

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 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

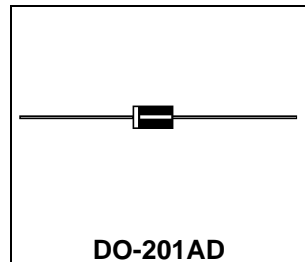
- * Low Forward Voltage.
- * Low Switching noise.
- * High Current Capacity
- * Guarantee Reverse Avalanche.
- * Guard-Ring for Stress Protection.
- * Low Power Loss & High efficiency.
- * 150°C Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- * Moisture Sensitivity Level: MSL-1



- * ESD: 8KV(Min.) Humen-Body Model
- * In compliance with EU RoHs 2002/95/EC directives

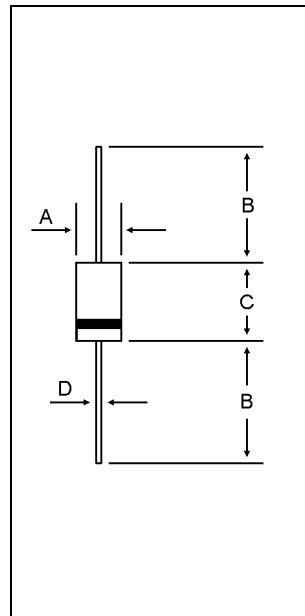
SCHOTTKY BARRIER RECTIFIERS

**3.0 AMPERES
100 VOLTS**



MAXIMUM RATINGS

Characteristic	Symbol	SR3100L	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_O	3.0	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	75	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	$R_{\theta j-A}$	30	°C/w
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ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	SR3100L			Unit
		Min.	Typ.	Max.	
Maximum Instantaneous Forward Voltage ($I_F = 0.1$ Amp) ($I_F = 1.5$ Amp) ($I_F = 3.0$ Amp)	V_F	---	0.31 0.55 0.75	0.35 0.60 0.85	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ\text{C}$) (Rated DC Voltage, $T_C = 125^\circ\text{C}$)	I_R		0.1 20		mA
Typical Junction Capacitance (Reverse Voltage of 4 volts & $f=1$ MHz)	C_P		150		pF

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

FIG-1 FORWARD CURRENT DERATING CURVE

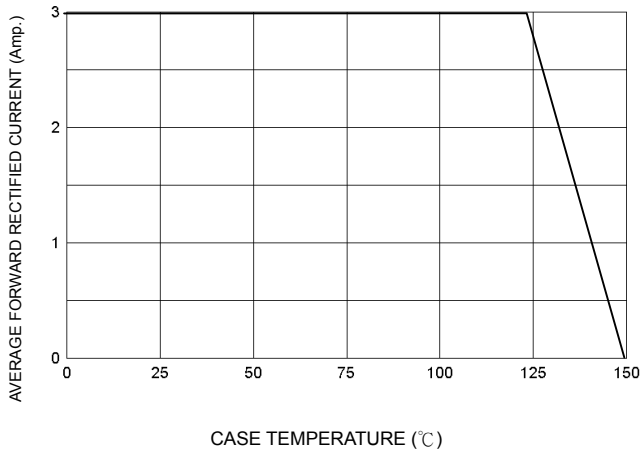


FIG-2 TYPICAL FORWARD CHARACTERISTICS

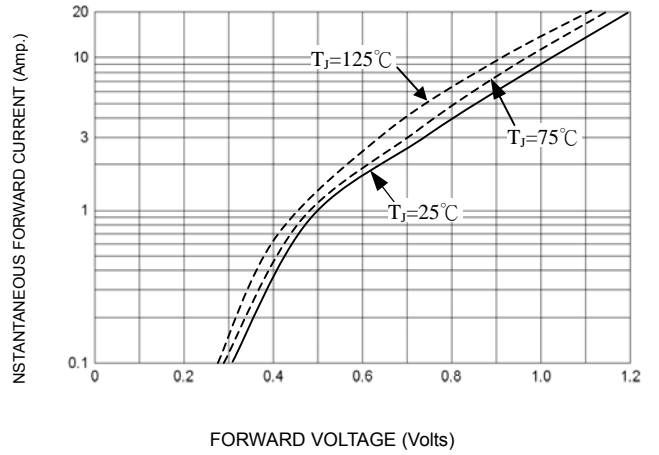


FIG-3 TYPICAL REVERSE CHARACTERISTICS

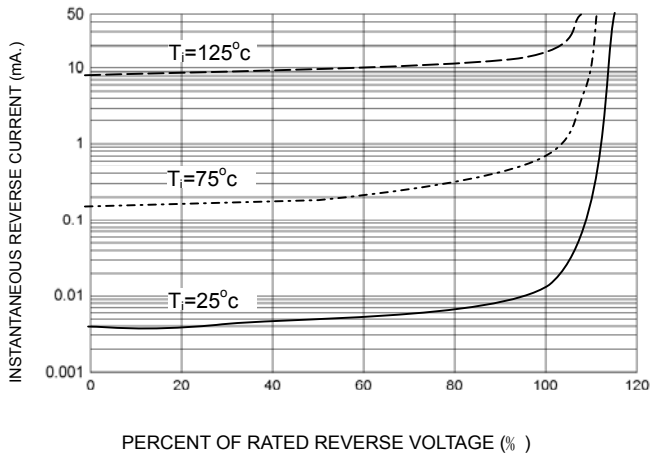


FIG-4 TYPICAL JUNCTION CAPACITANCE

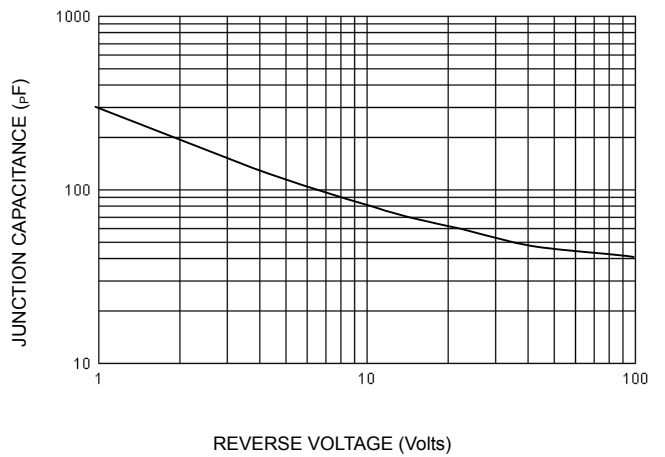
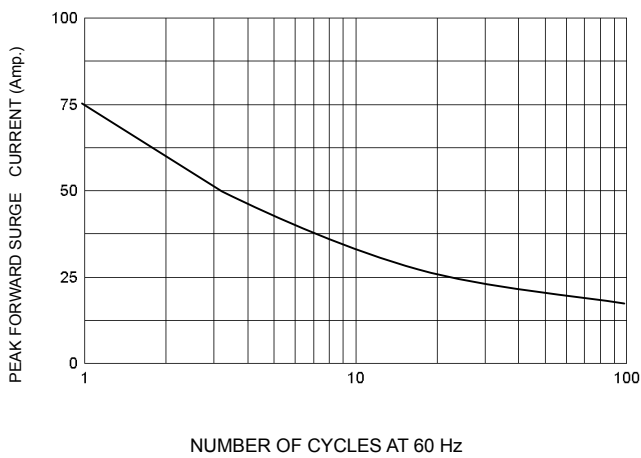


FIG-5 PEAK FORWARD SURGE CURRENT



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