



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

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

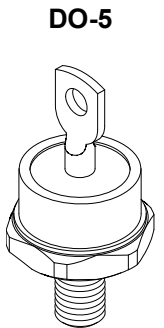
└── Family/Voltage
 6304 = 50V
 6305 = 100V
 6306 = 150V
 6307 = 200V

**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, $T_A = 25^\circ\text{C}$)		I_o	70	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$)		I_{FSM}	800	Amps
Operating & Storage Temperature		T_{OP} & T_{STG}	-55 to +175	$^\circ\text{C}$
Thermal Resistance (Junction to Case)		$R_{\theta JC}$	0.8	$^\circ\text{C/W}$

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.





Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SDR6306

Electrical Characteristics ^{3/}		Symbol	Value	Units
Maximum Instantaneous Forward Voltage Drop ($I_F = 70\text{A}_{dc}$, $T_A = 25\text{ }^\circ\text{C}$, 300-500 μs Pulse)		V_{F1}	0.975	V_{DC}
Maximum Instantaneous Forward Voltage Drop ($I_F = 70\text{A}_{dc}$, $T_A = 150\text{ }^\circ\text{C}$, 300-500 μs Pulse)		V_{F2}	0.84	V_{DC}
Maximum Reverse Leakage Current (Rated V_R , 300 μs minimum pulse)	$T_A = 25\text{ }^\circ\text{C}$	I_{R1}	25	μA
	$T_A = 150\text{ }^\circ\text{C}$	I_{R2}	30	mA
Maximum Reverse Recovery Time ($I_F = 500\text{ mA}$, $I_R = 1\text{ Amp}$, $I_{RR} = 250\text{ mA}$)	$T_A = 25\text{ }^\circ\text{C}$	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

Table 1- PIN ASSIGNMENT			
Code	Configuration	Terminal	Stud
—	Normal	Anode	Cathode
R	Reverse	Cathode	Anode

DO-5 Outline (Normal Pin Configuration Shown):

