



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

**SDR620/59
 SDR621/59
 SDR622/59**

**20 AMPS
 100 - 200 VOLTS
 ULTRA FAST RECOVERY
 RECTIFIER**

- FEATURES:**
- Isolated Package
 - Reverse Recovery Time 35 ns Max
 - PIV 200 Volts
 - Low Reverse Leakage
 - Hermetically Sealed
 - Single Chip Construction
 - -65°C to 200°C Operating and Storage Temperature
 - Isolated Version of 1N5812-16 DO-4
 - TX, TXV, and S-Level Screening Available^{2/}

Designer's Data Sheet

Part Number / Ordering Information^{1/}

SDR62

- └─ Screening^{2/}
 - ── = Not Screened
 - TX = TX Level
 - TXV = TXV
 - S = S Level
- └─ Package
 - 59 = TO-59
- └─ Voltage
 - 0 = 100 V
 - 1 = 150 V
 - 2 = 200 V

MAXIMUM RATINGS ^{3/}		Symbol	Value	Units
Peak Repetitive Reverse Voltage (Per Leg) and DC Blocking Voltage (Per Leg) (I _R = 100 μA)	SDR620	V _{RRM} V _R	100	Volts
	SDR621		150	
	SDR622		200	
RMS Reverse Voltage (Per Leg)		V _r	140	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60 Hz, Sine Wave, T _C =55°C)		I _o	20	Amps
Peak Repetitive Forward Current (T _C =25°C, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)		I _{FRM}	80	Amps
Peak Surge Current (T _A =25°C, 8.3 ms Pulse)		I _{FSM}	300	Amps
Operating and Storage Temperature		T _J & T _{stg}	-65 to +200	°C

THERMAL CHARACTERISTICS	Symbol	Max	Units
Thermal Resistance, Junction to Case	R _{θJC}	3.0	°C/W

^{1/} For Ordering Information, Price, Operating Curves, and Availability-Contact Factory.

^{2/} Screened to MIL-PRF-19500.

^{3/} Unless Otherwise Specified, All Electrical Characteristics @25°C.

TO-59





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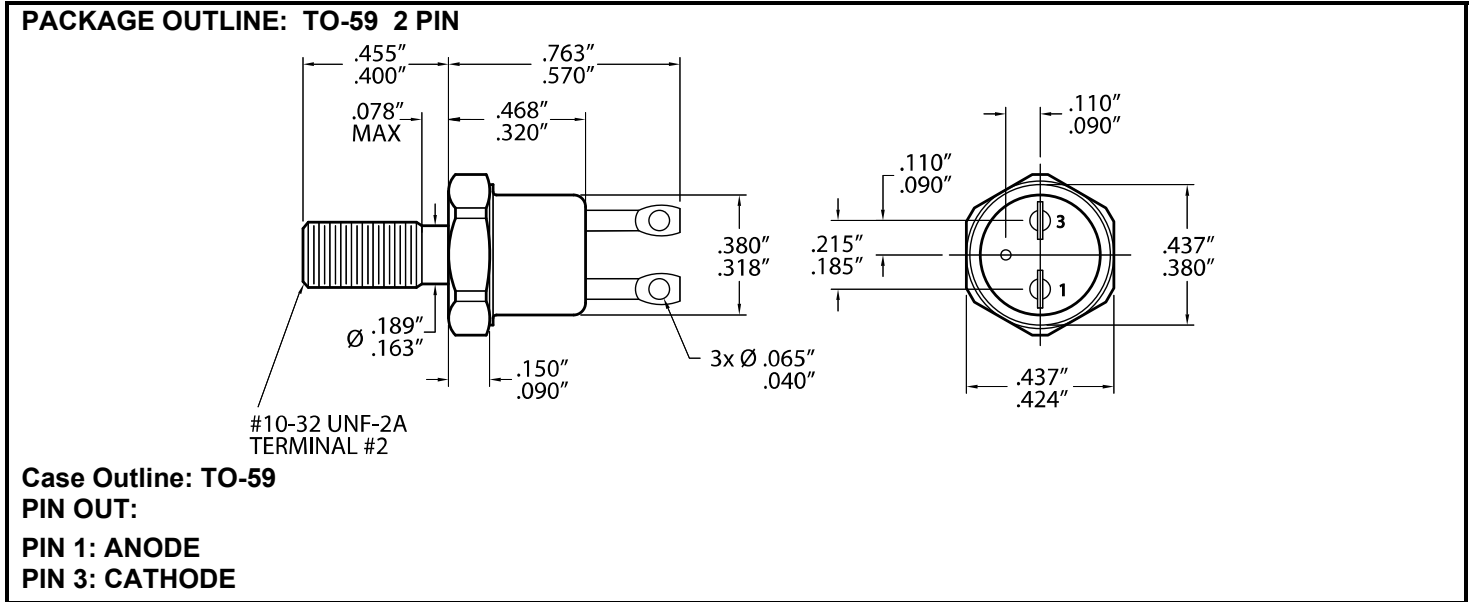
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ELECTRICAL CHARACTERISTICS (per leg)		Symbol	Minimum	Maximum	Unit
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 – 500 μsec Pulse)	$I_F = 10\text{A}$	V_{F1}	--	1.1	V_{DC}
	$I_F = 20\text{A}$	V_{F2}	--	1.4	
Instantaneous Forward Voltage Drop ($I_F = 10\text{A}$, 300 – 500 μs Pulse)	$T_A = 100^\circ\text{C}$	V_{F3}	--	1.0	V_{DC}
	$T_A = -55^\circ\text{C}$	V_{F4}	--	1.25	
Reverse Leakage Current (Rated V_R , 300 μs Pulse min.)	$T_A = 25^\circ\text{C}$	I_{R1}	--	10	μA
	$T_C = 100^\circ\text{C}$	I_{R2}	--	1.0	mA
Junction Capacitance ($V_R = 10 V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)		C_J	--	225	pF
Reverse Recovery Time ($T_A = 25^\circ\text{C}$, $I_F = 0.5\text{A}$, $I_R = 1.0 \text{A}$, $I_{RR} = 0.25\text{A}$)		t_{rr}	--	35	nsec

NOTES:

- * Pulse Test: Pulse Width = 300 μsec , Duty Cycle = 2%
- 1. Unless Otherwise Specified, All Electrical Characteristics @25°C



*For information on curves, contact the Factory Representative for Engineering Assistance.



DATA SHEET APPROVAL FORM

Data Sheet Number	RC0117	Rev	A	Custom Data Sheet, do not put on Web
Part Number(s):	SDR620/59, SDR621/59, SDR622/59			

Approval	Sign			Date
Engineering Manager:				
Executive / CEO				
Operation Manager:				
Marketing Manager:				
Quality Manager:				

Device Category

	Rectifier	Schottky	Bridge	Zener & TVS	Thyristor	FET & IGBT	Transistors	IC & Vreg	Power Module
	HF	Standard	Doubler & CT	Zener	SCR	N Fet	NPN <1 W	Vreg (Adj)	High Voltage
x	UF	Super (<25V)	Single	Temp Comp	Triac	PFet	NPN > 1W	Vreg (fixed)	FET & IGBT Bridges
	F	SiC	Three	TVS (< 4KW)	Trigger Devices	RadFet	NPN > 400 V	IC	Battery Bypass
	Std		Mult	TVS (> 4KW)		JFET	PNP < 1W		DC - DC Converter
	HV >2.5KV					N IGBT	PNP >1 W		Other
	HC >200A					N IGBT +diode	PNP >400V		
	PIN					P IGBT	Comp Pair		
						P IGBT +diode			

Data Sheet Developmental Notes	

