

TEST REPORT

Report number : KR21220106A

Issue date : 2022/01/06

Applicant : FASTPONG CORP.
401, 8, Hangang-daero 44-gil, Yongsan-gu, Seoul,
Republic of Korea
Tel. +82-10-2272-9376 Fax. -

Model name : FP01

Serial number : N/A

Test procedure : Radio equipment according to Certification Ordinance
Article 2 Section 1 No. 19

Date of test : 2022/1/5

Name of facility : KRL Co., Ltd.

The results in this report are applicable only to the equipment tested.

This report shall not be re-produced except in full without the written approval of KRL Co.,Ltd.

Tested by :



Moo-Hong, KIM

Approved by :



Kyu-Hyun, LEE

This report shall not be reproduced except in full without the written approval of KRL Co., Ltd.

Summary of Test Results

Test report No.	Description	Result
1	Frequency Tolerance	Pass
2	Occupied Bandwidth	Pass
3	Spurious emission intensity	Pass
4	Antenna Power	Pass
5	Spread-spectrum Bandwidth	NA
6	Secondary radiated emission	Pass
7	Holding Time	NA
8	Radio Interference Prevention Function	Pass

Measurement equipment list

USE	Equipment	Company	Model No.	Serial No.	Calibrated by	Cal. Method	Cal. Due	Cal. Date
X	FREQUENCY COUNTER	EIP	25B	9105-00535	KTICC	∕\ (c)	Oct. 2022	Oct. 15, 2021
X	SPECTRUM ANALYZER	ROHDE&SCHWARZ	FSP	100665	KTICC	∕\ (c)	Nov. 2022	Nov. 10, 2021
X	Auto Range DC Power Supply	ITECH	IT6721	600104011717610000	BCS	∕\ (c)	Aug. 2022	May. 26, 2021
X	TEMP & HUMI. CHAMBER	HITACHI	EC-25MHPS	U5539026	KTICC	∕\ (c)	Nov. 2022	Nov. 19, 2021
	SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ26	100044	KTICC	∕\ (c)	Jan. 2022	Jan. 8, 2021
X	USB Average Power Sensor	AGILENT	U2004A	MY53340013	KTICC	∕\ (c)	Oct. 2022	Oct. 15, 2021
	POWER DIVIDER	HP	11636A	03871	BCS	∕\ (c)	Jan. 2022	Jan. 8, 2021
	STEP ATTENUATOR	AEROFLEX	AF9010-60-31	12987	BCS	∕\ (c)	Jan. 2022	Jan. 8, 2021
	AC POWER SUPPLY	DAELIM	D-45	KRL-002	BCS	二 (d)	Aug. 2022	Aug. 6, 2021
	FIXED ATTENUATOR	XMA CORP	4882-6140-06	KRL-009	KTICC	∕\ (c)	Oct. 2022	Oct. 15, 2021

Note1: The calibration of measurement equipment is valid for one year period.

Note2: "X" used equipment.

Note3: Cal.Method ...

a): Calibration conducted by the National Institute of Information and Communications Technology(NICT)(hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1)

b): Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992)

c): Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)

d): Calibration conducted by using measuring instruments and other equipment listed in the right column of Table No. 3 attached hereto, which shall have been given any of calibration, etc. listed above from a) to c)

Specified Radio Equipment Test Report

Test Date : 2022-01-05

Class: Article 2 Paragraph 1 Item 19	Frequency : (2 402 ~ 2 480) MHz
Rated Power (mW) : 1 mW	Antenna Gain : 2.12 dBi
Rated Power (dBm) : 0.00 dBm	E.I.R.P : 2.12 dBm
Emission Designator : F1D	
Model Name : FP01	Test Location : RF TEST ROOM
Serial No. : N/A	Temp / Humid. 20℃ / 50%
Type of Emission : BLE	Tested By : MooHong, Kim

No.	Test Items	Test ch	Test Frequency MHz	Test Result			Unit	Technical Regulations
				Voltage	Voltage	Voltage		
					DC 12.0 V			
1	Frequency Tolerance	0	2402.0		2401.981056		MHz	50 PPM or less
					-7.887		PPM	
		19	2440.0		2439.980689		MHz	
					-7.914		PPM	
		39	2480.0		2479.980364		MHz	
					-7.918		PPM	
2	Occupied Bandwidth	0	2402.0		1.370		MHz	26MHz or less
		19	2440.0		1.370		MHz	
		39	2480.0		1.380		MHz	
3	Spurious Emission Intensity	0	2402 (1)		-55.90		dBm	(1) Below 2387 MHz : -26dBm (2) 2387 to 2400 MHz : -16dBm (3) 2483.5 to 2496.5 MHz : -16dBm (4) Over 2496.5 MHz : -26dBm
			2402 (2)		-22.87		dBm	
			2402 (3)		-59.00		dBm	
			2402 (4)		-45.97		dBm	
		19	2440 (1)		-56.54		dBm	
			2440 (2)		-59.76		dBm	
			2440 (3)		-60.03		dBm	
			2440 (4)		-44.70		dBm	
		39	2480 (1)		-55.68		dBm	
			2480 (2)		-59.27		dBm	
			2480 (3)		-37.91		dBm	
			2480 (4)		-43.50		dBm	
4	Antenna Power	0	2402.0		0.000993		W	0.01 W or less Error +20%-80%
					-0.70		%	
		19	2440.0		0.001005		W	
					0.50		%	
		39	2480.0		0.001019		W	
					1.90		%	
5	Spread-spectrum Bandwidth	0	2402.0				kHz	500kHz or more
		19	2440.0				kHz	
		39	2480.0				kHz	
6	Secondary Radiated Emissions	0	2402 (1)		-80.86		dBm	(1) Below 1 GHz : -54dBm (2) 1 GHz or higher : -47dBm
			2402 (2)		-64.58		dBm	
		19	2440 (1)		-80.75		dBm	
			2440 (2)		-63.27		dBm	
		39	2480 (1)		-80.64		dBm	
			2480 (2)		-63.59		dBm	
7	Holding Time	0	2402.0				Sec	less than 0.4sec
		19	2440.0				Sec	
		39	2480.0				Sec	
8	Radio Interference Prevention Function	ID Code		MAC ADDRES : 21:06:27:00:7E:3F				Carrier sense is not required

The input voltage to receiver RF circuit varies below $\pm 1\%$ as the input voltage from the external power supply to the receiver varies $\pm 10\%$ (excluding power supply).

BLE Test Result

Frequency error

LOW



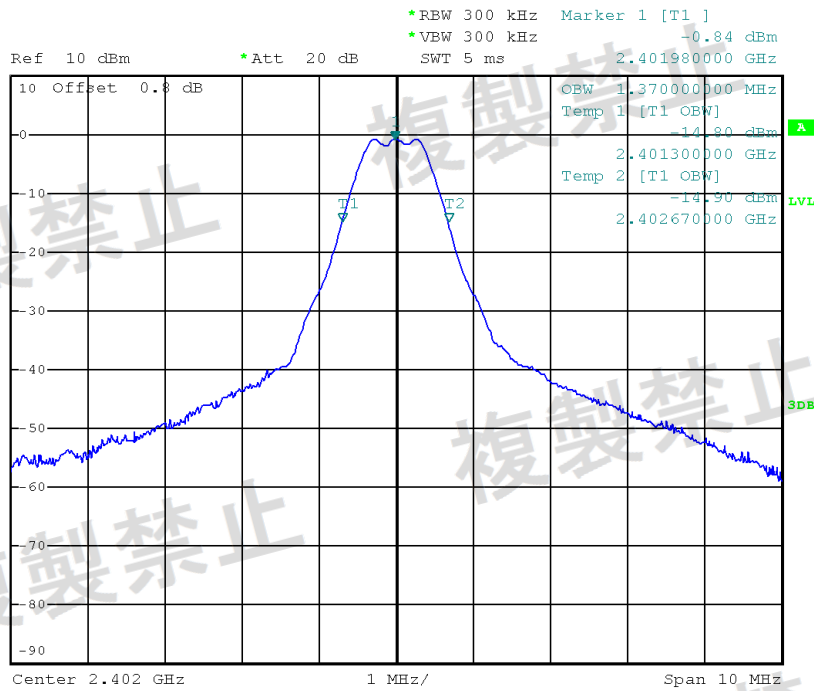
MID





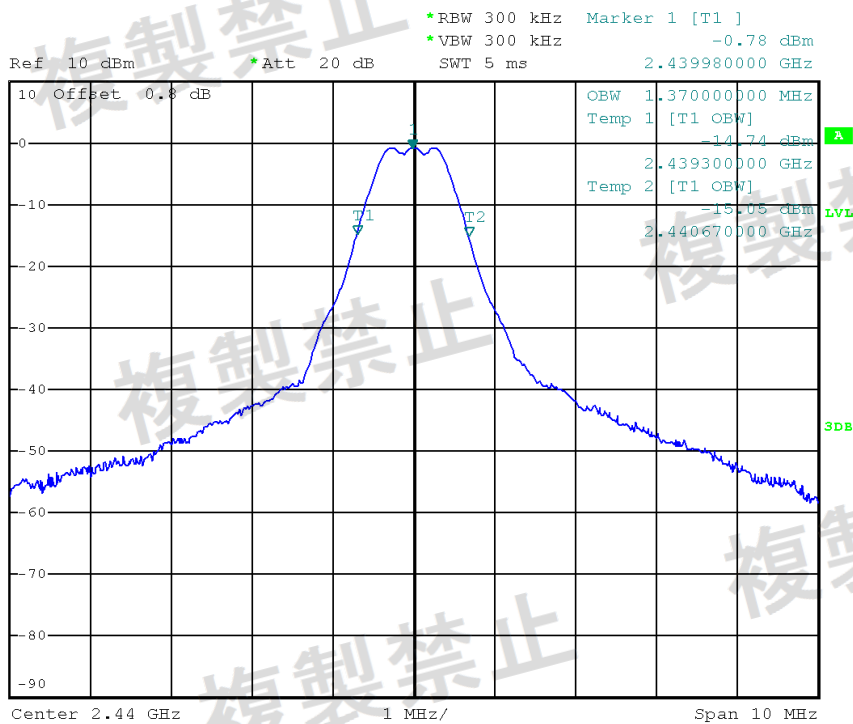
Occupied Bandwidth

LOW

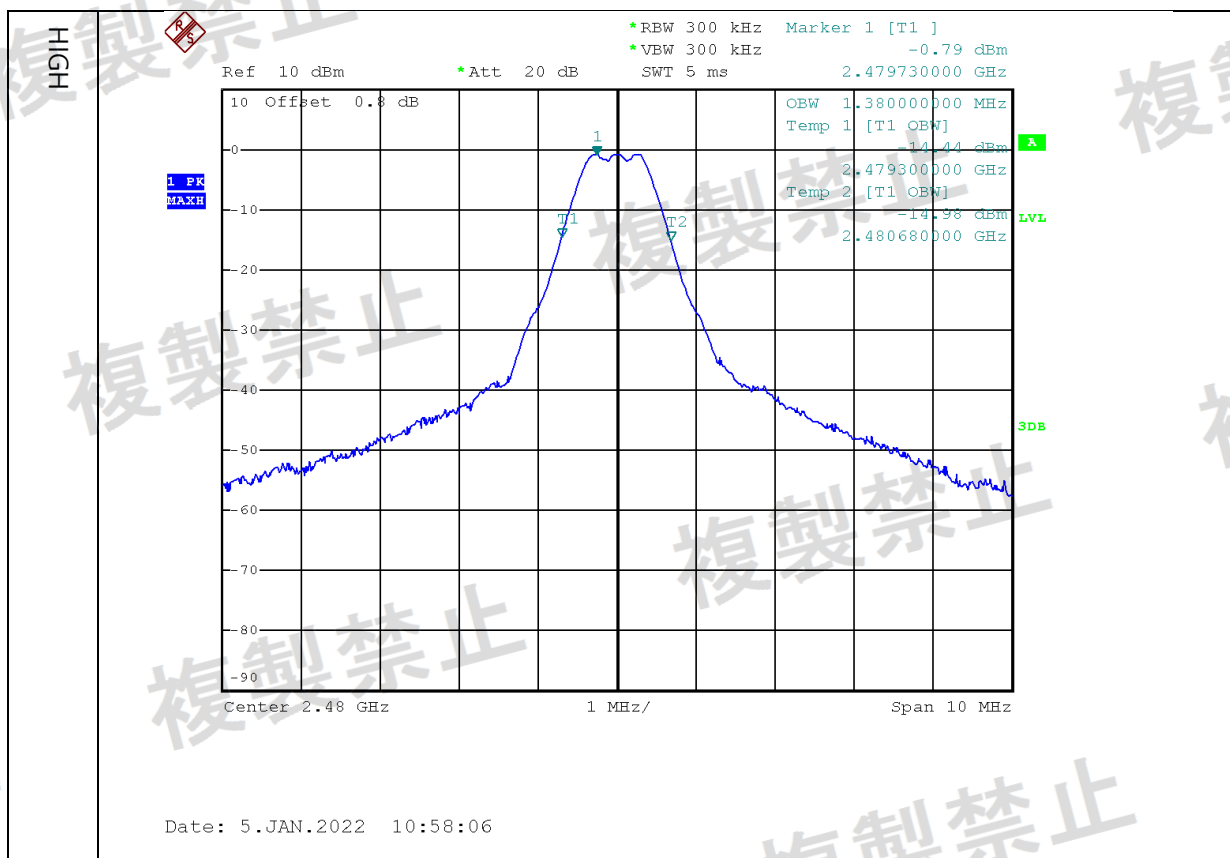


Date: 5.JAN.2022 10:50:23

MID



Date: 5.JAN.2022 10:55:04

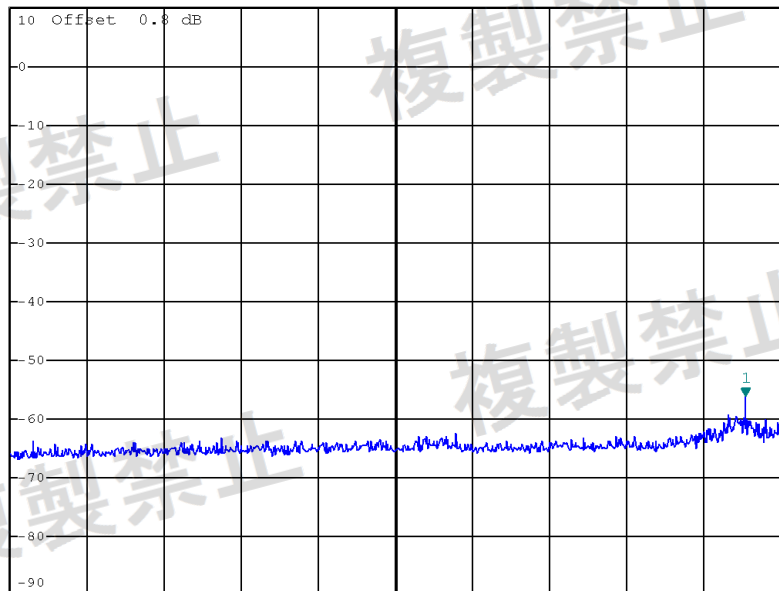


Spurious Emission Intensity

LOW



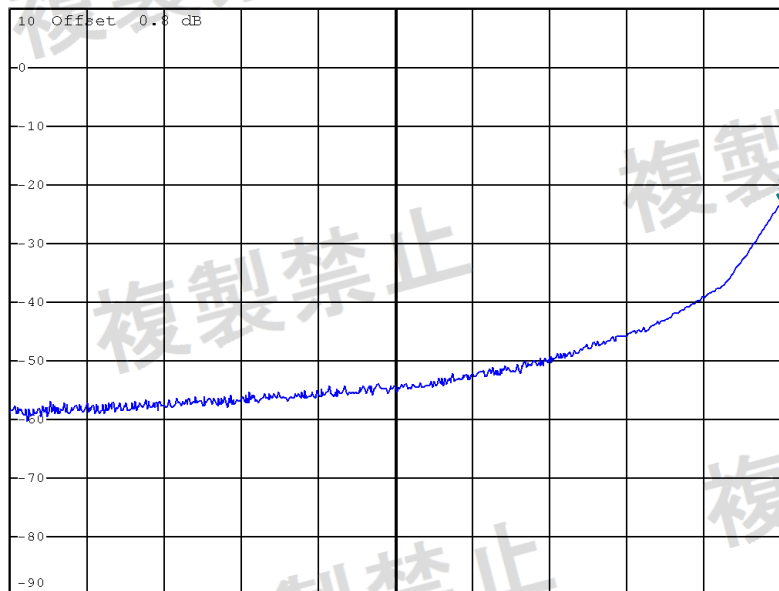
Ref 10 dBm *Att 20 dB *RBW 1 MHz *VEW 1 MHz *SWT 15 ms Marker 1 [T1] -55.90 dBm 2.275281000 GHz



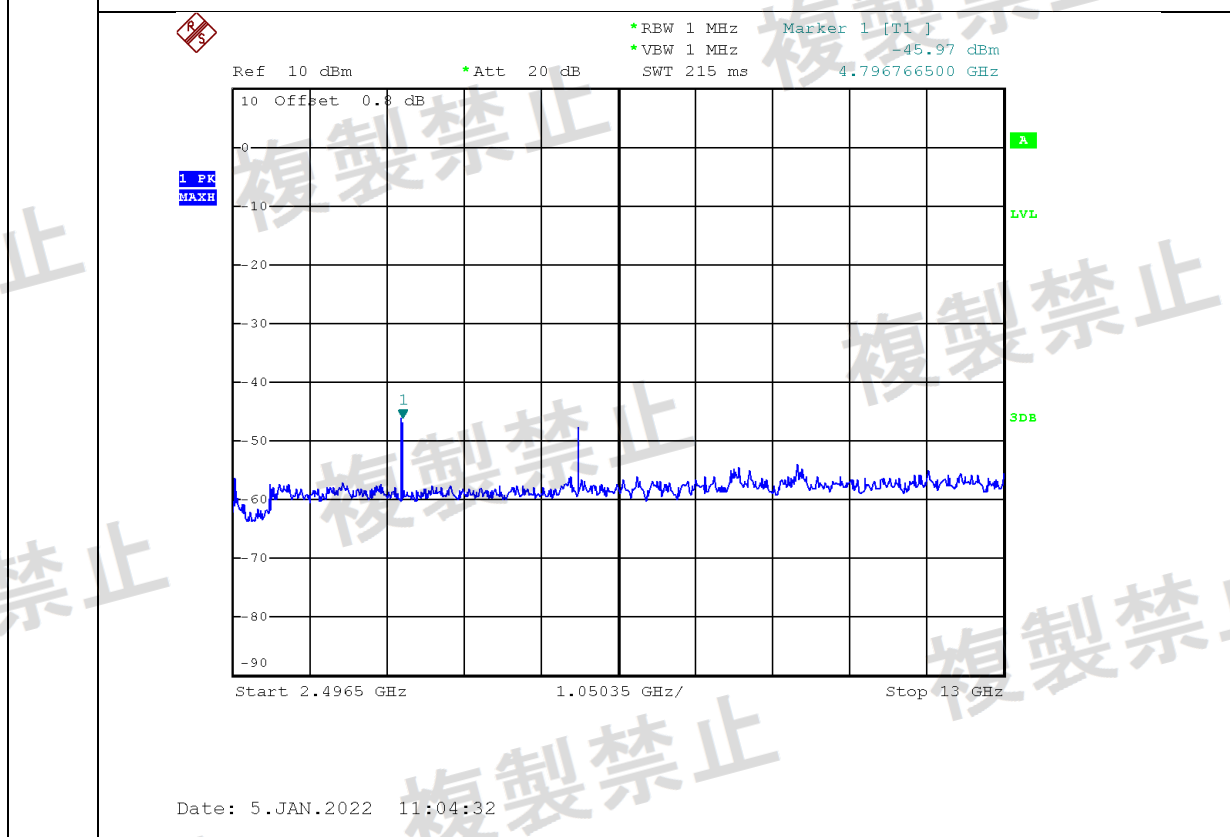
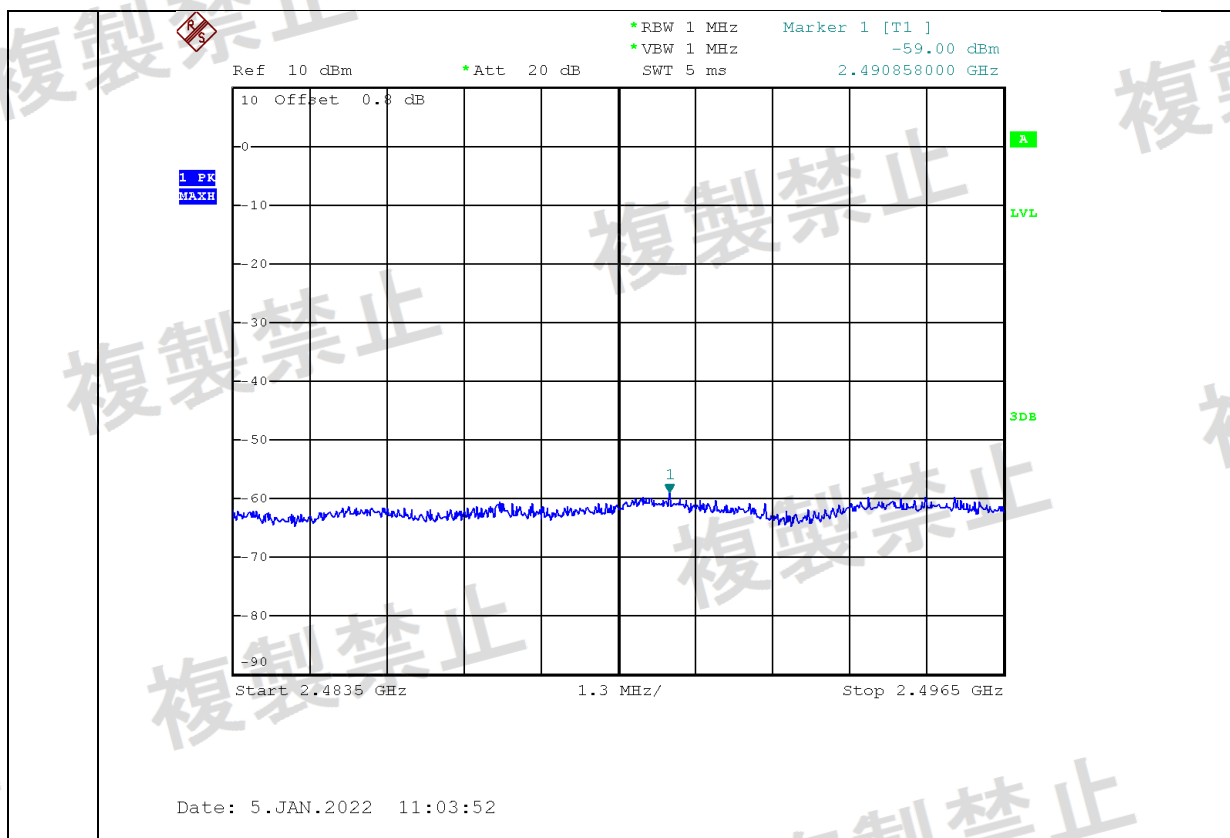
Date: 5.JAN.2022 11:02:07



Ref 10 dBm *Att 20 dB *RBW 1 MHz *VEW 1 MHz *SWT 5 ms Marker 1 [T1] -22.87 dBm 2.400000000 GHz



Date: 5.JAN.2022 11:03:26



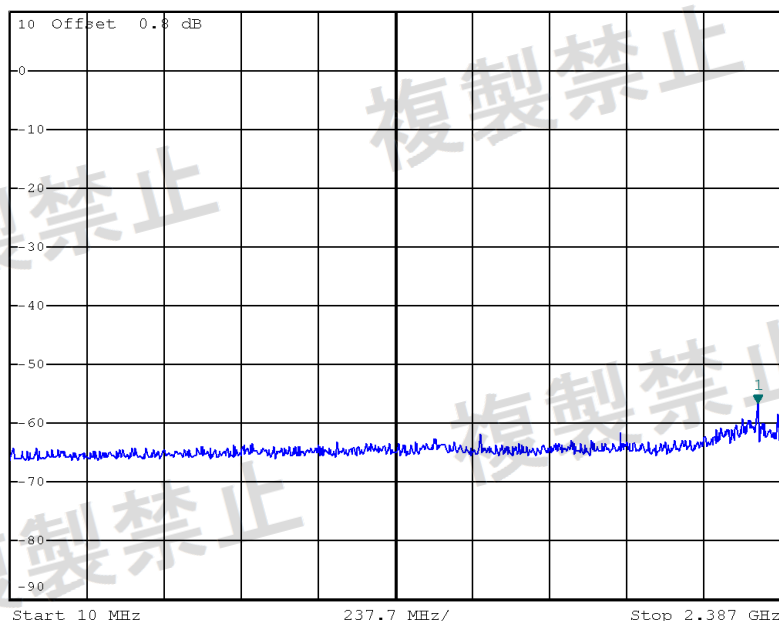
Spurious Emission Intensity

MID



1 PK
MAXH

Ref 10 dBm *Att 20 dB *RBW 1 MHz Marker 1 [T1] -56.54 dBm
*VEW 1 MHz 2.313313000 GHz
SWT 15 ms

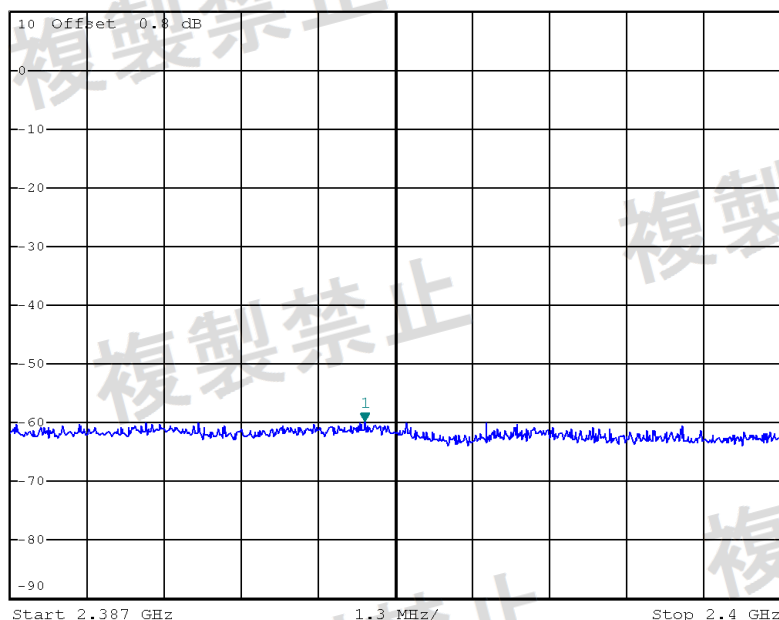


Date: 5.JAN.2022 11:12:36

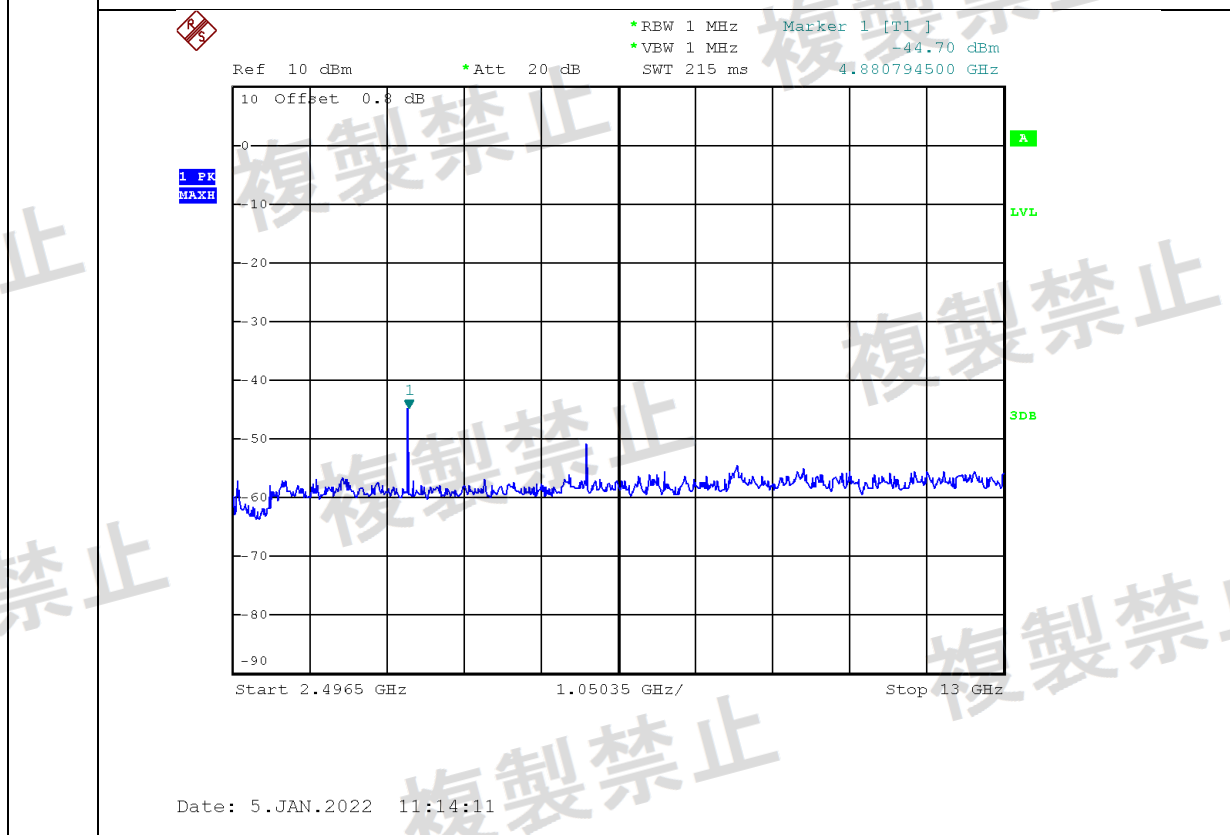
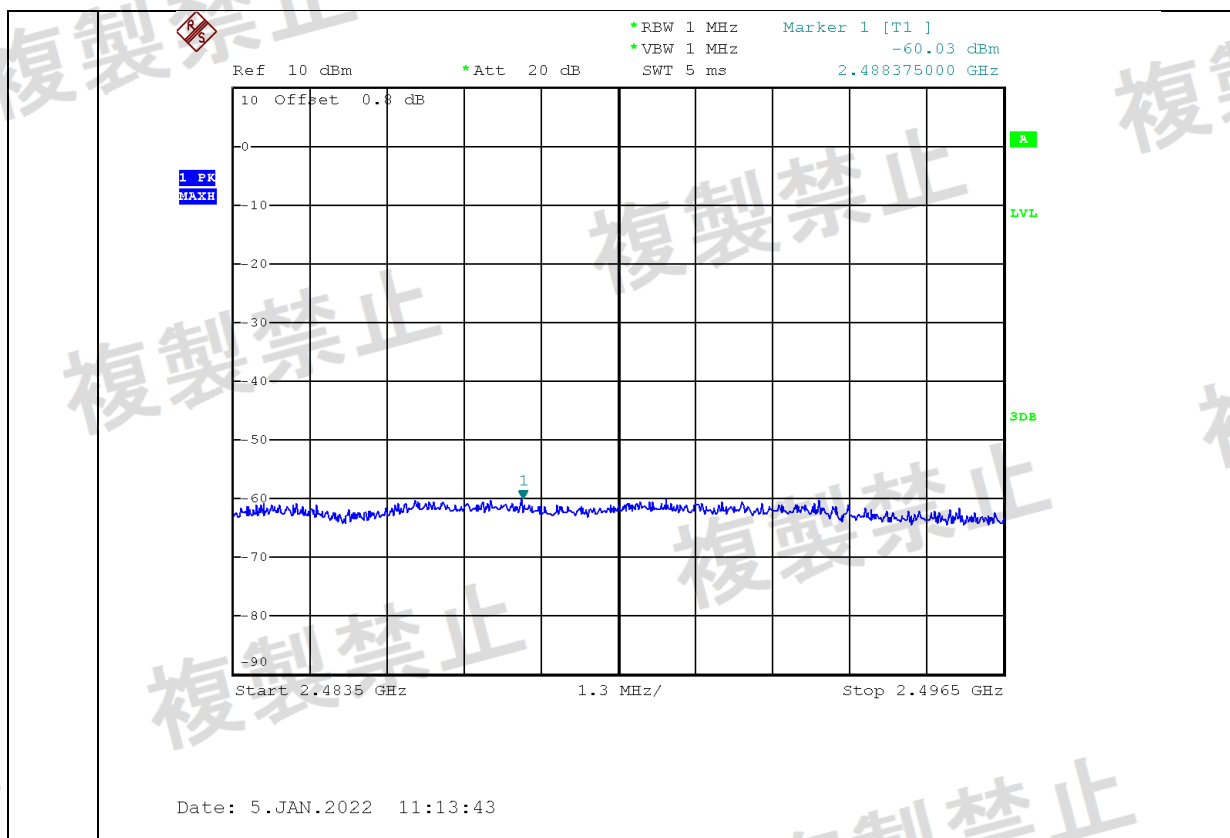


1 PK
MAXH

Ref 10 dBm *Att 20 dB *RBW 1 MHz Marker 1 [T1] -59.76 dBm
*VEW 1 MHz 2.392980000 GHz
SWT 5 ms



Date: 5.JAN.2022 11:13:14

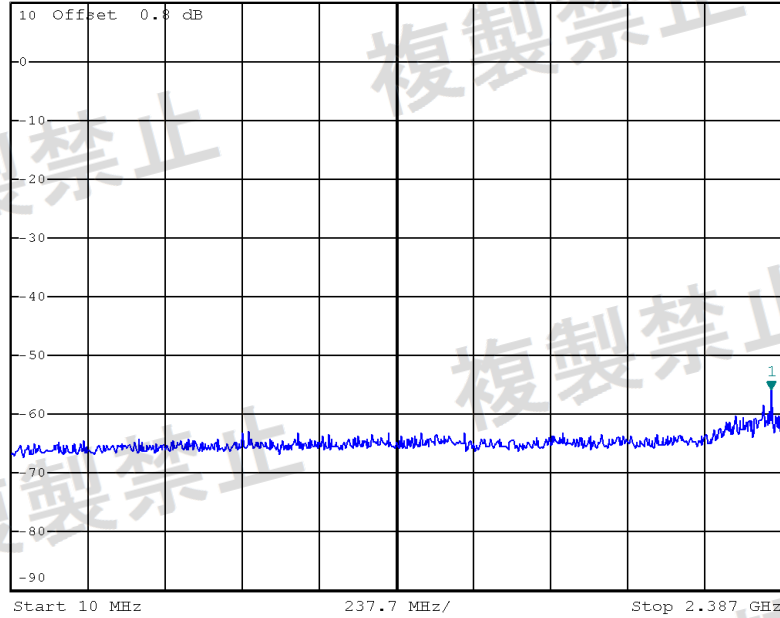


Spurious Emission Intensity

HIGH



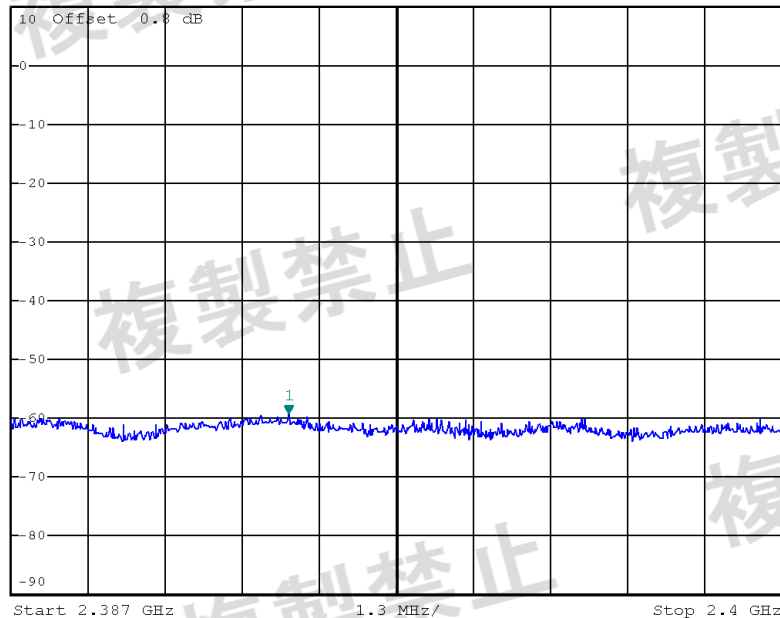
Ref 10 dBm *Att 20 dB *RBW 1 MHz *VEW 1 MHz *SWT 15 ms Marker 1 [T1] -55.68 dBm 2.353722000 GHz



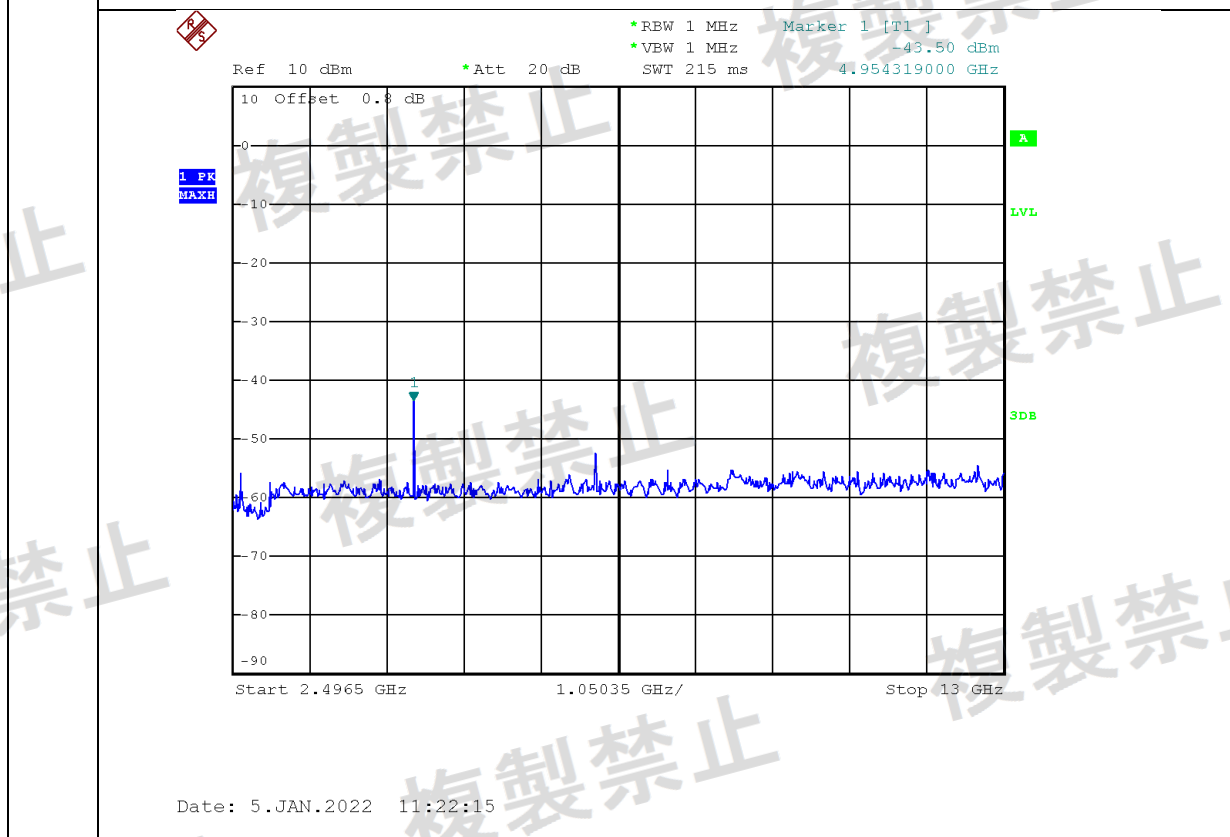
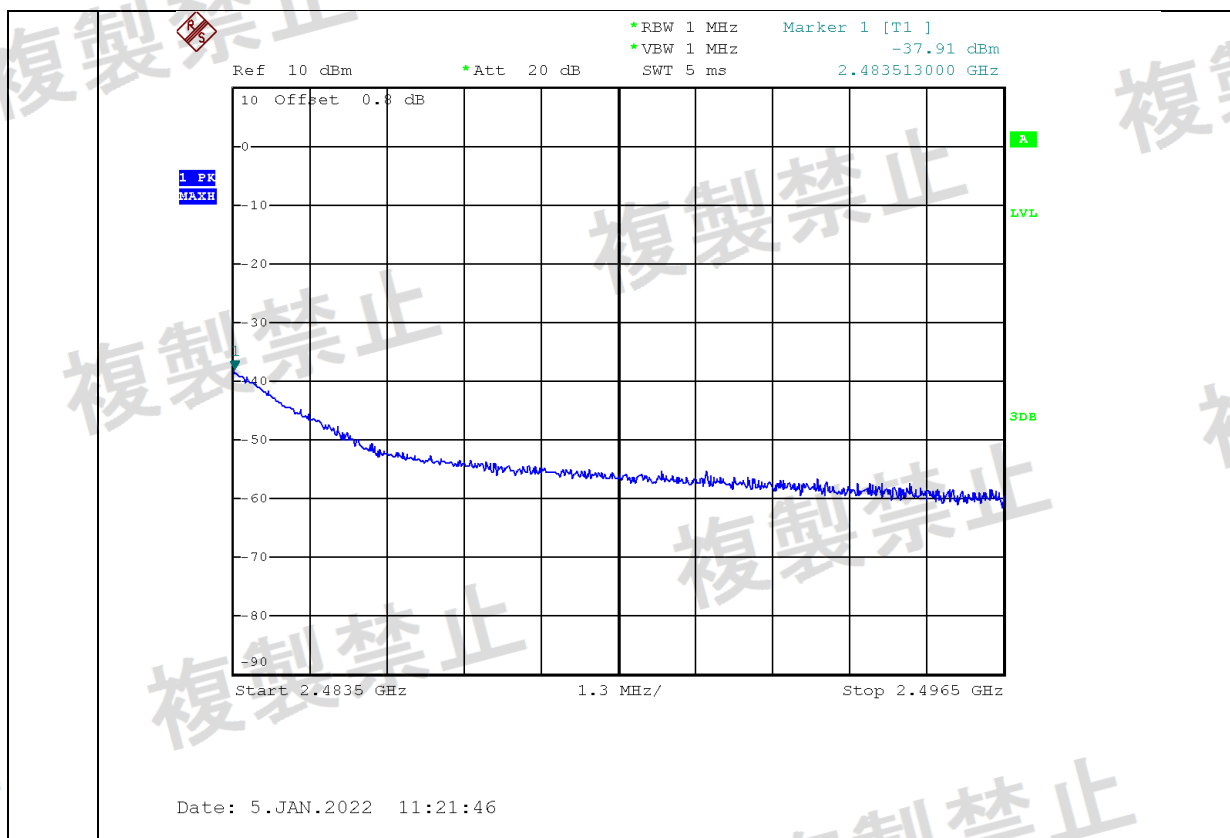
Date: 5.JAN.2022 11:20:38



Ref 10 dBm *Att 20 dB *RBW 1 MHz *VEW 1 MHz *SWT 5 ms Marker 1 [T1] -59.27 dBm 2.391680000 GHz

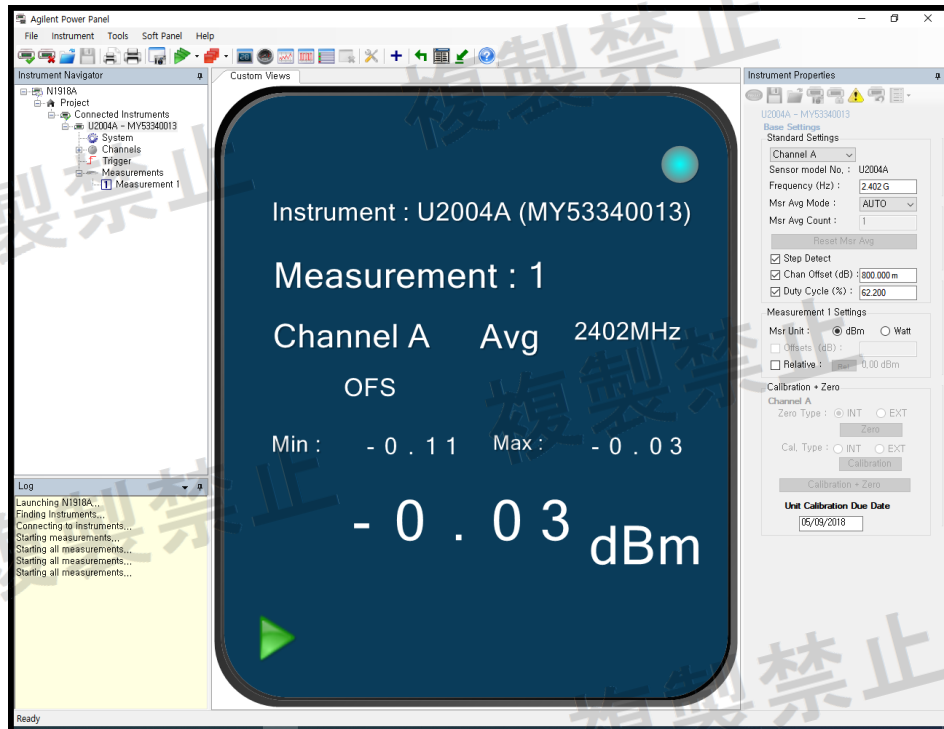


Date: 5.JAN.2022 11:21:10

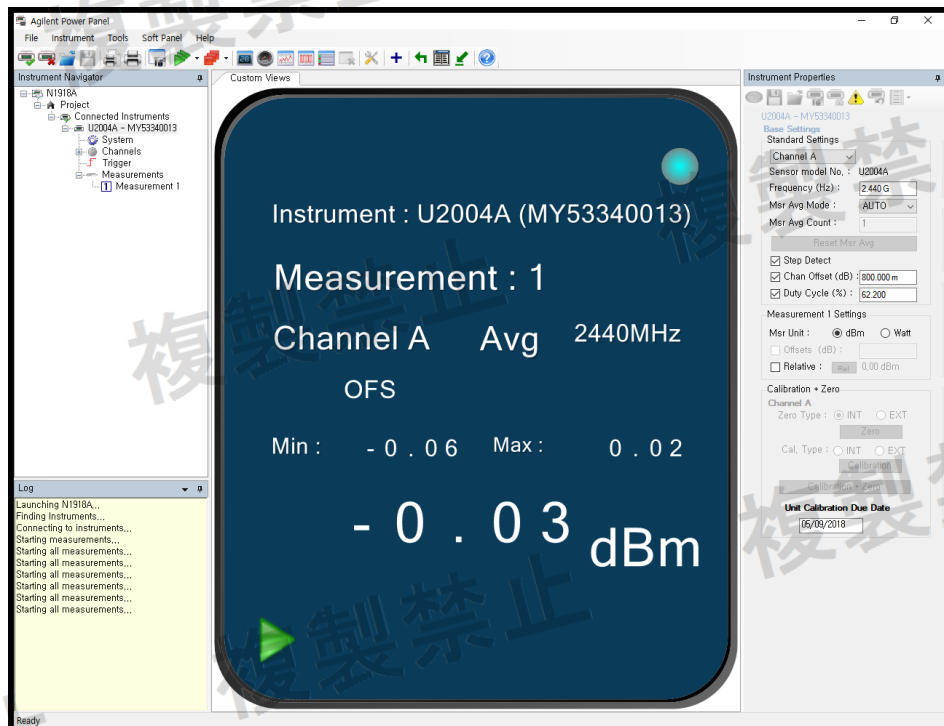


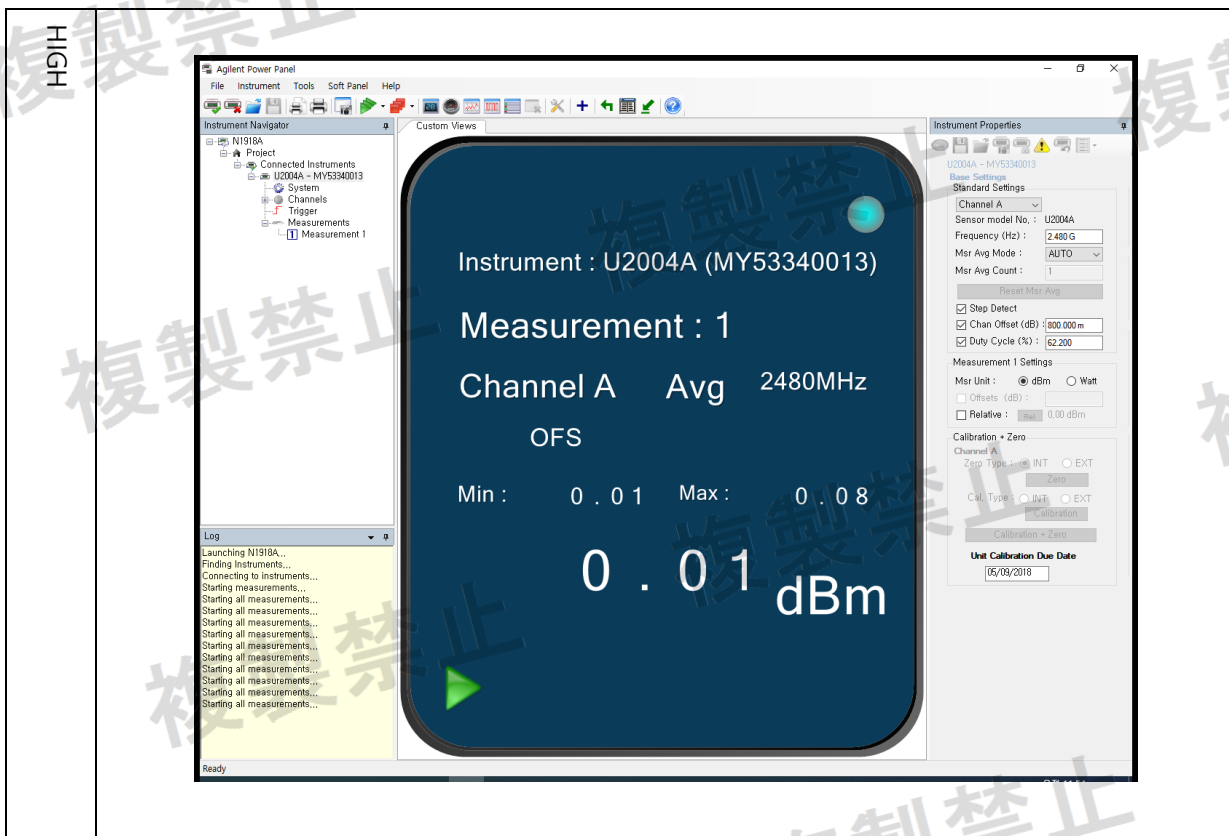
Antenna Power

LOW



MID





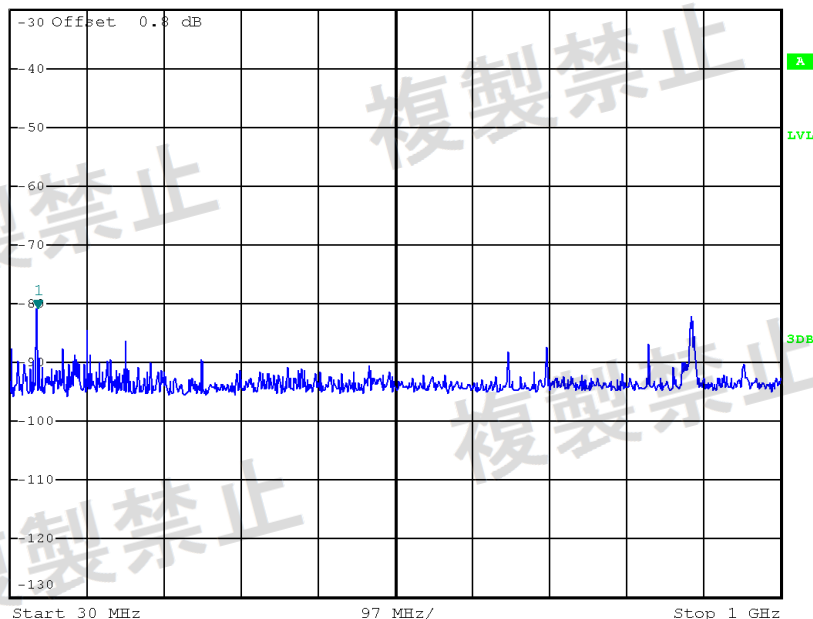
Secondary Radiated Emissions

LOW



1 PK
MAXH

Ref -30 dBm *Att 0 dB *RBW 100 kHz *VEW 100 kHz SWT 100 ms Marker 1 [T1] -80.86 dBm 63.95000000 MHz

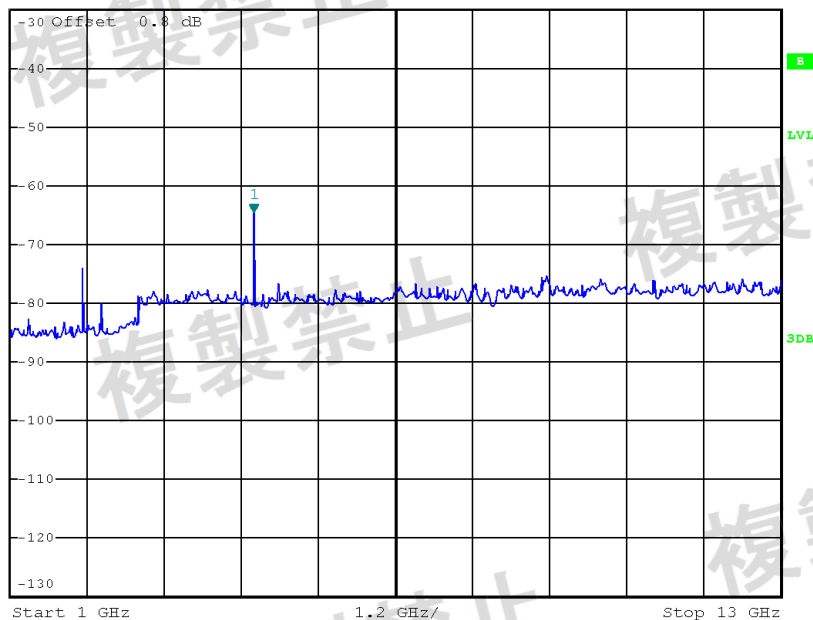


Date: 5.JAN.2022 11:55:51



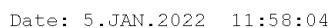
1 PK
MAXH

Ref -30 dBm *Att 0 dB *RBW 1 MHz *VEW 1 MHz SWT 240 ms Marker 1 [T1] -64.58 dBm 4.792000000 GHz



Date: 5.JAN.2022 11:56:12

MID

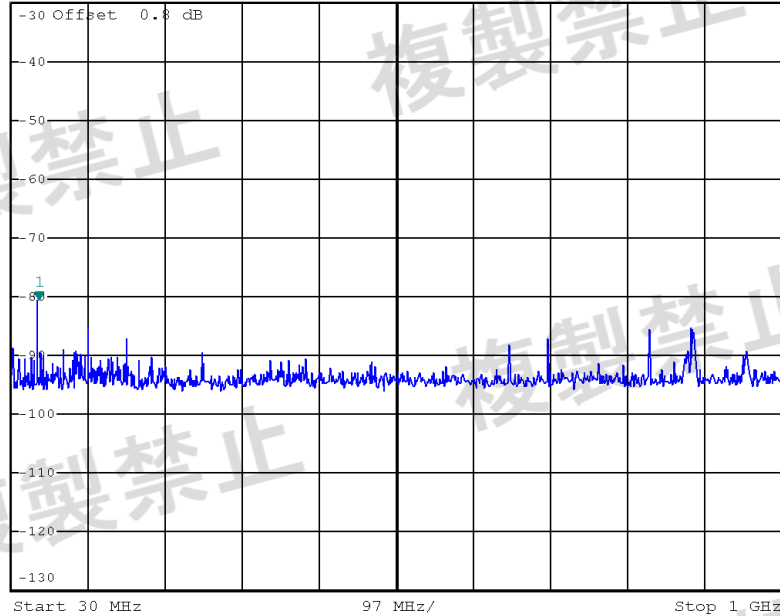


Secondary Radiated Emissions

HIGH



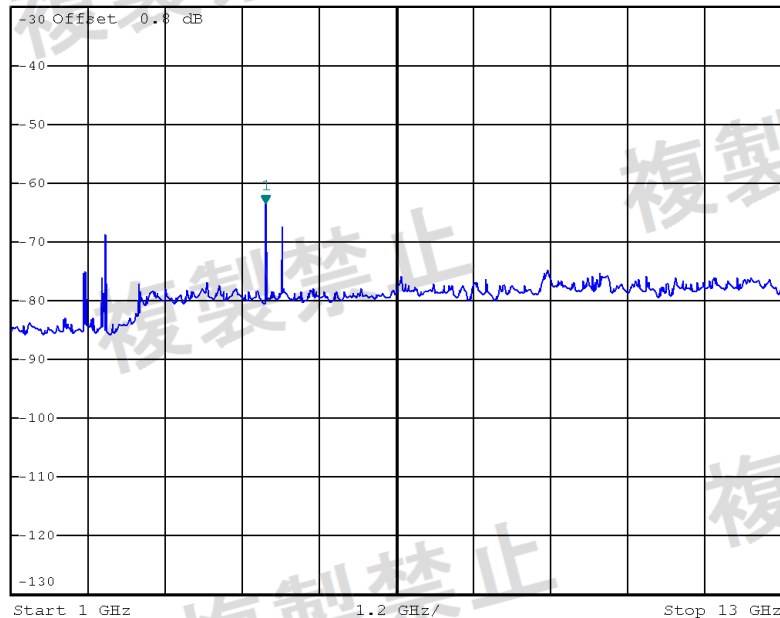
Ref -30 dBm *Att 0 dB *RBW 100 kHz Marker 1 [T1] -80.64 dBm
*VEW 100 kHz 63.95000000 MHz
SWT 100 ms



Date: 5.JAN.2022 12:00:49



Ref -30 dBm *Att 0 dB *RBW 1 MHz Marker 1 [T1] -63.59 dBm
*VEW 1 MHz 4.960000000 GHz
SWT 240 ms



Date: 5.JAN.2022 12:01:06