

## PURCHASE ORDER ATTACHMENT **TQA-94 (00)**

### SOLDERABLE TERMINATION HOT SOLDER DIP FINISH

1. Unless otherwise specified in the product specification, solderable terminations of electronic components shall be hot solder dipped per the MIL-STD-2000 paragraph listed below:

<u>MATERIALS AND PROCESSES:</u>	<u>MIL-STD-2000, Paragraph No.:</u>
Hot solder dip	4.11.3
Removal of gold plating	5.4.17
Solder baths	4.13.4
Solder	4.10.1
Flux	4.10.2
Cleaning	4.17

2. Final lead finish shall be smooth and uniform with no blisters, lumps, peaks, foreign material or discoloration. Coverage shall be at least 95% with no single void larger than 0.032 inch. Concentrations of voids in one area are not acceptable. For parts that are sensitive to Electro-static Discharge (ESD) damage, Seller shall protect the components in accordance with DOD-STD-1686 during hot solder dip operations and solderability testing.

Notes:

- a. This requirement applies only to leads and terminations designed for soldered connections. Threaded stud terminals and any other type terminals intended for mechanical, non-soldered connections, are excluded from this requirement.
- b. The 0.0001 inch solder coat thickness requirement shall not apply to square or small (0.025 inch or less) diameter leaded parts.
- c. Rejected components from the same manufactured lot which exhibit acceptable lead characteristics may be used for solderability test. Test samples that are nonconforming, or that are degraded by solderability testing shall not be shipped on this purchase order.
- d. For components that cannot be dipped due to weight, dimension or shape, tinning may be accomplished with a soldering iron that does not produce a magnetic field or inject electrical energy detrimental to the component being tinned.
- e. Equivalent procedures that accomplish the same purpose and are approved by RMSC may be substituted, especially when necessary to comply with environmental laws.

SOLDERABILITY TESTING

3. After component terminations or leads have been hot solder dipped, a sample shall be subjected to solderability testing in accordance with MIL-STD-202 Method 208; MIL STD-750 Method 2026 (for discrete semiconductors); or MIL-STD 883 Method 2003 (for microcircuits). Components shall be preconditioned by eight hours of steam ageing prior to solderability testing. Exception: all electronic component lots which are required by military specification and/or drawing reference to comply with solderability requirements shall be solderability tested in accordance with the test method specified in the applicable military specification and/or drawing. The solderability testing shall have been completed no more than six months prior to shipment of the components to RMSC.

4. Lot sampling for solderability testing shall be in accordance with MIL-STD-105D, Level S-2, Single sample, normal inspection, 1.0 AQL. For the purpose of solderability testing, an inspection lot shall consist of components that were processed through hot solder dip during the same week.
5. Seller shall maintain solderability test records traceable to each shipment and documenting the completion and acceptance of solderability testing in accordance with this requirement. Seller shall include a certificate of conformance with each shipment giving the part number, lot identification and date that solderability testing was completed and accepted.
6. Seller shall assure that the components are packaged and protected to prevent degradation to the solder coated surface of terminals while the parts are being stored or transported. As a minimum, the packaging shall protect the solder coated surfaces from degradation due to moisture and other corrosive elements.
7. A sample of components may be solderability tested upon receipt at RMSC. Should a sample fail the solderability testing, the lot will be rejected, and the lot or part thereof may be returned to Seller for replacement or credit as determined by the Buyer.
8. If Seller is unable to comply with these requirements, Seller shall contact the Buyer for further direction.