



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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**SPD4942 Thru SPD4948
Series**

Designer's Data Sheet

Part Number/Ordering Information^{1/}

SPD

- Screening^{2/}**
- = Not Screened
- TX = TX Level
- TXV = TXV
- S = S Level (for SM, use -S)

Package Type

- = Axial Leaded
- SM = Surface Mount Round Tab
- SMS = Surface Mount Square Tab

Voltage	4945 = 500V
	4942 = 200V 4946 = 600V
	4943 = 300V 4947 = 800V
	4944 = 400V 4948 = 1000V

**1 Amp, 150-200 nsec, 200-1000 V
Fast Recovery Rectifier**

Features:

- Fast Recovery: 150-200 nsec maximum
- Low Reverse Leakage Current
- Single Chip Construction
- PIV to 1000 Volts
- Hermetically Sealed
- High Surge Rating
- Low Thermal Resistance
- Replacement for 1N4942 – 1N4948
- TX, TXV, and Space Level Screening Available^{2/}

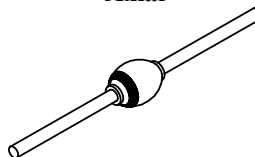
Maximum Ratings	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SPD4942	200	Volts
	SPD4943	300	
	SPD4944	400	
	SPD4945	500	
	SPD4946	600	
	SPD4947	800	
	SPD4948	1000	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T _A = 25 °C)	I_O	1	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I _O , allow junction to reach equilibrium between pulses, T _A = 25 °C)	I_{FSM}	25	Amps
Operating & Storage Temperature	T_{OP} & T_{STG}	-65 to +175	°C
Maximum Thermal Resistance	Junction to Leads, L= 3/8"	R_{θJL}	45
	Junction to Tabs	R_{θJE}	35

NOTES:

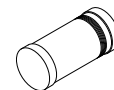
^{1/} For Ordering Information, Operating Curves, Price, and Availability- Contact Factory.

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

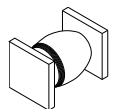
Axial



Surface Mount Round Tab



Surface Mount Square Tab



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

DATA SHEET #: RF0013F

DOC



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SPD4942 Thru SPD4948 Series

Electrical Characteristics	Symbol	Value	Units
Instantaneous Forward Voltage Drop ($I_F = 1\text{Adc}$, $T_A = 25\text{ }^\circ\text{C}$, 300 μs Pulse)	V_F	1.3	V_{DC}
Instantaneous Forward Voltage Drop ($I_F = 1\text{Adc}$, $T_A = -55\text{ }^\circ\text{C}$, 300 μs Pulse)	V_F	1.5	V_{DC}
Reverse Leakage Current (Rated V_R , $T_A = 25\text{ }^\circ\text{C}$, 300 μs minimum pulse)	I_R	1.0	μA
Reverse Leakage Current (Rated V_R , $T_A = 100\text{ }^\circ\text{C}$, 300 μs minimum pulse)	I_R	20	μA
Reverse Recovery Time ($I_F = 500\text{ mA}$, $I_R = 1\text{ Amp}$, $I_{RR} = 250\text{ mA}$, $T_A = 25\text{ }^\circ\text{C}$)	t_{RR}	150	nsec
		200	
Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25\text{ }^\circ\text{C}$, $f = 1\text{MHz}$)	C_J	20	pF

**CASE OUTLINE:
Axial**

Dimensions		
DIM	MIN	MAX
A	.100"	.150"
B	---	.180"
C	.027"	.033"
D	1.00"	---

**CASE OUTLINE:
Surface Mount Round Tab**

Dimensions		
DIM	MIN	MAX
A	.095"	.105"
B	.185"	.205"
C	.015"	.035"

**CASE OUTLINE:
Surface Mount Square Tab**

Dimensions		
DIM	MIN	MAX
A	.134"	.153"
B	.200"	.280"
C	.022"	.028"
D	.002"	---