Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SDR526 thru SDR529
SDR526SMS thru SDR529SMS

3 AMPS
600 – 900 VOLTS
35 nsec
HYPER FAST
RECTIFIER

Designer's Data Sheet

Part Number/Ordering Information [1/]

SDR52 ___ ___ ___

Screening [2/]
__ = Not Screened
TX = TX Level
TXV = TXV
S = S Level

Package Type
___ = Axial
SMS = Surface Mount Square Tab

Voltage/Family
6 = 600V
7 = 700V
8 = 800V
9 = 900V

FEATURES:

- Hyper Fast Recovery: 35 nsec maximum
- PIV up to 900 Volts
- Avalanche Breakdown
- Hermetically Sealed
- For High Efficiency High Voltage Applications
- Single Chip Construction
- Metallurgically Bonded
- TX, TXV, and Space Level Screening Available[2/]

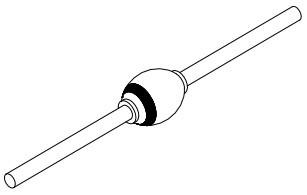
MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage @ 50µA	**SDR526** **SDR527** **SDR528** **SDR529**	V_{RRM} V_{RWM} V_R	600 700 800 900	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T_A=25°C)		I_O	3	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, Superimposed on I_O, allow junction to reach equilibrium between pulses, T_A=25°C)		I_{FSM}	60	**Amps**
Operating and Storage Temperature		T_{OP} & T_{stg}	-65 to +175	**°C**
Maximum Thermal Resistance Junction to Lead, L = 0.125" (Axial Lead) Junction to End Tab (Surface Mount)		$R_{\theta JL}$ $R_{\theta JE}$	20 10	**°C/W**

Notes:

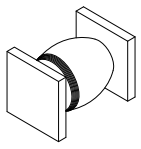
1/ For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screening Based on MIL-PRF-19500. Screening Flow Available on Request.

Axial



Surface Mount Square Tab (SMS)



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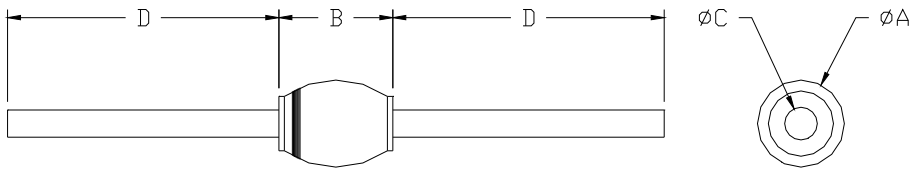
SDR526SMS thru SDR529SMS

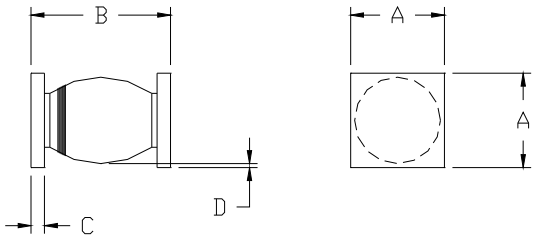
ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop (I_F = 3 A_{DC}, 300 - 500µsec Pulse)	T_A = 25°C T_A = -55°C	V_{F1} V_{F2}	— —	2.50 2.50	**Volts** **Volts**
Reverse Leakage Current (Rated V_R, 300µsec minimum pulse)	T_A = 25°C T_A = 100°C	I_{R1} I_{R2}	— —	50 250	**µA** **µA**
Junction Capacitance (V_R = 10 V_{DC}, T_A = 25°C, f = 1 MHz)		C_J	—	50	**pF**
Reverse Recovery Time (I_F = 500 mA, I_R = 1 A, I_{RR} = 250 mA, T_A = 25°C)		t_{rr}	—	35	**ns**

Case Outline: (Axial)



DIM	MIN	MAX
A	0.140”	0.180”
B	0.170”	0.230”
C	0.046”	0.053”
D	1.00”	—

Case Outline: (SMS)



DIM	MIN	MAX
A	0.170”	0.180”
B	0.220”	0.280”
C	0.020”	0.030”
D	0.002”	—

Note: Dimensions prior to soldering.

NOTES:
Consult manufacturing for operating curves.