

ALL Supplier Quality Requirement Codes by Commodity Class

APPLICABILITY: The following codes which are listed under the supplier's commodity class in the table below, are required along with any other terms, conditions, drawing(s) and specification(s) stated on the order.

Commodity Code	Commodity Class	Default Quality Codes
RAWQ	Assembly Components	101, 102, 105, 107, 108, 111, 114, 116, 117, 125, 127, 130, 131, 133, 137, 140, 141, 142, 145
DIE	Semiconductor, Passive components	101, 102, 105, 107, 108, 111, 115, 117, 121, 122, 127, 130, 131, 133, 141, 142, 144, 147
DIST	OEM or distributed active and passive components	101, 102, 105, 107, 108, 111, 114, 116, 117, 127, 130, 131, 133, 137, 141, 142, 143, 144, 145
SPAR	Space grade components	101, 102, 105, 107, 108, 111, 114, 115, 116, 117, 118, 127, 130, 131, 133, 137, 141, 142, 143, 144, 145, 146
OUTP	Outsourced process, not testing	101, 102, 105, 107, 108, 111, 114, 116, 117, 125, 127, 131, 133, 137, 139, 141, 142, 144
OUTT	Outsourced testing	101, 102, 105, 107, 108, 111, 114, 116, 117, 127, 131, 133, 137, 139, 141, 142, 144
CAL	Calibration	101, 102, 108, 118, 142
EQP	Equipment for Test/Production and parts	101, 102, 108, 119, 142
REP	Repair services for Production Equipment	101, 102, 107, 108, 118, 142
CHEM	Chemicals and shelf life materials	101, 102, 112, 113, 142

IT	IT	101, 102, 142
HRD	Hardware, tooling	101, 102, 105, 107, 119, 133, 142
MISC	Miscellaneous/other suppliers	101, 102, 107, 130, 142
SHIP	Shipping Materials	101, 102, 107, 142

CODES:

100. Removed

101. Quality System: The Supplier shall maintain a quality system that conforms to ISO9001 or AS9100, or demonstrated equivalency, and is subject to conformance verification at any time during periods of performance of this contract or purchase order.

102. Revisions: Unless other stated by the PO, all standards and specifications shall conform to the revision applicable at the time of PO issuance.

104. Removed

105. On-site Audits: The Buyer and/or Authorised Representative, reserve the right to perform source inspection and conduct on-site audits at the Supplier's facilities or where designated in the purchase order prior to shipment. Inspection and test of the articles defined in this contract shall be performed by the Supplier, and shall be subject to witness by the Buyer and/or Authorised Representative.

107. Workmanship shall be best commercial practices for the articles being supplied.

108. Record Retention & Disposition: Records to provide evidence of conformity to the requirements of this Purchase Order shall be retained by the Supplier for a minimum of 15 years and shall be made available upon request. Records may only be disposed of after the minimum retention period (or retention period required by contract– whichever is longer) is satisfied.

111. Product/Process Changes: The supplier shall make no change in design, materials, manufacturing location, manufacturing processes, or sources of supply, without the prior written authorisation from the Buyer. The Supplier shall notify the Buyer of any product that does not conform to the requirements of the purchase order prior to shipment. The Supplier shall flow down to any sub-tier supplier applicable requirements, such as key characteristics or data reports that are required to fulfill the requirements of the purchase order.

112. **Shelf life** shall be indicated on items and/or exterior packages which deteriorate with age, including cure date and limited life data. No material shall be shipped that has less than 80% of shelf life remaining without Buyer authorisation.
113. **Material Safety:** All materials that are volatile, toxic, or emit fumes that are harmful to human health shall be properly contained in accordance with applicable health and safety requirements. The containers will be plainly marked as to contents with appropriate warnings, precautions and storage conditions. A Safety Data Sheet (SDS) is required for each material delivery.
114. **Identification:** All materials shall be identified by a part number, permanently and legibly affixed directly to the surface of each article. In the event this is not possible due to physical size or nature of material, an identification tag will be securely affixed to each article, or if articles are supplied in individual or multi-unit containers the container must reveal the appropriate identification.
115. **Traceability:** Supplier shall furnish and maintain lot or batch traceability with each article shipped. A batch is defined as a homogeneous production run. Supplier shall furnish wafer lot traceability.
116. **Packaging:** The Supplier shall incorporate good commercial practices for preservation and packaging of all materials that apply to this purchase order and shall identify each package permanently and legibly with purchase order number, manufacturer's name, date shipped, and packing list number.
117. **ESDS (Electro-static Discharge Sensitive):** The Supplier shall take necessary precautions to ensure that ESDS devices are adequately protected from electrostatic discharge (ESD) damage during the handling, manufacture, test/inspection, packaging and shipping. Packaging shall be marked with an ESD cautionary note and/or symbol.
118. **Calibration:** Supplier shall calibrate the item and provide certification that services provided are traceable to the National Institute of Standards and Technology in accordance with the documentation requirements of ANSI/NCSL Z540, ISO 10012, or ISO17025 revision applicable at time of PO issuance. Any repairs or rework performed upon equipment; or any adjustments needed to correct out of tolerance conditions must be recorded and reported to Micross.
119. **Manuals:** The Supplier shall supply any operating/maintenance manuals necessary to be used to support in-house metrology activities.
121. **Die Map:** A printed hard copy of the die map(s) is required with each shipment.
122. **Wafer Probe:** As a minimum, product has been 100% probed by the manufacturer @25°C for DC parameters per the devices published datasheet. All rejects must be controlled (i.e. identified and/or segregated). When rejected die are mapped, a copy of the wafer map must accompany shipment.

125. **First Article Inspection:** When specified on PO, the supplier shall perform and supply a First Article Inspection (FAI) conforming to AS9102 Aerospace First Article Inspection requirements (AS9102 revision applicable at time of PO issuance). A first article inspection report must include objective evidence supporting the conformance to all dimensional, physical, functional requirements and notes specified by the drawing or specification. The Supplier shall ensure the AS9102 requirements for First Article Inspection are flowed down to their Sub-tier suppliers and processors.
127. **Inspection:** Unless otherwise stated in the Source Controlled Drawing (SCD), 100% visual inspection required to MIL-STD-883 or MIL-STD-750 test method, or the manufacturer's standard commercial method, as applicable.
130. **Counterfeit Mitigation:** Authorized and franchised distributors shall implement a counterfeit/fraudulent parts avoidance, detection, mitigation, and disposition program consistent with the requirements of SAE AS6496. Original equipment manufacturers and integrators shall implement consistent with SAE AS5333.
131. **FOD:** Suppliers shall implement a Foreign Object Detection (FOD) program to ensure a FOD free product.
133. **Certificate of Conformance:** Supplier shall provide a Certificate of Conformance (C of C) with each material shipment, signed by an authorized member of the organization. The C of C shall identify the applicable purchase order, part number, name and country of the manufacturer / original electronic manufacturer (OEM) lot/batch number, revision (when applicable), controlling document, and title of the authorized approver, and date of manufacture or date code. In addition, the C of C must certify that the materials and processes used to produce the product were in conformance with all requirements of the contract (or Purchase Order). The Supplier shall certify that parts and/or materials supplied have been inspected and found to conform to this purchase order and any applicable drawings, catalogs and/or specification requirements. The Supplier shall further certify that substantiating inspection data is on file, subject to review by the Buyer upon request.
134. **Removed**
137. **Corrective Action System:** Supplier shall implement and maintain a Corrective Action system in response to non-conforming products or services. Containment of non-conforming products or materials shall be implemented immediately upon receipt of notification of the non-conformance. Appropriate actions shall be taken to prevent recurrence of the non-conformance and ensure controls are in place to evaluate effectiveness of actions taken and consideration of impact to other products or services.
138. **Removed**
139. **Consigned Material:** Return all unused consigned material with shipment. This includes all carriers, tubes and trays sent in with devices for processing. All parts classified as "rejects" shall be properly identified and packaged separately in appropriate packaging just as the acceptable parts for return to Micross.

140. **Desiccant:** All Nickel packages to be delivered/stored must be dry packed with desiccant.
141. **Commerce Control List:** Suppliers shall comply with the US government export regulations regarding restricted or denied parties on the Commerce Control List and flow down these requirements to their suppliers.
142. **Awareness:** Suppliers shall ensure awareness of their contribution to product or service conformity, their contribution to product safety, and the importance of ethical behavior.
143. **Tape & Reel:** In the event devices are to be supplied on tape/reel, then they must be compliant to EIA-481 or EIA-726 as applicable.
144. **Protective Packaging:** Unless otherwise stated on the SCD, packaging must be compliant with ANSI/ESD S541. Devices rated MSL-2 or above must be packaged in accordance with IPC J-STD-033 and/or original manufacturer requirements.
145. **Franchised Distribution Only:** Devices must be original OEM devices of the manufacturer and part number specified, no substitutions allowed.
146. **Date Code Restriction:** Unless otherwise specified by the PO, upon receipt devices must have date codes of less than 3 years and be from a single lot date code.
147. **Metallization Composition and Thickness:** Die, wafer, and semiconductor/passive/active components shall have the material composition of its metallization (backside materials, terminations, etc.) and typical thickness(es) noted on the Certificate of Conformance, Die Map, or other accompanying documentation.