SIRECT ELECTRONIC

MBR20W300CTH/FCTH

Trench MOS Barrier Schottky Rectifier - 20Amp 300Volt

☐ 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
-Halogen-Free

☐ Application

-AC/DC Switching Adaptor and other Switching Power Supply

☐ Absolute maximum ratings

Symbol	Ratings	Unit	Conditions
$I_{F(AV)}$	20	A	Average Forward Current
V_{RRM}	300	V	Repetitive Peak Reverse Voltage
I_{FSM}	150	A	Peak Forward Surge Current
V_F	0.75	V	Forward Voltage Drop
T_j, T_{stg}	-65 to +150	ºC	Operating and Storage Temperature

☐ Electrical characteristics

Parameters	Symbol	Ratings	Conditions
Maximum Instantaneous Forward Voltage	V_F	0.90V 0.75V	Per Leg at I_F = 10A Tc = 25ºC Tc = 125ºC
Maximum Reverse Leakage Current	I_R	0.05mA 10mA	Per Leg at V_R = 300V Tc = 25ºC Tc = 125ºC
Typical Thermal Resistance,Junction to Case	$R_{\theta (j-c)}$	2.2 ºC/W 4.5 ºC/W	Per Leg TO-220AB ITO-220AB

Note : 1.Mounted on P.C.B with copper pad size 20mm x 30mm, thickness 1.5mm

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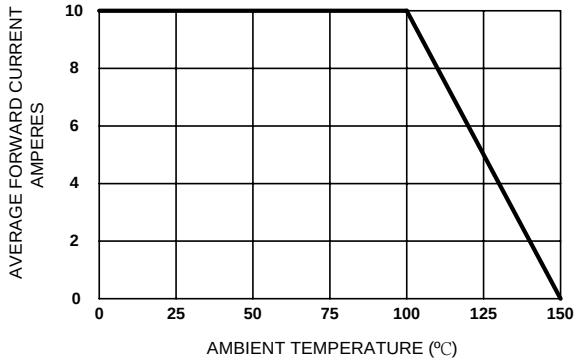

Figure 1. Forward Current Derating Curve

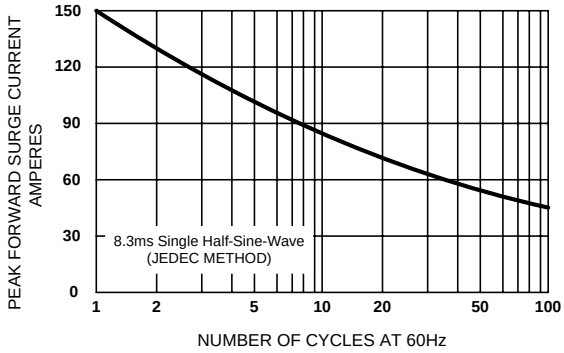

Figure 2. Maximum Non-repetitive Surge Current

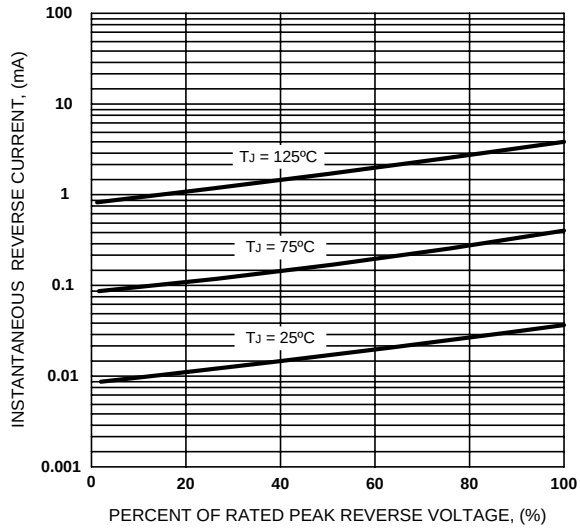

Figure 3. Typical Reverse Characteristics

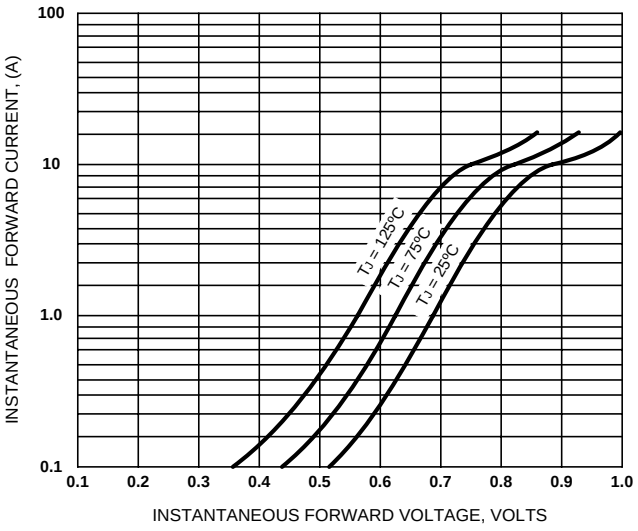

Figure 4. Typical Forward Characteristics

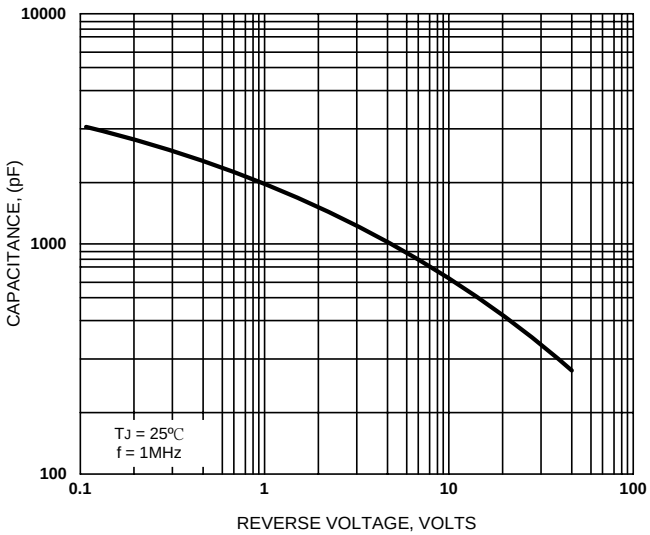

Figure 5. Typical Junction Capacitance

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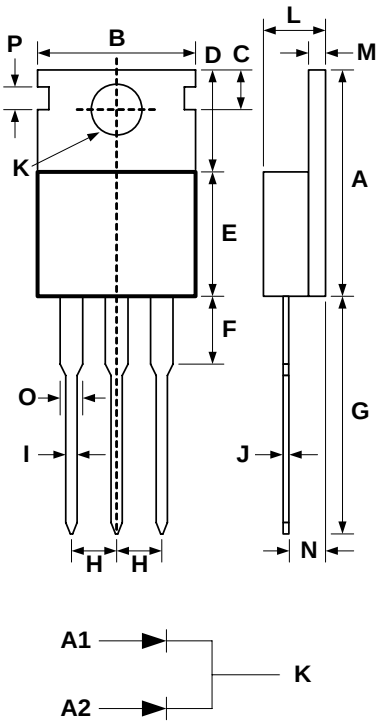

DIMENSIONS					
DIM	INCHES		MILLIMETERS		NOTE
	MIN	MAX	MIN	MAX	
A	.610	.630	15.5	16.00	
B	.390	.413	9.90	10.50	
C	.106	.126	2.70	3.20	
D	.228	.272	5.80	6.90	
E	.348	.372	8.85	9.45	
F	.102	.142	2.60	3.60	
G	.512	.551	13.00	14.00	
H	.093	.112	2.35	2.85	
I	.028	.037	0.70	0.95	
J	.016	.026	0.40	0.65	
K	.132	.152	3.35	3.85	
L	.169	.185	4.30	4.70	
M	.045	.057	1.15	1.45	
N	.089	.112	2.25	2.85	
O	.043	.055	1.10	1.40	
P	.055	.067	1.40	1.70	

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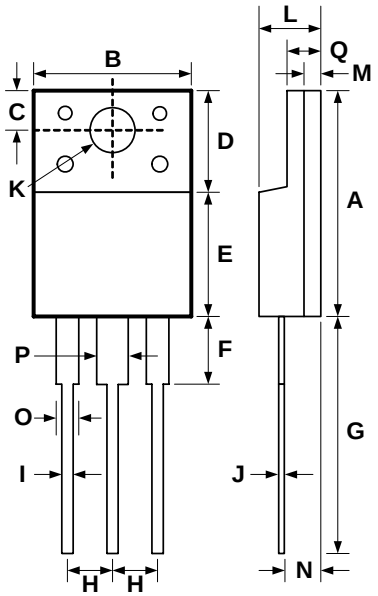

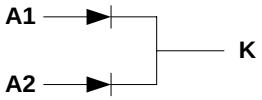

DIMENSIONS					
DIM	INCHES		MILLIMETERS		NOTE
	MIN	MAX	MIN	MAX	
A	.581	.600	14.75	15.25	
B	.386	.410	9.80	10.40	
C	.102	.122	2.60	3.10	
D	.228	.272	5.80	6.90	
E	.315	.339	8.00	8.60	
F	.138	.177	3.50	4.50	
G	.512	.551	13.00	14.00	
H	.093	.112	2.35	2.85	
I	.020	.030	0.50	0.75	
J	.020	.030	0.50	0.75	
K	.120	.140	3.05	3.55	
L	.169	.185	4.30	4.70	
M	.039	.051	1.00	1.30	
N	.089	.112	2.25	2.85	
O	.043	.055	1.10	1.40	
P	.059	.071	1.50	1.80	
Q	.114	.130	2.90	3.30	

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