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

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

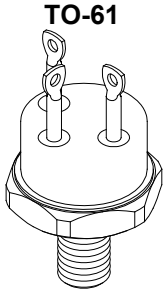
30 Amp ULTRA FAST RECTIFIER
700 – 1200 Volt
60 nsec

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** **SDR938** **SDR939** **SDR9310** **SDR9311** **SDR9312**	V_{RRM} V_{RWM} V_R	700 800 900 1000 1100 1200	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T_A = 25°C)	**Io**	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	$R_{\theta JC}$	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



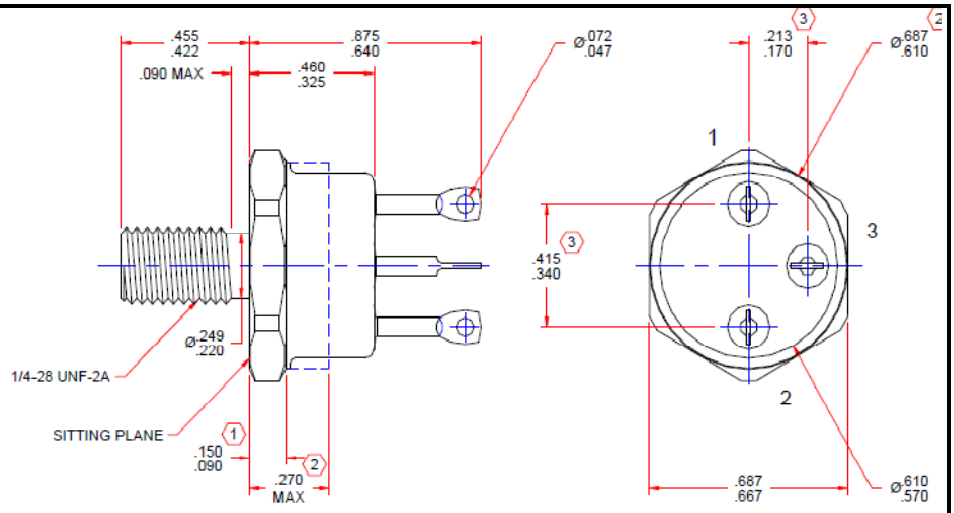
Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, CA 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SDR937/61 thru SDR9312/61

Electrical Characteristics		Symbol	Typical	Maximum	Units
Instantaneous Forward Voltage Drop (T_A = 25°C, 300µs pulse)	I_F = 15A_{DC} I_F = 30A_{DC}	V_{F1} V_{F2}	2.0 2.2	2.2 2.4	V_{DC}
Instantaneous Forward Voltage Drop (T_A = 125°C, 300µs pulse)	I_F = 15A_{DC}	V_{F3}	1.5	1.6	V_{DC}
Instantaneous Forward Voltage Drop (T_A = -55°C, 300µs pulse)	I_F = 15A_{DC}	V_{F4}	2.1	2.3	V_{DC}
Reverse Leakage Current (Rated V_R, T_A = 25°C, 300µs pulse minimum)		I_{R1}	20	100	µA
Reverse Leakage Current (Rated V_R, T_A = 125°C, 300µs pulse minimum)		I_{R2}	10	25	mA
Junction Capacitance (T_A = 25°C, f = 1MHz)	V_R = 10V_{DC}	C_J	70	100	pf
Reverse Recovery Time (I_F = 500mA, I_R = 1 Amp, I_{RR} = 250mA, T_A = 25°C) (I_F = 10A, dI_F/dt = 100A/µs)		t_{RR1} t_{RR2}	45 60	60 100	nsec

CASE OUTLINE: 3 Pin TO-61

PIN OUT:
PIN 1: ANODE
PIN 2: CATHODE
PIN 3: NOT CONNECTED



Notes:
1/ Dimension does not include sealing flange.
2/ Package contour optional within specified dimensions
3/ Position of leads in relation to hexagon is not controlled