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TEST REPORT

N°: 21490906-798426-C(FILE#7873522)

Version : 01

Subject

**Radio spectrum matters
tests according to standards:
47 CFR Part 15.247 & RSS-247 ISSUE 3 & RSS-Gen Issue 5**

Issued to

INGENICO
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FRANCE

Apparatus under test

- ↳ Product
- ↳ Trade mark
- ↳ Manufacturer
- ↳ Model under test
- ↳ Serial number
- ↳ FCC ID
- ↳ IC

Payment terminal
INGENICO
INGENICO
AXIUM RX9000
2419MR900209 / 2419MR900267
XKB-RX9CLWBT
2586D-RX9CLWBT

Conclusion

See Test Program chapter

Test date

May 13, 2024 to June 7, 2024

Test location

Moirans

FCC Test site

FR0008 - 918017 (MOI)

ISED Test site

FR0008 - 6500A

Sample receipt date

May 10, 2024

Composition of document

89 pages

Document issued on

August 12, 2024

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PUBLICATION HISTORY

Version	Date	Author	Modification
01	August 12, 2024	Akram HAKKARI	Creation of the document

Each new edition of this test report replaces and cancels the previous edition. The control of the old editions of report is under responsibility of client.



SUMMARY

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1. TEST PROGRAM

References

- 47 CFR Part 15.247
- RSS 247 ISSUE 3
- RSS Gen Issue 5
- KDB 558074 D01 DTS Meas Guidance v05r02 [fb](#)
- ANSI C63.10-2013

Radio requirement:

Clause (47CFR Part 15.247 & RSS-247 ISSUE 3 & RSS-Gen Issue 5) Test Description	Test result - Comments			
Occupied Bandwidth	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
20dB Bandwidth	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Number of Hopping Frequency	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Carrier Frequency Separation	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Time of Occupancy	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Duty Cycle	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Maximum Conducted Output Power	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Conducted Spurious Emission at the Band Edge	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Unwanted Emissions into Non-Restricted Frequency Bands	☒ PASS	☐ FAIL	☐ NA()	☐ NP(1)
AC Power Line Conducted Emission	☒ PASS	☐ FAIL	☐ NA(2)	☐ NP(1)
Unwanted Emissions into Restricted Frequency Bands	☒ PASS	☐ FAIL	☐ NA	☐ NP(1)
Receiver Radiated emissions	☒ PASS	☐ FAIL	☒ NA	☐ NP(1)
This table is a summary of test report, see conclusion of each clause of this test report for detail.				

(1): Limited program

(2): EUT not directly or indirectly connected to the AC Power Public Network

PASS: EUT complies with standard's requirement

FAIL: EUT does not comply with standard's requirement

NA: Not Applicable

NP: Test Not Performed



2. EQUIPMENT UNDER TEST: CONFIGURATION (DECLARED BY PROVIDER)

2.1. HARDWARE IDENTIFICATION (EUT AND AUXILIARIES):

Equipment under test (EUT):
INGENICO AXIUM RX9000

Serial Number: 2419MR900209 / 2419MR900267



Equipment Under Test

Power supply:

During all the tests, EUT is supplied by V_{nom} : 240 VAC

For measurement with different voltage, it will be presented in test method.

Name	Type	Rating	Reference / Sn	Comments
Supply1	DC	8-14 VDC	NC	-
Supply2	PoE	12.95W max	NC	-

Voltage table used (for Power Line Conducted Emissions):

Access	Type	Length used (m)	Declared <3m	Shielded	Comments
Supply1	240 VAC – 50Hz	NC	NC	No	-
Supply2	PoE	NC	NC	Yes	-
Access1	COMBOX	NC	No	NC	-

Access	Type	Length used (m)	Declared <3m	Shielded	Comments
Supply1	240 VAC – 50Hz	1.5	NC	No	-
Supply2	PoE	1.5	NC	Yes	-
Access1	COMBOX	2.2	No	NC	-



Equipment information:

Bluetooth Classic Type:	☐ v1.2	☐ v2.0	☐ v2.1+EDR	☐ v3.0+HS
	☐ v4.0	☐ v4.1	☒ v4.2	
Frequency band:	[2400 – 2483.5] MHz			
Spectrum Modulation:	☒ FHSS			
Number of Channel:	Maximum:	79	Minimum:	20
Spacing channel:	1MHz			
Channel bandwidth:	1MHz			
Antenna Type:	☒ Integral	☐ External	☐ Dedicated	
Antenna connector:	☐ Yes	☐ No	☒ Temporary for test	
Transmit chains:	1			
Antenna Requirements §15.203	Single antenna			
	Gain: 1.1dBi			
	The transmitter uses an integral antenna and it permanently connected			
Beam forming gain:	No			
Receiver chains	1			
Type of equipment:	☒ Stand-alone	☐ Plug-in	☐ Combined	
Ad-Hoc mode:	☐ Yes		☒ No	
Duty cycle:	☒ Continuous duty	☐ Intermittent duty	☐ 100% duty	
Equipment type:	☒ Production model		☐ Pre-production model	
Operating temperature range:	Tmin:	☐ -20°C	☐ 0°C	☒ -10°C
	Tnom:	20°C		
	Tmax:	☐ 35°C	☐ 55°C	☒ 45°C
Type of power source:	☒ AC power supply		☐ DC power supply	☐ Battery
Operating voltage range:	Vnom:	☒ 230V/50Hz		☐ 24Vdc



CHANNEL PLAN					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Cmin: 0	2402	27	2429	54	2456
1	2403	28	2430	55	2457
2	2404	29	2431	56	2458
3	2405	30	2432	57	2459
4	2406	31	2433	58	2460
5	2407	32	2434	59	2461
6	2408	33	2435	60	2462
7	2409	34	2436	61	2463
8	2410	35	2437	62	2464
9	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	Cmax: 78	2480
25	2427	52	2454		
26	2428	53	2455		

DATA RATE				
Available for EUT	Modulation type	Max. Data Rate (Mbps)	Packet type	Worst Case Modulation
☒	GFSK	1	1-DM1	☐
	GFSK	1	1-DH1	☐
	GFSK	1	1-DM3	☐
	GFSK	1	1-DH3	☐
	GFSK	1	1-DM5	☐
	GFSK	1	1-DH5	☒
☐	GFSK	1	AUX1	☐
☒	$\pi/4$ DQPSK	2	2-DH1	☐
	$\pi/4$ DQPSK	2	2-DH3	☐
	$\pi/4$ DQPSK	2	2-DH5	☒
	8DPSK	3	3-DH1	☐
	8DPSK	3	3-DH3	☐
	8DPSK	3	3-DH5	☒



2.2. RUNNING MODE

Test mode	Description of test mode
Test mode 1	Permanent emission with modulation on a fixed channel with the data rate that produced the highest power. adb root adb remount adb shell bdt_unisoc enable set_nonsig_tx enable 0 pattern channel pac_type pac_len power_type power_value pac_cnt enable: 1 means start transmission, 0 means stop transmission pattern : 1->00000000, 2->11111111, 3->10101010, 4->PRBS9, 9->11110000 channel : Specified channel (hexadecimal) pac_type :packets type, the relationship between index and pac_type is shown in the following table. pac_len : TX packet length (hexadecimal) power_type :power type. Default is 1 power_value :Power value range, 0~9, default is 9 pac_cnt : Specified pac_cnt, 0 means continuous TX. All tests are done with 9 at power value
Test mode 2	Permanent emission with modulation on a fixed channel with the data rate that produced the highest power. adb root adb remount adb shell bdt_unisoc enable set_nonsig_tx enable 0 pattern channel pac_type pac_len power_type power_value pac_cnt enable: 1 means start transmission, 0 means stop transmission pattern : 1->00000000, 2->11111111, 3->10101010, 4->PRBS9, 9->11110000 channel : FF for hopping pac_type :packets type, the relationship between index and pac_type is shown in the following table. pac_len : TX packet length (hexadecimal) power_type :power type. Default is 1 power_value :Power value range, 0~9, default is 9 pac_cnt : Specified pac_cnt, 0 means continuous TX. All tests are done with 9 at power value
Test mode 3	Permanent reception adb root adb remount adb shell bdt_unisoc enable set_nonsig_tx enable 0 pattern channel pac_type rx_gain bdaddr enable: 1 means start transmission, 0 means stop transmission pattern : 1->00000000, 2->11111111, 3->10101010, 4->PRBS9, 9->11110000 channel : Specified channel (hexadecimal) pac_type :packets type, the relationship between index and pac_type is shown in the above table. rx_gain: Gain parameter, which is fixed at 7F. bdaddr : The Bluetooth address of the device : XX:XX:XX:XX:XX:XX get_nonsig_rx_data 0



Test	Running mode	
Occupied Bandwidth	☒ Test mode 1 (1)	☐ Alternative test mode()
20dB Bandwidth	☒ Test mode 1 (1)	☐ Alternative test mode()
Number of Hopping Frequency	☒ Test mode 2 (1)	☐ Alternative test mode()
Carrier Frequency Separation	☒ Test mode 1 (1)	☐ Alternative test mode()
Time of Occupancy	☒ Test mode 2 (1)	☐ Alternative test mode()
Duty Cycle	☒ Test mode 1 (1)	☐ Alternative test mode()
Maximum Conducted Output Power	☒ Test mode 1 (1)	☐ Alternative test mode()
Conducted Spurious Emission at the Band Edge	☒ Test mode 1 (1)	☐ Alternative test mode()
Unwanted Emissions into Non-Restricted Frequency Bands	☒ Test mode 1 (1)	☐ Alternative test mode()
AC Power Line Conducted Emission	☒ Test mode 2 (1)	☐ Alternative test mode()
Unwanted Emissions into Restricted Frequency Bands	☒ Test mode 1 (1)	☐ Alternative test mode()
Receiver Radiated emissions	☒ Test mode 3 (1)	☐ Alternative test mode()

- (1) Following commands with the specific test software "X" are used to set the product:
a. – See document "X"(provided by customer) for the command used during test.

Hardware information		
Software (if applicable):	V. :	NC

2.3. EQUIPMENT LABELLING



2.4. EQUIPMENT MODIFICATION

- ☒ None ☐ Modification:



2.5. FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follow:

$$FS = RA + AF + CF - AG$$

Where
FS = Field Strength
RA = Receiver Amplitude
AF = Antenna Factor
CF = Cable Factor
AG = Amplifier Gain

Assume a receiver reading of 52.5dB μ V is obtained. The antenna factor of 7.4 and a cable factor of 1.1 are added. The amplifier gain of 29dB is subtracted, giving a field strength of 32 dB μ V/m.

$$FS = 52.5 + 7.4 + 1.1 - 29 = 32 \text{ dB}\mu\text{V/m}$$

The 32 dB μ V/m value can be mathematically converted to its corresponding level in μ V/m.

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm } [(32\text{dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}.$$

2.6. TEST DISTANCE EXTRAPOLATION – FCC/ISED

The field strength is extrapolated to the new measurement distance using formula from FCC Part15.31 (f) and §6.5-6.6 RSS-GEN:

Below 30MHz,

$$FS_{\text{limit}} = FS_{\text{max}} - 40 \log \left(\frac{d_{\text{limit}}}{d_{\text{measure}}} \right)$$

Above 30MHz,

$$FS_{\text{limit}} = FS_{\text{max}} - 20 \log \left(\frac{d_{\text{limit}}}{d_{\text{measure}}} \right)$$

Where:

FS_{limit} is the calculation of field strength at the limit distance, expressed in dB μ V/m

FS_{max} is the measured field strength, expressed in dB μ V/m

d_{measure} is the distance of the measurement point from the EUT

d_{limit} is the reference limit distance

2.7. CALIBRATION DATE

The calibration intervals are extended at 12+2 months. This extended interval is based on the fact that there is sufficient calibration data to statistically establish a trend or based on experience of use of the test equipment to assure good measurement results for a longer period.



3. OCCUPIED BANDWIDTH

3.1. TEST CONDITIONS

Date of test : May 22, 2024
Test performed by : Akram HAKKARI
Relative humidity (%) : 32
Ambient temperature (°C) : 21

3.2. TEST SETUP

- The Equipment under Test is installed:

- ☐ On a table
☒ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:

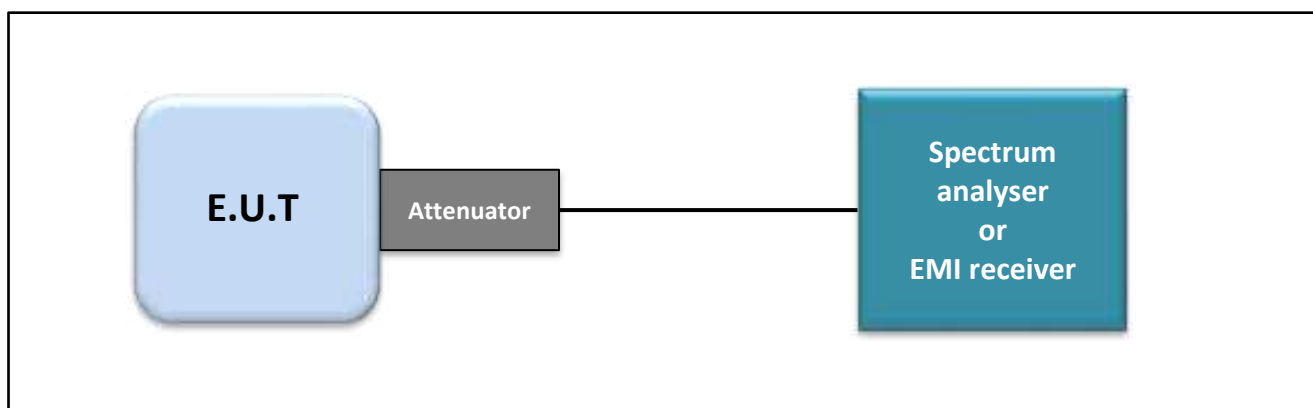
- ☒ Conducted Method
☐ Radiated Method

- Test Procedure:

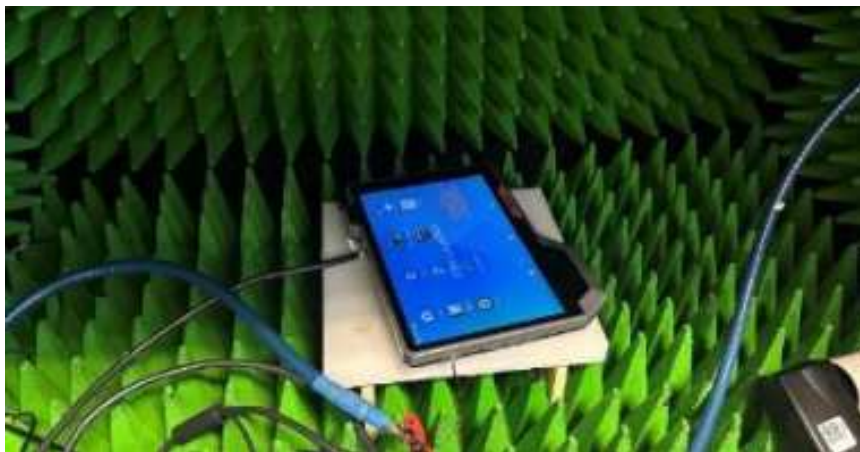
- ☐ RSS-Gen Issue 5 § 6.7
☐ ANSI C63.10 § 6.9.2

Measurement Procedure:

- RBW shall be in the range of 1% to 5% of the anticipated occupied bandwidth
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW
- SPAN = Capture all products of the modulation process
- Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Allow the trace to stabilize.
- OBW 99% function of spectrum analyzer used



Test set up of Occupied Bandwidth



Photograph for Occupied bandwidth

3.3. LIMIT

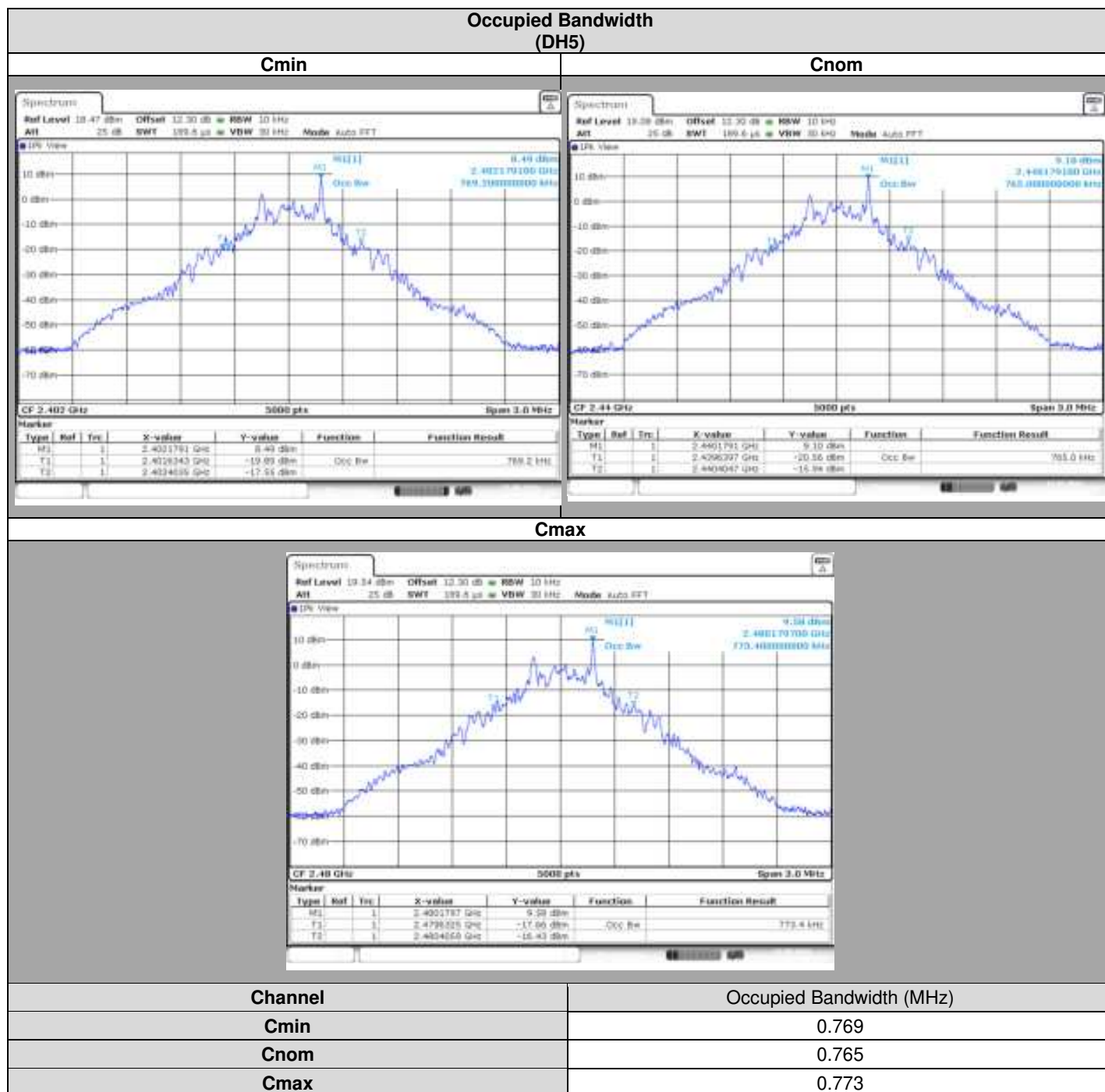
None

3.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Attenuator 10dB	AEROFLEX	—	A7122268	07/23	07/25
Cable Measure	—	36G	A5329604	02/24	02/25
Full Anechoic Room	SIEPEL	—	D3044024		
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25
SMK 1.2m (Ampl <-> chamber)	HUBER-SUHNER	SUCOFLEX 102	A5330062	04/23	04/26
Spectrum analyzer	ROHDE & SCHWARZ	FSV 40	A4060059	04/24	04/26
Thermo-hygrometer	TESTO	608-H1	B4204120	03/23	03/25
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	05/25

Note: In our quality system, the test equipment calibration due is more & less 2 months

3.5. RESULTS



Occupied Bandwidth (2-DH5)

Cmin

Cnom



Cmax



Channel

Occupied Bandwidth (MHz)

Cmin

1.155

Cnom

1.152

Cmax

1.154

Occupied Bandwidth (3-DH5)

Cmin



Cnom



Cmax



Channel

Occupied Bandwidth (MHz)

Cmin

1.174

Cnom

1.173

Cmax

1.170

3.6. CONCLUSION

Occupied Channel Bandwidth measurement performed on the sample of the product **INGENICO AXIUM RX9000**, SN: **2419MR900209 / 2419MR900267**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS-GEN ISSUE 5** limits.

4. 20dB EMISSION BANDWIDTH

4.1. TEST CONDITIONS

Date of test : May 22, 2024
Test performed by : Akram HAKKARI
Relative humidity (%) : 32
Ambient temperature (°C) : 21

4.2. TEST SETUP

- The Equipment Under Test is installed:

- ☐ On a table
- ☒ In an anechoic chamber

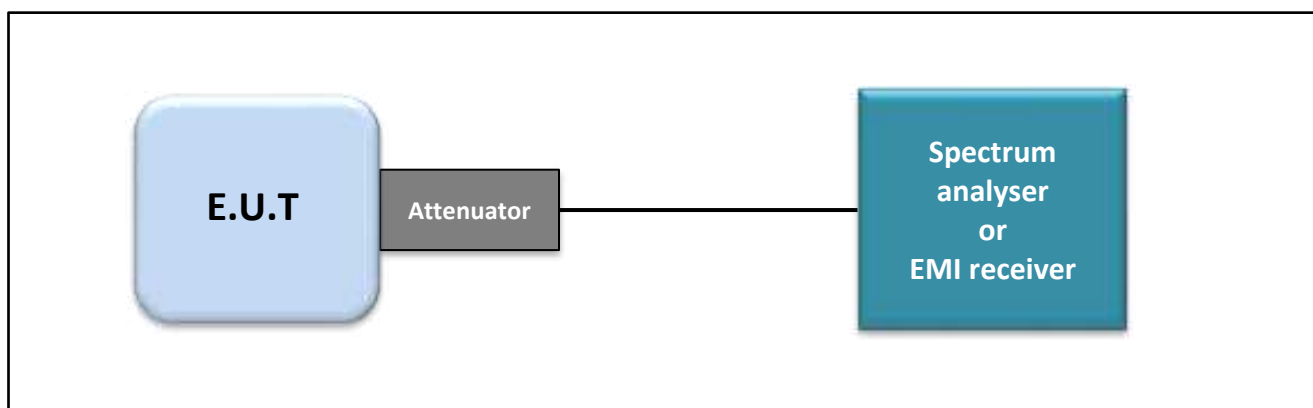
- Measurement is performed with a spectrum analyzer in:

- ☒ Conducted Method
- ☐ Radiated Method

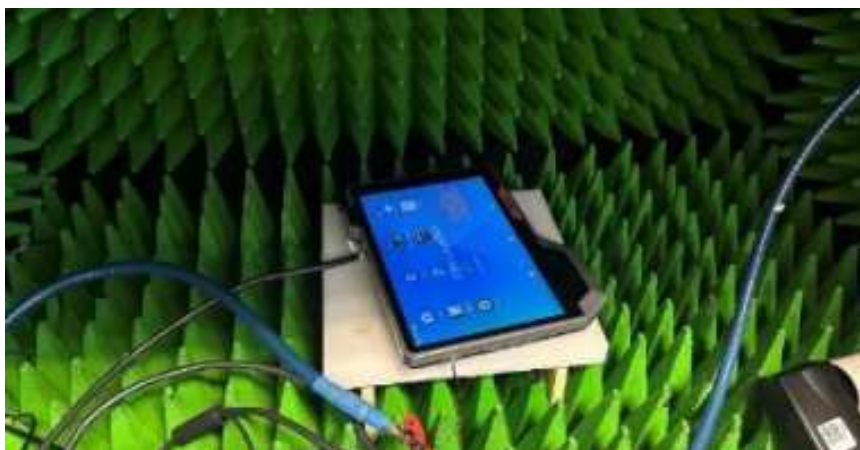
- Test Procedure:

- ☒ ANSI C63.10 § 6.9.2:

The EUT is placed in an anechoic chamber; levels have been corrected to be in compliant with the Peak Output Power measured. The EUT is turn ON and using the MaxHold function, the frequency separation of two frequencies that were attenuated 20dB from the Peak Output Power level. A delta marker is used to measure the frequency difference as the emission bandwidth.



Test set up of 20dB Emission Bandwidth



Photograph for 20dB emission bandwidth

4.3. LIMIT

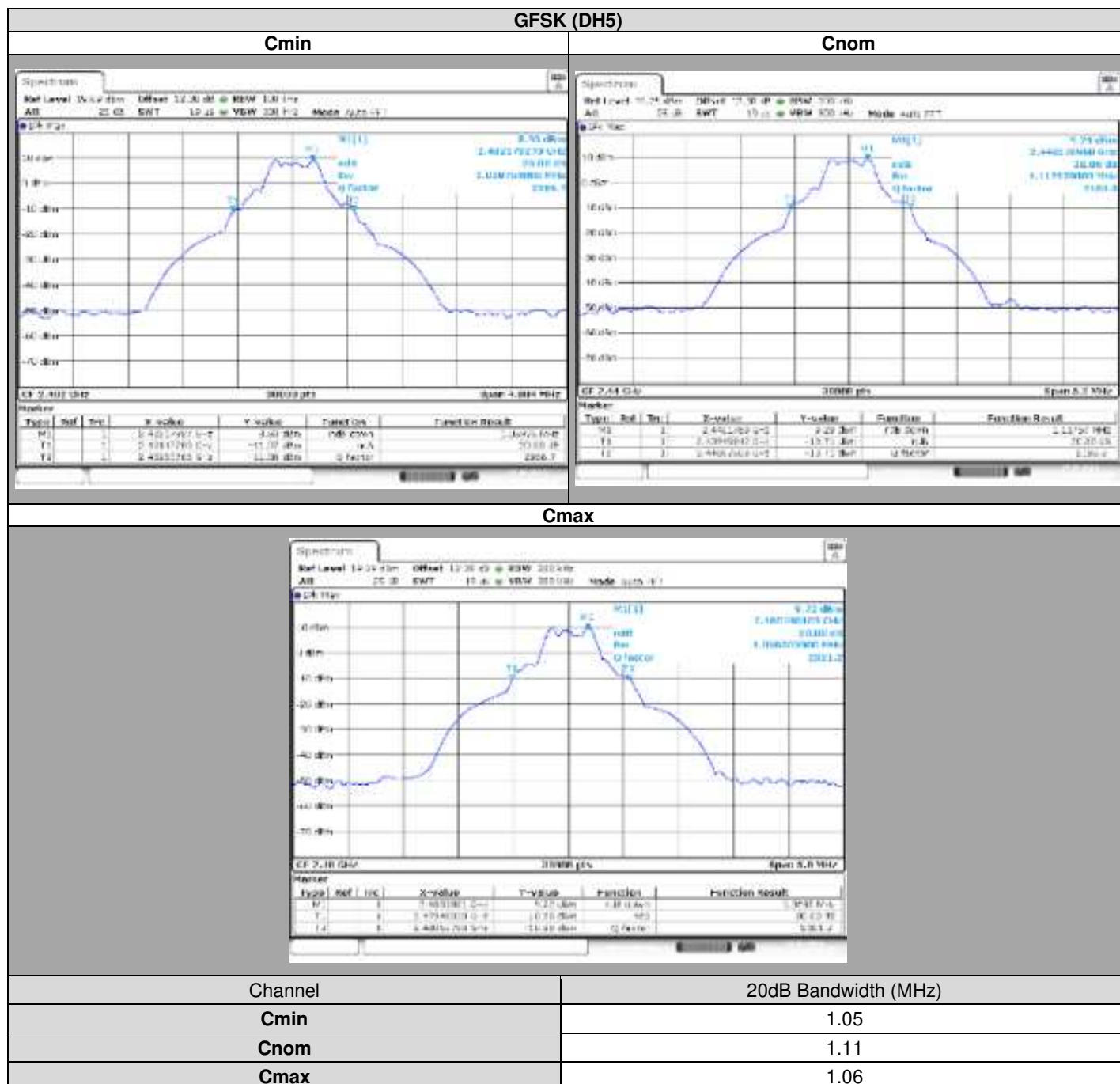
The maximum allowed 20dB bandwidth of hopping channel is 500kHz.

4.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Attenuator 10dB	AEROFLEX	—	A7122268	07/23	07/25
Cable Measure	—	36G	A5329604	02/24	02/25
Full Anechoic Room	SIEPEL	—	D3044024		
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25
SMK 1.2m (Ampl <-> chamber)	HUBER-SUHNER	SUCOFLEX 102	A5330062	04/23	04/26
Spectrum analyzer	ROHDE & SCHWARZ	FSV 40	A4060059	04/24	04/26
Thermo-hygrometer	TESTO	608-H1	B4204120	03/23	03/25
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	05/25

Note: In our quality system, the test equipment calibration due is more & less 2 months

4.5. RESULTS

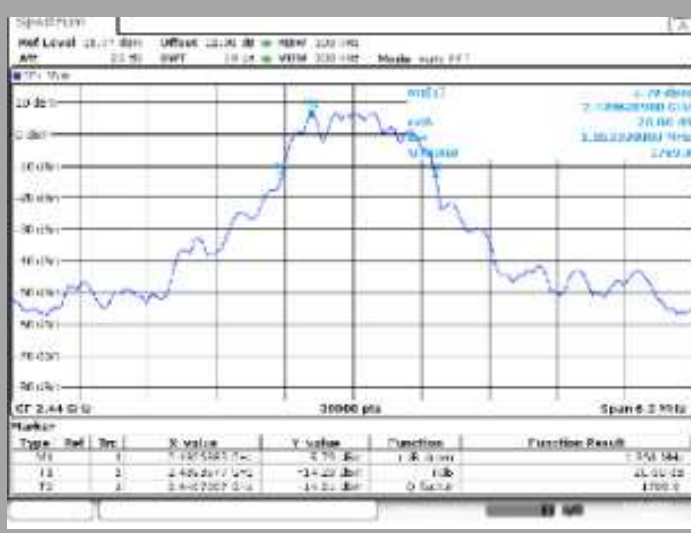


$\pi/4$ DQPSK (2-DH5)

Cmin



Cnom



Cmax



Channel

20dB Bandwidth (MHz)

Cmin

1.34

Cnom

1.36

Cmax

1.36

8DPSK (3-DH5)

Cmin



Cnom



Cmax



Channel

20dB Bandwidth (MHz)

Cmin

1.39

Cnom

1.39

Cmax

1.38

4.6. CONCLUSION

20dB Emission Bandwidth measurement performed on the sample of the product **INGENICO AXIUM RX9000**, SN: **2419MR900209 / 2419MR900267**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS 247 ISSUE 3** limits.



5. CARRIER FREQUENCY SEPARATION

5.1. TEST CONDITIONS

Date of test : May 22, 2024
Test performed by : Akram HAKKARI
Relative humidity (%) : 32
Ambient temperature (°C) : 21

5.2. TEST SETUP

- The Equipment Under Test is installed:

- ☒ On a table
- ☐ In an anechoic chamber

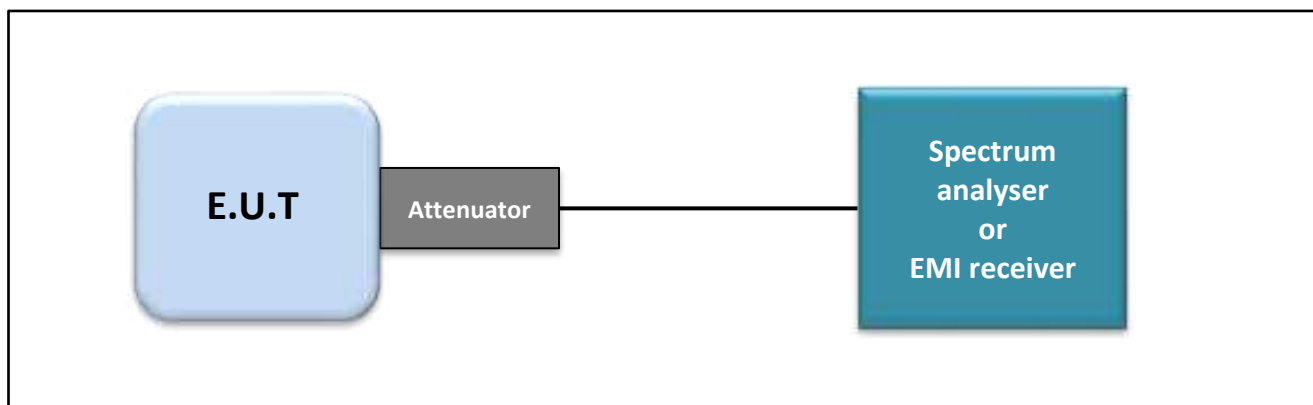
- Measurement is performed with a spectrum analyzer in:

- ☒ Conducted Method
- ☐ Radiated Method

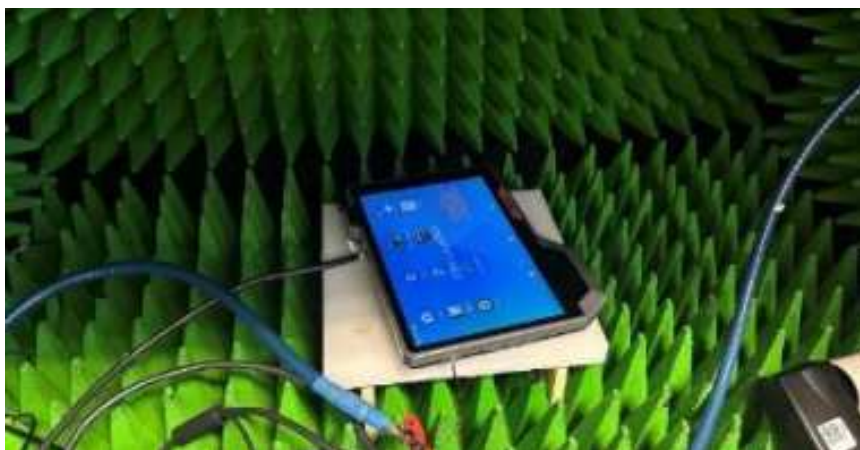
- Test Procedure:

- ☒ ANSI C63.10 § 7.8.2:

The EUT is placed in an anechoic chamber; levels have been corrected to be in compliant with the Peak Output Power measured. The EUT is turn ON and using the MaxHold function, the separation of two adjacent channels is recorded. A delta marker is used to measure the frequency difference.



Test set up of Carrier Frequency Separation



Photograph for Carrier Frequency Separation

5.3. LIMIT

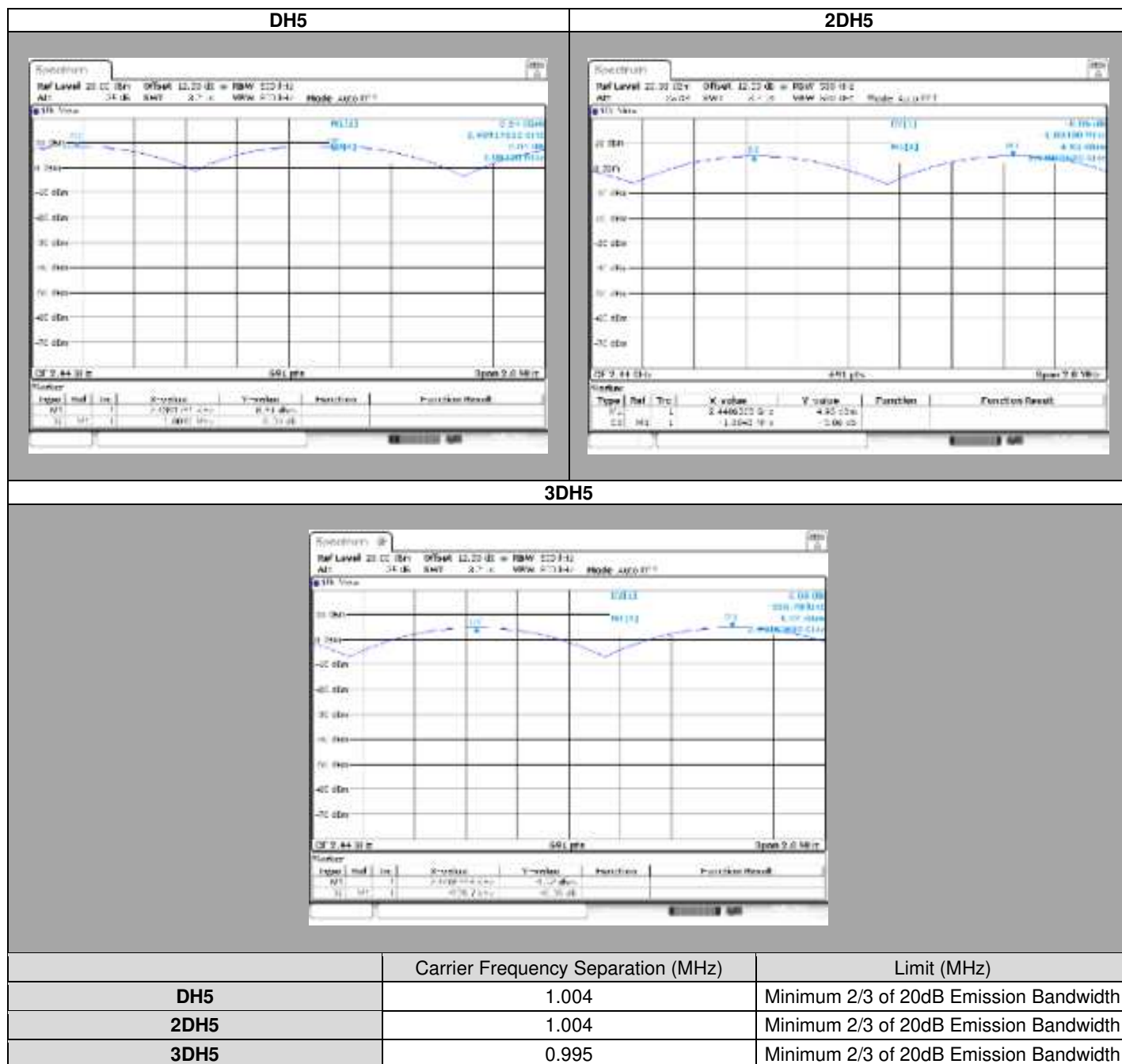
Carrier Frequency Separation shall be at least two-thirds of the 20dB Bandwidth

5.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Attenuator 10dB	AEROFLEX	—	A7122268	07/23	07/25
Cable Measure	—	36G	A5329604	02/24	02/25
Full Anechoic Room	SIEPEL	—	D3044024		
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25
SMK 1.2m (Ampl <-> chamber)	HUBER-SUHNER	SUCOFLEX 102	A5330062	04/23	04/26
Spectrum analyzer	ROHDE & SCHWARZ	FSV 40	A4060059	04/24	04/26
Thermo-hygrometer	TESTO	608-H1	B4204120	03/23	03/25
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	05/25

Note: In our quality system, the test equipment calibration due is more & less 2 months

5.5. RESULTS





5.6. CONCLUSION

Carrier Frequency Separation measurement performed on the sample of the product **INGENICO AXIUM RX9000**, SN: **2419MR900209 / 2419MR900267**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS-GEN ISSUE 5** limits.

6. NUMBER OF HOPPING FREQUENCY

6.1. TEST CONDITIONS

Date of test : May 22, 2024
Test performed by : Akram HAKKARI
Relative humidity (%) : 32
Ambient temperature (°C) : 21

6.2. TEST SETUP

- The Equipment Under Test is installed:

- ☐ On a table
- ☒ In an anechoic chamber

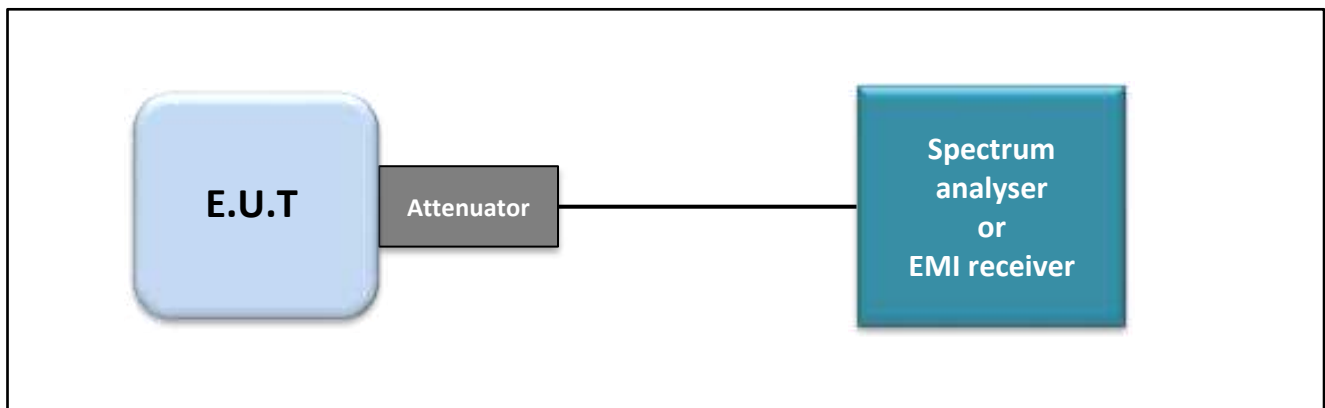
- Measurement is performed with a spectrum analyzer in:

- ☒ Conducted Method
- ☐ Radiated Method

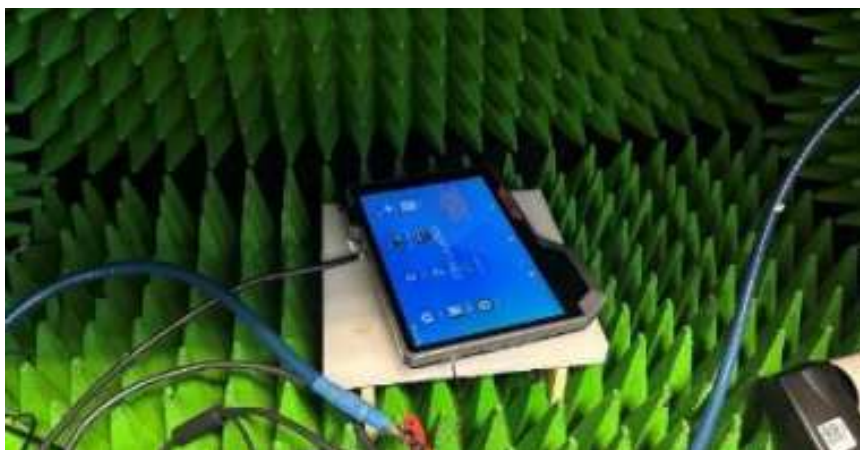
- Test Procedure:

- ☒ ANSI C63.10 § 7.8.3:

The EUT is placed in an anechoic chamber. The EUT is turn ON and using the MaxHold function and a delta marker the number of frequencies used for this FHSS system is recorded, see following graphs.



Test set up of Number of Hopping Frequency



Photograph for Number of Frequency Hopping

6.3. LIMIT

Number of Hopping Frequencies shall be at least 15 channels

6.4. TEST EQUIPMENT LIST

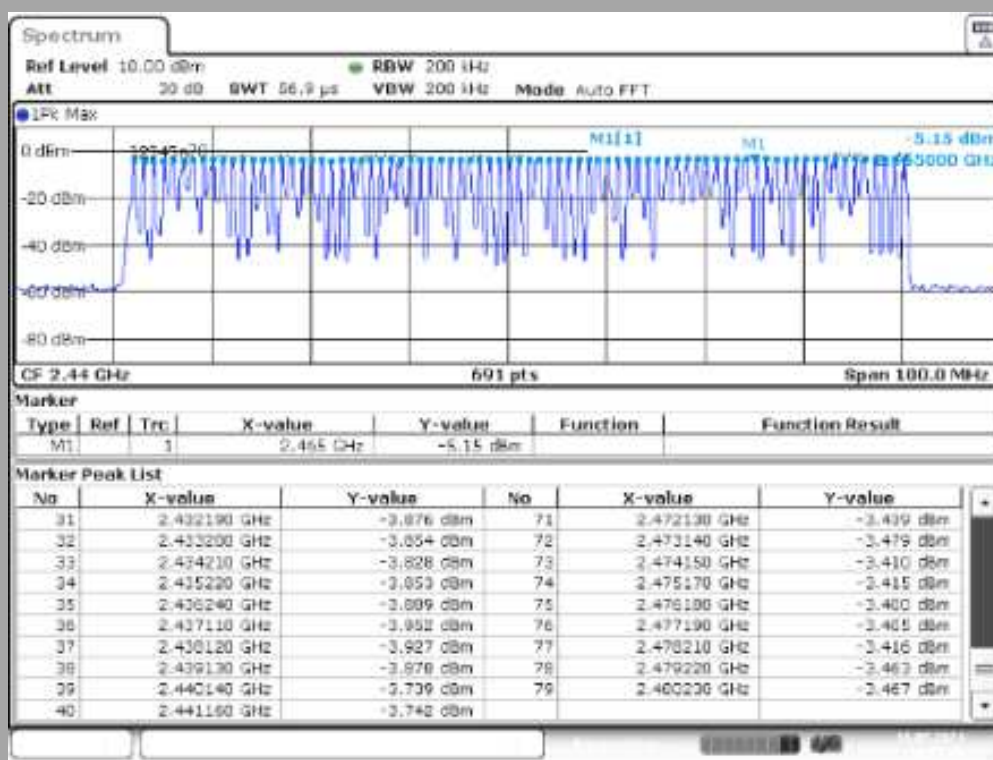
TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Attenuator 10dB	AEROFLEX	—	A7122268	07/23	07/25
Cable Measure	—	36G	A5329604	02/24	02/25
Full Anechoic Room	SIEPEL	—	D3044024		
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25
SMK 1.2m (Ampl <-> chamber)	HUBER-SUHNER	SUCOFLEX 102	A5330062	04/23	04/26
Spectrum analyzer	ROHDE & SCHWARZ	FSV 40	A4060059	04/24	04/26
Thermo-hygrometer	TESTO	608-H1	B4204120	03/23	03/25
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	05/25

Note: In our quality system, the test equipment calibration due is more & less 2 months

6.5. RESULTS

GFSK (DH5)

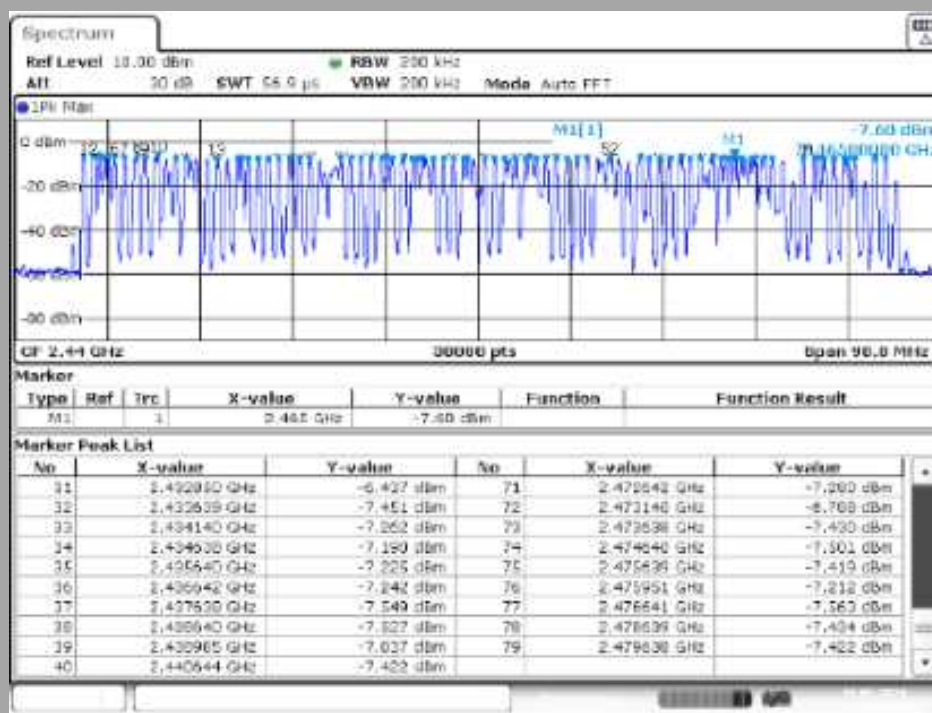
Call



Channel	Number of Hopping Frequencies	Limit
Call	79	Minimum 15

$\pi/4$ DQPSK (2-DH5)

Call



Channel

Number of Hopping Frequencies

Limit

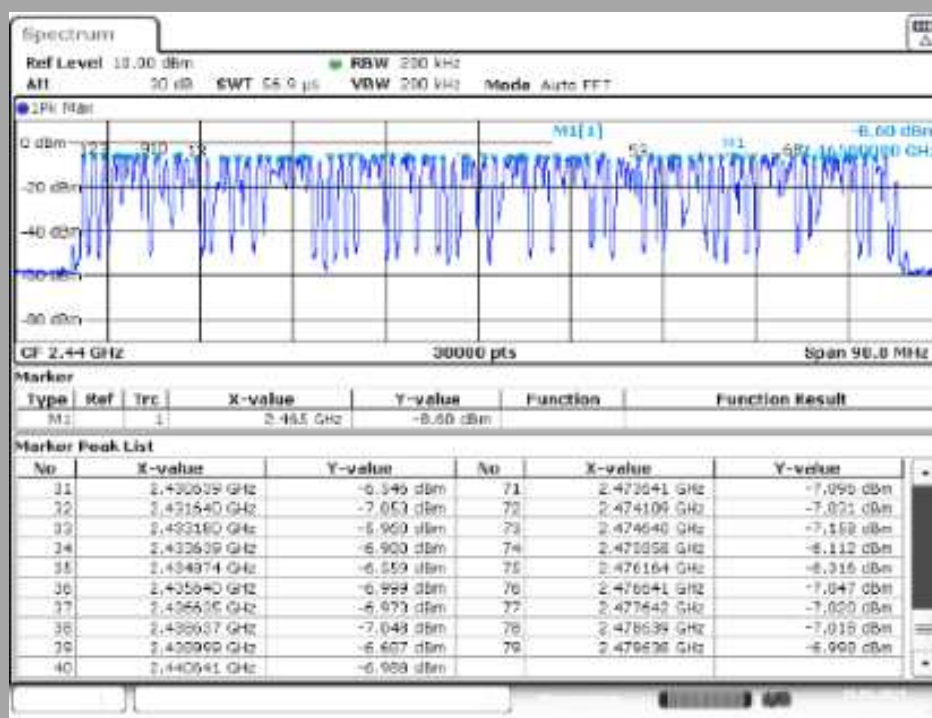
Call

79

Minimum 15

8DPSK (3-DH5)

Call



Channel	Number of Hopping Frequencies	Limit
Call	79	Minimum 15

6.6. CONCLUSION

Number of Frequency Hopping measurement performed on the sample of the product **INGENICO AXIUM RX9000**, SN: **2419MR900209 / 2419MR900267**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS-GEN ISSUE 5** limits.



7. TIME OF OCCUPANCY

7.1. TEST CONDITIONS

Date of test : May 22, 2024
Test performed by : Akram HAKKARI
Relative humidity (%) : 32
Ambient temperature (°C) : 21

7.2. TEST SETUP

- The Equipment Under Test is installed:

- ☐ On a table
- ☒ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:

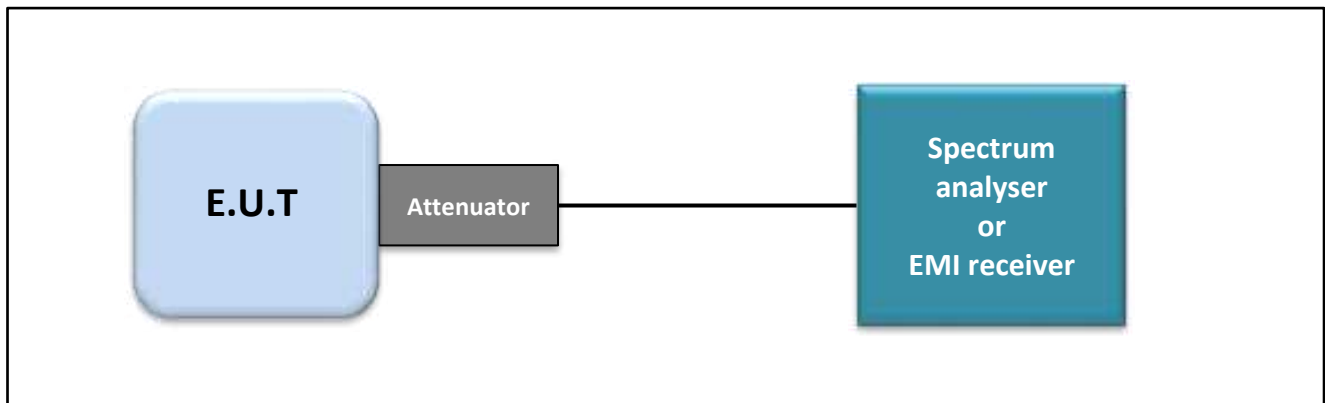
- ☒ Conducted Method
- ☐ Radiated Method

- Test Procedure:

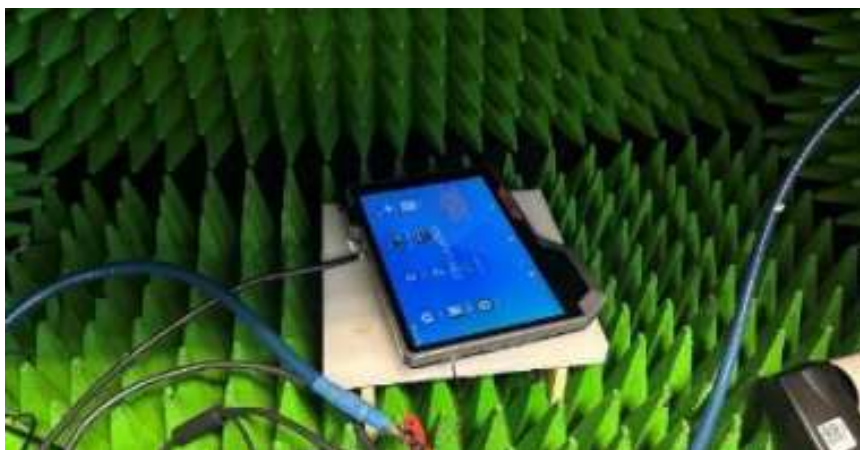
- ☒ ANSI C63.10 § 7.8.4

Dwell Time is measured and calculated using the zero SPAN mode on a channel frequency and a SWEEP with an adapter value to measure the number of transmission within a period and the time of transmission

RBW: 100kHz



Test set up of Time of Occupancy



Photograph for Time of Occupancy

7.3. LIMIT

The Time of Occupancy shall not exceed 0.4s within any period of 0.4s multiplied by the number of hopping channels employed

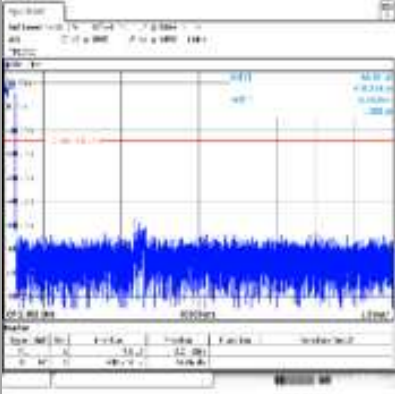
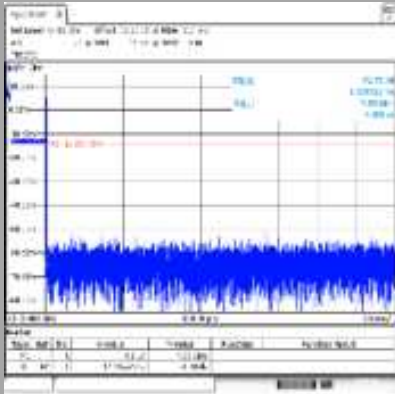
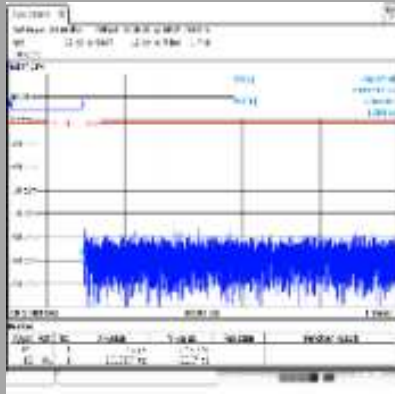
7.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Attenuator 10dB	AEROFLEX	—	A7122268	07/23	07/25
Cable Measure	—	36G	A5329604	02/24	02/25
Full Anechoic Room	SIEPEL	—	D3044024		
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25
SMK 1.2m (Ampl <-> chamber)	HUBER-SUHNER	SUCOFLEX 102	A5330062	04/23	04/26
Spectrum analyzer	ROHDE & SCHWARZ	FSV 40	A4060059	04/24	04/26
Thermo-hygrometer	TESTO	608-H1	B4204120	03/23	03/25
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	05/25

Note: In our quality system, the test equipment calibration due is more & less 2 months

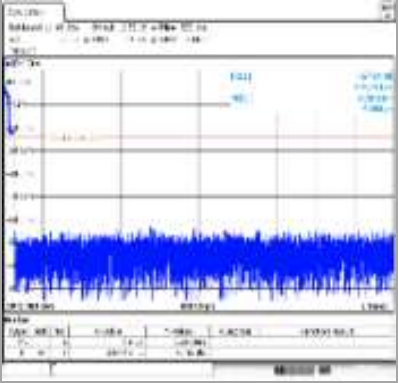
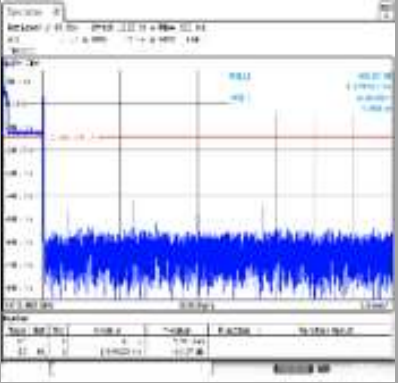
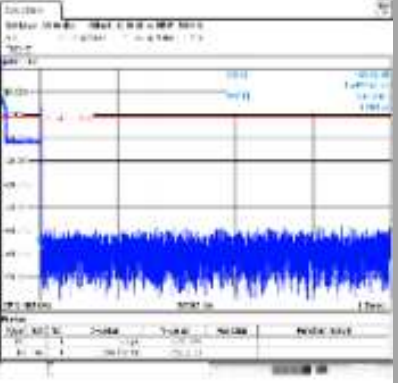


7.5. RESULTS

Burst Length			
DH1		DH3	
DH5			
			
			
Packet Type	Burst Length (ms)	Time of Occupancy (ms)	Limit of Time of Occupancy (ms)
DH1	0.43	158.2	400
DH3	1.55	254.2	400
DH5	2.91	359.6	400

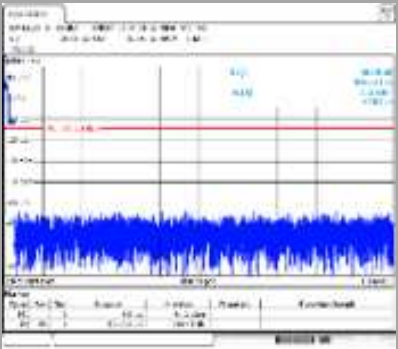
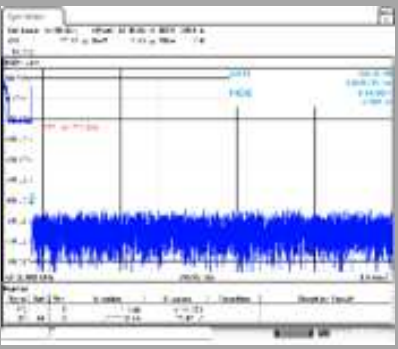
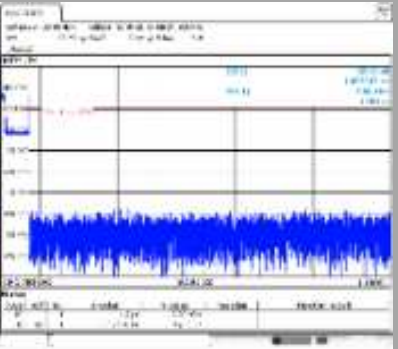
Note: Period of 31.6 seconds (79 channels x 0.4)



Burst Length			
2DH1	2DH3	2DH5	
			
Packet Type	Burst Length (ms)	Time of Occupancy (ms)	Limit of Time of Occupancy (ms)
2DH1	0.4	137.42	400
2DH3	1.55	272.8	400
2DH5	1.54	161.2	400

Note: Period of 31.6 seconds (79 channels x 0.4)



Burst Length			
3DH1	3DH3	3DH5	
			
Packet Type	Burst Length (ms)	Time of Occupancy (ms)	Limit of Time of Occupancy (ms)
2DH1	0.4	132.8	400
2DH3	1.08	164.16	400
2DH5	1.08	91.56	400

Note: Period of 31.6 seconds (79 channels x 0.4)

7.6. CONCLUSION

Time of Occupancy measurement performed on the sample of the product **INGENICO AXIUM RX9000**, SN: **2419MR900209 / 2419MR900267**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS-GEN ISSUE 5** limits.

8. MAXIMUM CONDUCTED OUTPUT POWER

8.1. TEST CONDITIONS

Date of test : May 23, 2024
Test performed by : Akram HAKKARI
Relative humidity (%) : 32
Ambient temperature (°C) : 21

8.2. TEST SETUP

- The Equipment Under Test is installed:

- ☐ On a table
☒ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:

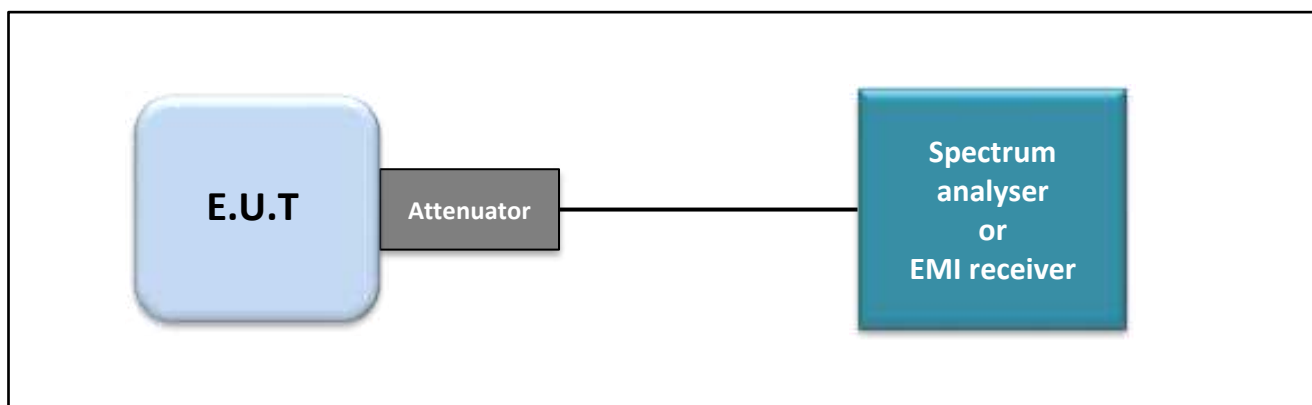
- ☒ Conducted Method
☐ Radiated Method

- Test Procedure:

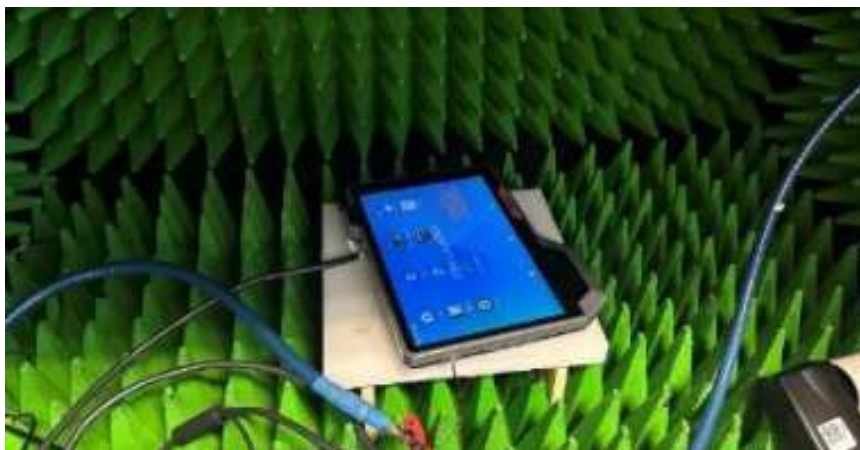
- ☒ ANSI C63.10 § 7.8.5

Measurement Procedure:

- 1) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
- 2) RBW > 20 dB bandwidth of the emission being measured.
- 3) VBW ≥ RBW.
- 4) Sweep: Auto.
- 5) Detector function: Peak.
- 6) Trace: Max hold.



Test set up of Maximum Conducted Output Power



Photograph for Maximum Conducted Output Power

8.3. LIMIT

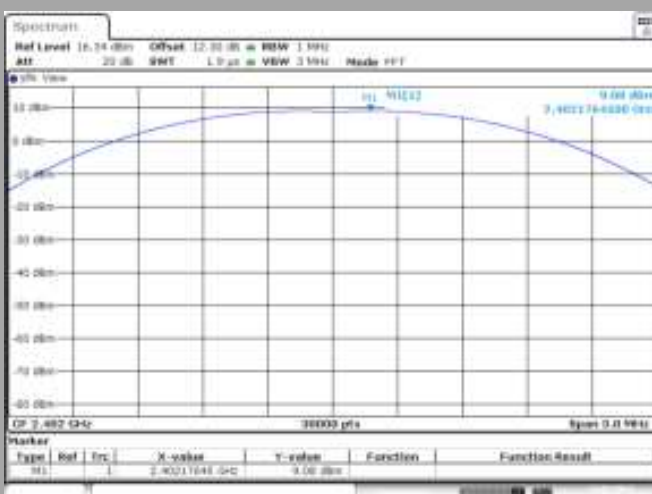
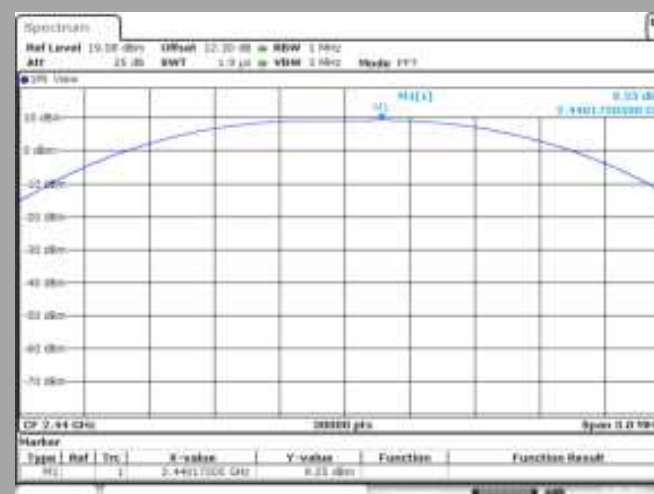
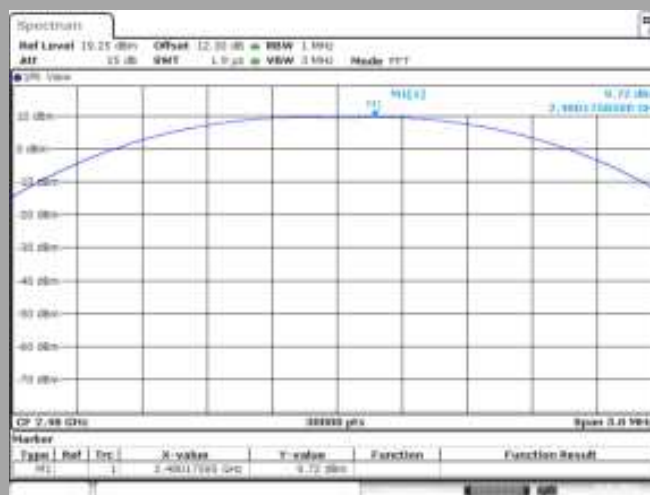
Maximum Conducted Output power:
Shall not exceed 21dBm
Limits are reduced by G-6dBi if Antenna Gain above 6dBi

8.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Attenuator 10dB	AEROFLEX	—	A7122268	07/23	07/25
Cable Measure	—	36G	A5329604	02/24	02/25
Full Anechoic Room	SIEPEL	—	D3044024		
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25
SMK 1.2m (Ampl <-> chamber)	HUBER-SUHNER	SUCOFLEX 102	A5330062	04/23	04/26
Spectrum analyzer	ROHDE & SCHWARZ	FSV 40	A4060059	04/24	04/26
Thermo-hygrometer	TESTO	608-H1	B4204120	03/23	03/25
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	05/25

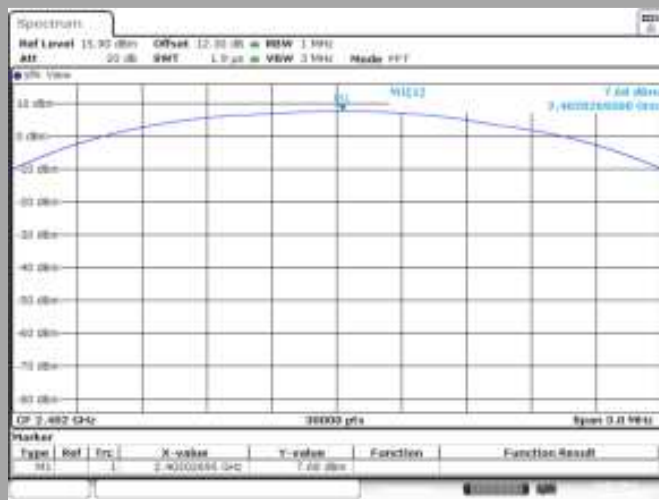
Note: In our quality system, the test equipment calibration due is more & less 2 months

8.5. RESULTS

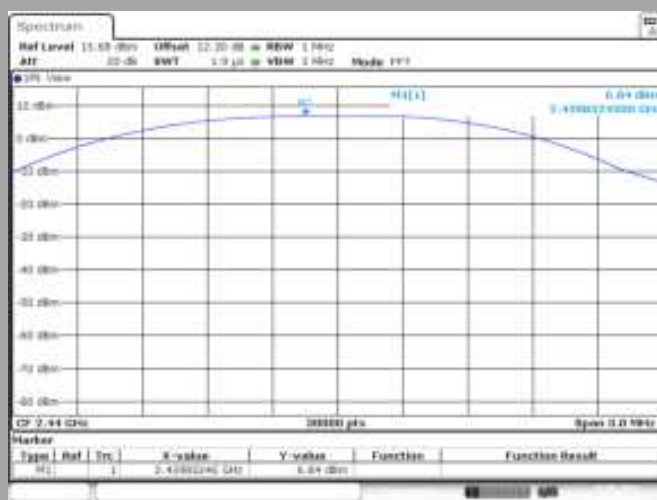
GFSK (DH5)				
Cmin		Cnom		
				
Cmax				
				
Channel	Offset Cable + Att (dB)	Antenna Gain (dBi)	Maximum Conducted Power (dBm)	Limit (dBm)
Cmin	12.3	1.1	9.08	21dBm. Reduced by G-6dBi if Antenna Gain above 6dBi
Cnom	12.3	1.1	9.25	21dBm. Reduced by G-6dBi if Antenna Gain above 6dBi
Cmax	12.3	1.1	9.72	21dBm. Reduced by G-6dBi if Antenna Gain above 6dBi

$\pi/4$ DQPSK (2-DH5)

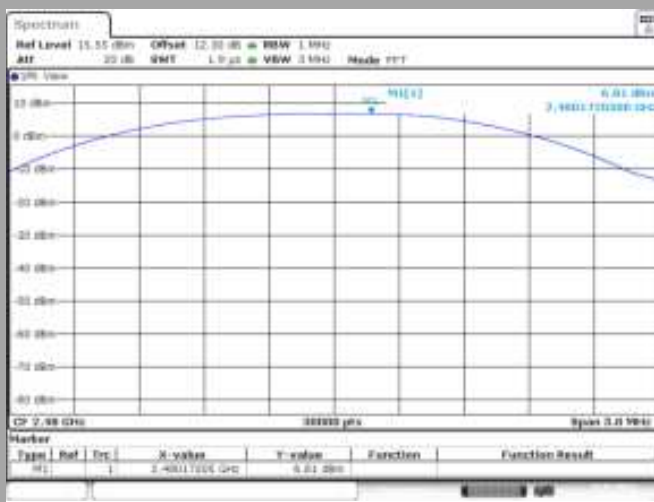
Cmin



Cnom



Cmax



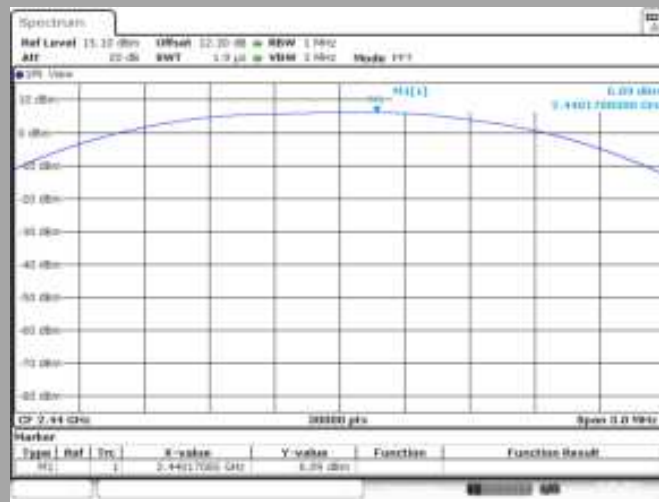
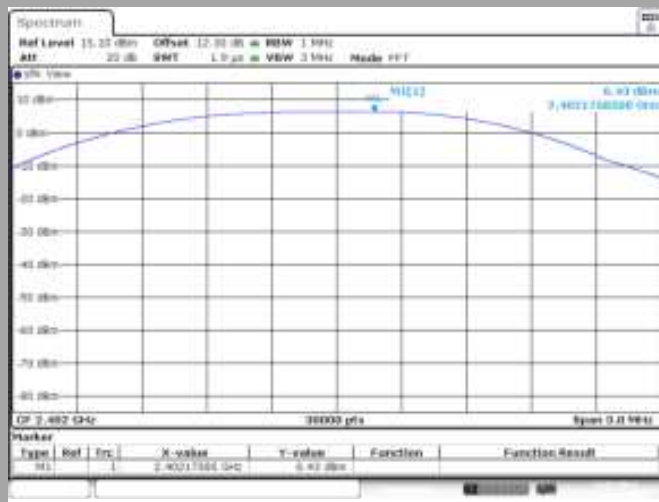
Channel	Offset Cable + Att (dB)	Antenna Gain (dBi)	Maximum Conducted Power (dBm)	Limit (dBm)
Cmin	12.3	1.1	7.68	21dBm. Reduced by G-6dBi if Antenna Gain above 6dBi
Cnom	12.3	1.1	6.84	21dBm. Reduced by G-6dBi if Antenna Gain above 6dBi
Cmax	12.3	1.1	6.81	21dBm. Reduced by G-6dBi if Antenna Gain above 6dBi



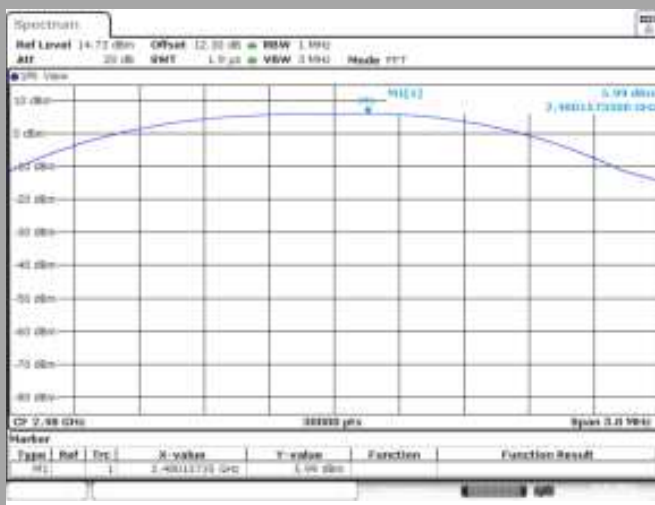
$\pi/4$ DQPSK (3-DH5)

Cmin

Cnom



Cmax



Channel	Offset Cable + Att (dB)	Antenna Gain (dBi)	Maximum Conducted Power (dBm)	Limit (dBm)
Cmin	12.3	1	6.43	21dBm. Reduced by G-6dBi if Antenna Gain above 6dBi
Cnom	12.3	1	6.09	21dBm. Reduced by G-6dBi if Antenna Gain above 6dBi
Cmax	12.3	1	5.99	21dBm. Reduced by G-6dBi if Antenna Gain above 6dBi



8.6. CONCLUSION

Maximum Conducted Output Power measurement performed on the sample of the product **INGENICO AXIUM RX9000**, SN: **2419MR900209 / 2419MR900267**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS 247 ISSUE 3** limits.



9. UNWANTED EMISSIONS INTO NON-RESTRICTED FREQUENCY BANDS AT THE BAND EDGE

9.1. TEST CONDITIONS

Date of test : May 23, 2024
Test performed by : Akram HAKKARI
Relative humidity (%) : 32
Ambient temperature (°C) : 21

9.2. TEST SETUP

- The Equipment Under Test is installed:

- ☐ On a table
- ☒ In an anechoic chamber

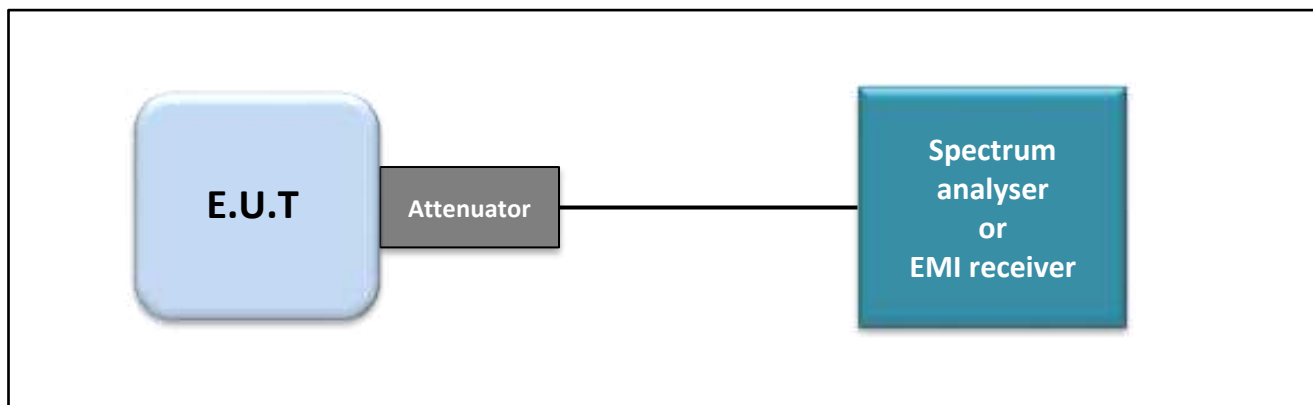
- Measurement is performed with a spectrum analyzer in:

- ☒ Conducted Method
- ☐ Radiated Method

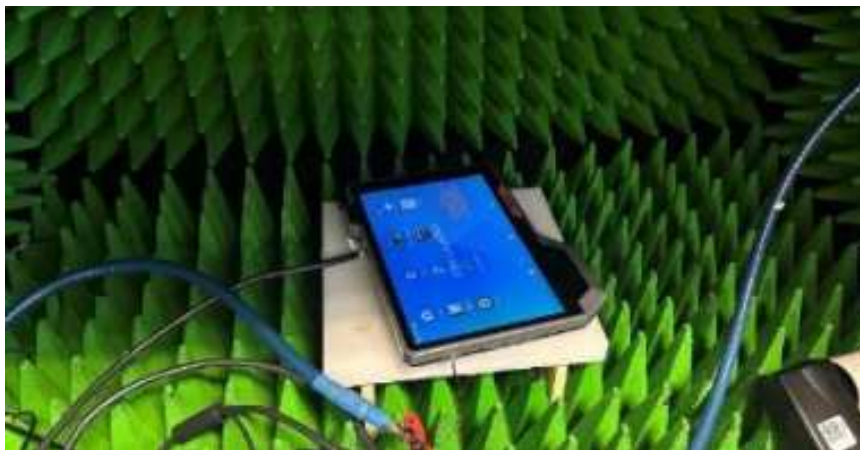
Packet type: 1-DH5 / 2-DH5 / 3-DH5 Worst case presented

- Test Procedure:

- ☒ ANSI C63.10 § 7.8.6



Test set up of Unwanted Emissions into Non-Restricted Frequency Bands at the Band Edge



Photograph for Unwanted Emission into non-restricted frequency bands at the band edge

9.3. LIMIT

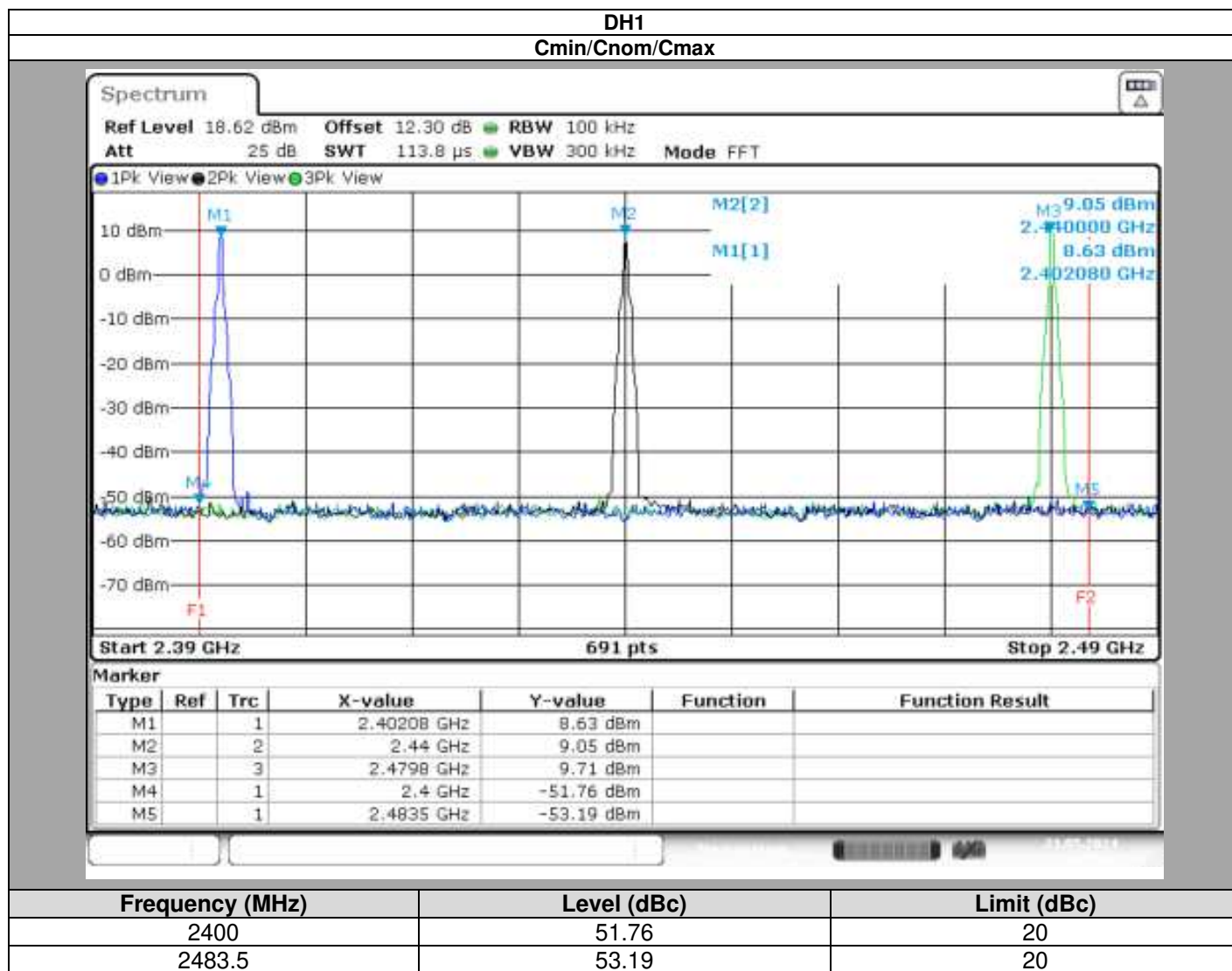
All Spurious Emissions must be at least 20dB below the Fundamental Radiator Level at the Band Edge Edge “2400MHz & 2483,5MHz”

9.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Attenuator 10dB	AEROFLEX	—	A7122268	07/23	07/25
Cable Measure	—	36G	A5329604	02/24	02/25
Full Anechoic Room	SIEPEL	—	D3044024		
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25
SMK 1.2m (Ampl <-> chamber)	HUBER-SUHNER	SUCOFLEX 102	A5330062	04/23	04/26
Spectrum analyzer	ROHDE & SCHWARZ	FSV 40	A4060059	04/24	04/26
Thermo-hygrometer	TESTO	608-H1	B4204120	03/23	03/25
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	05/25

Note: In our quality system, the test equipment calibration due is more & less 2 months

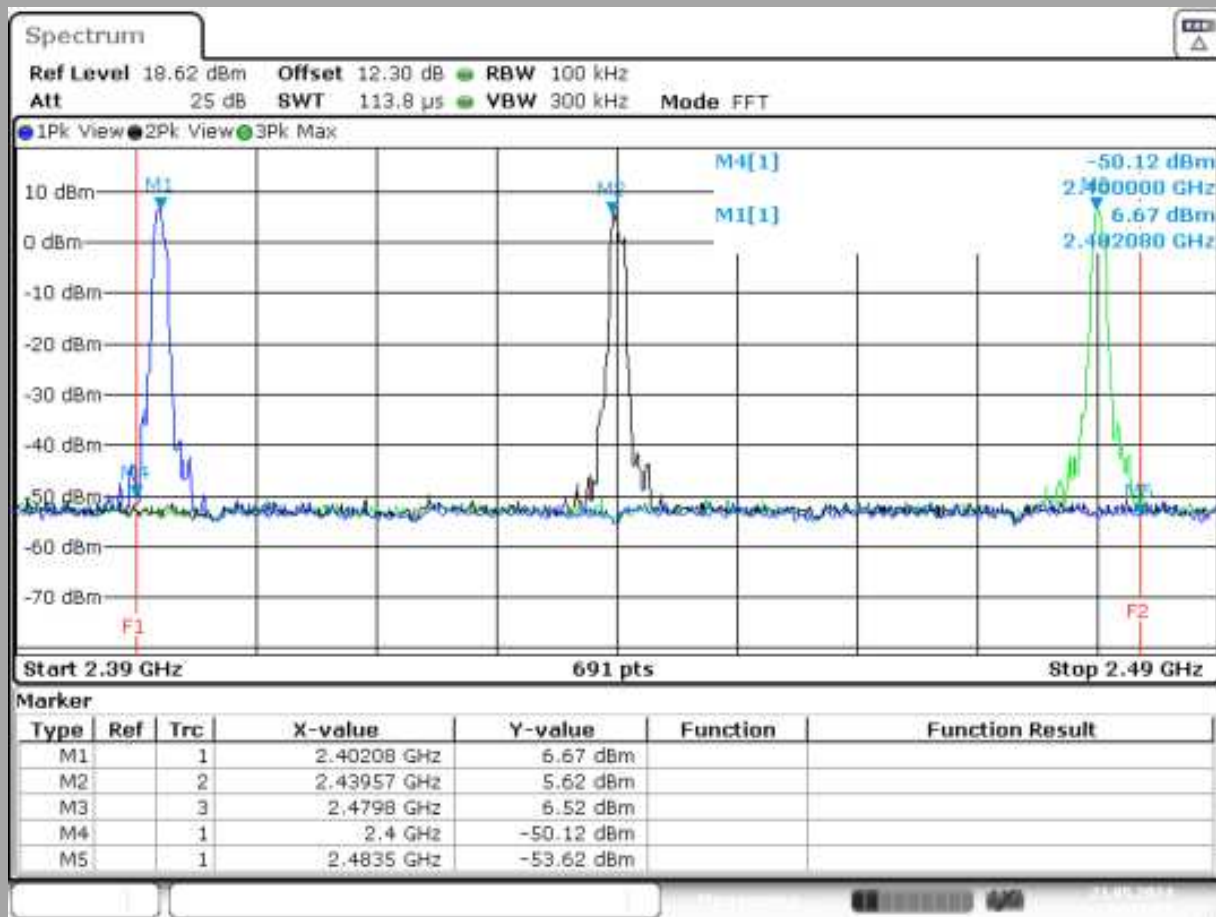
9.5. RESULTS





2-DH1

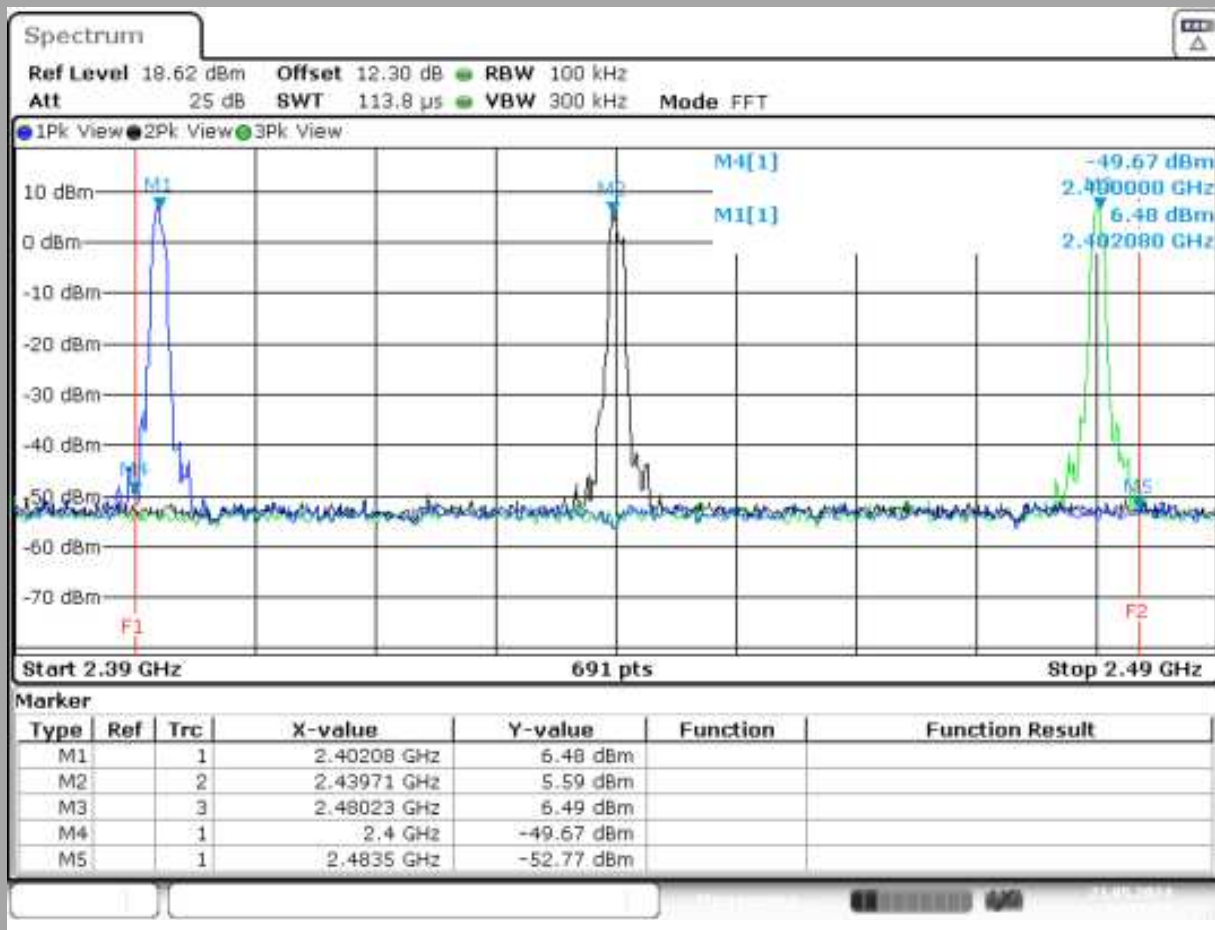
Cmin/Cnom/Cmax



Frequency (MHz)	Level (dBc)	Limit (dBc)
2400	50.12	20
2483.5	53.62	20



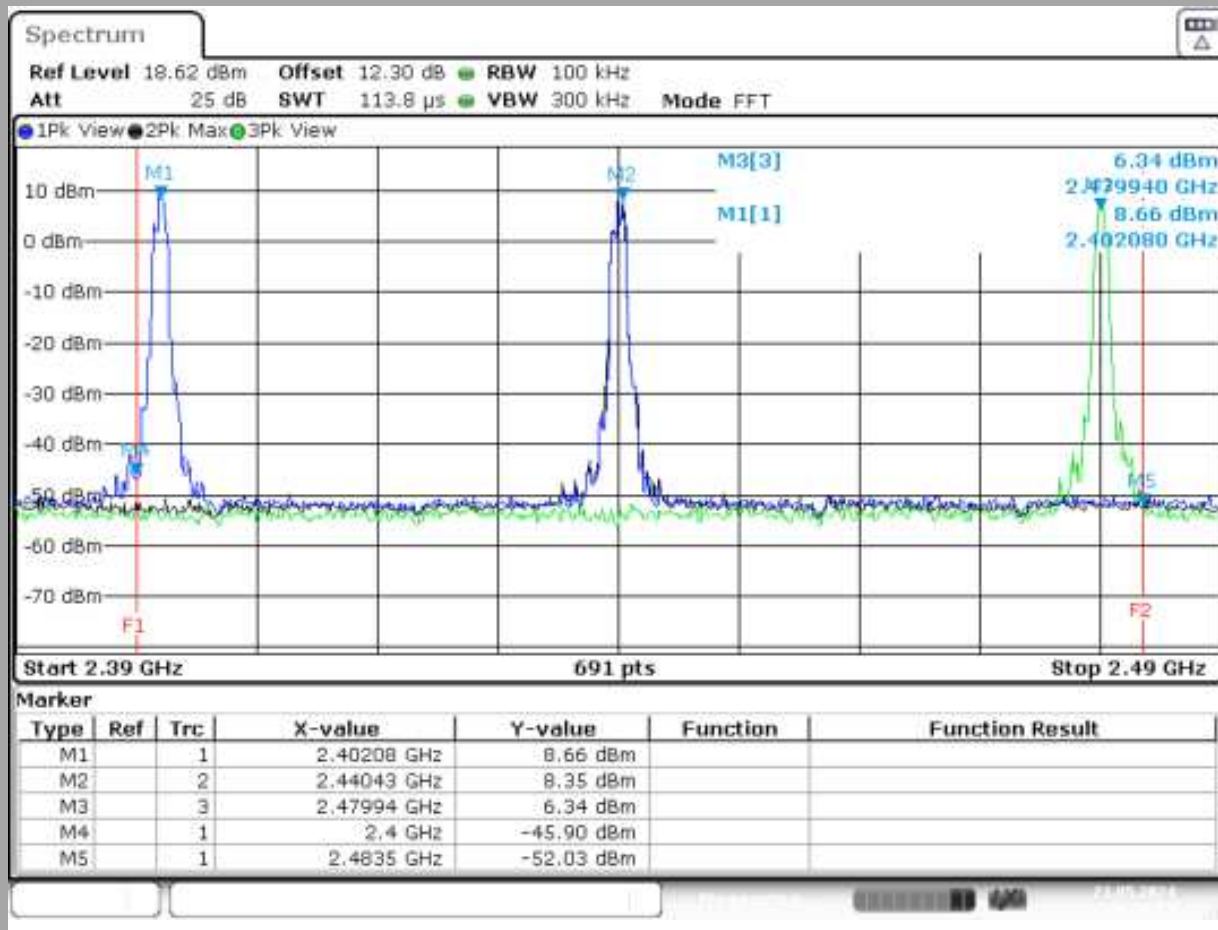
3-DH1 Cmin/Cnom/Cmax



Frequency (MHz)	Level (dBc)	Limit (dBc)
2400	49.67	20
2483.5	52.77	20

DH3

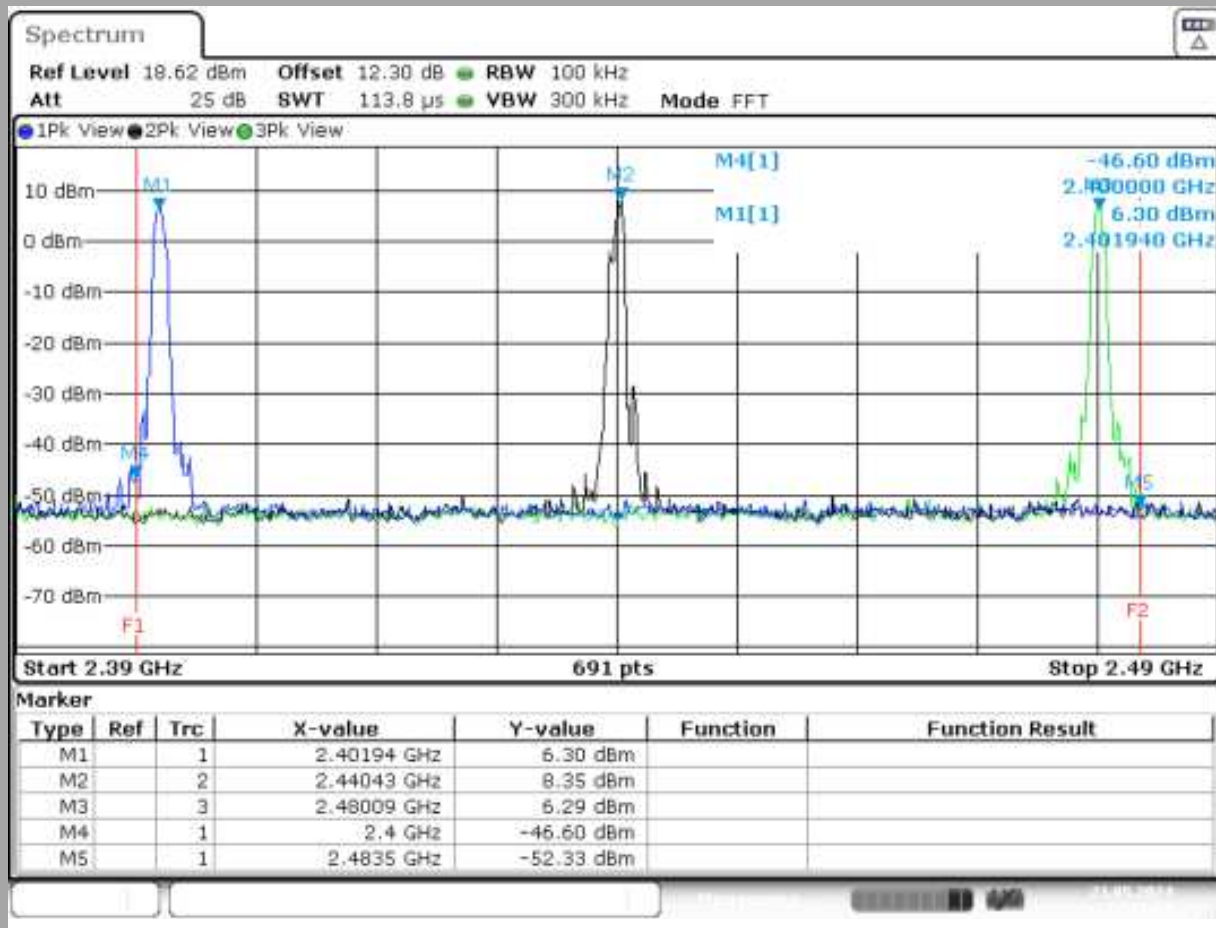
Cmin/Cnom/Cmax



Frequency (MHz)	Level (dBc)	Limit (dBc)
2400	45.9	20
2483.5	52.03	20

2-DH3

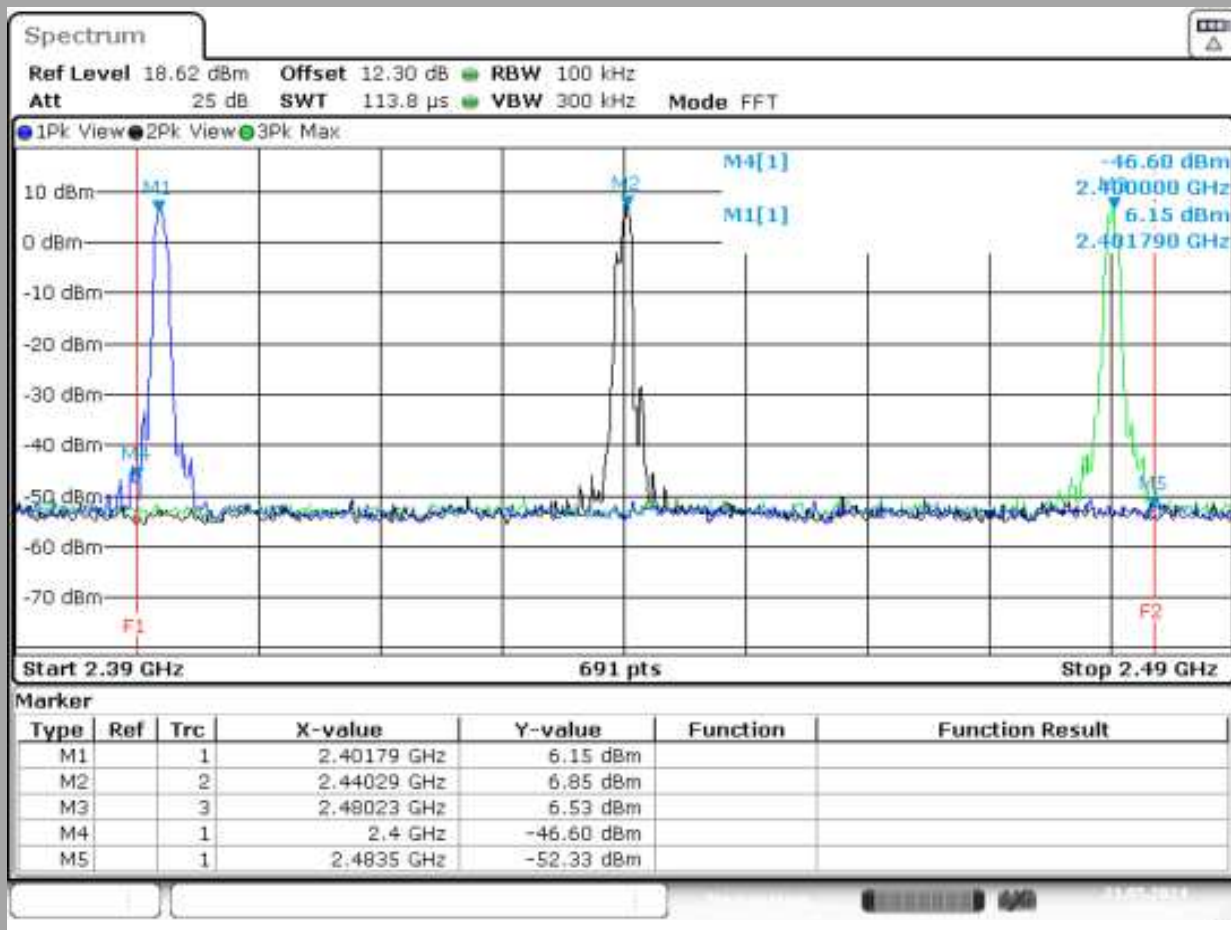
Cmin/Cnom/Cmax



Frequency (MHz)	Level (dBc)	Limit (dBc)
2400	46.6	20
2483.5	52.33	20

3-DH3

Cmin/Cnom/Cmax

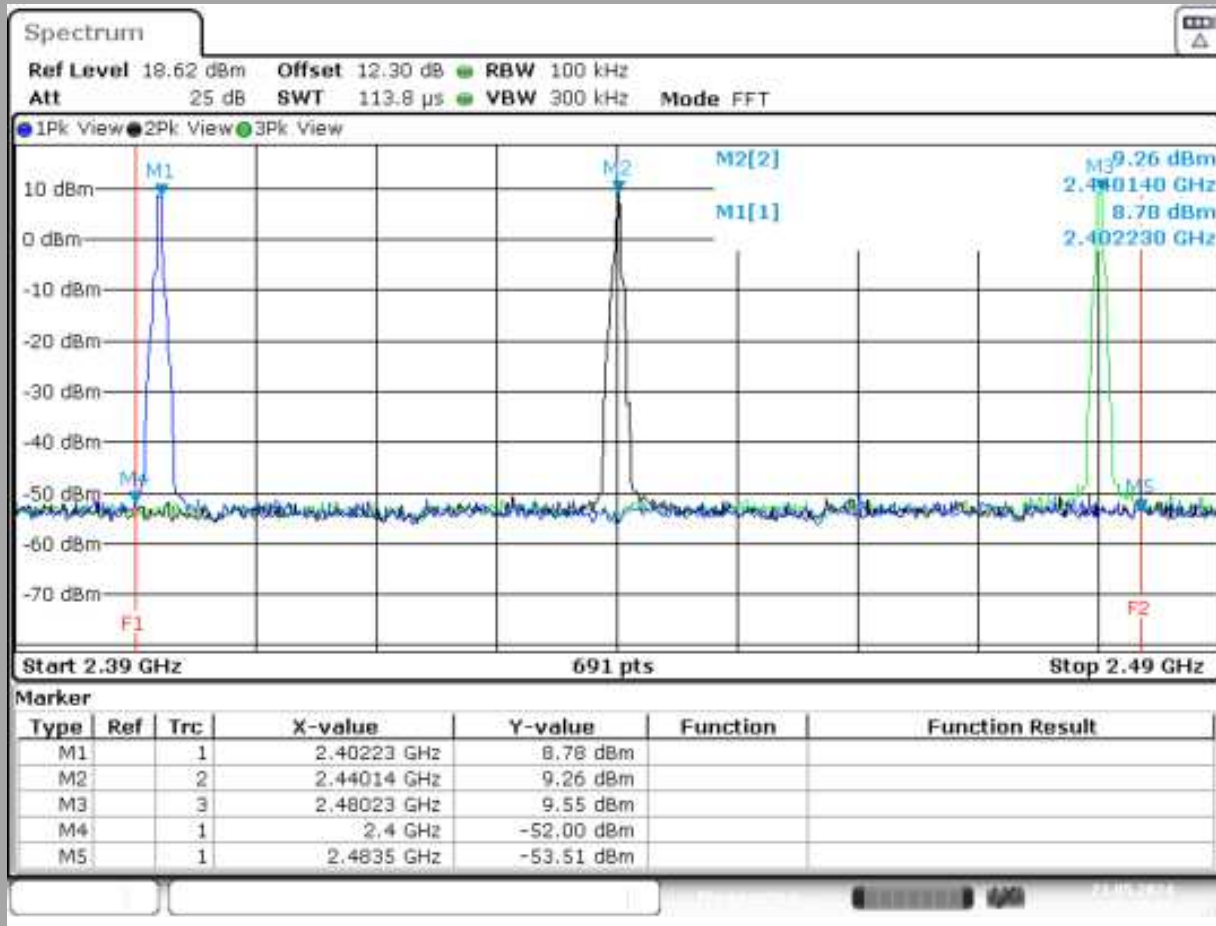


Frequency (MHz)	Level (dBc)	Limit (dBc)
2400	46.6	20
2483.5	52.33	20



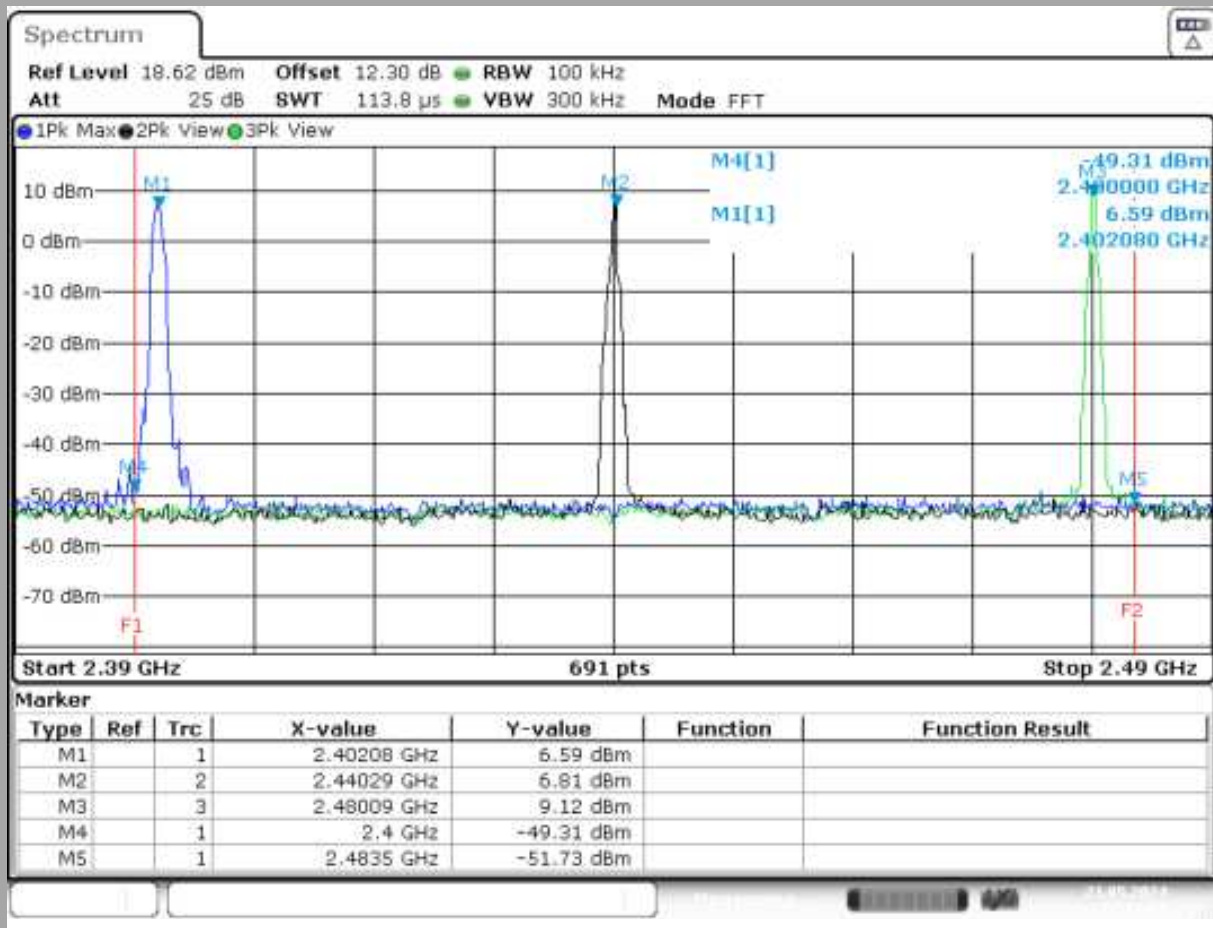
DH5

Cmin/Cnom/Cmax



Frequency (MHz)	Level (dBc)	Limit (dBc)
2400	52	20
2483.5	53.51	20

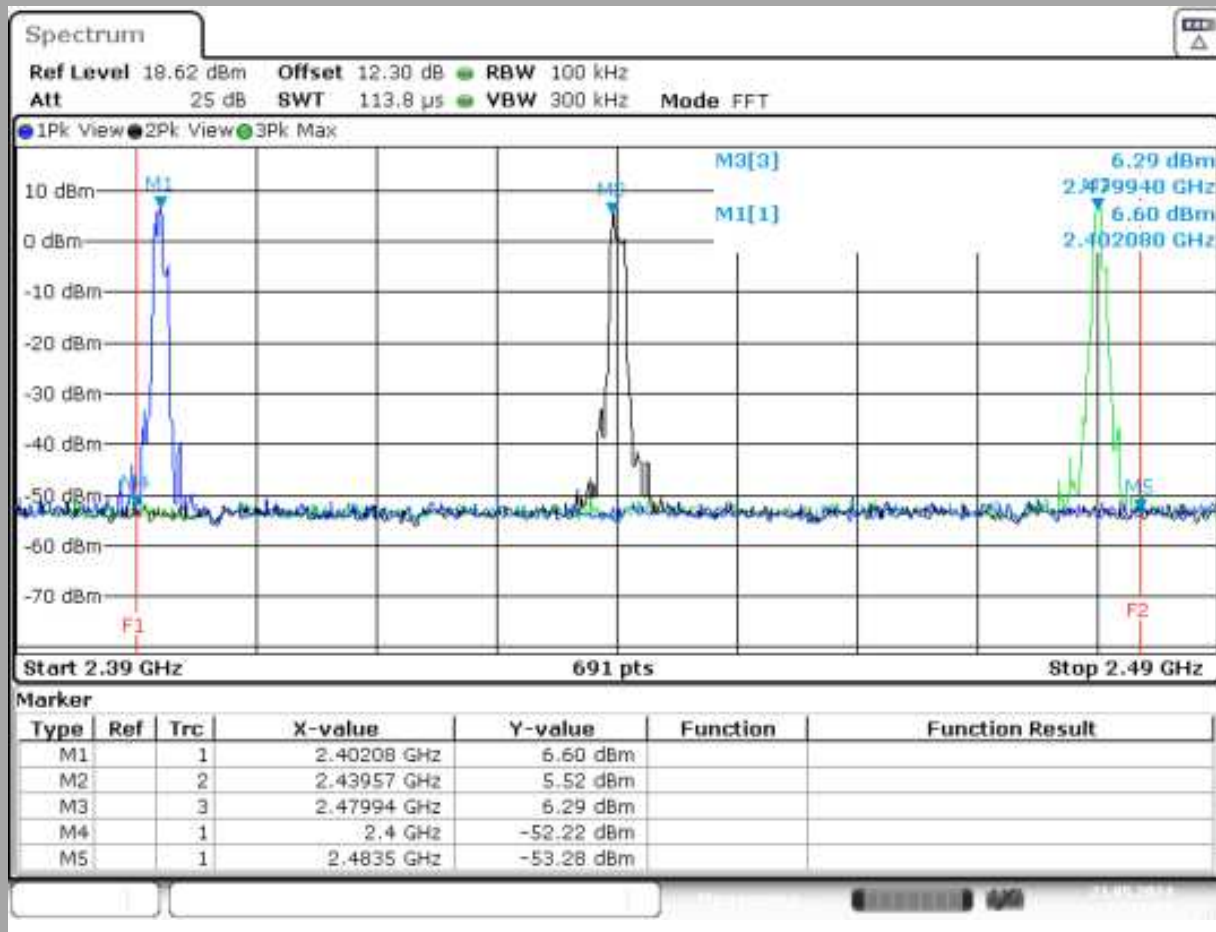
2-DH5
Cmin/Cnom/Cmax



Frequency (MHz)	Level (dBc)	Limit (dBc)
2400	49.3	20
2483.5	51.73	20

3-DH5

Cmin/Cnom/Cmax



Frequency (MHz)	Level (dBc)	Limit (dBc)
2400	52.22	20
2483.5	53.28	20

9.6. CONCLUSION

Unwanted Emission into non-restricted frequency bands at the band edge measurement performed on the sample of the product **INGENICO AXIUM RX9000**, SN: **2419MR900209 / 2419MR900267**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS 247 ISSUE 3** limits.

10. UNWANTED EMISSIONS INTO NON-RESTRICTED FREQUENCY BANDS

10.1. TEST CONDITIONS

Date of test : May 24, 2024
Test performed by : Akram HAKKARI
Relative humidity (%) : 32
Ambient temperature (°C) : 22

10.2. TEST SETUP

- The Equipment under Test is installed:

- ☐ On a table
- ☒ In an anechoic chamber

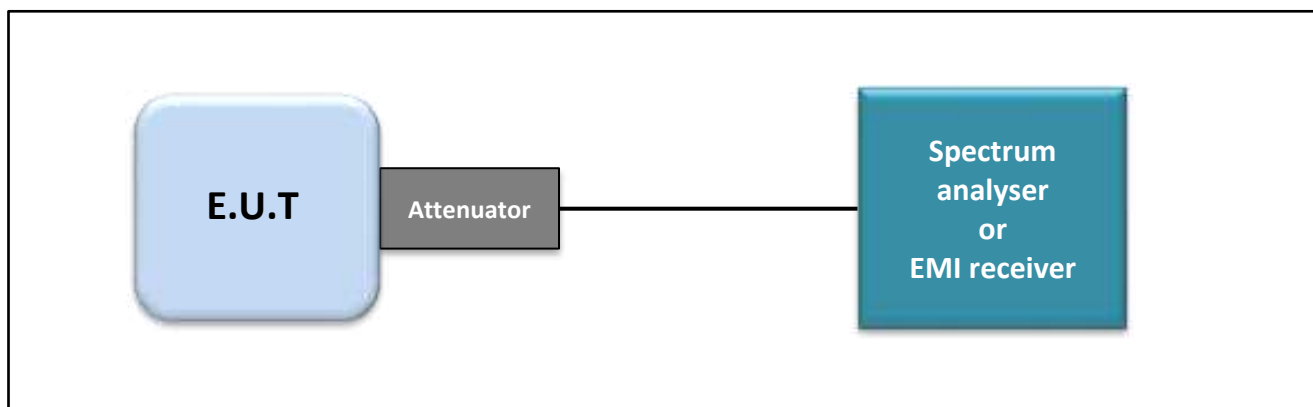
- Measurement is performed with a spectrum analyzer in:

- ☒ Conducted Method
- ☐ Radiated Method

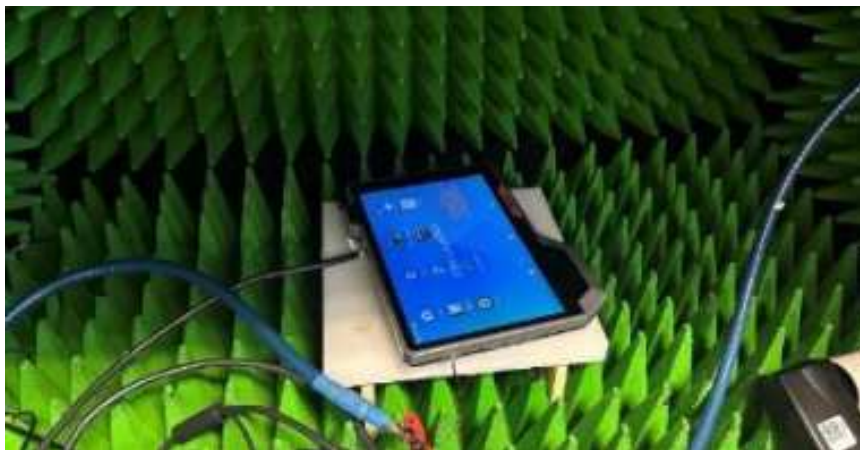
Packet type: 1-DH5 / 2-DH5 / 3-DH5 Worst case presented

- Test Procedure:

- ☒ ANSI C63.10 § 7.8.8



Test set up of Unwanted Emissions into Non-Restricted Frequency Bands



Photograph for Unwanted Emission into non-restricted frequency bands

10.3. LIMIT

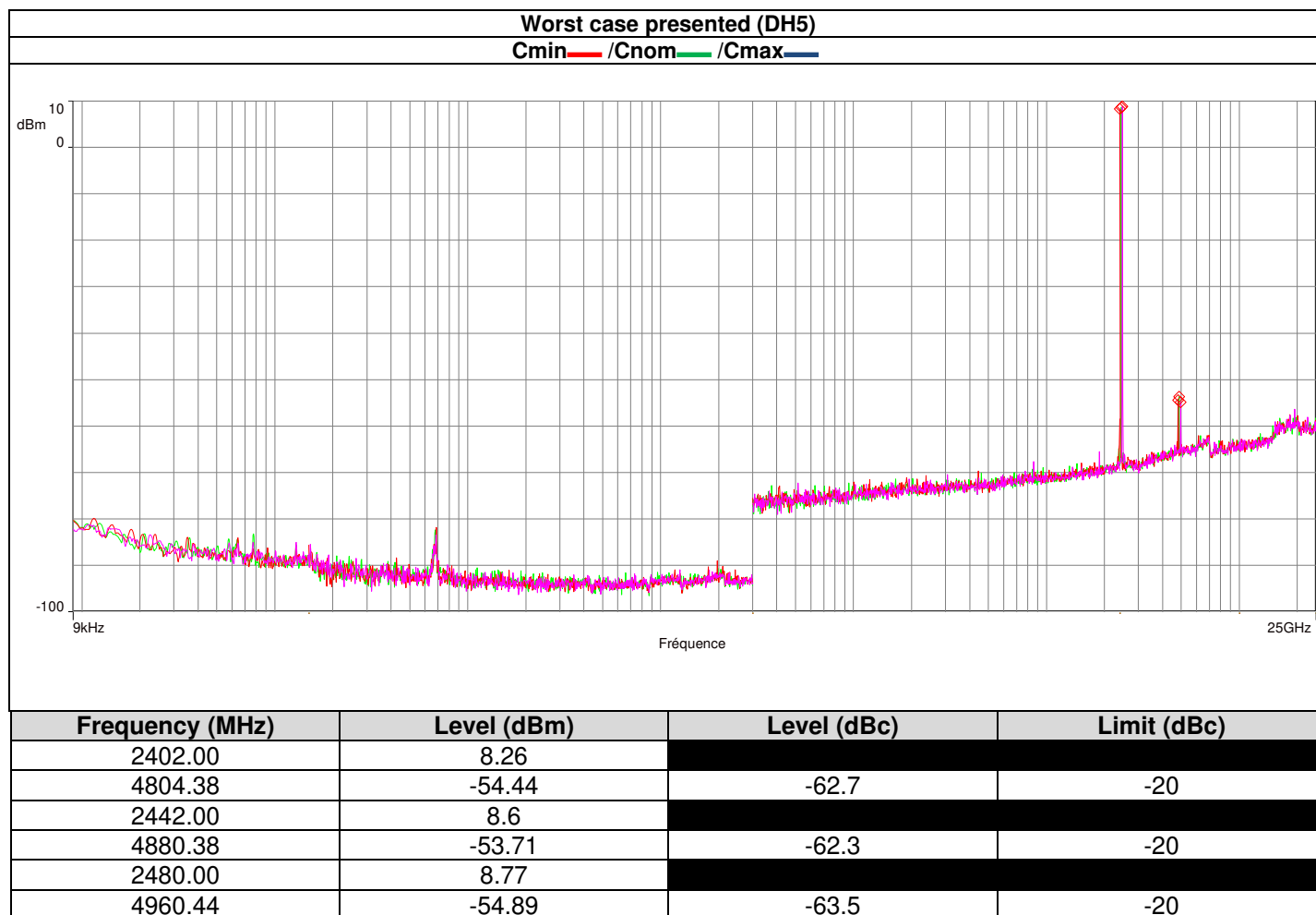
All Spurious Emissions must be at least 20 below the Fundamental Radiator Level

10.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Attenuator 10dB	AEROFLEX	—	A7122268	07/23	07/25
Cable Measure	—	36G	A5329604	02/24	02/25
Full Anechoic Room	SIEPEL	—	D3044024		
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25
SMK 1.2m (Ampl <-> chamber)	HUBER-SUHNER	SUCOFLEX 102	A5330062	04/23	04/26
Spectrum analyzer	ROHDE & SCHWARZ	FSV 40	A4060059	04/24	04/26
Thermo-hygrometer	TESTO	608-H1	B4204120	03/23	03/25
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	05/25

Note: In our quality system, the test equipment calibration due is more & less 2 months

10.5. RESULTS



10.6. CONCLUSION

Unwanted Emission into non-restricted frequency bands measurement performed on the sample of the product **INGENICO AXIUM RX9000**, SN: **2419MR900209 / 2419MR900267**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS 247 ISSUE 3** limits.



11. UNWANTED EMISSIONS IN RESTRICTED FREQUENCY BANDS

11.1. TEST CONDITIONS

Date of test : May 16, 2024
Test performed by : Akram HAKKARI
Relative humidity (%) : 33
Ambient temperature (°C) : 22

11.2. TEST SETUP

The product has been tested according to ANSI C63.10 (2013) and FCC part15 subpart C.

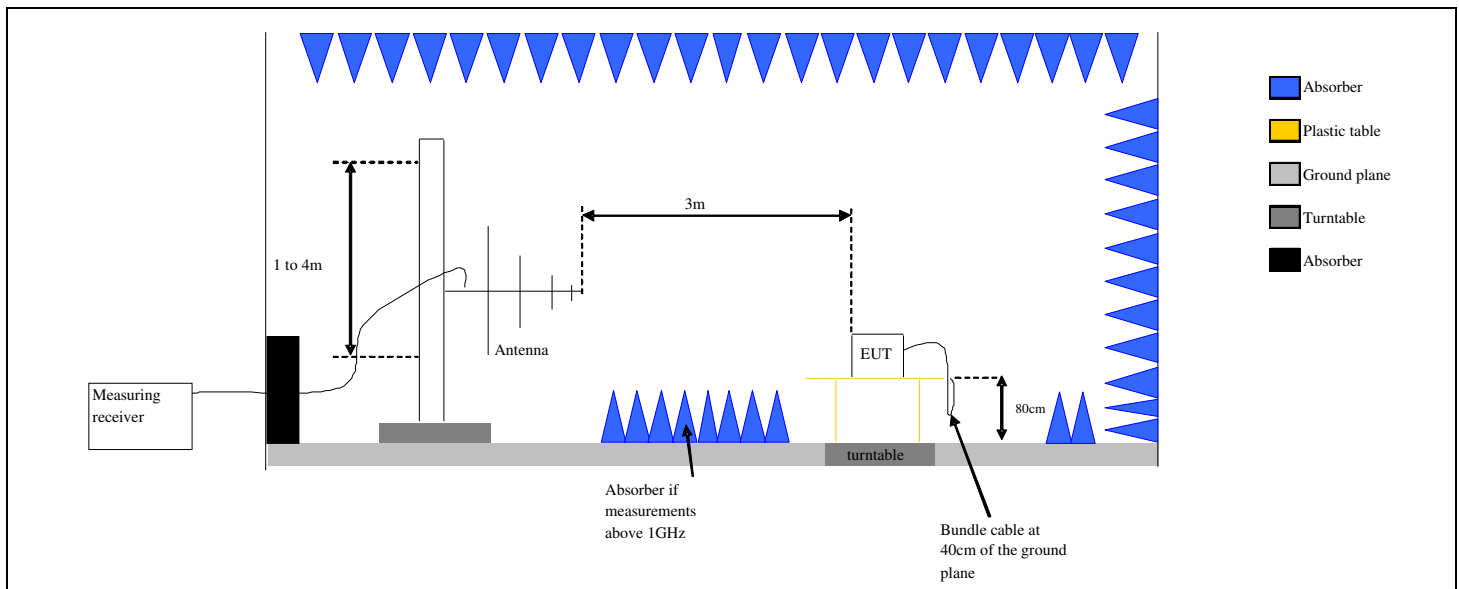
Test is performed in parallel, perpendicular and ground parallel axis with a loop antenna below 30MHz. Measurement bandwidth was 200Hz below 150kHz and 9kHz between 150kHz & 30MHz. The level has been maximised by the turntable rotation of 360 degrees range on all axis of EUT used in normal configuration. Antenna height was 1m. The EUT is placed **on an open area test site**. Distance between measuring antenna and the EUT is **10m**.

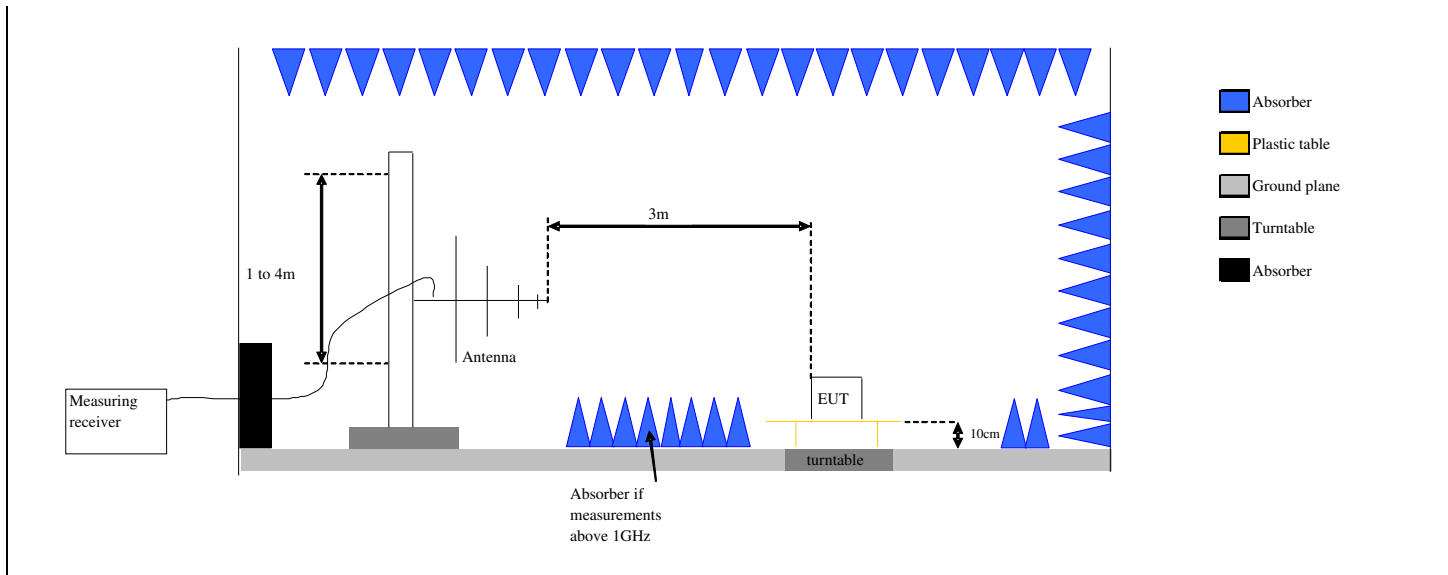
Test is performed in horizontal (H) and vertical (V) polarization with **bilog** between 30MHz & 1GHz and with a horn antenna above 1GHz. Measurement bandwidth was 120kHz below 1GHz and 1MHz above 1GHz. The level has been maximised by the turntable rotation of 360 degrees range on all axis of EUT used in normal configuration. The EUT is placed at 1.5m high above 1GHz and at 0.8m high under 1GHz. The EUT is placed **in a full anechoic chamber** above 1GHz and **on an open area test site** from 30MHz to 1GHz. Distance between measuring antenna and the EUT is **3m**. The height antenna is varied from 1m to 4m from 30MHz to 1GHz and above 1GHz is:

☐ On mast, varied from 1m to 4m

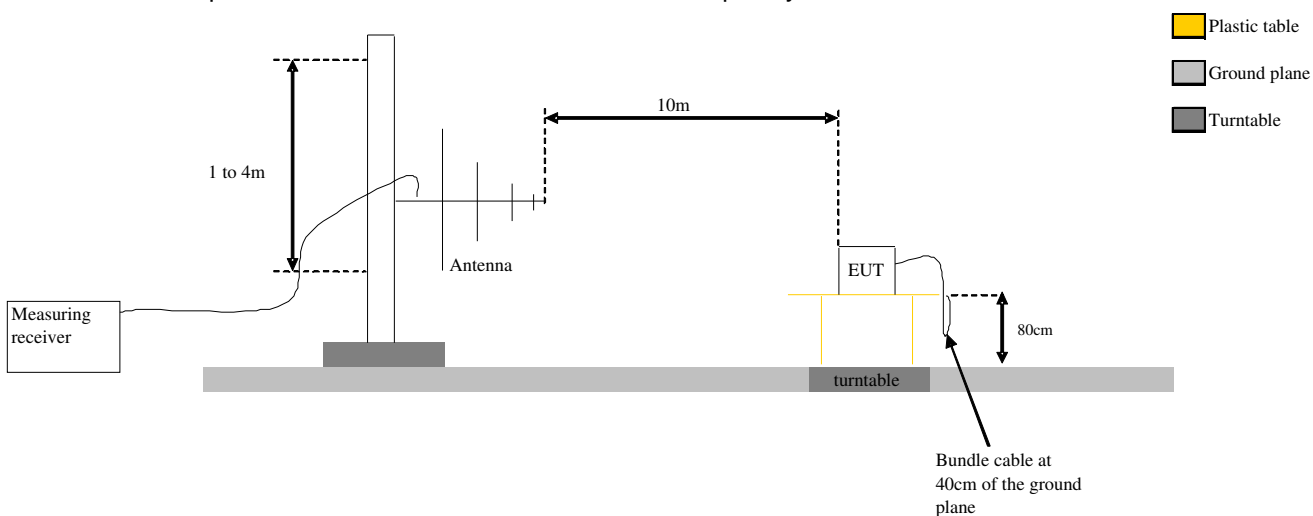
☒ Fixed and centered on the EUT (EUT smaller than the beamwidth of the measurement antenna, ANSI C63.10 §6.6.5)

Frequency list has been created with anechoic chamber pre-scan results.





Test set up of Unwanted Emissions in Restricted Frequency Bands in semi anechoic chamber



Test Set up for radiated measurement in open area test site



Photograph for Unwanted Emission in restricted frequency bands

11.3. LIMIT

Measure at 300m		
Frequency range	Level	Detector
9kHz-490kHz	67.6dB μ V/m /F(kHz)	QPeak
Measure at 30m		
Frequency range	Level	Detector
490kHz-1.705MHz	87.6dB μ V/m /F(kHz)	QPeak
1.705MHz-30MHz	29.5dB μ V/m	QPeak
Measure at 10m		
Frequency range	Level	Detector
30MHz to 88MHz	29.5dB μ V/m	QPeak
88MHz to 216MHz	33dB μ V/m	QPeak
216MHz to 960MHz	35.5B μ V/m	QPeak
960MHz to 1000MHz	43.5dB μ V/m	QPeak
Above 1000MHz	63.5dB μ V/m	Peak
	43.5dB μ V/m	Average



Measure at 3m		
Frequency range	Level	Detector
30MHz to 88MHz	40dB μ V/m	QPeak
88MHz to 216MHz	43.5dB μ V/m	QPeak
216MHz to 960MHz	46B μ V/m	QPeak
960MHz to 1000MHz	54dB μ V/m	QPeak
Above 1000MHz	74dB μ V/m	Peak
	54dB μ V/m	Average

11.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Amplifier 10MHz - 18GHz	LCIE SUD EST	—	A7102082	05/22	05/24
Antenna Bi-log	AH System	SAS-521-7	C2040180	05/23	05/25
Antenna horn 18GHz	EMCO	3115	C2042029	03/22	03/25
BAT EMC	NEXIO	v3.21.0.32	L1000115		
CABLE	TELEDYNE	R82-0404-0.5M	A5330010	03/22	03/25
Cable 0.75m	-	18GHz	A5329900	08/22	08/24
Cable SMA 40cm	WITHWAVE	W101-SM1-0.4M	A5329979	10/23	10/26
Comb EMR HF	YORK	CGE01	A3169114		
CONTROLLER	INNCO	CO3000	D3044034		
Emission Cable (SMA 1m)	TELEDYNE	26GHz	A5329874	08/22	08/25
Emission Cable (SMA 3.3m)	TELEDYNE	26GHz	A5329875	08/22	08/25
Filter Matrice	LCIE SUD EST	Combined filters	A7484078	03/23	03/25
Rehausse Table C3	LCIE	—	F2000511		
Rehausse Table C3	LCIE	—	F2000507		
Semi-Anechoic chamber #3 (BF)	SIEPEL	—	D3044017_BF	04/22	04/25
Semi-Anechoic chamber #3 (VSWR)	SIEPEL	—	D3044017_VSWR	04/22	04/25
Spectrum analyzer	ROHDE & SCHWARZ	FSU 26	A4060058	09/23	09/25
Table C3	LCIE	—	F2000461		
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	05/25
TILT	INNCO	TILT	D3044033		
Turntable chamber (Cage#3)	ETS Lingren	Model 2165	F2000371		
Turntable controller (Cage#3)	ETS Lingren	Model 2090	F2000444		

Note: In our quality system, the test equipment calibration due is more & less 2 months

11.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

☒ None ☐ Divergence:



11.6. RESULTS

11.6.1. 30MHz to 14GHz

Graphs – Pre characterization:

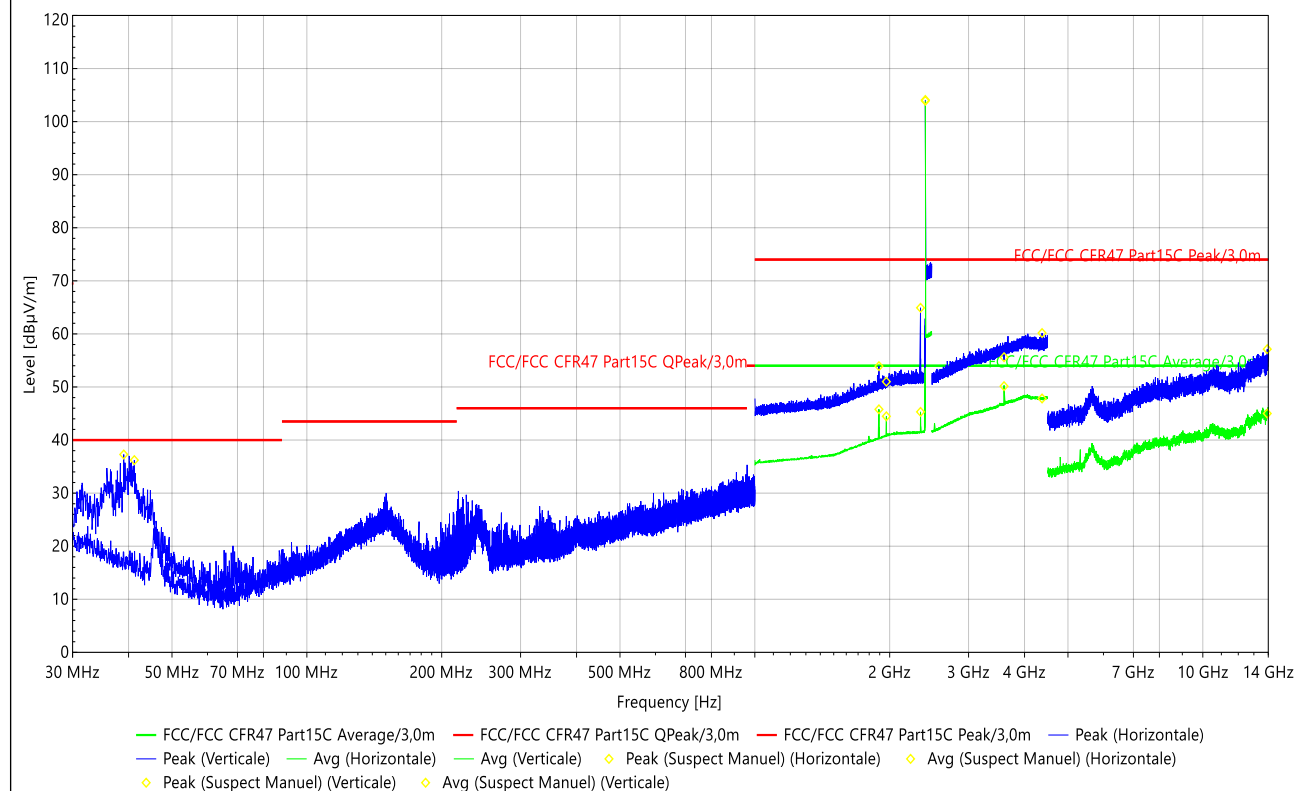
Graph identifier	Polarization	Mode	Channel	EUT position	Comments
Emr# 1	H/V	TX	Cmin	Axis XY/Z	DH5 Supply 1
Emr# 2	H/V	TX	Cmid	Axis XY/Z	DH5 Supply 1
Emr# 3	H/V	TX	Cmax	Axis XY/Z	DH5 Supply 1
Emr# 4	H/V	TX	Cmin	Axis XY/Z	2DH5 Supply 1
Emr# 5	H/V	TX	Cmid	Axis XY/Z	2DH5 Supply 1
Emr# 6	H/V	TX	Cmax	Axis XY/Z	2DH5 Supply 1
Emr# 7	H/V	TX	Cmin	Axis XY/Z	3DH5 Supply 1
Emr# 8	H/V	TX	Cmid	Axis XY/Z	3DH5 Supply 1
Emr# 9	H/V	TX	Cmax	Axis XY/Z	3DH5 Supply 1
Emr# 10	H/V	TX	Cmin	Axis XY/Z	DH5 Supply 2
Emr# 11	H/V	TX	Cmid	Axis XY/Z	DH5 Supply 2
Emr# 12	H/V	TX	Cmax	Axis XY/Z	DH5 Supply 2
Emr# 13	H/V	TX	Cmin	Axis XY/Z	2DH5 Supply 2
Emr# 14	H/V	TX	Cmid	Axis XY/Z	2DH5 Supply 2
Emr# 15	H/V	TX	Cmax	Axis XY/Z	2DH5 Supply 2
Emr# 16	H/V	TX	Cmin	Axis XY/Z	3DH5 Supply 2
Emr# 17	H/V	TX	Cmid	Axis XY/Z	3DH5 Supply 2
Emr# 18	H/V	TX	Cmax	Axis XY/Z	3DH5 Supply 2



Radiated Emissions

Graph name: Emr#1
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmin - TX mode - Automatic Axis

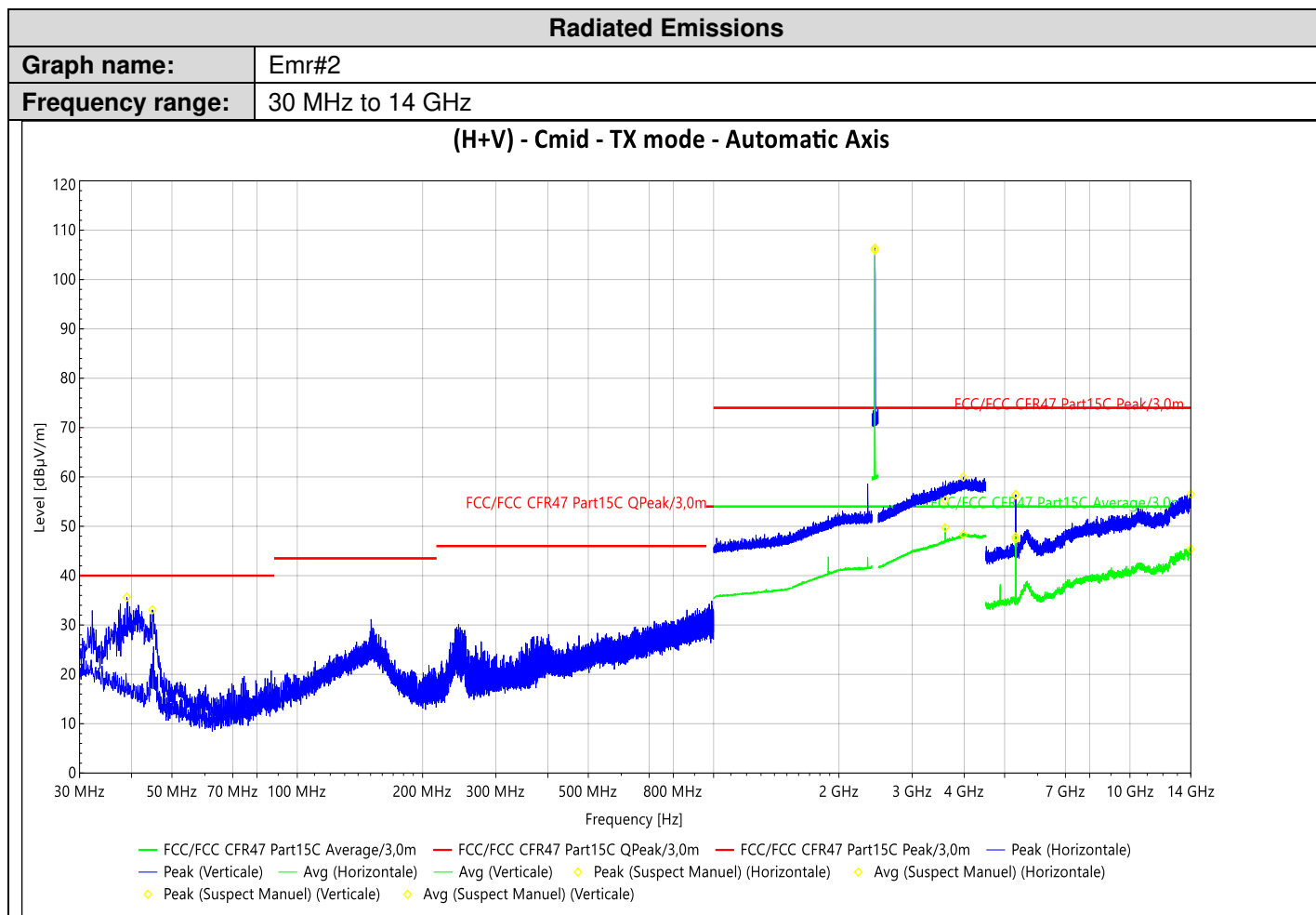


Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
1.8925 GHz	53.92	74.00	45.79	54.00		0	H	34.55
1.966 GHz	51.00	74.00	44.47	54.00		314	H	35.07
2.343649999 GHz	64.92	74.00	45.31	54.00		242	H	35.48
4.3769935 GHz	60.16	74.00	47.83	54.00		0	H	41.07
13.9259 GHz	57.12	74.00	45.00	54.00		187	H	-4.42
3.599834399 GHz	55.61	74.00	50.15	54.00		0	V	40.05
2.40212925 GHz*	104.08	74.00	103.92	54.00		194	V	35.51
39.021 MHz	37.28				40.00	74	V	17.19
41.2035 MHz	36.22				40.00	94	V	16.10

*Carrier frequency

No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)

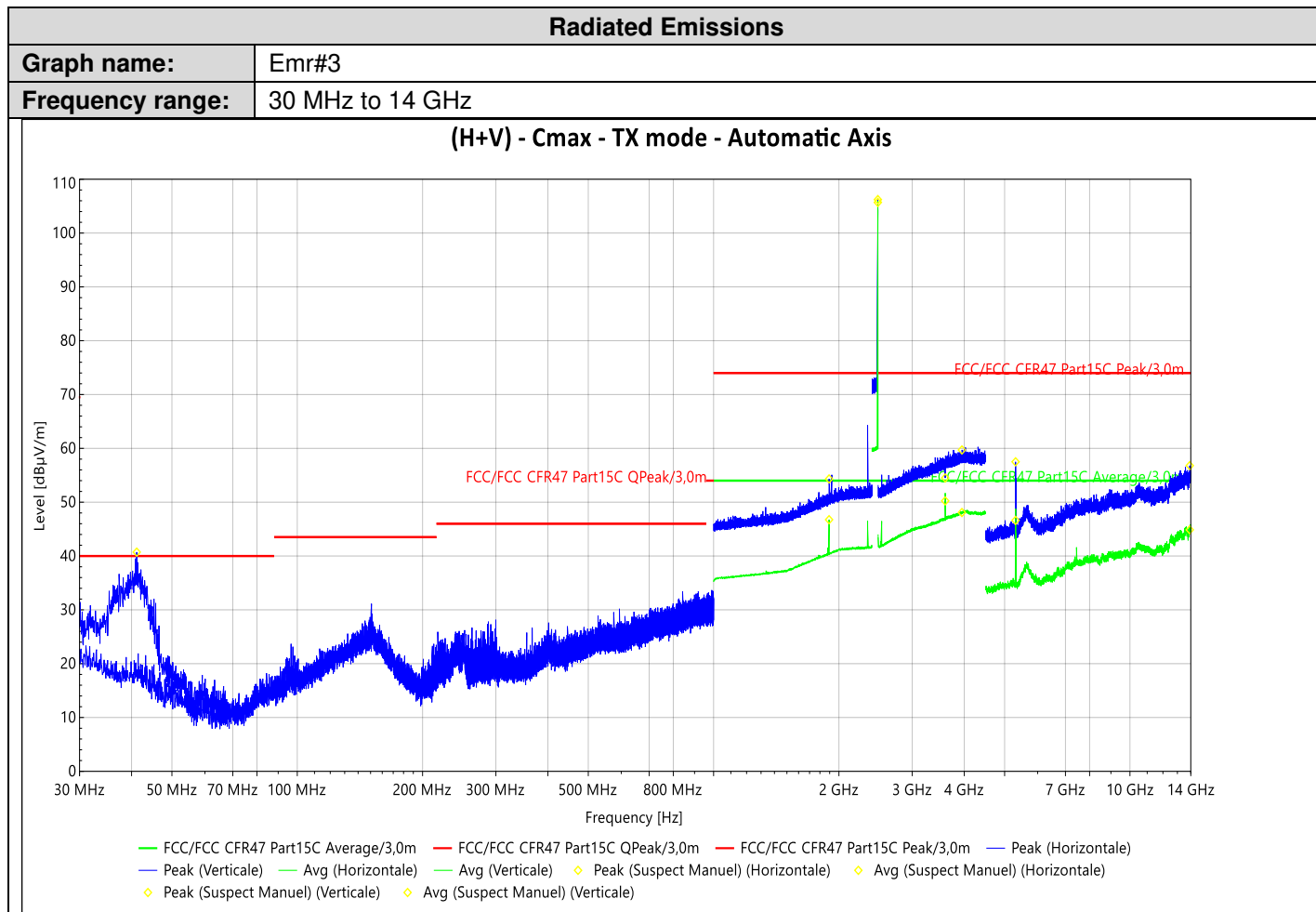


Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
3.599834399 GHz	55.30	74.00	49.70	54.00		73	H	40.05
3.979743 GHz	59.99	74.00	48.31	54.00		34	H	41.28
5.31415 GHz	56.43	74.00	47.87	54.00		305	H	-17.56
13.99335 GHz	56.55	74.00	45.40	54.00		263	H	-3.94
5.31415 GHz	56.41	74.00	47.44	54.00		198	V	-17.56
2.44020525 GHz*	106.37	74.00	105.98	54.00		191	V	35.55
38.9725 MHz	35.63				40.00	272	V	17.21
44.8895 MHz	33.09				40.00	178	V	14.32

*Carrier frequency

No significant frequency observed due to RF module see the EMC test report (30 MHz to 1 GHz)

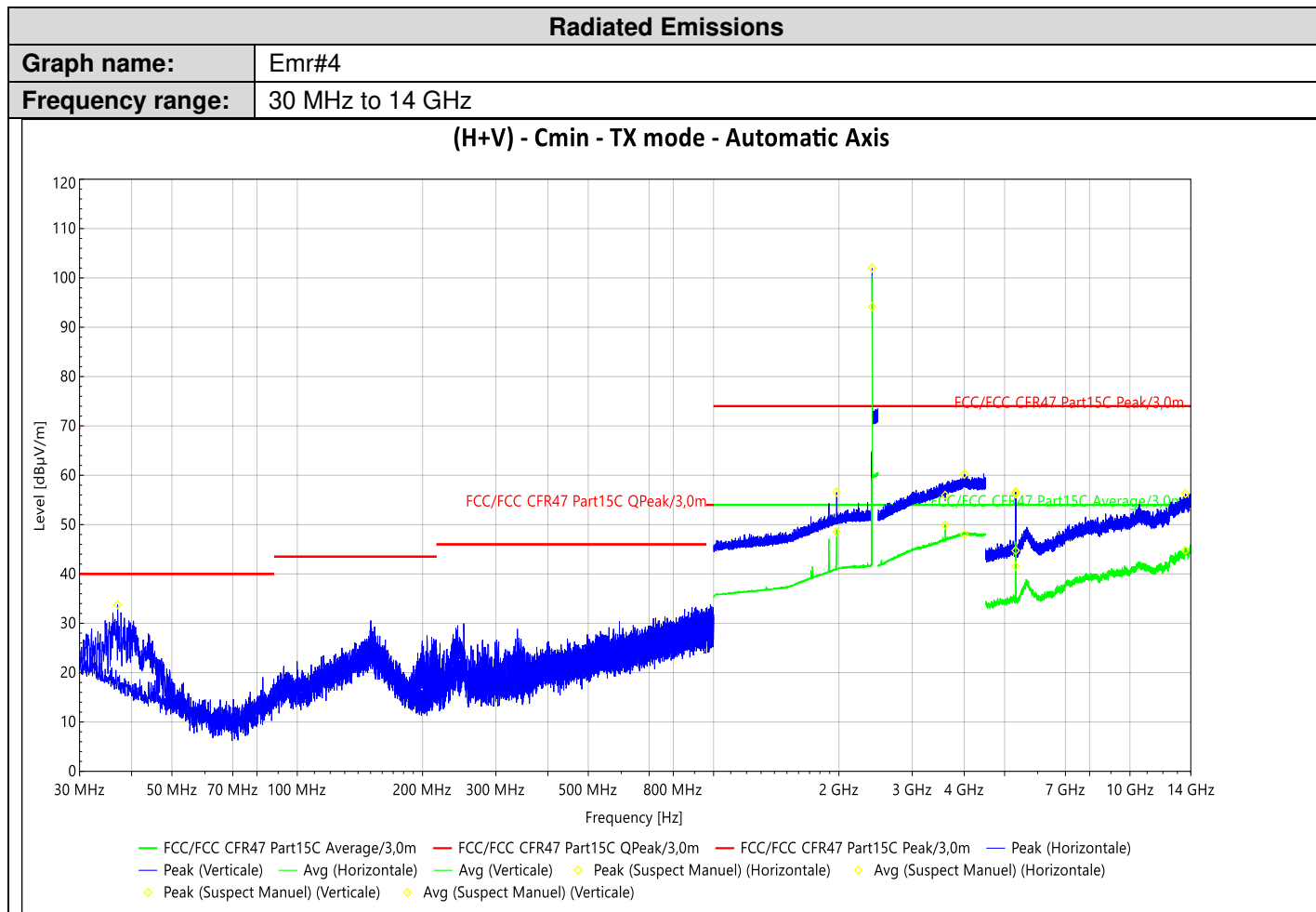


Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
3.599834399 GHz	54.50	74.00	50.24	54.00		123	H	40.05
3.9482856 GHz	59.70	74.00	48.08	54.00		112	H	41.15
5.31225 GHz	57.50	74.00	46.62	54.00		124	H	-17.57
13.920199999 GHz	56.79	74.00	44.87	54.00		0	H	-4.45
2.48020175 GHz	106.22	74.00	105.70	54.00		166	V	35.55
1.8939 GHz	54.32	74.00	46.75	54.00		72	V	34.56
41.155 MHz	40.72				40.00	327	V	16.12

*Carrier frequency

No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
3.599834399 GHz	55.94	74.00	49.88	54.00		221	H	40.05
4.0015212 GHz	60.20	74.00	48.04	54.00		32	H	41.37
5.3151 GHz	56.24	74.00	44.73	54.00		114	H	-17.56
13.58485 GHz	56.29	74.00	44.80	54.00		187	H	-5.96
5.31605 GHz	56.66	74.00	41.56	54.00		112	V	-17.55
2.40212925 GHz*	102.03	74.00	94.16	54.00		206	V	35.51
1.9744 GHz	56.55	74.00	48.57	54.00		237	V	35.12
37.0325 MHz	33.78				40.00	54	V	18.23

*Carrier frequency

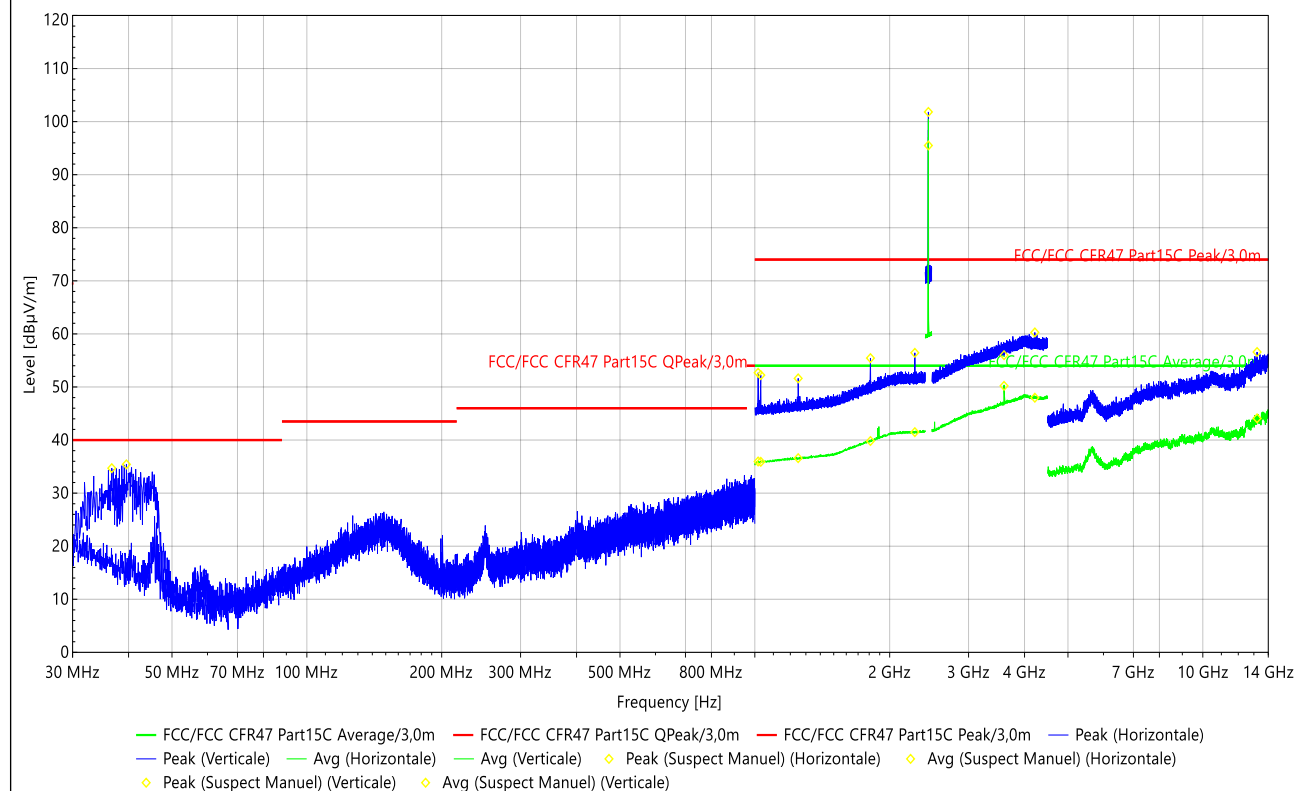
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Radiated Emissions

Graph name: Emr#5
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmid - TX mode - Automatic Axis



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
2.44003825 GHz*	101.82	74.00	95.50	54.00		256	H	35.55
3.599834399 GHz	55.99	74.00	50.21	54.00		355	H	40.05
13.217199999 GHz	56.59	74.00	44.09	54.00		260	H	-7.40
4.21769 GHz	60.28	74.00	47.98	54.00		354	V	41.24
1.01715 GHz	52.68	74.00	35.96	54.00		184	V	30.34
1.03115 GHz	52.23	74.00	35.90	54.00		0	V	30.38
1.24955 GHz	51.62	74.00	36.59	54.00		252	V	30.95
1.81165 GHz	55.44	74.00	39.82	54.00		302	V	34.02
2.2761 GHz	56.44	74.00	41.49	54.00		144	V	35.44
36.693 MHz	34.70				40.00	87	V	18.42
39.5545 MHz	35.42				40.00	171	V	16.93

*Carrier frequency

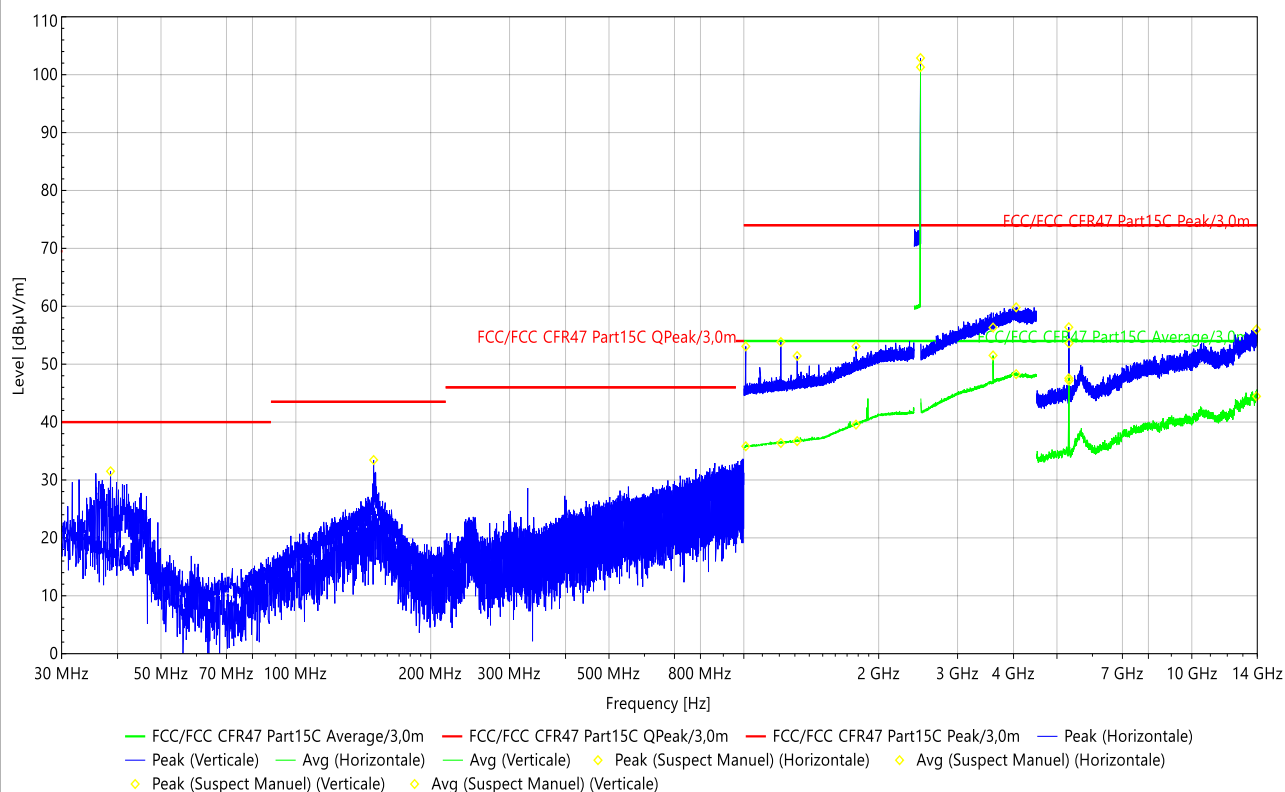
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Radiated Emissions

Graph name: Emr#6
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmax - TX mode - Automatic Axis

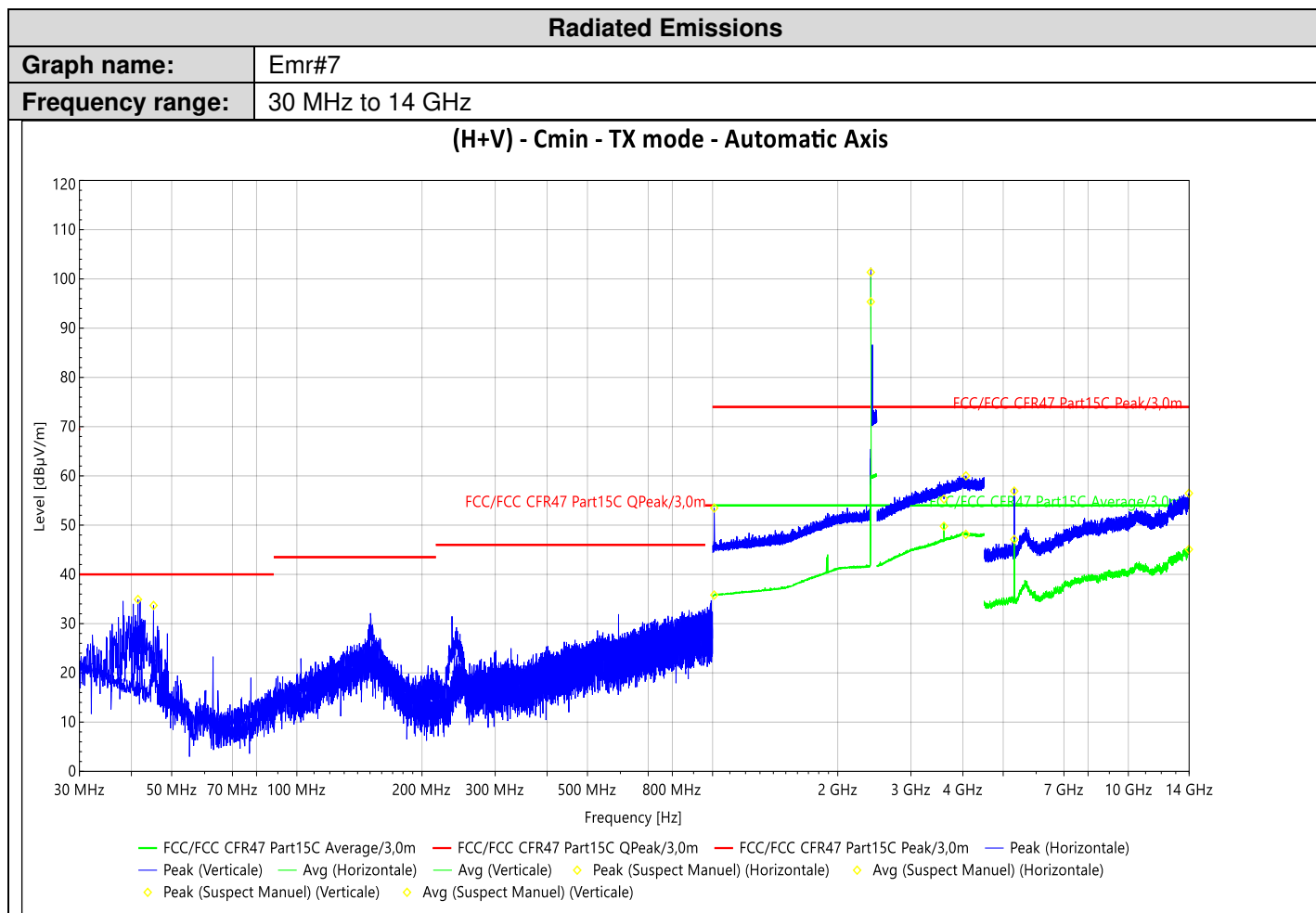


Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
149.1645 MHz	33.45				43.50	94	H	24.20
3.599834399 GHz	56.33	74.00	51.51	54.00		114	H	40.05
5.31985 GHz	53.61	74.00	47.16	54.00		0	H	-17.54
5.3132 GHz	56.38	74.00	47.57	54.00		217	V	-17.57
13.943949999 GHz	56.00	74.00	44.44	54.00		37	V	-4.34
4.0539502 GHz	59.82	74.00	48.27	54.00		113	V	41.32
2.47970075 GHz*	102.88	74.00	101.30	54.00		165	V	35.55
1.01015 GHz	53.06	74.00	35.82	54.00		159	V	30.21
1.20965 GHz	53.83	74.00	36.38	54.00		132	V	30.88
1.31535 GHz	51.41	74.00	36.71	54.00		134	V	31.12
1.7798 GHz	53.08	74.00	39.56	54.00		329	V	33.81
38.5845 MHz	31.50				40.00	0	V	17.42

*Carrier frequency

No significant frequency observed due to RF module see the EMC test report (30 MHz to 1 GHz)



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
2.40196225 GHz*	101.36	74.00	95.36	54.00		282	H	35.51
45.229 MHz	33.69				40.00	317	H	14.16
1.0091 GHz	53.48	74.00	35.80	54.00		240	H	30.18
3.599834399 GHz	55.30	74.00	49.77	54.00		341	H	40.05
13.9829 GHz	56.47	74.00	45.07	54.00		0	H	-4.04
5.31605 GHz	56.92	74.00	47.10	54.00		203	V	-17.55
4.0676624 GHz	60.00	74.00	48.14	54.00		0	V	41.29
41.4945 MHz	34.91				40.00	12	V	15.95

*Carrier frequency

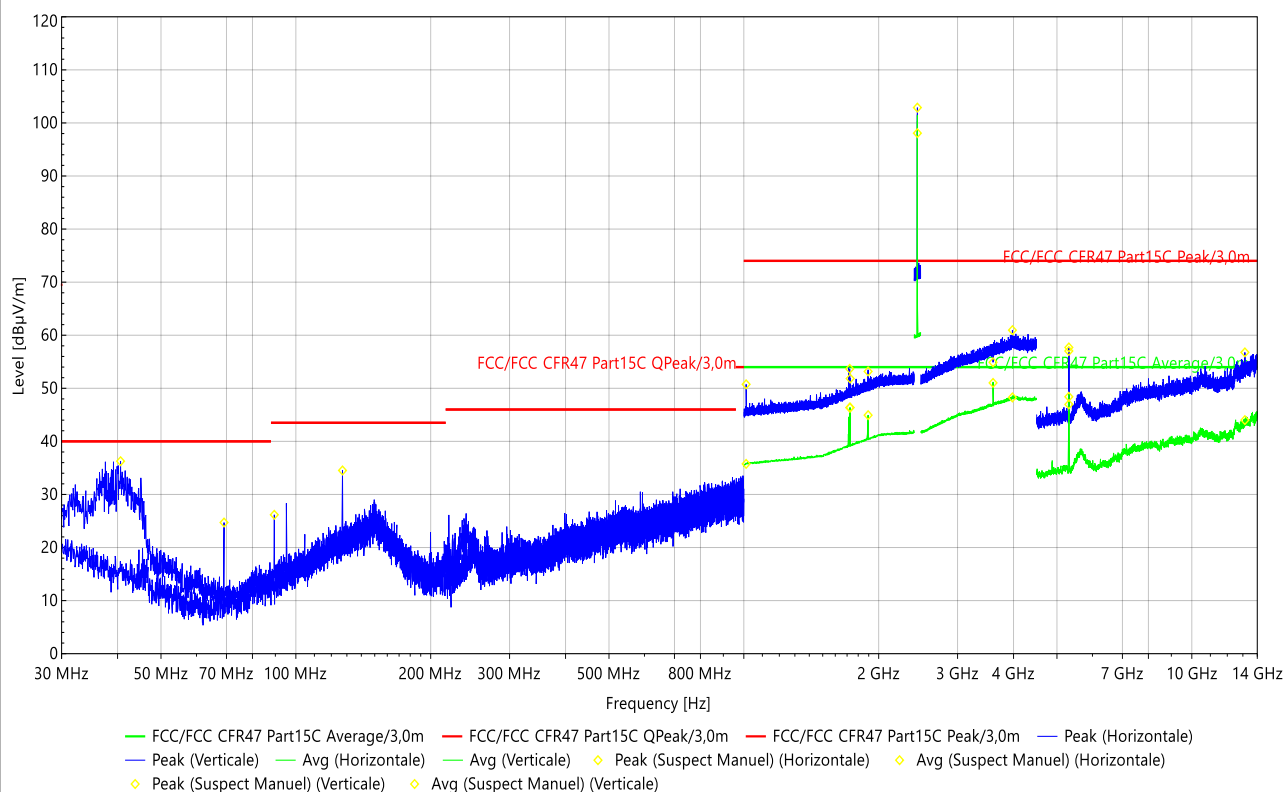
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1 GHz)



Radiated Emissions

Graph name: Emr#8
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmid - TX mode - Automatic Axis



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
1.723449999 GHz	53.66	74.00	46.36	54.00		67	H	33.41
3.9765166 GHz	60.95	74.00	48.28	54.00		274	H	41.26
5.31415 GHz	57.03	74.00	48.41	54.00		233	H	-17.56
13.136449999 GHz	56.77	74.00	44.01	54.00		262	H	-7.10
5.3151 GHz	57.70	74.00	46.96	54.00		112	V	-17.56
3.599834399 GHz	54.90	74.00	51.02	54.00		0	V	40.05
2.44008 GHz*	102.89	74.00	98.07	54.00		195	V	35.55
1.0119 GHz	50.75	74.00	35.76	54.00		264	V	30.26
1.7273 GHz	51.84	74.00	46.37	54.00		267	V	33.43
1.89425 GHz	53.18	74.00	44.94	54.00		188	V	34.56
40.6215 MHz	36.26				40.00	51	V	16.40
69.1395 MHz	24.71				40.00	230	V	10.79
89.5095 MHz	26.17				43.50	182	V	14.85
127.097 MHz	34.52				43.50	230	V	21.63

*Carrier frequency

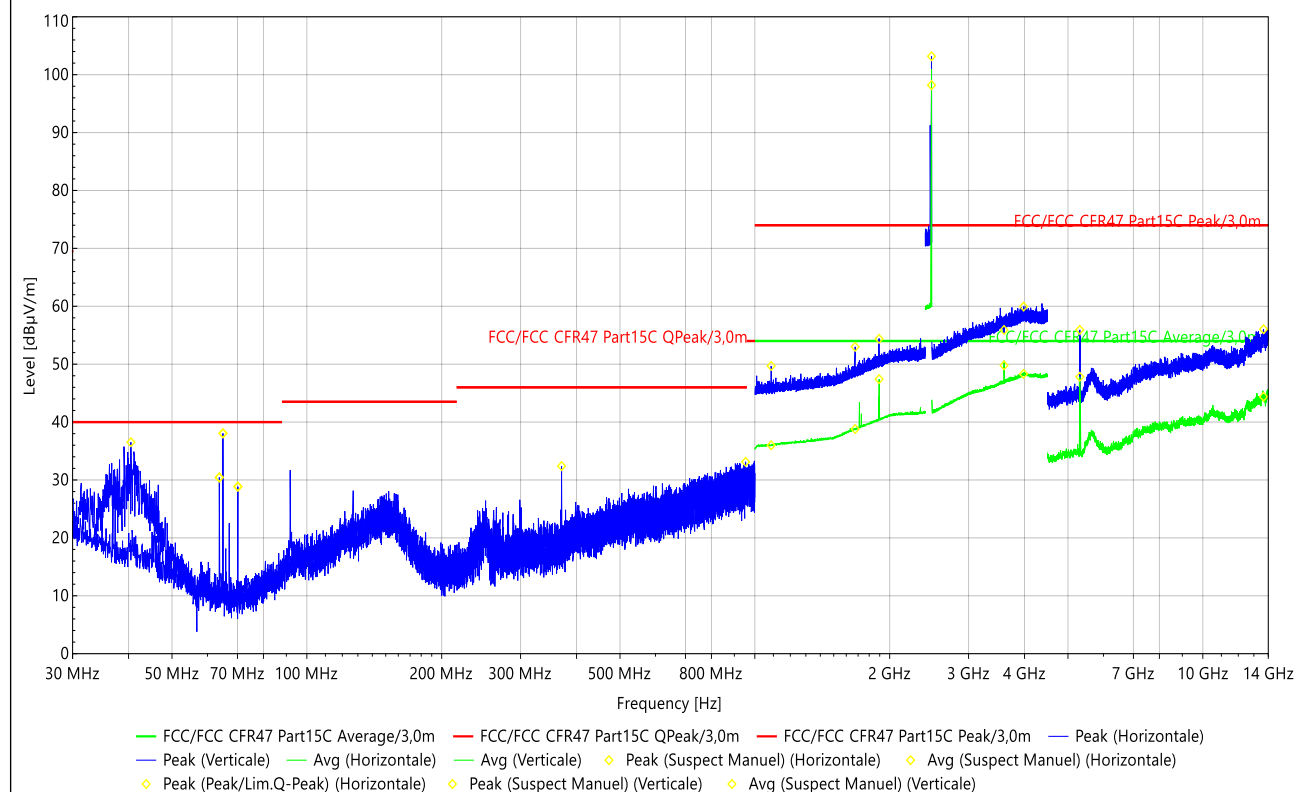
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Radiated Emissions

Graph name: Emr#9
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmax - TX mode - Automatic Axis



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)	PK-Lim.QP (dB)	Angle (°)	Tilt (°)
63.756 MHz	30.44				40.00	283	H	10.20			
63.756 MHz	30.44				40.00		H	10.20	-9.56	283	0.50
64.9685 MHz	38.06				40.00	283	H	10.26			
64.9685 MHz	38.06				40.00		H	10.26	-1.94	283	0.50
70.158 MHz	28.85				40.00	283	H	11.02			
70.158 MHz	28.85				40.00		H	11.02	-11.15	283	0.50
370.373 MHz	32.40				46.00		H	19.48	-13.60	171	0.50
953.7795 MHz	33.13				46.00		H	29.08	-12.87	117	0.50
1.8939 GHz	54.37	74.00	47.42	54.00		29	H	34.56			
3.9805496 GHz	59.95	74.00	48.32	54.00		7	H	41.28			
5.31415 GHz	55.93	74.00	47.82	54.00		262	H	-17.56			
13.66465 GHz	56.03	74.00	44.38	54.00		324	H	-5.49			
3.59983439 GHz	55.91	74.00	49.80	54.00		246	V	40.05			
2.479993 GHz*	103.18	74.00	98.19	54.00		190	V	35.55			
1.0875 GHz	49.69	74.00	35.99	54.00		254	V	30.53			
1.6748 GHz	53.00	74.00	38.80	54.00		291	V	33.05			
40.476 MHz	36.52				40.00	60	V	16.47			

*Carrier frequency

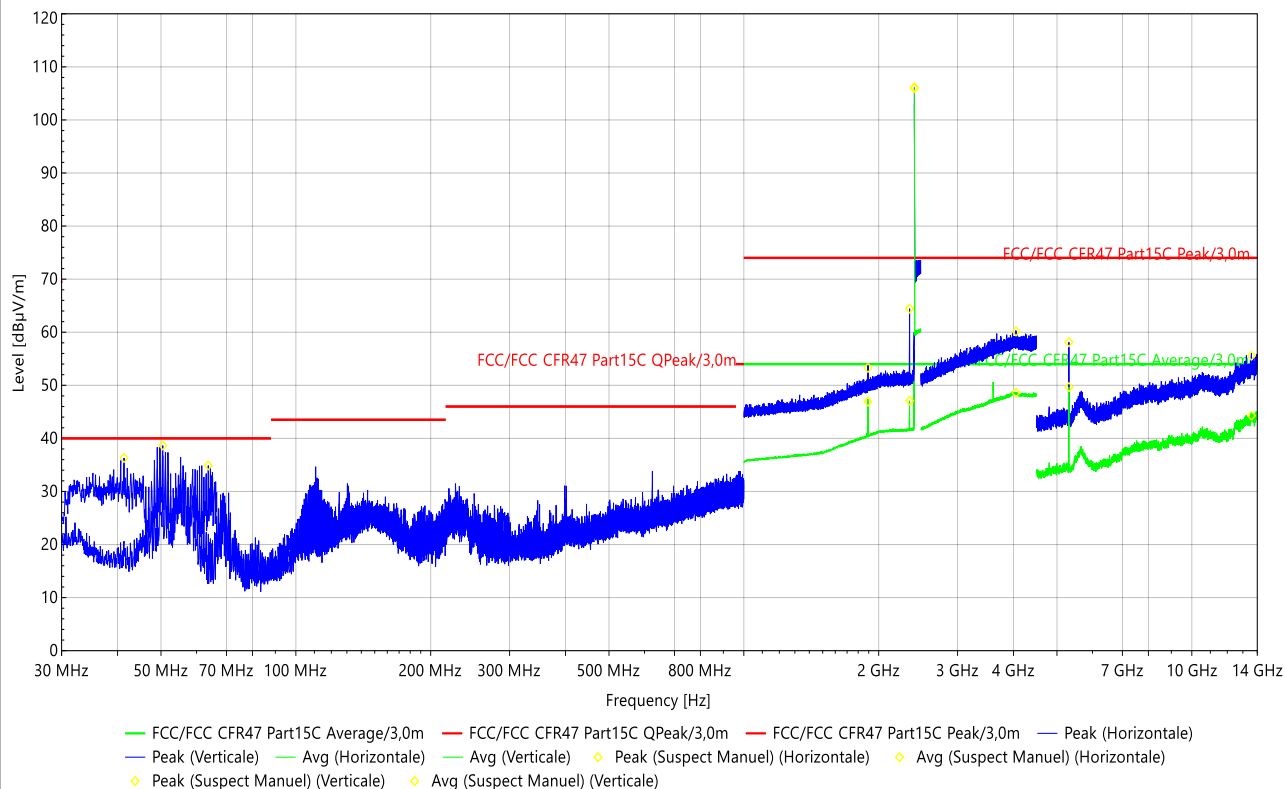
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Radiated Emissions

Graph name: Emr#10
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmin - TX mode - Automatic Axis



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
2.40212925 GHz*	106.15	74.00	105.97	54.00		192	H	35.71
2.3447 GHz	64.45	74.00	47.09	54.00		167	H	35.68
5.317 GHz	58.12	74.00	49.66	54.00		212	H	-17.55
13.58675 GHz	55.56	74.00	44.29	54.00		272	V	-5.95
4.051530399 GHz	60.15	74.00	48.61	54.00		56	V	41.69
1.89215 GHz	53.28	74.00	46.92	54.00		219	V	34.70
41.349 MHz	36.30				40.00	137	V	16.03
50.467 MHz	38.65				40.00	300	V	12.04
63.756 MHz	34.89				40.00	338	V	10.20

*Carrier frequency

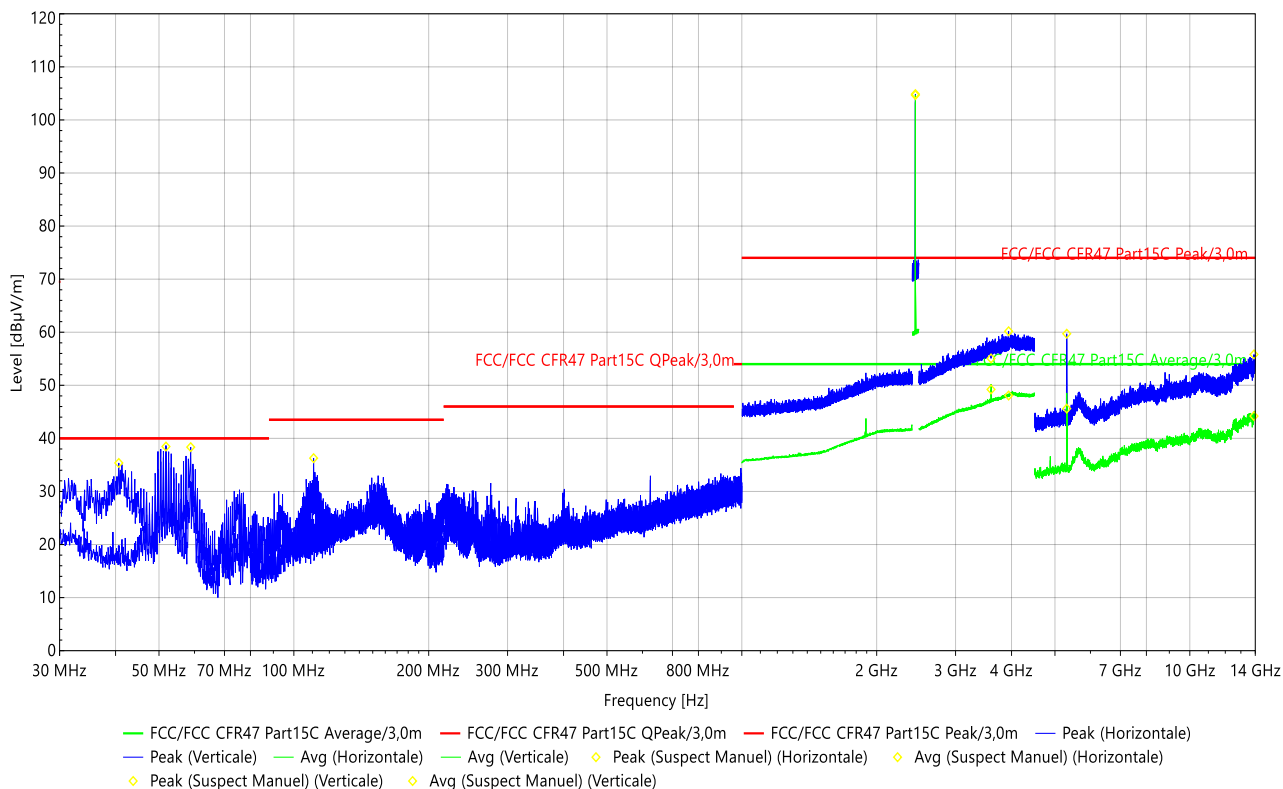
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Radiated Emissions

Graph name: Emr#11
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmid - TX mode - Automatic Axis



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
110.704 MHz	36.27				43.50	0	H	18.77
3.9402196 GHz	60.18	74.00	48.07	54.00		81	H	41.43
13.9069 GHz	55.82	74.00	44.20	54.00		256	H	-4.51
5.31225 GHz	59.72	74.00	45.61	54.00		213	V	-17.57
3.599834399 GHz	55.06	74.00	49.22	54.00		33	V	40.39
2.44012175 GHz*	104.87	74.00	104.68	54.00		194	V	35.77
40.67 MHz	35.37				40.00	329	V	16.37
51.825 MHz	38.46				40.00	0	V	11.61
58.8575 MHz	38.35				40.00	276	V	10.25

*Carrier frequency

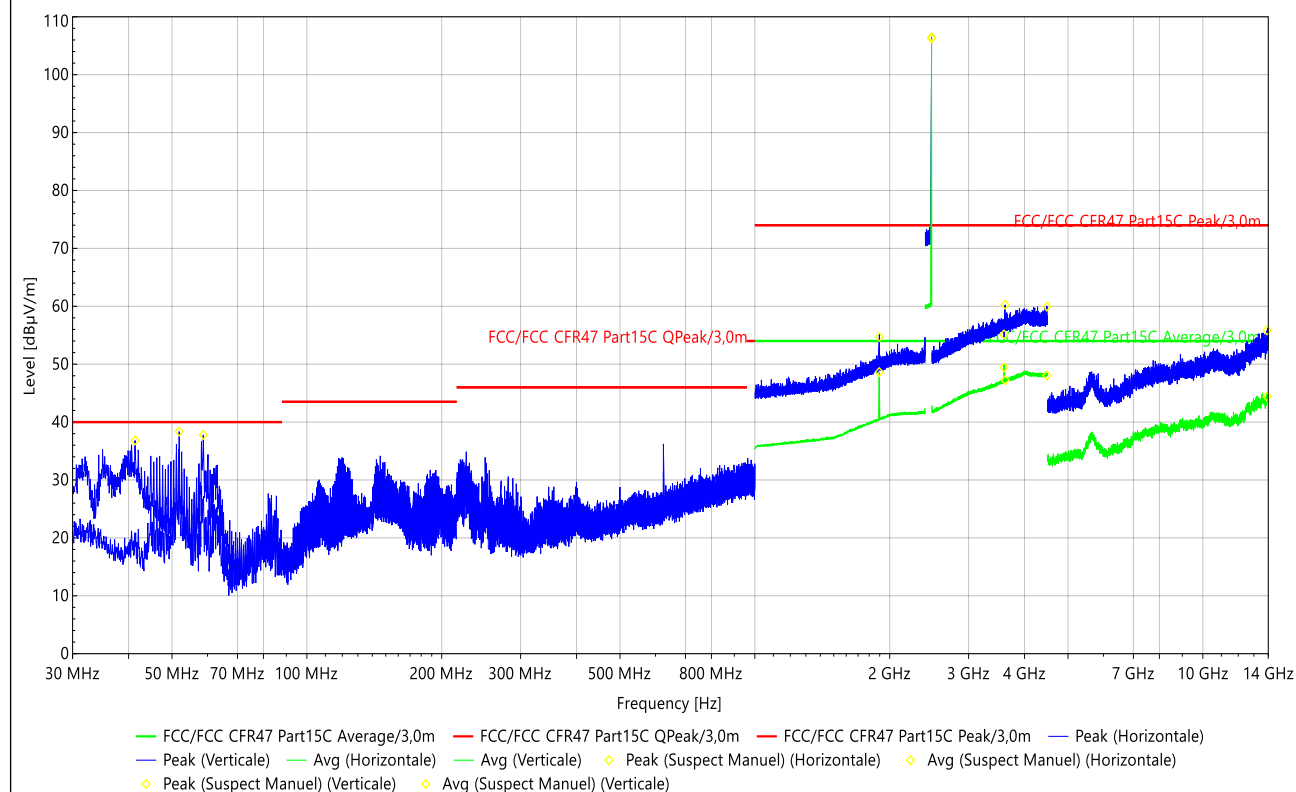
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Radiated Emissions

Graph name: Emr#12
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmax - TX mode - Automatic Axis

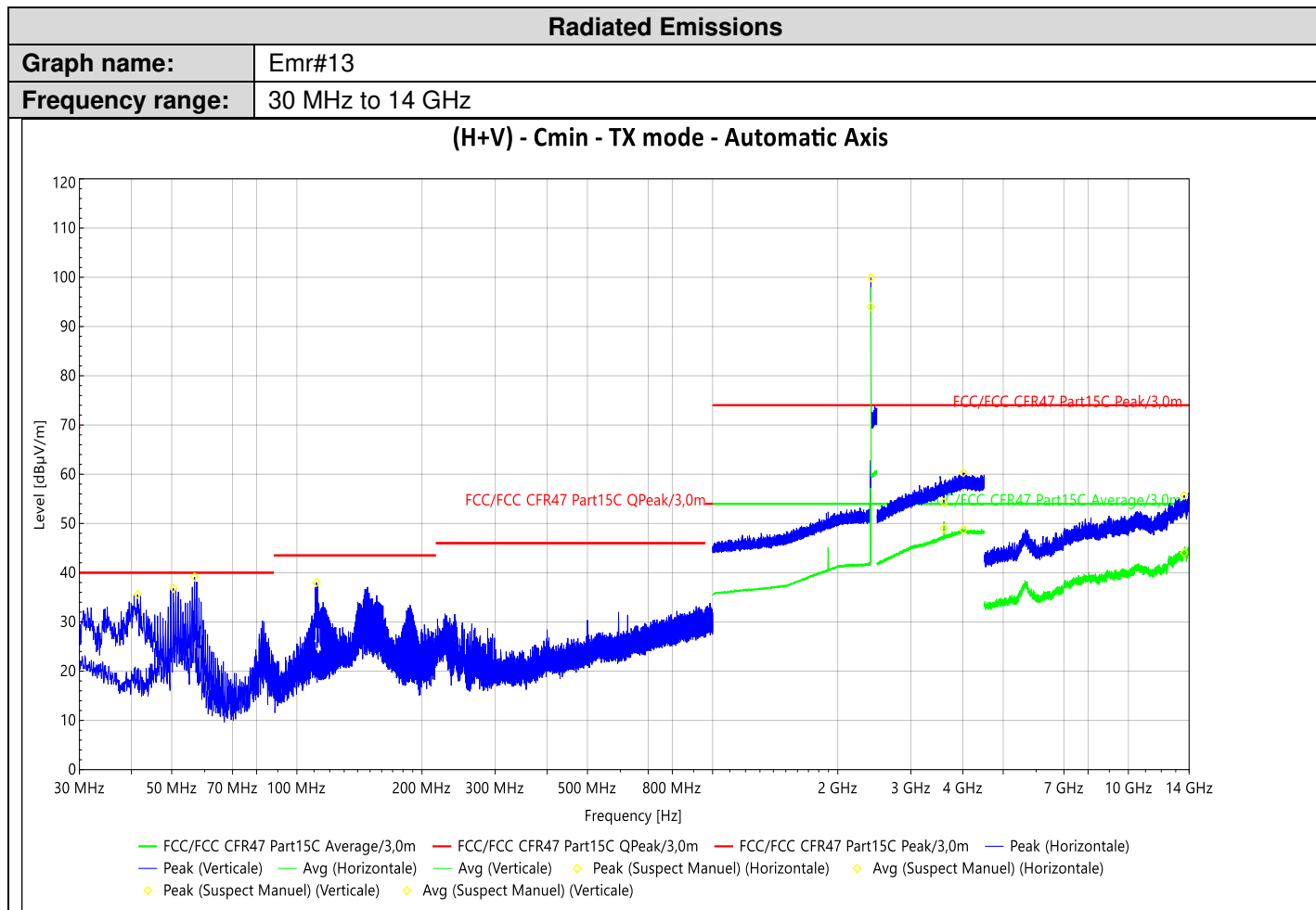


Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
2.48016 GHz*	106.47	74.00	106.28	54.00		194	H	35.77
51.8735 MHz	38.36				40.00	345	H	11.59
13.9126 GHz	55.84	74.00	44.41	54.00		138	V	-4.48
3.59834399 GHz	55.14	74.00	49.45	54.00		140	V	40.39
3.6191928 GHz	60.26	74.00	47.23	54.00		73	V	40.43
4.4846746 GHz	59.95	74.00	48.04	54.00		19	V	41.46
1.89565 GHz	54.71	74.00	48.64	54.00		260	V	34.73
41.349 MHz	36.83				40.00	53	V	16.03
58.712 MHz	37.78				40.00	257	V	10.26

*Carrier frequency

No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
111.5285 MHz	38.02				43.50	330	H	18.96
4.0107971 GHz	60.32	74.00	48.72	54.00		123	H	41.73
13.6276 GHz	55.73	74.00	44.05	54.00		292	H	-5.71
3.599834399 GHz	54.28	74.00	48.99	54.00		123	V	40.39
2.40212925 GHz*	99.95	74.00	94.00	54.00		342	V	35.71
41.3975 MHz	35.60				40.00	0	V	16.00
50.467 MHz	36.81				40.00	314	V	12.04
56.772 MHz	39.14				40.00	111	V	10.48

*Carrier frequency

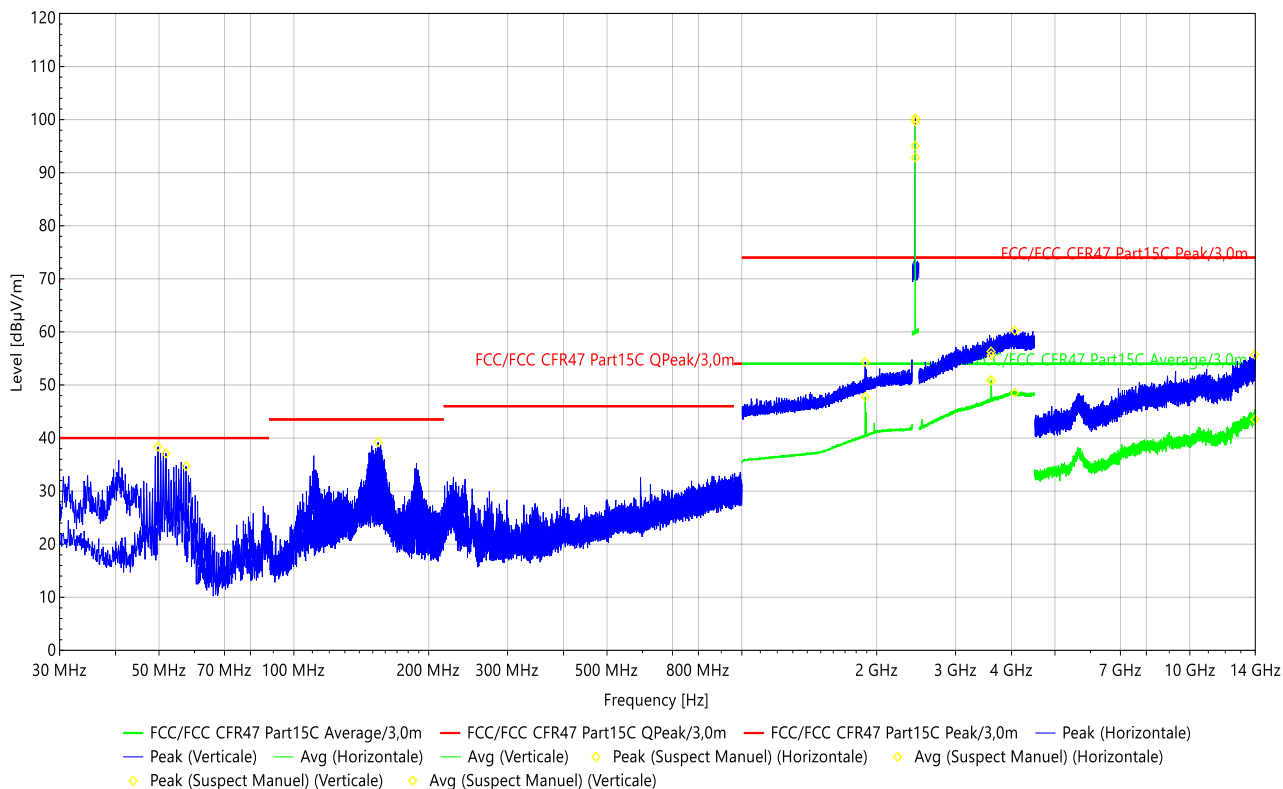
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Radiated Emissions

Graph name: Emr#14
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmid - TX mode - Automatic Axis



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
2.44020525 GHz*	99.67	74.00	92.88	54.00		143	H	35.77
51.825 MHz	37.12				40.00	183	H	11.61
3.599834399 GHz	55.58	74.00	50.81	54.00		191	H	40.39
13.96485 GHz	55.75	74.00	43.52	54.00		23	V	-4.22
3.599834399 GHz	56.31	74.00	50.90	54.00		0	V	40.39
4.0664525 GHz	60.26	74.00	48.52	54.00		259	V	41.66
2.44020525 GHz	100.26	74.00	95.08	54.00		18	V	35.77
1.8855 GHz	54.34	74.00	47.78	54.00		84	V	34.66
49.7395 MHz	38.37				40.00	295	V	12.30
57.451 MHz	34.71				40.00	259	V	10.39
154.16 MHz	39.22				43.50	115	V	24.06

*Carrier frequency

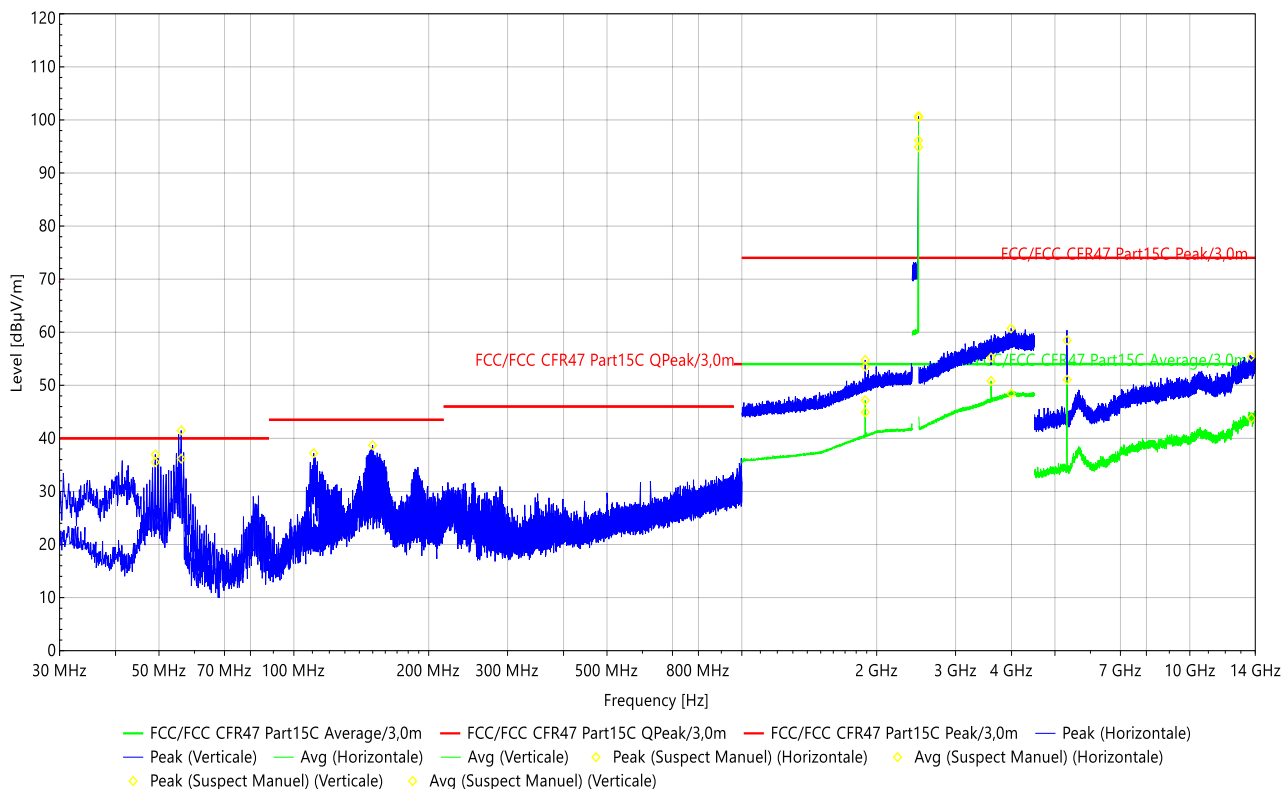
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Radiated Emissions

Graph name: Emr#15
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmax - TX mode - Automatic Axis



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
2.48016 GHz	100.48	74.00	94.88	54.00		356	H	35.77
49.0605 MHz	35.51				40.00	165	H	12.56
56.0445 MHz	36.18				40.00	118	H	10.62
110.7525 MHz	37.21				43.50	316	H	18.78
1.88585 GHz	53.52	74.00	44.92	54.00		111	H	34.66
3.599834399 GHz	55.23	74.00	50.83	54.00		0	H	40.39
3.9894222 GHz	60.72	74.00	48.43	54.00		0	H	41.67
5.3227 GHz	58.48	74.00	51.05	54.00		2	H	-17.52
13.725449999 GHz	55.41	74.00	43.79	54.00		184	H	-5.15
2.48016 GHz	100.74	74.00	96.13	54.00		345	V	35.77
1.8855 GHz	54.78	74.00	47.16	54.00		139	V	34.66
49.0605 MHz	36.98				40.00	309	V	12.56
56.0445 MHz	41.50				40.00	78	V	10.62
149.9405 MHz	38.69				43.50	64	V	24.13

*Carrier frequency

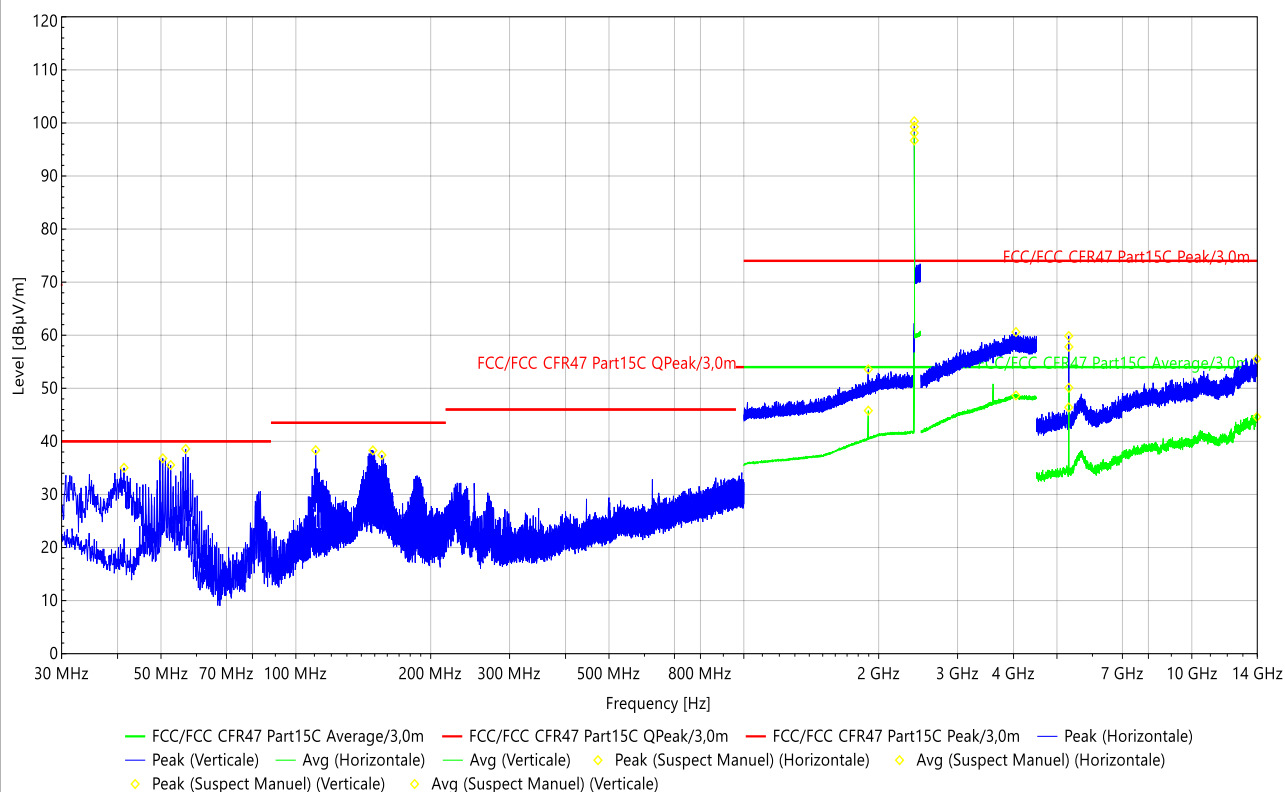
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Radiated Emissions

Graph name: Emr#16
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmin - TX mode - Automatic Axis

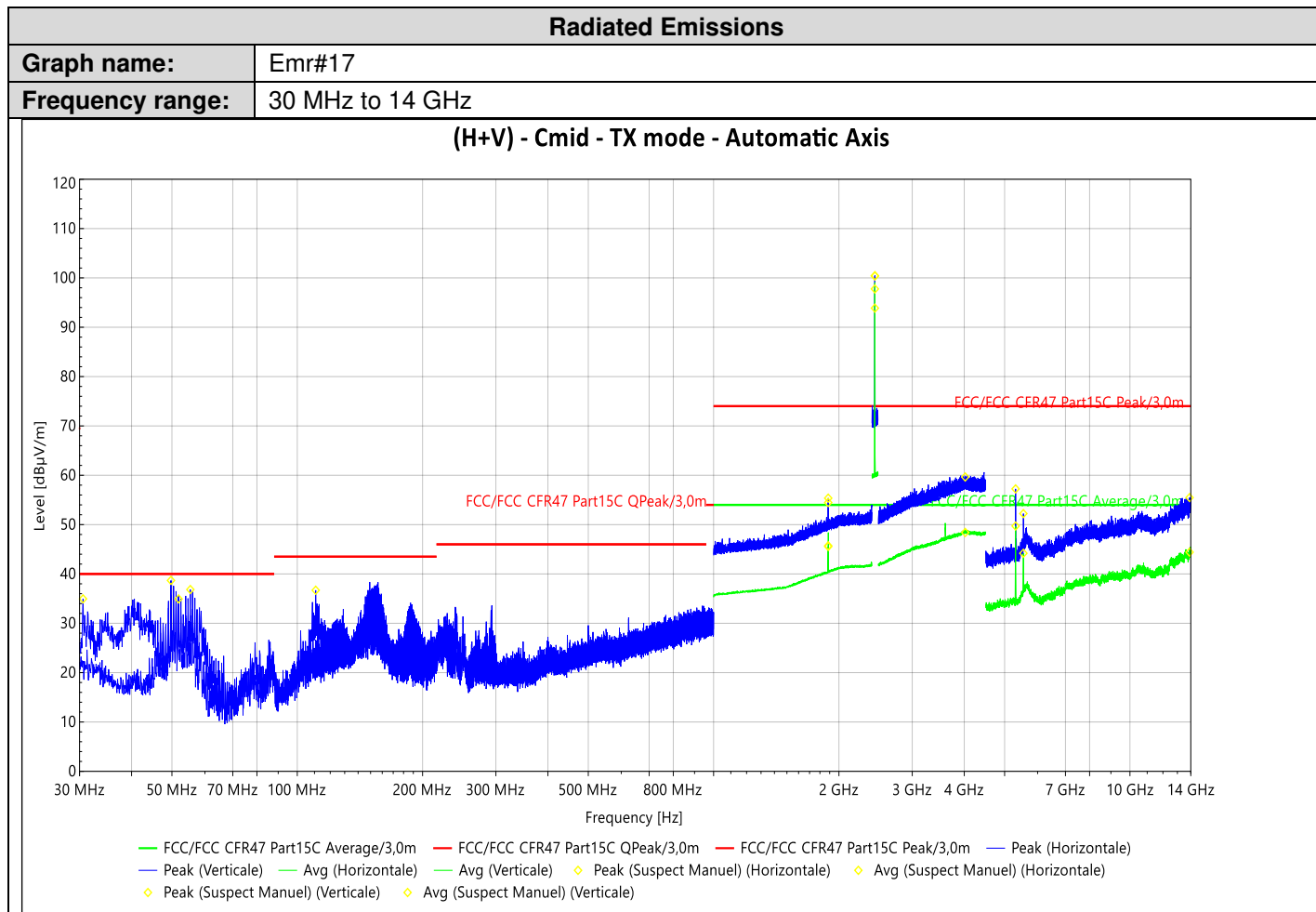


Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
52.5525 MHz	35.54				40.00	201	H	11.39
110.7525 MHz	38.34				43.50	265	H	18.78
2.4017535 GHz*	100.31	74.00	96.69	54.00		156	H	35.71
4.0503205 GHz	60.60	74.00	48.64	54.00		354	H	41.70
5.31225 GHz	59.86	74.00	46.40	54.00		100	V	-17.57
5.317 GHz	57.81	74.00	50.10	54.00		178	V	-17.55
13.967699999 GHz	55.53	74.00	44.61	54.00		241	V	-4.20
2.40171175 GHz*	99.28	74.00	98.09	54.00		42	V	35.71
1.896 GHz	53.57	74.00	45.79	54.00		124	V	34.74
41.349 MHz	35.02				40.00	329	V	16.03
50.467 MHz	36.80				40.00	280	V	12.04
56.772 MHz	38.56				40.00	107	V	10.48
148.5825 MHz	38.30				43.50	136	V	24.17
155.615 MHz	37.42				43.50	164	V	23.83

*Carrier frequency

No significant frequency observed due to RF module see the EMC test report (30 MHz to 14 GHz)



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
2.439746 GHz*	100.38	74.00	97.76	54.00		156	H	35.77
51.8735 MHz	34.94				40.00	210	H	11.59
110.7525 MHz	36.70				43.50	331	H	18.78
1.8848 GHz	54.47	74.00	45.56	54.00		0	H	34.65
5.3132 GHz	57.24	74.00	49.71	54.00		282	V	-17.57
5.5469 GHz	52.22	74.00	44.19	54.00		220	V	-15.59
13.9069 GHz	55.47	74.00	44.41	54.00		68	V	-4.51
4.0212829 GHz	59.65	74.00	48.41	54.00		232	V	41.72
2.4401635 GHz*	100.44	74.00	93.87	54.00		18	V	35.77
1.8848 GHz	55.36	74.00	45.71	54.00		271	V	34.65
30.582 MHz	34.95				40.00	208	V	21.66
49.7395 MHz	38.69				40.00	281	V	12.30
55.3655 MHz	36.84				40.00	144	V	10.72

*Carrier frequency

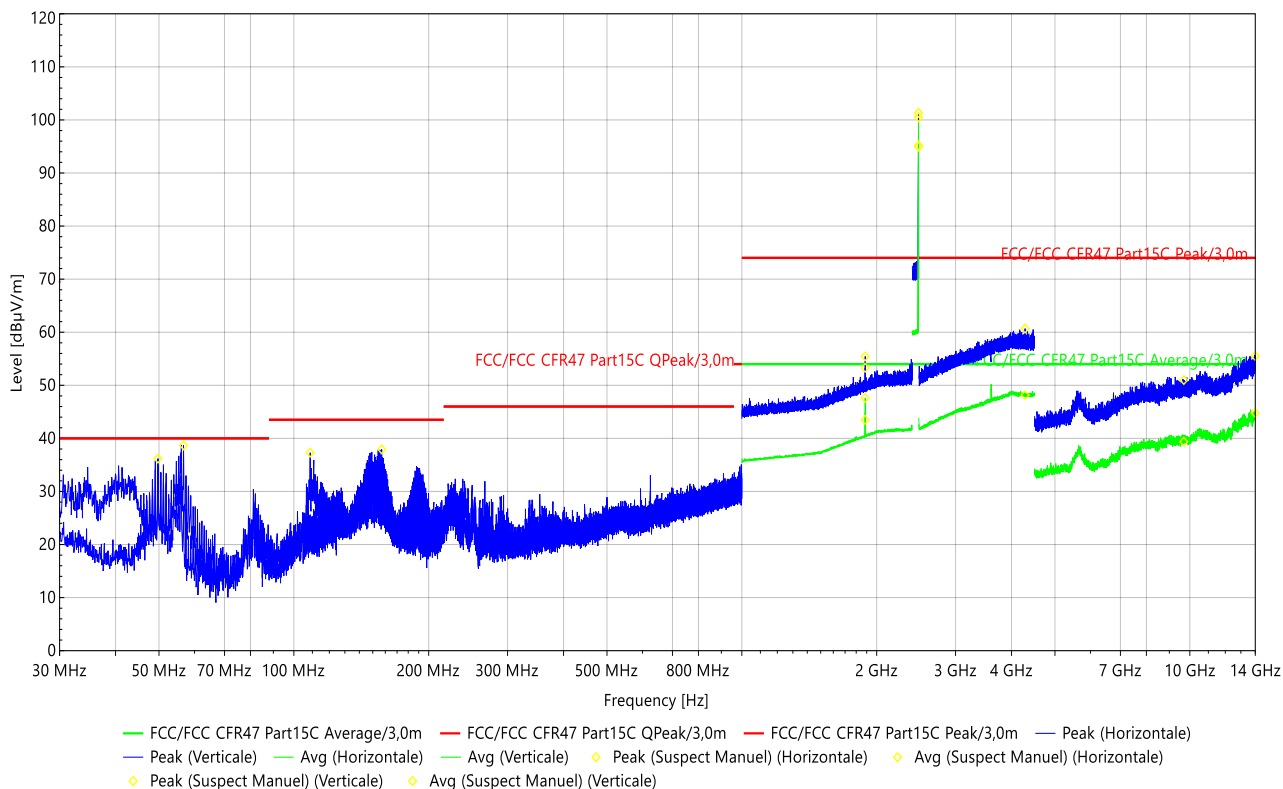
No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Radiated Emissions

Graph name: Emr#18
Frequency range: 30 MHz to 14 GHz

(H+V) - Cmax - TX mode - Automatic Axis



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Avg (dBμV/m)	Lim.Avg (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
2.479993 GHz*	101.32	74.00	95.17	54.00		181	H	35.77
108.764 MHz	37.31				43.50	325	H	18.37
1.8848 GHz	53.30	74.00	43.50	54.00		310	H	34.65
4.2882675 GHz	60.69	74.00	48.17	54.00		115	H	41.51
9.69745 GHz	51.00	74.00	39.37	54.00		105	H	-11.37
13.9886 GHz	55.52	74.00	44.80	54.00		89	H	-3.99
2.48016 GHz	100.48	74.00	94.97	54.00		343	V	35.77
1.88515 GHz	55.44	74.00	47.60	54.00		0	V	34.66
49.7395 MHz	36.20				40.00	323	V	12.30
56.7235 MHz	38.68				40.00	285	V	10.49
157.07 MHz	37.94				43.50	27	V	23.59

*Carrier frequency

No significant frequency observed due to RF module see the EMC test report (30 MHz to 1GHz)



Test Frequency (MHz)	Meter Reading dB(μ V)	Detector (Pk/QP/Av)	Transducer Factor (dB)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
39.021	24.0	QP	14.0	38.0	40.0	-2.0
41.2035	23.7	QP	13.8	37.5	40.0	-2.5
38.9725	22.6	QP	14.0	36.6	40.0	-3.4
44.8895	21.8	QP	13.2	35.0	40.0	-5.0
41.155	24.6	QP	13.8	38.4	40.0	-1.6
36.693	23.3	QP	14.1	37.4	40.0	-2.6
39.5545	24.2	QP	14.0	38.2	40.0	-1.8
41.4945	22.5	QP	13.8	36.3	40.0	-3.7
40.6215	23.4	QP	13.9	37.3	40.0	-2.7
40.4760	24.0	QP	13.9	37.9	40.0	-2.1
64.9685	22.2	QP	7.9	30.1	40.0	-9.9
35.9170	24.2	QP	14.2	38.4	40.0	-1.6
38.7785	23.1	QP	14.0	37.1	40.0	-2.9
40.3305	23.3	QP	13.9	37.2	40.0	-2.8
56.0445	23.7	QP	10.4	34.1	40.0	-5.9
112.7895	24.3	QP	12.7	37.0	43.5	-6.5
31.9885	23.0	QP	13.9	36.9	40.0	-3.1
60.2155	23.6	QP	9.1	32.7	40.0	-7.3
150.668	23.4	QP	18.9	42.3	43.5	-1.2
183.5995	23.9	QP	16.3	40.2	43.5	-3.3
58.8575	23.2	QP	9.5	32.7	40.0	-7.3
141.5985	22.8	QP	17.5	40.3	43.5	-3.2



11.6.1. 14GHz to 25GHz

Graphs – Pre characterization:

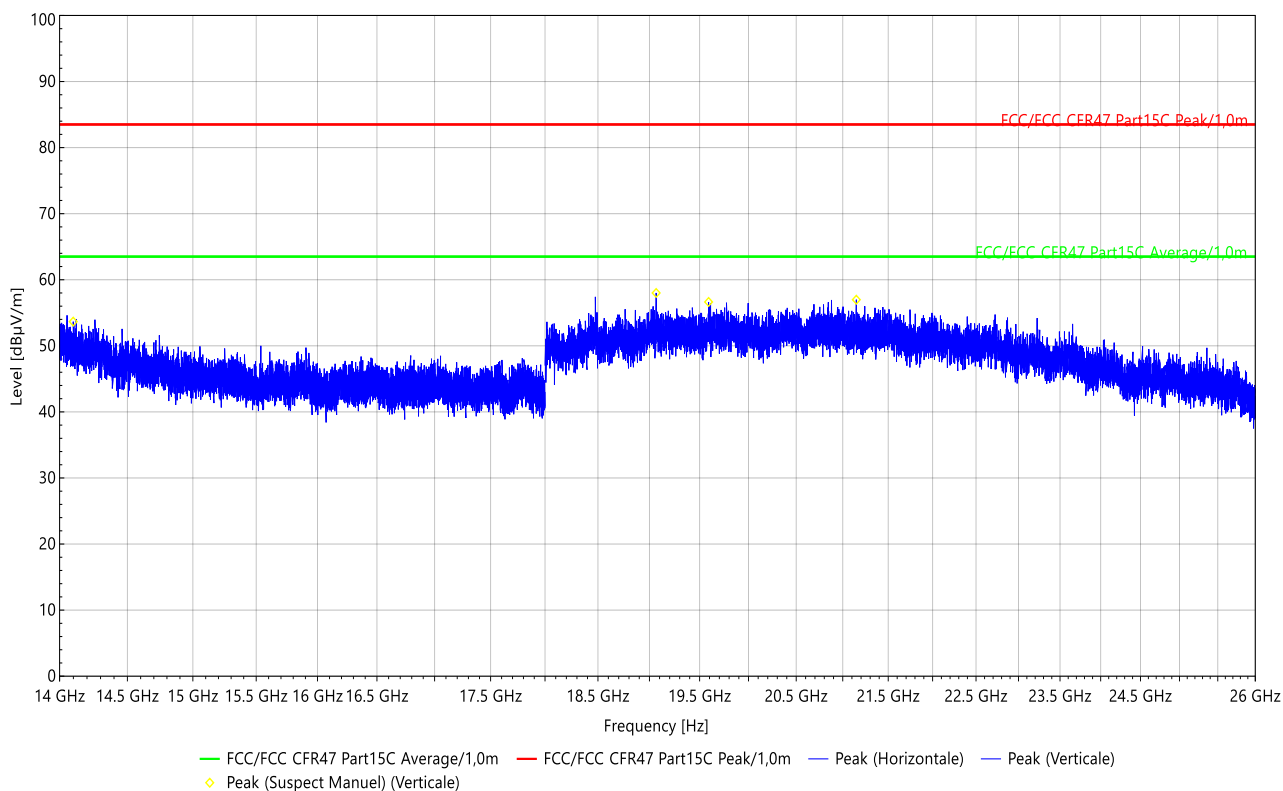
Graph identifier		Polarization	Mode	Channel	EUT position	Comments
Emr#	1	H/V	TX	Cmin	Axis XY/Z	DH5
Emr#	2	H/V	TX	Cmid	Axis XY/Z	DH5
Emr#	3	H/V	TX	Cmax	Axis XY/Z	DH5
Emr#	4	H/V	TX	Cmin	Axis XY/Z	2DH5
Emr#	5	H/V	TX	Cmid	Axis XY/Z	2DH5
Emr#	6	H/V	TX	Cmax	Axis XY/Z	2DH5
Emr#	7	H/V	TX	Cmin	Axis XY/Z	3DH5
Emr#	8	H/V	TX	Cmid	Axis XY/Z	3DH5
Emr#	9	H/V	TX	Cmax	Axis XY/Z	3DH5



Radiated Emissions

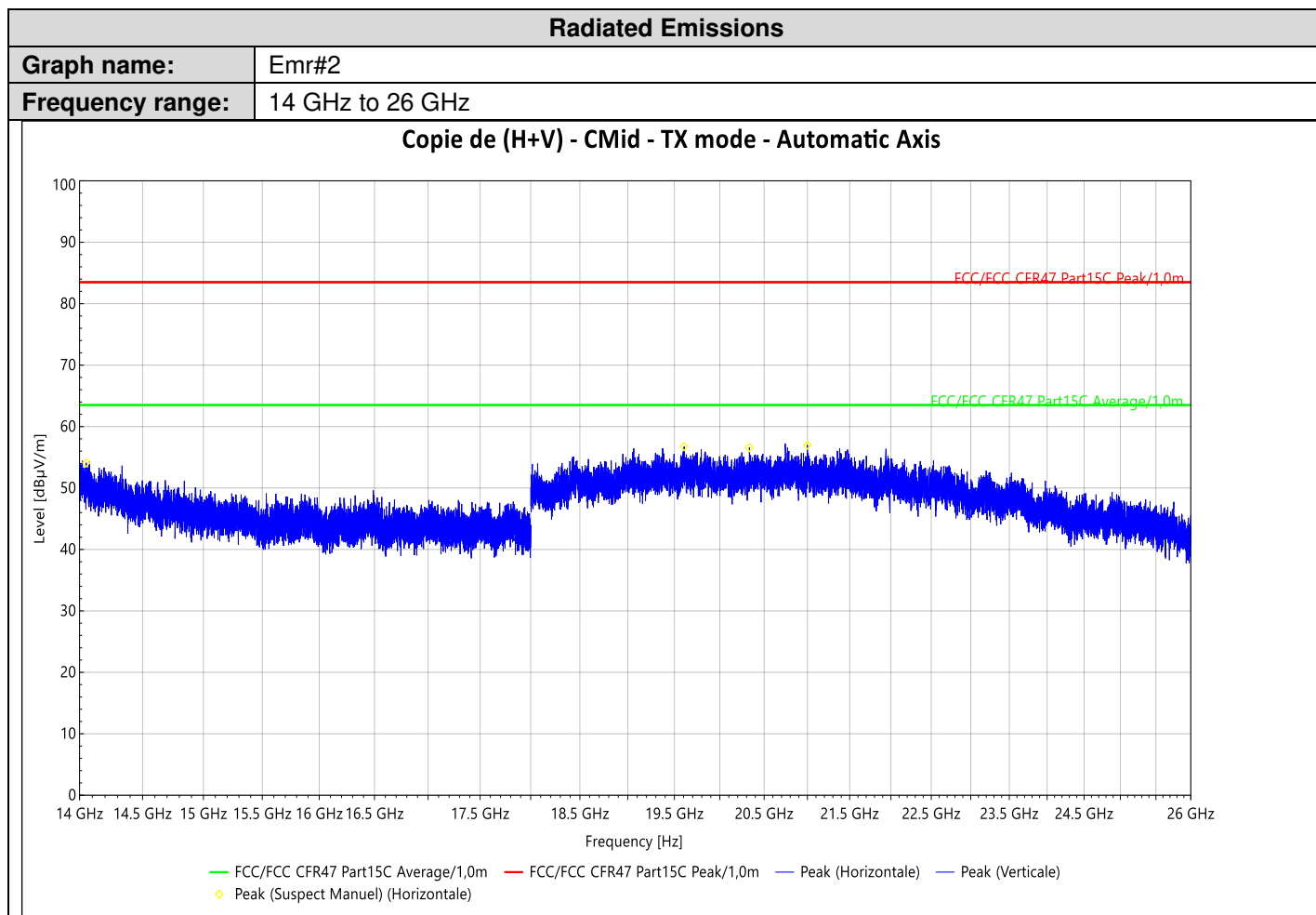
Graph name: Emr#1
Frequency range: 14 GHz to 26 GHz

Copie de (H+V) - CMin - TX mode - Automatic Axis



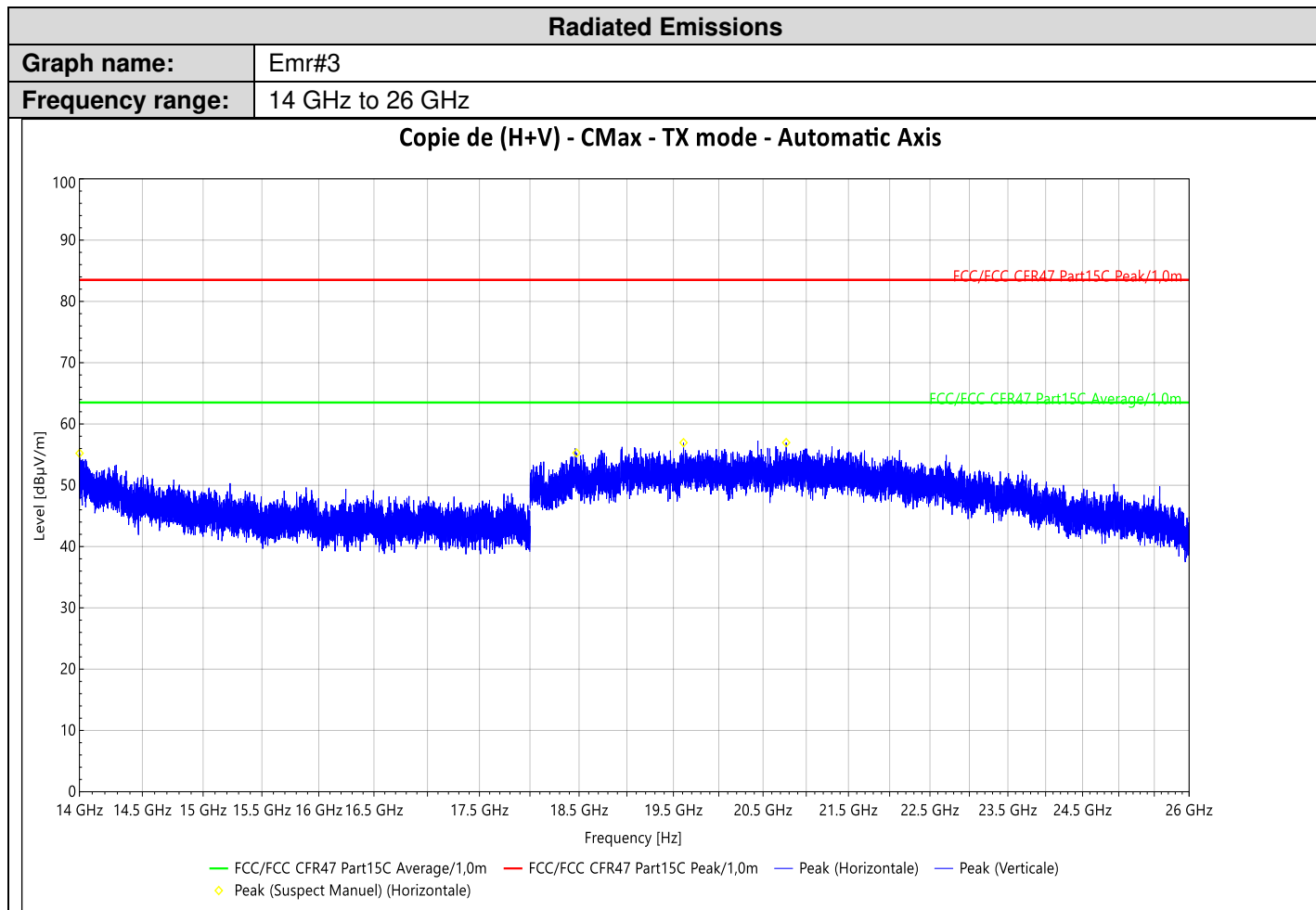
Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Lim.Avg (dBμV/m)	Polar.	Correct. (dB)
14.099 GHz	53.66	83.50	63.50	V	2.97
19.066 GHz	58.00	83.50	63.50	V	4.08
19.591 GHz	56.64	83.50	63.50	V	3.68
21.148 GHz	56.98	83.50	63.50	V	2.63

No significant frequency observed



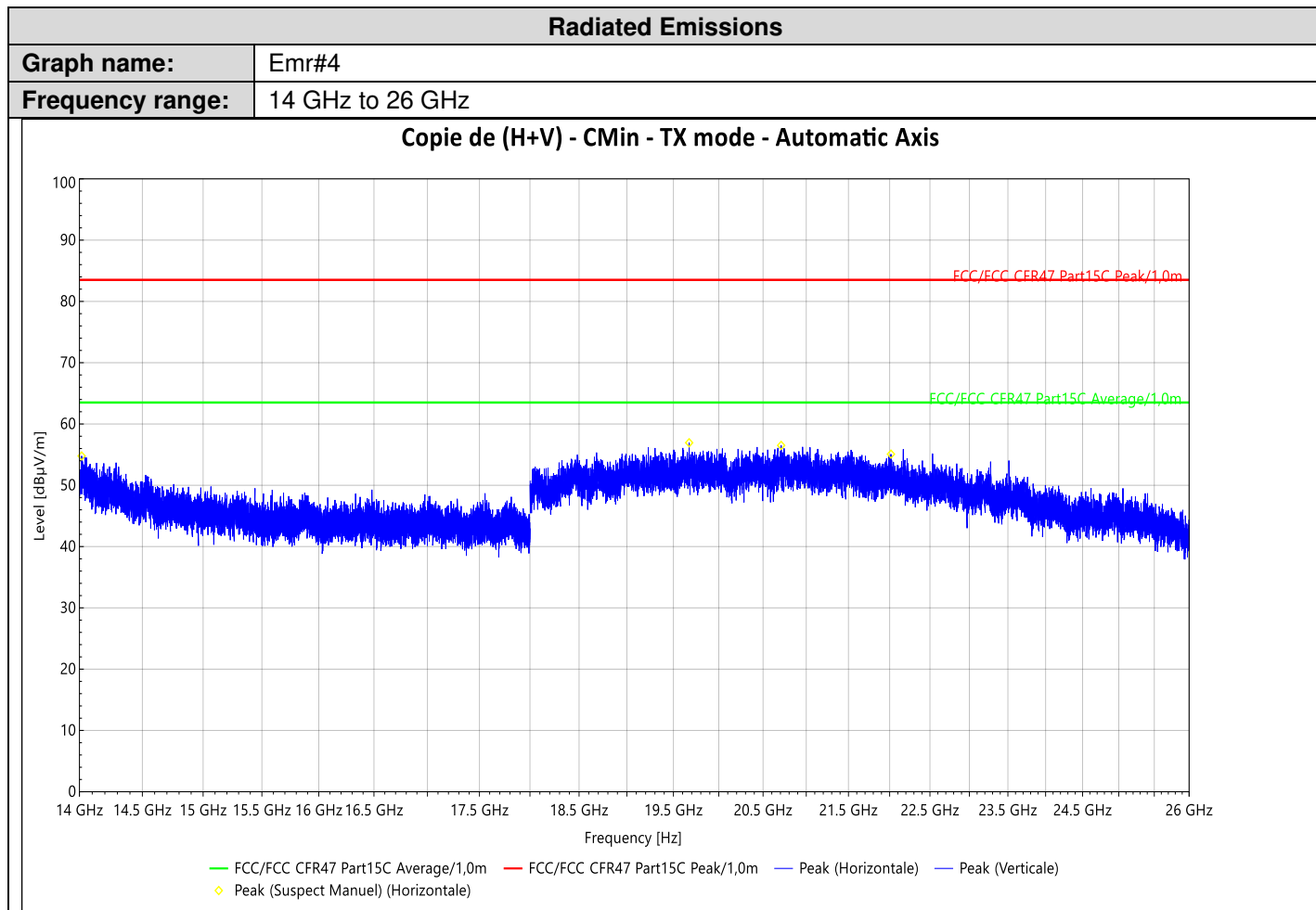
Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Lim.Avg (dBμV/m)	Polar.	Correct. (dB)
14.052 GHz	54.11	83.50	63.50	H	3.32
19.606 GHz	56.74	83.50	63.50	H	3.75
20.332 GHz	56.60	83.50	63.50	H	3.40
21GHz	57.00	83.50	63.50	H	3.13

No significant frequency observed



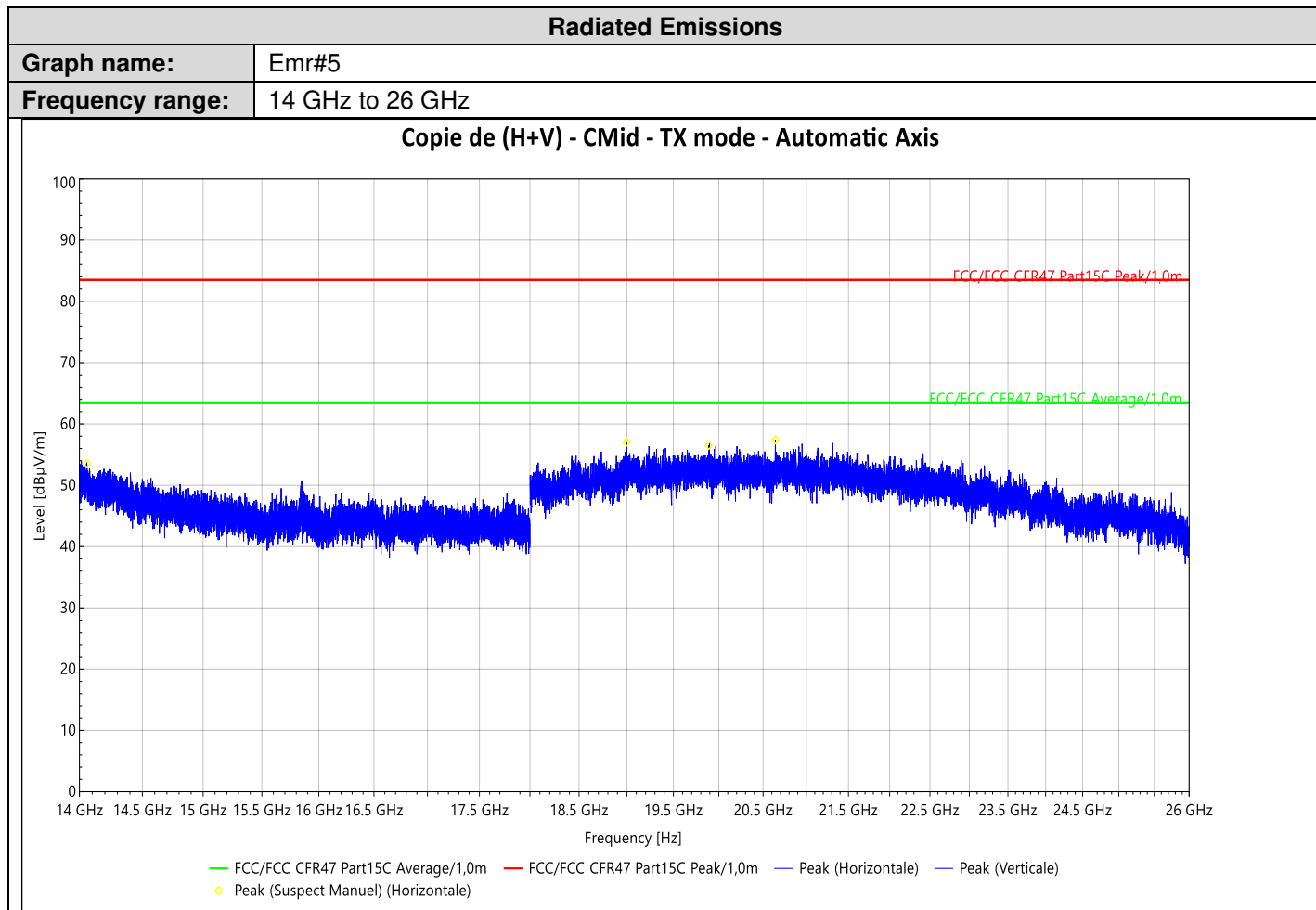
Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Lim.Avg (dBμV/m)	Polar.	Correct. (dB)
14.001 GHz	55.22	83.50	63.50	H	3.62
18.473 GHz	55.28	83.50	63.50	H	3.41
19.61 GHz	56.95	83.50	63.50	H	3.75
20.766 GHz	56.97	83.50	63.50	H	2.55

No significant frequency observed



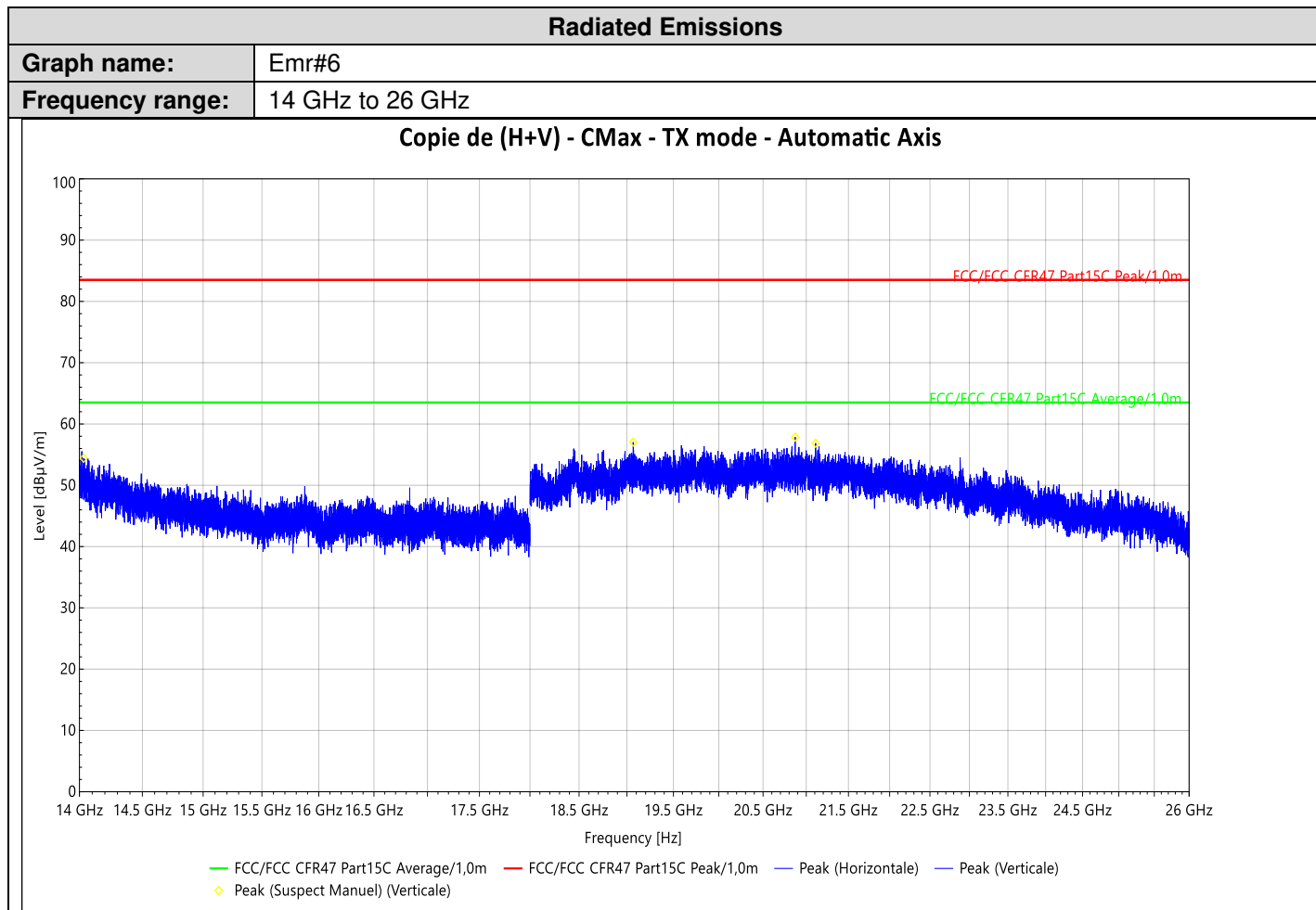
Frequency	PK Level (dBµV/m)	Lim.PK (dBµV/m)	Lim.Avg (dBµV/m)	Polar.	Correct. (dB)
14.017 GHz	54.78	83.50	63.50	H	3.53
19.672 GHz	56.94	83.50	63.50	H	3.76
20.708 GHz	56.51	83.50	63.50	H	2.50
22.016 GHz	55.08	83.50	63.50	H	2.19

No significant frequency observed



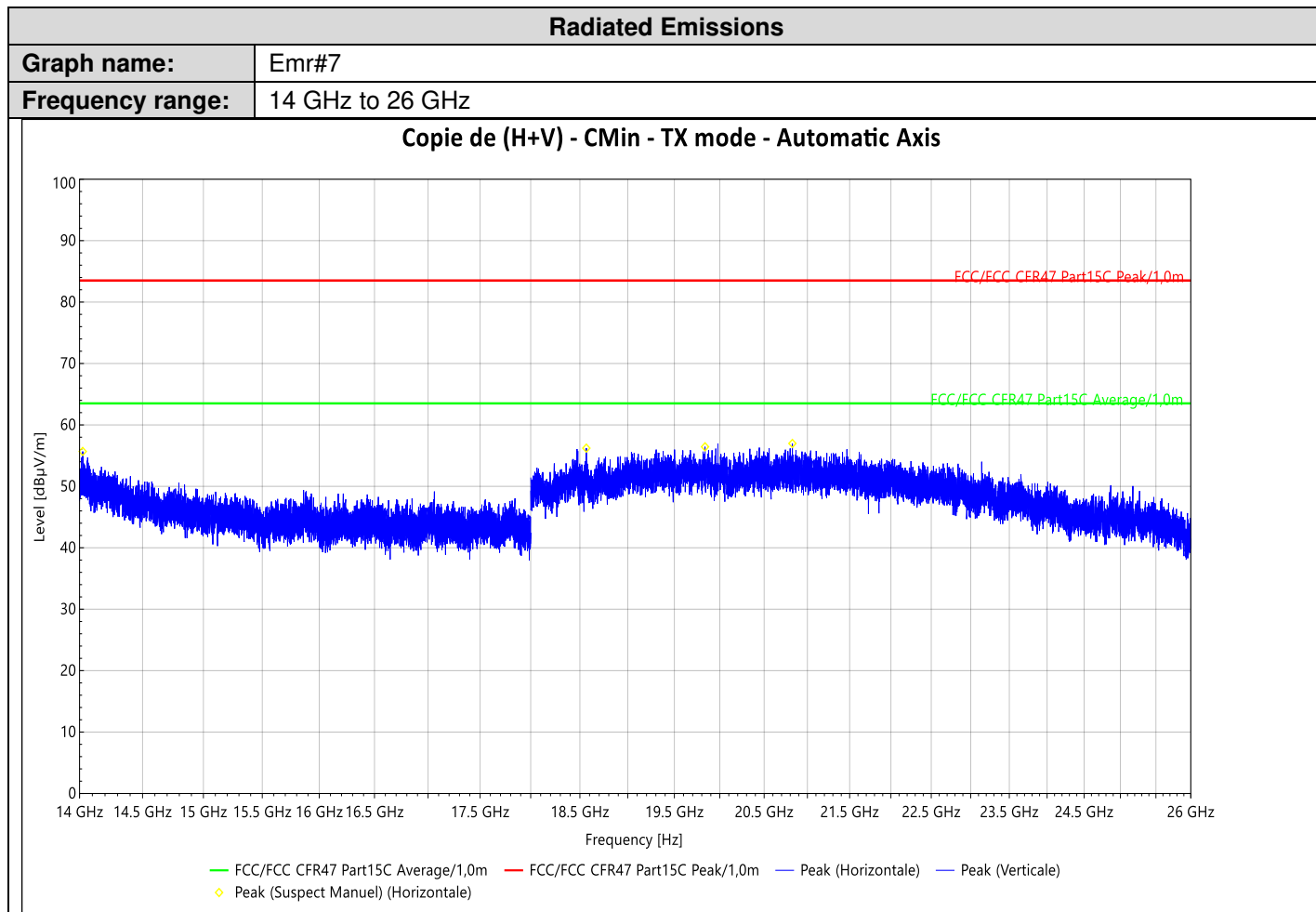
Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Lim.Avg (dBμV/m)	Polar.	Correct. (dB)
14.057 GHz	53.58	83.50	63.50	H	3.28
18.996 GHz	57.02	83.50	63.50	H	3.84
19.887 GHz	56.50	83.50	63.50	H	3.56
20.642 GHz	57.42	83.50	63.50	H	2.41

No significant frequency observed



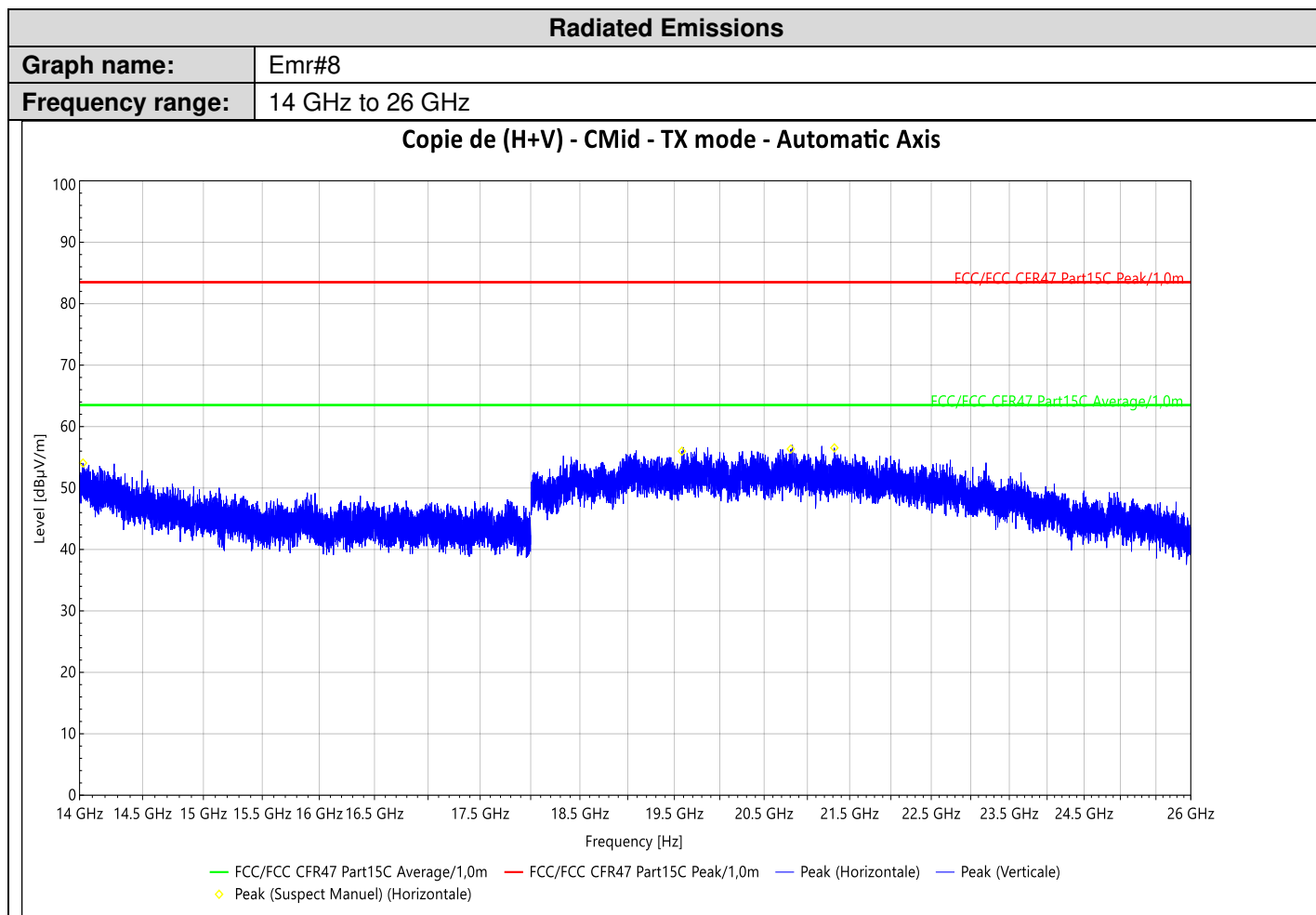
Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Lim.Avg (dBμV/m)	Polar.	Correct. (dB)
14.033 GHz	54.41	83.50	63.50	V	3.44
19.067 GHz	57.04	83.50	63.50	V	4.08
20.871 GHz	57.86	83.50	63.50	V	2.76
21.11 GHz	56.87	83.50	63.50	V	2.72

No significant frequency observed



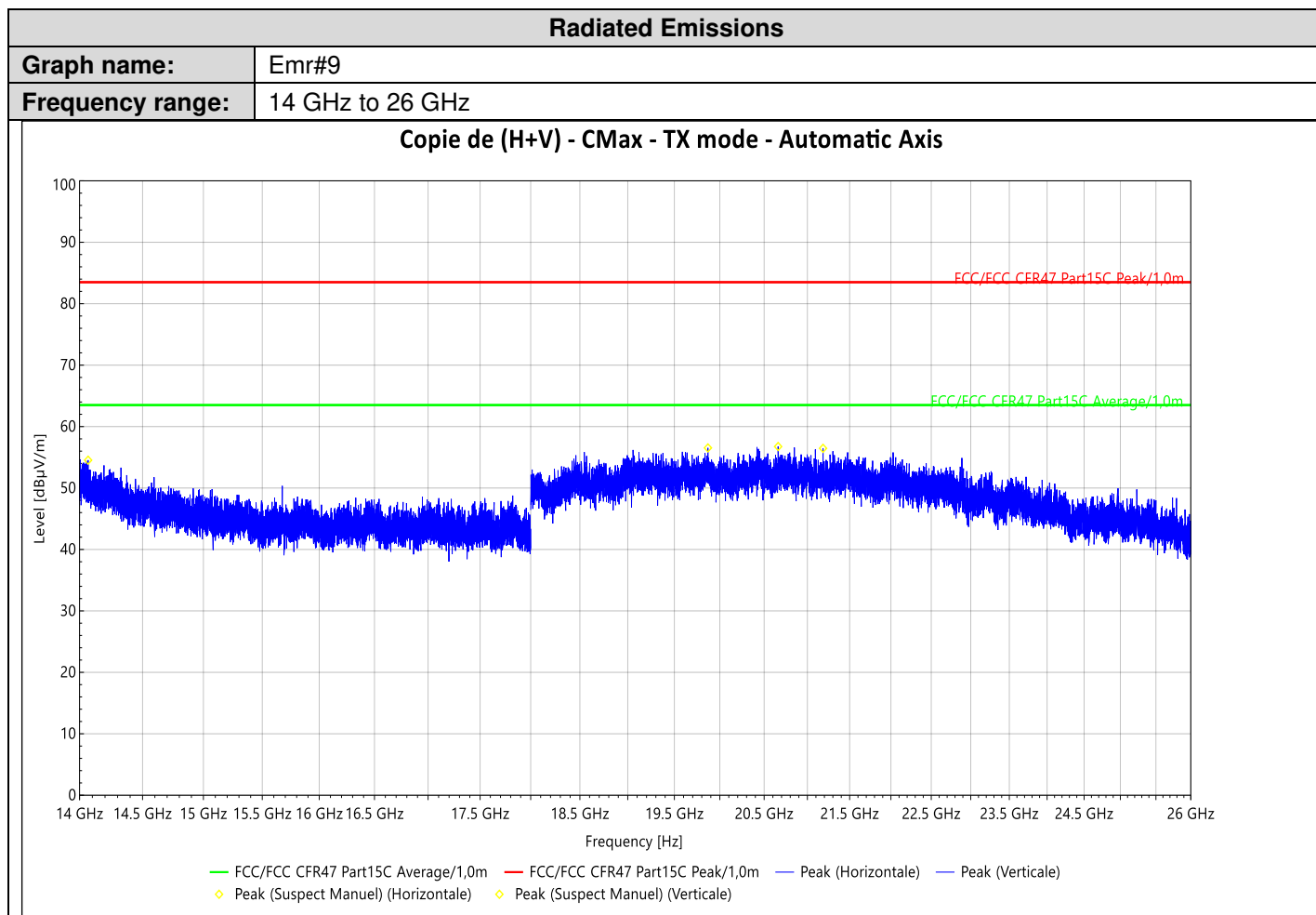
Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Lim.Avg (dBμV/m)	Polar.	Correct. (dB)
14.0245 GHz	55.68	83.50	63.50	H	3.48
18.567 GHz	56.22	83.50	63.50	H	2.91
19.836 GHz	56.44	83.50	63.50	H	3.78
20.825 GHz	56.98	83.50	63.50	H	2.65

No significant frequency observed



Frequency	PK Level (dBμV/m)	Lim.PK (dBμV/m)	Lim.Avg (dBμV/m)	Polar.	Correct. (dB)
14.027 GHz	54.07	83.50	63.50	H	3.47
19.582 GHz	55.99	83.50	63.50	H	3.62
20.807 GHz	56.34	83.50	63.50	H	2.60
21.318 GHz	56.54	83.50	63.50	H	2.55

No significant frequency observed



Frequency	PK Level (dBµV/m)	Lim.PK (dBµV/m)	Lim.Avg (dBµV/m)	Polar.	Correct. (dB)
14.067 GHz	54.53	83.50	63.50	H	3.21
19.868 GHz	56.53	83.50	63.50	V	3.67
20.66 GHz	56.75	83.50	63.50	V	2.43
21.184 GHz	56.46	83.50	63.50	V	2.54

No significant frequency observed

11.7. CONCLUSION

Unwanted Emission in restricted frequency bands measurement performed on the sample of the product **INGENICO AXIUM RX9000**, SN: **2419MR900209 / 2419MR900267**, in configuration and description presented in this test report, show levels **compliant** to the 47 CFR PART 15.247 & RSS 247 ISSUE 3 limits.



12. UNCERTAINTIES CHART

Type de mesure / Kind of measurement	Incertitude élargie laboratoire / Wide uncertainty laboratory (k=2) $\pm x$	Incertitude limite du CISPR / CISPR uncertainty limit $\pm y$
Measurement of conducted disturbances in voltage on the power port	3.29dB	3.4 dB
Measurement of conducted disturbances in voltage on the telecommunication port.	3.26 dB	5dB
Measurement of discontinuous conducted disturbances in voltage	3.33 dB	3.4 dB
Measurement of conducted disturbances in current	2.67 dB	2.9dB
Spurious emission, radiated (Semi anechoic chamber & open test site)	5.60 dB	6 dB
Spurious emission, radiated (Full anechoic chamber above 1GHz)	± 3.8 dB	± 6 dB
Occupied Channel Bandwidth	± 2.8 %	± 5 %
RF power, conducted	± 1.2 dB	± 1.5 dB
Power Spectral Density, Conducted	± 1.7 dB	± 3 dB
Spurious emission, conducted	± 2.3 dB	± 3 dB
Temperature	± 0.75 °C	± 3 °C
Supply Voltages	± 1.7 %	± 3 %
Time	± 2.3 %	± 5 %

Les valeurs d'incertitudes calculées du laboratoire étant inférieures aux valeurs d'incertitudes limites établies par la norme, la conformité de l'échantillon est établie directement par les niveaux limites applicables. / The uncertainty values calculated by the laboratory are lower than limit uncertainty values defined by the standard. The conformity of the sample is directly established by the applicable limits values.