Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SDR1304 thru SDR1308
SDR1304SMS thru SDR1308SMS

DESIGNER'S DATA SHEET

3 AMP, 400 – 800 Volts
70 nsec, Ultra Fast Rectifier

Part Number / Ordering Information [1/]

SDR130 — — — —

- **Screening**[2/] = None, or TX , TXV, S
- **Package** = Axial, SMS = Surface Mount
- **Lead Dia** ___ = .050" standard, A = .040" special order
- **Voltage** 4 = 400 V, 6 = 600 V, 8 = 800 V

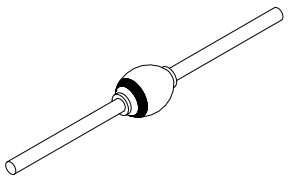
Features:

- **Ultra Fast Recovery: 70 nsec @ 25°C,**
- **PIV to 700 Volts**
- **Hermetically Sealed**
- **Void Free Construction**
- **For High Efficiency Applications**
- **Low Forward Voltage Drop**
- **Single Chip Construction**
- **Replaces UES 1304 Types**
- **TX, TXV, Space Level Screening Available**[2/]

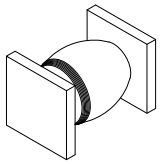
Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	**SDR1304** **SDR1306** **SDR1308**	V_{RRM} V_R	400 600 800	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T_A = 25ºC)		**Io**	3.0	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, Allow Junction to Reach Equilibrium Between Pulses, T_A = 25ºC)		I_{FSM}	75	**Amps**
Operating & Storage Temperature		**Top & Tstg**	-65 to +175	**ºC**
Maximum Thermal Resistance	Junction to Lead, L = 3/8 " Junction to End Tab	$R_{\theta JL}$ $R_{\theta JE}$	20 14	**ºC/W**

Notes:
1/ For Ordering Information, Price, and Availability – Contact Factory.
2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

Axial Leaded



Surface Mount (SMS)

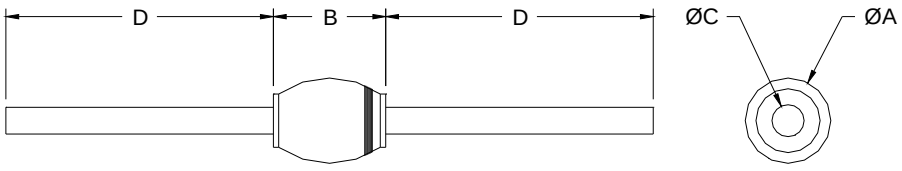


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SDR1304 thru SDR1308
SDR1304SMS thru SDR1308SMS

Electrical Characteristics	Part Type	Symbol	Min	Max	Units
Instantaneous Forward Voltage Drop (T_A = 25ºC, pulsed) I_F = 3A	SDR1304 - 1306 SDR1308	V_{F1}	—	1.25 1.35	**Volts**
Instantaneous Forward Voltage Drop (T_A = -55ºC, pulsed) I_F = 3A	SDR1304 - 1306 SDR1308	V_{F2}	—	1.40 1.50	**Volts**
Reverse Leakage Current (Rated V_R, T_A = 25ºC, pulsed)	All	I_{R1}	—	10	**µA**
Reverse Leakage Current (Rated V_R, pulsed)	SDR1304 - 1306 @ 125°C SDR1308 @ 100°C	I_{R2}	—	150 150	**µA**
Junction Capacitance (V_R = 10 Vdc, T_A = 25ºC, f = 1MHz)	All	C_J	—	50	**pF**
Reverse Recovery Time **(**I_F = 500 mA, I_R = 1A, I_{RR} = 0.25A	All	t_{rr}	—	70	**nsec**

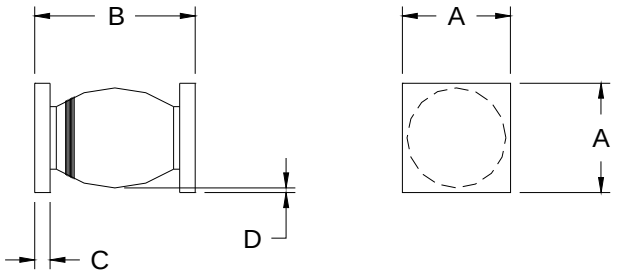
Case Outline: (Axial)



DIMENSIONS SDR1304 & SDR1306		
DIM	**MIN**	**MAX**
A	0.140”	0.170”
B	—	0.200”
C	0.047”	0.053”
D	1.00”	—

DIMENSIONS SDR1308		
DIM	**MIN**	**MAX**
A	0.140”	0.170”
B	—	0.215”
C	0.045”	0.053”
D	1.00”	—

Case Outline: Surface Mount (SMS



DIMENSIONS SDR1304 & SDR1306		
DIM	**MIN**	**MAX**
A	0.172”	0.180”
B	0.200”	0.250”
C	0.020”	0.035”
D	0.002”	—

DIMENSIONS SDR1308		
DIM	**MIN**	**MAX**
A	0.172”	0.180”
B	0.200”	0.265”
C	0.020”	0.035”
D	0.002”	—