High speed Photodiode

OSX1245

Description

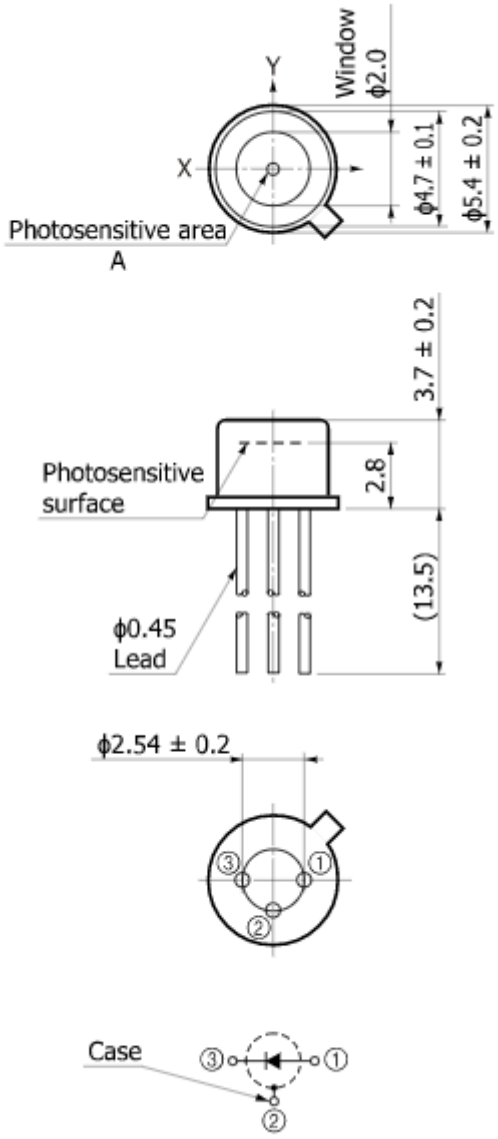
The OSX1245 is high speed, high sensitivity silicon Photodiode with high bandwidth.

Features

* High speed response
* Low dark current
* High reliability in demanding environments
* Operating temperature is from -40 to +80℃
*Storage temperature is from -40 to +100℃

Applications

* High speed photometry
* High speed switch
* pulse light detection
* High speed optical communications
* Fiber optic light monitoring



NOTES:

All dimension are in millimeters.

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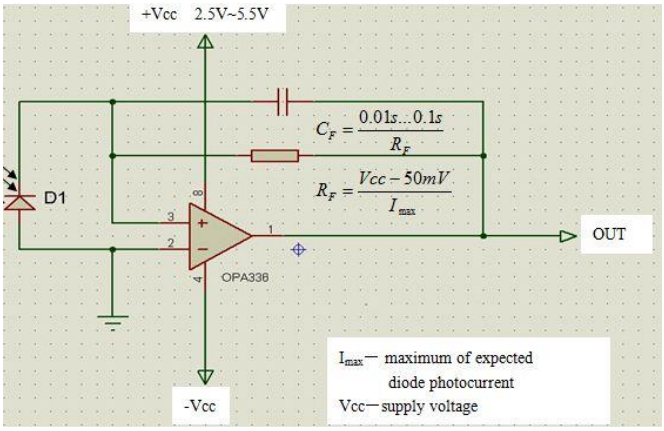
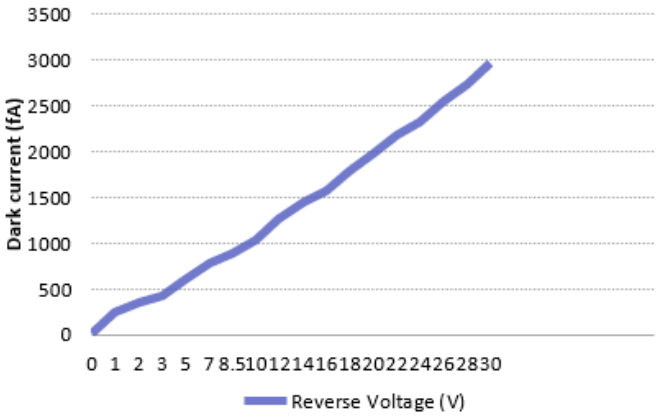
Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size	S			1.524*1.524		mm
Active area	A			1.245*1.245		mm
Dark current	I_D	VR=0V		0.01		nA
Temp coefficient of I_D	T_{CID}			0.18		times/℃
Rise time	t_R	V_R=5V;λ=850nm;R_L=50Ω		5		ns
Reverse breakdown voltage	$V_{(BR)R}$	I_R=100μA Ev=0lx	60			V
Junction Capacitance	C_J	V_R=3V f=1MHz		6.1		pF
Photo sensitivity	S_R	830nm		0.54		A/W
Spectral Application Range	λ_{range}		400		1100	nm
Spectral Response-Peak	λ_p			830		
Shunt resistance	R_{sh}	V_R=10mV		1.0		GΩ
Rsh Temperature Coefficient	TC R_{sh}	Ev=100lx , VR=10mV		0.18		%/℃
Angular Resp 50% Resp Pt	$\theta_{1/2}$			±35		Degrees
Noise Equivalent Power	NEP	V_R =0V λ=830nm		1.8×10^{-15}		$W/Hz^{1/2}$
Specific Detectivity	D*	V_R =0V λ=830nm		3.8×10^{14}		$cm(Hz/W)^{1/2}$

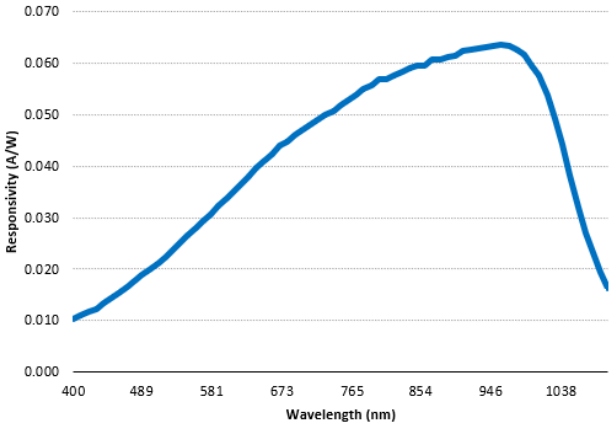
Application Circuit:



■Dark current vs. reverse voltage



■ Spectral response



■ Capacitor vs. reverse voltage