SIRECT ELECTRONIC

MBR30B150CTH

Power Schottky Rectifier - 30Amp 150Volt

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 > 6 KV
-Halogen-Free

Application

-AC/DC Switching Adaptor and TFT-LCD Power Supply
-SMPS

Absolute maximum ratings

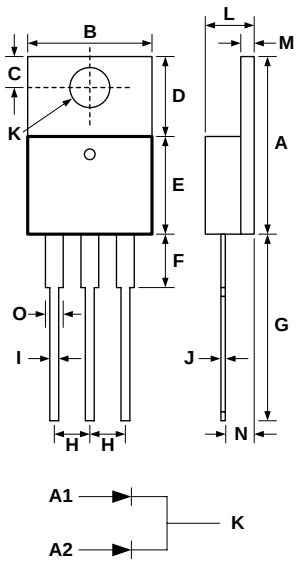
Symbol	Ratings	Unit	Conditions
$I_{F(AV)}$	30	A	Average Forward Current
V_{RRM}	150	V	Repetitive Peak Reverse Voltage
I_{FSM}	350	A	Peak Forward Surge Current
$V_{F(max)}$	0.69	V	Forward Voltage Drop
T_j	-50 to +150	ºC	Operating Temperature
T_{stg}	-50 to +150	ºC	Storage Temperature

Electrical characteristics

Parameters	Symbol	Ratings	Conditions
Maximum Instantaneous Forward Voltage	V_F	0.88V 0.69V	I_F = 15A Tc = 25ºC Tc = 125ºC
Maximum Reverse Leakage Current	I_R	0.05mA 10mA	Tc = 25ºC Tc = 125ºC
Maximum Voltage Rate of Change	dv/dt	10,000 V/μs	Rated V_R
Typical Thermal Resistance, Junction to Case	$R_{\theta(j\text{-}c)}$	2.2 ºC/W	Per diode

Note: Pulse Test : 380μs pulse width, 2% duty cycle

TO-220AB



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.579	.606	14.70	15.40	
B	.392	.411	9.95	10.45	
C	.114	.126	2.90	3.20	
D	.248	.272	6.30	6.90	
E	.325	.350	8.25	8.90	
F	.153	.173	3.90	4.40	
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	

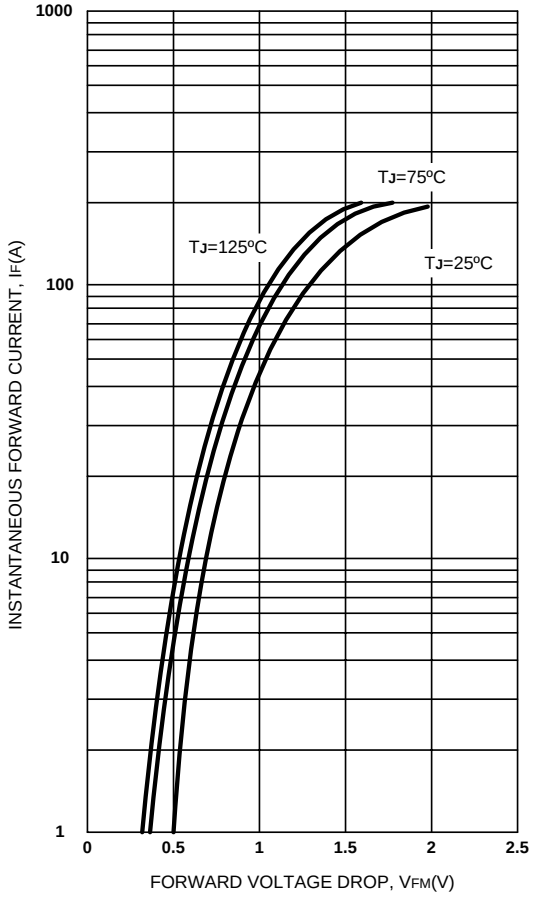


Figure 1. Max. Forward Voltage Drop Characteristics (PerLeg)

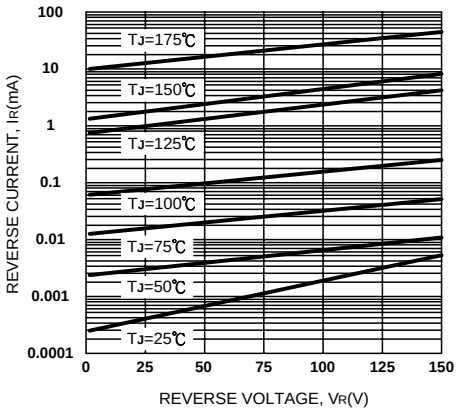


Figure 2. Typical Values Of Reverse Current Vs. Reverse Voltage (PerLeg)

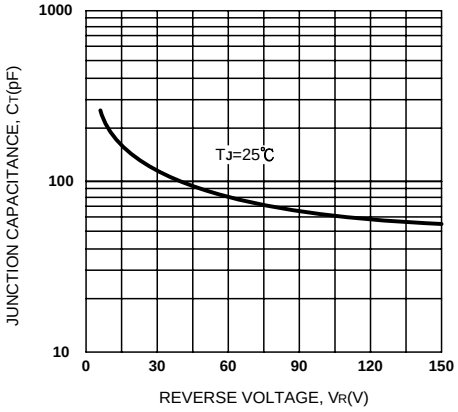


Figure 3. Typical Junction Capacitance Vs. Reverse Voltage (PerLeg)

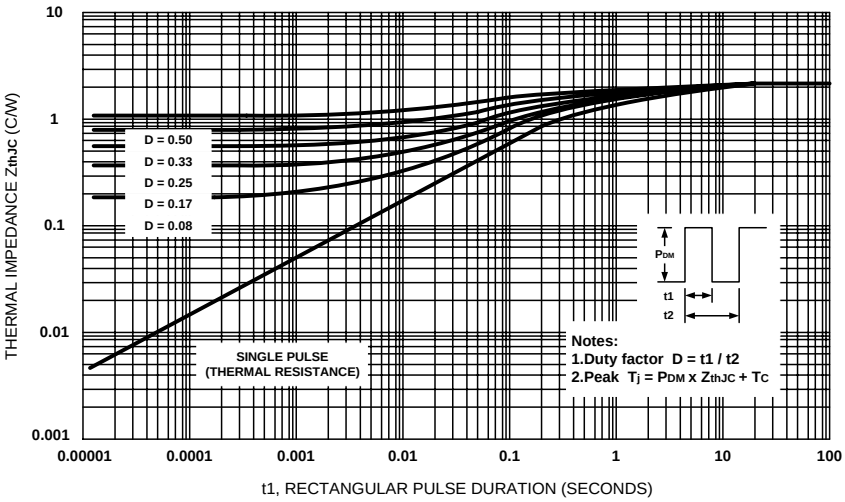


Figure 4. Max. Thermal Impedance Z_{thJC} Characteristics (PerLeg)

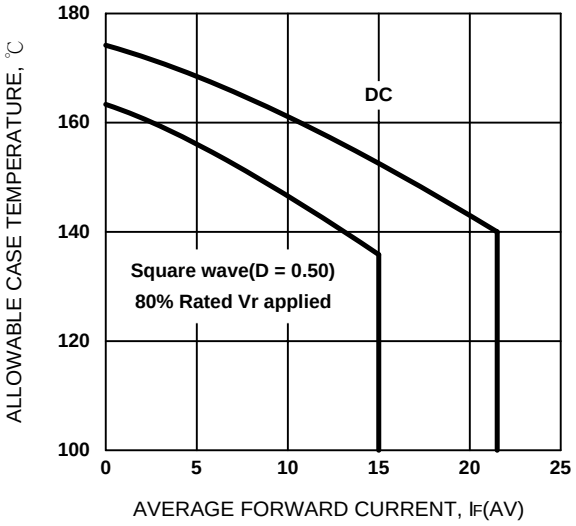


Figure 5. Max. Allowable Case Temperature Vs. Average Forward Current (PerLeg)

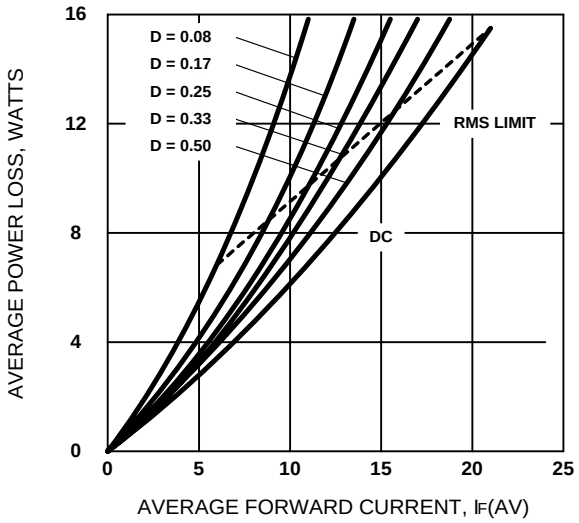


Figure 6. Forward PowerLoss Characteristics (PerLeg)

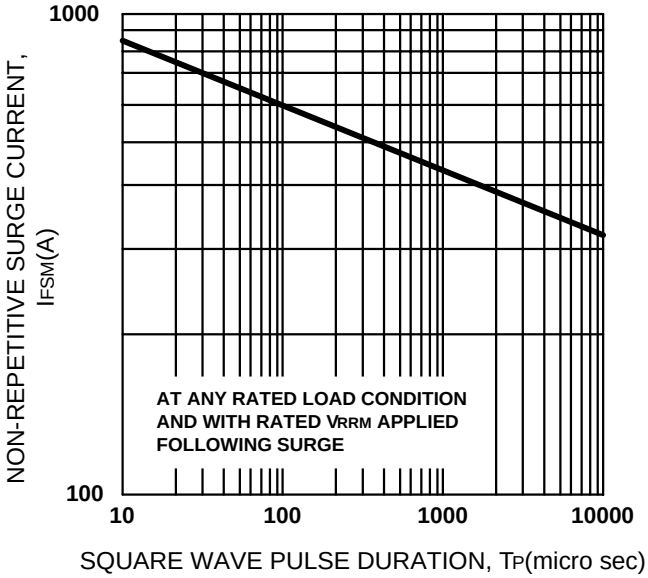


Figure 7. Max. Non-Repetitive Surge Current (PerLeg)