

Surface Mount 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

SCHOTTKY BARRIER RECTIFIERS

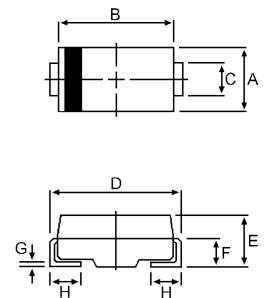
**5 AMPERES
100 VOLTS**



DO-214AA(SMB)

MAXIMUM RATINGS

Characteristic	Symbol	SR510L	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	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



DIM	MILLIMETERS	
	MIN	MAX
A	3.30	3.90
B	4.20	4.60
C	1.80	2.20
D	5.10	5.60
E	1.90	2.50
F		1.30
G		0.22
H	0.95	1.35

THERMAL RESISTANCES

Typical Thermal Resistance junction from Junction to ambient	$R_{\theta J-A}$	7.5	°C/w
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ELECTRICAL CHARACTERISTICS

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

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

SR510L

FIG-1 FORWARD CURRENT DERATING CURVE

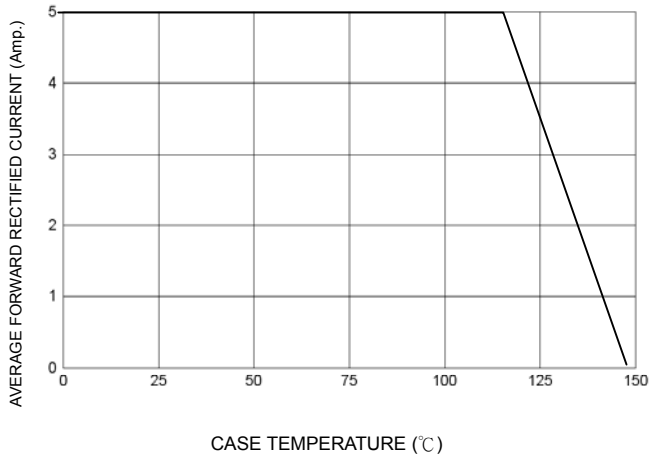


FIG-2 TYPICAL FORWARD CHARACTERISTICS

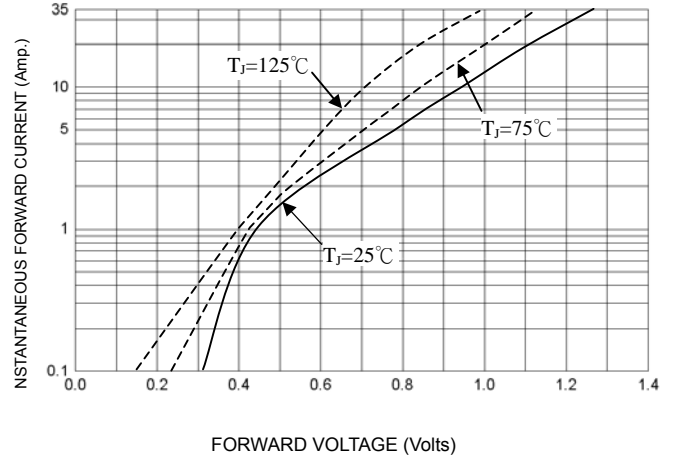


FIG-3 TYPICAL REVERSE CHARACTERISTICS

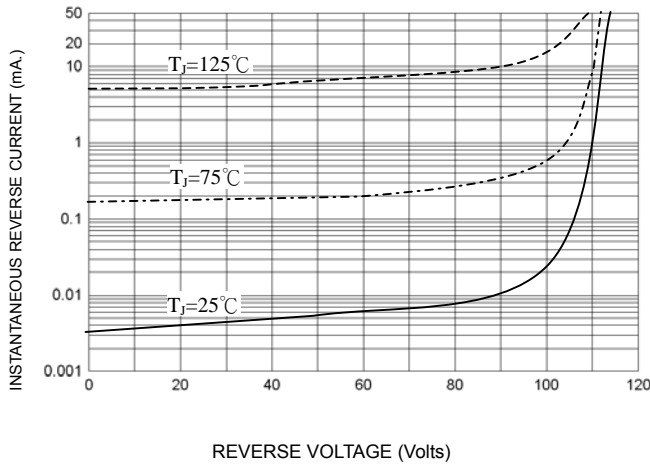


FIG-4 TYPICAL JUNCTION CAPACITANCE

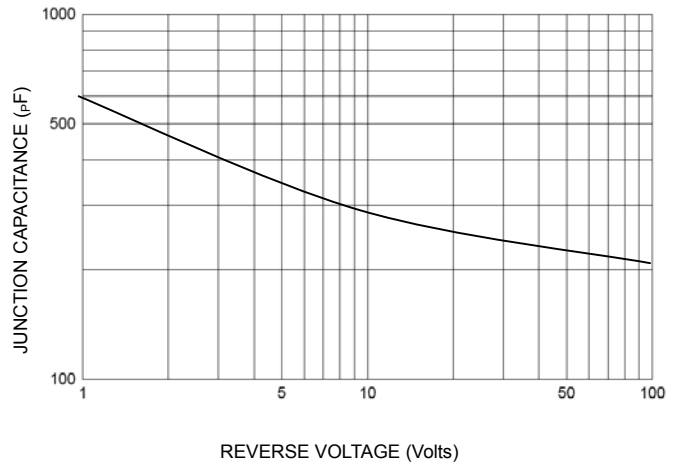
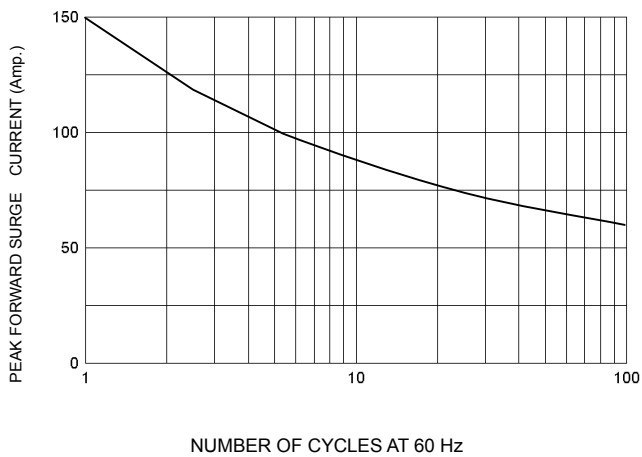


FIG-5 PEAK FORWARD SURGE CURRENT



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