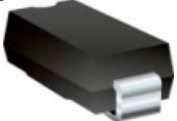


MATERIAL DECLARATION SHEET



| | | | | |
|------------------------|-------------------------------|------------|----------|---|
| Material Number | SMLJ-Q | | |  |
| Product Line | Semiconductor Products | | | |
| Compliance Date | 2017/7/31 | | | |
| 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 | Dice | Silicon | 0.004829 | Silicon (Si) | 7440-21-3 | 60.1800% | 1.221% | 2.028% |
| | | | | Phosphorous(P) | 7723-14-0 | 0.0100% | 0.0002% | |
| | | | | Boron(B) | 7440-42-8 | 0.0100% | 0.0002% | |
| | | | | Nickel (Ni) | 7440-02-0 | 14.8000% | 0.300% | |
| | | | | PbO | 1317-36-8 | 12.5000% | 0.254% | |
| | | | | SiO ₂ | 7631-86-9 | 10.0000% | 0.203% | |
| | | | | Al ₂ O ₃ | 1344-28-1 | 2.5000% | 0.0507% | |
| 2 | Die attach (Solder) | solder paste | 0.009170 | Tin (Sn) | 7440-31-5 | 5.000% | 0.193% | 3.851% |
| | | | | Lead (Pb) | 7439-92-1 | 92.500% | 3.563% | |
| | | | | (Ag) | 7440-22-4 | 2.500% | 0.096% | |
| 3 | Lead frame | Copper | 0.110667 | Copper (Cu) | 7440-50-8 | 99.800% | 46.388% | 46.481% |
| | | | | Iron (Fe) | 7439-89-6 | 0.150% | 0.070% | |
| | | | | P | 7723-14-0 | 0.050% | 0.023% | |
| 4 | Molding compound | Epoxy material | 0.112150 | Silica (SiO ₂) | 14808-60-7 | 76.000% | 35.799% | 47.104% |
| | | | | Epoxy resin | 25928-94-3 | 9.000% | 4.239% | |
| | | | | Phenolic resin-A,-B | 9003-35-4 | 8.000% | 3.768% | |
| | | | | Hydroxide metal | - | 6.000% | 2.826% | |
| | | | | Carbon | 1333-86-4 | 1.000% | 0.471% | |
| 5 | Plating | Matte-Tin | 0.001275 | Tin (Sn) | 7440-31-5 | 100.000% | 0.536% | 0.536% |
| | | Total weight | 0.238091g | | | | | |

MATERIAL DECLARATION SHEET

BOURNS®

This Document was updated on: 2017/7/31

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.
2. 7(a) Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)
3. 7(c)-I Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.