High-Gain Microwave Photonics Receiver



Description

This high-gain ultrafast photodetector is ideally suited for measuring weak optical waveforms. With only 100 µW of optical signal, it can generate a voltage waveform of more than 200 mV and can respond to frequencies up to 20 GHz (output impedance 50 Ω).
All photodiodes are enclosed in a compact and solid aluminum housing and are powered by an external power supply. Perfect impedance matching and state-of-the-art microwave technology ensure pulse form measurements without any ringing or artefacts.

Features

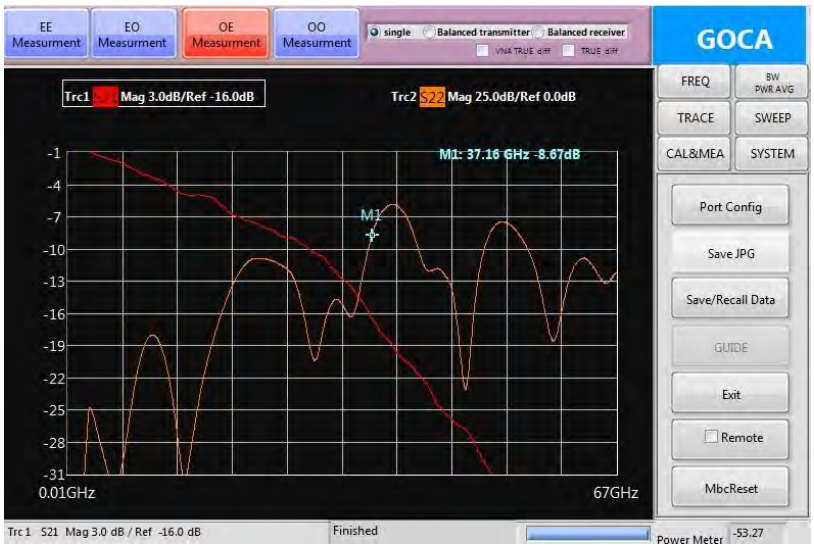
- Ultra High-Speed Operation
- Rise Times: starting from 1ps
- Bandwidths: up to 20 GHz
- Spectral Ranges: 900-1620 nm
- Compact Design
- External Power Supply
- Models for FC/APC Receptacle

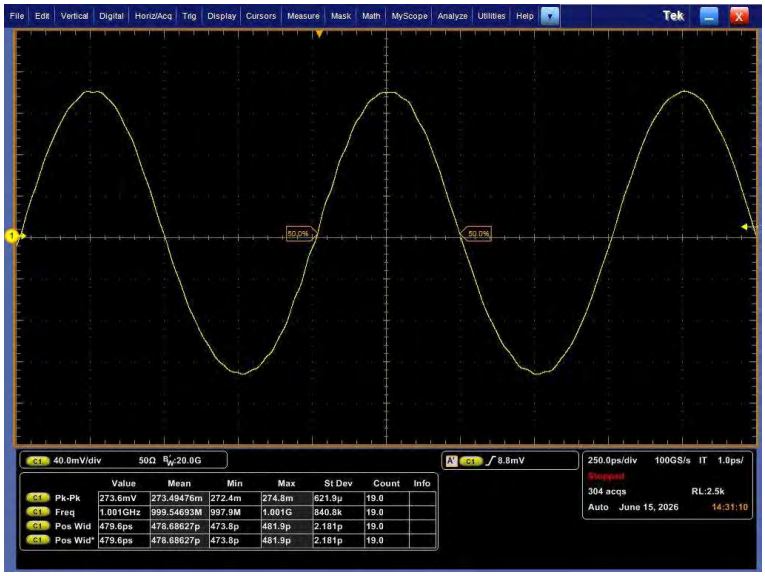
Specifications

Test conditions: 25 °C, unless otherwise specified

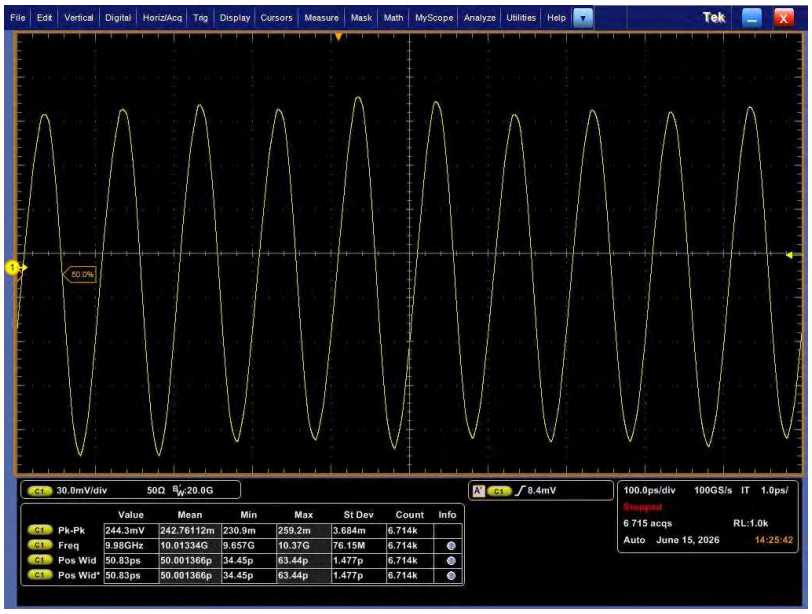
Parameters	Symbol	Test condition	Min.	Typ.	Max.	Unit
Operating Temperature	TO		0		75	°C
Storage Temperature	Ts		-40		85	°C
Operating Wavelength	λ		900-1620nm, Typ:1550			nm
Gain	G			3000		V/W
Active Area Diameter	Φ			16		μm
Saturation Optical Power	Ps	λ = 1550 nm		3		dBm
Responsivity	R	λ= 1550 nm		0.8		A/W
Dark Current	Id			50		nA
3dB Bandwidth	BW	Pin = 1 mW		20		GHz
Connector	\	\	2.92mm RF port, FC/APC connector			
Power Supply	V	5V				

Bandwidth and Responsivity value test

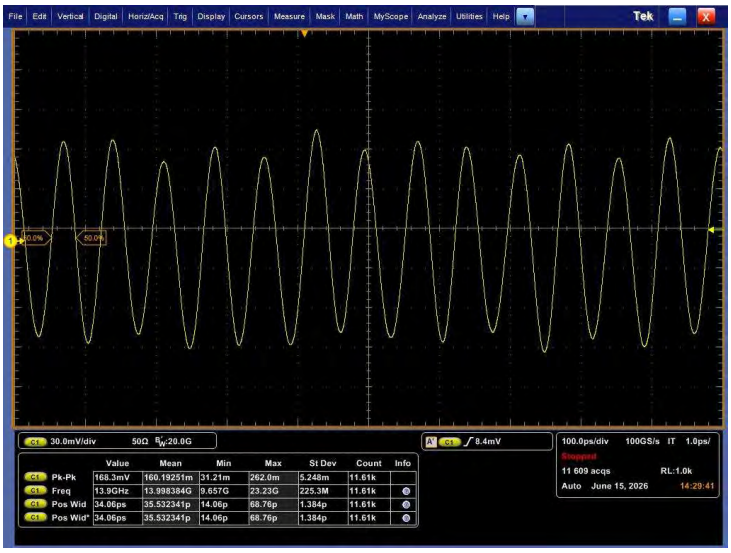




1GHz Signal Waveform(Pin=-10dBm)

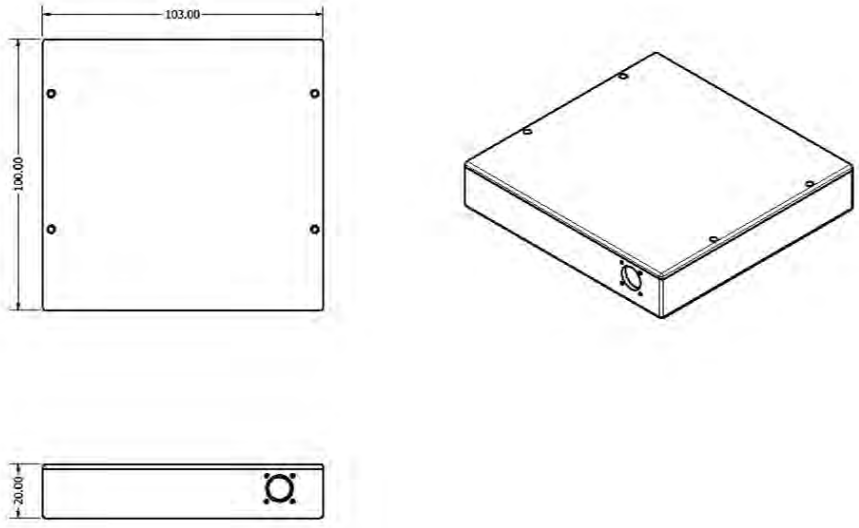


10GHz Signal Waveform(Pin=-10dBm)



14GHz Signal Waveform(Pin=-10dBm)

Dimension



Unit in mm

Application

- Pulse Form Measurements
- Pulse Duration Measurements
- Precise Synchronization
- Mode Beating Monitoring
- Heterodyne Measurements

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