



SOLID STATE DEVICES, INC.

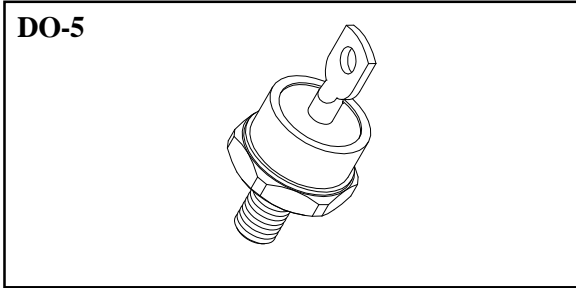
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Designer's Data Sheet

**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 SDR804 SDR805 SDR806 SDR807 SDR808 SDR809 SDR810 SDR811 SDR812 SDR813 SDR814 SDR815 SDR816 SDR817 SDR818	V_{RRM} V_{RWM} V_R	50 100 150 200 250 300 350 400 500 600 700 800 900 1000 1100 1200 Volts
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, $T_A = 25^\circ C$)	I_o	100	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ C$)	SDR803 - 806 SDR807 - 809 SDR810 - 814 SDR815 - 818	I_{FSM}	1000 800 700 600 Amps
Operating and Storage Temperature	$T_{OP} \& T_{STG}$	-55 TO +175	$^\circ C$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	0.85	$^\circ C/W$

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

**SDR803
thru
SDR818**



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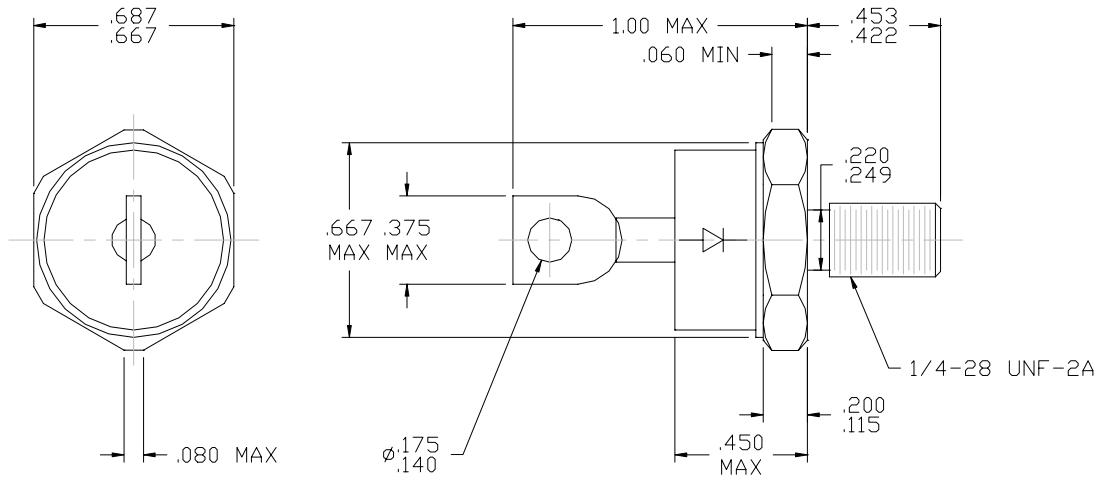
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Electrical Characteristics		SYMBOL	MAXIMUM	UNITS
Instantaneous Forward Voltage Drop ($I_F = 100A_{DC}$, $T_A = 25^\circ C$, 300 - 500 μs Pulse)	SDR803 - 806	V_{F1}	1.00	V_{DC}
	SDR807 - 810		1.50	
	SDR811 - 814		1.85	
	SDR815 - 818		1.90	
Instantaneous 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	
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)

