



Solid State Devices, Inc.

14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
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SDR12 Series

12 AMPS
200 - 1000 VOLTS
5 msec

STANDARD RECOVERY
RECTIFIER

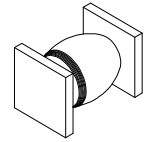
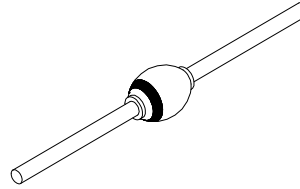
Designer's Data Sheet

FEATURES:

- Standard Recovery: 5 μ sec maximum
- PIV up to 800 Volts
- High Current Operation up to 12 A
- Hermetically Sealed
- Single Chip Construction
- Low Thermal Resistance
- TX, TXV, and Space Level Screening Available
- Fast and Ultrafast Recovery Versions Available. Contact Factory.

Axial

Surface Mount
Square Tab (SMS)



MAXIMUM RATINGS

	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR12D	200	Volts
	SDR12G	400	
	SDR12J	600	
	SDR12K	800	
	SDR12M	1000	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 55^\circ\text{C}$)	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	$T_{OP} \ \& \ T_{stg}$	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Lead, $L = 0.125''$ (Axial Lead) Junction to End Tab (Surface Mount)	R_{qJL}	6	$^\circ\text{C/W}$
	R_{qJE}	4	

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

DATA SHEET #: RC0091A

DOC



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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 Volts
	$T_A = -55^\circ\text{C}$	V_{F2}	—	1.50	
Reverse Leakage Current (At Rated V_R , 300 μsec pulse minimum)	$T_A = 25^\circ\text{C}$	I_{R1}	---	5.0	mA
	$T_A = 100^\circ\text{C}$	I_{R2}	—	200	mA
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	ms

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.