



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDR937/61 thru SDR9312/61

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR93

Screening ^{2/} ☐ = Not Screened
TX = TX Level
TXV = TXV Level
S = S Level

Package

/61 = TO-61

Family/Voltage

7 = 700V
8 = 800V
9 = 900V
10 = 1000V
11 = 1100V
12 = 1200V

30 Amp ULTRA FAST RECTIFIER 700 – 1200 Volt 60 nsec

Features:

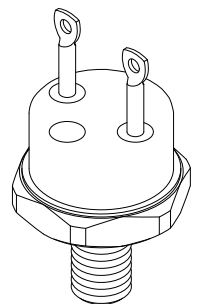
- Soft recovery diode
- Ultra fast recovery: 60 nsec maximum
- Available with faster recovery
- High surge rating
- Low reverse leakage current
- Low junction capacitance
- Hermetically sealed package
- Gold eutectic die attach available
- Ultrasonic aluminum wire bonds
- TX, TXV, and S-level screening available – Contact factory ^{2/}

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SDR937	V_{RRM} V_{RWM} V_R	700	Volts
	SDR938		800	
	SDR939		900	
	SDR9310		1000	
	SDR9311		1100	
	SDR9312		1200	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T _A = 25°C)		I _O	30	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T _A = 25°C)		I _{FSM}	450	Amps
Operating & Storage Temperature		T _{OP} & T _{STG}	-65 to +200	°C
Maximum Thermal Resistance Junction to Case		R _{θJC}	1.3	°C/W

Notes:

- 1/ For ordering information, price, operating curves, and availability - contact factory.
2/ Screening based on MIL-PRF-19500. Screening flows available on request.

TO-61



NOTE: All specifications are subject to change without notification.
SSD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: RU0075C

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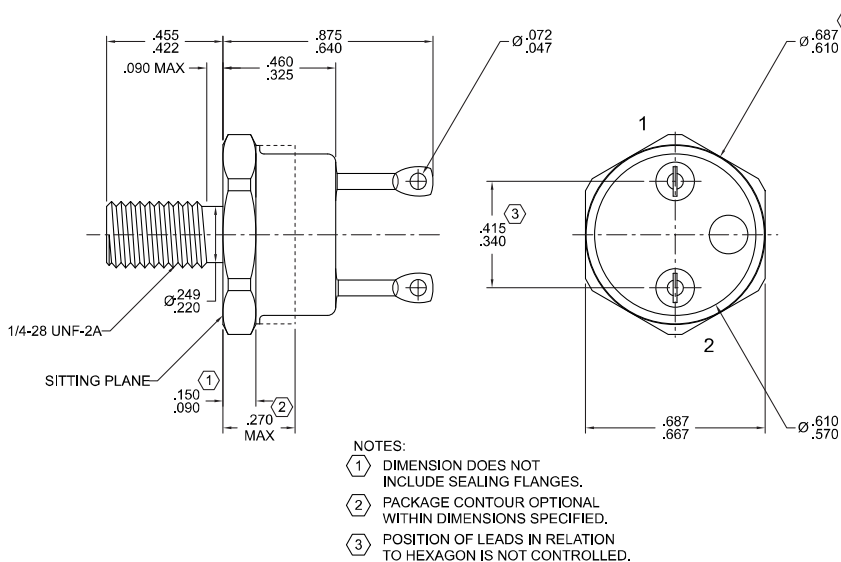
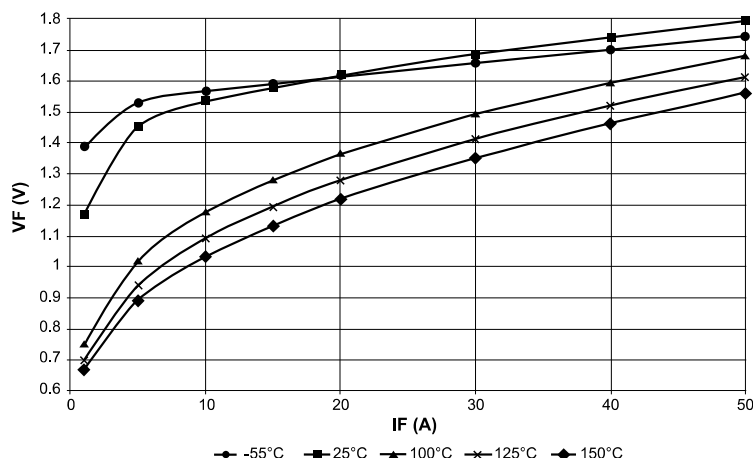
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Electrical Characteristics		Symbol	Typical	Maximum	Units
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 μs pulse)	$I_F = 15\text{A}_{\text{DC}}$	V_{F1}	1.8	2.0	V_{DC}
	$I_F = 30\text{A}_{\text{DC}}$	V_{F2}	2.0	2.2	
Instantaneous Forward Voltage Drop ($T_A = 125^\circ\text{C}$, 300 μs pulse)	$I_F = 15\text{A}_{\text{DC}}$	V_{F3}	1.4	1.5	V_{DC}
Instantaneous Forward Voltage Drop ($T_A = -55^\circ\text{C}$, 300 μs pulse)	$I_F = 15\text{A}_{\text{DC}}$	V_{F4}	1.85	2.1	V_{DC}
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs pulse minimum)		I_{R1}	20	100	μA
Reverse Leakage Current (Rated V_R , $T_A = 125^\circ\text{C}$, 300 μs pulse minimum)		I_{R2}	10	25	mA
Junction Capacitance ($T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)	$V_R = 10\text{V}_{\text{DC}}$	C_J	80	100	pf
Reverse Recovery Time ($I_F = 500\text{mA}$, $I_R = 1\text{Amp}$, $I_{\text{RR}} = 250\text{mA}$, $T_A = 25^\circ\text{C}$) ($I_F = 10\text{A}$, $dI_F/dt = 100\text{A}/\mu\text{s}$)		t_{RR1}	45	60	nsec
		t_{RR2}	70	100	

CASE OUTLINE: 2 Pin TO-61

PIN OUT:
PIN 1: CATHODE
PIN 2: ANODE



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