InGaAs avalanche photodiode detector APD-300M-A

Product Description

The avalanche unit detection module integrates a low-noise APD detector, low-noise broadband transimpedance amplifier, ultra-low noise isolated power supply, high-voltage power supply, and APD temperature compensation. The isolated power supply ensures that the output signal is not affected by external power supply interference. APD temperature compensation improves the stability of the detection module. The avalanche photodetector features high gain, high sensitivity, high bandwidth, and low noise.

Part Number

APD-300M-A

● Product features

Low noise、 High gain 、 Built-in high-voltage power supply、 APD temperature compensation、 Compact structure、 Built-in low-noise isolated power supply

● Application area

Fiber sensing、 Fiber optic communication、 Laser ranging、 Spectral measurement、 Nanosecond-level optical pulse detection

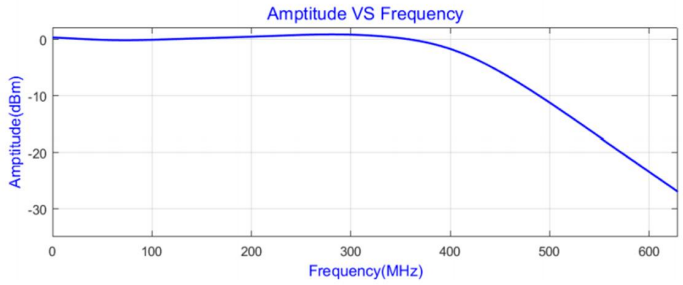
Parameters

General parameters

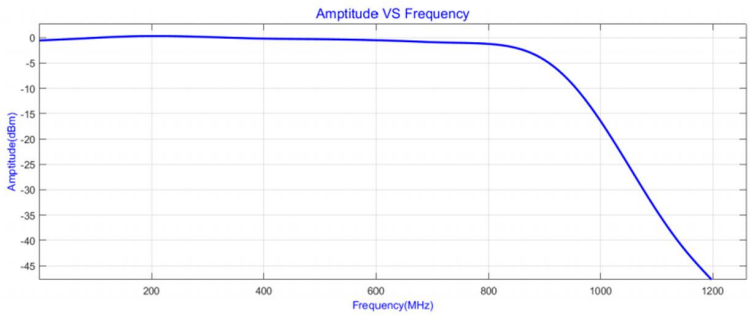
PN#	APD-100M-A	APD-200M-A	APD-300M-A	APD-400M-A	APD-500M-A	APD-600M-A	APD-800M-A	APD-1G-A	APD-1.2G-A	APD-1.5G-A	APD-2G-A	APD-2.5G-A	APD-5G-A	Unit
Detector type	InGaAs													
Wavelength	800~1700													nm
Bandwidth	100M	200M	300M	400M	500M	600M	800M	1G	1.2G	1.5G	2G	2.5G	5G	Hz
Responsivity	9	9	9	9	9	9	9	9	9	9	9	9	9	V/W
Transimpedance gain	300K	300K	300K	100K	50K	50K	300K	300K	300K	200K	150K	150K	30K	V/W
Output impedance	50	50	50	50	50	50	50	50	50	50	50	50	50	Ω
Saturation power	13	13	13	39	78	78	13	13	13	20	26	26	78	uW

NEP	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	pW/√(Hz)
Output coupling method	DC/AC	DC/AC	DC/AC	DC/AC	DC	DC	AC	AC	AC	AC	AC	AC	AC	
Supply voltage	5	5	5	5	5	5	12	12	12	12	12	12	12	V
Supply current	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	A
Optical input	FC/APC（Free space optical input optional）												FC/APC	
RF output	SMA												SMA	
Dimensions	65*50*20						65*50*25						80*90*25	mm

Test result



400MHz Bandwidth curve



800MHz Bandwidth curve