



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/}

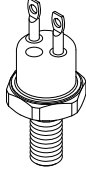
SDR62

- └─ 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 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 = 55°C		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 °C/W
Operating and Storage Temperature		T_J & T_{stg}	-65 to +200 °C

^{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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ELECTRICAL CHARACTERISTICS ^{1/}		Symbol	Minimum	Maximum	Unit
Instantaneous Forward Voltage Drop 300 – 500 μ s Pulse	$I_F = 10A$	V_{F1}	–	1.2	V_{DC}
	$I_F = 20A$	V_{F2}	–	1.5	
Instantaneous Forward Voltage Drop $I_F = 10 A$, 300 – 500 μ s Pulse	$T_A = 100^\circ C$	V_{F3}	–	1.15	V_{DC}
	$T_A = -55^\circ C$	V_{F4}	–	1.25	
Reverse Leakage Current Rated V_R , 300 μ s Pulse min.	$T_A = 25^\circ C$	I_{R1}	–	10	μA
	$T_C = 100^\circ C$	I_{R2}	–	1.0	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 @ 25°C
- 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



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

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

DATA SHEET #: RC0117B

DOC

