

InGaAs Avalanche Photodiode

Features

- High sensitivity (-32dBm)
- Differential output (50Ω)
- 5 pin coaxial package
- Pigtail type and LC-ROSA are available as an option

Package drawings are seen in datasheet of 'Package Option for KPDX, KPDXA, KPGX, KPIX Series.'

Specifications

Absolute Maximum Ratings

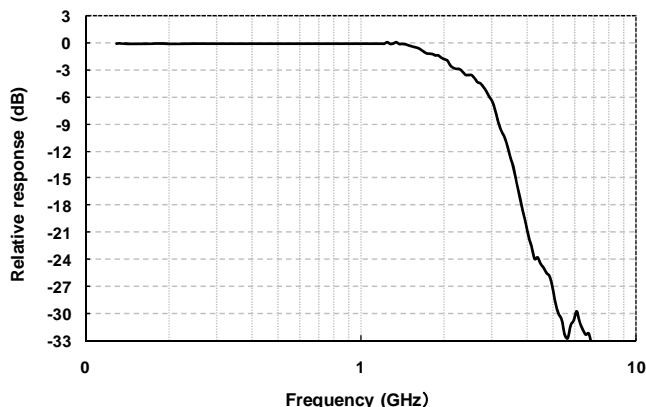
Parameter	Symbol	Value	Unit
Supply voltage	V_{cc}	-0.5 to +6.0	V
APD reverse voltage	V_R	0 to V_B	V
APD forward current	I_F	1	mA
APD reverse current	I_R	1	mA
Operating temperature	T_{opr}	-40 to +85	°C
Storage temperature	T_{stg}	-40 to +85	°C

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

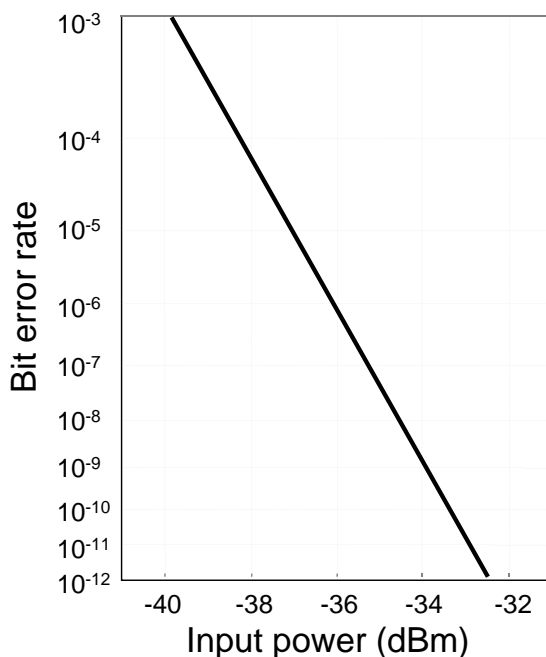
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Operating voltage	V_{op}	3.0	3.3	5.5	V	
Supply current	I_{cc}		34	63	mA	
Sensitive wavelength	λ	1250		1650	nm	
Multiplication factor	M	20			-	
Bit rate	BR		2.5		Gbps	
Bandwidth @-3dB	BW	2.0			GHz	$R_L=50\Omega$, $P_i=-10\text{dBm}$, $M=10$
Optical sensitivity	P_{min}		-32		dBm	differential, BER=10 ⁻¹⁰
Output impedance	Z_o	48	50	52	Ω	single ended
Differential output voltage	V_o		323	633	mVpp	$R_L>50\Omega$, single ended, $M=10$
Noise equivalent power	NEP			916	nWrms	
Transimpedance	Z_t	2.10	2.70	3.40	kΩ	differential
Active diameter	D	55			μm	
Responsivity	R	0.8	0.9		A/W	$\lambda=1310\text{nm}$, $M=1$
		0.9	1.0			$\lambda=1550\text{nm}$, $M=1$
Breakdown voltage	V_B	40	45	60	V	$I_D=10\mu\text{A}$
Temperature coefficient of V_B	$\Delta V_B/\Delta T$		0.09	0.12	V/°C	

Specifications are subject to change without notice.

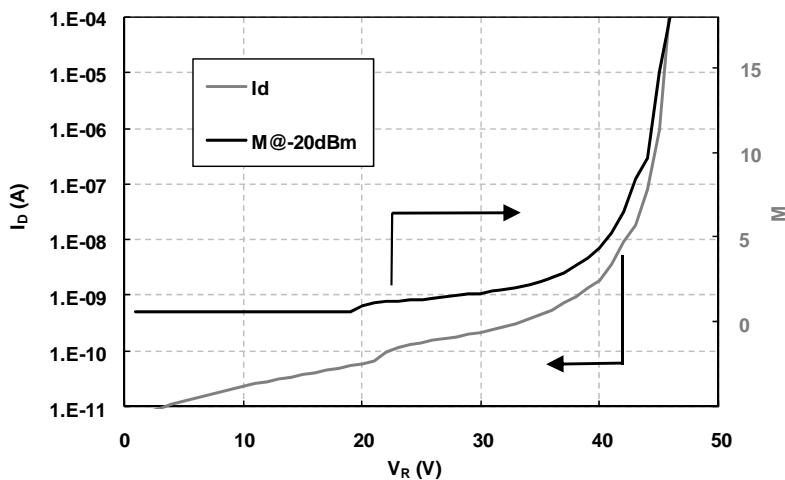
Frequency response



KPDXA2G Bit error rate



Dark current and gain



Specifications are subject to change without notice.

Contacts:

www.kyosemi.co.jp / info@kyosemi.co.jp

Kansai Sales Office: 949-2 Ebisu-cho, Fushimi-ku, Kyoto, 612-8201 Japan Tel: +81 75 605 7311 Fax: +81 75 605 7312 (Overseas Sales Dept.)

Tokyo Sales Office: 24th Sky Building, 2nd Floor, 1-34-3 Shinjuku, Shinjuku-ku, Tokyo 160-0022 Japan Tel: +81 3 5312 5360 Fax: +81 3 5312 5367

Eniwa Operation: 385-31 Toiso, Eniwa-shi, Hokkaido 061-1405 Japan Tel: +81 123 34 3111 Fax: +81 123 34 2110

Kyosemi Opto America Corp: 3003 Bunker Hill Lane, Suite 102, Santa Clara, CA 95054 USA Tel: +1 408 492 1486 Fax: +1 408 492 9843