Solid State Devices, Inc.
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ssdi@ssdi-power.com * www.ssdi-power.com

SDR705 thru SDR720

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

Designer's Data Sheet

Part Number/Ordering Information [1/]

SDR ___ ___

Screening [2/]
- ___ = Not Screened
- TX = TX Level
- TXV = TXV Level
- S = S Level

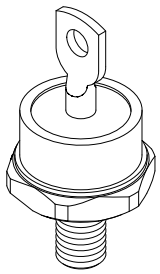
Family/Voltage
- 705 = 50V
- 710 = 100V
- 715 = 150V
- 720 = 200V

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** **SDR710** **SDR715** **SDR720**	V_{RRM} V_{RWM} V_R	**50** **100** **150** **200**	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T_A = 25 °C)		**Io**	**70**	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T_A = 25 °C)		I_{FSM}	**750**	**Amps**
Operating & Storage Temperature		T_{OP} & T_{STG}	**-55 to +175**	**ºC**
Thermal Resistance (Junction to Case)		$R_{\theta JC}$	**1.0**	**ºC/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 mA, I_R = 1 Amp, I_{RR} = 250 mA.
4/ Unless Otherwise Specified, All Maximum Ratings/Electrical Characteristics @25°C.



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

DO-5 Outline: