

MBR6035PT - MBR60100PT

60 AMPS. Schottky Barrier Rectifiers

TO-3P/TO-247AD

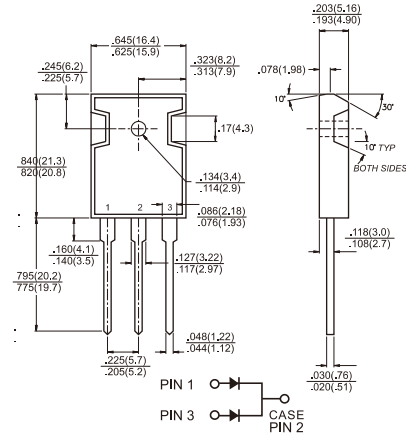


Features

- ✧ UL Recognized File # E-326243
- ✧ 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.

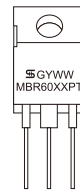
Mechanical Data

- ✧ 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: 6.15 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 _{F(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 (Note2)	I _{RRM}	1.0						A
Maximum Instantaneous Forward Voltage at I _F =30A, T _A =25°C I _F =30A, T _A =125°C I _F =60A, T _A =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 at Rated DC Blocking Voltage Per Leg (Note 1) @T _A =25 °C @ T _A =125 °C	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	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: 1. Pulse Test: 300 μ s Pulse Width, 1% Duty Cycle
2. 2.0 μ s Pulse Width, f=1.0 KHz

Version: D10

RATINGS AND CHARACTERISTIC CURVES (MBR6035PT THRU MBR60100PT)

FIG.1- FORWARD CURRENT DERATING CURVE

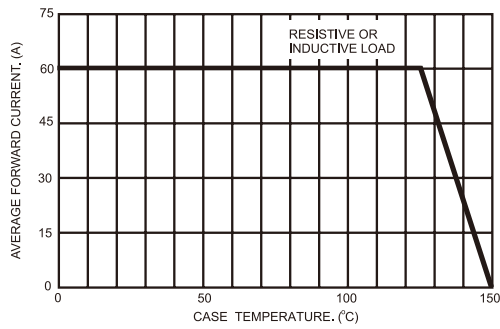


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

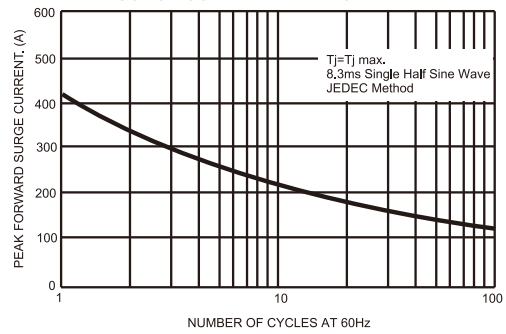


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

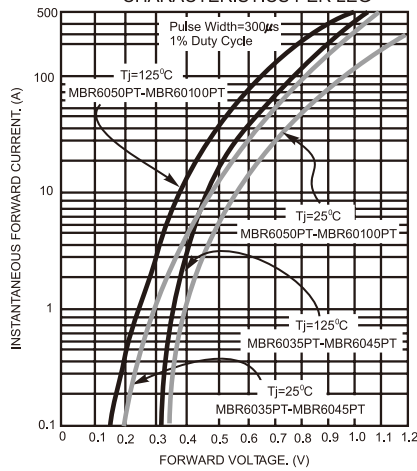


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

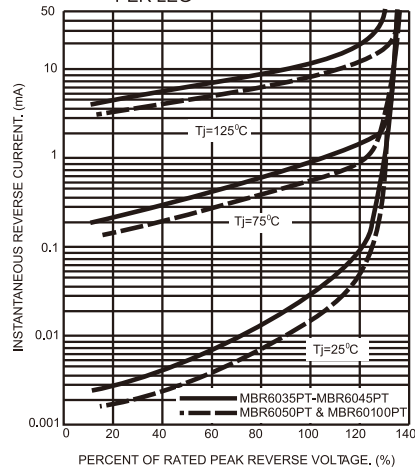


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

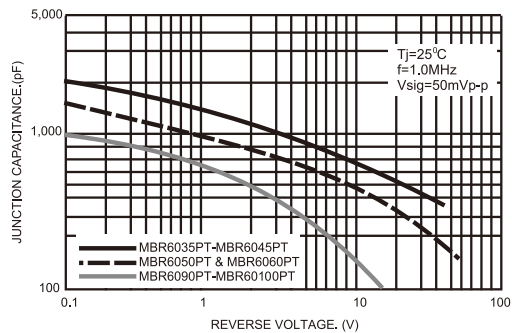


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

