

# B250-B260(LS)

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**REVERSE VOLTAGE** – 50 to 60 Volts  
**FORWARD CURRENT** – 2.0 Amperes

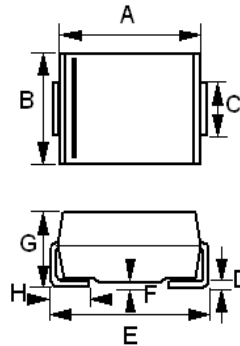
### FEATURES

- For surface mounted application
- Metal-semiconductor junction with guard ring
- Epitaxial construction
- Very low forward voltage drop
- High current capability
- Qualified according to AEC-Q101 Rec\_C
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection application
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

### MECHANICAL DATA

- Case: Molded plastic
- Case Material: Molding compound, UL Flammability classification 94V-0, "Halogen-free".
- Polarity: Color band denotes cathode
- Weight: 0.093 grams

### SMB



SMB		
DIM.	MIN.	MAX.
A	4.06	4.57
B	3.30	3.94
C	1.96	2.21
D	0.15	0.31
E	5.21	5.59
F	0.05	0.20
G	2.01	2.50
H	0.76	1.52

All Dimensions in millimeter

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	B250	B260	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	60	V
Maximum RMS Voltage	$V_{RMS}$	35	42	V
Maximum DC Blocking Voltage	VDC	50	60	V
Maximum Average Forward Rectified Current @ $T_L=130^{\circ}C$	$I_{AV}$	2.0		A
Peak Forward Surge 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	50		A
Maximum Forward Voltage at 2.0A DC	$V_F$	0.7		V
Maximum DC Reverse Current @ $T_j=25^{\circ}C$ at Rated DC Blocking Voltage @ $T_j=100^{\circ}C$	$I_R$	0.05 15		mA
Typical Junction Capacitance (Note 4)	$C_T$	100		pF
Typical Thermal Resistance (Note 5)	$R_{\theta JL}$	15		$^{\circ}C/W$
Operating Junction Temperature Range	$T_j$	-55 to +150		$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 to +150		$^{\circ}C$

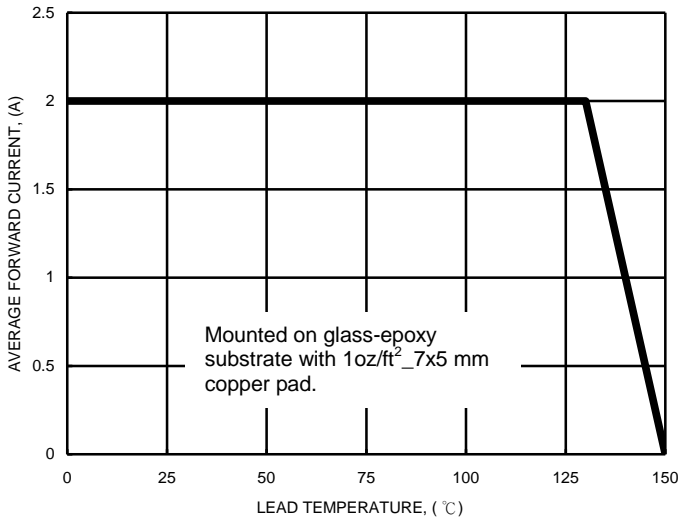
Note :

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
5. Thermal Resistance Junction to Lead

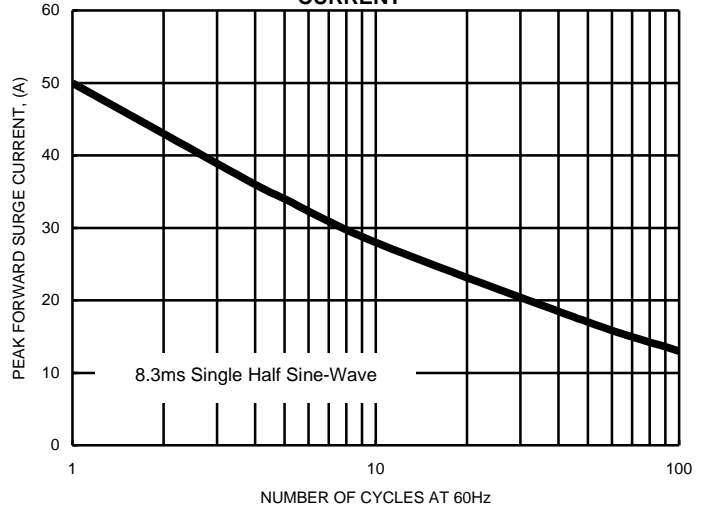
REV.-7, Oct-2021, KSHB18

**RATING AND CHARACTERISTIC CURVES**  
**B250-B260(LS)**

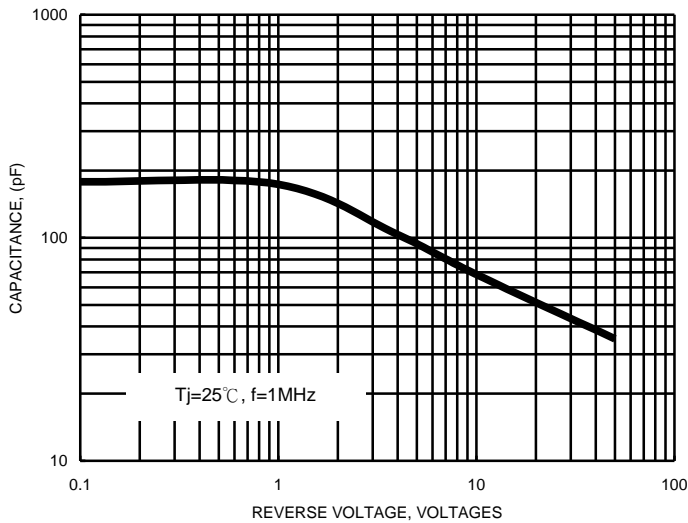
**FIG.1- FORWARD CURRENT DERATING CURVE**



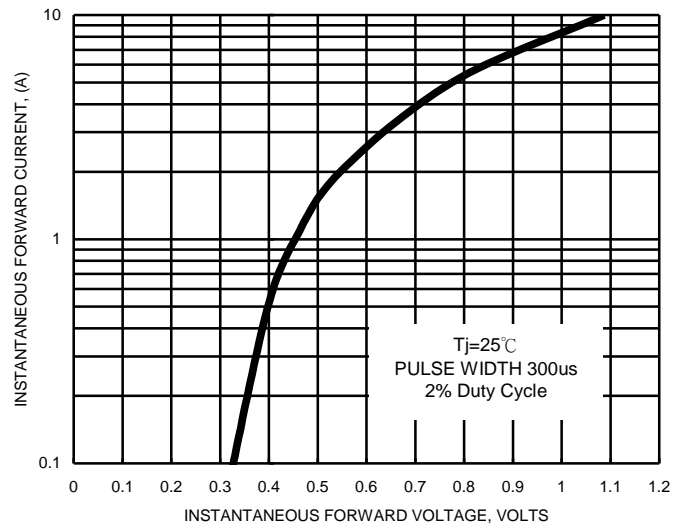
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



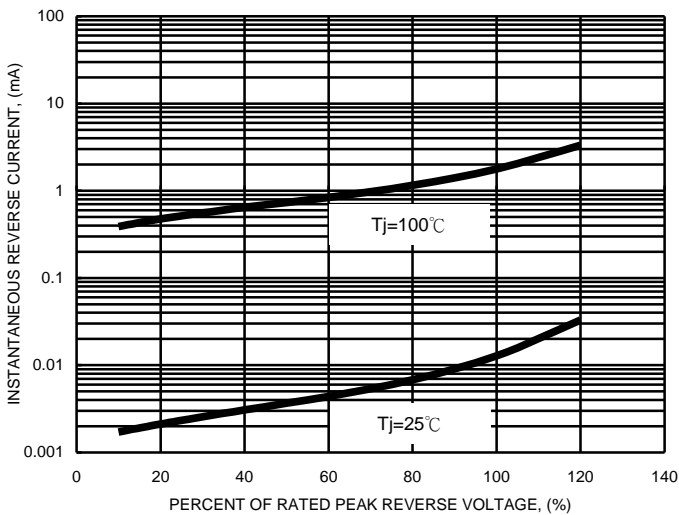
**FIG.3- TYPICAL JUNCTION CAPACITANCE**



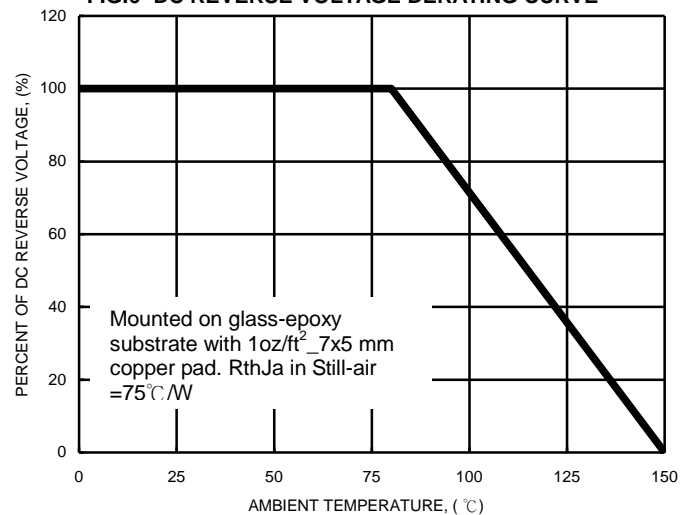
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



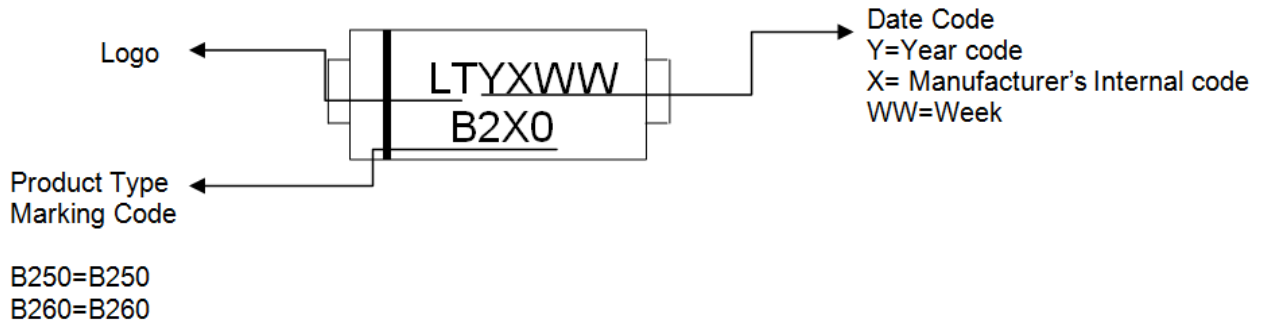
**FIG.6- DC REVERSE VOLTAGE DERATING CURVE**



### Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
B250	SMB	3000	Tape & Reel
B260	SMB	3000	Tape & Reel

### Marking Information:



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