

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **70 to 100** Volts
FORWARD CURRENT - **8.0** Amperes

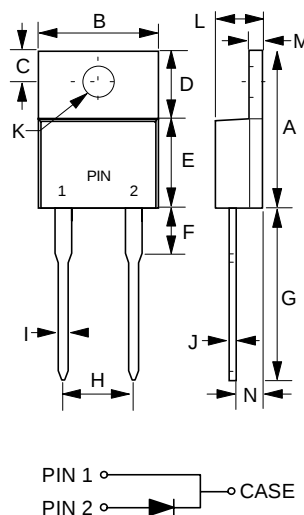
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low V_F
- 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

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	MBR870	MBR880	MBR890	MBR8100	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	70	80	90	100	V
Maximum RMS Voltage	V_{RMS}	49	56	63	70	V
Maximum DC Blocking Voltage	V_{DC}	70	80	90	100	V
Maximum Average Forward Rectified Current (See Fig.1) @ $T_C=110^\circ C$	$I_{(AV)}$	8				A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	I_{FSM}	125				A
Voltage Rate of Change (Rated VR)	dv/dt	10000				V/us
Maximum Forward Voltage (Note 1) $I_F=8A @ T_J=25^\circ C$ $I_F=8A @ T_J=125^\circ C$ $I_F=16A @ T_J=25^\circ C$ $I_F=16A @ T_J=125^\circ C$	V_F	0.85 0.75 0.95 0.85				V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_J=25^\circ C$ @ $T_J=125^\circ C$	I_R	0.1 100				mA
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	2.0				°C/W
Typical Junction Capacitance (Note 3)	C_J	280				pF
Operating Temperature Range	T_J	-55 to +150				°C
Storage Temperature Range	T_{STG}	-55 to +175				°C

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

REV. 3, 13-Sep-2001, KTHA09

FIG.1 - FORWARD CURRENT DERATING CURVE

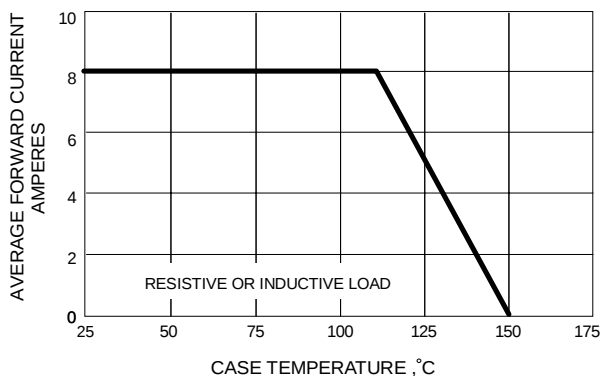


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

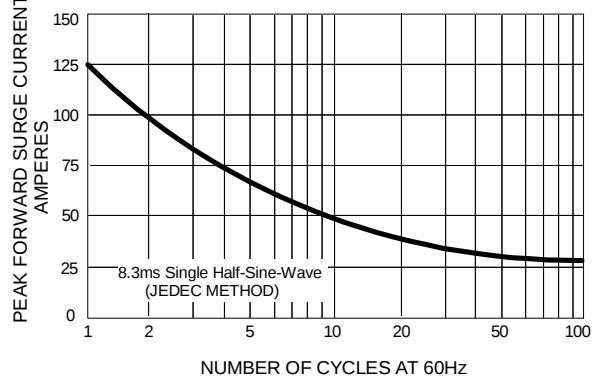


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

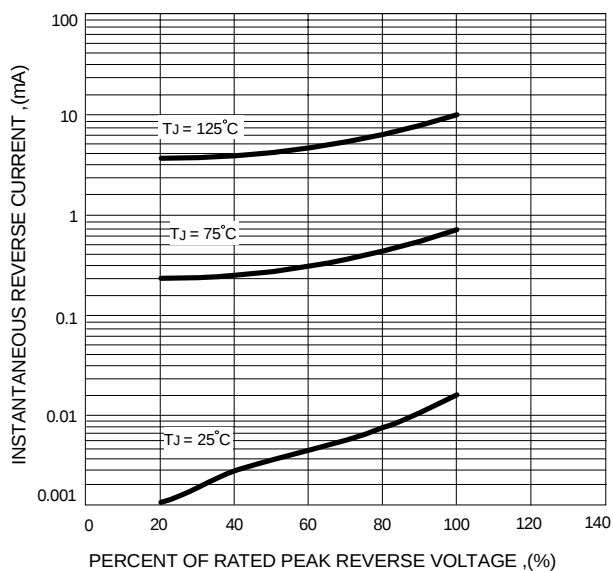


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

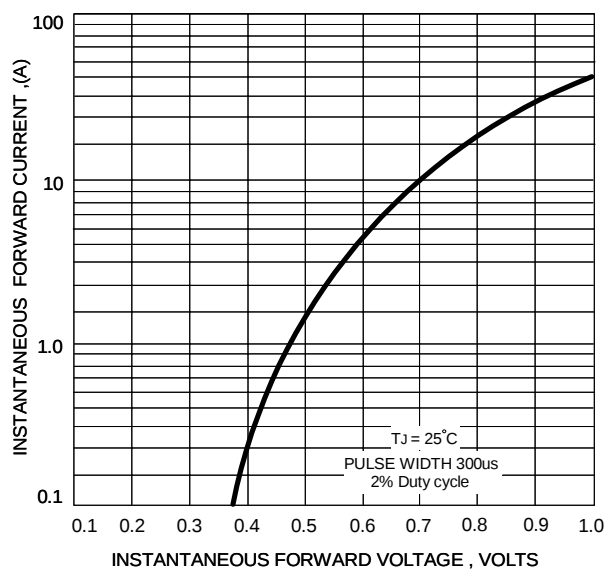


FIG.5 - TYPICAL JUNCTION CAPACITANCE

