



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDR953/61 thru SDR955/61

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR95 _____

_____ **L 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

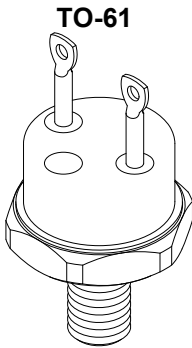
**50 Amp
HYPER FAST RECTIFIER**
300 – 500 Volts
35 nsec

- 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	V_{RRM}	300	Volts
	SDR954/61	V_{RWM}	400	
	SDR955/61	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 sinewave, $T_A = 25^\circ\text{C}$)		I_{FSM}	450*	Amps
Operating & Storage Temperature		T_{OP} and T_{STG}	-65 to +200	$^\circ\text{C}$
Maximum Thermal Resistance	Junction to Case	$R_{\theta JC}$	0.75	$^\circ\text{C/W}$

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.
 *Package limited





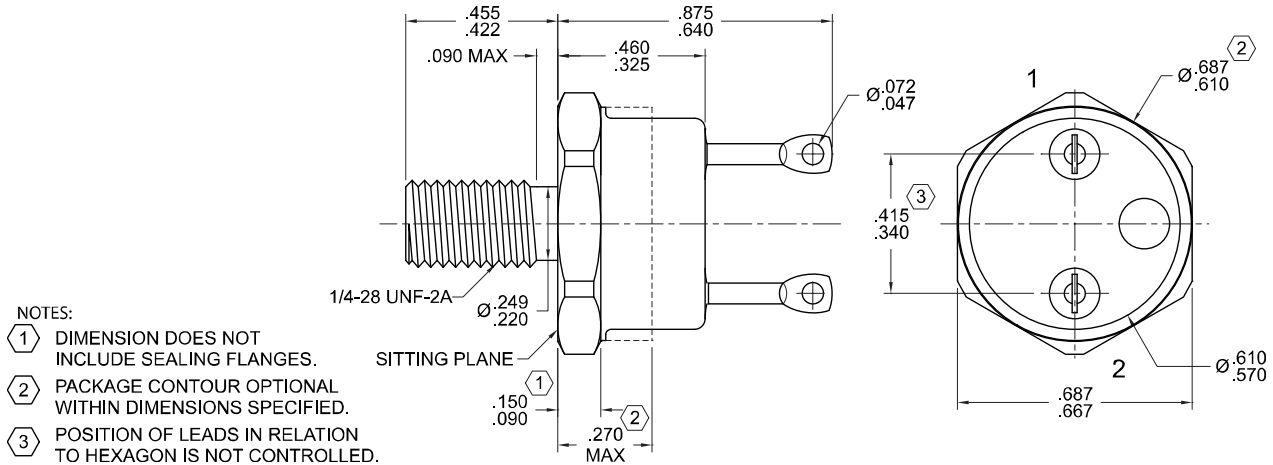
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 thru
 SDR955/61**

ELECTRICAL CHARACTERISTICS ^{3/}	SYMBOL	MAX	UNIT
Max Instantaneous Forward Voltage Drop ($I_F = 25\text{A}_{dc}$, $T_A = 25^\circ\text{C}$, 300 μs pulse) ($I_F = 50\text{A}_{dc}$, $T_A = 25^\circ\text{C}$, 300 μs pulse)	V_{F1} V_{F2}	1.30 1.65	Vdc
Max Instantaneous Forward Voltage Drop ($I_F = 25\text{A}_{dc}$, $T_A = 100^\circ\text{C}$, 300 μs pulse) ($I_F = 25\text{A}_{dc}$, $T_A = -55^\circ\text{C}$, 300 μs pulse)	V_{F3} V_{F4}	1.2 1.4	Vdc
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs pulse minimum)	I_{R1}	100	μA_{dc}
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs pulse minimum)	I_{R2}	10	mA_{dc}
Junction Capacitance ($V_R = 10\text{V}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)	C_J	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}	35	nsec

Case Outline: 2 Pin TO-61



**PIN 1: ANODE
 PIN 2: CATHODE**

TYPICAL OPERATING CURVES

$T_A = 25^\circ\text{C}$ unless otherwise specified

