



PRELIMINARY

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

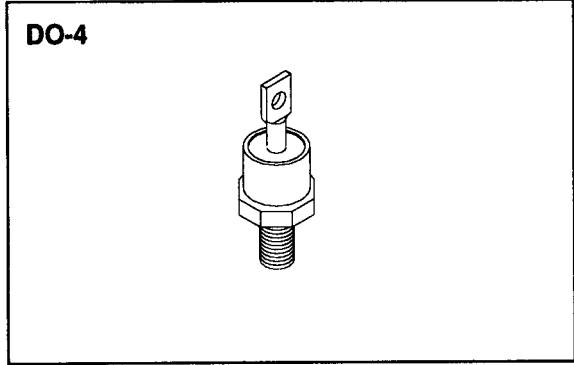
**SDR600
thru
SDR608**

Designer's Data Sheet

**15 AMP
50-800 VOLTS
45-60 nsec
ULTRA FAST
RECTIFIER**

FEATURES:

- Ultra Fast Recovery: 45-60 nsec Maximum
- PIV to 700 Volts
- Low Reverse Leakage Current
- Hermetically Sealed
- Single Chip Construction
- High Surge Current: 250 Amps
- Also available in 2 Pin TO-59 or TO-111
- Isolated Package Upon Request
- TX, TXV, and Space Level Screening Available



MAXIMUM RATINGS			
RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse 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, 60Hz, Sine Wave, TA=25°C)	IO	15	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, TA=25°C)	IFSM	250	Amps
Operating and storage temperature	Top & Tstg	-65 to +175	°C
Maximum Thermal Resistance Junction to Case	RθJC	2.5	°C/W

SDR600 thru SDR608

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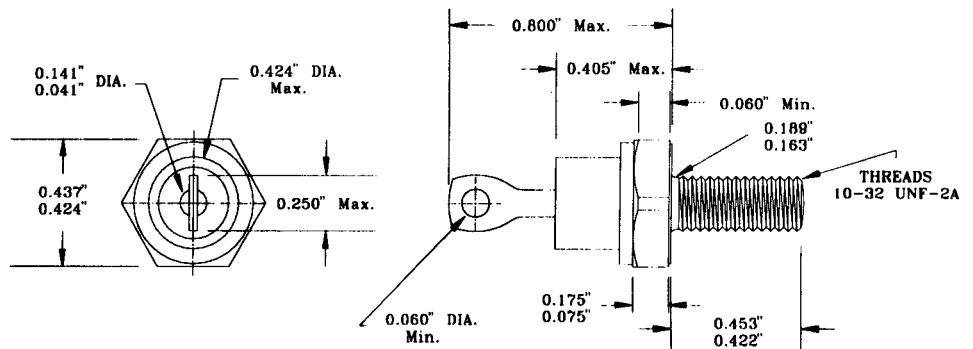
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ELECTRICAL CHARACTERISTICS

CHARACTERISTICS		SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop ($I_F = 15 \text{ A dc}$, $T_A = 25^\circ\text{C}$, 300 μs Pulse)	SDR600-605	VF	1.3	Vdc
	SDR606-608		1.8	
Instantaneous Forward Voltage Drop ($I_F = 15 \text{ A dc}$, $T_A = -55^\circ\text{C}$, 300 μs Pulse)	SDR600-605	VF	1.45	Vdc
	SDR606-608		1.95	
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs pulse minimum)		IR	50	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs pulse minimum)		IR	10	mA
Junction Capacitance ($V_R = 10 \text{ Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)		CJ	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	trr	45	nsec
	SDR606		50	
	SDR607-608		60	

CASE OUTLINE: DO-4



TYPICAL OPERATING CURVES

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

