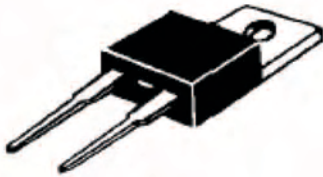


# Schottky Barrier Rectifiers



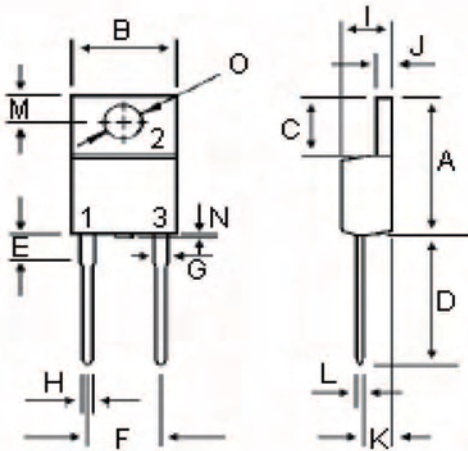
Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.



## Features:

- Low forward voltage.
- Low switching noise.
- High current capacity.
- Guarantee reverse avalanche.
- Guard-ring for stress protection.
- Low power loss and high efficiency.
- 150°C operating junction temperature.
- Low stored charge majority carrier conduction.
- Plastic material used carries Underwriters Laboratory Flammability classification 94V-O.

8 Amperes  
40-45 Volts  
TO-220A



Dimensions : Millimetres

DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.32
B	9.78	10.42
C	6.02	6.52
D	13.06	14.62
E	3.57	4.07
F	4.84	5.32
G	1.12	1.36
H	0.72	0.96
I	4.22	4.98
J	1.14	1.38
K	2.20	2.98
L	0.33	0.55
M	2.48	2.98
N	---	1.00
O	3.70	3.90

# Schottky Barrier Rectifiers



## Maximum Ratings

Characteristic	Symbol	MBR840	MBR845	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	40	45	V
RMS Reverse Voltage	$V_R (RMS)$	28	32	
Average Rectifier Forward Current	$I_F (AV)$	8		A
Peak Repetitive Forward Current (Rate $V_R$ , Square Wave, 20kHz)	$I_{FM}$			
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 +150		°C

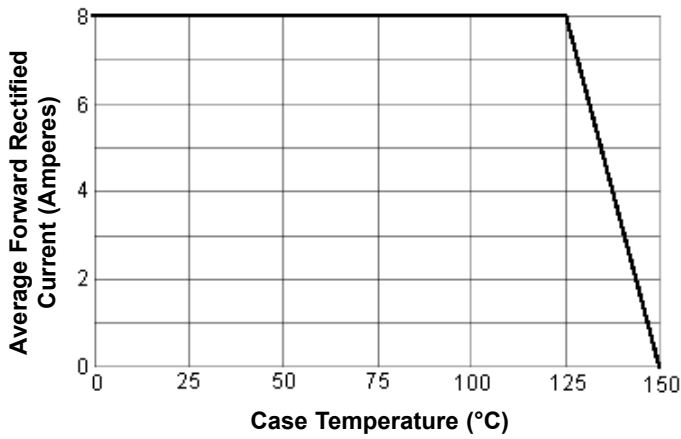
## Electrical Characteristics

Characteristic	Symbol	MBR840	MBR845	Units
Maximum Instantaneous Forward Voltage ( $I_F = 8.0$ Amperes $T_C = 25^\circ\text{C}$ ) ( $I_F = 8.0$ Amperes $T_C = 125^\circ\text{C}$ )	$V_F$	0.55 0.48		V
Typical Thermal Resistance Junction to Case	$R_{\theta j-c}$	3.8		°C/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 20		mA

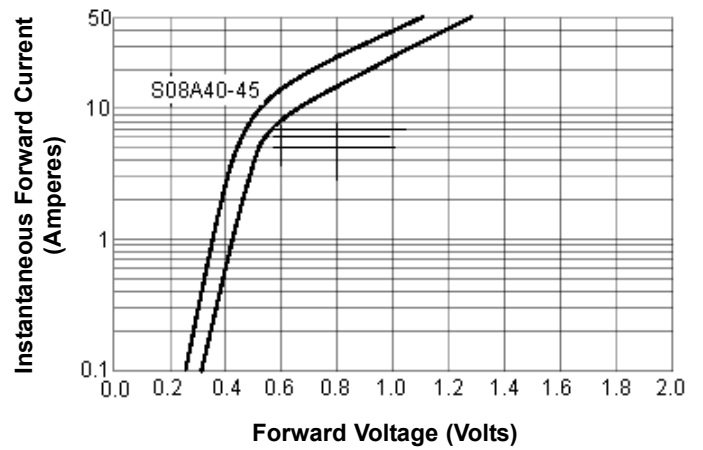
# Schottky Barrier Rectifiers



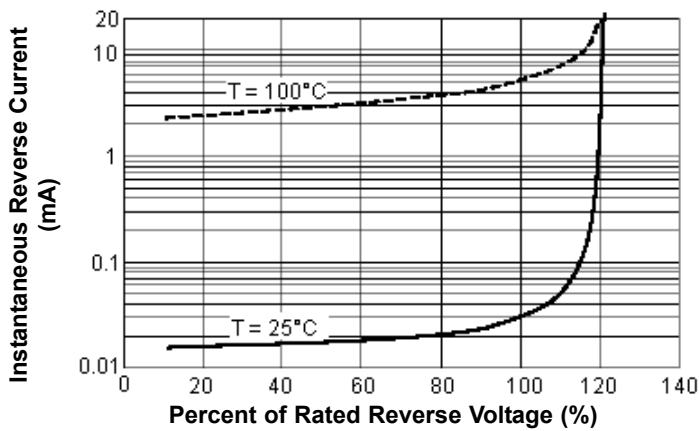
Forward Current Derating Curve



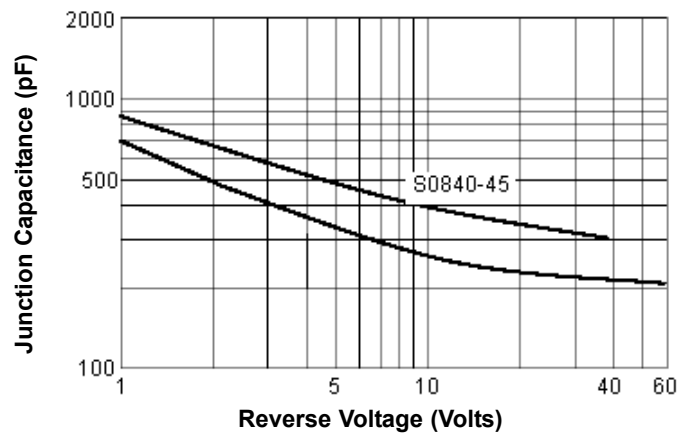
Typical Forward Characteristics



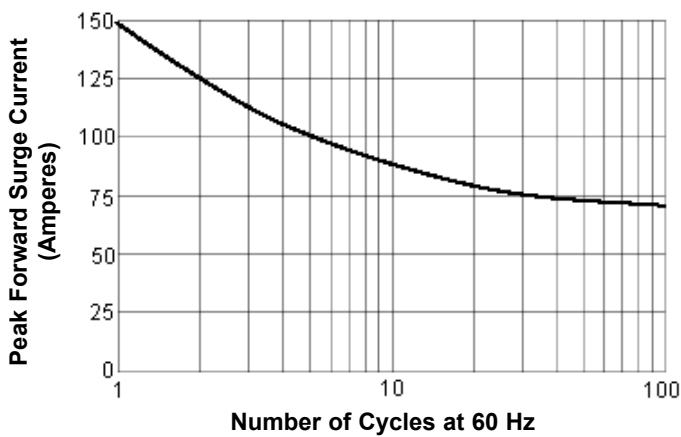
Typical Reverse Characteristics



Typical Junction Capacitance



Peak Forward Surge Current



# Schottky Barrier Rectifiers



## Part Number Table

Description	Part Number
Schottky Barrier Rectifiers	MBR840
Schottky Barrier Rectifiers	MBR845



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