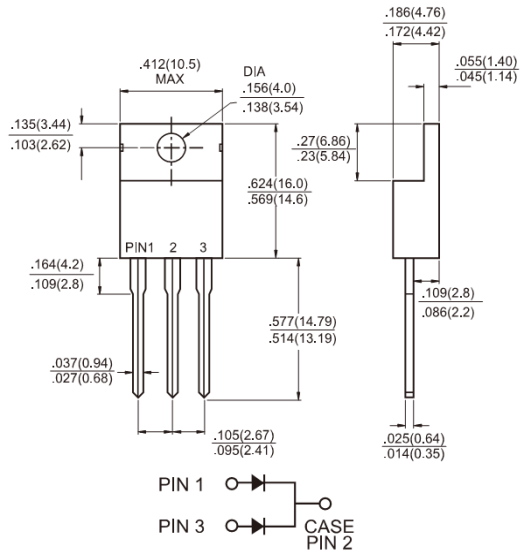




**MBR20H100CT - MBR20H200CT**  
**20.0AMPS. Schottky Barrier Rectifiers**  
**TO-220AB**

**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: 1.82 grams

**Dimensions in inches and (millimeters)**



**Marking Diagram**

- MBR20HXXCT = 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 20H100CT	MBR 20H150CT	MBR 20H200CT	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	$I_{F(AV)}$	20			A
Peak Repetitive Surge Current (Rated $V_R$ , Square Wave, 20KHz)	$I_{FRM}$	20			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	150			A
Peak Repetitive Reverse Surge Current (Note 1)	$I_{RRM}$	1.0		0.5	A
Maximum Instantaneous Forward Voltage at (Note 2) $I_F=10A, T_A=25^\circ C$ $I_F=10A, T_A=125^\circ C$ $I_F=20A, T_A=25^\circ C$ $I_F=20A, T_A=125^\circ C$	$V_F$	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 @ $T_A=25^\circ C$	$I_R$	5			uA
@ $T_A=125^\circ C$		2			
Voltage Rate of Change, (Rated $V_R$ )	$dV/dt$	10,000			V/us
Maximum Typical Thermal Resistance	$R_{\theta JC}$	1.5			$^\circ C/W$
Operating Junction Temperature Range	$T_J$	- 65 to + 175			$^\circ C$
Storage Temperature Range	$T_{STG}$	- 65 to + 175			$^\circ C$

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

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

### RATINGS AND CHARACTERISTIC CURVES (MBR20H100CT THRU MBR20H200CT)

FIG.1- FORWARD CURRENT DERATING CURVE

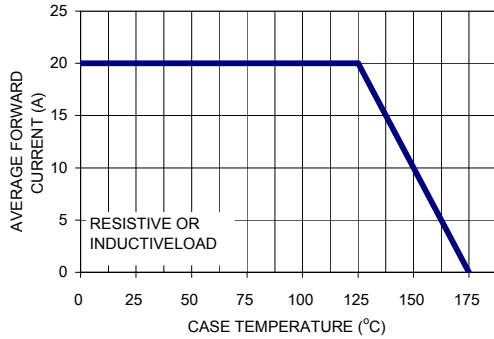


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

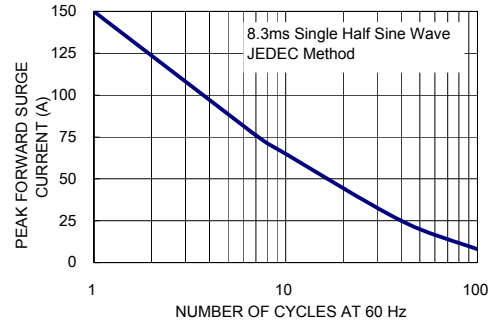


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

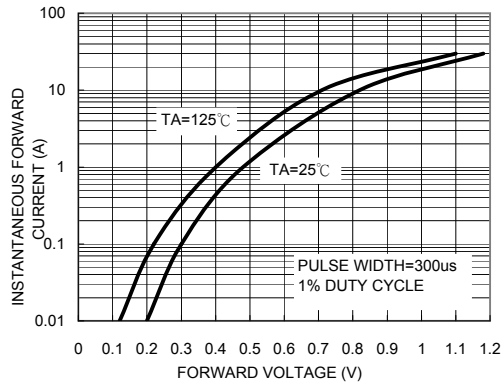


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

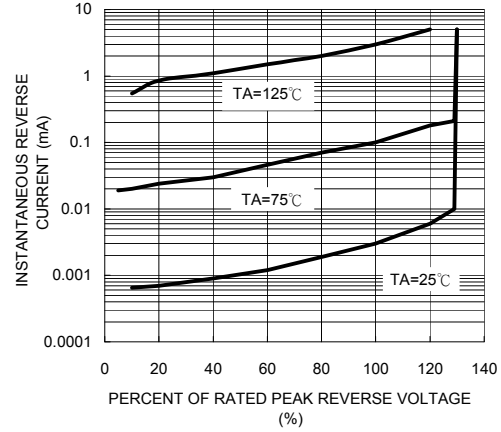


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

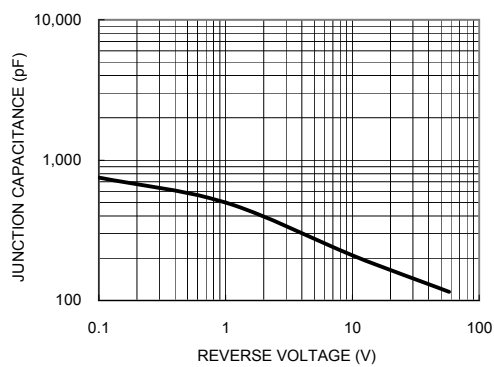


FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

