

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 30 Amperes

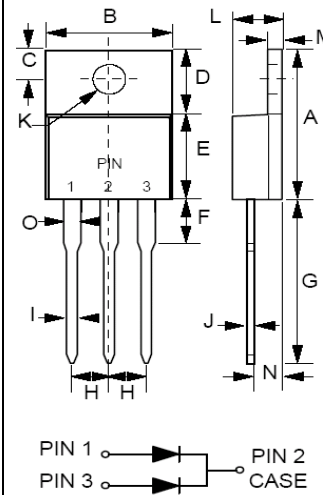
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High surge & current capability, low VF
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case: TO-220AB molded plastic
- Plastic package has UL flammability classification 94V-0
- Terminals: Matte Tin, solderable per MIL-STD-202 Method 208
- Lead Free Finish, RoHS Compliant
- 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-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∅	4.09∅
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
O	1.14	1.70

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	MBR30100CTW	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Average Rectified Output Current @Tc=125°C	I_F	30	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	250	A
Maximum Forward Voltage Note(1)	V_F	IF=15A@ Tj=25°C: 0.8 IF=15A@ Tj=125°C: 0.67 IF=30A@ Tj=25°C: 0.93 IF=30A@ Tj=125°C: 0.8	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	Tj=25°C: 100 Tj=125°C: 5	µA mA
Typical junction Capacitance per element (Note 2)	C_j	450	pF
Typical thermal resistance (Note 3, 4)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$	1.6 2.0 8.0	°C/W
Operating junction temperature range	T_J	-55 to +175	°C
Storage temperature range	T_{STG}	-55 to +175	°C

Note :

- (1) 300us Pulse Width, 2% Duty Cycle.
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 V_{DC}.
- (3) Thermal resistance Junction to Case, Lead and ambient.

FIG.1- FORWARD CURRENT DERATING CURVE

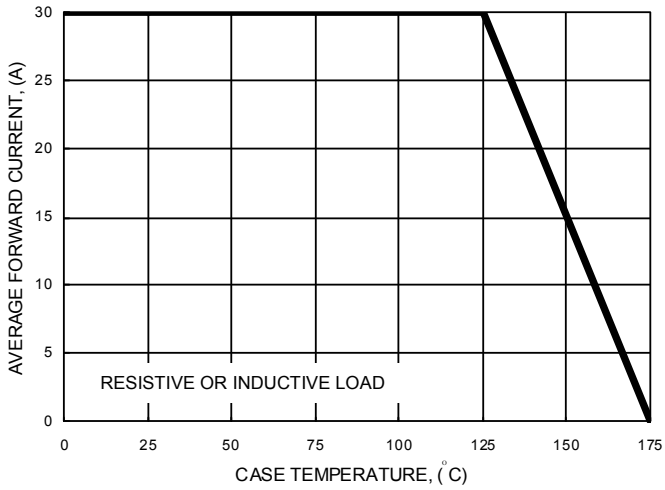


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

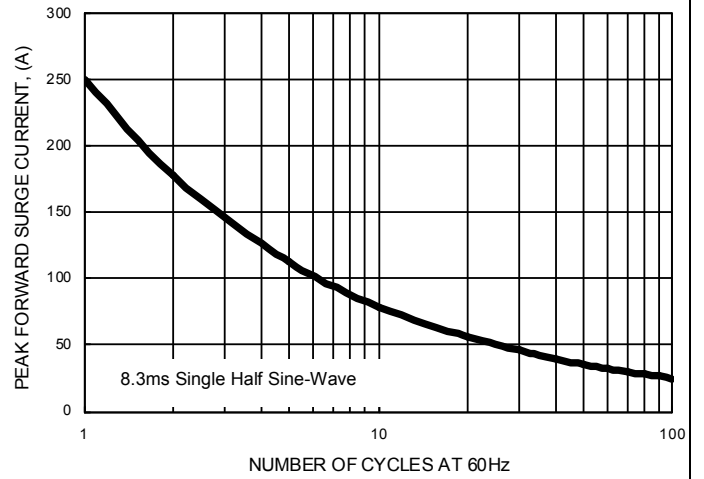


FIG.3- TYPICAL JUNCTION CAPACITANCE

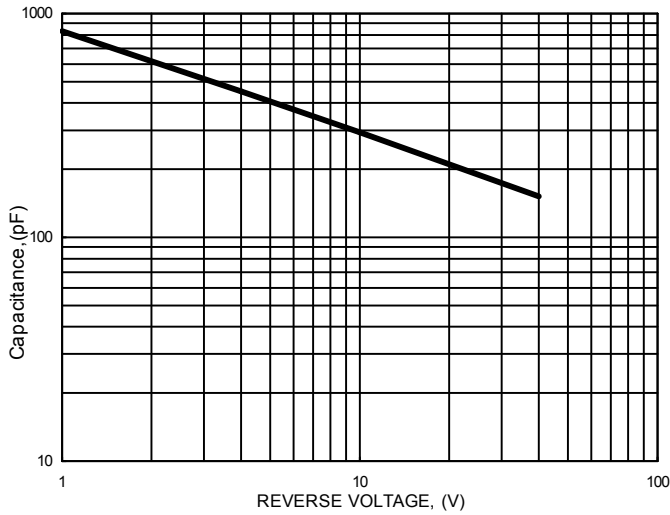


FIG.4- TYPICAL FORWARD CHARACTERISTICS

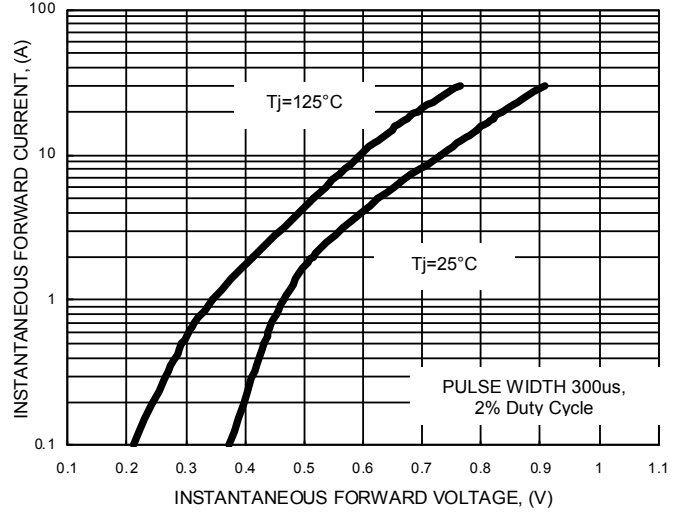
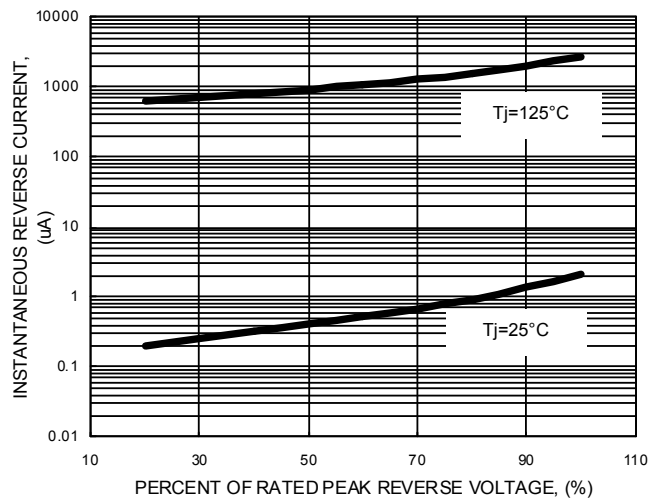


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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