



Solid State Devices, Inc.

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SPD4963-1 thru SPD4963-3

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SPD4963

Screening ^{2/}

___ = Not Screened

TX = TX Level

TXV = TXV

S = S Level

Reverse Voltage

-1 = 550V

-2 = 670V

-3 = 800V

1 AMP
550 – 800 VOLTS
130 nsec
FAST RECOVERY
RECTIFIER

FEATURES:

- Fast Recovery: 130 nsec maximum
- PIV up to 800 Volts
- Low Reverse Leakage Current
- Hermetically Sealed
- Single Chip Construction
- High Surge Rating
- Low Thermal Resistance
- TX, TXV, and Space Level Screening Available^{2/}

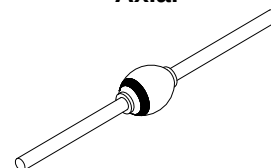
MAXIMUM RATINGS		Symbol	Value	Units
DC Blocking Voltage	SPD4963-1	V_R	500	Volts
	SPD4963-2		600	
	SPD4963-3		600	
Peak Repetitive Reverse Voltage	SPD4963-1	V_{BR}	550	Volts
	SPD4963-2		670	
	SPD4963-3		800	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A=25^{\circ}\text{C}$)		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; $T_A=25^{\circ}\text{C}$)		I_{FSM}	20	Amps
Operating and Storage Temperature		$T_{OP} \text{ \& } T_{stg}$	-65 to +175	$^{\circ}\text{C}$
Maximum Thermal Resistance Junction to Lead, $L = 0.375"$		$R_{\theta JL}$	40	$^{\circ}\text{C/W}$

NOTES:

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

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

Axial



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

DATA SHEET #: RC0051C

DOC

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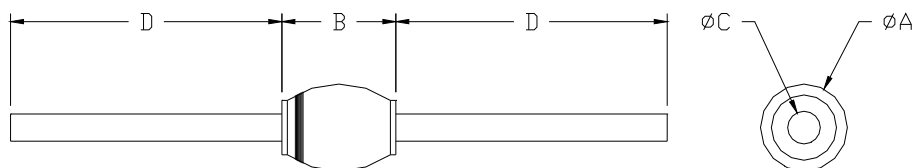
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SPD4963-1 thru SPD4963-3

ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 1 A_{DC}$, $T_A = 25^\circ C$, 300 - 500 μ sec Pulse)	SPD4963-1	V_{F1}	—	1.30	Volts
	SPD4963-2		—	1.30	
	SPD4963-3		—	1.35	
Instantaneous Forward Voltage Drop ($I_F = 60 A_{DC}$, $T_A = 25^\circ C$, 50 - 500 μ sec Pulse)	ALL	V_{F2}	—	10.0	Volts
Reverse Breakdown Voltage ($I_R = 100 \mu A_{DC}$, $T_A = 25^\circ C$, 300 μ sec min Pulse)	SPD4963-1	V_{BR}	550	—	Volts
	SPD4963-2		670	—	
	SPD4963-3		800	—	
Reverse Leakage Current (Rated V_R , 300 μ sec min Pulse)	$T_A = 25^\circ C$	I_{R1}	—	2	μA
	$T_A = 150^\circ C$	I_{R2}	—	1	mA
Storage Charge ($I_F = 100 mA$, $T_A = 25^\circ C$)		Q_s	—	30	nC
Reverse Recovery Time ($I_F = 500 mA$, $I_R = 1 A$, $I_{RR} = 250 mA$, $T_A = 25^\circ C$)		t_{rr}	—	130	ns

Case Outline:

DIM	MIN	MAX
A	--	0.120"
B	--	0.250"
C	0.027"	0.033"
D	1.00"	—

NOTES:

Consult manufacturing for operating curves.

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