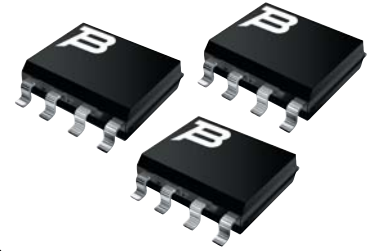


Product Change Notification

TISP® THYRISTOR SURGE PROTECTORS

Bourns Manufacturers Representatives
 Corporate Distributor Product Managers
 Americas Sales Team
 Asia Sales Team
 Europe Sales Team
 FAE Team



November, 2011 - Revised March, 2014

Additional Assembly/Test Location for TISP® Thyristor Surge Protector 8-pin SOP Packages

In order to support our fast growing demand, secure continuity of supply and provide maximum flexibility to our customers, Bourns, Inc. is adding an additional Assembly/Test Location in India for the assembly/test of 8-pin SOP (150 mil) packages (MS012, JEDEC 95) for TISP® Thyristor Surge Protector products.

Below are the affected Bourns® part numbers using an 8-pin SOP (150 mil) package (MS012, JEDEC 95):

Part Number	Part Number	Part Number	Part Number
R1W065DR-S	TISP1072F3DR-S	TISP3380F3DR-S	TISP7072F3DR-S
R3589DR-S	TISP1082F3DR-S	TISP4072F3DR-S	TISP7082F3DR-S
R3601DR-S	TISP2082F3DR-S	TISP4150F3DR-S	TISP7125F3DR-S
R3602CDR-S	TISP2125F3DR-S	TISP4180F3DR-S	TISP7150F3DR-S
R3602DR-S	TISP2150F3DR-S	TISP4290F3DR-S	TISP7180F3DR-S
R3604-1DR-S	TISP2180F3DR-S	TISP4380F3DR-S	TISP7240F3DR-S
R3604-2DR-S	TISP2240F3DR-S	TISP61060DR-S	TISP7260F3DR-S
R3604-4DR-S	TISP2260F3DR-S	TISP61089ASDR-S	TISP7290F3DR-S
R3620DR-S	TISP2290F3DR-S	TISP61089DR-S	TISP7320F3DR-S
R3653-3DR-S	TISP2320F3DR-S	TISP61089SDR-S	TISP7350F3DR-S
R3653-4DR-S	TISP2380F3DR-S	TISP6L7591DR-S	TISP7380F3DR-S
R3653DR-S	TISP3072F3DR-S	TISP6NTP2ADR-S	TISP7038L1DR-S
R3661DR-S	TISP3082F3DR-S	TISP6NTP2BDR-S	TISP8210MDR-S
R7W080DR-S	TISP3125F3DR-S	TISP6NTP2CDR-S	TISP8211MDR-S
R7W120DR-S	TISP3150F3DR-S	TISP7015DR-S	TISP8250DR-S
R7W200DR-S	TISP3180F3DR-S	TISP7015L1DR-S	TISPA79R241DR-S
R3604-3DR-S	TISP3290F3DR-S	TISP7038DR-S	TISPL758LF3DR-S
R3679DR-S	TISP61511DR-S	TISP61089ADR-S	TISP8200MDR-S
R3680DR-S	TISP61521DR-S	TISP61089BDR-S	TISP8201MDR-S
			TISP83121DR-S

Qualification:

Below are the Qualification Information & Results using an 8-pin SOP (150 mil) package (MS012, JEDEC 95) at the new assembly/test location. Qualification by similarity will apply to the part numbers listed above.

Qualification Information:

All Products	
Die Technology	Thyristor Overvoltage Protector
Product Name	See row 1 in Qualification Results table
Die Name	See row 2 in Qualification Results table
Top Metal	Al
Back Metal	AlNiAu
Assembly Site	India
Pins/Package	8/SOIC
Mold Compound	Sumitomo G600
Die Attach	Sumitomo CRM1076NS
Bond Wire	Multiple 2 Mil Cu
L/F Material	Copper
Marking	Laser
Termination Finish	Matte Sn (Pb Free)

Qualification Results:

Test Plan							
					Lot 1	Lot 2	Lot 3
					R3604D-S	TISP61089D-S	TISP6NTP2CD-S
					TT380TQ	TG605TQ	TG435TQ
Stress Test	Conditions	Standard	Method	SS/Acc	SS/fail	SS/fail	SS/fail
Moisture Induced Stress Sensitivity		J-STD-020	-	Level1	6/0	6/0	6/0
HTRB,	150 °C, 1000 h	MIL STD 750	1048	129/1	45/0	45/0	45/0
THB	85 °C / 85 % RH, 1000 h	J-STD-22	A101	129/1	45/0	45/0	45/0
T Cycle	65 / +150 °C, 200 cs	MIL STD 883	2031	129/1	45/0	45/0	45/0
Solderability	8 h Steam	MIL STD 883	2003	32/0	11/0	11/0	11/0
Lead Fatigue	-	MIL STD 883	2004	22/0	8/0	8/0	8/0
Lead Pull	-	MIL STD 883	2004	22/0	8/0	8/0	8/0
Lead Adhesion	-	MIL STD 883	2025	15/0	8/0	8/0	8/0
Dimensions	Data Sheet	MIL STD 883	2025	5/0	5		
Flammability	3 mm	UL94-V0			Manufacturer's Data Sheet		
W/Bond Pull Strength	-	MIL STD 883	2011	76/0	76/0	76/0	76/0
Die Shear	-	MIL STD 883	2019	5/0	5/0	5/0	5/0
X-Ray	-	MIL STD 883	2012	5/0	5/0	5/0	5/0

Samples subjected to HTRB, THB and T Cycle are preconditioned according to JESD22-A113 (260 °C).

Product Labeling:

The product marking is unchanged except for the country code information. The labels will show the country of origin code.

Identification of the Changed Product:

Bourns maintains traceability back to source wafer lots and assembly sites for all products.

First Date Code from New Site: 1205

Impact on Form, Fit, Function and Reliability:

The package outline dimensions will continue to meet MS012, JEDEC 95 and the current Bourns data sheet specifications. Materials specified for packaging are unchanged. Product ratings and electrical characteristics are unaffected by the change. There is no impact on form, fit, function or reliability.

Last Date of Manufacture of Existing Product:

Bourns has no plans to discontinue assembly & test of products at its existing sites.

Implementation Date:

Assembly of product at the India location will begin in November 2011.
Deliveries of such products to customers may occur from 90 days after the date of this notice onwards.

If you have any questions, please contact our [customer service teams](#) in your region.