



AEM's Sn/Pb Conversion Process

- Includes both Sn/Pb plating and subsequent fusion processing to ensure that resultant component termination finishes are a homogenous mixture of Sn/Pb.
- Ensures that all areas of each component termination are converted to Sn/Pb (including termination locations in egress and wrap-around areas).
- Includes monitoring of component quality going into and out of the Sn/Pb conversion process QA1/QA2/DPA – where solderability, leach resistance, and terminal adhesion strength are verified.
- Ensures that converted component terminations contain a minimum of 5% Pb as verified by SEM/EDS and XRF inspection methods.
- May be followed by 100% electrical or customer specified up-screening activities. 100% visual inspection at 7X-10X magnification levels is performed by AEM on all Sn/Pb conversion lots.
- Included within the scopes of AEM's AS9100 and ISO 9001:2008 QMS Certifications.

As a leading producer of high-reliability passive components for use in military, aerospace and medical electronic devices, AEM, Inc. has devised an aerospace-qualified tin/lead (Sn/Pb) conversion process designed to virtually eliminate the formation of tin whiskers on surface-mount component terminations (including types with external terminals). The AEM proprietary plating process delivers superior quality while eliminating the potential damage to sensitive electronic devices caused by conventional hot solder dipping. AEM's Sn/Pb conversion process is ideal for chip scale passive components including capacitors, inductors, resistors, ferrite chip beads, fuses, resistor arrays, capacitor arrays, bead arrays and many molded body passive and active surface mount component types.

AEM Services

- Refinishing of most multi-layer chip components using AEM's Tin Whisker Mitigation (TWM) process
- Base part sourcing from approved OEM distributors
- Up-screening and QCI per military standards
- DPA Analysis on a sample from each TWM lot
- Full warranty on all Sn/Pb terminated components

AEM Facts

- AEM is the world's largest manufacturer of solid-body current limiting fuses and fusistors for the aerospace industry
- AEM is the world's sole manufacturer of high-reliability ferrite chip beads
- AEM's high-reliability fuses have been in orbit for 40 years with zero reported failures



Examples of Parts Processed

- Surface Mount Chip Capacitors (01005 to 2220 package size or larger)
- Surface Mount Chip Resistors (0402 to 2220 package size or larger)
- Surface Mount Chip Inductors (0402 to 1812 package size or larger)
- Surface Mount Chip Beads (0402 to 1812 package size or larger)
- Surface Mount Fuses (0402 to 1812 package size or larger)
- Surface Mount Varistors (0603 to 1812 package size or larger)
- Resistor Arrays / Capacitor Arrays / Chip Bead Arrays
- Molded Body Diodes (SMA, SMB, SMC, SMD Packages with Reverse J Leads and Molded Body MOSFETS)
- DPAK packages
- SOT-23 packages
- SOT-223 packages
- DO-214AB package
- QFN packages
- Tantalum Capacitors (All Standard Sizes)
- Lug Connectors
- EMIFL packages and most chip and molded body filters
- Leaded Components (consult factory)

Certifications and Standards

AS9100 / ISO 9001:2008 Certified by TÜV Rheinland
 MIL-PRF-23419/12 / MIL-STD-202 Certified Testing Laboratory
 MIL-STD-790 Inspection System – DSCC/DLA Audited/Approved
 SPC - Statistical Process Control implemented at critical process control points
 Raw Material Control & Traceability
 QPL listed for MIL-PRF-23419/12 (FM12), Hi-Rel Fuses
 Meets EIA & EIAJ Standards

Partial List of Key Customers

Arrow	JPL
ATK	KOA Speer
Avnet	L-3 Communications
Ball Aerospace	Lockheed Martin
Boeing	MDA
Celestica Aerospace	MOOG
Crane Aerospace	Perkin Elmer
Diehl BGT Defence	Primus
Ducommun	Raytheon
EADS Astrium	Rockwell Collins
EADS Matrium	RUAG
EBV Elektronik	Sandia National Labs
Harris	TE Connectivity
Honeywell	Teledyne
ITT Exelis	UTC Aerospace
Intracom Defense	ViaSat



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