



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
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**SDR06150S.22 and
SDR06200S.22**

**6 AMP
HERMETIC SURFACE MOUNT
HYPERFAST RECTIFIER
150 - 200 VOLTS**

Designer's Data Sheet

Part Number / Ordering Information^{1/}

SDR06

$\overline{\quad}$ **Screening^{2/}** $\overline{\quad}$ = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

\square **Package** S.22 = SMD.22

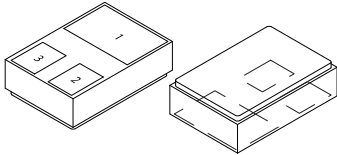
Voltage 150 = 150 V
 200 = 200 V

- FEATURES:**
- Extremely small footprint
 - Extremely low forward voltage drop
 - Low reverse leakage
 - Hermetically sealed surface mount package
 - Enhanced equivalent for 1N5811 applications
 - 175°C 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, $T_A = 25^\circ\text{C}$)		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, $T_A = 25^\circ\text{C}$)		I_{FSM}	70	Amps
Operating & Storage Temperature		T_{OP} & T_{stg}	-65 to +175	°C
Maximum Thermal Resistance (Junction to Case)		$R_{\theta JC}$	15 (typ 13)	°C/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 @25°C.
 - 4/ For optimal performance, connect anode terminals together.

SMD.22 (S.22)



(dime used for size reference)



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**SDR06150S.22 thru
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ELECTRICAL CHARACTERISTICS ^{4/}		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop (T _A =25°C, 300µsec pulse)	I _F = 1 A	V _{F1}	-	0.73	-	V _{DC}
	I _F = 3 A	V _{F2}	-	0.825	0.865	
	I _F = 4 A	V _{F3}	-	0.85	0.875	
	I _F = 6 A	V _{F4}	-	0.91	0.925	
	I _F = 8 A	V _{F5}	-	0.96	-	
Instantaneous Forward Voltage Drop (T _A =-55°C, 300µsec pulse)	I _F = 1 A	V _{F6}	-	0.84	-	V _{DC}
	I _F = 3 A	V _{F7}	-	0.92	-	
	I _F = 4 A	V _{F8}	-	0.95	1.075	
	I _F = 6 A	V _{F9}	-	1.00	-	
	I _F = 8 A	V _{F10}	-	1.05	-	
Instantaneous Forward Voltage Drop (T _A =125°C, 300µsec pulse)	I _F = 1 A	V _{F11}	-	0.58	-	V _{DC}
	I _F = 3 A	V _{F12}	-	0.69	-	
	I _F = 4 A	V _{F13}	-	0.73	0.8	
	I _F = 6 A	V _{F14}	-	0.80	-	
	I _F = 8 A	V _{F15}	-	0.86	-	
Reverse Leakage Current (Rated V _R , T _A = 25°C, 300µsec pulse minimum)		I _{R1}	-	10	50	µA
Reverse Leakage Current (Rated V _R , T _A = 100°C, 300µsec pulse minimum)		I _{R2}	-	30	-	µA
Reverse Leakage Current (Rated V _R , T _A = 125°C, 300µsec pulse minimum)		I _{R3}	-	40	150	µA
Reverse Leakage Current (Rated V _R , T _A = 150°C, 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	I _F = 0.5 A	V _{fr}	-	1.25	2.2	V
Forward Recovery Time	I _F = 0.5 A	t _{fr}	-	33	35	ns
Junction Capacitance (f = 1MHz, T _A = 25°C)	V _R = 5V	C _J	-	50	-	pF
	V _R = 10V			40	60	

