



Solid State Devices, Inc.


14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDR429 SDR429SMS

1 AMP, 700 V Hyper Fast Rectifier

DESIGNER'S DATA SHEET

SDR429

 **Screening** ^{2/}
 — = Not Screened
 TX = TX Level
 TXV = TXV
 S = S Level

Package Type
 — = Axial Leaded
 SMS = Surface Mount Square Tab

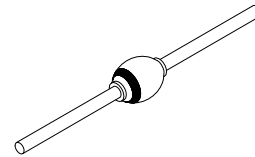
- Features:**
- High Voltage 700 V continuous
 - Very Fast Switching < 20 nS
 - Low High Temperature Leakage < 15 μ A
 - Very Fast Switching @ 100 ° C < 35 nS
 - Hermetically Sealed
 - Higher Voltages Available, consult Factory
 - TX, TXV, S Level screening Available^{2/}
 - Available Axial Leaded or Surface Mount (Square Tab)

Maximum Ratings	Symbol	Value	Units
Peak Repetitive and Peak Surge Reverse Voltage	V_{RRM} V_{RSM}	700	Volts
Average Rectified Forward Current (Resistive Load, 60 hz Sine Wave)	I_o	1.0	Amps
Non Repetitive Surge Current (8.3 ms Pulse Half Sine Wave Superimposed on I_o)	I_{FSM}	18	Amps
Operating & Storage Temperature	Top & Tstg	-55 to +175	°C
Maximum Thermal Resistance Junction to Lead, L = 1/8 " Junction to End Tab	$R_{\theta JL}$ $R_{\theta JE}$	12 9	°C/W

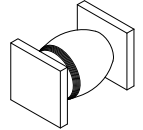
NOTES:

- 1/ For Ordering Information, Price, and Availability- Contact Factory.
 2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

Axial Lead Diode



SMS





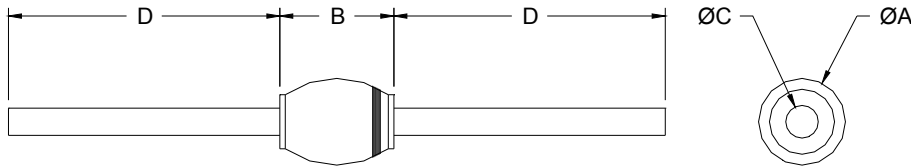
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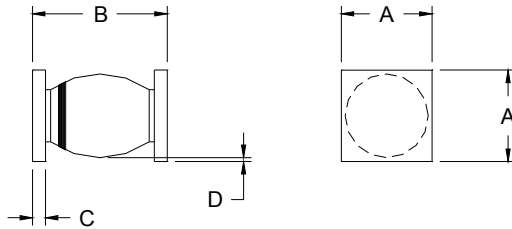
Electrical Characteristic		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop (T _j = 25°C, 300 μsec pulse)	I _f = 1A	Vf1	—	2.35	2.5	Volts
	I _f = 3A	Vf2	—	3.5	3.8	
Instantaneous Forward Voltage Drop (T _j = 100°C, 300 μsec pulse)	I _f = 1A	Vf3	—	1.65	1.8	Volts
	I _f = 3A	Vf4	—	2.5	2.7	
Instantaneous Forward Voltage Drop (T _j = -55°C, 300 μsec pulse)	I _f = 1A	Vf5	—	3.0	3.75	Volts
	I _f = 3A	Vf6	—	4.5	5.30	
Reverse Leakage Current (V _r = 700 V, T _j = 25°C, 300 μsec pulse)		Ir1	—	0.2	1.0	μA
Reverse Leakage Current (V _r = 700 V, T _j = 100°C, 300 μsec pulse)		Ir2	—	5.0	20	μA
Reverse Recovery Time (I _F = 0.5A, I _R = 1A, I _{RR} = 0.25A)	T _A = 25°C	t_{RR1}	—	17	20	nsec
	T _A = 100°C	t_{RR2}	—	32	35	
Junction Capacitance (V _r =10 Vdc, T _c =25°C, f=1Mhz)		C_j	—	22	30	pF

Case Outline: (Axial)



DIM	MIN	MAX
A	0.120"	0.145"
B	0.150"	0.190"
C	0.027"	0.033"
D	1.00"	--

Case Outline: (SMS)



DIM	MIN	MAX
A	0.170"	0.180"
B	0.200"	0.240"
C	0.020"	0.030"
D	0.005"	--