



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

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

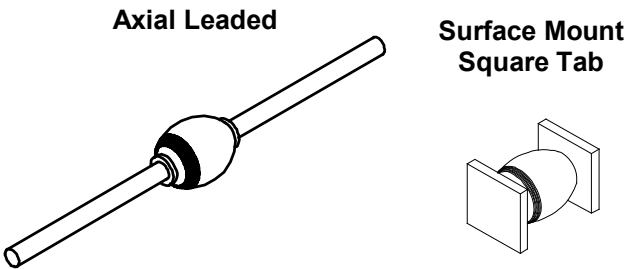
Package Type
_ = Axial Leaded
SMS = Surface Mount Square Tab

- 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.





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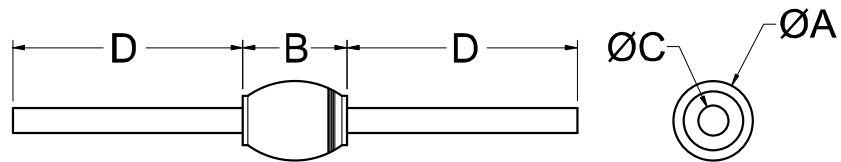
ELECTRICAL CHARACTERISTICS ^{3/}

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

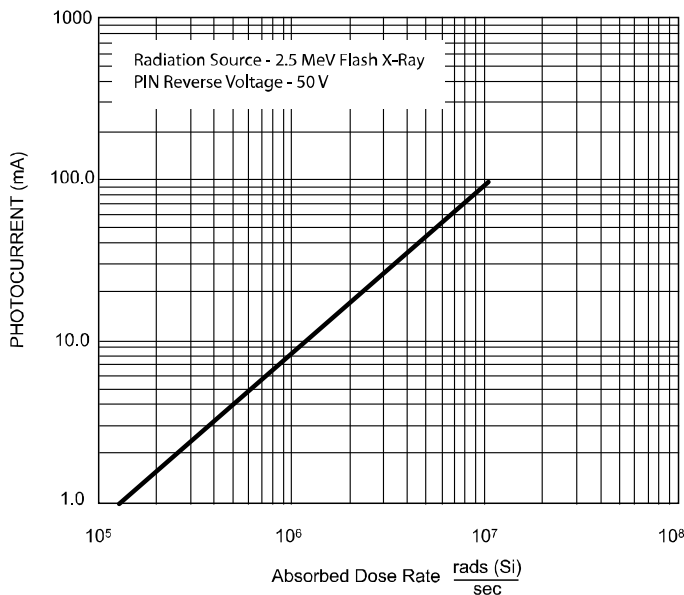
DIMENSIONS

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

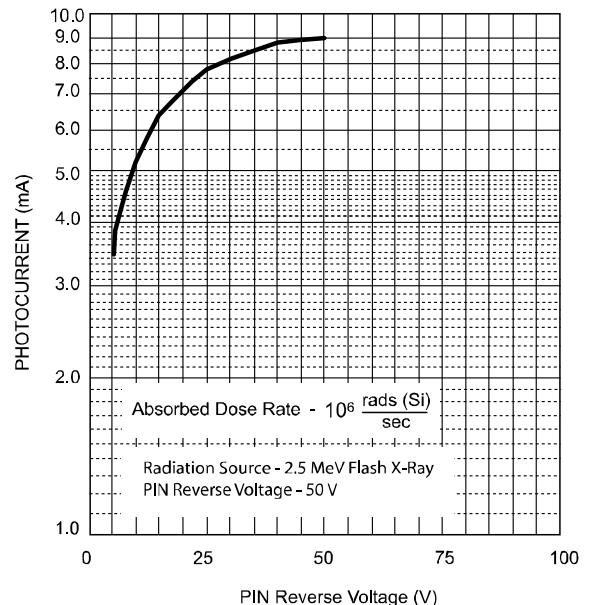


* .175" max special order available.
 ** .028/.032 special order available.

TYPICAL PHOTOCURRENT SENSITIVITY



TYPICAL VOLTAGE SENSITIVITY



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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