



MBR6035PT THRU MBR60100PT

60.0 AMPS. Schottky Barrier Rectifiers



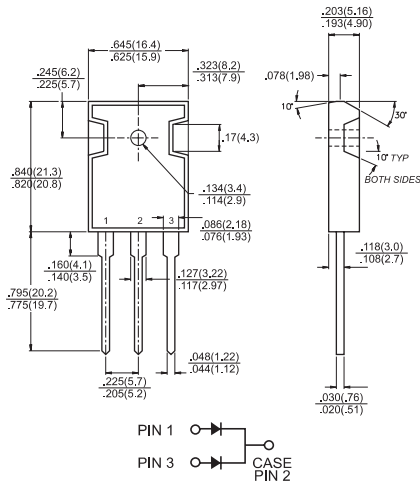
Voltage Range
35 to 100 Volts
Current
60.0 Amperes

Features

- Plastic material used carries Underwriters Laboratory Classifications 94V-0
- 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 overvoltage protection
- High temperature soldering guaranteed:
260°C/10 seconds, 0.17" (4.3mm) from case

Mechanical Data

- Cases: JEDEC TO-3P/TO-247AD molded plastic body
- Terminals: Leads solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting position: Any
- Mounting torque: 10 in. - lbs. max
- Weight: 0.2 ounce, 5.6 grams



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

Type Number	Symbol	MBR 6035PT	MBR 6045PT	MBR 6050PT	MBR 6060PT	MBR 60100PT	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	45	50	60	100	V
Maximum RMS Voltage	V _{RMS}	24	31	35	42	70	V
Maximum DC Blocking Voltage	V _{DC}	35	45	50	60	100	V
Maximum Average Forward Rectified Current at Tc=125°C	I _(AV)	60					A
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20KHz) at Tc=120°C	I _{FRM}	60.0					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	500					A
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1.0					A
Maximum Instantaneous Forward Voltage at (Note 2) I _F =30A, Tc=25°C I _F =30A, Tc=125°C I _F =60A, Tc=25°C	V _F	0.62 0.55 0.75	0.72 0.62 0.85			V	
Maximum Instantaneous Reverse Current @Tc=25°C at Rated DC Blocking voltage Per Leg @ Tc=125°C (Note 1)	I _R	1.0 50	1.0 100			mA mA	
Voltage Rate of Change at (Rated V _R)	dV/dt	1,000					V/uS
Typical Thermal Resistance Per Leg (Note 3)	R θ _{JC}	1.2					°C/W
Operating Junction Temperature Range	T _J	-65 to +150					°C
Storage Temperature Range	T _{STG}	-65 to +175					°C

Notes: 1. 2.0us Pulse Width, f=1.0 KHz

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

3. Thermal Resistance from Junction to Case Per Leg

RATINGS AND CHARACTERISTIC CURVES (MBR6035PT THRU MBR60100PT)

FIG.1- FORWARD CURRENT DERATING CURVE

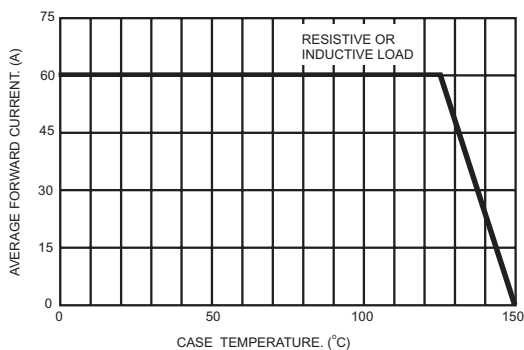


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

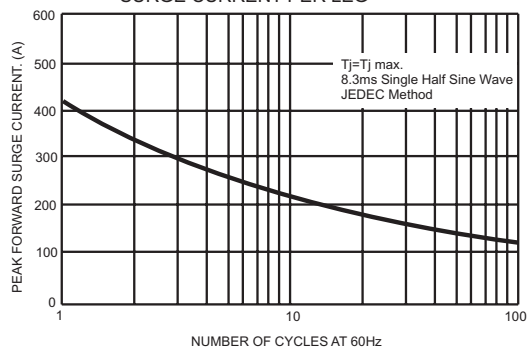


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

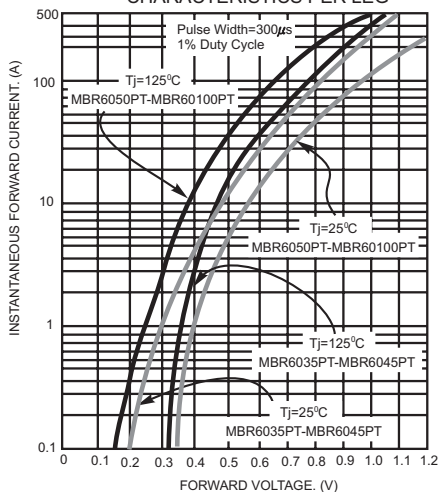


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

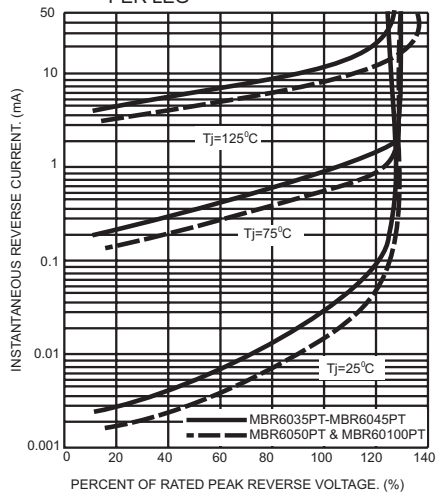


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

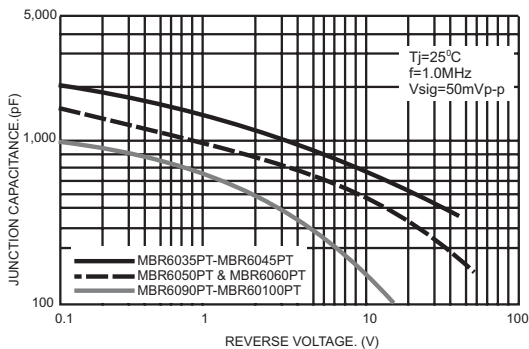


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

