

CURRENT 40 Ampere
VOLTAGE RANG 40 to 200 Volts

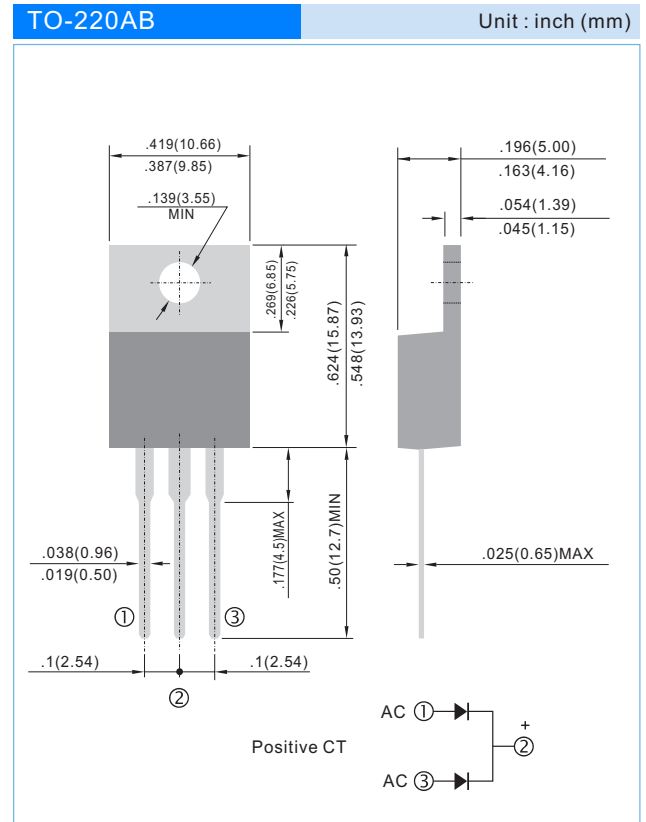
MBR4040CT THRU MBR40200CT

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

MECHANICAL DATA

- Case: JEDEC TO-220AB molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.08ounce, 2.24 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 4030CT	MBR 4035CT	MBR 4040CT	MBR 4045CT	MBR 4050CT	MBR 4060CT	MBR 40100CT	MBR 40150CT	MBR 40200CT	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°C	0.2									mA
	T _c = 125°C	30			50						
Typical thermal resistance (Note 2)	R _{θJC}	3.0									°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

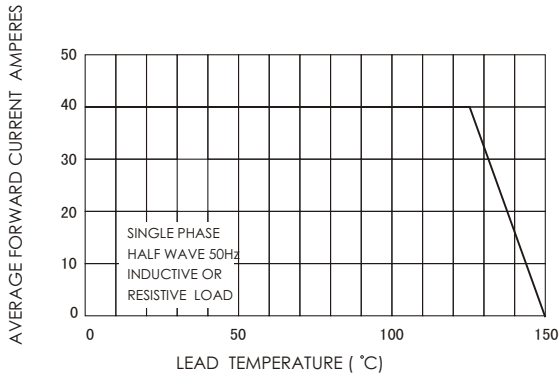


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

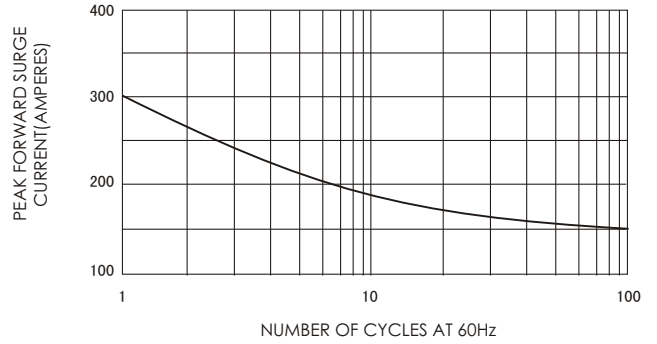


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

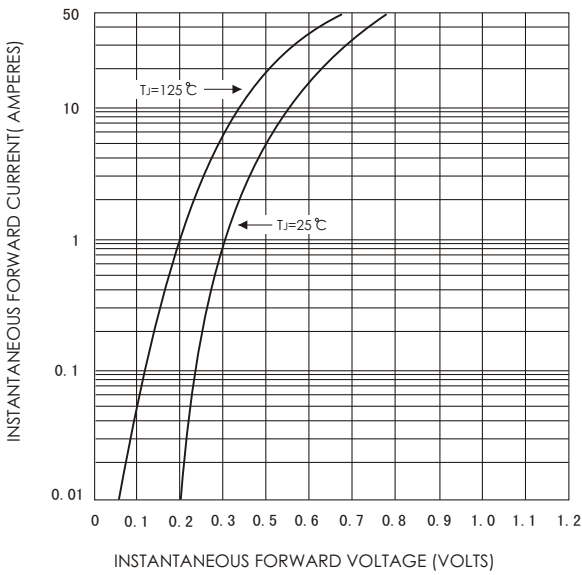


FIG.4-TYPICAL REVERSE CHARACTERISTICS

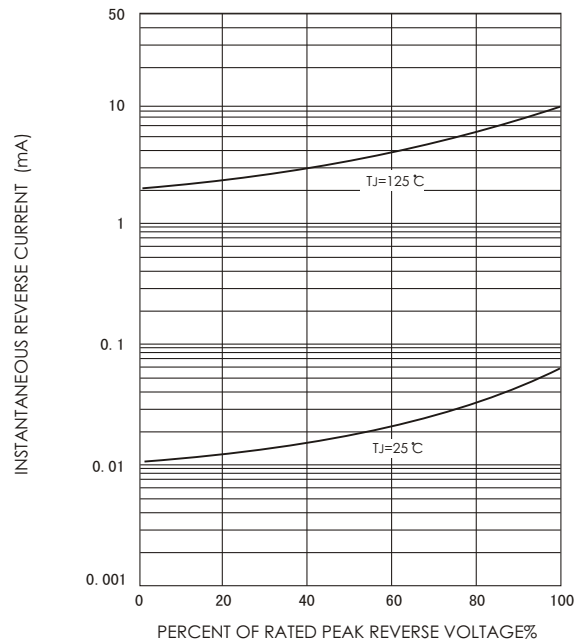


FIG.5-TYPICAL JUNCTION CAPACITANCE

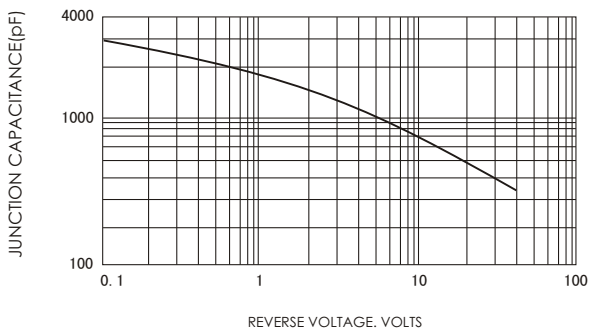


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

