

Switchmode Full Plastic Dual Schottky Barrier Power 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	MBRF20100CL	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 (per diode) Total Device (Rated V_R), $T_C=125^\circ\text{C}$	$I_{F(AV)}$	10 20	A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	I_{FM}	20	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	150	A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +175	°C

THERMAL RESISTANCES

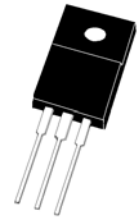
Typical Thermal Resistance junction to case (per device)	$R_{\theta j-c}$	3.4	°C/w
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ELECTRICAL CHARACTERISTICS

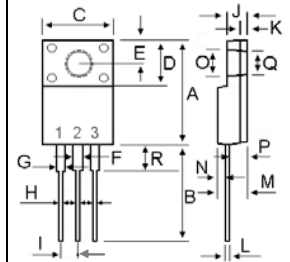
Characteristic	Symbol	Min	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (per diode) ($I_F=0.1$ Amp $T_C=25^\circ\text{C}$) ($I_F=5.0$ Amp $T_C=25^\circ\text{C}$) ($I_F=10$ Amp $T_C=25^\circ\text{C}$)	V_F	---	0.29 0.60 0.78	0.35 0.66 0.85	V
Maximum Instantaneous Reverse Current (Rated DC Voltage,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

SCHOTTKY BARRIER RECTIFIERS

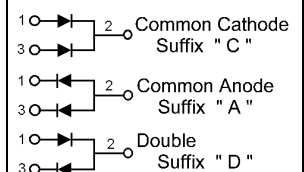
**20 AMPERES
100 VOLTS**



ITO-220AB



DIM	MILLIMETERS	
	MIN	MAX
A	14.90	15.30
B	13.20	13.50
C	9.9	10.30
D	6.50	6.70
E	2.50	2.80
F	1.10	1.40
G	1.10	1.40
H	0.50	0.80
I	2.30	2.70
J	3.00	3.30
K	1.10	1.30
L	0.50	0.80
M	4.30	4.70
N	1.10	1.30
O	3.20	3.50
P	2.50	2.80
Q	3.20	3.50
R	3.40	3.80



MBRF20100CL

FIG-1 FORWARD CURRENT DERATING CURVE

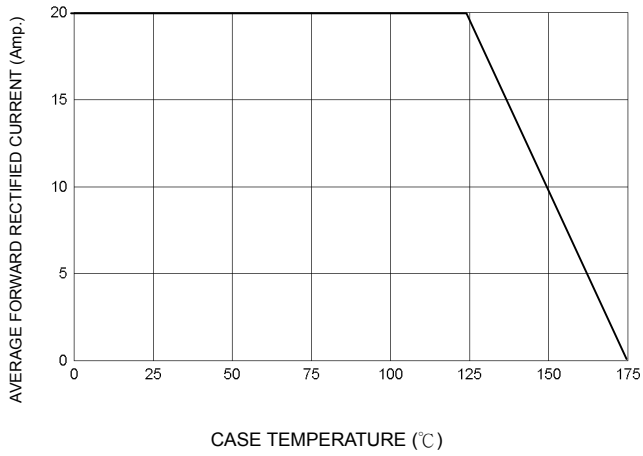


FIG-2 TYPICAL FORWARD CHARACTERISTICS

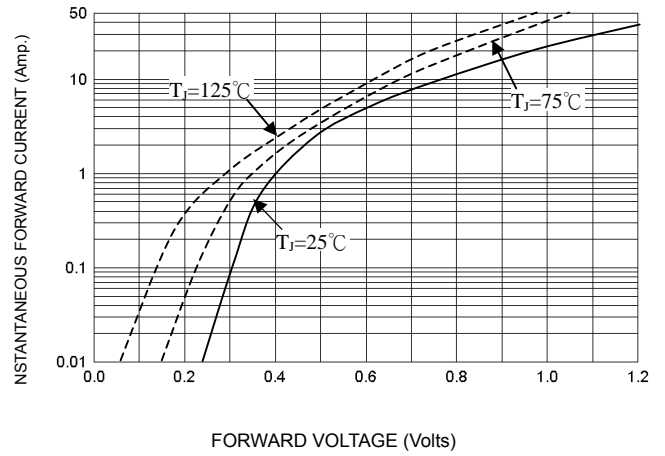


FIG-3 TYPICAL REVERSE CHARACTERISTICS

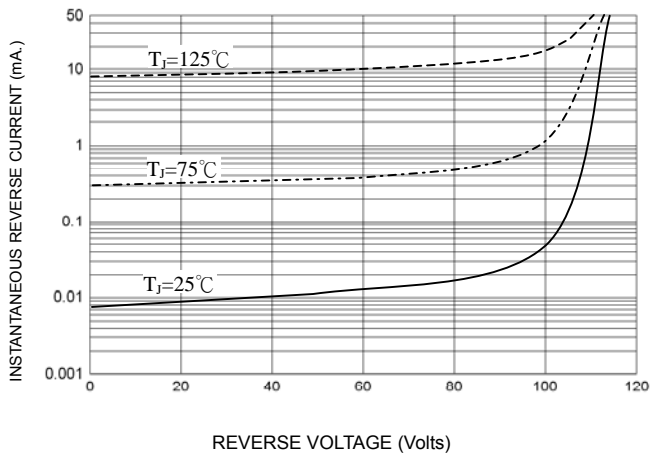


FIG-4 TYPICAL JUNCTION CAPACITANCE

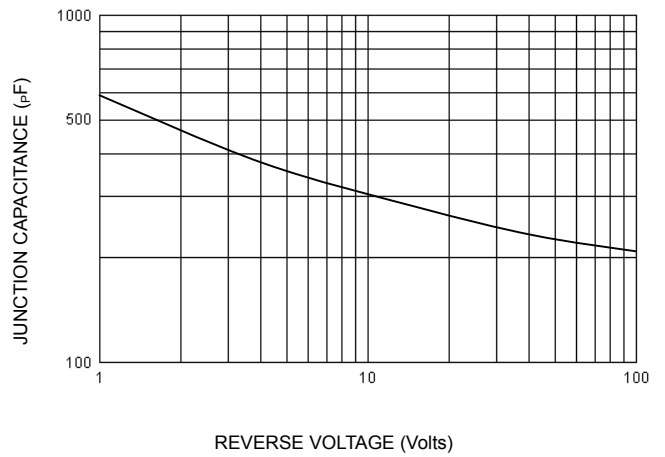
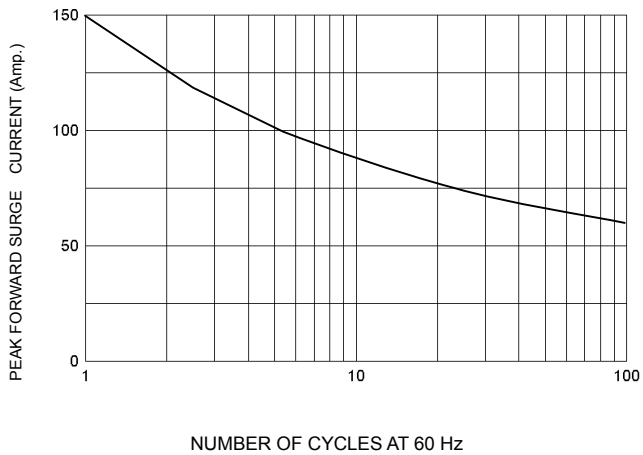


FIG-5 PEAK FORWARD SURGE CURRENT



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