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** **SDR954** **SDR955**	V_{RRM} V_{RWM} V_R	300 400 500	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T_A = 25ºC)		I_O	50	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T_A = 25ºC)		I_{FSM}	450	**Amps**
Operating & Storage Temperature		T_{OP} & T_{STG}	-65 to +200	**ºC**
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	0.8	**ºC/W**

NOTES:

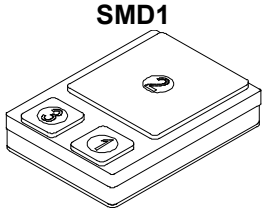
1/ For ordering information, price, and availability, contact factory.

2/ Screening based on MIL-PRF-19500. Screening flows available on request.

3/ Higher voltages available.

4/ Pads 1 and 3 externally connected together

SMD1



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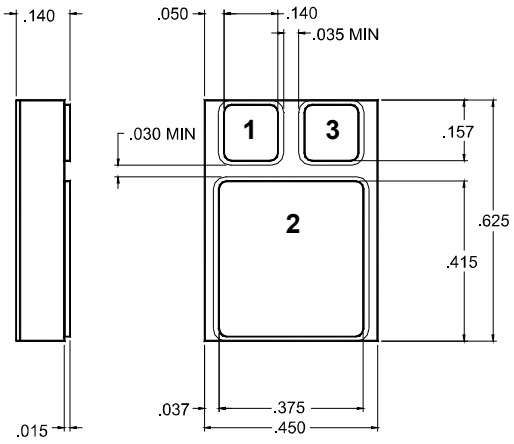
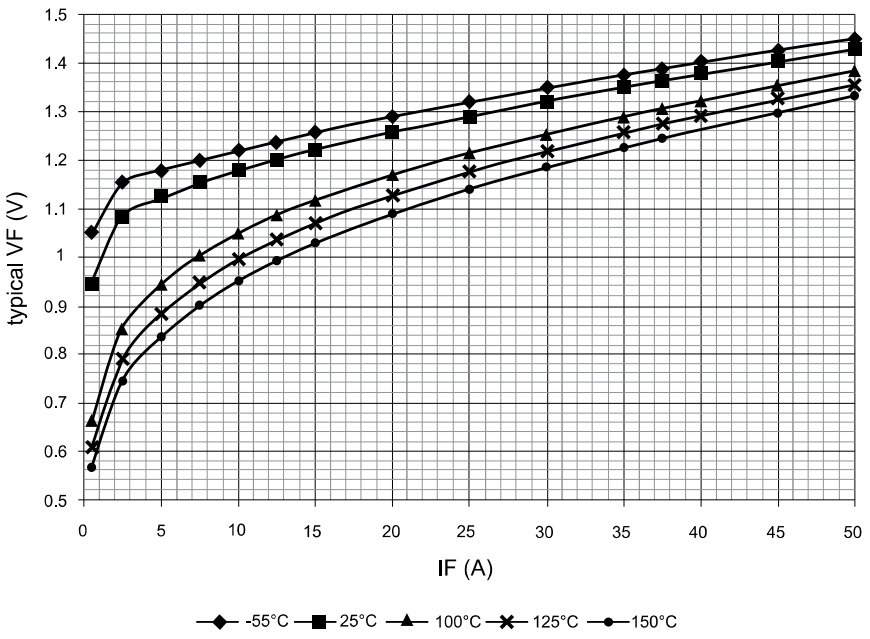
Electrical Characteristic [4/]	Symbol	Typ	Max	Units
Instantaneous Forward Voltage Drop (I_F = 25 A, T_A = 25ºC, 300µsec Pulse)	V_{F1}	1.15	1.3	V_{DC}
Instantaneous Forward Voltage Drop (I_F = 50 A, T_A = 25ºC, 300µsec Pulse)	V_{F2}	1.35	1.5	V_{DC}
Instantaneous Forward Voltage Drop (I_F = 25 A, T_A =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