SIRECT
ELECTRONIC

MBR40V100CTH/FCTH

Power Schottky Rectifier - 40Amp 100Volt

☐ Features

-Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
-High Junction Temperature Capability
-Low forward voltage, high current capability
-High surge capacity
-Low power loss, high efficiency
-ESD performance human body mode > 4 KV
-Halogen-Free

☐ Application

-AC/DC Switching Adaptor and other Switching Power Supply

☐ Absolute maximum ratings

Symbol	Ratings	Unit	Conditions
$I_{F(AV)}$	40	A	Average Forward Current
V_{RRM}	100	V	Repetitive Peak Reverse Voltage
I_{FSM}	250	A	Peak Forward Surge Current
V_F	0.59	V	Forward Voltage Drop
T_j, T_{stg}	-40 to +150	ºC	Operating and Storage Temperature

☐ Electrical characteristics

Parameters	Symbol	Ratings		Conditions
Maximum Instantaneous Forward Voltage	V_F	TYP.	MAX.	Per Leg at I_F = 20A
		0.74V	0.79V	Tc = 25ºC
		0.59V	0.68V	Tc = 125ºC
Maximum Reverse Leakage Current	I_R	TYP.	MAX.	Per Leg at V_R = 100V
		0.2mA	1.0mA	Tc = 25ºC
		15mA	30mA	Tc = 125ºC
Typical Thermal Resistance,Junction to Case	$R_{\theta (j-c)}$	2.2 ºC/W		Per Leg TO-220AB
		4.5 ºC/W		ITO-220AB

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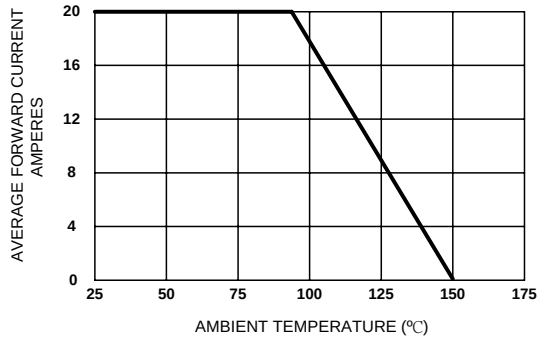


Figure 1. Forward Current Derating Curve

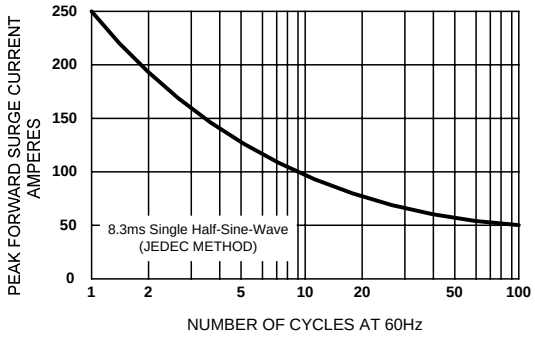


Figure 2. Maximum Non-repetitive Surge Current

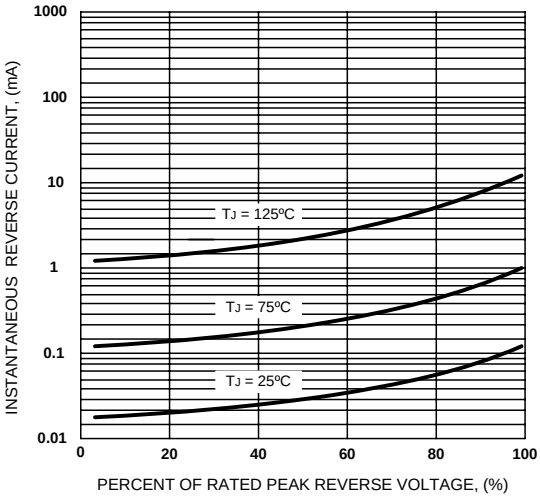


Figure 3. Typical Reverse Characteristics

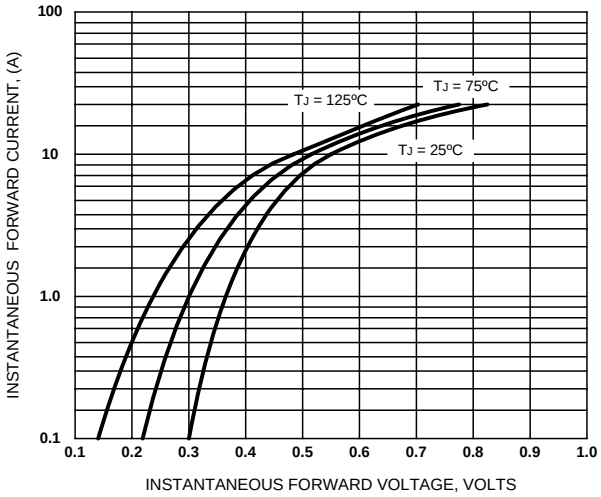


Figure 4. Typical Forward Characteristics

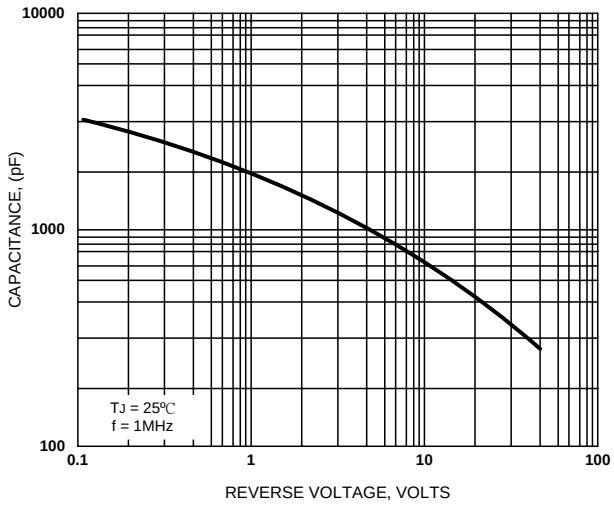
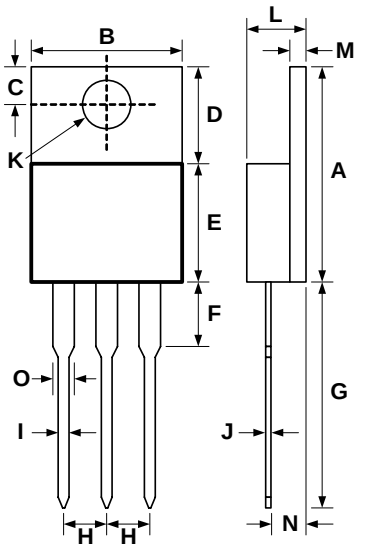
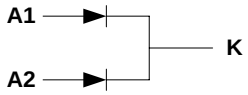


Figure 5. Typical Junction Capacitance

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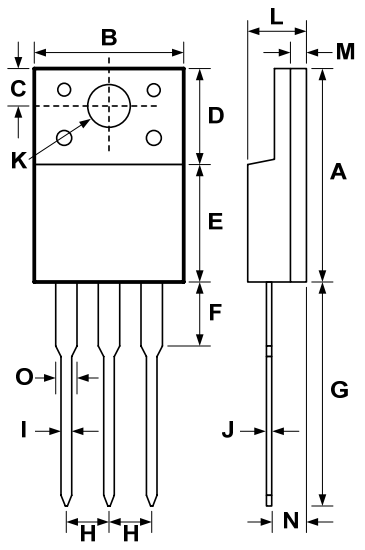


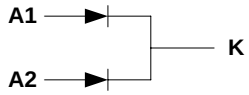


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.579	.606	14.70	15.40	
B	.392	.411	9.95	10.45	
C	.104	.116	2.65	2.95	
D	.248	.272	6.30	6.90	
E	.325	.350	8.25	8.90	
F	.126	.157	3.20	4.00	
G	.492	.551	12.50	14.00	
H	.096	.108	2.45	2.75	
I	.028	.039	0.70	1.00	
J	.010	.022	0.25	0.55	
K	.146	.157	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	

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DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.600	.630	15.25	16.00	
B	.386	.406	9.80	10.30	
C	.104	.132	2.65	3.35	
D	.258	.274	6.55	6.95	
E	.331	.370	8.40	9.40	
F	.110	.161	2.80	4.10	
G	.508	.551	12.90	14.00	
H	.089	.106	2.25	2.70	
I	.028	.039	0.70	1.00	
J	.020	.028	0.50	0.70	
K	.120	.138	3.05	3.50	
L	.167	.193	4.25	4.90	
M	.028	.057	0.70	1.45	
N	.079	.112	2.00	2.85	
O	.043	.055	1.10	1.40	