



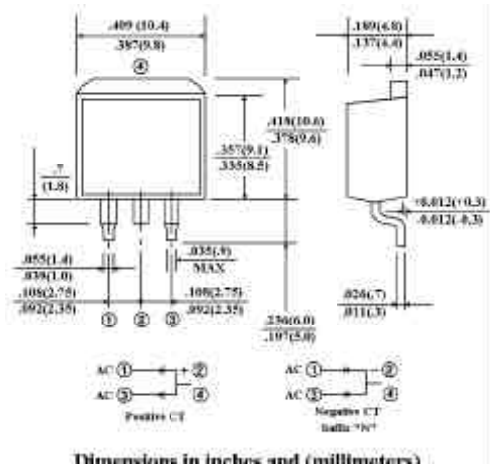
SB820D THRU SB8100D

D²PAK SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER
 VOLTAGE - 20 to 100 Volts CURRENT - 8.0 Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 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

D²PAK/TO-263



MECHANICAL DATA

- Case: D²PAK/TO-263 molded plastic
- Terminals: Leads, solderable per MIL-STD-202, Method 208
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.06 ounce, 1.7 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, Resistive or inductive load.
 For capacitive load, derate current by 20%.

| | SB820D | SB830D | SB840D | SB850D | SB860D | SB880D | SB8100D | UNITS |
|--------------------------------------------------------------------------------------------------|-------------|--------|--------|--------|--------|--------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum RMS Voltage | 14 | 21 | 26 | 35 | 42 | 56 | 80 | V |
| Maximum DC Blocking Voltage | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum Average Forward Rectified Current at T _C =100 °C | 8.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | 150 | | | | | | | A |
| Maximum Forward Voltage at 8.0A per element | 0.55 | | 0.75 | | 0.85 | | | V |
| Maximum DC Reverse Current at T _C =25 °C | 0.5 | | | | | | | mA |
| DC Blocking Voltage per element T _C =100 °C | 50 | | | | | | | |
| Typical Thermal Resistance(Note) R _{θJKJA} | 60 | | | | | | | °C/W |
| Operating and Storage Temperature Range T _J | -50 to +150 | | | | | | | °C |

NOTES:

Thermal Resistance Junction to Ambient.

RATING AND CHARACTERISTIC CURVES

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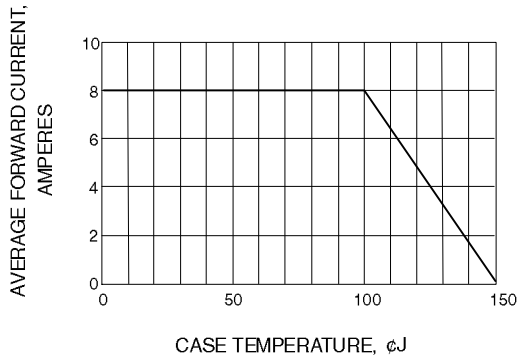


Fig. 1-FORWARD CURRENT DERATING CURVE

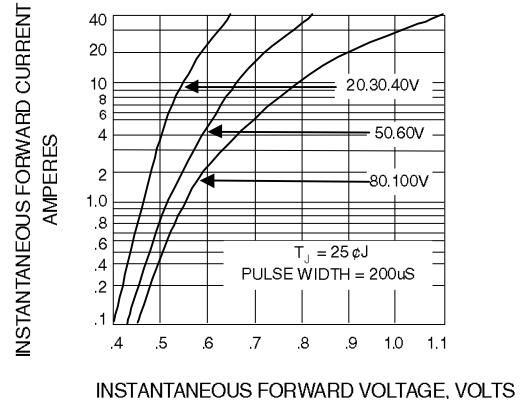


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

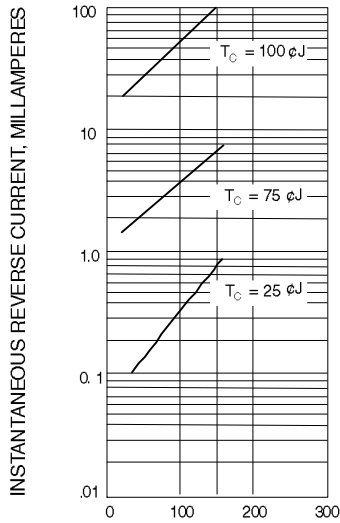


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

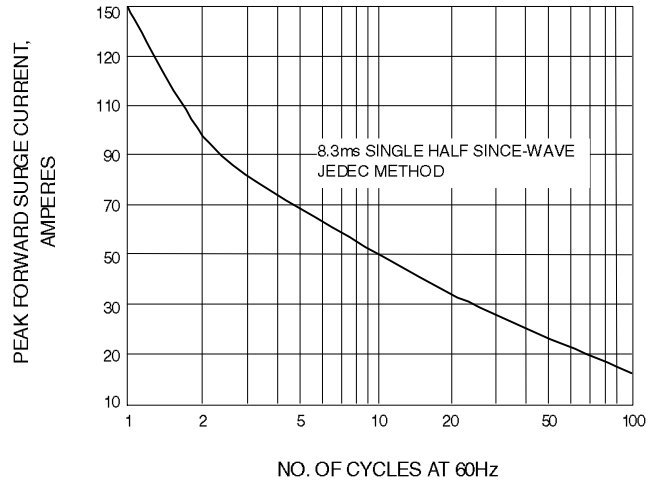


Fig. 4-MAXIMUM NON-REPETITIVE SURGE CURRENT

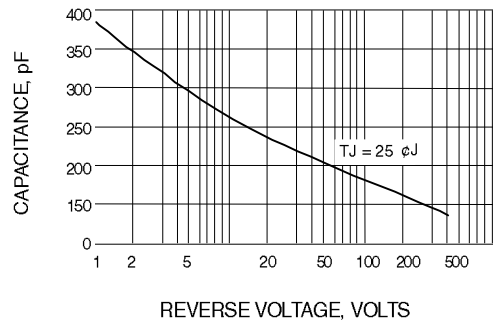


Fig. 5-TYPICAL JUNCTION CAPACITANCE