



MBR1030CT thru MBR10100CT

SCHOTTKY BARRIER RECTIFIERS	REVERSE VOLTAGE - 30 to 100Volts FORWARD CURRENT - 10.0 Amperes
<p>FEATURES</p> <ul style="list-style-type: none"> ● Metal of silicon rectifier , majority carrier conduction ● Guard ring for transient protection ● Low power loss,high efficiency ● High current capability,low VF ● High surge capacity ● Plastic package has UL flammability classification 94V-0 ● For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> ● Case: TO-220AB molded plastic ● Polarity: As marked on the body ● Weight: 0.08ounces,2.24 grams ● Mounting position :Any 	<p>TO-220AB</p> <p>Dimensions in inches and (millimeters)</p>

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	MBR 1030CT	MBR 1040CT	MBR 1050CT	MBR 1060CT	MBR 1080CT	MBR 10100CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	30	40	50	60	80	100	V
Maximum RMS Voltage	V _{RMS}	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V _{DC}	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current (See Fig.1)	I _(AV)	10.0						A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I _{FSM}	125						A
Peak Forward Voltage (Note1) IF=5A @T _J =25°C IF=5A @T _J =125°C IF=10A @T _J =25°C IF=10A @T _J =125°C	V _F	0.70 0.57 0.80 0.70		0.80 0.65 0.90 0.75		0.85 0.75 0.95 0.85		V
Maximum DC Reverse Current at Rated DC Bolcking Voltage	I _R	0.1 15						mA
Typical Junction Capacitance (Note2)	C _J	170		220		300		pF
Typical Thermal Resistance (Note3)	R _{θJC}	3.0						°C/W
Operating Temperature Range	T _J	-55 to +150						°C
Storage Temperature Range	T _{STG}	-55 to +175						°C

NOTES: 1. 300us pulse width, 2% duty cycle.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 3. Thermal resistance junction to case

RATING AND CHARACTERISTIC CURVES

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FIG. 1 – FORWARD CURRENT DERATING CURVE

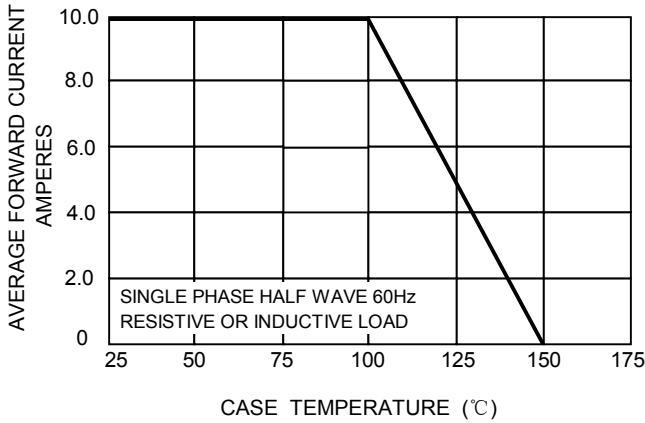


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

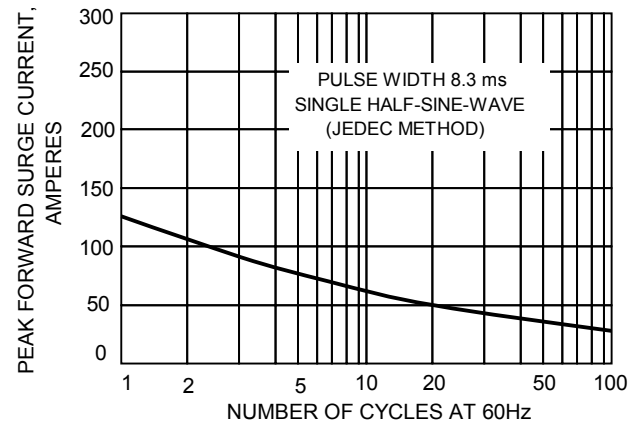


FIG.3-TYPICAL REVER CHARACTERISTICS

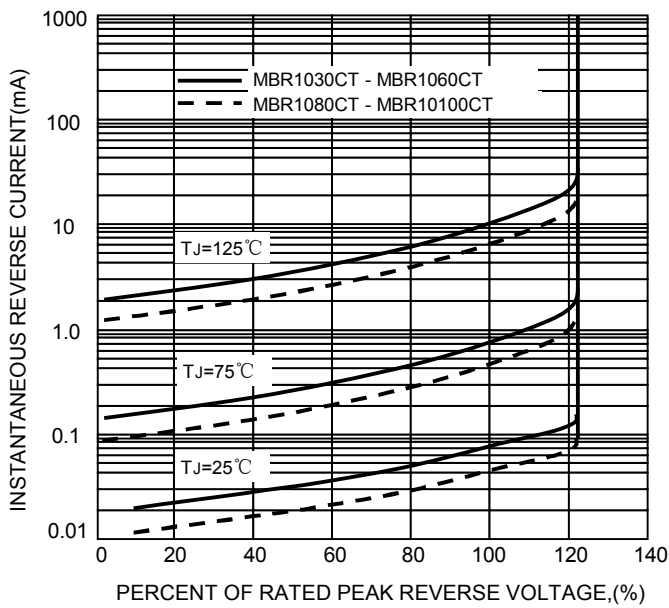


FIG.4-TYPICAL FORWARD CHARACTERISTICS

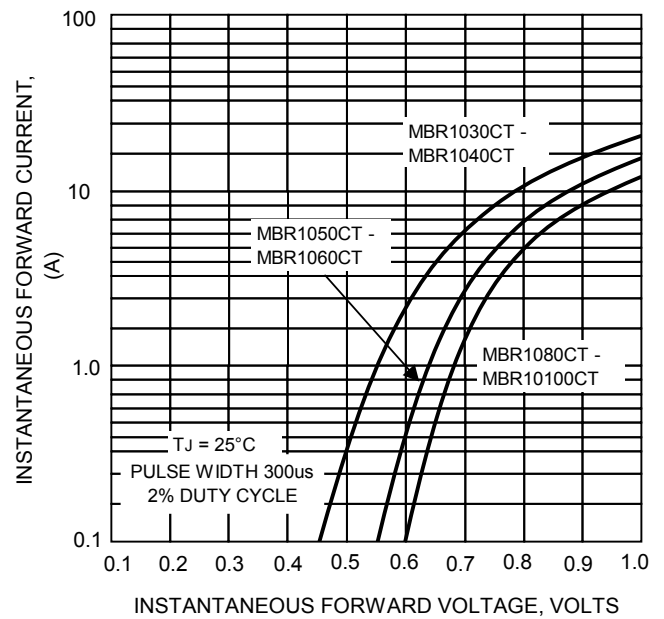


FIG.5 – TYPICAL JUNCTION CAPACITANCE

