

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



Mechanical Data

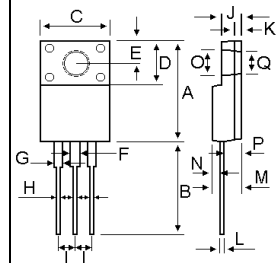
- * Case :JEDEC ITO-220AB molded plastic body
- * Terminals: Plated lead, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting Torque: 5 in-lbs. Max.
- * Weight: 1.7 g approx.
- * ESD: 4KV(Min.) Human-Body Model
- * *In compliance with EU RoHs 2002/95/EC directives*

SCHOTTKY BARRIER RECTIFIERS

**20 AMPERES
100 VOLTS**



ITO-220AB



DIM	MILLIMETERS	
	MIN	MAX
A	15.05	15.15
B	13.35	13.45
C	10.00	10.10
D	6.55	6.65
E	2.65	2.75
F	1.55	1.65
G	1.15	1.25
H	0.55	0.65
I	2.50	2.60
J	3.00	3.20
K	1.10	1.20
L	0.55	0.65
M	4.40	4.60
N	1.15	1.25
P	2.65	2.75
O	3.35	3.45
Q	3.15	3.25

MAXIMUM RATINGS

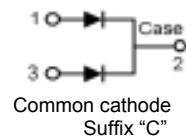
Characteristic	Symbol	MBRF20100CL	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectifier Forward Current	$I_{F(AV)}$	10	A
Total Device (Rated V_R), $T_C=125$		20	
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	I_{FM}	20	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	I_{FSM}	150	A
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +175	

THERMAL RESISTANCES

Typical Thermal Resistance junction to case	$R_{\theta jc}$	3.4	/w
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ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage ($I_F=0.1$ Amp $T_C=25$) ($I_F=1.0$ Amp $T_C=25$) ($I_F=2.5$ Amp $T_C=25$) ($I_F=5.0$ Amp $T_C=25$) ($I_F=10$ Amp $T_C=25$)	V_F	--	0.29 0.38 0.42 0.60 0.78	0.32 0.41 0.45 0.64 0.85	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25$) (Rated DC Voltage, $T_C=125$)	I_R	--	0.05 15	0.1 30	mA



MBRF20100CL

FIG-1 FORWARD CURRENT DERATING CURVE

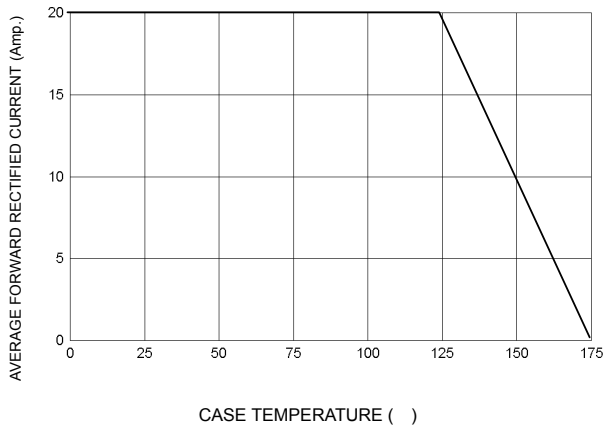


FIG-2 TYPICAL FORWARD CHARACTERISTICS

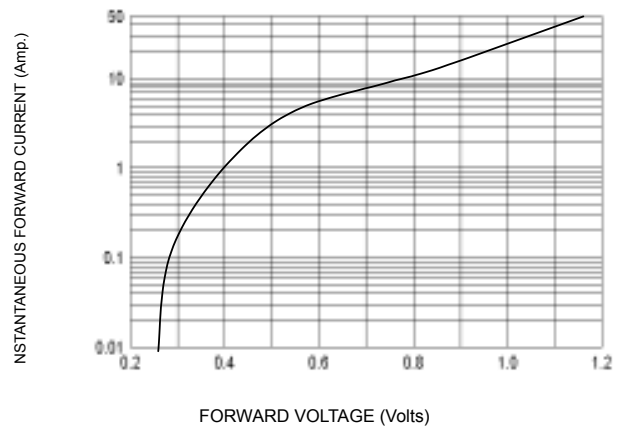


FIG-3 TYPICAL REVERSE CHARACTERISTICS

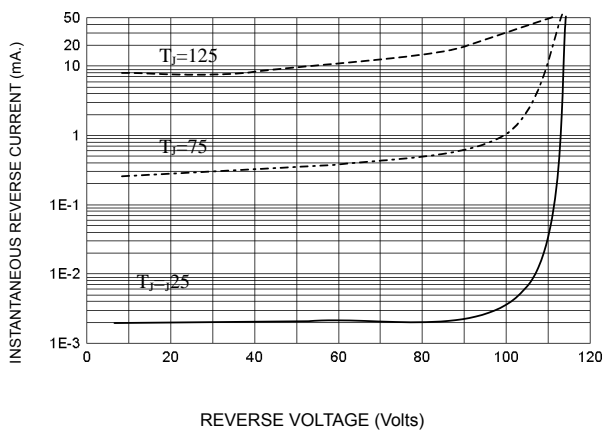


FIG-4 TYPICAL JUNCTION CAPACITANCE

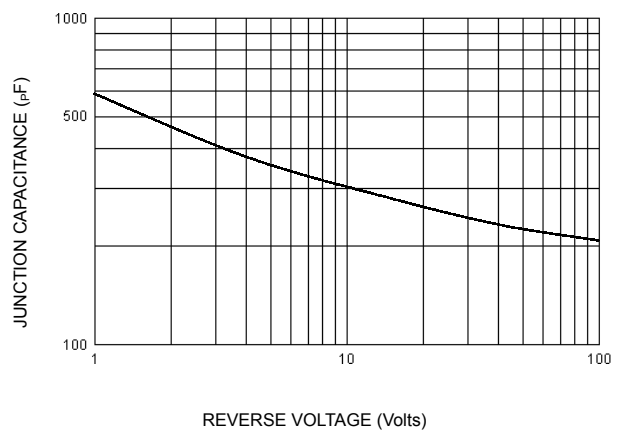


FIG-5 PEAK FORWARD SURGE CURRENT

