

47 CFR PART SUBPART 15C

TEST REPORT

of

Bluetooth® Audio Module KB11R

Model Name: KB11R

Trade Name: (n.a.)

Report No.: SZ07040078E03

FCC ID: VCPKB11R

prepared for

President Industry Development(ShenZhen) CO.,LTD

West side of Bu-Long road, LongHua street, ShenZhen city, China

prepared by

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TABLE OF CONTENTS

1.	TEST CERTIFICATION	4
2.	GENERAL INFORMATION	5
2.1	EUT Description	5
2.2	Test Standards and Results	6
2.3	Facilities and Accreditations	7
2.3.1	Facilities	7
2.3.2	Test Environment Conditions	7
3.	47 CFR PART 15C REQUIREMENT	8
3.1	Number of Hopping Frequency	8
3.1.1	Requirement	8
3.1.2	Test Description	8
3.1.3	Test Result	8
3.2	Peak Output Power	11
3.2.1	Requirement	11
3.2.2	Test Description	11
3.2.3	Test Result	11
3.3	20dB Bandwidth	14
3.3.1	Requirement	14
3.3.2	Test Description	14
3.3.3	Test Result	14
3.4	Peak Power Spectral Density	16
3.4.1	Definition	16
3.4.2	Test Configuration	16
3.4.3	Test procedure	16
3.4.4	Test results	16
3.5	Carried Frequency Separation	19
3.5.1	Requirement	19
3.5.2	Test Description	19
3.5.3	Test Result	19
3.6	Time of Occupancy (Dwell time)	20

3.6.1	Requirement	20
3.6.2	Test Description	20
3.6.3	Test Result.....	20
3.7	Conducted Spurious Emissions	23
3.7.1	Requirement	23
3.7.2	Test Description	23
3.7.3	Test Result.....	23
3.8	Band Edge	27
3.8.1	Requirement	27
3.8.2	Test Description	27
3.8.3	Test Result.....	27
3.9	Radiated Emissions.....	29
3.9.1	Requirement	29
3.9.2	Test Procedure.....	29
3.9.3	Test Setup.....	30
3.9.4	Test Result.....	31
ANNEX A	PHOTOS OF THE EUT	47
ANNEX B	PHOTOS OF TEST SETUP.....	49

1. TEST CERTIFICATION

Equipment under Test: Bluetooth® Audio Module KB11R

Trade Name: (n.a.)

Model Name: KB11R

FCC ID: VCPKB11R

Applicant: President Industry Development(ShenZhen) CO.,LTD
West side of Bu-Long road, LongHua street, ShenZhen city, China

Manufacturer: President Industry Development(ShenZhen) CO.,LTD
West side of Bu-Long road, LongHua street, ShenZhen city, China

EUT Received Date: June 11, 2007

Test Date(s): June 19, 2007 – June 28, 2007

Test Result: PASS

* We Hereby Certify That:

The equipment was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test results of this report only apply for the sample equipment identified above. The test data, data evaluation, test procedures and equipment configurations shown in this report were made according to the requirements of related FCC rules. The test report shall be invalid without all the signatures of the test engineer, the reviewer and the approver.

Tested by: Luo Biao Dated: 2007.07.28
Luo Biao

Reviewed by: Liao Jianmin Dated: 2007.07.28
Liao Jianmin

Approved by: Shu Luan Dated: 2007.07.28
Shu Luan



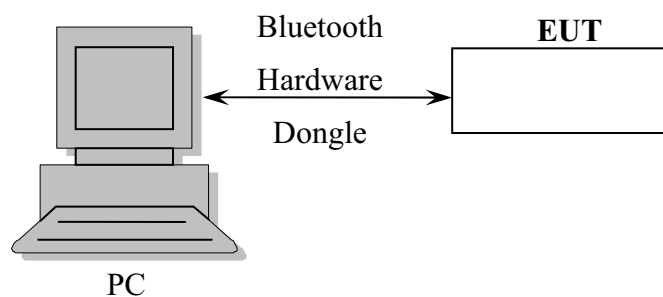
2. GENERAL INFORMATION

2.1 EUT Description

EUT	
Description:	Bluetooth® Audio Module KB11R
Model No.:	KB11R
Serial No.:	(n.a., marked #1 by test site)
High Voltages:	3.3V
Voltages:	1.8V
Frequency :	Tx: 2402MHz - 2480MHz Frequency Block: 2400MHz-2483.5MHz

NOTE:

1. The EUT is a Bluetooth Module; it works under the control of the PC via a Bluetooth Hardware Dongle and works under its max power.
2. For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



2.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart C (Bluetooth, 2.4GHz ISM band radiators) for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-05 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result	Date of Test
1	15.247(a)	Number of Hopping Frequency	PASS	2007-06-28
2	15.247(b)	Peak Output Power	PASS	2007-06-28
3	15.247(a)	20dB Bandwidth	PASS	2007-06-28
4	15.247(d)	Peak Power Spectral Density	PASS	2007-06-28
5	15.247(a)	Carrier Frequency Separation	PASS	2007-06-28
6	15.247(a)	Time of Occupancy (Dwell time)	PASS	2007-06-28
7	15.247(c)	Conducted Spurious Emission	PASS	2007-06-28
8	15.247(c)	Band Edge	PASS	2007-06-28
9	15.209 15.247(c)	Radiated Emission	PASS	2007-06-19

2.3 Facilities and Accreditations

2.3.1 Facilities

Shenzhen Electronic Product Quality Testing Center Morlab Laboratory is a testing organization accredited by China National Accreditation Board for Laboratories (CNAL) according to ISO/IEC 17025. The accreditation certificate number is L1659.

All measurement facilities used to collect the measurement data are located at Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen 518055 CHINA. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

2.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	20 - 25
Relative Humidity (%):	40 - 60
Atmospheric Pressure (kPa):	960

3. 47 CFR PART 15C REQUIREMENT

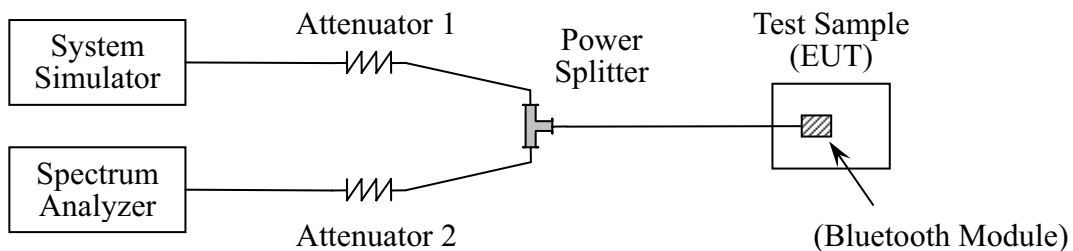
3.1 Number of Hopping Frequency

3.1.1 Requirement

According to FCC section 15.247(a)(1)(ii), frequency hopping systems operating in the 2400MHz to 2483.5MHz bands shall use at least 75 hopping frequencies.

3.1.2 Test Description

A. Test Setup:



The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the Bluetooth Service Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. During the measurement, the Bluetooth Module of the EUT is activated and controlled by the SS, and is set to operate under test mode transmitting 339 bytes DH5 packages at maximum power.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Service Simulator	Agilent	E5515C	GB43130131	2006.06	1year
Spectrum Analyzer	Agilent	E7405A	US44210471	2006.07	1year
Power Splitter	Weinschel	1506A	NW521	(n.a.)	(n.a.)
Attenuator 1	Resnet	20dB	(n.a.)	(n.a.)	(n.a.)
Attenuator 2	Resnet	3dB	(n.a.)	(n.a.)	(n.a.)

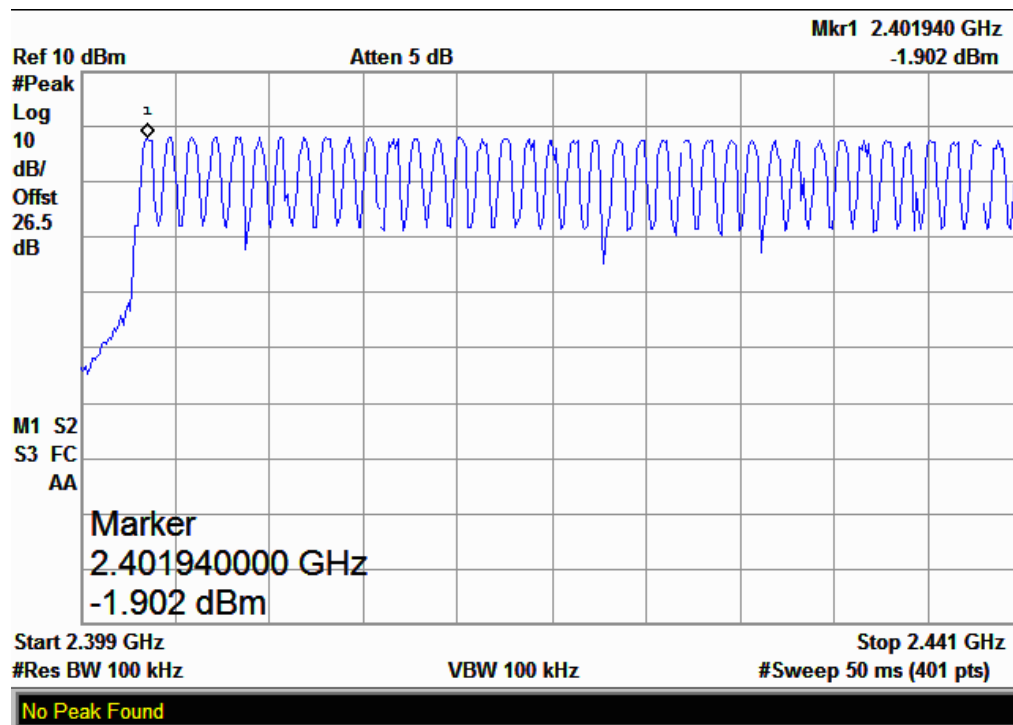
3.1.3 Test Result

The Bluetooth Module operates at hopping-on test mode; the frequencies number employed is counted to verify the Module's using the number of hopping frequency.

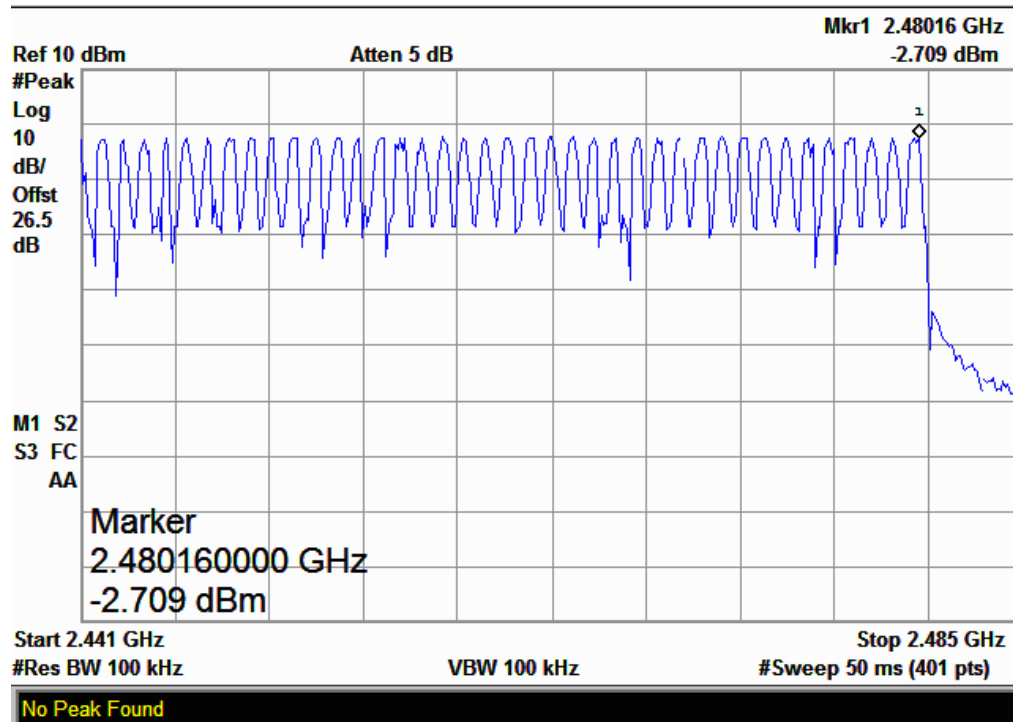
A. Test Verdict

Frequency Block (MHz)	Measured Channel Numbers	Min. Limit	Refer to Plot	Verdict
2400 - 2483.5	79	75	Plot A.1/A.2	PASS

B. Test Plots



(Plot A.1: 2402MHz to 2441MHz)



(Plot A.2: 2441MHz to 2480MHz)

3.2 Peak Output Power

3.2.1 Requirement

According to FCC section 15.247(b)(1), for frequency hopping systems that operates in the 2400MHz to 2483.5MHz band employing at least 75 hopping channels, the maximum peak output power of the intentional radiator shall not exceed 1Watt. For all other frequency hopping systems in the 2400MHz to 2483.5MHz band, it is 0.125Watts.

3.2.2 Test Description

See section 3.1.2 of this report.

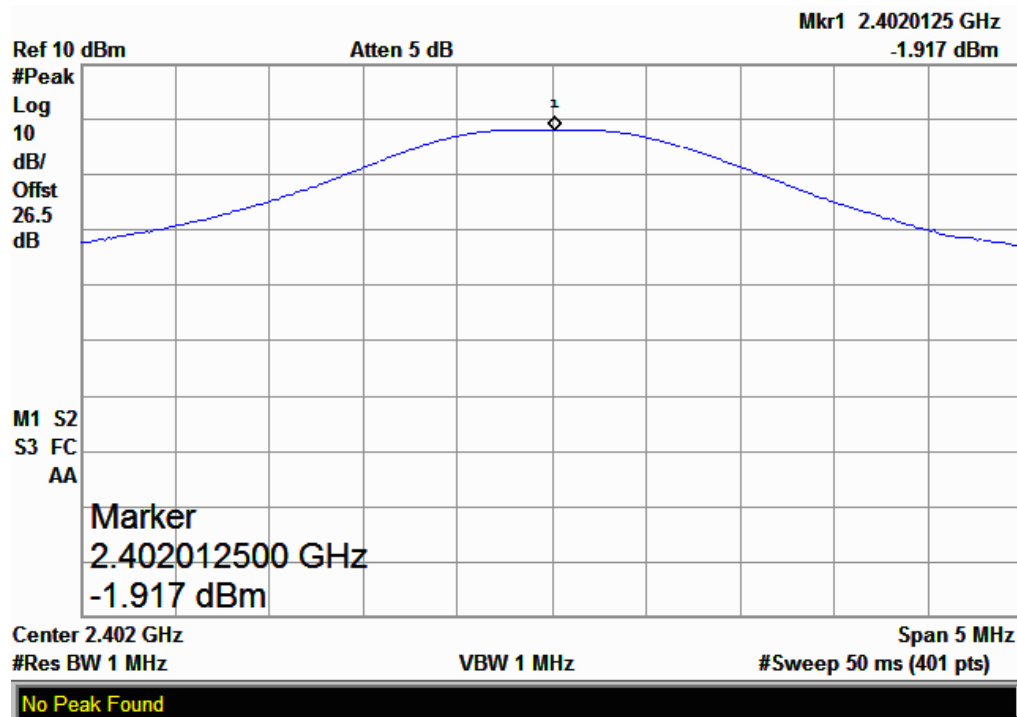
3.2.3 Test Result

The EUT operates at hopping-off test mode. The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power.

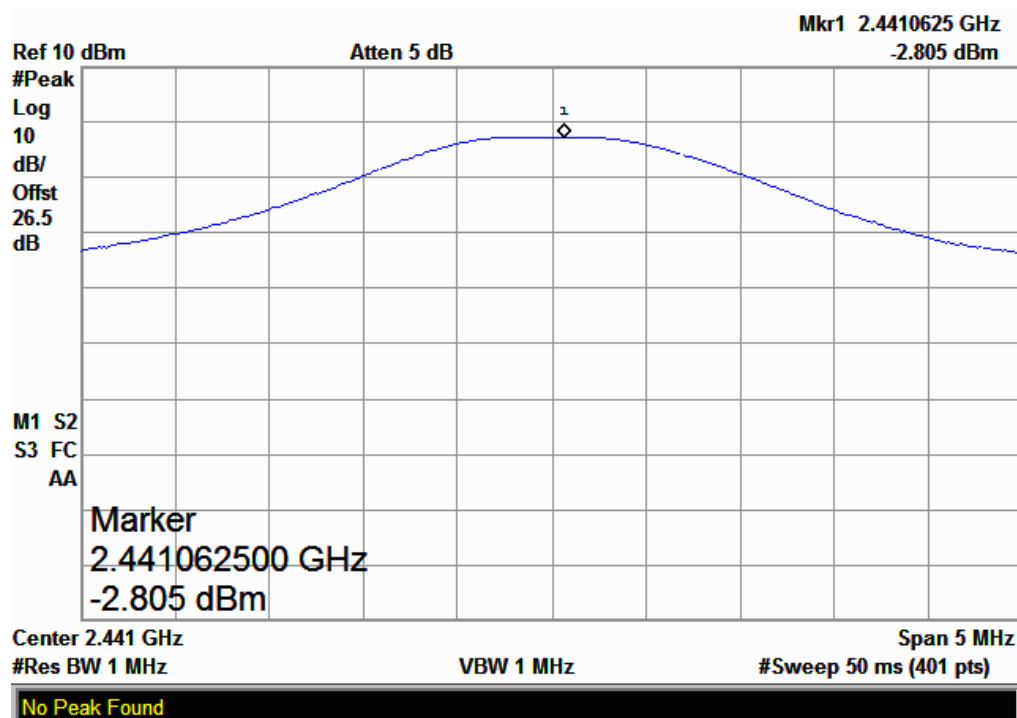
A. Test Verdict

CH	Freq. (MHz)	Measured Max. Peak Output Power			Limit		Verdict
		dBm	W	Refer to Plot	dBm	W	
0	2402	-1.917	0.64E-3	Plot A	30	1	PASS
39	2441	-2.805	0.52E-3	Plot B			PASS
78	2480	-2.604	0.55E-3	Plot C			PASS

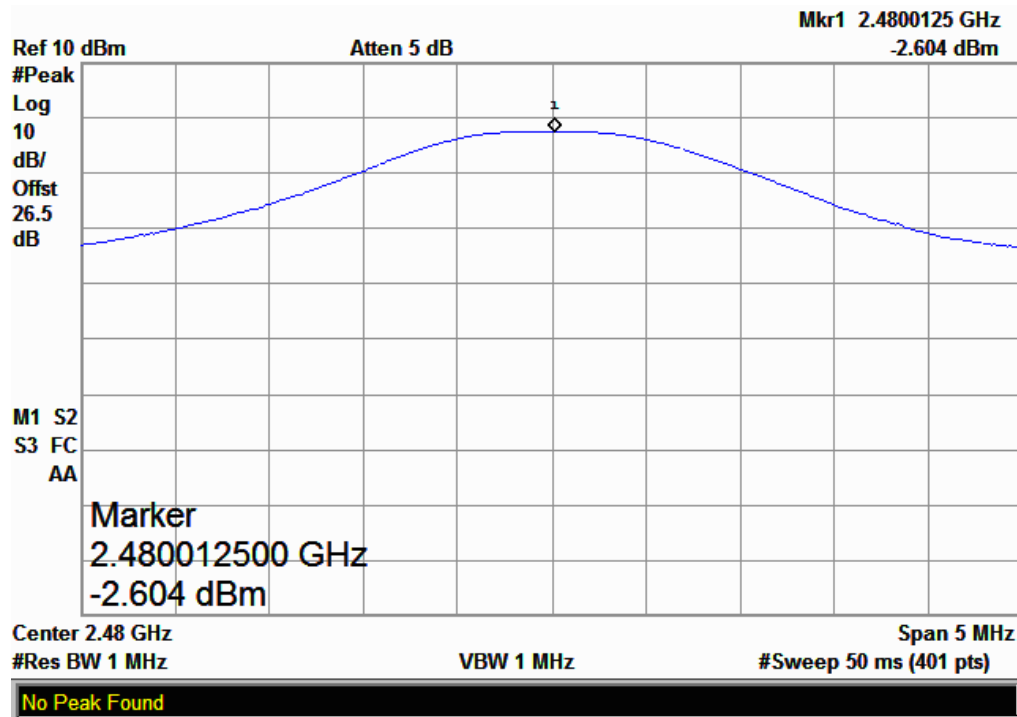
B. Test Plots



(Plot A: Channel = 2402)



(Plot B: Channel = 2441)



(Plot C: Channel = 2480)

3.3 20dB Bandwidth

3.3.1 Requirement

The 20dB bandwidth is known as the 99% emission bandwidth, or 20dB bandwidth ($10 \cdot \log 1\% = 20\text{dB}$) taking the total RF output power.

3.3.2 Test Description

See section 3.1.2 of this report.

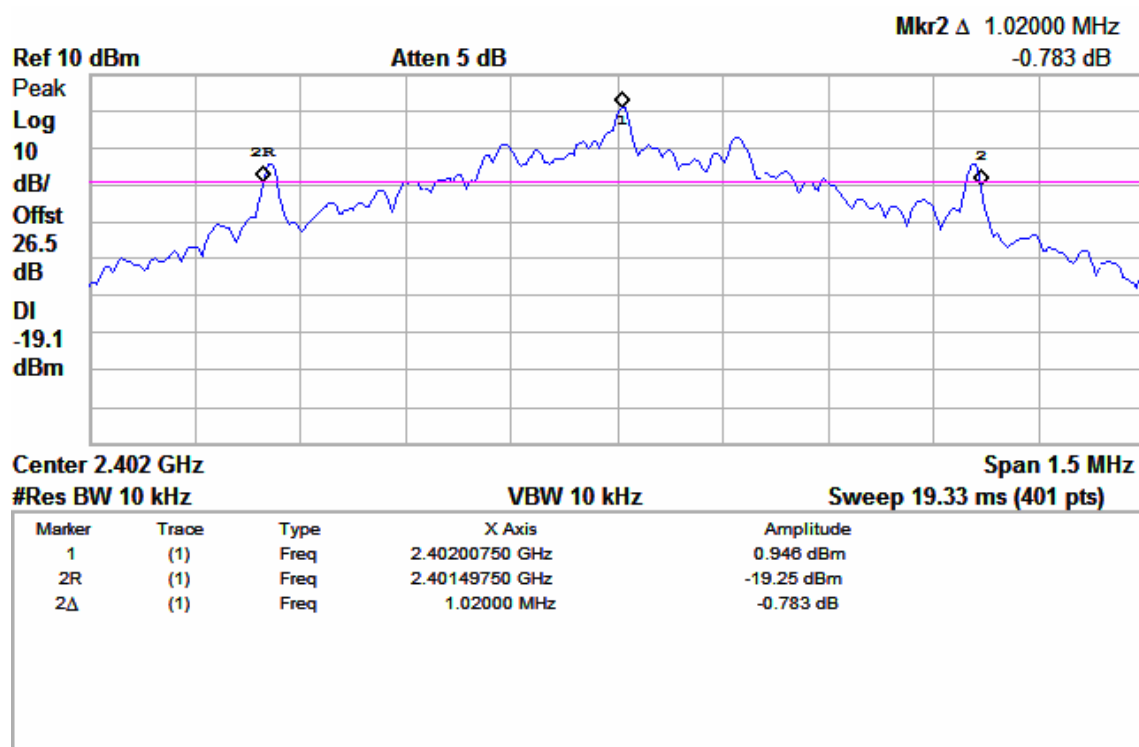
3.3.3 Test Result

The EUT operates at hopping-off test mode. The middle and channels are selected to perform testing to record the 20dB bandwidth.

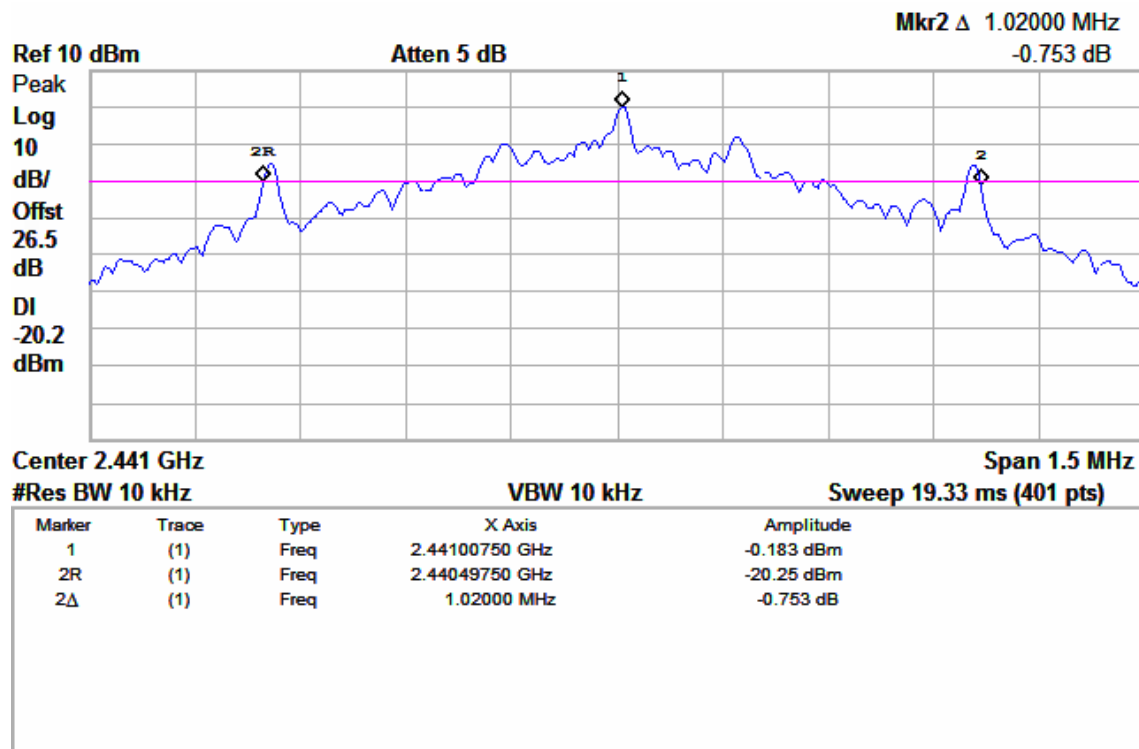
A. Test Verdict

CH	Freq. (MHz)	20dB Bandwidth (MHz)	Refer to Plot
0	2402	1.02	Plot A
39	2441	1.02	Plot B
78	2480	1.02	Plot C

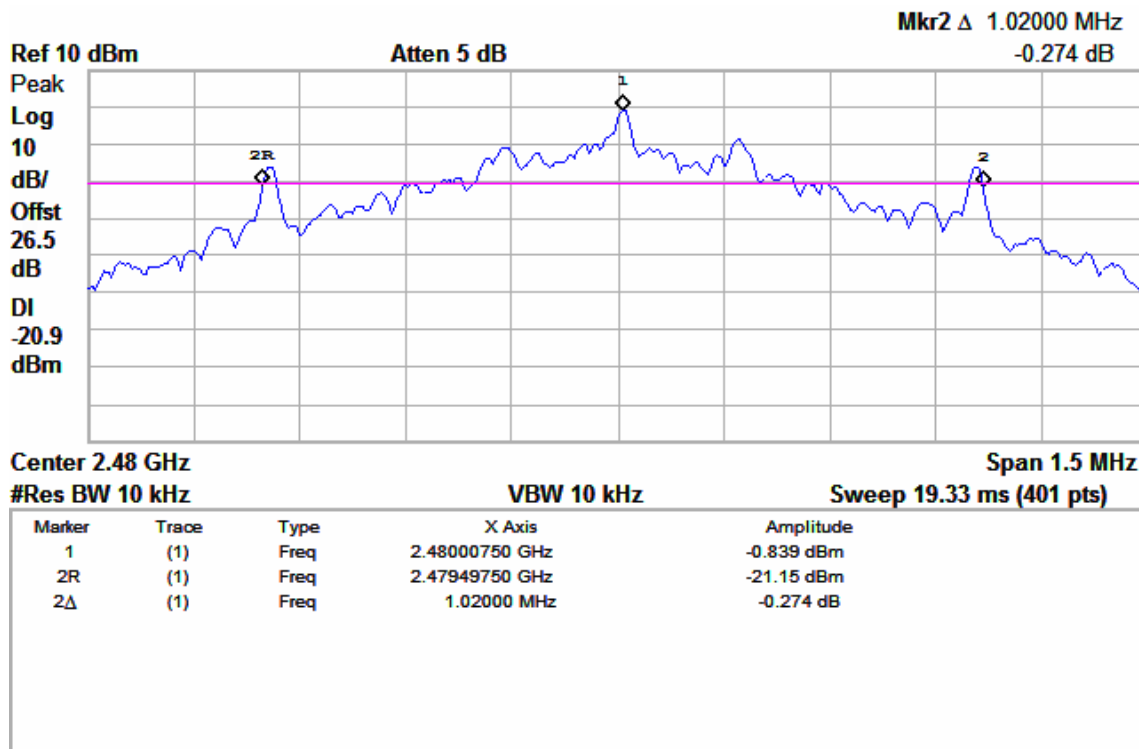
B. Test Plots



(Plot A: Channel = 2402)



(Plot B: Channel = 2441)



(Plot C: Channel = 2480)

3.4 Peak Power Spectral Density

3.4.1 Definition

1. For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.
2. The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

3.4.2 Test Configuration

See section 3.1.2 of this report.

3.4.3 Test procedure

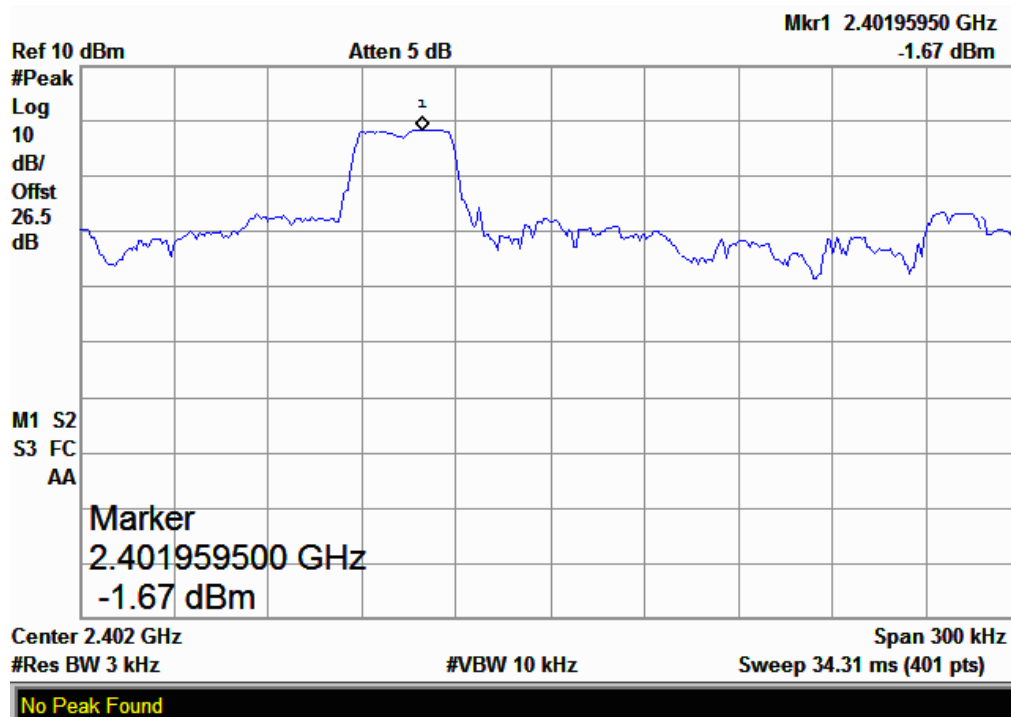
1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 3kHz, VBW = 10kHz, Span = 300kHz, Sweep=100s
4. Record the max reading.
5. Repeat the above procedure until the measurements for all frequencies are completed.

3.4.4 Test results

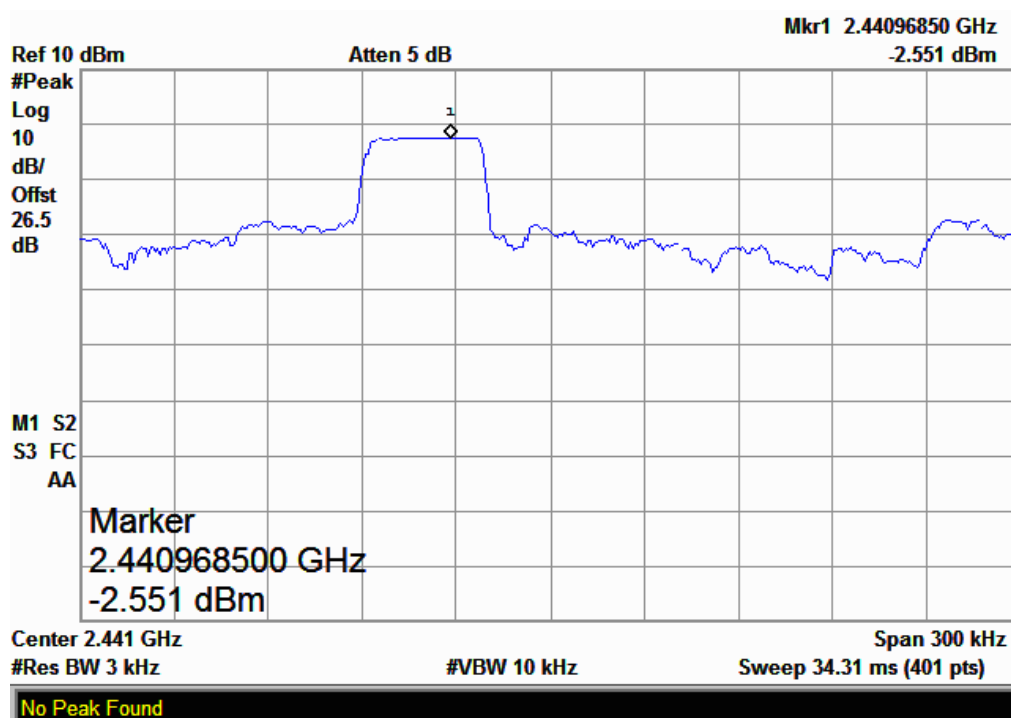
Test Data

Channel	Frequency (MHz)	Measured Peak Power Density		Limit	Verdict
		dBm	Refer to Plot	dBm	
0	2402	-1.670	Plot A	8	PASS
39	2441	-2.551	Plot B		PASS
78	2480	-2.476	Plot C		PASS

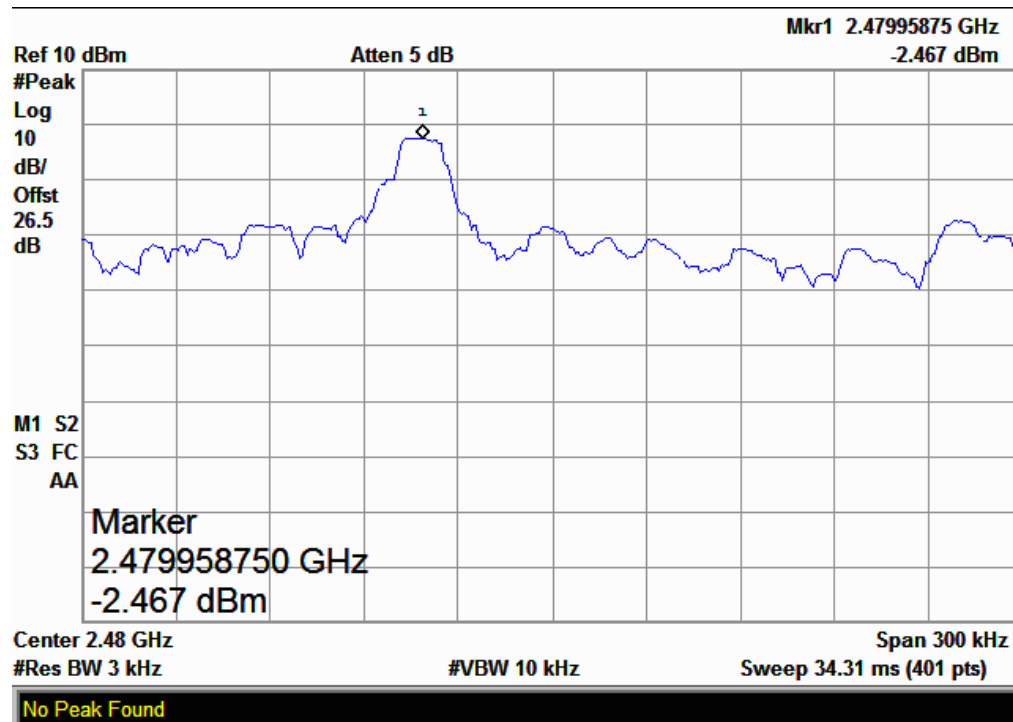
Test Plot:



Plot A: (Channel = 0)



Plot B: (Channel = 39)



Plot C: (Channel = 78)

3.5 Carried Frequency Separation

3.5.1 Requirement

According to FCC section 15.247(a)(1), frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater.

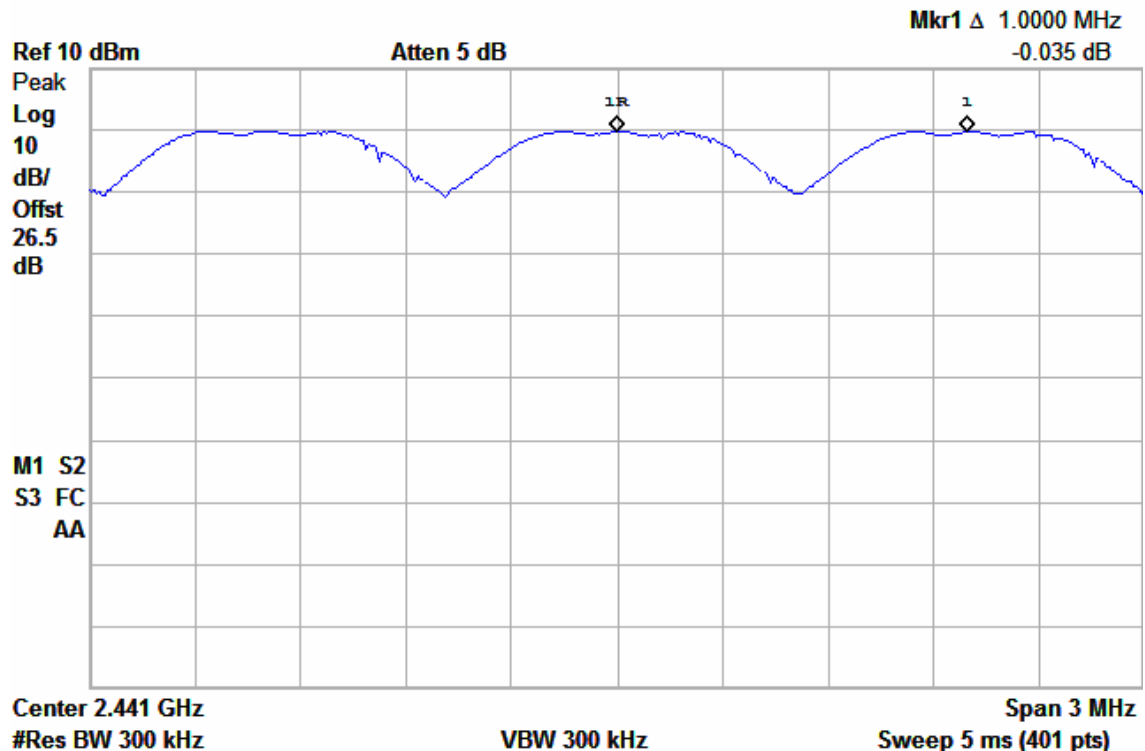
3.5.2 Test Description

See section 3.1.2 of this report.

3.5.3 Test Result

The EUT operates at hopping-on test mode.

For any adjacent channels (e.g. the channel 39 and 40 as showed in the Plot A), the Module does have hopping channel carrier frequencies separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel (1.15MHz, refer to section 3.3.3), whichever is greater. So, the verdict is PASS.



(Plot A: Carried Frequency Separation)

3.6 Time of Occupancy (Dwell time)

3.6.1 Requirement

According to FCC section 15.247(a)(1)(iii), frequency hopping systems in the 2400 - 2483.5MHz band shall use at least 15 non-overlapping channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

3.6.2 Test Description

See section 3.1.2 of this report.

3.6.3 Test Result

The EUT operates at hopping-off test mode (under DH5 data package).

A. Test Verdict

CH Low: $2.875 * (1600/6)/79 * 30 = 291.14$ (ms)

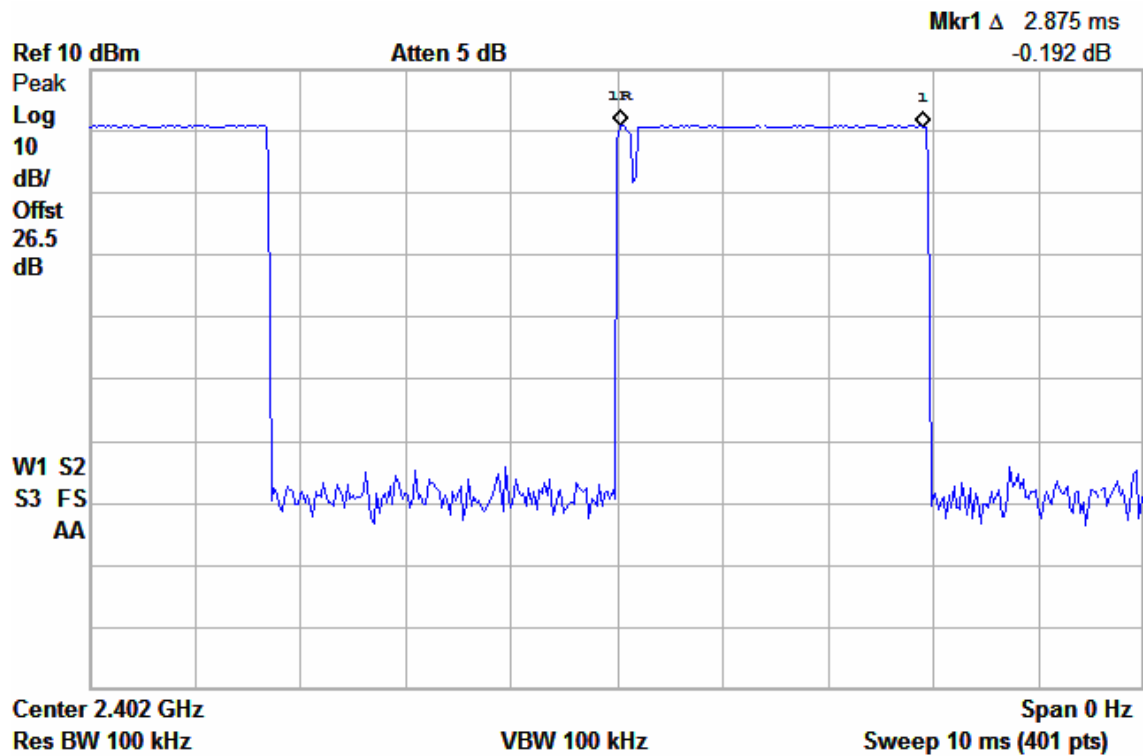
CH Mid: $2.900 * (1600/6)/79 * 30 = 294.67$ (ms)

CH High: $2.900 * (1600/6)/79 * 30 = 294.67$ (ms)

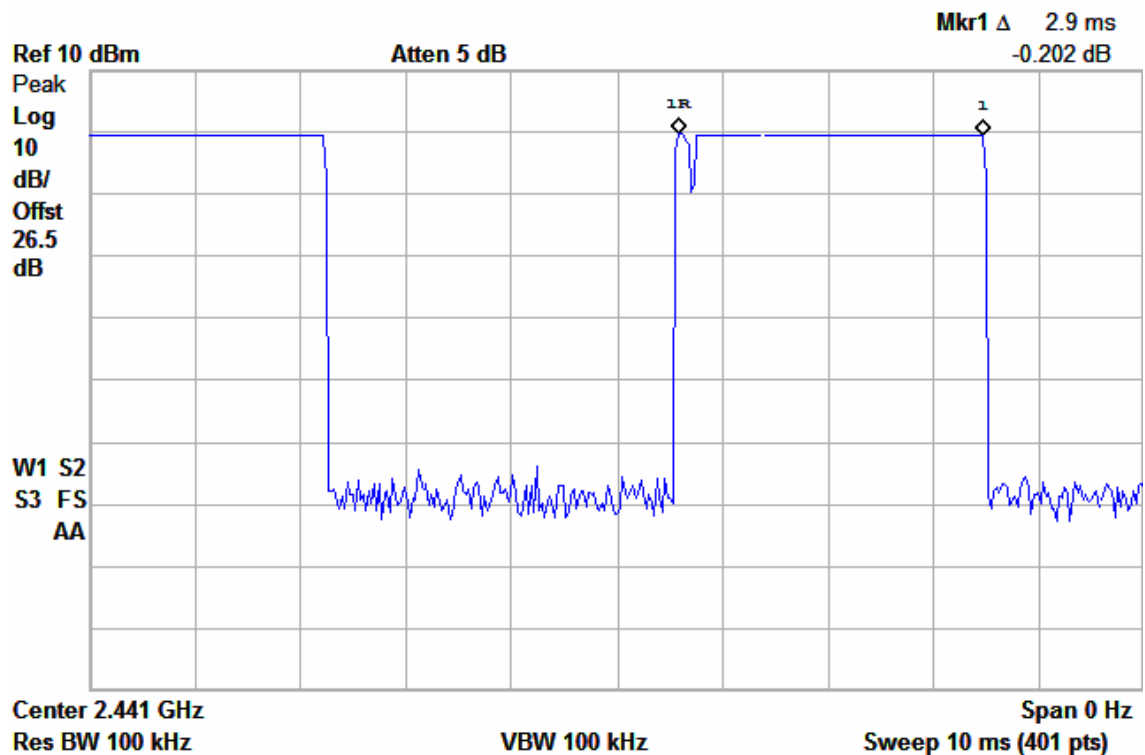
CH	Freq. (MHz)	Pulse Time		Calculated Dwell Time (ms)	Limit (ms)	Verdict
		ms	Refer to Plot			
0	2402	2.875	Plot A	291.14	400	PASS
39	2441	2.900	Plot B	294.67		PASS
78	2480	2.900	Plot C	294.67		PASS

B. Test Plots

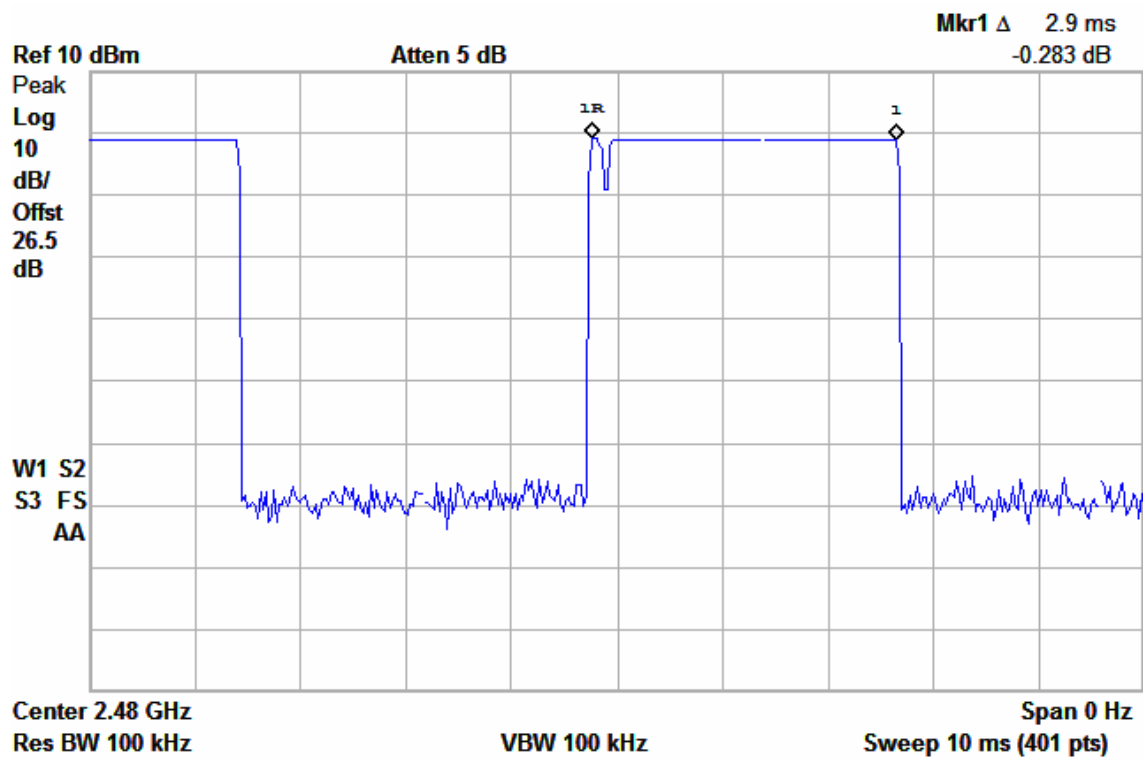
Note: the following plots record the Pulse Time of the Module carrier.



(Plot A: Channel = 2402)



(Plot B: Channel = 2441)



(Plot C: Channel = 2480)

3.7 Conducted Spurious Emissions

3.7.1 Requirement

According to FCC section 15.247(c), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

3.7.2 Test Description

See section 3.1.2 of this report.

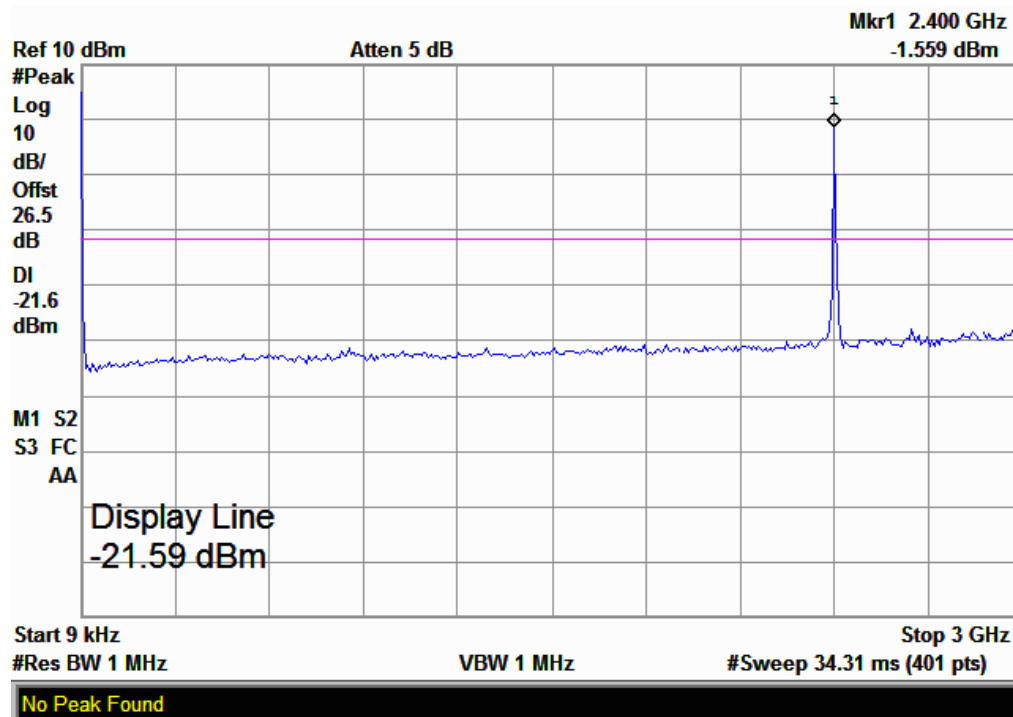
3.7.3 Test Result

The EUT operates at hopping-off test mode. The measurement frequency range is from 9 KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions.

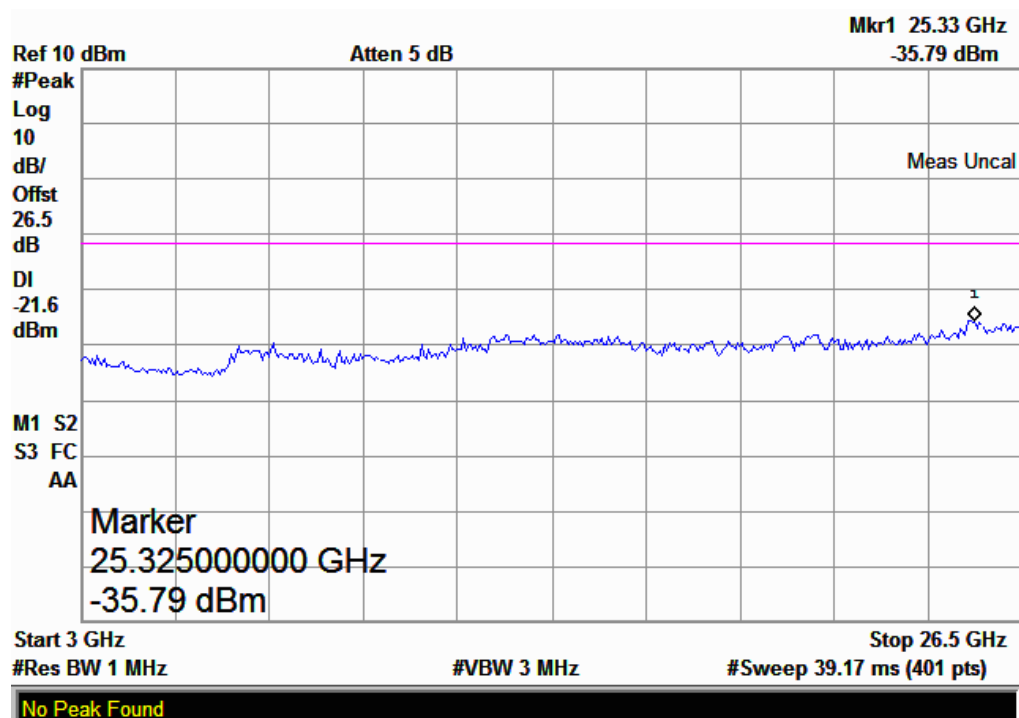
A. Test Verdict

CH	Freq. (MHz)	Measured Max. Out of Band Emissions (dBm)	Refer to Plot	Limit (dBm)		Verdict
				P _c	P _{-20dBc}	
0	2402	-35.79	Plot A.1/A.2	-1.559	-21.559	PASS
39	2441	-36.84	Plot B.1/B.2	-2.301	-22.301	PASS
78	2480	-37.48	Plot C.1/C.2	-2.170	-22.170	PASS

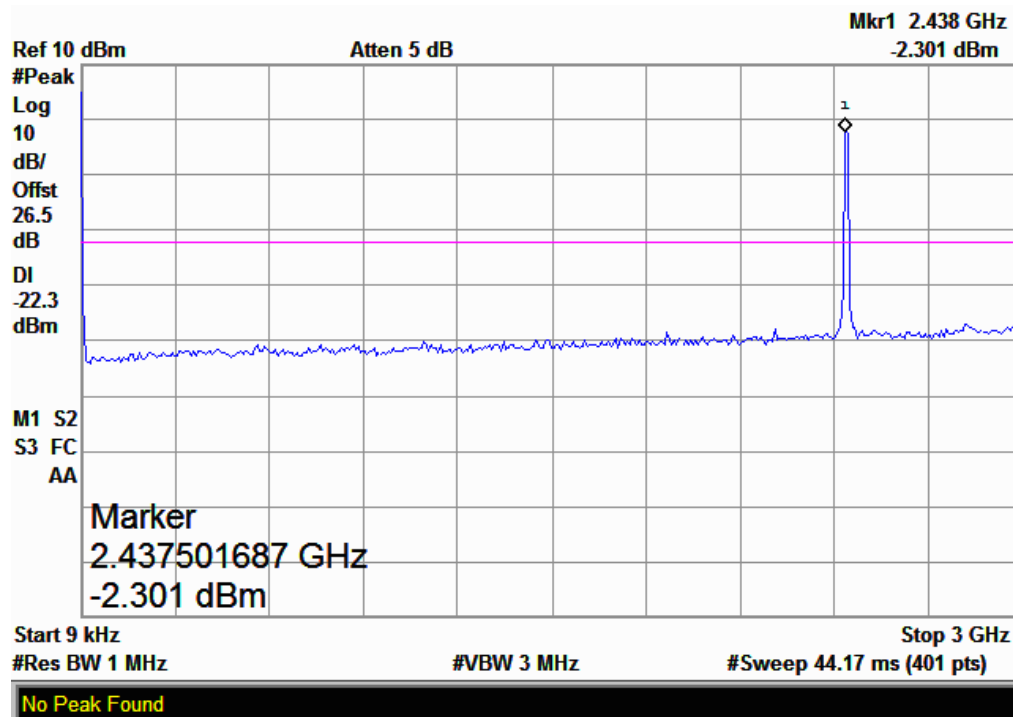
B. Test Plots



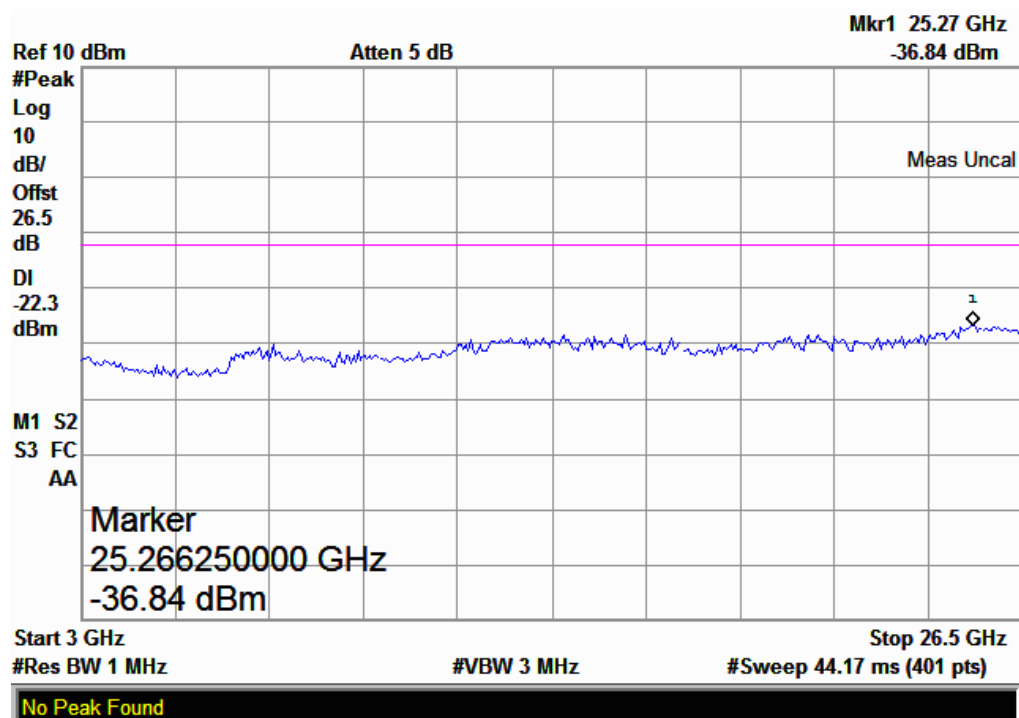
(Plot A.1: Channel = 0, 9KHz to 3GHz)



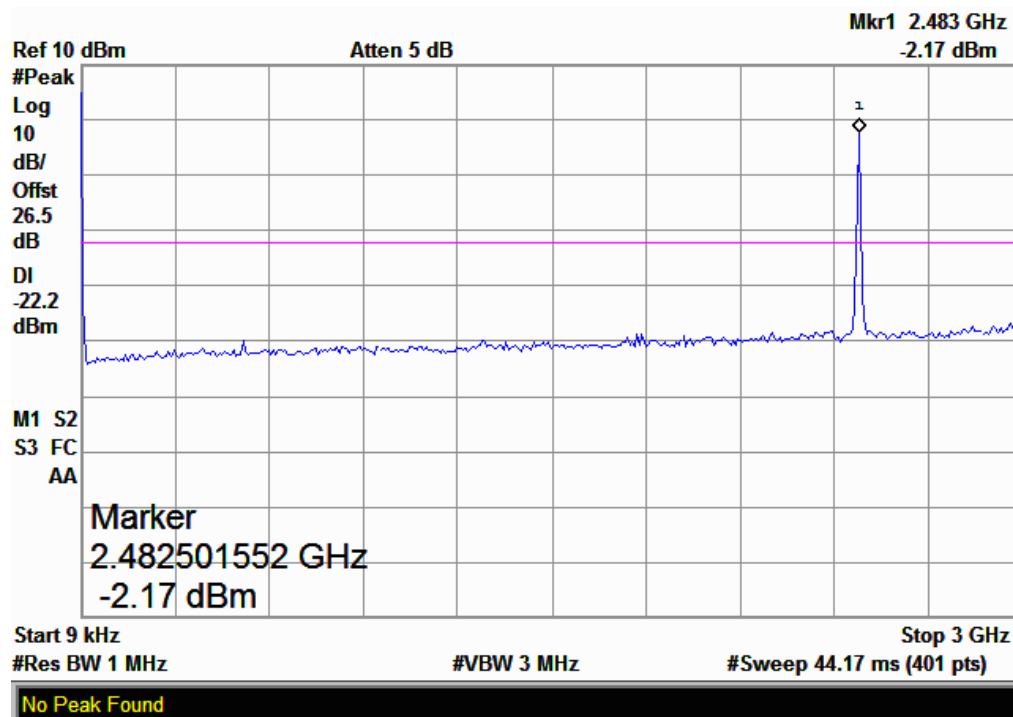
(Plot A.2: Channel = 0, 3GHz to 26.5GHz)



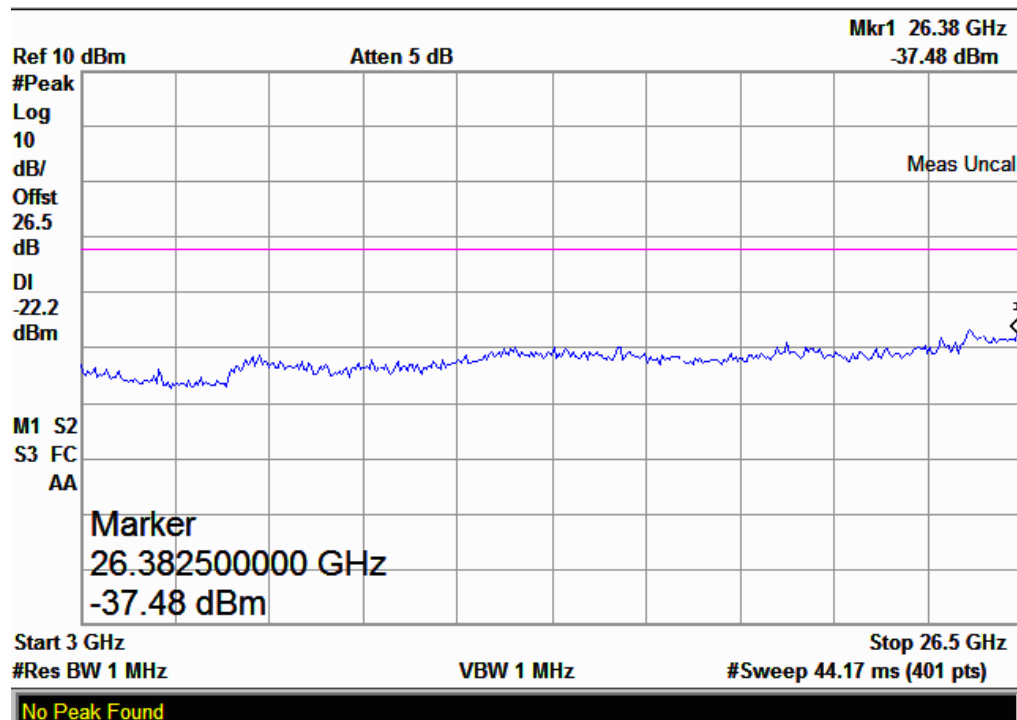
(Plot B.1: Channel = 39, 9KHz to 3GHz)



(Plot B.2: Channel = 39, 3GHz to 26.5GHz)



(Plot C.1: Channel = 78, 9KHz to 3GHz)



(Plot C.2: Channel = 78, 3GHz to 26.5GHz)

3.8 Band Edge

3.8.1 Requirement

According to FCC section 15.247(c), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

3.8.2 Test Description

See section 3.1.2 of this report.

3.8.3 Test Result

The EUT operates at hopping-off test mode. The lowest and highest channels are tested to verify the band edge emissions.

A. Test Verdict

$P_{\text{Max_Band_Edge_Emission}}$ is the measured maximum band edge level;

$f_{\text{Max_Band_Edge_Emission}}$ is the frequency at which the maximum band edge level is measured;

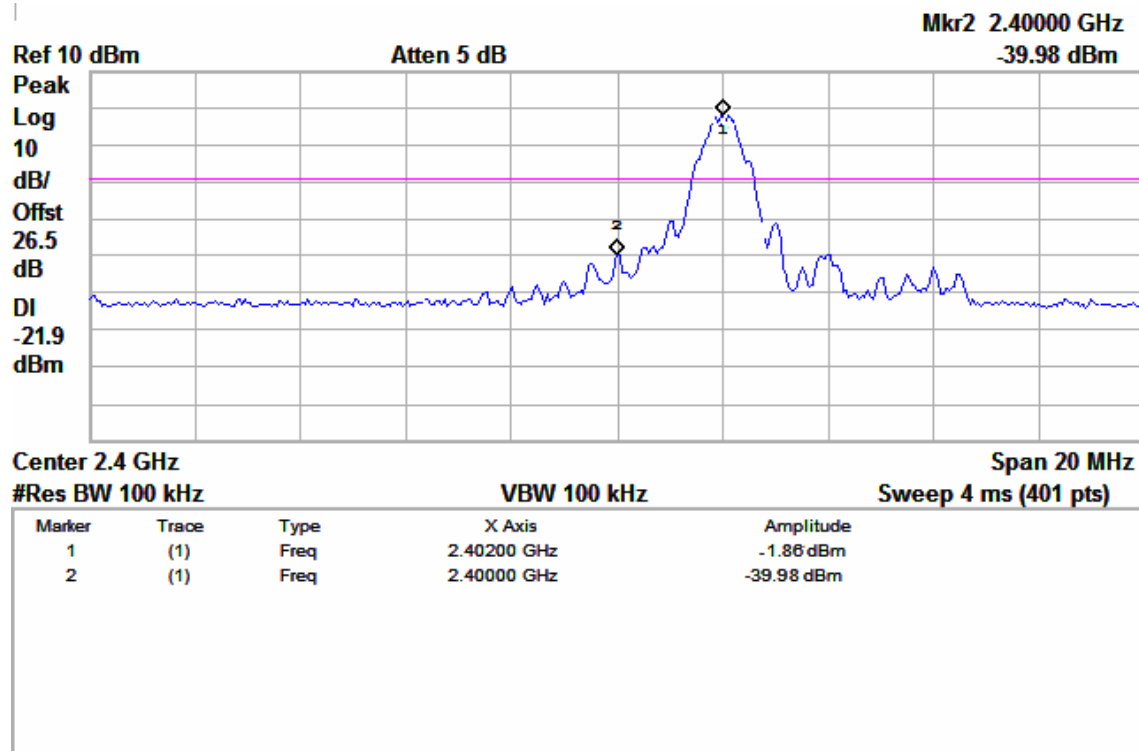
P_c is the level of the Module carrier;

$P_{-20\text{dBc}}$ is the level that is -20dBm below the P_c ;

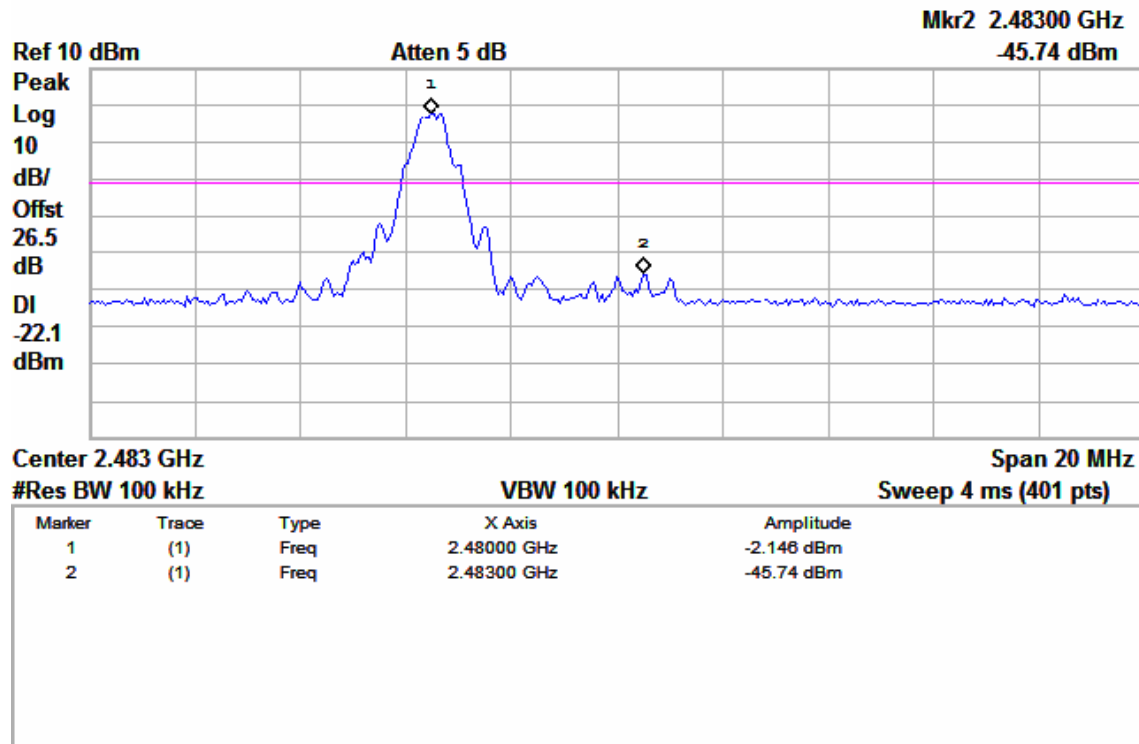
$\Delta_{\text{Marker_Delta}} = P_c - P_{\text{Max_Band_Edge_Emission}}$

CH	Freq. (MHz)	Measured Max. Band Edge Emission		Limit (dBm)		$\Delta_{\text{Marker_Delta}}$ (dB)	Refer to Plot	Verdict
		$P_{\text{Max_Band_Edge_Emission}}$ (dBm)	$f_{\text{Max_Band_Edge_Emission}}$ (MHz)	P_c	$P_{-20\text{dBc}}$			
0	2402	-39.98	2400	-1.86	-21.86	38.12	Plot A	PASS
78	2480	-45.74	2483	-2.15	-22.15	43.59	Plot B	PASS

B. Test Plots



(Plot A: Channel = 0)



(Plot B: Channel = 78)

3.9 Radiated Emissions

3.9.1 Requirement

According to FCC section 15.247(c), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

As shown in FCC section 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector. When average radiated emission measurements are specified in this part, including emission measurements below 1000MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules.

3.9.2 Test Procedure

1. The EUT is set to operate at hopping off test mode.
2. The lowest, middle and highest channels of the EUT are employed to perform this test.
3. The test frequency range is from 9kHz to 30MHz, and from 30MHz to the 10th harmonic of the fundamental frequency.

The corresponding Test Antenna is located at 1m height. The Peak (PK) detector is employed to sweep the radiated field strength over the test frequency range while the Turn Table is located separately at the degree of $\text{STEP}_{\text{TT}}(\text{degree}) = N \cdot 45$, $N \in [0, 8]$.

For each fundamental frequency signal, rotate the Turn Table and vary the Test Antenna height until the emission is at its highest amplitude; then tuned the Receiver and use the PK and Average (AV) detectors to measure and record these maximum readings as $P_{\text{Fundamental_FieldStrength}}$.

Calculate the field strength of band edge emission falling in adjacent restricted bands (from 2310MHz to 2390MHz and from 2483.5MHz to 2500MHz) recorded as $P_{\text{Max_Band_Edge_Field_Strength}}$ that is mentioned in FCC section 15.205(a) via the method of "Marker Delta" described by the formula: $P_{\text{Max_Band_Edge_Field_Strength}} = P_{\text{Fundamental_FieldStrength}} - \Delta_{\text{Marker_Delta}}(@f_{\text{Max_Band_Edge_Emission}})$, where the $\Delta_{\text{Marker_Delta}}(@f_{\text{Max_Band_Edge_Emission}})$ is the measured maximum band edge emission $\Delta_{\text{Marker_Delta}}$ versus the frequency $f_{\text{Max_Band_Edge_Emission}}$ which are mentioned in the section 3.8 of this test report. The $P_{\text{Max_Band_Edge_Field_Strength}}$ is compared with the PK and AV limit lines.

Observe the restricted bands mentioned in FCC section 15.205(a), and for each swept signal that is more than or have narrow negative margins beyond the AV limit line, rotate the Turn Table and vary the Test Antenna height until the emission is at its highest amplitude; then tuned the Receiver and use the PK and AV detectors to measure this suspect signal to find its maximum readings and compare with the PK and AV limit lines.

Both the Vertical (V) and the Horizontal (H) polarizations of the Test Antenna are employed to perform this test.

3.9.3 Test Setup

A. Test Setup Sketch

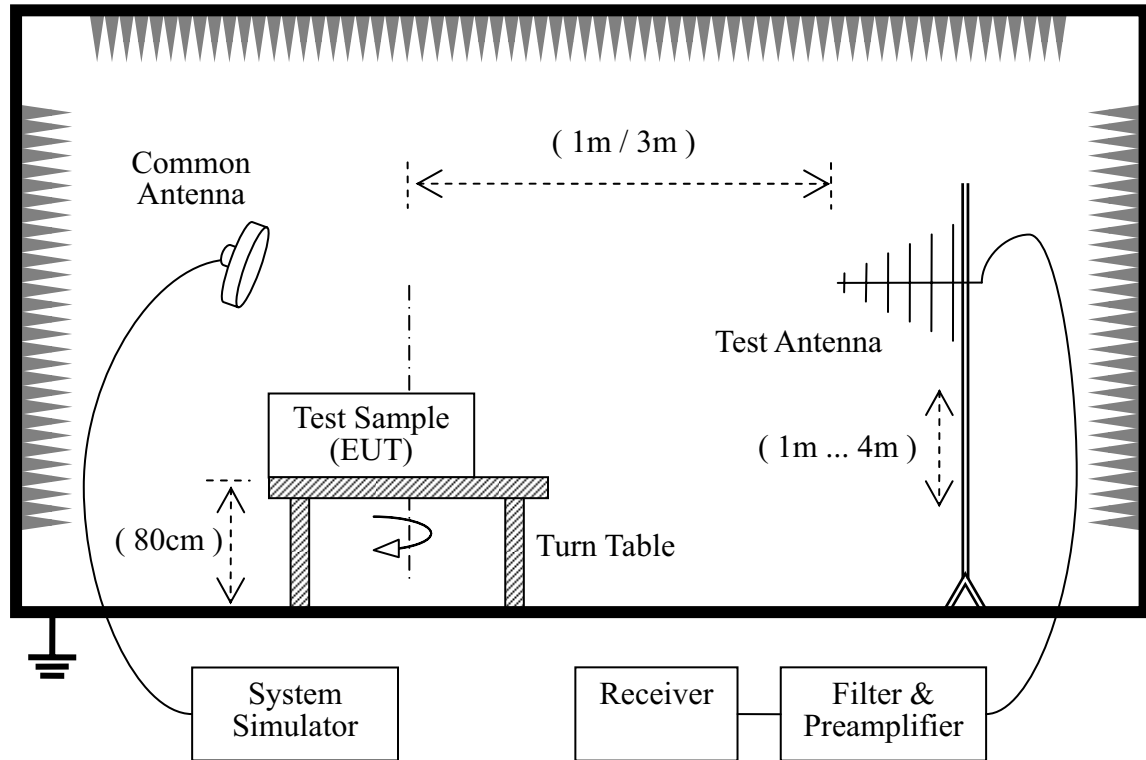
The test is performed in a 3m Semi-Anechoic Chamber. The EUT is placed on a 0.8m high insulating Turn Table and keeps

1. 3m away from the Test Antenna which is a Bi-Log one with working frequency range from 30MHz to 3GHz while a Horn one with working frequency range above 3GHz, and is mounted on a variable-height antenna master tower.
2. 1m away from the Test Antenna which is a Loop one with working frequency range from 9kHz to 30MHz, and the center of which is positioned at 1m above the ground.

If applicable, a Filter (Notch and/or High-Pass) and a Preamplifier are employed for the measuring instrument of a Receiver. The factors of the whole test system are calibrated to correct the reading.

The EUT is powered by the Battery, which is charged with the AC Adapter powered by 120V 60Hz AC mains supply.

The EUT is activated and controlled by the System Simulator via a Common Antenna, and is set to operate under hopping on test mode transmitting 339 bytes DH5 packages at maximum power condition.



B. Equipments List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2006.07	1year
Semi-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2006.08	2year
Test Antenna (Bi-Log)	Schwarzbeck	VULB 9163	9163-274	2006.07	1year
Test Antenna (Horn)	Schwarzbeck	BBHA 9120C	9120C-384	2006.07	1year
System Simulator	R&S	CMU200	100448	2006.10	1year

3.9.4 Test Result

A. Test Verdict

a) The Field Strength of Fundamental Emissions

CH	Freq. (MHz)	P _{Fundamental} FieldStrength (dBμV/m)		Antenna Polarization	Refer to Plot
		PK	AV		
0	2402	86.34	66.33	H	Plot A.3
		87.64	70.57	V	Plot A.7
39	2441	84.35	66.96	H	Plot B.3
		87.68	71.43	V	Plot B.7

CH	Freq. (MHz)	P _{Fundamental} _FieldStrength (dB μ V/m)		Antenna Polarization	Refer to Plot
		PK	AV		
78	2480	85.23	66.04	H	Plot C.3
		87.45	71.18	V	Plot C.7

b) The Calculated Field Strength of Band Edge Emissions Fall in the Restricted Bands

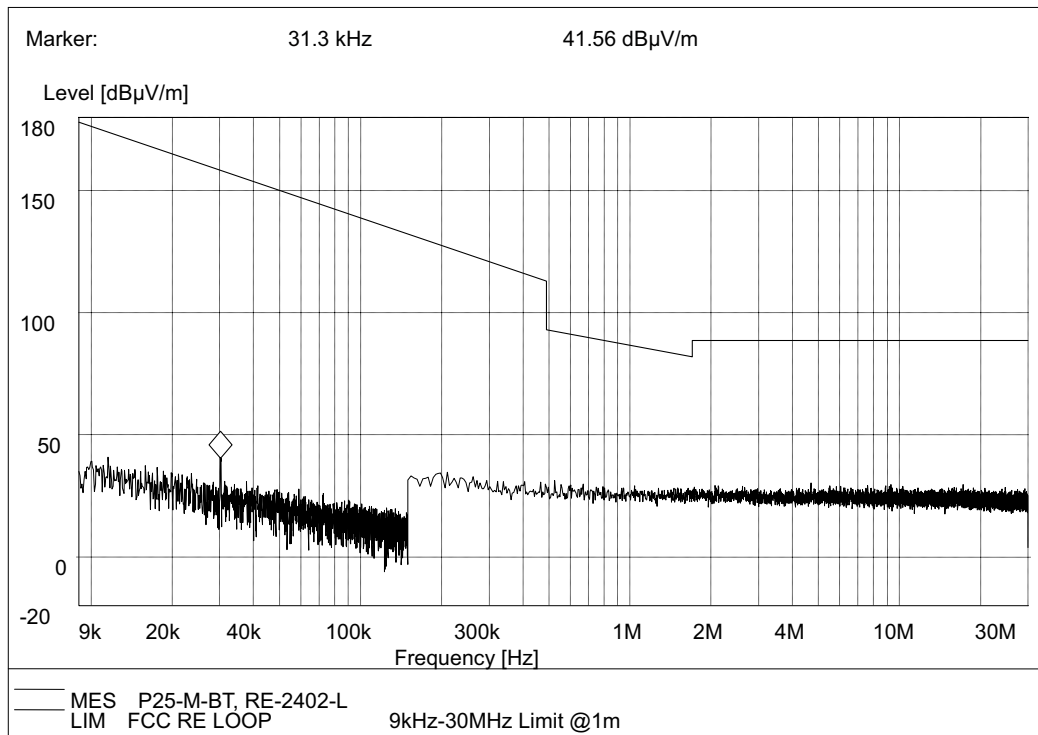
CH	Freq. (MHz)	P _{Fundamental} _FieldStrength		Measured Max. Band Edge Emissions			Limit (dB μ V/m)	Verdict
		Detector	dB μ V/m	@f _{Max_Band_Edge_Emission} (MHz)	Δ _{Marker_Delta} (dB)	P _{Max_Band_Edge_Field_Strength} (dB μ V/m)		
0	2402	PK	87.64	2400.00	38.12	49.52	74	PASS
		AV	70.57			32.45	54	PASS
78	2480	PK	87.68	2483.00	43.59	44.09	74	PASS
		AV	71.43			27.84	54	PASS

c) The Field Strength of Radiated Emissions Fall in the Restricted Bands

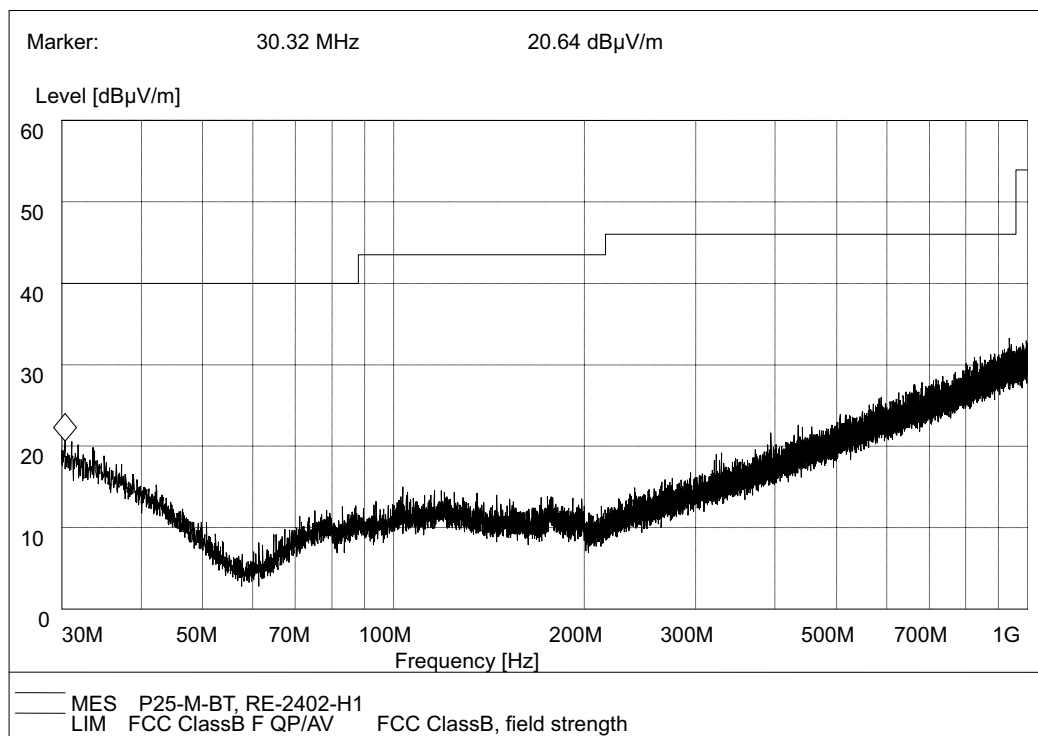
NOTE: also refer to Plot A.1 to Plot A.9, Plot B.1 to Plot B.9 and Plot C.1 to Plot C.9 for the emissions falling in the restricted bands.

CH	Freq. (MHz)	Antenna Polarization	Measured Max. Radiated Emissions in the Restricted Bands (dB μ V/m)		Limit (dB μ V/m)		Verdict
			PK	AV	PK	AV	
0	2402	V	---	---	74	54	PASS
		H	---	---	74	54	PASS
39	2441	V	---	---	74	54	PASS
		H	---	---	74	54	PASS
78	2480	V	---	---	74	54	PASS
		H	---	---	74	54	PASS

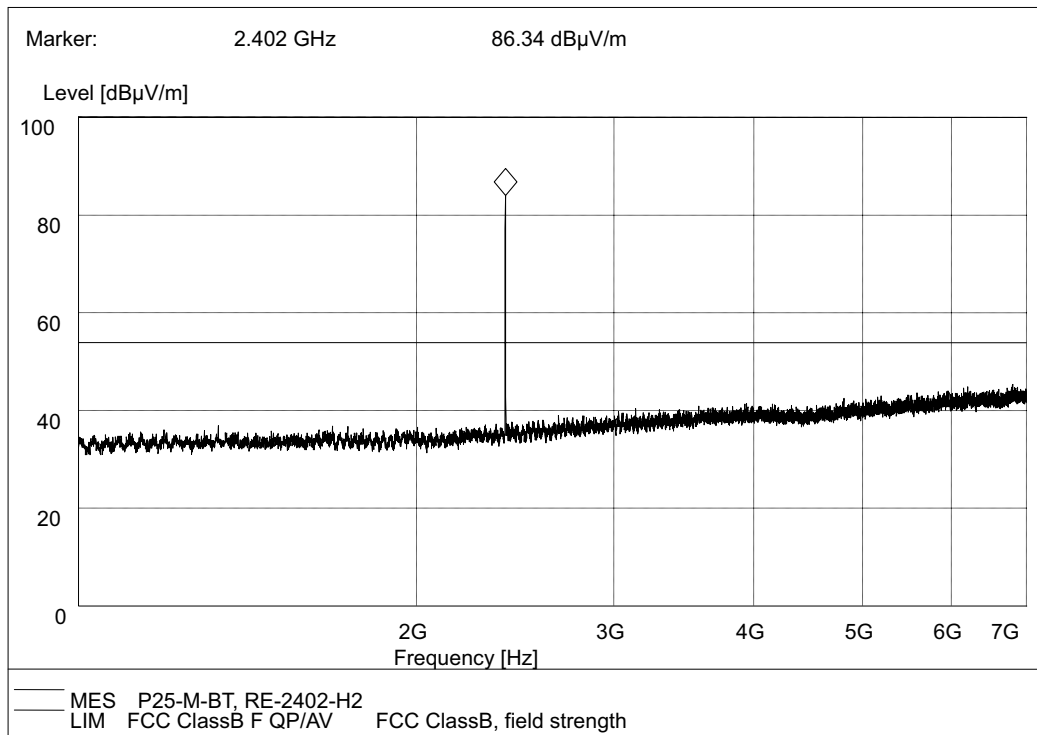
B. Test Plots for the Whole Measurement Frequency Range



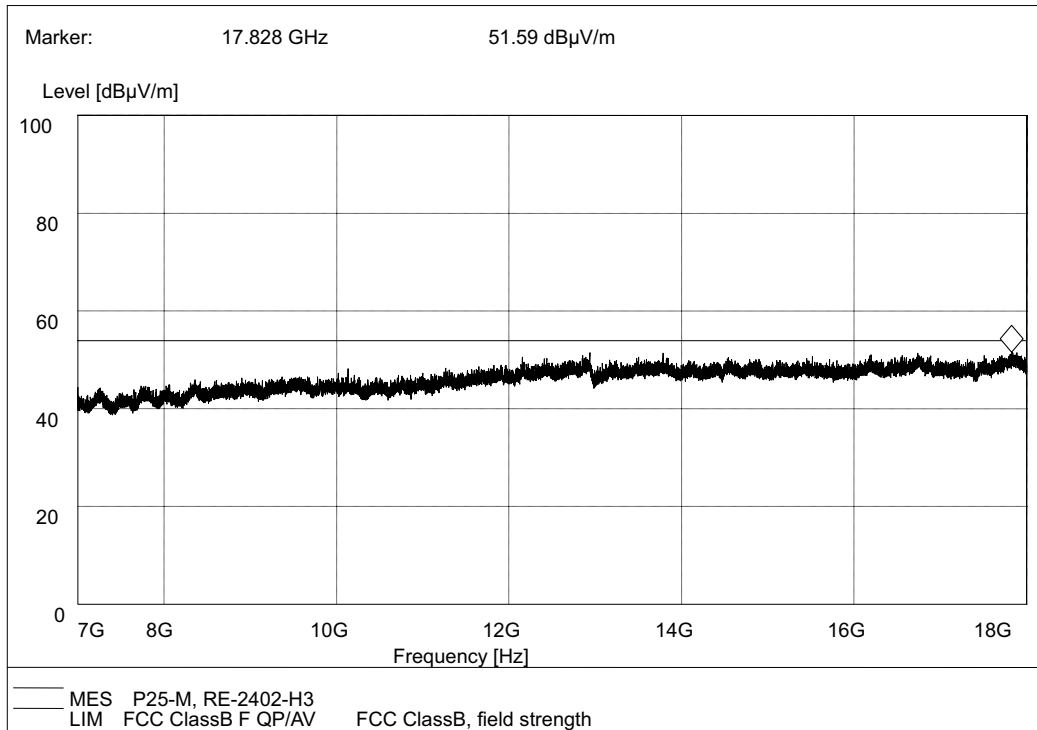
(Plot A.1: 9kHz to 30MHz)



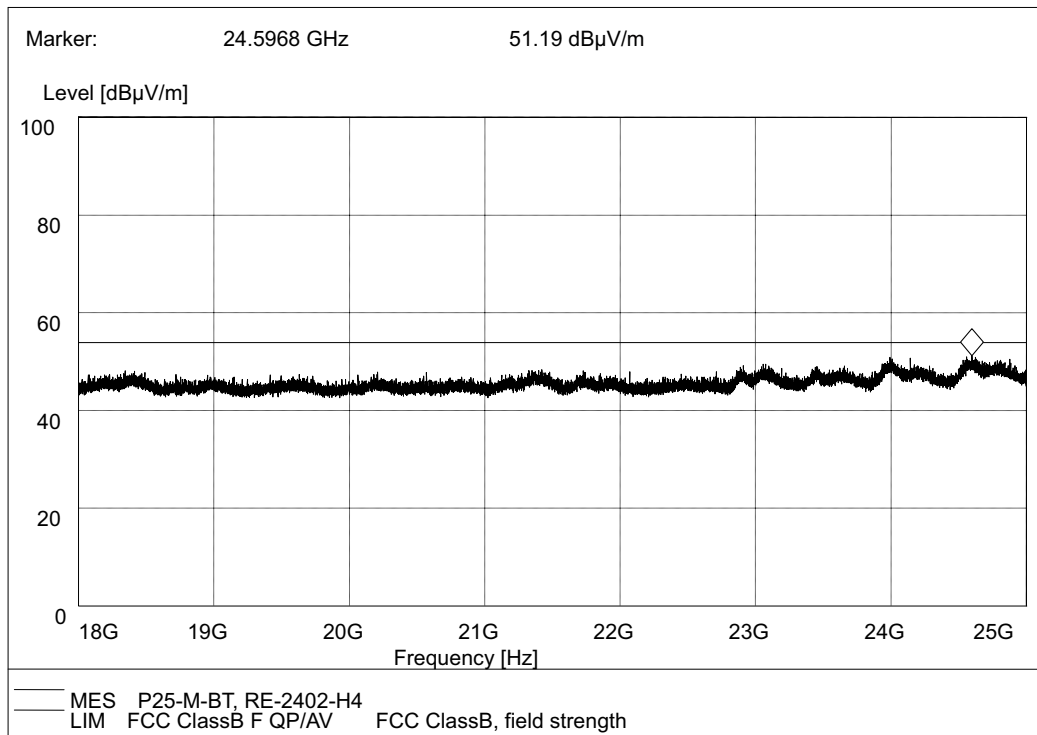
(Plot A.2: Antenna Horizontal, 30MHz to 1GHz)



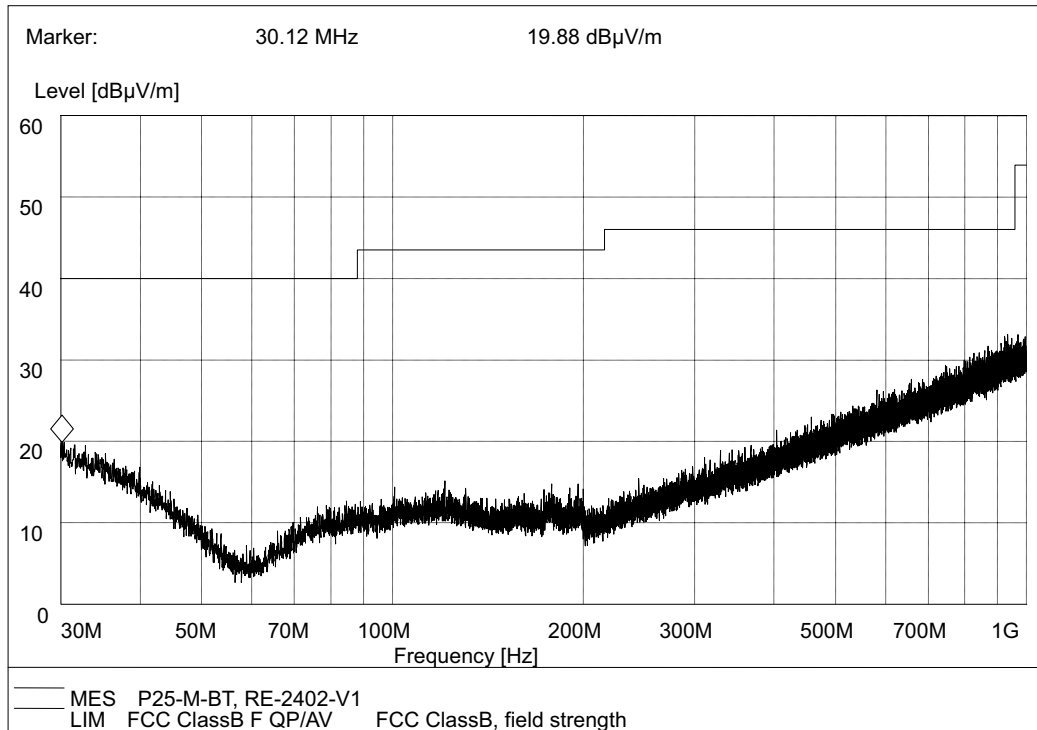
(Plot A.3: Antenna Horizontal, 1GHz to 7GHz)



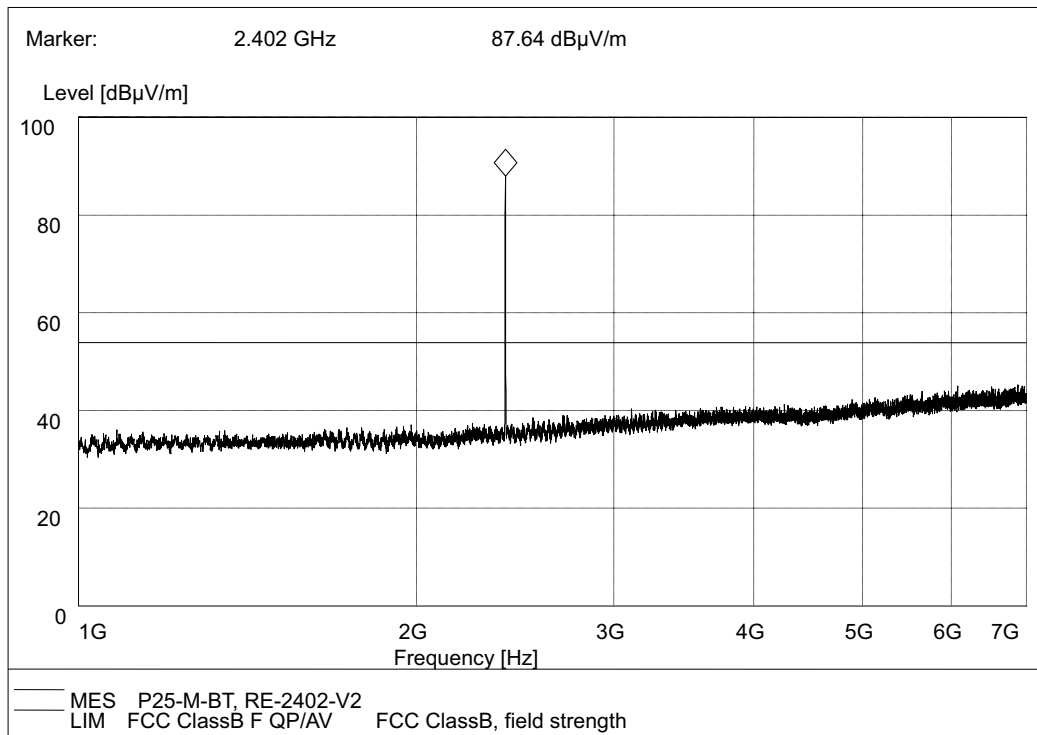
(Plot A.4: Antenna Horizontal, 7GHz to 18GHz)



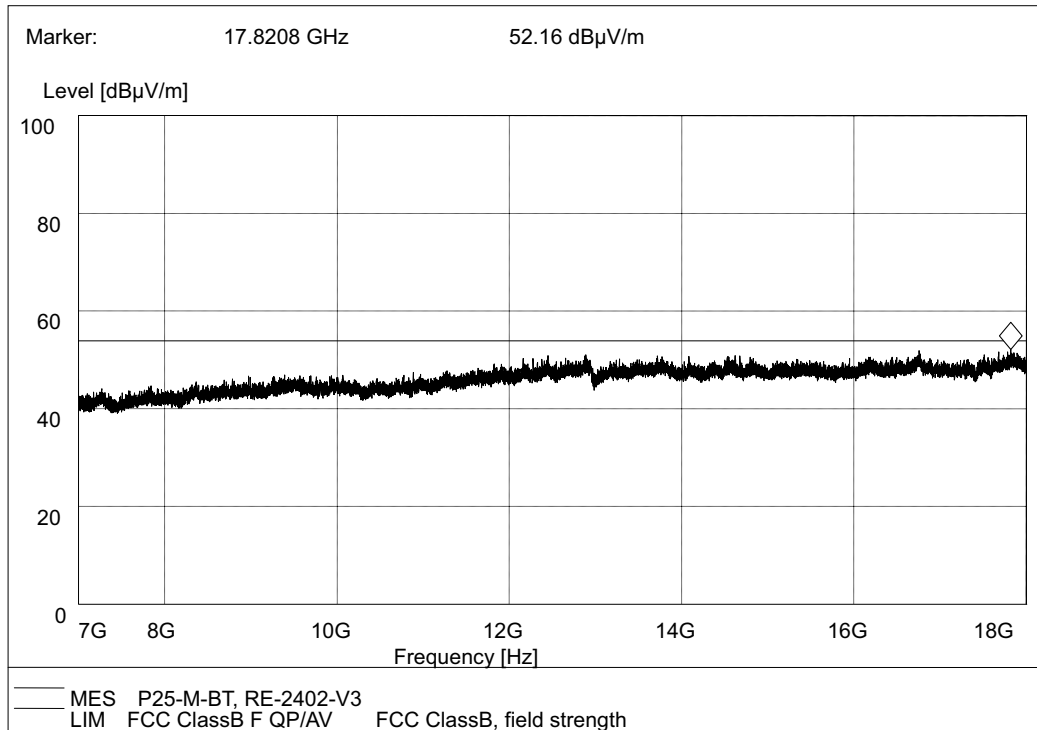
(Plot A.5: Antenna Horizontal, 18GHz to 25GHz)



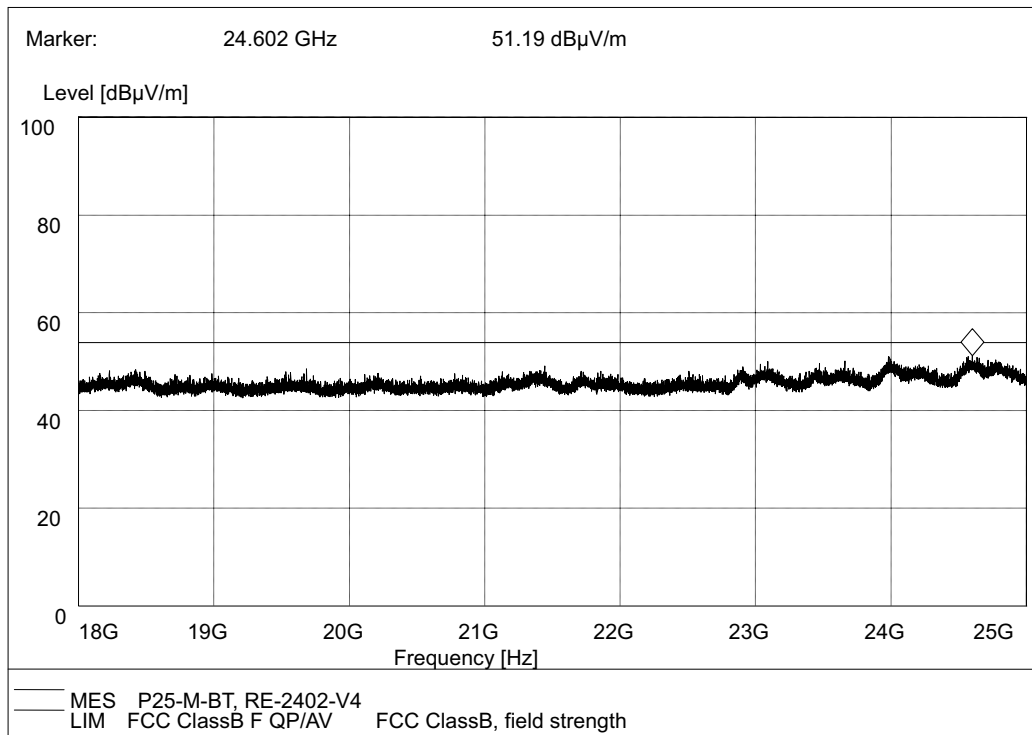
(Plot A.6: Antenna Vertical, 30MHz to 1GHz)



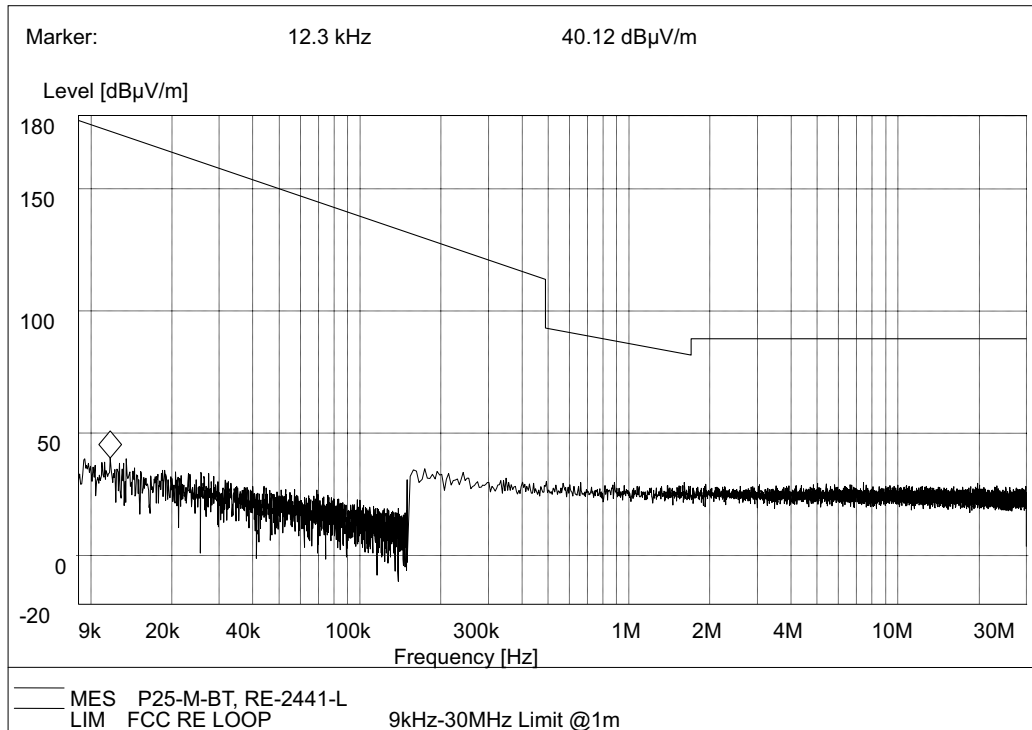
(Plot A.7: Antenna Vertical, 1GHz to 7GHz)



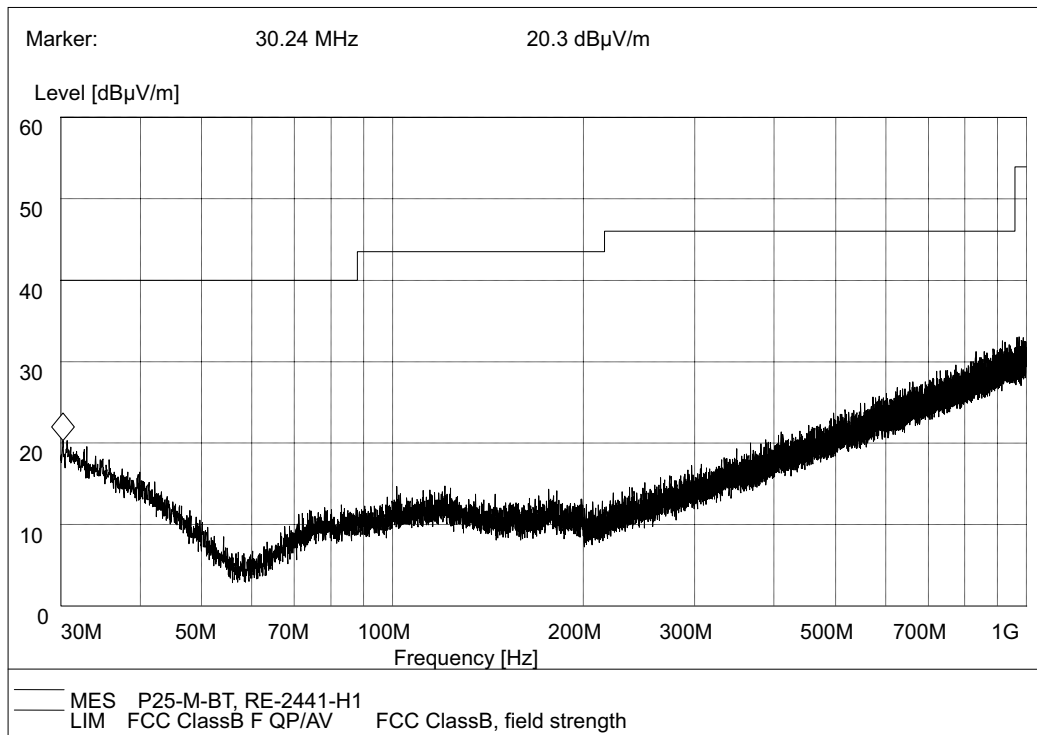
(Plot A.8: Antenna Vertical, 7GHz to 18GHz)



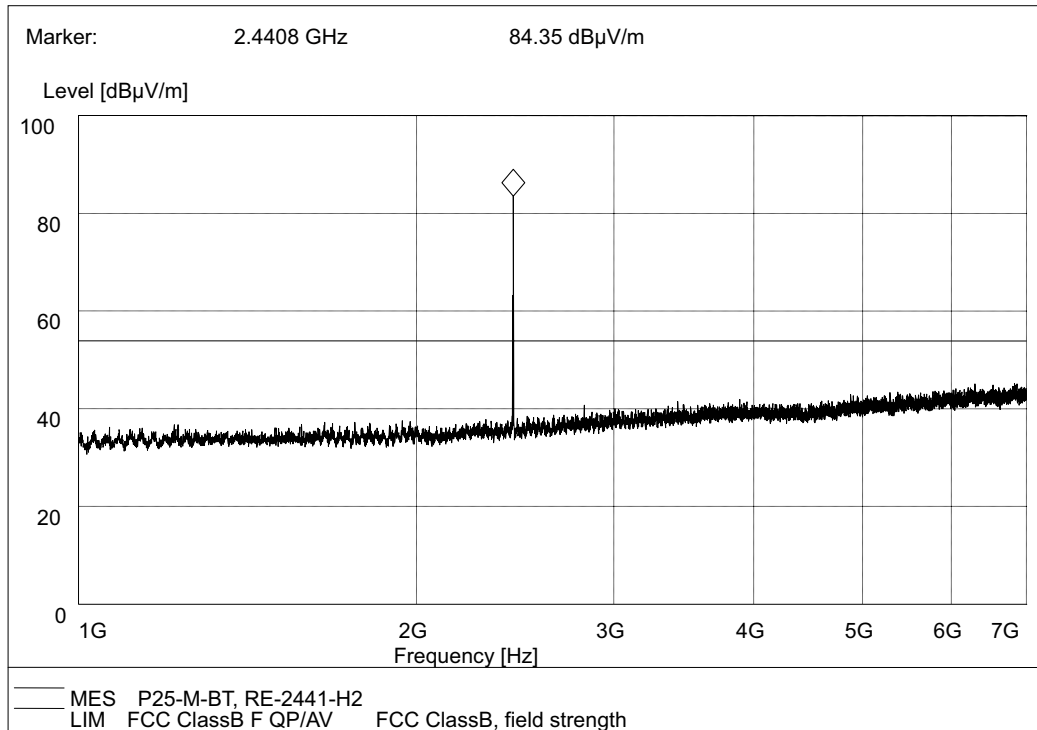
(Plot A.9: Antenna Vertical, 18GHz to 25GHz)



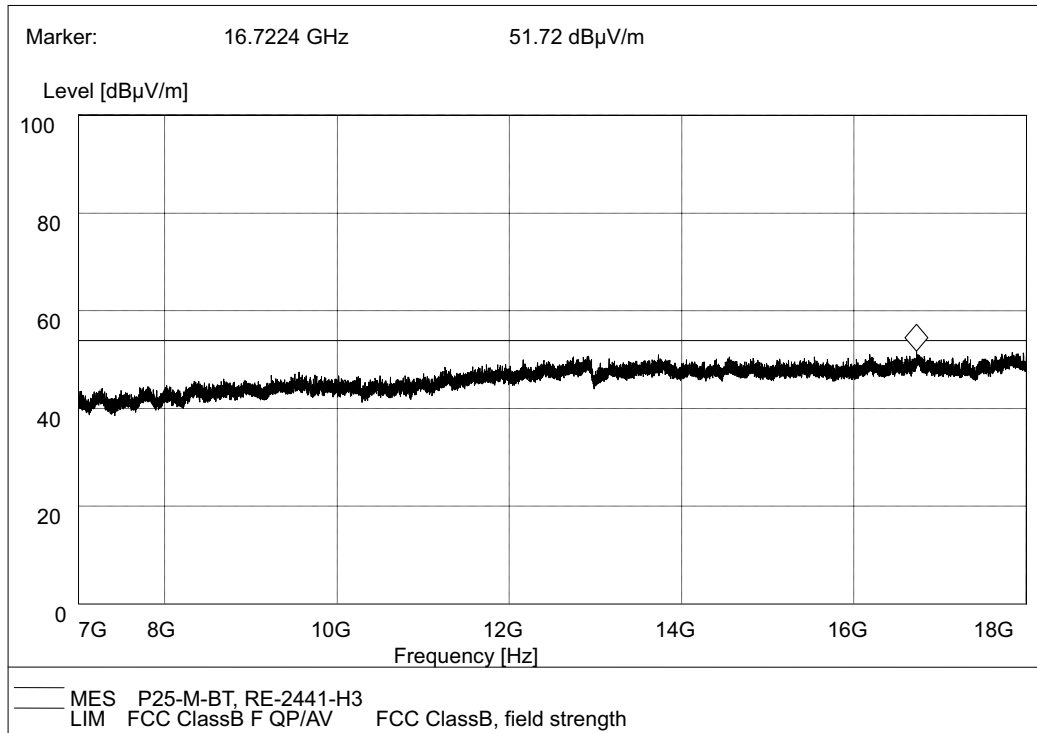
(Plot B.1: 9kHz to 30MHz)



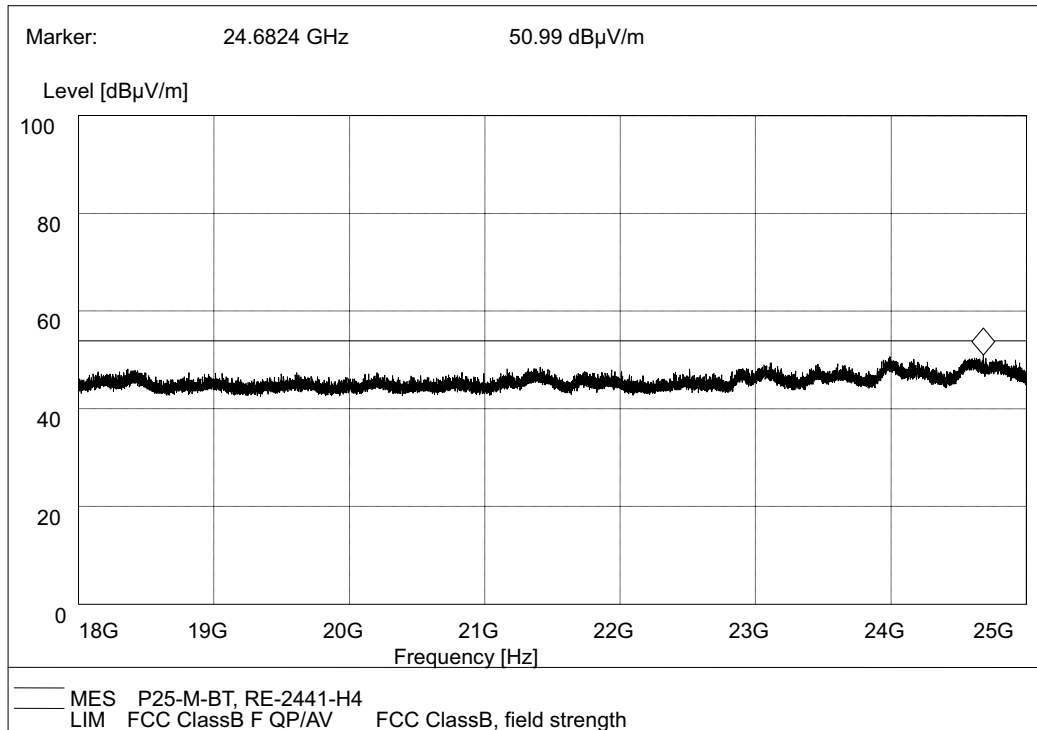
(Plot B.2: Antenna Horizontal, 30MHz to 1GHz)



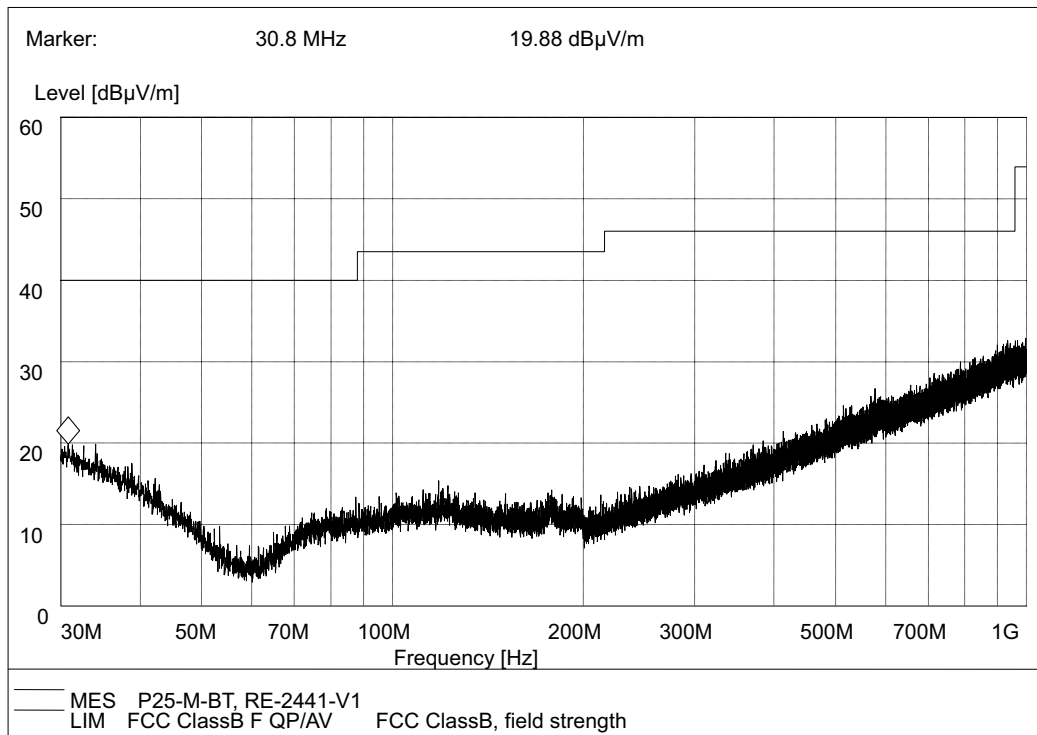
(Plot B.3: Antenna Horizontal, 1GHz to 7GHz)



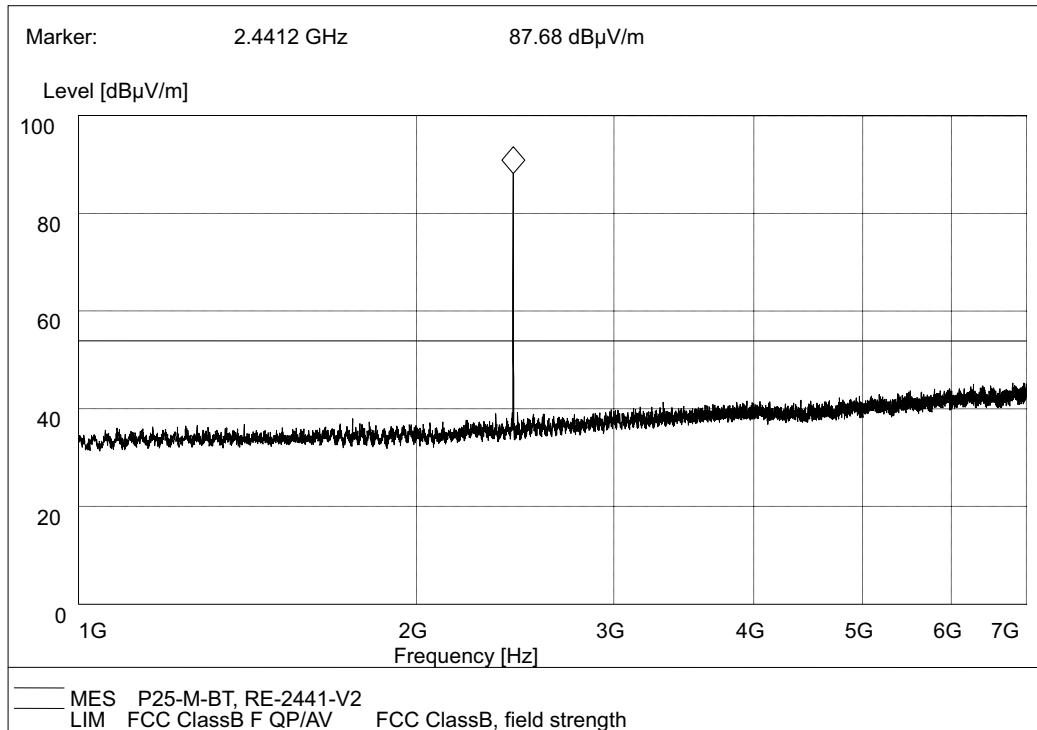
(Plot B.4: Antenna Horizontal, 7GHz to 18GHz)



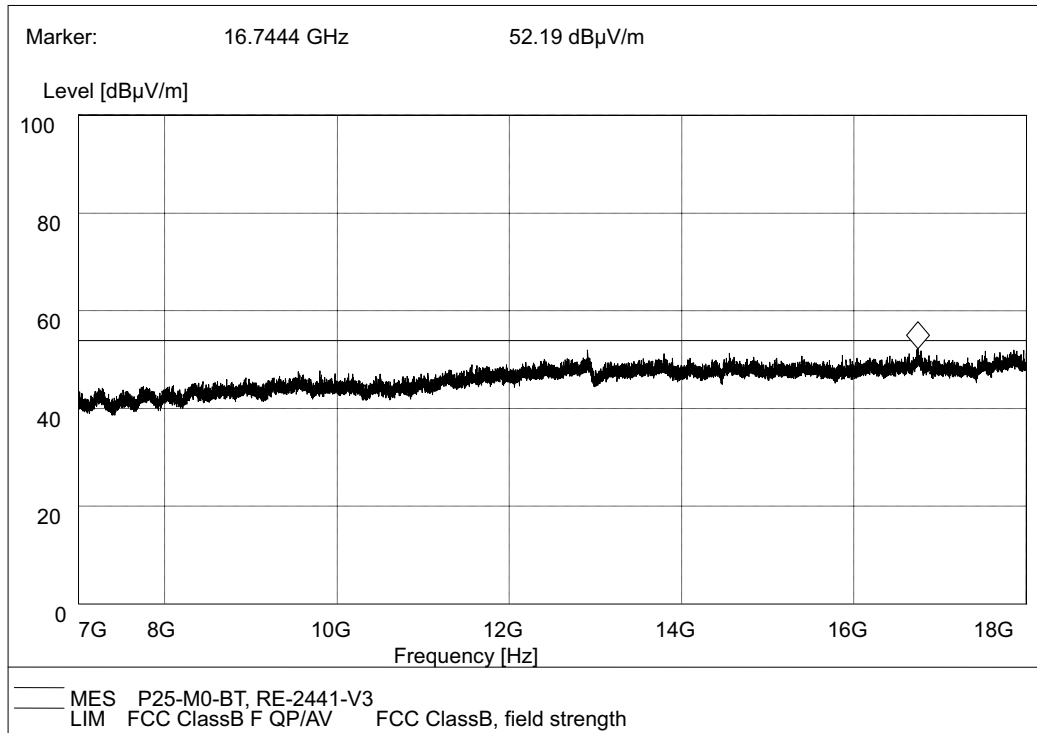
(Plot B.5: Antenna Horizontal, 18GHz to 25GHz)



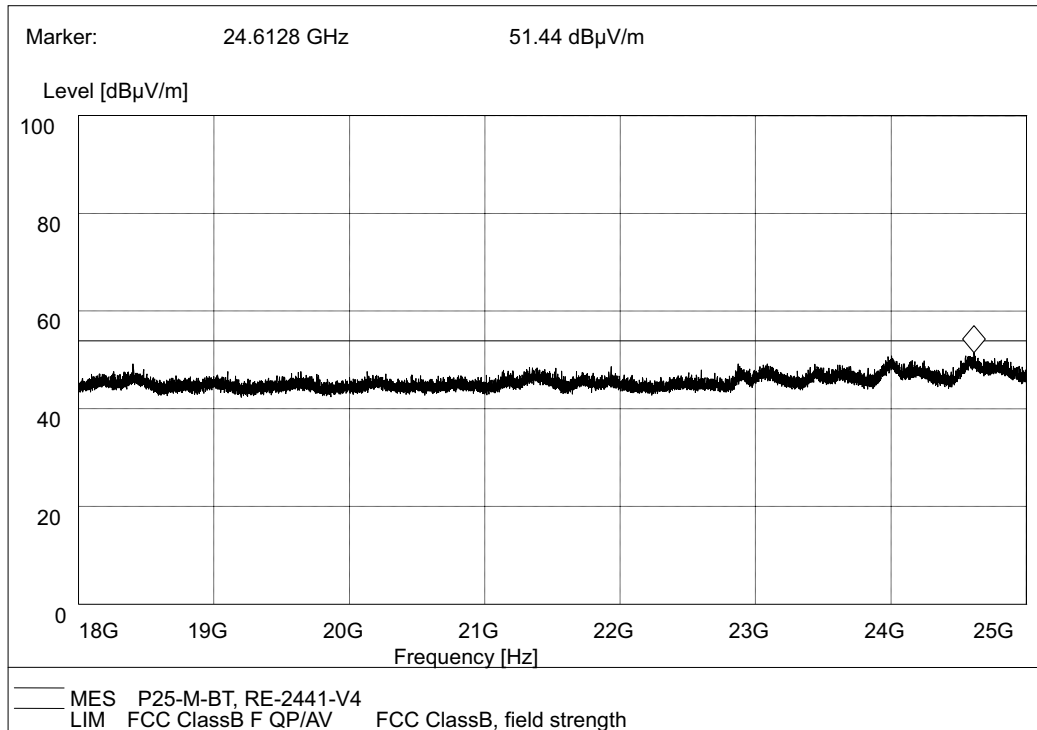
(Plot B.6: Antenna Vertical, 30MHz to 1GHz)



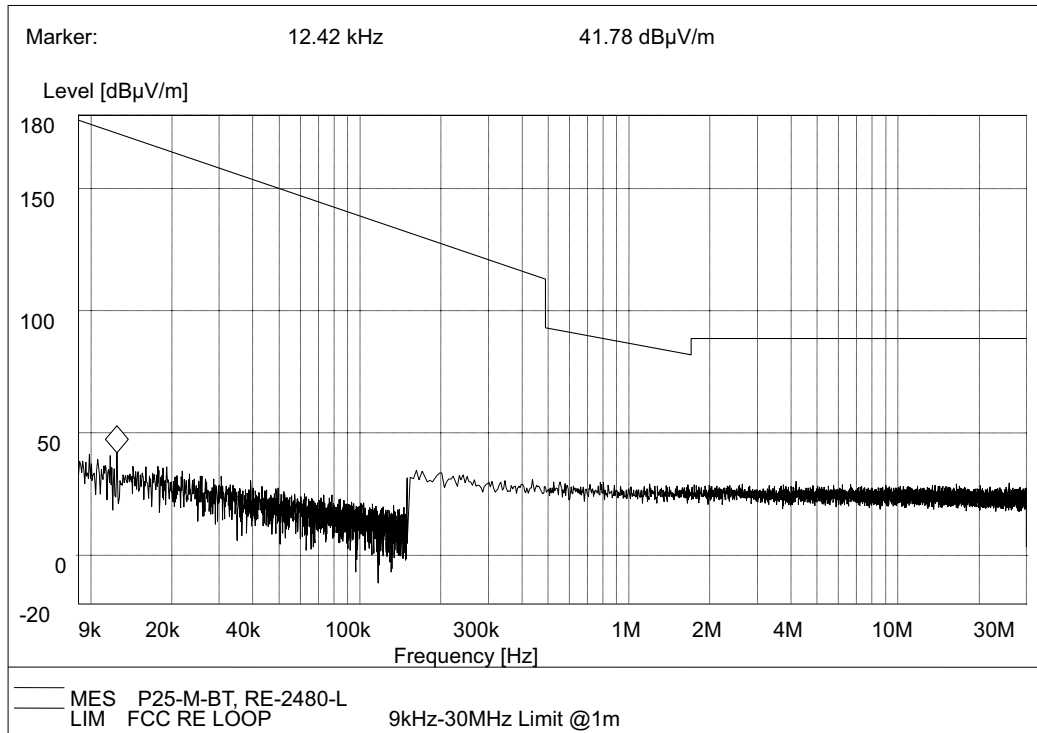
(Plot B.7: Antenna Vertical, 1GHz to 7GHz)



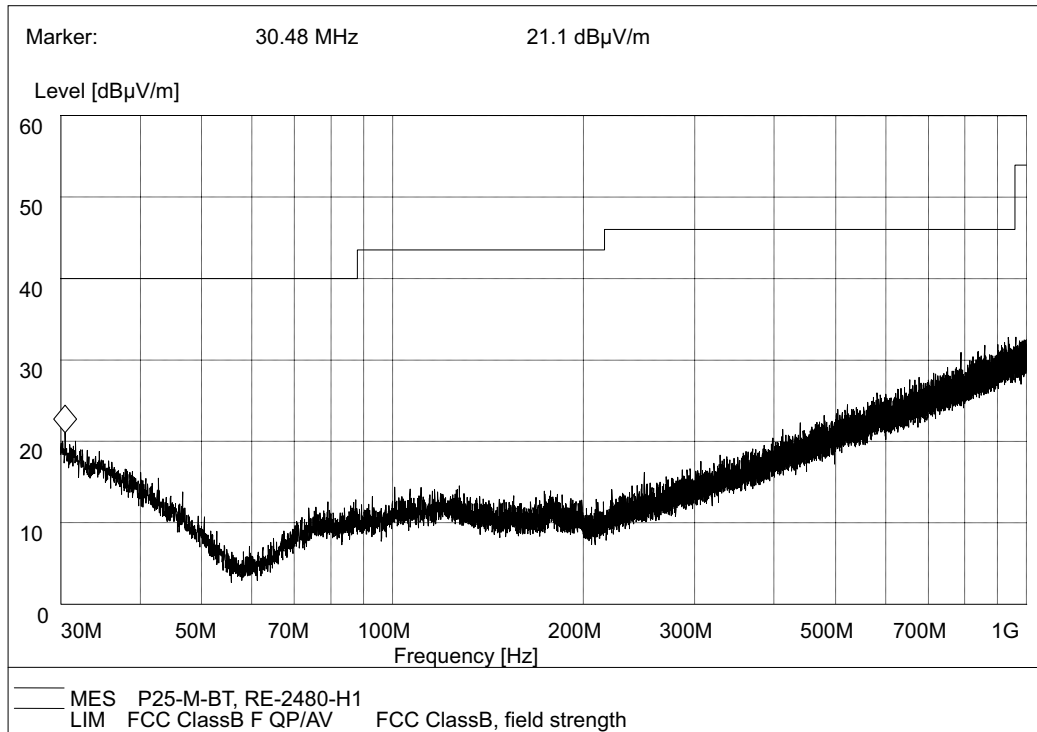
(Plot B.8: Antenna Vertical, 7GHz to 18GHz)



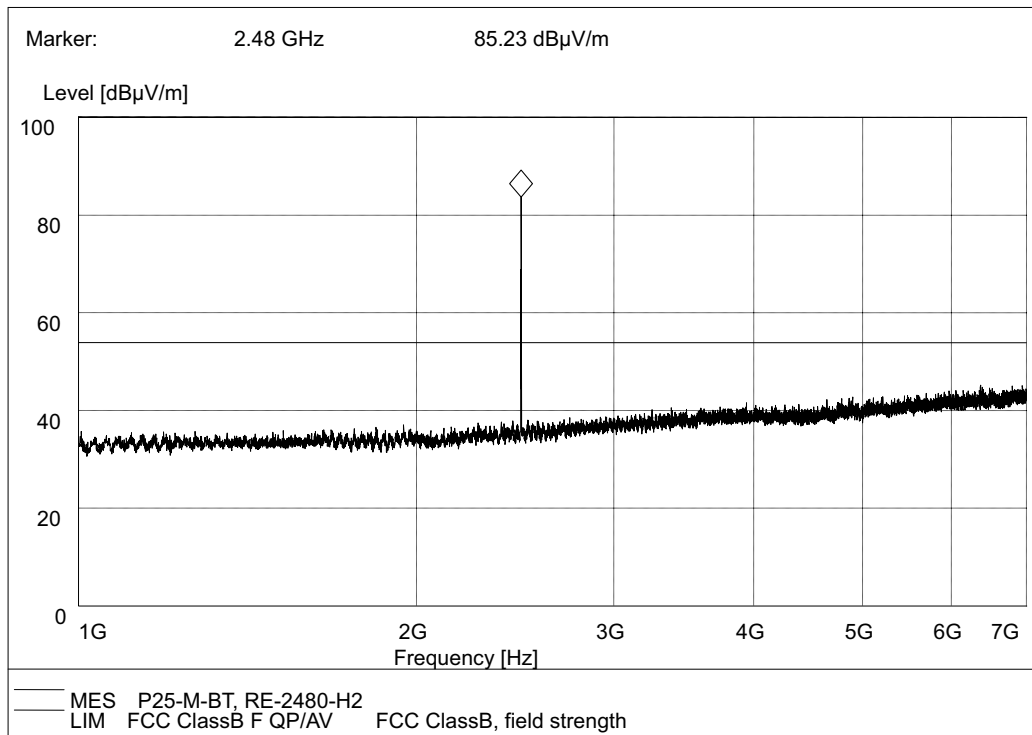
(Plot B.9: Antenna Vertical, 18GHz to 25GHz)



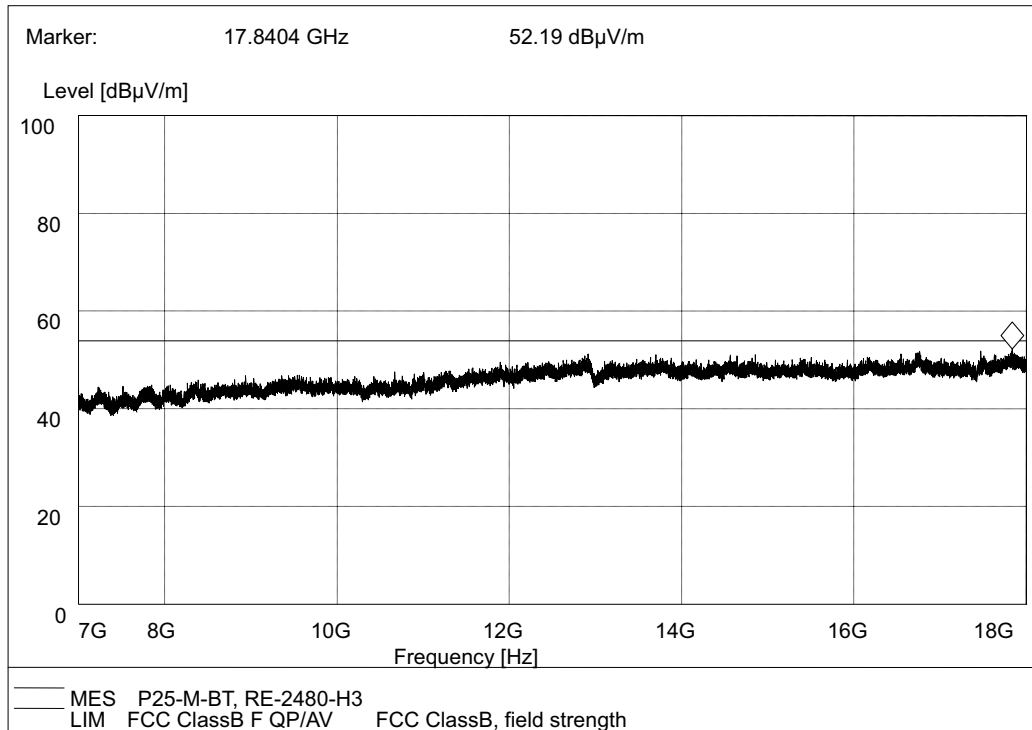
(Plot C.1: 9kHz to 30MHz)



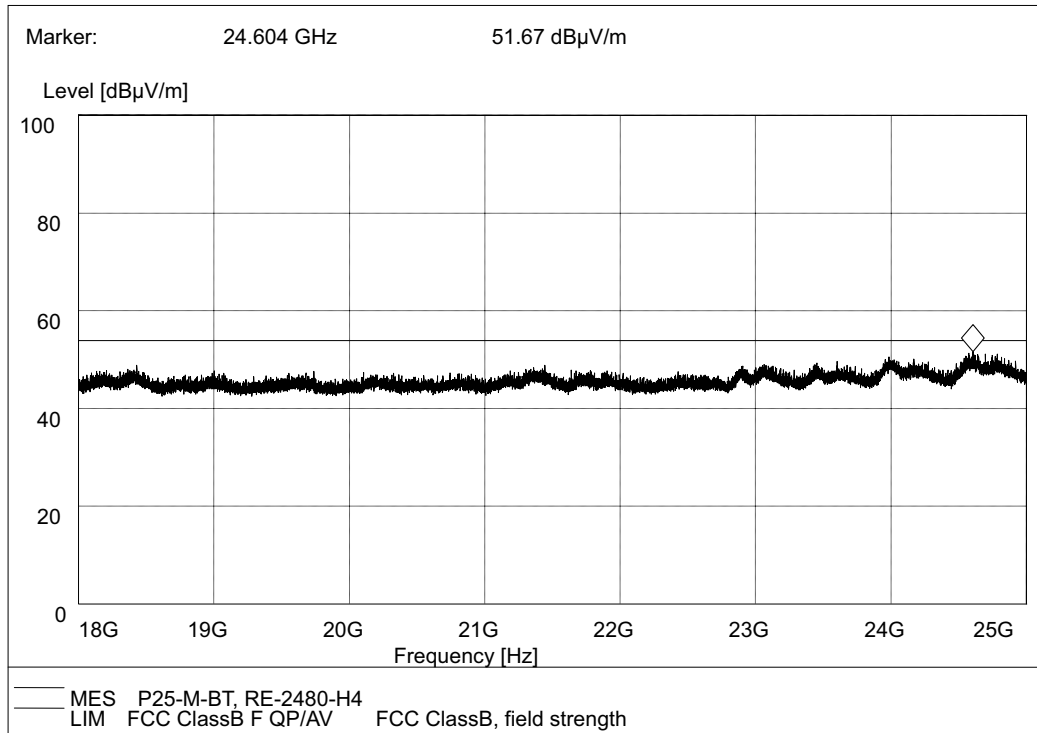
(Plot C.2: Antenna Horizontal, 30MHz to 1GHz)



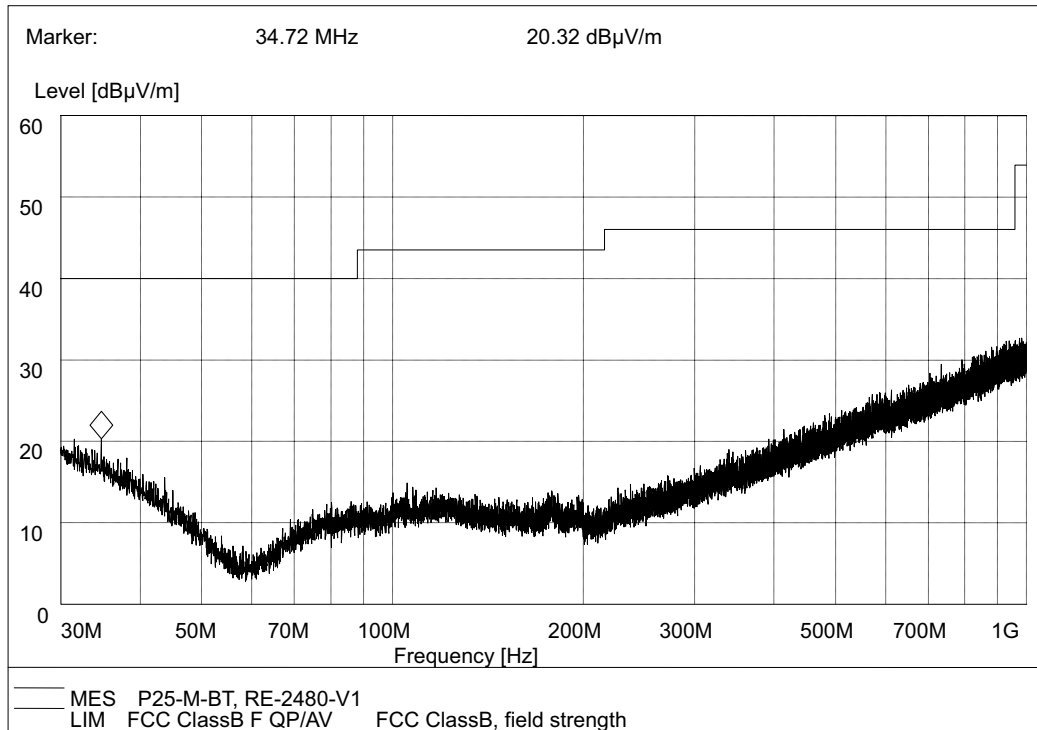
(Plot C.3: Antenna Horizontal, 1GHz to 7GHz)



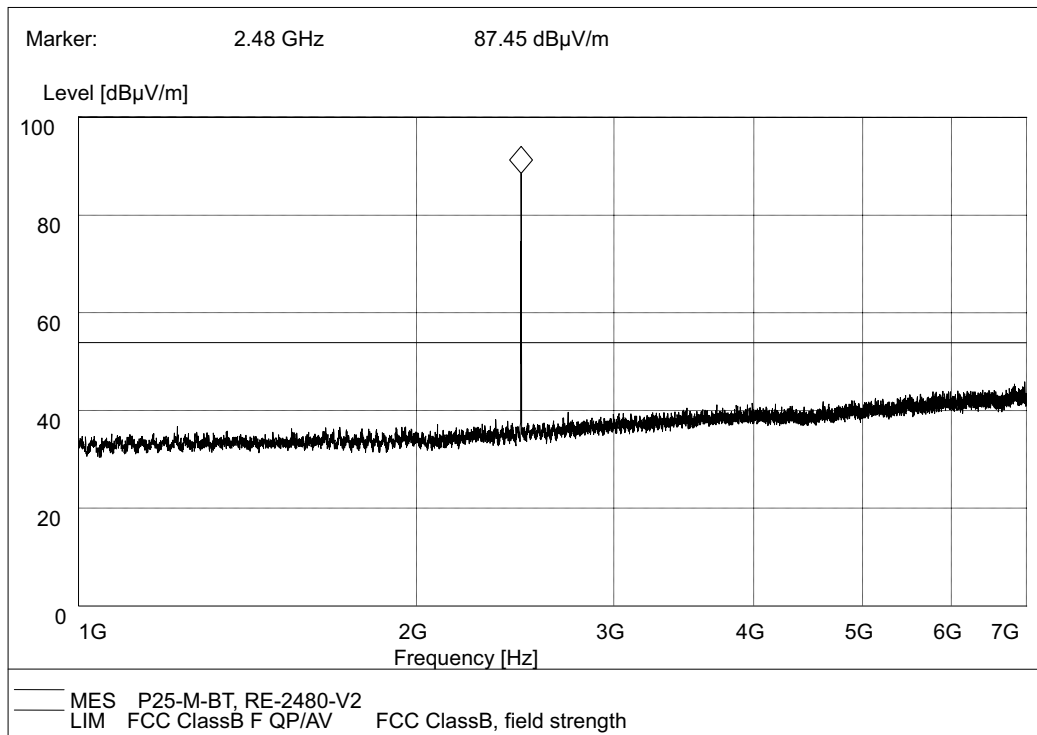
(Plot C.4: Antenna Horizontal, 7GHz to 18GHz)



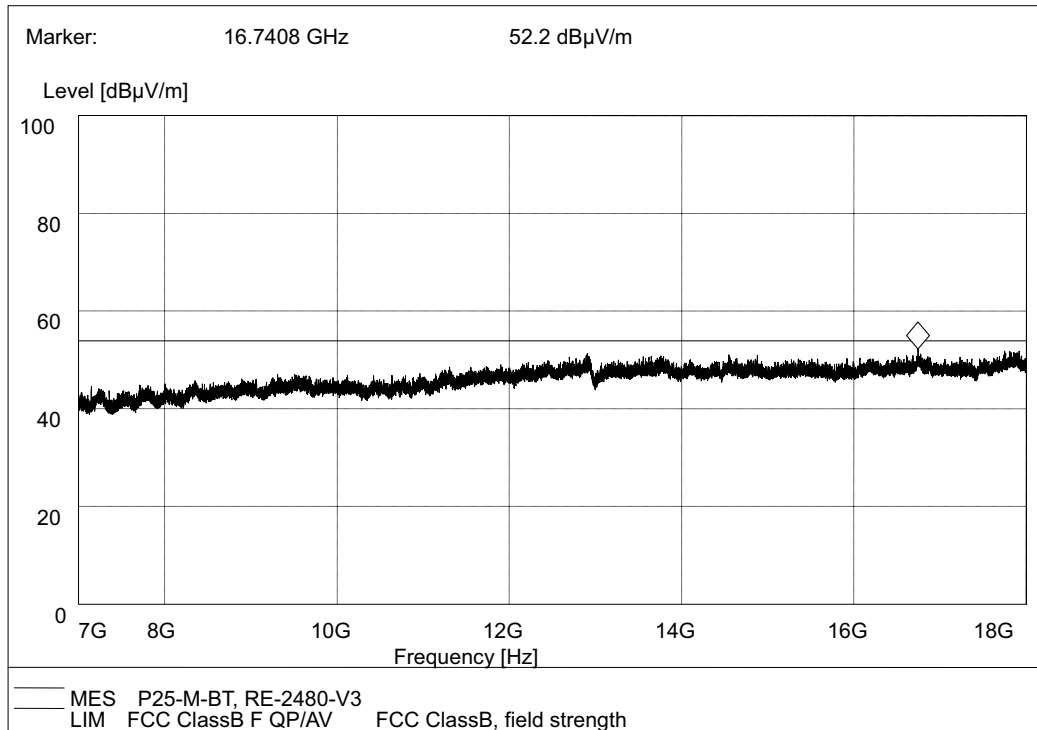
(Plot C.5: Antenna Horizontal, 18GHz to 25GHz)



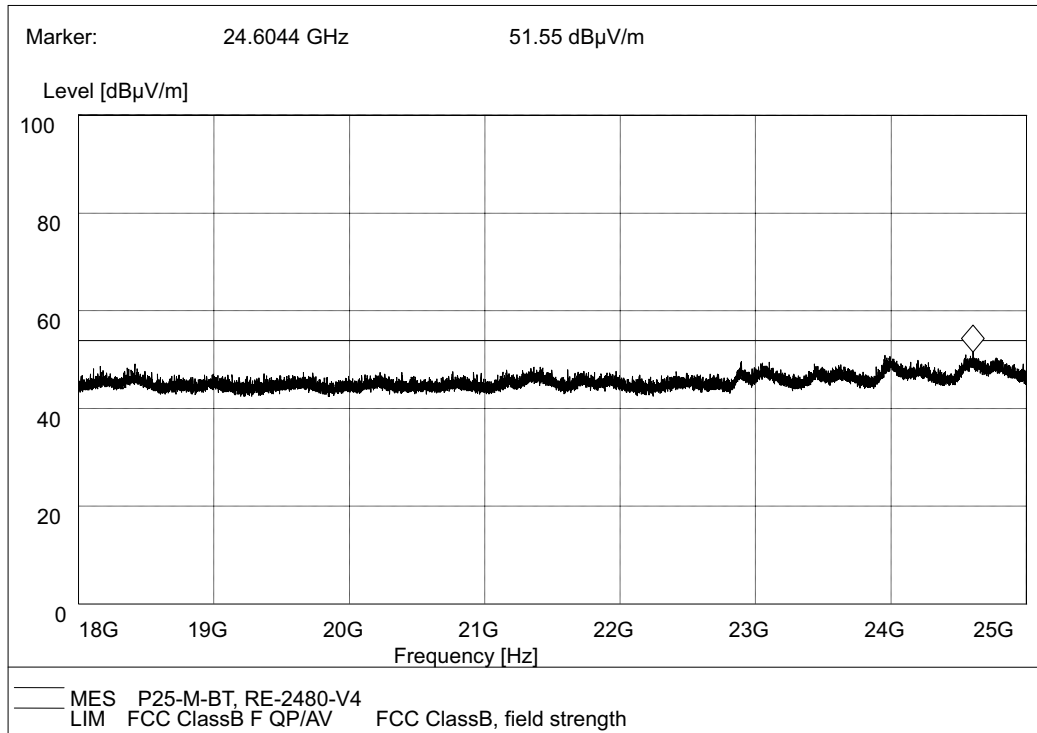
(Plot C.6: Antenna Vertical, 30MHz to 1GHz)



(Plot C.7: Antenna Vertical, 1GHz to 7GHz)



(Plot C.8: Antenna Vertical, 7GHz to 18GHz)

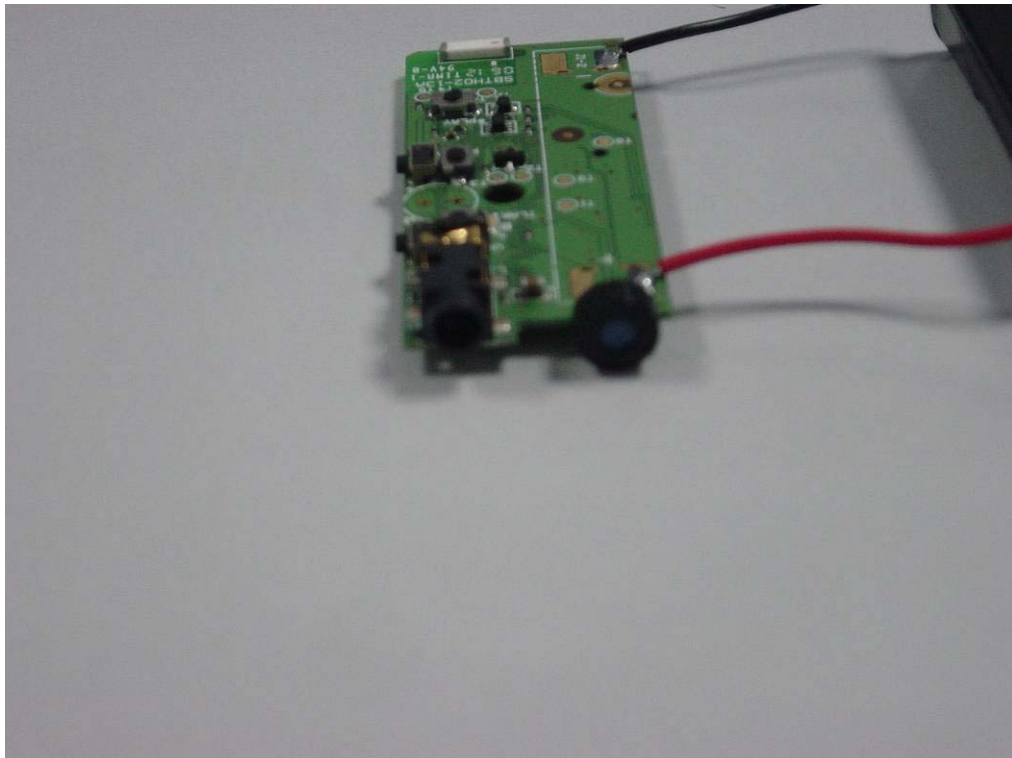


(Plot C.9: Antenna Vertical, 18GHz to 25GHz)

ANNEX A PHOTOS OF THE EUT

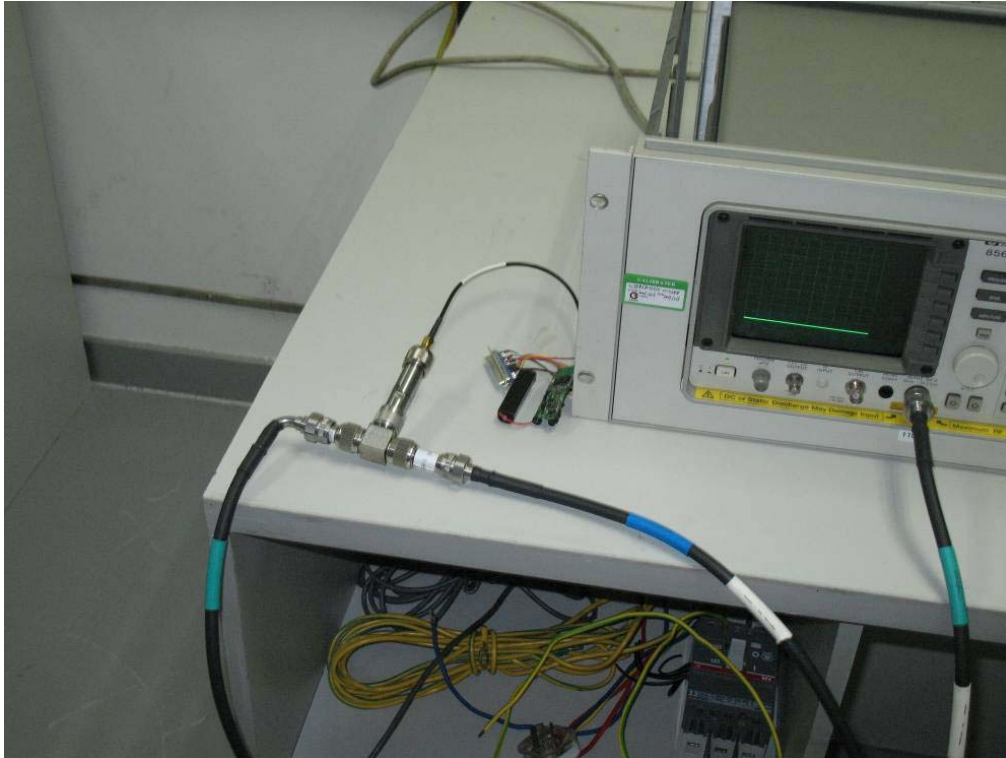
1. Appearance of the EUT:





ANNEX B PHOTOS OF TEST SETUP

1. RF Test Setup



2. Radiated Emission Test Setup

