



MBR30H100CT
30.0AMPS. Schottky Barrier Rectifiers
TO-220AB

Features

- ✧ UL Recognized File #E-326243
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✧ High surge current capability
- ✧ Guard-ring for overvoltage protection
- ✧ For use in low voltage - high frequency inverter, free wheeling, and polarity protection application
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs.,(2.3kg) tension
- ✧ Qualified as per AEC-Q101
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

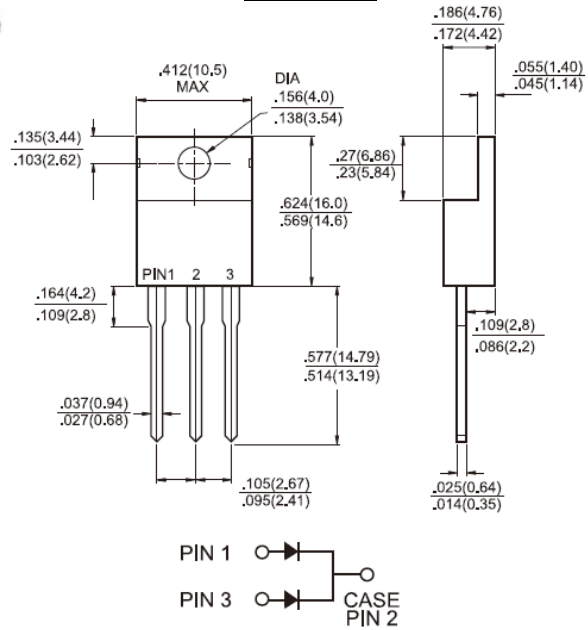
- ✧ Case: TO-220AB
- ✧ Terminals: Pure tin plated leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ Weight: 1.92 grams
- ✧ Mounting torque: 5 in- lbs, max
- ✧ Mounting position:Any

Maximum Ratings and Electrical Characteristics

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

Type Number	Symbol	MBR30H100CT	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	70	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	30	A
Peak Repetitive Forward Current(Rated VR, Square Wave, 20KHz)	$I_{F(RMS)}$	30	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	150	A
Peak Repetitive Reverse Surge Current (Note 1)	I_{RRM}	1	A
Maximum Instantaneous Forward Voltage IF=15A, TA=25°C IF=15A, TA=125°C IF=30A, TA=25°C IF=30A, TA=125°C	V_F	0.85 0.75 0.98 0.85	V
Maximum Reverse Current @ Rated VR (Note 2)	I_R	10 2	uA mA
Voltage Rate of Change,(Rated VR)	dV/dt	10000	V/us
Typical Junction Capacitance (Note 3)	Cj	400	pF
Typical Thermal Resistance (Note 4)	RθJC	2	°C/W
Operating Temperature Range	TJ	- 65 to + 175	°C
Storage Temperature Range	TSTG	- 65 to + 175	°C

- Note 1: 2.0uS Pulse Width, f=1.0KHz
 Note 2: Pulse Test : 300uS Pulse Width, 1% Duty Cycle
 Note 3: Measure at 1 MHz and Applied Reverse Voltage of 4.0V D.C.
 Note 4: Heatsink Size (4" x 6" x 0.25") Al-Plate



RATINGS AND CHARACTERISTIC CURVES (MBR30H100CT)

FIG. 1 FORWARD CURRENT DERATING CURVE

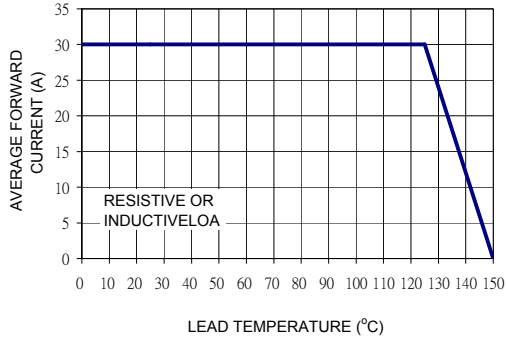


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

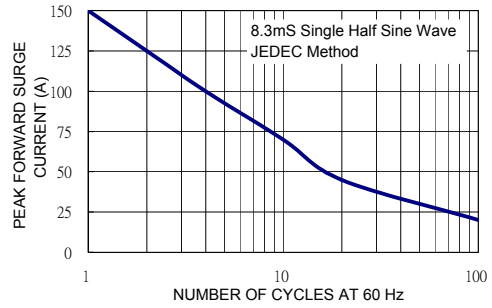


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

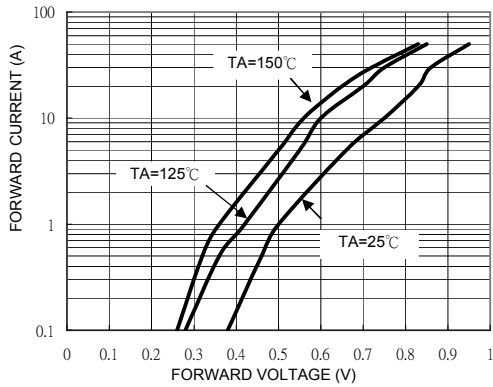


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

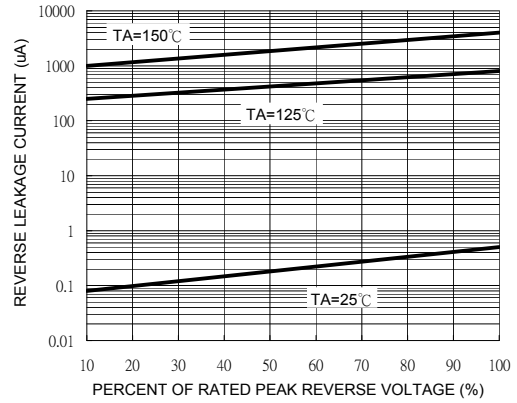


FIG. 5 TYPICAL JUNCTION CAPACITANCE

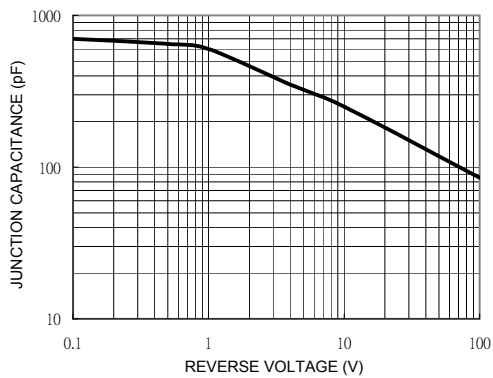


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

