

MBR6035PT - MBR60100PT

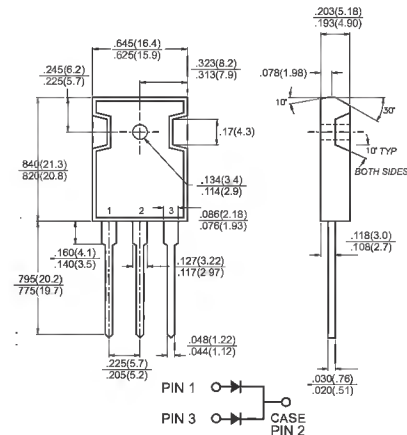
60 AMPS. Schottky Barrier Rectifiers

TO-3P/TO-247AD



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
- Green compound with suffix “G” on packing code & prefix “G” on datecode.

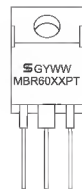


Mechanical Data

- Cases: JEDEC TO-3P/TO-247AD molded plastic body
- Terminals: Pure tin plated, lead free. 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)

Marking Diagram



- MBR60XXPT = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

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 6035 PT	MBR 6045 PT	MBR 6050 PT	MBR 6060 PT	MBR 6090 PT	MBR 60100 PT	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	45	50	60	90	100	V
Maximum RMS Voltage	V _{RMS}	24	31	35	42	63	70	V
Maximum DC Blocking Voltage	V _{DC}	35	45	50	60	90	100	V
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						A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	420						A
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1.0						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	0.70 0.60 0.82		0.75 0.65 0.93		0.84 — 0.98		V
Maximum Instantaneous Reverse Current @T _c =25 °C at Rated DC Blocking Voltage Per Leg @ T _c =125 °C (Note 1)	I _R	1.0 30		1.0		10		mA mA
Voltage Rate of Change at (Rated V _R)	dV/dt	10,000						V/μs
Typical Thermal Resistance Per Leg (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						°C

- Notes:
- 2.0us Pulse Width, f=1.0 KHz
 - Pulse Test: 300us Pulse Width, 1% Duty Cycle
 - Thermal Resistance from Junction to Case Per Leg

RATINGS AND CHARACTERISTIC CURVES (MBR6035PT THRU MBR60100PT)

FIG.1- FORWARD CURRENT DERATING CURVE

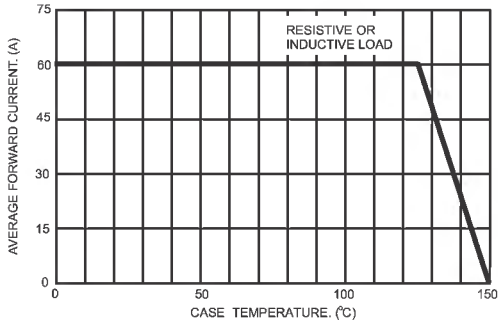


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

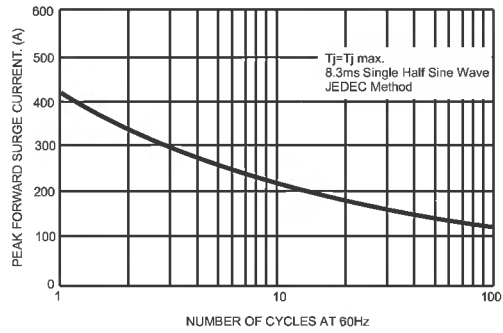


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

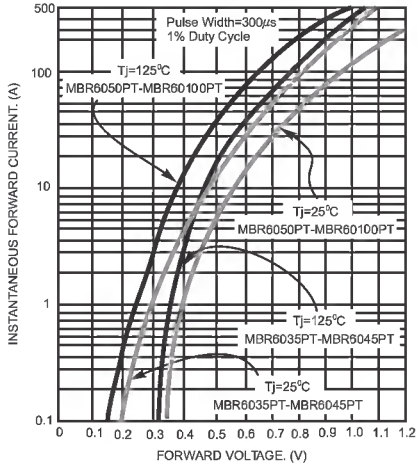


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

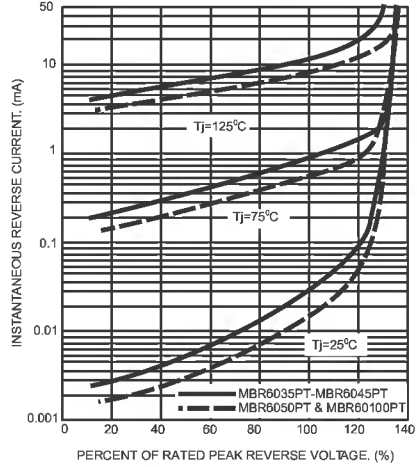


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

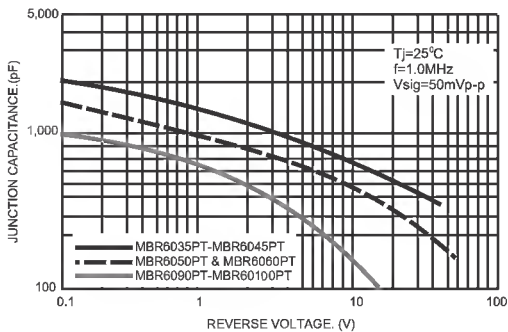


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

