

622Mbps Si PD-TIA Receiver

Features

- Coaxial TO-46 package
- $\phi 200\mu\text{m}$ large active area
- Wide operating voltage of 3.0V to 5.5V
- High level optical sensitivity (-23dBm at single)
- Cost effective

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

Applications

- Digital and analog optical VSR communication
- Optical LAN
- OE converters

Specifications

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Supply voltage	V_{cc}	0 to 5.5	V
Operating temperature	T_{opr}	-40 to +85	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-40 to +85	$^{\circ}\text{C}$

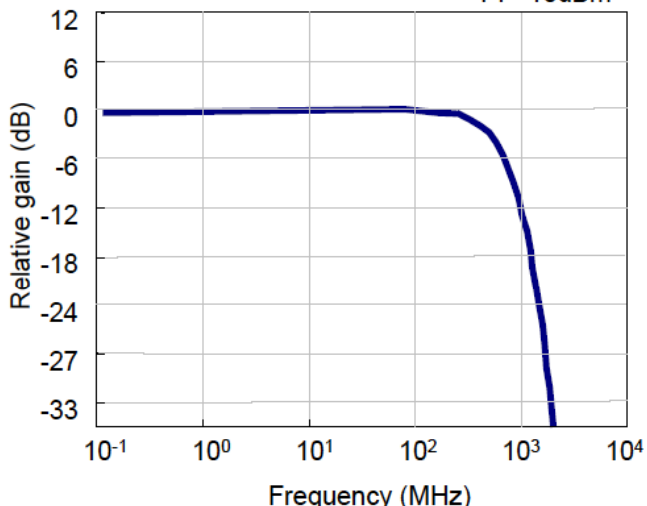
Electrical and Optical characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active diameter	D	200			μm	
Operating voltage	V_{op}	3.0		5.5	V	
Supply current	I_{cc}	14	23	36	mA	$V_{op}=3.3\text{V}$
		15	24	32	mA	$V_{op}=5.0\text{V}$
Bit rate	BR		622		Mbps	
Bandwidth @-3dB	BW		480		MHz	$R_L=50\Omega$, $P_i=-10\text{dBm}$, small signal modulation
Optical sensitivity	P_{min}		-23		dBm	single, BER= 10^{-10}
Output impedance	Z_o	35	50	65	Ω	single ended
Differential output voltage	V_o			1.2	Vpp	single ended
Photo-electric conversion efficiency	η_{PE}	7.5	7	18.5	kV/W	single ended

Specifications are subject to change without notice.

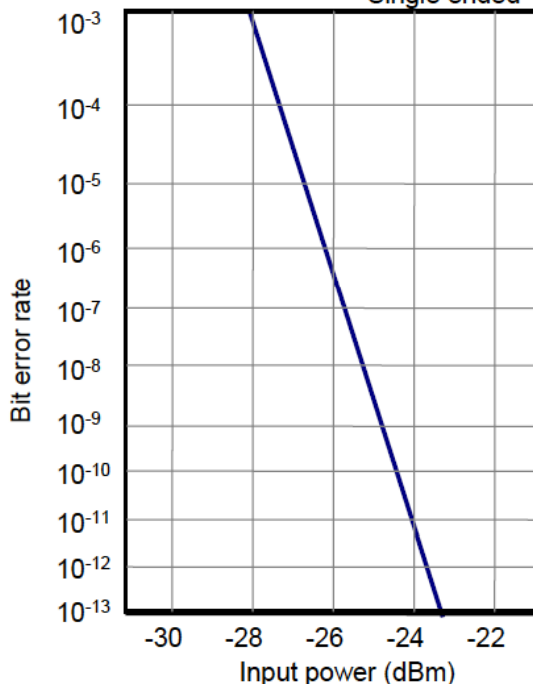
Frequency response

Pi=-10dBm



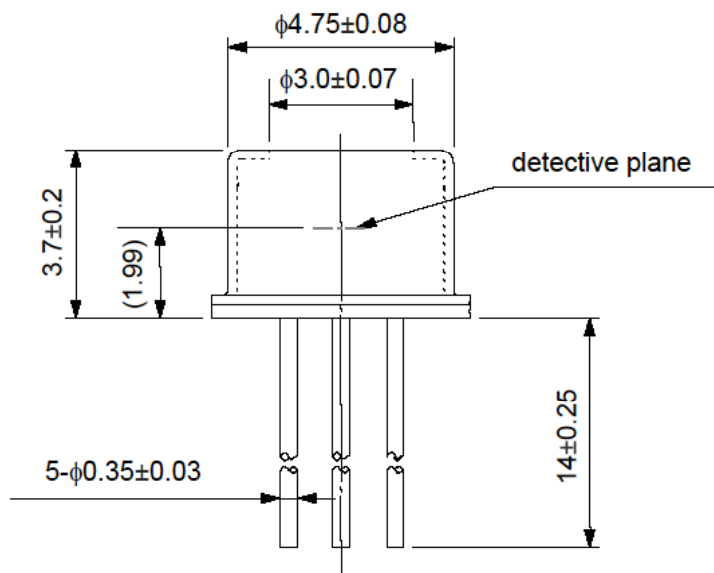
Bit error rate

Single ended

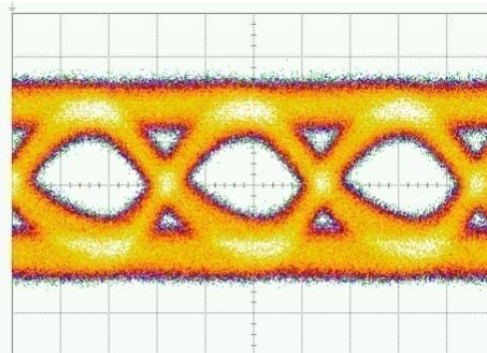


Package

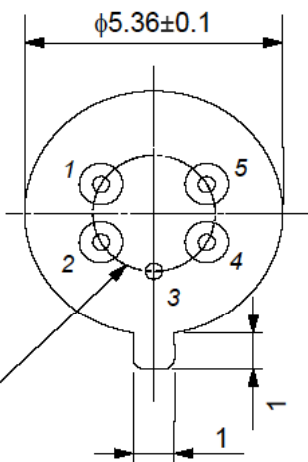
Dimensions (unit: mm)



Example eye diagram



Hor.: 10mV/div, Ver.: 500ps/div,
Pi = -21dBm, BR = 622Mbps



Pin assignment

KPIX600M-H33	
PIN	Function
1	PD IMON
2	OUT
3	GND
4	OUTB
5	VCC

Specifications are subject to change without notice.

Contacts:

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