MBRF1030CT thru MBRF10100CT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **30** to **100**Volts
FORWARD CURRENT - **10.0** Amperes

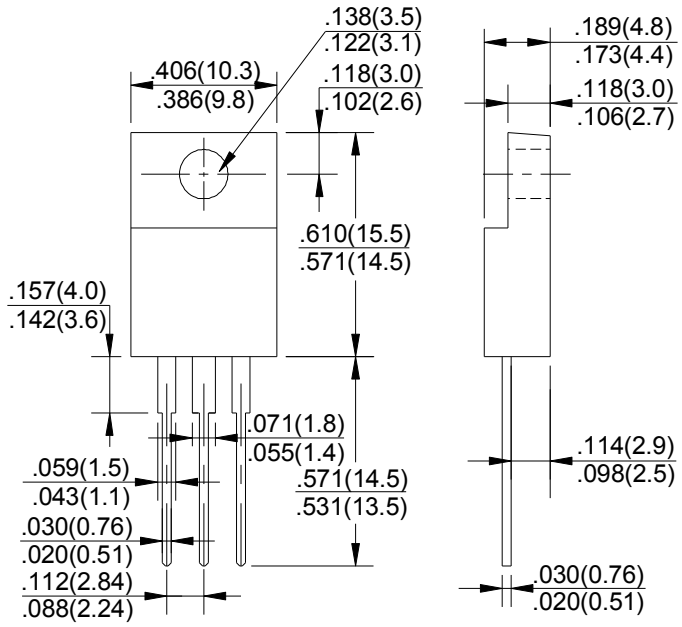
FEATURES

- 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

MECHANICAL DATA

- Case: ITO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

ITO-220AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	MBRF 1030CT	MBRF 1040CT	MBRF 1050CT	MBRF 1060CT	MBRF 1080CT	MBRF 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℃	V_F	0.70		0.80		0.85		V
IF=5A @T_J=125℃		0.57		0.65		0.75		
IF=10A @T_J=25℃		0.80		0.90		0.95		
IF=10A @T_J=125℃		0.70		0.75		0.85		
Maximum DC Reverse Current @T_J=25℃ at Rated DC Bolcking Voltage @T_J=125℃	I_R	0.1						mA
		15						
Typical Junction Capacitance (Note2)	C_J	170		220		300		pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	3.0				3.0		℃/W
Operating Temperature Range	T_J	-55 to +150						℃
Storage Temperature Range	T_{STG}	-55 to +175						℃

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.

FIG. 1 – FORWARD CURRENT DERATING CURVE

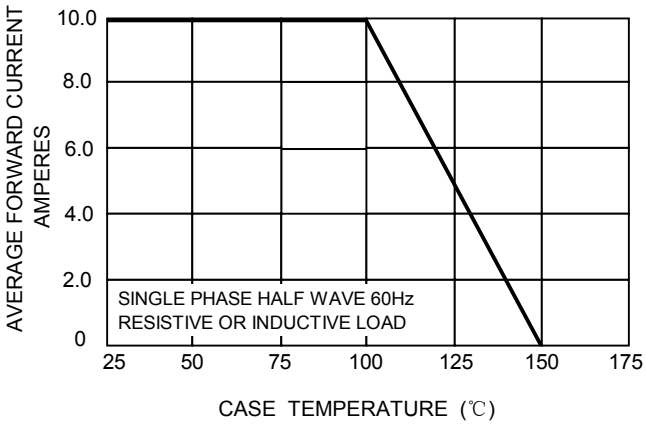


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

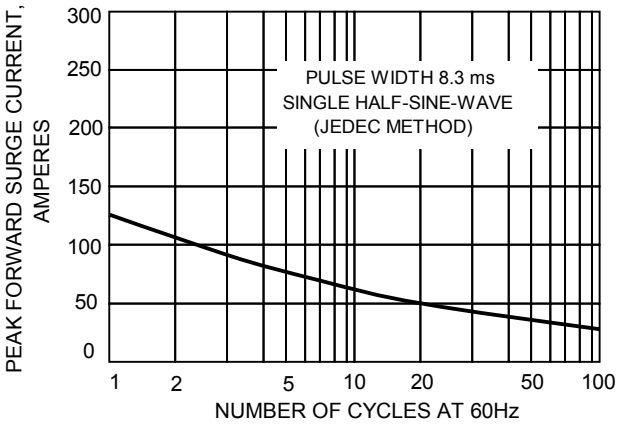


FIG.3-TYPICAL REVER CHARACTERISTICS

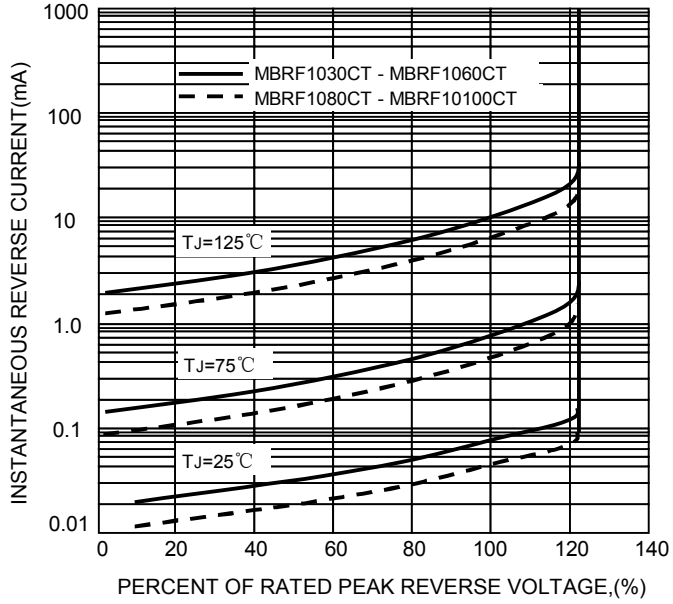


FIG.4-TYPICAL FORWARD CHARACTERISTICS

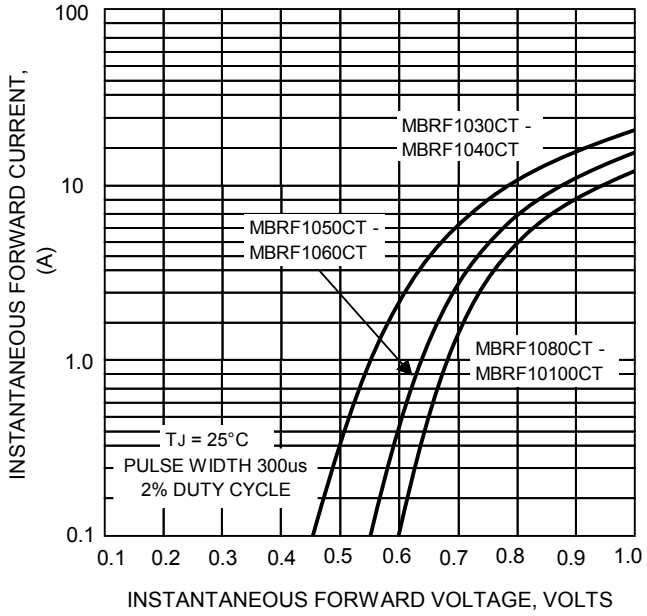


FIG.5 – TYPICAL JUNCTION CAPACITANCE