



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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SPD9442

RADIATION DETECTOR PIN DIODE

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SPD9442 _ _

L Screening ^{2/}
_ = Not Screened
TX = TX Level
TXV = TXV
S = S Level

Package Type
_ = Axial Leaded
SMS = Surface Mount Square Tab

- FEATURES:**
- High Photocurrent Sensitivity
 - Linear Output > 4 Decades*
 - Fast Rise Time: < 20 nsec
 - High Reliability Construction
 - Tungsten Pins
 - Hardness to Neutron Bombardment
 - Low Operating Voltage
 - Wide Dynamic Range
 - Effective Detector of Nuclear and Electromagnetic Radiation (i.e. Gamma Radiation, Electrons, and X-rays)
 - Not Restricted to Use at Low Temperatures; Temperature range of -65°C to +200°C
 - Available in Surface Mount
 - Higher Performance than Unitrode's UM9442
 - TX, TXV, and S-Level Screening Available ^{2/}

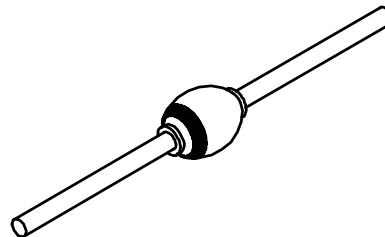
MAXIMUM RATINGS ^{3/}

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage DC Blocking Voltage	V _R	100	Volts
Photocurrent	I _P	5	Amps
Operating & Storage Temperature	T _{OP} and T _{STG}	-65 to +200	°C

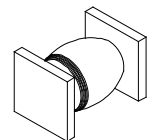
NOTES:

- ^{1/} For Ordering Information, Price, and Availability- Contact Factory.
^{2/} Screening Based on MIL-PRF-19500. Screening Flows Available on Request.
^{3/} Unless Otherwise Specified, All Electrical Characteristics @25°C.

Axial Leaded



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ELECTRICAL CHARACTERISTICS ^{3/}

CHARACTERISTICS	SYMBOL	MIN	MAX	UNIT
Photocurrent, Bias = 15V min 10 ⁶ (RAD(Si)/Sec) Gamma Radiation	I_P	5 5	-- --	nQ/(RAD(Si) mAdc
Capacitance (VR = 50V, f = 1MHz)	C_J	--	11	pF
Reverse Leakage Current (VR = 50Vdc)	I_R	--	500	nAdc
Breakdown Voltage (I _r = 100 μAdc)	BV_R	100	--	Vdc

AXIAL

DIMENSIONS		
DIM	MIN	MAX
A	---	.200"
B*	---	.300"
C**	.037"	.041"
D	.75"	---

* .175" max special order available.
** .028/.032 special order available.

The drawing shows a side view of the component with dimensions D (lead length), B (body length), and ØC (lead diameter). A top view shows the component with dimensions ØC (outer diameter) and ØA (inner diameter).

