



MBR20L100CT
20.0 AMP. Schottky Barrier Rectifiers
TO-220AB

Features

- ◇ Low power loss, high efficiency.
- ◇ High current capability, Low forward voltage drop.
- ◇ Plastic material used carries Underwriters Laboratory Classifications UL 94V-0
- ◇ High surge current capability.
- ◇ Guard-ring for transient protection.
- ◇ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application.
- ◇ High temperature soldering guaranteed: 260oC/10 seconds / .375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension

Mechanical Data

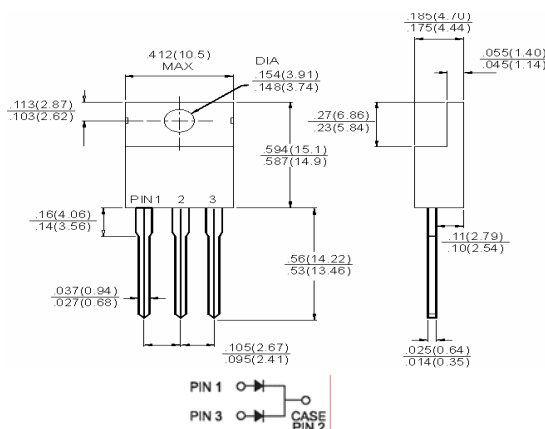
- ◇ Cases: JEDEC TO-220AB Molded plastic
- ◇ Terminal: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ◇ Polarity: As marked
- ◇ Mounting position : Any
- ◇ Mounting Torque : 5 in-lbs. max.
- ◇ Weight: 2.24 gram

Maximum Ratings and Electrical Characteristics

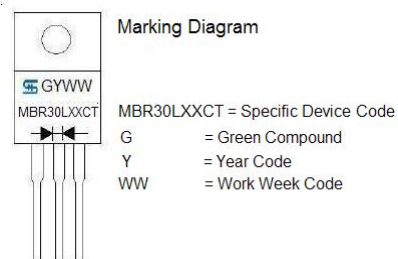
Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%



Dimensions in inches and (millimeters)



Type Number	Symbol	MBR20L1000CT	Units
Maximum Recurrent 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 .375 (9.5mm) Lead Length @TC = 120 °C	$I_{(AV)}$	20	A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz) At TC = 130 °C	I_{FRM}	20	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	220	A
Peak Repetitive Reverse surge Current (Note 1)	I_{RRM}	1.0	A
Maximum Instantaneous Forward Voltage at (Note 2) IF=10A TC =25 °C IF=10A TC =125 °C	V_F	0.77 0.67	V
Maximum DC Reverse Current @ TA=25 °C at Rated DC Blocking Voltage @ TA=100 °C	I_R	0.2 10	mA
Voltage rate of change (rated VR)	dV/dt	10,000	V/uS
Typical Junction Capacitance (Note 2)	C_j	460	pF
Typical Thermal Resistance per leg.(Note 3)	$R_{\theta JC}$	1.0	°C/W
Operating Temperature Range	T_J	-65 to +150	°C
Storage Temperature Range	T_{STG}	-65 to +175	°C

Notes: 1. 2.0Us PU;SE WIDTH. F=1.0kh, Continue 10 cycles

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

3. Thermal Resistance from junction to case Per Leg, with Heatsink size (4"x6"x0.25") Al-plate.

RATINGS AND CHARACTERISTIC CURVES (MBR20L100CT)

FIG.1 Forward Current Derating Curve

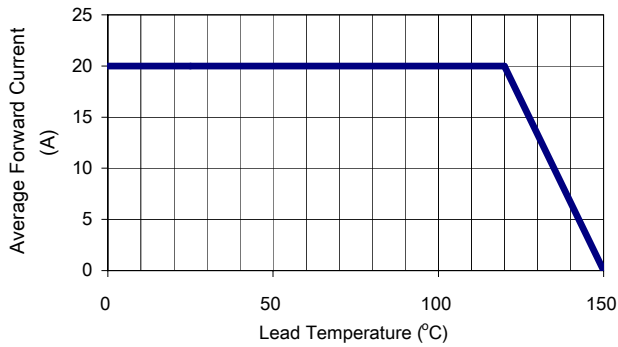


FIG 2 Maximum Forward Surge Current

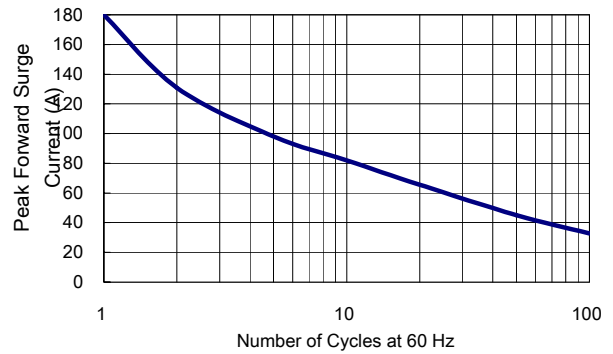


FIG 3 Typical Forward Voltage character

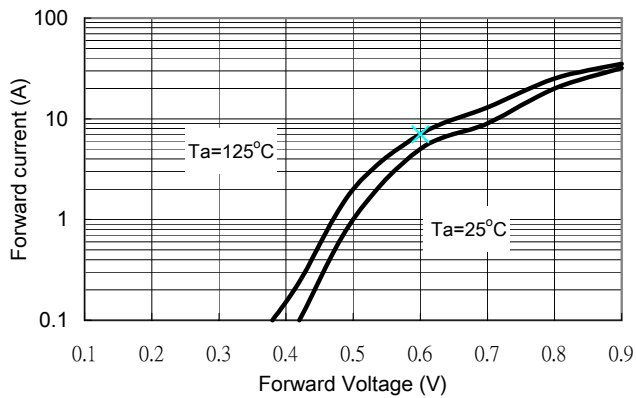


FIG 4 Typical Reverse Leakage character

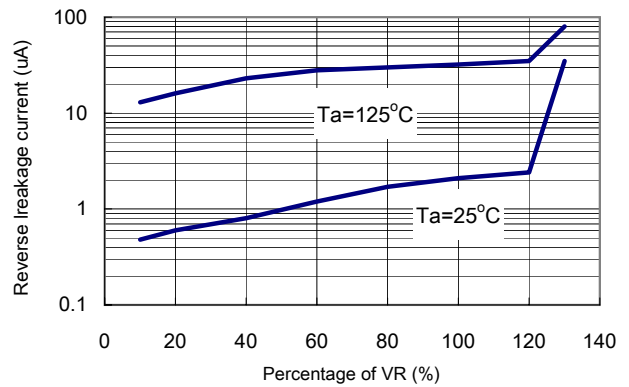


FIG 5 Typical Junction Capacitance

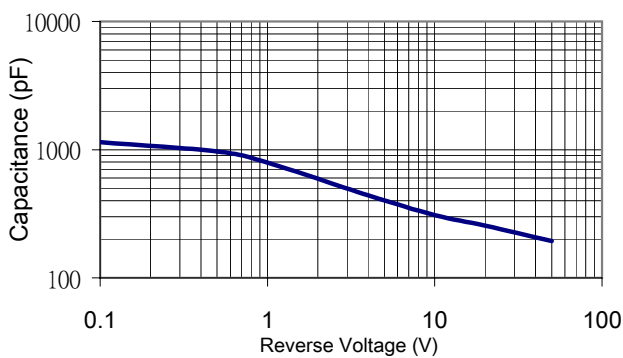


FIG 6 Typical transient Thermal Resistance

