



# SB1020DC~SB1060DC

## SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 60 Volt **CURRENT** 10 Ampere

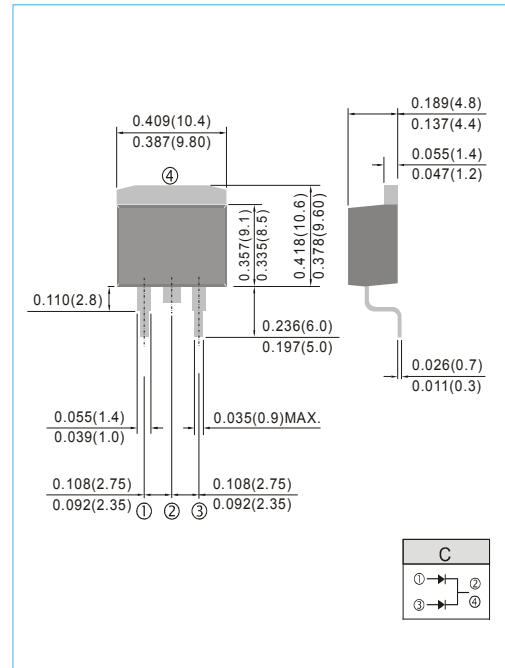
**TO-263 / D<sup>2</sup>PAK** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- 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-263 Molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.049 ounces, 1.38 grams.



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

PARAMETER	SYMBOL	SB1020DC	SB1030DC	SB1040DC	SB1045DC	SB1050DC	SB1060DC	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	45	50	60	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	31.5	35	42	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	45	50	60	V
Maximum Average Forward Current $T_C = 75^\circ C$	$I_{F(AV)}$	10						A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150						A
Maximum Forward Voltage at 5A,	$V_F$	0.55				0.75		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J = 25^\circ C$ $T_J = 100^\circ C$	$I_R$	0.2 50			0.1 50			mA
Typical Thermal Resistance	$R_{\theta JC}$	3.0						$^\circ C / W$
Operating Junction Temperature Range	$T_J$	-55 to +125			-55 to +150			$^\circ C$
Storage Temperature Range	$T_{STG}$	-55 to +150						$^\circ C$

Note.

Both Bonding and Chip structure are available.



# SB1020DC~SB1060DC

## RATING AND CHARACTERISTIC CURVES

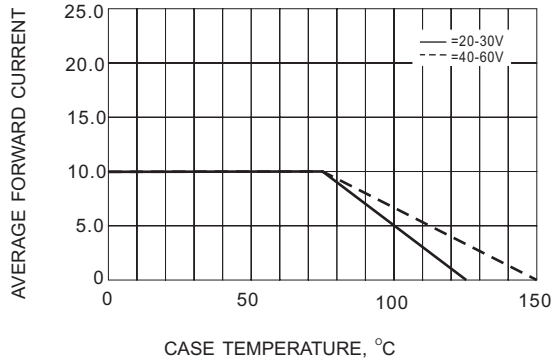


Fig.1 FORWARD CURRENT DERATING CURVE

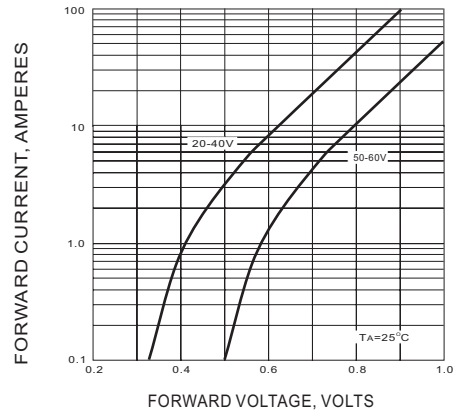


Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

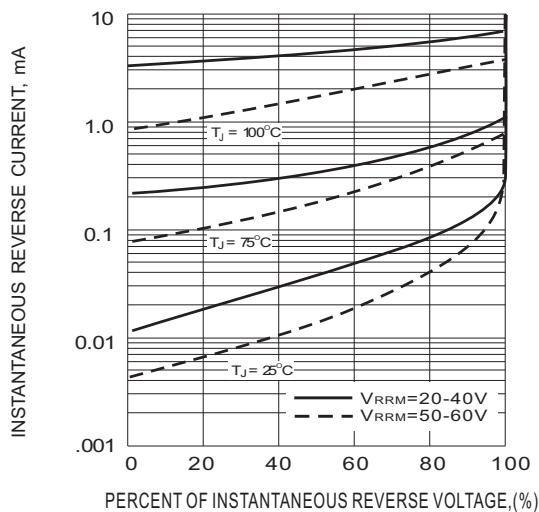


Fig.3 TYPICAL REVERSE CHARACTERISTIC

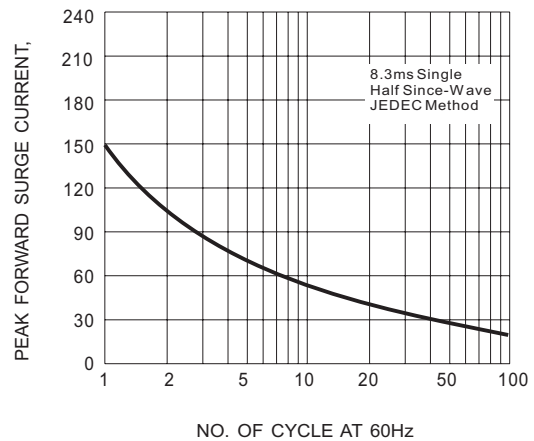


Fig.4 MAXIMUM NON-REPETITIVE SURGE CURRENT

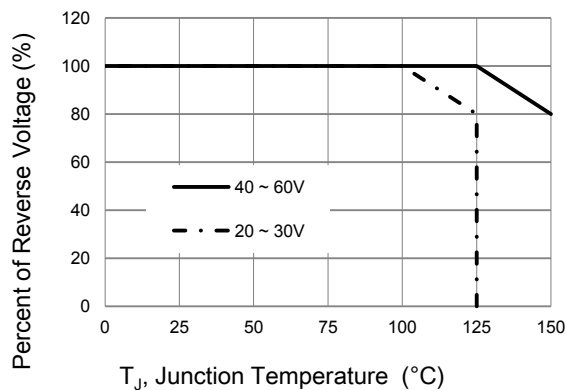


Fig.5 Operating Temperature Derating Curve

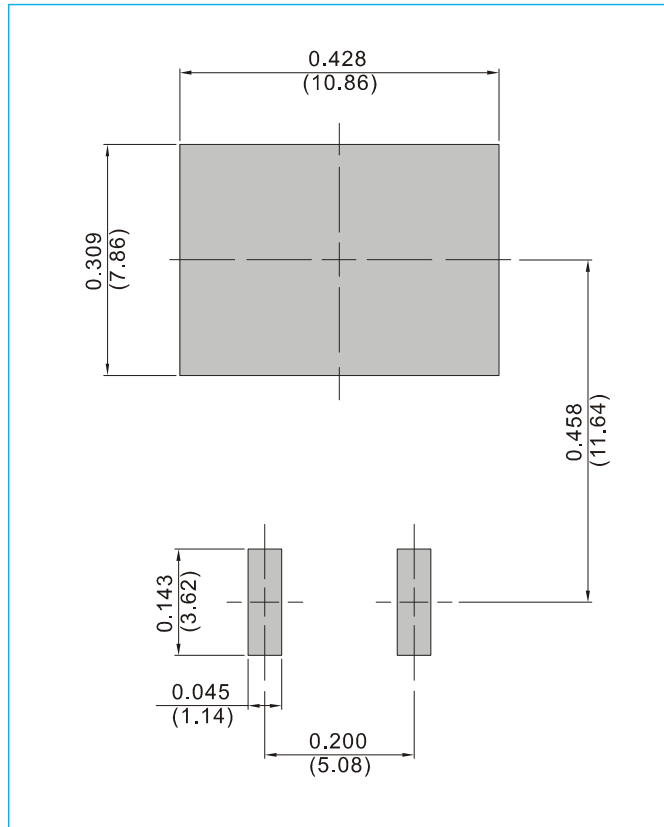


# SB1020DC~SB1060DC

## MOUNTING PAD LAYOUT

TO-263 / D<sup>2</sup>PAK

Unit : inch(mm)



## ORDER INFORMATION

- Packing information

T/R - 0.8K per 13" plastic Reel



# SB1020DC~SB1060DC

Part No\_packing code\_Version

SB1020DC\_R2\_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)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<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>			