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

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

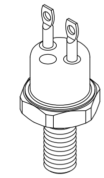
FEATURES:

- Isolated Package
- Reverse Recovery Time 35 ns Max
- PIV 200 Volts
- Low Reverse Leakage
- Hermetically Sealed
- Single Chip Construction
- -65ºC to 200ºC Operating and Storage Temperature
- Isolated Version of 1N5812-16 DO-4
- TX, TXV, and S-Level Screening Available [2/]

MAXIMUM RATINGS [3/]		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR620 SDR621 SDR622	V_{RRM} V_R	100 150 200	**Volts**
Half Wave Rectified Forward Current, Averaged Over Full Cycle Resistive Load, 60 Hz, Sine Wave, T_C= 55ºC		I_O	20	**Amps**
Peak Repetitive Forward Current 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses		I_{FRM}	80	**Amps**
Peak Surge Current 8.3 ms Pulse		I_{FSM}	200	**Amps**
Thermal Resistance Junction to Case		$R_{\theta JC}$	1.5	**ºC/W**
Operating and Storage Temperature		T_J & T_{stg}	-65 to +200	**ºC**

1/ For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.
2/ Screened to MIL-PRF-19500.
3/ Unless Otherwise Specified, All Electrical Characteristics @ 25ºC.

TO-59



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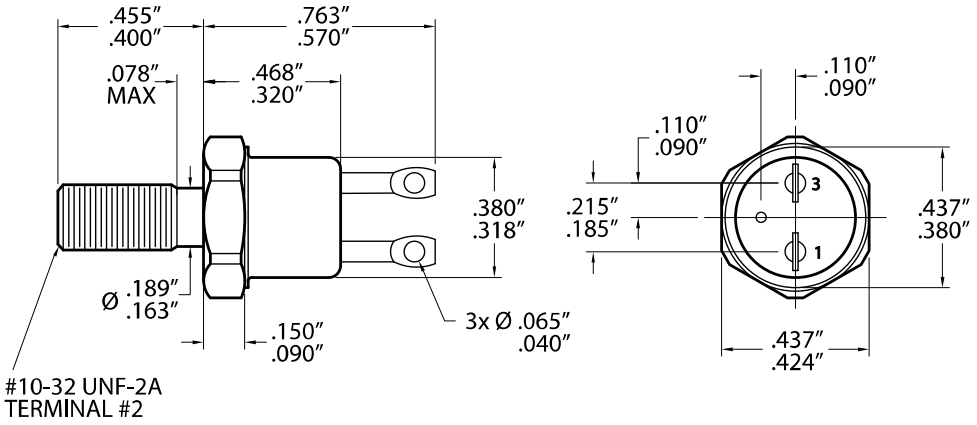
ELECTRICAL CHARACTERISTICS [1/]		Symbol	Minimum	Maximum	Unit
Instantaneous Forward Voltage Drop 300 – 500 µs Pulse	I_F= 10A I_F= 20A	V_{F1} V_{F2}	– –	1.2 1.5	V_{DC}
Instantaneous Forward Voltage Drop I_F= 10 A, 300 – 500 µs Pulse	T_A= 100ºC T_A= -55ºC	V_{F3} V_{F4}	–	1.15 1.25	V_{DC}
Reverse Leakage Current Rated V_R, 300 µs Pulse min.	T_A= 25ºC T_C= 100ºC	I_{R1} I_{R2}	– –	10 1.0	**µA** **mA**
Junction Capacitance V_R= 10 V_{DC}, f= 1 MHz		C_J	–	225	**pF**
Reverse Recovery Time I_F= 0.5 A, I_R= 1.0 A, I_{RR}= 0.25 A		t_{RR}	–	35	**nsec**

NOTES:

1/ Unless Otherwise Specified, All Electrical Characteristics @ 25ºC

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

PACKAGE OUTLINE: TO-59 2 PIN



PIN OUT:

PIN 1: ANODE

PIN 3: CATHODE

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DATA SHEET APPROVAL FORM

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

Approval	Sign		Date
Engineering Manager:	Dan Tulbure		12/12/07
Executive / CEO	Arnold N. Applebaum		06/04/08
Operation Manager:	Joel Mearig		06/04/08
Marketing Manager:	Sharon Pfifer		06/04/08
Quality Manager:	Brian E. Green		06/04/08

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

Uc15s20 per id#3331/7198

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Data Sheet # RC0117

REVISIONS

ECO #	REV	DATE	DESCRIPTION	APPROVAL
----	A	12/04/07	Initial release.	BEG
E-100386	B	07/01/10	I_{FSM} = 200A; $R_{\theta JC}$= 1.5ºC/W, V_{F1}= 1.2V, V_{F2}= 1.5V, V_{F3}= 1.15V	IB

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