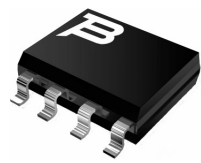



MATERIAL DECLARATION SHEET



Package Type	8-SOIC (MS-012AA)			
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. TISP61089DR-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	0.042343	Fused Silica (SiO2)	60676-86-0	82.00	43.302	52.977
				Epoxy		6.00%	3.179	
				Phenol Resin		6.00%	3.179	
				Epoxy Cresol Novolac	29690-82-2	2.50%	1.324	
				Carbon Black	1333-86-4	0.50%	0.265	
2	Leadframe	Copper alloy	0.030438	Copper	7440-50-8	97.57	37.157	38.082
				Iron	7439-89-6	2.30	0.876	
				Zinc	7440-66-6	0.10	0.038	
				Phosphorous	7723-14-0	0.03	0.011	
3	Chip	Silicon	0.004194	Silicon	7440-21-3	92.58	4.858	5.248
				Aluminium	7429-90-5	2.25	0.118	
				Nickel	7440-02-0	0.74	0.260	
				Gold	7440-57-5	0.13	0.011	
4	Die Attach	Silver epoxy	0.001000	Silver	7440-22-4	70.00	0.876	1.251
				Epoxy	9003-36-5	30.00	0.375	
5	Bond wires	Copper	0.000220	Copper	7440-50-8	99.99	0.2754	0.2754
6	Terminal Finish	Matte Tin	0.001732	Matte Tin	7440-31-5	100.00	2.167	2.167
		Total weight	0.079928					

MATERIAL DECLARATION SHEET



RoHS Compliance Verification.

The substance content of Bourns products in 8-SOIC package has been verified for RoHS compliance. The following is a summary of analytical analysis reports from external laboratories provided to Bourns by its suppliers.

Substance	Analysis Method	Detect Limit	Unit	Material	Encapsulation	Leadframe	Die Attach Epoxy	Bond Wire	Terminal Finish
Lead (Pb)	ICP-AES US EPA 3050B or other acid digestion.	2	ppm	Pb/Hg/Cd & Cr+6 Analysis Result	N.D	N.D	N.D	N.D	<30
Mercury (Hg)	ICP-AES or Mercury Analyzer US EPA 3052 or other acid digestion	2	ppm		N.D	N.D	N.D	N.D	N.D
Cadmium (Cd)	ICP-AES EN1122, Method B:2001, US EPA 3050B or other acid digestion.	2	ppm		N.D	N.D	N.D	N.D	N.D
Hexavalent Chromium (Cr+6)	UV-Vis US EPA 7196A, US EPA 3060A	2	ppm		N.D	N.D	N.D	N.D	N.D
Polybrominated biphenyls (PBBs)	GC/MS, ECDMS, LC/MS or HPLC/DAD	5	ppm	PBBs / PBDEs Analysis Result	N.D	-	N.D	N.D	-
Polybrominated diphenyl ethers (PBDEs)	GC/MS, ECDMS, LC/MS or HPLC/DAD	5	ppm		N.D	-	N.D	N.D	-

Note: N.D = Not Detected (<Minimum detection limit)
 - = Not Applicable

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.