

MBR30H100CT

SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 30 Amperes

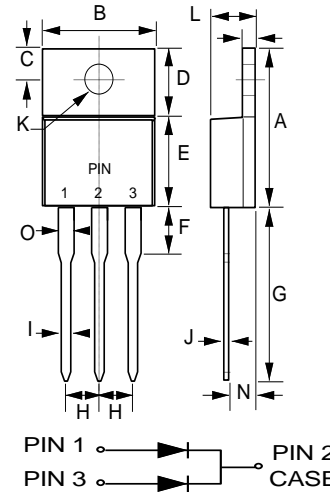
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- Low leakage current
- High current capability, low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Case :TO-220AB molded plastic
- Polarity : As marked on the body
- Weight : 2.24 grams
- Mounting position : Any
- Max. mounting torque = 0.5N.m (5.1Kgf.cm)

TO-220AB



TO-220AB		
DIM	MIN	MAX
A	14.40	15.20
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	--	4.20
G	12.70	14.73
H	2.29	2.79
I	0.51	1.14
J	0.30	0.64
K	3.53φ	4.09φ
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
O	1.14	1.70

All dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	MBR30H100CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	70	
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	30	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}	250	A
Voltage Rate of Charge (Rated VR)	dV/dt	10000	V/us
Maximum Forward Voltage (Note 4)	V_F	0.80 0.67 0.93 0.80	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5 5	uA mA
Typical Thermal Resistance (Note 5)	$R_{\theta JC}$	1.4	°C/W
Typical Junction Capacitance per element (Note 6)	C_j	300	pF
Operating and Storage temperature range	T_J, T_{STG}	-65 to +175	°C

Note :

- (1) EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3).compliant. All applicable RoHS exemptions applied.
- (2) See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
- (3) Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- (4) 300us pulse width, 2% duty cycle.
- (5) Thermal Resistance Junction to Case.
- (6) Measured at 1.0MHz and applied reverse voltage of 4.0 VD

REV. 4, Oct-2021, KTHC37

RATING AND CHARACTERISTIC CURVES
MBR30H100CT

FIG.1 - FORWARD CURRENT DERATING CURVE

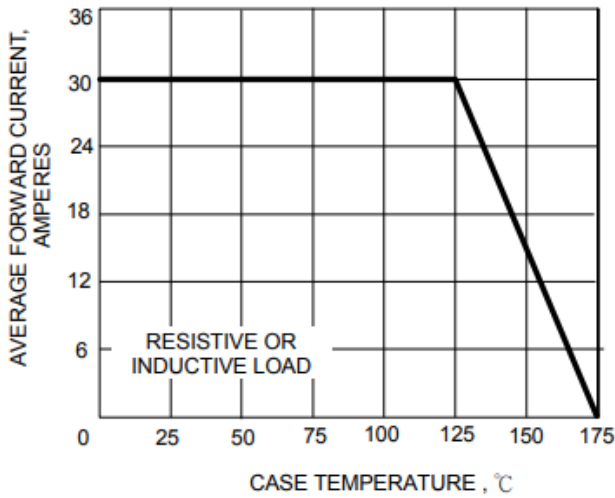


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

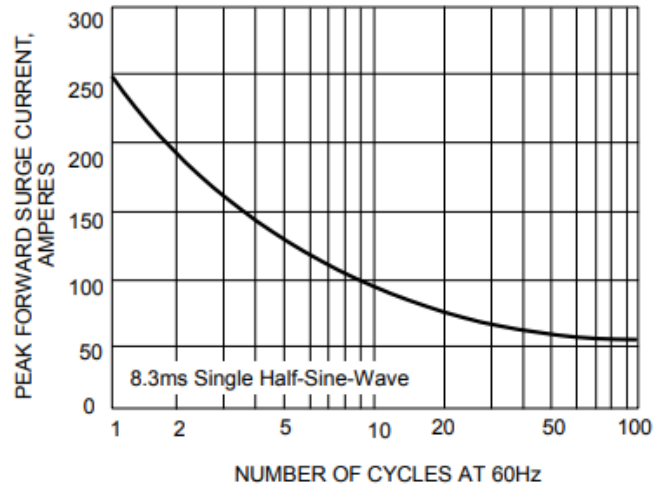


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

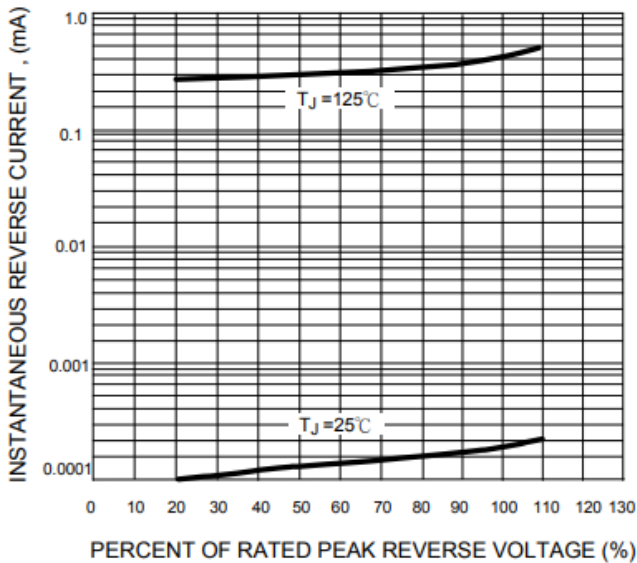


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

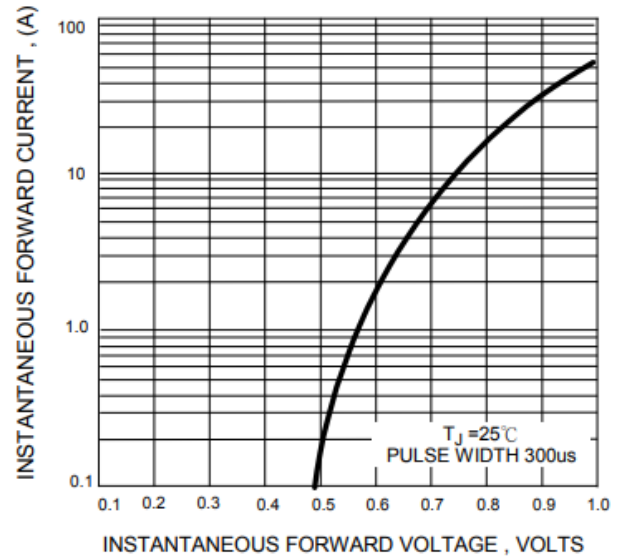
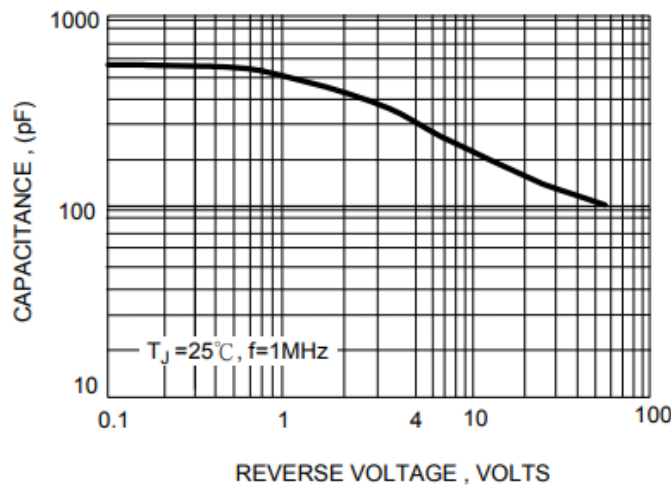


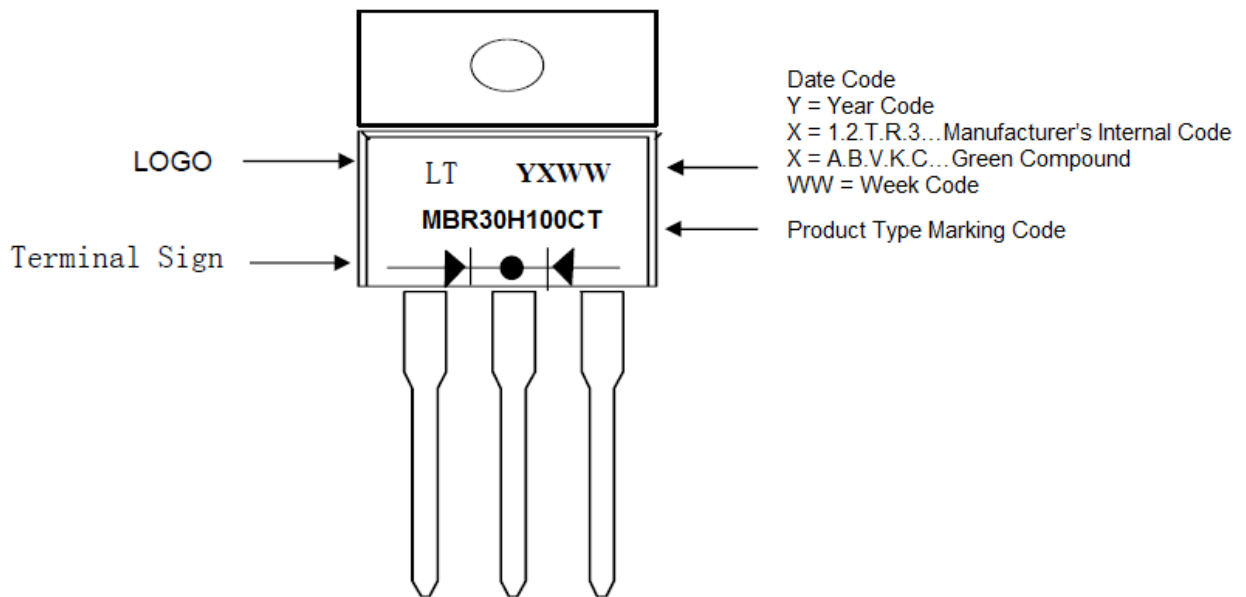
FIG.5 - TYPICAL JUNCTION CAPACITANCE



Ordering Information :

Part Number	Case	Packaging
MBR30H100CT	TO-220AB	50 pieces/tube

Marking Information :



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