

1. Description for NWT-200:

The NWT-200 is a high-precision, high-resolution frequency characteristic tester with the functions of a signal source and an RF power meter. The popular application of the device is to test the amplitude and frequency characteristics of filters and RF amplifying circuits, and at the same time have an ultra-high test resolution of 1 Hz. At the same time, many domestic and foreign experts also use NWT series equipment to test the standing wave ratio, inductance, capacitance, RF power and function as a signal source.

2, NWT-200 circuit structure (computer usb port power supply)

NWT-200 uses ft232+pic16f876a+ad9951 +ad8307 circuit structure scheme.

3, Technical parameters

The working current of the whole machine: 170mA~270mA (three sets of relays in the machine are turned on);

Dynamic range: better than 75dB;

Bottom noise: -80dBm (50 ohm impedance);

Measuring frequency range: 50KHz~200MHz;

Measurement frequency resolution: 1 Hz.

4, NWT-200 approximate use method

The NWT-200 connects to a personal computer via the usb cable and installs the corresponding NWT test software on a personal computer for measurement, which is portable and space-saving.

5, NWT-200 interface diagram

6. Does the NWT-200 require additional power?

The NWT-200 does not require additional power, just use the power cord that comes with the computer's usb cable.

7, NWT-200 circuit shielding effect

After three times of modification in the NWT-200 production process, the maximum shielding of the whole machine is optimized. No extra shielding iron shells and other materials need to be added on the pcb board, and the whole pcb board is placed in the aluminum casing. The shielding effect is also excellent and will not be affected by the aluminum casing.

8, NWT-200 internal circuit board

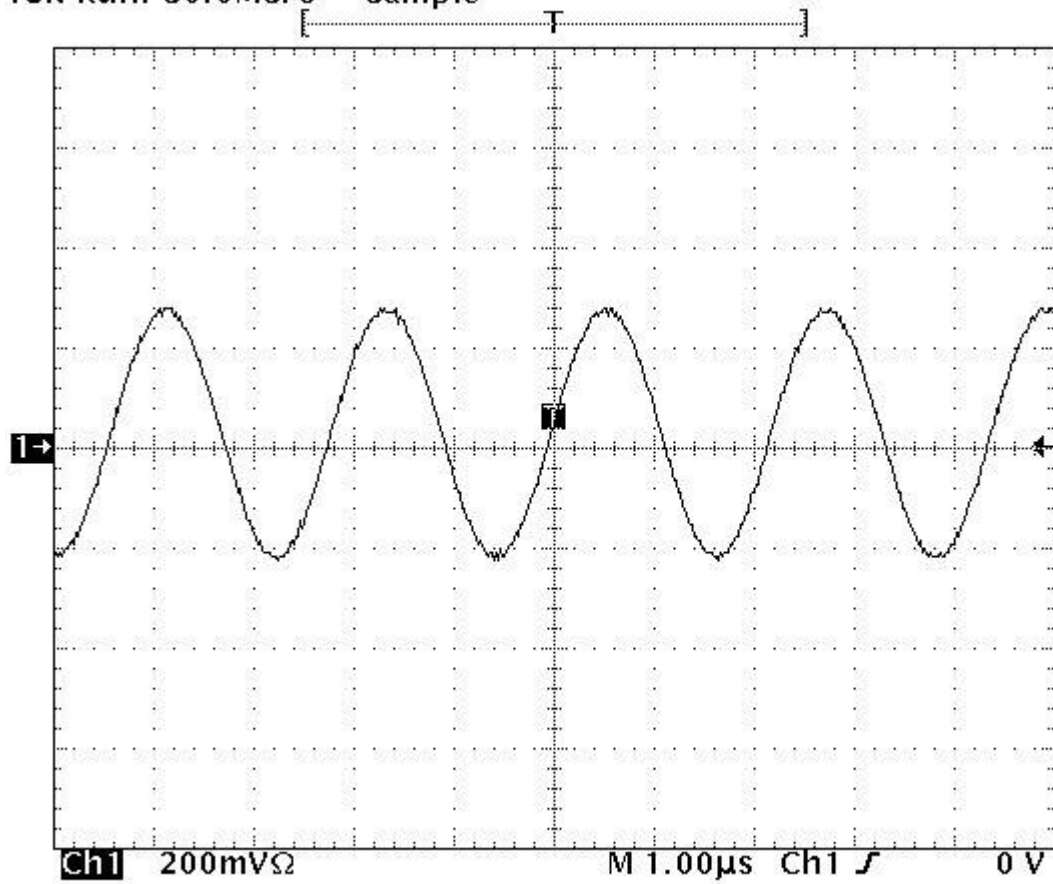
9, materials used in NWT-200

The NWT-200 uses a thick aluminum housing, a full copper bnc socket, and a double-sided military-grade circuit board.

10, Accessories attached to the NWT-200

Double magnetic ring usb line one, bnc turn sma plug two, double head sma line two.

Tek Run: 50.0MS/s Sample



C1 Freq
456.62kHz

C1 RMS
177.6mV

C1 Pk-Pk
504mV

C1 Mean
28.0mV

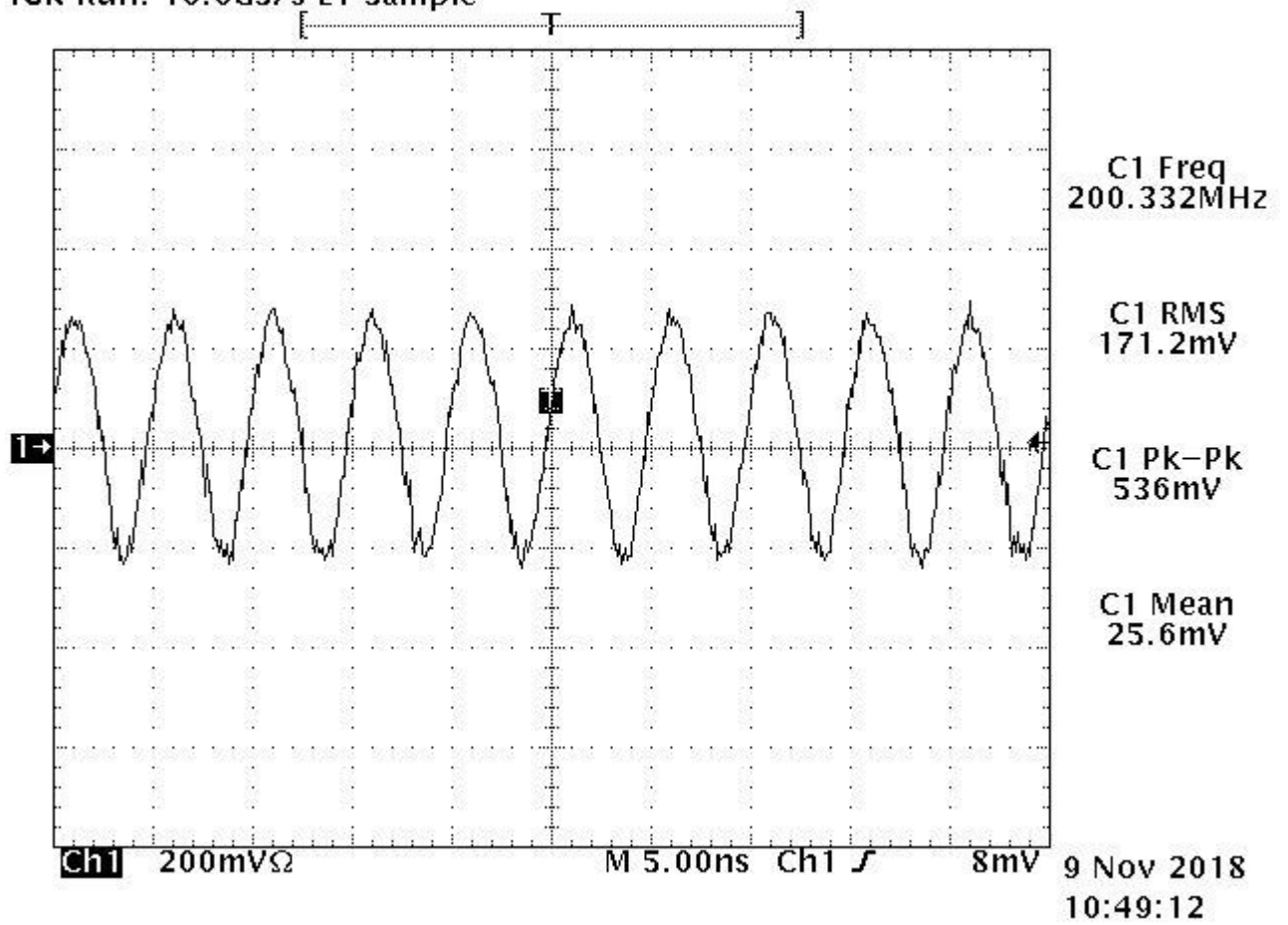
ch1 200mV/div

M 1.00μs Ch1

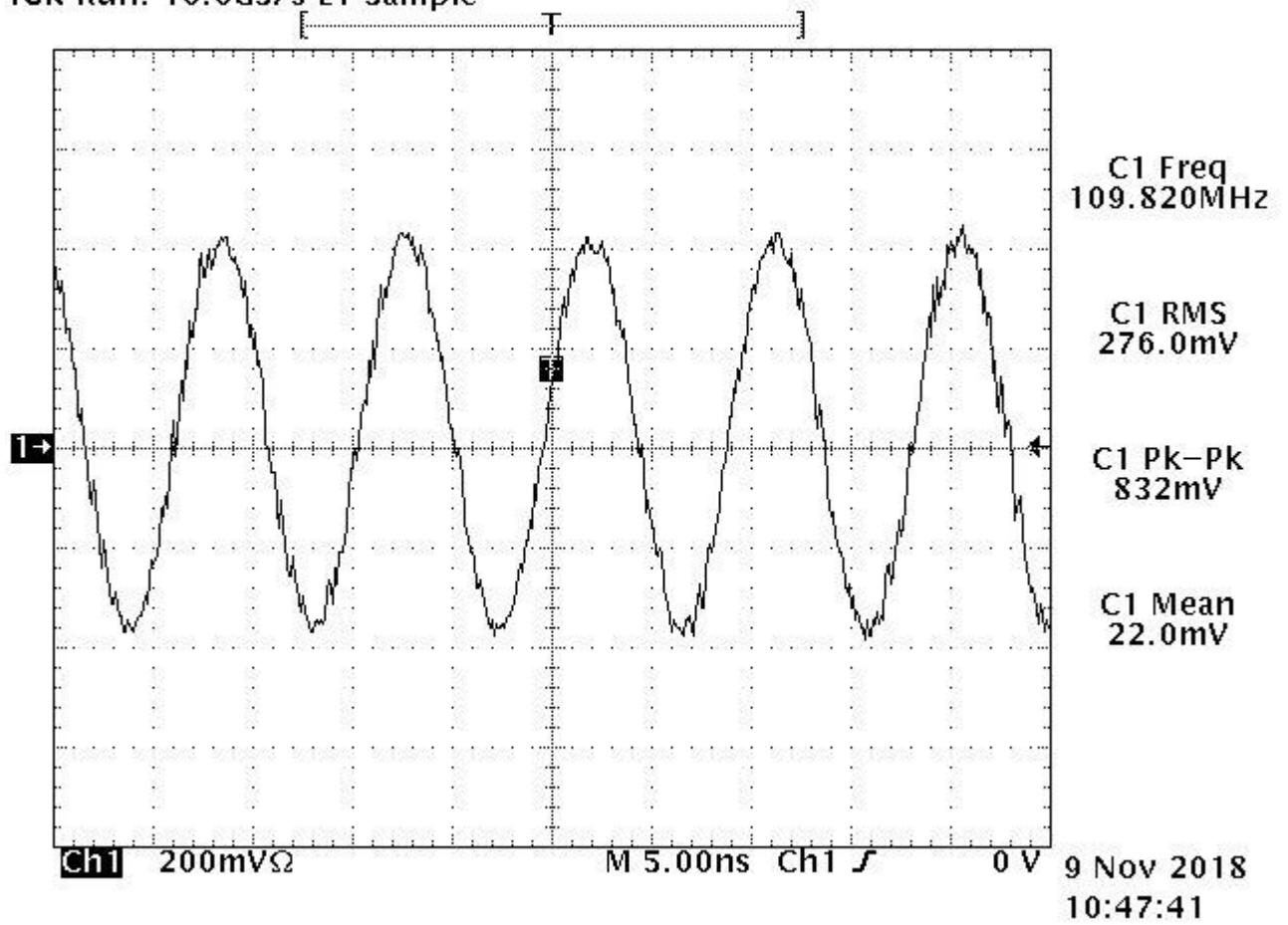
0 V

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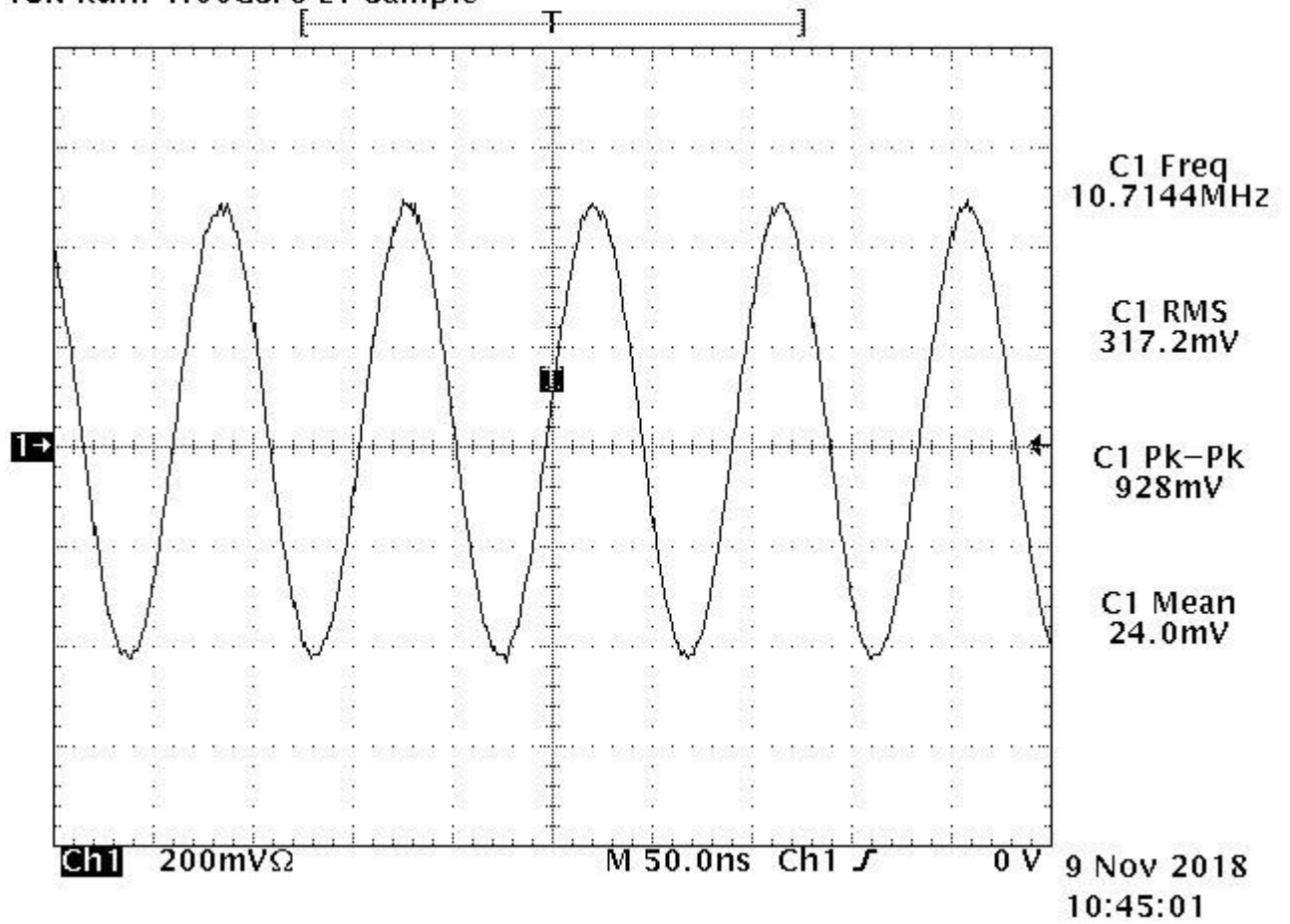
Tek Run: 10.0GS/s ET Sample

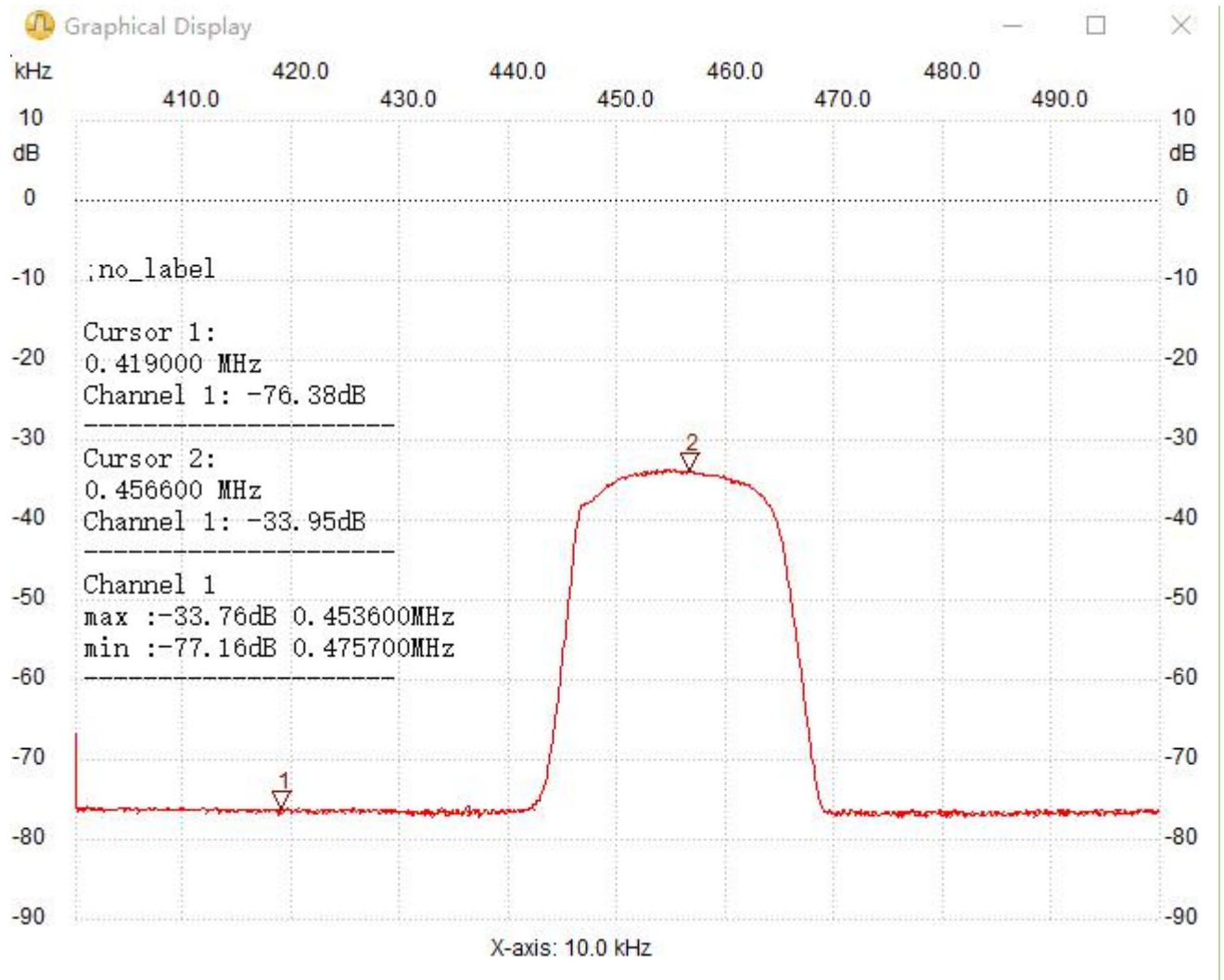


Tek Run: 10.0GS/s ET Sample

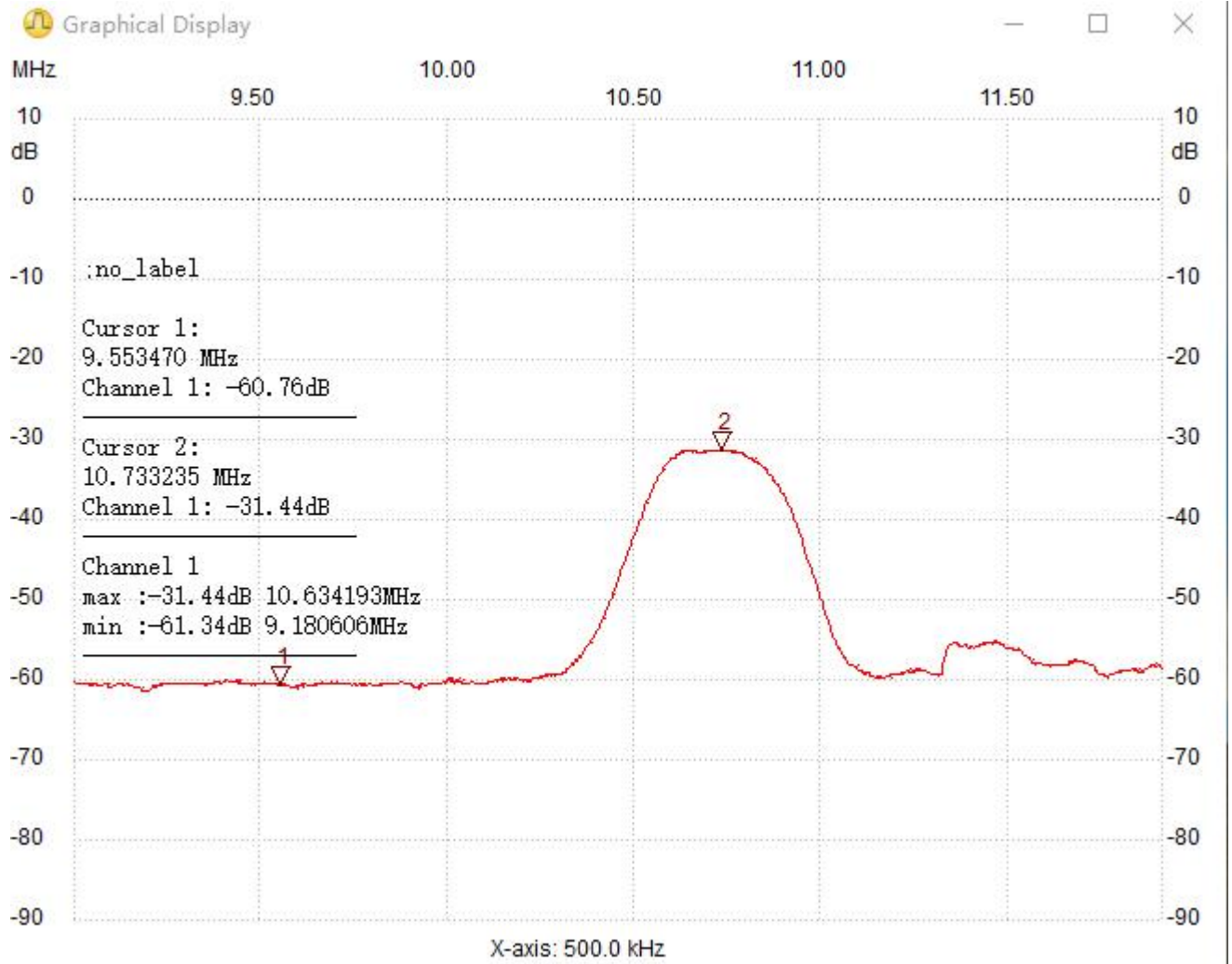


Tek Run: 1.00GS/s ET Sample





10.7MHz ceramic filter amplitude frequency curve



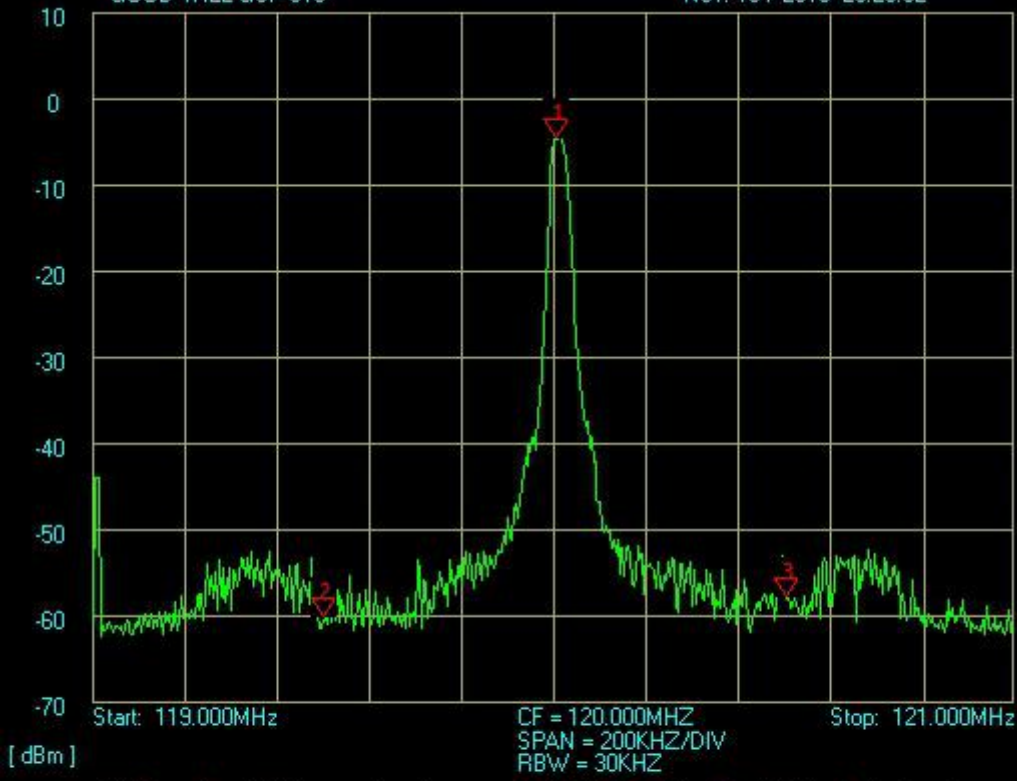
16.934MHz crystal vibration measurement curve



13, NWT-200 output frequency spectrum analyzer test chart

GOOD WILL GSP-810

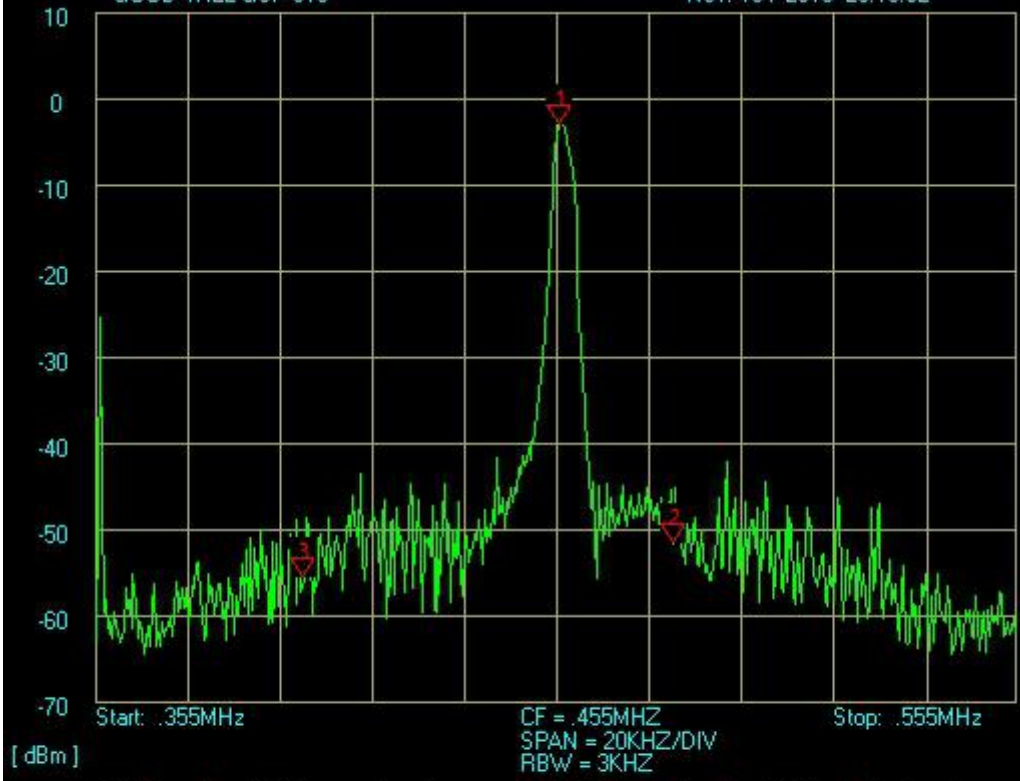
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MKR	Freq. (MHz)	Level	Delta MKR	Delta Freq.(MHz)	Delta Level
1	120	-4.7			
2	119.5	-60.1			
3	120.5	-57.9			
4					
5					

GOOD WILL GSP-810

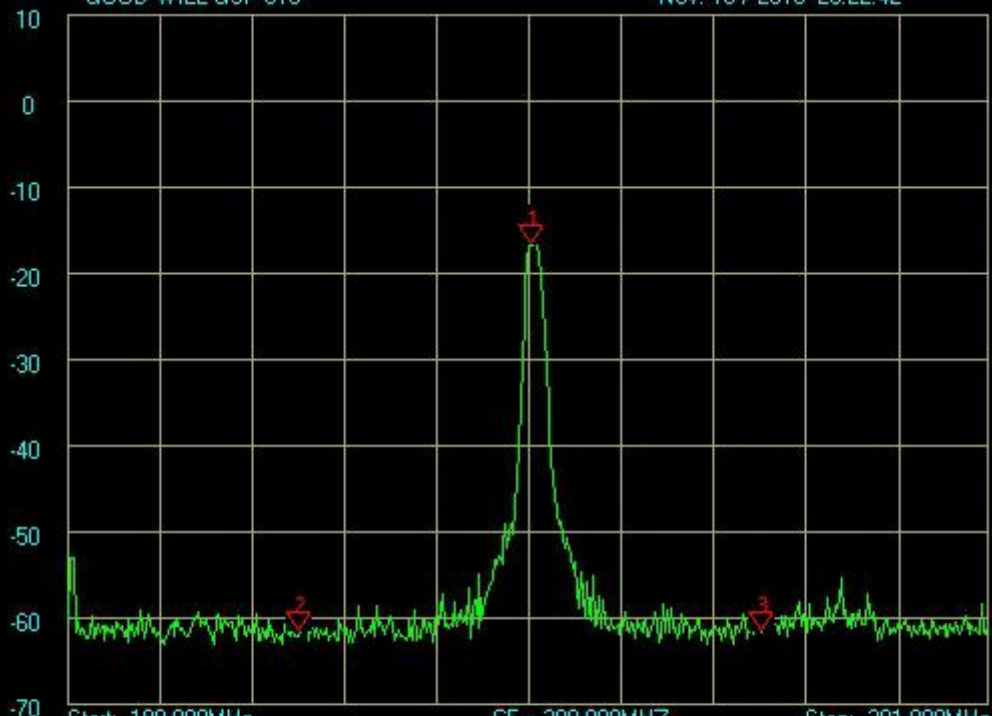
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MKR	Freq. (MHz)	Level	Delta MKR	Delta Freq.(MHz)	Delta Level
1	.455	-3.1			
2	.48	-51.5			
3	.4	-55.5			
4					
5					

GOOD WILL GSP-810

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Start: 199.000MHz

CF = 200.000MHz
SPAN = 200KHZ/DIV
RBW = 30KHZ

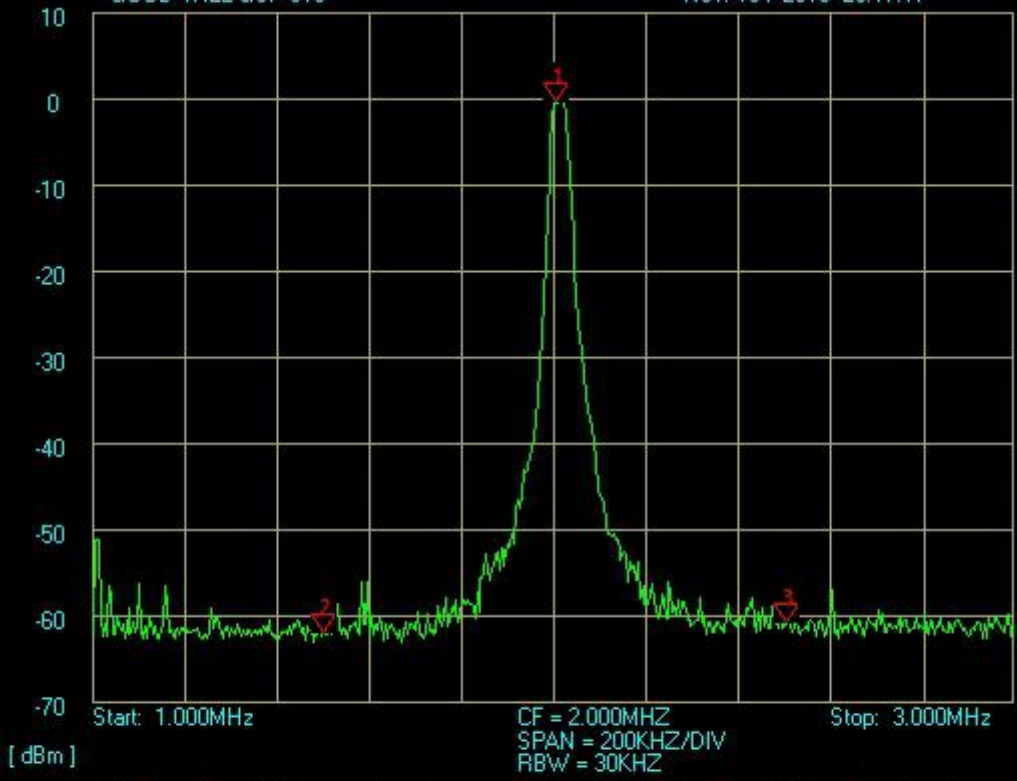
Stop: 201.000MHz

[dBm]

MKR	Freq. (MHz)	Level	Delta MKR	Delta Freq.(MHz)	Delta Level
1	200	-16.8			
2	199.5	-61.5			
3	200.5	-61.5			
4					
5					

GOOD WILL GSP-810

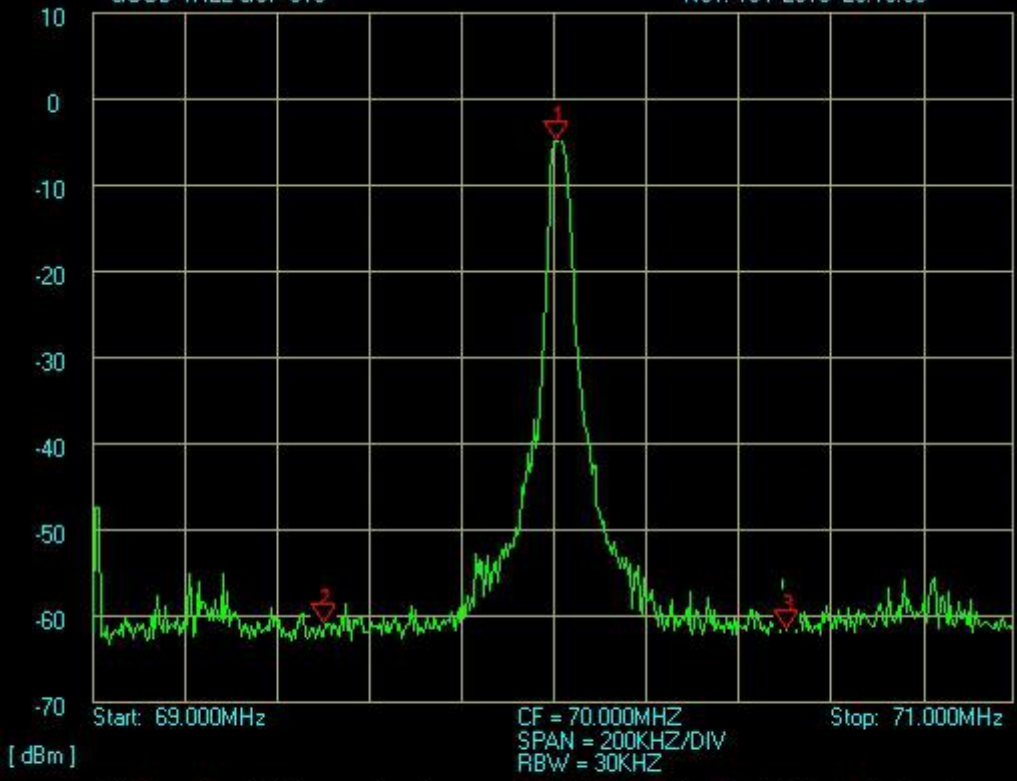
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MKR	Freq. (MHz)	Level	Delta MKR	Delta Freq.(MHz)	Delta Level
1	2	-0.4			
2	1.5	-62.0			
3	2.5	-60.8			
4					
5					

GOOD WILL GSP-810

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MKR	Freq. (MHz)	Level	Delta MKR	Delta Freq.(MHz)	Delta Level
1	70	-4.8			
2	69.5	-60.9			
3	70.5	-61.5			
4					
5					