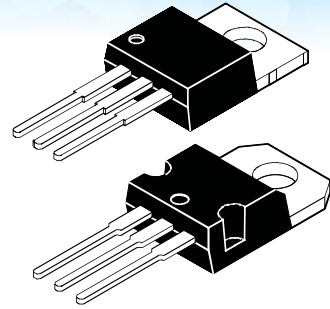


# Product Update Memo

## CIRCUIT PROTECTION PRODUCTS

February, 2006

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



### TO-220 Packaged Transistor, Thyristor & Overvoltage Protection Product Change Notification

### PCN Tracking Number BLBF39 - Mold Compound Change

This change notification covers a change to the epoxy mold compound used for encapsulation of TO-220 products assembled by PSI Technologies Inc, Manila, Philippines.

The change is:

From: **MP150SG**, manufactured by Nitto

To: **KTMC-1030NAP**, manufactured by KCC Corporation Co., Korea

#### Products Affected by the Change:

All products assembled in TO-220 package are affected. These include catalog power transistors, thyristors, overvoltage protectors and customer specific products.

#### Reason for the Change:

Rationalization of mold compounds in the assembly/test site.

#### Product Labeling:

No change to the product labeling.

#### Identification of the Changed Product:

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

#### Implementation Date:

Shipments of finished goods including the new mold compound are expected to commence in March 2006.

#### Commencing Date Code:

612

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

There is no impact. KTMC-1030NAP is recognized by UL and listed in E106817. The flammability rating is V-O.

**Qualification Plan:**

Following page.

**Last Date of Manufacture of Unchanged Product:**

March 2006

**Qualification Information as Follows:**

Die Technology	Bipolar Transistor/Thyristor
Die Name	As Qual Plan Table (Row 2)
Top Metal	Al
Back Metal	AlTiNiAu
Assembly Site	PSI, Technologies, Manila, Philippines
Pins/Package	3/TO-220
Mold Compound	KTMC-1030NAP
Die Attach	Solder (>88% Pb)
Wire Bond	Aluminum
L/F Material	Copper
Marking	Laser
Termination Finish	Hot Dipped SnAgCu

**Qualification Tests:**

Stress Test/Conditions	QSS (1)	Standard	Method	SS/Accept
HTRB, 150 °C, 1000 h with bias	009-101	MIL STD 883	1015	129/1
85 °C/85 % RH, 50 V, 1000 h	009-102	JEDEC STD 22	A101	129/1
Temperature Cycle -65/+150 °C, 200cs	009-104	MIL STD 883	1010	129/1
Solder Heat	009-106	MIL STD 750	2031	22/0
Lead Pull	009-110	MIL STD 883	2004	22/0

Notes:

1. QSS Specifications are Bourns Internal Qualification Standards.

**Qualification Plan:**

	<b>Lot Number:</b>	<b>Lot 1</b>	<b>Lot 2</b>	<b>Lot 3</b>
	<b>Product Name:</b>	TIP135-S	TIPL760A-S	TIC225M-S
	<b>Product Technology:</b>	Transistor	Transistor	Thyristor
	<b>Die Name:</b>	SD135HQ	PL741HY	YS307HQ
<b>HTRB</b>		65/0	65/0	65/0
<b>85 °C/85 % RH</b>		65/0	65/0	65/0
<b>Temperature Cycle</b>		65/0	65/0	65/0
<b>Solder Heat</b>		12/0	12/0	12/0
<b>Lead Pull</b>		12/0	12/0	12/0

**Stress Test Completion Date:**

June 2006

## TO-220 Parts Sold

ATOM-A	BD244	BD650-S	BD901-S	BDW94-S	BF67	R3680-S	TIC225N	TIP127-S
ATOM-A-S	BD244A	BD651	BD902	BDX33	BF67-S	TIC106D	TIC225N-S	TIP130
BD239	BD244A-S	BD651-S	BD902-S	BDX33A	BU406	TIC106D-S	TIC226D	TIP130-S
BD239A	BD244B	BD652	BD903	BDX33A-S	BU406-S	TIC106M	TIC226D-S	TIP131
BDX34C-S	BD244B-S	BD652-S	BD903-S	BDX33B	BU446	TIC106M-S	TIC226M	TIP131-S
BD239A-S	BD244C	BD653	BD904	BDX33B-S	BU446-S	TIC106N	TIC226M-S	TIP132
BD239B	BD244C-S	BD653-S	BD904-S	BDX33D	BUT11	TIC106N-S	TIC226N	TIP132-S
BD239B-S	BD244-S	BD654	BDW23B	BDX33D-S	BUT11-S	TIC108D	TIC226N-S	TIP135
BD239C	BD539B	BD654-S	BDW23B-S	BDX33-S	BUT12	TIC108D-S	TIC236D	TIP135-S
BD239C-S	BD539B-S	BD655	BDW24C	BDX34	BUT12-S	TIC108M	TIC236D-S	TIP136
BD239-S	BD539C	BD655-S	BDW24C-S	BDX34A	BUX84	TIC108M-S	TIC236M	TIP136-S
BD240	BD539C-S	BD656	BDW53C	BDX34A-S	BUX84-S	TIC116D	TIC236M-S	TIP137
BD240A	BD540C	BD656-S	BDW53C-S	BDX34BS	BUX85	TIC116D-S	TIC236N	TIP137-S
BD240A-S	BD540C-S	BD657	BDW53D	BDX34BS-S	BUX85-S	TIC116M	TIC236N-S	TIP150
BD240B	BD543	BD657-S	BDW53D-S	BDX34D	IDM1J	TIC116M-S	TIC246D	TIP150-S
BD240B-S	BD543A	BD658	BDW54B	BDX34D-S	IDM1J-S	TIC116N	TIC246D-S	TIP151
BD240C	BD543A-S	BD658-S	BDW54B-S	BDX34-S	R3224T	TIC116N-S	TIC246M	TIP151-S
BD240C-S	BD543B	BD659	BDW64D	BDX35	R3224T-S	TIC126D	TIC246M-S	TIP152
BD240-S	BD543B-S	BD659-S	BDW64D-S	BDX35-S	R3439	TIC126D-S	TIC246N	TIP152-S
BD241	BD543C	BD660	BDW73C	BDX53	R3439-S	TIC126M	TIC246N-S	TIP29A
BD241A	BD543C-S	BD660-S	BDW73C-S	BDX53A	R3524S	TIC126M-S	TIP100	TIP29A-S
BD241A-S	BD543-S	BD743A	BDW73D	BDX53A-S	R3524S-S	TIC126N	TIP100-S	TIP29C
BD241B	BD544	BD743A-S	BDW73D-S	BDX53B	R3555	TIC126N-S	TIP110	TIP29C-S
BD241B-S	BD544A	BD743B	BDW74	BDX53B-S	R3555-S	TIC201D	TIP110-S	TIP30
BD241C	BD544A-S	BD743B-S	BDW74C	BDX53C	R3671	TIC201D-S	TIP111	TIP30A
BD241C-S	BD544B	BD743C	BDW74C-S	BDX53C-S	R3671-S	TIC201M	TIP111-S	TIP30A-S
BD241D	BD544B-S	BD743C-S	BDW74D	BDX53-S	R3672	TIC201M-S	TIP112	TIP30B
BD241D-S	BD544C	BD744A	BDW74D-S	BDX54	R3672-S	TIC206D	TIP112-S	TIP30B-S
BD241-S	BD544C-S	BD744A-S	BDW74-S	BDX54A	R3673	TIC206D-S	TIP115	TIP30C
BD242	BD544-S	BD744B	BDW75	BDX54A-S	R3673-S	TIC206M	TIP115-S	TIP30C-S
BD242A	BD545	BD744C	BDW75-S	BDX54B	R3674	TIC206M-S	TIP117	TIP30-S
BD242A-S	BD545-S	BD744C-S	BDW93	BDX54B-S	R3674-S	TIC206S	TIP117-S	TIP31
BD242B	BD645	BD897A	BDW93A	BDX54C	R3675	TIC206S-S	TIP120	TIP31A
BD242B-S	BD645-S	BD897A-S	BDW93B	BDX54C-S	R3675-S	TIC216D	TIP120-S	TIP31A-S
BD242C	BD646	BD898	BDW93B-S	BDX54-S	R3676	TIC216D-S	TIP121	TIP31C
BD242C-S	BD646-S	BD898-S	BDW93C	BDX55	R3676-S	TIC216M	TIP121-S	TIP31C-S
BD242-S	BD647	BD899	BDW93C-S	BDX55-S	R3677	TIC216M-S	TIP122	TIP31F
BD243	BD647-S	BD899A	BDW93-S	BF64	R3677-S	TIC216S	TIP122-S	TIP31F-S
BD243B	BD648	BD899A-S	BDW94	BF64-S	R3678	TIC216S-S	TIP125	TIP32A
BD243B-S	BD648-S	BD899-S	BDW94B	BF65	R3678-S	TIC225D	TIP125-S	TIP32A-S
BD243C	BD649	BD900	BDW94B-S	BF65-S	R3679	TIC225D-S	TIP126	TIP32C
BD243C-S	BD649-S	BD900-S	BDW94C	BF66	R3679-S	TIC225M	TIP126-S	TIP32C-S
BD243-S	BD650	BD901	BDW94C-S	BF66-S	R3680	TIC225M-S	TIP127	TIP41

### TO-220 Parts Sold (Continued)

TIP41A	TIP42C	TIP49-S	TIP54-S	TIPL760-S	TIPL810-S	TISP2180	TISP4082	Y1133
TIP41A-S	TIP42C-S	TIP50	TIP6080	TIPL770	TIPL830	TISP2180-S	TISP4082-S	Y1133-3827
TIP41B	TIP42-S	TIP50-S	TIP6080-S	TIPL770-S	TIPL830-S	TISP2290	TISP4180	Y1133-
TIP41B-S	TIP43	TIP51	TIPL760	TIPL790	TIPP31A	TISP2290-S	TISP4180-S	3827-S
TIP41C	TIP43-S	TIP51-S	TIPL760A	TIPL790A	TISP1082	TISP3082	TISP4290	Y1133-S
TIP41C-S	TIP47	TIP52	TIPL760A-S	TIPL790A-S	TISP1082-S	TISP3082-S	TISP4290-S	Y1171
TIP41-S	TIP47-S	TIP52-S	TIPL760B	TIPL790-S	TISP1083	TISP3180	Y1031	Y1171-S
TIP42	TIP48	TIP53	TIPL760B-S	TIPL791A	TISP1083-S	TISP3180-S	Y1031-S	
TIP42A	TIP48-S	TIP53-S	TIPL760C	TIPL791A-S	TISP2082	TISP3290	Y1112	
TIP42A-S	TIP49	TIP54	TIPL760C-S	TIPL810	TISP2082-S	TISP3290-S	Y1112-S	