

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - 30 to 60 Volts
FORWARD CURRENT - 10 Amperes

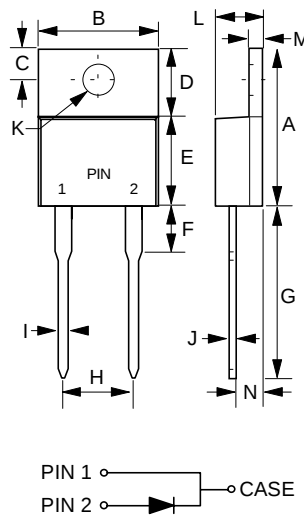
FEATURES

- 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

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	MBR1030	MBR1035	MBR1040	MBR1045	MBR1050	MBR1060	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	30	35	40	45	50	60	V
Maximum RMS Voltage	V _{RMS}	21	24.5	28	31.5	35	42	V
Maximum DC Blocking Voltage	V _{DC}	30	35	40	45	50	60	V
Maximum Average Forward Rectified Current (See Fig.1) @T _C =125°C	I(AV)	10						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	I _{FSM}	150						A
Voltage Rate of Change (Rated VR)	dv/dt	10000						V/us
Maximum Forward Voltage @ I _F =20A T _J =25°C @ I _F =10A T _J =125°C	V _F	0.84 0.57				0.95 0.70		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J =25°C @T _J =125°C	I _R	0.1				25		mA
		15						
Typical Thermal Resistance (Note 1)	R _{θJC}	2.5						°C/W
Typical Junction Capacitance (Note 2)	C _J	400						pF
Operating Temperature Range	T _J	-55 to +150						°C
Storage Temperature Range	T _{STG}	-55 to +175						°C

NOTES : 1. Thermal Resistance Junction to Case.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

REV. 3, 13-Sep-2001, KTHA08

FIG.1 - FORWARD CURRENT DERATING CURVE

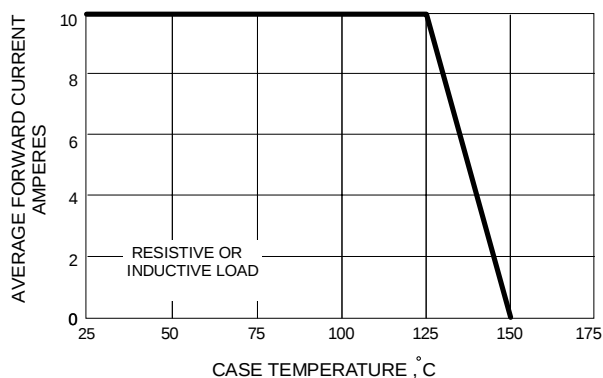


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

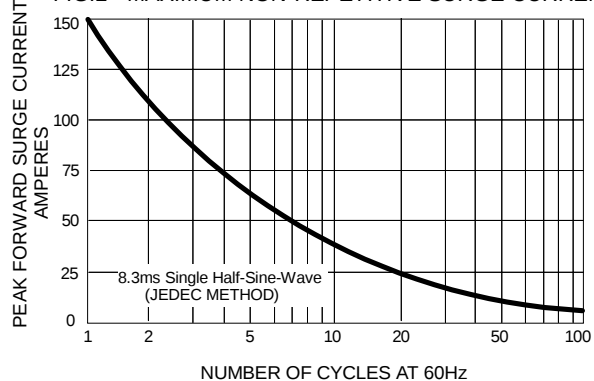


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

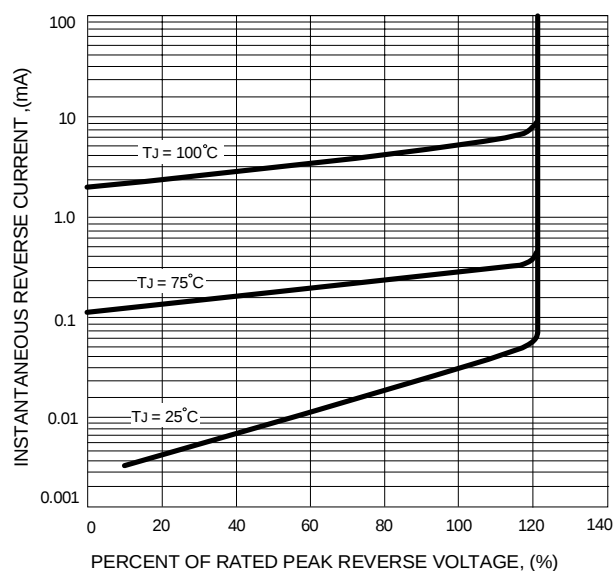


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

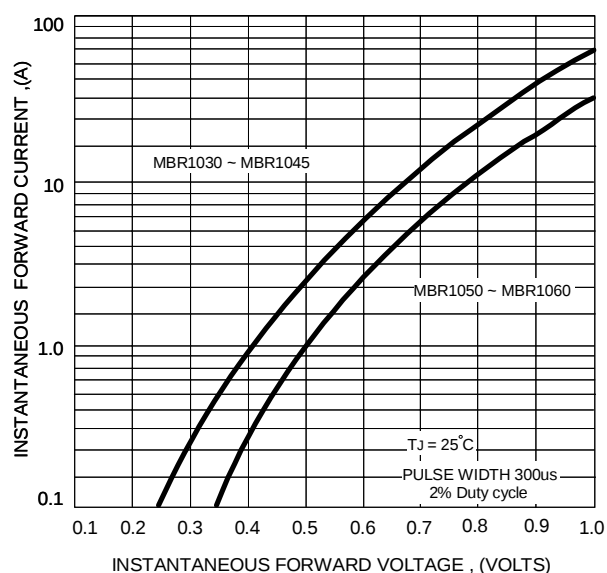


FIG.5 - TYPICAL JUNCTION CAPACITANCE

