



MEASUREMENT REPORT

FCC PART 15C / WLAN 802.11b/g/n

FCC ID: XMR2021SC20AD

Applicant: Quectel Wireless Solutions Co., Ltd

Application Type: Certification

Product: LTE Module

Model No.: SC20-AD

Brand Name: Quectel

FCC Classification: Digital Transmission System (DTS)

FCC Rule Part(s): Part 15 Subpart C (Section 15.247)

Test Procedure(s): ANSI C63.10-2013, KDB 558074 D01v05r02

Test Date: December 21 ~ 27, 2021

Reviewed By:

Sunny Sun

Sunny Sun

Approved By:

Robin Wu

Robin Wu



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 (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2112RSU024-U3	Rev. 01	Initial Report	01-13-2022	Valid

Note: For the difference between FCC IDs “XMR2021SC20AD” and “XMR201706SC20A”, “XMR2021SC20AD” disabled WCDMA, GSM and voice part via software and removed some small RF components which are used in WCDMA and GSM. This report is based on “XMR201706SC20A” original report to supplement the spot check related test items with worst mode.

CONTENTS

Description	Page
1. General Information	5
1.1. Applicant	5
1.2. Manufacturer	5
1.3. Testing Facility	5
1.4. Product Information	6
1.5. Radio Specification	6
1.6. Working Frequencies for this report	7
2. TEST CONFIGURATION	8
2.1. Test Mode	8
2.2. Configuration of Test System	8
2.3. Description of Test Software	8
2.4. Test Environment Condition	8
3. ANTENNA REQUIREMENTS	9
4. TEST EQUIPMENT CALIBRATION DATE	10
5. MEASUREMENT UNCERTAINTY	12
6. TEST RESULT	13
6.1. Summary	13
6.2. Output Power Measurement	14
6.2.1. Test Limit	14
6.2.2. Test Procedure Used	14
6.2.3. Test Setting	14
6.2.4. Test Setup	15
6.2.5. Test Result	16
6.3. Radiated Spurious Emission Measurement	17
6.3.1. Test Limit	17
6.3.2. Test Procedure	17
6.3.3. Test Setting	17
6.3.4. Test Setup	19
6.3.5. Test Result	20
6.4. Radiated Restricted Band Edge Measurement	23
6.4.1. Test Limit	23
6.4.2. Test Procedure Used	24
6.4.3. Test Setting	24
6.4.4. Test Setup	25

6.4.5. Test Result.....	26
Appendix A - Test Setup Photograph	30
Appendix B - EUT Photograph.....	31

1. General Information

1.1. Applicant

Quectel Wireless Solutions Co., Ltd

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District,
Shanghai, China 200233

1.2. Manufacturer

Quectel Wireless Solutions Co., Ltd

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District,
Shanghai, China 200233

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 FCC: CN1166 VCCI:	CNAS: L10551 ISED: CN0001 ☐ 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 FCC: CN1284	CNAS: L10551 ISED: CN0105
☐	Test Site – MRT Taiwan Laboratory	
	Laboratory Location (Taiwan) No. 38, Fuxing 2 nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
	Laboratory Accreditations	
	TAF: L3261-190725 FCC: 291082, TW3261	ISED: TW3261

1.4. Product Information

Product Name	LTE Module
Model No.	SC20-AD
Serial No.	D1Y21L22E000063
Brand Name	Quectel
Operating Temperature	-35 ~ 75°C
Wi-Fi Specification	802.11a/b/g/n
Bluetooth Specification	V4.1 dual mode
E-UTRA Band	Band 2, 4, 5, 7, 12, 13, 25, 26
Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification

Frequency Range	802.11b/g/n-HT20: 2412 ~ 2462 MHz 802.11n-HT40: 2422 ~ 2452 MHz
Channel Number	802.11b/g/n-HT20: 11 802.11n-HT40: 7
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM
Data Rate	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 150Mbps
Antenna Information	Dipole Antenna with gain 3.0 dBi

Note: For other features of this EUT, test report will be issued separately.

1.6. Working Frequencies for this report

802.11b/g/n-HT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	--	--

802.11n-HT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz
06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	--	--	--	--

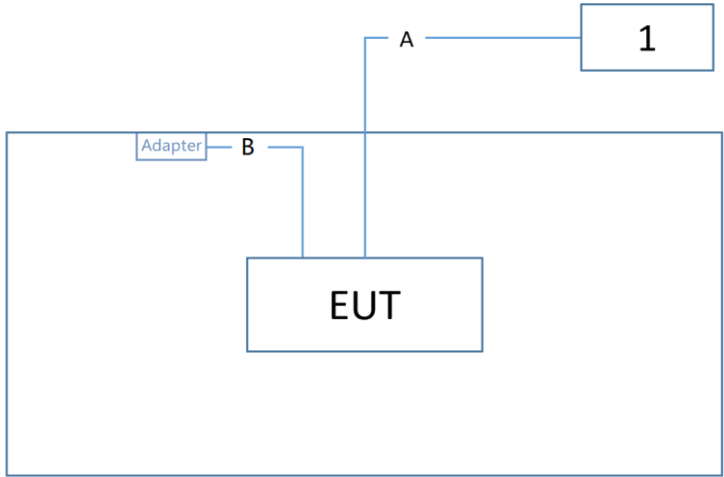
2. TEST CONFIGURATION

2.1. Test Mode

Test Mode	Mode 1: Transmit by 802.11b (1Mbps)
	Mode 2: Transmit by 802.11g (6Mbps)
	Mode 3: Transmit by 802.11n-HT20 (MCS0)
	Mode 4: Transmit by 802.11n-HT40 (MCS0)

2.2. Configuration of Test System

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.

Connection Diagram - Radiated Emission testing & AC Conducted Emissions			
			
Cable Type		Cable Description	
A	USB Cable	Shielding, 1m	
B	Power Cable	Non shielded, 1.1m	
Product		Manufacturer	Model No.
1	Notebook	HP	TPN-I125

2.3. Description of Test Software

The test utility software used during testing was “QRCT.exe”, and the version was 3.0.268.0. Power parameter value refers to operation description.

2.4. Test Environment Condition

Ambient Temp.	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.”

Conclusion:

The unit complies with the requirement of §15.203.

4. TEST EQUIPMENT CALIBRATION DATE

Radiated Emission (WZ-AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2022/01/04
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2022/10/28
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2022/08/05
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2022/9/16
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06597	1 year	2022/12/01
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2022/11/12
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2022/06/10
Thermal Hygrometer	testo	608-H1	MRTSUE06403	1 year	2022/06/28
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2022/04/29

Radiated Emission (WZ-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
MXE EMI Receiver	Keysight	N9038A	MRTSUE06125	1 year	2022/06/24
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2022/10/28
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2022/05/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2022/10/21
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06597	1 year	2022/12/01
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2022/11/12
Thermal Hygrometer	Minggao	ETH529	MRTSUE06170	1 year	2022/12/01
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2022/04/29

Conducted Test Equipment (WZ-TR3)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2022/04/13
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2022/01/06
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2022/10/10
USB wideband power sensor	Keysight	U2021XA	MRTSUE06446	1 year	2022/06/08
USB wideband power sensor	Keysight	U2021XA	MRTSUE06447	1 year	2022/06/08
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2022/06/08
Modulation Analyzer	HP	HP8901A	MRTSUE06098	1 year	2022/09/12
DC Power Supply	GWINSTEK	DPS-3303C	MRTSUE06064	N/A	N/A
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2022/10/10
Thermal Hygrometer	testo	608-H1	MRTSUE06401	1 year	2022/06/28

Software	Version	Function
EMI Software	V3	EMI Test Software

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 Disturbance
Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 1.13dB

6. TEST RESULT

6.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Test Result	Reference
15.247(b)(1)	Output Power	Conducted	Pass	Section 6.2
15.205, 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass	Section 6.3, 6.4

Notes:

- 1) 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.

6.2. Output Power Measurement

6.2.1. Test Limit

The maximum output power shall be less 1 Watt (30dBm).

The conducted output power limit specified in paragraph FCC Part 15.247(b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs FCC Part 15.247(b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.2.2. Test Procedure Used

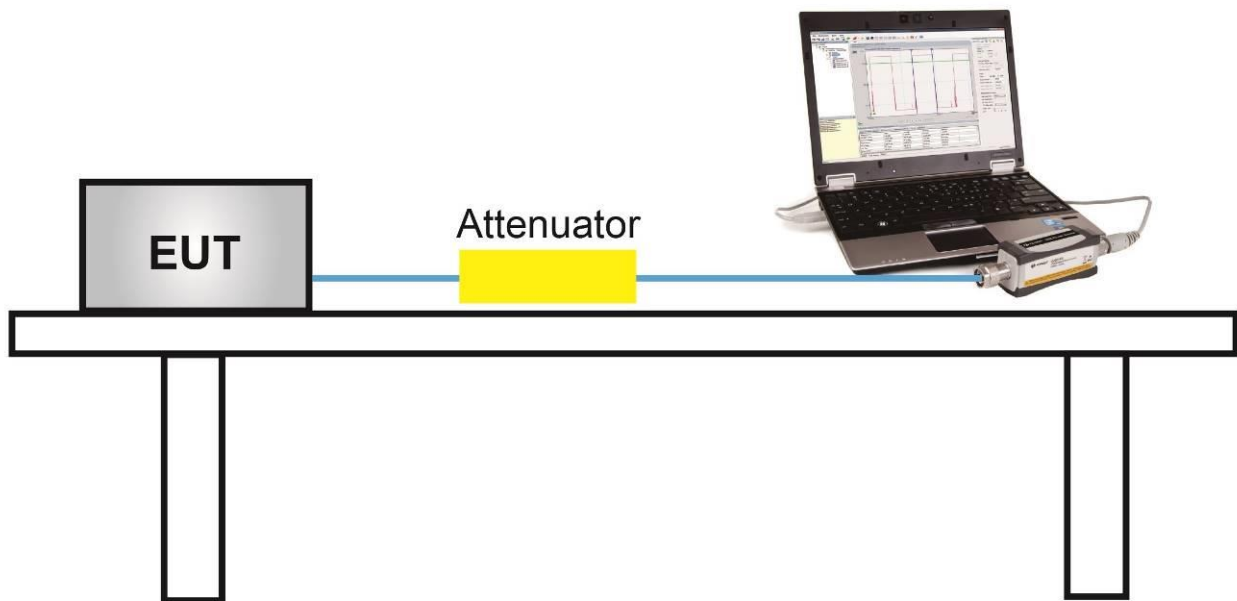
ANSI C63.10-2013 - Section 11.9.2.3.2

6.2.3. Test Setting

Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.2.4. Test Setup



6.2.5. Test Result

Test Site	WZ-TR3	Test Engineer	Jeff Yang
Test Date	2021/12/21		

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Output Power (dBm)	Limit (dBm)	Result
Peak Output Power						
11g	6Mbps	11	2462	21.72	≤ 30.00	Pass
11n-HT40	MCS0	03	2422	21.81	≤ 30.00	Pass
Average Output Power						
11g	6Mbps	11	2462	13.05	≤ 30.00	Pass
11n-HT40	MCS0	03	2422	13.23	≤ 30.00	Pass

6.3. Radiated Spurious Emission Measurement

6.3.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
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

6.3.2. Test Procedure

ANSI C63.10 Section 6.3, 6.4, 6.5, 6.6

6.3.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

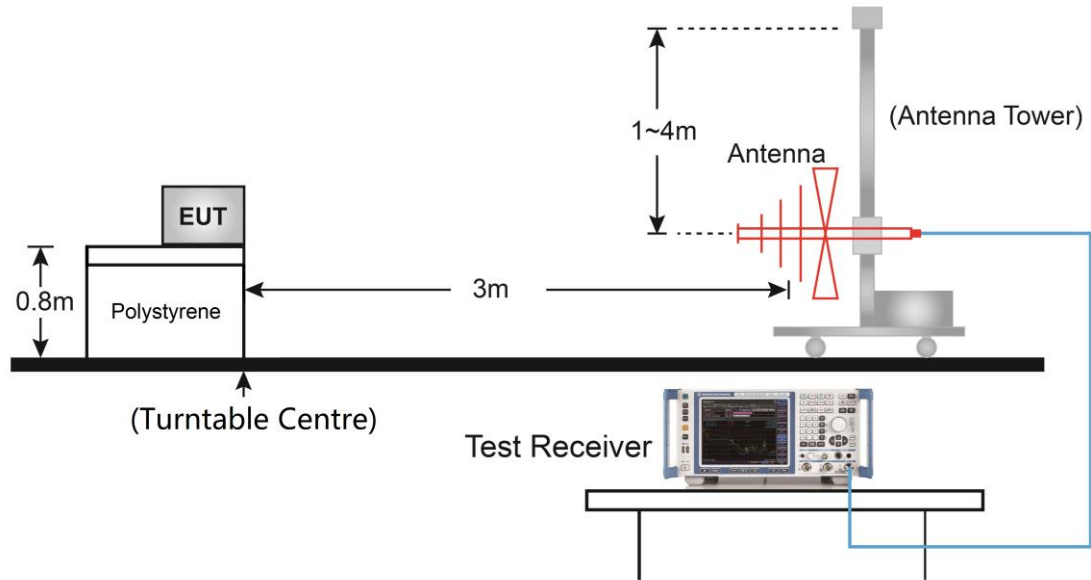
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

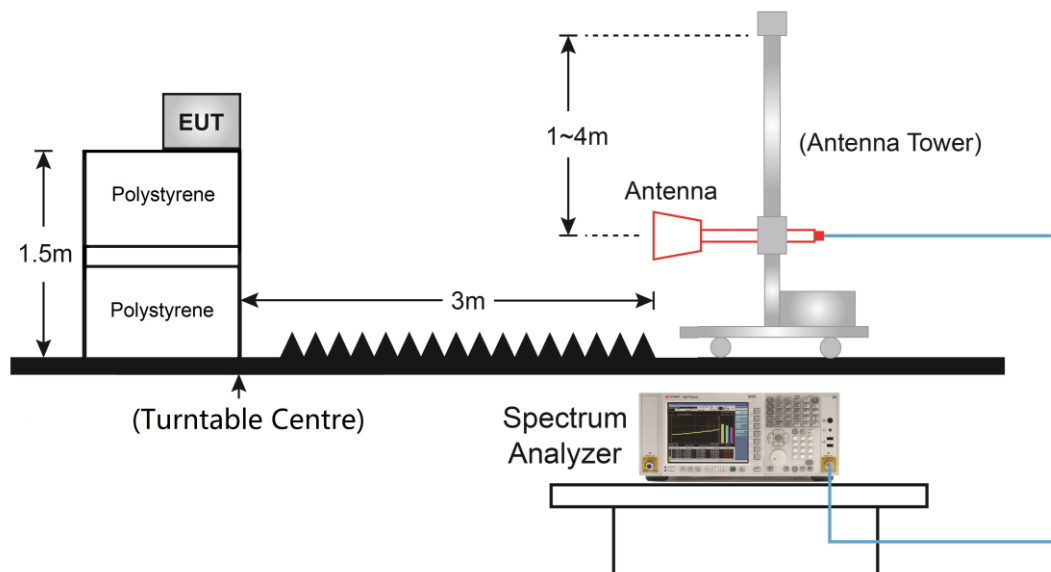
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set $\text{VBW} \geq 1/T$. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

6.3.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.3.5. Test Result

Test Site	WZ-AC2	Test Engineer	Bob Zhang
Test Mode	802.11n-HT40	Test Date	2021/12/26
Test Channel	03		
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

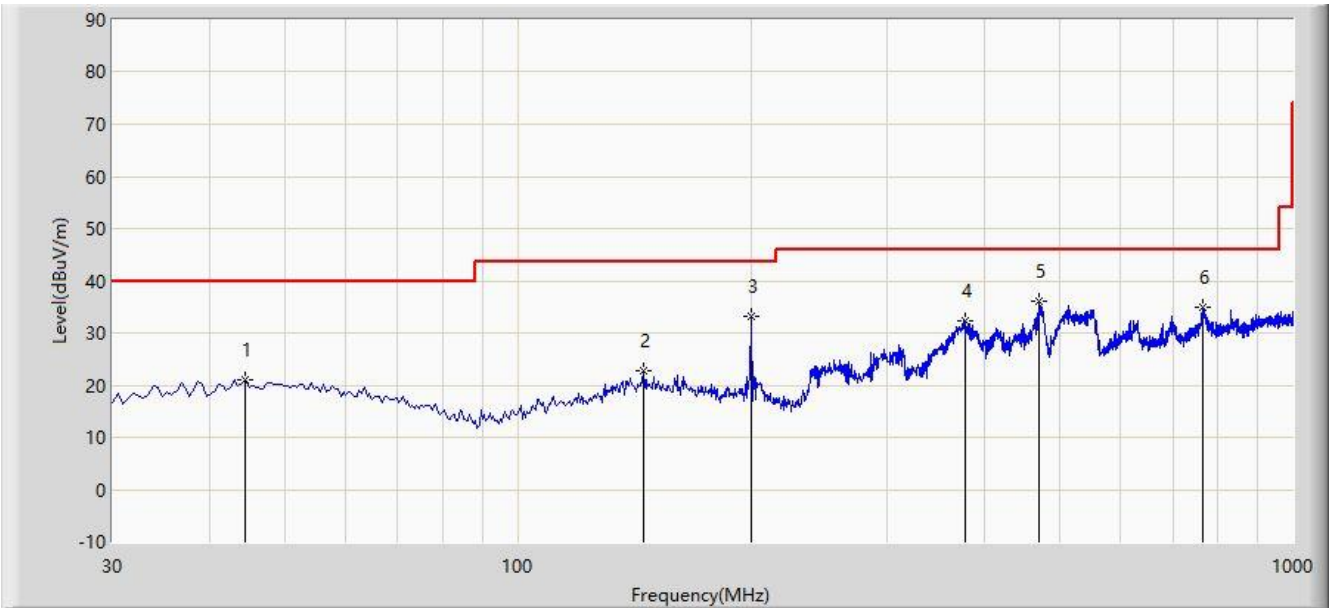
Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
3762.5	34.0	0.0	34.0	74.0	-40.0	Peak	Horizontal
4230.0	32.0	1.6	33.6	74.0	-40.4	Peak	Horizontal
4944.0	32.0	3.8	35.8	74.0	-38.2	Peak	Horizontal
3762.5	34.2	0.0	34.2	74.0	-39.8	Peak	Vertical
4230.0	33.0	1.6	34.6	74.0	-39.4	Peak	Vertical
4816.5	32.4	3.9	36.3	74.0	-37.7	Peak	Vertical

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Result of Radiated Emission below 1GHz:

Site: WZ-AC1	Time: 2021/12/27 - 17:20
Limit: FCC_Part15.209_RSE(3m)	Engineer: Kin Xia
Probe: WZ-AC1_VULB 9168 _30-1000MHz	Polarity: Horizontal
EUT: LTE Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 2422MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			44.550	21.011	2.355	-18.989	40.000	18.656	PK
2			145.430	22.826	4.948	-20.674	43.500	17.878	PK
3			199.750	33.125	18.813	-10.375	43.500	14.312	PK
4			377.745	32.350	12.090	-13.650	46.000	20.260	PK
5		*	470.865	35.983	13.385	-10.017	46.000	22.598	PK
6			764.775	34.793	6.580	-11.207	46.000	28.212	PK

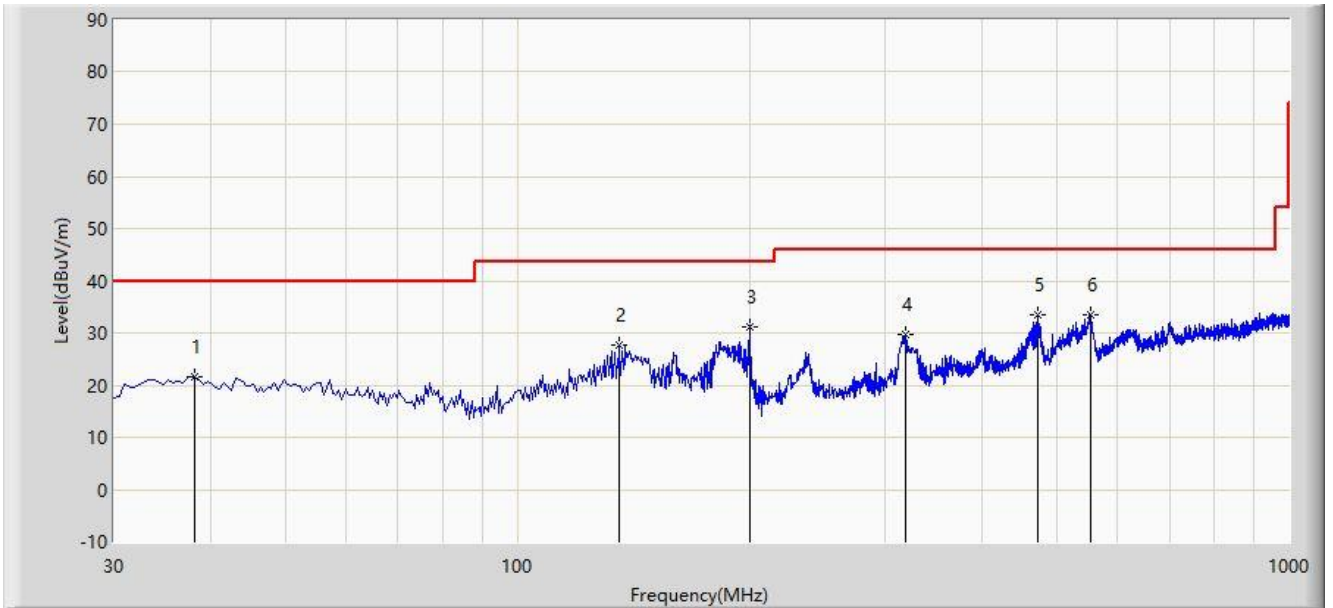
Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

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

Note 2: 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: WZ-AC1	Time: 2021/12/27 - 17:20
Limit: FCC_Part15.209_RSE(3m)	Engineer: Kin Xia
Probe: WZ-AC1_VULB 9168 _30-1000MHz	Polarity: Vertical
EUT: LTE Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 2422MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			38.245	21.606	4.112	-18.394	40.000	17.495	PK
2			135.730	27.606	10.599	-15.894	43.500	17.007	PK
3		*	199.750	31.258	16.946	-12.242	43.500	14.312	PK
4			318.575	29.706	10.893	-16.294	46.000	18.812	PK
5			471.835	33.598	10.985	-12.402	46.000	22.613	PK
6			552.830	33.457	9.465	-12.543	46.000	23.992	PK

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB/m)

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

Note 2: 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.

6.4. Radiated Restricted Band Edge Measurement

6.4.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (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	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	(²)
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
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

6.4.2.Test Procedure Used

ANSI C63.10-2013 Section 6.3, 6.6

6.4.3.Test Setting

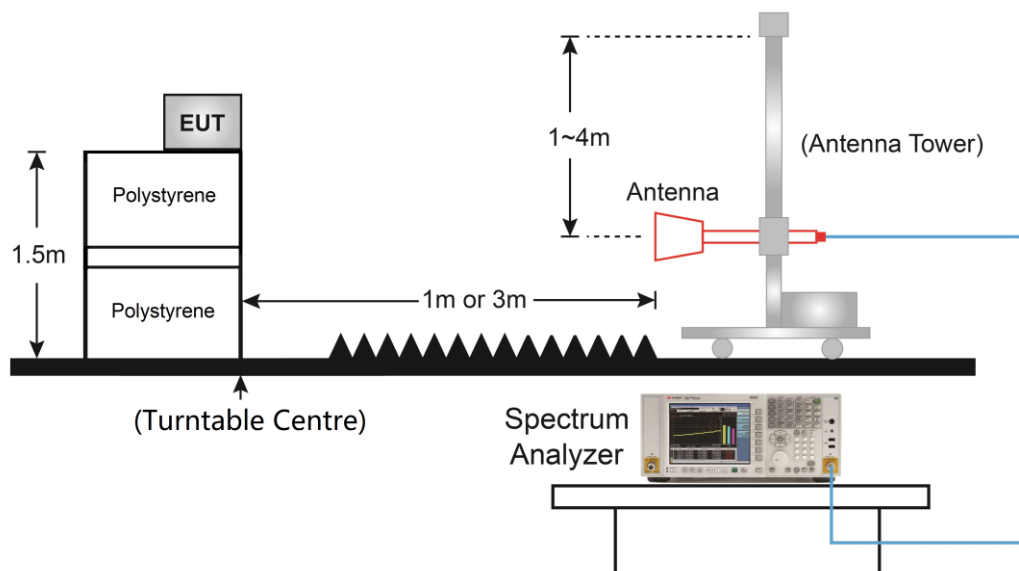
Peak Field Strength Measurements

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

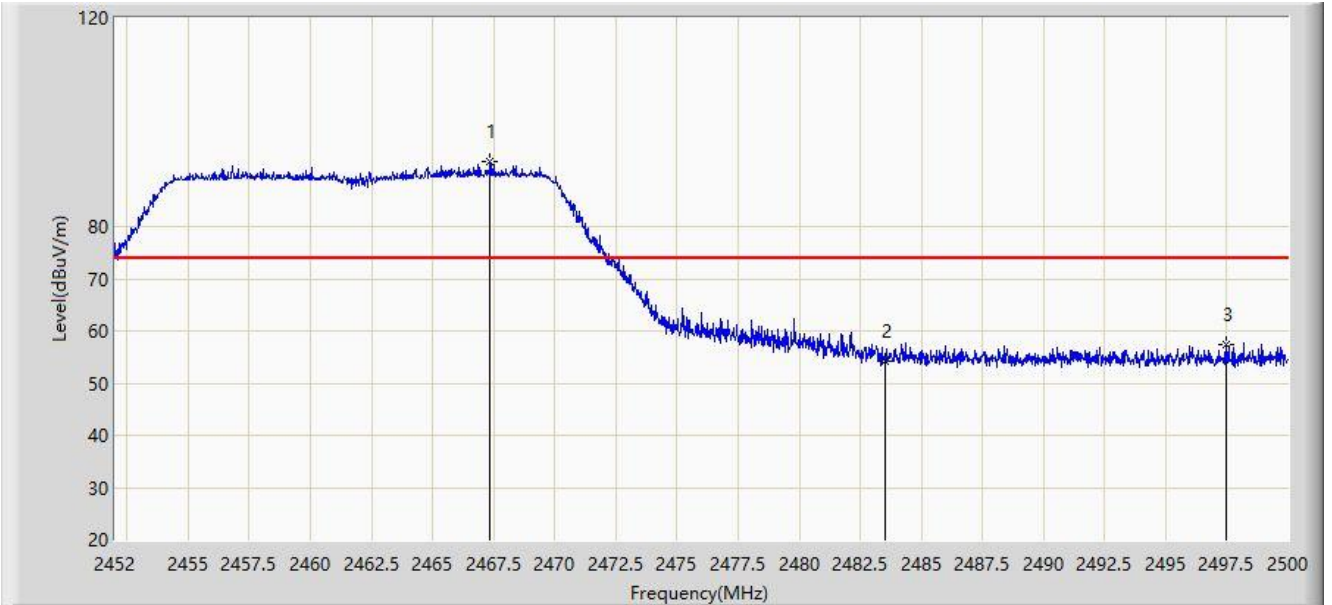
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

6.4.4. Test Setup



6.4.5. Test Result

Site: WZ-AC2	Time: 2021/12/26 - 16:00
Limit: FCC_Part15.209_RSE(3m)	Engineer: Tommy Tang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: LTE Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz	

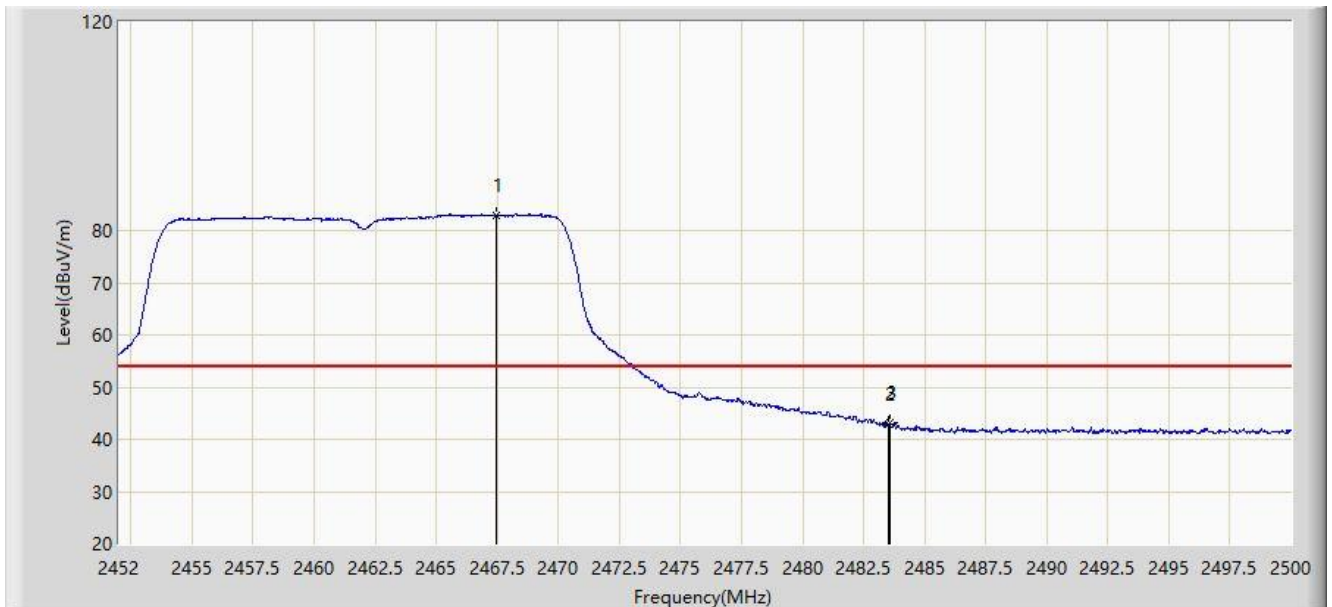


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2467.336	92.340	60.412	N/A	N/A	31.928	PK
2			2483.500	54.315	22.403	-19.685	74.000	31.912	PK
3			2497.456	57.437	25.523	-16.563	74.000	31.915	PK

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

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

Site: WZ-AC2	Time: 2021/12/26 - 15:58
Limit: FCC_Part15.209_RSE(3m)	Engineer: Tommy Tang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: LTE Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz	

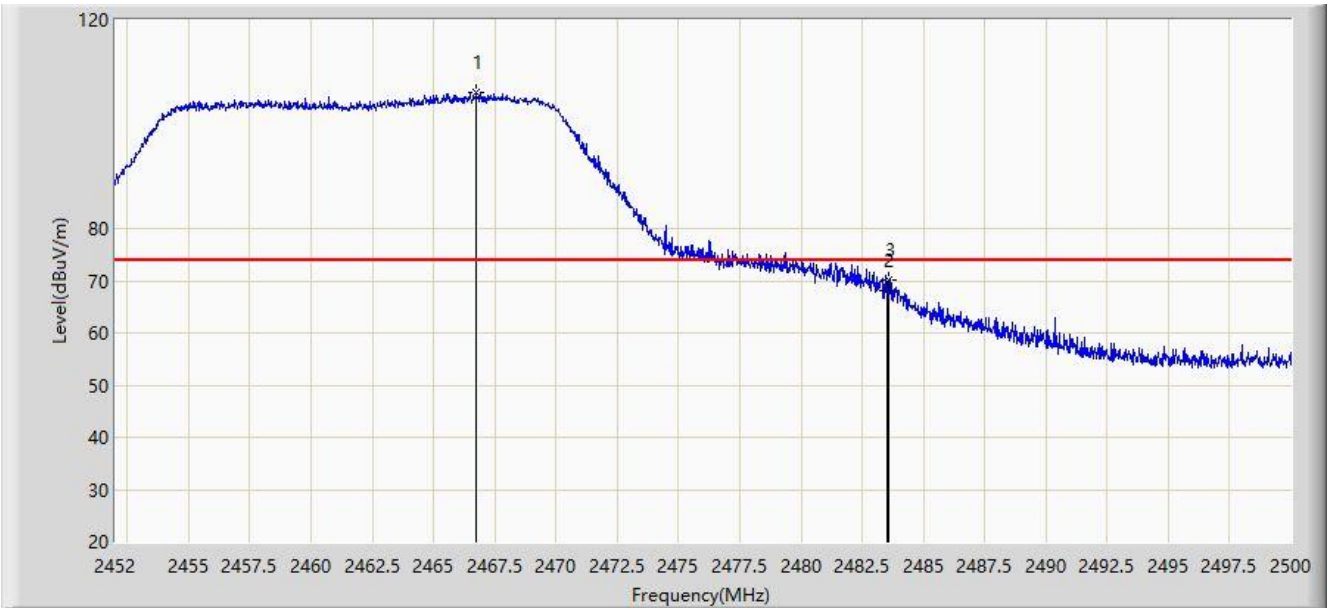


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2467.432	82.922	50.994	N/A	N/A	31.928	AV
2			2483.500	42.824	10.912	-11.176	54.000	31.912	AV
3			2483.560	43.317	11.405	-10.683	54.000	31.911	AV

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

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

Site: WZ-AC2	Time: 2021/12/26 - 16:01
Limit: FCC_Part15.209_RSE(3m)	Engineer: Bob Zhang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: LTE Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz	

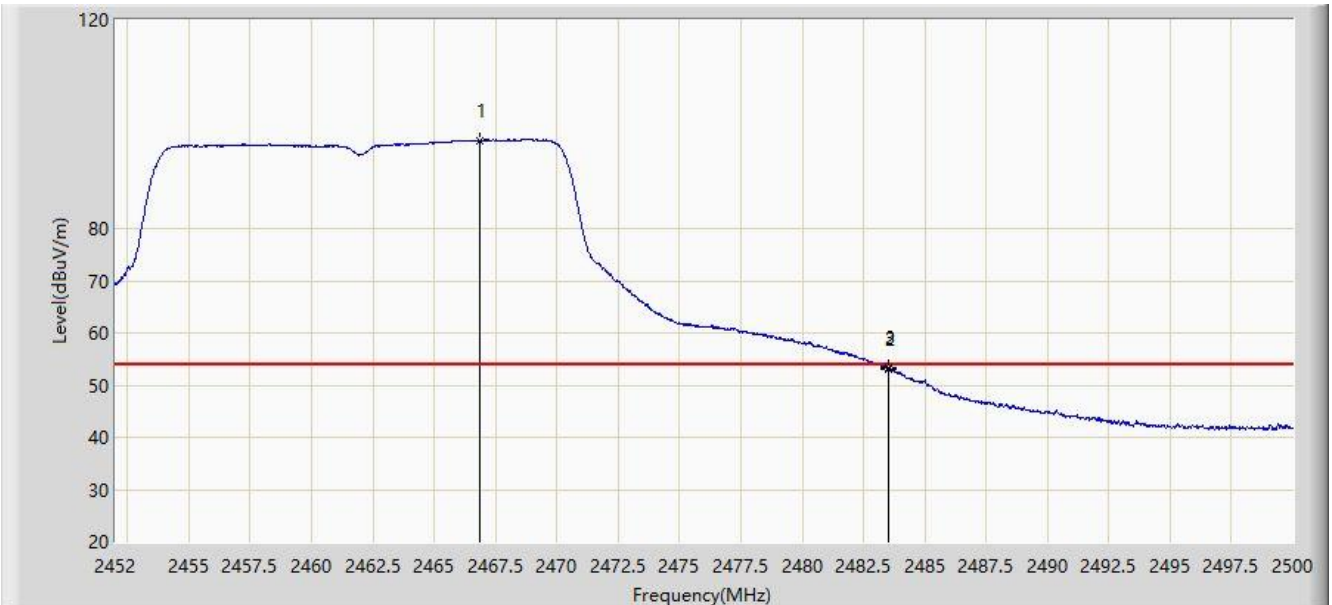


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2466.736	105.982	74.055	N/A	N/A	31.927	PK
2			2483.500	68.218	36.306	-5.782	74.000	31.912	PK
3			2483.560	70.144	38.232	-3.856	74.000	31.911	PK

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

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

Site: WZ-AC2	Time: 2021/12/26 - 15:56
Limit: FCC_Part15.209_RSE(3m)	Engineer: Tommy Tang
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: LTE Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2466.832	96.894	64.966	N/A	N/A	31.927	AV
2			2483.500	53.152	21.240	-0.848	54.000	31.912	AV
3			2483.536	53.280	21.368	-0.720	54.000	31.911	AV

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

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

Appendix A - Test Setup Photograph

Refer to “2112RSU024-UT” file.

Appendix B - EUT Photograph

Refer to “2112RSU024-UE” file.

The End
