



SOLID STATE DEVICES, INC.

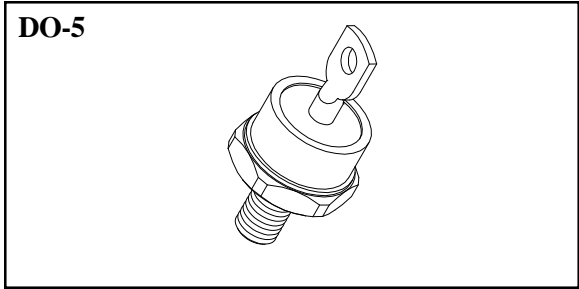
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Designer's Data Sheet

**SDR803
thru
SDR818**

**100 AMP
50 - 1200 VOLTS
60 nsec
ULTRA FAST RECTIFIER**

- FEATURES:**
- Ultra Fast Recovery: 60 nsec maximum.
 - PIV to 1200 Volts.
 - Low Forward Voltage Drop.
 - Low Leakage Current.
 - Hermetically Sealed.
 - Single Chip Construction.
 - For High Efficiency Applications.
 - TX, TXV, and Space Level Screening Available



Maximum Ratings	SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage @ 100μA	SDR803	50	Volts
	SDR804	100	
	SDR805	150	
	SDR806	200	
	SDR807	250	
	SDR808	300	
	SDR809	350	
	SDR810	400	
	SDR811	500	
	SDR812	600	
	SDR813	700	
	SDR814	800	
	SDR815	900	
	SDR816	1000	
	SDR817	1100	
SDR818	1200		
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, T _A = 25 °C)	I _o	100	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T _A = 25°C)	SDR803 - 806	1000	Amps
	SDR807 - 809	800	
	SDR810 - 814	700	
	SDR815 - 818	600	
Operating and Storage Temperature	T _{OP} & T _{STG}	-55 TO +175	°C
Maximum Thermal Resistance Junction to Case	R _{θJC}	0.85	°C/W

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

DATA SHEET #: RU0059F

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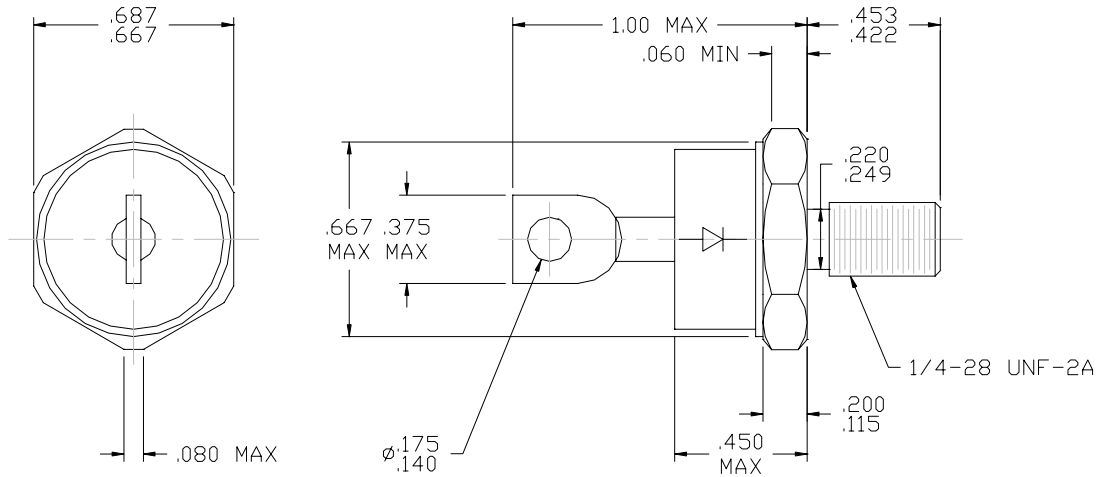


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Electrical Characteristics		SYMBOL	MAXIMUM	UNITS
Instantaneous Forward Voltage Drop ($I_F = 100A_{DC}$, $T_A = 25^\circ C$, 300 - 500 μs Pulse)	SDR803 - 806	V_{F1}	1.00	V_{DC}
	SDR807 - 810		1.50	
	SDR811 - 814		1.85	
	SDR815 - 818		1.90	
Instantaneous Forward Voltage Drop ($I_F = 100A_{DC}$, $T_A = -55^\circ C$, 300 - 500 μs Pulse)	SDR803 - 806	V_{F2}	1.10	V_{DC}
	SDR807 - 810		1.60	
	SDR811 - 814		1.95	
	SDR815 - 818		2.00	
Reverse Leakage Current (Rated V_R , 300 μs minimum Pulse)	$T_A = 25^\circ C$	I_R	100	μA
	$T_A = 100^\circ C$		10	mA
Junction Capacitance ($V_R = 10 V_{DC}$, $T_A = 25^\circ C$, $f = 1 MHz$)		C_J	700	pF
Reverse Recovery Time ($I_F = 500 mA$, $I_R = 1 A$, $I_{RR} = 250 mA$, $T_A = 25^\circ C$)		t_{RR}	60	nsec

CASE OUTLINE: DO-5



TYPICAL OPERATING CURVES

($T_A = 25^\circ C$ unless otherwise specified)

