

# BD1040CS~BD10200CS

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**Voltage**

**40~200 V**

**Current**

**10 A**

**TO-252**

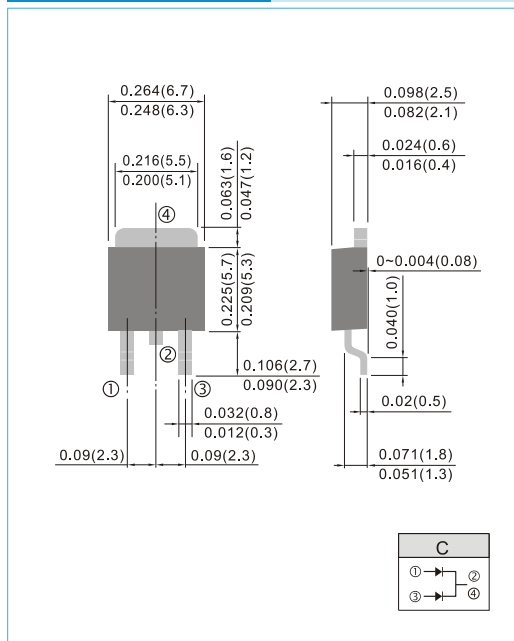
Unit : inch(mm)

### 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 ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

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

Note: Both Bonding and Chip structure are available.

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## TYPICAL CHARACTERISTIC CURVES

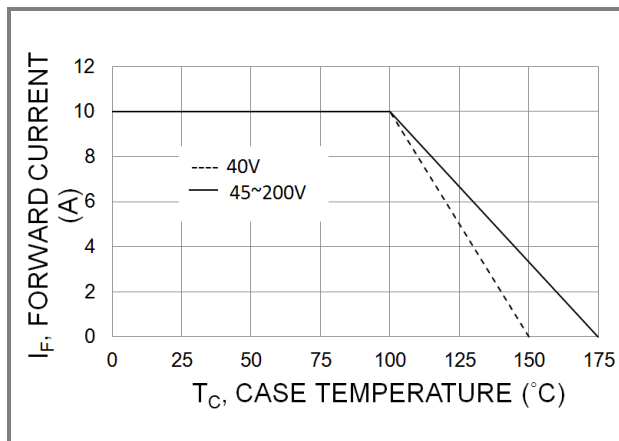


Fig.1 Forward Current Derating Curve

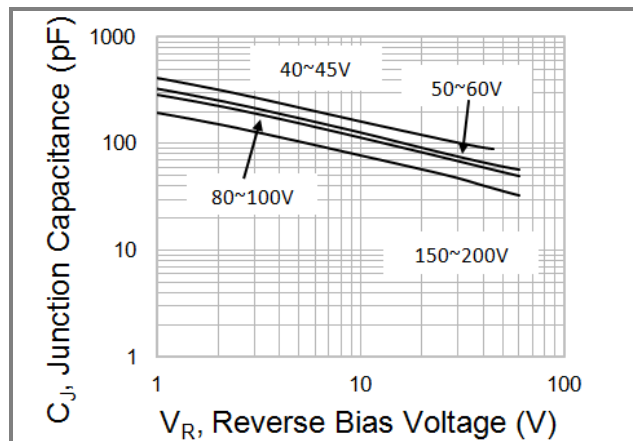


Fig.2 Typical Junction Capacitance

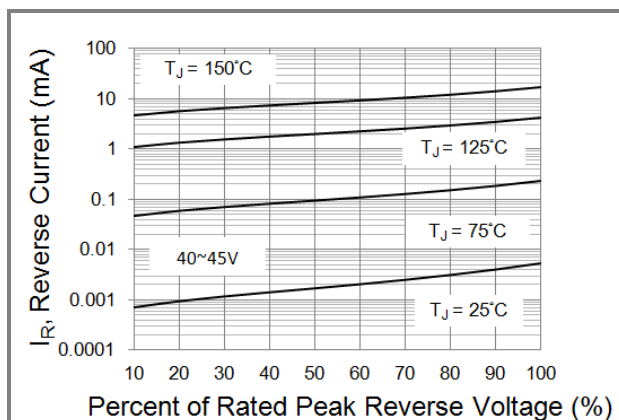


Fig.3 Typical Reverse Characteristics

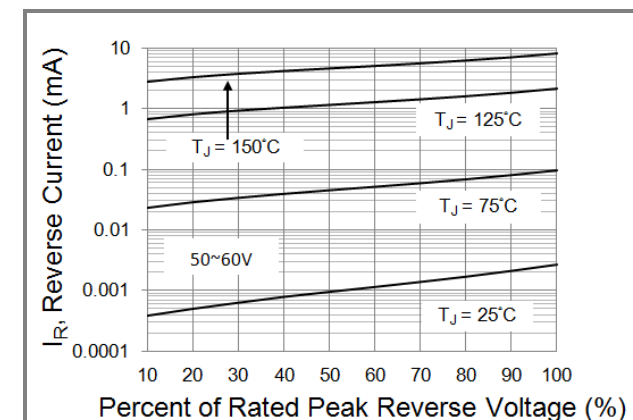


Fig.4 Typical Reverse Characteristics

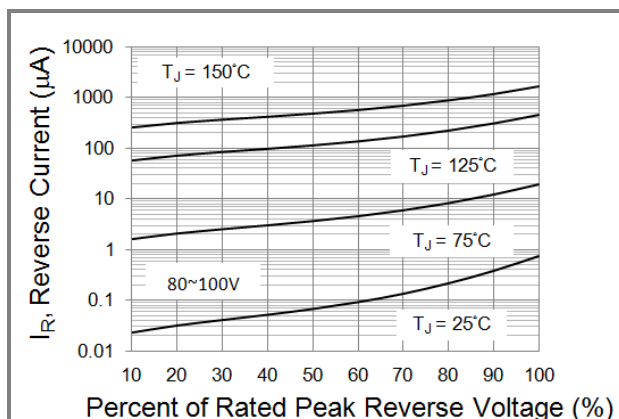


Fig.5 Typical Reverse Characteristics

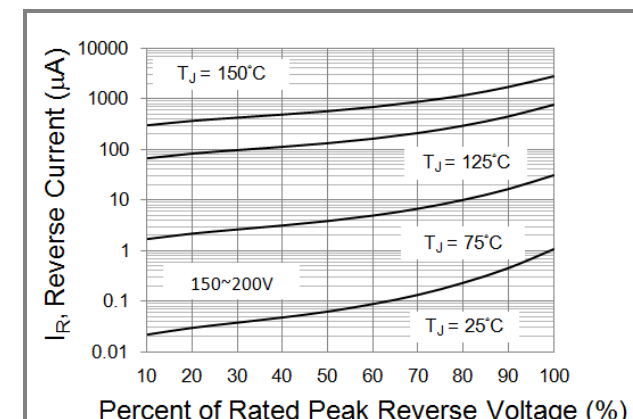


Fig.6 Typical Reverse Characteristics

## BD1040CS~BD10200CS

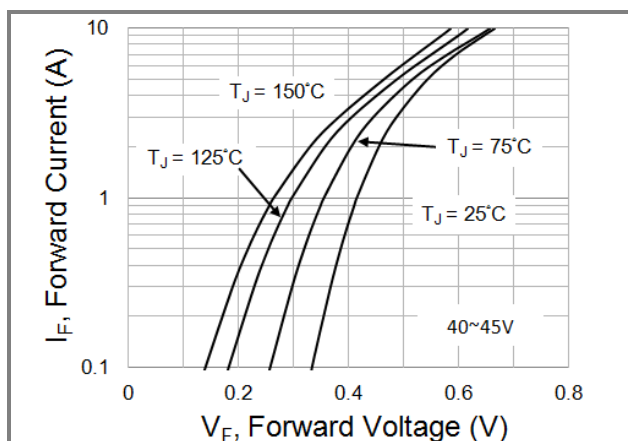


Fig.7 Typical Forward Characteristics

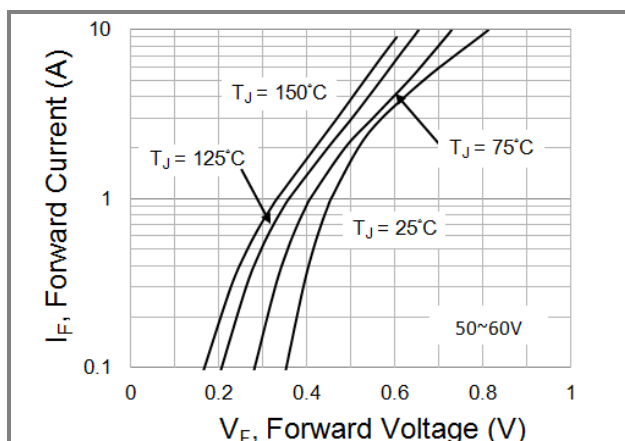


Fig.8 Typical Forward Characteristics

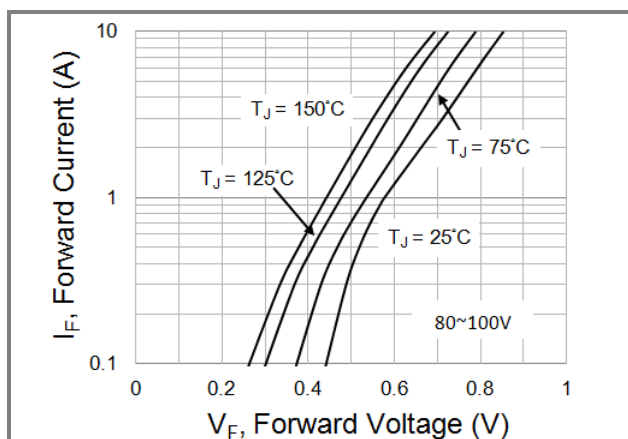


Fig.9 Typical Forward Characteristics

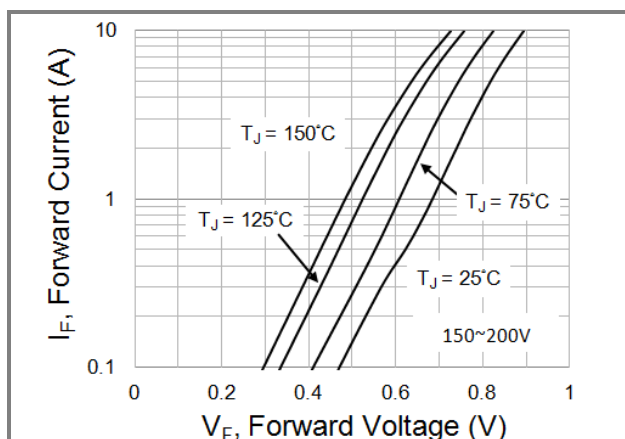


Fig.10 Typical Forward Characteristics

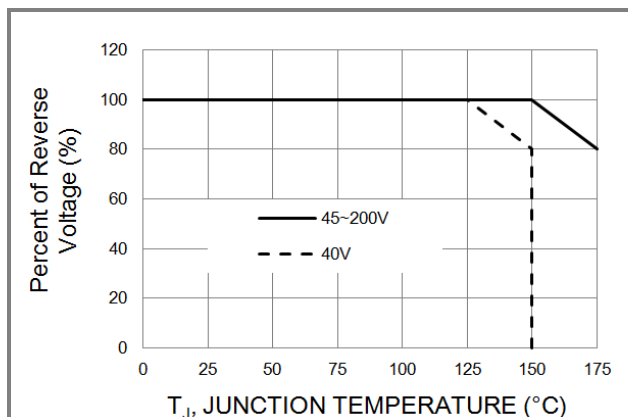
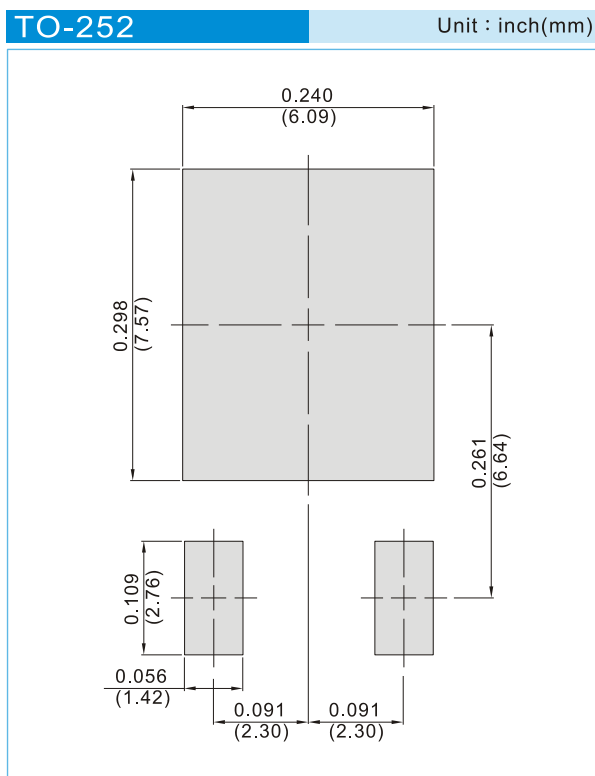


Fig.11 Operating Temperature Derating Curve

## BD1040CS~BD10200CS

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

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

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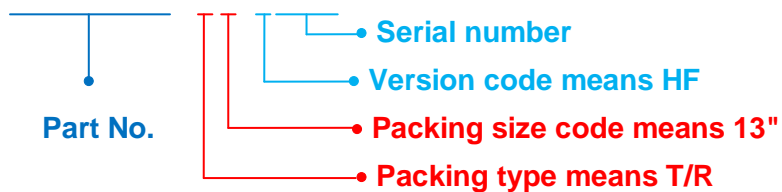
Part No\_packing code\_Version

BD1040CS\_L2\_00001

BD1040CS\_S2\_00001

For example :

RB500V-40\_R2\_00001



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> 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)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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