

## FCC CERTIFICATION TEST REPORT

Report No.: DDT-B22071201-2E01

<b>Applicant</b>	:	Shanghai Cross Stars Cultural Technology LLC., Co.
<b>Address</b>	:	Floor 3, building 7, block chain ecological Valley, Jing'an District, Shanghai, P.R. China
<b>Equipment under Test</b>	:	Formation performance multi-rotor UAV
<b>Model No.</b>	:	CROSS STARS 3
<b>Trade Mark</b>	:	N/A
<b>FCC ID</b>	:	2A9JR-CROSS-STARS-3
<b>Manufacturer</b>	:	Shanghai Cross Stars Cultural Technology LLC., Co.
<b>Address</b>	:	Floor 3, building 7, block chain ecological Valley, Jing'an District, Shanghai, P.R. China

**Issued By:** Tianjin Dongdian Testing Service Co., Ltd.

**Address:** Building D-1, No. 19, Weishi Road, Microelectronics Industrial Park  
Development Area, Tianjin, China

Tel: +86-22-58038033, E-mail: [ddt@ddt.com](mailto:ddt@ddt.com), <http://www.ddttest.com>



## Table of Contents

	Test report declares.....	4
1.	Summary of Test Results .....	6
2.	General Test Information .....	7
2.1.	Description of EUT.....	7
2.2.	Accessories of EUT .....	7
2.3.	Assistant equipment used for test.....	7
2.4.	Block diagram of EUT configuration for test .....	8
2.5.	Deviations of test standard .....	8
2.6.	Test environment conditions .....	8
2.7.	Test laboratory.....	9
2.8.	Measurement uncertainty .....	9
3.	Equipment Used During Test.....	10
4.	6dB Bandwidth and 99% Bandwidth.....	11
4.1.	Block diagram of test setup .....	11
4.2.	Limits .....	11
4.3.	Test procedure.....	11
4.4.	Test result.....	12
4.5.	original test data .....	14
5.	Maximum PK Conducted Output Power .....	32
5.1.	Block diagram of test setup .....	32
5.2.	Limits .....	32
5.3.	Test procedure.....	32
5.4.	Test result.....	33
6.	Power Spectral Density .....	34
6.1.	Block diagram of test setup .....	34
6.2.	Limits .....	34
6.3.	Test procedure.....	34
6.4.	Test result.....	35
6.5.	original test data .....	36
7.	Band Edge Compliance (Conducted Method).....	45
7.1.	Block diagram of test setup .....	45
7.2.	Limits .....	45
7.3.	Test procedure.....	45
7.4.	Test result.....	46
7.5.	original test data .....	46
8.	Radiated Spurious Emissions.....	59
8.1.	Block diagram of test setup .....	59

8.2.	Limit .....	60
8.3.	Test procedure.....	61
8.4.	Test result.....	63
9.	RF Conducted Spurious Emissions .....	89
9.1.	Block diagram of test setup .....	89
9.2.	Limits .....	89
9.3.	Test procedure.....	89
9.4.	Test result.....	90
9.5.	Original test data.....	90
10.	Radiated Band Edge Compliance.....	109
10.1.	Block diagram of test setup .....	109
10.2.	Limit .....	109
10.3.	Test procedure.....	109
10.4.	Test result.....	109
11.	Power Line Conducted Emission .....	134
11.1.	Block diagram of test setup .....	134
11.2.	Power Line Conducted Emission Limits (Class B).....	134
11.3.	Test procedure.....	134
11.4.	Test result.....	135
12.	Antenna Requirements .....	136
12.1.	Limit .....	136
12.2.	Result .....	136
13.	Test Setup Photograph.....	137
14.	Photos of the EUT .....	139

## Test Report Declare

<b>Applicant</b>	:	Shanghai Cross Stars Cultural Technology LLC., Co.
<b>Address</b>	:	Floor 3, building 7, block chain ecological Valley, Jing'an District, Shanghai, P.R. China
<b>Equipment under Test</b>	:	Formation performance multi-rotor UAV
<b>Model No.</b>	:	CROSS STARS 3
<b>Trade Mark</b>	:	N/A
<b>Manufacturer</b>	:	Shanghai Cross Stars Cultural Technology LLC., Co.
<b>Address</b>	:	Floor 3, building 7, block chain ecological Valley, Jing'an District, Shanghai, P.R. China

**Test Standard Used:** FCC Rules and Regulations Part 15 Subpart C

**Test procedure used:** ANSI C63.10:2020, KDB 558074 D01 15.247 Meas Guidance v05r02

**We Declare:**

The equipment described above is tested by Tianjin Dongdian Testing Service Co., Ltd and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Tianjin Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these tests.

**After test and evaluation, our opinion is that the equipment provided compliance with the requirement of the above FCC standards.**



<b>Report No:</b>	DDT-B22071201-2E01		
<b>Date of Receipt:</b>	Jul. 12, 2022	<b>Date of Test:</b>	Jul. 12, 2022 ~ May 26, 2023

**Prepared By:**

*Sunny Zhang*

**Sunny Zhang/Engineer**

**Approved By:**

*Aaron Zhang*

**Aaron Zhang/Manager**

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Tianjin Dongdian Testing Service Co., Ltd.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

### Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	May 26, 2023	

## 1. Summary of Test Results

The EUT have been tested according to the applicable standards as referenced below.		
Description of Test Item	Standard	Verdict
6dB Bandwidth and 99% Bandwidth	FCC 15.247 (a) (2)	Pass
Maximum Conducted Output Power	FCC 15.247 (b) (3)	Pass
Power Spectral Density	FCC 15.247 (e)	Pass
Conducted Band-Edge Emissions	FCC 15.247 (d)	Pass
Conducted Spurious Emissions	FCC 15.247 (d)	Pass
Radiated Spurious Emissions	FCC 15.247 (d) FCC 15.209 FCC 15.205	Pass
Radiated Band Edge Emissions	FCC 15.247 (d) FCC 15.209 FCC 15.205	Pass
Power Line Conducted Emission	FCC 15.207	N/A
Antenna Requirement	FCC 15.203	Pass
"N/A" means Not Applicable.		

## 2. General Test Information

### 2.1. Description of EUT

EUT* Name	: Formation performance multi-rotor UAV
Model Number	: CROSS STARS 3
EUT Function Description	: Please reference user manual of this device
Power supply	: DC 14.54V by Polymer Li-ion built-in battery
Radio Technology	: IEEE 802.11b/g/n
Operation Frequency	: IEEE 802.11b: 2412MHz-2462MHz IEEE 802.11g: 2412MHz-2462MHz IEEE 802.11n HT20: 2412MHz-2462MHz
Modulation	: IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Transmitter Rate	: IEEE 802.11b: 1, 2, 5.5, 11 Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n: MCS0~MCS7
Antenna Type	: FPC antenna 1, maximum PK gain: 4.20 dBi FPC antenna 2, maximum PK gain: 3.69 dBi
SISO Mode	: <input checked="" type="checkbox"/> 11b <input checked="" type="checkbox"/> 11g <input checked="" type="checkbox"/> 11n <input type="checkbox"/> 11ax
MIMO Mode	: <input type="checkbox"/> 11b <input type="checkbox"/> 11g <input type="checkbox"/> 11n <input type="checkbox"/> 11ax

Note1: EUT is the ab. of equipment under test.

Channel information					
CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447	/	/

### 2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Description	Remark
N/A	N/A	N/A	N/A	N/A

### 2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN
Notebook	Lenovo Beijing Co. Ltd.	ThinkPad	FCC/CE	TP00067A

## 2.4. Block diagram of EUT configuration for test

EUT

Run the special test software “MobaXterm.exe” provided by manufacturer to control EUT work in Continuous Tx mode, and select test channel, wireless mode and data rate.

Tested mode, channel, setting Tx power and rand data rate information				
Mode	Setting Tx Power	Data rate (Mbps) (See Note)	Channel	Frequency (MHz)
IEEE 802.11b	Default	1	LCH: CH1	2412
	Default	1	MCH: CH6	2437
	Default	1	HCH: CH11	2462
IEEE 802.11g	Default	6	LCH: CH1	2412
	Default	6	MCH: CH6	2437
	Default	6	HCH: CH11	2462
IEEE 802.11n HT20	Default	MCS 0	LCH: CH1	2412
	Default	MCS 0	MCH: CH6	2437
	Default	MCS 0	HCH: CH11	2462

Note1: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.

## 2.5. Deviations of test standard

No Deviation

## 2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-28℃
Humidity range:	20-75%
Pressure range:	86-106kPa



## 2.7. Test laboratory

Tianjin Dongdian Testing Service Co., Ltd.

Address: Building D-1, No. 19, Weisi Road, Microelectronics Industrial Park Development Area, Tianjin, China.

Tel: +86-22-58038033, <http://www.ddttest.com>, Email: [ddt@dgddt.com](mailto:ddt@dgddt.com)

**NVLAP** (National Voluntary Laboratory Accreditation Program) CODE: 500036-0

**CNAS** (China National Accreditation Service for Conformity Assessment) CODE: L13402

**FCC** Designation Number: CN5004; FCC Test Firm Registration Number: 368676

**ISED** (Innovation, Science and Economic Development Canada) Company Number: 27768

Conformity Assessment Body Identifier: CN0125

**VCCI** Facility Registration Number: C-20089, T-20093, R-20125, G-20122

## 2.8. Measurement uncertainty

Test Item	Uncertainty
Bandwidth	0.14%
Peak Output Power (Conducted) (Spectrum Analyzer)	0.12 dB (10 MHz ≤ f < 3.6 GHz);
	0.32 dB (3.6 GHz ≤ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.51 dB
Power Spectral Density	0.12 dB (10 MHz ≤ f < 3.6 GHz);
	0.32 dB (3.6 GHz ≤ f < 8 GHz)
Frequencies Stability	6.7 x 10 <sup>-8</sup> (Antenna couple method)
	3.4 x 10 <sup>-8</sup> (Conducted method)
Conducted Spurious Emissions	0.12 dB (10 MHz ≤ f < 3.6 GHz);
	0.32 dB (3.6 GHz ≤ f < 8 GHz)
	0.52 dB (8 GHz ≤ f < 22 GHz)
Uncertainty for Radio Frequency (RBW < 20 kHz)	3x10 <sup>-7</sup>
Temperature	±2°C
Humidity	±1%
Uncertainty for Radiation Emission Test (30 MHz - 1 GHz)	2.72 dB (Antenna Polarize: V)
	2.72 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission Test (1 GHz - 40 GHz)	2.74 dB (1 - 6 GHz)
	2.72 dB (6 GHz - 18 GHz)
	3.54 dB (18 GHz - 26 GHz)
	4.30 dB (26 GHz - 40 GHz)
Uncertainty for Power Line Conduction Emission Test	3.40 dB (150 kHz - 30 MHz)

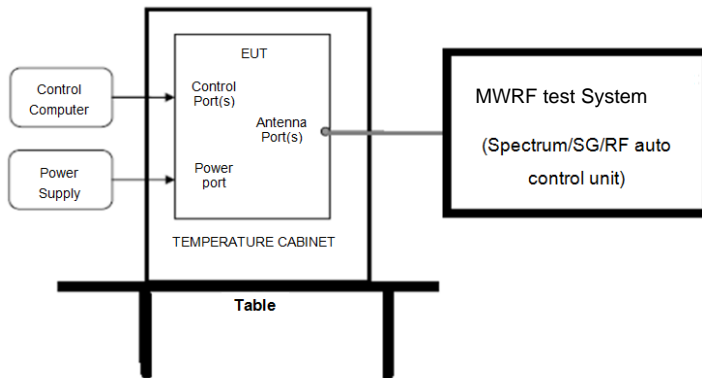
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

### 3. Equipment Used During Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
<b>RF Connected Test (MWRFtest system)</b>					
Microwave Signal Generator	R&S	SMF100A	101396	2022/05/26	1 Year
MXG Vector Signal Generator	Keysight	N5182A	MY50143288	2023/03/07	1 Year
EMI Test Receiver	R&S	ESU26	100243	2023/03/03	1 Year
Signal Analyzer	R&S	FSV	101730	2023/04/04	1 Year
Wideband Radio Communication Tester	R&S	CMW500	158800	2022/06/11	1 Year
Power Sensor	KEYSIGHT	U2021XA	MY59150007	2023/03/22	1 Year
DC Power Supply	inSTEK	PSP-2010	EN122317	2023/02/12	1 Year
Test Software	MWRFtest	MTS8310	V03	N/A	N/A
<b>Radiated Emission -10m EMI Chamber</b>					
Broadband Horn Antenna	TESEQ	BHA 9118	31754	2022/10/12	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	2023/05/06	1 Year
Active Loop Antenna	R&S	HFH2-Z2	100269	2022/07/11	1 Year
Low noise amplifier	MITEQ	TPA0118-36	0914	2023/02/16	1 Year
EMI Test Receiver	R&S	ESCI	101024	2023/02/15	1 Year
EMI Test Receiver	R&S	ESCI	101030	2023/02/15	1 Year
EMI Test Receiver	R&S	ESU26	100244	2023/03/03	1 Year
Bilog Antenna	TESEQ	CBL6112D	29068	2022/10/10	2 Year
Bilog Antenna	TESEQ	CBL6112D	29069	2022/10/10	2 Year
Amplifier	Sonoma	310N	300913	2023/02/15	1 Year
Amplifier	Sonoma	310N	300914	2023/02/15	1 Year
Ant Mast	Innco	MA4000	N/A	N/A	N/A
Ant Mast	Innco	MA4000	N/A	N/A	N/A
Mast Controller	Innco	CO2000	N/A	N/A	N/A
Mast Controller	Innco	CO2000	N/A	N/A	N/A
RF Selector 4CH	TOYO	NS4904N	Selector1	N/A	N/A
RF Selector 4CH	TOYO	NS4904N	Selector2	N/A	N/A
Test software	TOYO	EP5/RSE	Ver 1.9.1	N/A	N/A
Test software	Audix	E3	V 6.11111b	N/A	N/A
<b>Power Line Conducted Emissions Test</b>					
Test Receiver	R&S	ESCI	101397	2023/02/15	1 Year
LISN	R&S	ENV216	101122	2023/02/15	1 Year
Test software	TOYO	EP5/CE	V 5.4.40	N/A	N/A

## 4. 6dB Bandwidth and 99% Bandwidth

### 4.1. Block diagram of test setup



### 4.2. Limits

For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz

### 4.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) 99% Bandwidth set the spectrum analyzer as follows:

RBW: 1% to 5% of the OBW

VBW: Three times the RBW

Detector Mode: Peak

Sweep time: auto

Trace mode Max hold

(3) 6dB Bandwidth set the spectrum analyzer as follows:

RBW: 100 kHz

VBW: 300 kHz

Detector Mode: Peak

Sweep time: auto

Trace mode Max hold

(4) Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

## 4.4. Test result

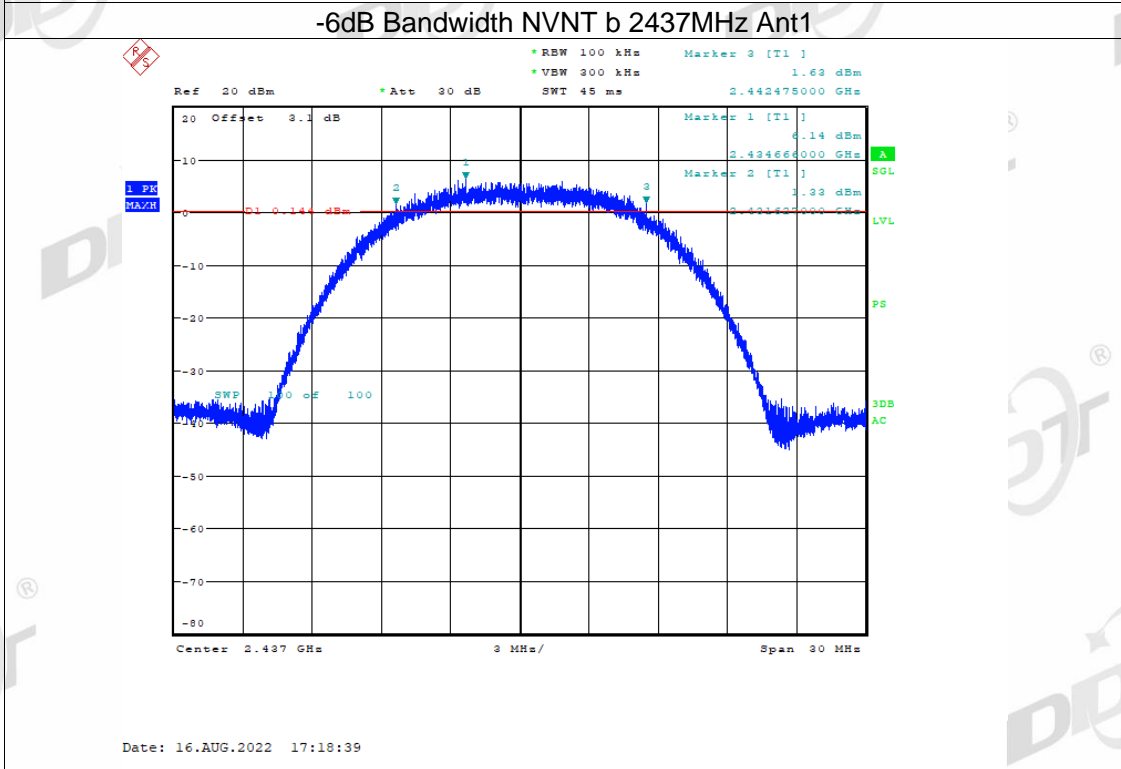
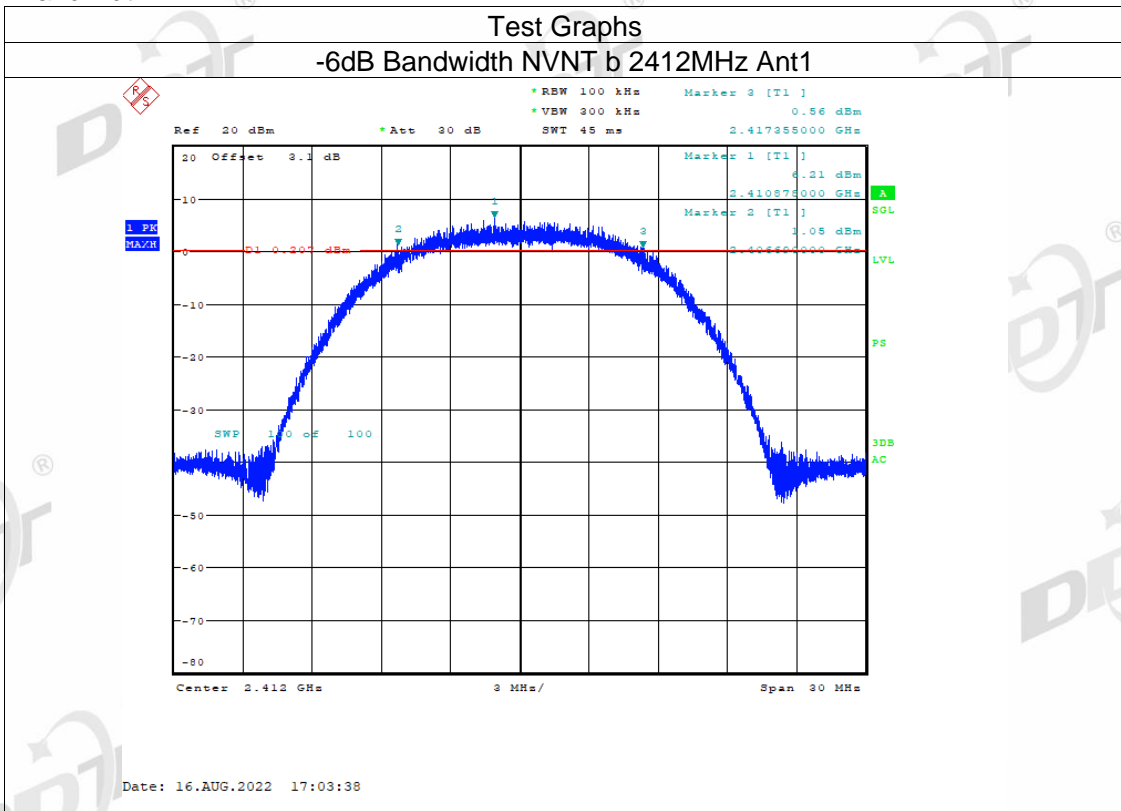
Test Mode	Test Channel	Antenna	6dB Bandwidth (MHz)	Limit (MHz)	Verdict
b	2412	Ant1	10.665	$\cong 0.5$	Pass
b	2437	Ant1	10.848	$\cong 0.5$	Pass
b	2462	Ant1	10.161	$\cong 0.5$	Pass
b	2412	Ant2	10.827	$\cong 0.5$	Pass
b	2437	Ant2	11.217	$\cong 0.5$	Pass
b	2462	Ant2	10.713	$\cong 0.5$	Pass
g	2412	Ant1	15.660	$\cong 0.5$	Pass
g	2437	Ant1	15.783	$\cong 0.5$	Pass
g	2462	Ant1	15.894	$\cong 0.5$	Pass
g	2412	Ant2	16.281	$\cong 0.5$	Pass
g	2437	Ant2	16.287	$\cong 0.5$	Pass
g	2462	Ant2	16.314	$\cong 0.5$	Pass
n20	2412	Ant1	16.146	$\cong 0.5$	Pass
n20	2437	Ant1	16.518	$\cong 0.5$	Pass
n20	2462	Ant1	16.266	$\cong 0.5$	Pass
n20	2412	Ant2	16.290	$\cong 0.5$	Pass
n20	2437	Ant2	16.758	$\cong 0.5$	Pass
n20	2462	Ant2	16.281	$\cong 0.5$	Pass

Test Mode	Test Channel	Antenna	99% OBW (MHz)	Limit (MHz)	Verdict
b	2412	Ant1	14.472	---	Pass
b	2437	Ant1	14.511	---	Pass
b	2462	Ant1	14.508	---	Pass
b	2412	Ant2	14.448	---	Pass
b	2437	Ant2	14.466	---	Pass
b	2462	Ant2	14.481	---	Pass
g	2412	Ant1	16.434	---	Pass
g	2437	Ant1	16.428	---	Pass
g	2462	Ant1	16.482	---	Pass
g	2412	Ant2	16.407	---	Pass
g	2437	Ant2	16.416	---	Pass
g	2462	Ant2	16.401	---	Pass
n20	2412	Ant1	17.595	---	Pass
n20	2437	Ant1	17.637	---	Pass
n20	2462	Ant1	17.613	---	Pass

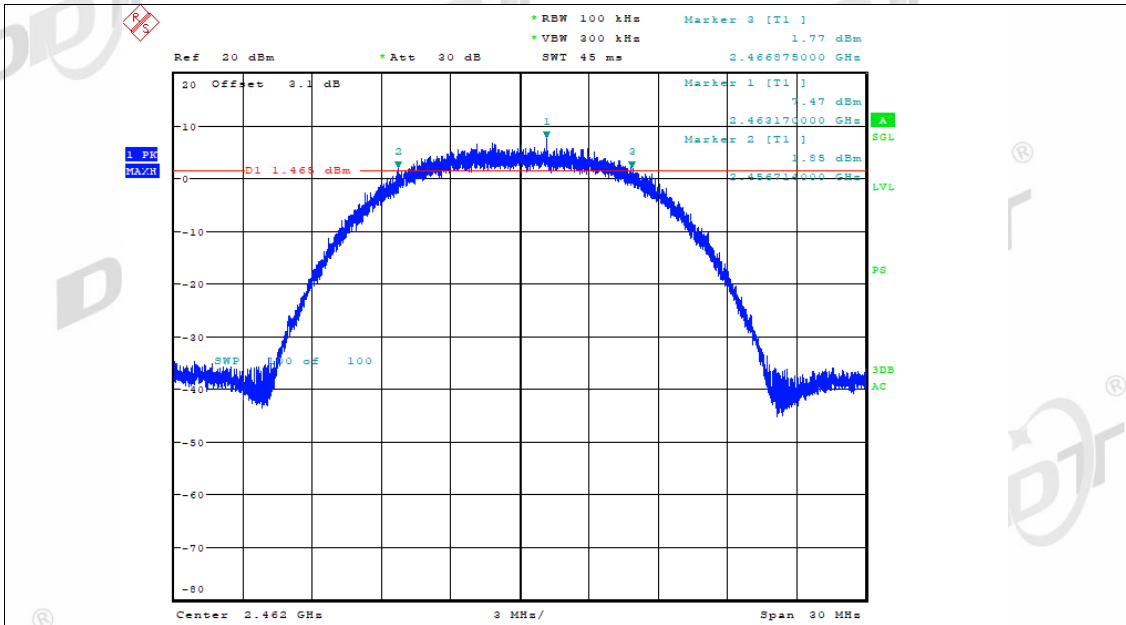
n20	2412	Ant2	17.595	---	Pass
n20	2437	Ant2	17.631	---	Pass
n20	2462	Ant2	17.616	---	Pass

### 4.5. original test data

6dB Bandwidth

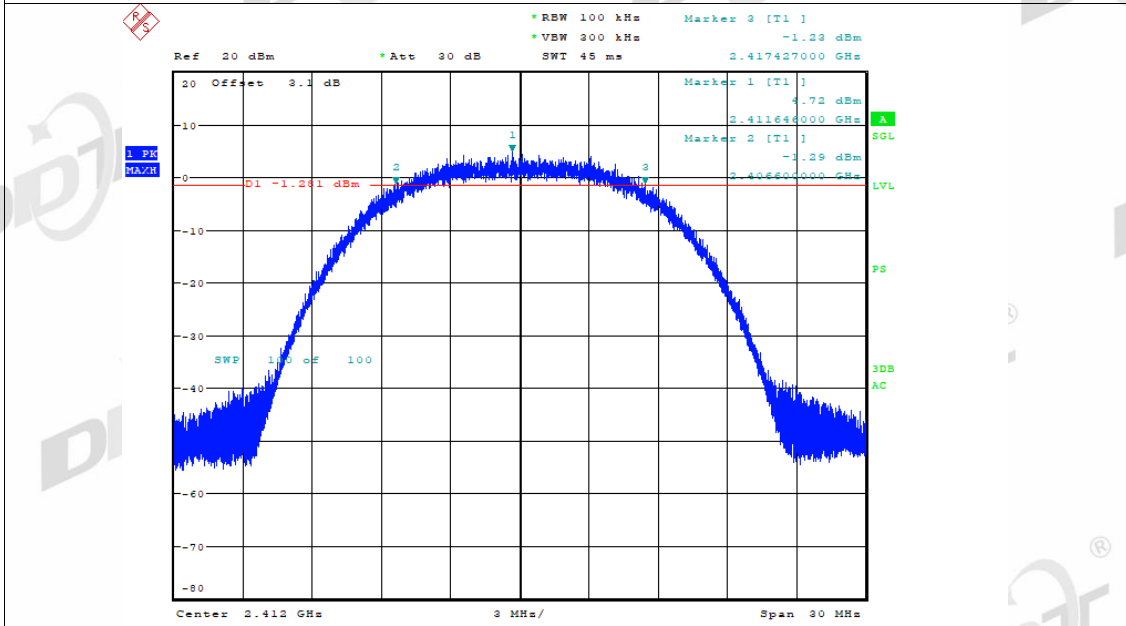


**-6dB Bandwidth NVNT b 2462MHz Ant1**



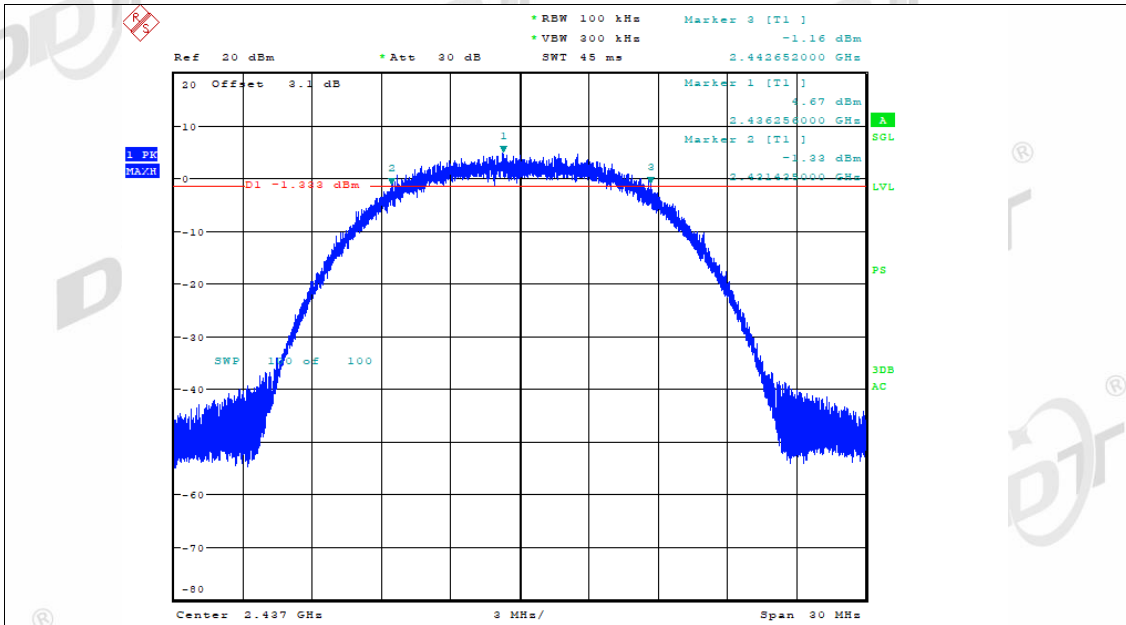
Date: 16.AUG.2022 17:25:19

-6dB Bandwidth NVNT b 2412MHz Ant2



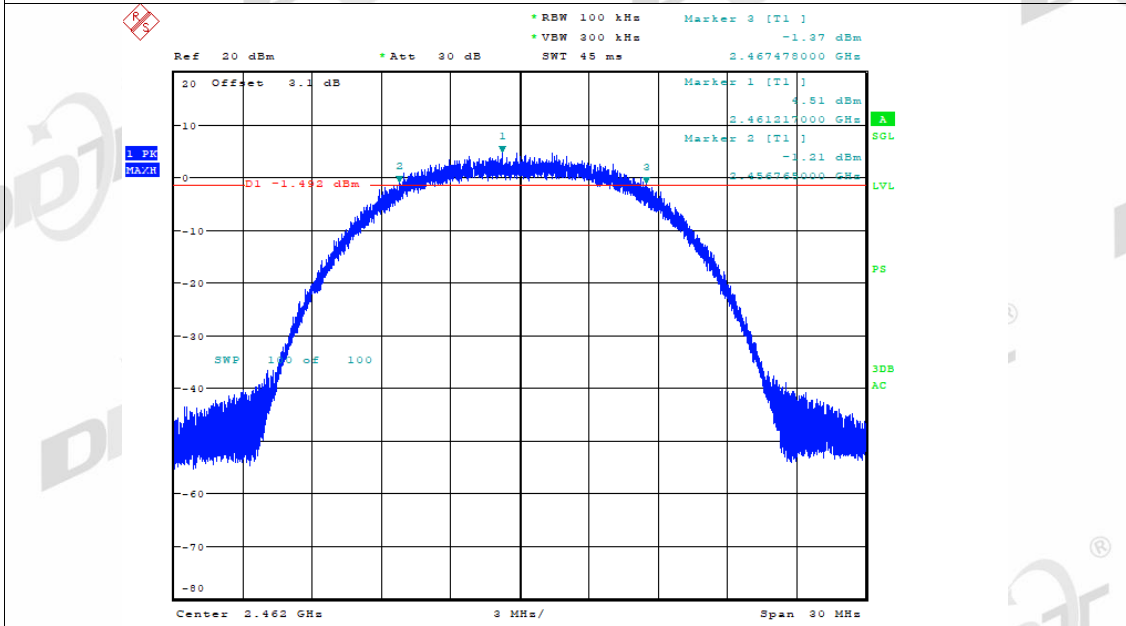
Date: 16.AUG.2022 17:10:25

-6dB Bandwidth NVNT b 2437MHz Ant2



Date: 16.AUG.2022 17:21:53

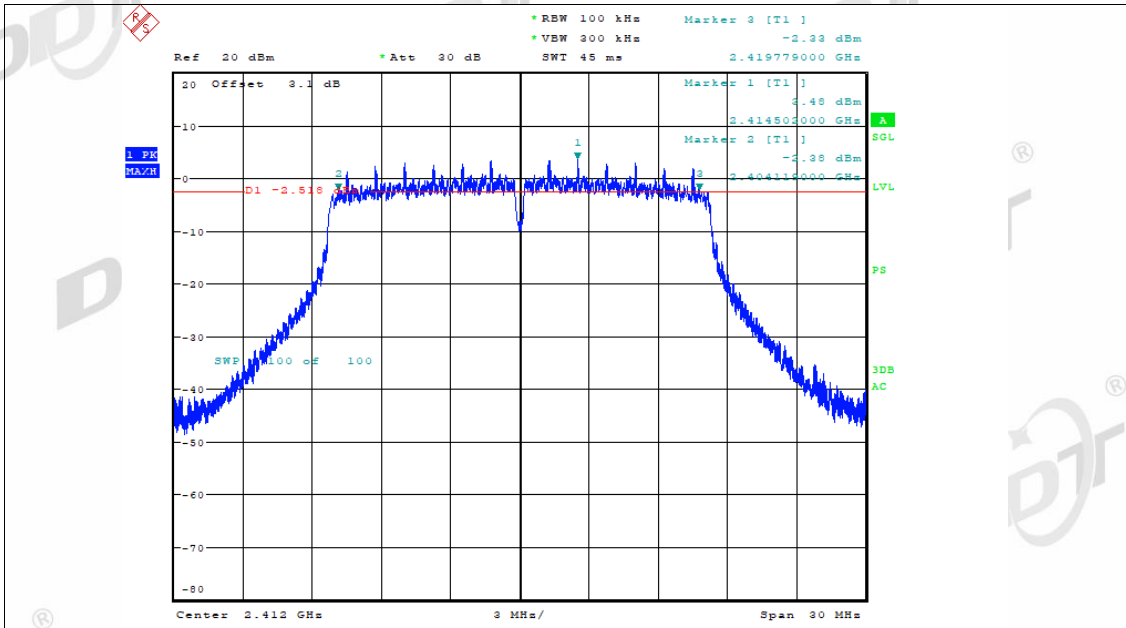
-6dB Bandwidth NVNT b 2462MHz Ant2



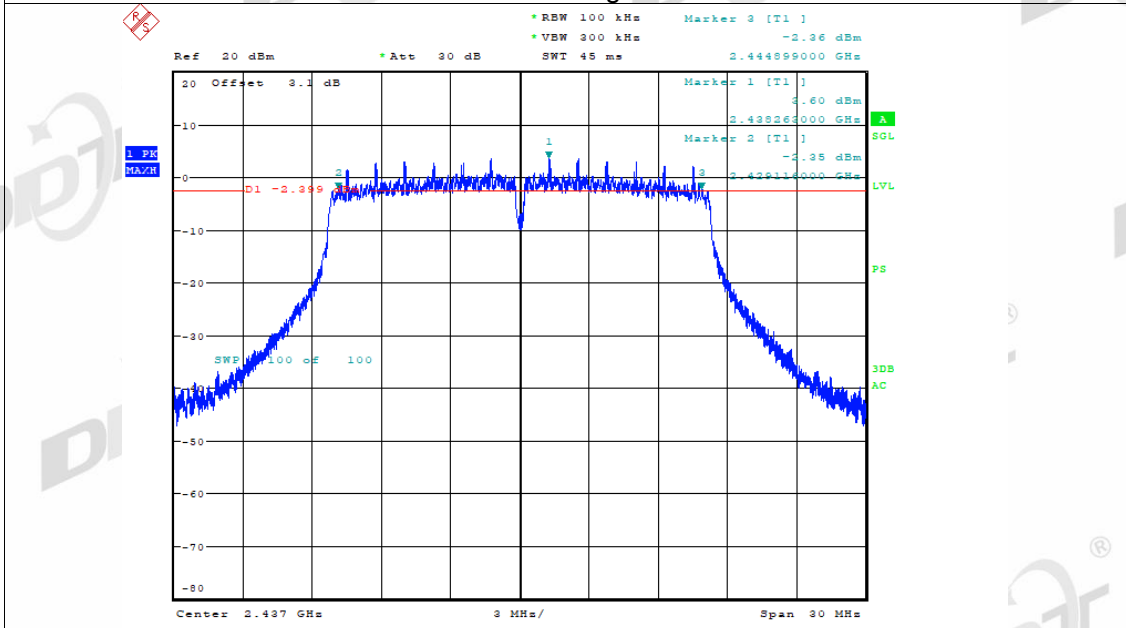
Date: 16.AUG.2022 17:27:51

-6dB Bandwidth NVNT g 2412MHz Ant1

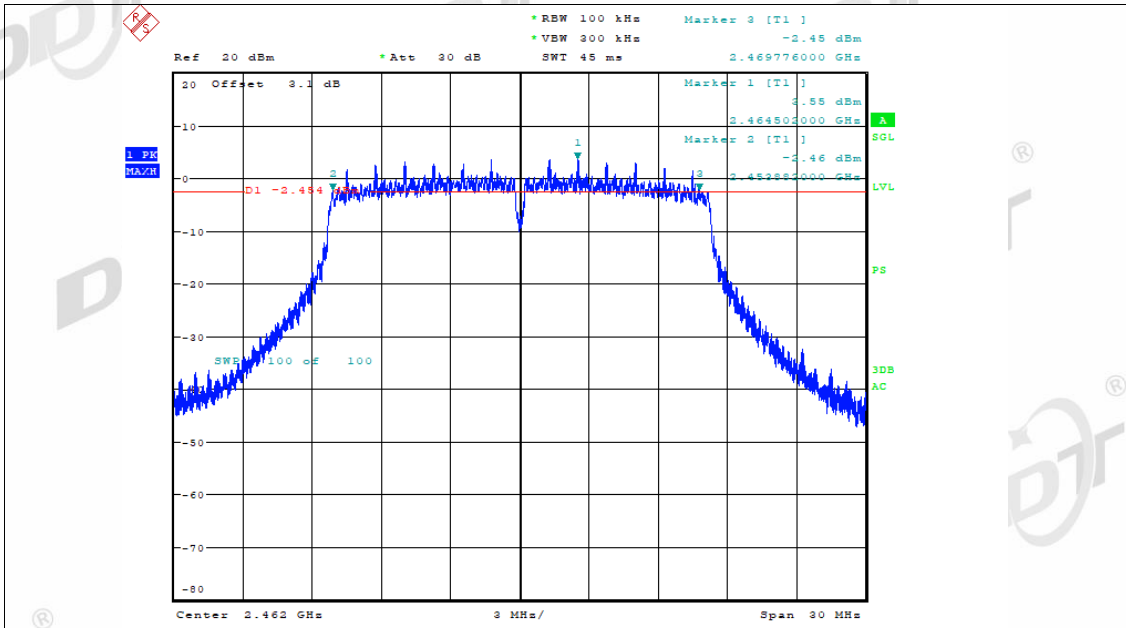




-6dB Bandwidth NVNT g 2437MHz Ant1

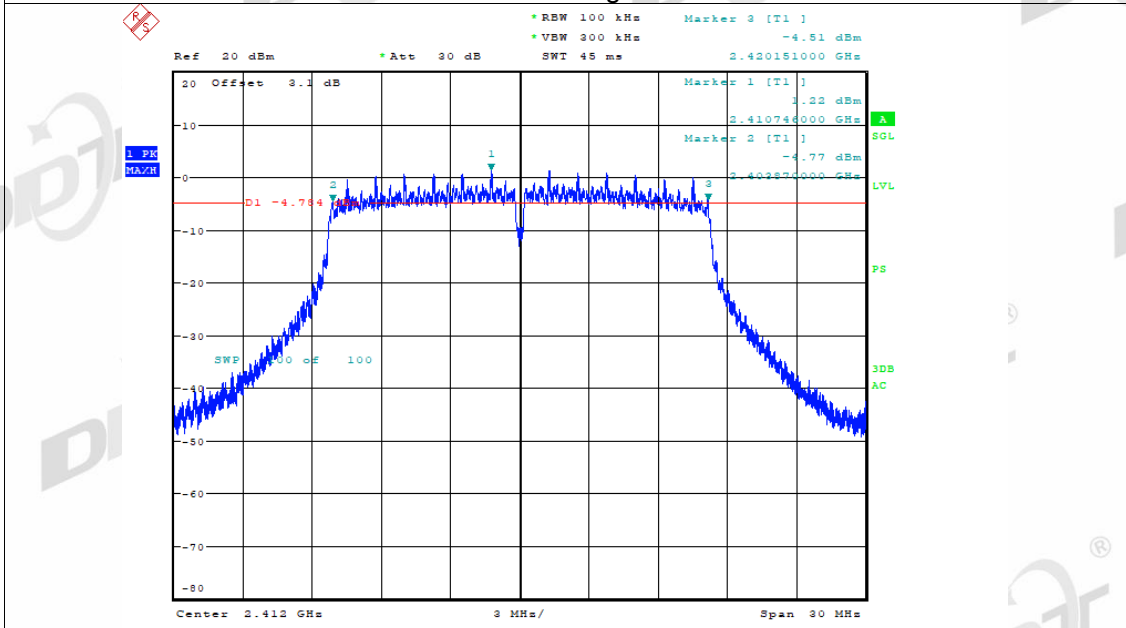


-6dB Bandwidth NVNT g 2462MHz Ant1



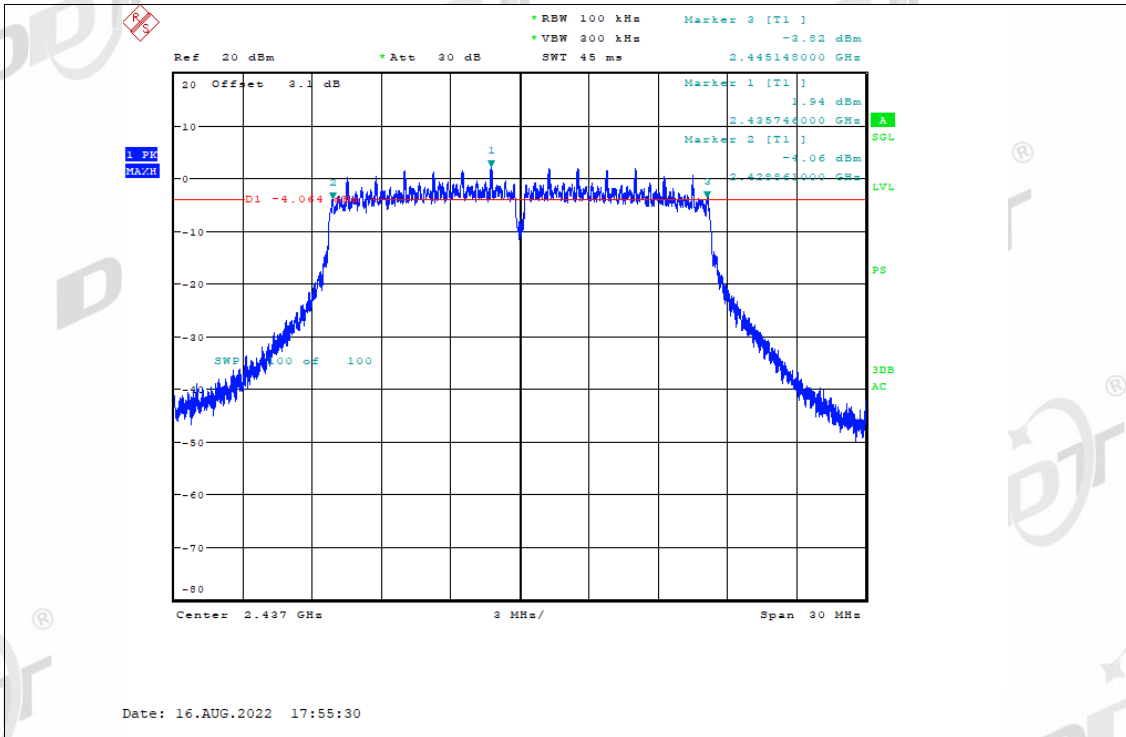
Date: 16.AUG.2022 18:01:53

-6dB Bandwidth NVNT g 2412MHz Ant2

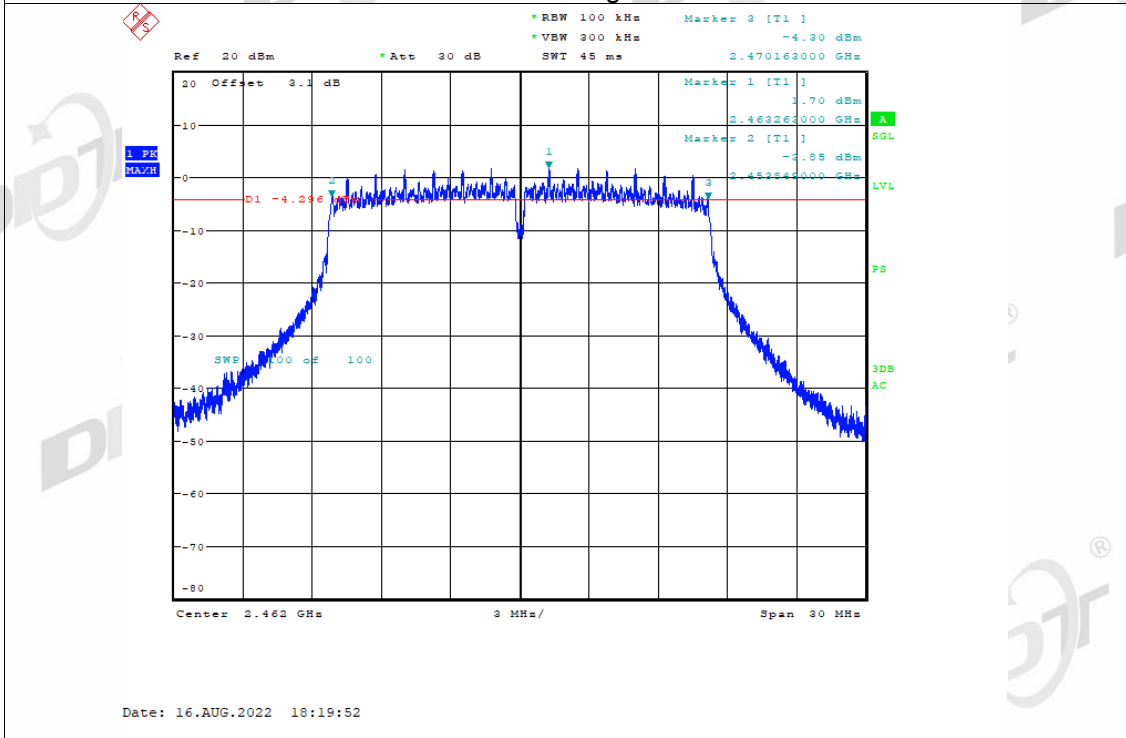


Date: 16.AUG.2022 17:41:25

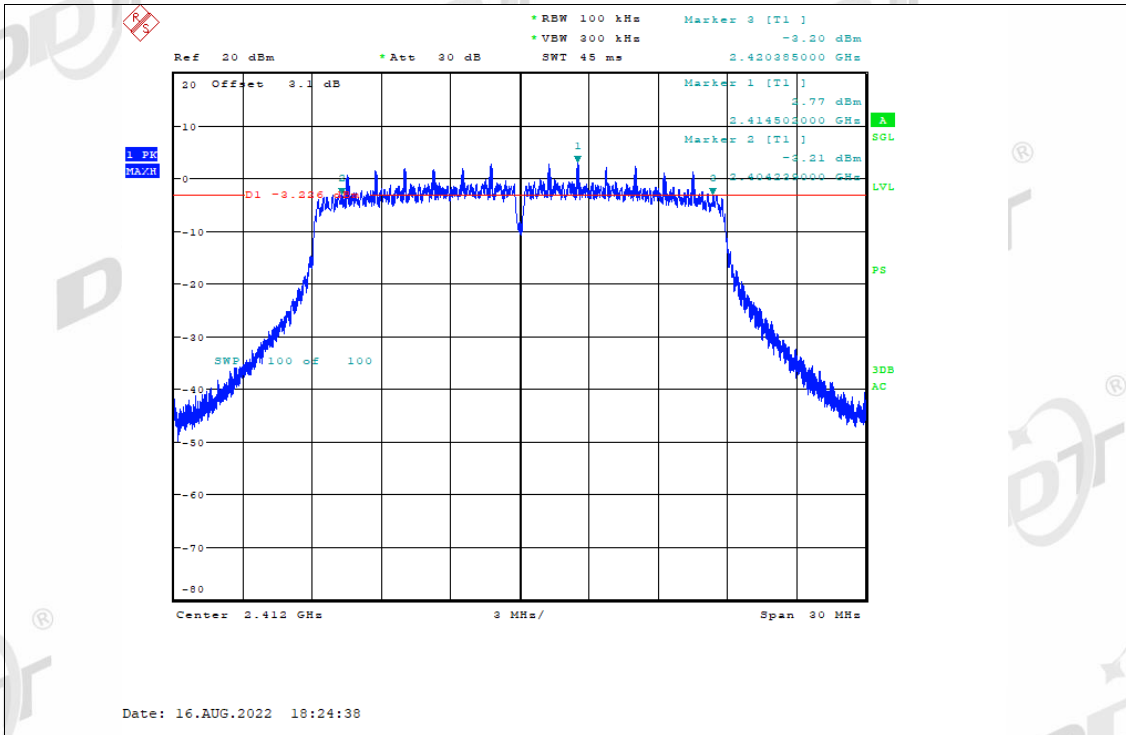
-6dB Bandwidth NVNT g 2437MHz Ant2



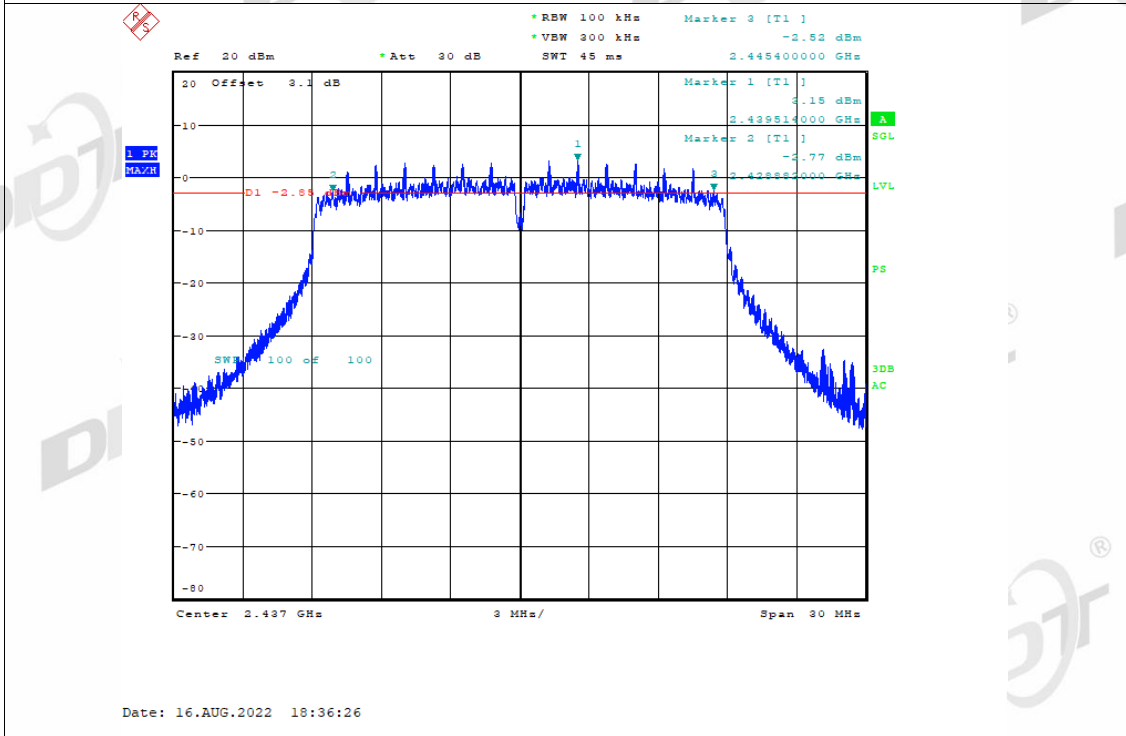
-6dB Bandwidth NVNT g 2462MHz Ant2



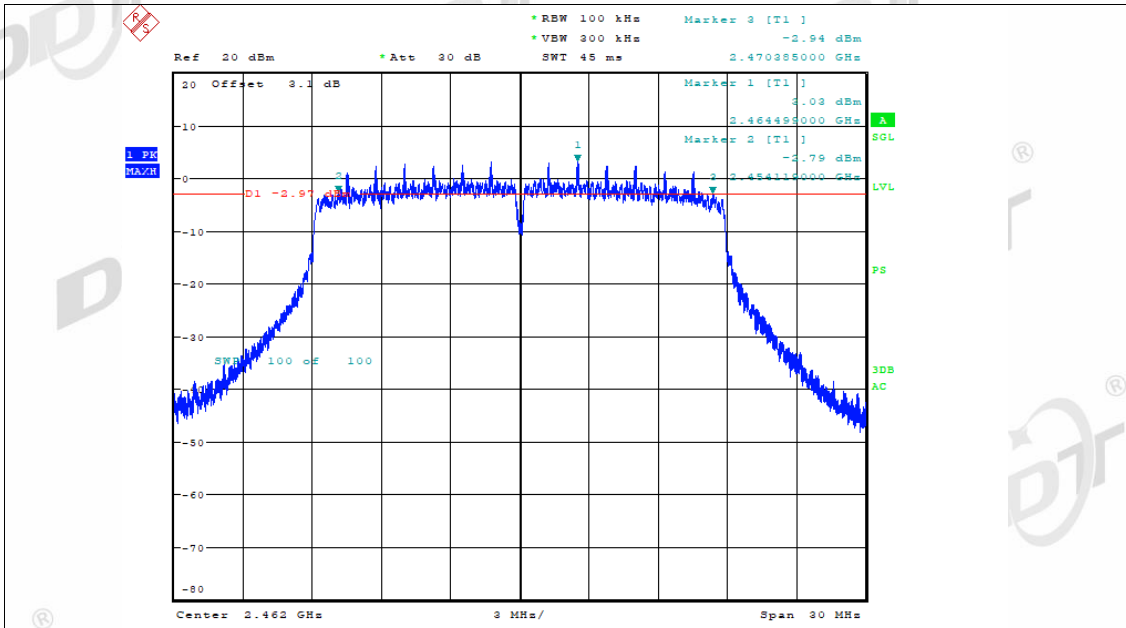
-6dB Bandwidth NVNT n20 2412MHz Ant1



-6dB Bandwidth NVNT n20 2437MHz Ant1

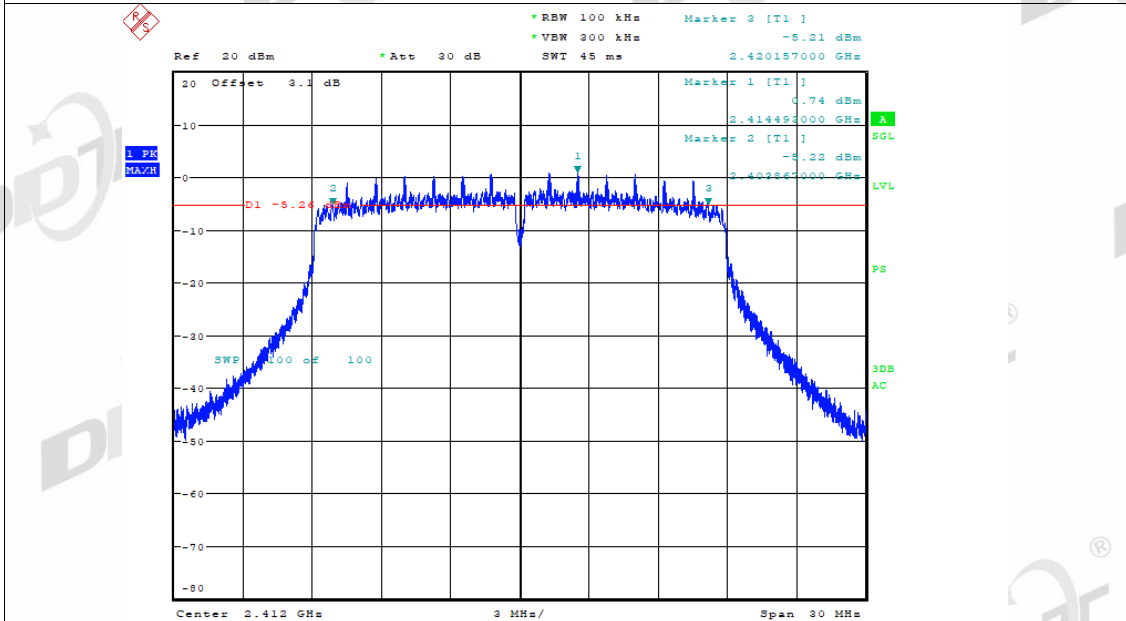


-6dB Bandwidth NVNT n20 2462MHz Ant1



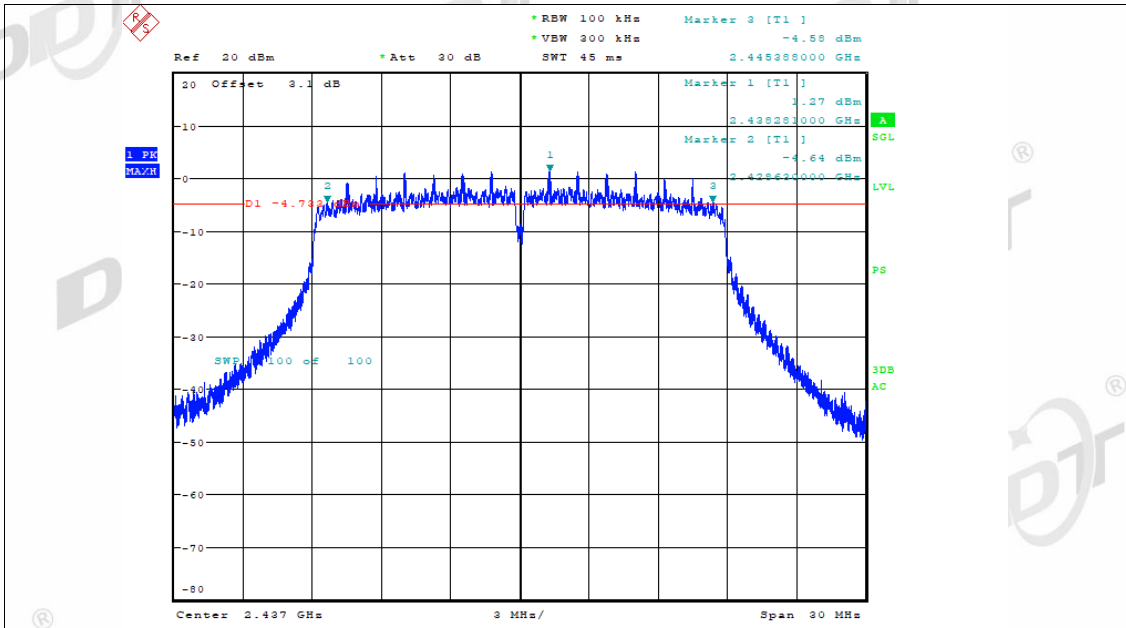
Date: 16.AUG.2022 18:48:51

-6dB Bandwidth NVNT n20 2412MHz Ant2



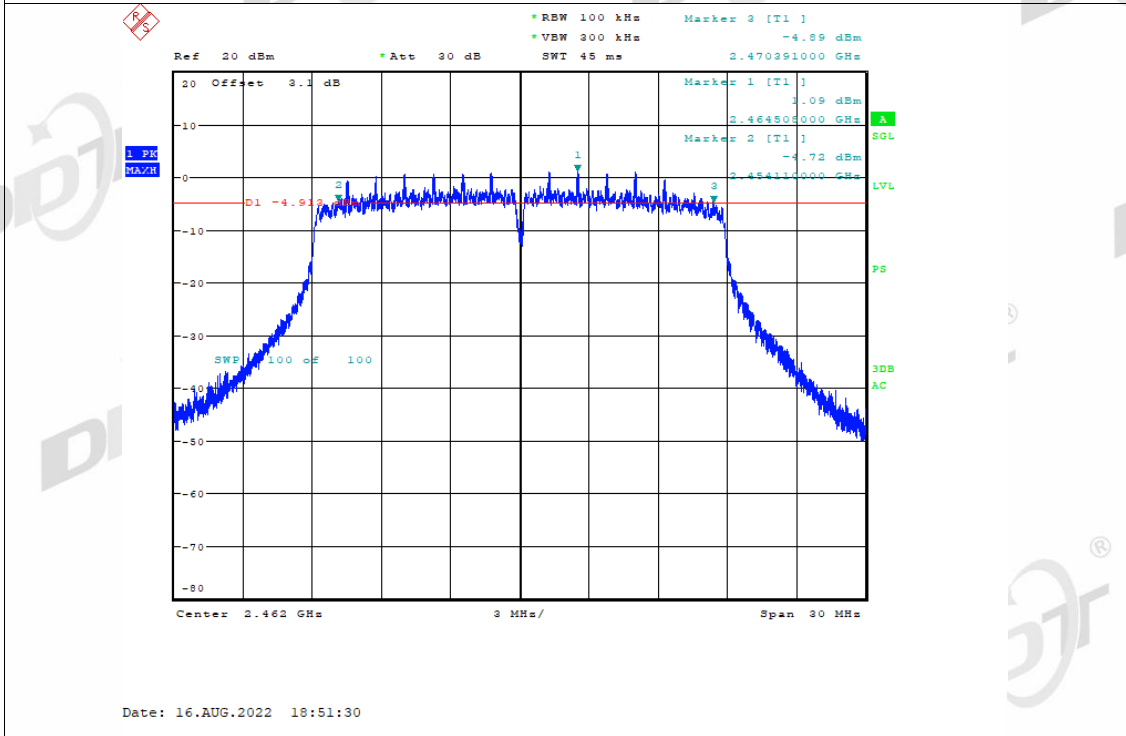
Date: 16.AUG.2022 18:27:38

-6dB Bandwidth NVNT n20 2437MHz Ant2



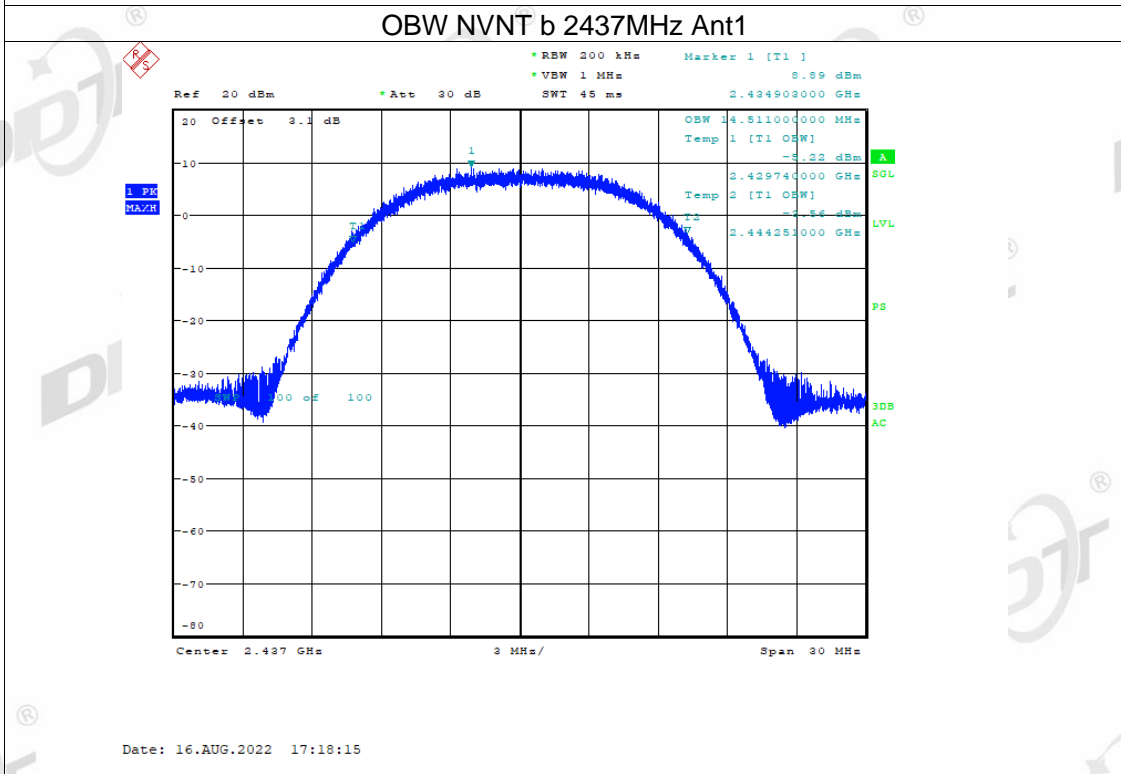
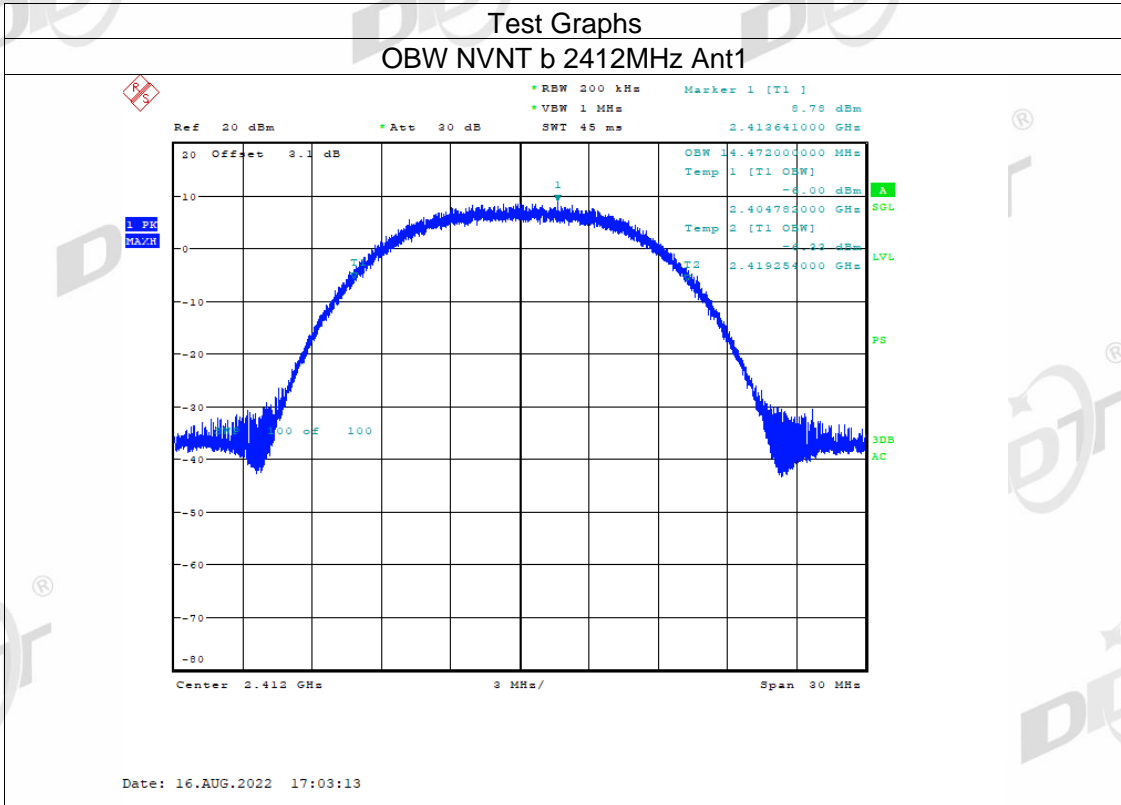
Date: 16.AUG.2022 18:42:53

-6dB Bandwidth NVNT n20 2462MHz Ant2

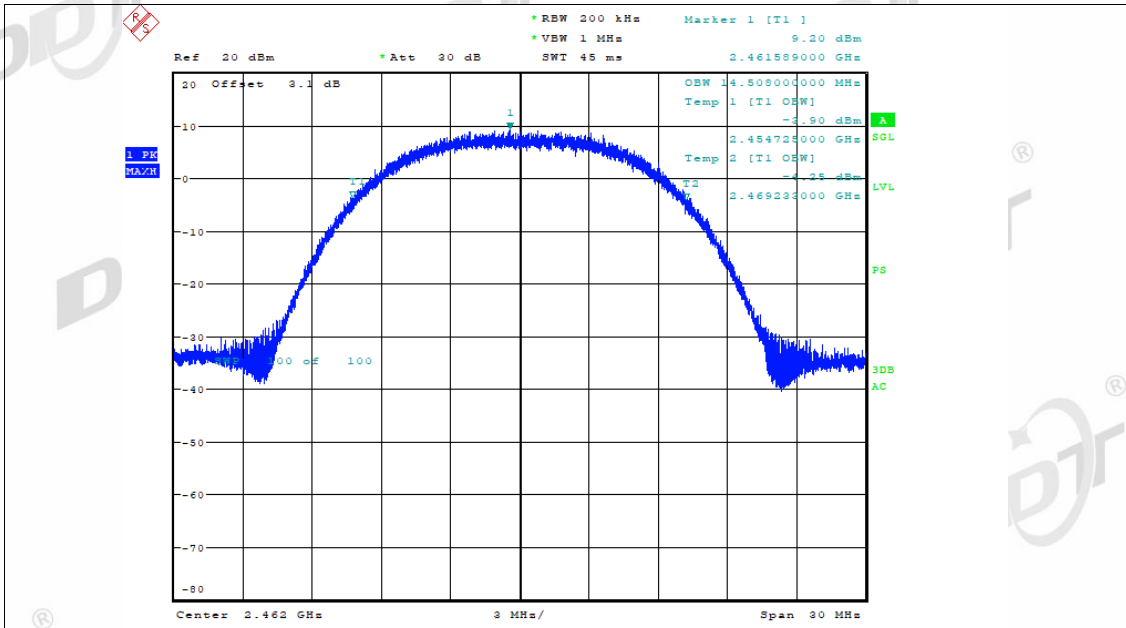


Date: 16.AUG.2022 18:51:30

99% Bandwidth

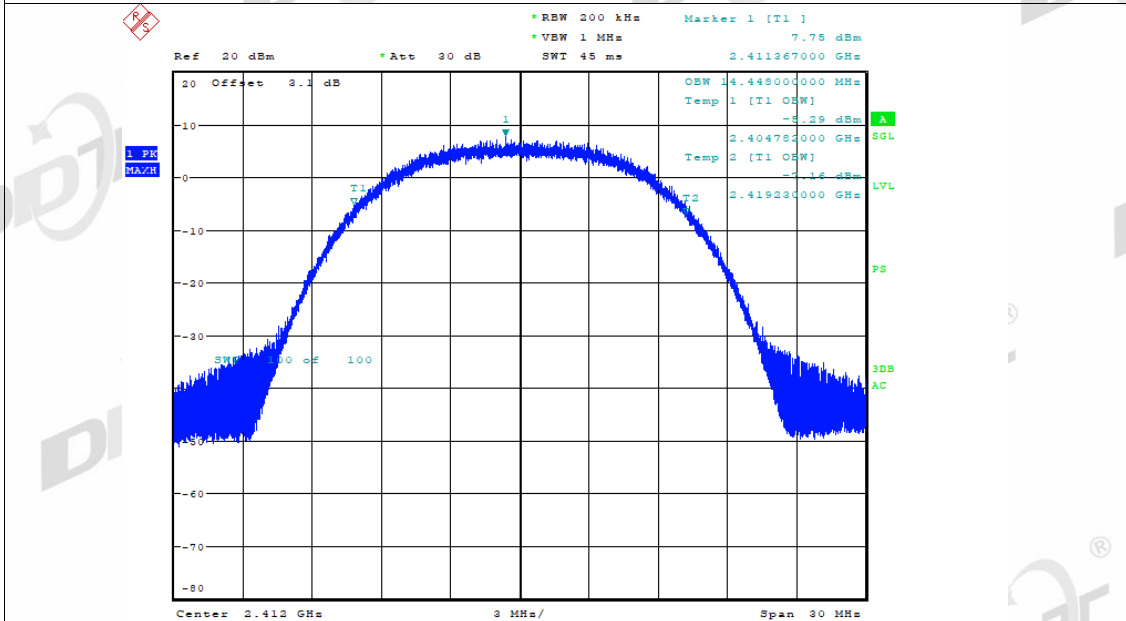


OBW NVNT b 2462MHz Ant1



Date: 16.AUG.2022 17:24:52

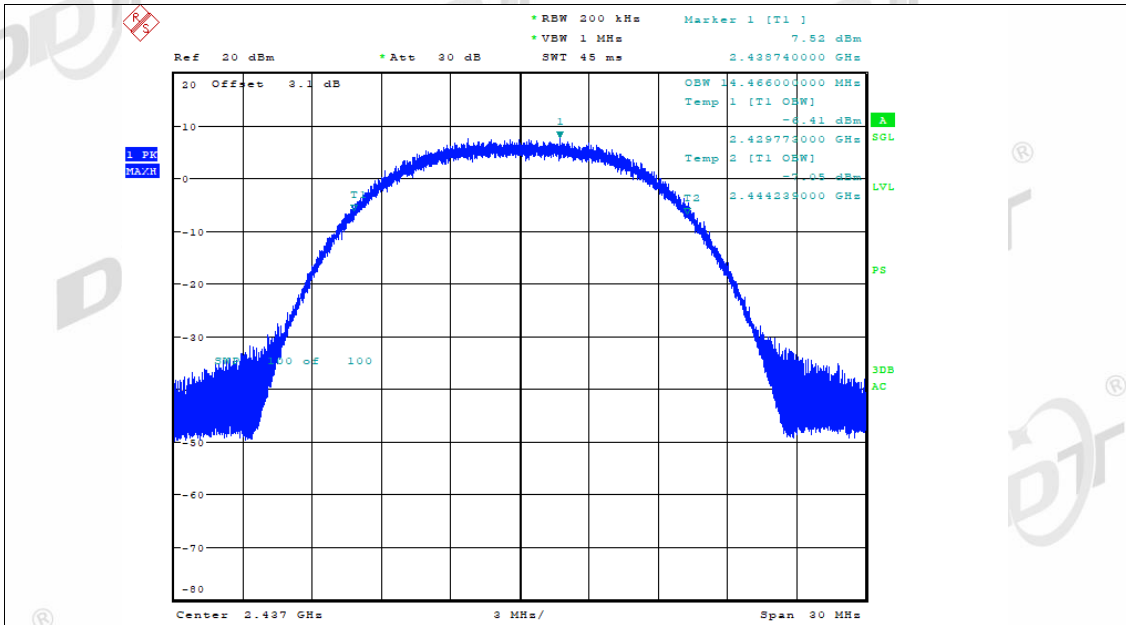
OBW NVNT b 2412MHz Ant2



Date: 16.AUG.2022 17:10:00

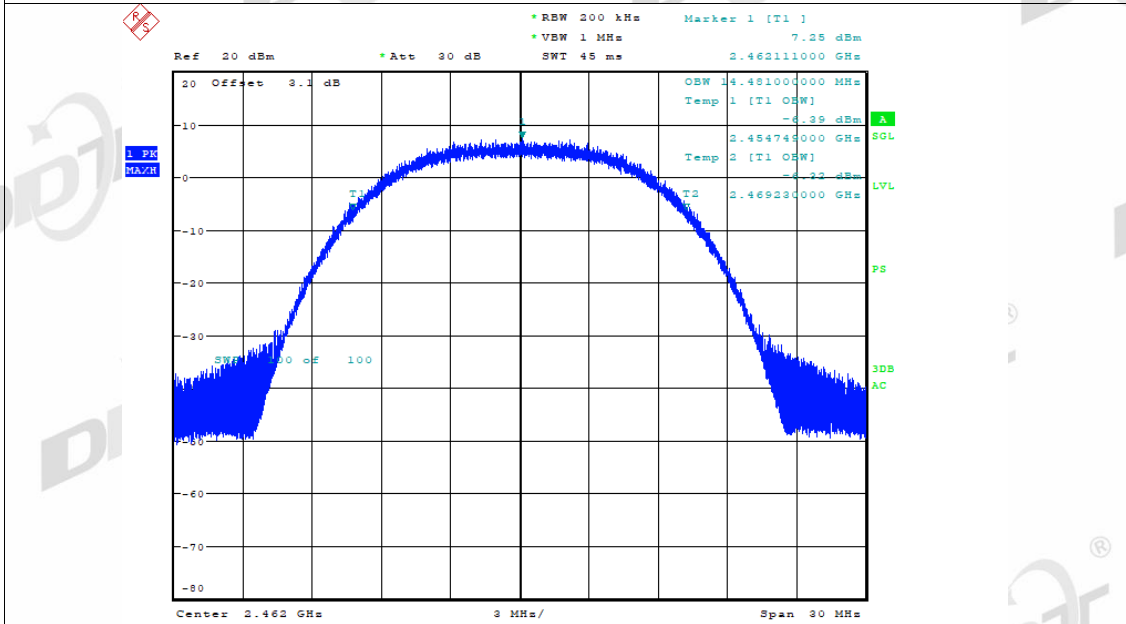
OBW NVNT b 2437MHz Ant2





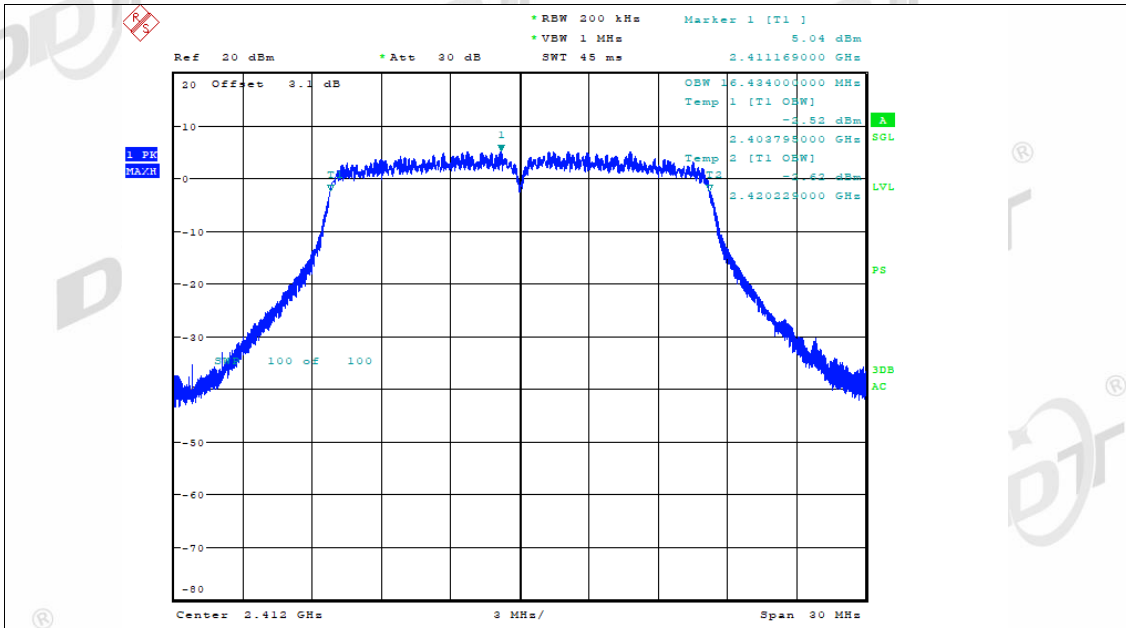
Date: 16.AUG.2022 17:21:28

OBW NVNT b 2462MHz Ant2



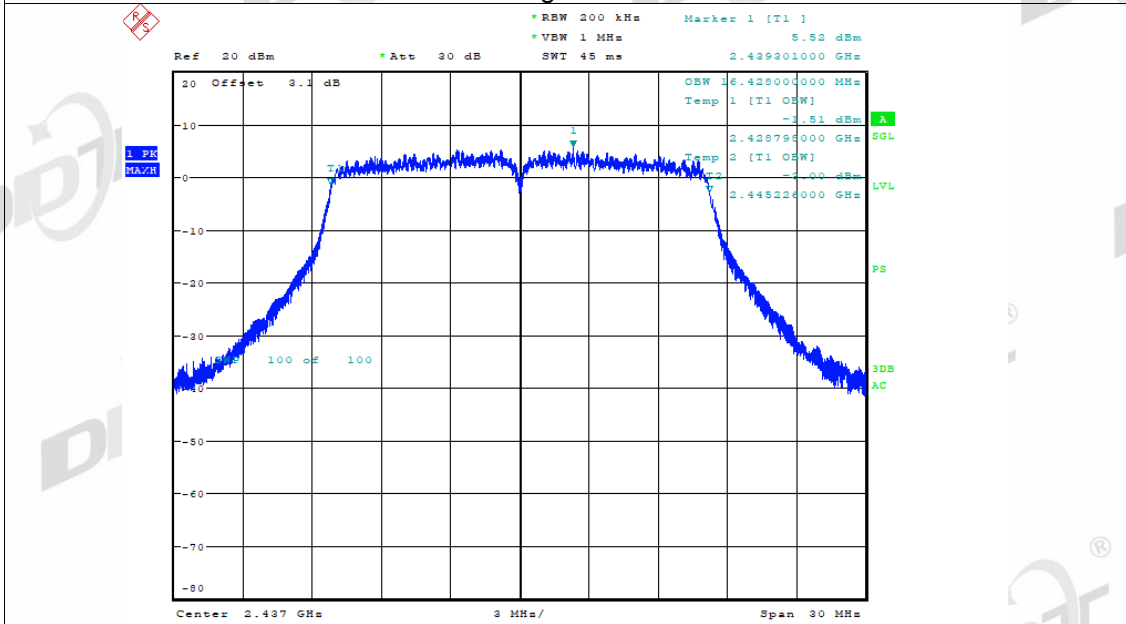
Date: 16.AUG.2022 17:27:24

OBW NVNT g 2412MHz Ant1



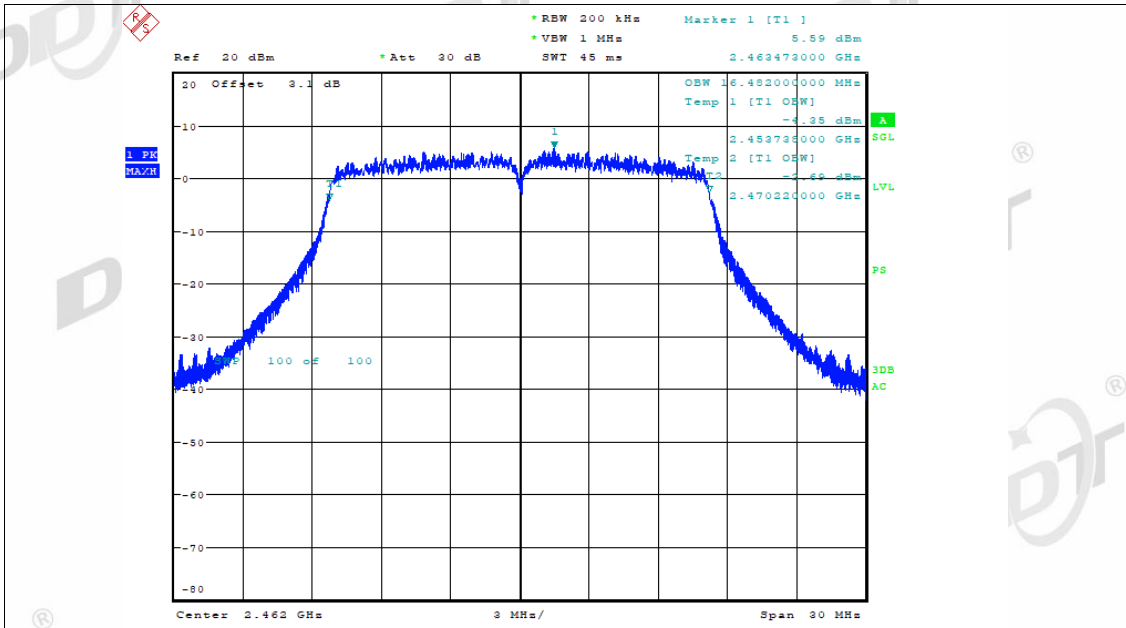
Date: 16.AUG.2022 17:33:39

OBW NVNT g 2437MHz Ant1



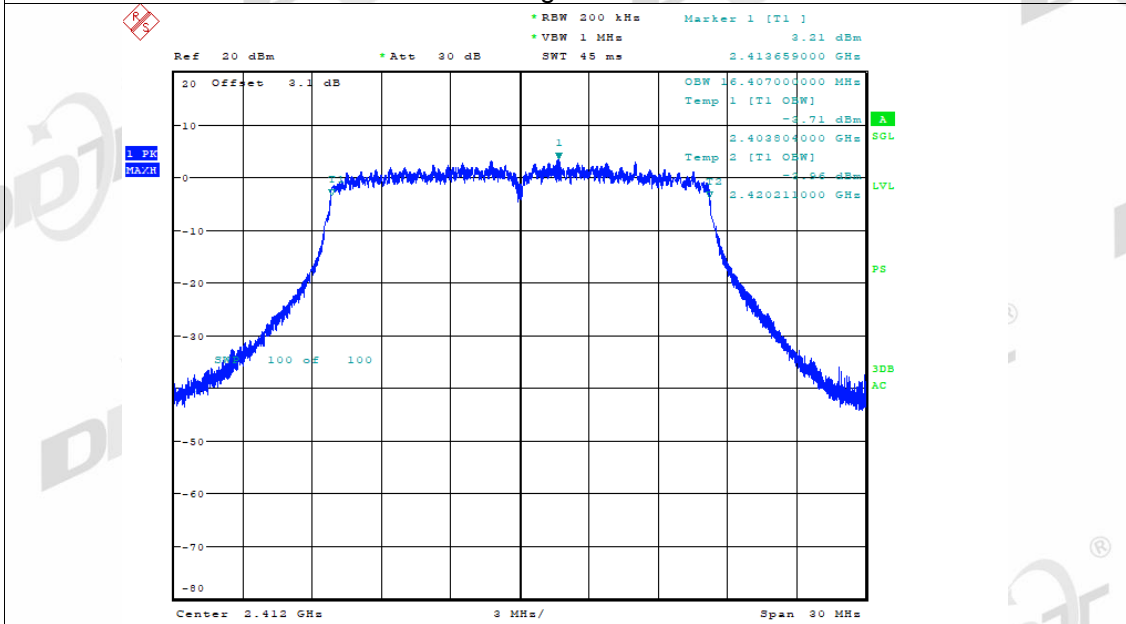
Date: 16.AUG.2022 17:52:30

OBW NVNT g 2462MHz Ant1



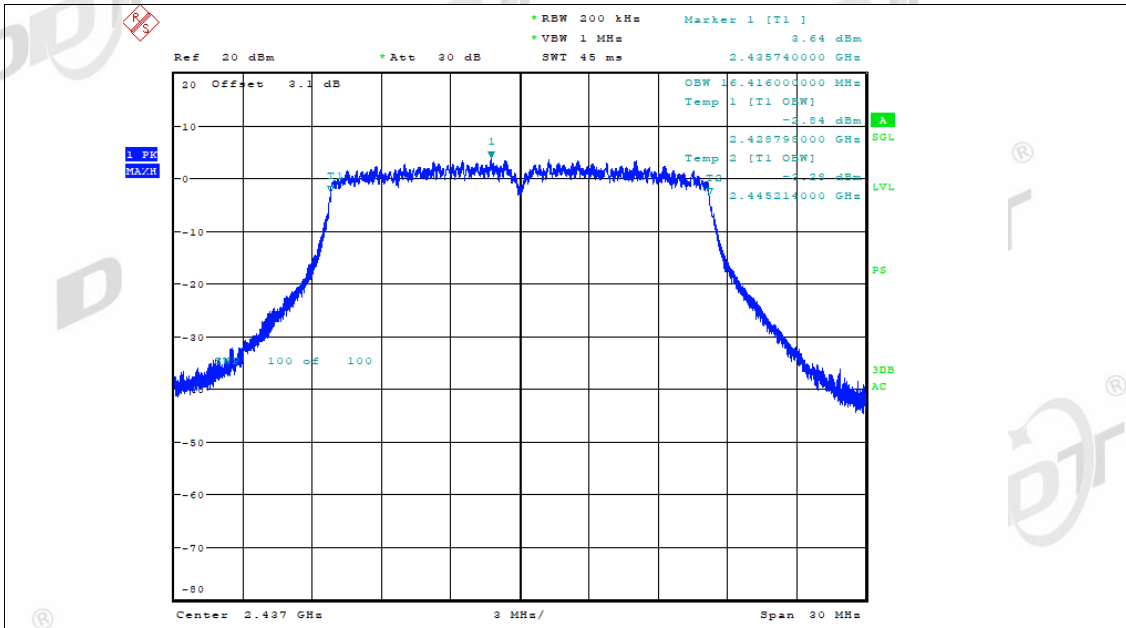
Date: 16.AUG.2022 18:01:25

OBW NVNT g 2412MHz Ant2



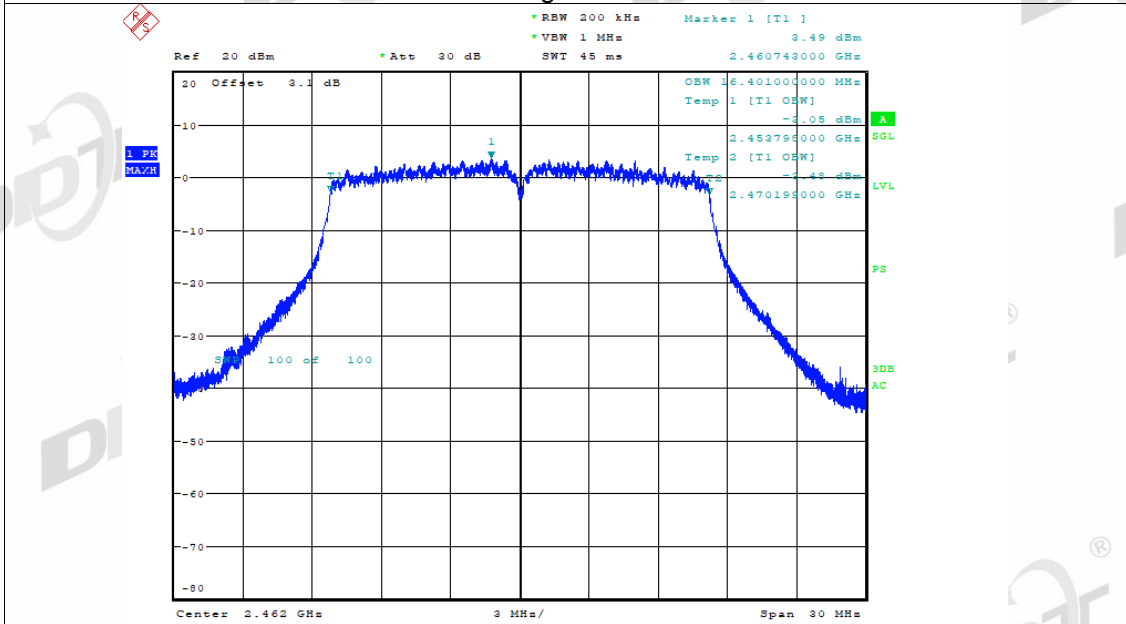
Date: 16.AUG.2022 17:40:57

OBW NVNT g 2437MHz Ant2



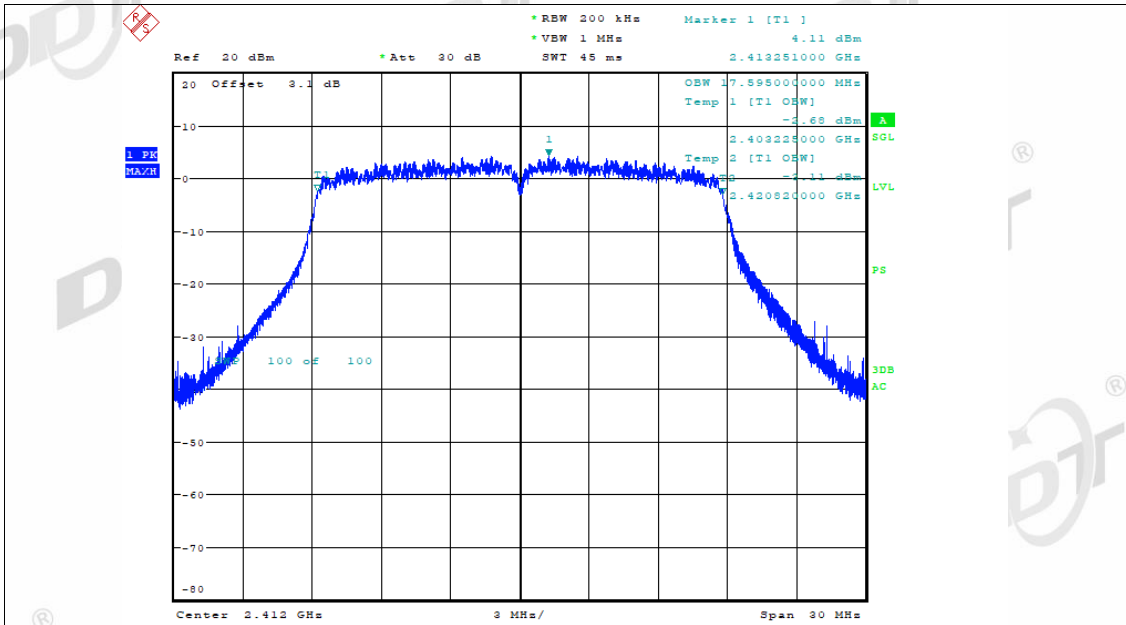
Date: 16.AUG.2022 17:55:03

OBW NVNT g 2462MHz Ant2



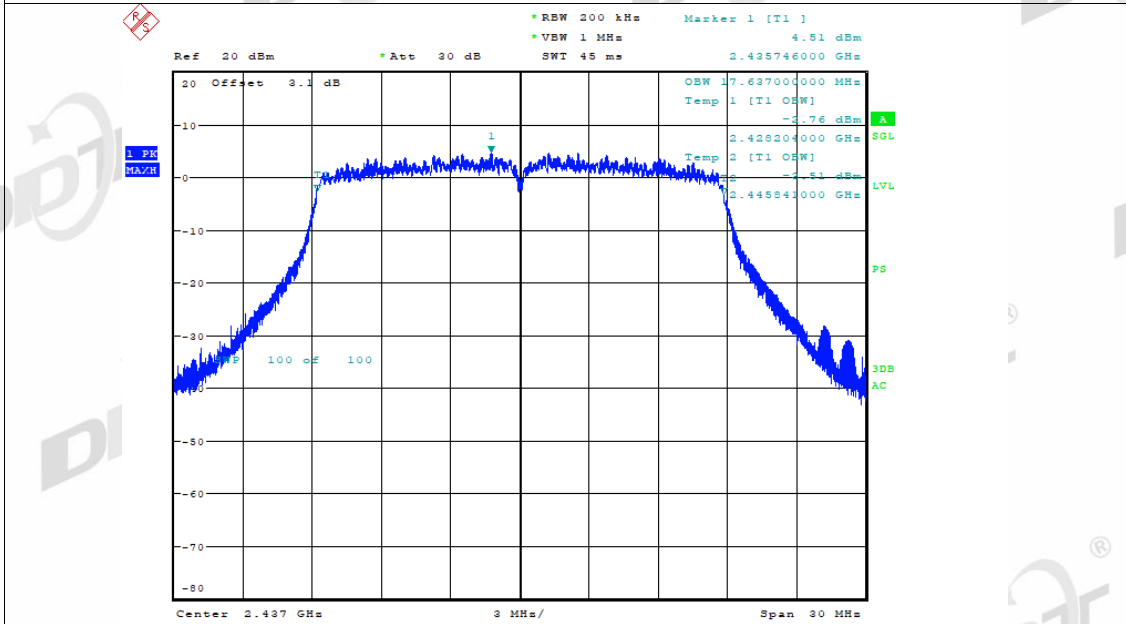
Date: 16.AUG.2022 18:19:22

OBW NVNT n20 2412MHz Ant1



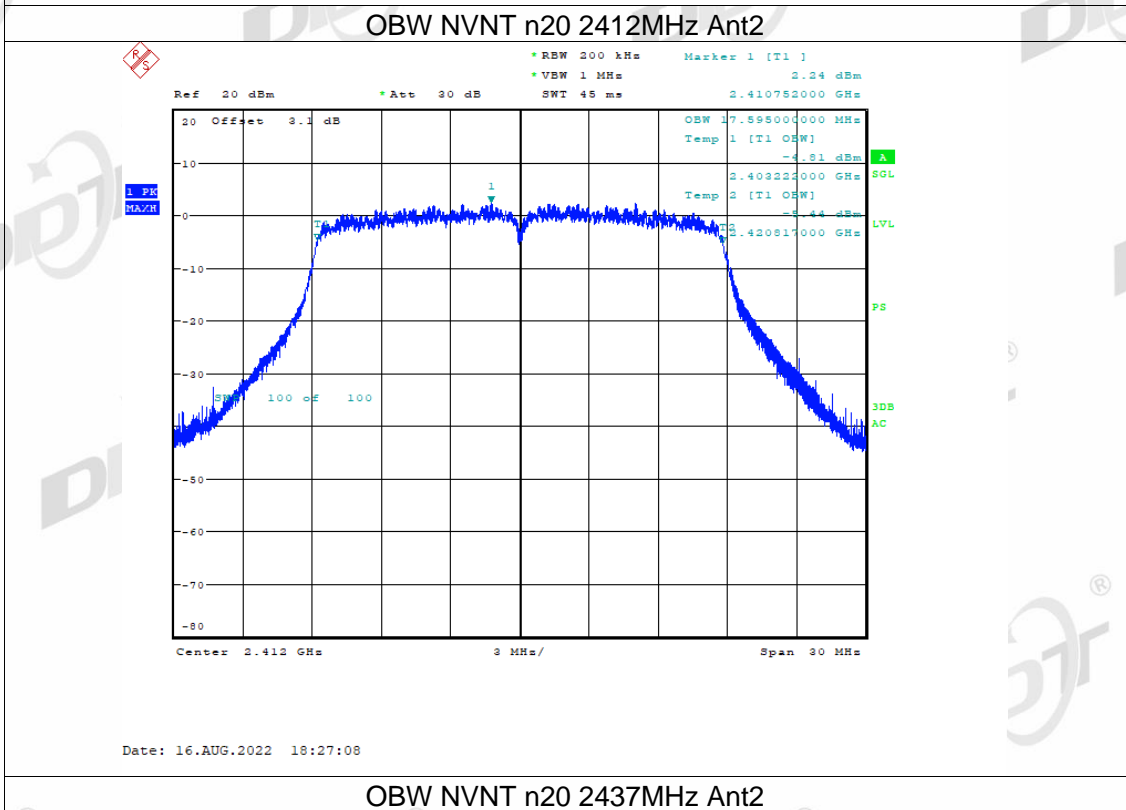
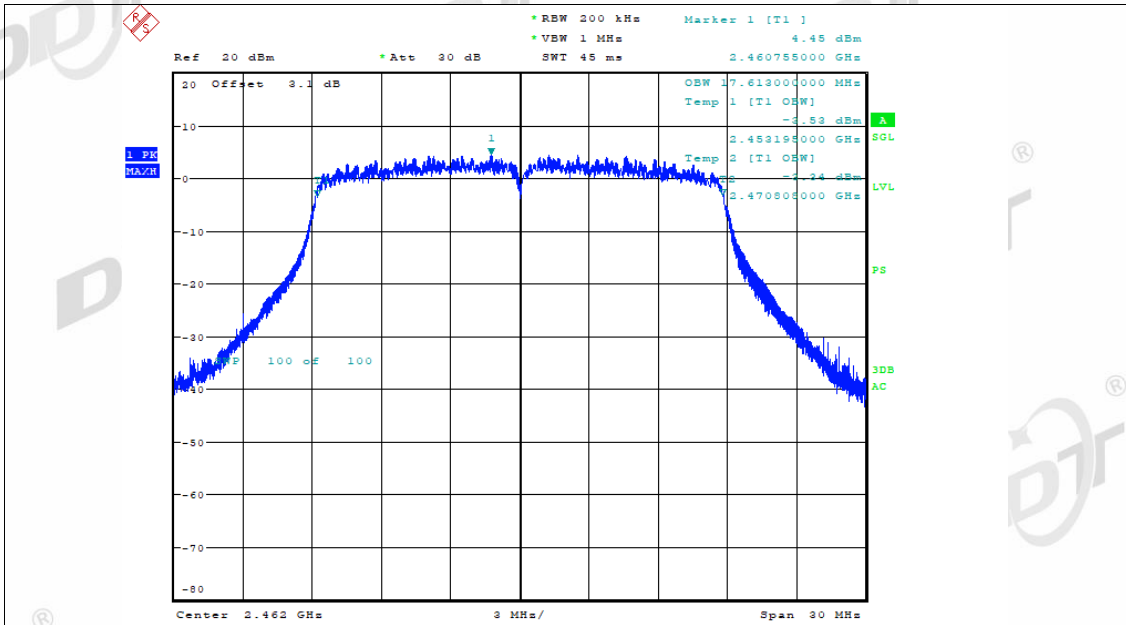
Date: 16.AUG.2022 18:24:09

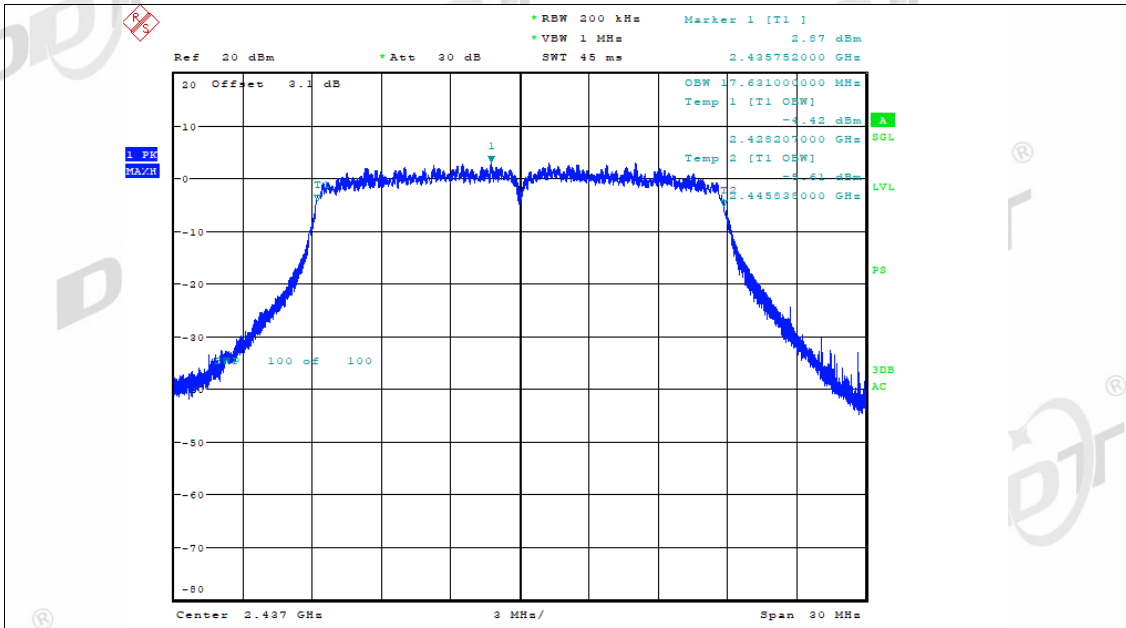
OBW NVNT n20 2437MHz Ant1



Date: 16.AUG.2022 18:35:58

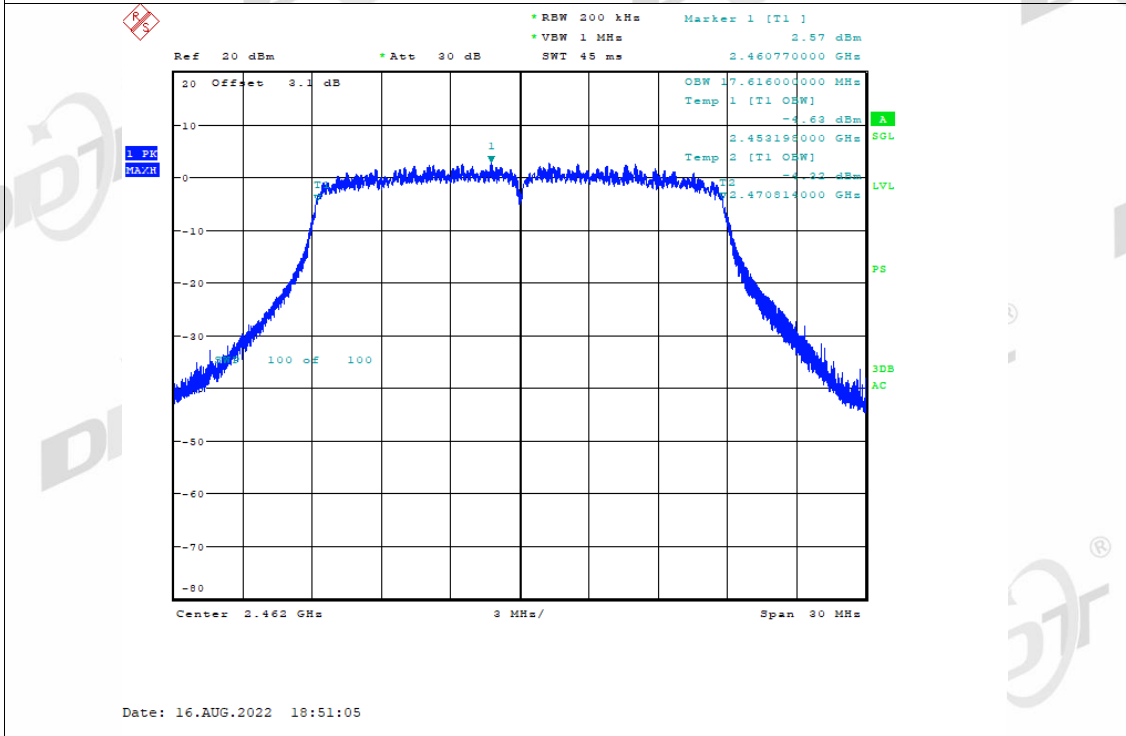
OBW NVNT n20 2462MHz Ant1





Date: 16.AUG.2022 18:38:33

OBW NVNT n20 2462MHz Ant2



Date: 16.AUG.2022 18:51:05

## 5. Maximum PK Conducted Output Power

### 5.1. Block diagram of test setup

Same as section 4.1

### 5.2. Limits

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 5.3. Test procedure

Connect each EUT's antenna output to power sensor by RF cable and attenuator  
Measure the Maximum output power of antenna port by power sensor.



## 5.4. Test result

Mode	Frequency (MHz)	Antenna	PK Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	Ant1	21.43	30	Pass
b	2437	Ant1	21.84	30	Pass
b	2462	Ant1	22.04	30	Pass
b	2412	Ant2	19.96	30	Pass
b	2437	Ant2	20.32	30	Pass
b	2462	Ant2	20.08	30	Pass
g	2412	Ant1	21.51	30	Pass
g	2437	Ant1	21.66	30	Pass
g	2462	Ant1	21.63	30	Pass
g	2412	Ant2	20.69	30	Pass
g	2437	Ant2	21.43	30	Pass
g	2462	Ant2	21.25	30	Pass
n20	2412	Ant1	21.58	30	Pass
n20	2437	Ant1	21.11	30	Pass
n20	2462	Ant1	21.95	30	Pass
n20	2412	Ant2	19.89	30	Pass
n20	2437	Ant2	20.52	30	Pass
n20	2462	Ant2	20.23	30	Pass

## 6. Power Spectral Density

### 6.1. Block diagram of test setup

Same as section 4.1

### 6.2. Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### 6.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Set the spectrum analyzer as follows:

Center frequency	DTS Channel center frequency
RBW:	$3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
VBW:	$\geq 3\text{RBW}$
Span	1.5 times the DTS bandwidth
Detector Mode:	peak
Sweep time:	auto
Trace mode	Max hold

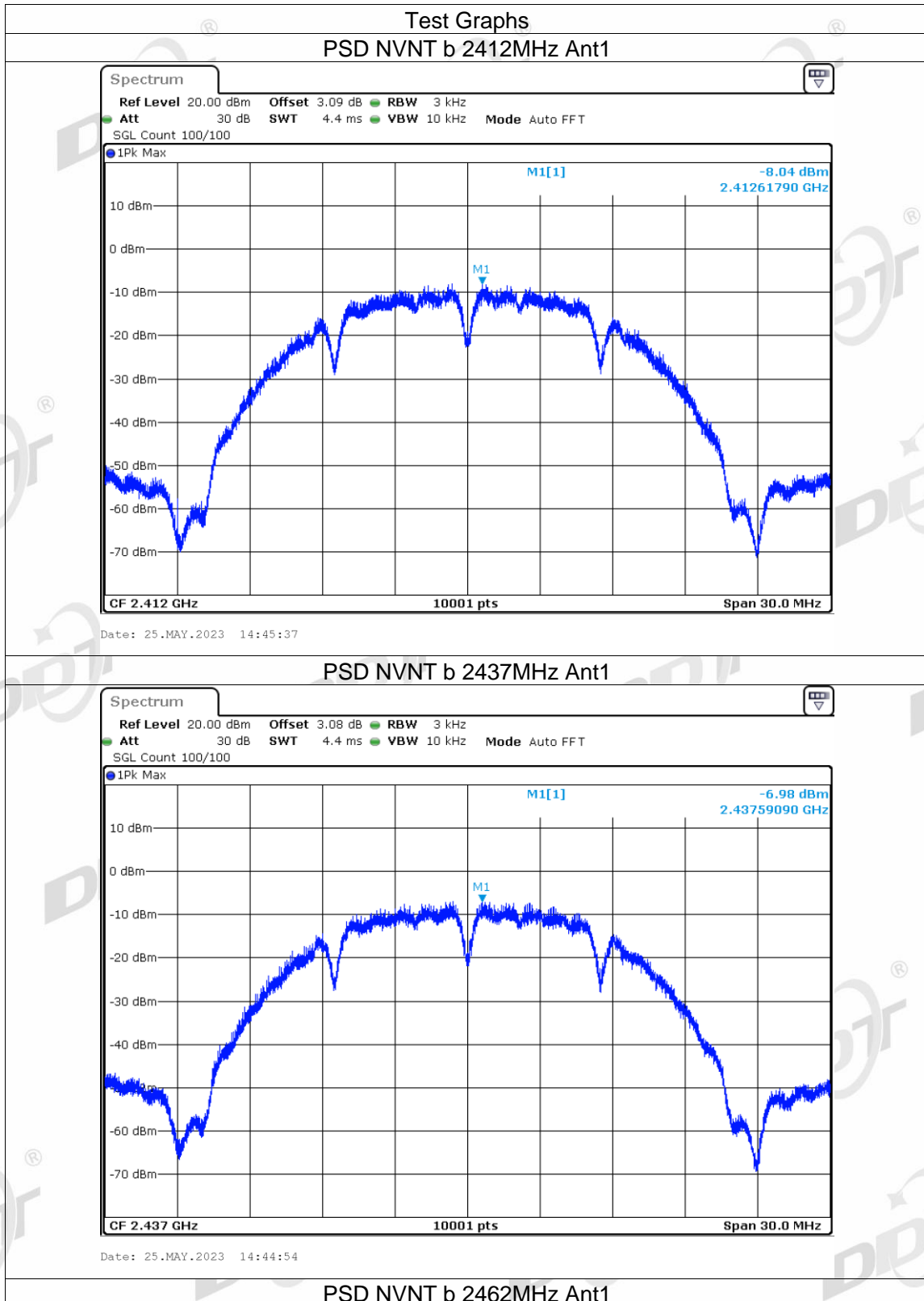
(3) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.

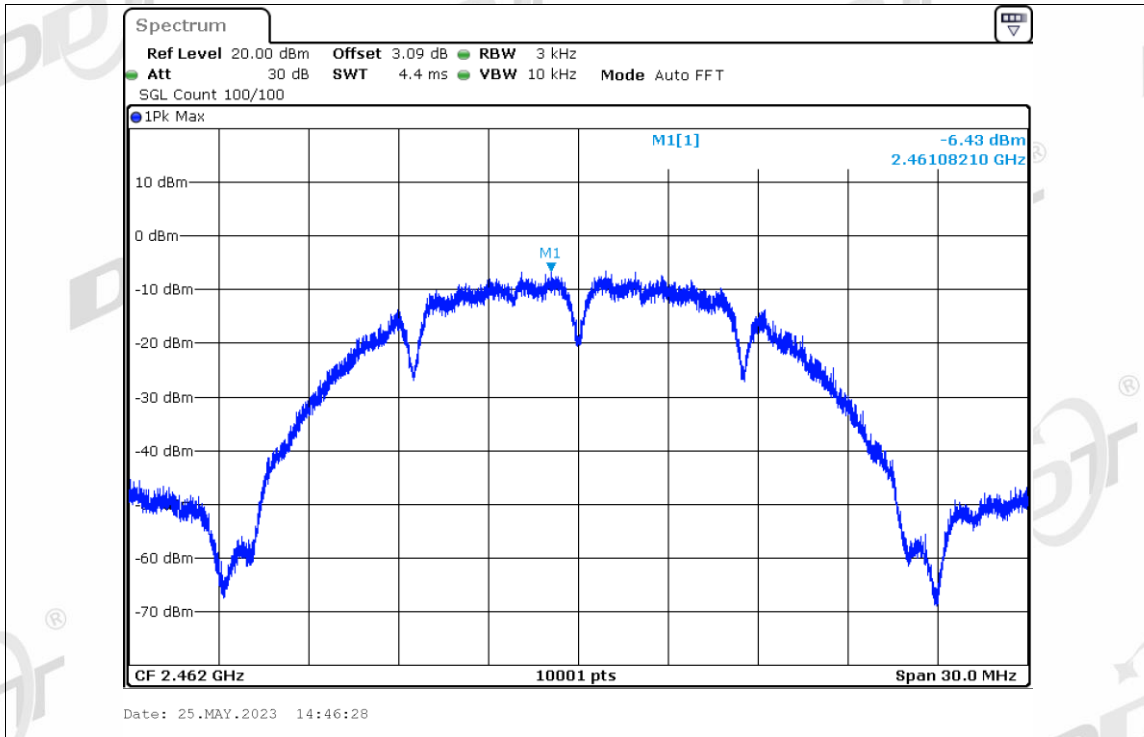
(4) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

## 6.4. Test result

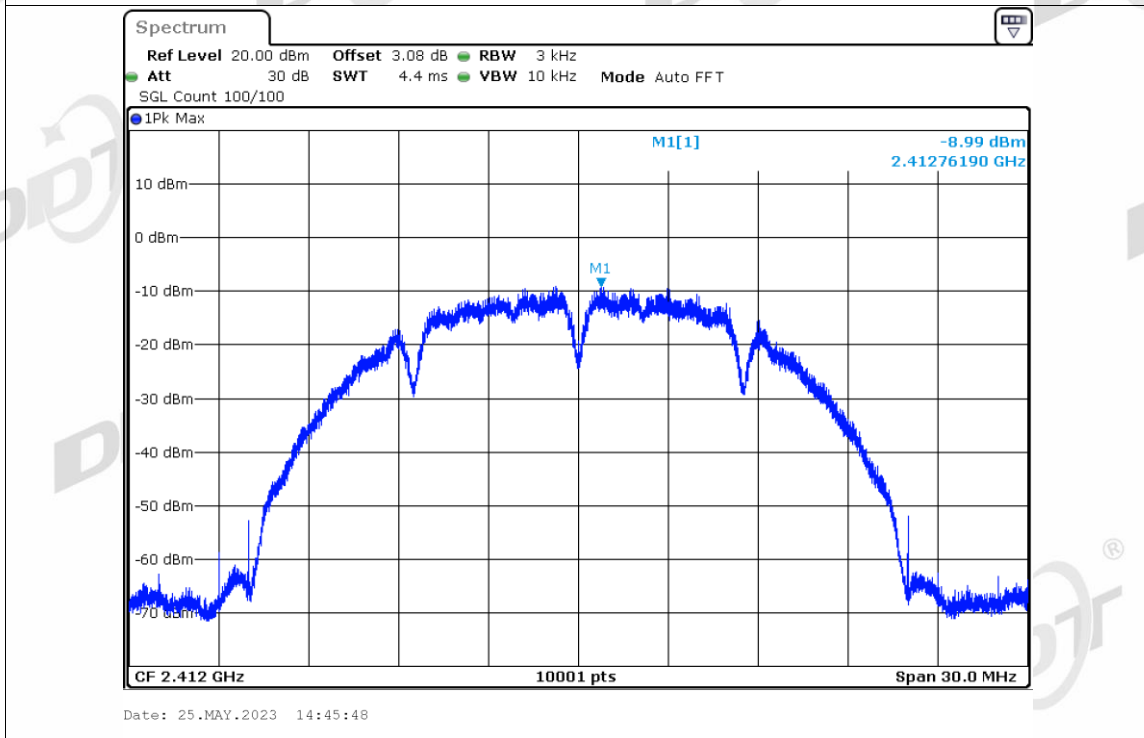
Test Mode	Test Channel	Ant	PSD (dBm/3kHz)	Limit(dBm/3kHz)	Verdict
b	2412	Ant1	-8.04	8.00	Pass
b	2437	Ant1	-6.98	8.00	Pass
b	2462	Ant1	-6.43	8.00	Pass
b	2412	Ant2	-8.99	8.00	Pass
b	2437	Ant2	-9.37	8.00	Pass
b	2462	Ant2	-8.66	8.00	Pass
g	2412	Ant1	-10.00	8.00	Pass
g	2437	Ant1	-9.38	8.00	Pass
g	2462	Ant1	-9.07	8.00	Pass
g	2412	Ant2	-11.07	8.00	Pass
g	2437	Ant2	-10.36	8.00	Pass
g	2462	Ant2	-10.60	8.00	Pass
n20	2412	Ant1	-10.22	8.00	Pass
n20	2437	Ant1	-9.61	8.00	Pass
n20	2462	Ant1	-9.34	8.00	Pass
n20	2412	Ant2	-12.02	8.00	Pass
n20	2437	Ant2	-11.44	8.00	Pass
n20	2462	Ant2	-11.55	8.00	Pass

6.5. original test data

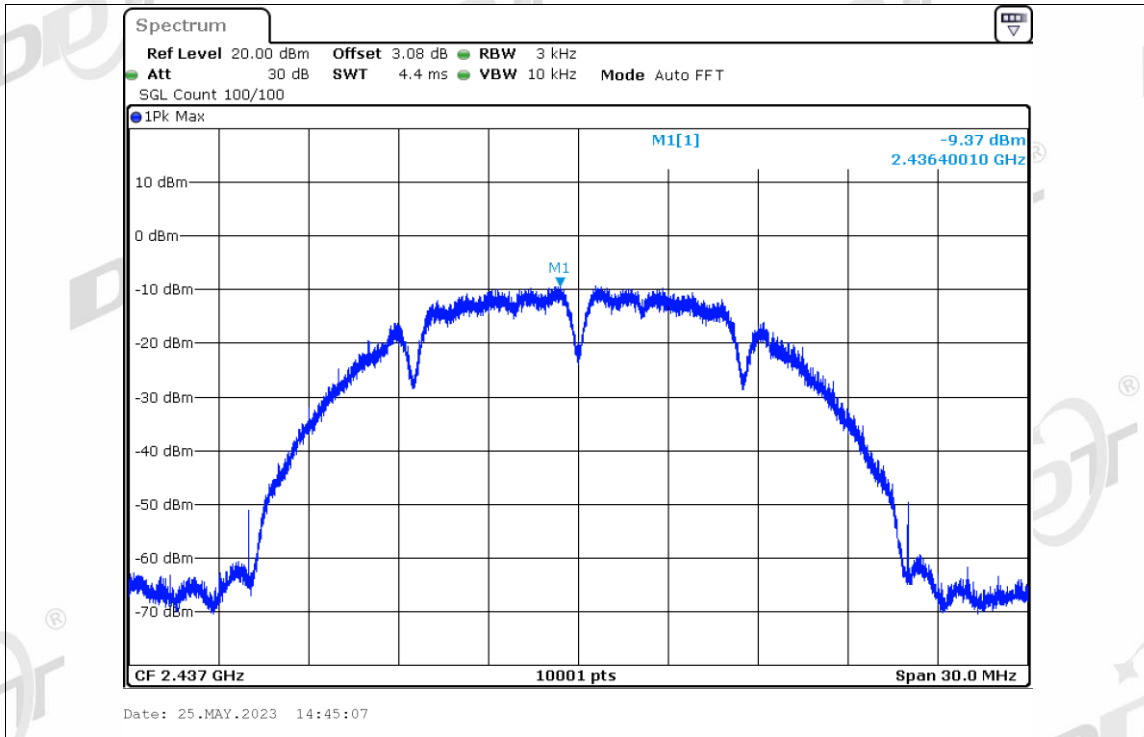




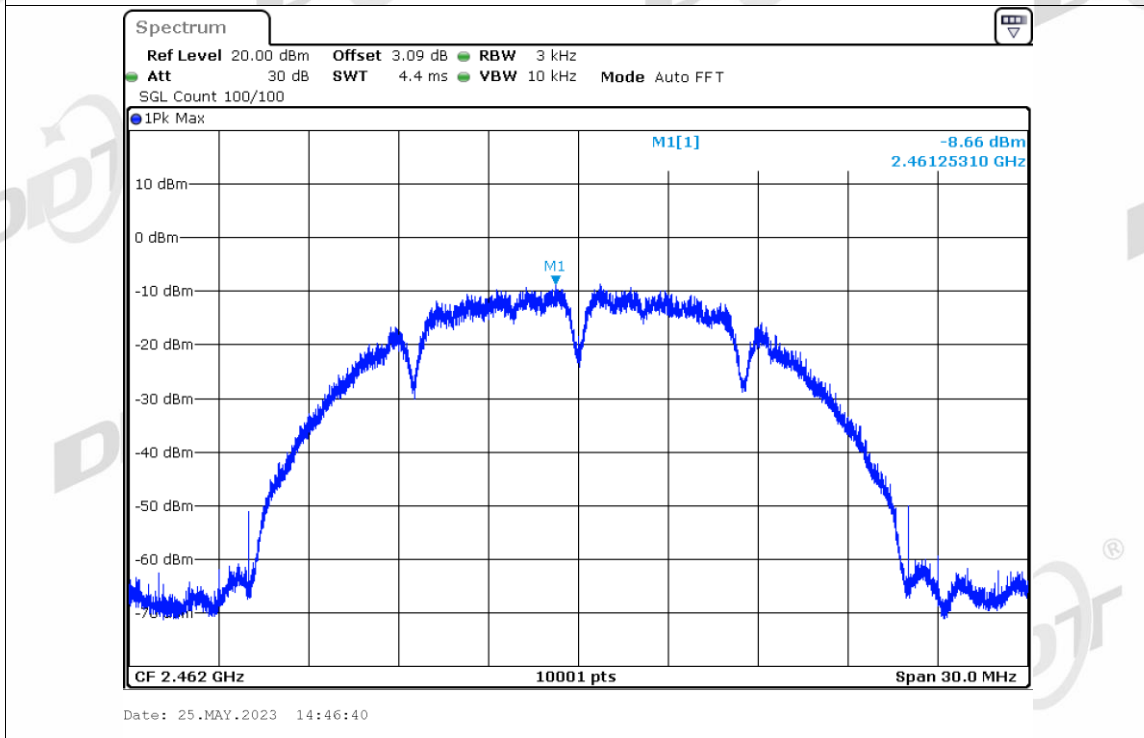
PSD NVNT b 2412MHz Ant2



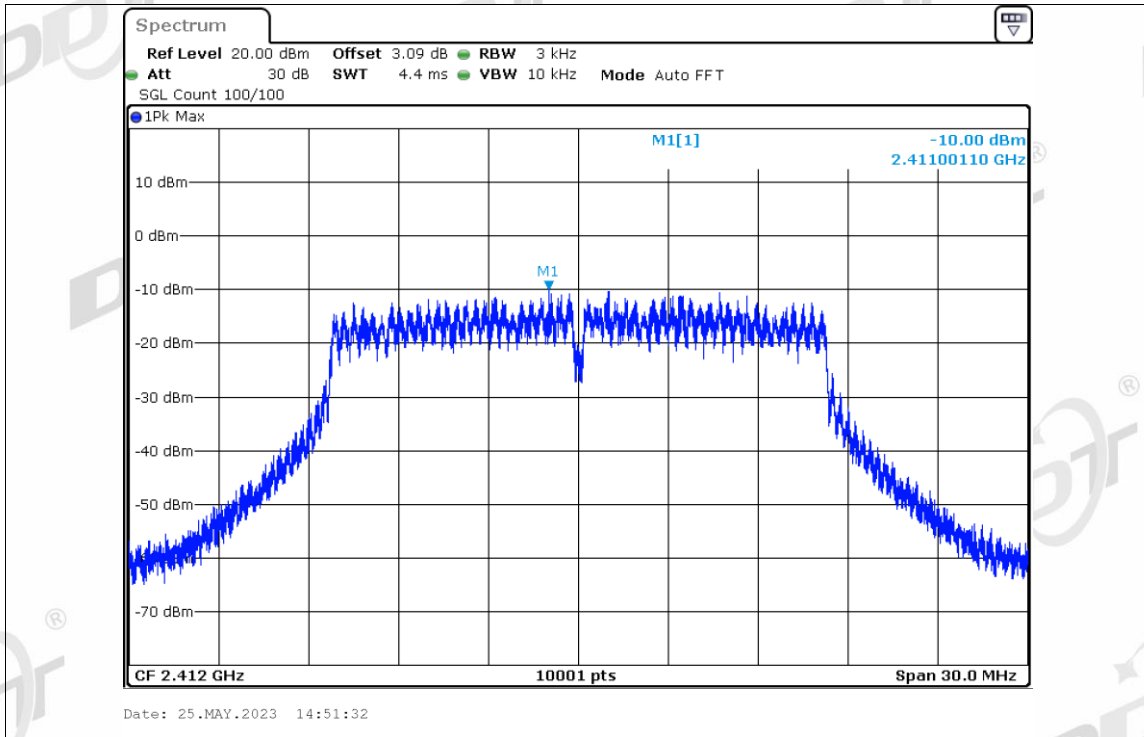
PSD NVNT b 2437MHz Ant2



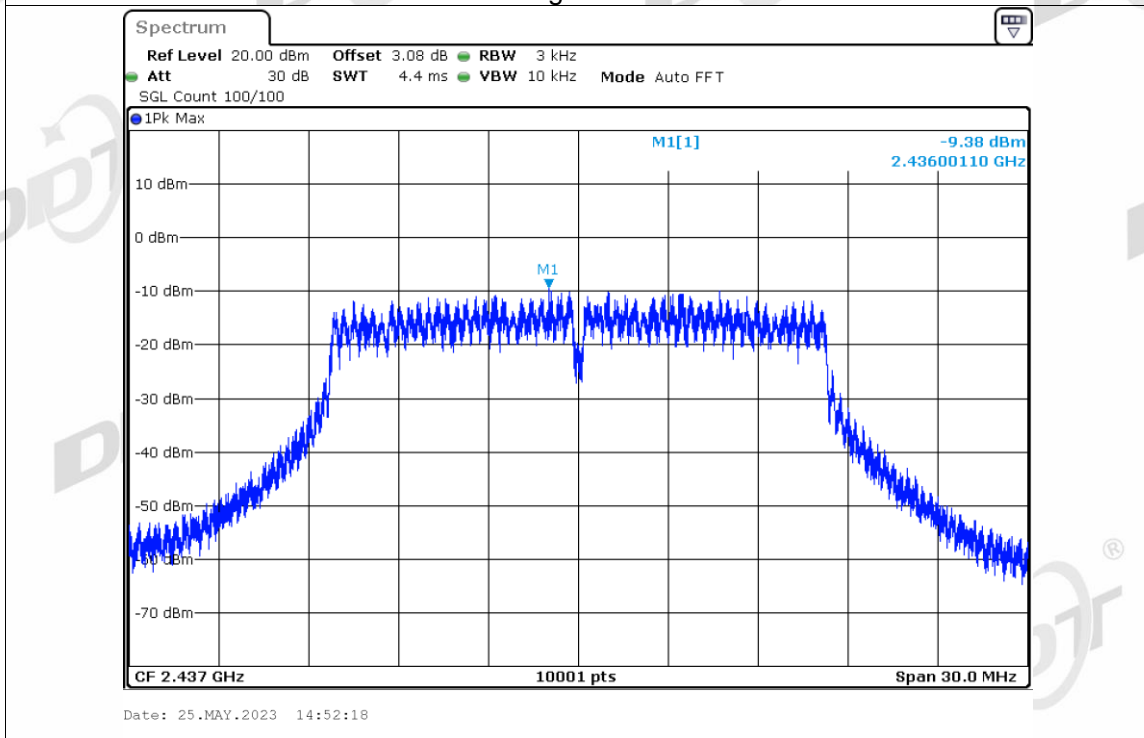
PSD NVNT b 2462MHz Ant2



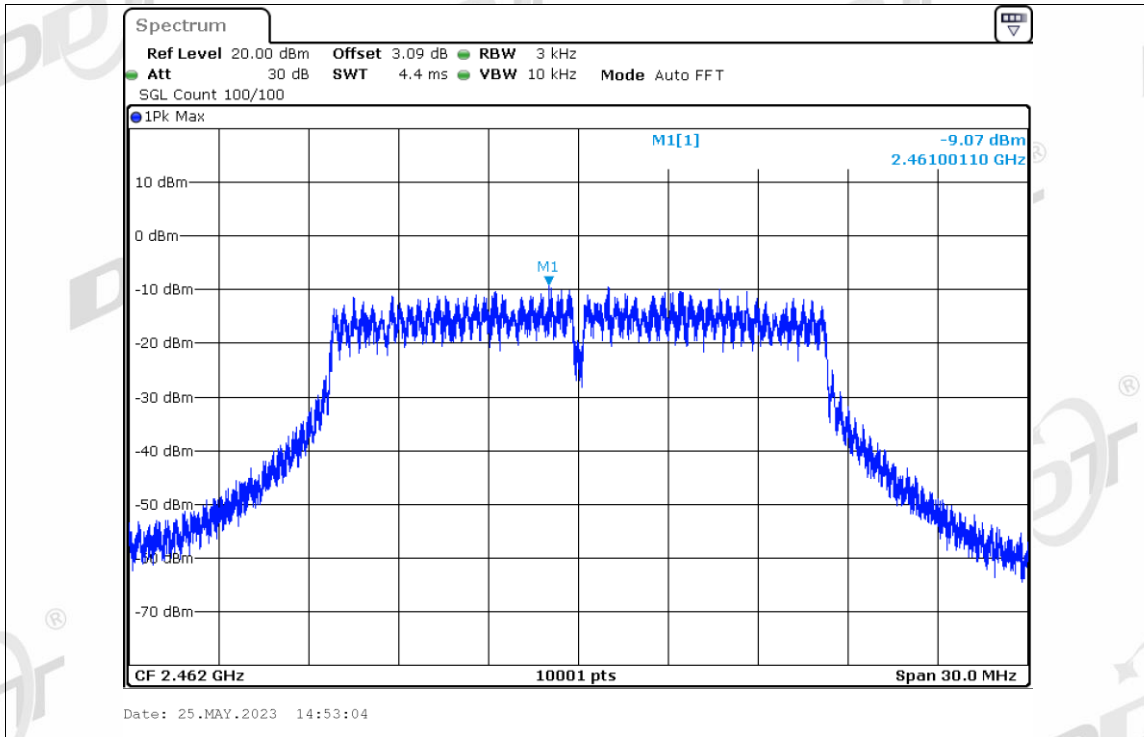
PSD NVNT g 2412MHz Ant1



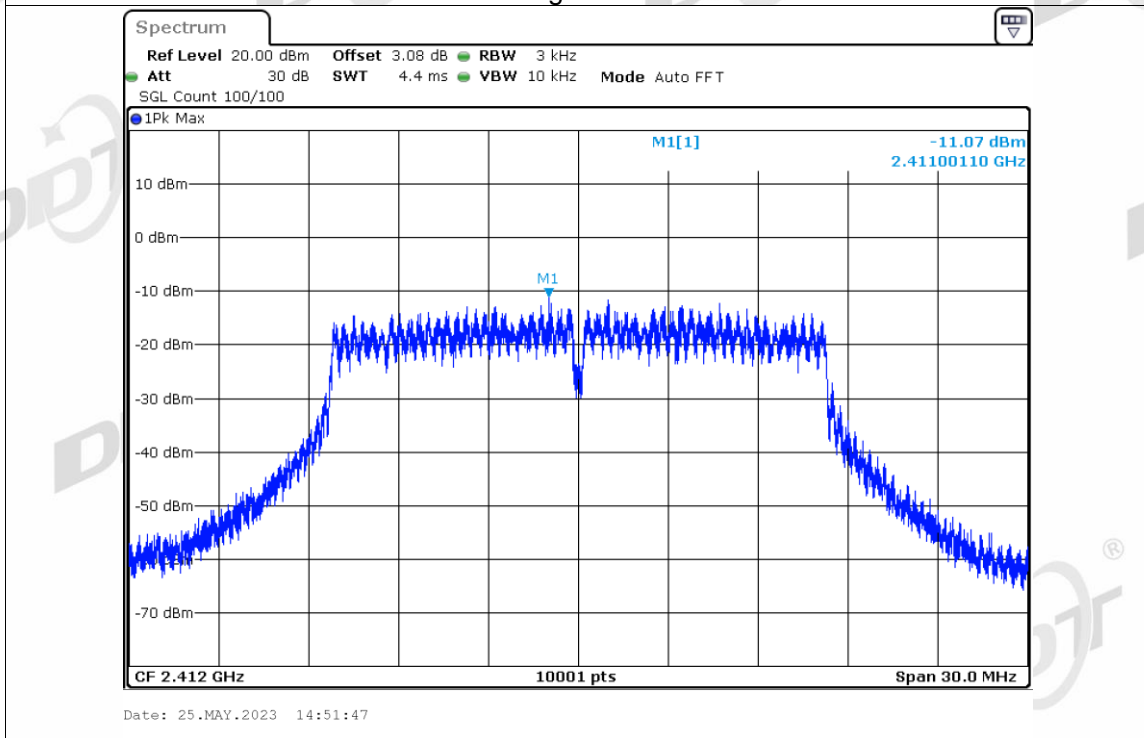
PSD NVNT g 2437MHz Ant1



PSD NVNT g 2462MHz Ant1

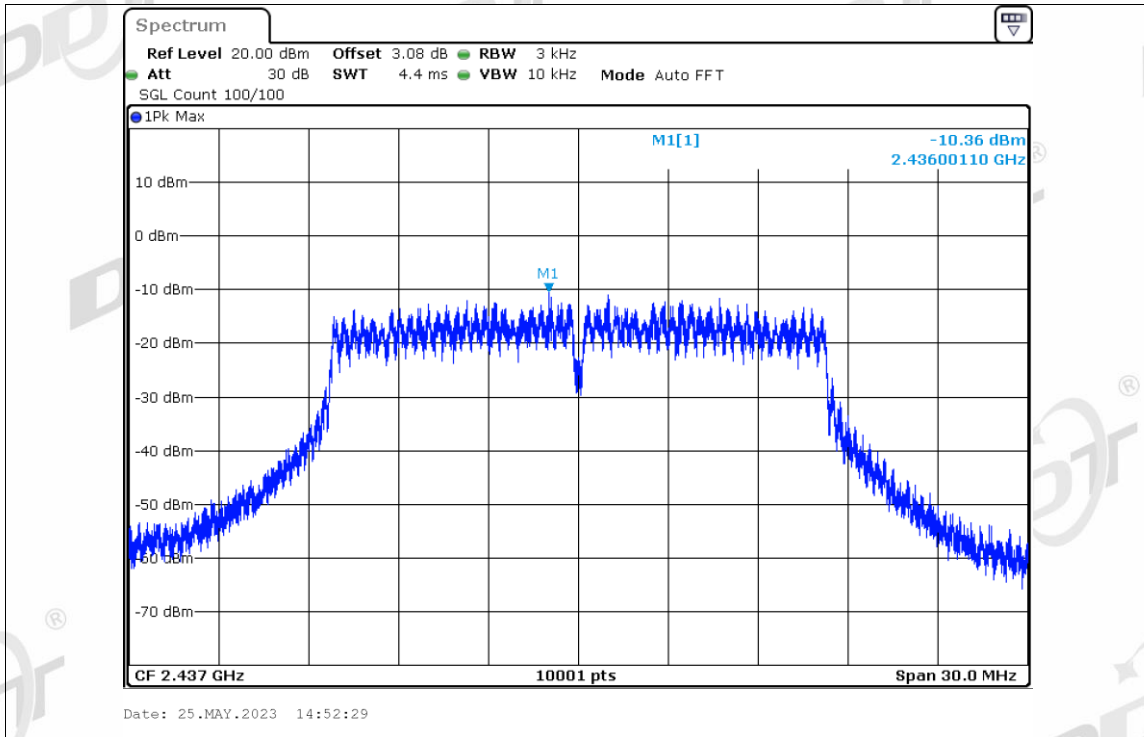


PSD NVNT g 2412MHz Ant2

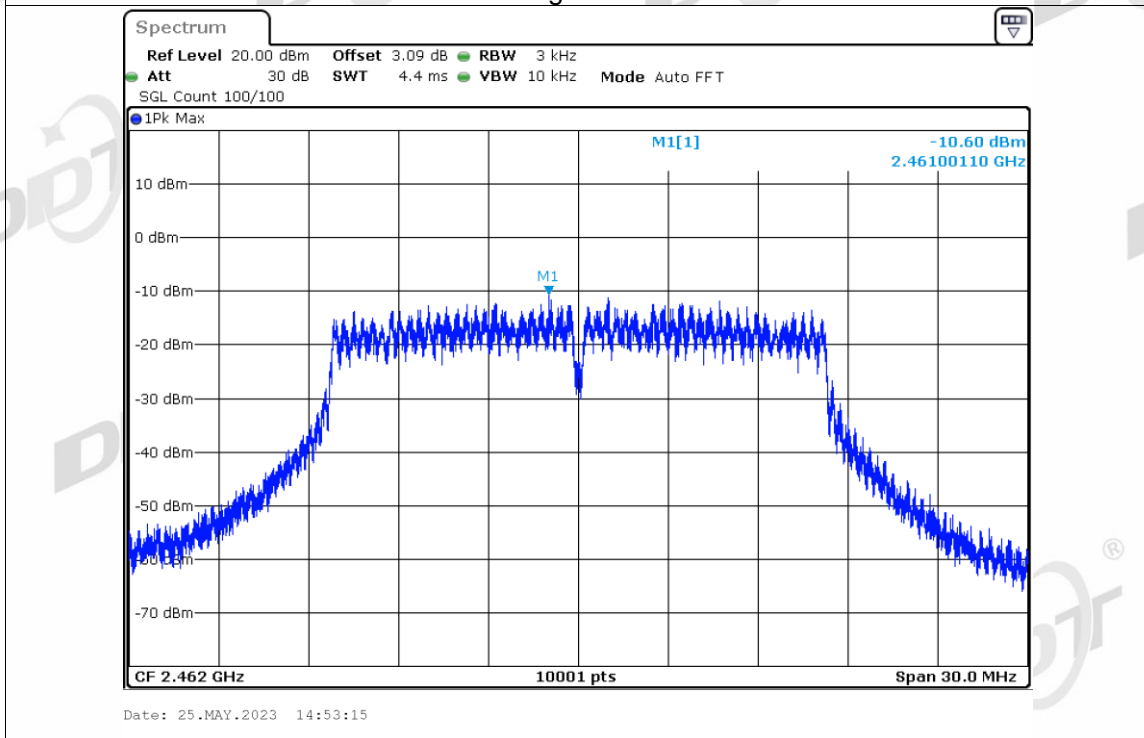


PSD NVNT g 2437MHz Ant2

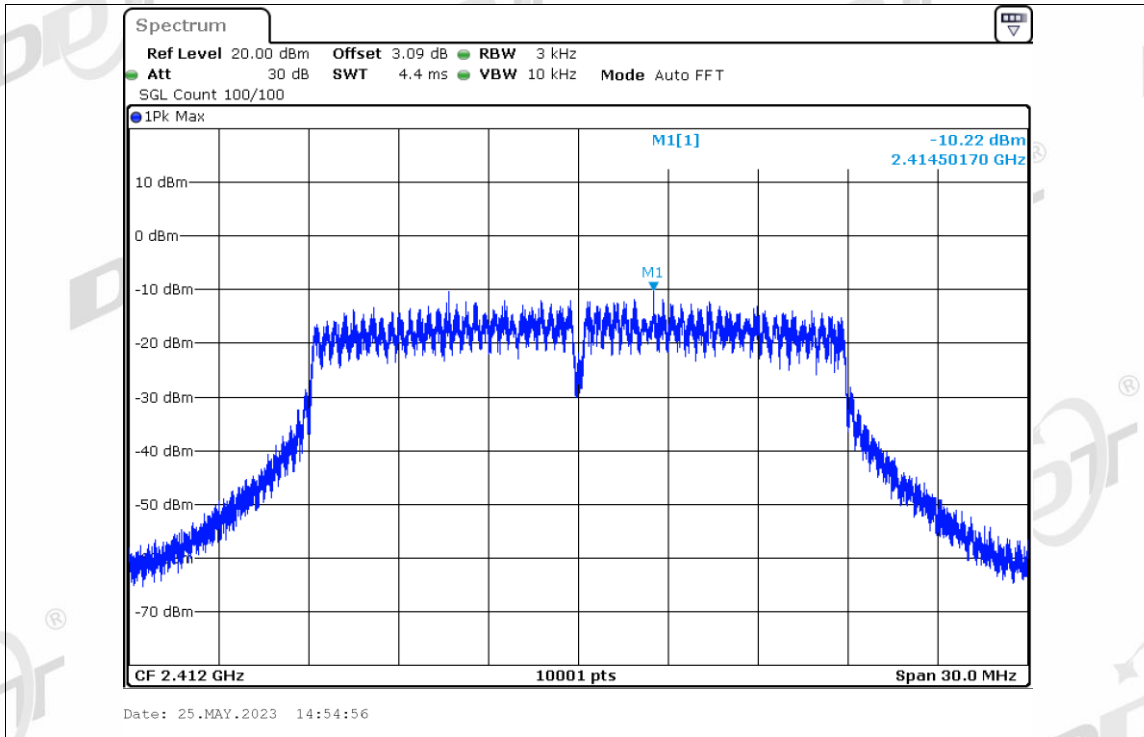




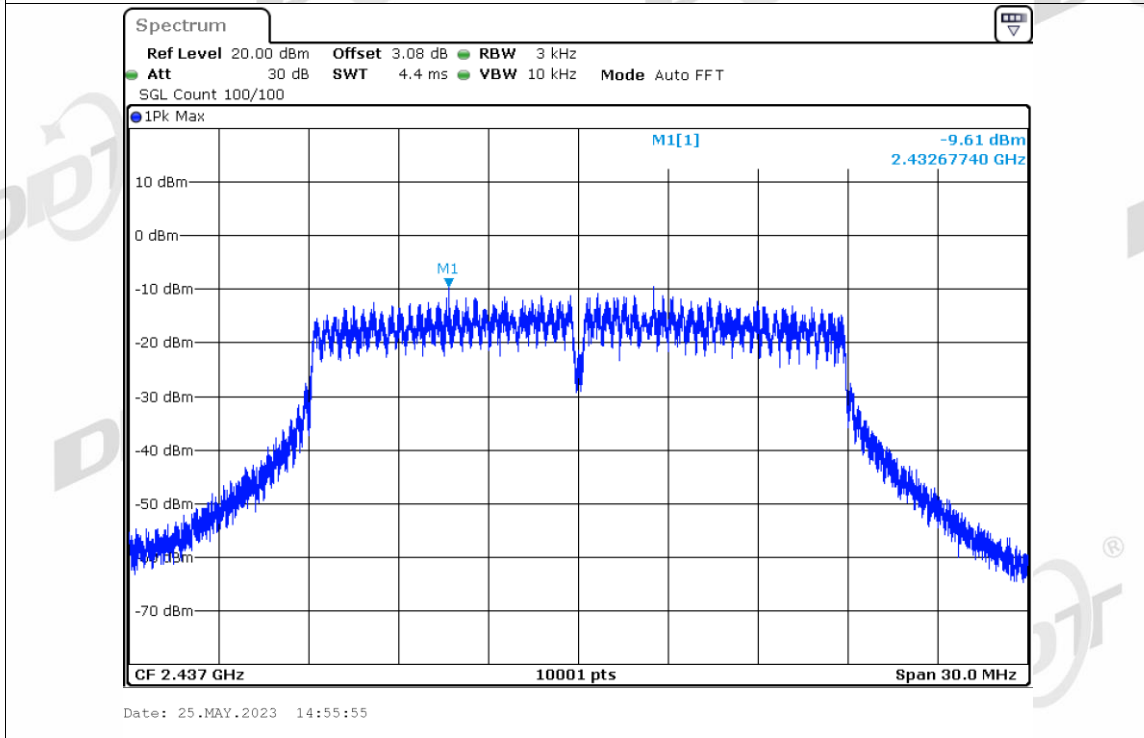
PSD NVNT g 2462MHz Ant2



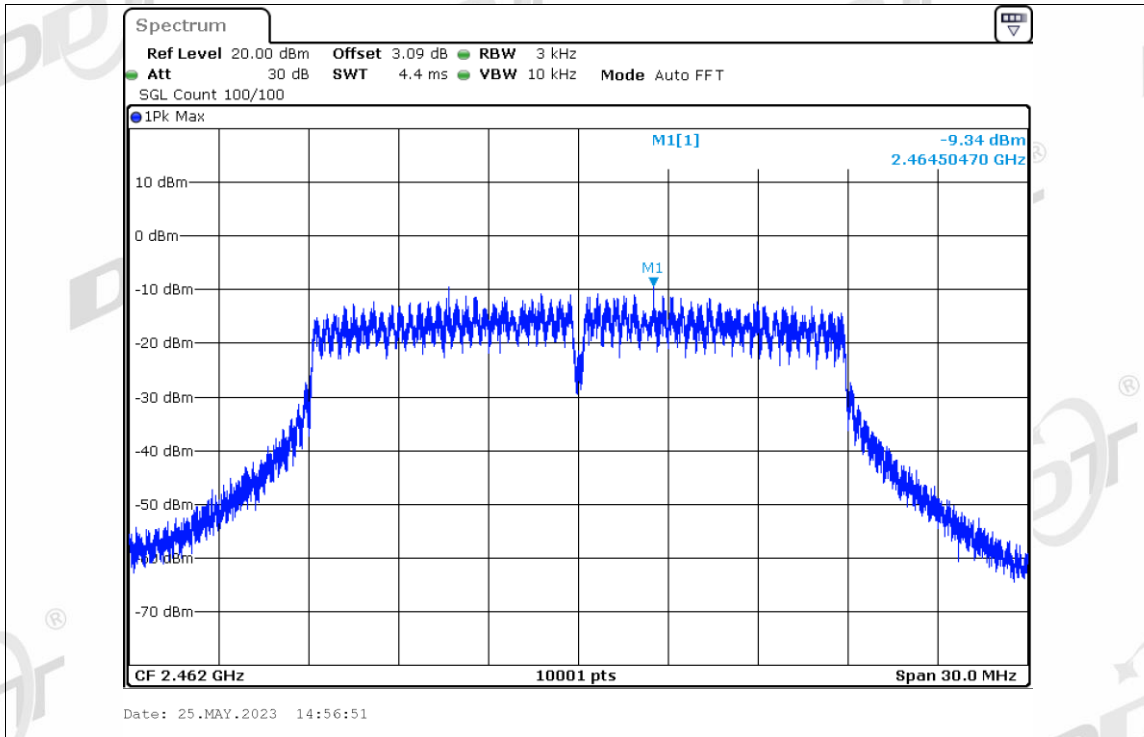
PSD NVNT n20 2412MHz Ant1



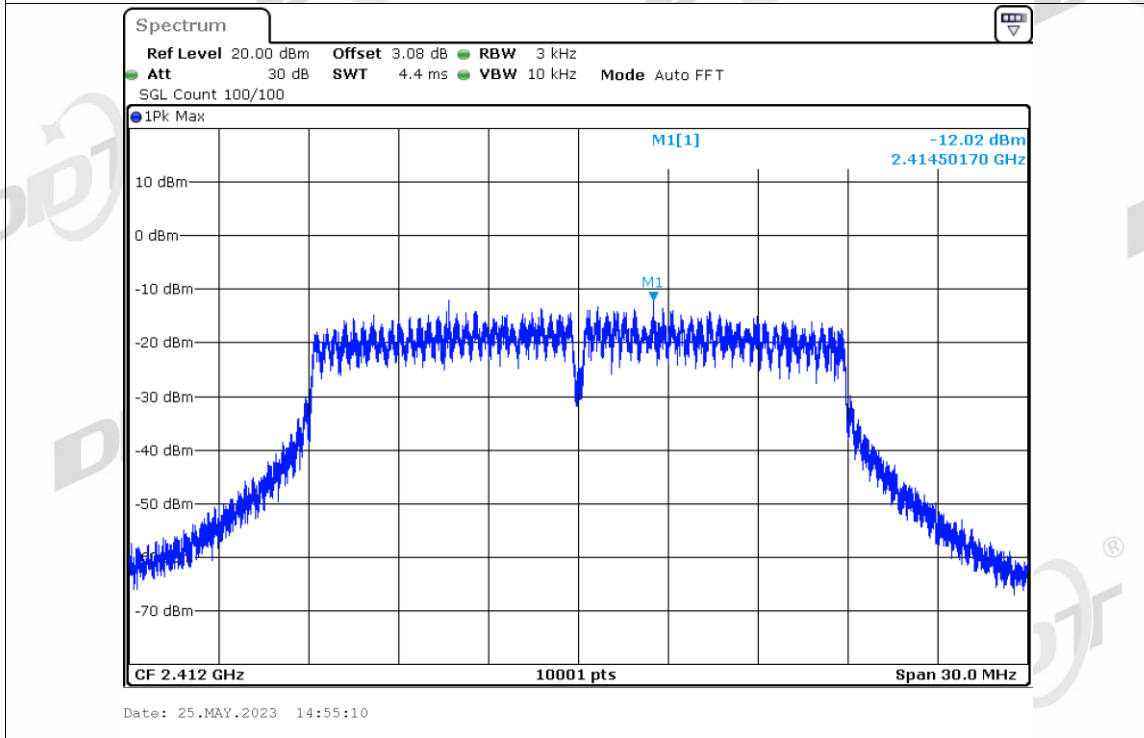
PSD NVNT n20 2437MHz Ant1



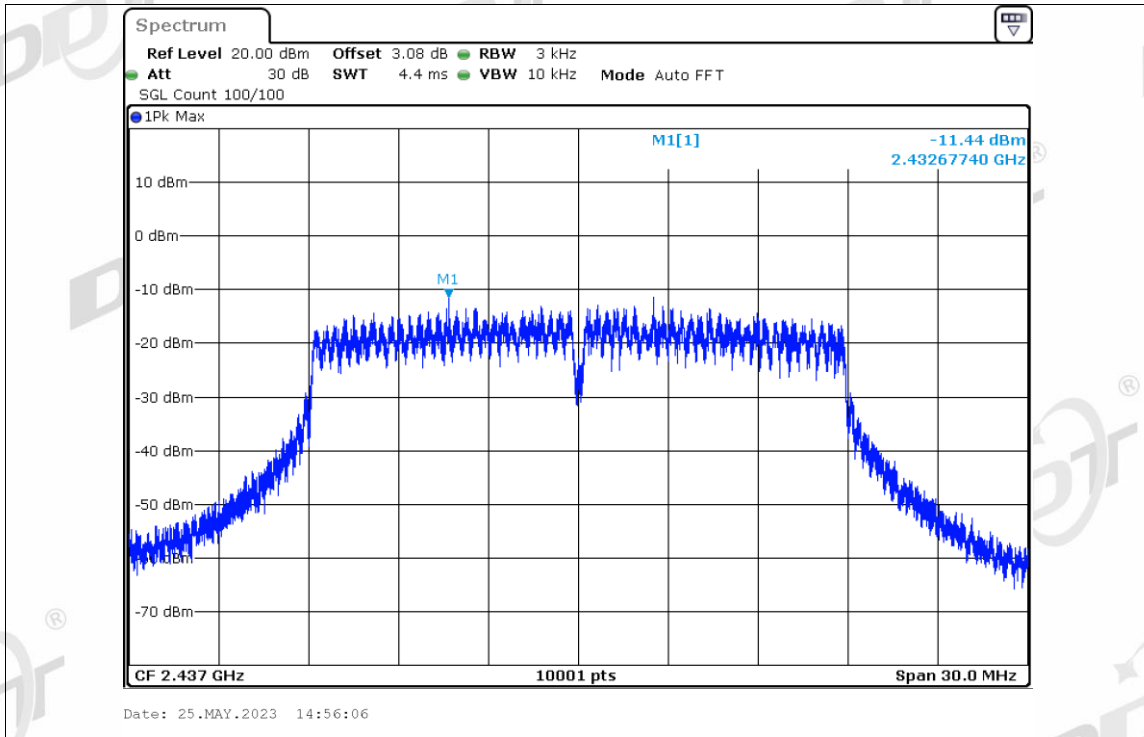
PSD NVNT n20 2462MHz Ant1



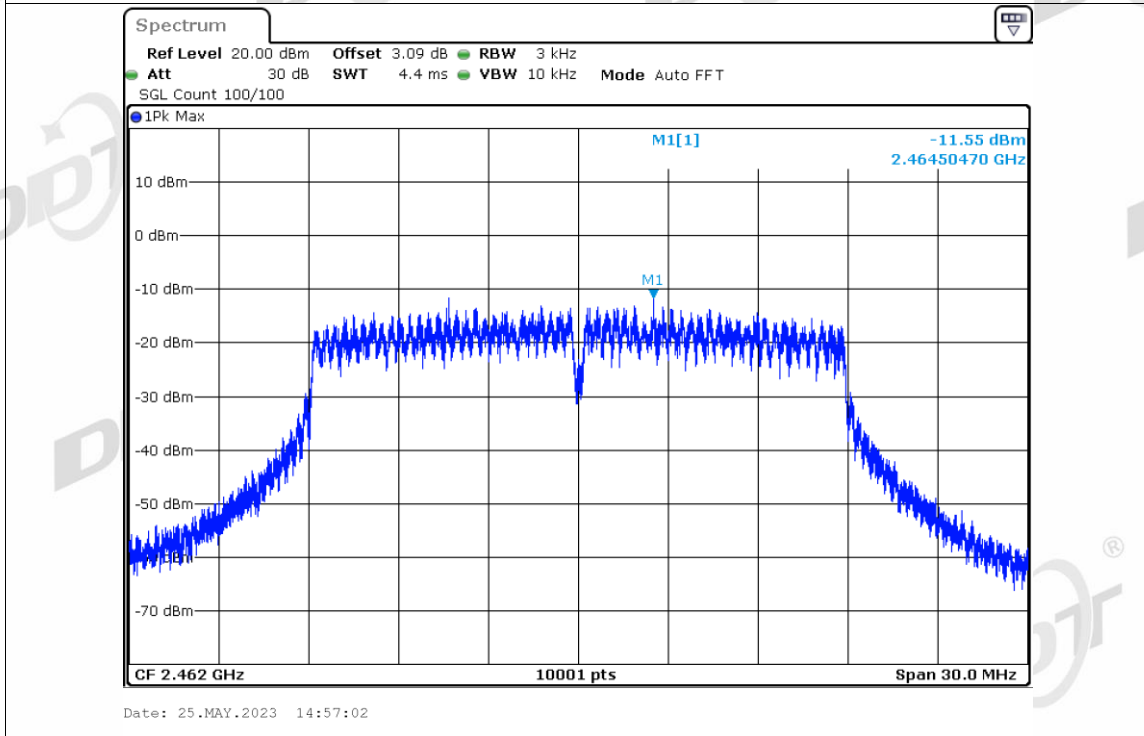
PSD NVNT n20 2412MHz Ant2



PSD NVNT n20 2437MHz Ant2



PSD NVNT n20 2462MHz Ant2



## 7. Band Edge Compliance (Conducted Method)

### 7.1. Block diagram of test setup

Same as section 4.1

### 7.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

### 7.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

Center frequency	DTS Channel center frequency
RBW:	100 kHz
VBW:	300 kHz
Span	1.5 times the DTS bandwidth
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

(4) Set the spectrum analyzer as follows:

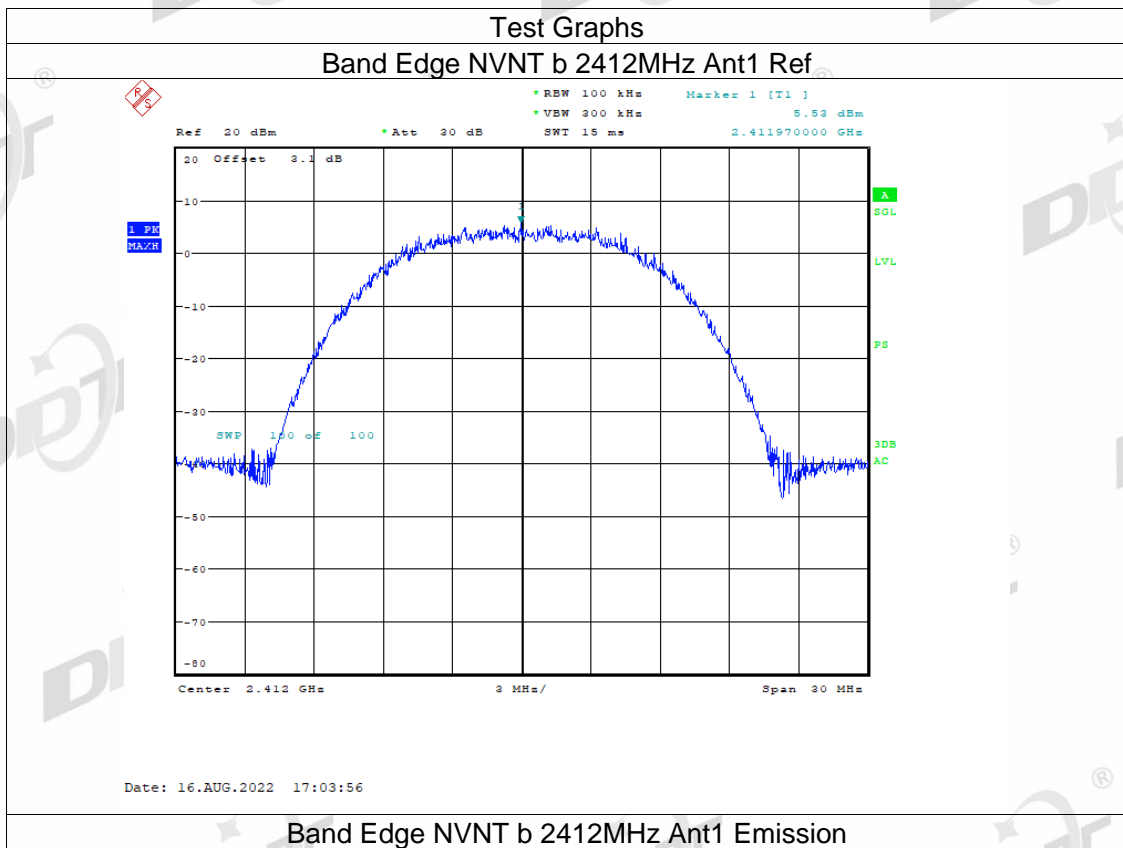
RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	$\geq \text{span}/\text{RBW}$
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

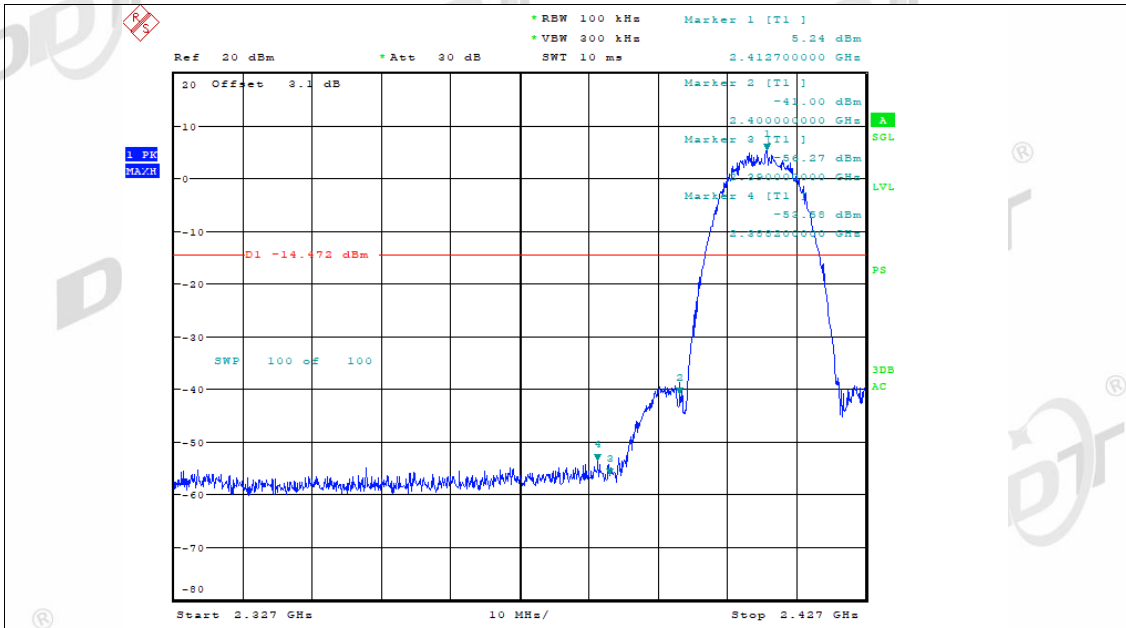
7.4. Test result

EUT Set Mode	CH or Frequency	Ant1 Result (dBm)	EUT Set Mode	CH or Frequency	Ant1 Result (dBm)
11b	CH1	Pass	11n HT 20	CH1	Pass
	CH11	Pass		CH11	Pass
11g	CH1	Pass	11n HT 40	CH3	--
	CH11	Pass		CH9	--

7.5. original test data

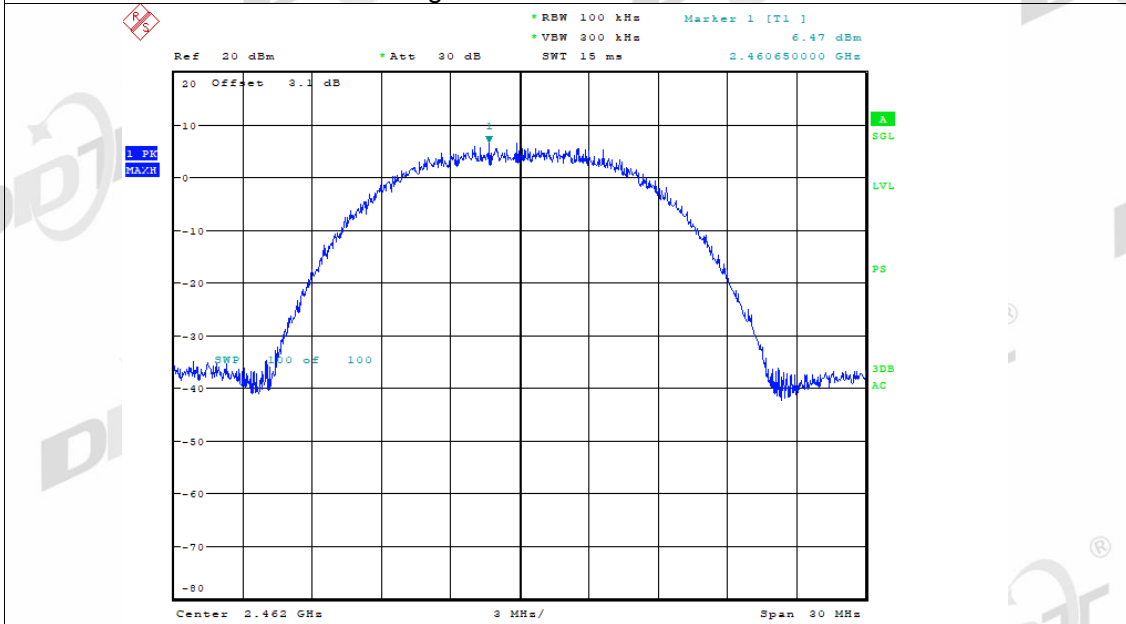


Band Edge NVNT b 2412MHz Ant1 Emission



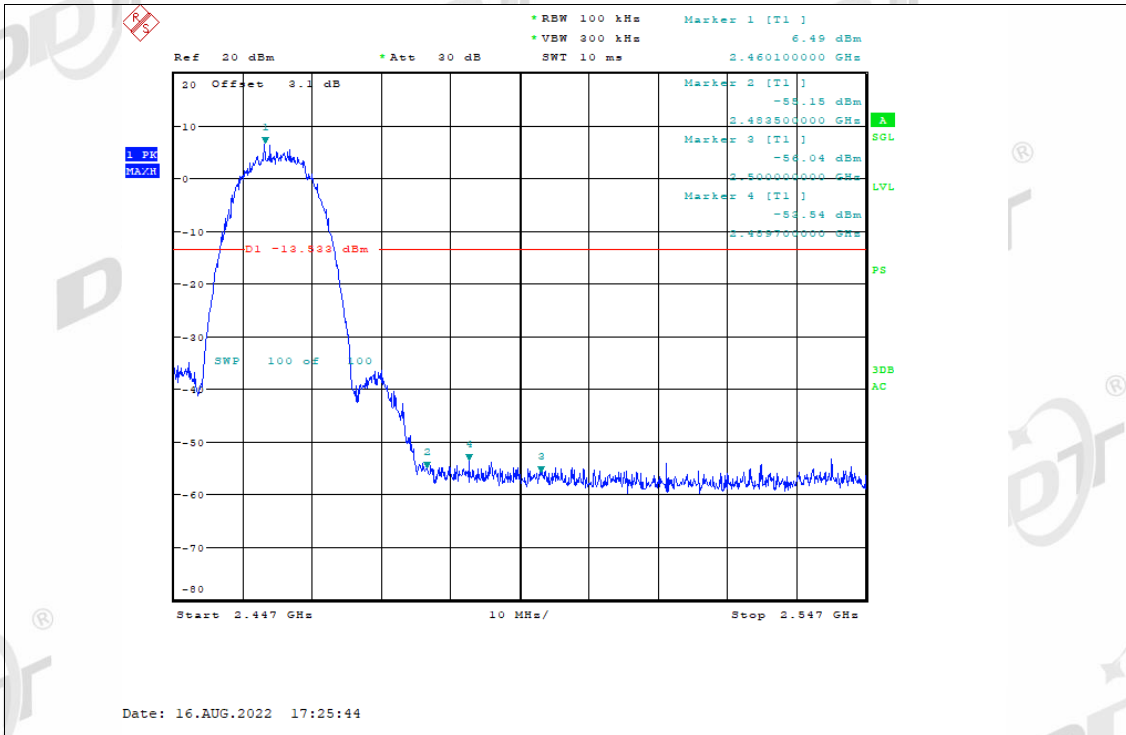
Date: 16.AUG.2022 17:04:00

### Band Edge NVNT b 2462MHz Ant1 Ref

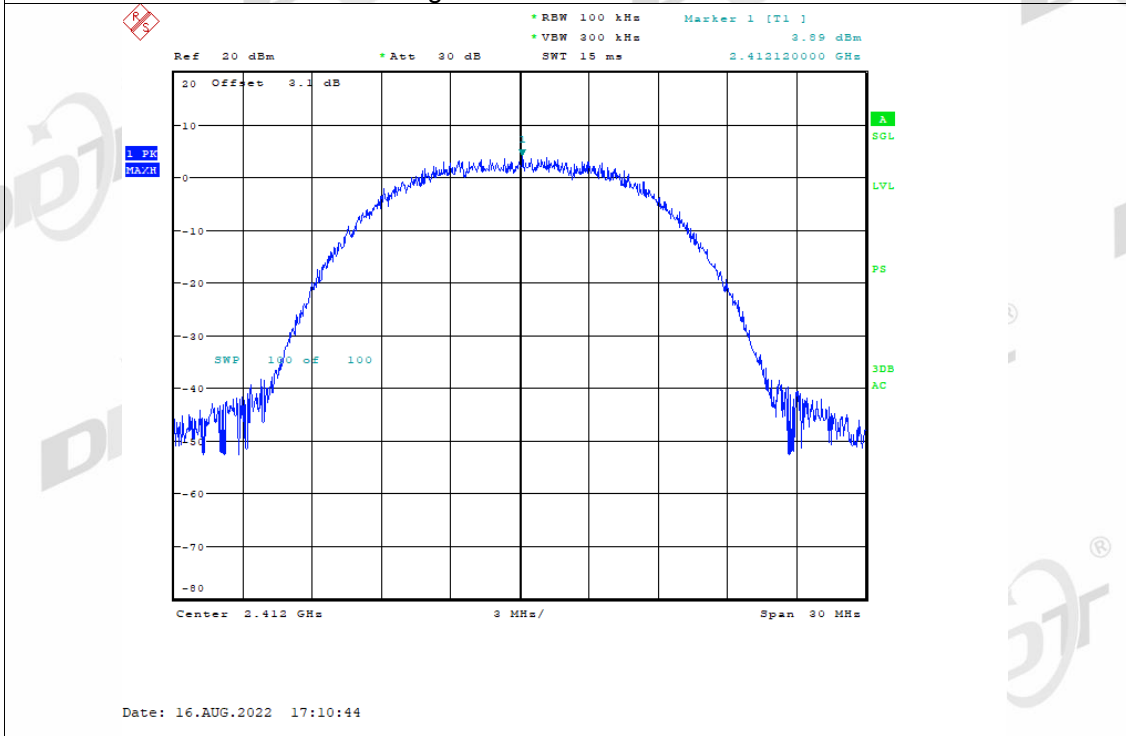


Date: 16.AUG.2022 17:25:40

### Band Edge NVNT b 2462MHz Ant1 Emission

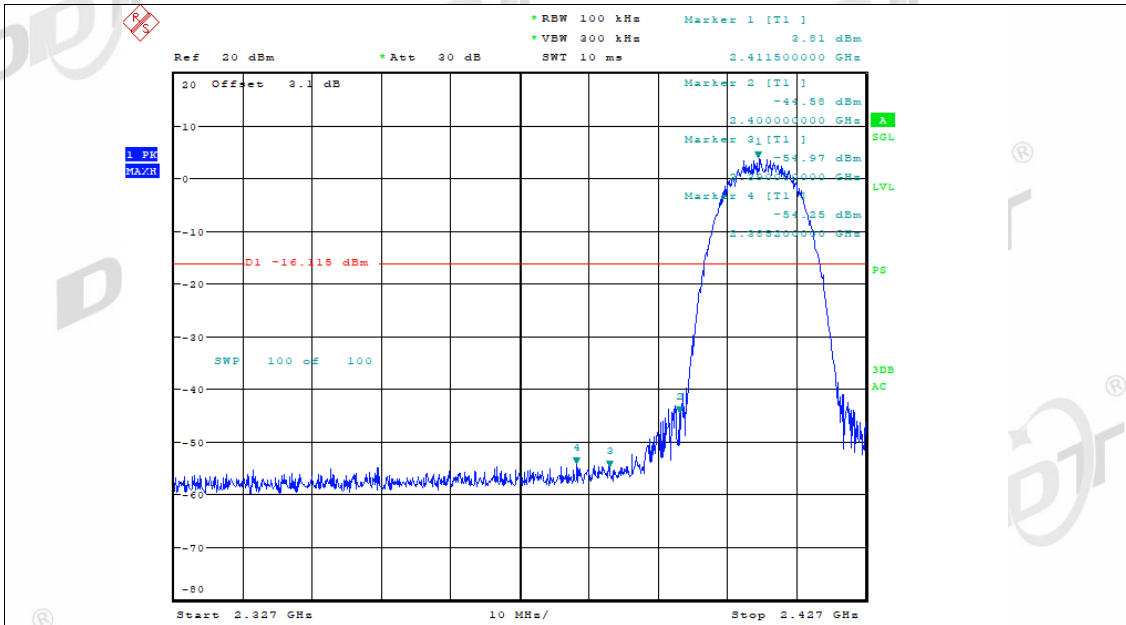


Band Edge NVNT b 2412MHz Ant2 Ref



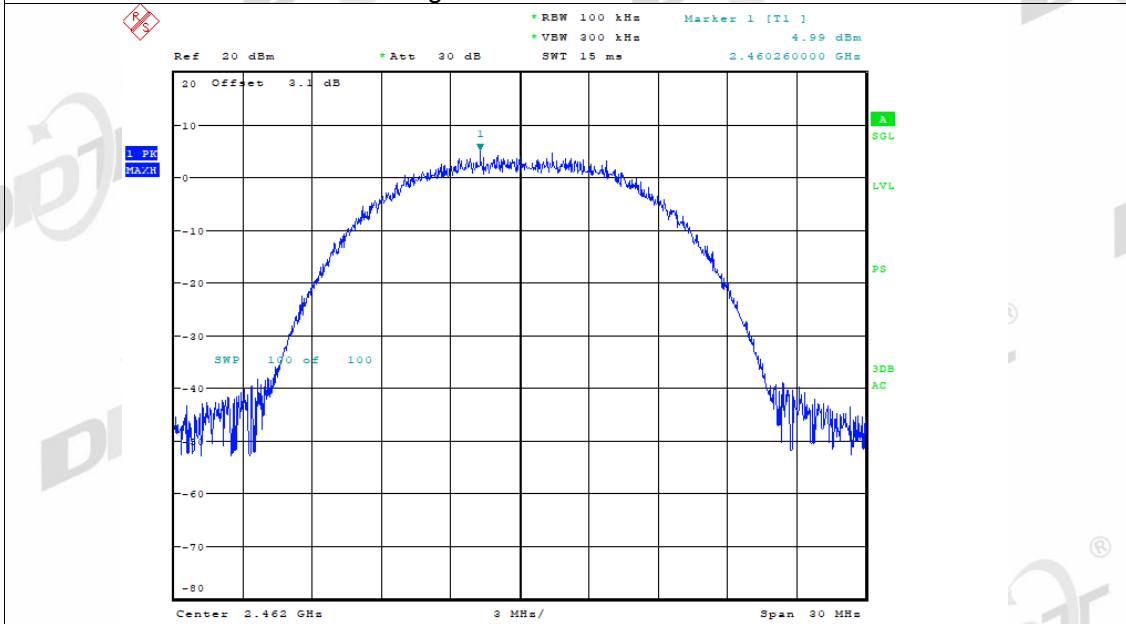
Band Edge NVNT b 2412MHz Ant2 Emission





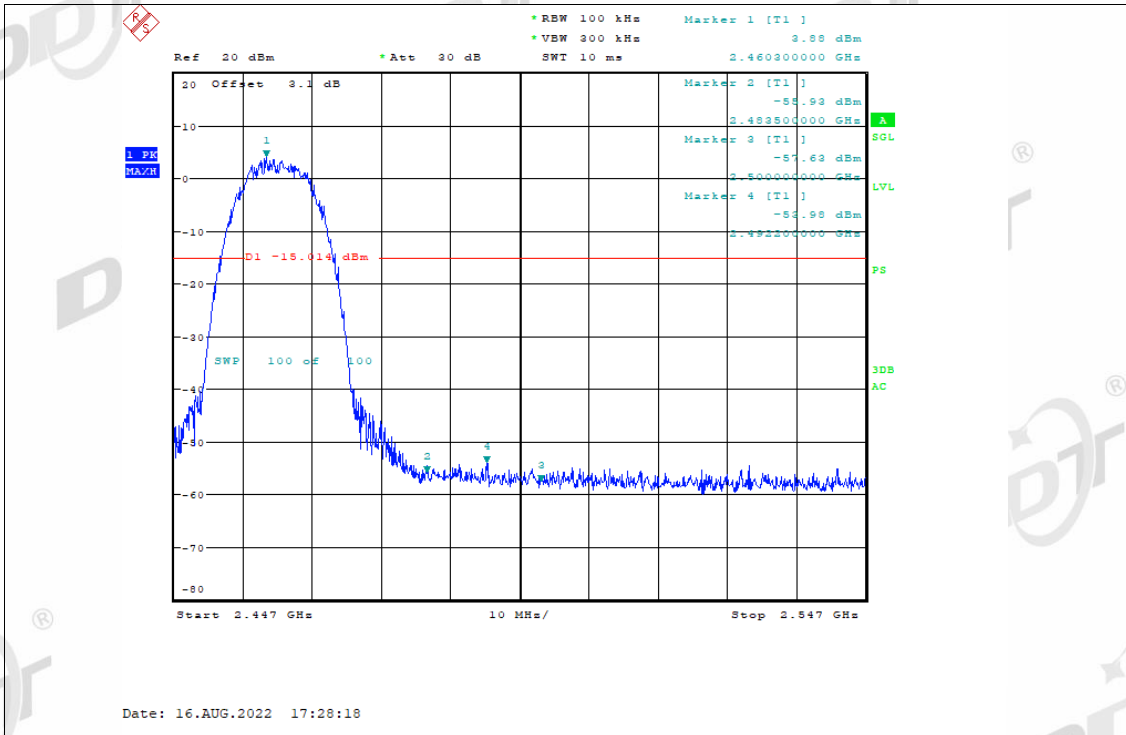
Date: 16.AUG.2022 17:10:49

### Band Edge NVNT b 2462MHz Ant2 Ref

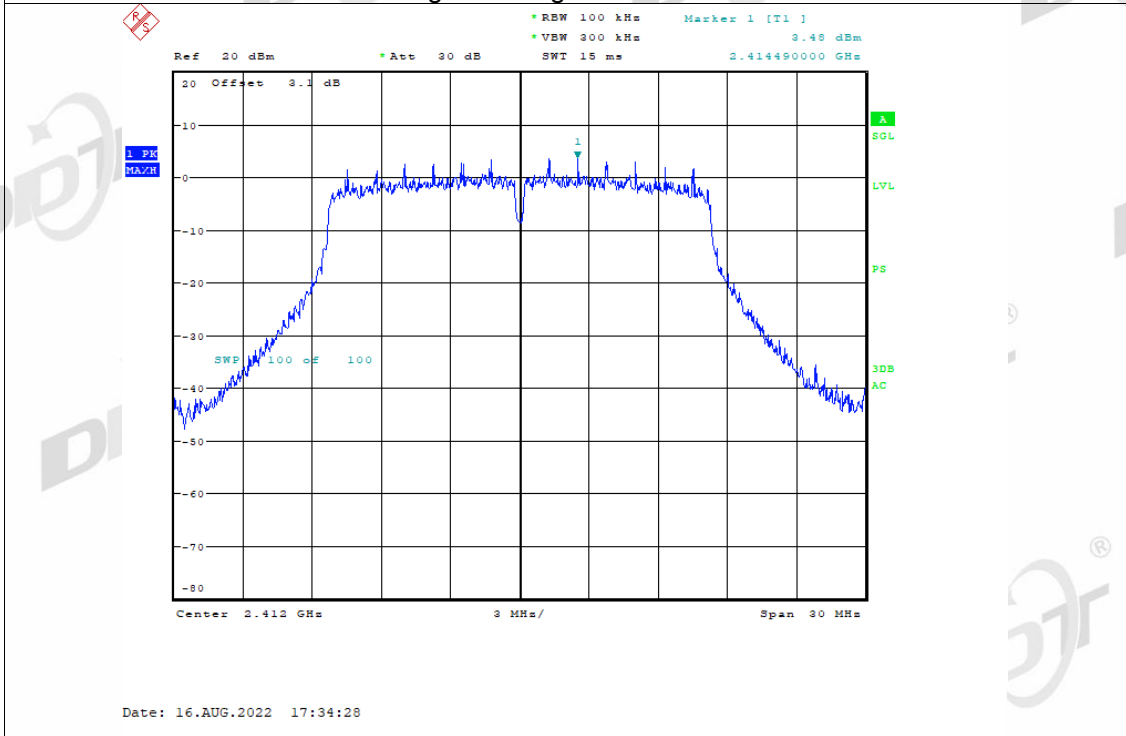


Date: 16.AUG.2022 17:28:13

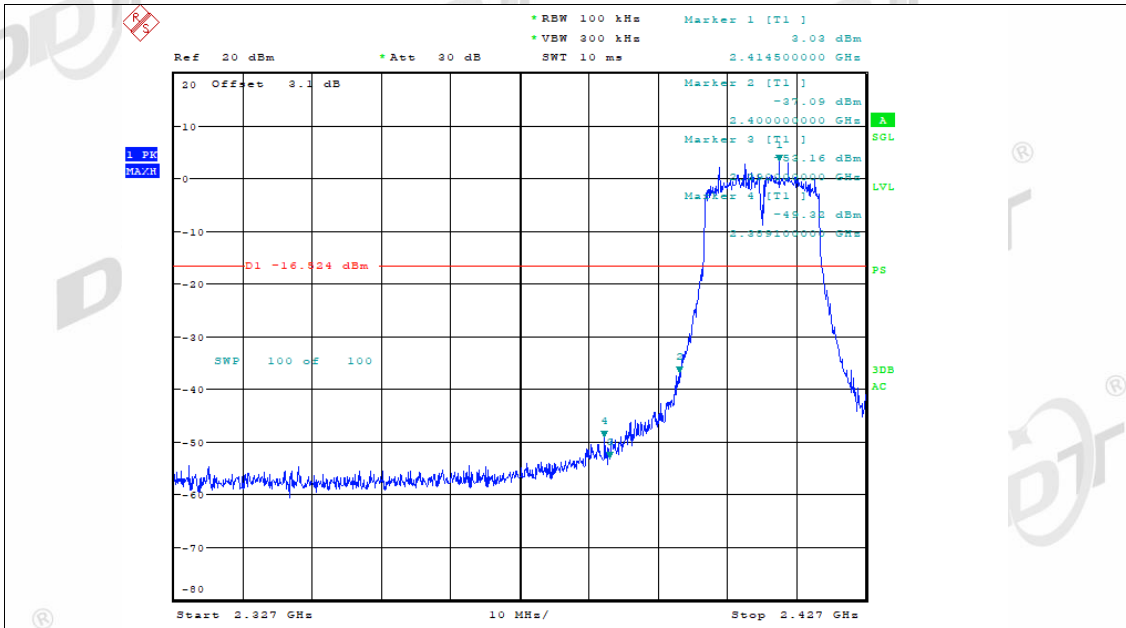
### Band Edge NVNT b 2462MHz Ant2 Emission



Band Edge NVNT g 2412MHz Ant1 Ref

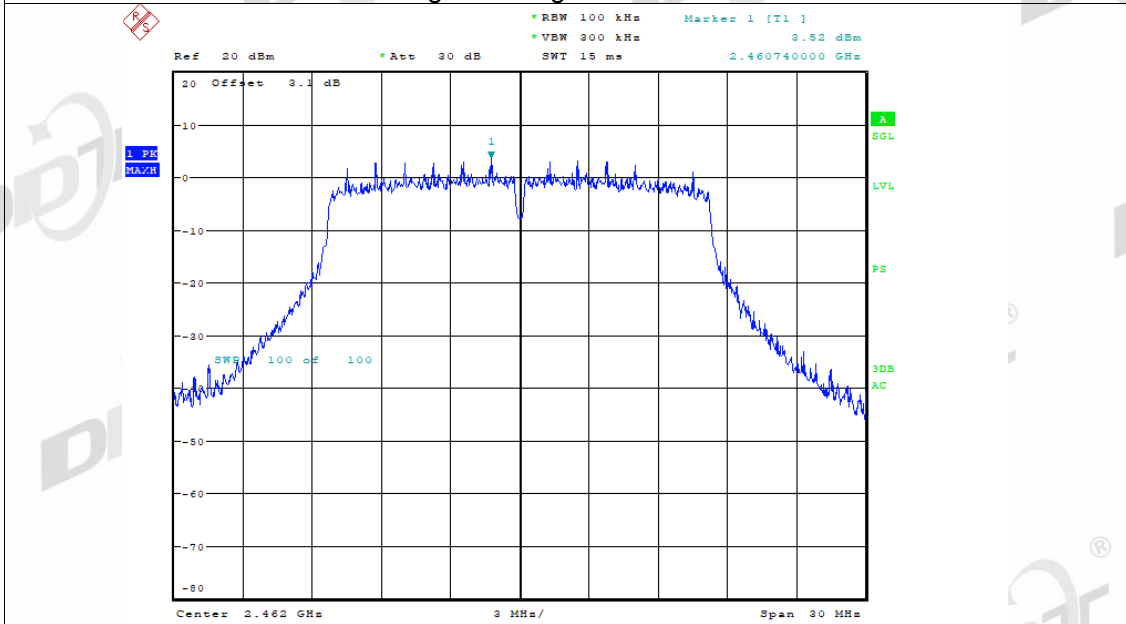


Band Edge NVNT g 2412MHz Ant1 Emission



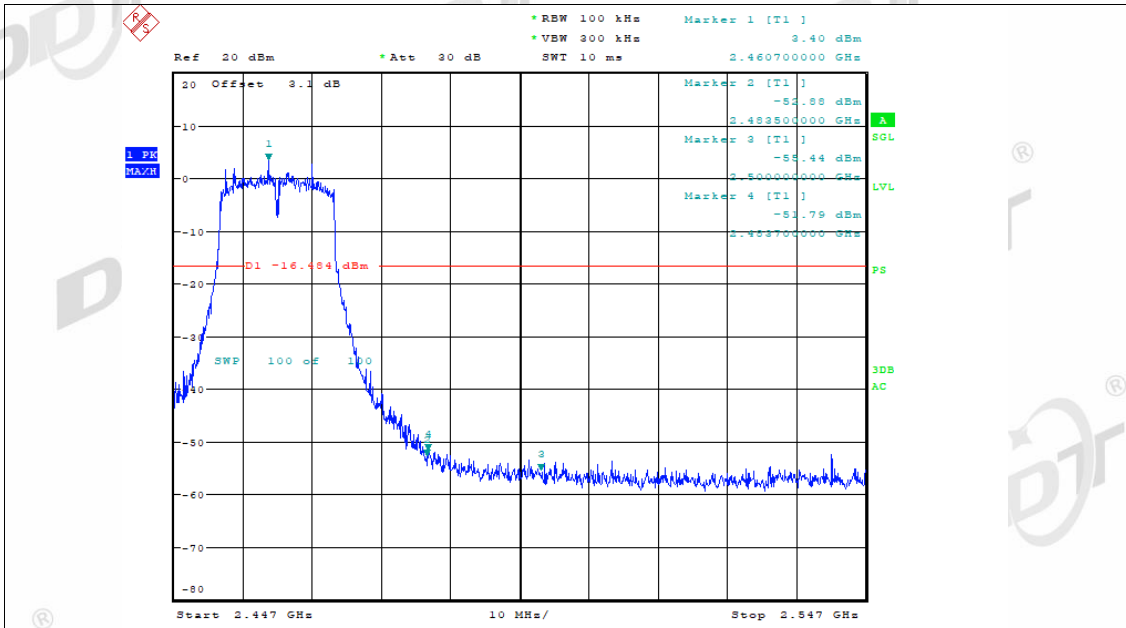
Date: 16.AUG.2022 17:34:33

### Band Edge NVNT g 2462MHz Ant1 Ref



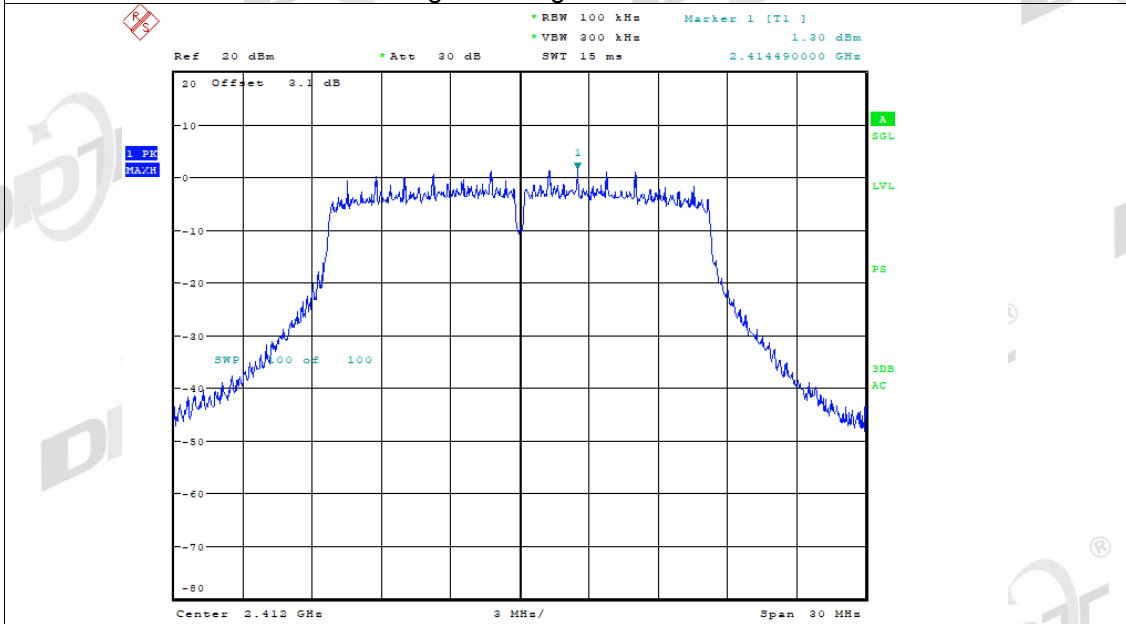
Date: 16.AUG.2022 18:02:18

### Band Edge NVNT g 2462MHz Ant1 Emission



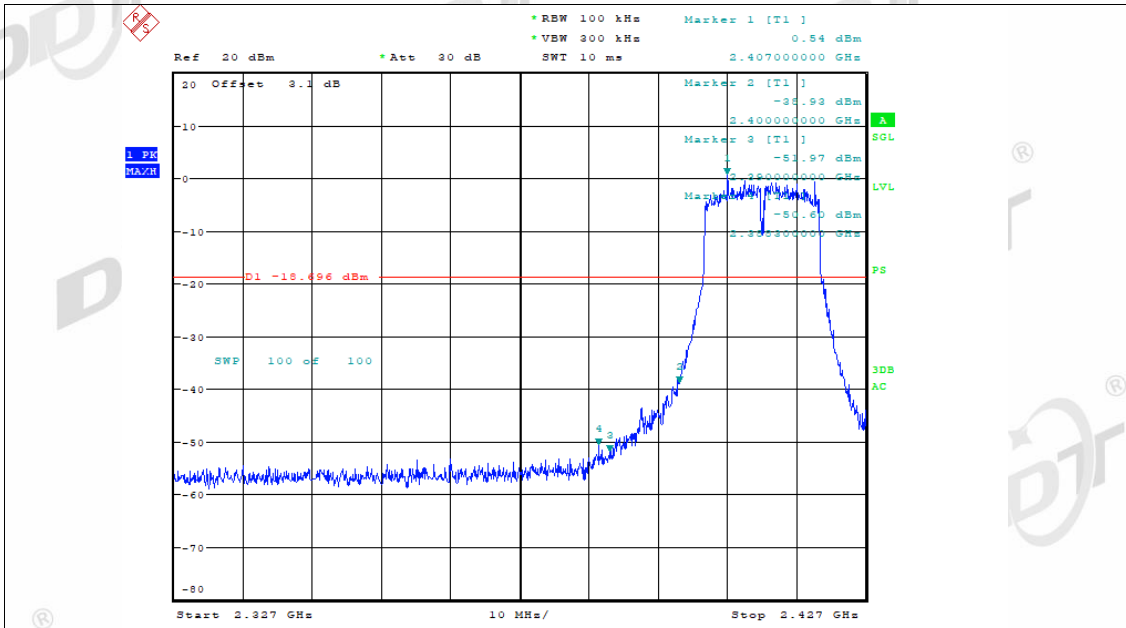
Date: 16.AUG.2022 18:02:23

### Band Edge NVNT g 2412MHz Ant2 Ref



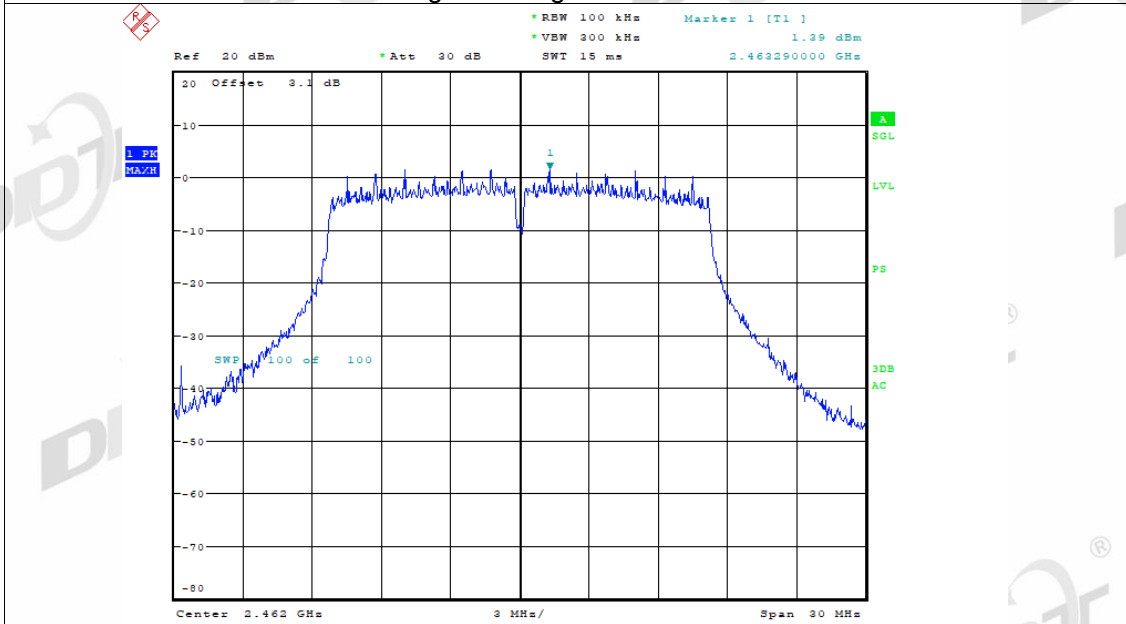
Date: 16.AUG.2022 17:41:49

### Band Edge NVNT g 2412MHz Ant2 Emission



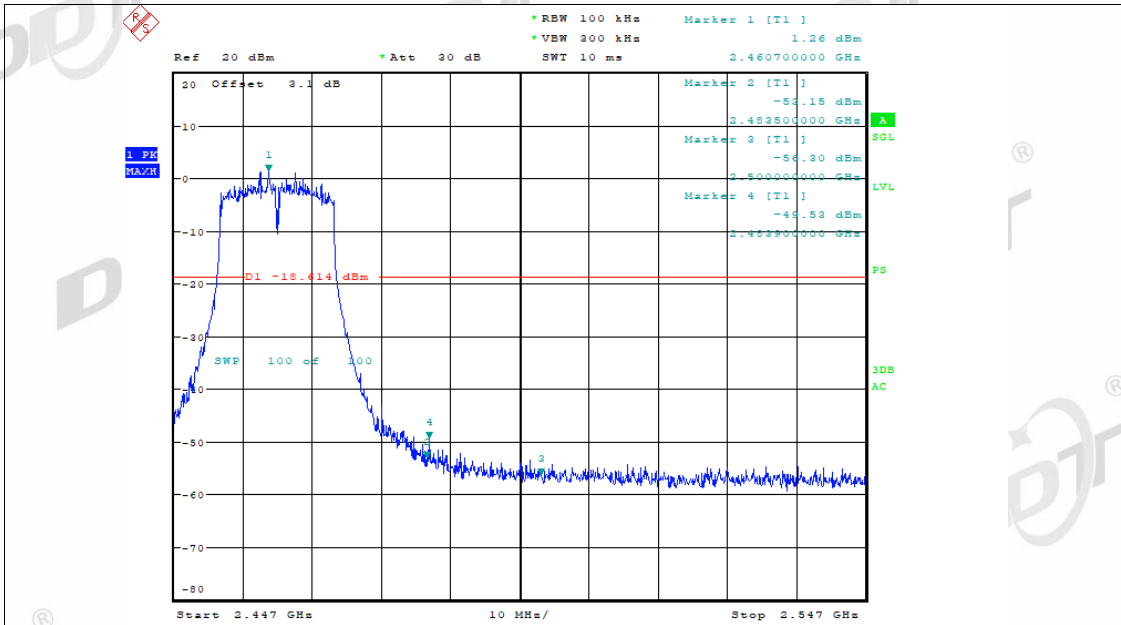
Date: 16.AUG.2022 17:41:54

### Band Edge NVNT g 2462MHz Ant2 Ref



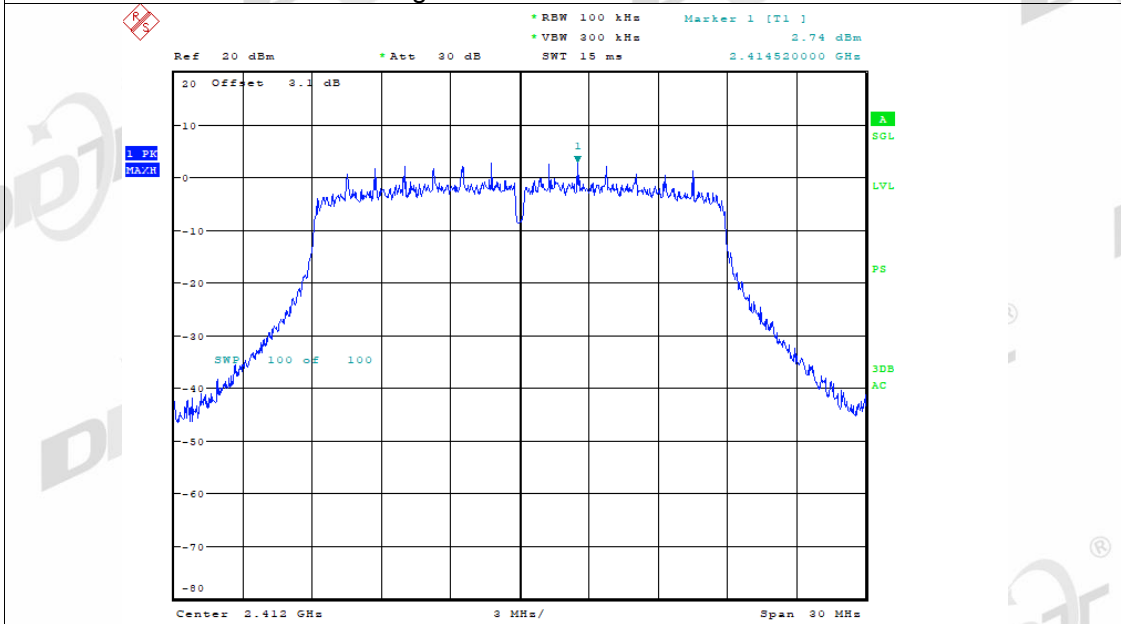
Date: 16.AUG.2022 18:20:19

### Band Edge NVNT g 2462MHz Ant2 Emission



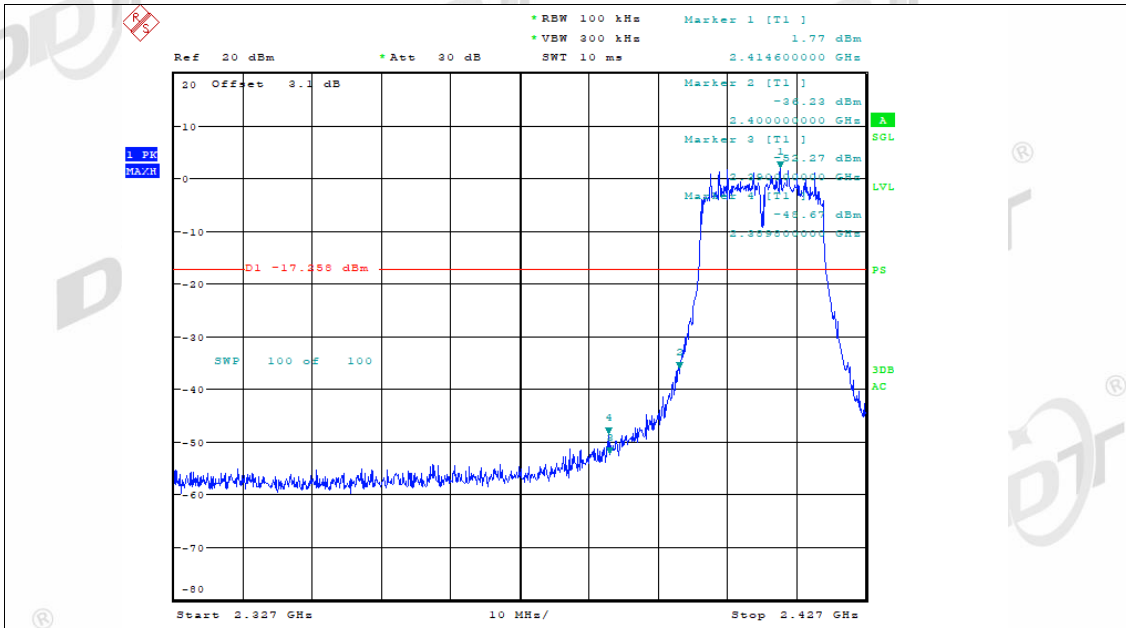
Date: 16.AUG.2022 18:20:24

Band Edge NVNT n20 2412MHz Ant1 Ref



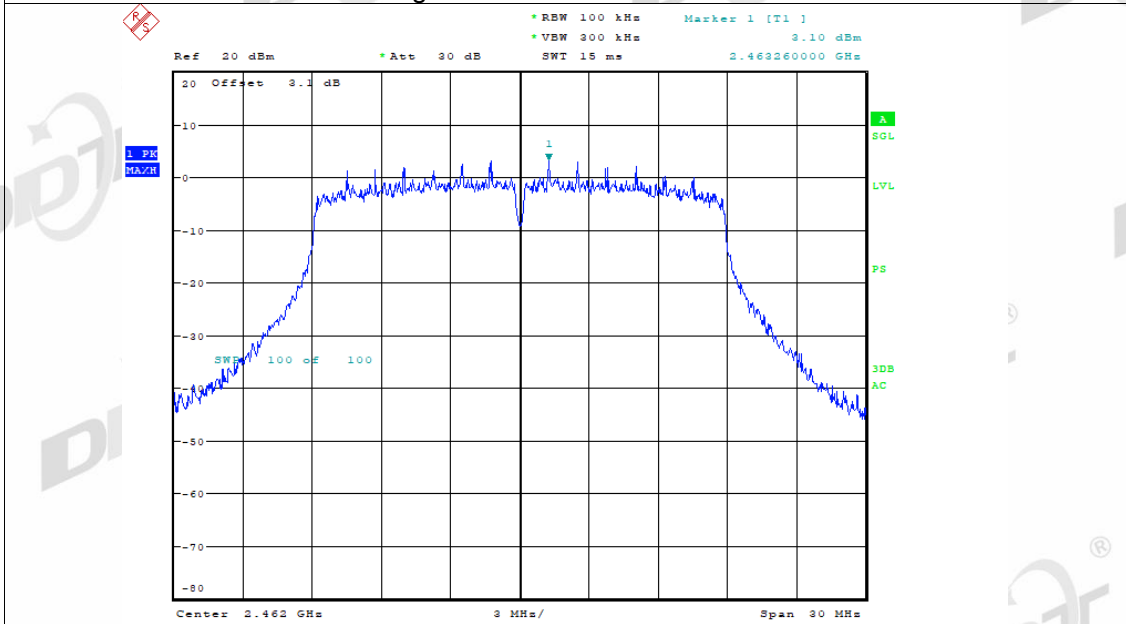
Date: 16.AUG.2022 18:25:04

Band Edge NVNT n20 2412MHz Ant1 Emission



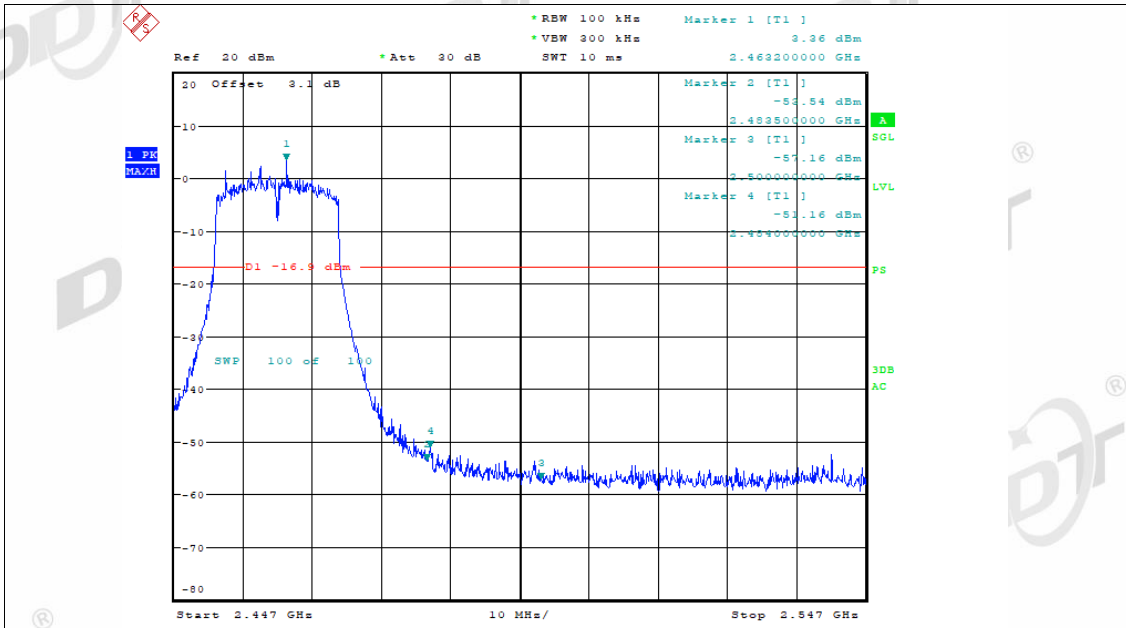
Date: 16.AUG.2022 18:25:08

### Band Edge NVNT n20 2462MHz Ant1 Ref



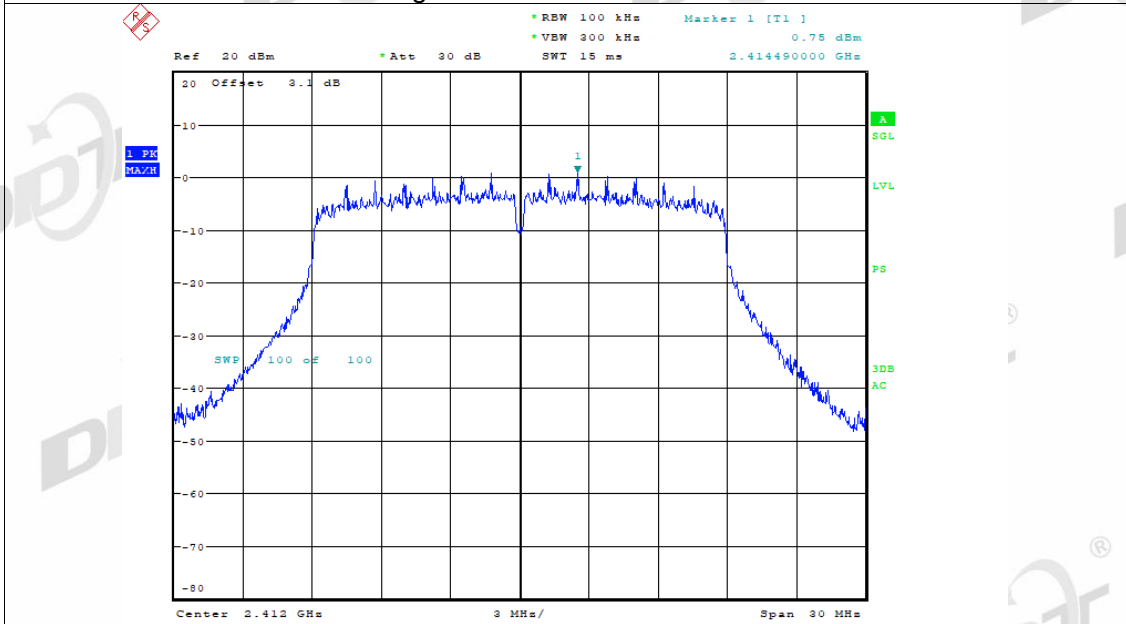
Date: 16.AUG.2022 18:49:10

### Band Edge NVNT n20 2462MHz Ant1 Emission



Date: 16.AUG.2022 18:49:14

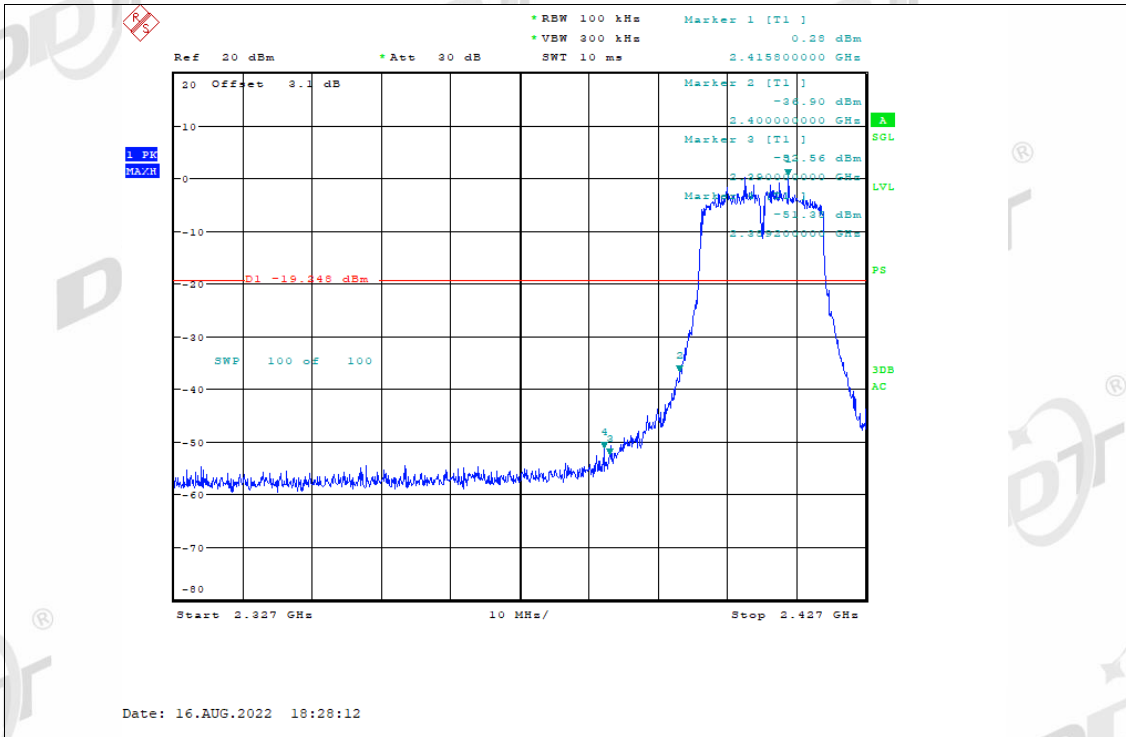
### Band Edge NVNT n20 2412MHz Ant2 Ref



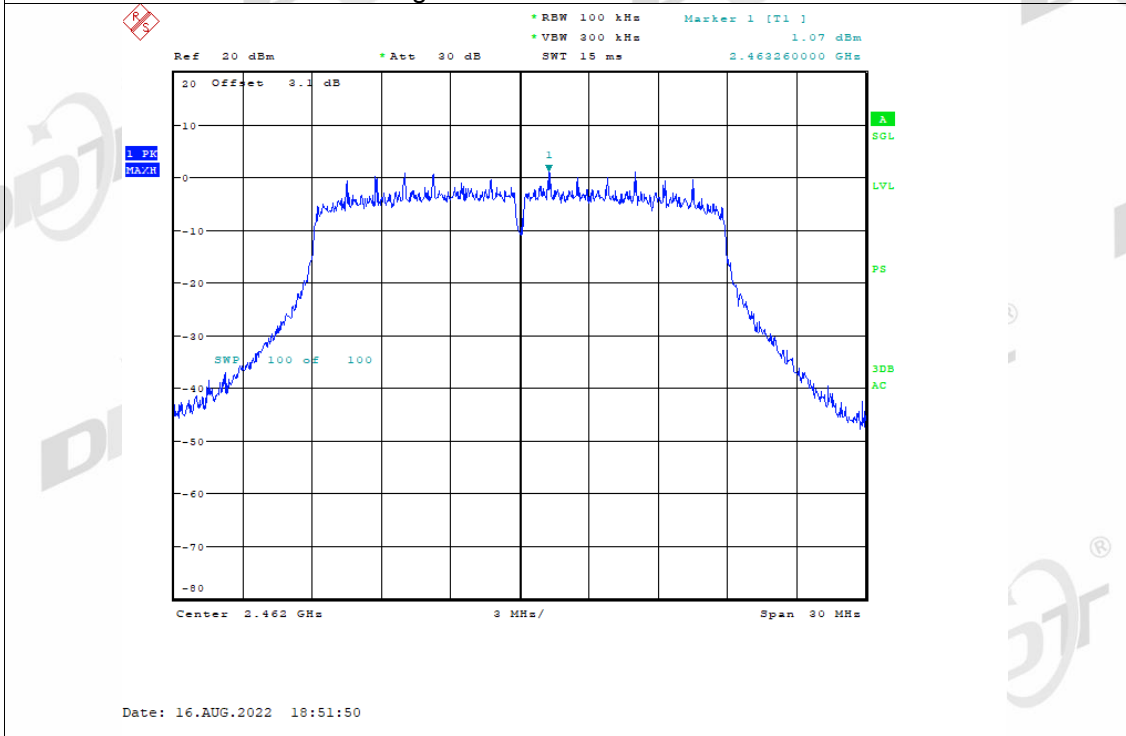
Date: 16.AUG.2022 18:28:07

### Band Edge NVNT n20 2412MHz Ant2 Emission

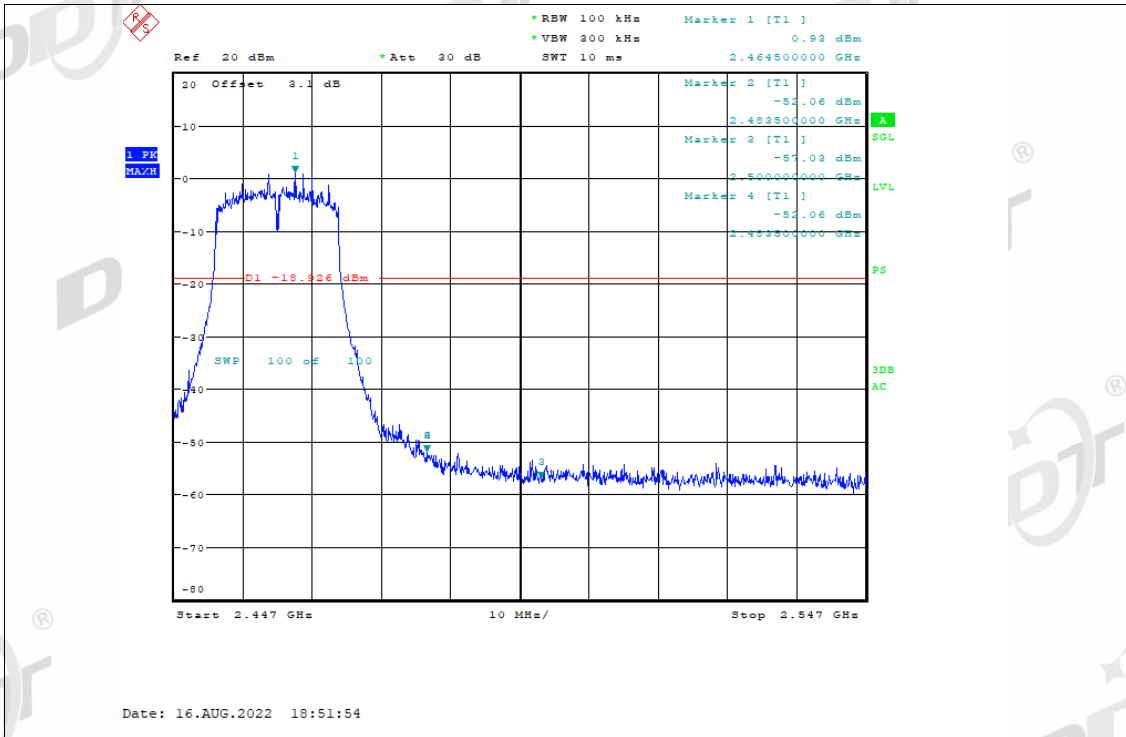




Band Edge NVNT n20 2462MHz Ant2 Ref



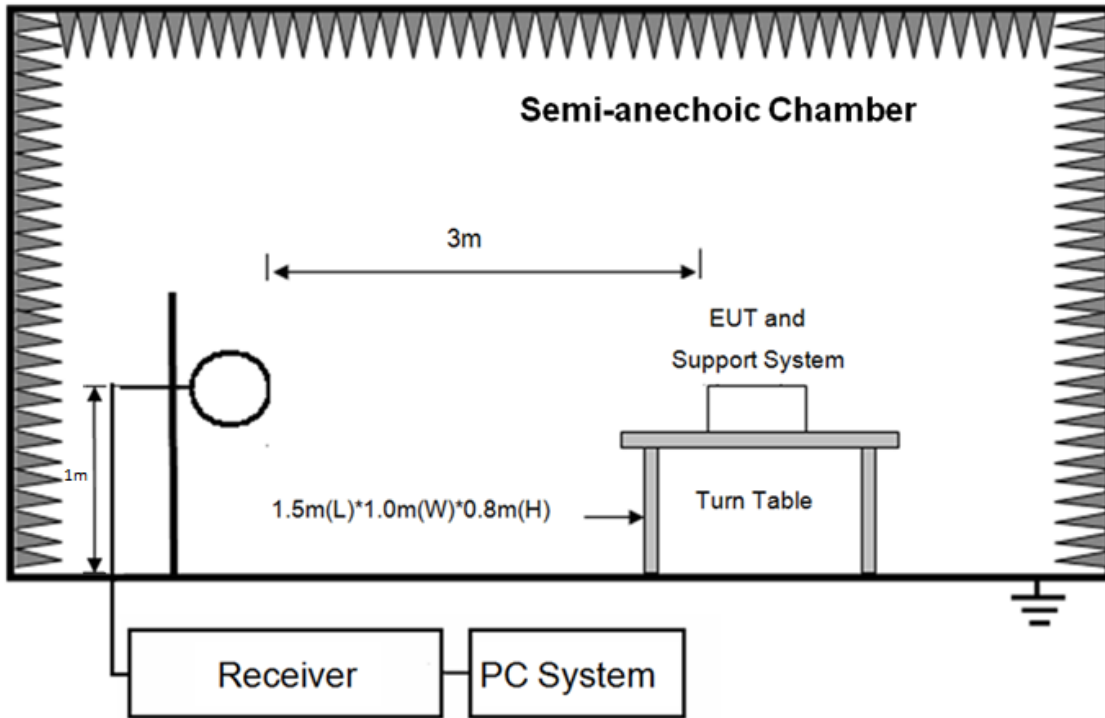
Band Edge NVNT n20 2462MHz Ant2 Emission



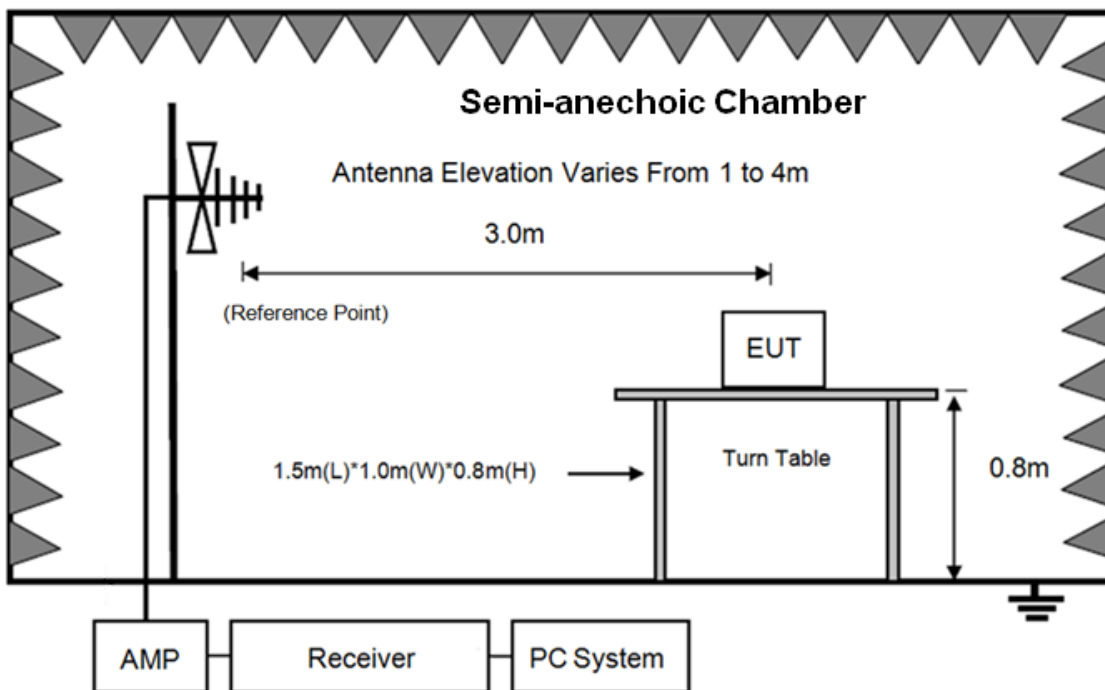
## 8. Radiated Spurious Emissions

### 8.1. Block diagram of test setup

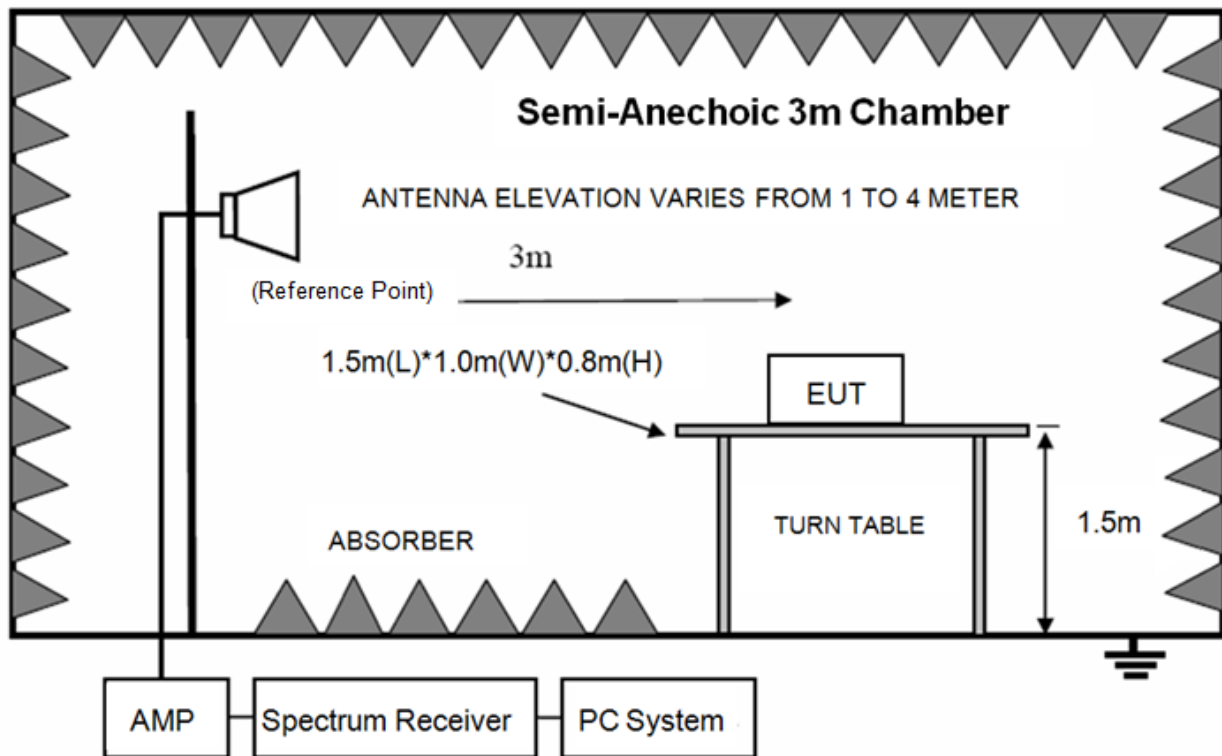
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz – 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

## 8.2. Limit

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

<sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

<sup>2</sup>Above 38.6

(2) FCC 15.209 Limit.

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

Note: (1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3\text{m}}(\text{dB}\mu\text{V}/\text{m}) = \text{Limit}_{30\text{m}}(\text{dB}\mu\text{V}/\text{m}) + 40\text{Log}(30\text{m}/3\text{m})$$

(4) Limit for this EUT

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions or comply with 15.209 limits.

### 8.3. Test procedure

(1) EUT height should be 0.8 m for below 1 GHz at a semi-anechoic chamber while EUT height should be 1.5 m for above 1 GHz at full chamber or semi-anechoic chamber ground with absorbers.

(2) The antenna used as below table.

Test frequency range	Test antenna used	Measuring distance
9 kHz-30 MHz	Active Loop antenna	3 m
30 MHz-1 GHz	Trilog Broadband Antenna	10 m
1 GHz-18 GHz	Double Ridged Horn Antenna(1GHz-18GHz)	3 m
18 GHz-40 GHz	Horn Antenna(18GHz-40GHz)	3 m

According to ANSI C63.10:2020 clause 6.4.4.2 and 6.5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also be positioned with its plane horizontal at the specified distance from the EUT. The center of the loop is 1 m above the ground. For measurement above 30 MHz, the Trilog Broadband Antenna was located 3 m, Horn Antenna was located 3 m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degrees, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT through three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18GHz to 25GHz, so below final test was performed with frequency range from 9kHz to 18GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to ANSI C63.10 2020 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz, for emissions from 9 kHz-90 kHz, 110 kHz-490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9 kHz-150 kHz	200 Hz
150 kHz-30 MHz	9 kHz
30 MHz-1 GHz	120 kHz

(7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum

Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; According ANSI C63.10:2020 clause 4.1.4.2.2 procedure for Average measure.

(8) X axis, Y axis, Z axis are tested, and worse setup X axis is reported.

#### 8.4. Test result

##### Pass. (See below detailed test result)

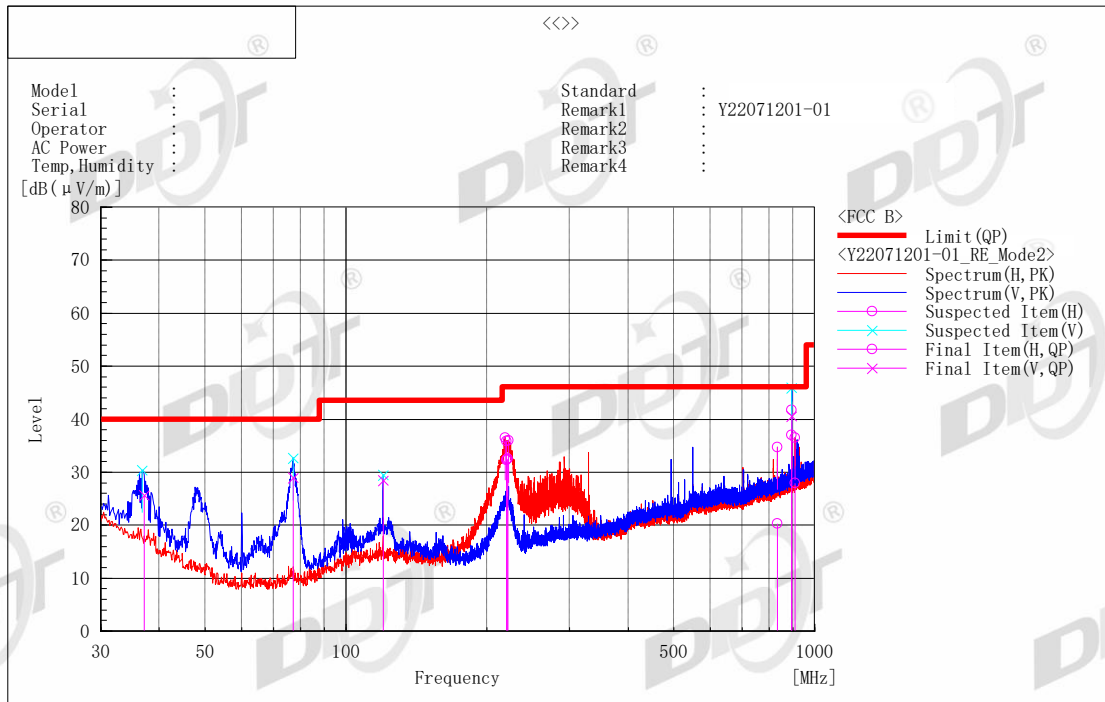
All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limit.

Note1: According exploratory test no any obvious emission was detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

Note2: For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in transmission mode.

Note3: Scan with all modes, the worst case was recorded in this report.

**Radiated Emission test (below 1GHz)**



**Final Result**

No.	Frequency [MHz]	(P)	Reading QP [dB (µV)]	c. f [dB(1/m)]	Result QP [dB (µV/m)]	Limit QP [dB (µV/m)]	Margin QP [dB]	Height [cm]	Angle [°]	System	Remark
1	219.728	H	44.8	-12.5	32.3	46.0	13.7	100.0	255.8	1	
2	221.893	H	44.9	-12.4	32.5	46.0	13.5	100.0	272.3	1	
3	220.886	H	44.9	-12.5	32.4	46.0	13.6	100.0	296.5	1	
4	893.333	H	33.7	3.3	37.0	46.0	9.0	100.0	8.5	1	
5	831.634	H	17.9	2.4	20.3	46.0	25.7	100.0	270.1	1	
6	907.516	H	24.4	3.5	27.9	46.0	18.1	100.0	48.8	1	
7	893.234	V	36.8	3.8	40.6	46.0	5.4	300.0	78.9	2	
8	77.170	V	44.3	-15.4	28.9	40.0	11.1	197.0	47.8	2	
9	37.133	V	33.4	-7.7	25.7	40.0	14.3	300.0	145.2	2	
10	120.009	V	38.0	-9.6	28.4	43.5	15.1	300.0	18.8	2	

Note) Receiving antenna polarization: Horizontal and/or Vertical

Test Distance: 3 m, Antenna Height: 1 m to 4 m

Level QP (Quasi-Peak) = Reading QP + Factor (Antenna Factor + Cable Loss - Amp. Gain)

Margin QP (Quasi-Peak) = Limit - Level QP



Radiated Emission test (1GHz - 3GHz)

**Radiated Emission Test Result**

Test Site : 10m Chamber

Test Date : 05-24-2023

Tested By : Sunny

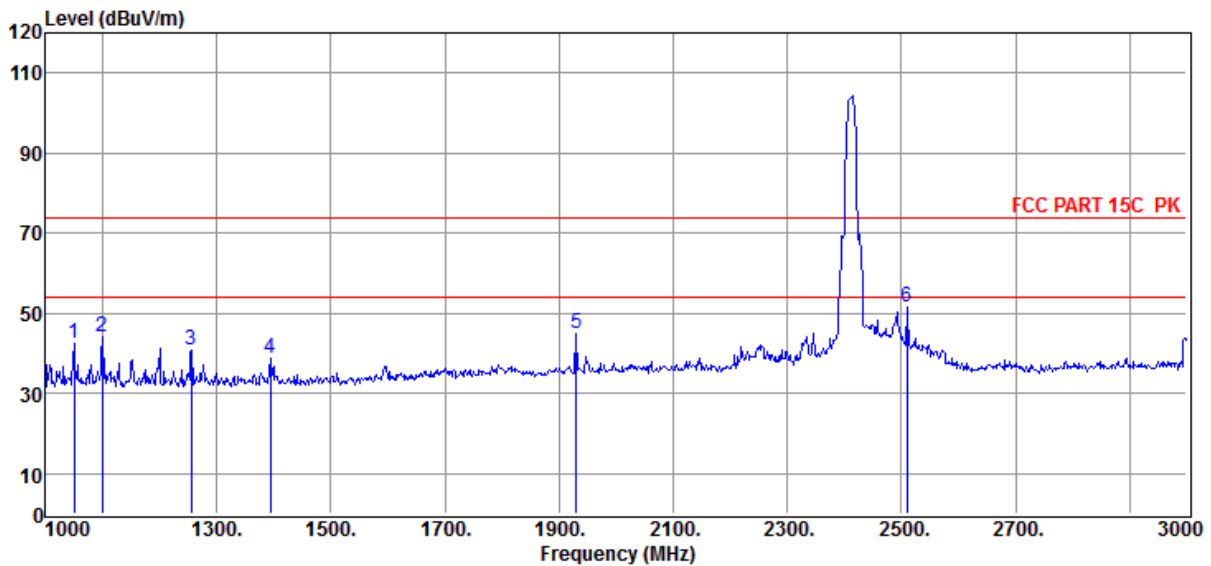
EUT : Formation performance multi-rotor UAV Model Number : CROSS STARS III

Power Supply : Battery

Test Mode : Tx Mode

Memo : 11b ANT1 1M 2412MHz

Data: 1



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1050.00	54.10	23.70	-35.17	42.63	74.00	-31.37	Peak	HORIZONTAL
2	1100.00	55.60	23.90	-35.24	44.26	74.00	-29.74	Peak	HORIZONTAL
3	1256.00	51.35	24.52	-34.92	40.95	74.00	-33.05	Peak	HORIZONTAL
4	1394.00	48.26	25.08	-34.75	38.59	74.00	-35.41	Peak	HORIZONTAL
5	1930.00	51.31	28.17	-34.38	45.10	74.00	-28.90	Peak	HORIZONTAL
6	2510.00	57.22	27.93	-33.53	51.62	74.00	-22.38	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

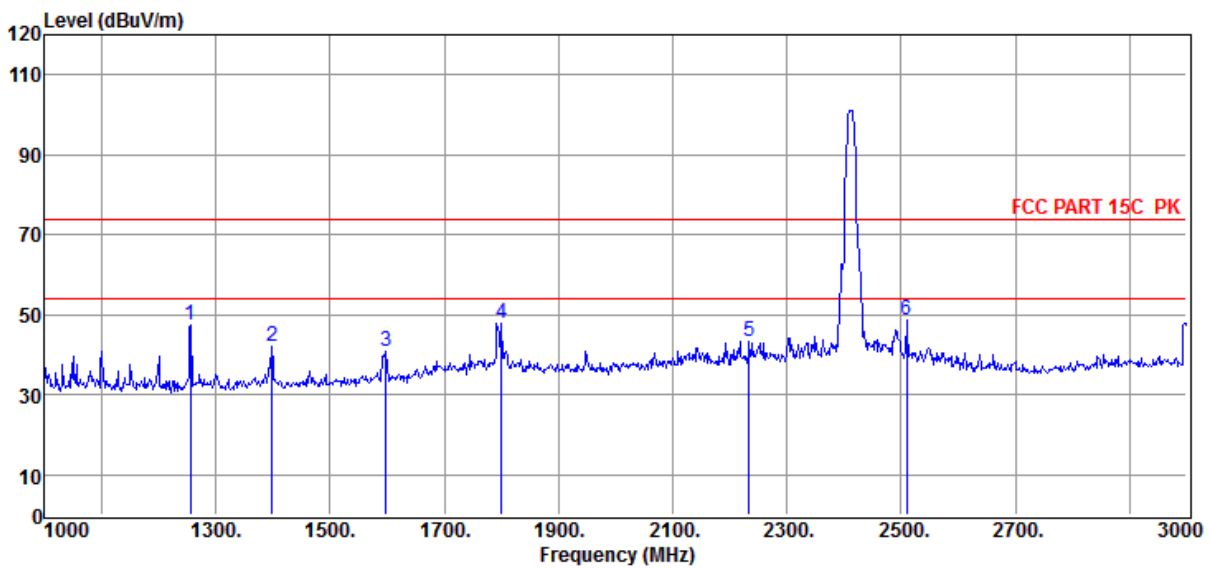
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT1 1M 2412MHz

Data: 2



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1256.00	57.80	24.52	-34.92	47.40	74.00	-26.60	Peak	VERTICAL
2	1398.00	51.79	25.09	-34.74	42.14	74.00	-31.86	Peak	VERTICAL
3	1598.00	49.14	26.11	-34.59	40.66	74.00	-33.34	Peak	VERTICAL
4	1800.00	54.93	27.36	-34.39	47.90	74.00	-26.10	Peak	VERTICAL
5	2234.00	49.12	28.27	-34.17	43.22	74.00	-30.78	Peak	VERTICAL
6	2510.00	54.38	27.93	-33.53	48.78	74.00	-25.22	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

**EUT** : Formation performance multi-rotor UAV

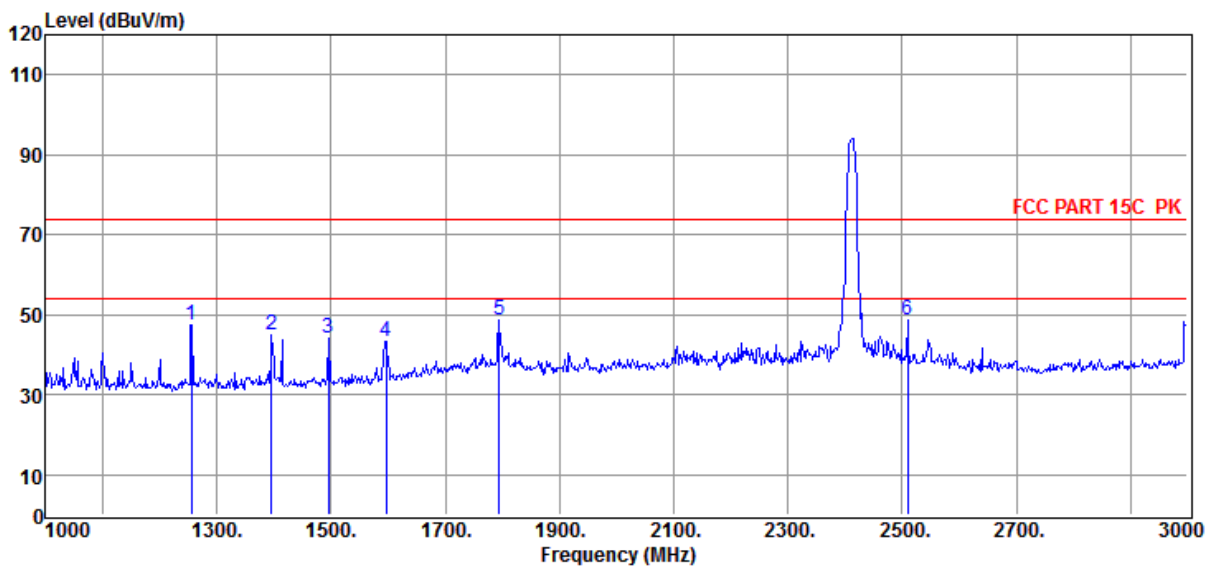
**Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT2 1M 2412MHz

Data: 3



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	1256.00	57.74	24.52	-34.92	47.34	74.00	-26.66	Peak	VERTICAL
2	1396.00	54.50	25.08	-34.74	44.84	74.00	-29.16	Peak	VERTICAL
3	1496.00	53.33	25.48	-34.71	44.10	74.00	-29.90	Peak	VERTICAL
4	1596.00	51.78	26.10	-34.58	43.30	74.00	-30.70	Peak	VERTICAL
5	1794.00	55.68	27.32	-34.44	48.56	74.00	-25.44	Peak	VERTICAL
6	2510.00	54.25	27.93	-33.53	48.65	74.00	-25.35	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

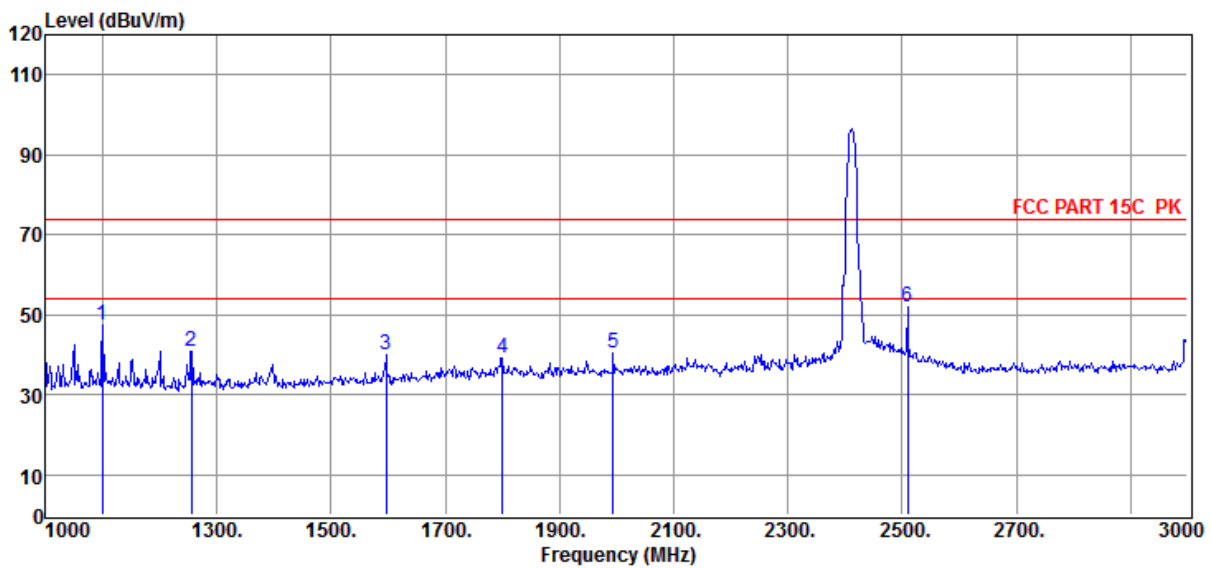
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT2 1M 2412MHz

Data: 4



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	1100.00	58.64	23.90	-35.24	47.30	74.00	-26.70	Peak	HORIZONTAL
2	1256.00	51.43	24.52	-34.92	41.03	74.00	-32.97	Peak	HORIZONTAL
3	1596.00	48.68	26.10	-34.58	40.20	74.00	-33.80	Peak	HORIZONTAL
4	1800.00	46.40	27.36	-34.39	39.37	74.00	-34.63	Peak	HORIZONTAL
5	1994.00	46.17	28.56	-34.37	40.36	74.00	-33.64	Peak	HORIZONTAL
6	2510.00	57.37	27.93	-33.53	51.77	74.00	-22.23	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

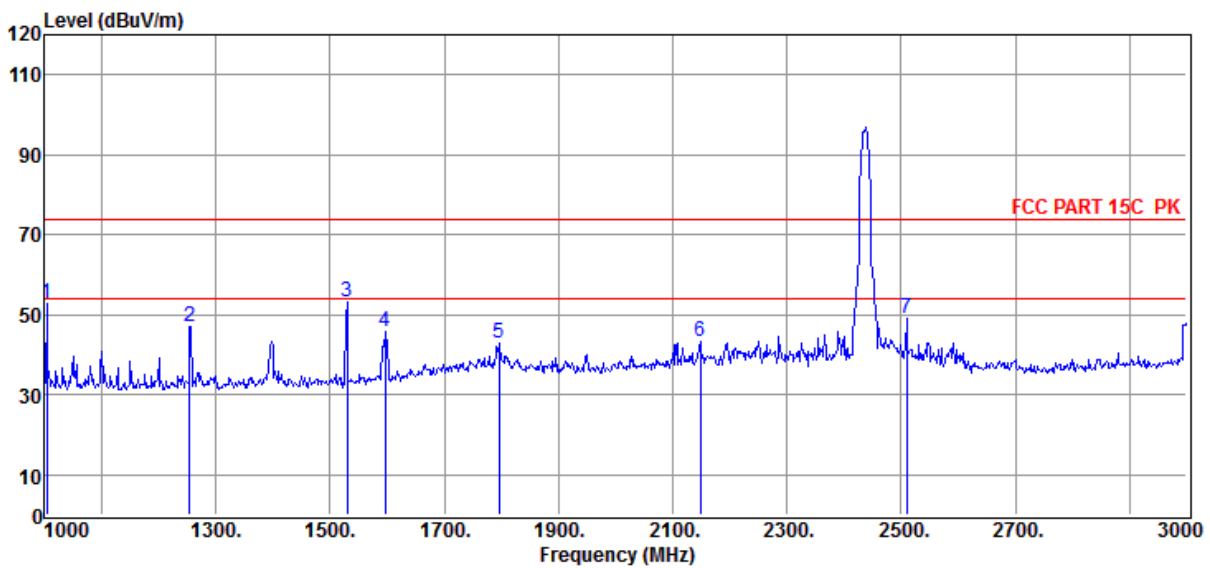
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT1 1M 2437MHz

Data: 5



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1004.00	64.46	23.52	-35.20	52.78	74.00	-21.22	Peak	VERTICAL
2	1254.00	57.49	24.52	-34.93	47.08	74.00	-26.92	Peak	VERTICAL
3	1530.00	62.10	25.69	-34.56	53.23	74.00	-20.77	Peak	VERTICAL
4	1596.00	54.34	26.10	-34.58	45.86	74.00	-28.14	Peak	VERTICAL
5	1796.00	49.76	27.34	-34.42	42.68	74.00	-31.32	Peak	VERTICAL
6	2148.00	49.07	28.39	-34.29	43.17	74.00	-30.83	Peak	VERTICAL
7	2510.00	54.86	27.93	-33.53	49.26	74.00	-24.74	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

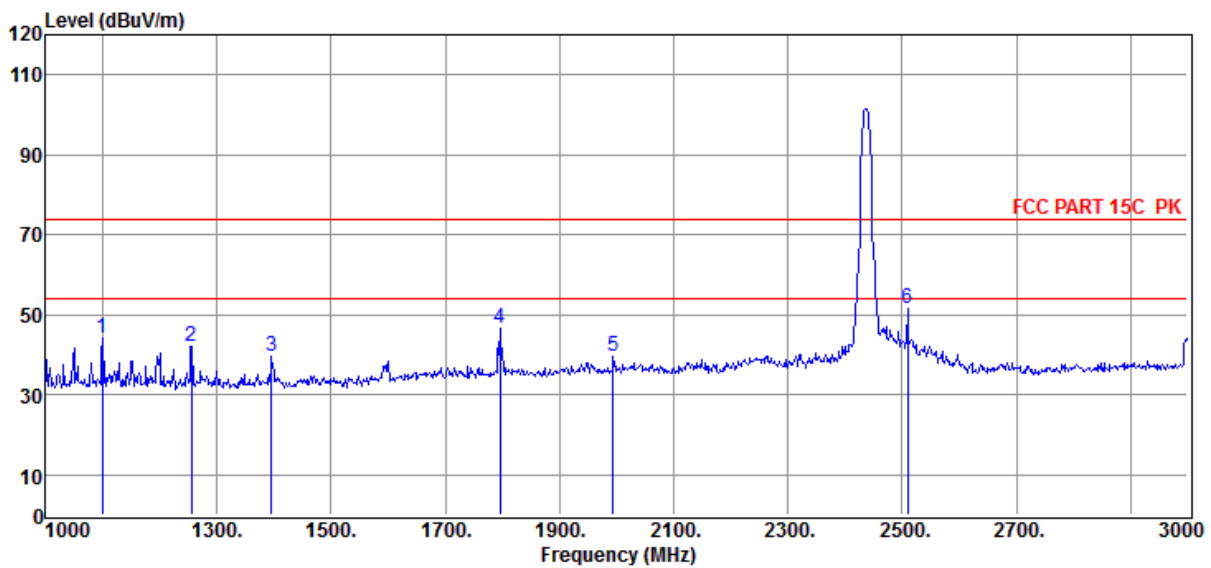
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT1 1M 2437MHz

Data: 6



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	1100.00	55.35	23.90	-35.24	44.01	74.00	-29.99	Peak	HORIZONTAL
2	1256.00	52.46	24.52	-34.92	42.06	74.00	-31.94	Peak	HORIZONTAL
3	1396.00	49.12	25.08	-34.74	39.46	74.00	-34.54	Peak	HORIZONTAL
4	1796.00	53.87	27.34	-34.42	46.79	74.00	-27.21	Peak	HORIZONTAL
5	1994.00	45.50	28.56	-34.37	39.69	74.00	-34.31	Peak	HORIZONTAL
6	2510.00	57.10	27.93	-33.53	51.50	74.00	-22.50	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

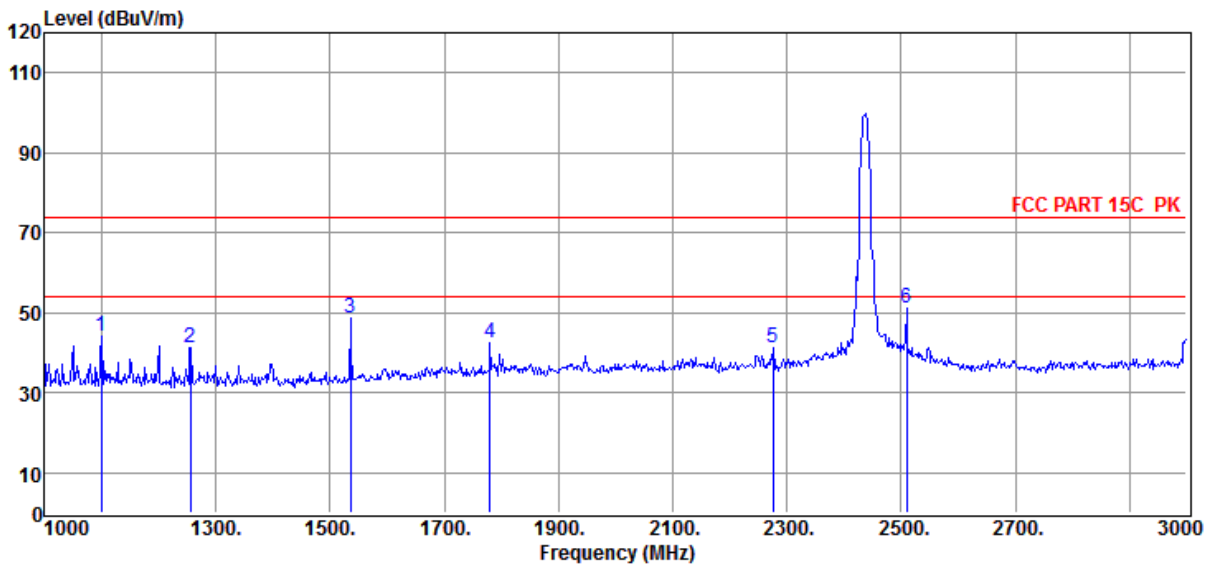
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT2 1M 2437MHz

Data: 7



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1100.00	55.44	23.90	-35.24	44.10	74.00	-29.90	Peak	HORIZONTAL
2	1256.00	51.64	24.52	-34.92	41.24	74.00	-32.76	Peak	HORIZONTAL
3	1536.00	57.35	25.72	-34.55	48.52	74.00	-25.48	Peak	HORIZONTAL
4	1780.00	49.97	27.24	-34.54	42.67	74.00	-31.33	Peak	HORIZONTAL
5	2276.00	47.04	28.21	-34.18	41.07	74.00	-32.93	Peak	HORIZONTAL
6	2510.00	56.83	27.93	-33.53	51.23	74.00	-22.77	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

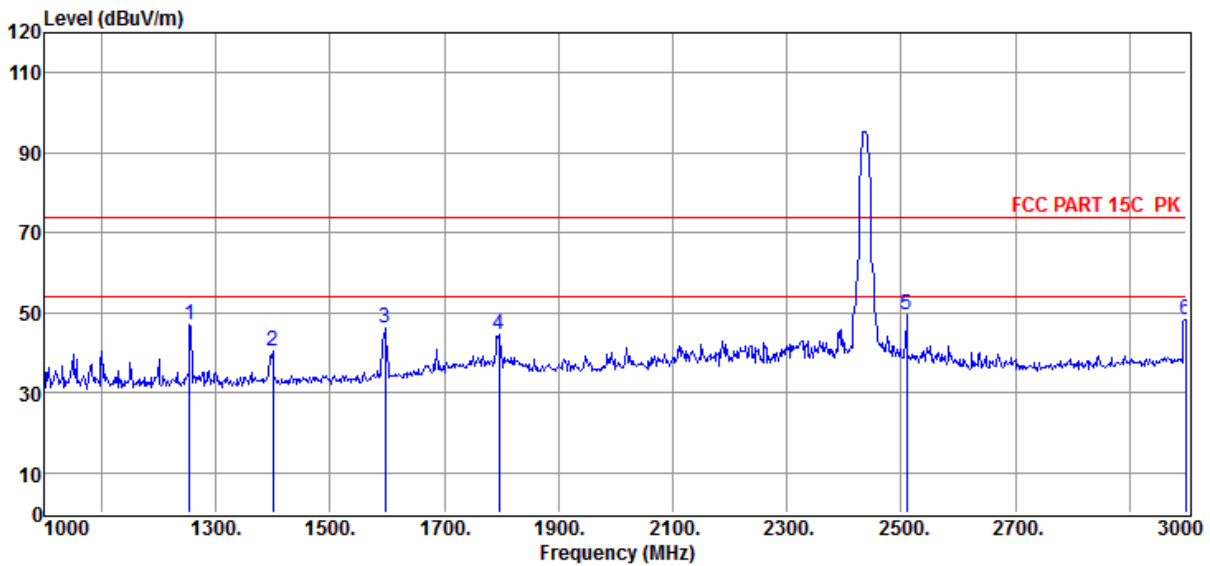
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT2 1M 2437MHz

Data: 8



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	1254.00	57.50	24.52	-34.93	47.09	74.00	-26.91	Peak	VERTICAL
2	1400.00	49.90	25.10	-34.74	40.26	74.00	-33.74	Peak	VERTICAL
3	1596.00	54.58	26.10	-34.58	46.10	74.00	-27.90	Peak	VERTICAL
4	1796.00	51.55	27.34	-34.42	44.47	74.00	-29.53	Peak	VERTICAL
5	2510.00	54.99	27.93	-33.53	49.39	74.00	-24.61	Peak	VERTICAL
6	2998.00	52.75	29.19	-33.54	48.40	74.00	-25.60	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.



# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

**EUT** : Formation performance multi-rotor UAV

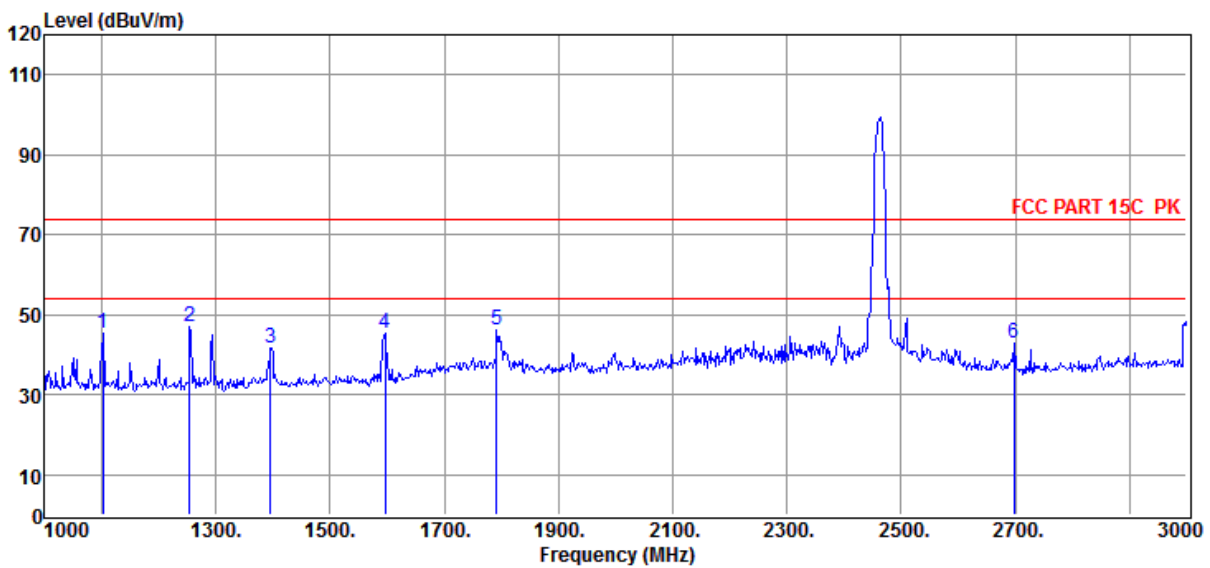
**Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT1 1M 2462MHz

Data: 9



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1102.00	56.67	23.91	-35.24	45.34	74.00	-28.66	Peak	VERTICAL
2	1254.00	57.55	24.52	-34.93	47.14	74.00	-26.86	Peak	VERTICAL
3	1396.00	51.40	25.08	-34.74	41.74	74.00	-32.26	Peak	VERTICAL
4	1596.00	53.69	26.10	-34.58	45.21	74.00	-28.79	Peak	VERTICAL
5	1792.00	53.25	27.31	-34.45	46.11	74.00	-27.89	Peak	VERTICAL
6	2698.00	47.91	28.41	-33.37	42.95	74.00	-31.05	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

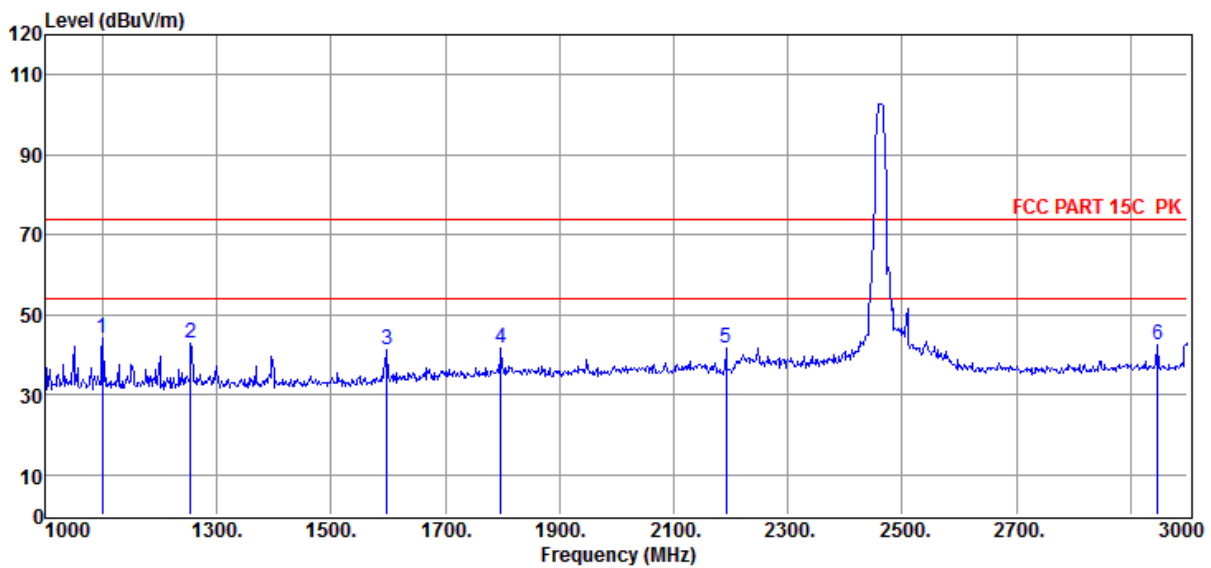
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT1 1M 2462MHz

Data: 10



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	1100.00	55.32	23.90	-35.24	43.98	74.00	-30.02	Peak	HORIZONTAL
2	1254.00	53.45	24.52	-34.93	43.04	74.00	-30.96	Peak	HORIZONTAL
3	1598.00	49.92	26.11	-34.59	41.44	74.00	-32.56	Peak	HORIZONTAL
4	1798.00	48.57	27.35	-34.40	41.52	74.00	-32.48	Peak	HORIZONTAL
5	2192.00	47.36	28.33	-34.14	41.55	74.00	-32.45	Peak	HORIZONTAL
6	2948.00	47.07	29.06	-33.55	42.58	74.00	-31.42	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

**EUT** : Formation performance multi-rotor UAV

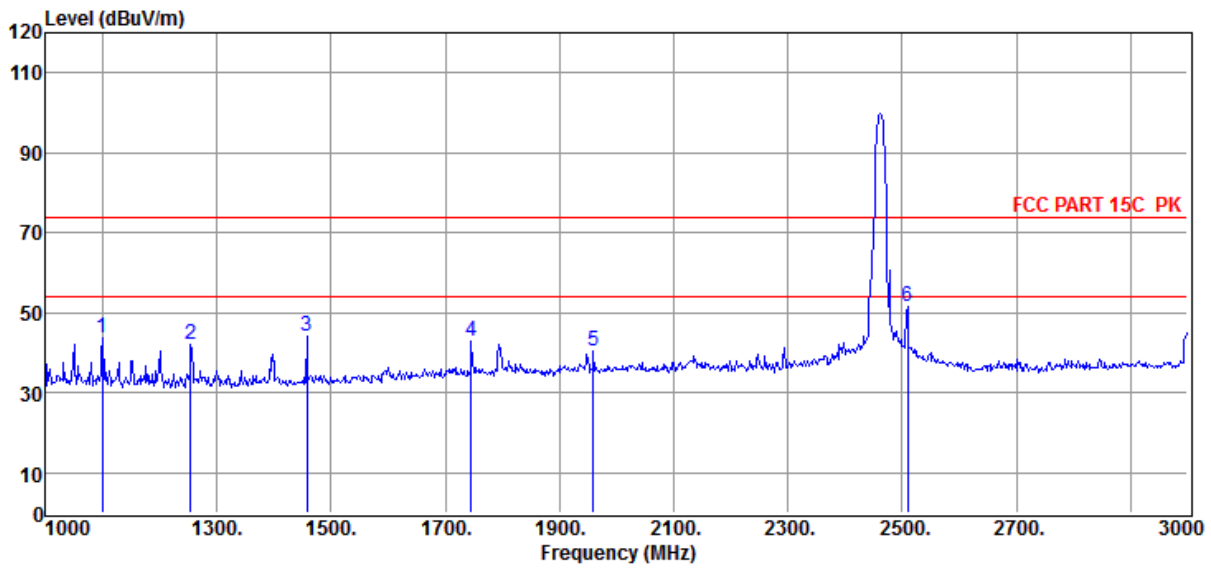
**Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT2 1M 2462MHz

Data: 11



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1100.00	55.24	23.90	-35.24	43.90	74.00	-30.10	Peak	HORIZONTAL
2	1254.00	52.46	24.52	-34.93	42.05	74.00	-31.95	Peak	HORIZONTAL
3	1458.00	53.25	25.33	-34.59	43.99	74.00	-30.01	Peak	HORIZONTAL
4	1746.00	50.27	27.03	-34.50	42.80	74.00	-31.20	Peak	HORIZONTAL
5	1960.00	46.15	28.35	-34.23	40.27	74.00	-33.73	Peak	HORIZONTAL
6	2510.00	57.16	27.93	-33.53	51.56	74.00	-22.44	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

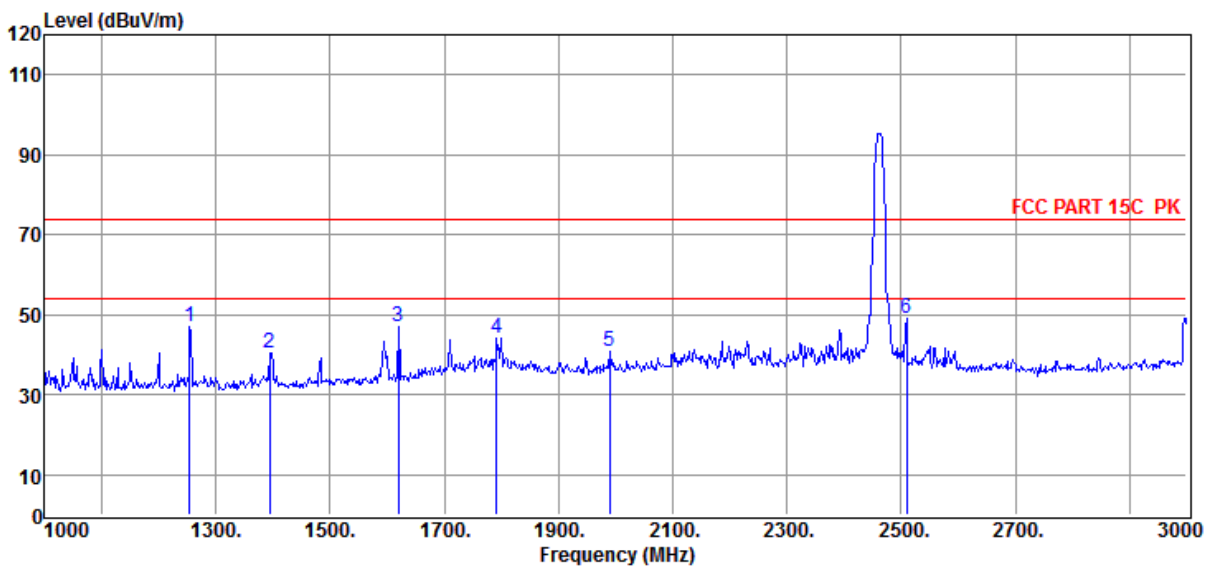
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT2 1M 2462MHz

Data: 12



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1254.00	57.48	24.52	-34.93	47.07	74.00	-26.93	Peak	VERTICAL
2	1394.00	50.15	25.08	-34.75	40.48	74.00	-33.52	Peak	VERTICAL
3	1620.00	55.35	26.24	-34.53	47.06	74.00	-26.94	Peak	VERTICAL
4	1792.00	51.37	27.31	-34.45	44.23	74.00	-29.77	Peak	VERTICAL
5	1990.00	46.54	28.54	-34.32	40.76	74.00	-33.24	Peak	VERTICAL
6	2510.00	54.56	27.93	-33.53	48.96	74.00	-25.04	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

Radiated Emission test (3GHz -18GHz)

**Radiated Emission Test Result**

Test Site : 10m Chamber

Test Date : 05-24-2023

Tested By : Sunny

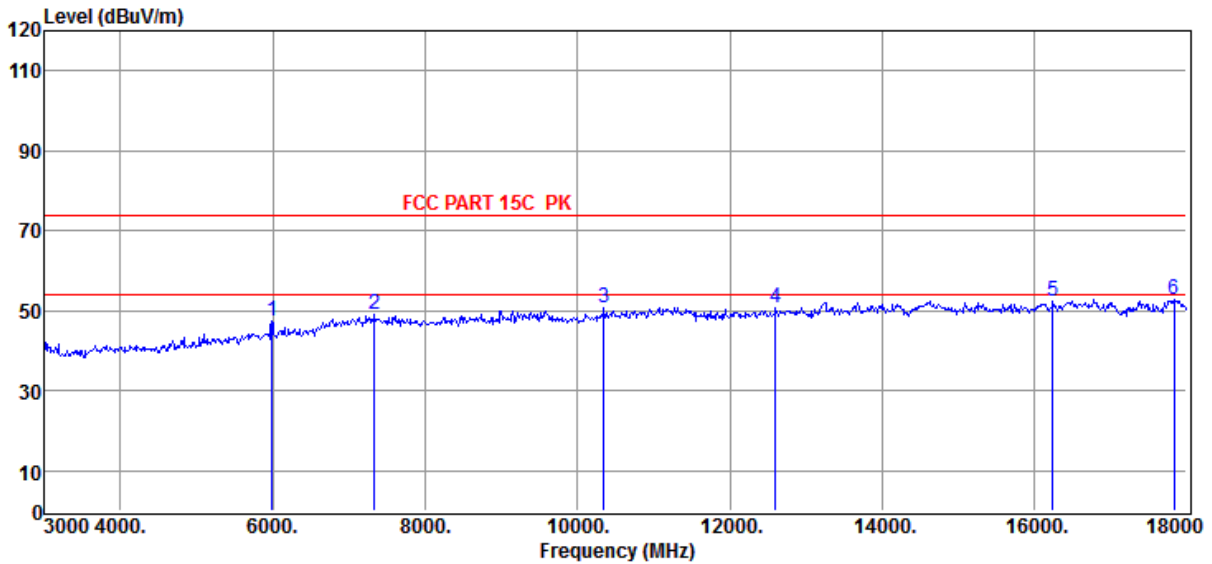
EUT : Formation performance multi-rotor UAV Model Number : CROSS STARS III

Power Supply : Battery

Test Mode : Tx Mode

Memo : 11B ANT1 1M 2412MHz

Data: 110



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5985.00	43.90	35.26	-31.86	47.30	74.00	-26.70	Peak	VERTICAL
2	7335.00	42.78	37.14	-30.66	49.26	74.00	-24.74	Peak	VERTICAL
3	10350.00	41.91	38.44	-29.71	50.64	74.00	-23.36	Peak	VERTICAL
4	12600.00	40.91	38.78	-28.96	50.73	74.00	-23.27	Peak	VERTICAL
5	16245.00	40.69	39.14	-27.49	52.34	74.00	-21.66	Peak	VERTICAL
6	17835.00	37.40	42.43	-27.14	52.69	74.00	-21.31	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

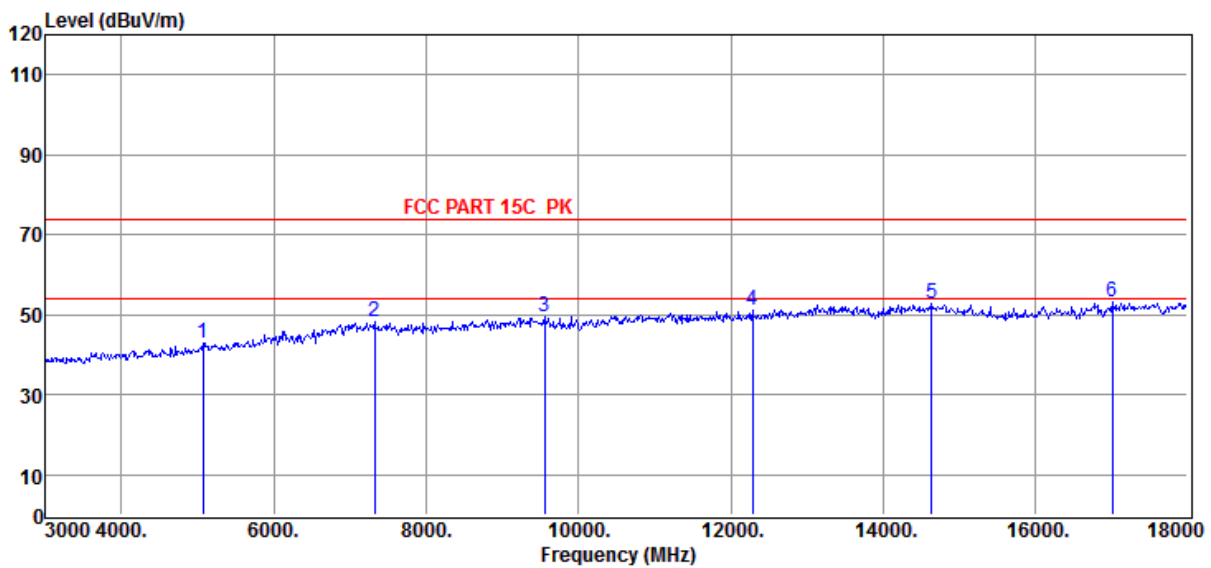
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT1 1M 2412MHz

Data: 111



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5070.00	41.22	33.03	-31.46	42.79	74.00	-31.21	Peak	HORIZONTAL
2	7320.00	41.67	37.11	-30.72	48.06	74.00	-25.94	Peak	HORIZONTAL
3	9555.00	41.69	38.03	-30.08	49.64	74.00	-24.36	Peak	HORIZONTAL
4	12285.00	41.94	38.60	-29.28	51.26	74.00	-22.74	Peak	HORIZONTAL
5	14640.00	39.50	40.22	-27.09	52.63	74.00	-21.37	Peak	HORIZONTAL
6	17010.00	36.87	42.21	-25.97	53.11	74.00	-20.89	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

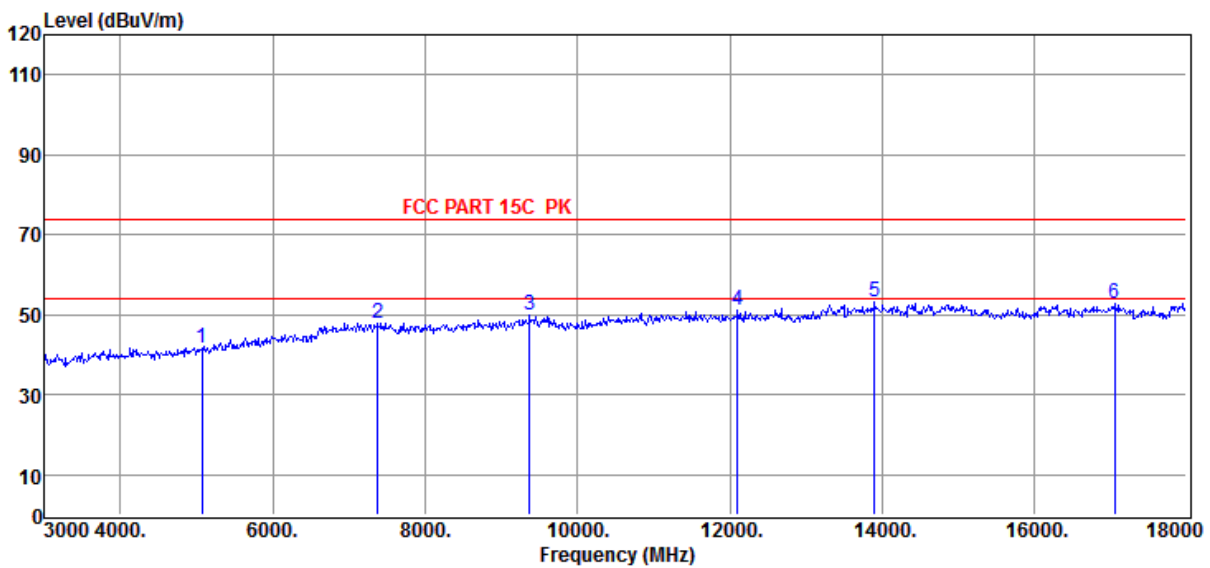
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT2 1M 2412MHz

Data: 112



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5070.00	40.22	33.03	-31.46	41.79	74.00	-32.21	Peak	HORIZONTAL
2	7380.00	41.72	37.21	-30.91	48.02	74.00	-25.98	Peak	HORIZONTAL
3	9375.00	41.69	37.92	-29.86	49.75	74.00	-24.25	Peak	HORIZONTAL
4	12105.00	41.14	38.60	-28.75	50.99	74.00	-23.01	Peak	HORIZONTAL
5	13905.00	40.58	41.21	-28.61	53.18	74.00	-20.82	Peak	HORIZONTAL
6	17055.00	36.72	42.28	-26.38	52.62	74.00	-21.38	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

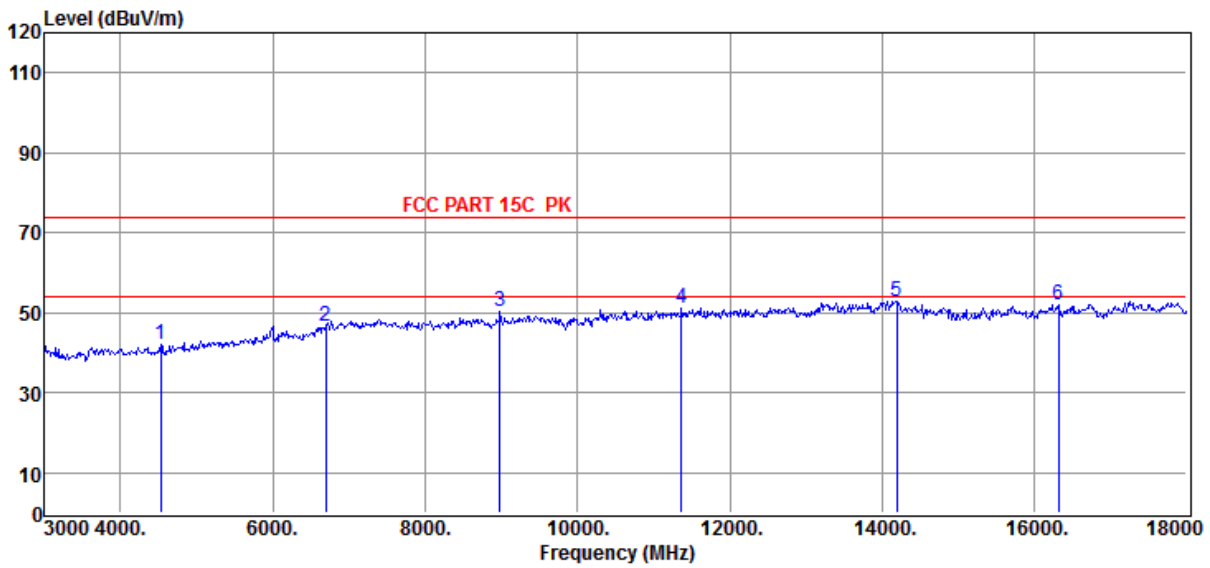
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT2 1M 2412MHz

Data: 113



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	4530.00	41.86	31.96	-31.86	41.96	74.00	-32.04	Peak	VERTICAL
2	6690.00	41.95	36.10	-31.43	46.62	74.00	-27.38	Peak	VERTICAL
3	8985.00	43.16	37.69	-30.62	50.23	74.00	-23.77	Peak	VERTICAL
4	11370.00	41.13	38.70	-28.63	51.20	74.00	-22.80	Peak	VERTICAL
5	14190.00	38.75	41.13	-27.16	52.72	74.00	-21.28	Peak	VERTICAL
6	16320.00	39.96	39.33	-27.13	52.16	74.00	-21.84	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.



# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-23-2023

**Tested By** : Sunny

**EUT** : Formation performance multi-rotor UAV

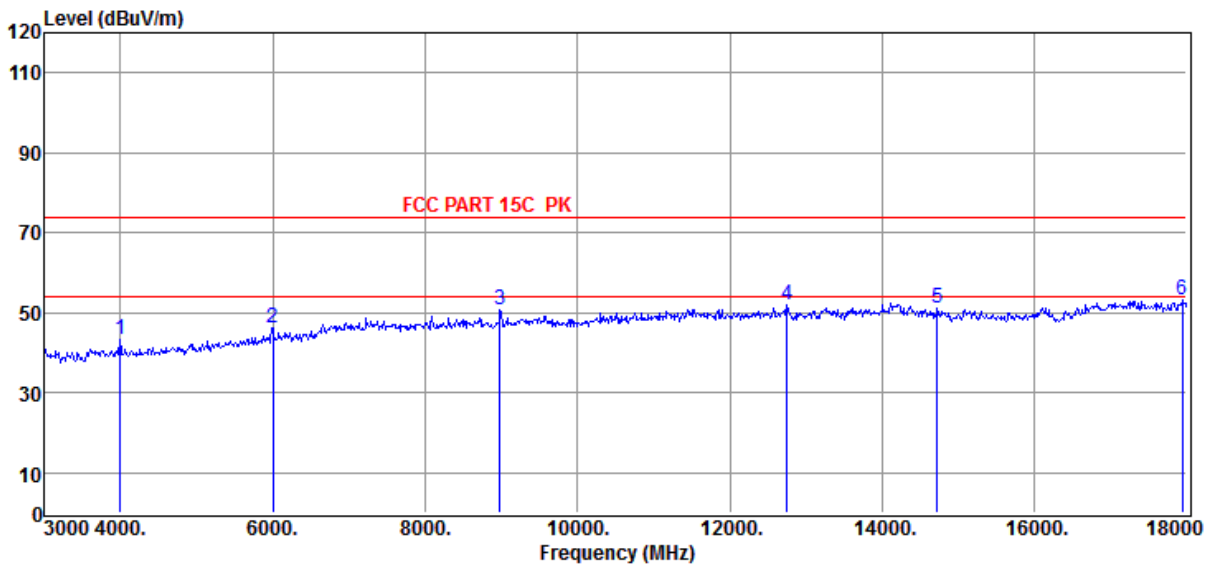
**Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT1 1M 2437MHz

Data: 114



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	3990.00	43.94	31.58	-32.11	43.41	74.00	-30.59	Peak	VERTICAL
2	6000.00	42.83	35.30	-31.80	46.33	74.00	-27.67	Peak	VERTICAL
3	8985.00	43.68	37.69	-30.62	50.75	74.00	-23.25	Peak	VERTICAL
4	12750.00	42.32	39.05	-29.31	52.06	74.00	-21.94	Peak	VERTICAL
5	14730.00	38.70	39.92	-27.30	51.32	74.00	-22.68	Peak	VERTICAL
6	17940.00	38.15	42.28	-27.33	53.10	74.00	-20.90	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-23-2023

**Tested By** : Sunny

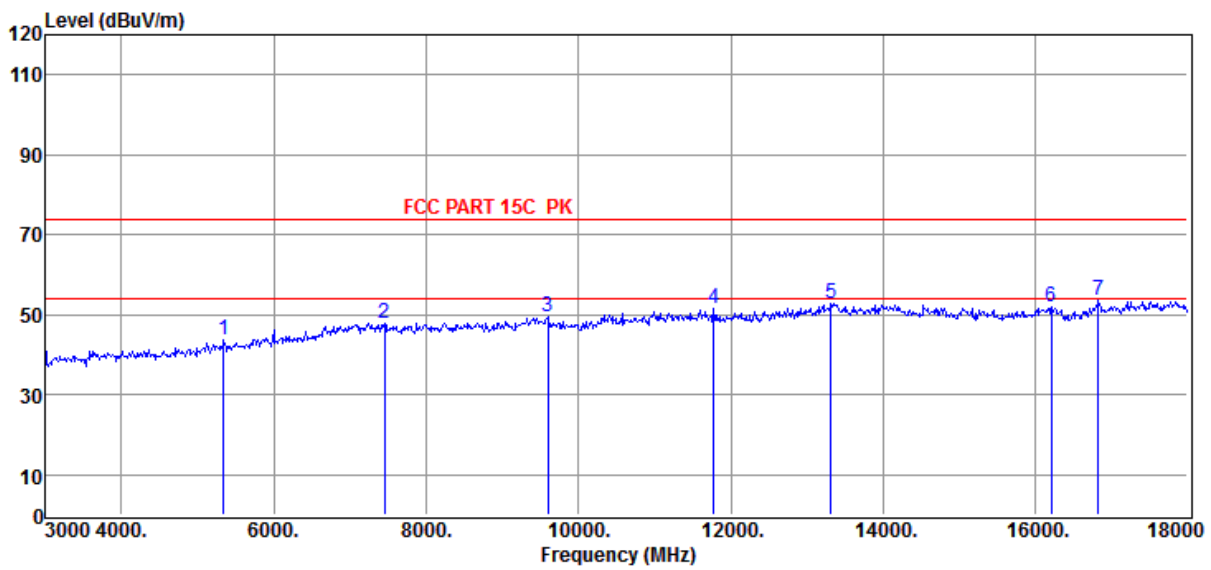
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT1 1M 2437MHz

Data: 115



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5340.00	42.14	33.51	-31.81	43.84	74.00	-30.16	Peak	HORIZONTAL
2	7455.00	41.51	37.33	-30.82	48.02	74.00	-25.98	Peak	HORIZONTAL
3	9600.00	41.22	38.06	-29.97	49.31	74.00	-24.69	Peak	HORIZONTAL
4	11775.00	41.66	38.65	-28.62	51.69	74.00	-22.31	Peak	HORIZONTAL
5	13320.00	41.86	40.08	-29.17	52.77	74.00	-21.23	Peak	HORIZONTAL
6	16215.00	40.56	39.06	-27.69	51.93	74.00	-22.07	Peak	HORIZONTAL
7	16830.00	38.18	41.38	-26.11	53.45	74.00	-20.55	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

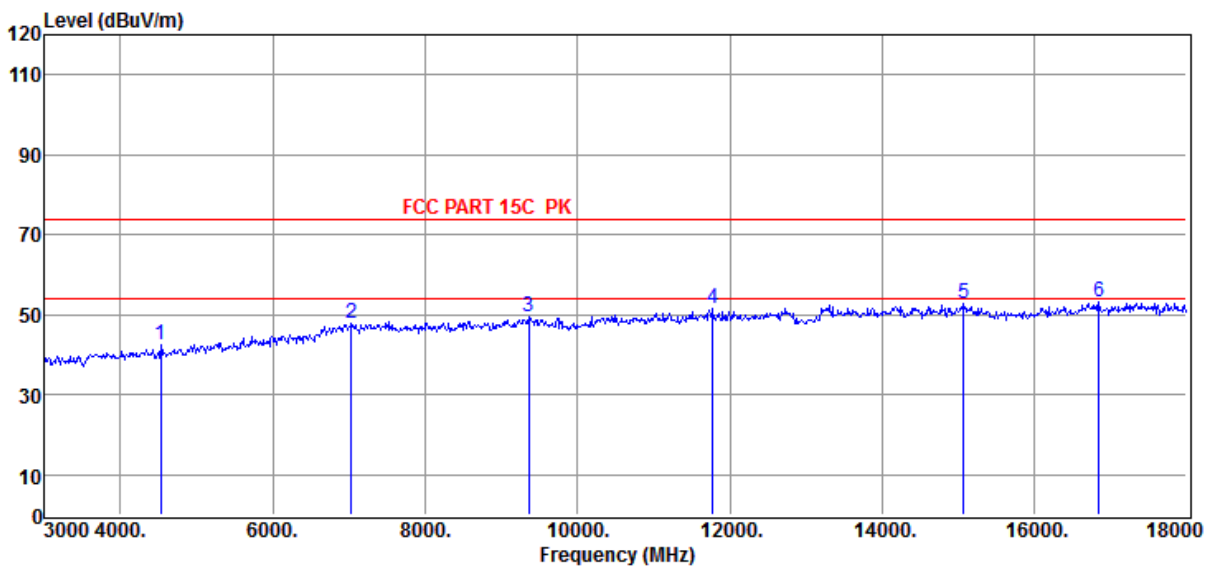
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT2 1M 2437MHz

Data: 116



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	4530.00	42.23	31.96	-31.86	42.33	74.00	-31.67	Peak	HORIZONTAL
2	7035.00	41.72	36.66	-30.74	47.64	74.00	-26.36	Peak	HORIZONTAL
3	9360.00	41.46	37.92	-29.93	49.45	74.00	-24.55	Peak	HORIZONTAL
4	11775.00	41.32	38.65	-28.62	51.35	74.00	-22.65	Peak	HORIZONTAL
5	15075.00	40.43	38.88	-26.70	52.61	74.00	-21.39	Peak	HORIZONTAL
6	16845.00	38.17	41.46	-26.27	53.36	74.00	-20.64	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

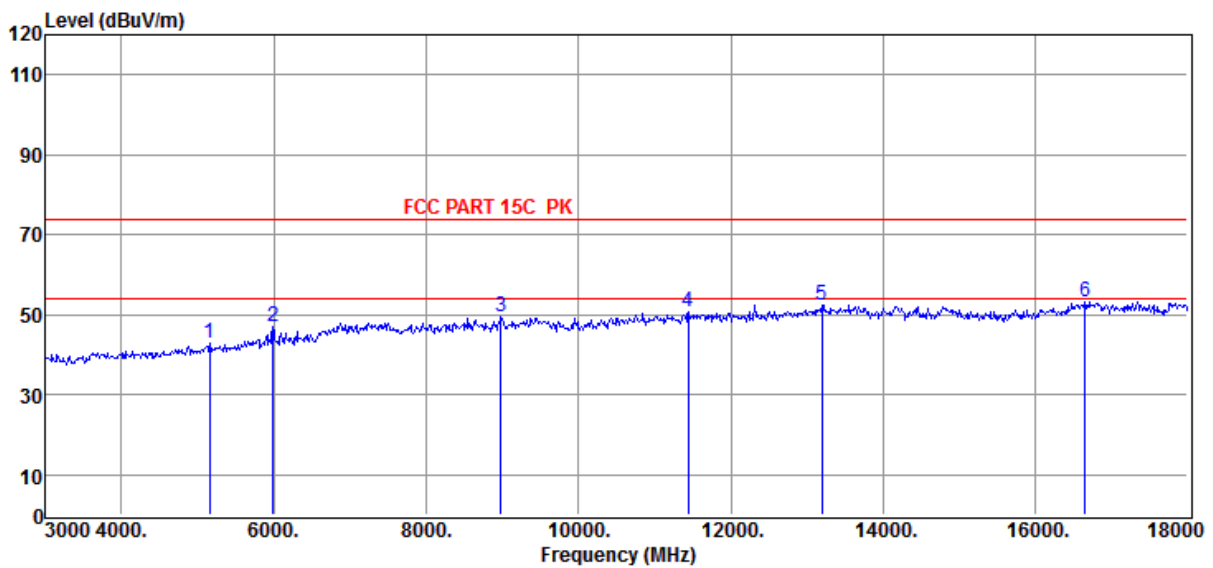
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT2 1M 2437MHz

Data: 117



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5160.00	41.32	33.19	-31.69	42.82	74.00	-31.18	Peak	VERTICAL
2	5985.00	43.55	35.26	-31.86	46.95	74.00	-27.05	Peak	VERTICAL
3	8985.00	42.21	37.69	-30.62	49.28	74.00	-24.72	Peak	VERTICAL
4	11445.00	40.78	38.70	-28.63	50.85	74.00	-23.15	Peak	VERTICAL
5	13200.00	42.22	39.86	-29.62	52.46	74.00	-21.54	Peak	VERTICAL
6	16650.00	39.18	40.52	-26.41	53.29	74.00	-20.71	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

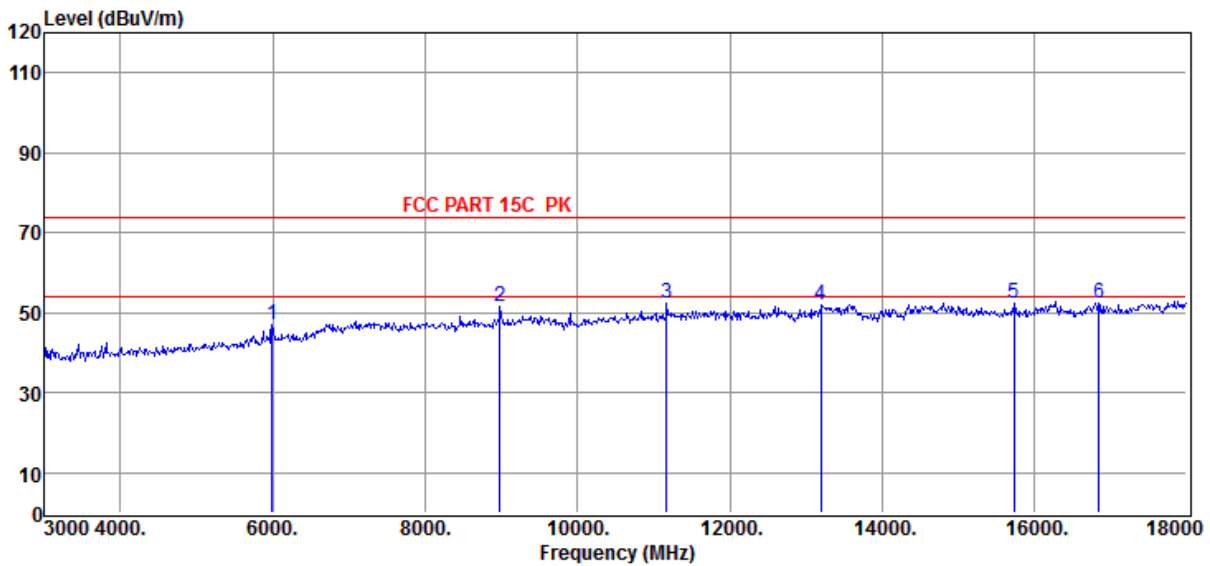
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT1 1M 2462MHz

Data: 118



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5985.00	43.44	35.26	-31.86	46.84	74.00	-27.16	Peak	VERTICAL
2	8985.00	44.42	37.69	-30.62	51.49	74.00	-22.51	Peak	VERTICAL
3	11175.00	42.11	38.70	-28.40	52.41	74.00	-21.59	Peak	VERTICAL
4	13200.00	41.84	39.86	-29.62	52.08	74.00	-21.92	Peak	VERTICAL
5	15735.00	41.47	38.34	-27.47	52.34	74.00	-21.66	Peak	VERTICAL
6	16845.00	37.14	41.46	-26.27	52.33	74.00	-21.67	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

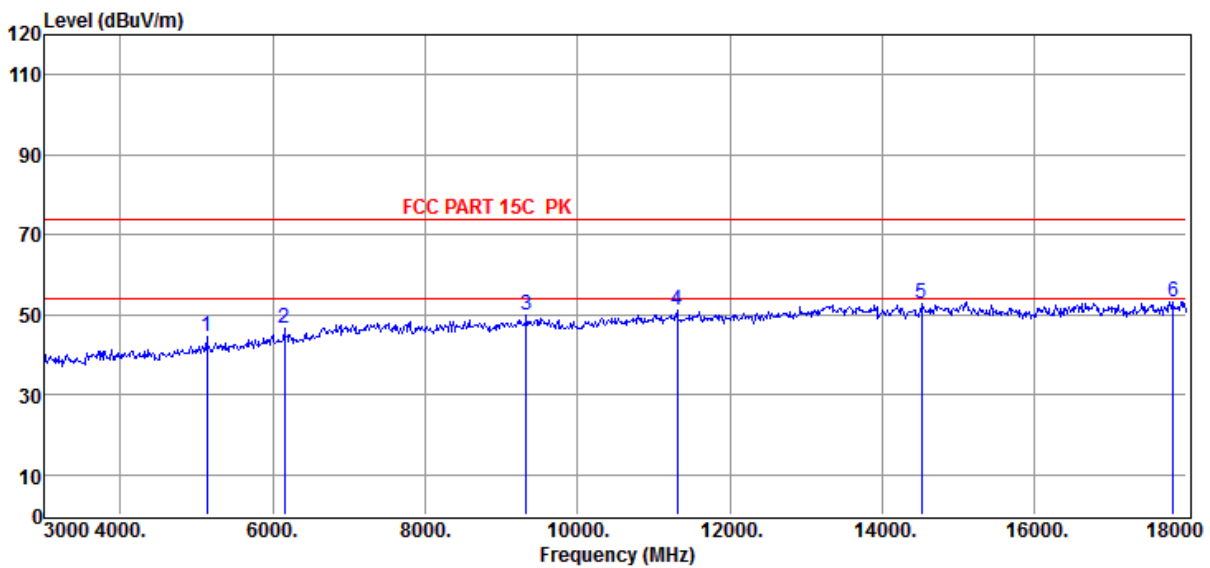
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT1 1M 2462MHz

Data: 119



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5130.00	42.82	33.13	-31.55	44.40	74.00	-29.60	Peak	HORIZONTAL
2	6150.00	43.17	35.45	-31.86	46.76	74.00	-27.24	Peak	HORIZONTAL
3	9330.00	42.00	37.90	-30.07	49.83	74.00	-24.17	Peak	HORIZONTAL
4	11310.00	40.89	38.70	-28.61	50.98	74.00	-23.02	Peak	HORIZONTAL
5	14520.00	39.83	40.63	-27.65	52.81	74.00	-21.19	Peak	HORIZONTAL
6	17820.00	37.93	42.45	-27.16	53.22	74.00	-20.78	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

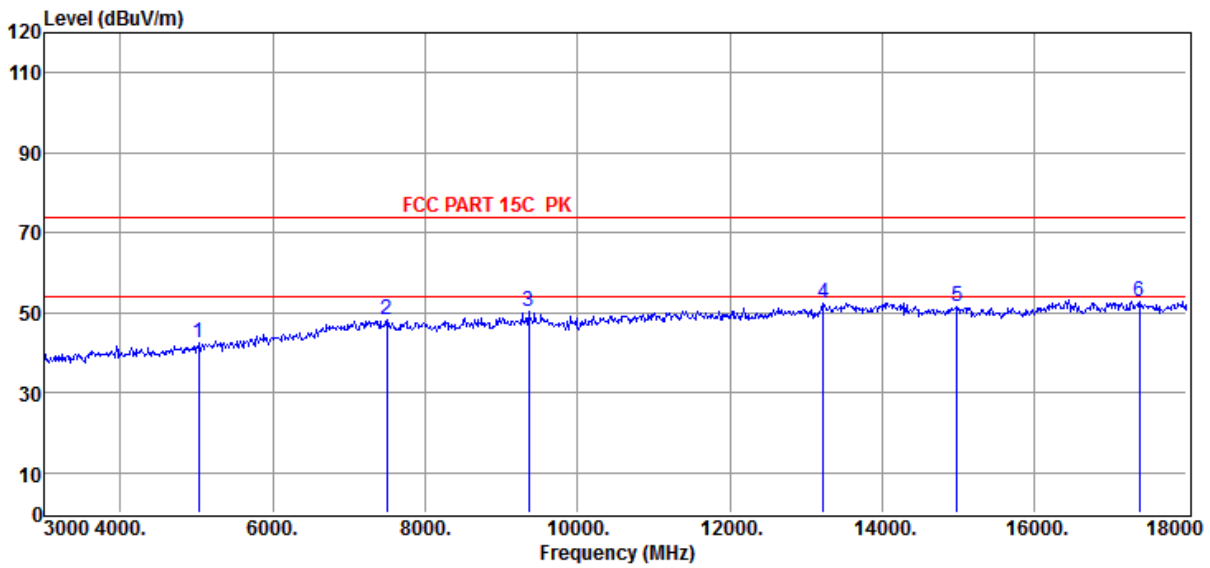
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT2 1M 2462MHz

Data: 120



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5025.00	41.21	32.94	-31.66	42.49	74.00	-31.51	Peak	HORIZONTAL
2	7500.00	41.56	37.40	-30.90	48.06	74.00	-25.94	Peak	HORIZONTAL
3	9360.00	42.28	37.92	-29.93	50.27	74.00	-23.73	Peak	HORIZONTAL
4	13230.00	42.06	39.91	-29.47	52.50	74.00	-21.50	Peak	HORIZONTAL
5	14985.00	39.70	39.05	-27.40	51.35	74.00	-22.65	Peak	HORIZONTAL
6	17385.00	37.34	42.74	-27.11	52.97	74.00	-21.03	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

**EUT** : Formation performance multi-rotor UAV

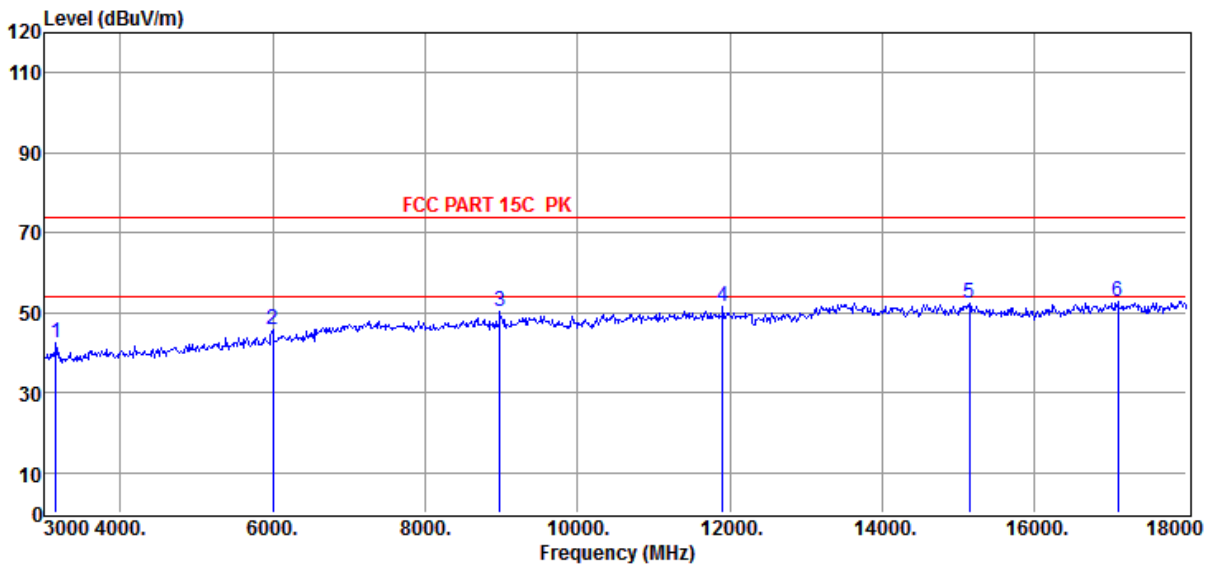
**Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11B ANT2 1M 2462MHz

Data: 121



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	3150.00	45.68	29.56	-32.56	42.68	74.00	-31.32	Peak	VERTICAL
2	6000.00	42.18	35.30	-31.80	45.68	74.00	-28.32	Peak	VERTICAL
3	8985.00	43.24	37.69	-30.62	50.31	74.00	-23.69	Peak	VERTICAL
4	11910.00	41.74	38.62	-28.63	51.73	74.00	-22.27	Peak	VERTICAL
5	15150.00	40.55	38.76	-27.07	52.24	74.00	-21.76	Peak	VERTICAL
6	17100.00	37.12	42.34	-26.78	52.68	74.00	-21.32	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.



## 9. RF Conducted Spurious Emissions

### 9.1. Block diagram of test setup

Same as section 4.1

### 9.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

### 9.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

Center frequency	Test frequency
RBW:	100 kHz
VBW:	300 kHz
Span	Wide enough to capture the peak level of the in-band emission
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

(4) Set the spectrum analyzer as follows:

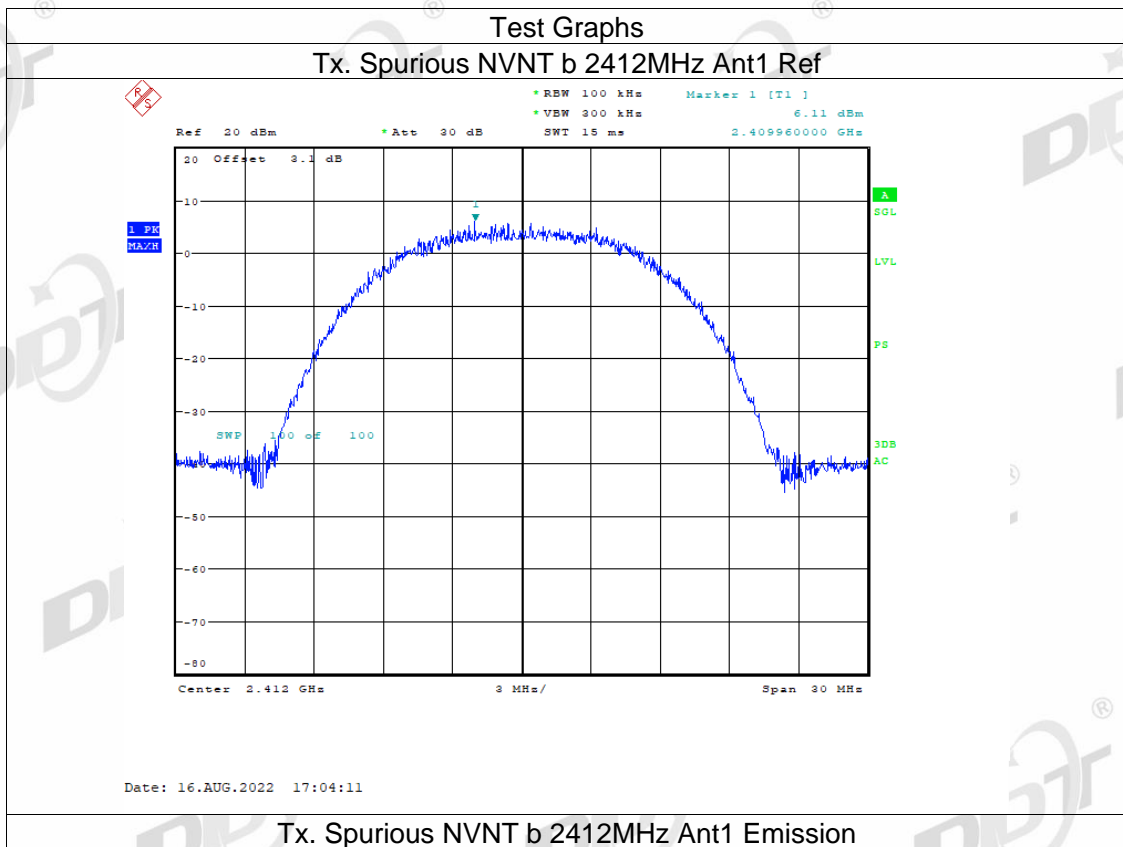
RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	$\geq \text{span}/\text{RBW}$
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

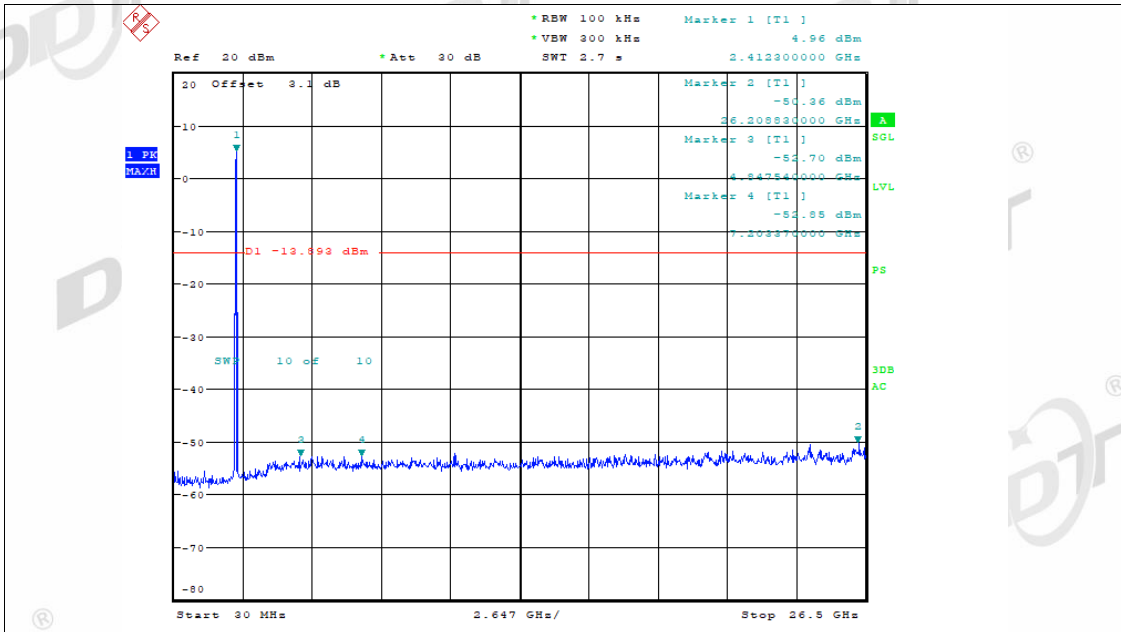
(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

9.4. Test result

EUT Set Mode	CH or Frequency	Ant1 Result (dBm)	EUT Set Mode	CH or Frequency	Ant1 Result (dBm)
11b	CH1	Pass	11n HT 20	CH1	Pass
	CH6	Pass		CH6	Pass
	CH11	Pass		CH11	Pass
11g	CH1	Pass	11n HT 40	CH3	--
	CH6	Pass		CH6	--
	CH11	Pass		CH9	--

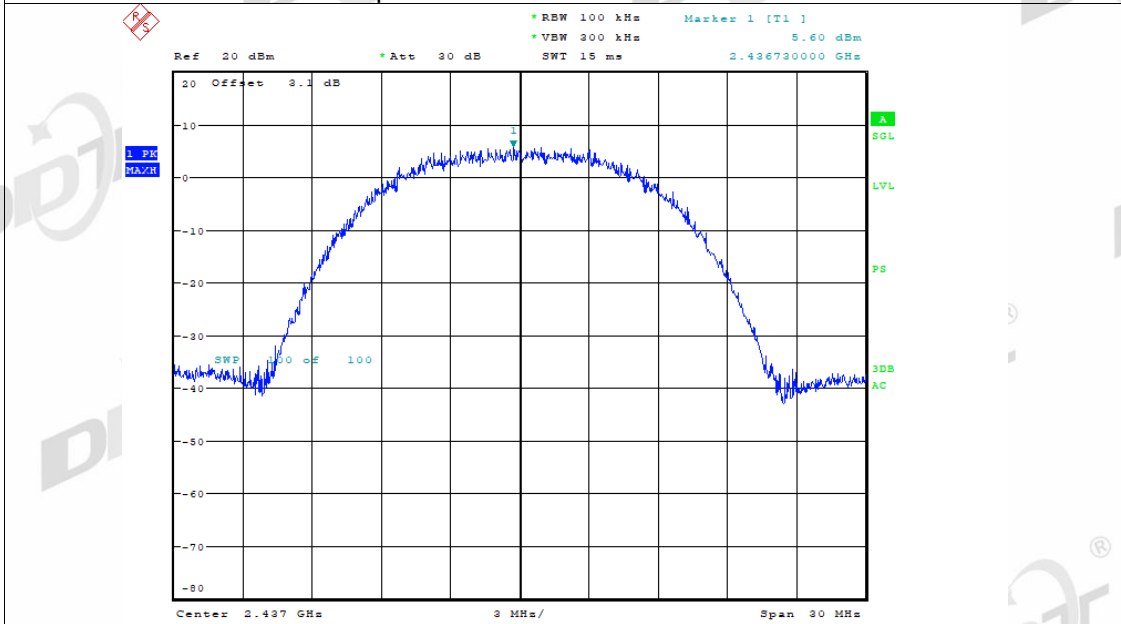
9.5. Original test data





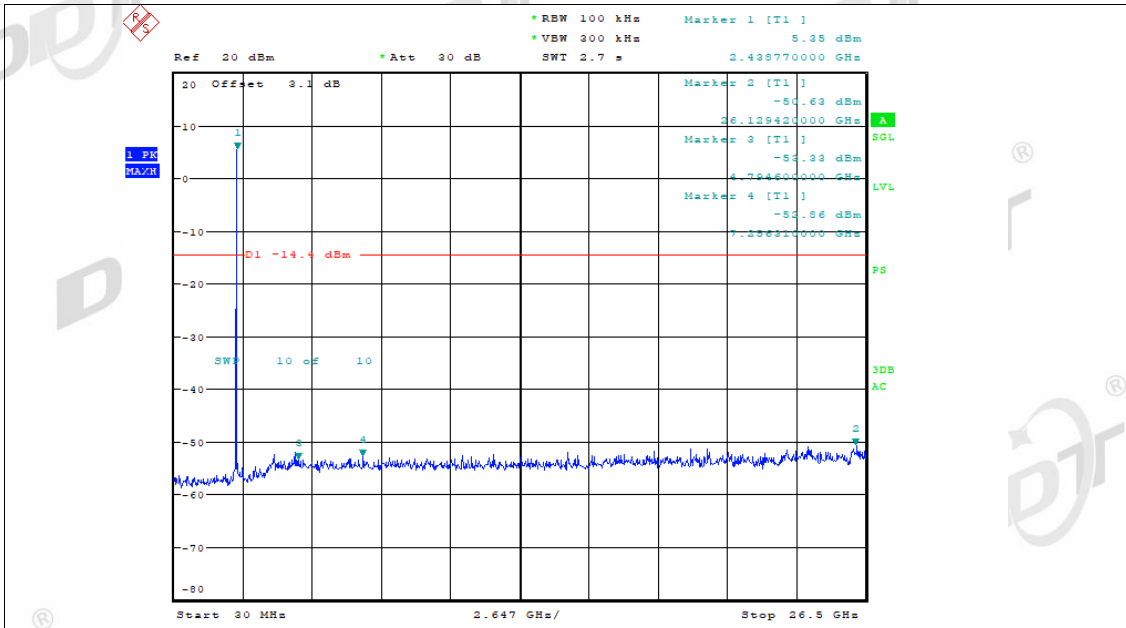
Date: 16.AUG.2022 17:04:44

Tx. Spurious NVNT b 2437MHz Ant1 Ref



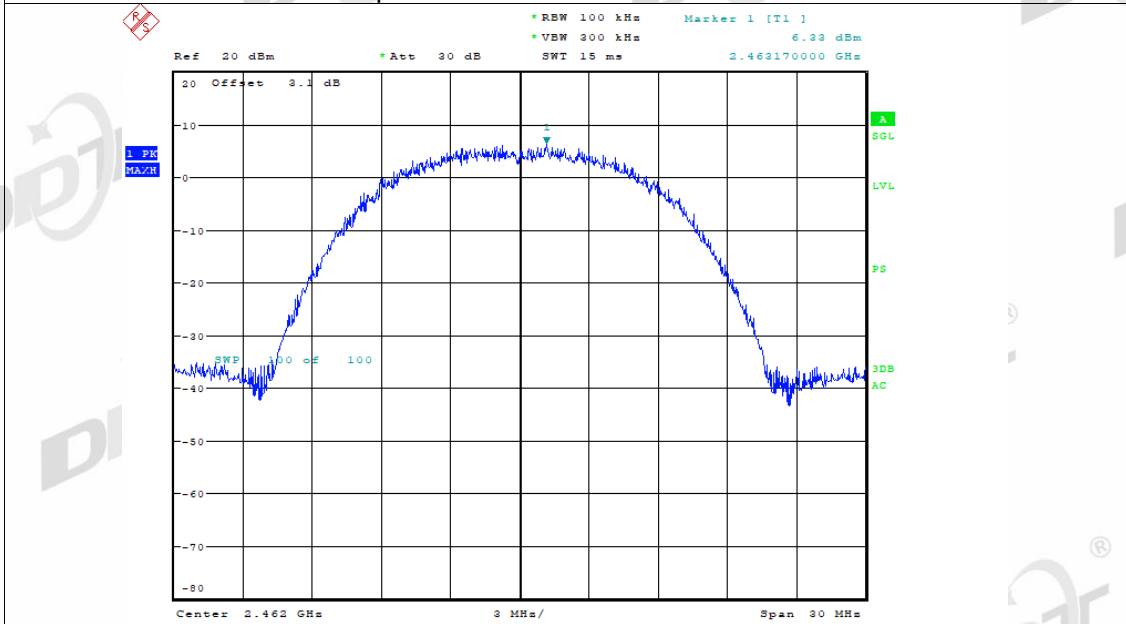
Date: 16.AUG.2022 17:19:11

Tx. Spurious NVNT b 2437MHz Ant1 Emission



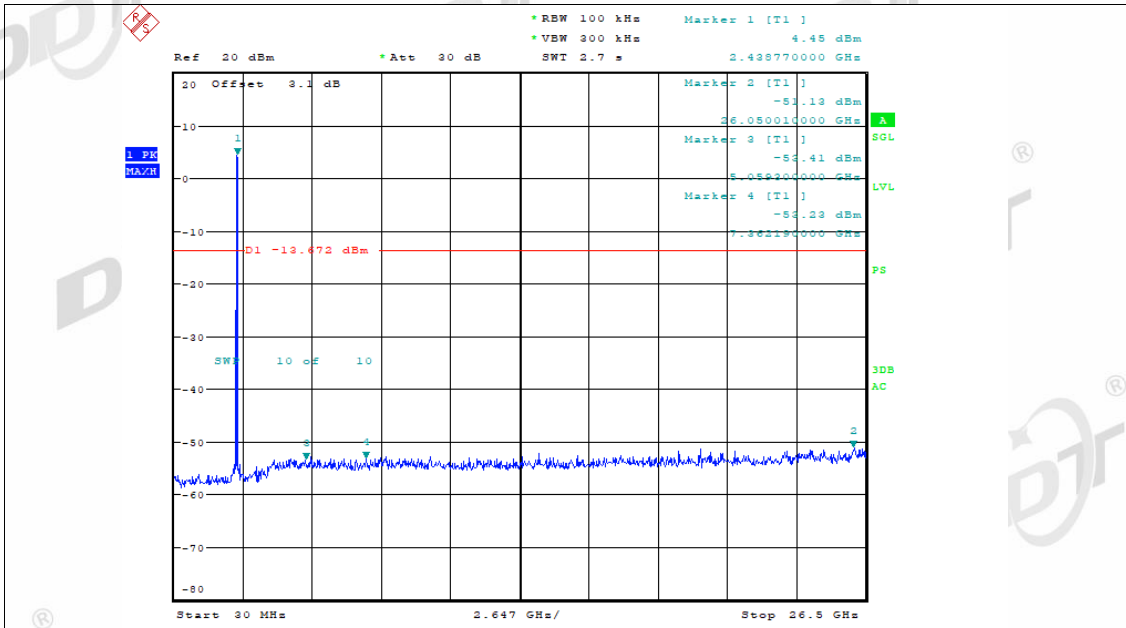
Date: 16.AUG.2022 17:19:44

Tx. Spurious NVNT b 2462MHz Ant1 Ref



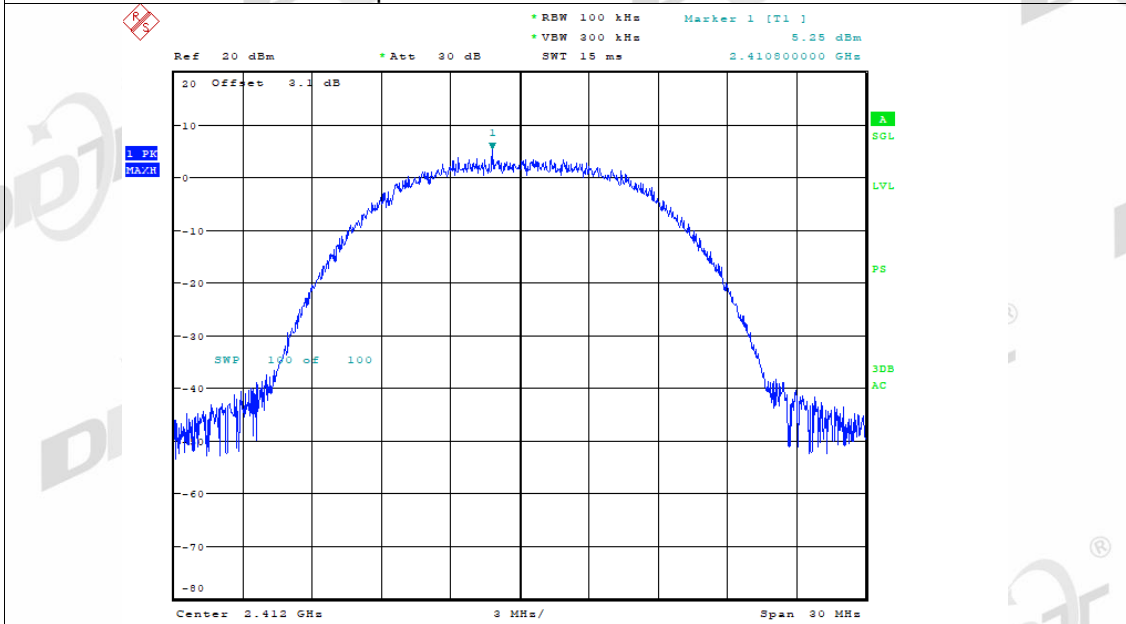
Date: 16.AUG.2022 17:25:56

Tx. Spurious NVNT b 2462MHz Ant1 Emission



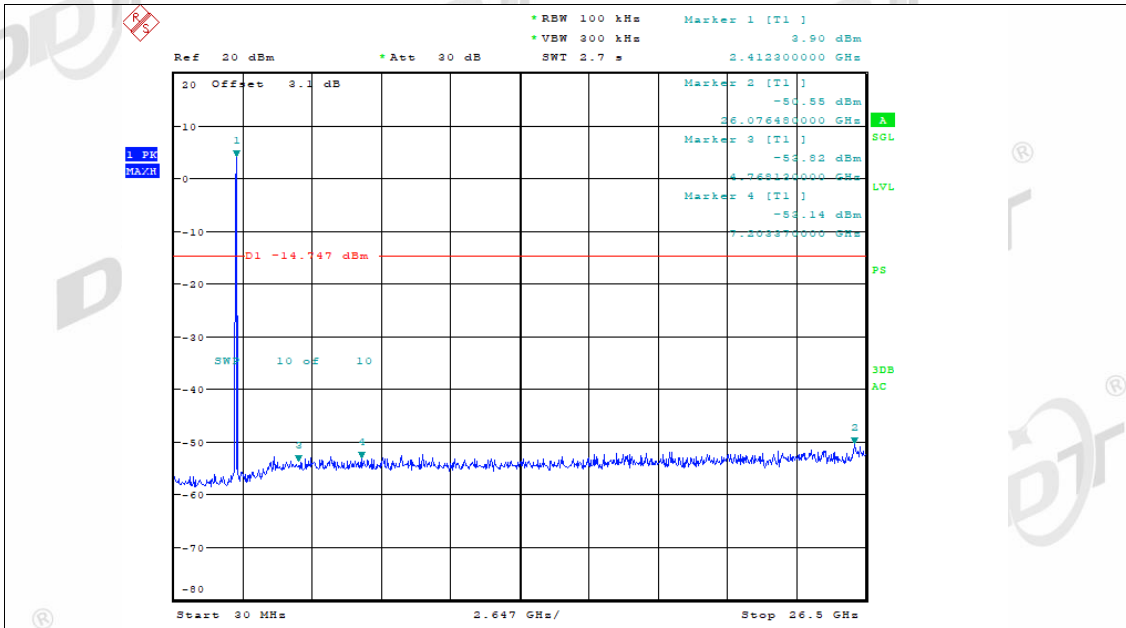
Date: 16.AUG.2022 17:26:29

Tx. Spurious NVNT b 2412MHz Ant2 Ref



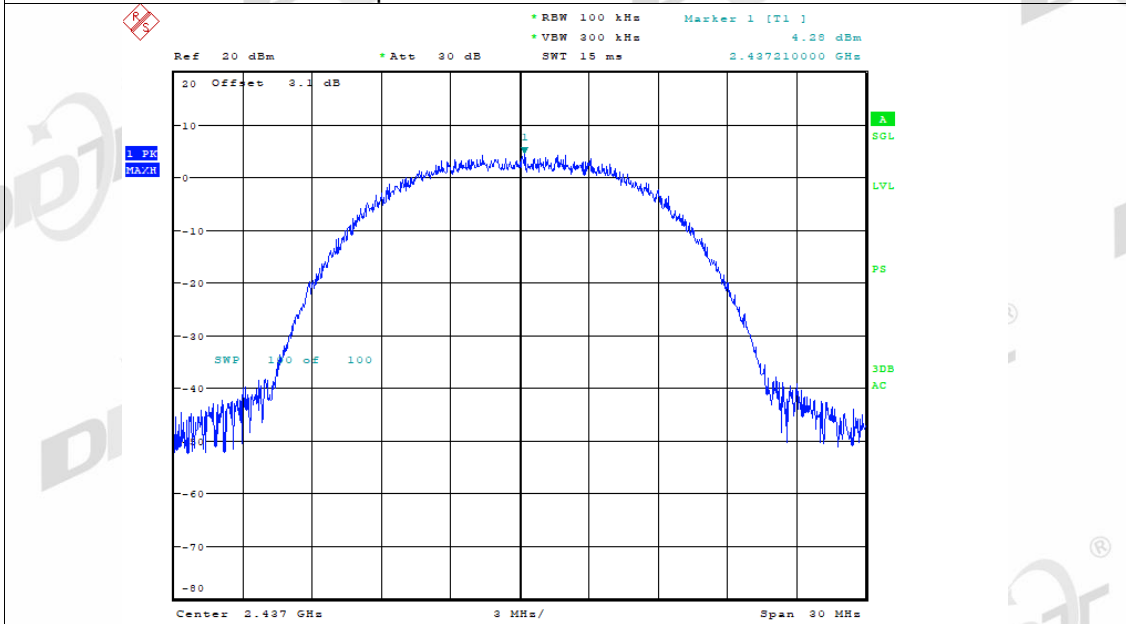
Date: 16.AUG.2022 17:11:00

Tx. Spurious NVNT b 2412MHz Ant2 Emission



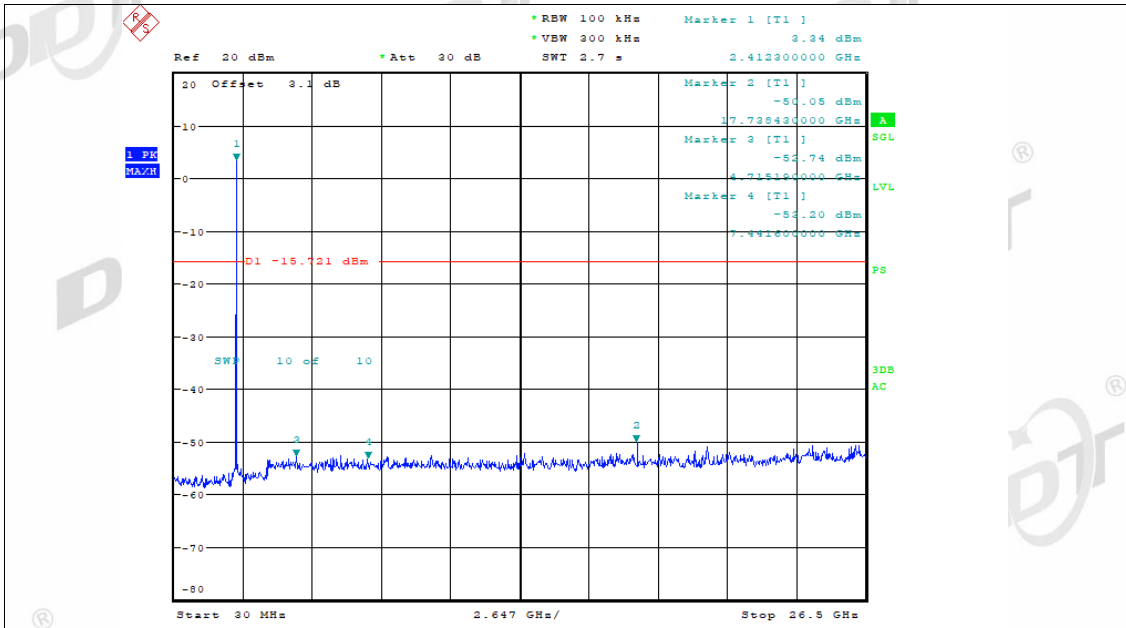
Date: 16.AUG.2022 17:11:33

Tx. Spurious NVNT b 2437MHz Ant2 Ref



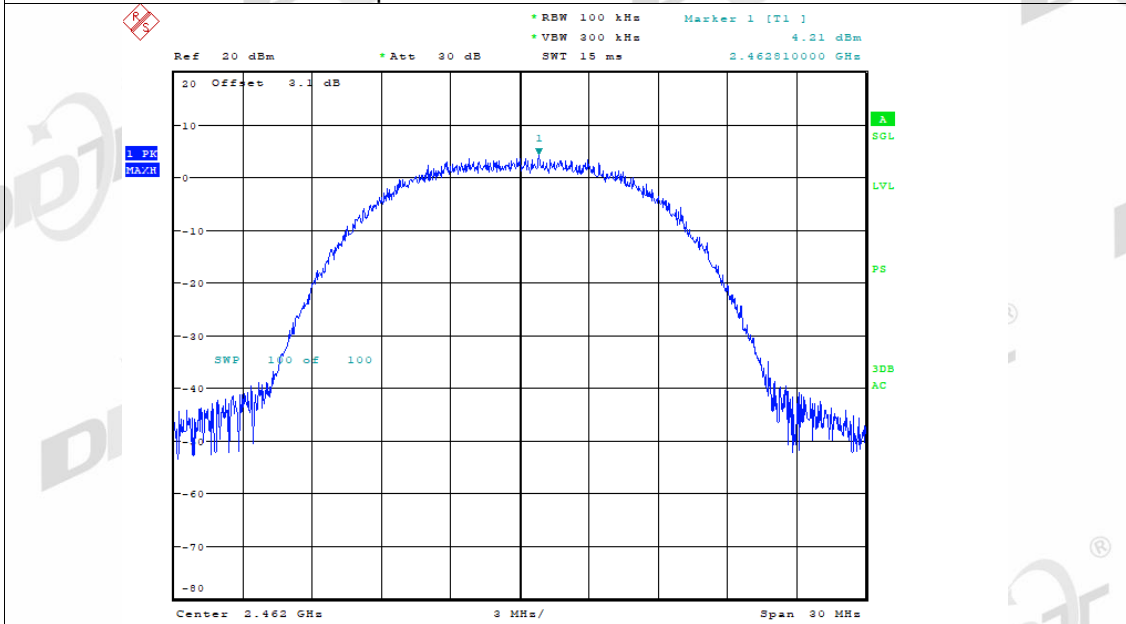
Date: 16.AUG.2022 17:22:26

Tx. Spurious NVNT b 2437MHz Ant2 Emission



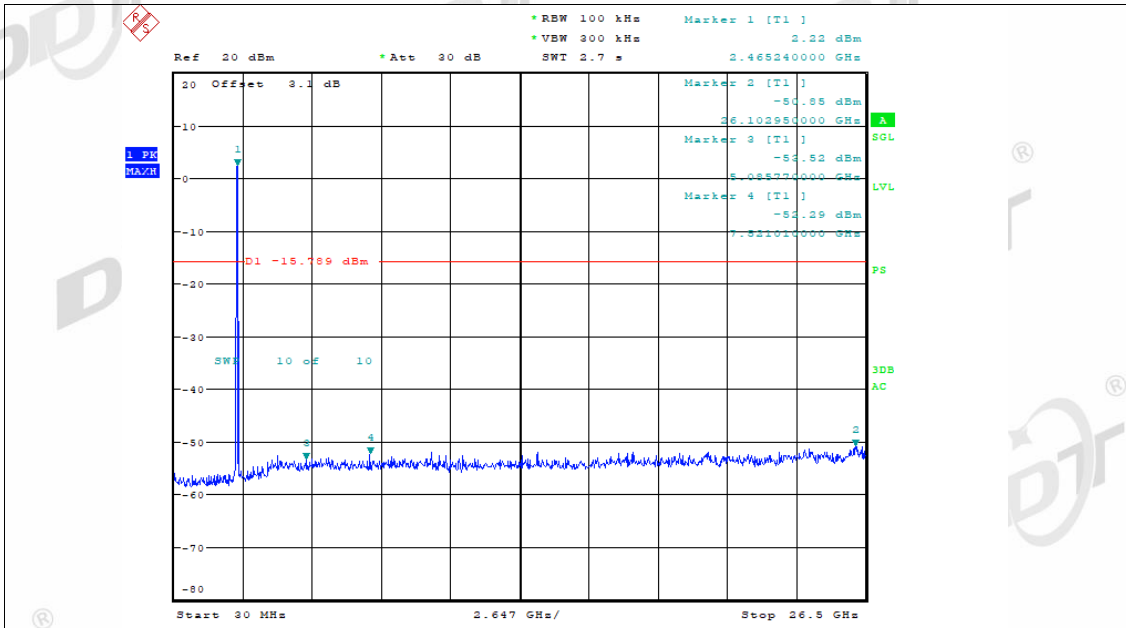
Date: 16.AUG.2022 17:22:59

Tx. Spurious NVNT b 2462MHz Ant2 Ref



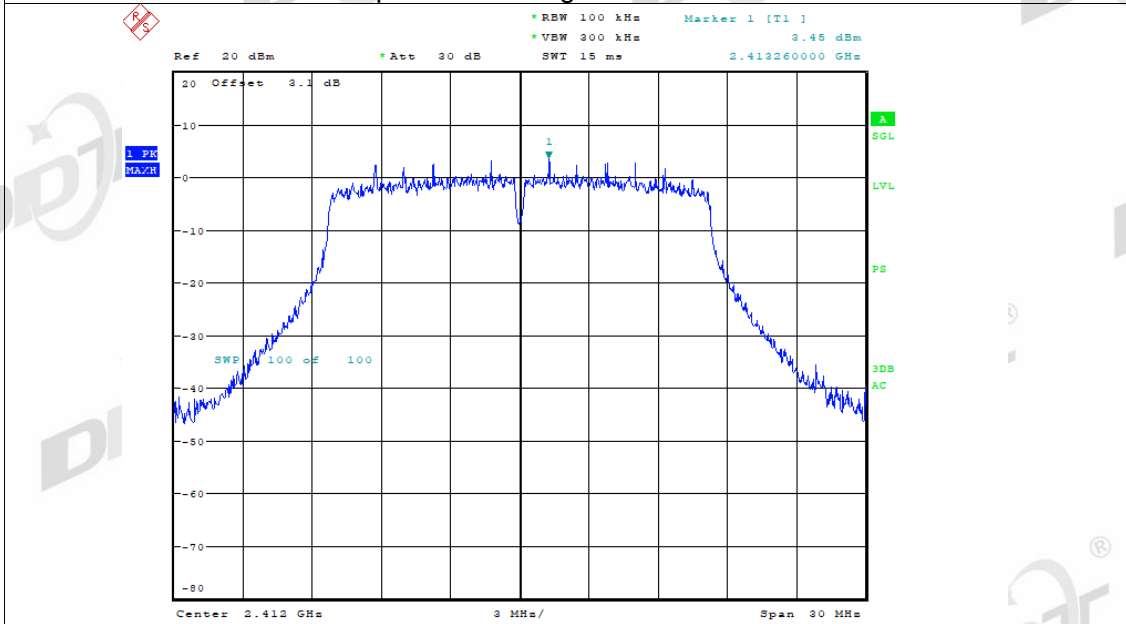
Date: 16.AUG.2022 17:28:31

Tx. Spurious NVNT b 2462MHz Ant2 Emission



Date: 16.AUG.2022 17:29:04

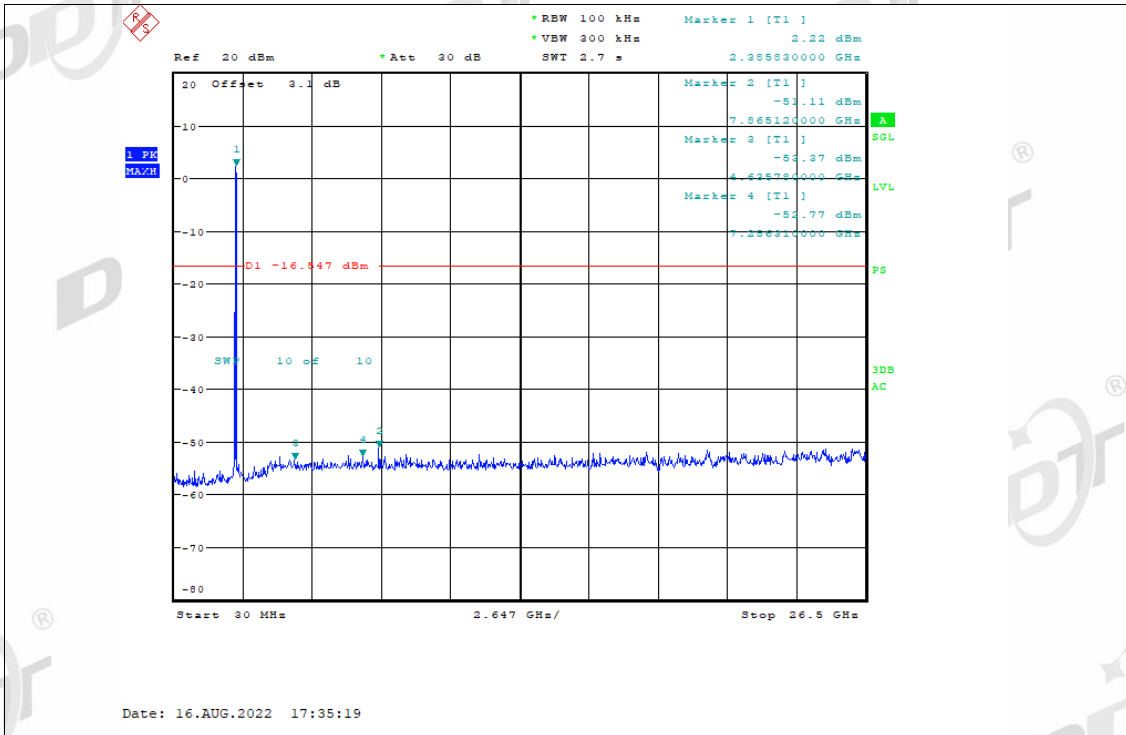
Tx. Spurious NVNT g 2412MHz Ant1 Ref



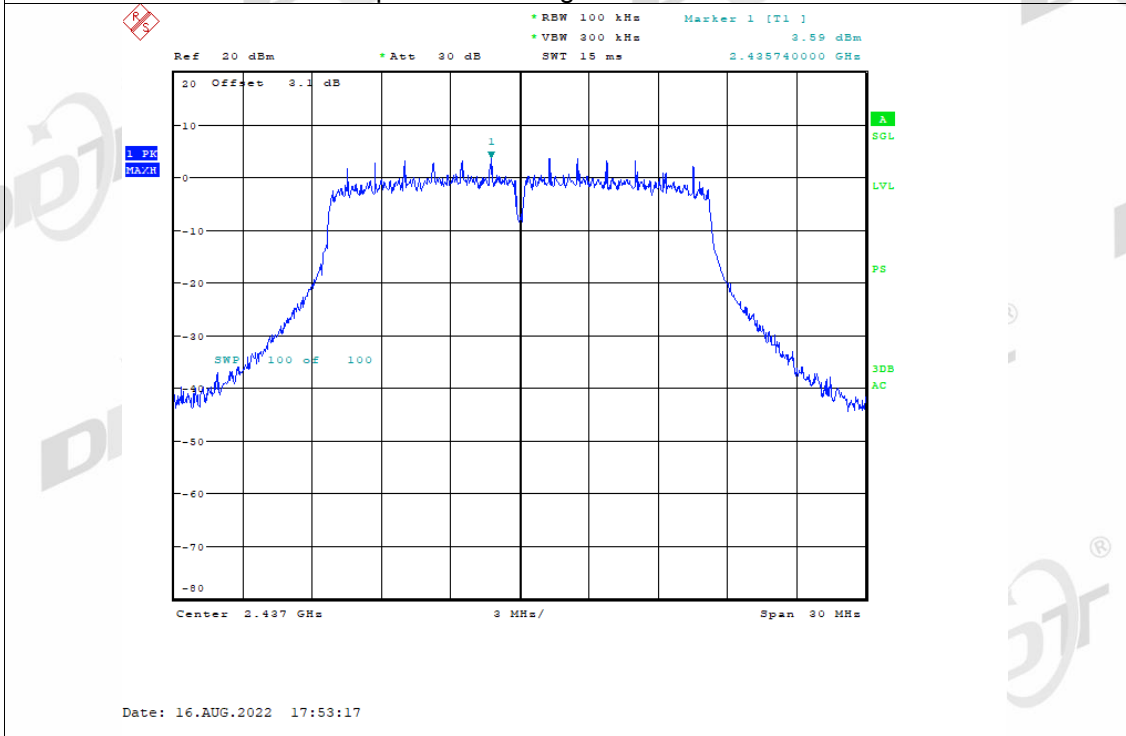
Date: 16.AUG.2022 17:34:46

Tx. Spurious NVNT g 2412MHz Ant1 Emission

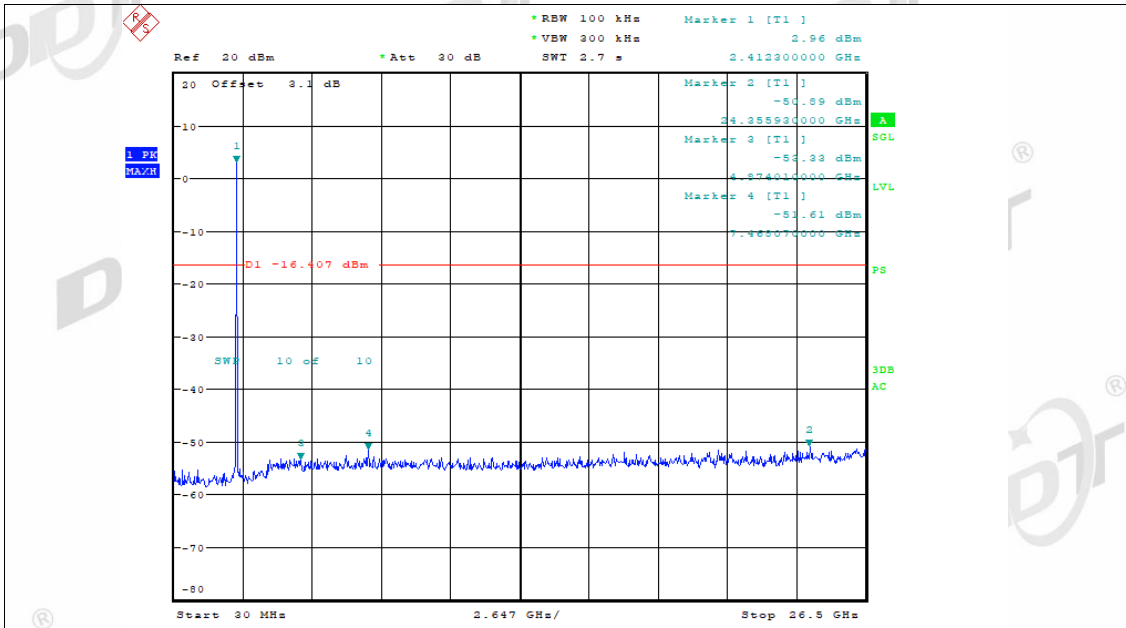




Tx. Spurious NVNT g 2437MHz Ant1 Ref

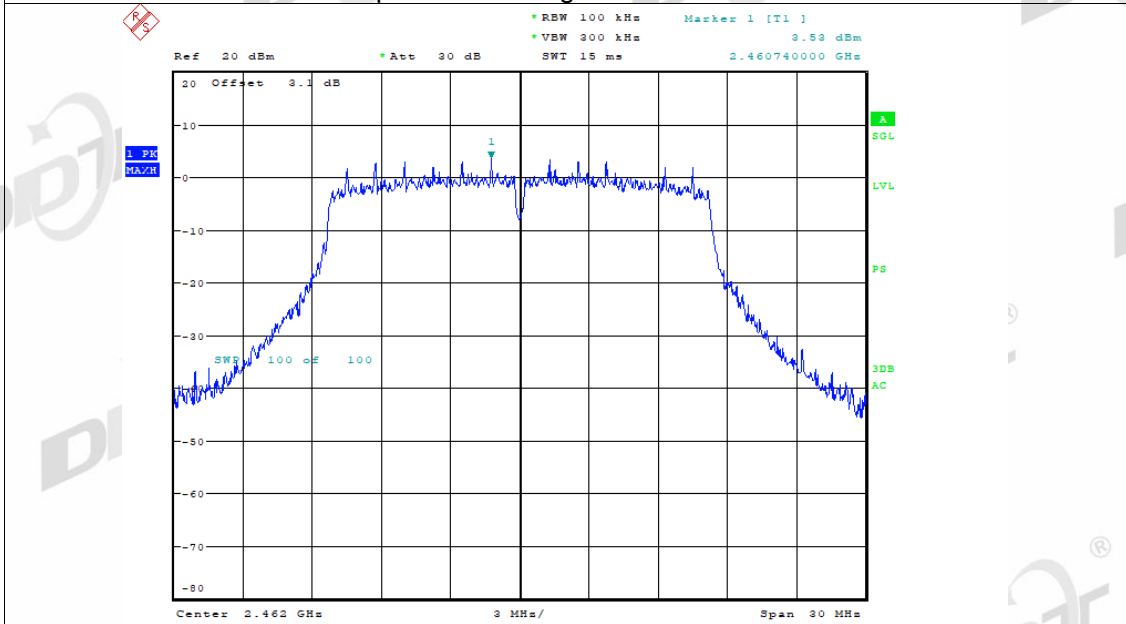


Tx. Spurious NVNT g 2437MHz Ant1 Emission



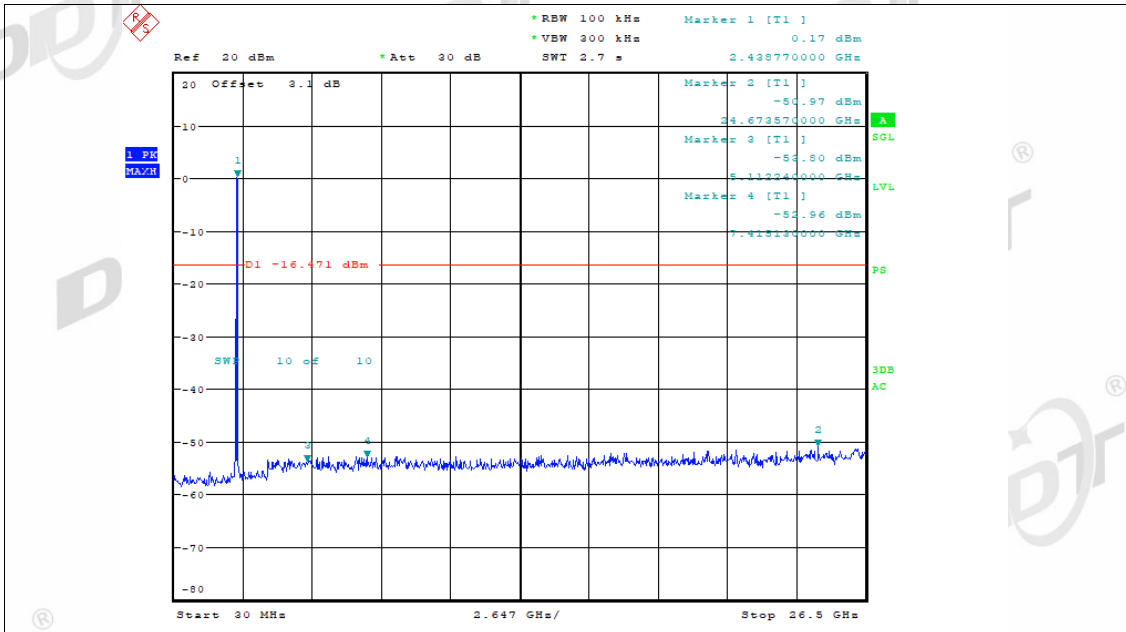
Date: 16.AUG.2022 17:53:50

Tx. Spurious NVNT g 2462MHz Ant1 Ref



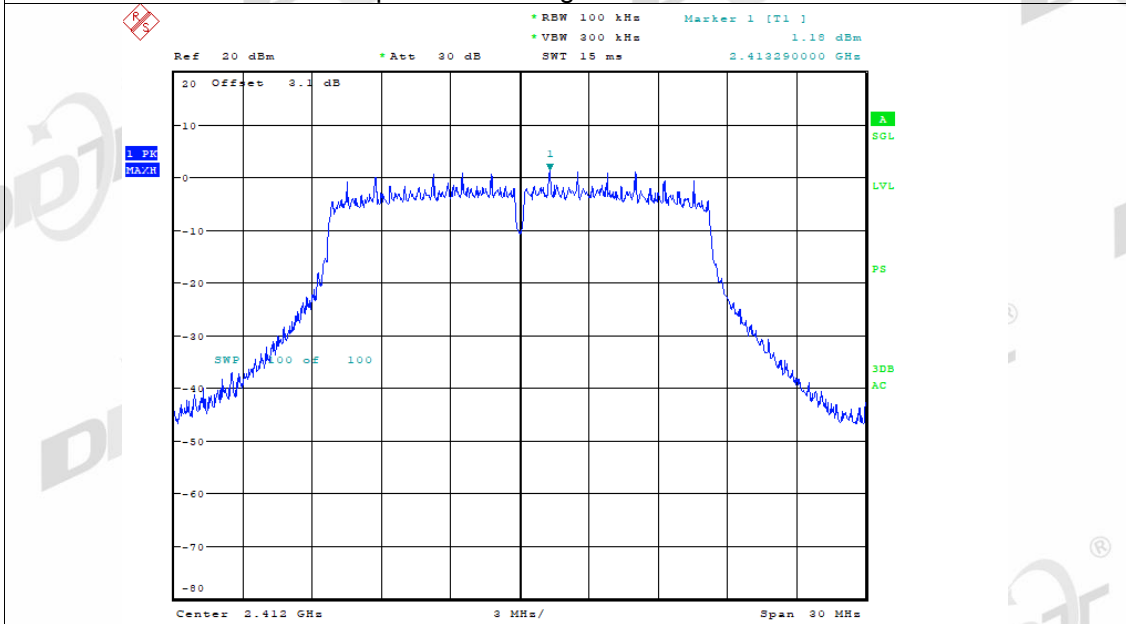
Date: 16.AUG.2022 18:02:37

Tx. Spurious NVNT g 2462MHz Ant1 Emission



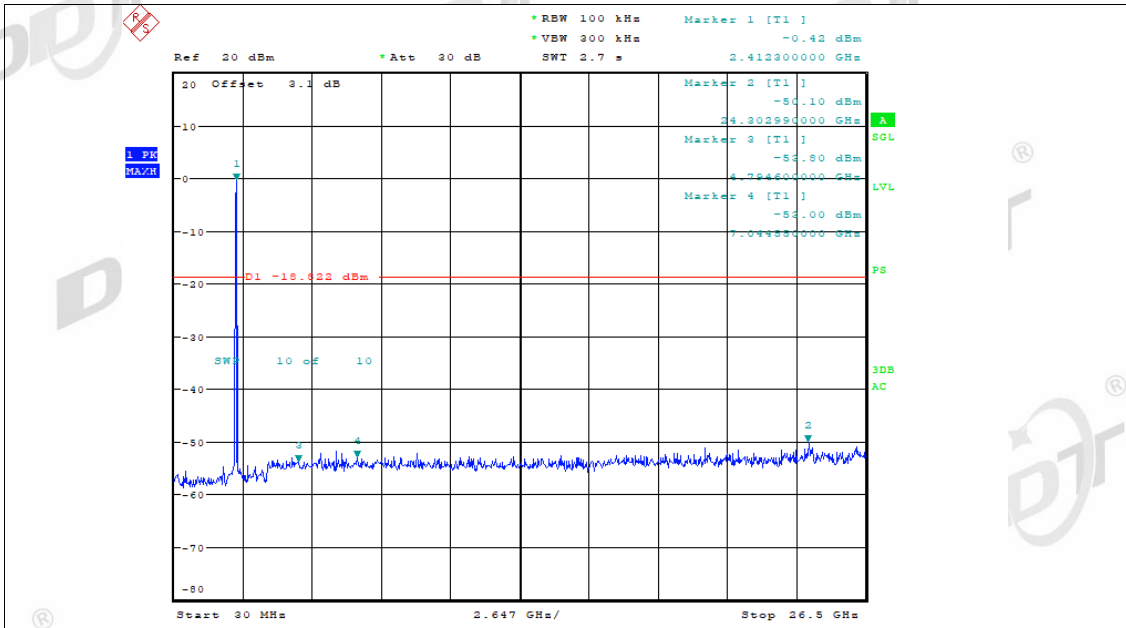
Date: 16.AUG.2022 18:03:10

### Tx. Spurious NVNT g 2412MHz Ant2 Ref



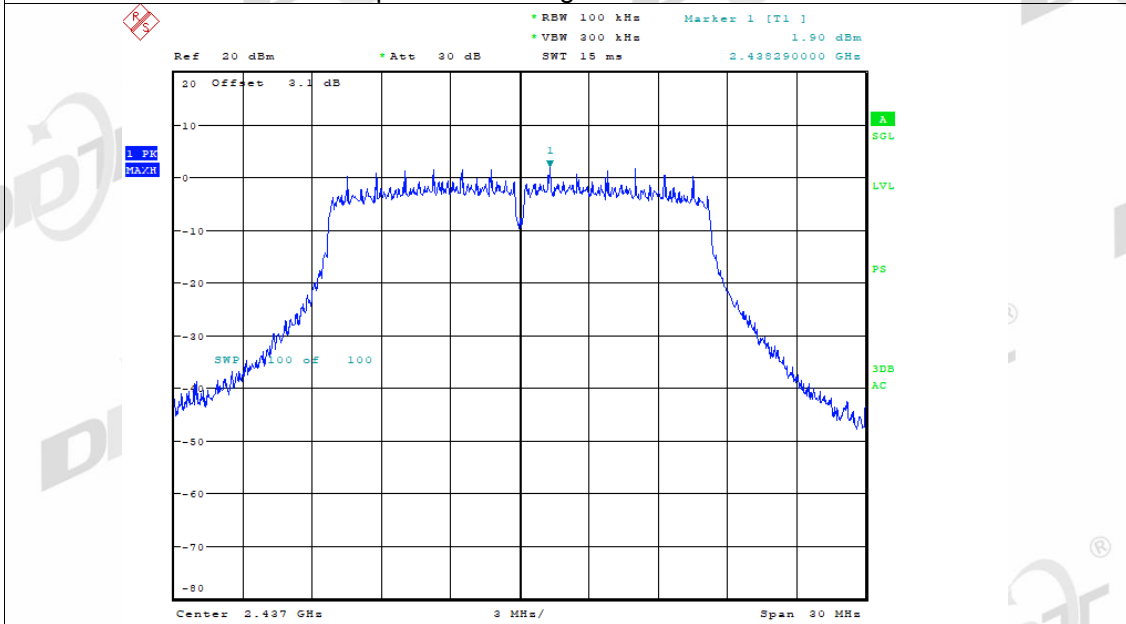
Date: 16.AUG.2022 17:42:08

### Tx. Spurious NVNT g 2412MHz Ant2 Emission



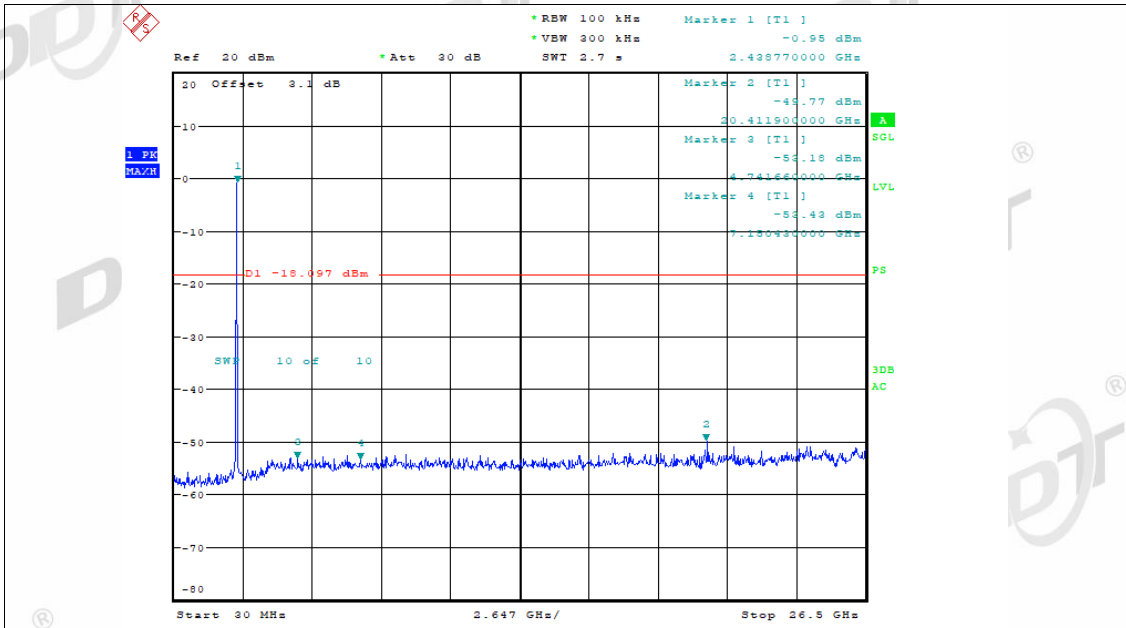
Date: 16.AUG.2022 17:42:41

Tx. Spurious NVNT g 2437MHz Ant2 Ref



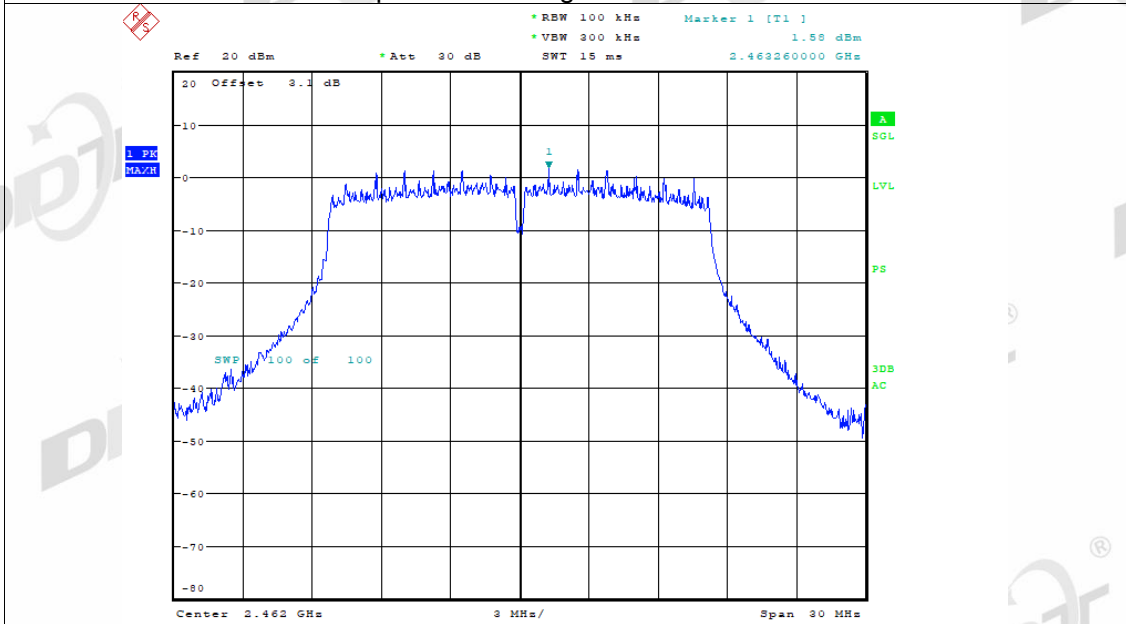
Date: 16.AUG.2022 17:55:54

Tx. Spurious NVNT g 2437MHz Ant2 Emission



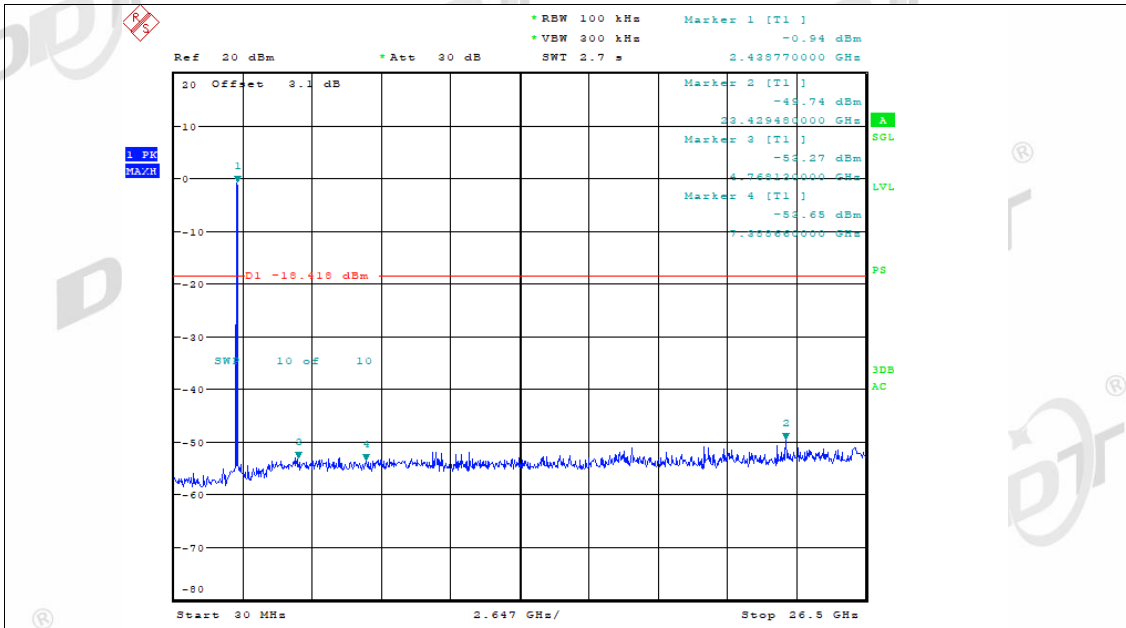
Date: 16.AUG.2022 17:56:27

Tx. Spurious NVNT g 2462MHz Ant2 Ref



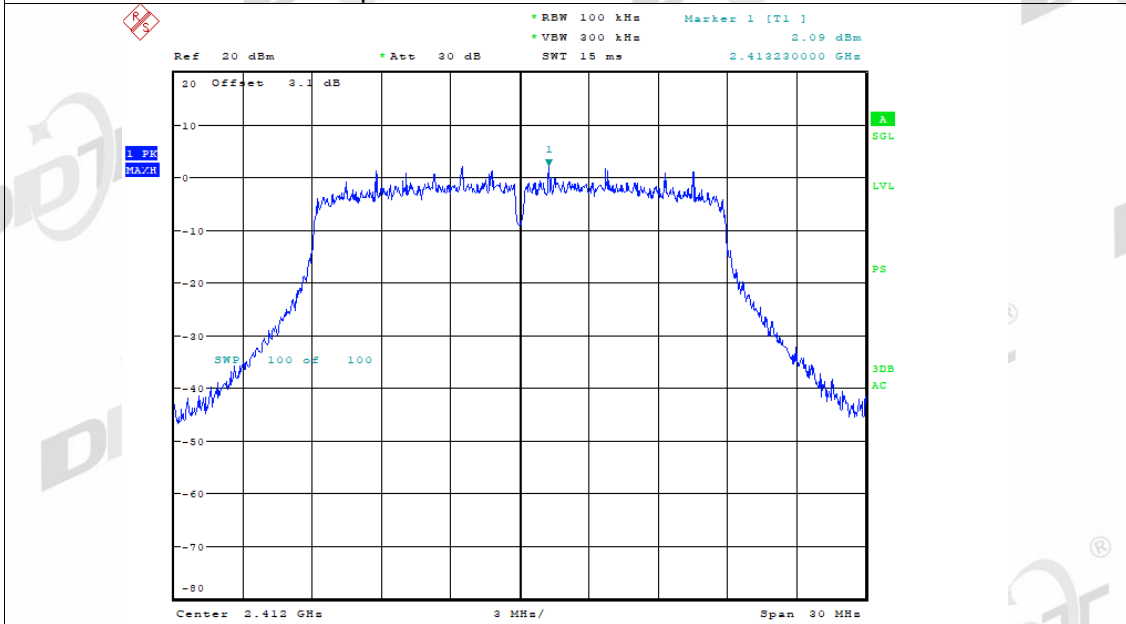
Date: 16.AUG.2022 18:20:39

Tx. Spurious NVNT g 2462MHz Ant2 Emission



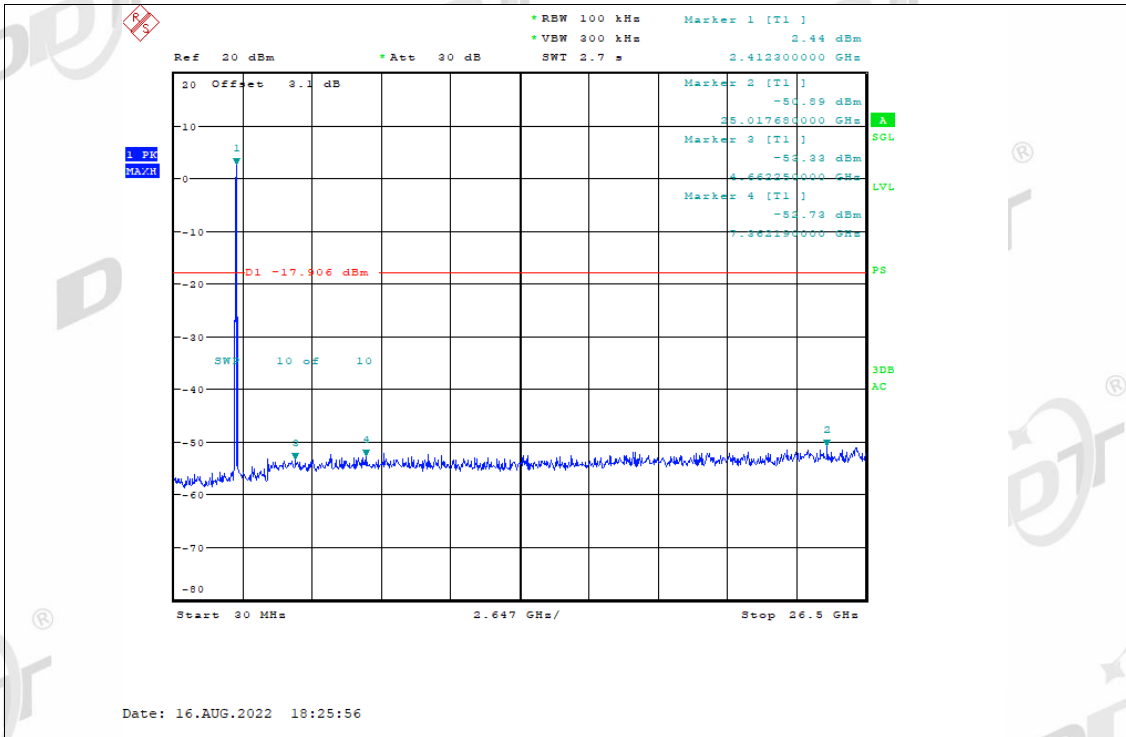
Date: 16.AUG.2022 18:21:12

Tx. Spurious NVNT n20 2412MHz Ant1 Ref

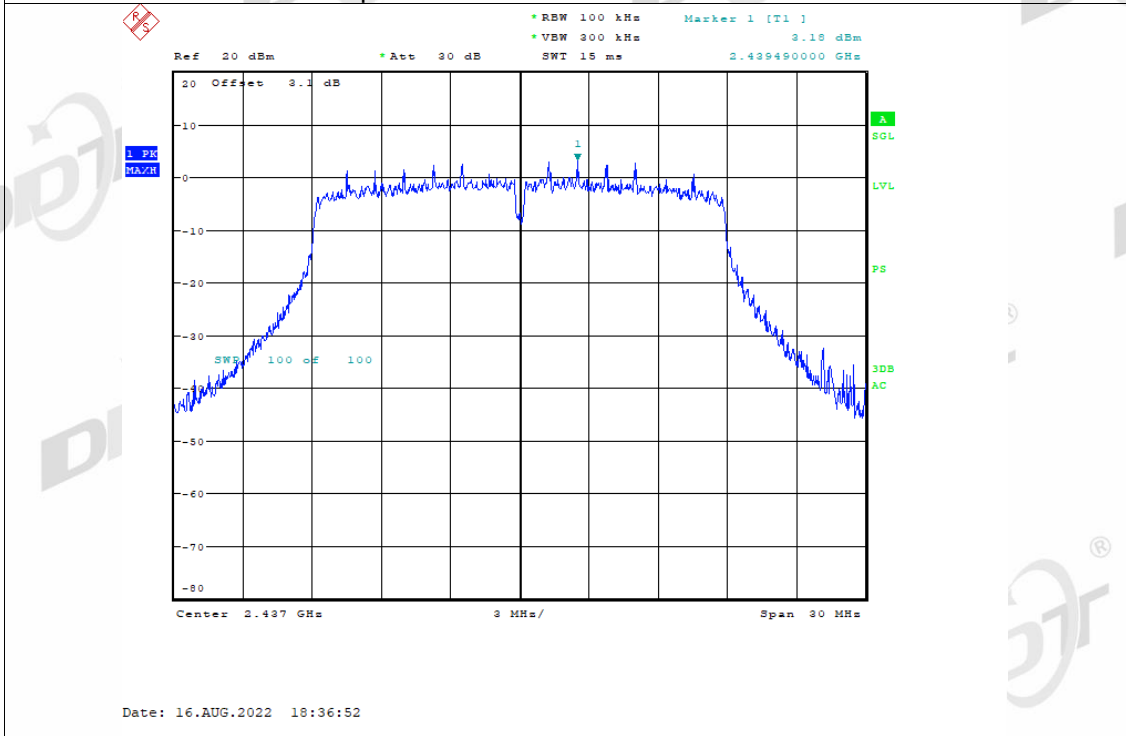


Date: 16.AUG.2022 18:25:23

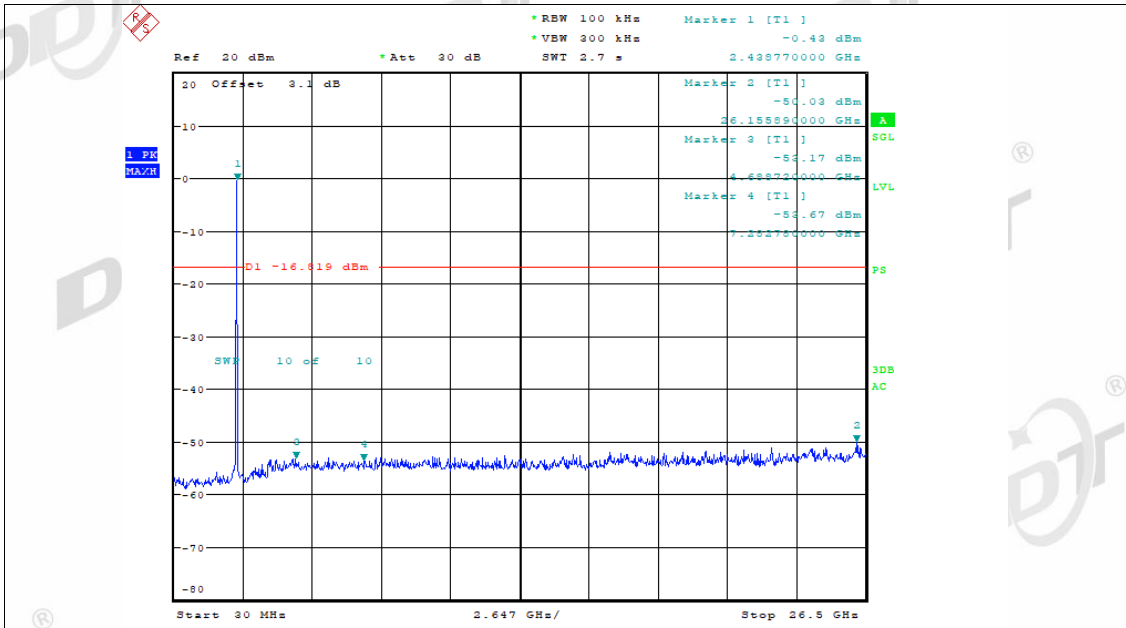
Tx. Spurious NVNT n20 2412MHz Ant1 Emission



Tx. Spurious NVNT n20 2437MHz Ant1 Ref

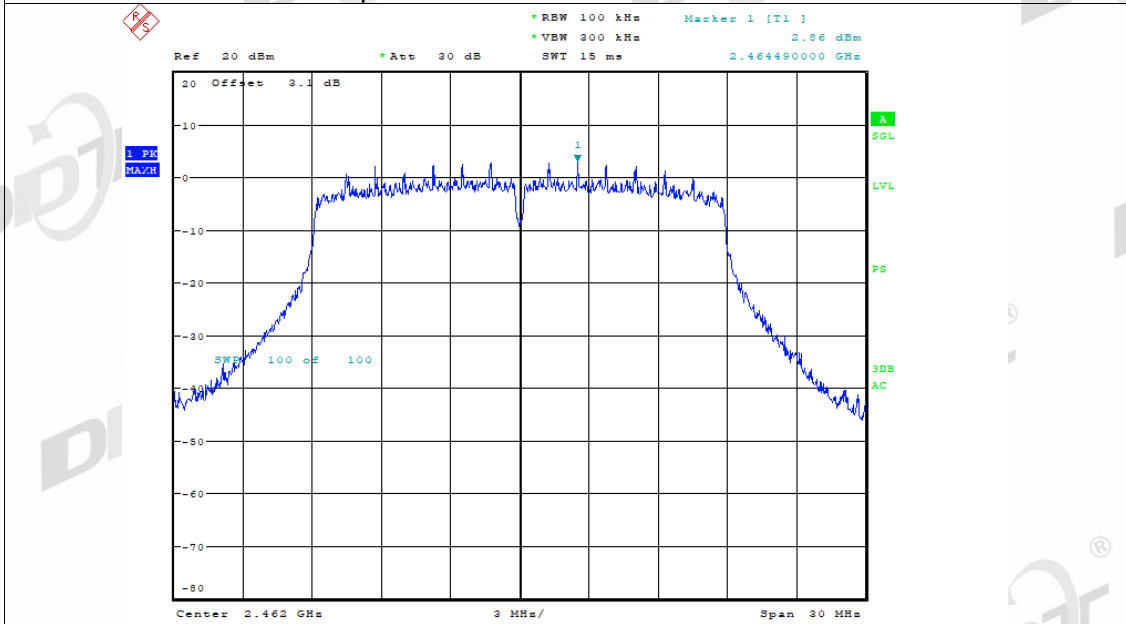


Tx. Spurious NVNT n20 2437MHz Ant1 Emission



Date: 16.AUG.2022 18:37:25

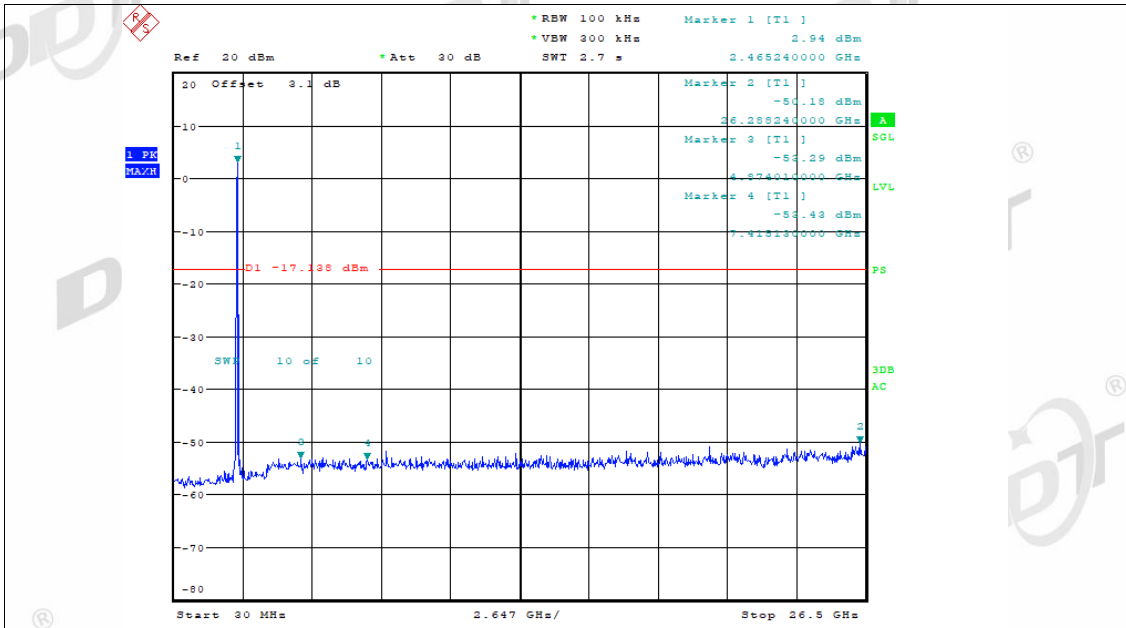
Tx. Spurious NVNT n20 2462MHz Ant1 Ref



Date: 16.AUG.2022 18:49:26

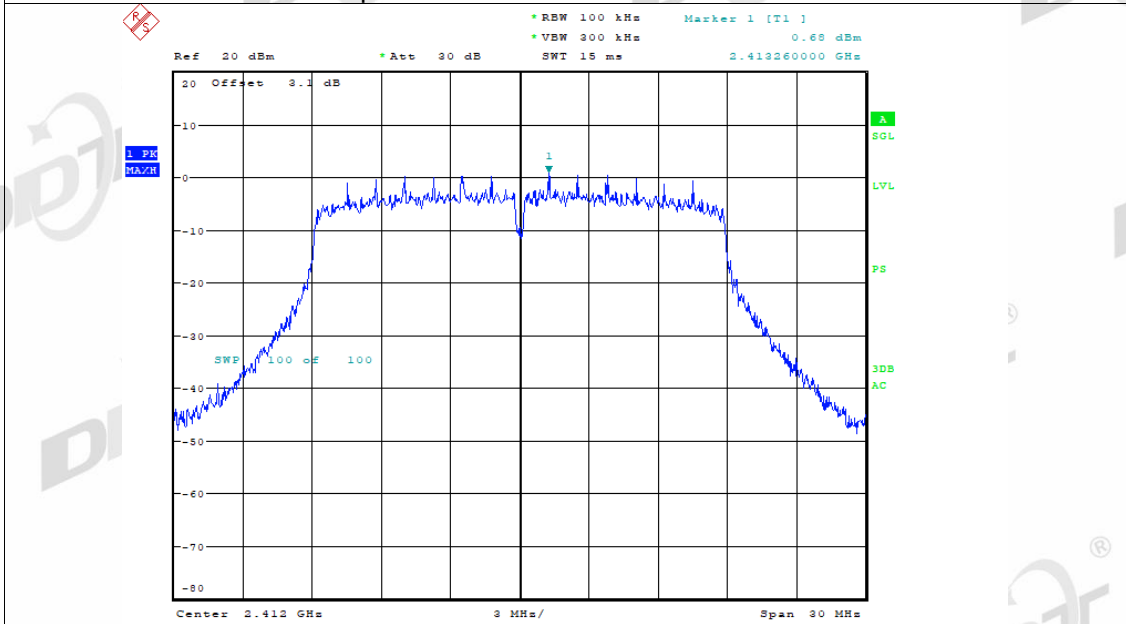
Tx. Spurious NVNT n20 2462MHz Ant1 Emission





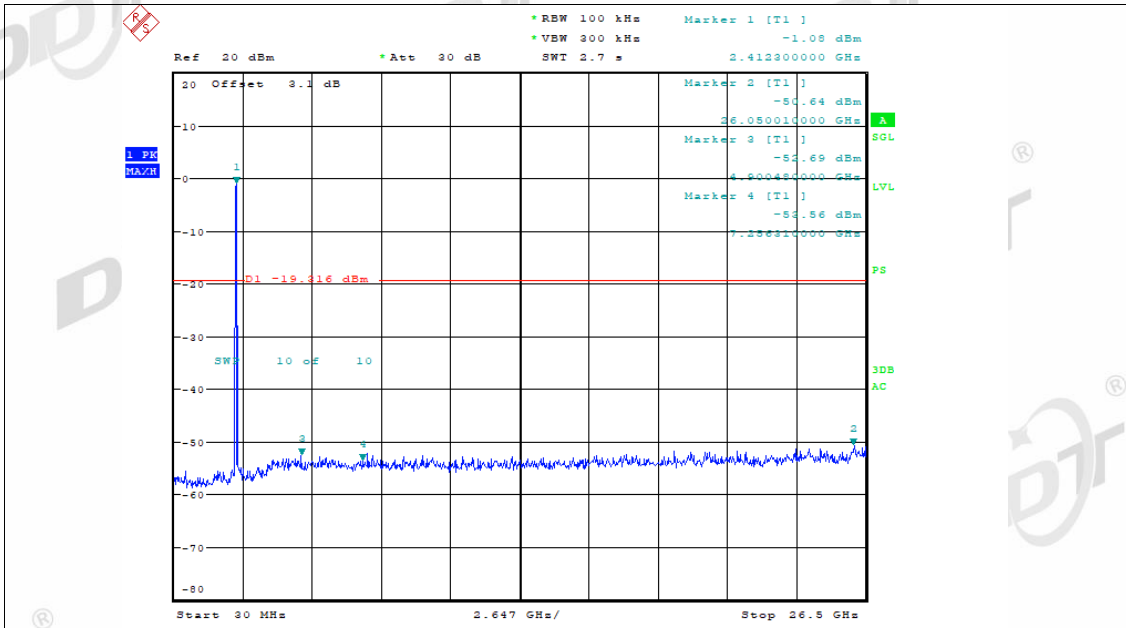
Date: 16.AUG.2022 18:49:59

Tx. Spurious NVNT n20 2412MHz Ant2 Ref



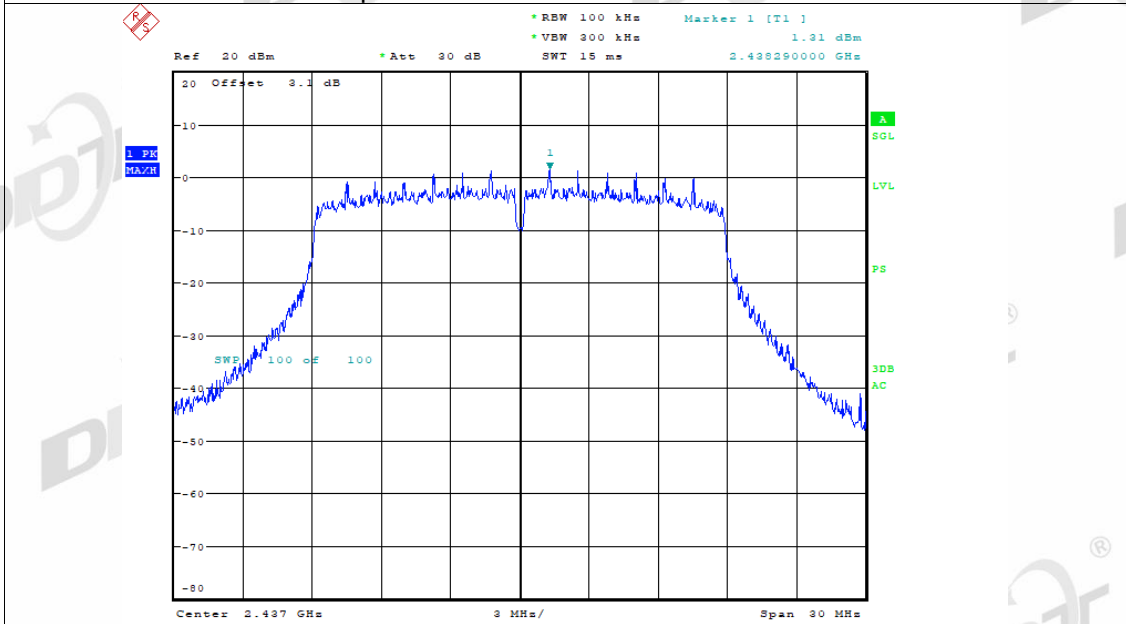
Date: 16.AUG.2022 18:28:28

Tx. Spurious NVNT n20 2412MHz Ant2 Emission



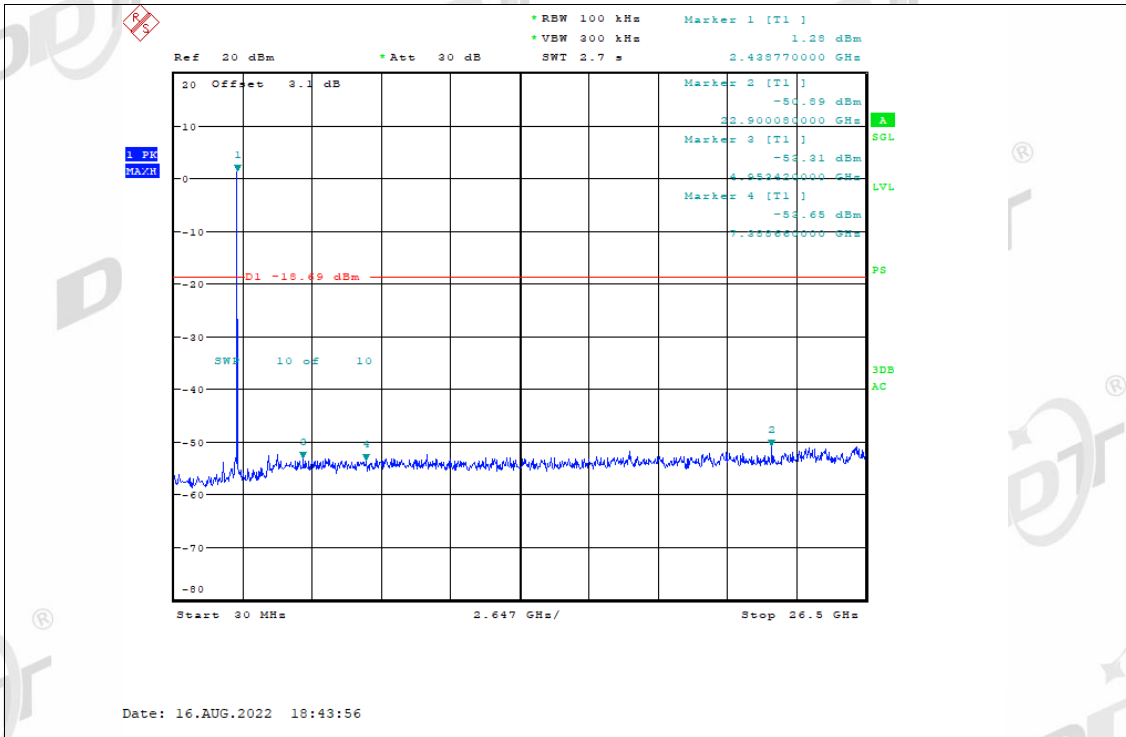
Date: 16.AUG.2022 18:29:01

Tx. Spurious NVNT n20 2437MHz Ant2 Ref

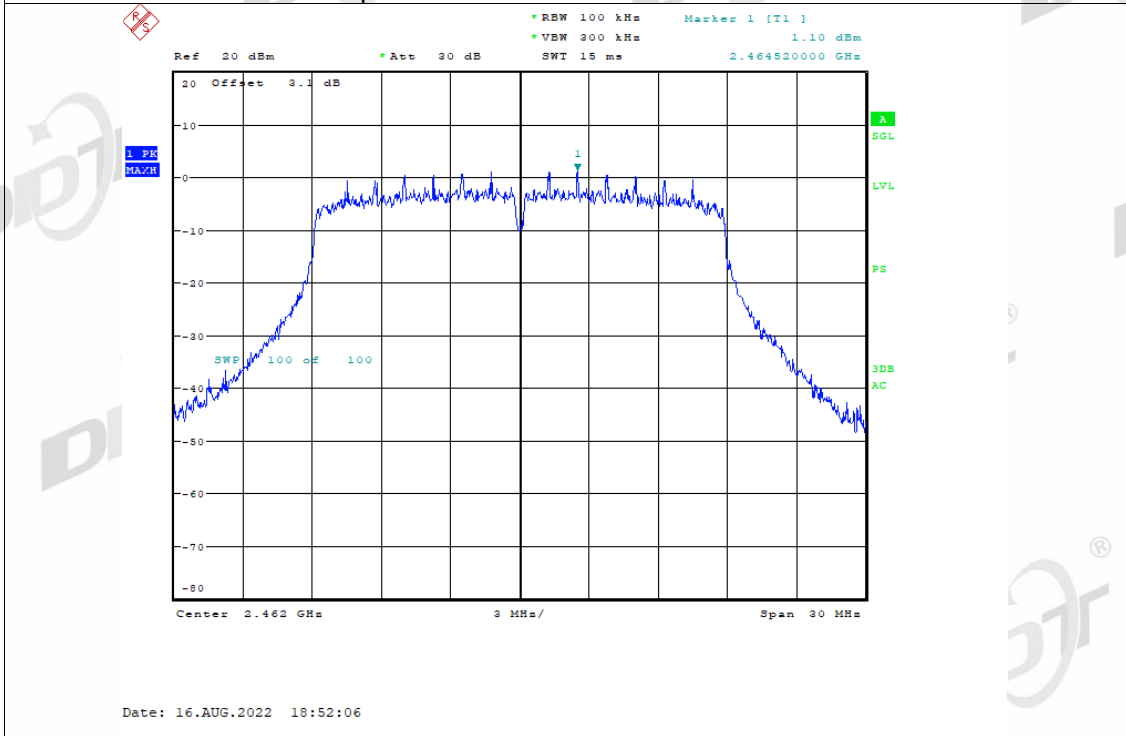


Date: 16.AUG.2022 18:43:23

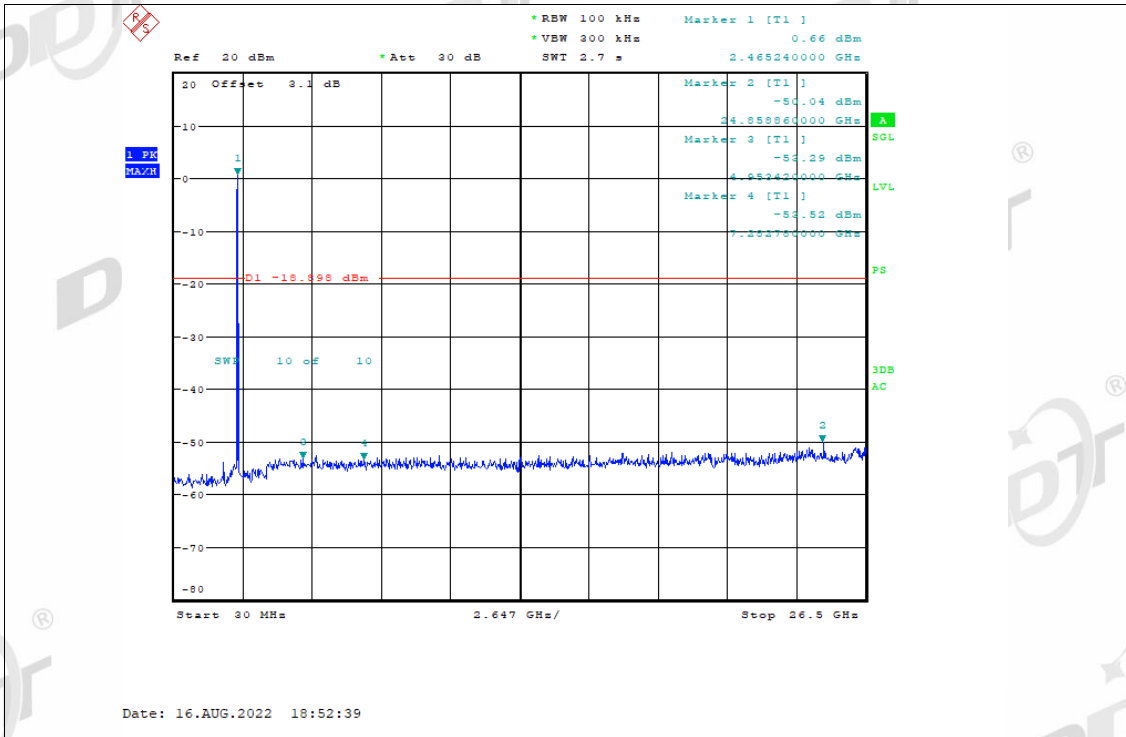
Tx. Spurious NVNT n20 2437MHz Ant2 Emission



Tx. Spurious NVNT n20 2462MHz Ant2 Ref

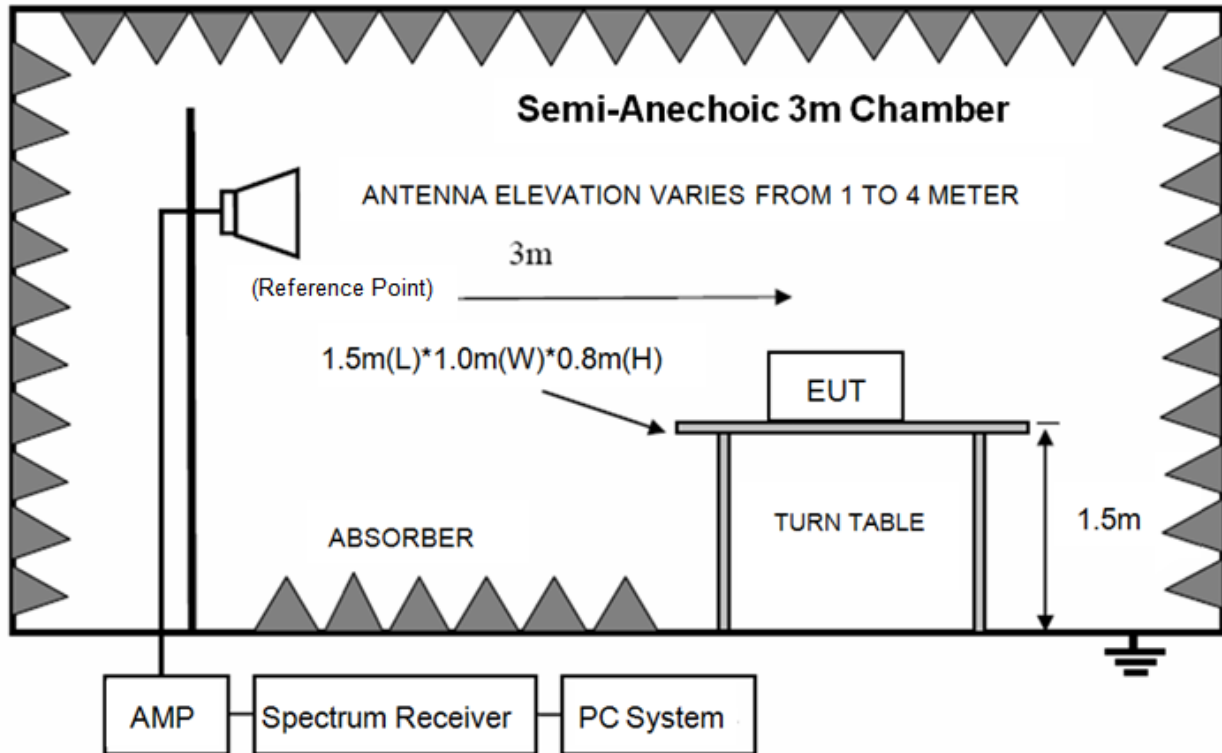


Tx. Spurious NVNT n20 2462MHz Ant2 Emission



## 10. Radiated Band Edge Compliance

### 10.1. Block diagram of test setup



### 10.2. Limit

All restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400 MHz to 2483.5 MHz shall be at least 20dB below the fundamental emissions.

### 10.3. Test procedure

Same with clause 8.3 except change investigated frequency range.

Remark: All restriction band have been tested, and shown in report.

### 10.4. Test result

**Pass. (See below detailed test result)**

Note: All modes were test and the worst case was record in this report.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

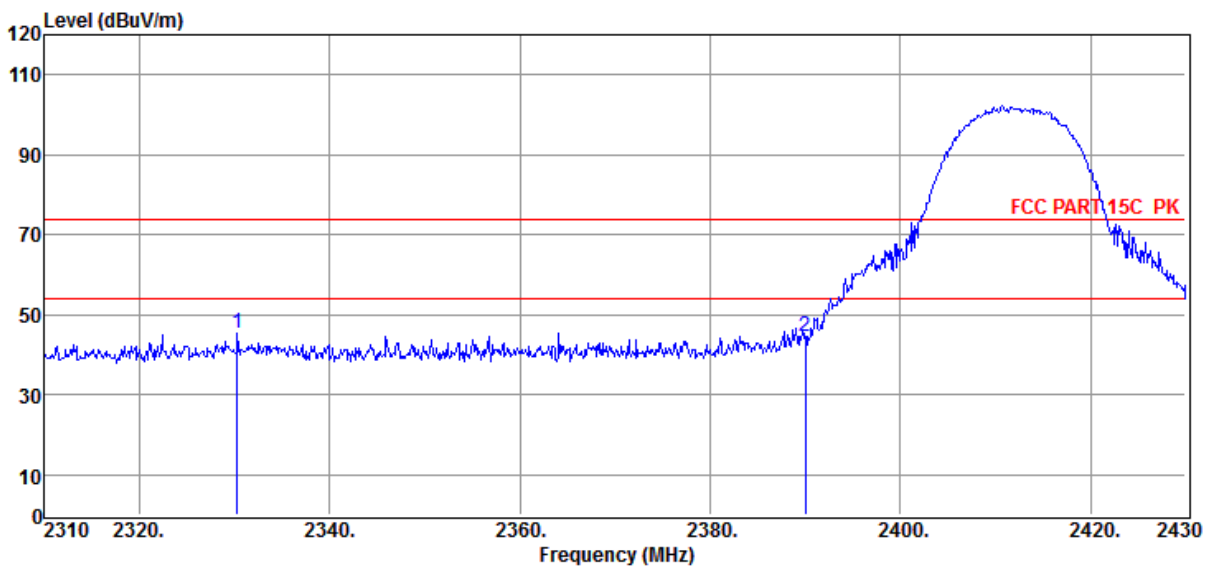
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT1 11M 2412MHz

Data: 15



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2330.28	51.05	28.14	-34.00	45.19	74.00	-28.81	Peak	VERTICAL
2	2390.00	50.58	28.05	-34.02	44.61	74.00	-29.39	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

**EUT** : Formation performance multi-rotor UAV

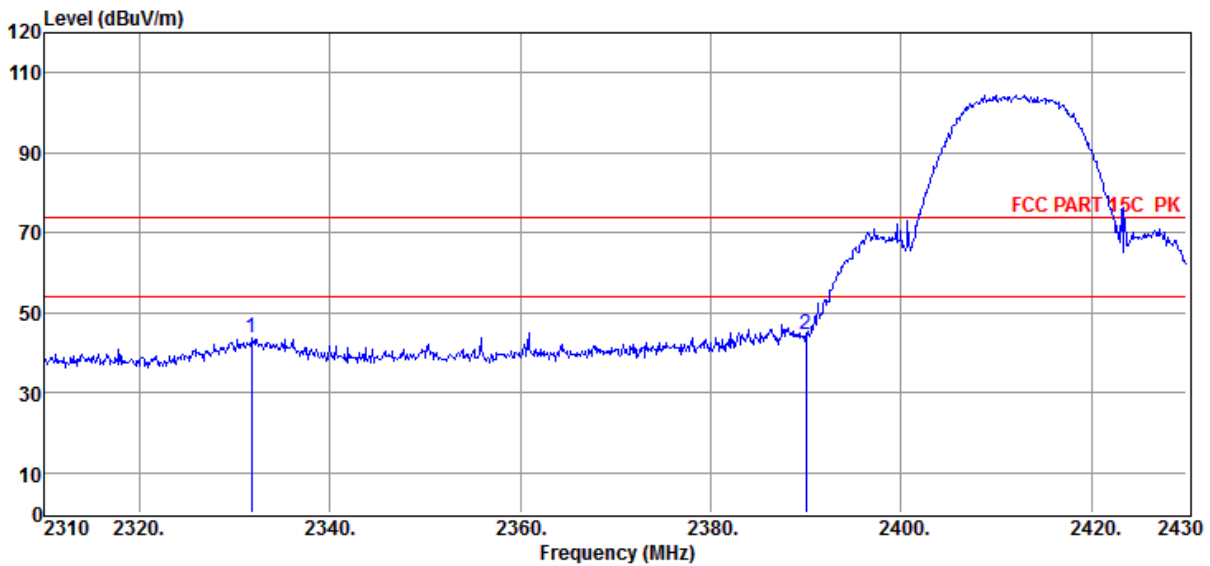
**Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT1 11M 2412MHz

Data: 16



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2331.72	49.68	28.14	-34.00	43.82	74.00	-30.18	Peak	HORIZONTAL
2	2390.00	50.52	28.05	-34.02	44.55	74.00	-29.45	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

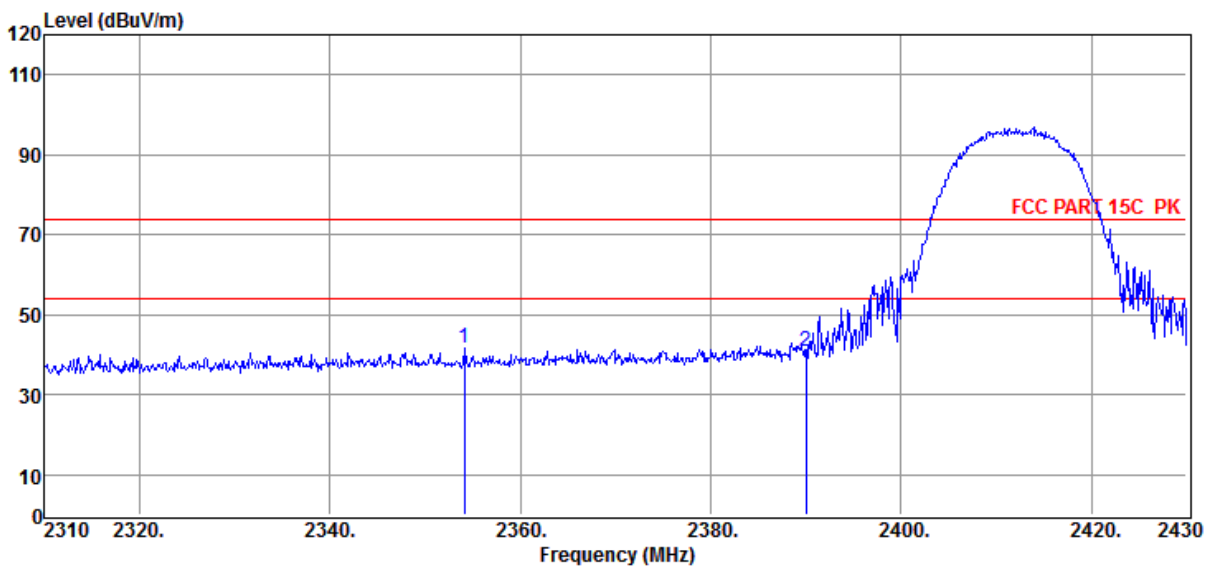
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT2 11M 2412MHz

Data: 17



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2354.16	47.31	28.10	-33.97	41.44	74.00	-32.56	Peak	HORIZONTAL
2	2390.00	46.64	28.05	-34.02	40.67	74.00	-33.33	Peak	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.



# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

**EUT** : Formation performance multi-rotor UAV

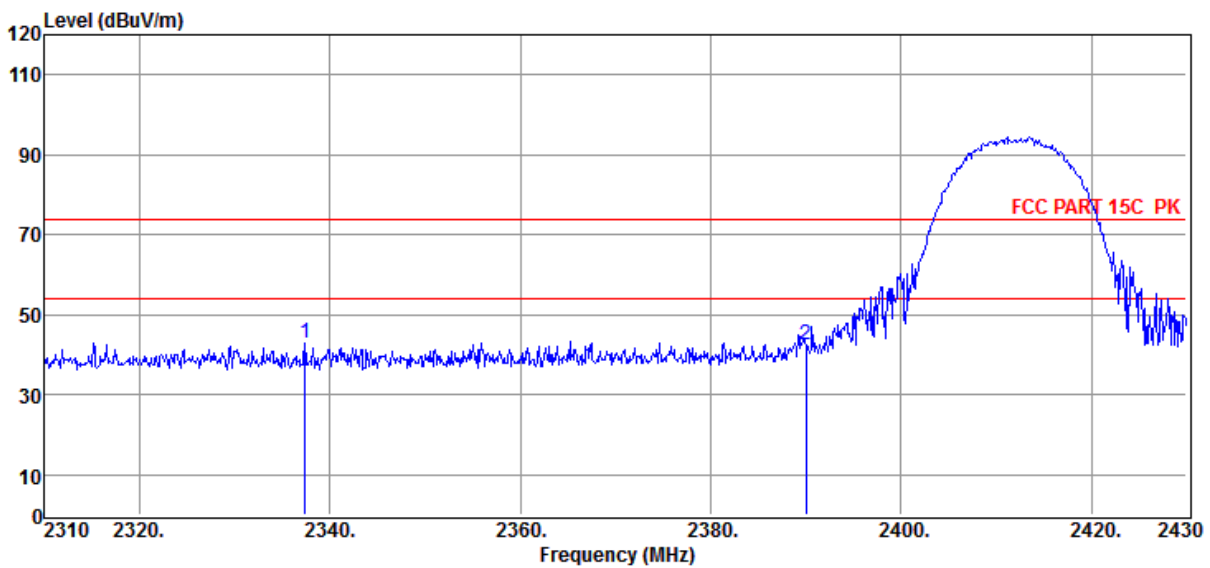
**Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT2 11M 2412MHz

Data: 18



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2337.36	48.62	28.13	-33.96	42.79	74.00	-31.21	Peak	VERTICAL
2	2390.00	48.47	28.05	-34.02	42.50	74.00	-31.50	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

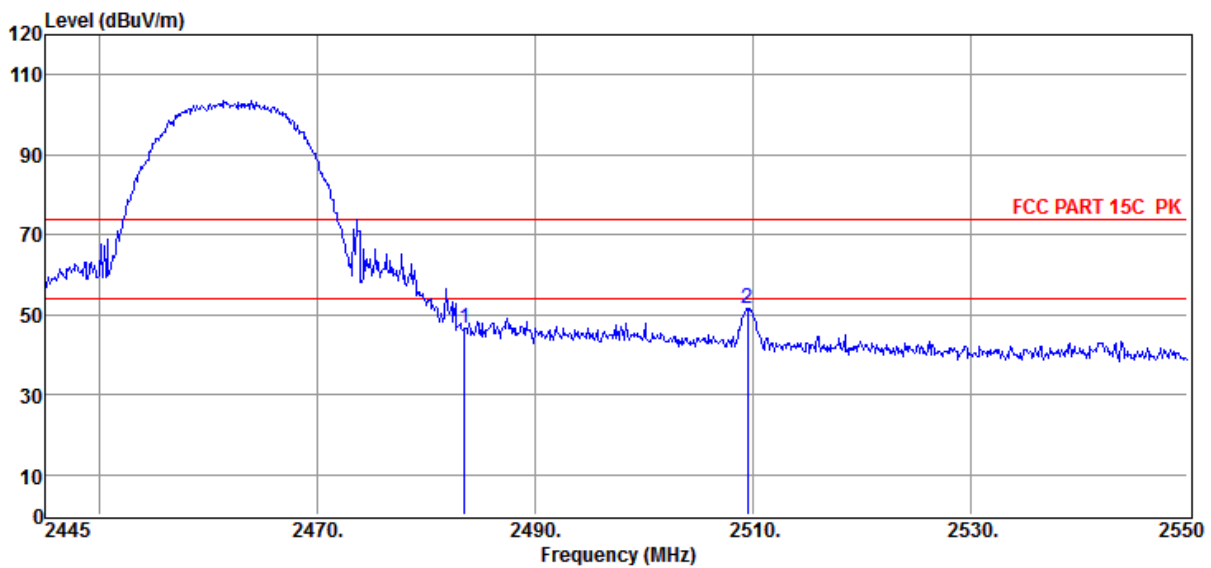
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT1 11M 2462MHz

Data: 19



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	52.52	27.92	-33.79	46.65	74.00	-27.35	Peak	HORIZONTAL
2	2509.58	57.17	27.92	-33.53	51.56	74.00	-22.44	Peak	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

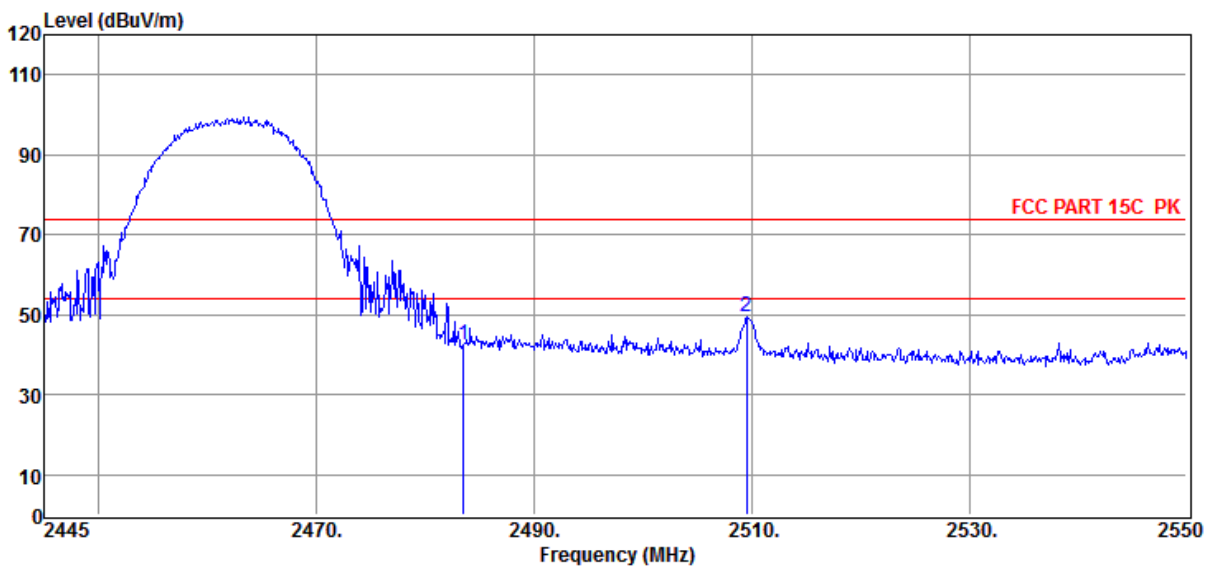
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT1 11M 2462MHz

Data: 20



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	48.22	27.92	-33.79	42.35	74.00	-31.65	Peak	VERTICAL
2	2509.58	54.92	27.92	-33.53	49.31	74.00	-24.69	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

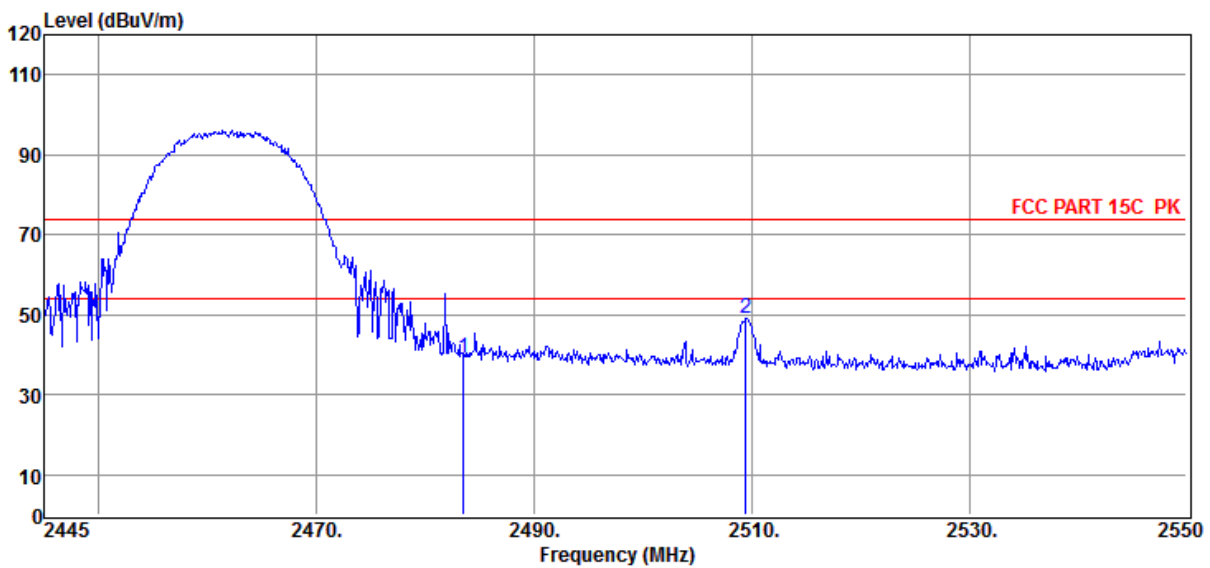
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT2 11M 2462MHz

Data: 21



Item (Mark)	Freq. (MHz)	Read Level (dBUV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBUV/m)	Limit Line (dBUV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	45.08	27.92	-33.79	39.21	74.00	-34.79	Peak	VERTICAL
2	2509.47	54.79	27.92	-33.53	49.18	74.00	-24.82	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

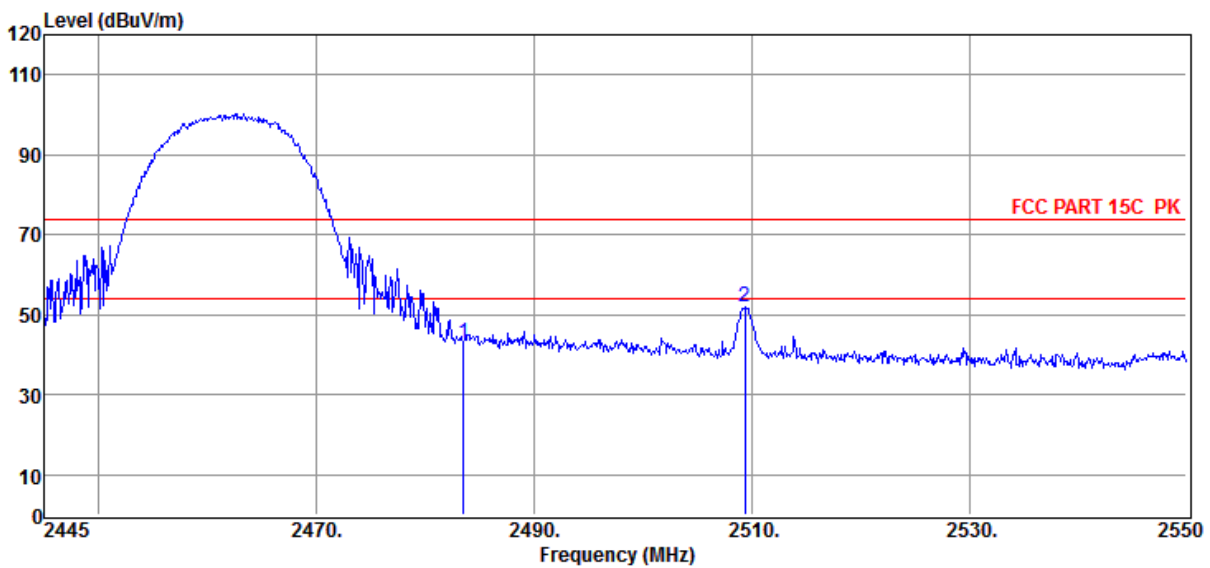
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11b ANT2 11M 2462MHz

Data: 22



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	48.82	27.92	-33.79	42.95	74.00	-31.05	Peak	HORIZONTAL
2	2509.37	57.52	27.92	-33.53	51.91	74.00	-22.09	Peak	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

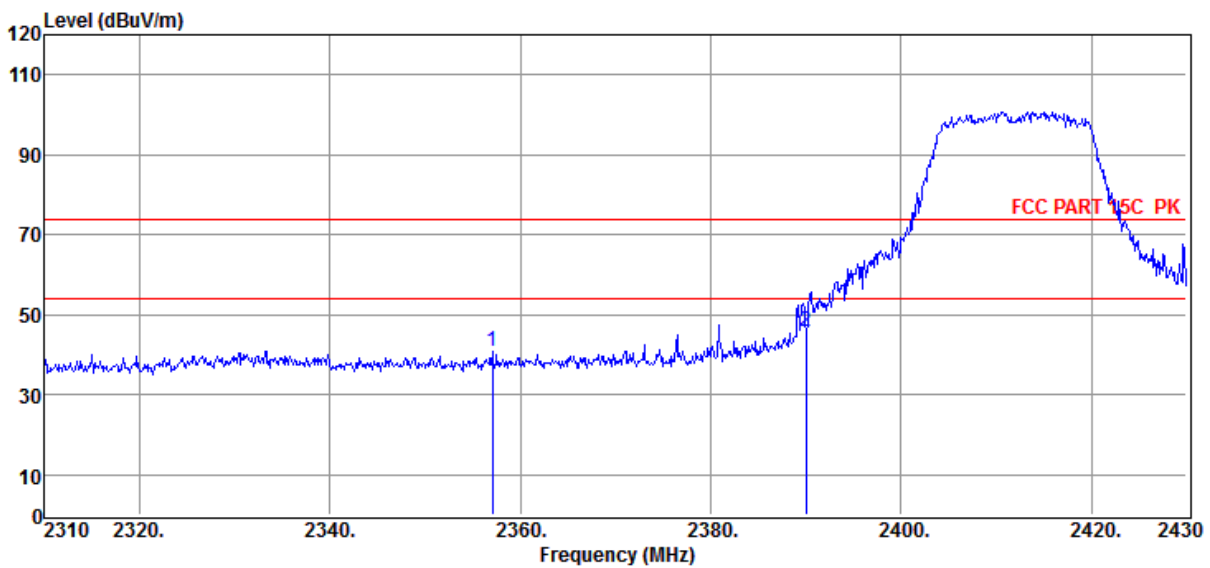
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11G ANT1 6M 2412MHz

Data: 23



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2357.04	46.64	28.10	-33.98	40.76	74.00	-33.24	Peak	HORIZONTAL
2	2390.00	51.87	28.05	-34.02	45.90	74.00	-28.10	Peak	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

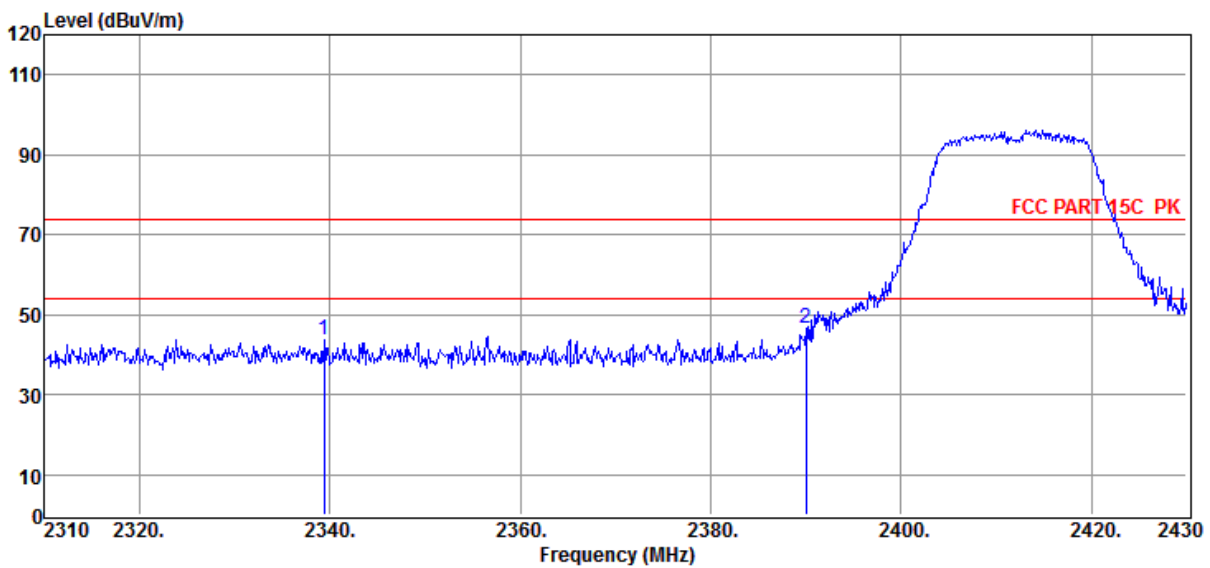
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11G ANT1 6M 2412MHz

Data: 24



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2339.40	49.44	28.12	-33.95	43.61	74.00	-30.39	Peak	VERTICAL
2	2390.00	52.74	28.05	-34.02	46.77	74.00	-27.23	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

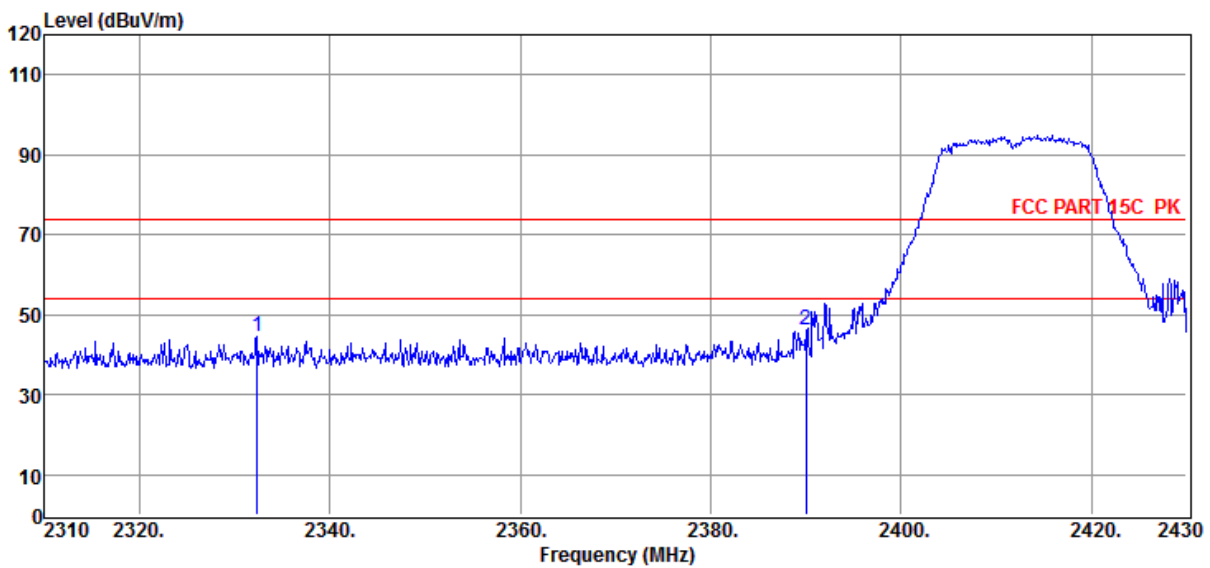
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11G ANT2 6M 2412MHz

Data: 25



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2332.32	50.21	28.13	-33.99	44.35	74.00	-29.65	Peak	VERTICAL
2	2390.00	52.26	28.05	-34.02	46.29	74.00	-27.71	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.



# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

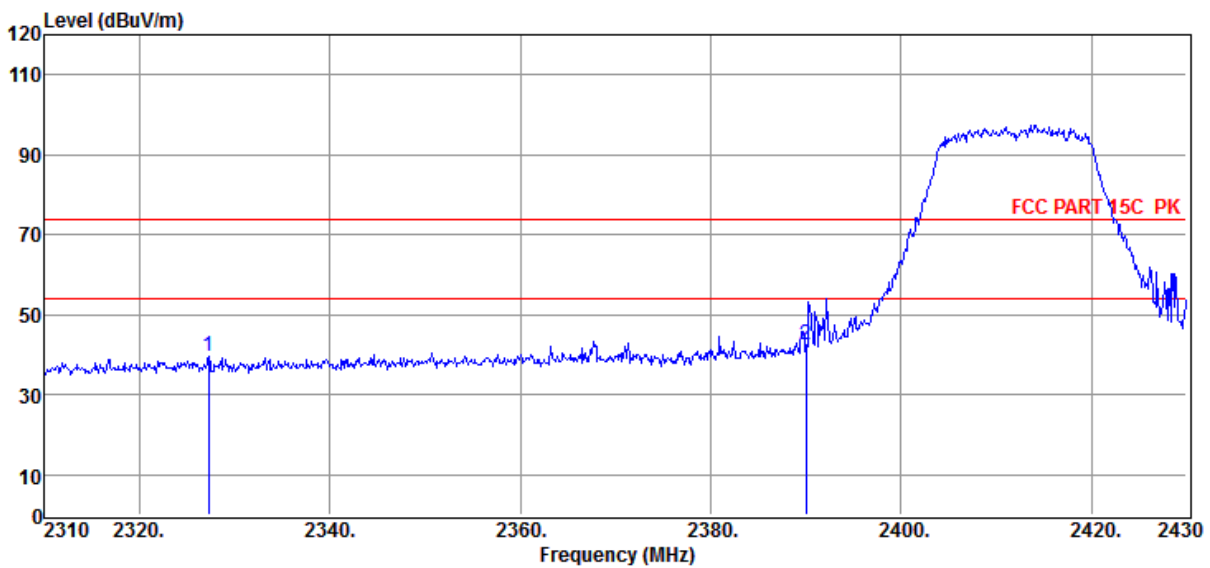
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11G ANT2 6M 2412MHz

Data: 26



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2327.28	45.51	28.14	-34.02	39.63	74.00	-34.37	Peak	HORIZONTAL
2	2390.00	48.53	28.05	-34.02	42.56	74.00	-31.44	Peak	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

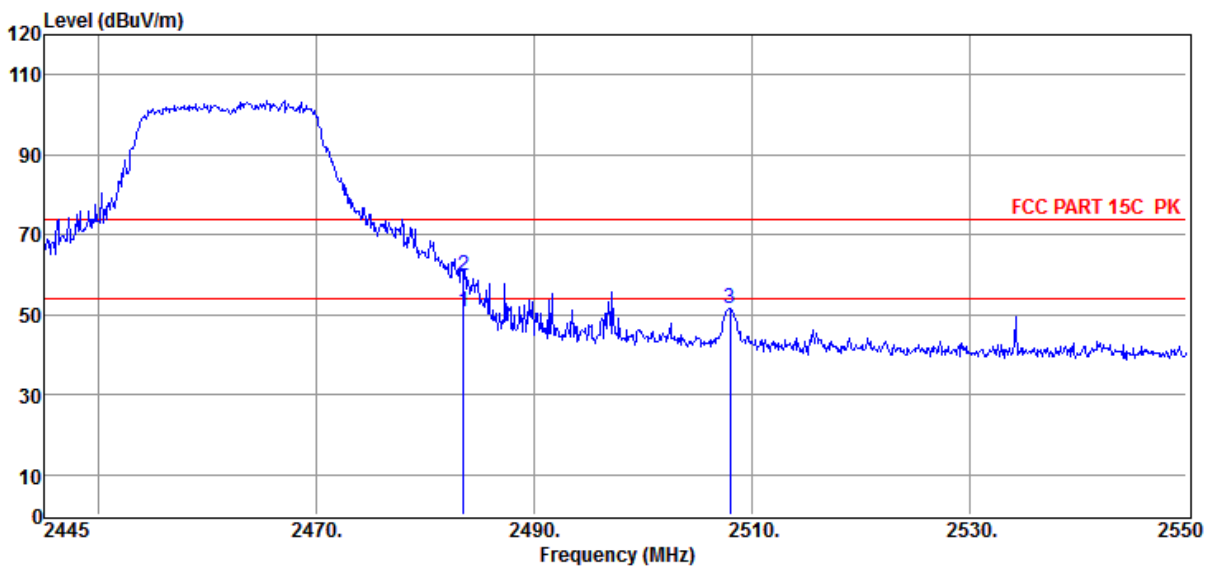
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11G ANT1 6M 2462MHz

Data: 27



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	56.64	27.92	-33.79	50.77	54.00	-3.23	Average	HORIZONTAL
2	2483.50	65.55	27.92	-33.79	59.68	74.00	-14.32	Peak	HORIZONTAL
3	2508.00	57.12	27.92	-33.53	51.51	74.00	-22.49	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

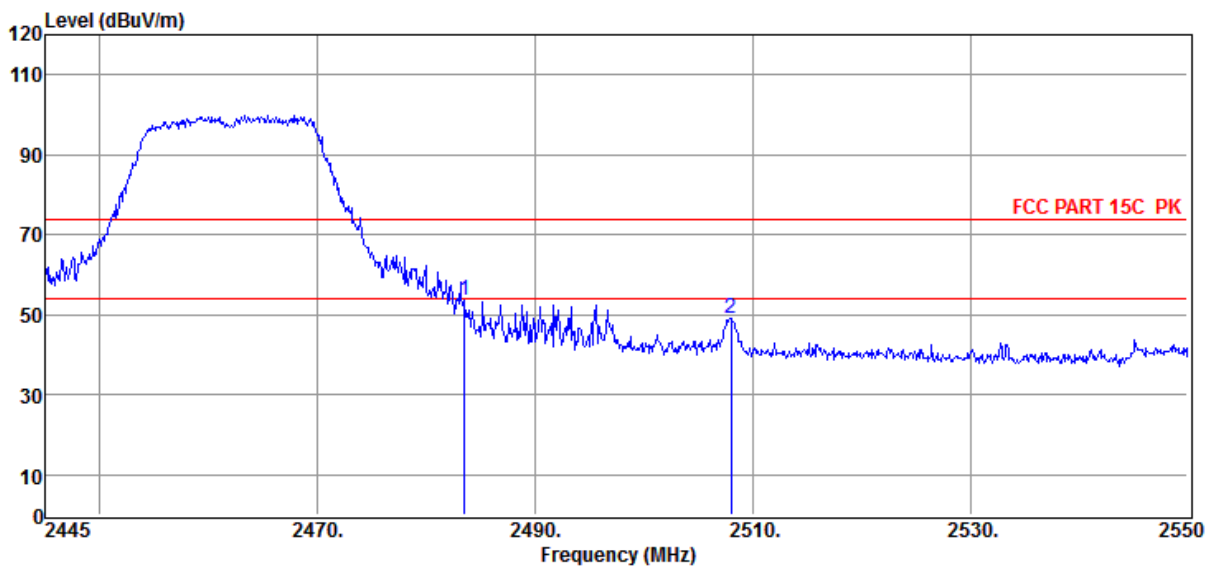
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11G ANT1 6M 2462MHz

Data: 28



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	59.34	27.92	-33.79	53.47	74.00	-20.53	Peak	VERTICAL
2	2508.00	54.54	27.92	-33.53	48.93	74.00	-25.07	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

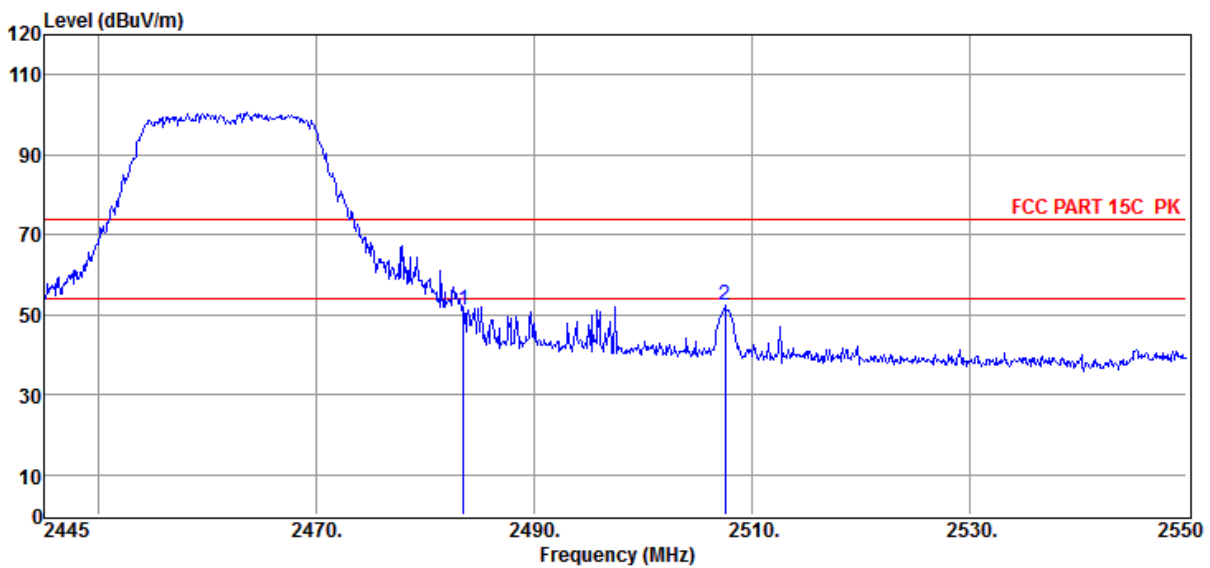
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11G ANT2 6M 2462MHz

Data: 29



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	57.09	27.92	-33.79	51.22	74.00	-22.78	Peak	HORIZONTAL
2	2507.58	57.82	27.92	-33.53	52.21	74.00	-21.79	Peak	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-24-2023

**Tested By** : Sunny

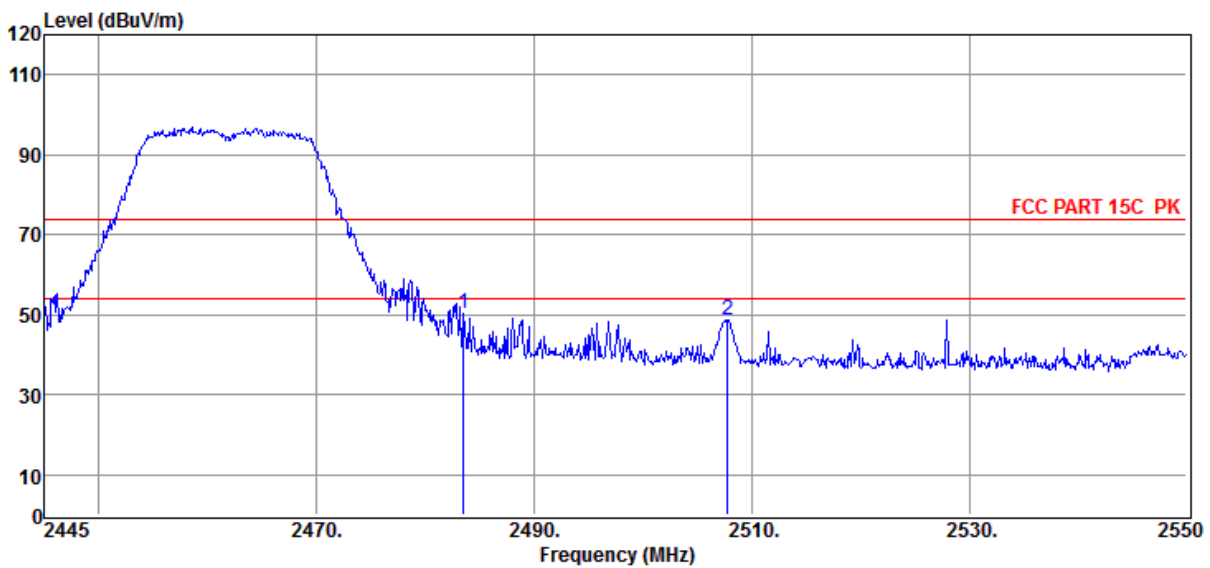
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11G ANT2 6M 2462MHz

Data: 30



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	56.36	27.92	-33.79	50.49	74.00	-23.51	Peak	VERTICAL
2	2507.79	54.25	27.92	-33.53	48.64	74.00	-25.36	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-25-2023

**Tested By** : Sunny

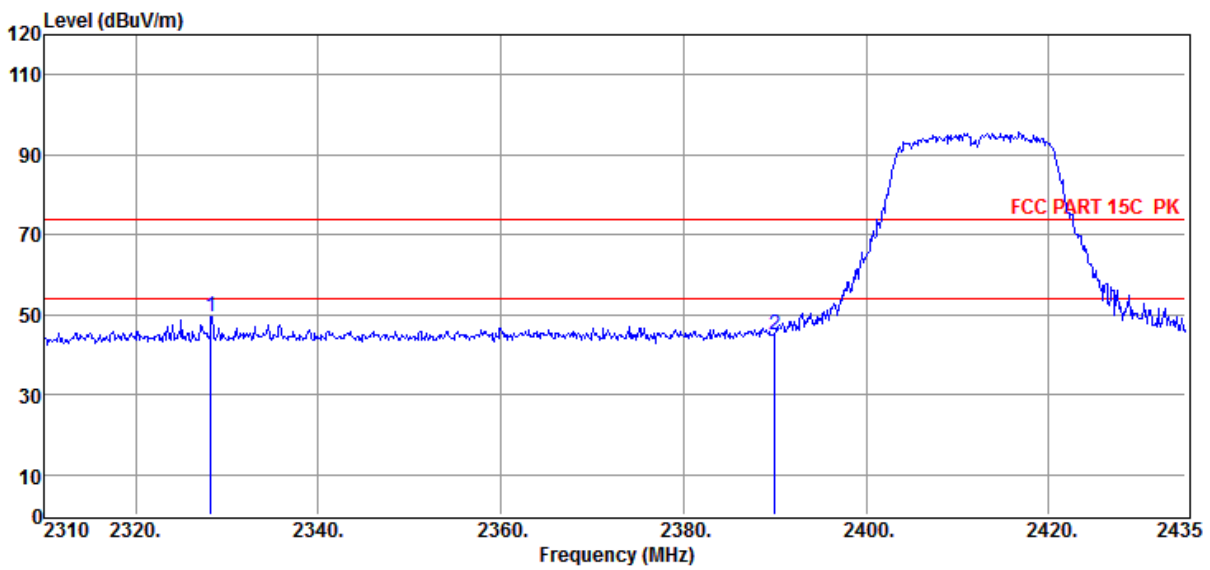
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11n20 ANT1 MCS0 2412MHz

Data: 232



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2328.25	46.75	34.30	-31.67	49.38	74.00	-24.62	Peak	VERTICAL
2	2390.00	41.82	35.00	-31.70	45.12	74.00	-28.88	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-25-2023

**Tested By** : Sunny

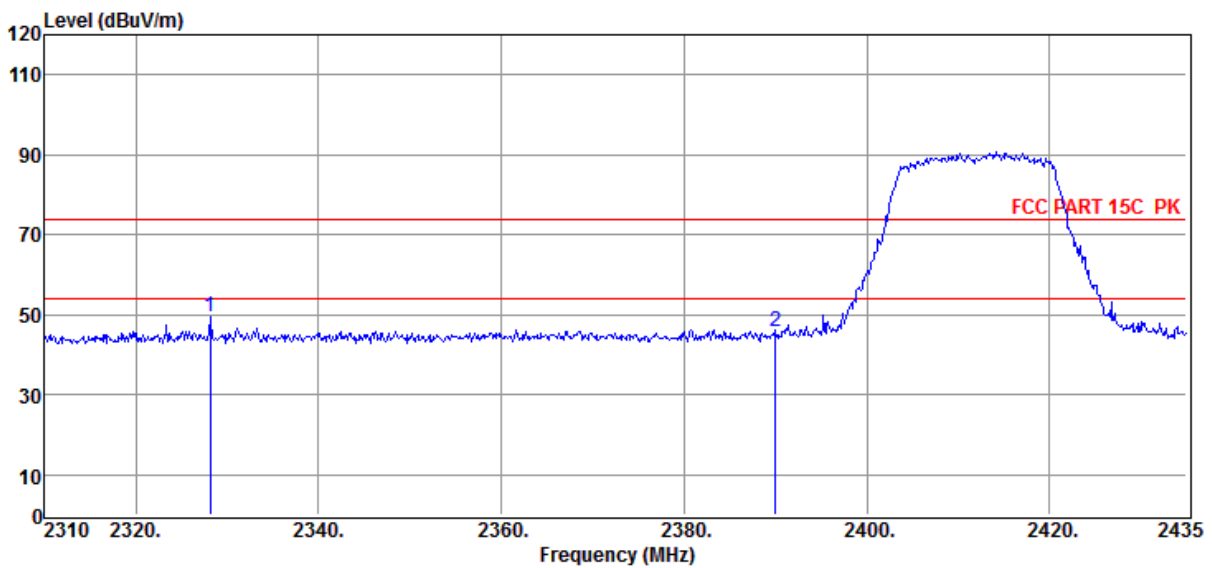
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11n20 ANT1 MCS0 2412MHz

Data: 233



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2328.13	46.70	34.29	-31.67	49.32	74.00	-24.68	Peak	HORIZONTAL
2	2390.00	42.39	35.00	-31.70	45.69	74.00	-28.31	Peak	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-25-2023

**Tested By** : Sunny

**EUT** : Formation performance multi-rotor UAV

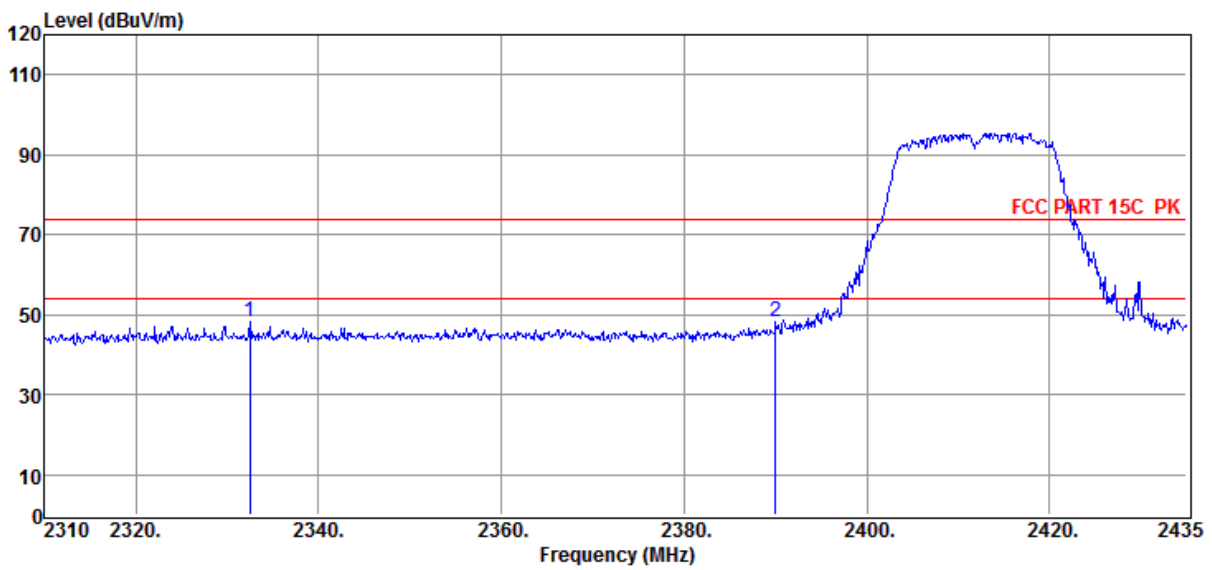
**Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11n20 ANT2 MCS0 2412MHz

Data: 234



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2332.50	45.67	34.35	-31.62	48.40	74.00	-25.60	Peak	VERTICAL
2	2390.00	44.80	35.00	-31.70	48.10	74.00	-25.90	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.



# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-25-2023

**Tested By** : Sunny

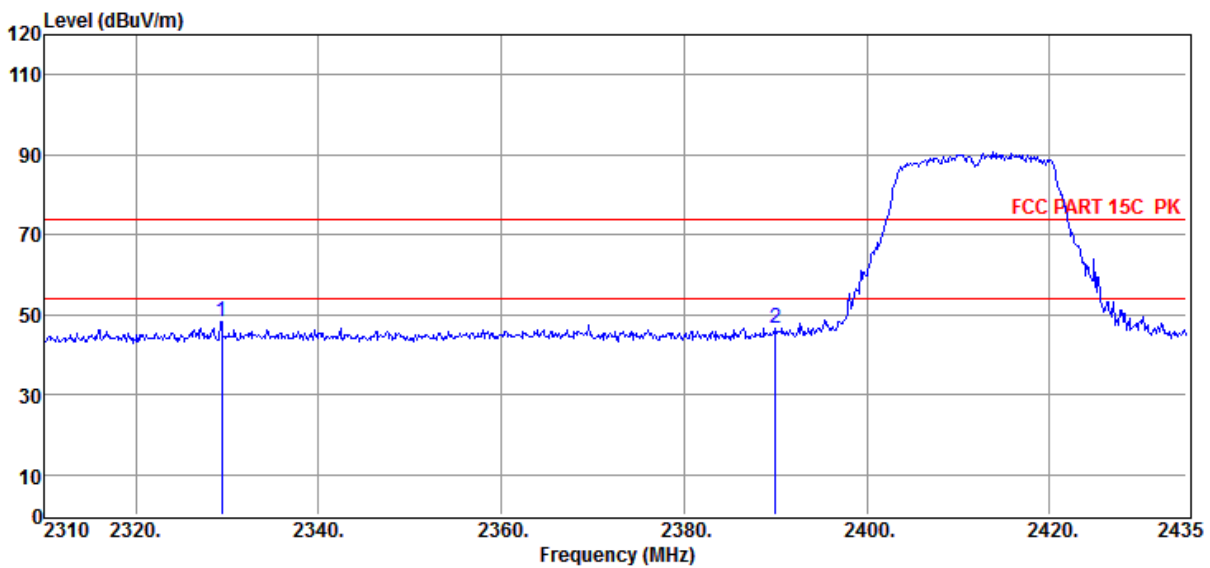
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11n20 ANT2 MCS0 2412MHz

Data: 235



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2329.38	45.56	34.31	-31.65	48.22	74.00	-25.78	Peak	HORIZONTAL
2	2390.00	43.42	35.00	-31.70	46.72	74.00	-27.28	Peak	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-25-2023

**Tested By** : Sunny

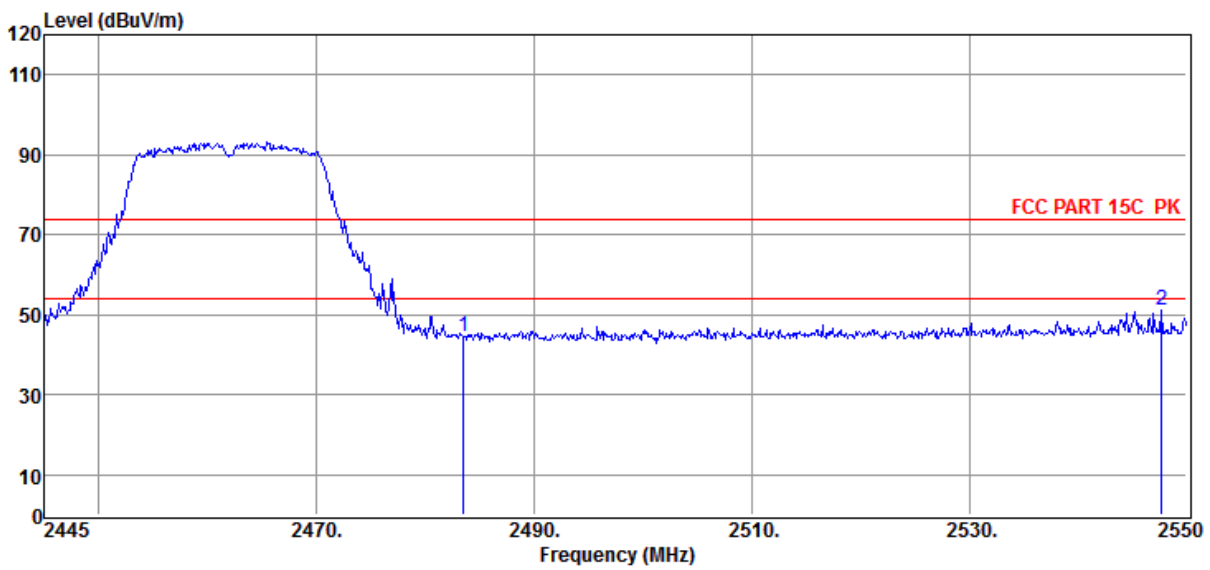
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11n20 ANT1 MCS0 2462MHz

Data: 236



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	40.89	35.10	-31.58	44.41	74.00	-29.59	Peak	HORIZONTAL
2	2547.69	46.27	35.96	-31.23	51.00	74.00	-23.00	Peak	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-25-2023

**Tested By** : Sunny

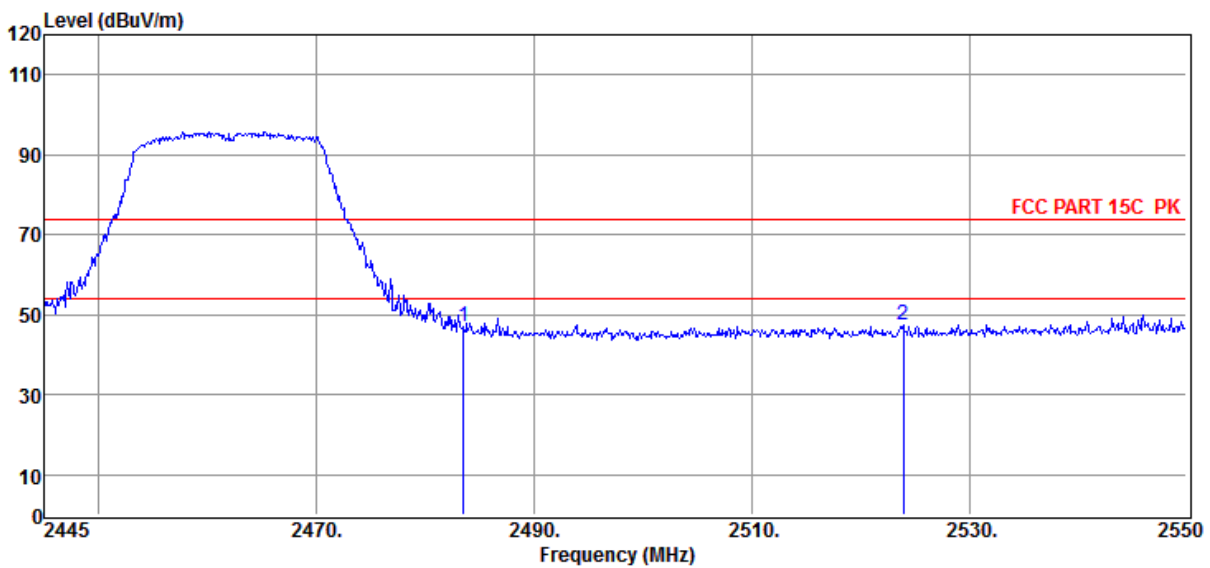
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11n20 ANT1 MCS0 2462MHz

Data: 237



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	43.30	35.10	-31.58	46.82	74.00	-27.18	Peak	VERTICAL
2	2523.96	43.39	35.58	-31.39	47.58	74.00	-26.42	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-25-2023

**Tested By** : Sunny

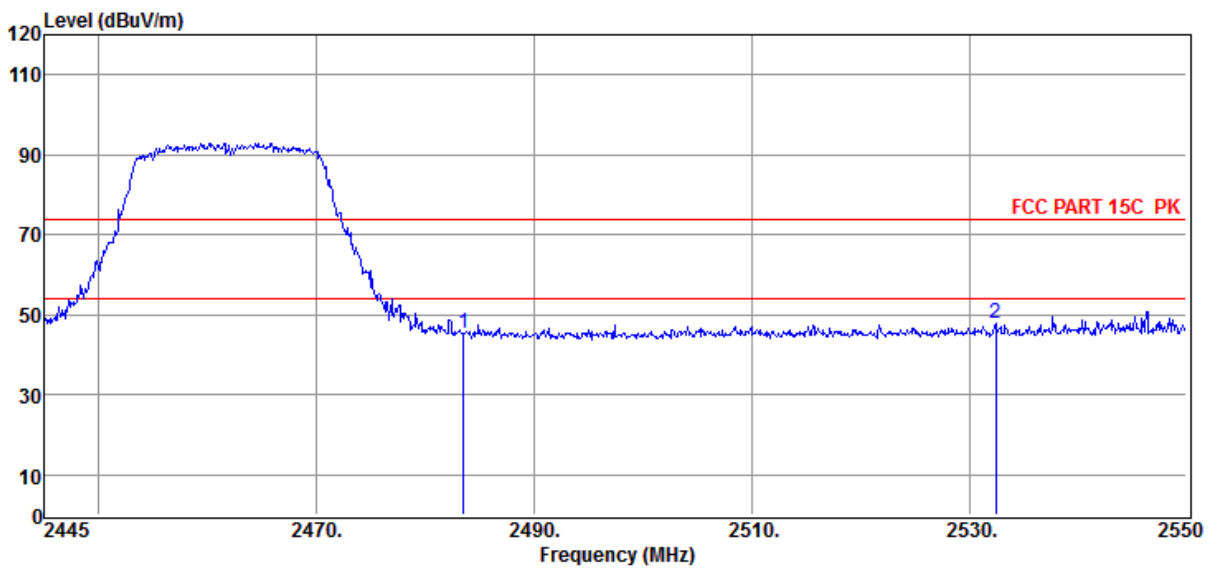
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11n20 ANT2 MCS0 2462MHz

Data: 238



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	41.90	35.10	-31.58	45.42	74.00	-28.58	Peak	HORIZONTAL
2	2532.47	43.25	35.72	-31.33	47.64	74.00	-26.36	Peak	HORIZONTAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

# Radiated Emission Test Result

**Test Site** : 10m Chamber

**Test Date** : 05-25-2023

**Tested By** : Sunny

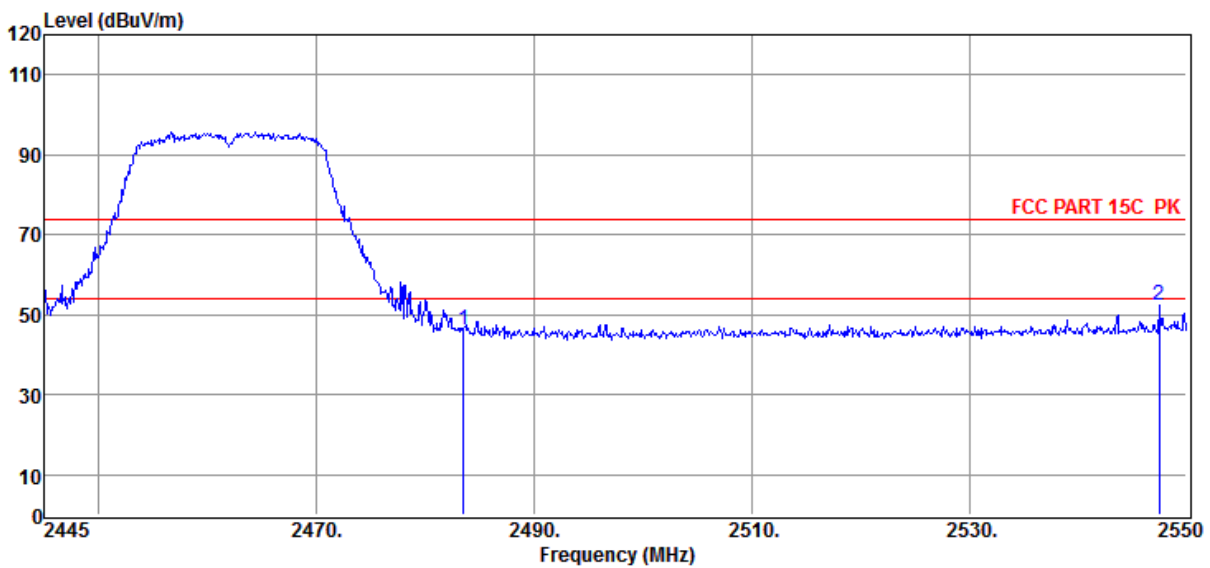
**EUT** : Formation performance multi-rotor UAV **Model Number** : CROSS STARS III

**Power Supply** : Battery

**Test Mode** : Tx Mode

**Memo** : 11n20 ANT2 MCS0 2462MHz

Data: 239

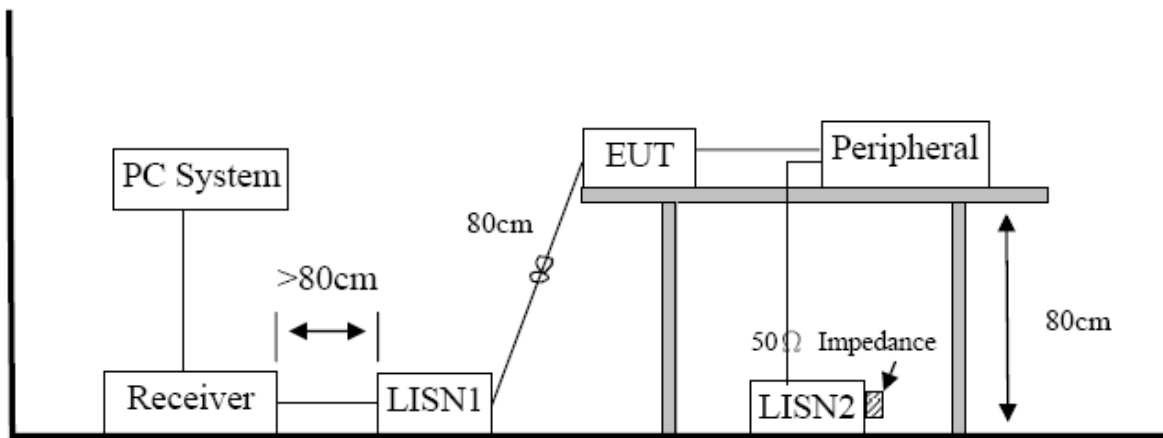


Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	42.79	35.10	-31.58	46.31	74.00	-27.69	Peak	VERTICAL
2	2547.48	47.47	35.96	-31.23	52.20	74.00	-21.80	Peak	VERTICAL

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.  
 4. Margin = Result Level - Limit.

## 11. Power Line Conducted Emission

### 11.1. Block diagram of test setup



### 11.2. Power Line Conducted Emission Limits (Class B)

Frequency	Quasi-Peak Level dB( $\mu$ V)	Average Level dB( $\mu$ V)
150 kHz ~ 500 kHz	66 ~ 56*	56 ~ 46*
500 kHz ~ 5 MHz	56	46
5 MHz ~ 30 MHz	60	50

Note 1: \* Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

### 11.3. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

#### **11.4. Test result**

Not Applicable.

## 12. Antenna Requirements

### 12.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 12.2. Result

The device support equips two antennas, this product was dedicated FPC antennas and other than that furnished by the responsible party shall be used with the device, maximum antenna gain is 4.20 dBi for antenna 1, 3.69 dBi for antenna 2.