



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 ^{2/} — = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

Family/Voltage

705 = 50V

710 = 100V

715 = 150V

720 = 200V

SDR705 thru SDR720

70A, 50nsec, 50-200 V Ultra Fast Recovery Rectifier

Features:

- Ultra Fast Recovery: 50nsec Maximum
- Low Forward Voltage Drop
- High Surge Current Capability
- PIV to 200 Volts
- Hermetically Sealed
- For High Efficiency Applications
- TX, TXV, and S-Level Screening Available ^{2/}
- For Reverse Polarity see Data Sheet RU0059 (SDR803R thru SDR806R)

Maximum Ratings ^{4/}	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR705 V_{RRM} SDR710 V_{RWM} SDR715 V_R SDR720	50 100 150 200	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ\text{C}$)	I_o	70	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$)	I_{FSM}	750	Amps
Operating & Storage Temperature	$T_{OP} \& T_{STG}$	-55 to +175	$^\circ\text{C}$
Thermal Resistance (Junction to Case)	$R_{\theta JC}$	1.0	$^\circ\text{C/W}$

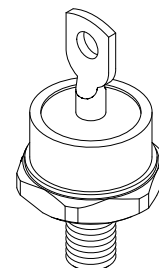
Notes:

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

2/ Screened to MIL-PRF-19500.

3/ Recovery Conditions: $I_F = 500\text{ mA}$, $I_R = 1\text{ Amp}$, $I_{RR} = 250\text{ mA}$.

4/ Unless Otherwise Specified, All Maximum Ratings/Electrical Characteristics @25°C.



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

DATA SHEET #: RU0057B

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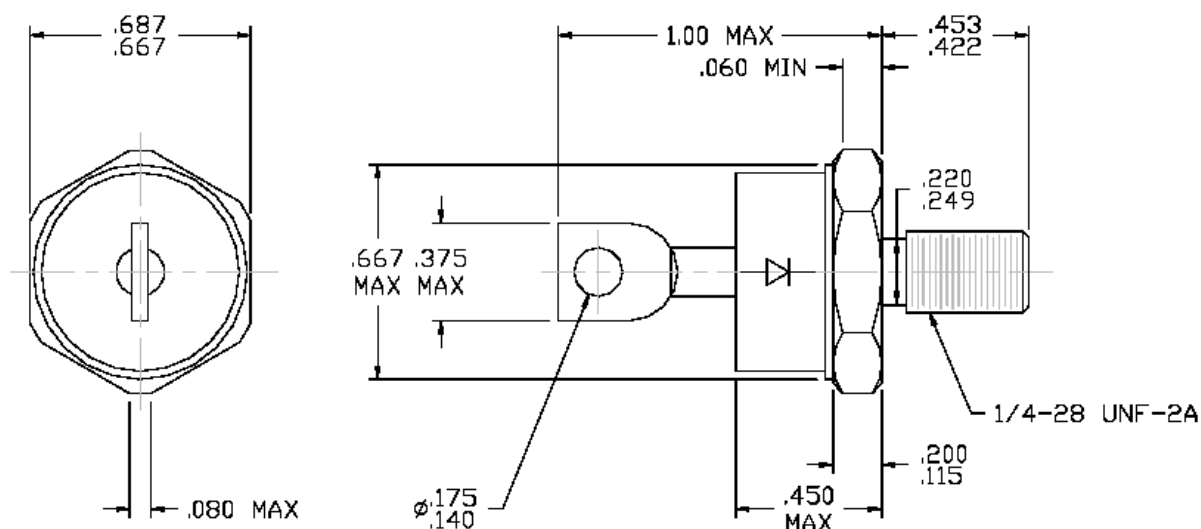
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SDR705 thru SDR720

Electrical Characteristics ^{4/}		Symbol	Value	Units
Maximum Instantaneous Forward Voltage Drop ($I_F = 70\text{Adc}$, $T_A = 25^\circ\text{C}$, 300-500 μs Pulse)		V_{F1}	0.975	V_{DC}
Maximum Instantaneous Forward Voltage Drop ($I_F = 70\text{Adc}$, $T_A = -55^\circ\text{C}$, 300-500 μs Pulse)		V_{F2}	1.40	V_{DC}
Maximum Reverse Leakage Current (Rated V_R , 300 μs minimum pulse)	$T_A = 25^\circ\text{C}$	I_{R1}	25	μA
	$T_A = 100^\circ\text{C}$	I_{R2}	6	mA
Maximum Reverse Recovery Time ($I_F = 500\text{ mA}$, $I_R = 1\text{ Amp}$, $I_{RR} = 250\text{ mA}$)	$T_A = 25^\circ\text{C}$	t_{RR}	50	nsec
Maximum Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)		C_J	700	pF

DO-5 Outline:



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