

## Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. 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



\* *In compliance with EU RoHs 2002/95/EC directives*  
 The marking is indicated by part no. with. "M". ex:SR5200M

### MAXIMUM RATINGS

Characteristic	Symbol	SR5300J	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	300	V
RMS Reverse Voltage	$V_{R(RMS)}$	210	V
Average Rectifier Forward Current	$I_O$	5.0	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

### ELECTRICAL CHARACTERISTICS

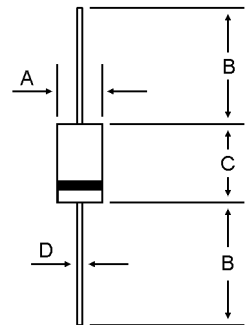
Characteristic	Symbol	SR5300J	Unit
Maximum Instantaneous Forward Voltage ( $I_F = 5.0$ Amp.)	$V_F$	0.92	V
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C = 25^\circ\text{C}$ ) ( Rated DC Voltage, $T_C = 125^\circ\text{C}$ )	$I_R$	0.5 3	$\mu\text{A}$ mA
Maximum Thermal Resistance Junction to case	$R_{\theta JC}$	6.5	°C/W
Typical Junction Capacitance ( Reverse Voltage of 4 volts & $f=1$ MHz )	$C_P$	320	pF

### SCHOTTKY BARRIER RECTIFIERS

**5.0 AMPERES  
300 VOLTS**



**DO-201AD**



DIM	MILLIMETERS	
	MIN	MAX
A	5.00	5.60
B	25.40	---
C	8.50	9.50
D	1.15	1.25

CASE---  
Transfer molded plastic

POLARITY---  
Cathode indicated polarity band

FIG-1 FORWARD CURRENT DERATING CURVE

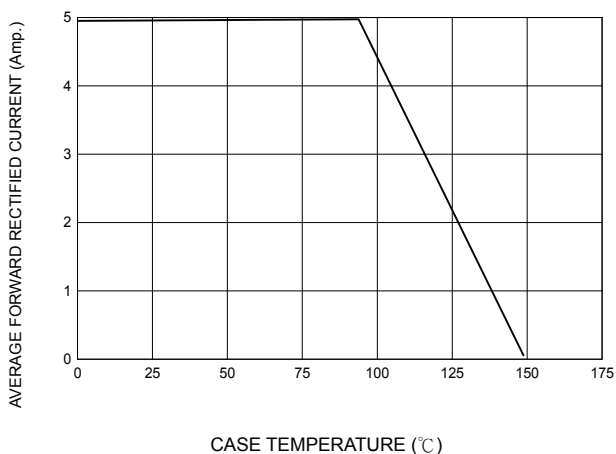


FIG-2 TYPICAL FORWARD CHARACTERISTICS

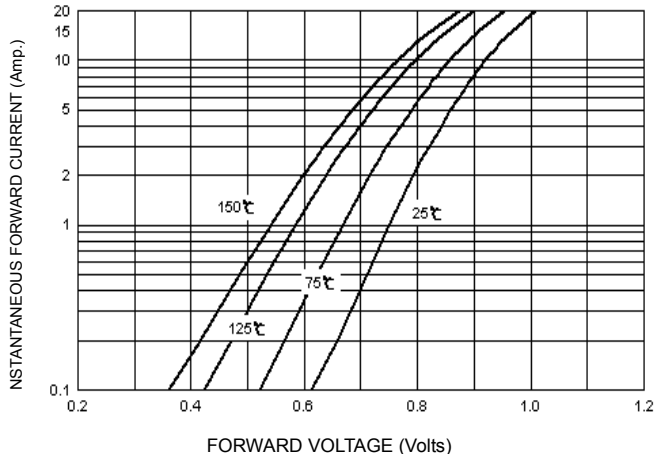


FIG-3 TYPICAL REVERSE CHARACTERISTICS

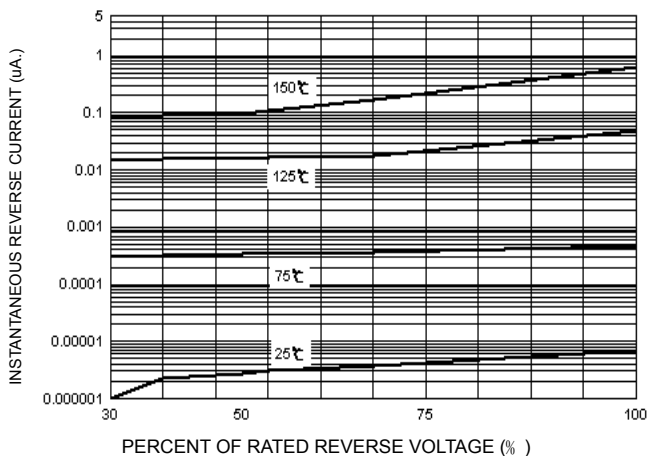


FIG-4 TYPICAL JUNCTION CAPACITANCE

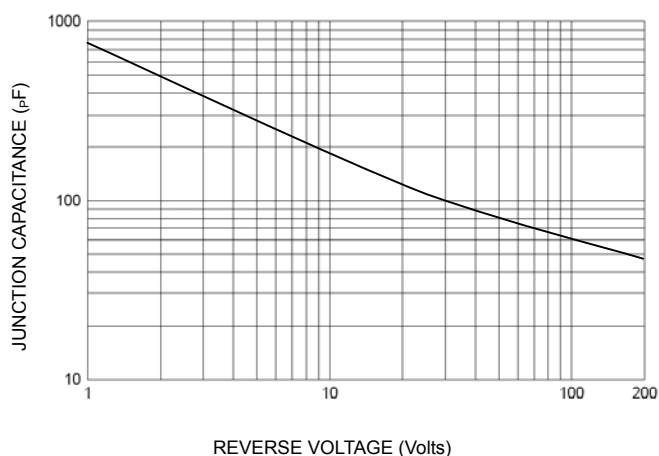
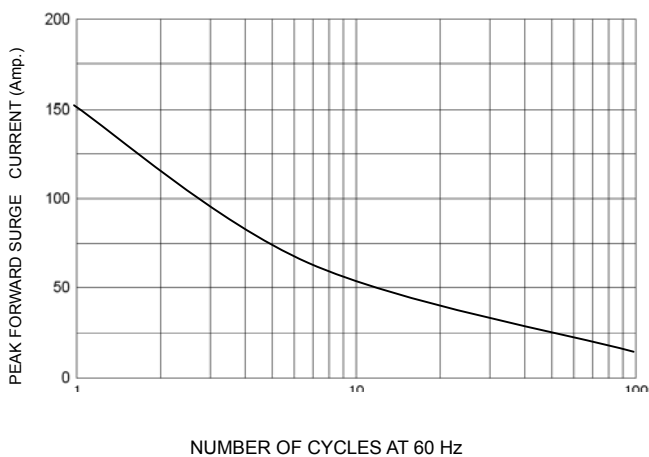


FIG-5 PEAK FORWARD SURGE CURRENT



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