

MBRA120ET3G

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

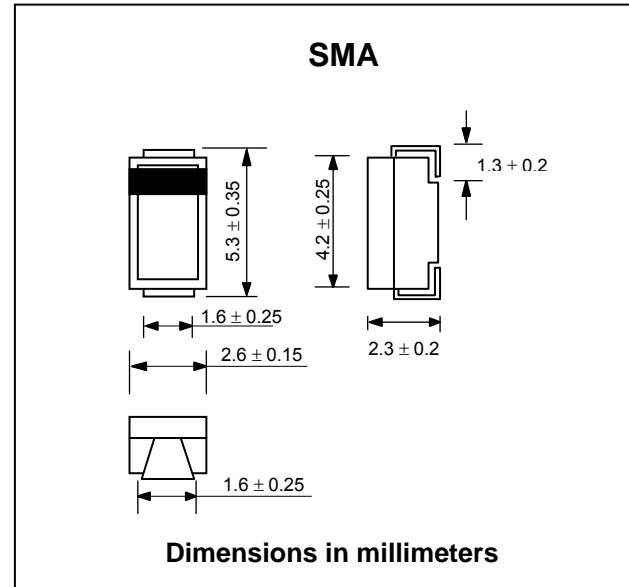
PRV : 20 Volts
Io : 1.0 Ampere

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 Reversr Voltage	V_{RWM}	20	V
Maximum DC Blocking Voltage	V_{DC}	20	V
Maximum Average Forward Current at $T_C = 125^\circ C$	$I_{F(AV)}$	1.0	V
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) ($I_F = 1.0 A, T_J = 25^\circ C$) ($I_F = 2.0 A, T_J = 25^\circ C$)	V_F	0.530 0.595	V
Maximum Instantaneous Reverse Current (Note 1) ($V_R = \text{rated } V_R, T_J = 25^\circ C$) ($V_R = \text{rated } V_R, T_J = 100^\circ C$)	I_R I_{RH}	10 1600	μA
Thermal Resistance Junction to Lead (Note 2)	$R_{\theta JL}$	34	$^\circ C/W$
Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	138	$^\circ C/W$
Storage/Operating Junction Temperature Range	T_{STG}, T_J	- 55 to + 150	$^\circ C$

Notes :

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

RATING AND CHARACTERISTIC CURVES (MBRA120ET3G)

**FIG.1 - CURRENT DERATING,
JUNCTION TO CASE**

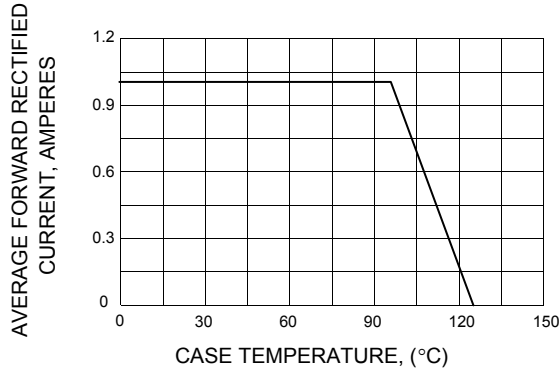
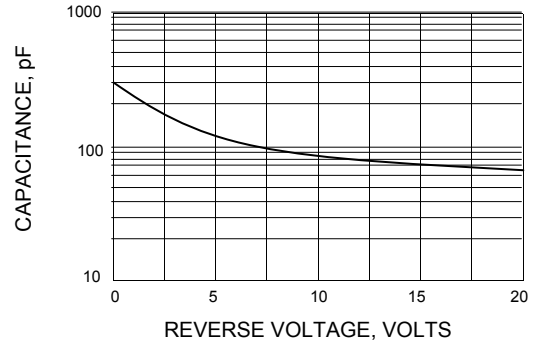


FIG.2 - TYPICAL JUNCTION CAPACITANCE



**FIG.3 - MAXIMUM INSTANTANEOUS
FORWARD VOLTAGE**

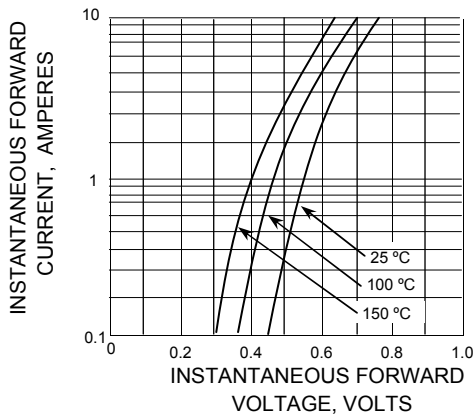


FIG. 4 - TYPICAL REVERSE CURRENT

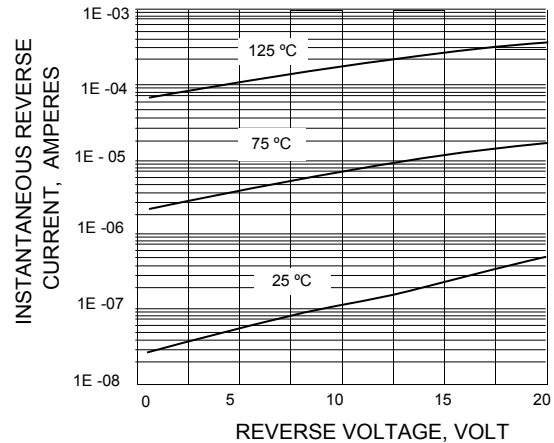


FIG. 5 – FORWARD POWER DISSIPATION

