



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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**SDR1AHF & SDR1AHFSMS
 thru
 SDR1NHF & SDR1NHFSMS**

**1 AMPS, 50 thru 1200 VOLTS
 35 nsec
 Hyper Fast Recovery Rectifier**

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR

Screening ^{2/}

- = Not Screened
- TX = TX Level
- TXV = TXV
- S = S Level

Package Type

- = Axial Leaded
- SMS = Surface Mount Square Tab

Voltage/Family

- SDR1AHF = 50V SDR1JHF = 600V
- SDR1BHF = 100V SDR1KHF = 800V
- SDR1DHF = 200V SDR1MHF = 1000V
- SDR1GHF = 400V SDR1NHF = 1200V

FEATURES:

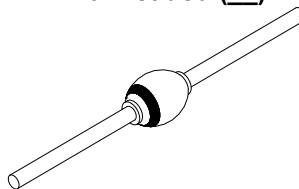
- Hyper Fast Recovery: 35 nsec maximum
- PIV up to 1200 Volts
- Hermetically Sealed
- Void Free Single Chip Construction
- For High Efficiency Applications
- Low Reverse Leakage
- TX, TXV, and Space Level Screening Available^{2/}
- Avalanche Breakdown Guaranteed
- Hyper Fast Recovery Replacement for 1N6620-6625

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR1AHF	V_{RRM} V_{RWM} 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)		I_O	1.0	Amps
Peak Surge Current @ T_A = 25°C (8.3 ms Pulse, Half Sine Wave or equivalent Square Wave)		I_{FSM}	25	Amps
SDR1A - 1JHF			7	
SDR1K - 1NHF				
Operating and Storage Temperature		T _{OP} & T _{stg}	-65 to +175	°C
Maximum Thermal Resistance Junction to Lead, L = 0.375" (Axial Lead)		$R_{\theta JL}$ $R_{\theta JE}$	35	°C/W
Junction to End Tab (Surface Mount)			28	

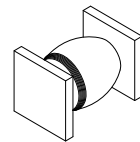
NOTES:

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

Axial Leaded ()



Square Tab Surface Mount (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 #: RH0119G

DOC



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**SDR1AHF & SDR1AHFSMS
 thru
 SDR1NHF & SDR1NHFSMS**

ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 1$ Amps, $T_A = 25^\circ\text{C}$, Pulsed)	SDR1AHF – SDR1JHF	V_{F1}	—	3.30	Volts
	SDR1KHF – SDR1NHF		—	3.50	
Instantaneous Forward Voltage Drop ($I_F = 1$ Amps, $T_A = -55^\circ\text{C}$, Pulsed)	SDR1AHF – SDR1JHF	V_{F2}	—	3.40	Volts
	SDR1KHF – SDR1NHF		—	3.60	
Reverse Leakage Current (At Rated V_R , pulsed)	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_{R1}	—	5.0	μA
		I_{R2}	—	200	
Reverse Recovery Time ($I_F = 500$ mA, $I_R = 1$ A, $I_{RR} = 250$ mA, $T_A = 25^\circ\text{C}$)		t_{rr}	—	35	ns
Junction Capacitance ($V_R = 10$ V _{DC} , $T_A = 25^\circ\text{C}$, $f = 1$ MHz)		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"	—

Note: Dimensions prior to soldering.