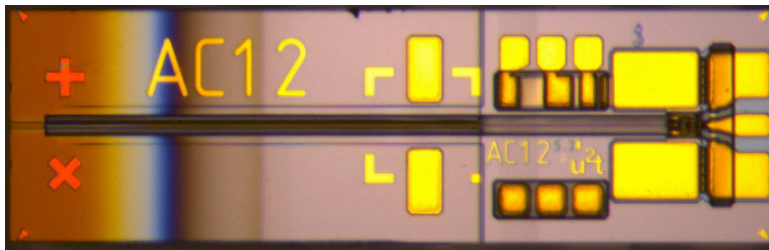


50 GHz HIGH SPEED PHOTODIODE

CXPDV2xx0R

The CXPDV2xx0R is an optimized photodiode, operating at the C- and O-bands. The chip provides a low PDL and comes with integrated chip biasing. The 50 Ω termination resistor provides excellent matching of the electrical output signal. An alternative configuration without 50 Ω termination is available (see CXPDV2xx0 with a bandwidth of 35 GHz). Due to the optimized combination of the waveguide and the active photodiode design, the CXPDV2xx0R achieves excellent linearity, high responsivity, and superior flatness of RF response and therefore ensures superb performance, even at high optical powers.



Picture shows product example, actual product might differ

FEATURES

- High 3dB bandwidth of >50 GHz
- Optical window at 1310 and 1550 nm
- Excellent linearity
- High responsivity of >0.5 A/W
- Low PDL of < 0.5 dB
- Superior flatness

APPLICATIONS

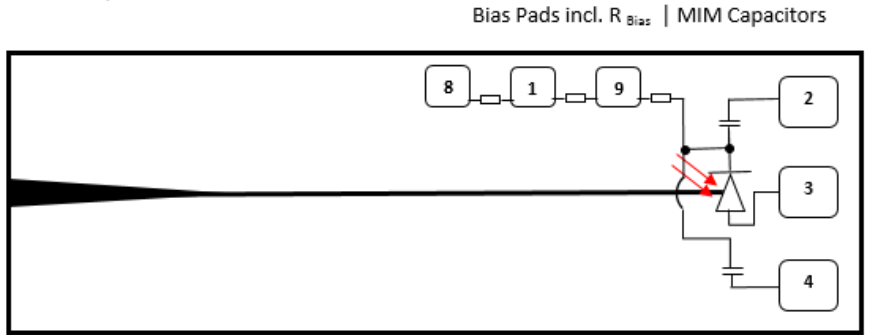
- Optical communication components
- Advance component R&D
- Microwave Photonics

Product Selection

CXPDV2xx0R

xx	12	= C-band
	32	= Dual band (O- and C- band)
	05	= Low PDL

Block Diagram

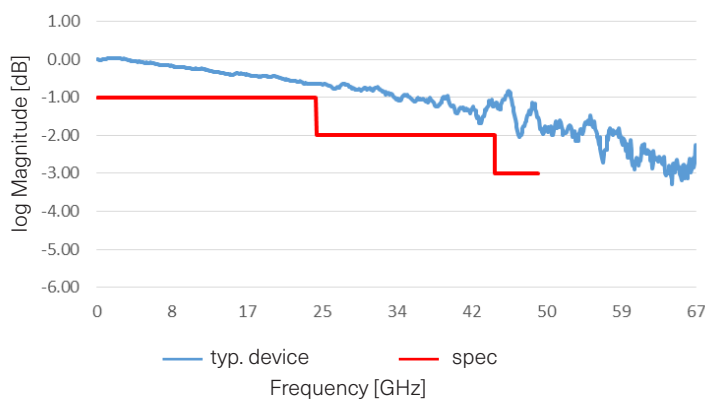


Spot-size converter | optical waveguide | Pin PD | RF out - CPW

Key Specifications

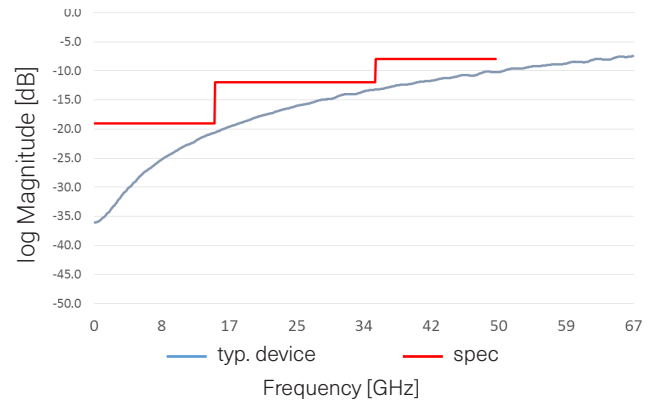
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Operating Case Temperature	T_{CASE}		0		75	°C
Storage Temperature	T_{STORE}		-40		125	°C
Wavelength Range	λ	CXPDV2320R CXPDV21x0R		1310 1550		nm
Photodiode Supply Voltage	V_{PD}			2.8		V
Average Optical Input Power	P_{OPT_avg}	At facet			16	dBm
Photodiode DC Responsivity	R		0.4			A/W
Polarization-Dependent Loss	PDL	CXPDV2x20R CXPDV2150R			0.5 0.25	dB
Photodiode Dark Current	I_{DARK}	$T_{CASE} = 25\text{ °C}$		5		nA
3 dB Cut-off Frequency	f_{3dB}		50			GHz
Output Reflection Coefficient	S_{22}				-1	dB

Bandwidth UPD 00-Type



Typical frequency response s_{21}

S22 Log Magnitude Plot



Typical backreflection s_{22}