

SCHOTTKY BARRIER RECTIFIERS

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

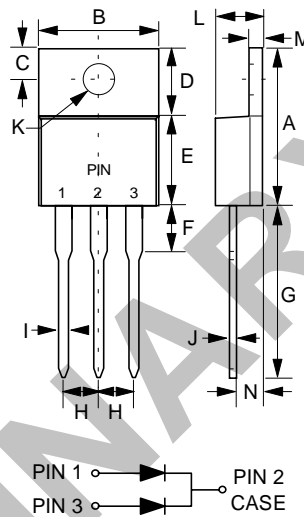
FEATURES

- Metal of silicon rectifier, majority carrier conductor
- 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 whelling, 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	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 (See Fig.1) $T_C=100^\circ\text{C}$	I(AV)	30						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	IFSM	200						A
Voltage Rate of Chang (Rated VR)	dv/dt	10000						V/us
Maximum Forward Voltage (Note 1) $I_F=30\text{A @ } T_J=125^\circ\text{C}$ $I_F=15\text{A @ } T_J=25^\circ\text{C}$ $I_F=30\text{A @ } T_J=25^\circ\text{C}$	V _F	0.72			0.85		0.80	V
		0.70			0.80		0.95	
		0.84			0.95			
Maximum DC Reverse Current at Rated DC Blocking Voltage $@T_J=25^\circ\text{C}$ $@T_J=125^\circ\text{C}$	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.

FIG.1 - FORWARD CURRENT DERATING CURVE

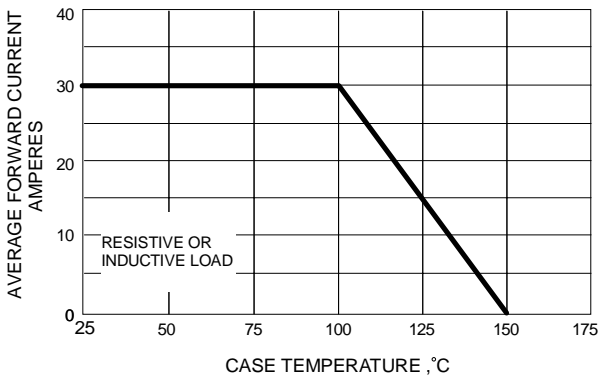


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

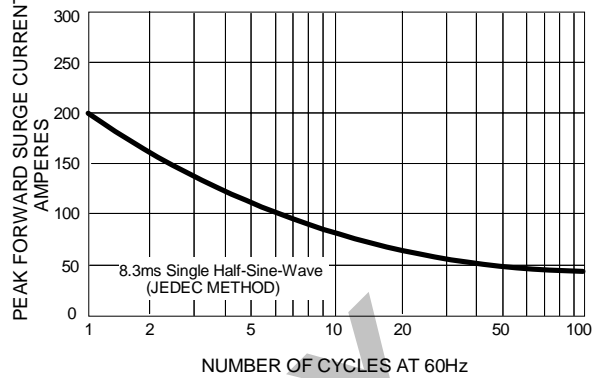


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

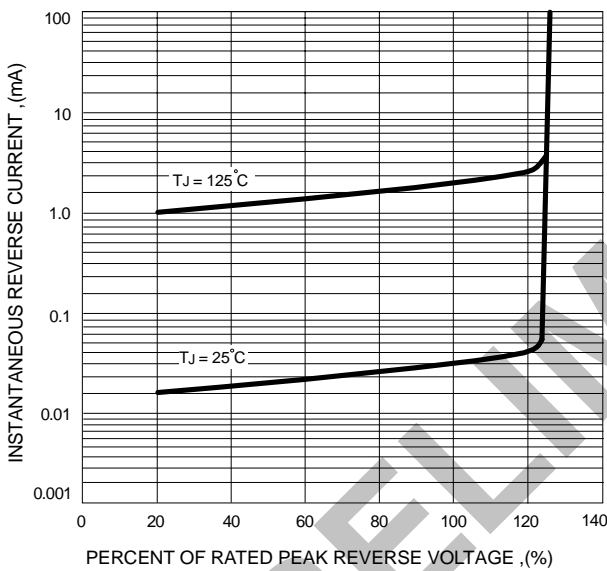


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

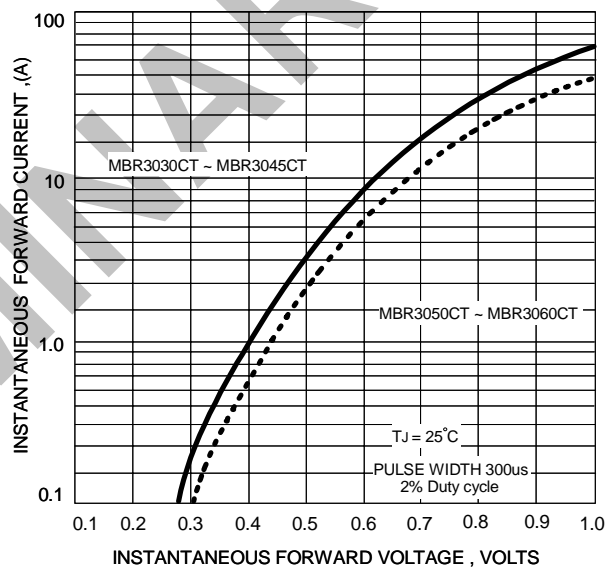


FIG.5 - TYPICAL JUNCTION CAPACITANCE

