

MBR0530

PRV : 30 Volts
I_o : 0.5 Ampere

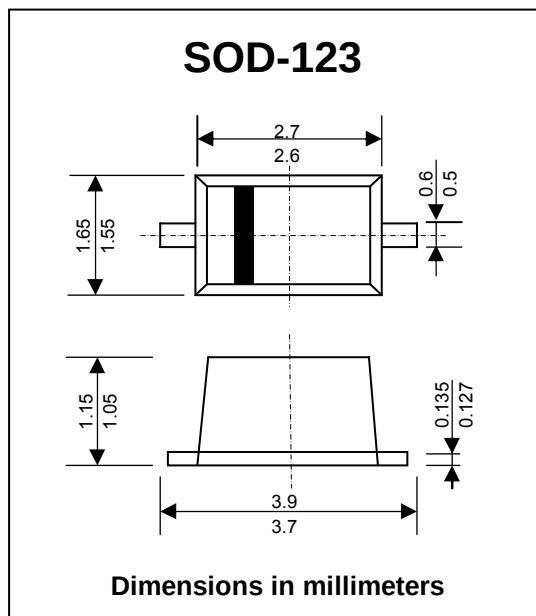
FEATURES :

- * Guardring for Stress Protection
- * 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)
- * Marking Code : "SE"

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_{RRM}	30	V
Maximum Working Peak Reverse Voltage	V_{RWM}	30	V
Maximum DC Blocking Voltage	V_R	30	V
Maximum Average Rectified Forward Current, $T_L = 100\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	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 ($I_F = 0.1\text{ A}$, $T_J = 25\text{ }^{\circ}\text{C}$) (Note 1) ($I_F = 0.5\text{ A}$, $T_J = 25\text{ }^{\circ}\text{C}$)	V_F	375 430	mV
Maximum Instantaneous Reverse Current (Note 1) (Rated DC Voltage, $T_c = 25\text{ }^{\circ}\text{C}$) ($V_R = 15\text{ V}$, $T_c = 25\text{ }^{\circ}\text{C}$)	I_R	130 20	μA
Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	206	$^{\circ}\text{C/W}$
Thermal Resistance Junction to Lead	$R_{\theta JL}$	150	$^{\circ}\text{C/W}$
Junction Temperature Range	T_J	- 65 to + 125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 125	$^{\circ}\text{C}$

Notes :

- (1) Pulse Test : Pulse Width = 300 μs , 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 (MBR0530)

FIG.1 - CURRENT DERATING CURVE

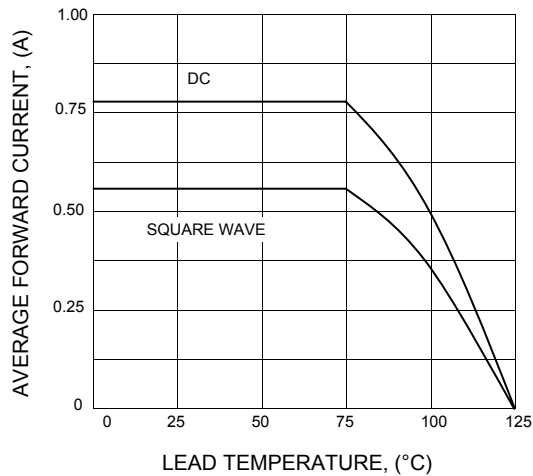


FIG.2 - TYPICAL CAPACITANCE

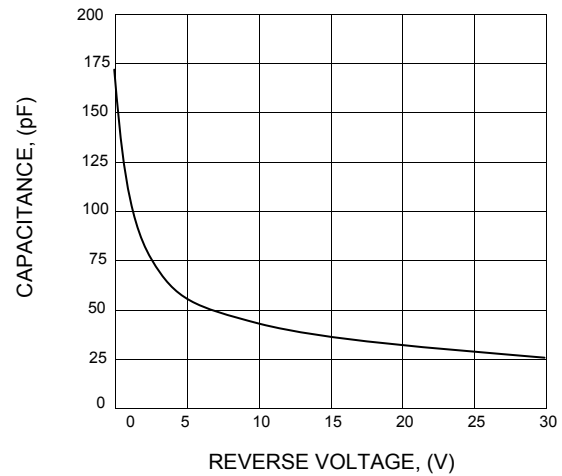


FIG.3 - TYPICAL FORWARD VOLTAGE

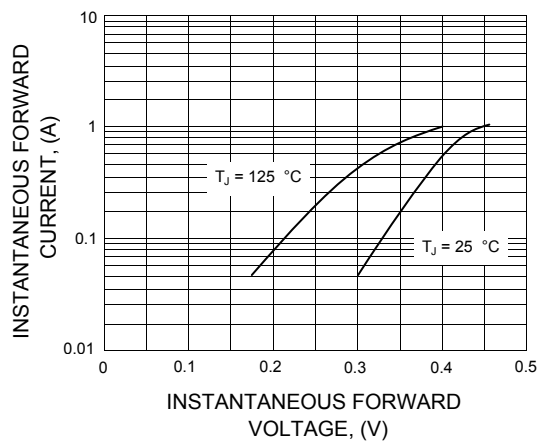


FIG.4 - TYPICAL REVERSE CURRENT

