

# MBR0540

**PRV : 40 Volts**

**I<sub>o</sub> : 500 mA**

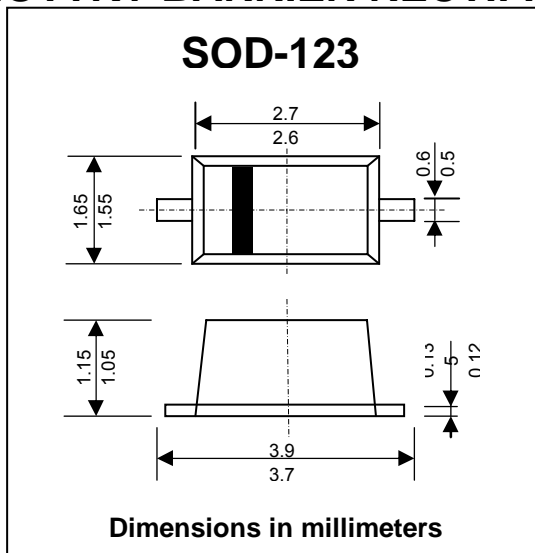
**FEATURES :**

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

**MECHANICAL DATA :**

- \* Case : SOD-123
- \* Weight : 0.01 gram (approximately)
- \* Marking Code : "SQ"

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNIT
Maximum Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	40	V
Maximum Average Rectified Forward Current,	I <sub>F(AV)</sub>	500	mA
Maximum Non-Repetitive Peak Forward Surge Current ( Half Wave, Single Phase, 60 Hz)	I <sub>FSM</sub>	5.5	A
Maximum Forward Voltage ( I <sub>F</sub> = 0.5 A , Ta = 25 °C) ( I <sub>F</sub> = 0.5 A , Ta = 100 °C) ( I <sub>F</sub> = 1.0 A , Ta = 25 °C) ( I <sub>F</sub> = 1.0 A , Ta = 100 °C)	V <sub>F</sub>	510	mV
		460	
		620	
		610	
Maximum Reverse Current ( V <sub>R</sub> = 20 V, Ta = 25 °C) ( V <sub>R</sub> = 20 V, Ta = 100 °C) ( V <sub>R</sub> = 40 V, Ta = 25 °C) ( V <sub>R</sub> = 40 V, Ta = 100 °C)	I <sub>R</sub>	10	μA
		5	mA
		20	μA
		13	mA
Thermal Resistance Junction to Ambient (Note 1)	R <sub>θJA</sub>	206	°C/W
Thermal Resistance Junction to Lead (Note 2)	R <sub>θJL</sub>	118	°C/W
Junction Temperature Range	T <sub>J</sub>	- 65 to + 125	°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 150	°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.