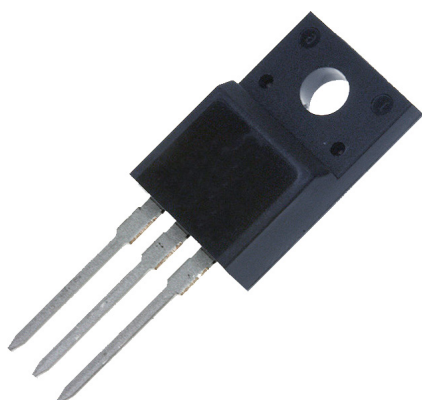




**RoHS
Compliant**

Features:

- Plastic material
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Guardring for over voltage protection
- High temperature soldering guaranteed: 260°C/10 seconds, 0.25" (6.35mm) from case

Specifications:

Mechanical Data:

Cases	: TO-220AB moulded plastic
Terminals	: Leads solderable per M IL-STD-2026
Polarity	: As marked
Mounting Position	: Any
Mounting Torque	: 5in. - lbs. Max.
Weight	: 0.08oz, 2.24g

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Type Number	Symbol	MBRF1035CT	MBRF1045CT	MBRF1060CT	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	45	60	V
Maximum RMS Voltage	V _{RMS}	24	31	42	
Maximum DC Blocking Voltage	V _{DC}	35	45	60	
Maximum Average Forward Rectified Current at T _C = 133°C	I _(AV)	10			A
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20kHz) at T _C = 133°C	I _{FRM}	10			
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	150			
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	0.5			A

Note: 1. 2μs Pulse Width, f = 1kHz.

Type Number	Symbol	MBRF1035CT	MBRF1045CT	MBRF1060CT	Units
Maximum Instantaneous Forward Voltage at: (Note 2) $I_F = 5A, T_C = 25^\circ C$ $I_F = 5A, T_C = 125^\circ C$ $I_F = 10A, T_C = 25^\circ C$ $I_F = 10A, T_C = 125^\circ C$	V_F	0.7 0.57	0.8 0.65		V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage at $T_C = 25^\circ C$ $T_C = 125^\circ C$	I_R		0.1 15		μA μA
Voltage Rate of Change (Rated V_R)	dV/dt		10,000		V/ μS
RMS Isolation Voltage ($t = 1.0$ second, R.H. $\leq 30\%, T_A = 25^\circ C$) (Note 4) (Note 5) (Note 6)	V_{ISO}		4,500 3,500 1,500		pF
Maximum Typical Thermal Resistance, (Note 3)	$R_{\theta JC}$		3.5		$^\circ C/W$
Operating Junction Temperature Range	T_J		-65 to +150		$^\circ C$
Storage Temperature Range	T_{STG}				

Note: 2. Pulse Test: 300 μs Pulse Width, 1% Duty Cycle.

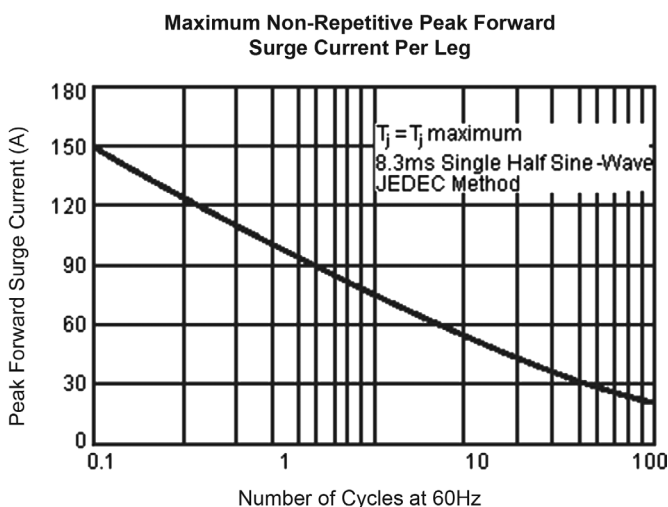
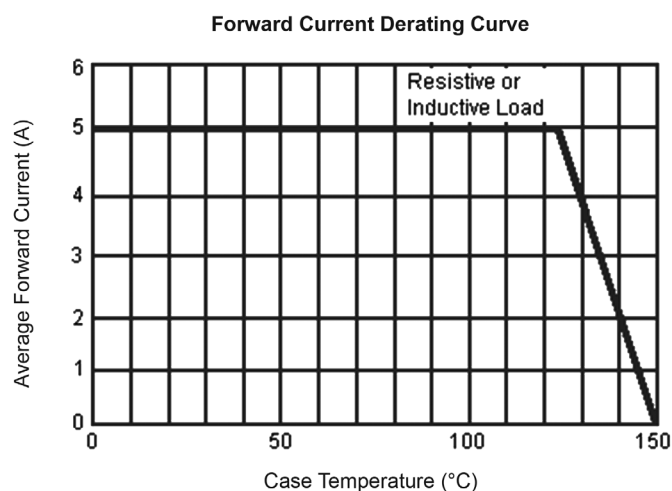
Note: 3. Thermal Resistance from Junction to Case Per Leg.

Note: 4. Clip Mounting (On Case), Where Lead Does Not Overlap Heatsink With 0.110" Offset.

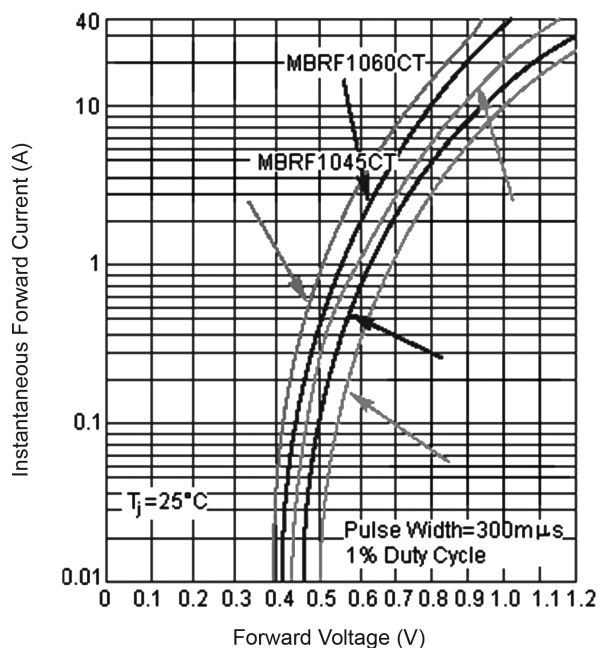
Note: 5. Clip Mounting (On Case), Where Leads Do Overlap Heatsink.

Note: 6. Screw Mounting with 4-40 Screw, Where Washer Diameter is $\leq 4.9mm$ (0.19").

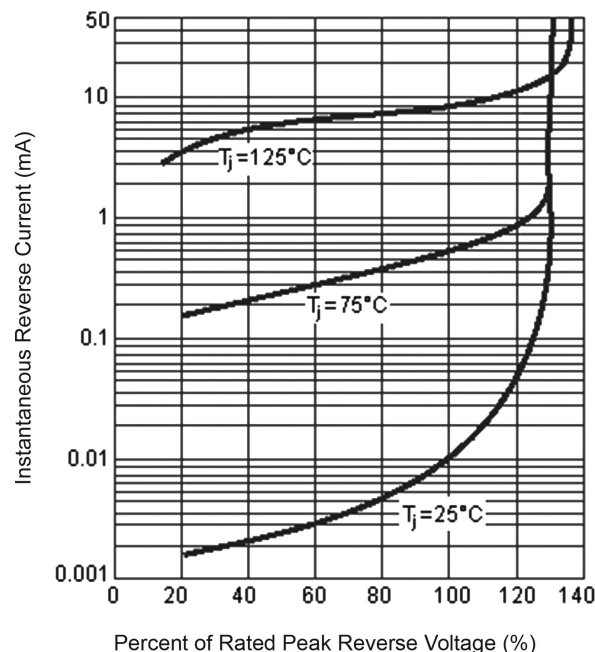
Ratings and Characteristic Curves (MBRF1035CT, MBRF1045CT and MBRF1060CT)



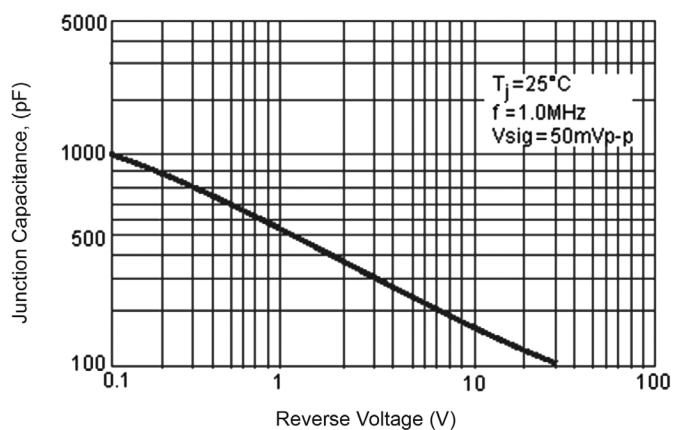
Typical Instantaneous Forward Characteristics



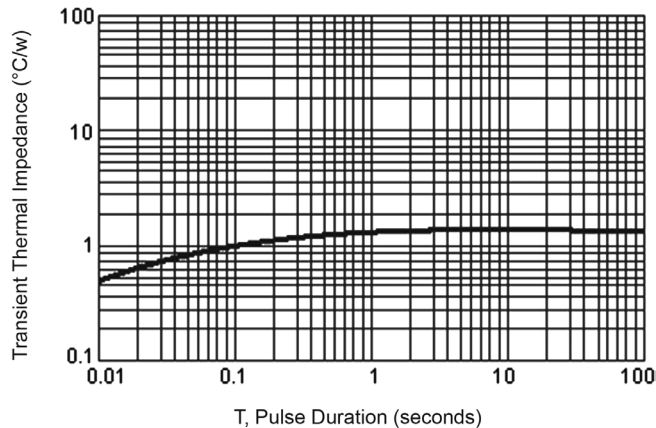
Typical Reverse Characteristics



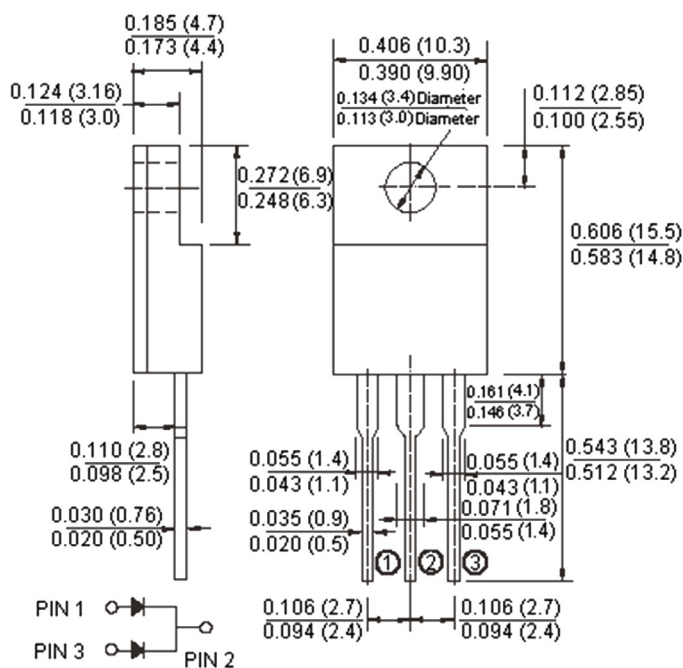
Typical Junction Capacitance



Typical Transient Thermal Characteristics Per Leg



ITO-220AB



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Schottky, 10A, 35V	MBRF1035CT
Diode, Schottky, 10A, 45V	MBRF1045CT
Diode, Schottky, 10A, 60V	MBRF1060CT

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