TEST REPORT

N°: 173186-767203-A(FILE#2615290) **Version : 02**

Subject	**Radio spectrum matters tests according to standards: 47 CFR Part 15.225 & RSS 210 Issue 10 & RSS-Gen Issue 5**
Issued to	**MARKEM-IMAJE 9 rue Gaspard Monge 26501 - BOURG-LES-VALENCE FRANCE**
Apparatus under test	
↳ Product	**Ink Jet Printer**
↳ Trade mark	**MARKEM IMAJE**
↳ Manufacturer	**MARKEM-IMAJE INDUSTRIES**
↳ Model under test	**9750**
↳ Serial number	**FR21240050(Beta2) and FR21240220(Beta1)**
↳ FCC ID	**2AAW8-MI9700**
↳ IC	**11372A-MI9700**
Conclusion	See Test Program chapter
Test date	August 3, 2021 to August 4, 2021
Test location	Moirans
Test Site	6500A-1 & 6500A-3 (ISED) / 197516 (FCC)
Sample receipt date	July 28, 2021
Composition of document	47 pages
Document issued on	September 17, 2021

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PUBLICATION HISTORY

Version	Date	Author	Modification
01	September 8, 2021	Mounir BOUAMARA	Creation of the document
02	September 17, 2021	Mounir BOUAMARA	Adding IDs

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

1. TEST PROGRAM

References

- **47 CFR Part 15.225 (2020)**
- **RSS 210 Issue 10**
- **RSS Gen Issue 5**
- **ANSI C63.10 (2013)**

Radio requirement:

Clause (47CFR Part 15.225 & RSS-210 Issue 9 & RSS-Gen Issue 5) Test Description	Test result - Comments			
Occupied Bandwidth	☑ PASS	☐ FAIL	☐ NA	☐ NP(1)
20dB Bandwidth	☑ PASS	☐ FAIL	☐ NA	☐ NP(1)
AC Power Line Conducted Emission	☑ PASS	☐ FAIL	☐ NA(2)	☐ NP(1)
Frequency Tolerance	☑ PASS	☐ FAIL	☐ NA	☐ NP(1)
Field strength within the band 13.110-14.010MHz	☑ PASS	☐ FAIL	☐ NA	☐ NP(1)
Field strength outside of the bands 13.110-14.010 MHz	☑ PASS	☐ FAIL	☐ NA	☐ NP(1)
Receiver Radiated Emissions	☐ PASS (3)	☐ 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
(3)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. INFORMATIONS

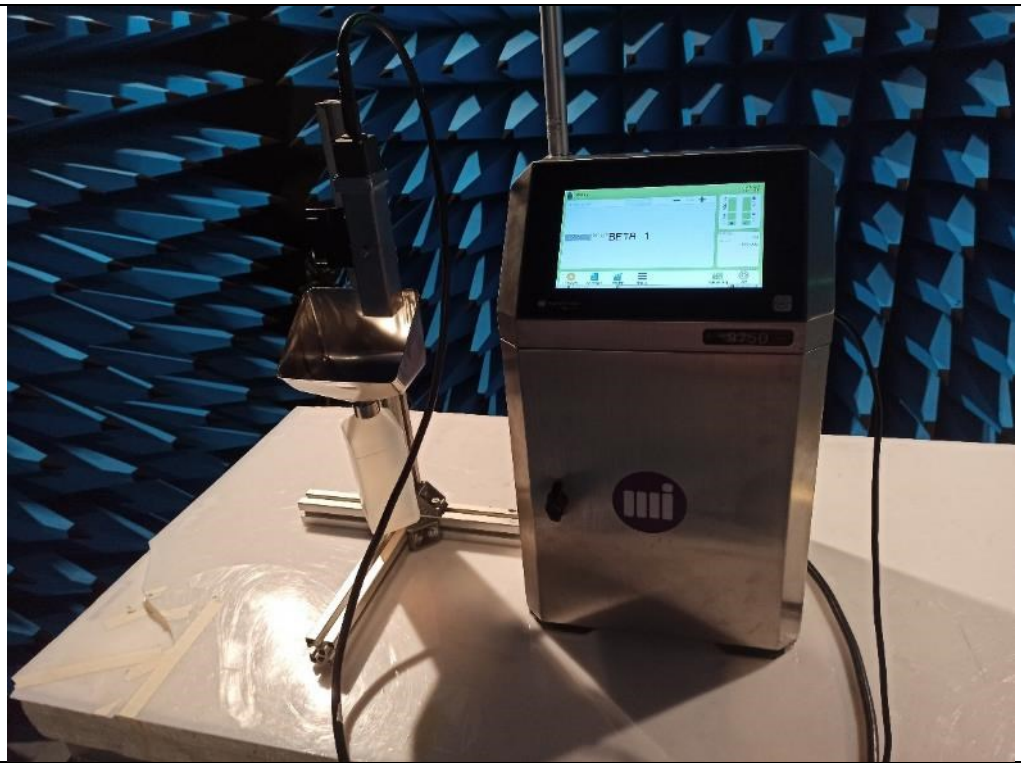
Beta1 and Beta2 are continuous inkjet printers with TAG reading on consumable cartridges, identical electronic cards, but supplied by two different power supplies.

- Meanwell: LRS-100-24)
- (TDK: HWS100 A-24/A)

These printers are equipped with the TCO module and the air compressor module

2.2. HARDWARE IDENTIFICATION (EUT AND AUXILIARIES):

Equipment under test (EUT):
MARKEM-IMAJE 9750
Serial Number: FR21240050 (Beta2) and FR21240220 (Beta1)



Equipment Under Test

Power supply:
During all the tests, EUT is supplied by V_{nom}: **110/60HzVAC**
For measurement with different voltage, it will be presented in test method.

Name	Type	Rating	Reference / Sn	Comments
Supply1	AC	100-240V 50-60Hz	Meanwell (LRS-100-24)	-
Supply2	AC	100-240V 50-60Hz	TDK(HWS100A-24/A)	-

Inputs/outputs - Cable:

Access	Type	Length used (m)	Declared <3m	Shielded	Under test	Comments
Access1	Umbilical cable side EUT	3	No	Yes	Yes	-
Access2	Umbilical cable side printing head	3	No	Yes	Yes	-
Access3	Beacon cable	3	No	No	Yes	-
Access4	Tachymeter cable	5	No	Yes	Yes	-
Access5	DTop cable	5	No	No	Yes	-
Access6	USB	2	Yes	Yes	Yes	-
Access7	Ethernet	10	No	Yes	Yes	-

Auxiliary equipment used during test:

Type	Reference	Sn	Comments
Laptop	DELL	-	-
Printing Head	IMAJE A46508	FR20122032	-
DTop	IMAJE A35355/B	C122	-
Pulse encoder	IMAJE A35356	200502111757 178	-
Beacon	PATLITE MP	06809M	-

Equipment information (declaration of provider):

Type:	☑ **RFID**		
Frequency band:	[13.553 to 13.567] MHz		
Number of Channel:	1		
Antenna Type:	☑ Integral	☐ External	☐ Dedicated
Transmit chains:	1		
Receiver chains	1		
Type of equipment:	☑ Stand-alone	☐ Plug-in	☐ Combined
Equipment arrangement:	☑ Tabletop	☑ Floor-standing	☐ Multiple orientations
Equipment type:	☐ Production model	☑ Pre-production model	
Operating temperature range:	Tmin:	☐ -20°C	☑ 0°C*
	Tnom:	20°C	
	Tmax:	☑ 50°C	☐ X°C*
Operating voltage:	Vmin (85% Vnom):	☑ 93.5VAC/60Hz	☐ XVdc*
	Vnom:	☑ 110VAC/60Hz	☐ XVdc*
	Vmax (115% Vnom):	☑ 126.5VAC/60Hz	☐ XVdc*

*Ask from provider

Antenna Characteristic			
Antenna assembly	**Gain (dBi)**	**Frequency Band (MHz)**	**Impedance(Ω)**
1	Not communicated	[13.553 to 13.567] MHz	50

Hardware information		
Software (if applicable):	**V. :**	**9450C Beta 1H2 01.06.00. 6c0b92**

2.3. 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 mode 2	Permanent reception

Test	Running mode	
Occupied Bandwidth	☑ Test mode 1 (1)	☐ Alternative test mode()
Frequency Tolerance	☑ Test mode 1 (1)	☐ Alternative test mode()
AC Power Line Conducted Emission	☑ Test mode 1 (1)	☐ Alternative test mode()
Field strength within the band 13.110-14.010MHz	☑ Test mode 1 (1)	☐ Alternative test mode()
Field strength outside of the bands 13.110-14.010 MHz	☑ Test mode 1 (1)	☐ Alternative test mode()
Receiver Radiated Emissions	☑ Test mode 2 (2)	☐ Alternative test mode()

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

(2) Note: 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

2.4. EQUIPMENT LABELLING

2.5. EQUIPMENT MODIFICATION

☑ None ☐ Modification:

2.6. *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.

2.7. *CALIBRATION DATE*

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

3. OCCUPIED BANDWIDTH

3.1. TEST CONDITIONS

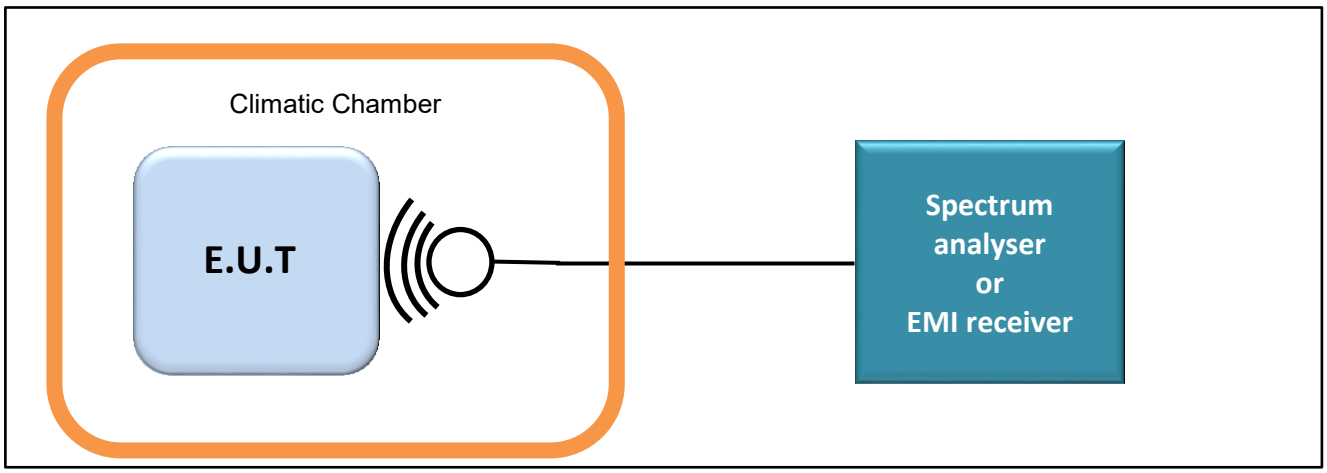
Test performed by	: Mounir BOUAMARA
Date of test	: July 28, 2021 to August 4, 2021
Ambient temperature	: 23 °C
Relative humidity	: 44 %

3.2. TEST SETUP

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

- Measurement is performed with a spectrum analyzer in:
☐ Conducted Method
☑ Radiated Method
The EUT is turned ON and connected to measurement instrument; 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) ≥ 3 x RBW.
  - Detector = Peak.
  - Trace mode = Max Hold.
  - Sweep = Auto couple.
  - Allow the trace to stabilize.
  - OBW 99% function of spectrum analyzer used



Test set up of Occupied Bandwidth

Photograph for Occupied bandwidth

3.3. LIMIT

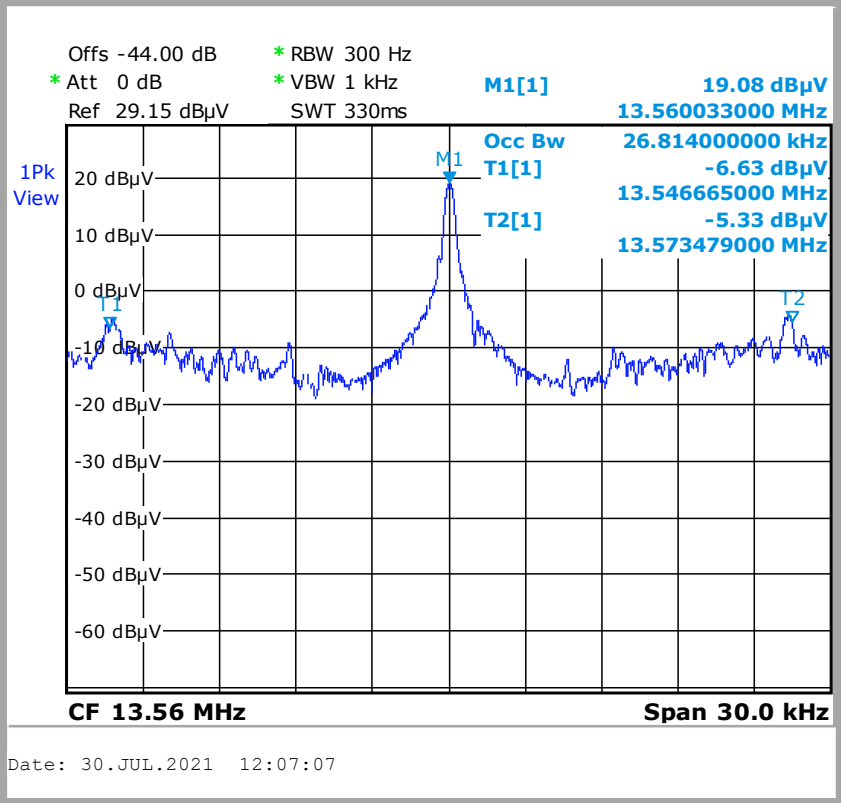
None

3.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	**Manufacturer**	**Model**	**Identifier**	**Cal_Date**	**Cal_Due**
Climatic chamber - SAF / ENV	CLIMATS	EXCAL²14014-HA	D1022141	12/20	12/22
AC source 1kW	KEYSIGHT	AC6802A	A7042305		
Antenna Loop (near field)	ELECTRO-METRICS	EM-6993	C2040215	06/19	06/22
Attenuator 10dB	AEROFLEX	_	A7122267	05/19	05/21*
Cable SMA 2m	_	6GHz	A5329635	02/20	02/22
Multimeter - CEM	FLUKE	87	A1240251	03/21	03/23
Spectrum Analyzer 9kHz - 6GHz	ROHDE & SCHWARZ	FSL6	A2642020	08/20	08/22
Thermo-hygrometer	TESTO	608-H1	B4204120	12/20	12/22
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	01/21	01/23
Thermocouple K (radio)	FLUKE	Type K	B4045004	09/19	09/21
Thermocouple K (radio)	FLUKE	Type K	B4045005	09/19	09/21

3.5. RESULTS

Occupied Bandwidth
13.56MHz



Frequency(MHz)	Occupied Bandwidth (MHz)
13.56MHz	0.026814

3.6. CONCLUSION

Occupied Channel Bandwidth measurement performed on the sample of the product **MARKEM-IMAJE 9750** SN**: FR21240050 (Beta2) and FR21240220 (Beta1)**, in configuration and description presented in this test report, show levels **compliant** to the **RSS-GEN** limits.

4. 20dB Emission Bandwidth

4.1. TEST CONDITIONS

Test performed by	: Mounir BOUAMARA
Date of test	: July 28, 2021 to August 4, 2021
Ambient temperature	: 23 °C
Relative humidity	: 44 %

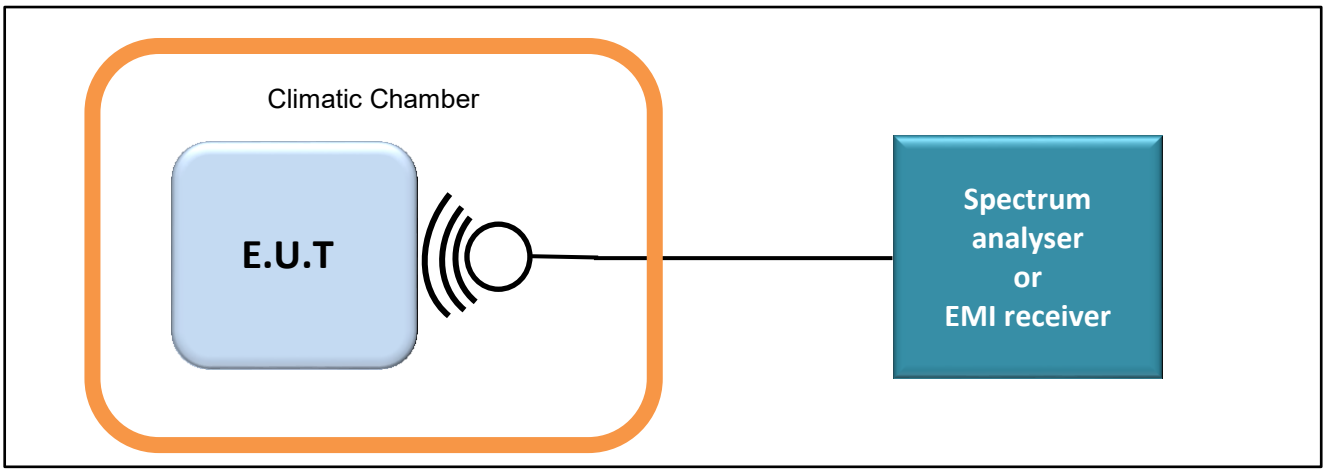
4.2. TEST SETUP

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

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

- Test Procedure:
☑ ANSI C63.10 § 6.9.2:

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



Test set up of 20dB Emission Bandwidth

Photograph for 20dB emission bandwidth

4.3. LIMIT

No Limit

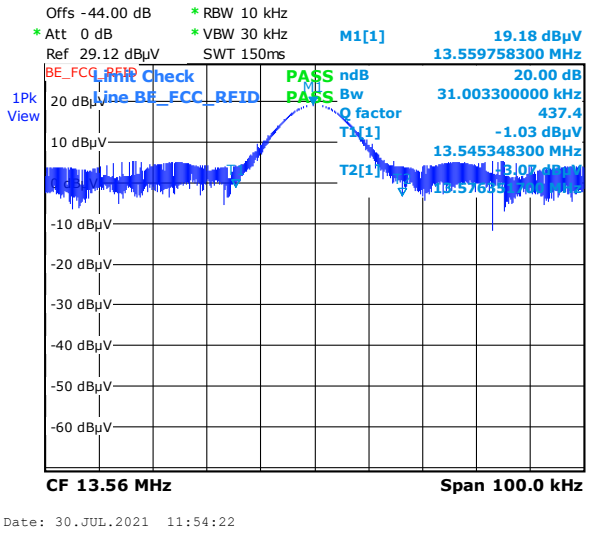
4.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	**Manufacturer**	**Model**	**Identifier**	**Cal_Date**	**Cal_Due**
Climatic chamber - SAF / ENV	CLIMATS	EXCAL²14014-HA	D1022141	12/20	12/22
AC source 1kW	KEYSIGHT	AC6802A	A7042305		
Antenna Loop (near field)	ELECTRO-METRICS	EM-6993	C2040215	06/19	06/22
Attenuator 10dB	AEROFLEX	_	A7122267	05/19	05/21*
Cable SMA 2m	_	6GHz	A5329635	02/20	02/22
Multimeter - CEM	FLUKE	87	A1240251	03/21	03/23
Spectrum Analyzer 9kHz - 6GHz	ROHDE & SCHWARZ	FSL6	A2642020	08/20	08/22
Thermo-hygrometer	TESTO	608-H1	B4204120	12/20	12/22
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	01/21	01/23
Thermocouple K (radio)	FLUKE	Type K	B4045004	09/19	09/21
Thermocouple K (radio)	FLUKE	Type K	B4045005	09/19	09/21

4.5. RESULTS

Fnom	
Frequency (MHz)	**20 Db Bandwidth (kHz)**
13.56	**31.003**

Graph



4.6. CONCLUSION

20dB Emission Bandwidth measurement performed on the sample of the product **MARKEM-IMAJE 9750** SN: **FR21240050 (Beta2) and FR21240220 (Beta1)**, 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

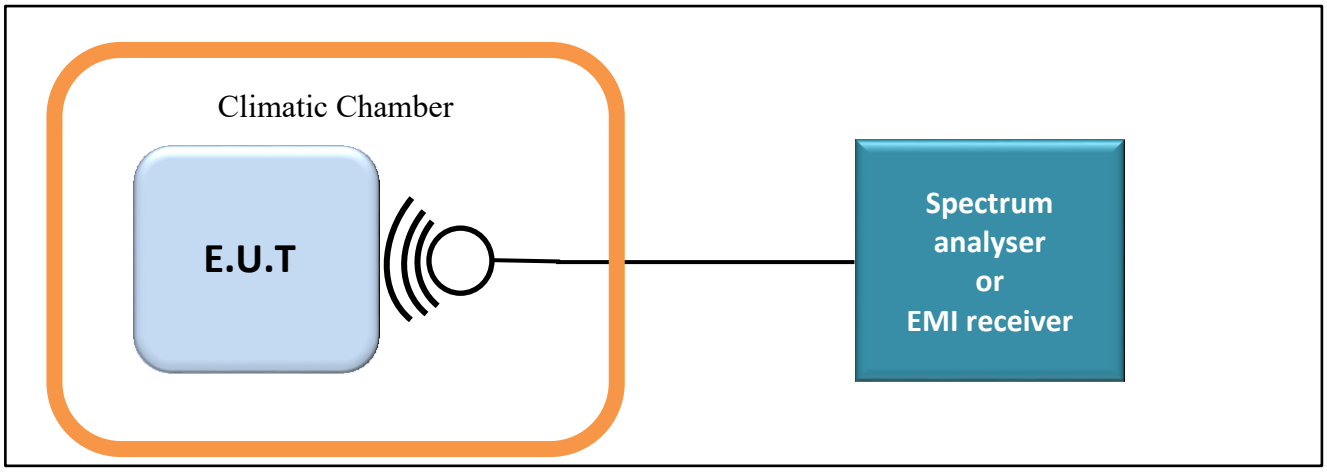
Test performed by	: Mounir BOUAMARA
Date of test	: July 28, 2021 to August 4, 2021
Ambient temperature	: 23 °C
Relative humidity	: 44 %

5.2. TEST SETUP

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

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

- Test Procedure:
☑ ANSI C63.10 § 6.8



Test set up of Occupied Bandwidth

Photograph for Frequency Tolerance

5.3. LIMIT

±0.01% (± 100ppm)

5.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	**Manufacturer**	**Model**	**Identifier**	**Cal_Date**	**Cal_Due**
Climatic chamber - SAF / ENV	CLIMATS	EXCAL²14014-HA	D1022141	12/20	12/22
AC source 1kW	KEYSIGHT	AC6802A	A7042305		
Antenna Loop (near field)	ELECTRO-METRICS	EM-6993	C2040215	06/19	06/22
Attenuator 10dB	AEROFLEX	_	A7122267	05/19	05/21*
Cable SMA 2m	_	6GHz	A5329635	02/20	02/22
Multimeter - CEM	FLUKE	87	A1240251	03/21	03/23
Spectrum Analyzer 9kHz - 6GHz	ROHDE & SCHWARZ	FSL6	A2642020	08/20	08/22
Thermo-hygrometer	TESTO	608-H1	B4204120	12/20	12/22
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	01/21	01/23
Thermocouple K (radio)	FLUKE	Type K	B4045004	09/19	09/21
Thermocouple K (radio)	FLUKE	Type K	B4045005	09/19	09/21

5.5. RESULTS

EUT activation:	Startup					
Voltage:	Vnom					
Temperature:	0°C	10°C	20°C	30°C	40°C	50°C
Frequency (MHz)	13.56007914	13.56001403	13.56002747	13.55995265	13.55992757	13.55993281
Frequency Drift (%)	0.0006%	0.0001%	0.0002%	-0.0003%	-0.0005%	-0.0005%
EUT activation:	2min					
Voltage:	Vnom					
Temperature:	0°C	10°C	20°C	30°C	40°C	50°C
Frequency (MHz)	13.56007914	13.56001403	13.56002747	13.55995265	13.55992757	13.55993281
Frequency Drift (%)	0.0006%	0.0001%	0.0002%	-0.0003%	-0.0005%	-0.0005%
EUT activation:	5min					
Voltage:	Vnom					
Temperature:	0°C	10°C	20°C	30°C	40°C	50°C
Frequency (MHz)	13.56007914	13.56001403	13.56002747	13.55995265	13.55992757	13.55993281
Frequency Drift (%)	0.0006%	0.0001%	0.0002%	-0.0003%	-0.0005%	-0.0005%
EUT activation:	10min					
Voltage:	Vnom					
Temperature:	0°C	10°C	20°C	30°C	40°C	50°C
Frequency (MHz)	13.56007914	13.56001403	13.56002747	13.55995265	13.55992757	13.55993281
Frequency Drift (%)	0.0006%	0.0001%	0.0002%	-0.0003%	-0.0005%	-0.0005%

Temperature	Tnom		
Voltage:	Vmin	Vnom	Vmax
Frequency (MHz)	13.56002388	13.5600232	13.56002293
Frequency Drift (%)	0.0002%	0.0002%	0.0002%

5.6. CONCLUSION

Frequency tolerance measurement performed on the sample of the product **MARKEM-IMAJE 9750** SN**: FR21240050 (Beta2) and FR21240220 (Beta1)**, in configuration and description presented in this test report, show levels **compliant** to the 47 CFR PART 15.225 & RSS 210 limits.

6. MEASUREMENT OF CONDUCTED EMISSION

6.1. *ENVIRONMENTAL CONDITIONS*

Date of test	:	June 23, 2021
Test performed by	:	Mamady FOFANA
Atmospheric pressure (hPa)	:	992
Relative humidity (%)	:	51
Ambient temperature (°C)	:	23

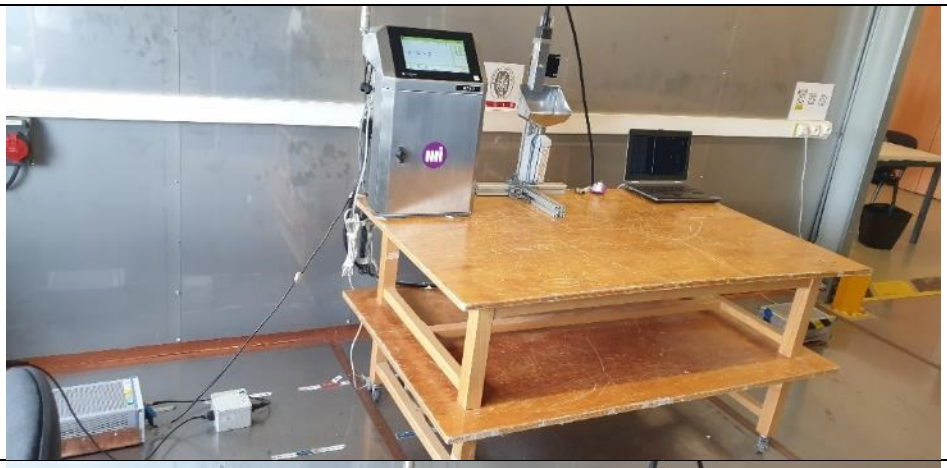
6.2. *TEST SETUP*

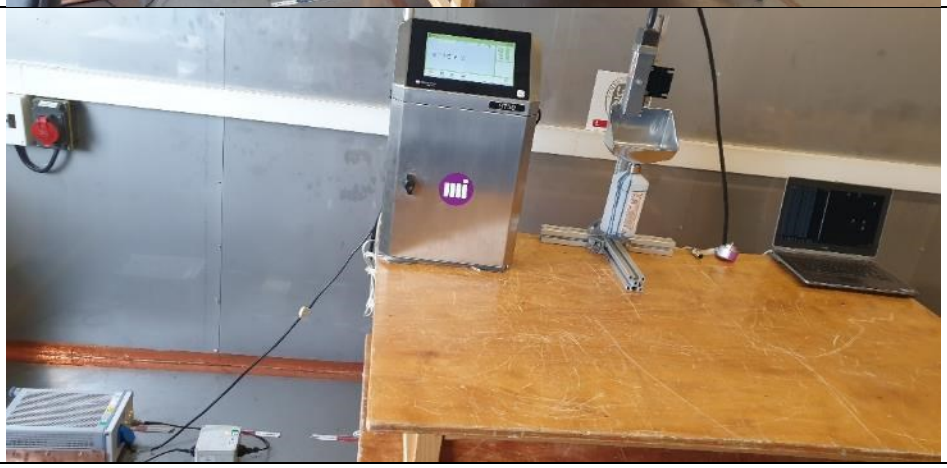
Mains terminals

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}.
The EUT is powered through a LISN (measure). Auxiliaries are powered by another LISN.

Test setup for Beta 1 with Supply TDK

Test setup





Test setup for Beta 2 with Supply (Meanwell)

Test setup

6.3. *TEST EQUIPMENT LIST*

TEST EQUIPMENT USED					
Description	**Manufacturer**	**Model**	**Identifier**	**Cal_Date**	**Cal_Due**
BAT EMC	NEXIO	v3.19.1.23	L1000115	-	-
EMC comb generator	LCIE SUD EST	_	A3169098	-	-
LISN	ROHDE & SCHWARZ	ENV216	C2320123	09/20	09/21
LISN	ROHDE & SCHWARZ	ENV216	C2320291	06/20	06/21
Spectrum Analyzer 9kHz - 30MHz	ROHDE & SCHWARZ	ESHS10	A2642028	01/20	01/22
Thermo-hygrometer (PM3)	KIMO	HQ 210	B4206022	01/21	01/23
Transient limiter	ROHDE & SCHWARZ	ESH3-Z2	A7122204	08/20	08/21
Load 50Ω - BNC	AEROFLEX	_	A7152072	06/20	06/21
Load 50Ω - N	AEROFLEX	_	A7152067	07/20	07/21
Cable + self	_	_	A5329585	07/20	07/21
Probe - Current	SCHAFFNER	CSP9160	A1290017	11/20	11/21
Coupling Decoupling Network	TESEQ	CDN T08	C2320373	11/20	11/21

6.4. *DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION*

None

6.5. *TEST RESULTS – RUNNING MODE N°1 AND MODE N°2*

Mains terminals:

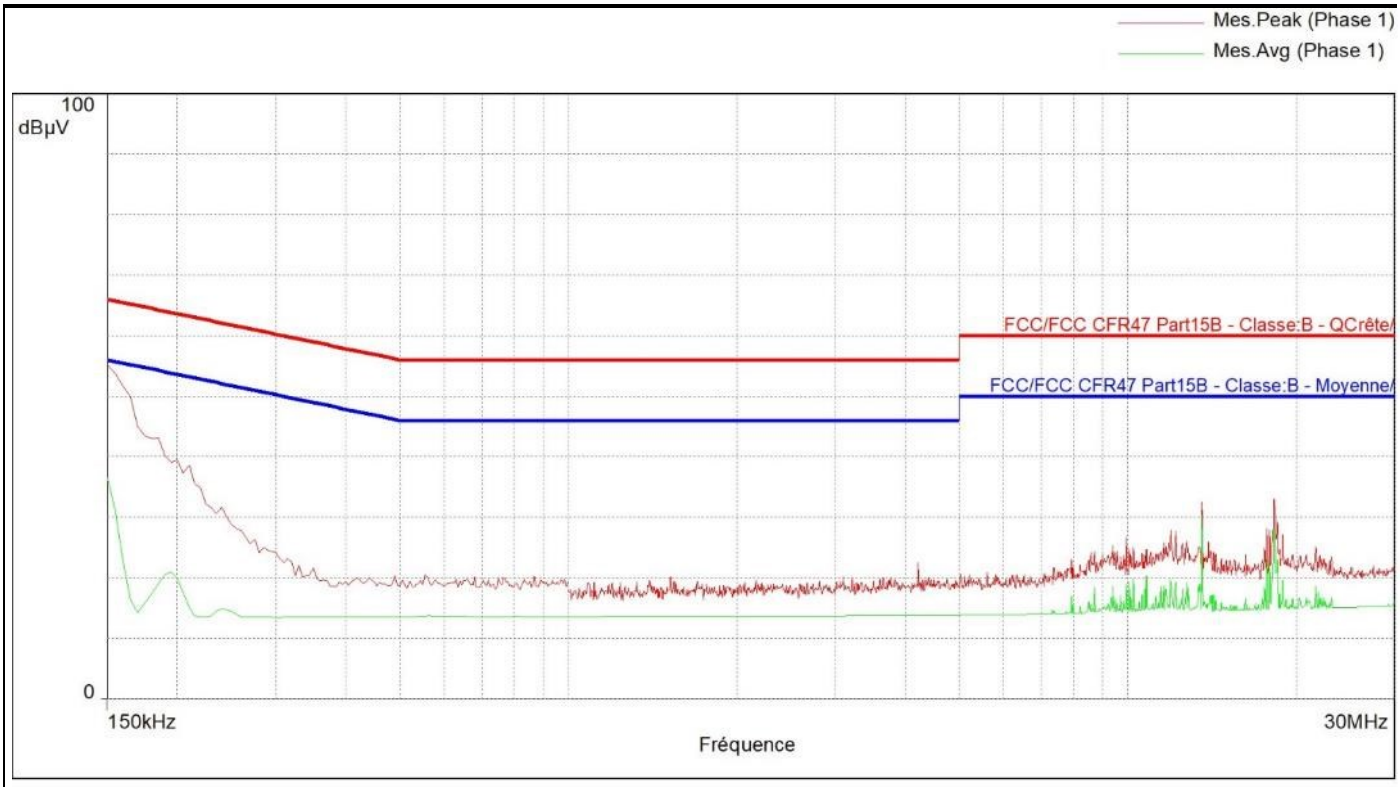
Supply1 *(*Meanwell)
Measurements are performed on the phase (L1) and neutral (N) of the power line.
Results: (PEAK detection)

Graph identifier		Line	Comments	
Emc#	1	Phase1	100VAC/60Hz	See below
Emc#	2	Neutral	100VAC/60Hz	See below
Emc#	3	Phase1	240VAC/50Hz	See below
Emc#	4	Neutral	240VAC/50Hz	See below

Supply2*(TDK)*
Measurements are performed on the phase (L1) and neutral (N) of the power line.
Results: (PEAK detection)

Graph identifier		Line	Comments	
Emc#	5	Phase1	100VAC/60Hz	See below
Emc#	6	Neutral	100VAC/60Hz	See below
Emc#	7	Phase1	240VAC/50Hz	See below
Emc#	8	Neutral	240VAC/50Hz	See below

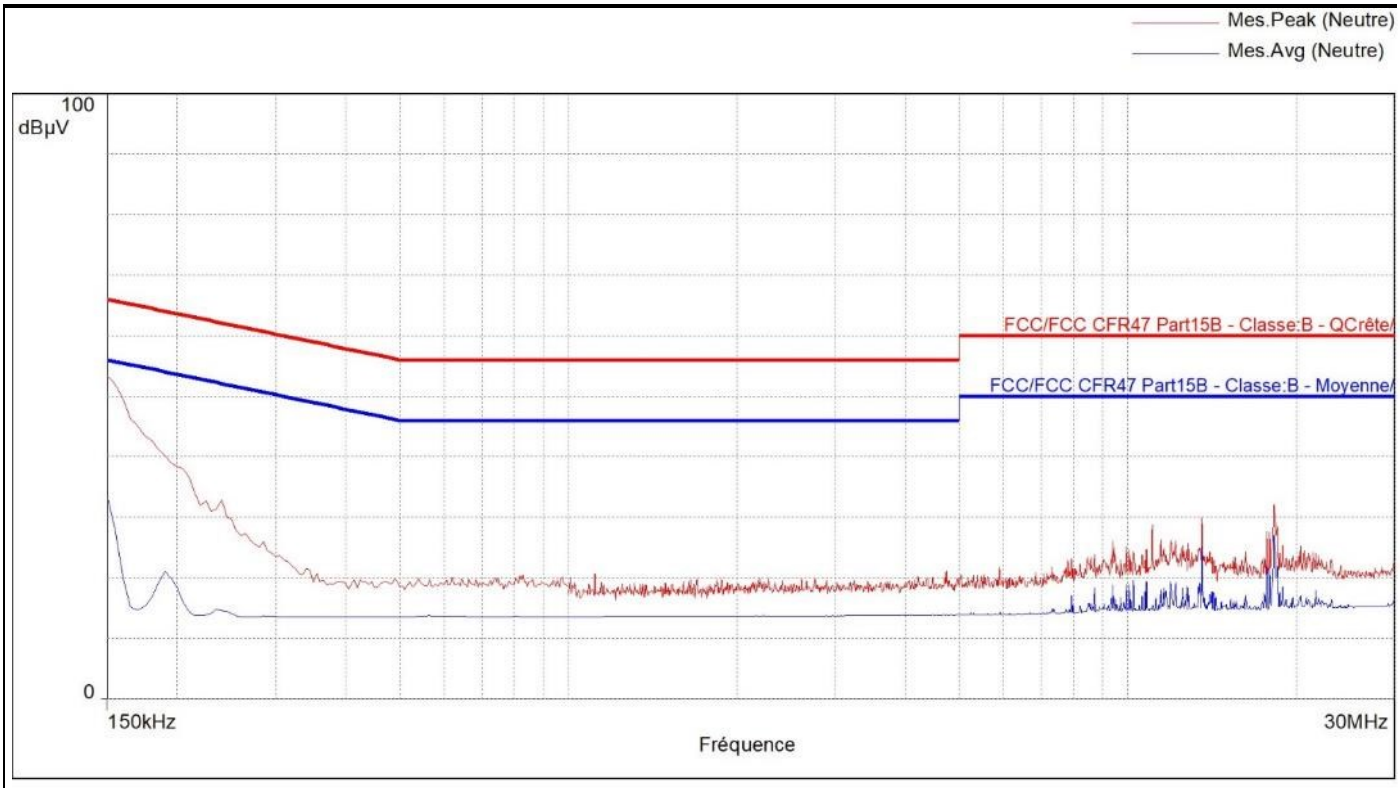
CONDUCTED EMISSIONS		
Graph name:	Emc#1	**Test configuration:1**
Limit:	FCC CFR47 Part15B	Test-Phase1
Class:	B	
Frequency range: [150kHz - 30MHz]		
Voltage / Frequency:	100VAC / 60Hz	**RBW :** 10kHz
Line:	Phase1	**VBW :** 30kHz



Spurious emissions

Frequency (MHz)	Mes.QPeak (dBµV)	LimQP (dBµV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBµV)	LimAvg (dBµV)	Mes.Avg-LimAvg (dB)	Line	Correction (dB)
0.150	50.1	66.0	-15.9	32.6	56.0	-23.4	Phase 1	19.4
0.310	13.9	60.0	-46.0	7.6	50.0	-42.4	Phase 1	19.5
4.216	11.7	56.0	-44.3	7.8	46.0	-38.2	Phase 1	19.8
13.600	21.0	60.0	-39.0	16.7	50.0	-33.3	Phase 1	20.4
18.240	29.6	60.0	-30.4	26.3	50.0	-23.7	Phase 1	20.7
27.448	12.4	60.0	-47.6	8.7	50.0	-41.3	Phase 1	21.2

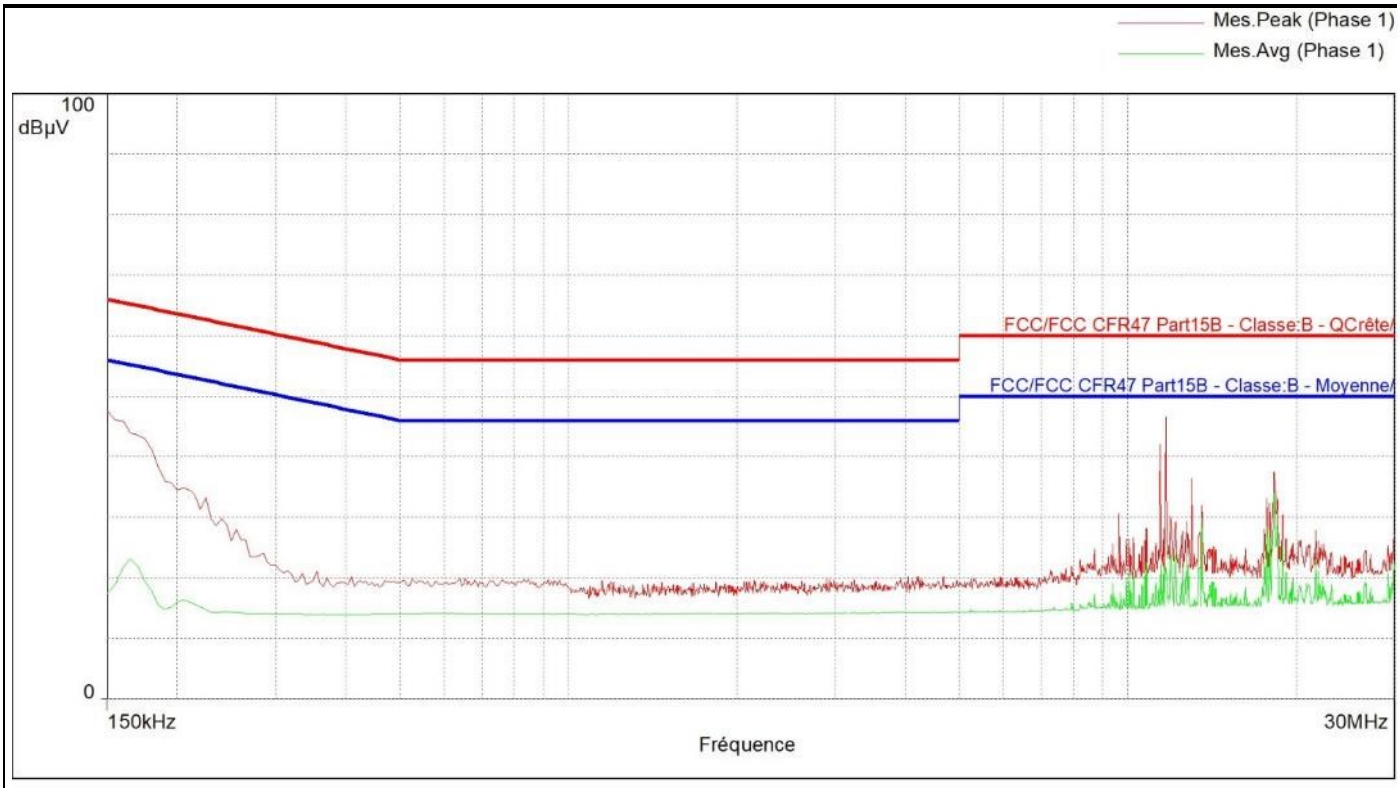
CONDUCTED EMISSIONS			
Graph name:	Emc#2	**Test configuration:1**	
Limit:	FCC CFR47 Part15B	Test-Neutral	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	100VAC / 60Hz	**RBW :**	10kHz
Line:	Neutral	**VBW :**	30kHz



Spurious emissions

Frequency (MHz)	Mes.QPeak (dBµV)	LimQP (dBµV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBµV)	LimAvg (dBµV)	Mes.Avg-LimAvg (dB)	Line	Correction (dB)
0.150	49.7	66.0	-16.3	31.8	56.0	-24.2	Neutral	19.4
0.190	35.1	64.0	-28.9	20.0	54.0	-34.1	Neutral	19.6
1.144	10.9	56.0	-45.1	7.3	46.0	-38.7	Neutral	19.6
11.072	14.8	60.0	-45.2	10.2	50.0	-39.8	Neutral	20.3
13.556	30.7	60.0	-29.3	22.2	50.0	-27.8	Neutral	20.4
18.240	28.8	60.0	-31.2	25.6	50.0	-24.4	Neutral	20.7

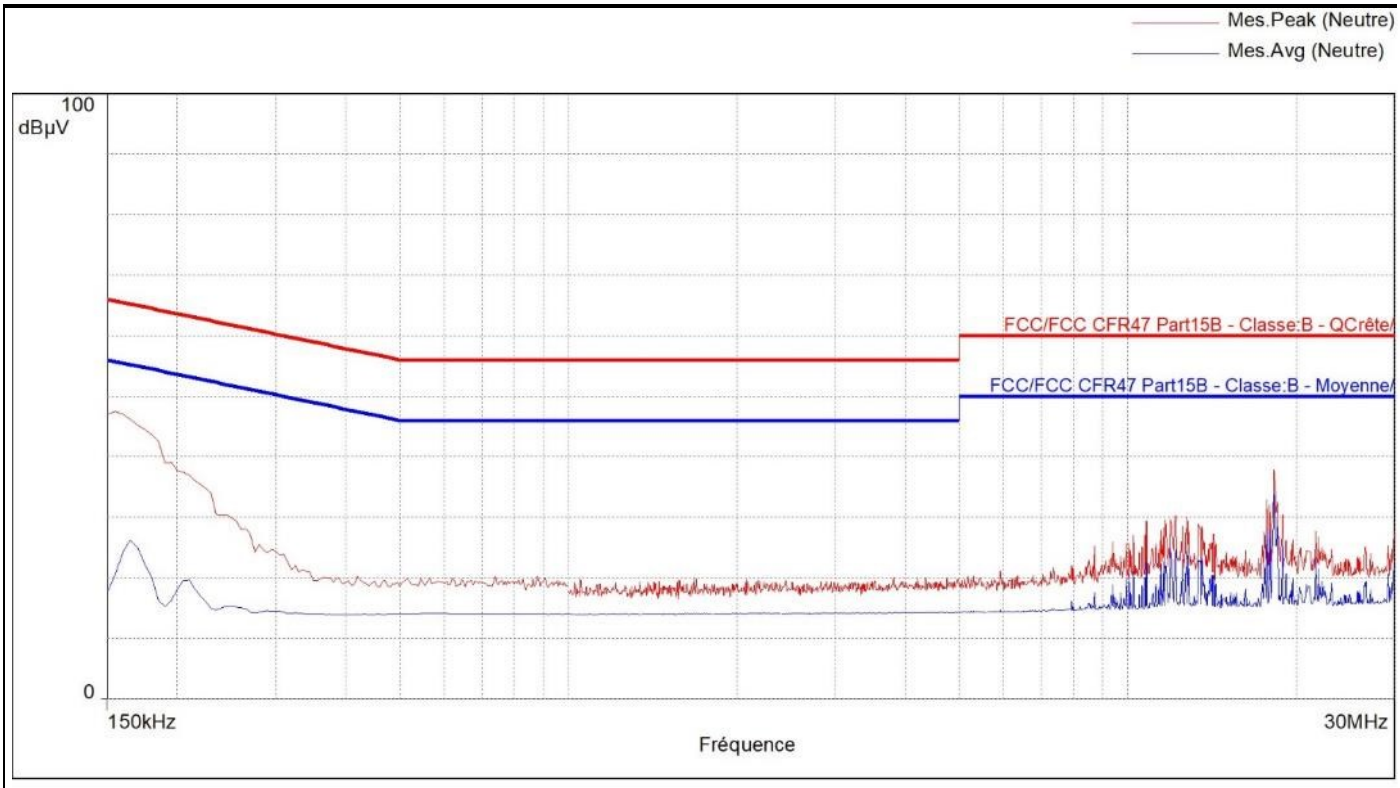
CONDUCTED EMISSIONS			
Graph name:	Emc#3	**Test configuration:1**	
Limit:	FCC CFR47 Part15B	Test-Phase1	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	240VAC / 50Hz	**RBW :**	10kHz
Line:	Phase1	**VBW :**	30kHz



Spurious emissions

Frequency (MHz)	Mes.QPeak (dBµV)	LimQP (dBµV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBµV)	LimAvg (dBµV)	Mes.Avg-LimAvg (dB)	Line	Correction (dB)
0.150	40.5	66.0	-25.5	16.7	56.0	-39.3	Phase 1	19.4
0.215	28.2	63.0	-34.8	13.5	53.0	-39.5	Phase 1	19.6
2.200	11.1	56.0	-44.9	7.6	46.0	-38.4	Phase 1	19.7
11.712	24.2	60.0	-35.8	20.3	50.0	-29.7	Phase 1	20.3
13.052	18.0	60.0	-42.0	12.7	50.0	-37.3	Phase 1	20.4
18.240	34.8	60.0	-25.2	31.5	50.0	-18.5	Phase 1	20.7
29.908	24.6	60.0	-35.4	22.0	50.0	-28.0	Phase 1	21.4

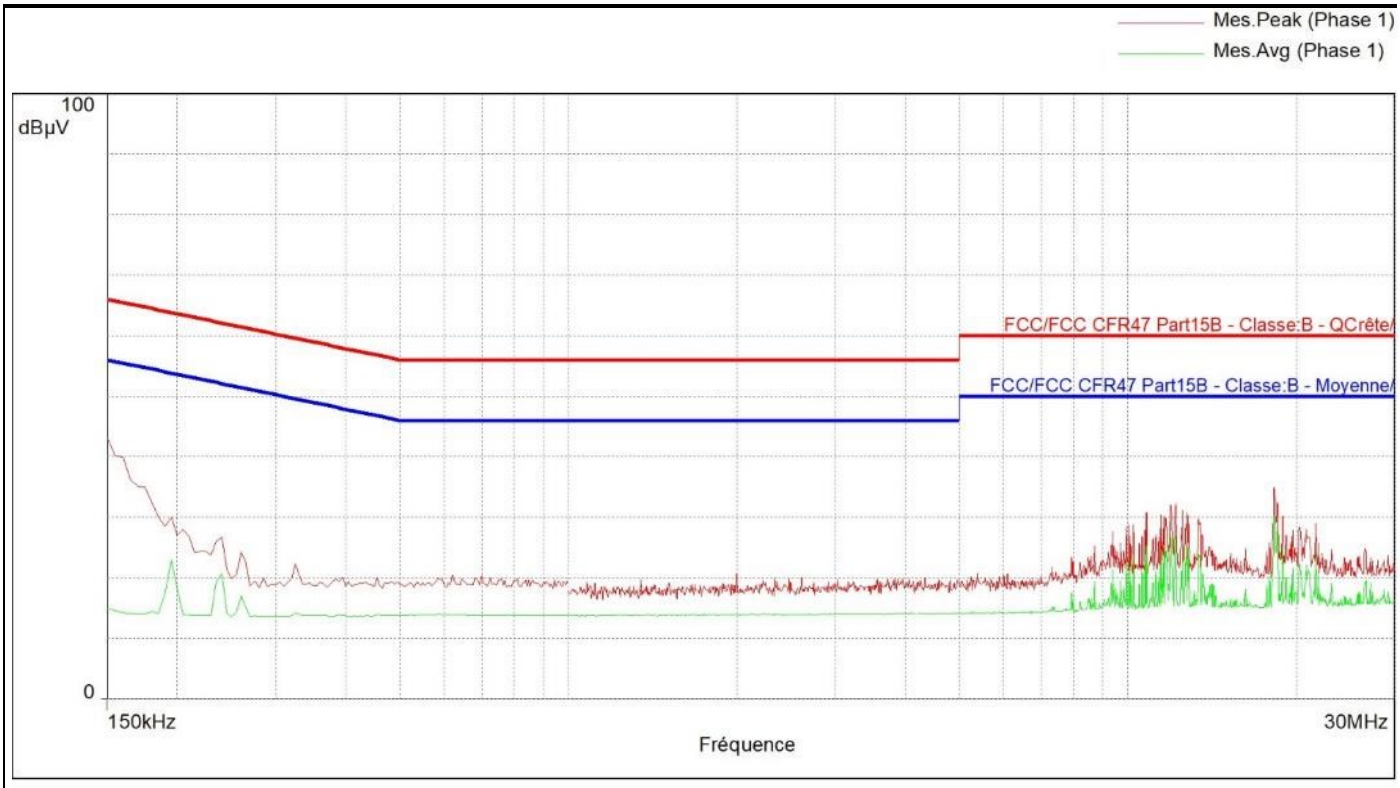
CONDUCTED EMISSIONS			
Graph name:	Emc#4	**Test configuration:1**	
Limit:	FCC CFR47 Part15B	Test-Neutral	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	240VAC / 50Hz	**RBW :**	10kHz
Line:	Neutral	**VBW :**	30kHz



Spurious emissions

Frequency (MHz)	Mes.QPeak (dBµV)	LimQP (dBµV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBµV)	LimAvg (dBµV)	Mes.Avg-LimAvg (dB)	Line	Correction (dB)
0.150	41.5	66.0	-24.5	17.5	56.0	-38.5	Neutral	19.4
0.260	23.0	61.4	-38.4	12.0	51.4	-39.5	Neutral	19.5
0.915	11.0	56.0	-45.0	7.4	46.0	-38.6	Neutral	19.6
4.752	11.1	56.0	-44.9	7.8	46.0	-38.2	Neutral	19.8
10.792	26.0	60.0	-34.0	22.2	50.0	-27.8	Neutral	20.3
12.748	27.8	60.0	-32.2	23.8	50.0	-26.2	Neutral	20.4
13.356	26.4	60.0	-33.6	22.8	50.0	-27.2	Neutral	20.4
18.240	34.7	60.0	-25.3	31.4	50.0	-18.6	Neutral	20.7

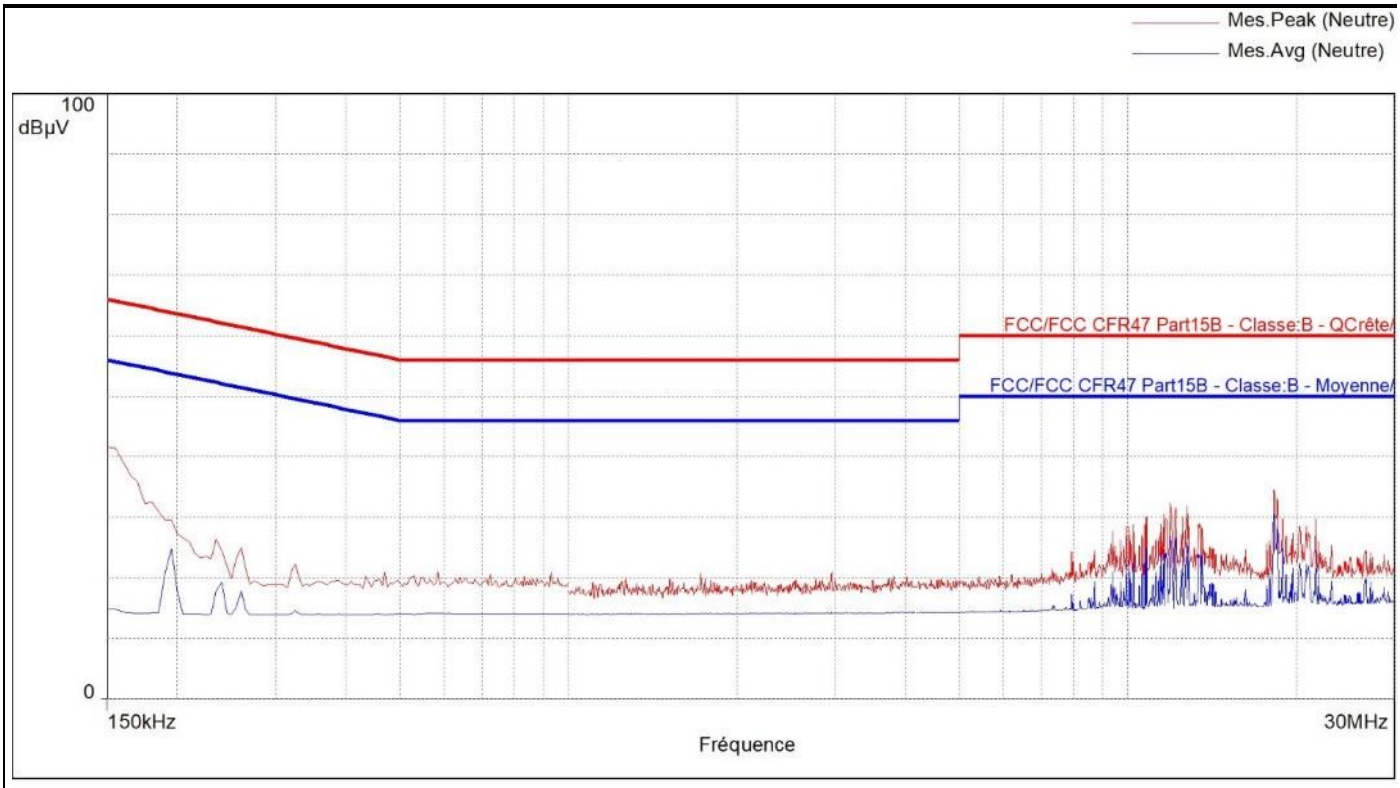
CONDUCTED EMISSIONS			
Graph name:	Emc#5	**Test configuration:2**	
Limit:	FCC CFR47 Part15B	Test- Phase1	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	100VAC / 60Hz	**RBW :**	10kHz
Line:	Phase1	**VBW :**	30kHz



Spurious emissions

Frequency (MHz)	Mes.QPeak (dBµV)	LimQP (dBµV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBµV)	LimAvg (dBµV)	Mes.Avg-LimAvg (dB)	Line	Correction (dB)
0.150	33.4	66.0	-32.6	11.9	56.0	-44.1	Phase 1	19.4
0.195	25.4	63.8	-38.4	22.7	53.8	-31.1	Phase 1	19.6
1.364	10.7	56.0	-45.3	7.4	46.0	-38.6	Phase 1	19.6
10.792	28.5	60.0	-31.5	24.7	50.0	-25.3	Phase 1	20.3
12.192	24.3	60.0	-35.7	21.0	50.0	-29.0	Phase 1	20.4
21.664	26.6	60.0	-33.4	24.0	50.0	-26.0	Phase 1	20.9

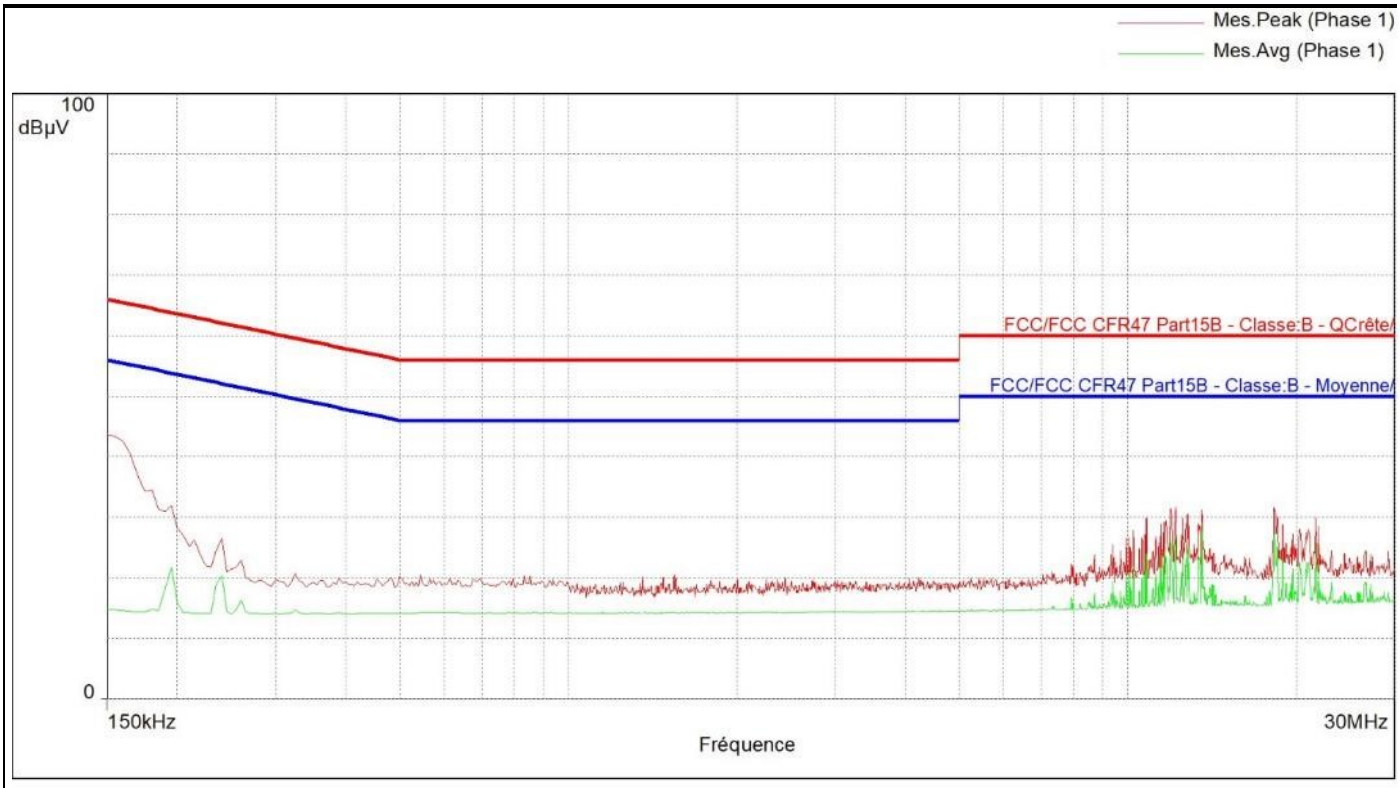
CONDUCTED EMISSIONS			
Graph name:	Emc#6	**Test configuration:2**	
Limit:	FCC CFR47 Part15B	Test- Neutral	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	100VAC / 60Hz	**RBW :**	10kHz
Line:	Neural	**VBW :**	30kHz



Spurious emissions

Frequency (MHz)	Mes.QPeak (dBµV)	LimQP (dBµV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBµV)	LimAvg (dBµV)	Mes.Avg-LimAvg (dB)	Line	Correction (dB)
0.150	33.4	66.0	-32.6	12.1	56.0	-43.9	Neutral	19.4
0.235	19.2	62.3	-43.0	17.0	52.3	-35.3	Neutral	19.5
1.692	10.9	56.0	-45.1	7.5	46.0	-38.5	Neutral	19.6
11.892	30.4	60.0	-29.6	26.8	50.0	-23.2	Neutral	20.3
18.240	31.4	60.0	-28.6	28.1	50.0	-21.9	Neutral	20.7
21.664	26.8	60.0	-33.2	24.2	50.0	-25.8	Neutral	20.9

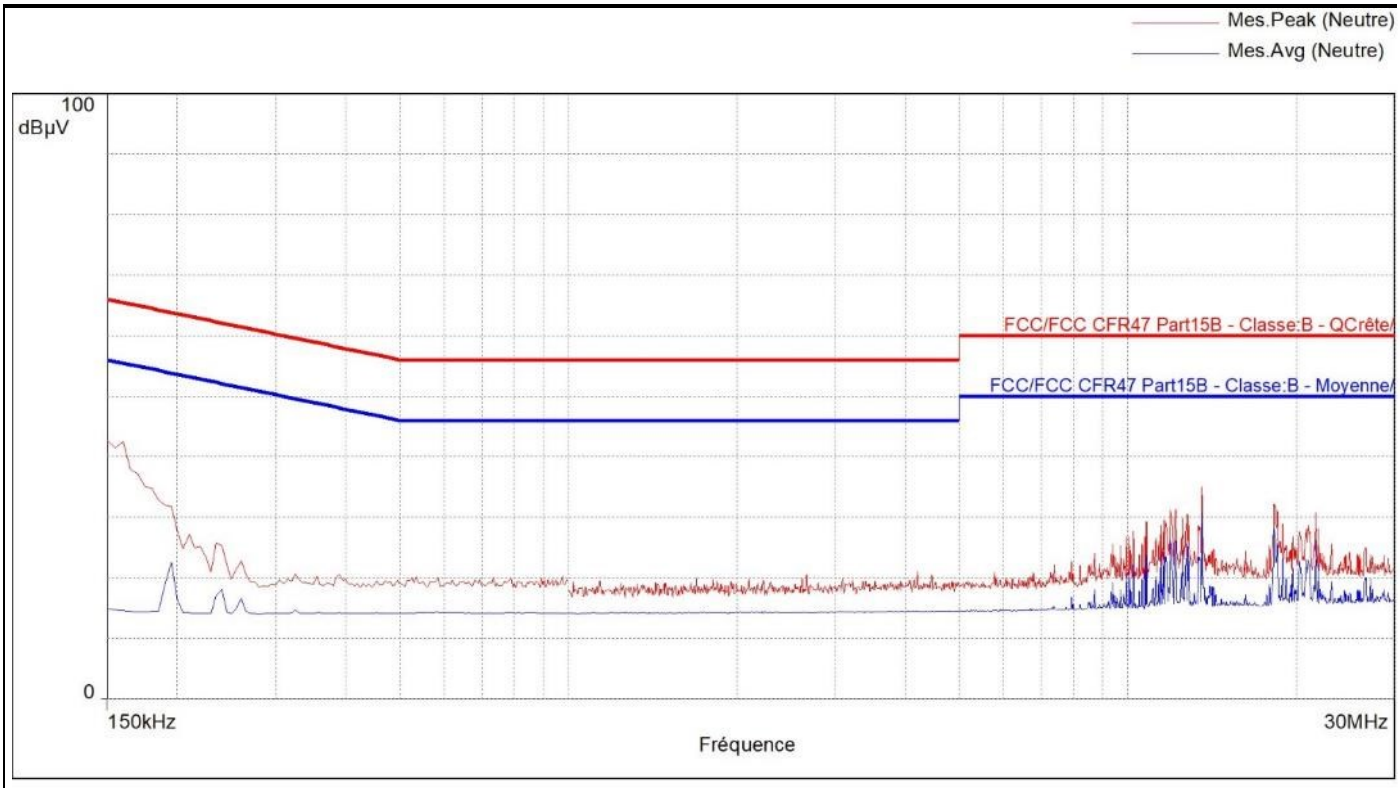
CONDUCTED EMISSIONS			
Graph name:	Emc#7	**Test configuration:2**	
Limit:	FCC CFR47 Part15B	Test- Phase1	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	240VAC / 50Hz	**RBW :**	10kHz
Line:	Phase1	**VBW :**	30kHz



Spurious emissions

Frequency (MHz)	Mes.QPeak (dBµV)	LimQP (dBµV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBµV)	LimAvg (dBµV)	Mes.Avg-LimAvg (dB)	Line	Correction (dB)
0.150	33.7	66.0	-32.3	11.4	56.0	-44.6	Phase 1	19.4
0.190	22.1	64.0	-41.9	17.2	54.0	-36.8	Phase 1	19.6
1.392	10.7	56.0	-45.3	7.4	46.0	-38.6	Phase 1	19.6
12.196	29.6	60.0	-30.4	26.0	50.0	-24.0	Phase 1	20.4
18.240	28.6	60.0	-31.4	25.3	50.0	-24.7	Phase 1	20.7
29.116	16.7	60.0	-43.3	13.5	50.0	-36.5	Phase 1	21.3

CONDUCTED EMISSIONS			
Graph name:	Emc#8	**Test configuration:2**	
Limit:	FCC CFR47 Part15B	Test-Neutral	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	240VAC / 50Hz	**RBW :**	10kHz
Line:	Neutral	**VBW :**	30kHz



Spurious emissions

Frequency (MHz)	Mes.QPeak (dBµV)	LimQP (dBµV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBµV)	LimAvg (dBµV)	Mes.Avg-LimAvg (dB)	Line	Correction (dB)
0.155	32.7	65.7	-33.0	10.5	55.7	-45.2	Neutre	19.4
0.190	23.0	64.0	-41.1	18.1	54.0	-36.0	Neutre	19.6
1.000	10.9	56.0	-45.1	7.4	46.0	-38.6	Neutre	19.6
10.244	25.6	60.0	-34.4	21.8	50.0	-28.2	Neutre	20.2
10.792	27.3	60.0	-32.7	23.5	50.0	-26.5	Neutre	20.3
13.556	30.9	60.0	-29.1	22.8	50.0	-27.2	Neutre	20.4
18.240	29.5	60.0	-30.5	26.1	50.0	-23.9	Neutre	20.7
21.664	28.4	60.0	-31.6	26.1	50.0	-23.9	Neutre	20.9

6.6. *CONCLUSION*

The sample of the equipment **MARKEM-IMAJE 9750** SN**: FR21240050 (Beta2) and FR21240220 (Beta1),** tested in the configuration presented in this test report **satisfies** to requirements of the product family standard applied (See §Test Program) for conducted emissions.

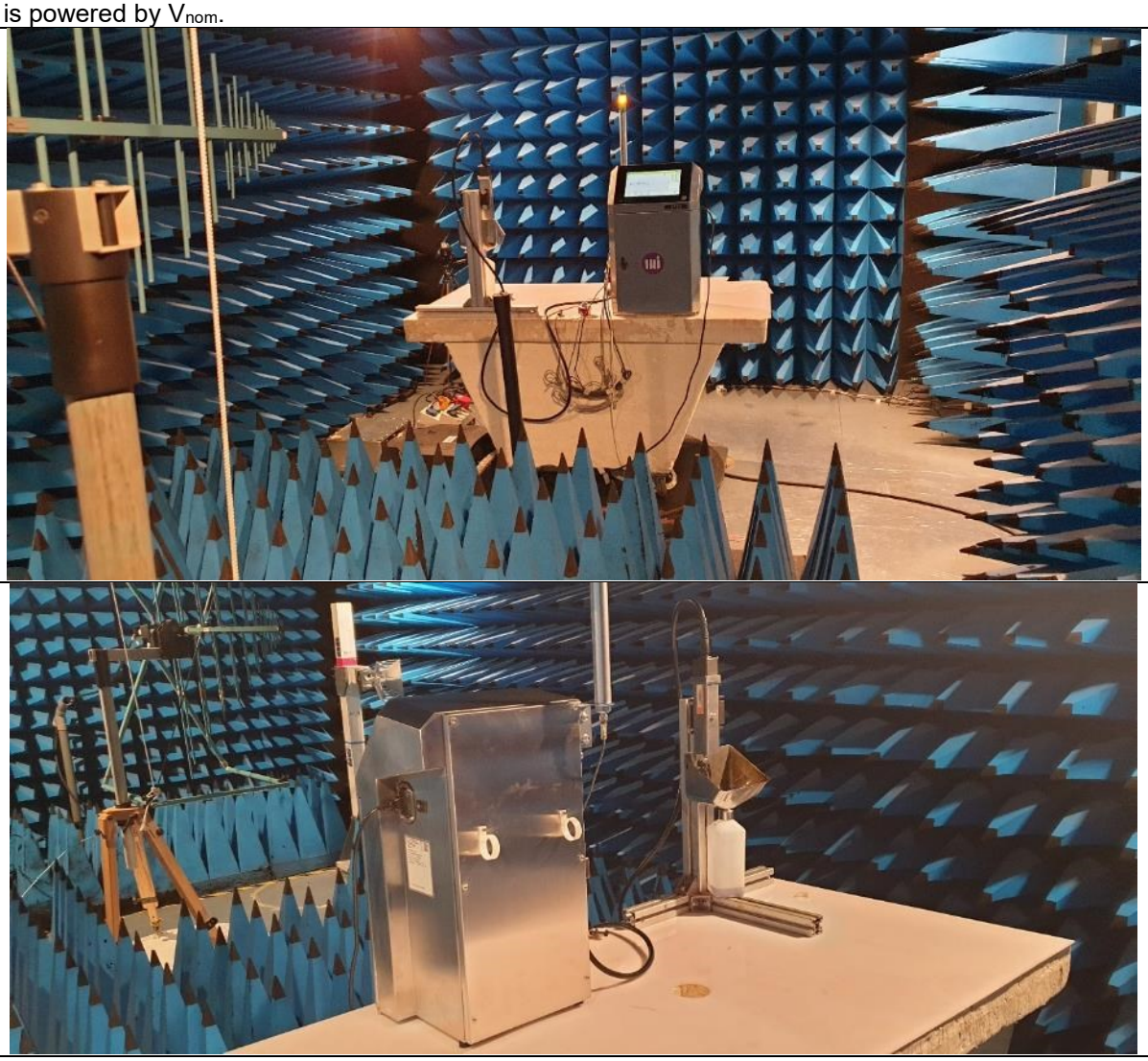
7. MEASUREMENT OF RADIATED EMISSION

7.1. *ENVIRONMENTAL CONDITIONS*

Date of test	:	June 22, 2021
Test performed by	:	Mamady FOFANA
Atmospheric pressure (hPa)	:	992
Relative humidity (%)	:	51
Ambient temperature (°C)	:	22.6

7.2. *TEST SETUP*

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}.



Test setup in anechoic chamber – Frequency <1GHz

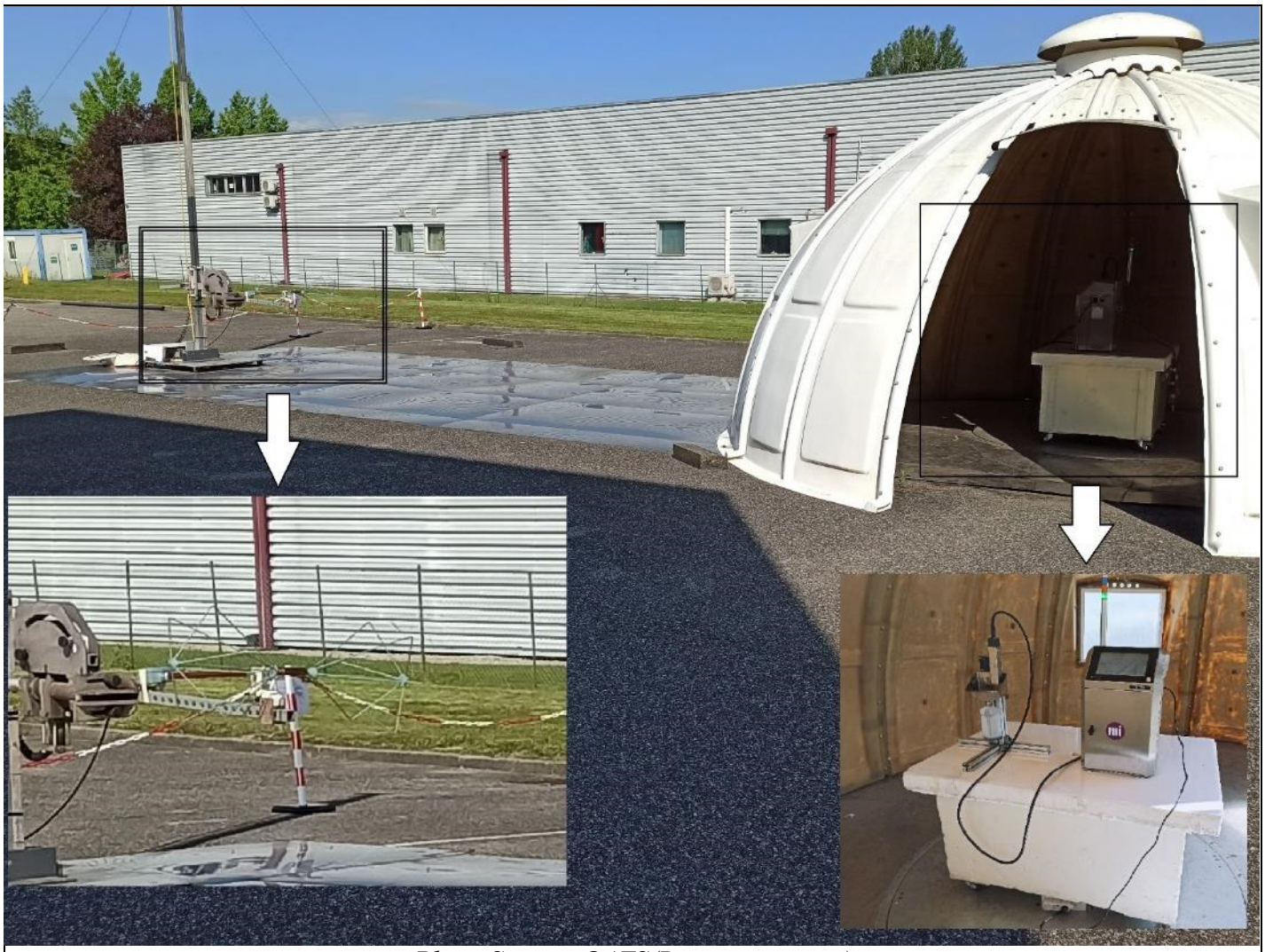


Photo Setup – OATS(Biconic antenna)

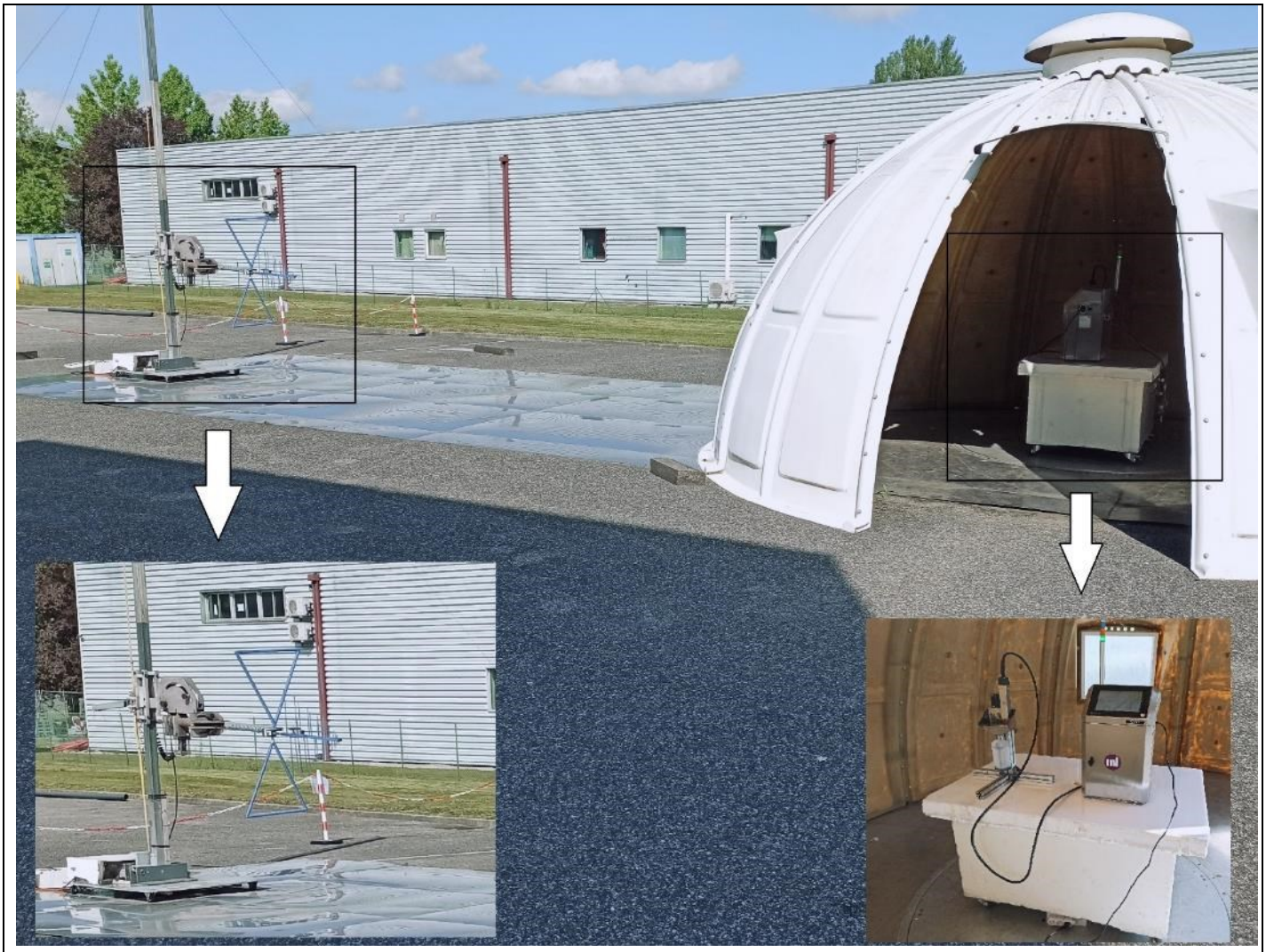
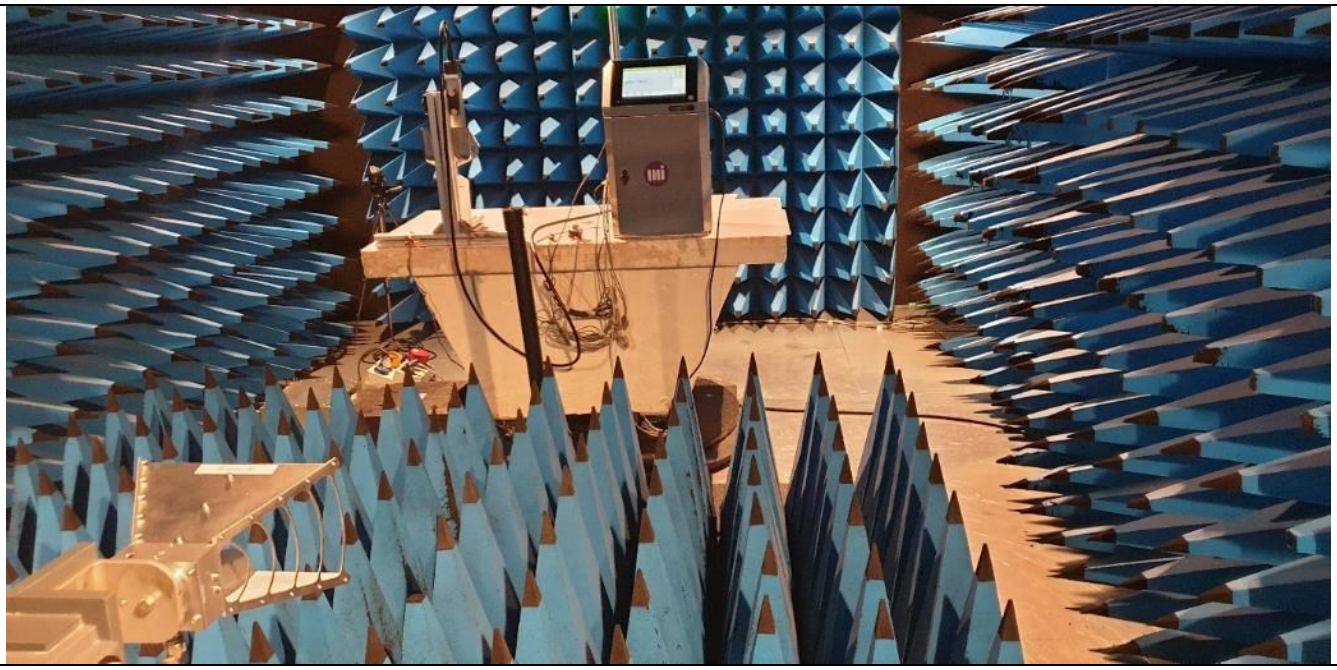


Photo Setup – OATS (Bilog antenna)

Test setup on OATS



Test setup in anechoic chamber – Frequency <1GHz

7.3. *TEST METHOD*

7.3.1. 30MHz –1GHz

Pre-qualification measurement

A pre-scan of all the setup has been performed in a 3 meters semi-anechoic chamber. Test is performed with antenna centered on EUT in horizontal (H) and vertical (V) polarization, continuous linear turntable azimuth search was performed with 360 degrees range. Measurements are performed on all axis of EUT used in normal configuration. The pre-characterization graphs are obtained in PEAK detection.

Qualification

The installation of EUT is identical than for pre-qualification measurements on an Open Area Test Site with a 10 meters distance between EUT and antenna. In this case, it corrected according to requirements of 15.209.e), M@3m = M@10m+10.5dB. Test is performed in horizontal (H) and vertical (V) polarization and the height antenna is varied from 1m to 4m. Continuous linear turntable azimuth search was performed with 360 degrees range. Measurements are performed on all axis of EUT used in normal configuration. A summary of the worst case emissions found in all test configurations and modes is shown.

7.3.2. 1GHz – 6GHz:

Pre-qualification measurement

A pre-scan of all the setup has been performed in a 3 meters full anechoic chamber. Test is performed with antenna centered on EUT in horizontal (H) and vertical (V) polarization, continuous linear turntable azimuth search was performed with 360 degrees range. Measurements are performed on all axis of EUT used in normal configuration. The pre-characterization graphs are obtained in PEAK and AVERAGE detection.

Qualification

The installation of EUT is identical for pre-characterization measurements. Test is performed in horizontal (H) and vertical (V) polarization and the height antenna is on mast, varied from 1m to 4m.
Minimal beamwidth of the measurement antenna used: AINFO 10180 / w@3m=1.4m<14GHz / w@3m=0.8m<18GHz
Continuous linear turntable azimuth search was performed with 360 degrees range. Measurements are performed on all axis of EUT used in normal configuration. A summary of the worst case emissions found in all test configurations and modes is shown.

7.4. *TEST EQUIPMENT LIST*

TEST EQUIPMENT USED					
Description	**Manufacturer**	**Model**	**Identifier**	**Cal_Date**	**Cal_Due**
Amplifier 100kHz - 18GHz	LCIE SUD EST	_	A7085027	11/20	11/21
Antenna Bi-Log XWing	TESEQ	CBL6144	C2040146	03/17	03/22
Antenna horn 18GHz	AINFO	LB	C2042078	04/21	04/23
BAT EMC	NEXIO	v3.19.1.23	L1000115	_	_
Cable 0.75m	SUCOFLEX	18GHz	A5329919	11/20	11/21
Cable 2.2m N	SUCOFLEX	SF118A/2x11N/2.2M	A5329990	11/20	11/21
Cable 5m	SUCOFLEX	18GHz	A5329918	11/20	11/21
CALCUL_FACTEURS	LCIE SUD EST	V4	L2000035	_	_
Diameter 1.2m / Height 2.25m	LCIE	VSWR 1GHz - 18GHz	D3044015_VSWR	06/19	06/22
HF Radiated emission comb generator	LCIE SUD EST	_	A3169088	_	_
Radiated emission comb generator	BARDET	_	A3169050	_	_
Semi-Anechoic chamber #2	SIEPEL	_	D3044015	06/19	06/22
Spectrum Analyzer 9kHz - 6GHz	ROHDE & SCHWARZ	FSL6	A4060049	04/20	04/22
Table C2/OATS	LCIE	_	F2000438	_	_
Thermo-hygrometer (C2)	LACROSS Techn.	WS-2357	B4206015	12/20	12/22
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	01/21	01/23
Turntable chamber (Cage#2)	ETS Lingren	Model 2165	F2000404	_	_
Turntable controller (Cage#2)	ETS Lingren	Model 2066	F2000393		
Antenna Bi-log	CHASE	CBL6111A	C2040051	06/19	06/21
Antenna Mat (OATS)	ETS Lingren	2071-2	F2000392	_	_
BAT EMC	NEXIO	v3.19.1.23	L1000115	_	_
Biconic Antenna	EATON	94455-1	C2040234	03/21	03/23
Cable (OATS)	_	1GHz	A5329623	05/20	05/21
CALCUL_FACTEURS	LCIE SUD EST	V4	L2000035	_	_
Emission Cable	SUCOFLEX	6GHz	A5329061	06/20	06/21
Emission Cable	MICRO-COAX	1GHz	A5329656	08/20	08/21
OATS	_	_	F2000409	04/21	04/22
Radiated emission comb generator	BARDET	_	A3169050	_	_
Receiver 20-1000MHz	ROHDE & SCHWARZ	ESVS30	A2642006	03/20	03/22
Table C2/OATS	LCIE	_	F2000438	_	_
Turntable (OATS)	ETS Lingren	Model 2187	F2000403	_	_
Turntable / Mast controller (OATS)	ETS Lingren	Model 2066	F2000372	_	_

7.5. *DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION*

None

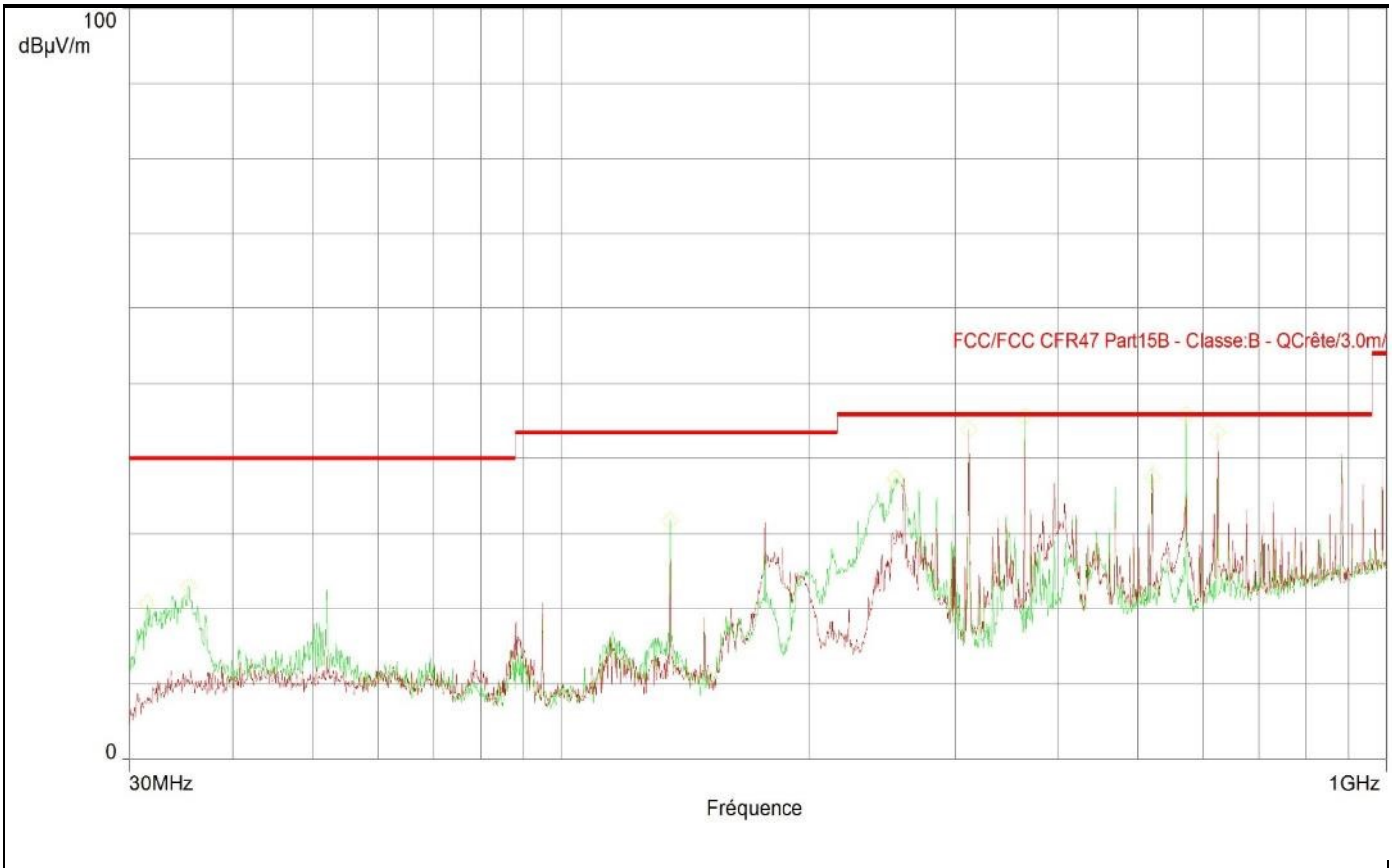
7.6. *TEST RESULTS – RUNNING MODE N°1 AND RUNNING MODE N°2*

7.6.1. 30MHz –1GHz

Pre-qualification measurement

Graph identifier		Polarization	EUT position	Comments	
Emr#	1	**Horizontal** & **Vertical**	Axis XY	EUT Beta2 with the customer's ferrite on the screen cable	See below
Emr#	2	**Horizontal** & **Vertical**	Axis XY	EUT Beta1 with shielded power supply (TDK) and customer's ferrite on the screen cable and inversion of the switch to better order the cables for OATS measurements	See below

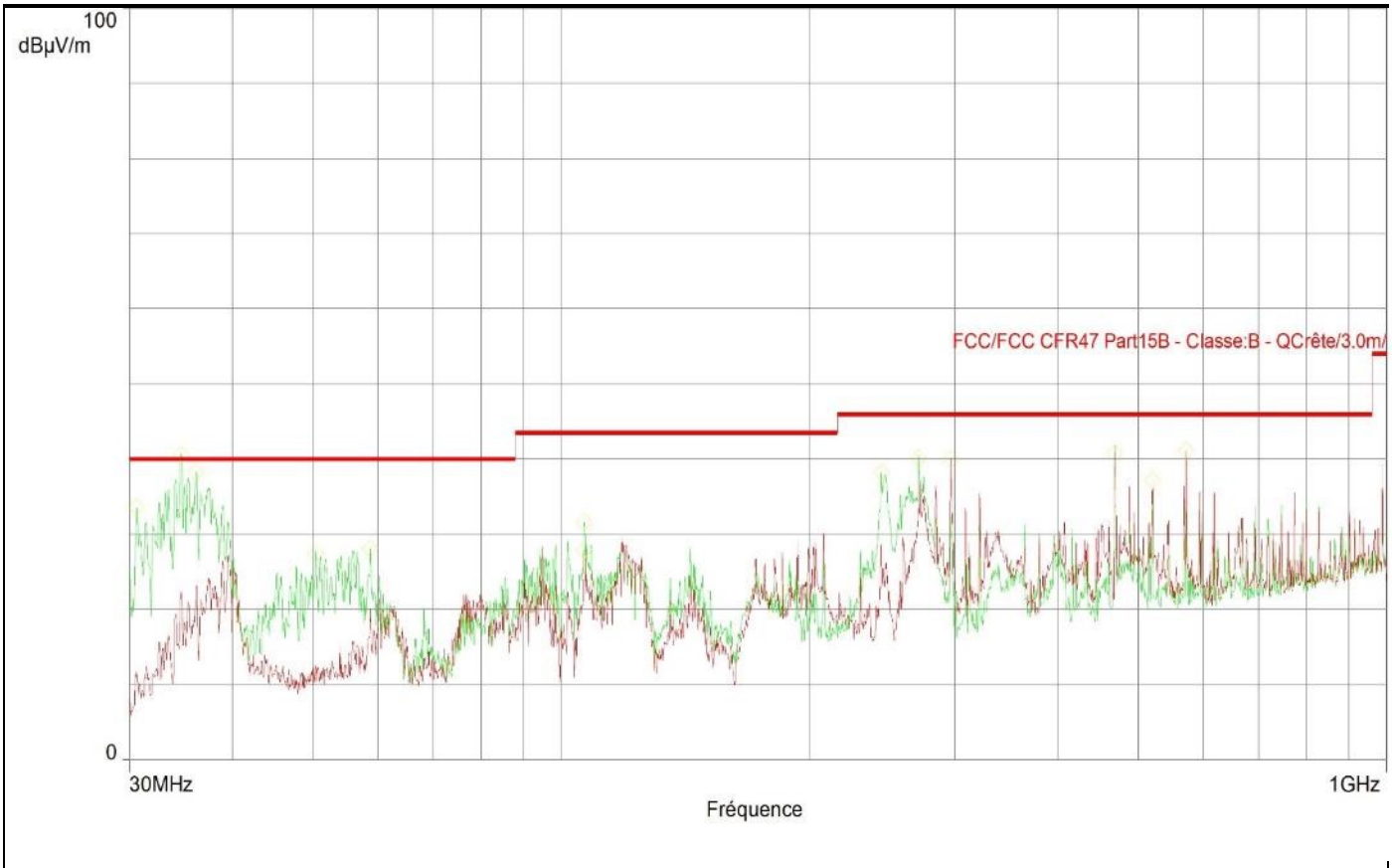
RADIATED EMISSIONS			
Graph name:	Emr#1	**Test configuration:1**	
Limit:	FCC CFR47 Part15B	Test- (H+V)[0.03-1]GHz	
Class:	B		
Frequency range: [30MHz - 1GHz]			
Antenna polarization:	Horizontal & Vertical	**RBW :**	100kHz
Azimuth:	0° - 360°	**VBW :**	300kHz



Spurious emissions

Frequency (MHz)	Peak Level (dBµV/m)	Polarization	Correction (dB)
312.000	43.9	Horizontal	-11.9
520.040	37.5	Horizontal	-6.1
624.000	43.5	Horizontal	-5.4
253.440	37.3	Vertical	-13.2
254.320	37.4	Vertical	-13.2
364.000	45.6	Vertical	-9.9
572.080	45.9	Vertical	-6.0

RADIATED EMISSIONS			
Graph name:	Emr#2	**Test configuration:2**	
Limit:	FCC CFR47 Part15B	Test- (H+V)[0.03-1]GHz	
Class:	B		
Frequency range: [30MHz - 1GHz]			
Antenna polarization:	Horizontal & Vertical	**RBW :**	100kHz
Azimuth:	0° - 360°	**VBW :**	300kHz



Spurious emissions

Frequency (MHz)	Peak Level (dBµV/m)	Polarization	Correction (dB)
296.680	40.0	Horizontal	-12.5
468.040	40.9	Horizontal	-7.1
520.040	37.2	Horizontal	-6.1
572.080	41.2	Horizontal	-6.0
30.629	33.6	Vertical	-21.1
34.641	40.6	Vertical	-18.7
36.154	38.3	Vertical	-18.2
50.417	27.4	Vertical	-16.4
58.730	28.2	Vertical	-15.9
244.040	38.2	Vertical	-13.5
271.200	40.1	Vertical	-12.9

Qualification

The frequency list is created from the results obtained during the pre-qualification.
Measurements are performed using a QUASI-PEAK detection.

- **For Beta2**

Test Frequency (MHz)	Meter Reading dB(µV)	Detector (Pk/QP/Av)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (cm)	Gain/Loss Factor (dB)	Transducer Factor (dB)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
312	19,5	QP	V	0	205	-	17,4	36,9	46,0	-9,1
353,32	23,5	QP	V	360	100	-	18,9	42,4	46,0	-3,6
364	22,5	QP	V	360	100	-	19,1	41,6	46,0	-4,4
520	20,5	QP	H	360	400	-	24,0	44,5	46,0	-1,5
572,08	17,5	QP	V	399	100	-	25,9	43,4	46,0	-2,6
624	18,0	QP	V	0	100	-	26,8	44,8	46,0	-1,2

- **For Beta1**

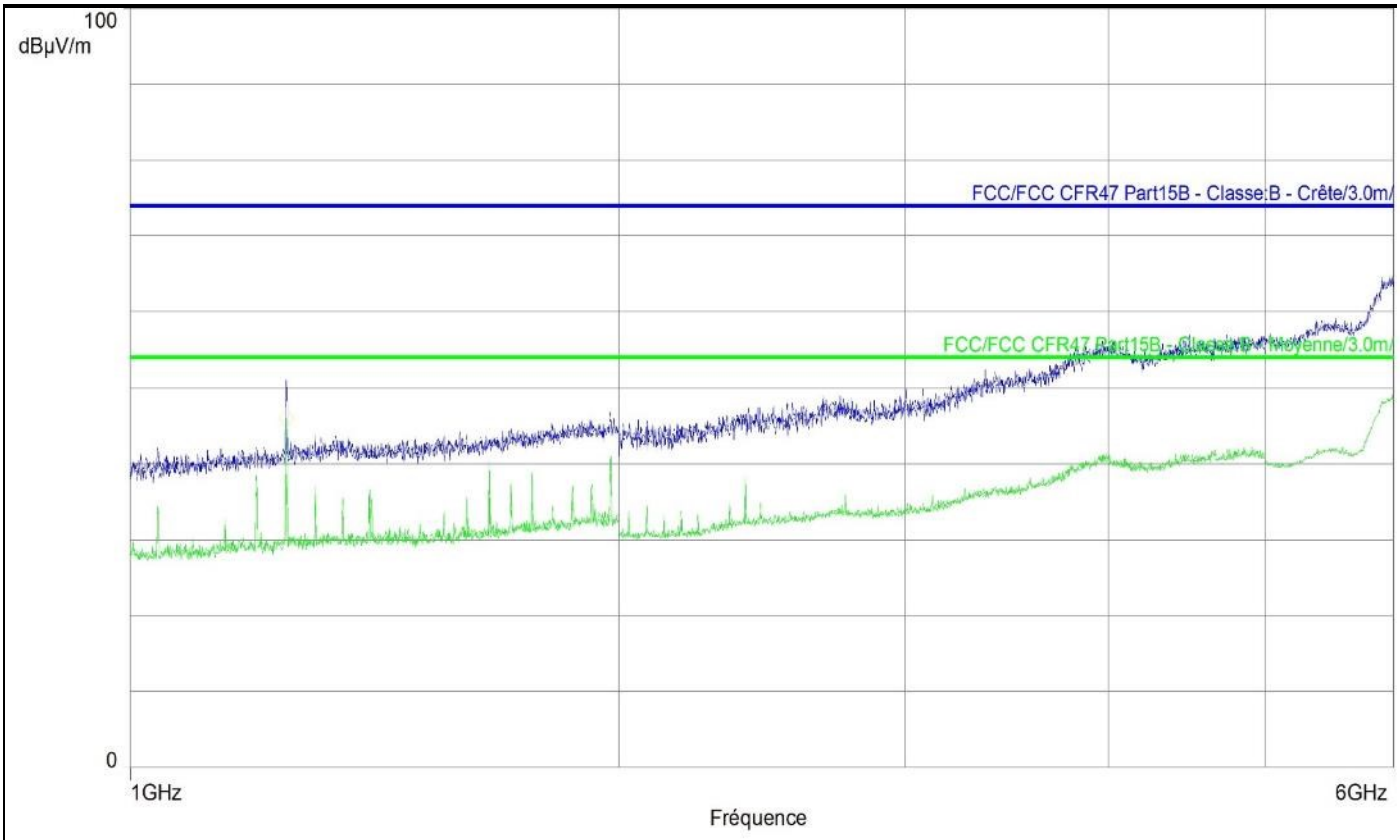
Test Frequency (MHz)	Meter Reading dB(µV)	Detector (Pk/QP/Av)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (cm)	Gain/Loss Factor (dB)	Transducer Factor (dB)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
30,629	17,5	QP	V	0	280	-	14,1	31,6	40,0	-8,4
34,641	19,5	QP	V	360	100	-	14,4	33,9	40,0	-6,1
36,154	19,6	QP	V	0	100	-	14,5	34,1	40,0	-5,9
54,417	20,5	QP	V	360	100	-	11,1	31,6	40,0	-8,4
58,73	22,5	QP	V	255	100	-	9,8	32,3	40,0	-7,7
244,04	23,5	QP	V	0	100	-	15,0	38,5	46,0	-7,5
271,2	27,2	QP	V	360	100	-	16,3	43,5	46,0	-2,5
296,68	26,5	QP	H	160	300	-	17,1	43,6	46,0	-2,4
448,04	22,5	QP	H	0	400	-	21,9	44,4	46,0	-1,6
520	20,5	QP	H	360	400	-	24,0	44,5	46,0	-1,5

7.6.2. 1GHz - 6GHz

Pre-qualification measurement

Graph identifier		Polarization	EUT position	Comments	
Emr#	3	Vertical & Horizontal	Axis XY	For Beta2	See below
Emr#	4	Vertical & Horizontal	Axis XY	For Beta1	See below

RADIATED EMISSIONS			
Graph name:	Emr#3	**Test configuration:**	
Limit:	FCC CFR47 Part15B	Tes - (H+V)[1-6]GHz	
Class:	B		
Frequency range: [1GHz - 6GHz]			
Antenna polarization:	Horizontal & Vertical	**RBW :**	1MHz
Azimuth:	0° - 360°	**VBW :**	3MHz

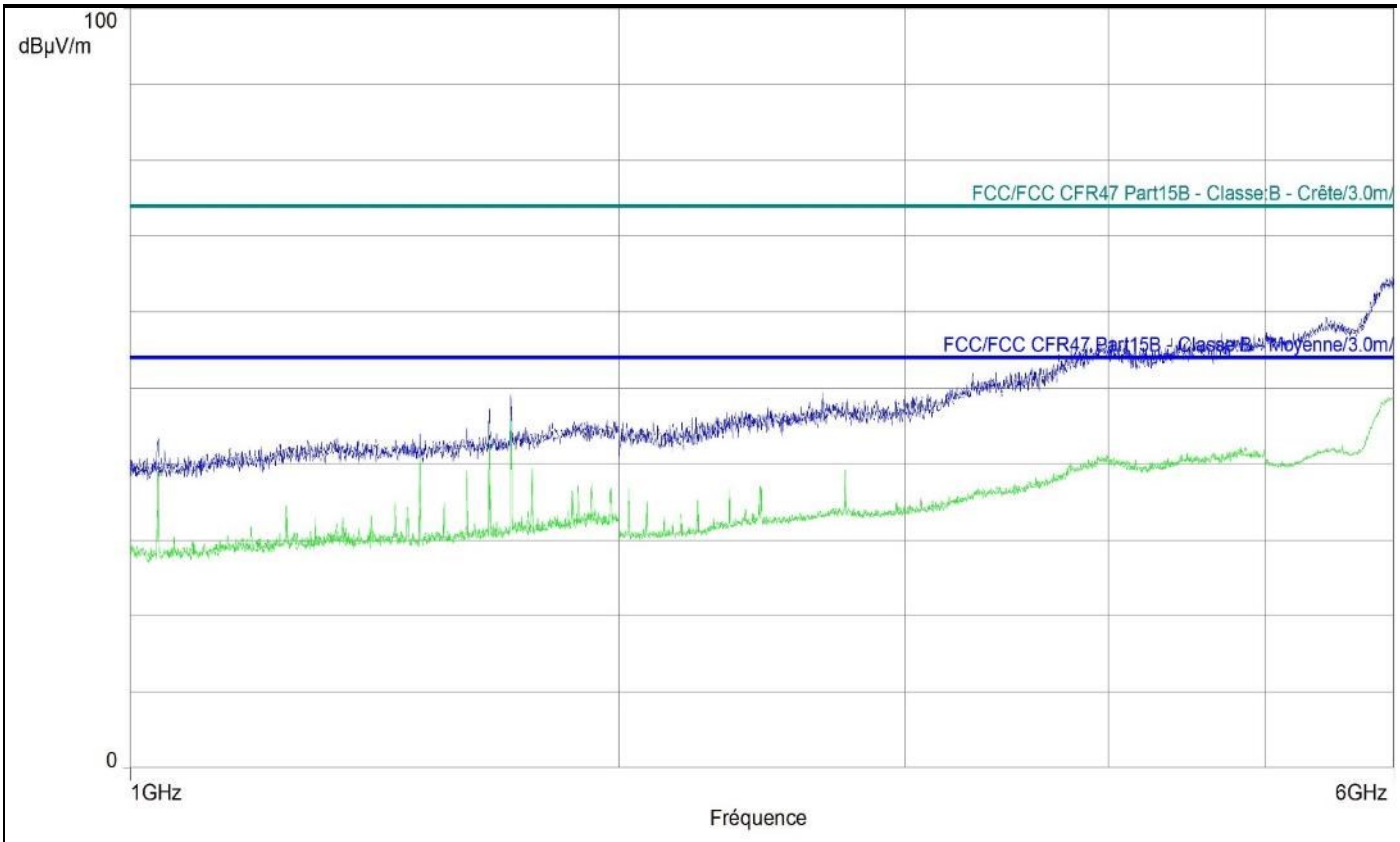


Spurious emissions

Frequency (MHz)	Average (dBµV/m)	Lim.Average (dBµV/m)	Average-Lim.Average (dB)	Commentaire	Polarization	Correction (dB)
1248.250	46.0	54.0	-8.0	Horizontal	Horizontal	0.1

- ***Does not come from EUT,***

RADIATED EMISSIONS			
Graph name:	Emr#4	**Test configuration:**	
Limit:	FCC CFR47 Part15B	Tes - (H+V)[1-6]GHz	
Class:	B		
Frequency range: [1GHz - 6GHz]			
Antenna polarization:	Horizontal & Vertical	**RBW :**	1MHz
Azimuth:	0° - 360°	**VBW :**	3MHz



Spurious emissions
No significative frequency observed

Qualification

The frequency list is created from the results obtained during the pre-qualification.
Measurements are performed using a PEAK and AVERAGE detection.

No significative frequency observed

7.7. *CONCLUSION*

The sample of the equipment **MARKEM-IMAJE 9750** SN**: FR21240050 (Beta2) and FR21240220 (Beta1),**, tested in the configuration presented in this test report **satisfies** to requirements of the product family standard applied (See §Test Program) for radiated emissions.

8. FIELD STRENGTH WITHIN THE BAND 13.110-14.010MHz

8.1. TEST CONDITIONS

Test performed by	: Mounir BOUAMARA
Date of test	: July 28, 2021 to August 4, 2021
Ambient temperature	: 23 °C
Relative humidity	: 44 %

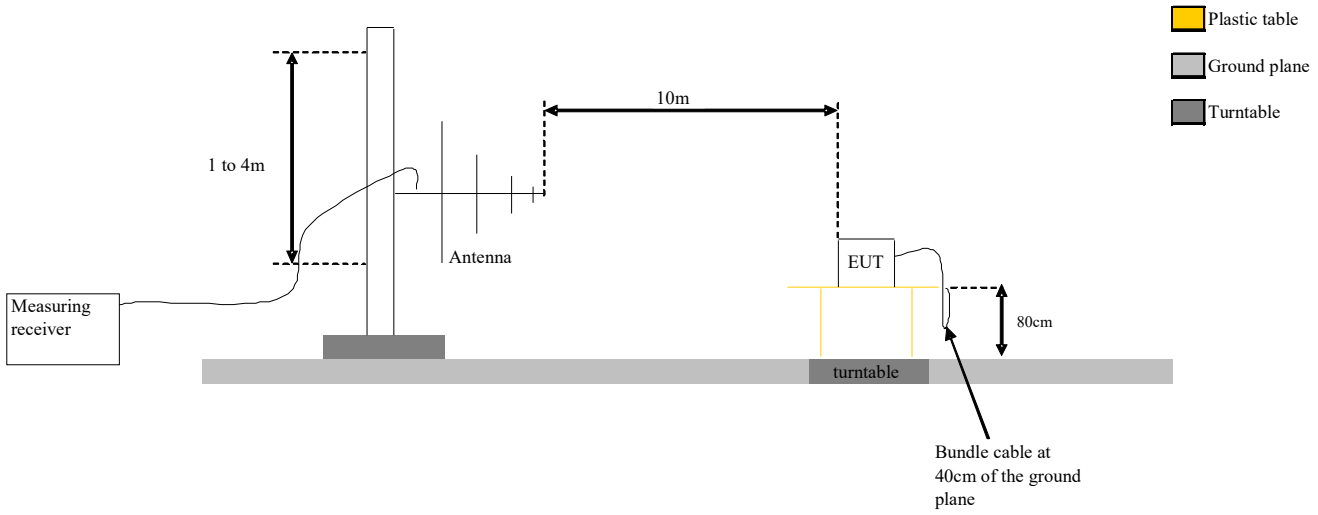
8.2. TEST SETUP

Measurement procedure:

☐ Open Area Test Site

☑ Open Area Test Site + Test fixture in climatic chamber

The product has been tested according to 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 maximised 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.



Test Set up for radiated measurement in open area test site

For 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 Setup – OATS

Photograph for Field strength within the band 13.110-14.010MHz

8.3. LIMIT

Frequency (MHz)	Field strength (µV/m) @30m	Field strength (dBµV/m) @30m	Field strength (dBµV/m) @3m
13.553-13.567	15 848	84.0	124.0
13.410-13.553 13.567-13.710	334.0	50.5	90.5
13.110-13.410 13.710-14.010	106.0	40.5	80.5
Below 13.110MHz Above 14.010MHz	30.0	29.5	69.5

8.4. TEST EQUIPMENT LIST

TEST EQUIPMENT USED					
Description	**Manufacturer**	**Model**	**Identifier**	**Cal_Date**	**Cal_Due**
Antenna Loop	ELECTRO-METRICS	EM-6879	C2040052	06/19	06/22
Antenna Mat (OATS)	ETS Lingren	2071-2	F2000392		
Cable (OATS)	_	1GHz	A5329623	05/20	05/21*
Emission Cable	SUCOFLEX	6GHz	A5329061	06/20	06/21*
Multimeter - CEM	FLUKE	87	A1240251	03/21	03/23
OATS	_	_	F2000409	04/21	04/22
RADIO ERP_EIRP	LCIE SUD EST	v4	L2000034		
Receiver 20Hz – 8GHz	ROHDE & SCHWARZ	ESU8	A2642019	11/20	11/22
Rehausse Table C1/OATS	LCIE	_	F2000512		
SOFT	RADIMOTION	2017.2.5	L1000139		
Table C1/OATS	LCIE	_	F2000445		
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	01/21	01/23
Turntable (OATS)	ETS Lingren	Model 2187	F2000403		
Turntable / Mast controller (OATS)	ETS Lingren	Model 2066	F2000372		
CALCUL_FACTEURS	LCIE SUD EST	V4	L2000035		

*Under derogation

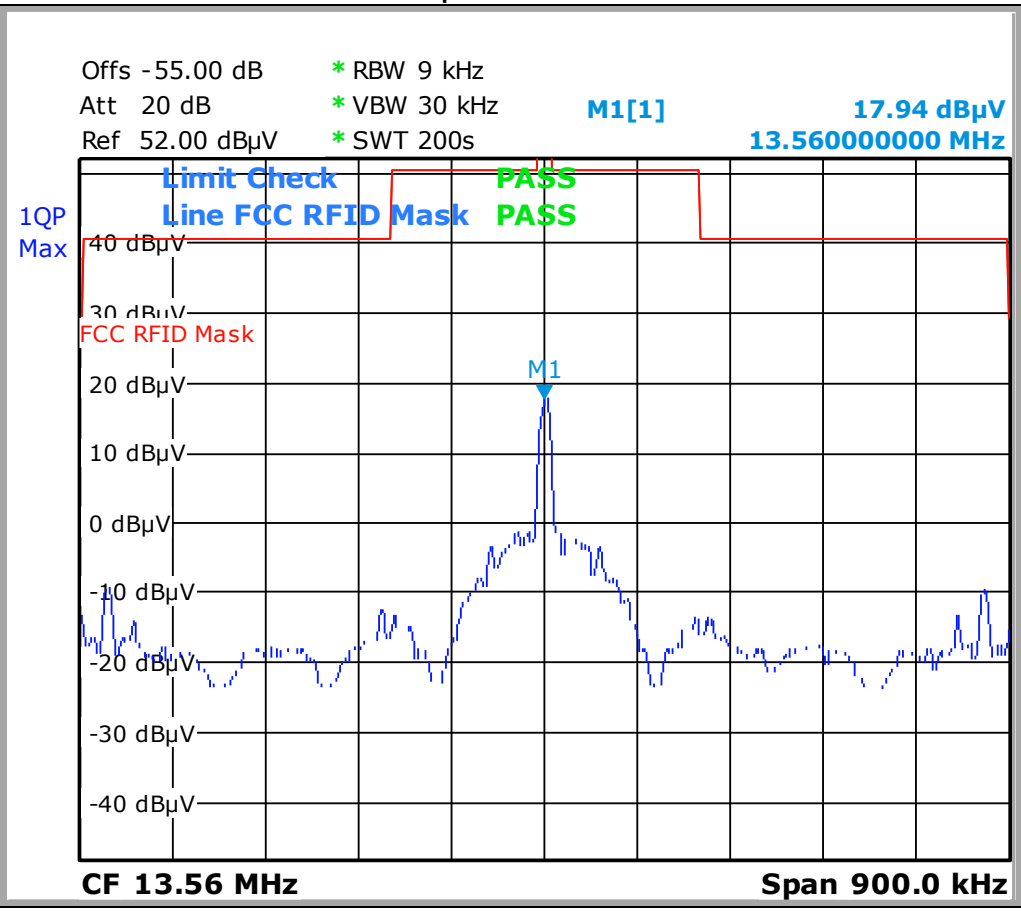
8.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

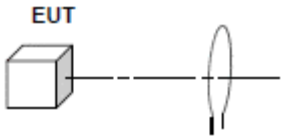
☑ None ☐ Divergence:

8.6. RESULTS

Plots (Worst case presented)

Perpendicular Axis





Perpendicular Axis

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	17.5	**66.5**	90	90	250	35.6	

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

8.7. CONCLUSION

Field strength within the band 13.110-14.010MHz measurement performed on the sample of the product **MARKEM-IMAJE 9750** SN**: FR21240050 (Beta2) and FR21240220 (Beta1)**, in configuration and description presented in this test report, show levels **compliant** to the 47 CFR PART 15.225 & RSS 210 limits.

9. 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