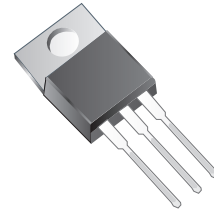


MBRF1030CT-G Thru. MBRF10100CT-G

Voltage: 30 to 100 V

Current: 10.0 A

RoHS Device

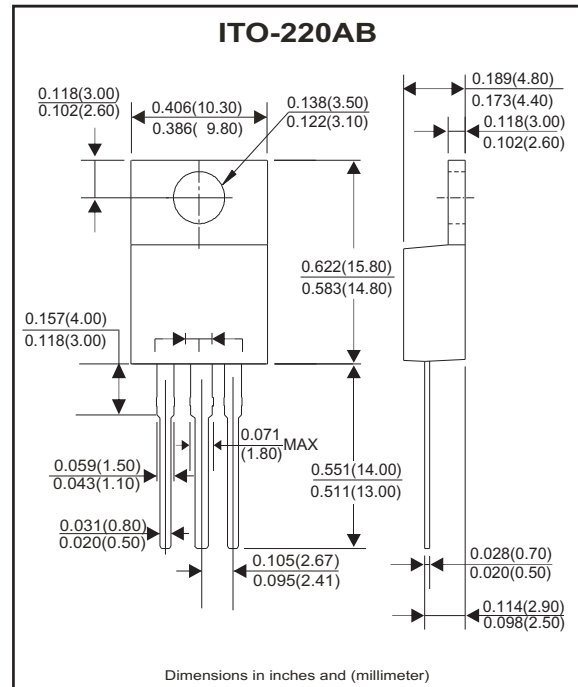


Features

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

Mechanical Data

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



Maximum Ratings and Electrical Characteristics

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	MBRF 1030CT-G	MBRF 1040CT-G	MBRF 1045CT-G	MBRF 1050CT-G	MBRF 1060CT-G	MBRF 1080CT-G	MBRF 10100CT-G	Unit
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	30	40	45	50	60	80	100	V
Maximum RMS Voltage	V _{RMS}	21	28	31.5	35	42	56	70	V
Maximum DC Blocking Voltage	V _{DC}	30	40	45	50	60	80	100	V
Maximum Average Forward Rectified Current (See Fig.1)	I _(AV)	10							A
Peak Forward Surge Current , 8.3ms Single Half Sine-Wave Super Imposed On Rated Load(JEDEC Method)	I _{FSM}	120							A
Peak Forward Voltage (Note 1)	IF=5A@ T _J = 25°C	V _F	0.70			0.80		0.85	V
	IF=5A@ T _J =125°C		0.57			0.65		0.75	
	IF=10A@ T _J = 25°C		0.80			0.90		0.95	
	IF=10A@ T _J =125°C		0.70			0.75		0.85	
Maximum DC Reverse Current at Rate DC Blocking Voltage	@ T _J = 25°C	I _R	0.1						
	@ T _J = 125°C		15						
Typical Junction Capacitance (Note2)	C _J	170			220		300		pF
Typical Thermal Resistance (Note3)	R _{θJC}	3.0					3.0		°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.

RATING AND CHARACTERISTIC CURVES (MBRF1030CT-G Thru. MBRF10100CT-G)

FIG.1 - Forward Current Derating Curve

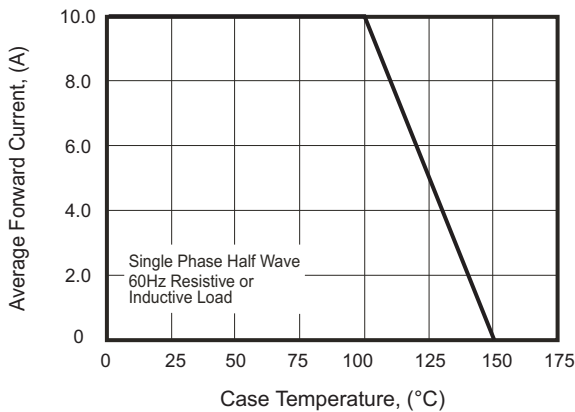


FIG.2 - Maximum Non-Repetitive Surge Current

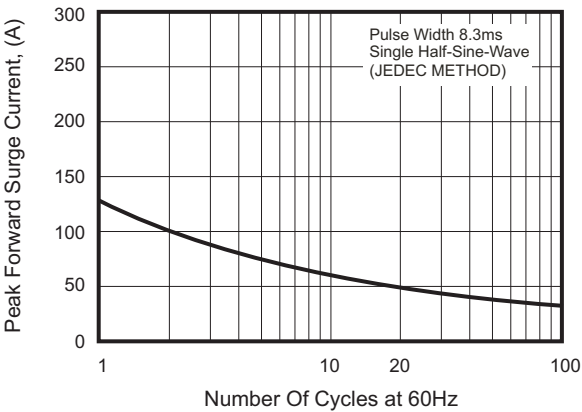


FIG.3 - Typical Rever Characteristics

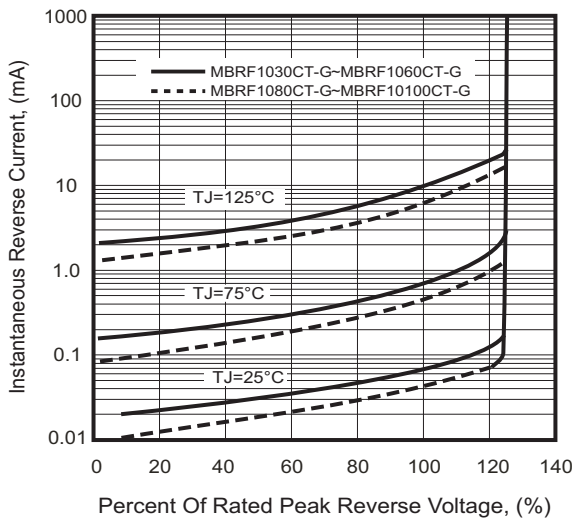


FIG.4 - Typical Forward Characteristics

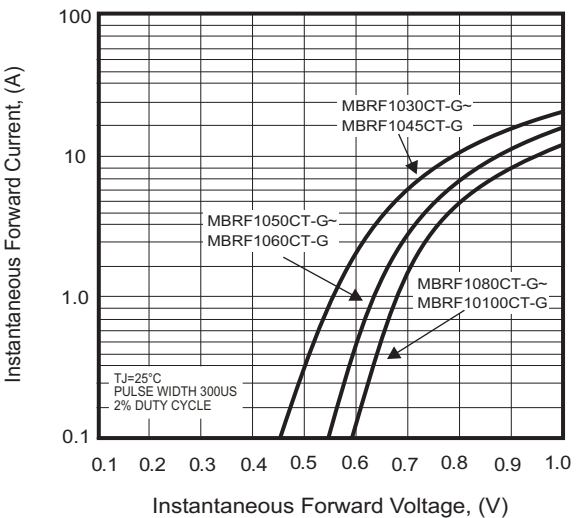
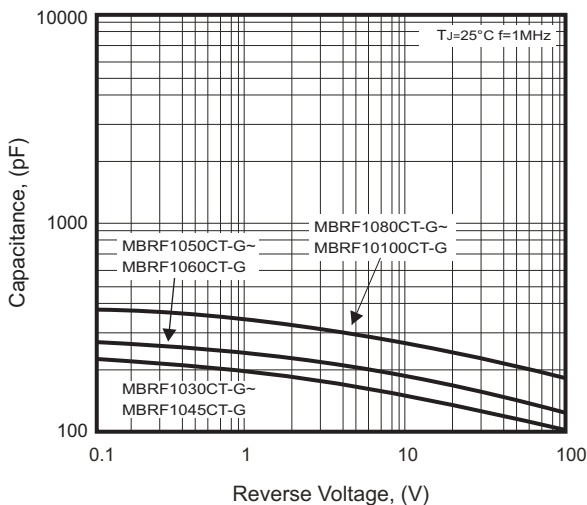
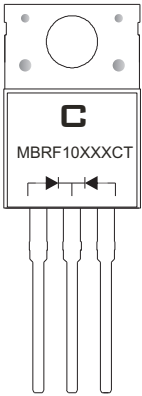


FIG.5 - Typical Junction Capacitance



Marking Code

Part Number	Marking code
MBRF1030CT-G	MBRF1030CT
MBRF1040CT-G	MBRF1040CT
MBRF1045CT-G	MBRF1045CT
MBRF1050CT-G	MBRF1050CT
MBRF1060CT-G	MBRF1060CT
MBRF1080CT-G	MBRF1080CT
MBRF10100CT-G	MBRF10100CT



XX / XXX = Product type marking code
C = Compchip Logo

Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
ITO-220AB	50	2,000