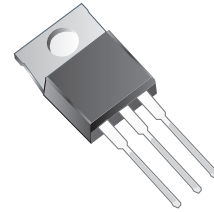


MBR2030CT-G Thru. MBR20150CT-G

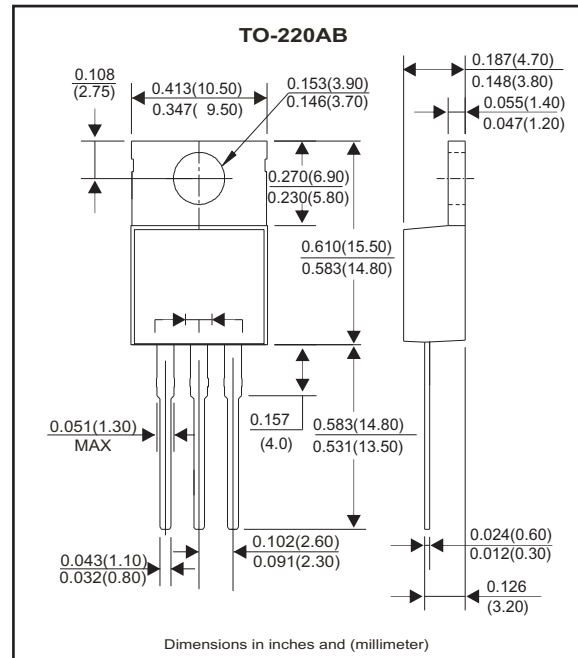
Voltage: 30 to 150 V
Current: 20.0 A
RoHS Device


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 $T_A=25^{\circ}\text{C}$ 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)	IF=10A@ T _J = 25°C	V _F	-		0.80		0.85		0.95	V
	IF=10A@ T _J =125°C		0.57		0.70		0.75		0.85	
	IF=20A@ T _J = 25°C		0.84		0.95		0.95		1.05	
	IF=20A@ T _J =125°C		0.72		0.85		0.85		0.95	
Maximum DC Reverse Current at Rate DC Blocking Voltage	@ T _J = 25°C	I _R	0.10		0.10		0.10		0.10	mA
	@ T _J = 125°C		15.0		10.0		7.50		5.00	
Typical Junction Capacitance (Note2)	C _J	400			320				pF	
Typical Thermal Resistance (Note3)	R _{θJC}	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:

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

REV:B

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

FIG.1- Forward Current Derating Curve

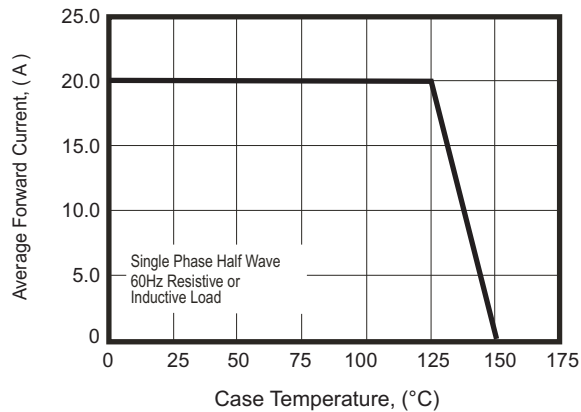


FIG.2- Maximum Non-Repetitive Surge Current

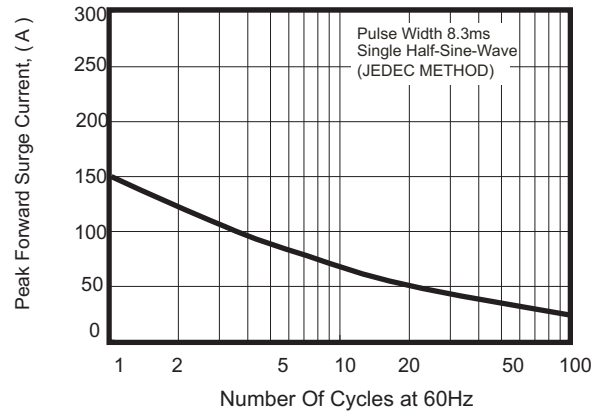


FIG.3- Typical Rever Characteristics

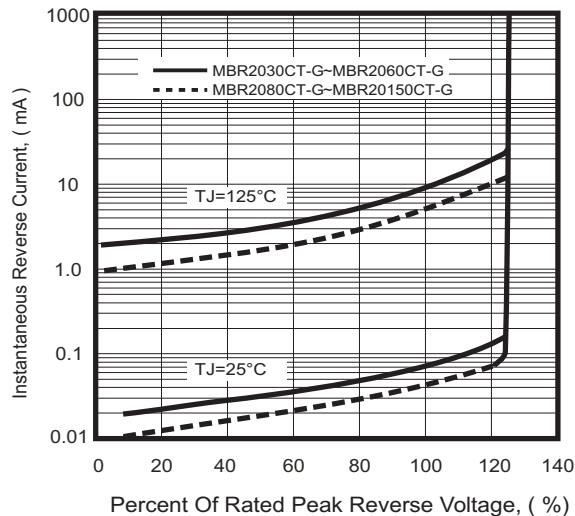


FIG.4- Typical Forward Characteristics

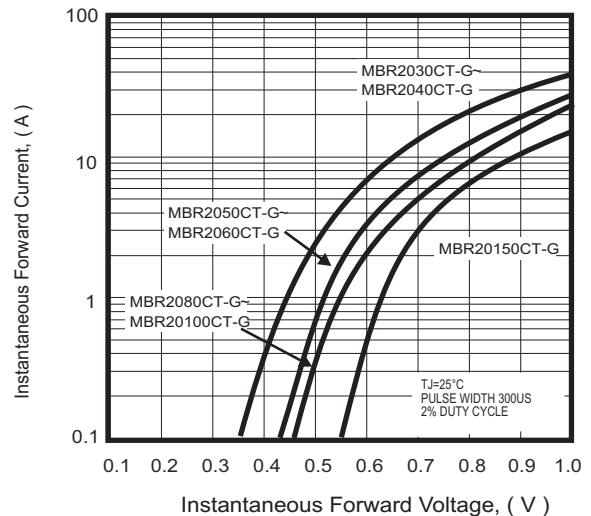
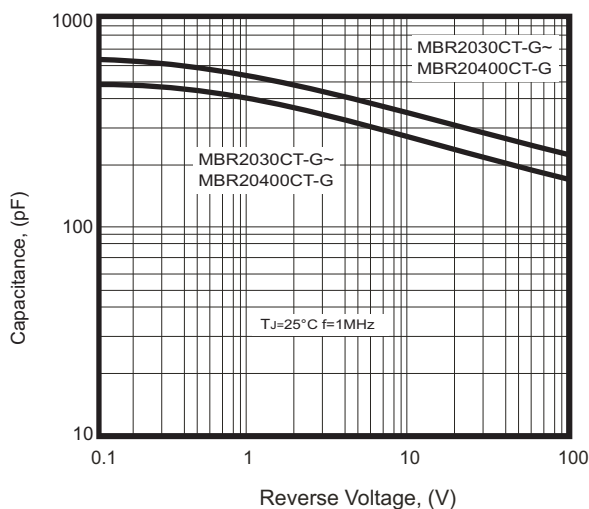
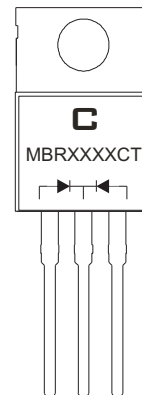


FIG.5- Typical Junction Capacitance



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