Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDR933/61 thru SDR936/61

Designer's Data Sheet

Part Number/Ordering Information [1/]

SDR93___ __ __

- **Screening** [2/]
  - __ = Not Screened
  - TX = TX Level
  - TXV = TXV
  - S = S Level
- **Package Type**
  - /61 = TO-61
- **Device Type** (VRWM)
  - 3 = 300V
  - 4 = 400V
  - 5 = 500V
  - 6 = 600V

30 Amp ULTRA FAST RECTIFIER

300 – 600 Volts
35 nsec

FEATURES:

- Ultra Fast Reverse Recovery Time: 35 nsec Max
- Isolated Package
- Reverse Voltage to 600 Volts
- Low Reverse Leakage
- Hermetically Sealed
- Single Chip Construction
- 200°C Operating Temperature
- Ultrasonic Aluminum Wire Bonds
- TX, TXV, and S-Level Screening Available [2/]

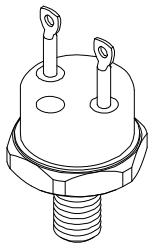
MAXIMUM RATINGS [3/]

RATING		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage **DC Blocking Voltage** (IR = 100μA)	SDR933/61 SDR934/61 SDR935/61 SDR936/61	$V_{RM(rep)}$ V_R	300 400 500 600	Volts
RMS Reverse Voltage	SDR932/61 SDR933/61 SDR934/61 SDR935/61	V_r	140 210 280 350	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60 Hz, Sine Wave, T_C = 25°C)		I_O	30	Amps
Peak Repetitive Forward Current (T_C = 55°C, 8.3 ms pulse, allow junction to reach equilibrium between pulses)		$I_{FM(rep)}$	120	Amps
Peak Surge Current (T_C = 25°C, half sinewave 8.3 ms pulse or equivalent DC)		I_{FSM}	300	Amps
Operating & Storage Temperature		T_{OP} **and** T_{STG}	-65 to +175	°C
Thermal Resistance	Junction to Case	$R_{\theta JC}$	1.5	°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.

TO-61



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	DATA SHEET #: RC0135A	DOC

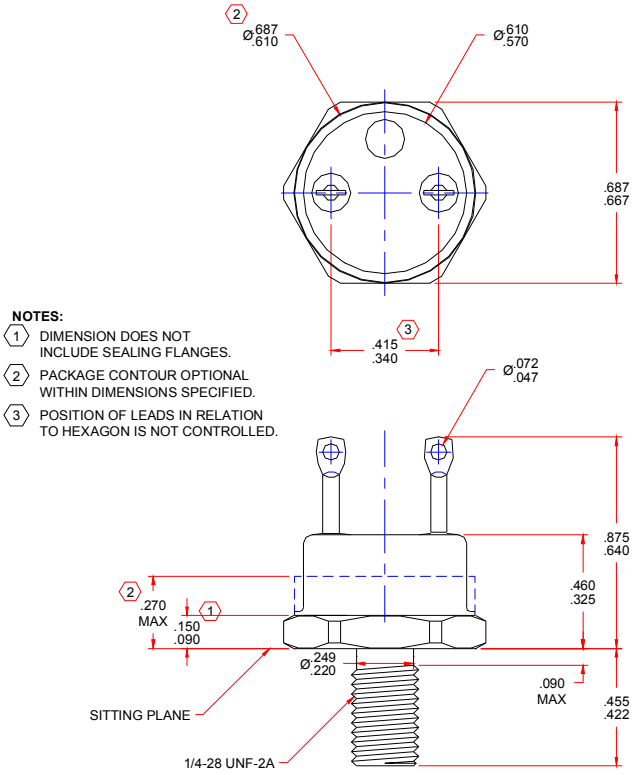
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SDR933/61 thru SDR936/61

CHARACTERISTICS		SYMBOL	MAX	UNIT
Max Instantaneous Forward Voltage Drop (I_F = 30Adc, T_C = 25°C, 300 µs Pulse)		V_{F2}	1.7	Vdc
Max Instantaneous Forward Voltage Drop (I_F = 30Adc, T_C = 100°C, 300 µs Pulse)		V_{F1}	1.5	Vdc
Max Reverse Leakage Current (T_C = 25°C)	SDR933/61, VR = 300V SDR934/61, VR = 400V SDR935/61, VR = 500V SDR936/61, VR = 600V	I_{R1}	100	µAdc
Maximum Reverse Leakage Current (Rated VR, T_C = 100°C)	SDR933/61, VR = 300V SDR934/61, VR = 400V SDR935/61, VR = 500V SDR936/61, VR = 600V	I_{R2}	5.0	mAdc
Max Junction Capacitance (T_A = 25°C, V_R = 10V)		C_J	250	pf

CHARACTERISTICS	SYMBOL	TYP	MAX	UNIT
Reverse Recovery Time (I_F = 500mA, I_R = 1A, I_{RR} = 250mA) (I_F = 1A to V_R = 30Vdc)	t_{rr}	30	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.

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