

# MBR40120

## Schottky Barrier Rectifiers

Reverse Voltage - 120 V

Forward Current - 40 A

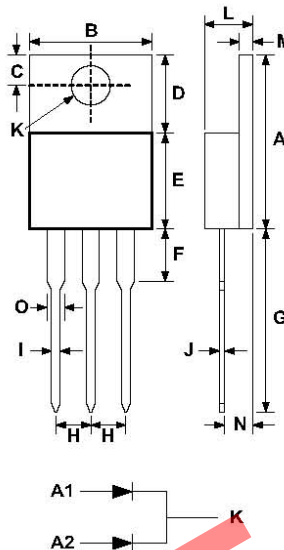
### Features

- Plastic package has Underwriters Laboratory Flammability
- High Junction Temperature Capability
- Low forward voltage, high current capability
- High surge capacity
- Low power loss, high efficiency

### Application

- AC/DC Switching Adaptor and other Switching Power Supply

### TO-220AB



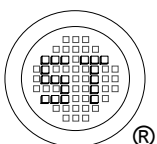
DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	.579	.606	14.70	15.40
B	.392	.411	9.95	10.45
C	.104	.116	2.65	2.95
D	.248	.272	6.30	6.90
E	.325	.350	8.25	8.90
F	.126	.157	3.20	4.00
G	.492	.551	12.50	14.00
H	.096	.108	2.45	2.75
I	.028	.039	0.70	1.00
J	.010	.022	0.25	0.55
K	.146	.157	3.70	4.00
L	.167	.187	4.25	4.75
M	.045	.057	1.15	1.45
N	.089	.114	2.25	2.90
O	.047	.055	1.20	1.40

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load, for capacitive load, derate by 20%.

Parameter	Symbols	Value	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	120	V
Working Peak Reverse Voltage	$V_{RWM}$	120	V
Maximum DC Blocking Voltage	$V_{RM}$	120	V
Maximum Average Forward Rectified Current(Per device)	$I_{F(AV)}$	40	A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	250	A
Peak Repetitive Reverse Surge Current (2 $\mu$ S-1 KHZ)	$I_{RRM}$	1	A
Maximum Forward Voltage per leg at 20 A per leg at 20 A, $T_J = 125^\circ\text{C}$	$V_F$	0.86 0.71	V
Maximum Reverse Current at Rated DC Blocking Voltage $T_C = 25^\circ\text{C}$ $T_C = 125^\circ\text{C}$	$I_R$	100 40	$\mu\text{A}$ mA
Typical Thermal Resistance <sup>1)</sup>	$R_{\theta JC}$	2	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{stg}$	- 40 to + 150	$^\circ\text{C}$

<sup>1)</sup> Thermal Resistance from Junction to case per leg.



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IECQ QC 080000  
Certificate No. PRC-1894-148-1

Dated: 14/03/2014 TL Rev: 01

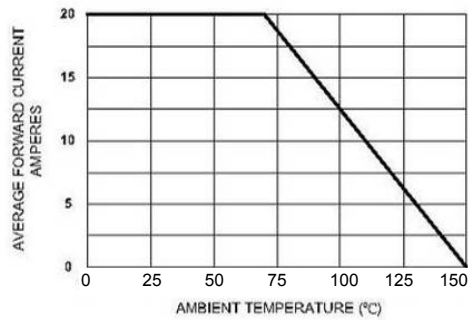


Figure 1. Forward Current Derating Curve

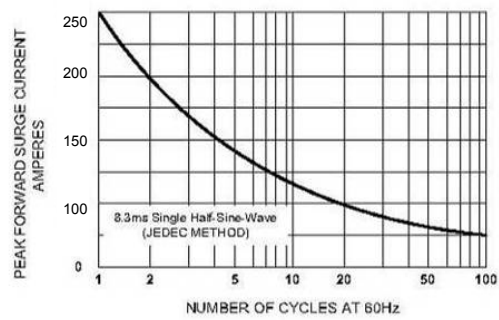


Figure 2. Maximum Non-repetitive Surge Current

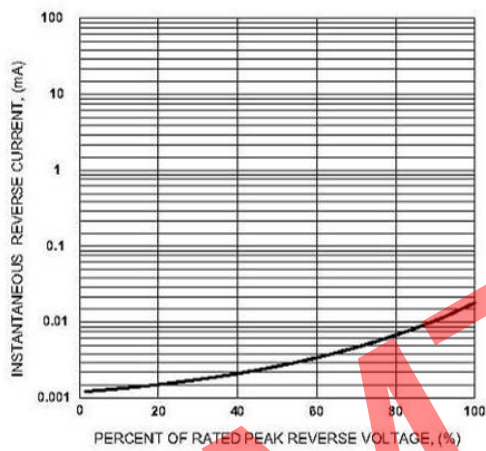


Figure 3. Typical Reverse Characteristics



Figure 4. Typical Forward Characteristics

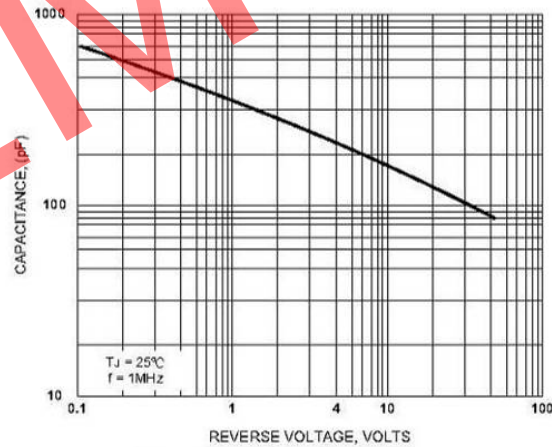
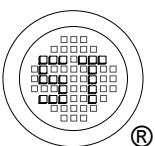


Figure 5. Typical Junction Capacitance



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