

Power Schottky Rectifier - 10Amp 45Volt

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

- Switching-Mode Power Supply
- Solar-System Control Box

Absolute maximum ratings

Symbol	Ratings	Unit	Conditions
$I_F(AV)$	10	A	Average Forward Current
V_{RRM}	45	V	Repetitive Peak Reverse Voltage
I_{FSM}	120	A	Peak Forward Surge Current
V_F	0.52	V	Forward Voltage Drop
T_j, T_{stg}	-50 to +175	°C	Operating and Storage Temperature

Electrical characteristics

Parameters	Symbol	Ratings	Conditions
Maximum Instantaneous Forward Voltage	V_F	0.68V	Per Leg at $I_F = 5A$ $T_c = 25^\circ C$
		0.52V	$T_c = 125^\circ C$
Maximum Reverse Leakage Current	I_R	0.05mA	Per Leg at $V_R = 45V$ $T_c = 25^\circ C$
		10mA	$T_c = 125^\circ C$
Typical Thermal Resistance, Junction to Case	$R_{\theta(j-c)}$	7 °C/W	Per Leg TO-251 / TO-252

Note : 1.Mounted on P.C.B with copper pad size 20mm x 30mm, thickness 1.5mm
 2.Reverse Surge 3.0A @ 0.004ms, 10 cycle
 3.Repetitive Peak Reverse Current (IRRM) 0.5A @ Per Leg at $t_p = 2\mu s$, 1kHz

August 2015 / Rev.7.0

MBR10B45IH/DH

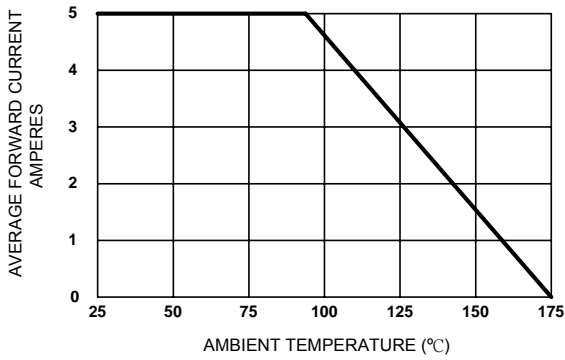


Figure 1. Forward Current Derating Curve

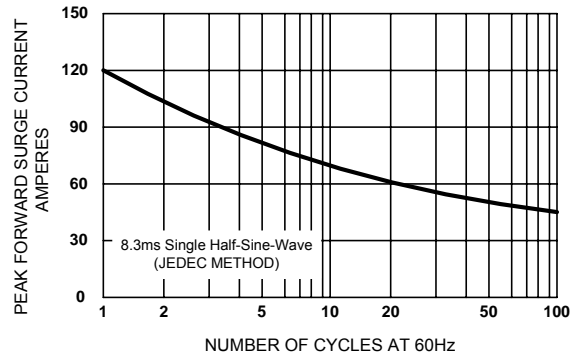


Figure 2. Maximum Non-repetitive Surge Current

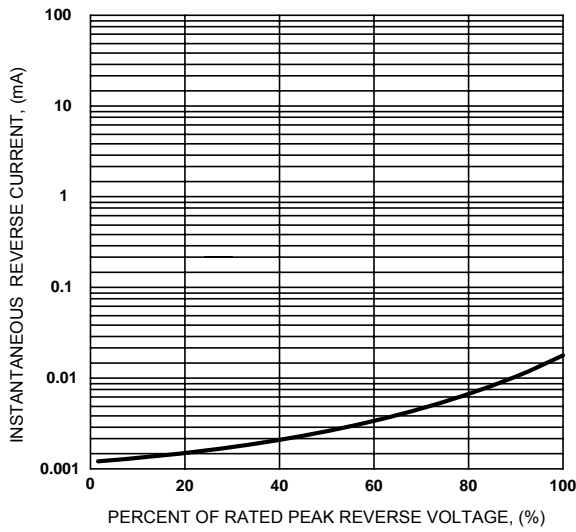


Figure 3. Typical Reverse Characteristics

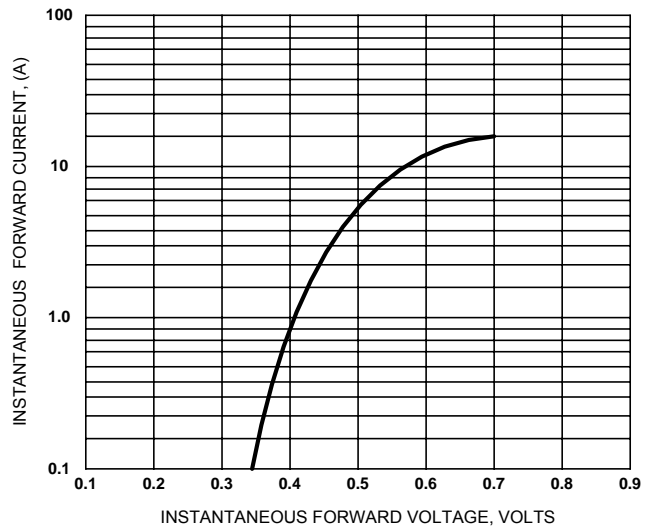


Figure 4. Typical Forward Characteristics

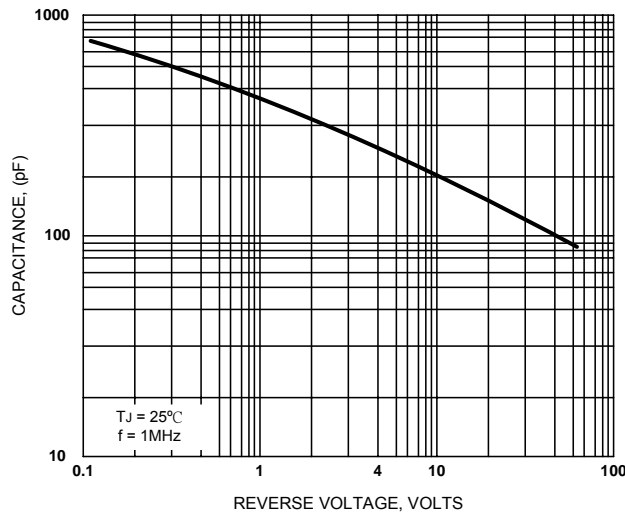


Figure 5. Typical Junction Capacitance



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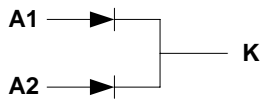
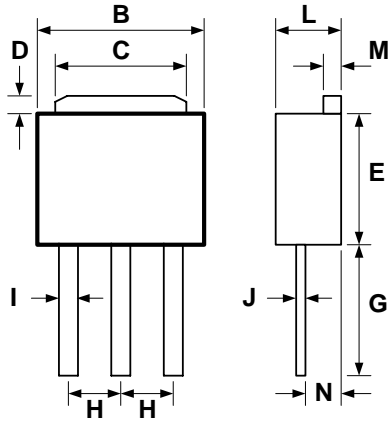
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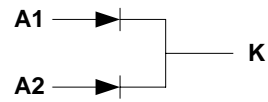
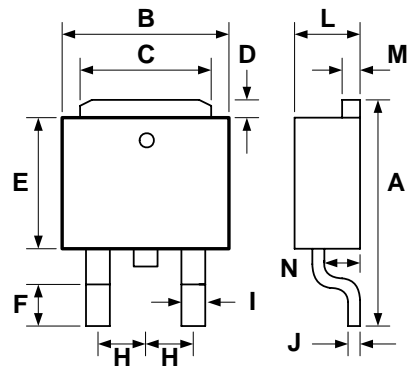
T0-251



DIM	DIMENSIONS				NOTE
	INCHES		MILLIMETERS		
	MIN	MAX	MIN	MAX	
B	.250	.266	6.35	6.75	
C	.201	.217	5.10	5.50	
D	.033	.053	0.85	1.35	
E	.228	.248	5.80	6.30	
G	.209	.228	5.30	5.80	
H	.085	.096	2.15	2.45	
I	.030	.041	0.75	1.05	
J	.016	.024	0.40	0.60	
L	.083	.098	2.10	2.50	
M	.018	.026	0.45	0.65	
N	.031	.051	0.80	1.30	

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T0-252



DIM	DIMENSIONS				NOTE
	INCHES		MILLIMETERS		
	MIN	MAX	MIN	MAX	
A	.380	.400	9.65	10.15	
B	.250	.266	6.35	6.75	
C	.201	.217	5.10	5.50	
D	.033	.053	0.85	1.35	
E	.228	.248	5.80	6.30	
F	.049	.065	1.25	1.65	
H	.085	.096	2.15	2.45	
I	.030	.041	0.75	1.05	
J	.016	.024	0.40	0.60	
L	.083	.098	2.10	2.50	
M	.018	.026	0.45	0.65	
N	.031	.051	0.80	1.30	