



# DATA SHEET

## SB1020DC~SB10150DC

### D<sup>2</sup>PAK SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 150 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.
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

#### MECHANICAL DATA

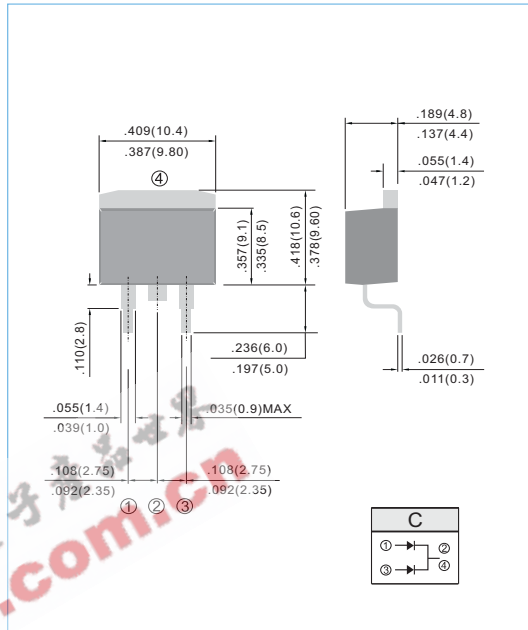
Case: D<sup>2</sup>PAK Molded plastic

Terminals: Solder plated, solderable per MIL-STD-202G, Method 208

Polarity: As marked.

Standard packaging: Any

Weight: 0.06 ounces, 1.7 grams.



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

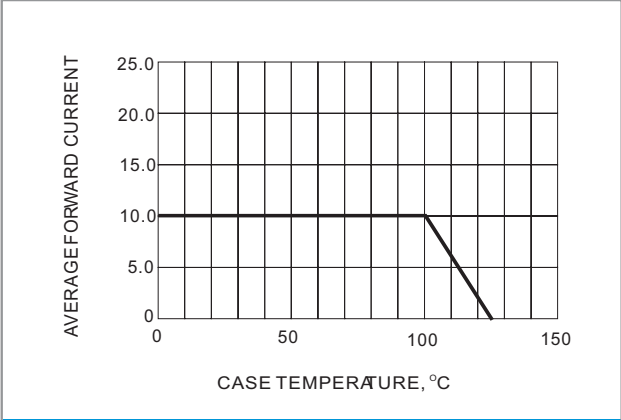
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

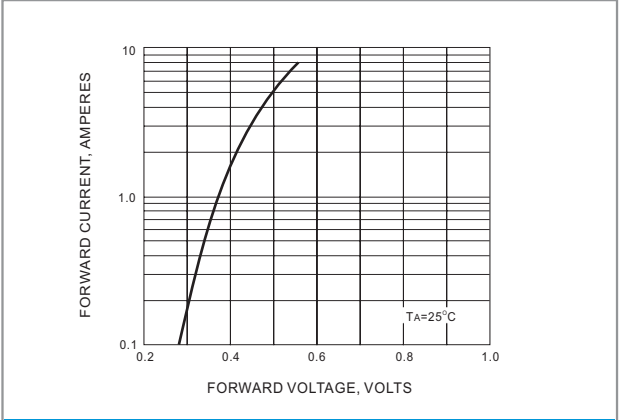
PARAMETER	SYMBOL	SB1020DC	SB1030DC	SB1040DC	SB1045DC	SB1050DC	SB1060DC	SB1080DC	SB10100DC	SB10150DC	UNITS	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	45	50	60	80	100	150	V	
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	31.5	35	42	56	70	105	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	45	50	60	80	100	150	V	
Maximum Average Forward Current .375" (9.5mm) lead length at T <sub>c</sub> = 100°C	I <sub>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 5.0A, per leg	V <sub>F</sub>	0.55			0.75		0.85		0.92		V	
Maximum DC Reverse Current T <sub>A</sub> =25°C at Rated DC Blocking Voltage T <sub>A</sub> =100°C	I <sub>R</sub>					0.5						mA
Typical Thermal Resistance	R <sub>θJC</sub>					3.0						°C / W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>					-50 TO +125						°C



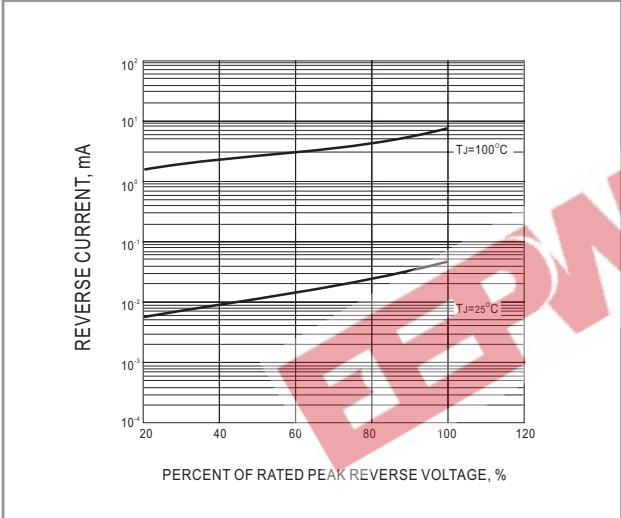
**RATING AND CHARACTERISTIC CURVES**



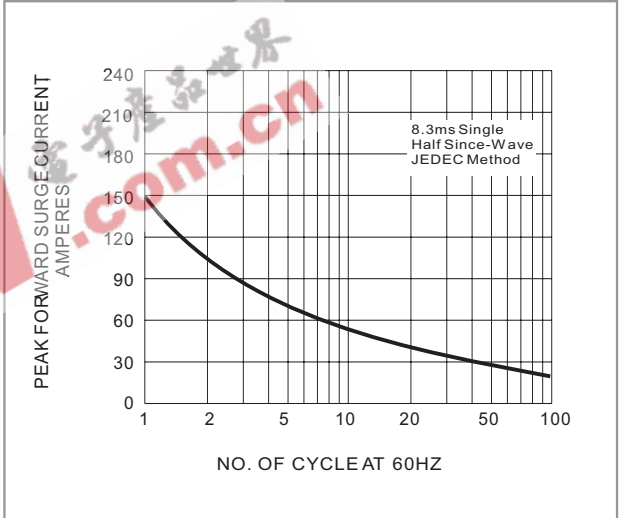
**Fig. 1- FORWARD CURRENT DERATING CURVE**



**Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**



**Fig. 3- TYPICAL REVERSE CHARACTERISTIC**



**Fig. 4- TMAXIMUM NON - REPETITIVE SURGE CURRENT**