

# Schottky Barrier Rectifiers



Using the schottky barrier principle with a molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

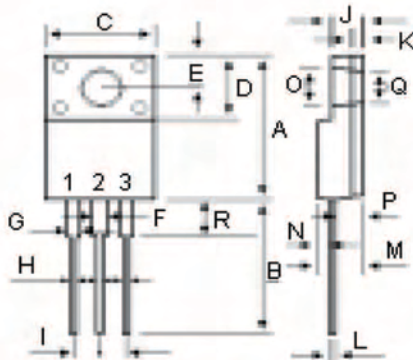
## Switch mode Full Plastic Dual Schottky Barrier Power Rectifiers



### Features:

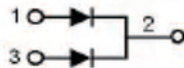
- Low forward voltage.
- Low switching noise.
- High current capacity.
- Guarantee reverse avalanche.
- Guard-ring for stress protection.
- Low power loss and high efficiency.
- 175°C operating junction temperature.
- Low stored charge majority carrier conduction.
- Plastic material used carries Underwriters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

30 Amperes  
45 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

### Part Number Table

Description	Part Number
Schottky Barrier Rectifiers	MBRF3045CT

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## Maximum Ratings

Characteristic	Symbol	MBRF3045	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	45	V
RMS Reverse Voltage	$V_R$ (RMS)	32	
Average Rectifier Forward Current (per diode) Total Device (Rated $V_R$ ), $T_C = 125^\circ\text{C}$	$I_F$ (AV)	15 30	
Peak Repetitive Forward Current (Rate $V_R$ , Square Wave, 20kHz)	$I_{FM}$	30	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	$I_{FSM}$	250	
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

## Electrical Characteristics

Characteristic	Symbol	MBRF3045	Units
Maximum Instantaneous Forward Voltage (per diode) ( $I_F = 15$ Amperes $T_C = 25^\circ\text{C}$ ) ( $I_F = 15$ Amperes $T_C = 125^\circ\text{C}$ )	$V_F$	0.55 0.48	V
Typical Thermal Resistance Junction to Case	$R_{\theta j-c}$	3.0	$^\circ\text{C}/\text{W}$
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ\text{C}$ ) (Rated DC Voltage, $T_C = 125^\circ\text{C}$ )	$I_R$	0.5 30	mA

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