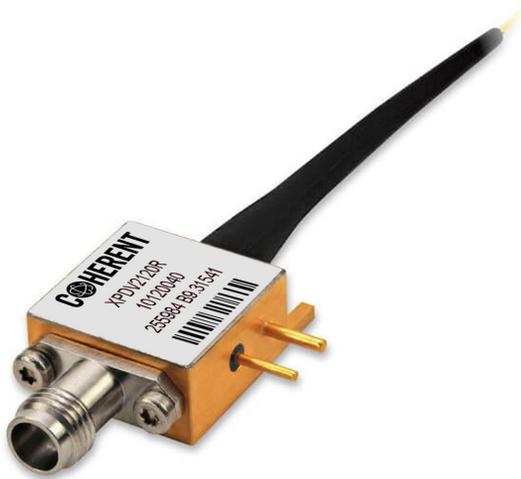


50 GHz HIGH SPEED PHOTODETECTOR

XPDV2xx0Rv

The XPDV2xx0Rv photodetector consists of a well-established, waveguide-integrated single photodiode chip, designed to exhibit an optimized frequency response in both power and phase. Due to experienced RF packaging, the pulse response shows almost no ringing. The integrated on-chip spot size converter leads to a high responsivity and ensures reliability and robustness of the detector. An advantage of the waveguide structure is the unsurpassed high-power behavior with linear response up to an optical input power of 10 dBm. XP DVs contain a unique on-chip integrated bias network and ensure undisturbed frequency response from DC to the 3 dB cut-off frequency. Besides the standard version optimized for C-band a dual window version supporting O- and C- band is offered.



Picture shows product example, actual product might differ

FEATURES

- 50 GHz typical bandwidth with flat response
- High linearity
- C- band and dual window (O- /C- band) version
- Unique on-chip integrated bias network

APPLICATIONS

- Microwave Photonics
- Analog Photonic links
- Radio-over-Fiber

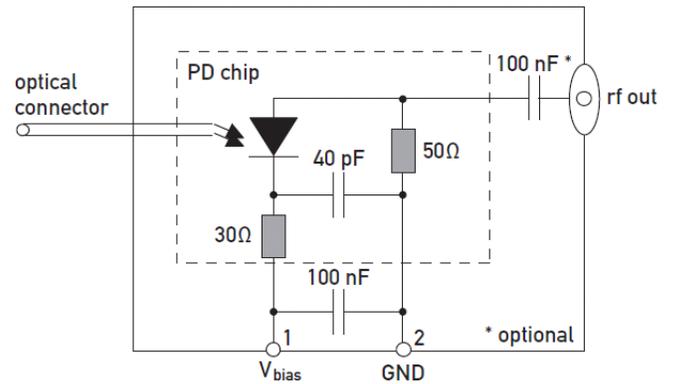
50 GHz HIGH SPEED PHOTODETECTOR

Product Selection

XPDV2xx0Rv-Vy-zz

xx	12	= C-band version
	15	= Low PDL version
	32	= Dual window version
v	A	= AC coupled
Vy	VF	= Female V [®] connector
	VM	= Male V [®] connector
zz	FP	= FC/PC connector (standard)
	FA	= FC/APC connector

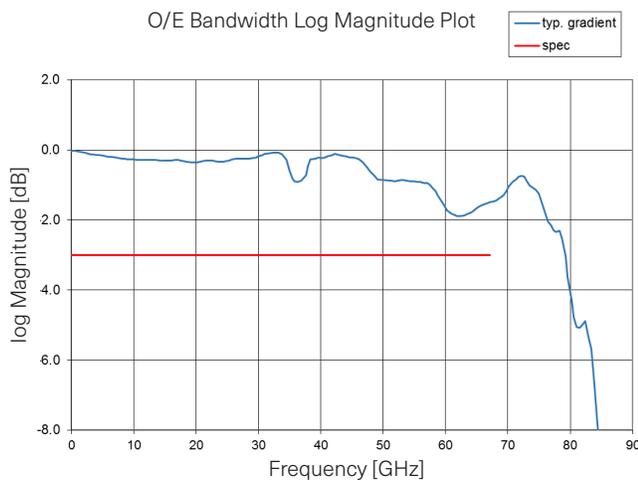
Block Diagram



Key Specifications

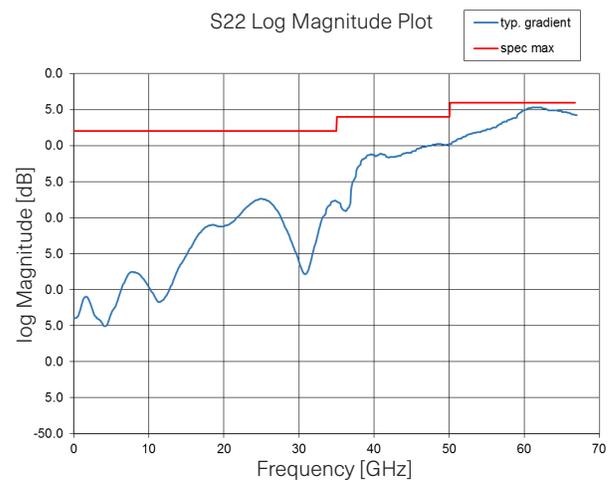
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Operating Case Temperature	T_{CASE}		0		75	°C
Storage Temperature	T_{STORE}		-40		85	°C
Wavelength Range	λ	O-band C-band		1310 1550		nm
Photodiode Supply Voltage	V_{PD}			2.8		V
Average Optical Input Power	$P_{OPT\ avg}$				10	dBm
Photodiode DC Responsivity	R	optimum polarization	0.4			A/W
Photodiode Dark Current	I_{DARK}	TCASE = 25 °C		5		nA
3 dB Cut-off Frequency	f_{3dB}	C-band		50		GHz
Output Reflection Coefficient	S_{22}				-6	dB

O/E Bandwidth Log Magnitude Plot



Typical frequency response s21

S22 Log Magnitude Plot



Typical backreflection s22