

## NY15T Series UWB Directly Modulated Transmitter

### Product Features

- ※ Ultra-wideband (better than 18GHz )
- ※ Operating case temperature: ( -40°C ~ 70°C )
- ※ Wavelength 1550nm
- ※ Excellent side mode suppression ratio
- ※ Highly integrated, module packaging
- ※ High-Dynamic-Range
- ※ High output power



### Applications

- ※ Antenna & Radar
- ※ Electronic countermeasure system
- ※ Analog RF links transmission
- ※ Broadband Wireless Communication
- ※ Mobile communication base station

### Introduce Of NY15T

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NY15T Transmitter are mainly composed of a high-speed directly modulated DFB laser, an automatic optical power control circuit, an automatic temperature control circuit, a voltage-stabilizing conversion circuit and a monitoring and indicating circuit.

NY15T Transmitter works at 1550nm. The modulation bandwidth is better than 18GHz. Output power can reach 10mW. Take a good stability of output wavelength. The power supply of NY15T Transmitter is a single positive power supply, which can work stably in the voltage range of +7V ~ +36V.

Besides, NY15T Transmitter also has the function of indicating that the power supply and optical power output is normal.

## Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage temperature	T <sub>STG</sub>	-55	+25	+85	°C
Operation temperature	T <sub>C</sub>	-40	+25	+70	°C
RF input power <sup>1</sup>	P <sub>in</sub>	-	+10	+20	dBm
Voltage	V <sub>in</sub>	+7	+12	+36	V

(1) Continuous wave (CW) working mode.

## Optical and Electrical Specification (T<sub>C</sub> = 22±3°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength	λ	-	-	1550	-	nm
Frequency ( 3dB )	f <sub>3dB</sub>	X band	0.1	-	12	GHz
		Ku band	1	-	18	
Light output power	P	-	5	10	-	mW
Relative Intensity Noise	RIN	-	-	-	-155	dBc/Hz
Return loss ( VSWR )	VSWR	X band	-	-	2	-
		Ku band	-	-	2.2	
Input 1 dB Compression	-	-	+13	+15	-	dBm

## Power Supply (T<sub>C</sub> = 22±3°C)

Parameter	Min.	Typ.	Max.	Unit
Voltage	+7	+12	+36	V
Current <sup>(2)</sup>	0.07	0.1	1	A

(1) Test condition : V<sub>in</sub>=+12V.

## Typical Response Curve

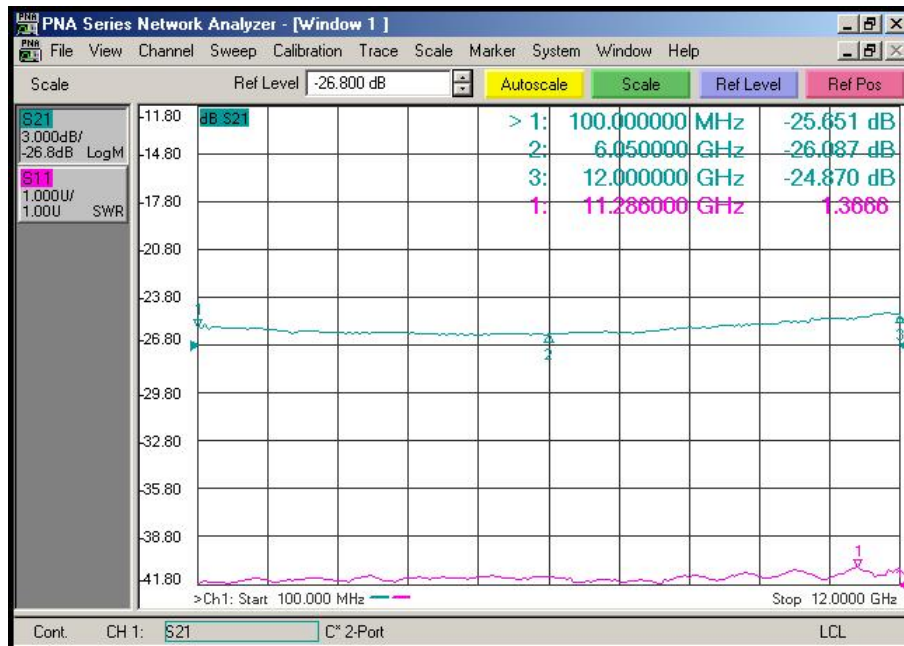


Figure 1 NY15T-X Transmitter Typical Response Curve

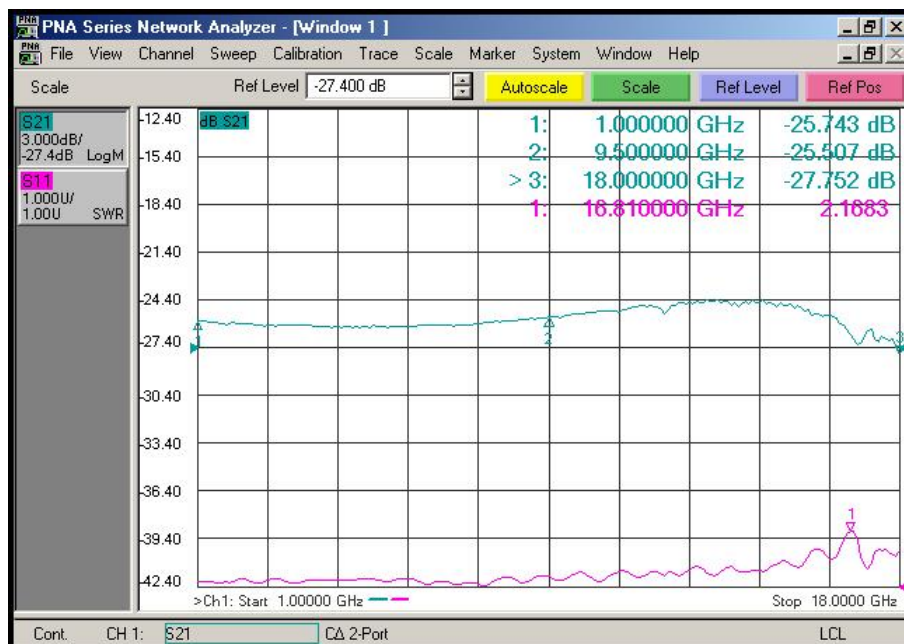


Figure 2 NY15T-Ku Transmitter Typical Response Curve

**Typical Spectrogram**

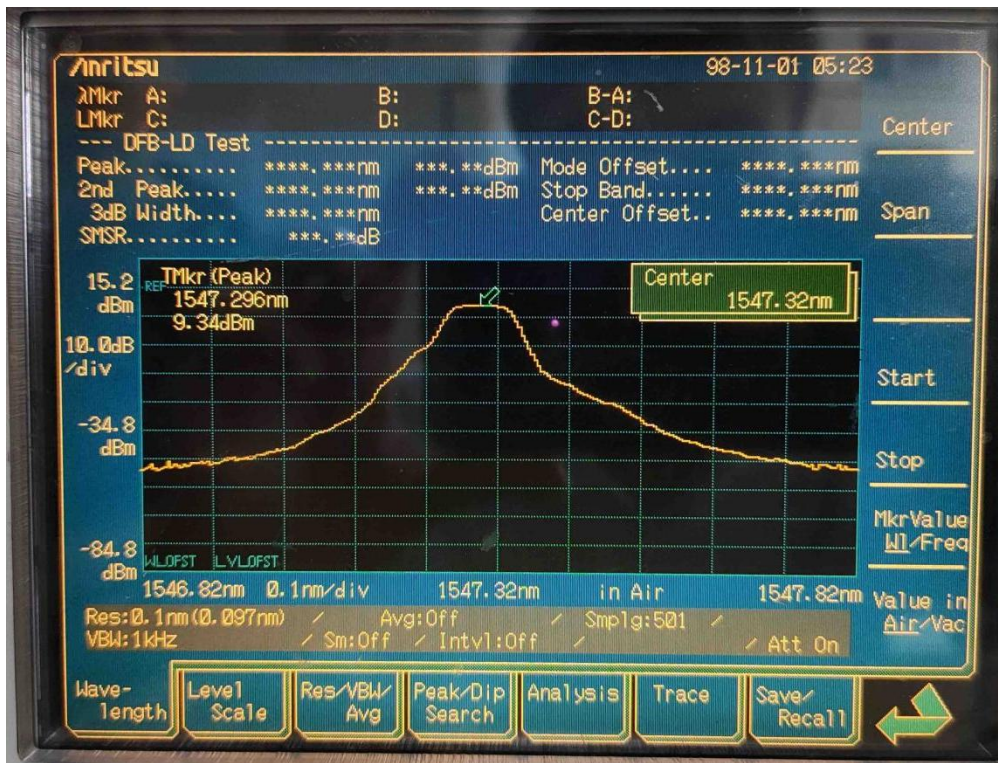
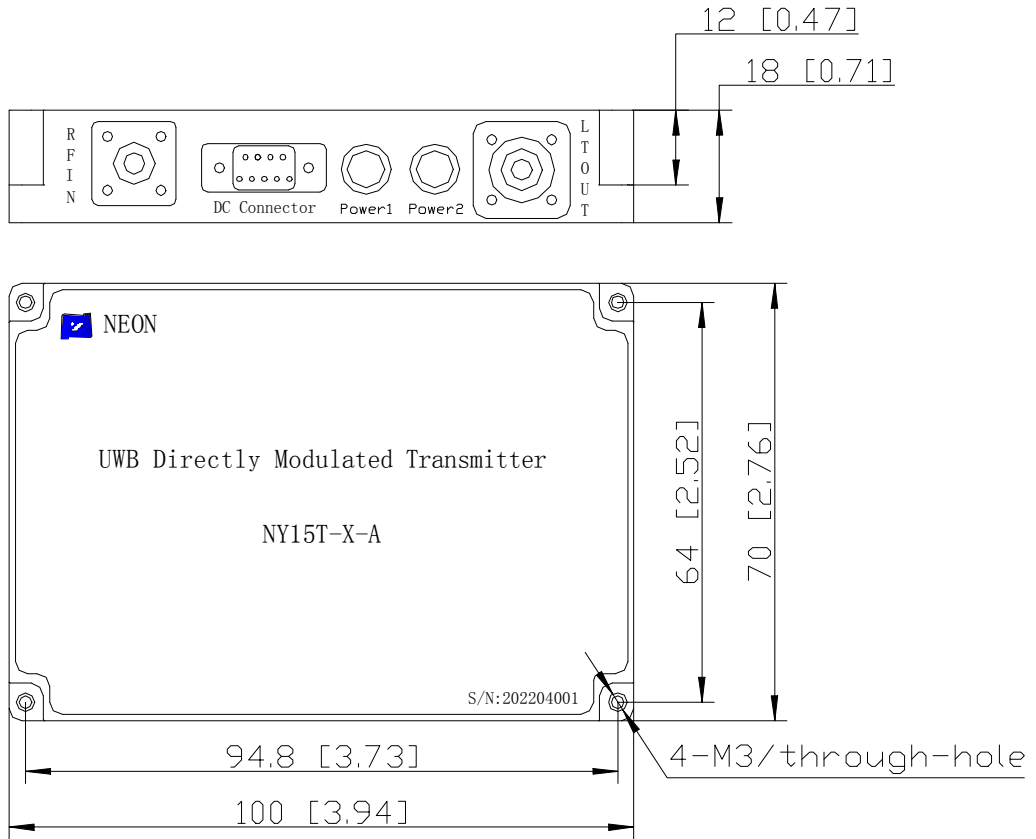


Figure 3 NY15T Transmitter Typical Spectrogram

**Dimension** Unit : mm[inch]



**RF Connector : SMA**

**Power Connector : J30J-9-ZKP**

Figure 4 NY15T Transmitter Dimension

**Pin Of Power Supply**

Parameter	Description								
Pin	1	2	3	4	5	6	7	8	9
Voltage	+12V			NC		GND			NC

## Order Information

**NY15T-□-□** \_\_\_\_\_ Sheet 2  
 |  
 \_\_\_\_\_ Sheet 1

Sheet 1 :

Symbol	Description
X	0.1 ~ 12 GHz
Ku	1 ~ 18 GHz

Sheet 2 :

Symbol	Connector Type	Description
N	Customized	Customized
A	FC / APC	Standard 9/125μm SM fiber
P	FC / PC	Standard 9/125μm SM fiber