RF MEASUREMENT REPORT

FCC ID:	ZMKM450C7
Applicant:	MICROZONE ELECTRONIC (HK) CO., LIMITED
Product:	2.4GHz Wireless Control System
Model No.:	C7-MINI
Serial Model	6C-MINI, 8B-MINI, C10-MINI, M450
Brand Name:	MICROZONE
FCC Classification:	Part 15 Low Power Communication Device Transmitter (DXX)
FCC Rule Part(s):	Part 15 Subpart C (Section 15.249)
Result:	Complies
Received Date:	2024-04-26
Test Date:	2024-05-24 ~ 2024-05-30

Reviewed By: Vincent Yu

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY CERTIFICATE #3628.02

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Shenzhen) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2404RSZ051-U1	V01	Initial Report	2024-09-08	Valid

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1. General Information

1.1. Applicant

MICROZONE ELECTRONIC (HK) CO., LIMITED

ROOM 1005, 10/F, HO KING COMMERCIAL CENTRE, 2-16 FA YUEN STREET, MONGKOK, KL, HONGKONG

1.2. Manufacturer

SHENZHEN MICROZONE R/C TECHNOLOGY LIMITED

Room709, Building 8-9, Xingji Home, Hongxing Community, Songgang Street, Baoan District, Shenzhen, China

1.3. Testing Facility

☐	**Test Site – MRT Suzhou Laboratory**
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China **Laboratory Location (Suzhou - SIP)** 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Accreditations
	A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: ☐R-20025 ☐G-20034 ☐C-20020 ☐T-20020 ☐R-20141 ☐G-20134 ☐C-20103 ☐T-20104
☒	**Test Site – MRT Shenzhen Laboratory**
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
☐	**Test Site – MRT Taiwan Laboratory**
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: 3261 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product	2.4GHz Wireless Control System
Model No.	C7-MINI
Serial Model	6C-MINI, 8B-MINI, C10-MINI, M450
Brand Name	MICROZONE
EUT Identification No.	20240426Sample#02 (For connected) 20240426Sample#03 (For Radiated)
Wireless Specification	FSK: 2405 ~ 2475MHz
Antenna Information	Refer to section 1.5
Product Voltage	DC 4V ~ 8.4V
Normal Voltage	DC 6V

Notes:

1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.
2. The different models are only for marketing different clients, others are the same.

1.5. Radio Specification

Frequency Range	2405 ~ 2475MHz
Channel No.	15
Type of modulation	FSK
Antenna Type	Monopole Antenna
Antenna Gain	3.22dBi

1.6. Working Frequencies

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2405 MHz	01	2410 MHz	02	2415 MHz
03	2420 MHz	04	2425 MHz	05	2430 MHz
06	2435 MHz	07	2440 MHz	08	2445 MHz
09	2450 MHz	10	2455 MHz	11	2460 MHz
12	2465 MHz	13	2470 MHz	14	2475 MHz

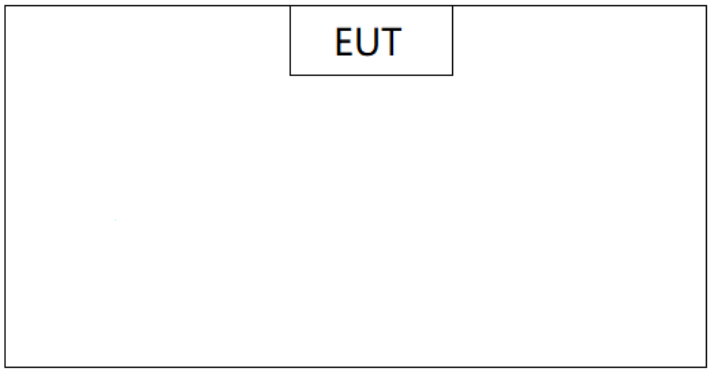
2. Test Configuration

2.1. Test Mode

Mode 1: Transmitter (FSK)

2.2. Test Configuration

This device was tested per the guidance ANSI C63.10:2013 was used to reference the appropriate EUT setup for radiated emissions testing.

Connection Diagram


2.3. Test Software

The EUT could enter Engineer Mode and transmit.

2.4. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.249
- ANSI C63.10-2013

2.5. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

- The antenna of the device is **permanently attached.**
- There are no provisions for connection to an external antenna.

Conclusion:

This unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
EMI Test Receiver	R&S	ESR3	MRTSUE06575	1 year	2024-06-18	NS-AC1
Signal Analyzer	Keysight	N9010A	MRTSUE06195	1 year	2024-12-10	NS-AC1
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2024-09-17	NS-AC1
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06573	1 year	2025-05-12	NS-AC1
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06572	1 year	2025-03-15	NS-AC1
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06574	1 year	2024-07-07	NS-AC1
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06292	1 year	2024-10-21	NS-AC1
Preamplifier	EMCI	EMC184045SE	MRTSUE06641	1 year	2025-01-07	NS-AC1
Thermohygrometer	testo	608-H1	MRTSUE11294	1 year	2025-05-14	NS-AC1
Anechoic Chamber	BOOMWAVE	NS-AC1	MRTSUE06496	1 year	2024-07-12	NS-AC1

Software	Version	Function
EMI Software	V 3.0.0	EMI Test Software
Controller_T-E-TAC-2	1.02	RE Antenna & Turntable

5. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Radiated Emission Measurement
The maximum measurement uncertainty is evaluated as: Coaxial: 9kHz~30MHz: 2.61dB Coplanar: 9kHz~30MHz: 2.62dB Horizontal: 30MHz~200MHz: 3.79dB 200MHz~1GHz: 3.91dB 1GHz~40GHz: 4.99dB Vertical: 30MHz~200MHz: 4.06dB 200MHz~1GHz: 5.21dB 1GHz~40GHz: 4.90dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.7%

6. Test Result

6.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Verdict
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	N/A
15.209 15.249	General Field Strength Limits (Fundamental and Radiated Emission Limits)	Radiated	Pass
15.215(c)	20dB Bandwidth	Conducted	Pass

Notes:

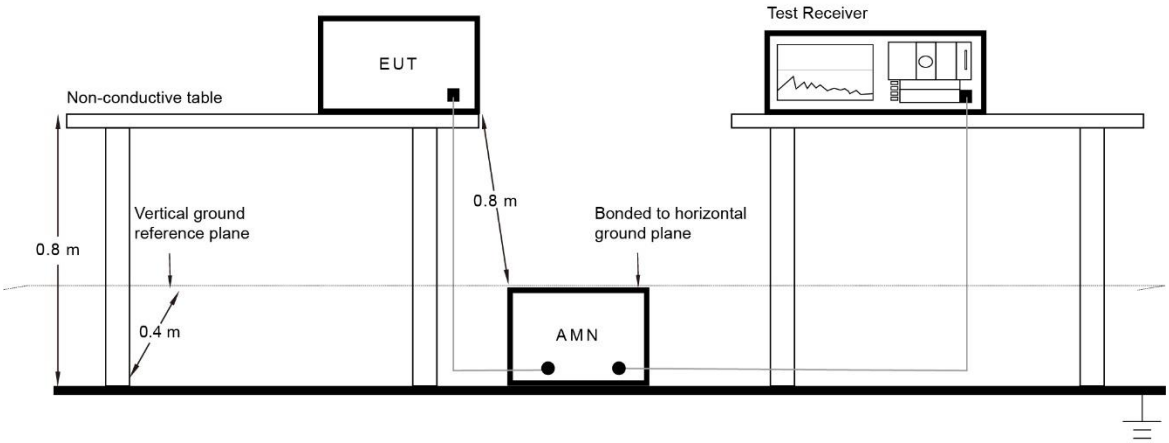
1. The radiation measurements are performed in X, Y, Z axis positioning. The test results shown in the following sections represent the worst-case emissions.
2. The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
3. “N/A” means that this item is not applicable, and the detail information refer to relevant section.

6.2. AC Conducted Emissions Measurement

6.2.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBμV)	Average (dBμV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.		

6.2.2. Test Setup



6.2.3. Test Result

The EUT is powered by battery, so this item is not applicable.

6.3. Fundamental & Radiated Spurious Emission Measurement

6.3.1. Test Limit

The field strength of fundamental and harmonic emissions measured at 3 m shall not exceed the limits shown in Table per Section 15.249.

FCC Part 15 Subpart C Paragraph 15.249		
Fundamental Frequency (MHz)	Field Strength of Fundamental (mV/m)	Field Strength of Harmonics (μV/m)
902 ~ 928	50	500
2400 ~ 2483.5	50	500
5725 ~ 5875	50	500
24000 ~ 24250	250	2500

All out of band emissions must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
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
Note 1: The lower limit shall apply at the transition frequency. Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system. Note 3: Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.		

6.3.2. Test Procedure

ANSI C63.10-2013 Section 6.3 (General Requirements)

ANSI C63.10-2013 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10-2013 Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10-2013 Section 6.6 (Standard test method above 1GHz)

6.3.3. Test Setting

Measurement of harmonic and spurious emissions below 40 GHz

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3 x RBW
4. Detector = Peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

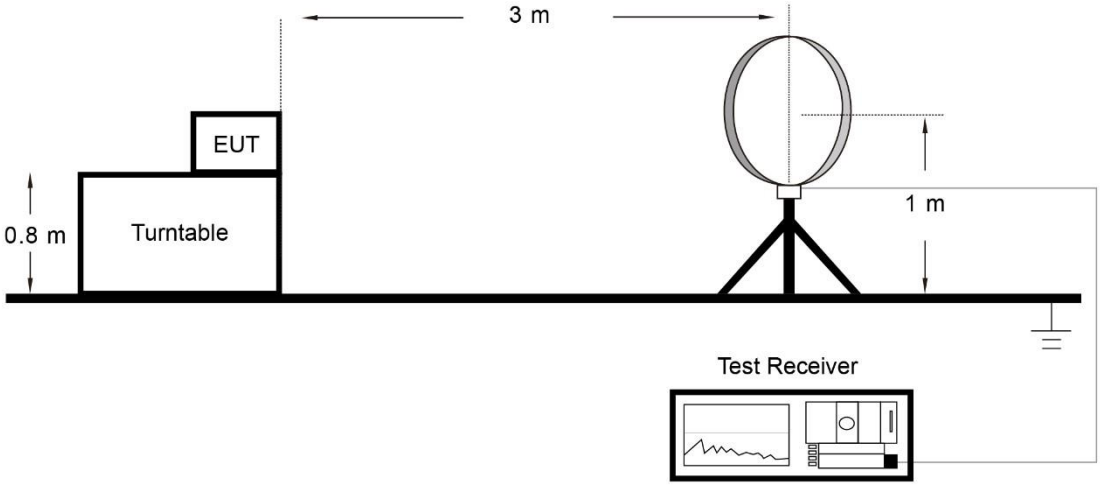
Frequency	RBW
9 ~ 150 kHz	200 Hz
0.15 ~ 30 MHz	9 kHz
30 ~ 1000 MHz	120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

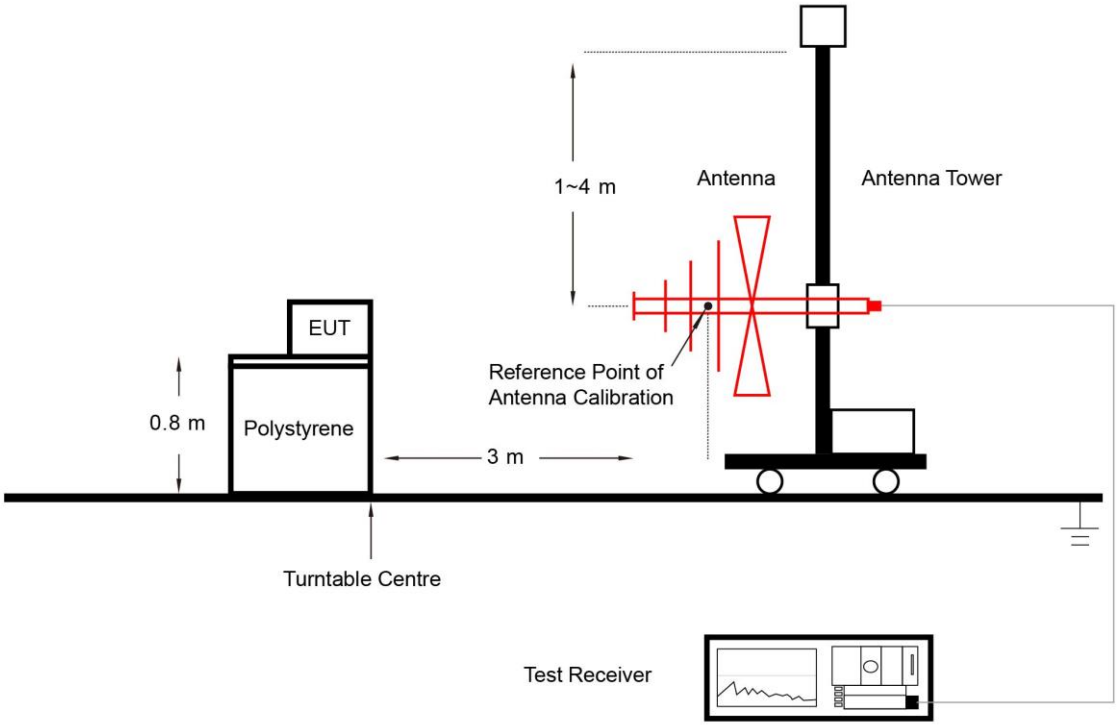
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. Set the VBW ≥ 3 × RBW
4. Detector function = Average
5. Sweep time ≥ (number of points in sweep) × (transmission symbol period)
6. Trace mode = Max Hold
7. Allow max hold to run for suitable traces until the trace tend to stabilize.

6.3.4. Test Setup

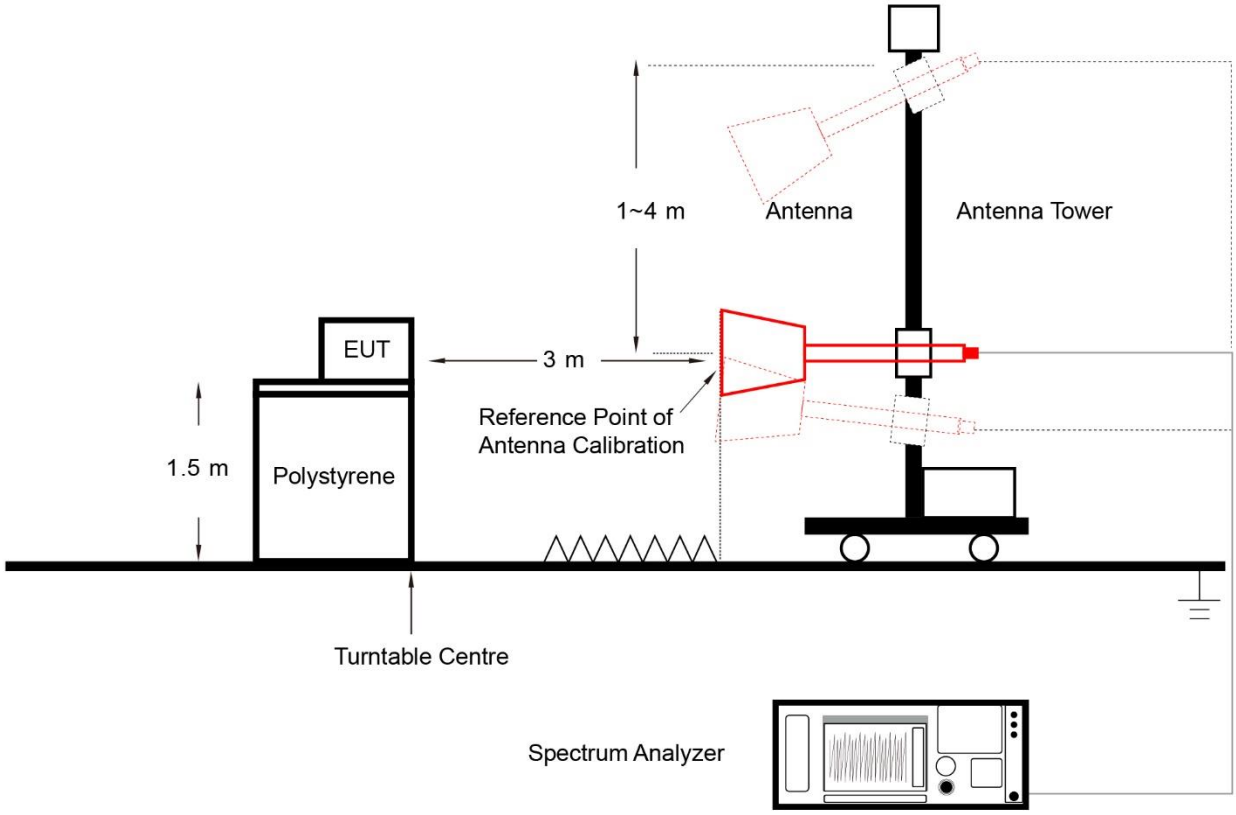
Below 30MHz Test Setup:



Below 1GHz Test Setup:



1GHz ~ 40GHz Test Setup:



6.3.5. Test Result

Refer to Appendix A.1.

6.4. Radiated Restricted Band Edge Measurement

6.4.1. Test Limit

All out of band emissions must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [μV/m]	Measured Distance [Meter]
0.009 ~ 0.490	2400/F (kHz)	300
0.490 ~ 1.705	24000/F (kHz)	30
1.705 ~ 30	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3
Note 1: The lower limit shall apply at the transition frequency. Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system. Note 3: Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.		

6.4.2. Test Procedure

ANSI C63.10-2013 Section 6.3 (General Requirements)

ANSI C63.10-2013 Section 6.6 (Standard test method above 1GHz)

ANSI C63.10-2013 Section 6.10 (Band-edge testing)

6.4.3. Test Setting

Peak Field Strength Measurements

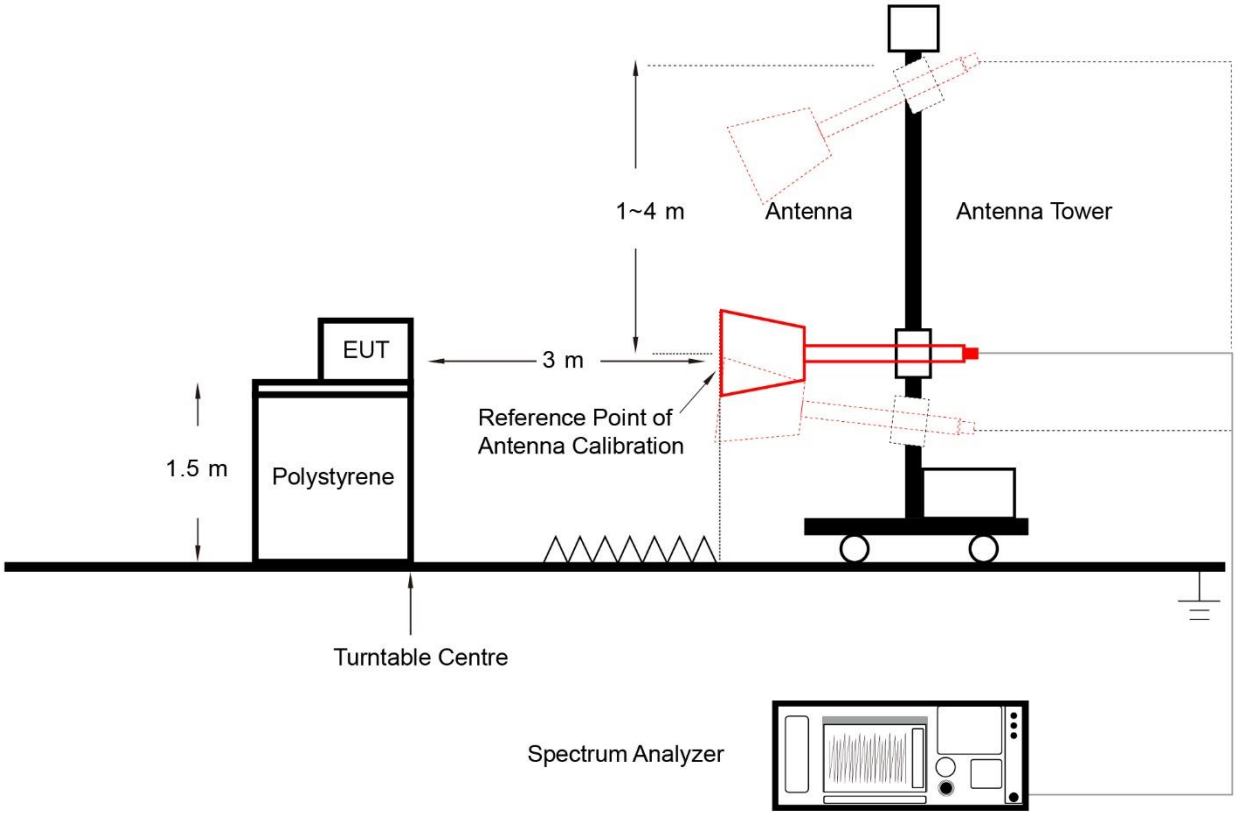
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak

5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. Set the VBW ≥ 3 × RBW
4. Detector function = Average
5. Sweep time ≥ (number of points in sweep) × (transmission symbol period)
6. Trace mode = Max Hold
7. Allow max hold to run for suitable traces until the trace tend to stabilize.

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.2.

6.5. 20dB Bandwidth Measurement

6.5.1. Test Limit

Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emission in the specific band.

6.5.2. Test Procedure

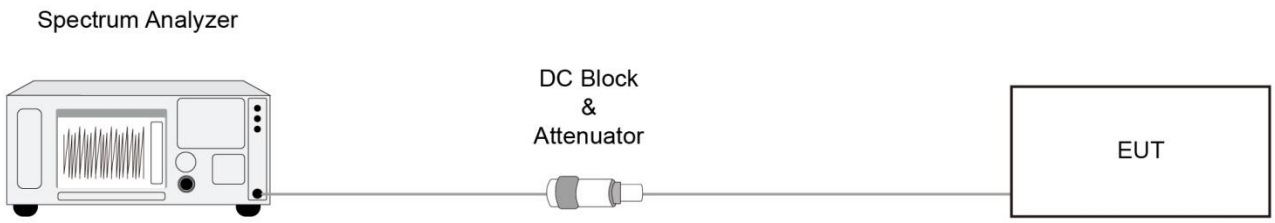
ANSI C63.10-2013 Clause 6.9.2

6.5.3. Test Setting

20dB Bandwidth

1. The analyzers' automatic bandwidth measurement capability was used to perform the 20dB bandwidth
2. Spectrum analyzer frequency is set to the nominal EUT channel center frequency.
3. The frequency span for the spectrum analyzer shall be between 2.0 times and 5.0 times the OBW
4. Set RBW = 1% ~ 5% of the OBW
5. VBW ≥ 3 × RBW
6. Detector = Peak
7. Trace mode = max hold
8. Sweep = auto couple
9. Allow the trace to stabilize
10. Measure the maximum width of the emission that is 20 dB down from the maximum of the emission.

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.3.

Appendix A - Test Result

A.1 Fundamental & Radiated Emission Test Result

Test Site	NS-AC1	Test Date	2024-05-30
Test Engineer	Flag Yang	Test Mode	Mode 1

Frequency Band (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Result
Fundamental Radiated Emission (Horizontal)							
2405	58.000	32.148	90.148	114	-23.852	Peak	Pass
	57.632	32.148	89.780	94	-4.220	Average	Pass
2445	57.952	32.088	90.040	114	-23.960	Peak	Pass
	57.749	32.088	89.837	94	-4.163	Average	Pass
2475	57.574	32.114	89.688	114	-24.312	Peak	Pass
	57.416	32.114	89.530	94	-4.470	Average	Pass
Fundamental Radiated Emission (Vertical)							
2405	50.377	32.148	82.525	114	-31.475	Peak	Pass
	49.941	32.148	82.089	94	-11.911	Average	Pass
2445	48.835	32.087	80.922	114	-33.078	Peak	Pass
	48.462	32.088	80.550	94	-13.450	Average	Pass
2475	46.406	32.114	78.520	114	-35.480	Peak	Pass
	45.631	32.114	77.745	94	-16.255	Average	Pass

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

Test Site	NS-AC1	Test Engineer	Flag Yang
Test Date	2024-05-22	Test Mode	Mode 1
Remark	Average measurement was not performed if peak level lower than average limit.		

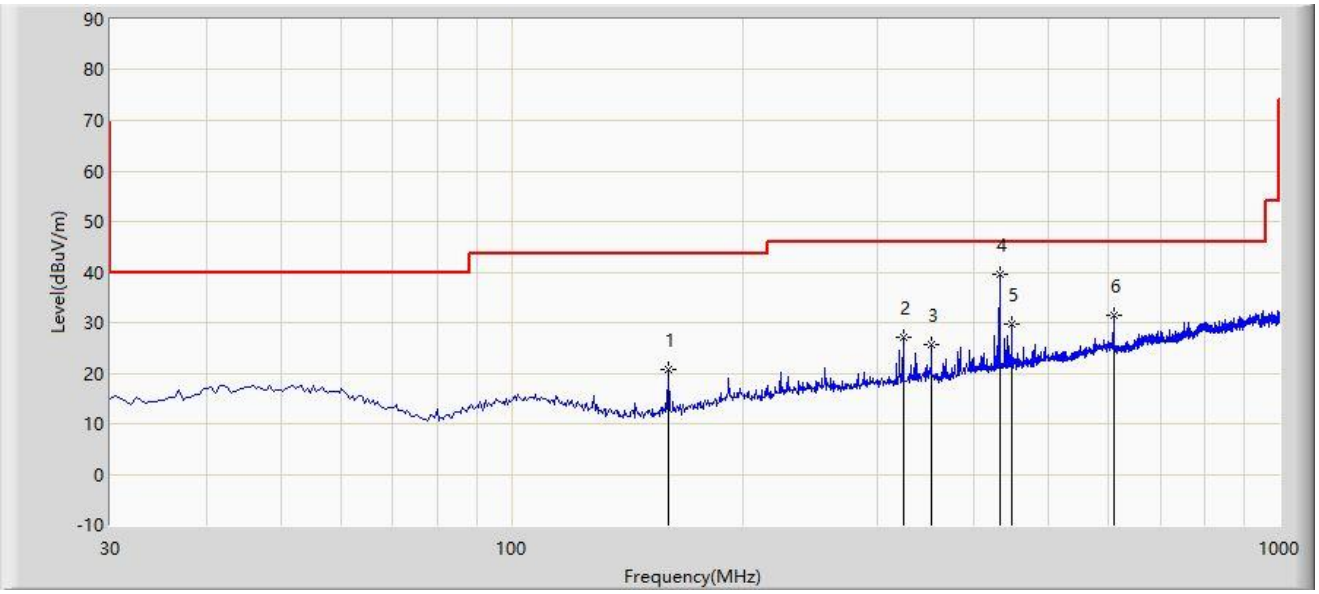
Test Freq. (MHz)	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Between 1GHz ~ 18GHz								
2405	4808.0	48.8	3.4	52.2	74.0	-21.8	Peak	Horizontal
	8063.5	34.9	11.8	46.7	74.0	-27.3	Peak	Horizontal
	9083.5	32.7	14.9	47.6	74.0	-26.4	Peak	Horizontal
	4808.0	42.8	3.4	46.2	74.0	-27.8	Peak	Vertical
	7409.0	32.7	13.2	45.9	74.0	-28.1	Peak	Vertical
	8845.5	32.5	14.6	47.1	74.0	-26.9	Peak	Vertical
2445	4893.0	47.8	3.6	51.4	74.0	-22.6	Peak	Horizontal
	8471.5	32.6	13.0	45.6	74.0	-28.4	Peak	Horizontal
	10384.0	32.7	16.6	49.3	74.0	-24.7	Peak	Horizontal
	4893.0	42.0	3.6	45.6	74.0	-28.4	Peak	Horizontal
	7417.5	32.4	13.2	45.6	74.0	-28.4	Peak	Vertical
	11030.0	31.7	17.9	49.6	74.0	-24.4	Peak	Vertical
	4893.0	47.8	3.6	51.4	74.0	-22.6	Peak	Vertical
	8471.5	32.6	13.0	45.6	74.0	-28.4	Peak	Vertical
2475	4952.5	48.3	3.6	51.9	74.0	-22.1	Peak	Horizontal
	9075.0	32.7	14.7	47.4	74.0	-26.6	Peak	Horizontal
	11217.0	30.8	18.7	49.5	74.0	-24.5	Peak	Horizontal
	4952.5	41.3	3.6	44.9	74.0	-29.1	Peak	Vertical
	9355.5	32.8	14.5	47.3	74.0	-26.7	Peak	Vertical
	11013.0	31.5	17.9	49.4	74.0	-24.6	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

The Result of Radiated Emission below 1GHz:

Site: NS-AC1	Test Date: 2024-05-24
Limit: FCC_Part15.209_RSE(3m)	Engineer: Flag Yang
Probe: NS-AC1_VULB9162	Polarity: Horizontal
EUT: 2.4GHz Wireless Control System	Power: By Battery
Test Mode: Transmit at 2405MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		159.980	20.841	6.963	-22.659	43.500	13.878	PK
2		323.910	27.085	7.346	-18.915	46.000	19.739	PK
3		352.040	25.752	5.120	-20.248	46.000	20.631	PK
4	*	432.065	39.441	17.433	-6.559	46.000	22.008	PK
5		448.070	29.680	7.306	-16.320	46.000	22.374	PK
6		608.120	31.569	6.164	-14.431	46.000	25.405	PK

Note 1: " * ", means this data is the worst emission level.

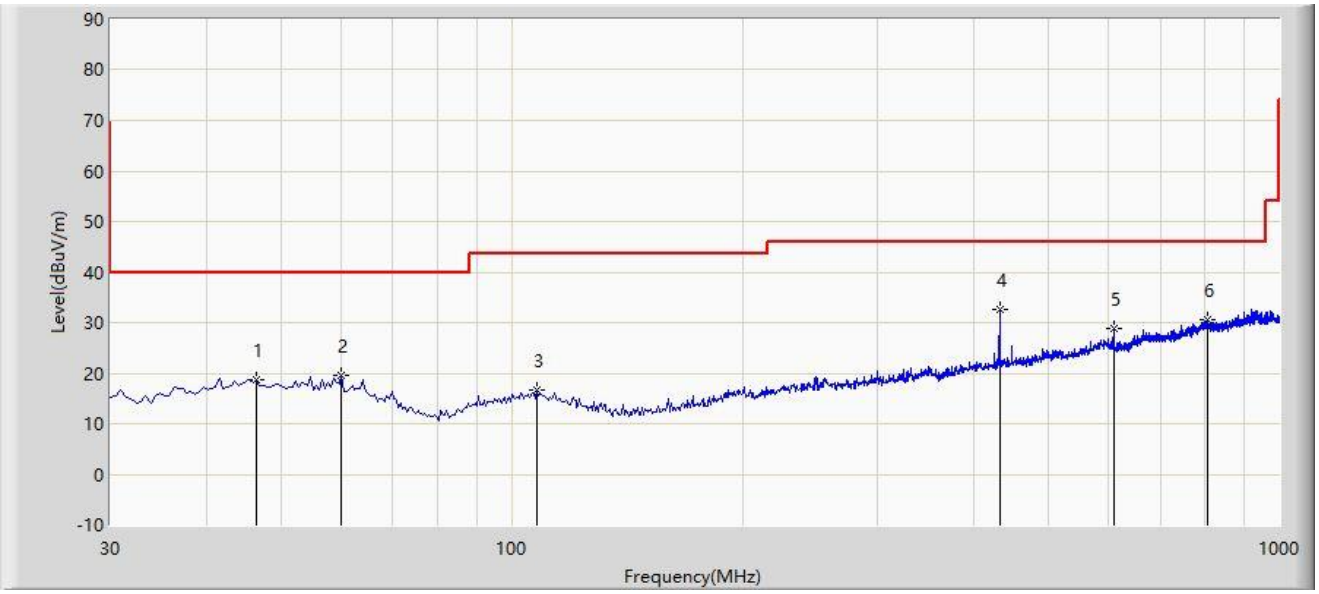
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

Note 5: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site: NS-AC1	Test Date: 2024-05-24
Limit: FCC_Part15.209_RSE(3m)	Engineer: Flag Yang
Probe: NS-AC1_VULB9162	Polarity: Vertical
EUT: 2.4GHz Wireless Control System	Power: By Battery
Test Mode: Transmit at 2405MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		46.490	18.808	0.010	-21.192	40.000	18.798	PK
2		60.070	19.507	1.873	-20.493	40.000	17.634	PK
3		108.085	16.743	0.086	-26.757	43.500	16.658	PK
4	*	432.065	32.497	10.489	-13.503	46.000	22.008	PK
5		608.120	28.840	3.435	-17.160	46.000	25.405	PK
6		807.455	30.567	1.594	-15.433	46.000	28.973	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

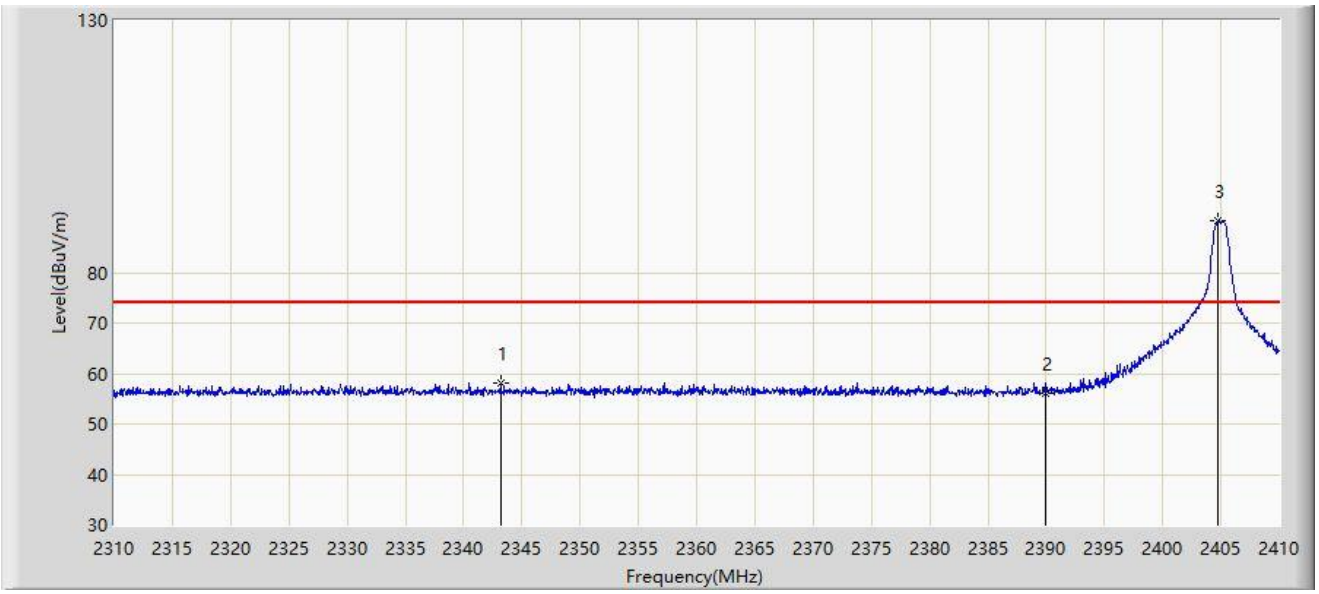
Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

Note 5: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

A.2 Radiated Restricted Band Edge Test Result

Site: NS-AC1	Test Date: 2024-05-30
Limit: FCC_2.4G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: 2.4GHz Wireless Control System	Power: By Battery
Test Mode: Transmit at 2405MHz	



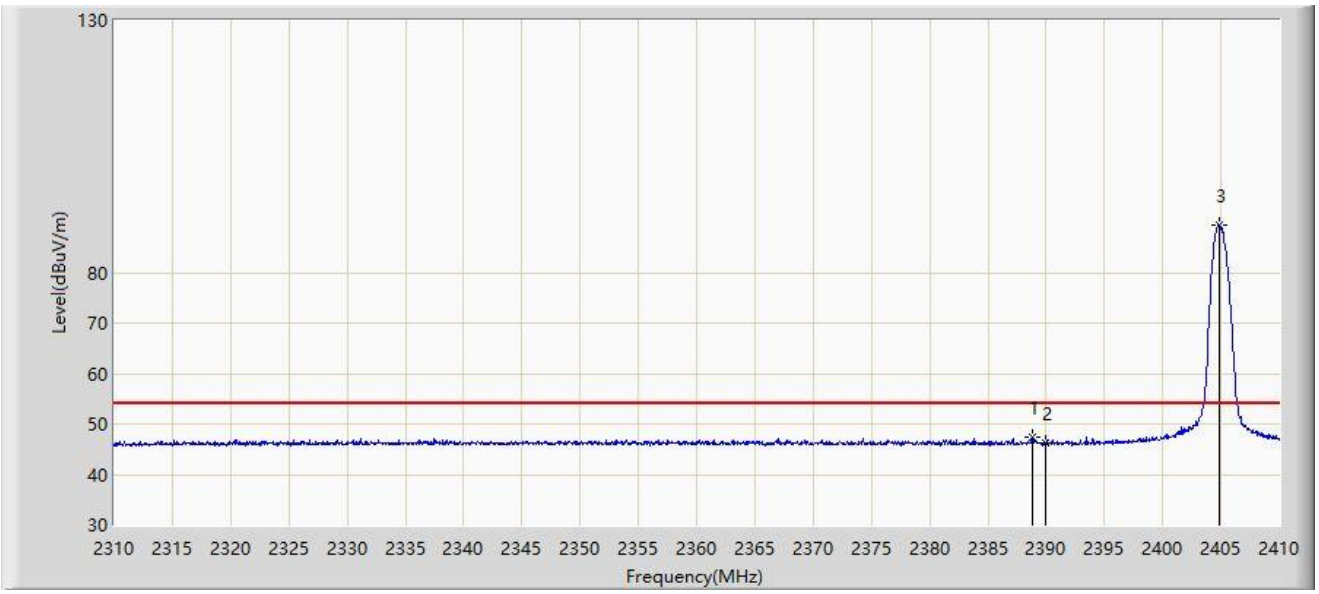
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2343.150	58.136	25.850	-15.864	74.000	32.286	PK
2		2390.000	56.146	23.988	-17.854	74.000	32.159	PK
3		2404.750	90.175	58.026	N/A	N/A	32.148	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: NS-AC1	Test Date: 2024-05-30
Limit: FCC_2.4G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: 2.4GHz Wireless Control System	Power: By Battery
Test Mode: Transmit at 2405MHz	



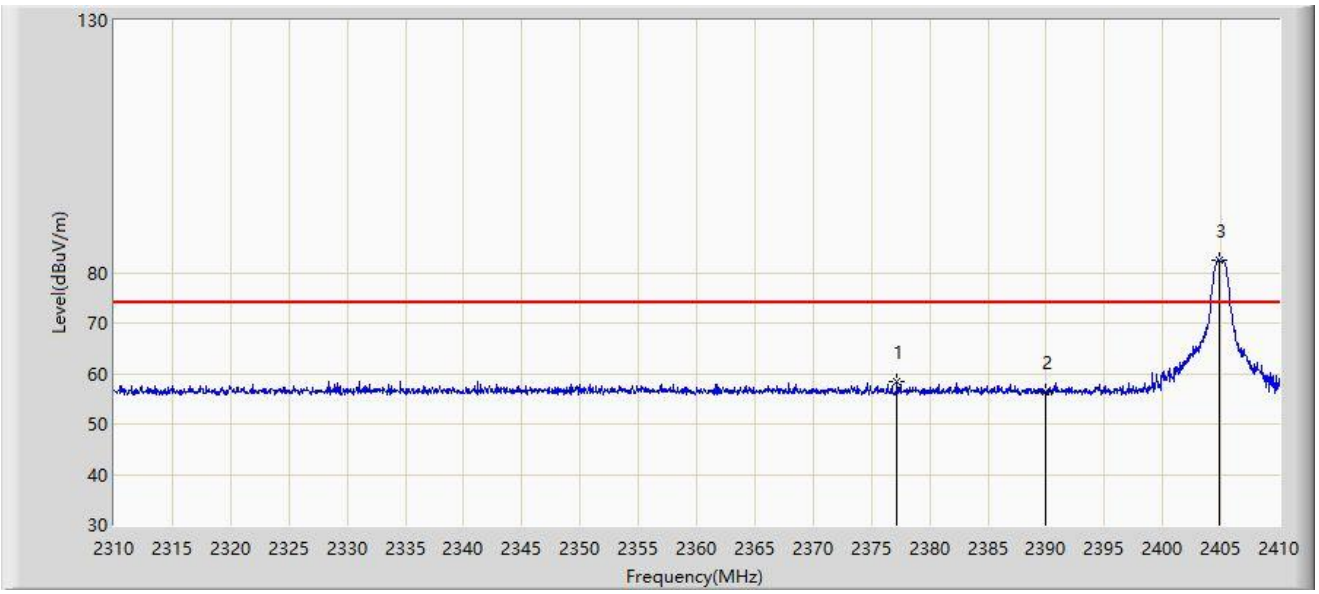
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2388.800	47.277	15.121	-6.723	54.000	32.156	AV
2		2390.000	46.247	14.089	-7.753	54.000	32.159	AV
3		2404.800	89.362	57.213	N/A	N/A	32.148	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: NS-AC1	Test Date: 2024-05-30
Limit: FCC_2.4G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: 2.4GHz Wireless Control System	Power: By Battery
Test Mode: Transmit at 2405MHz	



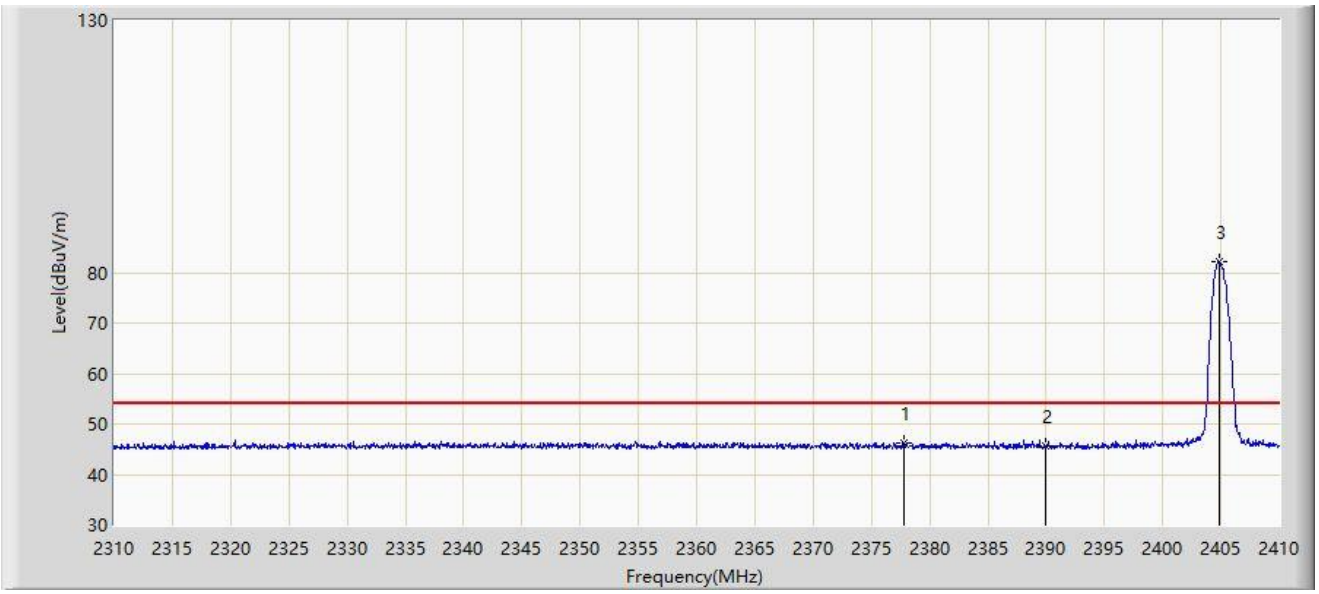
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2377.200	58.446	26.314	-15.554	74.000	32.132	PK
2		2390.000	56.261	24.103	-17.739	74.000	32.159	PK
3		2404.800	82.424	50.275	N/A	N/A	32.148	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: NS-AC1	Test Date: 2024-05-30
Limit: FCC_2.4G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: 2.4GHz Wireless Control System	Power: By Battery
Test Mode: Transmit at 2405MHz	



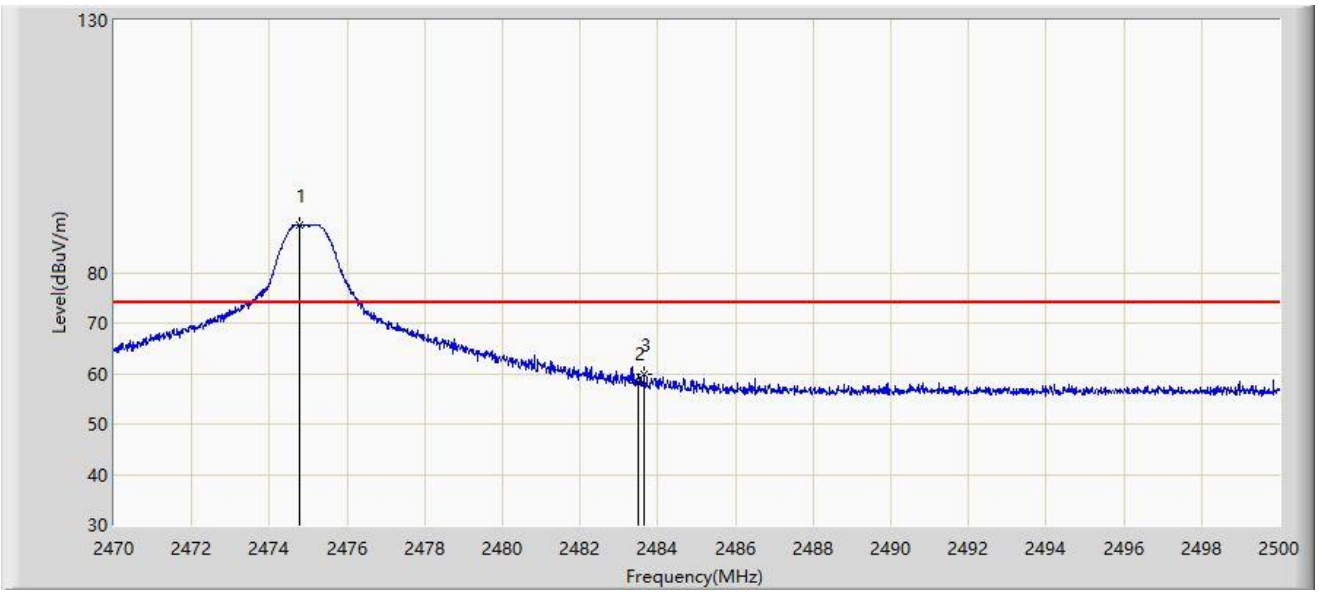
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1	*	2377.750	46.308	14.175	-7.692	54.000	32.133	AV
2		2390.000	45.691	13.533	-8.309	54.000	32.159	AV
3		2404.800	82.157	50.008	N/A	N/A	32.148	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: NS-AC1	Test Date: 2024-05-30
Limit: FCC_2.4G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: 2.4GHz Wireless Control System	Power: By Battery
Test Mode: Transmit at 2475MHz	



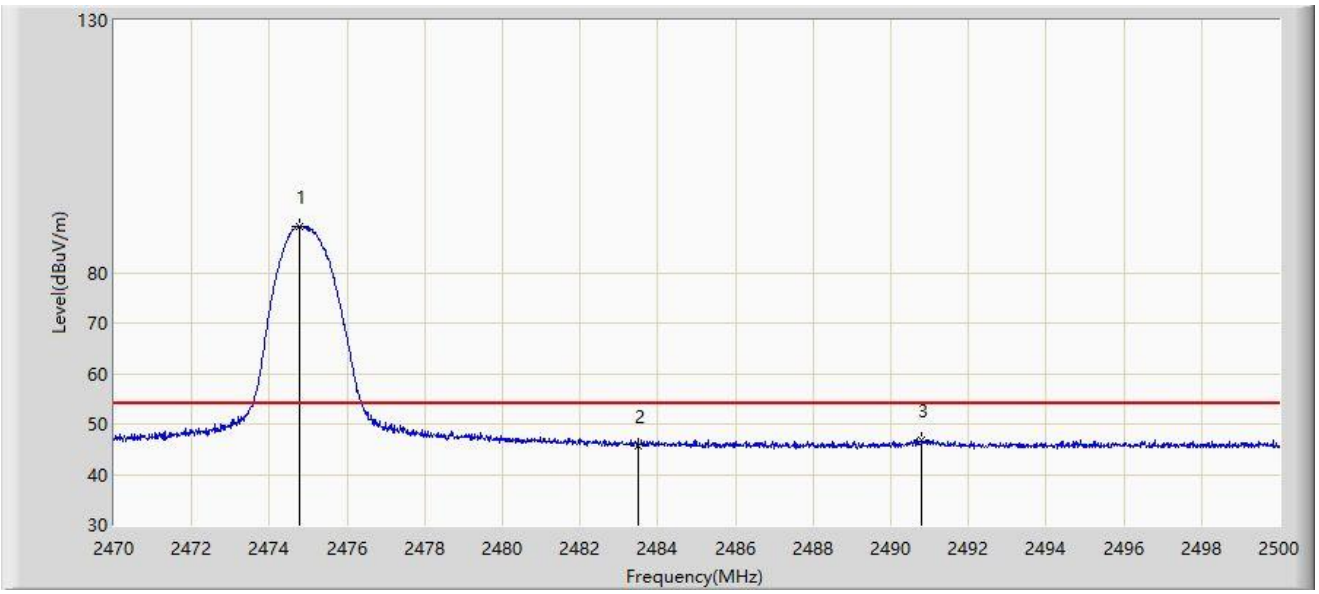
No	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBµV)	Margin (dB)	Limit (dBµV/m)	Factor (dB/m)	Type
1		2474.770	89.533	57.419	N/A	N/A	32.114	PK
2		2483.500	58.054	25.918	-15.946	74.000	32.136	PK
3	*	2483.650	59.761	27.625	-14.239	74.000	32.136	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: NS-AC1	Test Date: 2024-05-30
Limit: FCC_2.4G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Horizontal
EUT: 2.4GHz Wireless Control System	Power: By Battery
Test Mode: Transmit at 2475MHz	



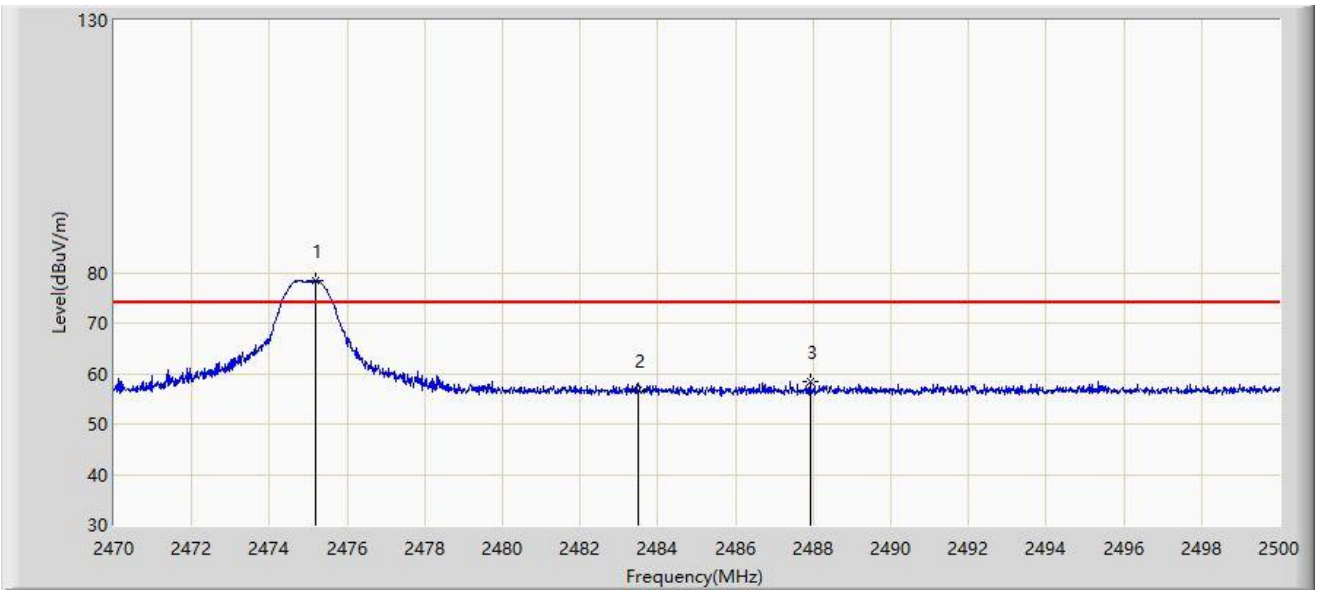
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2474.785	89.184	57.070	N/A	N/A	32.114	AV
2		2483.500	45.797	13.661	-8.203	54.000	32.136	AV
3	*	2490.805	46.940	14.786	-7.060	54.000	32.154	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: NS-AC1	Test Date: 2024-05-30
Limit: FCC_2.4G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: 2.4GHz Wireless Control System	Power: By Battery
Test Mode: Transmit at 2475MHz	



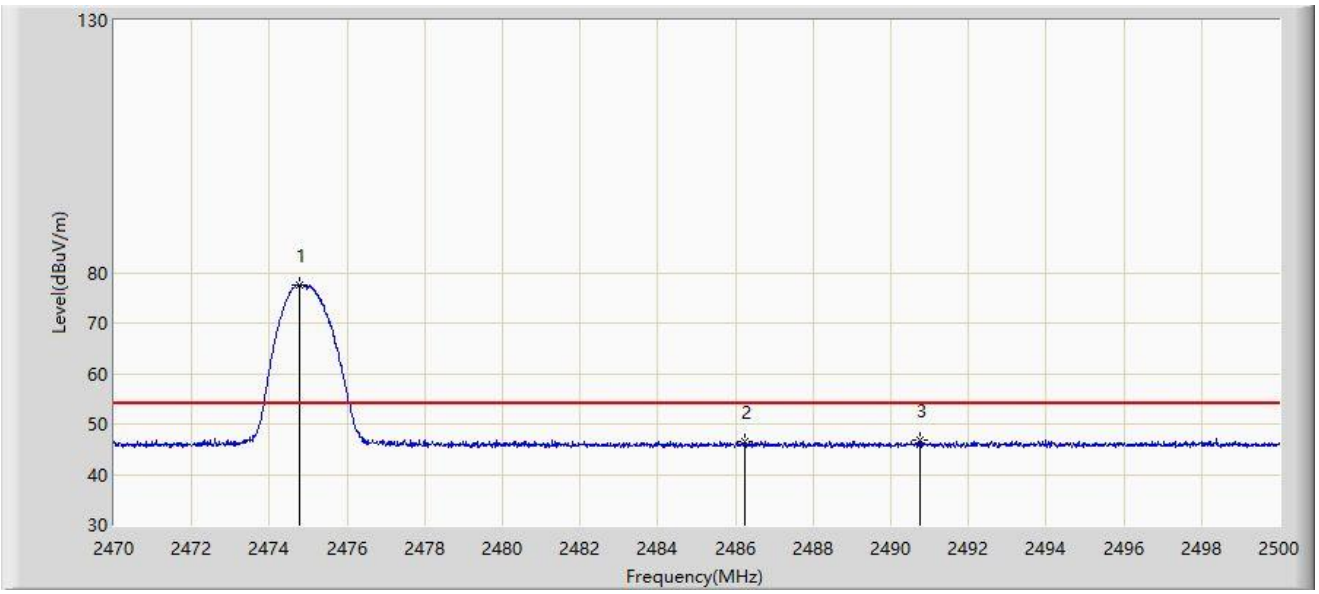
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2475.190	78.383	46.268	N/A	N/A	32.115	PK
2		2483.500	56.531	24.395	-17.469	74.000	32.136	PK
3	*	2487.925	58.272	26.125	-15.728	74.000	32.147	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: NS-AC1	Test Date: 2024-05-30
Limit: FCC_2.4G_RE(3m)	Engineer: Flag Yang
Probe: NS-AC1_BBHA9120D_2111_1-18GHz	Polarity: Vertical
EUT: 2.4GHz Wireless Control System	Power: By Battery
Test Mode: Transmit at 2475MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2474.785	77.594	45.480	N/A	N/A	32.114	AV
2		2486.230	46.642	14.500	-7.358	54.000	32.142	AV
3	*	2490.760	46.683	14.529	-7.317	54.000	32.154	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

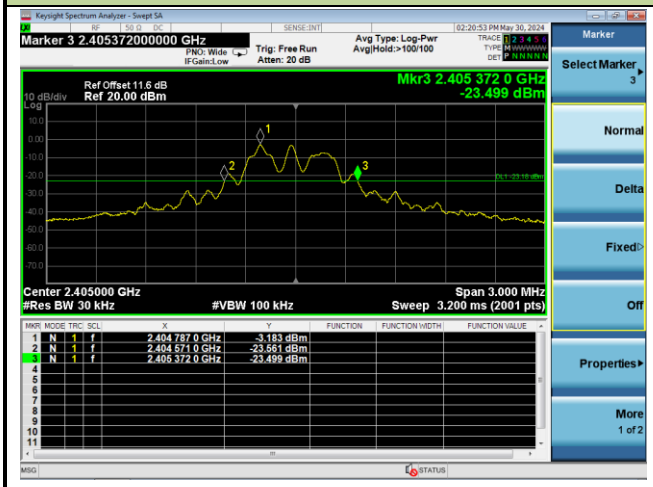
A.3 20dB Bandwidth Test Result

Test Site	NS-TR2	Test Date	2024-05-30
Test Engineer	Summer Tang	Test Mode	Mode 1

Test Frequency (MHz)	20dB Bandwidth (MHz)	F_L (MHz)	F_L Limit (MHz)	F_H (MHz)	F_H Limit (MHz)	Result
2405	0.801	2404.571	≥ 2400	2405.372	≤ 2483.5	Pass
2445	0.798	2444.571	≥ 2400	2445.369	≤ 2483.5	Pass
2475	0.798	2474.571	≥ 2400	2475.369	≤ 2483.5	Pass

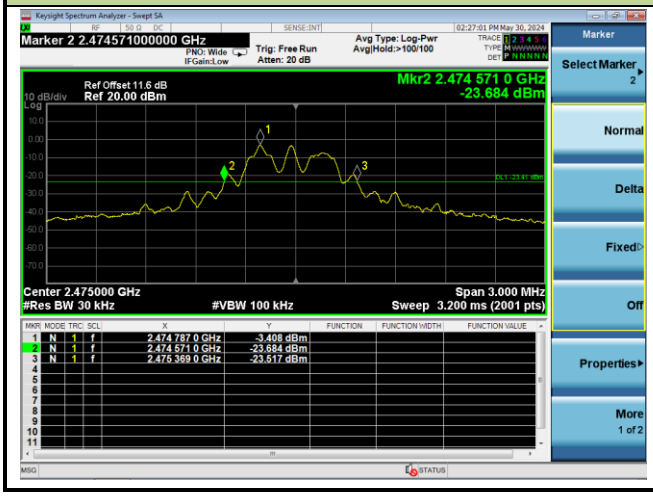
20dB Bandwidth Measurement

2405 MHz



2445 MHz

2475 MHz



Appendix B - Test Setup Photograph

Refer to “2404RSZ051-UT” file.

Appendix C - EUT Photograph

Refer to “2404RSZ051-UE” file.