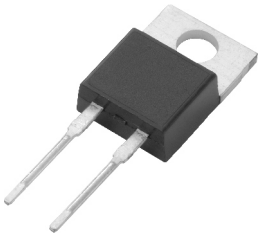
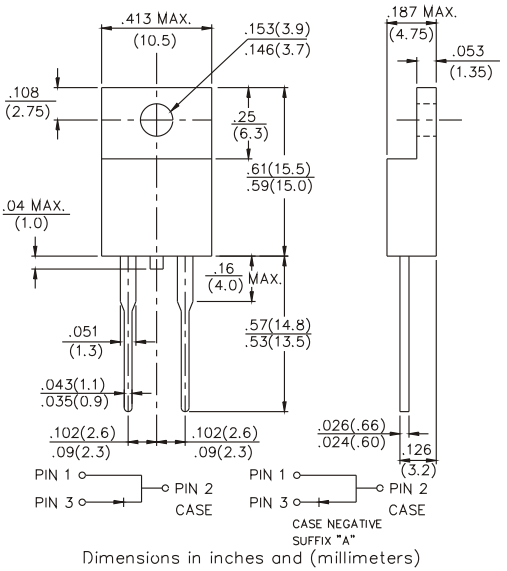
# SB1020 thru SB10150

## SCHOTTKY BARRIER RECTIFIER

**VOLTAGE - 20 TO 150 VOLTS  CURRENT - 10 AMPERES**



TO-220AC




Dimensions in inches and (millimeters)

## FEATURES

- Schottky Barrier Chip
- Guard Ring Transient Protection
- High Current Capability, Low Forward
- Low Reverse Leakage Current
- High surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0
- High temperature soldering：260°C/10seconds at terminals
- Pb free product are available：99% Sn above can meet RoHS
- environment substance directive request

## MECHANICAL DATA

Case：TO220AC Molded plastic
Terminals：Lead solderable per MIL-STD-202, Method 2026
Polarity：As Marked on Body
Mounting Position：Any
Weight：2.24gram
Marking：Type Number

## MAXIMUM RATIXGS AND ELECTRICAL CHARACTERISTICS

Single phase half wave 60Hz, resistive or inductive load
For capacitive load, derate current by 20%

| PARAMETER | SYMBOL | SB 1020 | SB 1030 | SB 1040 | SB 1050 | SB 1060 | SB 1080 | SB 10100 | SB 10150 | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | Volts |
| RMS Reverse Voltage | $V_{RMS}$ | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | Volts |
| Average Repetitive Output Current @$T_C$=95°C | $I_F$ | 10 | | | | | | | | Amps |
| Non-Repetitive Peak Forward surge current 8.3ms Single Half Sine-Wave Superimosed on rated load (JEDEC Method) | $I_{FSM}$ | 150 | | | | | | | 120 | Amps |
| Forward Voltage @$I_F$=10A | $V_F$ | 0.55 | | | 0.75 | | 0.85 | | 0.92 | Volts |
| Peak Reverse Current @$T_A$=25°C<br>AT Rated DC Blocking Voltage $T_A$=100°C | $I_{RM}$ | 0.5<br>50 | | | | | | | 0.1<br>7 | mA |
| Typical Junction Capacitance (Note 1) | $C_J$ | 700 | | | | | | | | pF |
| Operating and Storage Temperature Range | $T_J$<br>$T_{STG}$ | -55 to +150 | | | | | | | | °C |

NOTE：
1. Measured at 1.0MHz and applied reverse Voltage of 4.0V D.C

## SCHOTTKY BARRIER RECTIFIER

### RATINGS AND CHARACTERISTIC CURVES SB1020 THRU SB10150

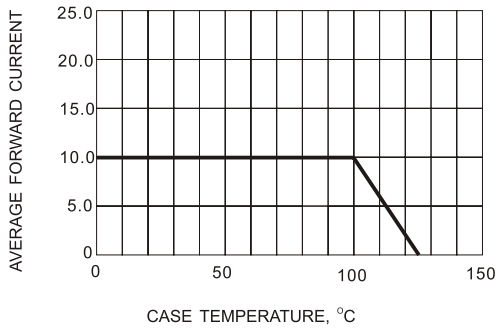



Fig.1- FORWARD CURRENT DERATING CURVE

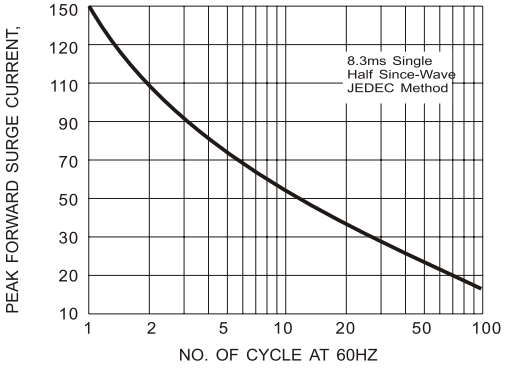



Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

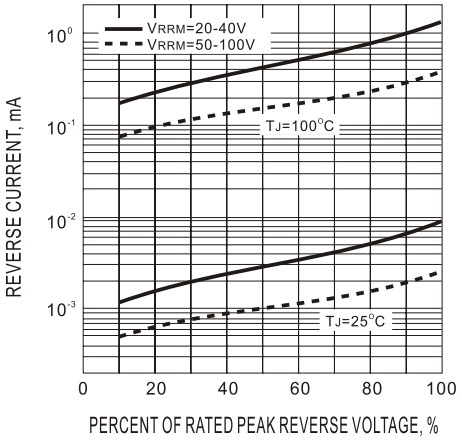



Fig.3- TYPICAL REVERSE CHARACTERISTIC

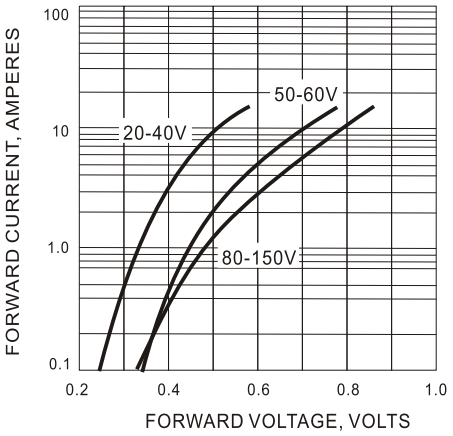



Fig.4- TYPICAL INSTANTANEOUS FORWARD CHRACTERISTIC