MBR6030PT - MBR6045PT

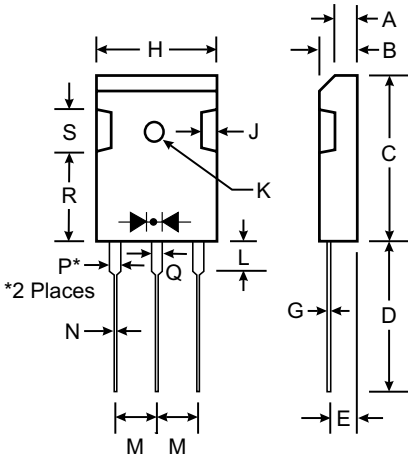
60A SCHOTTKY BARRIER RECTIFIER

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 5.6 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



TO-3P		
Dim	**Min**	**Max**
A	3.20	3.50
B	4.59	5.16
C	20.80	21.30
D	19.70	20.20
E	2.10	2.40
G	0.51	0.76
H	15.90	16.40
J	1.70	2.70
K	3.10∅	3.30∅
L	3.50	4.51
M	5.20	5.70
N	1.12	1.22
P	1.93	2.18
Q	2.97	3.22
R	11.70	12.80
S	4.30 Typical	
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	MBR 6030PT	MBR 6035PT	MBR 6040PT	MBR 6045PT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	25	28	32	V
Average Rectified Output Current @ T_C = 125°C (Note 1)	I_O	60				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	500				A
Forward Voltage Drop @ I_F = 30A, T_C = 25°C @ I_F = 30A, T_C = 125°C @ I_F = 60A, T_C = 25°C	V_{FM}	0.62 0.55 0.75				V
Peak Reverse Current @ T_C = 25°C at Rated DC Blocking Voltage @ T_C = 100°C	I_{RM}	1.0 50				mA
Typical Junction Capacitance (Note 2)	C_j	650				pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta Jc}$	1.0				K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150				°C

Notes: 1. Thermal resistance junction to case mounted on heatsink.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

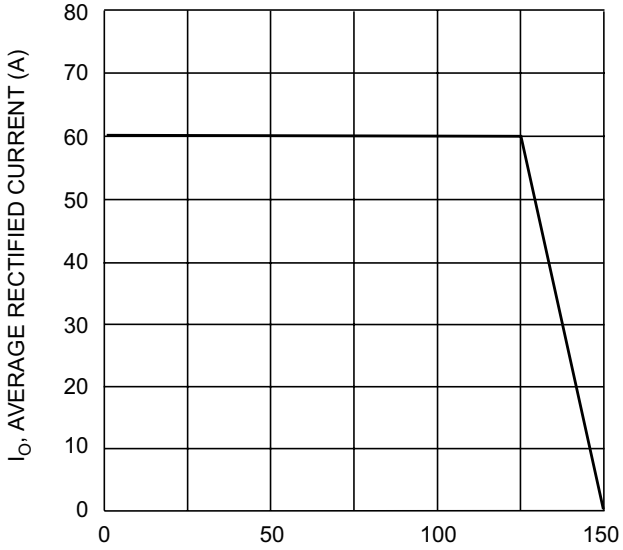


Fig. 1 Forward Current Derating Curve

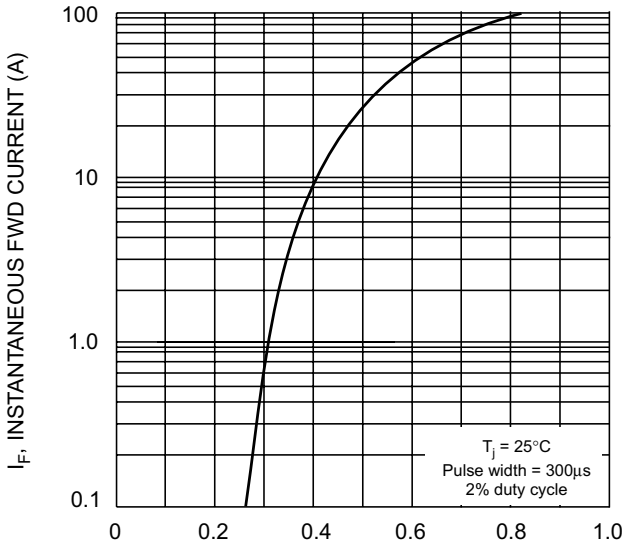


Fig. 2 Typical Forward Characteristics

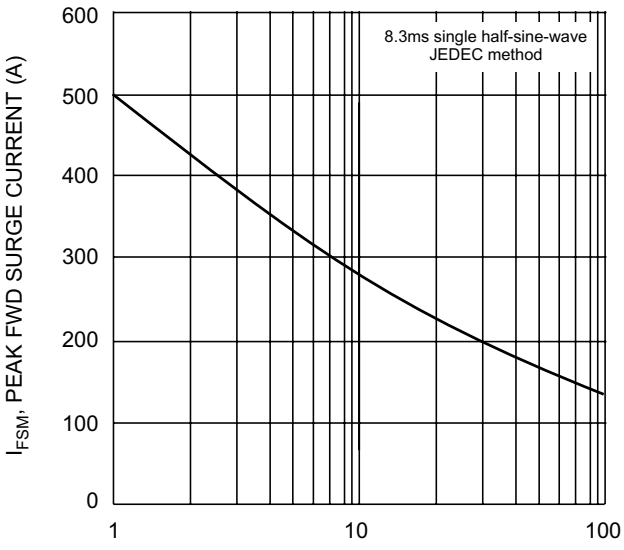


Fig. 3 Max Non-Repetitive Surge Current

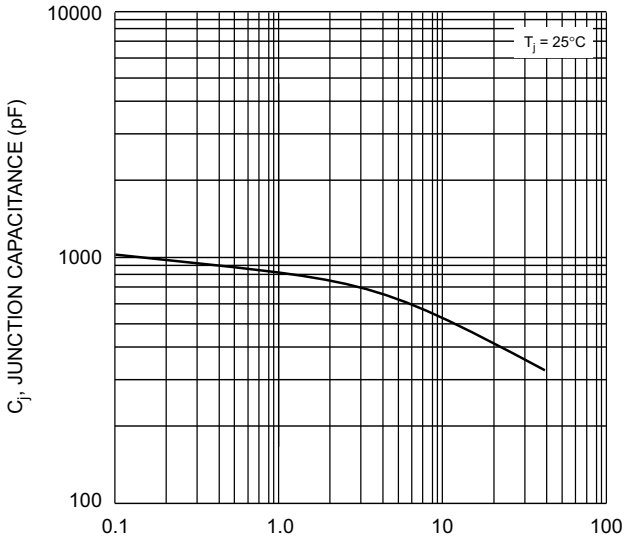


Fig. 4 Typical Junction Capacitance per Element

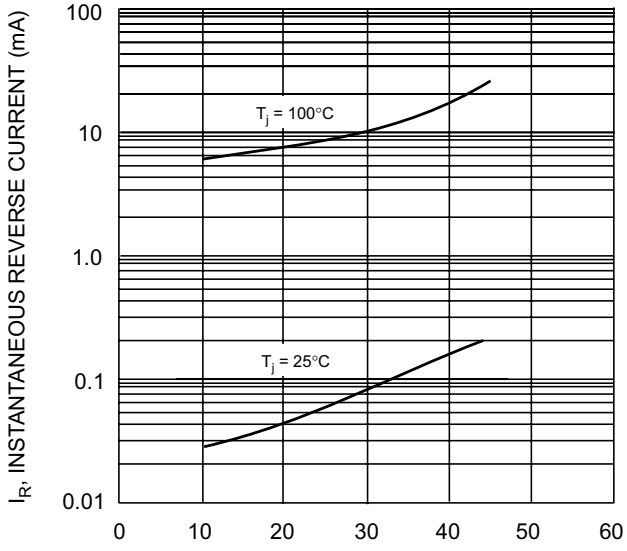


Fig. 5 Typical Reverse Characteristics