



# MBR3030PT THRU MBR30100PT

## SCHOTTKY BARRIER RECTIFIER

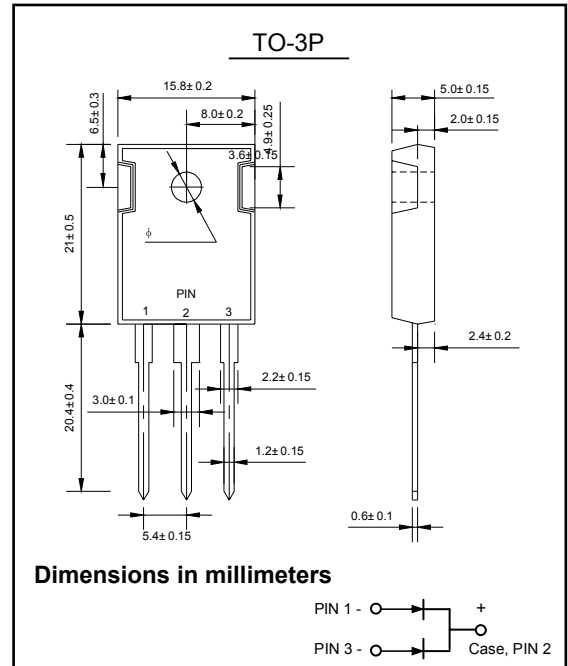
Reverse Voltage - 30 to 100 Volts    Forward Current - 30.0 Ampere

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guardring for overvoltage protection
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### MECHANICAL DATA

- Case: TO-3P, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Polarity: See Diagram
- Weight: 5.6 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 11.5 cm·kg (10 in·lbs) Max.



### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	MBR 3030PT	MBR 3035PT	MBR 3040PT	MBR 3045PT	MBR 3050PT	MBR 3060PT	MBR 3080PT	MBR 30100PT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	30	35	40	45	50	60	80	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	25	28	32	35	42	56	70	V
Average Rectified Output Current @ $T_C = 95^\circ\text{C}$	$I_O$	30								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	275								A
Forward Voltage @ $I_F = 15\text{A}$	$V_{FM}$	0.55			0.65		0.85			V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_{RM}$	1.0				60				mA
Typical Junction Capacitance (Note 1)	$C_j$	1100								pF
Typical Thermal Resistance Junction to Case (Note 2)	$R_{\theta JC}$	1.4								$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150								$^\circ\text{C}$

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



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## RATINGS AND CHARACTERISTIC CURVES

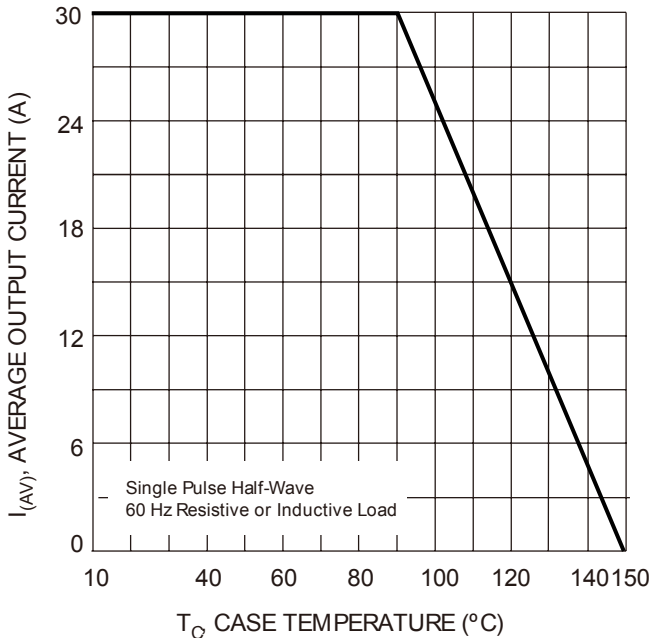


Fig. 1 Forward Current Derating Curve

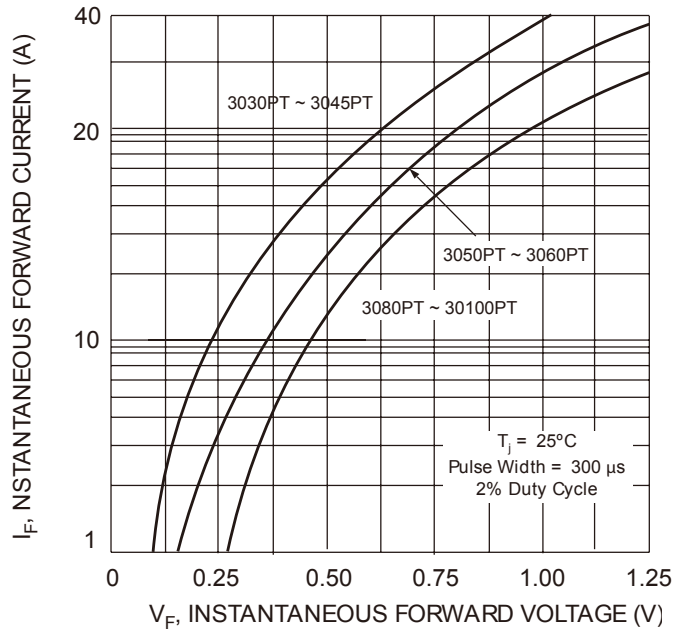


Fig. 2 Typical Forward Characteristics

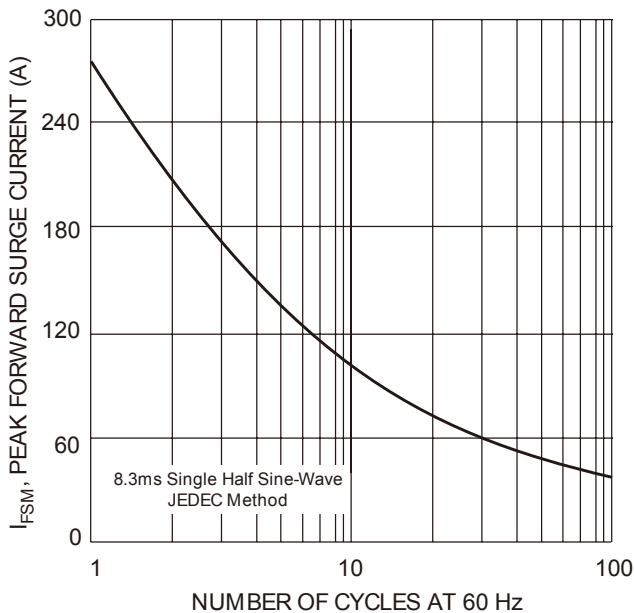


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

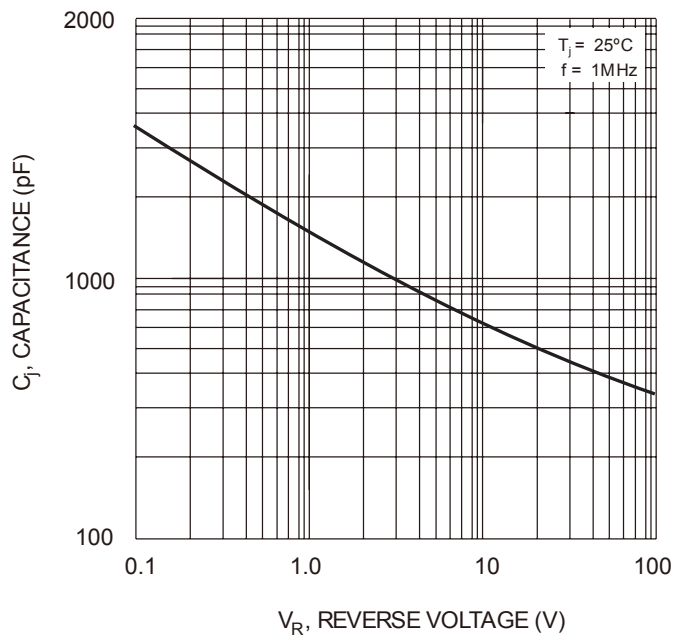


Fig. 4 Typical Junction Capacitance