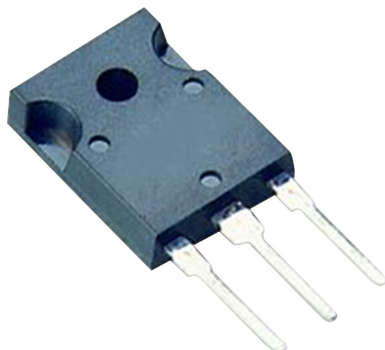




**RoHS
Compliant**

Features:

- Plastic material
- Metal silicon rectifier, 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, 0.17" (4.3mm) from case

Specifications:

Mechanical Data:

Cases	: JEDEC TO-3P/TO-247AD moulded plastic body
Terminals	: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026
Polarity	: As marked
Mounting Position	: Any
Mounting Torque	: 10in. - lbs. Max.
Weight	: 0.2oz, 5.6g

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%.

Parameter	Symbol	MBR6035PT	MBR6060PT	MBR60100PT	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	60	100	V
Maximum RMS Voltage	V _{RMS}	24	42	70	
Maximum DC Blocking Voltage	V _{DC}	35	60	100	
Maximum Average Forward Rectified Current at T _C = 125°C	I _(AV)	60			A
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20kHz) at T _C = 120°C	I _{FRM}	60			
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	420			

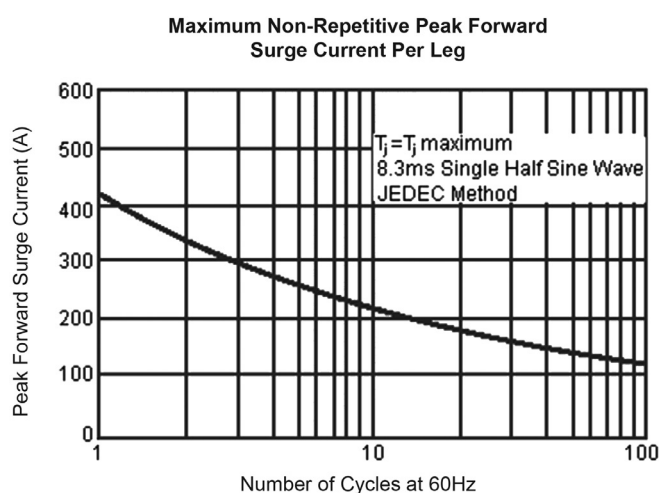
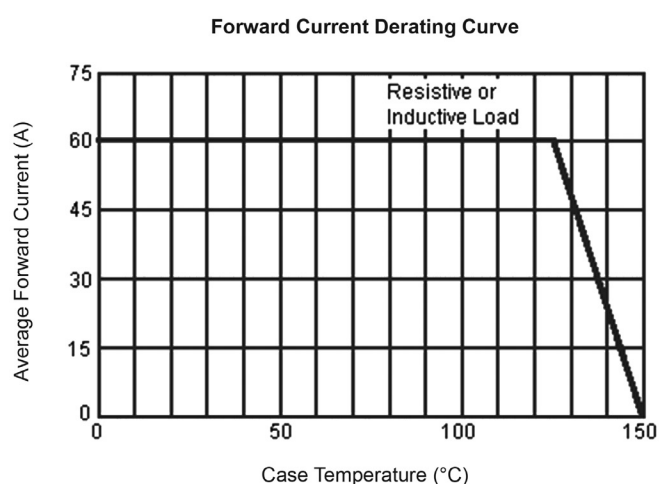
Parameter	Symbol	MBR6035PT	MBR6060PT	MBR60100PT	Units
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1			A
Maximum Instantaneous Forward Voltage at: (Note 2) I _F = 30A, T _C = 25°C I _F = 30A, T _C = 125°C I _F = 60A, T _C = 25°C	V _F	0.7 0.6 0.82	0.75 0.65 0.93	0.84 - 0.98	V
Maximum Instantaneous Reverse Current at T _C = 25°C at Rated DC Blocking Voltage at T _C = 125°C (Note 1)	I _R	1 30	1		μA μA
			20	10	
Voltage Rate of Change (Rated V _R)	dV/dt	10,000			V/μS
Maximum Typical Thermal Resistance, (Note 3)	R _{θJC}	1.2			°C/W
Operating Junction Temperature Range	T _J	-65 to +150			°C
Storage Temperature Range	T _{STG}	-65 to +175			

Note: 1. 2 μs Pulse Width, $f = 1kHz$.

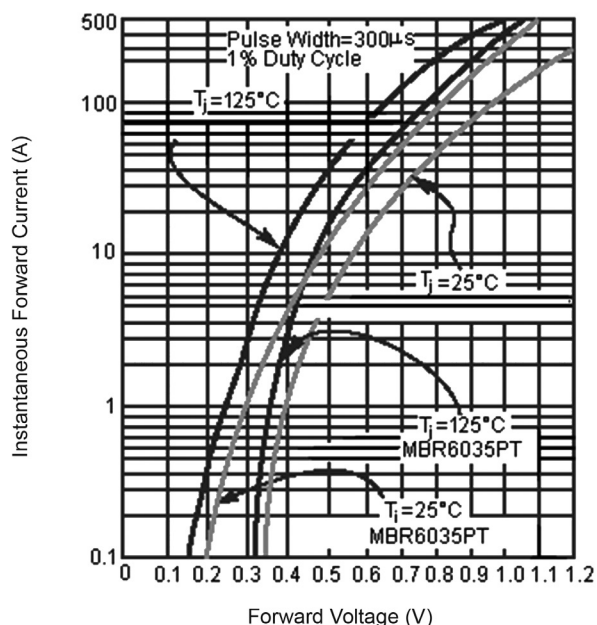
Note: 2. Pulse Test: 300 μs Pulse Width, 1% Duty Cycle.

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

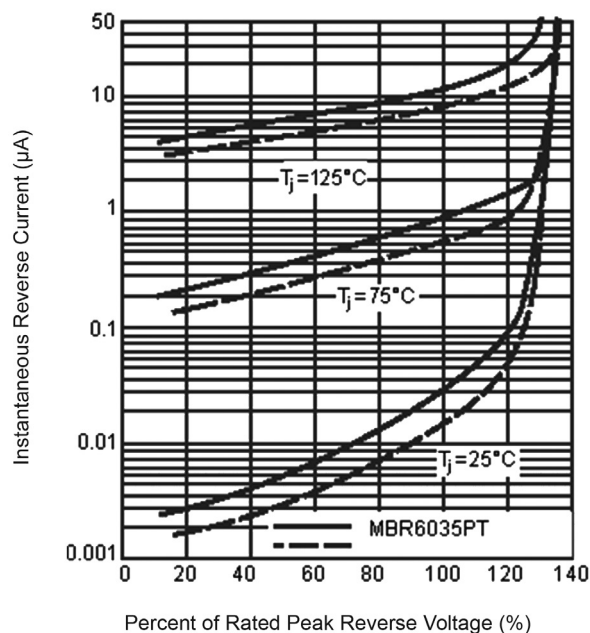
Ratings and Characteristic Curves (MBR60100PT, MBR6035PT and MBR6060PT)



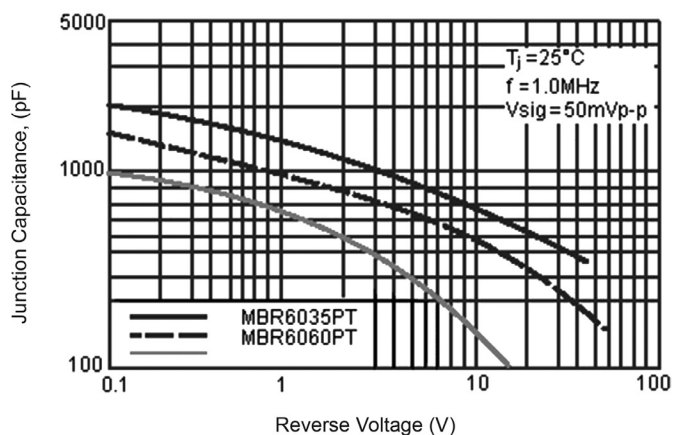
Typical Instantaneous Forward Characteristics
Per Leg



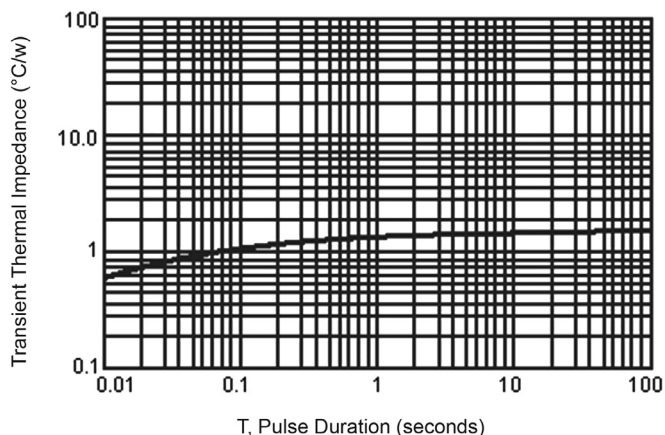
Typical Reverse Characteristics Per Leg



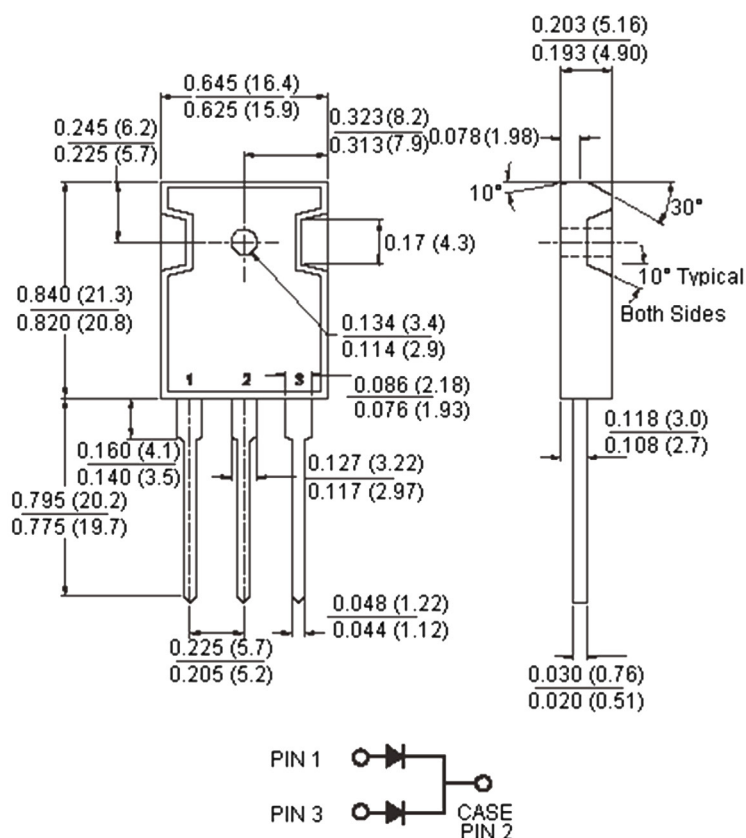
Typical Junction Capacitance Per Leg



Typical Transient Thermal Impedance Per Leg



TO-3P/TO-247AD



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Schottky, 60A, 100V	MBR60100PT
Diode, Schottky, 60A, 35V	MBR6035PT
Diode, Schottky, 60A, 60V	MBR6060PT

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