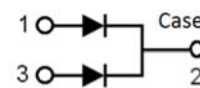


10A,45V Schottky Barrier Diodes

TO-252

Features

- Guard Ring for Stress Protection
- Low Forward Voltage
- 175°C Operating Junction Temperature
- Epoxy Meets UL 94 V 0 @ 0.125 in
- Low Power Loss/High Efficiency
- High Surge Capacity
- Low Stored Charge Majority Carrier Conduction
- Pb Free Packages are Available*
- *In compliance with EU RoHs directives*
- *Green product-halogen free*



Mechanical Characteristics

- **Case:** Epoxy, Molded
- **Weight:** 1.2grams (approximately)
- **Finish:** All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- **Lead Temperature for Soldering Purposes:** 260°C Max. for 10 Seconds



RATINGS (Per Diode Leg)

| Rating | Symbol | SBD1045CT | Unit |
|--|-------------|--------------|------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 45 | V |
| Average Rectified Forward Current (Rated V_R) $T_C = 133^\circ\text{C}$ | $I_{F(AV)}$ | 5 | A |
| Peak Repetitive Forward Current (Rated V_R , Square Wave, 20 kHz) $T_C = 133^\circ\text{C}$ | I_{FRM} | 10 | A |
| Maximum Instantaneous Forward Voltage ($I_F = 5\text{Amps}$, $T_C = 25^\circ\text{C}$) | V_F | 0.60 | V |
| Nonrepetitive Peak Surge Current (Surge applied at rates load conditions halfwave, single phase, 60Hz) | I_{FSM} | 100 | A |
| Peak Repetitive Reverse Surge Current (2.0 μs , 1.0 kHz) | I_{RRM} | 5 | A |
| Operating Junction Temperature | T_J | - 65 to +175 | $^\circ\text{C}$ |
| Voltage Rate of Change (Rated V_R) | dv/dt | 10,000 | V/ μs |
| Maximum Instantaneous Reverse Current (Rated dc Voltage, $T_C = 125^\circ\text{C}$) (Rated dc Voltage, $T_C = 25^\circ\text{C}$) | I_R | 6.0 0.5 | mA |

Typical Characteristics

FIG-1 Typical Forward Voltage Per Diode

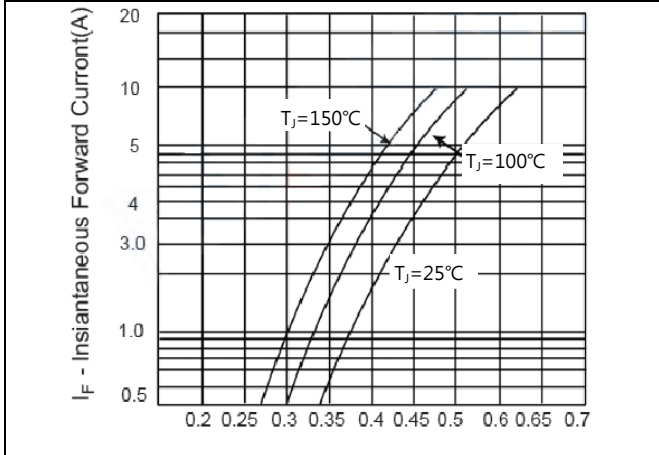


FIG-2 Typical Reverse Current Per Diode

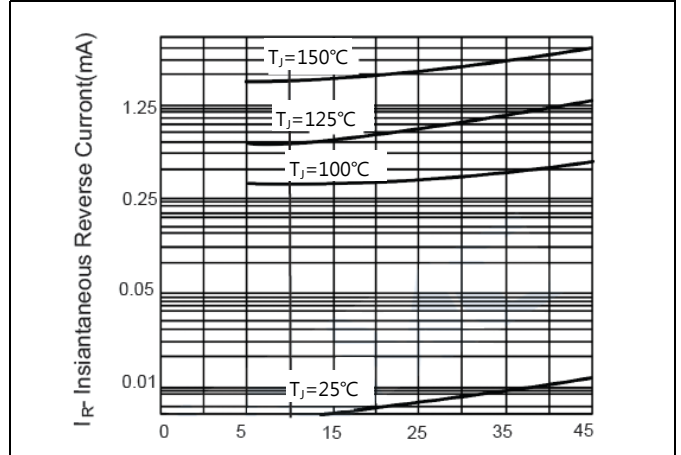


FIG-3 Forward Current Derating Curve

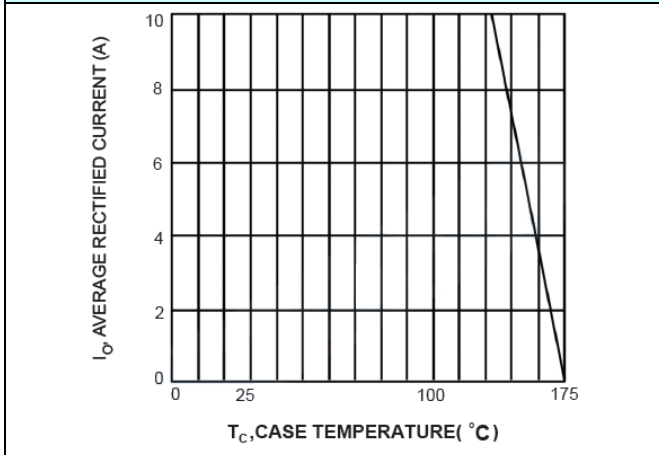
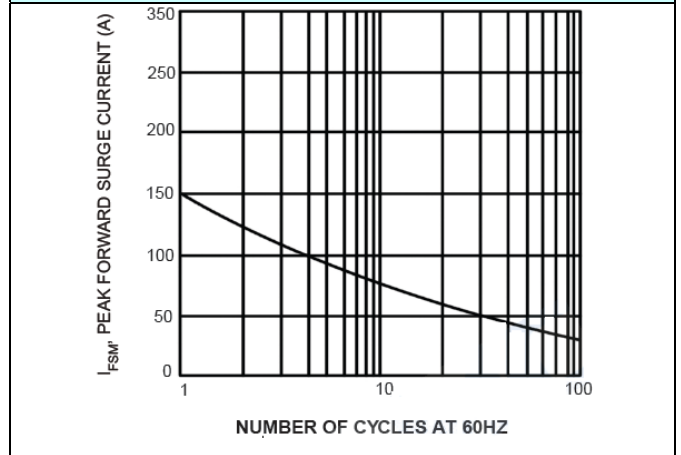
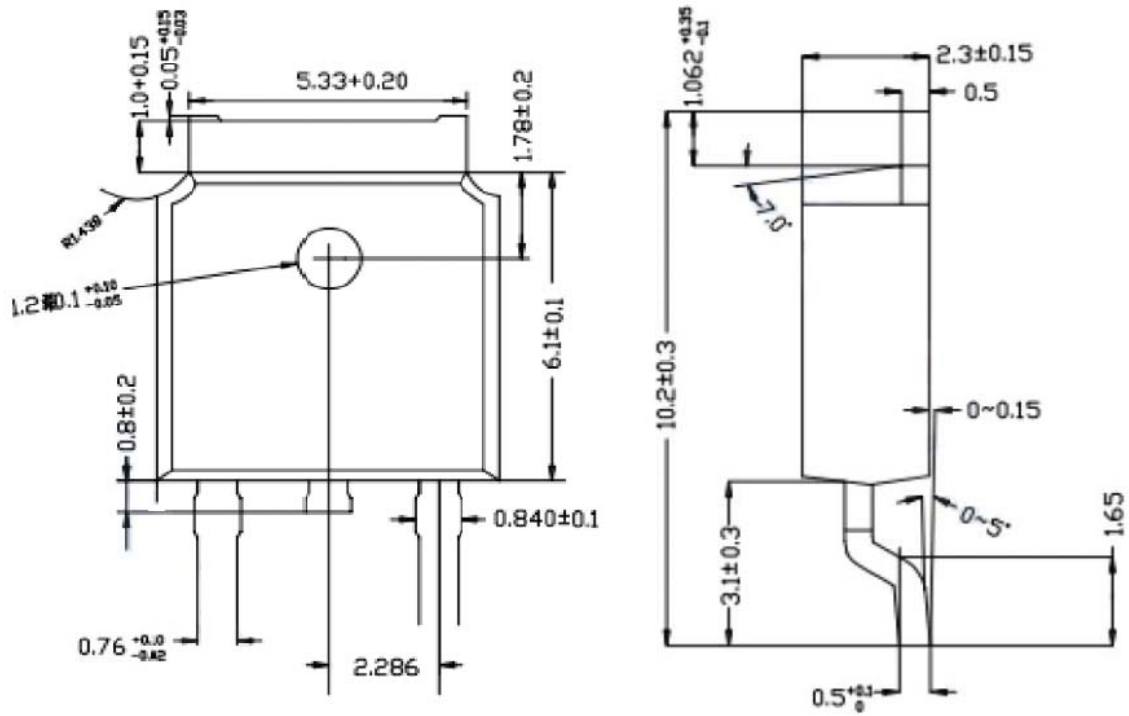


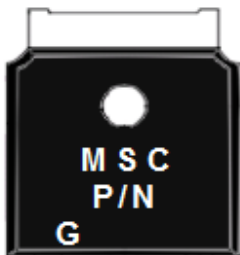
FIG-4 Max Non- Repetitive Surge Current



TO-252 PACKAGE OUTLINE DIMENSIONS



MARKING DIAGRAM



MSC = MOSPEC

P/N = SBD1045CT marking S1045T

G = Green Compound-Halogen free

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