Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDR6304 thru SDR6307

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
6304 = 50V
6305 = 100V
6306 = 150V
6307 = 200V

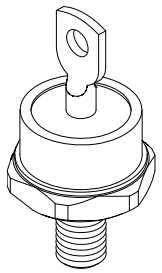
70 Amp
Ultra Fast Recovery Rectifier
50 - 200 Volts
50 nsec

Features:
- **Fast Recovery: 50nsec Maximum**
- **Low Forward Voltage Drop**
- **Low Reverse Leakage Current**
- **Single Chip Construction**
- **Hermetically Sealed**
- **For High Efficiency Applications**
- **Replacement for 1N6304, 1N6305, and 1N6306**
- **TX, TXV, and S-Level Screening Available** [2/]

Maximum Ratings [3/]		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage @ 100µA	**SDR6304** **SDR6305** **SDR6306** **SDR6307**	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}	**800**	**Amps**
Operating & Storage Temperature		T_{OP} & T_{STG}	**-55 to +175**	**ºC**
Thermal Resistance (Junction to Case)		$R_{\theta JC}$	**0.8**	**ºC/W**

Notes: **1/ For ordering information, price, operating curves, and availability- Contact factory.**
2/ Screening based on MIL-PRF-19500. Screening flows available on request.
3/ Unless otherwise specified, all maximum ratings/electrical characteristics @25°C.

DO-5



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SDR6306

Electrical Characteristics [3/]		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 = 150 ºC, 300-500µs Pulse)		V_{F2}	0.84	V_{DC}
Maximum Reverse Leakage Current (Rated V_R, 300µs minimum pulse)	T_A = 25 ºC T_A = 150 ºC	I_{R1} I_{R2}	25 30	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

Table 1- PIN ASSIGNMENT

Code	Configuration	Terminal	Stud
—	Normal	Anode	Cathode
R	Reverse	Cathode	Anode

DO-5 Outline (Normal Pin Configuration Shown):