



FEATURES

- Large active area
- Low Capacitance
- High speed
- High responsivity

DESCRIPTION

The **SD 551-23-41-221** is a NIR enhanced silicon P-type detector used for applications requiring fast response with low capacitance and high responsivity packaged in a hermetic TO-8 metal package.

APPLICATIONS

- Laser guided munition

ABSOLUTE MAXIMUM RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	PARAMETER	MIN	MAX	UNITS
V_{BR}	Reverse Voltage		180	V
T_{STG}	Storage Temperature	-55	+100	°C
T_O	Operating Temperature	-40	+85	°C
T_S	Soldering Temperature*		+260	°C

* 1/16 inch from case for 3 seconds max.

ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C UNLESS OTHERWISE NOTED

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_D	Dark Current	$V_R = 180\text{ V}$		40	1000	nA
C_J	Junction Capacitance	$V_R = 180\text{ V}, f = 100\text{ KHz}$		12	15	pF
R	Responsivity	$\lambda = 1064\text{ nm}, V_R = 180\text{ V}$	0.41	0.48		A/W
V_{BR}	Breakdown Voltage	$I = 10\text{ }\mu\text{A}$	200			V
NEP	Noise Equivalent Power	$V_R = 180\text{ V @ } \lambda = 1064$		2.3×10^{-13}		W/ $\sqrt{\text{Hz}}$
t_r	Response Time**	$RL = 50\text{ }\Omega, V_R = 180\text{ V}$		10	12	nS

**Response time of 10% to 90% is specified at 660nm wavelength light.

Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice.