



MBR10H100CT - MBR10H200CT

10.0AMPS. Schottky Barrier Rectifiers

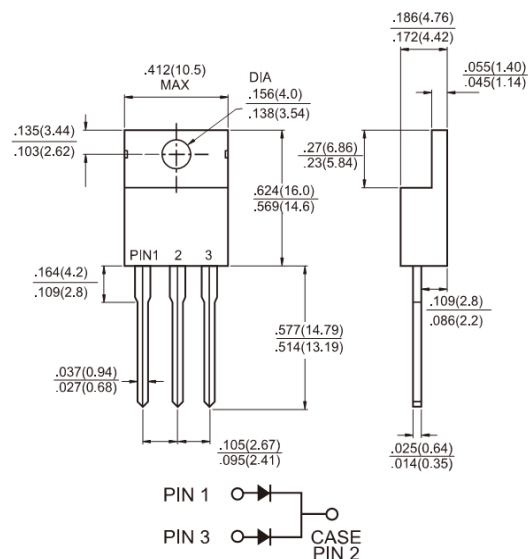
TO-220AB

Features

- ✧ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✧ Metal silicon junction, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ High surge capability
- ✧ For use in power supply - output rectification, power management, instrumentation
- ✧ Guard-ring for overvoltage protection
- ✧ High temperature soldering guaranteed: 260°C/10 seconds, 0.25", (6.35mm) from case
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Cases: JEDEC TO-220AB molded plastic body
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Mounting torque: 5 in. - lbs, max
- ✧ Weight: 1.88 grams



Dimensions in inches and (millimeters)

Marking Diagram

MBR10HXXCT = Specific Device Code

G = Green Compound

Y = Year

WW = Work Week



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	MBR 10H100CT	MBR 10H150CT	MBR 10H200CT	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	100	150	200	V
Maximum RMS Voltage	V _{RMS}	70	105	140	V
Maximum DC Blocking Voltage	V _{DC}	100	150	200	V
Maximum Average Forward Rectified Current	I _{F(AV)}	10			A
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20KHz)	I _{FRM}	10			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	120			A
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1.0		0.5	A
Maximum Instantaneous Forward Voltage at: (Note 2) IF=5A, T _A =25°C IF=5A, T _A =125°C IF=10A, T _A =25°C IF=10A, T _A =125°C	V _F	0.85 0.75 0.95 0.85	0.88 0.75 0.97 0.85		V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage @ T _A =25 °C @ T _A =125 °C	I _R	5 1			uA mA
Voltage Rate of Change (Rated V _R)	dV/dt	10,000			V/us
Maximum Typical Thermal Resistance	R _{θJC}	1.5			°C/W
Operating Junction Temperature Range	T _J	- 65 to + 175			°C
Storage Temperature Range	T _{STG}	- 65 to + 175			°C

Note 1: 2.0us Pulse Width, f=1.0 KHz

Note 2: Pulse Test : 300us Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTIC CURVES (MBR10H100CT THRU MBR10H200CT)

FIG.1- FORWARD CURRENT DERATING CURVE

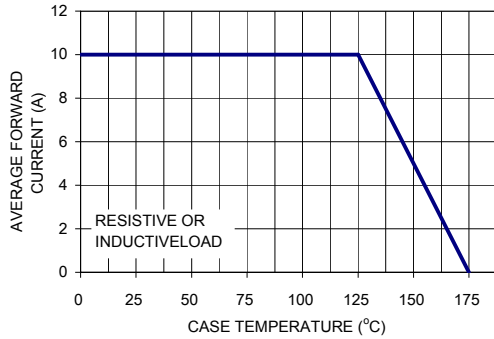


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

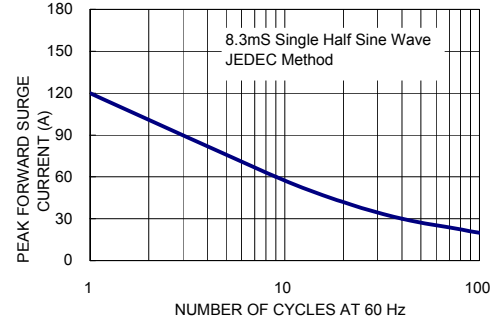


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

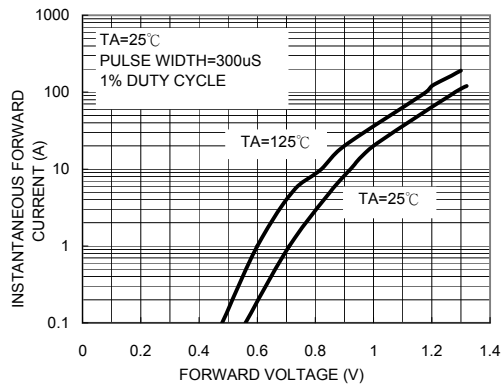


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

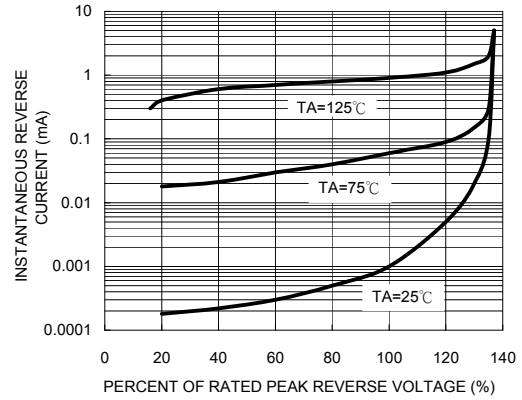


FIG. 5- TYPICAL JUNCTION CAPACITANCE

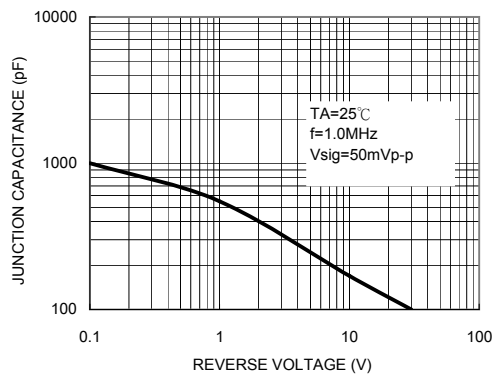


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG

