



MBR1030 thru MBR10100

SCHOTTKY BARRIER RECTIFIERS

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

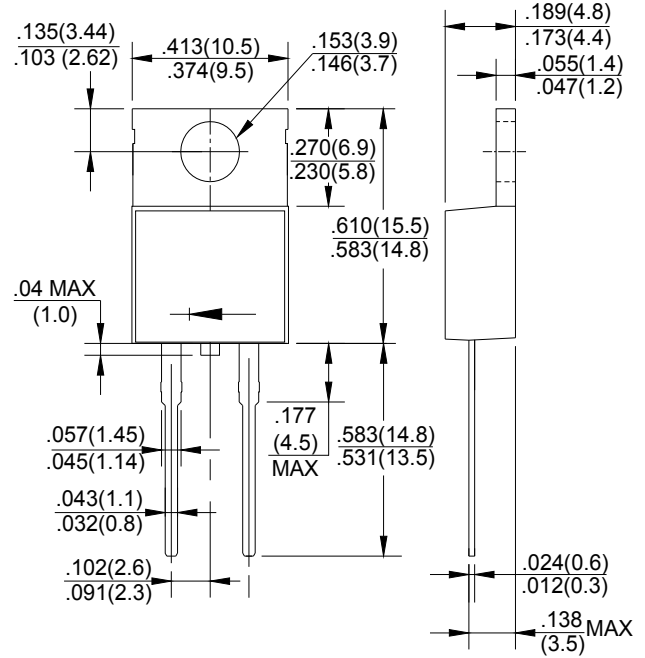
FEATURES

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

TO-220AC



Dimensions in inches and (millimeters)

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	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°C IF=10A @T _J =125°C IF=20A @T _J =25°C IF=20A @T _J =125°C	V _F	0.70 0.57 0.84 0.72		0.80 0.70 0.95 0.85		0.85 0.71 - -		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	0.1 15		0.1 10		0.1 6.0		mA
Typical Junction Capacitance (Note2)	C _J	400				1100		pF
Typical Thermal Resistance (Note3)	R _{θJC}	2.5				2.0		°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.

4.The typical data above is for reference only(典型值仅供参考).

RATING AND CHARACTERISTIC CURVES

MBR1030 thru MBR10100



FIG. 1 – FORWARD CURRENT DERATING CURVE

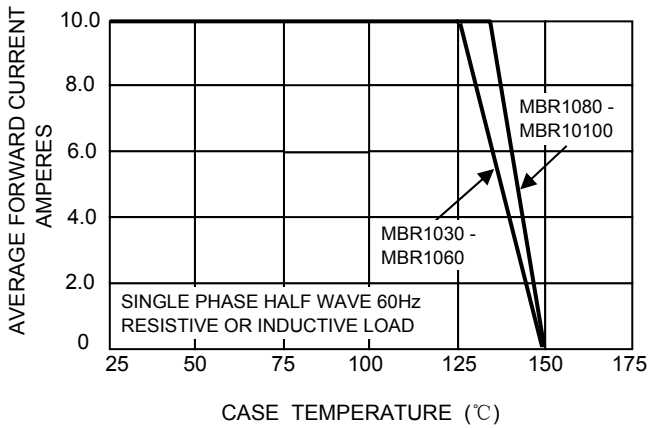


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

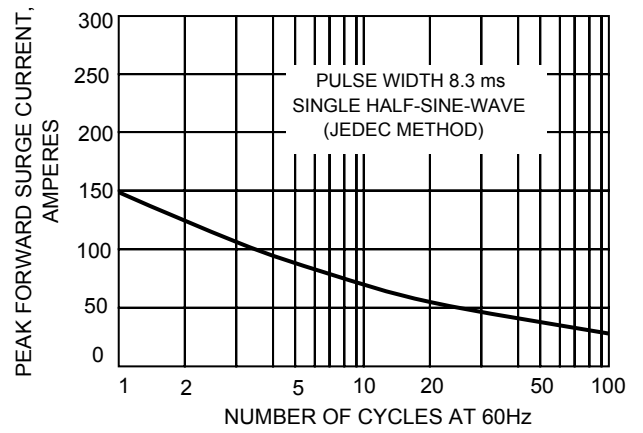


FIG.3-TYPICAL REVERSE CHARACTERISTICS

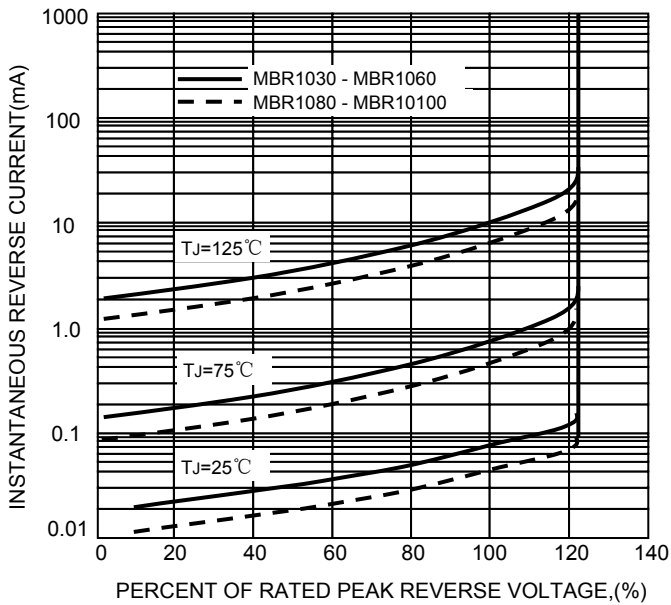


FIG.4-TYPICAL FORWARD CHARACTERISTICS

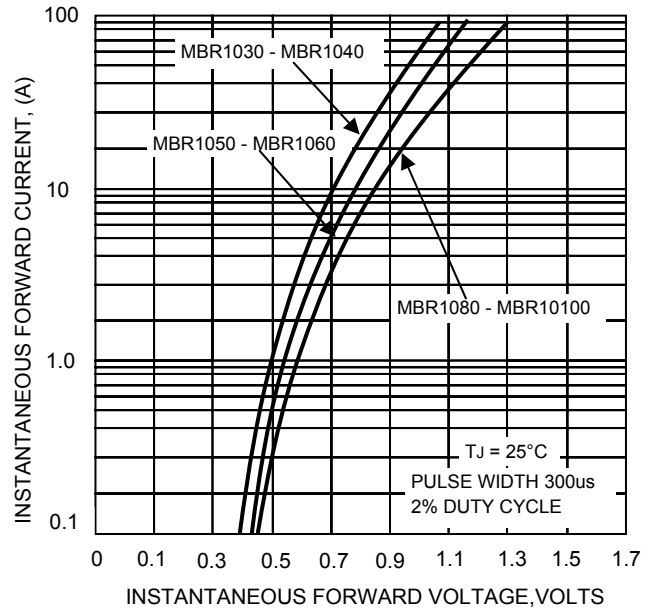
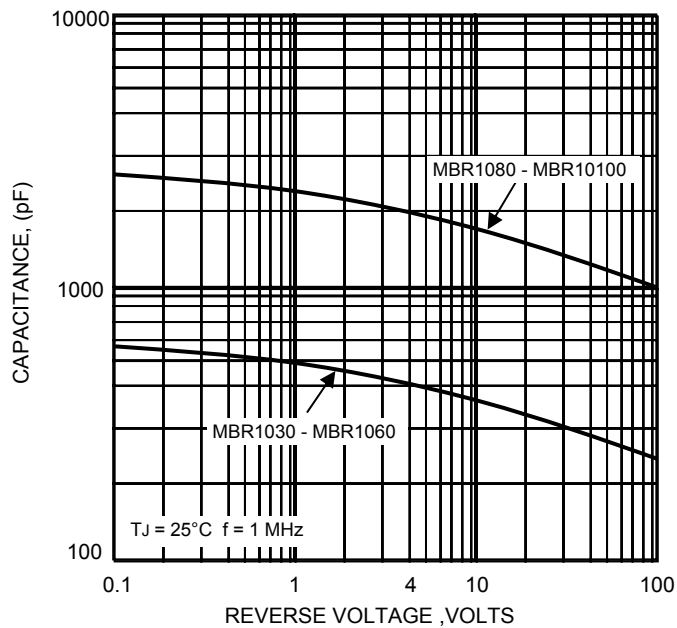


FIG.5 – TYPICAL JUNCTION CAPACITANCE



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!



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