

Features

- Low noise and high speed transimpedance amplifier built-in for optical data links in the wavelength of 850nm
- High reliability
- 5 pin package available for an independent PD connection or input power monitoring

**Applications**

- High speed data communications
- 1x/2x/4x Fibre Channel receivers
- Gigabit ethernet

1) KPGX2GK-LR33S**Absolute Maximum Ratings**

Parameter	Symbol	Value	Unit	Note
Supply voltage	V_{CC}	-0.5 to +6.0	V	
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	Test Condition
Operating voltage	V_{op}	3.0	3.3	3.6	V	
Supply current	I_{CC}	-	48	-	mA	
Bit rate	BR	-	2.5	-	Gbps	
Bandwidth @-3dB	BW	-	1.8	-	GHz	$R_L=50\Omega$, $P_i=-10\text{dBm}$
Optical sensitivity	P_{min}	-	-20	-	dBm	differential, BER= 10^{-10}
Output impedance	Z_O	40	50	60	Ω	single ended
Differential output voltage	V_O	160	200	240	mVpp	$R_L=50\Omega$
Photo-electric conversion efficiency	η_{PE}	-	6.25	-	kV/W	single ended, $R_L=50\Omega$

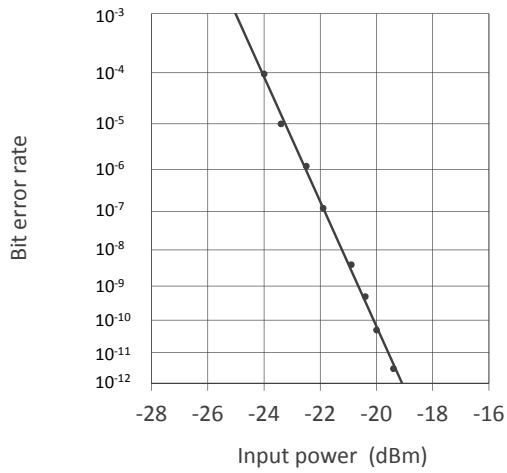
2) KPGX4G-LR33S**Absolute Maximum Ratings**

Parameter	Symbol	Value	Unit	Note
Supply voltage	V_{CC}	-0.3 to +4.0	V	
Operating temperature	T_{opr}	-40 to +85	°C	
Storage temperature	T_{stg}	-40 to +85	°C	

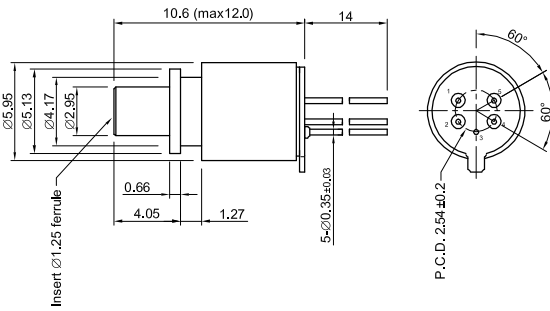
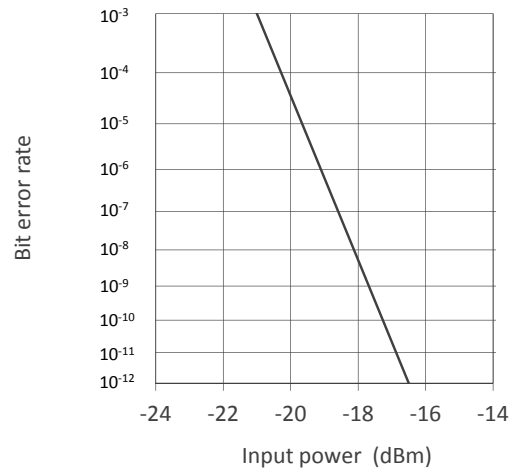
Electrical and Optical Characteristics (Ta=25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Operating voltage	V_{op}	3.0	3.3	3.6	V	
Supply current	I_{CC}	11	17	25	mA	
Bit rate	BR	-	4.25	-	Gbps	
Bandwidth @-3dB	BW	2.2	2.8	-	GHz	$R_L=50\Omega$, $P_i=-10\text{dBm}$
Optical sensitivity	P_{min}	-	-17	-	dBm	differential, BER= 10^{-10}
Output impedance	Z_O	40	50	60	Ω	single ended
Differential output voltage	V_O	85	130	187	mVpp	$R_L=50\Omega$
Photo-electric conversion efficiency	η_{PE}	-	1.6	-	kV/W	single ended, $R_L=50\Omega$

KPGX2GK Bit Error Rate



KPGX4G Bit Error Rate



Unit: mm

Pin	Function
1	VCC
2	OUT
3	GND
4	OUTB
5	RSSI (KPGX2GK) V _{PD} (KPGX4G)

- Specifications , characteristics, data, materials, structures specified in this datasheet are subject to change without notice. Please refer to the latest specification before use of the products.
- Products listed in this datasheet comply with the RoHS Directive (EU2002/95/EC).

Opto-technologies for the Future



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