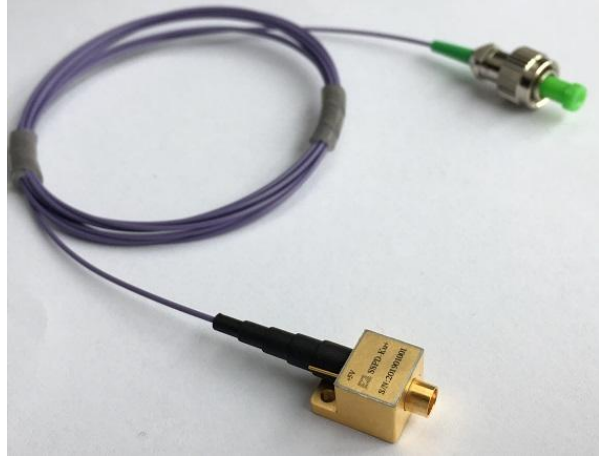


SSPD Mini-High Speed InGaAs Photodetector

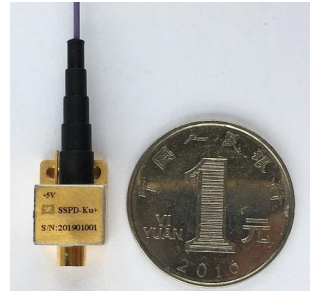
✧ Features

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



✧ Applications

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



✧ Introduce Of SSPD

The SSPD high-speed detector module is designed for both digital and analog applications. The module contains an InGaAs PIN photodiode which response wavelength covers 1000 to 1650 nm and necessary matching electronics.

SSPD can provide the bandwidth of 20 GHz . The module operates on +5 V . It complies with a standard single-mode 9 / 125 μm fiber input. The RF output port is an SMP compatible connector matched by 50 ohm impedance .

SSPD is hermetically sealed in a small house, and weighs less than 8 grams.

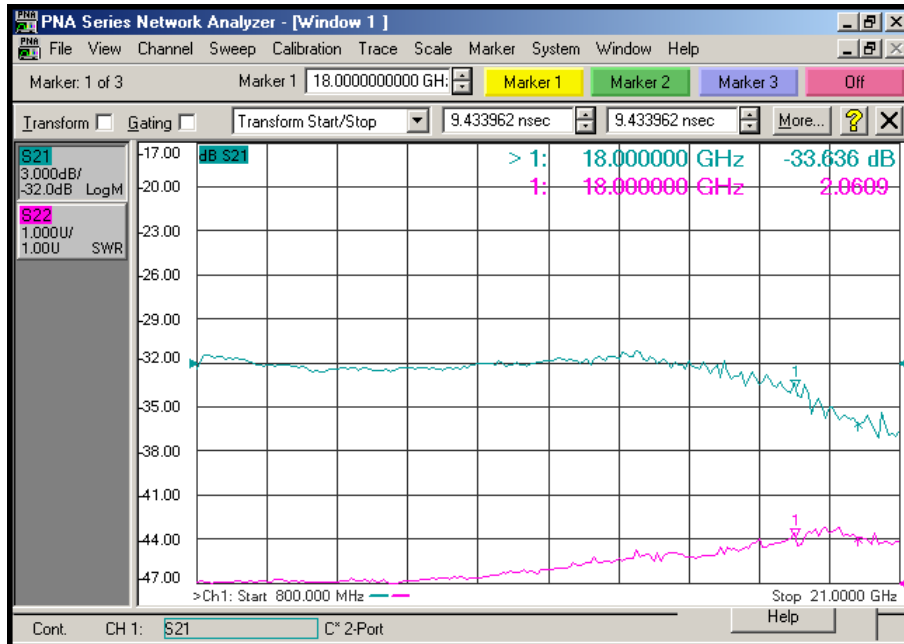
✧ Product Selection

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	+5	+5 ~ +9	V
Optical Input Power	P _{in}	+3	+10	dBm
Burn-out Optical Power	P _B	-	+13	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	—	—		Ku ⁺ Band	—
Small Signal Bandwidth	f _{.3dB}	T _C = 22 ± 3°C		0.3 ~ 20	GHz
Responsivity	R _e	V _R = +5 V, P _{in} = 1mW	λ = 1310 nm	≥ 0.9	A/W
			λ = 1550 nm	≥ 0.85	
Amplitude Flatness	A	T _C = -40 ~ +85 °C		≤ ± 2	dB
Saturation Optical Power	P _s	V _R = 5V, λ = 1550nm AC Modulated		+7	dBm
Saturation RF Output Power	P _{out}	—		-10	dBm
Output VSWR	VSWR	—		≤ 2.2	—
Dark Current	I _d	V _R = +5 V		≤ 10	nA
Output Impedance	R _L	—		50	Ω

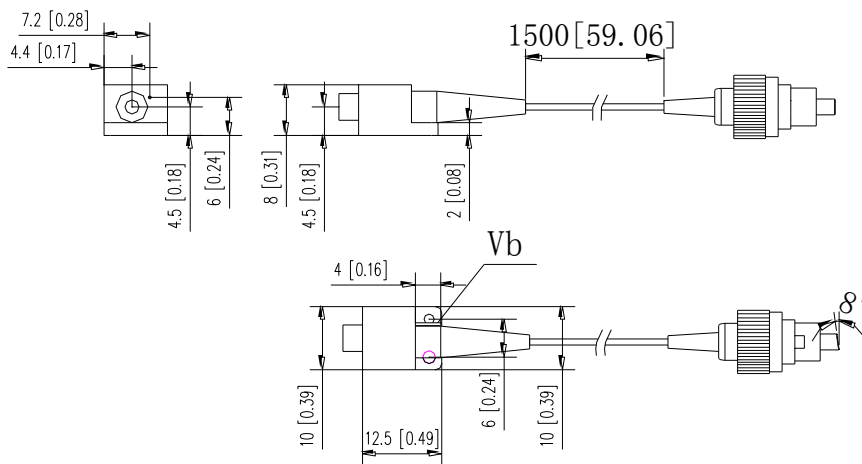
✧ **Typical Responsivity Curves**

(V_R , $\lambda=1550\text{nm}$, $TC=25^\circ\text{C}$, $P_{in}=0\text{dBm}$)



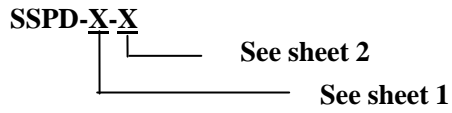
(Fig.1 Ku⁺-Band Photodetector Frequency Response)

✧ **Dimension and Pins (Unit: inch)**



RF Connector: SMP

✧ Ordering Information



Sheet 1:

Code	Analog Bandwidth
Ku ⁺	0.3 ~ 20 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 .