

MBRA120ET3G

PRV : 20 Volts
Io : 1.0 Ampere

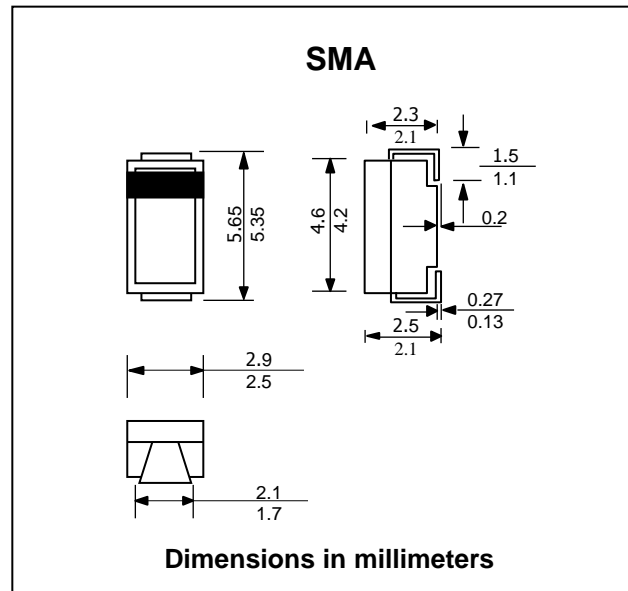
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

FEATURES :

- * Highly Stable Oxidation Passivated Junction
- * Guardring for Over - Voltage Protection
- * Optimized for Low Leakage Current
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : SMA Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.060 gram (Approximately)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (Ta=25°C)

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_{DC}	20	V
Maximum Average Forward Current at $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	1.0	A
Maximum Non-Repetitive Peak Surge Current (Surge Applied at Rate Load Conditions Halfwave, Single Phase, 60 Hz)	I_{FSM}	40	A
Maximum Instantaneous Forward Voltage (Note 1) ($I_F = 1.0\text{ A}$, $T_J = 25^\circ\text{C}$) ($I_F = 2.0\text{ A}$, $T_J = 25^\circ\text{C}$)	V_F	0.530 0.595	V
Maximum Instantaneous Reverse Current (Note 1) ($V_R = \text{rated } V_R$, $T_J = 25^\circ\text{C}$) ($V_R = \text{rated } V_R$, $T_J = 100^\circ\text{C}$)	I_R I_{RH}	10 1600	μA
Thermal Resistance Junction to Lead (Note 2)	$R_{\theta JL}$	34	$^\circ\text{C/W}$
Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	138	$^\circ\text{C/W}$
Storage/Operating Junction Temperature Range	T_{STG}, T_J	- 55 to + 150	$^\circ\text{C}$

Notes :

- (1) Pulse Test : Pulse Width $\leq 250\ \mu\text{s}$, Duty Cycle $\leq 2\%$.
- (2) Mounted on a Pad Size of 5 mm x 5 mm, PC Board FR4 (2 pads).

RATING AND CHARACTERISTIC CURVES (MBRA120ET3G)

FIG.1 - CURRENT DERATING, JUNCTION TO CASE

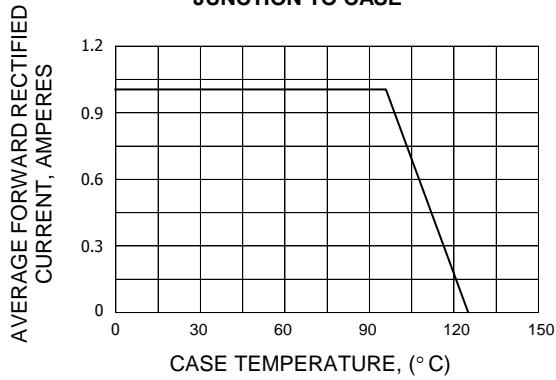


FIG.2 - TYPICAL JUNCTION CAPACITANCE

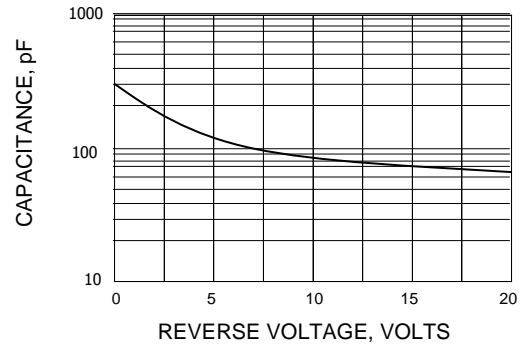


FIG.3 - MAXIMUM INSTANTANEOUS FORWARD VOLTAGE

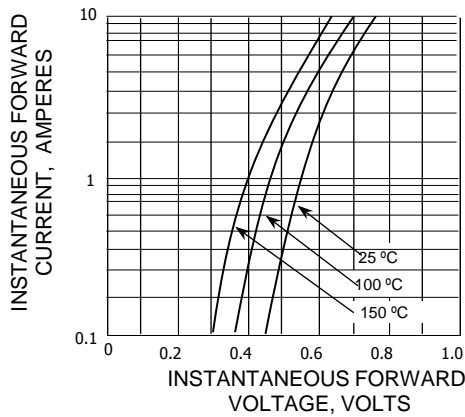


FIG. 4 - TYPICAL REVERSE CURRENT

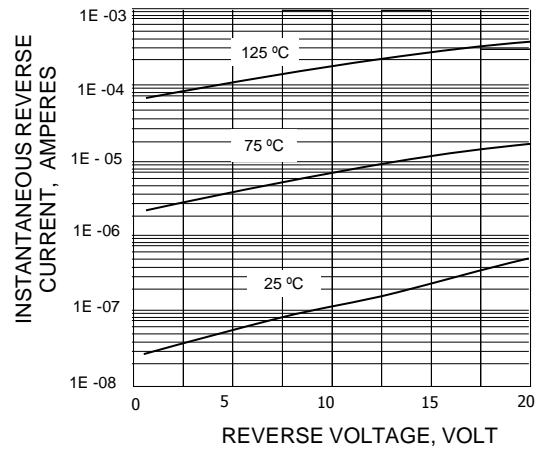


FIG. 5 - FORWARD POWER DISSIPATION

