

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 junction temperature. Typical application are in switching Mode Power Supplies such as adaptors, DC/DC converters, freewheeling 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 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	MBRA10100L	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectifier Forward Current	I _{F(AV)}	10	Α
Peak Repetitive Forward Current (Rate V _R , Square Wave, 20kHz)	I _{FM}	20	Α
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I _{FSM}	150	А
Operating and Storage Junction Temperature Range	T_J , T_stg	-65 to +175	

THERMAL RESISTANCES

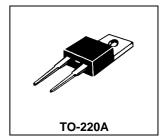
Typical Thermal Resistance junction to case (per device)	$R_{\theta j\text{-}c}$	3.4	/w
	-		

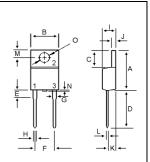
ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	Min	Тур.	Max.	Unit
Maximum Instantaneous Forward Voltage (per diode)					
$(I_F = 0.1 \text{ Amp T}_C = 25)$	V _F		0.29	0.35	V
$(I_F = 5.0 \text{ Amp } T_C = 25)$	V F		0.60	0.66	V
$(I_F = 10 \text{ Amp T}_C = 25)$			0.78	0.85	
Maximum Instantaneous Reverse Current					
(Rated DC Voltage, T _C = 25)	I_R		0.08	0.1	mA
(Rated DC Voltage, T _C = 125)			15	30	

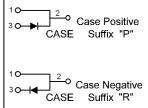
SCHOTTKY BARRIER RECTIFIERS

10 AMPERES 100 VOLTS





DIM	MILLIMETERS		
DIIVI	MIN	MAX	
Α	14.68	15.32	
В	9.78	10.42	
С	6.02	6.52	
D	13.06	14.62	
E	3.57	4.07	
F	4.84	5.32	
G	1.12	1.36	
Н	0.72	0.96	
- 1	4.22	4.98	
J	1.14	1.38	
K	2.20	2.98	
L	0.33	0.55	
M	2.48	2.98	
N		1.00	
0	3.70	3.90	



MBRA10100L



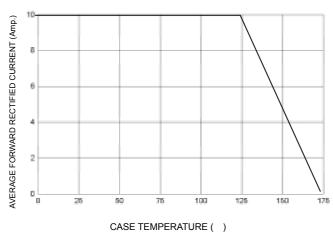
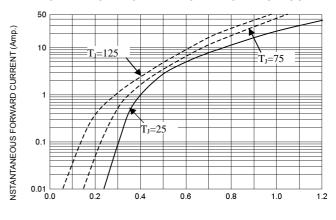


FIG-2 TYPICAL FORWARD CHARACTERISITICS



FORWARD VOLTAGE (Volts)

FIG-3 TYPICAL REVERSE CHARACTERISTICS

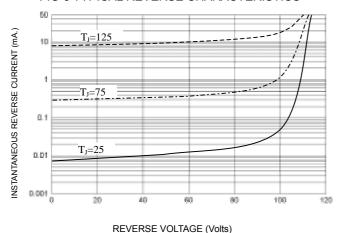
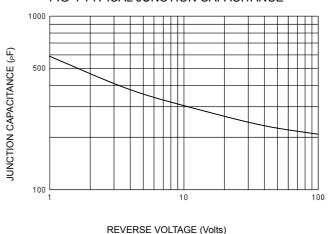
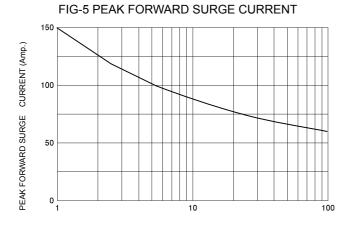


FIG-4 TYPICAL JUNCTION CAPACITANCE





NUMBER OF CYCLES AT 60 Hz