

Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 150°C junction temperature. Typical application are in switching Mode Power Supplies such as adaptors, DC/DC converters, free-wheeling and polarity protection diodes.

Features

- * Low Forward Voltage.
- * Low Switching noise.
- * High Current Capacity
- * Guarantee Reverse Avalanche.
- * Guard-Ring for Stress Protection.
- * Low Power Loss & High efficiency.
- * 150°C Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- * *In compliance with EU RoHs 2002/95/EC directives*



SCHOTTKY BARRIER RECTIFIERS

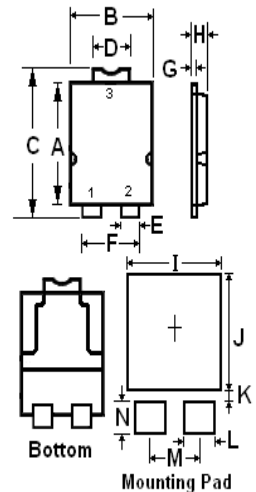
**10 AMPERES
100VOLTS**



TO-277

MAXIMUM RATINGS

Characteristic	Symbol	S10L100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectifier Forward Current	$I_{F(AV)}$	10	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	I_{FSM}	150	A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150	°C



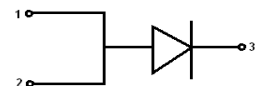
THERMAL RESISTANCES

Typical Thermal Resistance junction to case (per device)	$R_{\theta j-c}$	6.5	°C/w
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ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (per diode) ($I_F = 0.1$ Amp $T_C = 25^\circ C$) ($I_F = 10.0$ Amp $T_C = 25^\circ C$)	V_F	---	0.35 0.70	---	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ C$) (Rated DC Voltage, $T_C = 125^\circ C$)	I_R	--	0.05 30	---	mA

DIM	MILLIMETERS	
	MIN	MAX
A	5.20	5.40
B	4.10	3.90
C	6.40	6.60
D	1.70	1.90
E	0.80	1.00
F	1.80	1.90
G	0.25	0.35
H	1.05	1.15
I	3.36	----
J	4.86	----
K	0.85	----
L	1.40	----
M	1.84	----
N	1.40	----



S10L100

FIG-1 FORWARD CURRENT DERATING CURVE

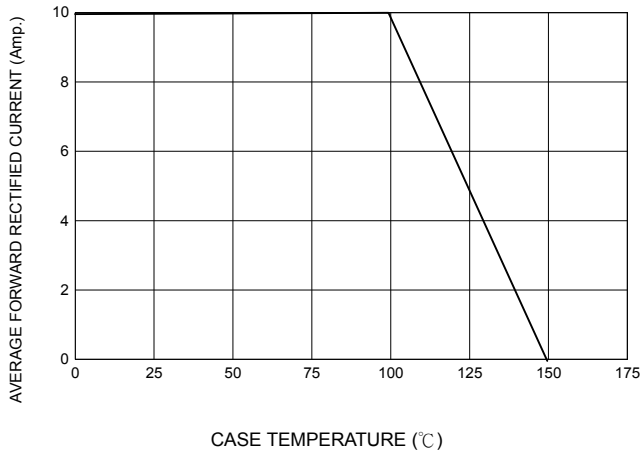


FIG-2 TYPICAL FORWARD CHARACTERISTICS

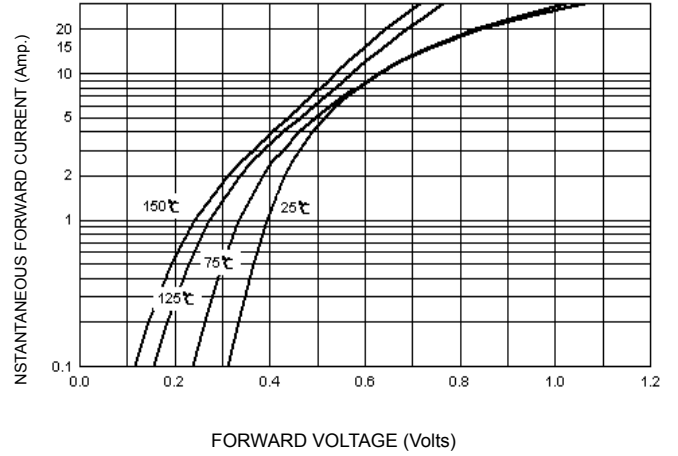


FIG-3 TYPICAL REVERSE CHARACTERISTICS

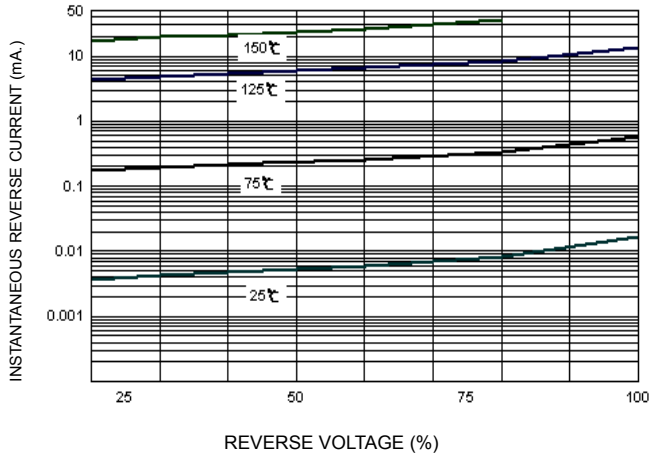


FIG-4 TYPICAL JUNCTION CAPACITANCE

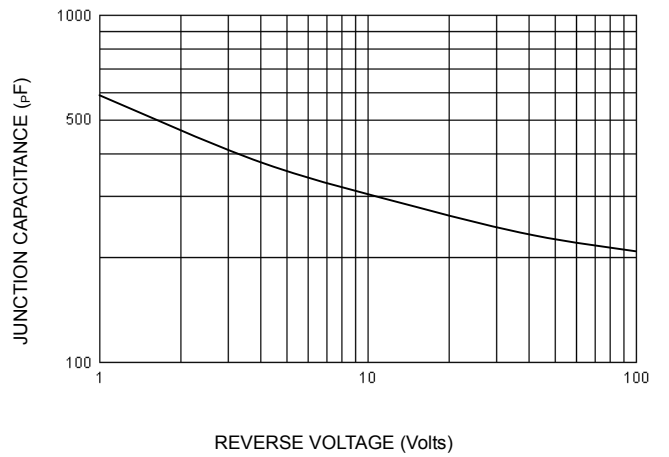
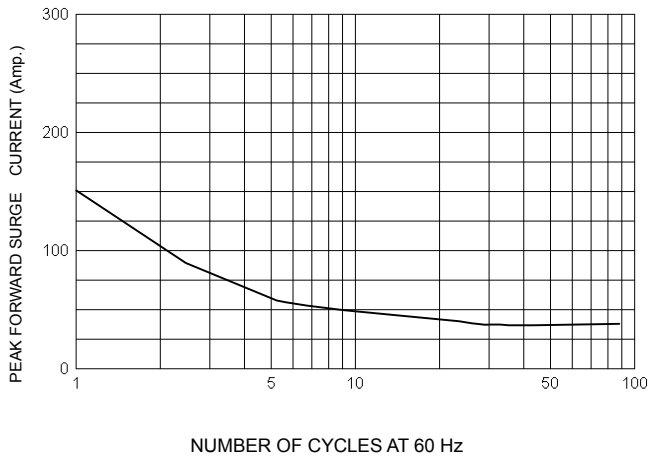


FIG-5 PEAK FORWARD SURGE CURRENT



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