Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDR600 Thru SDR608

Designer's Data Sheet

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

Part Number/Ordering Information [1/]

SDR ___ ___

Screening [3/]
- ___ = Not Screened
- TX = TX Level
- TXV = TXV
- S = S Level

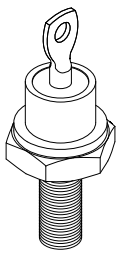
Voltage
- 600 = 50V
- 601 = 100V
- 602 = 200V
- 603 = 300V
- 604 = 400V
- 605 = 500 V
- 606 = 600V
- 607 = 700V
- 608 = 800V

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**	V_{RRM} V_{RWM} V_R	**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**	**ºC**
Maximum Thermal Resistance (Junction to Case)		$R_{\theta JC}$	**2.5**	**ºC/W**

DO-4:



Notes:

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

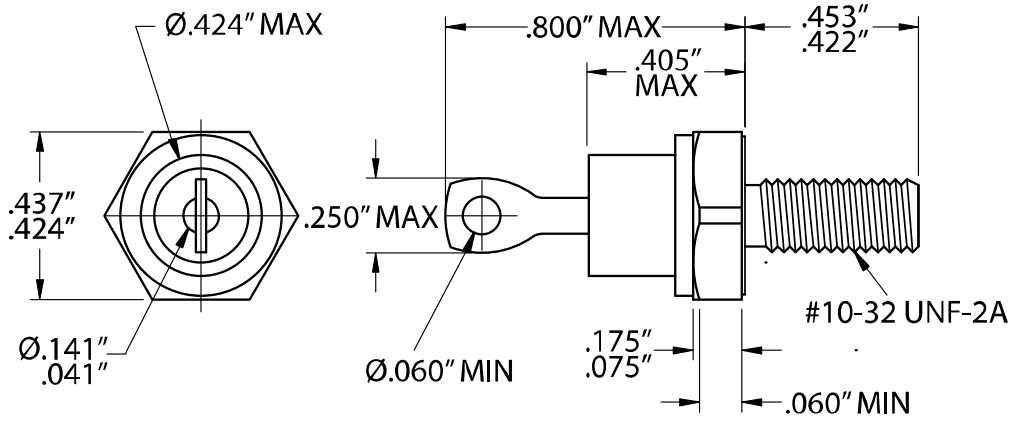
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SDR600 Thru SDR608

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

Notes:
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2/ Screened to MIL-PRF-19500.
3/ Unless otherwise specified, all Maximum Ratings/Electrical Characteristics @ 25ºC.

Case Outline: DO-4
Stud: Cathode
Lead: Anode



TYPICAL OPERATING CURVES
TA=25˚C Unless otherwise specified

