



MBR4040ST SERIES

SCHOTTKY BARRIER RECTIFIERS

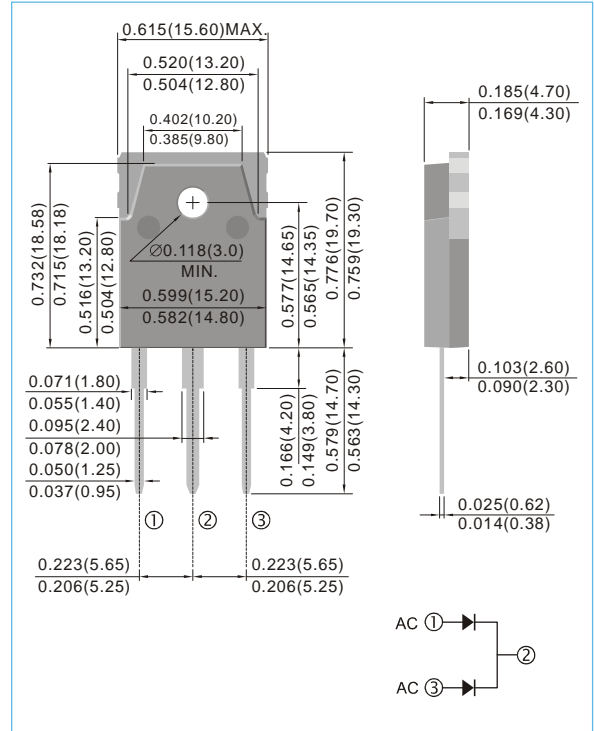
VOLTAGE 40 to 100 Volts **CURRENT** 40 Amperes **TO-247S / TO-3PS** Unit : inch(mm)

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/TO-3PS molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any



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	MBR4040ST	MBR4045ST	MBR4050ST	MBR4060ST	MBR4080ST	MBR4090ST	MBR40100ST	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	50	60	80	90	100	V
Maximum RMS Voltage	V_{RMS}	28	31.5	35	42	56	63	70	V
Maximum DC Blocking Voltage	V_{DC}	40	45	50	60	80	90	100	V
Maximum Average Forward Current	$I_{F(AV)}$	40							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	350							A
Maximum Forward Voltage at 20A per leg	V_F	0.7		0.79		0.8			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R					0.1 20		0.05 20	mA
Typical Thermal Resistance	$R_{\theta JC}$	1.2							°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

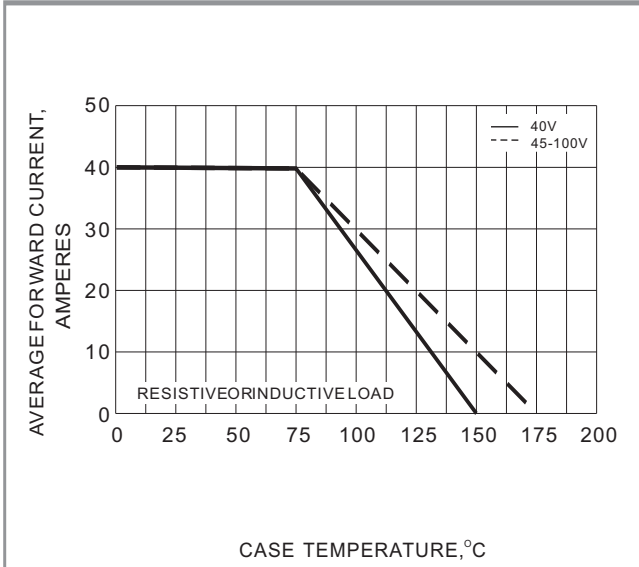


Fig.1-FORWARD CURRENT DERATING CURVE

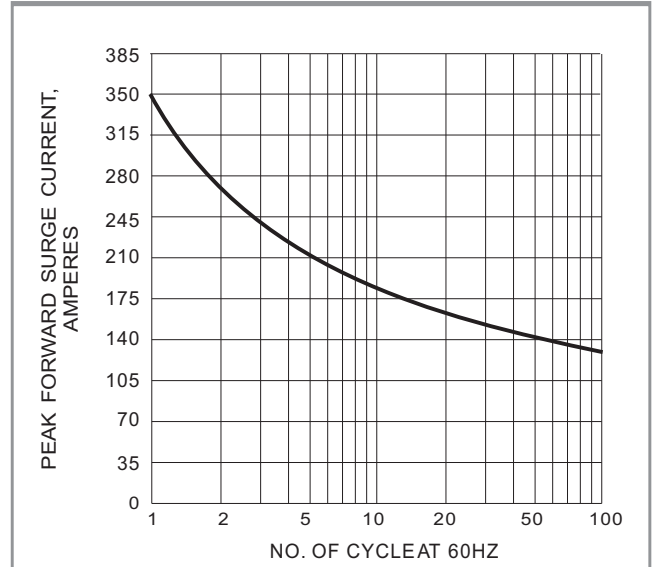


Fig.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

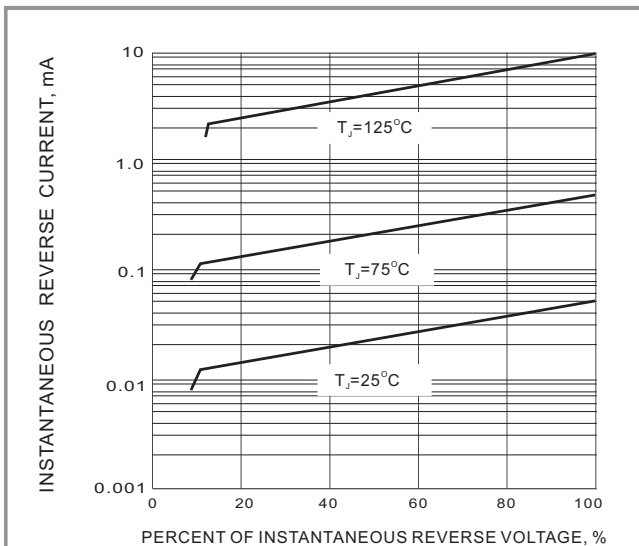


Fig.3-TYPICAL REVERSE CHARACTERISTIC

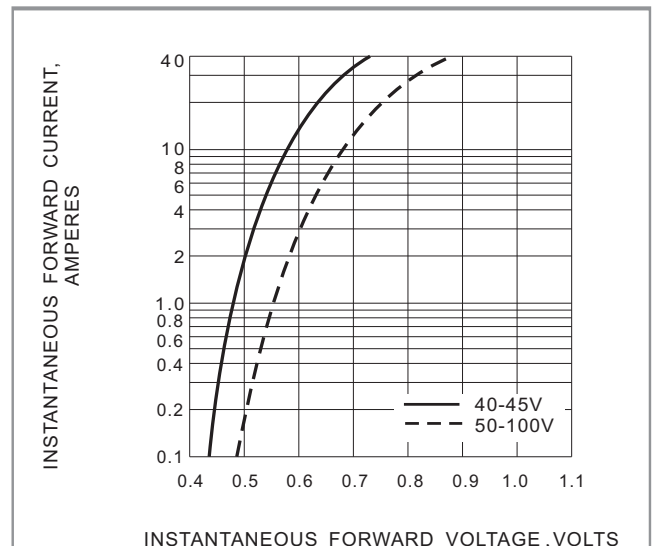


Fig.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC