TAYCHIPST

SURFACE MOUNT SCHOTTK Y BARRIER RECTIFIER

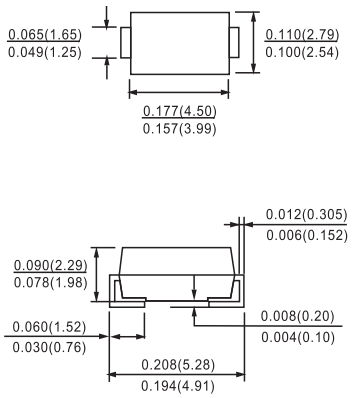
MBRA120 THRU MBRA100

20V-100V 1.0A

FEATURES

- Plastic package has Underwriters Laboratory flammability classification 94V-0
- Metal silicon junction, majority carrier conduction
- For surface mount applications
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability

DO-214AC(SMA)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- **Case:** SMA (DO-214AC), molded plastic body
- **Terminals:** solder plated, solderable per MIL-STD-750, method 2026
- **Polarity:** color band denotes cathode end

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%.

Parameter	Symbols	MBRA120	MBRA130	MBRA140	MBRA150	MBRA160	MBRA180	MBRA100	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	40							A
Maximum Forward Voltage at 1 A [1]	V_F	0.55			0.75		0.85		V
Maximum DC Reverse Current at T_a = 25 °C	I_R	0.2							mA
Rated DC Blocking Voltage [1] T_a = 100 °C		10							
Typical Thermal Resistance [2]	$R_{\theta JA}$ $R_{\theta JL}$	88 28							°C/W
Operating Junction Temperature Range	T_J	- 65 to + 125			- 65 to + 150				°C
Storage Temperature Range	T_S	- 65 to + 150							°C

[1] Pulse test: 300 μs pulse width, 1% duty cycle

[2] P.C.B mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES MARA120 THRU MBRA100

FIG.1-FORWARD CURRENT DERATING CURVE

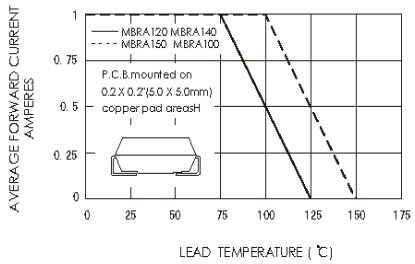


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

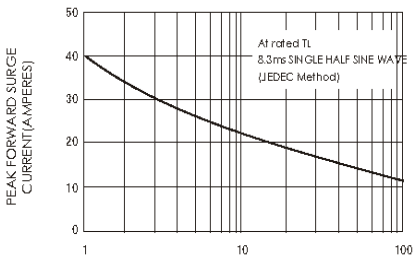


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

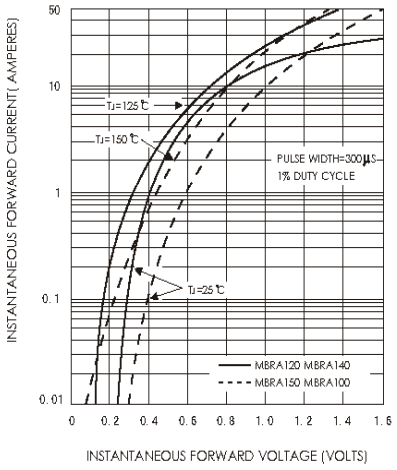


FIG.4-TYPICAL REVERSE CHARACTERISTICS

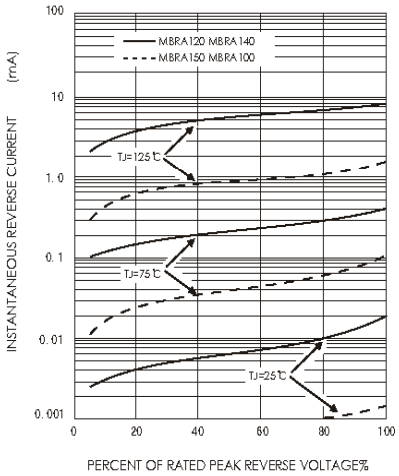


FIG.5-TYPICAL JUNCTION CAPACITANCE