

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

Ordering Information(example)

Part No.	Package	Packing	Packing code	Packing code (Green)
MBR20H100CT	TO-220AB	50 / TUBE	C0	C0G

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	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) IF=10A, T _A =25℃ IF=10A, T _A =125℃ IF=20A, T _A =25℃ IF=20A, T _A =125℃	V _F	0.85 0.75 0.95 0.85	0.88 0.75 0.97 0.85		V
Maximum Instantaneius Reverse Current at Rated DC Blocking Voltage	I _R	5			uA
@ T _A =25℃ @ T _A =125℃		2			mA
Voltage Rate of Change,(Rated V _R)	dV/dt	10,000			V/us
Maximum Typical Thermal Resistance	R _{θJC}	1.5			℃/W
Operating Junction Temperature Range	T _J	- 65 to + 175			℃
Storage Temperature Range	T _{STG}	- 65 to + 175			℃

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

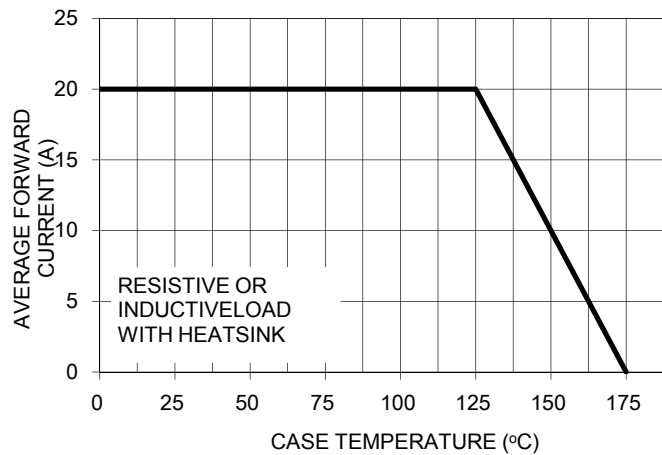


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

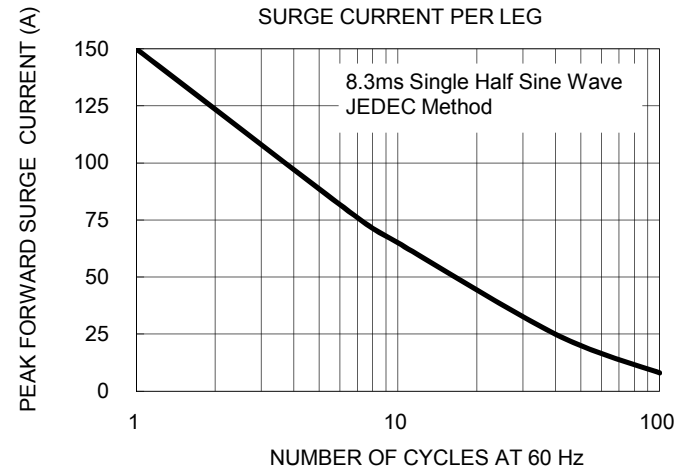


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

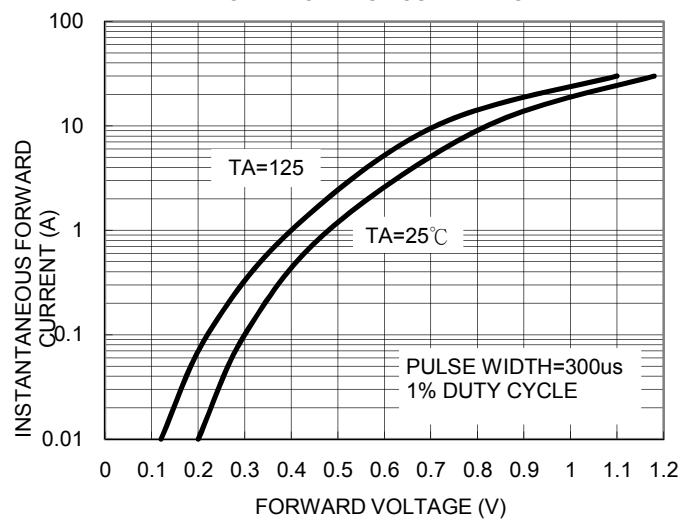


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

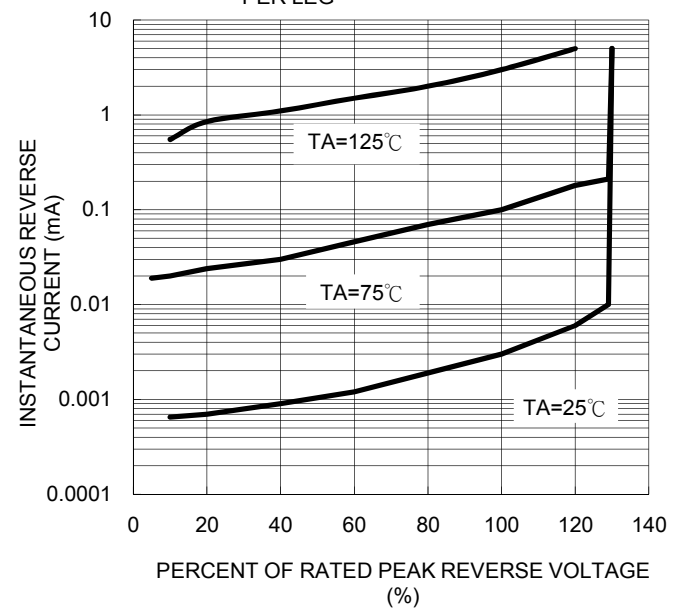


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

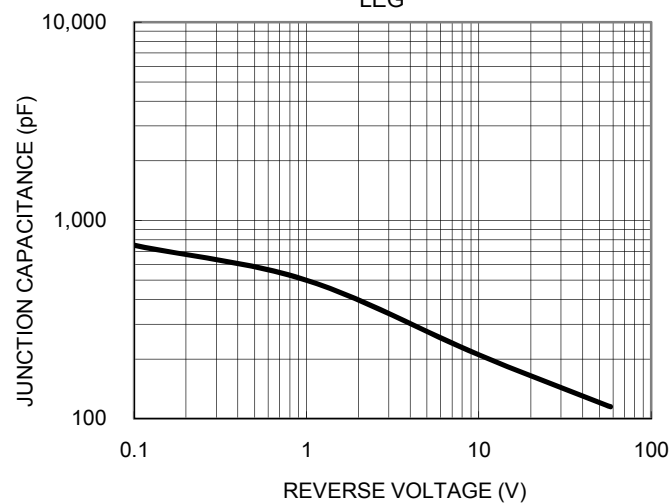
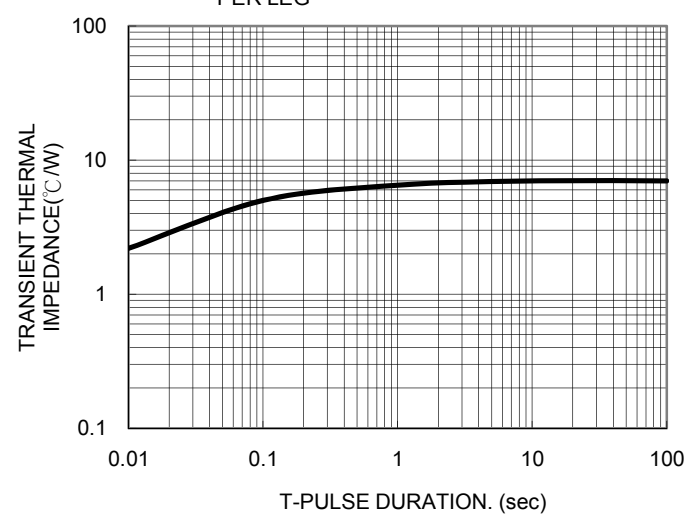


FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

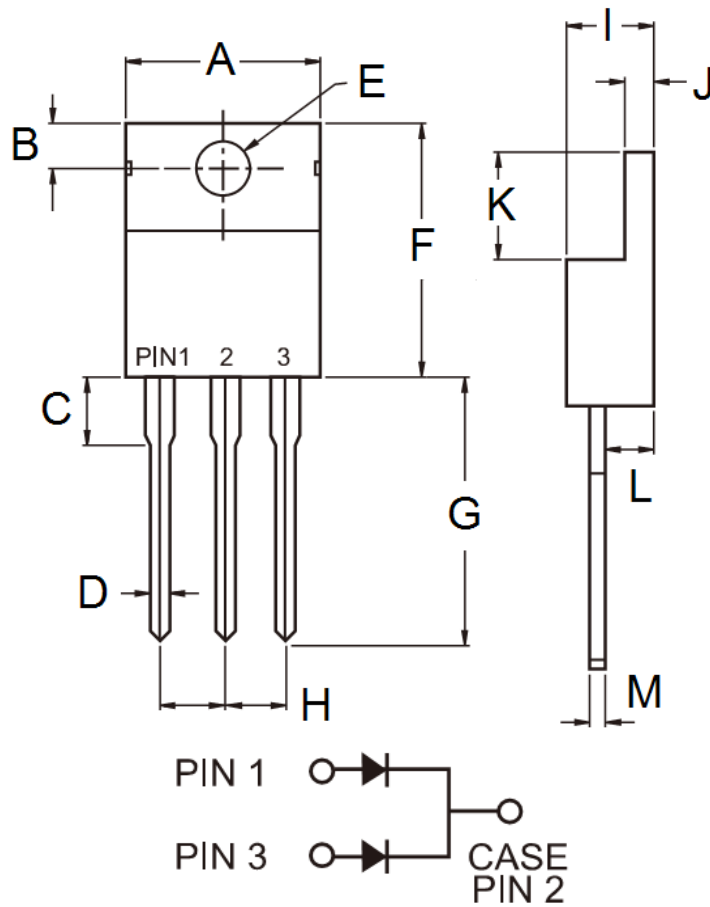


Ordering information

Part No.	Package	BULK Packing	Packing code	Packing code (Green)
MBR20HxxCT	TO-220AB	50 / TUBE	C0	C0G

Note: "xx" is Device Code from "100" thru "200".

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	2.62	3.44	0.103	0.135
C	2.80	4.20	0.110	0.165
D	0.68	0.94	0.027	0.037
E	3.54	4.00	0.139	0.157
F	14.60	16.00	0.575	0.630
G	13.19	14.79	0.519	0.582
H	2.41	2.67	0.095	0.105
I	4.42	4.76	0.174	0.187
J	1.14	1.40	0.045	0.055
K	5.84	6.86	0.230	0.270
L	2.20	2.80	0.087	0.110
M	0.35	0.64	0.014	0.025

Marking Diagram



P/N = Specific Device Code
G = Green Compound
YWW = Date Code