



REVISION HISTORY

REV	DATE	ORIGIN	REASON FOR CHANGE(S)
A	06/04/10	Paul Gettins	New
B	01/25/11	Paul Gettins	Lot #/ Date code traceability
C	12/22/11	Paul Gettins	Added Wavier approval
D	03/02/12	Adriana Cimpan	Added Q17 requirements for 1 st shipment and subsequent shipments
E	03/26/13	Adriana Cimpan/ Yee-Wen Khoo	1. Replace EN13980/IECEX OD005 with ISO/IEC 80079-34. 2. Clarifying the access of supplier facility. 3. Add material certificate per ISO/IEC 80079-34 requirement.
F	29AUG14	Adriana Cimpan	Add requirement for formal signature from supplier's quality representative on the CoC and equivalence of CoC with Doc
G	29SEP16	Eric Steif	Added clarification language to COC requirement
H	5/04/18	Daniel Crouse	Added PCN language
I	10/30/18	Joyce Conn	Added hyper corrosion requirement

Q-CODE Q33 QUALITY REQUIREMENTS

For ISO/IEC 80079-34 Safety Critical **Printed Circuit Boards**

With acceptance of/or receipt of product against this order the supplier agrees to allow Plexus, their customer and regulatory authorities the right of access to their facility and all applicable records including verifying any aspect of their operation that affects the type of protection. The following are the quality requirements for product purchased under Q-code Q33. Unless a written waiver is received from Plexus, the supplier agrees to abide by the quality requirements listed below. Plexus will only give a written wavier after notifying and obtaining approval from the customer authorized person and Certified Body.

1st Shipment - The documentation and quality requirements for the 1st shipment of parts includes the requirements of All Shipments and the following:

- A. First Article Inspection Report –All dimensions must be within print tolerance. Any dimension, which is not within print specification, must be approved by Plexus in writing before product can be shipped.
- B. Hyper-corrosion – For ENIG boards, process controls shall be implemented as per Plexus PCB specification G9000-3. Results and applicable cross-sections shall be retained by the supplier and provided to Plexus on request.
- C. PCB for Solderability Sample - Complete and physically intact PCB or Array as supplied for the Part Number. This should be segregated and boldly identified. The box containing the solderability sample must also be identified as such.
- D. Process Capability
The Requirements of Q-code Q17 must be applied to all Safety Critical or Critical to Function Characteristics
- E. Material Certificate – at a minimum the material certification must include a statement declaring that the items are manufactured from the material specified. This may be included with the certificate of compliance. This is only required if the purchased product relates to the material (metals, alloys, non metallic parts, resin and similar)

All Shipments-The documentation and quality requirements for each shipment of parts are as follows:

- A. ATEX/ IECEX Declaration of Conformity – The declaration must meet all the following requirements:
 - Compliant to ISO17050-1 and ISO17050-2
 - Annex A of ISO/IEC 80079-34 requirements
 - List the factors to demonstrate product conformity.
 - Must include a statement of overall compliance to all the applicable specifications (statement is not required to list, but shall cover all the applicable specifications such as; drawing, PO, customer specifications, Plexus G9000-3, IPC specification, etc), being manufactured from UL certified material and having a flammability class rating of 94V-0. The PCBs must also be marked with the UL recognized

*Notice: This document is considered “UNCONTROLLED” when it exists in any printed form. See the Partner Portals - Supplier section of the Plexus Web page for the current master of this Q-code.

component mark and the 94V-0 flammability class.

Note: CoC must be signed by supplier's quality function representative in order to be considered valid. A CoC is considered the equivalent of DoC for components and subassemblies and may be accepted if states compliance to specifications.

- B. Cross-Section (with inspection data) per IPC-6012 section 3.6.2
- C. Hyper-corrosion – For ENIG boards, process controls shall be implemented as per Plexus PCB specification G9000-3. Results and applicable cross-sections shall be retained by the supplier and provided to Plexus on request.
- D. Contamination Test Report
- E. 100% Electrical Testing Certificate or Stamp. Including an Impedance Report on impedance designs
- F. Process Capability
The Requirements of Q-code Q17 must be applied to all Safety Critical Characteristics
- G. Material Certificate – same requirements as E above.
- H. All cartons, packing slips, certificates, and ATEX/ IECEx Declaration of Conformity must match the PO exactly and include the following information:
 - Part number
 - EC level or Revision level as specified on the PO for the Plexus part number ordered
 - Name of Supplier (if different than the actual OEM)
 - Name of Manufacturer
 - Manufacturers' part number supplied
 - The Lot # and/or Date Code (both preferred, but date code at a minimum) for each shipment - COC and packing slip must contain each lot and/or date code.¹
 - Bar coding this information in 39 or 128 format is optional.

¹ The minimum-required date code format shall identify the 2-digit workweek, 2-digit year (WWYY). If the component marking contains a lot and/or date code, then those markings must be traceable to the COC. Shipments of multiple lot and/or date codes must be identified separately on the COC with the actual quantity shipped for each. Each lot and/or date code shall be independently packaged (i.e., no mixed lot/date codes within a package: reels, trays, tubes, bags, etc.).

Material received without the completion and proper execution of the Quality Requirement allows Plexus the right to return the material as defective. For material that has been previously provided to Plexus, the requirements under subsequent shipments will be followed.

Product change notification

Upon acceptance of conforming product, documentation, and the requirements of this Q-code, the supplier's manufacturing process shall be considered "qualified". All changes require written approval from Plexus prior to implementation. Product or Process change notification requests (PCNs) shall be submitted to pcns@plexus.com.