



DATA SHEET

SB820D~SB8150D

D²PAK SURFACE MOUNTSCHOTTKY BARRIER RECTIFIER

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

TO-263 / D²PAK

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.
- Both normal and Pb free product are available :
Normal : 80~95% Sn, 5~20% Pb
Pb free: 99% Sn above

MECHANICAL DATA

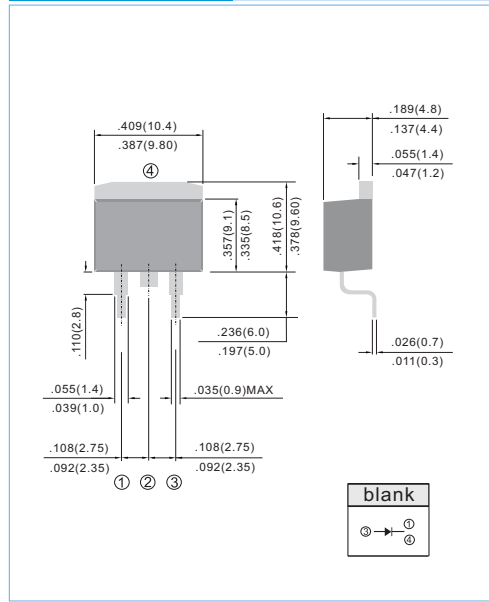
Case: TO-263/D²PAK molded plastic package

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

Polarity: As marked.

Mounting Position: 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 | SB820D | SB830D | SB840D | SB850D | SB860D | SB880D | SB8100D | SB8150D | UNITS | |
|--|-----------------------------------|-------------|--------|--------|--------|--------|--------|---------|---------|--------|----|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | V | |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | V | |
| Maximum DC Blocking Voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | V | |
| Maximum Average Forward Current .375" (9.5mm) lead length at T _c = 100°C | I _{AV} | 8 | | | | | | | | A | |
| Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 150 | | | | | | | | A | |
| Maximum Forward Voltage at 8.0A | V _F | 0.55 | | | 0.75 | | 0.85 | | 0.92 | V | |
| Maximum DC Reverse Current T _A =25°C at Rated DC Blocking Voltage T _A =100°C | I _R | | | | | 0.5 | | 50 | | | mA |
| Typical Thermal Resistance | R _{θJC} | 6 | | | | | | | | °C / W | |
| Operating Junction Temperature Rang | T _J | -50 to +125 | | | | | | | | °C | |
| Storage Temperature Rang | T _J , T _{STG} | -50 to +150 | | | | | | | | °C | |

NOTES:

Both Bonding and Chip structure are available.



RATING AND CHARACTERISTIC CURVES

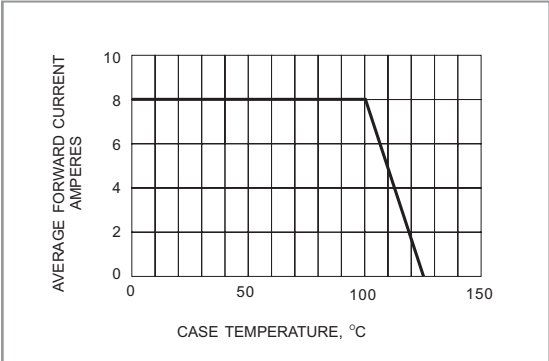


Fig.1- FORWARD CURRENT DERATING CURVE

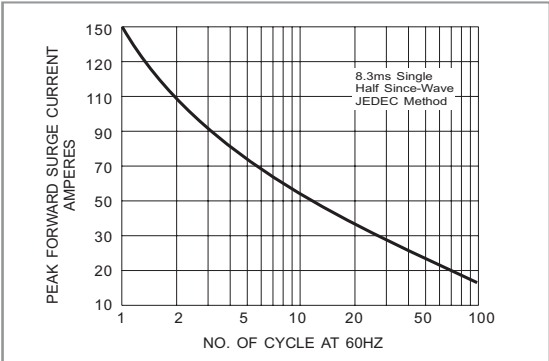


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

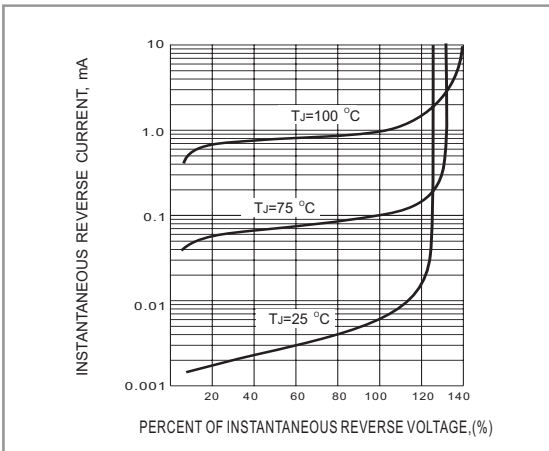


Fig.3- TYPICAL REVERSE CHARACTERISTICS

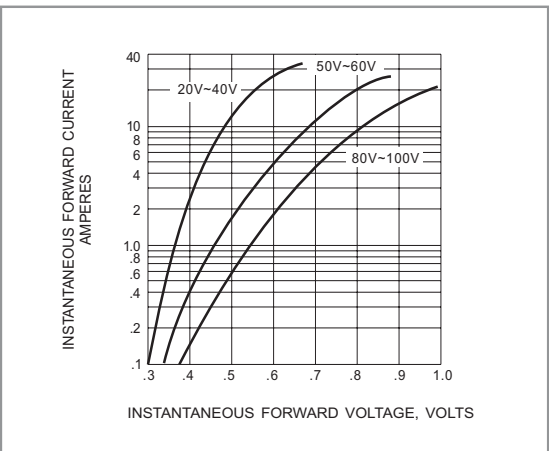


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS