



SB1020DC~SB1060DC

SCHOTTKY BARRIER RECTIFIERS

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

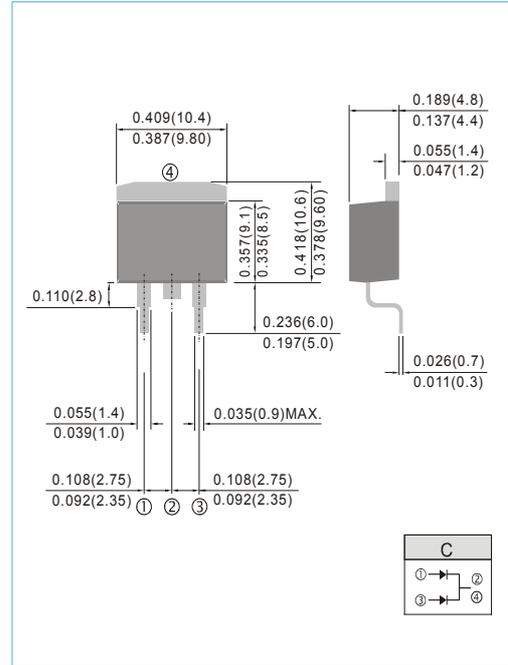
TO-263 / D²PAK Unit : inch(mm)

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.



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RATING AND CHARACTERISTIC CURVES

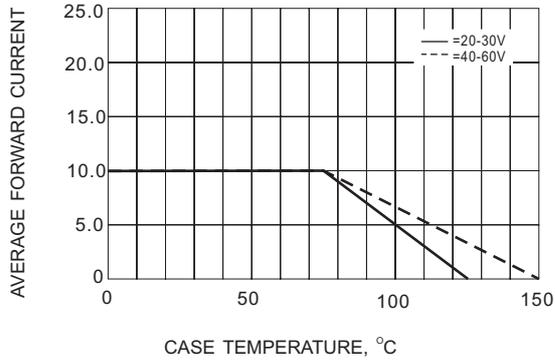


Fig.1 FORWARD CURRENT DERATING CURVE

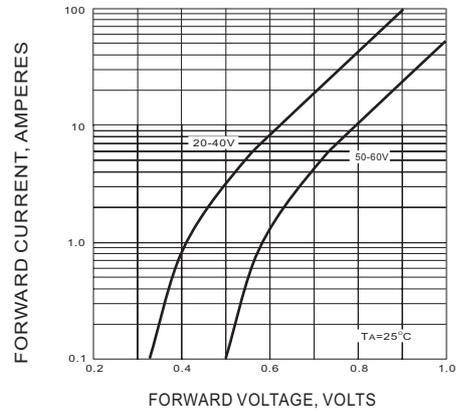


Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

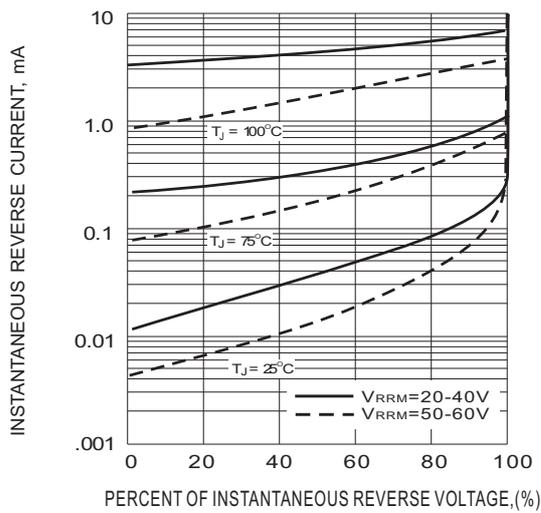


Fig.3 TYPICAL REVERSE CHARACTERISTIC

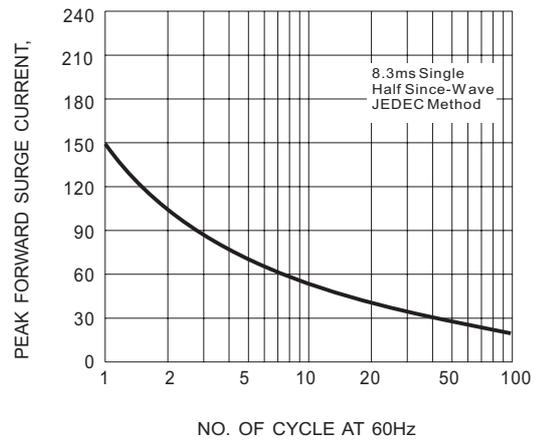


Fig.4 MAXIMUM NON-REPETITIVE SURGE CURRENT

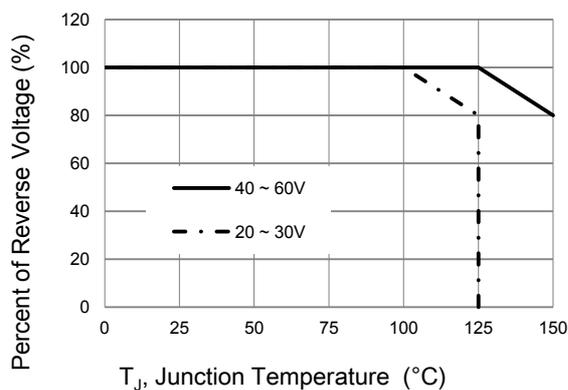


Fig.5 Operating Temperature Derating Curve

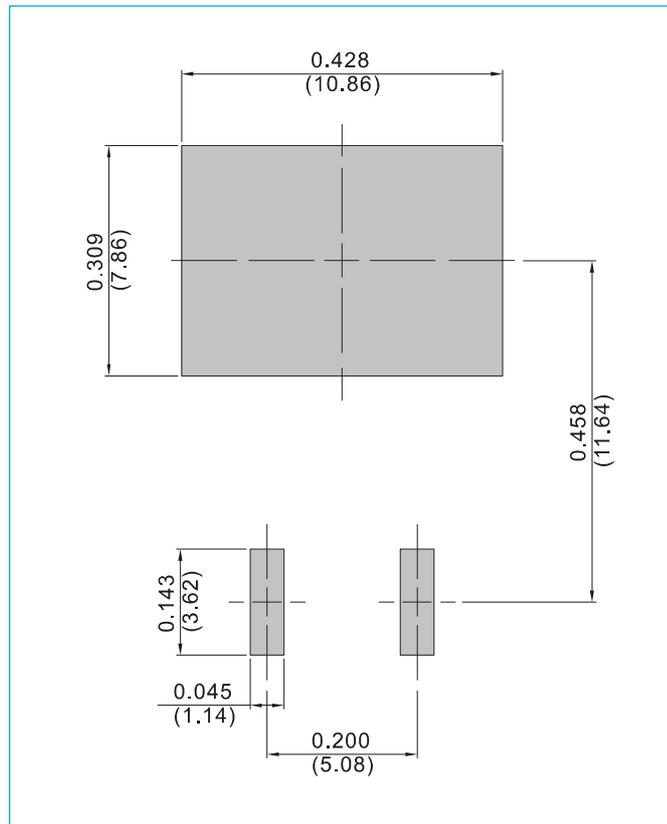


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MOUNTING PAD LAYOUT

TO-263 / D²PAK

Unit : inch(mm)



ORDER INFORMATION

- Packing information

T/R - 0.8K per 13" plastic Reel



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Part No_packing code_Version

SB1020DC_R2_00001

For example :

RB500V-40_R2_00001



Packing type	Packing Code XX			Version Code XXXXX		
	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd -5 th 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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