



Material Declaration Sheet

VISHAY MLCC Sub-Division

Date 6/1/2011

Part / Product Family Details

| Vishay Part Number | RoHS Compliance Status | RoHS Compliance Date Code dd-mmm-yyyy | Total product Weight (mg) | Value Range | 3rd Party Lab ICP Test Report Available | Manufacturing Location | Number of Exemptions Used |
|--------------------|------------------------|---------------------------------------|---------------------------|-------------|---|------------------------|---------------------------|
| VJ1206A...W1BC | YES | 1-Sept-2006 | 17.1 | - | Yes | Israel | None |

Technical Information

| Terminal Plating / Grid Array Material | Terminal Base Alloy | JESD-97 Pb-Free Material Code Marking | J-STD-20D MSL Rating | Reflow Peak Process Body Temperature | Reflow Maximum number of cycles | Reflow Max.Time at Peak Temperature (sec) | Soldering Compatibility (SnPb/Pb-Free) |
|--|---------------------|---------------------------------------|----------------------|--------------------------------------|---------------------------------|---|--|
| Matte Sn w/ Nickel underplate | Other | e3 | 1 | 260 °C | 2 | 10 | Backward & Forward |

Material Composition

| Homogenous Material Name | Material Classification | Substance Name | CAS number | Weight of Substance (mg) | With respect to Homogenous Material | | % with respect to Total Product Weight | RoHS Exemptions Used |
|--------------------------|-------------------------|----------------------------|------------|--------------------------|-------------------------------------|----------|--|----------------------|
| | | | | | % | ppm | | |
| Dielectric | Ceramic | Praseodymium(III,IV) Oxide | 12037-29-5 | 2.78867 | 18.00 | 180000 | 16.31 | 0 - None |
| | | Barium Titanium Trioxide | 12047-27-7 | 7.90123 | 51.00 | 510000 | 46.21 | 0 - None |
| | | Dibismuth Trioxide | 1304-76-3 | 2.47882 | 16.00 | 160000 | 14.50 | 0 - None |
| | | Neodymium Oxide | 1313-97-9 | 1.54926 | 10.00 | 100000 | 9.06 | 0 - None |
| | | Tin Dioxide | 18282-10-5 | 0.30985 | 2.00 | 20000 | 1.81 | 0 - None |
| | | Misc. | - | 0.46478 | 3.00 | 30000 | 2.72 | 0 - None |
| | | | | | | 15.49260 | | |
| Electrode | Conductive paste | Barium Titanium Trioxide | 12047-27-7 | 0.04617 | 9.00 | 90000 | 0.27 | 0 - None |
| | | Palladium | 5/3/7440 | 0.03078 | 6.00 | 60000 | 0.18 | 0 - None |
| | | Silver | 7440-22-4 | 0.43605 | 85.00 | 850000 | 2.55 | 0 - None |
| | | | | 0.03420 | | | | |
| Ni Plating | Ni Plating | Nickel | 7440-02-0 | 0.03420 | 100.00 | 1000000 | 0.20 | 0 - None |
| Sn Plating | Sn Plating | Tin | 7440-31-5 | 0.03420 | 100.00 | 1000000 | 0.20 | 0 - None |
| | | | | 1.02600 | | | | |
| Termination | Conductive paste | Glass, Oxide, Chemicals | 65997-17-3 | 0.04104 | 4.00 | 40000 | 0.24 | 0 - None |
| | | Silver | 7440-22-4 | 0.98496 | 96.00 | 960000 | 5.76 | 0 - None |

EU-RoHS Directive-2002/95/EC MCV of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and MCV of 0.01% by mass cadmium

Exemption Used NONE

Note :- (i) All information is based on data received from our vendors & subjected to change without prior notice.
(ii) Substance weight are derived from MSDS.

Build Vishay
into your Design

ONE OF THE WORLD'S LARGEST MANUFACTURERS OF DISCRETE SEMICONDUCTORS AND PASSIVE COMPONENTS

One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components