

## 155Mbps Si PD-TIA Receiver

### Features

- Coaxial TO-46 package
- $\phi 500\mu\text{m}$  large active area
- Wide operating voltage of 3.0V to 5.5V
- High level optical sensitivity (-31dBm 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	$^{\circ}\text{C}$

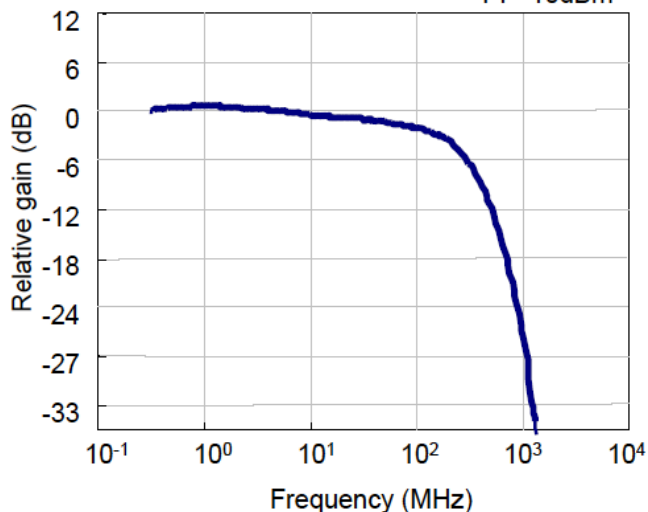
#### Electrical and Optical characteristics ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active diameter	D	500			$\mu\text{m}$	
Operating voltage	$V_{op}$	3.0		5.5	V	
Supply current	$I_{cc}$	14	23	31	mA	$V_{op}=3.3\text{V}$
		15	24	33	mA	$V_{op}=5.0\text{V}$
Bit rate	BR		155		Mbps	
Bandwidth @-3dB	BW	93	110		MHz	$R_L=50\Omega$ , $P_i=-10\text{dBm}$ , small signal modulation
Optical sensitivity	$P_{min}$		-31		dBm	single, BER= $10^{-10}$
Output impedance	$Z_o$	35	50	65	$\Omega$	single ended
Differential output voltage	$V_o$			600	mVpp	single ended
Photo-electric conversion efficiency	$\eta_{PE}$	28	40	52	kV/W	single ended

Specifications are subject to change without notice.

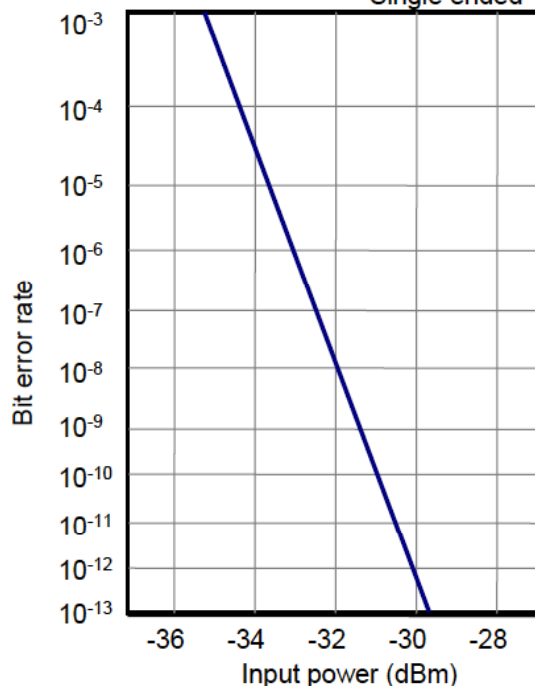
**Frequency response**

Pi=-10dBm



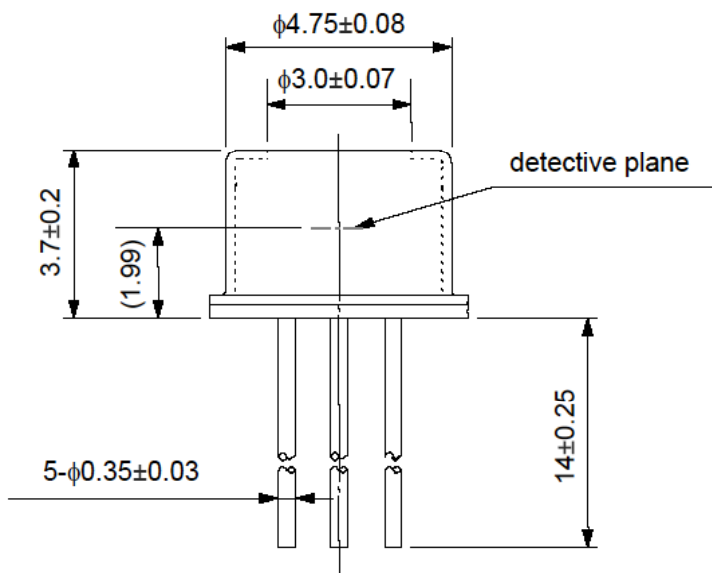
**Bit error rate**

Single ended

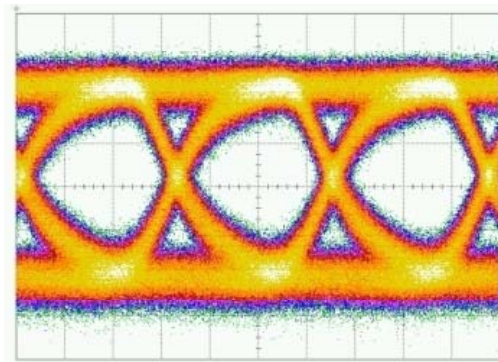


**Package**

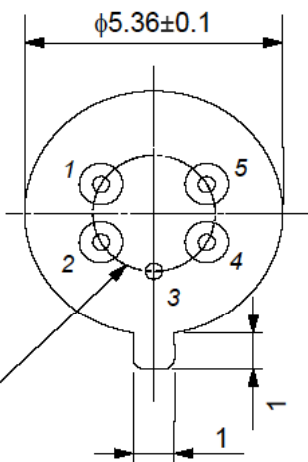
Dimensions (unit: mm)



**Example eye diagram**



Hor.: 10mV/div, Ver.: 2ns/div,  
Pi = -29dBm, BR = 155Mbps



**Pin assignment**

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

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