RoHS2™ Compliant   Pb Pb-Free Plating

RoHS - Declaration of Compliance

RoHS:
The European Union has adopted RoHS2 (Directive 2011/65/EU) – the Restriction of Hazardous Substances (RoHS) in electrical and electronic equipment. This legislation bans the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) in electrical and electronic devices after July 1, 2006 with certain exemptions.

Central's Policy:
Central Semiconductor is doing its part to help improve the environment by reducing and removing any substances that are considered harmful to the environment. Central has put procedures in place to comply with legislation pertaining to environmental concerns. Central has implemented procedures to comply with RoHS banned substances.

Table 1 lists the allowable limits for banned substances.

Table 1:

Substance	Maximum Limit (ppm)
Cadmium (Cd)	100
Lead (Pb)	1000 [1] [2]
Mercury (Hg)	1000
Hexavalent Chromium (Cr^{6+})	1000
Poly Brominated Biphenyls (PBB)	1000
Poly Brominated Diphenyl Ethers (PBDE)	1000

[1] Applicable to products with Pb-free lead finish only.
[2] Maximum limit does not apply to applications for which exemptions have been granted by the RoHS directive.

Central's current products do not contain any of the following banned substances: Mercury, Cadmium, hexavalent chromium, polybrominated biphenyls (PBB), or polybrominated diphenyl ethers (PBDE). Nearly all of Central's products are currently available with lead free exterior finishes, in the form of 99.9% matte tin plating. Presently some of Central's products are available in both Lead free (99.9% Tin), and Tin/Lead finishes.

Special Notations

1. Tin Whisker Mitigation Methods:
    Central's Pb free plating meets the following criteria:
    a. External plating composition is 99.9% Matte Tin (Sn) minimum.
    b. External plating thickness is 315 micro-inches (8μm) minimum.
    c. External plating grain size is 40 micro-inches (1μm) minimum.
    d. External plating carbon content is 0.1% maximum.
    e. Devices do not have a Nickel (Ni) barrier underlayer.
    f. Some case types include a post plating anneal bake.
2. Central's Pb free devices are RoHS compliant.
3. Central's Pb free devices are compatible with both tin/lead and lead free solder processes.

R12 (9-September 2013)

4. Central's Pb free devices can withstand a MAX temperature of 260°C for 30 seconds maximum.
   Click here for Central's typical reflow & wave soldering temperature profile.
5. Central's Pb free surface mount devices have a Moisture Sensitivity Level (MSL) of 1. (per JEDEC J-STD-020D)
6. Central's Pb free devices are not a change in form, fit or function.
7. Central's Pb free devices are controlled by an internal lot tracking system.
8. Parts may be available with Lead Free or Tin/Lead plating:
   - For Lead Free plating, add suffix "LEAD FREE" to part number.
   - For Tin/Lead plating, add suffix "TIN/LEAD" to part number.
   - No suffix designation allows for the supply of either lead-free or tin/lead plated product depending on availability.
9. Devices ordered as Pb free are certified to contain less than 1000ppm Pb content on the terminal plating and will be labeled with Central's Lead Free/RoHS Compliant Logo.
   Sample Label
10. Devices with tin/lead plating are still available for certain customer's requirements.
   Please contact Central's sales department for additional detail.

REACH

The European Union's REACH (**R**egistration, **E**valuation, **A**uthorization, and restriction of **Ch**emicals) regulation applies to chemical substances manufactured in or imported to the EU in quantities of 1 tonne or more per year. It applies to chemical substances on their own, in preparations, or in articles (manufactured goods). The goal of REACH is to improve the protection of human health and the environment through better and earlier identification of chemical substances.

R12 (9-September 2013)