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TEST REPORT

N°: 172911-765736-A **Version : 02**

Subject	**Radio spectrum matters tests according to standards: 47 CFR Part 15.247 & RSS-247 Issue 2 & RSS-Gen Issue 5**
Issued to	**SAGEMCOM 250 Route de l'Empereur 92848 – RUEIL MALMAISON FRANCE**
Apparatus under test	
Product	**TV Set Top Box**
Trade mark	**COGECO**
Manufacturer	**SAGEMCOM**
Model under test	**DIW3930 COGECO**
Serial number	**6211130035003**
FCC ID	**VW3DIW3930**
IC	**9140A-DIW3930**
Conclusion	See Test Program chapter
Test date	June 17, 2021 to June 24, 2021
Test location	Moirans
Test Site	6500A-1 & 6500A-3
Sample receipt date	June 7, 2021
Registration Number	197516
Designation Number	FR0008
Composition of document	64 pages
Document issued on	September 30, 2021

Written by :	Approved by :
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Tests operator	**Technical manager**

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PUBLICATION HISTORY

Version	Date	Author	Modification
01	August 3, 2021	Armand MAHOUNGOU	Creation of the document
02	September 30, 2021	Armand MAHOUNGOU	Customer request withdraw the pictures of equipment

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 2**
- **RSS Gen Issue 5**
- **KDB 558074 D01 DTS Meas Guidance v05r02**
- **ANSI C63.10-2013**

Radio requirement:

Clause (47CFR Part 15.247 & RSS-247 Issue 2 & RSS-Gen Issue 5) Test Description	Test result - Comments			
Occupied Bandwidth	☑ **PASS**	☐ **FAIL**	☐ **NA**	☐ **NP(1)**
6dB Bandwidth	☑ **PASS**	☐ **FAIL**	☐ **NA()**	☐ **NP(1)**
Duty Cycle	☑ **PASS**	☐ **FAIL**	☐ **NA**	☐ **NP(1)**
Maximum Conducted Output Power	☑ **PASS**	☐ **FAIL**	☐ **NA**	☐ **NP(1)**
Power Spectral Density	☑ **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):
COGECO DIW3930 COGECO **Serial Number: 6211130035003**

Power supply:

Name	Type	Rating	Reference / Sn	Comments
Supply1	☑ AC ☐ DC ☐ Battery	100-127Vac; 50/60Hz; 0.3A	NBC12B120100VU / 191636225-xx	-

Inputs/outputs - Cable:

Access	Type	Length used (m)	Declared <3m	Shielded	Under test	Comments
1	Main power supply cable	-	☑	☐	☐	-
2	HDMI cable	-	☑	☐	☐	-
3	USB cable	-	☑	☐	☐	-
4	Ethernet cable	-	☑	☐	☐	-

Auxiliary equipment used during test:

Type	Reference	Sn	Comments
Laptop	-	-	Use to set the EUT

Equipment information:

Bluetooth LE Type:	☐ **BLE**	☐ **v4.0**	☐ **v4.1**	☑ **v4.2**	☑ **v5.0**
Chipset :	BCM72180				
Frequency band:	[2400 – 2483.5] MHz				
Number of Channel:	40				
Spacing channel:	2MHz				
Channel bandwidth:	1MHz				
Antenna Type:	☑ Integral		☐ External		☐ Dedicated
Antenna connector:	☑ Yes		☐ No		☐ Temporary for test
Antenna Requirements §15.203	The transmitter uses an integral antenna with a u.fl connector which is classified as a unique connector				
Transmit chains:	1				
	Single antenna				
Receiver chains	1				
Type of equipment:	☑ Stand-alone		☐ Plug-in		☐ Combined
Equipment arrangement:	☑ Tabletop		☐ Floor-standing		☐ Multiple orientations
Ad-Hoc mode:	☐ Yes			☑ No	
Duty cycle:	☑ Continuous duty		☐ Intermittent duty		☐ 100% duty
Equipment type:	☑ Production model			☐ Pre-production model	
Operating temperature range:	Tnom:	20°C			
Type of power source:	☑ AC power supply		☐ DC power supply		☐ Battery
Operating voltage range:	Vnom:		☑ 120V/60Hz		☐ X VDC
			☐ 240V/50Hz		☐ X VDC

Antenna Characteristic			
Antenna assembly	**Gain (dBi)**	**Frequency Band (MHz)**	**Impedance(Ω)**
1	3.62	2400 – 2483.5	50

Hardware information		
Software (if applicable):	**V. :**	STB_BCM4375B1_100.007_4375B1_UART_37_4MHz_fcbga_ipa_ref_stbda_class2.HCD FW

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

DATA RATE		
Data Rate (Mbps)	**Modulation Type**	**Worst Case Modulation**
1	GFSK	☑
2	GFSK	☑

2.2. RUNNING MODE

Test mode	Description of test mode
Test mode 1	Permanent emission with modulation on a fixed channel in the data rate that produced the highest power

Test	Running mode	
Occupied Bandwidth	☑ Test mode 1 (1)	☐ Alternative test mode()
6dB Bandwidth	☑ Test mode 1 (1)	☐ Alternative test mode()
Duty Cycle	☑ Test mode 1 (1)	☐ Alternative test mode()
Maximum Conducted Output Power	☑ Test mode 1 (1)	☐ Alternative test mode()
Power Spectral Density	☑ 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 1 (1)	☐ Alternative test mode()
Unwanted Emissions into Restricted Frequency Bands	☑ Test mode 1 (1)	☐ Alternative test mode()

(1) Following commands with the specific test software “Teraterm Pro V4.52” are used to set the product:

a. – See document “FCC BLE compliance test commands for M393 COGEFO, ref: AVS 31 006 099, version: 01”(provided by customer) for the command used during test.

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 52.5dBµV 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 dBµV/m.
FS = 52.5 + 7.4 + 1.1 – 29 = 32 dBµV/m
The 32 dBµV/m value can be mathematically converted to its corresponding level in µV/m.
Level in µV/m = Common Antilogarithm [(32dBµV/m)/20] = 39.8 µV/m.

2.6. *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

Test performed by	: Julien Palard
Date of test	: June 17, 2021
Ambient temperature	: 26 °C
Relative humidity	: 36 %

3.2. TEST SETUP

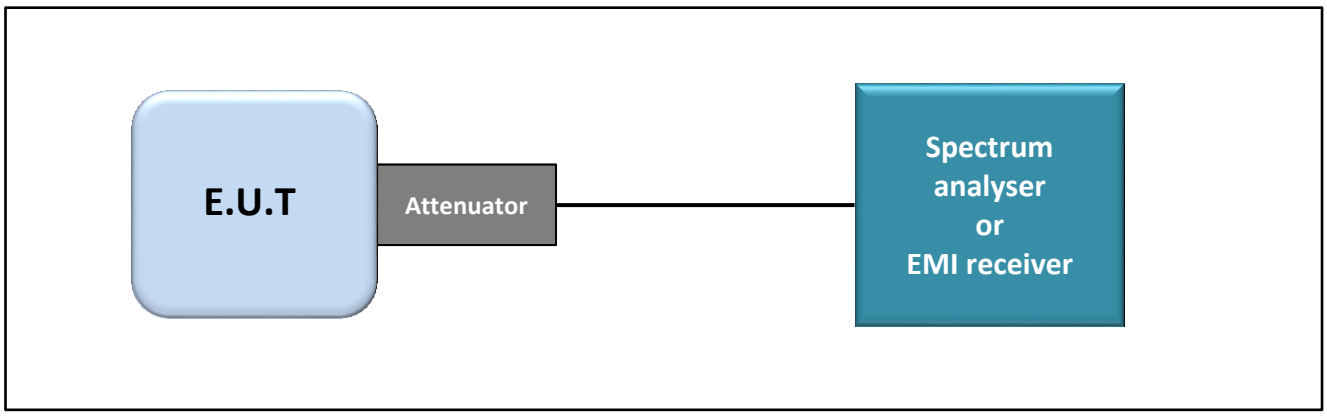
- The Equipment under Test is installed:
☑ On a table
☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:
☑ Conducted Method
☐ Radiated Method

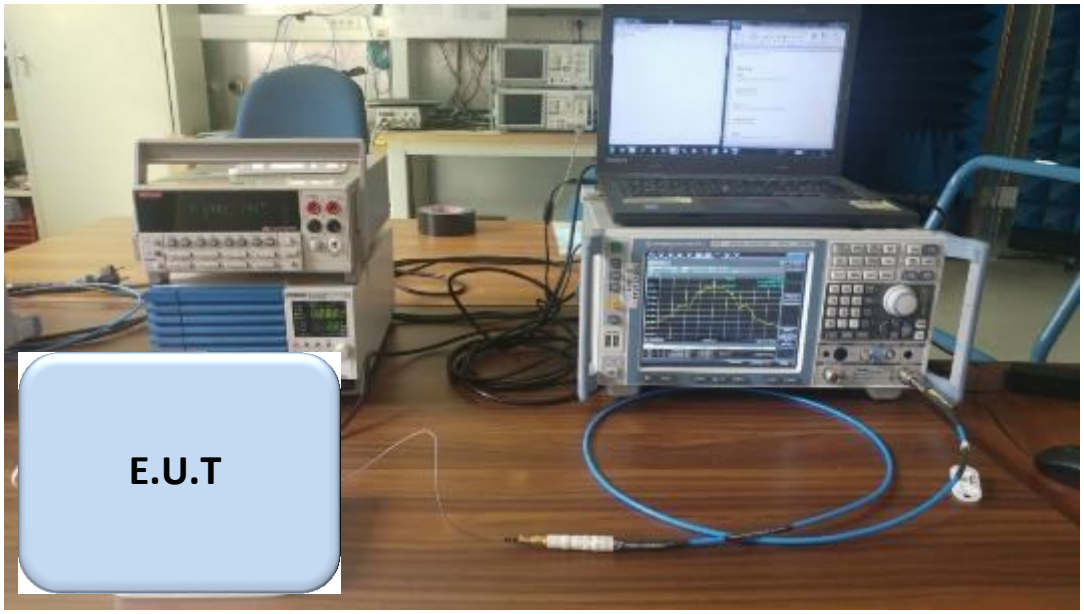
- Test Procedure:
☐ RSS-Gen Issue 5 § 6.7
☑ ANSI C63.10 § 6.9.2

Measurement Procedure:

a) RBW shall be in the range of 1% to 5% of the anticipated occupied bandwidth
b) Set the video bandwidth (VBW) ≥ 3 x RBW
c) SPAN = Capture all products of the modulation process
d) Detector = Peak.
e) Trace mode = max hold.
f) Sweep = auto couple.
g) Allow the trace to stabilize.
h) 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

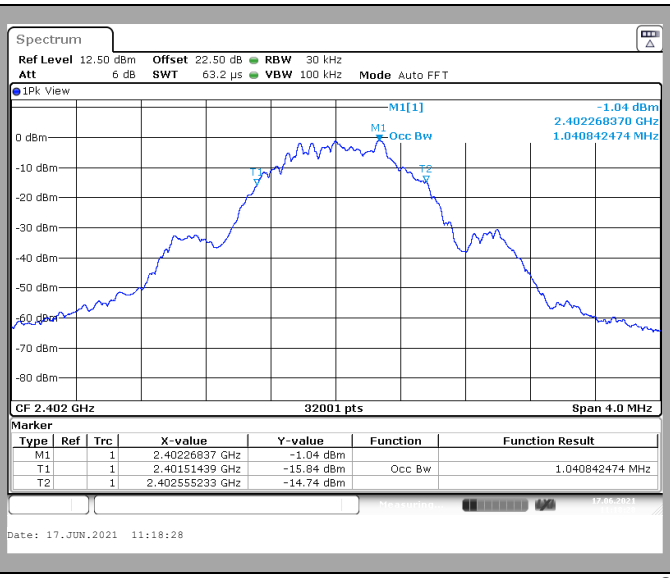
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Power supply	KIKUSUI	PCR500M	A7049006	Calibrate with multimeter	Calibrate with multimeter
Multimeter	KEITHLEY	2000	A1242090	2021/03	2023/03
R&S Commander Software	ROHDE & SCHWARZ	Version 1,6,4	-	-	-
Cable SONDE 026+ Attenuateur 20dB	PASTERNACK	PE350-150CM	A5329971	2020/09	2021/09
EMI signal analyser	ROHDE & SCHWARZ	FSV40	A4060061	2019/05	2021/05

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

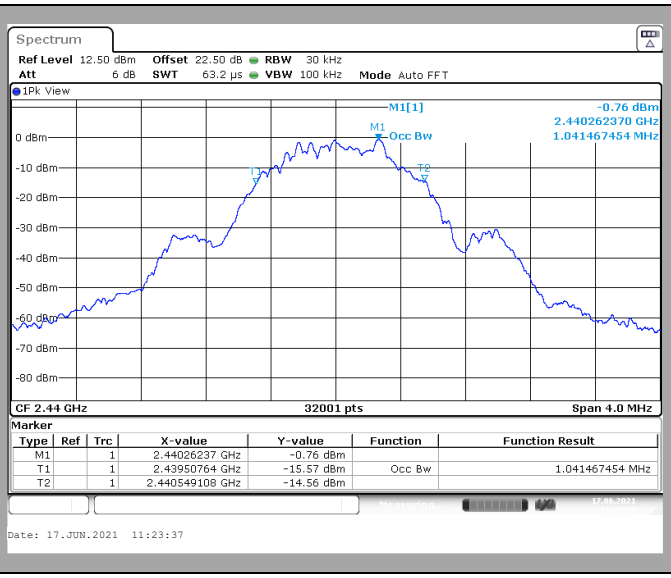
3.5. RESULTS

Occupied Bandwidth – BLE 4.2

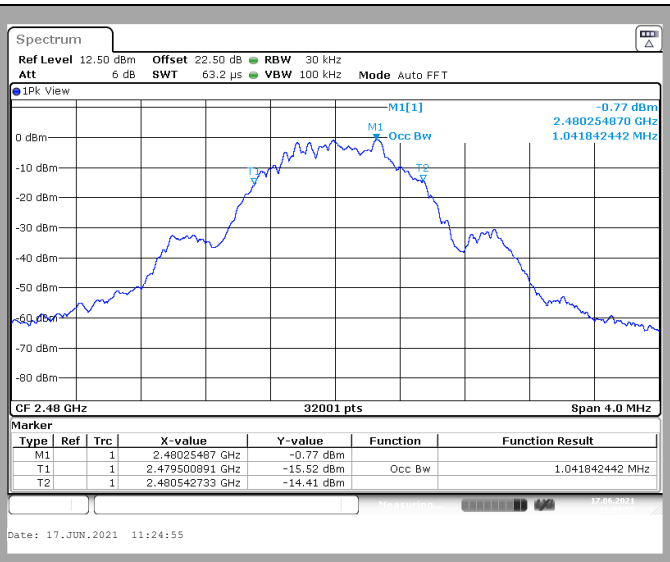
Cmin



Cnom



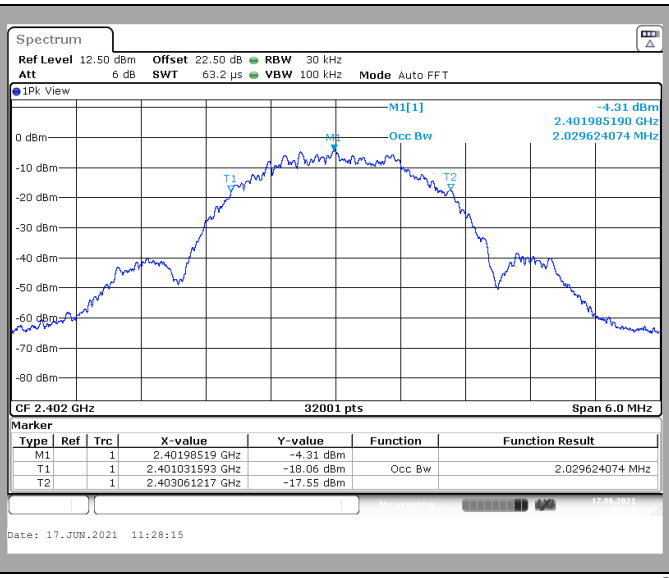
Cmax



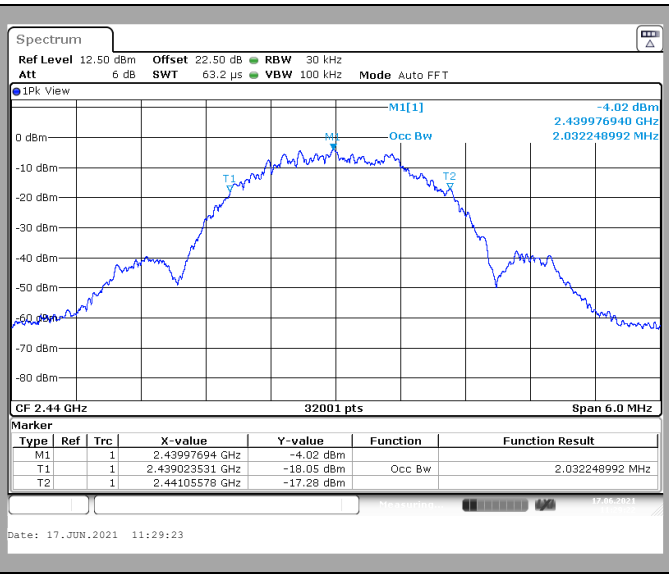
Channel	Occupied Bandwidth (MHz)
Cmin	1.0408
Cnom	1.0414
Cmax	1.0418

Occupied Bandwidth – BLE 5.0

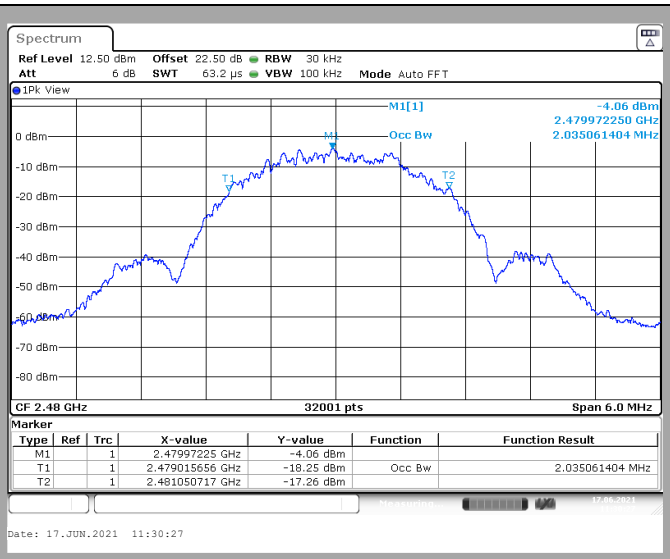
Cmin



Cnom



Cmax



Channel	Occupied Bandwidth (MHz)
Cmin	2.0296
Cnom	2.0322
Cmax	2.0351

3.6. *CONCLUSION*

Occupied Channel Bandwidth measurement performed on the sample of the product **COGECO DIW3930 COGECO**, SN: **6211130035003**, 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. 6DB EMISSION BANDWIDTH

4.1. TEST CONDITIONS

Test performed by	: Julien Palard
Date of test	: June 17, 2021
Ambient temperature	: 26 °C
Relative humidity	: 36 %

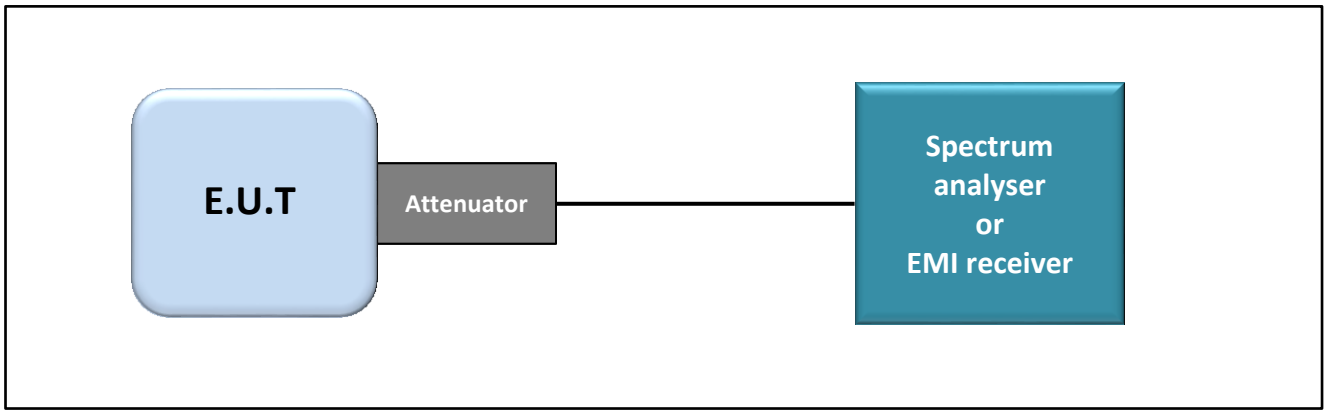
4.2. TEST SETUP

- The Equipment under Test is installed:
☑ On a table
☐ In an anechoic chamber

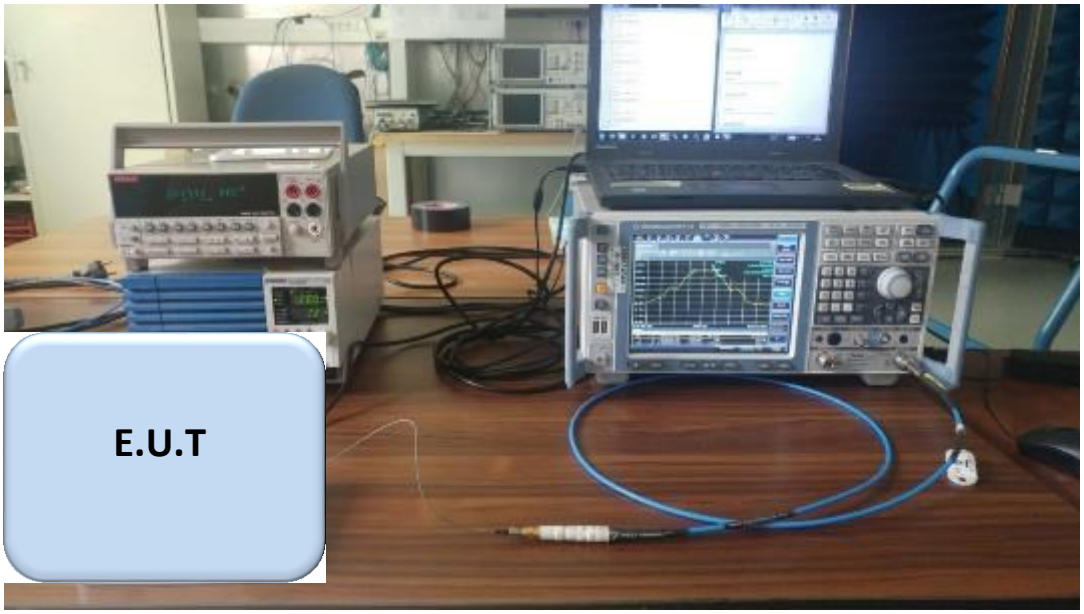
- Measurement is performed with a spectrum analyzer in:
☑ Conducted Method
☐ Radiated Method

- Test Procedure:
☑ ANSI C63.10 § 11.8.1
☐ ANSI C63.10 § 11.8.2

Measurement Procedure:
1. Set resolution bandwidth (RBW) = 100kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission. Compare the resultant bandwidth with the RBW setting of the analyzer.



Test set up of 6dB Emission Bandwidth



Photograph for 6dB emission bandwidth

4.3. LIMIT

Frequency range	The 6dB bandwidth Limit
2400MHz to 2483.5MHz	≤500kHz

4.4. TEST EQUIPMENT LIST

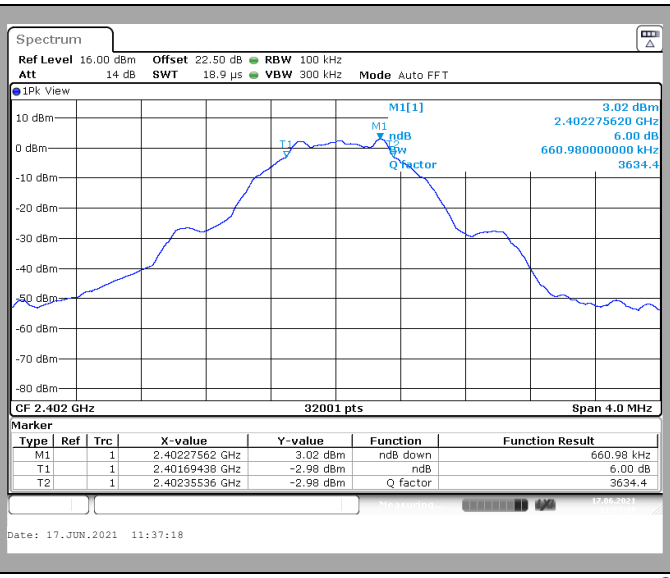
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Power supply	KIKUSUI	PCR500M	A7049006	Calibrate with multimeter	Calibrate with multimeter
Multimeter	KEITHLEY	2000	A1242090	2021/03	2023/03
R&S Commander Software	ROHDE & SCHWARZ	Version 1,6,4	-	-	-
Cable SONDE 026+ Attenuateur 20dB	PASTERNACK	PE350-150CM	A5329971	2020/09	2021/09
EMI signal analyser	ROHDE & SCHWARZ	FSV40	A4060061	2019/05	2021/05

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

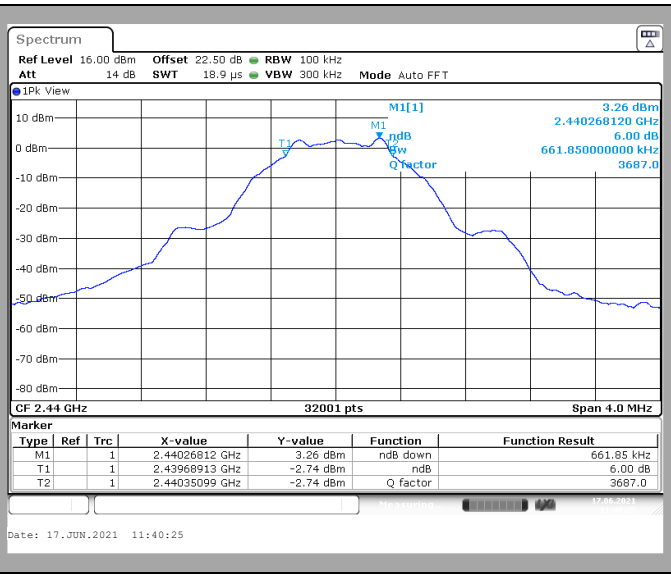
4.5. RESULTS

6dB Emission Bandwidth - BLE 4.2

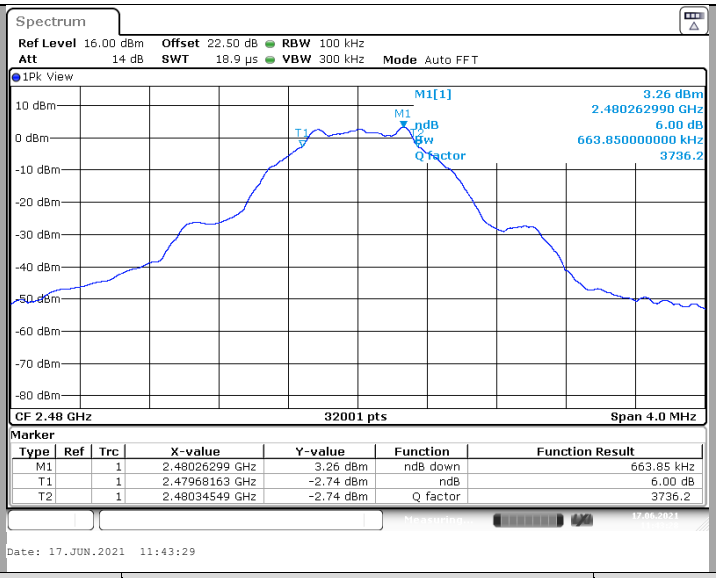
Cmin



Cnom



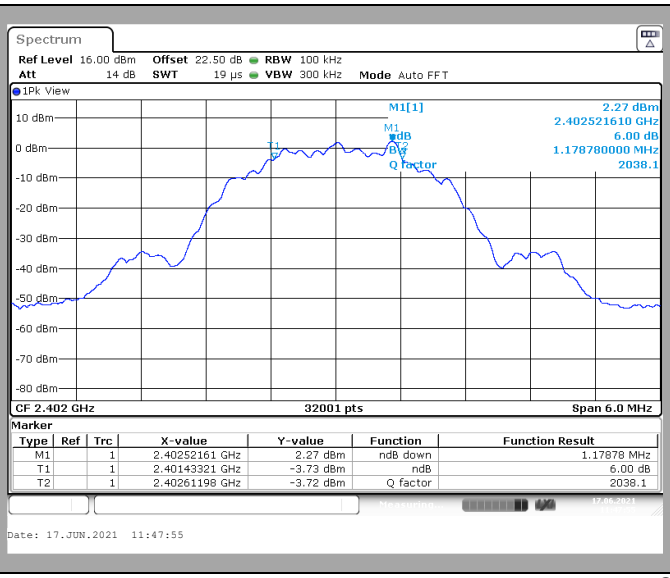
Cmax



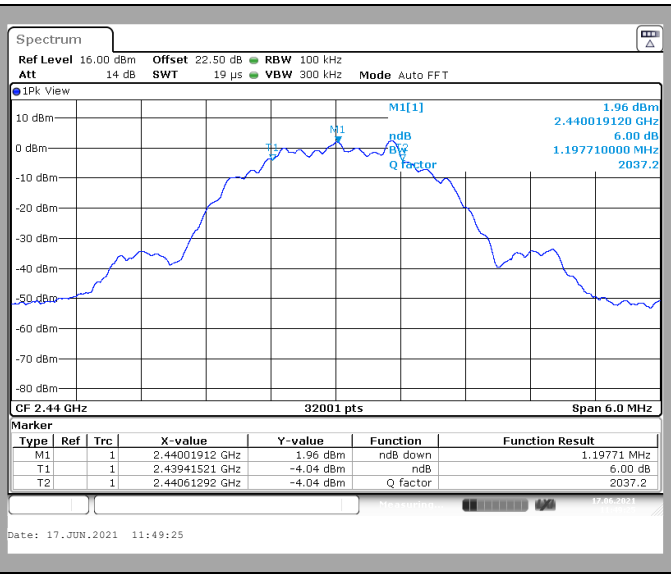
Channel	6dB Emission Bandwidth (MHz)	Limit (MHz)
Cmin	0.661	Minimum 0.5
Cnom	0.662	Minimum 0.5
Cmax	0.664	Minimum 0.5

6dB Emission Bandwidth - BLE 5.0

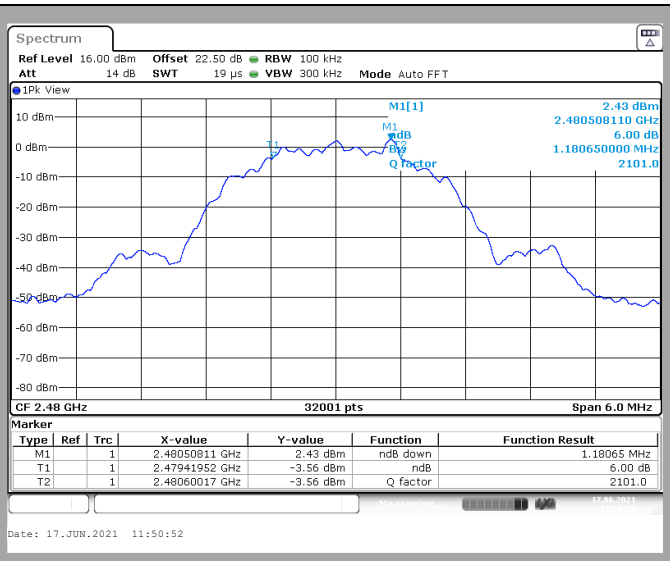
Cmin



Cnom



Cmax



Channel	6dB Emission Bandwidth (MHz)	Limit (MHz)
Cmin	1.179	Minimum 0.5
Cnom	1.198	Minimum 0.5
Cmax	1.181	Minimum 0.5

4.6. CONCLUSION

6dB Emission Bandwidth measurement performed on the sample of the product **COGECO DIW3930 COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS 247 ISSUE 2** limits.

5. DUTY CYCLE

5.1. TEST CONDITIONS

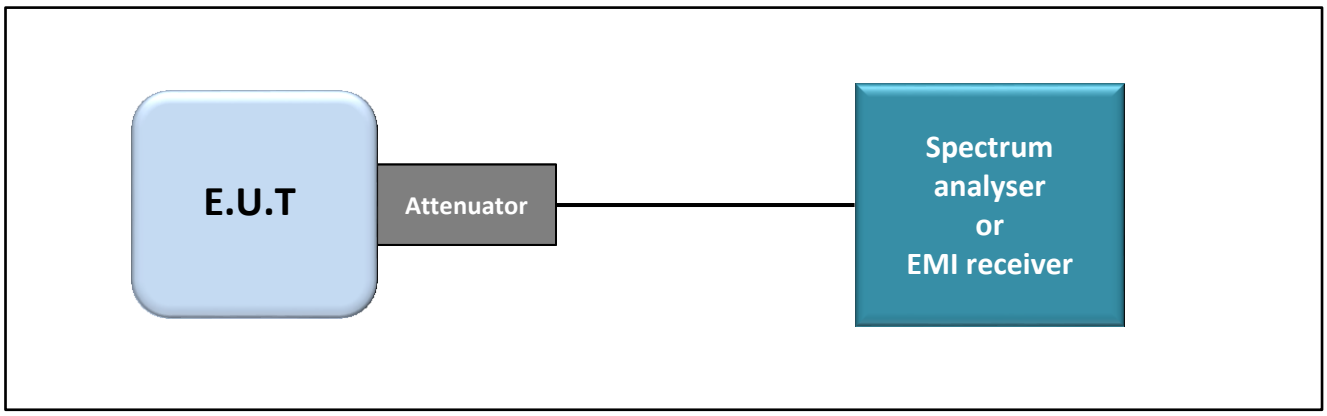
Test performed by	: Armand MAHOUNGOU
Date of test	: June 9, 2021
Ambient temperature	: 24°C
Relative humidity	: 41%

5.2. TEST SETUP

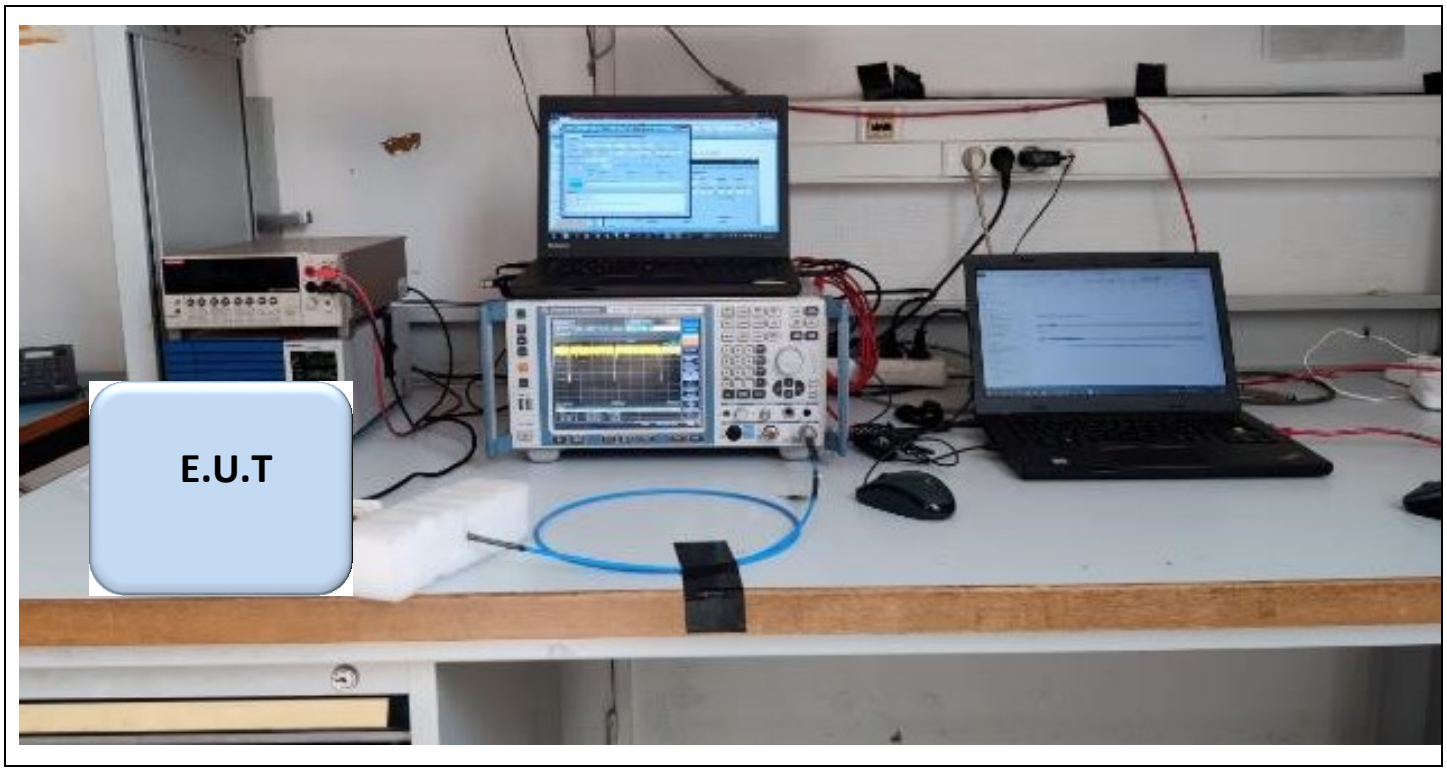
- The Equipment under Test is installed:
☑ On a table
☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:
☑ Conducted Method
☐ Radiated Method

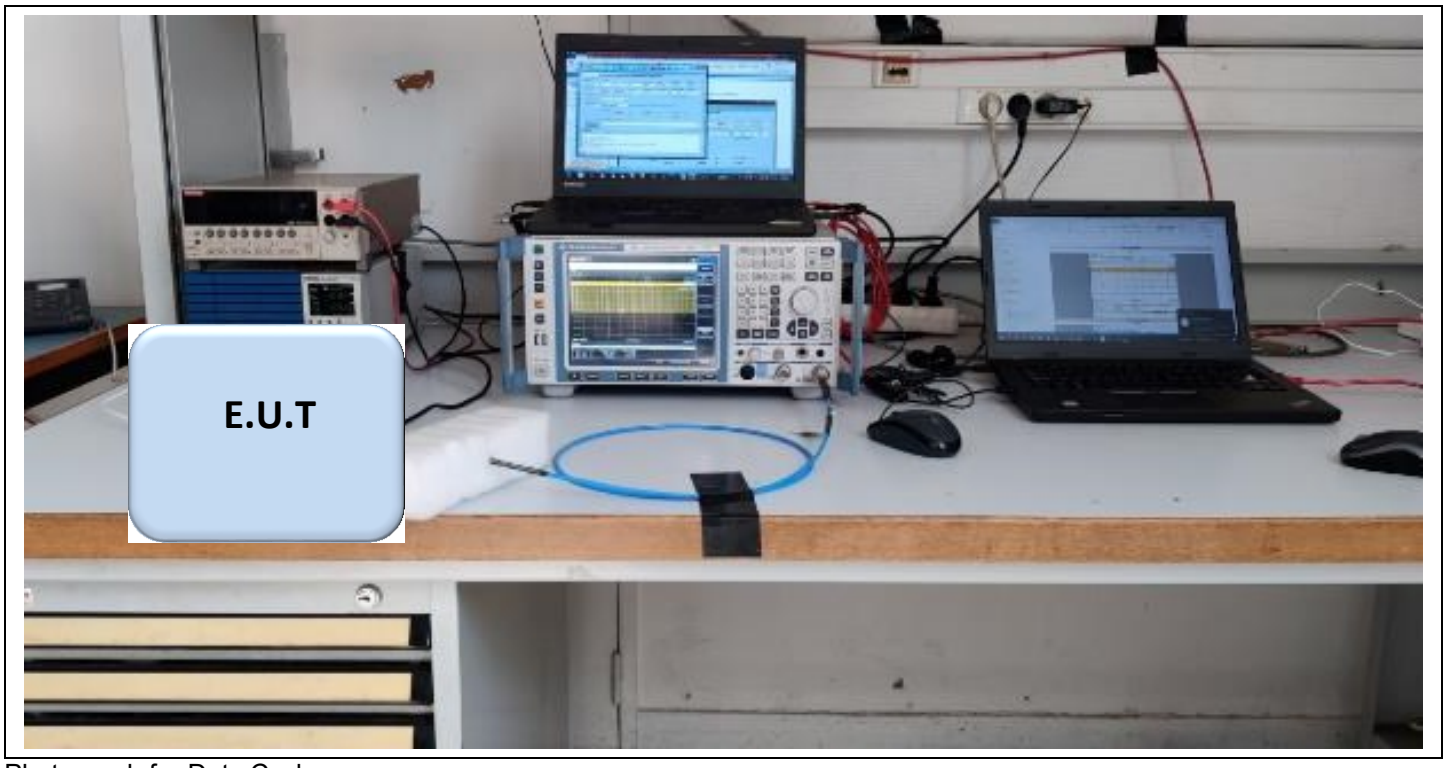
- Test Procedure:
☑ ANSI C63.10 § 11.6



Test set up of Duty Cycle



Photograph for Duty Cycle



Photograph for Duty Cycle

5.3. LIMIT

None

5.4. TEST EQUIPMENT LIST

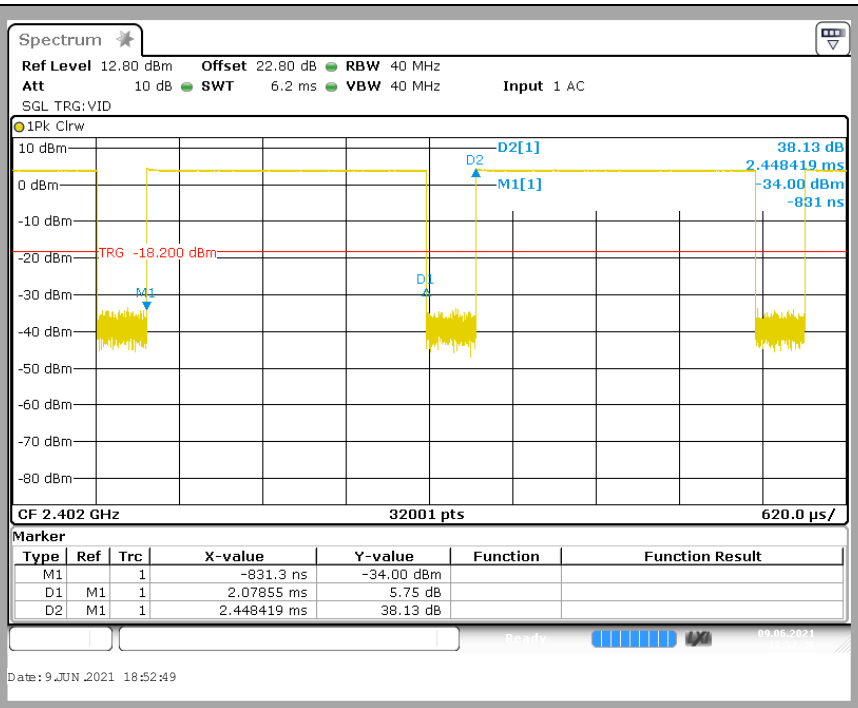
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
EMI receiver	ROHDE & SCHWARZ	ESR7	A2642026	2019/07	2021/07
Cable + Attenuateur 20dB	PASTERNACK	PE350-150CM	A5329970	2020/09	2021/09
Power supply	KIKUSUI	PCR500M	A7049006	See Multimeter	See Multimeter
Multimeter	KEITHLEY	2000	A1242090	2021/03	2023/03
R&S Commander Software	ROHDE & SCHWARZ	Version 1,6,4	-	-	-
Load 50 ohms	TELEGARTNER	-	A7150103	2021/04	2023/04
Load 50 ohms	TELEGARTNER	-	A7150104	2021/04	2023/04

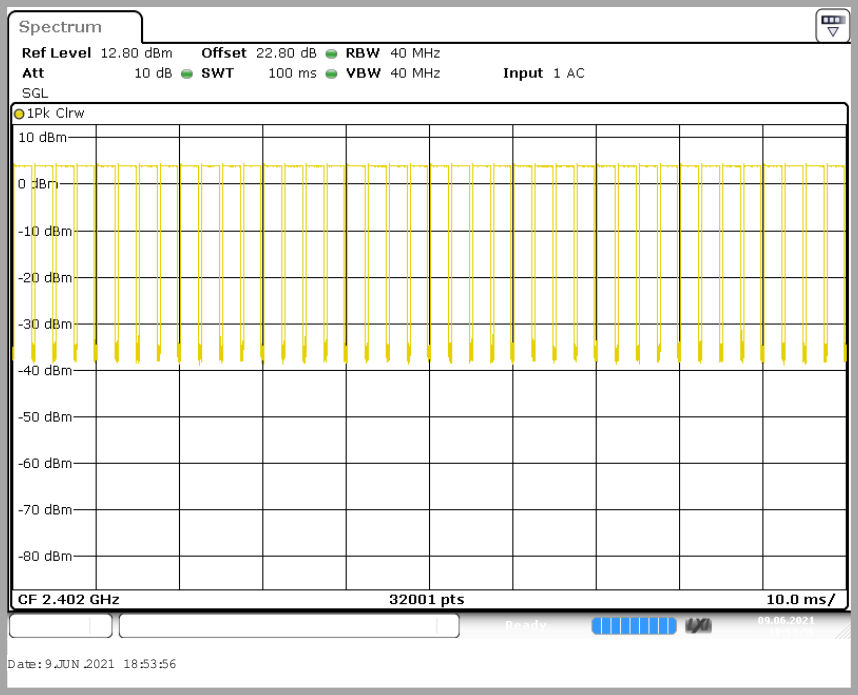
Note: In our quality system, the test equipment calibration due is more & less 2 months

5.5. RESULTS

Duty Cycle / 1M

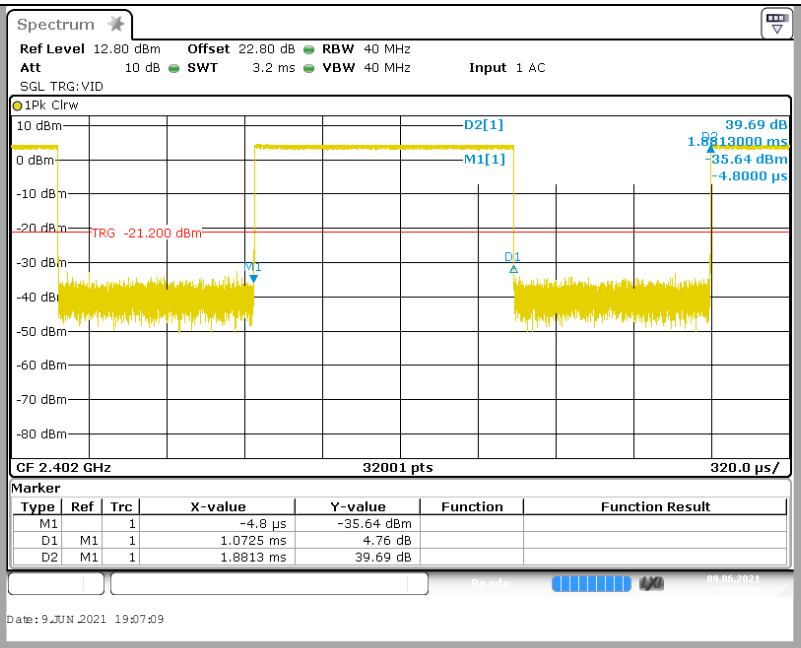
Channel

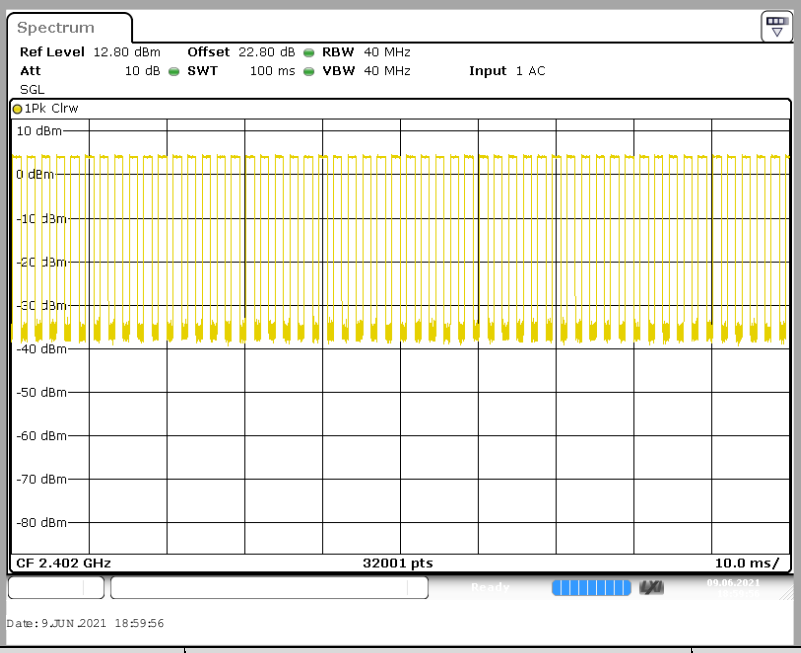




Channel	Duty Cycle (%)	Duty Cycle Correction (dB)
Channel	84.893	$20\log(\frac{1}{duty\ cycle})$ = 1.4225

Duty Cycle / 2M
Channel





Channel	Duty Cycle (%)	Duty Cycle Correction (dB)
Channel	57.0084	$20\log(\frac{1}{duty\ cycle})$ = 4.8697

5.6. CONCLUSION

Duty Cycle measurement performed on the sample of the product **COGECO DIW3930** **COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS 247 ISSUE 2** limits.

6. MAXIMUM CONDUCTED OUTPUT POWER

6.1. TEST CONDITIONS

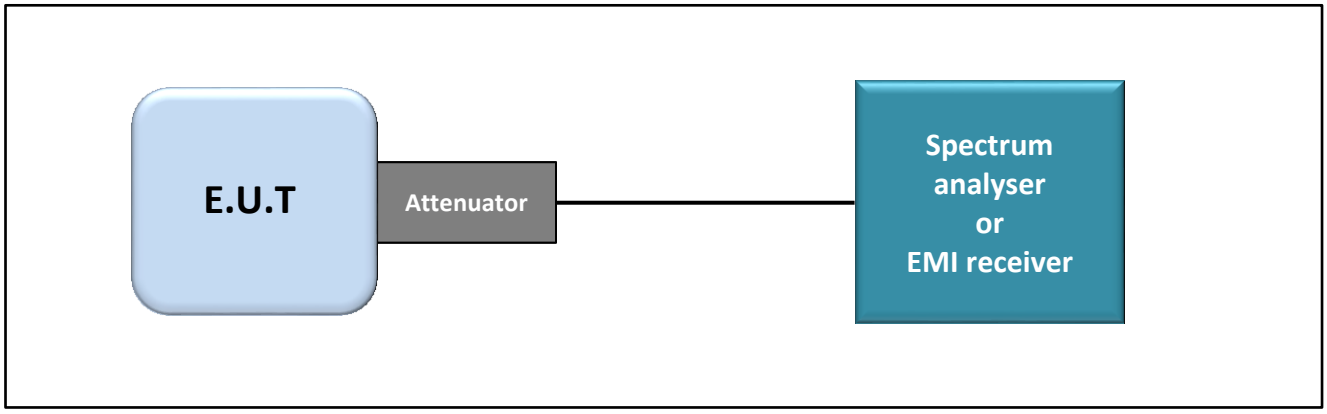
Test performed by	: Julien Palard
Date of test	: June 17, 2021
Ambient temperature	: 26 °C
Relative humidity	: 36 %

6.2. TEST SETUP

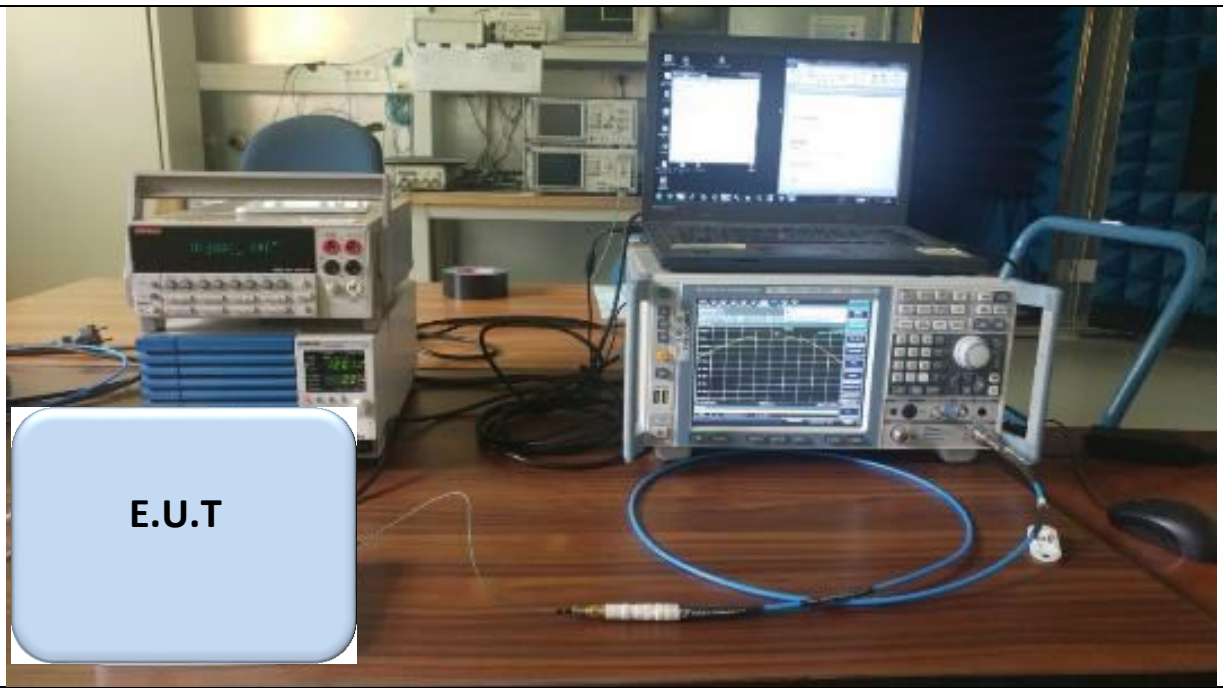
- The Equipment under Test is installed:
☑ On a table
☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:
☑ Conducted Method
☐ Radiated Method

- Test Procedure:
☑ ANSI C63.10 § 11.9.1.1
☐ ANSI C63.10 § 11.9.1.2
☐ ANSI C63.10 § 11.9.2.2.2 (Method AVGSA-1)
☐ ANSI C63.10 § 11.9.2.2.4 (Method AVGSA-2)



Test set up of Maximum Conducted Output Power



Photograph for Maximum Conducted Output Power

6.3. LIMIT

Frequency range	Maximum Conducted Output Power
2400MHz to 2483.5MHz	≤30dBm*

*Remark: Limits are reduced by G-6dBi if Overall Antenna Gain above 6dBi

6.4. TEST EQUIPMENT LIST

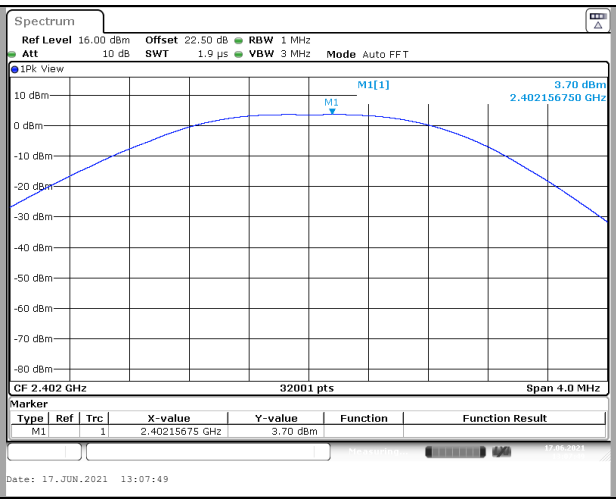
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Power supply	KIKUSUI	PCR500M	A7049006	Calibrate with multimeter	Calibrate with multimeter
Multimeter	KEITHLEY	2000	A1242090	2021/03	2023/03
R&S Commander Software	ROHDE & SCHWARZ	Version 1,6,4	-	-	-
Cable SONDE 026+ Attenuateur 20dB	PASTERNACK	PE350-150CM	A5329971	2020/09	2021/09
EMI signal analyser	ROHDE & SCHWARZ	FSV40	A4060061	2019/05	2021/05

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

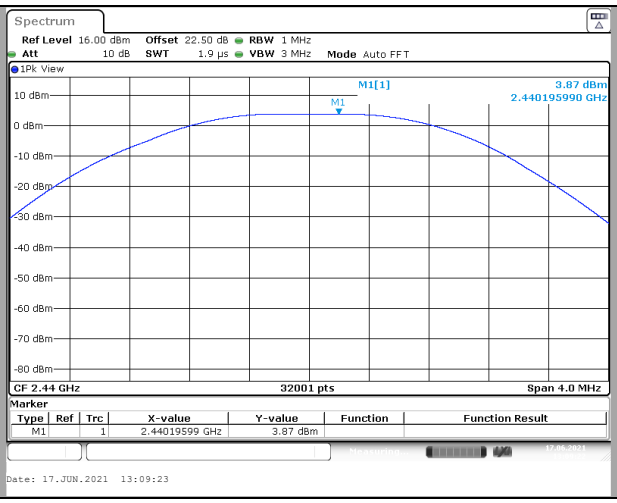
6.5. RESULTS

Maximum Conducted Output Power – BLE 4.2

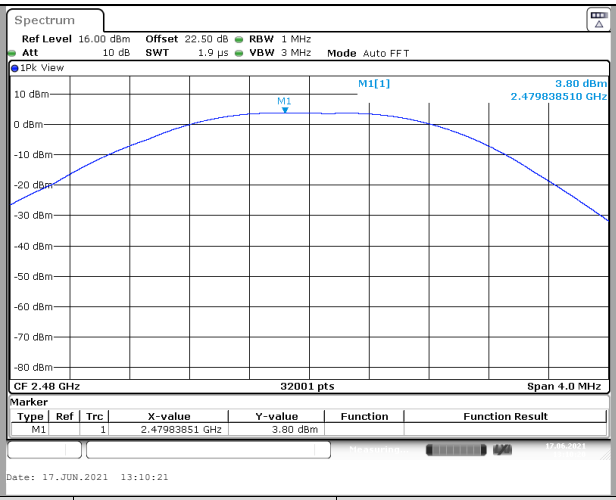
Cmin



Cnom



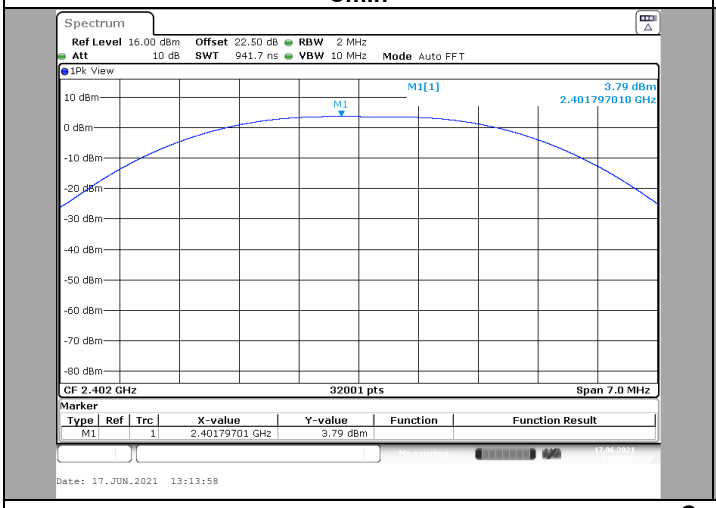
Cmax



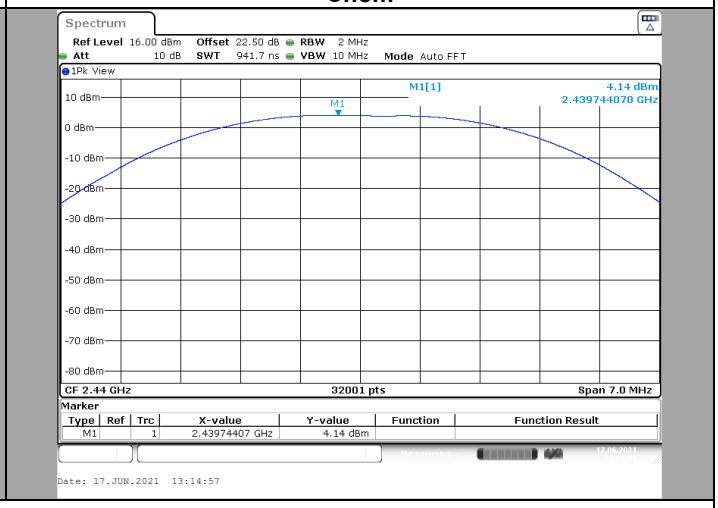
Channel	Offset Cable + Att (dB)	Antenna Gain (dBi)	Maximum Conducted Power (dBm)	Limit (dBm)
Cmin	**22.5**	**3.62**	**3.70**	30
Cnom	**22.5**	**3.62**	**3.87**	30
Cmax	**22.5**	**3.62**	**3.80**	30

Maximum Conducted Output Power – BLE 5.0

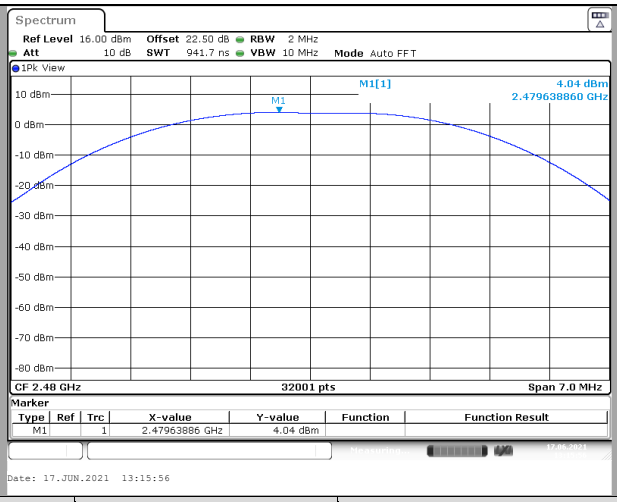
Cmin



Cnom



Cmax



Channel	Offset Cable + Att (dB)	Antenna Gain (dBi)	Maximum Conducted Power (dBm)	Limit (dBm)
Cmin	**22.5**	**3.62**	**3.79**	30
Cnom	**22.5**	**3.62**	**4.14**	30
Cmax	**22.5**	**3.62**	**4.04**	30

6.6. CONCLUSION

Maximum Conducted Output Power measurement performed on the sample of the product **COGECO DIW3930 COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS 247 ISSUE 2** limits.

7. POWER SPECTRAL DENSITY

7.1. TEST CONDITIONS

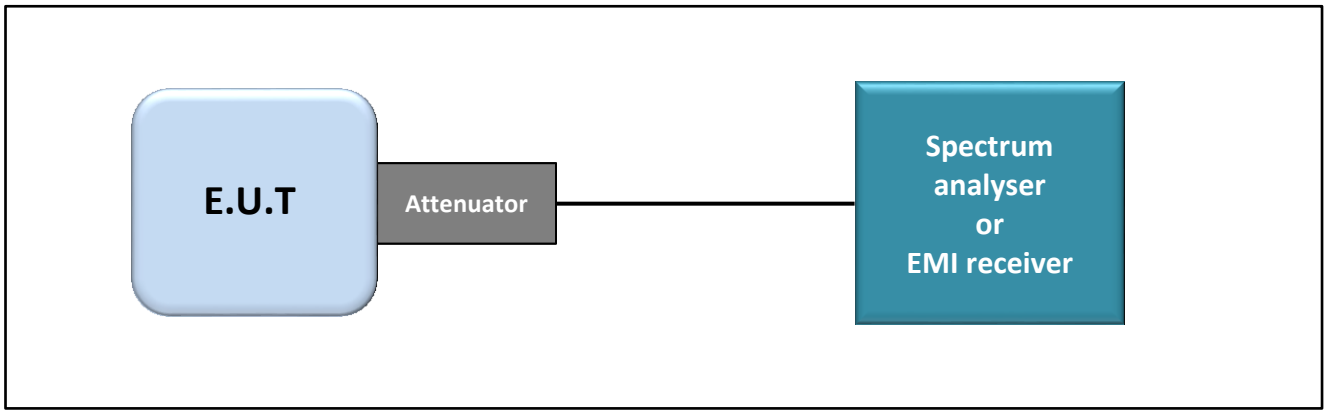
Test performed by	: Julien Palard
Date of test	: June 17, 2021
Ambient temperature	: 26 °C
Relative humidity	: 36 %

7.2. TEST SETUP

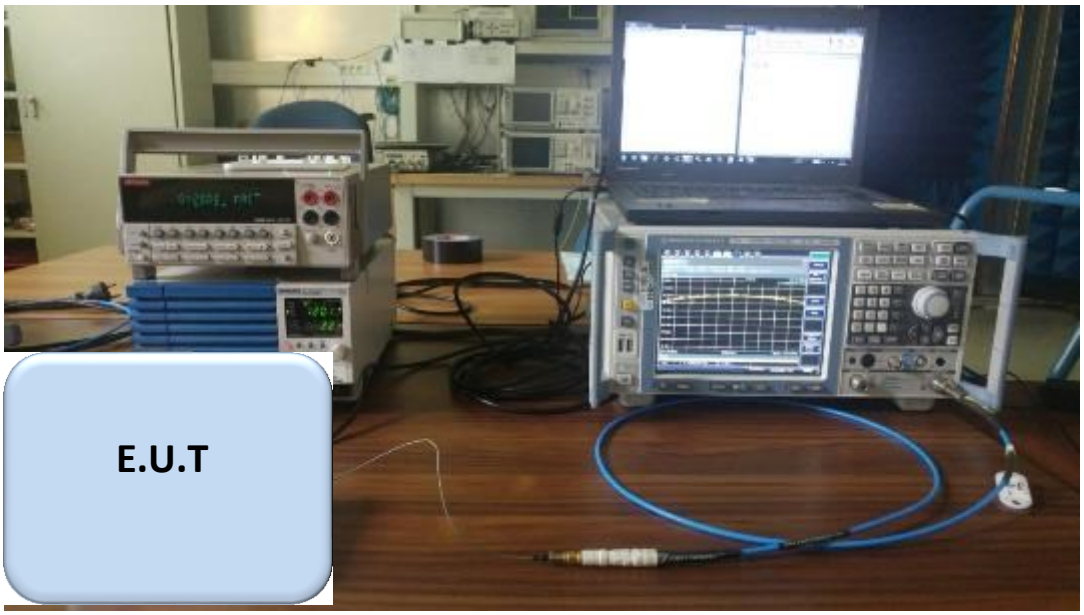
- The Equipment Under Test is installed:
☑ On a table
☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:
☑ Conducted Method
☐ Radiated Method

- Test Procedure:
☑ ANSI C63.10 § 11.10.2 (Method PKPSD)
☐ ANSI C63.10 § 11.10.3 (Method AVGPSD-1)



Test set up of Power Spectral Density



Photograph for Power Spectral Density

7.3. LIMIT

Frequency range	Power Spectral Density
2400MHz to 2483.5MHz	≤8dBm/3kHz*

*Remark: Limits are reduced by G-6dBi if Overall Antenna Gain above 6dBi

7.4. TEST EQUIPMENT LIST

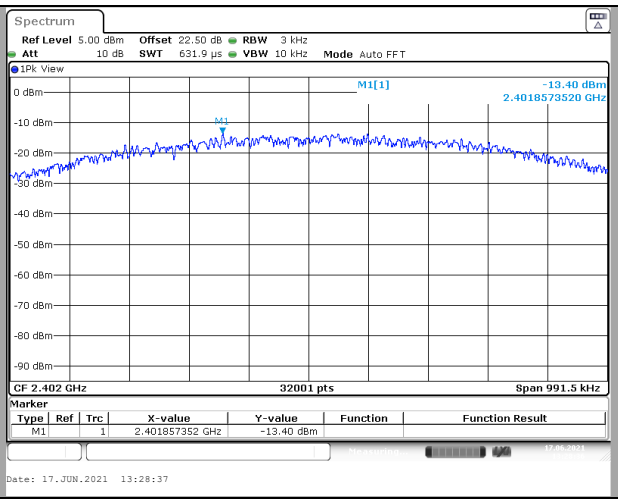
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Power supply	KIKUSUI	PCR500M	A7049006	Calibrate with multimeter	Calibrate with multimeter
Multimeter	KEITHLEY	2000	A1242090	2021/03	2023/03
R&S Commander Software	ROHDE & SCHWARZ	Version 1,6,4	-	-	-
Cable SONDE 026+ Attenuateur 20dB	PASTERNACK	PE350-150CM	A5329971	2020/09	2021/09
EMI signal analyser	ROHDE & SCHWARZ	FSV40	A4060061	2019/05	2021/05

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

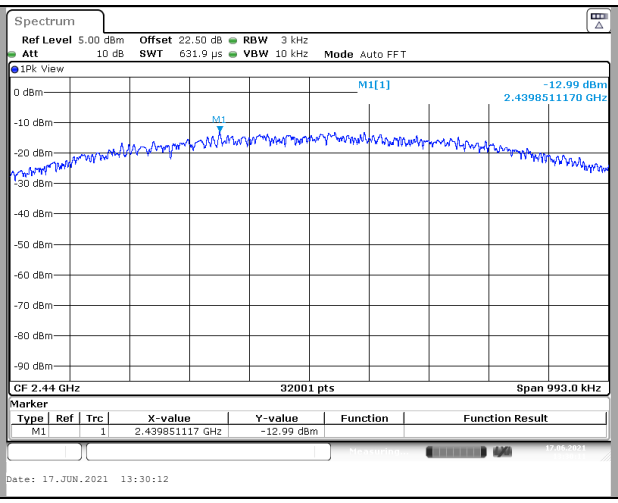
7.5. RESULTS

Power Spectral Density – BLE 4.2

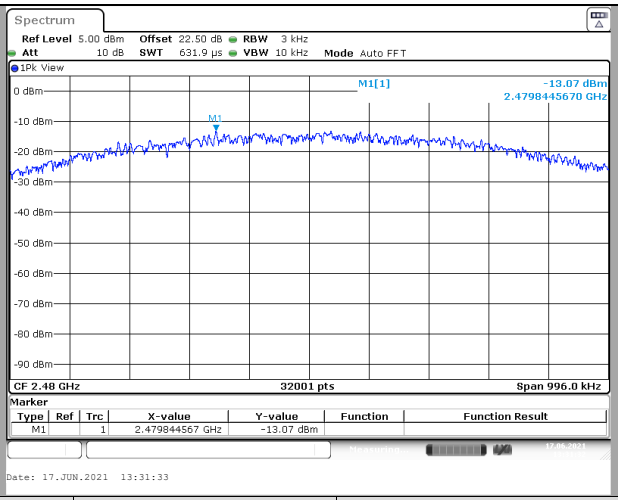
Cmin



Cnom



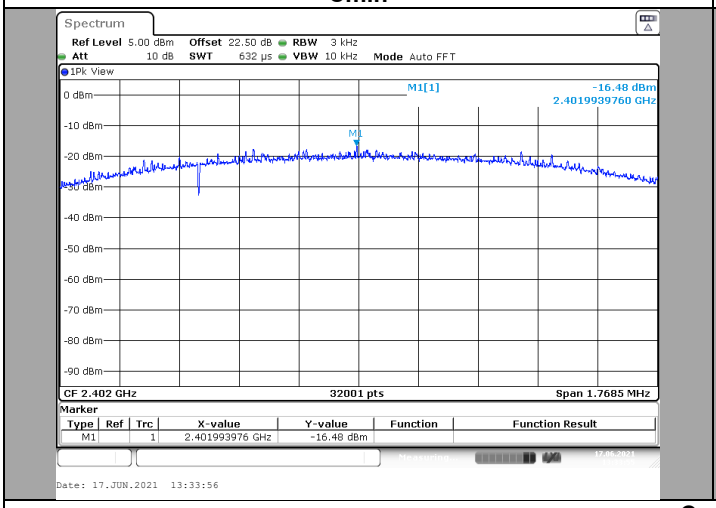
Cmax



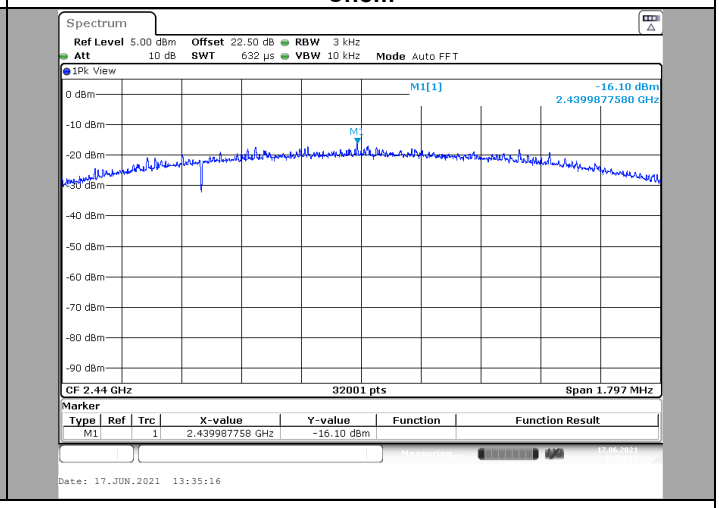
Channel	Offset Cable + Att (dB)	Antenna Gain (dBi)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)
Cmin	**22.5**	**3.62**	**-13.40**	8
Cnom	**22.5**	**3.62**	**-12.99**	8
Cmax	**22.5**	**3.62**	**-13.07**	8

Power Spectral Density – BLE 5.0

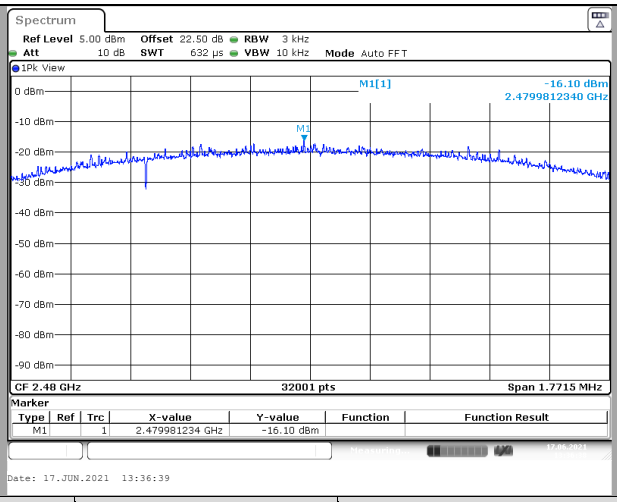
Cmin



Cnom



Cmax



Channel	Offset Cable + Att (dB)	Antenna Gain (dBi)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)
Cmin	**22.5**	**3.62**	**-16.48**	8
Cnom	**22.5**	**3.62**	**-16.10**	8
Cmax	**22.5**	**3.62**	**-16.10**	8

7.6. CONCLUSION

Power Spectral Density measurement performed on the sample of the product **COGECO DIW3930 COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS 247 ISSUE 2** limits.

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

8.1. TEST CONDITIONS

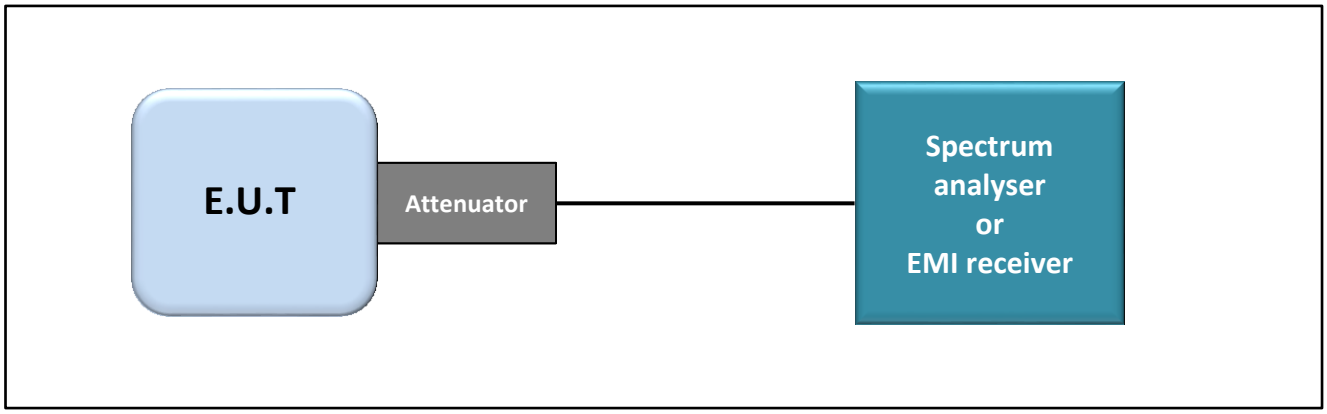
Test performed by	: Julien Palard
Date of test	: June 17, 2021
Ambient temperature	: 26 °C
Relative humidity	: 36 %

8.2. TEST SETUP

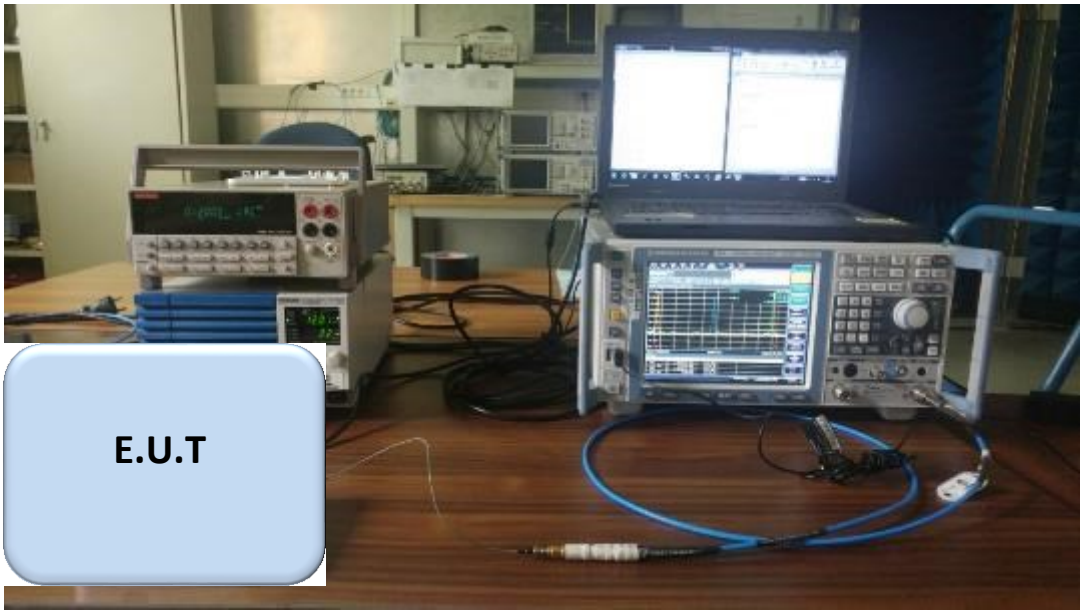
- The Equipment Under Test is installed:
☑ On a table
☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:
☑ Conducted Method
☐ Radiated Method

- Test Procedure:
☑ ANSI C63.10 § 11.11



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

8.3. LIMIT

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

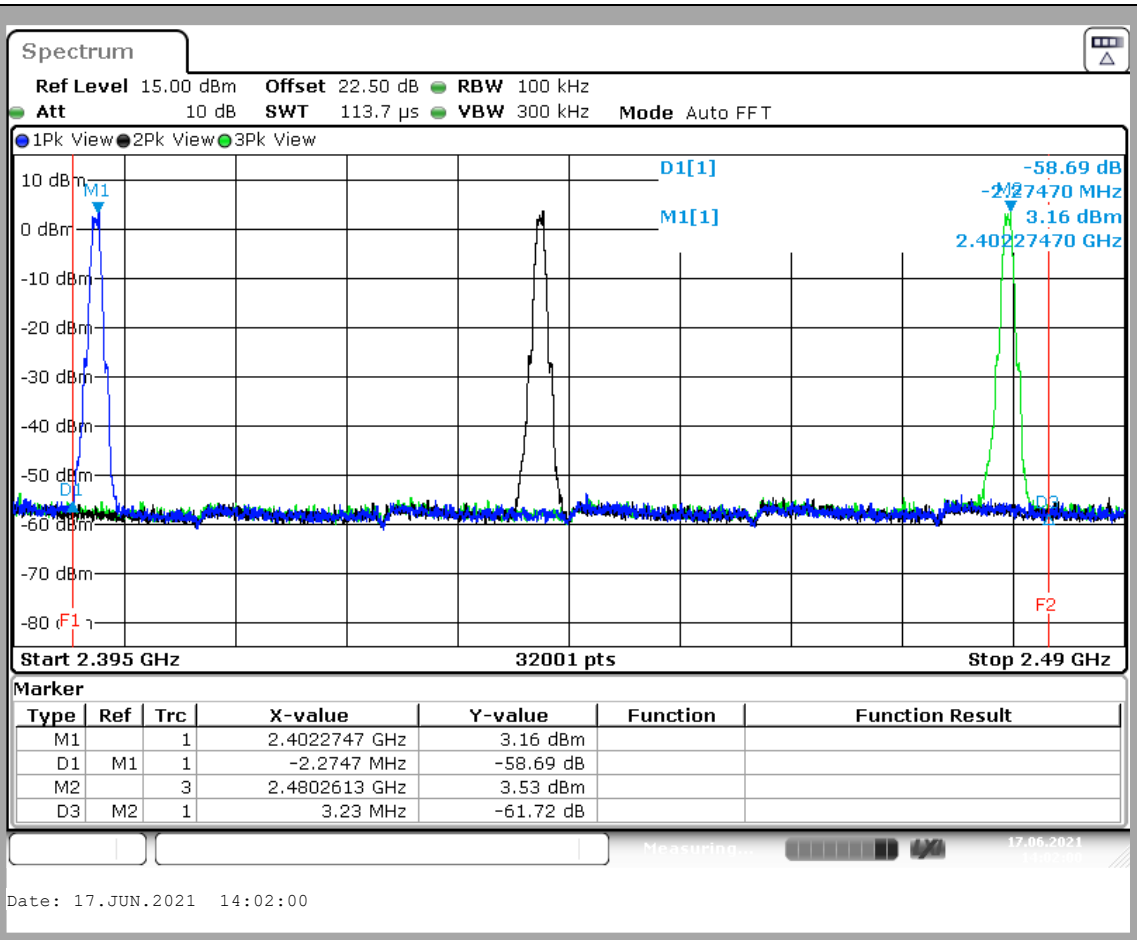
8.4. TEST EQUIPMENT LIST

DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Power supply	KIKUSUI	PCR500M	A7049006	Calibrate with multimeter	Calibrate with multimeter
Multimeter	KEITHLEY	2000	A1242090	2021/03	2023/03
R&S Commander Software	ROHDE & SCHWARZ	Version 1,6,4	-	-	-
Cable SONDE 026+ Attenuateur 20dB	PASTERNACK	PE350-150CM	A5329971	2020/09	2021/09
EMI signal analyser	ROHDE & SCHWARZ	FSV40	A4060061	2019/05	2021/05

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

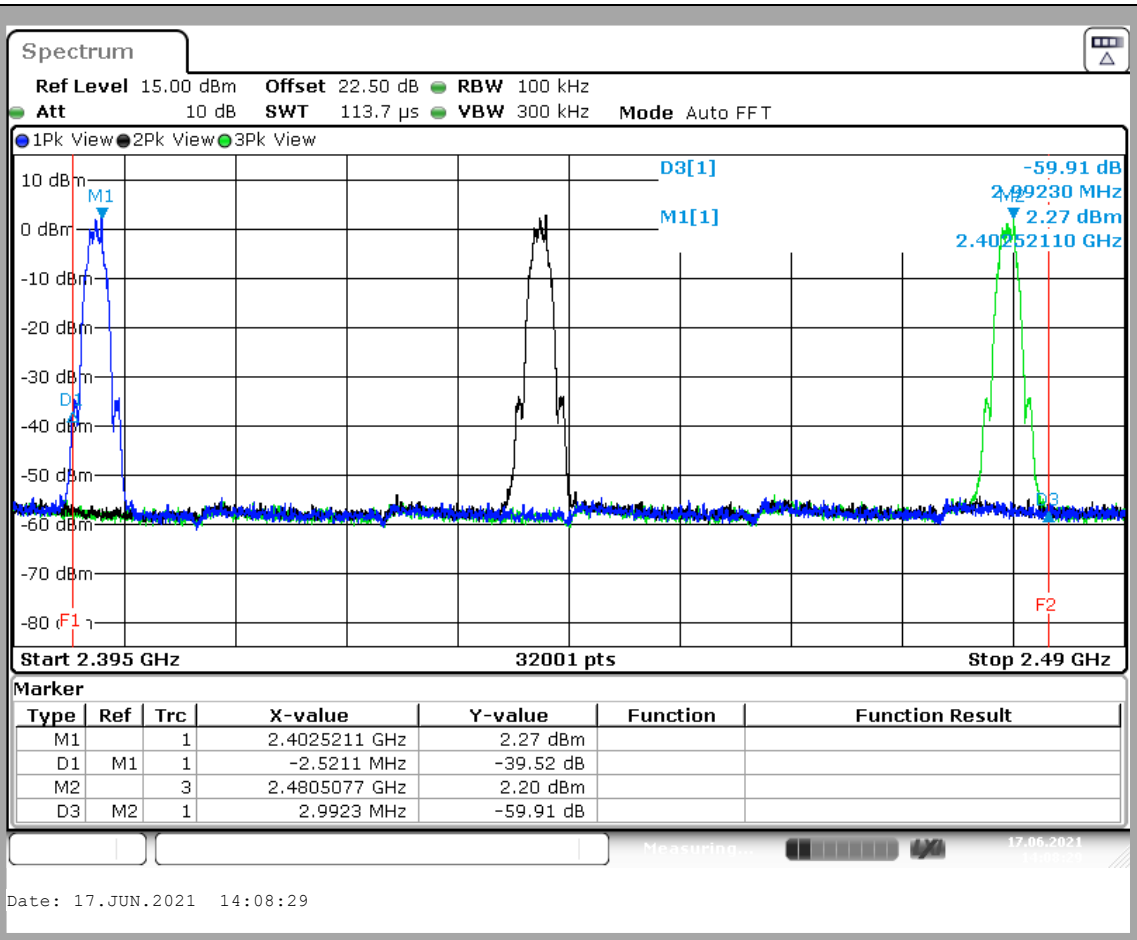
8.5. RESULTS

Cmin/Cnom/Cmax – BLE 4.2



Frequency (MHz)	Level (dBc)	Limit (dBc)
2400	58.69	20
2483.5	61.72	20

Cmin/Cnom/Cmax – BLE 5.0



Frequency (MHz)	Level (dBc)	Limit (dBc)
2400	39.52	20
2483.5	59.91	20

8.6. CONCLUSION

Unwanted Emission into non-restricted frequency bands at the band edge measurement performed on the sample of the product **COGECO DIW3930 COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS 247 ISSUE 2** limits.

9. UNWANTED EMISSIONS INTO NON-RESTRICTED FREQUENCY BANDS

9.1. TEST CONDITIONS

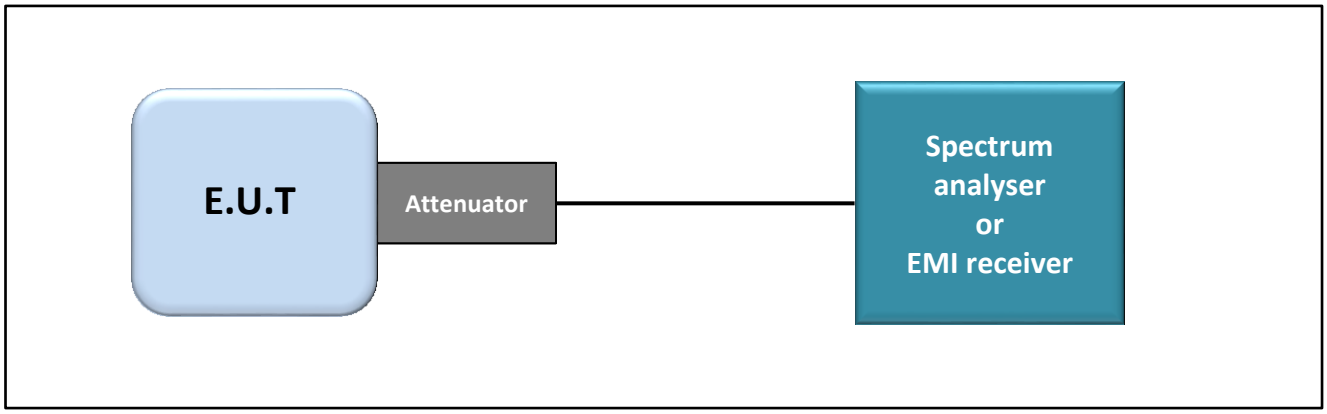
Test performed by	: Julien Palard
Date of test	: June 18, 2021
Ambient temperature	: 27 °C
Relative humidity	: 34 %

9.2. TEST SETUP

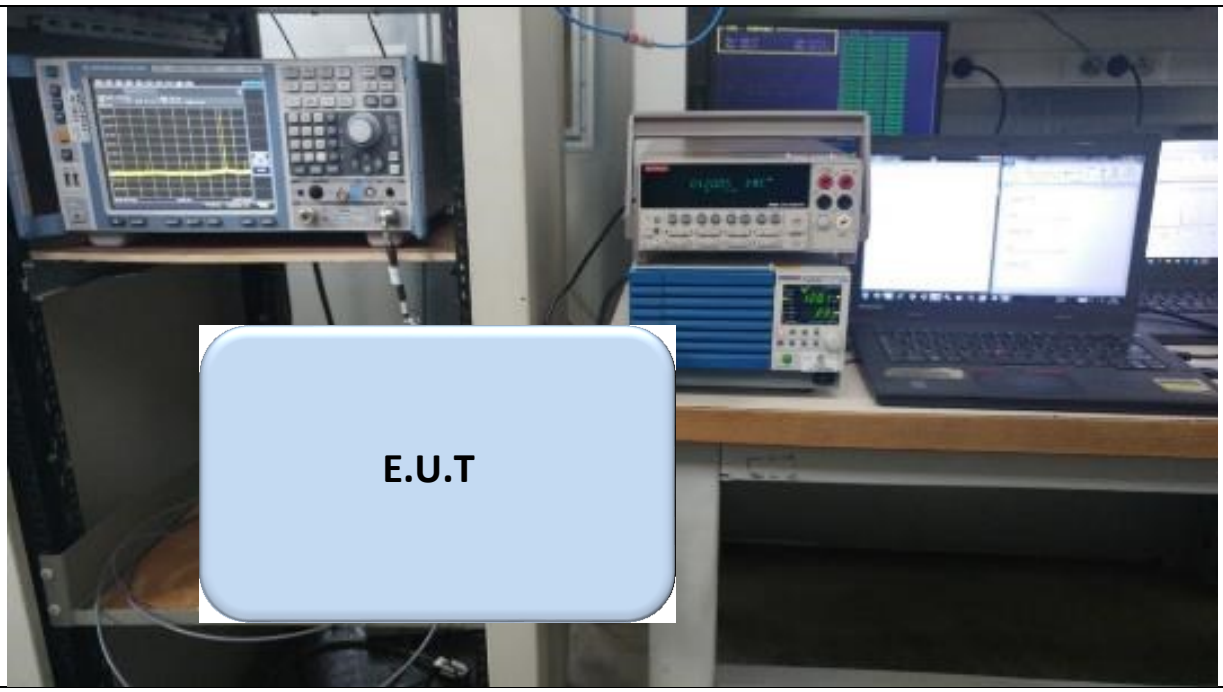
- The Equipment under Test is installed:
☑ On a table
☐ In an anechoic chamber

- Measurement is performed with a spectrum analyzer in:
☑ Conducted Method
☐ Radiated Method

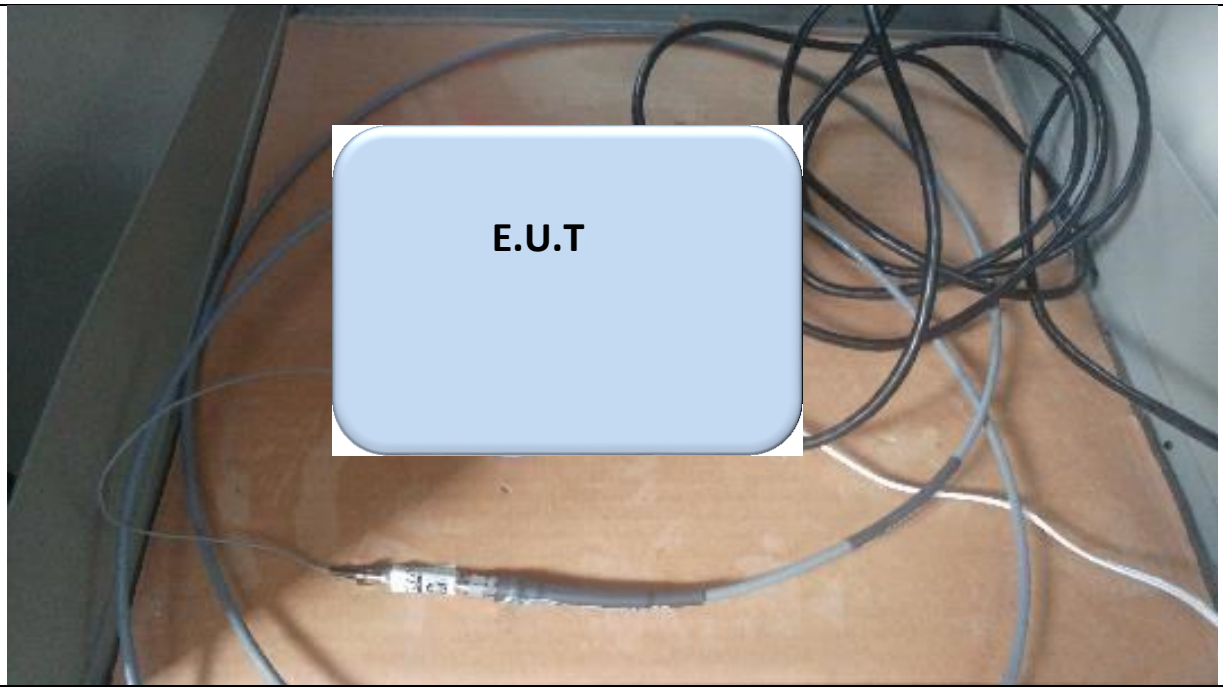
- Test Procedure:
☑ ANSI C63.10 § 11.11



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



Photograph for Unwanted Emission into non-restricted frequency bands



Photograph for Unwanted Emission into non-restricted frequency bands

9.3. LIMIT

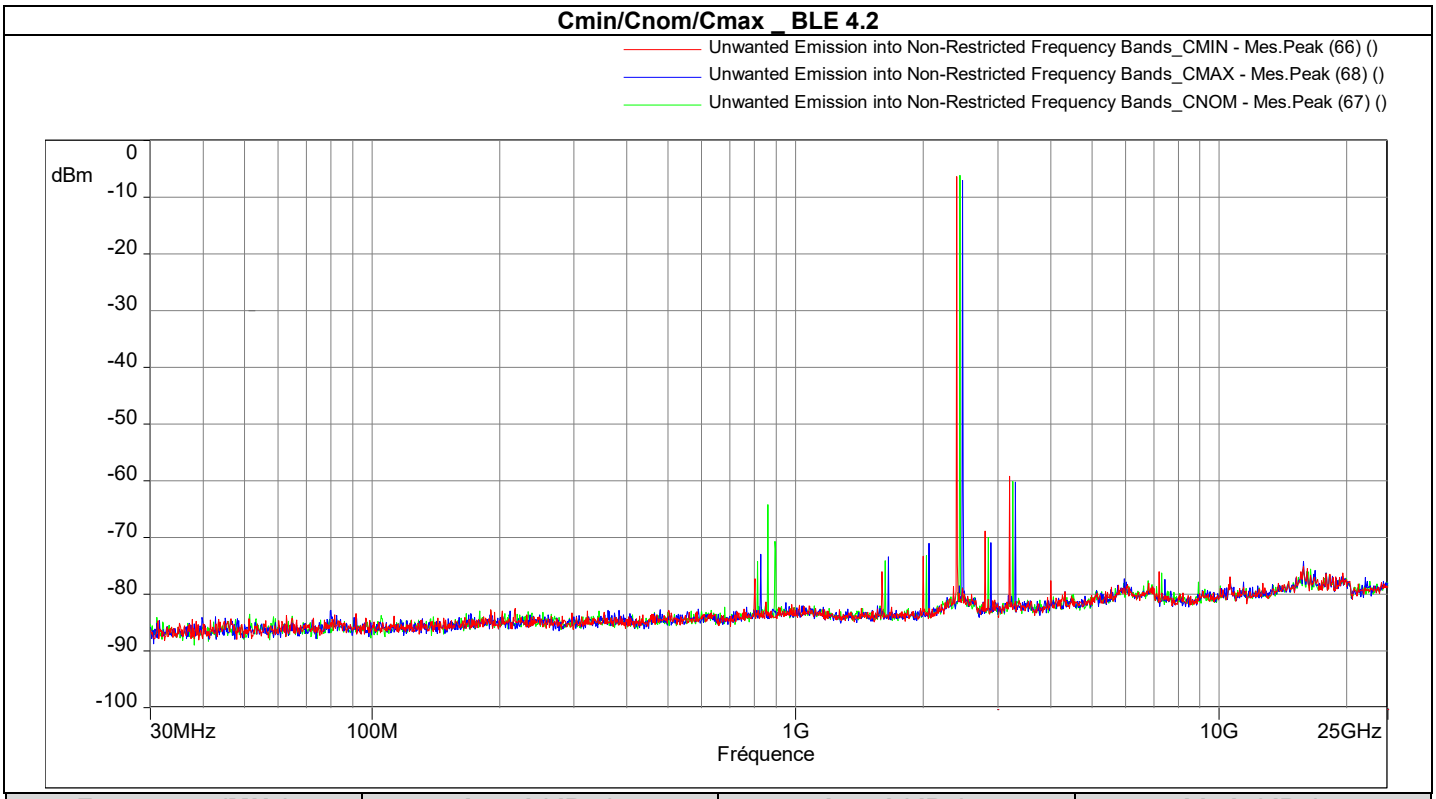
All Spurious Emissions must be at least 20dB (Maximum Conduted Power) below the Fundamental Radiator Level

9.4. TEST EQUIPMENT LIST

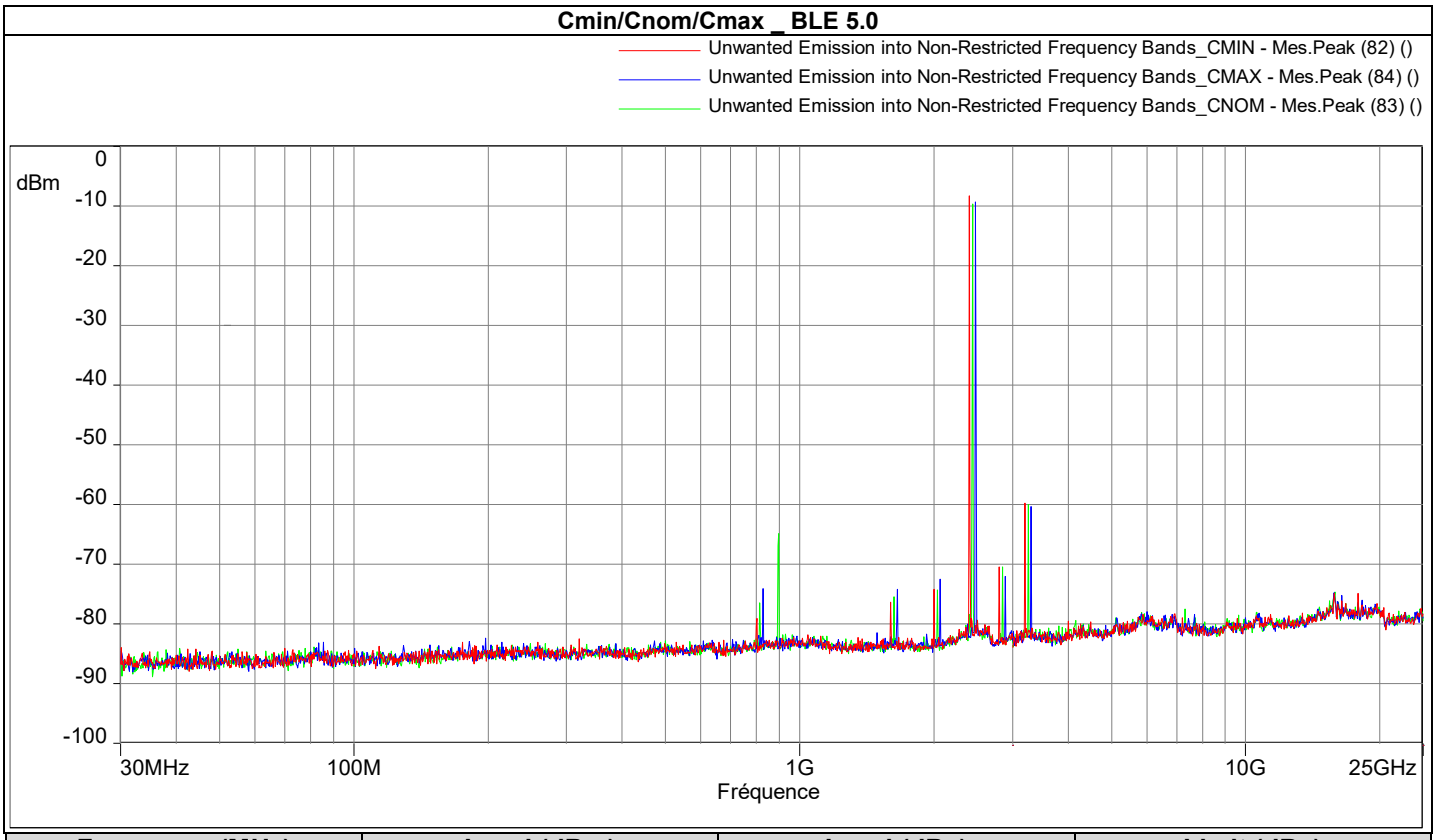
DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
BAT EMC Software	NEXIO	Version 3.19.1.18	-	-	-
Cable S36 chamber	PASTERNACK	PE360-1500CM	A5329940	2021/02	2022/02
EMI receiver	ROHDE & SCHWARZ	FSV40GHz	A4060061	2019/05	2021/05
Multimeter	KEITHLEY	2000	A1242090	2019/05	2021/05
Power supply	KIKUSUI	PCR500M	A7040079	See Multimeter	See Multimeter
High Pass Filter 2,4GHz	WAINWRIGHT	WHK12-2494	A7484068	2019/07	2021/07
Attenuator 3dB Cable Spurious Conducted	-	WA54-3-12	A7122223	2021/02	2022/02
Load 50 ohms	TELEGARTNER	-	A7150105	2021/04	2023/04
Load 50 ohms	TELEGARTNER	-	A7150104	2021/04	2023/04

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

9.5. RESULTS



Frequency (MHz)	Level (dBm)	Level (dBc)	Limit (dBc)
2402.00	-6,40		
2802	-68,9	62,50	20
3202	-59,25	52,85	20
4000	-77,54	71,14	20
7207	-76,03	69,63	20
2442.00	-6,12		
2847	-69,95	63,83	20
3253	-60,09	53,97	20
7320	-76,29	70,17	20
2480.00	-6,99		
2893	-70,86	63,87	20
3307	-60,24	53,25	20
7440	-77,43	70,44	20



Frequency (MHz)	Level (dBm)	Level (dBc)	Limit (dBc)
2402.00	-8,27		
2802	-70,24	61,97	20
3202	-59,73	51,46	20
2442.00	-9,70		
2847	-70,50	60,80	20
3253	-60,01	50,31	20
2480.00	-9,30		
2893	-72,01	62,71	20
3307	-60,37	51,07	20

9.6. CONCLUSION

Unwanted Emission into non-restricted frequency bands measurement performed on the sample of the product **COGECO DIW3930 COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.247 & RSS 247 ISSUE 2** limits.

10. AC POWER LINE CONDUCTED EMISSIONS

10.1. TEST CONDITIONS

Test performed by	: Laurent DENEUX
Date of test	: June 24, 2021
Ambient temperature	: 21 °C
Relative humidity	: 46 %

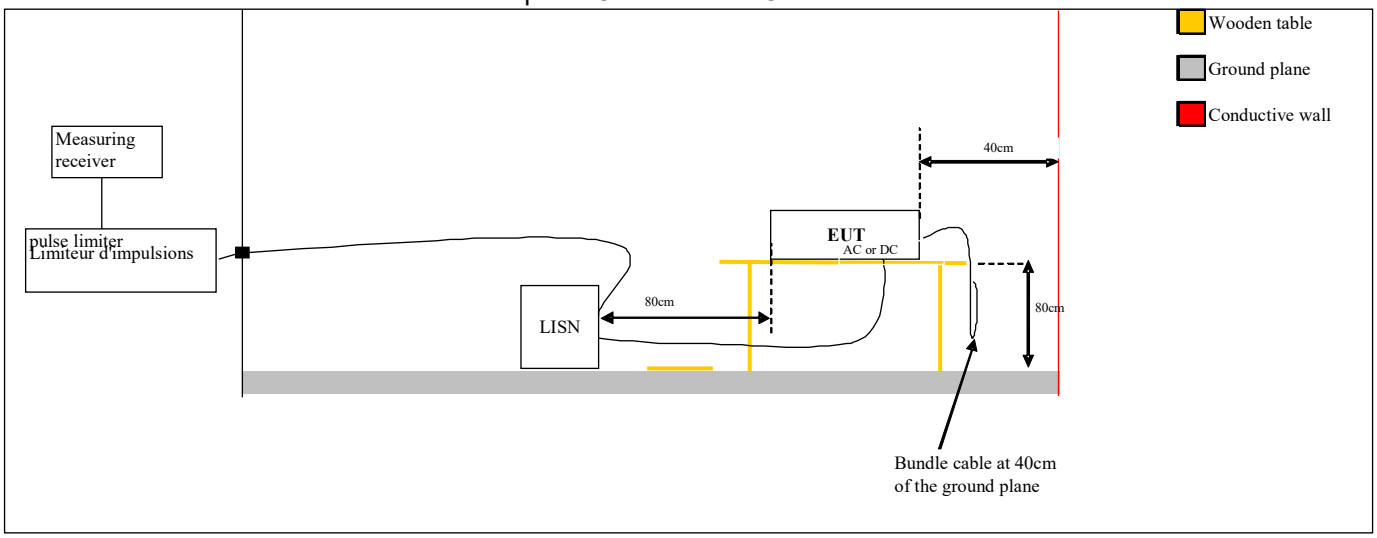
10.2. TEST SETUP

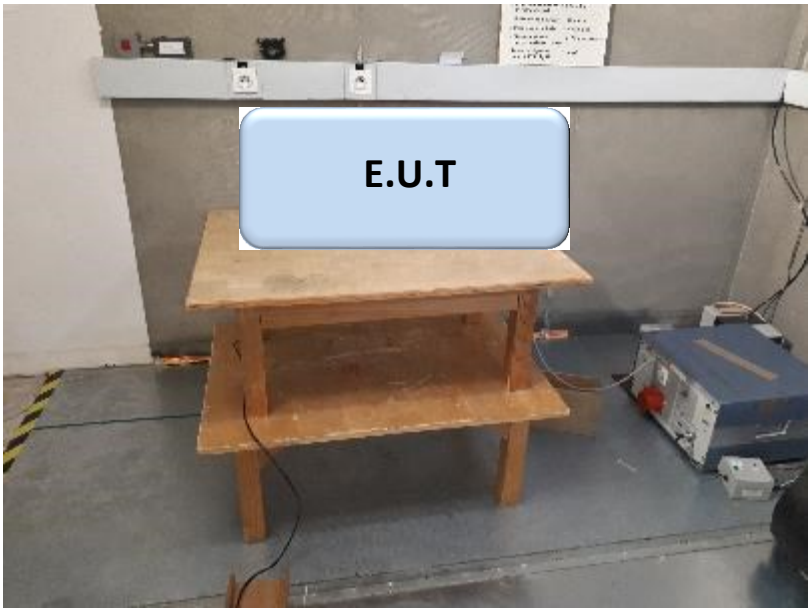
The product has been tested according to ANSI C63.10 method. The EUT is placed on the ground reference plane, at 80cm from the LISN. The distance between the EUT and the vertical ground plane is 40cm. Auxiliaries are powered by another LISN. The cable has been shorted to 1meter length. The EUT is powered through the LISN. Measurement is made with a receiver in peak mode. This was followed by a Quasi-Peak, i.e. CISPR measurement for any strong signal. If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary. The LISN (measure) is 50Ω / 50µH. Interconnecting cables and equipment's were moved to position that maximized emission.

Voltage table used (for Power Line Conducted Emissions):

Type	Measurement performed:	
☑ AC / ☐ DC (Auxiliary used)	☑ 120VAC/60Hz	☑ 240VAC/50Hz
☐ USB (Laptop auxiliary)	☐ 120VAC/60Hz (Laptop auxiliary)	☐ 240VAC/50Hz(Laptop auxiliary)

Test set up of AC Power Line Conducted Emissions





Photograph for AC Power Line Conducted Emissions (Front view)

Photograph for AC Power Line Conducted Emissions (Front view)

10.3. LIMIT

Frequency range	Level	Detector
0,15kHz to 0,5MHz	66dBµV to 56µV*	QPeak
	56dBµV to 46µV*	Average
0,5MHz to 5MHz	56dBµV	QPeak
	46dBµV	Average
5MHz to 30MHz	60BµV	QPeak
	50dBµV	Average

*Decreases with the logarithm of the frequency

10.4. TEST EQUIPMENT LIST

Test equipment used					
Description	**Manufacturer**	**Model**	**Identifier**	**Last Calibration date**	**Calibration due date**
EMI Test Receiver	ROHDE & SCHWARZ	ESU	A2642018	2020-10	2022-10
V ISLN	ROHDE & SCHWARZ	ESH2-Z5	C2322002	2020-10	2021-10
Pulse limiter	ROHDE & SCHWARZ	ESH3-Z2	A2649008	2020-05	2021-05
Cable	-	-	A5329417	2020-12	2021-12
Cable	LCIE	-	A5329589	2020-11	2021-11
Reference ground plan 3 x 3m	L.C.I.E.	-	-	-	-

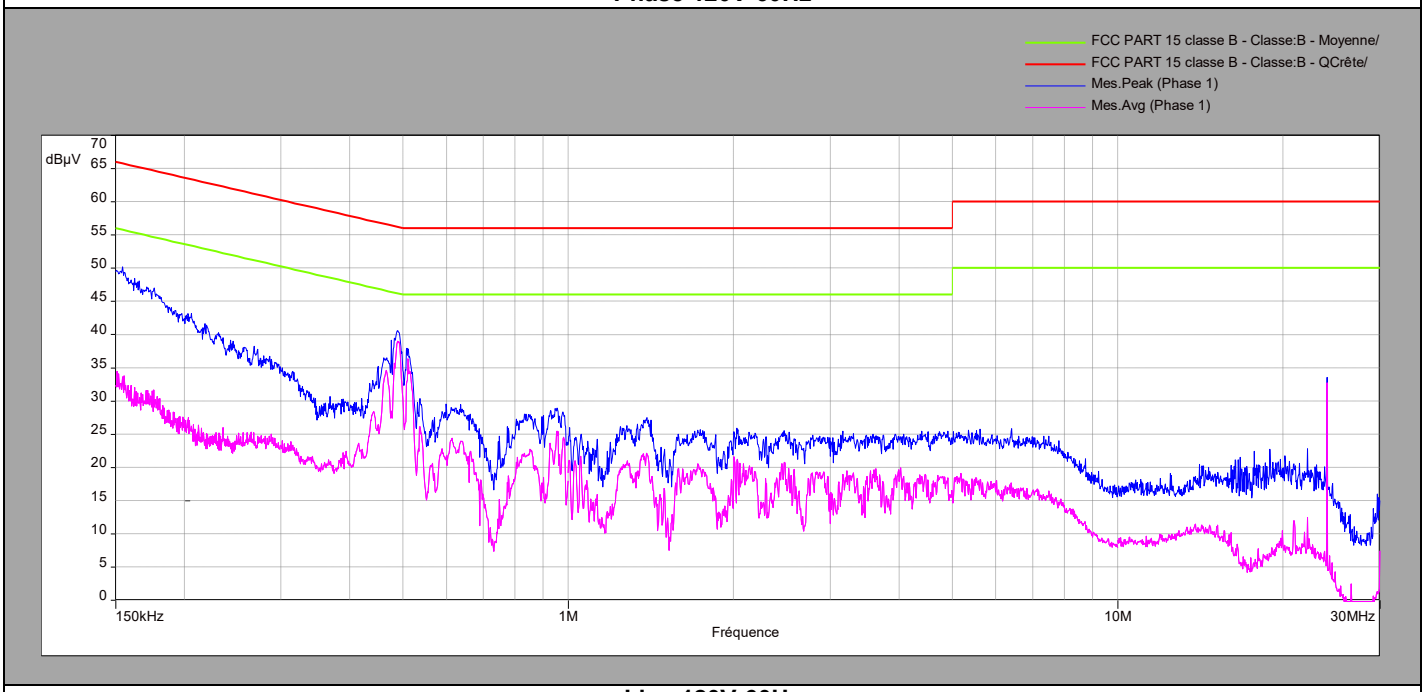
10.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

☑ None ☐ Divergence:

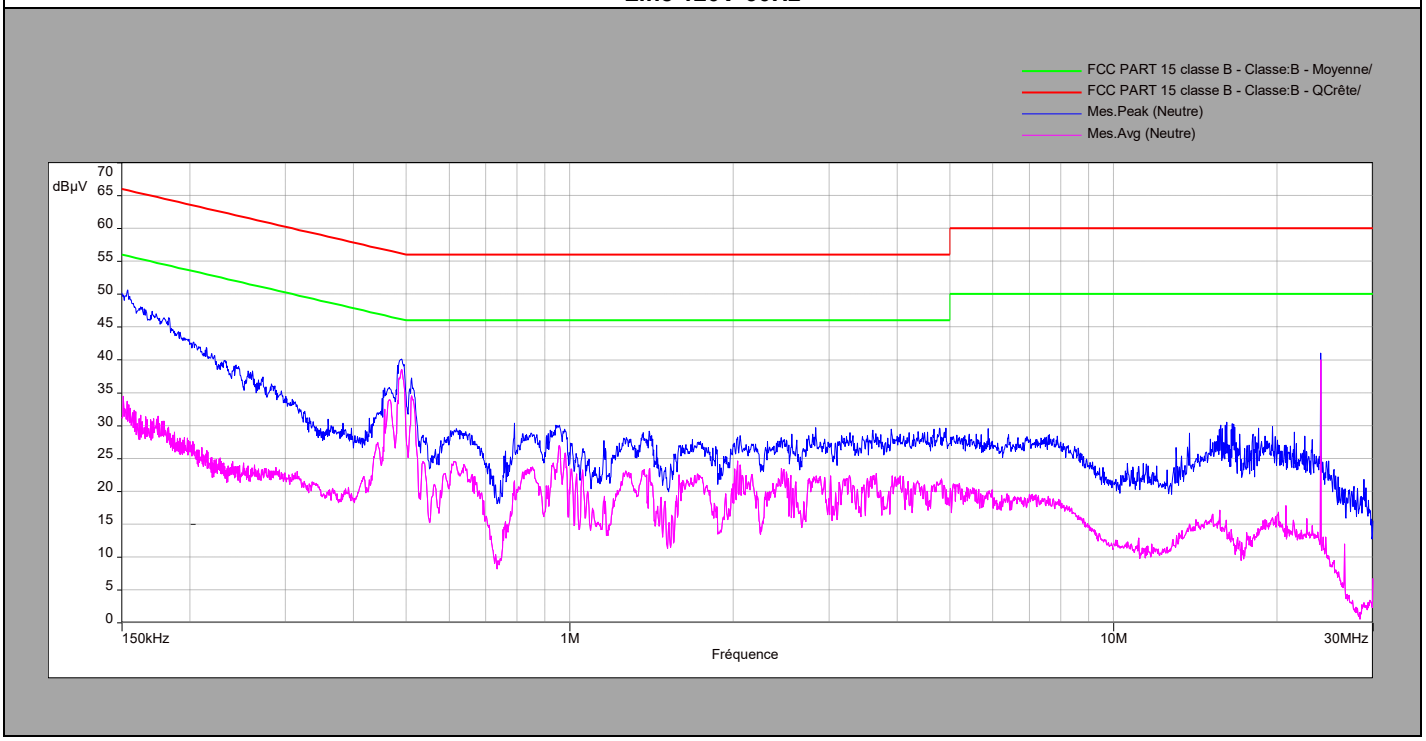
10.6. RESULTS

Cmin

Phase 120V-60Hz



Line 120V-60Hz

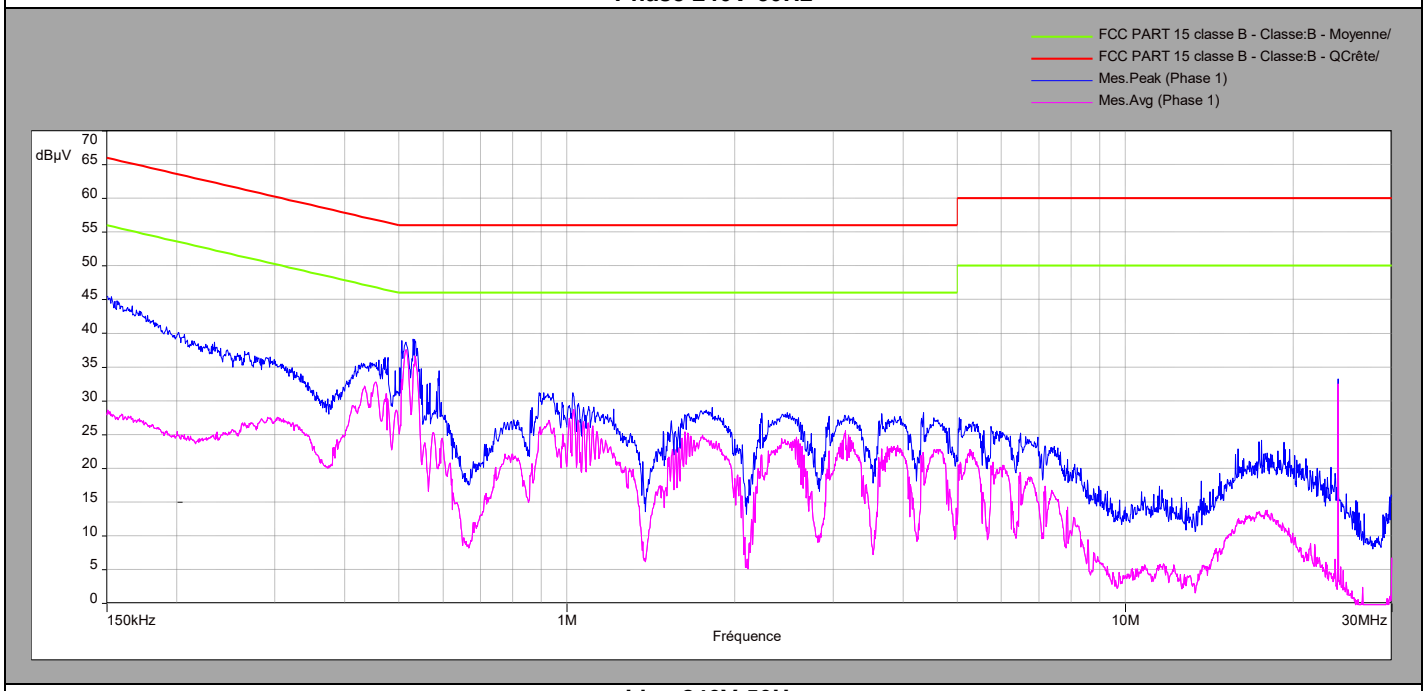


Phase Line 120V-60Hz							
Frequency (MHz)	Peak Level (dBµV)	Quasi-Peak Level (dBµV)	Quasi-Peak Limit (dBµV)	Margin Quasi-Peak (dBµV)	Average Level (dBµV)	Average Limit (dBµV)	Margin Average (dBµV)
0,1545	49,34	-	65,75	16,41	30,12	55,75	25,63
0,4895	40,37	-	56,18	15,81	38,26	46,18	7,92
0,599	27,65	-	56	28,35	17,13	46	28,87
0,9545	28,62	-	56	27,38	23,76	46	22,24
16,374	16,04	-	60	43,96	3,31	50	46,69

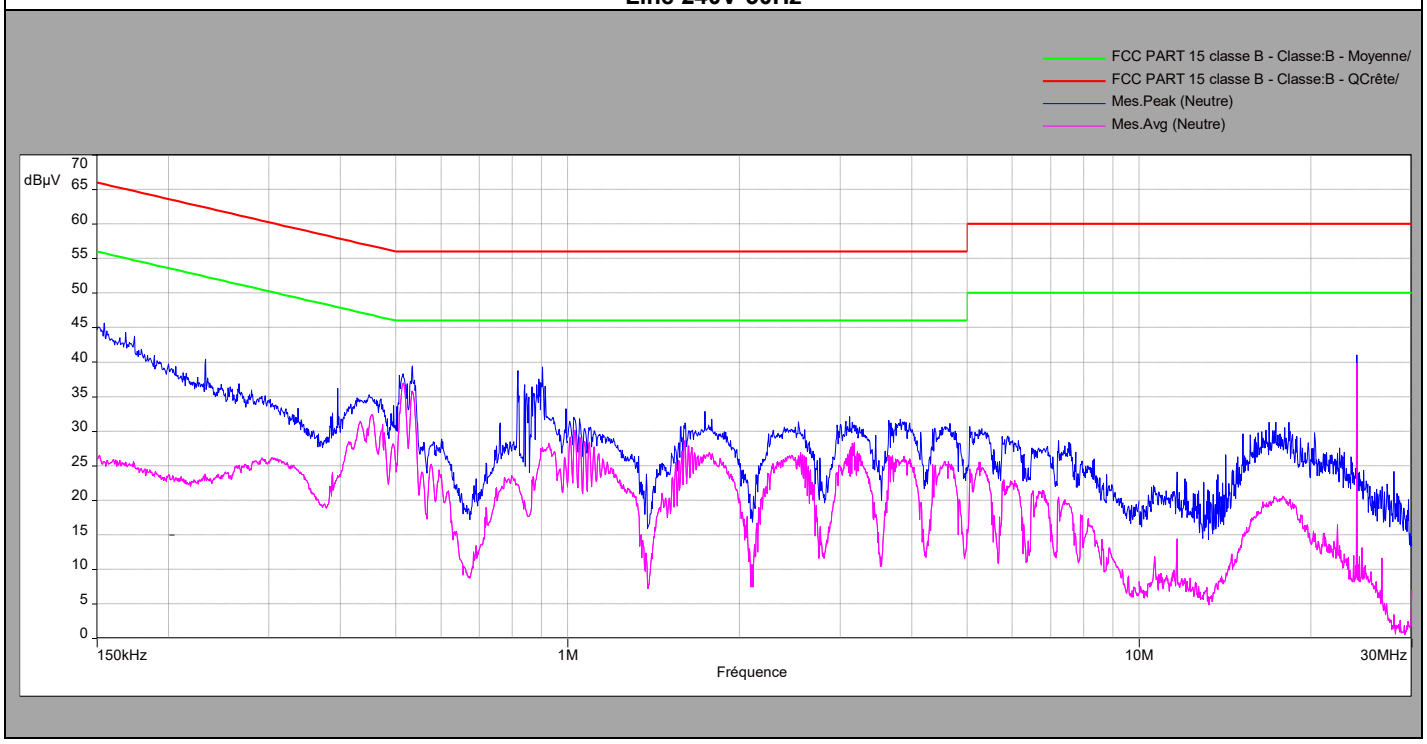
Neutral Line 120V-60Hz							
Frequency (MHz)	Peak Level (dBµV)	Quasi-Peak Level (dBµV)	Quasi-Peak Limit (dBµV)	Margin Quasi-Peak (dBµV)	Average Level (dBµV)	Average Limit (dBµV)	Margin Average (dBµV)
0,154	49,33	-	65,78	16,45	29,53	55,78	26,25
0,2435	39,02	-	61,98	22,96	19,89	51,98	32,09
0,4905	40,04	-	56,16	16,12	37,99	46,16	8,17
5,878	27,45	-	60	32,55	16,79	50	33,21
7,882	26,72	-	60	33,28	15,42	50	34,58

Cmin

Phase 240V-50Hz



Line 240V-50Hz



Phase Line 240V-50Hz							
Frequency (MHz)	Peak Level (dBµV)	Quasi-Peak Level (dBµV)	Quasi-Peak Limit (dBµV)	Margin Quasi-Peak (dBµV)	Average Level (dBµV)	Average Limit (dBµV)	Margin Average (dBµV)
0,531	37,08	-	56	18,92	29,39	46	16,61
0,59	26,6	-	56	29,4	16,06	46	29,94
0,8925	30,29	-	56	25,71	20,97	46	25,03
17,522	22,73	-	60	37,27	9,82	50	40,18
24,046	33,47	-	60	26,53	32,47	50	17,53

Neutral Line 240V-50Hz							
Frequency (MHz)	Peak Level (dBµV)	Quasi-Peak Level (dBµV)	Quasi-Peak Limit (dBµV)	Margin Quasi-Peak (dBµV)	Average Level (dBµV)	Average Limit (dBµV)	Margin Average (dBµV)
0,1545	45,86	-	65,75	19,89	23,13	55,75	32,62
0,535	38,4	-	56	17,6	35,08	46	10,92
1,74	30,19	-	56	25,81	23,14	46	22,86
3,82	30,34	-	56	25,66	22,31	46	23,69
24,046	41,14		60	18,86	39,63	50	10,37

10.7. CONCLUSION

Ac Power Line Conducted Emission measurement performed on the sample of the product **COGECO DIW3930 COGECO**, **SN: 6211130035003**, in configuration and description presented in this test report, show levels compliant to the 47 CFR PART 15.247 & RSS 247 ISSUE 2 limits.

11. UNWANTED EMISSIONS IN RESTRICTED FREQUENCY BANDS

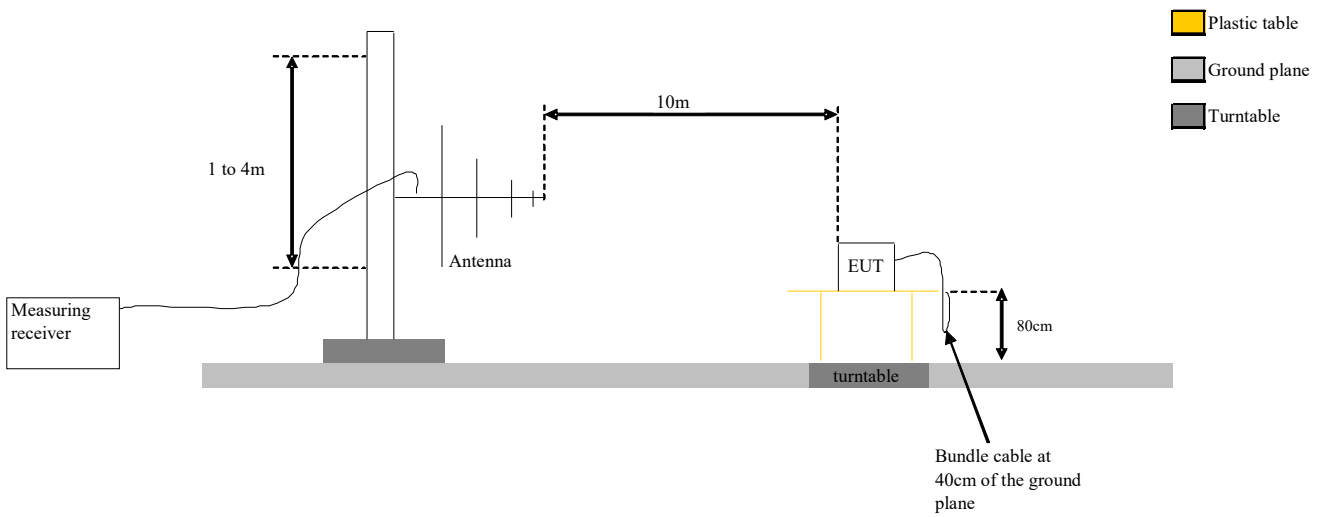
11.1. TEST CONDITIONS

Test performed by : Laurent DENEUX
Date of test : June 24, 2021 to June 25, 2021
Ambient temperature : 20 °C
Relative humidity : 45 %

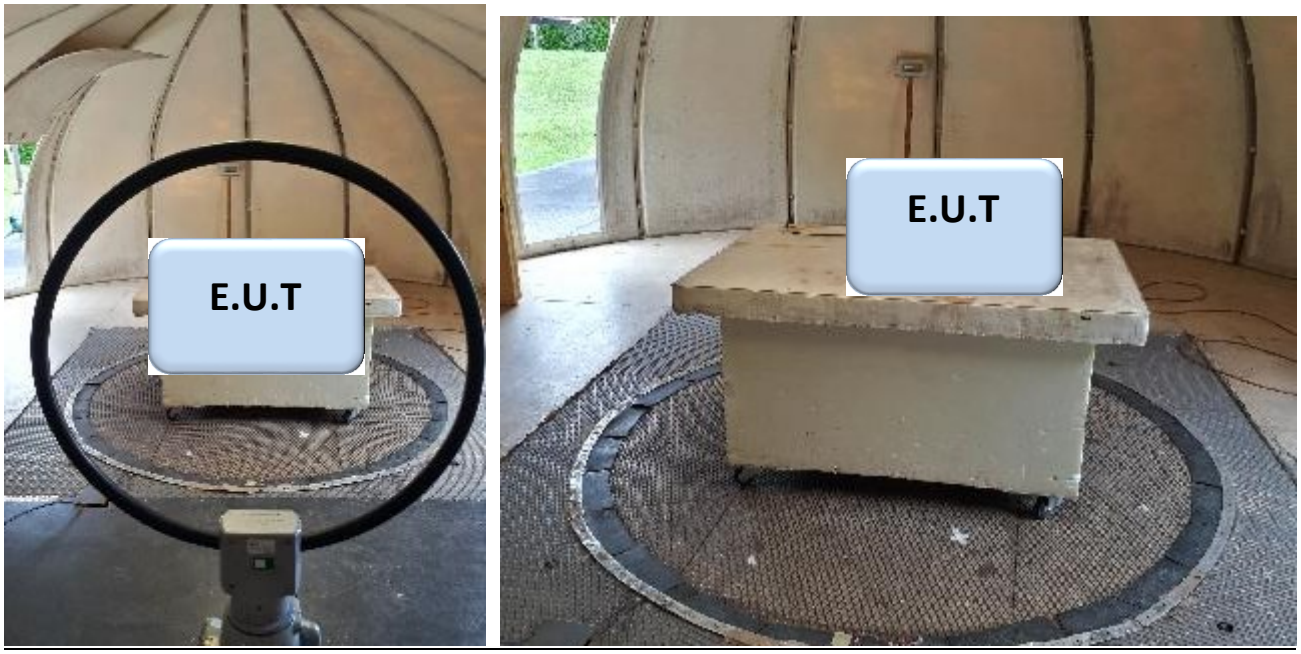
11.2. TEST SETUP

The product has been tested according to ANSI C63.10 and FCC part 15 subpart C:

Frequency range :	**Below 30MHz**	**From 30MHz to 1GHz**	**Above 1GHz**
Antenna Polarization :	Parallel, Perpendicular And Ground parallel	Horizontal And Vertical	Horizontal And Vertical
Antenna Height :	1m	Varied from 1m to 4m	Varied from 1m to 4m
Antenna Type :	Loop	Bi-Log	Horn
RBW Filter :	200Hz below 150kHz 9kHz above 150kHz	120kHz	1MHz
Maximization :	Turntable rotation of 360 degrees range		
EUT height :	0.8m		1.5m
Test site :	Open Aera Test Site	Open Aera Test Site	Open Aera Test Site
Distance EUT-Antenna :	3m	10m	3m



Test Set up for radiated measurement in open area test site



Photograph for Unwanted Emission in restricted frequency bands

Photograph for Unwanted Emission in restricted frequency bands

11.3. LIMIT

Measure at 300m		
Frequency range	**Level**	**Detector**
9kHz-490kHz	67.6dBµV/m /F(kHz)	QPeak
Measure at 30m		
Frequency range	**Level**	**Detector**
490kHz-1.705MHz	87.6dBµV/m /F(kHz)	QPeak
1.705MHz-30MHz	29.5dBµV/m	QPeak
Measure at 10m		
Frequency range	**Level**	**Detector**
30MHz to 88MHz	29.5dBµV/m	QPeak
88MHz to 216MHz	33dBµV/m	QPeak
216MHz to 960MHz	35.5BµV/m	QPeak
960MHz to 1000MHz	43.5dBµV/m	QPeak
Above 1000MHz	63.5dBµV/m	Peak
	43.5dBµV/m	Average
Measure at 3m		
Frequency range	**Level**	**Detector**
30MHz to 88MHz	40dBµV/m	QPeak
88MHz to 216MHz	43.5dBµV/m	QPeak
216MHz to 960MHz	46BµV/m	QPeak
960MHz to 1000MHz	54dBµV/m	QPeak
Above 1000MHz	74dBµV/m	Peak
	54dBµV/m	Average

11.4. TEST EQUIPMENT LIST

DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
BAT EMC Software	NEXIO	Version 3,19,1,18	-	-	-
Preamplifier	LCIE	LCIE-ALB-001	A7080073	2021/02	2023/02
Horn antenna	AH SYSTEMS	SAS 571	C2042041	2019/11	2021/11
Horn antenna (18-26,5GHz)	PASTERNACK	PE9852/2F-20	C2042048	2020/06	2022/06
EMI receiver	ROHDE & SCHWARZ	FSV40GHz	A4060061	2019/05	2021/05
Cable	PASTERNACK	PE360-3000CM	A5329872	2021/02	2022/02
Cable	PASTERNACK	PE360-1000CM	A5329939	2021/02	2022/02
Cable	PASTERNACK	PE360-1500CM	A5329940	2021/02	2022/02
High Pass Filter 2,4GHz	WAINWRIGHT	WHK12-2494	A7484068	2019/07	2021/07
Open test site	LCIE	-	F2000400	2021-02	2022-02
EMI Test Receiver	ROHDE & SCHWARZ	ESU	A2642018	2020-10	2022-10
Preamplifier	HELWETT PACKARD	8449B	A4069002	2020-09	2022-09
Cable	-	-	A5329442	2020-12	2021-12
Cable	-	-	A5329542	2020-11	2021-11
Loop antenna	R&S	HFH2-Z2	C2040269	2020-09	2022-09
Cable	-	-	A53291007	2021-02	2022-02
Horn antenna	ETS	3115	C2042016	2021-04	2023-04
Cable			A5329361	2020-12	2021-12
Antenne bilog	CHASE	CBL 6112A	C2040040	2021-04	2022-04
Cable	-	-	A5329876	2020-12	2021-12
Cable	-	-	A5329449	2020-12	2021-12

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

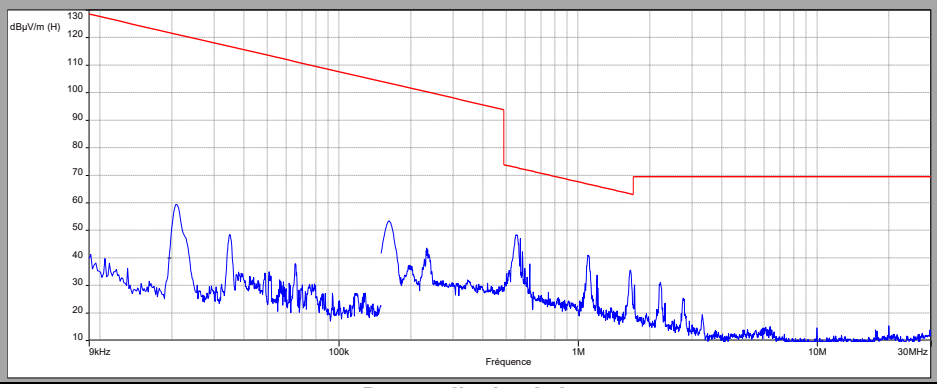
11.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

☑ None ☐ Divergence:

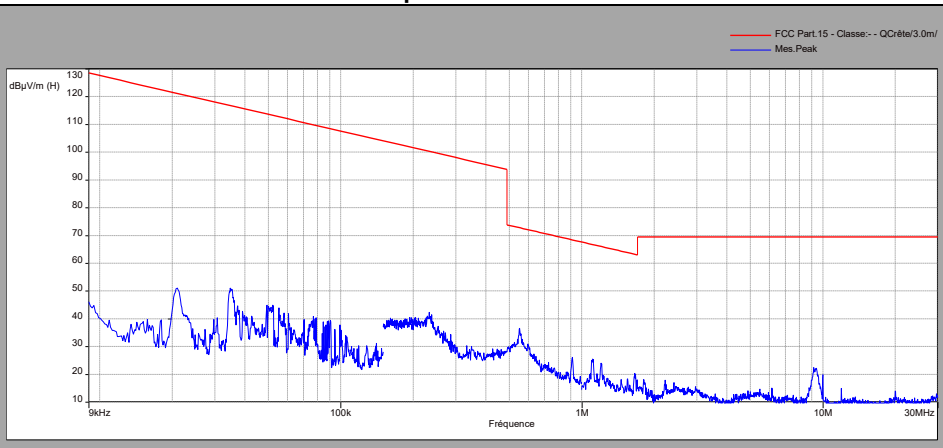
11.6. RESULTS

9kHz to 30MHz / 1M

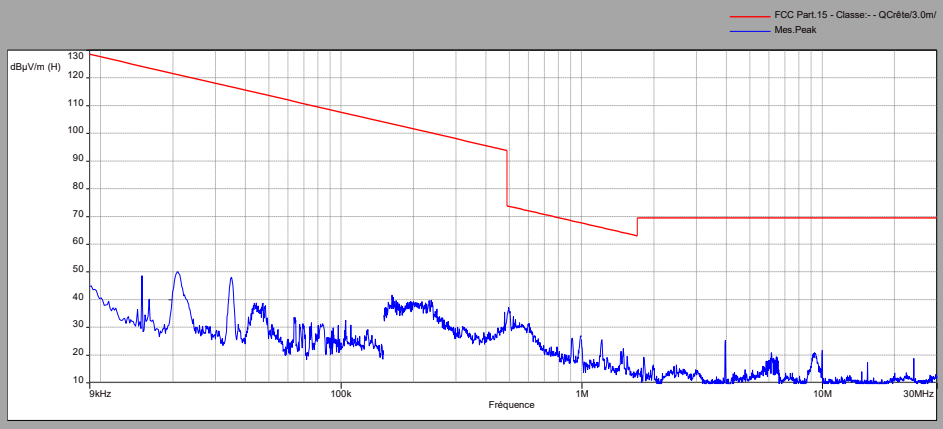
Parallel Axis



Perpendicular Axis

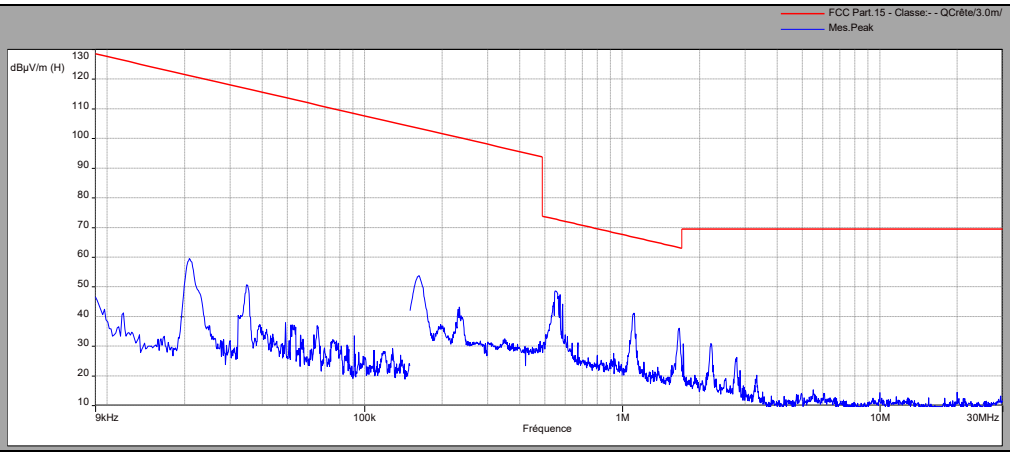


Ground Parallel Axis

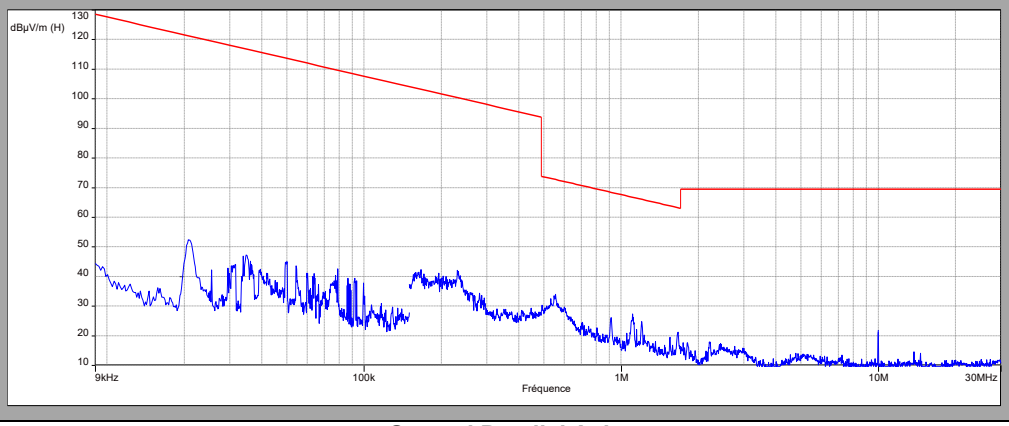


9kHz to 30MHz / 2M

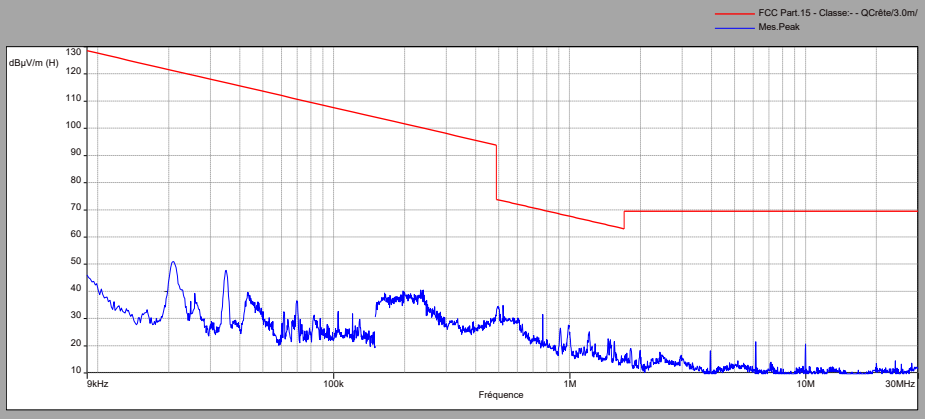
Parallel Axis



Perpendicular Axis



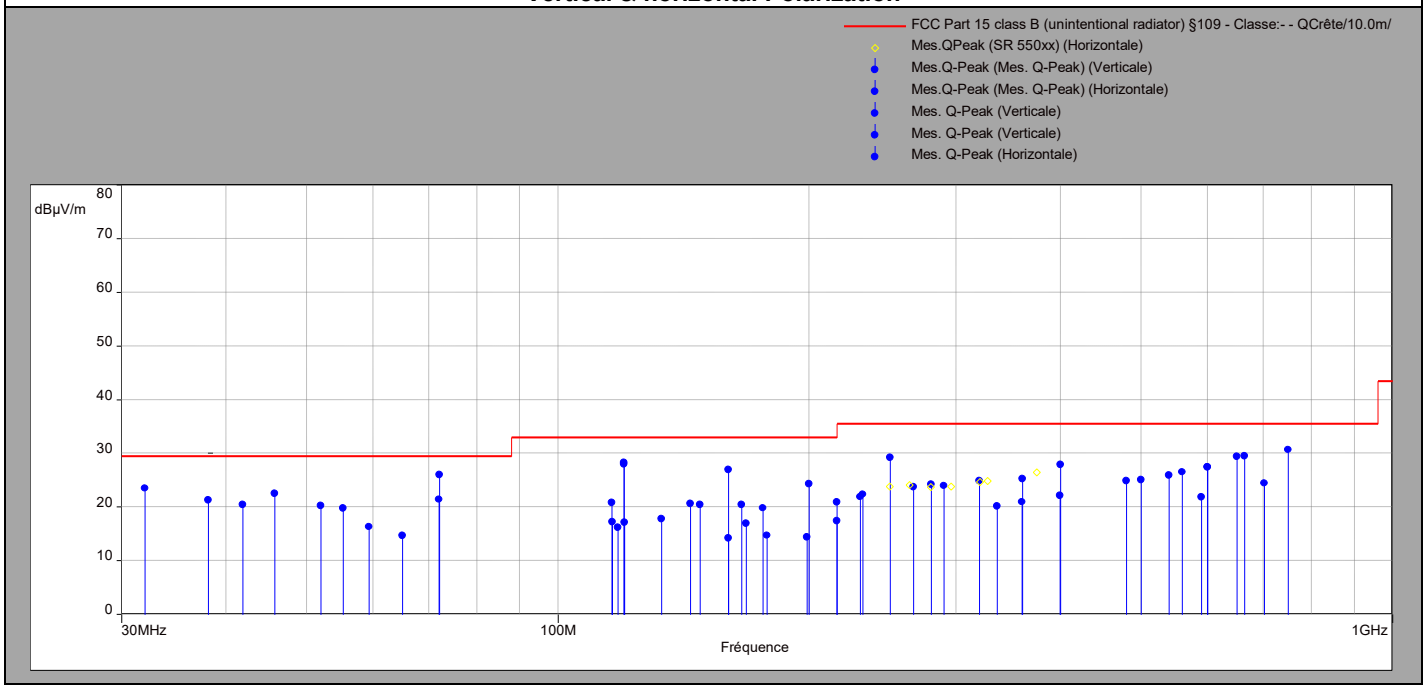
Ground Parallel Axis



Below 1GHz / 1M

Cmin

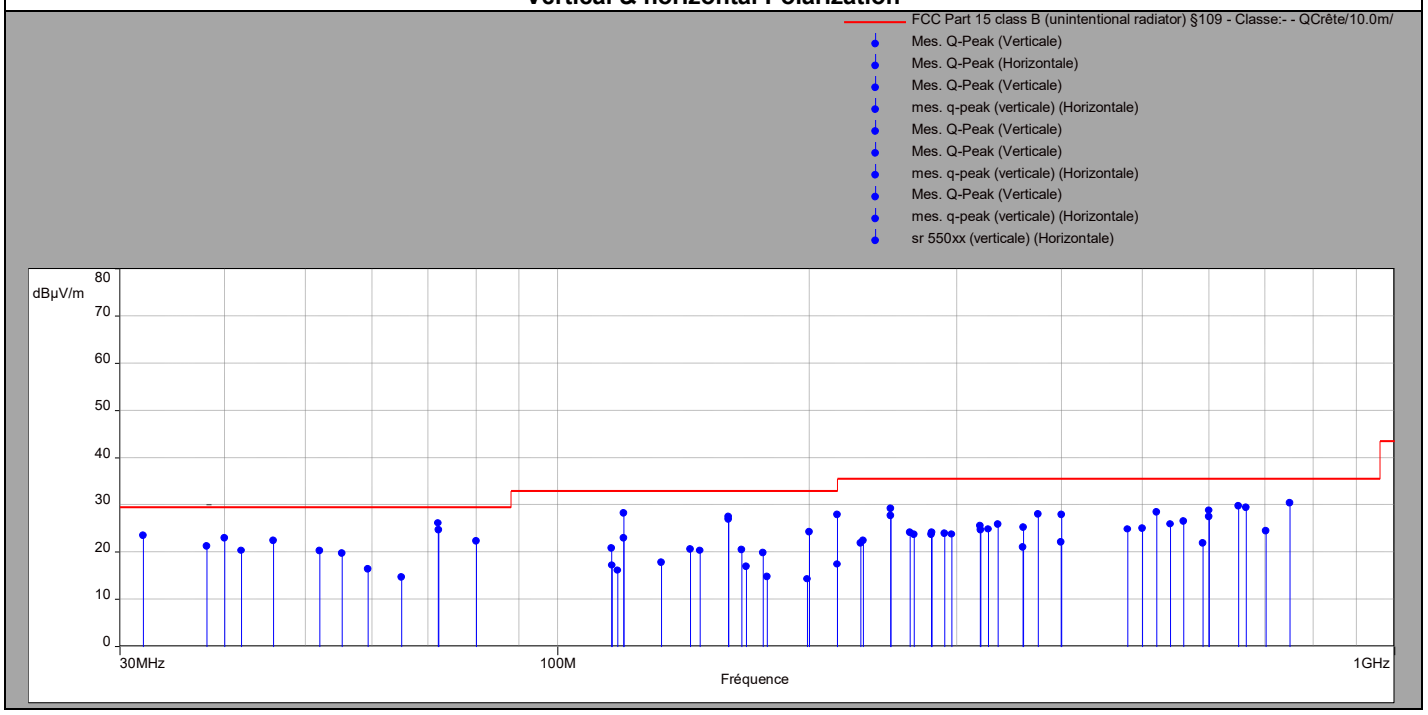
Vertical & horizontal Polarization



Below 1GHz / 2M

Cmin

Vertical & horizontal Polarization



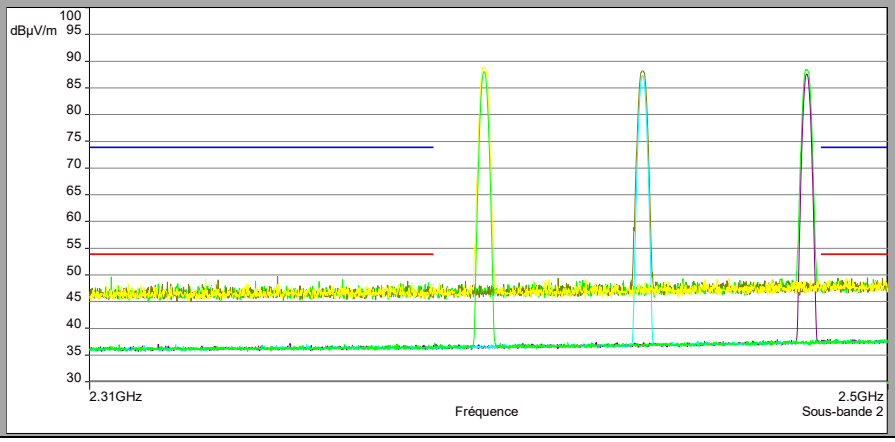
Above 1GHz Zoom 2310MHz-2500MHz / 1M

Cmin/Cnom/Cmax

Vertical Polarization

FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Moyenne/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Crête/3.0m/
Mes.Avg_C0 - Verticale (Verticale)
Mes.Peak_C0 - Verticale (Verticale)
Mes.Avg_C20 - Verticale (Verticale)
Mes.Peak_C20 - Verticale (Verticale)
Mes.Avg_C39 - Verticale (Verticale)
Mes.Peak_C39 - Verticale (Verticale)

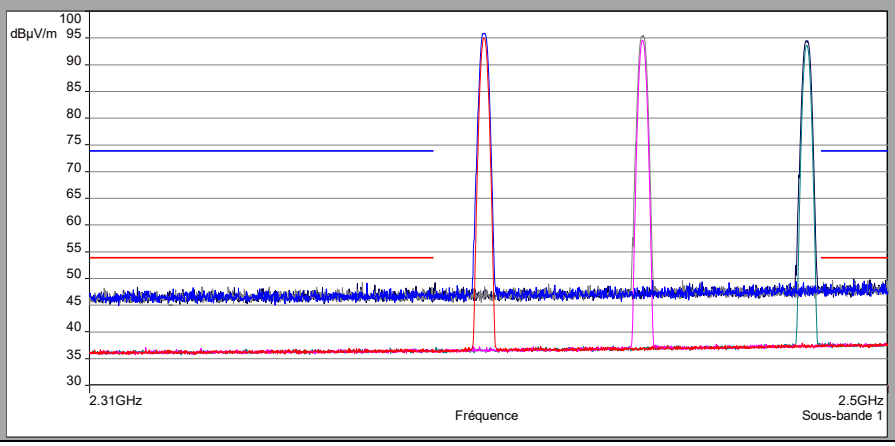
Description Sous-bande 2
Fréquences:2.31 GHz - 2.5 GHz (Mode analyseur) 32001 Points
Réglages: RBW: 1MHz, VBW: 3MHz, Durée balayage : 20 ms/MHz, Atténuation : 0 dB, Nombre de Balayages : 1, Pream
Polarisation:Verticale
Distance: 3 m



Horizontal polarization

FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Moyenne/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Crête/3.0m/
Mes.Avg_C0 - Horizontale (Horizontale)
Mes.Peak_C0 - Horizontale (Horizontale)
Mes.Avg_C20 - Horizontale (Horizontale)
Mes.Peak_C20 - Horizontale (Horizontale)
Mes.Avg_C39 - Horizontale (Horizontale)
Mes.Peak_C39 - Horizontale (Horizontale)

Description Sous-bande 1
Fréquences:2.31 GHz - 2.5 GHz (Mode analyseur) 32001 Points
Réglages: RBW: 1MHz, VBW: 3MHz, Durée balayage : 20 ms/MHz, Atténuation : 0 dB, Nombre de Balayages : 1, Pream
Polarisation:Horizontale
Distance: 3 m

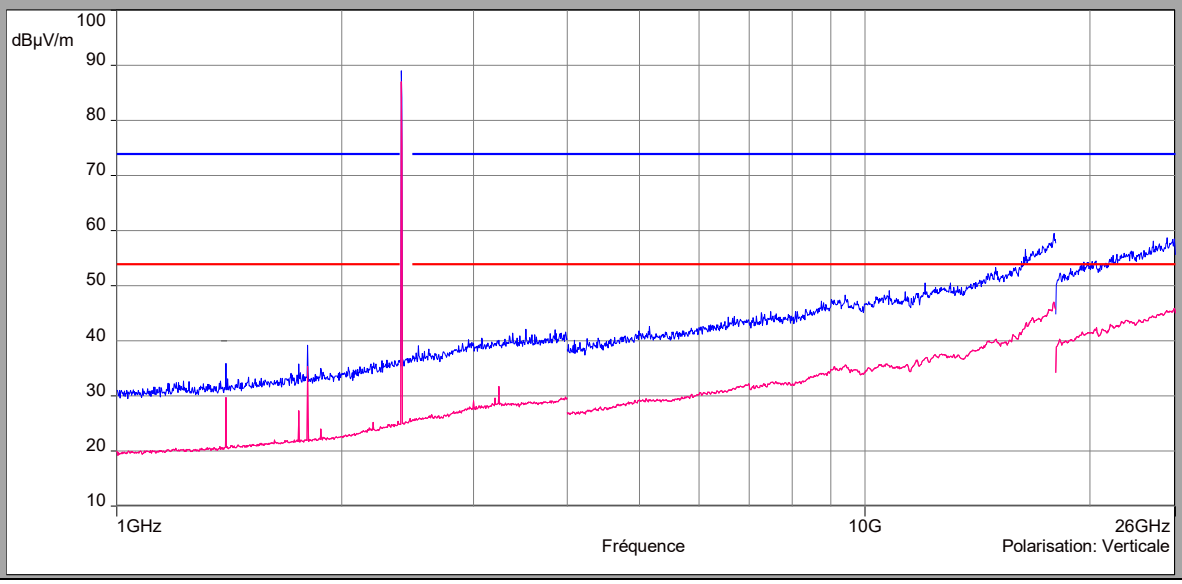


Above 1GHz / 1M

Cmin

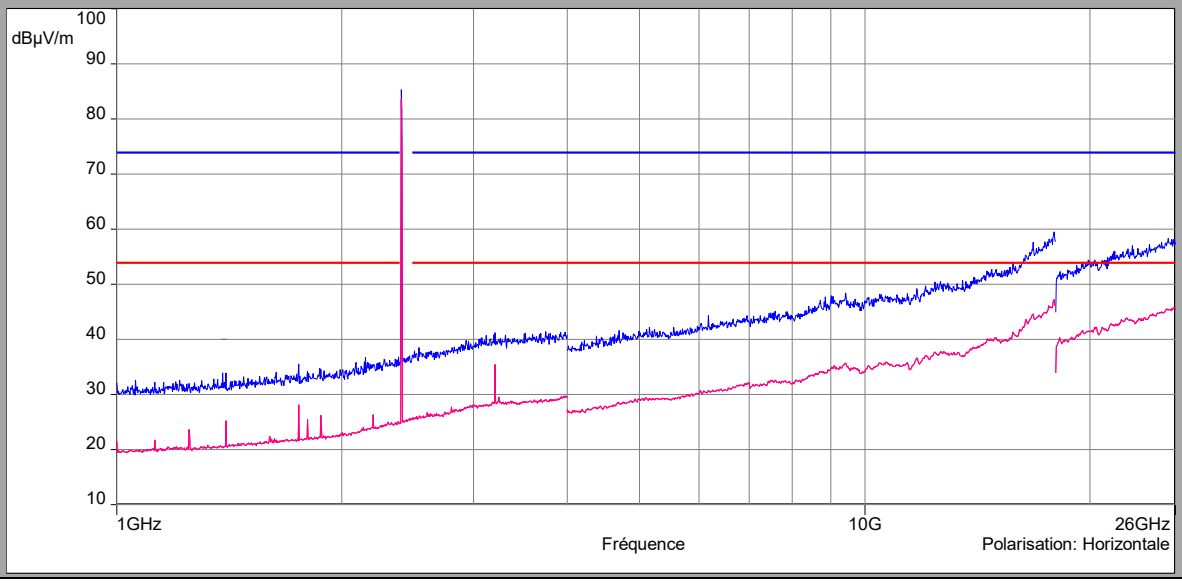
Vertical Polarization

FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Moyenne/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - QCrête/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Crête/3.0m/
Mes.Peak (Verticale)
Mes.Avg (Verticale)

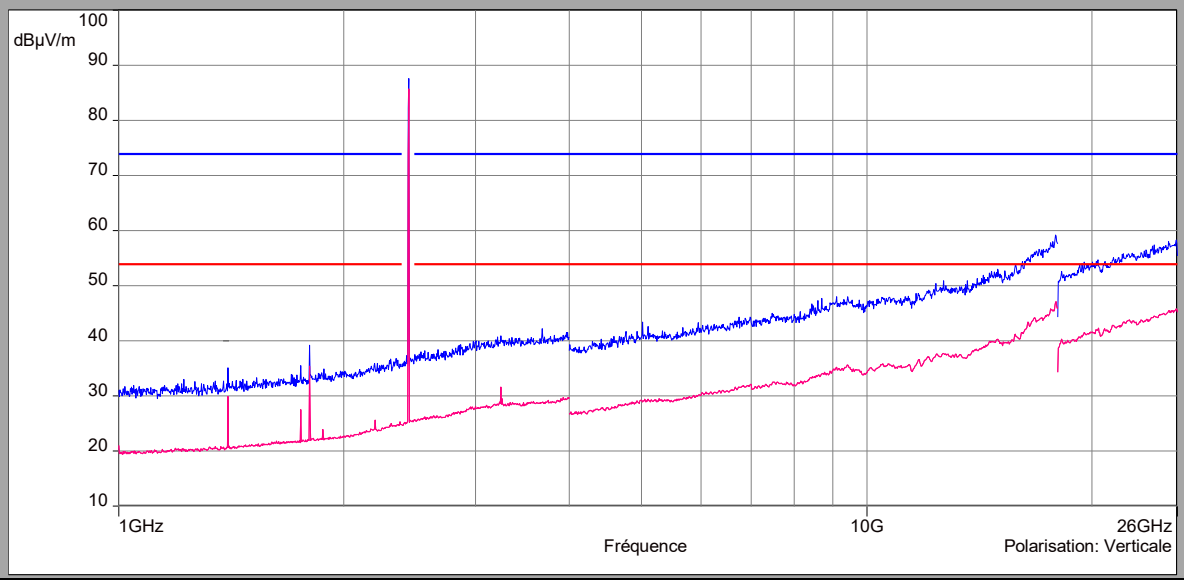


Horizontal polarization

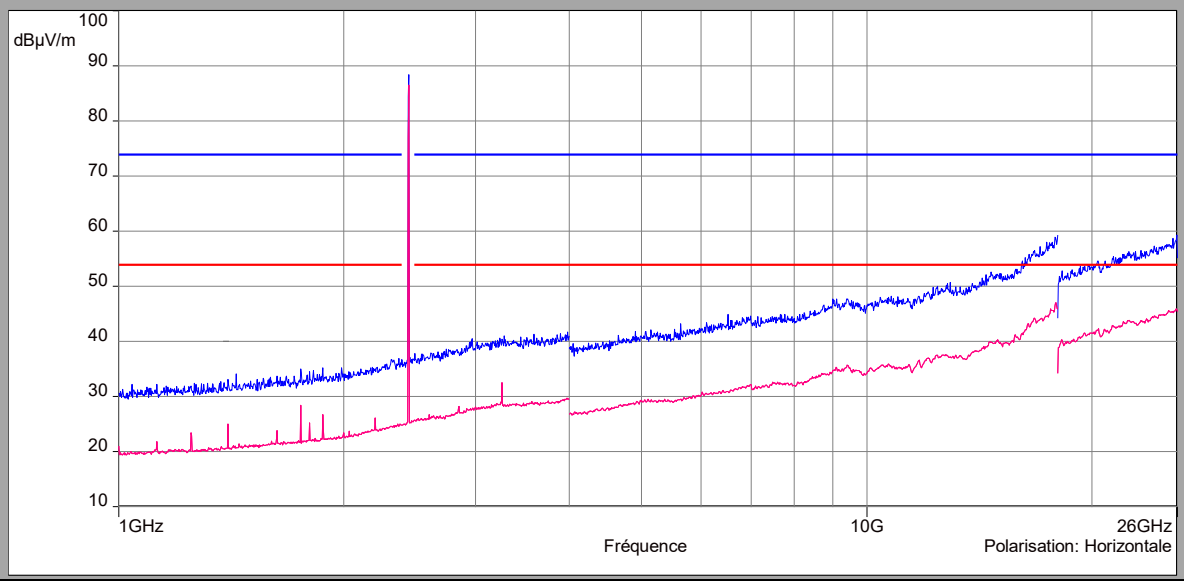
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Moyenne/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - QCrête/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Crête/3.0m/
Mes.Peak (Horizontale)
Mes.Avg (Horizontale)



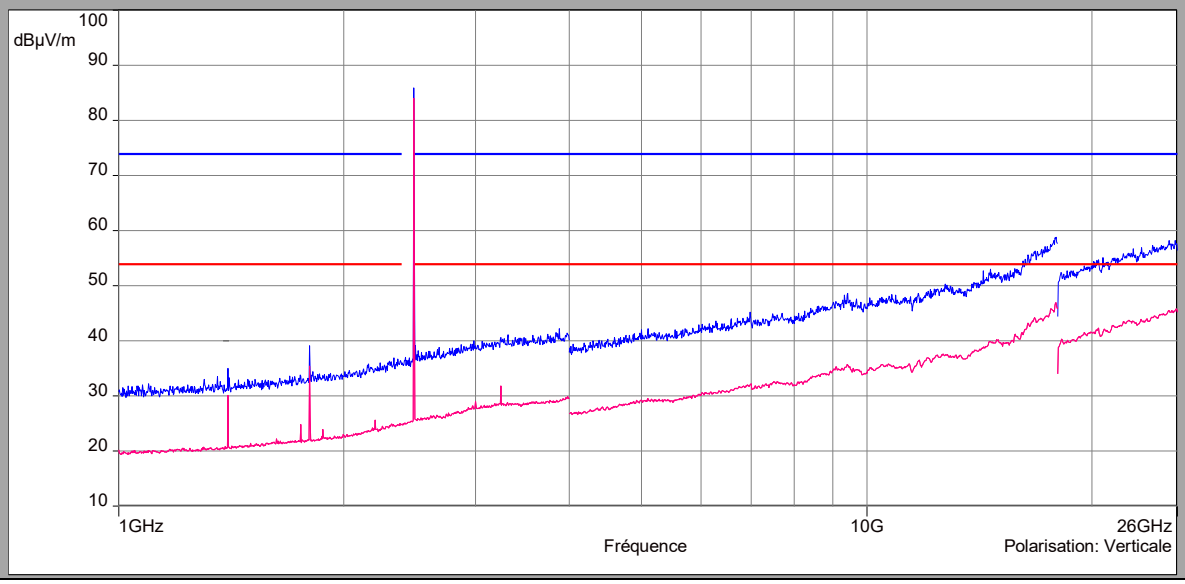
Above 1GHz / 1M
Cnom
Vertical Polarization



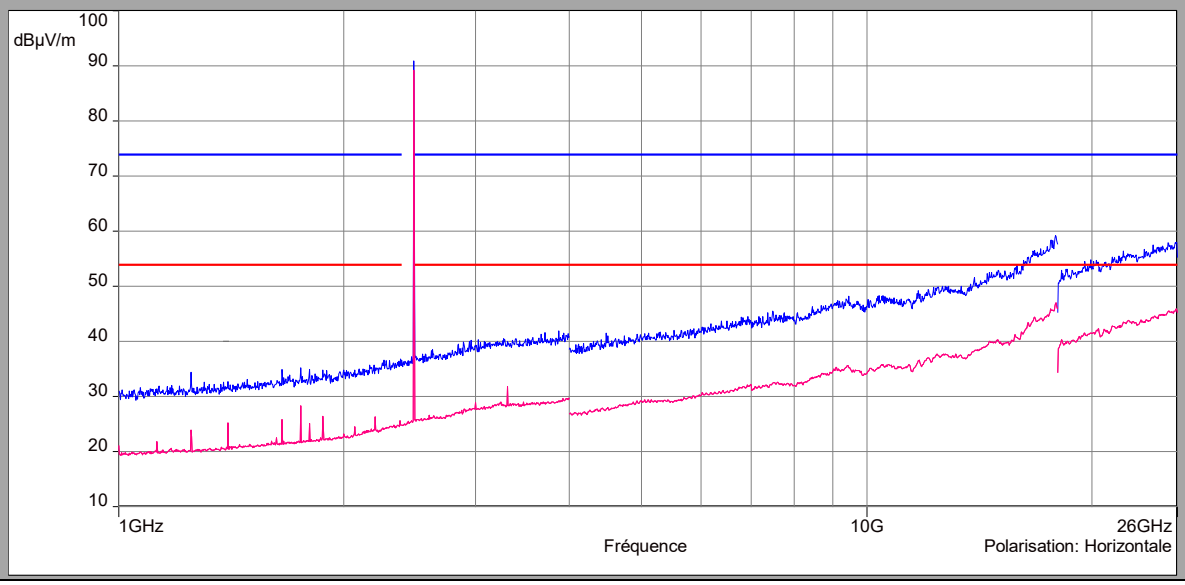
Horizontal polarization



Above 1GHz / 1M
Cmax
Vertical Polarization



Horizontal polarization



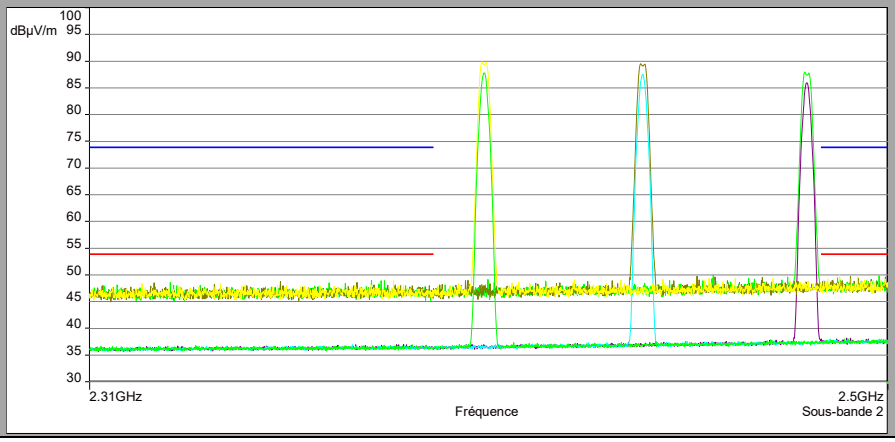
Above 1GHz Zoom 2310MHz-2500MHz / 2M

Cmin/Cnom/Cmax

Vertical Polarization

FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Moyenne/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Crête/3.0m/
Mes.Avg_C0 - Verticale (Verticale)
Mes.Peak_C0 - Verticale (Verticale)
Mes.Avg_C20 - Verticale (Verticale)
Mes.Peak_C20 - Verticale (Verticale)
Mes.Avg_C39 - Verticale (Verticale)
Mes.Peak_C39 - Verticale (Verticale)

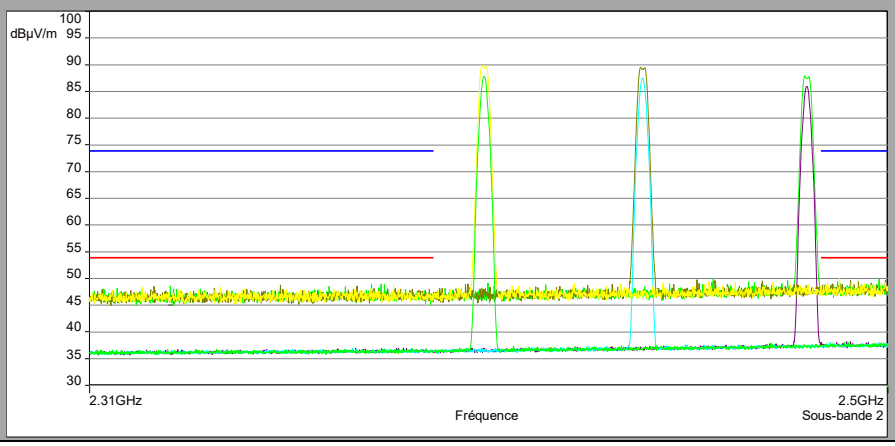
Description Sous-bande 2
Fréquences:2.31 GHz - 2.5 GHz (Mode analyseur) 32001 Points
Réglages: RBW: 1MHz, VBW: 3MHz, Durée balayage : 20 ms/MHz, Atténuation : 0 dB, Nombre de Balayages : 1, Pream
Polarisation:Verticale
Distance: 3 m



Horizontal polarization

FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Moyenne/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Crête/3.0m/
Mes.Avg_C0 - Verticale (Verticale)
Mes.Peak_C0 - Verticale (Verticale)
Mes.Avg_C20 - Verticale (Verticale)
Mes.Peak_C20 - Verticale (Verticale)
Mes.Avg_C39 - Verticale (Verticale)
Mes.Peak_C39 - Verticale (Verticale)

Description Sous-bande 2
Fréquences:2.31 GHz - 2.5 GHz (Mode analyseur) 32001 Points
Réglages: RBW: 1MHz, VBW: 3MHz, Durée balayage : 20 ms/MHz, Atténuation : 0 dB, Nombre de Balayages : 1, Pream
Polarisation:Verticale
Distance: 3 m

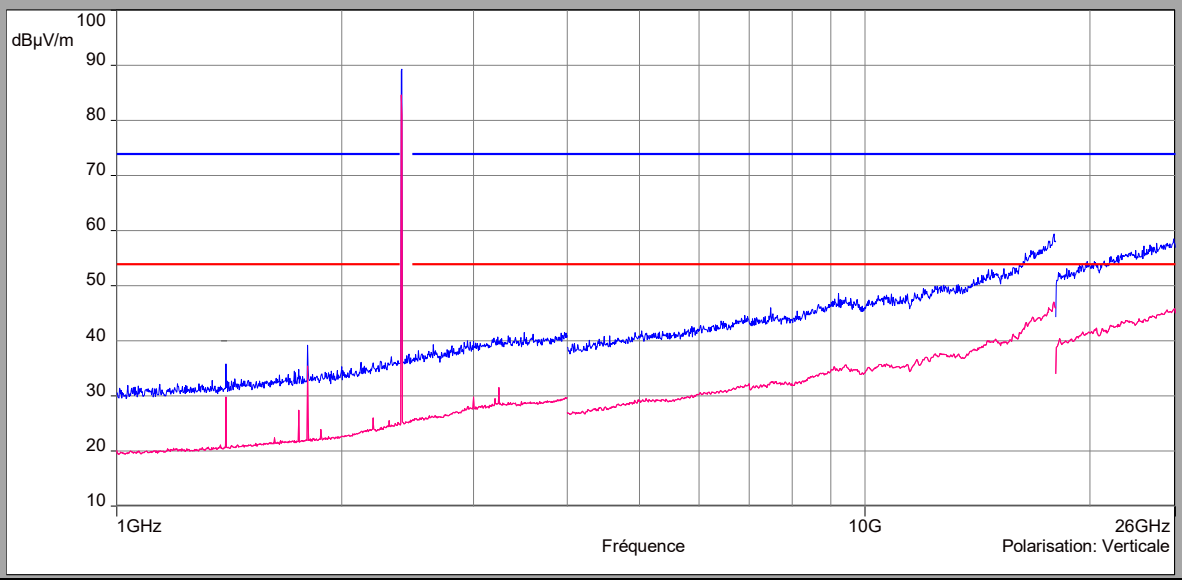


Above 1GHz / 2M

Cmin

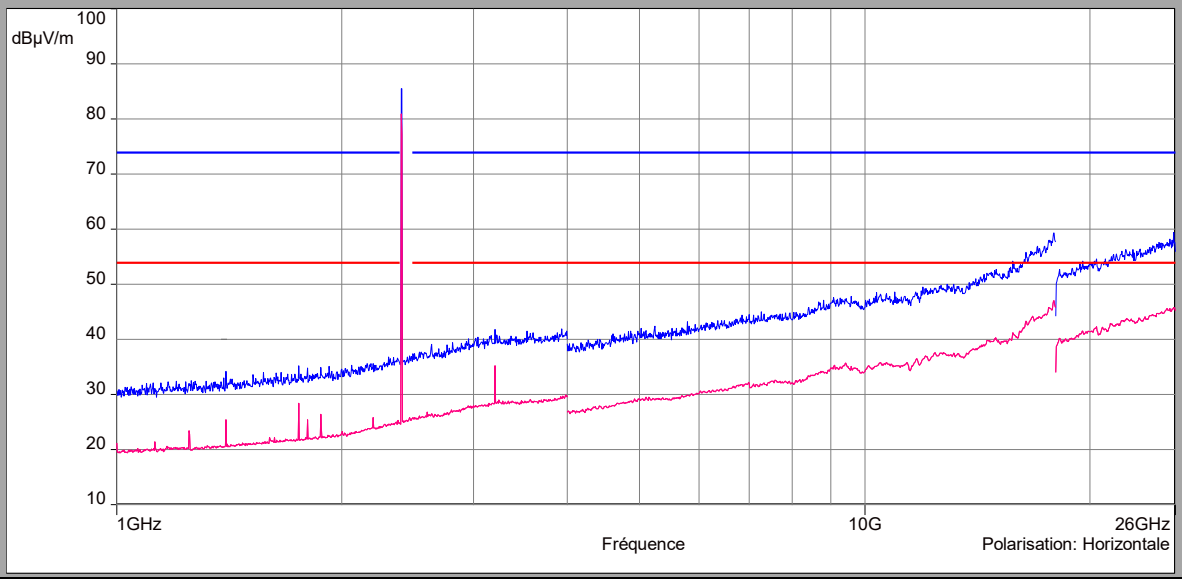
Vertical Polarization

FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Moyenne/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - QCrête/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Crête/3.0m/
Mes.Peak (Verticale)
Mes.Avg (Verticale)

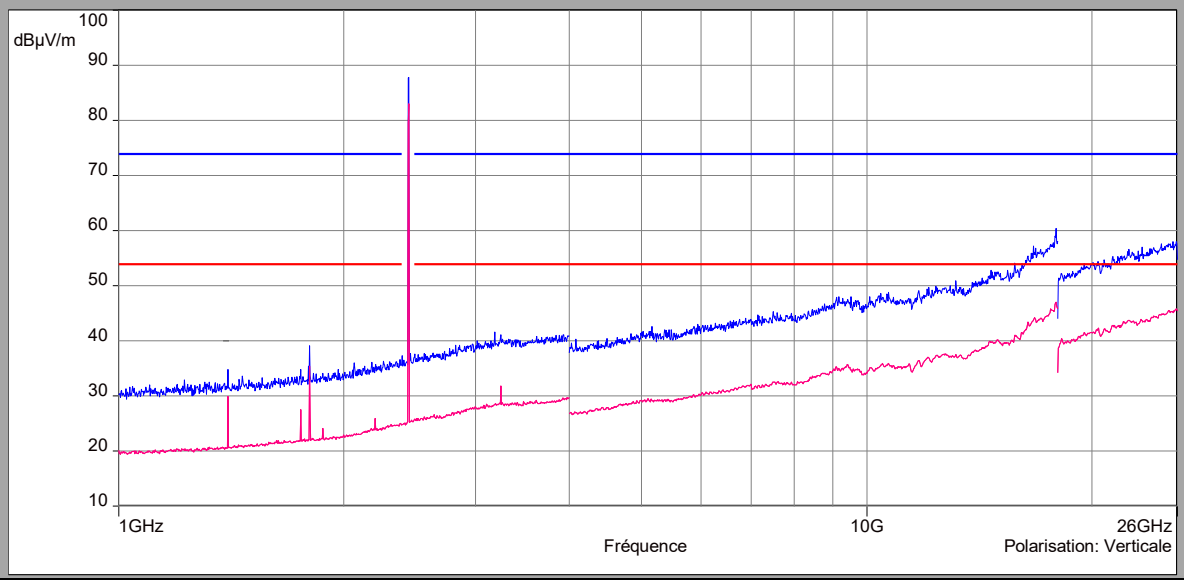


Horizontal polarization

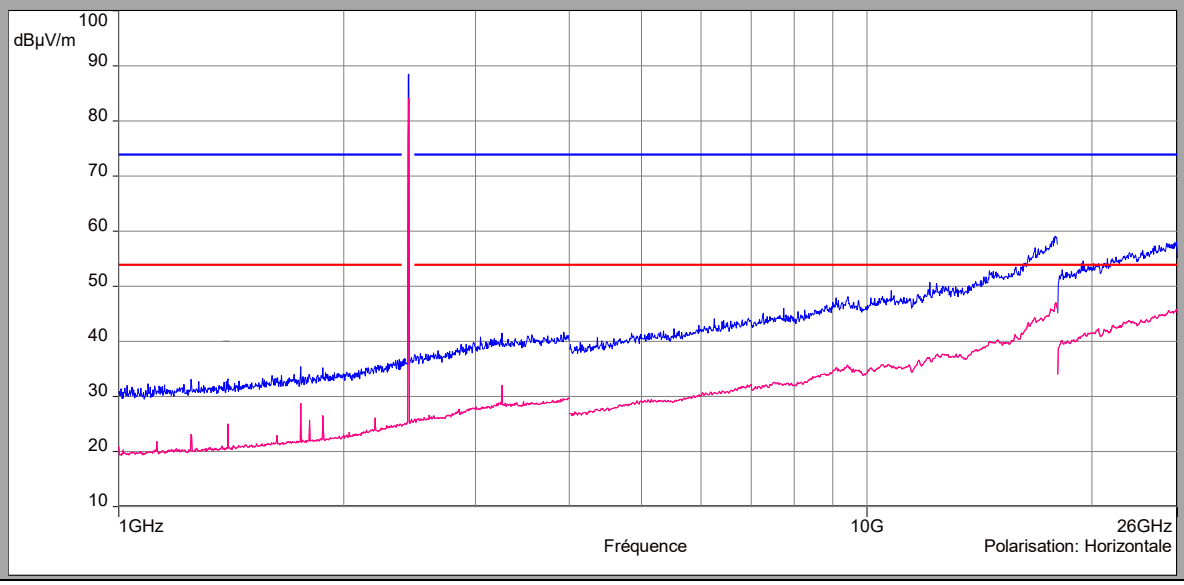
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Moyenne/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - QCrête/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Crête/3.0m/
Mes.Peak (Horizontale)
Mes.Avg (Horizontale)



Above 1GHz / 2M
Cnom
Vertical Polarization



Horizontal polarization

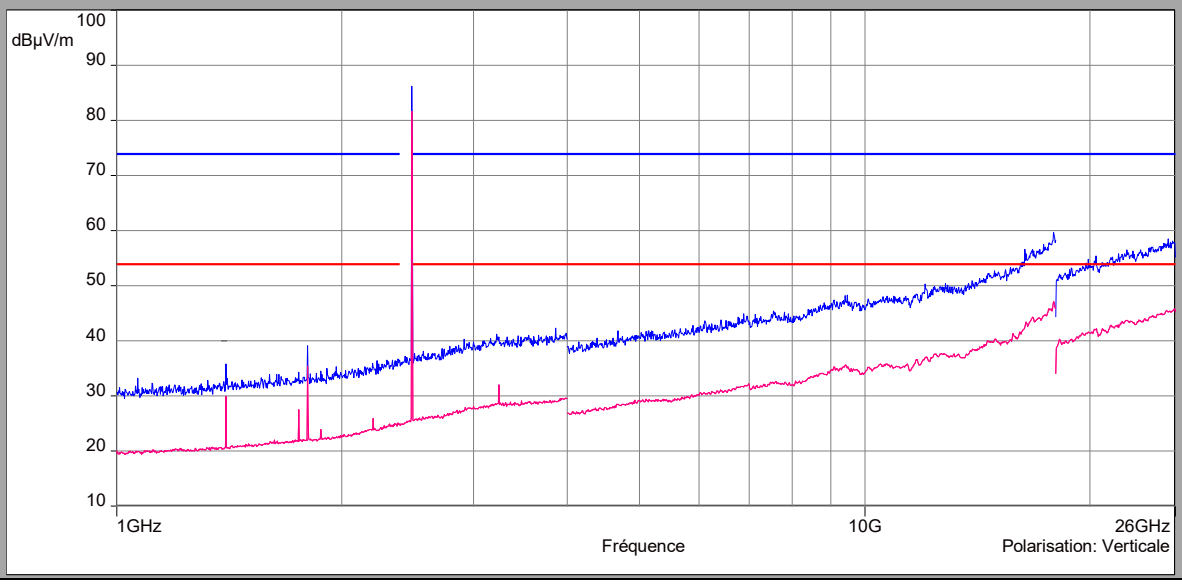


Above 1GHz / 2M

Cmax

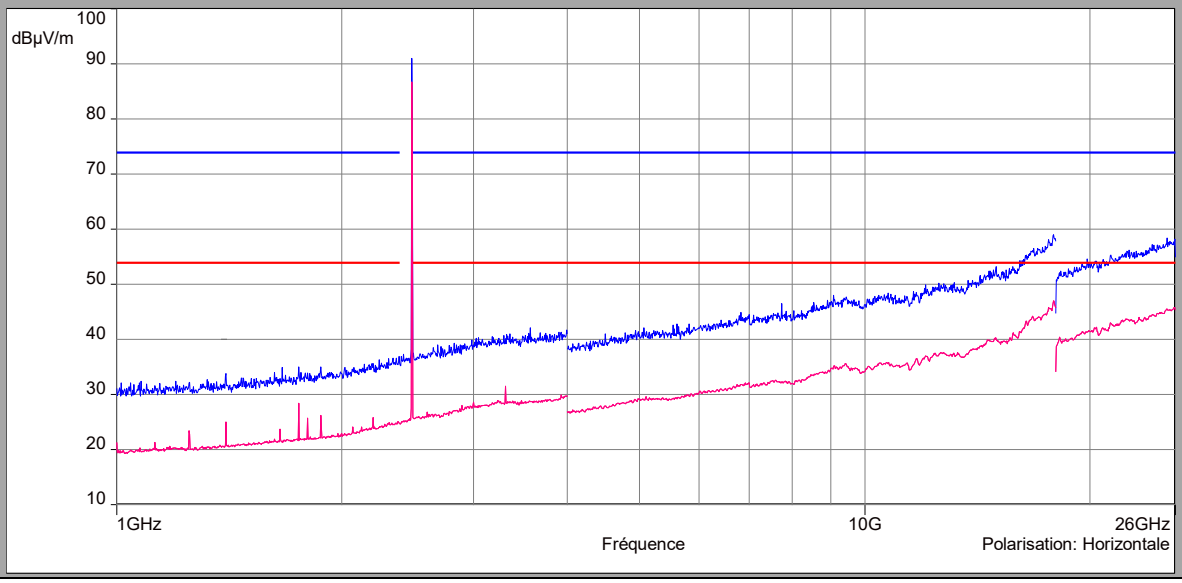
Vertical Polarization

FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Moyenne/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - QCrête/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Crête/3.0m/
Mes.Peak (Verticale)
Mes.Avg (Verticale)



Horizontal polarization

FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Moyenne/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - QCrête/3.0m/
FCC/FCC 15.209 2400MHz-2483MHz Band - Classe:1 - Crête/3.0m/
Mes.Peak (Horizontale)
Mes.Avg (Horizontale)



9kHz to 30MHz / 1M and 2M				
Polarization	**Frequency (MHz)**	**Peak Level (dBµV/m)**	**QPeak Level (dBµV/m)**	**Limit (dBµV/m)**
all emissions were greater than 20 dB below the limit				

Below 1GHz / 1M				
Frequency (MHz)	**Peak Level (dBµV/m)**	**QPeak Level (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dBµV/m)**
72	-	25.94	29.5	3.56
120	-	28.24	33	4.76
250	-	29.22	35.5	6.28
400	-	27.88	35.5	7.62
600	-	27.48	35.5	8.02
750	-	30.67	35.5	4.83

Below 1GHz / 2M				
Frequency (MHz)	**Peak Level (dBµV/m)**	**QPeak Level (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dBµV/m)**
40	-	22.96	29.5	6.54
72.09	-	24.72	29.5	4.78
216	-	27.93	33	5.07
520	-	28.39	35.5	7.11
600	-	28.83	35.5	6.67
750	-	30.32	35.5	5.18

Above 1GHz / 1M								
Cmin/Cnom/Cmax								
Polarization	**Frequency (MHz)**	**Average Level (dBµV/m)**	**Average Level + Duty Cycle Factor (dBµV/m)**	**Average Limit (dBµV/m)**	**Average Margin Level (dBµV/m)**	**Peak Level (dBµV/m)**	**Peak Limit (dBµV/m)**	**Peak Margin Level (dBµV/m)**
Verticale	1399	27,73	29,1525	54	24,8475	35,91	74	38,09
Verticale	1749	27,31	28,7325	54	25,2675	35,77	74	38,23
Verticale	1799	35,27	36,6925	54	17,3075	39,19	74	34,81
Horizontale	3203	35,47	36,8925	54	17,1075	41,22	74	32,78
Horizontale	2390	36,96	38,3825	54	15,6175	49,11	74	24,89
Verticale	2390	36,94	38,3625	54	15,6375	49,23	74	24,77
Horizontale	2483.5	37,97	39,3925	54	14,6075	49,92	74	24,08
Verticale	2483.5	37,93	39,3525	54	14,6475	49,12	74	24,88

Above 1GHz / 2M								
Cmin/Cnom/Cmax								
Polarization	**Frequency (MHz)**	**Average Level (dBµV/m)**	**Average Level + Duty Cycle Factor (dBµV/m)**	**Average Limit (dBµV/m)**	**Average Margin Level (dBµV/m)**	**Peak Level (dBµV/m)**	**Peak Limit (dBµV/m)**	**Peak Margin Level (dBµV/m)**
Verticale	1399	27,47	32,3397	54	21,6603	35,99	74	38,01
Verticale	1751	27,78	32,6497	54	21,3503	35,71	74	38,29
Verticale	1800	35,57	40,4397	54	13,5603	39,26	74	34,74
Horizontale	3202	35,77	40,6397	54	13,3603	41,09	74	32,91
Horizontale	2390	36,78	41,6497	54	12,3503	48,58	74	25,42
Verticale	2390	36,69	41,5597	54	12,4403	48,11	74	25,89
Horizontale	2483.5	37,91	42,7797	54	11,2203	49,17	74	24,83
Verticale	2483.5	37,82	42,6897	54	11,3103	49,02	74	24,98

11.7. CONCLUSION

Unwanted Emission in restricted frequency bands measurement performed on the sample of the product **COGECO DIW3930** **COGECO**, SN: **6211130035003**, in configuration and description presented in this test report, show levels **compliant** to the 47 CFR PART 15.247 & RSS 247 ISSUE 2 limits.

12. UNCERTAINTIES CHART

47 CFR Part 15.209 & 15.207 Kind of test	Wide uncertainty laboratory (k=2) ±x(dB) / (Hz)/ ms	Uncertainty limit
Measurement of conducted disturbances in voltage on the AC power port (9 kHz – 150 kHz)	2,67	3.8
Measurement of conducted disturbances in voltage on the AC power port (150 kHz – 30 MHz)	2,67	3.4
Measurement of conducted disturbances in voltage on the telecommunication port. (AAN)	3,67	5.0
Measurement of conducted disturbances in current (current clamp)	2,73	2.9
Measurement of disturbance power	2,67	4.5
Measurement of radiated magnetic field from 10kHz to 30MHz in SAC V01	4,48	/
Measurement of radiated magnetic field from 10kHz to 30MHz in SAC C01	4,48	/
Measurement of radiated electric field from 30 to 1000MHz in horizontal position on the OATS (Ecuelles)	4,88	6.3
Measurement of radiated electric field from 1 to 18GHz on the Ecuelles site	5.16	/
Measurement of radiated electric field from 30 to 1000MHz in vertical position on the OATS (Ecuelles)	4,99	6.3
Measurement of radiated electric field from 30 to 1000MHz in horizontal position in SAC C01	5,08	6.3
Measurement of radiated electric field from 30 to 1000MHz in vertical position in SAC C01	5,16	6.3
Measurement of radiated electric field from 30 to 1000MHz in horizontal position in SAC V01	5,08	6.3
Measurement of radiated electric field from 30 to 1000MHz in vertical position in SAC V01	5,15	6.3
Measurement of radiated electric field from 1 to 6 GHz C01	5,1	5.2
Measurement of radiated electric field from 1 to 6 GHz V01	4,85	5.2
Measurement of radiated magnetic field from 10kHz to 30MHz on the OATS (Ecuelles)	4,48	/

The uncertainty values calculated by the laboratory are lower than limit uncertainty values defined by the CISPR. The conformity of the sample is directly established by the applicable limits values. This table includes all uncertainties maximum feasible for testing in the laboratory, whether or not made in this report