

# MBR0520L

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

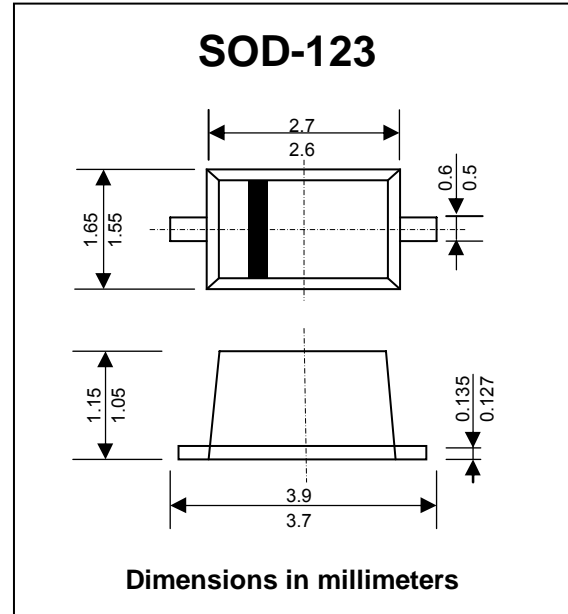
**PRV : 20 Volts**  
**I<sub>o</sub> : 0.5 Ampere**

### 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  $\mu$ 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

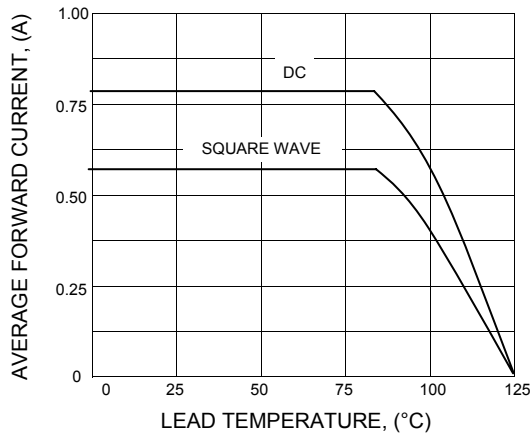


FIG.2 - TYPICAL CAPACITANCE

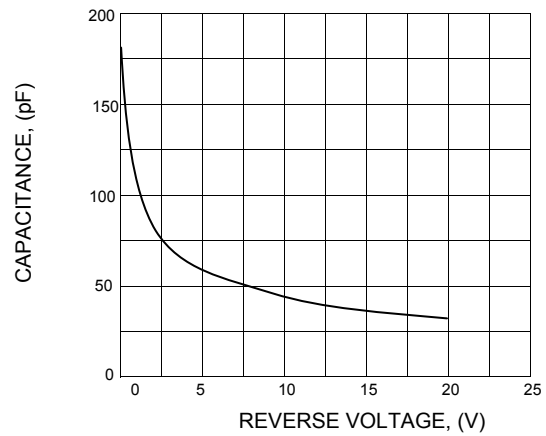


FIG.3 - TYPICAL FORWARD VOLTAGE

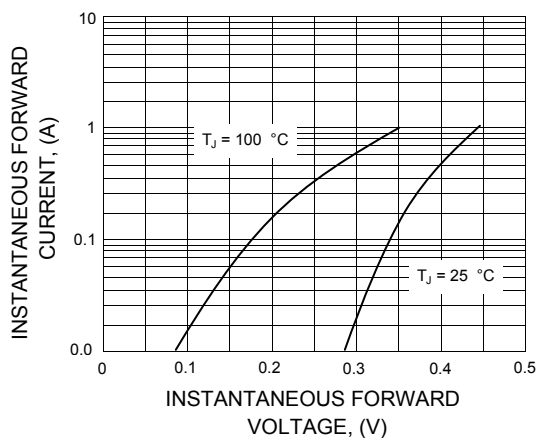


FIG.4 - TYPICAL REVERSE CURRENT

