

**REVISION HISTORY**

<u>REV</u>	<u>DATE</u>	<u>ORIGIN</u>	<u>REASON FOR CHANGE(S)</u>
A	7/28/98	Scott Ubl	New
B	7/22/02	Scott M. Ubl	Format Update
C	12/1/2010	Scott M. Ubl	Added 7 year record retention time
D	5/04/18	Daniel Crouse	Added PCN language

**Q-CODE Q19 QUALITY REQUIREMENTS****For Dock to Stock Shipments**

The following are the quality requirements for product purchased under Q-code Q19. Unless a written waiver is received from Plexus, the supplier agrees to abide by the quality requirements listed below. This Q-code is only applicable to Plexus Suppliers that have successfully completed a Plexus' Supplier Quality Systems Audit.

**Pre-1st Shipment** - Before a product will be released for production the supplier will be required to meet the documentation and quality requirements as follows:

- A. Manufacturing Process Flow - The supplier must have a process routing or flow chart, which describes the manufacturing process.
- B. Pre-Production Run - The supplier will manufacture a pre-production lot utilizing production tooling and processes representative of a repeatable process. During, or subsequent to the manufacturing of the parts, representation from Plexus will be on-site at the supplier.
- C. X-bar and R Charts - The supplier will monitor in-process control parameters via X-bar and R Charts. Out of control points should have process corrections indicated on the chart. Any chart that has had process corrections and does not show control regained, must be approved by Plexus in writing before product can be shipped.
- D. Capability Study - The supplier will sample 30 pieces prior to shipment from which the supplier will measure all customer designated CTF dimensions and will submit all associates data to Plexus; the supplier will calculate X-bar, Sigma, Cp and Cpk values. Plexus must approve any dimension, which is not within print specification, in writing before product can be shipped.
- E. Material Certification.
- F. First Article Inspection Report - All dimensions must be within print tolerance. Plexus must approve any dimension, which is not within print specification, in writing before product can be shipped.

Plexus must approve all above items in writing before tooling and the manufacturing process is released for production.

**ALL Shipments**-The quality requirements for all subsequent production shipments will be as follows. This documentation will be appropriately retained and stored by the supplier. The documentation and will be subject to Plexus audit and made available upon request for 7 years.

- A. X-bar and R Charts - The supplier will monitor in-process control parameters via X-bar and R Charts. Out of control points should have process corrections indicated on the chart. Any chart that has had process corrections and does not show control regained, must be approved by Plexus in writing before product can be shipped.
- B. Material Certification.
- C. All cartons, packing slips and C.O.C.'s must have part number, EC level or revision, quantity and P.O. number listed on them.

The above listed documentation must be submitted with each shipment. Any shipment received without this



documentation will be considered defective.

**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](mailto:pcns@plexus.com).