

# BD1040CS~BD10200CS

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**Voltage**

**40~200 V**

**Current**

**10 A**

**TO-252**

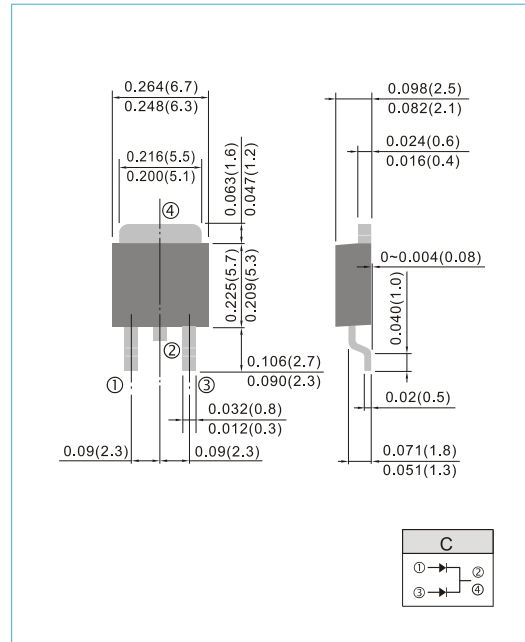
Unit : inch(mm)

### 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)

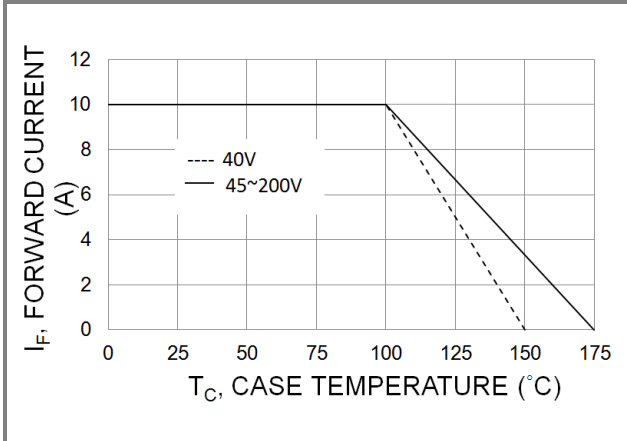
PARAMETER	SYMBOL	BD1040CS	BD1045CS	BD1050CS	BD1060CS	BD1080CS	BD1090CS	BD10100CS	BD10150CS	BD10200CS	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	45	50	60	80	90	100	150	200	V
Maximum rms voltage	$V_{RMS}$	28	31.5	35	42	56	63	70	105	140	V
Maximum dc blocking voltage	$V_R$	40	45	50	60	80	90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

Note: Both Bonding and Chip structure are available.

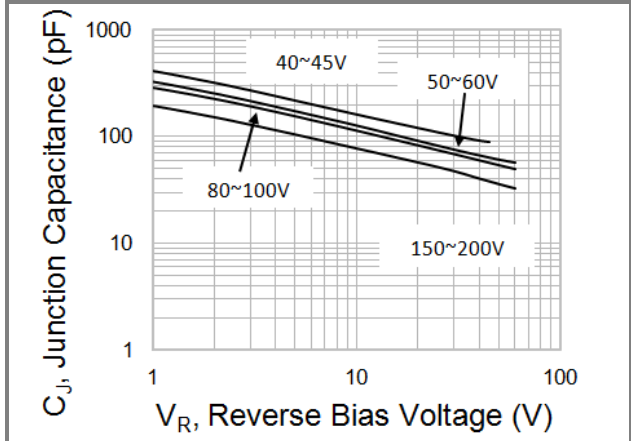


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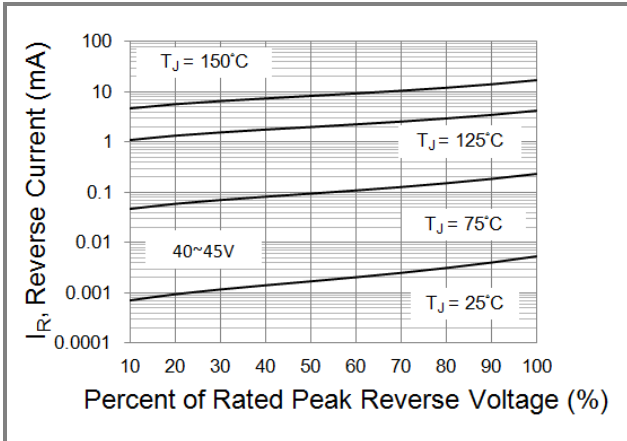
## TYPICAL CHARACTERISTIC CURVES



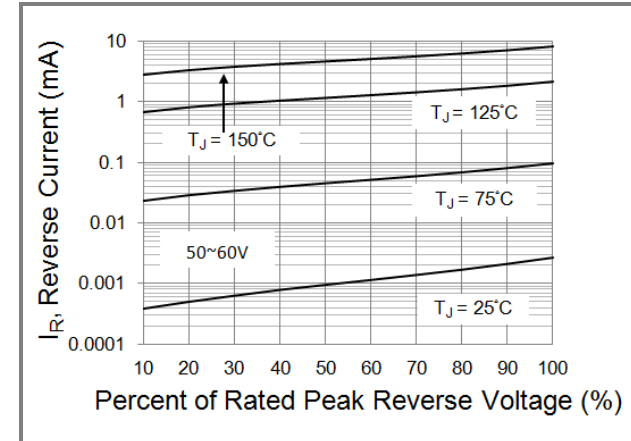
**Fig.1 Forward Current Derating Curve**



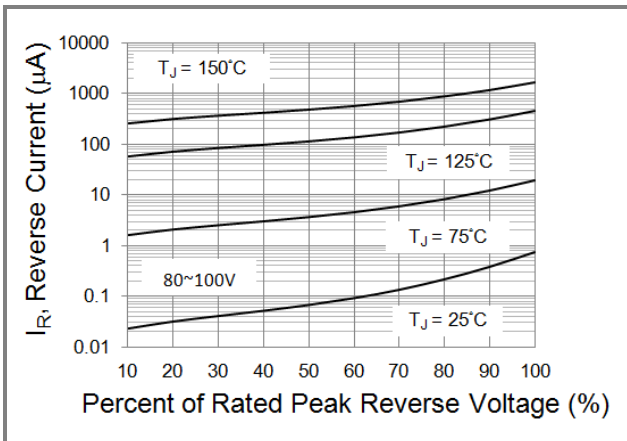
**Fig.2 Typical Junction Capacitance**



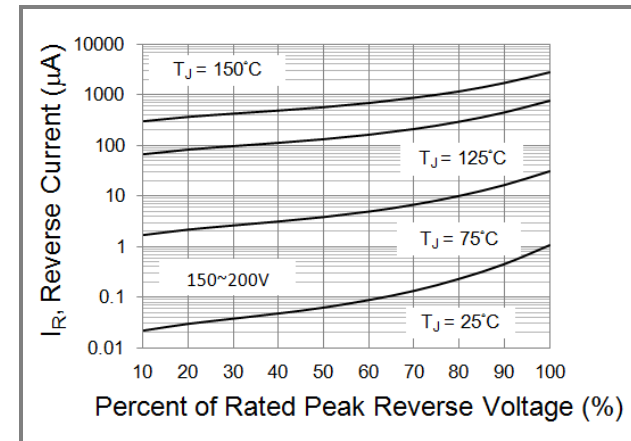
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Reverse Characteristics**



**Fig.6 Typical Reverse Characteristics**



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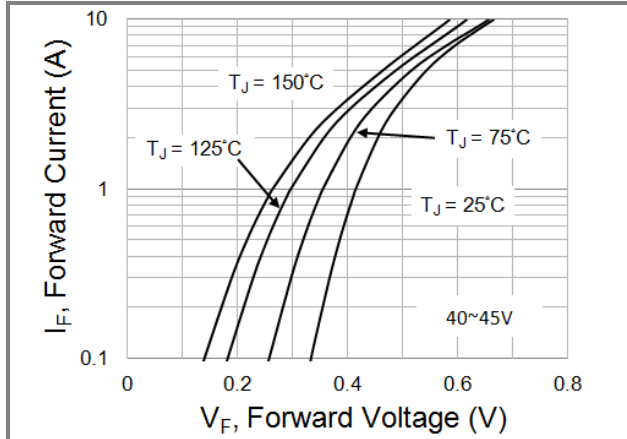


Fig.7 Typical Forward Characteristics

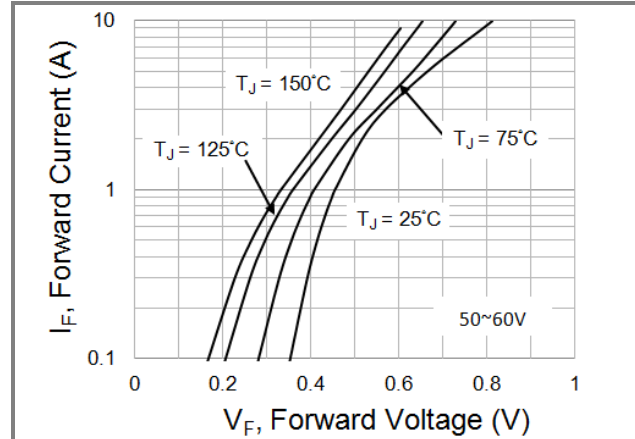


Fig.8 Typical Forward Characteristics

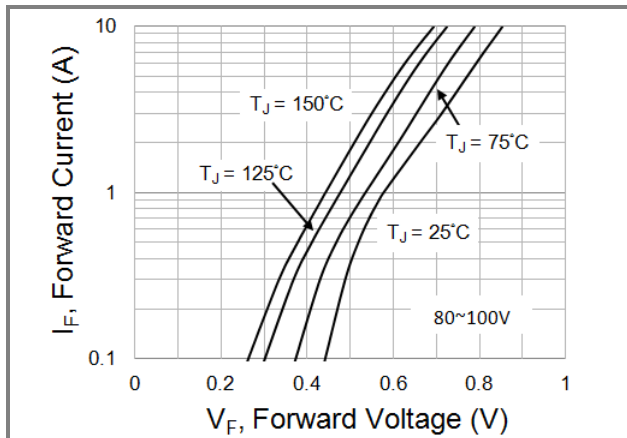


Fig.9 Typical Forward Characteristics

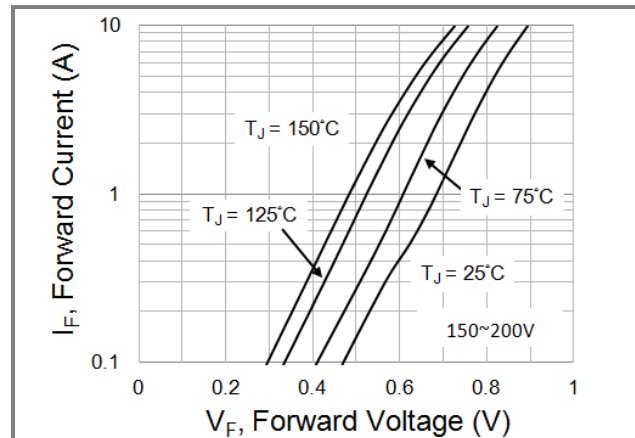


Fig.10 Typical Forward Characteristics

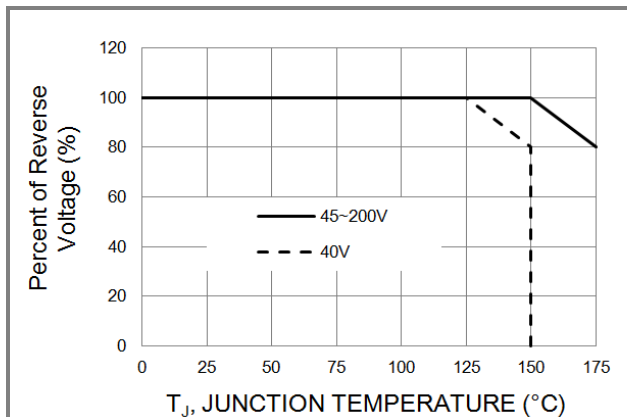
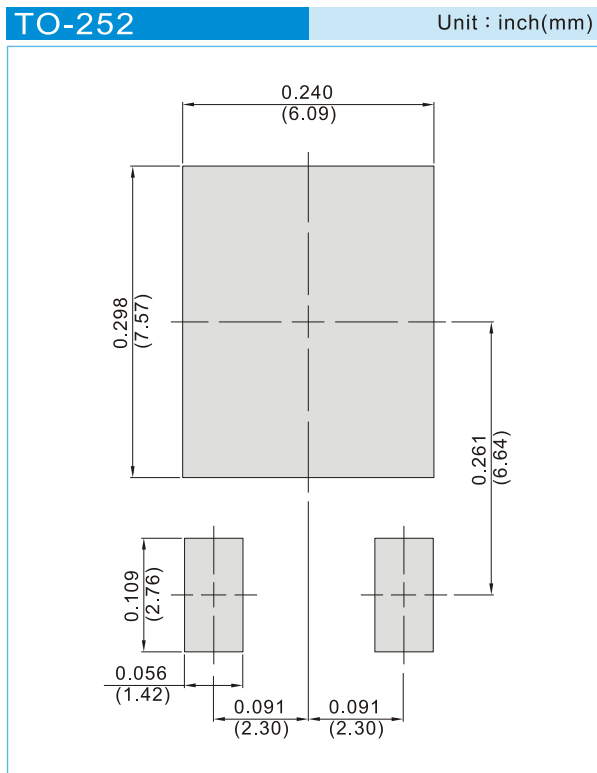


Fig.11 Operating Temperature Derating Curve



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



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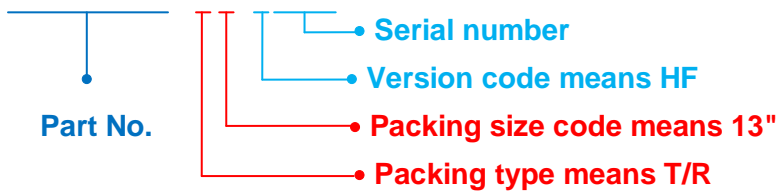
### Part No\_packing code\_Version

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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