

MBR4040ST SERIES

SCHOTTKY BARRIER RECTIFIERS

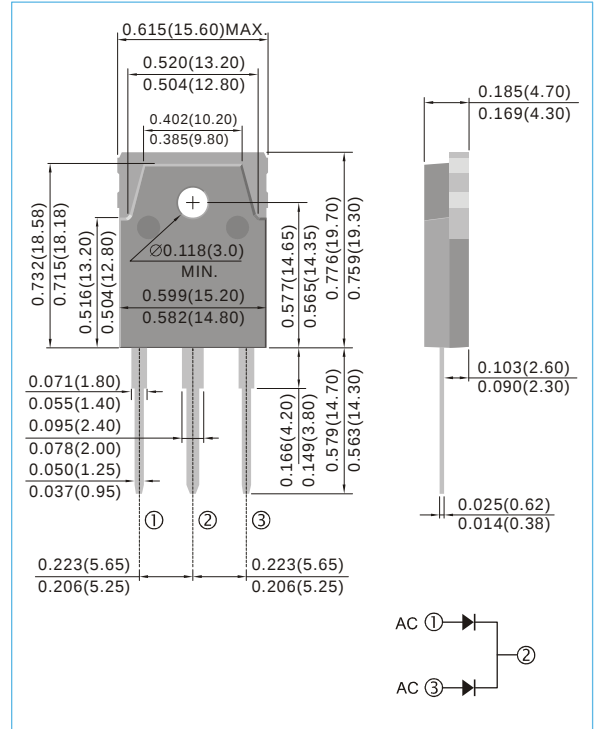
VOLTAGE	40 to 100 Volts	CURRENT	40 Amperes	TO-247S / TO-3PS	Unit : inch(mm)
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FEATURES

- 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 T _J =25°C T _J =125°C	I _R	0.1 20						0.05 20	mA
Typical Thermal Resistance	R _{θJC}	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

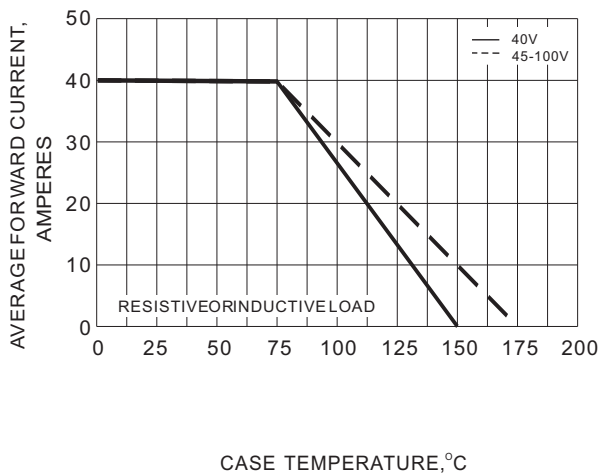


Fig.1-FORWARD CURRENT DERATING CURVE

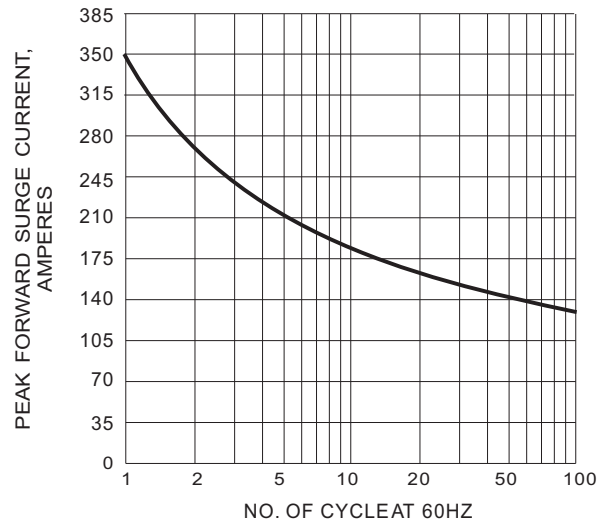


Fig.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

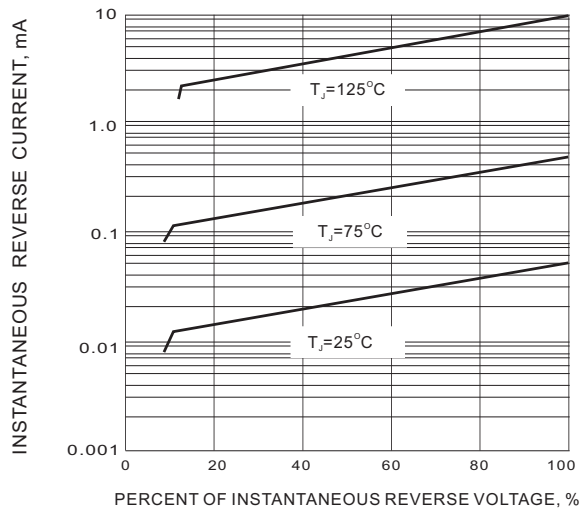


Fig.3-TYPICAL REVERSE CHARACTERISTIC

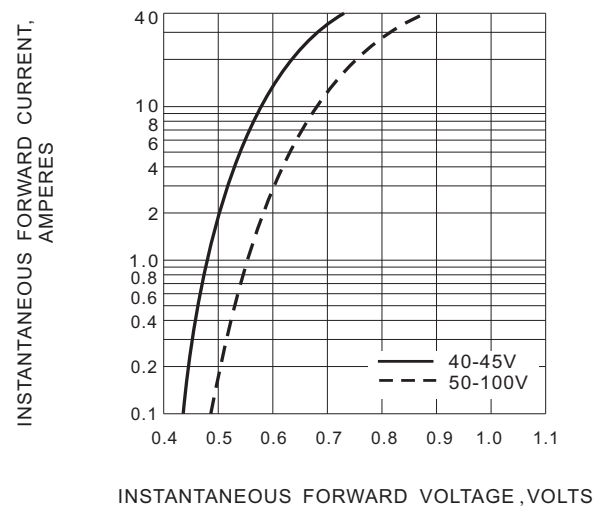


Fig.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC