



LCIE



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TEST REPORT

N°: 26771866-812543-A (FILE#11253614-SRA)

Version: 01

Subject Electromagnetic compatibility tests according to the standards:
FCC CFR 47 Part 15, Subpart B
ANSI C63.4 / ANSI C63.4a
ICES-001

Issued to E.M.S. ELECTRO MEDICAL SYSTEMS S.A
Chemin de la Vuarpillière 31
1260 - NYON
SWITZERLAND

Apparatus under test

Product GBT Machine AIRFLOW Prophylaxis Master
Trade mark EMS ELECTRO MEDICAL SYSTEMS
Manufacturer E.M.S. ELECTRO MEDICAL SYSTEMS S.A.
Model under test FT-300
Serial number MM00773
FCCID 2ANZC-NSFBMJYDEAV
IC 23296-NSFBMJYDEAV

Conclusion See Test Program chapter

Test date June 25, 2025 and August 07, 2025
Test location LCIE Grenoble
FCC Test site FR0008 - 197516 (MOI)
ISED Test site 6500A (MOI)
Sample receipt date May 21, 2025
Composition of document 37 pages
Document issued on September 11, 2025

Written by :
Majid MOURZAGH
Tests operator

Approved by :
Anthony MERLIN
Technical manager



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LCIE
Laboratoire Central des Industries Electriques
Une société Bureau Veritas

Z.I Centr'alp
170, Rue de Chatagnon
38430 Moirans
FRANCE

Tél. + 33 4 76 07 36 36
contact@lcie.fr
www.lcie.fr



PUBLICATION HISTORY

Version	Date	Author	Modification
01	September 11, 2025	Majid MOURZAGH	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

Standard:

- ✓ FCC Part 15, Subpart B (Digital Devices)
- ✓ ANSI C63.4 (2014) / ANSI C63.4a (2017)
- ✓ ICES-001 (2020)

1.1. REQUIREMENTS FOR DISTURBANCE EMISSIONS – CLASS B

EMISSION TEST	LIMITS			RESULTS (Comments)
Limits for conducted disturbance 150kHz-30MHz FCC §15.107 / ICES-001	Access: AC power			PASS
	Frequency	Quasi-peak	Average	
	150-500kHz	66 to 56 dBµV	56 to 46 dBµV	
	0.5-5MHz	56 dBµV	46 dBµV	
	5-30MHz	60 dBµV	50 dBµV	
Radiated emissions 30MHz-1GHz FCC §15.109	Access: Enclosure port of ancillary equipment			PASS
	Frequency	Quasi-peak @3m		
	30MHz-88MHz	40.0 dBµV/m		
	88MHz-216MHz	43.5 dBµV/m		
	216MHz-960MHz	46.0 dBµV/m		
Above 960MHz	54.0 dBµV/m			
Radiated emissions 30MHz-1GHz ICES-001	Access: Enclosure port of ancillary equipment			PASS
	Frequency	Quasi-peak @3m		
	30MHz-88MHz	40.0 dBµV/m		
	88MHz-216MHz	43.5 dBµV/m		
	216MHz-230MHz	46.0 dBµV/m		
	230MHz-960MHz	47.0 dBµV/m		
Above 960MHz	54.0 dBµV/m			
Radiated emissions 1GHz-13GHz* FCC §15.109 / ICES-001	Access: Enclosure port of ancillary equipment			PASS
	Frequency	Peak @3m	Average @3m	
	1- 13GHz	74.0 dBµV/m	54.0 dBµV/m	

NA: Not Applicable / NP: Not Performed, not requested by the customer (It cannot be taken into account for the declaration of conformity)

°: Divergence, the latest version is used to make it possible to test the product with the standard which describes the current state of the art and thus to answer as well as possible his environment of final use. If this test is covered by the COFRAC accreditation, the declaration of conformity for product standard only are carried out outside the framework of accreditation.

*§15.33: The highest internal source of a testing device is defined like more the highest frequency generated or used in the testing device or on which the testing device works or agrees.

- If the highest frequency of the internal sources of the testing device is lower than 108 MHz, measurement must be only performed until 1GHz.

- If the highest frequency of the internal sources of the testing device ranges between 108 MHz and 500 MHz, measurement must be only performed until 2GHz.

- If the highest frequency of the internal sources of the testing device ranges between 500 MHz and 1 GHz, measurement must be only performed until 5GHz.

If the highest frequency of the internal sources of the testing device is above 1 GHz, measurement must be only performed until 5 times the highest frequency or 40 GHz, while taking smallest of both.

Special condition for intentional radiator:

- For a composite system comprised of a digital device using a clock frequency of 1 GHz as the highest frequency for the digital logic and an intentional radiator operating at 2.4 GHz, the composite is required to be investigated to the upper frequency of 24 GHz (in this case, 10 times the intentional radiator frequency is the higher frequency).

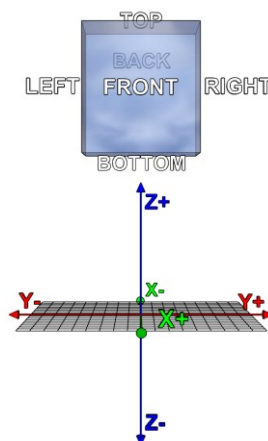
- For a composite system comprised of a digital device using a clock frequency of 2 GHz as the highest frequency for the digital logic and an intentional radiator operating at 913 MHz, the composite is required to be investigated to the upper frequency of 10 GHz (in this case, 5 times the unintentional radiator clock frequency is the higher frequency).

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

2.1. HARDWARE IDENTIFICATION (EUT AND AUXILIARIES)

Equipment under test (EUT):

Model under test:	FT-300		
Serial Number:	MM00773		
			
Dimensions:	26cm x 30cm x 26cm (Length x Width x Height)		
Type:	Table-Top		



Power supply:

Name	Type	Rating	Reference / Sn	Comments
Supply1	AC	100-240Vac	/	/

**Inputs/outputs - Cable:**

Name	Type	Rating	Reference / Sn	Comments
Supply1	L+N+PE	2.5	Yes	No
PZ cable	PZ	1.7	Yes	No
AF cable	AF	1.7	Yes	No

NC: Not communicated by provider

Auxiliary equipment used during test:

Type	Reference	Sn	Comments
None			

NC: Not communicated by provider



2.2. EUT CONFIGURATION

Hardware information			
Highest internal frequency (PLL, Quartz, Clock, Microprocessor...):	F_{Highest}:	2500	MHz
Firmware (if applicable):	V. :	N/A	
Software (if applicable):	V. :	ES-1115 rev 1.3.3.5 with FCC parameters (corresponding to 1.3.4.0) ES-1023 rev 2.3.11.0 ES-1061 rev 2.0 ES-1111 rev 1.3.1	

NC: Not communicated by provider

Running mode n°1:

Setup:

Piezon holder with Bluetooth pedal, Ping WiFi 2.4GHz and LTE powered but disabled

.

Running mode n°2:

Setup:

Air flow holder with Bluetooth pedal, WiFi 2.4GHz powered but disabled and LTE transmission on band 2

2.3. EQUIPMENT MODIFICATIONS DURING THE TESTS

None



2.4. 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

2.5. 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 dBμV/m

FS_{max} is the measured field strength, expressed in dBμV/m

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

d_{limit} is the reference limit distance

2.6. CALIBRATION DATE

The calibration intervals are extended at +4 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. The symbol -/- replaces the date for equipment checking before test or that have none impact on the test or that have no calibration required by the standard.

3. MEASUREMENT OF CONDUCTED EMISSION

3.1. TEST CONDITIONS

Date of test : June 25, 2025
 Test performed by : Jonathan SARTO
 Atmospheric pressure (hPa) : 992
 Relative humidity (%) : 38
 Ambient temperature (°C) : 24

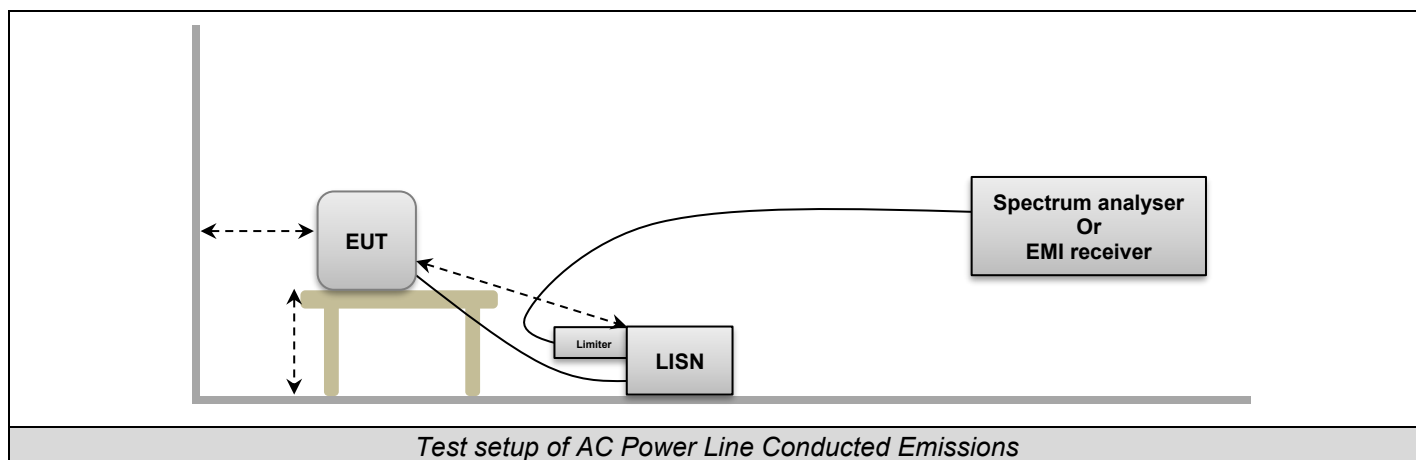
3.2. TEST SETUP

Test procedure:
 ANSI C63.4 & FCC Part 15 subpart B

The EUT and auxiliaries are set 80cm above the ground on the non-conducting table (Table-top equipment) at 80cm from the LISN, the cable has been shorted to 1meter length. The distance between the EUT and the vertical ground plane is 40cm. 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. Interconnecting cables and equipment were moved to position that maximized emission. The EUT is powered like specified in following table, through a LISN (measure); auxiliaries are powered by another LISN.

Frequency range:	150kHz to 30MHz	
Test:	Pre-Characterization	Qualification
RBW Filter:	10kHz	9kHz
Detector:	Peak & Average	QPeak & Cispr Average
Mode:	Linear Scan	

Type	Measurement performed:	
☒ AC / ☐ DC (Auxiliary used)	☒ 120VAC/60Hz	☒ 240VAC/50Hz



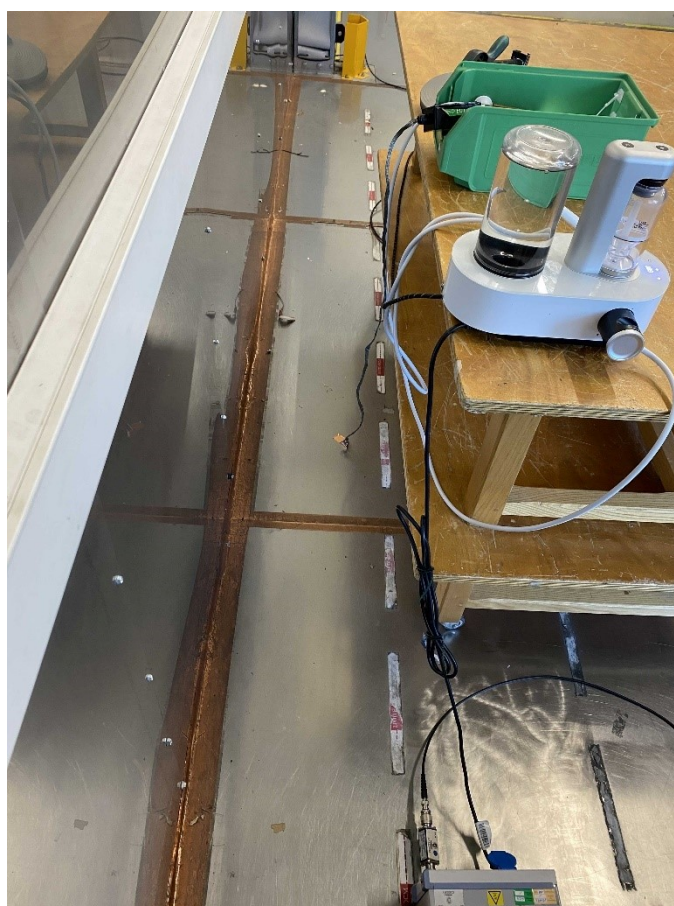


Photo of AC Power Line Conducted Emissions Test Mode 1

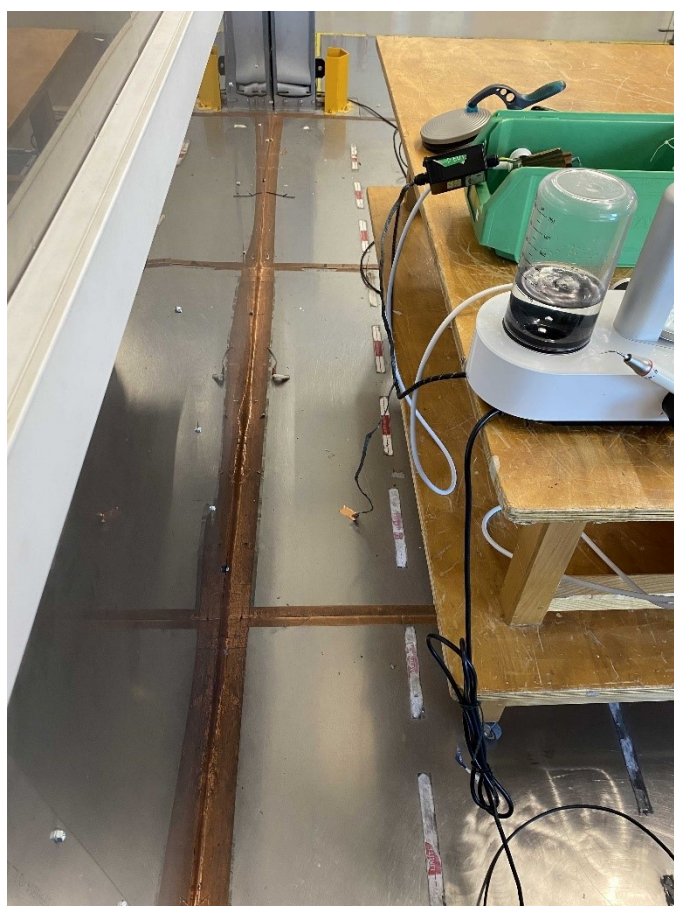
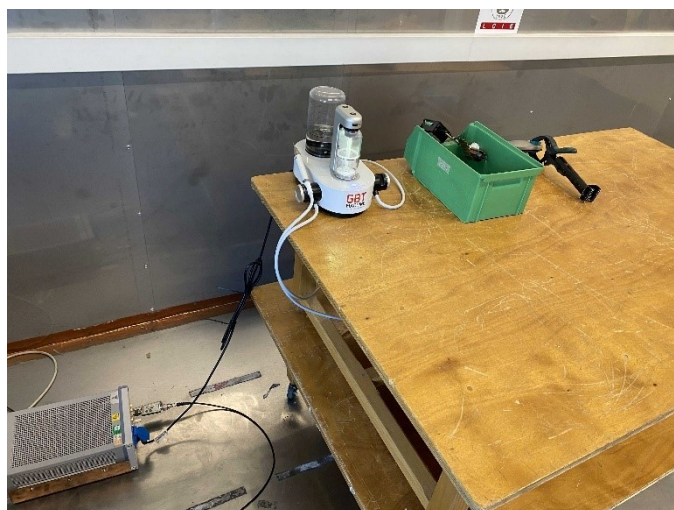


Photo of AC Power Line Conducted Emissions Test Mode 2



3.3. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
BAT EMC	NEXIO	v3.21.0.32	L1000115	-/-	-/-
Cable + self	—	—	A5329578	05/24	09/25
EMC comb generator	LCIE SUD EST	—	A3169098	-/-	-/-
LISN	ROHDE & SCHWARZ	ENV216	C2320291	08/24	08/25
Receiver 20Hz – 8GHz	ROHDE & SCHWARZ	ESU8	A2642019	03/23	07/25
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	09/25
Transient limiter	ROHDE & SCHWARZ	ESH3-Z2	A7122204	07/24	07/26
Probe - Current	ROHDE & SCHWARZ	ESH2-Z1	A1290018	05/24	05/26

3.4. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

None



3.5. TEST RESULTS

Mains terminals:

SUPPLY1

Measurements are performed on the phase (L1) and neutral (N) of the power line.

Configuration mode n°1

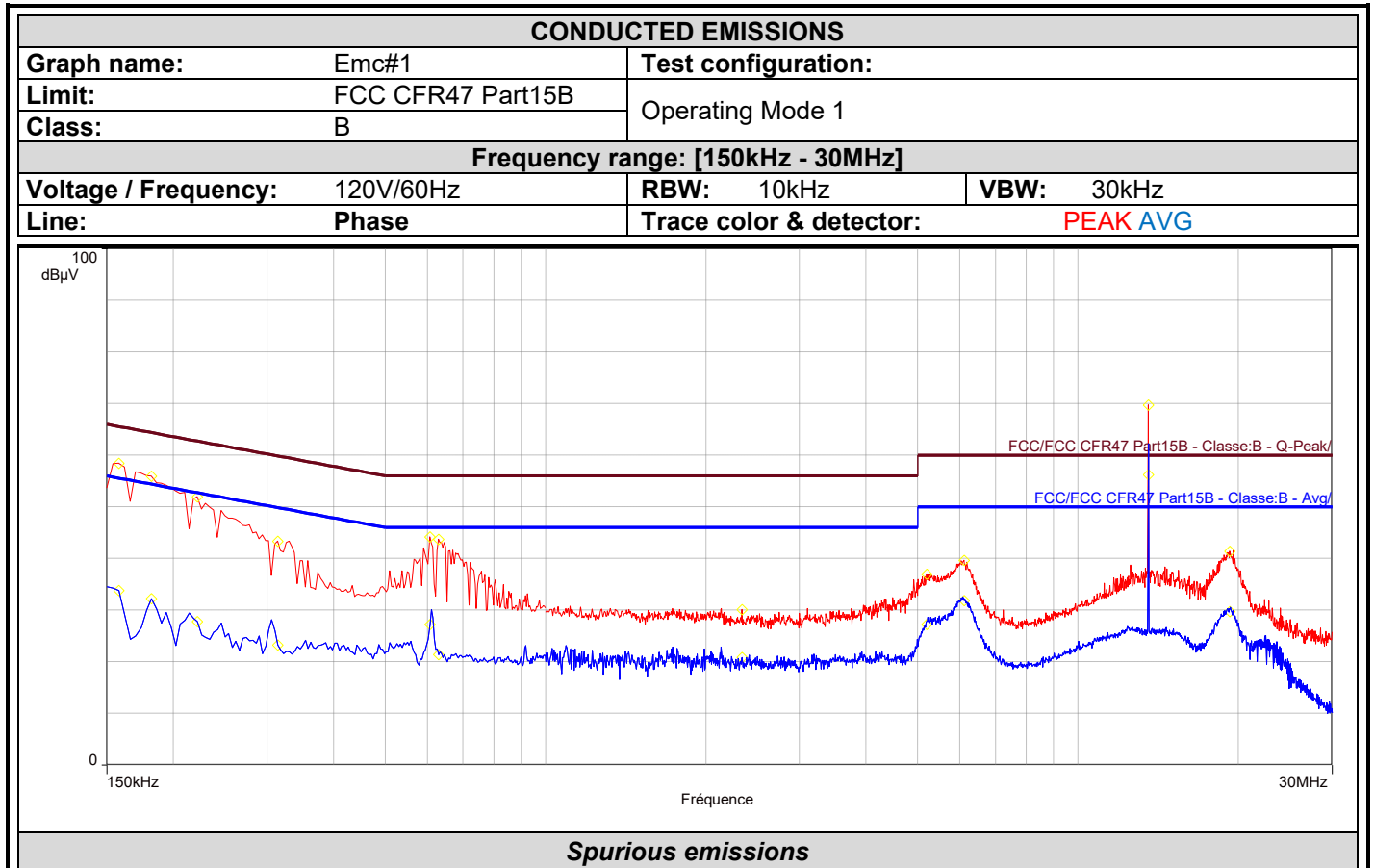
Graph identifier	Line	Comments	
Emc# 1	Phase	120VAC/60Hz	See below
Emc# 2	Neutral	120VAC/60Hz	See below
Emc# 3	Phase	240VAC/50Hz	See below
Emc# 4	Neutral	240VAC/50Hz	See below

Configuration mode n°2

Graph identifier	Line	Comments	
Emc# 5	Phase	120VAC/60Hz	See below
Emc# 6	Neutral	120VAC/60Hz	See below
Emc# 7	Phase	240VAC/50Hz	See below
Emc# 8	Neutral	240VAC/50Hz	See below



L C I E



Frequency (MHz)	QPeak (dBμV)	Lim.QPeak (dBμV)	QPeak- Lim.QPeak (dB)	CISPR.AVG (dBμV)	Lim.CISPR.AVG (dBμV)	CISPR.AVG- Lim.CISPR.AVG (dB)
0.158	43.64	65.57	-21.93	34.45	55.57	-21.12
0.182	39.25	64.39	-25.14	27.97	54.39	-26.42
0.222	38.71	62.74	-24.03	29.30	52.74	-23.44
0.314	30.94	59.86	-28.92	22.38	49.86	-27.48
0.606	32.93	56.00	-23.07	26.17	46.00	-19.83
0.630	29.35	56.00	-26.65	20.92	46.00	-25.08
2.340	26.44	56.00	-29.56	19.59	46.00	-26.41
5.200	33.31	60.00	-26.69	26.99	50.00	-23.01
6.104	36.99	60.00	-23.01	31.51	50.00	-18.49
13.560*	62.28	60.00	2.28	42.23	50.00	-7.77
19.284	35.82	60.00	-24.18	28.75	50.00	-21.25

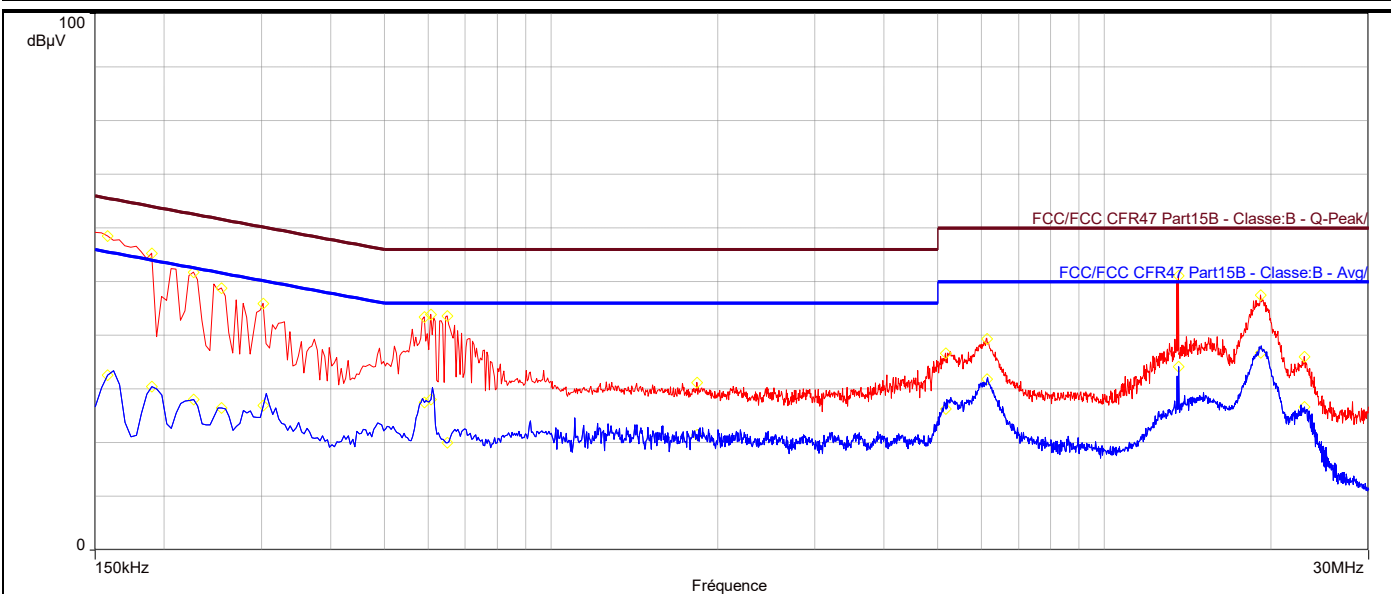
*: RFID signal



L C I E

CONDUCTED EMISSIONS

Graph name:	Emc#2	Test configuration:	
Limit:	FCC CFR47 Part15B	Operating Mode 1	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	120V/60Hz	RBW: 10kHz	VBW: 30kHz
Line:	Neutral	Trace color & detector:	PEAK AVG



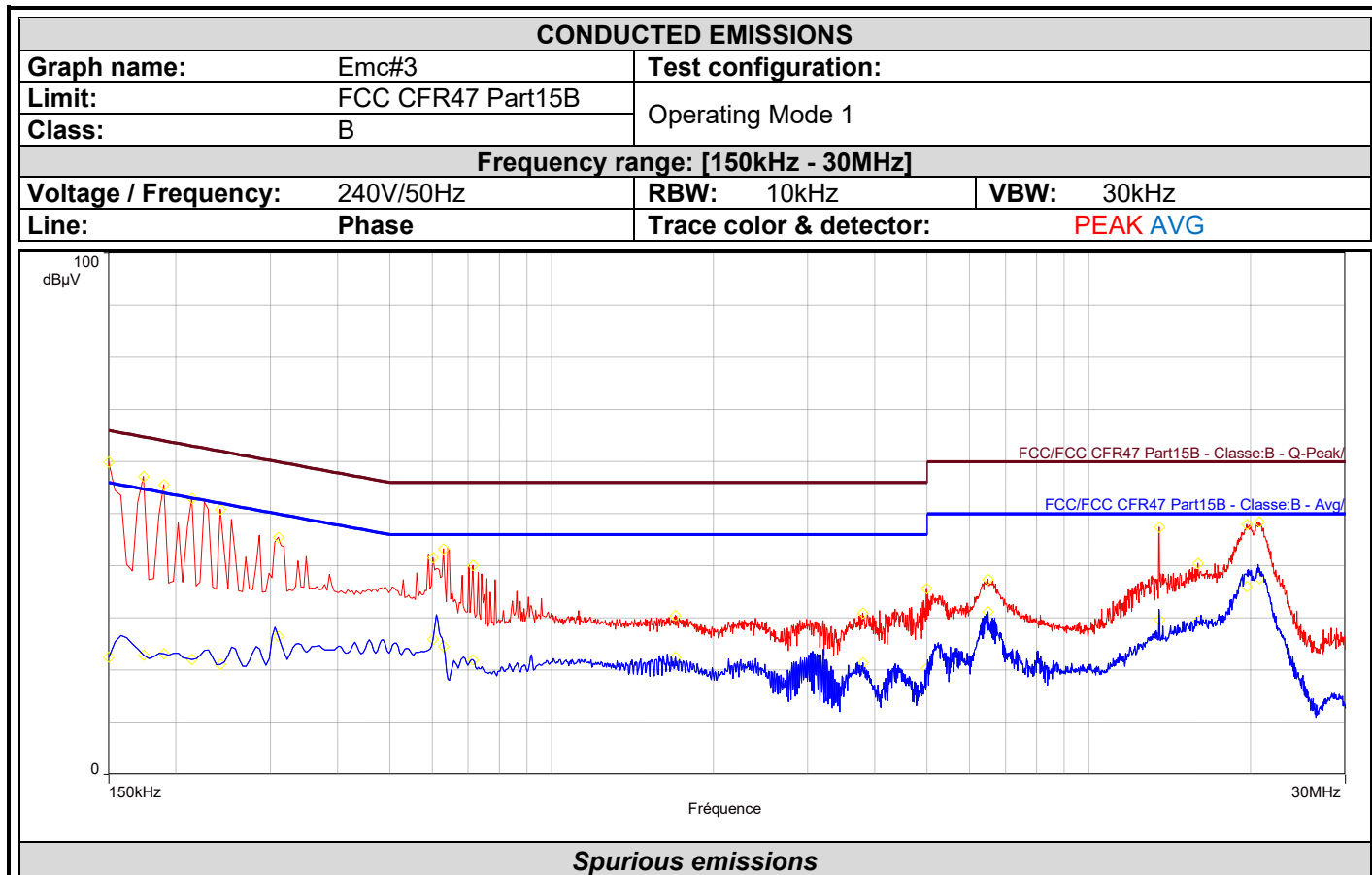
Spurious emissions

Frequency (MHz)	QPeak (dBμV)	Lim.QPeak (dBμV)	QPeak-Lim.QPeak (dB)	CISPR.AVG (dBμV)	Lim.CISPR.AVG (dBμV)	CISPR.AVG-Lim.CISPR.AVG (dB)
0.158	43.13	65.57	-22.43	32.82	55.57	-22.75
0.190	37.31	64.04	-26.72	29.84	54.04	-24.20
0.226	37.46	62.60	-25.13	26.74	52.60	-25.85
0.254	33.75	61.63	-27.87	26.31	51.63	-25.31
0.302	33.47	60.19	-26.72	26.70	50.19	-23.48
0.590	36.57	56.00	-19.43	27.19	46.00	-18.81
0.606	33.82	56.00	-22.18	27.15	46.00	-18.85
0.650	28.86	56.00	-27.14	19.87	46.00	-26.13
1.836	28.30	56.00	-27.70	21.38	46.00	-24.62
5.164	32.42	60.00	-27.58	26.05	50.00	-23.95
6.136	36.06	60.00	-23.94	30.56	50.00	-19.44
13.612*	38.19	60.00	-21.81	26.01	50.00	-23.99
19.132	42.41	60.00	-17.59	36.14	50.00	-13.86
22.984	30.96	60.00	-29.04	25.28	50.00	-24.72

*: RFID signal



L C I E

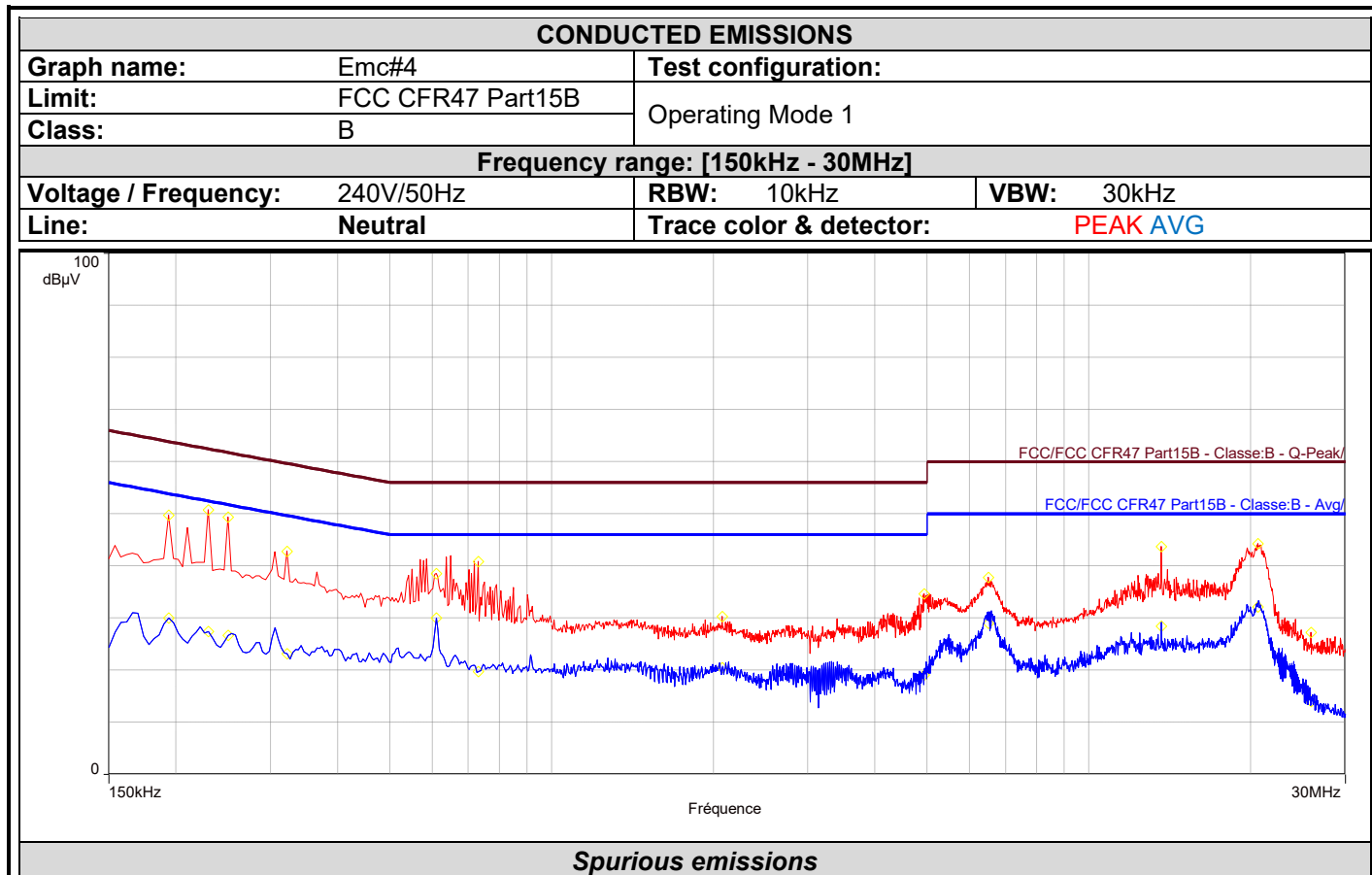


Frequency (MHz)	QPeak (dBμV)	Lim.QPeak (dBμV)	QPeak-Lim.QPeak (dB)	CISPR.AVG (dBμV)	Lim.CISPR.AVG (dBμV)	CISPR.AVG-Lim.CISPR.AVG (dB)
0.150	37.06	66.00	-28.94	21.51	56.00	-34.49
0.174	34.06	64.77	-30.71	21.92	54.77	-32.85
0.190	34.67	64.04	-29.36	22.55	54.04	-31.49
0.214	31.65	63.05	-31.40	21.08	53.05	-31.97
0.242	31.47	62.03	-30.55	20.29	52.03	-31.74
0.310	31.93	59.97	-28.04	25.69	49.97	-24.29
0.602	33.55	56.00	-22.45	25.14	46.00	-20.86
0.630	34.05	56.00	-21.95	25.10	46.00	-20.90
0.714	29.07	56.00	-26.93	21.62	46.00	-24.38
1.700	27.87	56.00	-28.13	20.94	46.00	-25.06
3.796	26.21	56.00	-29.79	19.28	46.00	-26.72
4.992	28.25	56.00	-27.75	16.46	46.00	-29.54
6.480	35.43	60.00	-24.57	27.14	50.00	-22.86
13.520*	37.44	60.00	-22.56	26.64	50.00	-23.36
15.960	35.36	60.00	-24.64	26.97	50.00	-23.03
19.680	43.79	60.00	-16.21	36.29	50.00	-13.71
20.748	43.85	60.00	-16.15	36.08	50.00	-13.92

*: RFID signal



L C I E

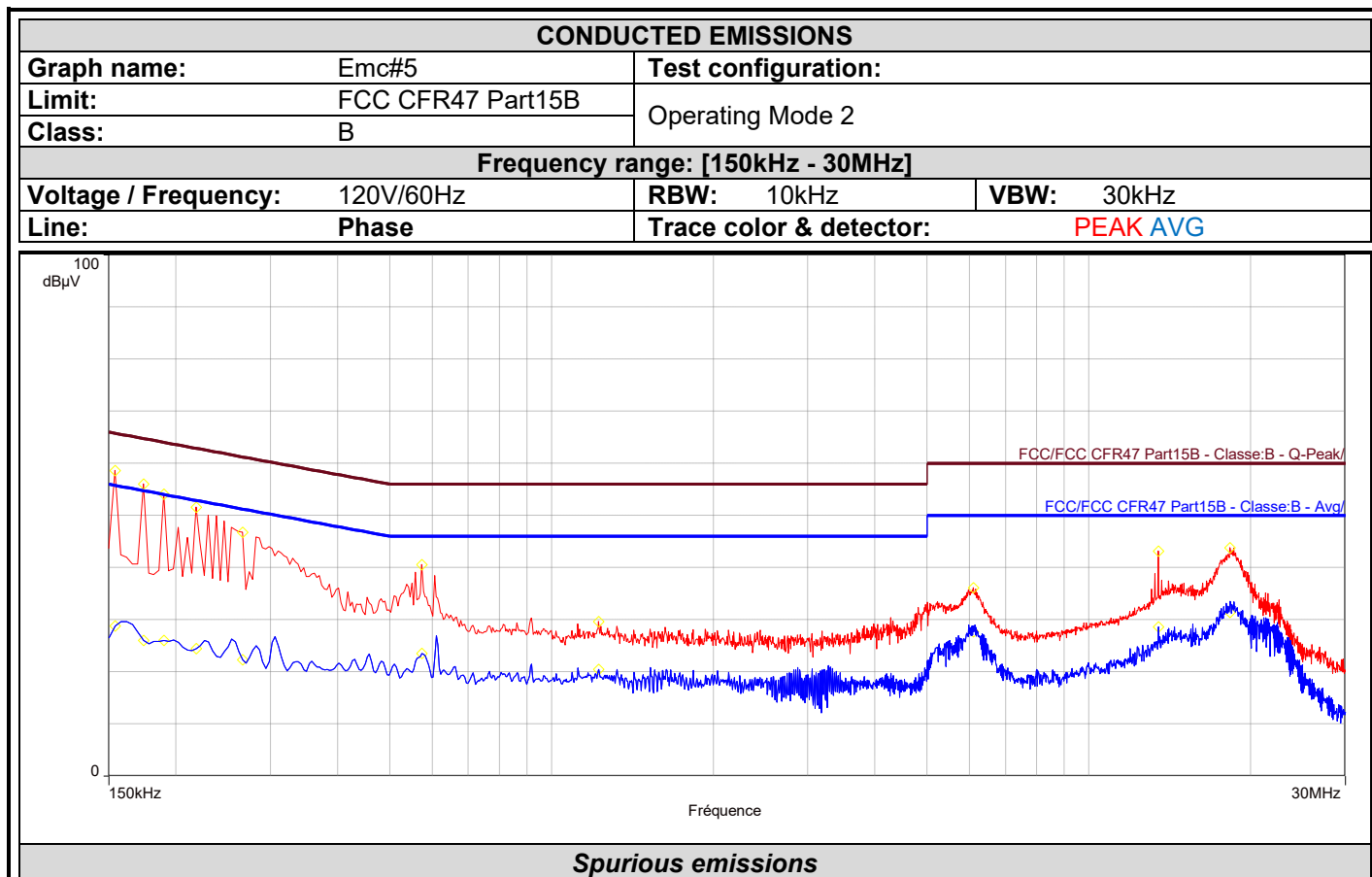


Frequency (MHz)	QPeak (dBμV)	Lim.QPeak (dBμV)	QPeak- Lim.QPeak (dB)	CISPR.AVG (dBμV)	Lim.CISPR.AVG (dBμV)	CISPR.AVG- Lim.CISPR.AVG (dB)
0.194	36.56	63.86	-27.31	25.83	53.86	-28.03
0.230	35.88	62.45	-26.57	26.73	52.45	-25.72
0.250	34.20	61.76	-27.56	24.76	51.76	-27.00
0.322	30.71	59.66	-28.94	19.96	49.66	-29.69
0.610	34.15	56.00	-21.85	29.27	46.00	-16.73
0.730	27.44	56.00	-28.56	19.50	46.00	-26.50
2.080	26.63	56.00	-29.37	19.41	46.00	-26.59
4.936	28.14	56.00	-27.86	18.14	46.00	-27.86
6.504	33.71	60.00	-26.29	24.02	50.00	-25.98
13.624*	33.18	60.00	-26.82	22.63	50.00	-27.37
20.648	40.25	60.00	-19.75	32.47	50.00	-17.53
25.916	17.40	60.00	-42.60	10.36	50.00	-39.64

*: RFID signal



L C I E

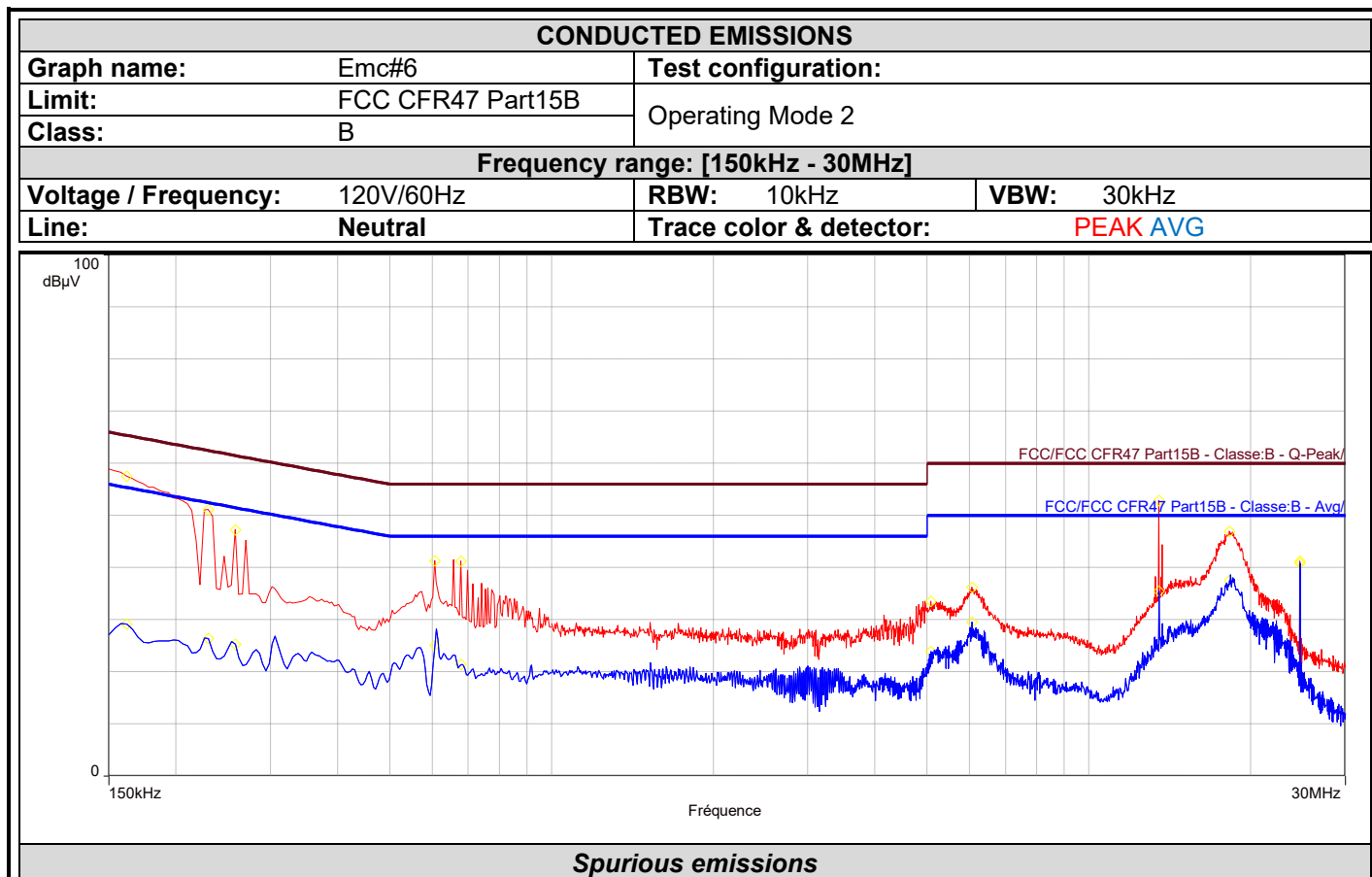


Frequency (MHz)	QPeak (dBμV)	Lim.QPeak (dBμV)	QPeak- Lim.QPeak (dB)	CISPR.AVG (dBμV)	Lim.CISPR.AVG (dBμV)	CISPR.AVG- Lim.CISPR.AVG (dB)
0.154	39.19	65.78	-26.59	28.42	55.78	-27.36
0.174	36.47	64.77	-28.29	24.84	54.77	-29.93
0.190	42.97	64.04	-21.07	26.03	54.04	-28.01
0.218	34.48	62.89	-28.42	23.39	52.89	-29.51
0.266	31.99	61.24	-29.25	20.69	51.24	-30.56
0.574	32.01	56.00	-23.99	22.86	46.00	-23.14
1.224	27.33	56.00	-28.67	19.98	46.00	-26.02
6.092	34.59	60.00	-25.41	26.93	50.00	-23.07
13.472*	32.49	60.00	-27.51	24.09	50.00	-25.91
18.284	39.44	60.00	-20.56	30.66	50.00	-19.34

*: RFID signal



L C I E



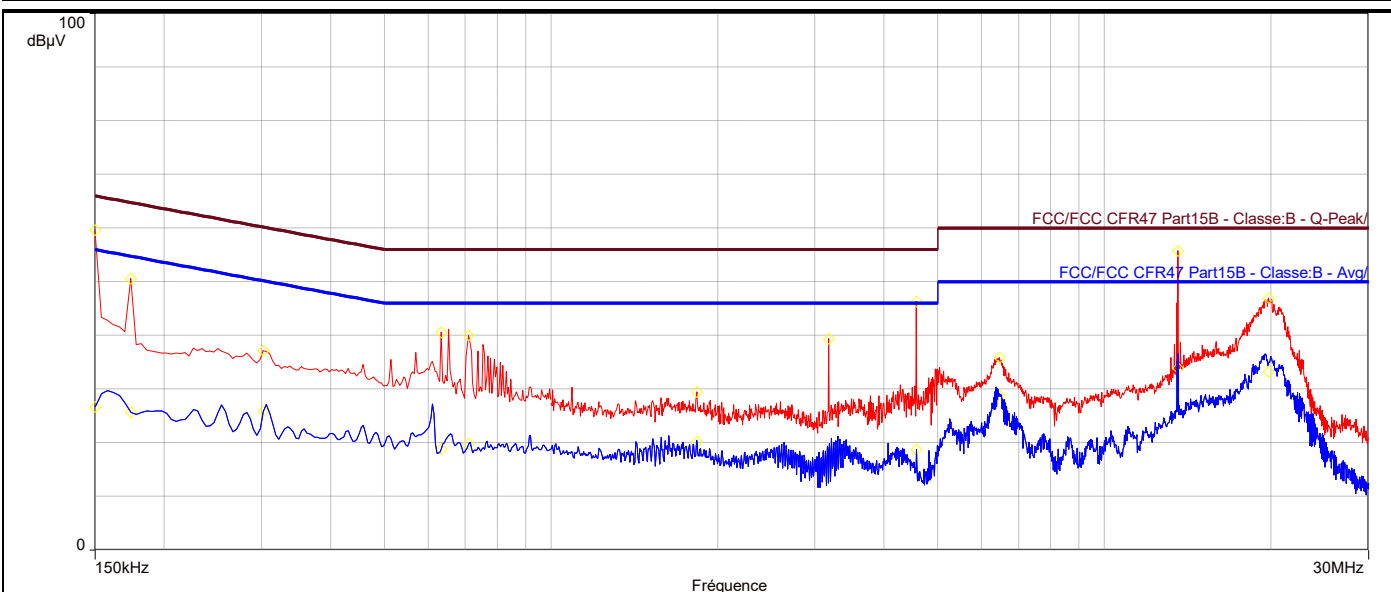
Frequency (MHz)	QPeak (dBμV)	Lim.QPeak (dBμV)	QPeak- Lim.QPeak (dB)	CISPR.AVG (dBμV)	Lim.CISPR.AVG (dBμV)	CISPR.AVG- Lim.CISPR.AVG (dB)
0.162	36.82	65.36	-28.54	27.11	55.36	-28.25
0.230	40.68	62.45	-21.77	25.84	52.45	-26.61
0.258	32.29	61.50	-29.20	24.47	51.50	-27.03
0.606	31.28	56.00	-24.72	23.93	46.00	-22.07
0.678	29.50	56.00	-26.50	20.89	46.00	-25.11
5.084	30.95	60.00	-29.05	22.60	50.00	-27.40
6.060	34.38	60.00	-25.62	28.05	50.00	-21.95
13.504	38.49	60.00	-21.51	25.33	50.00	-24.67
18.276	43.29	60.00	-16.71	36.13	50.00	-13.87
24.716	14.28	60.00	-45.72	8.25	50.00	-41.75



L C I E

CONDUCTED EMISSIONS

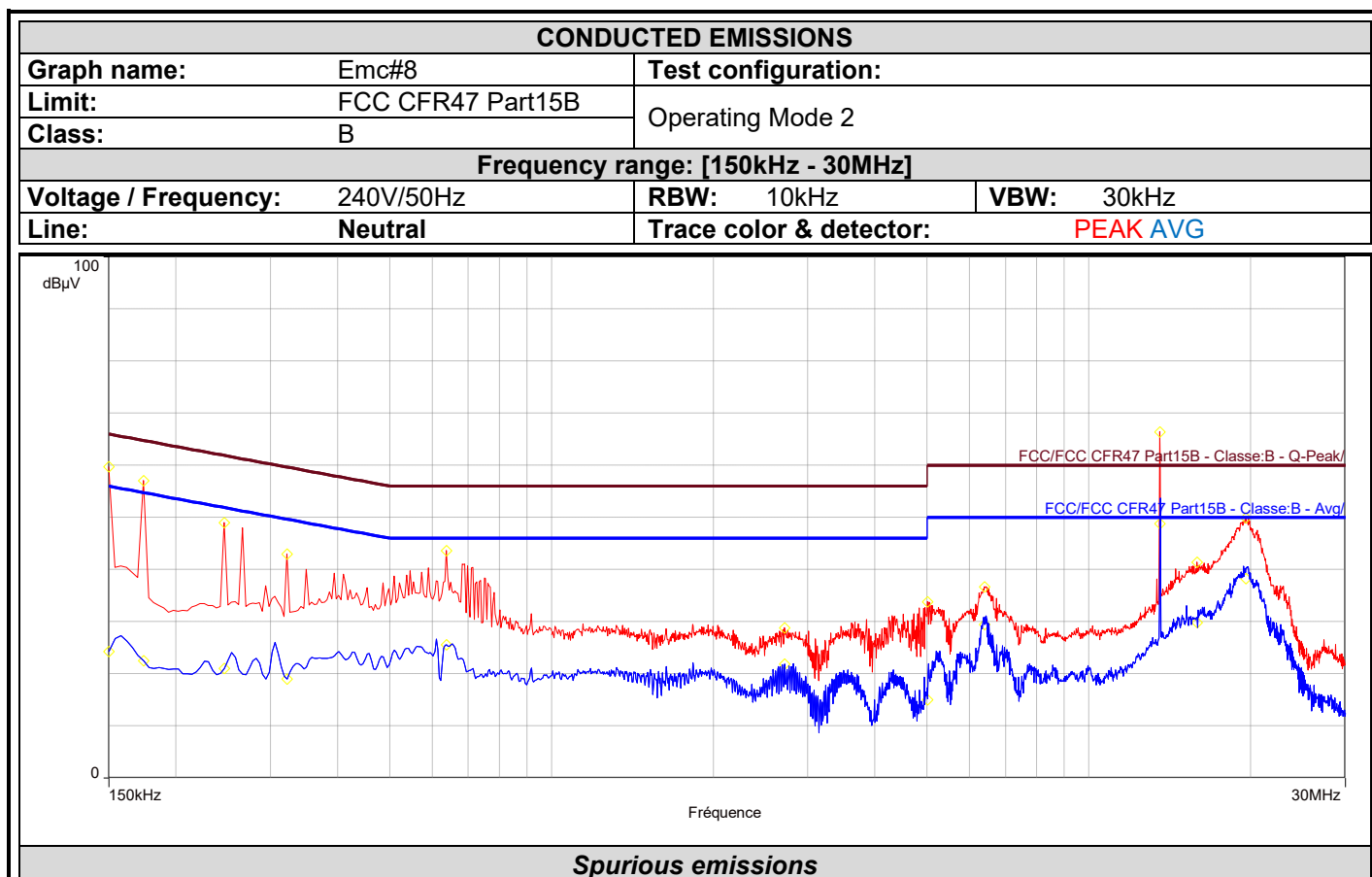
Graph name:	Emc#7	Test configuration:	
Limit:	FCC CFR47 Part15B	Operating Mode 2	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	240V/50Hz	RBW: 10kHz	VBW: 30kHz
Line:	Phase	Trace color & detector:	PEAK AVG



Spurious emissions

Frequency (MHz)	QPeak (dBμV)	Lim.QPeak (dBμV)	QPeak-Lim.QPeak (dB)	CISPR.AVG (dBμV)	Lim.CISPR.AVG (dBμV)	CISPR.AVG-Lim.CISPR.AVG (dB)
0.150	38.69	66.00	-27.31	25.47	56.00	-30.53
0.174	35.48	64.77	-29.29	24.59	54.77	-30.17
0.302	32.37	60.19	-27.82	25.47	50.19	-24.72
0.634	27.75	56.00	-28.25	18.68	46.00	-27.32
0.710	26.74	56.00	-29.26	19.17	46.00	-26.83
1.836	25.98	56.00	-30.02	19.50	46.00	-26.50
3.176	22.11	56.00	-33.89	14.04	46.00	-31.96
4.568	23.20	56.00	-32.80	12.48	46.00	-33.52
6.456	34.69	60.00	-25.31	27.80	50.00	-22.20
13.572*	41.12	60.00	-18.88	24.30	50.00	-25.70
19.788	41.89	60.00	-18.11	32.81	50.00	-17.19

*: RFID signal



Frequency (MHz)	QPeak (dBμV)	Lim.QPeak (dBμV)	QPeak-Lim.QPeak (dB)	CISPR.AVG (dBμV)	Lim.CISPR.AVG (dBμV)	CISPR.AVG-Lim.CISPR.AVG (dB)
0.150	36.23	66.00	-29.77	22.69	56.00	-33.31
0.174	33.58	64.77	-31.19	21.49	54.77	-33.28
0.246	32.95	61.89	-28.94	20.25	51.89	-31.64
0.322	28.15	59.66	-31.51	18.10	49.66	-31.56
0.638	34.41	56.00	-21.59	24.92	46.00	-21.08
2.712	26.18	56.00	-29.82	21.04	46.00	-24.96
5.012	26.66	60.00	-33.34	14.74	50.00	-35.26
6.396	35.70	60.00	-24.30	30.31	50.00	-19.69
13.564*	57.44	60.00	-2.56	40.76	50.00	-9.24
15.888	37.88	60.00	-22.12	29.81	50.00	-20.19
19.576	46.22	60.00	-13.78	38.63	50.00	-11.37

*: RFID signal

3.6. CONCLUSION

The sample of the equipment **FT-300**, Sn : **MM00773**, tested in the configuration presented in this test report **satisfies** to requirements of the product family standard applied (See §Test Program) for conducted emissions.

4. MEASUREMENT OF RADIATED EMISSION

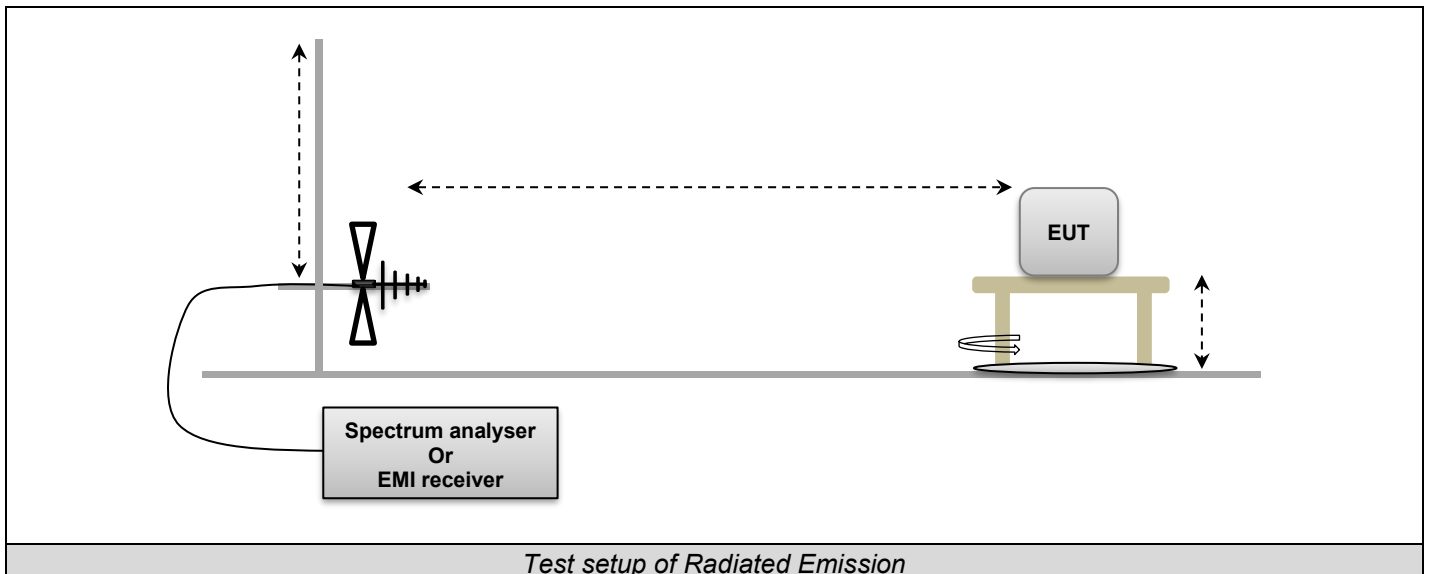
4.1. TEST CONDITIONS

Date of test : August 07, 2025
 Test performed by : Majid MOURZAGH
 Atmospheric pressure (hPa) : 990
 Relative humidity (%) : 39
 Ambient temperature (°C) : 23

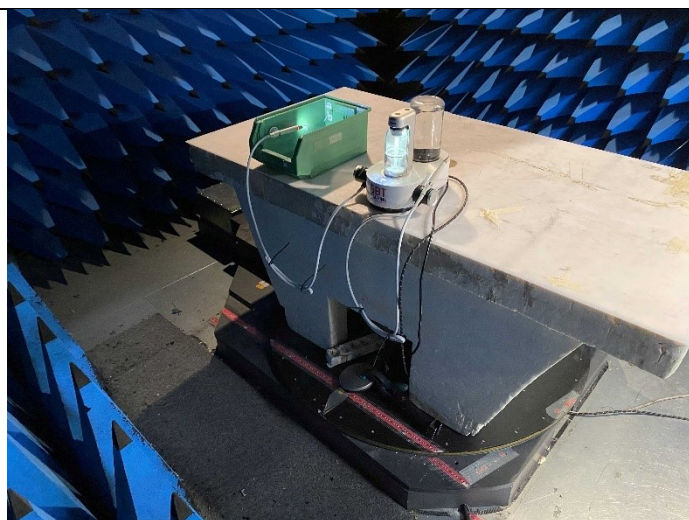
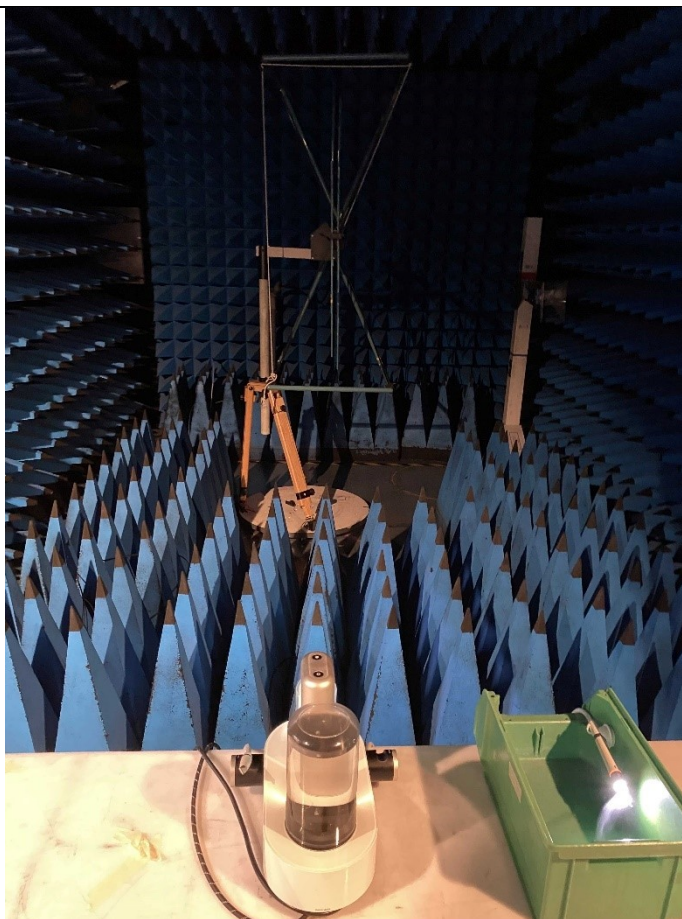
4.2. TEST SETUP

Test procedure:
 ANSI C63.4 & FCC Part 15 subpart B

The EUT and auxiliaries are set 80cm above the ground on the non-conducting table (Table-top equipment).
 The EUT is powered by V_{nom} .



Same setup is used in semi anechoic chamber during pre-characterization, with a distance of 3m between EUT and antenna.



Configuration Mode 1

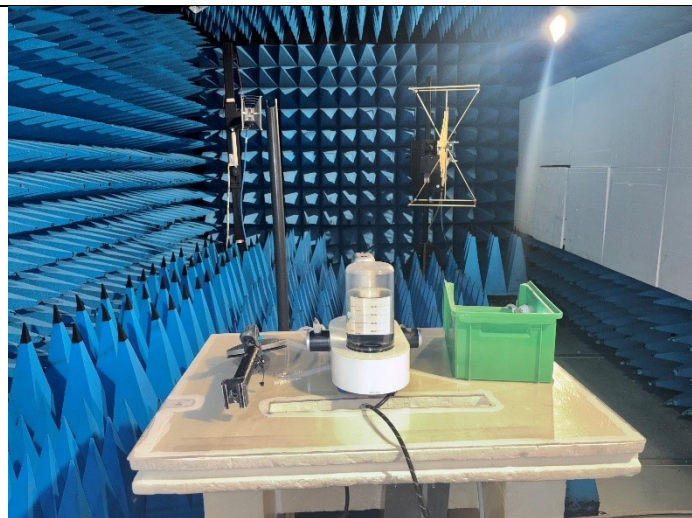


Configuration Mode 2

Photo in anechoic chamber – Frequency <1GHz



Configuration mode 1



Configuration mode 2

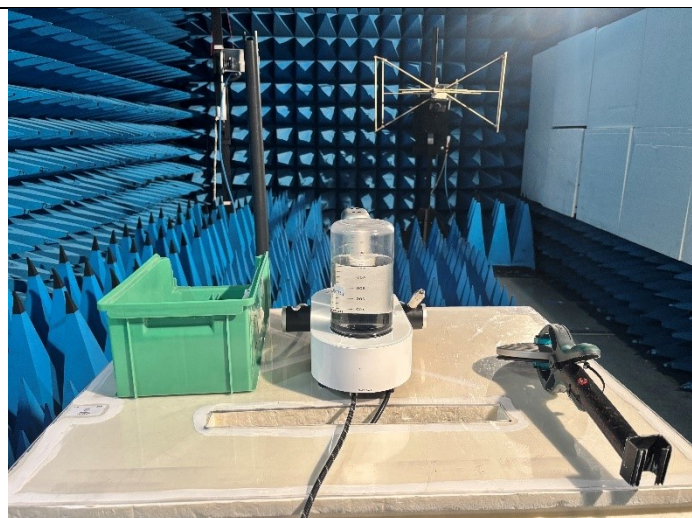


Photo in anechoic chamber – Frequency >1GHz



Configuration Mode 1



Configuration Mode 2

Photo on OATS



4.3. TEST METHOD

During pre-characterization, a pre-scan of all the setup has been performed on all axis of EUT used in normal configuration. The pre-characterization graphs are obtained in PEAK detection, and AVERAGE detection for frequencies above 1GHz. A summary of the worst case emissions found in all test configurations and modes is shown. Spurious or frequency band are measured with qualification detectors to show compliance with limits.

Following frequency ranges, test setup parameters are different and specified in tables below.

4.3.1. 30MHz –1GHz

Frequency range:	30MHz to 1GHz	
Test:	Pre-Characterization	Qualification
Antenna Polarization:	Horizontal and Vertical	
Antenna Height:	Centered on EUT, EUT smaller than the beamwidth of antenna	Varied continuously from 1m to 4m
Antenna Type:	Bi-Log	Biconical & Bi-Log
Min. Antenna Beamwidth:	R&S HL562E / w@3m - 3.1m<1GHz	Teseq CBL 6111 / w@10m - 14m<1GHz
RBW Filter:	100kHz	120kHz
Maximization:	Turntable rotation of 360 degrees range	
Test site:	Semi-Anechoic Chamber	Open Aera Test Site
Distance EUT - Antenna:	3m	10m
Detector:	Peak	QPeak
Mode:	Linear Scan	Linear Scan

4.3.2. 1GHz – 14GHz:

Frequency range:	1GHz to 13GHz	
Test:	Pre-Characterization	Qualification
Antenna Polarization:	Horizontal and Vertical	
Antenna Height:	Centered on EUT, EUT smaller than the beamwidth of antenna	Centered on EUT, EUT smaller than the beamwidth of antenna
Antenna Type:	Horn	Horn
Min. Antenna Beamwidth:	A-INFO LB-10180 / w@3m - 2.0m<14GHz / 0.7m<18GHz	A-INFO LB-10180 / w@3m - 2.0m<14GHz / 0.7m<18GHz
RBW Filter:	1MHz	1MHz
Maximization:	Turntable rotation of 360 degrees range	
Test site:	Full Anechoic Chamber	Full Anechoic Chamber
Distance EUT - Antenna:	3m	3m
Detector:	QPeak & Average	Peak & Average
Mode:	Linear Scan	Linear Scan

4.4. TEST EQUIPMENT LIST

Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Amplifier 10kHz - 13.5GHz	LCIE SUD EST	—	A7085028	04/23	08/25
Antenna Bi-Log XWing	TESEQ	CBL6144	C2040146	-/-	-/-
BAT EMC	NEXIO	v3.21.0.32	L1000115	-/-	-/-
Cable 0.75m	SUCOFLEX	18GHz	A5329919	08/24	08/25
Cable 2.2m N	SUCOFLEX	SF118A/2x11N/2.2M	A5329990	08/24	08/25
Cable 5m	SUCOFLEX	18GHz	A5329918	08/24	08/25
Radiated emission comb generator	BARDET	—	A3169050	-/-	-/-
RECEIVER	KEYSIGHT	E4440A	A4060035	06/24	06/27
Semi-Anechoic chamber #2	SIEPEL	—	D3044015	12/24	12/25
Table C2	LCIE	—	F2000438	-/-	-/-
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	09/25
Turntable chamber (Cage#2)	ETS Lingren	Model 2165	F2000404	-/-	-/-
Turntable controller (Cage#2)	ETS Lingren	Model 2066	F2000393	-/-	-/-
Antenna Bi-log	CHASE	CBL6111A	C2040172	07/24	07/26
Antenna Mat (OATS)	ETS Lingren	2071-2	F2000392	-/-	-/-
Cable (OATS)	—	1GHz	A5329623	09/24	09/25
CALCUL_FACTEURS	LCIE SUD EST	V4	L2000035	-/-	-/-
Emission Cable	RADIALEX	-/-	A5329061	01/25	01/26
Emission Cable	CABELTEL	6GHz	A5329069	02/24	06/25
Emission Cable	MICRO-COAX	1GHz	A5329656	09/24	09/25
OATS	—	—	F2000409	07/24	07/25
Receiver 20-1000MHz	ROHDE & SCHWARZ	ESVS30	A2642006	10/24	10/26
Turntable (OATS)	ETS Lingren	Model 2187	F2000403	-/-	-/-
Turntable / Mast controller (OATS)	ETS Lingren	Model 2066	F2000372	-/-	-/-
Table C1/OATS	MATURO GmbH	—	F2000437	-/-	-/-



TEST EQUIPMENT USED during test performed 21/02/2025					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Antenna horn 18GHz	AINFO	LB	C2042055	11/24	11/27
BAT EMC	NEXIO	v3.21.0.32	L1000115	-/-	-/-
CABLE	TELEDYNE	R82-0404-0.5M	A5330009	04/23	04/26
Cable 0.75m	-	18GHz	A5329900	08/24	08/25
Filter Matrice	LCIE SUD EST	Combined filters	A7484078	03/23	03/25
HF Radiated emission comb generator	LCIE SUD EST	—	A3169088	-/-	-/-
Rehausse Table C3	LCIE	—	F2000507	-/-	-/-
Rehausse Table C3	LCIE	—	F2000511	-/-	-/-
Semi-Anechoic chamber #3 (BF)	SIEPEL	—	D3044017_BF	04/22	04/25
Semi-Anechoic chamber #3 (VSWR)	SIEPEL	—	D3044017_VSWR	04/22	04/25
SMA Cable 18GHz 0.6m	TELEDYNE	18GHz	A5330055	05/24	05/25
SMA Cable 18GHz 3.5m	TELEDYNE	18GHz	A5330058	05/24	05/25
Spectrum analyzer	ROHDE & SCHWARZ	FSU 26	A4060058	09/23	09/25
Table C3	LCIE	—	F2000461	-/-	-/-
Turntable chamber (Cage#3)	ETS Lingren	Model 2165	F2000371	-/-	-/-
Turntable controller (Cage#3)	ETS Lingren	Model 2090	F2000444	-/-	-/-

4.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

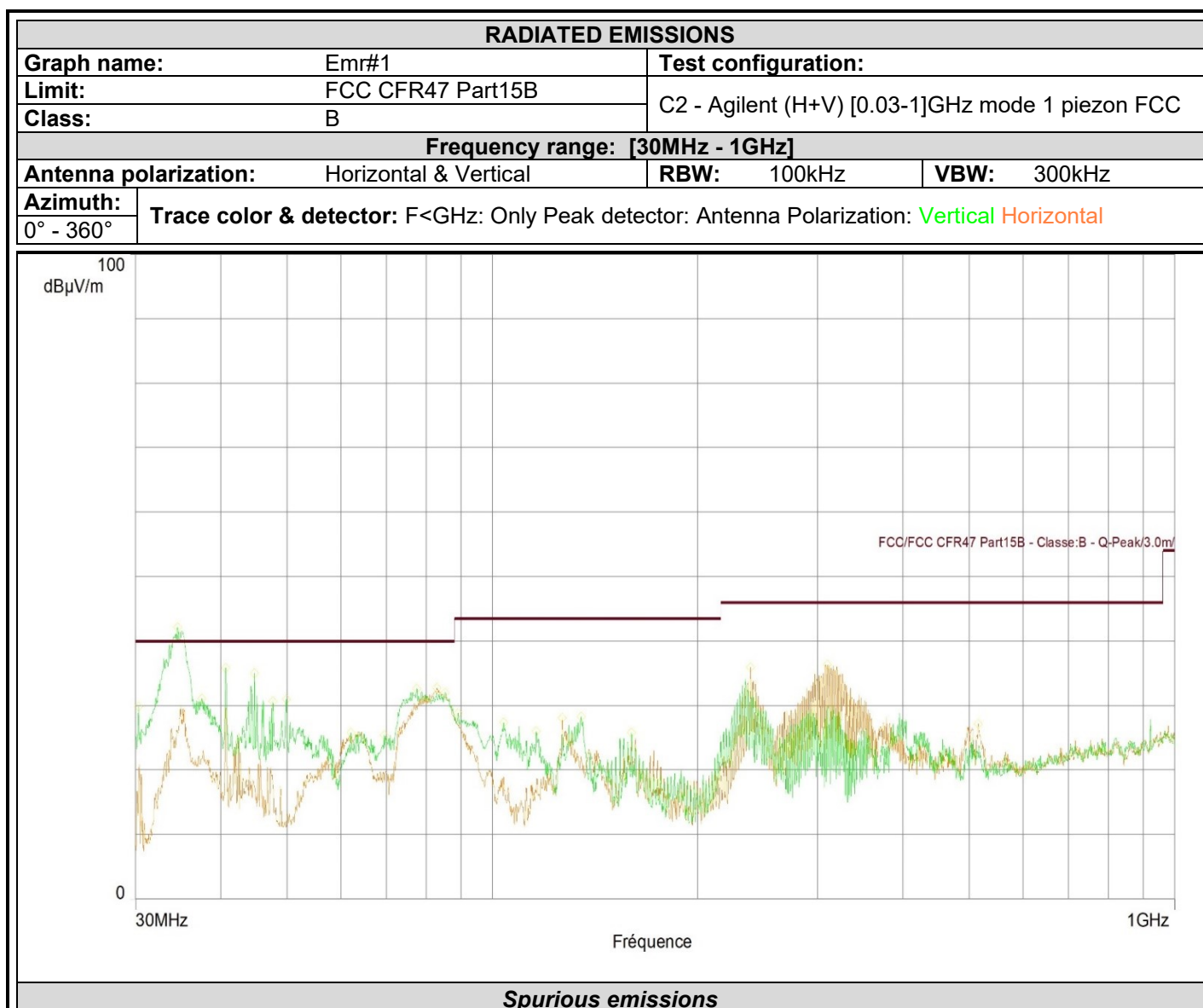
None

4.6. TEST RESULTS

4.6.1. 30MHz –1GHz

Pre-qualification measurement

Graph identifier	Polarization	EUT position	Comments	
Emr# 1	Vertical	Axis XY	Mode n°1	See below
Emr# 2	Horizontal	Axis XY	Mode n°2	See below

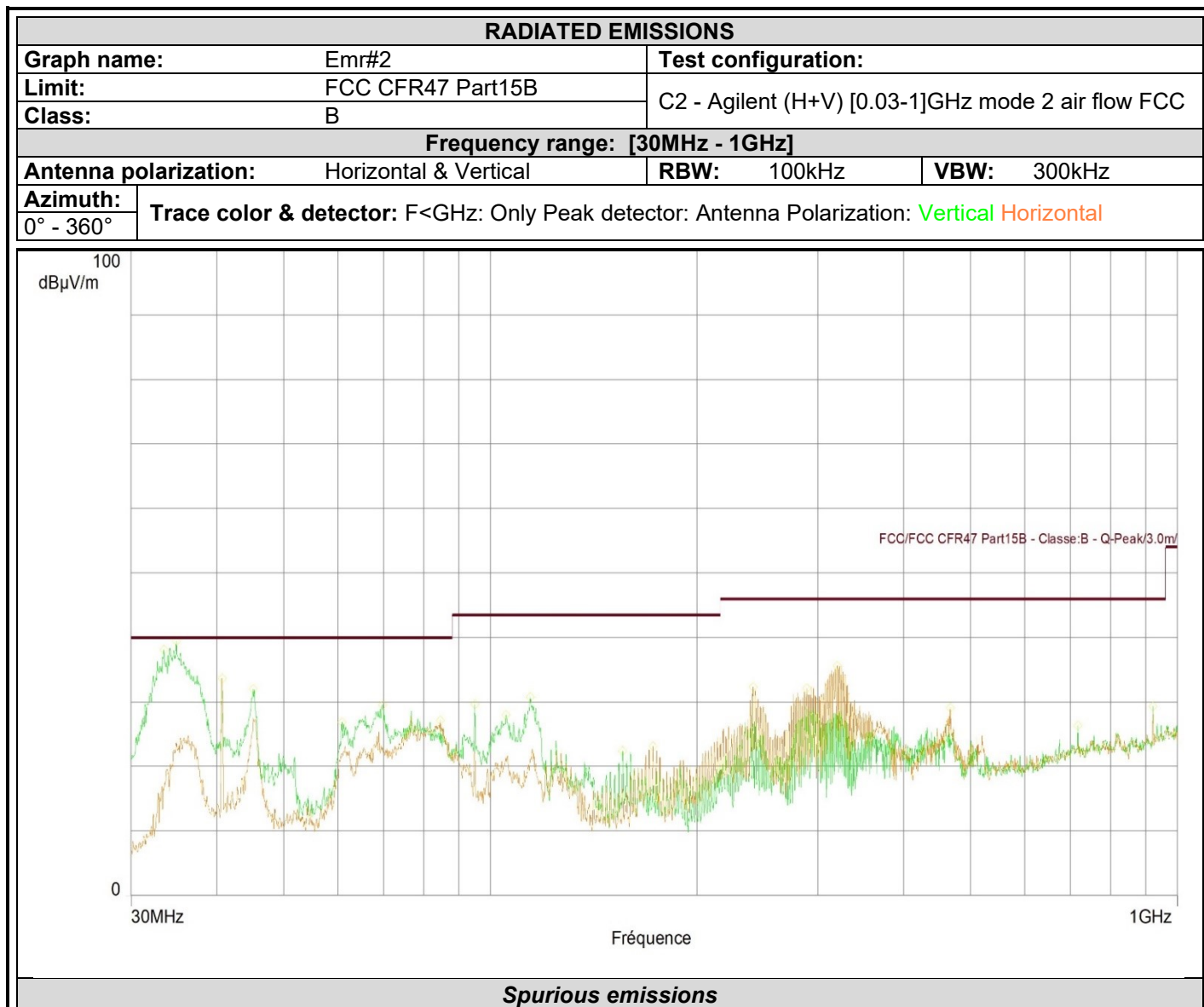




Frequency (MHz)	Peak (dBμV/m)	Lim.Q-Peak (dBμV/m)	Peak-Lim.Q-Peak (dB)	Polarization
30.311	29.86	40.00	-10.14	Vertical
34.545	42.11	40.00	2.11	Vertical
37.534	31.09	40.00	-8.91	Vertical
40.668	35.88	40.00	-4.12	Vertical
44.819	35.01	40.00	-4.99	Vertical
47.724	30.69	40.00	-9.31	Vertical
49.883	30.98	40.00	-9.02	Vertical
62.045	25.83	40.00	-14.17	Vertical
69.351	25.43	40.00	-14.57	Vertical
77.528	32.60	40.00	-7.40	Vertical
85.331	32.03	40.00	-7.97	Vertical
89.130	28.80	43.50	-14.70	Vertical
103.824	27.33	43.50	-16.17	Vertical
116.048	26.03	43.50	-17.47	Vertical
135.018	28.33	43.50	-15.17	Vertical
160.006	25.81	43.50	-17.69	Vertical
82.882	32.73	40.00	-7.27	Horizontal
126.695	28.06	43.50	-15.44	Horizontal
239.018	35.99	46.00	-10.01	Horizontal
309.535	36.36	46.00	-9.64	Horizontal
515.712	27.15	46.00	-18.85	Horizontal



L C I E



Frequency (MHz)	Peak (dBµV/m)	Lim.Q-Peak (dBµV/m)	Peak-Lim.Q-Peak (dB)	Polarization
40.689	33.72	40.00	-6.28	Horizontal
84.605	27.13	40.00	-12.87	Horizontal
172.459	23.15	43.50	-20.35	Horizontal
241.216	32.30	46.00	-13.70	Horizontal
288.878	32.10	46.00	-13.90	Horizontal
320.034	35.66	46.00	-10.34	Horizontal
467.562	29.12	46.00	-16.88	Horizontal
33.466	38.11	40.00	-1.89	Vertical
34.919	39.44	40.00	-0.56	Vertical
45.192	32.04	40.00	-7.96	Vertical



Frequency (MHz)	Peak (dB μ V/m)	Lim.Q-Peak (dB μ V/m)	Peak-Lim.Q-Peak (dB)	Polarization
60.779	26.91	40.00	-13.09	Vertical
69.745	29.53	40.00	-10.47	Vertical
94.920	29.69	43.50	-13.81	Vertical
105.401	28.03	43.50	-15.47	Vertical
114.284	30.77	43.50	-12.73	Vertical
155.814	22.42	43.50	-21.08	Vertical
716.958	26.35	46.00	-19.65	Vertical
921.231	29.38	46.00	-16.62	Vertical

Qualification

The frequency list is created from the results obtained during the pre-qualification.

Configuration mode N°1

Test Frequency (MHz)	Meter Reading dB(μ V)	Detector (Pk/QP/Av)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (cm)	Transducer Factor (dB)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
30.3000	19.1	QP	V	40	100	14.4	33.5	40.0	-6.5
34.5000	18.7	QP	V	0	100	14.7	33.4	40.0	-6.6
37.5000	18.6	QP	V	39	100	14.7	33.3	40.0	-6.7
40.6700	16.5	QP	V	112	110	14.5	31.0	40.0	-9.0
44.8000	20.7	QP	V	34	143	13.9	34.6	40.0	-5.4
49.9000	23.0	QP	V	360	180	12.7	35.7	40.0	-4.3
77.5000	25.0	QP	V	0	134	9.3	34.3	40.0	-5.7
82.9000	23.0	QP	V	168	160	10.9	33.9	40.0	-6.1
103.8000	16.3	QP	V	0	100	13.7	30.0	43.5	-13.5
135.0000	18.0	QP	V	0	183	16.7	34.7	43.5	-8.8
160.0000	17.7	QP	V	156	100	20.3	38.0	43.5	-5.5
239.0000	21.8	QP	V	230	100	15.1	36.9	46.0	-9.1
309.5000	21.7	QP	V	244	100	18.1	39.8	46.0	-6.2



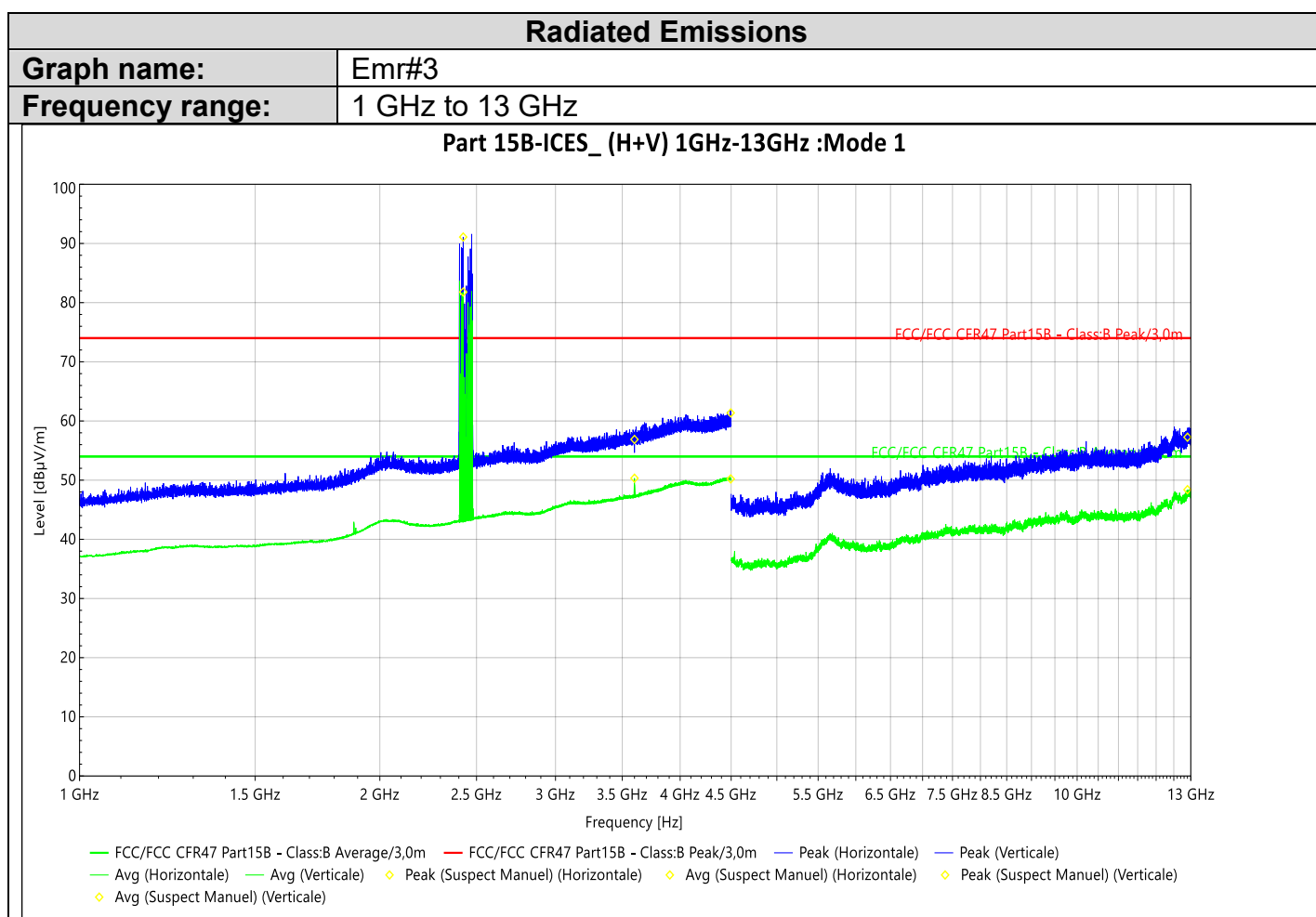
Configuration mode N°2

Test Frequency (MHz)	Meter Reading dB(μV)	Detector (Pk/QP/Av)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (cm)	Transducer Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
33.5000	19.3	QP	V	111	196	14.7	34.0	40.0	-6.0
34.9000	18.8	QP	V	0	100	14.8	33.6	40.0	-6.4
40.6700	21.7	QP	V	112	122	14.5	36.2	40.0	-3.8
45.2000	17.6	QP	V	0	100	13.8	31.4	40.0	-8.6
60.8000	24.3	QP	V	0	100	9.6	33.9	40.0	-6.1
69.7000	21.1	QP	V	0	181	7.9	29.0	40.0	-11.0
84.6000	19.9	QP	V	150	212	11.4	31.3	40.0	-8.7
94.9000	20.3	QP	V	0	152	13.4	33.7	43.5	-9.8
105.4000	19.8	QP	V	0	100	13.6	33.4	43.5	-10.1
114.3000	18.3	QP	V	171	137	13.2	31.5	43.5	-12.0
241.2000	19.5	QP	V	0	100	15.4	34.9	46.0	-11.1
320.0000	20.3	QP	V	121	100	18.3	38.6	46.0	-7.4

4.6.2. 1GHz - 13GHz

Pre-qualification measurement

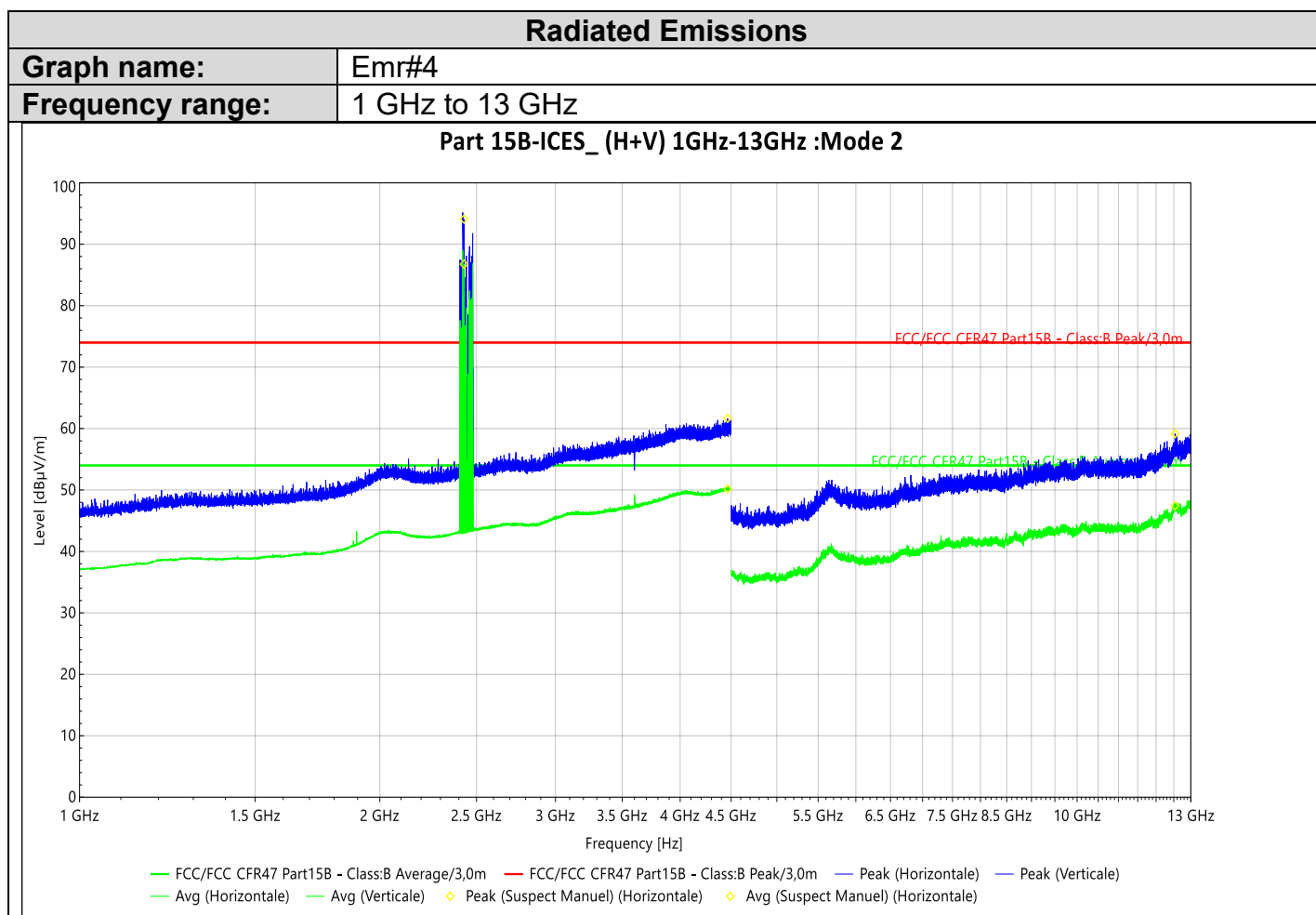
Graph identifier	Polarization	EUT position	Comments	
Emr# 3	Vertical	Axis XY	Mode n°1	See below
Emr# 4	Horizontal	Axis XY	Mode n°2	See below



Pre-Characterization:

Frequency	PK Level (dBµV/m)	Lim.PK (dBµV/m)	Avg (dBµV/m)	Lim.Avg (dBµV/m)	Angle (°)	Polar.	Correct. (dB)
3.600 GHz	56.88	74.00	50.32	54.00	71	H	40.54
12.901 GHz	57.26	74.00	48.39	54.00	306	H	-0.37
4.495 GHz	61.36	74.00	50.21	54.00	295	V	43.43
2.424 GHz*	91.09	74.00	81.79	54.00	211	V	37.18

*: due to Bluetooth and WIFI band



Pre-Characterization:

Frequency	PK Level (dBµV/m)	Lim.PK (dBµV/m)	Avg (dBµV/m)	Lim.Avg (dBµV/m)	Angle (°)	Polar.	Correct. (dB)
2.428 GHz*	94.10	74.00	86.75	54.00	164	H	37.20
4.464 GHz	61.66	74.00	50.18	54.00	332	H	43.42
12.537 GHz	59.18	74.00	47.44	54.00	135	H	-1.44

*: due to Bluetooth and WIFI band

Qualification

The frequency list is created from the results obtained during the pre-qualification.

No significant frequency observed,

4.7. CONCLUSION

The sample of the equipment **FT-300**, Sn : **MM00773 / MM00773** tested in the configuration presented in this test report **satisfies** to requirements of the product family standard applied (See §Test Program) for radiated emissions.

5. 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 $\pm y$
Mesure des perturbations conduites en tension sur le réseau d'énergie <i>Measurement of conducted disturbances in voltage on the power port</i> RSIL / LISN - 50Ω/50μH		
9kHz - 150kHz	3.64 dB	3.8 dB
150kHz - 30MHz	3.21 dB	3.4 dB
Mesure des perturbations conduites en tension sur le réseau d'énergie <i>Measurement of conducted disturbances in voltage on the power port</i> Sonde de tension / Voltage Probe		
9kHz - 30MHz	2.61 dB	2.9 dB
Mesure des perturbations conduites en tension sur le réseau de télécommunication <i>Measurement of conducted disturbances in voltage on the telecommunication port</i> RSI / AAN		
150kHz - 30MHz - aLCL = 55 ... 40 dBc	4.07 dB	5.0 dB
150kHz - 30MHz - aLCL = 65 ... 50 dBc	4.47 dB	5.0 dB
150kHz - 30MHz - aLCL = 75 ... 60 dBc	4.91 dB	5.0 dB
Mesure des perturbations conduites en tension sur le réseau de télécommunication <i>Measurement of conducted disturbances in voltage on the telecommunication port</i> Sonde de tension / Capacitive Voltage Probe		
150kHz - 30MHz	3.53 dB	3.9 dB
Mesure des perturbations conduites en courant sur le réseau de télécommunication <i>Measurement of conducted disturbances in current on the telecommunication port</i> Sonde de courant / Current Probe		
9kHz - 30MHz	2.41 dB	2.9 dB
Mesure des perturbations discontinues conduites en tension <i>Measurement of discontinuous conducted disturbances in voltage</i> Récepteur / Receiver		
150kHz - 30MHz	3.21 dB	3.4 dB
Mesure des harmoniques de courant <i>Measurement of current harmonics</i>		
$I_{\text{harm}} \pm 5\%$ du calibre / range	0.93 A	-
$I_{\text{harm}} \pm 0.15\%$ du calibre / range	0.03 A	-
Mesure du flicker <i>Flicker measurement</i>		
Mesure du P_{ST} / Measurement of P_{ST}	6.0 %	-
Mesure des perturbations rayonnées <i>Measurement of radiated disturbances</i> OATS & SAC @3m		
30MHz - 200MHz, Antenne biconique / Biconical antenna	5.74 dB	6.3 dB
30MHz - 1GHz, Antenne hybride / Hybrid antenna	5.65 dB	6.3 dB
Mesure des perturbations rayonnées <i>Measurement of radiated disturbances</i> OATS @10m		
30MHz - 200MHz, Antenne biconique / Biconical antenna	5.72 dB	6.3 dB
30MHz - 1GHz, Antenne hybride / Hybrid antenna	6.18 dB	6.3 dB
Mesure des perturbations rayonnées <i>Measurement of radiated disturbances</i> FAR @3m		
1GHz - 6GHz, Antenne cornet ou hybride / Horn or hybride antenna	4.77 dB	5.2 dB
1GHz - 6GHz, Antenne cornet ou hybride et préamplificateur / Horn or hybride antenna and preamplifier	5.02 dB	5.2 dB
6GHz - 18GHz, Antenne cornet et préamplificateur / Horn antenna and preamplifier	5.41 dB	5.5 dB

Les valeurs d'incertitudes calculées du laboratoire étant inférieures aux valeurs d'incertitudes limites établies par le CISPR, la conformité de l'échantillon est établie directement par les niveaux limites applicables. Ce tableau regroupe l'ensemble des incertitudes maximales pour les essais réalisables dans le laboratoire, qu'ils aient été ou non réalisés dans le cadre du présent rapport / 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

Note - L'incertitude de mesure instrumentale est déterminée selon la CISPR 16-4-2. / The instrumentation measurement uncertainty is determined according to CISPR16-4-2



----- **END OF REPORT** -----