

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Surface mounted piezoelectric devices for frequency control and selection –
Standard outlines and terminal lead connections –
Part 2: Ceramic enclosures**

**Dispositifs piézoélectriques à montage en surface pour la commande et le choix
de la fréquence – Encombrements normalisés et connexions des sorties –
Partie 2: Enveloppes en céramique**



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REDLINE VERSION

VERSION REDLINE



**Surface mounted piezoelectric devices for frequency control and selection –
Standard outlines and terminal lead connections –
Part 2: Ceramic enclosures**

**Dispositifs piézoélectriques à montage en surface pour la commande et le choix
de la fréquence – Ensembles normalisés et connexions des sorties –
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SURFACE MOUNTED PIEZOELECTRIC DEVICES FOR
FREQUENCY CONTROL AND SELECTION – STANDARD
OUTLINES AND TERMINAL LEAD CONNECTIONS –****Part 2: Ceramic enclosures****FOREWORD**

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This consolidated version of the official IEC Standard and its amendment has been prepared for user convenience.

IEC 61837-2 edition 3.1 contains the third edition (2018-05) [documents 49/1252/CDV and 49/1276/RVC] and its amendment 1 (2020-09) [documents 49/1338/CDV and 49/1347/RVC].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 61837-2 has been prepared by IEC technical committee 49: Piezoelectric, dielectric and electrostatic devices and associated materials for frequency control, selection and detection.

This third edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) revision of the figures to match the notation of the drawings of IEC 61240:2016;
- b) addition of 7 enclosures as follows: DCC-6/5032A, DCC-6/3225A, DCC-4/3215C, DCC-6/2016A, DCC-2/2012C, DCC-2/1610C, DCC-4/1210C.

As a result, this third edition contains a total of 45 enclosure types, which are listed in Table 1.

This International Standard is to be read in conjunction with IEC 61240:2016.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61837 series, published under the general title *Surface mounted piezoelectric devices for frequency control and selection – Standard outlines and terminal lead connections*, can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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SURFACE MOUNTED PIEZOELECTRIC DEVICES FOR FREQUENCY CONTROL AND SELECTION – STANDARD OUTLINES AND TERMINAL LEAD CONNECTIONS –

Part 2: Ceramic enclosures

1 Scope

This part of IEC 61837 deals with standard outlines and terminal lead connections as they apply to surface-mounted devices (SMD) for frequency control and selection in ceramic enclosures, and is based on IEC 61240:2016.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61240:2016, *Piezoelectric devices – Preparation of outline drawings of surface-mounted devices (SMD) for frequency control and selection – General rules*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Configuration of enclosures

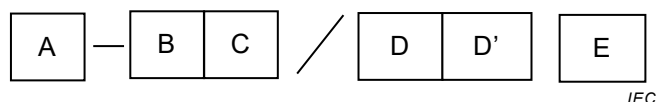
The enclosures of the surface-mounted devices are made of ceramic materials with the terminals of deposited metal film (leadless type) based on a descriptive designation system for semiconductors – devices packages.

The configuration symbols are shown as follows:

- DCC (dual chip carrier);
- QCC (quad chip carrier).

5 Designation of types

The designation of types is shown on four parts as follows:



A: Configuration symbol of enclosures:

- DCC (dual chip carrier);
- QCC (quad chip carrier).

B: Structure of terminal leads: leadless type has no mark.

C: Number of terminal leads

D: Serial number of both figures

E: Arrangement of terminal land:

In the case of DCC types:

- A (arrangement in the width direction side or the width direction side and the corner);
- B (arrangement in the length direction side or the length direction side and the corner);
- C (arrangement in the corner only).

In the case of QCC types:

- A (arrangement in the side only);
- B (arrangement in the side and the corner).

6 Ceramic enclosure dimensions

The dimensions given in this document apply to all completed SMD-devices for frequency control and selection. Only those dimensions which meet the requirements of IEC 61240 are given.

7 Lead connections

Recommendations for the lead connections of all completed SMD-devices for frequency control and selection are given in the following individual sheets. Lead connections shall always be given in the detail specification.

8 Designation of ceramic enclosures

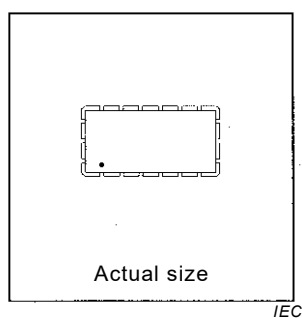
Table 1 is a list which includes all new enclosure types with their sheet numbers and brief descriptions. Old enclosure names are also listed as references.

Table 1 – Designation of ceramic enclosures

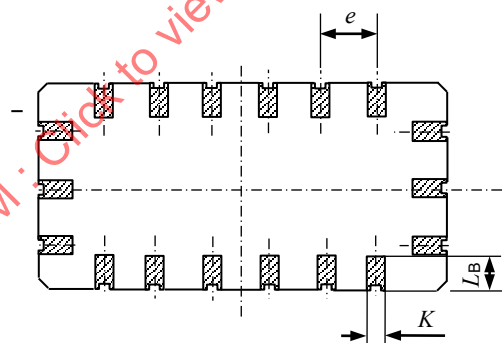
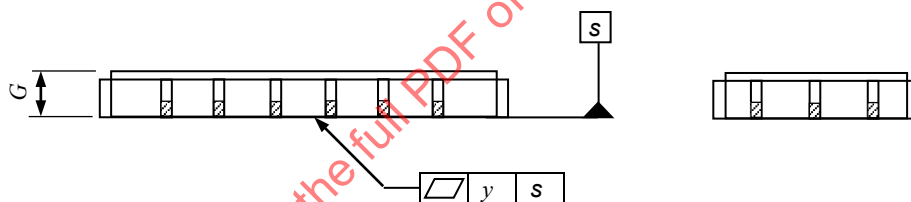
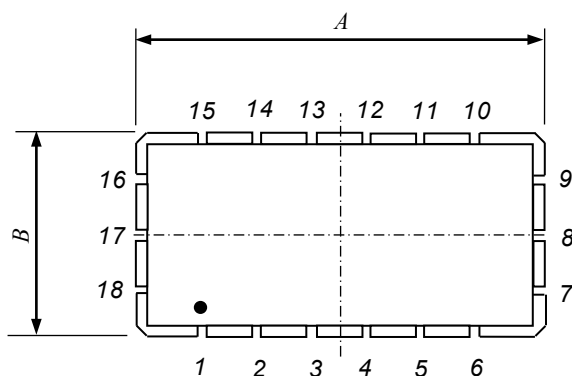
No.	Type	Old type	Sheet No.	Description
1	QCC-18/1809A	QCC-18/01	Sheet 1	Ceramic, welded, eighteen leadless SMD outline
2	QCC-12/1407A		Sheet 2	Ceramic, welded, twelve leadless SMD outline
3	DCC-4/1206A	DCC-4/01	Sheet 3	Ceramic, four leadless SMD outline
4	DCC-2/1206A		Sheet 4	Ceramic, two leadless SMD outline
5	QCC-10/9272A		Sheet 5	Ceramic, welded, ten leadless SMD outline
6	DCC-4/9070A		Sheet 6	Ceramic, welded, four leadless SMD outline
7	DCC-4/8045B	DCC-04/02, 03	Sheet 7	Ceramic, welded, four leadless SMD outline
8	DCC-2/8045B		Sheet 8	Ceramic, welded, two leadless SMD outline
9	DCC-6/7834B		Sheet 9	Ceramic, welded, six leadless SMD outline
10	DCC-6/7050A		Sheet 10	Ceramic, welded, six leadless SMD outline
11	DCC-4/7050A	DCC-4/08	Sheet 11	Ceramic, welded, four leadless SMD outline
12	DCC-4/7050B	DCC-4/04, 05	Sheet 12	Ceramic, welded, four leadless SMD outline
13	QCC-10/7050A		Sheet 13	Ceramic, welded, ten leadless SMD outline
14	QCC-6/7050A	QCC-6/01, 02	Sheet 14	Ceramic, welded, six leadless SMD outline
15	DCC-6/6035A	DCC-4/06, 07	Sheet 15	Ceramic, welded, six leadless SMD outline
16	DCC-4/6035C		Sheet 16	Ceramic, welded, four leadless SMD outline
17	DCC-2/6035C		Sheet 17	Ceramic, welded, two leadless SMD outline
18	QCC-8/5050A	QCC-8/02	Sheet 18	Ceramic, welded, eight leadless SMD outline
19	QCC-12/5045A	QCC-12/02	Sheet 19	Ceramic, welded, twelve leadless SMD outline
20	QCC-8/5045A		Sheet 20	Ceramic, welded, eight leadless SMD outline
21	DCC-6/5032A		Sheet 21	Ceramic, welded, six leadless SMD outline
22	DCC-4/5032A		Sheet 22	Ceramic, welded, four leadless SMD outline
23	DCC-4/5032C		Sheet 23	Ceramic, welded, four leadless SMD outline
24	DCC-2/5032B	DCC-2/01	Sheet 24	Ceramic, welded, two leadless SMD outline
25	DCC-2/4818C		Sheet 25	Ceramic, welded, two leadless SMD outline
26	DCC-2/4115C		Sheet 26	Ceramic, welded, two leadless SMD outline
27	DCC-4/4025C	DCC-6/01	Sheet 27	Ceramic, welded, four leadless SMD outline
28	QCC-8/3838A		Sheet 28	Ceramic, welded, eight leadless SMD outline
29	DCC-6/3838A		Sheet 29	Ceramic, welded, six leadless SMD outline
30	DCC-6/3225A		Sheet 30	Ceramic, welded, six leadless SMD outline
31	DCC-4/3225C		Sheet 31	Ceramic, welded, four leadless SMD outline
32	DCC-4/3215C		Sheet 32	Ceramic, welded, four leadless SMD outline
33	DCC-2/3215C		Sheet 33	Ceramic, welded, two leadless SMD outline
34	QCC-8/3030B		Sheet 34	Ceramic, welded, eight leadless SMD outline
35	DCC-6/3030A		Sheet 35	Ceramic, welded, six leadless SMD outline
36	DCC-6/2520A		Sheet 36	Ceramic, welded, six leadless SMD outline
37	DCC-4/2520C/01,02,03		Sheet 37	Ceramic, welded, four leadless SMD outline
38	DCC-4/2020C		Sheet 38	Ceramic, welded, six leadless SMD outline
39	DCC-6/2016A		Sheet 39	Ceramic, welded, four six leadless SMD outline
40	DCC-4/2016C/01,02,03		Sheet 40	Ceramic, welded, four leadless SMD outline
41	DCC-2/2012C		Sheet 41	Ceramic, welded, two leadless SMD outline
42	DCC-4/1612C/01,02		Sheet 42	Ceramic, welded, four leadless SMD outline
43	DCC-2/1612C		Sheet 43	Ceramic, welded, two leadless SMD outline
44	DCC-2/1610C		Sheet 44	Ceramic, welded, two leadless SMD outline
45	DCC-4/1210C		Sheet 45	Ceramic, welded, four leadless SMD outline

No.	Type	Old type	Sheet No.	Description
46	DCC-8/3225A		Sheet 46	Ceramic, welded, eight leadless SMD outline
47	DCC-4/1008C/0,1,02		Sheet 47	Ceramic, welded, four leadless SMD outline

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(18,0)	18,30	
<i>B</i>	–	(9,0)	9,30	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	1,10	
<i>L_B</i>	1,20	–	1,80	Note
<i>e</i>	–	2,54	–	
<i>y</i>	–	–	0,10	

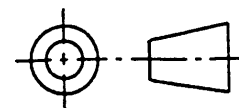


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NOTE Dimension *L_B* max. can be increased to 2,10 mm for lead 1 to identify the orientation.

Ceramic, welded, eighteen leadless SMD outline –
Type QCC-18/1809A

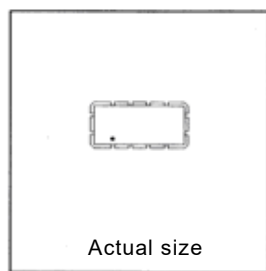
Scale
3: 1



Sheet 1

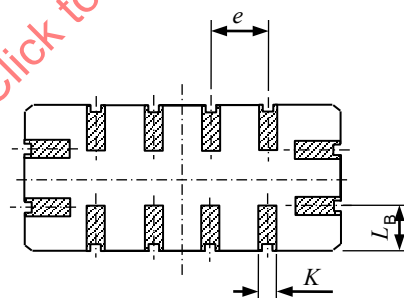
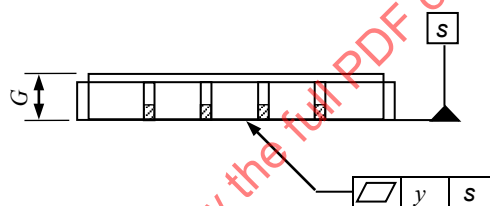
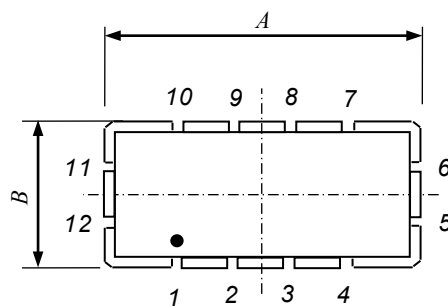
Terminal land connections of Type QCC-18/1809A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Ground
2				Option
3				Option
4				Option
5				Option
6				Ground
7				Input/Output
8				Ground
9				Input/Output /Ground
10				Ground
11				Option
12				Option
13				Option
14				Option
15				Ground
16				Output/Input
17				Ground
18				Output/Input /Ground



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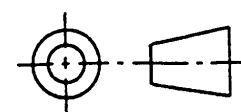
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(14,0)	14,30	
<i>B</i>	–	(6,5)	6,80	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	1,10	
<i>L_B</i>	1,70	–	2,30	
<i>e</i>	–	2,54	–	
<i>y</i>	–	–	0,10	



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Ceramic, welded, twelve leadless SMD outline –
Type QCC-12/1407A

Scale
3: 1

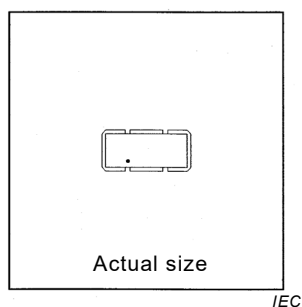


Sheet 2

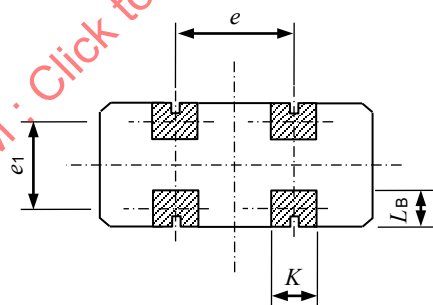
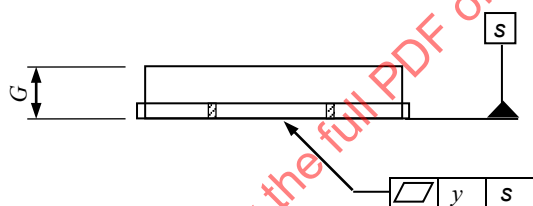
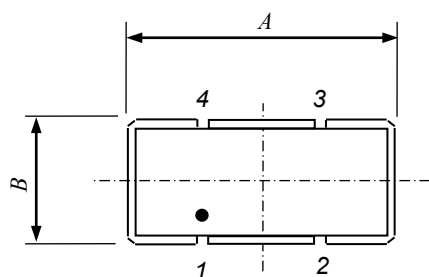
Terminal land connections of Type QCC-12/1407A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Option
2				Option
3				Ground
4				Option
5				Output/Input
6				Output/Input /Ground
7				Option
8				Ground
9				Option
10				Option
11				Input/Output
12				Input/Output /Ground

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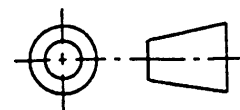
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(12,0)	12,30	
<i>B</i>	–	(5,5)	5,80	
<i>G</i>	–	–	2,30	
<i>K</i>	1,80	–	2,20	
<i>L_B</i>	1,30	–	1,90	
<i>e</i>	–	5,08	–	
<i>e₁</i>	–	3,90	–	
<i>y</i>	–	–	0,10	



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Ceramic, welded, four leadless SMD outline –
Type DCC-4/1206A

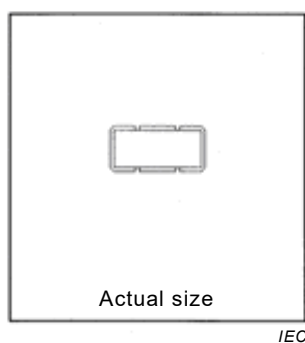
Scale
3: 1



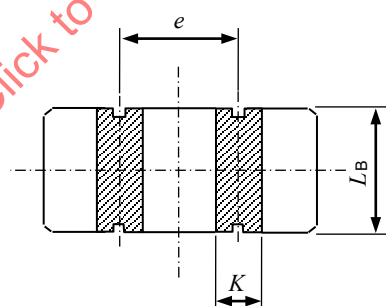
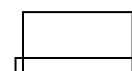
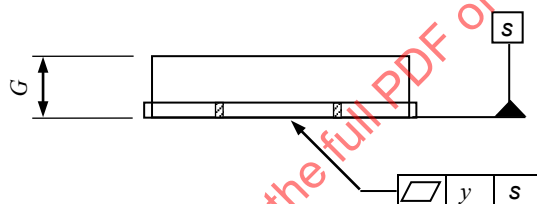
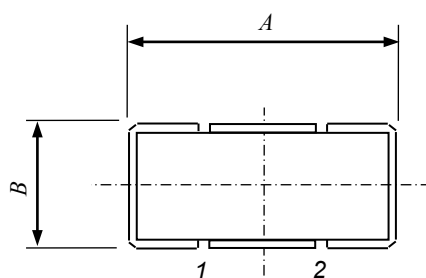
Sheet 3

Terminal land connections of Type DCC-4/1206A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control voltage		
2	NC	Ground		
3	Terminal 2	Output		
4	NC	DC supply		



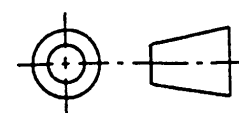
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(12,0)	12,30	
<i>B</i>	–	(5,5)	5,80	
<i>G</i>	–	–	2,70	
<i>K</i>	1,60	–	2,20	
<i>L_B</i>	5,20	–	5,80	
<i>e</i>	–	5,08	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, two leadless SMD outline –
Type DCC-2/1206A

Scale
3: 1

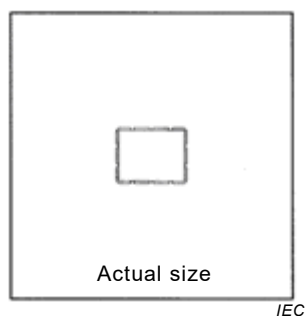


Sheet 4

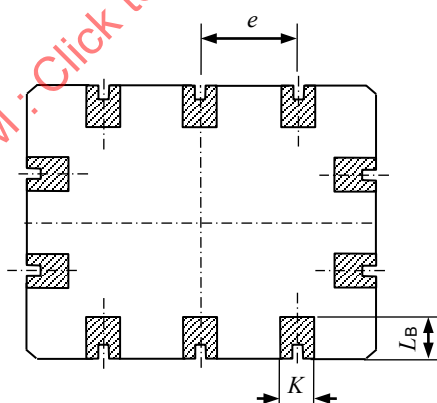
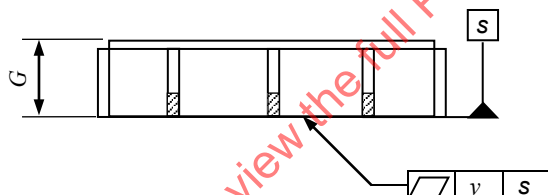
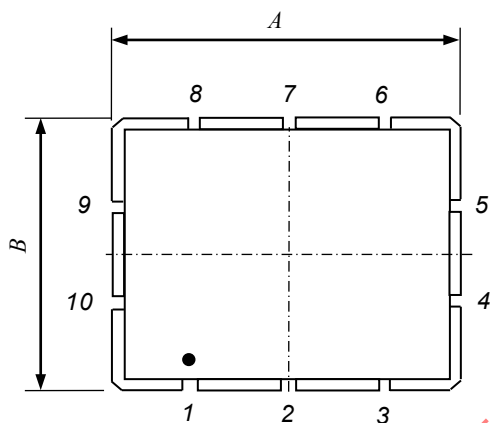
Terminal land connections of Type DCC-2/1206A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(9,2)	9,50	
<i>B</i>	–	(7,2)	7,50	
<i>G</i>	–	–	2,00	
<i>K</i>	0,60	–	1,20	
<i>L_B</i>	0,80	–	1,40	Note
<i>e</i>	–	2,54	–	
<i>y</i>	–	–	0,10	

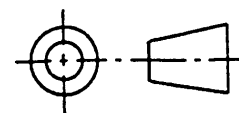


IEC

NOTE Dimension *L_B* max. can be increased to 2,00 mm for lead 1 to identify the orientation.

Ceramic, welded, ten leadless SMD outline –
Type QCC-10/9272A

Scale
5: 1

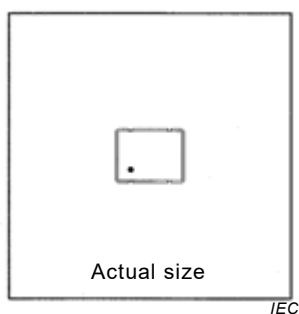


Sheet 5

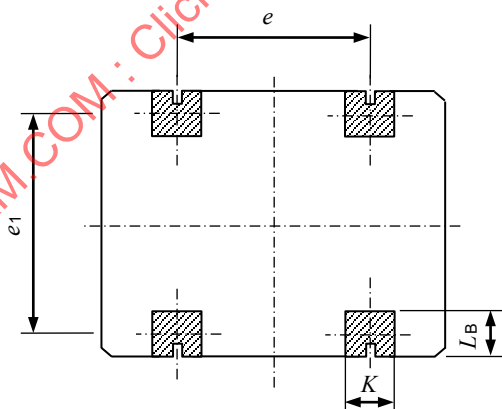
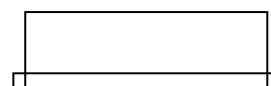
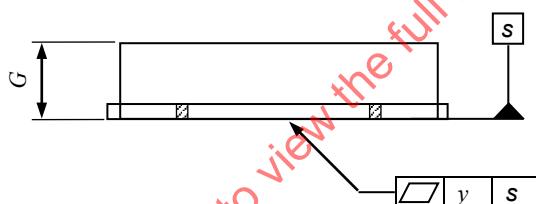
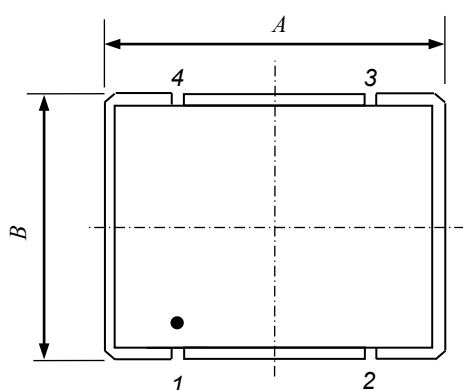
Terminal land connections of Type QCC-10/9272A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Input/Output /Ground
2				Input/Output
3				Ground
4				Ground
5				Ground
6				Output/Input /Ground
7				Output/Input
8				Option
9				Ground
10				Ground

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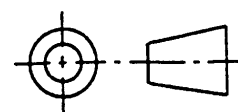
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(9,0)	9,30	
<i>B</i>	–	(7,0)	7,30	
<i>G</i>	–	–	2,00	
<i>K</i>	1,10	–	1,70	
<i>L_B</i>	0,90	–	1,50	
<i>e</i>	–	5,08	–	
<i>e₁</i>	–	5,80	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/9070A

Scale
5: 1

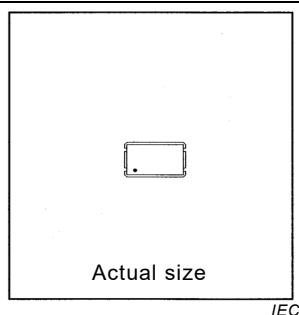


Sheet 6

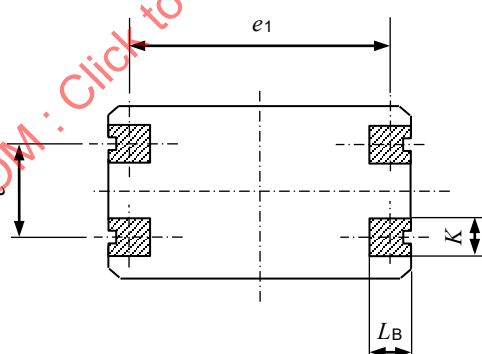
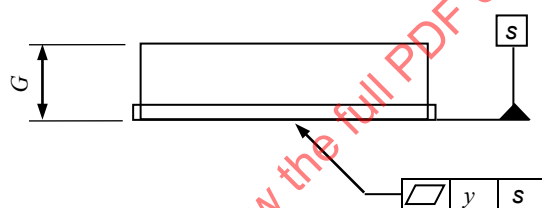
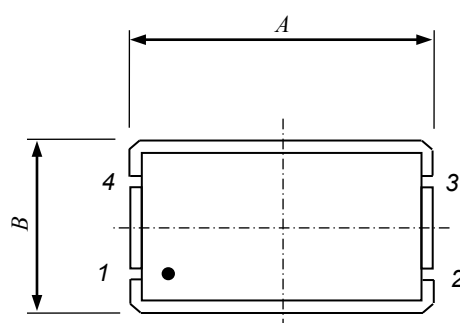
Terminal land connections of Type DCC-4/9070A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Control voltage		
2		Ground		
3		Output		
4		DC supply		

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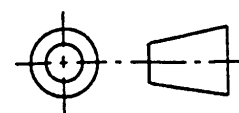
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(8,0)	8,30	
<i>B</i>	–	(4,5)	4,80	
<i>G</i>	–	–	2,00	
<i>K</i>	0,70	–	1,30	
<i>L_B</i>	0,80	–	1,40	
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	6,90	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/8045B

Scale
5: 1

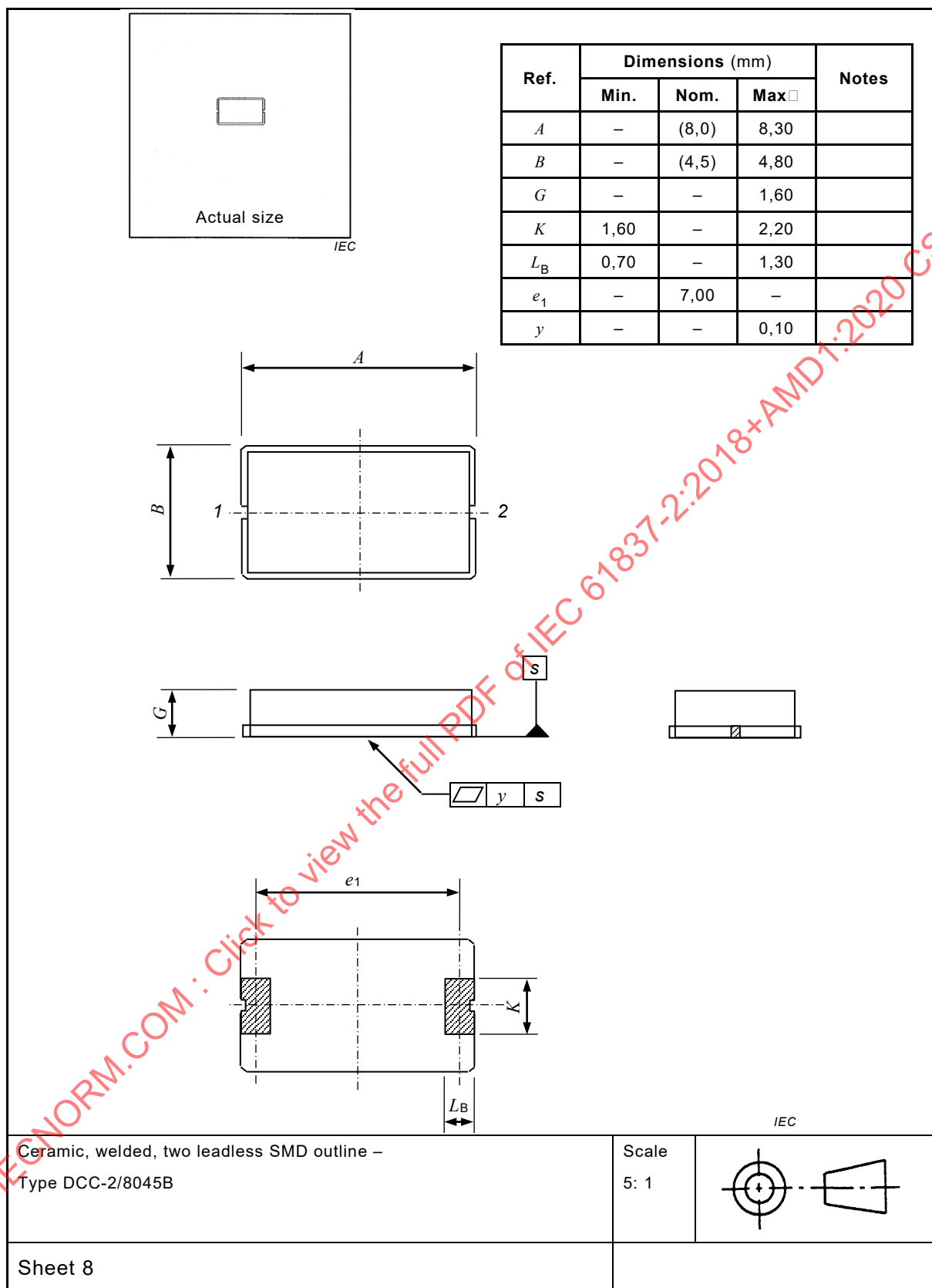


Sheet 7

Terminal land connections of Type DCC-4/8045B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control voltage		
2	Option	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

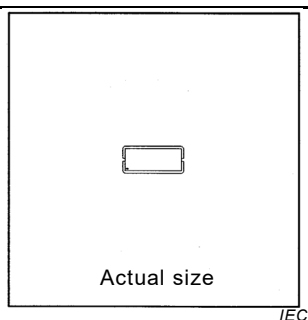
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



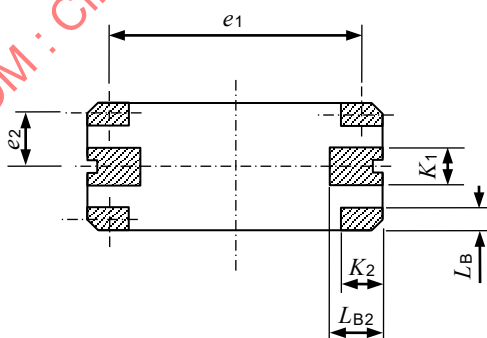
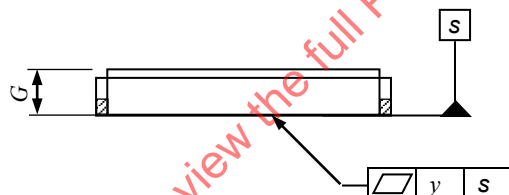
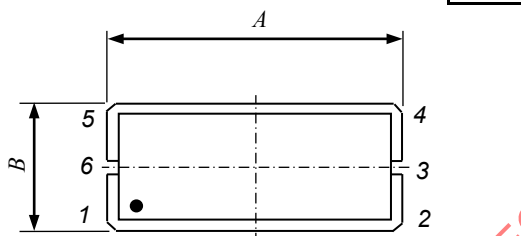
Terminal land connections of Type DCC-2/8045B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



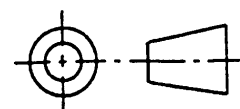
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(7,8)	8,10	
B	–	(3,4)	3,70	
G	–	–	1,20	
K_1	0,70	–	1,30	
K_2	0,80	–	1,40	
L_{B1}	0,30	–	0,90	
L_{B2}	1,10	–	1,70	
e_1	–	6,70	–	
e_2	–	1,40	–	
y	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/7834B

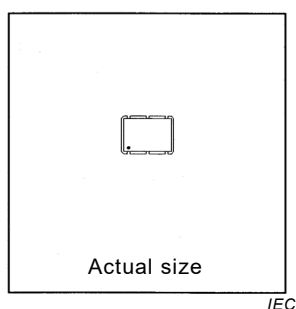
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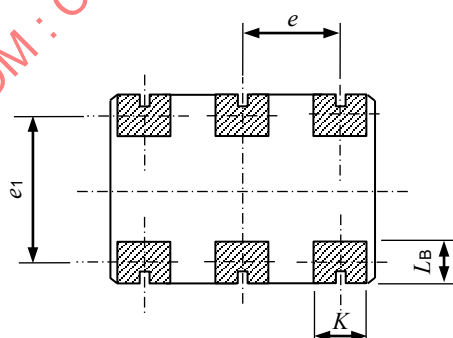
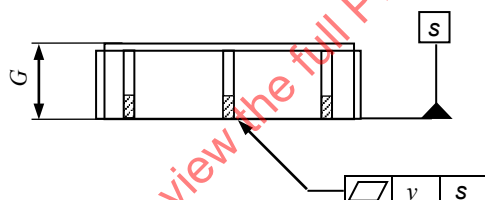
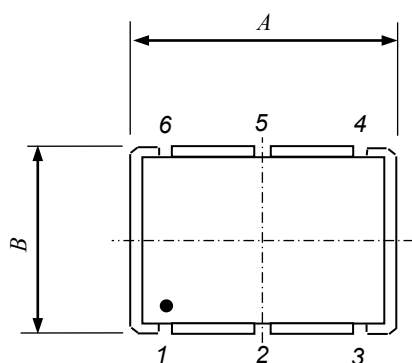
Sheet 9

Terminal land connections of Type DCC-6/7834B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Option			
2	Option			
3	Terminal 1			
4	Option			
5	Option			
6	Terminal 2			



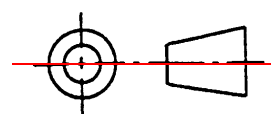
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(7,0)	7,30	
<i>B</i>	–	(5,0)	5,30	
<i>G</i>	–	–	2,00	
<i>K</i>	1,10	–	1,70	
<i>L_B</i>	0,80	–	1,40	
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	3,90	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/7050A

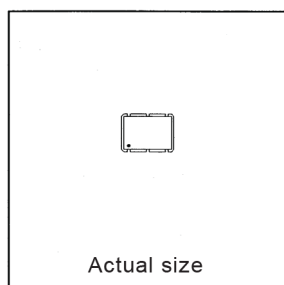
Scale
5:1



Sheet 10

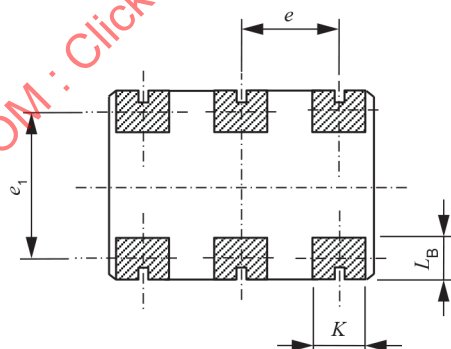
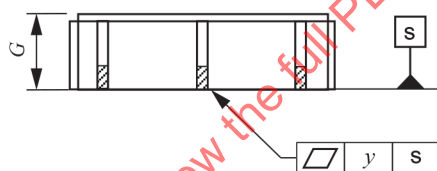
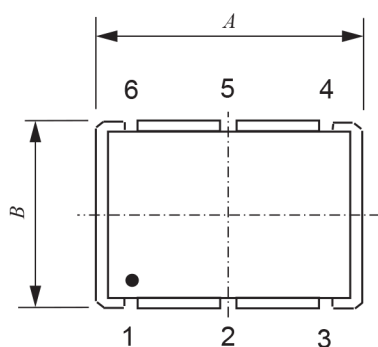
Terminal land connections of Type DCC-6/7050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Output enable		
2		NC		
3		Ground		
4		Output		
5		Output		
6		DC supply		



IEC

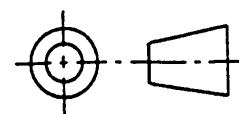
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	—	(7,0)	7,30	
<i>B</i>	—	(5,0)	5,30	
<i>G</i>	—	—	2,00	
<i>K</i>	1,10	—	1,70	
<i>L_B</i>	0,80	—	1,40	
<i>e</i>	—	2,54	—	
<i>e₁</i>	—	3,90	—	
<i>y</i>	—	—	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/7050A

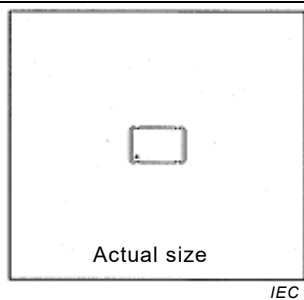
Scale
15: 1



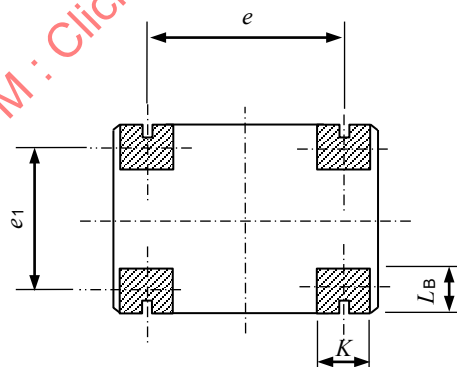
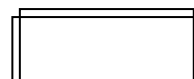
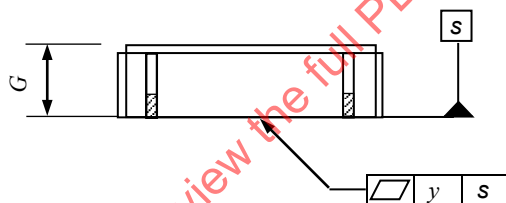
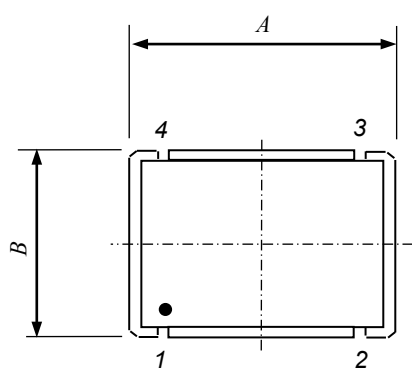
Sheet 10

Terminal land connections of Type DCC-6/7050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Option		
3		Ground		
4		Output		
5		Option		
6		DC supply		



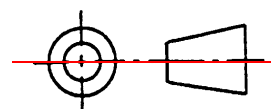
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(7,0)	7,30	
<i>B</i>	–	(5,0)	5,30	
<i>G</i>	–	–	1,90	
<i>K</i>	1,10	–	1,70	
<i>L_B</i>	0,90	–	1,50	
<i>e</i>	–	5,08	–	
<i>e₁</i>	–	3,80	–	
<i>y</i> □	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD-outline —
Type DCC-4/7050A

Scale
5:1

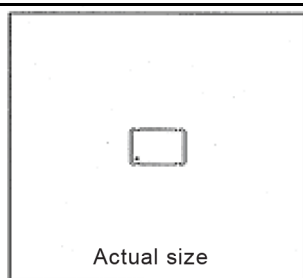


Sheet 11

Terminal land connections of Type DCC-4/7050A

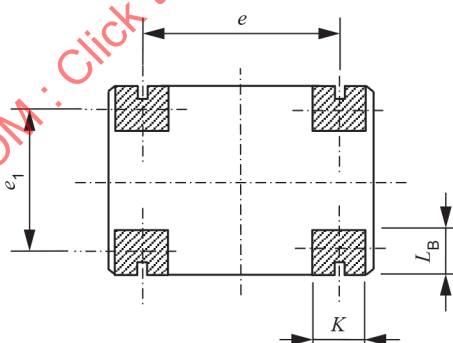
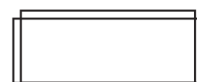
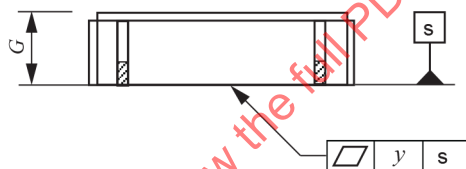
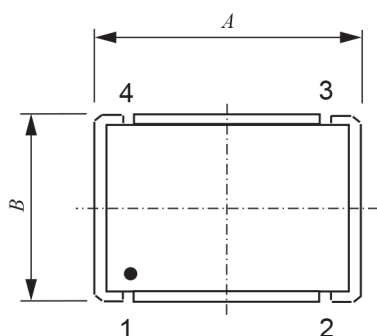
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Control voltage		
2		Ground		
3		Output		
4		DC supply		

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IEC

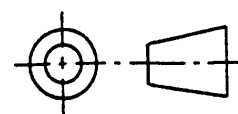
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
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<i>B</i>	—	(5,0)	5,30	
<i>G</i>	—	—	1,90	
<i>K</i>	1,10	—	1,70	
<i>L_B</i>	0,90	—	1,50	
<i>e</i>	—	5,08	—	
<i>e₁</i>	—	3,80	—	
<i>y</i>	—	—	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/7050A

Scale
5: 1

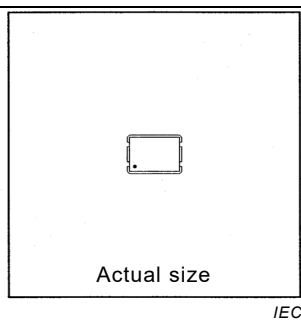


Sheet 11

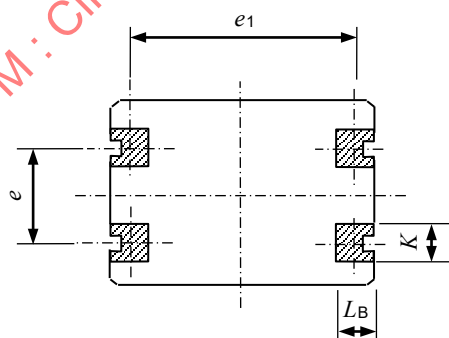
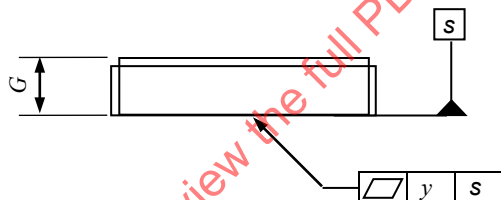
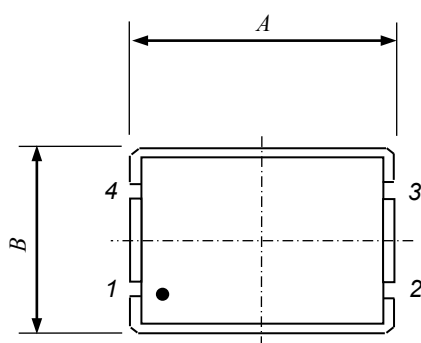
Terminal land connections of Type DCC-4/7050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Ground		
3		Output		
4		DC supply		

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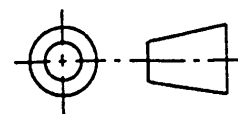
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(7,0)	7,30	
<i>B</i>	–	(5,0)	5,30	
<i>G</i>	–	–	1,50	
<i>K</i>	0,70	–	1,30	
<i>L_B</i>	0,70	–	1,30	□
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	6,00	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/7050B

Scale
5: 1

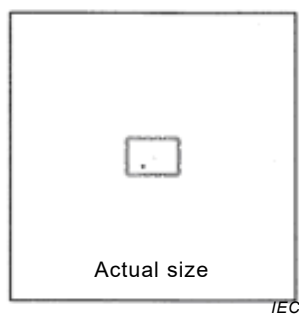


Sheet 12

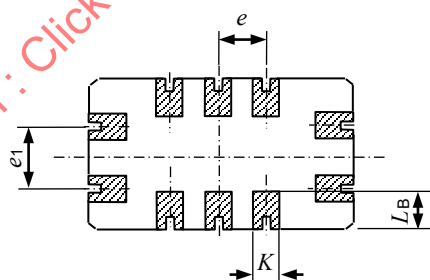
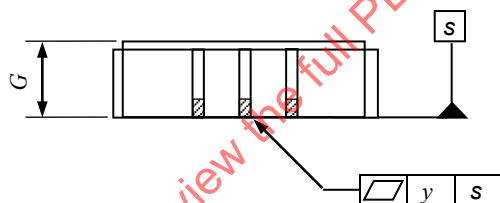
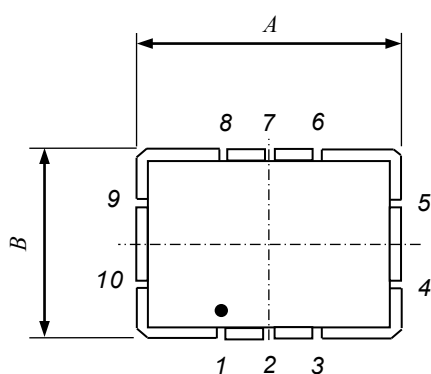
Terminal land connections of Type DCC-4/7050B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Option			
3	Terminal 2			
4	Option			

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(7,0)	7,30	
<i>B</i>	–	(5,0)	5,30	
<i>G</i>	–	–	2,00	
<i>K</i>	0,40	–	1,00	
<i>L_B</i>	0,80	–	1,20	Note
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	4,00	–	
<i>y</i>	–	–	0,10	

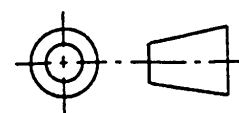


IEC

NOTE Dimension L_B max. can be increased to 1,60 mm for lead 1 to identify the orientation.

Ceramic, welded, ten leadless SMD outline –
Type QCC-10/7050A

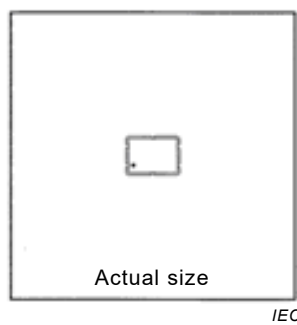
Scale
5: 1



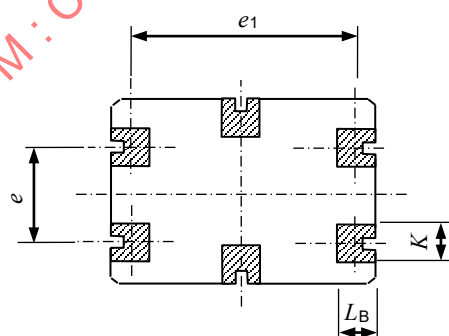
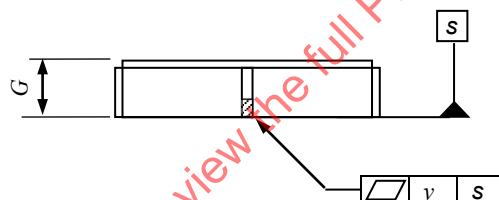
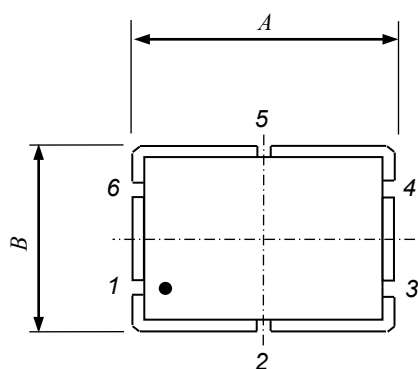
Sheet 13

Terminal land connections of Type QCC-10/7050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		Option
2		Option		Output/Input
3		Option		Option
4		Ground		Option
5		Output		Option
6		Option		Option
7		Option		Input/Output
8		Option		Option
9		DC supply		Ground
10		Option/Control voltage		Ground



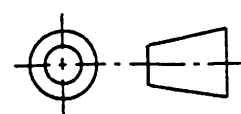
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(7,0)	7,30	
<i>B</i>	–	(5,0)	5,30	
<i>G</i>	–	–	1,50	
<i>K</i>	0,70	–	1,30	
<i>L_B</i>	0,70	–	1,30	
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	6,00	–	
<i>y</i>	–	–	0,10	



IEC

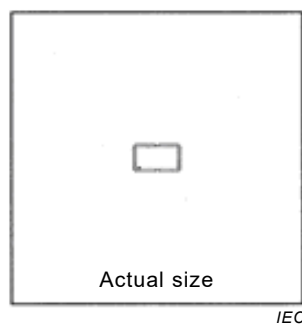
Ceramic, welded, six leadless SMD outline –
Type QCC-6/7050A

Scale
5: 1

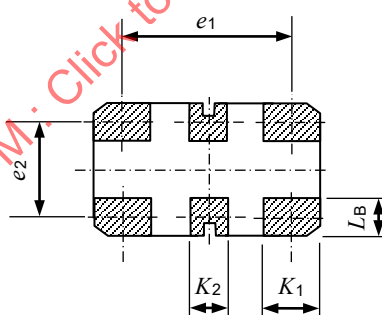
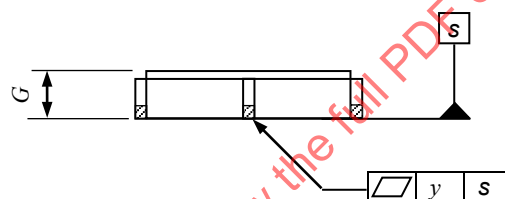
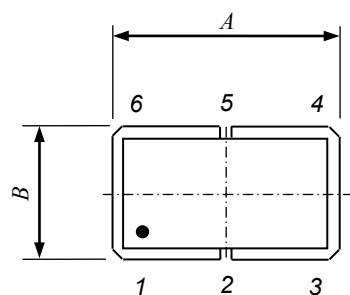


Terminal land connections of Type QCC-6/7050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1			Ground	
2			Option	
3			Output/Input	
4			Ground	
5			Option	
6			Input/Output	



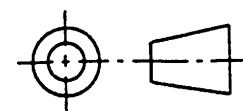
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(6,0)	6,20	
B	–	(3,5)	3,70	
G	–	–	1,25	
K_1	0,80	–	1,20	
L_B	1,30		1,70	
e_1	–	4,50	–	
e_2	–	2,50	–	
y	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/6035A

Scale
5: 1

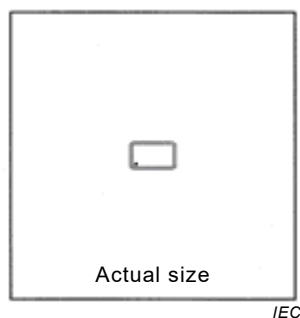


Sheet 15

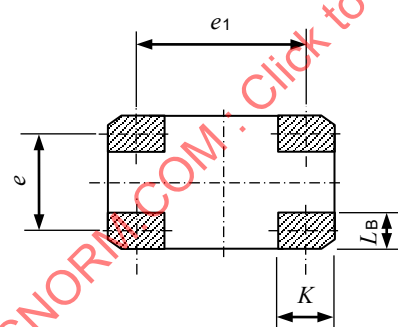
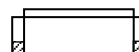
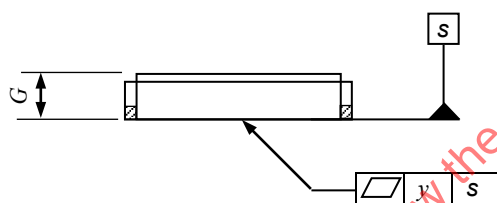
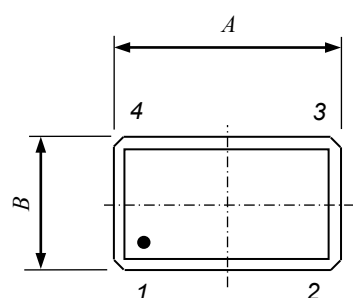
Terminal land connections of Type DCC-6/6035A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1			Ground	Ground
2			Ground	Input/Output
3			Output/Input	Ground
4			Ground	Ground
5			Ground	Output/Input
6			Input/Output	Ground

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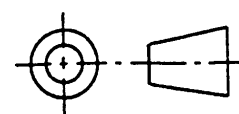
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(6,0)	6,20	
<i>B</i>	–	(3,5)	3,70	
<i>G</i>	–	–	1,20	
<i>K</i>	1,30	–	1,70	
<i>L_B</i>	0,76		1,16	
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	4,50	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/6035C

Scale
5: 1

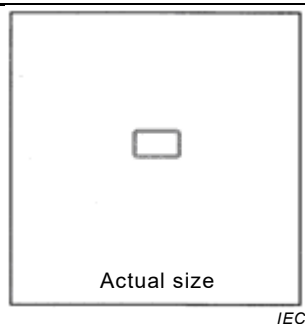


Sheet 16

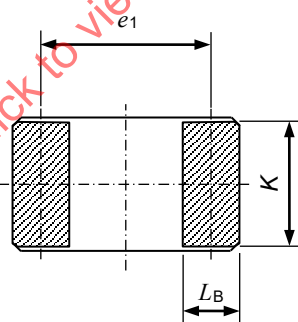
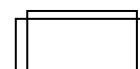
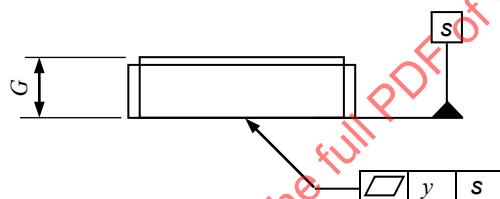
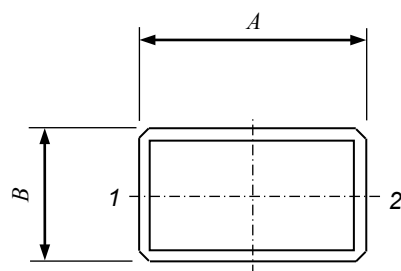
Terminal land connections of Type DCC-4/6035C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control voltage		
2	Option	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

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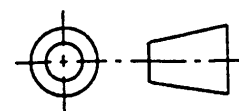
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(6,0)	6,20	
B	–	(3,5)	3,70	
G	–	–	1,60	
K	3,30	–	3,70	
L_B	1,30		1,70	
e_1	–	4,50	–	
y	–	–	0,10	



IEC

Ceramic, welded, two leadless SMD outline –
Type DCC-2/6035C

Scale
5: 1

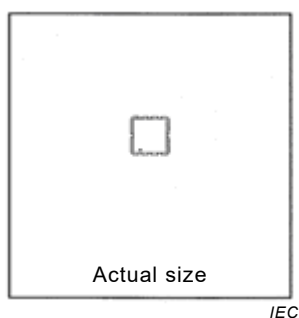


Sheet 17

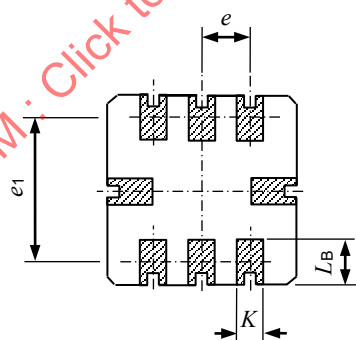
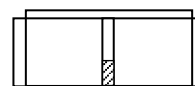
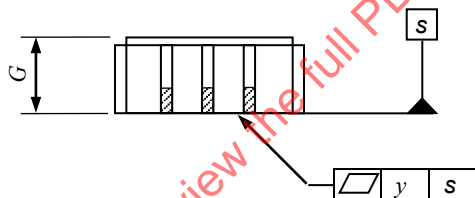
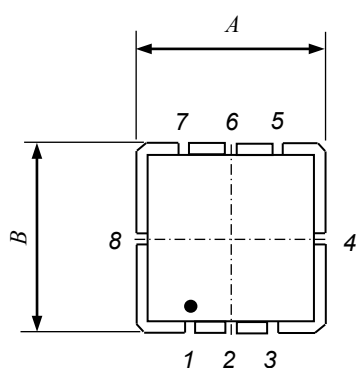
Terminal land connections of Type DCC-2/6035C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(5,0)	5,20	
<i>B</i>	–	(5,0)	5,20	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	0,90	
<i>L_B</i>	1,00	–	1,40	Note
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	3,80	–	
<i>y</i>	–	–	0,10	

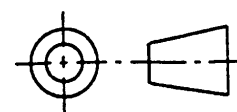


IEC

NOTE Dimension L_B max. can be increased to 1,90 mm for lead 8 to identify the orientation.

Ceramic, welded, eight leadless SMD outline –
Type QCC-8/5050A

Scale
5: 1

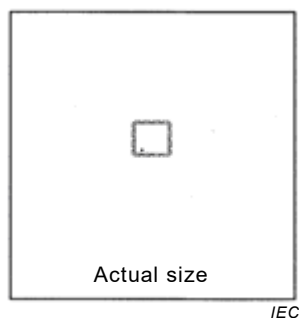


Sheet 18

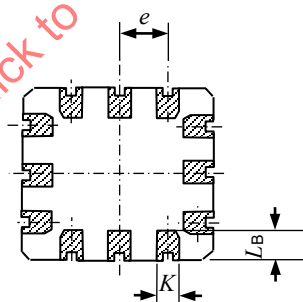
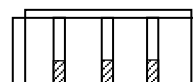
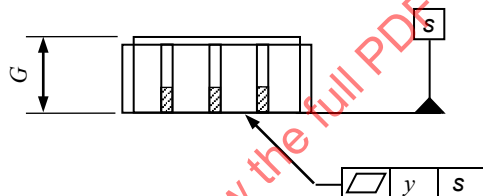
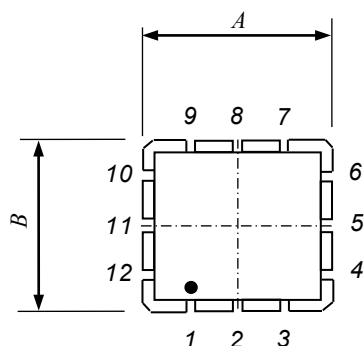
Terminal land connections of Type QCC-8/5050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Ground
2				Input/Output
3				Ground
4				Ground
5				Ground
6				Output/Input
7				Ground
8				Ground

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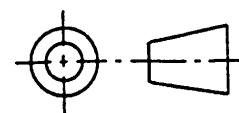
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(5,0)	5,20	
<i>B</i>	–	(4,5)	4,70	
<i>G</i>	–	–	2,00	
<i>K</i>	0,40	–	0,80	
<i>L_B</i>	0,60	–	1,00	
<i>e</i>	–	1,27	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, twelve leadless SMD outline –
Type QCC-12/5045A

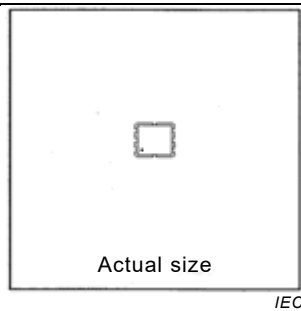
Scale
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Sheet 19

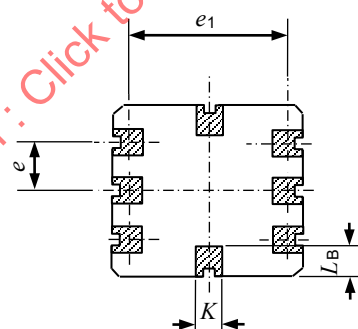
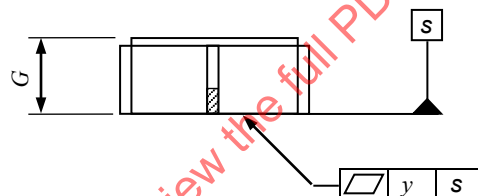
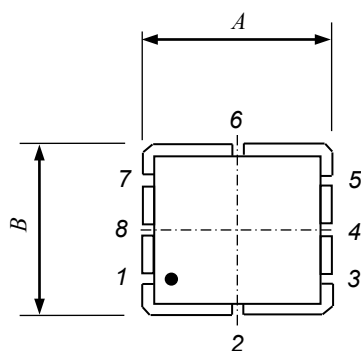
Terminal land connections of Type QCC-12/5045A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Ground
2				To be specified
3				Ground
4				Input/Output /Ground
5				Output/Input
6				Output/Input /Ground
7				Ground
8				To be specified
9				Ground
10				Output/Input /Ground
11				Output/Input
12				Output/Input /Ground



IEC

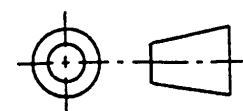
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(5,0)	5,20	
<i>B</i>	–	(4,5)	4,70	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	0,90	
<i>L_B</i>	0,60	–	1,00	
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	4,20	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, eight leadless SMD outline –
Type QCC-8/5045A

Scale
5: 1

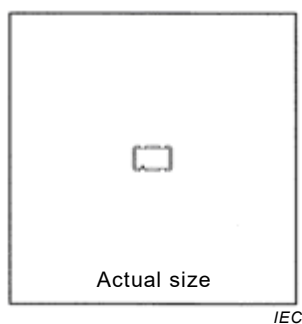


Sheet 20

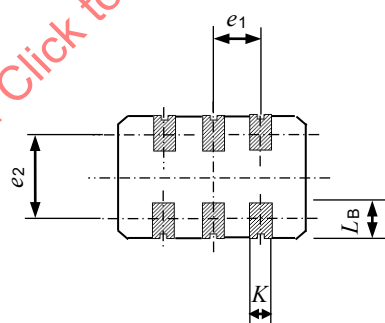
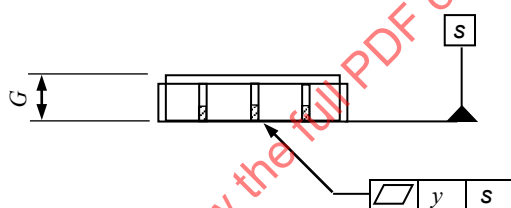
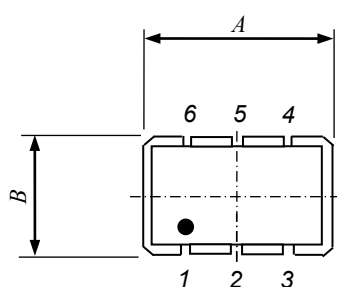
Terminal land connections of Type QCC-8/5045A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Control voltage	Ground	Ground
2		Option	Ground	Ground
3		Ground	Ground	Ground
4		Option	Input/Output	Input/Output
5		Output	Ground	Ground
6		Option	Ground	Ground
7		DC supply	Ground	Ground
8		Option	Output/Input	Output/Input

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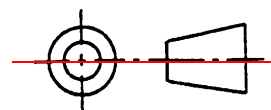
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(5,0)	5,20	
<i>B</i>	–	(3,2)	3,40	
<i>G</i>	–	–	1,40	
<i>K</i>	0,62	–	0,66	
<i>L_B</i>	0,80	–	1,20	
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	2,20	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD-outline –
Type DCC-6/5032A

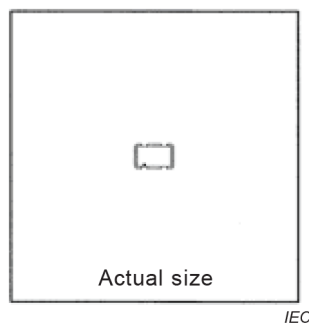
Scale
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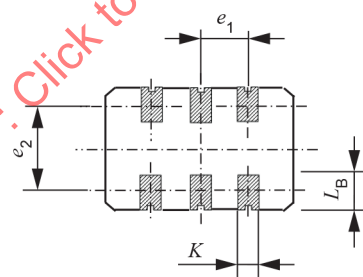
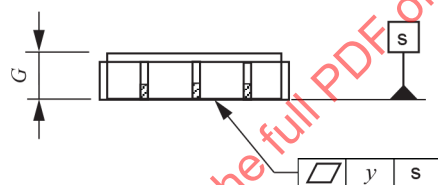
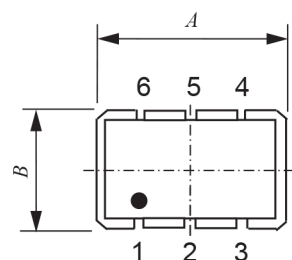
Sheet 21

Terminal land connections of Type DCC-6/5032A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Output Enable		
2		NC		
3		Ground		
4		Output		
5		Output		
6		DC supply		



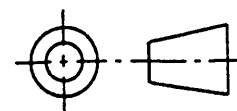
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	—	(5,0)	5,20	
<i>B</i>	—	(3,2)	3,40	
<i>G</i>	—	—	1,40	
<i>K</i>	0,62	—	0,66	
<i>L_B</i>	0,80	—	1,20	
<i>e</i>	—	1,27	—	
<i>e₁</i>	—	2,20	—	
<i>y</i>	—	—	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/5032A

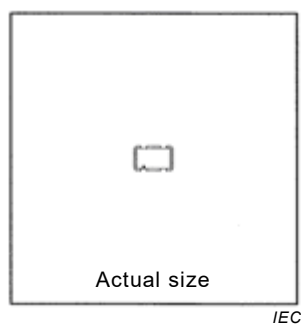
Scale
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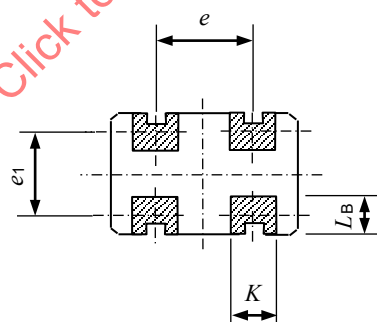
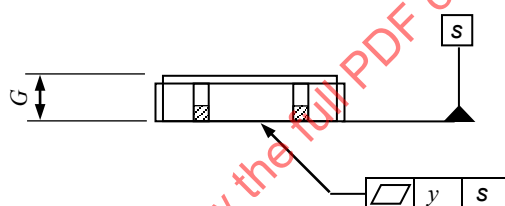
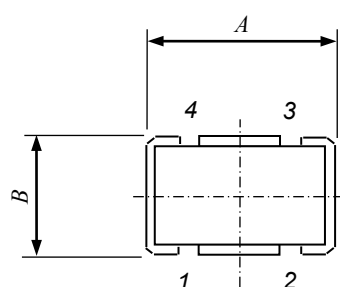
Sheet 21

Terminal land connections of Type DCC-6/5032A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Option		
3		Ground		
4		Output		
5		Option		
6		DC supply		



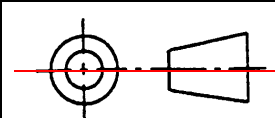
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(5,0)	5,20	
B	–	(3,2)	3,40	
G	–	–	1,20	
K	1,00	–	1,40	
L_B	0,80	–	1,20	
e	–	2,54	–	
e_1	–	2,20	–	
y	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD-outline –
Type DCC-4/5032A

Scale
5:1

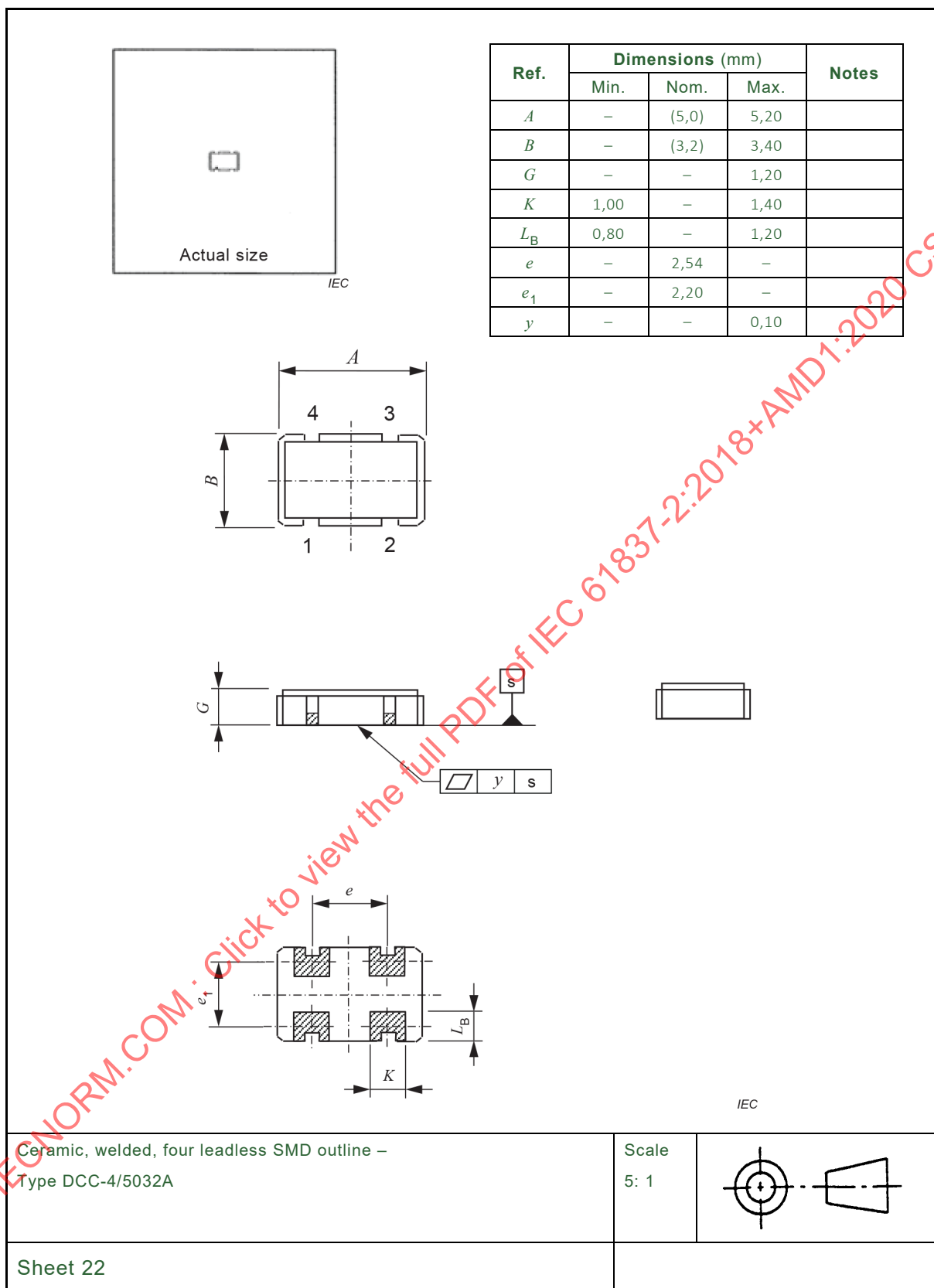


Sheet 22

Terminal land connections of Type DCC-4/5032A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Control voltage		
2		Ground		
3		Output		
4		DC supply		

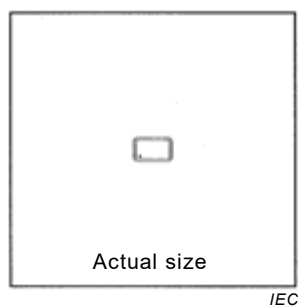
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



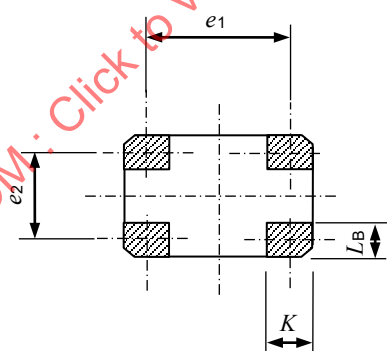
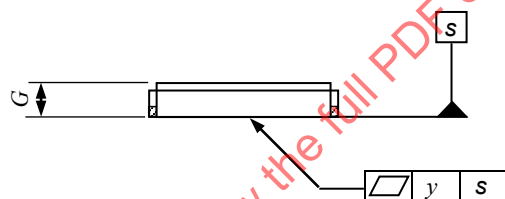
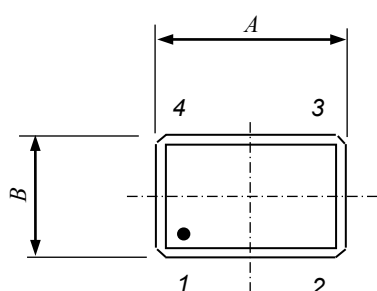
Terminal land connections of Type DCC-4/5032A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Ground		
3		Output		
4		DC supply		

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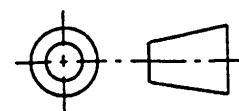
Ref.	Dimensions (mm)			Notes
	Min.	Max.	Min.	
A	–	(5,0)	5,20	
B	–	(3,2)	3,40	
G	–	–	0,90	
K	1,00	–	1,40	
L_B	0,70	–	1,10	
e_1	–	3,80	–	
e_2	–	2,30	–	
y	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/5032C

Scale
5: 1

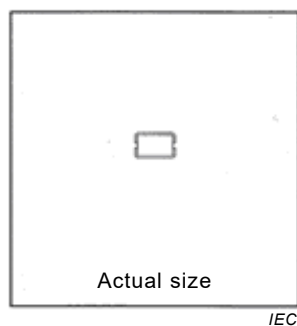


Sheet 23

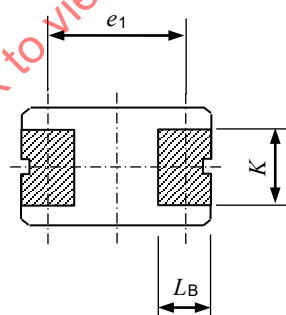
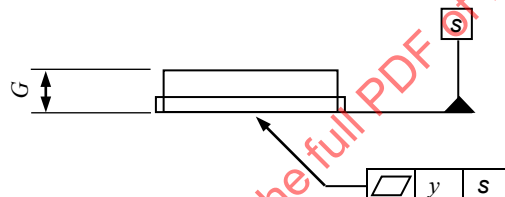
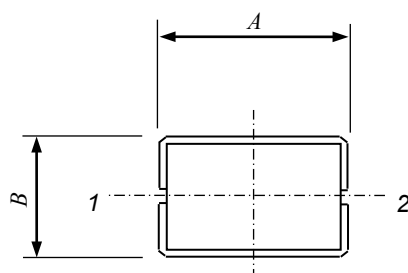
Terminal land connections of Type DCC-4/5032C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Option		
2	Ground	Ground		
3	Terminal 2	Output		
4	Ground	DC supply		

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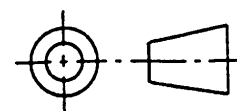
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(5,0)	5,20	
<i>B</i>	–	(3,2)	3,40	
<i>G</i>	–	–	1,10	
<i>K</i>	1,80	–	2,20	
<i>L_B</i>	1,20	–	1,60	
<i>e₁</i>	–	3,60	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, two leadless SMD outline –
Type DCC-2/5032B

Scale
5: 1

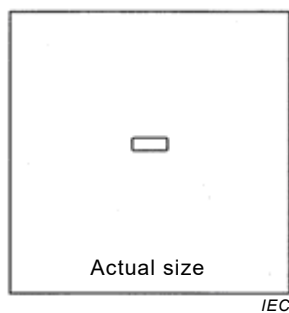


Sheet 24

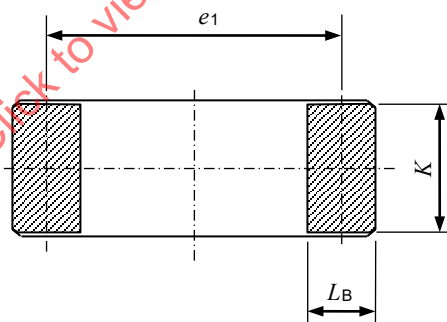
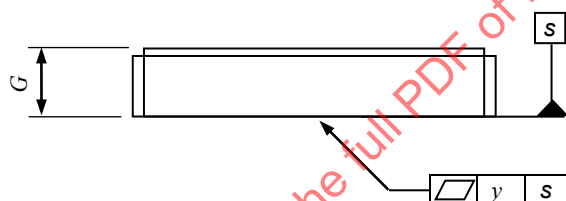
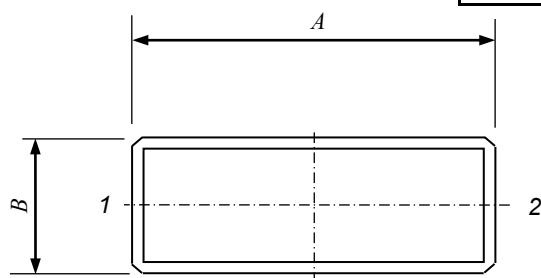
Terminal land connections of Type DCC-2/5032B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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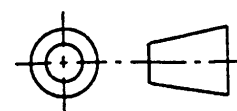
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(4,8)	5,00	
<i>B</i>	–	(1,8)	2,00	
<i>G</i>	–	–	0,90	
<i>K</i>	1,60	–	2,00	
<i>L_B</i>	0,70	–	1,10	
<i>e₁</i>	–	3,90	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, two leadless SMD outline –
Type DCC-2/4818C

Scale
10: 1

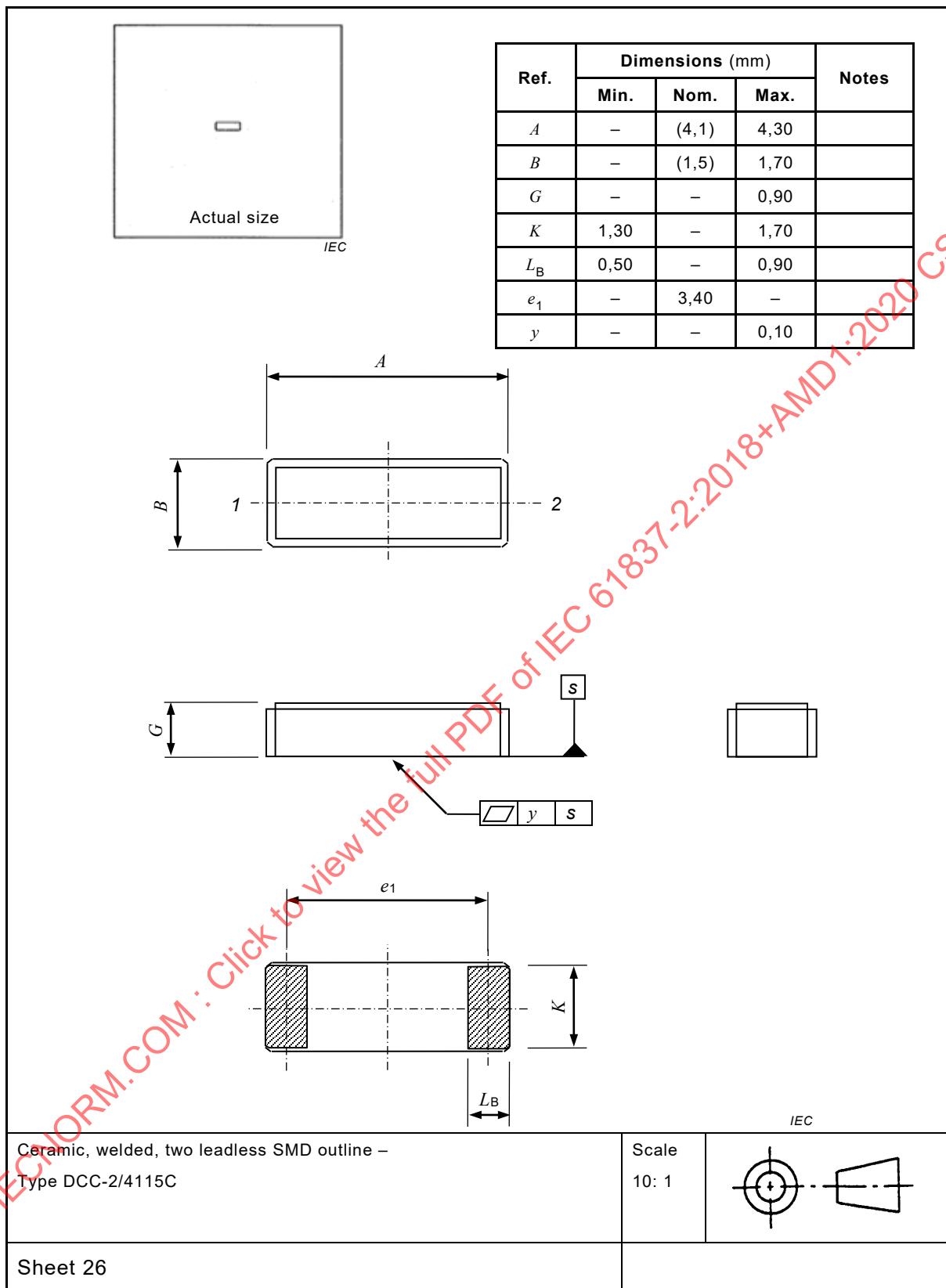


Sheet 25

Terminal land connections of Type DCC-2/4818C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

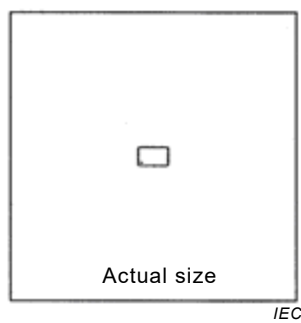
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



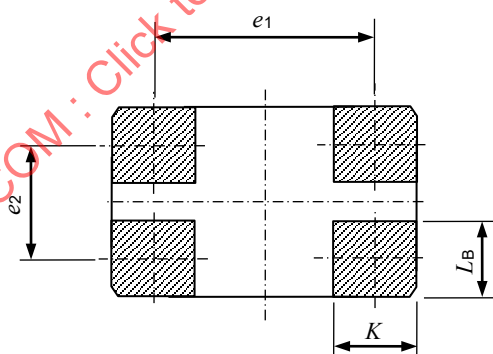
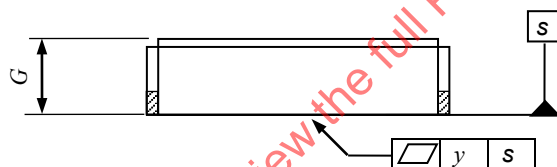
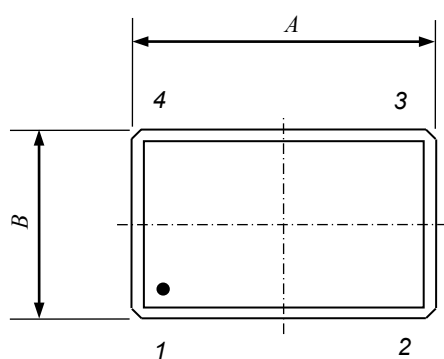
Terminal land connections of Type DCC-2/4115C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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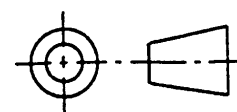
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(4,0)	4,20	
B	–	(2,5)	2,70	
G	–	–	1,00	
K	0,90	–	1,30	
L_B	0,80	–	1,20	
e_1	–	2,90	–	
e_2	–	1,50	–	
y	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/4025C

Scale
10: 1

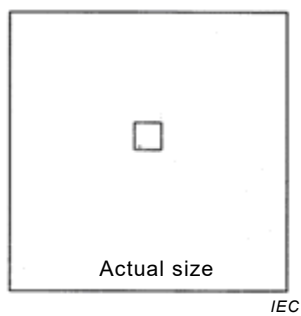


Sheet 27

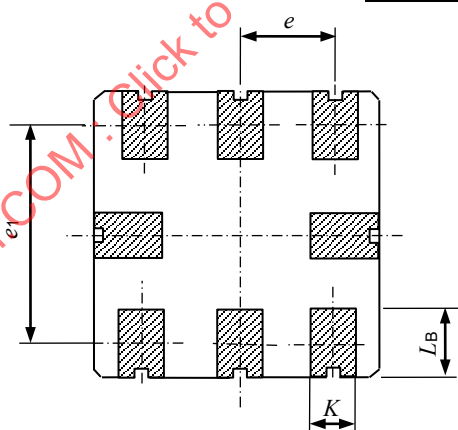
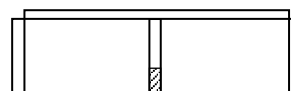
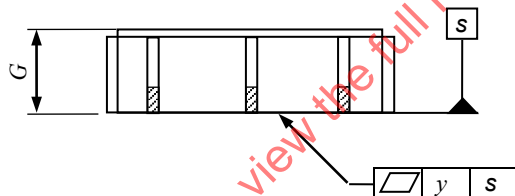
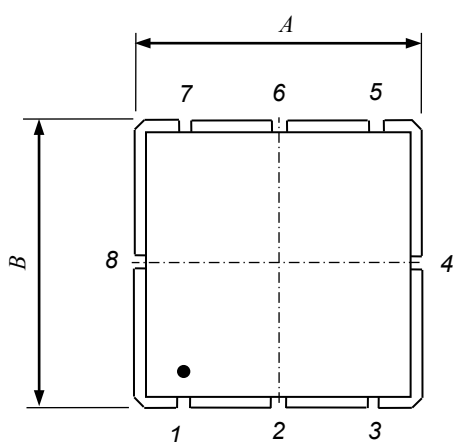
Terminal land connections of Type DCC-4/4025C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control Voltage		
2	Ground	Ground		
3	Terminal 2	Output		
4	Ground	DC supply		

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(3,8)	3,90	
<i>B</i>	–	(3,8)	3,90	
<i>G</i>	–	–	1,10	
<i>K</i>	0,50	–	0,70	
<i>L_B</i>	0,80	–	1,00	□ Note
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	2,90	–	
<i>y</i>	–	–	0,10	

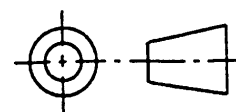


IEC

NOTE Dimension L_B max. can be increased to 2,00 mm for lead 4 to identify the orientation.

Ceramic, welded, eight leadless SMD outline –
Type QCC-8/3838A

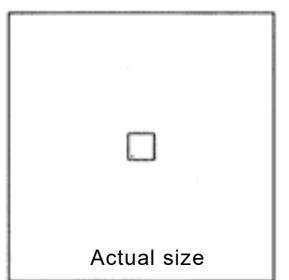
Scale
10: 1



Terminal land connections of Type QCC-8/3838A

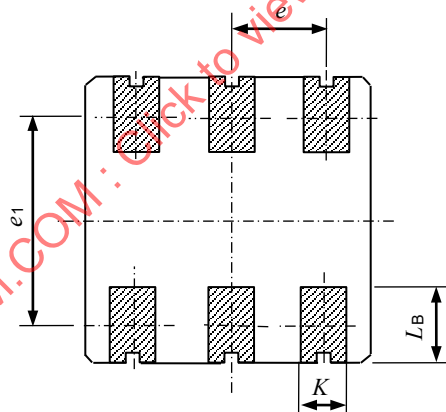
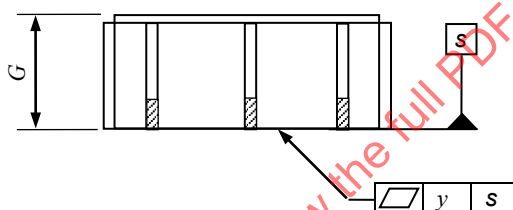
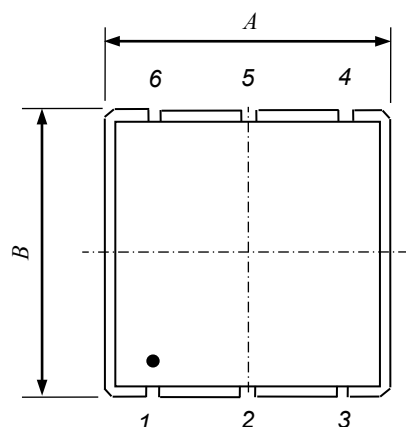
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1			Input/Output	Input/Output
2			Ground	Ground
3			Ground	Option
4			Ground	Ground
5			Output/Input	Option
6			Ground	Ground
7			Ground	Output/Input
8			Ground	Ground

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IEC

Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(3,8)	4,00	
<i>B</i>	–	(3,8)	4,00	
<i>G</i>	–	–	1,50	
<i>K</i>	0,40	–	0,80	
<i>L_B</i>	0,80	–	1,20	Note
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	2,80	–	
<i>y</i>	–	–	0,10	

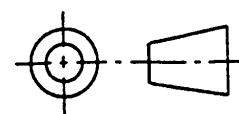


IEC

NOTE Dimension L_B max. can be increased to 2,05 mm for lead 1 to identify the orientation.

Ceramic, welded, six leadless SMD outline –
Type DCC-6/3838A

Scale
10: 1

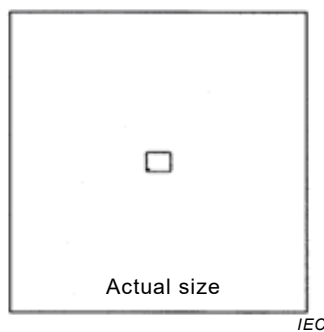


Sheet 29

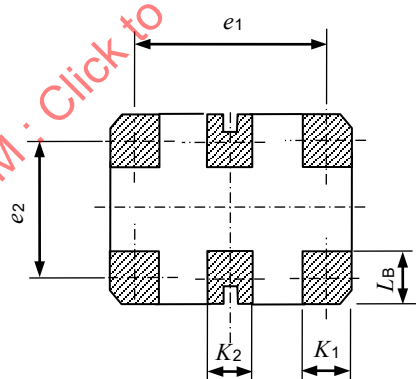
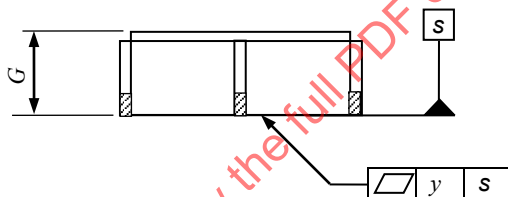
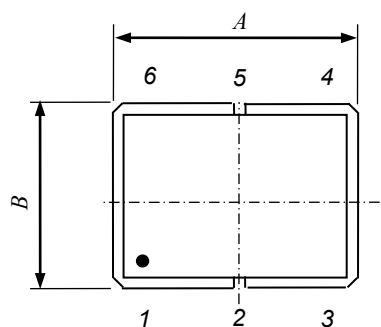
Terminal land connections of Type DCC-6/3838A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Ground
2				Input/Output
3				Ground
4				Ground
5				Output/Input
6				Ground

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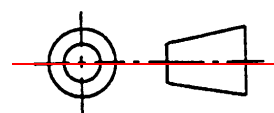


Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(3,2)	3,40	
B	–	(2,5)	2,70	
G	–	–	1,10	
K_1	0,45	–	0,85	
K_2	0,40	–	0,80	
L_B	0,50	–	0,90	
e_1	–	2,55	–	
e_2	–	1,80	–	
y	–	–	0,10	



Ceramic, welded, six-leadless SMD-outline –
Type DGC-6/3225A

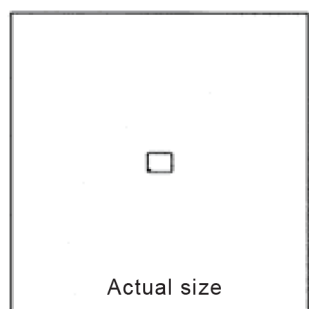
Scale
10:1



Sheet 30

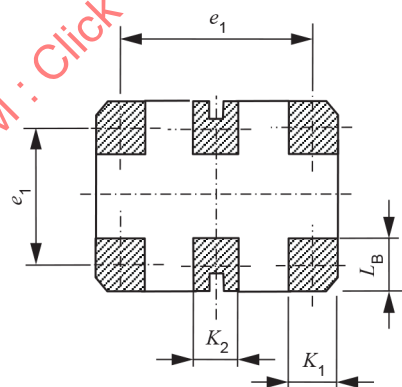
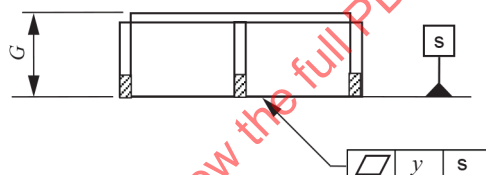
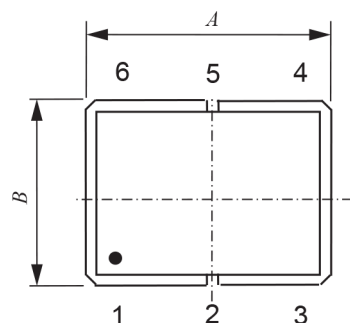
Terminal land connections of Type DCC-6/3225A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Output Enable		
2		NC		
3		Ground		
4		Output		
5		Output		
6		DC supply		



IEC

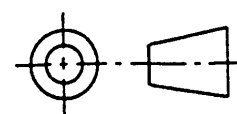
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(3,2)	3,40	
B	–	(2,5)	2,70	
G	–	–	1,10	
K_1	0,45	–	0,85	
K_2	0,40	–	0,80	
L_B	0,50	–	0,90	
e_1	–	2,55	–	
e_2	–	1,80	–	
y	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/3225A

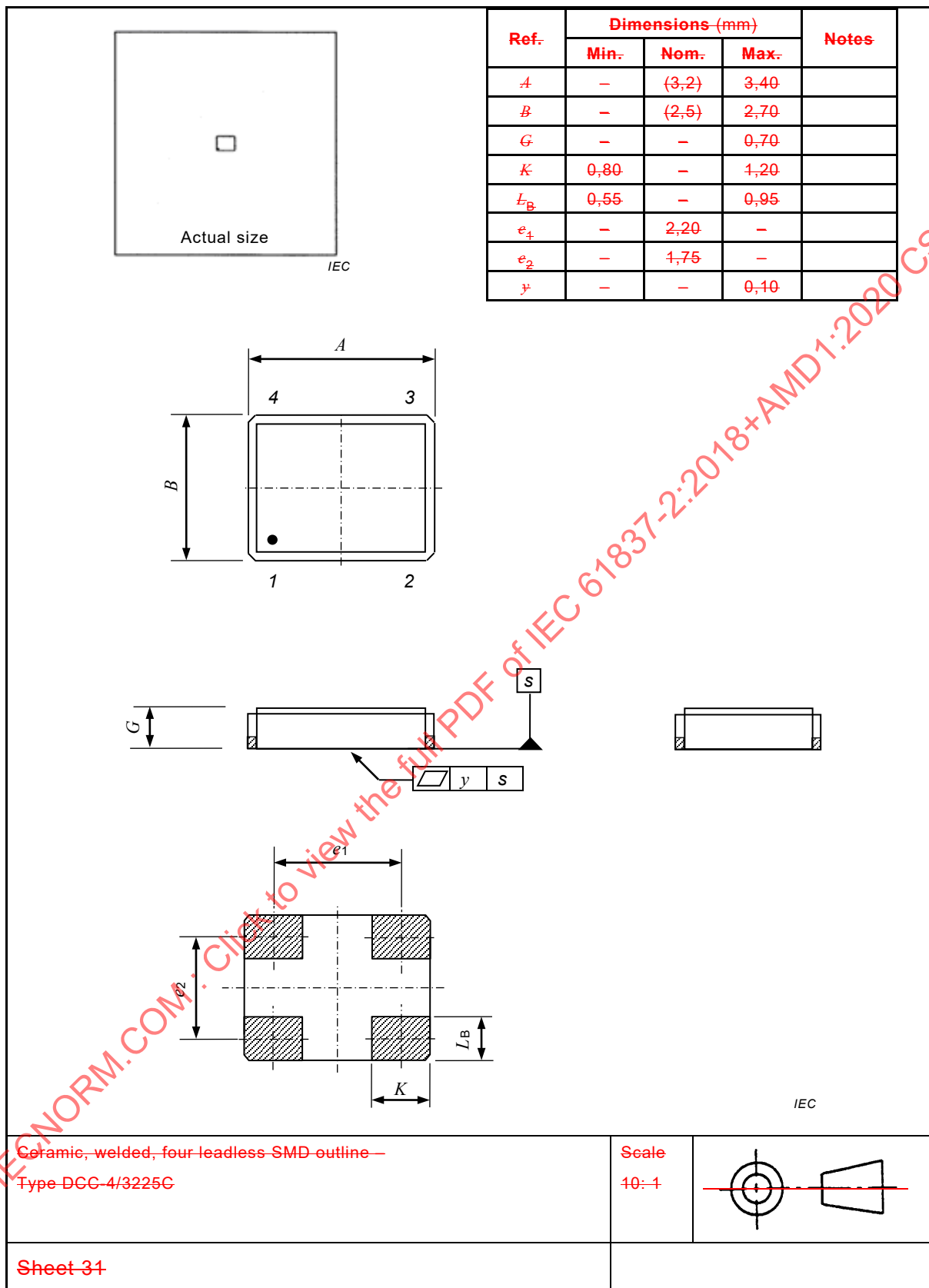
Scale
10: 1



Sheet 30

Terminal land connections of Type DCC-6/3225A

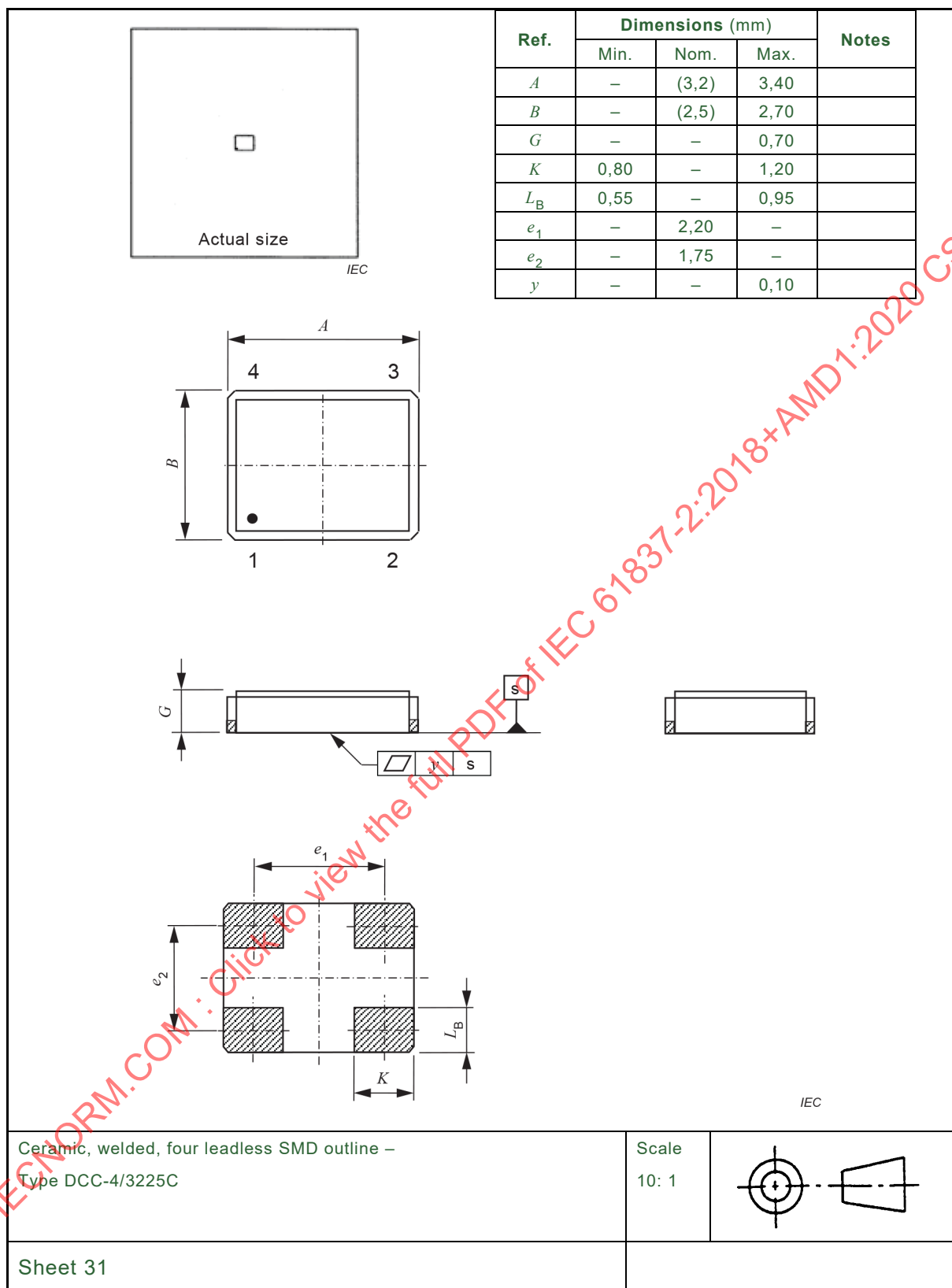
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Option		
3		Ground		
4		Output		
5		Option		
6		DC supply		



Terminal land connections of Type DCC-4/3225C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control voltage		
2	Option	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

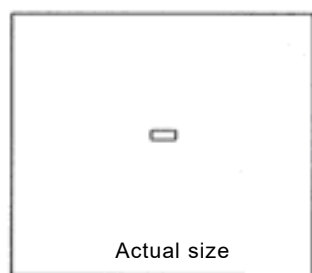
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Terminal land connections of Type DCC-4/3225C

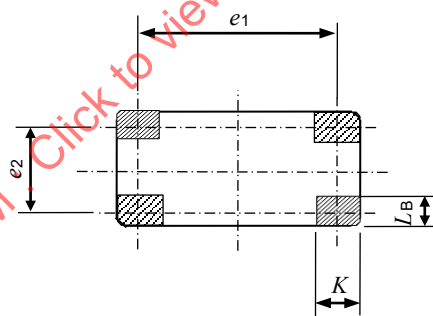
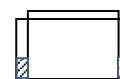
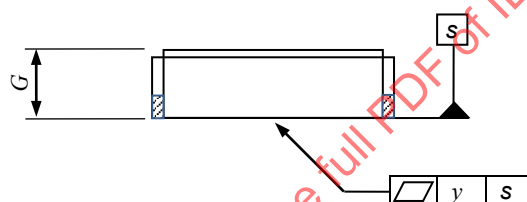
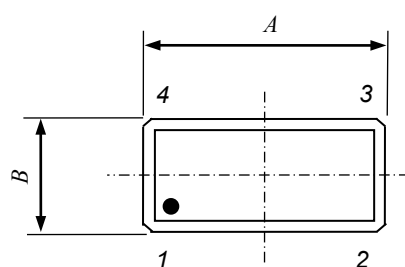
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Option		
2	Option	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

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IEC

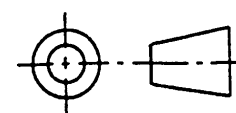
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(3,20)	3,40	
<i>B</i>	–	(1,50)	1,70	
<i>G</i>	–	–	1,00	
<i>K</i>	0,40	–	0,80	
<i>L_B</i>	0,20	–	0,60	
<i>e₁</i>	–	2,80	–	
<i>e₂</i>	–	0,90	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/3215C

Scale
10: 1

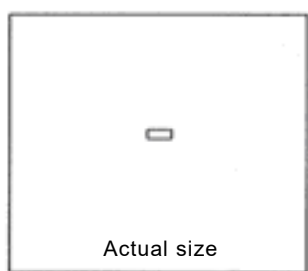


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Terminal land connections of Type DCC-4/3215C

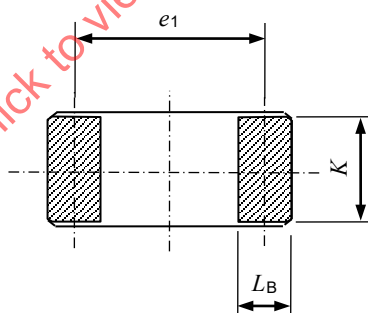
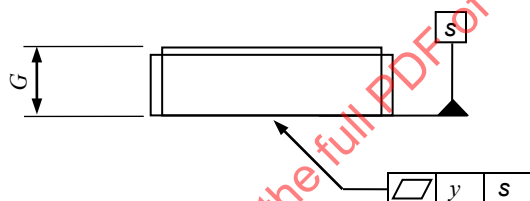
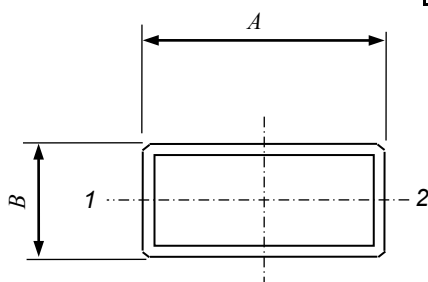
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control voltage		
2	Ground	Ground		
3	Ground	Output		
4	Terminal 2	DC supply		

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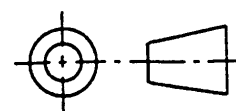
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(3,20)	3,40	
<i>B</i>	–	(1,50)	1,70	
<i>G</i>	–	–	0,90	
<i>K</i>	1,30	–	1,70	
<i>L_B</i>	0,50	–	0,90	
<i>e₁</i>	–	2,50	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, two leadless SMD outline –
Type DCC-2/3215C

Scale
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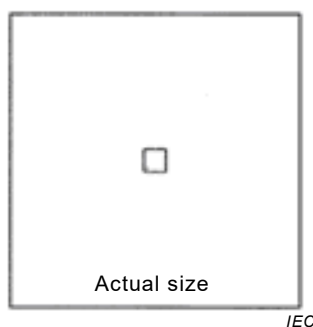


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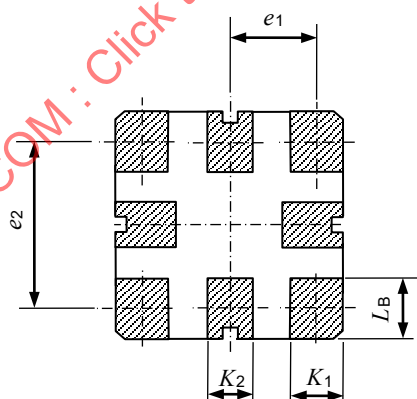
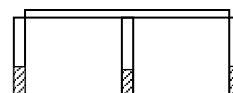
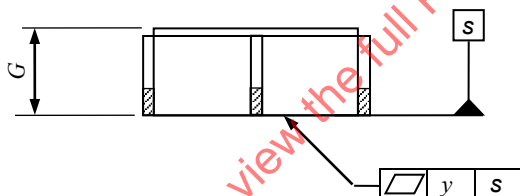
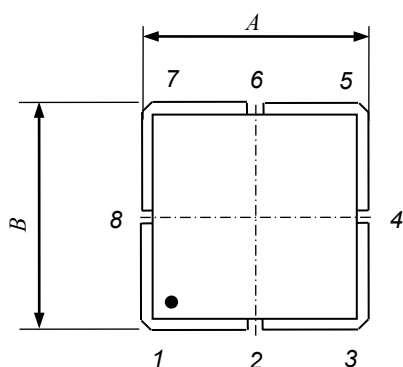
Terminal land connections of Type DCC-2/3215C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(3,0)	3,20	
B	–	(3,0)	3,20	
G	–	–	1,15	
K_1	0,50	–	0,90	
K_2	0,40	–	0,80	
L_B	0,70	–	0,90	Note
e_1	–	1,15	–	
e_2	–	2,20	–	
y	–	–	0,10	

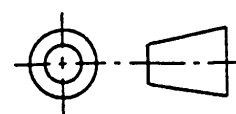


IEC

NOTE Dimension L_B max. can be increased to 1,60 mm for lead 4 to identify the orientation.

Ceramic, welded, eight leadless SMD outline –
Type QCC-8/3030B

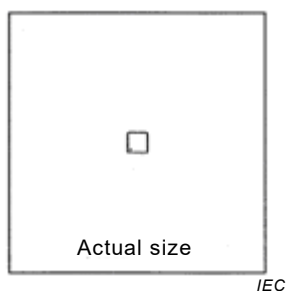
Scale
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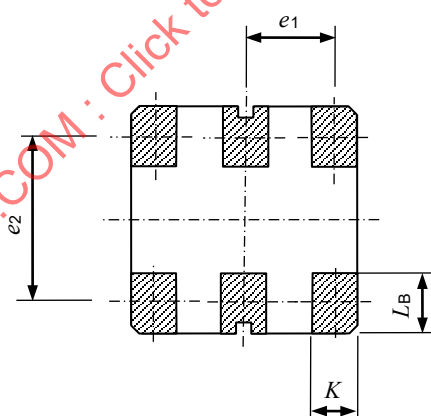
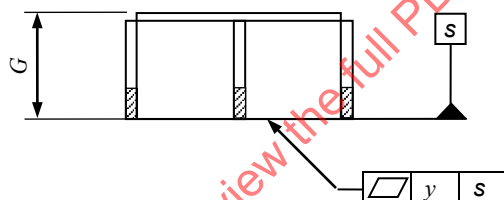
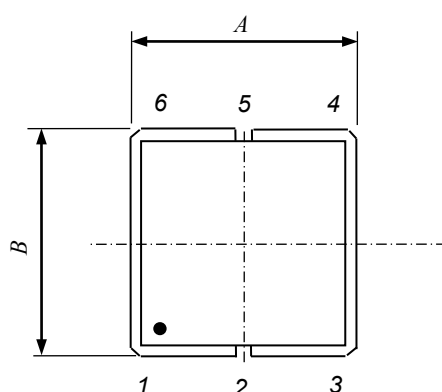
Terminal land connections of Type QCC-8/3030B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1			Input/Output	Input/Output
2			Ground	Ground
3			Ground	Option
4			Ground	Ground
5			Output/Input	Option
6			Ground	Ground
7			Ground	Output/Input
8			Ground	Ground

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Ref. □	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(3,0)	3,20	
B	–	(3,0)	3,20	
G	–	–	1,40	
K	0,40	–	0,80	
L_B	0,60	–	1,00	Note
e_1	–	1,20	–	
e_2	–	2,20	–	
y	–	–	0,10	

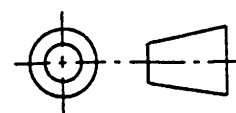


IEC

NOTE Dimension L_B max. can be increased to 1,60 mm for lead 6 to identify the orientation.

Ceramic, welded, six leadless SMD outline –
Type DCC-6/3030A

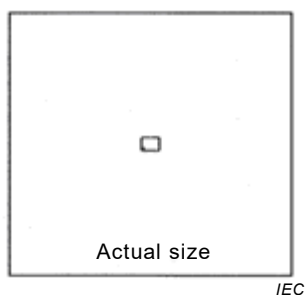
Scale
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Terminal land connections of Type DCC-6/3030A

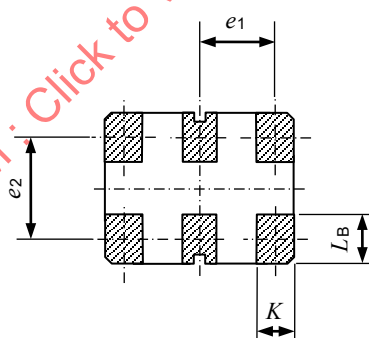
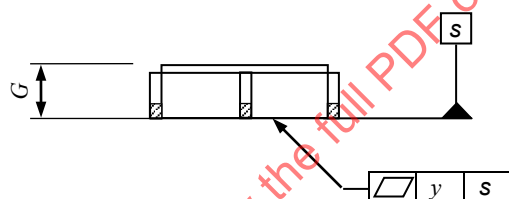
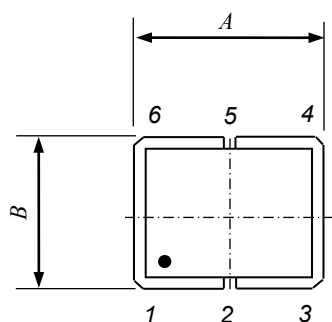
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Ground
2				Input/Output
3				Ground
4				Ground
5				Output/Input
6				Ground

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



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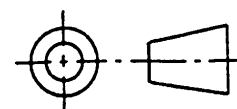
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(2,5)	2,70	
<i>B</i>	–	(2,0)	2,20	
<i>G</i>	–	–	1,10	
<i>K</i>	0,30	–	0,70	
<i>L_B</i>	0,45	–	0,85	
<i>e₁</i>	–	1,00	–	
<i>e₂</i>	–	1,35	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/2520A

Scale
10: 1

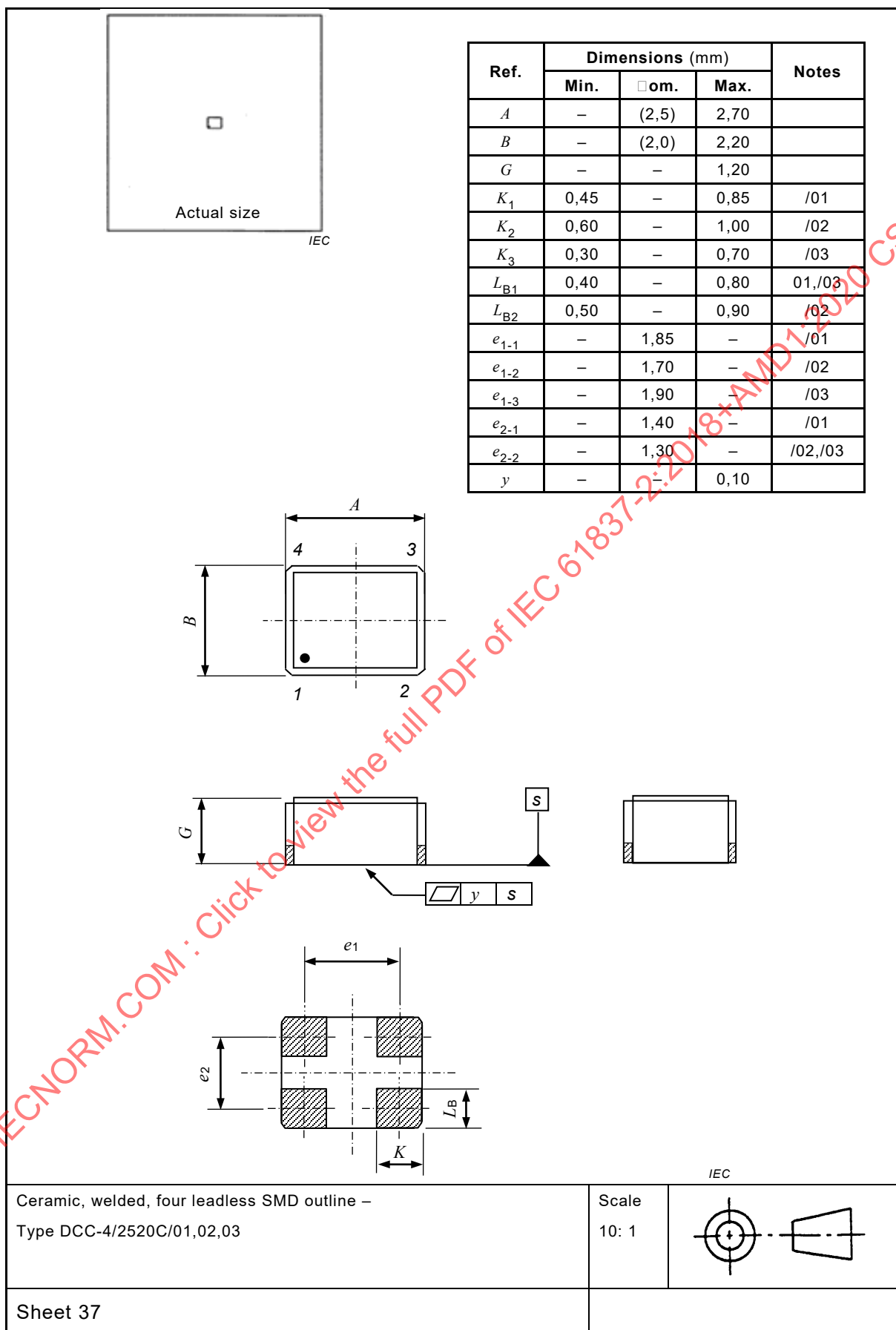


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Terminal land connections of Type DCC-6/2520A

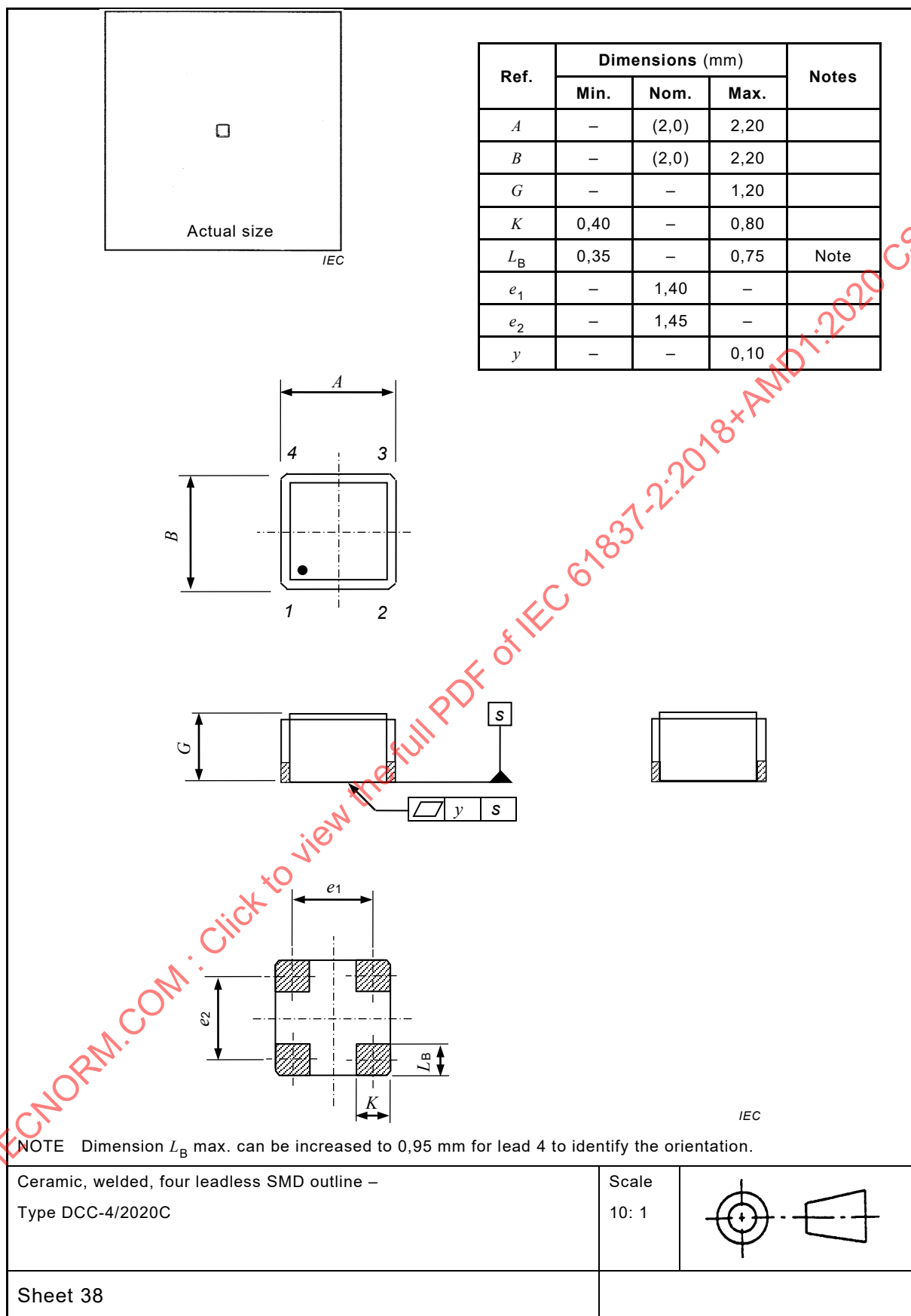
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option	Option	
2		Option	Ground	
3		Ground	Output/Input	
4		Output	Option	
5		Option	Ground	
6		DC supply	Input/Output	

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



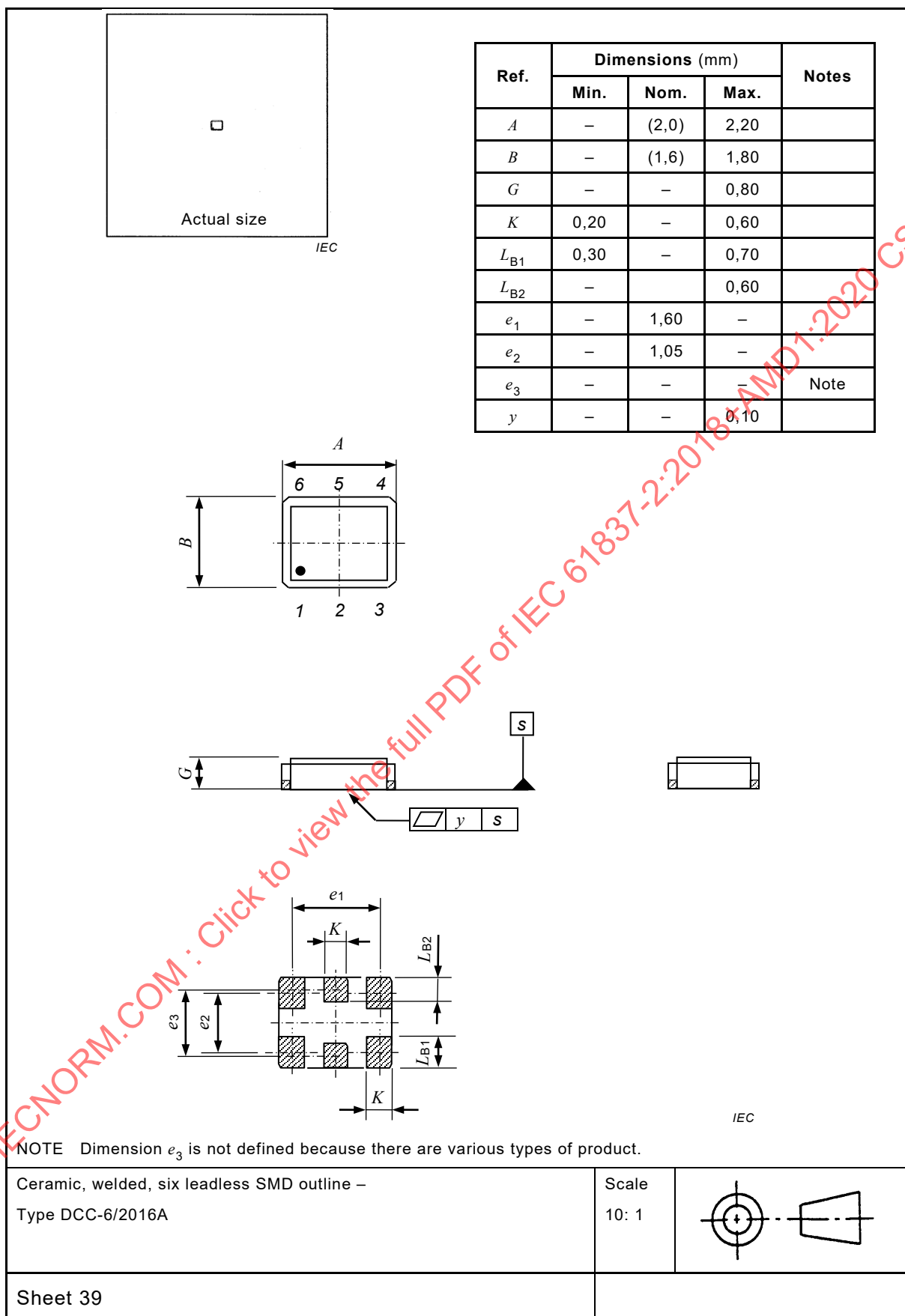
Terminal land connections of Type DCC-4/2520C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Option		
2	Ground/NC	Ground		
3	Terminal 2	Output		
4	Option	DC supply		



Terminal land connections of Type DCC-4/2020C

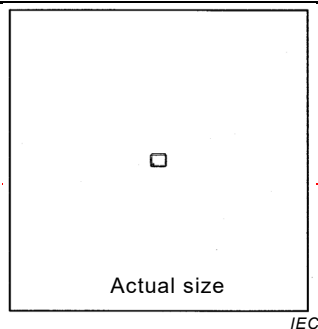
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1		Ground	Ground
2	Ground		Output/Input	Output/Input
3	Terminal 2		Ground	Input/Output
4	Ground		Input/ Output	Ground



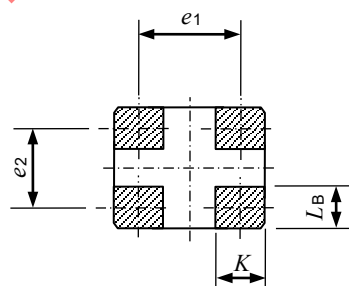
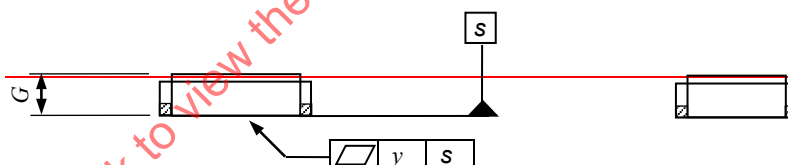
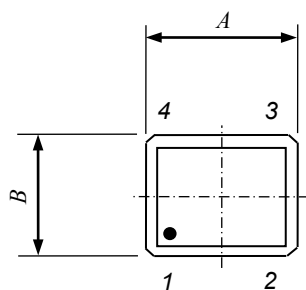
Terminal land connections of Type DCC-6/2016A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Option		
3		Ground		
4		Output		
5		Option		
6		DC supply		

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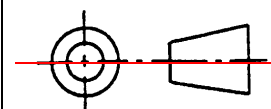
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(2,0)	2,20	
B	–	(1,6)	1,80	
G_4	–	–	0,55	/01
G_2	–	–	0,80	/02,/03
K_4	0,40	–	0,80	/01,/02
K_2	0,25	–	0,65	/03
L_B	0,30	–	0,70	
e_{4+4}	–	1,30	–	/01,/02
e_{4+2}	–	1,60	–	/03
e_2	–	1,05	–	
y	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD-outline –
Type DCC-4/2016C/01,02,03

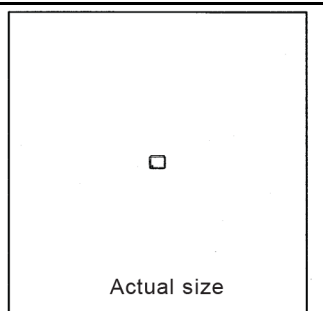
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Sheet 40

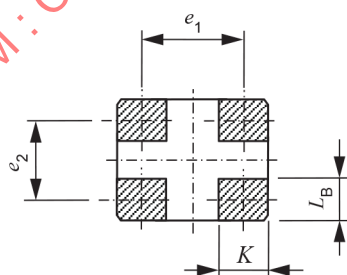
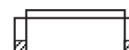
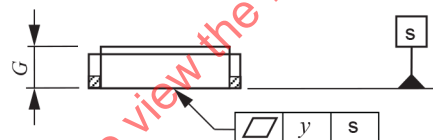
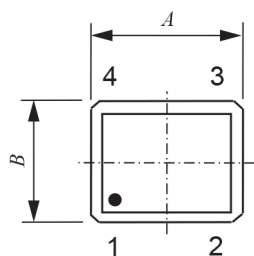
Terminal land connections of Type DCC-4/2016C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Ground			
3	Terminal 2			
4	Ground			



IEC

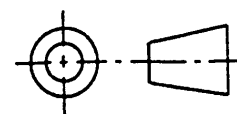
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(2,0)	2,20	
B	–	(1,6)	1,80	
G_1	–	–	0,55	/01
G_2	–	–	0,80	/02,/03
K_1	0,40	–	0,80	/01,/02
K_2	0,25	–	0,65	/03
L_B	0,30	–	0,70	
e_{1-1}	–	1,30	–	/01,/02
e_{1-2}	–	1,60	–	/03
e_2	–	1,05	–	
y	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/2016C/01,02,03

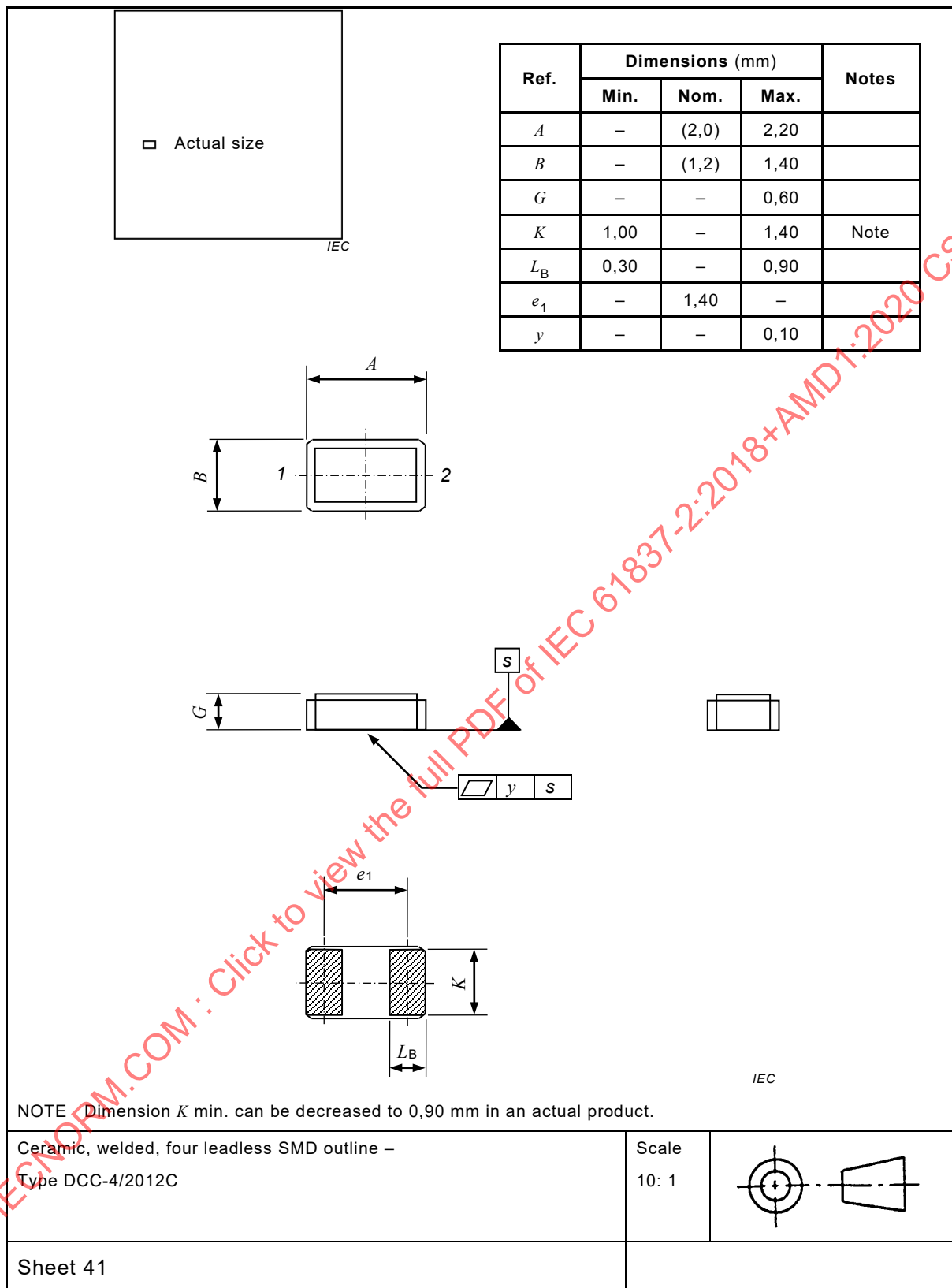
Scale
10: 1



Sheet 40

Terminal land connections of Type DCC-4/2016C

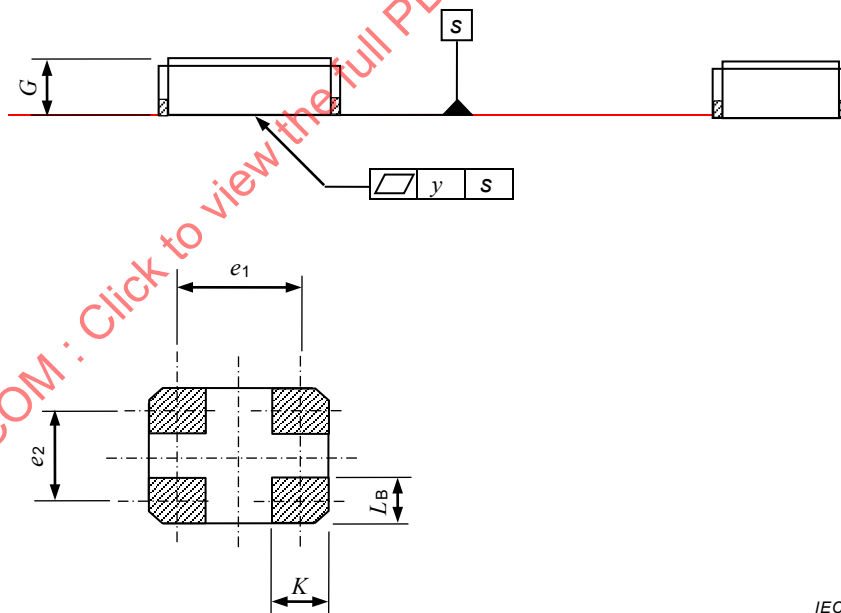
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Option		
2	Ground	Ground		
3	Terminal 2	Output		
4	Option	DC supply		



Terminal land connections of Type DCC-2/2012C

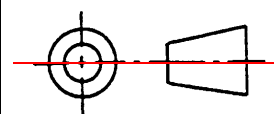
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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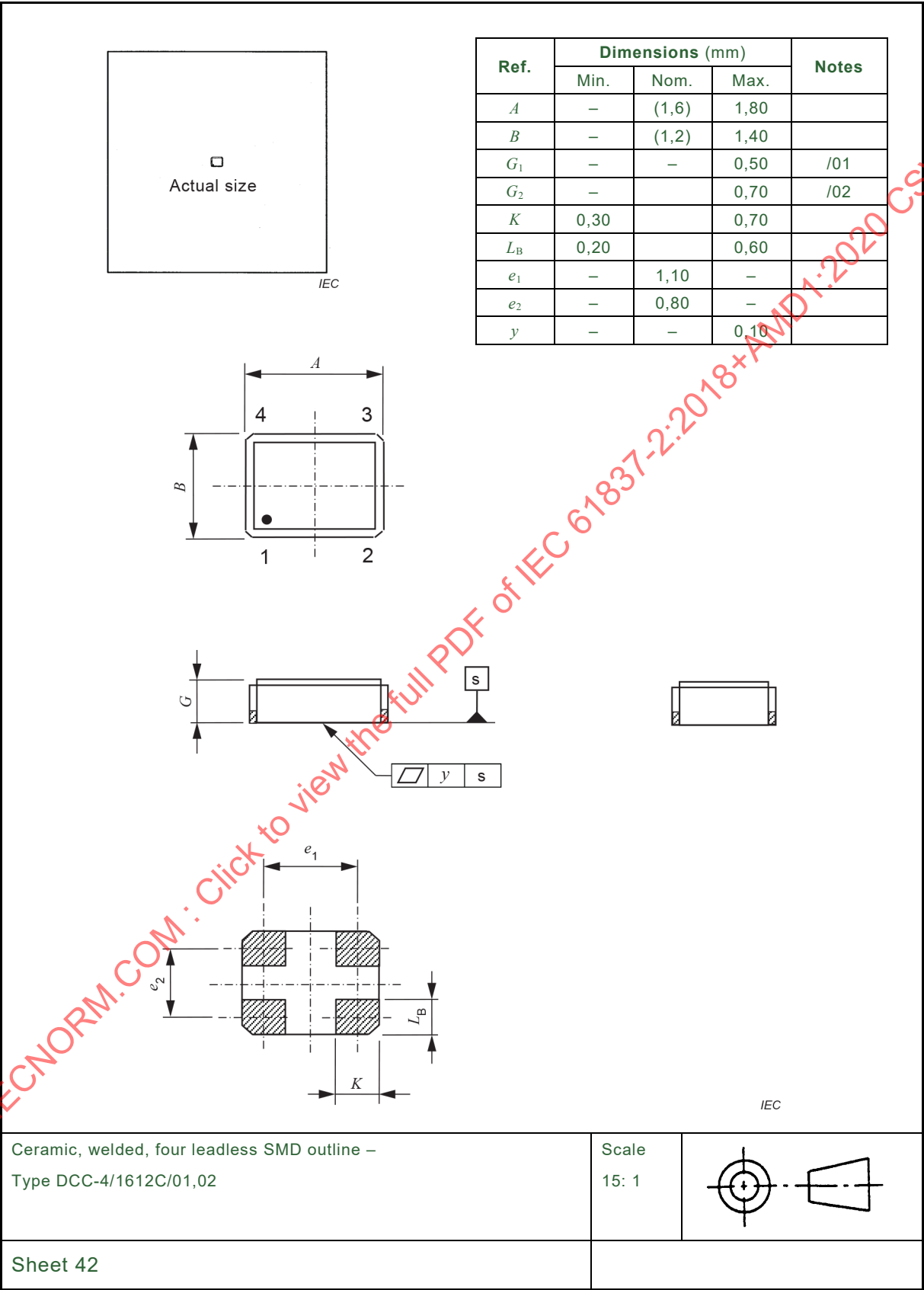
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	—	(1,6)	1,80	
B	—	(1,2)	1,40	
G_4	—	—	0,50	/01
G_2	—	—	0,70	/02
K	0,30	—	0,70	
L_B	0,20	—	0,60	
e_4	—	1,10	—	
e_2	—	0,80	—	
y	—	—	0,10	

~~Scale~~
~~15:1~~



Terminal lead connections of Type DCC-4/1612C

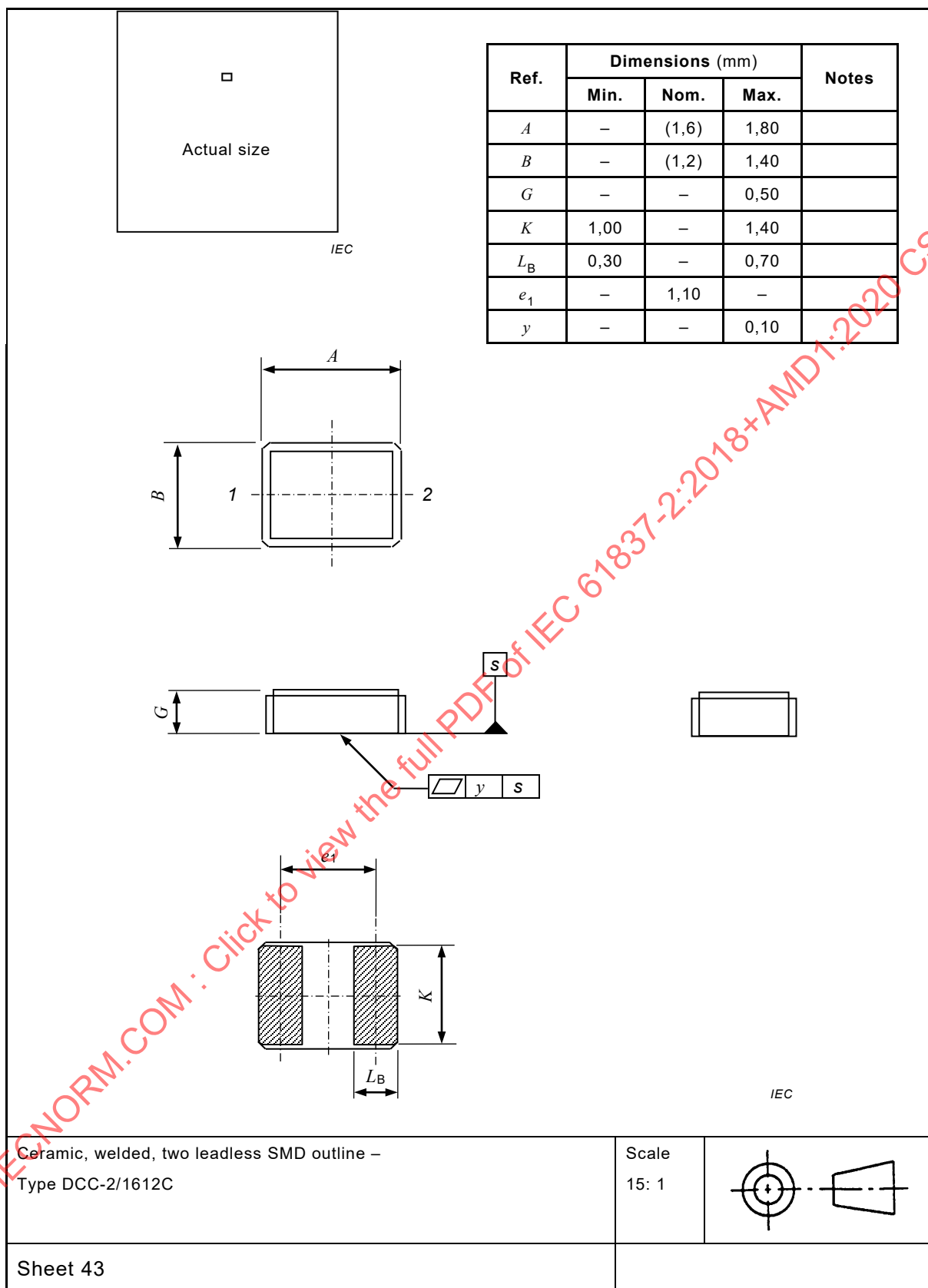
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW device
1	Terminal 1	Option		
2	Ground	Ground		
3	Terminal 2	Output		
4	Ground	DC supply		



Terminal lead connections of Type DCC-4/1612C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW device
1	Terminal 1	Option		
2	Ground	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

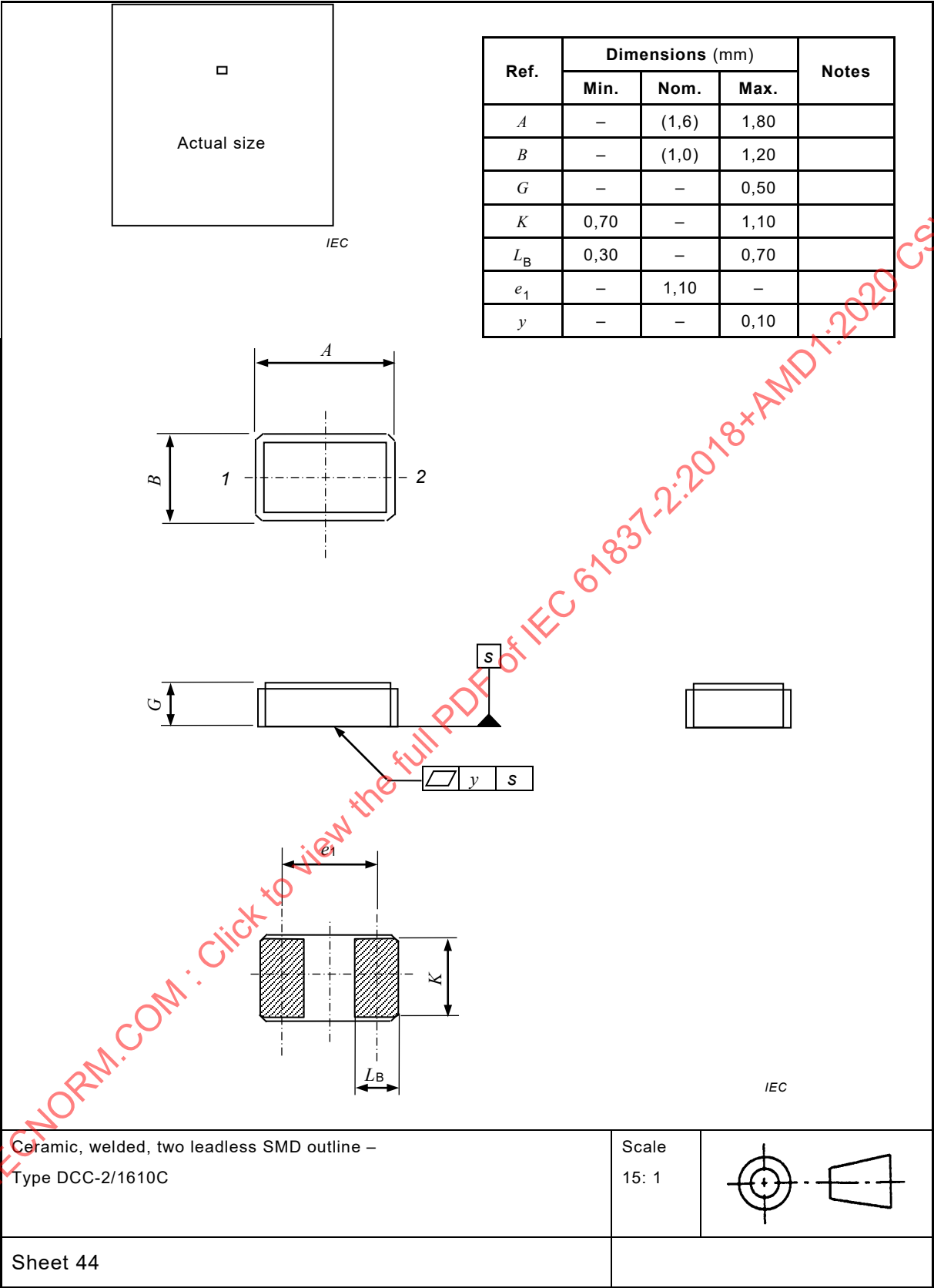
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Terminal land connections of Type DCC-2/1612C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

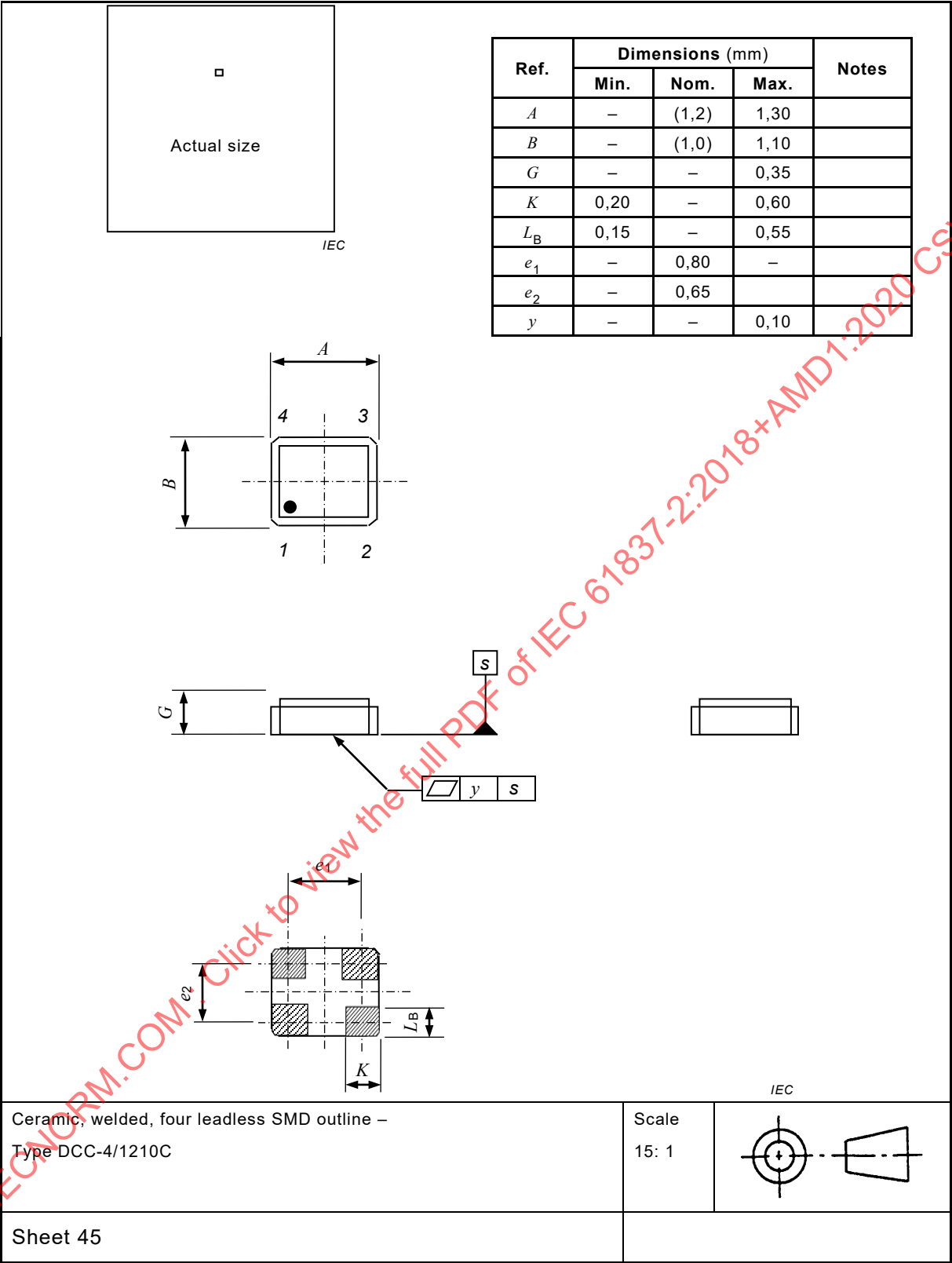
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Terminal land connections of Type DCC-2/1610C

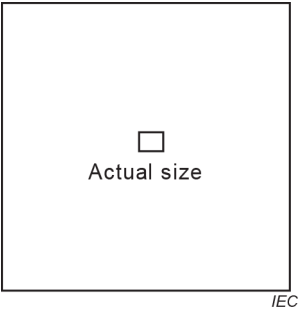
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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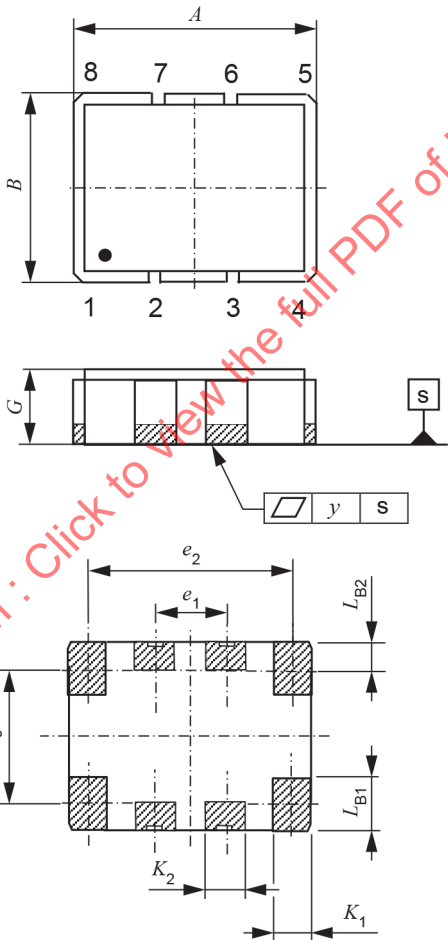


Terminal land connections of Type DCC-4/1210C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Ground			
3	Terminal 2			
4	NC			

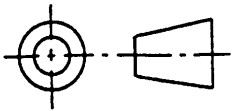


Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	—	(3,2)	3,40	
<i>B</i>	—	(2,5)	2,70	
<i>G</i>	—	—	1,00	
<i>K</i> ₁	0,30	—	0,70	
<i>K</i> ₂	0,35	—	0,75	
<i>L</i> _{B1}	0,50	—	0,90	
<i>L</i> _{B2}	0,15	—	0,55	
<i>e</i> ₁	—	0,95	—	
<i>e</i> ₂	—	2,70	—	
<i>e</i> ₃	—	1,80	—	
<i>y</i>	—	—	0,10	



Ceramic, welded, eight leadless SMD outline-
Type DCC-8/3225A

Scale
10: 1



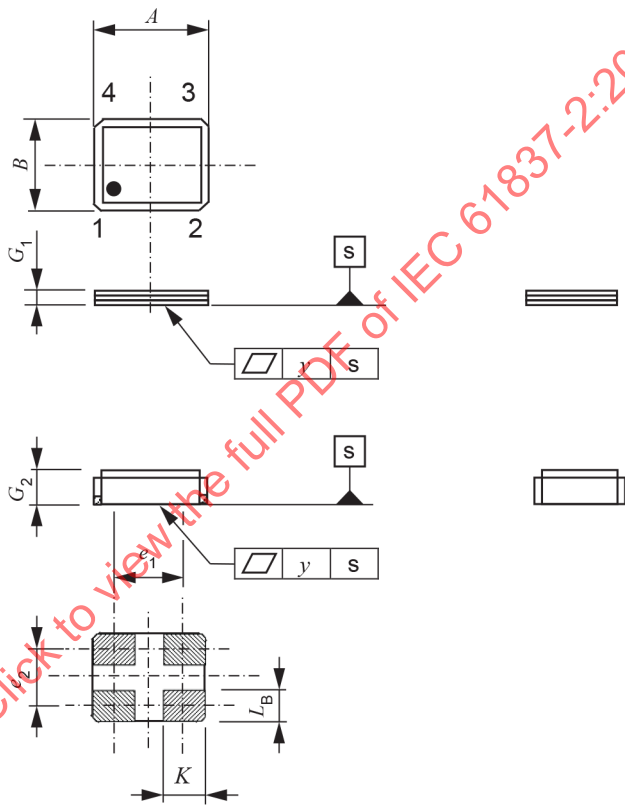
Terminal land connections of Type DCC-8/3225A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Output Enable		
2		INT		
3		NC		
4		Output		
5		Ground		
6		SCL		
7		SDA		
8		DC supply		

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV

Actual size omitted

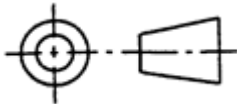
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
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B	—	(0,8)	1,0	
G ₁	—	—	0,13	/01
G ₂	—	—	0,30	/02
K	0,20	—	0,60	
L _B	0,10	—	0,50	
e ₁	—	0,60	—	
e ₂	—	0,50	—	
y	—	—	0,1	



IEC

Ceramic, welded, four leadless SMD outline-
Type DCC-4/1008C/01,02

Scale
15: 1



Sheet 47

Terminal land connections of Type DCC-4/1008C/01,02

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Ground			
3	Terminal 2			
4	NC			

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IEC 61019-1:2004, *Surface acoustic wave (SAW) resonators – Part 1: Generic specification*

IEC 61019-2:2005, *Surface acoustic wave (SAW) resonators – Part 2: Guide to the use*

ISO 1101:2017, *Geometrical product specifications (GPS) – Geometrical tolerancing – Tolerances of form, orientation, location and run-out*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

**DISPOSITIFS PIÉZOÉLECTRIQUES À MONTAGE EN SURFACE POUR LA
COMMANDE ET LE CHOIX DE LA FRÉQUENCE – ENCOMBREMENTS
NORMALISÉS ET CONNEXIONS DES SORTIES –****Partie 2: Enveloppes en céramique****AVANT-PROPOS**

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- 9) L'attention est attirée sur le fait que certains des éléments de la présente publication de l'IEC peuvent faire l'objet de droits de brevet. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets et de ne pas avoir signalé leur existence.

Cette version consolidée de la Norme IEC officielle et de son amendement a été préparée pour la commodité de l'utilisateur.

L'IEC 61837-2 édition 3.1 contient la troisième édition (2018-05) [documents 49/1252/CDV et 49/1276/RVC] et son amendement 1 (2020-09) [documents 49/1338/CDV et 49/1347/RVC].

Dans cette version Redline, une ligne verticale dans la marge indique où le contenu technique est modifié par l'amendement 1. Les ajouts sont en vert, les suppressions sont en rouge, barrées. Une version Finale avec toutes les modifications acceptées est disponible dans cette publication.

La Norme internationale IEC 61837-2 a été établie par le comité d'études 49 de l'IEC: Dispositifs piézoélectriques, diélectriques et électrostatiques et matériaux associés pour la détection, le choix et la commande de la fréquence.

Cette troisième édition constitue une révision technique.

La présente édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) révision des figures pour correspondre à la notation des dessins de l'IEC 61240:2016;
- b) ajout des 7 enveloppes suivantes: DCC-6/5032A, DCC-6/3225A, DCC-4/3215C, DCC-6/2016A, DCC-2/2012C, DCC-2/1610C, DCC-4/1210C.

Par conséquent, la présente troisième édition contient 45 types d'enveloppes, dont la liste est donnée au Tableau 1.

La présente Norme internationale doit être lue conjointement avec l'IEC 61240:2016.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 61837, publiée sous le titre général *Dispositifs piézoélectriques à montage en surface pour la commande et le choix de la fréquence – Encombrements normalisés et connexions des sorties*, peut être consultée sur le site web de l'IEC.

Le comité a décidé que le contenu de la publication de base et de son amendement ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous "<http://webstore.iec.ch>" dans les données relatives à la publication recherchée. A cette date, la publication sera

- reconduite,
- supprimée,
- remplacée par une édition révisée, ou
- amendée.

IMPORTANT – Le logo "colour inside" qui se trouve sur la page de couverture de cette publication indique qu'elle contient des couleurs qui sont considérées comme utiles à une bonne compréhension de son contenu. Les utilisateurs devraient, par conséquent, imprimer cette publication en utilisant une imprimante couleur.

DISPOSITIFS PIÉZOÉLECTRIQUES À MONTAGE EN SURFACE POUR LA COMMANDE ET LE CHOIX DE LA FRÉQUENCE – ENCOMBREMENTS NORMALISÉS ET CONNEXIONS DES SORTIES –

Partie 2: Enveloppes en céramique

1 Domaine d'application

La présente partie de l'IEC 61837 traite des encombrements normalisés et des connexions des sorties des dispositifs à montage en surface pour la commande et le choix de la fréquence applicables aux enveloppes en céramique, et est basée sur l'IEC 61240:2016.

2 Références normatives

Les documents suivants cités dans le texte constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 61240:2016, *Dispositifs piézoélectriques – Préparation des dessins d'encombrement des dispositifs pour montage en surface pour la commande et le choix de la fréquence – Règles générales*

3 Termes et définitions

Aucun terme n'est défini dans le présent document.

L'ISO et l'IEC tiennent à jour des bases de données terminologiques destinées à être utilisées en normalisation, consultables aux adresses suivantes:

- IEC Electropedia: disponible à l'adresse <http://www.electropedia.org/>
- ISO Online browsing platform: disponible à l'adresse <http://www.iso.org/obp>

4 Configuration des enveloppes

Les enveloppes des dispositifs à montage en surface sont constituées de matériaux céramiques et équipées de sorties comportant une pellicule métallique (type à plots) d'un type déposé, sur la base du système descriptif de désignation pour semiconducteurs – enveloppes des dispositifs.

Les symboles de configuration sont tels qu'indiqués ci-dessous:

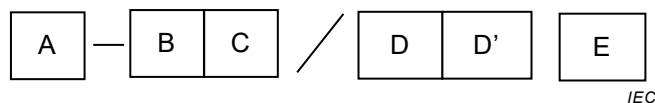
- DCC¹ (support de puce à deux rangées de sorties);
- QCC² (support de puce à quatre rangées de sorties).

¹ DCC = *dual chip carrier*.

² QCC = *quad chip carrier*.

5 Désignation des types

La désignation des types est présentée sur les quatre parties comme suit:



A: Symbole de configuration des enveloppes:

- DCC (support de puce à deux rangées de sorties);
- QCC (support de puce à quatre rangées de sorties).

B: Structure des sorties: le type à plots n'a pas de marque.

C: Nombre de sorties

D: Numéro de série des deux figures

E: Disposition de la zone de contact de sortie:

Dans le cas des types DCC:

- A (disposition dans le sens de la largeur ou le sens de la largeur et le coin);
- B (disposition dans les sens de la longueur ou le sens de la longueur et le coin);
- C (uniquement sur les coins).

Dans le cas des types QCC:

- A (uniquement sur les côtés);
- B (sur les côtés et sur les coins).

6 Dimensions des enveloppes en céramique

Les dimensions précisées dans le présent document s'appliquent à tous les dispositifs à montage en surface finis pour la commande et le choix de la fréquence. Seules sont données les dimensions qui répondent aux exigences de l'IEC 61240.

7 Connexions des sorties

Les recommandations pour les connexions des sorties de tous les dispositifs à montage en surface finis pour la commande et le choix de la fréquence sont données dans les feuilles individuelles suivantes. Les connexions des sorties doivent toujours être données dans la spécification particulière.

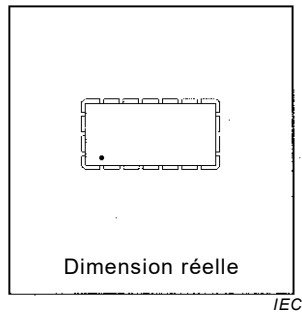
8 Désignation des enveloppes en céramique

Le Tableau 1 dresse la liste comprenant tous les nouveaux types d'enveloppes en indiquant leur numéro de feuille et en en donnant une brève description. Les anciens noms des enveloppes sont également répertoriés en références.

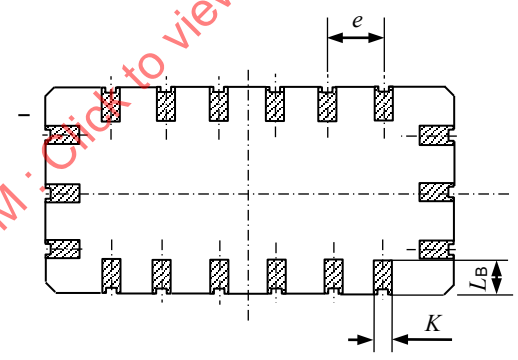
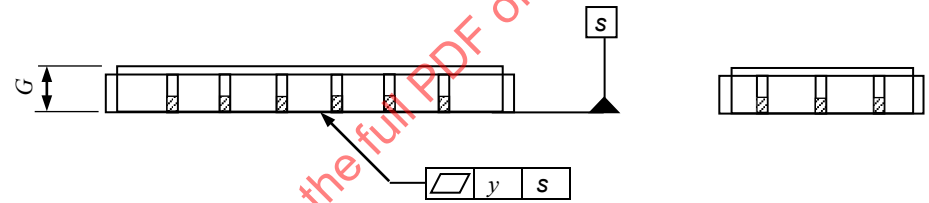
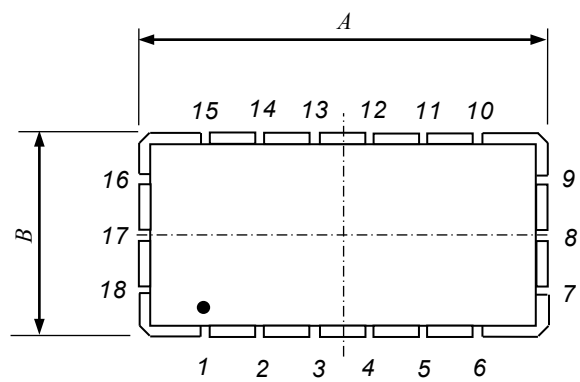
Tableau 1 – Désignation des enveloppes en céramique

No.	Type	Ancien type	N° de feuille	Description
1	QCC-18/1809A	QCC-18/01	Feuille 1	Enveloppe en céramique, soudée, destinée au montage en surface à dix-huit plots
2	QCC-12/1407A		Feuille 2	Enveloppe en céramique, soudée, destinée au montage en surface à douze plots
3	DCC-4/1206A	DCC-4/01	Feuille 3	Enveloppe en céramique, destinée au montage en surface à quatre plots
4	DCC-2/1206A		Feuille 4	Enveloppe en céramique, destinée au montage en surface à deux plots
5	QCC-10/9272A		Feuille 5	Enveloppe en céramique, soudée, destinée au montage en surface à dix plots
6	DCC-4/9070A		Feuille 6	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
7	DCC-4/8045B	DCC-04/02, 03	Feuille 7	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
8	DCC-2/8045B		Feuille 8	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
9	DCC-6/7834B		Feuille 9	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
10	DCC-6/7050A		Feuille 10	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
11	DCC-4/7050A	DCC-4/08	Feuille 11	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
12	DCC-4/7050B	DCC-4/04, 05	Feuille 12	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
13	QCC-10/7050A		Feuille 13	Enveloppe en céramique, soudée, destinée au montage en surface à dix plots
14	QCC-6/7050A	QCC-6/01, 02	Feuille 14	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
15	DCC-6/6035A	DCC-4/06, 07	Feuille 15	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
16	DCC-4/6035C		Feuille 16	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
17	DCC-2/6035C		Feuille 17	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
18	QCC-8/5050A	QCC-8/02	Feuille 18	Enveloppe en céramique, soudée, destinée au montage en surface à huit plots
19	QCC-12/5045A	QCC-12/02	Feuille 19	Enveloppe en céramique, soudée, destinée au montage en surface à douze plots
20	QCC-8/5045A		Feuille 20	Enveloppe en céramique, soudée, destinée au montage en surface à huit plots
21	DCC-6/5032A		Feuille 21	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
22	DCC-4/5032A		Feuille 22	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
23	DCC-4/5032C		Feuille 23	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
24	DCC-2/5032B	DCC-2/01	Feuille 24	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
25	DCC-2/4818C		Feuille 25	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
26	DCC-2/4115C		Feuille 26	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots

No.	Type	Ancien type	N° de feuille	Description
27	DCC-4/4025C	DCC-6/01	Feuille 27	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
28	QCC-8/3838A		Feuille 28	Enveloppe en céramique, soudée, destinée au montage en surface à huit plots
29	DCC-6/3838A		Feuille 29	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
30	DCC-6/3225A		Feuille 30	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
31	DCC-4/3225C		Feuille 31	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
32	DCC-4/3215C		Feuille 32	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
33	DCC-2/3215C		Feuille 33	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
34	QCC-8/3030B		Feuille 34	Enveloppe en céramique, soudée, destinée au montage en surface à huit plots
35	DCC-6/3030A		Feuille 35	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
36	DCC-6/2520A		Feuille 36	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
37	DCC-4/2520C/01,02,03		Feuille 37	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
38	DCC-4/2020C		Feuille 38	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
39	DCC-6/2016A		Feuille 39	Enveloppe en céramique, soudée, destinée au montage en surface à quatre six plots
40	DCC-4/2016C/01,02,03		Feuille 40	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
41	DCC-2/2012C		Feuille 41	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
42	DCC-4/1612C/01,02		Feuille 42	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
43	DCC-2/1612C		Feuille 43	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
44	DCC-2/1610C		Feuille 44	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
45	DCC-4/1210C		Feuille 45	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
46	DCC-8/3225A		Feuille 46	Enveloppe en céramique, soudée, destinée au montage en surface à huit plots
47	DCC-4/1008C/0,1,02		Feuille 47	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots



Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(18,0)	18,30	
B	–	(9,0)	9,30	
G	–	–	2,00	
K	0,50	–	1,10	
L_B	1,20	–	1,80	Note
e	–	2,54	–	
y	–	–	0,10	

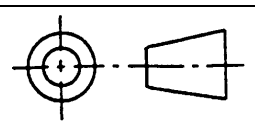


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NOTE La dimension L_B max. peut être augmentée jusqu'à 2,10 mm pour la sortie 1 pour identifier l'orientation.

Enveloppe en céramique, soudée, destinée au montage en surface à dix-huit plots –
Type QCC-18/1809A

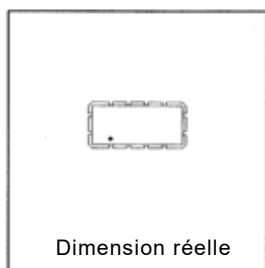
Echelle
3: 1



Feuille 1

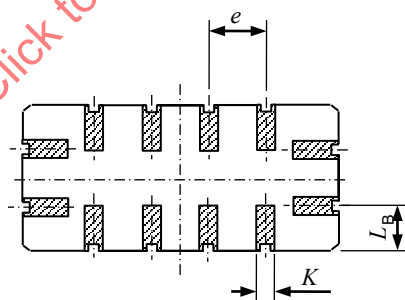
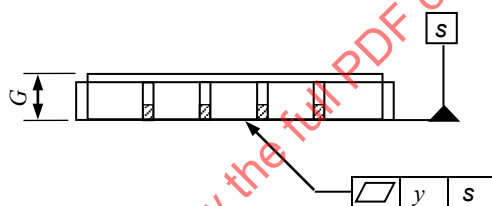
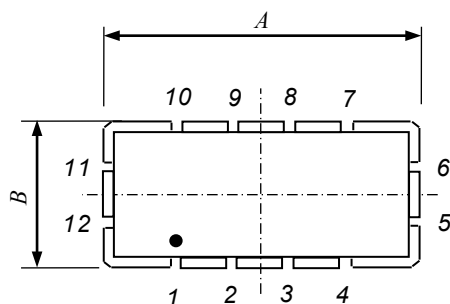
Connexions des zones de contact des sorties de type QCC-18/1809A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1				Masse
2				Facultatif
3				Facultatif
4				Facultatif
5				Facultatif
6				Masse
7				Entrée/Sortie
8				Masse
9				Entrée/Sortie/Masse
10				Masse
11				Facultatif
12				Facultatif
13				Facultatif
14				Facultatif
15				Masse
16				Sortie/Entrée
17				Masse
18				Sortie/Entrée/Masse



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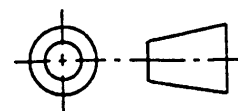
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(14,0)	14,30	
<i>B</i>	–	(6,5)	6,80	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	1,10	
<i>L_B</i>	1,70	–	2,30	
<i>e</i>	–	2,54	–	
<i>y</i>	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à douze plots –
Type QCC-12/1407A

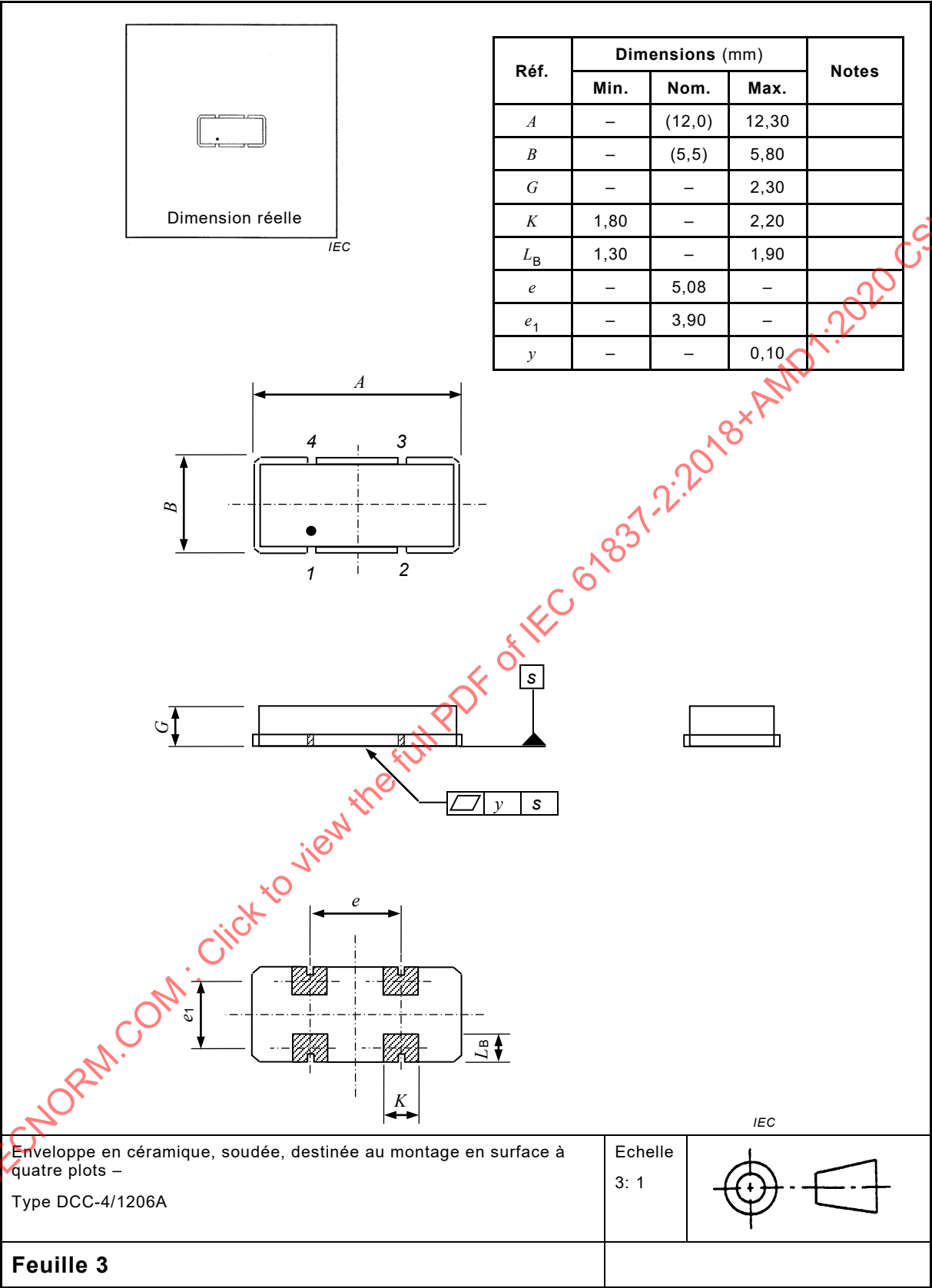
Echelle
3: 1



Feuille 2

Connexions des zones de contact des sorties de type QCC-12/1407A

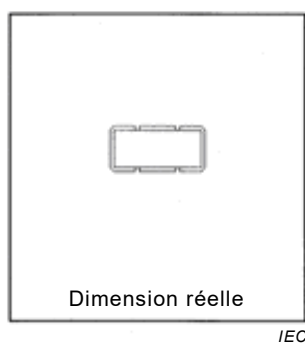
N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1				Facultatif
2				Facultatif
3				Masse
4				Facultatif
5				Sortie/Entrée
6				Sortie/Entrée/Masse
7				Facultatif
8				Masse
9				Facultatif
10				Facultatif
11				Entrée/Sortie
12				Entrée/Sortie/Masse



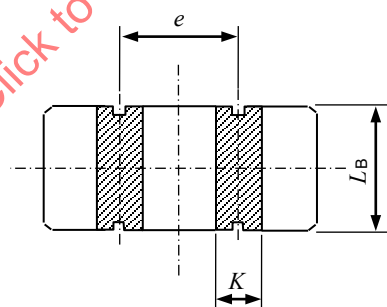
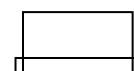
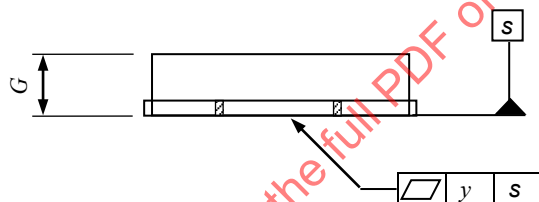
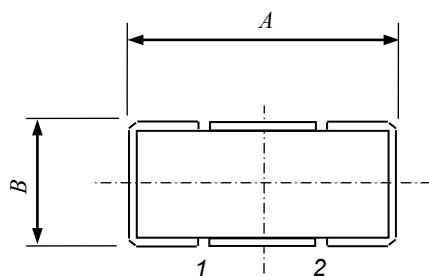
Connexions des zones de contact des sorties de type DCC-4/1206A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Tension de commande		
2	NC	Masse		
3	Sortie 2	Sortie		
4	NC	Alimentation en courant continu		

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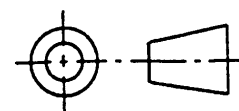
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(12,0)	12,30	
<i>B</i>	–	(5,5)	5,80	
<i>G</i>	–	–	2,70	
<i>K</i>	1,60	–	2,20	
<i>L_B</i>	5,20	–	5,80	
<i>e</i>	–	5,08	–	
<i>y</i>	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à deux plots –
Type DCC-2/1206A

Echelle
3: 1

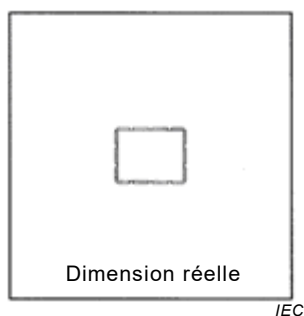


Feuille 4

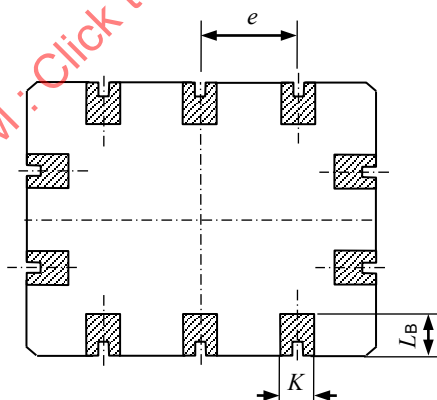
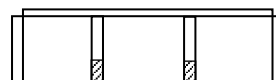
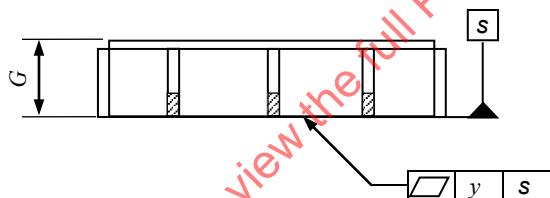
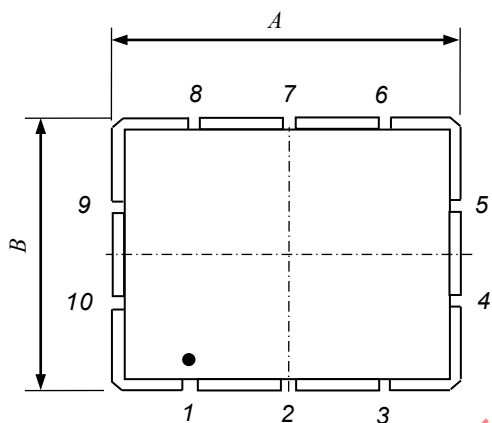
Connexions des zones de contact des sorties de type DCC-2/1206A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Sortie 2			

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(9,2)	9,50	
<i>B</i>	–	(7,2)	7,50	
<i>G</i>	–	–	2,00	
<i>K</i>	0,60	–	1,20	
<i>L_B</i>	0,80	–	1,40	Note
<i>e</i>	–	2,54	–	
<i>y</i>	–	–	0,10	

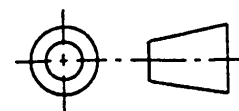


IEC

NOTE La dimension *L_B* max. peut être augmentée jusqu'à 2,00 mm pour la sortie 1 pour identifier l'orientation.

Enveloppe en céramique, soudée, destinée au montage en surface à dix plots –
Type QCC-10/9272A

Echelle
5: 1

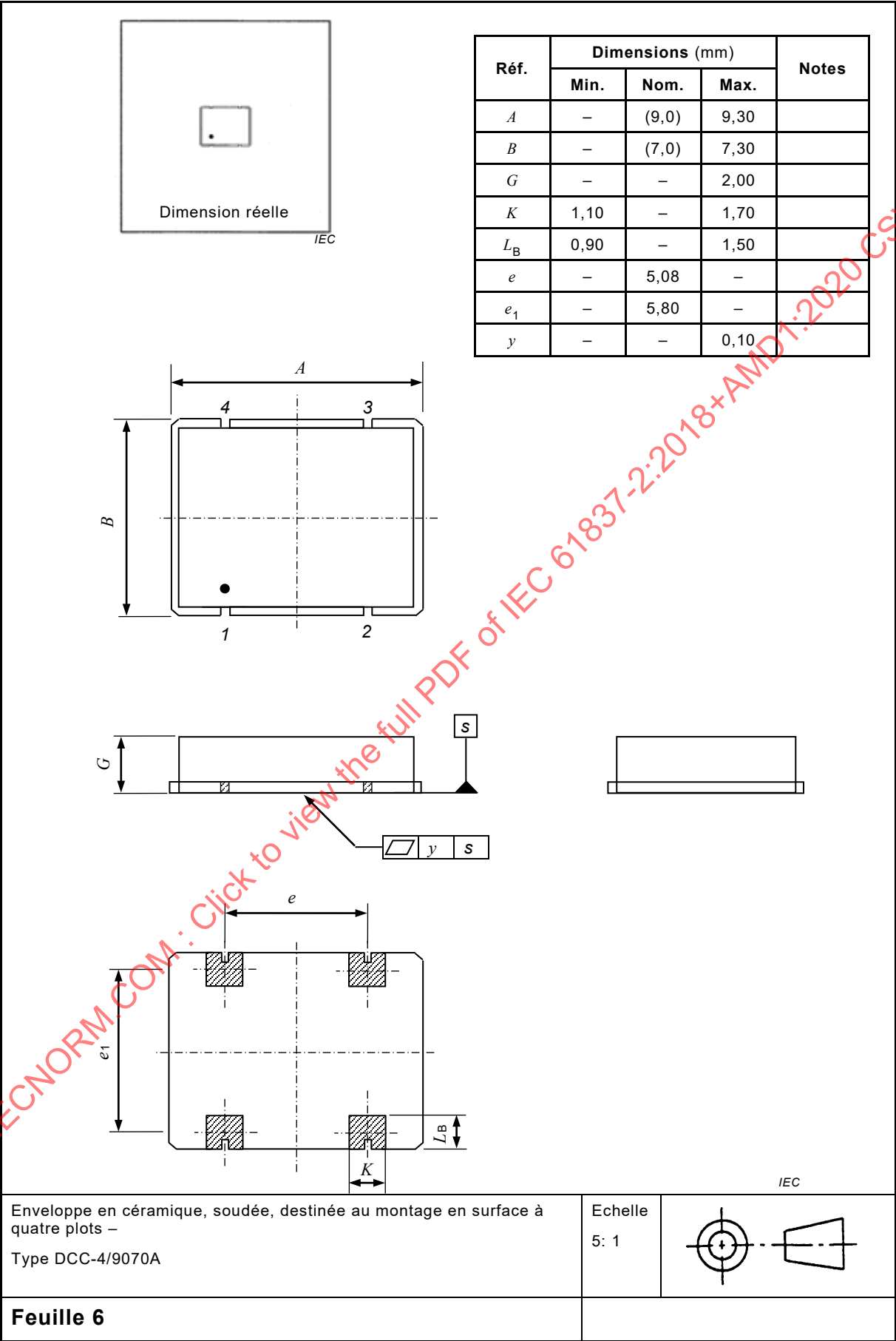


Feuille 5

Connexions des zones de contact des sorties de type QCC-10/9272A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1				Entrée/Sortie/Masse
2				Entrée/Sortie
3				Masse
4				Masse
5				Masse
6				Sortie/Entrée/Masse
7				Sortie/Entrée
8				Facultatif
9				Masse
10				Masse

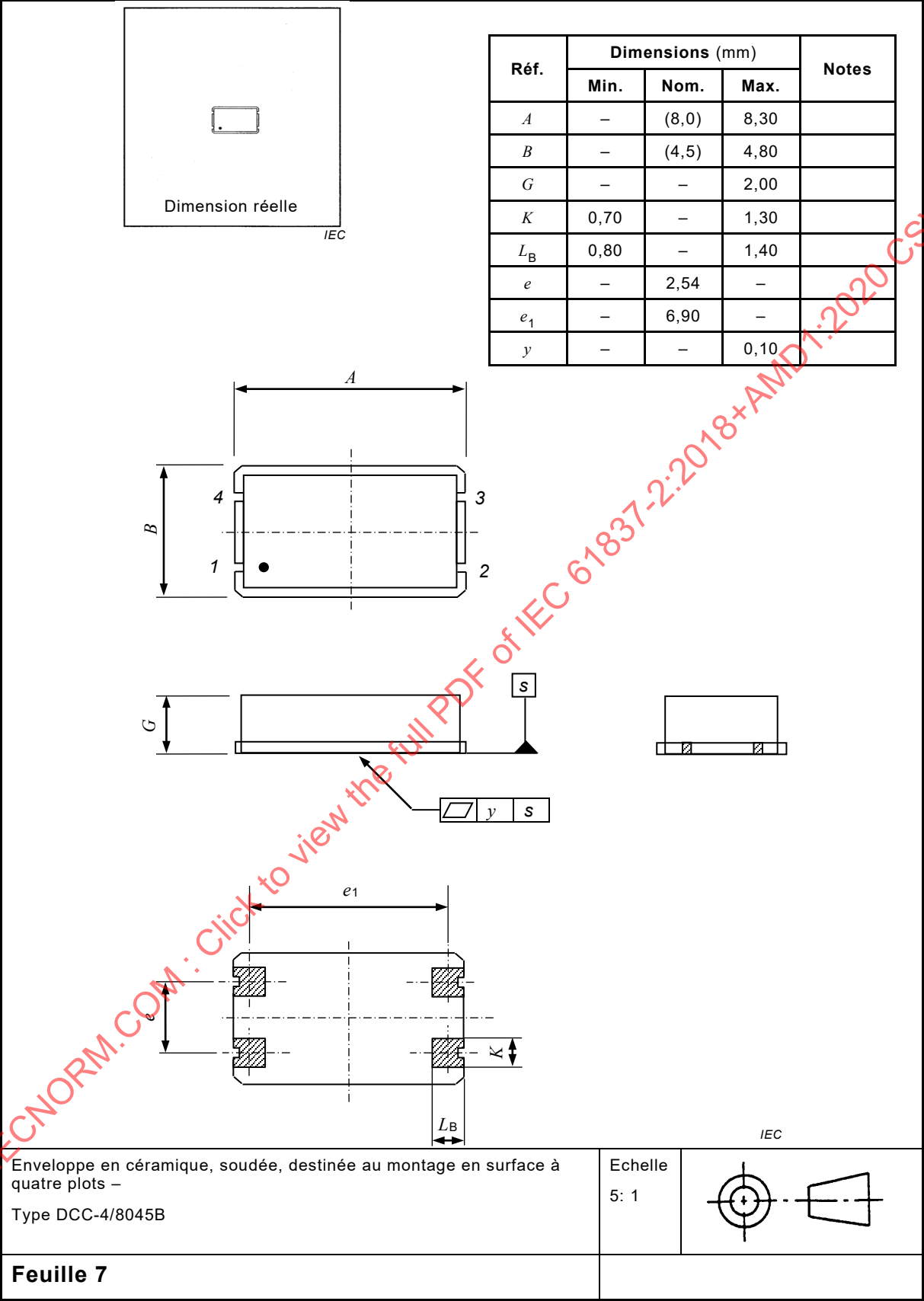
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de type DCC-4/9070A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Tension de commande		
2		Masse		
3		Sortie		
4		Alimentation en courant continu		

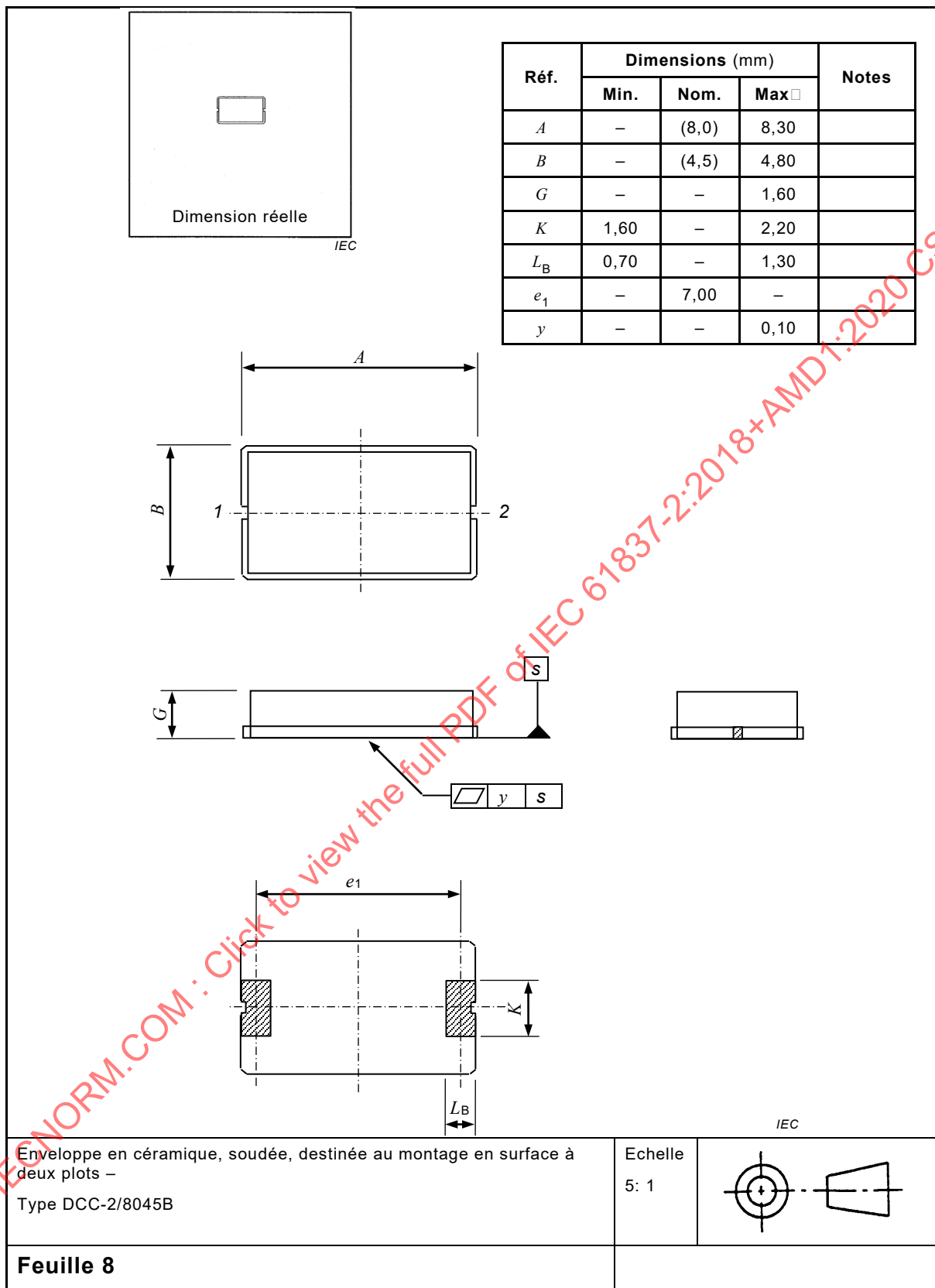
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de type DCC-4/8045B

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Tension de commande		
2	Facultatif	Masse		
3	Sortie 2	Sortie		
4	Facultatif	Alimentation en courant continu		

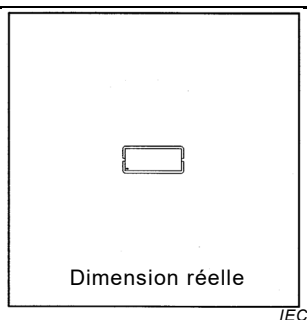
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



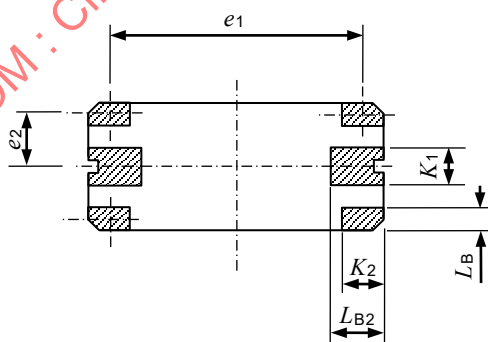
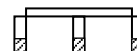
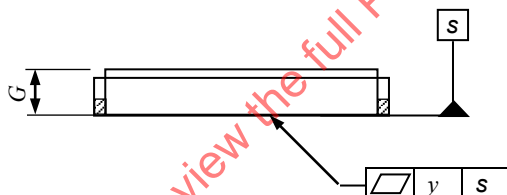
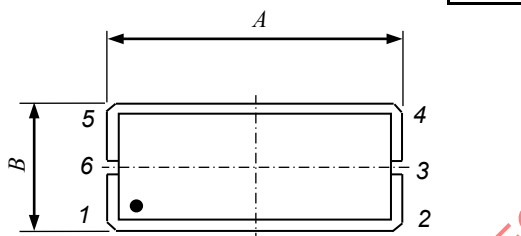
Connexions des zones de contact des sorties de type DCC-2/8045B

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Sortie 2			

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



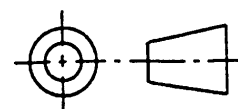
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(7,8)	8,10	
B	–	(3,4)	3,70	
G	–	–	1,20	
K_1	0,70	–	1,30	
K_2	0,80	–	1,40	
L_{B1}	0,30	–	0,90	
L_{B2}	1,10	–	1,70	
e_1	–	6,70	–	
e_2	–	1,40	–	
y	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à six plots –
Type DCC-6/7834B

Echelle
5: 1

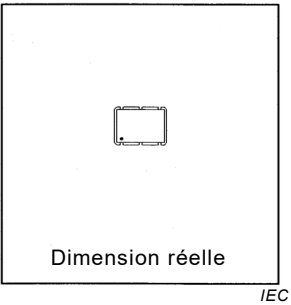


Feuille 9

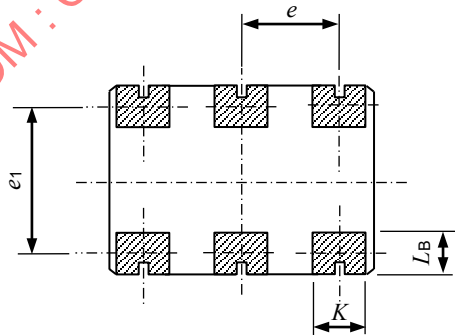
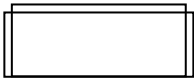
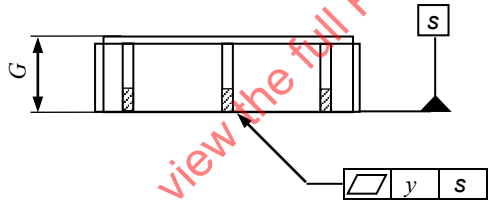
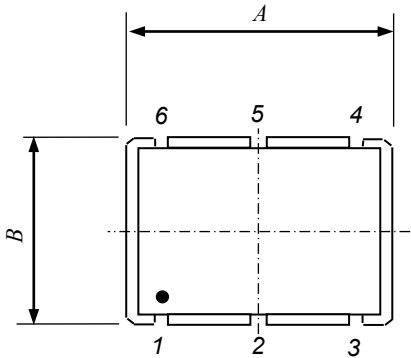
Connexions des zones de contact des sorties de type DCC-6/7834B

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Facultatif			
2	Facultatif			
3	Sortie 1			
4	Facultatif			
5	Facultatif			
6	Sortie 2			

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



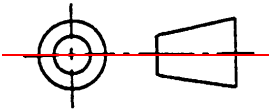
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	—	(7,0)	7,30	
B	—	(5,0)	5,30	
G	—	—	2,00	
K	1,10	—	1,70	
L _B	0,80	—	1,40	
e	—	2,54	—	
e ₁	—	3,90	—	
y	—	—	0,10	



IEC

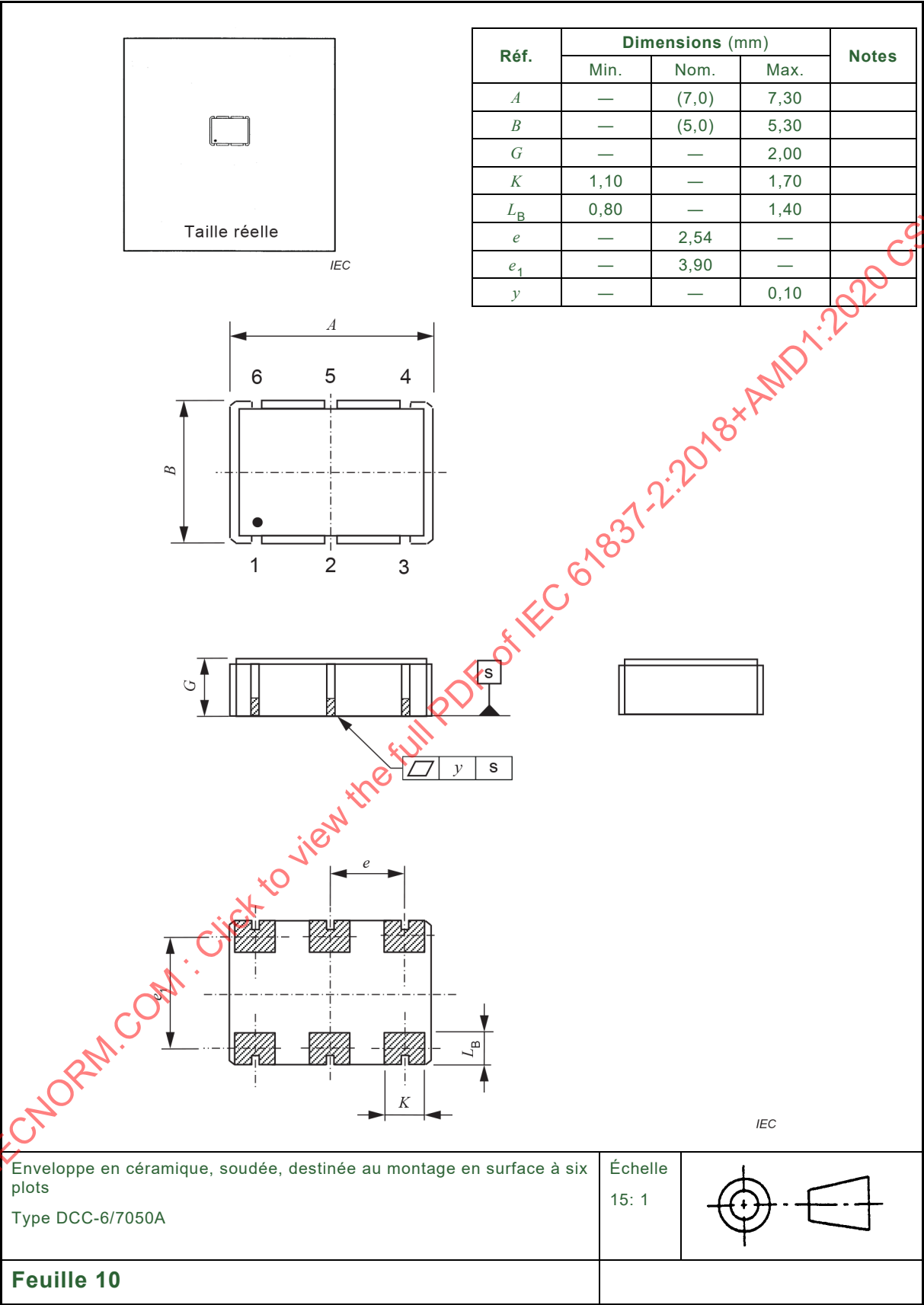
Enveloppe en céramique, soudée, destinée au montage en surface à six plots—
Type DCC-6/7050A

Echelle
5:1



Connexions des zones de contact des sorties de type DCC-6/7050A

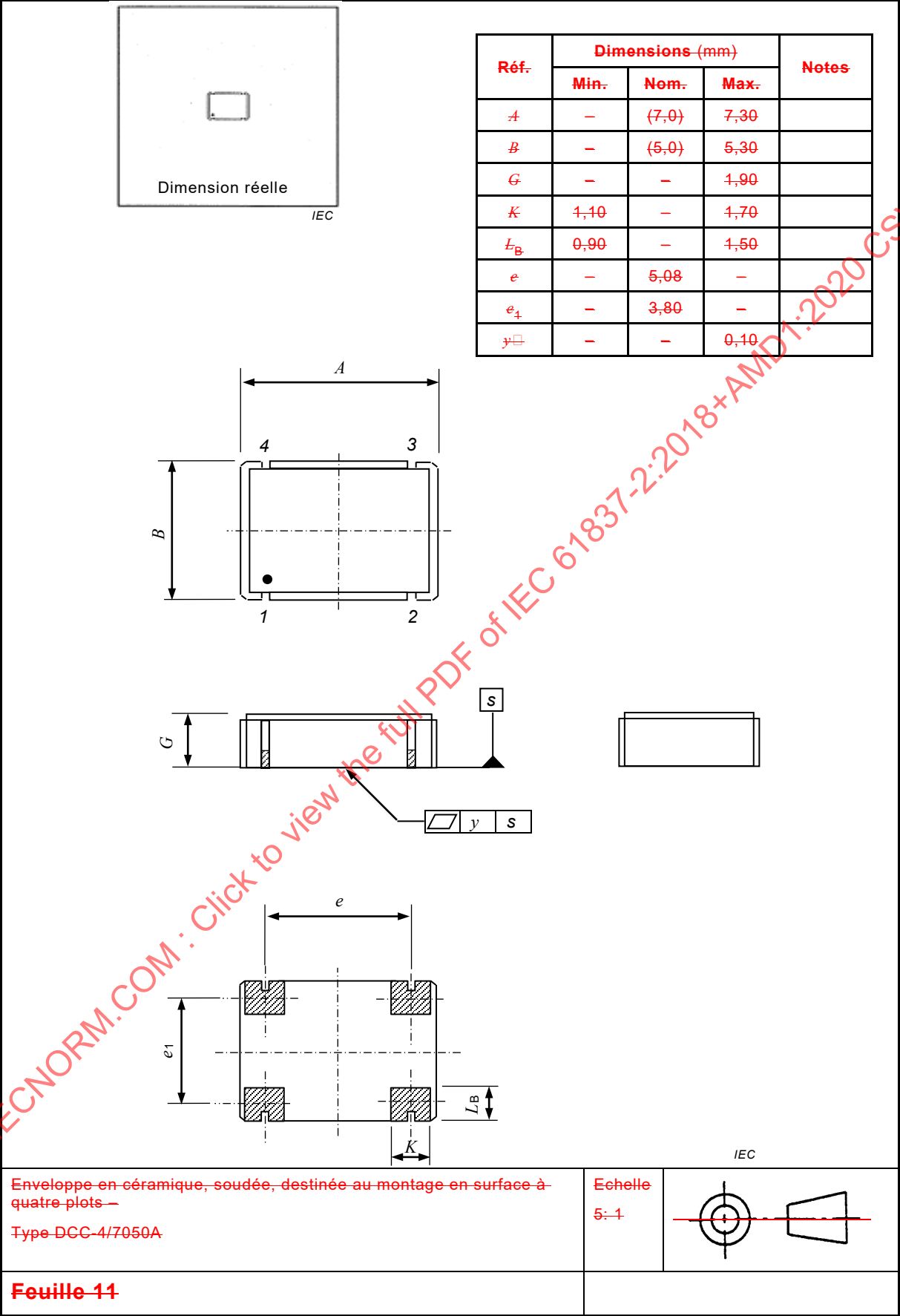
N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Activation de sortie		
2		NC		
3		Masse		
4		Sortie		
5		Sortie		
6		Alimentation en courant continu		



Connexions des zones de contact des sorties de Type DCC-6/7050A

No.	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Facultatif		
2		Facultatif		
3		Masse		
4		Sortie		
5		Facultatif		
6		Alimentation en courant continu		

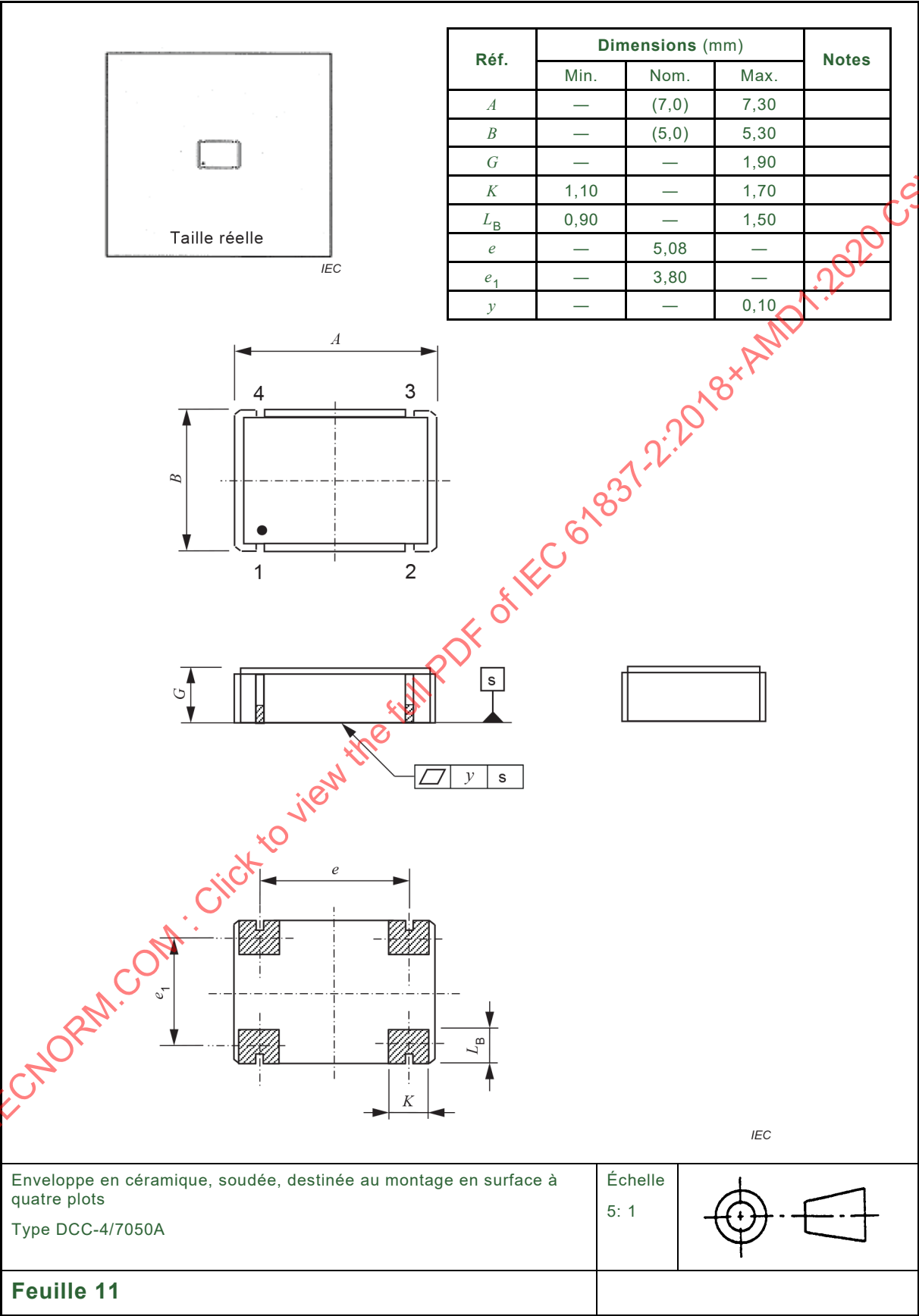
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de type DCC-4/7050A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Tension de commande		
2		Masse		
3		Sortie		
4		Alimentation en courant continu		

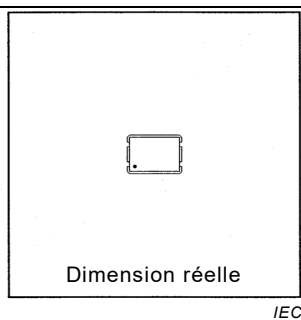
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



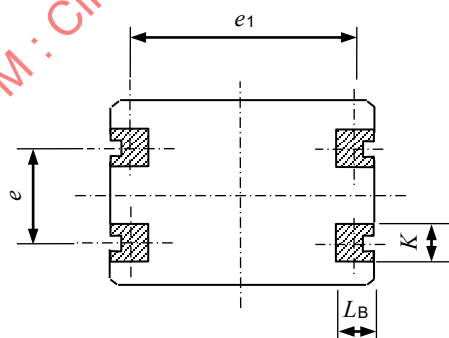
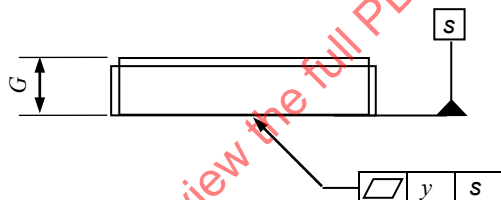
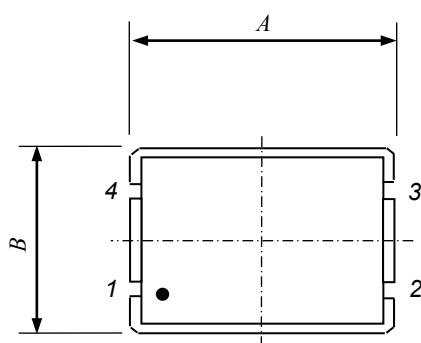
Connexions des zones de contact des sorties de Type DCC-4/7050A

No.	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Facultatif		
2		Masse		
3		Sortie		
4		Alimentation en courant continu		

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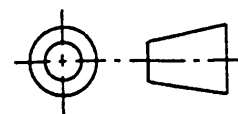
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(7,0)	7,30	
<i>B</i>	–	(5,0)	5,30	
<i>G</i>	–	–	1,50	
<i>K</i>	0,70	–	1,30	
<i>L_B</i>	0,70	–	1,30 □	
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	6,00	–	
<i>y</i>	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots –
Type DCC-4/7050B

Echelle
5: 1

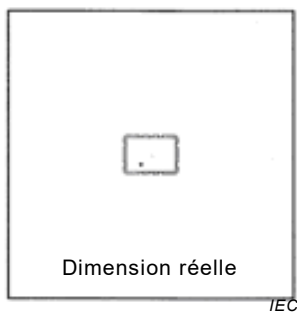


Feuille 12

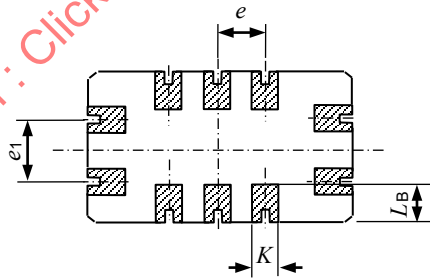
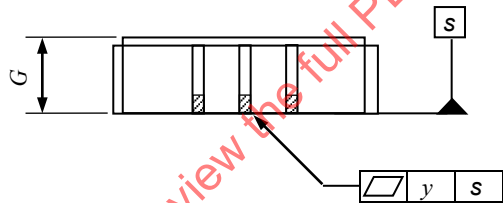
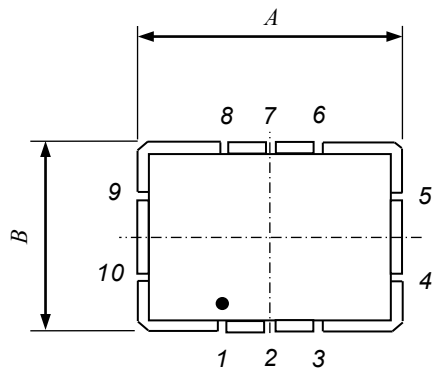
Connexions des zones de contact des sorties de type DCC-4/7050B

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Facultatif			
3	Sortie 2			
4	Facultatif			

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(7,0)	7,30	
B	–	(5,0)	5,30	
G	–	–	2,00	
K	0,40	–	1,00	
L _B	0,80	–	1,20	Note
e	–	1,27	–	
e ₁	–	4,00	–	
y	–	–	0,10	

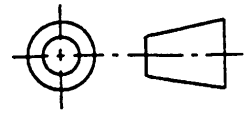


IEC

NOTE La dimension L_B max. peut être augmentée jusqu'à 1,60 mm pour la sortie 1 pour identifier l'orientation.

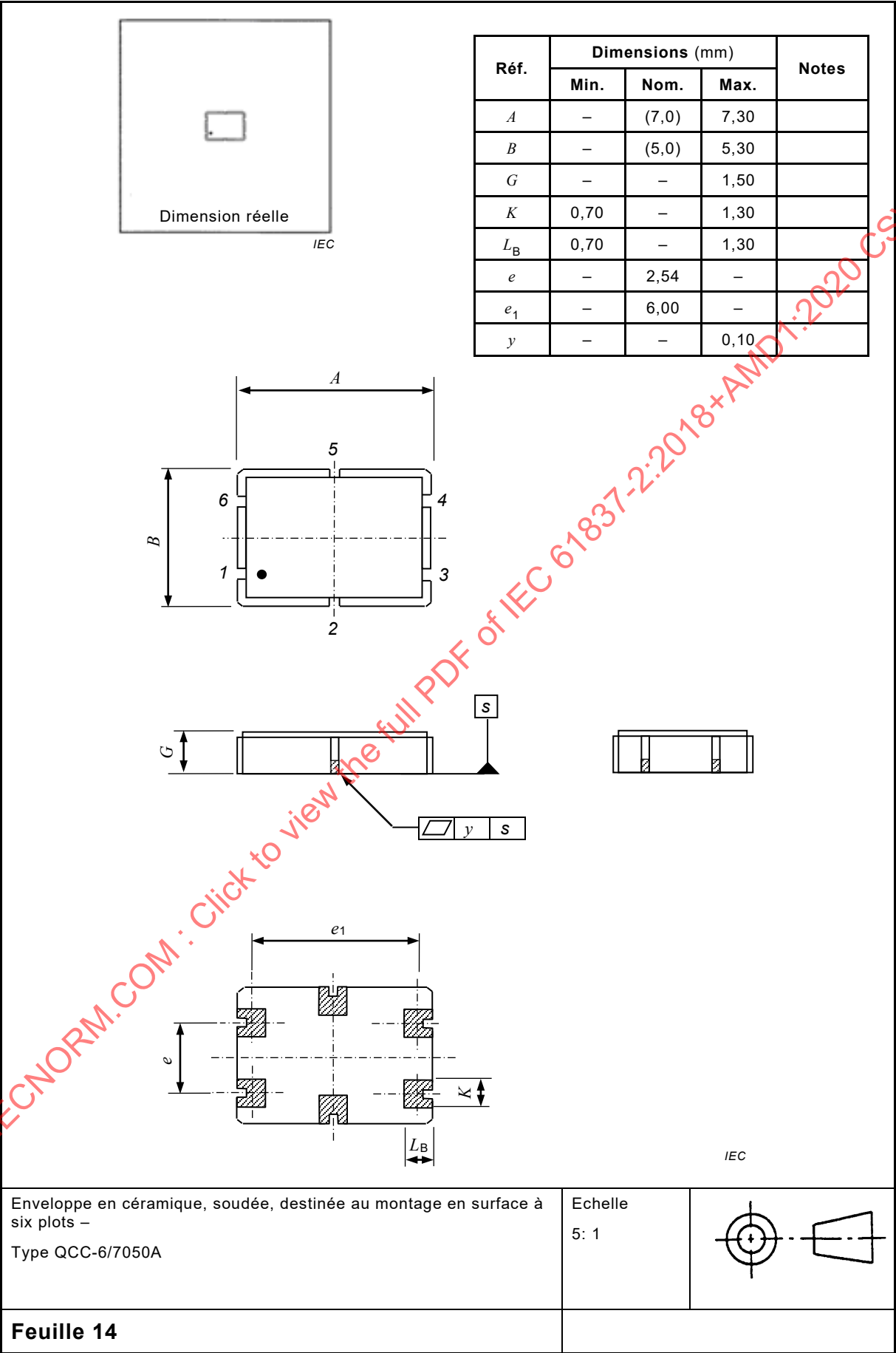
Enveloppe en céramique, soudée, destinée au montage en surface à dix plots –
Type QCC-10/7050A

Echelle
5: 1



Connexions des zones de contact des sorties de type QCC-10/7050A

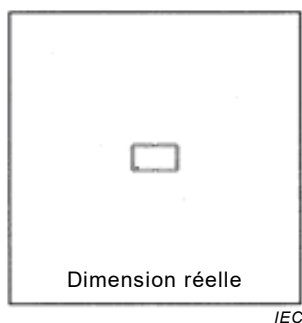
N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Facultatif		Facultatif
2		Facultatif		Sortie/Entrée
3		Facultatif		Facultatif
4		Masse		Facultatif
5		Sortie		Facultatif
6		Facultatif		Facultatif
7		Facultatif		Entrée/Sortie
8		Facultatif		Facultatif
9		Alimentation en courant continu		Masse
10		Facultatif/Tension de commande		Masse



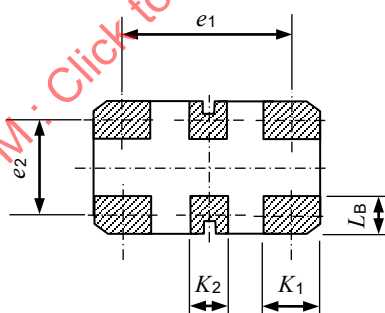
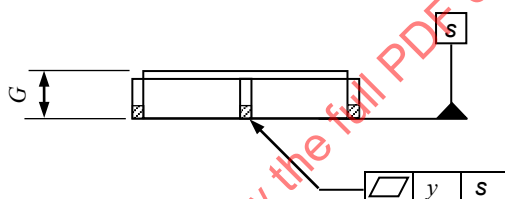
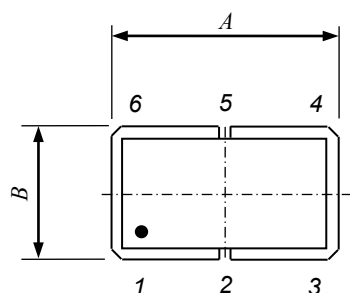
Connexions des zones de contact des sorties de type QCC-6/7050A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1			Masse	
2			Facultatif	
3			Sortie/Entrée	
4			Masse	
5			Facultatif	
6			Entrée/Sortie	

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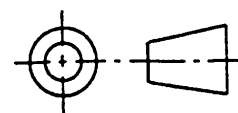
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(6,0)	6,20	
B	–	(3,5)	3,70	
G	–	–	1,25	
K_1	0,80	–	1,20	
L_B	1,30		1,70	
e_1	–	4,50	–	
e_2	–	2,50	–	
y	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à six plots –
Type DCC-6/6035A

Echelle
5: 1

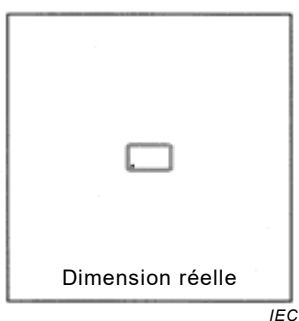


Feuille 15

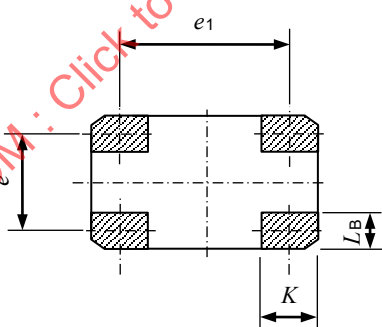
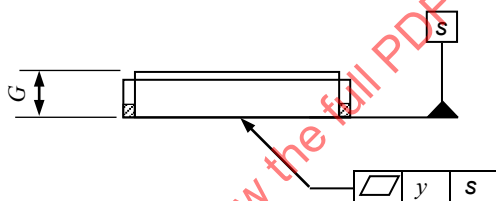
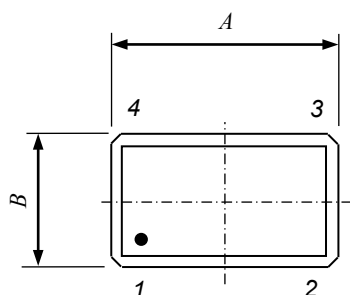
Connexions des zones de contact des sorties de type DCC-6/6035A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1			Masse	Masse
2			Masse	Entrée/Sortie
3			Sortie/Entrée	Masse
4			Masse	Masse
5			Masse	Sortie/Entrée
6			Entrée/Sortie	Masse

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Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(6,0)	6,20	
<i>B</i>	–	(3,5)	3,70	
<i>G</i>	–	–	1,20	
<i>K</i>	1,30	–	1,70	
<i>L_B</i>	0,76		1,16	
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	4,50	–	
<i>y</i>	–	–	0,10	

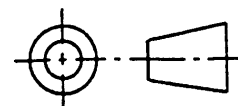


IEC

Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots –

Type DCC-4/6035C

Echelle
5: 1

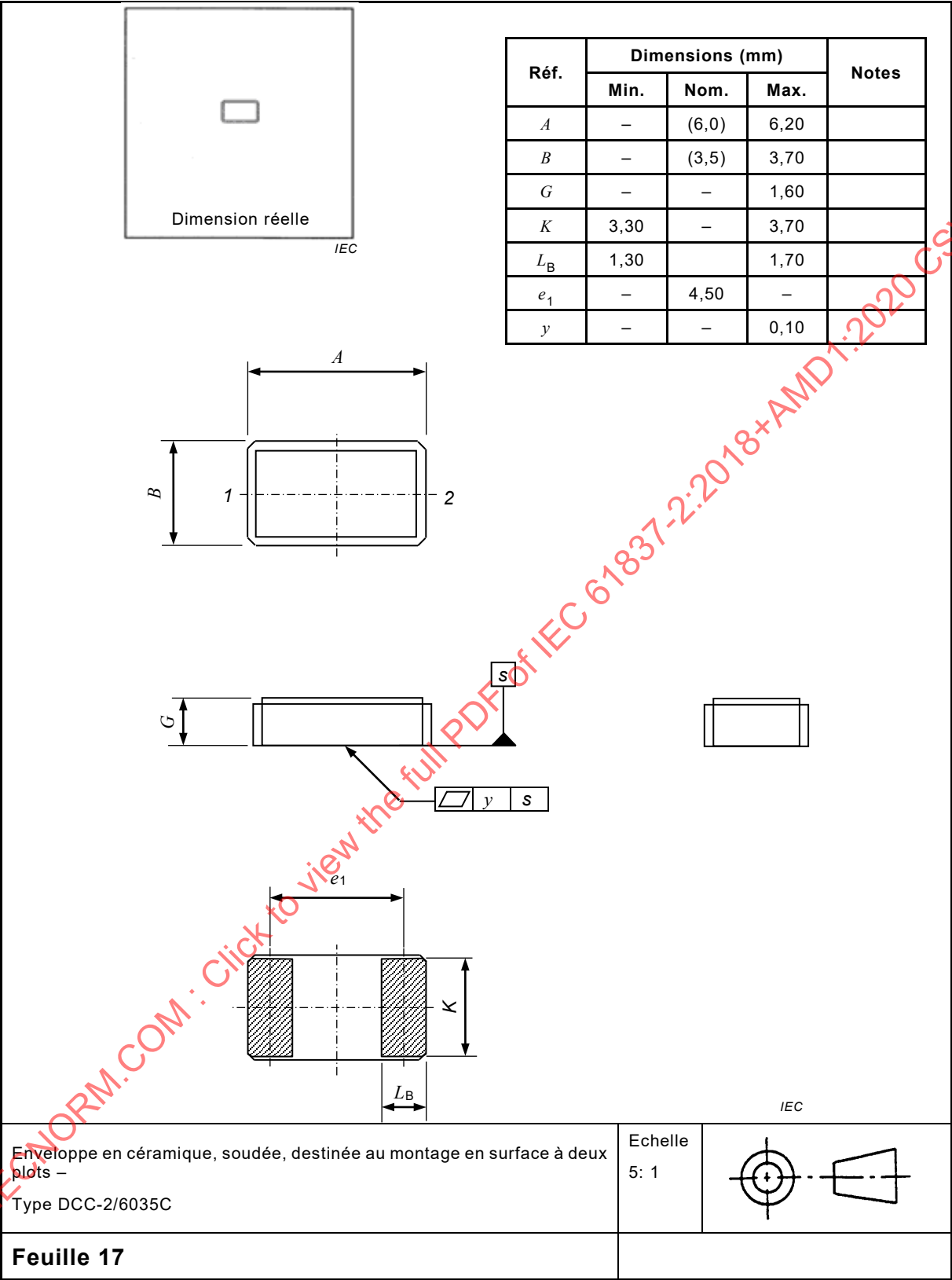


Feuille 16

Connexions des zones de contact des sorties de type DCC-4/6035C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Tension commande de		
2	Facultatif	Masse		
3	Sortie 2	Sortie		
4	Facultatif	Alimentation courant continu en		

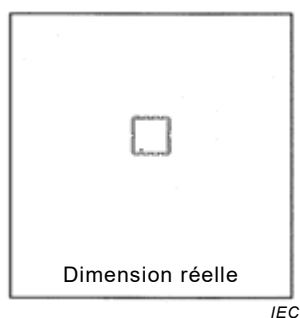
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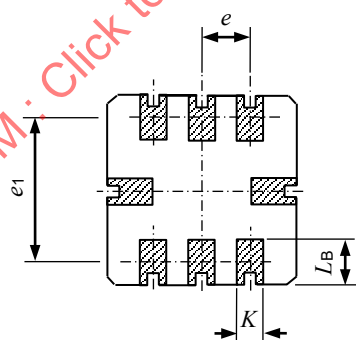
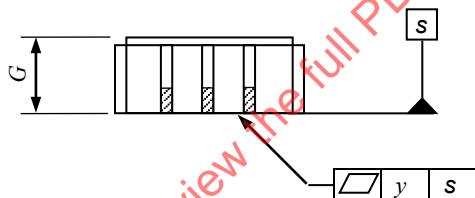
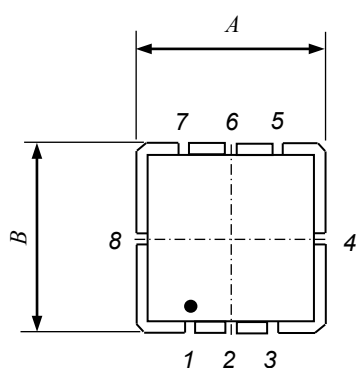
Connexions des zones de contact des sorties de type DCC-2/6035C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Sortie 2			

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Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(5,0)	5,20	
B	–	(5,0)	5,20	
G	–	–	2,00	
K	0,50	–	0,90	
L_B	1,00	–	1,40	Note
e	–	1,27	–	
e_1	–	3,80	–	
y	–	–	0,10	

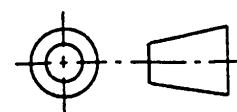


IEC

NOTE La dimension L_B max. peut être augmentée jusqu'à 1,90 mm pour la sortie 8 pour identifier l'orientation.

Enveloppe en céramique, soudée, destinée au montage en surface à huit plots –
Type QCC-8/5050A

Echelle
5: 1

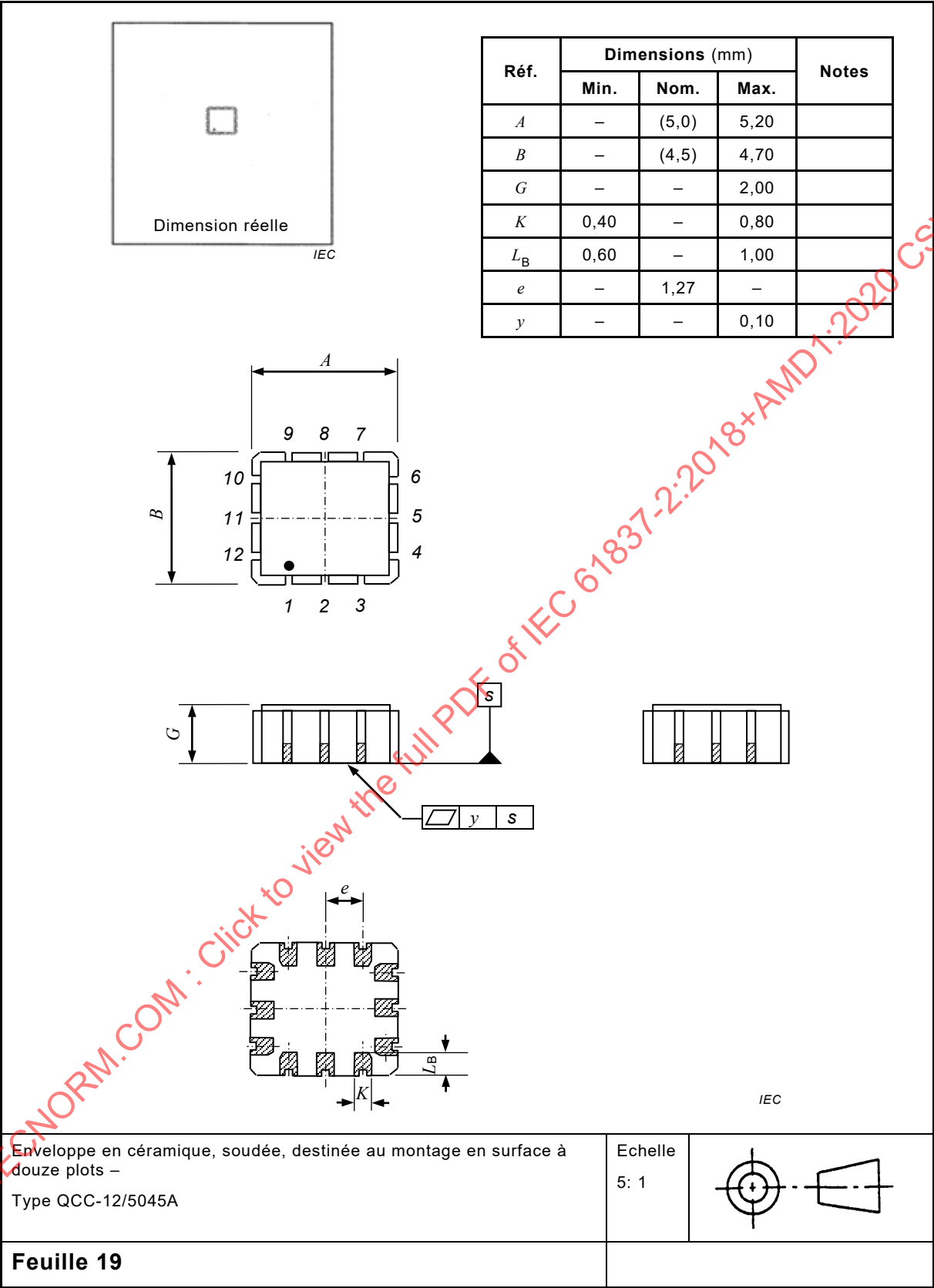


Feuille 18

Connexions des zones de contact des sorties de type QCC-8/5050A

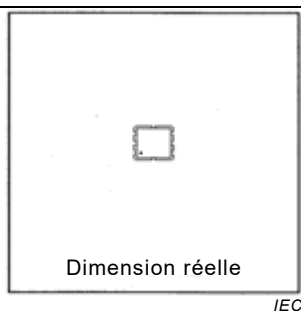
N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1				Masse
2				Entrée/Sortie
3				Masse
4				Masse
5				Masse
6				Sortie/Entrée
7				Masse
8				Masse

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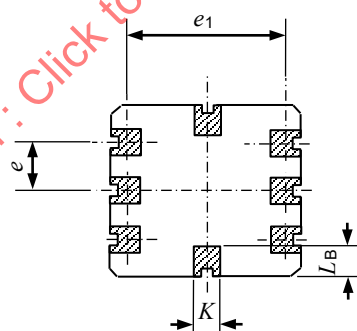
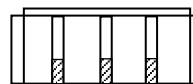
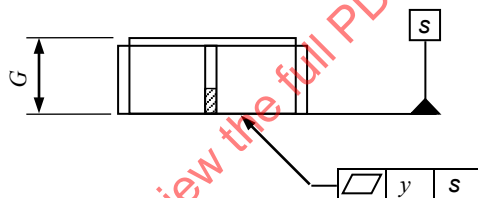
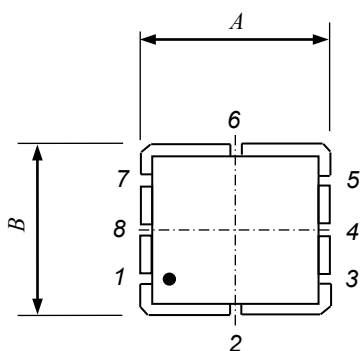


Connexions des zones de contact des sorties de type QCC-12/5045A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1				Masse
2				A spécifier
3				Masse
4				Entrée/Sortie/Masse
5				Sortie/Entrée
6				Sortie/Entrée/Masse
7				Masse
8				A spécifier
9				Masse
10				Sortie/Entrée/Masse
11				Sortie/Entrée
12				Sortie/Entrée/Masse



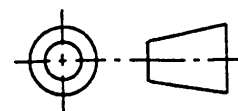
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(5,0)	5,20	
<i>B</i>	–	(4,5)	4,70	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	0,90	
<i>L_B</i>	0,60	–	1,00	
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	4,20	–	
<i>y</i>	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à huit plots –
Type QCC-8/5045A

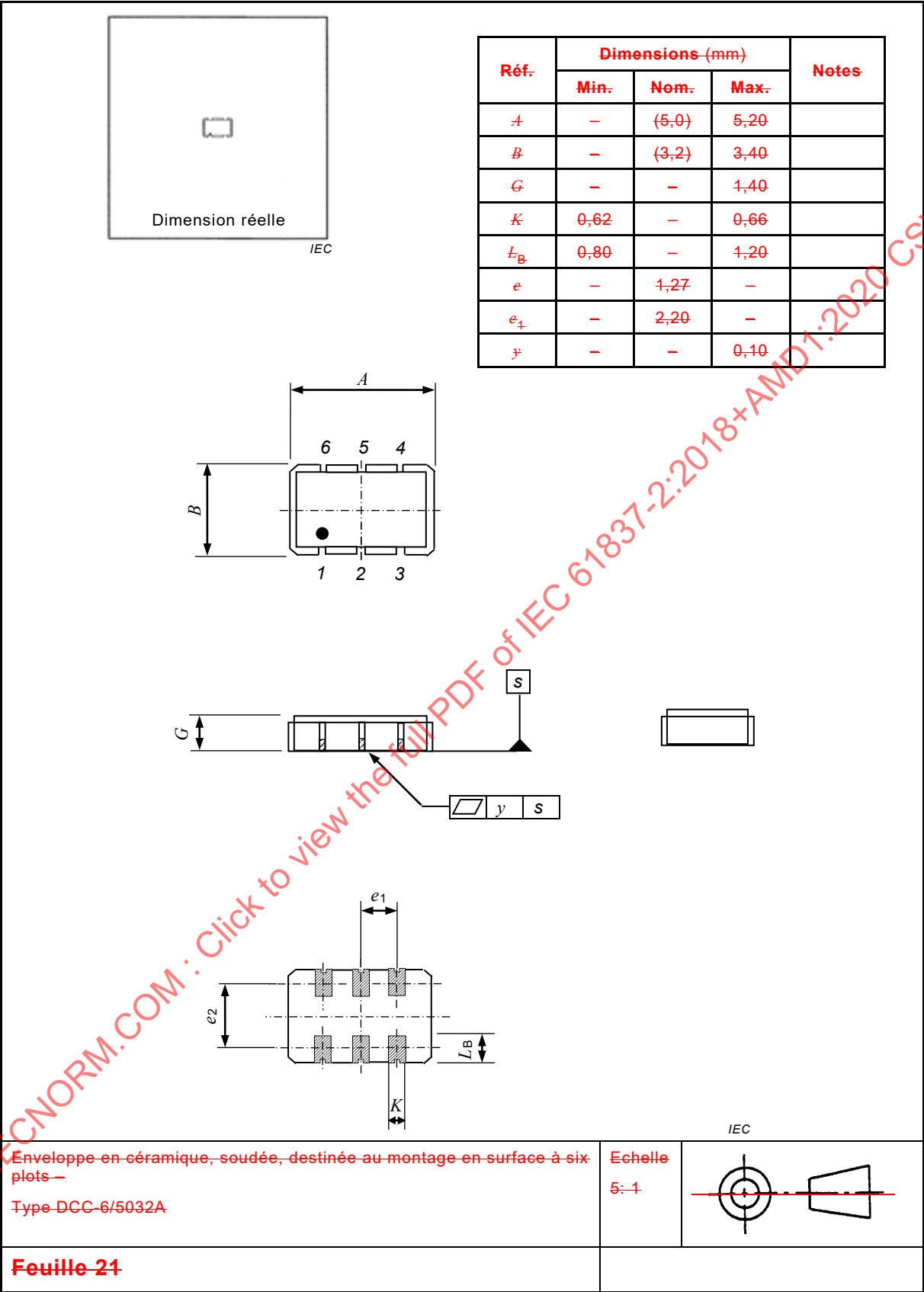
Echelle
5: 1



Feuille 20

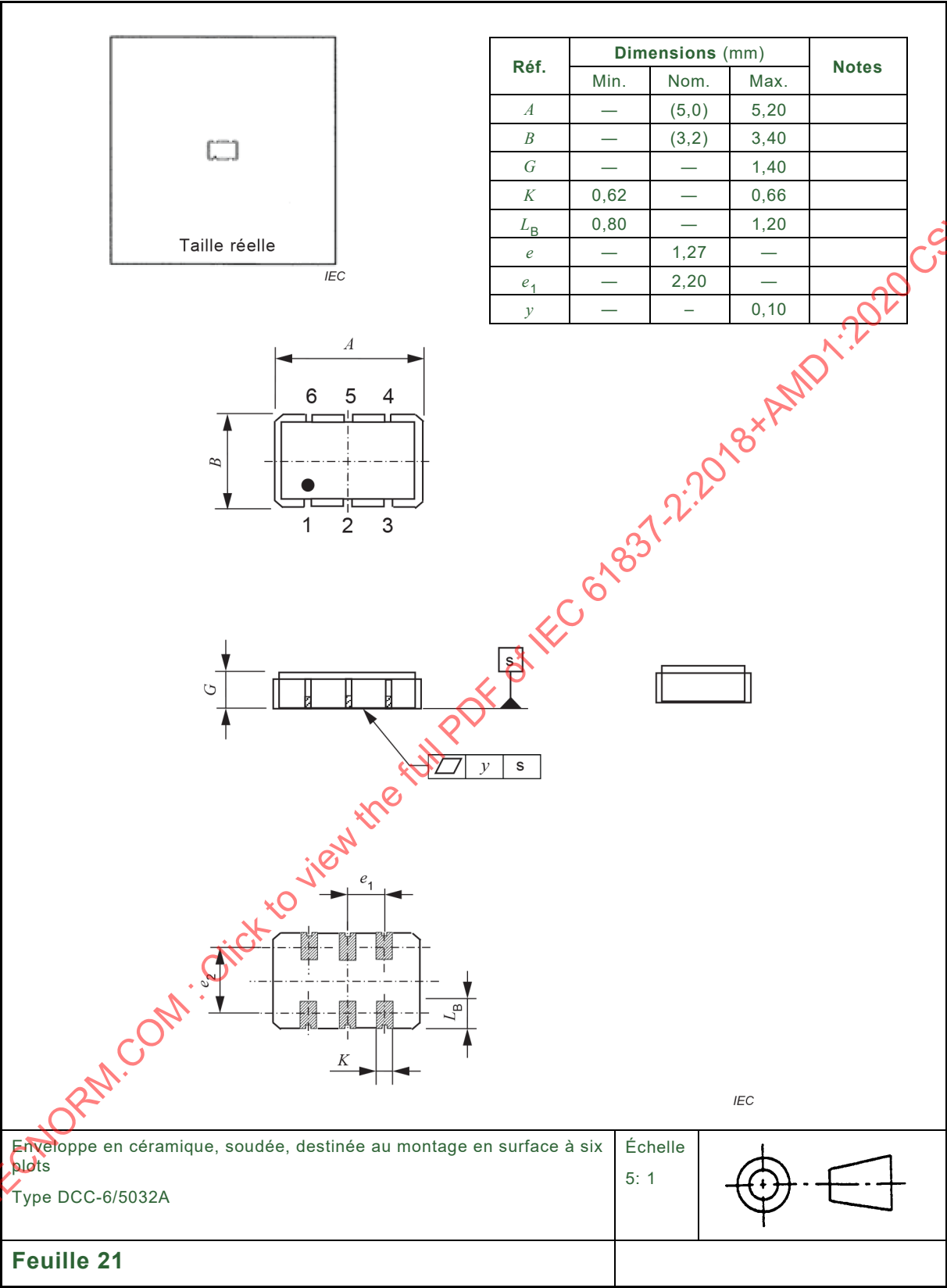
Connexions des zones de contact des sorties de type QCC-8/5045A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Tension de commande	Masse	Masse
2		Facultatif	Masse	Masse
3		Masse	Masse	Masse
4		Facultatif	Entrée/Sortie	Entrée/Sortie
5		Sortie	Masse	Masse
6		Facultatif	Masse	Masse
7		Alimentation en courant continu	Masse	Masse
8		Facultatif	Sortie/Entrée	Sortie/Entrée



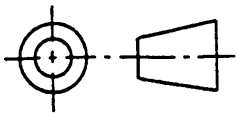
Connexions des zones de contact des sorties de type DCC-6/5032A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Activation de sortie		
2		NC		
3		Masse		
4		Sortie		
5		Sortie		
6		Alimentation en courant continu		



Enveloppe en céramique, soudée, destinée au montage en surface à six plots
Type DCC-6/5032A

Échelle
5: 1

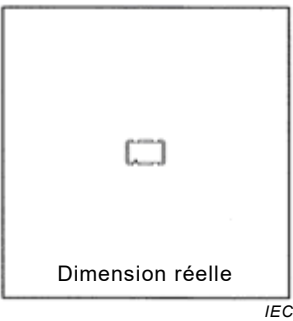


Feuille 21

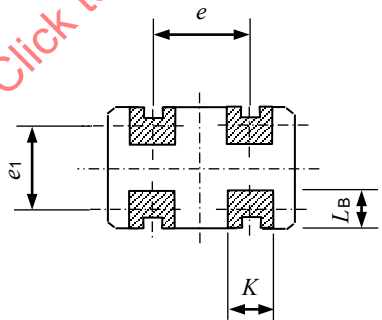
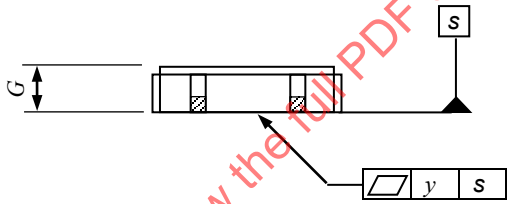
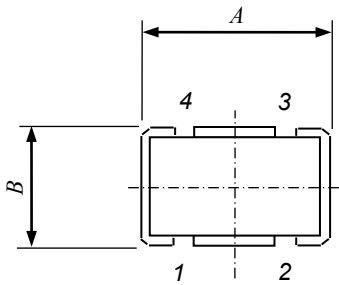
Connexions des zones de contact des sorties de Type DCC-6/5032A

No.	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Facultatif		
2		Facultatif		
3		Masse		
4		Sortie		
5		Facultatif		
6		Alimentation en courant continu		

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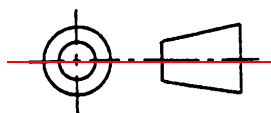
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	—	(5,0)	5,20	
B	—	(3,2)	3,40	
G	—	—	1,20	
K	1,00	—	1,40	
L_B	0,80	—	1,20	
e	—	2,54	—	
e_1	—	2,20	—	
y	—	—	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à quatre-plots—
Type DCC-4/5032A

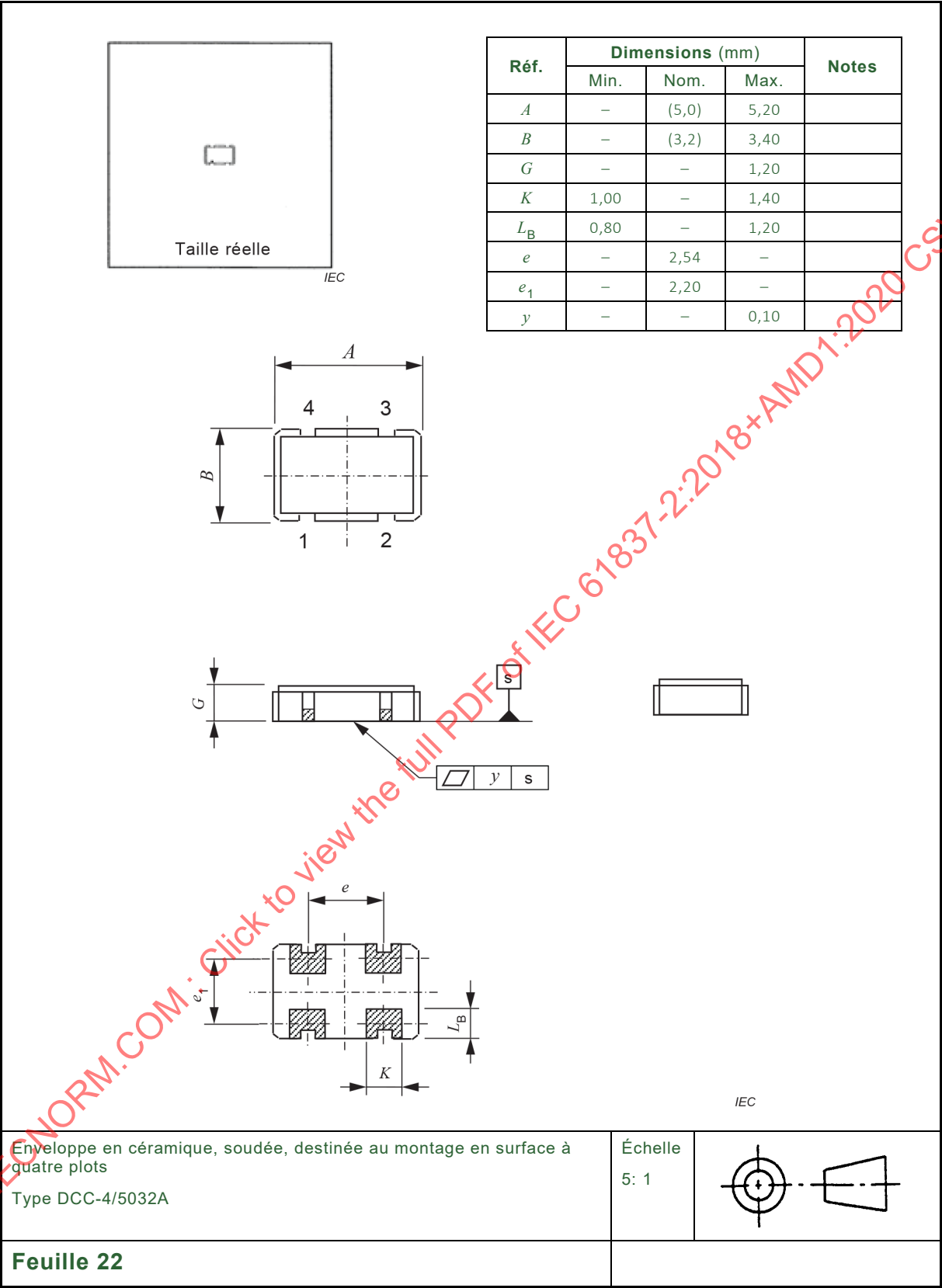
Echelle
5:1



Connexions des zones de contact des sorties de type DCC-4/5032A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Tension de commande		
2		Masse		
3		Sortie		
4		Alimentation en courant continu		

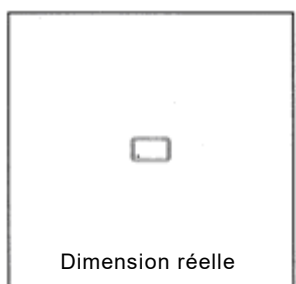
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de Type DCC-4/5032A

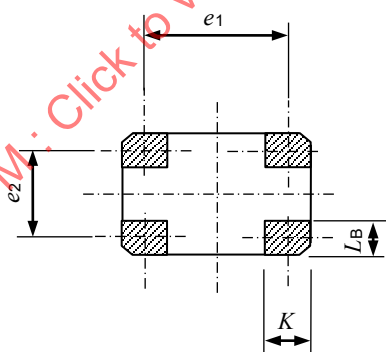
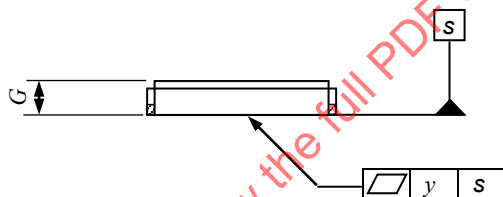
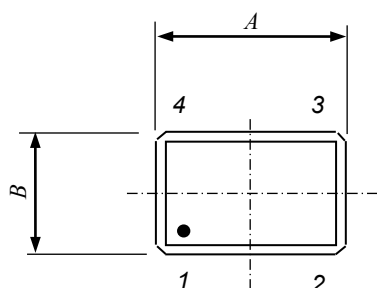
No.	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Facultatif		
2		Masse		
3		Sortie		
4		Alimentation en courant continu		

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IEC

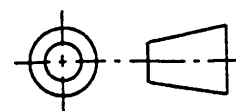
Réf.	Dimensions (mm)			Notes
	M ⁿ .	om.	Max.	
A	–	(5,0)	5,20	
B	–	(3,2)	3,40	
G	–	–	0,90	
K	1,00	–	1,40	
L _B	0,70	–	1,10	
e ₁	–	3,80	–	
e ₂	–	2,30	–	
y	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots –
Type DCC-4/5032C

Echelle
5: 1

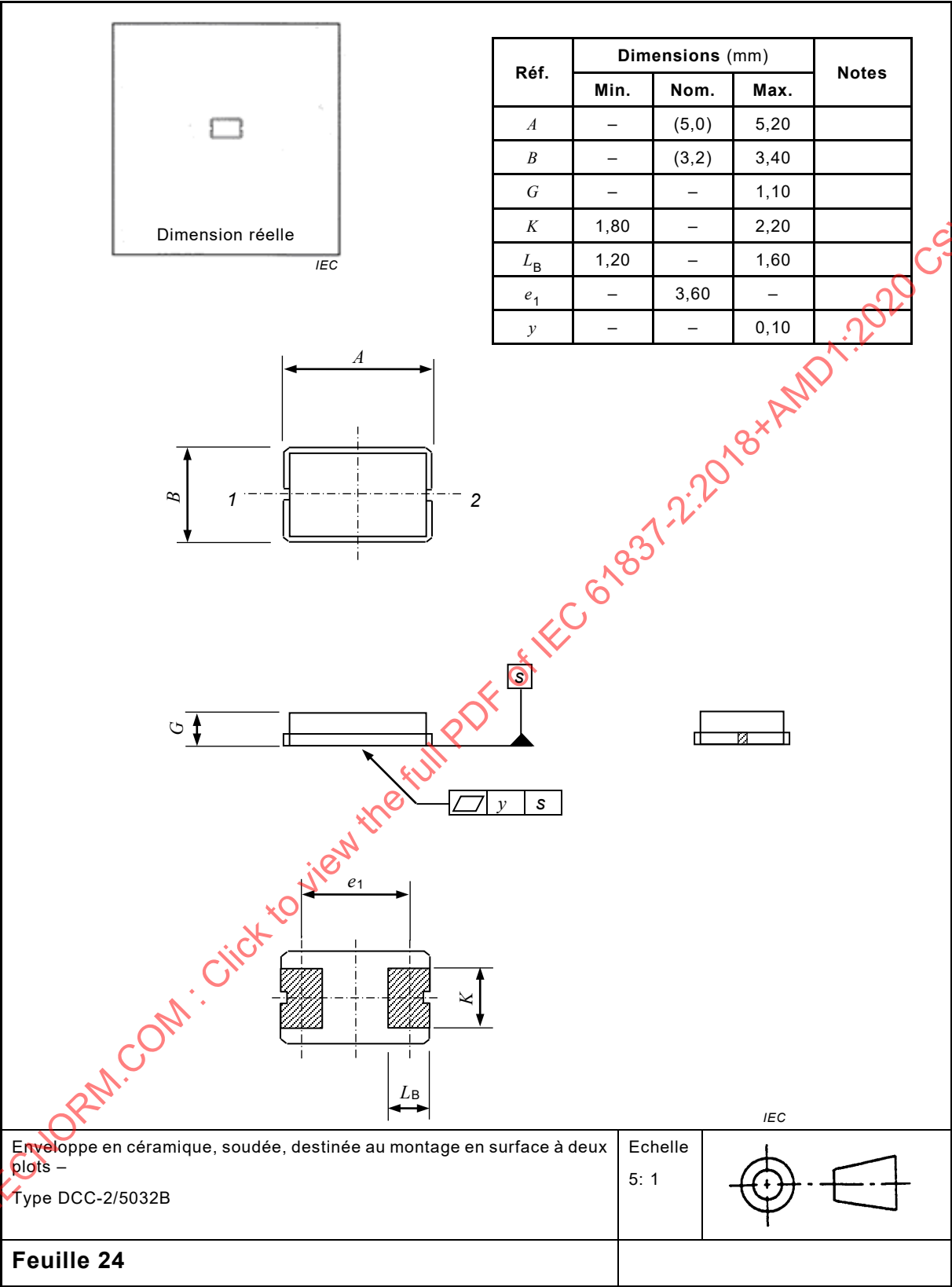


Feuille 23

Connexions des zones de contact des sorties de type DCC-4/5032C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Facultatif		
2	Masse	Masse		
3	Sortie 2	Sortie		
4	Masse	Alimentation en courant continu		

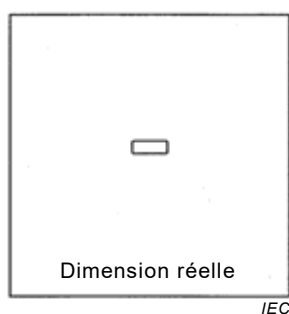
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



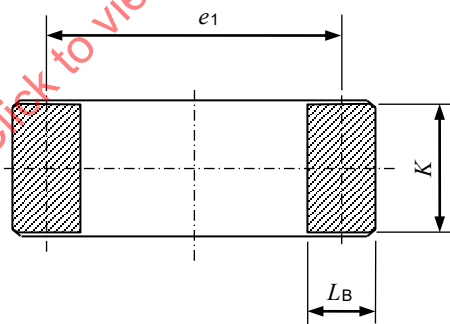
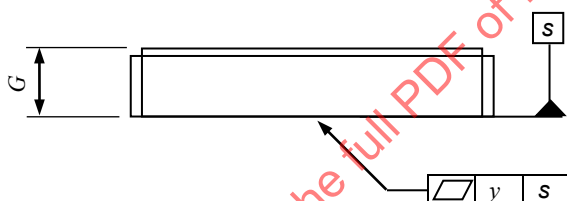
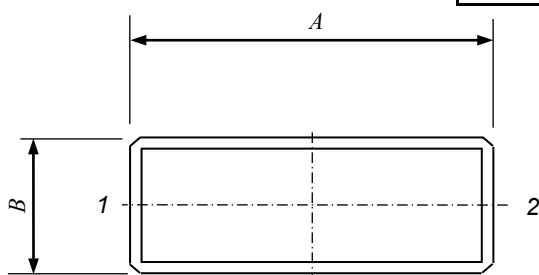
Connexions des zones de contact des sorties de type DCC-2/5032B

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Sortie 2			

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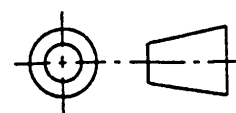
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(4,8)	5,00	
<i>B</i>	–	(1,8)	2,00	
<i>G</i>	–	–	0,90	
<i>K</i>	1,60	–	2,00	
<i>L_B</i>	0,70	–	1,10	
<i>e₁</i>	–	3,90	–	
<i>y</i>	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à deux plots –
Type DCC-2/4818C

Echelle
10: 1

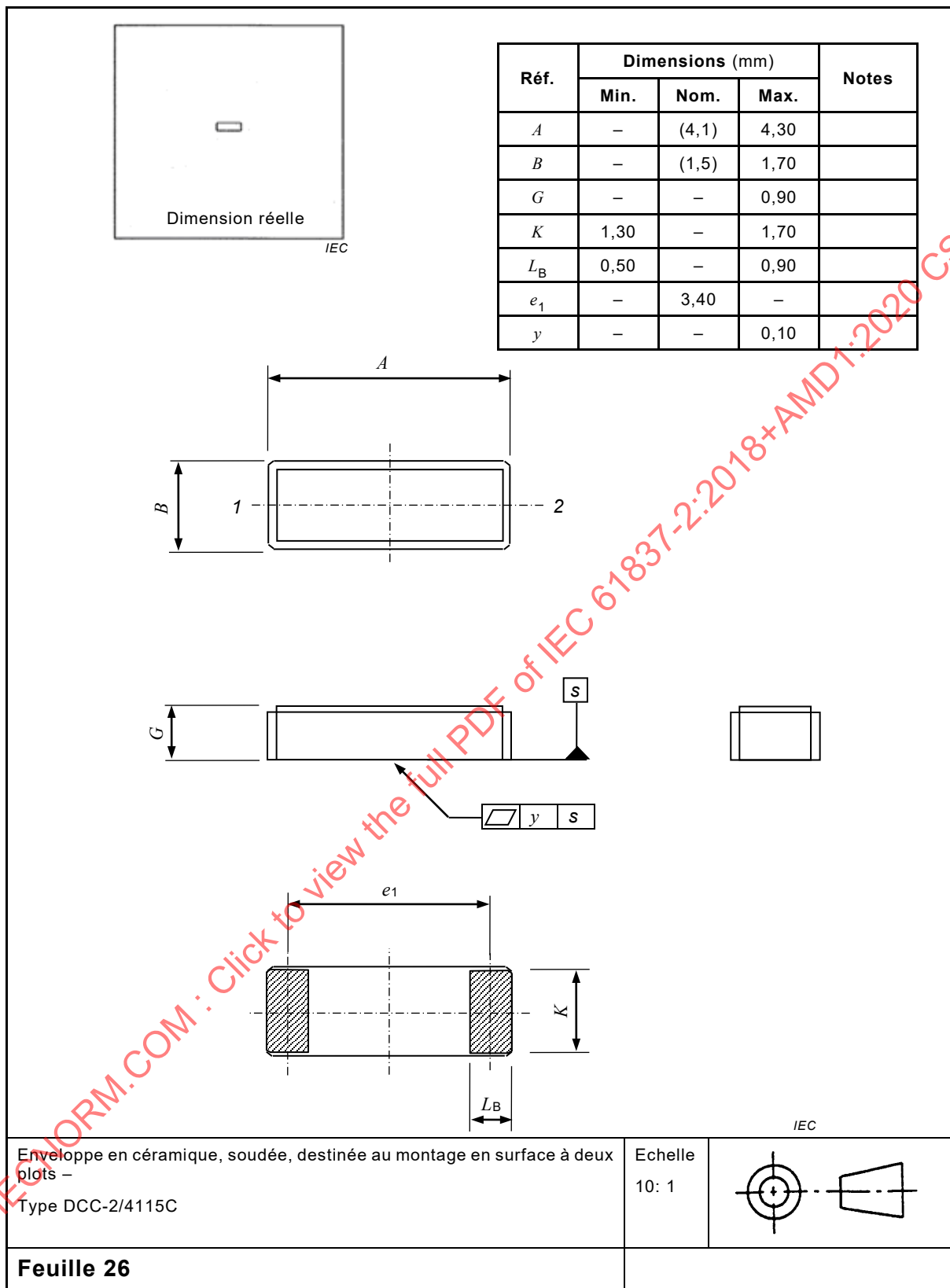


Feuille 25

Connexions des zones de contact des sorties de type DCC-2/4818C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Sortie 2			

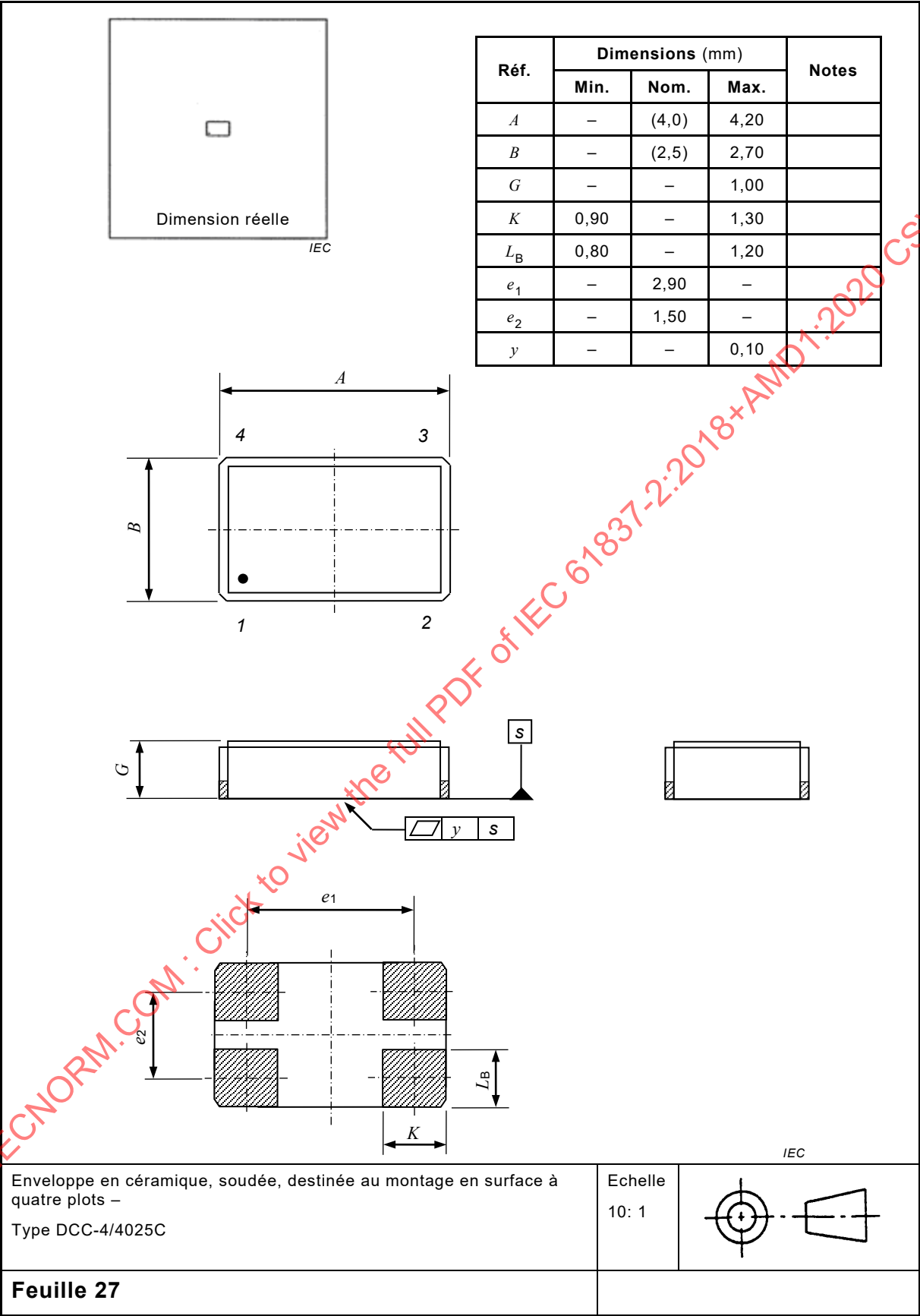
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de type DCC-2/4115C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Sortie 2			

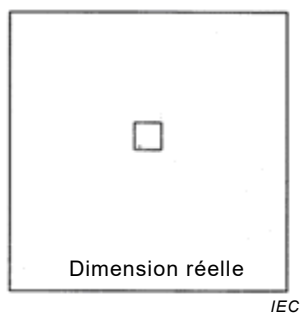
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



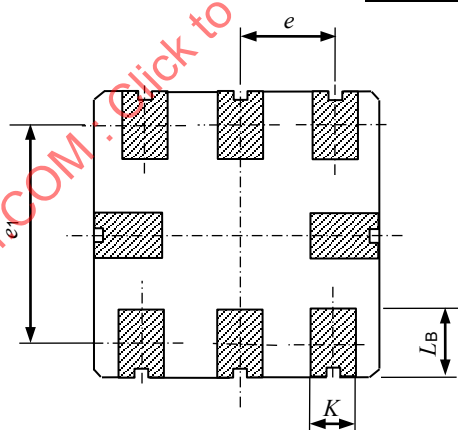
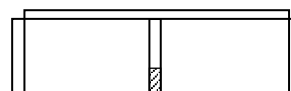
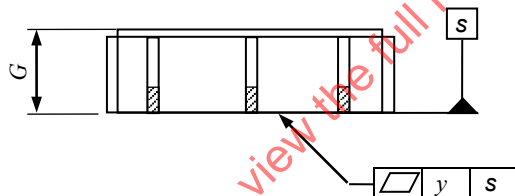
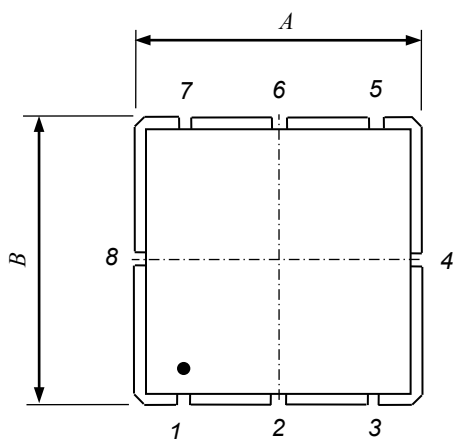
Connexions des zones de contact des sorties de type DCC-4/4025C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Tension de commande		
2	Masse	Masse		
3	Sortie 2	Sortie		
4	Masse	Alimentation en courant continu		

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Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(3,8)	3,90	
<i>B</i>	–	(3,8)	3,90	
<i>G</i>	–	–	1,10	
<i>K</i>	0,50	–	0,70	
<i>L_B</i>	0,80	–	1,00	□ Note
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	2,90	–	
<i>y</i>	–	–	0,10	

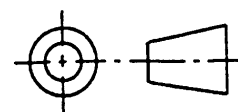


IEC

NOTE La dimension L_B max. peut être augmentée jusqu'à 2,00 mm pour la sortie 4 pour identifier l'orientation.

Enveloppe en céramique, soudée, destinée au montage en surface à huit plots –
Type QCC-8/3838A

Echelle
10: 1

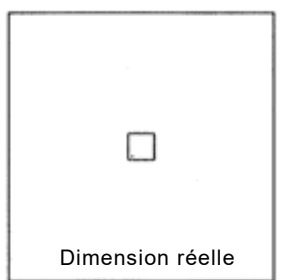


Feuille 28

Connexions des zones de contact des sorties de type QCC-8/3838A

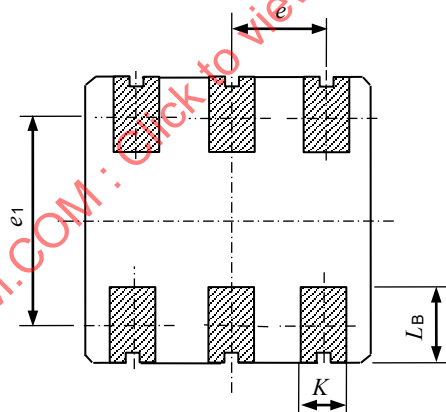
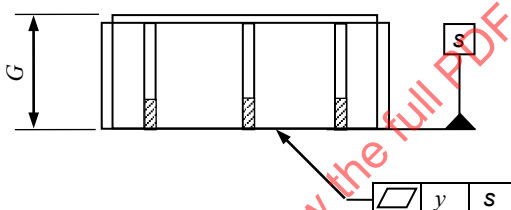
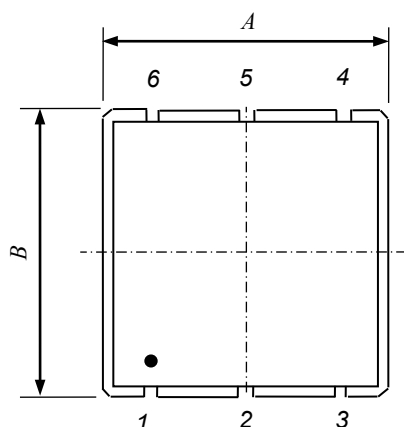
N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1			Entrée/Sortie	Entrée/Sortie
2			Masse	Masse
3			Masse	Facultatif
4			Masse	Masse
5			Sortie/Entrée	Facultatif
6			Masse	Masse
7			Masse	Sortie/Entrée
8			Masse	Masse

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IEC

Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(3,8)	4,00	
<i>B</i>	–	(3,8)	4,00	
<i>G</i>	–	–	1,50	
<i>K</i>	0,40	–	0,80	
<i>L_B</i>	0,80	–	1,20	Note
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	2,80	–	
<i>y</i>	–	–	0,10	

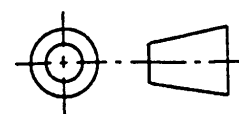


IEC

NOTE La dimension L_B max. peut être augmentée jusqu'à 2,05 mm pour la sortie 1 pour identifier l'orientation.

Enveloppe en céramique, soudée, destinée au montage en surface à six plots –
Type DCC-6/3838A

Echelle
10: 1

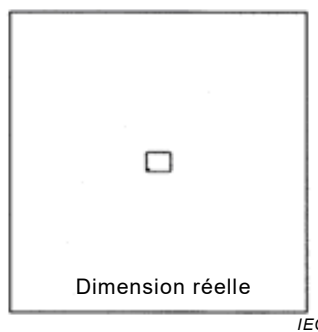


Feuille 29

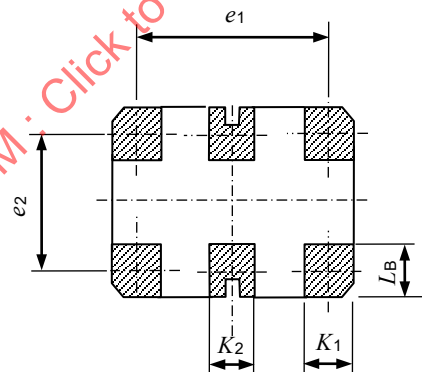
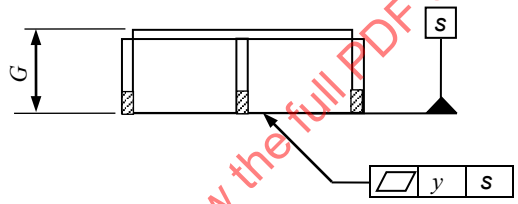
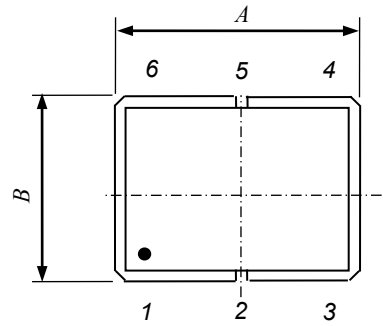
Connexions des zones de contact des sorties de type DCC-6/3838A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1				Masse
2				Entrée/Sortie
3				Masse
4				Masse
5				Sortie/Entrée
6				Masse

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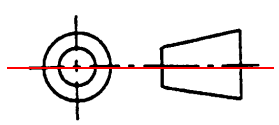


Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	—	(3,2)	3,40	
B	—	(2,5)	2,70	
G	—	—	1,10	
K ₁	0,45	—	0,85	
K ₂	0,40	—	0,80	
L _B	0,50	—	0,90	
e ₁	—	2,55	—	
e ₂	—	1,80	—	
y	—	—	0,10	



Enveloppe en céramique, soudée, destinée au montage en surface à six plots —
Type DCC-6/3225A

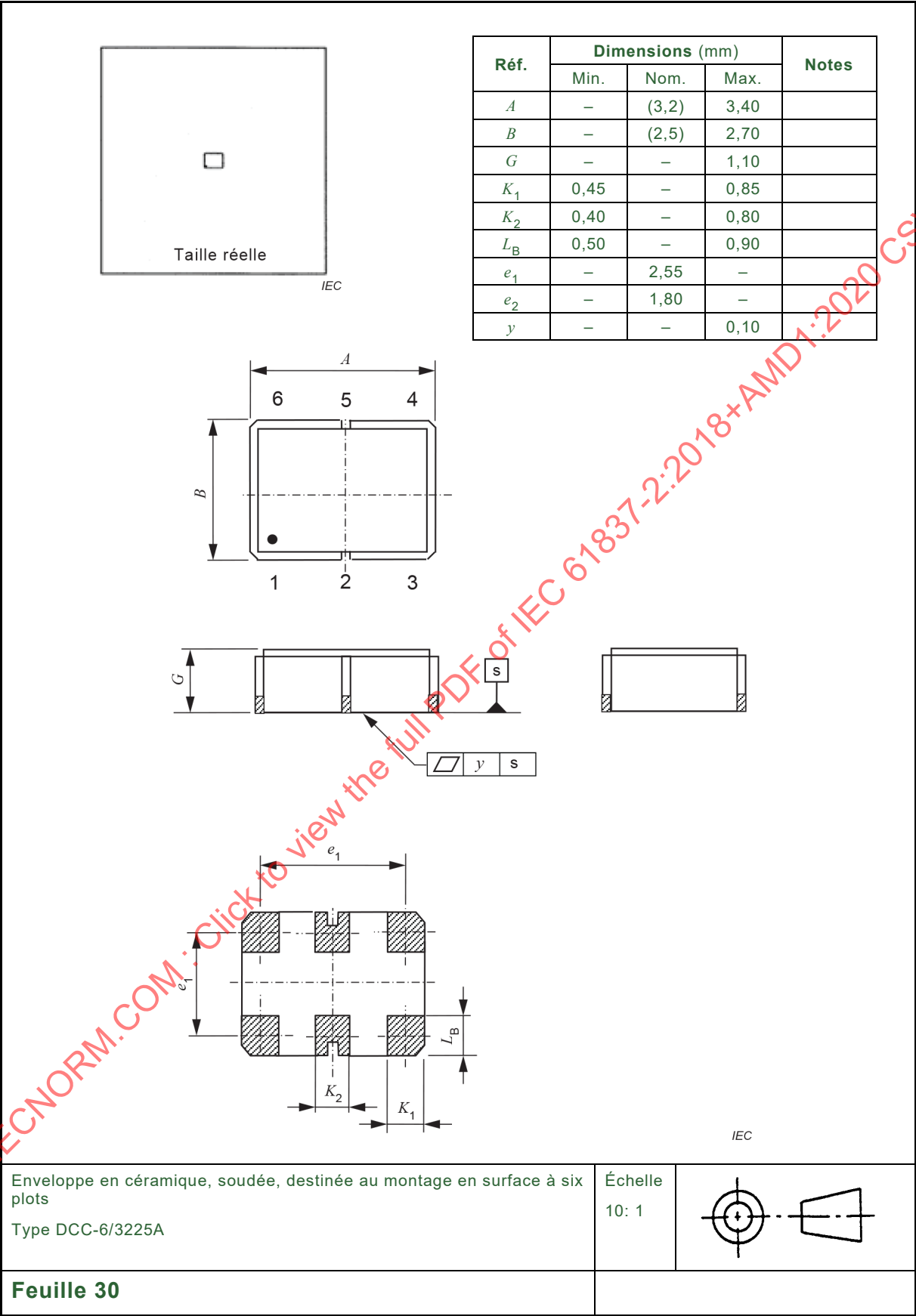
Echelle
10:1



Connexions des zones de contact des sorties de type DCC-6/3225A

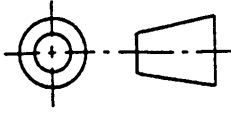
N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Activation de sortie		
2		NC		
3		Masse		
4		Sortie		
5		Sortie		
6		Alimentation courant continu en		

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Enveloppe en céramique, soudée, destinée au montage en surface à six plots
Type DCC-6/3225A

Échelle
10: 1

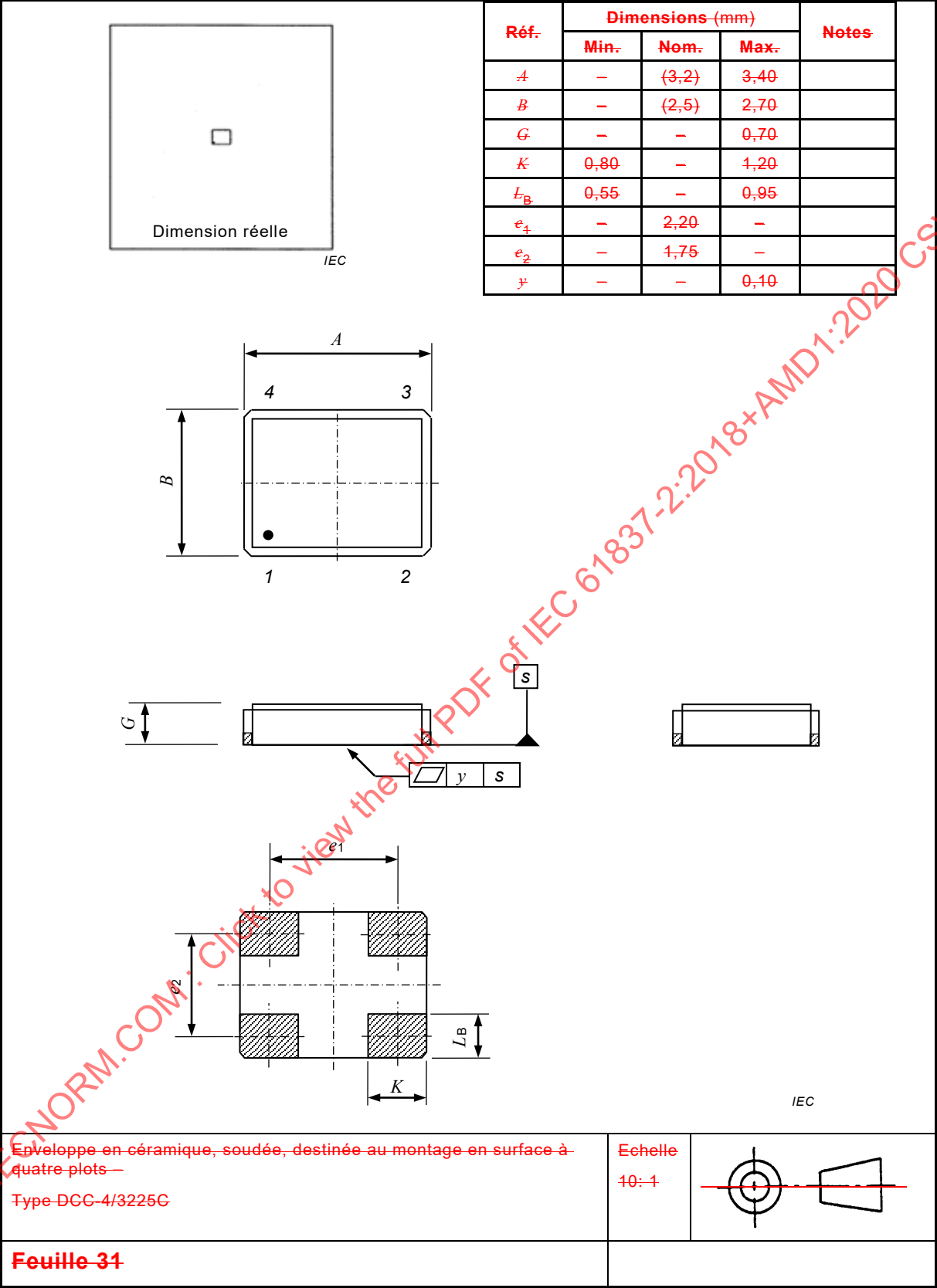


Feuille 30

Connexions des zones de contact des sorties de Type DCC-6/3225A

No.	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Facultatif		
2		Facultatif		
3		Masse		
4		Sortie		
5		Facultatif		
6		Alimentation en courant continu		

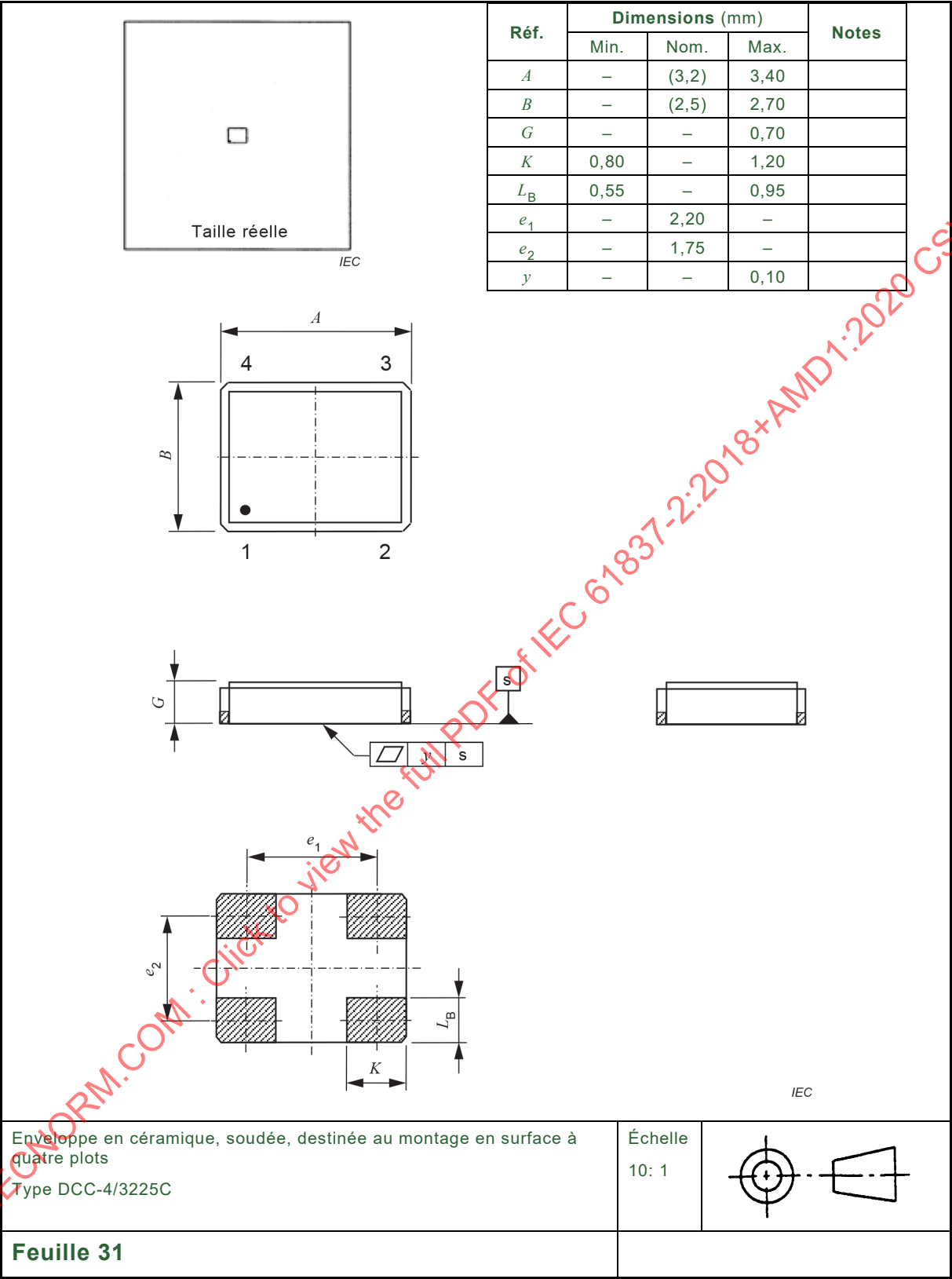
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de type DCC-4/3225C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Tension de commande		
2	Facultatif	Masse		
3	Sortie 2	Sortie		
4	Facultatif	Alimentation en courant continu		

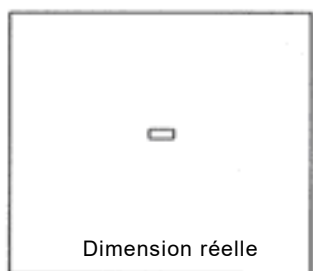
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de Type DCC-4/3225C

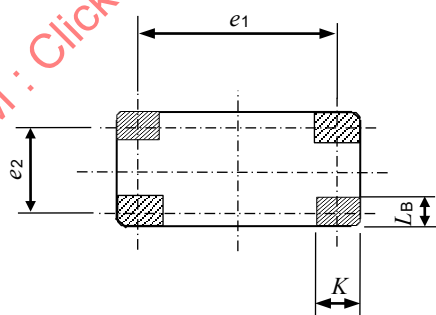
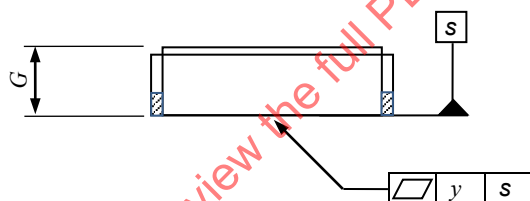
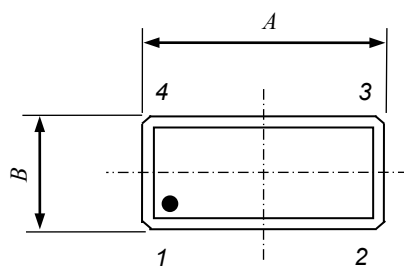
No.	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Facultatif		
2	Facultatif	Masse		
3	Sortie 2	Sortie		
4	Facultatif	Alimentation en courant continu		

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IEC

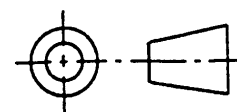
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(3,20)	3,40	
B	–	(1,50)	1,70	
G	–	–	1,00	
K	0,40	–	0,80	
L_B	0,20	–	0,60	
e_1	–	2,80	–	
e_2	–	0,90	–	
y	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots –
Type DCC-4/3215C

Echelle
10: 1

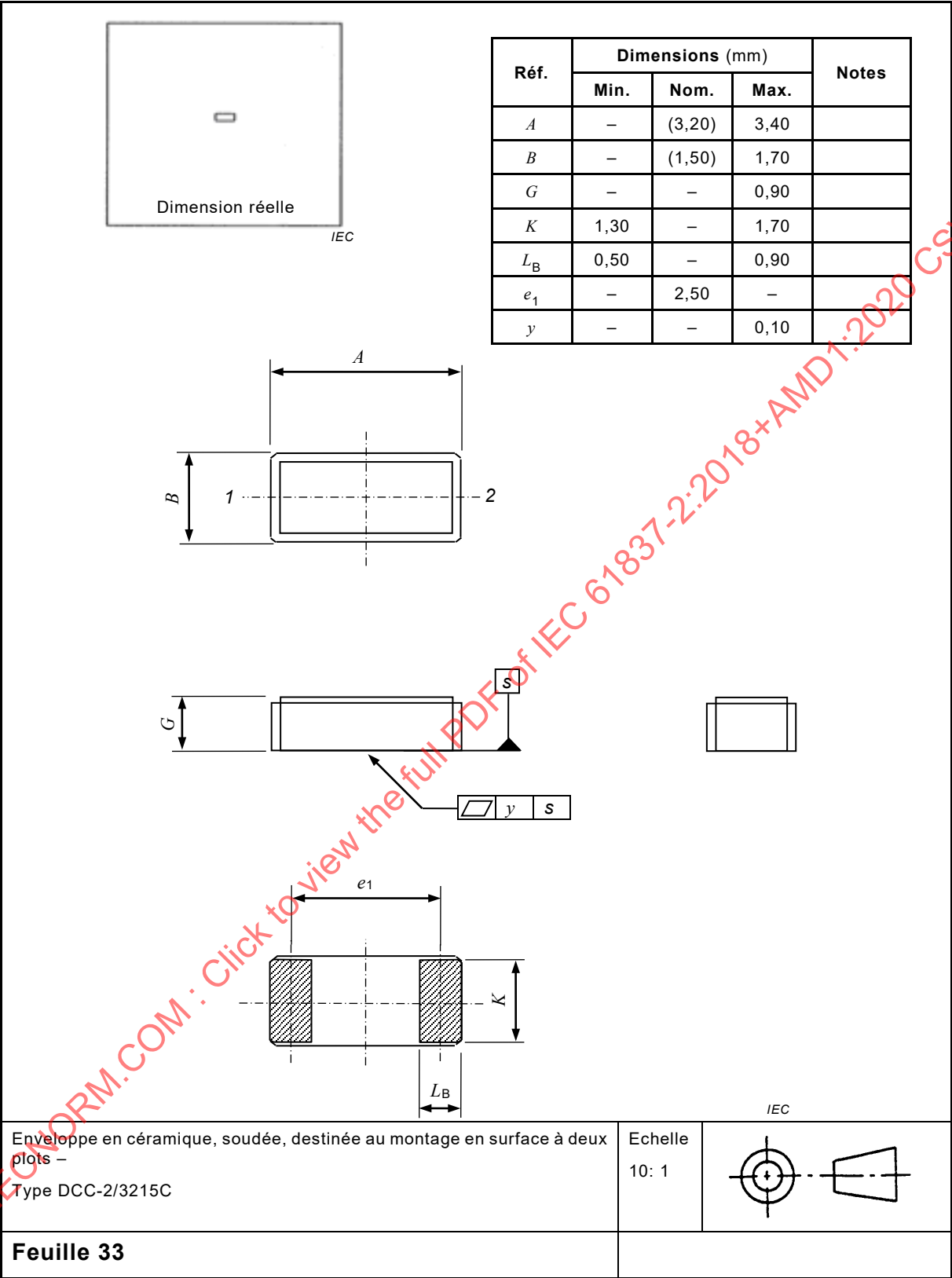


Feuille 32

Connexions des zones de contact des sorties de type DCC-4/3215C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Tension de commande		
2	Masse	Masse		
3	Masse	Sortie		
4	Sortie 2	Alimentation en courant continu		

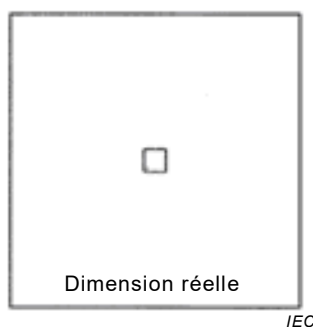
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



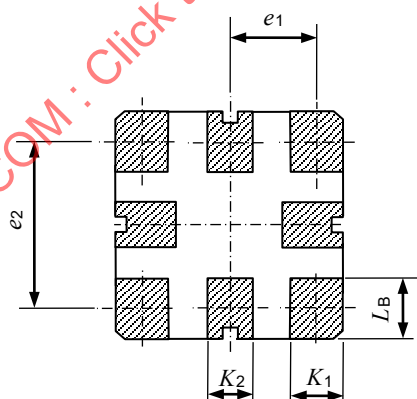
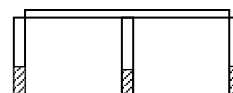
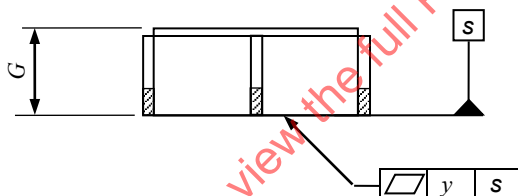
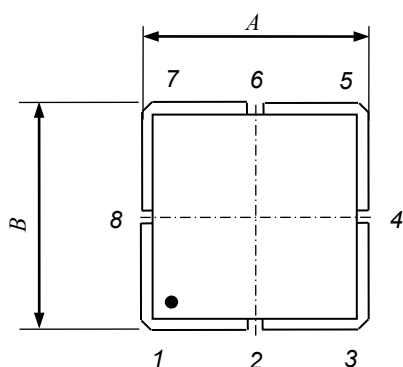
Connexions des zones de contact des sorties de type DCC-2/3215C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Sortie 2			

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(3,0)	3,20	
B	–	(3,0)	3,20	
G	–	–	1,15	
K_1	0,50	–	0,90	
K_2	0,40	–	0,80	
L_B	0,70	–	0,90	Note
e_1	–	1,15	–	
e_2	–	2,20	–	
y	–	–	0,10	

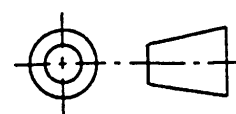


IEC

NOTE La dimension L_B max. peut être augmentée jusqu'à 1,60 mm pour la sortie 4 pour identifier l'orientation.

Enveloppe en céramique, soudée, destinée au montage en surface à huit plots –
Type QCC-8/3030B

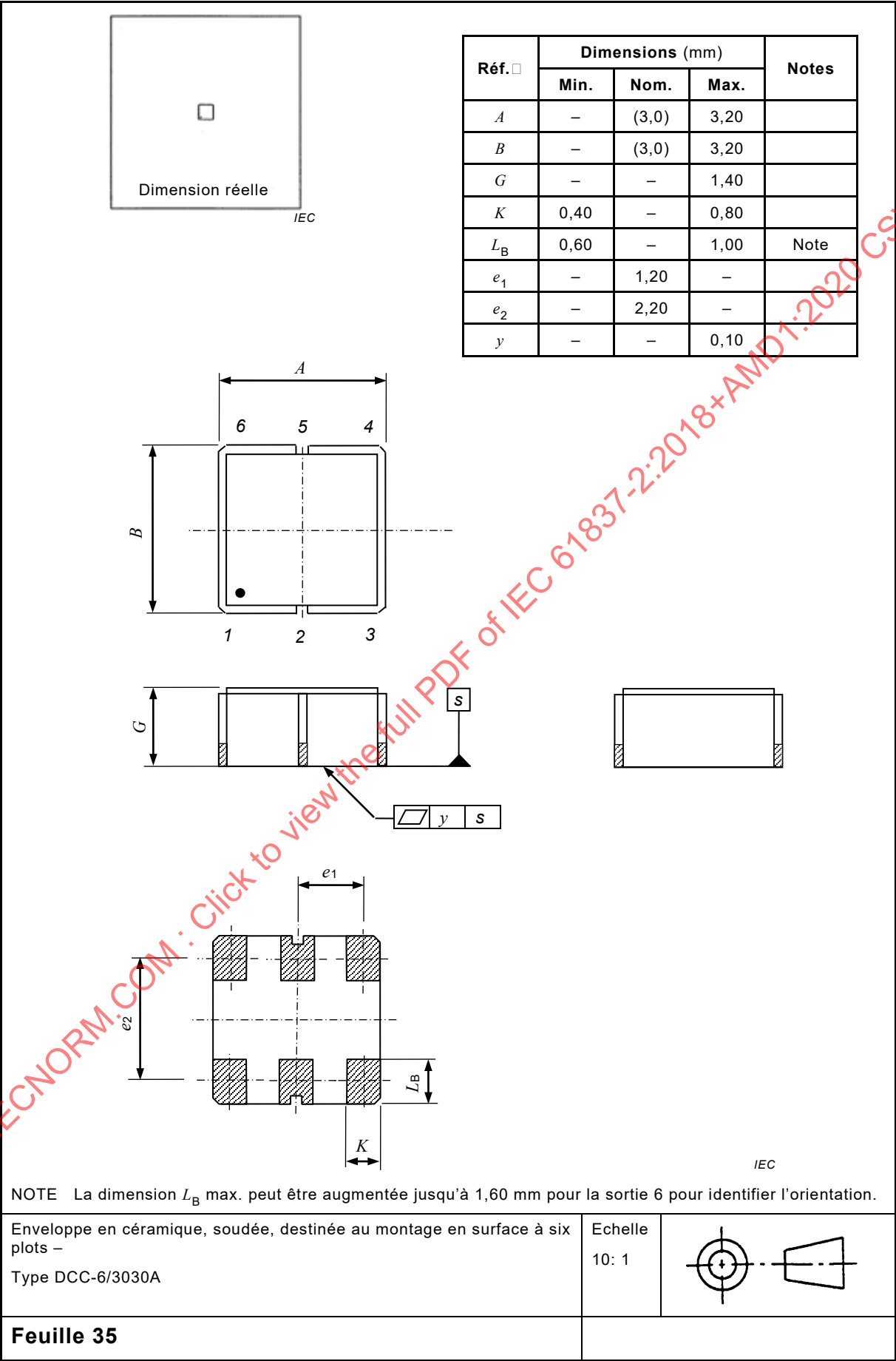
Echelle
10: 1



Connexions des zones de contact des sorties de type QCC-8/3030B

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1			Entrée/Sortie	Entrée/Sortie
2			Masse	Masse
3			Masse	Facultatif
4			Masse	Masse
5			Sortie/Entrée	Facultatif
6			Masse	Masse
7			Masse	Sortie/Entrée
8			Masse	Masse

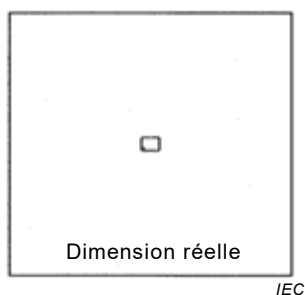
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de type DCC-6/3030A

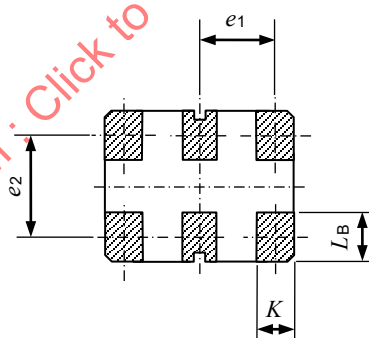
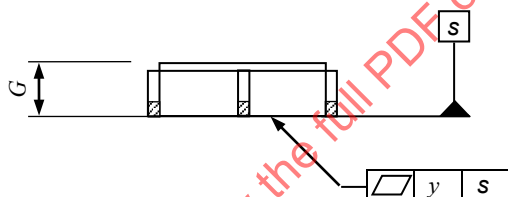
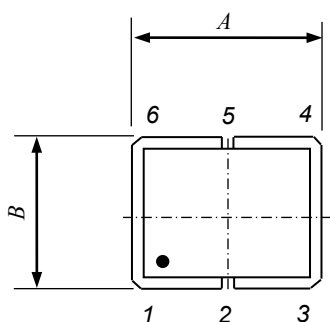
N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1				Masse
2				Entrée/Sortie
3				Masse
4				Masse
5				Sortie/Entrée
6				Masse

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IEC

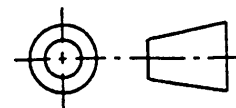
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(2,5)	2,70	
B	–	(2,0)	2,20	
G	–	–	1,10	
K	0,30	–	0,70	
L_B	0,45	–	0,85	
e_1	–	1,00	–	
e_2	–	1,35	–	
y	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à six plots –
Type DCC-6/2520A

Echelle
10: 1

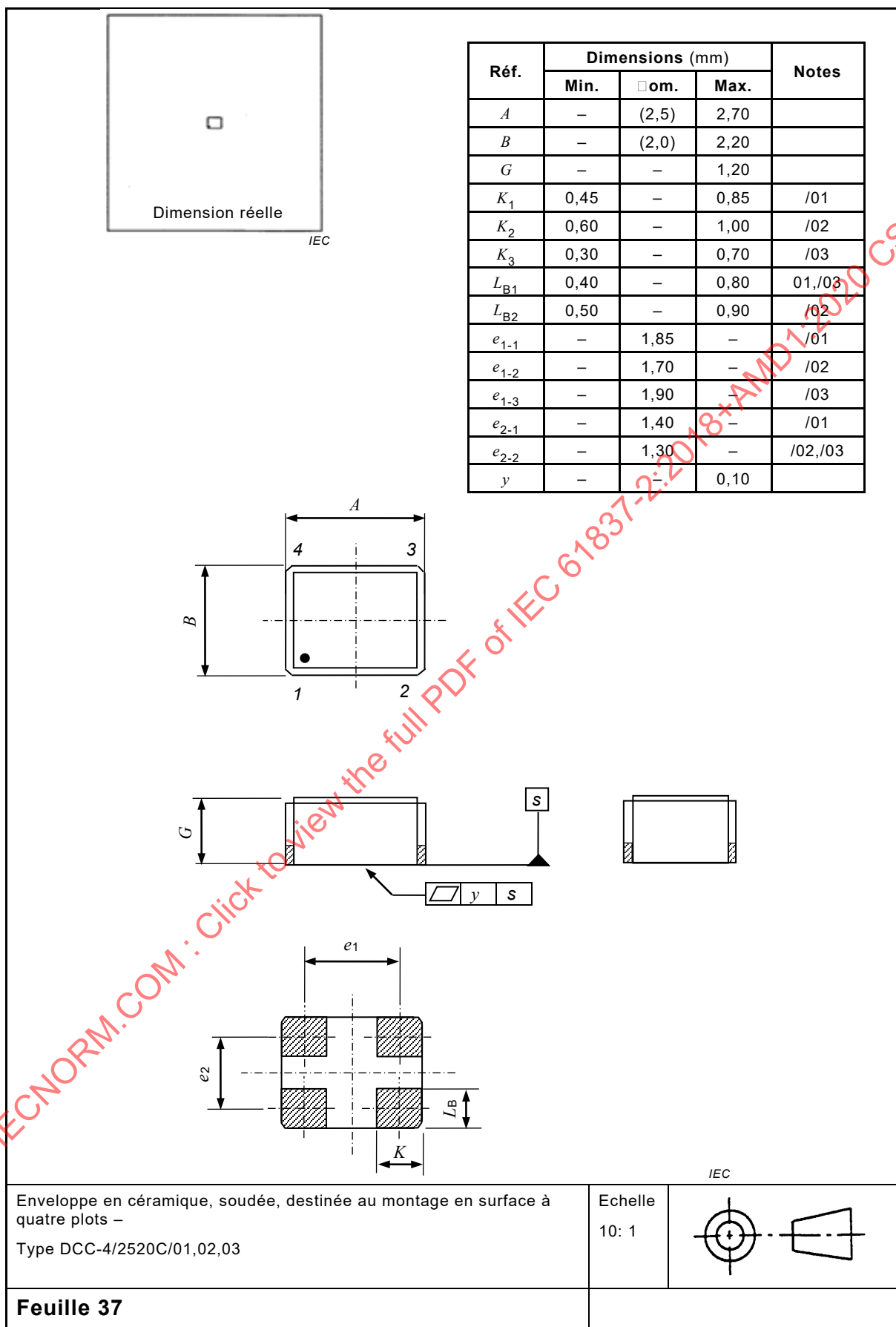


Feuille 36

Connexions des zones de contact des sorties de type DCC-6/2520A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Facultatif	Facultatif	
2		Facultatif	Masse	
3		Masse	Sortie/Entrée	
4		Sortie	Facultatif	
5		Facultatif	Masse	
6		Alimentation en courant continu	Entrée/Sortie	

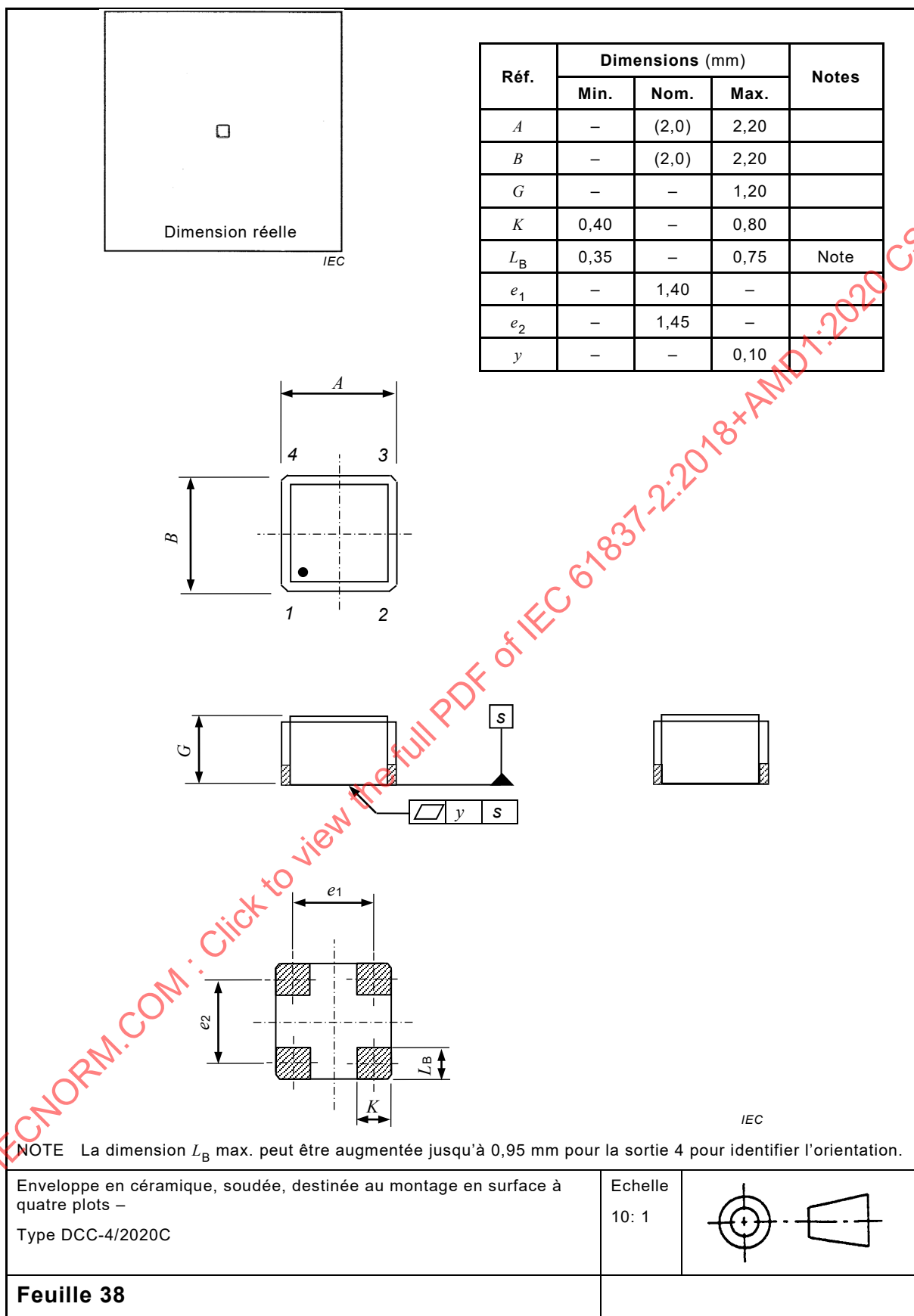
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de type DCC-4/2520C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Facultatif		
2	Masse/NC	Masse		
3	Sortie 2	Sortie		
4	Facultatif	Alimentation en courant continu		

IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV

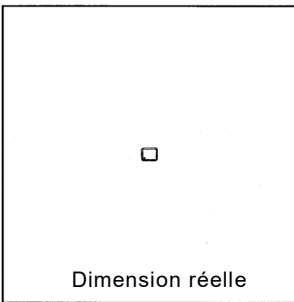


Connexions des zones de contact des sorties de type DCC-4/2020C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1		Masse	Masse
2	Masse		Sortie/Entrée	Sortie/Entrée
3	Sortie 2		Masse	Entrée/Sortie
4	Masse		Entrée/Sortie	Masse

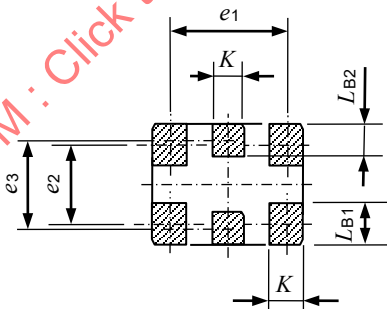
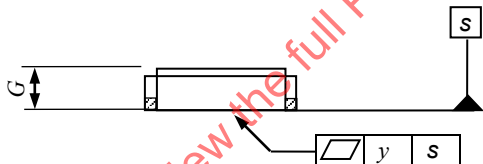
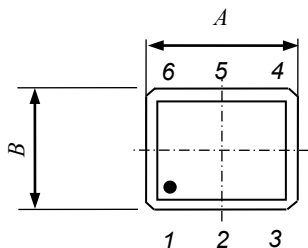
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV

Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(2,0)	2,20	
B	–	(1,6)	1,80	
G	–	–	0,80	
K	0,20	–	0,60	
L _{B1}	0,30	–	0,70	
L _{B2}	–		0,60	
e ₁	–	1,60	–	
e ₂	–	1,05	–	
e ₃	–	–	–	Note
y	–	–	0,10	



Dimension réelle

IEC

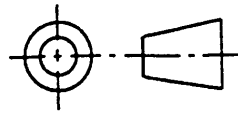


IEC

NOTE La dimension e_3 n'est pas définie car il existe différents types de produits.

Enveloppe en céramique, soudée, destinée au montage en surface à six plots –
Type DCC-6/2016A

Echelle
10: 1

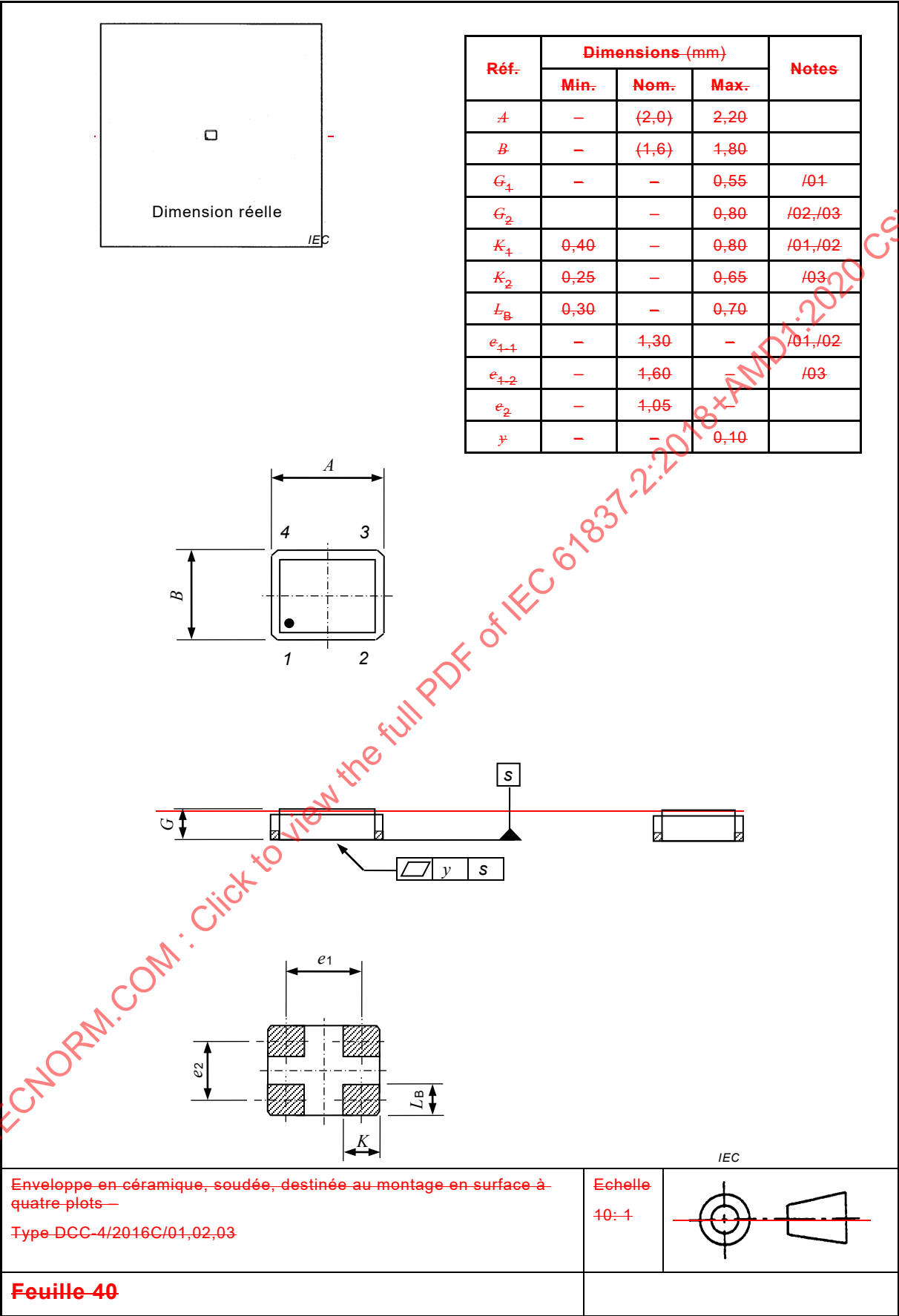


Feuille 39

Connexions des zones de contact des sorties de type DCC-6/2016A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Facultatif		
2		Facultatif		
3		Masse		
4		Sortie		
5		Facultatif		
6		Alimentation courant continu en		

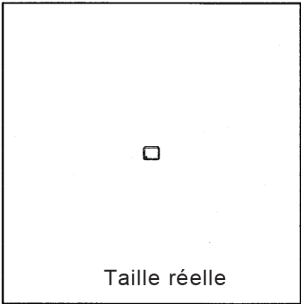
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Connexions des zones de contact des sorties de type DCC-4/2016C

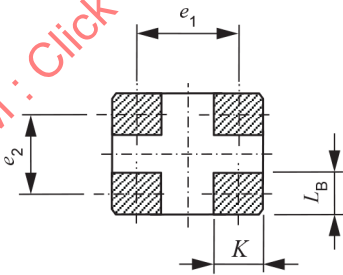
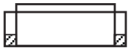
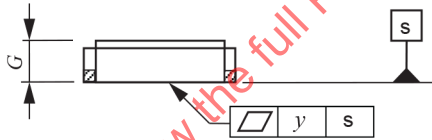
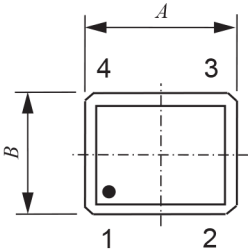
N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Masse			
3	Sortie 2			
4	Masse			

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IEC

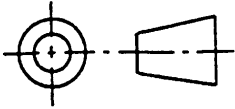
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	—	(2,0)	2,20	
B	—	(1,6)	1,80	
G ₁	—	—	0,55	/01
G ₂	—	—	0,80	/02,/03
K ₁	0,40	—	0,80	/01,/02
K ₂	0,25	—	0,65	/03
L _B	0,30	—	0,70	
e ₁₋₁	—	1,30	—	/01,/02
e ₁₋₂	—	1,60	—	/03
e ₂	—	1,05	—	
y	—	—	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
Type DCC-4/2016C/01,02,03

Échelle
10: 1

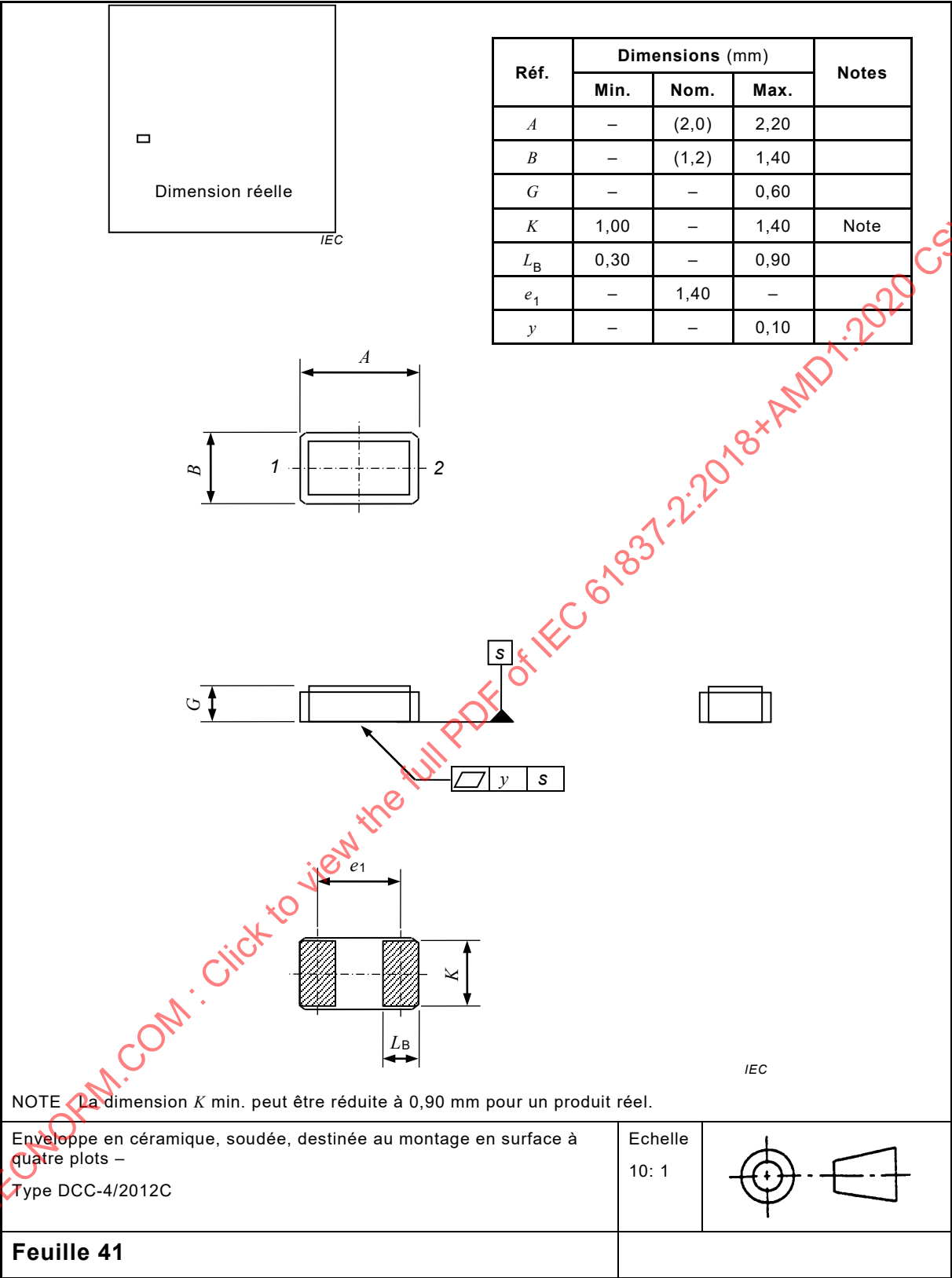


Feuille 40

Connexions des zones de contact des sorties de Type DCC-4/2016C

No.	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Facultatif		
2	Masse	Masse		
3	Sortie 2	Sortie		
4	Facultatif	Alimentation en courant continu		

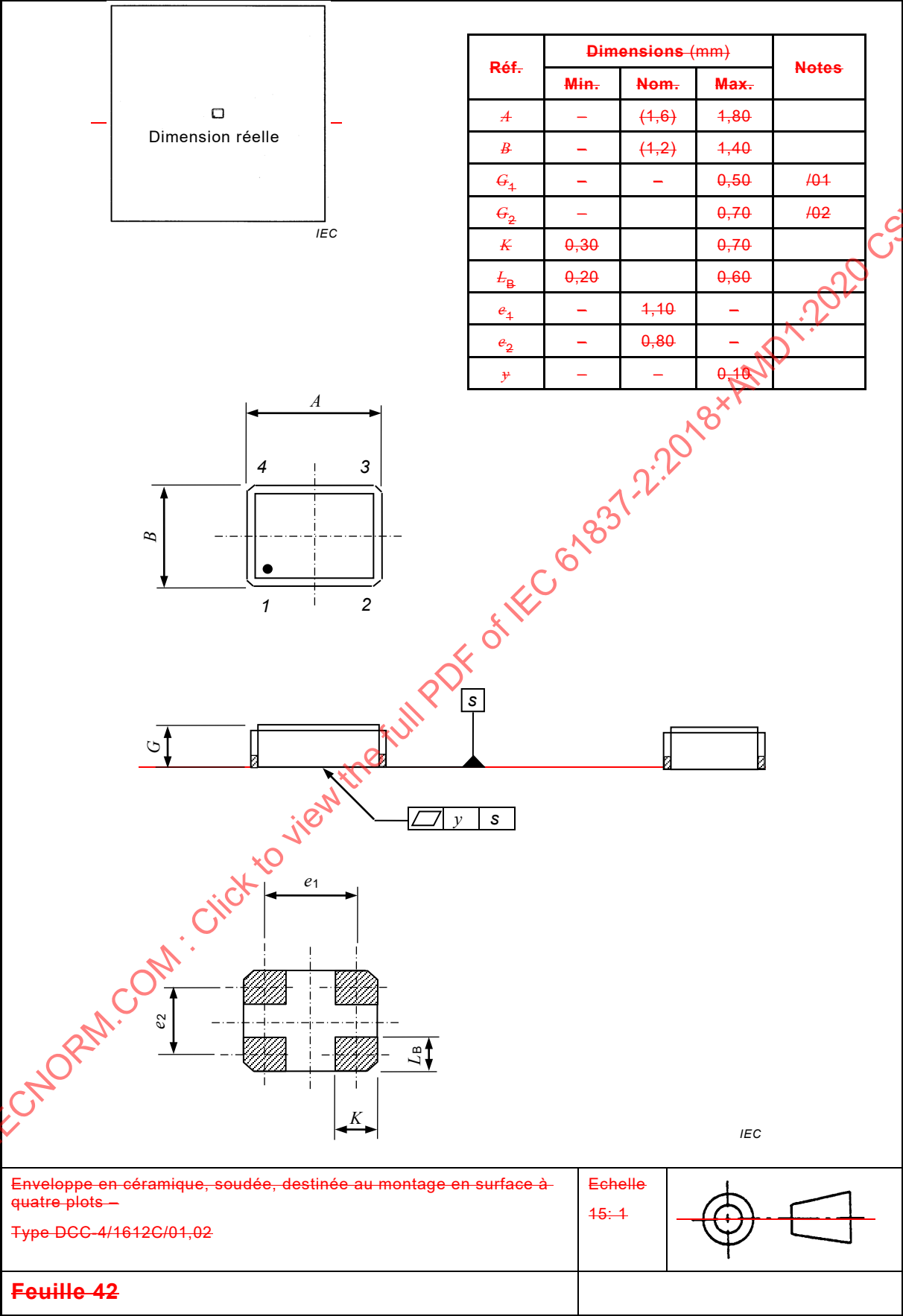
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de type DCC-2/2012C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Sortie 2			

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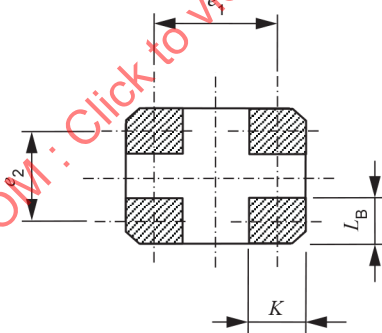
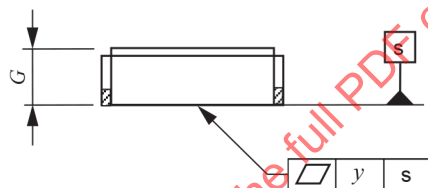
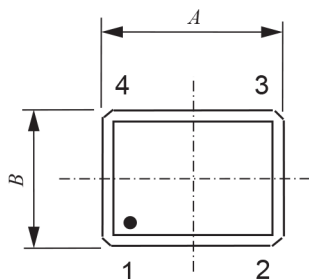
Connexions des zones de contact des sorties de type DCC-4/1612C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositif à OAS
1	Sortie 1	Facultatif		
2	Masse	Masse		
3	Sortie 2	Sortie		
4	Masse	Alimentation en courant continu		

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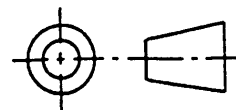
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	—	(1,6)	1,80	
B	—	(1,2)	1,40	
G_1	—	—	0,50	/01
G_2	—	—	0,70	/02
K	0,30	—	0,70	
L_B	0,20	—	0,60	
e_1	—	1,10	—	
e_2	—	0,80	—	
y	—	—	0,10	



IEC

Type DCC-4/1612C/01,02

15: 1

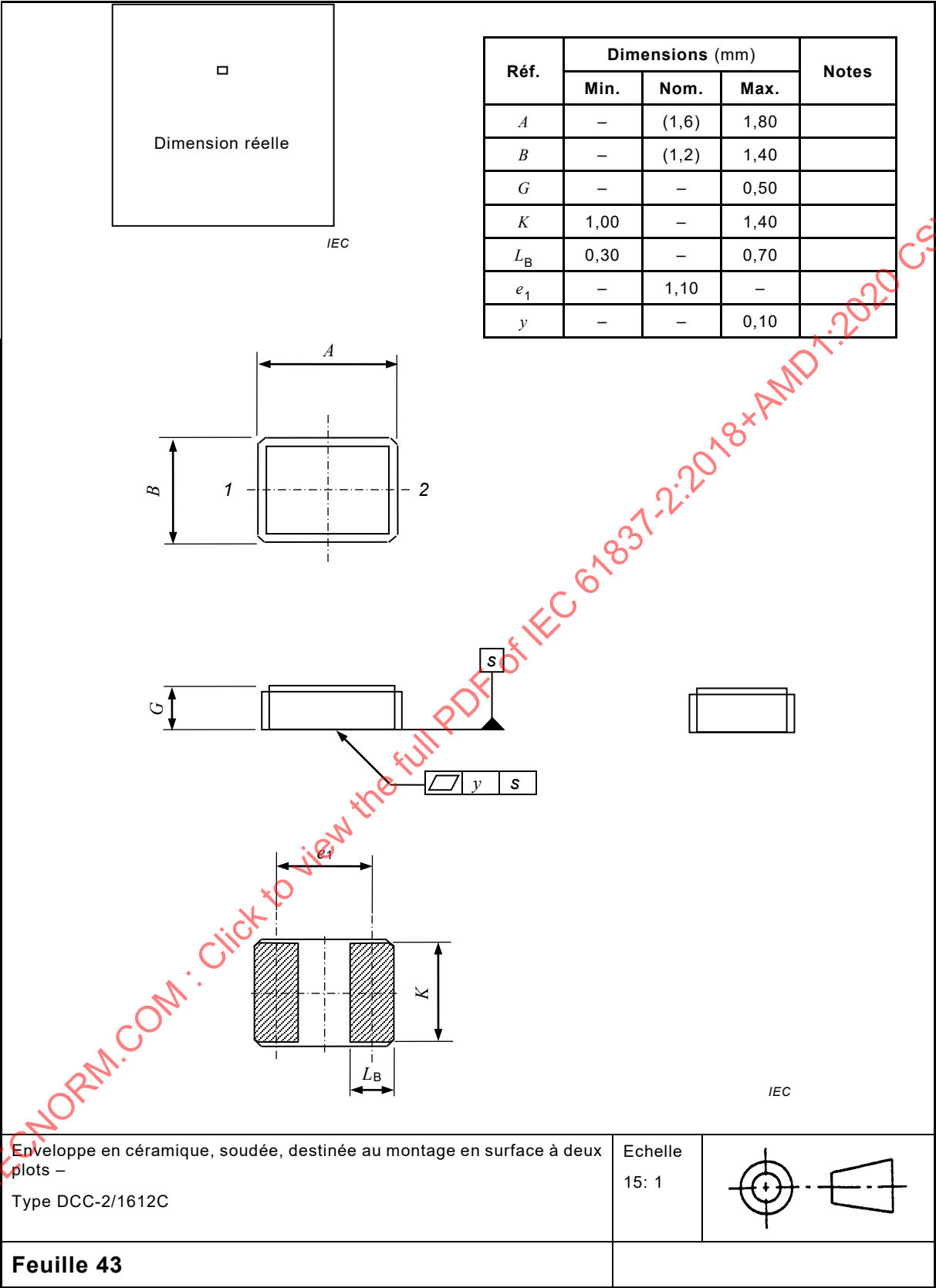


Feuille 42

Connexions des zones de contact des sorties de Type DCC-4/1612C

No.	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Facultatif		
2	Masse	Masse		
3	Sortie 2	Sortie		
4	Facultatif	Alimentation en courant continu		

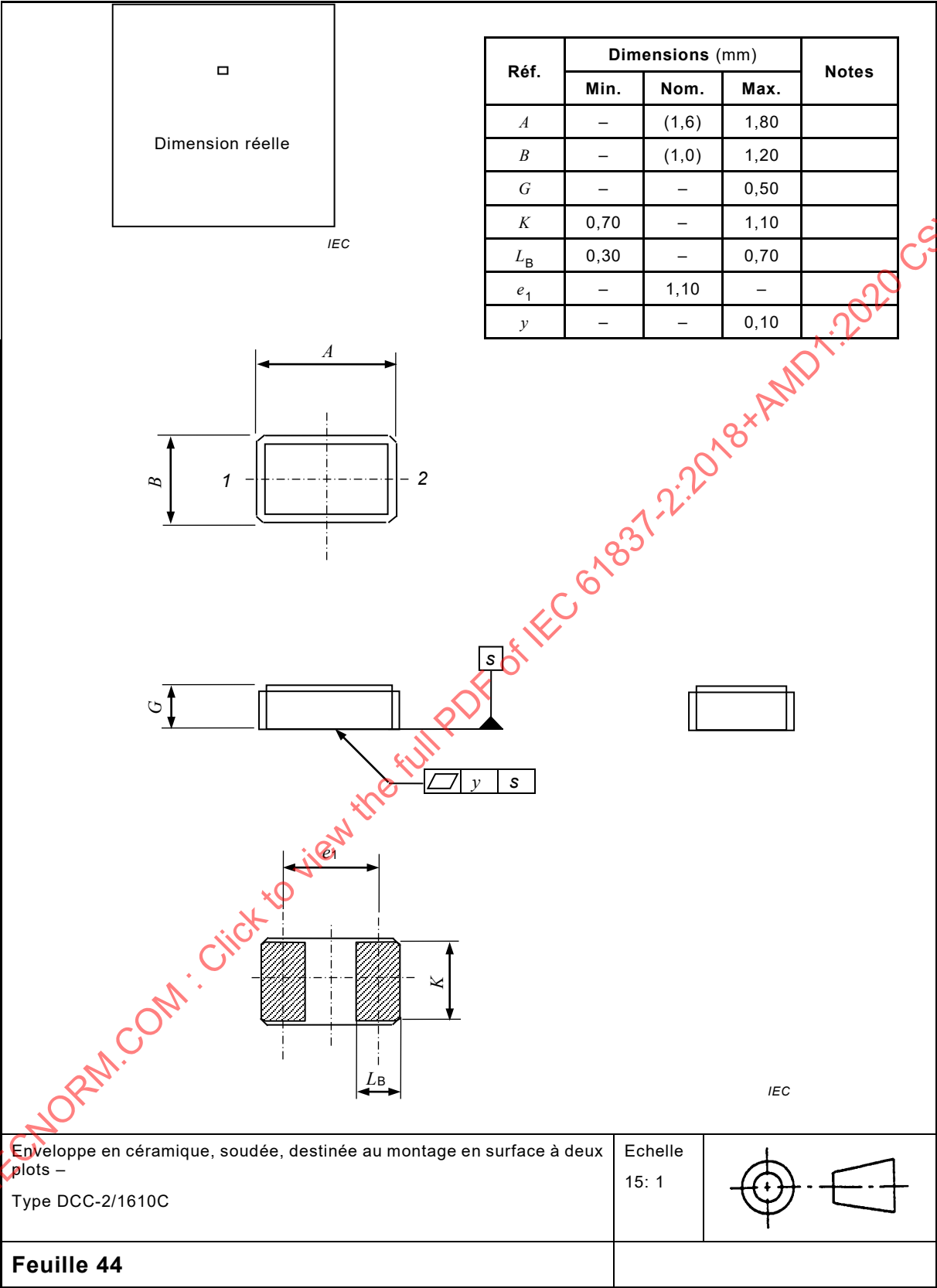
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de type DCC-2/1612C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Sortie 2			

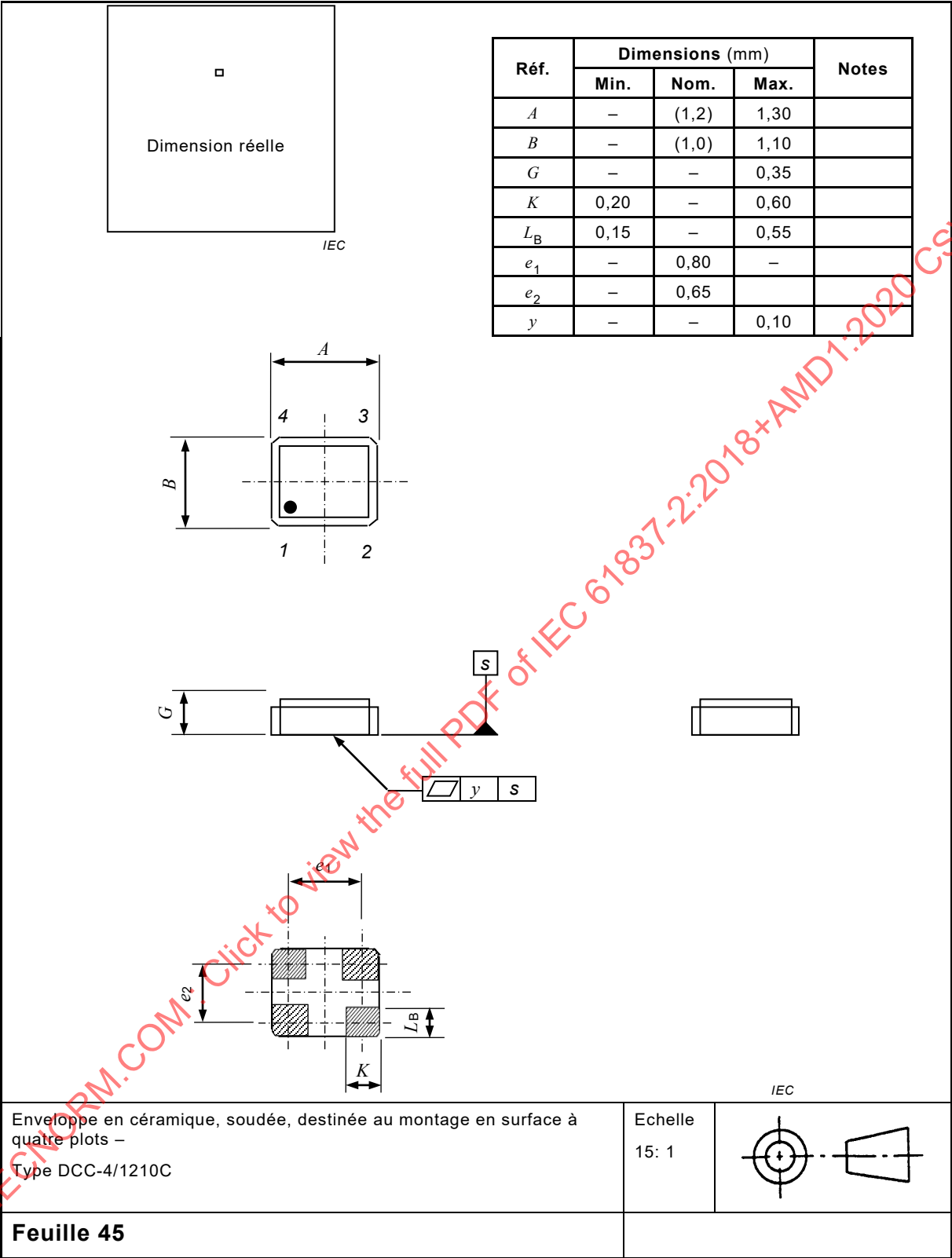
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



Connexions des zones de contact des sorties de type DCC-2/1610C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Sortie 2			

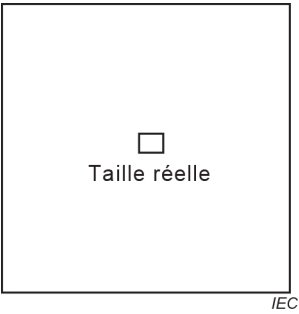
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



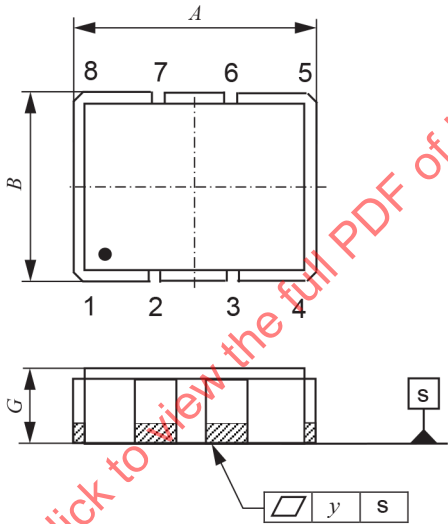
Connexions des zones de contact des sorties de type DCC-4/1210C

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Masse			
3	Sortie 2			
4	NC			

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Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	—	(3,2)	3,40	
B	—	(2,5)	2,70	
G	—	—	1,00	
K ₁	0,30	—	0,70	
K ₂	0,35	—	0,75	
L _{B1}	0,50	—	0,90	
L _{B2}	0,15	—	0,55	
e ₁	—	0,95	—	
e ₂	—	2,70	—	
e ₃	—	1,80	—	
y	—	—	0,10	



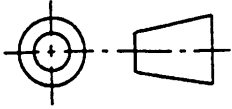
IEC

Enveloppe en céramique, soudée, destinée au montage en surface à huit plots

Type DCC-8/3225A

Feuille 46

Échelle
10: 1



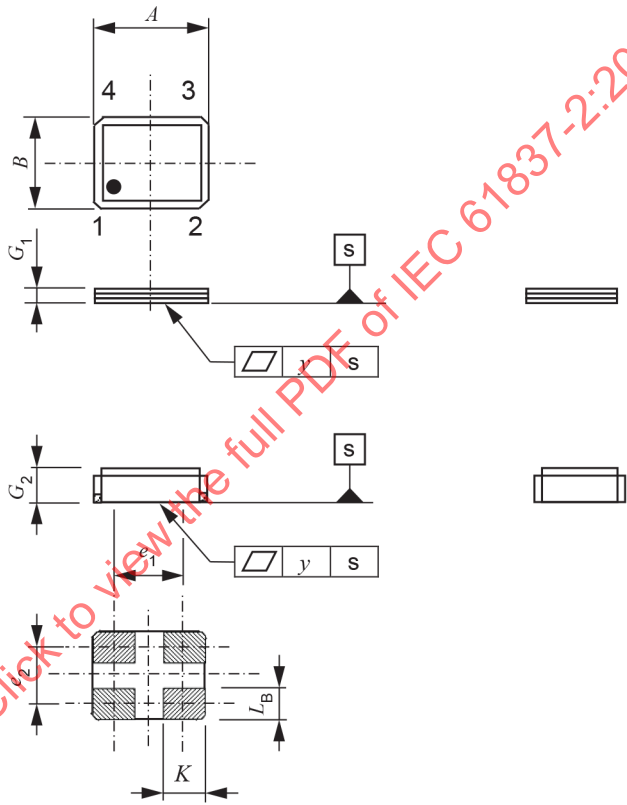
Connexions des zones de contact des sorties de DCC-8/3225A

No.	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1		Activation de sortie		
2		INT		
3		NC		
4		Sortie		
5		Masse		
6		SCL		
7		SDA		
8		Alimentation en courant continu		

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Taille réelle omise

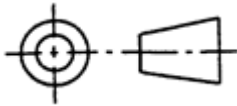
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	—	(1,0)	1,2	
B	—	(0,8)	1,0	
G ₁	—	—	0,13	/01
G ₂	—	—	0,30	/02
K	0,20	—	0,60	
L _B	0,10	—	0,50	
e ₁	—	0,60	—	
e ₂	—	0,50	—	
y	—	—	0,1	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
Type DCC-4/1008C/01,02

Échelle
15: 1



Connexions des zones de contact des sorties de Type DCC-4/1008C/01,02

No.	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1			
2	Masse			
3	Sortie 2			
4	NC			

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IEC 60862-1:2015, *Filtres à ondes acoustiques de surface (OAS) sous assurance de la qualité – Partie 1: Spécification générique*

IEC 60862-2:2012, *Filtres à ondes acoustiques de surface (OAS) sous assurance de la qualité – Partie 2: Lignes directrices d'utilisation*

IEC 60862-3:2003, *Filtres à ondes acoustiques de surface (OAS) sous assurance de la qualité – Partie 3: Encombrements normalisés*

IEC 61019-1:2004, *Résonateurs à ondes acoustiques de surface (OAS) – Partie 1: Spécification générique*

IEC 61019-2:2005, *Résonateurs à ondes acoustiques de surface (OAS) – Partie 2: Guide d'emploi*

ISO 1101:2017, *Spécification géométrique des produits (GPS) – Tolérancement géométrique – Tolérancement de forme, orientation, position et battement*

FINAL VERSION**VERSION FINALE**

**Surface mounted piezoelectric devices for frequency control and selection –
Standard outlines and terminal lead connections –
Part 2: Ceramic enclosures**

**Dispositifs piézoélectriques à montage en surface pour la commande et le choix
de la fréquence – Encombrements normalisés et connexions des sorties –
Partie 2: Enveloppes en céramique**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SURFACE MOUNTED PIEZOELECTRIC DEVICES FOR
FREQUENCY CONTROL AND SELECTION – STANDARD
OUTLINES AND TERMINAL LEAD CONNECTIONS –****Part 2: Ceramic enclosures****FOREWORD**

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This consolidated version of the official IEC Standard and its amendment has been prepared for user convenience.

IEC 61837-2 edition 3.1 contains the third edition (2018-05) [documents 49/1252/CDV and 49/1276/RVC] and its amendment 1 (2020-09) [documents 49/1338/CDV and 49/1347/RVC].

This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted is available in this publication.

International Standard IEC 61837-2 has been prepared by IEC technical committee 49: Piezoelectric, dielectric and electrostatic devices and associated materials for frequency control, selection and detection.

This third edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) revision of the figures to match the notation of the drawings of IEC 61240:2016;
- b) addition of 7 enclosures as follows: DCC-6/5032A, DCC-6/3225A, DCC-4/3215C, DCC-6/2016A, DCC-2/2012C, DCC-2/1610C, DCC-4/1210C.

As a result, this third edition contains a total of 45 enclosure types, which are listed in Table 1.

This International Standard is to be read in conjunction with IEC 61240:2016.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61837 series, published under the general title *Surface mounted piezoelectric devices for frequency control and selection – Standard outlines and terminal lead connections*, can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

SURFACE MOUNTED PIEZOELECTRIC DEVICES FOR FREQUENCY CONTROL AND SELECTION – STANDARD OUTLINES AND TERMINAL LEAD CONNECTIONS –

Part 2: Ceramic enclosures

1 Scope

This part of IEC 61837 deals with standard outlines and terminal lead connections as they apply to surface-mounted devices (SMD) for frequency control and selection in ceramic enclosures, and is based on IEC 61240:2016.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61240:2016, *Piezoelectric devices – Preparation of outline drawings of surface-mounted devices (SMD) for frequency control and selection – General rules*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Configuration of enclosures

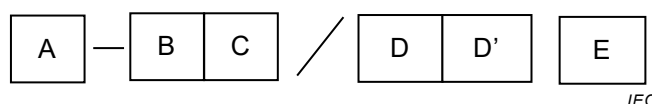
The enclosures of the surface-mounted devices are made of ceramic materials with the terminals of deposited metal film (leadless type) based on a descriptive designation system for semiconductors – devices packages.

The configuration symbols are shown as follows:

- DCC (dual chip carrier);
- QCC (quad chip carrier).

5 Designation of types

The designation of types is shown on four parts as follows:



A: Configuration symbol of enclosures:

- DCC (dual chip carrier);
- QCC (quad chip carrier).

B: Structure of terminal leads: leadless type has no mark.

C: Number of terminal leads

D: Serial number of both figures

E: Arrangement of terminal land:

In the case of DCC types:

- A (arrangement in the width direction side or the width direction side and the corner);
- B (arrangement in the length direction side or the length direction side and the corner);
- C (arrangement in the corner only).

In the case of QCC types:

- A (arrangement in the side only);
- B (arrangement in the side and the corner).

6 Ceramic enclosure dimensions

The dimensions given in this document apply to all completed SMD-devices for frequency control and selection. Only those dimensions which meet the requirements of IEC 61240 are given.

7 Lead connections

Recommendations for the lead connections of all completed SMD-devices for frequency control and selection are given in the following individual sheets. Lead connections shall always be given in the detail specification.

8 Designation of ceramic enclosures

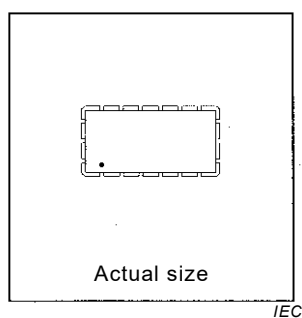
Table 1 is a list which includes all new enclosure types with their sheet numbers and brief descriptions. Old enclosure names are also listed as references.

Table 1 – Designation of ceramic enclosures

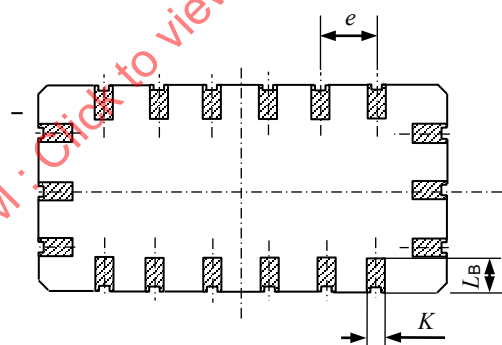
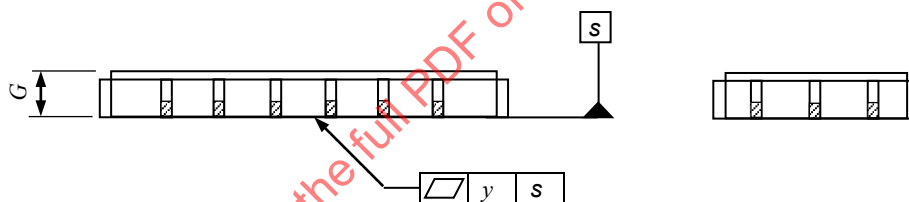
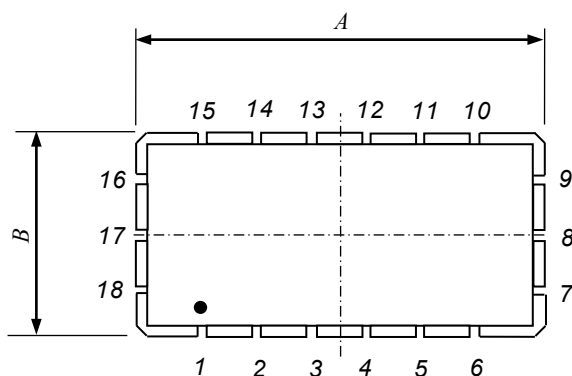
No.	Type	Old type	Sheet No.	Description
1	QCC-18/1809A	QCC-18/01	Sheet 1	Ceramic, welded, eighteen leadless SMD outline
2	QCC-12/1407A		Sheet 2	Ceramic, welded, twelve leadless SMD outline
3	DCC-4/1206A	DCC-4/01	Sheet 3	Ceramic, four leadless SMD outline
4	DCC-2/1206A		Sheet 4	Ceramic, two leadless SMD outline
5	QCC-10/9272A		Sheet 5	Ceramic, welded, ten leadless SMD outline
6	DCC-4/9070A		Sheet 6	Ceramic, welded, four leadless SMD outline
7	DCC-4/8045B	DCC-04/02, 03	Sheet 7	Ceramic, welded, four leadless SMD outline
8	DCC-2/8045B		Sheet 8	Ceramic, welded, two leadless SMD outline
9	DCC-6/7834B		Sheet 9	Ceramic, welded, six leadless SMD outline
10	DCC-6/7050A		Sheet 10	Ceramic, welded, six leadless SMD outline
11	DCC-4/7050A	DCC-4/08	Sheet 11	Ceramic, welded, four leadless SMD outline
12	DCC-4/7050B	DCC-4/04, 05	Sheet 12	Ceramic, welded, four leadless SMD outline
13	QCC-10/7050A		Sheet 13	Ceramic, welded, ten leadless SMD outline
14	QCC-6/7050A	QCC-6/01, 02	Sheet 14	Ceramic, welded, six leadless SMD outline
15	DCC-6/6035A	DCC-4/06, 07	Sheet 15	Ceramic, welded, six leadless SMD outline
16	DCC-4/6035C		Sheet 16	Ceramic, welded, four leadless SMD outline
17	DCC-2/6035C		Sheet 17	Ceramic, welded, two leadless SMD outline
18	QCC-8/5050A	QCC-8/02	Sheet 18	Ceramic, welded, eight leadless SMD outline
19	QCC-12/5045A	QCC-12/02	Sheet 19	Ceramic, welded, twelve leadless SMD outline
20	QCC-8/5045A		Sheet 20	Ceramic, welded, eight leadless SMD outline
21	DCC-6/5032A		Sheet 21	Ceramic, welded, six leadless SMD outline
22	DCC-4/5032A		Sheet 22	Ceramic, welded, four leadless SMD outline
23	DCC-4/5032C		Sheet 23	Ceramic, welded, four leadless SMD outline
24	DCC-2/5032B	DCC-2/01	Sheet 24	Ceramic, welded, two leadless SMD outline
25	DCC-2/4818C		Sheet 25	Ceramic, welded, two leadless SMD outline
26	DCC-2/4115C		Sheet 26	Ceramic, welded, two leadless SMD outline
27	DCC-4/4025C	DCC-6/01	Sheet 27	Ceramic, welded, four leadless SMD outline
28	QCC-8/3838A		Sheet 28	Ceramic, welded, eight leadless SMD outline
29	DCC-6/3838A		Sheet 29	Ceramic, welded, six leadless SMD outline
30	DCC-6/3225A		Sheet 30	Ceramic, welded, six leadless SMD outline
31	DCC-4/3225C		Sheet 31	Ceramic, welded, four leadless SMD outline
32	DCC-4/3215C		Sheet 32	Ceramic, welded, four leadless SMD outline
33	DCC-2/3215C		Sheet 33	Ceramic, welded, two leadless SMD outline
34	QCC-8/3030B		Sheet 34	Ceramic, welded, eight leadless SMD outline
35	DCC-6/3030A		Sheet 35	Ceramic, welded, six leadless SMD outline
36	DCC-6/2520A		Sheet 36	Ceramic, welded, six leadless SMD outline
37	DCC-4/2520C/01,02,03		Sheet 37	Ceramic, welded, four leadless SMD outline
38	DCC-4/2020C		Sheet 38	Ceramic, welded, six leadless SMD outline
39	DCC-6/2016A		Sheet 39	Ceramic, welded, six leadless SMD outline
40	DCC-4/2016C/01,02,03		Sheet 40	Ceramic, welded, four leadless SMD outline
41	DCC-2/2012C		Sheet 41	Ceramic, welded, two leadless SMD outline
42	DCC-4/1612C/01,02		Sheet 42	Ceramic, welded, four leadless SMD outline
43	DCC-2/1612C		Sheet 43	Ceramic, welded, two leadless SMD outline
44	DCC-2/1610C		Sheet 44	Ceramic, welded, two leadless SMD outline
45	DCC-4/1210C		Sheet 45	Ceramic, welded, four leadless SMD outline

No.	Type	Old type	Sheet No.	Description
46	DCC-8/3225A		Sheet 46	Ceramic, welded, eight leadless SMD outline
47	DCC-4/1008C/0,1,02		Sheet 47	Ceramic, welded, four leadless SMD outline

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(18,0)	18,30	
<i>B</i>	–	(9,0)	9,30	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	1,10	
<i>L_B</i>	1,20	–	1,80	Note
<i>e</i>	–	2,54	–	
<i>y</i>	–	–	0,10	

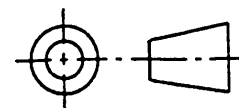


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NOTE Dimension *L_B* max. can be increased to 2,10 mm for lead 1 to identify the orientation.

Ceramic, welded, eighteen leadless SMD outline –
Type QCC-18/1809A

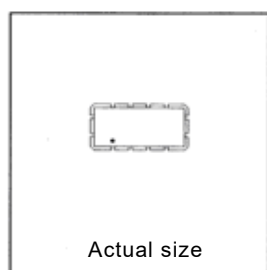
Scale
3: 1



Sheet 1

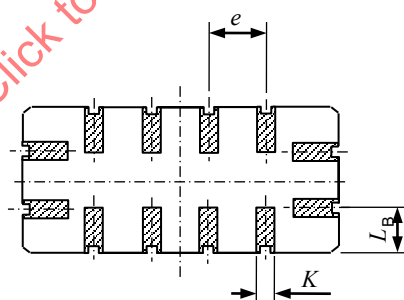
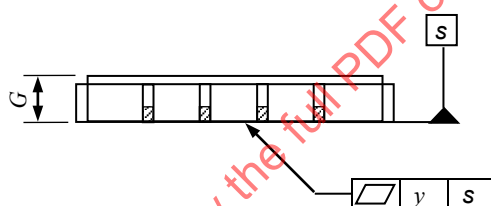
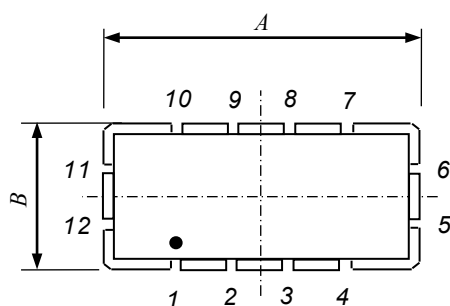
Terminal land connections of Type QCC-18/1809A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Ground
2				Option
3				Option
4				Option
5				Option
6				Ground
7				Input/Output
8				Ground
9				Input/Output /Ground
10				Ground
11				Option
12				Option
13				Option
14				Option
15				Ground
16				Output/Input
17				Ground
18				Output/Input /Ground



IEC

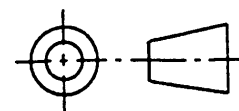
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(14,0)	14,30	
<i>B</i>	–	(6,5)	6,80	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	1,10	
<i>L_B</i>	1,70	–	2,30	
<i>e</i>	–	2,54	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, twelve leadless SMD outline –
Type QCC-12/1407A

Scale
3: 1

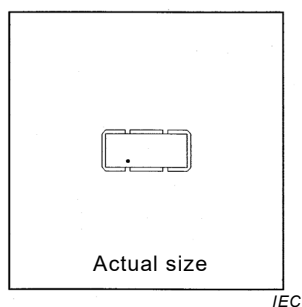


Sheet 2

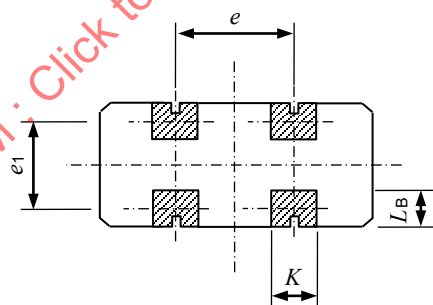
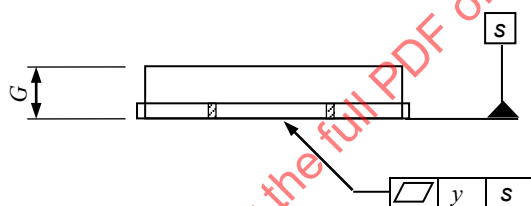
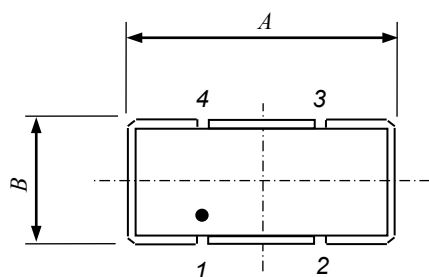
Terminal land connections of Type QCC-12/1407A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Option
2				Option
3				Ground
4				Option
5				Output/Input
6				Output/Input /Ground
7				Option
8				Ground
9				Option
10				Option
11				Input/Output
12				Input/Output /Ground

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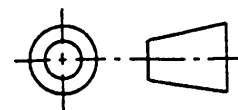
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(12,0)	12,30	
<i>B</i>	–	(5,5)	5,80	
<i>G</i>	–	–	2,30	
<i>K</i>	1,80	–	2,20	
<i>L_B</i>	1,30	–	1,90	
<i>e</i>	–	5,08	–	
<i>e₁</i>	–	3,90	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/1206A

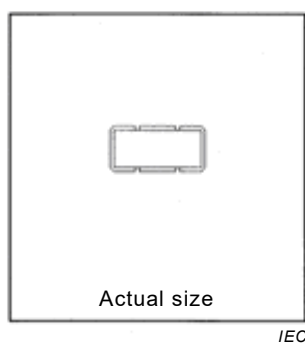
Scale
3: 1



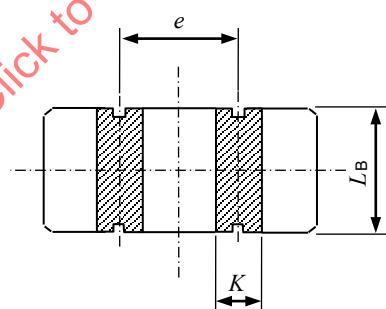
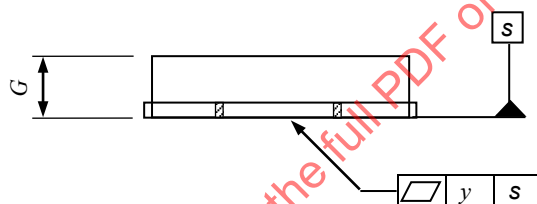
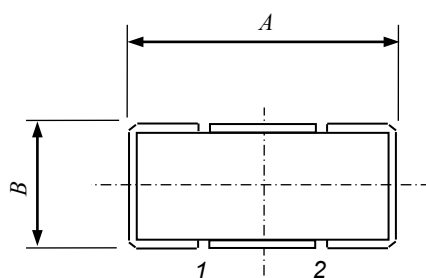
Sheet 3

Terminal land connections of Type DCC-4/1206A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control voltage		
2	NC	Ground		
3	Terminal 2	Output		
4	NC	DC supply		



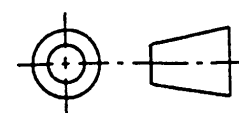
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(12,0)	12,30	
<i>B</i>	–	(5,5)	5,80	
<i>G</i>	–	–	2,70	
<i>K</i>	1,60	–	2,20	
<i>L_B</i>	5,20	–	5,80	
<i>e</i>	–	5,08	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, two leadless SMD outline –
Type DCC-2/1206A

Scale
3: 1

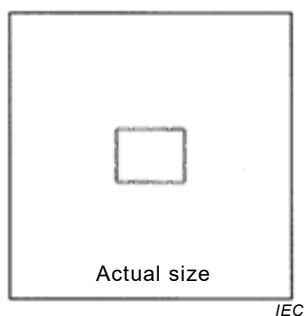


Sheet 4

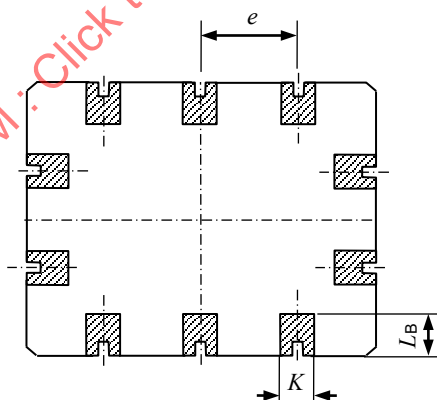
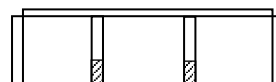
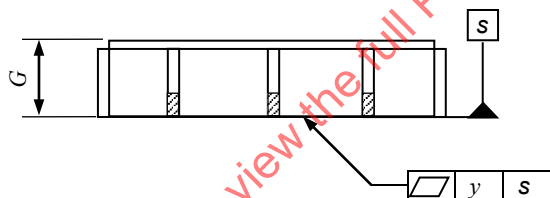
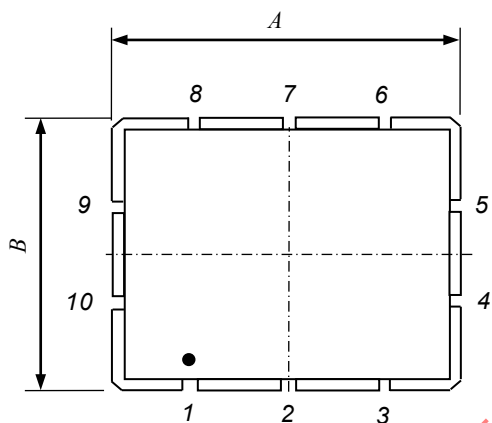
Terminal land connections of Type DCC-2/1206A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(9,2)	9,50	
<i>B</i>	–	(7,2)	7,50	
<i>G</i>	–	–	2,00	
<i>K</i>	0,60	–	1,20	
<i>L_B</i>	0,80	–	1,40	Note
<i>e</i>	–	2,54	–	
<i>y</i>	–	–	0,10	

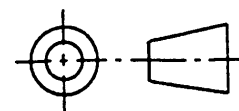


IEC

NOTE Dimension *L_B* max. can be increased to 2,00 mm for lead 1 to identify the orientation.

Ceramic, welded, ten leadless SMD outline –
Type QCC-10/9272A

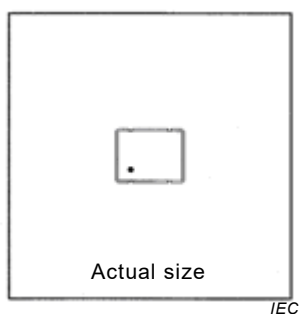
Scale
5: 1



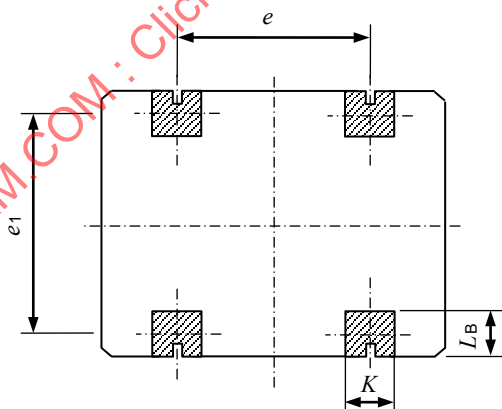
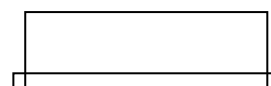
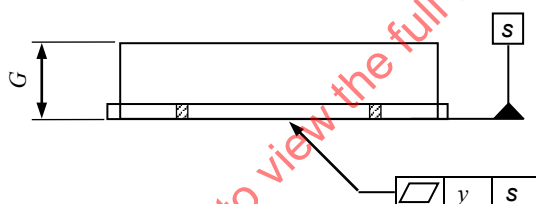
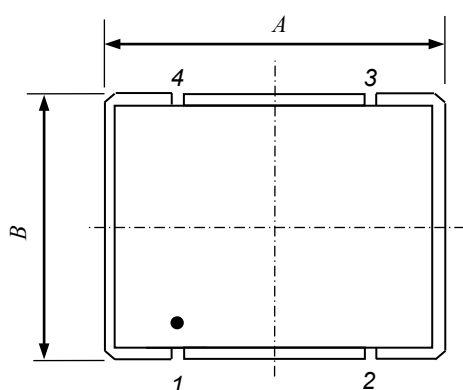
Sheet 5

Terminal land connections of Type QCC-10/9272A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Input/Output /Ground
2				Input/Output
3				Ground
4				Ground
5				Ground
6				Output/Input /Ground
7				Output/Input
8				Option
9				Ground
10				Ground



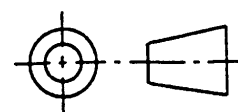
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(9,0)	9,30	
<i>B</i>	–	(7,0)	7,30	
<i>G</i>	–	–	2,00	
<i>K</i>	1,10	–	1,70	
<i>L_B</i>	0,90	–	1,50	
<i>e</i>	–	5,08	–	
<i>e₁</i>	–	5,80	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/9070A

Scale
5: 1

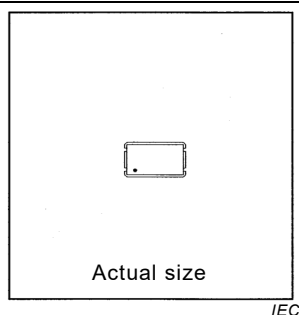


Sheet 6

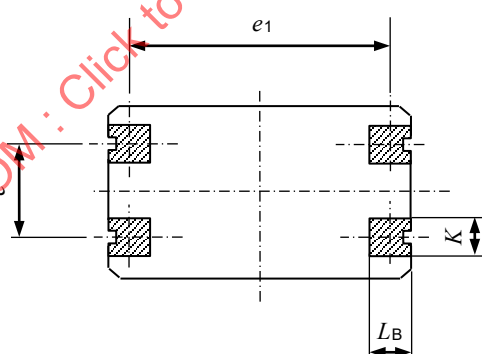
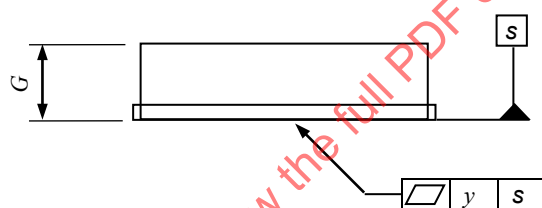
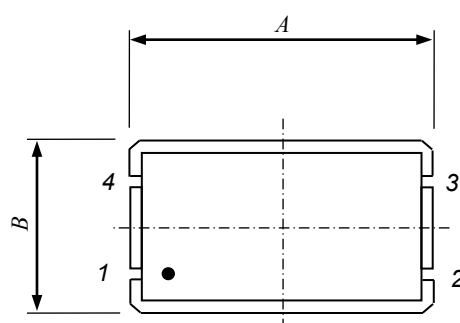
Terminal land connections of Type DCC-4/9070A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Control voltage		
2		Ground		
3		Output		
4		DC supply		

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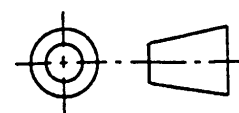
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(8,0)	8,30	
<i>B</i>	–	(4,5)	4,80	
<i>G</i>	–	–	2,00	
<i>K</i>	0,70	–	1,30	
<i>L_B</i>	0,80	–	1,40	
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	6,90	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/8045B

Scale
5: 1

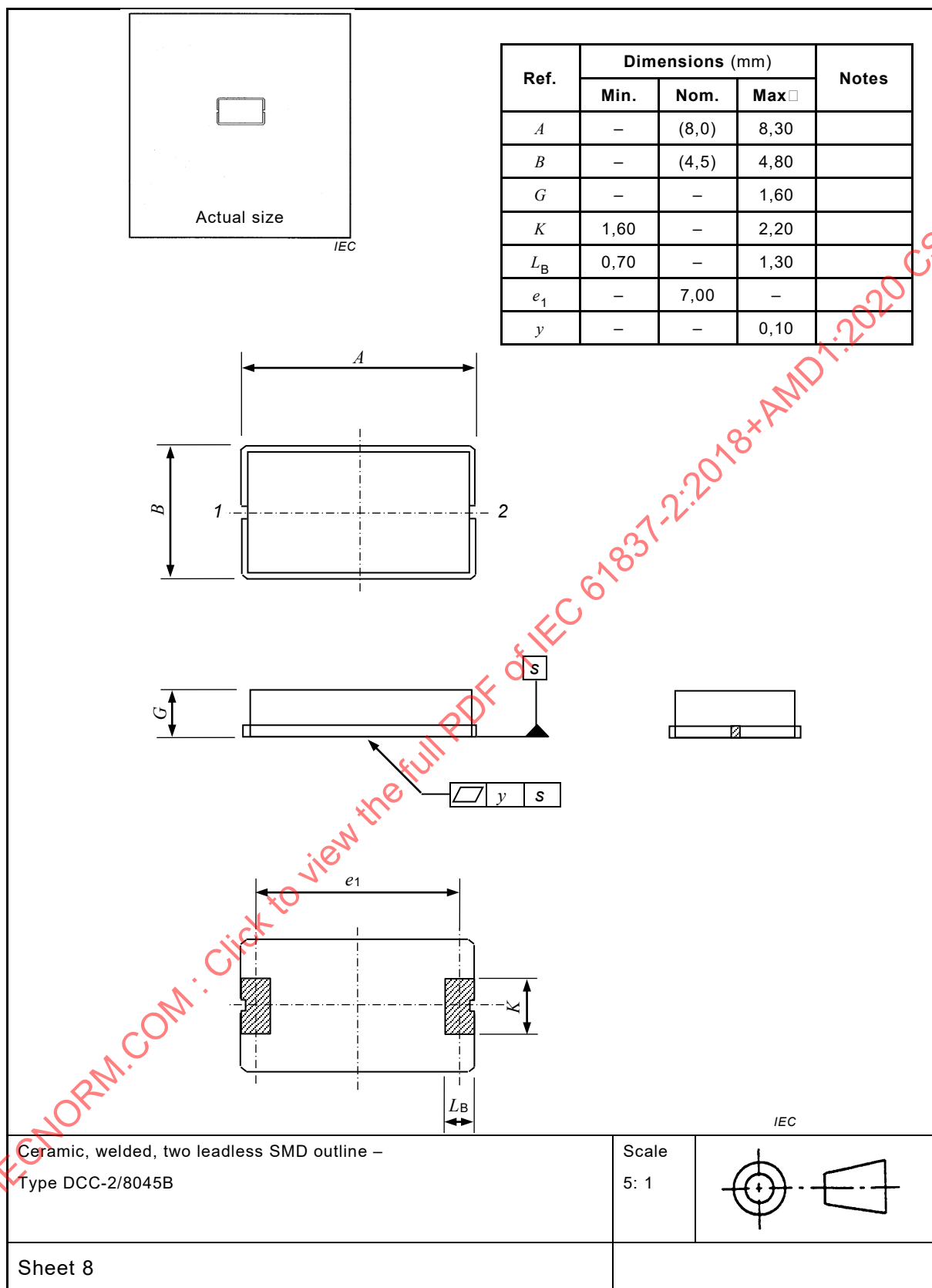


Sheet 7

Terminal land connections of Type DCC-4/8045B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control voltage		
2	Option	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

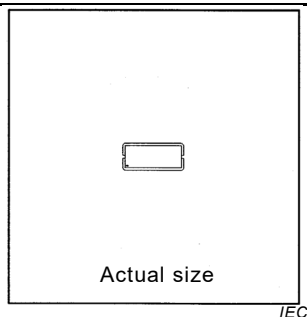
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



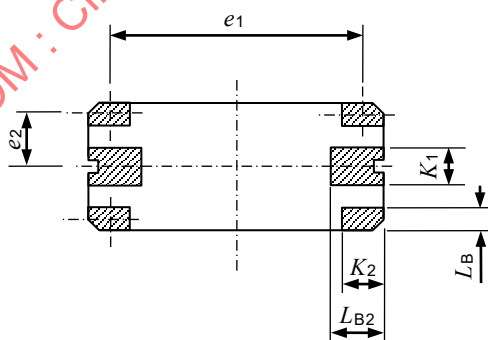
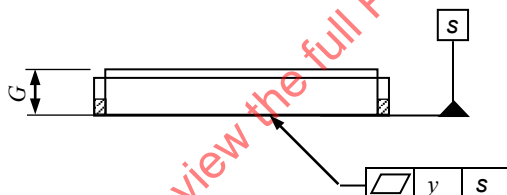
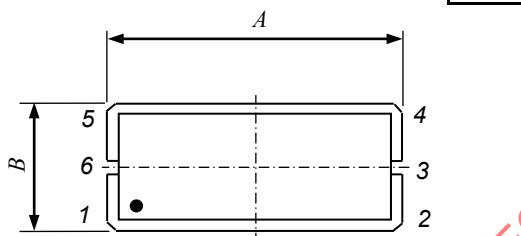
Terminal land connections of Type DCC-2/8045B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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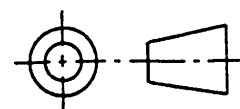
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(7,8)	8,10	
B	–	(3,4)	3,70	
G	–	–	1,20	
K_1	0,70	–	1,30	
K_2	0,80	–	1,40	
L_{B1}	0,30	–	0,90	
L_{B2}	1,10	–	1,70	
e_1	–	6,70	–	
e_2	–	1,40	–	
y	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/7834B

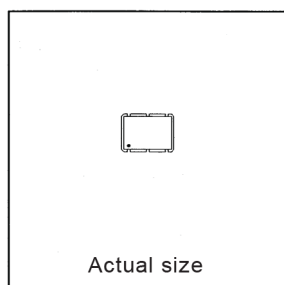
Scale
5: 1



Sheet 9

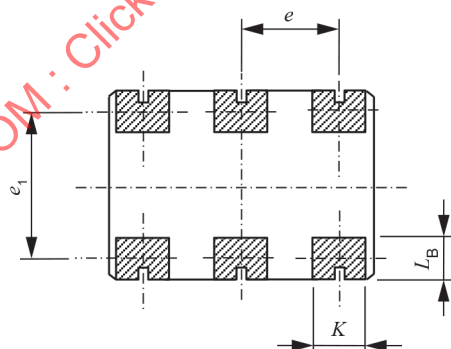
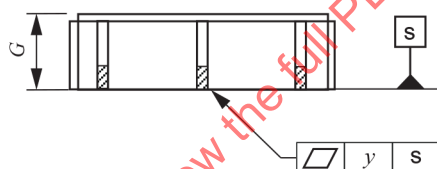
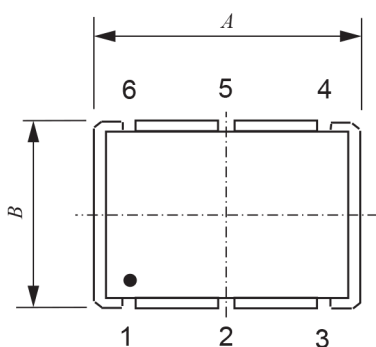
Terminal land connections of Type DCC-6/7834B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Option			
2	Option			
3	Terminal 1			
4	Option			
5	Option			
6	Terminal 2			



IEC

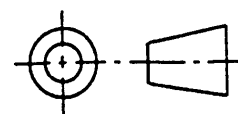
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	—	(7,0)	7,30	
<i>B</i>	—	(5,0)	5,30	
<i>G</i>	—	—	2,00	
<i>K</i>	1,10	—	1,70	
<i>L_B</i>	0,80	—	1,40	
<i>e</i>	—	2,54	—	
<i>e₁</i>	—	3,90	—	
<i>y</i>	—	—	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/7050A

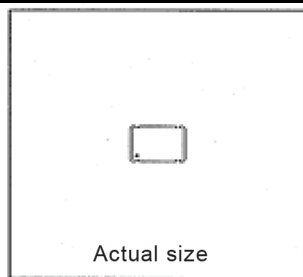
Scale
15: 1



Sheet 10

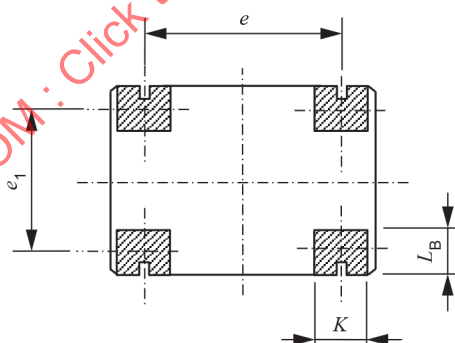
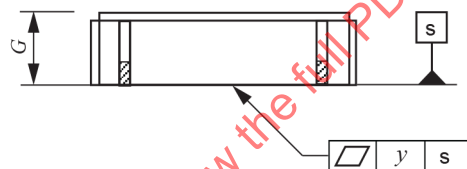
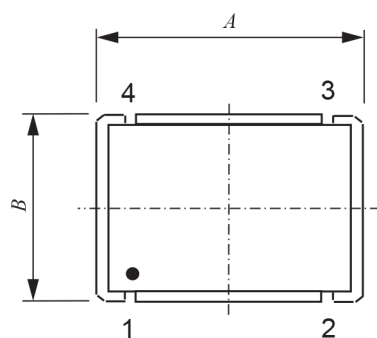
Terminal land connections of Type DCC-6/7050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Option		
3		Ground		
4		Output		
5		Option		
6		DC supply		



IEC

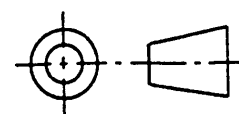
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	—	(7,0)	7,30	
<i>B</i>	—	(5,0)	5,30	
<i>G</i>	—	—	1,90	
<i>K</i>	1,10	—	1,70	
<i>L_B</i>	0,90	—	1,50	
<i>e</i>	—	5,08	—	
<i>e₁</i>	—	3,80	—	
<i>y</i>	—	—	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/7050A

Scale
5: 1

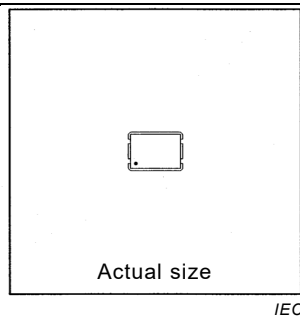


Sheet 11

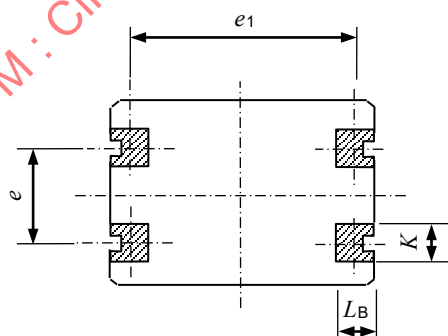
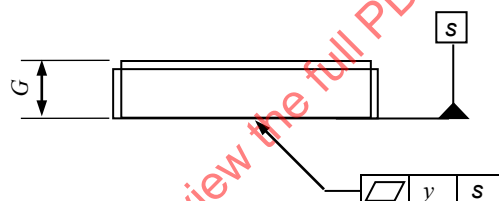
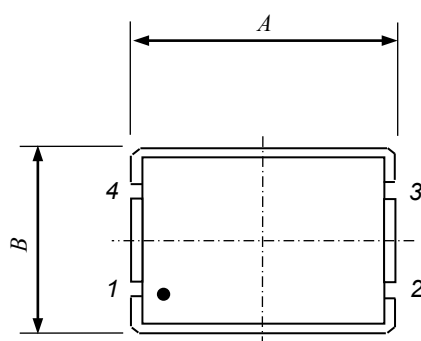
Terminal land connections of Type DCC-4/7050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Ground		
3		Output		
4		DC supply		

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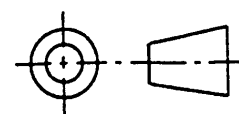
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(7,0)	7,30	
<i>B</i>	–	(5,0)	5,30	
<i>G</i>	–	–	1,50	
<i>K</i>	0,70	–	1,30	
<i>L_B</i>	0,70	–	1,30 □	
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	6,00	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/7050B

Scale
5: 1

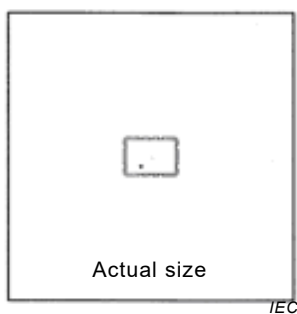


Sheet 12

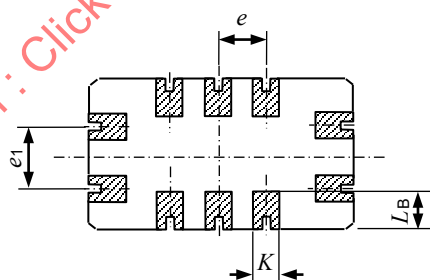
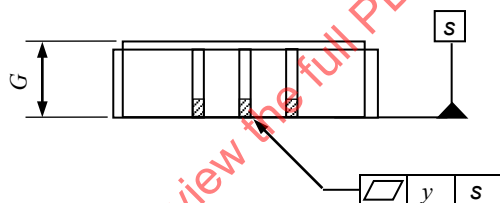
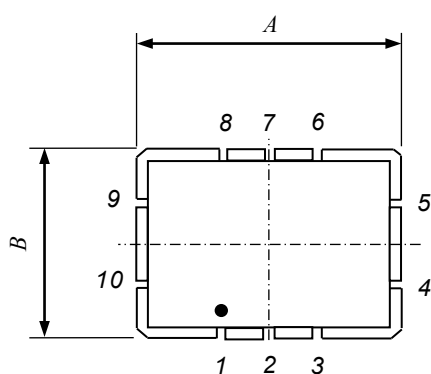
Terminal land connections of Type DCC-4/7050B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Option			
3	Terminal 2			
4	Option			

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(7,0)	7,30	
<i>B</i>	–	(5,0)	5,30	
<i>G</i>	–	–	2,00	
<i>K</i>	0,40	–	1,00	
<i>L_B</i>	0,80	–	1,20	Note
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	4,00	–	
<i>y</i>	–	–	0,10	

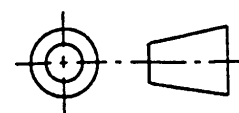


IEC

NOTE Dimension L_B max. can be increased to 1,60 mm for lead 1 to identify the orientation.

Ceramic, welded, ten leadless SMD outline –
Type QCC-10/7050A

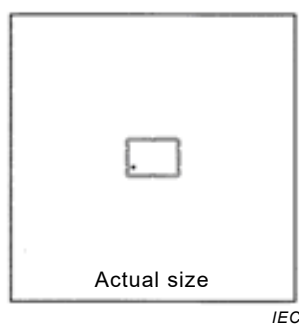
Scale
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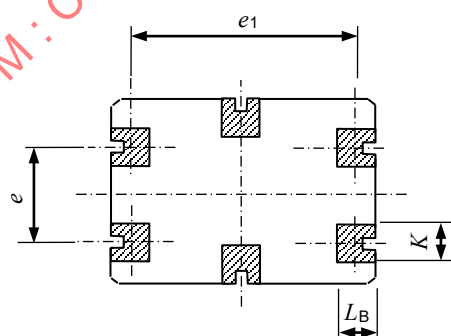
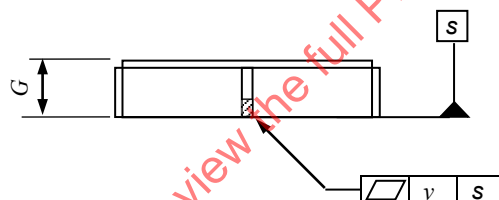
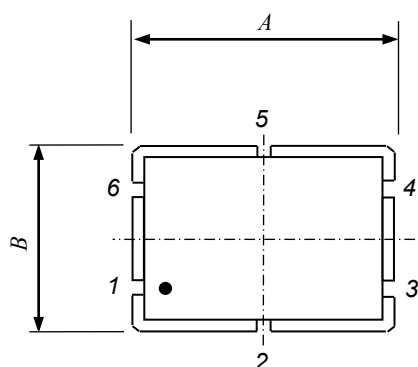
Sheet 13

Terminal land connections of Type QCC-10/7050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		Option
2		Option		Output/Input
3		Option		Option
4		Ground		Option
5		Output		Option
6		Option		Option
7		Option		Input/Output
8		Option		Option
9		DC supply		Ground
10		Option/Control voltage		Ground



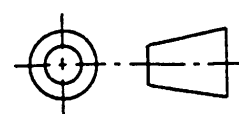
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(7,0)	7,30	
<i>B</i>	–	(5,0)	5,30	
<i>G</i>	–	–	1,50	
<i>K</i>	0,70	–	1,30	
<i>L_B</i>	0,70	–	1,30	
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	6,00	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type QCC-6/7050A

Scale
5: 1

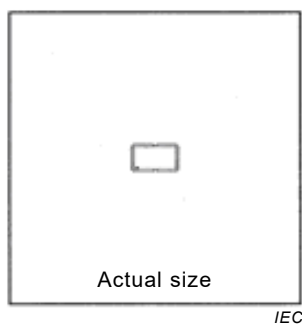


Sheet 14

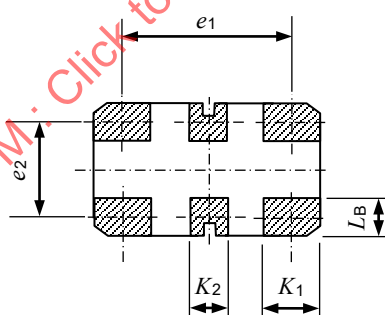
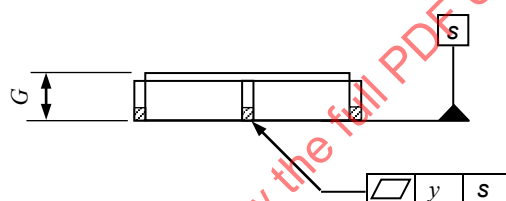
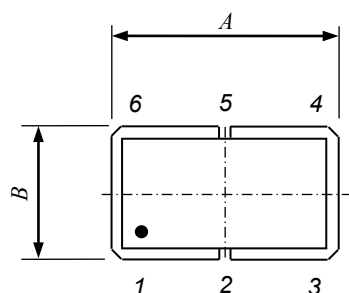
Terminal land connections of Type QCC-6/7050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1			Ground	
2			Option	
3			Output/Input	
4			Ground	
5			Option	
6			Input/Output	

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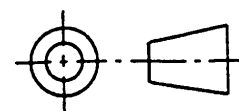
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(6,0)	6,20	
B	–	(3,5)	3,70	
G	–	–	1,25	
K_1	0,80	–	1,20	
L_B	1,30		1,70	
e_1	–	4,50	–	
e_2	–	2,50	–	
y	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/6035A

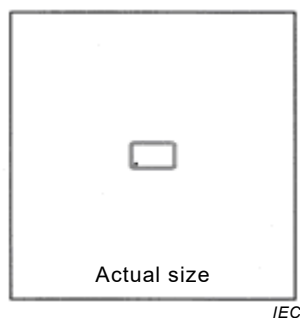
Scale
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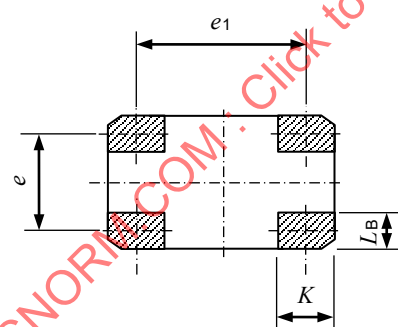
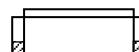
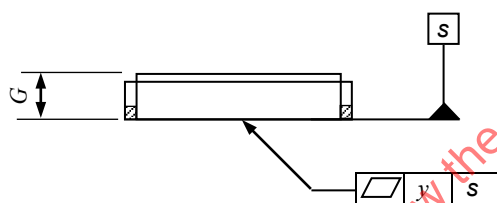
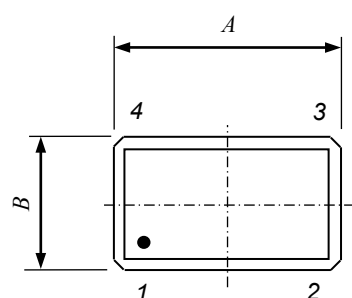
Sheet 15

Terminal land connections of Type DCC-6/6035A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1			Ground	Ground
2			Ground	Input/Output
3			Output/Input	Ground
4			Ground	Ground
5			Ground	Output/Input
6			Input/Output	Ground



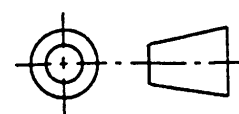
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
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<i>B</i>	–	(3,5)	3,70	
<i>G</i>	–	–	1,20	
<i>K</i>	1,30	–	1,70	
<i>L_B</i>	0,76		1,16	
<i>e</i>	–	2,54	–	
<i>e₁</i>	–	4,50	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/6035C

Scale
5: 1

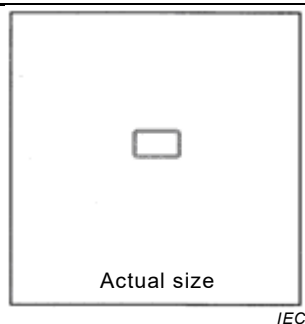


Sheet 16

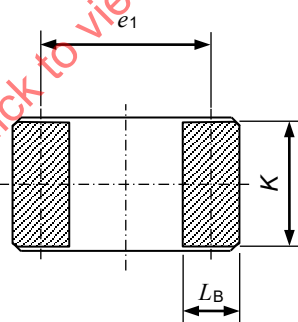
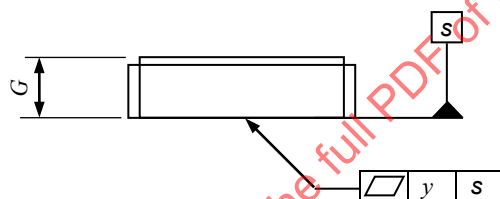
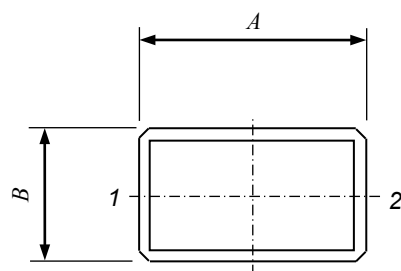
Terminal land connections of Type DCC-4/6035C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control voltage		
2	Option	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

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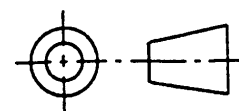
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(6,0)	6,20	
<i>B</i>	–	(3,5)	3,70	
<i>G</i>	–	–	1,60	
<i>K</i>	3,30	–	3,70	
<i>L_B</i>	1,30		1,70	
<i>e₁</i>	–	4,50	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, two leadless SMD outline –
Type DCC-2/6035C

Scale
5: 1

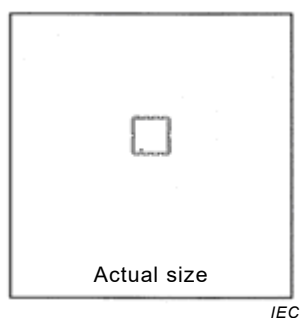


Sheet 17

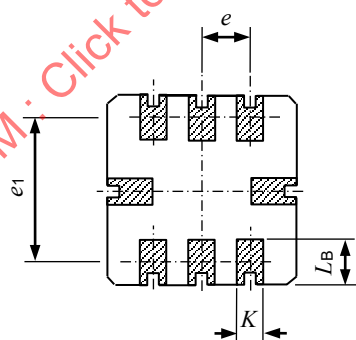
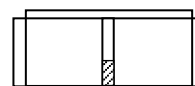
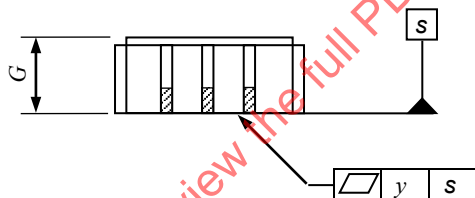
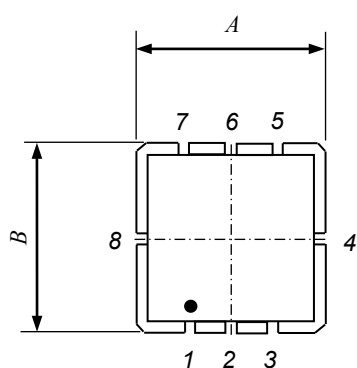
Terminal land connections of Type DCC-2/6035C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(5,0)	5,20	
<i>B</i>	–	(5,0)	5,20	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	0,90	
<i>L_B</i>	1,00	–	1,40	Note
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	3,80	–	
<i>y</i>	–	–	0,10	

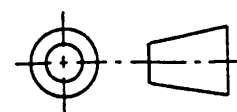


IEC

NOTE Dimension L_B max. can be increased to 1,90 mm for lead 8 to identify the orientation.

Ceramic, welded, eight leadless SMD outline –
Type QCC-8/5050A

Scale
5: 1

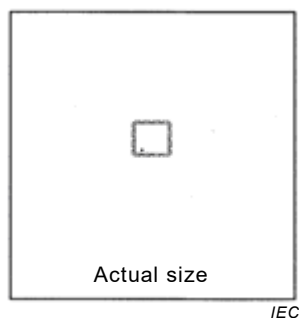


Sheet 18

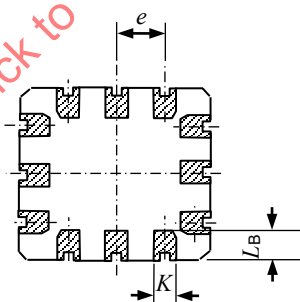
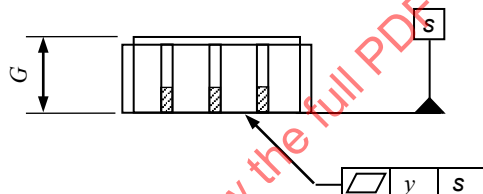
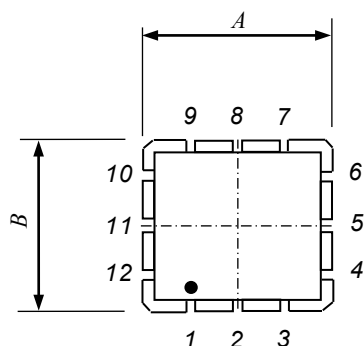
Terminal land connections of Type QCC-8/5050A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Ground
2				Input/Output
3				Ground
4				Ground
5				Ground
6				Output/Input
7				Ground
8				Ground

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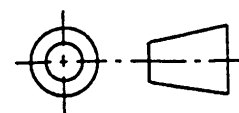
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(5,0)	5,20	
<i>B</i>	–	(4,5)	4,70	
<i>G</i>	–	–	2,00	
<i>K</i>	0,40	–	0,80	
<i>L_B</i>	0,60	–	1,00	
<i>e</i>	–	1,27	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, twelve leadless SMD outline –
Type QCC-12/5045A

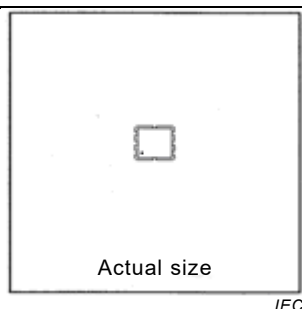
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Sheet 19

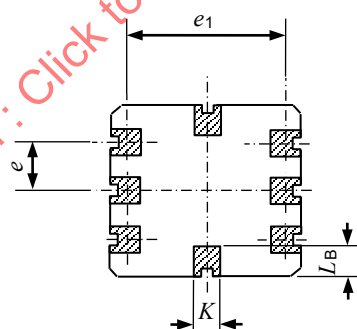
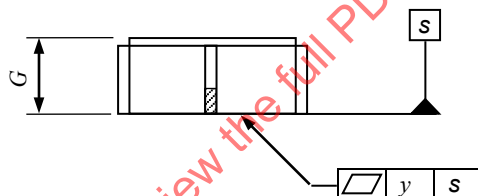
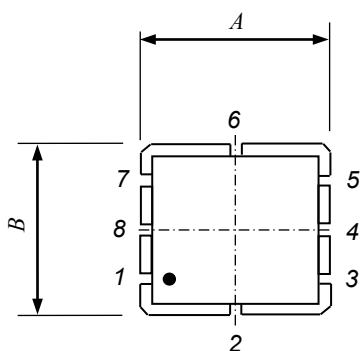
Terminal land connections of Type QCC-12/5045A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Ground
2				To be specified
3				Ground
4				Input/Output /Ground
5				Output/Input
6				Output/Input /Ground
7				Ground
8				To be specified
9				Ground
10				Output/Input /Ground
11				Output/Input
12				Output/Input /Ground



IEC

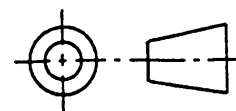
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(5,0)	5,20	
<i>B</i>	–	(4,5)	4,70	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	0,90	
<i>L_B</i>	0,60	–	1,00	
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	4,20	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, eight leadless SMD outline –
Type QCC-8/5045A

Scale
5: 1

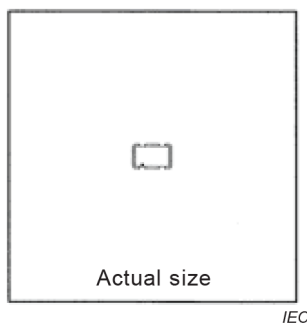


Sheet 20

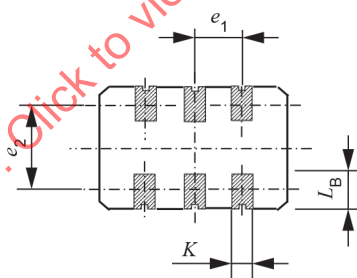
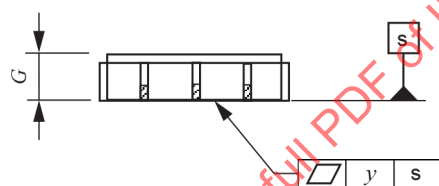
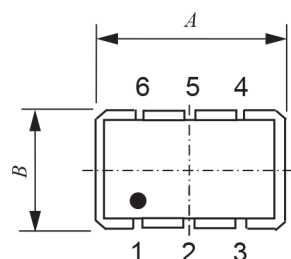
Terminal land connections of Type QCC-8/5045A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Control voltage	Ground	Ground
2		Option	Ground	Ground
3		Ground	Ground	Ground
4		Option	Input/Output	Input/Output
5		Output	Ground	Ground
6		Option	Ground	Ground
7		DC supply	Ground	Ground
8		Option	Output/Input	Output/Input

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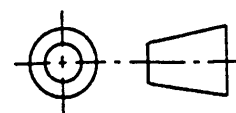
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
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<i>B</i>	—	(3,2)	3,40	
<i>G</i>	—	—	1,40	
<i>K</i>	0,62	—	0,66	
<i>L_B</i>	0,80	—	1,20	
<i>e</i>	—	1,27	—	
<i>e₁</i>	—	2,20	—	
<i>y</i>	—	—	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/5032A

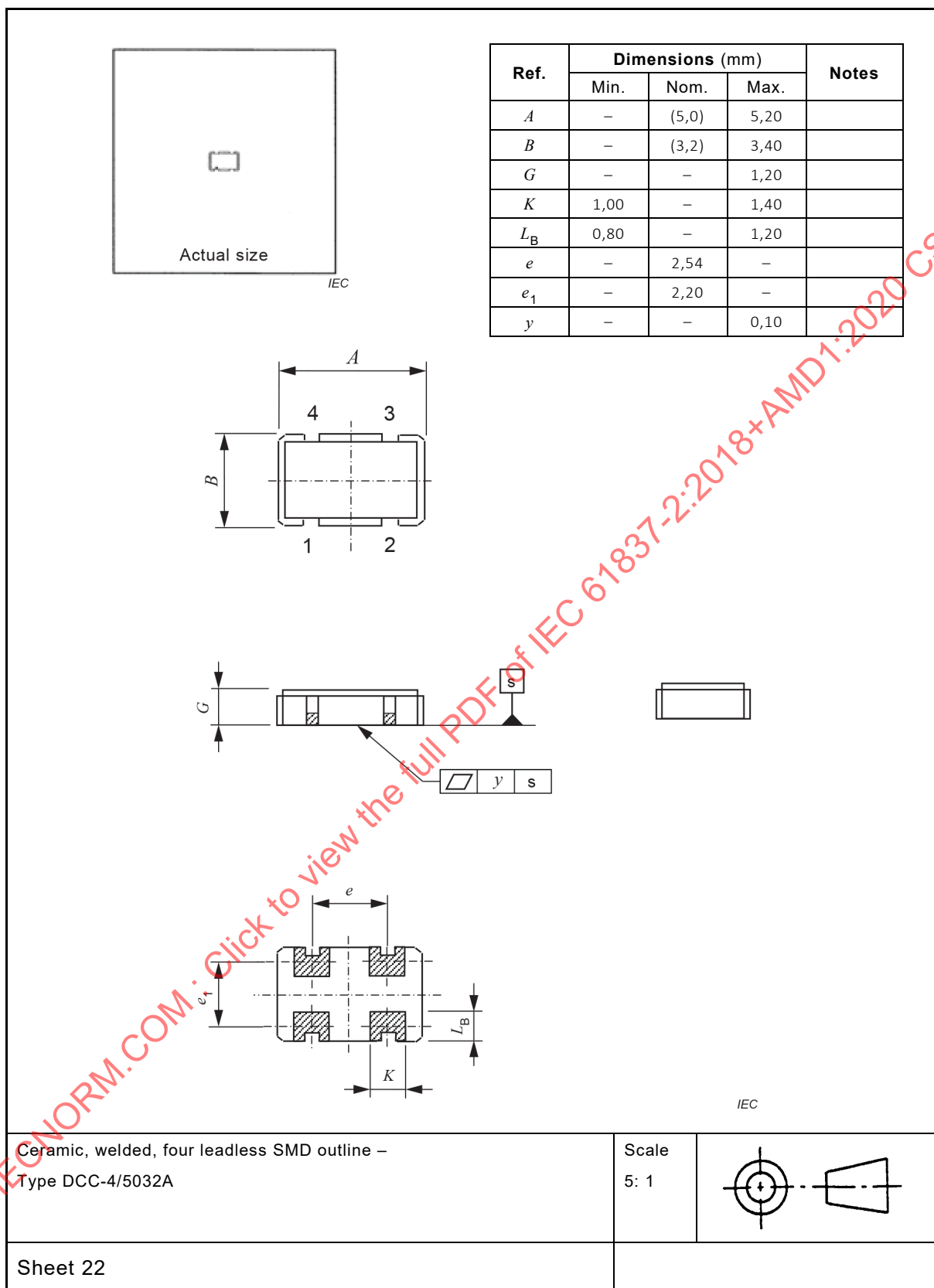
Scale
5: 1



Sheet 21

Terminal land connections of Type DCC-6/5032A

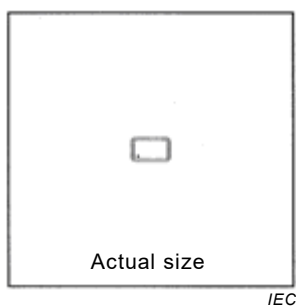
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Option		
3		Ground		
4		Output		
5		Option		
6		DC supply		



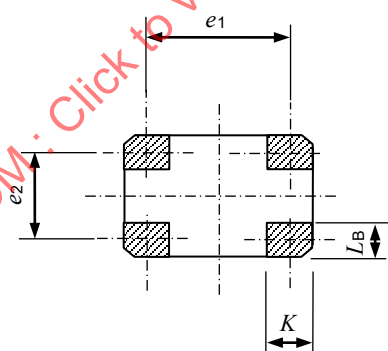
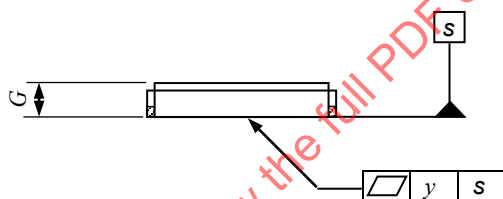
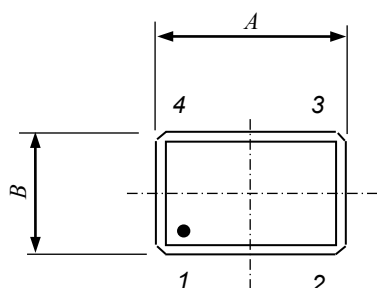
Terminal land connections of Type DCC-4/5032A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Ground		
3		Output		
4		DC supply		

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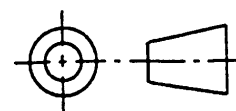
Ref.	Dimensions (mm)			Notes
	Min.	Max.	Min.	
A	–	(5,0)	5,20	
B	–	(3,2)	3,40	
G	–	–	0,90	
K	1,00	–	1,40	
L_B	0,70	–	1,10	
e_1	–	3,80	–	
e_2	–	2,30	–	
y	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/5032C

Scale
5: 1

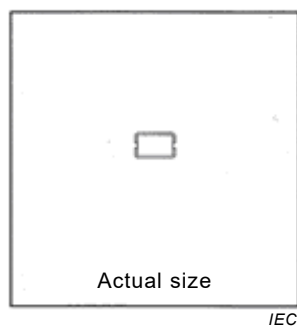


Sheet 23

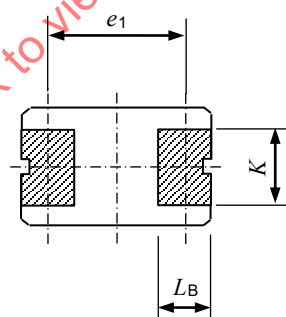
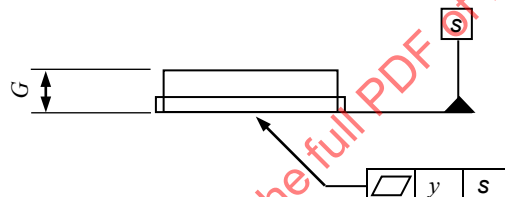
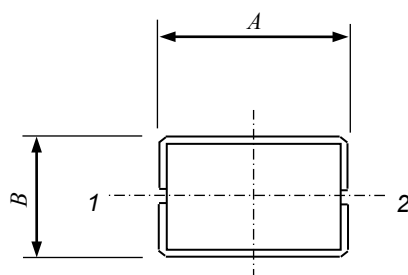
Terminal land connections of Type DCC-4/5032C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Option		
2	Ground	Ground		
3	Terminal 2	Output		
4	Ground	DC supply		

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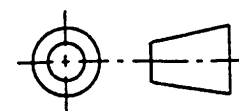
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
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<i>B</i>	–	(3,2)	3,40	
<i>G</i>	–	–	1,10	
<i>K</i>	1,80	–	2,20	
<i>L_B</i>	1,20	–	1,60	
<i>e₁</i>	–	3,60	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, two leadless SMD outline –
Type DCC-2/5032B

Scale
5: 1

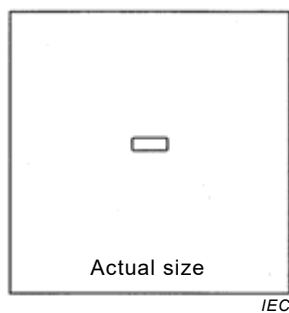


Sheet 24

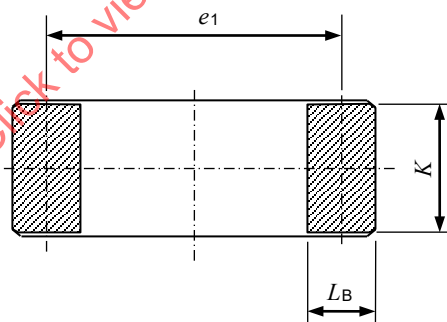
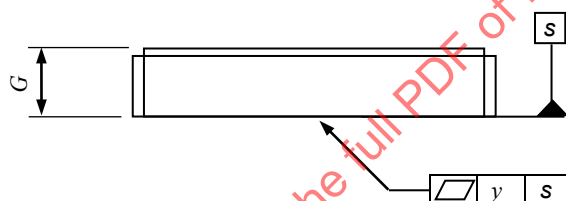
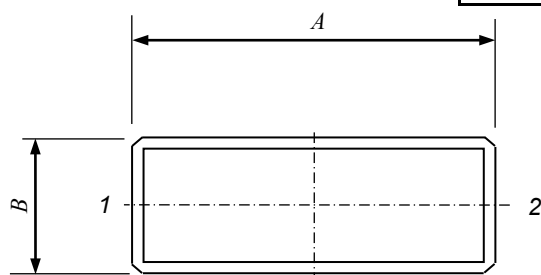
Terminal land connections of Type DCC-2/5032B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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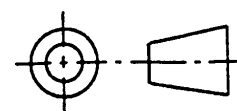
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
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<i>B</i>	–	(1,8)	2,00	
<i>G</i>	–	–	0,90	
<i>K</i>	1,60	–	2,00	
<i>L_B</i>	0,70	–	1,10	
<i>e₁</i>	–	3,90	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, two leadless SMD outline –
Type DCC-2/4818C

Scale
10: 1

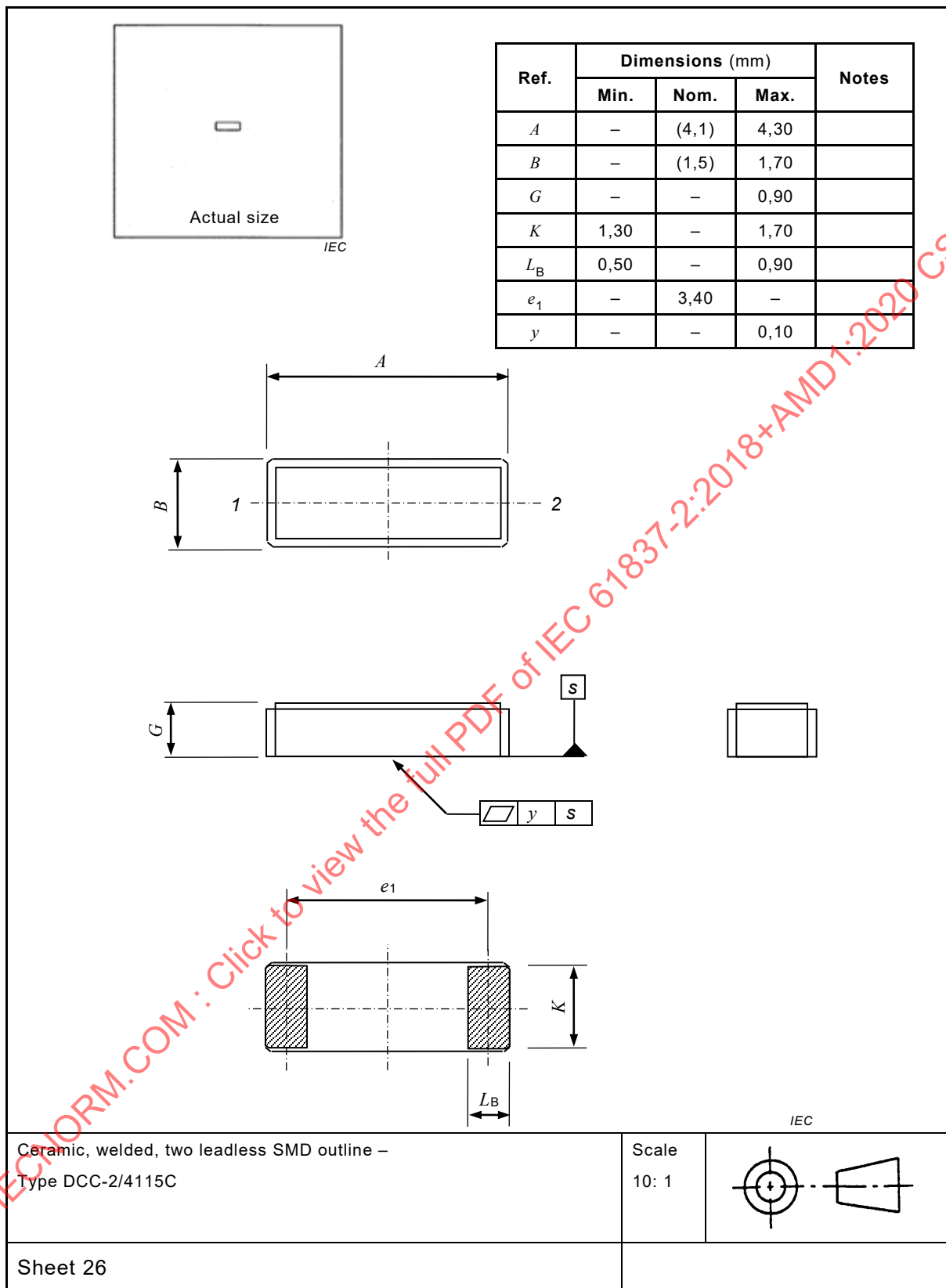


Sheet 25

Terminal land connections of Type DCC-2/4818C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

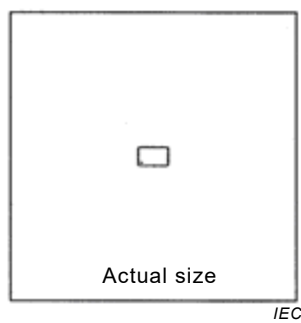
IECNORM.COM : Click to view the full PDF of IEC 61837-2:2018+AMD1:2020 CSV



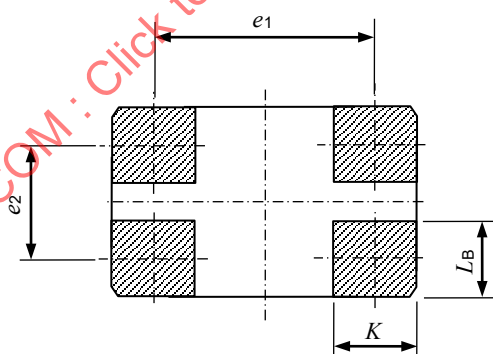
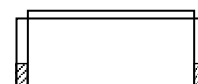
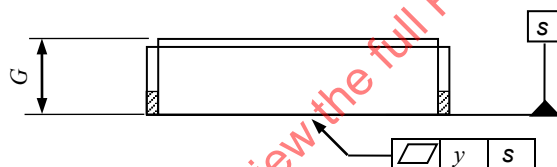
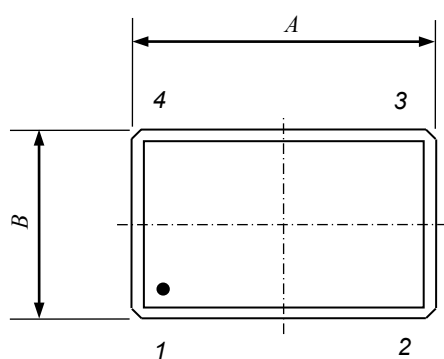
Terminal land connections of Type DCC-2/4115C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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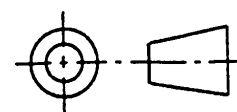
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(4,0)	4,20	
B	–	(2,5)	2,70	
G	–	–	1,00	
K	0,90	–	1,30	
L_B	0,80	–	1,20	
e_1	–	2,90	–	
e_2	–	1,50	–	
y	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/4025C

Scale
10: 1

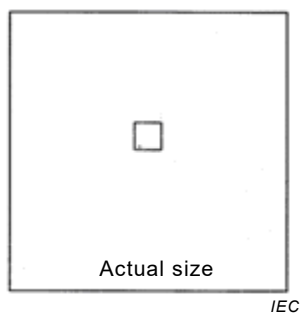


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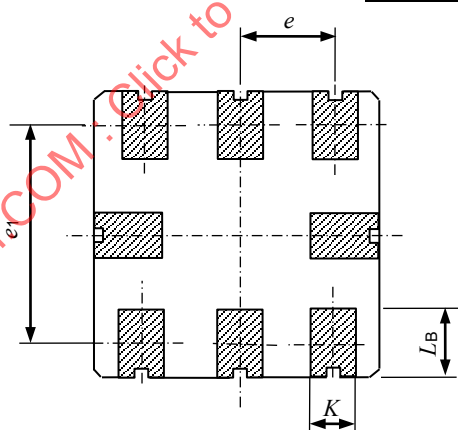
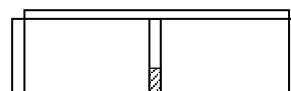
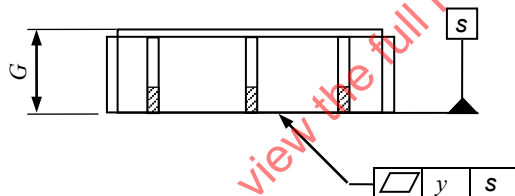
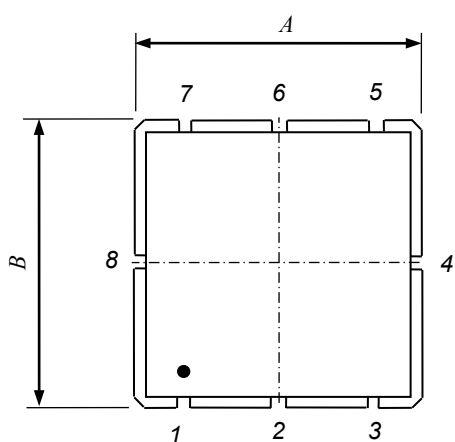
Terminal land connections of Type DCC-4/4025C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control Voltage		
2	Ground	Ground		
3	Terminal 2	Output		
4	Ground	DC supply		

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(3,8)	3,90	
<i>B</i>	–	(3,8)	3,90	
<i>G</i>	–	–	1,10	
<i>K</i>	0,50	–	0,70	
<i>L_B</i>	0,80	–	1,00	□ Note
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	2,90	–	
<i>y</i>	–	–	0,10	

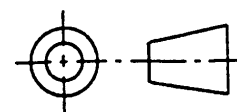


IEC

NOTE Dimension L_B max. can be increased to 2,00 mm for lead 4 to identify the orientation.

Ceramic, welded, eight leadless SMD outline –
Type QCC-8/3838A

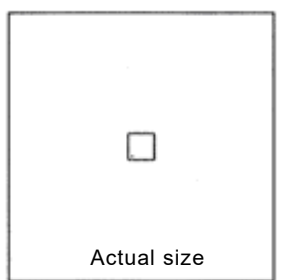
Scale
10: 1



Terminal land connections of Type QCC-8/3838A

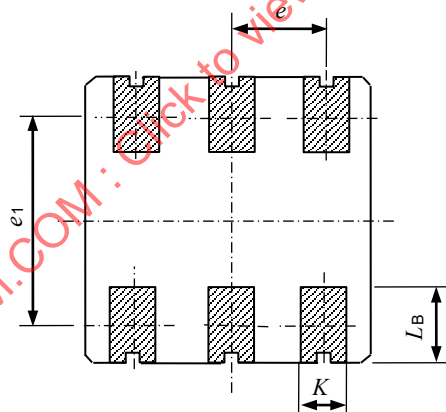
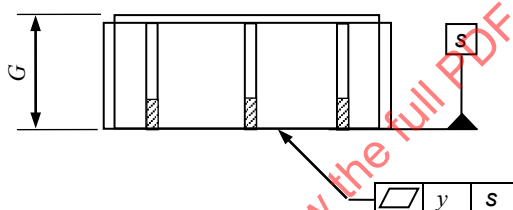
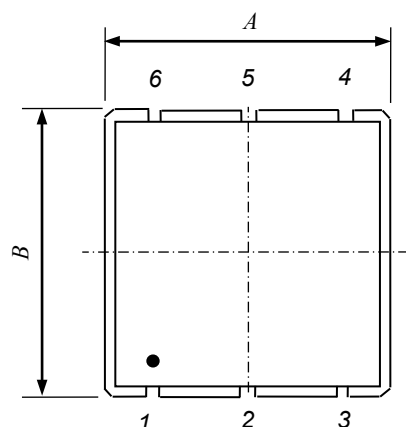
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1			Input/Output	Input/Output
2			Ground	Ground
3			Ground	Option
4			Ground	Ground
5			Output/Input	Option
6			Ground	Ground
7			Ground	Output/Input
8			Ground	Ground

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IEC

Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(3,8)	4,00	
<i>B</i>	–	(3,8)	4,00	
<i>G</i>	–	–	1,50	
<i>K</i>	0,40	–	0,80	
<i>L_B</i>	0,80	–	1,20	Note
<i>e</i>	–	1,27	–	
<i>e₁</i>	–	2,80	–	
<i>y</i>	–	–	0,10	

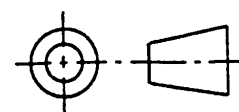


IEC

NOTE Dimension L_B max. can be increased to 2,05 mm for lead 1 to identify the orientation.

Ceramic, welded, six leadless SMD outline –
Type DCC-6/3838A

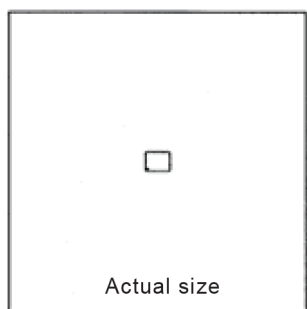
Scale
10: 1



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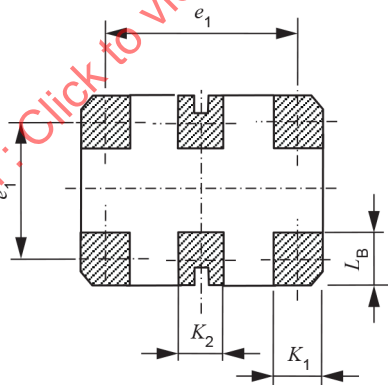
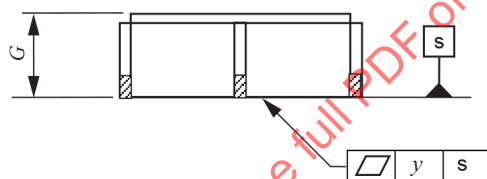
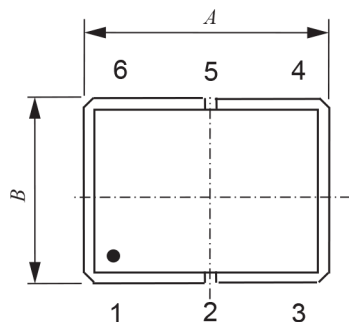
Terminal land connections of Type DCC-6/3838A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Ground
2				Input/Output
3				Ground
4				Ground
5				Output/Input
6				Ground



IEC

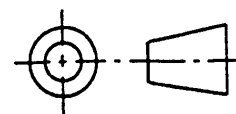
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(3,2)	3,40	
B	–	(2,5)	2,70	
G	–	–	1,10	
K_1	0,45	–	0,85	
K_2	0,40	–	0,80	
L_B	0,50	–	0,90	
e_1	–	2,55	–	
e_2	–	1,80	–	
y	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/3225A

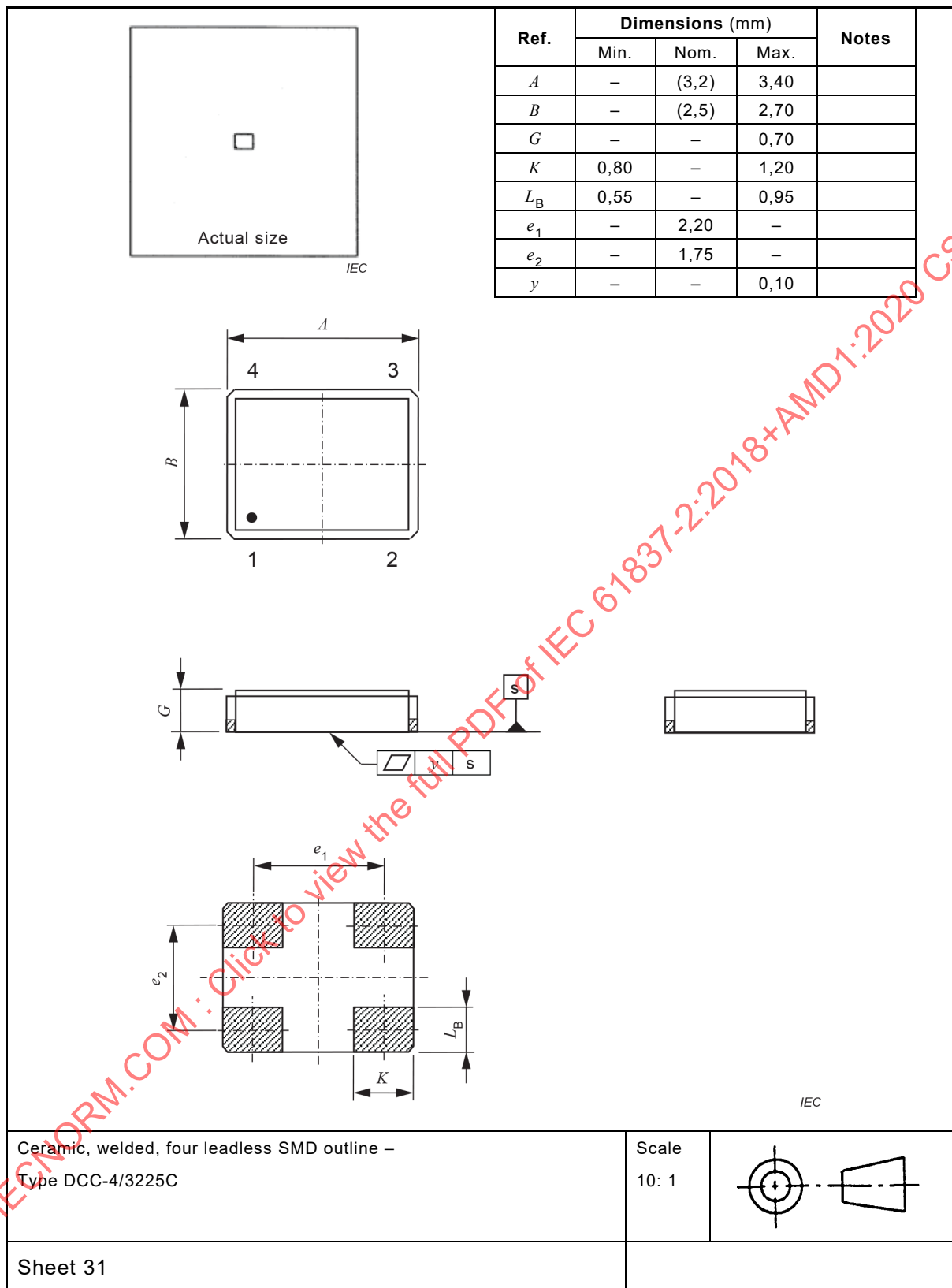
Scale
10: 1



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Terminal land connections of Type DCC-6/3225A

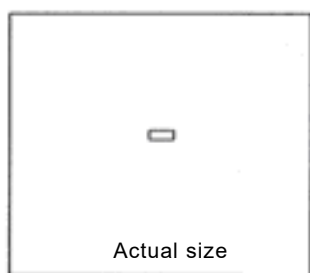
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Option		
3		Ground		
4		Output		
5		Option		
6		DC supply		



Terminal land connections of Type DCC-4/3225C

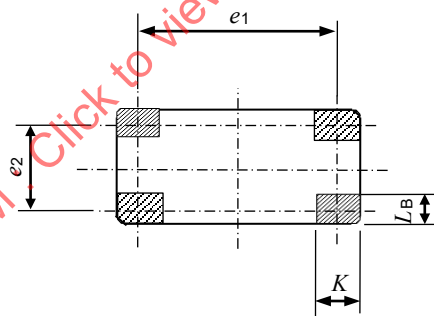
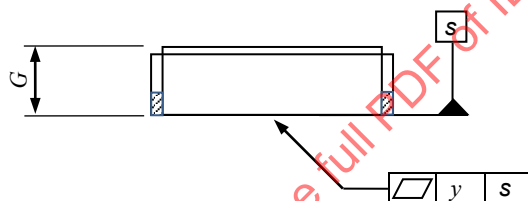
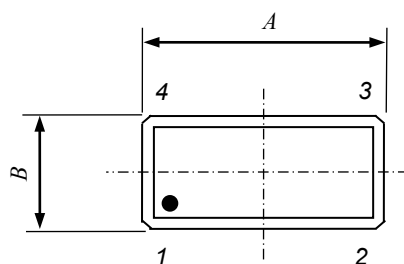
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Option		
2	Option	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

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IEC

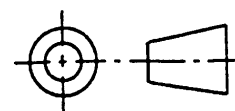
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(3,20)	3,40	
<i>B</i>	–	(1,50)	1,70	
<i>G</i>	–	–	1,00	
<i>K</i>	0,40	–	0,80	
<i>L_B</i>	0,20	–	0,60	
<i>e₁</i>	–	2,80	–	
<i>e₂</i>	–	0,90	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/3215C

Scale
10: 1

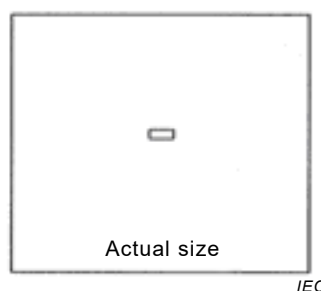


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Terminal land connections of Type DCC-4/3215C

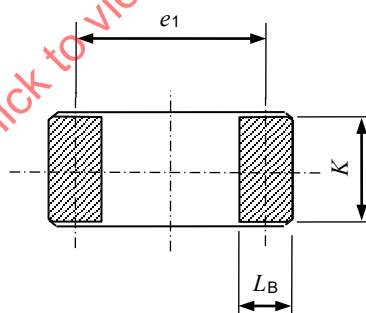
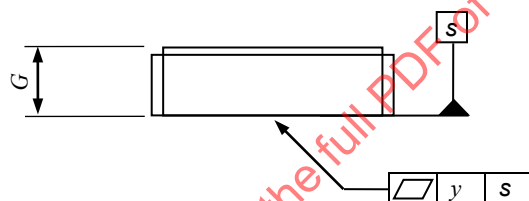
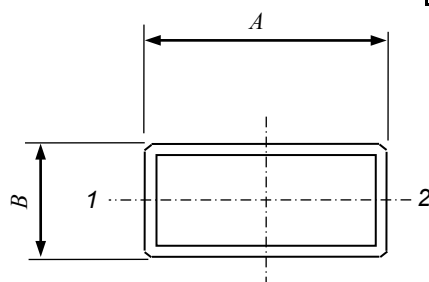
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Control voltage		
2	Ground	Ground		
3	Ground	Output		
4	Terminal 2	DC supply		

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IEC

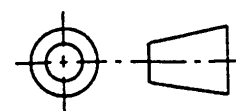
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(3,20)	3,40	
<i>B</i>	–	(1,50)	1,70	
<i>G</i>	–	–	0,90	
<i>K</i>	1,30	–	1,70	
<i>L_B</i>	0,50	–	0,90	
<i>e₁</i>	–	2,50	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, two leadless SMD outline –
Type DCC-2/3215C

Scale
10: 1

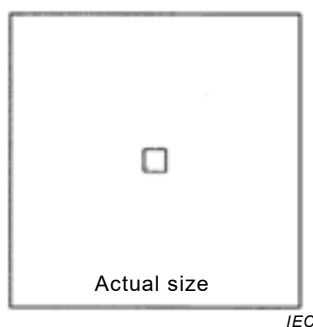


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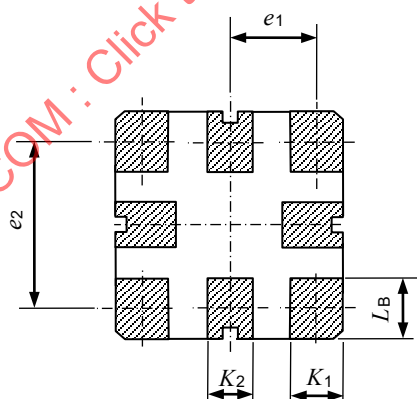
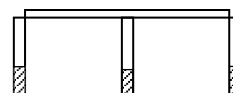
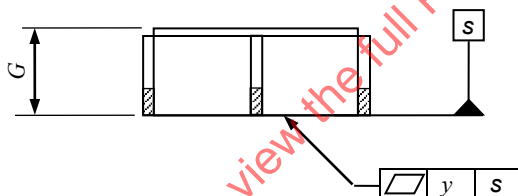
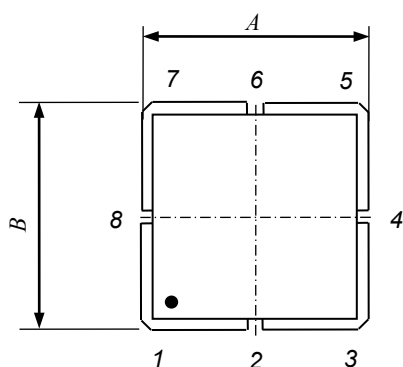
Terminal land connections of Type DCC-2/3215C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(3,0)	3,20	
B	–	(3,0)	3,20	
G	–	–	1,15	
K_1	0,50	–	0,90	
K_2	0,40	–	0,80	
L_B	0,70	–	0,90	Note
e_1	–	1,15	–	
e_2	–	2,20	–	
y	–	–	0,10	

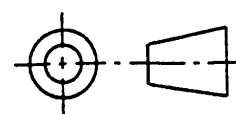


IEC

NOTE Dimension L_B max. can be increased to 1,60 mm for lead 4 to identify the orientation.

Ceramic, welded, eight leadless SMD outline –
Type QCC-8/3030B

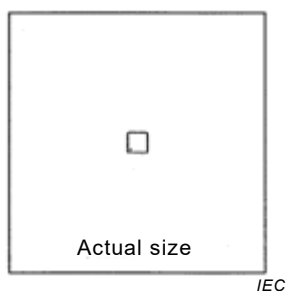
Scale
10: 1



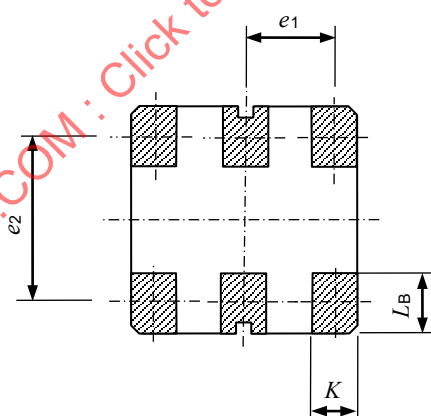
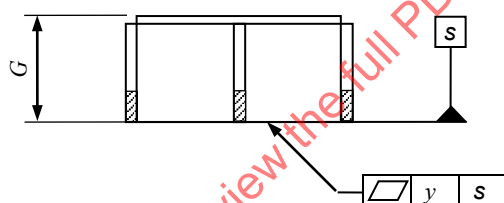
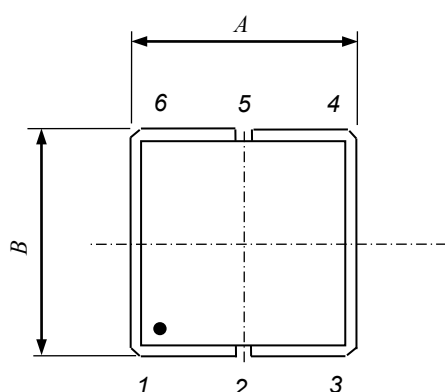
Terminal land connections of Type QCC-8/3030B

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1			Input/Output	Input/Output
2			Ground	Ground
3			Ground	Option
4			Ground	Ground
5			Output/Input	Option
6			Ground	Ground
7			Ground	Output/Input
8			Ground	Ground

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Ref. □	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(3,0)	3,20	
B	–	(3,0)	3,20	
G	–	–	1,40	
K	0,40	–	0,80	
L_B	0,60	–	1,00	Note
e_1	–	1,20	–	
e_2	–	2,20	–	
y	–	–	0,10	

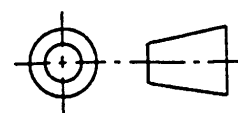


IEC

NOTE Dimension L_B max. can be increased to 1,60 mm for lead 6 to identify the orientation.

Ceramic, welded, six leadless SMD outline –
Type DCC-6/3030A

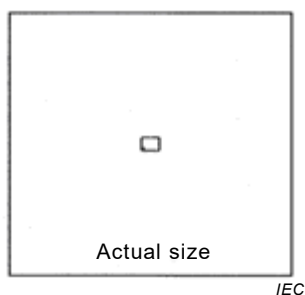
Scale
10: 1



Terminal land connections of Type DCC-6/3030A

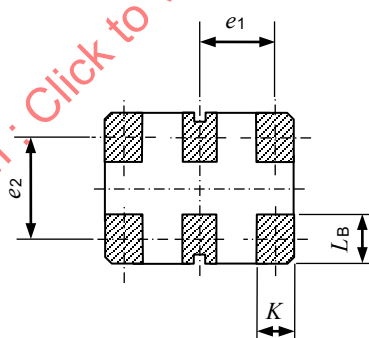
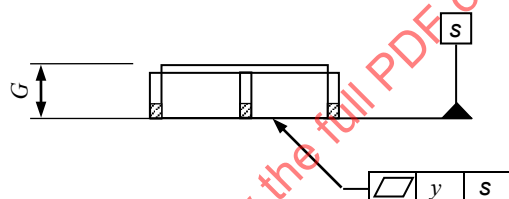
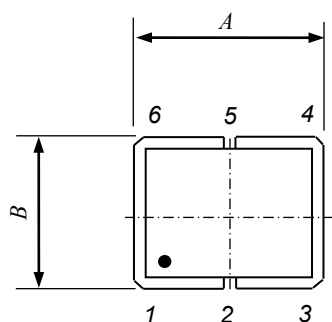
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1				Ground
2				Input/Output
3				Ground
4				Ground
5				Output/Input
6				Ground

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IEC

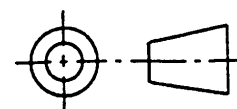
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(2,5)	2,70	
<i>B</i>	–	(2,0)	2,20	
<i>G</i>	–	–	1,10	
<i>K</i>	0,30	–	0,70	
<i>L_B</i>	0,45	–	0,85	
<i>e₁</i>	–	1,00	–	
<i>e₂</i>	–	1,35	–	
<i>y</i>	–	–	0,10	



IEC

Ceramic, welded, six leadless SMD outline –
Type DCC-6/2520A

Scale
10: 1

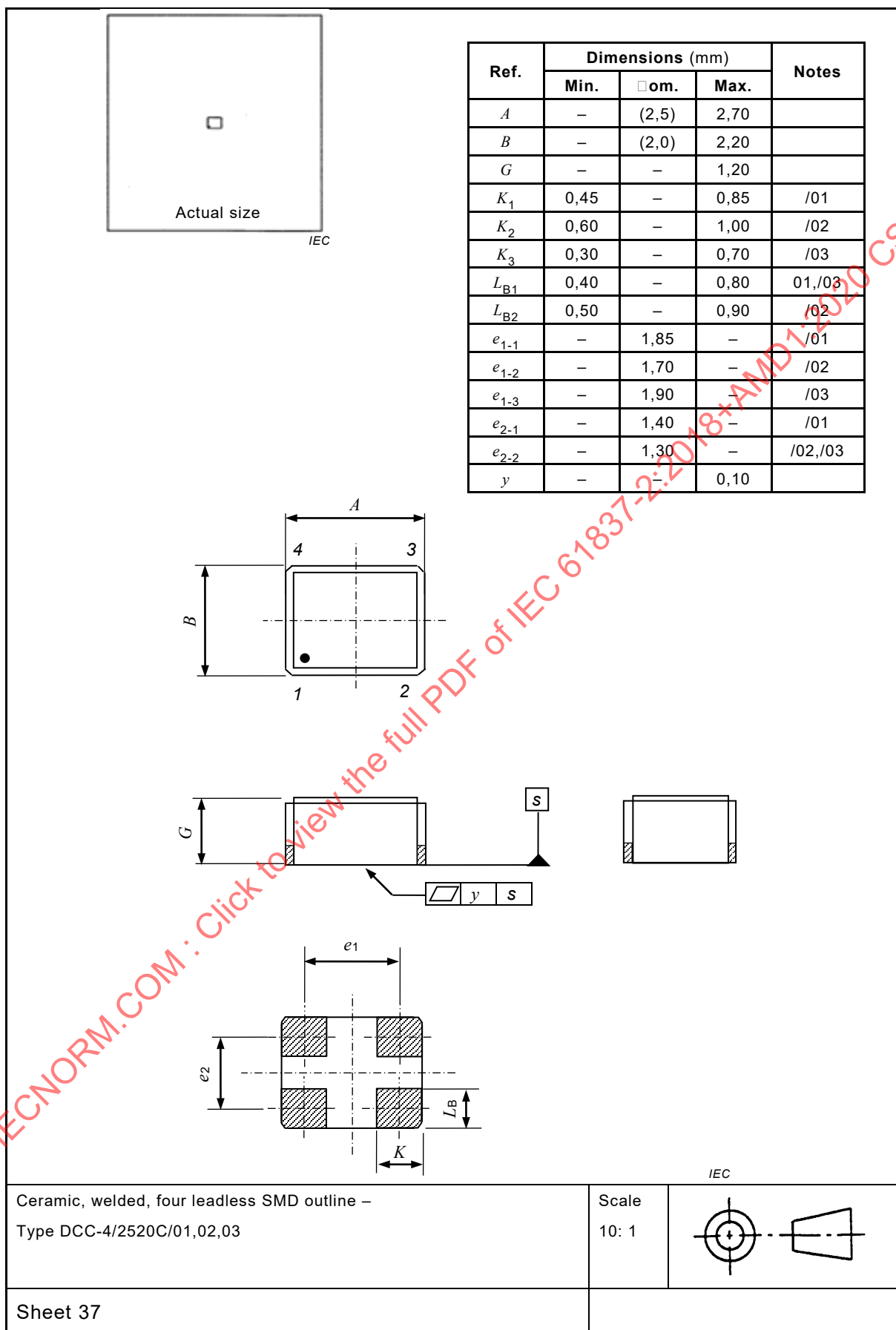


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Terminal land connections of Type DCC-6/2520A

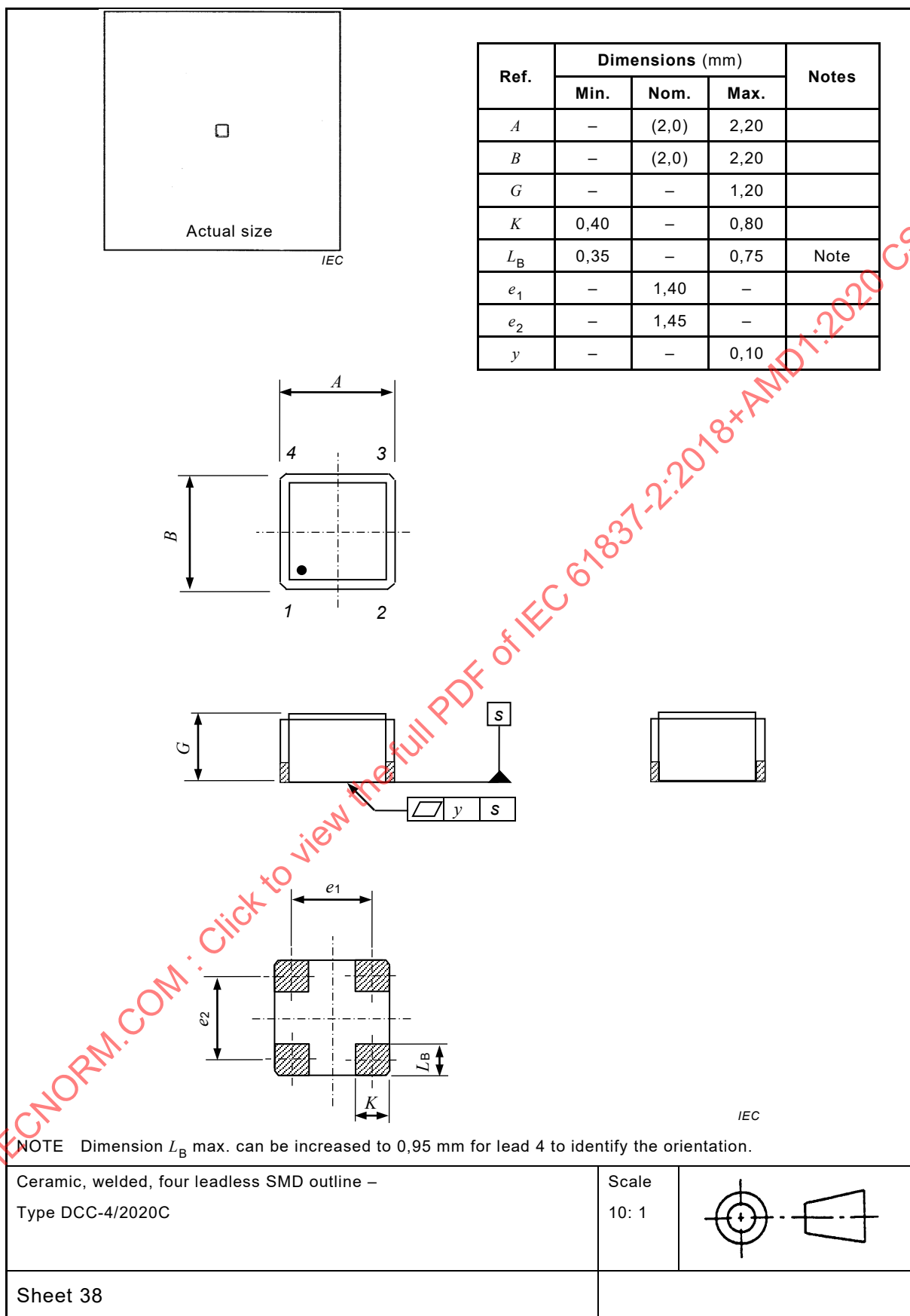
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option	Option	
2		Option	Ground	
3		Ground	Output/Input	
4		Output	Option	
5		Option	Ground	
6		DC supply	Input/Output	

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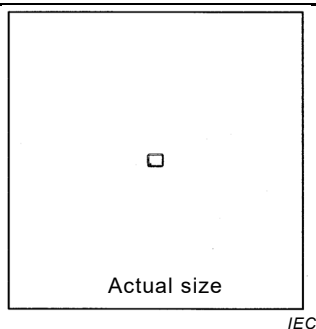
Terminal land connections of Type DCC-4/2520C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Option		
2	Ground/NC	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

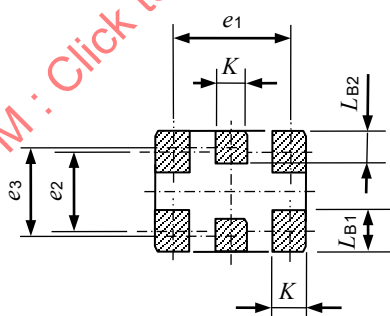
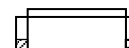
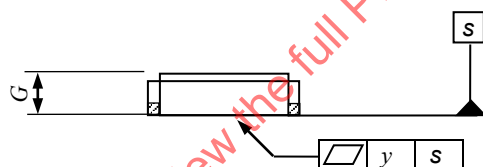
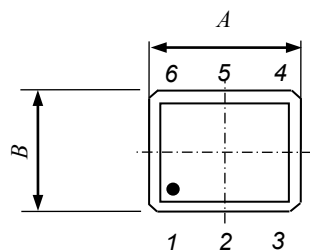


Terminal land connections of Type DCC-4/2020C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1		Ground	Ground
2	Ground		Output/Input	Output/Input
3	Terminal 2		Ground	Input/Output
4	Ground		Input/ Output	Ground



Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(2,0)	2,20	
B	–	(1,6)	1,80	
G	–	–	0,80	
K	0,20	–	0,60	
L_{B1}	0,30	–	0,70	
L_{B2}	–	–	0,60	
e_1	–	1,60	–	
e_2	–	1,05	–	
e_3	–	–	–	Note
y	–	–	0,10	

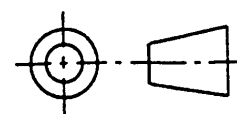


IEC

NOTE Dimension e_3 is not defined because there are various types of product.

Ceramic, welded, six leadless SMD outline –
Type DCC-6/2016A

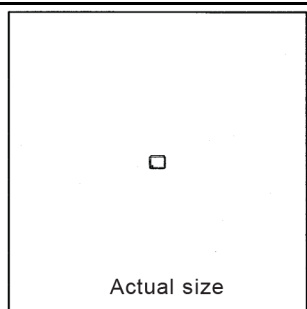
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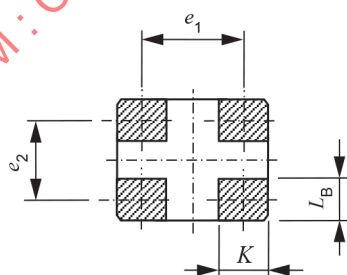
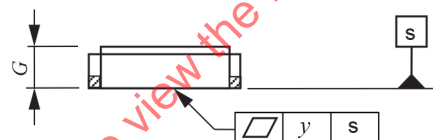
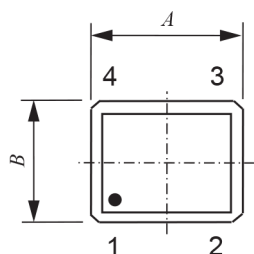
Terminal land connections of Type DCC-6/2016A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Option		
2		Option		
3		Ground		
4		Output		
5		Option		
6		DC supply		



IEC

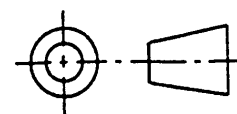
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(2,0)	2,20	
B	–	(1,6)	1,80	
G_1	–	–	0,55	/01
G_2	–	–	0,80	/02,/03
K_1	0,40	–	0,80	/01,/02
K_2	0,25	–	0,65	/03
L_B	0,30	–	0,70	
e_{1-1}	–	1,30	–	/01,/02
e_{1-2}	–	1,60	–	/03
e_2	–	1,05	–	
y	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/2016C/01,02,03

Scale
10: 1

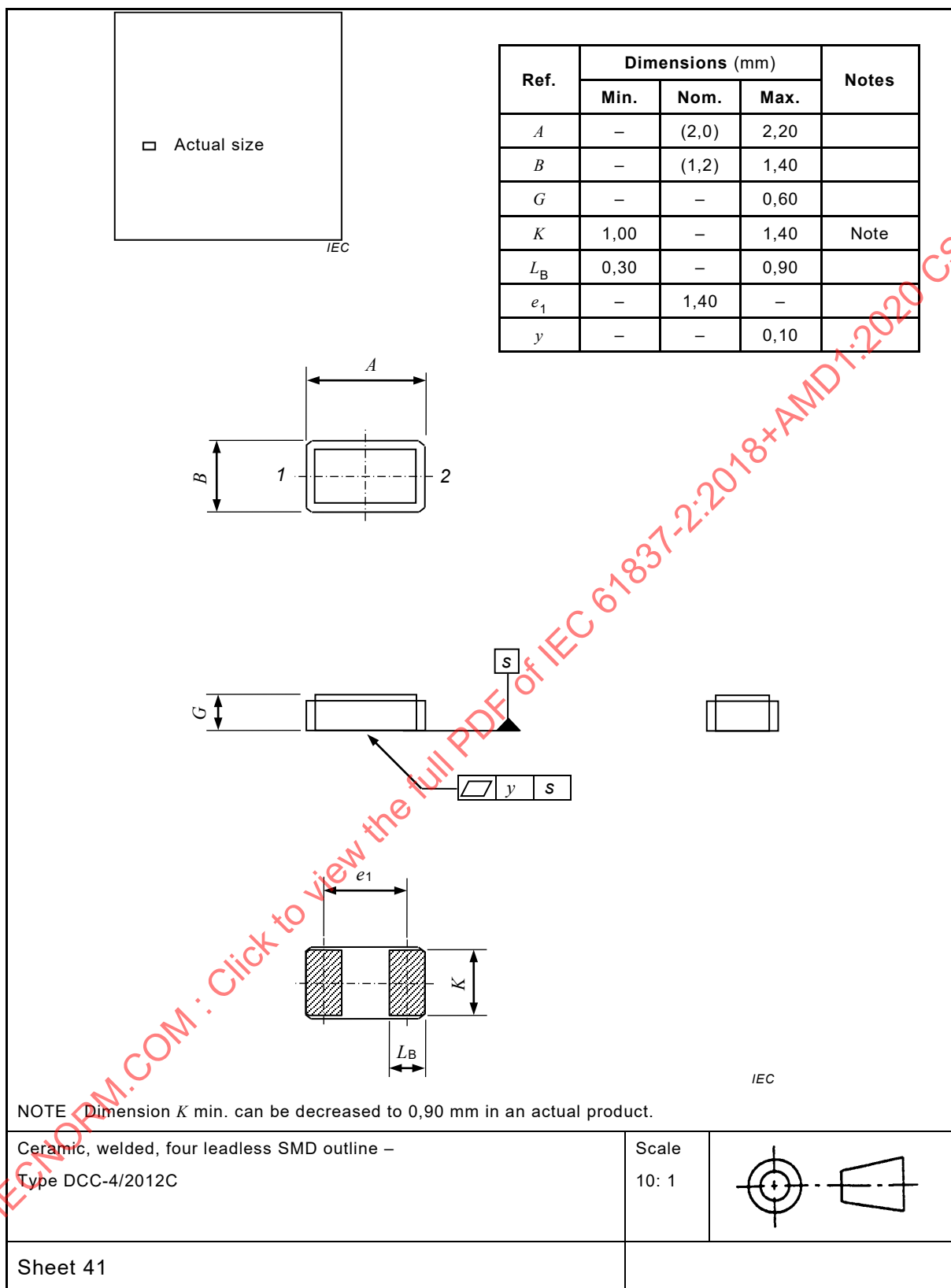


Sheet 40

Terminal land connections of Type DCC-4/2016C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1	Option		
2	Ground	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

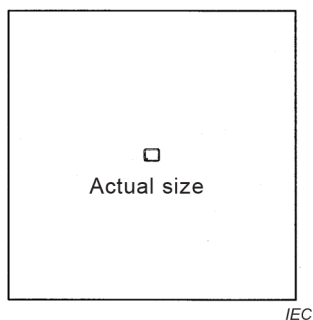
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Terminal land connections of Type DCC-2/2012C

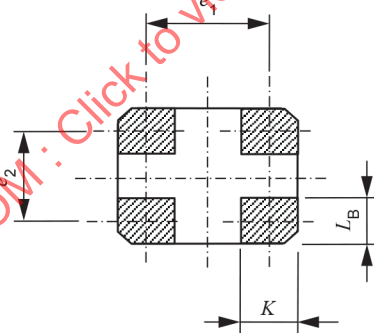
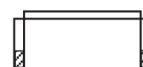
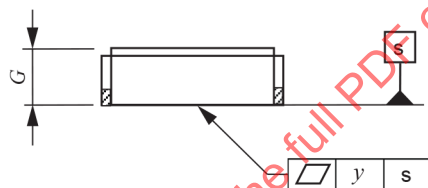
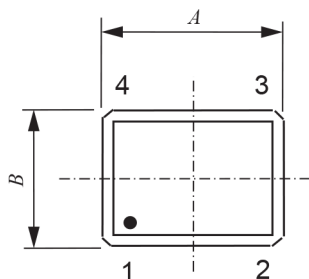
No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

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IEC

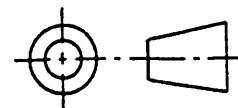
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	–	(1,6)	1,80	
B	–	(1,2)	1,40	
G_1	–	–	0,50	/01
G_2	–	–	0,70	/02
K	0,30	–	0,70	
L_B	0,20	–	0,60	
e_1	–	1,10	–	
e_2	–	0,80	–	
y	–	–	0,10	



IEC

Ceramic, welded, four leadless SMD outline –
Type DCC-4/1612C/01,02

Scale
15: 1

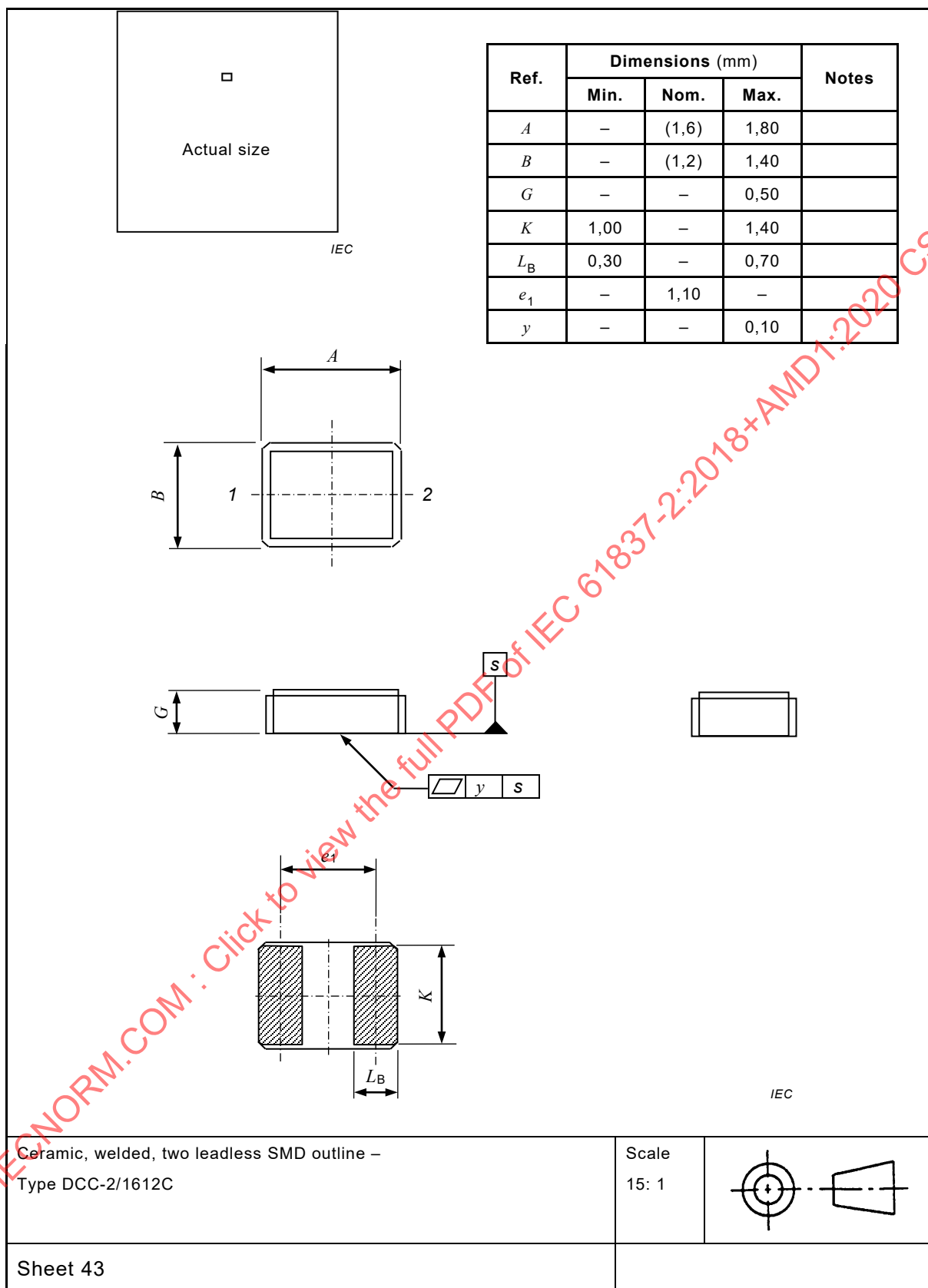


Sheet 42

Terminal lead connections of Type DCC-4/1612C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW device
1	Terminal 1	Option		
2	Ground	Ground		
3	Terminal 2	Output		
4	Option	DC supply		

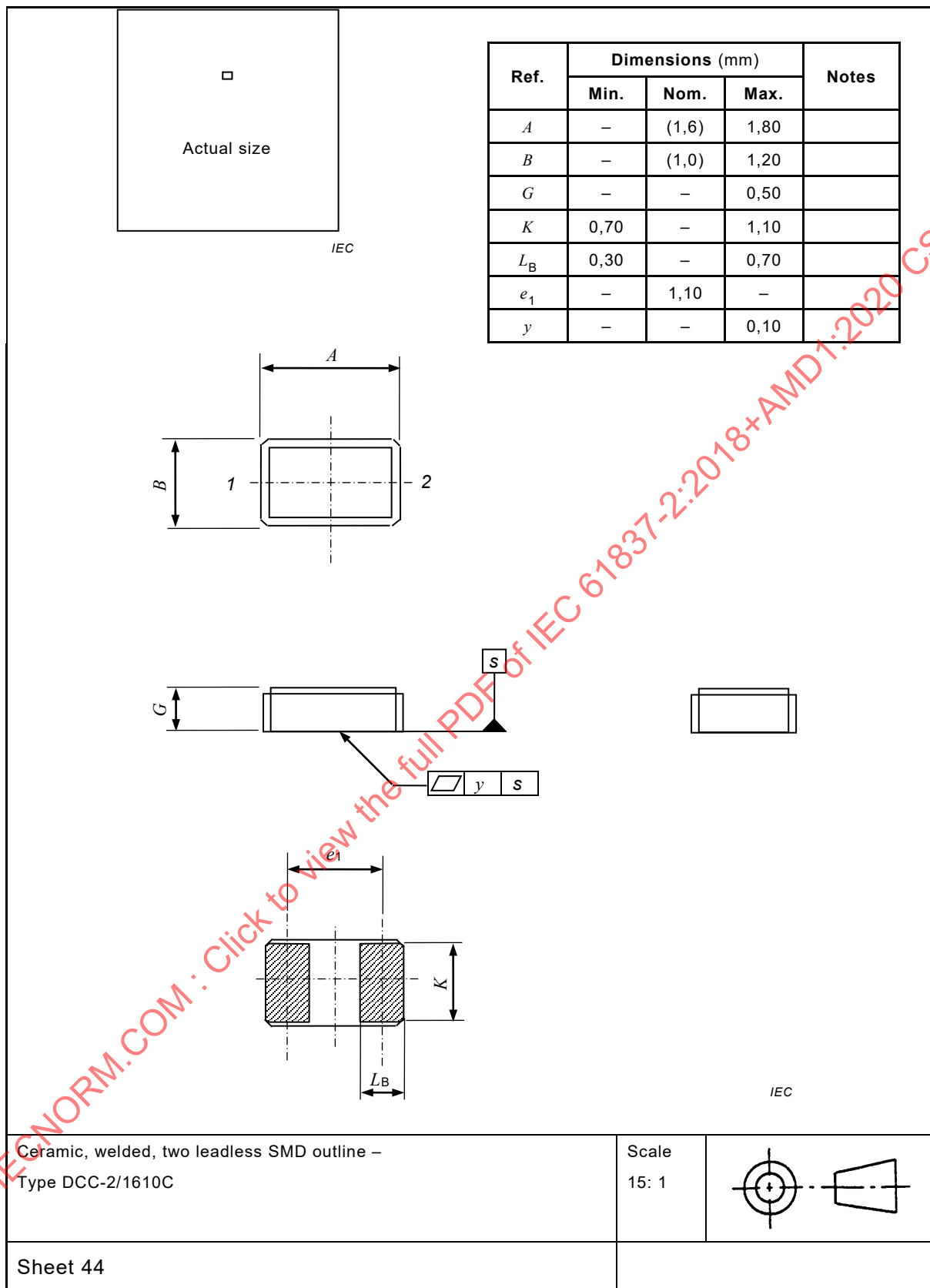
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Terminal land connections of Type DCC-2/1612C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

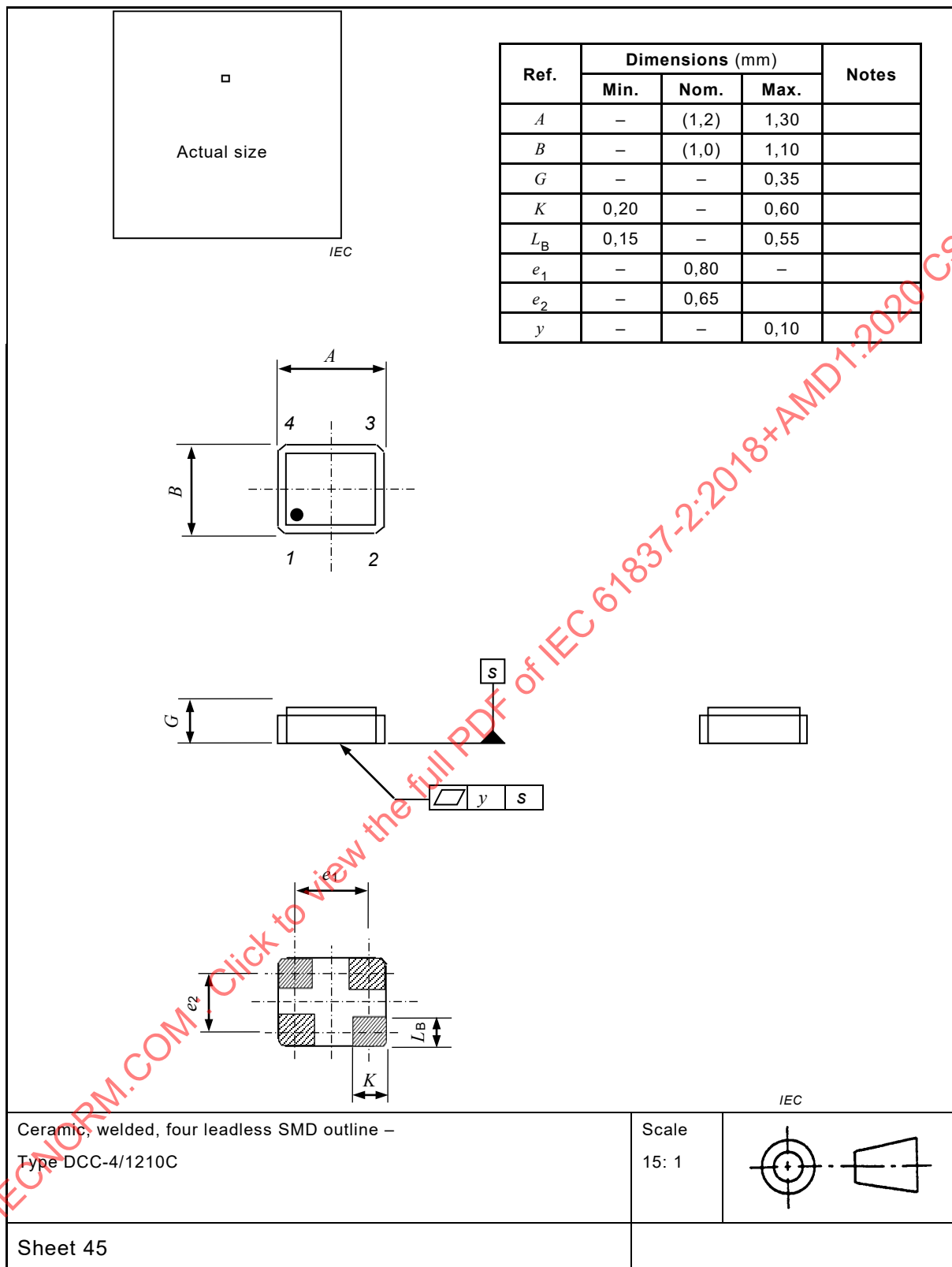
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Terminal land connections of Type DCC-2/1610C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Terminal 2			

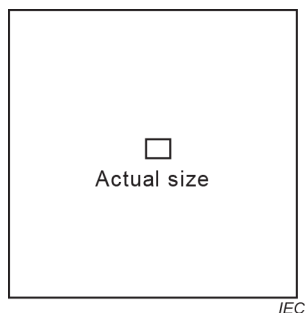
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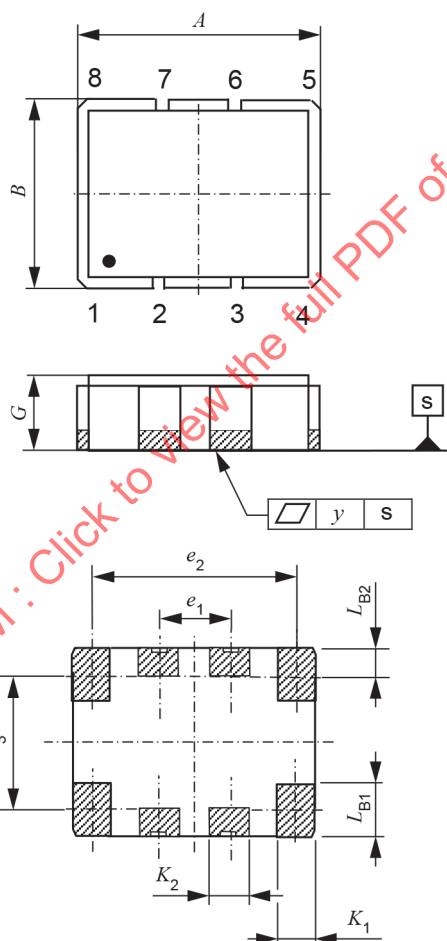
Terminal land connections of Type DCC-4/1210C

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Ground			
3	Terminal 2			
4	NC			

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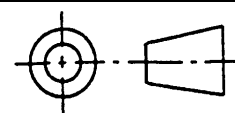
Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	—	(3,2)	3,40	
B	—	(2,5)	2,70	
G	—	—	1,00	
K_1	0,30	—	0,70	
K_2	0,35	—	0,75	
L_{B1}	0,50	—	0,90	
L_{B2}	0,15	—	0,55	
e_1	—	0,95	—	
e_2	—	2,70	—	
e_3	—	1,80	—	
y	—	—	0,10	



IEC

Ceramic, welded, eight leadless SMD outline-
Type DCC-8/3225A

Scale
10: 1



Sheet 46

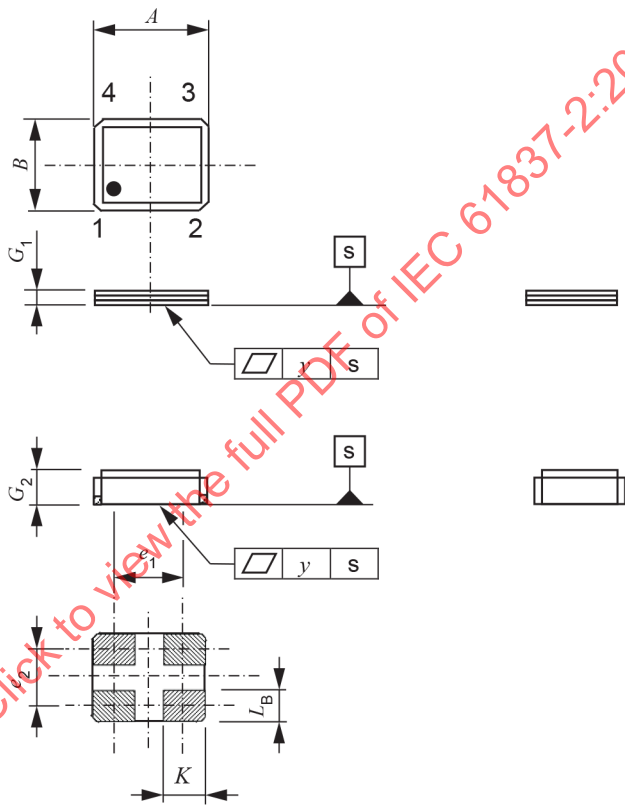
Terminal land connections of Type DCC-8/3225A

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1		Output Enable		
2		INT		
3		NC		
4		Output		
5		Ground		
6		SCL		
7		SDA		
8		DC supply		

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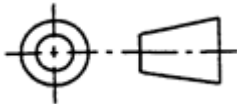
Actual size omitted

Ref.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
A	—	(1,0)	1,2	
B	—	(0,8)	1,0	
G ₁	—	—	0,13	/01
G ₂	—	—	0,30	/02
K	0,20	—	0,60	
L _B	0,10	—	0,50	
e ₁	—	0,60	—	
e ₂	—	0,50	—	
y	—	—	0,1	



Ceramic, welded, four leadless SMD outline-
Type DCC-4/1008C/01,02

Scale
15: 1



Terminal land connections of Type DCC-4/1008C/01,02

No.	Crystal unit	Crystal oscillator	Crystal filter	SAW devices
1	Terminal 1			
2	Ground			
3	Terminal 2			
4	NC			

Bibliography

IEC 60122-2:1983, *Quartz crystal units for frequency control and selection – Part 2: Guide to the use of quartz crystal units for frequency control and selection*

IEC 60122-3:2010, *Quartz crystal units of assessed quality – Part 3: Standard outlines and lead connections*

IEC 60191-6:2009, *Mechanical standardization of semiconductor devices – Part 6: General rules for the preparation of outline drawings of surface mounted semiconductor device packages*

IEC 60368-1:2000, *Piezoelectric filters of assessed quality – Part 1: Generic specification*

IEC 60368-2-1:1988, *Piezoelectric filters – Part 2: Guide to the use of piezoelectric filters – Section One: Quartz crystal filters*

IEC 60368-2-2:1996, *Piezoelectric filters – Part 2: Guide to the use of piezoelectric filters – Section 2: Piezoelectric ceramic filters*

IEC 60368-3:2010, *Piezoelectric filters of assessed quality – Part 3: Standard outlines and lead connections*

IEC 60679-1:2017, *Piezoelectric, dielectric and electrostatic oscillators of assessed quality – Part 1: Generic specification*

IEC 60679-2:1981, *Quartz crystal controlled oscillators – Part 2: Guide to the use of quartz crystal controlled oscillators*

IEC 60679-3:2012, *Quartz crystal controlled oscillators of assessed quality – Part 3: Standard outlines and lead connections*

IEC 60862-1:2015, *Surface acoustic wave (SAW) filters of assessed quality – Part 1: Generic specification*

IEC 60862-2:2012, *Surface acoustic wave (SAW) filters of assessed quality – Part 2: Guidelines for the use*

IEC 60862-3:2003, *Surface acoustic wave (SAW) filters of assessed quality – Part 3: Standard outlines*

IEC 61019-1:2004, *Surface acoustic wave (SAW) resonators – Part 1: Generic specification*

IEC 61019-2:2005, *Surface acoustic wave (SAW) resonators – Part 2: Guide to the use*

ISO 1101:2017, *Geometrical product specifications (GPS) – Geometrical tolerancing – Tolerances of form, orientation, location and run-out*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

**DISPOSITIFS PIÉZOÉLECTRIQUES À MONTAGE EN SURFACE POUR LA
COMMANDE ET LE CHOIX DE LA FRÉQUENCE – ENCOMBREMENTS
NORMALISÉS ET CONNEXIONS DES SORTIES –****Partie 2: Enveloppes en céramique****AVANT-PROPOS**

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Cette version consolidée de la Norme IEC officielle et de son amendement a été préparée pour la commodité de l'utilisateur.

L'IEC 61837-2 édition 3.1 contient la troisième édition (2018-05) [documents 49/1252/CDV et 49/1276/RVC] et son amendement 1 (2020-09) [documents 49/1338/CDV et 49/1347/RVC].

Cette version Finale ne montre pas les modifications apportées au contenu technique par l'amendement 1. Une version Redline montrant toutes les modifications est disponible dans cette publication.

La Norme internationale IEC 61837-2 a été établie par le comité d'études 49 de l'IEC: Dispositifs piézoélectriques, diélectriques et électrostatiques et matériaux associés pour la détection, le choix et la commande de la fréquence.

Cette troisième édition constitue une révision technique.

La présente édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) révision des figures pour correspondre à la notation des dessins de l'IEC 61240:2016;
- b) ajout des 7 enveloppes suivantes: DCC-6/5032A, DCC-6/3225A, DCC-4/3215C, DCC-6/2016A, DCC-2/2012C, DCC-2/1610C, DCC-4/1210C.

Par conséquent, la présente troisième édition contient 45 types d'enveloppes, dont la liste est donnée au Tableau 1.

La présente Norme internationale doit être lue conjointement avec l'IEC 61240:2016.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 61837, publiée sous le titre général *Dispositifs piézoélectriques à montage en surface pour la commande et le choix de la fréquence – Encombrements normalisés et connexions des sorties*, peut être consultée sur le site web de l'IEC.

Le comité a décidé que le contenu de la publication de base et de son amendement ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous "<http://webstore.iec.ch>" dans les données relatives à la publication recherchée. A cette date, la publication sera

- reconduite,
- supprimée,
- remplacée par une édition révisée, ou
- amendée.

DISPOSITIFS PIÉZOÉLECTRIQUES À MONTAGE EN SURFACE POUR LA COMMANDE ET LE CHOIX DE LA FRÉQUENCE – ENCOMBREMENTS NORMALISÉS ET CONNEXIONS DES SORTIES –

Partie 2: Enveloppes en céramique

1 Domaine d'application

La présente partie de l'IEC 61837 traite des encombrements normalisés et des connexions des sorties des dispositifs à montage en surface pour la commande et le choix de la fréquence applicables aux enveloppes en céramique, et est basée sur l'IEC 61240:2016.

2 Références normatives

Les documents suivants cités dans le texte constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 61240:2016, *Dispositifs piézoélectriques – Préparation des dessins d'encombrement des dispositifs pour montage en surface pour la commande et le choix de la fréquence – Règles générales*

3 Termes et définitions

Aucun terme n'est défini dans le présent document.

L'ISO et l'IEC tiennent à jour des bases de données terminologiques destinées à être utilisées en normalisation, consultables aux adresses suivantes:

- IEC Electropedia: disponible à l'adresse <http://www.electropedia.org/>
- ISO Online browsing platform: disponible à l'adresse <http://www.iso.org/obp>

4 Configuration des enveloppes

Les enveloppes des dispositifs à montage en surface sont constituées de matériaux céramiques et équipées de sorties comportant une pellicule métallique (type à plots) d'un type déposé, sur la base du système descriptif de désignation pour semiconducteurs – enveloppes des dispositifs.

Les symboles de configuration sont tels qu'indiqués ci-dessous:

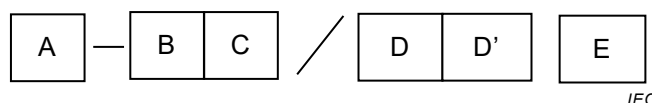
- DCC¹ (support de puce à deux rangées de sorties);
- QCC² (support de puce à quatre rangées de sorties).

¹ DCC = *dual chip carrier*.

² QCC = *quad chip carrier*.

5 Désignation des types

La désignation des types est présentée sur les quatre parties comme suit:



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A: Symbole de configuration des enveloppes:

- DCC (support de puce à deux rangées de sorties);
- QCC (support de puce à quatre rangées de sorties).

B: Structure des sorties: le type à plots n'a pas de marque.

C: Nombre de sorties

D: Numéro de série des deux figures

E: Disposition de la zone de contact de sortie:

Dans le cas des types DCC:

- A (disposition dans le sens de la largeur ou le sens de la largeur et le coin);
- B (disposition dans les sens de la longueur ou le sens de la longueur et le coin);
- C (uniquement sur les coins).

Dans le cas des types QCC:

- A (uniquement sur les côtés);
- B (sur les côtés et sur les coins).

6 Dimensions des enveloppes en céramique

Les dimensions précisées dans le présent document s'appliquent à tous les dispositifs à montage en surface finis pour la commande et le choix de la fréquence. Seules sont données les dimensions qui répondent aux exigences de l'IEC 61240.

7 Connexions des sorties

Les recommandations pour les connexions des sorties de tous les dispositifs à montage en surface finis pour la commande et le choix de la fréquence sont données dans les feuilles individuelles suivantes. Les connexions des sorties doivent toujours être données dans la spécification particulière.

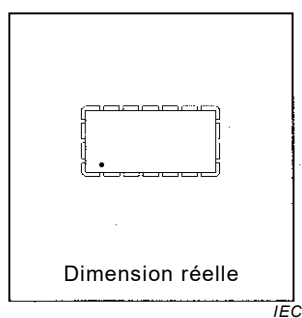
8 Désignation des enveloppes en céramique

Le Tableau 1 dresse la liste comprenant tous les nouveaux types d'enveloppes en indiquant leur numéro de feuille et en en donnant une brève description. Les anciens noms des enveloppes sont également répertoriés en références.

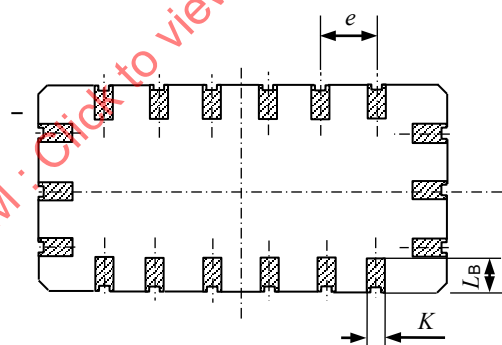
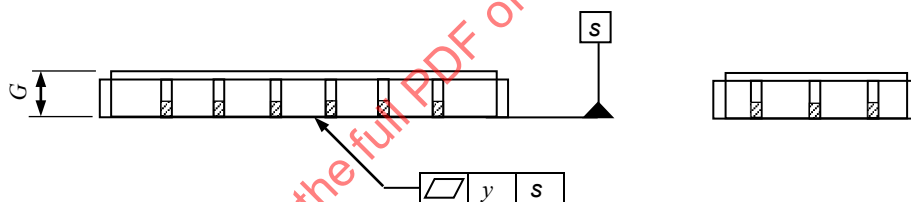
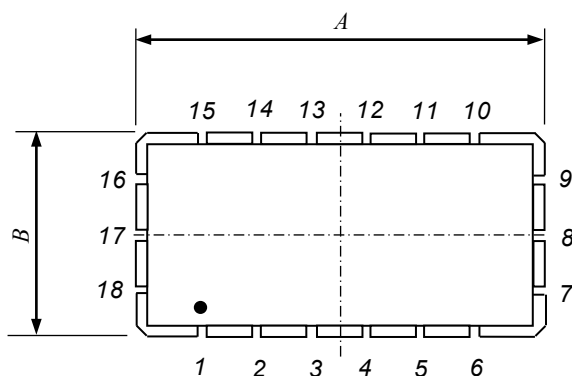
Tableau 1 – Désignation des enveloppes en céramique

No.	Type	Ancien type	N° de feuille	Description
1	QCC-18/1809A	QCC-18/01	Feuille 1	Enveloppe en céramique, soudée, destinée au montage en surface à dix-huit plots
2	QCC-12/1407A		Feuille 2	Enveloppe en céramique, soudée, destinée au montage en surface à douze plots
3	DCC-4/1206A	DCC-4/01	Feuille 3	Enveloppe en céramique, destinée au montage en surface à quatre plots
4	DCC-2/1206A		Feuille 4	Enveloppe en céramique, destinée au montage en surface à deux plots
5	QCC-10/9272A		Feuille 5	Enveloppe en céramique, soudée, destinée au montage en surface à dix plots
6	DCC-4/9070A		Feuille 6	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
7	DCC-4/8045B	DCC-04/02, 03	Feuille 7	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
8	DCC-2/8045B		Feuille 8	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
9	DCC-6/7834B		Feuille 9	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
10	DCC-6/7050A		Feuille 10	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
11	DCC-4/7050A	DCC-4/08	Feuille 11	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
12	DCC-4/7050B	DCC-4/04, 05	Feuille 12	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
13	QCC-10/7050A		Feuille 13	Enveloppe en céramique, soudée, destinée au montage en surface à dix plots
14	QCC-6/7050A	QCC-6/01, 02	Feuille 14	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
15	DCC-6/6035A	DCC-4/06, 07	Feuille 15	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
16	DCC-4/6035C		Feuille 16	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
17	DCC-2/6035C		Feuille 17	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
18	QCC-8/5050A	QCC-8/02	Feuille 18	Enveloppe en céramique, soudée, destinée au montage en surface à huit plots
19	QCC-12/5045A	QCC-12/02	Feuille 19	Enveloppe en céramique, soudée, destinée au montage en surface à douze plots
20	QCC-8/5045A		Feuille 20	Enveloppe en céramique, soudée, destinée au montage en surface à huit plots
21	DCC-6/5032A		Feuille 21	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
22	DCC-4/5032A		Feuille 22	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
23	DCC-4/5032C		Feuille 23	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
24	DCC-2/5032B	DCC-2/01	Feuille 24	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
25	DCC-2/4818C		Feuille 25	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
26	DCC-2/4115C		Feuille 26	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots

No.	Type	Ancien type	N° de feuille	Description
27	DCC-4/4025C	DCC-6/01	Feuille 27	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
28	QCC-8/3838A		Feuille 28	Enveloppe en céramique, soudée, destinée au montage en surface à huit plots
29	DCC-6/3838A		Feuille 29	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
30	DCC-6/3225A		Feuille 30	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
31	DCC-4/3225C		Feuille 31	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
32	DCC-4/3215C		Feuille 32	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
33	DCC-2/3215C		Feuille 33	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
34	QCC-8/3030B		Feuille 34	Enveloppe en céramique, soudée, destinée au montage en surface à huit plots
35	DCC-6/3030A		Feuille 35	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
36	DCC-6/2520A		Feuille 36	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
37	DCC-4/2520C/01,02,03		Feuille 37	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
38	DCC-4/2020C		Feuille 38	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
39	DCC-6/2016A		Feuille 39	Enveloppe en céramique, soudée, destinée au montage en surface à six plots
40	DCC-4/2016C/01,02,03		Feuille 40	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
41	DCC-2/2012C		Feuille 41	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
42	DCC-4/1612C/01,02		Feuille 42	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
43	DCC-2/1612C		Feuille 43	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
44	DCC-2/1610C		Feuille 44	Enveloppe en céramique, soudée, destinée au montage en surface à deux plots
45	DCC-4/1210C		Feuille 45	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots
46	DCC-8/3225A		Feuille 46	Enveloppe en céramique, soudée, destinée au montage en surface à huit plots
47	DCC-4/1008C/0,1,02		Feuille 47	Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots



Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(18,0)	18,30	
<i>B</i>	–	(9,0)	9,30	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	1,10	
<i>L_B</i>	1,20	–	1,80	Note
<i>e</i>	–	2,54	–	
<i>y</i>	–	–	0,10	



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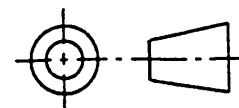
NOTE La dimension L_B max. peut être augmentée jusqu'à 2,10 mm pour la sortie 1 pour identifier l'orientation.

Enveloppe en céramique, soudée, destinée au montage en surface à dix-huit plots –

Type QCC-18/1809A

Echelle

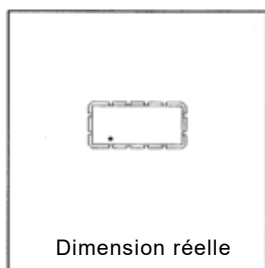
3: 1



Feuille 1

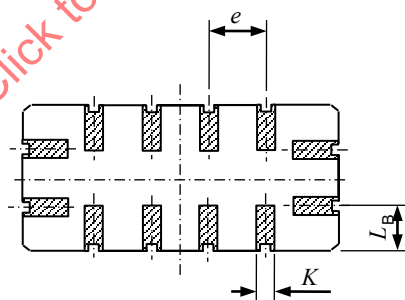
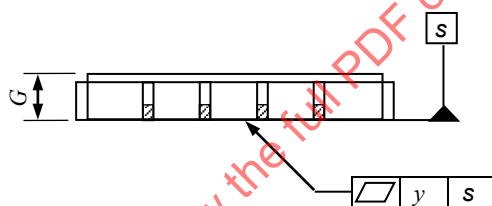
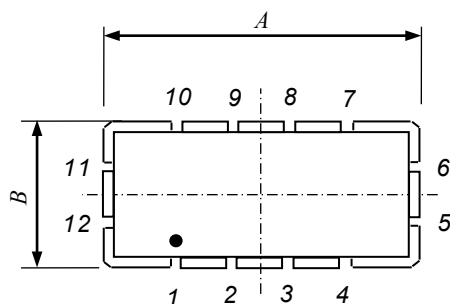
Connexions des zones de contact des sorties de type QCC-18/1809A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1				Masse
2				Facultatif
3				Facultatif
4				Facultatif
5				Facultatif
6				Masse
7				Entrée/Sortie
8				Masse
9				Entrée/Sortie/Masse
10				Masse
11				Facultatif
12				Facultatif
13				Facultatif
14				Facultatif
15				Masse
16				Sortie/Entrée
17				Masse
18				Sortie/Entrée/Masse



IEC

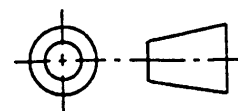
Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(14,0)	14,30	
<i>B</i>	–	(6,5)	6,80	
<i>G</i>	–	–	2,00	
<i>K</i>	0,50	–	1,10	
<i>L_B</i>	1,70	–	2,30	
<i>e</i>	–	2,54	–	
<i>y</i>	–	–	0,10	



IEC

Enveloppe en céramique, soudée, destinée au montage en surface à douze plots –
Type QCC-12/1407A

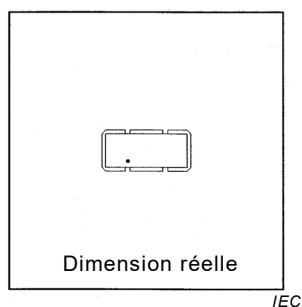
Echelle
3: 1



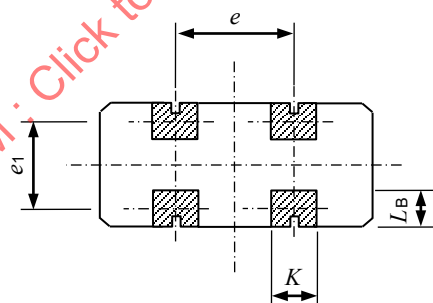
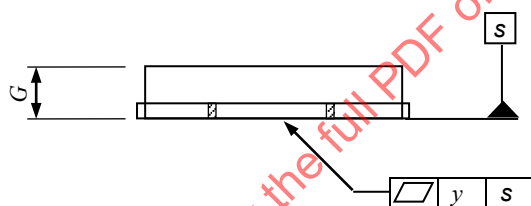
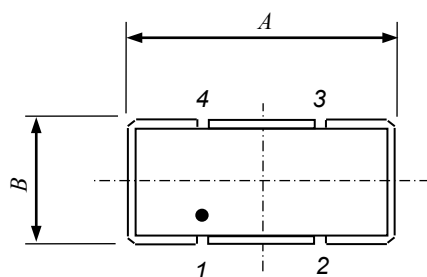
Feuille 2

Connexions des zones de contact des sorties de type QCC-12/1407A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1				Facultatif
2				Facultatif
3				Masse
4				Facultatif
5				Sortie/Entrée
6				Sortie/Entrée/Masse
7				Facultatif
8				Masse
9				Facultatif
10				Facultatif
11				Entrée/Sortie
12				Entrée/Sortie/Masse



Réf.	Dimensions (mm)			Notes
	Min.	Nom.	Max.	
<i>A</i>	–	(12,0)	12,30	
<i>B</i>	–	(5,5)	5,80	
<i>G</i>	–	–	2,30	
<i>K</i>	1,80	–	2,20	
<i>L_B</i>	1,30	–	1,90	
<i>e</i>	–	5,08	–	
<i>e₁</i>	–	3,90	–	
<i>y</i>	–	–	0,10	

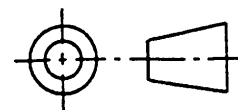


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Enveloppe en céramique, soudée, destinée au montage en surface à quatre plots –

Type DCC-4/1206A

Echelle
3: 1



Feuille 3

Connexions des zones de contact des sorties de type DCC-4/1206A

N°	Résonateur à quartz	Oscillateur à quartz	Filtre à quartz	Dispositifs à OAS
1	Sortie 1	Tension de commande		
2	NC	Masse		
3	Sortie 2	Sortie		
4	NC	Alimentation en courant continu		

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