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MBR0520L

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

PRV : 20 Volts
Io : 0.5 Ampere

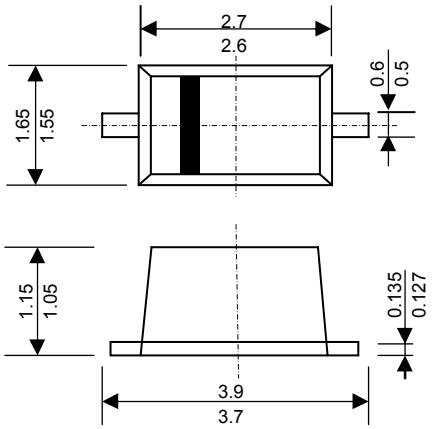
FEATURES :

* 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)

SOD-123



Dimensions in millimeters

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 °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 A (Note 1)	V_F	0.385(T_J =25 °C)	V
		0.330(T_J = 100 °C)	
Maximum Instantaneous Reverse Current	I_R	0.250(T_J =25 °C)	mA
at Rated DC Voltage = 20 V (Note 1)	$I_{R(H)}$	8.0(T_J = 100 °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 μs, Duty Cycle ≤ 2%.

(2) 1 inch square pad size (1 x 0.5 inch for each lead) on FR4 board.

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RATING AND CHARACTERISTIC CURVES (MBR0520L)

FIG.1 - DERATING CURVE

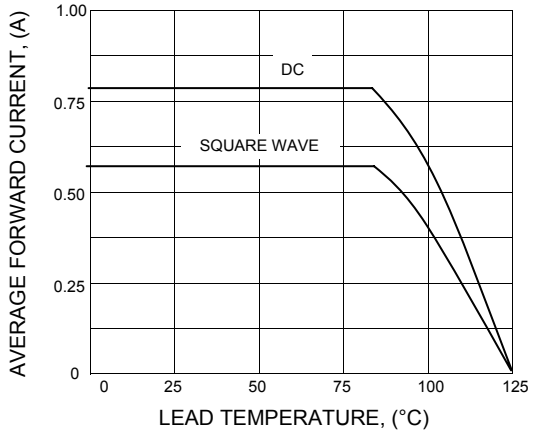


FIG.2 - TYPICAL CAPACITANCE

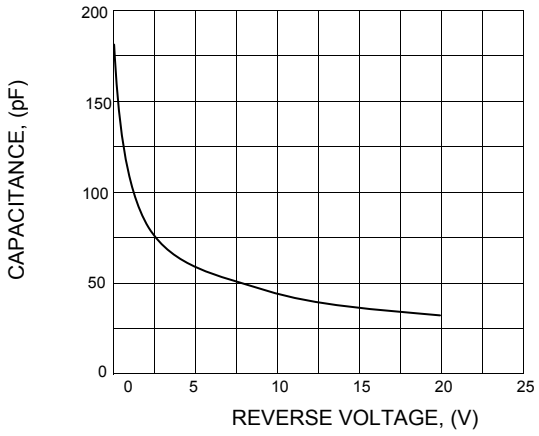


FIG.3 - TYPICAL FORWARD VOLTAGE

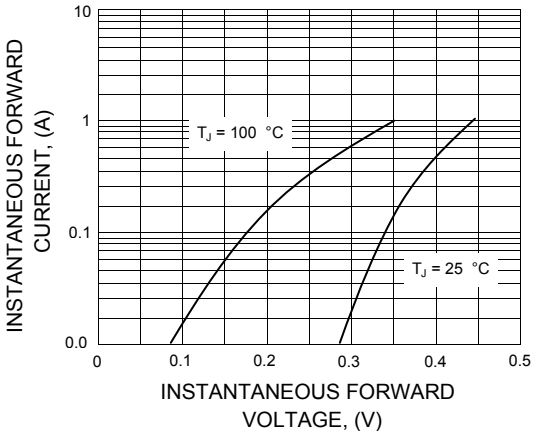
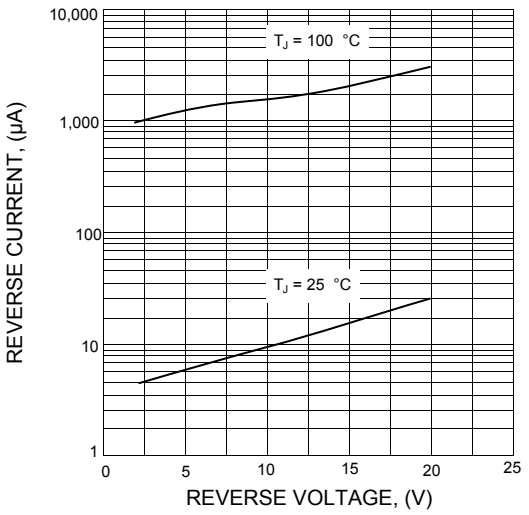


FIG.4 - TYPICAL REVERSE CURRENT



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