



**TRANSYS  
ELECTRONICS  
LIMITED**

## SB820F THRU SB8100F

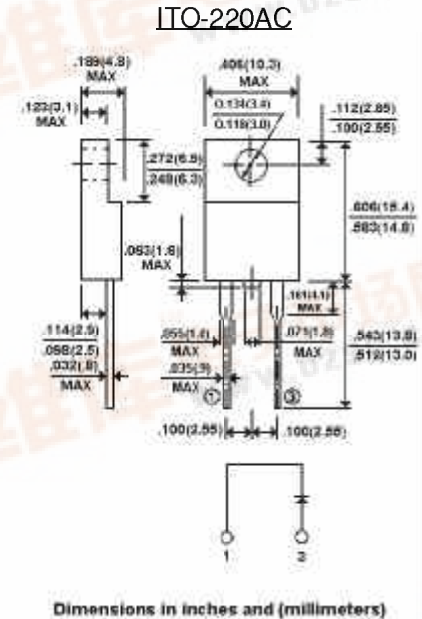
ISOLATION SCHOTTKY BARRIER RECTIFIERS  
VOLTAGE - 20 to 100 Volts CURRENT - 8.0 Amperes

### FEATURES

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

### MECHANICAL DATA

- Case: ITO-220AC full molded plastic package
- Terminals: Leads, solderable per MIL-STD-202, Method 208
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.08 ounce, 2.24 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Resistive or inductive load.

For capacitive load, derate current by 20%.

|                                                                                                  | SB820F      | SB830F | SB840F | SB850F | SB860F | SB880F | SB8100F | 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 <sub>C</sub> =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 Rated T <sub>C</sub> =25 °C                                        | 0.5         |        |        |        |        |        |         | mA    |
| DC Blocking Voltage per element T <sub>C</sub> =100 °C                                           | 50          |        |        |        |        |        |         |       |
| Typical Thermal Resistance Note R <sub>θJA</sub>                                                 | 60          |        |        |        |        |        |         | °C/W  |
| Operating and Storage Temperature Range T <sub>J</sub>                                           | -50 TO +150 |        |        |        |        |        |         | °C    |

### NOTES:

Thermal Resistance Junction to Ambient



RATING AND CHARACTERISTIC CURVES  
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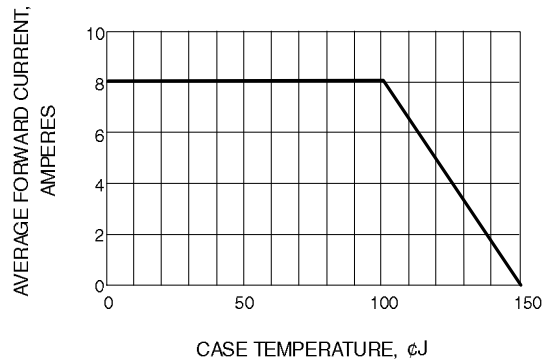


Fig. 1-FORWARD CURRENT DERATING CURVE

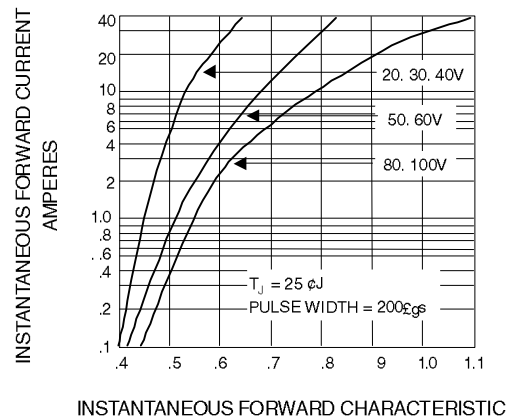


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

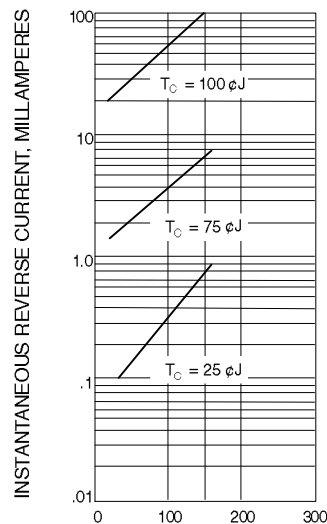


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

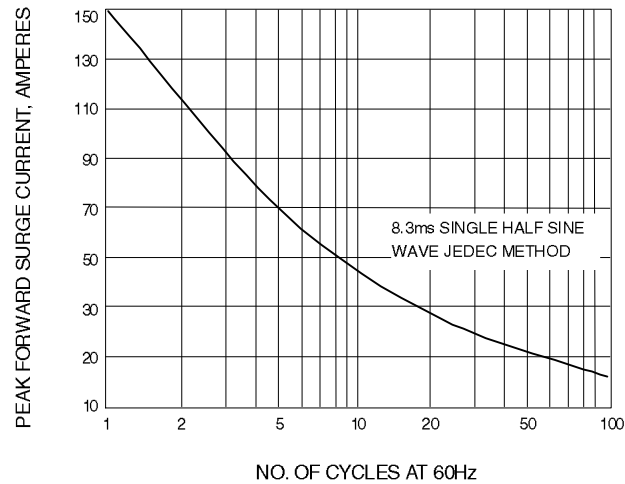


Fig. 4-MAXIMUM NON-REPETITIVE SURGE CURRENT

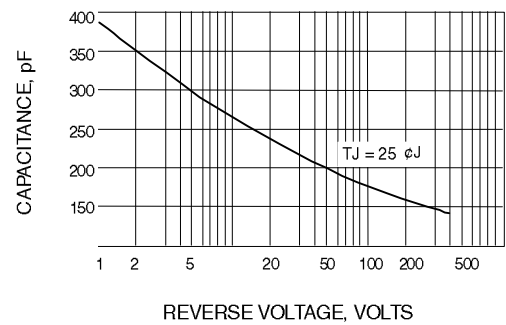


Fig. 5-TYPICAL JUNCTION CAPACITANCE