



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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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/}

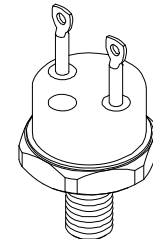
MAXIMUM RATINGS ^{3/}

	RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage DC Blocking Voltage (IR = 100µA)	SDR933/61	$V_{RM(rep)}$ V_R	300	Volts
	SDR934/61		400	
	SDR935/61		500	
	SDR936/61		600	
RMS Reverse Voltage	SDR932/61	V_r	140	Volts
	SDR933/61		210	
	SDR934/61		280	
	SDR935/61		350	
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 _{θJC}	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 @25°C.

TO-61





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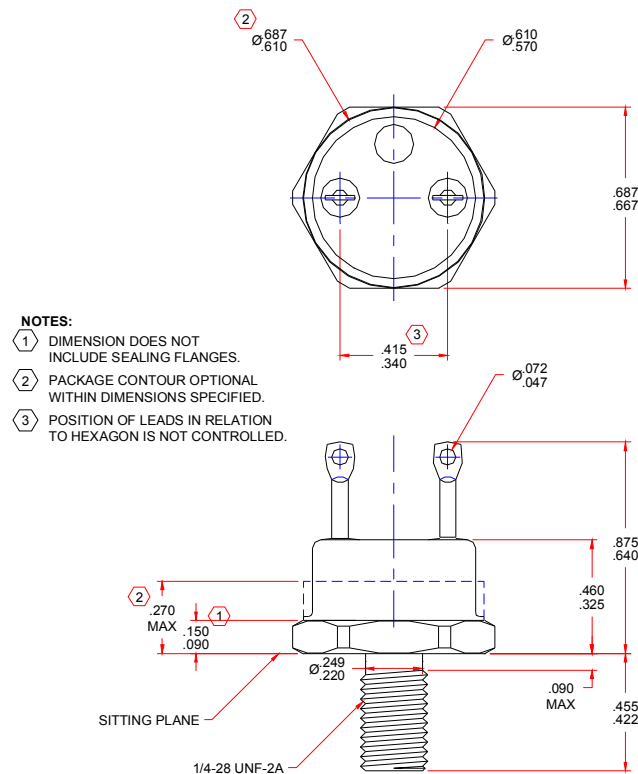
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**SDR933/61
 thru
 SDR936/61**

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

CHARACTERISTICS	SYMBOL	TYP	MAX	UNIT
Reverse Recovery Time ($I_F = 500\text{mA}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{mA}$) ($I_F = 1\text{A}$ to $V_R = 30\text{V dc}$)	t_{rr}	30	35	nsec

Case Outline: 2 Pin 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

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