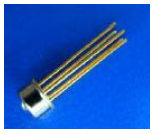
2.5Gbps InGaAs APD with AGC Pre-Amplifier
APD-A13P5-2GC3

Data Sheet



Features

- Industry standard TO-46 package with short cap lens and tab-less
- Gigabit-Capable Passive Optical Networks (GPON) application
- Design for long wavelength 2.5Gbps applications
- Supports +3.3V application

Specifications

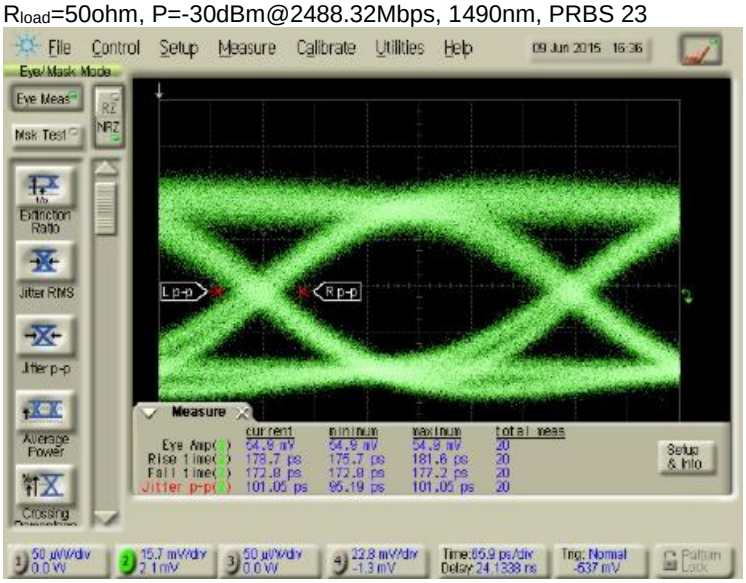
Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage temperature	-40	100	^oC	
Operating temperature	-40	85	^oC	
Lead solder temperature		260	^oC	10 seconds

Electro-Optical Characteristics (Typical values are at + 3.3V@25^oC)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Power supply	V_{CC}	3.0	3.3	3.6	V	
Supply current	I_{CC}	15	20	24	mA	No loads
APDTIA breakdown voltage	V_{BR}	34		55	V	I_d= 10uA, T_A=25^oC
Operating voltage	V_{OP}		V_{BR} -3		V	V_{CC}=3.3V
V_{BR} temperature coefficient	γ	0.081	0.11	0.120	V/ ^oC	T=-40 to 25^oC
		0.060	0.08	0.099		T=25 to 85^oC
Differential responsivity	R_d	30	50	80	mV/uW	λ=1490nm, R_{load}=100ohm, M=9, P=-30dBm, T_A=25^oC
Single ended responsivity	R_s	15	25	40	mV/uW	λ=1490nm, R_{load}=50ohm, M=9, P=-30dBm, T_A=25^oC
Small-signal bandwidth	BW	1.4			GHz	
Low frequency cut off	LF		30		kHz	
Saturation power	P_{sat}	-7			dBm	λ=1490nm, @2488.32Mbps
Single ended output impedance	R_O		50		ohm	
Wavelength	λ	1260		1620	nm	
Dynamic range		16			V	T=25^oC
Sensitivity				-32.0	dBm	λ=1490nm, @2488.32Mbps, PRBS23, ER=10dB, BER=10^{-10}, T_A=25^oC

Typical Characteristics

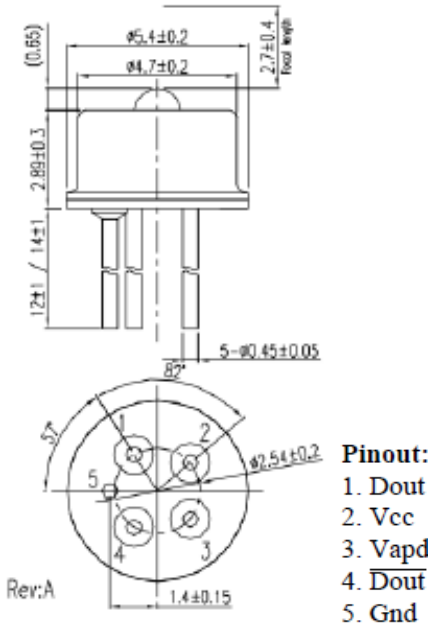
Eye Diagram

R_{load}=50ohm, P=-30dBm@2488.32Mbps, 1490nm, PRBS 23



tr=178.7ps, tf=172.8ps, Jitter p-p=101.05ps

Outline Dimensions (unit: mm)



Pinout:

1. Dout
2. Vcc
3. Vapd
4. $\overline{\text{Dout}}$
5. Gnd

Note: Specifications are subject to change without notice.