

Lead-Free Implementation

- Cirrus Logic is in the process of qualifying most of the active package outlines in our portfolio.
 - Existing products previously qualified in a standard Sn/Pb bill of materials will continue to be offered in parallel for the immediate future.
 - New products and package families will be qualified in a lead-free bill of materials exclusively.
- Package qualification priority and scheduling will be based on:
 - Customer timelines and demand
 - Implementation dates of key legislative initiatives
- Sales and Marketing Support
 - Availability of specific devices in a Pb-free bill of materials will be subject to support by the Sales and Marketing groups. Please contact a local Cirrus Logic representative for details.
- Alloy Selection
 - Leadframe Surface Mount Devices: 100% matte Sn
 - Array Packaging: Sn/Ag/Cu
- Compatibility with existing Sn/Pb solder processes
 - Matte Sn plated surface mount devices are considered to be backward compatible with existing eutectic solder processes conforming to JEDEC specified profiles with peak reflow temperatures of 225 deg C or higher.
 - Array packaging utilizing Sn/Ag/Cu solder spheres may require increased peak reflow temperature to ensure complete collapse and reflow of the Sn/Ag/Cu solder spheres.

Lead-free Part Numbering and Identification

- Lead Free products will have a “Z” suffix added after the package designator in the marketing part number
 - Example: CS4334-KSZ will be offered as the Pb-free version of CS4334-KS.
- Lead-free Package Marking
 - The lead-free “Z” designator character will be maintained on the package body.
 - Cirrus Logic is currently reviewing the new JEDEC standard JESD97 for Pb-free package marking to determine an implementation strategy.
- Lead-free Outer Packaging / Shipping Container Marking
 - All containers, invoices, and labels will be marked with the Pb-free part number with the “Z” designator character.
 - Cirrus Logic is currently reviewing JEDEC standard JESD97 for Pb-free labeling to determine an implementation strategy.

Lead-free Qualification

- Qualification Method
 - Moisture Sensitivity / Solder Reflow conditions for all new qualifications are being evaluated per IPC/JEDEC specification J-STD-020-C.
 - Some qualifications have been previously completed using J-STD-020-B. These products are in the process of re-qualification to J-STD-020-C.
 - Reliability testing is conducted per Cirrus Logic / industry standard procedures (JEDEC, Mil-STD, etc).
 - Package qualification tests typically include:
 - Pre-conditioning with 3X reflow passes
 - Temperature cycling
 - Temperature / humidity bias
 - Autoclave
 - High Temperature Storage Life
 - Solderability
- Restriction of Hazardous Substances (RoHS) Compliance
 - The European Union has created legislation that will restrict the use of Lead, Cadmium, Mercury, Chromium, Poly-Brominated bi-phenyls (PBB) and Poly-brominated di-phenyl ethers (PBDE) in most consumer electronic applications.
 - Cirrus Logic's standard product offerings contain Lead (Pb), and are therefore not RoHS compliant.
 - Cirrus Logic Pb-free product versions do not contain any of the six restricted substance classes, and are therefore RoHS compliant.