



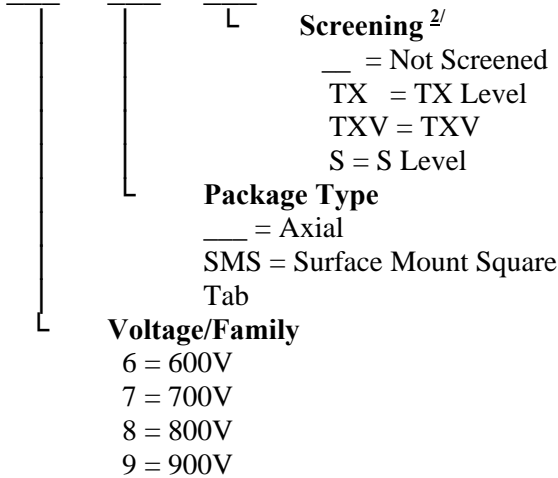
Solid State Devices, Inc.

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SDR526 thru SDR529 SDR526SMS thru SDR529SMS

Designer's Data Sheet

Part Number/Ordering Information ^{1/} SDR52



3 AMPS
600 – 900 VOLTS
35 nsec
HYPER FAST
RECTIFIER

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	V_{RRM}	600	Volts
	SDR527	V_{RWM}	700	
	SDR528	V_R	800	
	SDR529		900	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A=25^\circ\text{C}$)		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, $T_A=25^\circ\text{C}$)		I_{FSM}	60	Amps
Operating and Storage Temperature		T_{OP} & T_{stg}	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Lead, L = 0.125" (Axial Lead) Junction to End Tab (Surface Mount)		$R_{\theta JL}$	20	$^\circ\text{C/W}$
		$R_{\theta JE}$	10	

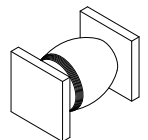
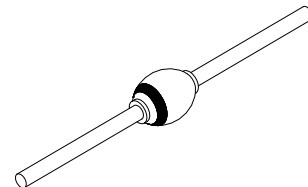
Notes:

^{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)



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: RC0049F

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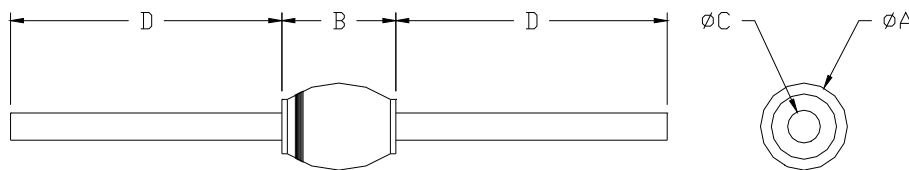
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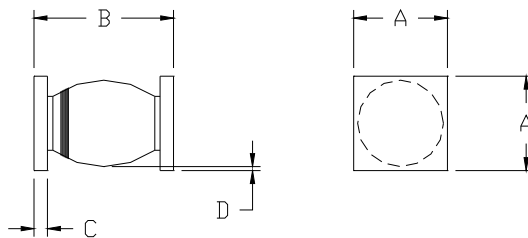
ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 3 A_{DC}$, 300 - 500 μ sec Pulse)	$T_A = 25^\circ C$	V_{F1}	—	2.50	Volts
	$T_A = -55^\circ C$	V_{F2}	—	2.50	Volts
Reverse Leakage Current (Rated V_R , 300 μ sec minimum pulse)	$T_A = 25^\circ C$	I_{R1}	—	50	μA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

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