MBR1020CT-MBR10200CT

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 20--- 200 V CURRENT: 10.0 A

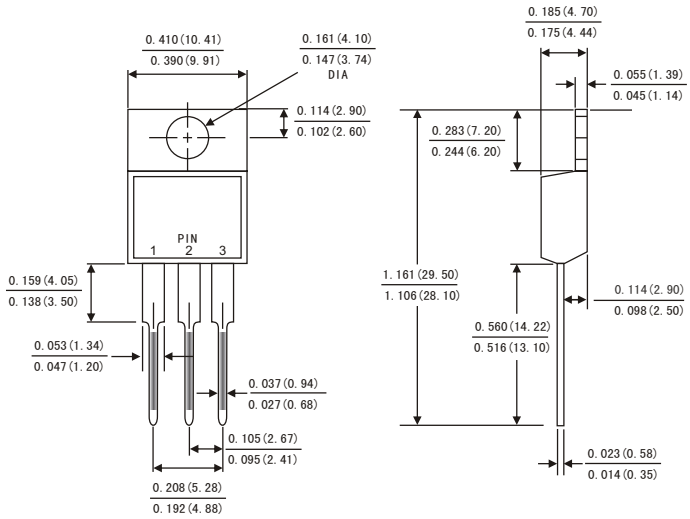
FEATURES

- ●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 ℃/10 seconds at terminals
- ●Component in accordance to RoHS 2002/95/Ec and WEEE 2002/96/EC

MECHANICAL DATA

- ●Case: TO-220AB molded plastic body
- ●Terminals:Lead solderable per MIL-STD-750,method 2026
- ●Polarity:Color band denotes cathode end

TO-220AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)Single phase,half wave,60 Hz,resistive or inductive load.
For capacitive load,derate by 20%.

TYPE NUMBER		SYMBOL	MBR 1020CT	MBR 1030CT	MBR 1045CT	MBR 1050CT	MBR 1060CT	MBR 1080CT	MBR 10100CT	MBR 10200CT	UNITS
Maximum recurrent peak reverse voltage		V_{RRM}	20	30	45	50	60	80	100	200	V
Maximum RMS voltage		V_{RMS}	14	21	31	35	42	56	70	140	V
Maximum DC blocking voltage		V_{DC}	20	30	45	50	60	80	100	200	V
Maximum Average Forward rectified Current0.375"(9.5mm) lead length		$I_{F(AV)}$	5.0 10.0								A
Peak forw ard surge current 8.3ms single half sine-w ave superimposed on rated load		I_{FSM}	150.0								A
Maximum instantaneous forwardvoltage at 10.0 A(Note1)		V_F	0.60			0.75		0.85		0.95	V
Maximum reverse current	@T_A=25℃	I_R	0.2								mA
at rated DC blocking voltage perdiode	@T_A=120℃		15			50					
Typical Thermal Resistance (Note 2)		$R_{\theta JC}$	2.5								℃/W
Storage Temperature		T_{STG}	- 65 ---- + 150								℃
Operation Junction Temperature		T_j	- 65 ---- + 125								℃

NOTE:1. Pulse test:300μs pulse width,1% duty cycle.

2.Thermal resistance from junction to case.

RATINGS AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

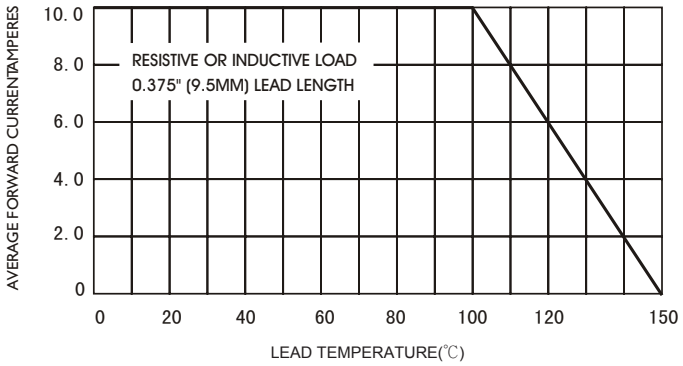


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

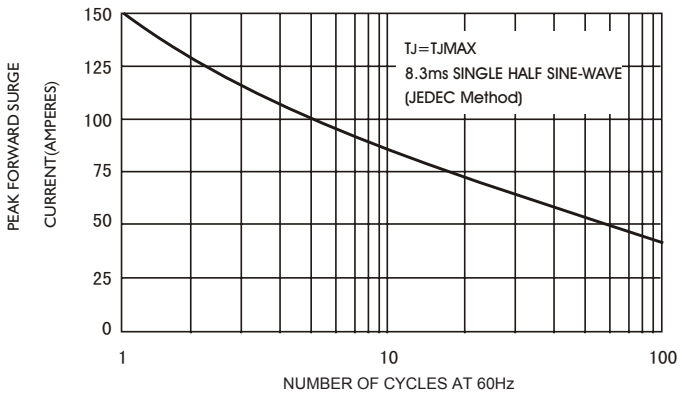


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

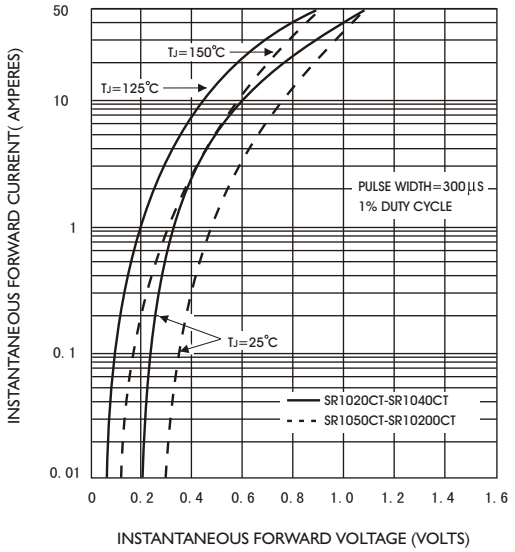


FIG.4 -TYPICAL REVERSE CHARACTERISTICS

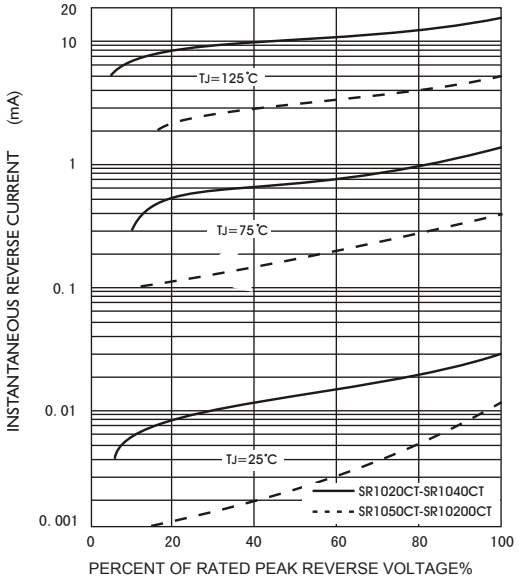


FIG.5-TYPICAL JUNCTION CAPACITANCE

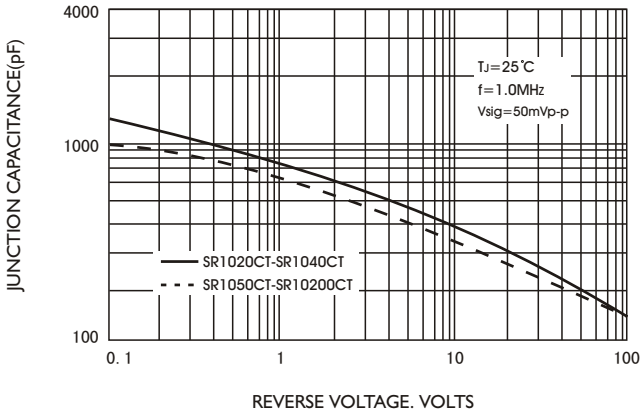


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE