

InGaAs NIR Photodiodes

KPDF030F22-H8

Characteristics

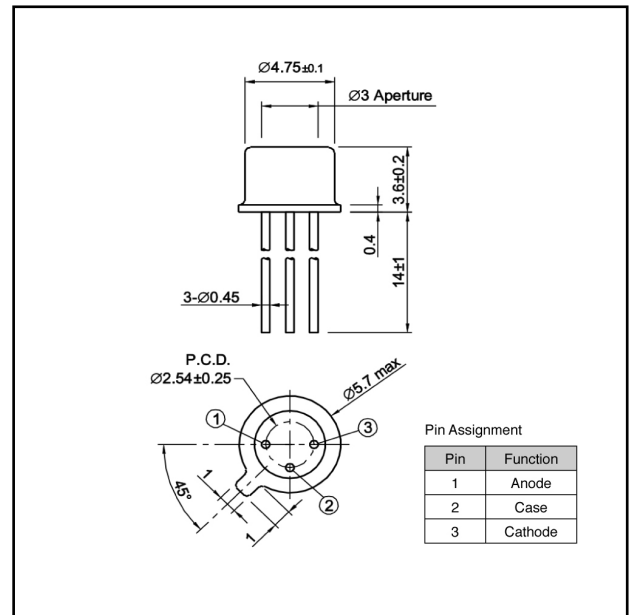
- Cutoff wavelength 2200nm
- Much higher responsivity and speed than conventional near infrared (NIR) detectors
- Operable with the photovoltaic mode under zero bias or low reverse bias mode

Applications

- Gas analyzers
- Water content analyzers
- Hydrocarbon sensors
- NIR spectroscopy
- Radiometry
- Power meters

Package

- TO-CAN



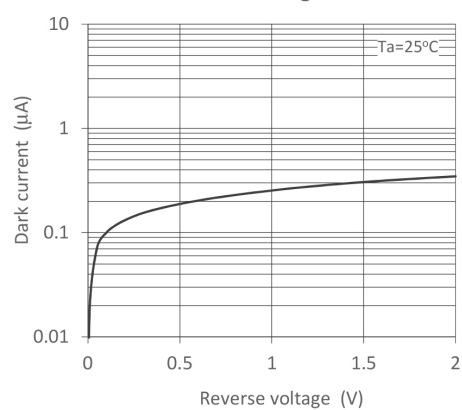
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
Reverse voltage	V_R	2	V	-
Reverse Current	I_R	2	mA	-
Forward current	I_F	10	mA	-
Operating temperature	T_{opr}	-40 to +85		Avoid dew condensation
Storage temperature	T_{stg}	-55 to +125		Avoid dew condensation
Soldering temperature	T_{sol}	260		Soldering time less than 5 seconds

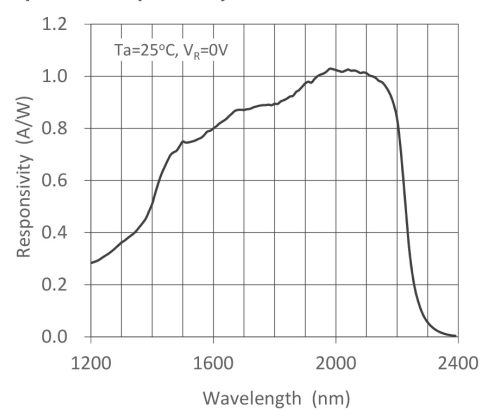
Electrical and Optical characteristics (Ta=25 unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active area	S	-	300	-	μm	-
Sensitive wavelength		1200	2000	2300	nm	-
Bandwidth	BW	-	100	-	MHz	$V_R=1V$ $R_L=50$
Responsivity	R	-	1.0	-	A/W	$V_R=0V$ $\lambda=1950\text{nm}$
Dark current	I_D	-	0.25	-	μA	$V_R=1V$
Terminal capacitance	C_t	-	20	-	pF	$V_R=1V$ $f=1\text{MHz}$

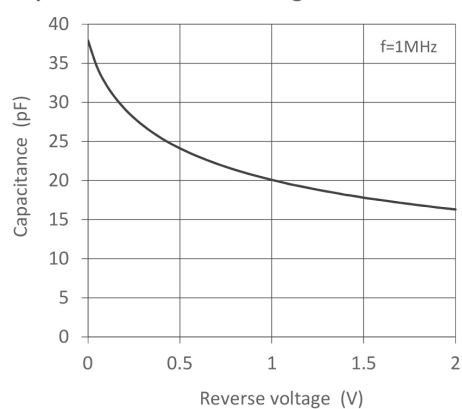
Dark Current - Reverse Voltage



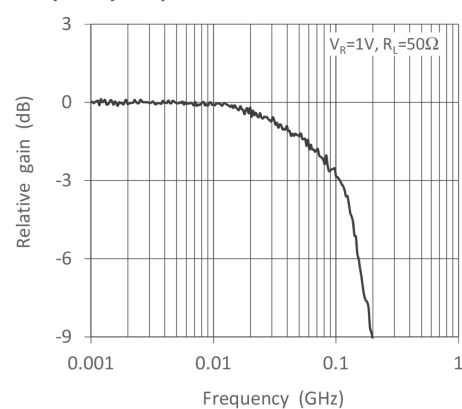
Spectral Responsivity



Capacitance - Reverse Voltage



Frequency Response



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