



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR

Screening ^{3/}

— = Not Screened
 TX = TX Level
 TXV = TXV
 S = S Level

Voltage

600 = 50V
 601 = 100V
 602 = 200V
 603 = 300V
 604 = 400V
 605 = 500 V
 606 = 600V
 607 = 700V
 608 = 800V

SDR600

Thru

SDR608

15 A, 45-60 nsec, 50-800 V
Ultra Fast Rectifier

Features:

- Ultra Fast Recovery: 45-60 nsec Maximum
- Low Reverse Leakage Current
- Single Chip Construction
- PIV to 800 Volts
- Hermetically Sealed
- High Surge Rating
- Low Thermal Resistance
- Also available in 2 Pin TO-59 or TO-111
- Isolated Package upon request
- TX, TXV, and Space Level Screening Available

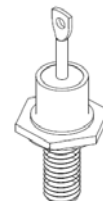
Maximum Ratings ^{2/}

	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR600	50	Volts
	SDR601	100	
	SDR602	200	
	SDR603	300	
	SDR604	400	
	SDR605	500	
	SDR606	600	
	SDR607	700	
	SDR608	800	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T _A = 25°C)	I _O	15	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T _A = 25°C)	I _{FSM}	180	Amps
Operating & Storage Temperature	T _{OP} & T _{STG}	-65 to +175	°C
Maximum Thermal Resistance (Junction to Case)	R _{θJC}	2.5	°C/W

Notes:

- 1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.
 2/ Unless Otherwise Specified, All Maximum Ratings/Electrical Characteristics @ 25°C.
 3/ Screened to MIL-PRF-19500.

DO-4:



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

DATA SHEET #: RU0019D

DOC



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SDR600

Thru

SDR608

Electrical Characteristics		Symbol	Value	Units
Instantaneous Forward Voltage Drop ($I_F = 15 \text{ A}$, $T_A = 25^\circ\text{C}$, 300 μs Pulse)	SDR600-605 SDR606-608	V_F	1.3 1.8	V_{DC}
Instantaneous Forward Voltage Drop ($I_F = 15 \text{ A}$, $T = -55^\circ\text{C}$, 300 μs Pulse)	SDR600-605 SDR606-608	V_F	1.45 1.95	V_{DC}
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs minimum pulse)		I_R	50	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs minimum pulse)		I_R	10	mA
Junction Capacitance ($V_R = 10 \text{ V}_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)		C_J	150	pF
Reverse Recovery Time ($I_F = 500 \text{ mA}$, $I_R = 1 \text{ A}$, $I_{RR} = 250 \text{ mA}$, $T_A = 25^\circ\text{C}$)	SDR600-605 SDR606 SDR607-608	t_{RR}	45 50 60	nsec

Notes: 1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.

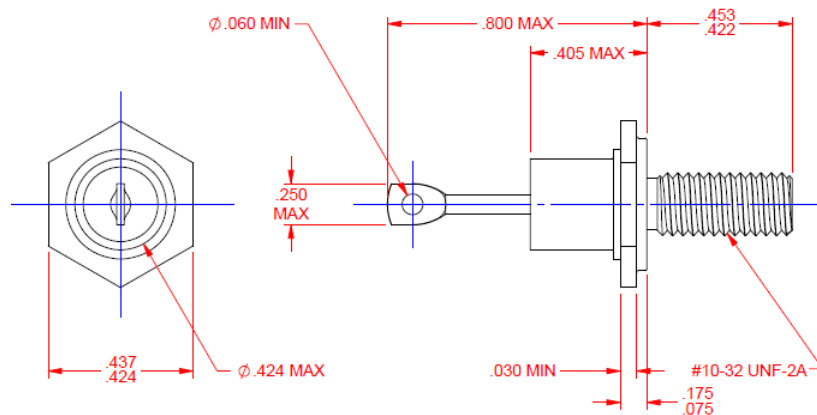
2/ Screened to MIL-PRF-19500.

3/ Unless otherwise specified, all Maximum Ratings/Electrical Characteristics @ 25°C .

Case Outline: DO-4

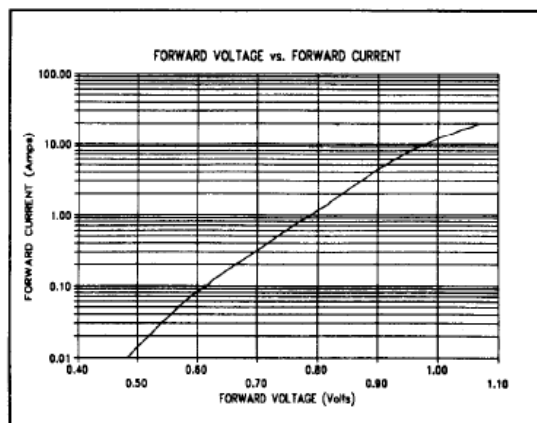
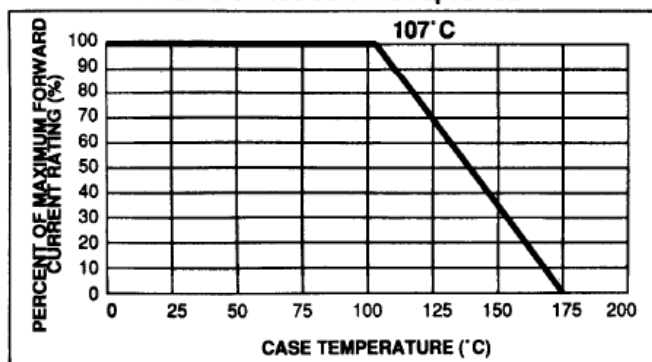
Stud: Cathode

Lead: Anode



TYPICAL OPERATING CURVES

$T_A = 25^\circ\text{C}$ Unless otherwise specified



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