



# Product Change Notification

## THYRISTOR SURGE PROTECTORS

February 2007

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

### **Thyristor Surge Protector PCN Tracking Number 44 — Alternative Die Attach Adhesive Material**

Bourns is qualifying an alternative conductive die attach adhesive for die mounting overvoltage protectors in 8 pin SOP (150 mil) packages (MS012, JEDEC 95).

The material is CRM1076NS, manufactured by Sumitomo Bakelite Singapore Pte Ltd.

#### **Products Affected by the Change:**

All overvoltage protection products assembled using the 8 pin SOP (150 mil) package, MS-012, JEDEC 95.

A list of products is provided as an attachment to this document.

#### **Reason for the Change:**

Alternative die attach material with improved moisture sensitivity capability compared to the currently qualified Sumitomo CRM1033D.

#### **Product Labeling:**

Product marking is unchanged.

#### **Identification of the Changed Product:**

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

#### **Implementation Date:**

Assembly of product will begin March 2007. Shipments of finished goods with the new adhesive material may occur from March 2007 onwards.

#### **First Date Code Containing Alternative Material:**

0711

**Impact on Form, Fit, Function and Reliability:**

The package outline dimensions will continue to meet MS012, JEDEC 95 and the current Bourns data sheet. Product ratings and electrical characteristics are unaffected by the change.

**Qualification Plan:**

Following page.

**Last Date of Manufacture of Existing Product:**

May continue until the end of 3Q07.

**Qualification Information as Follows:**

All Products	
Die Technology	Thyristor Overvoltage Protector
Product Name	Per Table (Row 2)
Die Name	Per Table (Row 3)
Die size (mil)	Per Table (Row 4)
Top Metal	Al
Back Metal	AlNiAu
Assembly Site	IDS, Malaysia
Pins/Package	8/SOIC
Mold Compound	Sumitomo EME 6600
Die Attach	Sumitomo CRM-1076NS
Bond Wire	Multiple 2 Mil Au
L/F Material	Copper
Marking	Laser
Termination Finish	Matte Sn (Pb Free)

**Qualification Samples Taken From Three Wafer Fabrication Lots:**

					Test Plan		
					Lot 1 61089D TG605TQ 100 x 75	Lot 2 Custom TT380TQ 124 x 92	Lot 3 6NTP2CD TG435TQ 136 x 76
Stress Test	Conditions	Standard	Method	SS/Acc			
Moisture Induced Stress Sensitivity		EIA/JESD22	A112	Level1	6	6	6
HTRB	150 °C, 1000 h	MIL STD 750	1048	129/1	45	105	45
THB	85 °C/85 % RH, 1000 h	JEDEC STD 22	A101	129/1	45	77	45
T Cycle	65/+150 °C, 200 cs	MIL STD 883	2031	129/1	45	45	45
Die Shear	-	MIL STD 883	2019	5/0	5	5	5

Representative samples will also be tested under data sheet ITSP and ITSM conditions.

**Stress Test Completion Date:**

February 2007

## 8 Pin SOP Part Numbers

R1W065DR-S	R7W080DR-S	TISP2290F3DR-S	TISP4150F3DR-S	TISP6NTP2ADR-S	TISP7350F3DR-S
R1W065D-S	R7W080D-S	TISP2290F3D-S	TISP4150F3D-S	TISP6NTP2AD-S	TISP7350F3D-S
R3589DR-S	R7W120DR-S	TISP2320F3DR-S	TISP4180F3DR-S	TISP6NTP2BDR-S	TISP7360F3DR-S
R3589D-S	R7W120D-S	TISP2320F3D-S	TISP4180F3D-S	TISP6NTP2BD-S	TISP7360F3D-S
R3601DR-S	R7W150DR-S	TISP2380F3DR-S	TISP4240F3DR-S	TISP6NTP2CDR-S	TISP7380F3DR-S
R3601D-S	R7W150D-S	TISP2380F3D-S	TISP4240F3D-S	TISP6NTP2CD-S	TISP7380F3D-S
R3602CDR-S	R7W160DR-S	TISP3072F3DR-S	TISP4260F3DR-S	TISP7015DR-S	TISP8200MDR-S
R3602CD-S	R7W160D-S	TISP3072F3D-S	TISP4260F3D-S	TISP7015D-S	TISP8200MD-S
R3602DR-S	R7W200DR-S	TISP3082F3DR-S	TISP4290F3DR-S	TISP7015L1DR-S	TISP8201MDR-S
R3602D-S	R7W200D-S	TISP3082F3D-S	TISP4290F3D-S	TISP7015L1D-S	TISP8201MD-S
R3604-1DR-S	R7W270DR-S	TISP3125F3DR-S	TISP4320F3DR-S	TISP7038DR-S	TISP8250DR-S
R3604-2DR-S	R7W270D-S	TISP3125F3D-S	TISP4320F3D-S	TISP7038D-S	TISP8250D-S
R3604-3DR-S	TISP1072F3DR-S	TISP3150F3DR-S	TISP4380F3DR-S	TISP7038L1DR-S	TISP83121ADR-S
R3604-3D-S	TISP1072F3D-S	TISP3150F3D-S	TISP4380F3D-S	TISP7038L1D-S	TISP83121AD-S
R3604-4DR-S	TISP1082F3DR-S	TISP3180F3DR-S	TISP61060DR-S	TISP7072F3DR-S	TISP83121DR-S
R3606DR-S	TISP1082F3D-S	TISP3180F3D-S	TISP61060D-S	TISP7072F3D-S	TISP83121D-S
R3606D-S	TISP1120F3DR-S	TISP3240F3DR-S	TISP61089ADR-S	TISP7082F3DR-S	TISP9W200F3DR-S
R3620DR-S	TISP1260F3D-S	TISP3240F3D-S	TISP61089AD-S	TISP7082F3D-S	TISP9W200F3D-S
R3653-2DR-S	TISP2072F3DR-S	TISP3260F3DR-S	TISP61089ASDR-S	TISP7125F3DR-S	TISPA79R241DR-S
R3653-2D-S	TISP2072F3D-S	TISP3260F3D-S	TISP61089ASD-S	TISP7125F3D-S	TISPA79R241D-S
R3653-3DR-S	TISP2082F3DR-S	TISP3290F3DR-S	TISP61089BDR-S	TISP7150F3DR-S	TISPL758LF3DR-S
R3653-3D-S	TISP2082F3D-S	TISP3290F3D-S	TISP61089BD-S	TISP7150F3D-S	TISPL758LF3D-S
R3653-4DR-S	TISP2125F3DR-S	TISP3320F3DR-S	TISP61089BSDR-S	TISP7180F3DR-S	TISPPBL1DR-S
R3653-4D-S	TISP2125F3D-S	TISP3320F3D-S	TISP61089CADR-S	TISP7180F3D-S	TISPPBL1D-S
R3653DR-S	TISP2150F3DR-S	TISP3380F3DR-S	TISP61089DR-S	TISP7240F3DR-S	TISPPBL2DR-S
R3653D-S	TISP2150F3D-S	TISP3380F3D-S	TISP61089D-S	TISP7240F3D-S	TISPPBL2D-S
R3661DR-S	TISP2180F3DR-S	TISP4072F3DR-S	TISP61089SDR-S	TISP7260F3DR-S	TISPPBL2SDR-S
R3661D-S	TISP2180F3D-S	TISP4072F3D-S	TISP61089SD-S	TISP7260F3D-S	TISPPBL2SD-S
R3679DR-S	TISP2240F3DR-S	TISP4082F3DR-S	TISP61511DR-S	TISP7290F3DR-S	TISPPBL3DR-S
R3679D-S	TISP2240F3D-S	TISP4082F3D-S	TISP61511D-S	TISP7290F3D-S	TISPPBL3D-S
R3680DR-S	TISP2260F3DR-S	TISP4125F3DR-S	TISP61521DR-S	TISP7320F3DR-S	TISPPBL4DR-S
R3680D-S	TISP2260F3D-S	TISP4125F3D-S	TISP61521D-S	TISP7320F3D-S	TISPPBL4D-S
R1W065DR-S	R7W080DR-S	TISP2290F3DR-S	TISP4150F3DR-S	TISP6NTP2ADR-S	TISP7350F3DR-S