

CURRENT 40 Ampere
 VOLTAGE RANG 40 to 200 Volts

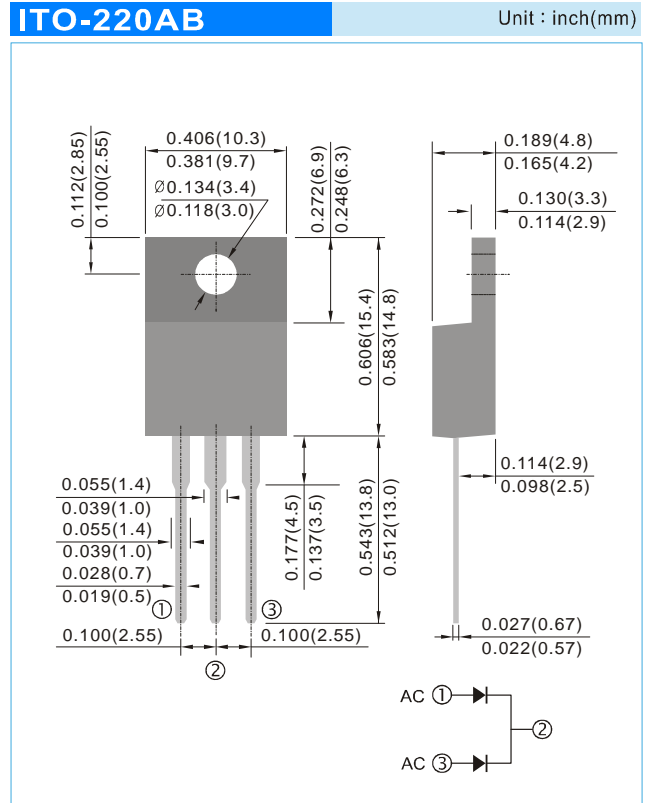
MBR4040FCT THRU MBR40200FCT

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: ITO-220AB molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any
- Weight: 0.055 ounces, 1.5615 grams.



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

	Symbols	MBR 4030FCT	MBR 4035FCT	MBR 4040FCT	MBR 4045FCT	MBR 4050FCT	MBR 4060FCT	MBR 40100FCT	MBR 40150FCT	MBR 40200FCT	Units
Maximum repetitive peak reverse voltage	V_{RRM}	30	35	40	45	50	60	100	150	200	Volts
Maximum RMS voltage	V_{RMS}	21	25	28	32	35	42	70	105	140	Volts
Maximum DC blocking voltage	V_{DC}	30	35	40	45	50	60	100	150	200	Volts
Maximum average forward rectified current(see Fig.1)	Per leg	20.0									Amps
	Total device	40.0									
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	300.0									Amps
Maximum instantaneous forward voltage at 40.0 A	V_F	0.60			0.75		0.85	0.95			Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	$T_c = 25^\circ C$	0.2									mA
	$T_c = 125^\circ C$	30			50						
Typical thermal resistance (Note 2)	$R_{\theta JC}$	1.4									°C/W
Operating junction temperature range	T_J	-65 to +150									°C
Storage temperature range	T_{STG}	-65 to +150									°C

Notes: 1.Pulse test: 300 μ s pulse width,1% duty cycle
 2.Thermal resistance from junction to case

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RATING AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

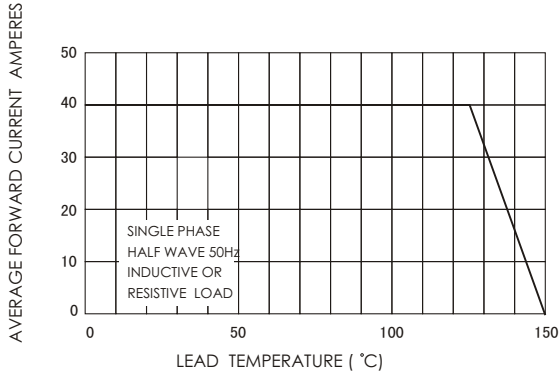


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

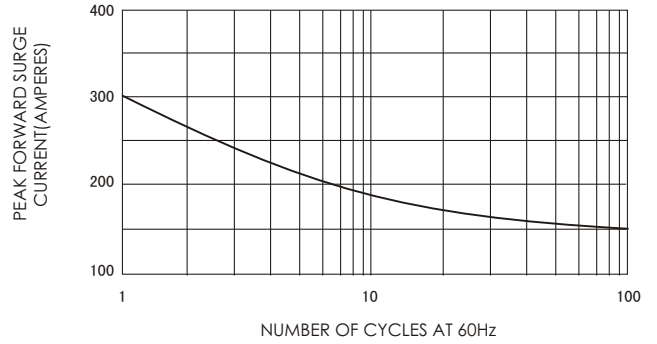


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

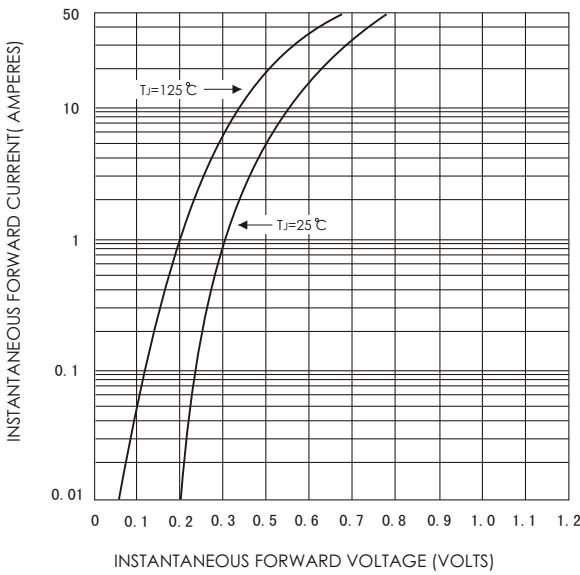


FIG.4-TYPICAL REVERSE CHARACTERISTICS

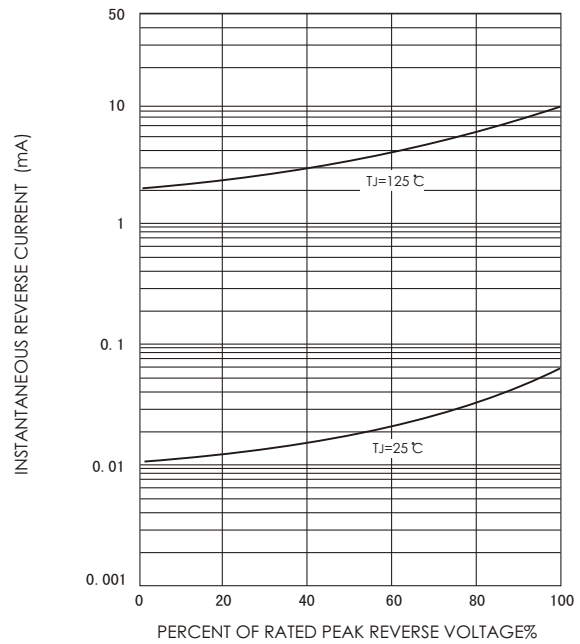


FIG.5-TYPICAL JUNCTION CAPACITANCE

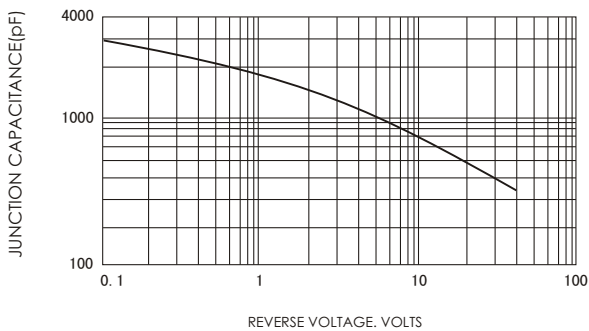


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

