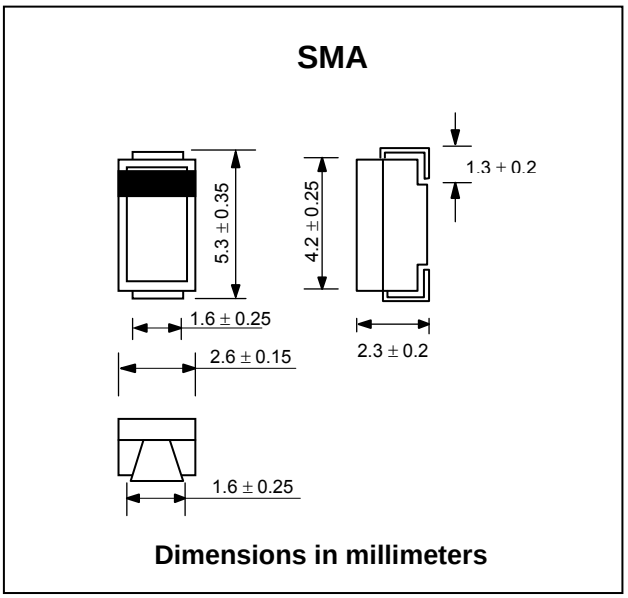
MBRA120ET3G

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 °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°C)	V_F	0.530	V
(I_F = 2.0 A , T_J = 25°C)		0.595	
Maximum Instantaneous Reverse Current (Note 1) (V_R = rated V_R , T_J = 25 °C)	I_R	10	µA
(V_R = rated V_R , T_J = 100 °C)	I_{RH}	1600	
Thermal Resistance Junction to Lead (Note 2)	$R_{\theta JL}$	34	°C/W
Thermal ResistanceJunction to Ambient (Note 2)	$R_{\theta JA}$	138	°C/W
Storage/Operating Junction Temperature Range	T_{STG} , T_J	- 55 to + 150	°C

Notes :

(1) Pulse Test : Pulse Width ≤ 250 µs, Duty Cycle ≤ 2 %.

(2) Mounted on a Pad Size of 5 mm × 5 mm, PC Board FR4 (2 pads).

RATING AND CHARACTERISTIC CURVES (MBRA120ET3G)

FIG.1 - CURRENT DERATING, JUNCTION TO CASE

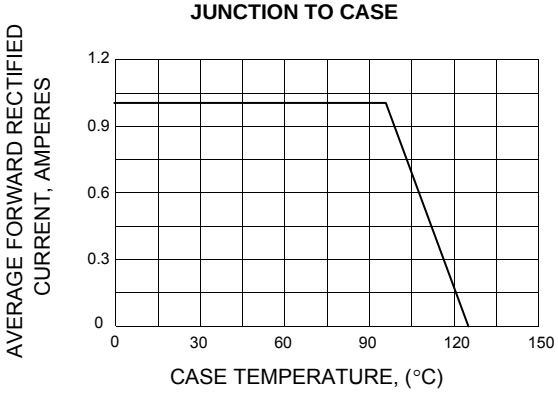


FIG.2 - TYPICAL JUNCTION CAPACITANCE

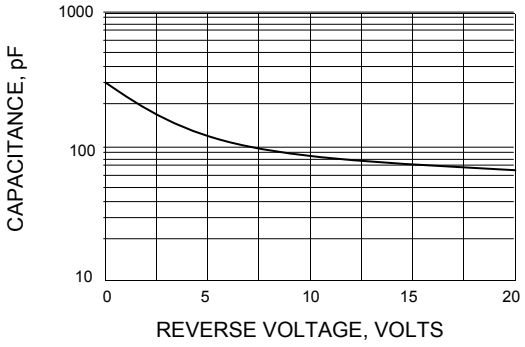


FIG.3 - MAXIMUM INSTANTANEOUS FORWARD VOLTAGE

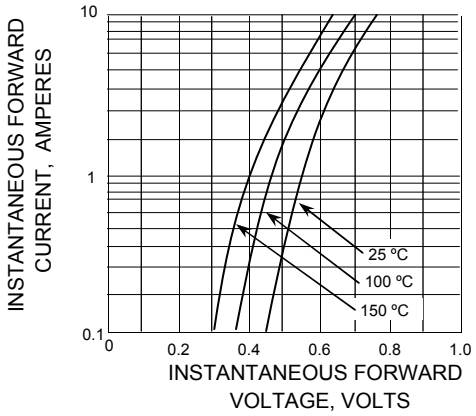


FIG. 4 - TYPICAL REVERSE CURRENT

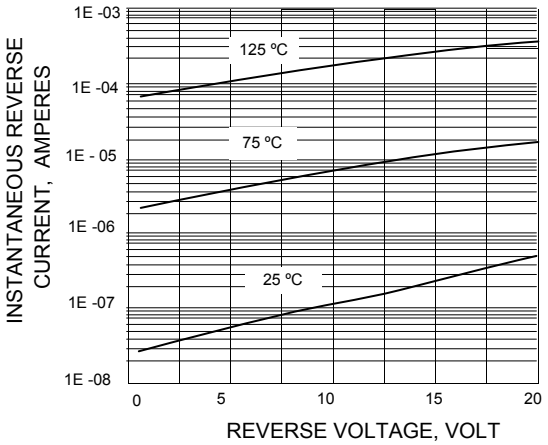


FIG. 5 – FORWARD POWER DISSIPATION