

**SCHOTTKY BARRIER RECTIFIER**

**REVERSE VOLTAGE – 100 Volts**  
**FORWARD CURRENT – 30 Amperes**

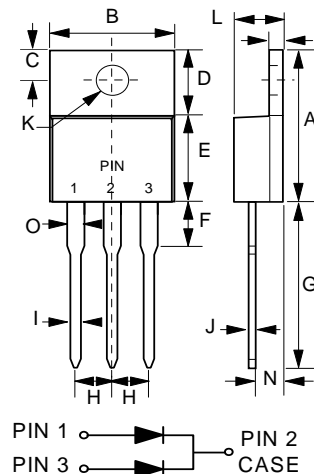
**FEATURES**

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- Low leakage current
- High current capability, low  $V_F$
- High surge capacity

**MECHANICAL DATA**

- Case :TO-220AB molded plastic
- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free"
- Polarity : As marked on the body
- Wight : 0.072 ounces, 2.0275grams (Approximate)
- Mounting position : Any
- Marking : MBR30100CT
- Lead free finish, RoHS compliant
- Max. mounting torque=0.5N.m(5.1Kgf.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	3.53φ	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	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
Maximum RMS Voltage	$V_{RMS}$	70	
Maximum DC blocking voltage	$V_{DC}$	100	V
Maximum Average rectified output current	$I_{(AV)}$	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
Operating and Storage temperature range	$T_J, T_{STG}$	-65 to +175	°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Forward voltage (Note1)	$I_F=15A$	$V_F$	$T_J=25°C$	0.80
			$T_J=125°C$	0.67
	$I_F=30A$	$V_F$	$T_J=25°C$	0.93
			$T_J=125°C$	0.80
Leakage current	$V_R=100V$	$I_R$	100	uA
			5	mA
Typical junction capacitance (Note2)		$C_j$	300	pF

**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note3,4)	$R_{thJc}$	2	°C/W
	$R_{thJa}$	7	
	$R_{thJL}$	1	

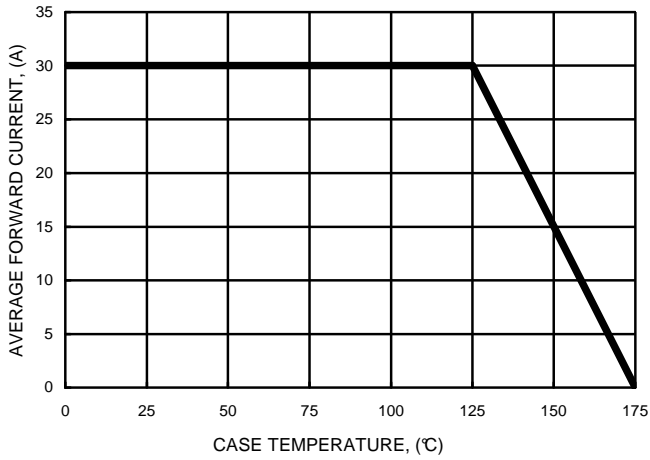
**Note :**

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC
- (3) Thermal Resistance Junction to Case.
- (4) The unit mounted on copper plate (75x75x15 ) mm heatsink

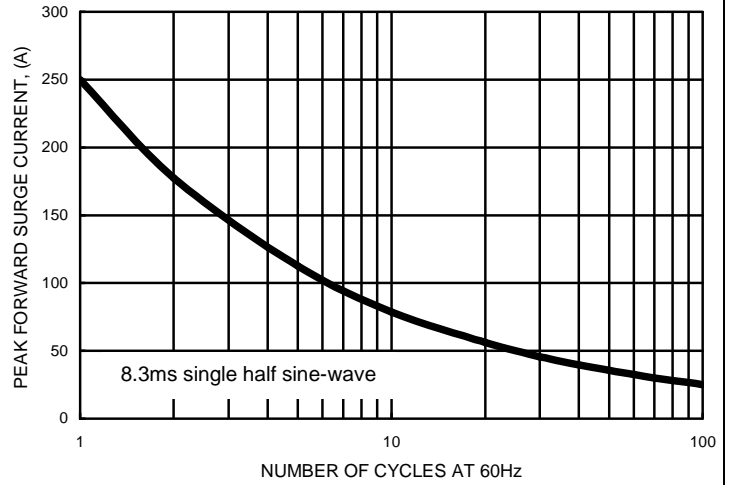
# RATING AND CHARACTERISTIC CURVES MBR30100CT



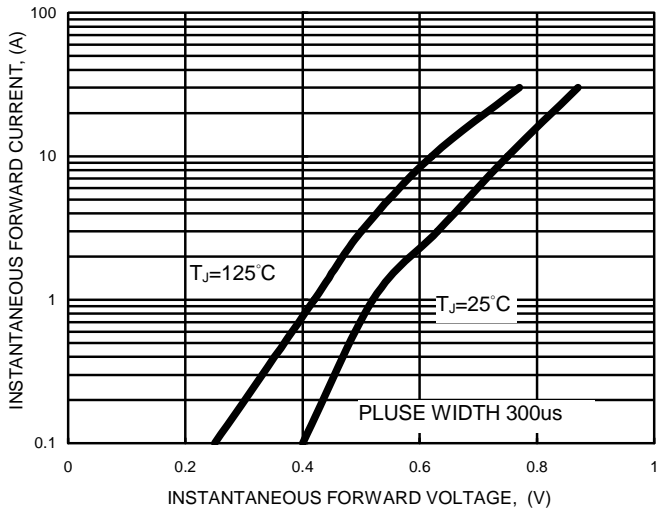
**FIG.1- FORWARD CURRENT DERATING CURVE**



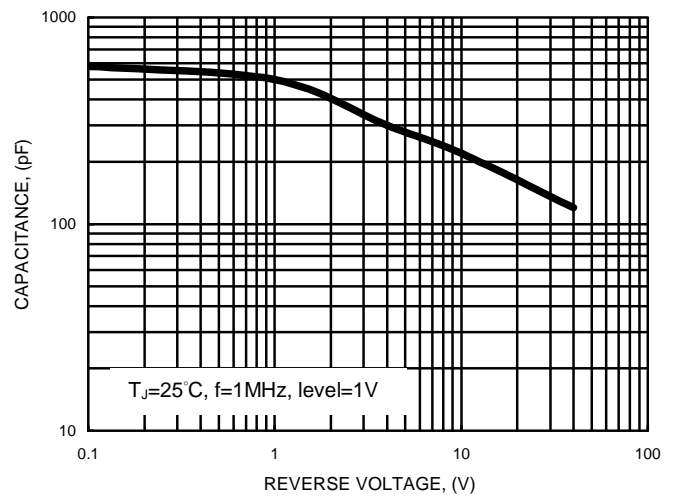
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



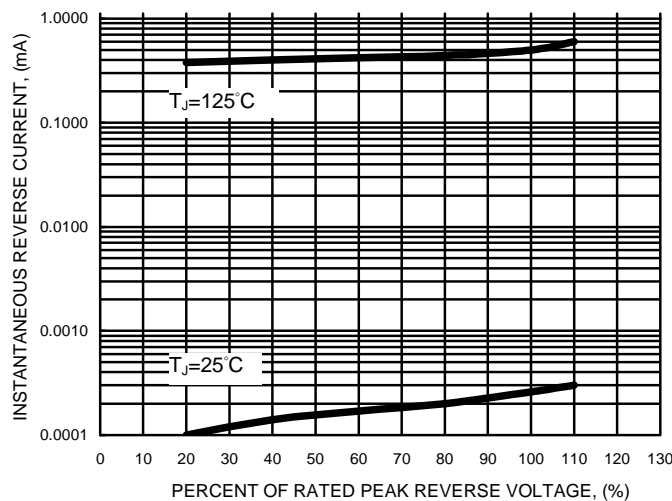
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



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