



# MBR3020PT~MBR30200PT

## 30 AMPERES SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 200 Volts **CURRENT** 30 Amperes

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency.
- High current capability
- Guardring for overvoltage protection
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.
- Component are in compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

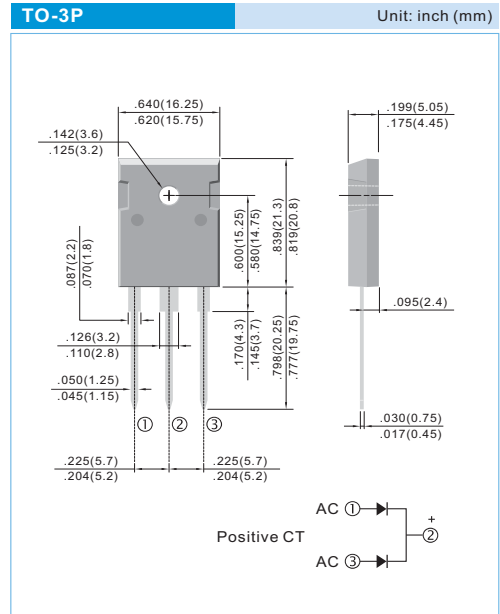
Case: TO-3P molded plastic

Terminals: solder plated, solderable per MIL-STD-750, Method 2026

Polarity: As marked.

Mounting Position: Any

Weight: 0.2 ounces, 5.6 grams.



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%

PARAMETER	SYMBOL	MBR 3020PT	MBR 3030PT	MBR 3040PT	MBR 3045PT	MBR 3050PT	MBR 3060PT	MBR 3080PT	MBR 30100PT	MBR 30150PT	MBR 30200PT	UNITS	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	45	50	60	80	100	150	200	V	
Maximum RMS Voltage	$V_{RMS}$	14	21	28	31.5	35	42	56	70	105	140	V	
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	45	50	60	80	100	150	200	V	
Maximum Average Forward Current (See fig.1)	$I_{AV}$	30										A	
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	200										A	
Maximum Forward Voltage at 15A, per leg	$V_F$	0.65			0.75			0.8		0.92		V	
Maximum DC Reverse Current $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_c=125^\circ\text{C}$	$I_R$	0.1						20					mA
Typical Thermal Resistance	$R_{\theta JC}$	1.4											$^\circ\text{C} / \text{W}$
Operating Junction Temperature Range	$T_J$	-50 TO +150											$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-50 TO +175											$^\circ\text{C}$

**Notes :**

Both Bonding and Chip structure are available.



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## RATING AND CHARACTERISTIC CURVES

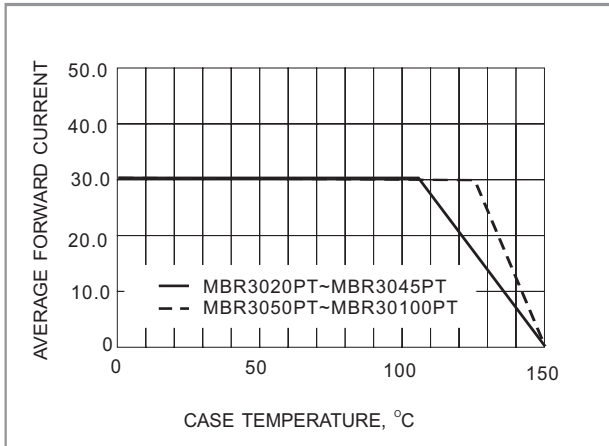


Fig.1- FORWARD CURRENT DERATING CURVE

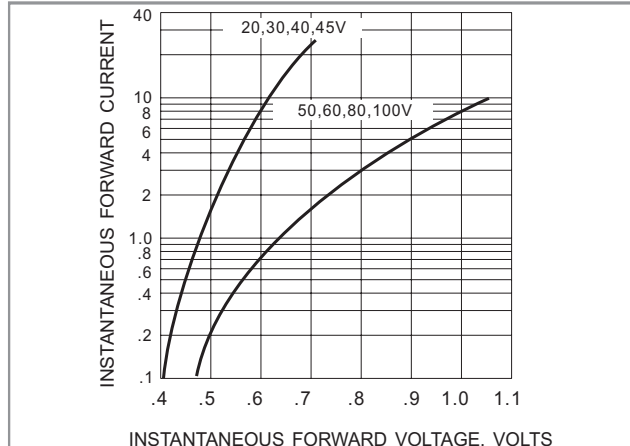


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

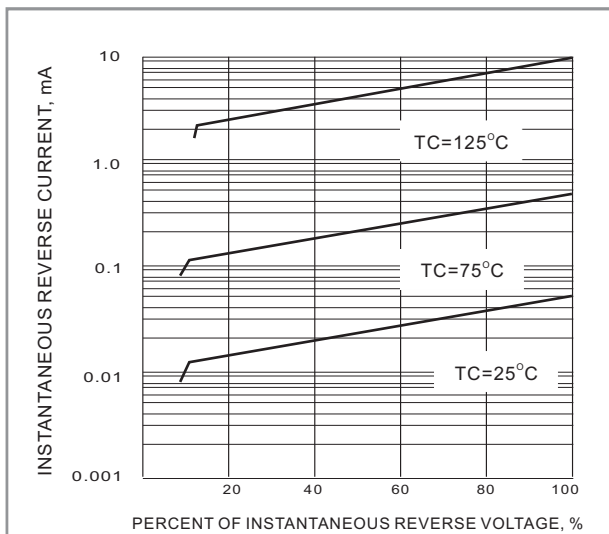


Fig.3- TYPICAL REVERSE CHARACTERISTICS

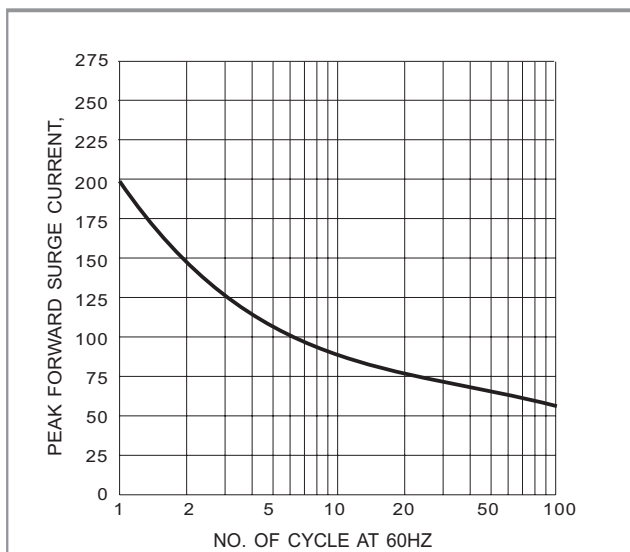


Fig.4- MAXIMUM NON-REPETITIVE SURGE CURRENT