



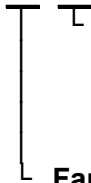
Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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ssdi@ssdi-power.com * www.ssdi-power.com

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

SDR6304 thru SDR6307

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

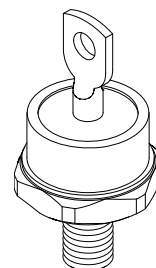
Features:

- 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	V_{RRM}	50	Volts
	SDR6305	V_{RRM}	100	
	SDR6306	V_{RWM}	150	
	SDR6307	V_R	200	
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		$T_{OP} \text{ \& } T_{STG}$	-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.

DO-5



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

DATA SHEET #: RC0141A

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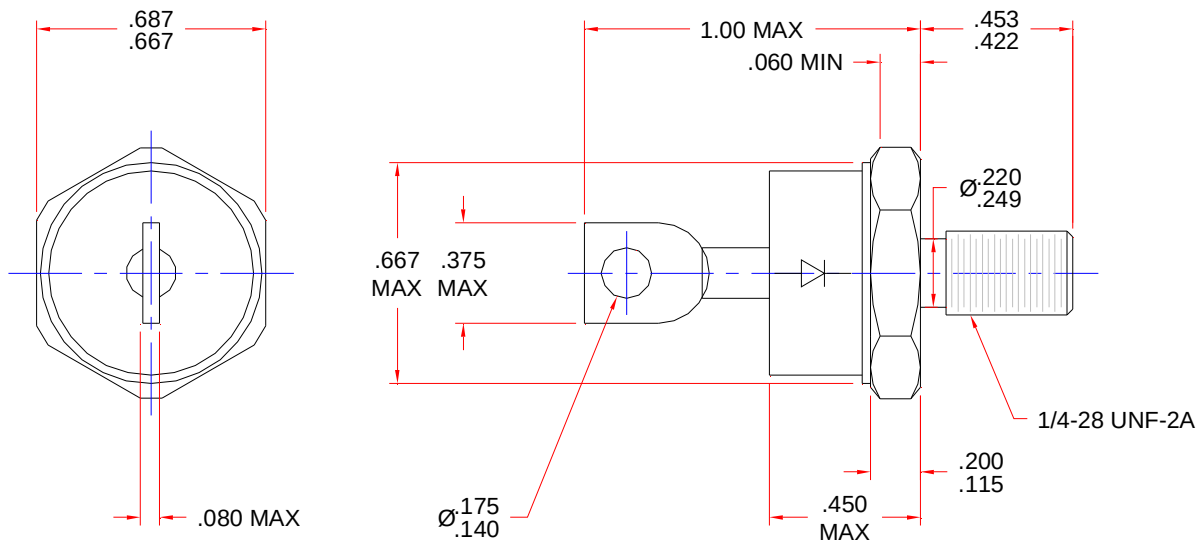
SDR6306

Electrical Characteristics ^{3/}		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 ($I_F = 70\text{Adc}$, $T_A = 150^\circ\text{C}$, 300-500 μs Pulse)		V_{F2}	0.84	V_{DC}
Maximum Reverse Leakage Current (Rated V_R , 300 μs minimum pulse)	$T_A = 25^\circ\text{C}$	I_{R1}	25	μA
	$T_A = 150^\circ\text{C}$	I_{R2}	30	mA
Maximum Reverse Recovery Time ($I_F = 500\text{mA}$, $I_R = 1\text{Amp}$, $I_{RR} = 250\text{mA}$)	$T_A = 25^\circ\text{C}$	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):



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