

**PERICOM SEMICONDUCTOR CORPORATION
DOCUMENT CONTROL SPECIFICATION**

REV.	DCN NO.	DATE	REVISION HISTORY	APPROVED BY	DATE
--	0032	06/22/93	Initiate Specification.	<i>Ed Mella</i>	08/20/93
A	0403	12/09/94	Update spec to latest requirements.	<i>Ed Mella</i>	01/09/95
B	0815	02/23/96	Extensively revised and updated to EIA-672.	<i>Ed Mella</i>	03/11/96
C	1579	05/23/97	Add new customer and sales reps to Table II list.	<i>Ed Mella</i>	05/27/97
D	1887	12/01/97	Add AMI as customer who requires notification of major change per customer and Sales Manager's request..	<i>Ed Mella</i>	12/05/97
E	2167	04/02/98	Add Dell and Synergy for customer notification.	<i>Ed Mella</i>	04/09/98
F	07-0324	03/25/07	Extensive updates to current practices per JESD46.	<i>Ed Mella</i>	10/02/07

APPROVED DOCUMENT CHANGE NOTICE (DCN) ON FILE IN DOCUMENT CONTROL

TITLE OF SPECIFICATION: PERICOM PRODUCT CHANGE NOTIFICATION (PCN)	SPECIFICATION NO.: QA-1420
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DO NOT REPRODUCE FOR OUTSIDE USE WITHOUT WRITTEN PERMISSION

PERICOM SEMICONDUCTOR CORPORATION

DOCUMENT CONTROL SPECIFICATION

1.0 TITLE: PERICOM PRODUCT CHANGE NOTIFICATION (PCN)

2.0 SCOPE: This document applies to all customers requiring notification of major changes to form, fit, or function of any saleable product that they are purchasing from Pericom Semiconductor.

3.0 PURPOSE: This procedure defines the types of changes that require a PCN to be generated, and the responsibilities for PCN initiation and customer notification.

4.0 APPLICABLE DOCUMENTS:

4.1 QA-1400, Document Control System

4.2 QA-1425, Pericom Product Discontinuance Notification (PDN) Procedure

4.3 JESD46 (latest issue in effect), *Customer Notification of Product/Process Changes by Semiconductor Suppliers*

5.0 DEFINITIONS

5.1 *PCN - Product Change Notification:* method whereby major changes to PSC products are formally documented to customers who have requested by specification and/or purchase order notification of major changes to a product's form, fit, or function.

5.2 *PDN – Product Discontinuance Notification:* to formally document the obsolence of a Pericom product and notify prior customers. This procedure is documented in QA-1425.

5.3 *Form* - the visual appearance of a device's documented external package color, mark and surface finish.

5.4 *Fit* - a device's external dimensional and associated tolerances.

5.5 *Function* - a device's electrical, mechanical, thermal, quality or reliability performance characteristics, in accordance with specified tests and limits.

5.6 *Quality* - results of tests or procedures that indicate conformance to documented requirements.

5.7 *Reliability* - the probability of continued operation over time.

5.8 *Major Change:* a category signifying that in the professional judgment of Pericom Quality and Engineering Management, the proposed change *may* affect a product's form, fit, function, quality or reliability. In other words, the products electrical and/or mechanical functionality will be changed such that it may no longer conform to the current PSC and/or customer's specification. See section 10.8 for a list of changes considered major by Pericom.

5.9 *Minor Change:* a category signifying that in the professional judgment of Pericom Quality and Engineering Management the proposed changed *will not* affect a product's form, fit, function, quality or reliability, as defined above.

6.0 EQUIPMENT, MATERIALS, AND SUPPLIES: N/A

7.0 MAINTENANCE AND CALIBRATION CRITERIA: N/A

8.0 LOGS AND RECORDS:

9.0 SAFETY INSTRUCTIONS: N/A

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10.0 PROCEDURE:

- 10.1 PCN Request Initiation: When a product manufactured for sale by PSC has any of the materials, processing, or tests revised such as to cause a major change to the product's form, fit, or function (as defined in paragraph 5.0), the group initiating the change (Design, Process Engineering, Product Engineering, etc.) will notify Quality by e-mail or meeting.
 - 10.1.1 The PCN Request will be sent to the Director of Quality Systems.
 - 10.1.3 The Quality Director (or designee) will assign a PCN control number (two digit year and two digit sequential number, i.e., *PCN # 06-04*), based on the last issued PCN number for that year.
 - 10.1.4 PCN's will normally be initiated 90 days before the change can become effective.
- 10.2 PCN Preparation and Approval:
 - 10.2.1 Describe specifically what change is being made to a product or product family.
 - 10.2.2 Justify why the change is being made and the effect it might have on product performance, characteristics, or reliability. (Reliability, Characterization or other data supporting the change must be included with the PCN, when appropriate.)
 - 10.2.3 Describe when the change will be effective, the specific date and/or date code.
 - 10.2.4 If found necessary by the Quality Director, the affected managers of Engineering, Marketing, Manufacturing Operations, or Quality may also be requested to review and approve the PCN and any accompanying data before it is released to customers.
- 10.3 PCN E-Mail Initiation: After final acceptance of the PCN form, a formal PCN e-mail will be initiated by the Director of Quality (or a designated representative).
 - 10.3.1 The e-mail shall include, as a minimum, Pericom part number(s), package type(s), description of change, reason for change, projected time and implementation date of change, anticipated impact on quality and reliability (if applicable).
 - 10.3.2 Additional information and data may be supplied upon customer request.
- 10.5 PCN Customer Submittal: Quality will send the PCN E-mail and all accompanying documentation to the applicable world-wide Area Sales Managers (ASM) and Sales Representatives. ProductMarketing and other internal organizations and personnel may also be copied on the notification when requested.
 - 10.5.1 The current backlog of customers and Pericom personnel who have been identified as requiring notification of a PCN for major changes to the affected product(s) will be reviewed and maintained by the Director of Quality.
 - 10.5.2 The PCN E-mail will be sent directly to the applicable companies e-mail addresses when formally requested. Otherwise, Pericom Sales and Sales Representatives are expected to notify any customers who are currently buying or have bought the product(s) being changed within the past two years.

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- 10.6 PCN Customer Approval:
- 10.6.1 Unless otherwise specified by the customer and agreed to in writing by Pericom, Pericom's definitions of when a PCN shall be generated (per 5.0) will apply.
- 10.6.2 Review and approval shall be requested by Quality, the Pericom ASM, or responsible Sales Representative within 30 days of receipt of the PCN by the customer.
- 10.6.3 A customer may have up to a maximum of 90 days from the date of the PCN to approve it, at which time the change will become effective. Shipment of product may occur prior to the 90 days if approved in writing (e-mail is sufficient) by the customer.
- 10.6.4 Additional review time beyond 90 days may be granted to customers when requested in writing or by specification, and agreed to by Pericom.
- 10.6.5 Changed product will not be shipped to customers who first require formal approval of the PCN, even if the 90 days has elapsed. Customer approval by e-mail is acceptable.
- 10.7 PCN Responsibility: Changes that are not covered under the form, fit, or function definitions stated herein, or other changes specified by customer order or contract, shall be the responsibility of Pericom Quality for determination of any change notification that may be required.
- 10.8 PCN Filing: A copy of the approved PCN Request form and the final PCN letter will be sent to Document Control for filing and to complete the PCN Request Log.
- 10.9 Major Changes: Examples of major changes that might require customer notification are noted in Table I below (these are examples only and do not represent all possible changes):

TABLE I

ITEM	CHANGE EXAMPLES
DESIGN	Major design change such as a die shrink, but only as a result of a process size change (e.g., 0.8 μ to 0.6 μ wafer fabrication process), not due to element layout optimization.
WAFER FAB	Wafer fab site, major process flow revision, wafer diameter, diffusion dopant, gate oxide material or thickness, dielectric material, polysilicon dopant type, metallization material or thickness, top-side passivation material or thickness, die coat material or thickness..
ASSEMBLY	Assembly site, lead frame material, plating material, die attach material, wire bond material, mold compound material, marking method.
TEST	Test elimination or changes in AC/DC electrical specifications that loosen conditions or limits.
ELECTRICAL SPEC	Changes in AC or DC specifications, loosening min. or max. limits or conditions.
MECHANICAL SPEC	Change in package outline, loosening dimensional tolerances.
PACK/LABEL/SHIP/ENVIRONMENT	Carrier (reel, tray) dimensions, maximum storage temperature, drypack requirements.

- 10.10 Customer Notification: The list of Customers who must be notified of major product changes are maintained by the Director of Quality based on customer request.
- 10.11 Customer Notification Additions: Quality shall add new customers to this list on a periodic basis as they are determined by Quality, Sales, Marketing or Customer Service.