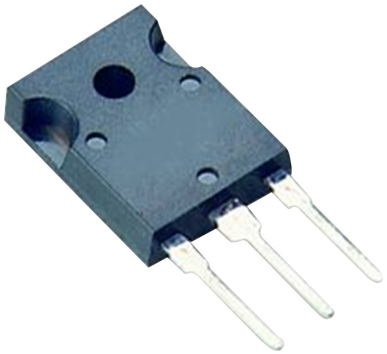
Diode
Schottky

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%.

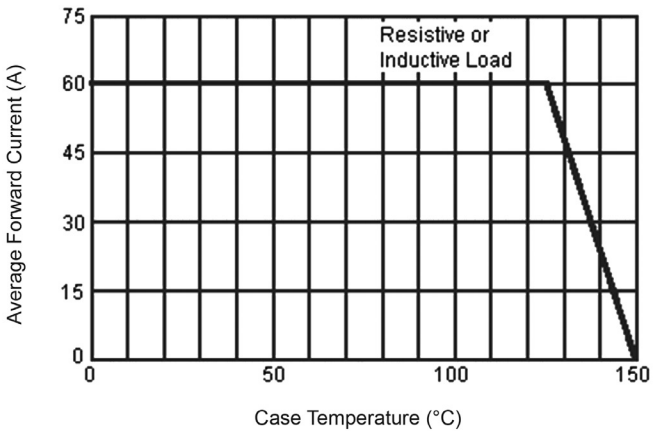
Parameter	Symbol	MBR6035PT	MBR6060PT	MBR60100PT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	35	60	100	V
Maximum RMS Voltage	V_{RMS}	24	42	70	
Maximum DC Blocking Voltage	V_{DC}	35	60	100	
Maximum Average Forward Rectified Current at T_C = 125°C	$I_{(AV)}$	60			A
Peak Repetitive Forward Current (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 20	 10	µA µA
Voltage Rate of Change (Rated V_R)	dV/dt	10,000			V/µS
Maximum Typical Thermal Resistance, (Note 3)	$R_{\theta JC}$	1.2			°C/W
Operating Junction Temperature Range	T_J	-65 to +150			°C
Storage Temperature Range	T_{STG}	-65 to +175			

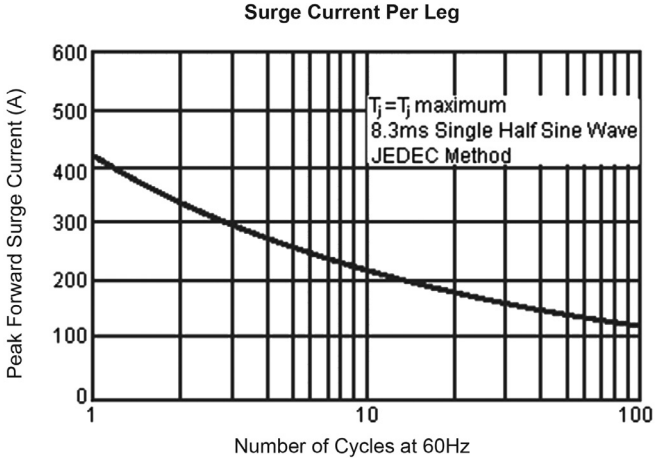
Note: 1. 2µs Pulse Width, f = 1kHz.
Note: 2. Pulse Test: 300µs Pulse Width, 1% Duty Cycle.
Note: 3. Thermal Resistance from Junction to Case Per Leg.

Ratings and Characteristic Curves (MBR60100PT, MBR6035PT and MBR6060PT)

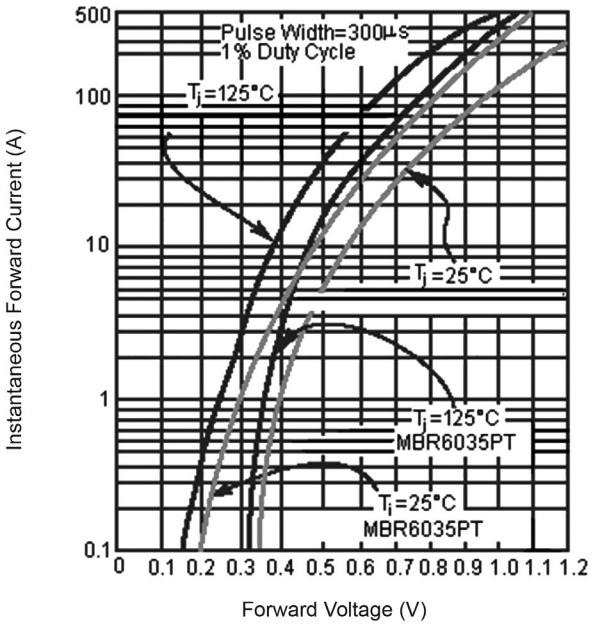
Forward Current Derating Curve



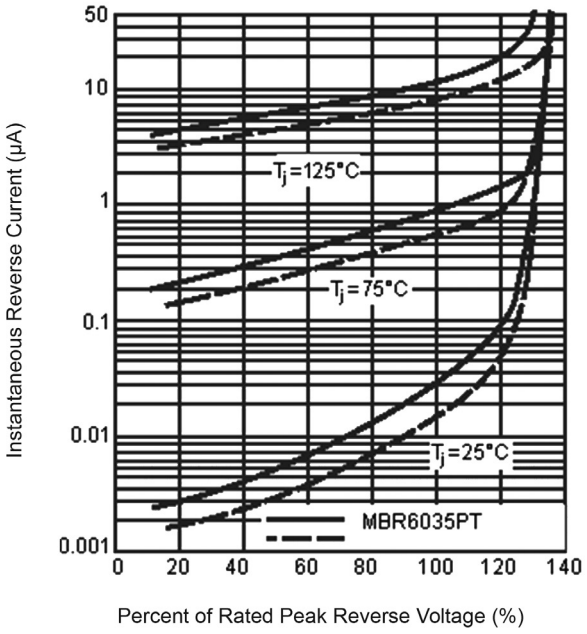
Maximum Non-Repetitive Peak Forward Surge Current Per Leg



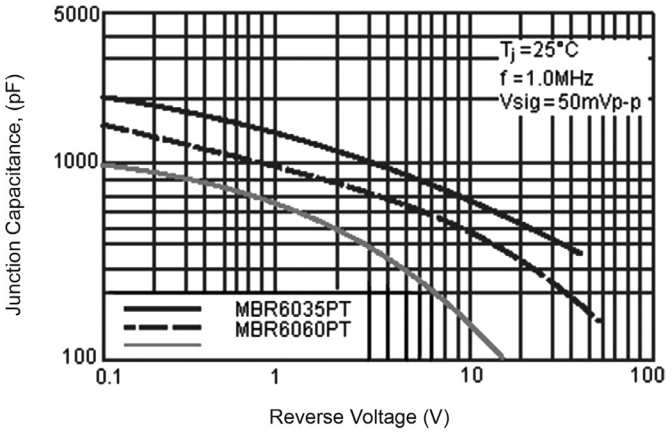
Typical Instantaneous Forward Characteristics Per Leg



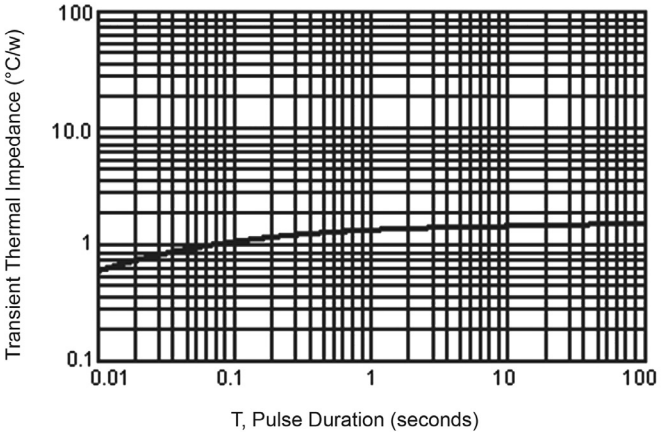
Typical Reverse Characteristics Per Leg



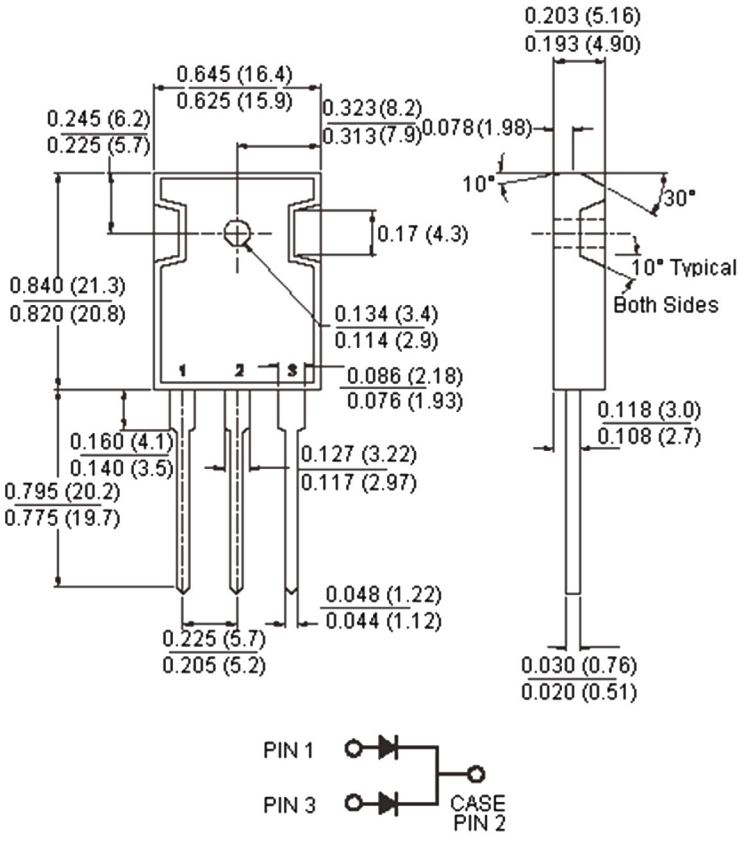
Typical Junction Capacitance Per Leg



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