

MBR0520L

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

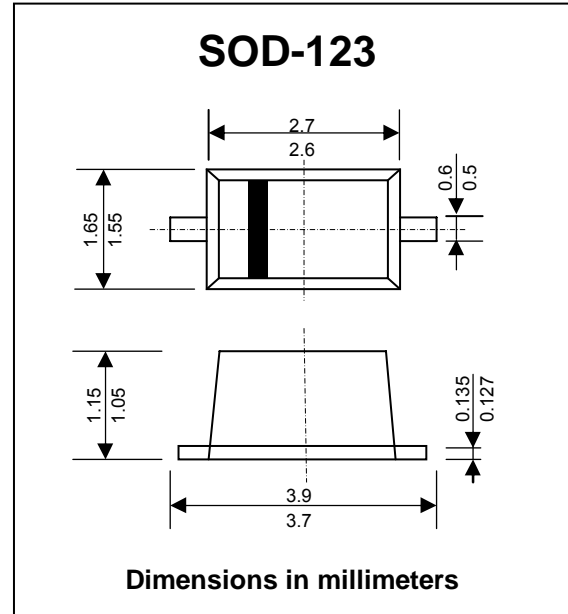
PRV : 20 Volts
I_o : 0.5 Ampere

FEATURES :

- * Guardring for Stress Protection
- * Very Low Forward Voltage
- * 125 °C Operating Junction Temperature
- * Package Designed for Optimal Automated Board Assembly
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : SOD-123
- * Weight : 0.01 gram (approximately)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

| RATING | SYMBOL | VALUE | UNIT |
|---|-----------------|--------------------------------|------|
| Maximum Peak Repetitive Reverse Voltage | V_{RRM} | 20 | V |
| Maximum Working Peak Reverse Voltage | V_{RWM} | 20 | V |
| Maximum DC Blocking Voltage | V_R | 20 | V |
| Maximum Average Rectified Forward Current, $T_L = 90\text{ °C}$ | $I_{F(AV)}$ | 0.5 | A |
| Maximum Non-Repetitive Peak Forward Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 HZ) | I_{FSM} | 5.5 | A |
| Maximum Instantaneous Forward Voltage at $I_F = 0.5\text{ A}$ (Note 1) | V_F | 0.385($T_J = 25\text{ °C}$) | V |
| | | 0.330($T_J = 100\text{ °C}$) | |
| Maximum Instantaneous Reverse Current at Rated DC Voltage = 20 V (Note 1) | I_R | 0.250($T_J = 25\text{ °C}$) | mA |
| | $I_{R(H)}$ | 8.0($T_J = 100\text{ °C}$) | mA |
| Thermal Resistance Junction to Ambient (Note 2) | $R_{\theta JA}$ | 206 | °C/W |
| Thermal Resistance Junction to Lead | $R_{\theta JL}$ | 150 | °C/W |
| Junction Temperature Range | T_J | - 65 to + 125 | °C |
| Storage Temperature Range | T_{STG} | - 65 to + 125 | °C |

Notes :

- (1) Pulse Test : Pulse Width = 300 μ s, Duty Cycle \leq 2%.
- (2) 1 inch square pad size (1 x 0.5 inch for each lead) on FR4 board.

RATING AND CHARACTERISTIC CURVES (MBR0520L)

FIG.1 - DERATING CURVE

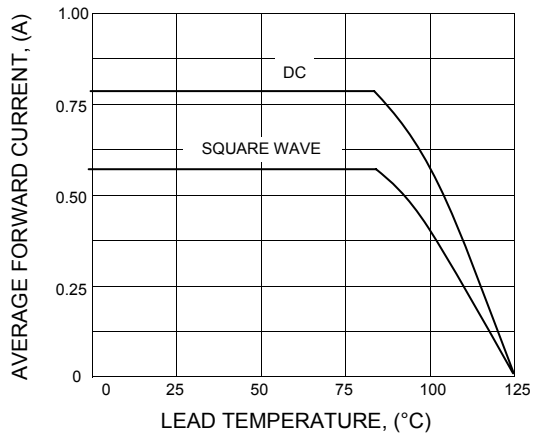


FIG.2 - TYPICAL CAPACITANCE

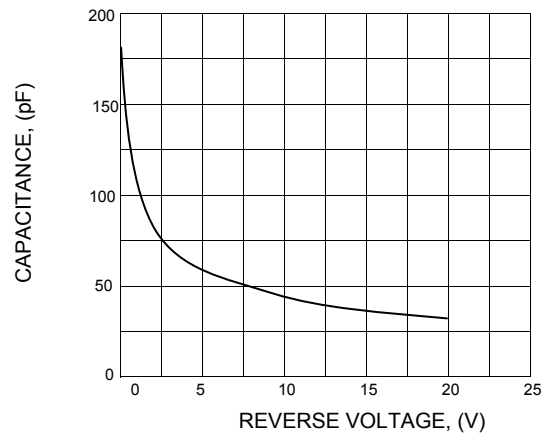


FIG.3 - TYPICAL FORWARD VOLTAGE

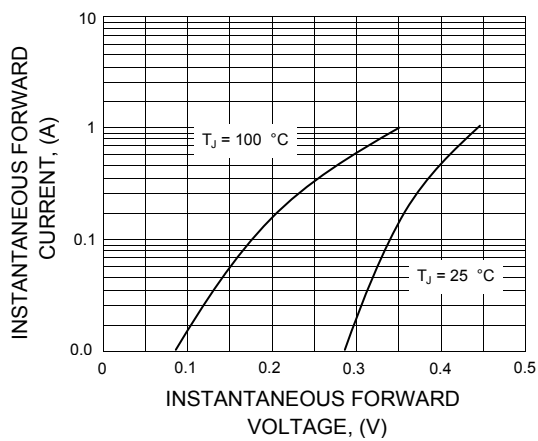


FIG.4 - TYPICAL REVERSE CURRENT

