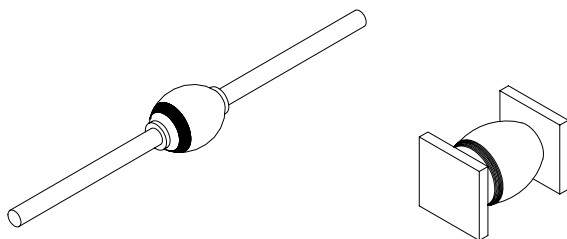


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Part Number / Ordering Information ^{1/}

Axial Leaded

Surface Mount (SMS)



- **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**

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

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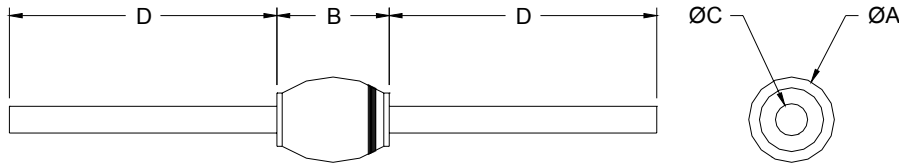
Solid State Devices, Inc.

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**SDR1304 thru SDR1308
SDR1304SMS thru SDR1308SMS**

Electrical Characteristics	Part Type	Symbol	Min	Max	Units
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, pulsed) $I_F = 3\text{A}$	SDR1304 - 1306 SDR1308	V_{F1}	—	1.25 1.35	Volts
Instantaneous Forward Voltage Drop ($T_A = -55^\circ\text{C}$, pulsed) $I_F = 3\text{A}$	SDR1304 - 1306 SDR1308	V_{F2}	—	1.40 1.50	Volts
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 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 ($V_R = 10\text{Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)	All	C_J	—	50	pF
Reverse Recovery Time ($I_F = 500\text{mA}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$)	All	t_{rr}	—	70	nsec

Case Outline: (Axial)



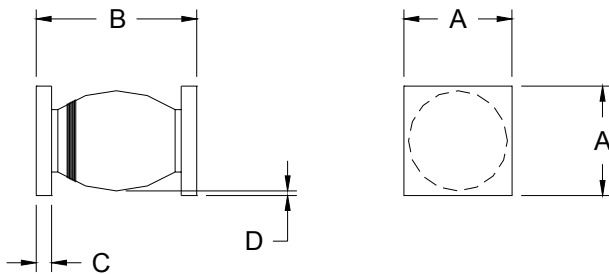
DIMENSIONS SDR1304 & SDR1306

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"	—

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

DATA SHEET #: RU0095C

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