Test Report

Verified code: 938080

Report No.: E20240605493601-2

Customer:	Lumi United Technology Co., Ltd
Address:	B1, Chongwen Park, Nanshan iPark, Liuxian Avenue, Taoyuan Residential District, Nanshan District, Shenzhen, China
Sample Name:	Valve Controller T1
Sample Model:	VC-X01E
Receive Sample Date:	Jun.06,2024
Test Date:	Jun.07,2024 ~ Jun.08,2024
Reference Document:	CFR 47 FCC Part 15 Subpart C RADIO FREQUENCY DEVICES:Subpart C—Intentional Radiators
Test Result:	Pass

Prepared by: Wen Wenwen Reviewed by: Wu Haoting Approved by: Xiao Liang

GRG METROLOGY & TEST GROUP CO., LTD

Issued Date: 2024-07-10

GRG METROLOGY & TEST GROUP CO., LTD.
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Statement

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6. The test report without CMA approval mark is only used for scientific research, teaching, internal quality co ntrol and other purposes.

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REPORT ISSUED HISTORY

Report Version	Report No.	Description	Compile Date
1.0	E20240605493601-2	Original Issue	2024-07-08

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1. TEST RESULT SUMMARY

Technical Requirements		
CFR 47, FCC Part 15 Subpart C (§15.247)		
Limit / Severity	**Item**	**Result**
§15.207	Conducted emission AC power port	Not Applicable[1]
§15.247(b)(3)	Maximum output power	Pass
§15.247(e)	Power spectral density	Pass
§15.247(a)(2)	6dB bandwidth	Pass
§15.247(d)	RF conducted spurious emissions	Pass
§15.247(d)	Band edge	Pass
§15.247(d) & §15.209(a) & §15.205(a)(c)	Radiated spurious emissions & restricted bands of operation	Pass
§15.203	Antenna requirement	Pass

Note 1: The EUT is power by battery, not applicable.

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2. GENERAL DESCRIPTION OF EUT

2.1 APPLICANT

Name:	Lumi United Technology Co., Ltd
Address:	B1, Chongwen Park, Nanshan iPark, Liuxian Avenue, Taoyuan Residential District, Nanshan District, Shenzhen, China

2.2 MANUFACTURER

Name:	Lumi United Technology Co., Ltd
Address:	B1, Chongwen Park, Nanshan iPark, Liuxian Avenue, Taoyuan Residential District, Nanshan District, Shenzhen, China

2.3 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Equipment:	Valve Controller T1
Model No.:	VC-X01E
Adding Model:	VC-X01D
Model difference descriptions:	They have the same technical construction including circuit diagram, PCB layout, hardware version and software version identical, only the model name is different.
Trade Name:	Aqara
Power Supply:	6V DC power by battery(AA*4)
Battery Specification:	AA LR6 1.5V No.3151B
FCC ID:	2AKIT-VCX01
Frequency Range:	ZigBee: 2405MHz-2480MHz
Conducted maximum output Power:	8.08dBm
Modulation type:	O-QPSK
Antenna Specification:	FPC antenna 3.08dBi gain (Max.)
Temperature Range:	-10 ℃ ~ +50 ℃
Hardware Version:	V32
Software Version:	4.2.8
Sample No:	E20240605493601-0001, E20240605493601-0004
Note:	The basic description of the EUT is provided by the applicant. This report is made Solely yon the basis of such data and/or information.We accept no responsibility for the authenticity and completeness of the above data and information and the validity of the results and/or conclusions.The test model is VC-X01E.

2.4 CHANNEL LIST

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
11	2405*	12	2410	13	2415	14	2420
15	2425	16	2430	17	2435	18	2440*
19	2445	20	2450	21	2455	22	2460
23	2465	24	2470	25	2475	26	2480*

* is the test frequency

2.5 TEST OPERATION MODE

Mode No.	Description of the modes
1	Zigbee fixed frequency transmitting

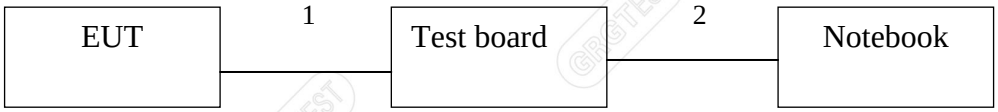
2.6 LOCAL SUPPORTIVE

No.	Name of Equipment	Manufacturer	Model	Serial Number	Note
A	Notebook	DELL	Latitude 3300	2C6CFW2	6#
B	Test board	/	/	/	/

No.	Cable Type	Qty.	Shielded Type	Ferrite Core(Qty.)	Length
1	serial cable	1	No	No	0.2m
2	USB-MINI cable	1	No	No	0.5m

Note: The notebook is just used to produce fixed frequency transmitting.

2.7 CONFIGURATION OF SYSTEM UNDER TEST



Test software:

Software version	Test level
QCOM_V1.0	2405MHz: 80 2440MHz: 80 2480MHz: 80

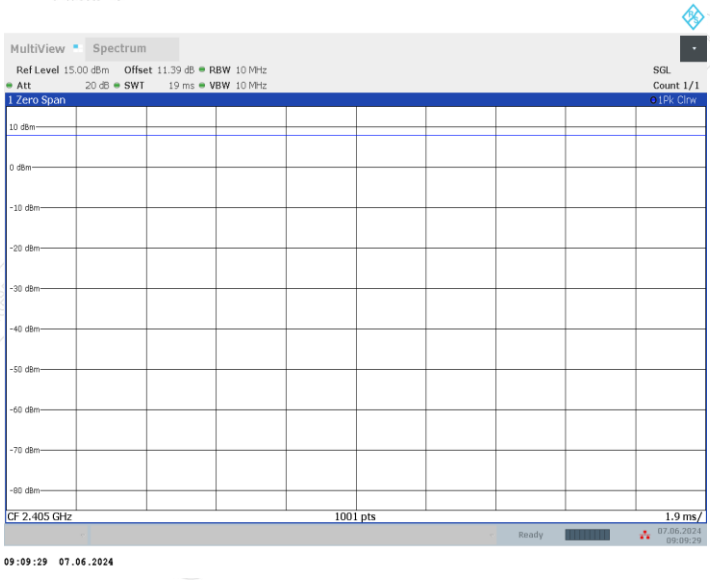
2.8 DUTY CYCLE

Environment: 25.0℃/49%RH/101.0kPa Voltage: DC 6V

Tested By: Huang tianmei Date: 2024-06-07

Test Mode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	DC [%]	T [s]
ZigBee	Ant1	2405	19	19	100	0.019

ZigBee_2405MHz



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3. LABORATORY

The tests & measurements refer to this report were performed by Shenzhen EMC Laboratory of GRG METROLOGY & TEST GROUP CO., LTD.

Add	:	Address: No.1301 Guanguang Road Xinlan Community, Guanlan Street, Longhua District Shenzhen, 518110, People's Republic of China
P.C.	:	518110
Tel	:	0755-61180008
Fax	:	0755-61180008

4. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025:2017.

USA	A2LA(Certificate #2861.01)

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	ISED (Company Number: 24897，CAB identifier:CN0069)
USA	FCC (Registration Number: 759402，Designation Number:CN1198)

Copies of granted accreditation certificates are available for downloading from our web site, http://www.grgtest.com

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5. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement		Frequency	Uncertainty
Radiated Emission	X	9kHz～30MHz	4.4dB[1)]
	Y	9kHz～30MHz	4.4dB[1)]
	Z	9kHz～30MHz	4.4dB[1)]
	Horizontal	30MHz～200MHz	4.6dB[1)]
		200MHz～1000MHz	4.8dB[1)]
		1GHz～18GHz	5.0dB[1)]
		18GHz～26.5GHz	5.2dB[1)]
	Vertical	30MHz～200MHz	4.7dB[1)]
		200MHz～1000MHz	4.7dB[1)]
		1GHz～18GHz	5.1dB[1)]
		18GHz～26.5GHz	5.4dB[1)]

Measurement	Uncertainty
RF frequency	6.0×10^{-6}
RF power conducted	0.80dB
Power spectral density conducted	0.80dB
Occupied channel bandwidth	0.40dB
Unwanted emission, conducted	0.70dB
Humidity	6.0%
Temperature	2.0℃

Note:
[1)] This uncertainty represents an expanded uncertainty expressed at approximately the 95%.
This uncertainty represents an expanded uncertainty factor of k=2.

6. LIST OF USED TEST EQUIPMENT AT GRGT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Radiated Spurious Emission & Restricted bands of operation				
Test S/W	Tonscend	JS32-RE/5.0.0		
Loop Antenna	Schwarzbeck	FMZB 1513-60	1513-60-56	2024-07-15
Bi-log Antenna	Schwarzbeck	VULB9160	VULB9160-3402	2024-10-06
Horn Antenna	Schwarzbeck	BBHA 9120D	02143	2024-09-23
Test Receiver	R&S	ESR26	101758	2024-09-22
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	BBHA 9170-497	2024-09-18
Amplifier	SHIRONG ELECTRONIC	DLNA-30M1G-G40	20200928001	2025-01-30
Amplifier	Tonscend	TAP01018048	AP20E8060075	2025-03-01
Amplifier	Tonscend	TAP184050	AP20E806071	2025-03-01
Amplifier	SHIRONG ELECTRONIC	DLNA-1G18G-G40	20200928005	2024-08-17
6dB Bandwidth &Conducted band edges and Spurious Emission &Power Spectral Density				
Spectrum Analyzer	R&S	FSW43	102072	2024-07-09
Automatic power test unit	TONSCEND	JS0806-2	21B8060365	2024-12-28
BT/WIFI System	Tonscend	JS1120-3		
Maximum peak output power				
Pulse power sensor	Anristu	MA2411B	1126150	2025-01-11
Power meter	Anristu	ML2495A	1204003	2025-01-11

Note: The calibration cycle of the above instruments is 12 months.

7. RADIATED SPURIOUS EMISSIONS

7.1 LIMITS

In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

Frequency (MHz)	Quasi-peak(μV/m)	Measurement distance(m)	Quasi-peak(dBμV/m)@distance 3m
0.009-0.490	2400/F(kHz)	300	128.5~93.8
0.490-1.705	24000/F(kHz)	30	73.8~63
1.705-30.0	30	30	69.5
30~88	100	3	40
88~216	150	3	43.5
216~960	200	3	46
Above 960	500	3	54

NOTE: (1) The lower limit shall apply at the transition frequencies.
(2) Above 18GHz test distance is 1m, so the Peak Limit=74+20*log(3/1)=83.54 (dBμV/m).
The Avg Limit=54+20*log(3/1)=63.54 (dBμV/m).

7.2 TEST PROCEDURES

a) Sequence of testing 9kHz to 30MHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Auxiliary equipment and cables were positioned to simulate fixedfrequencytransmitting conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0 °to 360 °.

--- The antenna height is 1.0 meter.

--- The antenna is polarized X,Y and Z.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

--- Identified emissions during the pre measurement the software maximizes by rotating the turntable position (0 °to 360 °) and by rotating the elevation axes (0 °to 360 °).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QP detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement and the limit will be stored.

b) Sequence of testing 30MHz to 1GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate fixed frequency transmitting conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

---- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0 °to 360 °.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 4 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of pre measurement the software maximize the peaks by changing turntable rotates from 0 °to 360 °and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

c) Sequence of testing 1GHz to 18GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate fixed frequency transmitting conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0 °to 360 °.

--- The antenna is polarized vertical and horizontal.

--- The antenna height scan range is 1 meter to 4 meter.

--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of pre measurement the software maximize the peaks by changing turntable rotates from 0 °to 360 °and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.

--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

d) Sequence of testing above 18GHz
Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate fixed frequency transmitting conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 1 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0 °to 360 °.

--- The antenna is polarized vertical and horizontal.

--- The antenna height scan range is 1 meter to 4 meter.

--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:
--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of pre measurement the software maximize the peaks by changing turntable rotates from 0 °to 360 °and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.

--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

NOTE:
(1).The frequency from 9kHz to 150kHz, Set RBW=300Hz(for Peak&AVG), VBW=300Hz(for Peak&AVG). The frequency from 150kHz to 30MHz, Set RBW=9kHz, VBW=9kHz, (for QP Detector).
(2).The frequency from 30MHz to 1GHz, Set RBW=120kHz, VBW=300kHz, (for QP Detector).
(3).The frequency above 1GHz, for Peak detector: Set RBW=1MHz,VBW=3MHz.
(4). The frequency above 1GHz, for Avg detector: Set RBW=1MHz,if the EUT is configured to transmit with duty cycle ≥98%，set VBW≤RBW/100 (i.e.,10kHz) but not less than 10 Hz. If the EUT duty cycle is ＜98%， set VBW≥1/T, Where T is defined in section 2.8.

7.3 TEST SETUP

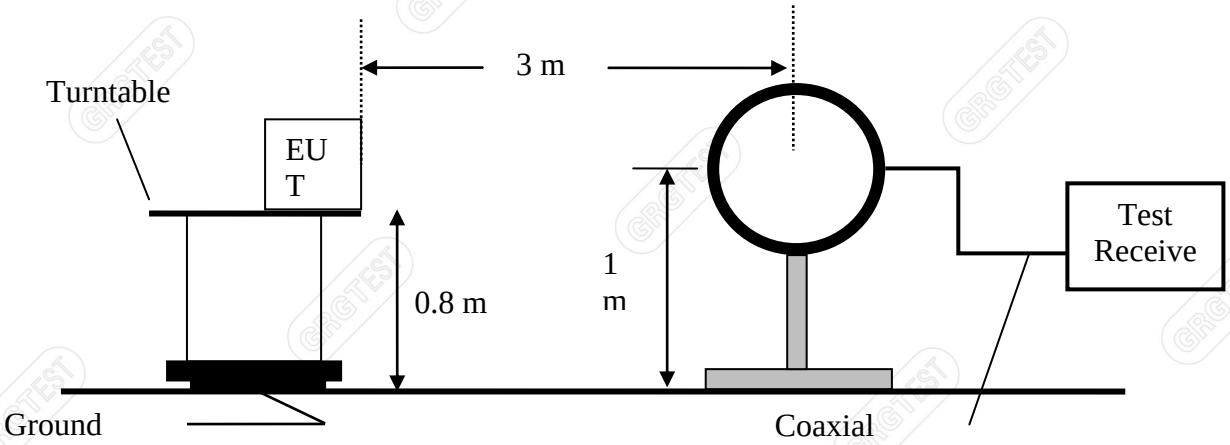

Figure 1. 9kHz to 30MHz radiated emissions test configuration

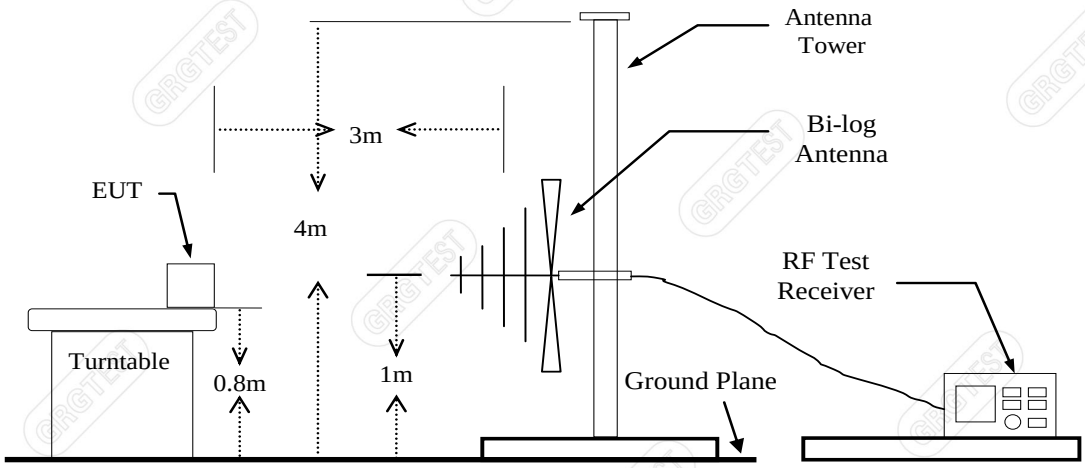

Figure 2. 30MHz to 1GHz radiated emissions test configuration

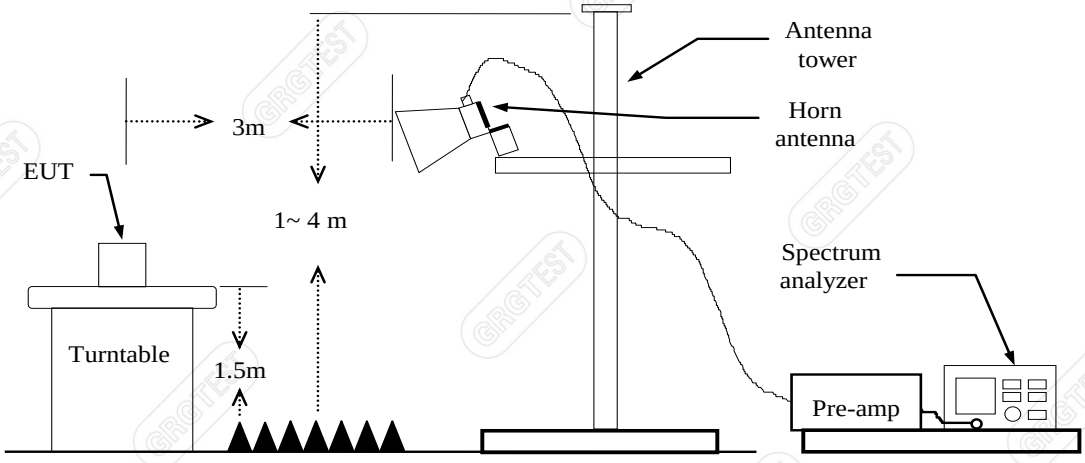

Figure 3. 1GHz to 18GHz radiated emissions test configuration

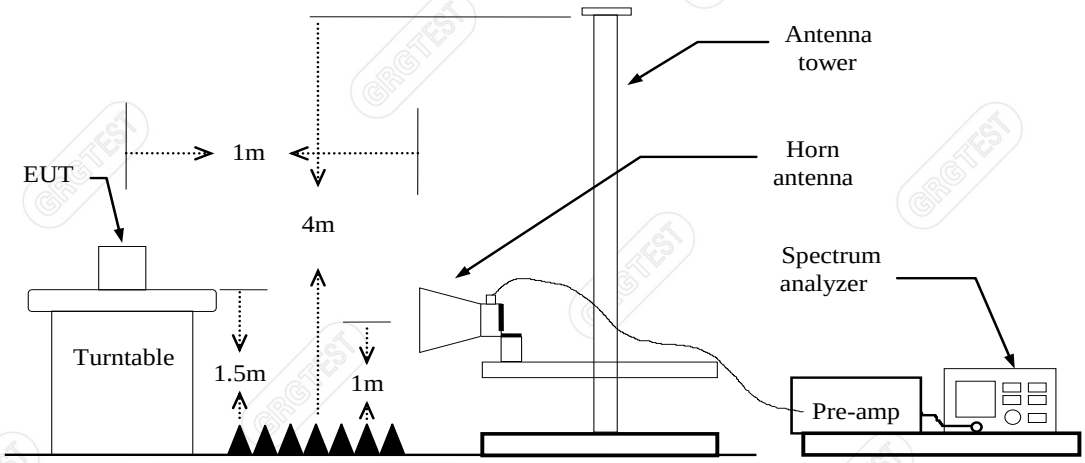

Figure 4. 18GHz to 26.5GHz radiated emissions test configuration

7.4 DATA SAMPLE

30MHz to 1GHz

Suspected Data List											
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
xxx	xxx	57.15	25.66	-31.49	40.00	14.34	PK	200	359	Horizontal	PASS

Frequency (MHz) = Emission frequency in MHz

Reading (dBμV/m) = Uncorrected Analyzer / Receiver reading

Factor (dB) = Antenna factor + Cable loss – Amplifier gain

Result (dBμV/m) = Reading (dBμV/m) + Factor (dB)

Limit (dBμV/m) = Limit stated in standard

Margin (dB) = Result (dBμV/m)-Limit (dBμV/m)

Peak = Peak Reading

QP = Quasi-peak Reading

1GHz-18GHz

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
xxx	xxx	49.54	40.49	-9.05	74.00	33.51	100	256	Horizontal

Above 18GHz

Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Level for 1m [dBμV/m]	Level for 3m [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
xxx	xxx	63.77	46.82	37.28	-16.95	74	36.72	100	307	Horizontal

Frequency (MHz) = Emission frequency in MHz

Reading (dBμV/m) = Uncorrected Analyzer / Receiver reading

Factor (dB) = Antenna factor + Cable loss – Amplifier gain

Level for 1m (dBμV/m)	= Reading (dBuV/m) + Factor (dB)
Level for 3m (dBμV/m)	= Level for 1m (dBμV/m) + 20*log(1/3)
Limit (dBμV/m)	= Limit stated in standard
Margin (dB)	= Limit (dBμV/m) – Level (dBμV/m)
Polarity	= Antenna polarization
Peak	= Peak Reading
AVG	= Average Reading

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7.5 TEST RESULTS

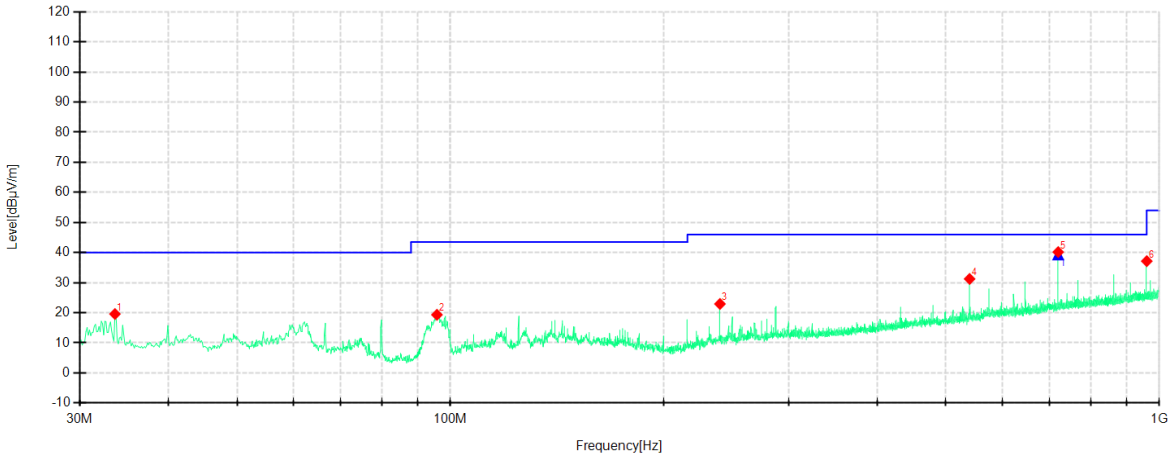
Note: The test is according to the typical placement method of the product.

Below 1GHz

Note: If the margin of the pre test results is greater than 6dB, it meets the requirements of quasi peak or average values, and final testing is no longer required.

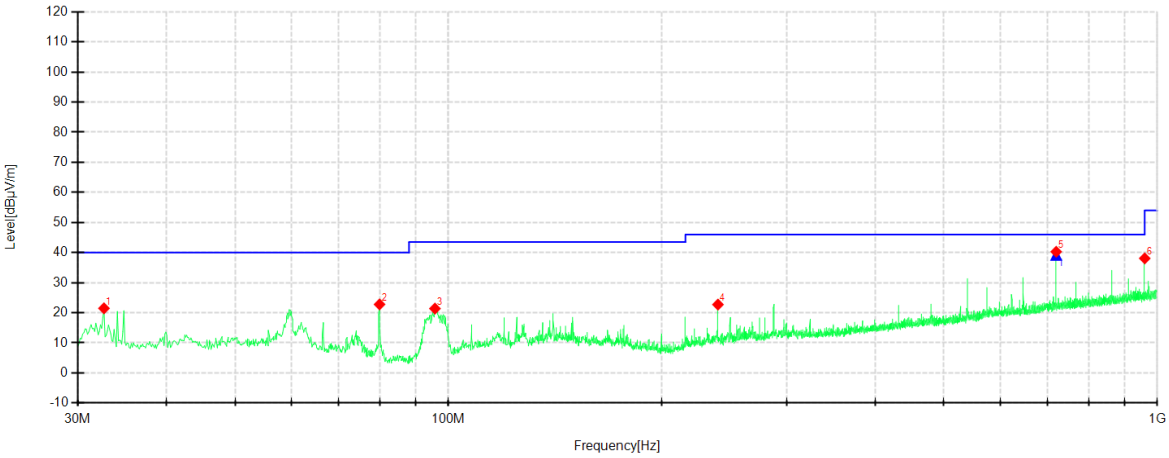
Pretest all case, only the worst mode and channel were recorded in this report. (ZigBee 2480MHz)

EUT Name:	Valve Controller T1	Test Mode:	Mode 1
Model:	VC-X01E	Sample No:	E20240605493601-0003
Power supply:	DC 6V	Environmental Conditions:	25.3℃/59%RH/101.0kPa
Test Engineer:	Wen wenwen	Test Date:	2024-06-08



Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	33.6380	49.30	19.59	-29.71	40.00	20.41	PK	100	130	Horizontal	PASS
2	95.7257	52.05	19.34	-32.71	43.50	24.16	PK	100	195	Horizontal	PASS
3	240.0313	52.58	22.94	-29.64	46.00	23.06	PK	100	93	Horizontal	PASS
4	540.0413	51.76	31.26	-20.50	46.00	14.74	PK	100	302	Horizontal	PASS
5	720.1200	57.72	40.18	-17.54	46.00	5.82	PK	200	253	Horizontal	PASS
6	960.1038	51.87	37.17	-14.70	54.00	16.83	PK	200	332	Horizontal	PASS

Final Data List										
NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBµV/m]	Level [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	720.0474	-17.54	56.89	39.35	46.00	6.65	200	338.2	Horizontal	PASS



Suspected Data List											
NO.	Freq. [MHz]	Reading [dBµV/m]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity	Verdict
1	32.6678	51.26	21.48	-29.78	40.00	18.52	PK	200	314	Vertical	PASS
2	79.9612	56.51	22.80	-33.71	40.00	17.20	PK	200	183	Vertical	PASS
3	95.7257	54.11	21.40	-32.71	43.50	22.10	PK	100	20	Vertical	PASS
4	240.0313	52.37	22.73	-29.64	46.00	23.27	PK	200	300	Vertical	PASS
5	720.1200	57.82	40.28	-17.54	46.00	5.72	PK	200	196	Vertical	PASS
6	960.1038	52.78	38.08	-14.70	54.00	15.92	PK	200	106	Vertical	PASS

Final Data List										
NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBµV/m]	Level [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	720.0474	-17.54	56.75	39.21	46.00	6.79	180	340	Vertical	PASS

Remark:

1 Radiated emissions measured in frequency range from 30MHz to 1GHz were made with an instrument using Quasi-peak detector mode.
2 Measuring frequencies from 9kHz to the 1GHz.
3 The IF bandwidth of Receiver between 30MHz to 1GHz was 120 kHz.
4 No emission found between lowest internal used/generated frequency to 30MHz.

1GHz-18GHz:

Mode: TX/ ZigBee
Lowest Frequency (2405MHz)
Environment: 25.3℃/59%RH/101.0kPa Voltage: DC 6V
Tested By:Wen wenwen Date: 2024-06-08

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1998.2000	56.61	52.72	-3.89	74.00	21.28	200	70	Horizontal
2	2663.6000	55.60	52.94	-2.66	74.00	21.06	100	123	Horizontal
3	3997.5000	54.79	44.46	-10.33	74.00	29.54	100	338	Horizontal
4	4809.0000	50.86	43.73	-7.13	74.00	30.27	100	304	Horizontal
5	5991.0000	52.14	48.55	-3.59	74.00	25.45	100	20	Horizontal
6	13075.5000	36.40	50.10	13.70	74.00	23.90	200	153	Horizontal
7	1994.6000	37.73	33.81	-3.92	54.00	20.19	100	307	Horizontal
8	2662.4000	40.39	37.73	-2.66	54.00	16.27	100	139	Horizontal
9	3996.0000	39.96	29.62	-10.34	54.00	24.38	100	338	Horizontal
10	4810.5000	42.44	35.31	-7.13	54.00	18.69	100	304	Horizontal
11	6505.5000	33.26	32.12	-1.14	54.00	21.88	100	187	Horizontal
12	13306.5000	25.63	39.51	13.88	54.00	14.49	200	53	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1999.2000	58.78	53.61	-5.17	74.00	20.39	200	206	Vertical
2	2658.6000	54.91	52.22	-2.69	74.00	21.78	200	155	Vertical
3	3981.0000	59.59	48.82	-10.77	74.00	25.18	100	237	Vertical
4	4810.5000	52.65	45.46	-7.19	74.00	28.54	200	138	Vertical
5	5977.5000	63.82	60.21	-3.61	74.00	13.79	100	254	Vertical
6	11727.0000	37.84	50.14	12.30	74.00	23.86	100	204	Vertical
7	1995.6000	40.52	35.39	-5.13	54.00	18.61	100	204	Vertical
8	2665.6000	40.70	38.02	-2.68	54.00	15.98	200	206	Vertical
9	3981.0000	44.32	33.55	-10.77	54.00	20.45	100	237	Vertical
10	4810.5000	44.37	37.18	-7.19	54.00	16.82	200	138	Vertical
11	5977.5000	38.74	35.13	-3.61	54.00	18.87	100	254	Vertical
12	12150.0000	25.93	39.97	14.04	54.00	14.03	200	37	Vertical

Mode: TX/ ZigBee
Middle Frequency (2440MHz)
Environment: 25.3℃/59%RH/101.0kPa Voltage: DC 6V
Tested By:Wen wenwen Date: 2024-06-08

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1991.2000	55.71	51.78	-3.93	74.00	22.22	200	91	Horizontal
2	2654.2000	50.85	48.23	-2.62	74.00	25.77	200	208	Horizontal
3	3996.0000	53.11	42.77	-10.34	74.00	31.23	200	90	Horizontal
4	4881.0000	52.01	45.12	-6.89	74.00	28.88	200	188	Horizontal
5	5994.0000	48.66	45.07	-3.59	74.00	28.93	100	278	Horizontal
6	12207.0000	38.15	50.77	12.62	74.00	23.23	200	55	Horizontal
7	1296.0000	41.79	33.11	-8.68	54.00	20.89	100	3	Horizontal
8	2792.8000	37.17	35.92	-1.25	54.00	18.08	100	289	Horizontal
9	3979.5000	39.11	28.69	-10.42	54.00	25.31	100	261	Horizontal
10	4879.5000	43.18	36.29	-6.89	54.00	17.71	200	172	Horizontal
11	7321.5000	34.53	35.91	1.38	54.00	18.09	200	205	Horizontal
12	12151.5000	26.37	40.51	14.14	54.00	13.49	100	142	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1997.6000	61.78	56.62	-5.16	74.00	17.38	200	173	Vertical
2	2664.8000	61.06	58.38	-2.68	74.00	15.62	100	156	Vertical
3	3985.5000	63.07	52.30	-10.77	74.00	21.70	100	239	Vertical
4	4881.0000	52.20	44.89	-7.31	74.00	29.11	200	189	Vertical
5	5980.5000	66.50	62.90	-3.60	74.00	11.10	100	121	Vertical
6	12147.0000	36.06	50.06	14.00	74.00	23.94	200	137	Vertical
7	1196.4000	45.66	36.58	-9.08	54.00	17.42	100	339	Vertical
8	2664.8000	42.99	40.31	-2.68	54.00	13.69	100	156	Vertical
9	3985.5000	44.26	33.49	-10.77	54.00	20.51	100	239	Vertical
10	4879.5000	43.45	36.14	-7.31	54.00	17.86	200	189	Vertical
11	5980.5000	40.27	36.67	-3.60	54.00	17.33	100	121	Vertical
12	12141.0000	25.78	39.69	13.91	54.00	14.31	200	221	Vertical

Mode: TX/ ZigBee
Highest Frequency (2480MHz)
Environment: 25.3℃/59%RH/101.0kPa Voltage: DC 6V
Tested By:Wen wenwen Date: 2024-06-08

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1992.8000	54.37	50.44	-3.93	74.00	23.56	200	88	Horizontal
2	2665.2000	53.06	50.39	-2.67	74.00	23.61	100	138	Horizontal
3	3987.0000	54.31	43.92	-10.39	74.00	30.08	200	239	Horizontal
4	4959.0000	51.78	45.44	-6.34	74.00	28.56	200	137	Horizontal
5	5985.0000	53.72	50.12	-3.60	74.00	23.88	100	20	Horizontal
6	12588.0000	38.39	50.47	12.08	74.00	23.53	200	171	Horizontal
7	1928.4000	38.75	34.78	-3.97	54.00	19.22	200	255	Horizontal
8	2665.4000	39.33	36.66	-2.67	54.00	17.34	100	172	Horizontal
9	3987.0000	41.33	30.94	-10.39	54.00	23.06	200	239	Horizontal
10	4960.5000	42.87	36.53	-6.34	54.00	17.47	200	137	Horizontal
11	6489.0000	33.22	31.94	-1.28	54.00	22.06	200	223	Horizontal
12	12147.0000	25.66	39.81	14.15	54.00	14.19	100	71	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1993.4000	62.38	57.27	-5.11	74.00	16.73	200	154	Vertical
2	2662.2000	61.72	59.03	-2.69	74.00	14.97	200	154	Vertical
3	3981.0000	58.39	47.62	-10.77	74.00	26.38	100	259	Vertical
4	4960.5000	50.88	44.18	-6.70	74.00	29.82	200	171	Vertical
5	5989.5000	61.73	58.14	-3.59	74.00	15.86	100	291	Vertical
6	12091.5000	37.43	50.65	13.22	74.00	23.35	100	259	Vertical
7	1997.2000	42.09	36.95	-5.14	54.00	17.05	200	154	Vertical
8	2662.2000	43.93	41.24	-2.69	54.00	12.76	200	154	Vertical
9	3996.0000	43.87	33.06	-10.81	54.00	20.94	100	207	Vertical
10	4960.5000	43.42	36.72	-6.70	54.00	17.28	200	171	Vertical
11	5991.0000	37.28	33.69	-3.59	54.00	20.31	100	259	Vertical
12	12147.0000	26.07	40.07	14.00	54.00	13.93	200	325	Vertical

18GHz to 26.5GHz

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Pre-scan all modes, only the worst case(TX/ZigBee_2480MHz) was recorded in this report.
Mode: TX/ ZigBee
Highest Frequency (2480MHz)
Environment: 25.3℃/59%RH/101.0kPa Voltage: DC 6V
Tested By:Wen wenwen Date: 2024-06-08

NO.	Freq. [MHz]	Reading [dBμV/m]	Level in 1m [dBμV/m]	Level in 3m [dBμV/m]	Factor [dB]	Limit in 1m [dBμV/m]	Limit in 3m [dBμV/m]	Margin in 1m [dB]	Margin in 3m [dB]	Height [cm]	Angle [°]	Polarity
1	19375.3	62.62	45.73	36.19	-16.89	83.54	74	37.81	37.81	200	19	Horizontal
2	21113.125	62.51	46.55	37.01	-15.96	83.54	74	36.99	36.99	100	342	Horizontal
3	22635.05	63.04	48.1	38.56	-14.94	83.54	74	35.44	35.44	100	116	Horizontal
4	23764.7	64.38	49.72	40.18	-14.66	83.54	74	33.82	33.82	200	210	Horizontal
5	24090.25	64.47	50.22	40.68	-14.25	83.54	74	33.32	33.32	100	210	Horizontal
6	26008.275	64.43	50	40.46	-14.43	83.54	74	33.54	33.54	100	342	Horizontal

NO.	Freq. [MHz]	Reading [dBμV/m]	Level in 1m [dBμV/m]	Level in 3m [dBμV/m]	Factor [dB]	Limit in 1m [dBμV/m]	Limit in 3m [dBμV/m]	Margin in 1m [dB]	Margin in 3m [dB]	Height [cm]	Angle [°]	Polarity
1	18832.15	62.81	45.66	36.12	-17.15	83.54	74	37.88	37.88	100	187	Vertical
2	19687.25	62.61	45.65	36.11	-16.96	83.54	74	37.89	37.89	200	282	Vertical
3	22032.4	62.96	47.14	37.6	-15.82	83.54	74	36.40	36.40	100	220	Vertical
4	23744.725	64.85	50.26	40.72	-14.59	83.54	74	33.28	33.28	100	282	Vertical
5	24938.975	64.41	50.47	40.93	-13.94	83.54	74	33.07	33.07	100	282	Vertical
6	25916.05	64.84	50.49	40.95	-14.35	83.54	74	33.05	33.05	200	251	Vertical

Remark:

1 Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

2 Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

4 Above 18G test distance is 1m, so the Level for 3m= Level for 1m + 20*log(1/3).

8. 6dB BANDWIDTH

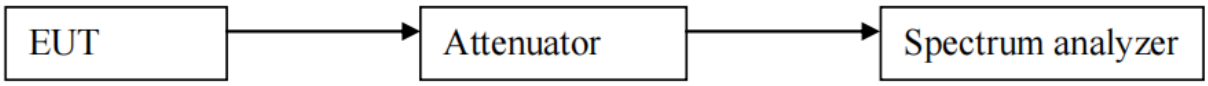
8.1 LIMITS

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

8.2 TEST PROCEDURES

1) Remove the antenna from the EUT, and then connect a low loss RF cable from antenna port to the spectrum analyzer**.**
2) Set resolution bandwidth (RBW) = 100kHz.Set the video bandwidth (VBW) ≥ 3 x RBW. Detector = Peak. Trace mode = max hold. Sweep = auto couple. Allow the trace to stabilize, record 6dB bandwidth value.
3) Repeat above procedures until all frequencies measured were complete.

8.3 TEST SETUP



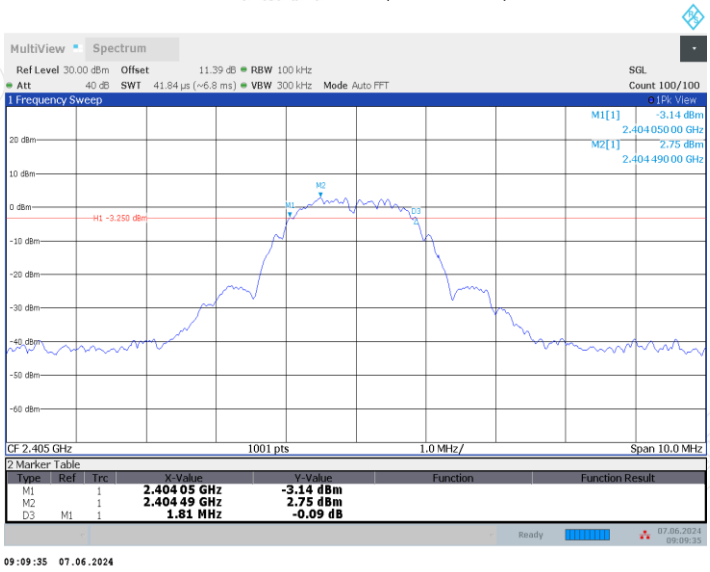
8.4 TEST RESULTS

Environment: 25.0℃/49%RH/101.0kPa Voltage: DC 6V

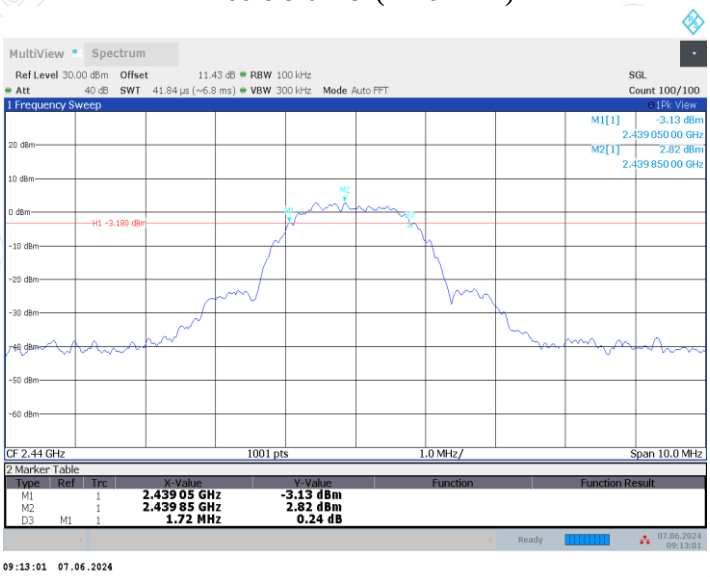
Tested By: Huang tianmei Date: 2024-06-07

Channel	Frequency (MHz)	Bandwidth [kHz]	Limit[kHz]	Verdict
Lowest	2405	1810	>500	PASS
Middle	2440	1720		PASS
Highest	2480	1630		PASS

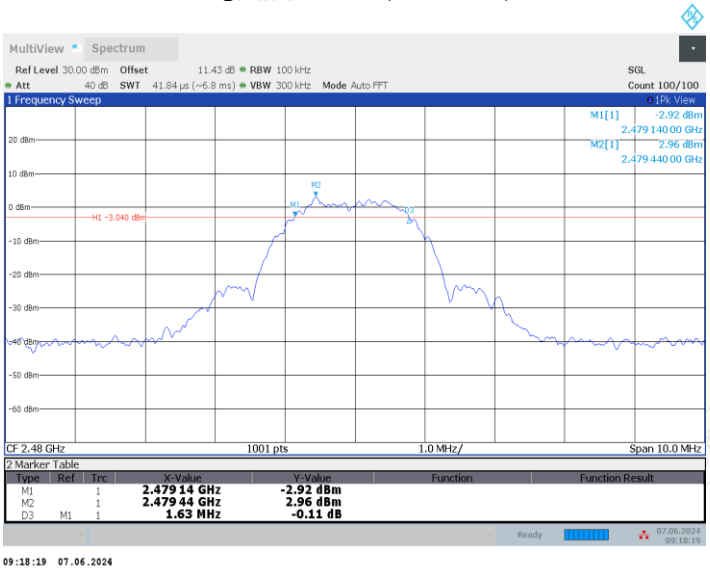
Lowest channel (2405MHz)



Middle channel (2440 MHz)



Highest channel (2480MHz)



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9. MAXIMUM OUTPUT POWER

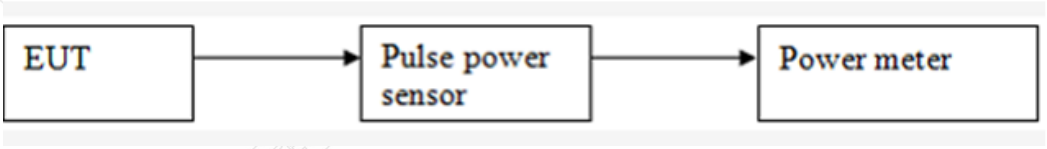
9.1 LIMITS

The maximum Peak output power measurement is 1W

9.2 TEST PROCEDURES

1) Place the EUT on a bench and set it in transmitting mode.
2) Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter.

9.3 TEST SETUP



9.4 TEST RESULTS

Environment: 25.0℃/49%RH/101.0kPa Voltage: DC 6V

Tested By: Huang tianmei Date: 2024-06-07

Channel	Frequency (MHz)	Conducted maximum output power (dBm)	Limit	Peak/ Average	Result
Lowest	2405	8.08	1W (30dBm)	Peak	Pass
Middle	2440	7.80			Pass
Highest	2480	7.44			Pass

10. POWER SPECTRAL DENSITY

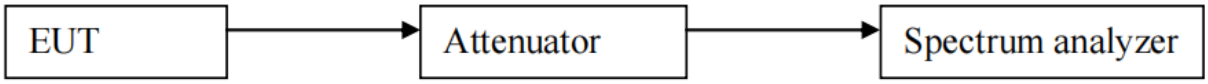
10.1 LIMITS

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. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

10.2 TEST PROCEDURES

1) Remove the antenna from the EUT, and then connect a low loss RF cable from antenna port to the spectrum analyzer.
2) Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3) Set the analyzer span to 1.5 times the DTS bandwidth. Set the RBW = 3 kHz. Set the VBW ≥3 RBW. Detector = peak. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW (use of a greater number of measurement points than this minimum requirement is recommended).
4) Repeat above procedures until all frequencies measured were complete.

10.3 TEST SETUP



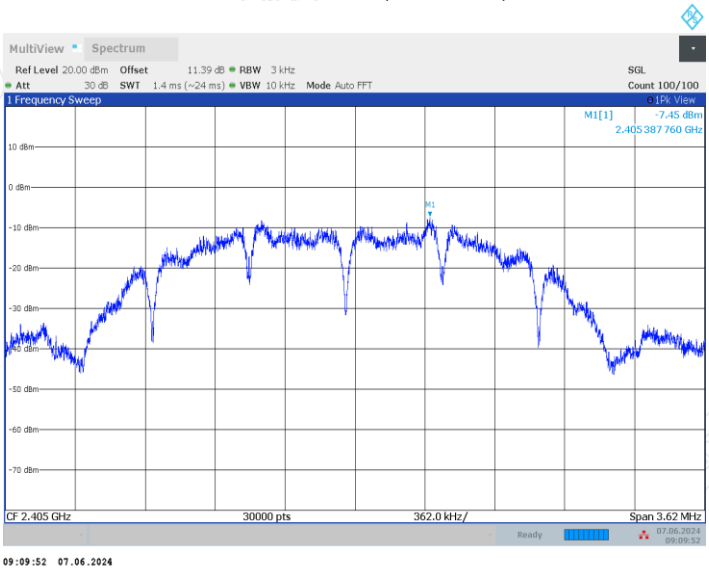
10.4 TEST RESULTS

Environment: 25.0℃/49%RH/101.0kPa Voltage: DC 6V

Tested By: Huang tianmei Date: 2024-06-07

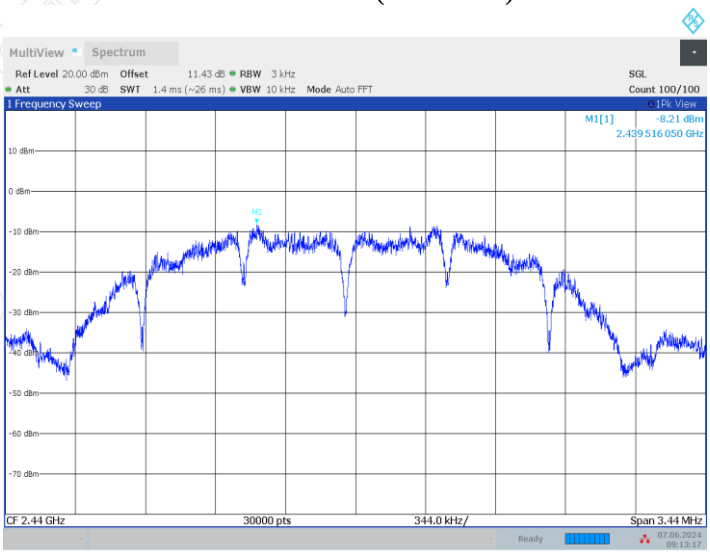
Channel No.	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
Lowest	2405	-7.45	8.00	Pass
Middle	2440	-8.21	8.00	Pass
Highest	2480	-8.50	8.00	Pass

Lowest channel (2405MHz)



09:09:52 07.06.2024

Middle channel (2440 MHz)



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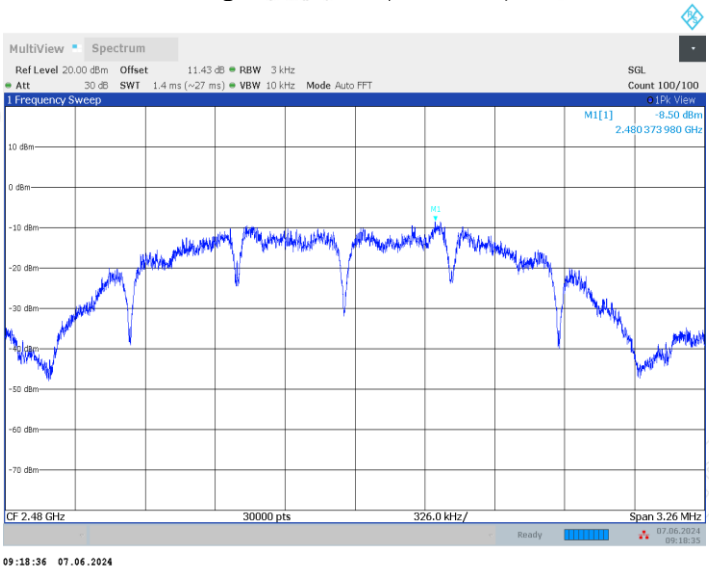
Highest channel (2480MHz)



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11. CONDUCTED BAND EDGES AND SPURIOUS EMISSIONS

11.1 LIMITS

In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

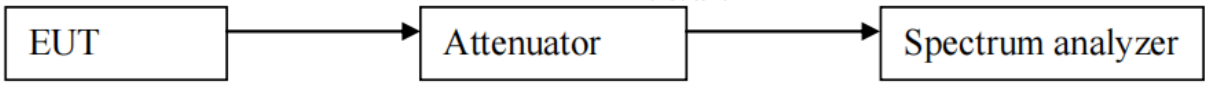
11.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v05r02.

Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.

1) Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.
2) Set the spectrum analyzer: RBW =100KHz; VBW =300KHz, Span = 10MHz to 26.5GHz; Sweep = auto; Detector Function = Peak. Trace = Max, hold.
3) Measure and record the results in the test report.
4) The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
5) Measurements are made over the 9 kHz to 26GHz range with the transmitter set to the lowest, middle, and highest channels. No emission found between lowest internal used/generated frequency to 10MHz，it is only recorded 10MHz to 26GHz.

11.3 TEST SETUP



11.4 TEST RESULTS

Environment: 25.0℃/49%RH/101.0kPa Voltage: DC 6V

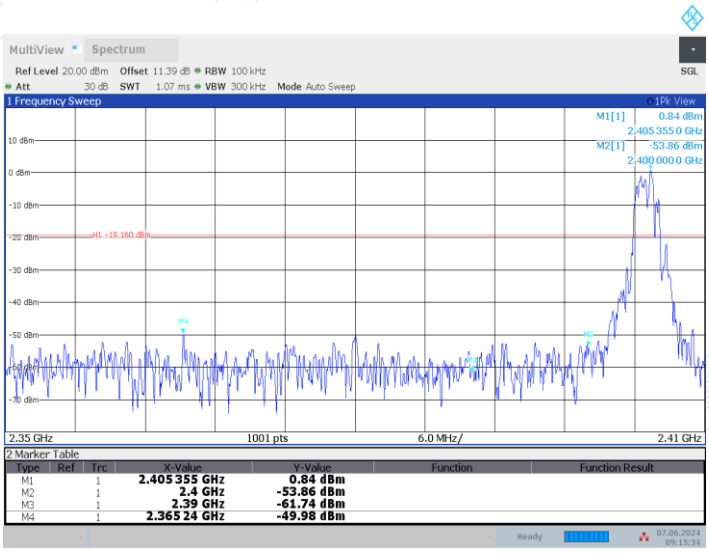
Tested By: Huang tianmei Date: 2024-06-07

Band edge

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
Zigbee	Ant1	Low	2405	0.84	-49.98	≤-19.16	PASS
		High	2480	0.10	-47.89	≤-19.9	PASS

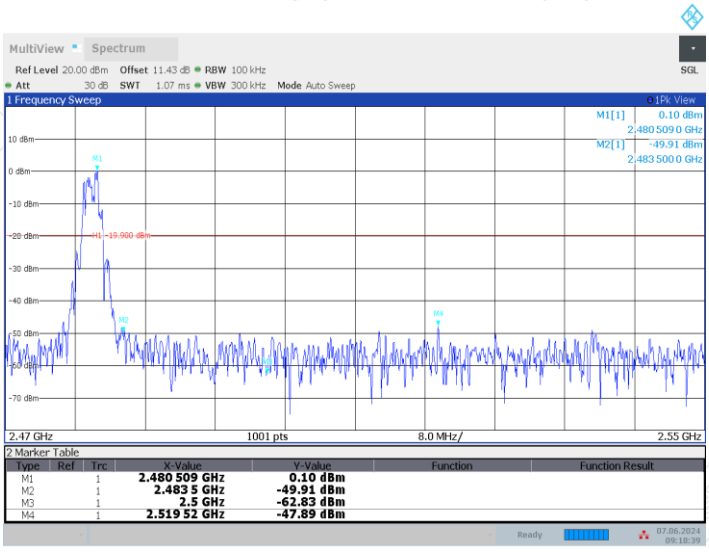
Lowest channel (2405MHz)

2.35GHz-2.41GHz



Highest channel (2480MHz)

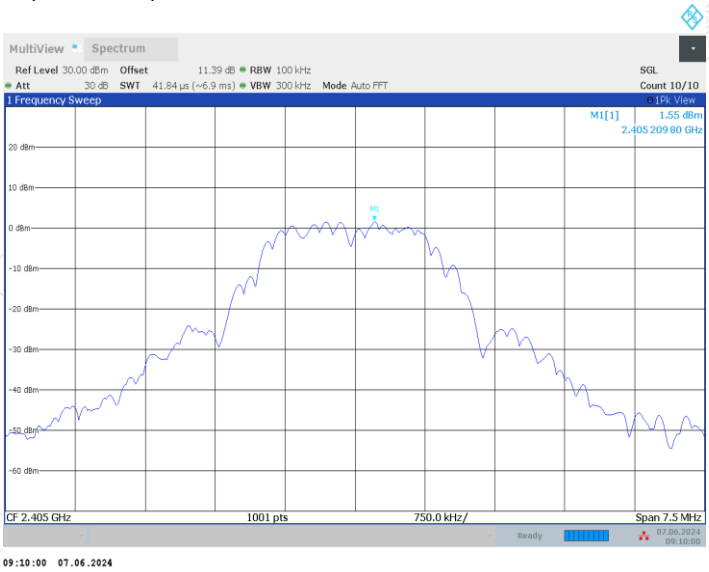
2.47GHz-2.55GHz



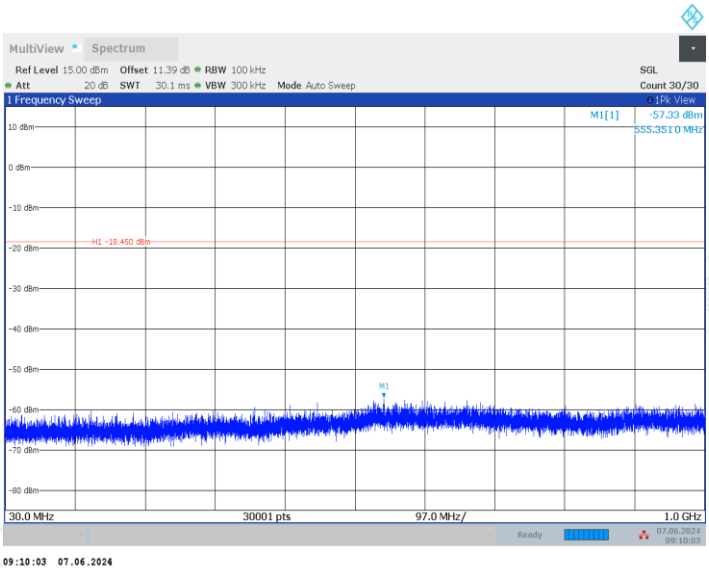
Conducted Spurious Emission

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
Zigbee	Ant1	2405	Reference	1.55	1.55	---	PASS
			30~1000	1.55	-57.33	≤-18.45	PASS
			1000~26500	1.55	-41.7	≤-18.45	PASS
		2440	Reference	3.14	3.14	---	PASS
			30~1000	3.14	-57.02	≤-16.86	PASS
			1000~26500	3.14	-43.63	≤-16.86	PASS
		2480	Reference	1.93	1.93	---	PASS
			30~1000	1.93	-57.82	≤-18.07	PASS
			1000~26500	1.93	-43.87	≤-18.07	PASS

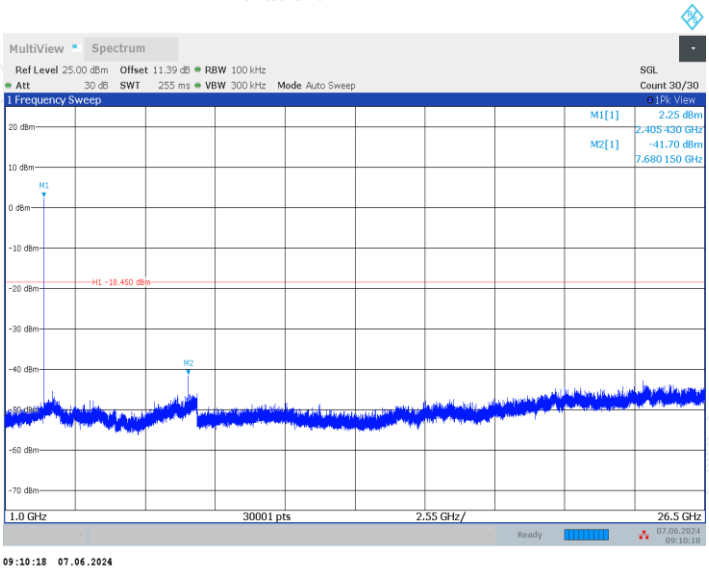
Lowest channel (2405MHz)



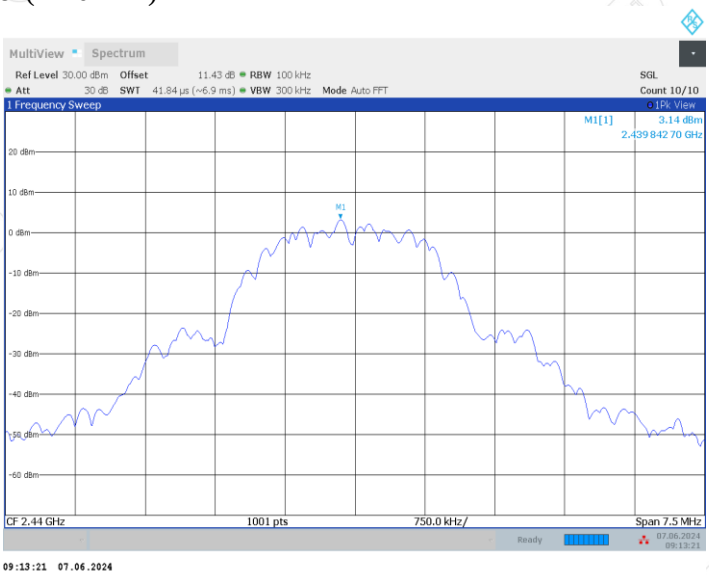
0.03GHz-1GHz



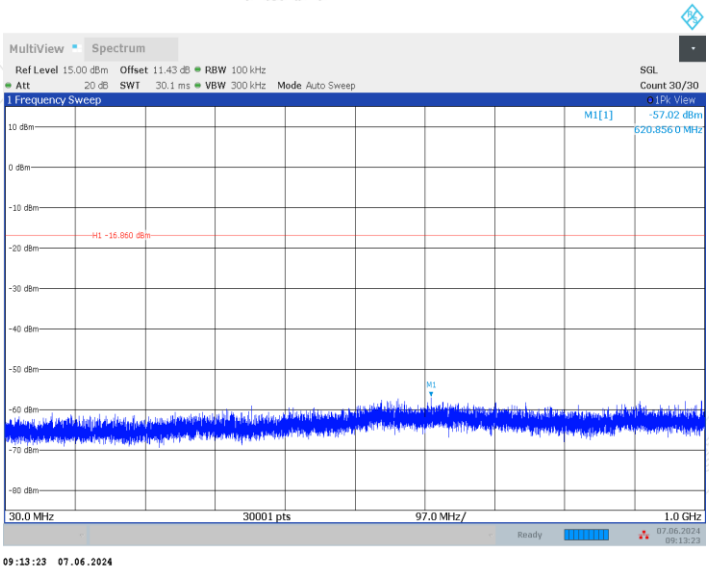
1GHz-26.5GHz



Middle channel (2440MHz)

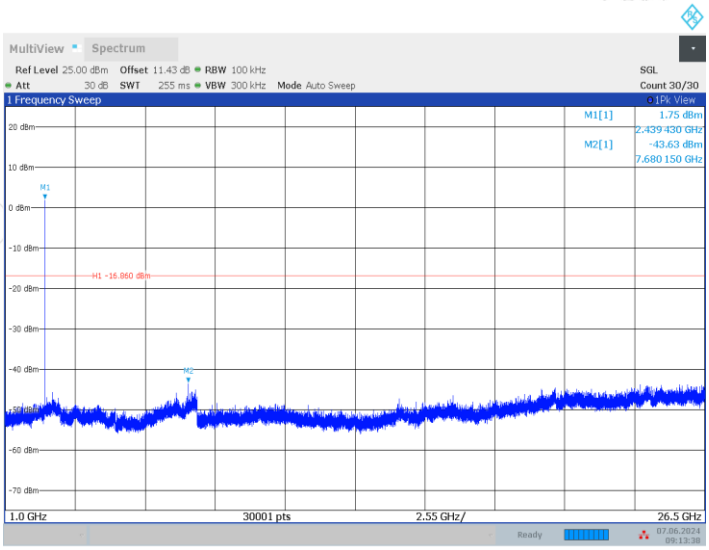


0.03GHz-1GHz



09:13:23 07.06.2024

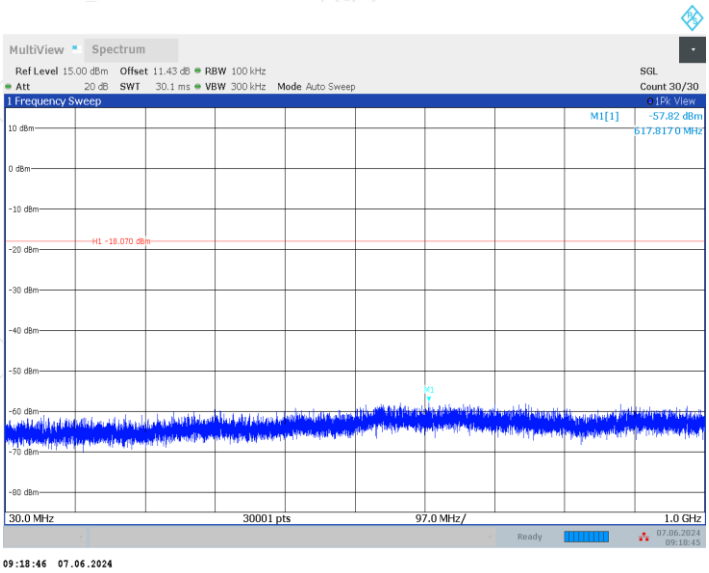
1GHz-26.5GHz



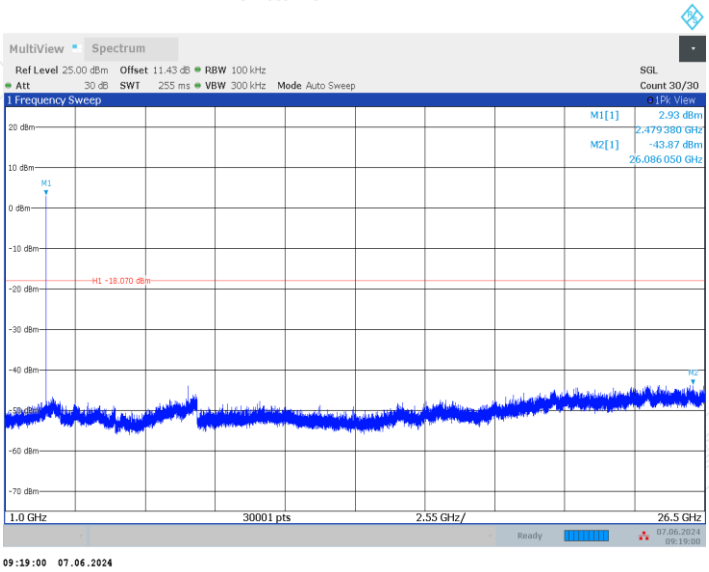
09:13:38 07.06.2024

Highest channel (2480MHz)

0.03GHz-1GHz



1GHz-26.5GHz



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12. RESTRICTED BANDS OF OPERATION

12.1 LIMITS

Section 15.247(d) In addition, Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

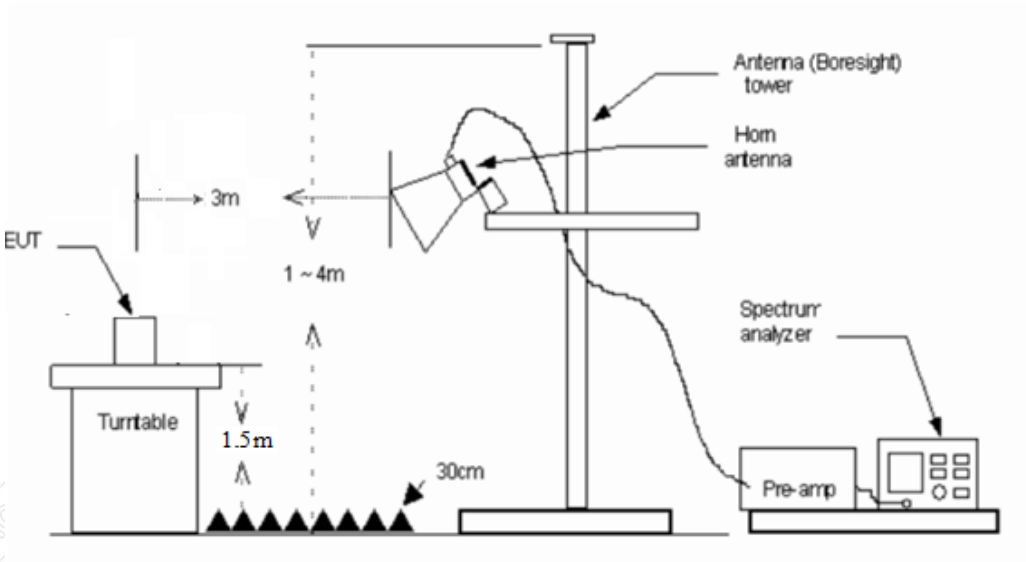
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 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	2655 - 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	
13.36 - 13.41			

12.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Meas Guidance v03r01.

1) The EUT is placed on a turntable, which is 1.5m above the ground plane.
2) The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3) EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4) Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
   a) PEAK: RBW=1MHz / VBW=1MHz / Sweep=AUTO
   b) AVERAGE: RBW=1MHz / VBW=1/T / Sweep=AUTO
5) Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

12.3 TEST SETUP



12.4 TEST RESULTS

Note: The test is according to the typical placement method of the product.

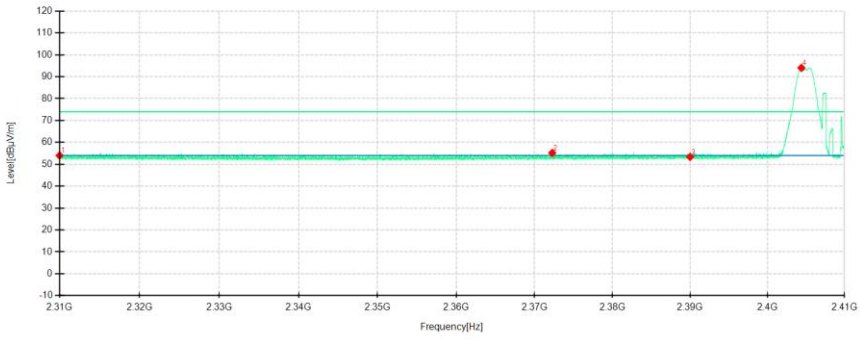
Environment: 25.3℃/59%RH/101.0kPa Voltage: DC 6V

Tested By: Wen wenwen Date: 2024-06-08

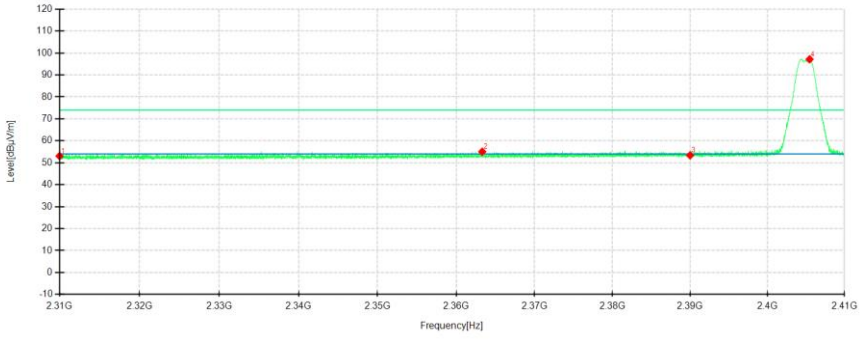
Lowest Channel

Channel 2405MHz

Detector mode: Peak Polarity: Horizontal



Detector mode: Peak Polarity: Vertical



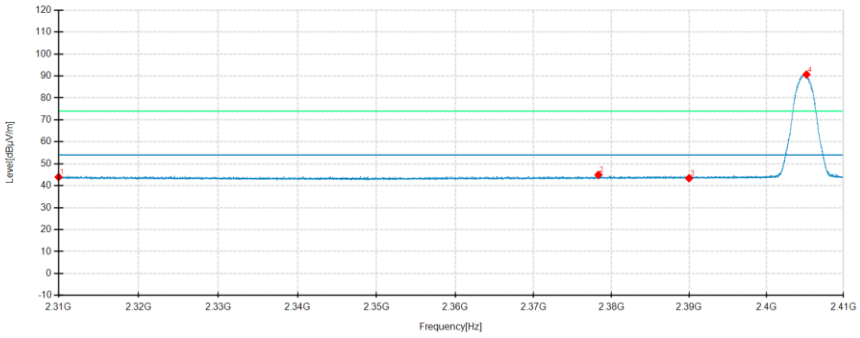
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2310.0000	58.97	54.01	-4.96	74.00	19.99	100	340	Horizontal	/
2	2372.2750	60.96	55.20	-5.76	74.00	18.80	200	244	Horizontal	/
3	2390.0000	59.20	53.37	-5.83	74.00	20.63	100	327	Horizontal	
4	2404.4125	99.90	94.04	-5.86	---	---	200	152	Horizontal	N/A
1	2310.0000	58.72	53.06	-5.66	74.00	20.94	100	97	Vertical	/
2	2363.3250	60.56	55.04	-5.52	74.00	18.96	200	340	Vertical	/
3	2390.0000	58.81	53.40	-5.41	74.00	20.60	200	14	Vertical	/
4	2405.4750	102.49	97.15	-5.34	---	---	100	124	Vertical	N/A

---------- The following blanks ----------

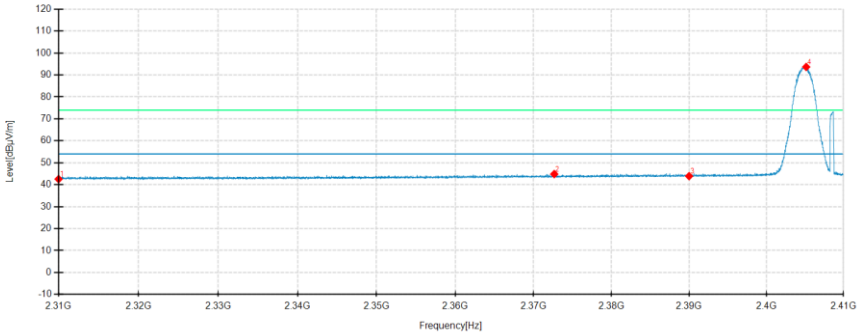
Lowest Channel

Channel 2405MHz

Detector mode: Average Polarity: Horizontal

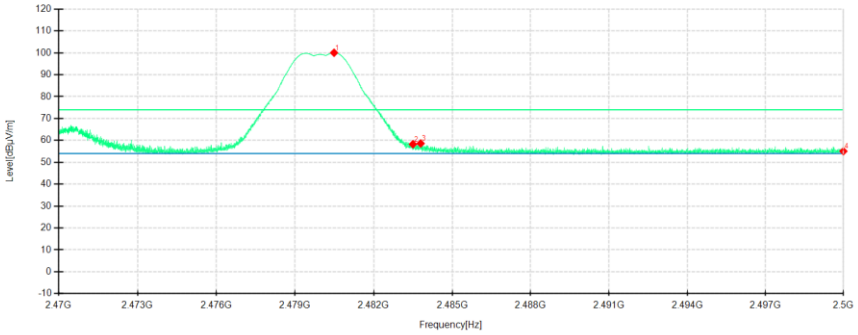


Detector mode: Average Polarity: Vertical

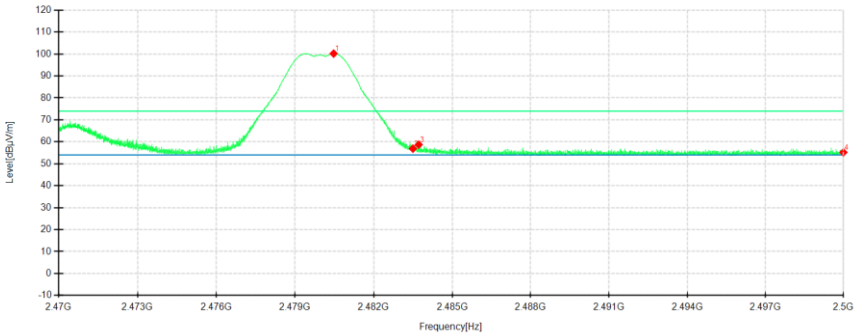


No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2310.0000	48.91	43.95	-4.96	54.00	10.05	100	41	Horizontal	/
2	2378.3375	50.74	44.96	-5.78	54.00	9.04	100	260	Horizontal	/
3	2390.0000	49.24	43.41	-5.83	54.00	10.59	200	60	Horizontal	/
4	2405.2000	96.54	90.68	-5.86	---	---	200	151	Horizontal	N/A
1	2310.0000	48.22	42.56	-5.66	54.00	11.44	100	320	Vertical	/
2	2372.6625	50.33	44.85	-5.48	54.00	9.15	200	92	Vertical	/
3	2390.0000	49.32	43.91	-5.41	54.00	10.09	200	144	Vertical	/
4	2405.1625	99.01	93.66	-5.35	---	---	100	124	Vertical	N/A

Highest Channel
Channel 2480MHz
Detector mode: Peak Polarity: Horizontal

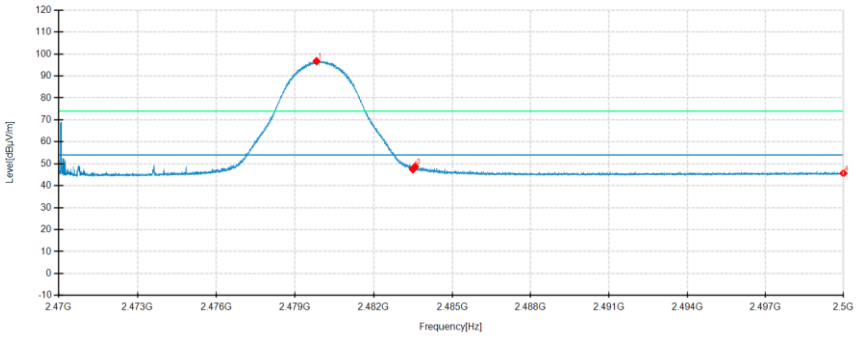


Detector mode: Peak Polarity: Vertical

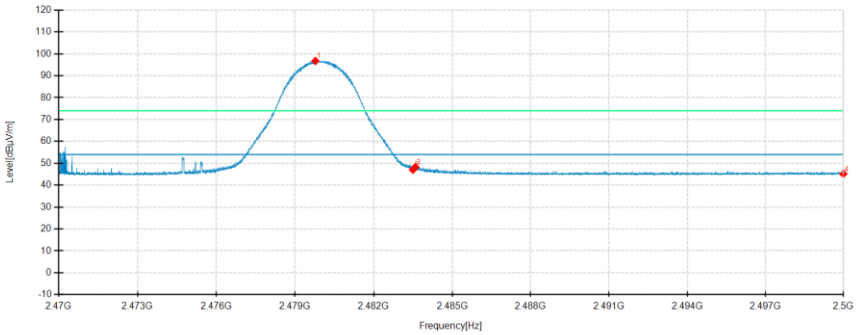


No.	Frequency MHz	Reading dBµV/m	Level dBµV/m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2480.4888	105.20	100.04	-5.16	---	---	100	302	Horizontal	N/A
2	2483.5000	63.36	58.26	-5.10	74.00	15.74	100	302	Horizontal	/
3	2483.7963	63.70	58.61	-5.09	74.00	15.39	100	314	Horizontal	/
4	2500.0000	59.87	55.08	-4.79	74.00	18.92	100	262	Horizontal	/
1	2480.4738	105.25	100.20	-5.05	---	---	200	106	Vertical	N/A
2	2483.5000	61.93	56.90	-5.03	74.00	17.10	100	294	Vertical	/
3	2483.7213	63.75	58.72	-5.03	74.00	15.28	200	106	Vertical	/
4	2500.0000	60.21	55.22	-4.99	74.00	18.78	100	360	Vertical	/

Highest Channel
Channel 2480MHz
Detector mode: Average Polarity: Horizontal



Detector mode: Average Polarity: Vertical



No.	Frequency MHz	Reading dBµV/m	Level dBµV/m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2479.8213	101.91	96.74	-5.17	---	---	100	313	Horizontal	N/A
2	2483.5000	52.59	47.49	-5.10	54.00	6.51	100	326	Horizontal	/
3	2483.5825	53.75	48.65	-5.10	54.00	5.35	100	313	Horizontal	/
4	2500.0000	50.45	45.66	-4.79	54.00	8.34	200	34	Horizontal	/
1	2479.7763	101.81	96.76	-5.05	---	---	200	107	Vertical	N/A
2	2483.5000	52.15	47.12	-5.03	54.00	6.88	200	107	Vertical	/
3	2483.5938	53.27	48.24	-5.03	54.00	5.76	200	107	Vertical	/
4	2500.0000	50.11	45.12	-4.99	54.00	8.88	100	336	Vertical	/

Remark: Max field strength in 3m distance. No any other emission which falls in restricted bands can be detected and be reported.

APPENDIX A. PHOTOGRAPH OF THE TEST CONNECTION DIAGRAM

Please refer to the attached document E20240605493601-test setup photo-FCC+IC.

APPENDIX B. PHOTOGRAPH OF THE EUT

Please refer to the attached document E20240605493601-EUT photo.

---------- End of Report ----------