星合电子
XINGHE ELECTRONICS

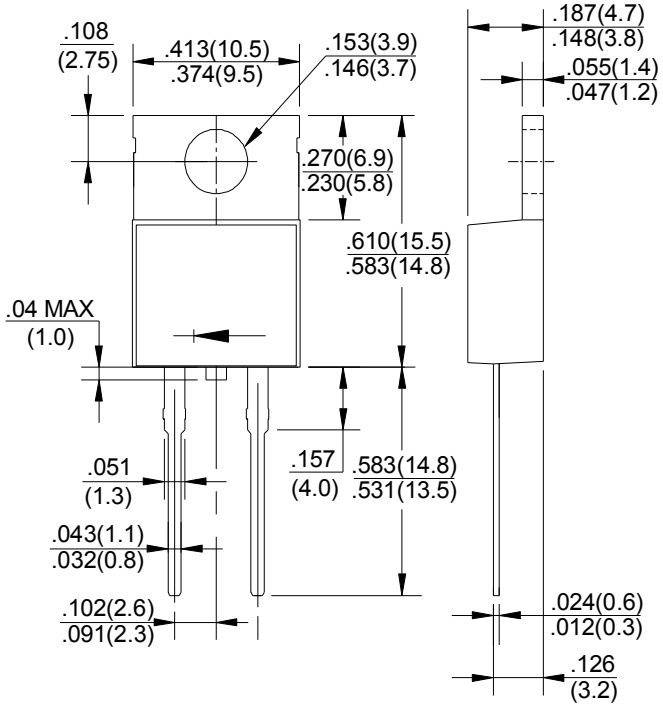
MBR1030 thru MBR10100

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

TO-220AC



Dimensions in inches and (millimeters)

MECHANICAL DATA

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

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	MBR1030	MBR1040	MBR1050	MBR1060	MBR1080	MBR10100	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}	150						A
Peak Forward Voltage (Note1) IF=10A @T_J=25℃	V_F	0.70		0.80		0.85		V
IF=10A @T_J=125℃		0.57		0.70		0.71		
IF=20A @T_J=25℃		0.84		0.95		-		
IF=20A @T_J=125℃		0.72		0.85		-		
Maximum DC Reverse Current @T_J=25℃	I_R	0.1		0.1		0.1		mA
at Rated DC Bolcking Voltage @T_J=125℃		15		10		6.0		
Typical Junction Capacitance (Note2)	C_J	400				1100		pF
Typical Thermal Resistance (Note3)	$R_{\theta JC}$	2.5				2.0		℃/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.

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FIG. 1 – FORWARD CURRENT DERATING CURVE

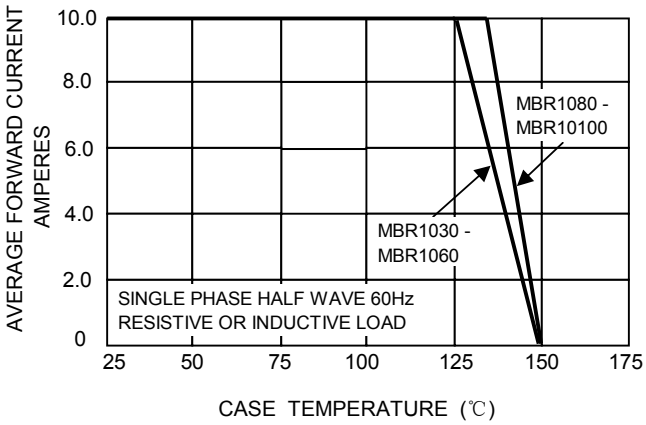


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

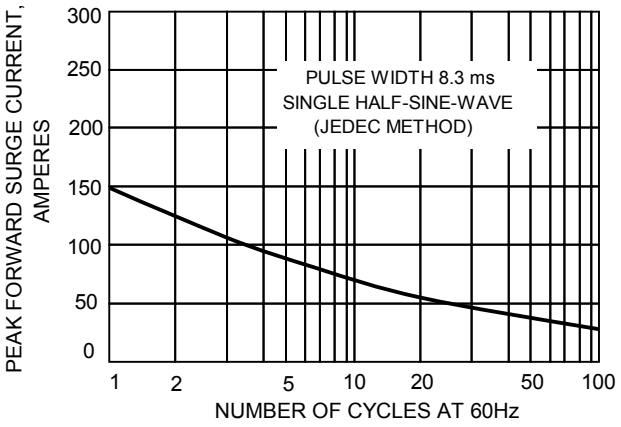


FIG.3-TYPICAL REVER CHARACTERISTICS

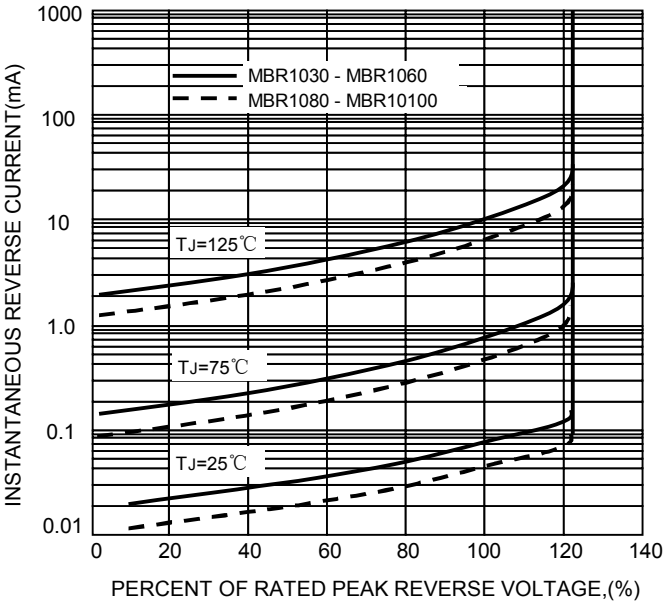


FIG.4-TYPICAL FORWARD CHARACTERISTICS

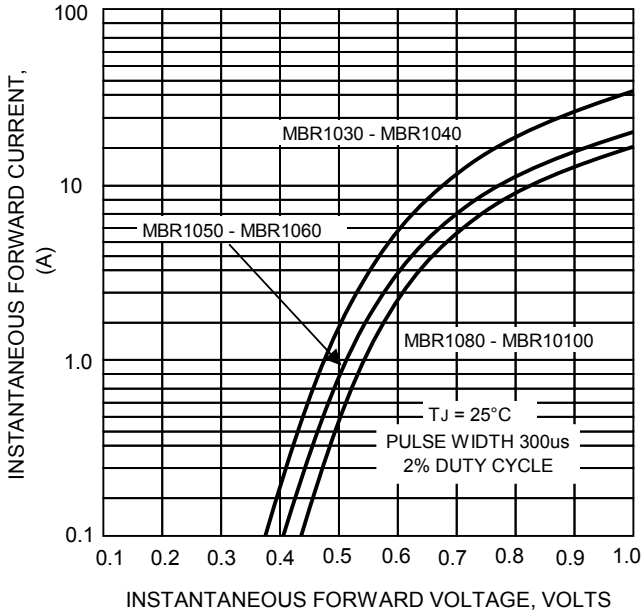


FIG.5 – TYPICAL JUNCTION CAPACITANCE

