



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

**70 Amp
 Ultrafast Recovery Rectifier
 50 - 200 Volts
 50 nsec**

Designer's Data Sheet

Part Number/Ordering Information^{1/}

SDR

Screening^{2/}

- ___ = Not Screened
- TX = TX Level
- TXV = TXV Level
- S = S Level

High Temp. Leakage Testing
 -LL = I_R @ V_R = 50 V, T_C = 100°C

Family/Voltage

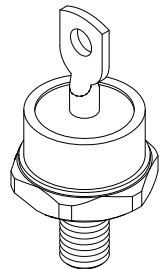
- 6304 = 50V
- 6305 = 100V
- 6306 = 150V
- 6307 = 200V

- Features:**
- Ultrafast Recovery: 50 nsec 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	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage @ 100 µA	SDR6304	V _{RRM}	50	V
	SDR6305	V _{RWM}	100	
	SDR6306	V _R	150	
	SDR6307	V _R	200	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T _A = 25°C)		I _O	70	A
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T _A = 25°C)		I _{FSM}	800	A
Operating & Storage Temperature		T _{OP} & T _{STG}	-55 to +175	°C
Thermal Resistance (Junction to Case)		R _{θJC}	0.8	°C/W

Notes: *Pulsed per MIL-STD-750.
 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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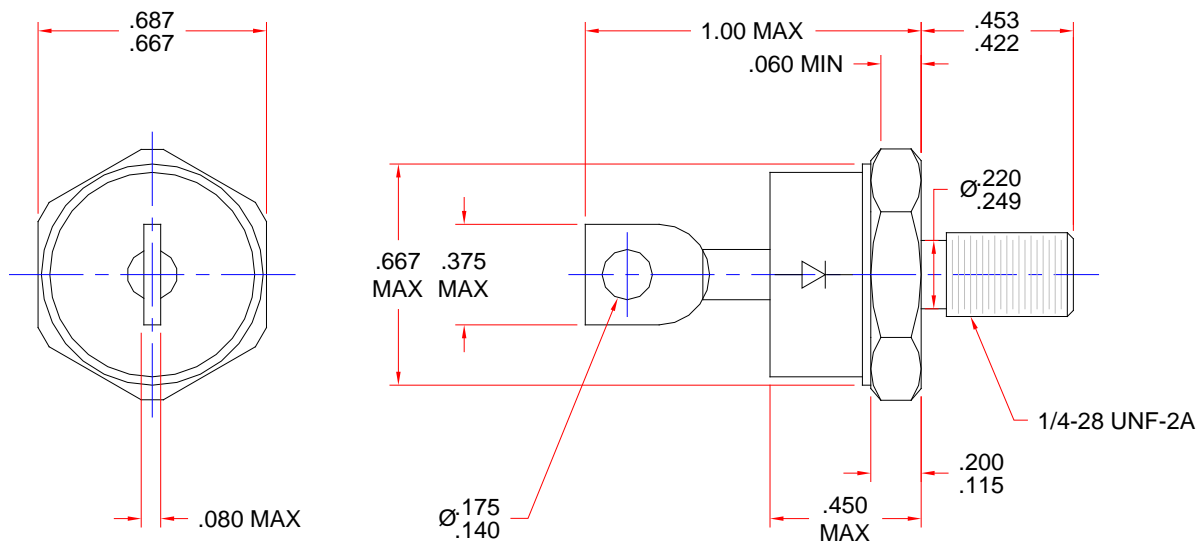
Electrical Characteristics ^{3/}	Symbol	Value	Unit
Maximum Instantaneous Forward Voltage Drop* ($I_F = 70 \text{ Adc}$, $T_A = 25^\circ\text{C}$)	V_{F1}	0.975	V_{DC}
Maximum Instantaneous Forward Voltage Drop* ($I_F = 70 \text{ Adc}$, $T_A = 150^\circ\text{C}$)	V_{F2}	0.84	V_{DC}
Maximum Reverse Leakage Current*	Rated V_R , $T_A = 25^\circ\text{C}$ Rated V_R , $T_A = 150^\circ\text{C}$ $V_R = 50 \text{ V}$, $T_A = 70^\circ\text{C}$ (-LL only)	I_{R1} I_{R2} I_{R3}	25 30 100 μA mA μA
Maximum Reverse Recovery Time ($I_F = 500 \text{ mA}$, $I_R = 1 \text{ A}$, $I_{RR} = 250 \text{ mA}$)	t_{RR}	50	ns
Maximum Junction Capacitance ($V_R = 10 \text{ V}_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)	C_J	700	pF

Notes: *Pulsed per MIL-STD-750.

^{3/} Unless otherwise specified, all maximum ratings/electrical characteristics @ 25°C.

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

DO-5 Outline (Normal Pin Configuration Shown):



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

DATA SHEET #: RC0141B

DOCX