



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

**SDR953S1
 thru
 SDR955S1**

**50 AMP
 HYPER FAST RECTIFIER
 300 - 500 VOLTS
 35 nsec**

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR95

--- Screening ^{2/}
 --- = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

Package
 S1= SMD1

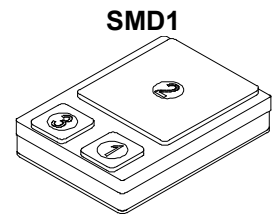
Family/Voltage
 3 = 300V
 4 = 400V
 5 = 500V

- FEATURES:**
- Hyper Fast Recovery: 35 nsec Maximum
 - High Surge Rating
 - Low Reverse Leakage Current
 - Low Junction Capacitance
 - Hermetically Sealed Surface Mount Package
 - Gold Eutectic Die Attach Available
 - Ultrasonic Aluminum Wire Bonds
 - TX, TXV, or Space Level Screening Available

Maximum Ratings ^{4/}		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage ^{3/}	SDR953	V_{RRM}	300	Volts
	SDR954	V_{RWM}	400	
	SDR955	V_R	500	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ\text{C}$)		I_O	50	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$)		I_{FSM}	450	Amps
Operating & Storage Temperature		$T_{OP} \& T_{STG}$	-65 to +200	°C
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	0.8	°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/} Higher voltages available.
- ^{4/} Pads 1 and 3 externally connected together





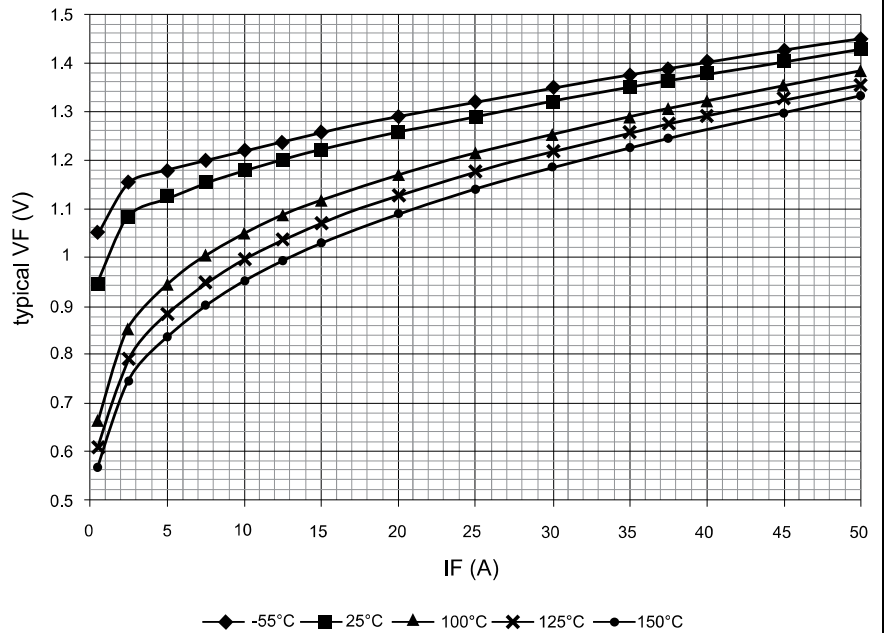
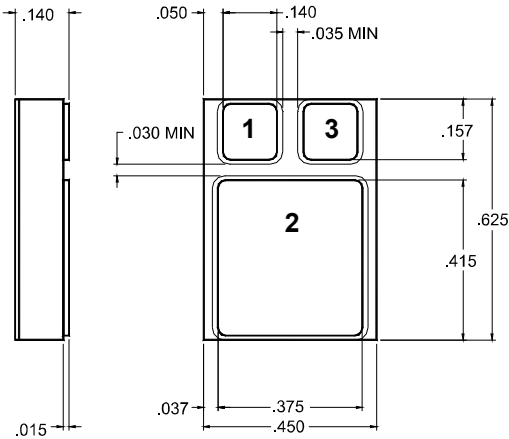
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Electrical Characteristic ^{4/}	Symbol	Typ	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 25\text{ A}$, $T_A = 25^\circ\text{C}$, 300 μsec Pulse)	V_{F1}	1.15	1.3	V_{DC}
Instantaneous Forward Voltage Drop ($I_F = 50\text{ A}$, $T_A = 25^\circ\text{C}$, 300 μsec Pulse)	V_{F2}	1.35	1.5	V_{DC}
Instantaneous Forward Voltage Drop ($I_F = 25\text{ A}$, $T_A = 100^\circ\text{C}$, 300 μsec Pulse)	V_{F3}	1.10	1.25	V_{DC}
Instantaneous Forward Voltage Drop ($I_F = 25\text{ A}$, $T_A = -55^\circ\text{C}$, 300 μsec Pulse)	V_{F4}	1.20	1.40	V_{DC}
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs pulse min.)	I_{R1}	20	200	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs pulse min.)	I_{R2}	2.5	10	mA
Junction Capacitance ($V_R = 10\text{ V}_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{ MHz}$)	C_J	100	250	pF
Reverse Recovery Time ($I_F = 500\text{mA}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{mA}$, $T_A = 25^\circ\text{C}$)	t_{RR}	30	35	nsec

CASE OUTLINE: SMD1
PIN 1+3: ANODE
PIN 2: CATHODE



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

DATA SHEET #: RH0027C

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