



# BD1040CS~BD10200CS

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**Voltage**

**40~200 V**

**Current**

**10 A**

**TO-252**

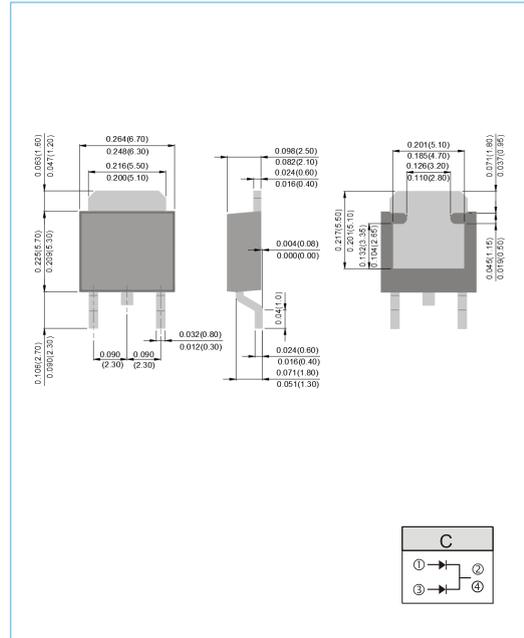
Unit : inch(mm)

### 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	$T_J=25^{\circ}\text{C}$	0.05									mA	
	$T_J=100^{\circ}\text{C}$	20										
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.



# BD1040CS~BD10200CS

## TYPICAL CHARACTERISTIC CURVES

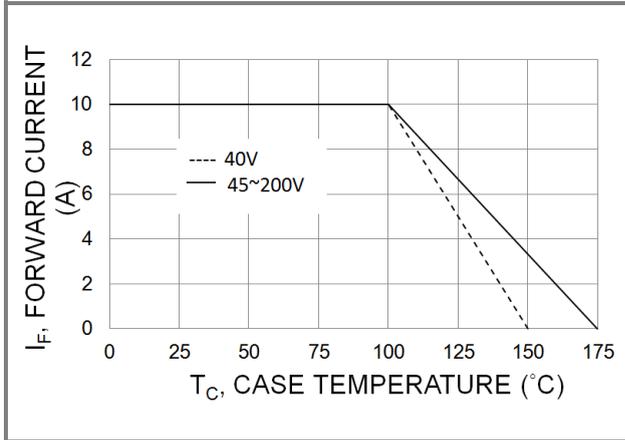


Fig.1 Forward Current Derating Curve

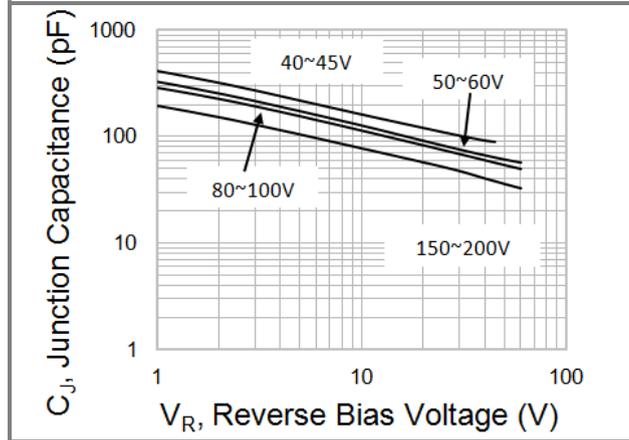


Fig.2 Typical Junction Capacitance

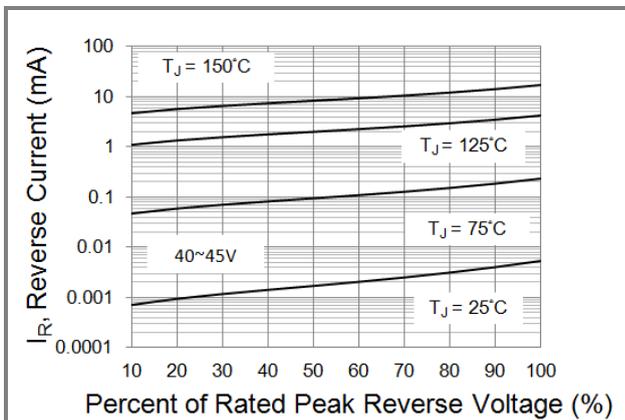


Fig.3 Typical Reverse Characteristics

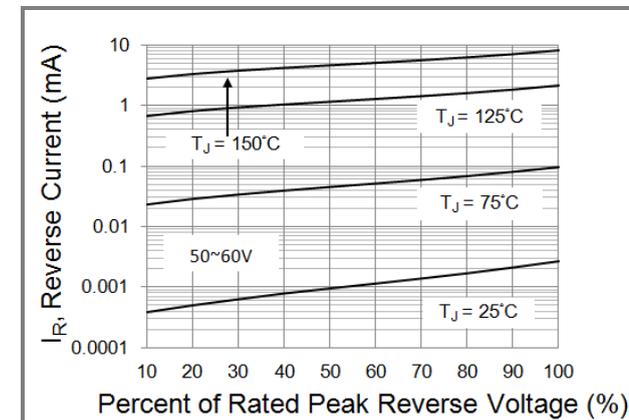


Fig.4 Typical Reverse Characteristics

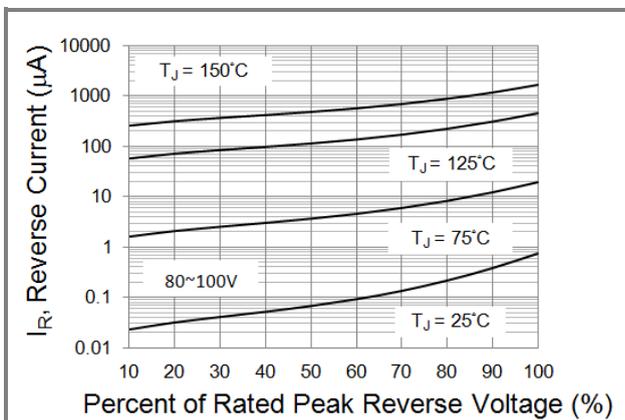


Fig.5 Typical Reverse Characteristics

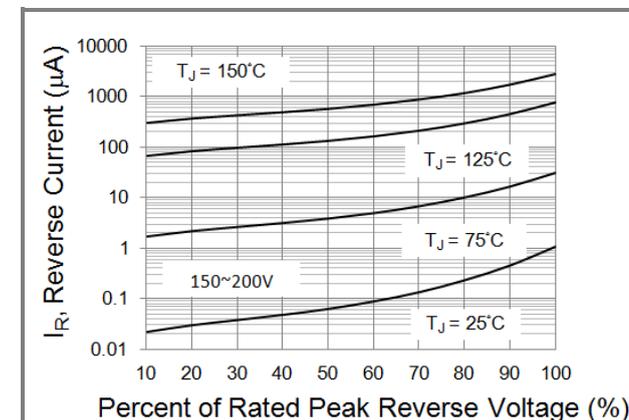


Fig.6 Typical Reverse Characteristics



# BD1040CS~BD10200CS

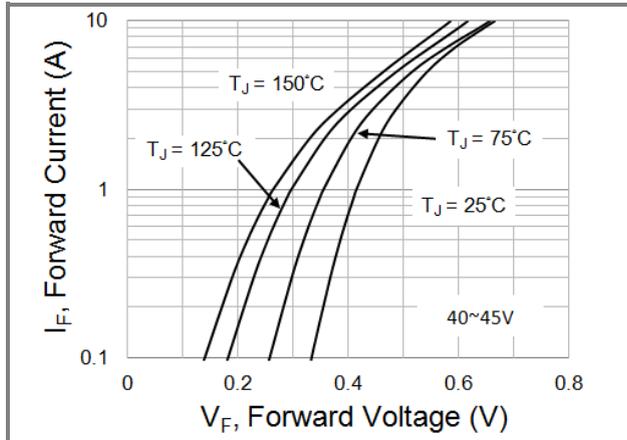


Fig.7 Typical Forward Characteristics

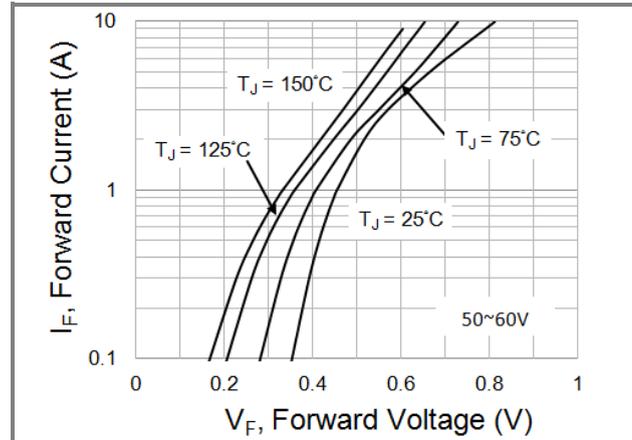


Fig.8 Typical Forward Characteristics

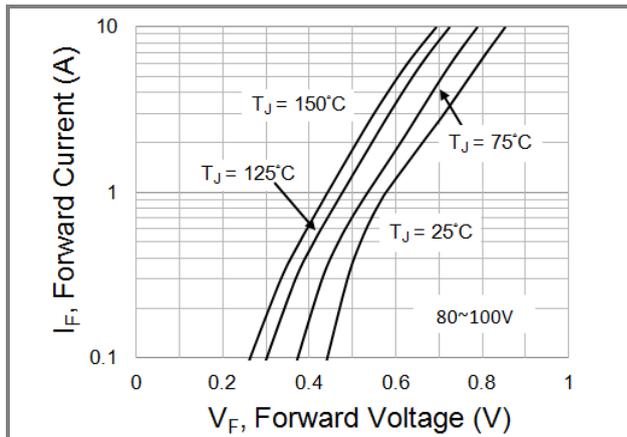


Fig.9 Typical Forward Characteristics

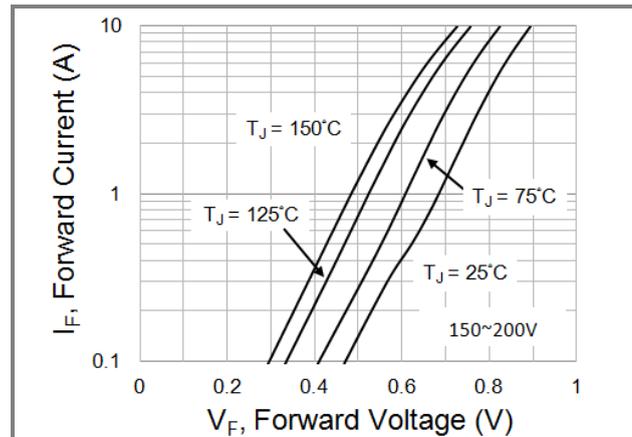


Fig.10 Typical Forward Characteristics

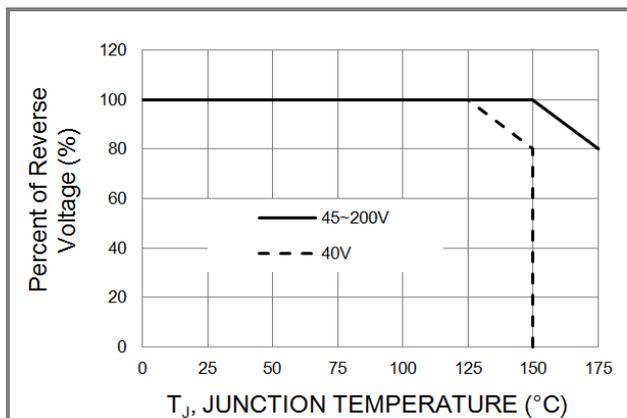
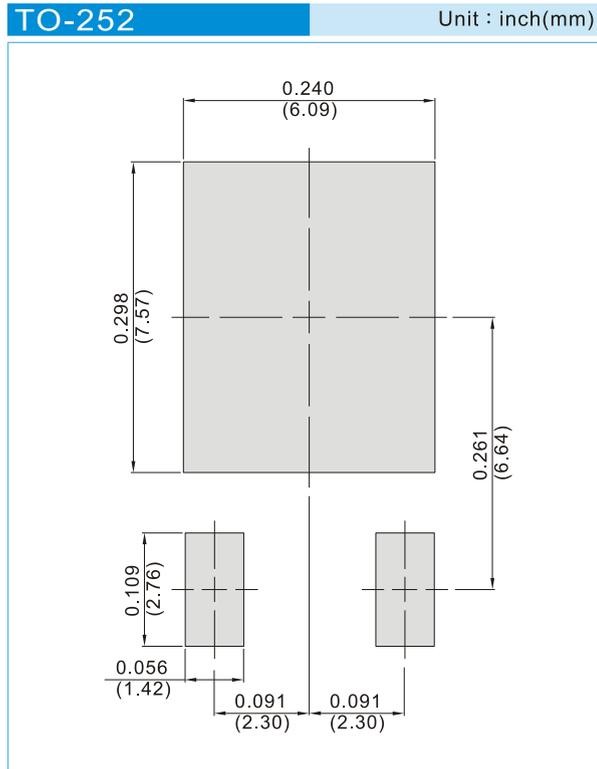


Fig.11 Operating Temperature Derating Curve



# BD1040CS~BD10200CS

## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



# BD1040CS~BD10200CS

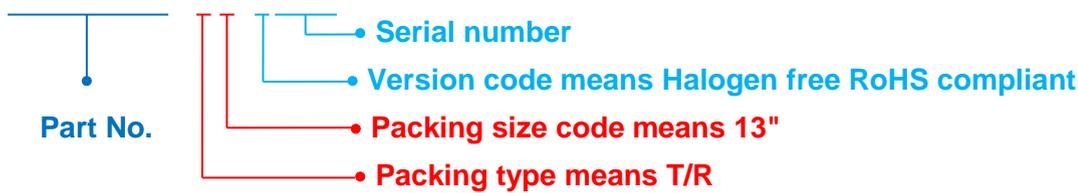
**Part No.\_packing code\_Version**

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**

### **Disclaimer**

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.