

SCHOTTKY BARRIER RECTIFIERS

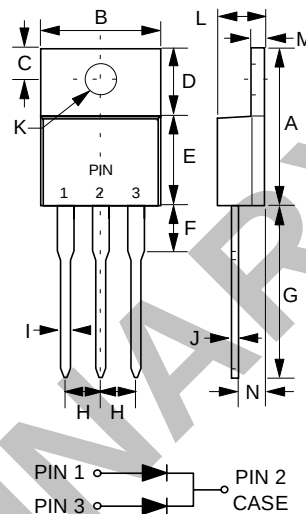
REVERSE VOLTAGE - 30 to 60 Volts
FORWARD CURRENT - 30 Amperes

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

TO-220AB


TO-220AB		
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	2.29	2.79
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	MBR 3030CT	MBR 3035CT	MBR 3040CT	MBR 3045CT	MBR 3050CT	MBR 3060CT	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 =100°C	I _(AV)	30						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	I _{FSM}	200						A
Voltage Rate of Chang (Rated VR)	dv/dt	10000						V/us
Maximum Forward Voltage (Note 1) I _F =30A @ T _J =125°C I _F =15A @ T _J =25°C I _F =30A @ T _J =25°C	V _F	0.72 0.70 0.84				0.85 0.80 0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J =25°C @T _J =125°C	I _R	0.2 40						mA
Typical Junction Capacitance per element (Note 2)	C _J	450				400		pF
Typical Thermal Resistance (Note 3)	R _{θJC}	1.5				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 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal Resistance Junction to Case.

REV. 2-PRE, 13-Sep-2001, KTHC11

FIG.1 - FORWARD CURRENT DERATING CURVE

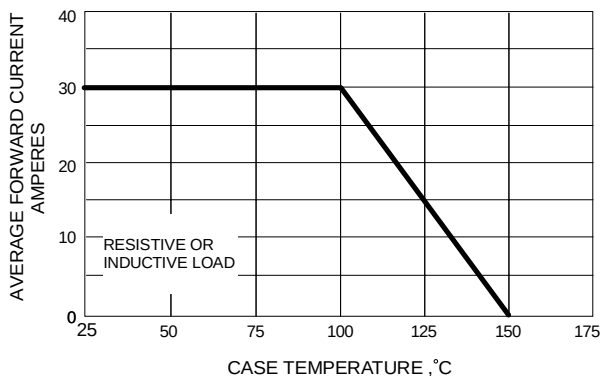


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

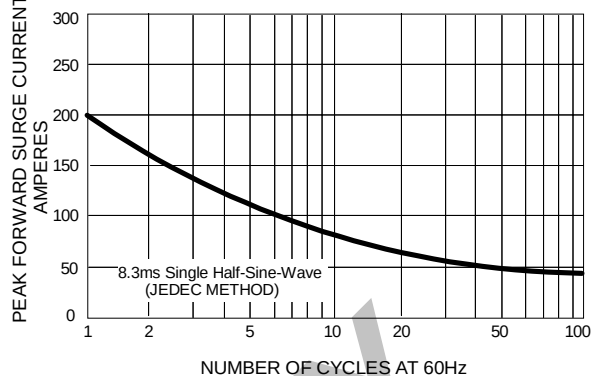


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

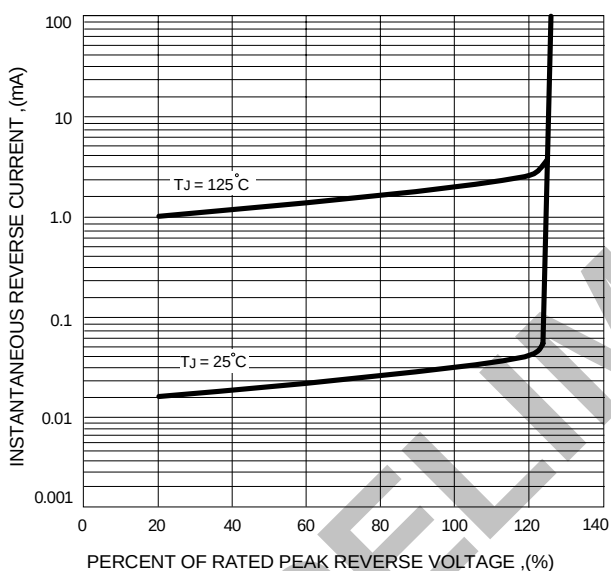


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

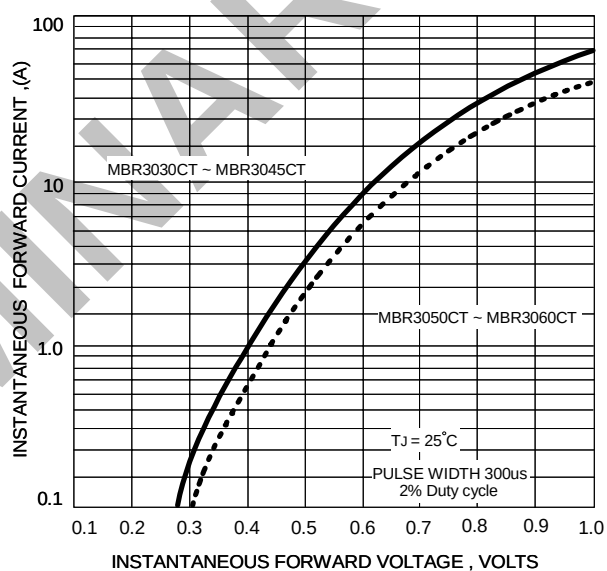


FIG.5 - TYPICAL JUNCTION CAPACITANCE

