

# SB1020DC~SB1060DC

## SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 60 Volts **CURRENT** 10 Amperes

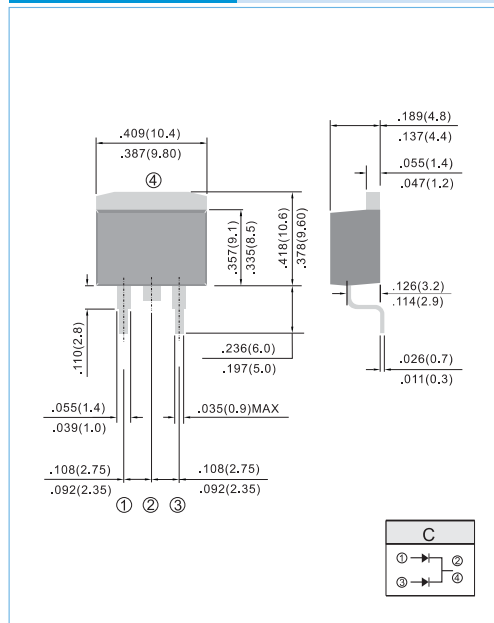
**TO-263 / D<sup>2</sup>PAK** Unit: inch (mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- 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.
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: TO-263 Molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.0514 ounces, 1.46 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 <sub>RRM</sub>	20	30	40	45	50	60	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	31.5	35	42	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	45	50	60	V
Maximum Average Forward Current at T <sub>C</sub> =75°C	I <sub>F(AV)</sub>	10						A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	150						A
Maximum Forward Voltage at 5A,	V <sub>F</sub>	0.55				0.75		V
Maximum DC Reverse Current at T <sub>J</sub> =25°C Rated DC Blocking Voltage T <sub>J</sub> =100°C	I <sub>R</sub>	0.2 50			0.1 50			mA
Typical Thermal Resistance	R <sub>θJC</sub>	3.0						°C / W
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +125		-55 to +150				°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150						°C

Note.

Both Bonding and Chip structure are available.

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## RATING AND CHARACTERISTIC CURVES

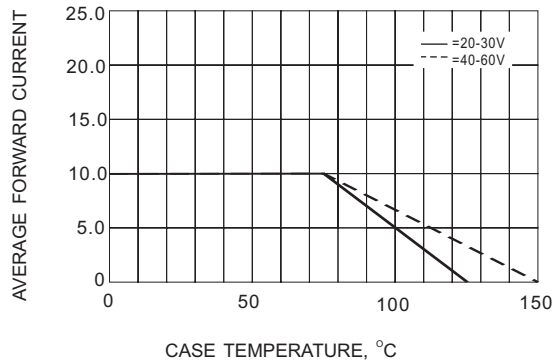


Fig.1- FORWARD CURRENT DERATING CURVE

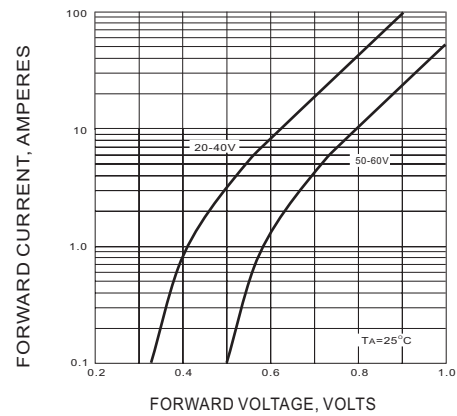


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

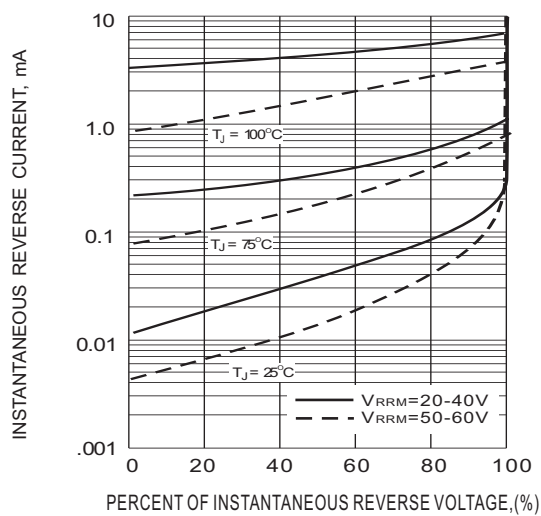


Fig.3- TYPICAL REVERSE CHARACTERISTIC

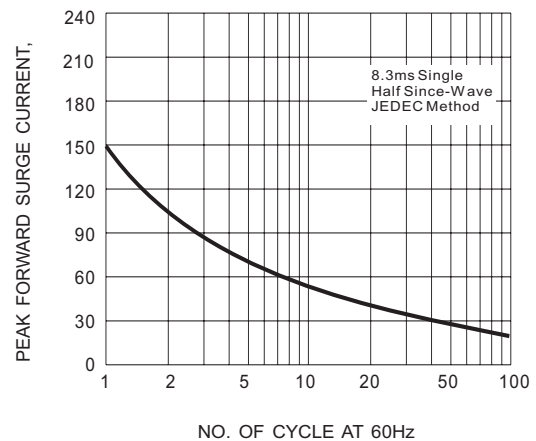
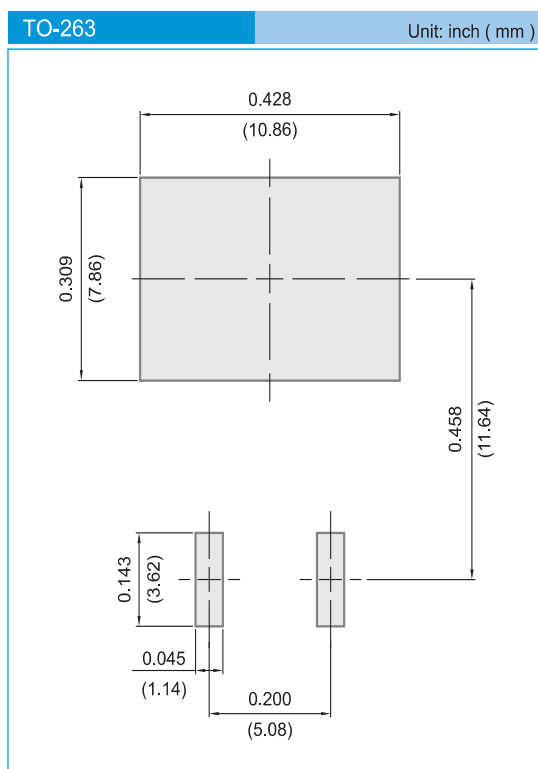


Fig.4- MAXIMUM NON - REPETITIVE SURGE CURRENT

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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 0.8K per 13" plastic Reel

## LEGAL STATEMENT

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