Solid State Devices, Inc.
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Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDR2HF1.8 and SMS
SDR2HF2.0 and SMS

2 AMPS
1800 - 2000 VOLTS
35 nsec
HYPER FAST RECOVERY RECTIFIER

Designer's Data Sheet

Part Number/Ordering Information [1/]

SDR2HF ___ ___ ___

- ___ **Screening** [2/]
  - __ = Not Screened
  - TX = TX Level
  - TXV = TXV Level
  - S = S Level
- ___ **Package Type**
  - ___ = Axial
  - SMS = Surface Mount Square Tab
- **Family/Voltage**
  - 1.8 = 1800 V
  - 2.0 = 2000 V

FEATURES:

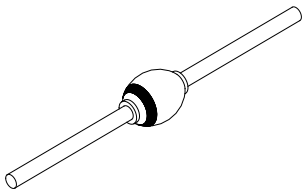
- Hyper Fast Recovery: 35 nsec maximum
- PIV to 2400 Volts
- Low Reverse Leakage Current
- Hermetically Sealed
- Low Thermal Resistance
- Low trr Change at High Temperature (typical: trr = 55 ns @ 100ºC)
- TX, TXV, and Space Level Screening Available.[2/] Contact Factory.
- Fast Recovery Versions Available. Contact Factory.
- Single Junction Construction
- Replaces 1N6512 and 1N6513 in many applications.

MAXIMUM RATINGS		Symbol	Value	Unit
Reverse Voltage	**SDR2HF1.8 & SMS** **SDR2HF2.0 & SMS**	V_{RRM} V_{RWM} V_R	1800 2000	**V**
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T_A = 25°C, L = 0")		I_O	2	**A**
Peak Surge Current (1 ms Pulse, Square Wave, Allow Junction to Reach Equilibrium between Pulses, T_A = 25°C, L = .125")		I_{FSM}	16	**A**
Temperature Range	**Operating** **Storage**	T_{OP} T_{stg}	-65 to +175 -65 to +200	**°C**
Maximum Thermal Resistance Junction to Lead, L = 0.125" (Axial Lead) Junction to End Tab (Surface Mount)		$R_{\theta JL}$ $R_{\theta JE}$	11 7	**°C/W**

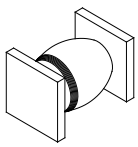
1/ For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screening Based on MIL-PRF-19500. Screening Flow Available on Request.

Axial



Surface Mount Square Tab (SMS)



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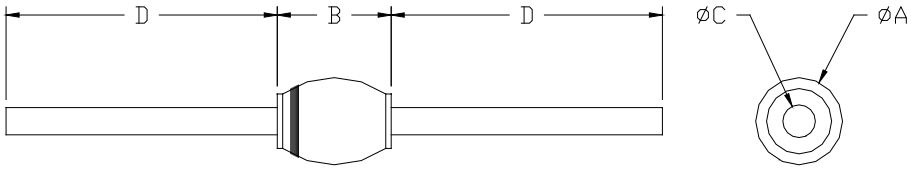
SDR2HF1.8 and SMS
SDR2HF2.0 and SMS

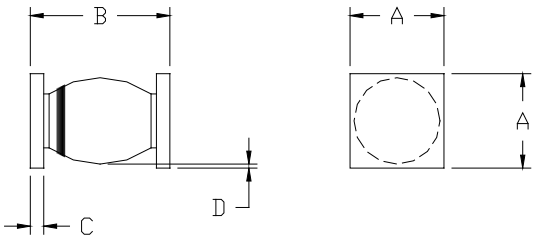
ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Breakdown Voltage (I_R = 50 µA, T_A = 25°C, Pulse)	**SDR2HF1.8 & SMS** **SDR2HF2.0 & SMS**	**BV_R**	1800 2000	— —	**V**
Instantaneous Forward Voltage Drop (T_A = 25°C, Pulse)	I_{F1} = 1 A I_{F2} = 2 A	**V_{F1}** **V_{F2}**	— —	8.0 11.0	**V** **V**
Instantaneous Forward Voltage Drop (T_A = -55°C, Pulse)	I_{F3} = 1 A I_{F4} = 2 A	**V_{F3}** **V_{F4}**	— —	8.0 11.0	**V** **V**
Reverse Leakage Current (V_R = 85% rated V_R, Pulse)	T_A = 25°C T_A = 100°C	**I_{R1}** **I_{R2}**	— —	10 250	**µA** **µA**
Junction Capacitance (V_R = 50 V_{DC}, T_A = 25°C, f = 1 MHz)		**C_J**	—	20	**pF**
Reverse Recovery Time (I_F = 500 mA, I_R = 1 A, I_{RR} = 250 mA, T_A = 25°C)		**t_{rr}**	—	35	**ns**

Case Outline: (Axial)



DIM	MIN	MAX
A	—	0.170”
B	0.210”	0.250”
C	0.045”	0.051”
D	1.000”	—

Case Outline: (SMS)



DIM	MIN	MAX
A	0.173”	0.205”
B	0.255”	0.280”
C	0.020”	0.030”
D	0.002”	—

NOTES:
Consult manufacturing for operating curves.