



**THE DATASHEET OF
MBR2040CT-G**

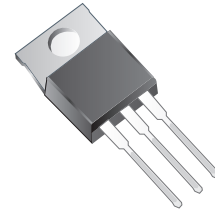


MBR2030CT-G Thru. MBR20150CT-G

Voltage: 30 to 150 V

Current: 20.0 A

RoHS Device

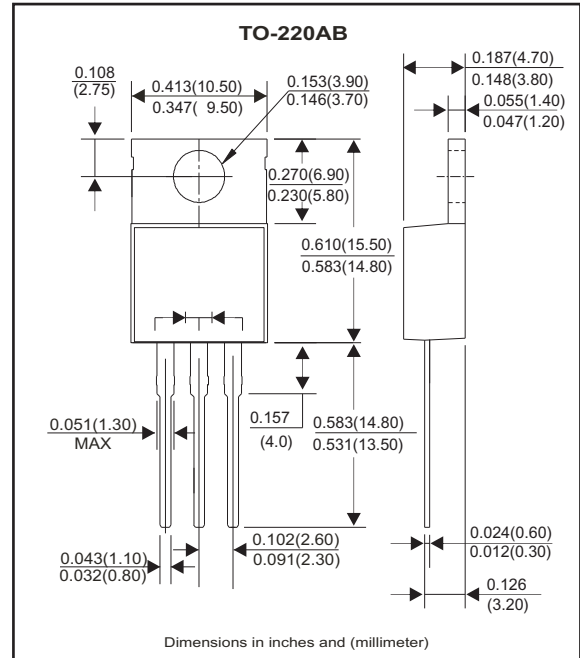


Features

- Metal of silicon rectifier, majority carrier conduction.
- Guard ring for transient protection.
- Low power loss, high efficiency.
- High current capability, low VF.
- High surge capacity.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

Mechanical Data

- Case: TO-220AB, molded plastic
- Epoxy: UL 94-V0 rate flame retardant.
- Polarity: As marked on the body.
- Mounting position: Any
- Weight: 2.24 grams



Electrical Characteristics (at TA=25°C unless otherwise noted)

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

Parameter	Symbol	MBR 2030CT-G	MBR 2040CT-G	MBR 2050CT-G	MBR 2060CT-G	MBR 2080CT-G	MBR 20100CT-G	MBR 20150CT-G	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V_{RMS}	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V_{DC}	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	20.0							A
Peak Forward Surge Current , 8.3ms Single Half Sine-Wave Super Imposed On Rated Load(JEDEC Method)	I_{FSM}	150							A
Peak Forward Voltage (Note 1)	V_F	IF=10A@ Tj= 25°C	-	0.80	0.85	0.95			V
		IF=10A@ Tj=125°C	0.57	0.70	0.75	0.85			
		IF=20A@ Tj= 25°C	0.84	0.95	0.95	1.05			
		IF=20A@ Tj=125°C	0.72	0.85	0.85	0.95			
Maximum DC Reverse Current at Rate DC Blocking Voltage	I_R	@ Tj= 25°C	0.10	0.10	0.10	0.10			mA
		@ Tj= 125°C	15.0	10.0	7.50	5.00			
Typical Junction Capacitance (Note2)	C_J	400	320						pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	1.50				3.50			°C/W
Operating Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +175							°C

NOTES:

1. 300us pulse width, 2% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to case.

RATING AND CHARACTERISTIC CURVES (MBR2030CT-G Thru. MBR20150CT-G)

FIG.1- Forward Current Derating Curve

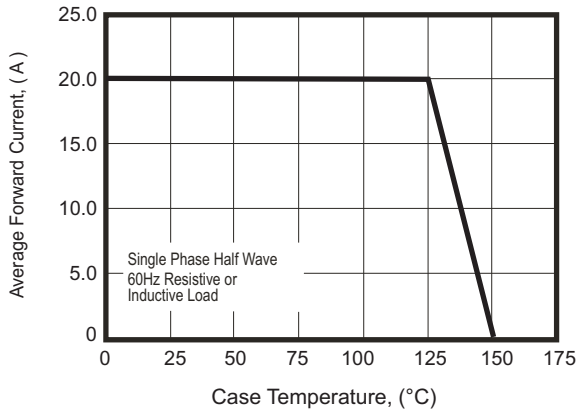


FIG.2- Maximum Non-Repetitive Surge Current

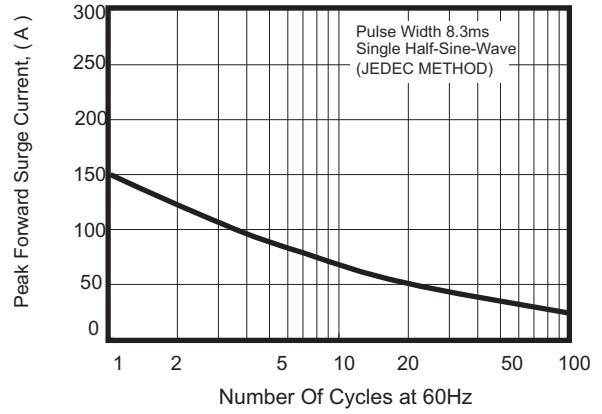


FIG.3- Typical Revers Characteristics

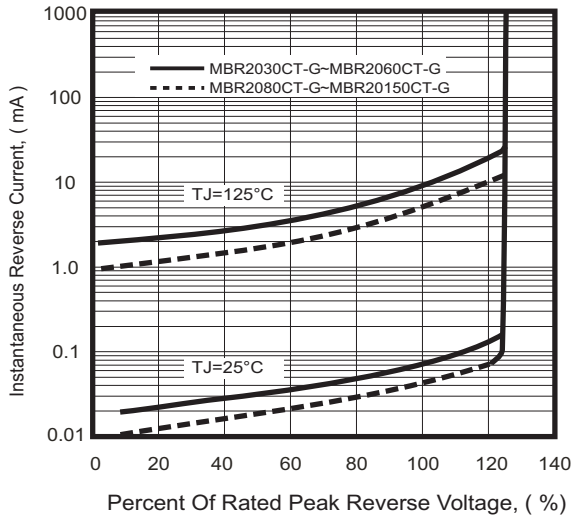


FIG.4- Typical Forward Characteristics

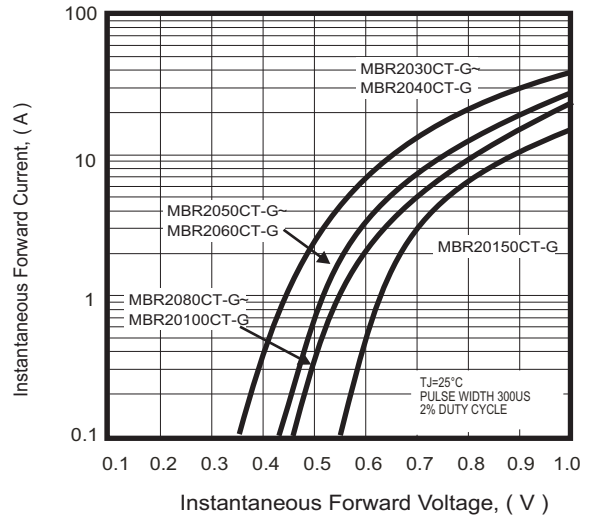
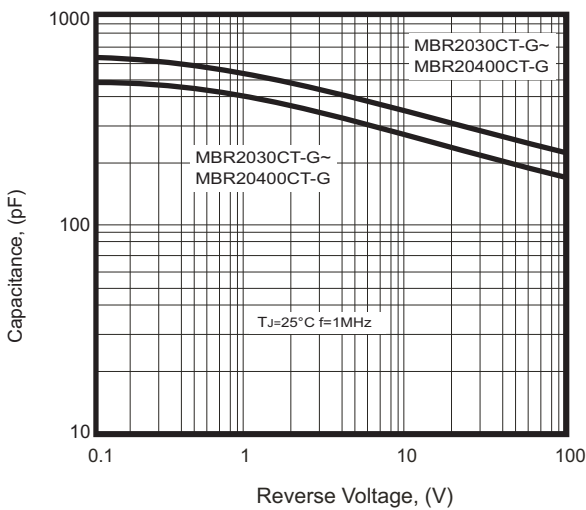
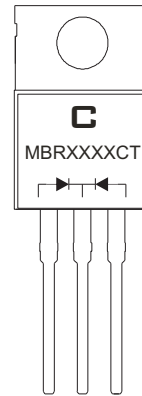


FIG.5- Typical Junction Capacitance



Marking Code

Part Number	Marking code
MBR2030CT-G	MBR2030CT
MBR2040CT-G	MBR2040CT
MBR2050CT-G	MBR2050CT
MBR2060CT-G	MBR2060CT
MBR2080CT-G	MBR2080CT
MBR20100CT-G	MBR20100CT
MBR20150CT-G	MBR20150CT




XXXX = Product type marking code
 C = Comchip Logo

Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
TO-220AB	50	8,000

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