

## Guidelines for user notification of product/process changes by semiconductor suppliers

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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION



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# EIA/JEDEC STANDARD

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## Guidelines for User Notification of Product/Process Changes by Semiconductor Suppliers

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ELECTRONIC INDUSTRIES ASSOCIATION

ENGINEERING DEPARTMENT



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## GUIDELINES FOR USER NOTIFICATION OF PRODUCT/PROCESS CHANGES BY SEMICONDUCTOR SUPPLIERS

### FOREWORD

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IEC-PAS 62166 was submitted by JEDEC and has been processed by IEC technical committee 47: Semiconductor devices.

The text of this PAS is based on the following document:

This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document:

<b>Draft PAS</b>	<b>Report on voting</b>
47/1466/PAS	47/1499/RVD

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## GUIDELINES FOR USER NOTIFICATION OF PRODUCT/PROCESS CHANGES BY SEMICONDUCTOR SUPPLIERS

(From Council Ballot JCB-97-13, formulated under the cognizance of JC-14.4 Committee on Quality System Standardization)

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### 1 Purpose

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This standard establishes procedures for notifying semiconductor users of product and process changes made by semiconductor suppliers.

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### 2 Scope

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#### 2.1 Applicable users

- a) Semiconductor suppliers including all supplier subcontractors
- b) Semiconductor distributors
- c) Semiconductor users

#### 2.2 Applicable part types

Includes but is not limited to discrete semiconductors, integrated circuits, hybrid microcircuits, and thin-film passive devices.

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### 3 Definitions

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**form:** The visual appearance including color, marking, and surface finish.

**fit:** The external dimensions and associated tolerances

**function:** The electrical, mechanical, thermal, quality, and reliability performance characteristics

**quality:** The results of tests or procedures that indicate conformance to requirements.

**reliability:** The probability of continued operation over time.

### 3 Definitions (cont'd)

**Product or Process Change Notice (PCN):** A document sent to users describing product or process changes.

**user profile:** The user's unique product application conditions and/or notification requirements that will affect the supplier's PCN methodology. If a user expresses no unique notification attributes, the supplier's standard PCN system shall apply.

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## 4 General requirements

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### 4.1 Procedure

A written agreement between the supplier and user take precedence over the criteria defined by this publication.

### 4.2 Document control

Each supplier shall maintain a controlled specification(s) that defines the procedures for notifying users of product and process changes as required. The criteria used to classify changes shall also be defined in a controlled specification(s).

### 4.3 PCN system

The following minimum elements must be included in the supplier's documented PCN procedure.

- a) Method of identifying and documenting the user's unique PCN requirements. (Section 7)
- b) Definition and classification of proposed changes. (Note: This could be a reference to a separate controlled document, e.g., Engineering Change Notice.)
- c) Standard notification timing: It is recommended that the user be allowed a minimum of **60** days notification before receiving changed product. However, shipment may occur prior to the **60** days if approved by the user.
- d) Deliverables to user - contents of change notification. (Section 6)
- e) Documented PCN delivery to the user.
- f) Record Retention (Section 8)
- g) Method of user approval.

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## 5 Procedure

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- a) Develop user profile (section 7)
- b) Describe Proposed Change
- c) Evaluate Proposed Change
- d) Determine whether the change(s) affects form, fit, function, quality, or reliability.

### 5.1 Classify changes(s)

The proposed change should be classified by one of the categories shown below. Each supplier shall include in their internal PCN specifications expanded definitions and/or example of the below categories. (See Annex A for examples.)

- a) Major - change impacts form fit, function, quality or reliability, and users should be notified.
- b) Minor - change does not impact form, fit, function, quality, or reliability. Notification of minor changes may not occur based on internal requirements and user specified requirements.

### 5.2 User notification

- a) Identify affected customers
- b) Determine notification per supplier standard criteria or user profile. (Section 7)

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## 6 Product and Process Change Notification content

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The following are guidelines for PCN content including a list of optional data that may be helpful in understanding the user needs. Two categories are discussed: Advance Notification and Standard Notification.

### 6.1 Advance notification

The supplier may determine to send out advance notifications of a potential change for the purpose of communication and soliciting input from the users. Advance notification requirements shall be either determined by the supplier or if specified by the user, included in the user profile.

### 6.1.1 Recommended information

- a) Product Identification (e.g., supplier part number(s), affected product lines including specific package types, product family).
- b) Detailed description of change(s)
- c) PCN tracking number
- d) Reason for change(s)
- e) Name, address, telephone, and fax number of supplier contact
- f) Projected timing of change and implementation date
- g) Anticipated (positive and negative) impact on quality and reliability
- h) Qualification plan, where applicable

### 6.1.2 Additional information

Additional information may include the following or as defined in user profile:

- a) User part number(s)
- b) Projected date, if required, for qualification samples
- c) Projected date, if required, for final qualification data

### 6.2 Standard notification

Includes applicable data needed to justify the change and the specific implementation dates or time frames.

#### 6.2.1 Minimum information

- a) Product Identification (e.g., supplier part number(s))
- b) Description of change(s)
- c) PCN tracking number
- d) Reason for change(s)
- e) Qualification data where applicable (e.g., reliability stress, characterization)

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**6.2.1 Minimum information** (cont'd)

- f) Name, address, telephone, and fax number of supplier contact
- g) Implementation Date
- h) Identification method to distinguish changed parts vs. old, where possible.
- i) Quantifiable (positive or negative) impact on quality or reliability and rationale for this position.

**6.2.2 Additional information**

Additional information may include the following or as defined in user profile:

- a) User part number(s)
- b) Application information

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**7 User Profile Considerations**

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Groups of users may fit into one of several profiles that may be recommended by the supplier. The following elements should be considered for inclusion in these profiles.

**7.1 User contact(s)**

- a) Product(s) supplied
- b) Product(s) application(s)
- c) commodity
- d) Approval requirements (site, function, and organization)

**7.2 Supplier contact(s)**

- a) Market segment(s)
- b) Location(s)
- c) Commodity
- d) Function/Organization

### **7.3 PCN Requirements of Contracts/Customer Specifications/Customer Standard Operating Procedures (SOP)**

- a) Advance notification
- b) Special communication requirements
- c) Special change classification requirements
- d) Review, approval, and closure scheduling
- e) Method of closing out PCN

### **7.4 Customer needs/expectations**

- a) Verbal agreements
- b) Lessons learned (prior experience)

### **7.5 Profile maintenance methodology**

- a) Review/update period (cycle)
- b) Maintenance ownership

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## **8 Records**

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### **8.1 Record retention**

Each supplier shall retain documentation of individual PCN information for a minimum of five years after final user notification.