

MBR3020ST SERIES

SCHOTTKY BARRIER RECTIFIERS

VOLTAGE 20 to 100 Volts **CURRENT** 30 Amperes

TO-247S / TO-3PS

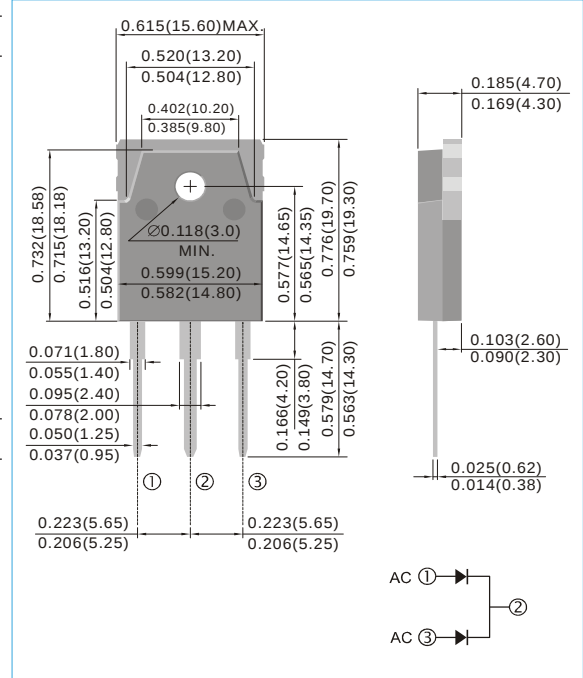
Unit : inch(mm)

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.
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: TO-247S/TO3PS molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any
- Weight: 0.1932 ounces, 5.4803 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	MBR3020ST	MBR3030ST	MBR3040ST	MBR3045ST	MBR3050ST	MBR3060ST	MBR3080ST	MBR3090ST	MBR30100ST	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	30	40	45	50	60	80	90	100	V
Maximum RMS Voltage	V _{RMS}	14	21	28	31.5	35	42	56	63	70	V
Maximum DC Blocking Voltage	V _{DC}	20	30	40	45	50	60	80	90	100	V
Maximum Average Forward Current	I _{F(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 per leg	V _F	0.70				0.75		0.8			V
Maximum DC Reverse Current at T _J =25 °C Rated DC Blocking Voltage T _J =125°C	I _R	0.1 20							0.05 20		mA
Typical Thermal Resistance	R _{θJC}	1.4									°C / W
Operating Junction and Storage Temperature Range	T _J ,T _{STG}	-55 to + 150			-65 to + 175						°C

Note :

Both Bonding and Chip structure are available.

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RATING AND CHARACTERISTIC CURVES

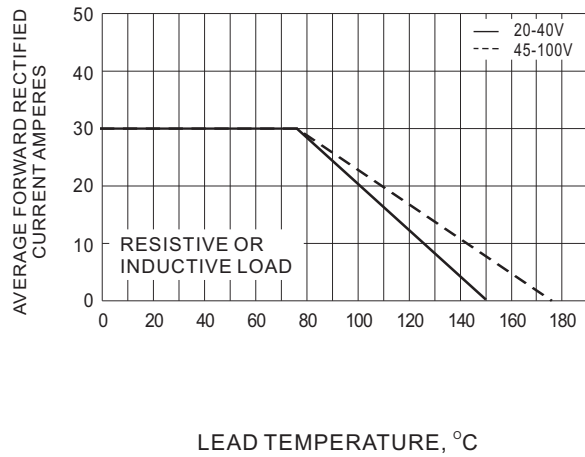


Fig.1- FORWARD CURRENT DERATING CURVE

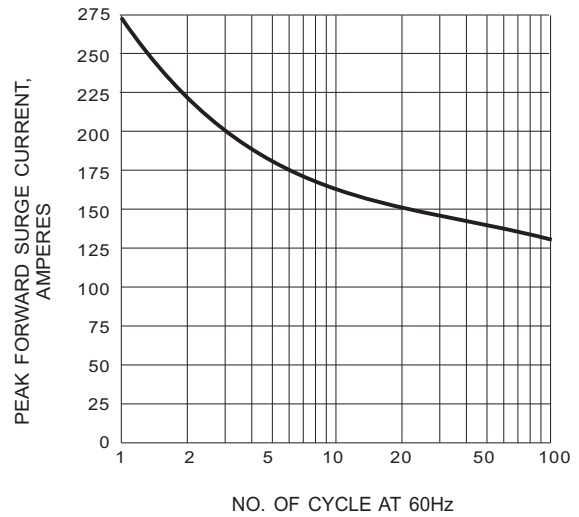


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

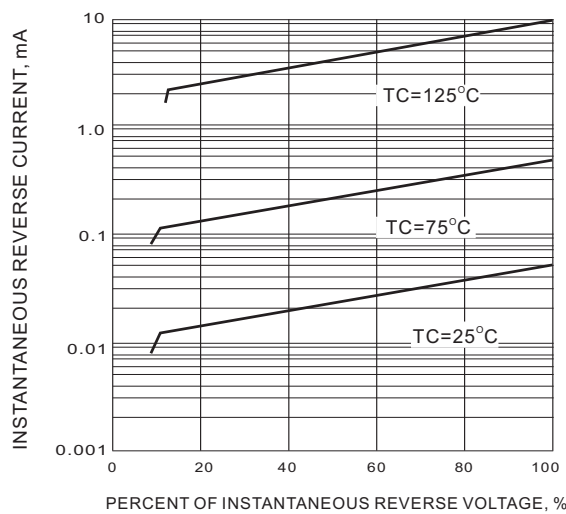


Fig.3- TYPICAL REVERSE CHARACTERISTIC

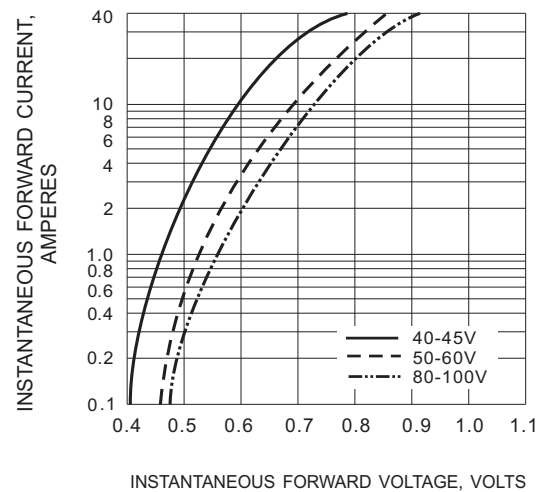


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC