

## 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.

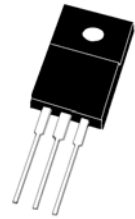
### Features

- \* 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
- \* **Pb free**
- \* *In compliance with EU RoHs directives*

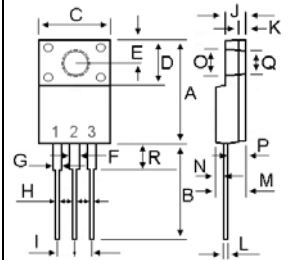


**SCHOTTKY BARRIER  
RECTIFIERS**

**20 AMPERES  
100 VOLTS**



**ITO-220AB**



DIM	MILLIMETERS	
	MIN	MAX
A	14.80	16.10
B	12.65	13.80
C	9.85	10.36
D	4.60	6.80
E	2.50	3.50
F	1.00	1.45
G	1.00	1.45
H	0.30	0.90
I	2.40	2.70
J	2.34	3.30
K	0.55	1.30
L	0.36	0.80
M	4.20	4.90
N	1.10	1.80
O	2.90	3.50
P	2.50	3.15
Q	2.90	3.50
R	3.10	4.85

### MAXIMUM RATINGS

Characteristic	Symbol	MBRF20100CK	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 halfwave, 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	$R_{\theta jc}$	3.6	°C/w
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### ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage ( $I_F=10$ Amp $T_C=25^\circ\text{C}$ ) ( $I_F=10$ Amp $T_C=125^\circ\text{C}$ )	$V_F$	---	0.80 0.67	0.85 ---	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25^\circ\text{C}$ ) (Rated DC Voltage, $T_C=125^\circ\text{C}$ )	$I_R$	---	0.1 0.5	10 ---	uA mA

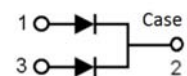


FIG-1 FORWARD CURRENT DERATING CURVE

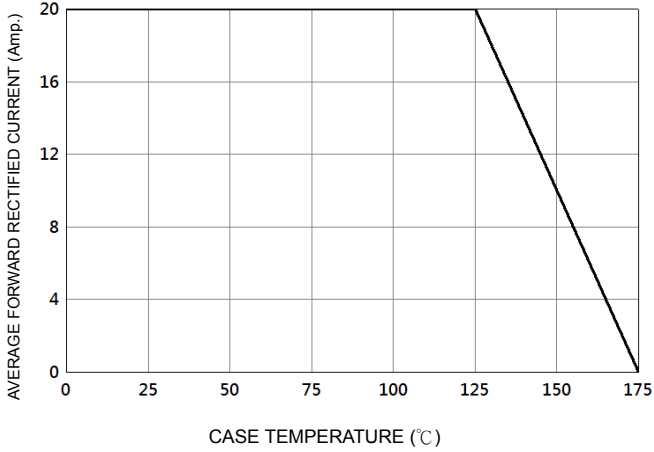


FIG-2 TYPICAL FORWARD CHARACTERISTICS

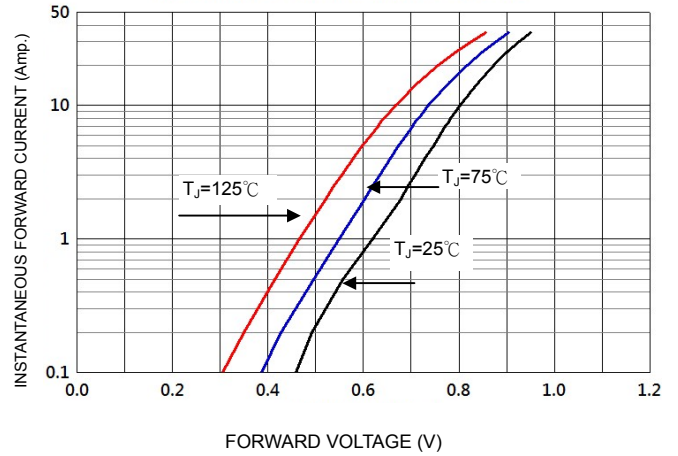


FIG-3 TYPICAL REVERSE CHARACTERISTICS

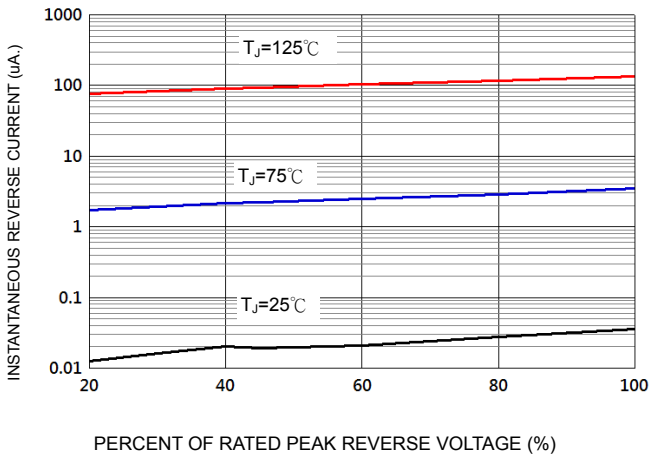


FIG-4 TYPICAL JUNCTION CAPACITANCE

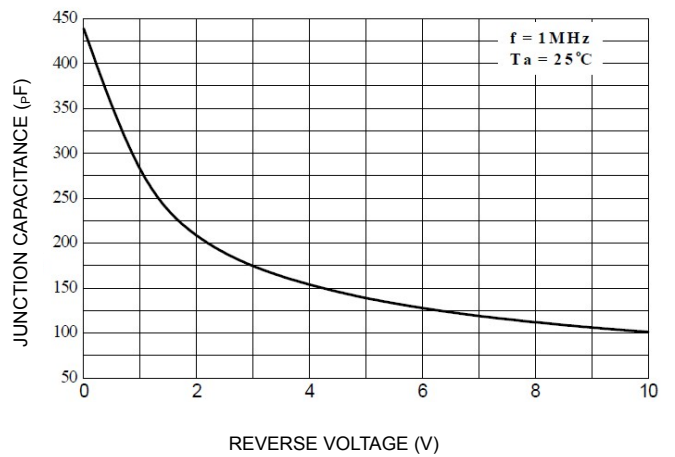
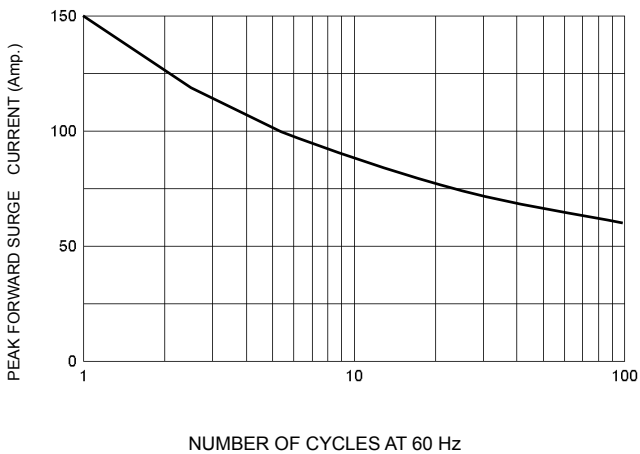


FIG-5 PEAK FORWARD SURGE CURRENT



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