



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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SDR3A and SDR3ASMS thru SDR3N and SDR3NSMS

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR1

L Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV

S = S Level

L Package Type

— = Axial Leaded

SMS = Surface Mount Square Tab

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

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	50 100 200 400 600 800 1000 1200	Volts
Rectified Forward Forward Current (Resistive Load, 60 Hz, Sine Wave, T _A = 25°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°C)	I_{FSM}	75	Amps	
Operating & Storage Temperature	T _{OP} and T _{STG}	-65 to +175	°C	
Thermal Resistance, Junction to Lead, L = 3/8"	$R_{\theta JL}$	20	°C/W	
Junction to End Tab	$R_{\theta JE}$	14		

NOTES:

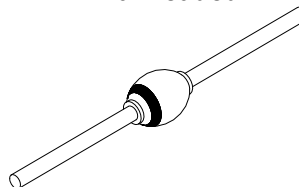
^{1/} For Ordering Information, Price, and Availability- Contact Factory.

^{2/} Screened to MIL-PRF-19500.

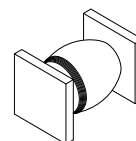
^{3/} Unless Otherwise Specified, All Electrical Characteristics @25°C.

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

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.

DATA SHEET #: RU0013D

DOC

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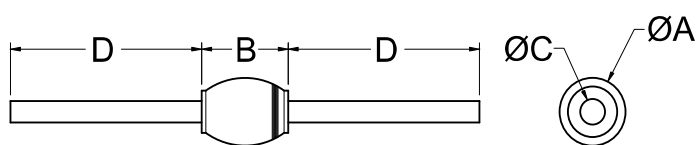
SDR3A and SDR3ASMS thru SDR3N and SDR3NSMS

ELECTRICAL CHARACTERISTICS ^{3/}

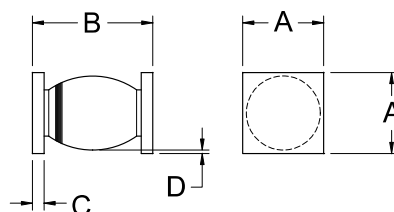
CHARACTERISTICS		SYMBOL	VALUE	UNIT
Instantaneous Forward Voltage Drop ($I_F = 1\text{A}$ dc, 300- 500 μs Pulse, $T_A = 25^\circ\text{C}$)	SDR3A thru SDR3J SDR3K thru SDR3N	V_{F1}	1.35 1.90	Vdc
Instantaneous Forward Voltage Drop ($I_F = 1\text{A}$ dc, 300- 500 μs Pulse, $T_A = -55^\circ\text{C}$)	SDR3A thru SDR3J SDR3K thru SDR3N	V_{F2}	1.50 2.10	Vdc
Maximum Reverse Leakage Current (Rated V_R , 300 μs Pulse Minimum , $T_A = 25^\circ\text{C}$)		I_{R1}	5	μA
Maximum Reverse Leakage Current (Rated V_R , 300 μs Pulse Minimum , $T_A = 100^\circ\text{C}$)		I_{R2}	500	μA
Junction Capacitance ($V_R = 10\text{V}$ dc, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)		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"	---

**NOTES:****1/** For Ordering Information, Price, and Availability- Contact Factory.**2/** Screened to MIL-PRF-19500.**3/** Unless Otherwise Specified, All Electrical Characteristics @25°C.**4/** Recovery Conditions: $I_F = 0.5\text{ Amp}$, $I_R = 1.0\text{ Amp}$, I_{RR} to .25 Amp.**5/** For information on operating curves, contact factory.

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