

Power Schottky Rectifier - 20Amp 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

Application

- AC/DC Switching Adaptor and other Switching Power Supply
- TFT-LCD and DVD Power Supply

Absolute maximum ratings

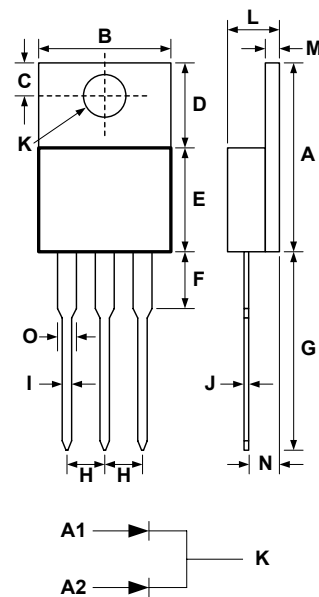
Symbol	Ratings	Unit	Conditions
$I_F(AV)$	20	A	Average Forward Current
V_{RRM}	150	V	Repetitive Peak Reverse Voltage
I_{FSM}	150	A	Peak Forward Surge Current
$V_F(max)$	0.65	V	Forward Voltage Drop
T_j	-50 to +175	°C	Operating Temperature
T_{stg}	-50 to +150	°C	Storage Temperature

Electrical characteristics

Parameters	Symbol	Ratings	Conditions
Maximum Instantaneous Forward Voltage	V_F	0.80V 0.65V	$T_c = 25^\circ C$ $T_c = 125^\circ C$
Maximum Reverse Leakage Current	I_R	0.01mA 10mA	$T_c = 25^\circ C$ $T_c = 125^\circ C$
Maximum Voltage Rate of Change	dv/dt	10,000 V/ μs	Rated V_R
Typical Thermal Resistance, Junction to Case	$R_{\theta(j-c)}$	2.2 °C/W	Per diode

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

TO-220AB



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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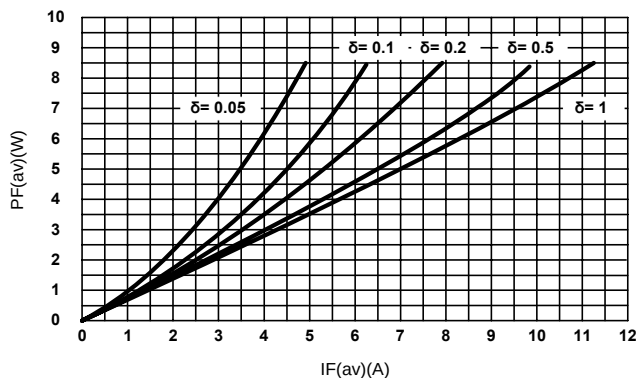


Figure 1. Average forward power dissipation versus average forward current (per diode)

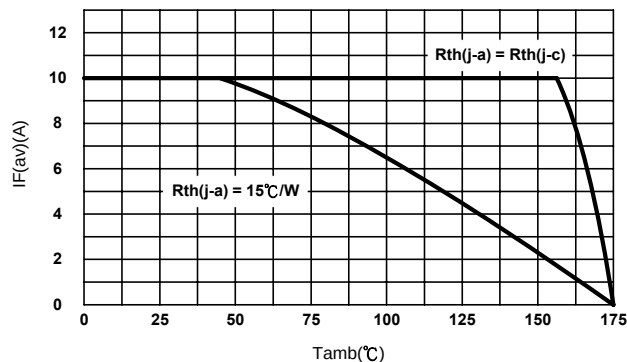


Figure 2. Average forward current versus ambient temperature ($\delta=0.5$, per diode)

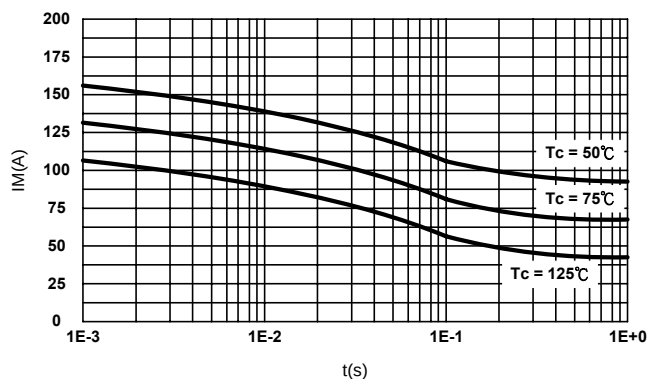


Figure 3. Non repetitive surge peak forward current versus overload duration (maximum values, per diode)

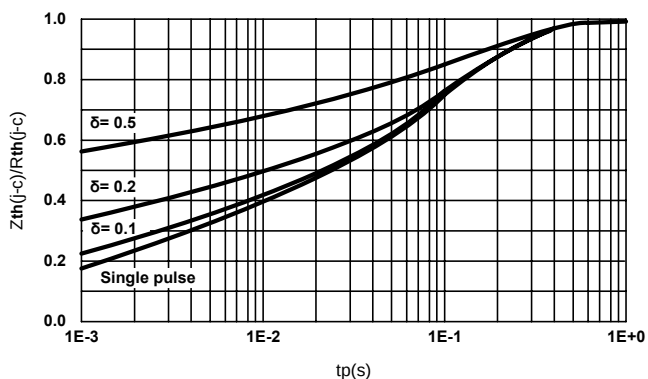


Figure 4. Relative variation of thermal impedance junction to case versus pulse duration (per diode)

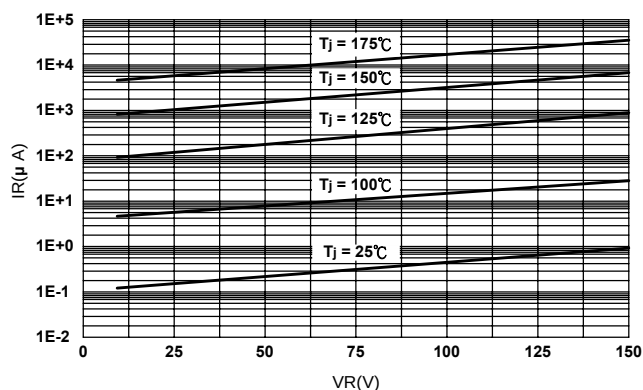


Figure 5. Reverse leakage current versus reverse voltage applied (typical values, per diode)

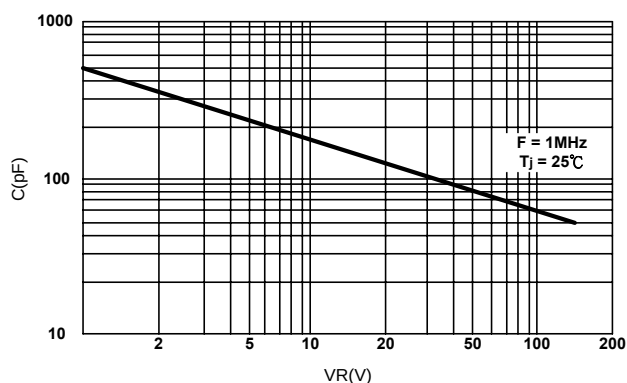


Figure 6. Junction capacitance versus reverse voltage applied (typical values, per diode)

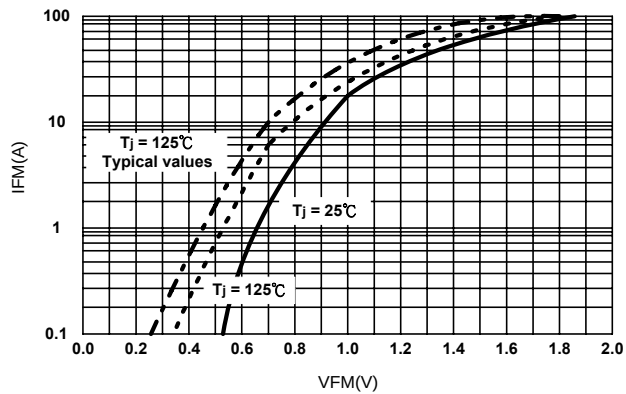


Figure 7. Forward voltage drop versus forward current (maximum values, per diode)

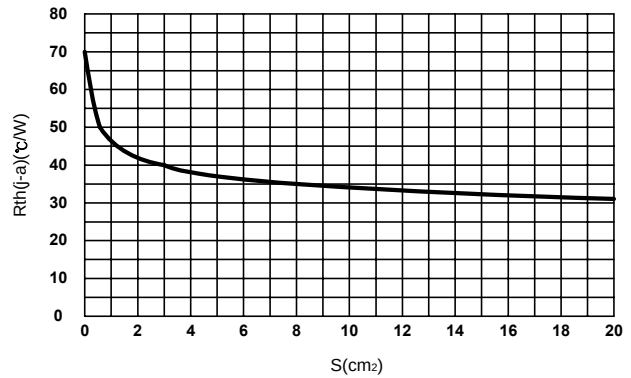


Figure 8. Thermal resistance junction to ambient versus copper surface under tab (Epoxy printed circuit board, copper thickness : $35\mu\text{m}$) (STPS20150CG only)