

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.

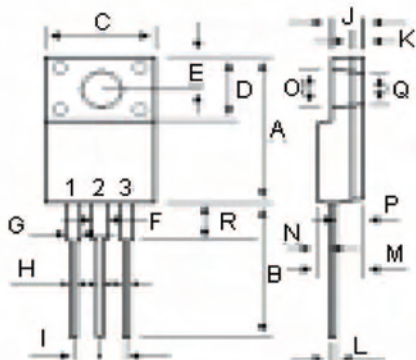
Switch mode Full Plastic Dual Schottky Barrier Power Rectifiers



Features:

- Low forward voltage.
- Low switching noise.
- High current capacity.
- Guarantee reverse avalanche.
- Guard-ring for stress protection.
- Low power loss and high efficiency.
- 175°C operating junction temperature.
- Low stored charge majority carrier conduction.
- Plastic material used carries Underwriters Laboratory Flammability classification 94V-O.

**20 Amperes
100 Volts
ITO-220AB**



Dimensions : Millimetres

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
O	3.35	3.45
P	2.65	2.75
Q	3.15	3.25
R	3.60	3.80



Common Cathode

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Maximum Ratings

Characteristic	Symbol	MBRF20100C	Units
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	
Average Rectifier Forward Current (per diode) Total Device (Rated V_R), $T_C = 125^\circ\text{C}$	$I_F (AV)$	10 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 half-wave, single phase, 60Hz)	I_{FSM}	150	
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +175	$^\circ\text{C}$

Thermal Resistances

Typical Thermal Resistance junction to case	$R_{\theta jc}$	3.4	$^\circ\text{C/W}$
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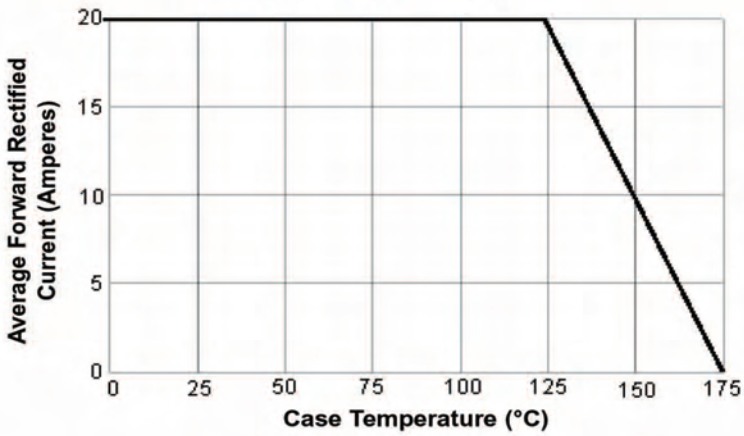
Electrical Characteristics

Characteristic	Symbol	MBRF20100C	Units
Maximum Instantaneous Forward Voltage (per diode) ($I_F = 10$ Amperes $T_C = 25^\circ\text{C}$) ($I_F = 10$ Amperes $T_C = 125^\circ\text{C}$)	V_F	0.85 0.76	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	0.01 10	mA

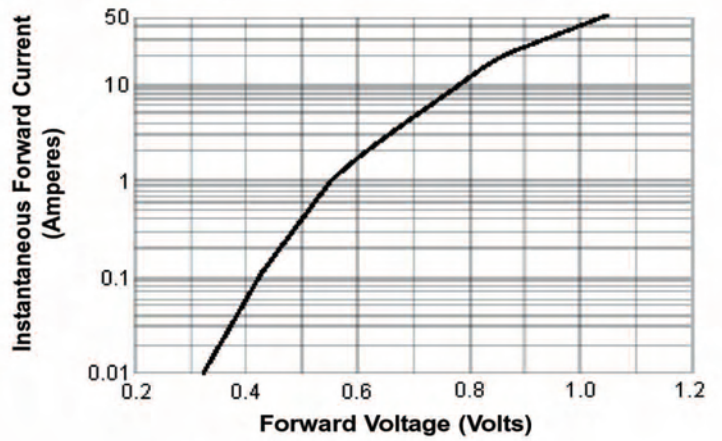
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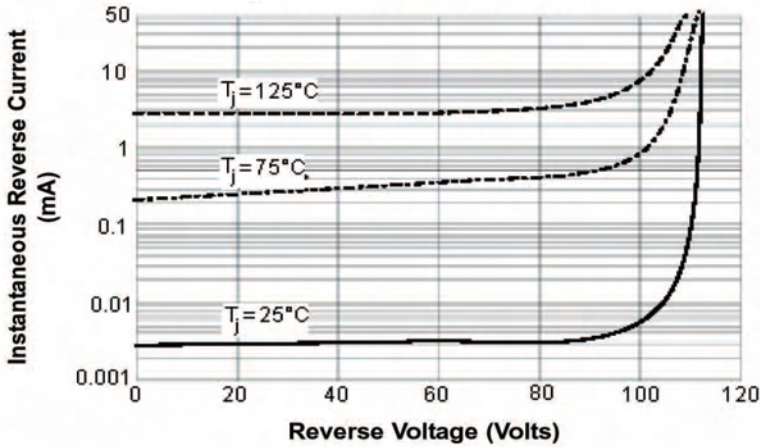
Forward Current Derating Curve



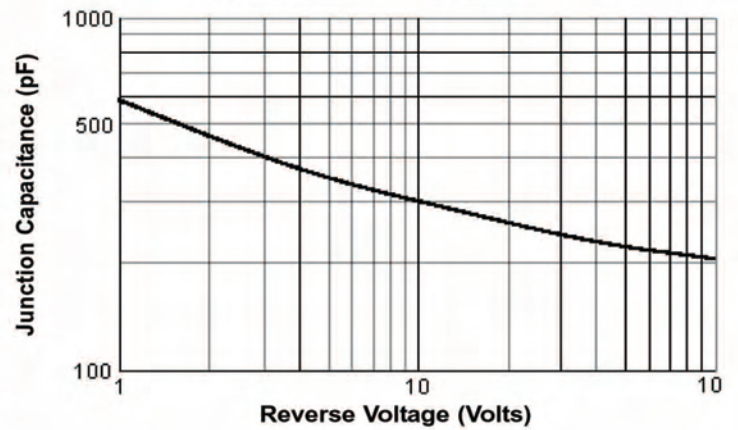
Typical Forward Characteristics



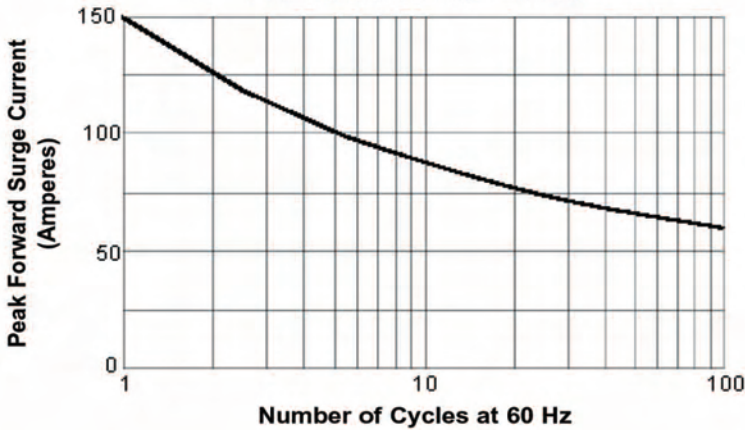
Typical Reverse Characteristics



Typical Junction Capacitance



Peak Forward Surge Current



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Part Number Table

Description	Part Number
Schottky Barrier Rectifiers	MBRF20100CT



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