

MBR0540

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

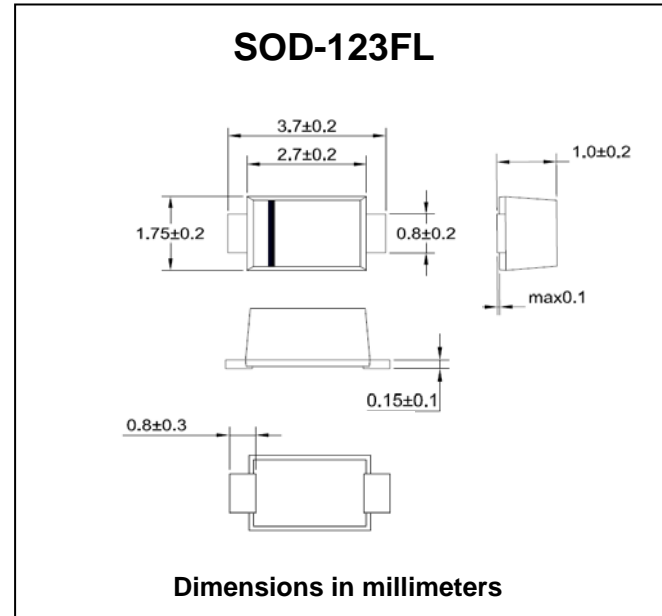
PRV : 40 Volts
I_o : 500 mA

FEATURES :

- * 0.5 ampere; forward voltage less than 460 mV.
- * 400 milliwatt power dissipation package.
- * Compact surface mount package
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case: JEDEC SOD-123FL, molded plastic over passivated chip
- * Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- * Polarity: Color band denotes cathode end
- * Mounting position : Any
- * Weight: 0.006 ounces, 0.02 gram



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} | 40 | V |
| Maximum Average Rectified Forward Current, | $I_{F(AV)}$ | 500 | mA |
| Maximum Non-Repetitive Peak Forward Surge Current (Half Wave, Single Phase, 60 Hz) | I_{FSM} | 5.5 | A |
| Maximum Forward Voltage ($I_F = 0.5 A$, $T_a = 25\text{ }^\circ\text{C}$) ($I_F = 0.5 A$, $T_a = 100\text{ }^\circ\text{C}$) ($I_F = 1.0 A$, $T_a = 25\text{ }^\circ\text{C}$) ($I_F = 1.0 A$, $T_a = 100\text{ }^\circ\text{C}$) | V_F | 510 460 620 610 | mV |
| Maximum Reverse Current ($V_R = 20 V$, $T_a = 25\text{ }^\circ\text{C}$) ($V_R = 20 V$, $T_a = 100\text{ }^\circ\text{C}$) ($V_R = 40 V$, $T_a = 25\text{ }^\circ\text{C}$) ($V_R = 40 V$, $T_a = 100\text{ }^\circ\text{C}$) | I_R | 10 5 20 13 | μA mA μA mA |
| Thermal Resistance Junction to Ambient (Note 1) | $R_{\theta JA}$ | 206 | $^\circ\text{C/W}$ |
| Thermal Resistance Junction to Lead (Note 2) | $R_{\theta JL}$ | 118 | $^\circ\text{C/W}$ |
| Junction Temperature Range | T_J | - 65 to + 125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | - 65 to + 150 | $^\circ\text{C}$ |

Notes :

- (1) 1 inch pad size (1 x 0.5 inch for each lead) on FR4 board.
- (2) Device mounted on FR-4 PCB 0.013 mm.