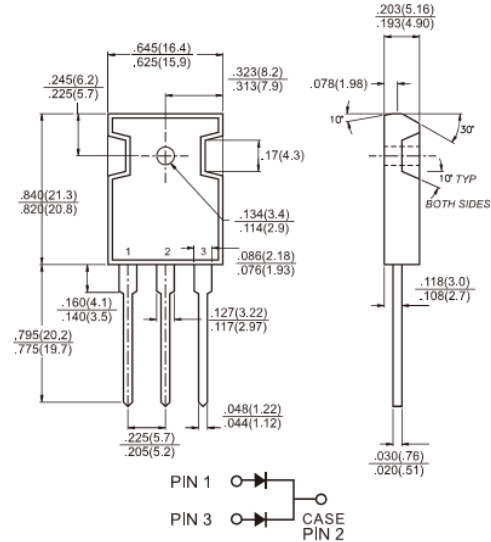




MBR6035PT - MBR60100PT
60.0AMPS. Schottky Barrier Rectifiers
TO-3P/TO-247AD

Features

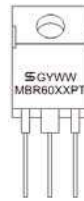
- ◇ UL Recognized File # E-326243
- ◇ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ◇ Metal silicon junction, majority carrier conduction
- ◇ Low power loss, high efficiency
- ◇ High current capability, low forward voltage drop
- ◇ High surge capability
- ◇ For use in low voltage - high frequency inverters, free wheeling, and polarity protection applications
- ◇ Guard-ring for overvoltage protection
- ◇ High temperature soldering guaranteed: 260°C/10 seconds/.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
- ◇ 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 $T_C = 125^\circ C$	$I_{F(AV)}$	60						A
Peak Repetitive Forward Current (Rated V_R , Square Wave, 20KHz) at $T_C=120^\circ C$	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						A
Maximum Instantaneous Forward Voltage at (Note 2) $I_F=30A, T_A=25^\circ C$ $I_F=30A, T_A=125^\circ C$ $I_F=60A, T_A=25^\circ C$	V_F	0.70	0.75	0.84				V
Maximum Instantaneous Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage Per Leg @ $T_A=125^\circ C$	I_R	1						mA
		30	20	10				mA
Voltage Rate of Change,(Rated V_R)	dV/dt	10000						V/us
Maximum Thermal Resistance Per Leg	$R_{\theta JC}$	1.2						$^\circ C/W$
Operating Junction Temperature Range	T_J	- 65 to + 150						$^\circ C$
Storage Temperature Range	T_{STG}	- 65 to + 175						$^\circ C$

Note 1: 2.0uS Pulse Width, f=1.0KHz

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

RATINGS AND CHARACTERISTIC CURVES (MBR6035PT THRU MBR60100PT)

FIG. 1 FORWARD CURRENT DERATING CURVE

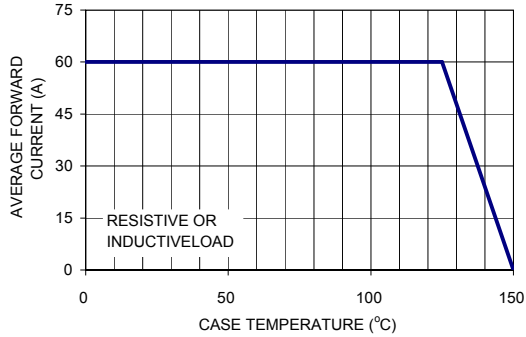


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

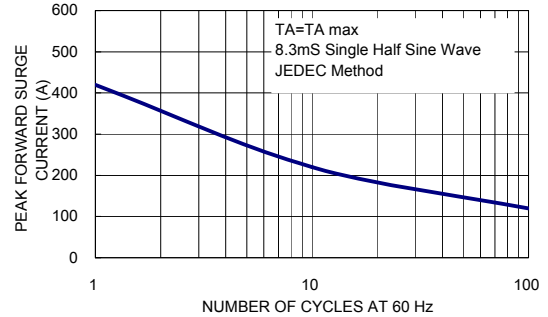


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

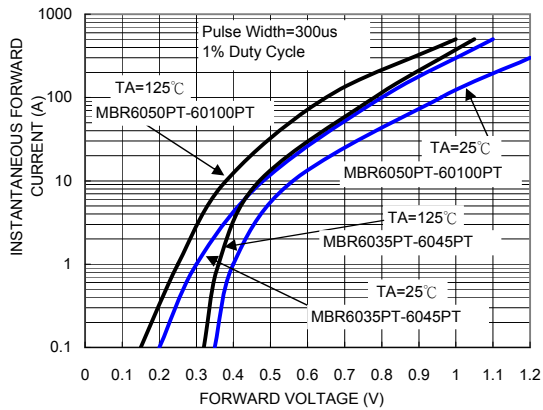


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

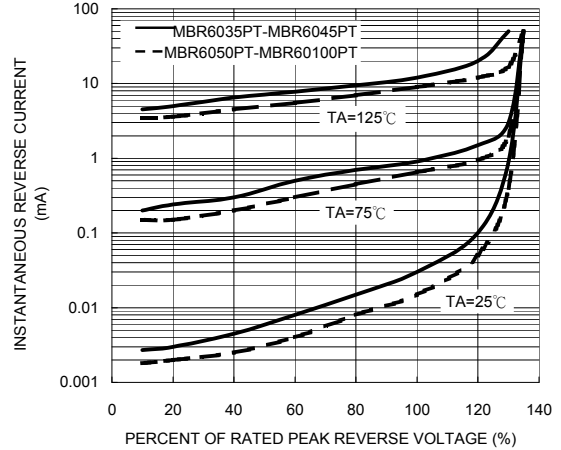


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

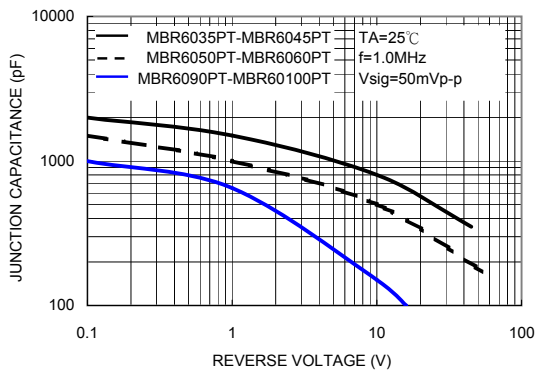


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

