

## 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 applications are in switching Mode Power Supplies such as adaptors, DC/DC converters, free-wheeling and polarity protection diodes.

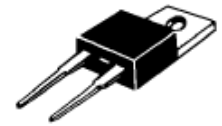
### Features

- \* Low Forward Voltage.
- \* Low Switching noise.
- \* High Current Capacity
- \* Guarantee Reverse Avalanche.
- \* Guard-Ring for Stress Protection.
- \* Low Power Loss & High efficiency.
- \* High 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

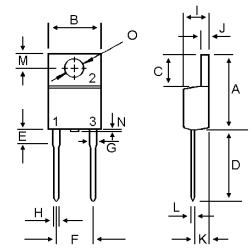


### SCHOTTKY BARRIER RECTIFIERS

**10 AMPERES  
100 VOLTS**



**TO-220AC**



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	16.00
B	9.78	10.42
C	5.02	6.60
D	13.00	14.62
E	3.10	4.19
F	4.82	5.34
G	1.10	1.67
H	0.69	1.01
I	4.22	4.98
J	1.14	1.40
K	2.20	3.30
L	0.28	0.61
M	2.48	3.00
N	---	2.00
O	3.50	4.00

### MAXIMUM RATINGS

Characteristic	Symbol	MBRA10100	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
Peak Repetitive Forward Current (Rate $V_R$ , Square Wave, 20kHz)	$I_{FM}$	10	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, 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	$R_{\theta jc}$	4.4	°C/w
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### ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage ( $I_F = 10$ Amp $T_C = 25^\circ C$ ) ( $I_F = 10$ Amp $T_C = 125^\circ C$ )	$V_F$	---	0.78 0.65	0.85 ---	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ C$ ) (Rated DC Voltage, $T_C = 125^\circ C$ )	$I_R$	---	2 5	10 ---	$\mu A$ mA

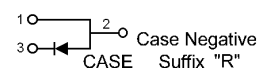
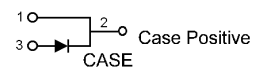


FIG-1 TYPICAL FORWARD CURRENT DERATING CURVE

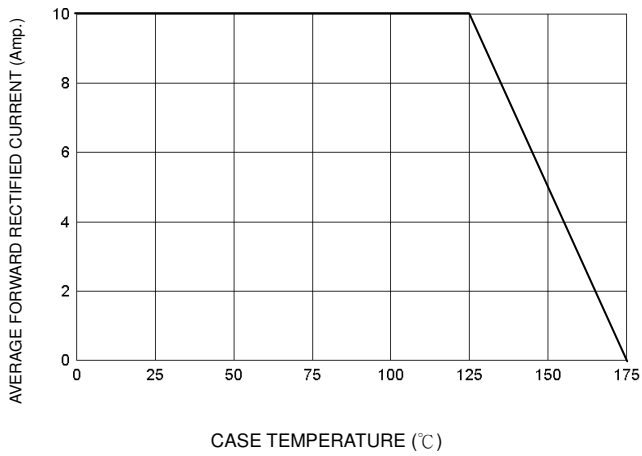


FIG-2 TYPICAL FORWARD CHARACTERISTICS

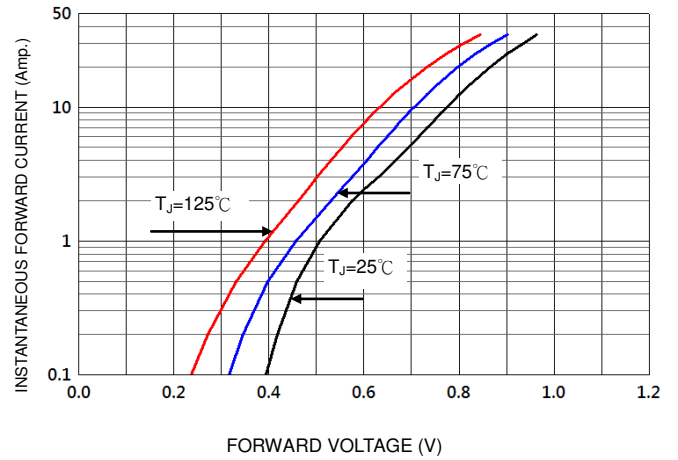


FIG-3 TYPICAL REVERSE CHARACTERISTICS

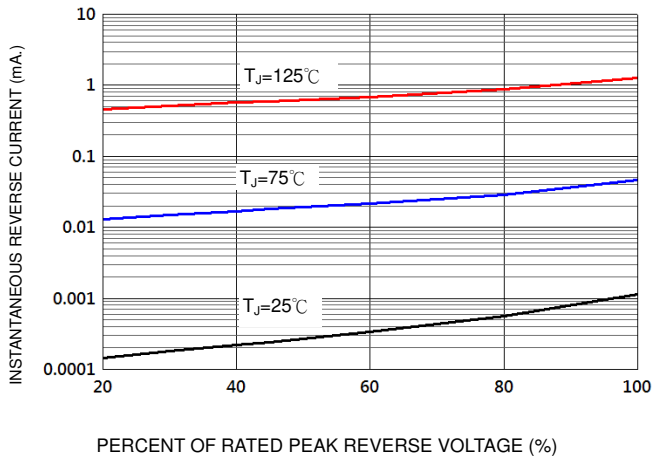


FIG-4 TYPICAL JUNCTION CAPACITANCE

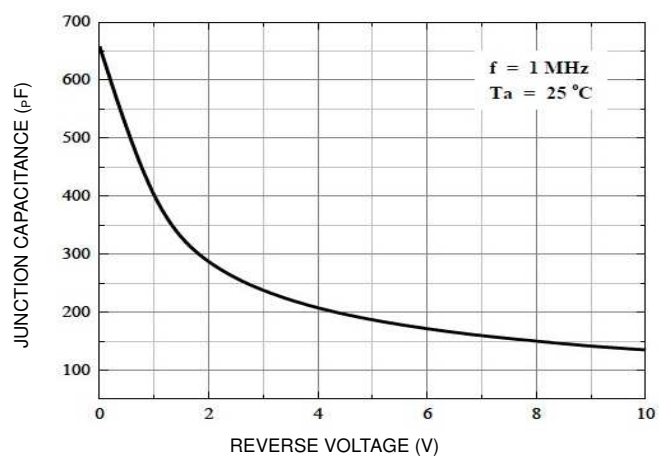
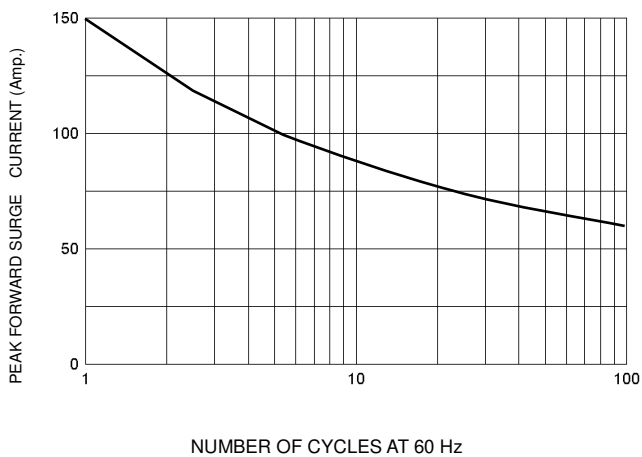


FIG-5 TYPICAL PEAK FORWARD SURGE CURRENT



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