NY13T Series UWB Directly Modulated Transmitter

Product Features

※ Ultra-wideband (better than 18GHz)
※ Operating case temperature: (-40℃～70℃)
※ High-Dynamic-Range
※ High output power
※ Low RIN

Applications

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

Introduce Of NY13T

NY13T 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.

NY13T Transmitter works at 1310nm. The modulation bandwidth is better than 18GHz. Output power can reach 10mW. Low relative intensity noise. Take a good stability of output wavelength.The power supply of NY13T Transmitter is a single positive power supply, which can work stably in the voltage range of+7V ～+36V.

Besides, NY13T Transmitter also has the function of indicating that the power supply and optical power output is normal.

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Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage temperature	T_{STG}	-55	+25	+85	℃
Operation temperature	T_C	-40	+25	+70	℃
RF input power[1]	P_{in}	-	+10	+20	dBm
Voltage	V_{in}	+7	+12	+36	V

(1) Continuous wave (CW) working mode.

Optical and Electrical Specification (TC = 22±3℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength	λ	-	-	1310	-	nm
Frequency (3dB)	f_{3dB}	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_C = 22±3℃)

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

(1) Test condition：Vin=+12V。

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Typical Response Curve

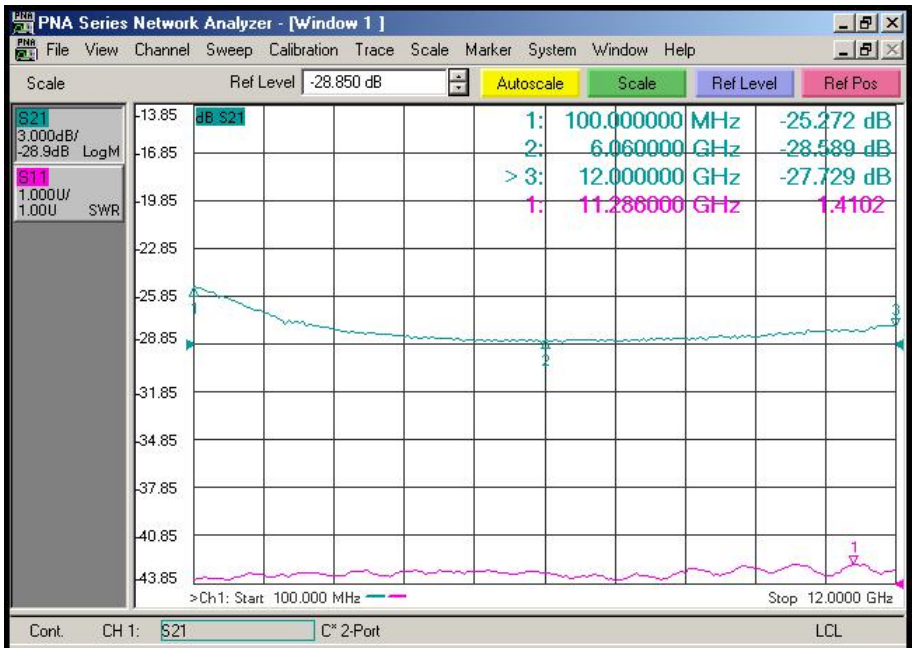

Figure 1 NY13T-X Transmitter Typical Response Curve

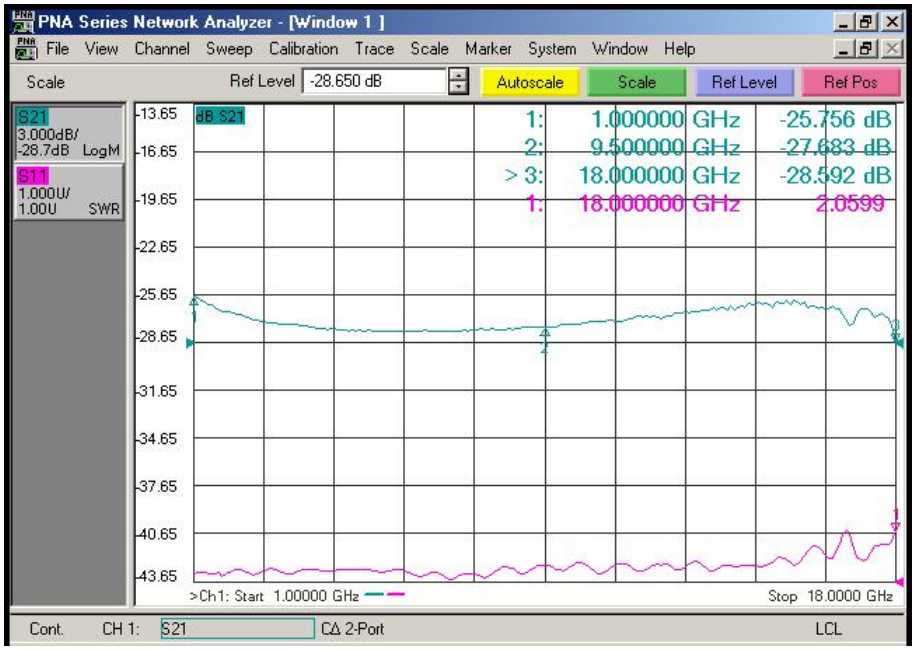

Figure 2 NY13T-Ku Transmitter Typical Response Curve

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Typical Spectrogram

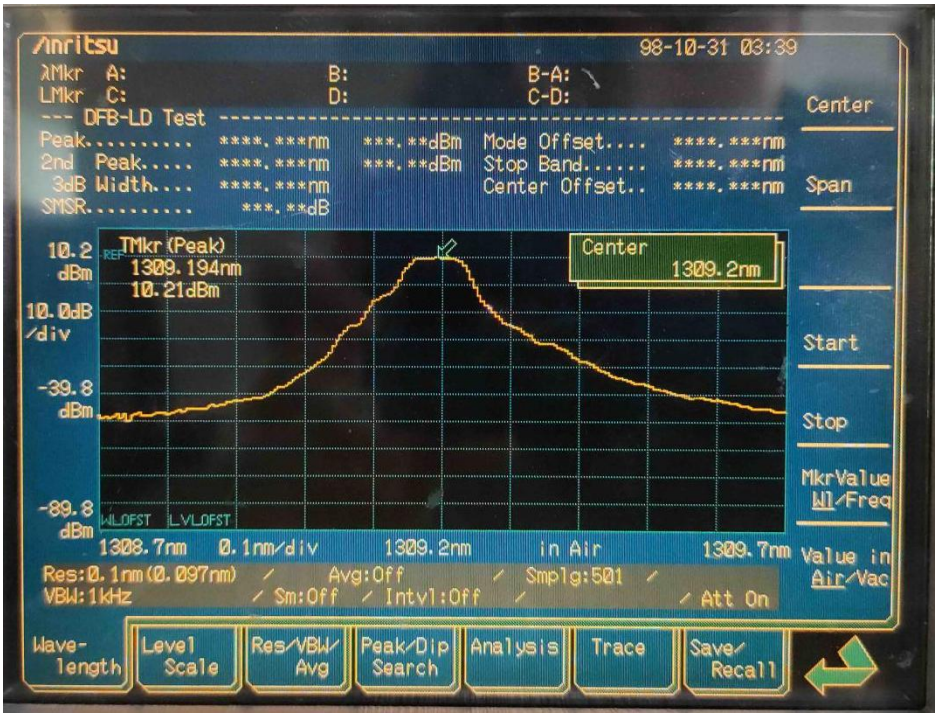

Figure 3 NY13T Transmitter Typical Spectrogram

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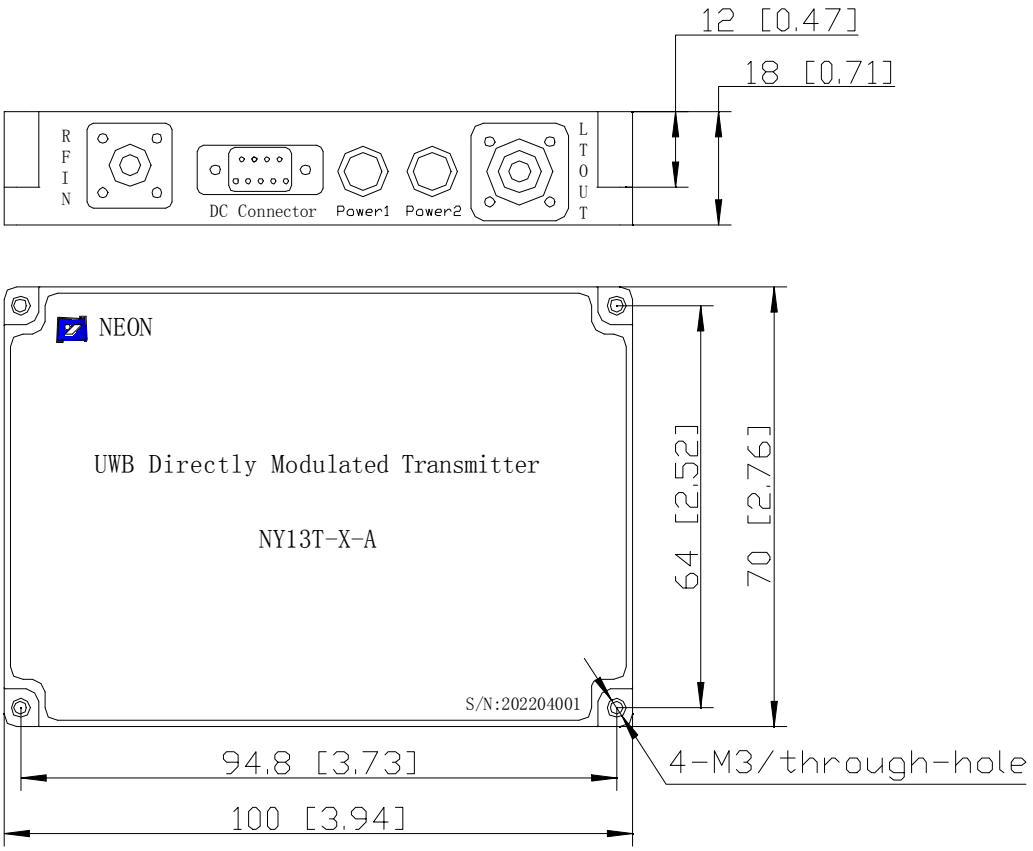
Dimension Unit：mm[inch]



RF Connector：SMA

Power Connector：J30J-9-ZKP

Figure 4 NY13T Transmitter Dimension

Pin Of Power Supply

Parameter	Description								
Pin	1	2	3	4	5	6	7	8	9
Voltage	V_{in}			NC		GND			NC

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Order Information

NY13T-□-□ ——— 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

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