MBR40120

Schottky Barrier Rectifiers

Reverse Voltage - 120 V

Forward Current - 40 A

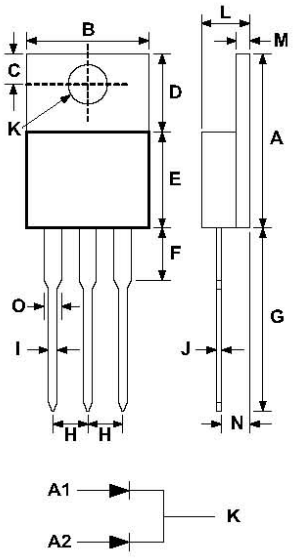
Features

- 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℃ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load, for capacitive load, derate by 20%.

Parameter	Symbols	Vaule	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 μS-1 KHZ)	I_{RRM}	1	A
Maximum Forward Voltage per leg at 20 A per leg at 20 A,T_J= 125℃	V_F	0.86 0.71	V
Maximum ReverseCurrent at Rated DC BlockingVoltage T_C =25℃ T_C = 125℃	I_R	100 40	μA mA
Typical Thermal Resistance [1]	$R_{\theta JC}$	2	℃/W
Operating and Storage Temperature Range	T_j, T_{stg}	- 40 to + 150	℃

[1] Thermal Resistance from Junction to case per leg.

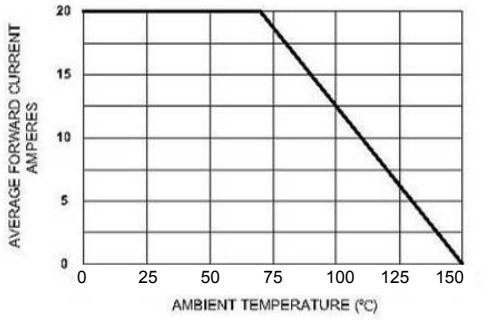


Figure 1. Forward Current Derating Curve

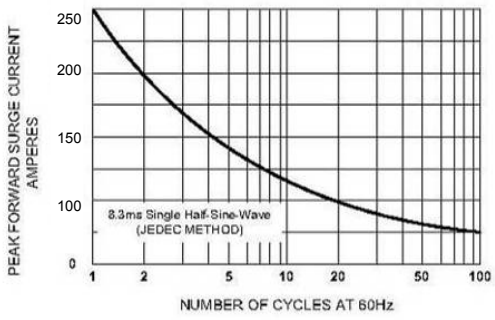


Figure 2. Maximum Non-repetitive Surge Current

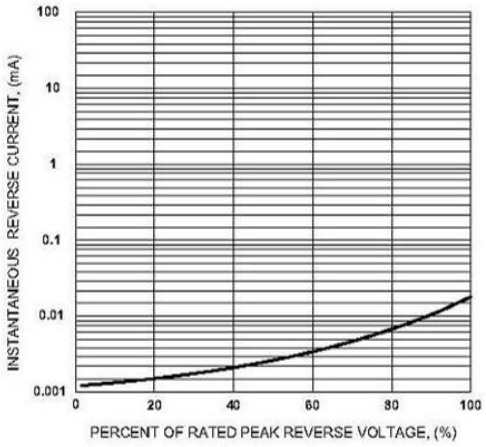


Figure 3. Typical Reverse Characteristics

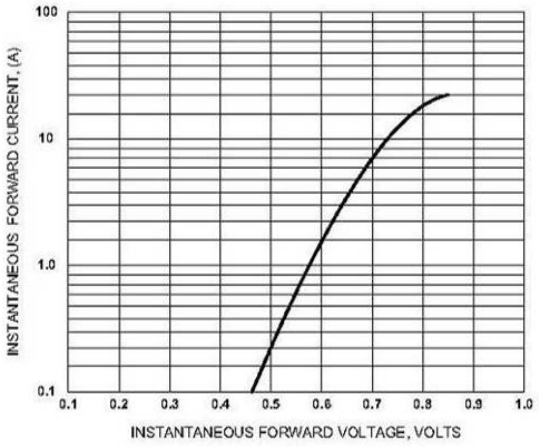


Figure 4. Typical Forward Characteristics

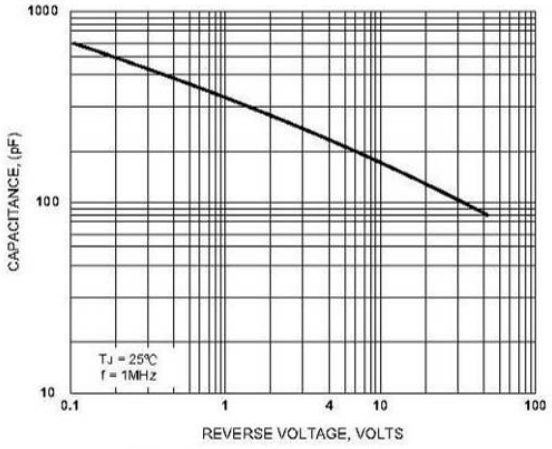


Figure 5. Typical Junction Capacitance