



# BD1040CS~BD10200CS

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**Voltage**

**40~200 V**

**Current**

**10 A**

**TO-252**

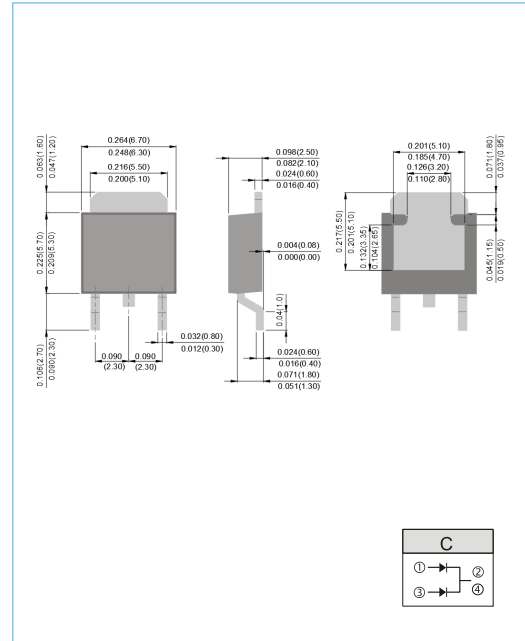
Unit : inch(mm)

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- 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 2.0
- Green molding compound as per IEC 61249 standard

### 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 : 0.297 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	$I_R$	$T_J=25^{\circ}\text{C}$				0.05				$T_J=100^{\circ}\text{C}$		mA
Typical thermal resistance	$R_{\theta JC}$	3									$^{\circ}\text{C/W}$	
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

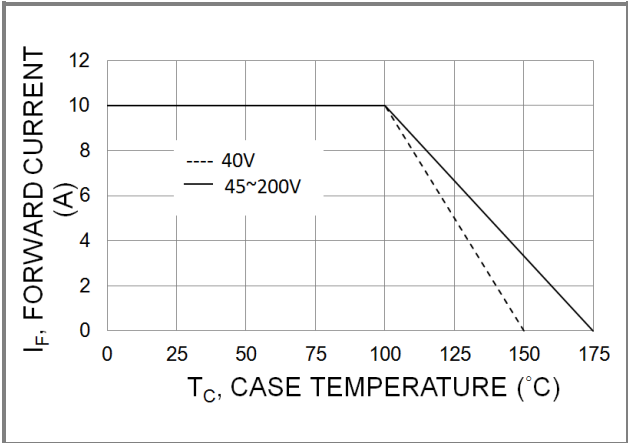


Fig.1 Forward Current Derating Curve

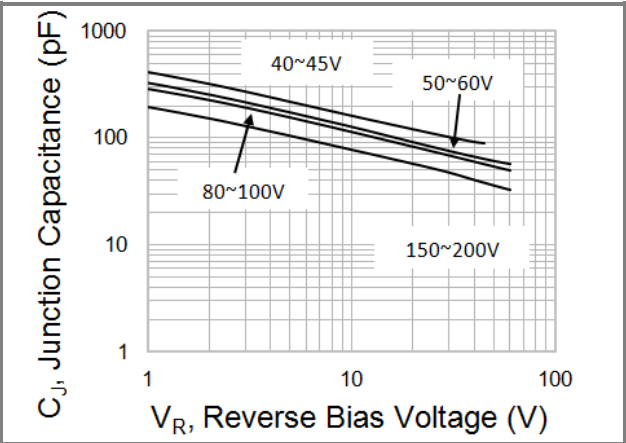


Fig.2 Typical Junction Capacitance

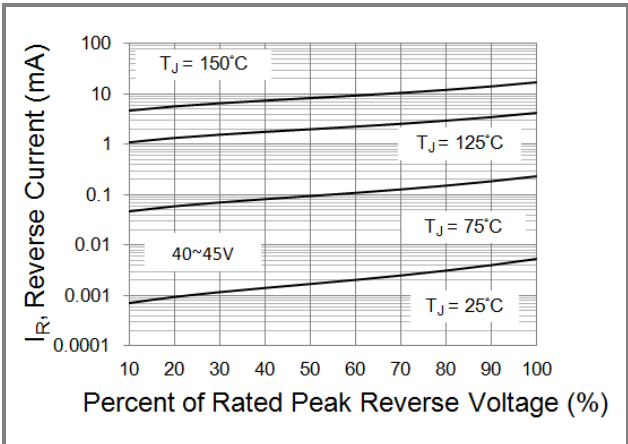


Fig.3 Typical Reverse Characteristics

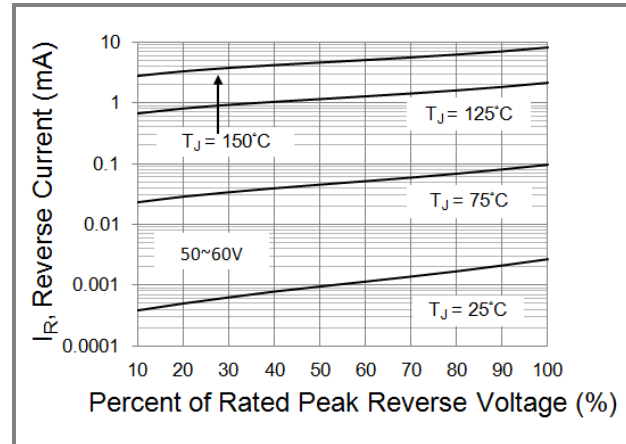


Fig.4 Typical Reverse Characteristics

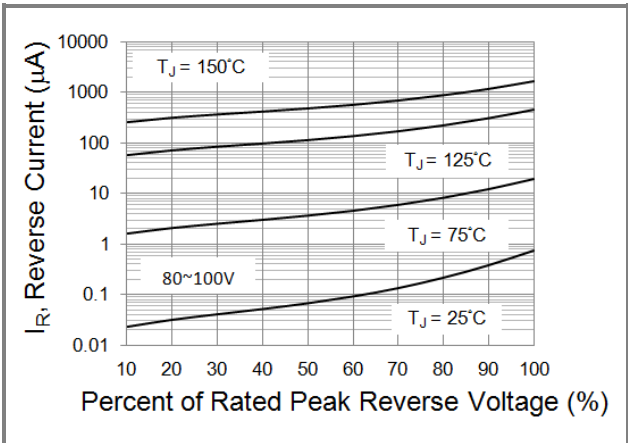


Fig.5 Typical Reverse Characteristics

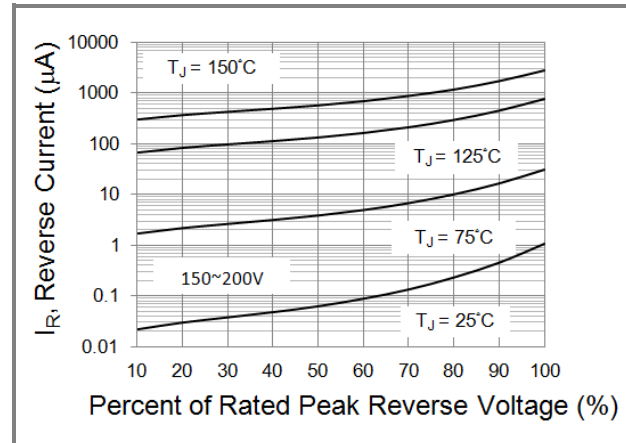


Fig.6 Typical Reverse Characteristics



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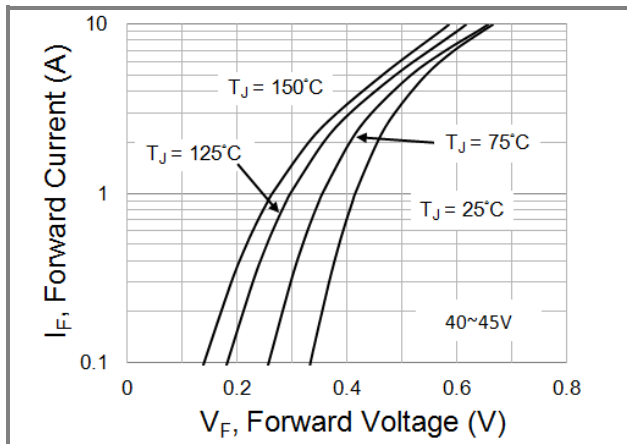


Fig.7 Typical Forward Characteristics

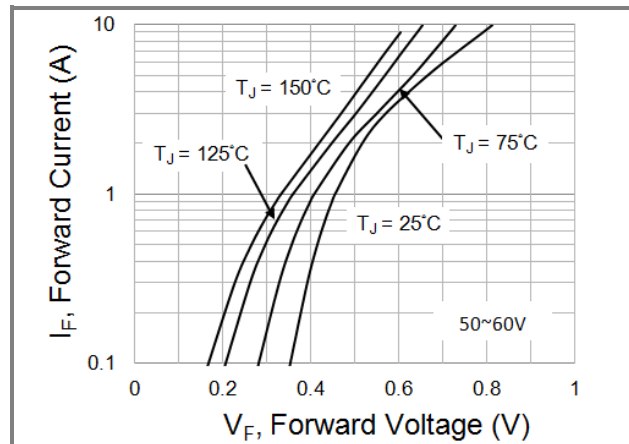


Fig.8 Typical Forward Characteristics

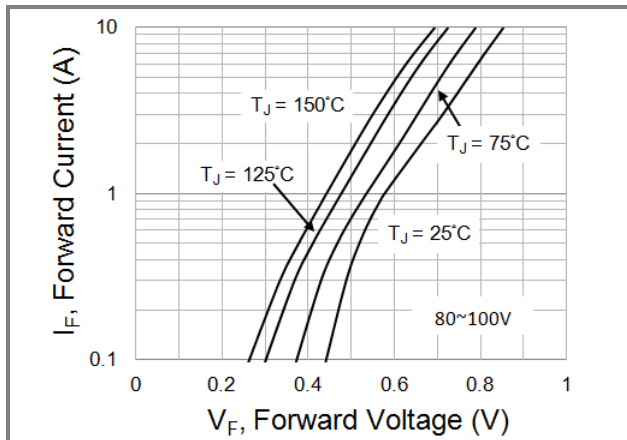


Fig.9 Typical Forward Characteristics

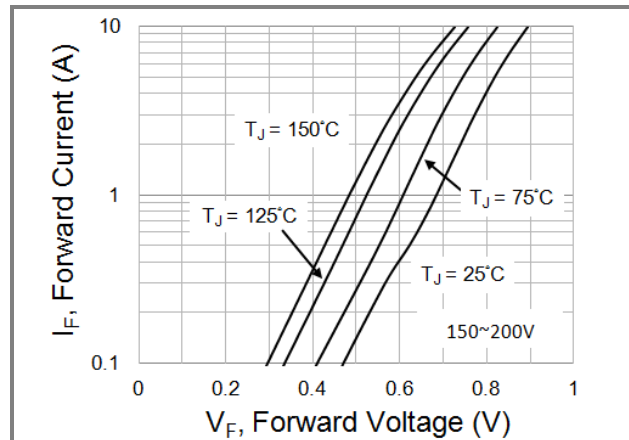


Fig.10 Typical Forward Characteristics

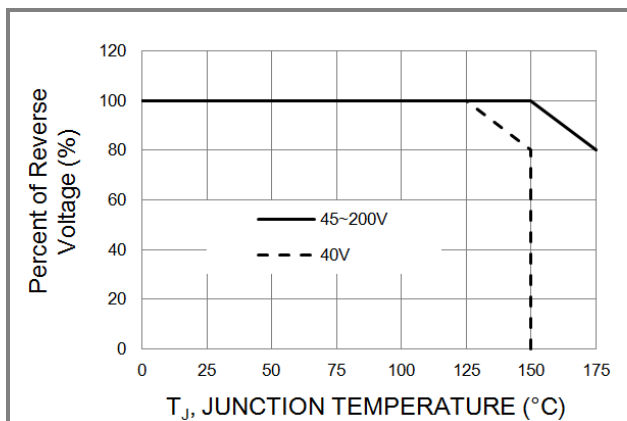
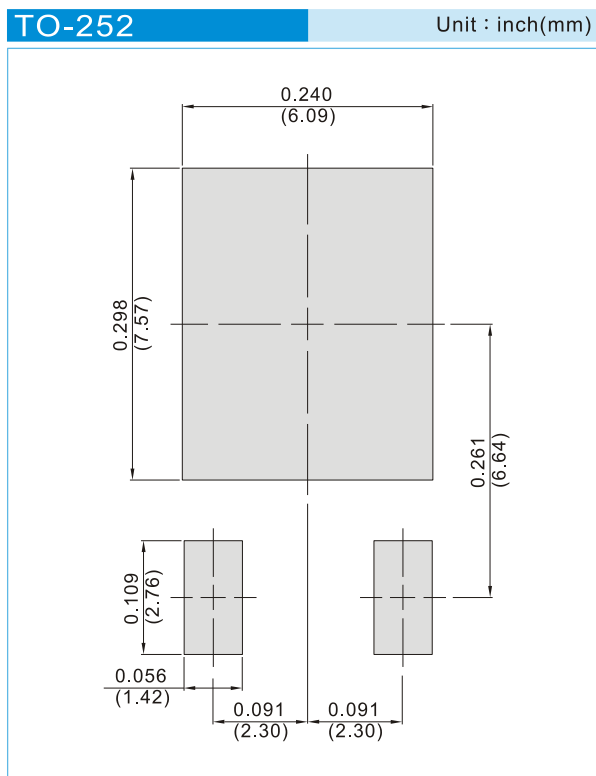


Fig.11 Operating Temperature Derating Curve



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



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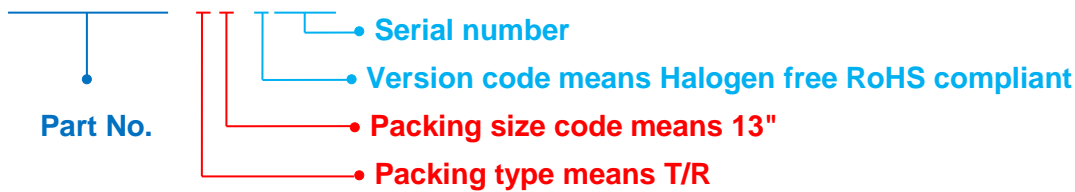
**Part No.\_packing code\_Version**

BD1040CS\_L2\_00001

BD1040CS\_S2\_00001

**For example :**

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>X</b>		Serial number <b>XXXX</b>
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HSF Level	1 <sup>st</sup> Code	2 <sup>nd</sup> _5 <sup>th</sup> Code
Tape and Ammunition Box(T/B)	<b>A</b>	N/A	<b>0</b>	Halogen free RoHS compliant	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	RoHS compliant	<b>1</b>	serial number
Bulk Packing(B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing(T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP(PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN(PBCD)	<b>D</b>			



## **BD1040CS~BD10200CS**

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