

MBRF2040CT-HF Thru. MBRF2060CT-HF

Forward current: 20A

Reverse voltage: 40 to 60V

RoHS Device

Halogen Free

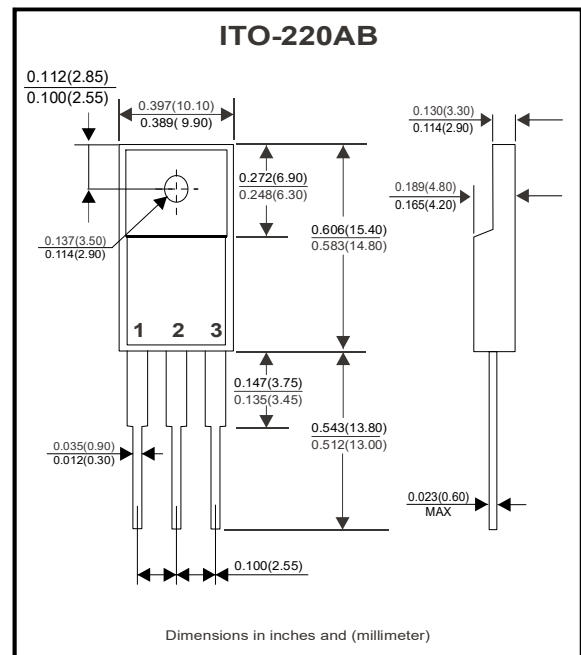


Features

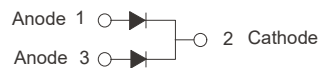
- High Current Capability
- Low Switching Noise
- High Surge Capability
- Low Power Loss & High Efficiency
- Guard Ring Protection
- Pd-free lead plating & Halogen-free part

Mechanical data

- Molded Plastic Low profile ITO-220AB
- Plastic materials used carries underwriters laboratory flammability classification UL94V-0
- Lead Temperature for Soldering Purposes : 265°C Max. for 10 Seconds
- Device Weight : Approximated 2.25 grams



Circuit diagram



Maximum Ratings and Electrical Characteristics (at TA=25°C unless otherwise specified)

Parameter	Symbol	MBRF 2040CT	MBRF 2060CT	Units
DC Blocking Voltage	V_{RM}			V
Working Peak Reverse Voltage	V_{RWM}	40	60	
Peak Repetitive Reverse Voltage	V_{RRM}			
Average Rectified Output Current (Total Device)	I_O	20		A
Non-Repetitive Peak Forward Surge Current (Per Leg) (Surge applied at rated load conditions half wave, single phase, 60Hz)	I_{FSM}	150		A
Instantaneous Forward Voltage (Per Leg) $I_F = 10A, T_A = 25^\circ C$	V_F	0.65	0.8	V
Instantaneous Reverse Current (Per Leg) $V_R = V_{RRM}, T_A = 25^\circ C$	I_R	0.1		mA
$V_R = V_{RRM}, T_A = 125^\circ C$		10		

Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Units
Maximum Thermal Resistance (Junction to Case)	$R\theta_{JC}$	2.0	$^\circ\text{C} / \text{W}$
Operating & Storage Junction Temperature	T_J	175	$^\circ\text{C}$
	T_{STG}	- 65 to +175	

NOTE : 1. Thermal resistance from junction to case per leg, with heatsink(1.35" x 0.95" x 0.18") Al-plate.

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise specified)

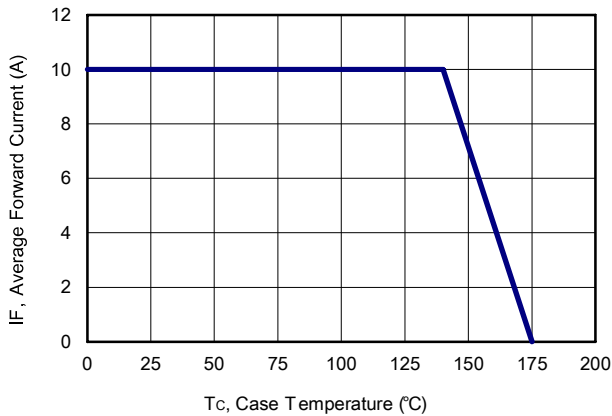


Figure 1: Current Derating Curves

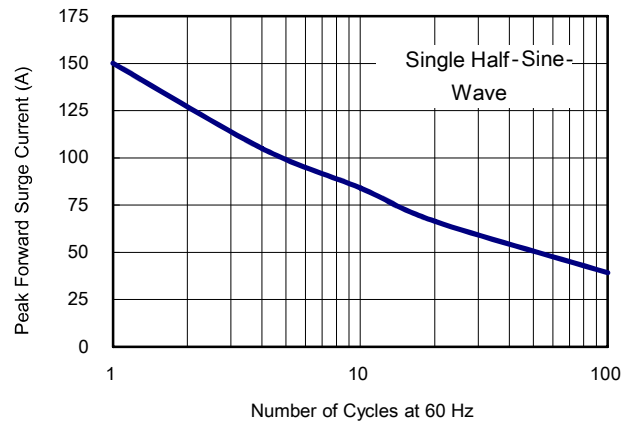


Figure 2: Peak Forward Surge Current (Per Leg)

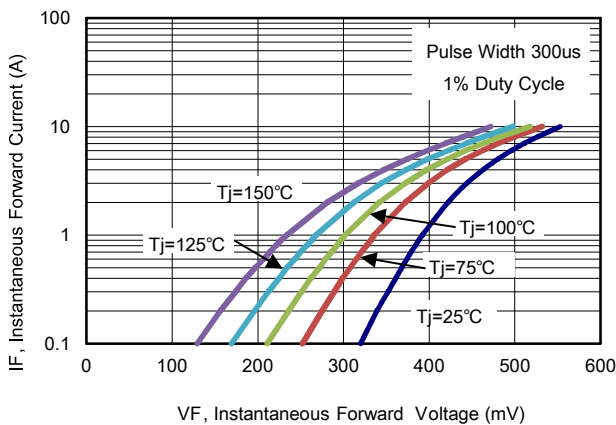


Figure 3: Typical Forward Characteristics (MBRF2040CT) (Per Leg)

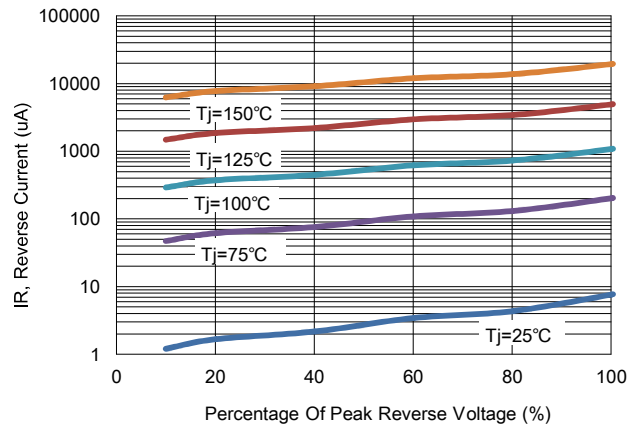


Figure 4: Typical Reverse Characteristics (MBRF2040CT) (Per Leg)

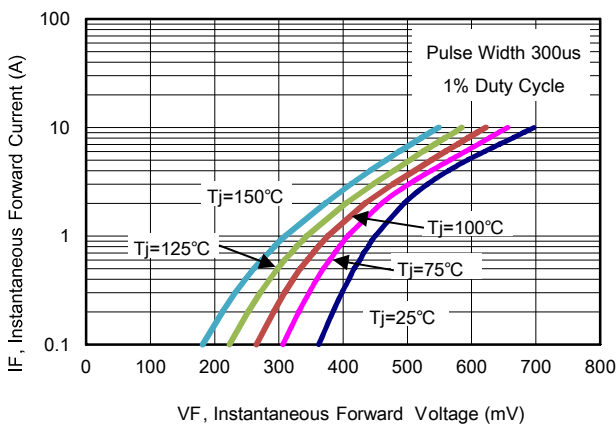


Figure 5: Typical Forward Characteristics (MBRF2060CT) (Per Leg)

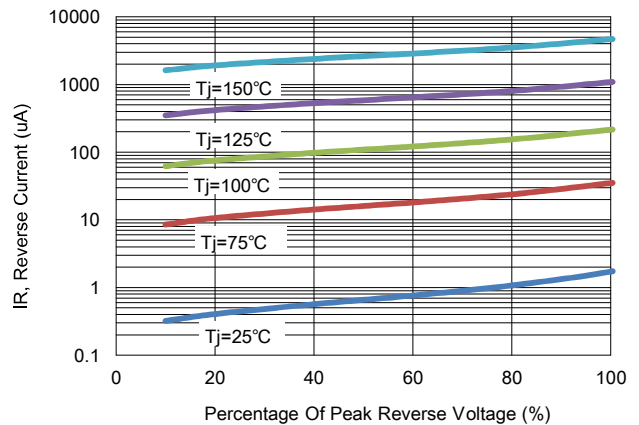
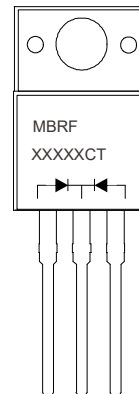


Figure 6: Typical Reverse Characteristics (MBRF2060CT) (Per Leg)

Company reserves the right to improve product design , functions and reliability without notice.

Marking Code

Part Number	Marking code
MBRF2040CT-HF	MBRF2040CT
MBRF2060CT-HF	MBRF2060CT



XXXXXX = Product type marking code

Standard Packaging

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