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100 Gbit/s SELF-BIASED PHOTODETECTOR MODULE

AT A GLANCE

- O/E conversion without power supply
- Ultra-high bandwidth
- C-band operation

Features

- O/E conversion up to 107 Gbit/s
- In ESD critical environments, high-voltage (e.g. 100 kV) terminals
- No external biasing
- Wavelength range 1480-1620 nm
- Packaged into modules with fibre pigtail (FC/PC) and a female 1mm connector

Applications

- Remote sensing
- Remote o/e conversion
- Remote antenna feeding

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Miscellaneous Features

Operating bias	none, generated internally
Output match	to 50 Ohm (integrated)
Electrical coupling	DC
Optical input	FC/PC (or customer specific)
RF output	1 mm female (Agilent)
Max. optical input	+20 dBm

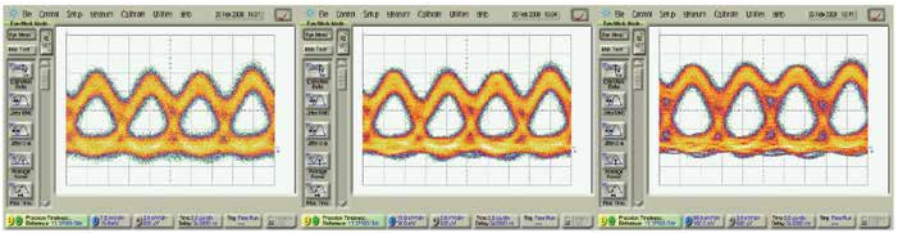
Preliminary Specifications

Responsivity	0.13 A/W (and higher)
3 dB bandwidth	73 GHz
PDL	0.4 dB
Power linearity	19 dBm (at 1 dB compression)
Dynamical range	> 55 dBel.
Pulse width	8 ps
Optical return loss	25 dB

Optical input condition

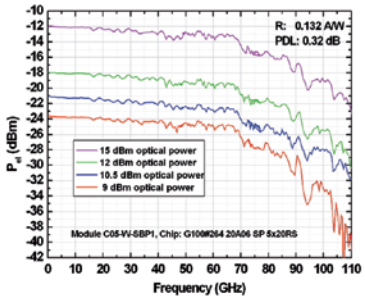
Opt. input pulses RZ: 2 ps, OTDM multiplexed, PRBS 2^7-1, recorded with scope: 70 GHz Agilent 86100B with 86118A.

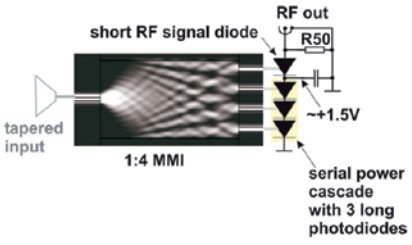
Eye Pattern at 107 Gbit/s Datarates



+6 dBm (7.5 mV/div) +9 dBm (15 mV/div) +15 dBm (50 mV/div)

Bandwidth and Dynamical Range





The Fraunhofer HHI

One of the prime research and development foci of the Fraunhofer Heinrich Hertz Institute lies in photonic networks, components and systems and their application in fields such as digital media.

Contact

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