



**Solid State Devices, Inc.**

14830 Valley View Blvd \* La Mirada, Ca 90638  
Phone: (562) 404-7855 \* Fax: (562) 404-1773  
ssdi@ssdi-power.com \* www.ssdi-power.com

**DESIGNER'S DATA SHEET**

**Features:**

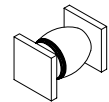
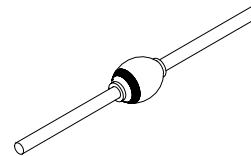
- High Voltage 700 V continuous
- Very Fast Switching < 20 nS
- Low High Temperature Leakage < 15  $\mu$ A
- Very Fast Switching @ 100 ° C < 35 nS
- Hermetically Sealed
- Higher Voltages Available, consult Factory
- TX, TXV, S Level screening Available
- Available Axial Leaded or Surface Mount (Square Tab)
- TX, TXV, S Level screening Available

**SDR429  
SDR429SMS**

**1 AMP, 700 V  
Hyper Fast  
Rectifier**

Axial Lead Diode

SMS



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

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

**DATA SHEET #: RH0008B**



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# SDR429

Electrical Characteristic		Symbol	Min	Typ	Max	Units
<b>Instantaneous Forward Voltage Drop</b> (T <sub>j</sub> = 25°C, 300 μsec pulse)	I <sub>f</sub> = 1A	<b>Vf1</b>	—	2.35	2.5	Volts
	I <sub>f</sub> = 3A	<b>Vf2</b>	—	3.5	3.8	
<b>Instantaneous Forward Voltage Drop</b> (T <sub>j</sub> = 100°C, 300 μsec pulse)	I <sub>f</sub> = 1A	<b>Vf3</b>	—	1.65	1.8	Volts
	I <sub>f</sub> = 3A	<b>Vf4</b>	—	2.5	2.7	
<b>Instantaneous Forward Voltage Drop</b> (T <sub>j</sub> = -55°C, 300 μsec pulse)	I <sub>f</sub> = 1A	<b>Vf5</b>	—	3.0	3.75	Volts
	I <sub>f</sub> = 3A	<b>Vf6</b>	—	4.5	5.30	
<b>Reverse Leakage Current</b> (V <sub>r</sub> = 700 V, T <sub>j</sub> = 25°C, 300 μsec pulse)		<b>Ir1</b>	—	0.2	1.0	μA
<b>Reverse Leakage Current</b> (V <sub>r</sub> = 700 V, T <sub>j</sub> = 100°C, 300 μsec pulse)		<b>Ir2</b>	—	5.0	20	μA
<b>Reverse Recovery Time</b> (I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1A, I <sub>RR</sub> = 0.25A)	T <sub>A</sub> = 25°C	<b>t<sub>RR1</sub></b>	—	17	20	nsec
	T <sub>A</sub> = 100°C	<b>t<sub>RR2</sub></b>	—	32	35	
<b>Junction Capacitance</b> (V <sub>r</sub> =10 Vdc, T <sub>c</sub> =25°C, f=1Mhz)		<b>Cj</b>	—	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"	--

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**Case Outline: (SMS)**

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