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

SDR953/61 thru SDR955/61

Designer's Data Sheet

Part Number/Ordering Information [1/]

SDR95___ __ __

- **Screening** [2/]
  - __ = Not Screened
  - TX = TX Level
  - TXV = TXV Level
  - S = S Level
- **Package Type**
  - /61 = TO-61
- **Device Type** (VRWM)
  - 3 = 300V
  - 4 = 400V
  - 5 = 500V

50 Amp HYPER FAST RECTIFIER
300 – 500 Volts
35 nsec

FEATURES:
- Hyper Fast Reverse Recovery Time: 35 nsec Max
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Gold Eutectic Die Attach Available
- Ultrasonic Aluminum Wire Bonds
- TX, TXV, and S-Level Screening Available[2/]

MAXIMUM RATINGS[3/]

RATING		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage **DC Blocking Voltage**	SDR953/61 SDR954/61 SDR955/61	V_{RRM} V_{RWM} V_R	300 400 500	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T_A = 25°C)		I_O	50	Amps
Peak Surge Current (8.3 ms pulse, half sinewave, T_A = 25°C)		I_{FSM}	450*	Amps
Operating & Storage Temperature		T_{OP} **and** T_{STG}	-65 to +200	°C
Maximum Thermal Resistance	Junction to Case	$R_{\theta JC}$	0.75	°C/W

NOTES:

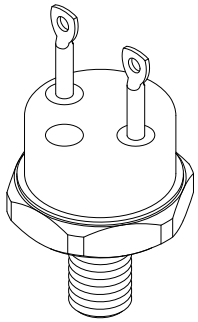
1/ For ordering information, price, and availability - contact factory.

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

3/ Unless otherwise specified, all electrical characteristics @25ºC.

*Package limited

TO-61



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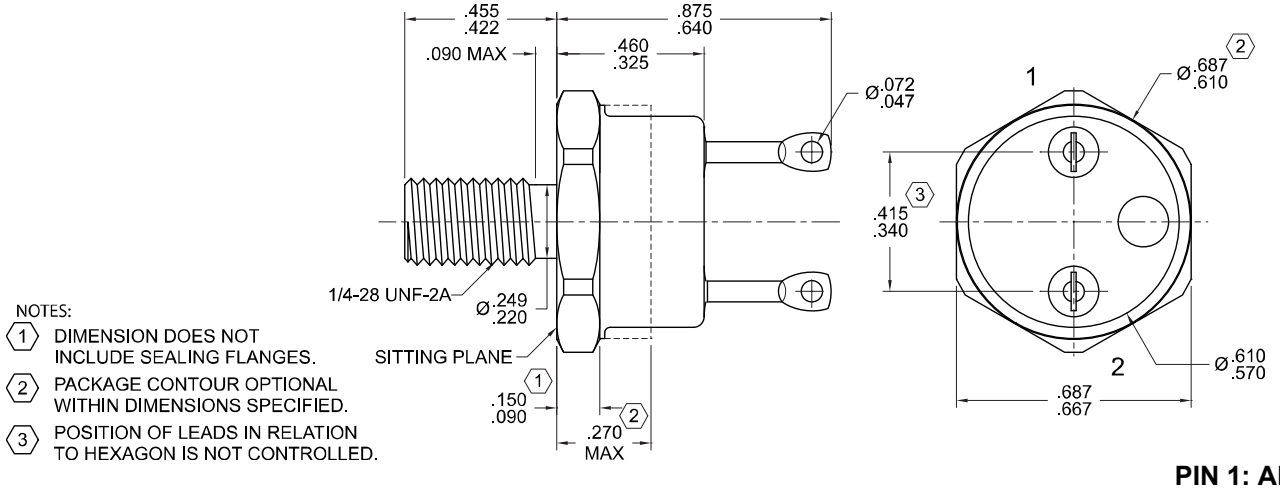
ELECTRICAL CHARACTERISTICS[3/]	SYMBOL	MAX	UNIT
Max Instantaneous Forward Voltage Drop (I_F = 25Adc, T_A = 25°C, 300 µs pulse) (I_F = 50Adc, T_A = 25°C, 300 µs pulse)	V_{F1} V_{F2}	1.30 1.65	Vdc
Max Instantaneous Forward Voltage Drop (I_F = 25Adc, T_A = 100°C, 300 µs pulse) (I_F = 25Adc, T_A = -55°C, 300 µs pulse)	V_{F3} V_{F4}	1.2 1.4	Vdc
Reverse Leakage Current (Rated V_R, T_A = 25°C, 300 µs pulse minimum)	I_{R1}	100	µAdc
Reverse Leakage Current (Rated V_R, T_A = 100°C, 300 µs pulse minimum)	I_{R2}	10	mAdc
Junction Capacitance (V_R = 10V, T_A = 25°C, f = 1MHz)	C_J	250	pf
Reverse Recovery Time (I_F = 500mA, I_R = 1A, I_{RR} = 250mA, T_A = 25°C)	t_{RR}	35	nsec

Case Outline: 2 Pin TO-61



NOTES:
1. DIMENSION DOES NOT INCLUDE SEALING FLANGES.
2. PACKAGE CONTOUR OPTIONAL WITHIN DIMENSIONS SPECIFIED.
3. POSITION OF LEADS IN RELATION TO HEXAGON IS NOT CONTROLLED.

PIN 1: ANODE
PIN 2: CATHODE

TYPICAL OPERATING CURVES

TA = 25°C unless otherwise specified