

Power Schottky Rectifier - 40Amp 60Volt

☐ 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

☐ Application

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

☐ Absolute maximum ratings

Symbol	Ratings	Unit	Conditions
$I_F(AV)$	40	A	Average Forward Current
V_{RRM}	60	V	Repetitive Peak Reverse Voltage
I_{FSM}	400	A	Peak Forward Surge Current
T_j, T_{stg}	-50 to +175	°C	Operating and Storage Temperature

☐ Electrical characteristics

Parameters	Symbol	Ratings		Conditions
Maximum Instantaneous Forward Voltage Per Leg at $I_F = 20A$	V_F	MBRH300SPT 0.82V 0.66V	MBRH300EPT 0.78V 0.62V	$T_c = 25^\circ C$ $T_c = 125^\circ C$
Maximum Reverse Leakage Current Per Leg at $V_R = 60V$	I_R	0.05mA 10mA		$T_c = 25^\circ C$ $T_c = 125^\circ C$
Typical Thermal Resistance, Junction to Case Per Leg	$R_{\theta(j-c)}$	1.25 °C/W 1.1 °C/W		TO-247AD TO-3P

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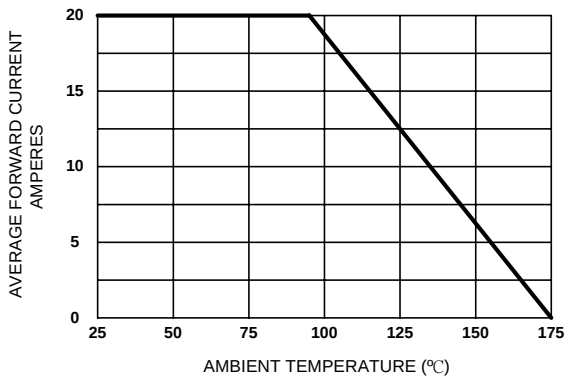


Figure 1. Forward Current Derating Curve

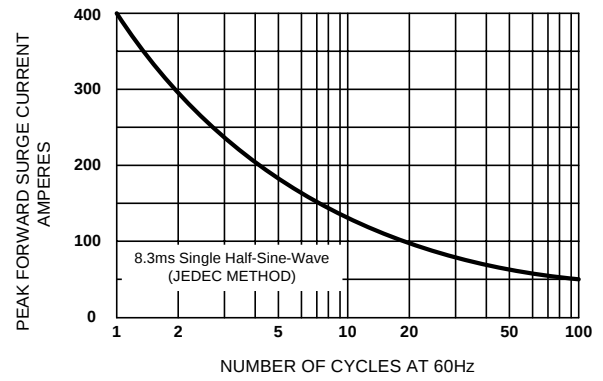


Figure 2. Maximum Non-repetitive Surge Current

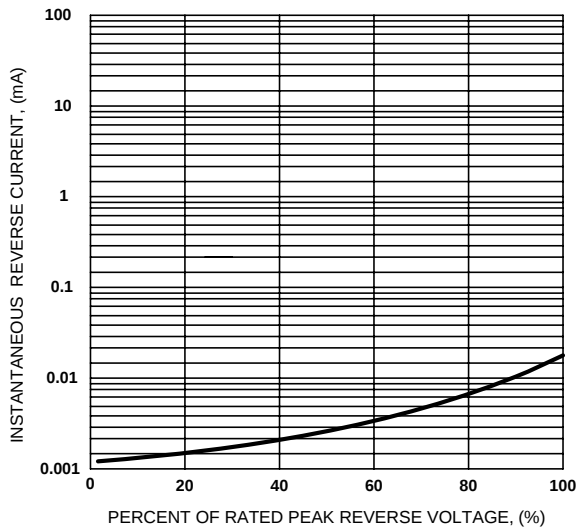


Figure 3. Typical Reverse Characteristics

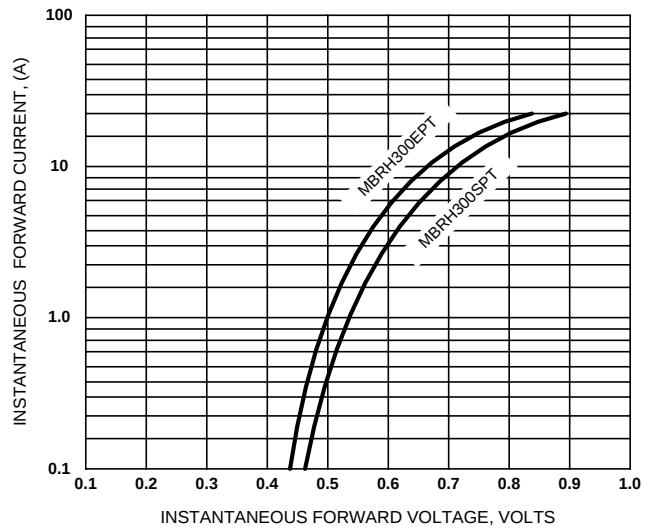


Figure 4. Typical Forward Characteristics

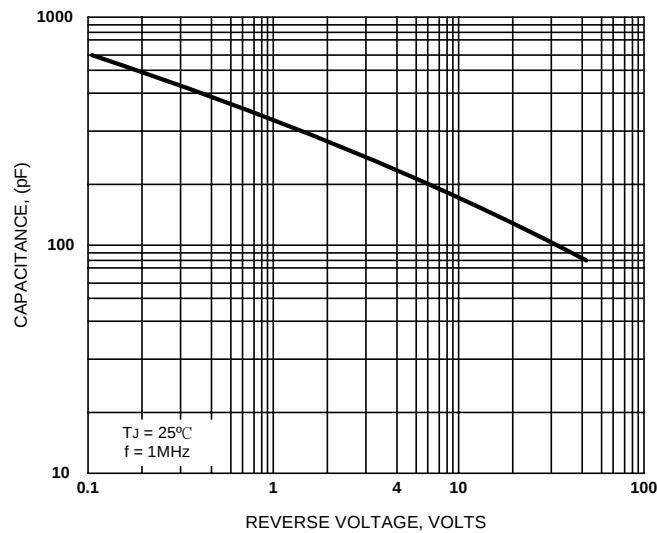
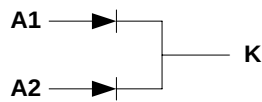
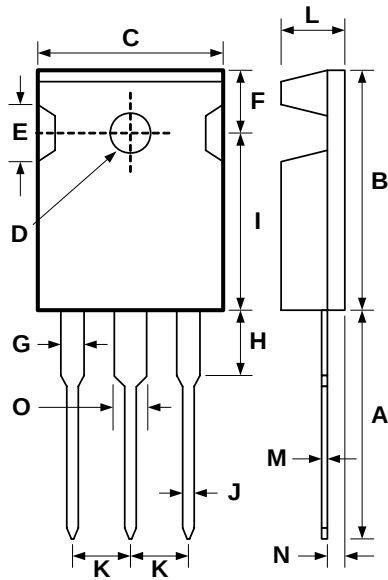


Figure 5. Typical Junction Capacitance

MBRH300SPT/EPT

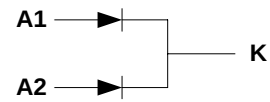
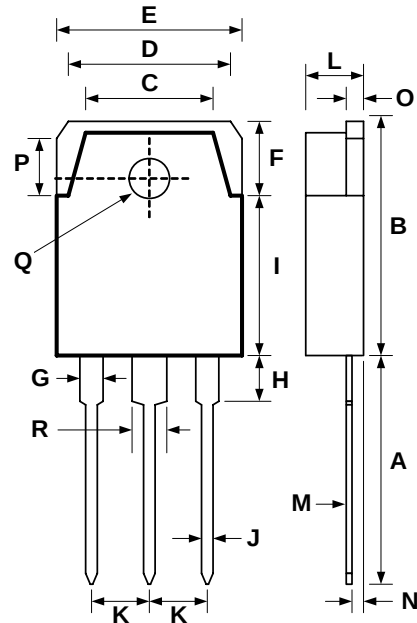
TO-247AD



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.748	.827	19.00	21.00	
B	.787	.866	20.00	22.00	
C	.598	.638	15.20	16.20	
D	.130	.150	3.30	3.80	
E	.205	.242	5.20	6.15	
F	.209	.232	5.30	5.90	
G	.077	.091	1.95	2.30	
H	.161	.189	4.10	4.80	
I	.551	.610	14.00	15.50	
J	.045	.055	1.15	1.40	
K	.197	.219	5.00	5.55	
L	.189	.205	4.80	5.20	
M	.020	.031	0.50	0.80	
N	.083	.094	2.10	2.40	
O	.116	.128	2.95	3.25	

MBRH300SPT/EPT

TO-3P



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.744	.783	18.90	19.90	
B	.787	.827	20.00	21.00	
C	.346	.386	8.80	9.80	
D	.512	.535	13.00	13.60	
E	.602	.628	15.30	15.95	
F	.256	.276	6.50	7.00	
G	.077	.085	1.95	2.15	
H	.098	.126	2.50	3.20	
I	.528	.551	13.40	14.00	
J	.035	.047	0.90	1.20	
K	.205	.220	5.20	5.60	
L	.183	.195	4.65	4.95	
M	.022	.035	0.55	0.90	
N	.053	.059	1.35	1.50	
O	.055	.065	1.40	1.65	
P	.165	.197	4.20	5.00	
Q	.128	.140	3.25	3.55	
R	.114	.130	2.90	3.30	