

# DATA SHEET

## MBR3020PT~MBR3060PT

### SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 60 Volts **CURRE** 30.0 Amperes

**TO-3P**

Unit: inch (mm)

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.
- Both normal and Pb free product are available :  
Normal : 80-95% Sn, 5-20% Pb  
Pb free: 99% Sn above

#### MECHANICAL DATA

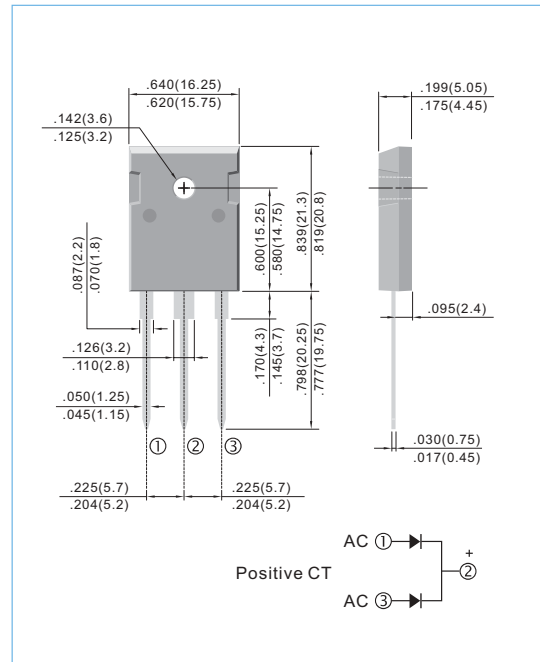
Case: TO-3P Molded plastic

Terminals: Solder plated, solderable per MIL-STD-202G, Method 208

Polarity: As marked.

Standard packaging: Any

Weight: 0.2 ounces, 5.6grams.



#### 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	MBR30 20PT	MBR30 30PT	MBR30 35PT	MBR30 40PT	MBR30 45PT	MBR30 50PT	MBR30 60PT	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	35	40	45	50	60	V
Maximum RMS Voltage	$V_{RMS}$	14	21	24.5	28	31.5	35	42	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	35	40	45	50	60	V
Maximum Average Forward Current .375"(9.5mm) lead length at $T_c = 100$	$I_{AV}$	30							A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	275							A
Maximum Forward Voltage at 15A	$V_F$	0.55					0.70V		V
Maximum DC Reverse Current $T_A=25$ at Rated DC Blocking Voltage $T_A=100$	$I_R$	1.0					100		mA
Maximum Thermal Resistance	$R_{\theta JC}$	1.5					/ W		

#### NOTES:

Both Bonding and Chip structure are available.

## RATING AND CHARACTERISTIC CURVES

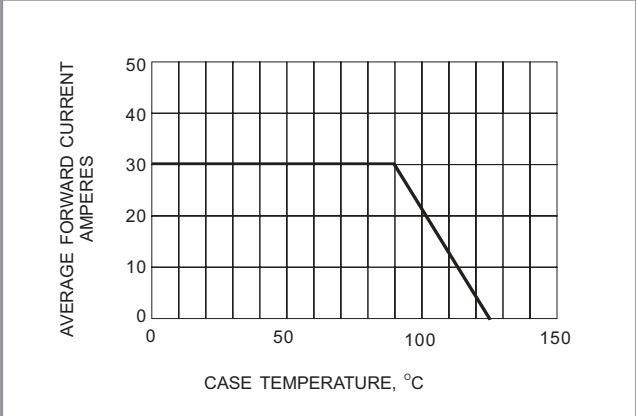


Fig.1- FORWARD CURRENT DERATING CURVE

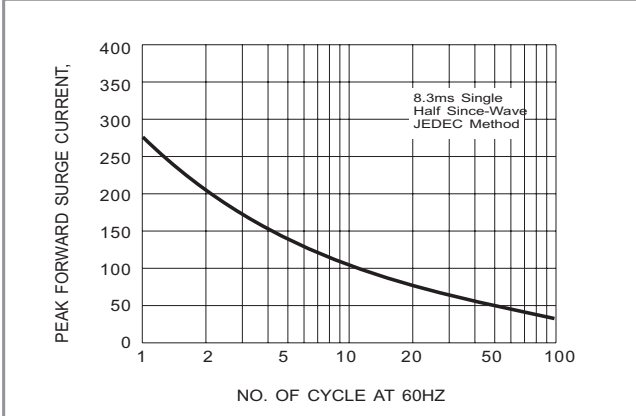


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

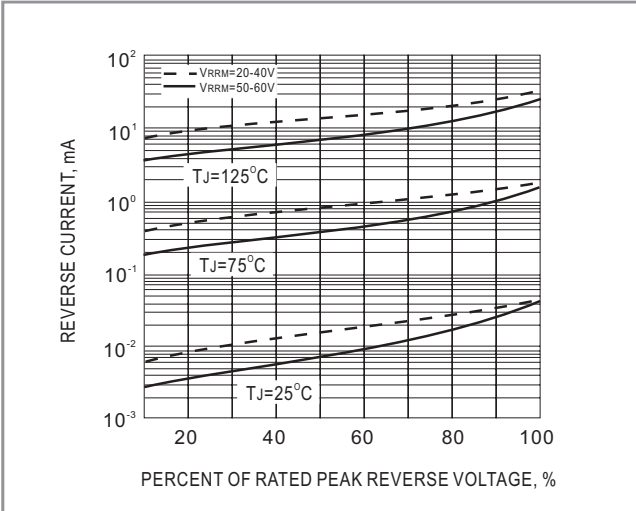


Fig.3- TYPICAL REVERSE CHARACTERISTICS

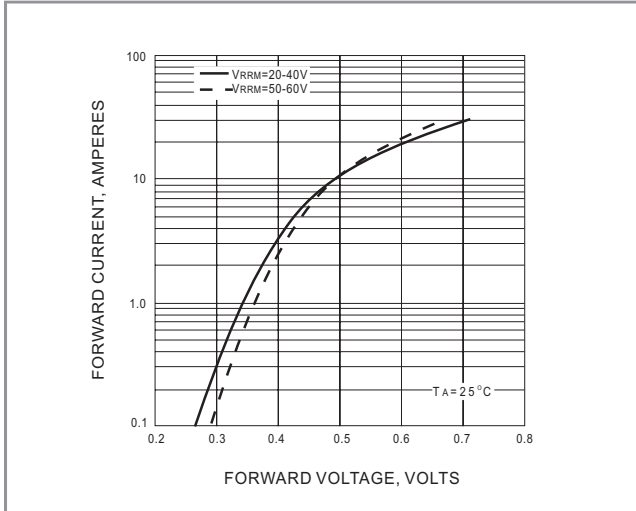


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS