MBR2020 THRU MBR20200

SCHOTTKY BARRIER RECTIFIER

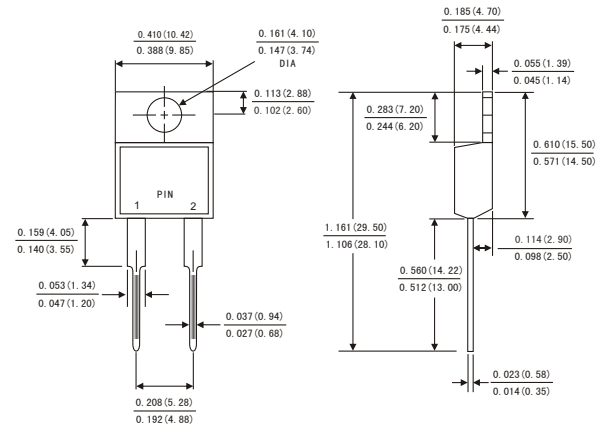
Reverse Voltage - 20 to 200 Volts
Forward Current - 20Amperes

GM GarboMicro Semiconductor

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- Dual rectifier construction
- High temperature soldering guaranteed:260° C/10 seconds,, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

TO-220AC



Dimensions in inches and (millimeters)

MECHANICAL DATA

- *Case*: JEDEC TO-220AC molded plastic body
- *Terminals*: Lead solderable per MIL-STD-750,method 2026
- *Polarity*: As marked
- *Mounting Position*: Any
- *Weight*: 0.08ounce, 2.24 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	Symbols	MBR 2020	MBR 2030	MBR 2040	MBR 2050	MBR 2060	MBR 2080	MBR 20100	MBR 20150	MBR 20200	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	Volts
Maximum average forward rectified current(see Fig.1) — Per leg	$I_{(AV)}$	10.0									Amps
Maximum average forward rectified current(see Fig.1) — Total device		20.0									
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200.0									Amps
Maximum instantaneous forward voltage at 20.0 A	V_F	0.60			0.75		0.85		0.90	0.95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) — T_c=25℃	I_R	0.2									mA
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) — T_c=125℃		30			50						
Typical thermal resistance (Note 2)	$R_{\theta JC}$	3.0									℃/W
Operating junction temperature range	T_J	-65 to+150									℃
Storage temperature range	T_{STG}	-65 to+150									℃

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Thermal resistance from junction to case

FIG.1-FORWARD CURRENT DERATING CURVE

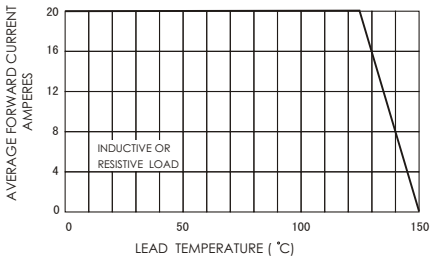


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

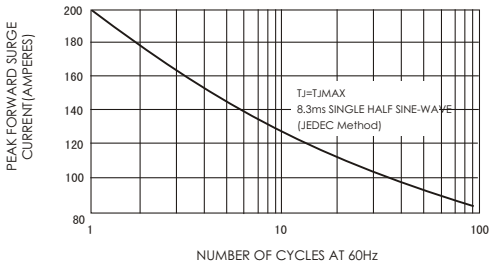


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

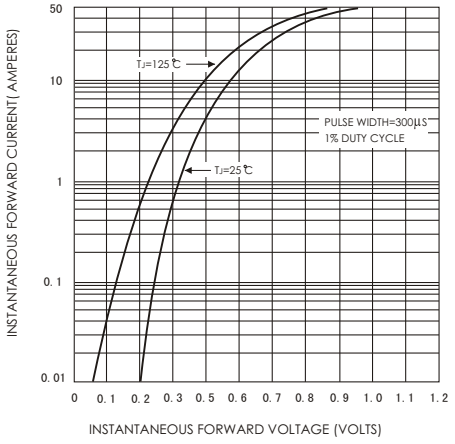


FIG.4-TYPICAL REVERSE CHARACTERISTICS

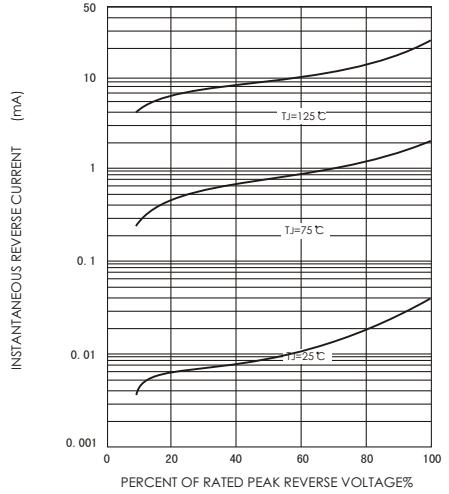


FIG.5-TYPICAL JUNCTION CAPACITANCE

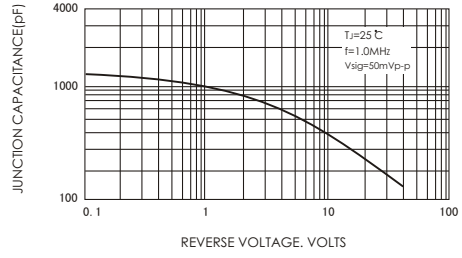


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE