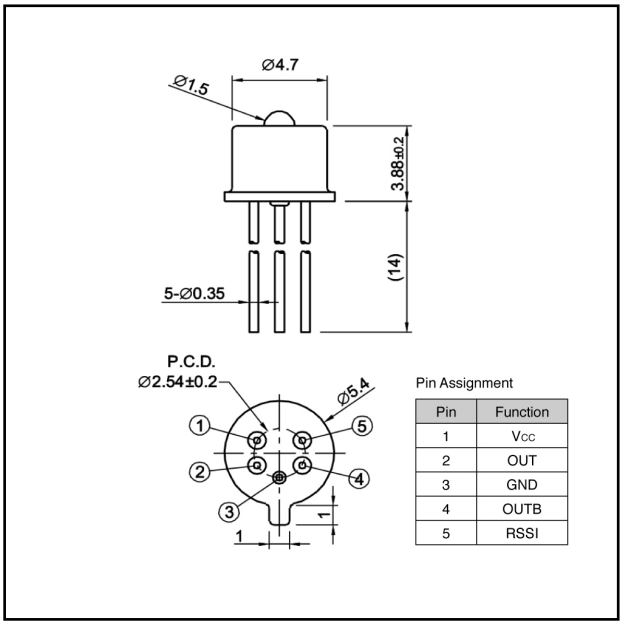
InGaAs PD-TIA Receivers

KPDX150MB-H33



Pin Assignment

Pin	Function
1	Vcc
2	OUT
3	GND
4	OUTB
5	RSSI

Characteristics

- High sensitivity -39dBm
- Low noise and high speed TIA
- 156Mbps (OC-3)
- AGC circuit
- PD monitoring current output 5 pin package

Applications

- Optical communications
- Optical LAN
- OE converters

Package

- TO-CAN

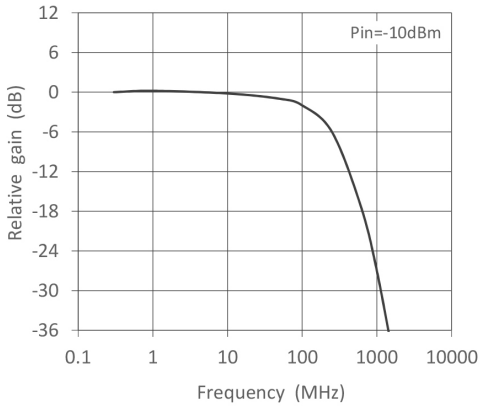
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
Supply voltage	V_{cc}	4.5	V	-
Operating temperature	T_{opr}	-40 to +85	℃	-
Storage temperature	T_{stg}	-40 to +85	℃	-

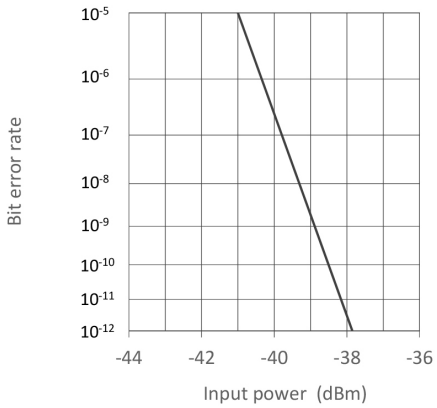
Electrical and Optical characteristics (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Sensitive wavelength	λ	900	-	1700	nm	-
Operating voltage	V_{op}	3	3.3	3.6	V	-
Supply current	I_{cc}	12	22	32	mA	V_{op}=3.3V
Bit rate	BR	-	156	-	Mbps	-
Bandwidth @-3dB	BW	110	140	-	MHz	R_L=50Ω P_i=-10dBm Small signal modulation
Optical sensitivity	P_{min}	-	-39	-	dBm	Single ended BER=10^{-10}
Output impedance	Z_o	25	40	100	Ω	single ended
Differential output voltage	V_o	-	-	800	mVpp	Differential (RL500Ω Single)
Photo-electric conversion efficiency	η_{PE}	22.8	26	-	kV/W	Single ended R_L>50Ω

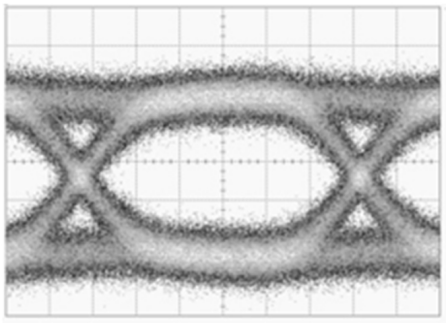
Frequency Response



Bit Error Rate



Eye Diagram



Hor. 1ns/div, Ver. 5mV/div, Pi=-36dBm, BR=155Mbps

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