

**FCC - TEST REPORT**Report Number : **709502605434-00D** Date of Issue: August 20, 2026Model : C11-F-K(L)Product Type : IMOU Smart LockApplicant : Hangzhou Huacheng Software Technology Co., Ltd.Address : 15th Floor, Building 3, No. 582, Liye Road, Changhe Street,
Binjiang District, Hangzhou, ChinaManufacturer : Hangzhou Huacheng Software Technology Co., Ltd.Address : 15th Floor, Building 3, No. 582, Liye Road, Changhe Street,
Binjiang District, Hangzhou, ChinaTest Result : ☒ **Positive** ☐ **Negative**Total pages including
Appendices : 57

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1 Table of Contents

1	Table of Contents.....	2
2	Report Modification Record	3
3	Details about the Test Laboratory	3
4	Description of the Equipment under Test	4
5	Summary of Test Standards	7
6	Summary of Test Results	8
7	General Remarks	9
8	Test Setups.....	10
9	Systems test configuration.....	13
10	Technical Requirement	14
10.1	Conducted peak output power	14
10.2	6dB bandwidth and 99% Occupied Bandwidth	17
10.3	Power spectral density	20
10.4	Spurious RF conducted emissions	23
10.5	Band edge	30
10.6	Spurious radiated emissions for transmitter	35
11	Test Equipment List	54
12	System Measurement Uncertainty.....	55
13	Photographs of Test Set-ups	56
14	Photographs of EUT	57



2 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
709502605434-00D	First Issue	08/20/2026

3 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Products Testing (Shanghai) Co., Ltd.
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Shanghai 201108,
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FCC Registration No.: 820234

FCC Designation Number: CN1183

ISED CAB identifier: CN0101

IC Registration No.: 31668

4 Description of the Equipment under Test

Product:	IMOU Smart Lock
Model no.:	C11-F-K(L)
FCC ID:	2BQWU-CUBO2-A1
Options and accessories:	N/A
Rating:	DC 6V from Battery DC 5V from Type-C Port (by Power Bank) (Testing)
RF Transmission Frequency:	For BLE: 2402~2480 MHz For 2.4G Wi-Fi: 802.11b/g/n-HT20/ax-HE20: 2412~2462 MHz For 5G Wi-Fi: 802.11a/n-HT20/ax-HE20/ac-VHT20: 5180~5240 MHz (U-NII-1) 802.11a/n-HT20/ax-HE20/ac-VHT20: 5745~5825 MHz (U-NII-3)
No. of Operated Channel:	For BLE: 40 For 2.4G Wi-Fi: 11 for 802.11b/802.11g/802.11n(HT20)/802.11ax(HE20) For 5G Wi-Fi: U-NII-1: 4 for 802.11a/n-HT20/ax-HE20/ac-VHT20 U-NII-3: 5 for 802.11a/n-HT20/ax-HE20/ac-VHT20
Modulation:	For BLE: GFSK For 2.4G Wi-Fi: Direct Sequence Spread Spectrum (DSSS) for 802.11b Orthogonal Frequency Division Multiplexing (OFDM) for 802.11g/n Orthogonal Frequency-Division Multiple Access (OFDMA) for 802.11ax For 5G Wi-Fi: Orthogonal Frequency Division Multiplexing (OFDM) for 802.11a/n/ac Orthogonal Frequency-Division Multiple Access (OFDMA) for 802.11ax
Hardware Version:	Main PCB: V2.00 117_103 Radio module: V2.02 117_147

Software Version: V1.000.0000000.0.R

Data speed: For BLE: 1Mbps, 2Mbps

For Wi-Fi:

11b 1-11Mbps

11g 6-54Mbps

11n(HT20) 6.5-72.2Mbps

11ac(VHT20) 6.5 ~ 86.7Mbps

11ax(HE20) 7.313 ~ 143.382Mbps

Channel list:

For BLE:

Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

For 2.4G Wi-Fi:

802.11b/g/n(HT20)/ax(HT20)			
Ch	Fre(MHz)	Ch	Fre(MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437		

For 5G Wi-Fi:

Band (GHz)	Operating Channel Number	Channel center frequencies for 20MHz bandwidth (MHz)
5.15GHz~5.25GHz	36	5180
	40	5200
	44	5220
	48	5240
5.725GHz~5.825GHz	149	5745
	153	5765
	157	5785



	161	5805
	165	5825

Antenna Type: FPC Antenna

Antenna Gain: For BLE: 1.4 dBi
For 2.4G Wi-Fi: 1.4 dBi
For 5G Wi-Fi: 2.4 dBi

Description of the EUT: The Equipment Under Test (EUT) is a IMOU Smart Lock with BLE & WIFI Module. The EUT support Wi-Fi operated at 2.4GHz and 5GHz.

Test sample no.: SHA-1046750-2 (Radiated sample)
SHA-1046750-3 (Conducted sample)

The sample's mentioned in this report is/are submitted/ supplied/ manufactured by client. The laboratory therefore assumes no responsibility for accuracy of information on the brand name, model number, origin of manufacture, consignment, antenna gain or any information supplied.



5 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2024 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

All the test methods were according to KDB 558074 D01 15.247 Measurement Guidance v05r02 and ANSI C63.10-2020.

6 Summary of Test Results

Technical Requirements					
FCC Part 15 Subpart C					
Test Condition		Test Site	Test Result		
			Pass	Fail	N/A
§15.207	Conducted emission AC power port	Site 1	☒	☐	☐
§15.247 (b) (3)	Conducted peak output power	Site 1	☒	☐	☐
§15.247(a)(1)	20dB bandwidth and 99% Occupied Bandwidth	---	☐	☐	☒
§15.247(a)(1)	Carrier frequency separation	---	☐	☐	☒
§15.247(a)(1)(iii)	Number of hopping frequencies	---	☐	☐	☒
§15.247(a)(1)(iii)	Dwell Time - Average Time of Occupancy	---	☐	☐	☒
§15.247(a)(2)	6dB bandwidth	Site 1	☒	☐	☐
§15.247(e)	Power spectral density	Site 1	☒	☐	☐
§15.247(d)	Spurious RF conducted emissions	Site 1	☒	☐	☐
§15.247(d)	Band edge	Site 1	☒	☐	☐
§15.247(d) & §15.209 & §15.205	Spurious radiated emissions for transmitter	Site 1	☒	☐	☐
§15.203	Antenna requirement	See note 1	☒	☐	☐

Remark 1: N/A – Not Applicable.

Note 1: The EUT uses a FPC Internal Antenna, which 2.4G gain is 1.4 dBi and 5G gain is 2.4 dBi. In accordance to §15.203, It is considered sufficiently to comply with the provisions of this section.

15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.



7 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: 2BQWU-CUBO2-A1 complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C Rules.

This report is only for BLE.

We tested it and listed the worst data in this report.

SUMMARY:

All tests according to the regulations cited on page 7 were

■ - Performed

□ - **Not** Performed

The Equipment under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: June 23, 2026

Testing Start Date: June 26, 2026

Testing End Date: July 15, 2026

- TÜV SÜD Products Testing (Shanghai) Co., Ltd.

Reviewed by:

Prepared by:

Tested by:



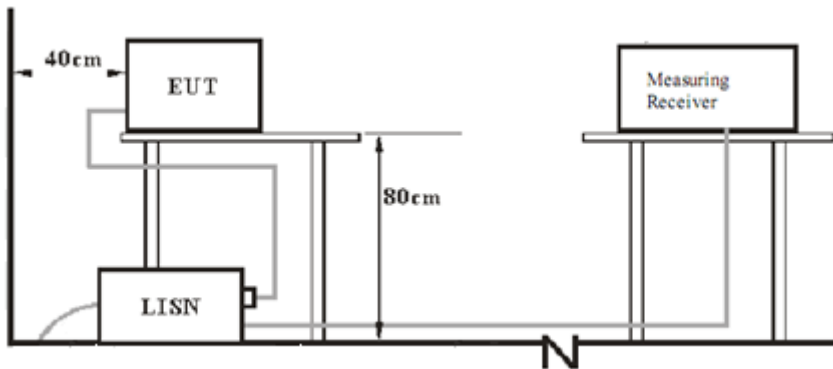
Hui TONG
Review Engineer

Wenqiang LU
Project Engineer

Doujun XU
Test Engineer

8 Test Setups

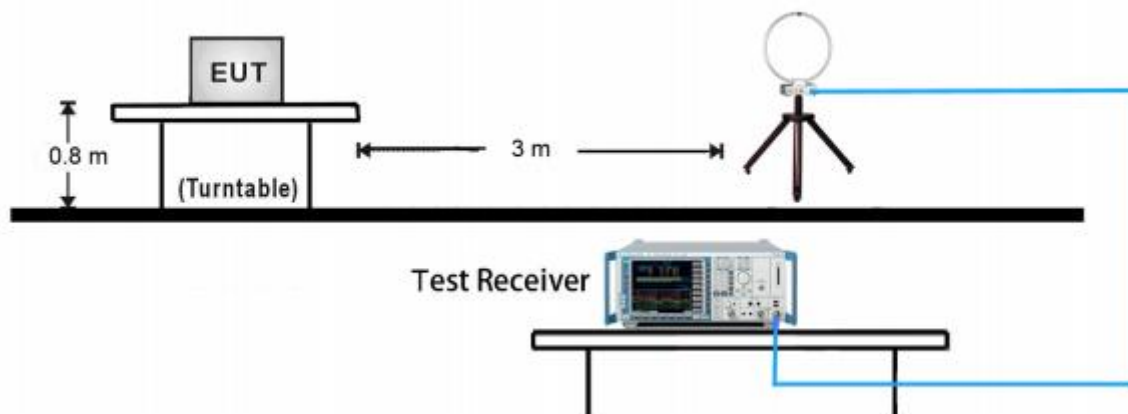
8.1 AC Power Line Conducted Emission test setups



Note: for floor-standing equipment, the supporting table (80 cm) shall be replaced by a insulating material (up to 12 mm thick).

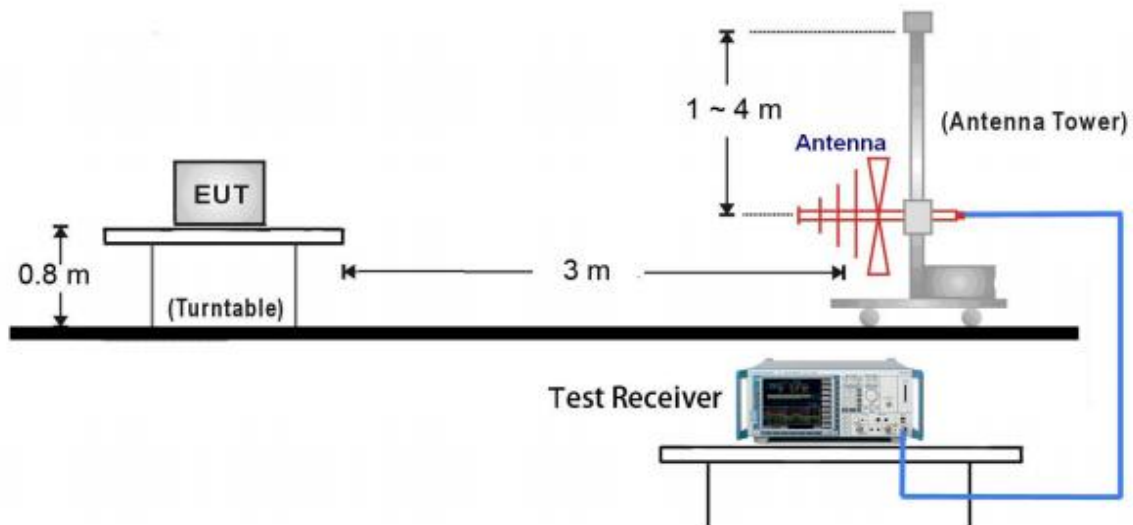
8.2 Radiated test setups

9kHz ~ 30MHz Test Setup:



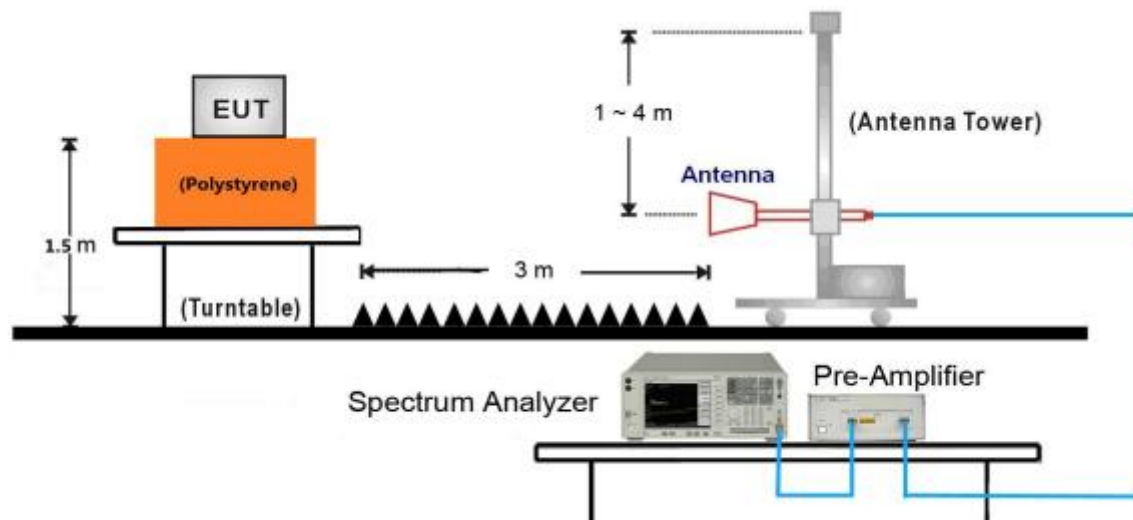
Note: for floor-standing equipment, the supporting table (80 cm) shall be replaced by a insulating material (up to 12 mm thick).

30MHz ~ 1GHz Test Setup:



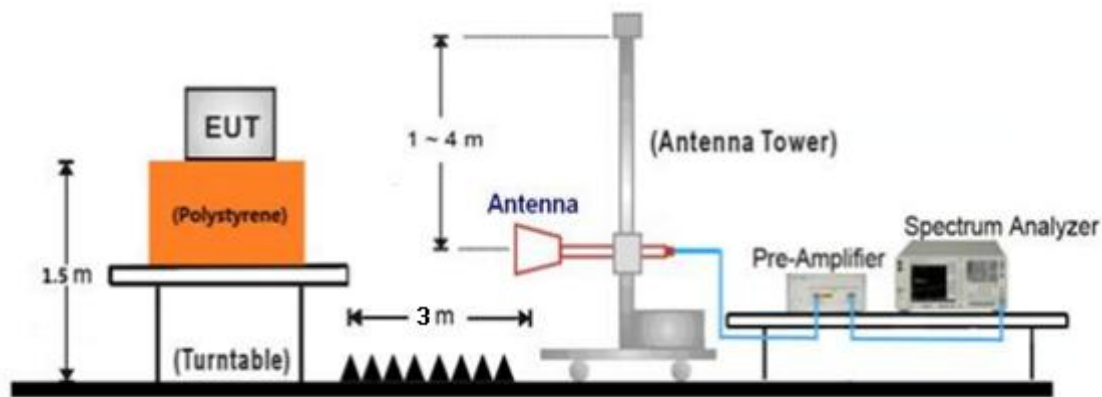
Note: for floor-standing equipment, the supporting table (80 cm) shall be replaced by a insulating material (up to 12 mm thick).

1GHz ~ 18GHz Test Setup:

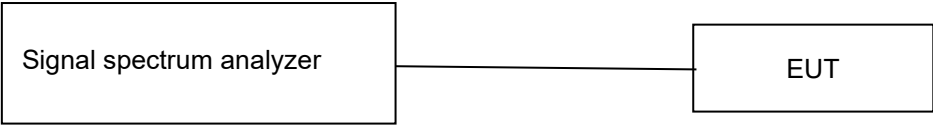




18GHz ~ 25GHz Test Setup:



8.3 Conducted RF test setups



9 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Notebook	Lenove	E470	PF-OU5TS7 17/09

Test software: SecureCRT.exe, which used to control the EUT in continues transmitting mode.

The system was configured to channel 0, 19, and 39 for the test.

Non-hopping mode: The system was configured to operate at a signal channel transmitting. The test software allows the configuration and operation at the worst-case duty and the highest transmit power.

Test Mode Applicability and Tested Channel Detail:

Mode	Tested Channel	Data Rate (Mbps)	Modulation	Index Value (Power level setting)
Bluetooth LE	0	1	GFSK	Auto
	19	1	GFSK	Auto
	39	1	GFSK	Auto
	0	2	GFSK	Auto
	19	2	GFSK	Auto
	39	2	GFSK	Auto

10 Technical Requirement

10.1 Conducted peak output power

Test Method for conducted peak power

1. Use the following spectrum analyzer settings:
RBW > the 6 dB bandwidth of the emission being measured, VBW $\geq$ 3RBW, Span $\geq$ 3RBW
Sweep = auto, Detector function = peak, Trace = max hold.
2. Add a correction factor to the display.
3. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power.

Limits

According to §15.247 (b) (3), conducted peak output power limit as below:

	Frequency Range	Limit	Limit
	MHz	W	dBm
Conducted peak output power	2400-2483.5	≤ 1	≤ 30

Test result as below table

1Mbps

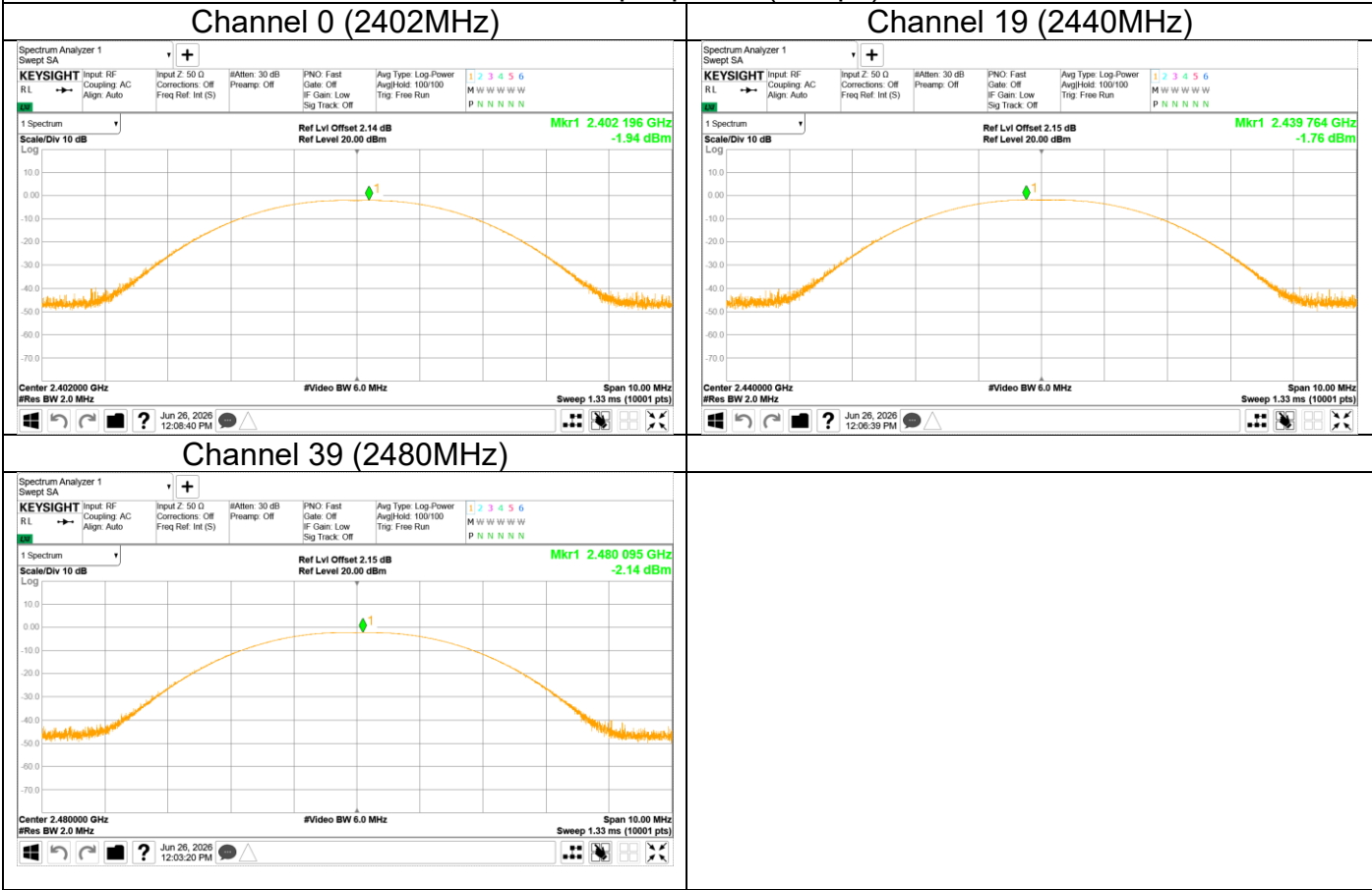
Frequency	Conducted Peak Output Power	Result
MHz	dBm	
Low channel 2402MHz	-1.94	Pass
Middle channel 2440MHz	-1.77	Pass
High channel 2480MHz	-2.14	Pass

2Mbps

Frequency	Conducted Peak Output Power	Result
MHz	dBm	
Low channel 2402MHz	-1.95	Pass
Middle channel 2440MHz	-1.73	Pass
High channel 2480MHz	-2.17	Pass

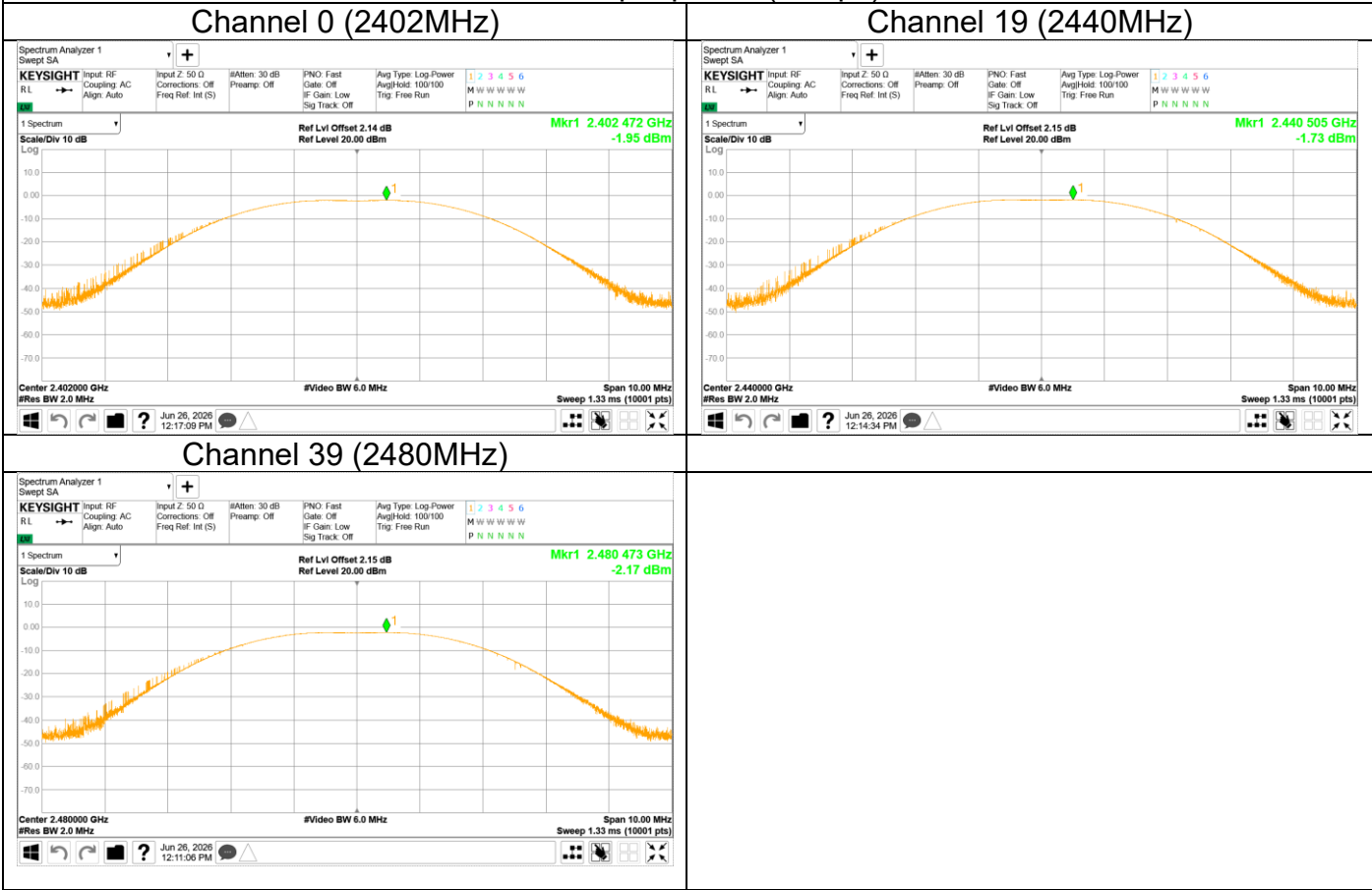


Peak output power (1Mbps)





Peak output power (2Mbps)



10.2 6dB bandwidth and 99% Occupied Bandwidth

Test Method for 6 dB Bandwidth

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
RBW=1% to 5% of the occupied bandwidth but not less than 100kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Use the automatic bandwidth measurement capability of an instrument, use the X dB bandwidth mode with X set to 6 dB.
5. Allow the trace to stabilize, record the 6 dB Bandwidth value.

Limit

According to §15.247(a)(2), 6dB bandwidth limit as below:

6dB bandwidth Limit [kHz]

≥ 500

Test result

1Mbps

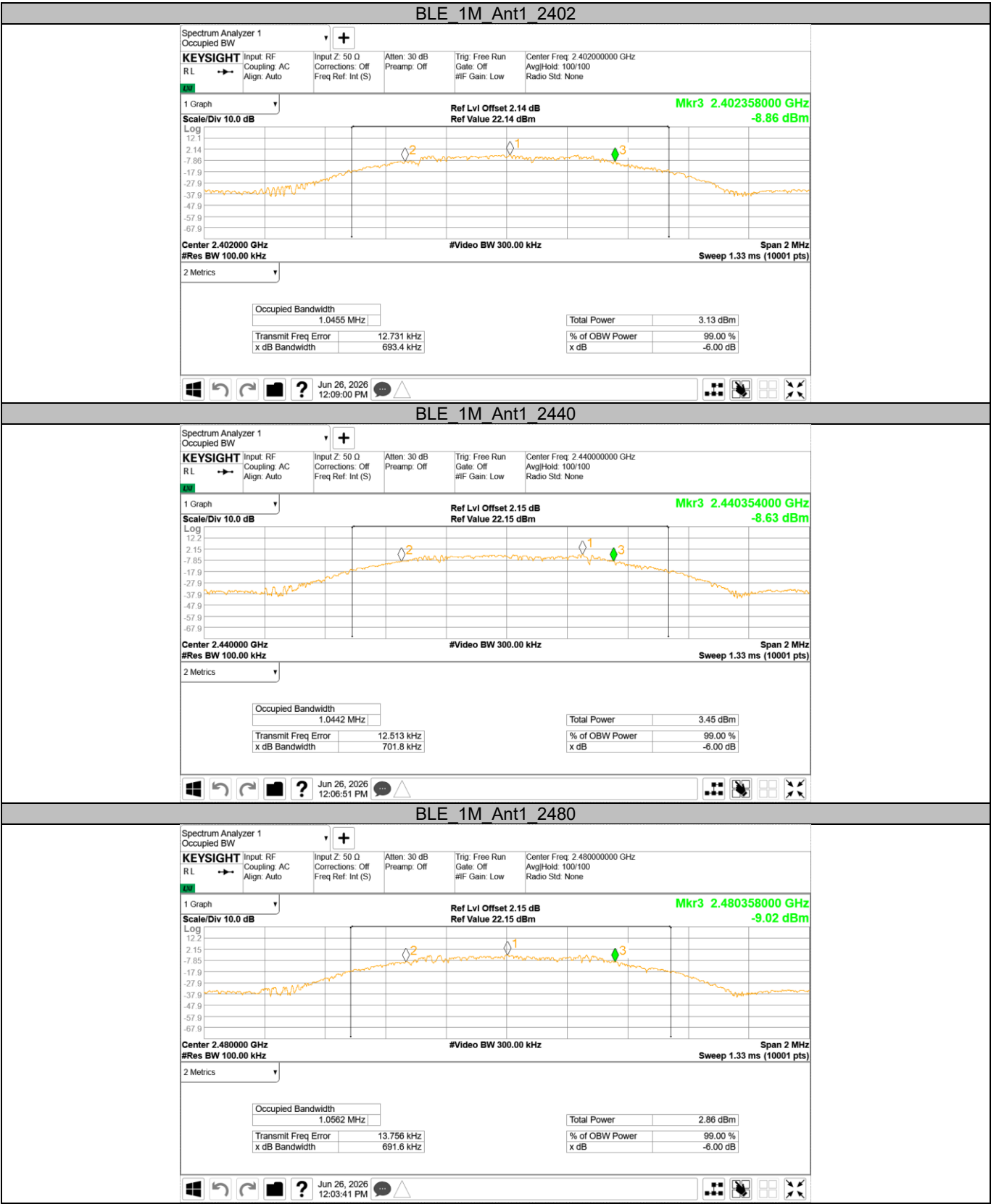
Frequency MHz	6dB bandwidth MHz	Result
Top channel 2402MHz	0.693	Pass
Middle channel 2440MHz	0.702	Pass
Bottom channel 2480MHz	0.692	Pass

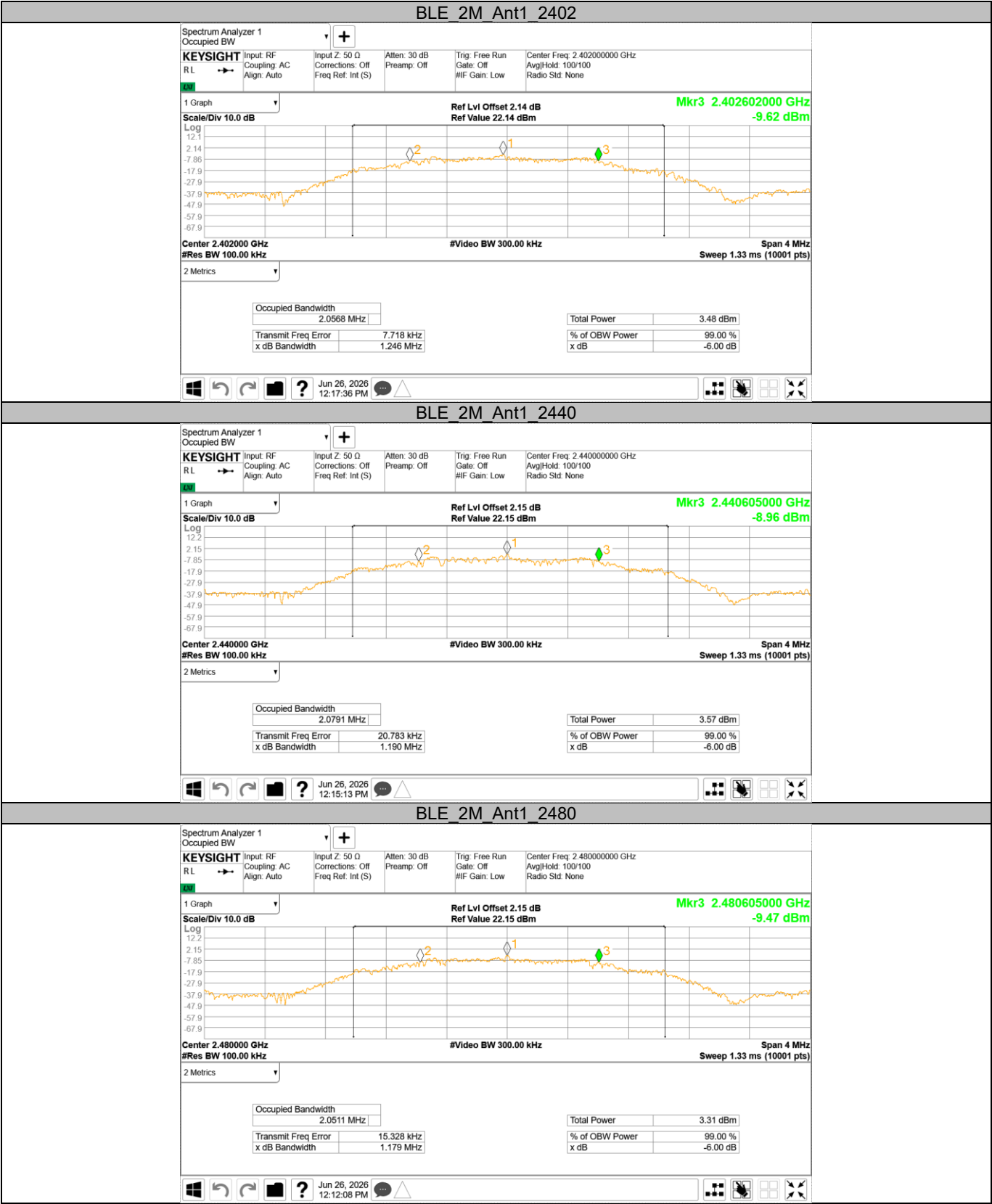
2Mbps

Frequency MHz	6dB bandwidth MHz	Result
Top channel 2402MHz	1.246	Pass
Middle channel 2440MHz	1.19	Pass
Bottom channel 2480MHz	1.179	Pass



6dB Bandwidth





10.3 Power spectral density

Test Method

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
4. Set analyzer center frequency to DTS channel center frequency. RBW=3kHz, VBW $\geq$ 3RBW, Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
5. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
6. Repeat above procedures until other frequencies measured were completed.

Limit

Limit [dBm/3KHz]
 ≤ 8

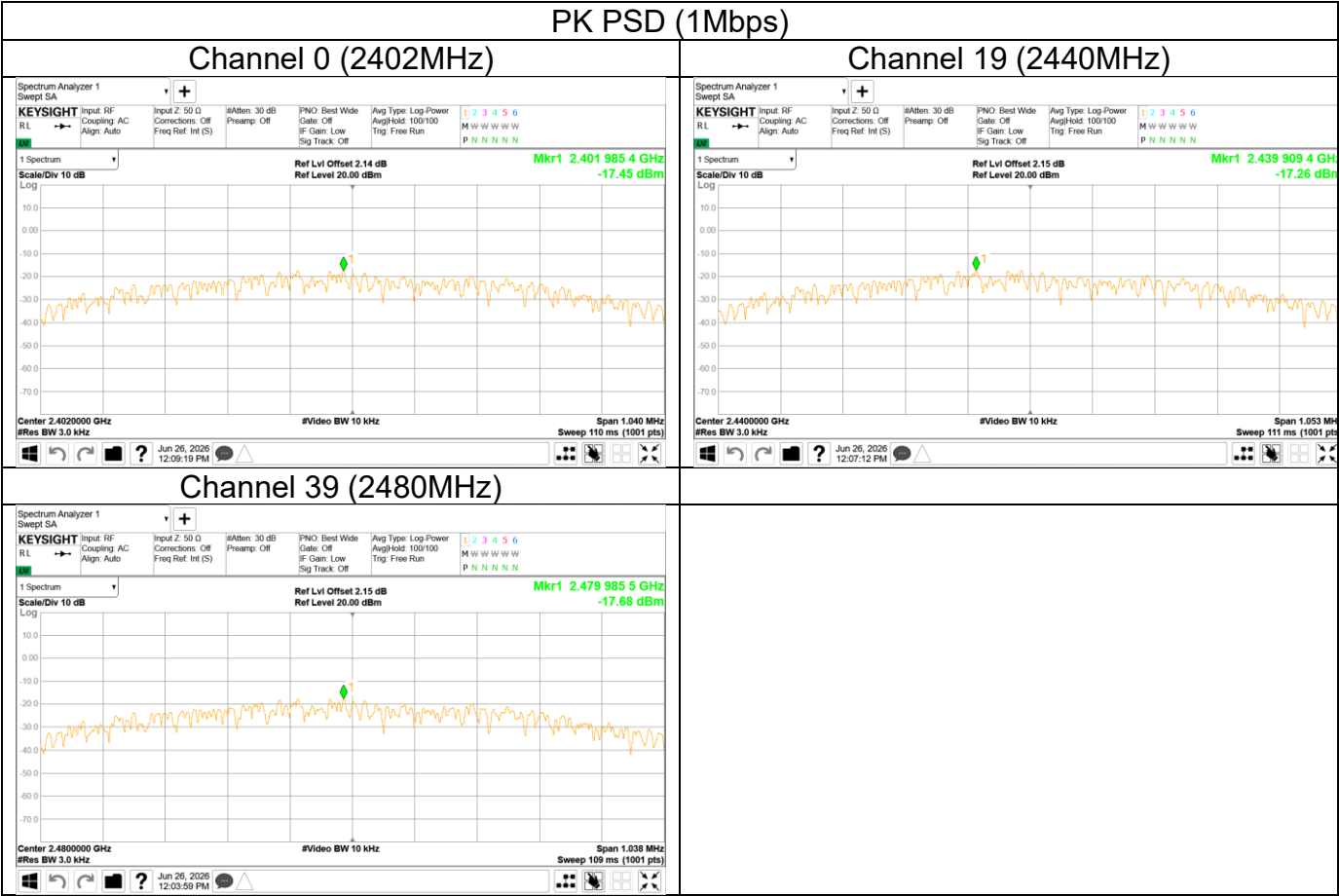
Test result

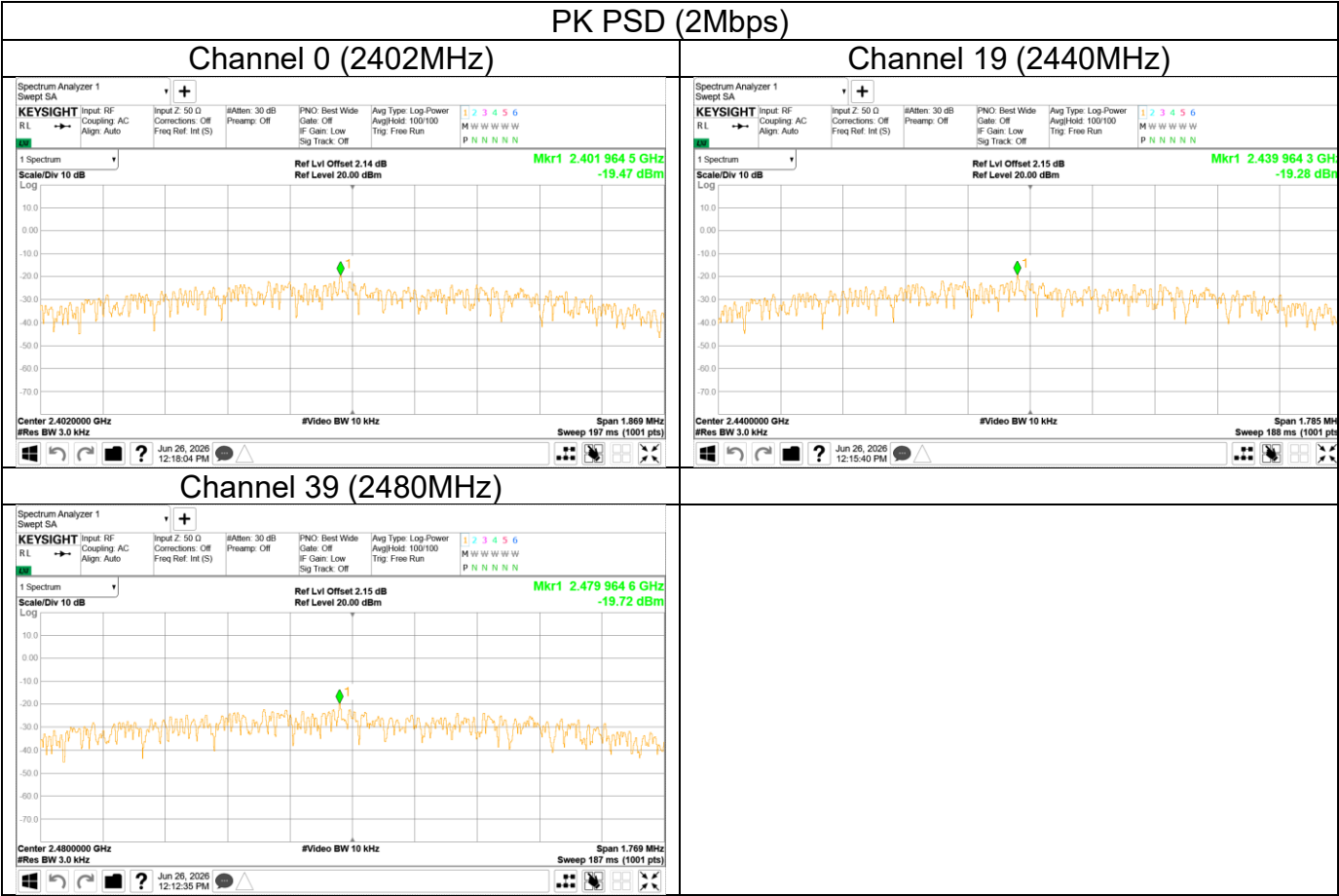
1Mbps

Frequency MHz	Power spectral density dBm/3kHz	Result
Top channel 2402MHz	-17.45	Pass
Middle channel 2440MHz	-17.26	Pass
Bottom channel 2480MHz	-17.68	Pass

2Mbps

Frequency MHz	Power spectral density dBm/3kHz	Result
Top channel 2402MHz	-19.47	Pass
Middle channel 2440MHz	-19.28	Pass
Bottom channel 2480MHz	-19.72	Pass





10.4 Spurious RF conducted emissions

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
RBW = 100 kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
5. The level displayed must comply with the limit specified in this Section. Submit these plots.
6. Repeat above procedures until all frequencies measured were complete.

Limit

According to §15.247(d), spurious RF conducted emissions limit as below:

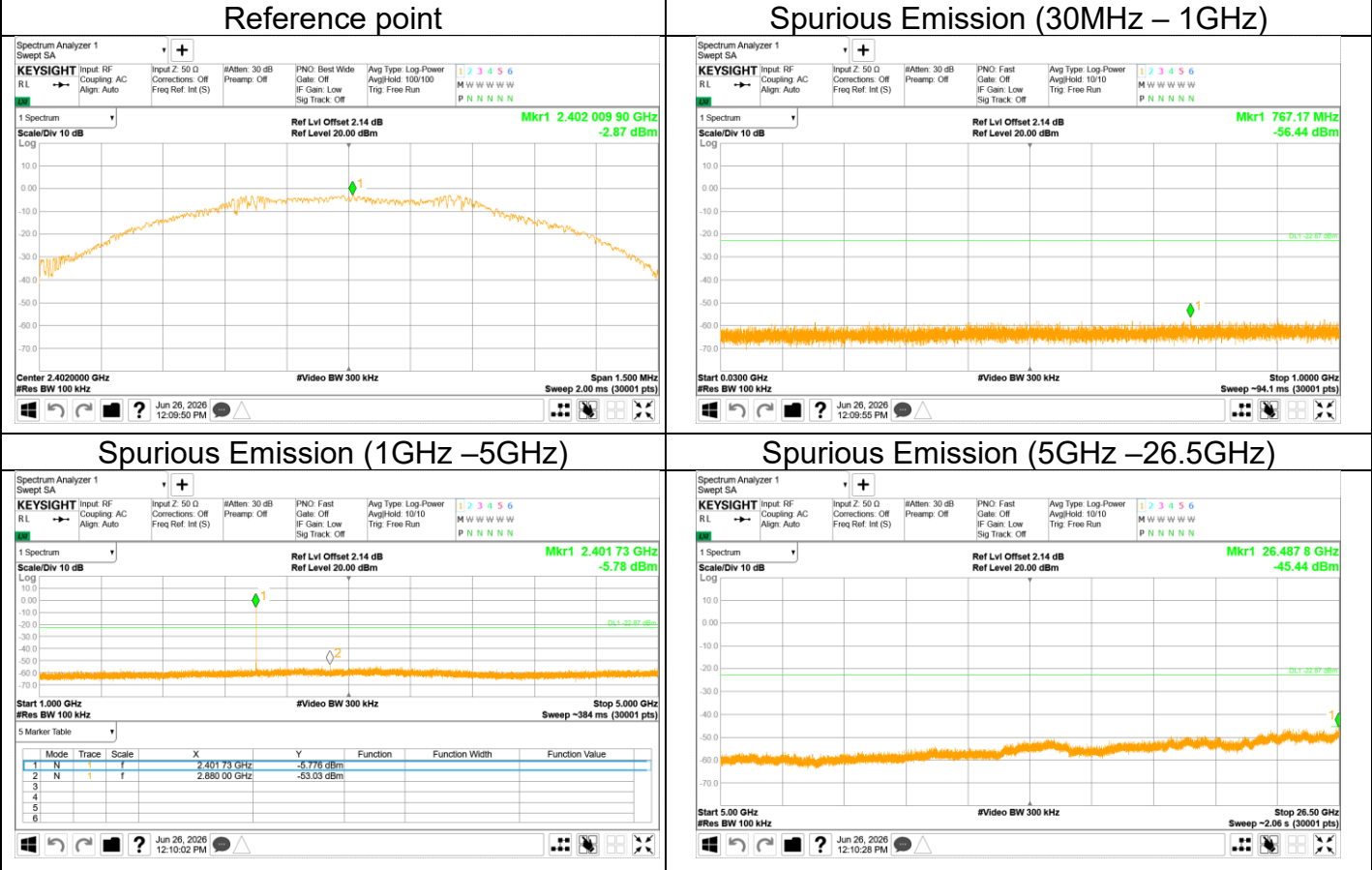
Frequency Range MHz	Limit (dBc)
30-25000	-20



Spurious RF conducted emissions

Out-of-Band Emissions (1Mbps)

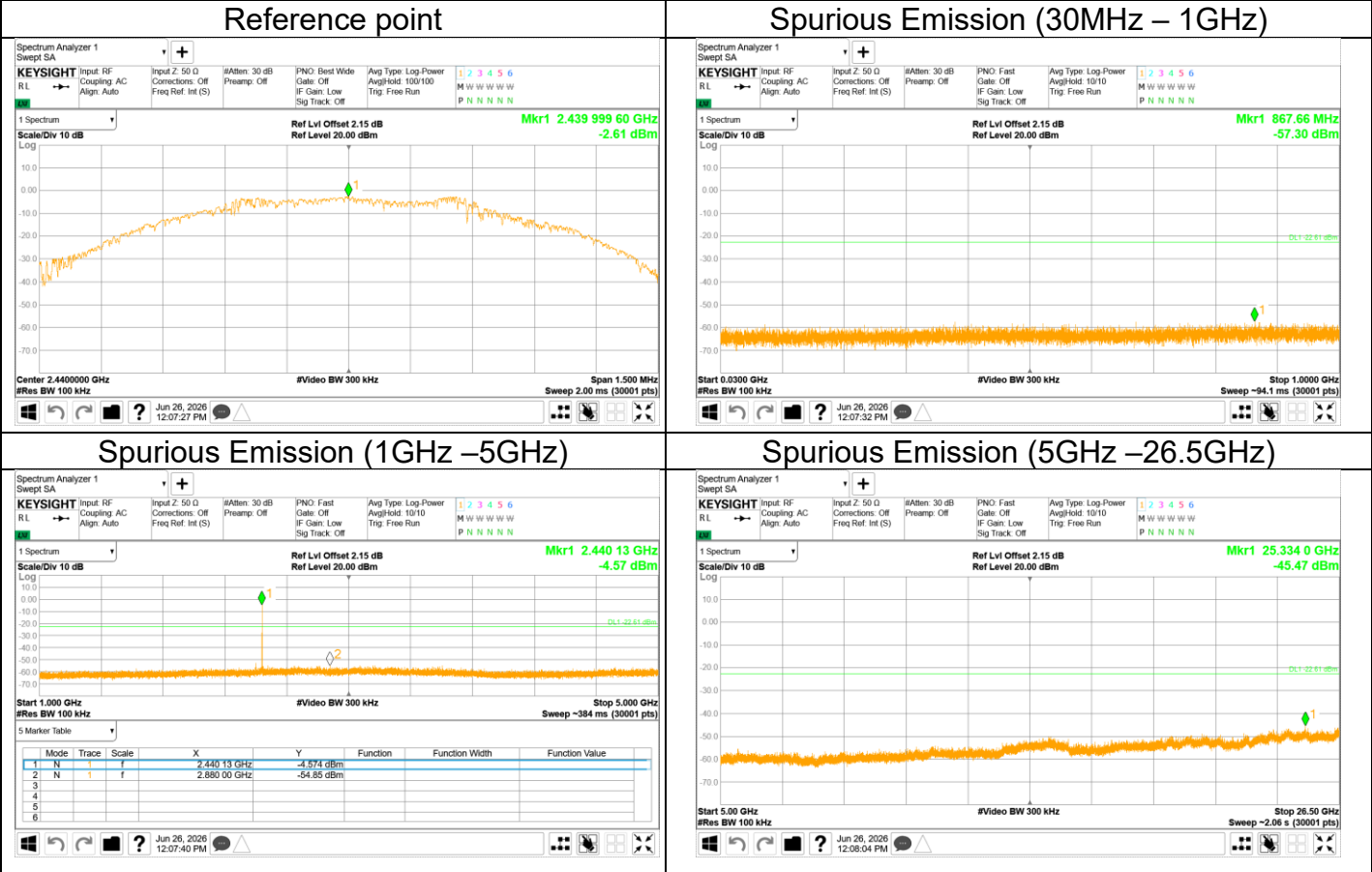
Channel 0 (2402MHz)



Note: The emission which exceed the limit is the fundamental.



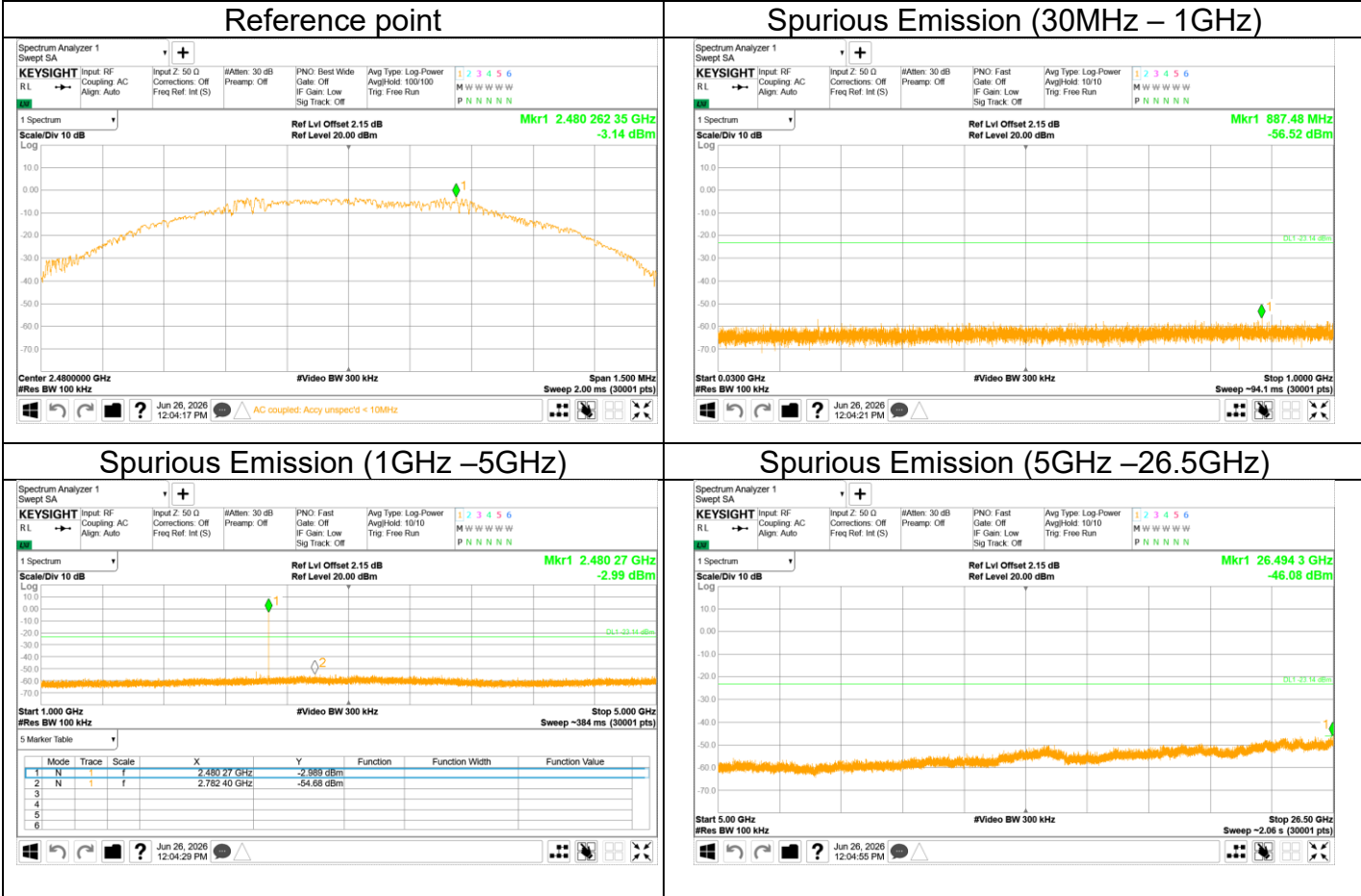
Out-of-Band Emissions (1Mbps)
Channel 19 (2440MHz)



Note: The emission which exceed the limit is the fundamental.



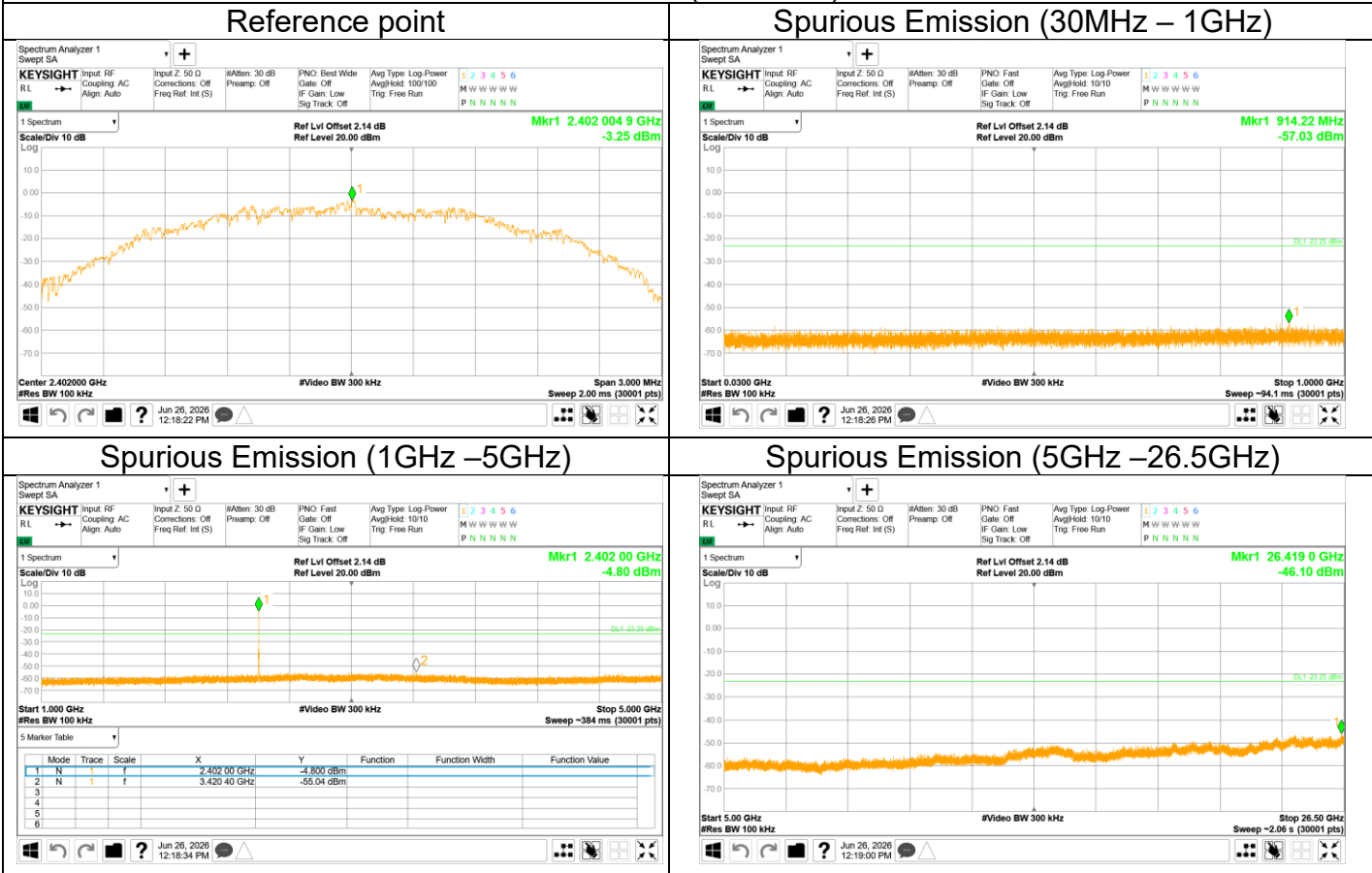
Out-of-Band Emissions (1Mbps)
Channel 39 (2480MHz)



Note: The emission which exceed the limit is the fundamental.



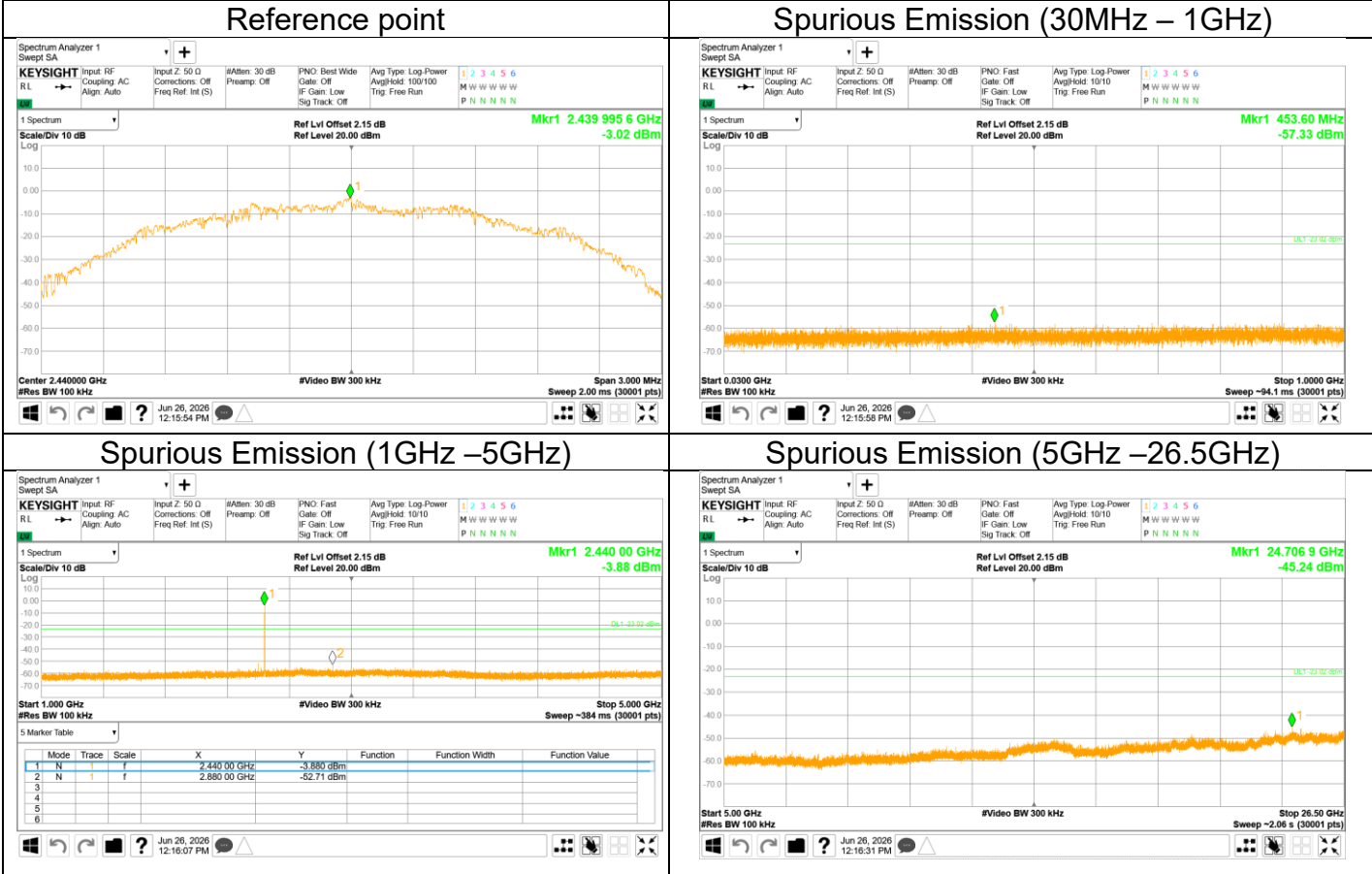
Out-of-Band Emissions (2Mbps)
Channel 0 (2402MHz)



Note: The emission which exceed the limit is the fundamental.



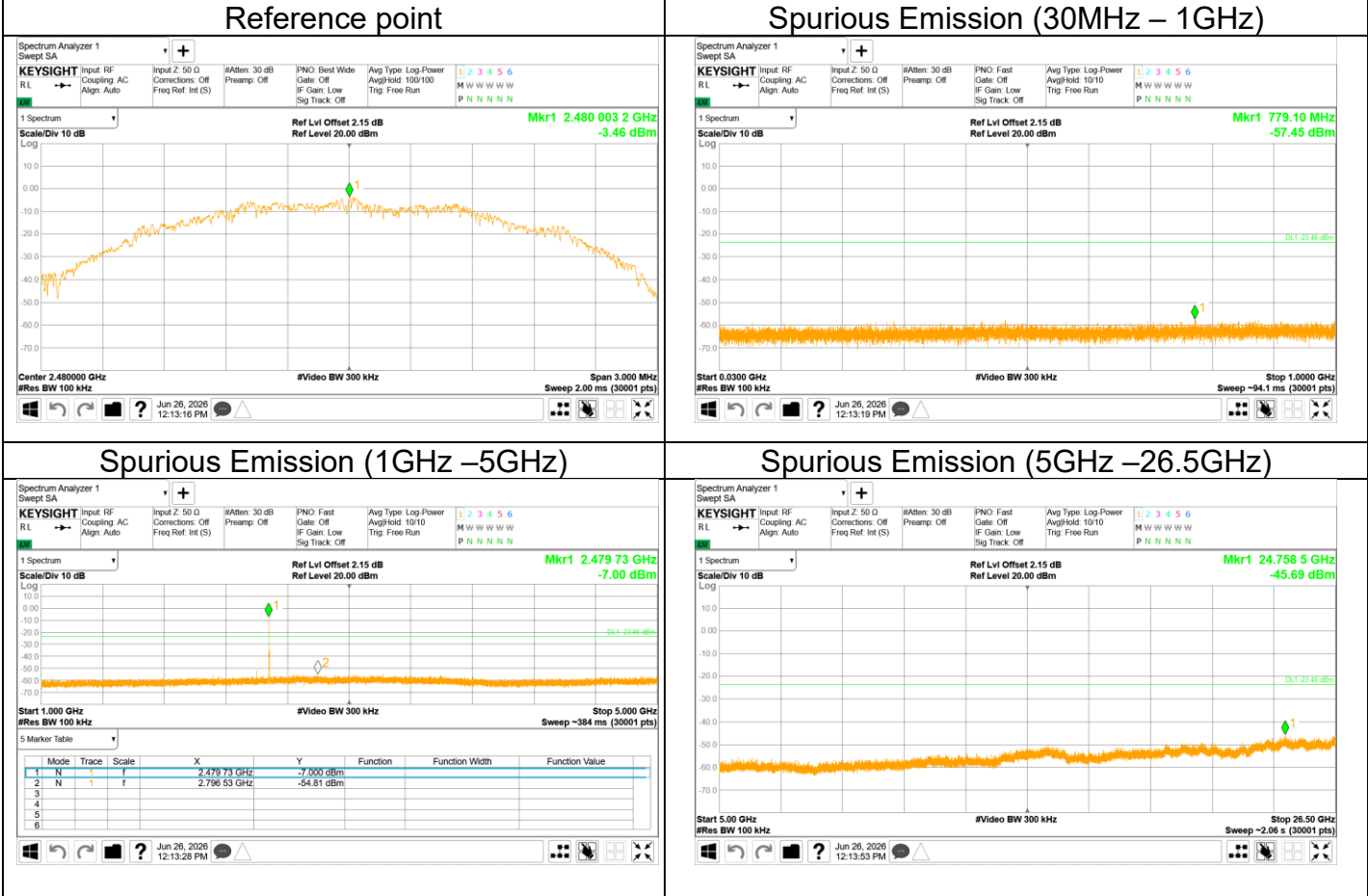
Out-of-Band Emissions (2Mbps)
Channel 19 (2440MHz)



Note: The emission which exceed the limit is the fundamental.



Out-of-Band Emissions (2Mbps)
Channel 39 (2480MHz)



Note: The emission which exceed the limit is the fundamental.



10.5 Band edge

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize, use the peak and delta measurement to record the result.
5. The level displayed must comply with the limit specified in this Section.
6. Repeat above procedures until all frequencies measured were complete and submit all the plots.

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that 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 § 15.247(b)(3) and RSS-247 section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB.

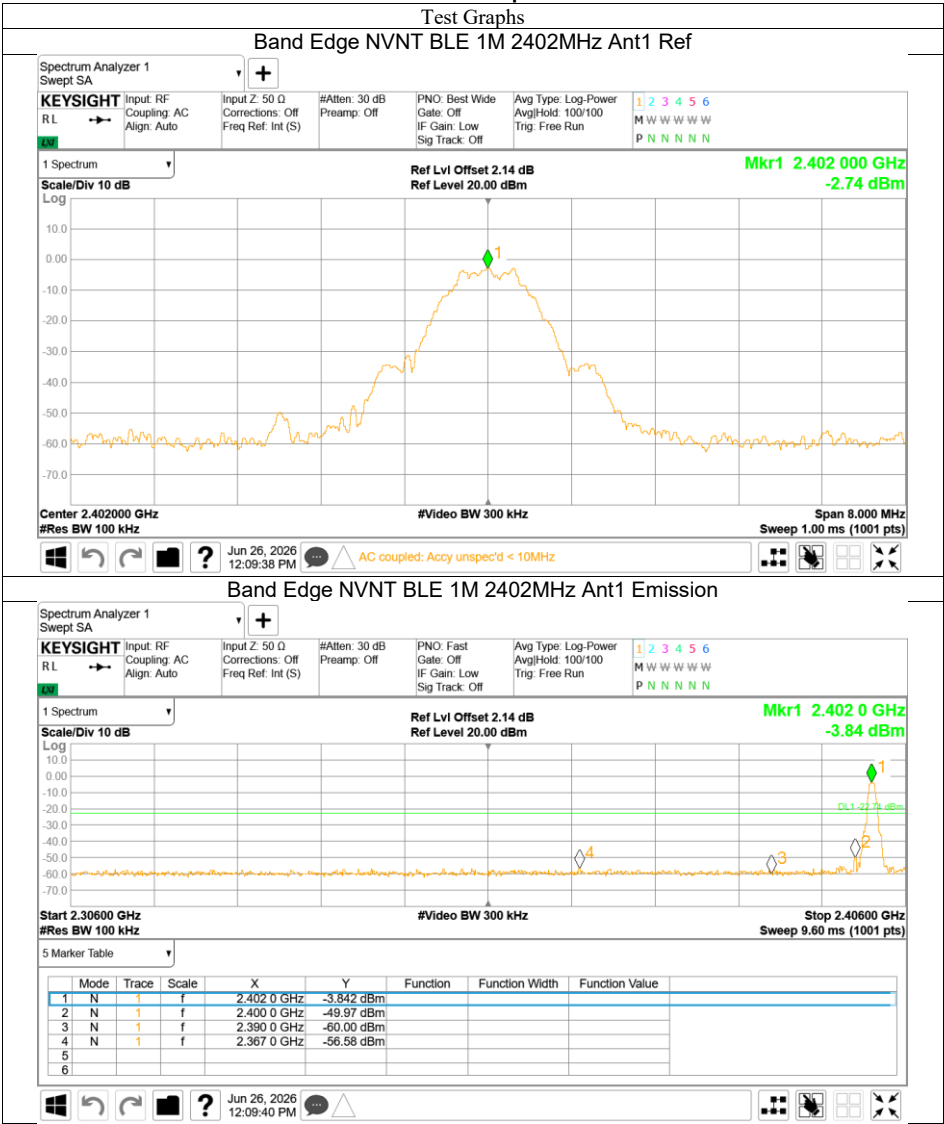
According to §15.247(d), band edge limit as below:

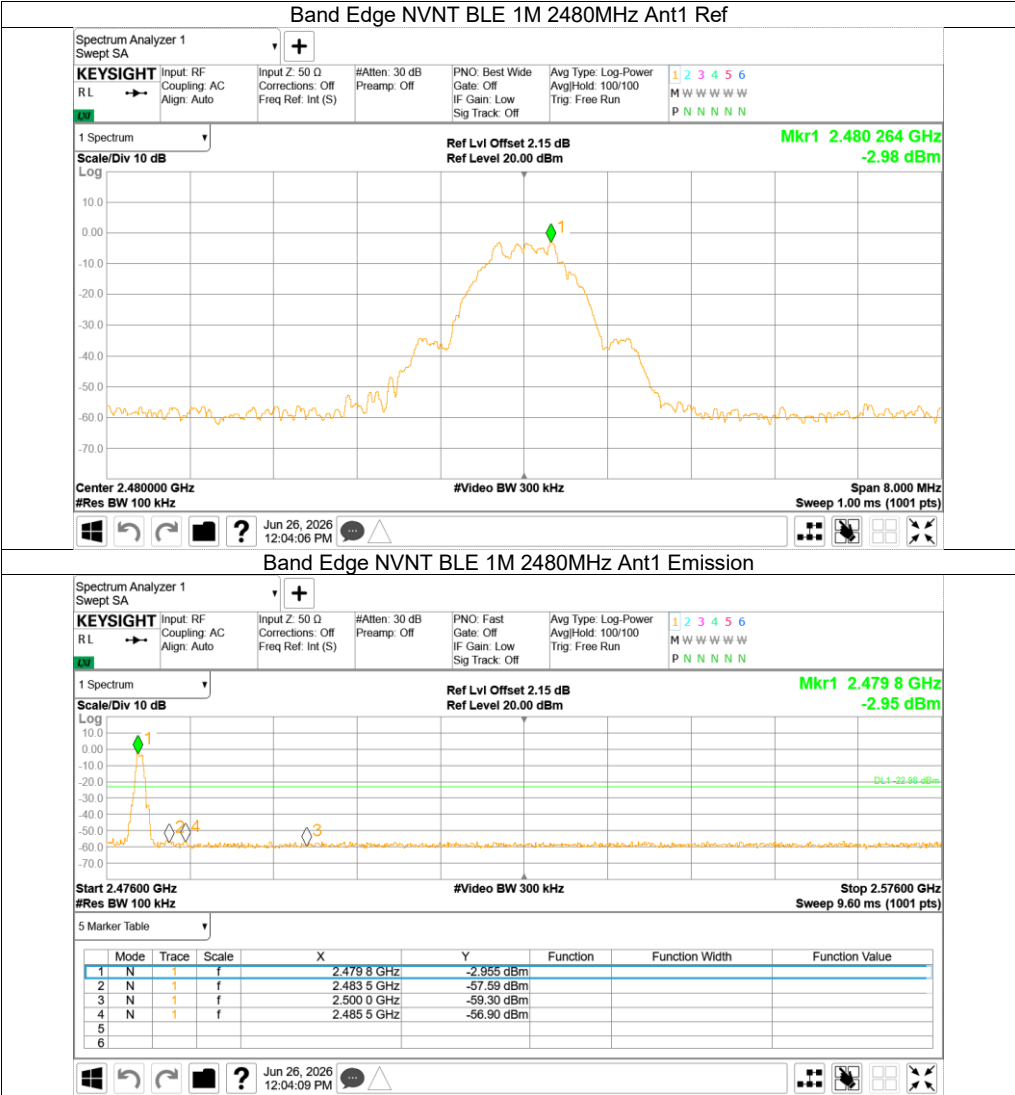
Frequency Range MHz	Limit (dBc)
30-25000	-20



Test result

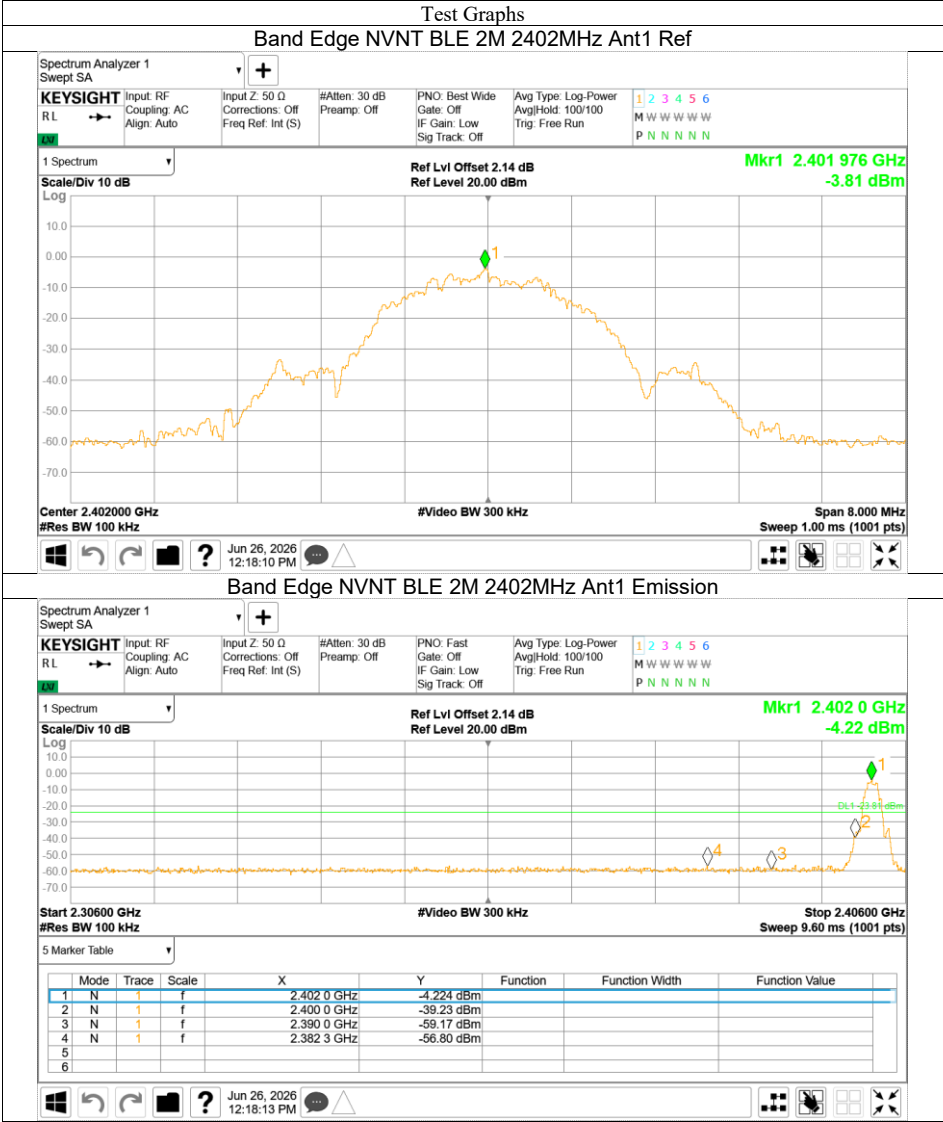
1Mbps







2Mbps





10.6 Spurious radiated emissions for transmitter

Test Method

1. The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. Use the following spectrum analyzer settings According to C63.10
 - 1) Procedure for Unwanted Emissions Measurements Below 1000 MHz
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 kHz to 120kHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.
 - 2) For Peak unwanted emissions Above 1GHz:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 1MHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

Procedures for average unwanted emissions measurements above 1GHz

 - a) RBW = 1MHz.
 - b) VBW \ [3 × RBW].
 - c) Detector = RMS (power averaging), if [span / (# of points in sweep)] \ RBW / 2.
Satisfying this condition can require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, then the detector mode shall be set to peak.
 - d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)
 - e) Sweep time = auto.
 - f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of 1 / D, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and OFF with the transmit cycle, at least 100 traces shall be averaged.)
 - g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:
 - 1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is $[10 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB shall be added to the measured emission levels.
 - 2) If linear voltage averaging mode was used in the preceding step e), then the correction

factor is $[20 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.

3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission (AV) at frequency above 1GHz.

Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that 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 § 15.247(b)(3) and RSS-247 section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in § 15.209(a) and RSS-Gen is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a) and RSS-Gen section 8.9, must also comply with the radiated emission limits specified in § 15.209(a) and RSS-Gen section 8.10.

Below 30MHz

§15.247(d) & §15.209 & §15.205

Frequency MHz	Field Strength uV/m	Detector	Measured Distance Meters
0.009~0.090	2400/F (kHz)	AV	300
0.090~0.110	2400/F (kHz)	QP	300
0.110~0.490	2400/F (kHz)	AV	300
0.490~1.705	24000/F (kHz)	QP	30
1.705~30	30	QP	30

Note 1: Limit 3m(dBµV/m)=Limit 300m(dBµV/m)+40Log(300m/3m) (Below 30MHz)

Note 2: Limit 3m(dBµV/m)=Limit 30m(dBµV/m)+40Log(30m/3m) (Below 30MHz)

Note 3: dBµV/m = 20log(µV/m)

Above 30MHz

§15.247(d) & §15.209 & §15.205

Frequency MHz	Field Strength uV/m	Field Strength dBµV/m	Detector	Measured Distance Meters
30-88	100	40	QP	3
88-216	150	43.5	QP	3
216-960	200	46	QP	3
960-1000	500	54	QP	3
Above 1000	500	54	AV	3
Above 1000	5000	74	PK	3



Spurious Radiated Emissions for Transmitter

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.
Data of measurement within frequency range 9kHz-30MHz is the noise floor or attenuated more than 20dB below the permissible limits or the field strength is too small to be measured, so test data does not present in this report.

Test result

The worst case of Radiated Emission below 1GHz: Only the worst case listed as below.

0.009-30MHz Radiated Emission

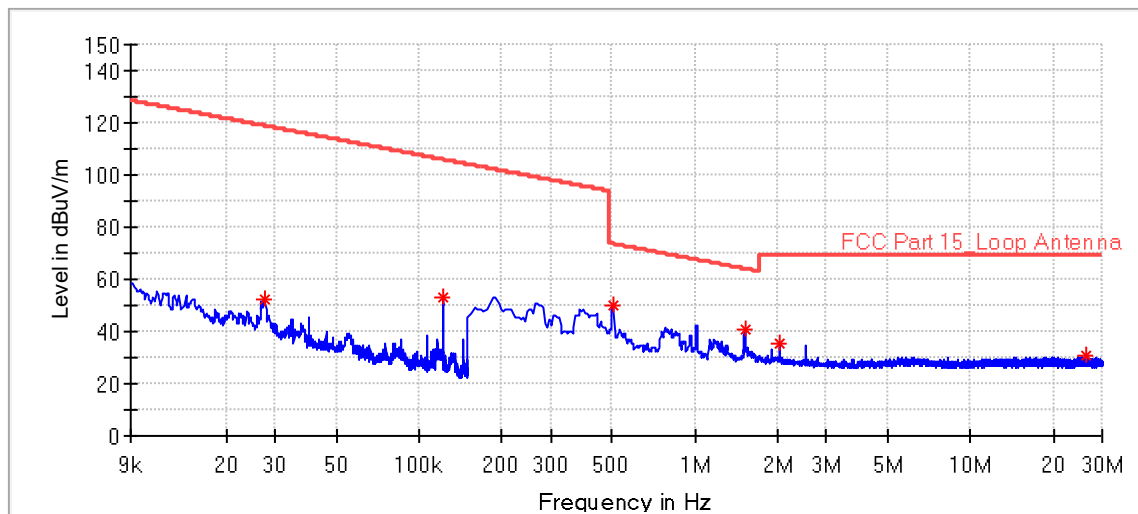
EUT Information

EUT Name: IMOU Smart Lock
 Model: C11-F-K(L)
 Client: Hangzhou Huacheng Software Technology Co., Ltd.
 Op Cond: Transmit mode and TX at 2440MHz, 2Mbps (worst case)
 Operator: Doujun XU
 Test Spec: FCC Part 15.209(a)
 Sample No: SHA-1046750-2

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_Loop Antenna V
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB



Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.027506	52.09	118.82	66.72	X	342.0	19.0
0.122153	52.92	105.87	52.95	X	0.0	18.8
0.505566	50.02	73.53	23.51	X	58.0	18.8
1.519588	40.43	63.97	23.54	X	58.0	18.9
2.028794	35.60	69.54	33.94	X	107.0	19.0
26.040485	30.52	69.54	39.02	X	46.0	19.3

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

0.009-30MHz Radiated Emission

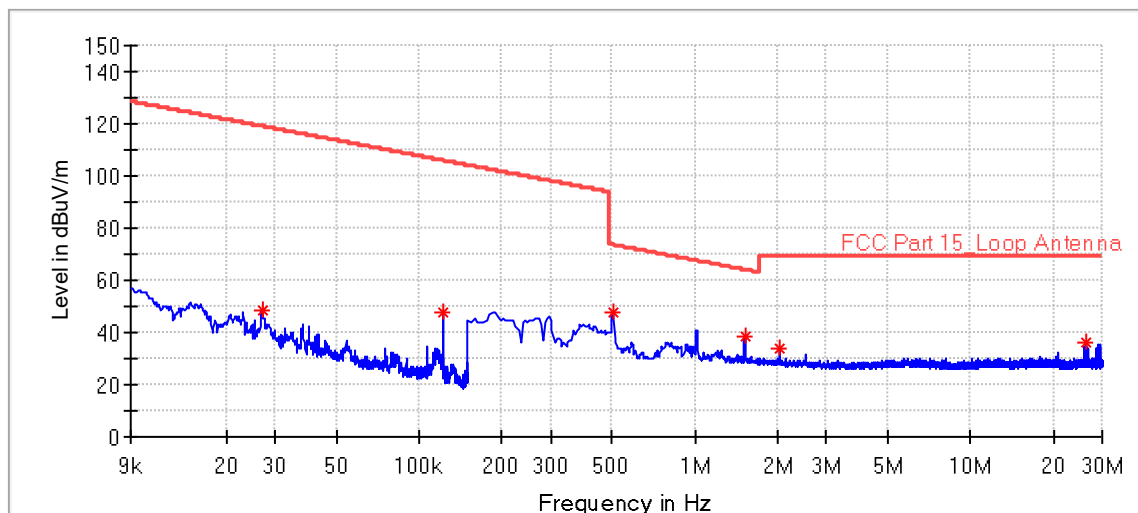
EUT Information

EUT Name: IMOU Smart Lock
 Model: C11-F-K(L)
 Client: Hangzhou Huacheng Software Technology Co., Ltd.
 Op Cond: Transmit mode and TX at 2440MHz, 2Mbps (worst case)
 Operator: Doujun XU
 Test Spec: FCC Part 15.209(a)
 Sample No: SHA-1046750-2

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_Loop Antenna V
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB



Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.026978	48.46	118.98	70.52	Y	72.0	19.0
0.122241	47.81	105.86	58.05	Y	67.0	18.8
0.505566	47.52	73.53	26.01	Y	334.0	18.8
1.519588	38.82	63.97	25.15	Y	334.0	18.9
2.024405	34.10	69.54	35.44	Y	10.0	19.0
26.145838	35.77	69.54	33.77	Y	33.0	19.3

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

30-1000MHz Radiated Emission

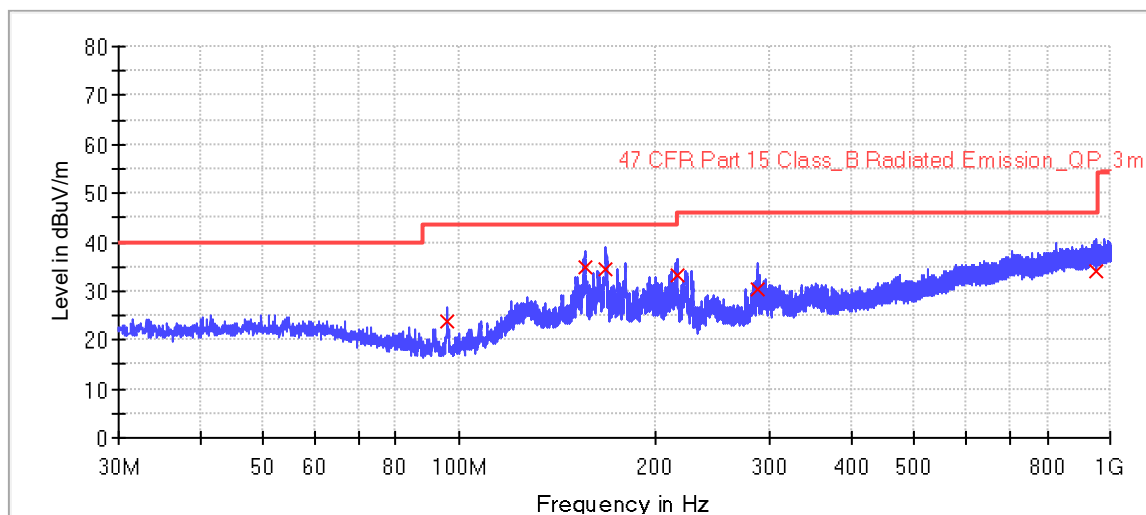
EUT Information

EUT Name: IMOU Smart Lock
 Model: C11-F-K(L)
 Client: Hangzhou Huacheng Software Technology Co., Ltd.
 Op Cond: Transmit mode and TX at 2440MHz, 2Mbps (worst case)
 Operator: Doujun XU
 Test Spec: FCC Part 15.209(a)
 Sample No: SHA-1046750-2

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_VULB9168
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
95.960000	23.6	1000.0	120.000	250.0	H	125.0	15.4	19.9	43.5
155.920000	34.9	1000.0	120.000	300.0	H	241.0	20.7	8.6	43.5
168.320000	34.6	1000.0	120.000	180.0	H	23.0	20.2	8.9	43.5
216.160000	33.1	1000.0	120.000	250.0	H	256.0	17.8	12.9	46.0
288.080000	30.4	1000.0	120.000	100.0	H	207.0	21.3	15.6	46.0
953.040000	34.0	1000.0	120.000	150.0	H	146.0	34.3	12.0	46.0

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

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

30-1000MHz Radiated Emission

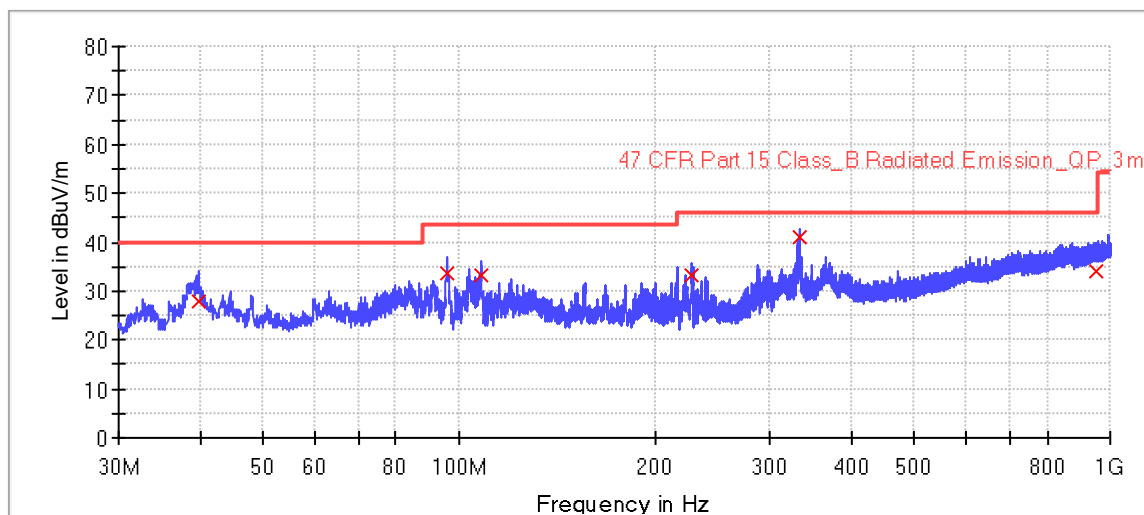
EUT Information

EUT Name: IMOU Smart Lock
 Model: C11-F-K(L)
 Client: Hangzhou Huacheng Software Technology Co., Ltd.
 Op Cond: Transmit mode and TX at 2440MHz, 2Mbps (worst case)
 Operator: Doujun XU
 Test Spec: FCC Part 15.209(a)
 Sample No: SHA-1046750-2

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_VULB9168
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB



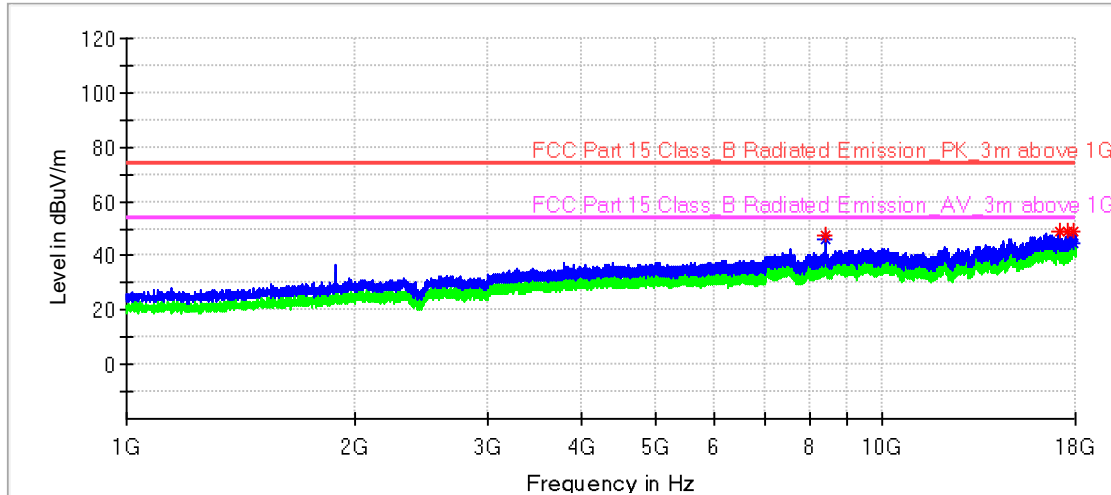
Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
39.760000	28.1	1000.0	120.000	100.0	V	224.0	19.8	11.9	40.0
96.000000	33.7	1000.0	120.000	250.0	V	125.0	15.4	9.8	43.5
107.880000	33.1	1000.0	120.000	300.0	V	23.0	17.1	10.4	43.5
228.040000	33.4	1000.0	120.000	150.0	V	156.0	18.3	12.6	46.0
332.960000	40.9	1000.0	120.000	150.0	V	241.0	22.7	5.1	46.0
954.880000	34.1	1000.0	120.000	100.0	V	109.0	34.3	11.9	46.0

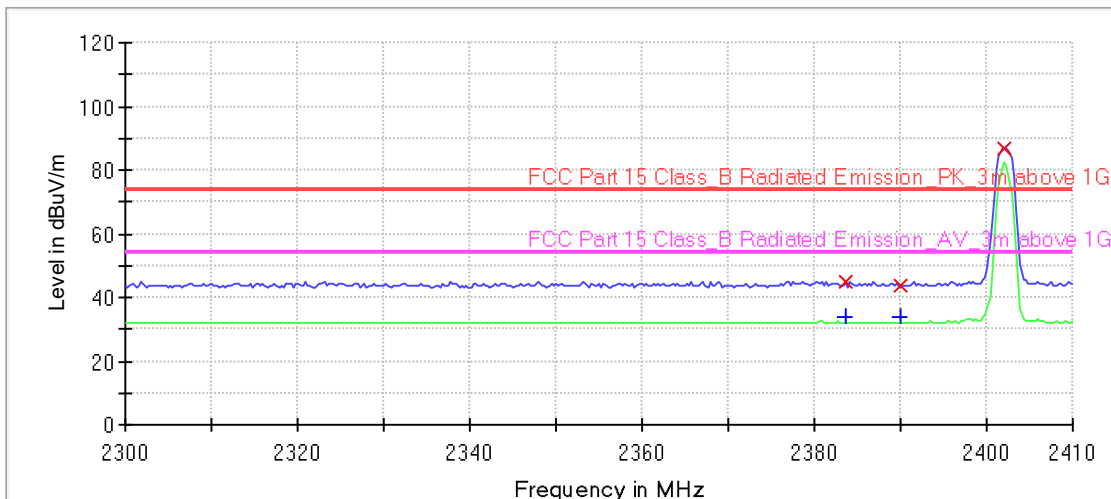
Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
 Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Radiated Emission 1-18GHz

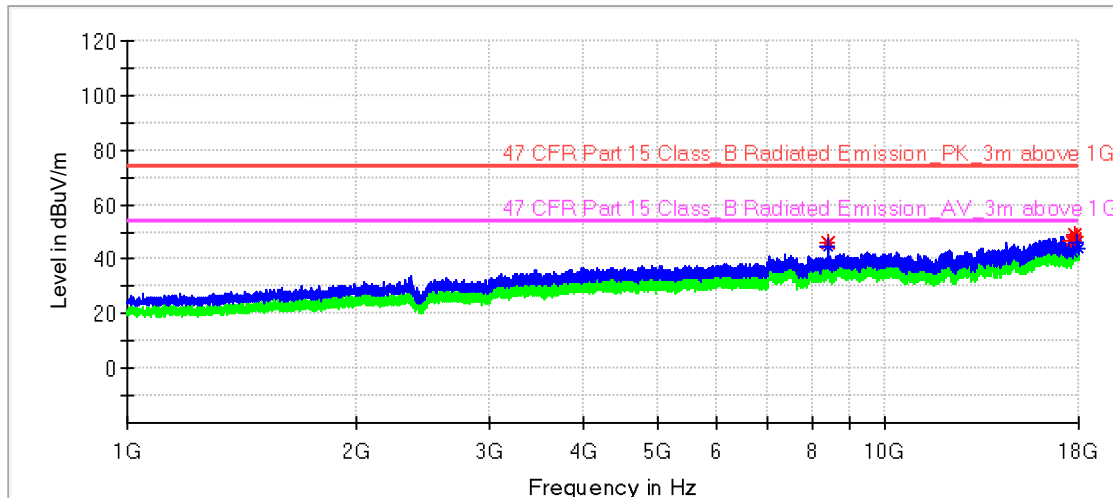
Frequency: 2402MHz, 1Mbps



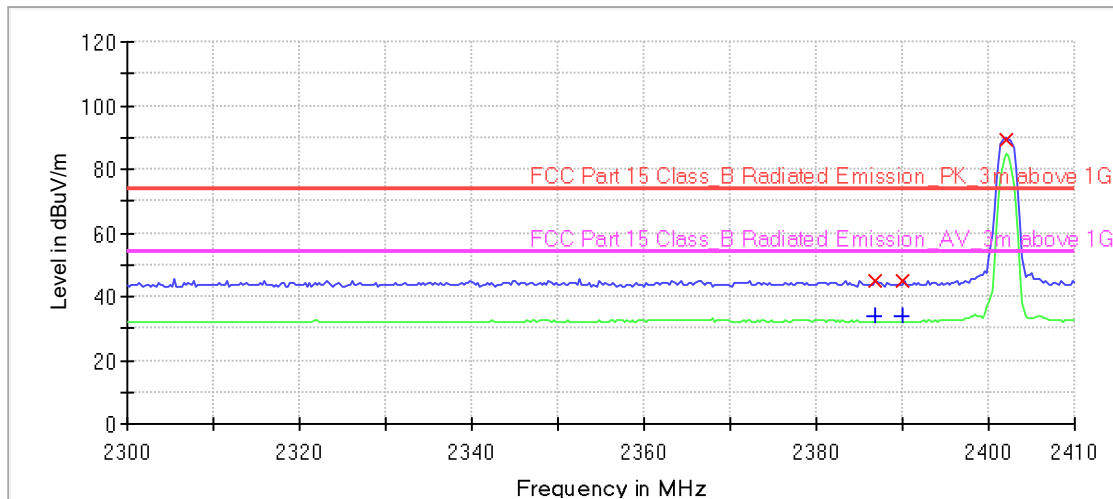
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8407.218750	---	45.92	54.00	8.08	150.0	H	106.0	0.2
8407.218750	47.57	---	74.00	26.43	150.0	H	106.0	0.2
17131.937500	48.81	---	74.00	25.19	150.0	H	187.0	10.6
17145.750000	---	44.18	74.00	29.82	150.0	H	89.0	10.6
17612.187500	48.62	---	74.00	25.38	150.0	H	95.0	11.2
17824.687500	---	45.27	54.00	8.73	150.0	H	125.0	11.6
17910.218750	48.75	---	74.00	25.25	150.0	H	84.0	11.8
17913.937500	---	44.52	74.00	29.48	150.0	H	0.0	11.8



Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2383.600000	45.2	34.1	200.0	H	145.0	-2.0	28.8	74.0	19.9	54.0
2390.000000	43.6	34.0	150.0	H	237.0	-2.0	30.4	74.0	20.0	54.0
2402.000000	86.8	---	180.0	H	179.0	-1.9	---	---	---	---

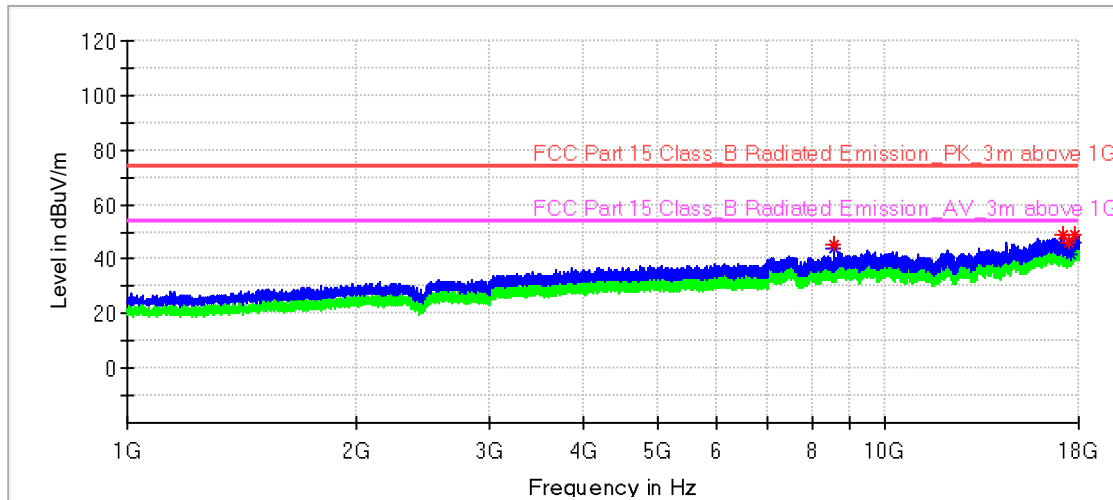


Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8407.218750	46.07	---	74.00	27.93	150.0	V	91.0	0.2
8407.218750	---	44.78	54.00	9.22	150.0	V	91.0	0.2
17613.250000	46.68	---	74.00	27.32	150.0	V	157.0	11.2
17678.062500	---	42.77	54.00	11.23	150.0	V	337.0	11.4
17837.437500	49.04	---	74.00	24.96	150.0	V	157.0	11.6
17929.343750	---	46.05	54.00	7.95	150.0	V	213.0	11.9
17945.281250	48.25	---	74.00	25.75	150.0	V	244.0	11.9
17990.968750	---	43.71	54.00	10.29	150.0	V	207.0	12.0

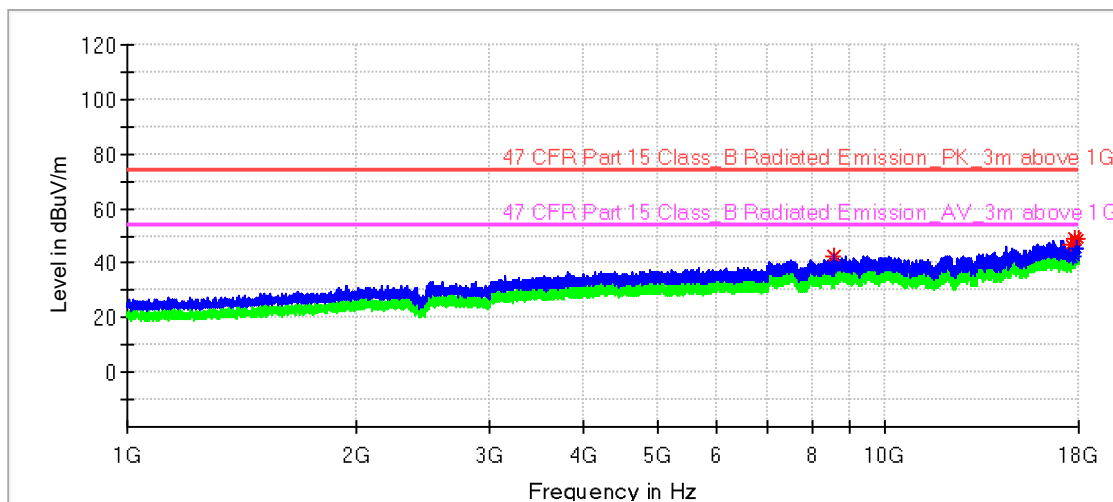


Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2386.900000	45.1	34.0	200.0	V	125.0	-2.0	28.9	74.0	20.0	54.0
2390.000000	44.8	34.1	350.0	V	234.0	-2.0	29.2	74.0	19.9	54.0
2402.000000	89.4	---	150.0	V	189.0	-1.9	---	---	---	---

Frequency: 2440MHz, 1Mbps

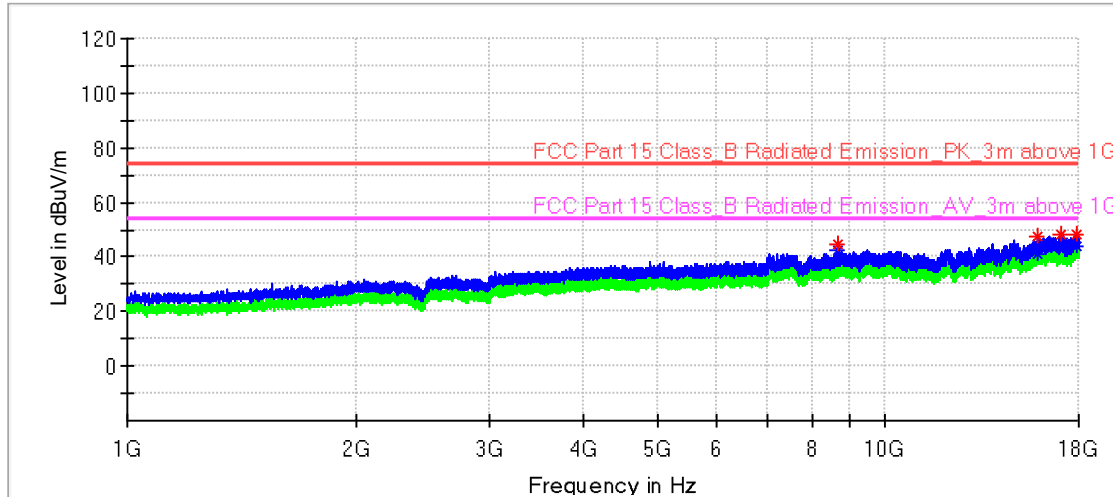


Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8540.031250	45.09	---	74.00	28.91	150.0	H	174.0	0.3
8540.031250	---	43.92	54.00	10.08	150.0	H	174.0	0.3
17152.125000	49.20	---	74.00	24.80	150.0	H	340.0	10.6
17164.875000	---	43.84	74.00	30.16	150.0	H	264.0	10.6
17495.843750	46.35	---	74.00	27.65	150.0	H	140.0	11.1
17525.062500	---	41.70	74.00	32.30	150.0	H	230.0	11.1
17834.781250	48.75	---	74.00	25.25	150.0	H	179.0	11.6
17834.781250	---	45.75	54.00	8.25	150.0	H	179.0	11.6

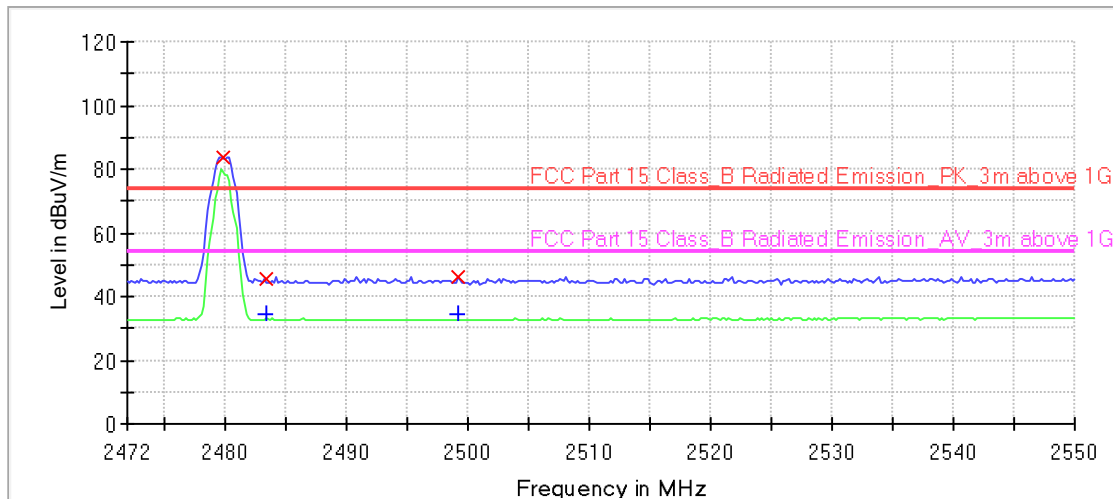


Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8540.031250	---	40.14	54.00	13.86	150.0	V	89.0	0.3
8540.562500	42.72	---	74.00	31.28	150.0	V	83.0	0.3
17628.125000	46.70	---	74.00	27.30	150.0	V	83.0	11.3
17632.906250	---	41.72	54.00	12.28	150.0	V	28.0	11.3
17818.843750	48.60	---	74.00	25.40	150.0	V	89.0	11.6
17824.687500	---	42.63	54.00	11.37	150.0	V	150.0	11.6
17939.437500	---	45.18	54.00	8.82	150.0	V	313.0	11.9
17951.656250	48.58	---	74.00	25.42	150.0	V	2.0	11.9

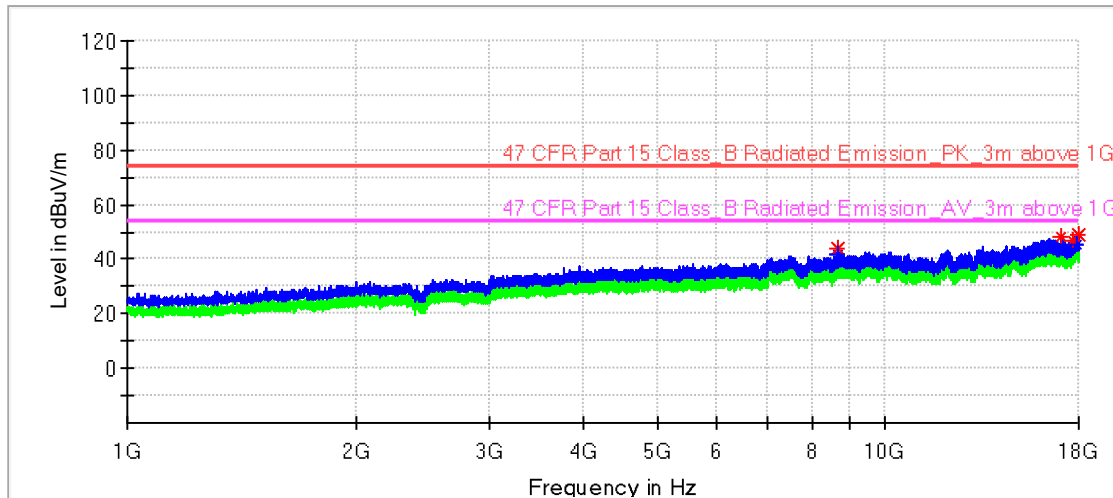
Frequency: 2480MHz, 1Mbps



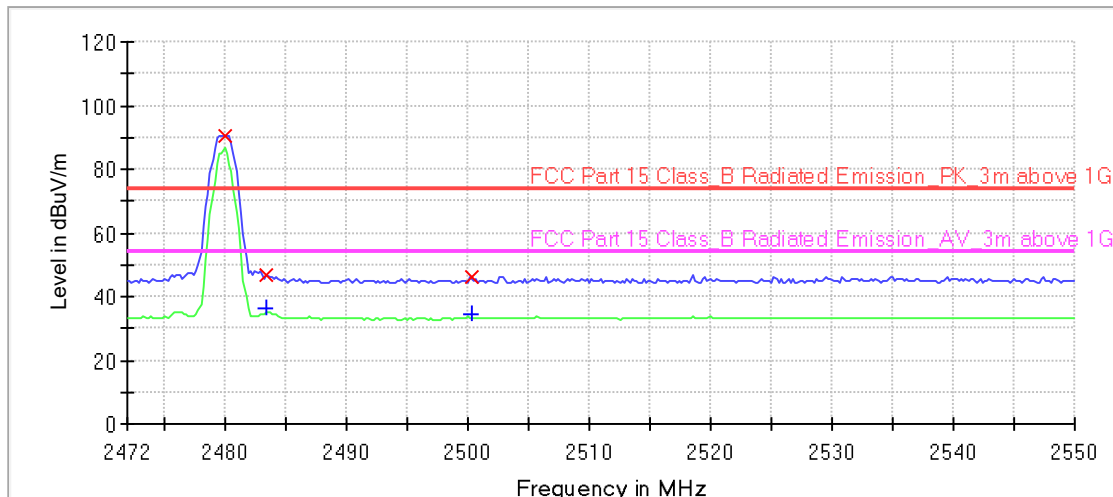
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8680.281250	---	42.39	54.00	11.61	150.0	H	185.0	0.5
8680.281250	44.33	---	74.00	29.67	150.0	H	185.0	0.5
15911.125000	47.17	---	74.00	26.83	150.0	H	302.0	8.2
15914.312500	---	41.08	74.00	32.92	150.0	H	202.0	8.2
17079.343750	47.92	---	74.00	26.08	150.0	H	78.0	10.5
17125.562500	---	45.28	54.00	8.72	150.0	H	36.0	10.6
17865.593750	48.02	---	74.00	25.98	150.0	H	257.0	11.7
17879.406250	---	43.57	74.00	30.43	150.0	H	29.0	11.7



Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2479.900000	83.7	---	250.0	H	224.0	-1.5	---	---	---	---
2483.500000	45.8	34.7	180.0	H	179.0	-1.4	28.2	74.0	19.3	54.0
2499.300000	46.2	34.7	350.0	H	315.0	-1.4	27.8	74.0	19.3	54.0

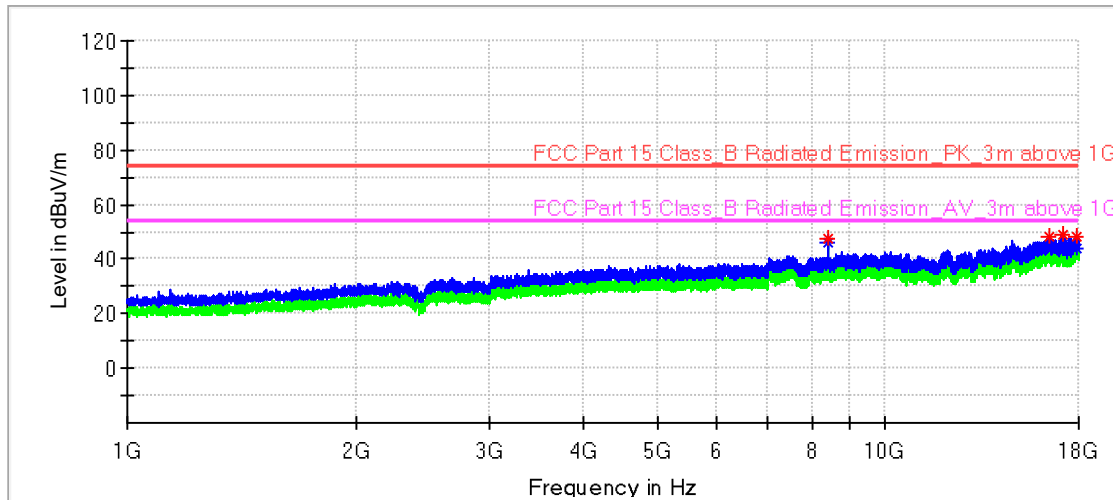


Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8679.750000	44.19	---	74.00	29.81	150.0	V	242.0	0.5
8680.281250	---	41.51	54.00	12.49	150.0	V	222.0	0.5
17097.406250	48.00	---	74.00	26.00	150.0	V	216.0	10.5
17101.656250	---	43.92	54.00	10.08	150.0	V	0.0	10.5
17689.218750	46.77	---	74.00	27.23	150.0	V	194.0	11.4
17707.281250	---	44.60	54.00	9.40	150.0	V	0.0	11.4
17908.625000	---	45.39	54.00	8.61	150.0	V	259.0	11.8
17975.031250	48.62	---	74.00	25.38	150.0	V	237.0	11.9

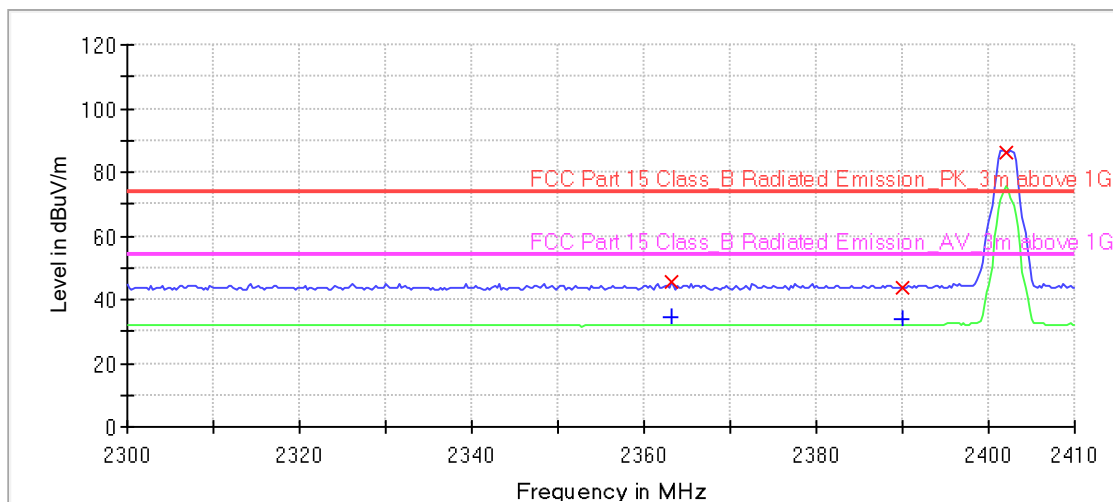


Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2480.000000	90.6	---	250.0	V	154.0	-1.5	---	---	---	---
2483.500000	46.6	36.5	300.0	V	289.0	-1.4	27.4	74.0	17.5	74.0
2500.300000	45.9	34.8	100.0	V	341.0	-1.4	28.1	74.0	19.2	74.0

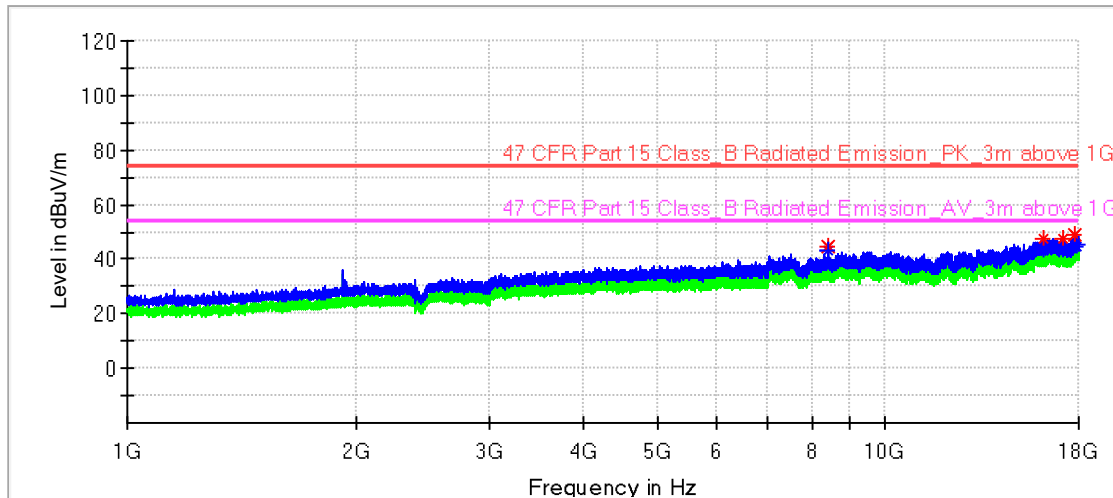
Frequency: 2402MHz, 2Mbps



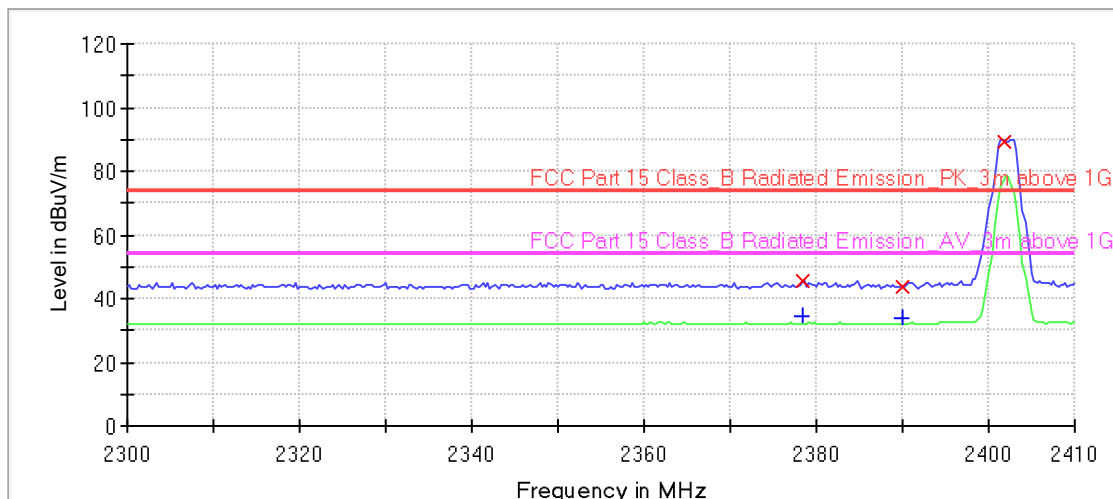
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8407.218750	---	45.73	54.00	8.27	150.0	H	104.0	0.2
8407.218750	47.49	---	74.00	26.51	150.0	H	104.0	0.2
16509.843750	47.94	---	74.00	26.06	150.0	H	109.0	9.6
16534.812500	---	44.02	54.00	9.98	150.0	H	98.0	9.7
17119.187500	---	45.11	54.00	8.89	150.0	H	0.0	10.6
17147.875000	48.68	---	74.00	25.32	150.0	H	41.0	10.6
17887.906250	48.30	---	74.00	25.70	150.0	H	65.0	11.8
17894.812500	---	43.67	54.00	10.33	150.0	H	150.0	11.8



Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2363.200000	45.4	34.2	250.0	H	241.0	-2.1	28.6	74.0	19.8	54.0
2390.000000	43.5	34.0	310.0	H	156.0	-2.0	30.5	74.0	20.0	54.0
2402.000000	86.2	---	150.0	H	278.0	-1.9	---	---	---	---

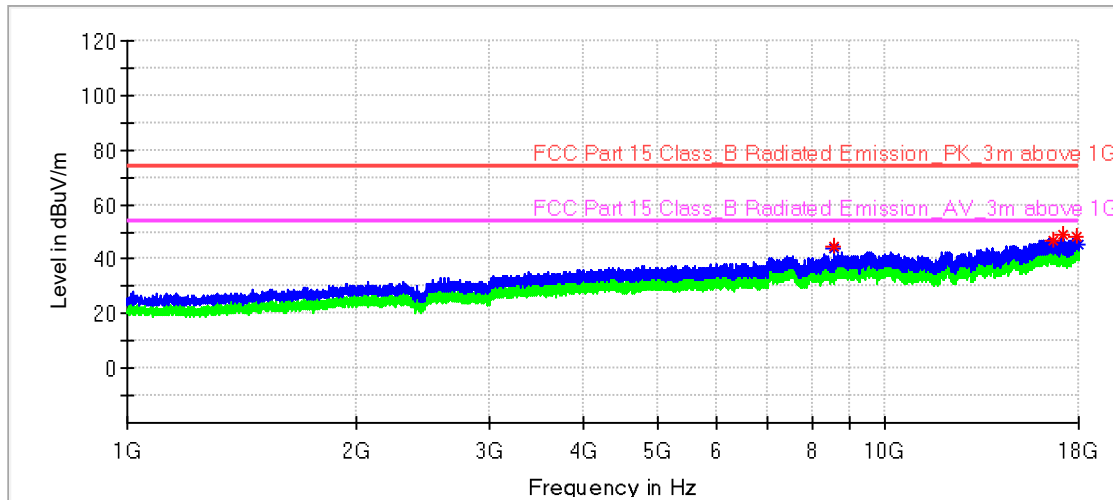


Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8407.218750	---	43.44	54.00	10.56	150.0	V	83.0	0.2
8407.218750	44.48	---	74.00	29.52	150.0	V	83.0	0.2
16131.062500	47.27	---	74.00	26.73	150.0	V	0.0	8.8
16148.593750	---	43.24	54.00	10.76	150.0	V	67.0	8.8
17122.906250	47.71	---	74.00	26.29	150.0	V	122.0	10.6
17134.593750	---	44.20	54.00	9.80	150.0	V	105.0	10.6
17836.906250	49.18	---	74.00	24.82	150.0	V	39.0	11.6
17854.968750	---	44.52	54.00	9.48	150.0	V	56.0	11.7

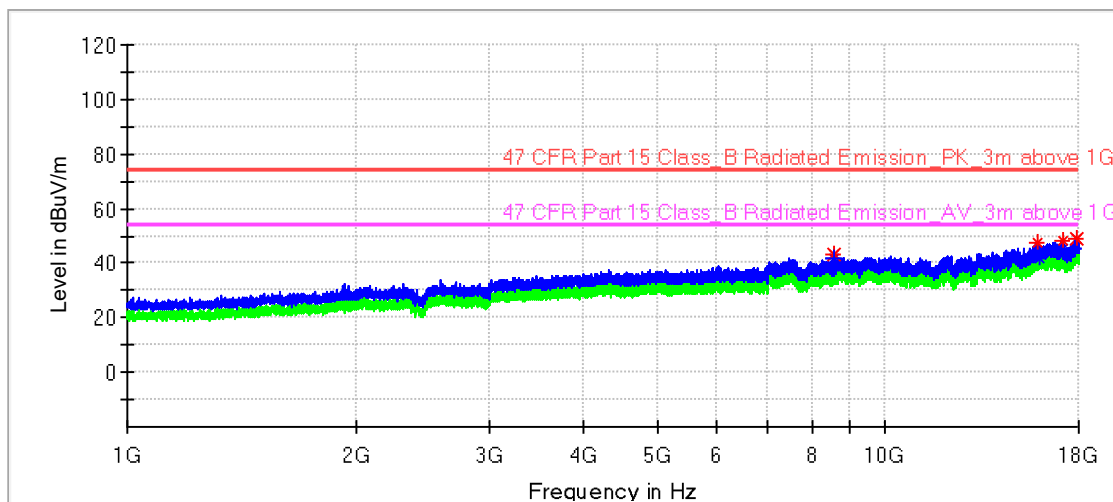


Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2378.500000	45.8	34.3	350.0	V	124.0	-2.0	28.2	74.0	19.8	54.0
2390.000000	43.4	34.1	250.0	V	268.0	-2.0	30.6	74.0	19.9	54.0
2401.900000	89.4	---	100.0	V	237.0	-1.9	---	---	---	---

Frequency: 2440MHz, 2Mbps

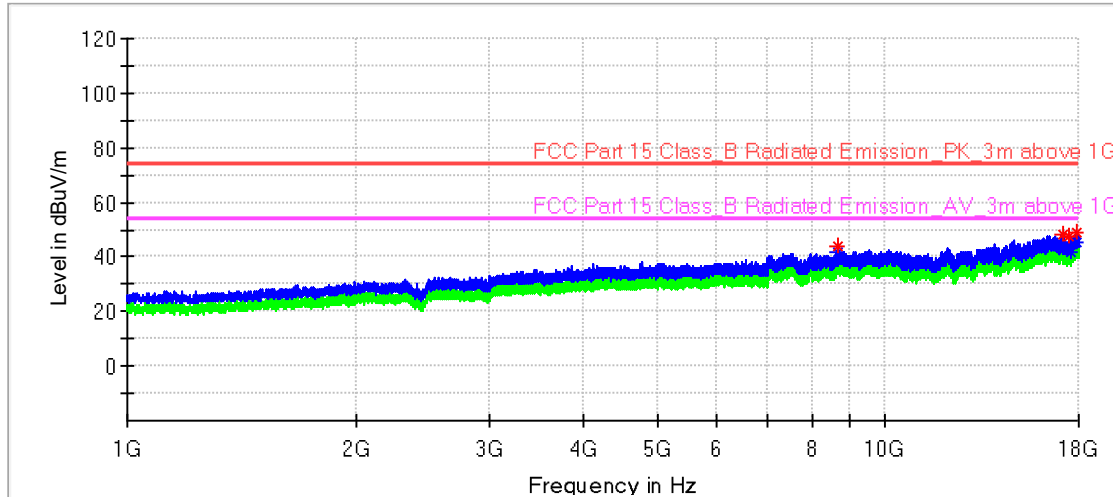


Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8540.031250	---	43.63	54.00	10.37	150.0	H	167.0	0.3
8540.031250	44.49	---	74.00	29.51	150.0	H	167.0	0.3
16668.687500	47.06	---	74.00	26.94	150.0	H	9.0	10.0
16676.125000	---	43.54	74.00	30.46	150.0	H	317.0	10.0
17122.906250	---	44.87	74.00	29.13	150.0	H	0.0	10.6
17130.343750	48.62	---	74.00	25.38	150.0	H	322.0	10.6
17867.187500	48.46	---	74.00	25.54	150.0	H	211.0	11.7
17970.250000	---	45.11	54.00	8.89	150.0	H	80.0	11.9

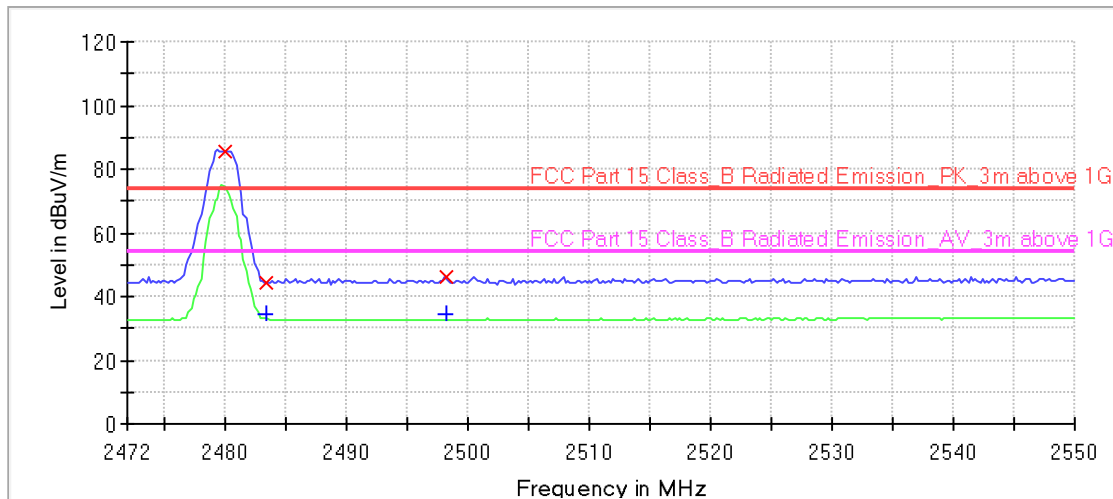


Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8540.031250	---	41.70	54.00	12.30	150.0	V	131.0	0.3
8540.031250	43.32	---	74.00	30.68	150.0	V	131.0	0.3
15910.062500	47.40	---	74.00	26.60	150.0	V	80.0	8.2
15946.187500	---	42.04	54.00	11.96	150.0	V	131.0	8.4
17144.687500	48.54	---	74.00	25.46	150.0	V	230.0	10.6
17157.968750	---	45.17	54.00	8.83	150.0	V	205.0	10.6
17828.406250	---	45.58	54.00	8.42	150.0	V	230.0	11.6
17926.156250	49.08	---	74.00	24.92	150.0	V	20.0	11.9

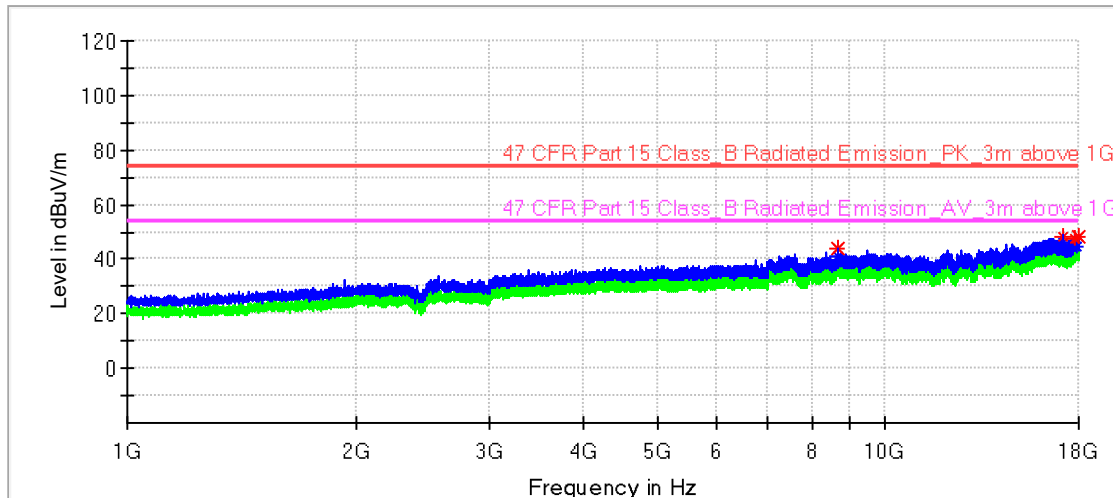
Frequency: 2480MHz, 2Mbps



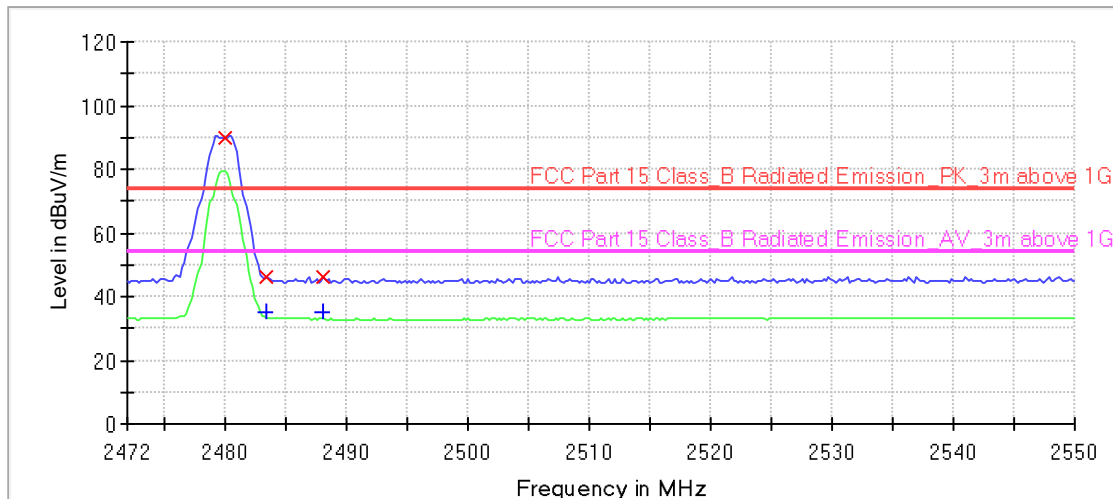
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8680.281250	---	41.94	54.00	12.06	150.0	H	172.0	0.5
8680.281250	44.20	---	74.00	29.80	150.0	H	172.0	0.5
17125.562500	47.85	---	74.00	26.15	150.0	H	306.0	10.6
17126.625000	---	44.01	74.00	29.99	150.0	H	57.0	10.6
17524.000000	47.14	---	74.00	26.86	150.0	H	261.0	11.1
17527.187500	---	41.60	74.00	32.40	150.0	H	161.0	11.1
17859.750000	---	45.46	54.00	8.54	150.0	H	127.0	11.7
17906.500000	48.95	---	74.00	25.05	150.0	H	194.0	11.8



Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2480.000000	85.4	---	250.0	H	259.0	-1.5	---	---	---	---
2483.500000	44.3	34.7	100.0	H	119.0	-1.4	29.7	74.0	19.3	54.0
2498.200000	46.1	34.6	150.0	H	341.0	-1.4	27.9	74.0	19.4	54.0



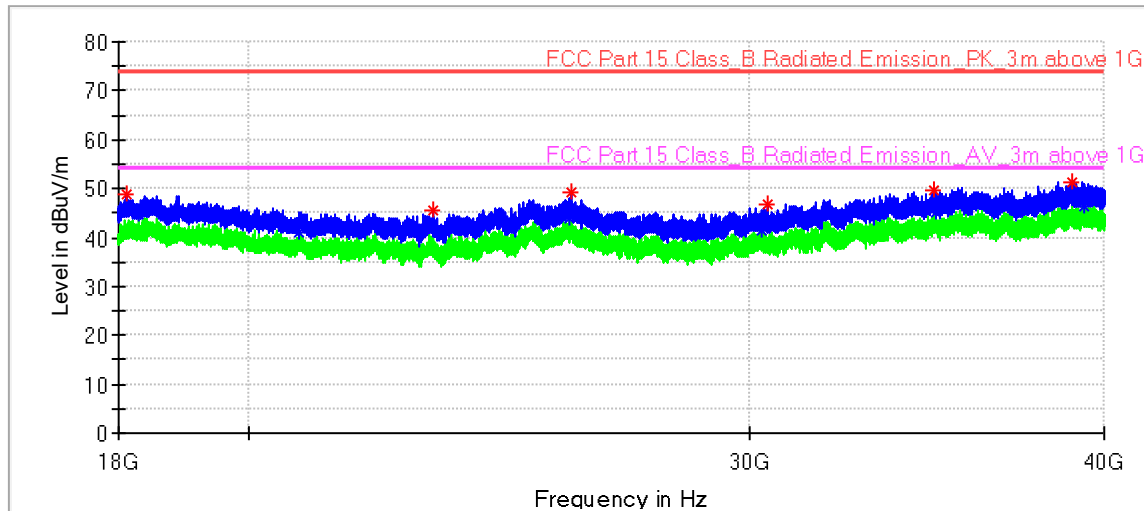
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
8679.750000	44.06	---	74.00	29.94	150.0	V	95.0	0.5
8680.281250	---	40.95	54.00	13.05	150.0	V	101.0	0.5
17115.468750	47.85	---	74.00	26.15	150.0	V	35.0	10.5
17139.375000	---	46.24	54.00	7.76	150.0	V	73.0	10.6
17771.562500	47.33	---	74.00	26.67	150.0	V	134.0	11.5
17821.500000	---	45.86	54.00	8.14	150.0	V	189.0	11.6
17935.718750	---	44.39	54.00	9.61	150.0	V	90.0	11.9
17957.500000	48.48	---	74.00	25.52	150.0	V	145.0	11.9



Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2480.000000	90.0	---	300.0	V	145.0	-1.5	---	---	---	---
2483.500000	46.0	34.8	250.0	V	219.0	-1.4	28.0	74.0	19.2	74.0
2488.185000	46.1	34.8	150.0	V	345.0	-1.4	27.9	74.0	19.2	74.0

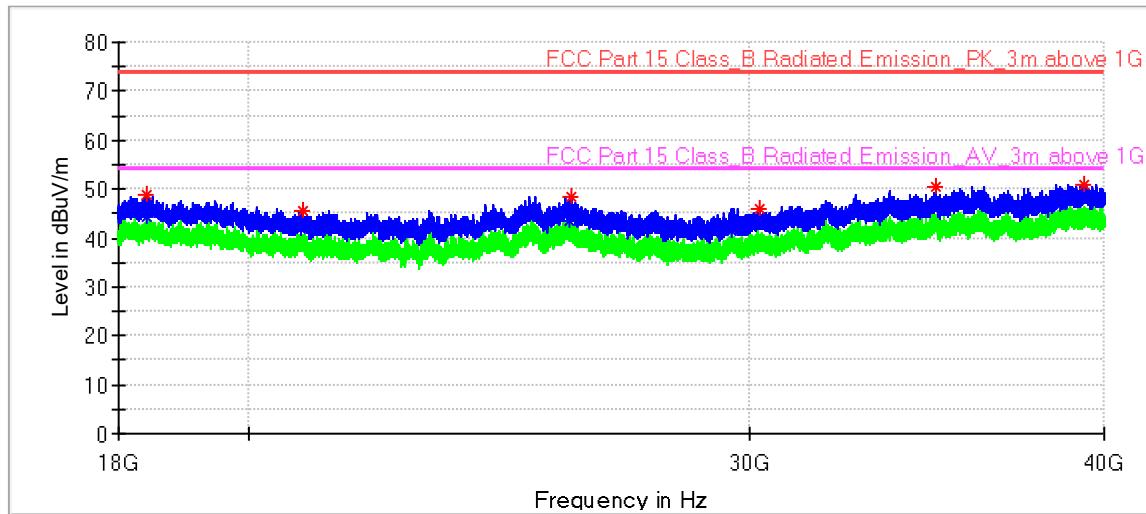
The worst case of Radiated Emission Above 18GHz

Frequency: 2440MHz, 2Mbps



Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18118.937500	48.95	---	74.00	25.05	100.0	H	230.0	8.1
18288.750000	---	44.70	54.00	9.30	100.0	H	1.0	8.1
20846.250000	---	40.83	54.00	13.17	100.0	H	355.0	8.5
23217.437500	45.73	---	74.00	28.27	100.0	H	320.0	8.9
25925.500000	---	43.75	54.00	10.25	100.0	H	359.0	9.6
25977.062500	49.15	---	74.00	24.85	100.0	H	243.0	9.7
30326.875000	---	41.52	54.00	12.48	100.0	H	138.0	10.2
30436.875000	46.58	---	74.00	27.42	100.0	H	12.0	10.2
34849.937500	49.77	---	74.00	24.23	100.0	H	107.0	12.2
34889.125000	---	45.11	54.00	8.89	100.0	H	302.0	12.2
38967.375000	51.43	---	74.00	22.57	100.0	H	290.0	13.4
39341.375000	---	46.49	54.00	7.51	100.0	H	107.0	13.6



Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18405.625000	48.92	---	74.00	25.08	100.0	V	78.0	8.1
18405.625000	---	44.34	54.00	9.66	100.0	V	78.0	8.1
20850.375000	---	42.04	54.00	11.96	100.0	V	54.0	8.5
20891.625000	45.56	---	74.00	28.44	100.0	V	151.0	8.5
25922.062500	---	43.65	54.00	10.35	100.0	V	151.0	9.6
25965.375000	48.39	---	74.00	25.61	100.0	V	175.0	9.7
29562.375000	---	41.56	54.00	12.44	100.0	V	15.0	9.9
30245.062500	46.15	---	74.00	27.85	100.0	V	78.0	10.2
34194.750000	---	45.35	54.00	8.65	100.0	V	187.0	11.4
34902.875000	50.52	---	74.00	23.48	100.0	V	78.0	12.3
38594.062500	---	46.95	54.00	7.05	100.0	V	193.0	13.5
39332.437500	50.97	---	74.00	23.03	100.0	V	348.0	13.6

Remark:

- (1) Emission level= Original Receiver Reading + Correct Factor
- (2) Correct Factor = Antenna Factor + Cable Loss -Amplifier gain
- (3) Margin = limit – Corrected Reading

11 Test Equipment List

List of Test Instruments
Test Site1

	Description	Manufacturer	Model no.	Serial no.	CAL. DATE	CAL. DUE DATE
C	Signal spectrum analyzer	Agilent	N9020B	MY59050168	2026-2-24	2027-2-23
	RF automatic control unit	MWRFTest	MW100-RFCB	MW211122-28	2025-10-9	2026-10-8
	RF_Cable	UCWAVE ELECTRONIC	UCA500-NJWSM-1.5M	---	2025-8-1	2026-7-31
RE	EMI Test Receiver	Rohde & Schwarz	ESR3	101906	2025-8-1	2026-7-31
	Signal Analyzer	Rohde & Schwarz	FSV40	101091	2025-8-1	2026-7-31
	Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	961	2025-6-25	2027-6-24
	Double-ridged waveguide horn antenna	Rohde & Schwarz	HF907	102393	2026-4-14	2027-4-13
	Pre-amplifier	Shenzhen HzEMC	HPA-081843	HYP A23026	2026-4-14	2027-4-13
	Loop antenna	Rohde & Schwarz	HFH2-Z2	100443	2025-7-4	2026-7-3
	Double Ridged Horn Antenna	ETS-Lindgren	3116C	00222727	2023-7-7	2026-7-6
	RE_Cable_01 Coaxial Cable	JUNFLON	MWX221	1906S057	2025-8-1	2026-7-31
	RE_Cable_02 Coaxial Cable	HUBER+SUHNER	RG214	1358176	2025-8-1	2026-7-31
	RE_Cable_03 Coaxial Cable	JUNFLON	MWX221	J12J102482	2025-8-1	2026-7-31
	RE_Cable_04 Coaxial Cable	PASTERNAK	PE360	2233	2025-8-1	2026-7-31
	3m Semi-anechoic chamber	TDK	9X6X6	----	2024-5-8	2027-5-7

Measurement Software Information			
Test Item	Software	Manufacturer	Version
C	MTS 8310	MWRFTest	3.0.0.0
RE	EMC 32	Rohde & Schwarz	V10.50.40

C - Conducted RF tests

- Conducted peak output power
- 6dB bandwidth and 99% Occupied Bandwidth
- Power spectral density
- Spurious RF conducted emissions
- Band edge



12 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

Items	Extended Uncertainty
Conducted Disturbance at Mains Terminals	150kHz to 30MHz, LISN, 3.16dB
Radiated Disturbance	9kHz to 30MHz, 3.52dB 30MHz to 1GHz, 5.03dB (Horizontal) 5.12dB (Vertical) 1GHz to 18GHz, 5.49dB 18GHz to 40GHz, 5.63dB
RF Conducted Measurement	Power related: 1.16dB Frequency related: 6.00×10^{-8}

Measurement Uncertainty Decision Rule:

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3.



13 Photographs of Test Set-ups

Refer to the < Test Setup photos >.



14 Photographs of EUT

Refer to the < External Photos > & < Internal Photos >.

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