



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
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**SDR1DHF & SDR1DHFSMS
 thru
 SDR1NHF & SDR1NHFSMS**

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR1 _ _ _

L Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV

S = S Level

L Package Type

— = Axial Leaded

SMS = Surface Mount Square Tab

L Voltage/Family

DHF = 200V

KHF = 800V

GHF = 400V

MHF = 1000V

JHF = 600V

NHF = 1200V

**1 AMP, 200 - 1200 VOLTS
 35 nsec**

Hyper Fast Recovery Rectifier

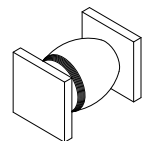
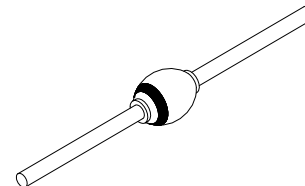
FEATURES:

- Hyper Fast Recovery: 35 nsec maximum
- Improved V_F over previous version
- 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 1N6620-1N6625

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR1DHF	V_{RRM} V_{RWM} V_R	200	Volts
	SDR1GHF		400	
	SDR1JHF		600	
	SDR1KHF		800	
	SDR1MHF		1000	
	SDR1NHF		1200	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 25^\circ\text{C}$)		I_o	1.0	Amps
Peak Surge Current @ $T_A = 25^\circ\text{C}$ (8.3 ms Pulse, Half Sine Wave or equivalent Square Wave)		SDR1DHF - SDR1JHF SDR1KHF - SDR1NHF	I_{FSM}	25 7 Amps
Operating and Storage Temperature		T_{OP} & T_{stg}	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Lead, $L = 0.375"$ (Axial Lead) Junction to End Tab (Surface Mount)		$R_{\theta JL}$ $R_{\theta JE}$	45 28	$^\circ\text{C/W}$

Axial Leaded (_)

Square Tab Surface Mount (SMS)



NOTES:

- ^{1/} For ordering information, price, and availability - contact factory.
^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.



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ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 1$ Amps, $T_A = 25^\circ\text{C}$, Pulsed)	SDR1DHF – SDR1JHF	V_{F1}	—	1.5	Volts
	SDR1KHF		—	1.9	
	SDR1MHF – SDR1NHF		—	2.9	
Instantaneous Forward Voltage Drop ($I_F = 1$ Amps, $T_A = -55^\circ\text{C}$, Pulsed)	SDR1DHF – SDR1JHF	V_{F2}	—	2.2	Volts
	SDR1KHF		—	2.6	
	SDR1MHF – SDR1NHF		—	3.6	
Reverse Leakage Current (At Rated V_R , pulsed)	$T_A = 25^\circ\text{C}$	I_{R1}	—	5.0	μA
	$T_A = 100^\circ\text{C}$	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.