INTERNATIONAL STANDARD

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AMENDMENT 1
2000-08

Amendment 1

Fixed capacitors for use in electronic equipment

Part 9: Sectional specification: Fixed capacitors of ceramic dielectric, Class 2

Amendement 1

Condensateurs fixes utilisés dans les équipements électroniques

Partie 9: Spécification intermédiaire: Condensateurs fixes à diélectrique en céramique de classe 2

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PRICE CODE E

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FOREWORD

This amendment has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

The text of this amendment is based on the following documents:

FDIS	Report on voting
40/1150/FDIS	40/1181/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until 2005. At this date, the publication will be

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- withdrawn;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

A bilingual version of this publication may be issued at a later date.

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2.2.5 Temperature characteristic of capacitance

Replace the existing table II by the following new table II:

Sub-class letter code	Max. capacitance change in % within the category temperature range with respect to the capacitance at 20 °C measured with and without a d.c. voltage applied		Category temperature range and corresponding number code				
			–55/+125 °C	–55/+85 °C	–40/+85 °C	–25/+85 °C	–10/+85 °C
	Without d.c. voltage applied	With d.c.* voltage applied	1	2	3	4	6
2B	±10	As specified in the detail specification	–	x	x	x	–
2C	±20		x	x	x	–	–
2D	+20/–30		–	-	–	x	–
2E	+22/–56		–	x	x	x	x
2F	+30/–80		–	x	x	x	x
2R	±15		x	–	–	–	–
2X	±15	+15/–25	x	–	–	–	–

* The applied voltage is the rated d.c. voltage or as specified in the detail specification.

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Table IV Test schedule for Qualification Approval

Replace, on page 33, in the second column "ND" *by* "D".

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4.3.1.1 Measuring conditions

Replace the existing table by the following new table:

– Measuring voltage:

Subclass	Measuring voltage	Referee voltage
2B, 2C, 2X	1,0 ± 0,2 V	1,0 ± 0,02 V
2D, 2E, 2F, 2R	0,3 ± 0,2 V or as specified in the detail specification	0,3 ± 0,02 V or as specified in the detail specification

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4.3.4.2

Replace the existing table by the following new table:

Type	Rated voltage V	Test voltage V
Leaded multilayer ceramic capacitors	$U_R \leq 100$	$2{,}5\ U_R$
	$100 < U_R \leq 200$	$1{,}5\ U_R + 100$
	$200 < U_R \leq 500$	$1{,}3\ U_R + 100$
	$500 < U_R$	$1{,}3\ U_R$
Others	$U_R \leq 500$	$2{,}5\ U_R$
	$U_R > 500$	$1{,}5\ U_R + 500$
NOTE If $U_R > 500$ V, then the test voltage for Test C (External insulation) is $1{,}5\ U_R + 500$ V or as specified in the relevant specification.		

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4.12.6.3 Final inspection, measurements and requirements

Replace the existing table by the following new table:

Measurement	Measuring conditions	Requirements			
		Subclasses 2B, 2C and 2X	Subclass 2D and 2R	Subclass 2E	Subclass 2F
Capacitance	4.3.1	$\frac{\Delta C}{C} \leq \pm 10\ \%$	$\frac{\Delta C}{C} \leq \pm 15\ \%$	$\frac{\Delta C}{C} \leq \pm 20\ \%$	$\frac{\Delta C}{C} \leq \pm 30\ \%$
Tangent of loss angle	4.3.2	$\tan \delta \leq 2 \times$ value of 4.3.2.2			
Insulation resistance	4.3.3	$R_i \geq 1\ 000\ M\Omega$ or $R_i \times C_R \geq 25$ s (whichever is the smaller)			

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4.13.5 Final inspection, measurements and requirements

Replace the existing table by the following new table:

Measurement	Measuring conditions	Requirements			
		Subclasses 2B, 2C and 2X	Subclass 2D and 2R	Subclass 2E	Subclass 2F
Capacitance	4.3.1	$\frac{\Delta C}{C} \leq \pm 10\ \%$	$\frac{\Delta C}{C} \leq \pm 15\ \%$	$\frac{\Delta C}{C} \leq \pm 20\ \%$	$\frac{\Delta C}{C} \leq \pm 30\ \%$
Tangent of loss angle	4.3.2	$\tan \delta \leq 2 \times$ value of 4.3.2.2			
Insulation resistance	4.3.3	$R_i \geq 1\ 000\ M\Omega$ or $R_i \times C_R \geq 25$ s (whichever is the smaller)			

4.14 Endurance

In the first sentence, replace ‘Clause 24’ *by* ‘Subclause 4.23’.