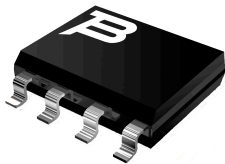



MATERIAL DECLARATION SHEET



| | | | | |
|-----------------|--|-----|---|---|
| Package Type | 8-SOIC (210 mil) | | |  |
| Product Line |  TISP® Thyristor Surge Protectors | | | |
| Compliance Date | November 31, 2004 | | | |
| RoHS Compliant | Yes (-S suffix) | MSL | 1 | |

Bourns TISP® products complying with RoHS legislation are identified with a “-S” suffix in the component part number e.g. TISP9110LDMR-S

| 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 | Encapsulation | Epoxy Resin | 0.077397 | Fused Silica (SiO2) | 60676-86-0 | 85.00 | 48.514 | 57.076 |
| | | | | Epoxy resin | | 6.00 | 3.425 | |
| | | | | Phenol resin | | 6.00 | 3.425 | |
| | | | | Epoxy Cresol Novolac | 29690-82-2 | 2.50 | 1.427 | |
| | | | | Carbon Black | 13333-86-4 | 0.50 | 0.285 | |
| 2 | Leadframe | Copper Alloy | 0.047605 | Copper | 7440-50-8 | 95.11 | 33.391 | 35.106 |
| | | | | Iron | 7439-89-6 | 2.24 | 0.787 | |
| | | | | Zinc | 7440-66-6 | 0.03 | 0.010 | |
| | | | | Phosphorous | 7723-14-0 | 0.10 | 0.034 | |
| | | | | Silver | 7440-22-4 | 2.52 | 0.884 | |
| 3 | Chip | Silicon | 0.006475 | Silicon | 7440-21-3 | 96.70 | 4.617 | 4.775 |
| | | | | Aluminium | 7429-90-5 | 2.48 | 0.119 | |
| | | | | Nickel | 7440-02-0 | 0.69 | 0.033 | |
| | | | | Gold | 7440-57-5 | 0.12 | 0.006 | |
| 4 | Die Attach | Silver epoxy | 0.001536 | Silver | 7440-22-4 | 75.00 | 0.850 | 1.133 |
| | | | | Epoxy | 9003-36-5 | 25.00 | 0.283 | |
| 5 | Bond wires | Copper | 0.000985 | Copper | 7440-50-8 | 99.99 | 0.335 | 0.335 |
| 6 | Terminal Finish | Matte Tin | 0.002137 | Matte Tin | 7440-31-5 | 100.00 | 1.570 | 1.570 |
| | | Total Weight | 0.135604 | | | | | |