

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - 30 to 60 Volts
FORWARD CURRENT - 8.0 Amperes

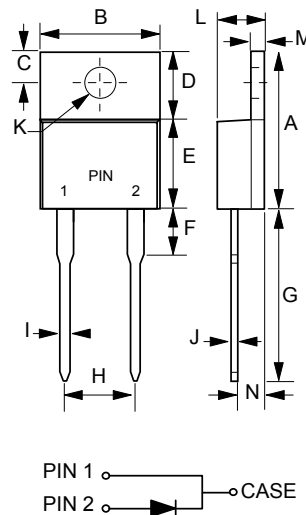
FEATURES

- 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 : 0.08 ounces, 2.24 grams
- Mounting position : Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf.cm)

TO-220AC



TO-220AC		
DIM.	MIN.	MAX.
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	6.35
G	12.70	14.73
H	4.83	5.33
I	0.51	1.14
J	0.30	0.64
K	3.53 \varnothing	4.09 \varnothing
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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	MBR830	MBR835	MBR840	MBR845	MBR850	MBR860	UNIT	
Maximum Recurrent Peak Reverse Voltage	VRRM	30	35	40	45	50	60	V	
Maximum RMS Voltage	VRMS	21	24.5	28	31.5	35	42	V	
Maximum DC Blocking Voltage	VDC	30	35	40	45	50	60	V	
Maximum Average Forward Rectified Current at Tc=125°C (See Fig. 1)	I(AV)	8						A	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	IFSM	150						A	
Voltage Rate of Change (Rated VR)	dv/dt	10000						V/us	
Maximum Forward Voltage (Note 1)	VF	IF=8A @ TJ=125°C	0.57			0.70		V	
		IF=8A @ TJ=25°C	0.70			0.80		V	
		IF=16A @ TJ=25°C	0.84			0.95		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	@TJ=25°C	0.1						mA
		@TJ=125°C	15						mA
Typical Junction Capacitance (Note 2)	CJ	250						pF	
Typical Thermal Resistance (Note 3)	RθJC	3.0						°C/W	
Operating Temperature Range	TJ	-55 to +150						°C	
Storage Temperature Range	TSTG	-55 to +175						°C	

NOTES : 1. 300us Pulse Width, 2% Duty Cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal Resistance Junction to Case.

FIG.1 - FORWARD CURRENT DERATING CURVE

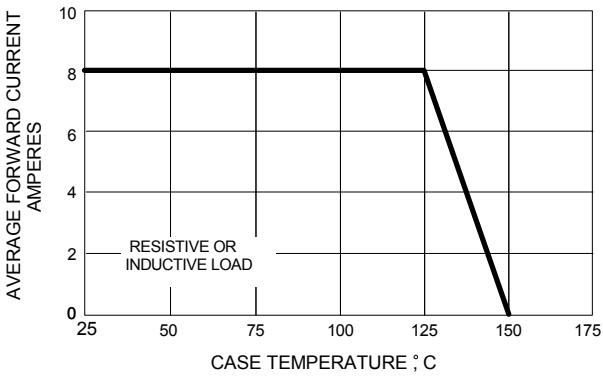


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

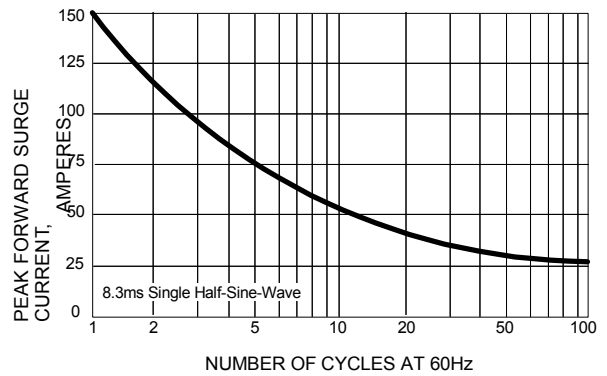


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

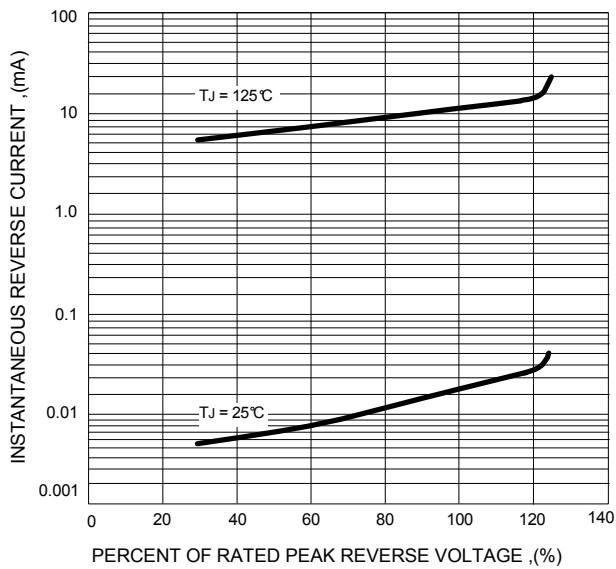


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

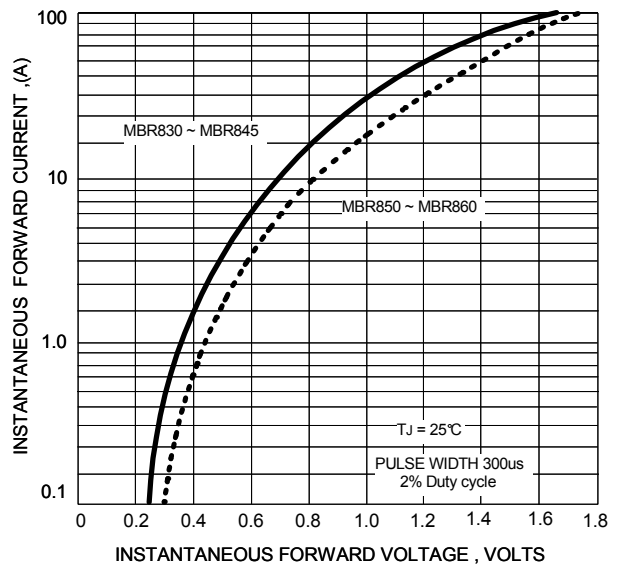


FIG.5 - TYPICAL JUNCTION CAPACITANCE

