



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	V
Photocurrent	I_P	5	A
Operating & Storage Temperature	T_{OP} and T_{STG}	-65 to +200	°C

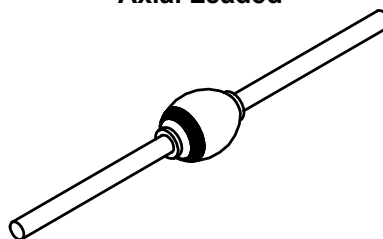
NOTES:

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

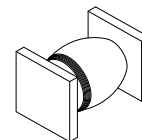
^{2/} Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

^{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 #: RC0131B

DOC



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ELECTRICAL CHARACTERISTICS ^{3/}

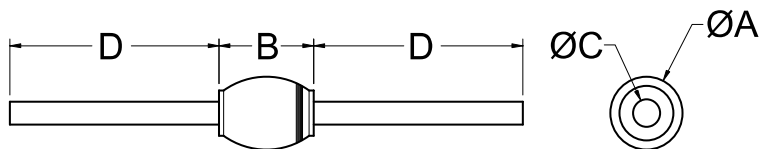
CHARACTERISTICS	SYMBOL	MIN	MAX	UNIT
Photocurrent, Bias = 15V min 10 ⁶ (RAD(Si)/Sec) Gamma Radiation	I _P	5 5	-- --	nQ/(RAD(Si) mAdc
Capacitance (VR = 50V, f = 1MHz)	C _J	--	11	pF
Reverse Leakage Current (VR = 50Vdc)	I _R	--	500	nAdc
Breakdown Voltage (Ir = 100 µAdc)	BV _R	100	--	Vdc

AXIAL

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

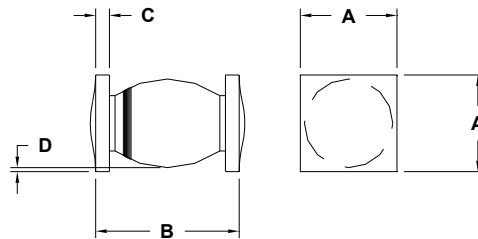
* .175" max special order available.

** .028/.032 special order available.

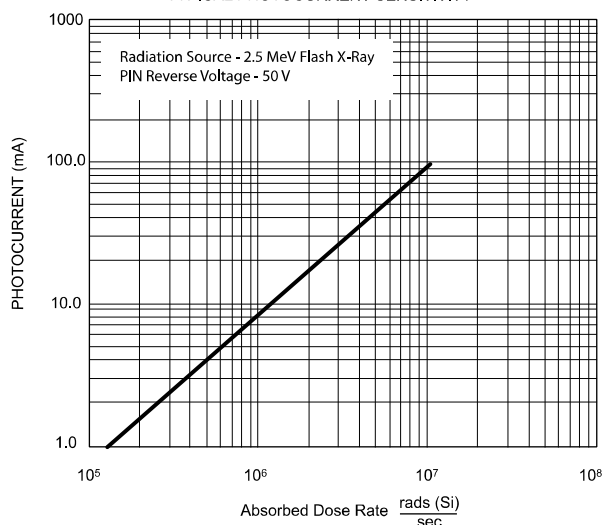


SMS

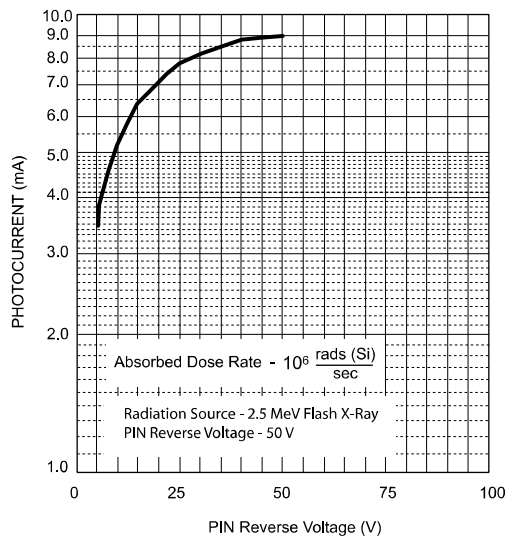
DIM	MIN	MAX
A	.197"	.203"
B	—	.350"
C	.019"	.027"
D	.002"	—



TYPICAL PHOTOCURRENT SENSITIVITY



TYPICAL VOLTAGE SENSITIVITY



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