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TEST REPORT

N°: 26771866-812660-B (FILE#11253614)

Version: 01

Subject

Radio spectrum tests according to the standards:
FCC CFR 47 Part 15.225 & ANSI C63.10
RSS 210 & RSS-Gen

Issued to

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

Apparatus under test

- Product
- Trade mark
- Manufacturer
- Model under test
- Serial number
- FCCID
- IC

GBT Machine AIRFLOW Prophylaxis Master
EMS ELECTRO MEDICAL SYSTEMS
E.M.S. ELECTRO MEDICAL SYSTEMS S.A.
FT-300
MM00773
2ANZC-NSFBMJYDEAV
23296-NSFBMJYDEAV

Conclusion

See Test Program chapter

Test date
Test location
FCC Test site
ISED Test site
Sample receipt date
Composition of document
Document issued on

July 15, 2025 to July 18, 2025
LCIE Grenoble
FR0008 - 918017 (MOI)
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PUBLICATION HISTORY

Version	Date	Author	Modification
01	September 12, 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

References

- 47 CFR Part 15.407 (July 21, 2025) [R](#)
- RSS 210 Issue 11
- RSS Gen Issue 5.2
- ANSI C63.10 (2020)

Radio requirement:

Clause - Test Description		Test result - Comments
Occupied Bandwidth	<i>ISED</i>	PASS
20dB Bandwidth	<i>FCC & ISED</i>	PASS
Frequency Tolerance	<i>FCC & ISED</i>	PASS
Field strength within the band [13.110-14.010] MHz	<i>FCC & ISED</i>	PASS
Field strength outside of the bands [13.110-14.010] MHz	<i>FCC & ISED</i>	PASS
Receiver Radiated Emissions	<i>ISED</i>	PASS(2)

This table is a summary of test report, see conclusion of each clause of this test report for detail.

(1) Limited program

(2) Testing covered the receive mode, and receiver spurious emissions are considered to be the same as transmitter.

PASS: EUT complies with standard's requirement

FAIL: EUT does not comply with standard's requirement

NA: Not Applicable

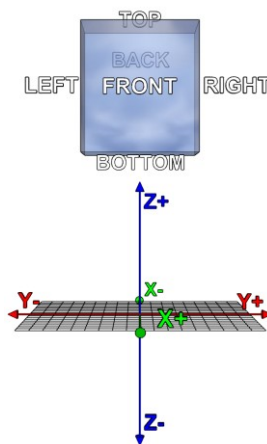
NP: Test Not Performed

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

2.1. HARDWARE IDENTIFICATION (EUT AND AUXILIARIES)

Equipment under test (EUT):

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

Equipment information (declaration of provider):

Type:	RFID		
Chipset	ST25R3911B		
Frequency band:	[13.553 to 13.567] MHz		
Number of Channel:	1		
Bandwidth:	Wideband (ISO14443, NFC...)		
Product class – Annex B.2	1		
Channelized system:	No		
RF mode:	Transceiver		
Standby mode:	No		
Antenna Type:	Internal		
Antenna connector:	None		
Equipment intended:	Mobile		
Type of equipment:	Stand-alone		
Equipment sample:	Production model		
Duty cycle:	Continuous operation		
Operating temperature range:	T _{min} :	+10 °C	
	T _{nom} :	+20°C	
	T _{max} :	+35 °C	
Operating voltage:	V _{min} :	85 VAC	
	V _{nom} :	230 VAC	
	V _{max} :	264 VAC	

PZ Antenna Characteristic

Antenna reference	Gain (dBi)	Frequency Band (MHz)	Impedance(Ω)
CA-1008 (EMS reference)	0	13.56	50



Modulation Type
AM

NC: Not communicated by provider

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. Tests are performed with internal "TAG" All test are performed on AirFlow RFID
Test mode 2	Permanent reception

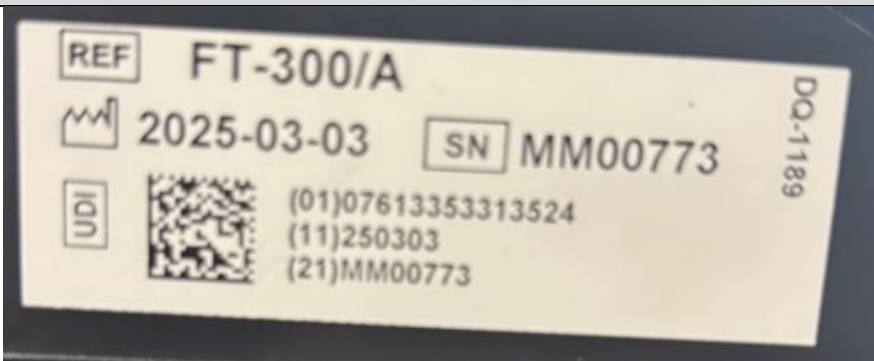
PZ = RFID on Piezon

AF = RFID on AirFlow

Test	Running mode
Occupied Bandwidth	Test mode 1
20dB Emission Bandwidth	Test mode 1
Frequency Tolerance	Test mode 1
Field strength within the band 13.110-14.010MHz	Test mode 1
Field strength outside of the bands 13.110-14.010 MHz	Test mode 1
Receiver Radiated Emissions	Test mode 2 (1)

(1) The test can't be performed because the transmitter and receiver are operating at the same frequency and the transmitter cannot be switched off as the carrier is used as receiver injection signal

2.3. EQUIPMENT LABELLING

Label


2.4. EQUIPMENT MODIFICATIONS DURING THE TESTS

None

2.5. TEST DISTANCE EXTRAPOLATION – FCC

The field strength is extrapolated to the new measurement distance using formula from §6.4.4 de l'ANSI C63.10 and FCC Part15.31 (p), the choice of equation is made according to the distances of the limit and the measurement,

$$FS_{\text{limit}} = FS_{\text{max}} - 40 \log \left(\frac{d_{\text{near field}}}{d_{\text{measure}}} \right) - 20 \log \left(\frac{d_{\text{limit}}}{d_{\text{near field}}} \right) \quad (2)$$

$$FS_{\text{limit}} = FS_{\text{max}} - 20 \log \left(\frac{d_{\text{limit}}}{d_{\text{measure}}} \right) \quad (3)$$

$$FS_{\text{limit}} = FS_{\text{max}} - 40 \log \left(\frac{d_{\text{limit}}}{d_{\text{measure}}} \right) \quad (4)$$

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
$d_{\text{near field}}$	is the $\lambda/2\pi$ distance
d_{measure}	is the distance of the measurement point from the EUT
d_{limit}	is the reference limit distance

2.6. TEST DISTANCE EXTRAPOLATION – ISSED

The field strength is extrapolated to the new measurement distance using formula from §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



2.7. 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

Example:

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

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

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

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

2.8. 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. OCCUPIED BANDWIDTH

3.1. TEST CONDITIONS

Date of test : July 16, 2025
Test performed by : Majid MOURZAGH
Relative humidity (%) : 39
Ambient temperature (°C) : 24

3.2. TEST SETUP

The Equipment Under Test is installed in a climatic chamber.
Measurement is performed with a spectrum analyzer in radiated method.

The EUT is turned ON, the center frequency of the spectrum analyzer is set to the fundamental frequency. The captured power is measured and recorded; the measurement is repeated until all frequencies required were complete.

Test Procedure:

RSS-Gen Issue 5 § 6.7

- RBW used in the range of 1% to 5% of the anticipated emission bandwidth
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- Detector = Peak.
- Trace mode = Max Hold.
- Sweep = Auto couple.
- Allow the trace to stabilize.
- OBW 99% function of spectrum analyzer used

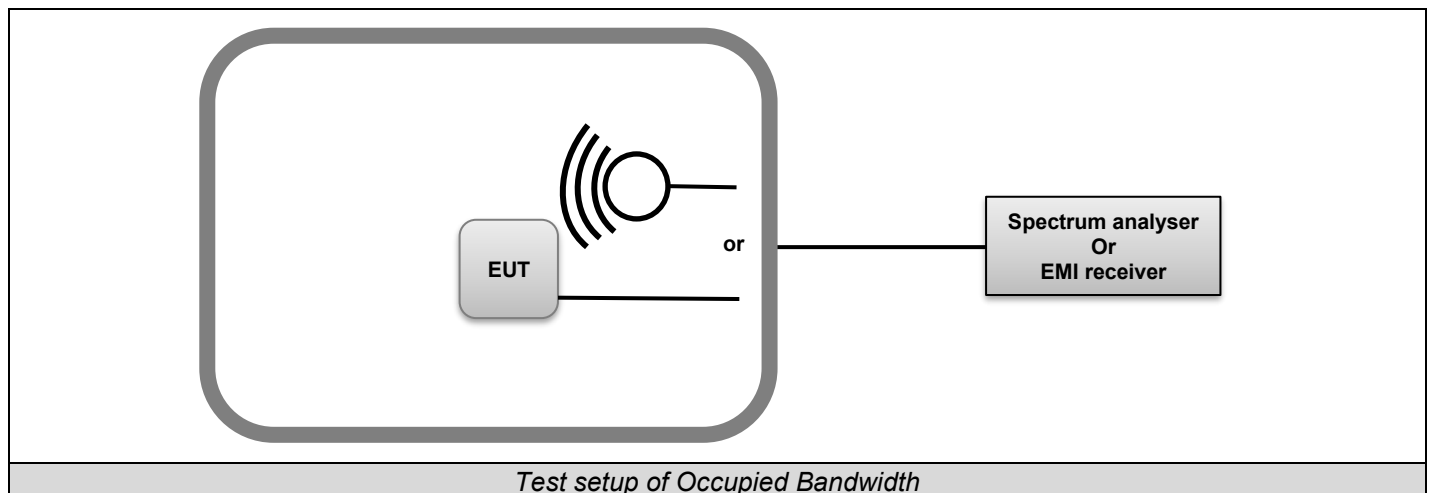




Photo of Occupied bandwidth

3.3. LIMIT

None

3.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
AC source 1kW	KEYSIGHT	AC6802A	A7042305	-/-	-/-
Attenuator 10dB	WA	INA 265B	A7122274	07/24	07/26
Cable SMA 2m	—	6GHz	A5329635	09/24	09/26
Climatic chamber	BIA CLIMATIC	CL 6-25	D1022117	01/23	05/25
Data Logger (CEM1)	AGILENT	34970A	A6440083	05/23	10/25
Loop Antenna	ELECTROMETRICS	EM-6993	C2040267	05/25	05/28
SOFT 300 330 V1.1	LCIE SUD EST	Fichier_Mesure_300330-FCC-ISED	L2000064	-/-	-/-
Spectrum Analyzer 9kHz - 6GHz	ROHDE & SCHWARZ	FSL6	A2642020	01/25	01/27
Thermo-hygrometer	TESTO	608-H1	B4204120	05/25	05/27
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	09/25
Thermocouple K (radio)	FLUKE	Type K	B4045005	10/23	10/25
Thermocouple K (radio)	FLUKE	Type K	B4045004	10/23	10/25
Thermometer (radio)	FLUKE	52 II	B4043150	10/23	10/25
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25



4. 20dB EMISSION BANDWIDTH

4.1. TEST CONDITIONS

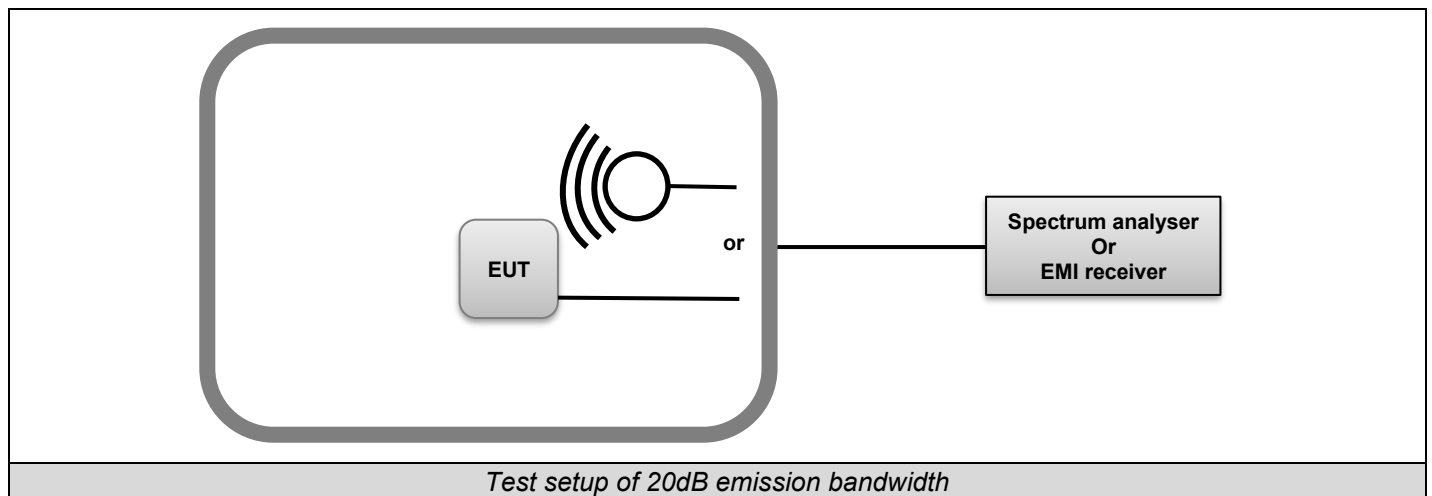
Date of test : July 16, 2025
Test performed by : Majid MOURZAGH
Relative humidity (%) : 39
Ambient temperature (°C) : 24

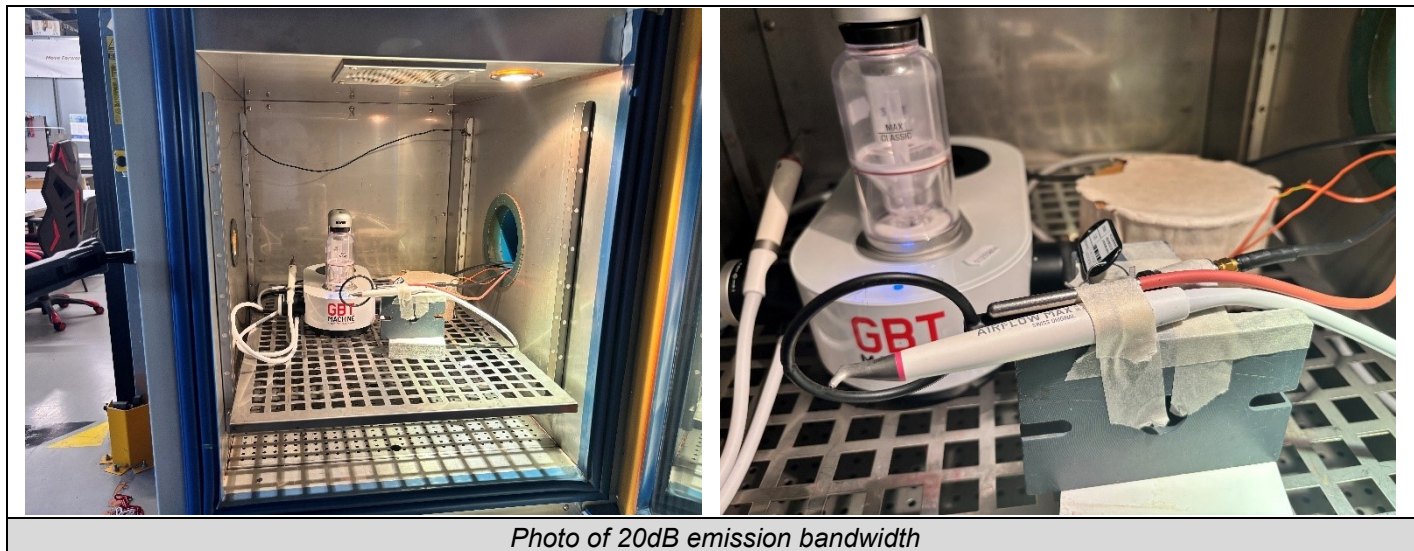
4.2. TEST SETUP

The Equipment Under Test is installed in a climatic chamber.
Measurement is performed with a spectrum analyzer in **radiated method**.

Test Procedure:
ANSI C63.10 § 6.9.2:

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





4.3. LIMIT

No Limit

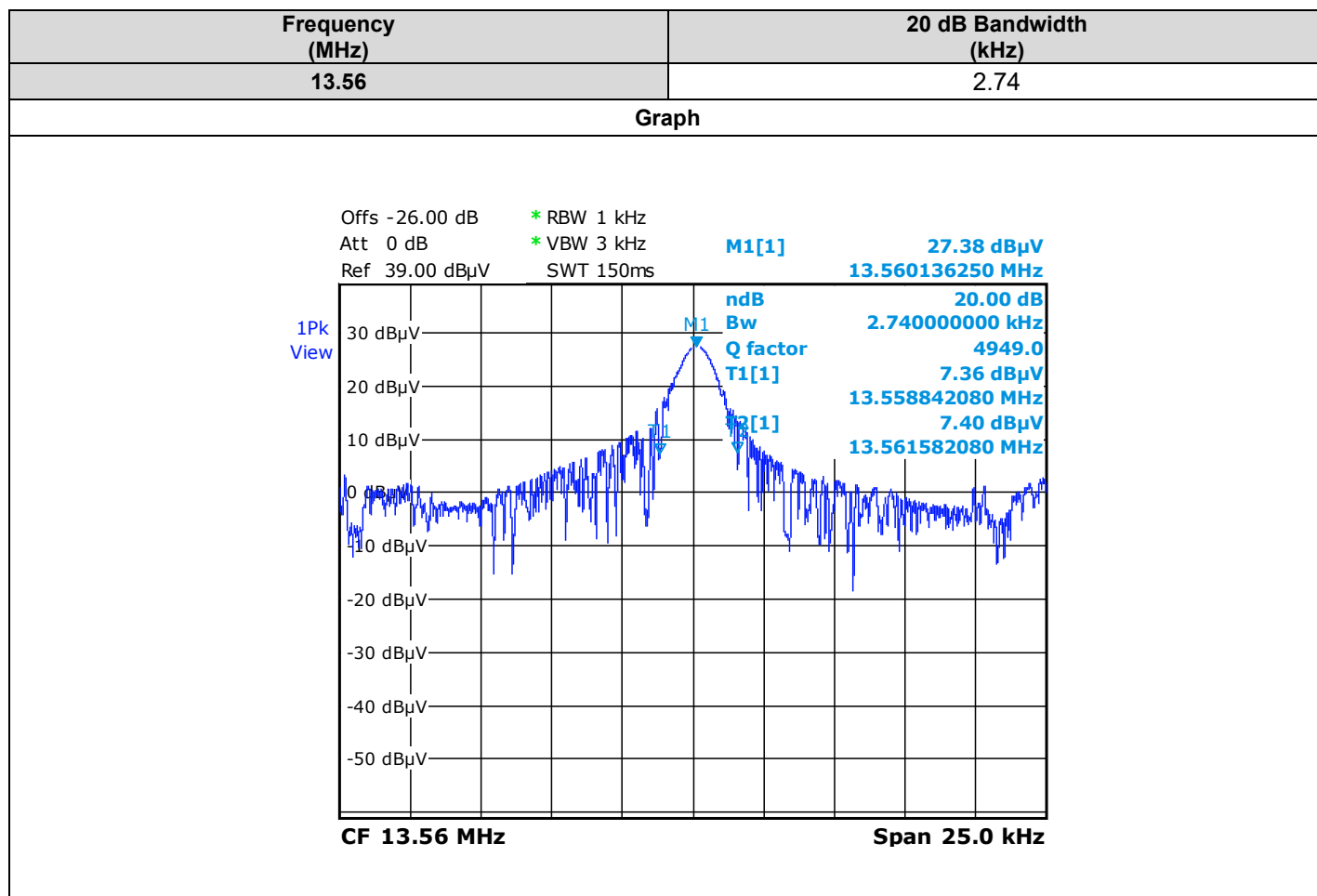
4.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
AC source 1kW	KEYSIGHT	AC6802A	A7042305	-/-	-/-
Attenuator 10dB	WA	INA 265B	A7122274	07/24	07/26
Cable SMA 2m	—	6GHz	A5329635	09/24	09/26
Climatic chamber	BIA CLIMATIC	CL 6-25	D1022117	01/23	05/25
Data Logger (CEM1)	AGILENT	34970A	A6440083	05/23	10/25
Loop Antenna	ELECTROMETRICS	EM-6993	C2040267	05/25	05/28
SOFT 300 330 V1.1	LCIE SUD EST	Fichier_Mesure_300330-FCC-ISED	L2000064	-/-	-/-
Spectrum Analyzer 9kHz - 6GHz	ROHDE & SCHWARZ	FSL6	A2642020	01/25	01/27
Thermo-hygrometer	TESTO	608-H1	B4204120	05/25	05/27
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	09/25
Thermocouple K (radio)	FLUKE	Type K	B4045005	10/23	10/25
Thermocouple K (radio)	FLUKE	Type K	B4045004	10/23	10/25
Thermometer (radio)	FLUKE	52 II	B4043150	10/23	10/25
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25

4.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

None

4.6. RESULTS



4.7. CONCLUSION

20dB Emission Bandwidth measurement performed on the sample of the product **FT-300**, Sn: **MM00773**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.225 & RSS 210** limits.

5. FREQUENCY TOLERANCE

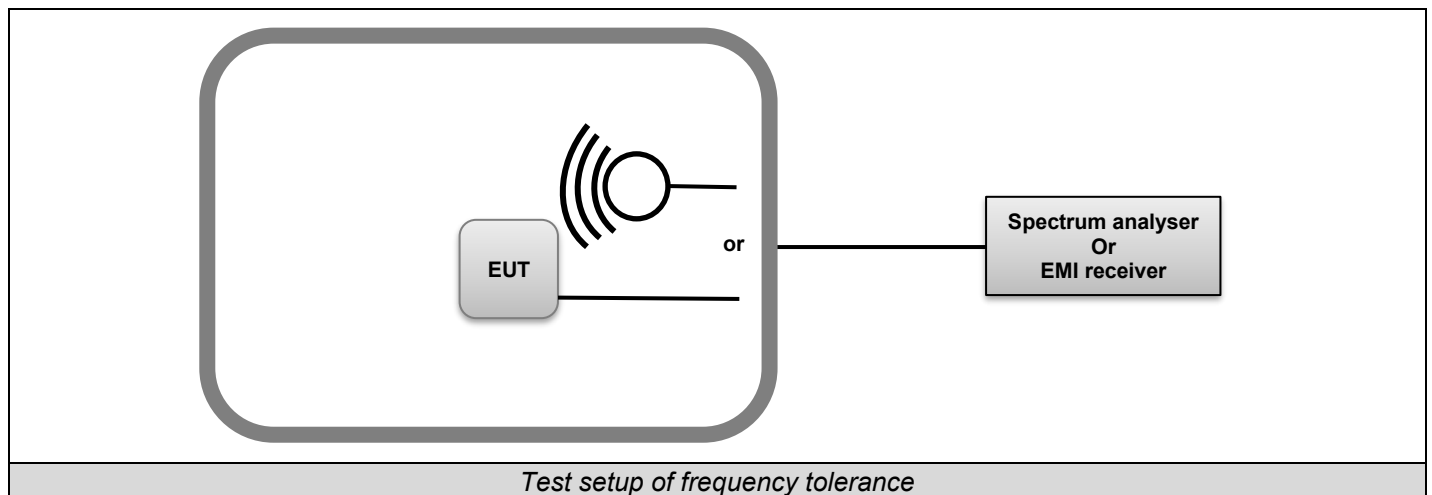
5.1. TEST CONDITIONS

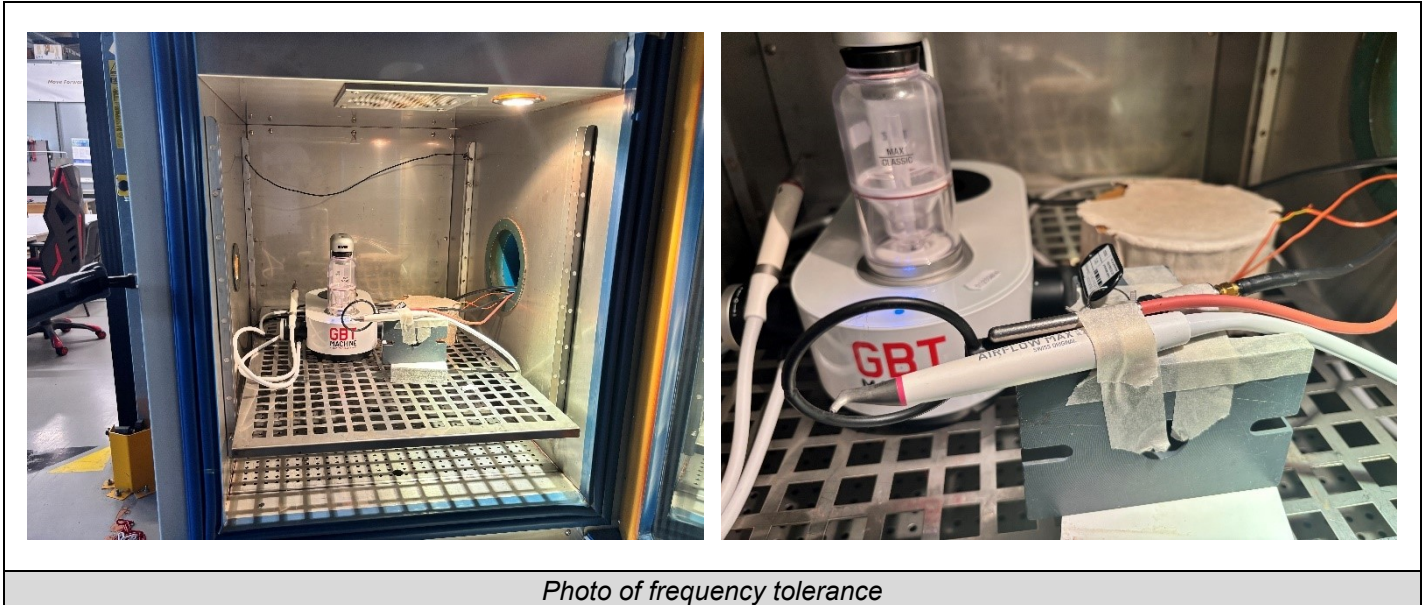
Date of test	: July 16, 2025	July 17, 2025
Test performed by	: Majid MOURZAGH	Majid MOURZAGH
Relative humidity (%)	: 39	38
Ambient temperature (°C)	: 24	23

5.2. TEST SETUP

The Equipment Under Test is installed **in a climatic chamber**.
Measurement is performed with a spectrum analyzer in **radiated method**.

Test Procedure:
ANSI C63.10 § 6.8





5.3. LIMIT

$\pm 0.01\%$ ($\pm 100\text{ppm}$)

5.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
AC source 1kW	KEYSIGHT	AC6802A	A7042305	-/-	-/-
Attenuator 10dB	WA	INA 265B	A7122274	07/24	07/26
Cable SMA 2m	-	6GHz	A5329635	09/24	09/26
Climatic chamber	BIA CLIMATIC	CL 6-25	D1022117	01/23	05/25
Data Logger (CEM1)	AGILENT	34970A	A6440083	05/23	10/25
Loop Antenna	ELECTROMETRICS	EM-6993	C2040267	05/25	05/28
SOFT 300 330 V1.1	LCIE SUD EST	Fichier_Mesure_300330-FCC-ISED	L2000064	-/-	-/-
Spectrum Analyzer 9kHz - 6GHz	ROHDE & SCHWARZ	FSL6	A2642020	01/25	01/27
Thermo-hygrometer	TESTO	608-H1	B4204120	05/25	05/27
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	09/25
Thermocouple K (radio)	FLUKE	Type K	B4045005	10/23	10/25
Thermocouple K (radio)	FLUKE	Type K	B4045004	10/23	10/25
Thermometer (radio)	FLUKE	52 II	B4043150	10/23	10/25
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25



5.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

None

5.6. RESULTS

EUT activation:	Startup			
Voltage:	V_{nom}			
Temperature (°C):	10	20	30	35
Frequency (MHz)	13.56010395	13.56013509	13.5600232	13.56014226
Frequency Drift (%)	0.0008%	0.0010%	0.0002%	0.0010%
EUT activation:	2min			
Voltage:	V_{nom}			
Temperature (°C):	10	20	30	35
Frequency (MHz)	13.56018718	13.56014391	13.56007556	13.56002155
Frequency Drift (%)	0.0014%	0.0011%	0.0006%	0.0002%
EUT activation:	5min			
Voltage:	V_{nom}			
Temperature (°C):	10	20	30	35
Frequency (MHz)	13.56011856	13.56016568	13.56013868	13.56009017
Frequency Drift (%)	0.0009%	0.0012%	0.0010%	0.0007%
EUT activation:	10min			
Voltage:	V_{nom}			
Temperature (°C):	10	20	30	35
Frequency (MHz)	13.56018332	13.56006095	13.56025581	13.56000887
Frequency Drift (%)	0.0014%	0.0004%	0.0019%	0.0001%

Temperature	T_{nom}		
Voltage:	V_{min}	V_{nom}	V_{max}
Frequency (MHz)	13.5602285	13.56009609	13.559962
Frequency Drift (%)	0.0008%	0.0008%	0.0008%

5.7. CONCLUSION

Frequency tolerance measurement performed on the sample of the product **FT-300**, Sn: **MM00773**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.225 & RSS 210** limits.

6. FIELD STRENGTH WITHIN THE BAND 13.110-14.010MHz

6.1. TEST CONDITIONS

Date of test : July 16, 2025
 Test performed by : Majid MOURZAGH
 Relative humidity (%) : 39
 Ambient temperature (°C) : 24

6.2. TEST SETUP

The Equipment Under Test is installed **on an Open Area Test Site..**
 Measurement is performed with a spectrum analyzer in **radiated method.**

Test Procedure:
 ANSI C63.10

The EUT is placed **on an open area test site.** Distance between measuring antenna and the EUT is **10m.** Test is performed in parallel, perpendicular, and ground parallel axis with a loop antenna below 30MHz. Measurement bandwidth was 9kHz between 150kHz & 30MHz. The level has been maximized by the turntable rotation of 360 degrees range on all axis of EUT used in normal configuration. Antenna height search was performed from 1 to 4m. The EUT is place at **0.8m.**

Ambient temperature: 27 °C
 Relative humidity: 30 %

Note: It is impracticable to carry out tests under normal condition as specified in standard.

When measurement with test fixture is used, the power level calibration of the spectrum analyzer shall then be related to the power level or field strength measured with temperature during OATS measure taking in consideration in climatic chamber. The calculation will be used to calculate the absolute level of the sideband power.

Frequency band 13.110-14.010MHz

Following plots show radiated emission level in the frequency band 13.110-14.010MHz with a RBW of 9kHz and a quasi-peak detector. The graphs are obtained with a measuring receiver.

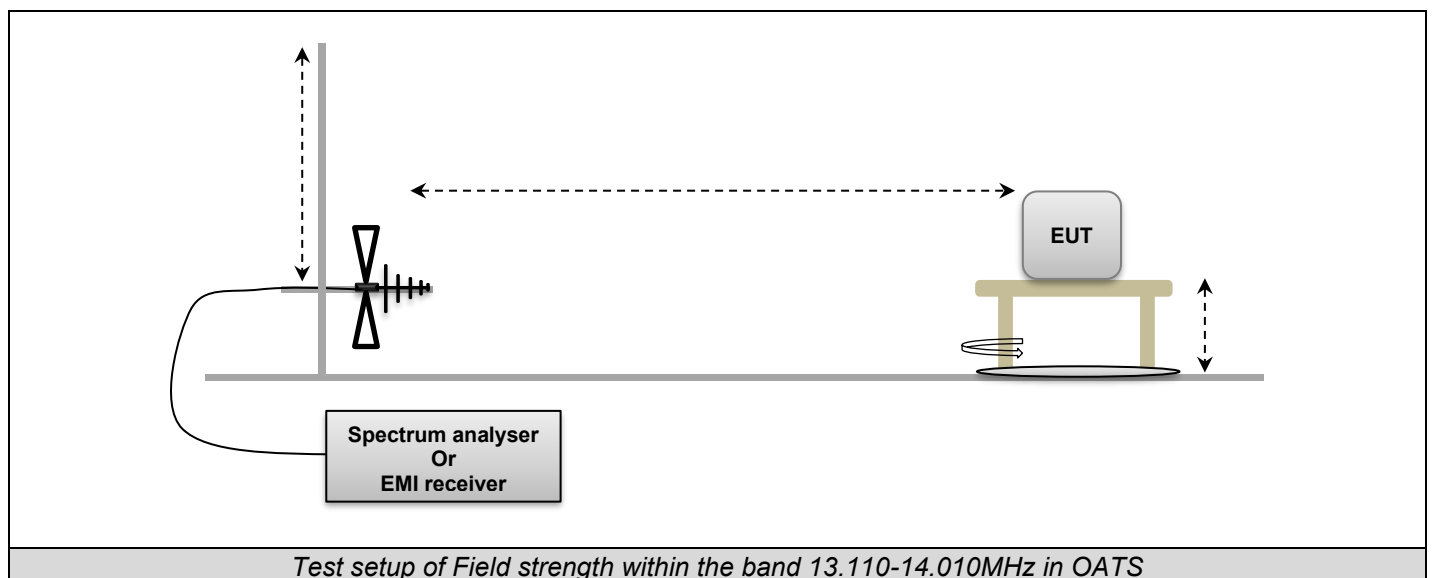
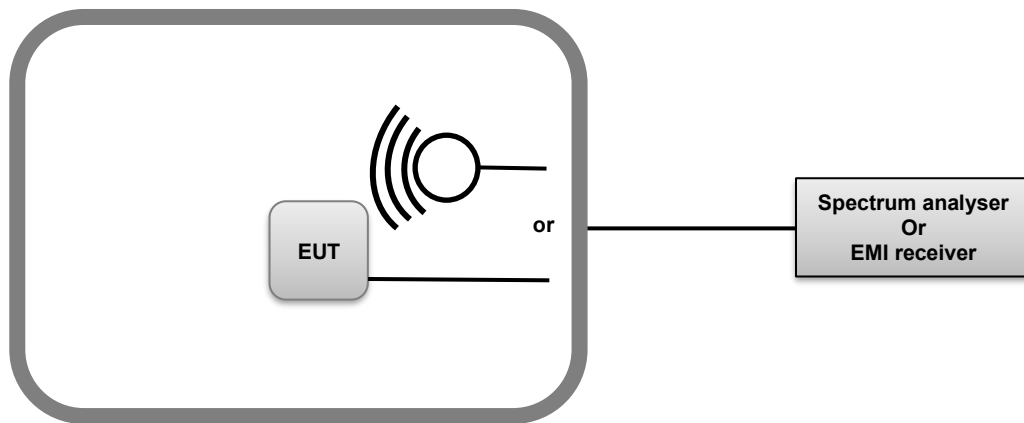




Photo of Field strength within the band 13.110-14.010MHz in OATS



Test setup of Field strength within the band 13.110-14.010MHz in Climatic Chamber

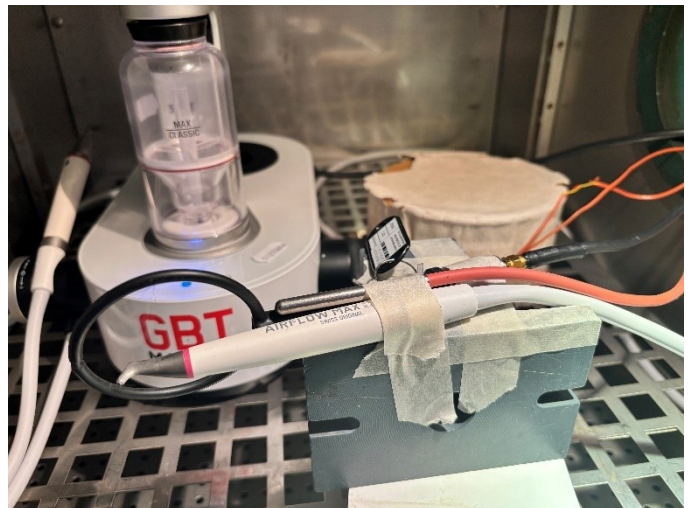


Photo of Field strength within the band 13.110-14.010MHz in Climatic Chamber



6.3. LIMIT

Frequency (MHz)	Field strength ($\mu\text{V/m}$) @30m	Field strength ($\text{dB}\mu\text{V/m}$) @30m
13.553-13.567	15 848	84.0
13.410-13.553 13.567-13.710	334.0	50.5
13.110-13.410 13.710-14.010	106.0	40.5
Below 13.110MHz Above 14.010MHz	30.0	29.5

6.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
AC source 1kW	KEYSIGHT	AC6802A	A7042305	-/-	-/-
Attenuator 10dB	WA	INA 265B	A7122274	07/24	07/26
Cable SMA 2m	—	6GHz	A5329635	09/24	09/26
Climatic chamber	BIA CLIMATIC	CL 6-25	D1022117	01/23	05/25
Data Logger (CEM1)	AGILENT	34970A	A6440083	05/23	10/25
Loop Antenna	ELECTROMETRICS	EM-6993	C2040267	05/25	05/28
SOFT 300 330 V1.1	LCIE SUD EST	Fichier_Mesure_300330-FCC-ISED	L2000064	-/-	-/-
Spectrum Analyzer 9kHz - 6GHz	ROHDE & SCHWARZ	FSL6	A2642020	01/25	01/27
Thermo-hygrometer	TESTO	608-H1	B4204120	05/25	05/27
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	09/25
Thermocouple K (radio)	FLUKE	Type K	B4045005	10/23	10/25
Thermocouple K (radio)	FLUKE	Type K	B4045004	10/23	10/25
Thermometer (radio)	FLUKE	52 II	B4043150	10/23	10/25
Multimeter - CEM	FLUKE	87	A1240251	10/23	10/25

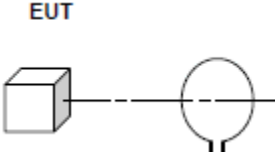
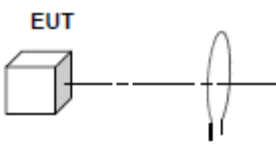
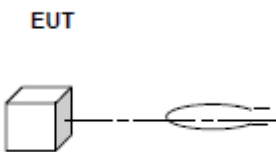
6.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

None

6.6. RESULTS - FCC

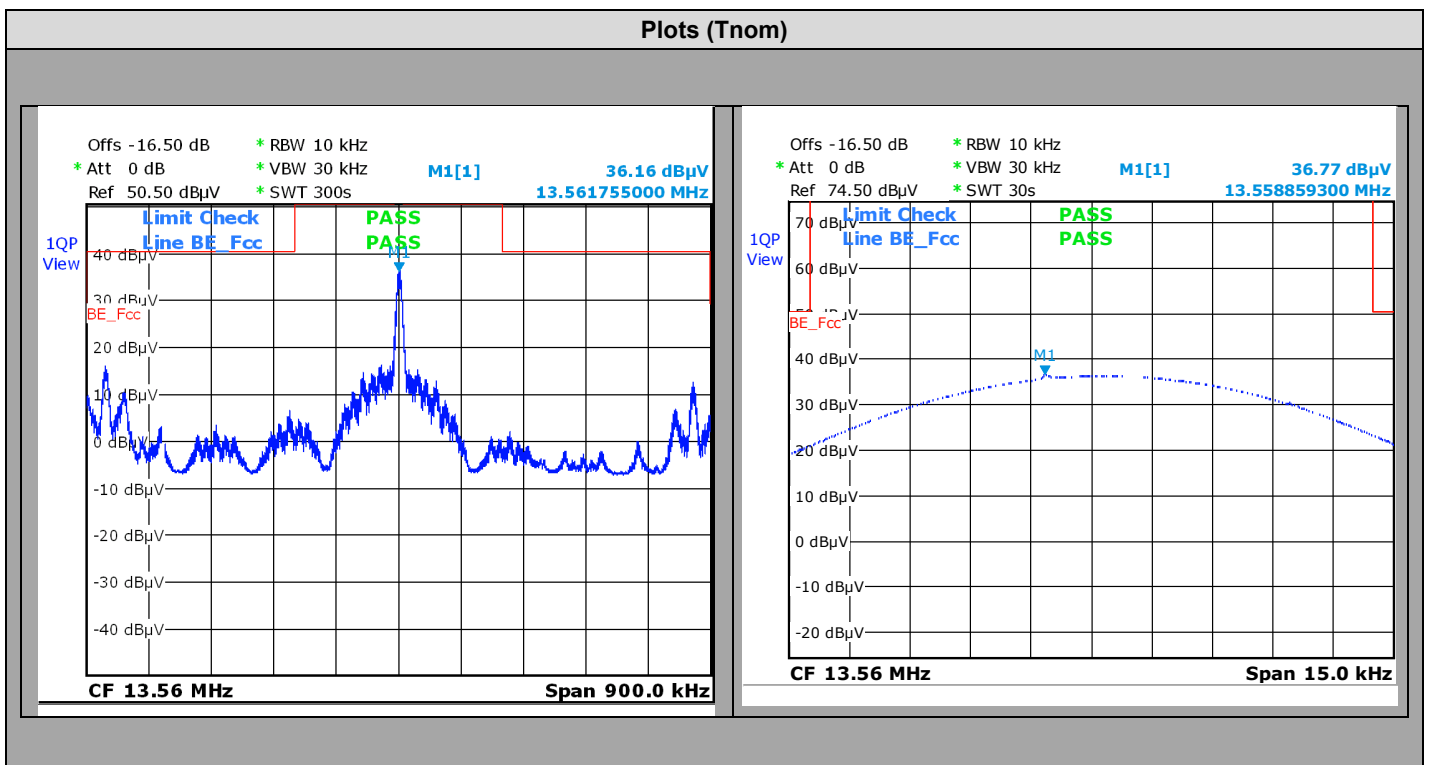
6.6.1. Results on OATS test conditions - FCC

Frequency (MHz)	QPeak Limit (dBμV/m) @ 30m	QPeak (dBμV/m) @ 30m	Margin (Mes-Lim) (dB)	Angle Table (deg)	Pol Ant.	Ht Ant. (cm)	Correc. Factor (dB)	Comments
13.56	84	36.1	47.9	270	0°	160	36.8	RFID AirFlow

		
Parallel Axis (0°)	Perpendicular Axis (90°)	Ground Parallel Axis (180°)

Note: Measure have been done at 10m distance and corrected according to requirements of § test distance extrapolation.

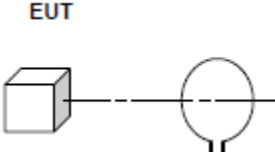
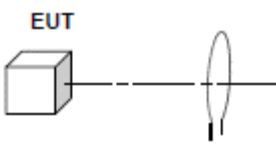
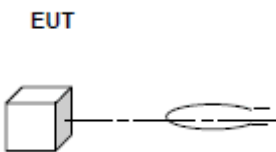
6.6.2. Results under Normal condition - FCC



6.7. RESULTS - ISED

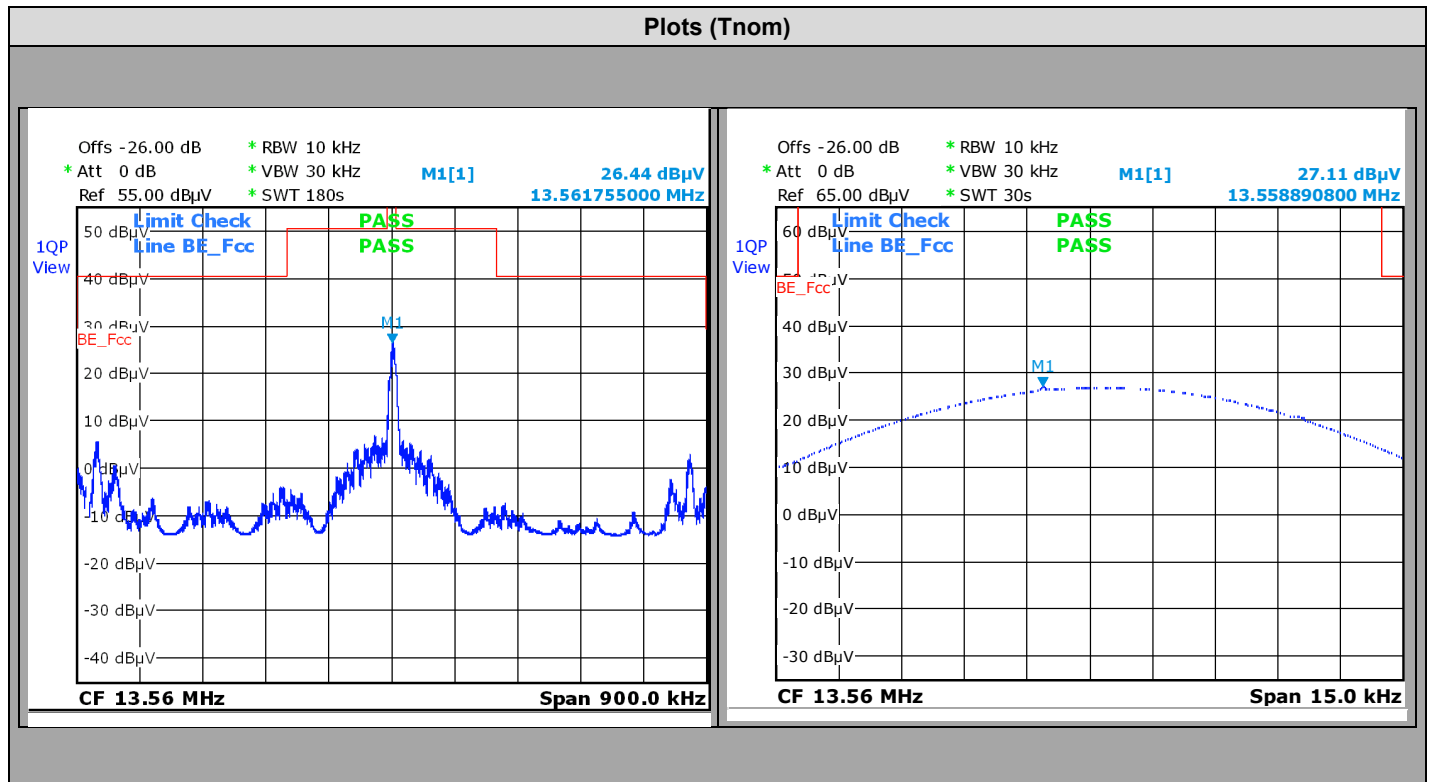
6.7.1. Results on OATS test conditions - ISED

Frequency (MHz)	QPeak Limit (dBμV/m) @ 30m	QPeak (dBμV/m) @ 30m	Margin (Mes-Lim) (dB)	Angle Table (deg)	Pol Ant.	Ht Ant. (cm)	Correc. Factor (dB)	Comments
13.56	84	26.6	-57.4	270	90°	160	36.8	RFID AirFlow

		
Parallel Axis (0°)	Perpendicular Axis (90°)	Ground Parallel Axis (180°)

Note: Measure have been done at 10m distance and corrected according to requirements of 15.209.e) ($M@30m = M@10m - 19.1dB$)

6.7.2. Results under Normal condition - ISED



6.8. CONCLUSION

Field strength within the band 13.110-14.010MHz measurement performed on the sample of the product **FT-300**, Sn: **MM00773**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.225 & RSS 210** limits.



7. FIELD STRENGTH OUTSIDE OF THE BANDS 13.110-14.010 MHz

7.1. TEST CONDITIONS

Date of test : July 16, 2025
Test performed by : Majid MOURZAGH
Relative humidity (%) : 39
Ambient temperature (°C) : 24

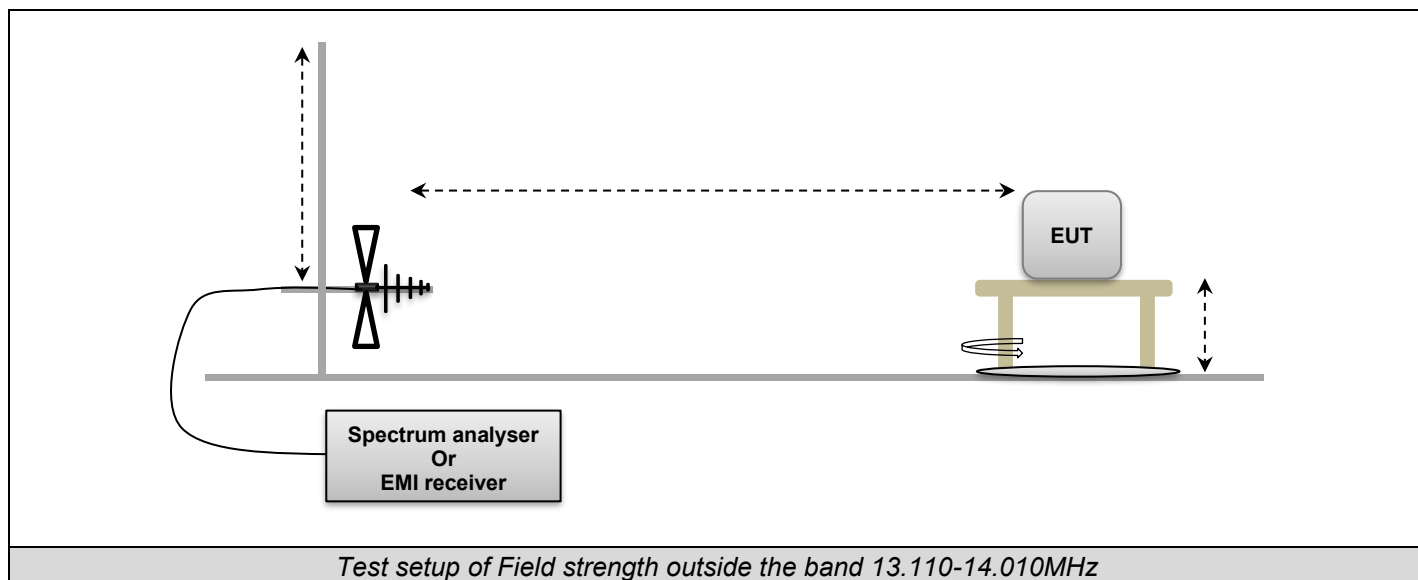
7.2. TEST SETUP

Test procedure:
ANSI C63.10 & FCC Part 15 subpart C

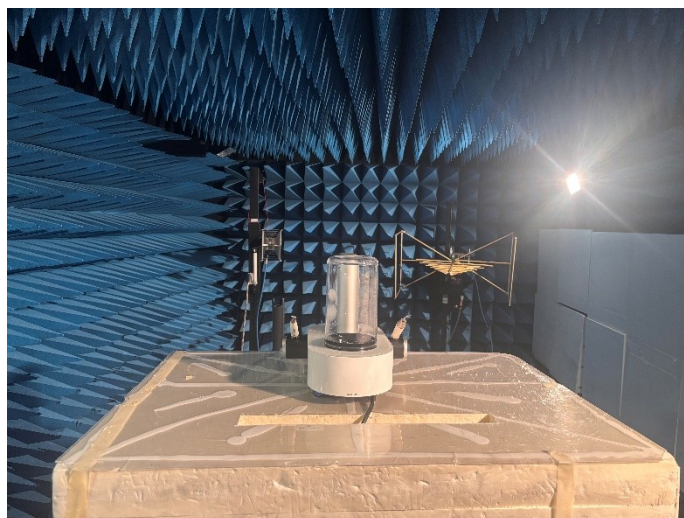
Following frequency ranges, test setup parameters are different and specified in this table:

Frequency range:	9kHz to 30MHz	
Test:	Pre-Characterization	Qualification
Antenna Polarization:	Parallel, Perpendicular and Ground parallel	
Antenna Height:	Centered on EUT (§6.6.5 ANSI C63-10)	1m
Antenna Type:	Loop	
RBW Filter:	200Hz below 150kHz / 9kHz above 150kHz	
Maximization:	Turntable rotation of 360 degrees range	
EUT height:	1.5m	1.5m
Test site:	Full Anechoic Chamber	Open Aera Test Site
Distance EUT - Antenna:	3m	10m
Detector:	Peak	QPeak

Frequency range:	30MHz to 1GHz	
Test:	Pre-Characterization	Qualification
Antenna Polarization:	Horizontal and Vertical	
Antenna Height:	Centered on EUT (§6.6.5 ANSI C63-10)	Varied from 1m to 4m
Antenna Type:	Bi-Log	
RBW Filter:	120kHz	
Maximization:	Turntable rotation of 360 degrees range	
EUT height:	1.5m	1.5m
Test site:	Full Anechoic Chamber	Open Aera Test Site
Distance EUT - Antenna:	3m	10m
Detector:	Peak	QPeak



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



Test Setup on FAR



Test Setup on OATS

7.3. LIMIT

Measure at 300m		
Frequency range	Level	Detector
9kHz-490kHz	67.6dB μ V/m /F(kHz)	QPeak
Measure at 30m		
Frequency range	Level	Detector
490kHz-1.705MHz	87.6dB μ V/m /F(kHz)	QPeak
1.705MHz-30MHz	29.5dB μ V/m	QPeak
Measure at 3m		
Frequency range	Level	Detector
30MHz to 88MHz	40dB μ V/m	QPeak
88MHz to 216MHz	43.5dB μ V/m	QPeak
216MHz to 960MHz	46B μ V/m	QPeak
960MHz to 1000MHz	54dB μ V/m	QPeak
Above 1000MHz	74dB μ V/m	Peak
	54dB μ V/m	Average

7.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	Manufacturer	Model	Identifier	Cal_Date	Cal_Due
Amplifier 10MHz - 18GHz	LCIE SUD EST	—	A7102082	03/25	03/27
Antenna Bi-log	AH System	SAS-521-7	C2040180	05/23	10/25
BAT EMC	NEXIO	v3.21.0.32	L1000115	-/-	-/-
Cable 0.75m	-	18GHz	A5329900	08/24	08/25
CONTROLLER	INNCO	CO3000	D3044034	-/-	-/-
Filter Matrice	LCIE SUD EST	Combined filters	A7484078	03/23	07/25
Rehausse Table C3	LCIE	—	F2000511	-/-	-/-
Rehausse Table C3	LCIE	—	F2000507	-/-	-/-
Semi-Anechoic chamber #3 (BF)	SIEPEL	—	D3044017_BF	04/22	08/25
Semi-Anechoic chamber #3 (VSWR)	SIEPEL	—	D3044017_VSWR	04/22	08/25
SMA Cable 18GHz 0.5m	TELEDYNE	18GHz	A5330060	05/24	09/25
SMA Cable 18GHz 0.5m	TELEDYNE	18GHz	A5330059	05/24	09/25
SMA Cable 18GHz 6m	TELEDYNE	18GHz	A5330057	05/24	09/25
Spectrum analyzer	ROHDE & SCHWARZ	FSU 26	A4060058	09/23	09/25
Table C3	LCIE	—	F2000461	-/-	-/-
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	05/23	09/25
TILT	INNCO	TILT	D3044033	-/-	-/-



Turntable chamber (Cage#3)	ETS Lingren	Model 2165	F2000371	-/-	-/-
Turntable controller (Cage#3)	ETS Lingren	Model 2090	F2000444	-/-	-/-
Antenna loop	ELECTRO-METRICS	EM-6879	C2040294	11/24	11/26
Antenna Bi-log	CHASE	CBL6111A	C2040172	07/24	07/26
Antenna Mat (OATS)	ETS Lingren	2071-2	F2000392	-/-	-/-
Biconic Antenna	EATON	94455-1	C2040234	05/23	09/25
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	MICRO-COAX	1GHz	A5329656	09/24	09/25
OATS	—	—	F2000409	07/24	07/25
Radiated emission comb generator	BARDET	—	A3169050	-/-	-/-
Table C1/OATS	LCIE	—	F2000445	-/-	-/-
Turntable (OATS)	ETS Lingren	Model 2187	F2000403	-/-	-/-
Turntable / Mast controller (OATS)	ETS Lingren	Model 2066	F2000372	-/-	-/-
Receiver 20Hz – 8GHz	ROHDE & SCHWARZ	ESU8	A2642019	03/23	07/25

7.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

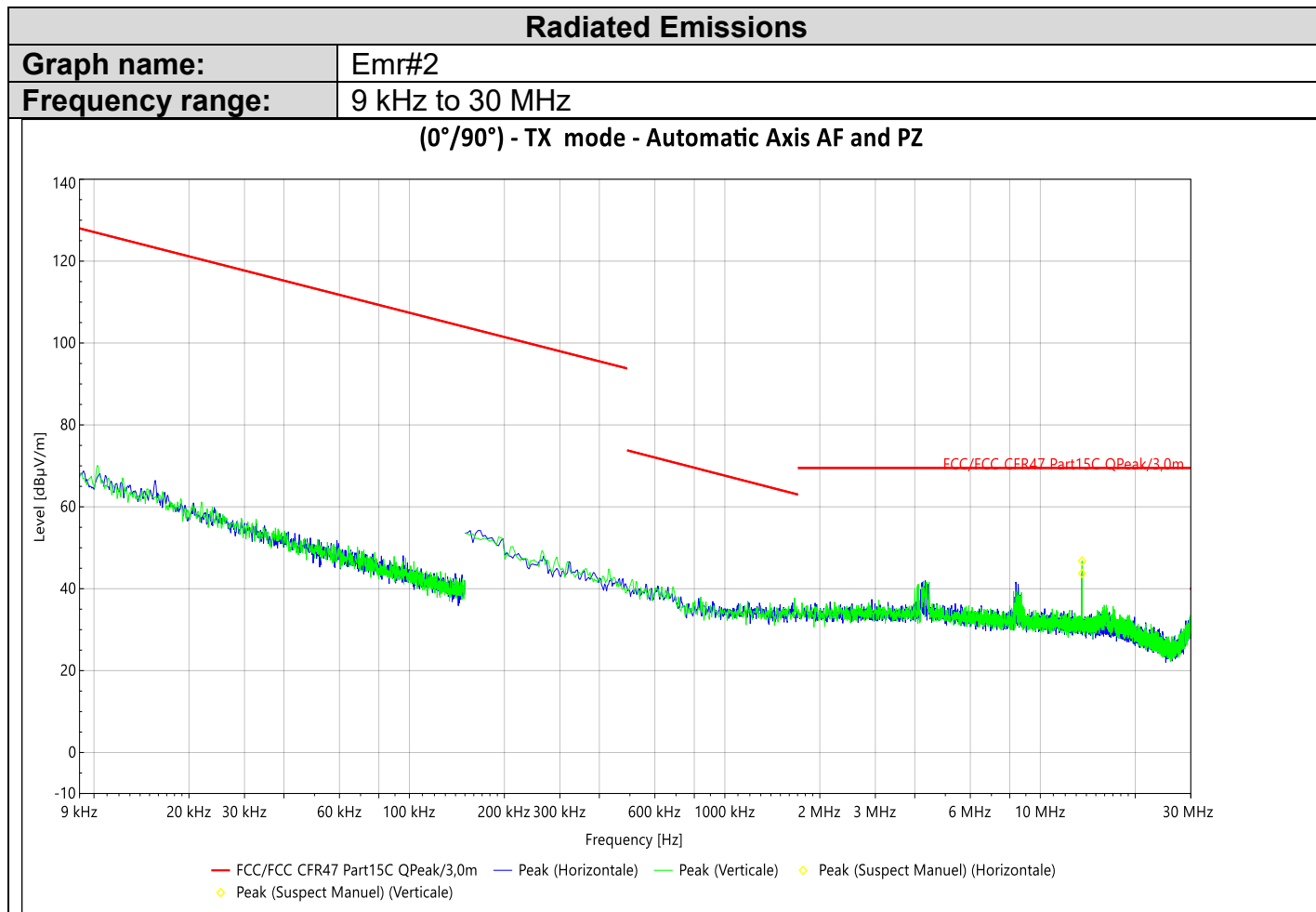
None

7.6. RESULTS

7.6.1. 9kHz to 30MHz

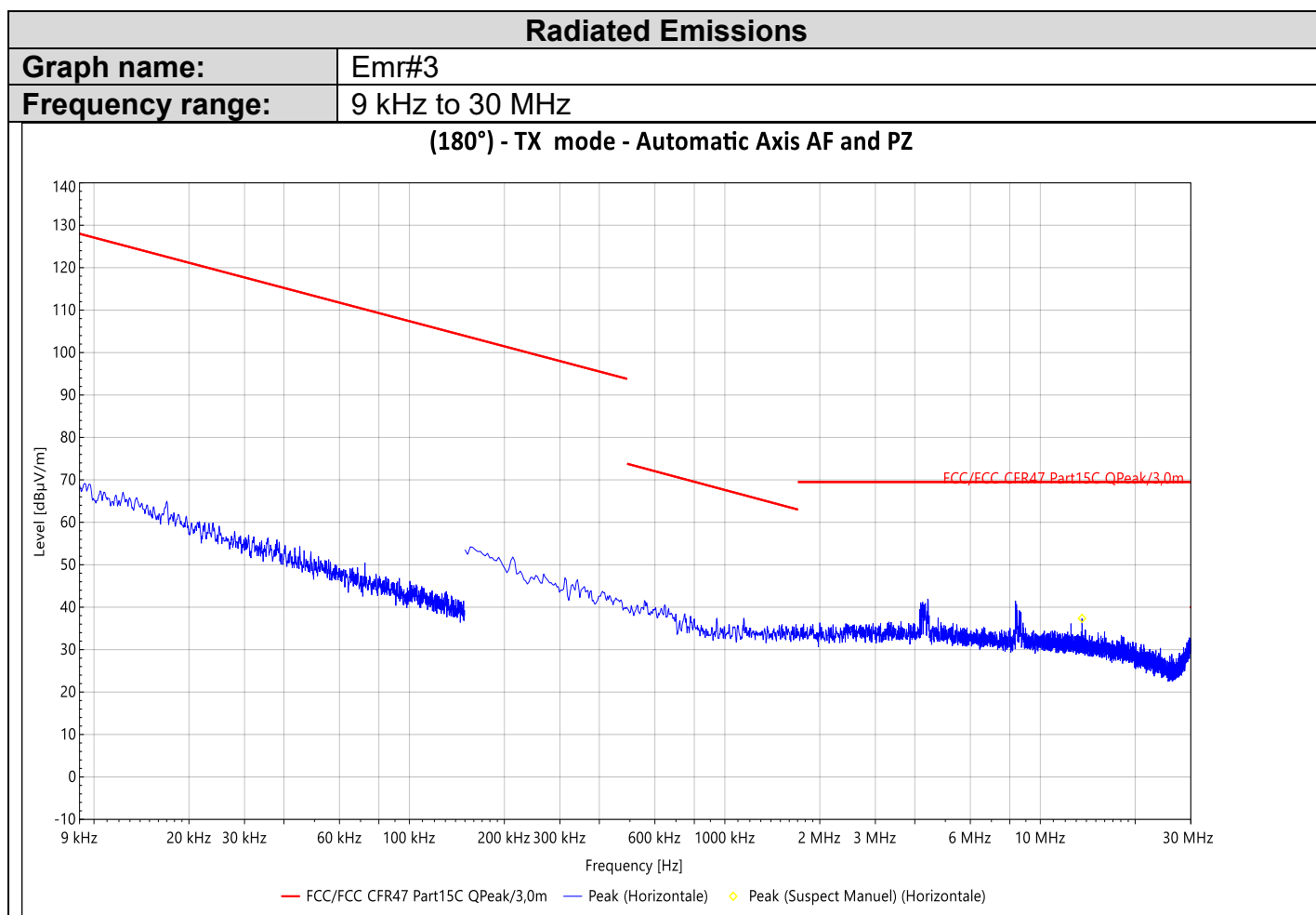
Graphs – Pre characterization:

Graph identifier	Polarization	Mode	Channel	EUT position	Comments
Emr# 1	0°/90°	TX/RX	Single	Axis XY	See the following results
Emr# 2	180°	TX/RX	Single	Axis XY	See the following results



Pre-Characterization:

Frequency	PK Level (dBµV/m)	Lim.QP (dBµV/m)	Angle (°)	Polar.	Correct. (dB)
13.559 MHz	43.73	69.50	261	H	41.90
13.562 MHz	46.79	69.50	130	V	41.90



Pre-Characterization:

Frequency	PK Level (dBμV/m)	Lim.QP (dBμV/m)	Angle (°)	Polar.	Correct. (dB)
13.559 MHz	37.37	69.50	229	H	41.90

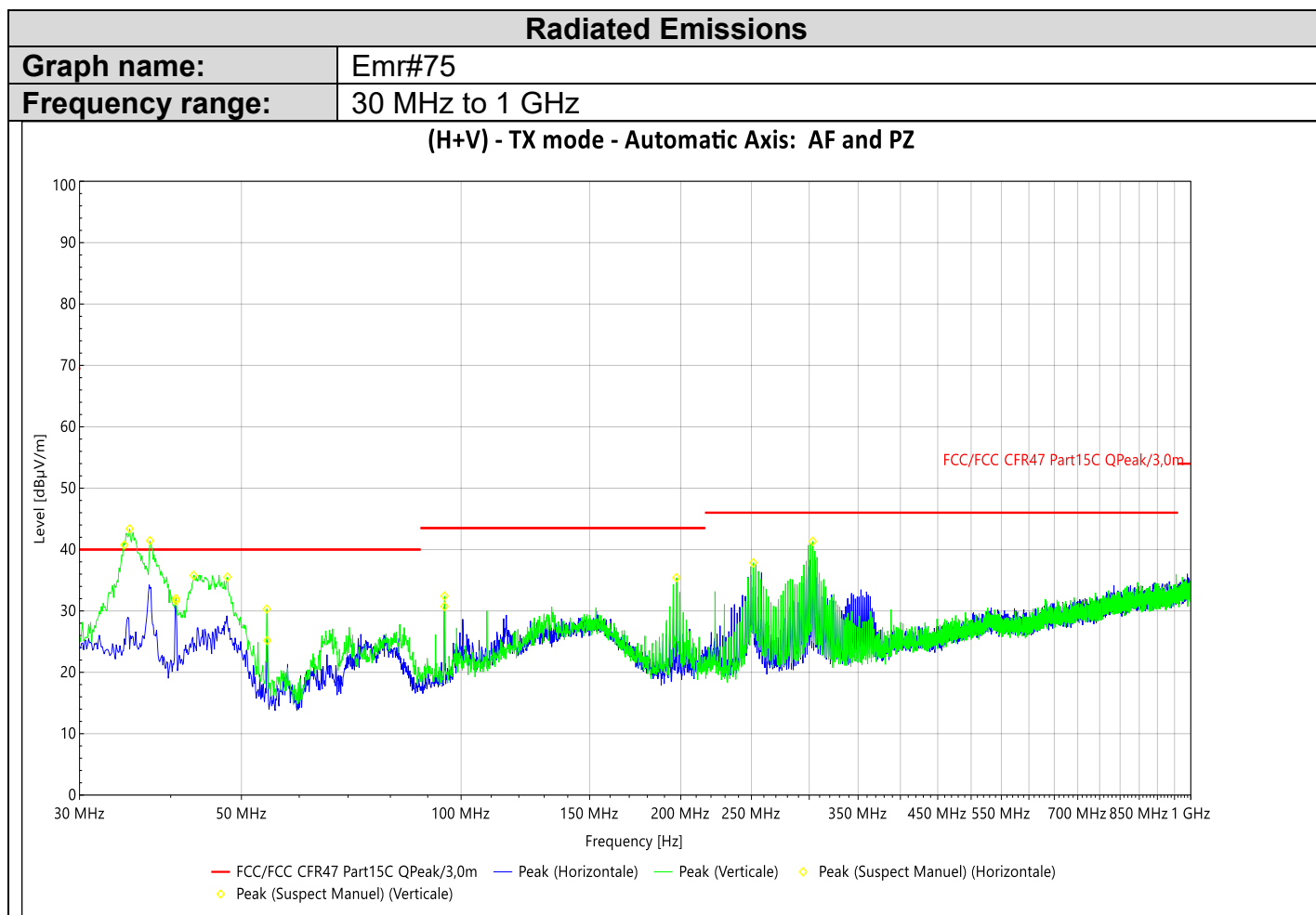
Final measurement:

No significant frequency observed

7.6.2. 30MHz to 1GHz

Graphs – Pre characterization:

Graph identifier	Polarization	Mode	Channel	EUT position	Comments
Emr# 3	H/V	TX/RX	Single	Axis XY/Z	See the following results



Pre-Characterization:

Frequency	PK Level (dBµV/m)	Lim.QP (dBµV/m)	Angle (°)	Polar.	Correct. (dB)
40.670 MHz	31.64	40.00	349	H	18.75
54.250 MHz	25.19	40.00	72	H	13.51
94.893 MHz	30.73	43.50	342	H	18.13
34.559 MHz	40.75	40.00	337	V	22.18
35.141 MHz	43.39	40.00	246	V	21.88
37.469 MHz	41.45	40.00	29	V	20.61
40.670 MHz	32.02	40.00	307	V	18.75
42.998 MHz	35.79	40.00	358	V	17.59
47.848 MHz	35.53	40.00	307	V	15.42
54.153 MHz	30.32	40.00	0	V	13.54
94.893 MHz	32.42	43.50	0	V	18.13
197.325 MHz	35.42	43.50	83	V	17.50
251.451 MHz	37.85	46.00	71	V	23.59
303.346 MHz	41.34	46.00	56	V	20.55



Final measurement:

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)
35.1500	17.6	QP	V	260	110	14.8	32.4	40.0	-7.6
35.5600	13.7	QP	V	212	150	14.8	28.5	40.0	-11.5
37.4700	15.7	QP	V	180	100	14.7	30.4	40.0	-9.6
43.0000	18.4	QP	V	0	110	14.2	32.6	40.0	-7.4
47.8000	25.5	QP	V	0	100	13.2	38.7	40.0	-1.3
303.0000	22.5	QP	V	70	100	18.0	40.5	46.0	-5.5

7.7. CONCLUSION

Field strength outside of the bands 13.110-14.010 MHz measurement performed on the sample of the product **FT-300**, Sn: **MM00773**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.225 & RSS-Gen** limits.

8. UNCERTAINTIES CHART

<i>Kind of measurement</i>	<i>Wide uncertainty laboratory</i>
Occupied Channel Bandwidth	±2.8 %
Humidity	±3.2 %
Power Spectral Density, Conducted	±1.7 dB
Radio frequency	±0.3 ppm
RF power, conducted	±1.2 dB
RF power, radiated (Full anechoic chamber above 1GHz)	±3.7 dB
RF power, radiated (Semi anechoic chamber & open test site)	±5.6 dB
Spurious emission, conducted	±2.3 dB
Spurious emission, radiated (Full anechoic chamber above 1GHz)	±3.8 dB
Spurious emission, radiated (Semi anechoic chamber & open test site)	±5.7 dB
Temperature	±0.75 °C
Time	±2.3 %
Voltage	±1.7 %

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



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