



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	: 0.08 ounces, 2.24 grams
Mounting Position	: Any
Reverse Voltage	: 40 to 60 Volts
Forward Current	: 8 Amperes

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	MBR840	MBR850	MBR860	Unit
Max. Recurrent Peak Reverse Voltage	V _{RRM}	40	50	60	V
Max. RMS Voltage	V _{RMS}	28	35	42	
Max. DC Blocking Voltage	V _{DC}	40	50	60	
Max. Average Forward Rectified Current (See Fig.1)	I(AV)	8.0			A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I _{FSM}	150			
Peak Forward Voltage (Note 1) I _F =8A @T _J =25°C I _F =8A @T _J =125°C I _F =16A @T _J =25°C	V _F	0.7 0.57 0.84	0.8 0.7 0.95		V
Max. DC Reverse Current at Rated DC Blocking Voltage at T _A = 25°C T _A = 125°C	I _R	0.1 15			mA
Typical Junction Capacitance (Note 2)	C _J	250			pF
Typical Thermal Resistance (Note 3)	R _{θJC}	3			°C/W
Operating Temperature Range	T _J	-55 to +150			°C
Storage Temperature Range	T _{STG}	-55 to +175			°C

Notes:

1. 300µs pulse width, 2% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to case
4. The typical data above is for reference only

Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

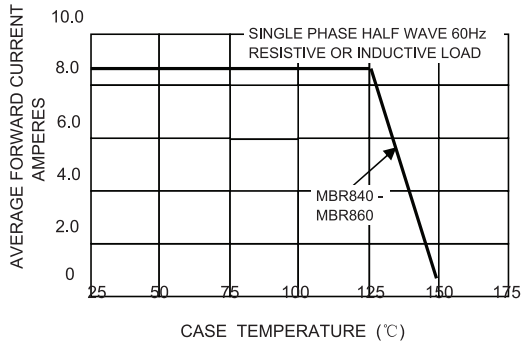


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

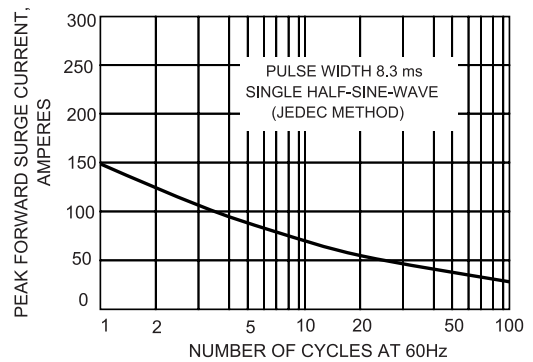


FIG.3-TYPICAL REVERSE CHARACTERISTICS

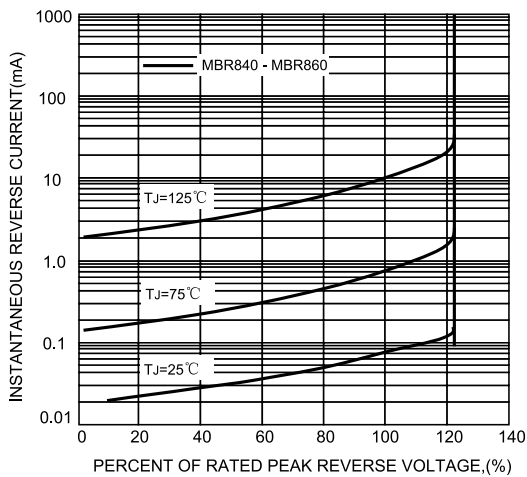


FIG.4-TYPICAL FORWARD CHARACTERISTICS

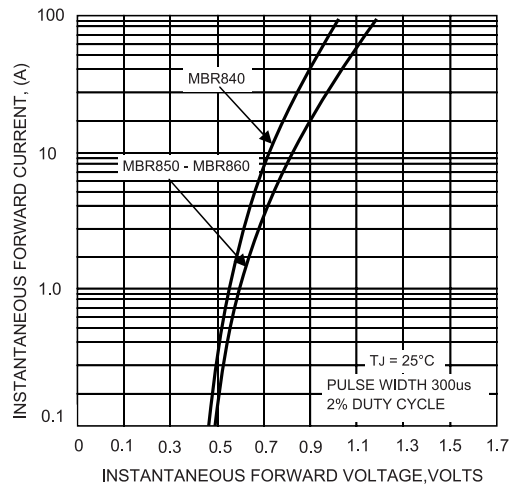
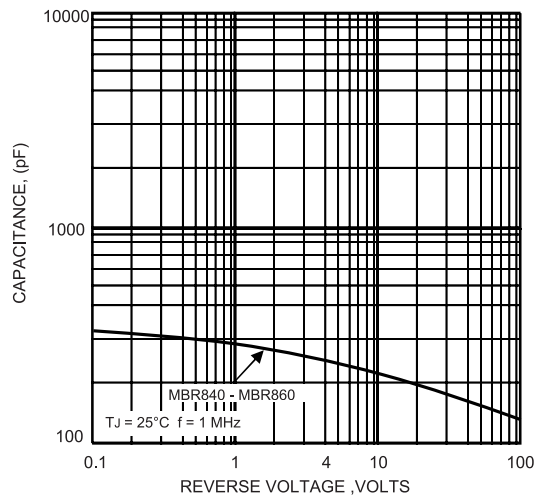
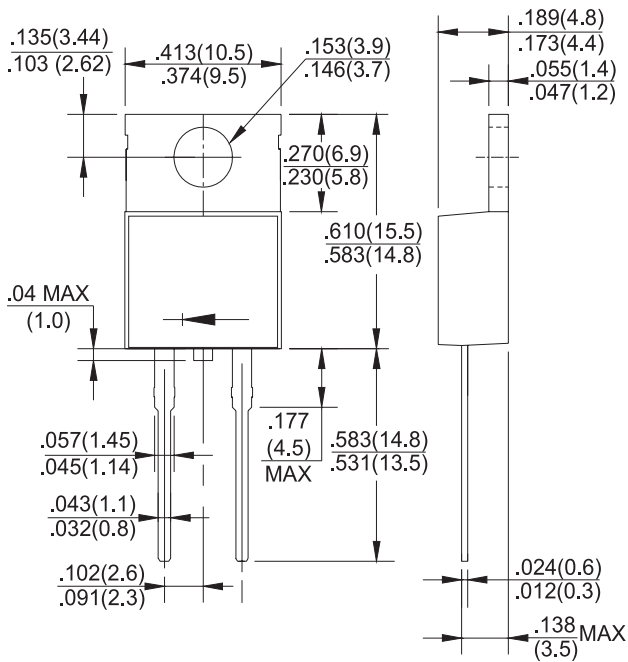


FIG.5 – TYPICAL JUNCTION CAPACITANCE



Dimensions:

TO-220AC



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Schottky Barrier Rectifiers	MBR840
	MBR850
	MBR860

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