



Solid State Devices, Inc.

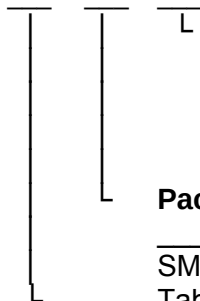
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SDR12 Series

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR12



Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV

S = S Level

Package Type

— = Axial

SMS = Surface Mount Square Tab

Family/Voltage

D = 200 V

G = 400V

J = 600 V

K = 800 V

M = 1000 V

12 AMPS
200 - 1000 VOLTS
5 μ sec
STANDARD RECOVERY
RECTIFIER

FEATURES:

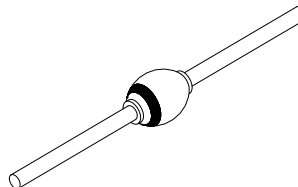
- Standard Recovery: 5 μ sec maximum
- PIV up to 1000 Volts
- High Current Operation up to 12 A
- Hermetically Sealed
- Single Chip Construction
- Low Thermal Resistance
- TX, TXV, and Space Level Screening Available^{2/}
- Fast and Ultrafast Recovery Versions Available. Contact Factory.

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR12D	V_{RRM} V_{RWM} V_R	200	Volts
	SDR12G		400	
	SDR12J		600	
	SDR12K		800	
	SDR12M		1000	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A \leq 55^\circ\text{C}$)		I_O	12	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}	150	Amps
Operating and Storage Temperature		$T_{OP} \text{ \& } T_{stg}$	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Lead, $L = 0.125"$ (Axial Lead) Junction to End Tab (Surface Mount)		$R_{\theta JL}$ $R_{\theta JE}$	6 4	$^\circ\text{C/W}$

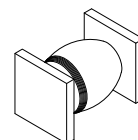
^{1/} For Ordering Information, Price, Operating Curves, and Availability-Contact Factory.

^{2/} Screening Based on MIL-PRF-19500. Screening Flow Available on Request.

Axial



Surface Mount Square Tab (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 #: RC0091C

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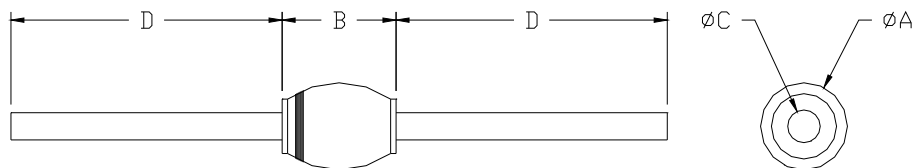
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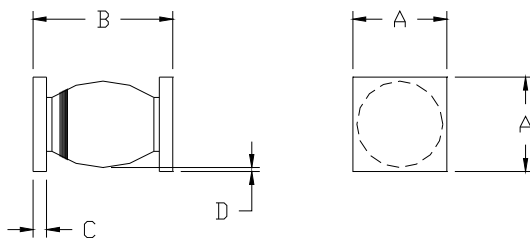
ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 12$ Amps, $T_A = 25^\circ\text{C}$, 300 μsec Pulse)	$T_A = 25^\circ\text{C}$	V_{F1}	—	1.30	Volts
	$T_A = -55^\circ\text{C}$	V_{F2}	—	1.50	Volts
Reverse Leakage Current (At Rated V_R , 300 μsec pulse minimum)	$T_A = 25^\circ\text{C}$	I_{R1}	---	5.0	μA
	$T_A = 100^\circ\text{C}$	I_{R2}	—	200	μA
Junction Capacitance ($V_R = 10$ V _{DC} , $T_A = 25^\circ\text{C}$, $f = 1$ MHz)		C_J	—	80	pF
Reverse Recovery Time ($I_F = 500$ mA, $I_R = 1$ A, $I_{RR} = 250$ mA, $T_A = 25^\circ\text{C}$)		t_{rr}	—	5	μs

Case Outline: (Axial)



DIM	MIN	MAX
A	—	0.190"
B	0.140"	0.180"
C	0.057"	0.063"
D	0.500"	—

Case Outline: (SMS)



DIM	MIN	MAX
A	0.195"	0.210"
B	0.190"	0.230"
C	0.020"	0.030"
D	0.002"	—

Note: Dimensions prior to soldering.

NOTES:

Consult manufacturing for operating curves.

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