

## Schottky Barrier 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 175°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
- \* Moisture Sensitivity Level: MSL-1



\* In compliance with EU RoHS 2002/95/EC directives

### MAXIMUM RATINGS

Characteristic	Symbol	SR5100L	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectifier Forward Current	$I_O$	5	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, 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 from Junction to ambient	$R_{\theta J-A}$	7.5	°C/w

### ELECTRICAL CHARACTERISTICS

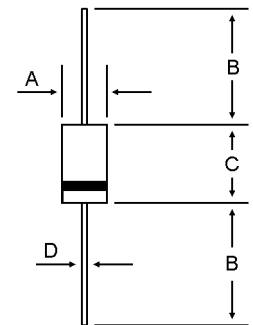
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage ( $I_F = 0.1$ Amp $T_C = 25^\circ C$ ) ( $I_F = 2.5$ Amp $T_C = 25^\circ C$ ) ( $I_F = 5.0$ Amp $T_C = 25^\circ C$ )	$V_F$	---	0.29 0.62 0.80	0.35 0.71 0.85	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ C$ ) (Rated DC Voltage, $T_C = 125^\circ C$ )	$I_R$	---	0.08 15	0.1 30	mA
Typical Junction Capacitance (Reverse Voltage of 4 volts & $f = 1$ MHz)	$C_P$		380		pF

### SCHOTTKY BARRIER RECTIFIERS

**5 AMPERES  
100 VOLTS**



**DO-201AD**



DIM	MILLIMETERS	
	MIN	MAX
A	5.00	5.60
B	25.40	---
C	8.50	9.50
D	1.20	1.30

CASE---  
Transfer molded plastic

POLARITY---  
Cathode indicated polarity band

# SR5100L

FIG-1 FORWARD CURRENT DERATING CURVE

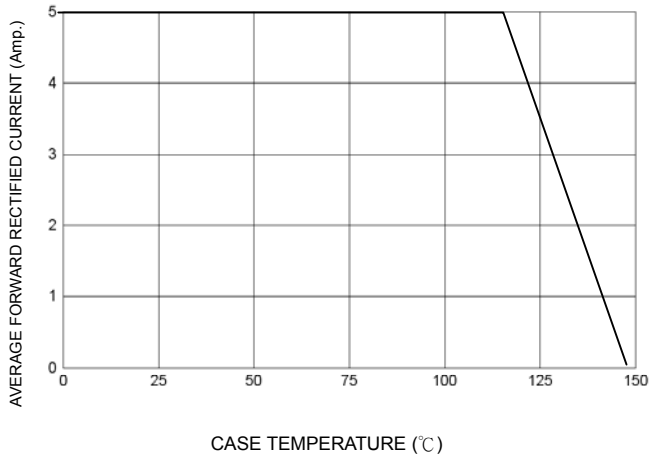


FIG-2 TYPICAL FORWARD CHARACTERISTICS

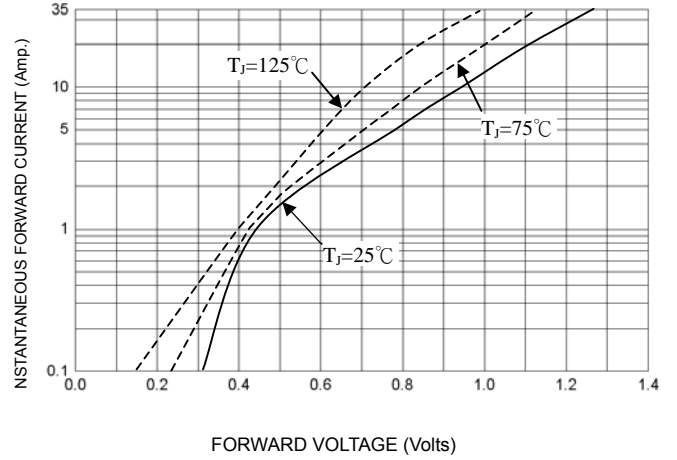


FIG-3 TYPICAL REVERSE CHARACTERISTICS

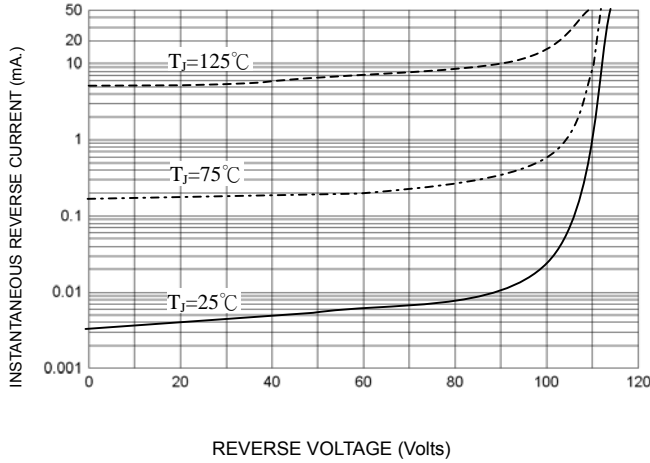


FIG-4 TYPICAL JUNCTION CAPACITANCE

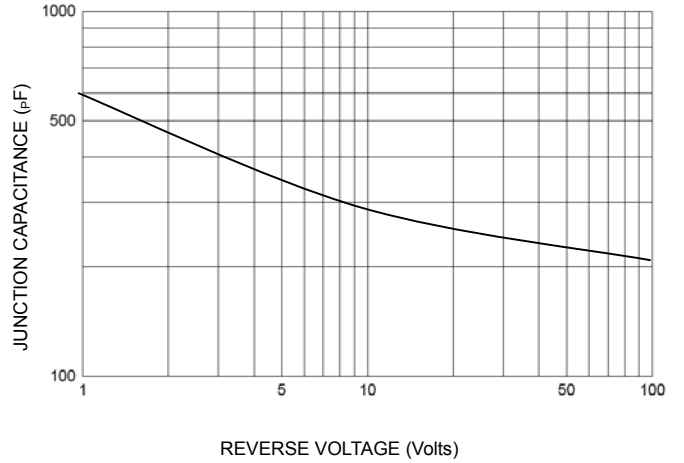
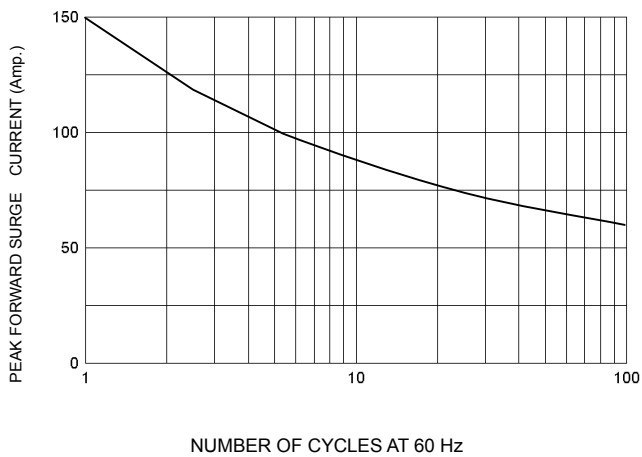


FIG-5 PEAK FORWARD SURGE CURRENT



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