RF TEST REPORT

Product Name: CONDOR FLSHERORMAN

Model Name: A20S/A22

FCC ID: 2AWQGA22001

Issued For : SICHUAN AEE AVIATION TECHNOLOGY CO., LTD.

No.1 Changdi Road, AEE Aerospace Intelligent Manufacturing Industrial Base, Lingang Economic Development District, Yibin, Sichuan Province,P.R.China

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China

Report Number:	LGT23J082RF03
Sample Received Date:	Oct. 27, 2023
Date of Test:	Oct. 27, 2023 – Nov. 09, 2023
Date of Issue:	Nov. 09, 2023

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TEST REPORT CERTIFICATION

Applicant:	SICHUAN AEE AVIATION TECHNOLOGY CO., LTD.
Address:	No.1 Changdi Road, AEE Aerospace Intelligent Manufacturing Industrial Base, Lingang Economic Development District, Yibin, Sichuan Province,P.R.China
Manufacturer:	SICHUAN AEE AVIATION TECHNOLOGY CO., LTD.
Address:	No.1 Changdi Road, AEE Aerospace Intelligent Manufacturing Industrial Base, Lingang Economic Development District, Yibin, Sichuan Province,P.R.China
Product Name:	CONDOR FLSHERORMAN
Trademark:	AEE
Model Name:	A20S/A22
Sample Status:	Normal

APPLICASTANDARDS	
STANDARD	TEST RESULTS
FCC Part 15.247, Subpart C ANSI C63.10-2013	PASS

Prepared by:

Zane Shan

Zane Shan
Engineer

Approved by:

Vita Li
Technical Director

SHENZHEN LGT TEST SERVICE CO., LTD. LGT 领冠检测

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Revision History

Rev.	Issue Date	Contents
00	Nov. 09, 2023	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
KDB 558074 D01 15.247 Meas Guidance v05r02.

FCC Part 15.247,Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	N/A	--
15.247 (a)(2)	6dB Bandwidth	PASS	--
15.247 (b)(3)	Output Power	PASS	--
15.209	Radiated Spurious Emission	PASS	--
15.247 (d)	Conducted Spurious & Band Edge Emission	PASS	--
15.247 (e)	Power Spectral Density	PASS	--
15.205	Restricted Band Edge Emission	PASS	--
Part 15.247(d)/ Part 15.209(a)	Band Edge Emission	PASS	--
15.203	Antenna Requirement	PASS	--

NOTE:

(1) 'N/A' denotes test is not applicain this Test Report.

(2) All tests are according to ANSI C63.10-2013.

1.1 TEST FACTORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China
Accreditation Certificate	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	RF Output Power, Conducted	±0.71dB
2	Power Spectral Density, Conducted	±1.57 dB
3	Unwanted Emission, Conducted	±0.63dB
4	Conducted emission	±2.80dB
5	All Emissions, Radiated (0.009-30MHz)	±2.16dB
6	All Emissions, Radiated (30MHz-1GHz)	±4.40dB
7	All Emissions, Radiated (1GHz-18GHz)	±5.49dB
8	All Emissions, Radiated (18GHz-26.5GHz)	±5.64dB
9	Occupied Channel Bandwidth	±3.2 %

Note: The measurement uncertainty is not included in the test result.

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

<table>
<tr><td>Product Name:</td><td>CONDOR FLSHERORMAN</td></tr>
<tr><td>Trademark:</td><td>AEE</td></tr>
<tr><td>Model Name:</td><td>A20S/A22</td></tr>
<tr><td>Series Model:</td><td>N/A</td></tr>
<tr><td>Model Difference:</td><td>N/A</td></tr>
<tr><td>Product Description:</td><td><table>
<tr><td>Operation Frequency:</td><td>2402~2480 MHz</td></tr>
<tr><td>Modulation Type:</td><td>GFSK</td></tr>
<tr><td>Antenna Designation:</td><td>79CH</td></tr>
<tr><td>Antenna Type:</td><td>Copper Tube Antenna</td></tr>
<tr><td>Antenna Gain(dBi):</td><td>2.47</td></tr>
</table></td></tr>
<tr><td>Channel List:</td><td>Please refer to the Note 3.</td></tr>
<tr><td>Rating:</td><td>Battery: 11.1V</td></tr>
<tr><td>Hardware Version:</td><td>N/A</td></tr>
<tr><td>Software Version:</td><td>N/A</td></tr>
<tr><td>Connecting I/O Port(s):</td><td>Please refer to the Note 1.</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
2. The antenna information refers to the manufacturer provide report, applicaonly to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.

3.

Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

2.2 DESCRIPTION OF THE TEST MODES

Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Worst Mode	Description	Data Rate/Modulation
Mode 1	TX CH00	GFSK
Mode 2	TX CH39	GFSK
Mode 3	TX CH78	GFSK

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

AC Conducted Emission

Test Case	
AC Conducted Emission	N/A

2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

Test software Version	Test program: 2.4G	
XCOM_V2.6	Mode Or Modulation type	Power setting
	GFSK	03

2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

Accessories Equipment

Description	Manufacturer	Model	S/N	Rating
Adapter	AEE	AC03	N/A	Input: 100-240V ~ 50/60Hz 1500mA Output: 12.6V, 4A
Power cord	AEE	N/A	N/A	1.1m
Battery	AEE	AD04	N/A	11.1V 6800mAh/75.48Wh 2pcs

Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Laptop	Lenovo	HKF-16	N/A	N/A

Note:

(1) For detachatype I/O cashould be specified the length in cm in『Length』column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiated Test equipment					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date**	**Cal. Until**
EMI Test Receiver	R&S	ESU8	100372	2023.04.13	2024.04.12
Active loop Antenna	ETS	6502	00049544	2022.06.02	2025.06.01
Spectrum Analyzer	Keysight	N9010B	MY60242508	2023.04.10	2024.04.09
Bilog Antenna(30M-1G)	SCHWARZBECK	VULB 9168	2705	2022.06.05	2025.06.04
Horn Antenna(1-18G)	SCHWARZBECK	3115	10SL0060	2022.06.02	2025.06.01
Horn Antenna(18-40G)	A-INFO	LB-180400-KF	J211060273	2022.06.08	2025.06.07
Pre-amplifier(30M-1G)	EMtrace	RP01A	02019	2023.04.07	2024.04.06
Pre-amplifier(1-26.5G)	Agilent	8449B	3008A4722	2023.04.07	2024.04.06
Pre-amplifier(18-40G)	com-mw	LNPA_18-40-01	18050003	2023.04.07	2024.04.06
Wireless Communications Test Set	R&S	CMW 500	137737	2023.04.13	2024.04.12
Temperature & Humidity	KTJ	TA218B	N.A	2023.04.24	2024.04.23
Testing Software	EMC-I_V1.4.0.3_SKET				

Conducted Test equipment					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date**	**Cal. Until**
Signal Analyzer	Keysight	N9010B	MY60242508	2023.04.10	2024.04.09
Wireless Communications Test Set	R&S	CMW 500	137737	2023.04.13	2024.04.12
MXG Vector Signal Generator	Keysight	N5182B	MY59100717	2023.04.07	2024.04.06
Power Sensor	MW	MW100-RFCB	MW220324LG-33	2023.04.13	2024.04.12
Temperature & Humidity	KTJ	TA218B	N.A	2023.04.24	2024.04.23
Temperature& Humidity test chamber	AISRY	LX-1000L	171200018	2023.05.10	2024.05.09
Attenuator	eastsheep	90db	N.A	2023.04.10	2024.04.09
Testing Software	MTS8200_ V2.0.0.0_MW				

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

FREQUENCY (MHz)	Conducted Emissionlimit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

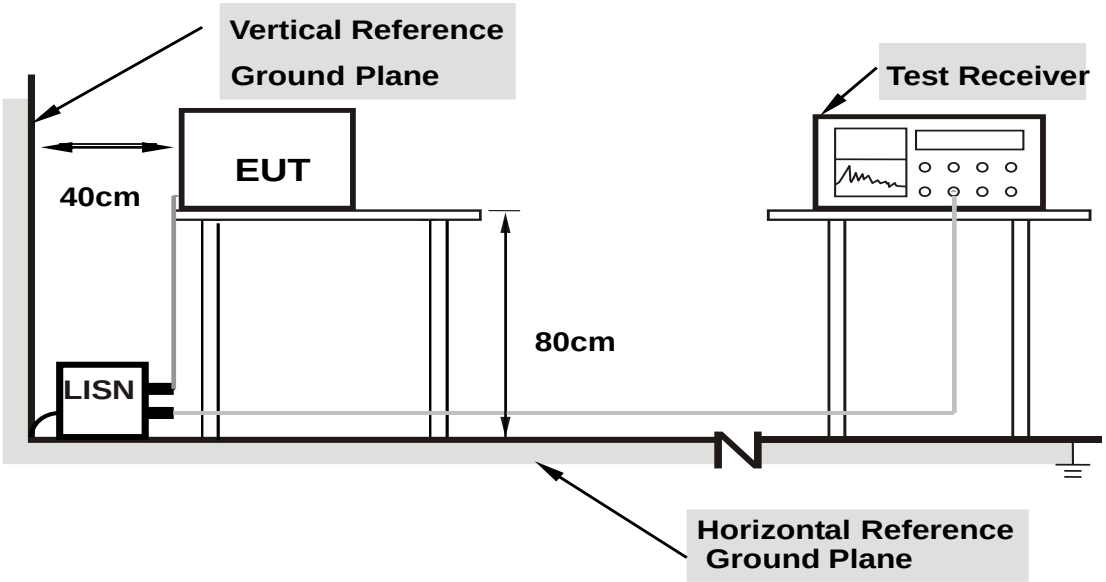
The following tais the setting of the receiver

Receiver Parameters	**Setting**
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.2 TEST PROCEDURE

a. The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the camay be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN is at least 80 cm from the nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

3.1.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.5 TEST RESULT

N/A.

Remark: According to the electrical construction of the EUT, EUT is powered by detachable and rechargeable battery. Charging the battery must be removed it from EUT. Therefore, EUT not directly connected to the public power network, this test is not evaluated.

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) limit in the taand according to ANSI C63.10-2013 below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (0.009MHz - 1000MHz)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (1000MHz-25GHz)

FREQUENCY (MHz)	(dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
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
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	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	Above 38.6
13.36-13.41			

For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP/AV
Start Frequency	9 KHz/150KHz(Peak/QP/AV)
Stop Frequency	150KHz/30MHz(Peak/QP/AV)
RB / VB (emission in restricted band)	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz); 200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP
Start Frequency	30 MHz(Peak/QP)
Stop Frequency	1000 MHz (Peak/QP)
RB / VB (emission in restricted band)	120 KHz / 300 KHz

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 3 MHz(Peak) 1 MHz/1/T MHz(AVG)

For Restricted band

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 2310 to 2430 MHz Upper Band Edge: 2445 to 2500 MHz
RB / VB	1 MHz / 3 MHz(Peak) 1 MHz/1/T MHz(AVG)

Receiver Parameter	**Setting**
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

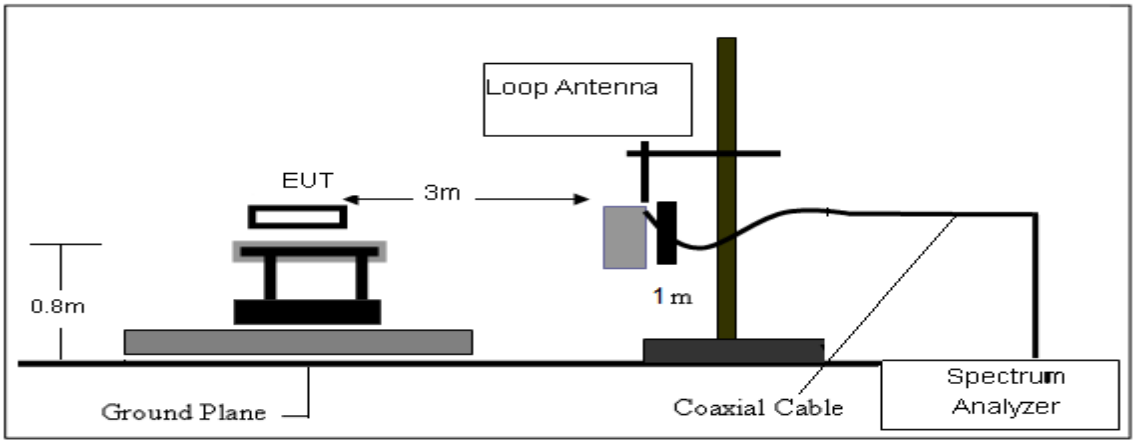
a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
b. The EUT was placed on the top of a rotating ta0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The tawas rotated 360 degree to determine the position of the highest radiation.
c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and QuasiPeak detector mode will be re-measured.
e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

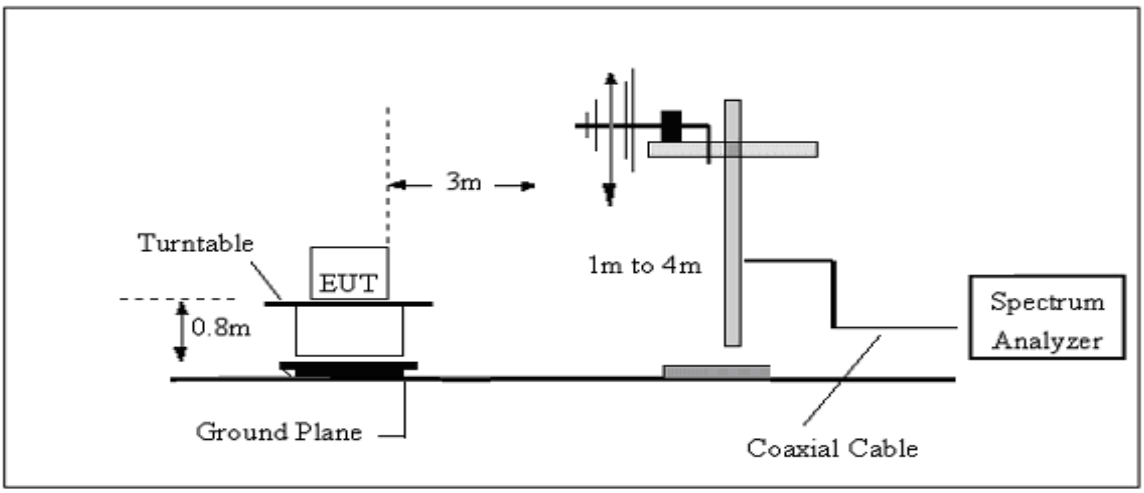
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.3 TEST SETUP

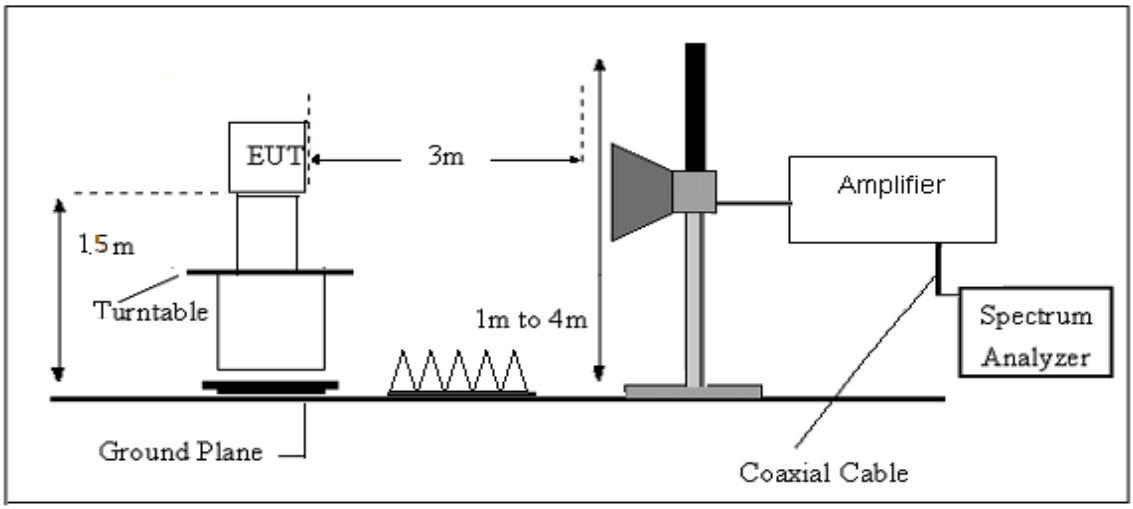
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.2.4 EUT OPERATING CONDITIONS

Please refer to section 3.1.4 of this report.

3.2.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and CaFactor and subtracting theAmplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where

FS = Field Strength

CL = CaAttenuation Factor (CaLoss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

Factor=AF+CL-AG

3.2.6 TEST RESULT

Results of Radiated Emissions (9 KHz~30MHz)

No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Remark
1*	-	-	-	-	-	-	-	See Note

Note:

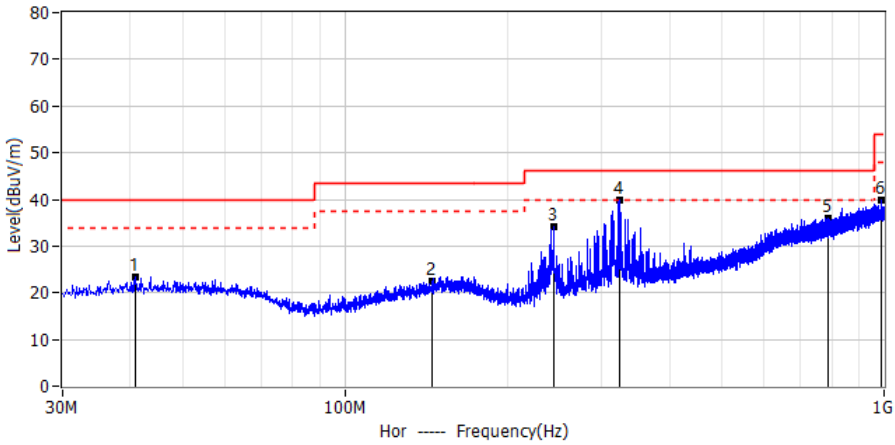
The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and the permissivalue has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

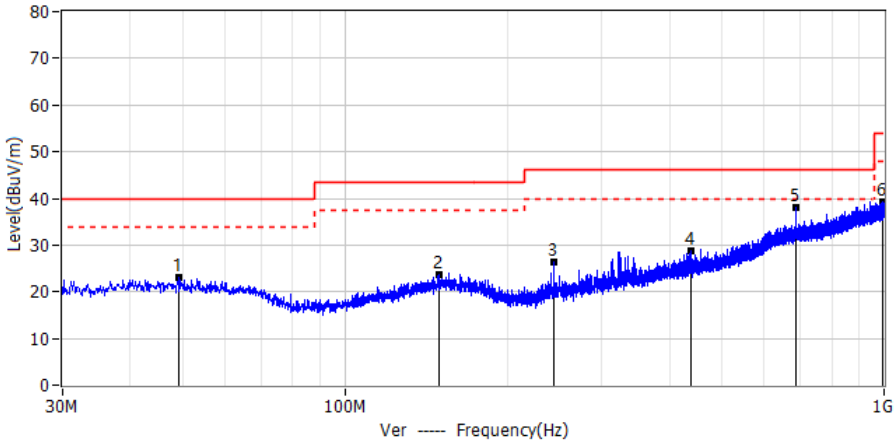
Limit line = specific limits (dBuV) + distance extrapolation factor.

Results of Radiated Emissions (30MHz~1000MHz)

Project: LGT23J082	Test Engineer: Xiangdong Ma
EUT: CONDOR FLSHERORMAN	Temperature: 25.5℃
M/N: A20S/A22	Humidity: 49%RH
Test Voltage: Battery	Test Data: 2023-10-30
Test Mode: TX	
Note:	



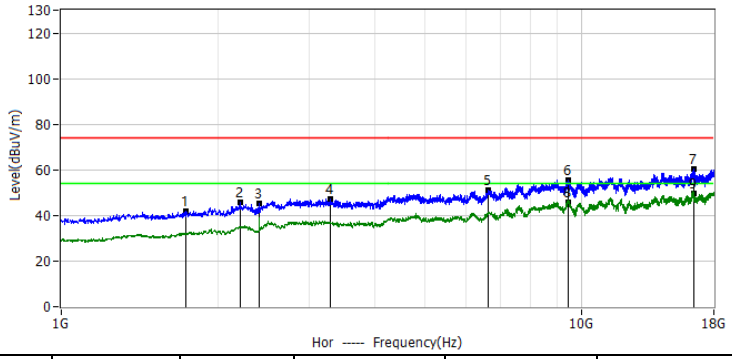
No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	41.034	4.06	19.35	23.41	40.00	-16.59	QP	Hor
2*	145.188	3.04	19.54	22.58	43.50	-20.92	QP	Hor
3*	244.128	16.24	17.91	34.15	46.00	-11.85	QP	Hor
4*	322.455	19.24	20.62	39.86	46.00	-6.14	QP	Hor
5*	785.630	5.06	30.96	36.02	46.00	-9.98	QP	Hor
6*	989.209	5.27	34.52	39.79	54.00	-14.21	QP	Hor



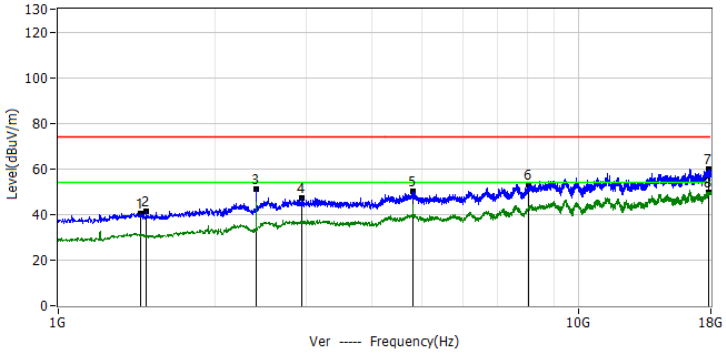
No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	49.158	3.66	19.34	23.00	40.00	-17.00	QP	Ver
2*	149.795	3.63	19.97	23.60	43.50	-19.90	QP	Ver
3*	244.128	8.56	17.91	26.47	46.00	-19.53	QP	Ver
4*	438.249	5.17	23.52	28.69	46.00	-17.31	QP	Ver
5*	687.539	8.40	29.69	38.09	46.00	-7.91	QP	Ver
6*	991.513	4.84	34.53	39.37	54.00	-14.63	QP	Ver

Results of Radiated Emissions (Above 1000MHz)

Project: LGT23J082	Test Engineer: Xiangdong Ma
EUT: CONDOR FLSHERORMAN	Temperature: 27℃
M/N: A20S/A22	Humidity: 57%RH
Test Voltage: Battery	Test Data: 2023-10-31
Test Mode: 2402	
Note:	

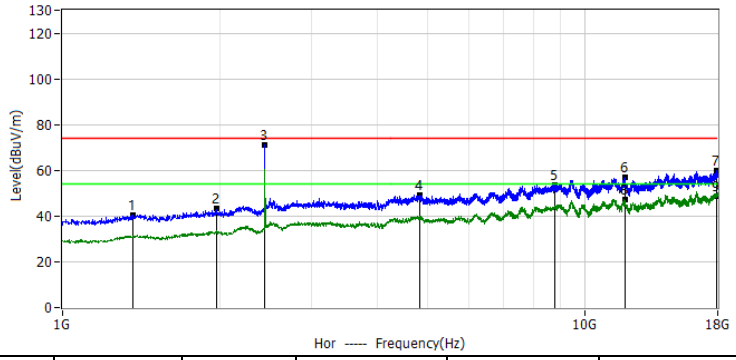


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1733.1000	60.72	-18.90	41.82	74.00	-32.18	PK	Hor
2*	2204.9000	59.66	-14.08	45.58	74.00	-28.42	PK	Hor
3*	2402.5000	57.47	-12.01	45.46	74.00	-28.54	PK	Hor
4*	3286.5000	55.54	-8.43	47.11	74.00	-26.89	PK	Hor
5*	6614.2000	57.68	-6.37	51.31	74.00	-22.69	PK	Hor
6*	9457.5000	56.54	-1.17	55.37	74.00	-18.63	PK	Hor
7*	16470.0000	53.36	6.99	60.35	74.00	-13.65	PK	Hor
8*	9457.5000	46.97	-1.17	45.80	54.00	-8.20	AV	Hor
9*	16470.0000	42.81	6.99	49.80	54.00	-4.20	AV	Hor

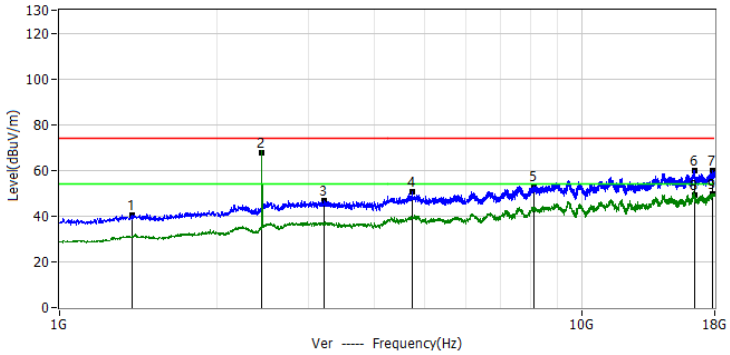


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1439.9000	61.73	-21.17	40.56	74.00	-33.44	PK	Ver
2*	1478.1000	62.35	-20.96	41.39	74.00	-32.61	PK	Ver
3*	2402.5000	62.92	-12.01	50.91	74.00	-23.09	PK	Ver
4*	2946.5000	55.86	-8.62	47.24	74.00	-26.76	PK	Ver
5*	4803.7000	56.14	-5.99	50.15	74.00	-23.85	PK	Ver
6*	8033.7000	57.07	-3.90	53.17	74.00	-20.83	PK	Ver
7*	17791.7000	51.36	8.37	59.73	74.00	-14.27	PK	Ver
8*	17791.7000	41.13	8.37	49.50	54.00	-4.50	AV	Ver

Project: LGT23J082	Test Engineer: Xiangdong Ma
EUT: CONDOR FLSHERORMAN	Temperature: 27℃
M/N: A20S/A22	Humidity: 57%RH
Test Voltage: Battery	Test Data: 2023-10-31
Test Mode: 2440	
Note:	

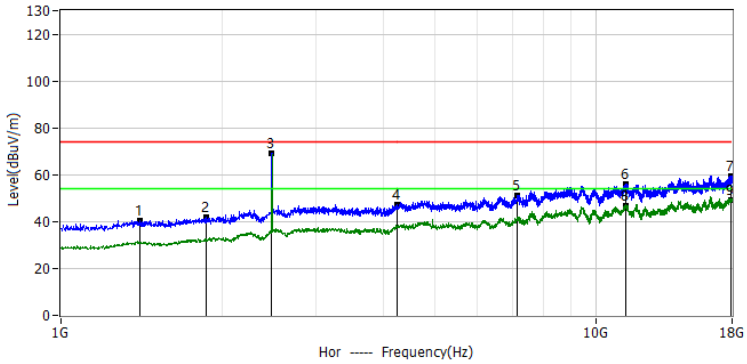


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1363.4000	62.31	-21.67	40.64	74.00	-33.40	PK	Hor
2*	1969.0000	59.63	-16.54	43.09	74.00	-30.90	PK	Hor
3*	2440.7000	/	/	/	/	/	PK	Hor
4*	4844.1000	55.21	-6.02	49.19	74.00	-24.80	PK	Hor
5*	8764.7000	55.59	-1.84	53.75	74.00	-20.20	PK	Hor
6*	11939.5000	54.58	2.18	56.76	74.00	-17.20	PK	Hor
7*	17953.2000	51.19	8.49	59.68	74.00	-14.30	PK	Hor
8*	11939.5000	44.82	2.18	47.00	54.00	-7.00	AV	Hor
9*	17953.2000	40.21	8.49	48.70	54.00	-5.30	AV	Hor

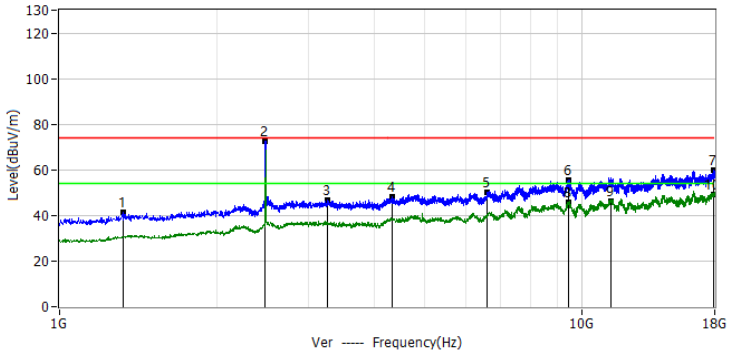


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1376.1000	62.18	-21.57	40.61	74.00	-33.39	PK	Ver
2*	2440.0000	/	/	/	/	/	PK	Ver
3*	3210.0000	55.09	-8.41	46.68	74.00	-27.32	PK	Ver
4*	4731.5000	56.41	-5.93	50.48	74.00	-23.52	PK	Ver
5*	8089.0000	56.73	-3.75	52.98	74.00	-21.02	PK	Ver
6*	16470.0000	52.73	6.99	59.72	74.00	-14.28	PK	Ver
7*	17798.1000	51.46	8.38	59.84	74.00	-14.16	PK	Ver
8*	16470.0000	42.41	6.99	49.40	54.00	-4.60	AV	Ver
9*	17798.1000	41.12	8.38	49.50	54.00	-4.50	AV	Ver

Project: LGT23J082	Test Engineer: Xiangdong Ma
EUT: CONDOR FLSHERORMAN	Temperature: 27℃
M/N: A20S/A22	Humidity: 57%RH
Test Voltage: Battery	Test Data: 2023-10-31
Test Mode: 2480	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1408.0000	61.81	-21.34	40.47	74.00	-33.53	PK	Hor
2*	1873.4000	59.31	-17.51	41.80	74.00	-32.20	PK	Hor
3*	2480.0000	/	/	/	/	/	PK	Hor
4*	4249.1000	54.18	-6.82	47.36	74.00	-26.64	PK	Hor
5*	7134.9000	56.54	-5.31	51.23	74.00	-22.77	PK	Hor
6*	11395.5000	54.28	1.86	56.14	74.00	-17.86	PK	Hor
7*	17921.4000	51.12	8.46	59.58	74.00	-14.42	PK	Hor
8*	11395.5000	44.94	1.86	46.80	54.00	-7.20	AV	Hor
9*	17921.4000	40.64	8.46	49.10	54.00	-4.90	AV	Hor

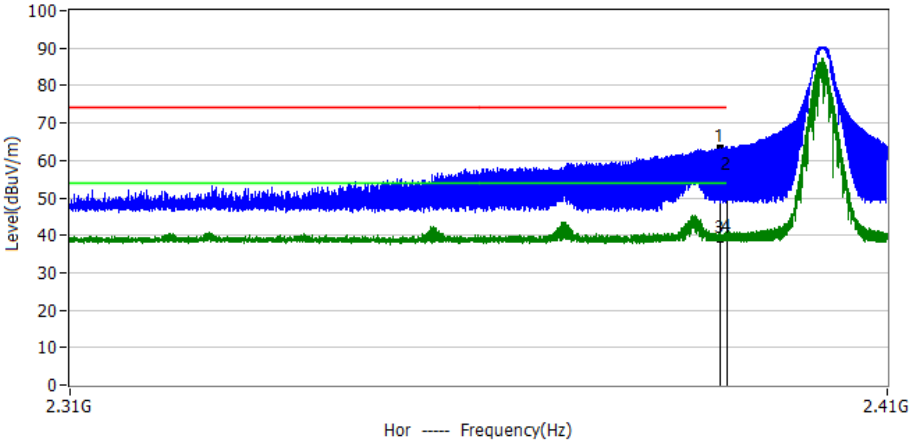


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1323.0000	63.55	-21.99	41.56	74.00	-32.40	PK	Ver
2*	2480.0000	/	/	/	/	/	PK	Ver
3*	3267.4000	55.02	-8.43	46.59	74.00	-27.41	PK	Ver
4*	4346.9000	54.62	-6.40	48.22	74.00	-25.78	PK	Ver
5*	6599.4000	56.69	-6.39	50.30	74.00	-23.70	PK	Ver
6*	9466.0000	56.82	-1.17	55.65	74.00	-18.35	PK	Ver
7*	17902.2000	51.38	8.45	59.83	74.00	-14.17	PK	Ver
8*	9466.0000	46.77	-1.17	45.60	54.00	-8.40	AV	Ver
9*	11384.9000	44.34	1.86	46.20	54.00	-7.80	AV	Ver
10*	17902.2000	40.85	8.45	49.30	54.00	-4.70	AV	Ver

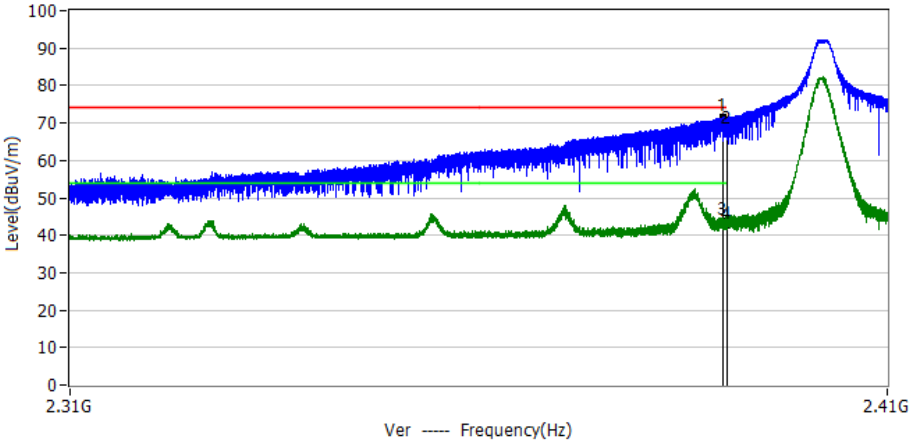
Remark:
In frequency ranges 18~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.

3.2.7 TEST RESULTS(Band edge Requirements)

Project: LGT23J082	Test Engineer: Xiangdong Ma
EUT: CONDOR FLSHERORMAN	Temperature: 27℃
M/N: A20S/A22	Humidity: 57%RH
Test Voltage: Battery	Test Data: 2023-10-31
Test Mode: 2402	
Note:	

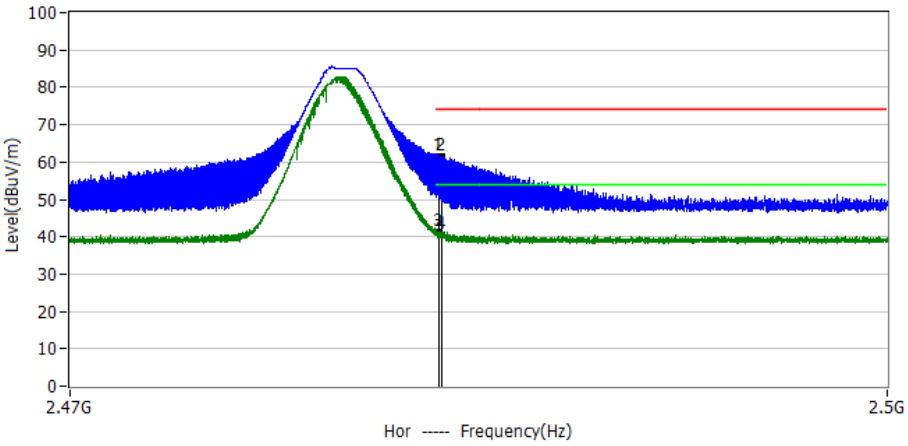


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2389.2000	29.35	33.96	63.31	74.00	-10.69	PK	Hor
2*	2390.0000	21.85	33.95	55.80	74.00	-18.20	PK	Hor
3*	2389.2000	5.04	33.96	39.00	54.00	-15.00	AV	Hor
4*	2390.0000	5.55	33.95	39.50	54.00	-14.50	AV	Hor

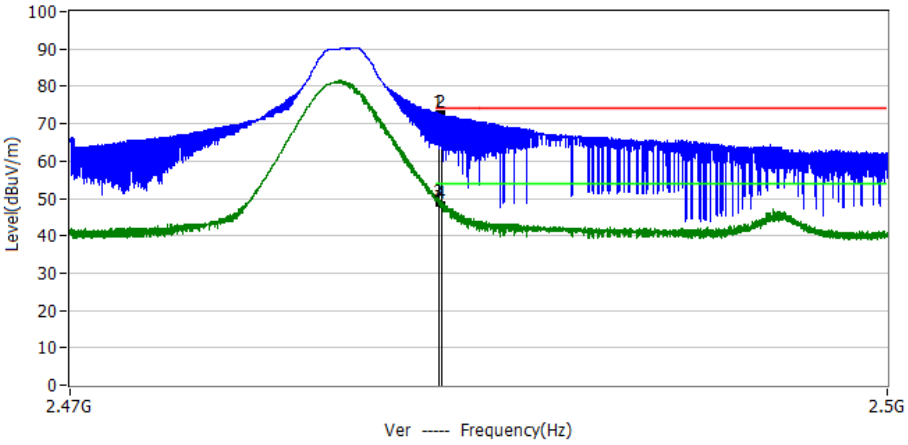


No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2389.6000	37.63	33.95	71.58	74.00	-2.42	PK	Ver
2*	2390.0000	34.25	33.95	68.20	74.00	-5.80	PK	Ver
3*	2389.6000	10.05	33.95	44.00	54.00	-10.00	AV	Ver
4*	2390.0000	8.75	33.95	42.70	54.00	-11.30	AV	Ver

Project: LGT23J082	Test Engineer: Xiangdong Ma
EUT: CONDOR FLSHERORMAN	Temperature: 27℃
M/N: A20S/A22	Humidity: 57%RH
Test Voltage: Battery	Test Data: 2023-10-31
Test Mode: 2480	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2483.5000	27.37	34.13	61.50	74.00	-12.50	PK	Hor
2*	2483.6000	27.37	34.13	61.50	74.00	-12.50	PK	Hor
3*	2483.5000	7.07	34.13	41.20	54.00	-12.80	AV	Hor
4*	2483.6000	6.37	34.13	40.50	54.00	-13.50	AV	Hor



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2483.5000	38.47	34.13	72.60	74.00	-1.40	PK	Ver
2*	2483.6000	38.48	34.13	72.61	74.00	-1.39	PK	Ver
3*	2483.5000	14.67	34.13	48.80	54.00	-5.20	AV	Ver
4*	2483.6000	14.37	34.13	48.50	54.00	-5.50	AV	Ver

4. CONDUCTED SPURIOUS & BAND EDGE EMISSION

4.1 LIMIT

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

4.2 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 2300 to 2432 MHz Upper Band Edge: 2442 to 2500 MHz
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP

The EUT is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.
Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

4.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

4.6 TEST RESULTS

For the measurement records, refer to the appendix I.

5. POWER SPECTRAL DENSITY TEST

5.1 LIMIT

FCC Part15.247 , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	≤8 dBm (RBW ≥3KHz)	2400-2483.5	PASS

5.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the 100 kHz ≥ RBW ≥3 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP

5.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

5.6 TEST RESULTS

For the measurement records, refer to the appendix I.

6. BANDWIDTH TEST

6.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	≥500KHz (6dB bandwidth)	2400-2483.5	PASS

6.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW≥3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be≥6 dB.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

6.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

6.6 TEST RESULTS

For the measurement records, refer to the appendix I.

7. PEAK OUTPUT POWER TEST

7.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5	PASS

7.2 TEST PROCEDURE

One of the following procedures may be used to determine the maximum peak conducted output power of a DTS EUT.

RBW ≥ DTS bandwidth

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is availato perform the measurement:

a) Set the RBW ≥ DTS bandwidth.
b) Set VBW ≥ [3 × RBW].
c) Set span ≥ [3 × RBW].
d) Sweep time = auto couple.
e) Detector = peak.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use peak marker function to determine the peak amplitude level.

Integrated band power method:

The following procedure can be used when the maximum availaRBW of the instrument is less than the

DTS bandwidth:

a) Set the RBW = 1 MHz.
b) Set the VBW ≥ [3 × RBW].
c) Set the span ≥ [1.5 × DTS bandwidth].
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select the peak detector). If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS channel bandwidth.

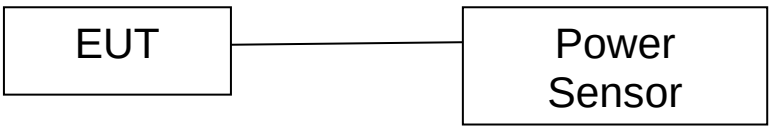
PKPM1 Peak power meter method:

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

7.6 TEST RESULTS

For the measurement records, refer to the appendix I.

8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsipartyshall be used with the device.

8.2 EUT ANTENNA

The EUT antenna is Copper Tube Antenna. It comply with the standard requirement.

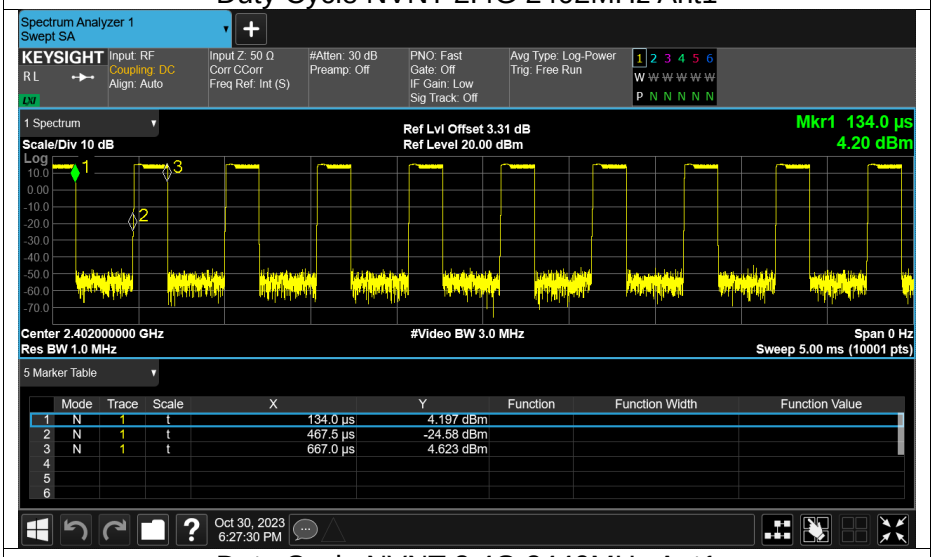
APPENDIX I - TEST RESULTS

Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	2.4G	2402	Ant1	37.43	4.27	5.01
NVNT	2.4G	2440	Ant1	37.43	4.27	5.01
NVNT	2.4G	2480	Ant1	37.43	4.27	5.01

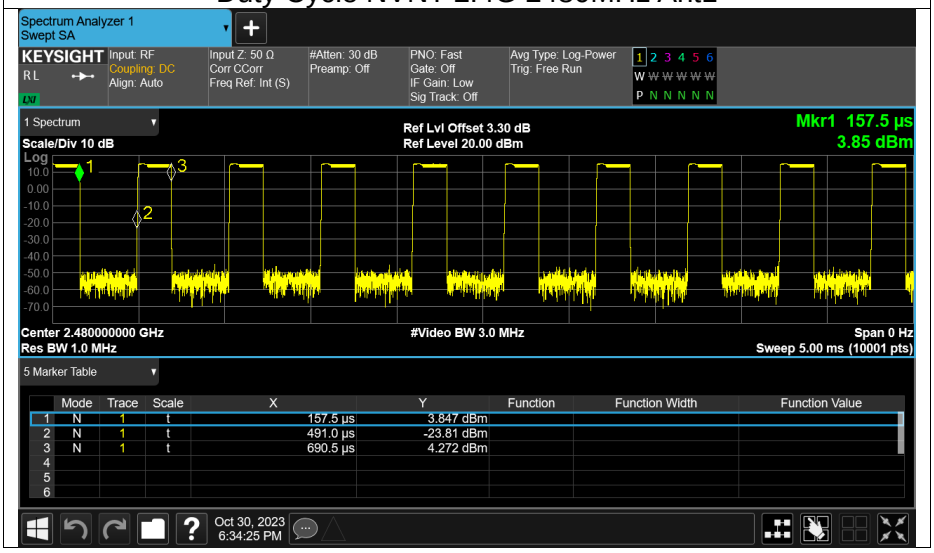
Test Graphs

Duty Cycle NVNT 2.4G 2402MHz Ant1



Duty Cycle NVNT 2.4G 2440MHz Ant1

Duty Cycle NVNT 2.4G 2480MHz Ant1



Maximum Peak Conducted Output Power

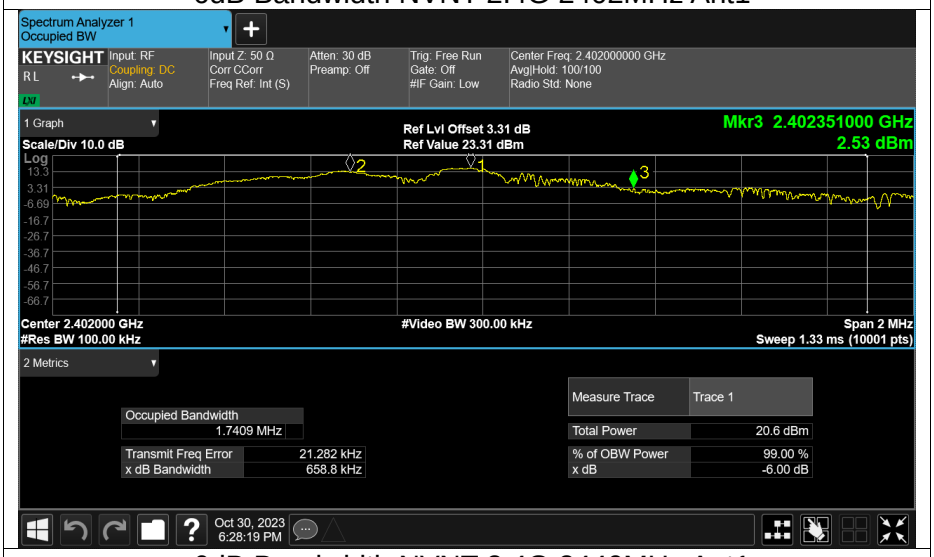
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	2.4G	2402	Ant1	15.29	30	Pass
NVNT	2.4G	2440	Ant1	15.44	30	Pass
NVNT	2.4G	2480	Ant1	15.05	30	Pass

-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	2.4G	2402	Ant1	0.659	0.5	Pass
NVNT	2.4G	2440	Ant1	0.663	0.5	Pass
NVNT	2.4G	2480	Ant1	0.66	0.5	Pass

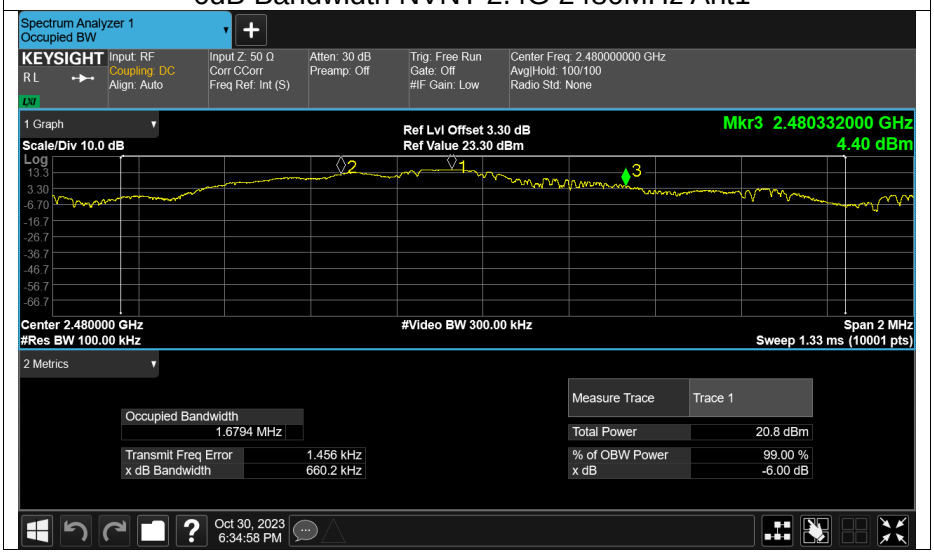
Test Graphs

-6dB Bandwidth NVNT 2.4G 2402MHz Ant1



-6dB Bandwidth NVNT 2.4G 2440MHz Ant1

-6dB Bandwidth NVNT 2.4G 2480MHz Ant1

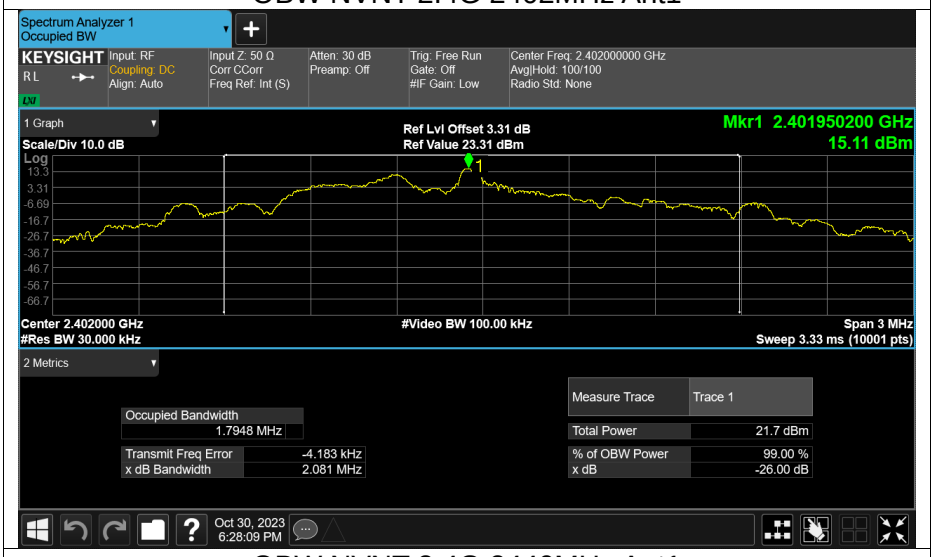


Occupied Channel Bandwidth

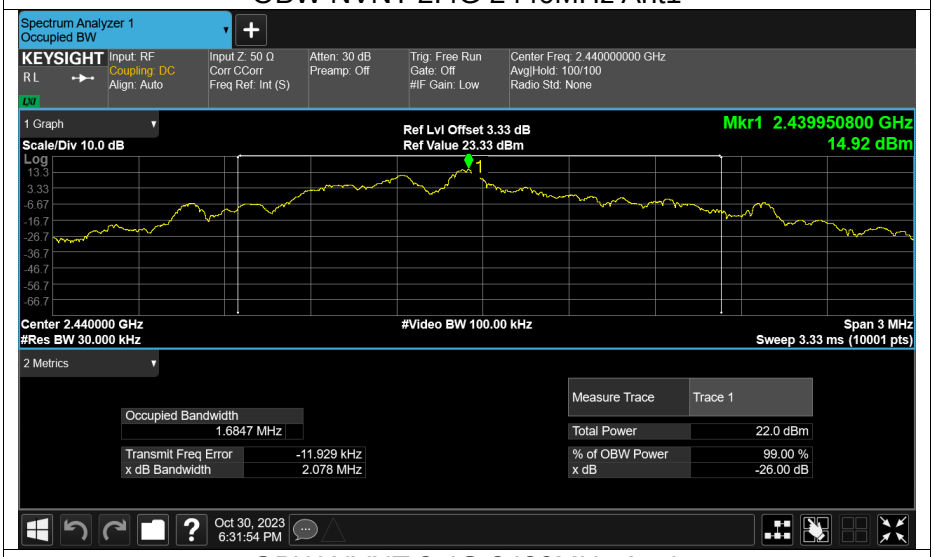
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	2.4G	2402	Ant1	1.795
NVNT	2.4G	2440	Ant1	1.685
NVNT	2.4G	2480	Ant1	1.69

Test Graphs

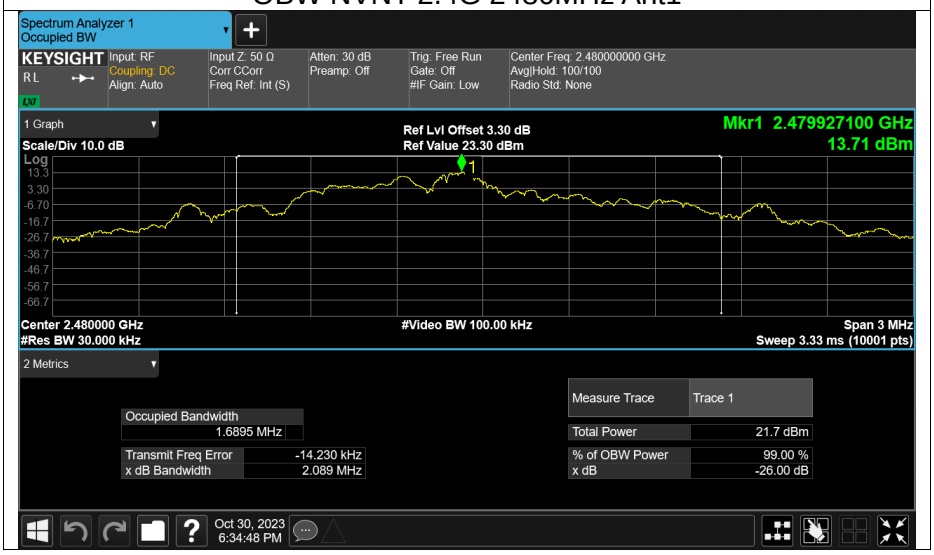
OBW NVNT 2.4G 2402MHz Ant1



OBW NVNT 2.4G 2440MHz Ant1



OBW NVNT 2.4G 2480MHz Ant1

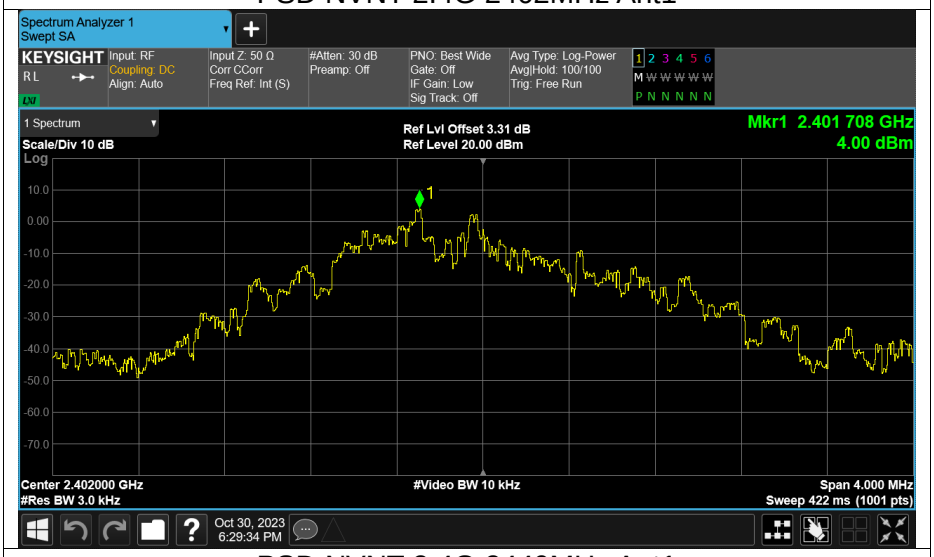


Maximum Power Spectral Density Level

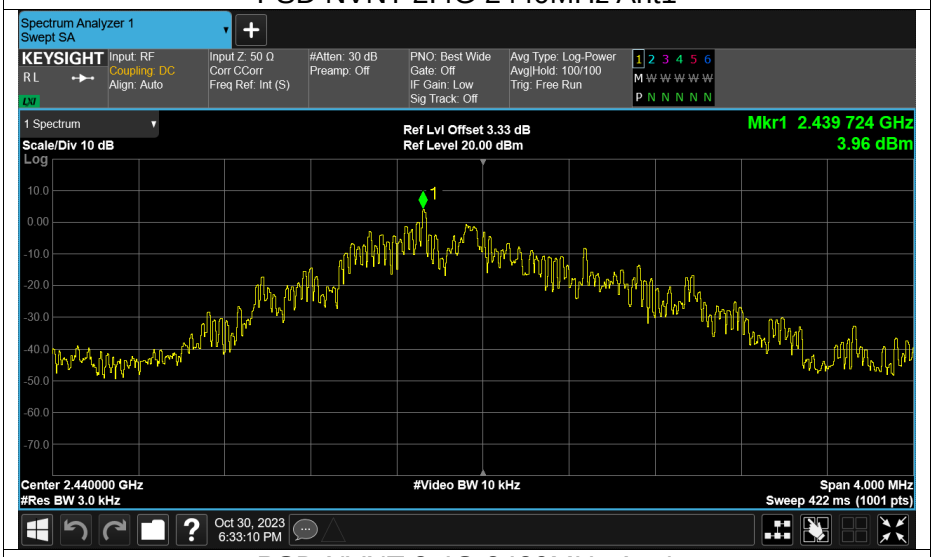
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	2.4G	2402	Ant1	4	8	Pass
NVNT	2.4G	2440	Ant1	3.96	8	Pass
NVNT	2.4G	2480	Ant1	4.07	8	Pass

Test Graphs

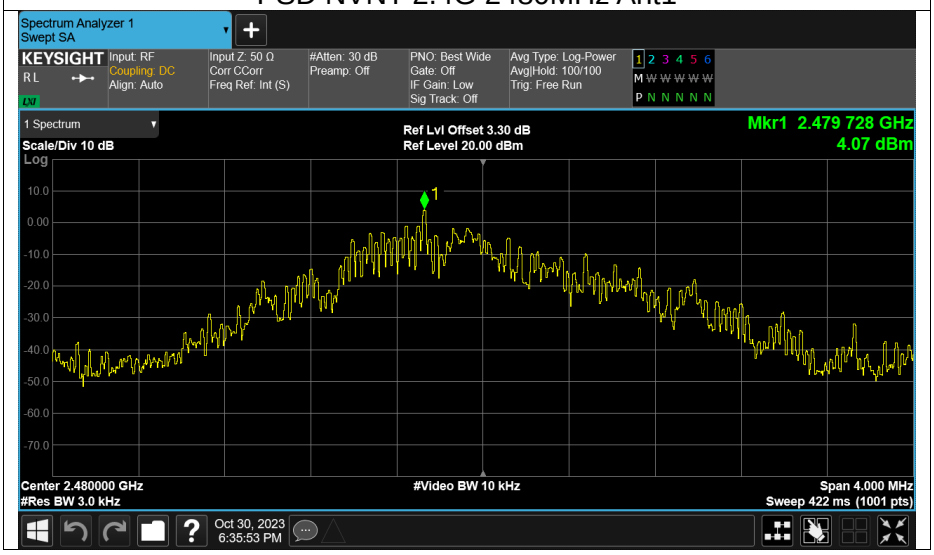
PSD NVNT 2.4G 2402MHz Ant1



PSD NVNT 2.4G 2440MHz Ant1



PSD NVNT 2.4G 2480MHz Ant1

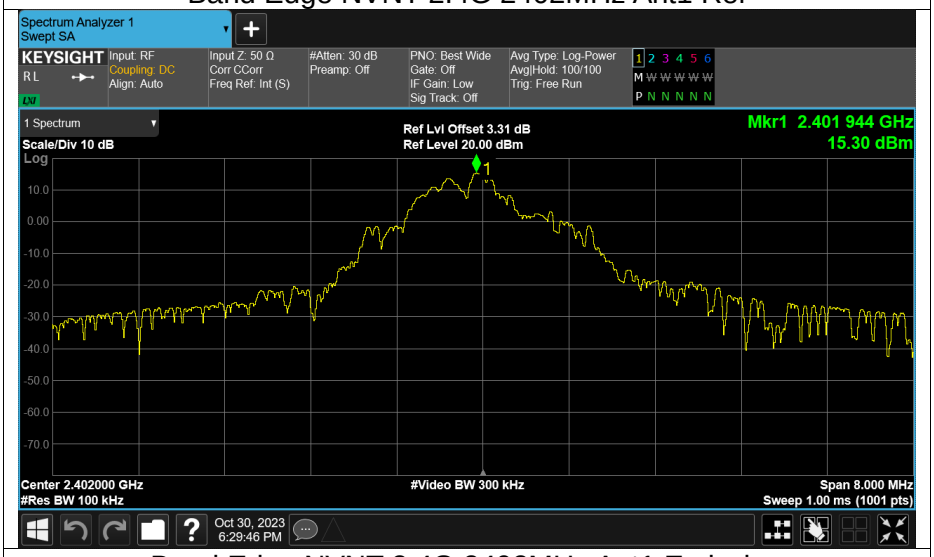


Band Edge

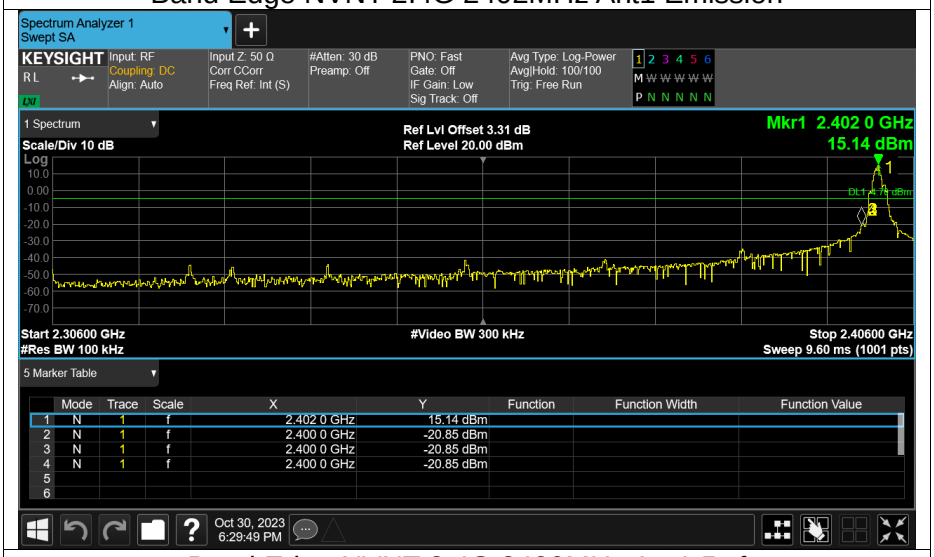
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	2.4G	2402	Ant1	-36.14	-20	Pass
NVNT	2.4G	2480	Ant1	-43.01	-20	Pass

Test Graphs

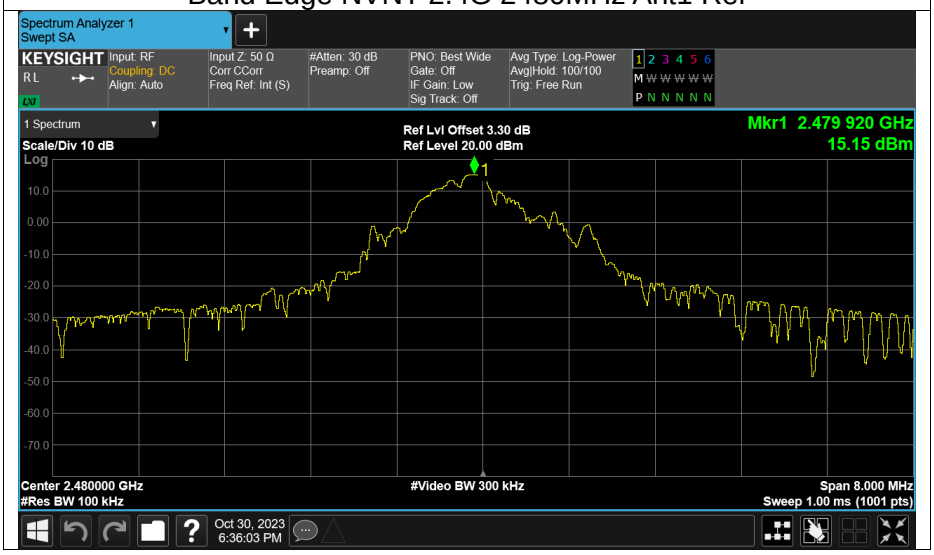
Band Edge NVNT 2.4G 2402MHz Ant1 Ref



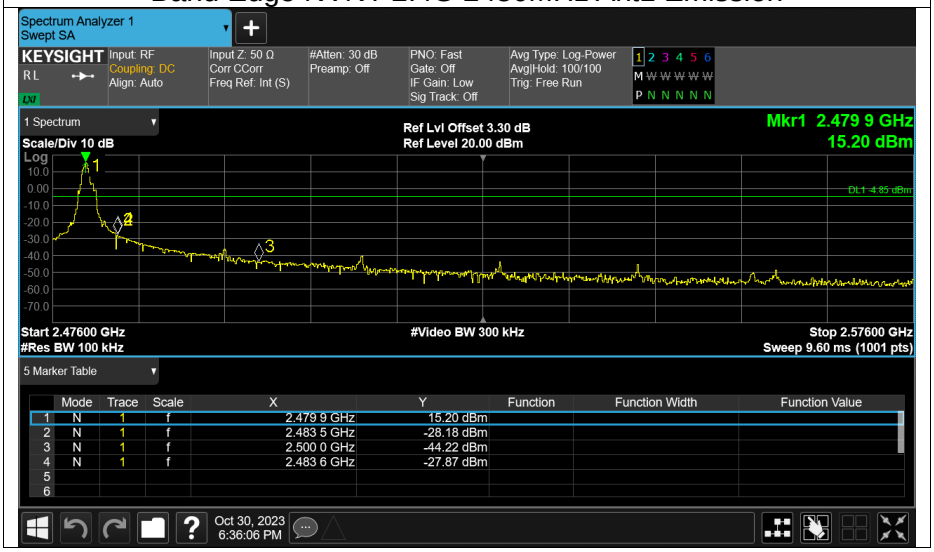
Band Edge NVNT 2.4G 2402MHz Ant1 Emission



Band Edge NVNT 2.4G 2480MHz Ant1 Ref



Band Edge NVNT 2.4G 2480MHz Ant1 Emission

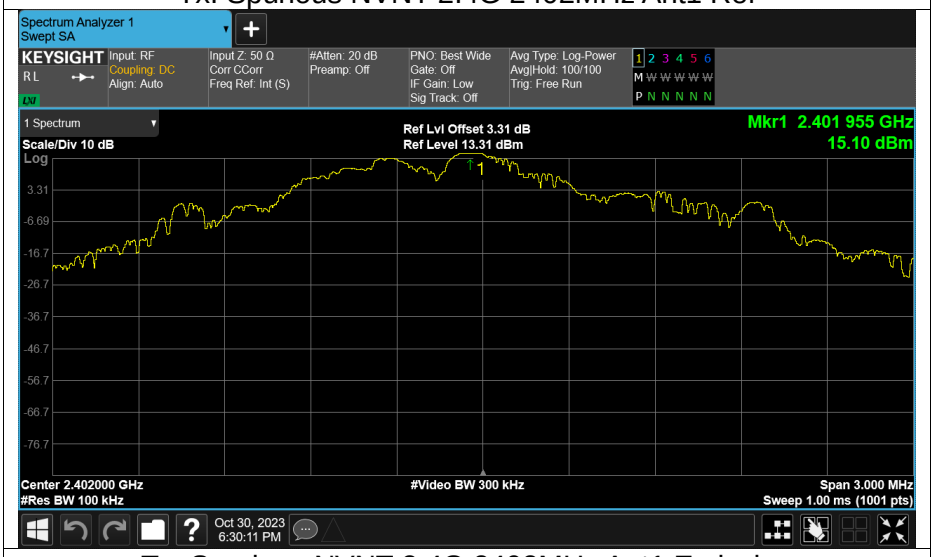


Conducted RF Spurious Emission

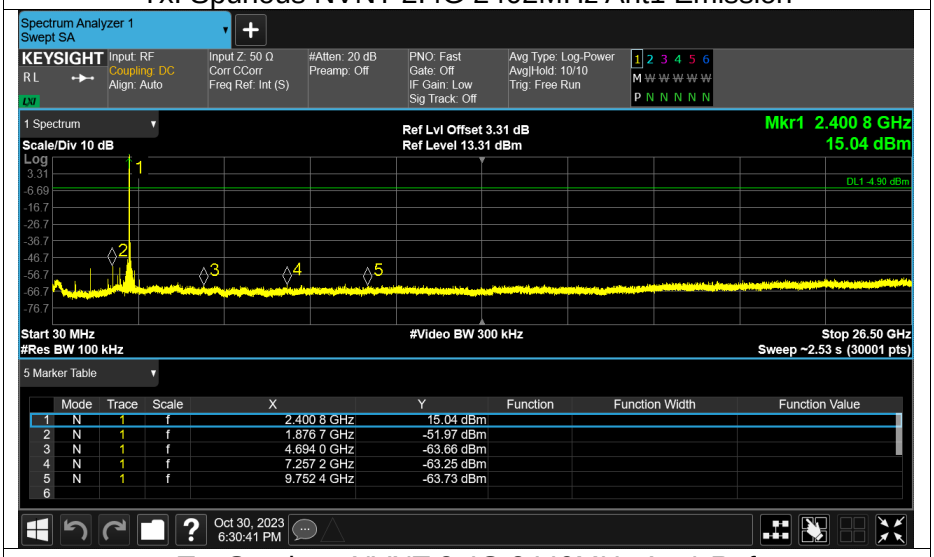
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	2.4G	2402	Ant1	-67.06	-20	Pass
NVNT	2.4G	2440	Ant1	-61.66	-20	Pass
NVNT	2.4G	2480	Ant1	-58.76	-20	Pass

Test Graphs

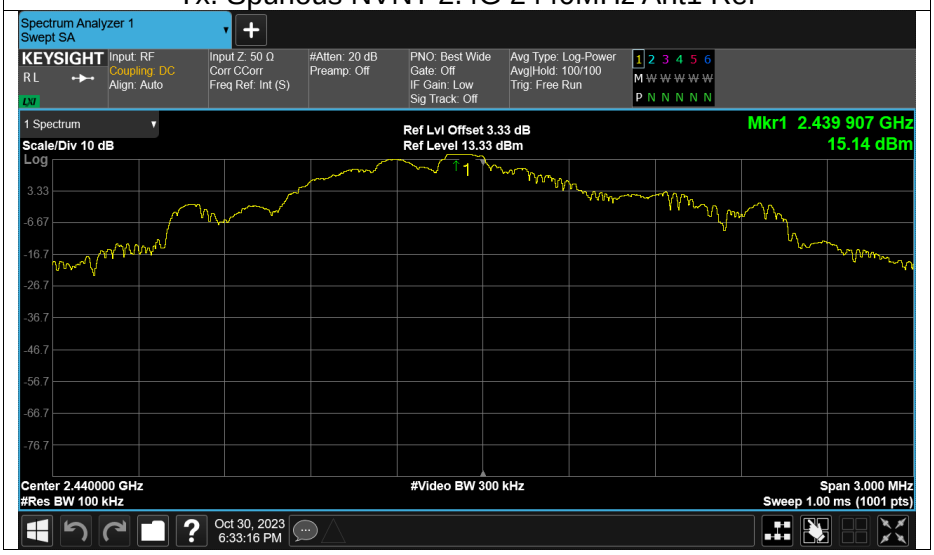
Tx. Spurious NVNT 2.4G 2402MHz Ant1 Ref



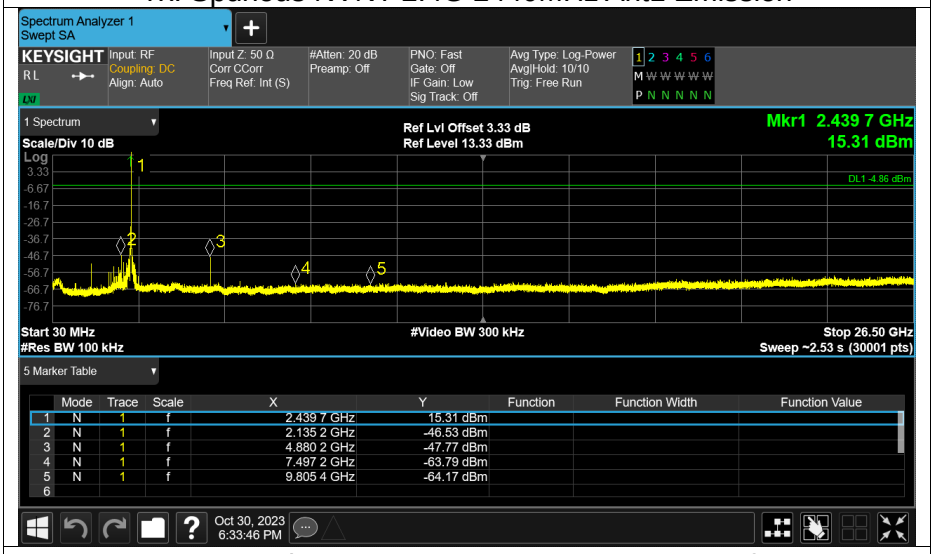
Tx. Spurious NVNT 2.4G 2402MHz Ant1 Emission



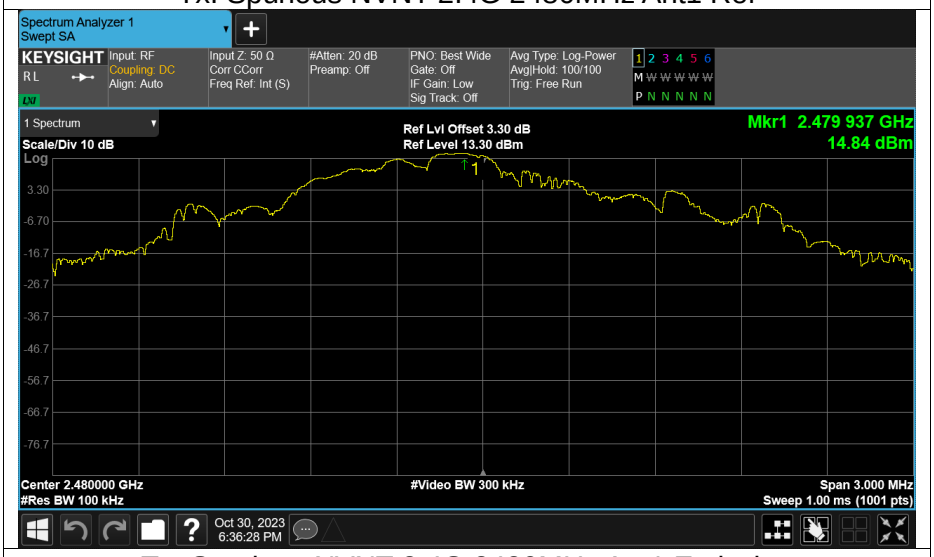
Tx. Spurious NVNT 2.4G 2440MHz Ant1 Ref



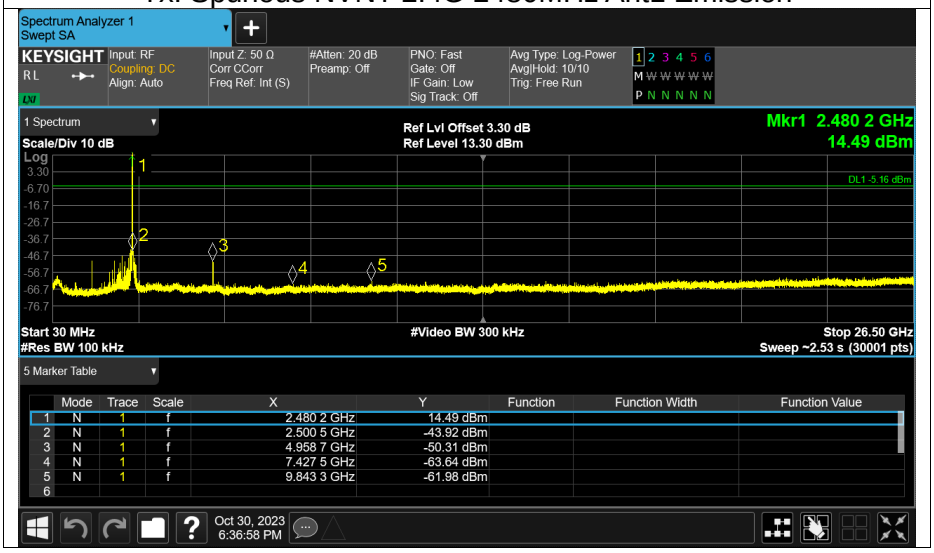
Tx. Spurious NVNT 2.4G 2440MHz Ant1 Emission



Tx. Spurious NVNT 2.4G 2480MHz Ant1 Ref

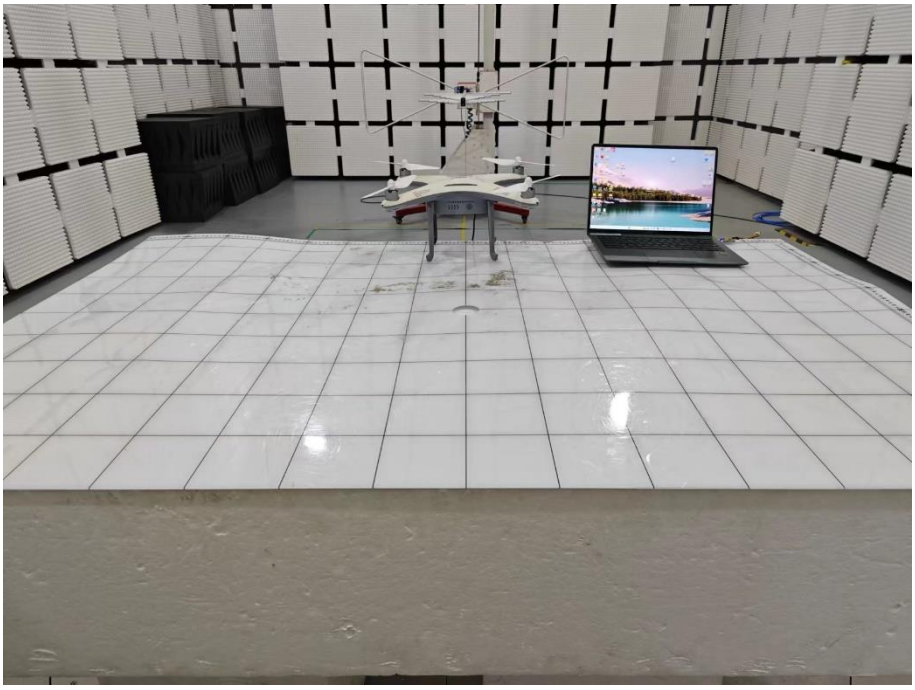


Tx. Spurious NVNT 2.4G 2480MHz Ant1 Emission

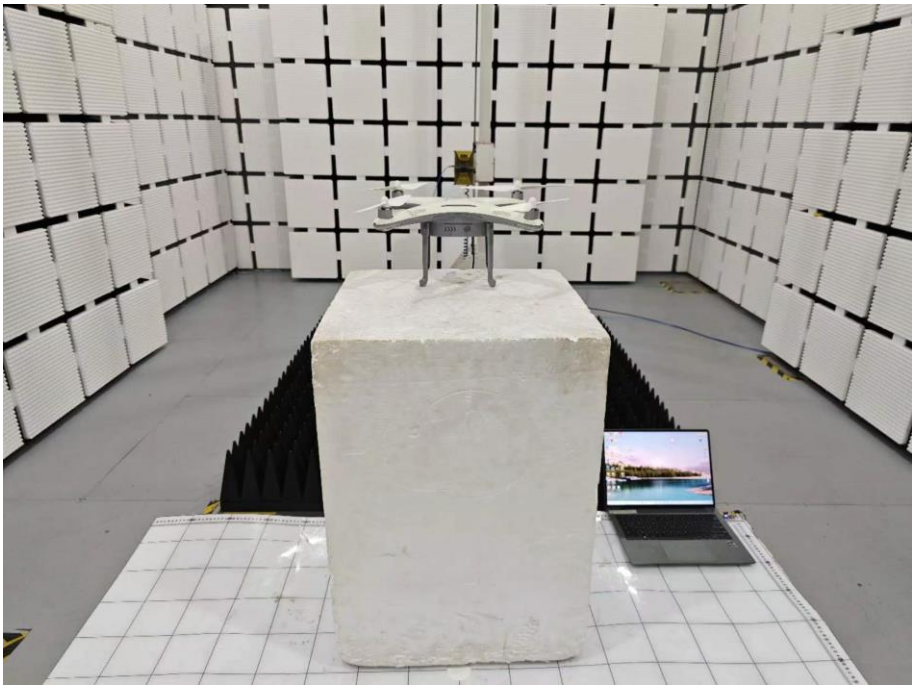


APPENDIX II - PHOTOS OF TEST SETUP

Set-up for Radiated Spurious Emission, Below 1GHz



Set-up for Radiated Spurious Emission, Above 1GHz



※※※※※END OF THE REPORT※※※※※