



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638

Phone: (562) 404-4474 * Fax: (562) 404-1773

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SDR3A and SDR3ASMS thru SDR3N and SDR3NSMS

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR3

L Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV

S = S Level

L Package Type

— = Axial Leaded

SMS = Surface Mount Square Tab

L Family

A = 50 V

J = 600V

B = 100V

K = 800V

D = 200V

M = 1000V

G = 400V

N = 1200V

3.0 AMPS

50 — 1200 VOLTS

50 — 80 nsec ULTRA FAST RECTIFIER

FEATURES:

- **Ultra Fast Recovery:** 50-80 ns Max @ 25°C ^{4/}
85-125 ns Max @ 100°C ^{4/}
- **Single Chip Construction**
- **PIV to 1200 Volts**
- **Low Reverse Leakage Current**
- **Hermetically Sealed**
- **For High Efficiency Applications**
- **Available in Axial and Surface Mount Versions**
- **Metallurgically Bonded**
- **TX, TXV, and S-Level Screening Available ^{2/}**

MAXIMUM RATINGS ^{3/}

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SDR3A and SDR3ASMS SDR3B and SDR3BSMS SDR3D and SDR3DSMS SDR3G and SDR3GSMS SDR3J and SDR3JSMS SDR3K and SDR3KSMS SDR3M and SDR3MSMS SDR3N and SDR3NSMS	V_{RRM} V_{RWM} V_R	Volts
Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 25^\circ\text{C}$)	I_O	3	Amp
Peak Surge Current (8.3 msec 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	T_{OP} and T_{STG}	-65 to +175	$^\circ\text{C}$
Thermal Resistance, Junction to Lead, $L = 3/8"$ Junction to End Tab	$R_{\theta JL}$ $R_{\theta JE}$	20 14	$^\circ\text{C/W}$

NOTES:

1/ For Ordering Information, Price, and Availability- Contact Factory.

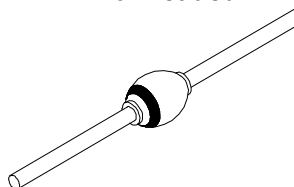
2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

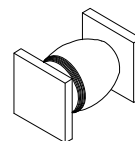
4/ Recovery Conditions: $I_F = 0.5$ Amp, $I_R = 1.0$ Amp, I_{RR} to .25 Amp.

5/ For information on operating curves, contact factory.

Axial Leaded



SMS



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

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DOC



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**SDR3A and SDR3ASMS
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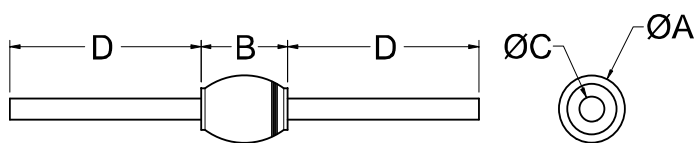
ELECTRICAL CHARACTERISTICS ^{3/}

CHARACTERISTICS		SYMBOL	VALUE	UNIT
Instantaneous Forward Voltage Drop ($I_F = 3A_{dc}$, 300- 500 μs Pulse, $T_A = 25^\circ C$)	SDR3A thru SDR3J SDR3K thru SDR3N	V_{F1}	1.35 1.90	Vdc
Instantaneous Forward Voltage Drop ($I_F = 3A_{dc}$, 300- 500 μs Pulse, $T_A = -55^\circ C$)	SDR3A thru SDR3J SDR3K thru SDR3N	V_{F2}	1.50 2.10	Vdc
Maximum Reverse Leakage Current (Rated V_R , 300 μs Pulse Minimum , $T_A = 25^\circ C$)		I_{R1}	5	μA
Maximum Reverse Leakage Current (Rated V_R , 300 μs Pulse Minimum , $T_A = 100^\circ C$)		I_{R2}	500	μA
Junction Capacitance ($V_R = 10V_{dc}$, $T_A = 25^\circ C$, $f = 1MHz$)		C_J	50	pf
Maximum Reverse Recovery Time ^{4/}	SDR3A thru SDR3J SDR3K SDR3M SDR3N	t_{rr}	50 60 70 80	ns

Axial Leaded Case Outline ^{5/}:

DIMENSIONS

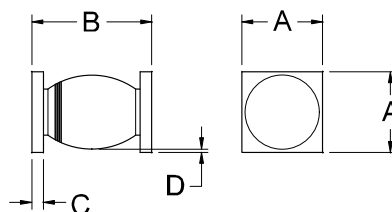
DIM.	MIN.	MAX.
A	.120"	.180"
B	---	.230"
C	.047"	.053"
D	1.00"	---



**Square Tab Surface Mount Case
Outline ^{5/}:**

DIMENSIONS

DIM.	MIN.	MAX.
A	.172"	.180"
B	.180"	.280"
C	.022"	.028"
D	.002"	---



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