

Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 175°C junction temperature. Typical application are in switching Mode Power Supplies such as adaptors, DC/DC converters, free-wheeling and polarity protection diodes.

Features

- * Low Forward Voltage.
- * Low Switching noise.
- * High Current Capacity
- * Guarantee Reverse Avalanche.
- * Guard-Ring for Stress Protection.
- * Low Power Loss & High efficiency.
- * 175°C Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O



* In compliance with EU RoHs 2002/95/EC directives

MAXIMUM RATINGS

Characteristic	Symbol	MBR30100CT	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectifier Forward Current (per diode)	$I_{F(AV)}$	15	A
Total Device (Rated V_R , $T_C=100^\circ\text{C}$)		30	
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	I_{FM}	30	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	I_{FSM}	250	A
Junction Operating Temperature Range	T_J	-65 to +175	°C
Storage Temperature (1)	T_{stg}	20~35 °C · 30%~60% RH	

(1)expired date : 1 year

THERMAL RESISTANCES

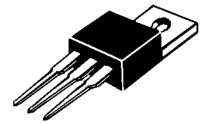
Typical Thermal Resistance junction to case	$R_{\theta jc}$	3.0	°C/w
---------------------------------------------	-----------------	-----	------

ELECTRICAL CHARACTERISTICS

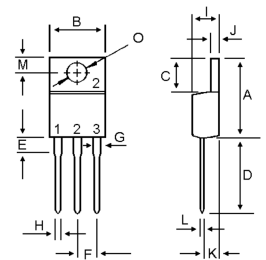
Characteristic	Symbol	MBR30100CT	Unit
Maximum Instantaneous Forward Voltage (per diode) ($I_F=15$ Amp $T_C=25^\circ\text{C}$)	V_F	0.85	V
($I_F=15$ Amp $T_C=125^\circ\text{C}$)		0.78	
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25^\circ\text{C}$)	I_R	0.01	mA
(Rated DC Voltage, $T_C=125^\circ\text{C}$)		15	

SCHOTTKY BARRIER RECTIFIERS

**30 AMPERES
100 VOLTS**



TO-220AB



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.32
B	9.78	10.42
C	5.02	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	2.66
G	1.20	1.47
H	0.72	0.96
I	4.22	4.98
J	1.14	1.38
K	2.20	2.98
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90

