



### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Voltage

40~200 V

Current

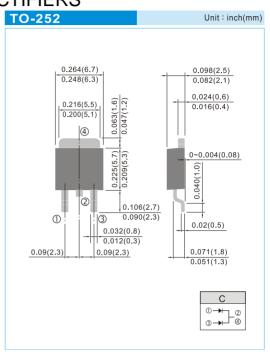
10 A

#### **Features**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O.
- For through hole applications
- Low power loss, High efficiency
- High surge capacity
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std..(Halogen Free)

#### Mechanical Data

- Case: TO-252 Molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marking
- Standard packaging: 16mm tape (EIA-481)
- Approx. Weight: 0.0104 ounces, 0.297 grams
- Marking: Part number



## Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

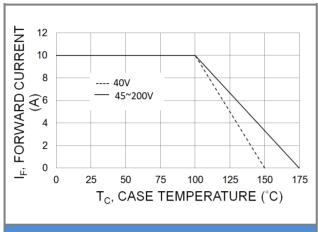
PARAMETER		SYMBOL	BD1040CS	BD1045CS	BD1050CS	BD1060CS	BD1080CS	BD1090CS	BD10100CS	BD10150CS	BD10200CS	UNIT
Maximum repetitive peak reverse voltage		$V_{RRM}$	40	45	50	60	80	90	100	150	200	V
Maximum rms voltage		$V_{RMS}$	28	31.5	35	42	56	63	70	105	140	V
Maximum dc blocking voltage		$V_R$	40	45	50	60	80	90	100	150	200	V
Maximum average forward rectified current		I <sub>F(AV)</sub>	10								А	
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load		I <sub>FSM</sub>	100							А		
Maximum forward voltage at 5A per diode		$V_{F}$	0.7 0.75 0.8 0.9			.9	V					
Maximum dc reverse current at	T <sub>J</sub> =25 °C		0.05									mA
rated dc blocking voltage	T <sub>J</sub> =100 °C	I <sub>R</sub>	I <sub>R</sub>				20					
Typical thermal resistance		R <sub>⊚JC</sub>	3							°C/W		
Operating junction and storage temperature range		$T_J, T_STG$	-55 to +150 -65 to +175							°C		

Note: Both Bonding and Chip structure are available.





#### **TYPICAL CHARACTERISTIC CURVES**



**Fig.1 Forward Current Derating Curve** 

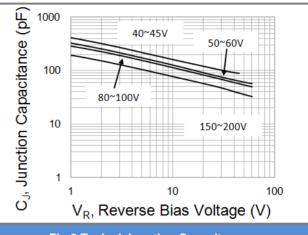


Fig.2 Typical Junction Capacitance

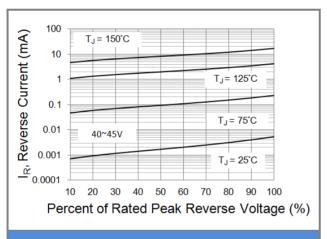
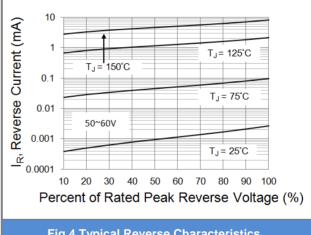


Fig.3 Typical Reverse Characteristics



**Fig.4 Typical Reverse Characteristics** 

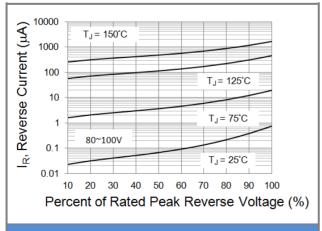
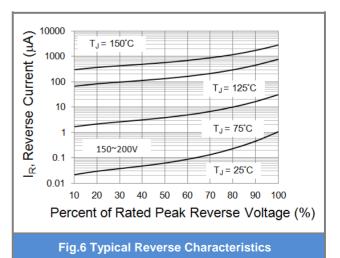
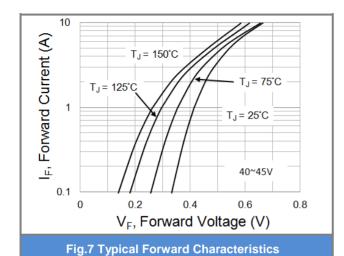


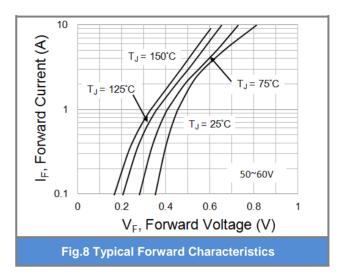
Fig.5 Typical Reverse Characteristics

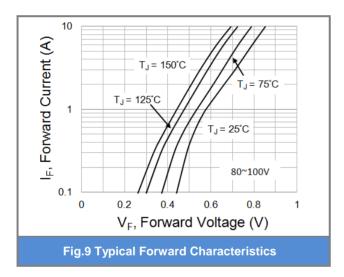


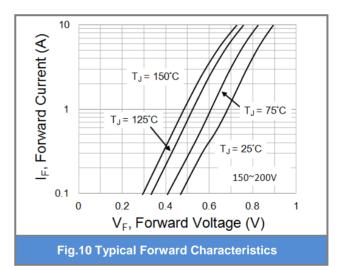


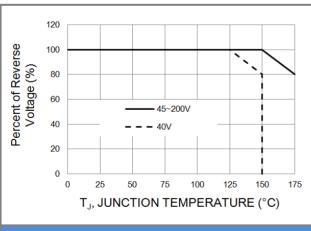










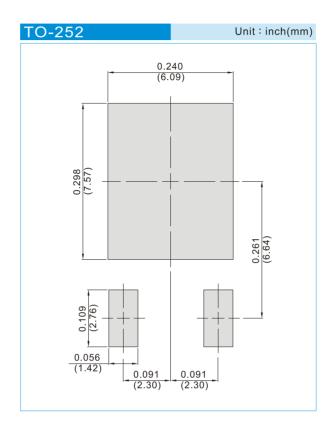


**Fig.11 Operating Temperature Derating Curve** 





### **MOUNTING PAD LAYOUT**



### ORDER INFORMATION

Packing information
 T/R – 3K per 13" plastic Reel

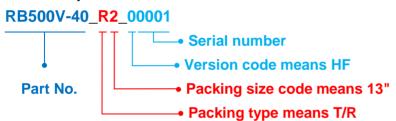




Part No\_packing code\_Version

BD1040CS\_L2\_00001 BD1040CS\_S2\_00001

### For example:



Packing Code XX					Version Code XXXXX				
Packing type	1 <sup>st</sup> Code	Packing size code		HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code			
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number			
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number			
Bulk Packing (B/P)	В	13"	2						
Tube Packing (T/P)	Т	26mm	X						
Tape and Reel (Right Oriented) (TRR)	Ø	52mm	Y						
Tape and Reel (Left Oriented) (TRL)	٦	PANASERT T/B CATHODE UP (PBCU)	U						
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D						





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