



# **Annex G: Unwanted Emissions into Restricted Frequency Bands (Radt.)**

The whole testing range is from “9 kHz to 26.5 GHz (10th harmonics)” is divided into 5 parts according to the test site settings, which are:

- (Part 1): Test range of “9 kHz to 30 MHz”,
- (Part 2): Test range of “30 MHz to 1 GHz”,
- (Part 3): Test range of “1 GHz to 3 GHz”,
- (Part 4): Test range of “3 GHz to 18 GHz”, and
- (Part 5): Test range of “18 GHz to 26.5 GHz”.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at all chains to get a final result, due to the radiated measurement method. The result is the directly measured sum of each chain.

In this Annex, only the test results and plots under the worst case can be reported. In the result table, the “< Limit” denotes that “Not found obvious spikes or see marked spikes on plots and listed emissions records”.

## 1 Result Table

Test Range	EUT Conf.	Emissions	Verdict
9 kHz to 30 MHz	Worst Case (11B/1_B@1, Ant 2)	< Limit	Pass
30 MHz to 1 GHz	Worst Case (11B/1_B@1, Ant 2)	< Limit	Pass
1 GHz to 3 GHz	11B/1_B@1 (Ant 1)	< Limit	Pass
	11B/1_M@1 (Ant 1)	< Limit	Pass
	11B/1_T@1 (Ant 1)	< Limit	Pass
	11G/6_B@1 (Ant 1)	< Limit	Pass
	11G/6_M@1 (Ant 1)	< Limit	Pass
	11G/6_T@1 (Ant 1)	< Limit	Pass
	11N20/0_B@1 (Ant 1)	< Limit	Pass
	11N20/0_M@1 (Ant 1)	< Limit	Pass
	11N20/0_T@1 (Ant 1)	< Limit	Pass
	11N40/0_B@1 (Ant 1)	< Limit	Pass
	11N40/0_M@1 (Ant 1)	< Limit	Pass
	11N40/0_T@1 (Ant 1)	< Limit	Pass
	Worse Case (11N40/0_B@1, Ant 2)	< Limit	Pass
	Worse Case (11N40/0_T@1, Ant 2)	< Limit	Pass
3 GHz to 18 GHz	Worst Case (11B/1_B@1, Ant 2)	< Limit	Pass
18 GHz to 26.5 GHz	Worst Case (11B/1_B@1, Ant 2)	< Limit	Pass

## 2 Result Plot

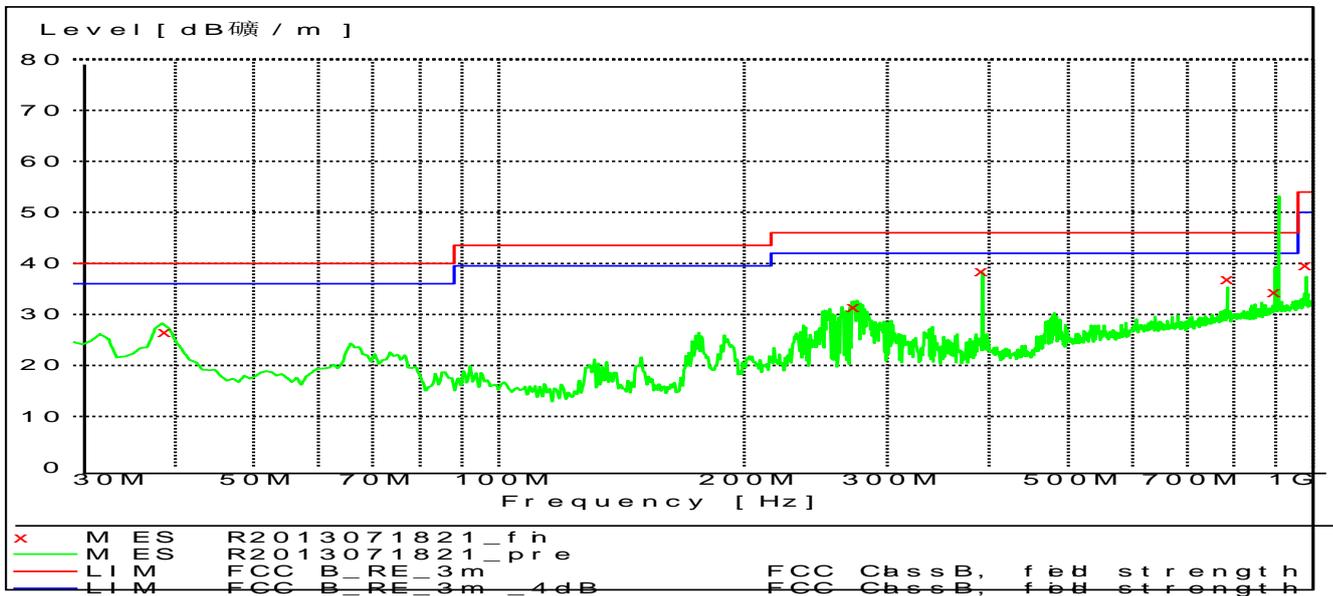
### 2.1 Test range of "9 kHz to 30 MHz"

#### 2.1.1 Worst Case (11B/1\_B@1, Ant 2)

(No obvious emissions)

### 2.2 Test range of "30 MHz to 1 GHz"

#### 2.2.1 Worst Case (11B/1\_B@1, Ant 2)

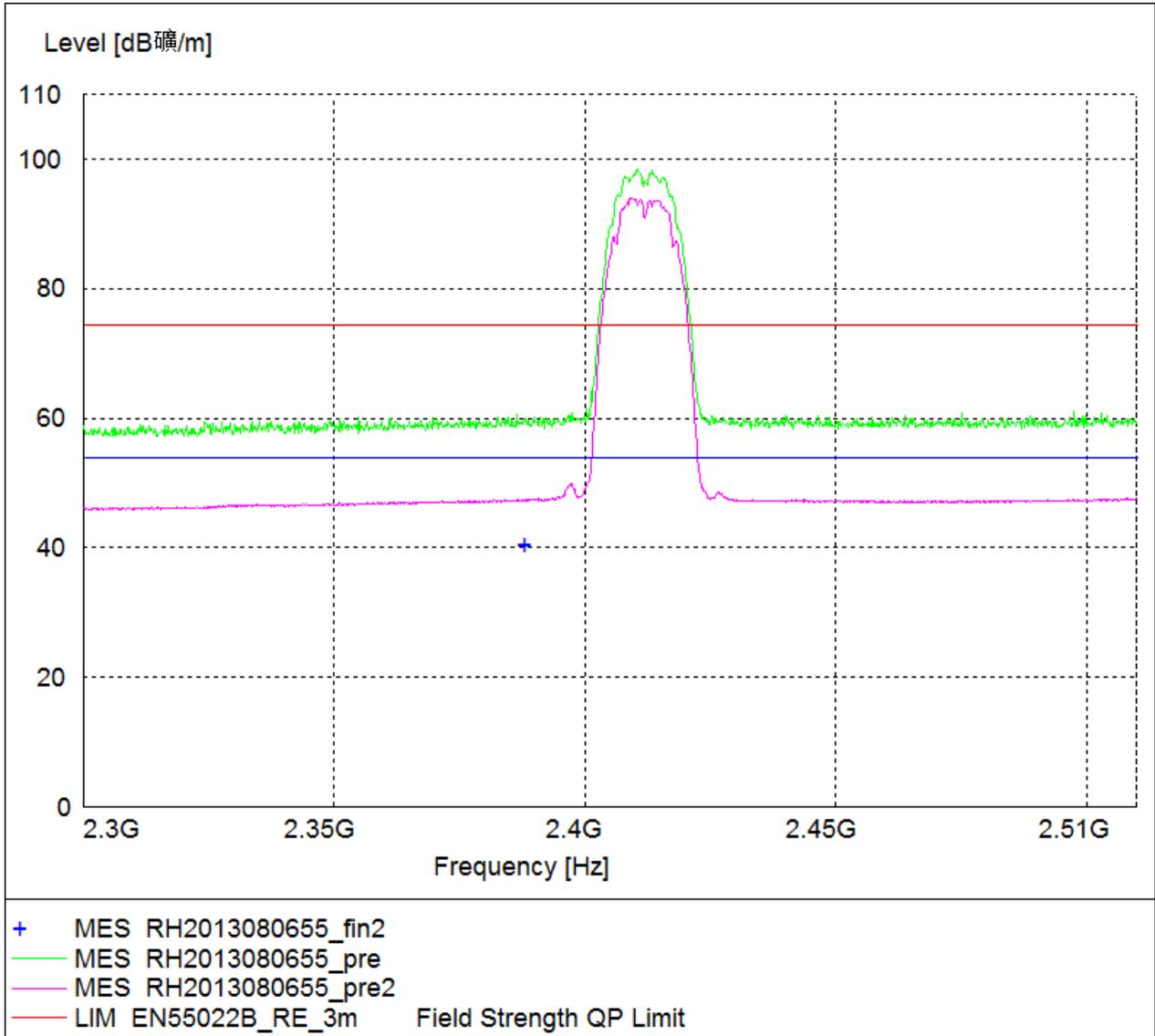


2013-7-18 13:17

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
39.000000	26.50	12.9	40.0	13.5	QP	100.0	78.00	VERTICAL
272.700000	31.40	14.8	46.0	14.6	QP	100.0	278.00	HORIZONTAL
392.760000	38.50	18.0	46.0	7.5	QP	100.0	306.00	HORIZONTAL
785.580000	36.90	24.7	46.0	9.1	QP	107.0	109.00	HORIZONTAL
898.200000	34.40	26.3	46.0	11.6	QP	100.0	258.00	VERTICAL
981.960000	39.60	27.1	54.0	14.4	QP	100.0	326.00	VERTICAL

### 2.3 Test range of “1 GHz to 3 GHz”

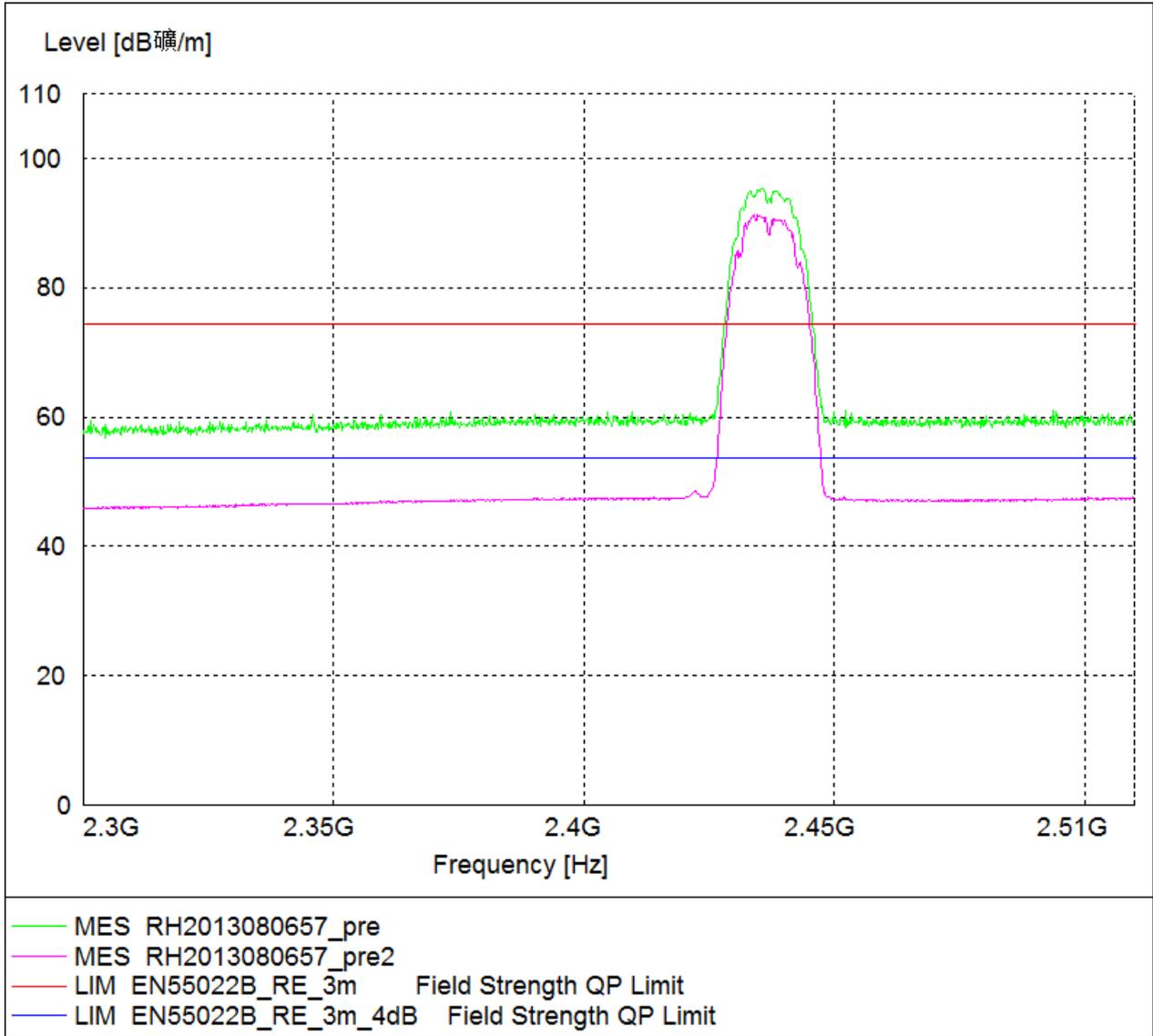
#### 2.3.1 11B/1\_B@1 (Ant 1)



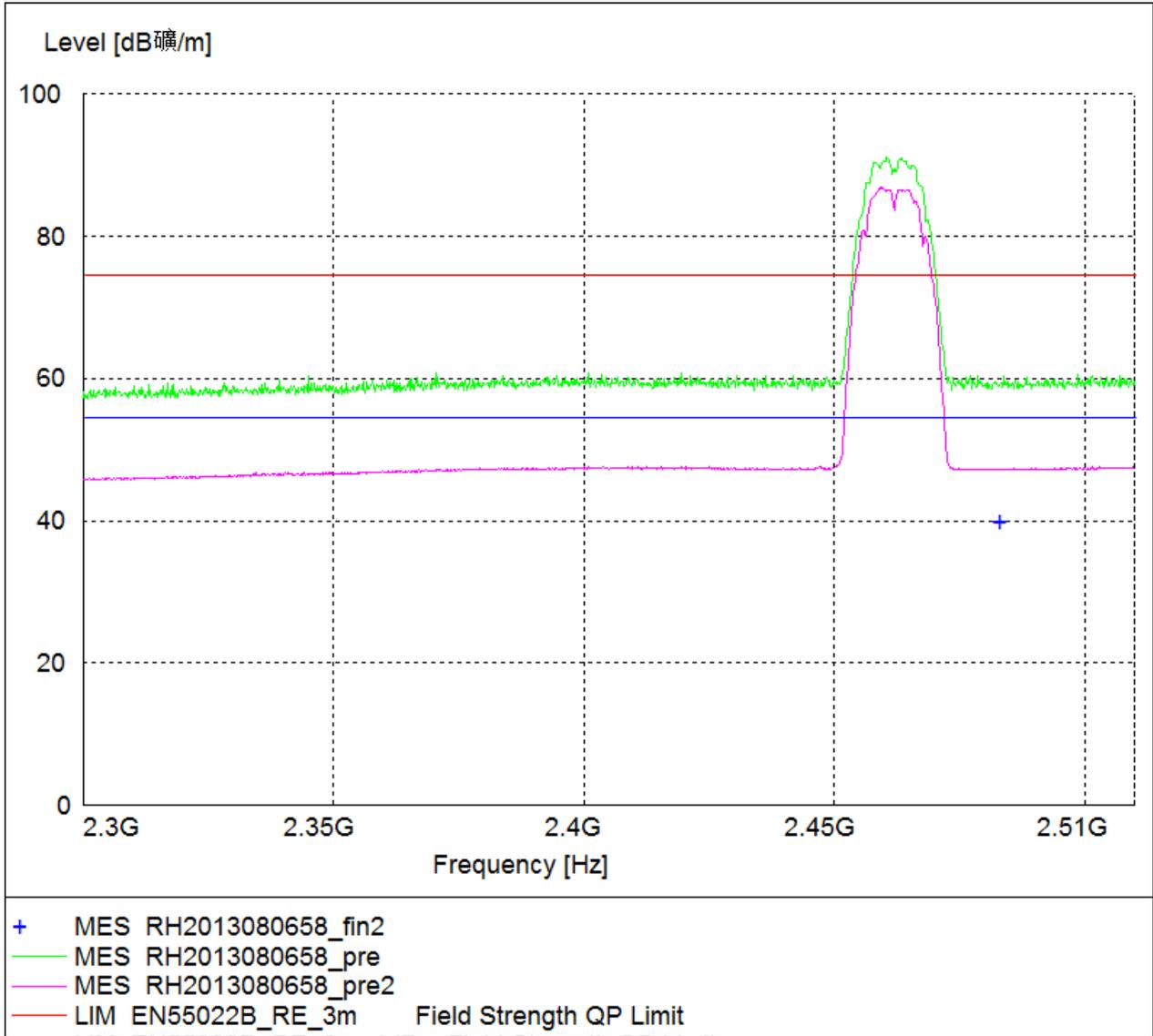
2013-8-6 18:45

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dB $\mu$ V/m	dB	dB $\mu$ V/m	dB	dB	cm	deg	deg
2388.036000	40.60	34.8	54.0	13.4	AV	100.0	78.00	VERTICAL

#### 2.3.2 11B/1\_M@1 (Ant 1)



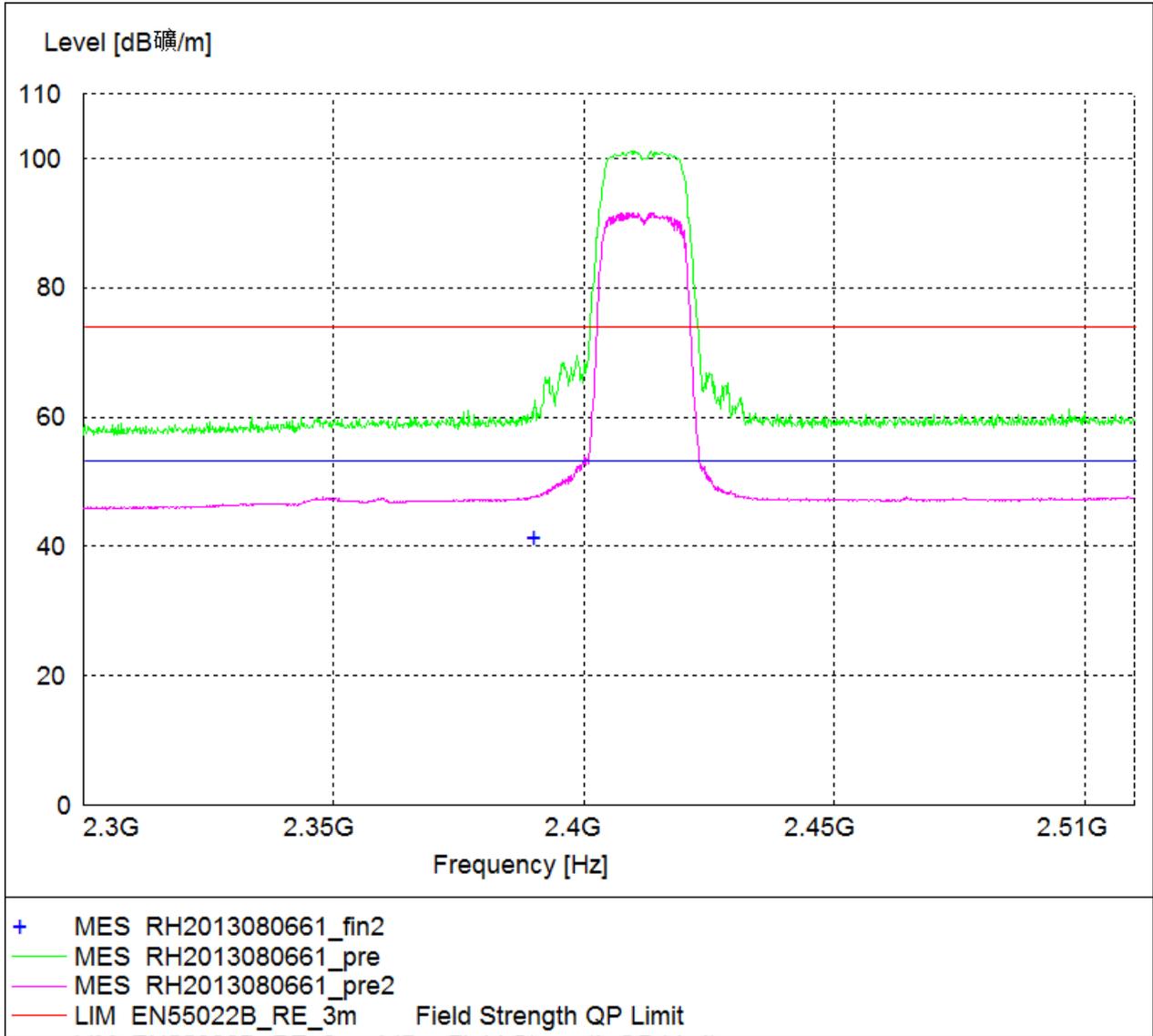
### 2.3.3 11B/1\_T@1 (Ant 1)



2013-8-6 19:00

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dB $\mu$ V/m		dB	dB $\mu$ V/m	dB		cm	deg
2483.136000	39.80	35.1	54.0	14.2	AV	144.0	252.00	HORIZONTAL

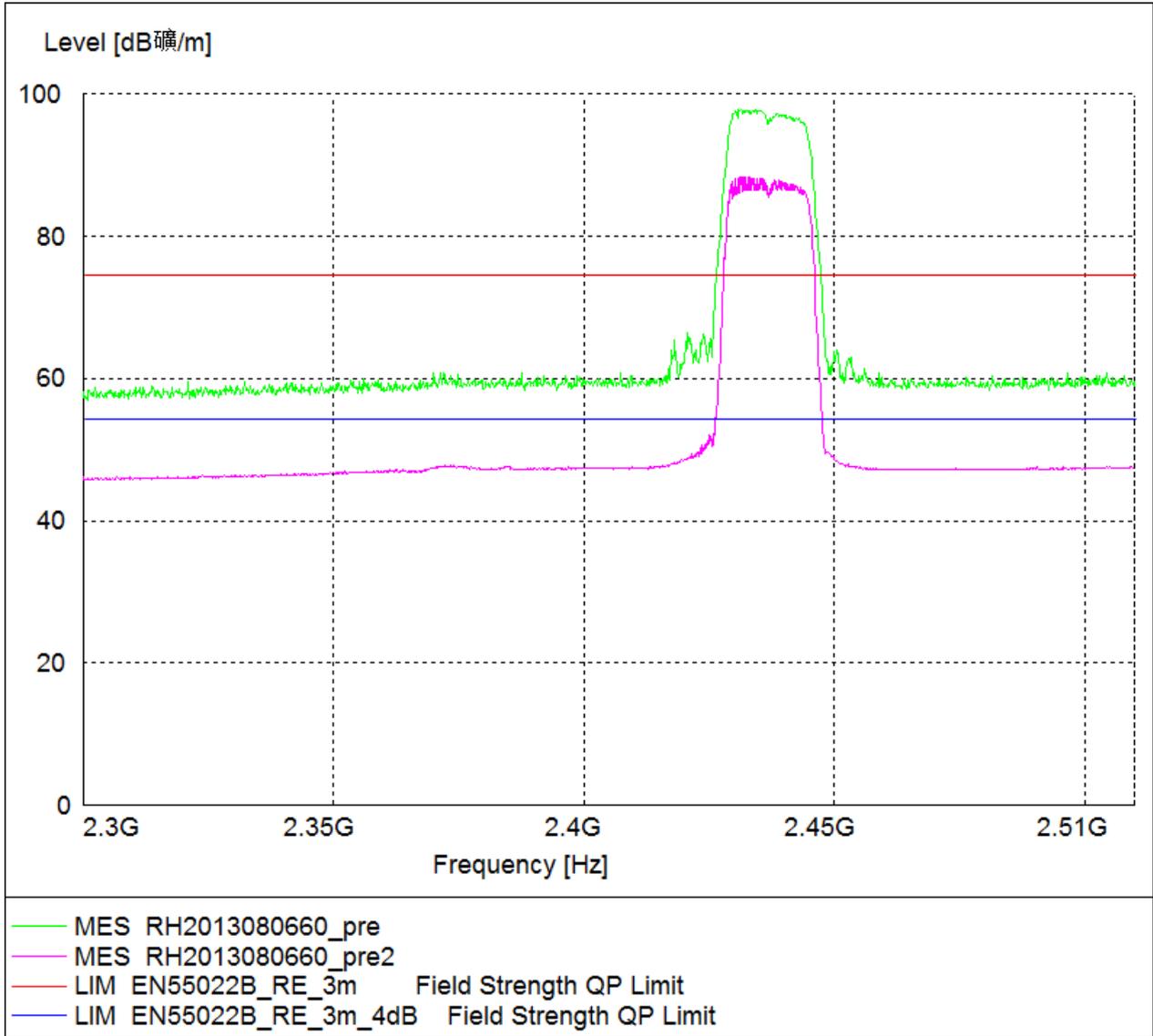
**2.3.4 11G/6\_B@1 (Ant 1)**



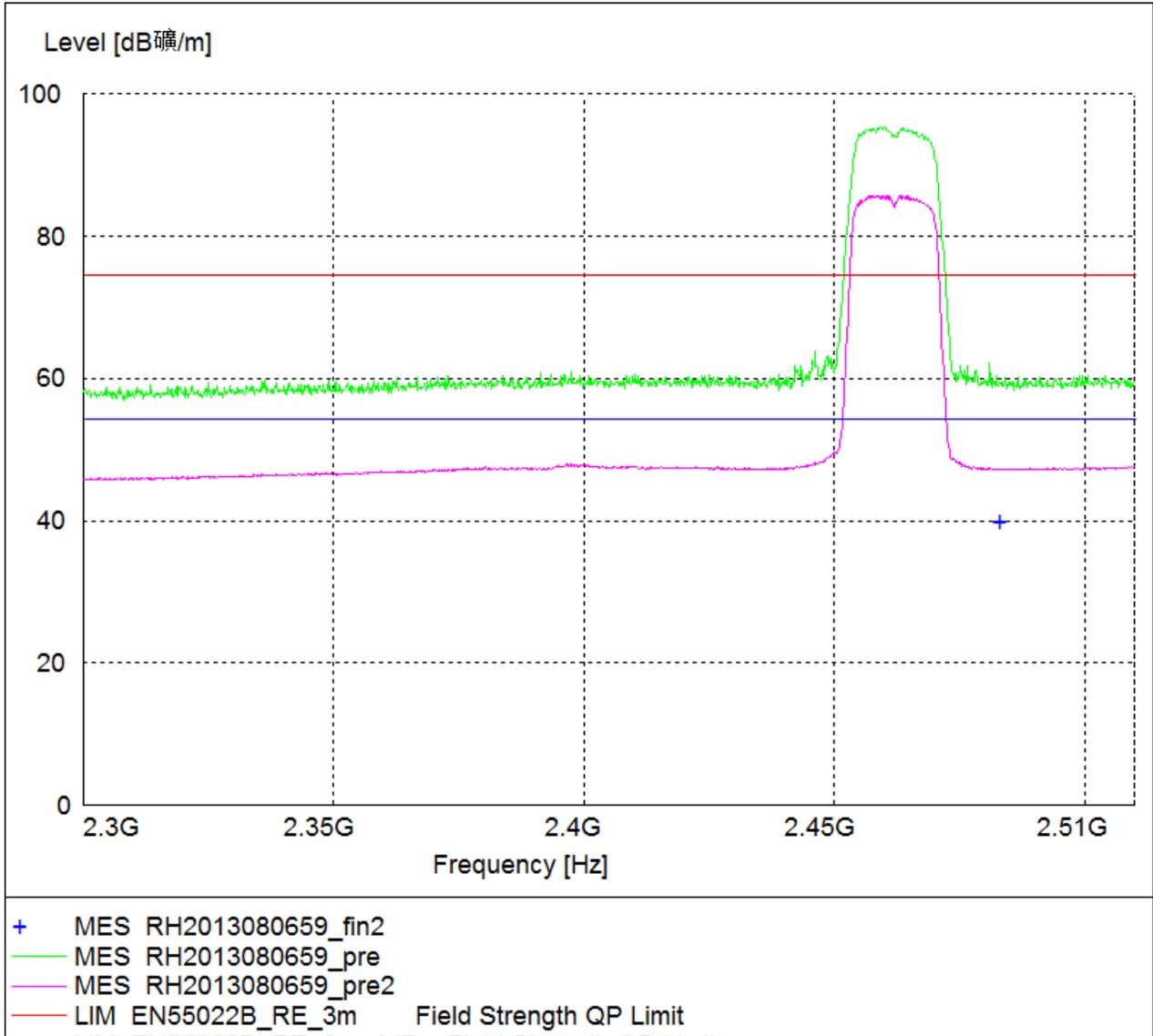
2013-8-6 19:18

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	deg	deg
2389.868000	41.40	34.8	54.0	12.6	AV	104.0	85.00	VERTICAL

**2.3.5 11G/6\_M@1 (Ant 1)**



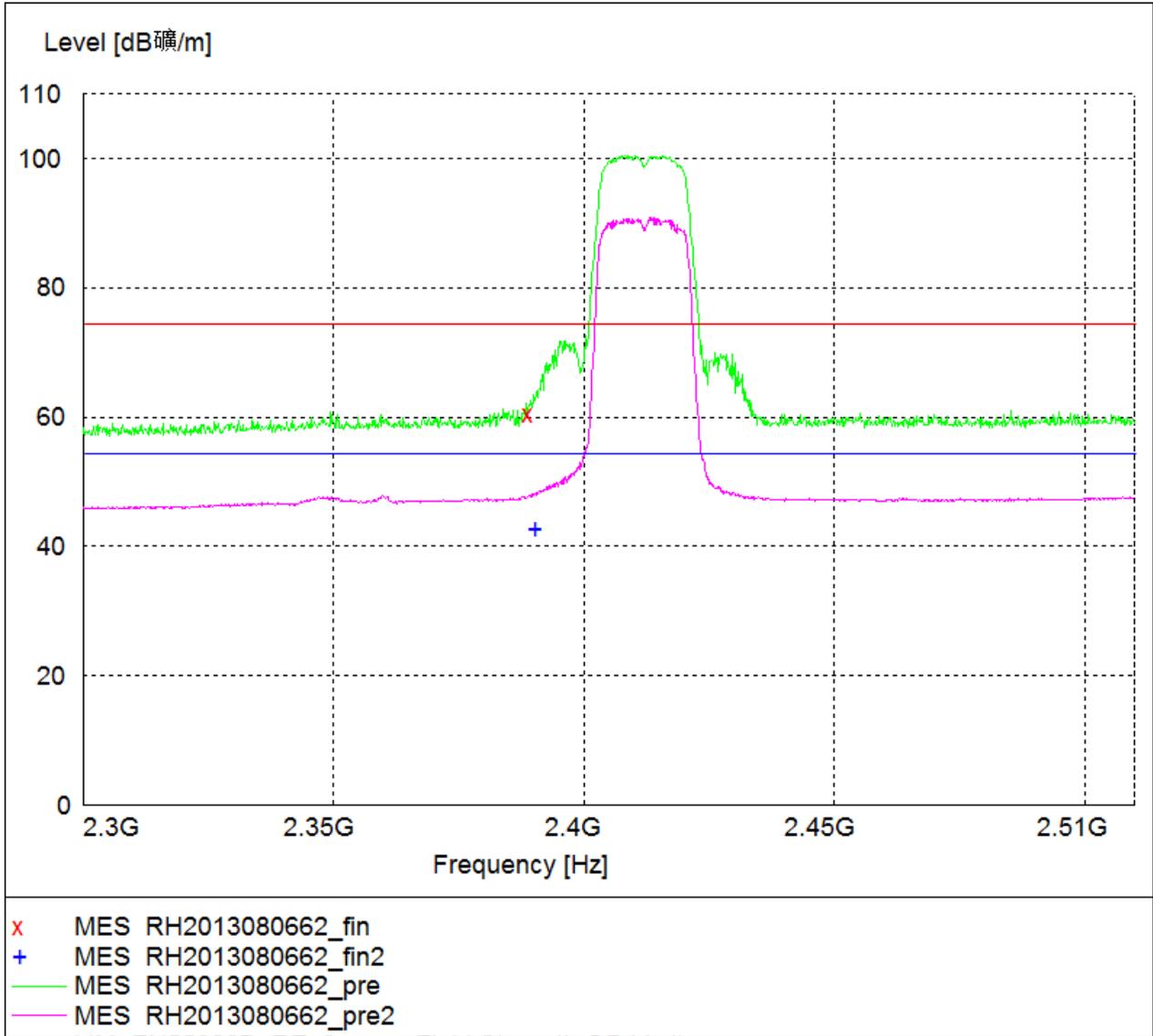
### 2.3.6 11G/6\_T@1 (Ant 1)



2013-8-6 19:07

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dB $\mu$ V/m	dB	dB $\mu$ V/m	dB	dB	cm	cm	deg
2483.136000	39.80	35.1	54.0	14.2	AV	100.0	208.00	HORIZONTAL

### 2.3.7 11N20/0\_B@1 (Ant 1)



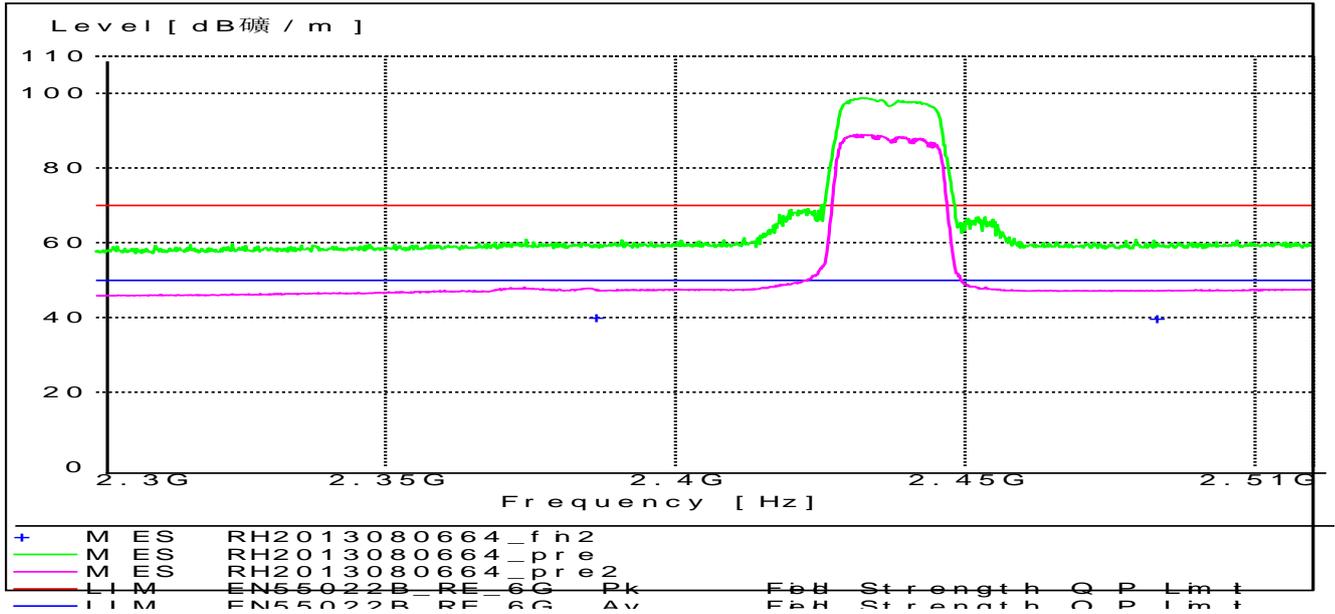
2013-8-6 19:26

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dB $\mu$ V/m	dB	dB $\mu$ V/m	dB	dB	cm	deg	deg
2389.200000	60.60	34.8	74.0	13.4	PK	104.0	95.00	VERTICAL

2013-8-6 19:26

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dB $\mu$ V/m	dB	dB $\mu$ V/m	dB	dB	cm	deg	deg
2390.368000	42.60	34.8	54.0	11.4	AV	104.0	93.00	VERTICAL

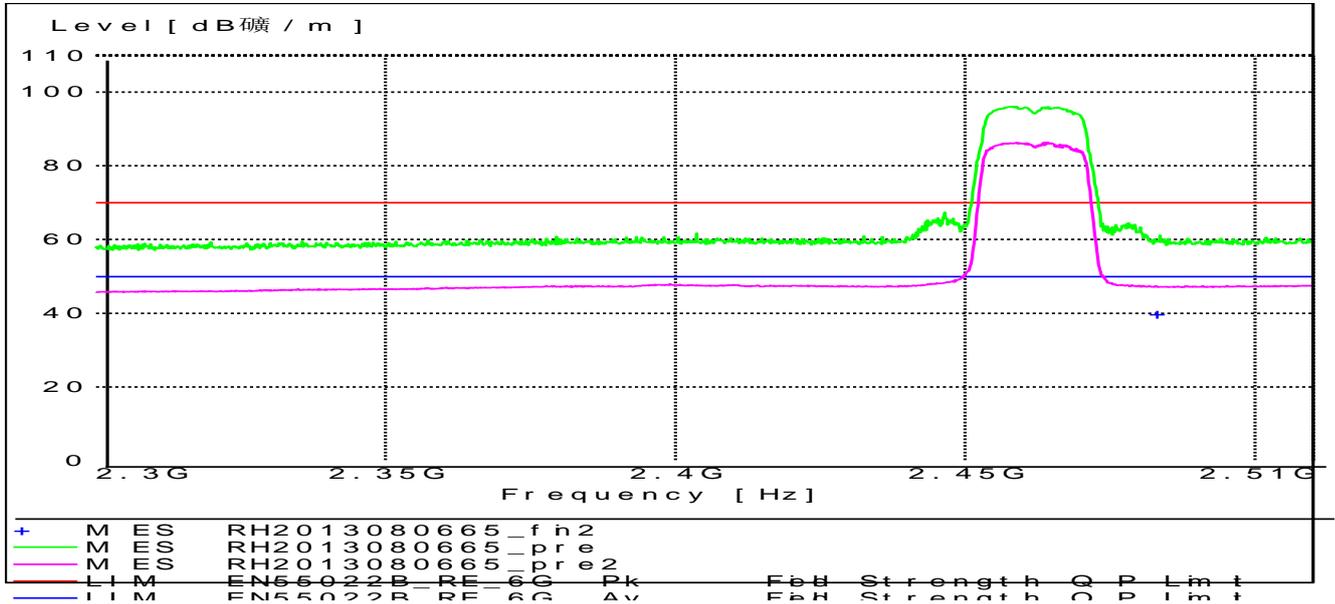
### 2.3.8 11N20/0\_M@1 (Ant 1)



2013-8-6 19:45

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	deg	deg
2483.136000	39.80	35.1	54.0	14.2	AV	124.0	253.00	HORIZONTAL

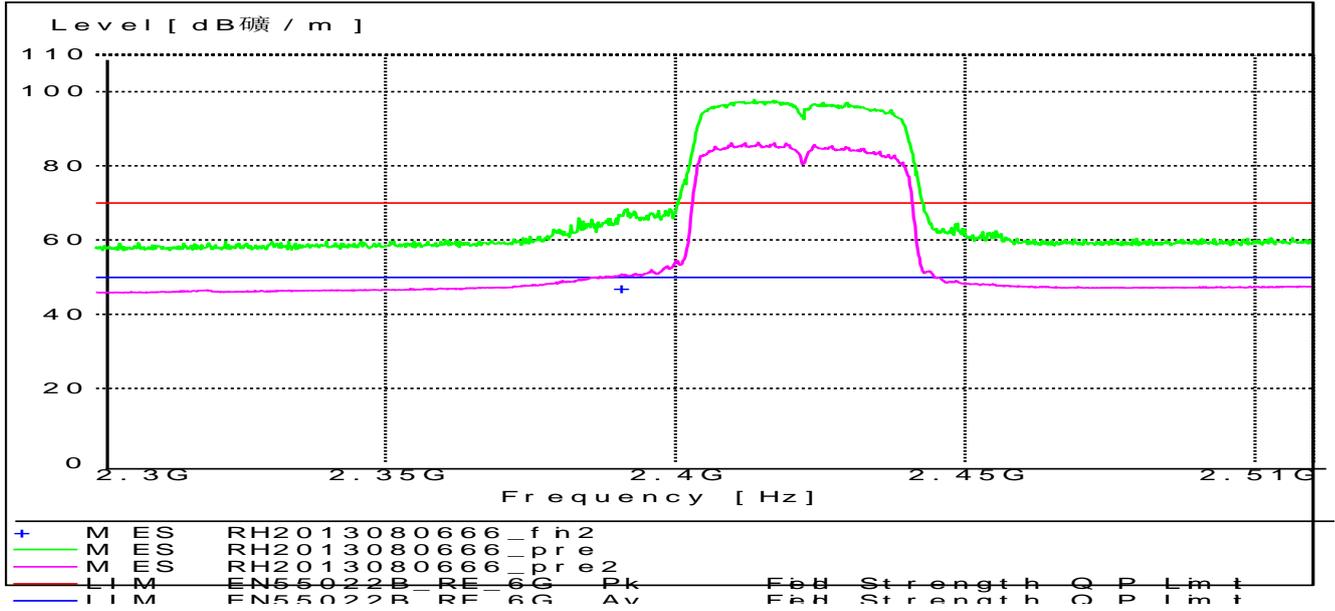
**2.3.9 11N20/0\_T@1 (Ant 1)**



2013-8-6 19:52

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	deg	deg
2483.136000	39.90	35.1	54.0	14.1	AV	100.0	215.00	VERTICAL

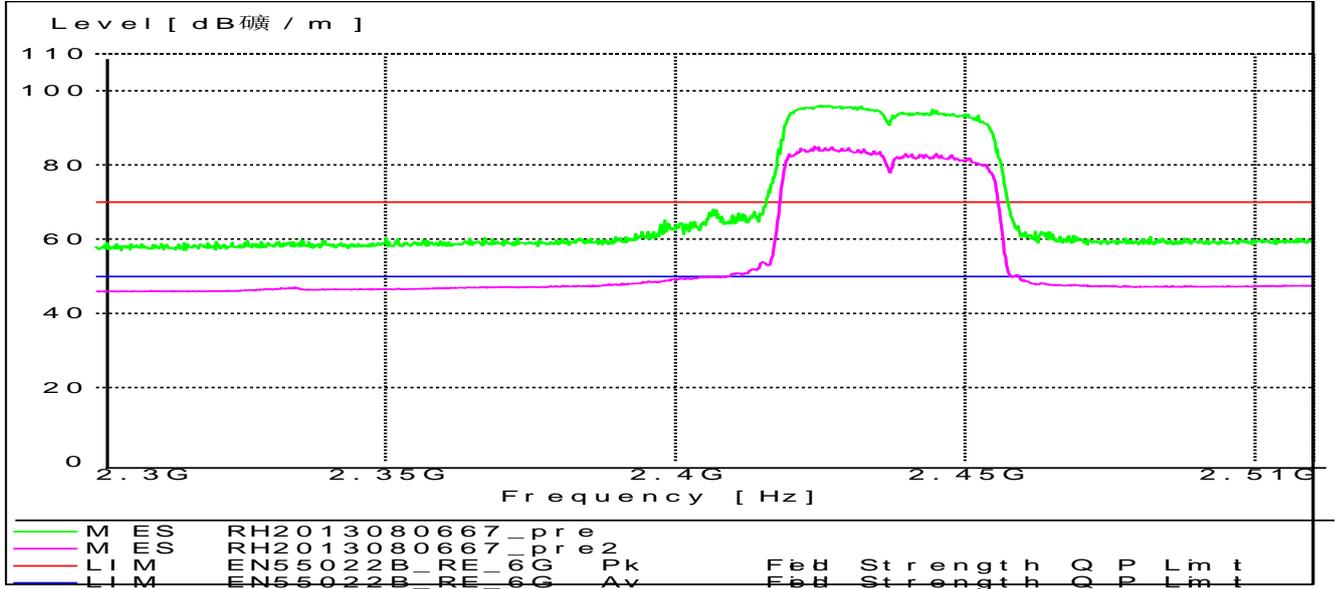
**2.3.10 11N40/0\_B@1 (Ant 1)**



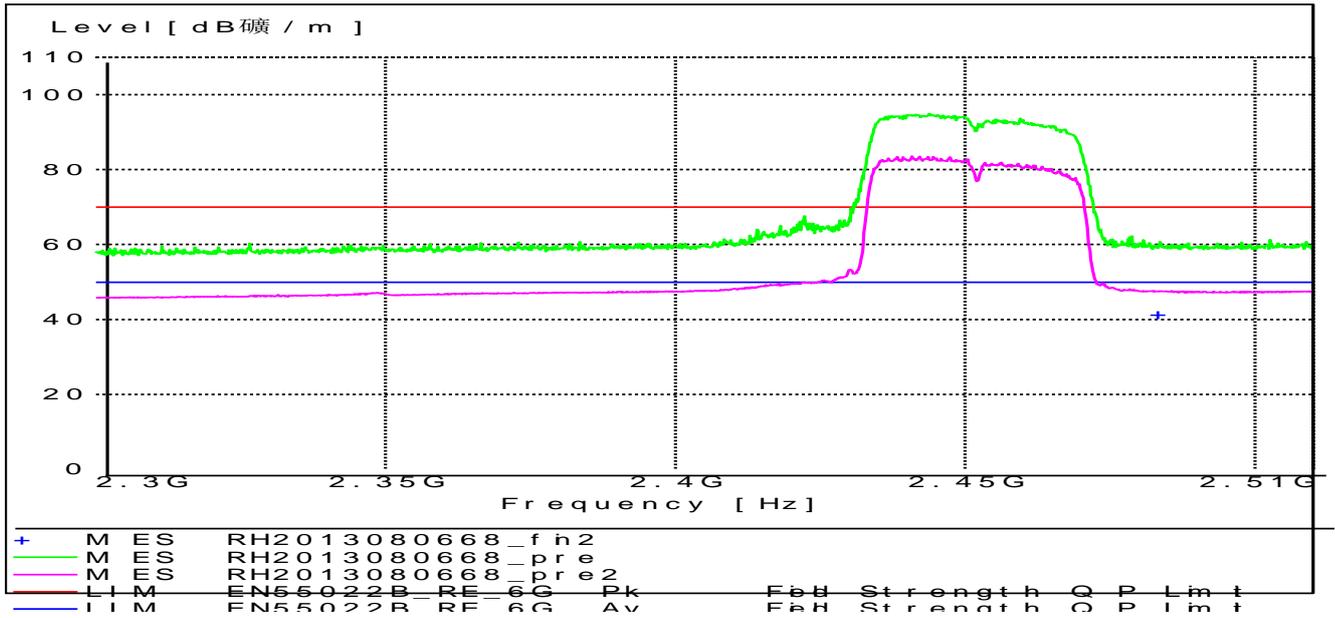
2013-8-6 19:58

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	deg	deg
2390.704000	47.00	34.8	54.0	7.0	AV	100.0	78.00	VERTICAL

2.3.11 11N40/0\_M@1 (Ant 1)



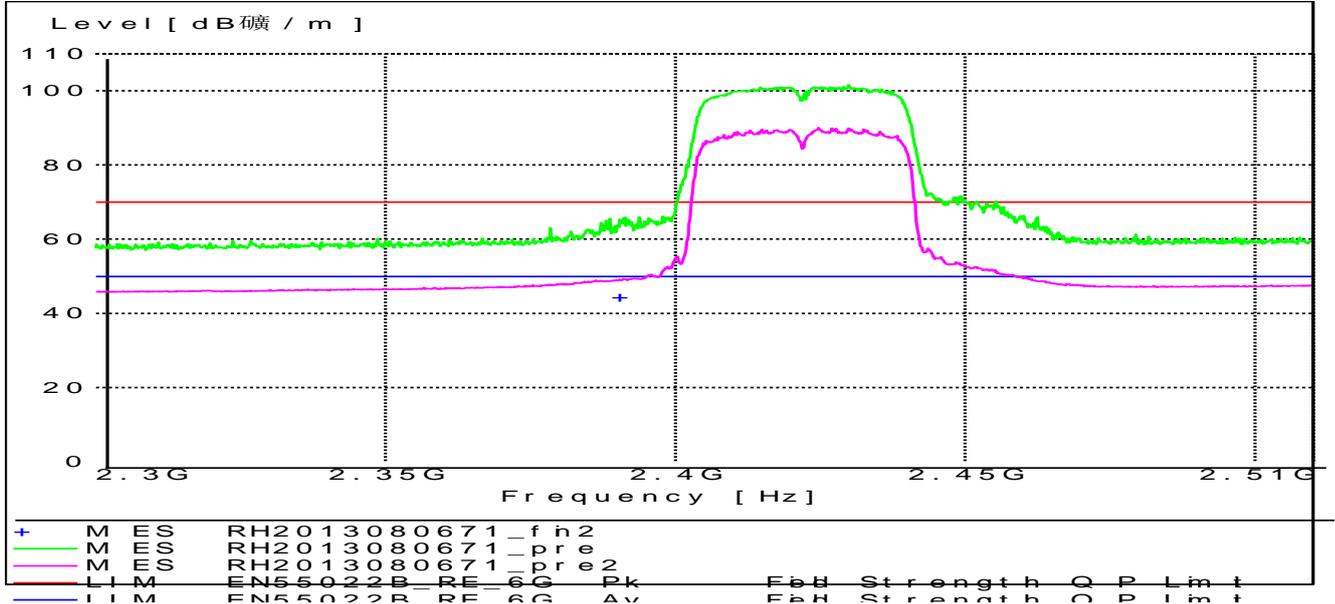
2.3.12 11N40/0\_T@1 (Ant 1)



2013-8-6 20:10

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	deg	deg
2483.304000	41.30	35.1	54.0	12.7	AV	100.0	80.00	VERTICAL

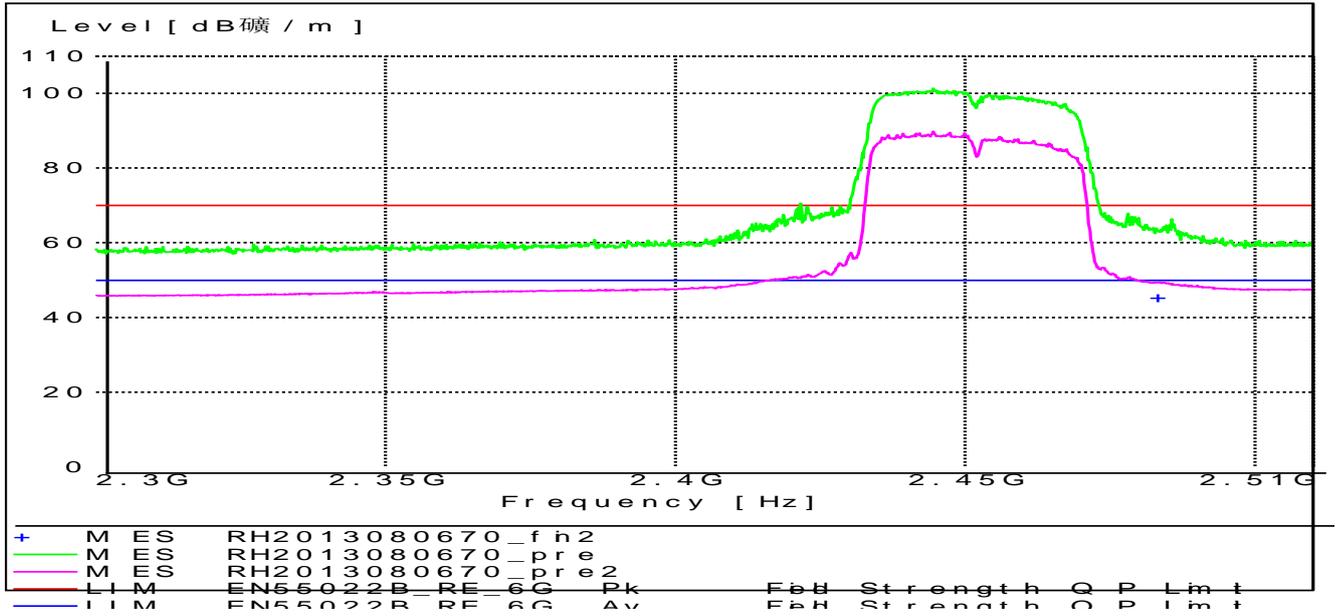
### 2.3.13 Worst Case (11N40/0\_B@1, Ant 2)



2013-8-6 20:30

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB	dB	cm	deg	deg
2390.368000	44.50	34.8	54.0	9.5	AV	100.0	96.00	VERTICAL

### 2.3.14 Worst Case (11N40/0\_T@1, Ant 2)

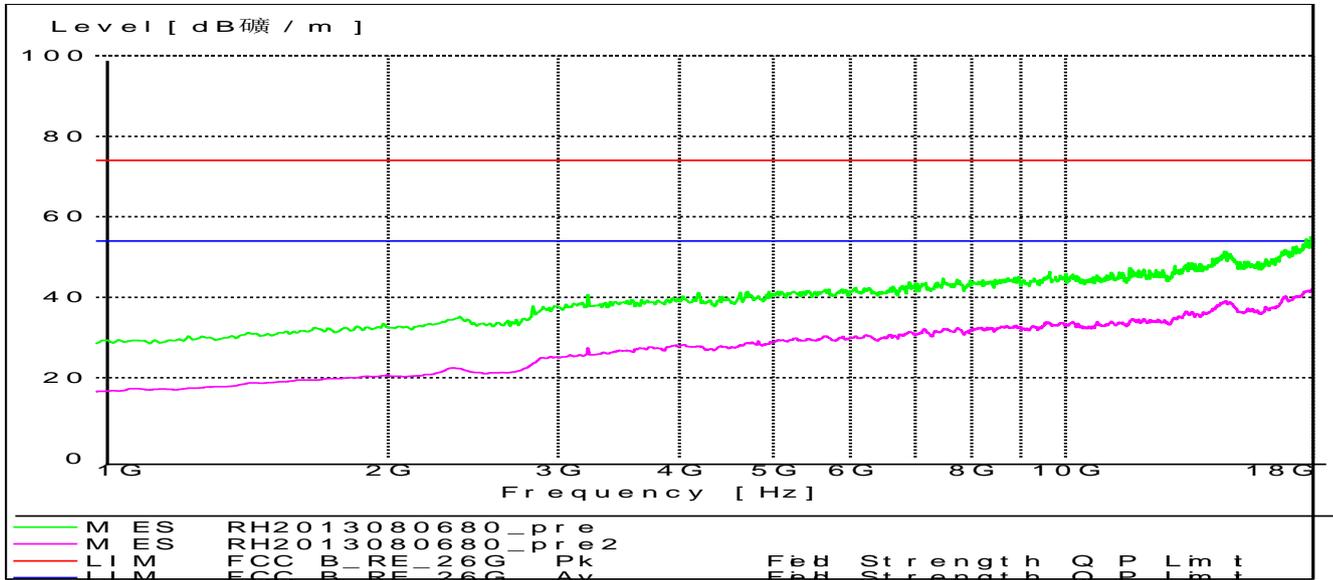


2013-8-6 20:24

Frequency	Level	Transd	Limit	Margin	Det.	Height	Azimuth	Polarization
MHz	dBμV/m	dB	dBμV/m	dB		cm	deg	
2483.304000	45.40	35.1	54.0	8.6	AV	120.0	81.00	VERTICAL

## 2.4 Test range of “3 GHz to 18 GHz”

### 2.4.1 Worst Case (11B/1\_B@1, Ant 2)



## 2.5 Test range of “18 GHz to 26.5 GHz”

### 2.5.1 Worst Case (11B/1\_B@1, Ant 2)

(No obvious emissions)



# Annex H: AC Power Line Conducted Emissions

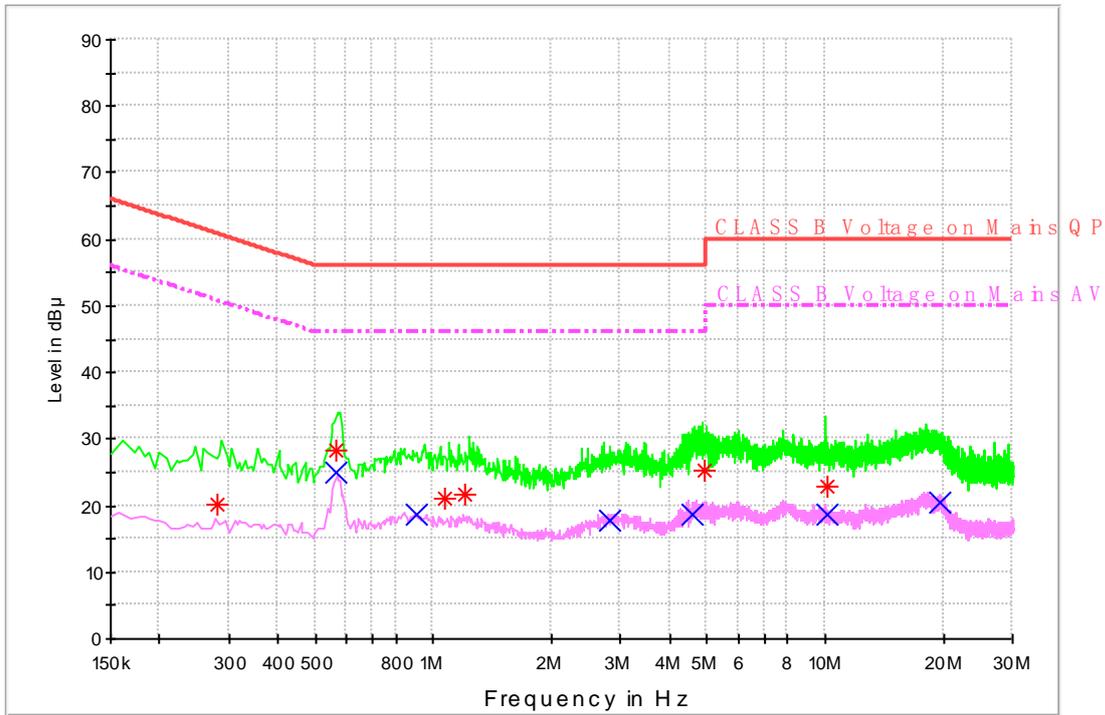


In this Annex, only the test results and plots under the worst case can be reported.

## 1 Result Table

EUT Conf.	Maximum Emissions	Verdict
11B/1_B@1, Ant 2	Not found obvious spikes or see marked spikes on plots and listed emissions records.	Pass

## 2 Result Plot



### Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.281374	20.1	L1	9.7	40.7	60.8
0.563752	28.4	L1	9.7	27.6	56.0
1.067366	21.0	L1	9.7	35.0	56.0
1.201800	21.7	L1	9.7	34.3	56.0
4.894849	25.2	L1	9.8	30.8	56.0
10.080402	23.0	L1	9.9	37.0	60.0

### Final Result 2

Frequency (MHz)	CAverage (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.566932	25.0	L1	9.7	21.0	46.0
0.900322	18.5	L1	9.7	27.5	46.0
2.829150	17.6	L1	9.7	28.4	46.0
4.550261	18.7	L1	9.8	27.3	46.0
10.050612	18.6	L1	9.9	31.4	50.0
19.640082	20.6	L1	10.1	29.4	50.0

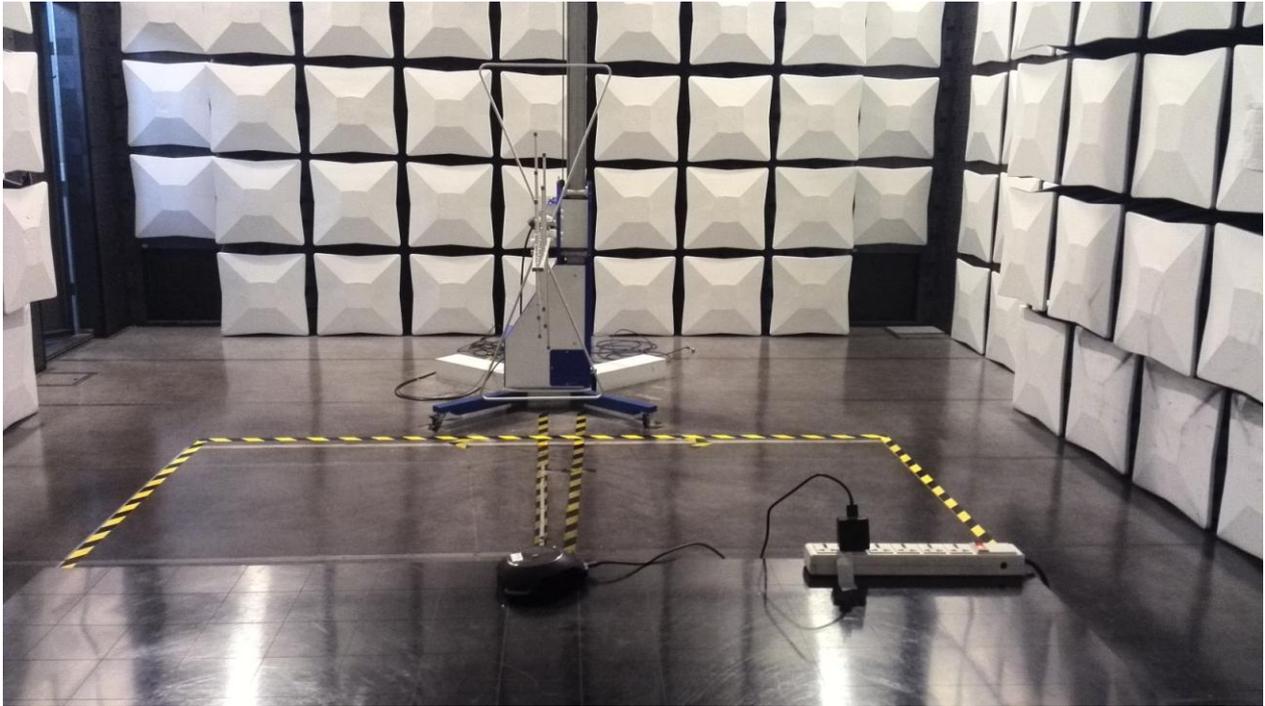


# Annex I: Photos of Test Setups

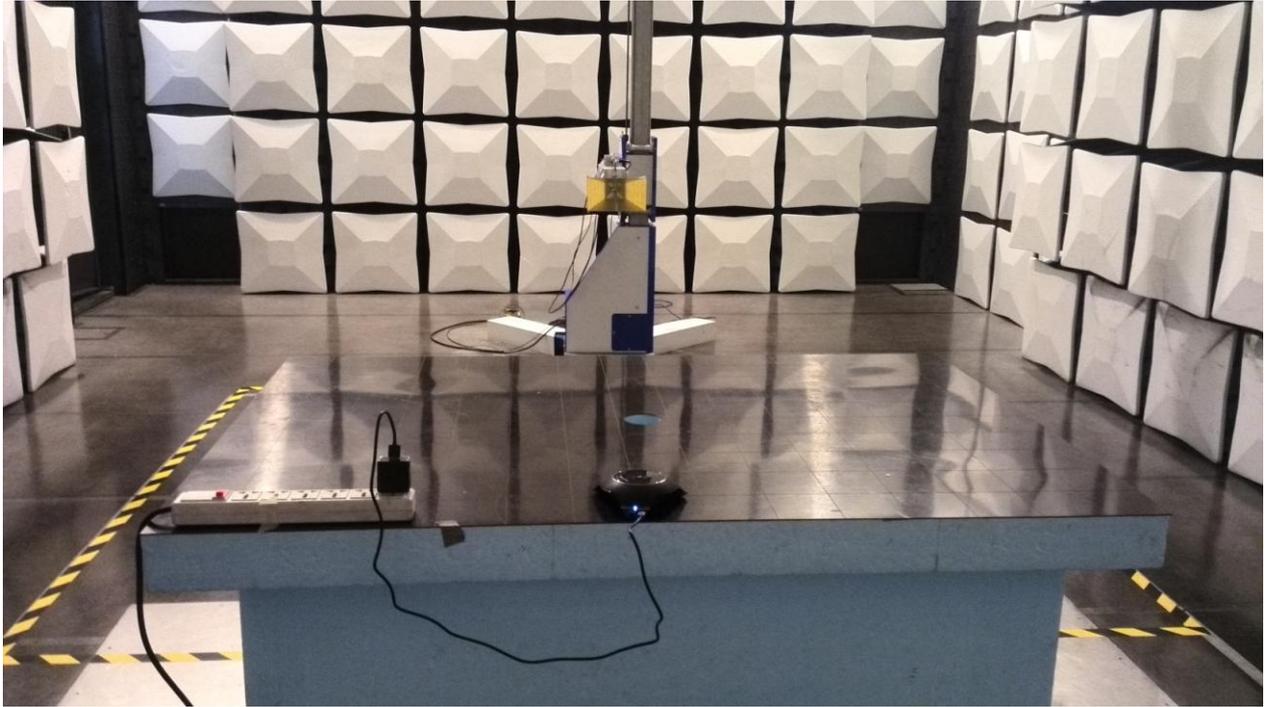
## 1 Test Setup 2

### 1.1 Radiated (Unwanted Emissions into Restricted Frequency Bands, cabinet/case emissions with impedance matching for antenna-port)

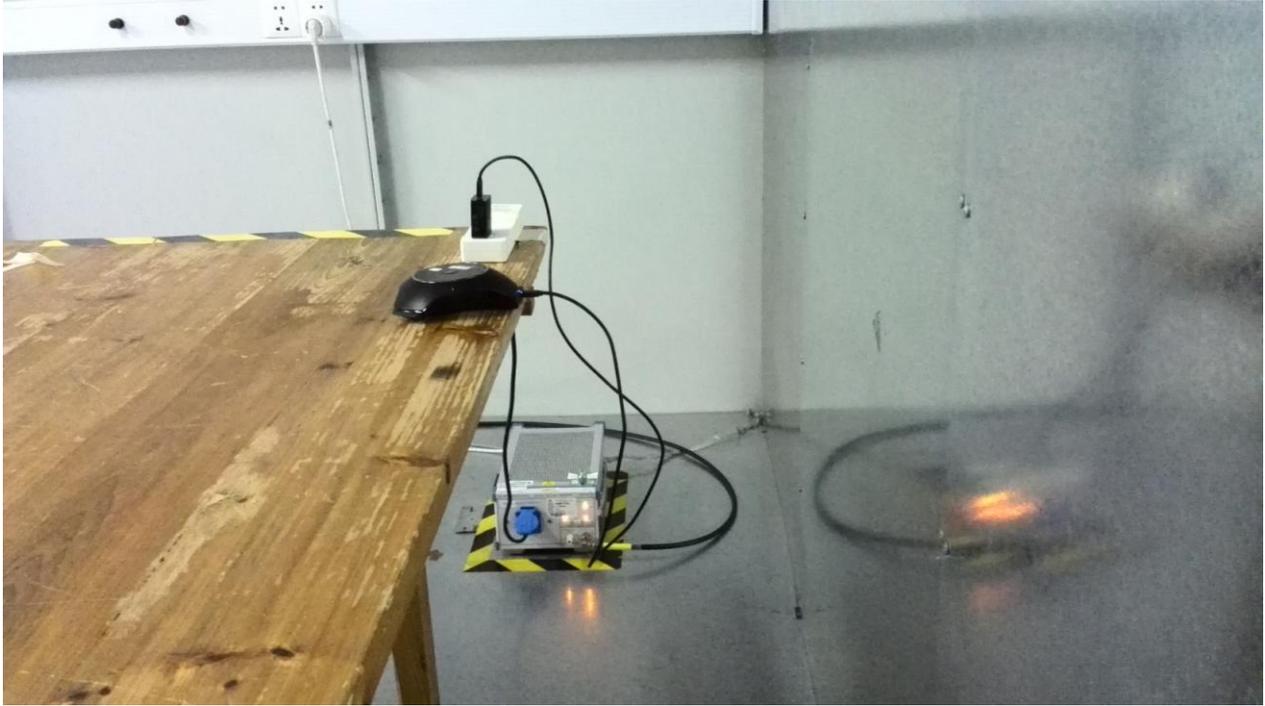
#### 1.1.1 Measurement Setup from 30 MHz to 1 GHz



#### 1.1.2 Measurement Setup above 1 GHz



## 2 Test Setup 3



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END