



# DATA SHEET

## SB820DC~SB8150DC

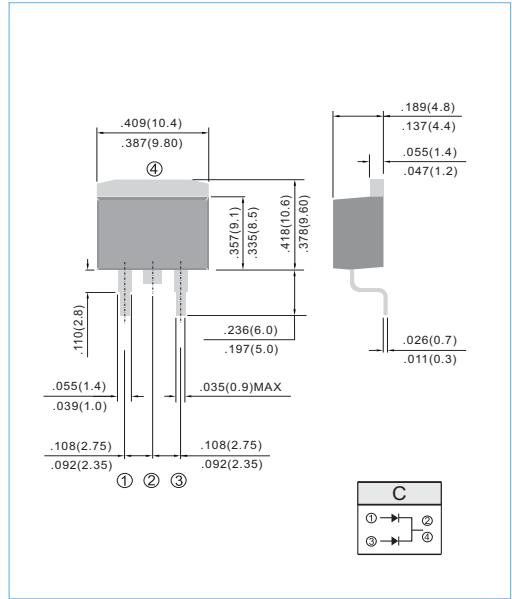
### D<sup>2</sup>PAK SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 150 Volts    **CURRENT** 8 Amperes

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

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing 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/TO-263 molded plastic package  
 Terminals: Lead solderable per MIL-STD-202G, Method 208  
 Polarity: As marked.  
 Mounting Position: Any  
 Weight: 0.06 ounces, 1466mg

#### 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%

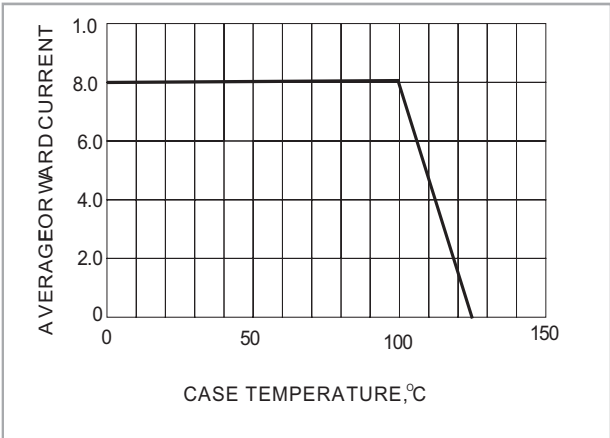
PARAMETER	SYMBOL	SB820DC	SB830DC	SB840DC	SB850DC	SB860DC	SB880DC	SB100DC	SB150DC	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current at T <sub>c</sub> = 100°C	I <sub>AV</sub>	8.0								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 4.0A per element	V <sub>F</sub>	0.55		0.75		0.85		0.92		V
Maximum DC Reverse Current at T <sub>c</sub> =25°C Rated DC Blocking Voltage T <sub>c</sub> =100°C	I <sub>R</sub>					0.5 100				mA
Typical Thermal Resistance	R <sub>θJA</sub>					60				°C / W
Operating Junction and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>					-50 to +150				C

#### NOTES:

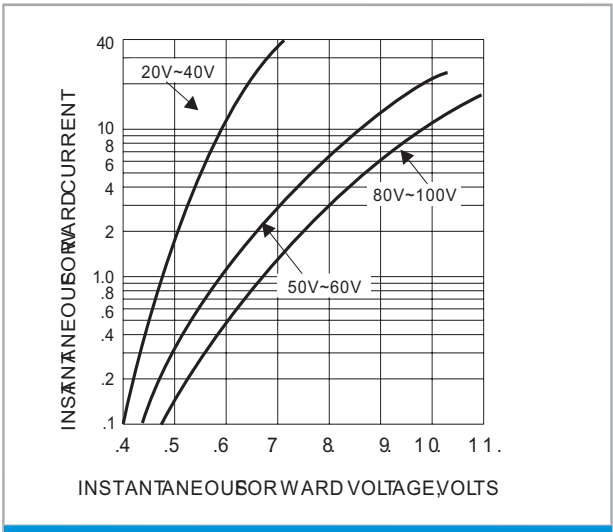
1. Ta = Tj (Junction temperature)
2. Thermal Resistance Junction to Case .



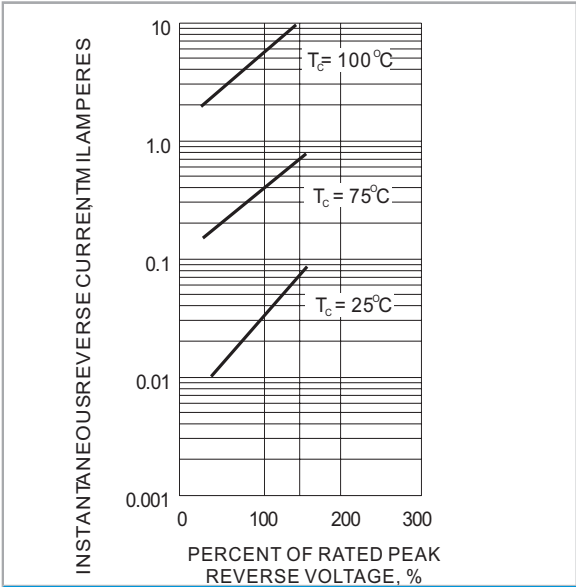
**RATING AND CHARACTERISTIC CURVES**



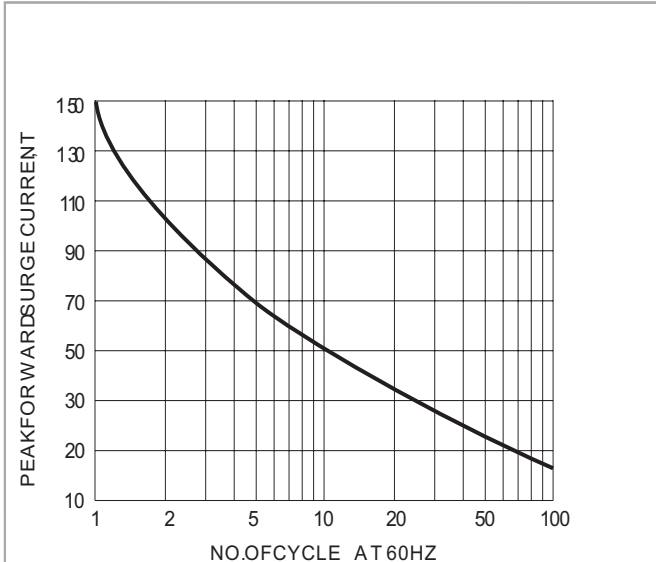
**FIG.1-FORWARD CURRENT DERATING CURVE**



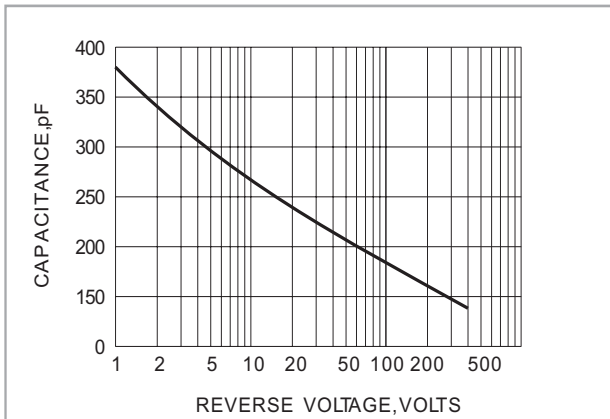
**FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**



**FIG.3-TYPICAL REVERSE CHARACTERISTICS**



**FIG.4-MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG.5-REVERSE VOLTAGE VOLTS**