TAIWAN SEMICONDUCTOR
The Smartest Choice

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 inventers, free wheeling, and polarity protection applications
- ✧ Guard-ring for overvoltage protection
- ✧ High temperature soldering guaranteed: 260℃/10 seconds/.17", (4.3mm) from case
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



Pb-Free

RoHS COMPLIANT

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

Ordering Information (example)

Part No.	Package	Packing	Packing code	Packing code (Green)
MBR6035PT	TO-3P	30 / TUBE	C0	C0G

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified.

Parameter	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	$I_{F(AV)}$	60						A
Peak Repetitive Forward Current (Rated V_R, Square Wave, 20KHz)	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℃ I_F=30A, T_A=125℃ I_F=60A, T_A=25℃	V_F	0.70 0.60 0.82		0.75 0.65 0.93		0.84 - 0.98		V
Maximum Instantaneous Reverse Current @ T_A=25 ℃	I_R	1						mA
at Rated DC Blocking Voltage Per Leg @ T_A=125 ℃		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						^{O}C/W
Operating Junction Temperature Range	T_J	- 55 to + 150						^{O}C
Storage Temperature Range	T_{STG}	- 55 to + 175						^{O}C

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

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

TAIWAN SEMICONDUCTOR
The Smartest Choice

RATINGS AND CHARACTERISTIC CURVES (MBR6035PT THRU MBR60100PT)

FIG.1 FORWARD CURRENT DERATING CURVE

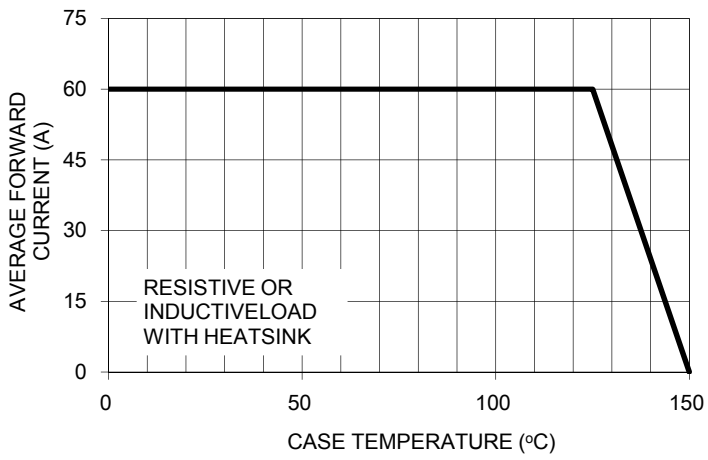


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

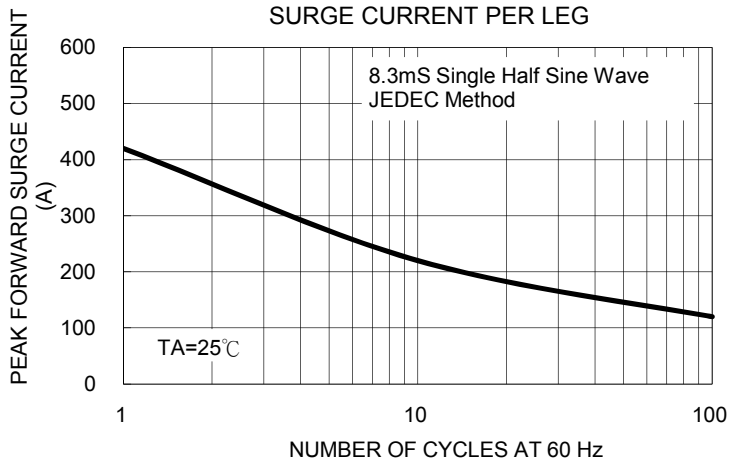


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

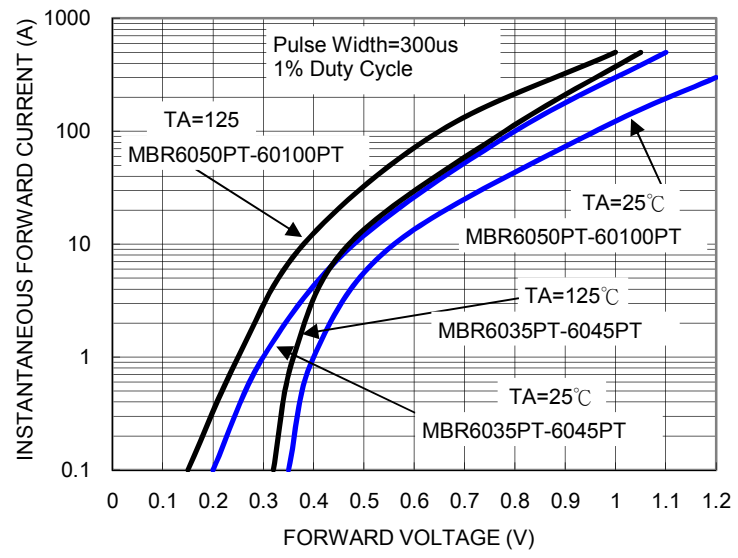


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

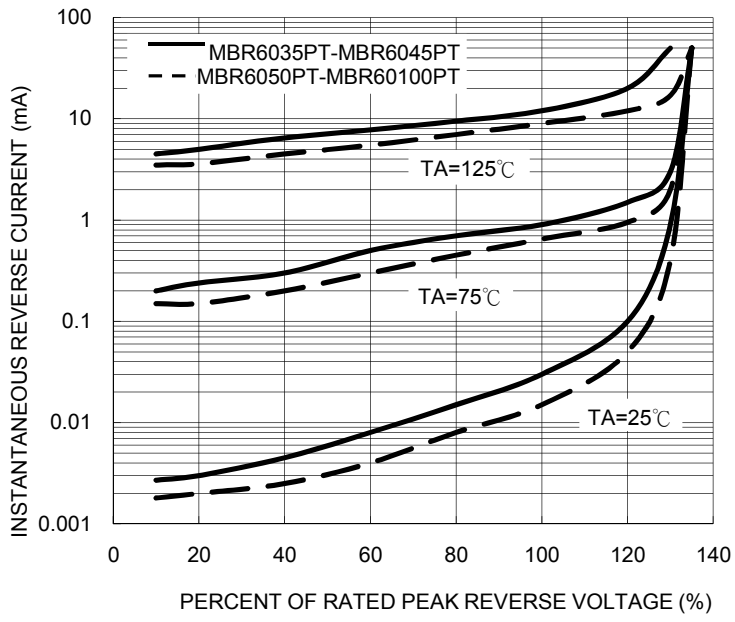


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

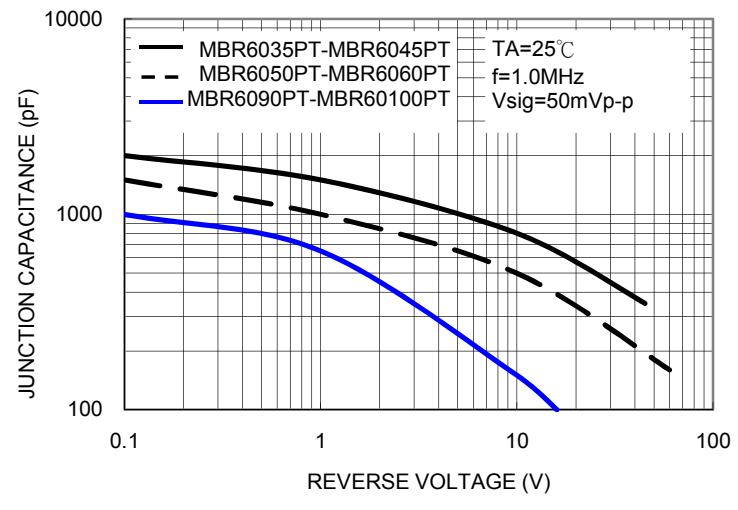
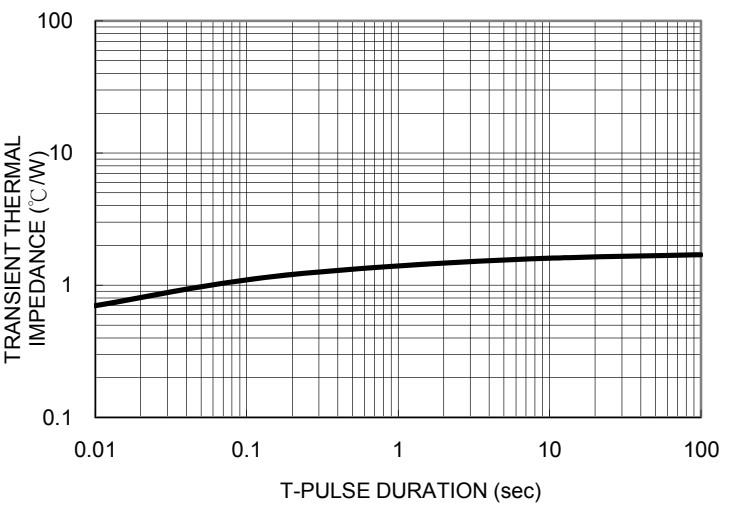


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



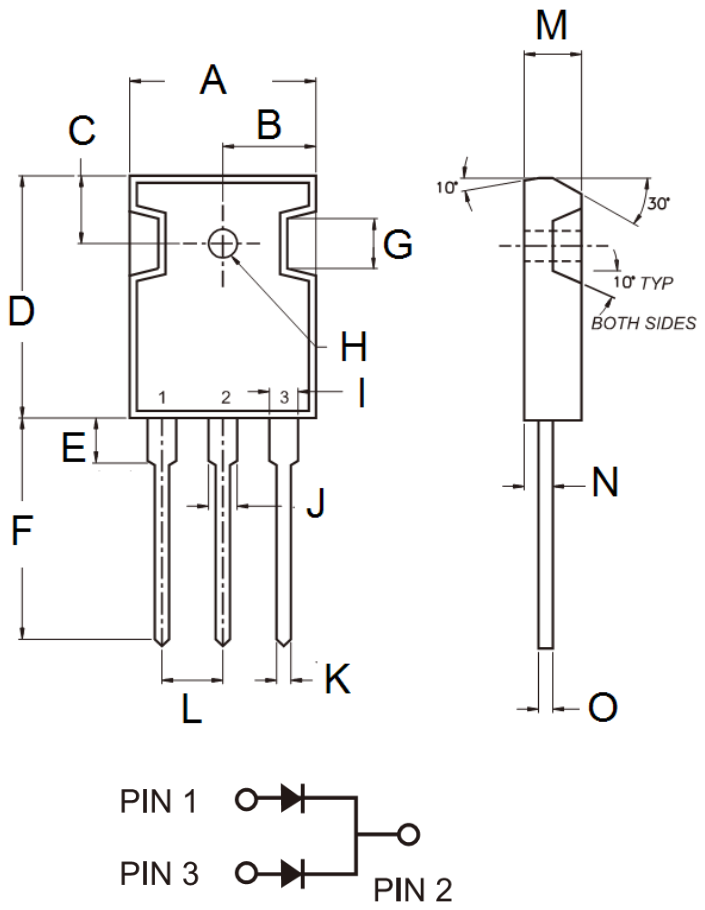
Version:F13

Ordering information

Part No.	Package	Packing	Packing code	Packing code (Green)
MBR60xxPT	TO-3P	30 / TUBE	C0	C0G

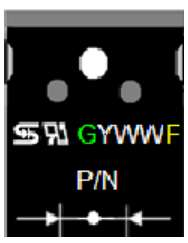
Note: "xx" is Device Code from "35" thru "100".

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	15.90	16.40	0.626	0.646
B	7.90	8.20	0.311	0.323
C	5.70	6.20	0.224	0.244
D	20.80	21.30	0.819	0.839
E	3.50	4.10	0.138	0.161
F	19.70	20.20	0.776	0.795
G	-	4.30	-	0.169
H	2.90	3.40	0.114	0.134
I	1.93	2.18	0.076	0.086
J	2.97	3.22	0.117	0.127
K	1.12	1.22	0.044	0.048
L	5.20	5.70	0.205	0.224
M	4.90	5.16	0.193	0.203
N	2.70	3.00	0.106	0.118
O	0.51	0.76	0.020	0.030

Marking Diagram



P/N = Specific Device Code
G = Green Compound
YWW = Date Code
F = Factory Code