Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, CA 90638
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SDR06150S.22 and SDR06200S.22

Designer's Data Sheet

Part Number / Ordering Information[1/]

SDR06 __ __ __

- **Screening**[2/]: __ = Not Screened; TX = TX Level; TXV = TXV Level; S = S Level
- **Package**: S.22 = SMD.22
- **Voltage**: 150 = 150 V; 200 = 200 V

6 AMP HERMETIC SURFACE MOUNT HYPERFAST RECTIFIER

150 - 200 VOLTS

FEATURES:

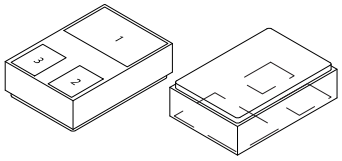
- Extremely small footprint
- Extremely low forward voltage drop
- Low reverse leakage
- Hermetically sealed surface mount package
- Enhanced equivalent for 1N5811 applications
- 175ºC operating junction temperature
- Weight: 0.12 g (typical)
- TX, TXV, and S level screening available - consult factory

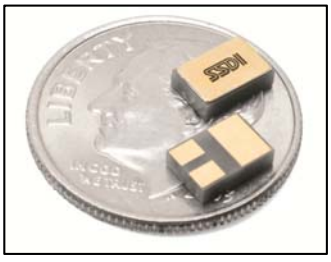
MAXIMUM RATINGS[3/ 4/]		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	**SDR06150** **SDR06200**	V_{RRM} V_{RWM} V_R	150 200	**Volts**
Average Rectified Forward Current (Resistive load, 60 Hz, sine wave, T_A = 25ºC)		I_O	6	**Amps**
Peak Surge Current (8.3 ms pulse, half sine wave superimposed on I_O, allow junction to reach equilibrium between pulses, T_A = 25ºC)		I_{FSM}	70	**Amps**
Operating & Storage Temperature		T_{OP} & T_{stg}	-65 to +175	**ºC**
Maximum Thermal Resistance (Junction to Case)		$R_{\theta JC}$	15 (typ 13)	**ºC/W**

NOTES:

1/ For ordering information, price, and availability - contact factory.
2/ Screening based on MIL-PRF-19500. Screening flows available on request.
3/ Unless otherwise specified, all electrical characteristics @25ºC.
4/ For optimal performance, connect anode terminals together.

SMD.22 (S.22)





(dime used for size reference)

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: RC0192A**	**DOC**

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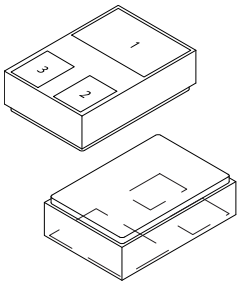
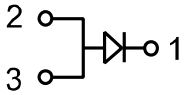
SDR06150S.22 thru SDR06200S.22

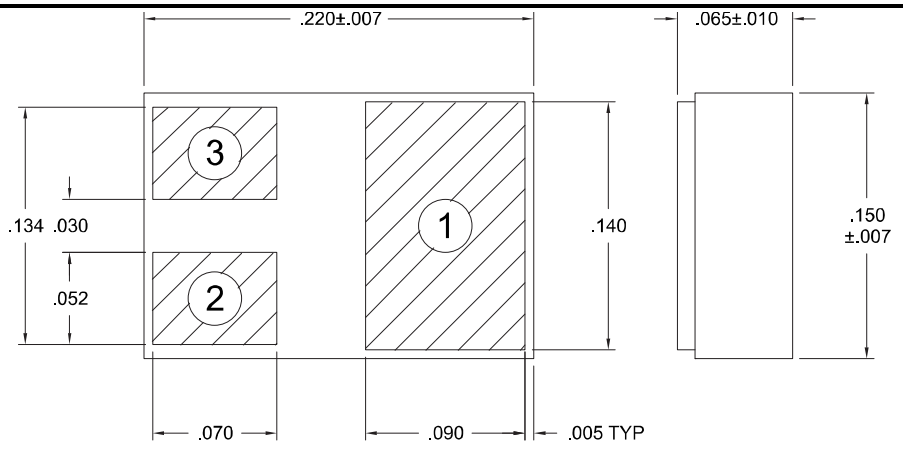
ELECTRICAL CHARACTERISTICS [4/]		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop (T_A=25ºC, 300µsec pulse)	I_F = 1 A I_F = 3 A I_F = 4 A I_F = 6 A I_F = 8 A	V_{F1} V_{F2} V_{F3} V_{F4} V_{F5}	-	0.73 0.825 0.85 0.91 0.96	- 0.865 0.875 0.925 -	V_{DC}
Instantaneous Forward Voltage Drop (T_A=-55ºC, 300µsec pulse)	I_F = 1 A I_F = 3 A I_F = 4 A I_F = 6 A I_F = 8 A	V_{F6} V_{F7} V_{F8} V_{F9} V_{F10}	-	0.84 0.92 0.95 1.00 1.05	- - 1.075 - -	V_{DC}
Instantaneous Forward Voltage Drop (T_A=125ºC, 300µsec pulse)	I_F = 1 A I_F = 3 A I_F = 4 A I_F = 6 A I_F = 8 A	V_{F11} V_{F12} V_{F13} V_{F14} V_{F15}	-	0.58 0.69 0.73 0.80 0.86	- - 0.8 - -	V_{DC}
Reverse Leakage Current (Rated V_R, T_A = 25ºC, 300µsec pulse minimum)		I_{R1}	-	10	50	µA
Reverse Leakage Current (Rated V_R, T_A = 100ºC, 300µsec pulse minimum)		I_{R2}	-	30	-	µA
Reverse Leakage Current (Rated V_R, T_A = 125ºC, 300µsec pulse minimum)		I_{R3}	-	40	150	µA
Reverse Leakage Current (Rated V_R, T_A = 150ºC, 300µsec pulse minimum)		I_{R4}	-	60	-	µA
Reverse Recovery Time	I_F = I_{RM} = 1.0 A, $I_{(REC)}$= 0.1 A	t_{rr}	-	16	30	ns
Forward Recovery Voltage **Forward Recovery Time**	I_F = 0.5 A	V_{fr} t_{fr}	-	1.25 33	2.2 35	V ns
Junction Capacitance (f = 1MHz, T_A = 25ºC)	V_R = 5V V_R = 10V	C_J	-	50 40	- 60	pF

Package Outline:
SMD.22 (S.22)

PIN OUT:
PIN 1: CATHODE
PIN 2: ANODE
PIN 3: ANODE
Note: For optimal performance, connect anode terminals together.







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