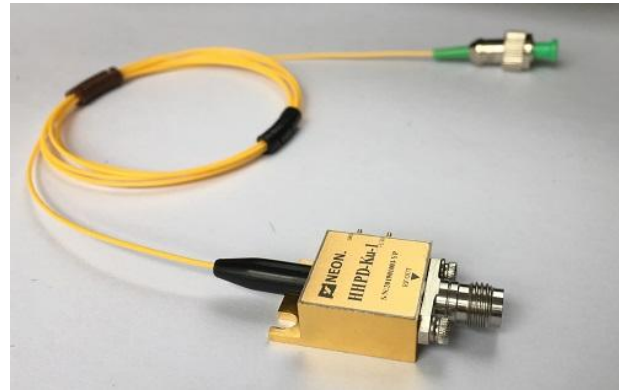


HHPD High Speed InGaAs Photodetector

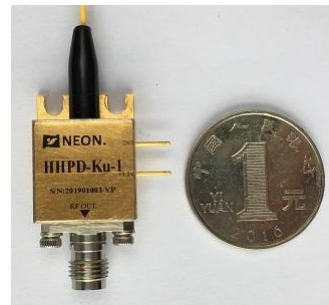
✧ Features

- Wide Bandwidth
- High Reponsivity
- Incorporated Bias-T
- High saturation Input
- Hermetically Sealed, SMA Connector



✧ Applications

- High-speed Optical-fiber Communication
- Radar Information Processing
- Electronic Warfare
- High-speed Signal Test and Measurement



✧ Introduce Of HHPD

The HHPD high-speed detector module is designed for both digital and analog applications. The module contains an InGaAs PIN photodiode which response wavelength covers 1250 to 1650 nm and necessary matching electronics.

HHPD can provide the bandwidth of 12 GHz and 18 GHz . The module operates on +3.3 V . It complies with a standard single-mode 9/125 μ m fiber input. The RF output port is an SMA compatible connector matched by 50 ohm impedance .

HHPD is hermetically sealed, and weighs less than 23 grams.

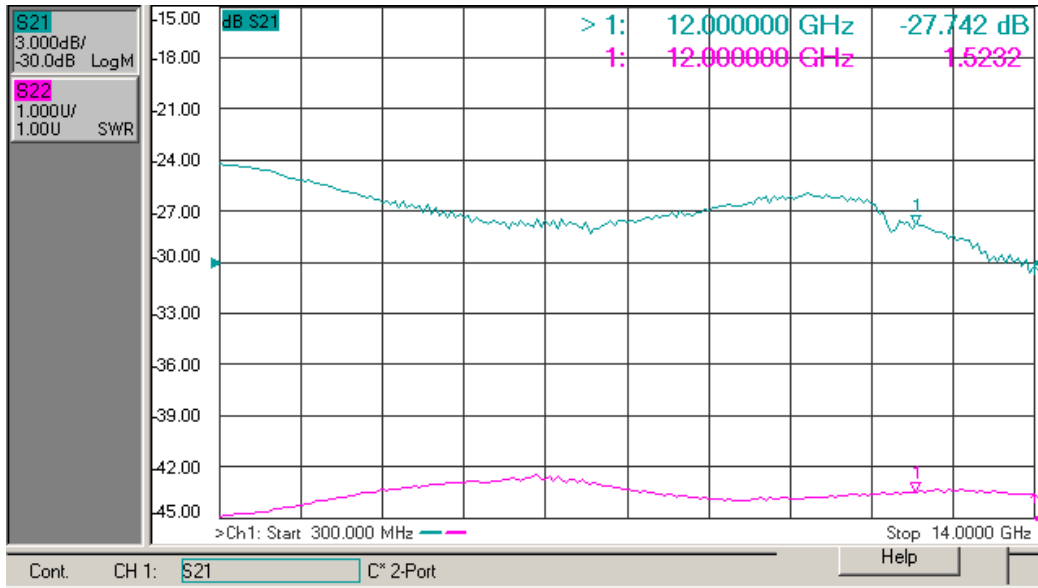
ROHS 2.0 certificated .

✧ Product Selection

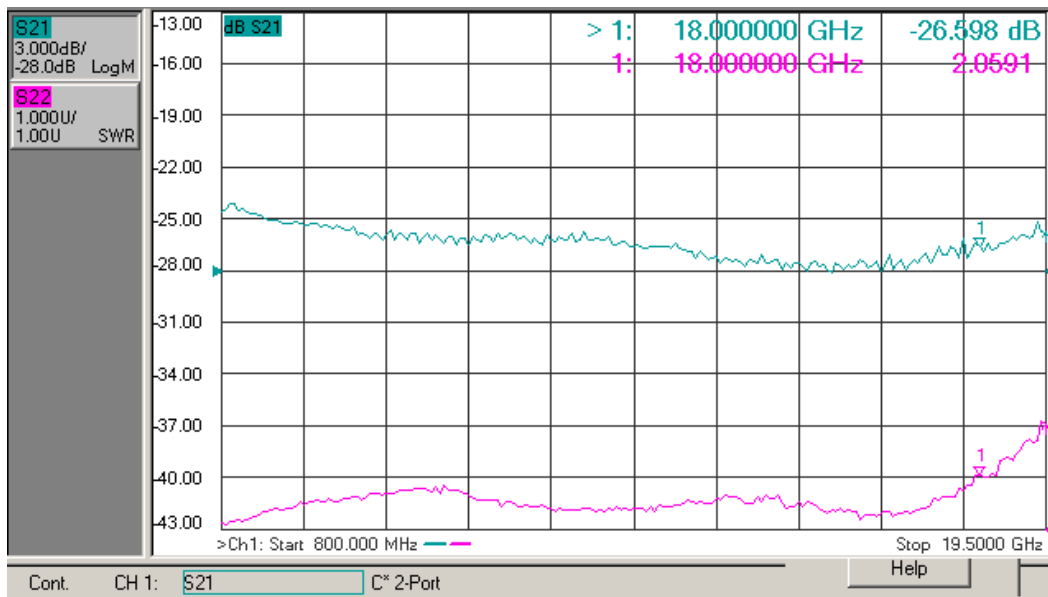
Typical & Absolute Maximum Rating				
Parameter	Sym.	Typ	Rating	Unit
Storage temperature range	T _{STG}	-45 ~ +85	-55 ~ +100	°C
Operating case temperature range	T _C	25	-40 ~ +85	°C
Bias Voltage	V _R	3.3	2.8 ~ 5	V
Optical Input Power	P _{in}	0	+13	dBm
Burn-out Optical Power	P _B	-	+16	dBm
Lead soldering temperature	T _p	280 (10s)	330 (10s)	°C

Electrical / Optical Characteristics (T _C = 22 ± 3°C)						
Parameter	Sym	Test Condition	Parameter Values		Unit	
Wavelength Range	λ	—	1000 ~ 1650		nm	
Frequency Range	—	—	X - Band	Ku - Band	—	
Small Signal Bandwidth	f _{.3dB}	T _C = 22 ± 3°C	0.3 ~ 12	0.8 ~ 18	GHz	
Responsivity	R _e	V _R = +3.3 V, P _{in} = 10mW	λ = 1310 nm	≥ 0.8	≥ 0.85	A/W
			λ = 1550 nm	≥ 0.85	≥ 0.8	
Amplitude Flatness	A	T _C = -45 ~ +85 °C	≤ ± 1.5		dB	
Saturation Optical Power	P _s	V _R = +3.3 V, λ = 1550 nm AC Modulated	13		dBm	
Saturation RF Output Power	P _{out}	—	-10		dBm	
Output VSWR	VSWR	—	≤ 2	≤ 2.2	—	
Dark Current	I _d	V _R = 3.3 V	≤ 10		nA	
Output Impedance	R _L	—	50		Ω	

✧ Typical Responsivity Curves

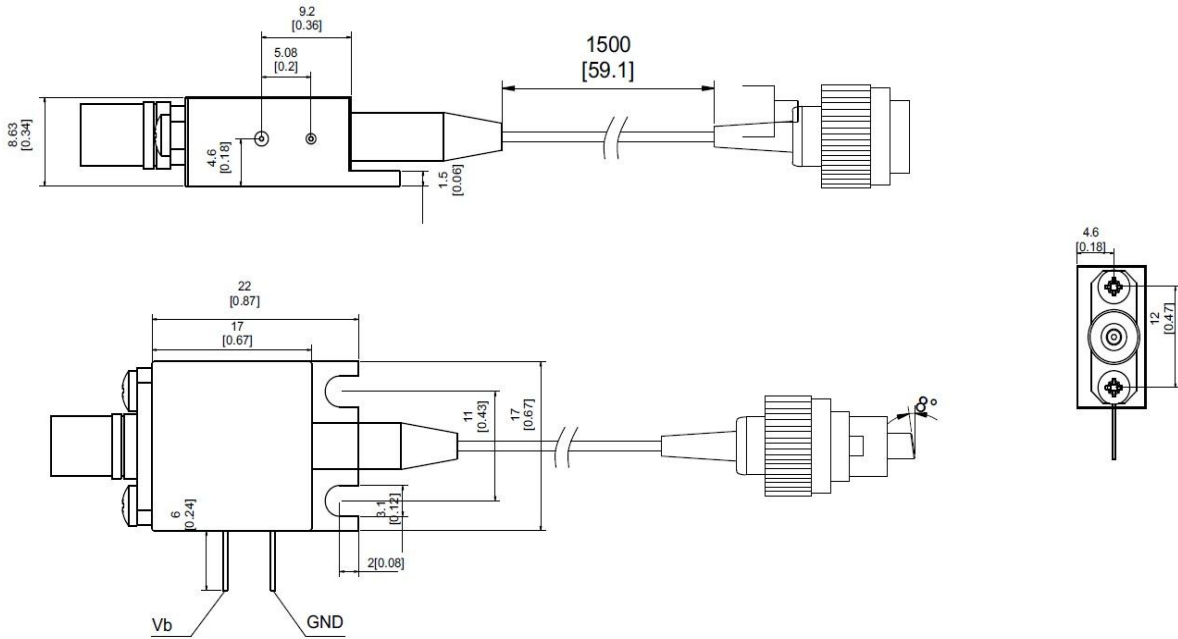


(Fig . 1 X - Band Photodetector Frequency Response)



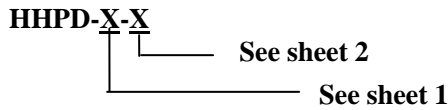
(Fig . 2 Ku - Band Photodetector Frequency Response)

✧ **Dimension and Pins (Unit: inch)**



RF Connector: SMA Connector

✧ **Ordering Information**



Sheet 1:

Code	Analog Bandwidth
X	0.3 ~ 12 GHz
Ku	0.8 ~ 18 GHz

Sheet 2:

Code	Connector Type	Remark
N	No Connector	Single-mode 9 / 125 μm fiber pigtail
A	FC / APC	

✧ **Precautions**

- The fiber bending radius no less than 20mm for avoiding fiber damaged .
- Be sure the fiber coupling facet is clean before connecting it to opto-circuit .
- The suitable ESD protection is required in storage, transportation and using .