

# SB1020DC~SB1060DC

## SCHOTTKY BARRIER RECTIFIERS

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

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

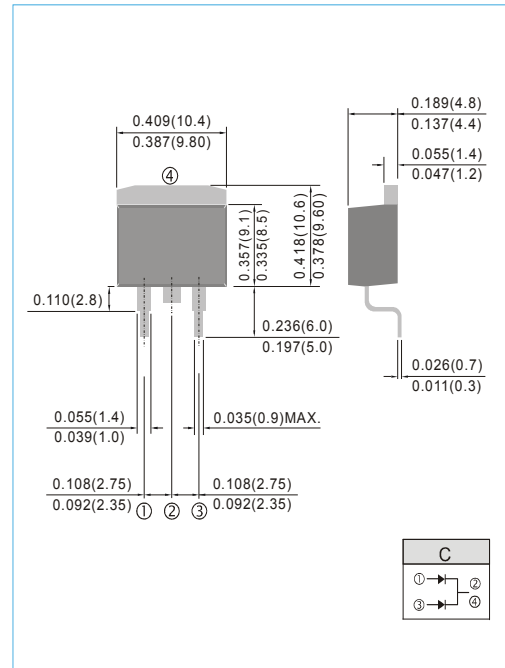
Unit : inch(mm)

### 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	UNIT
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			0.1			mA
		50			50			
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

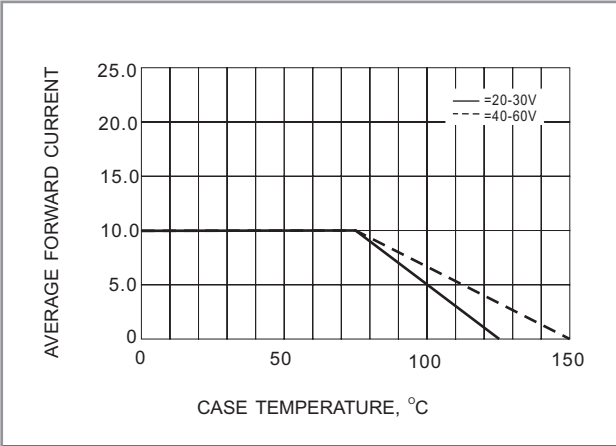


Fig.1 FORWARD CURRENT DERATING CURVE

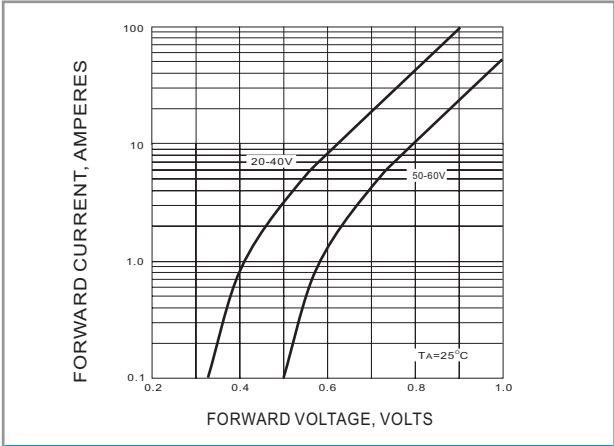


Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

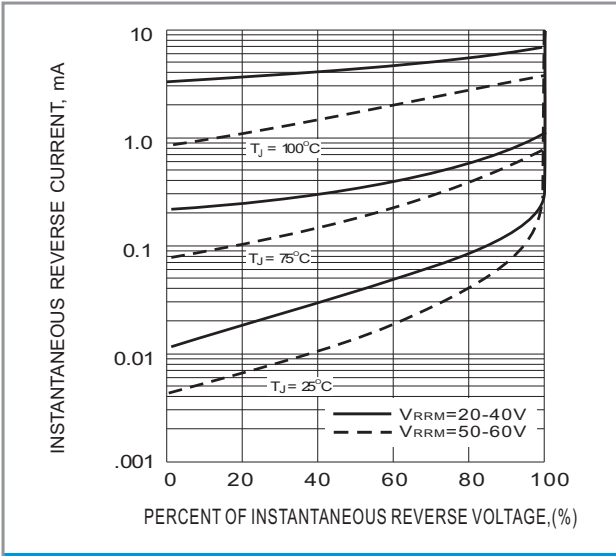


Fig.3 TYPICAL REVERSE CHARACTERISTIC

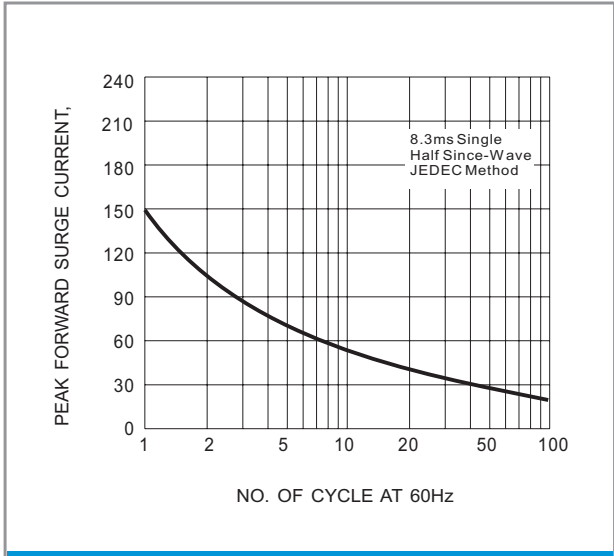


Fig.4 MAXIMUM NON-REPETITIVE SURGE CURRENT

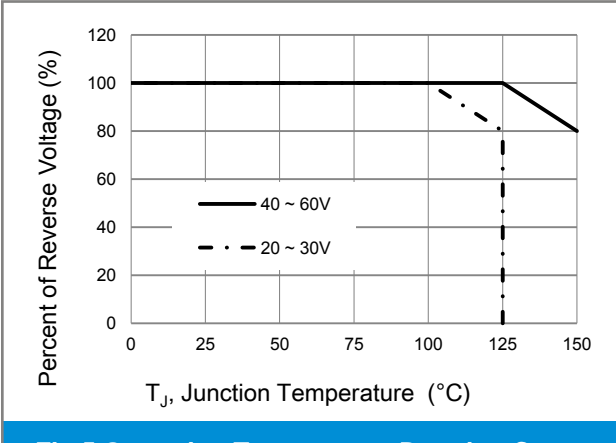


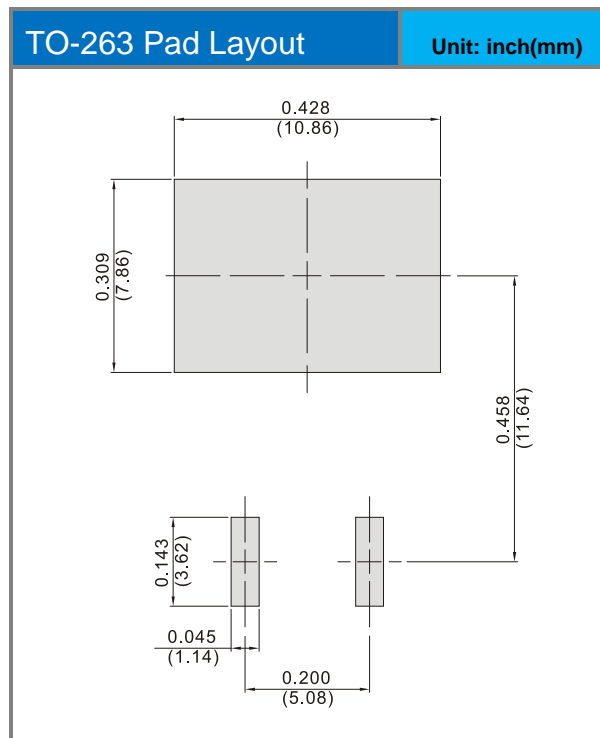
Fig.5 Operating Temperature Derating Curve

# SB1020DC~SB1060DC

## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB1020DC	TO-263	800 pcs / 13" reel	SB1020DC
SB1030DC	TO-263	800 pcs / 13" reel	SB1030DC
SB1040DC	TO-263	800 pcs / 13" reel	SB1040DC
SB1045DC	TO-263	800 pcs / 13" reel	SB1045DC
SB1050DC	TO-263	800 pcs / 13" reel	SB1050DC
SB1060DC	TO-263	800 pcs / 13" reel	SB1060DC

## Mounting Pad Layout



## SB1020DC~SB1060DC

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