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

SDR1AHF & SDR1AHFSMS thru SDR1NHF & SDR1NHFSMS

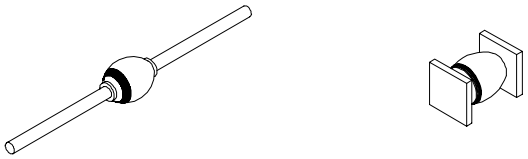
DESIGNER'S DATA SHEET

Features:

- Hyper Fast Recovery: 35 nsec maximum
- PIV to 1200 Volts
- Hermetically Sealed
- Void Free Construction
- For High Efficiency Applications
- Single Chip Construction
- Low Reverse Leakage
- TX, TXV, S Level screening Available

1 AMP
50 - 1200 V
35 nsec
Hyper Fast Rectifier

Axial Lead Diode **SMS**



Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	**SDR1AHF**	V_{RRM} V_{RSM} V_R	50	Volts
	SDR1BHF		100	
	SDR1DHF		200	
	SDR1GHF		400	
	SDR1JHF		600	
	SDR1KHF		800	
	SDR1MHF		1000	
	SDR1NHF		1200	
Average Rectified Forward Current (Resistive Load, 60 hz Sine Wave, T_A = 25 °C)		Io	1.0	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T_A = 25 °C)		I_{FSM}	25	Amps
Operating & Storage Temperature		T_{OP} & T_{STG}	-65 to +175	ºC
Maximum Thermal Resistance	Junction to Leads, L = 3/8	$R_{\theta JE}$	35	ºC/W
	Junction to Tabs		28	

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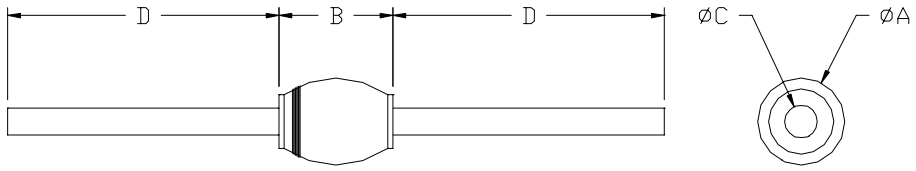
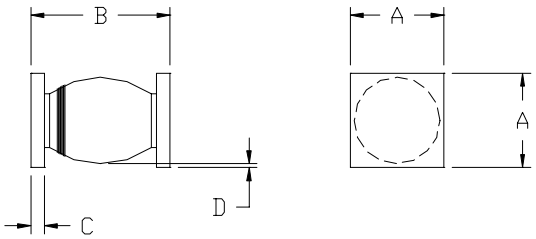
Electrical Characteristic		Symbol	Max	Units
Instantaneous Forward Voltage Drop (I_F = 1A_{DC}, T_A = 25ºC, pulsed)	SDR1AHF – SDR1JHF SDR1KHF – SDR1NHF	$\mathbf{V_F}$	3.3 3.5	V_{DC}
Instantaneous Forward Voltage Drop (I_F = 1A_{DC}, T_A = -55ºC, pulsed)	SDR1AHF – SDR1JHF SDR1KHF – SDR1NHF	$\mathbf{V_F}$	3.4 3.6	V_{DC}
Reverse Leakage Current (Rated V_R, T_A = 25ºC, pulsed)		$\mathbf{I_R}$	5	µA
Reverse Leakage Current (Rated V_R, T_A = 100ºC, pulsed)		$\mathbf{I_R}$	200	µA
Reverse Recovery Time (**I_F** = 500mA, I_R = 1A, I_{RR} = 250Ma, T_A = 25ºC)		$\mathbf{t_{RR}}$	35	nsec
Junction Capacitance (V_R = 10V_{DC}, f = 1MHz, T_A = 25ºC)		$\mathbf{C_J}$	20	pF

Case Outline: (Axial)



DIM	MIN	MAX
A	—	0.150”
B	—	0.190”
C	0.027”	0.033”
D	0.950”	—

Case Outline: (SMS)



DIM	MIN	MAX
A	0.134”	0.153”
B	0.200”	0.280”
C	0.022”	0.028”
D	0.002”	--