# MATERIAL DECLARATION

BOURNS®

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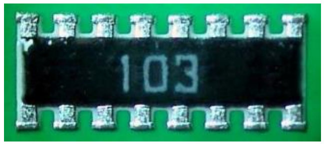
|---|---|---|---|---|
| Material Number | CAT16-J8 LF Series | | |  |
| Product Line | Thick Film Chip Resistors Arrays | | | |
| Compliance Date | 4-1-2003 DC 0314 | | | |
| RoHS Compliant | Yes | MSL | 1 | |

| No. | Construction Element(subpart) | Homogeneous Material | Material weight [g] | Homogeneous Material\ Substances | CASRN if applicable | Materials Mass % | Material Mass % of total unit wt. | Subpart mass of total wt. (%) |
|---|---|---|---|---|---|---|---|---|
| 1 | Ceramic Substrate | Ceramic | 0.0179 | Aluminum oxide | 1344-28-1 | 96 | 85.49 | 89.05 |
| | | | | Crystalline Silica Quartz | 14808-60-7 | 4 | 3.56 | |
| 2 | Terminal Electrode | Thick Film Conductor | 0.0005 | Silver | 7440-22-4 | 92 | 2.29 | 2.49 |
| | | | | Palladium | 7440-05-3 | 3 | 0.07 | |
| | | | | Bismuth | 7440-69-9 | 5 | 0.12 | |
| 3 | Resistive Element | Thick Film Resistor | 0.0001 | Silver | 7440-22-4 | 8 | 0.04 | 0.50 |
| | | | | Ruthenium oxide | 12036-10-1 | 38 | 0.19 | |
| | | | | Palladium | 7440-05-3 | 1 | 0.00 | |
| | | | | Lead | 7439-92-1 | 37 | 0.18 | |
| | | | | Boron | 7440-42-8 | 5 | 0.02 | |
| | | | | Silicon | 7440-21-3 | 11 | 0.05 | |
| 4 | Over Coat (Inner) | Thick Film Glass | 0.0002 | Lead | 7439-92-1 | 57 | 0.57 | 1.00 |
| | | | | Boron | 7440-42-8 | 8 | 0.08 | |
| | | | | Silicon | 7440-21-3 | 25 | 0.25 | |
| | | | | Aluminum | 7429-90-5 | 6 | 0.06 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Titanium | 7440-32-6 | 4 | 0.04 | |
| 5 | Over Coat (Outer) | Epoxy Resin | 0.0005 | Epoxy Resin | 25068-38-6 | 53 | 1.32 | 2.49 |
| | | | | Chromium oxide | 1308-38-9 | 29 | 0.72 | |
| | | | | Copper oxide | 1317-38-0 | 15 | 0.37 | |
| | | | | Manganese oxide | 1317-35-7 | 3 | 0.07 | |
| 6 | Terminal Electrode (Side) | Thick Film Conductor | 0.0001 | Silver | 7440-22-4 | 92 | 0.46 | 4.48 |
| | | | | Palladium | 7440-05-3 | 3 | 0.01 | |
| | | | | Bismuth | 7440-69-9 | 5 | 0.02 | |
| 7 | Ni Plating | Nickel | 0.0005 | Nickel | 7440-02-0 | 100 | 2.49 | |
| 8 | Sn Plating | Tin | 0.0003 | Tin | 7440-31-5 | 100 | 1.49 | |
| | | Total weight | 0.0201 | | | | | |

**This Document was updated on:** **4-18-2016**

**Important remarks:** Resistive Element contains the Lead (Pb) which can be referred to RoHS Exemption 7(c)-I