

2.5Gbps 1260-1620nm APD plus AGC Pre-amplifier in TO-46 Package

Part No. APD-A13P5-2GB3

Features

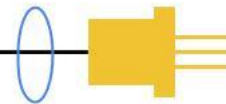
- 1310nm/1550nm continuous mode APDTIA TO
- Industry standard TO-46 package with short cap lens and tab-less
- Optimized for fiber optic application
- Design for long wavelength 2.5Gbps applications
- Supports +3.3V application



Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage temperature	-40	100	°C	
Operating temperature	-40	85	°C	
Lead solder temperature		260	°C	10 seconds

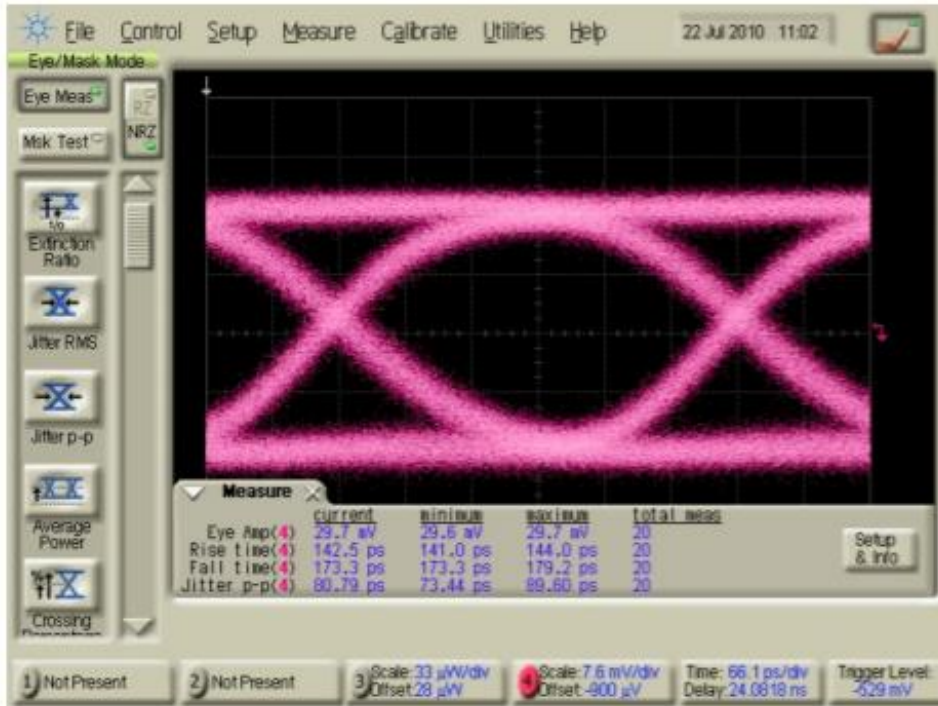
Electro-Optical Characteristics (Typical values are at + 3.3V@25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Power supply	V _{CC}	3.0	3.3	3.6	V	
Supply current	I _{CC}		43	50	mA	No loads
APDTIA breakdown voltage	V _{BR}	45		55	V	I _d = 10uA, T _A = 25°C
Operating voltage	V _{OP}		V _{BR} -2		V	V _{CC} = 3.3V
V _{BR} temperature coefficient	γ		0.1		V/°C	
Differential responsivity	R _d		28		mV/uW	λ = 1310nm, R _{load} = 100ohm, M=9, P= -30dBm
Single ended responsivity	R _s		14		mV/uW	λ = 1310nm, R _{load} = 50ohm, M=9, P= -30dBm
Small-signal bandwidth	BW	1.4			GHz	
Low frequency cut off	LF		20		kHz	
Rise/fall time (20-80%)	tr/tf		170	200	ps	P = -30dBm, M=9
Saturation power	P _{sat}	-7			dBm	λ = 1310nm, @2488.32Mbps
Single ended output impedance	R _O		50		ohm	
Wavelength	λ	1260		1620	nm	
Sensitivity				-31	dBm	λ = 1310nm, @2488.32Mbps, PRBS23, ER=10dB, BER=10 ⁻¹⁰



Typical Characteristics

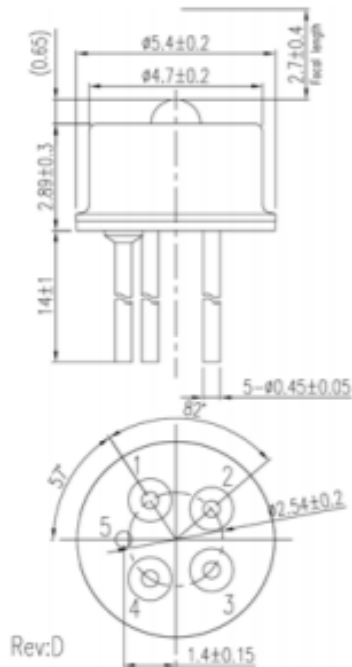
Eye Diagram

$R_{load} = 50\Omega$, $P = -30\text{dBm}@2488.32\text{Mbps}$, 1310nm, PRBS 23



$t_r=142.5\text{ps}$, $t_f=173.3\text{ps}$, Jitter p-p= 80.79ps

Outline Dimensions (unit: mm)



Pinout:

1. Dout
2. Vcc
3. Vapd
4. Dout
5. Gnd

Note: Specifications are subject to change without notice.