

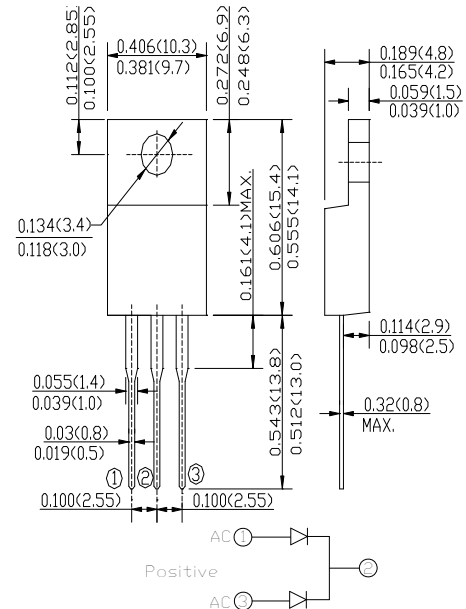
### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for over voltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
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- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- Dual rectifier construction
- High temperature soldering guaranteed:250 °C/10 seconds, 0.25"(6.35mm)from case

### Mechanical Data

- Case: JEDEC TO-220AB molded plastic body
- Terminals: Lead solder able per MIL-STD-750,method 2026
- Polarity: As marked. No suffix indicates Common Cathode, suffix "A" indicates Common Anode
- Mounting Position: Any
- Weight: 0.08ounce,2.24 grams

TO-220AB



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60HZ, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	MBR 2020 CT	MBR 2030 CT	MBR 2040 CT	MBR 2045 CT	MBR 2060 CT	MBR 2080 CT	MBR 20100 CT	MBR 20150 CT	MBR 20200 CT	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	45	60	80	100	150	200	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	31.5	42	57	71	105	140	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	45	60	80	100	150	200	Volts
Maximum average forward rectified current see Fig.1	$I_{(AV)}$	20.0									Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	200									Amp
Maximum instantaneous forward voltage at 10.0 A(Note 1 )	$V_F$	0.60			0.75		0.85		0.90	0.95	Volts
Maximum Reverse Current $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	$I_R$	0.5									mA
		30			50						
Typical Thermal Resistance (Note 2 )	$R_{\theta JC}$	3.0									°C/W
Operating Temperature Range	$T_J$	-65 to +150									°C
Storage Temperature Range	$T_{STG}$	-65 to +150									°C

#### NOTES:

1. Pulse test: 300  $\mu\text{s}$  pulse width, 1% duty cycle
2. Thermal resistance from junction to case

### RATINGS AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

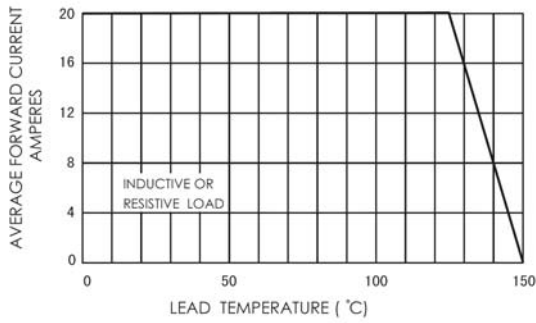


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

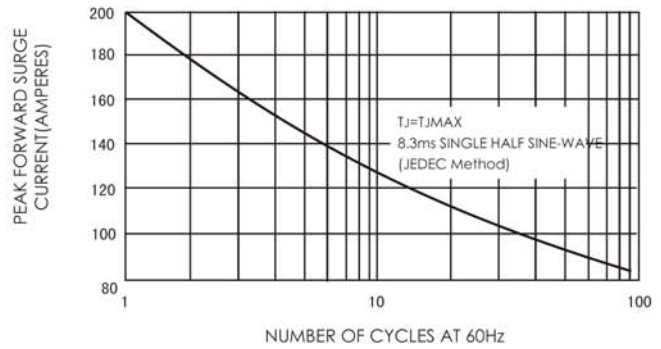


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

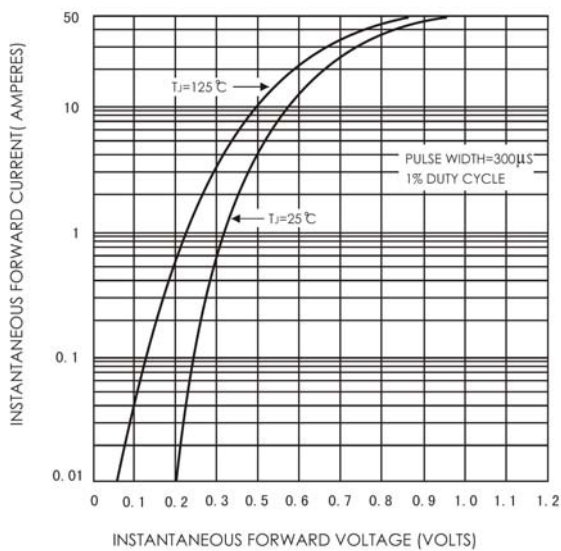


FIG.4-TYPICAL REVERSE CHARACTERISTICS

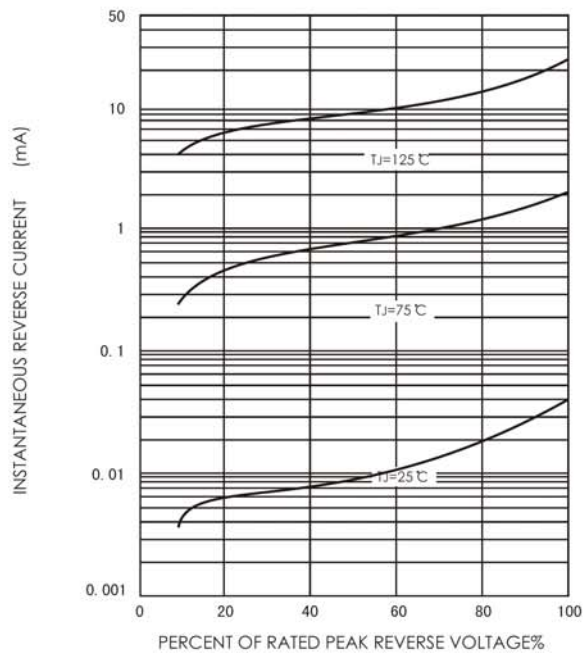


FIG.5-TYPICAL JUNCTION CAPACITANCE

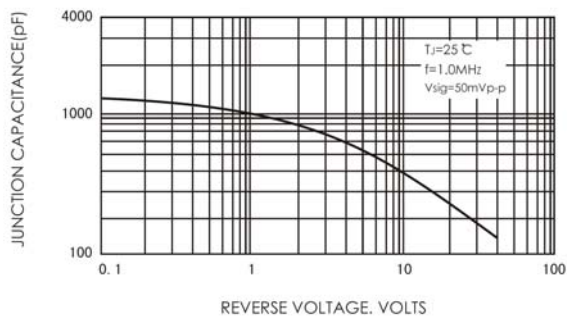


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

