



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SPD9442

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

RADIATION DETECTOR PIN DIODE

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/}

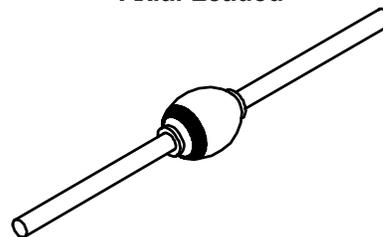
MAXIMUM RATINGS ^{3/}

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

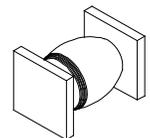
NOTES:

- 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



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 #: RC0131A

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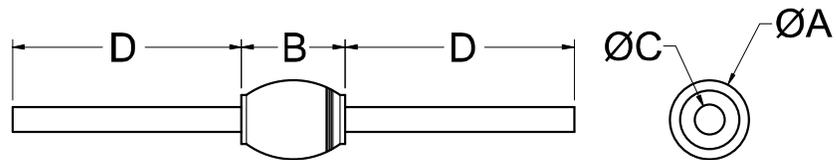
ELECTRICAL CHARACTERISTICS ^{3/}

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

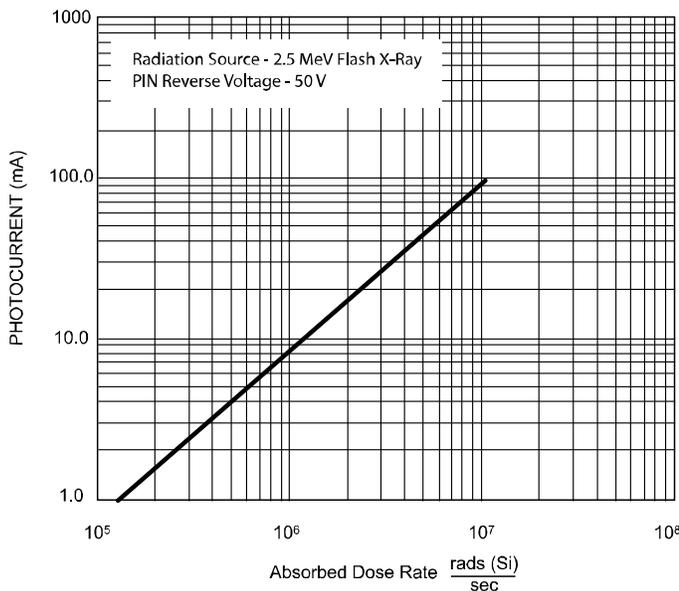
DIMENSIONS

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

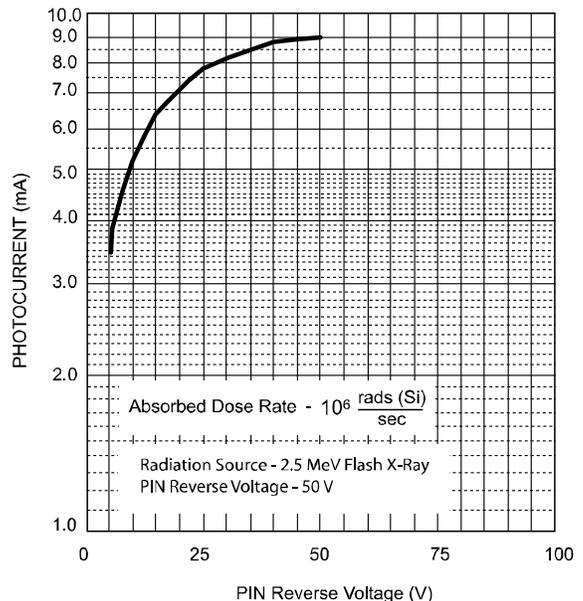


* .175" max special order available.
 ** .028/.032 special order available.

TYPICAL PHOTOCURRENT SENSITIVITY



TYPICAL VOLTAGE SENSITIVITY



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