PANJIT SEMI CONDUCTOR

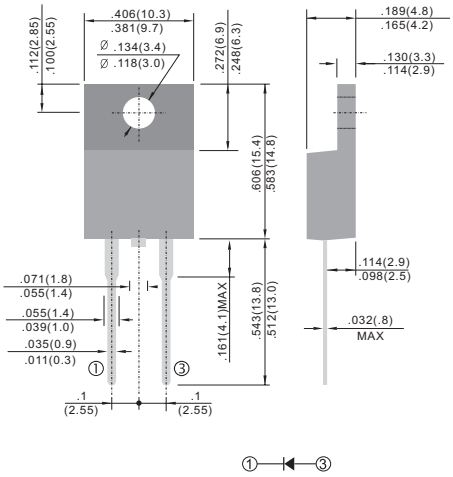
# DATA SHEET

## SB820F~SB8150F

### ISOLATION SCHOTTKY BARRIER RECTIFIERS

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

**ITO-220AC** 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 forwrd voltge, high current capability
- High surge capacity.
- For use in low voltage,high frequency inverters free wheeling , and polarlity protection applications.
- Both normal and Pb free product are available :
  Normal : 80~95% Sn, 5~20% Pb
  Pb free: 99% Sn above can meet Rohs environment substance directive request

### MECHANICALDATA

Case: ITO-220AC full molded plastic package

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

Polarity: As marked.

Mounting Position: Any

Weight: 0.08 ounces, 2.24grams.

### 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 | SB820 F | SB830 F | SB840 F | SB850 F | SB860 F | SB880 F | SB8100 F | SB8150 F | 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 Tc =100℃ | $I_{AV}$ | 10 | | | | | | | | 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 TA=25℃<br>at Rated DC Blocking Voltage TA=100℃ | $I_R$ | 0.5<br>50 | | | | | | | | mA |
| Typical Thermal Resistance | $R_{\theta JC}$ | 3.0 | | | | | | | | ℃/ W |
| Operating Junction and Storage Temperature Range | $T_J, T_{STG}$ | - 50 to + 125 | | | | | | | | ℃ |

NOTES:

Both Bonding and Chip structure are available.

## RATING AND CHARACTERISTIC CURVES

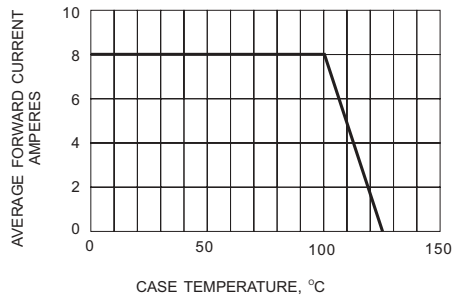



Fig.1- FORWARD CURRENT DERATING CURVE

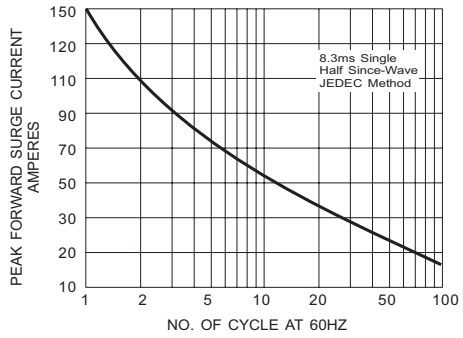



Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

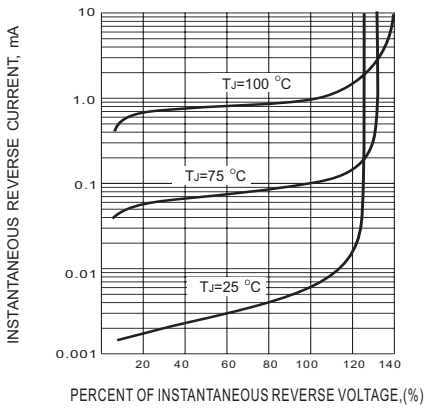



Fig.3- TYPICAL REVERSE CHARACTERISTICS

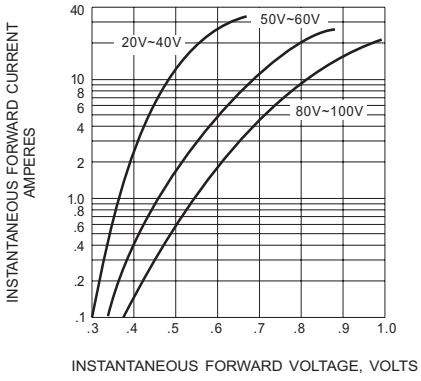



Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS