



FCC

RF Test Report

Product Name: Mobile WiFi

Model Number: E5336Bs-6

Report No: SYBH(Z-RF)021052014-2002

FCC ID: QISE5336BS-6

Reliability Laboratory of Huawei Technologies Co., Ltd.

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Notice

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2. The laboratory has Passed the accreditation by The American Association for Laboratory Accreditation (A2LA). The accreditation number is 2174.01.
3. The laboratory has been listed by the US Federal Communications Commission to perform electromagnetic emission measurements. The site recognition number is 97456.
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Applicant: Huawei Technologies Co., Ltd.
Address: Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District, Shenzhen, 518129, P.R.C

Date of Receipt Sample: 2014-05-06
Start Date of Test: 2014-05-06
End Date of Test: 2014-05-09

Test Result: Pass

Approved by Senior Engineer:

2014-05-13
Date

Liu Chunlin
Name

Signature

Prepared by:

2014-05-13
Date

Zhu Mingjing
Name

Signature



Modification Record

No.	Last Report No.	Modification Description
1		First Report



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1 General Information

1.1 Applied Standard

Applied Rules: 47 CFR FCC Part 2, Subpart J 2013
47 CFR FCC Part 15, Subpart C 2013

Test Method: FCC KDB 558074 D01 DTS Meas Guidance v03r01
ANSI C63.10-2009, American National Standard for Testing Unlicensed
Wireless Devices.

1.2 Test Location

Test Location 1: Reliability Laboratory of Huawei Technologies Co., Ltd.
Address: Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District, Shenzhen, 518129, P.R.C

1.3 Test Environment Condition

Ambient Temperature: 19.5to 25 °C
Ambient Relative Humidity: 40 to 55 %
Atmospheric Pressure: Not applicable



2 Test Summary

Test Item	FCC Part No.	Requirements	Test Result
DTS (6 dB) Bandwidth	15.247(a)(2)	≥ 500 kHz.	SYBH(Z-RF)002022014-2002
Maximum Peak Conducted Output Power	15.247(b)(3)	For directional gain: < 30 dBm – (G[dBi] – 6 [dB]), peak; Otherwise: < 30 dBm, peak.	SYBH(Z-RF)002022014-2002
Maximum Power Spectral Density Level	15.247(e)	For directional gain: < 8 dBm/3 kHz – (G[dBi] – 6 [dB]), peak. Otherwise: < 8 dBm/3 kHz, peak.	SYBH(Z-RF)002022014-2002
Band Edges Compliance	15.247(d)	< -20 dBm/100 kHz if total peak power \leq power limit.	SYBH(Z-RF)002022014-2002
Unwanted Emissions into Non-Restricted Frequency Bands			SYBH(Z-RF)002022014-2002
Unwanted Emissions into Restricted Frequency Bands (Radiated)	15.247(d) 15.209 (NOTE 1)	FCC Part 15.209 field strength limit;	Pass
AC Power Line Conducted Emissions	15.207	FCC Part 15.207 conducted limit;	SYBH(Z-RF)002022014-2002
NOTE 1: According to KDB 558074, antenna-port conducted measurements are acceptable as an alternative to radiated measurements for demonstrating compliance to the limits in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case emissions will also be required.			

3 Description of the Equipment under Test (EUT)

3.1 General Description

E5336Bs-6 HSPA+/2100M/1900M/850M EDGE Quad Band is subscriber equipment in the UMTS/GSM system. E5336Bs-6 implement such functions as RF signal receiving/ transmitting, HSPA+/WCDMA protocol processing, data service etc, and it can act as a Wi-Fi hotspot for user accessing to internet. Externally it provides USB interface (to connect to the notebook etc.), USIM card . E5336Bs-6 has 3 internal antennas as default Wi-Fi , diversity, and main antenna.

1、 The differences between E5336Bs-6 and E5330Bs-6 are as follows:

The E5336Bs-6 has the different Appearance, Dimension and Identity Defined with E5330Bs-6.

Dimensions:

E5330Bs-6: 92.8 (length) × 60 (width) × 14 (height) (mm³)

E5336Bs-6: 93 (length) × 60 (width) × 14.5 (height) (mm³)

For E5330Bs-6 as figure.1:



Fig.1

For E5336Bs-6 as figure.2:



Fig.2



Fig.3

2、The difference of E5336Bs-6 and E5330Bs-6:

The followed table is show the different between the 2 Modules.

	E5330Bs-6	E5336Bs-6	
UMTS BAND1	support	support	
UMTS BAND2	support	support	
UMTS BAND5	support	support	
GSM 850/900/1800/1900	support	support	
FLASH	the same	the same	
PCB	the same	the same	
MAIN Antenna	Difference: Bom and Antenna PCB layout;	Difference: Bom and Antenna PCB layout;	Hardware Revise
DIV Antenna	Difference: Bom and Antenna;	Difference: Bom and Antenna;	Hardware Revise
WIFI	No support WPS	support WPS	Software Revise
WCDMA PA	the same	the same	
Appearance	Different	Different	MD Revise
MicroSD Receptacle	No support	support	Hardware Revise
Display Unit	LED	LCD	Hardware Revise
WPS	No support	support	Hardware Revise Software Revise

So the test data except RSE refer to NO. SYBH(Z-RF)002022014-2002 RF report of E5330Bs-6.



3.2 EUT Identity

NOTE: Unless otherwise noted in the report, the functional boards installed in the units shall be selected from the below list, but not means all the functional boards listed below shall be installed in one unit.

3.2.1 Board

Board	
Hardware Version	Description
CH1E5330SM	Main Board

3.2.2 Sub-Assembly

Name	Manufacture	Model	Description
Adapter	Huawei Technologies Co., Ltd.	HW-050100U2W	Adapter: Adapter,0degC,45degC,100V,240V,5V/1 A,UL 2Pin/USB 2.0,UL/CTIA/FCC,ERP V,HUAWEI Logo,Small,Terminal Dedicated
Adapter	Huawei Technologies Co., Ltd.	HW-050100E2W	Adapter,0degC-45degC,100V-240V,5V/1 A,VDE 2Pin /USB 2.0,CE ,ERP V,HUAWEI Logo,Small,Black Case,Terminal Dedicated
Adapter	Huawei Technologies Co., Ltd.	HW-050100B2W	Adapter,0degC-45degC,100V-240V,5V/1 A,BS 3Pin/USB 2.0,CE/PSPRING,ERP V,HUAWEI Logo,Black Case,UK,Small,Terminal Dedicated
Li-ion Battery	Huawei Technologies Co., Ltd.	HB554666RAW	Rated capacity: 1500mAh Nominal Voltage: +3.7V Charging Voltage: +4.2V
USB Cable	Huawei Technologies Co., Ltd.	H09-000181	Terminal Accessory,Data Cable,Usb A male to Micro Usb 17cm,Black,Terminal Dedicated



3.3 Technical Description

Characteristics	Description			
IEEE 802.11 WLAN Mode Supported	<input checked="" type="checkbox"/> 802.11b (20 MHz channel bandwidth), <input checked="" type="checkbox"/> 802.11g (20 MHz channel bandwidth) <input checked="" type="checkbox"/> 802.11n (20 MHz channel bandwidth)			
TX/RX Operating Range	2412-2462 MHz band	$f_c = 2407 \text{ MHz} + N * 5 \text{ MHz}$, where: - f_c = "Operating Frequency" in MHz, - N = "Channel Number" with the range from 1 to 11 for the 20 MHz channel bandwidth		
Data Rate	802.11b	1 Mbps, 2 Mbps, 5.5 Mbps, 11 Mbps		
	802.11g	6 Mbps, 9 Mbps, 12 Mbps, 18 Mbps, 24 Mbps, 36 Mbps, 48 Mbps, 54 Mbps		
	802.11n (SISO)	MCS 0 to MCS 7		
Modulation Type	DBPSK/DQPSK/CCK (DSSS), BPSK/QPSK/16QAM/64QAM (OFDM).			
Emission Designator	10M4G1D (for 802.11b mode), 16M6G7D (for 802.11g mod), 17M9G7D (for 802.11n mode)			
TX Power Control	<input checked="" type="checkbox"/> Supported, <input type="checkbox"/> Not Supported			
Standby Mode	<input type="checkbox"/> Supported, <input checked="" type="checkbox"/> Not Supported			
Equipment Type	<input type="checkbox"/> Stand-alone equipment, <input type="checkbox"/> Plug-in radio device, <input checked="" type="checkbox"/> Combined equipment			
Antenna	Description	Isotropic Antenna		
	Type	<input type="checkbox"/> External, <input checked="" type="checkbox"/> Integrated		
	Ports	<input checked="" type="checkbox"/> Ant 1, <input type="checkbox"/> Ant 2, <input type="checkbox"/> Ant 3		
	Smart System	<input checked="" type="checkbox"/> SISO (for 802.11b/g/n), <input type="checkbox"/> MIMO (for 802.11n): 2 Tx & 2 Rx, <input type="checkbox"/> Diversity (for 802.11b/g) : Tx & Rx		
	Gain	1.58 dBi (per antenna port, max.)		
	Remark	When the EUT is put into service, the practical maximum antenna gain should NOT exceed the value as described above.		
Power Supply	Type	<input checked="" type="checkbox"/> AC/DC Adapter	<input type="checkbox"/> PoE:	<input type="checkbox"/> Other:



4 General Test Conditions / Configurations

4.1 Test Modes

NOTE: Worst cases for each IEEE 802.11 mode are selected to perform tests.

Test Mode	Test Modes Description
11B	IEEE 802.11b with data rate of 1 Mbps using SISO mode.
11G	IEEE 802.11g with data rate of 6 Mbps using SISO mode.
11N20	IEEE 802.11n with data rate of MCS0 and bandwidth of 20 MHz using SISO mode.

4.2 EUT Configurations

4.2.1 General Configurations

Configuration	Description
Test Antenna Ports	Until otherwise specified, <ul style="list-style-type: none"> - All TX tests are performed at all TX antenna ports of the EUT, and - All RX tests are performed at all RX antenna ports of the EUT.
Multiple RF Sources	Other than the tested RF source of the EUT, other RF source(s) are disabled or shutdown during measurements.

4.2.2 Customized Configurations

Test Mode	RF Ch.	Antenna Port	TX Freq. [MHz]	RX Freq. [MHz]	Ch. BW [MHz]	Power Conf., per Port
11B	L	Ant 1	Ch No. 1 / 2412 MHz	---	20	14
11B	M	Ant 1	Ch No. 6 / 2437 MHz	---	20	14
11B	H	Ant 1	Ch No. 11 / 2462 MHz	---	20	14
11G	L	Ant 1	Ch No. 1 / 2412 MHz	---	20	11
11G	M	Ant 1	Ch No. 6 / 2437 MHz	---	20	11
11G	H	Ant 1	Ch No. 11 / 2462 MHz	---	20	11
11N20	L	Ant 1	Ch No. 1 / 2412 MHz	---	20	9
11N20	M	Ant 1	Ch No. 6 / 2437 MHz	---	20	9
11N20	H	Ant 1	Ch No. 11 / 2462 MHz	---	20	9



4.3 Test Environments

NOTE: The values used in the test report may be stringent than the declared.

Environment Parameter	Selected Values During Tests		
	Temperature	Voltage	Relative Humidity
NTNV	Ambient	3.7 VDC	Ambient

4.4 Antenna requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

The antennas of the Mobile WiFi are **permanently attached**.
There are no provisions for connection to an external antenna.

Conclusion:

The Mobile WiFi, **FCC ID: QISE5336BS-6** unit complies with the requirement of §15.203.

Ch. Frequency (MHz)

Ch.	Frequency (MHz)
01	2412
.	.
.	.
06	2437
.	.
.	.
11	2462

Frequency/ Channel Operations

4.5 Description of tests

4.5.1 Bandwidth measurement

- (a) Connect EUT test port to spectrum analyzer.
- (b) Set the EUT to transmit maximum output power at 2.4GHz, then set the measured frequency number and test the bandwidth with spectrum analyzer.

4.5.2 Peak output power

- (a) Connect EUT test port to spectrum analyzer.
- (b) Set the EUT to transmit maximum output power at 2.4GHz.
- (c) Then set the EUT to transmit at high, middle and low frequency and measure the conducted output power separately.

4.5.3 Average power

- (a) Connect EUT test port to spectrum analyzer.
- (b) Set the EUT to transmit maximum output power at 2.4GHz.
- (c) Then set the EUT to transmit at high, middle and low frequency and measure the Average power separately.

4.5.4 Band edge spurious emission

- (a) Connect EUT test port to spectrum analyzer
- (b) Set the EUT to transmit maximum output power at 2.4GHz.
- (c) Then set the EUT to transmit at high, low frequency and measure the conducted band edge spurious separately.

4.5.5 Conducted RF spurious

- (a) Connect EUT test port to spectrum analyzer
- (b) Set the EUT to transmit maximum output power at 2.4GHz.
- (c) Then set the EUT to transmit at high, middle and low frequency and measure the conducted spurious separately.

4.5.6 Power spectral density

- (a) Connect EUT test port to spectrum analyzer
- (b) Set the EUT to transmit maximum output power at 2.4GHz.
- (c) Then set the EUT to transmit at high, middle and low frequency and measure the conducted power spectral density.

4.5.7 Radiated spurious emission & spurious in restricted band

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.10 (2009). The EUT was set-up on insulator 80cm above the Ground Plane. The set-up and test methods were according to ANSI C63.10:2009. The Radiated Disturbance measurements were made using a Rohde and Schwarz Test Receiver and control software.

A preliminary scan and a final scan of the emissions were made by using test script of software; the emissions were measured using a Quasi-Peak Detector below 1GHz, Peak Detector and AV Detector above 1GHz. The maximal emission value was acquired by adjusting the antenna height, polarisation and turntable azimuth in accordance with the software setup. Normally, the height range of antenna was 1m to 4m, and the azimuth range of turntable was 0° to 360°. The receive antenna has two polarizations V and H.

A portable or small unlicensed wireless device shall be placed on a non-metallic test fixture or other nonmetallic support during testing. The supporting fixture shall permit orientation of the EUT in each of three orthogonal (x, y, z) axis positions such that emissions from the EUT are maximized.

The EUT communicates with the BTS simulator through Air interface. The EUT operated on the typical channel.

Measurement bandwidth: 30 MHz – 1000 MHz: 120 kHz

Measurement bandwidth: 1000 MHz – 10th Carrier Frequency: 1 MHz

4.5.8 Conducted Emission at Power Port

The Table-top EUT was placed upon a non-metallic table 0.8 m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10: 2009.

Conducted Disturbance at AC Port measurements were undertaken on the L and N Lines. The emissions were measured using a Quasi-Peak Detector and Average Detector.

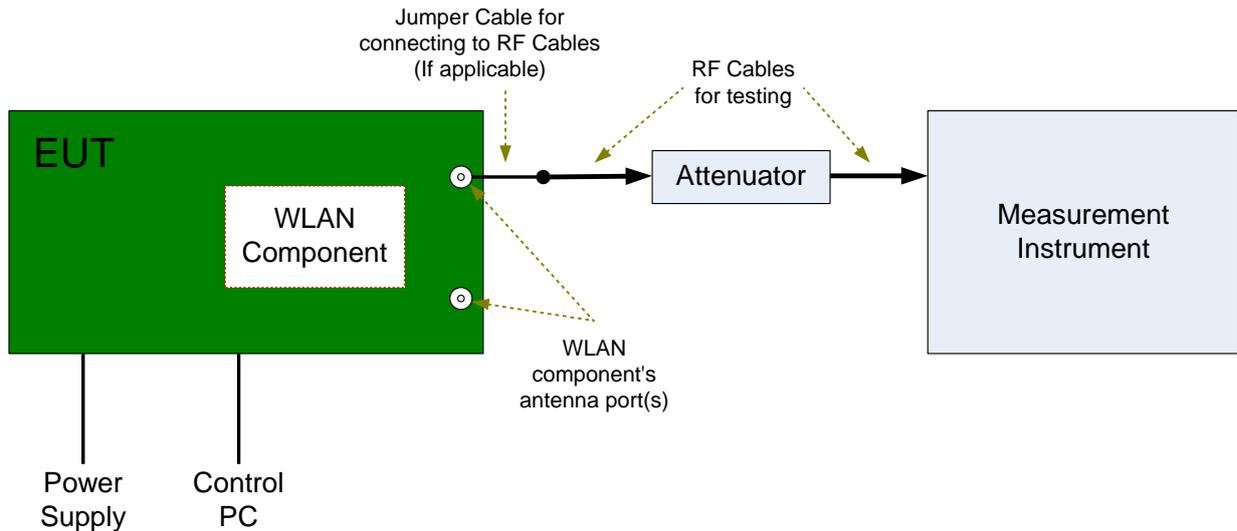
The EUT communicates with the BTS simulator through Air interface, the BTS simulator controls the Wireless Modem to transmit the maximum power which defined in specification of product. The Wireless Modem operated on the typical channel.

Measurement bandwidth (RBW) for 150kHz to 30 MHz: 9 kHz;

4.6 Test Setups

4.6.1 Test Setup 1

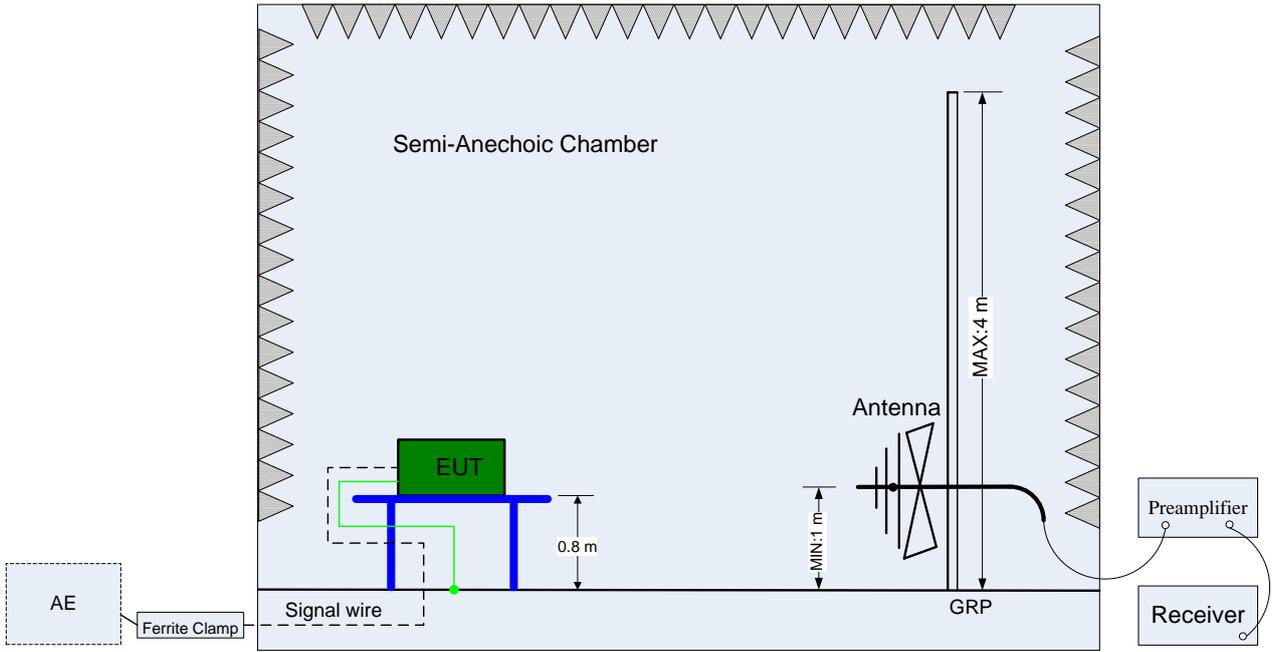
The WLAN component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



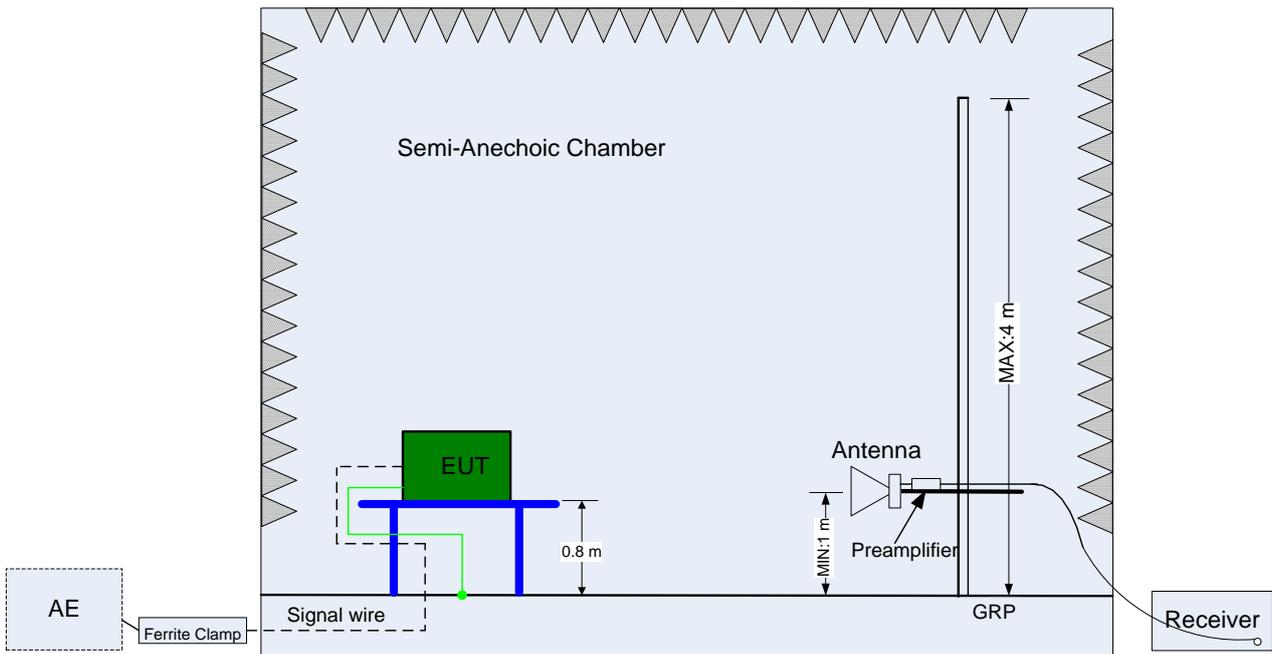
4.6.2 Test Setup 2

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.4. The test distance is 3m. The setup is according to ANSI C63.4 and CAN/CSA-CEI/IEC CISPR 22.

The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).



(Below 1 GHz)

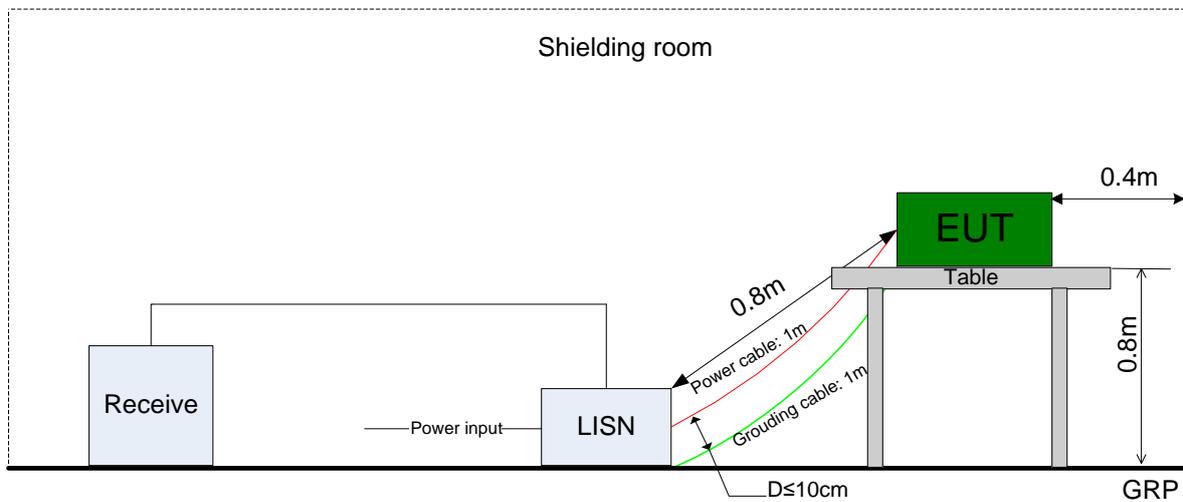


(Above 1 GHz)

4.6.3 Test Setup 3

The mains cable of the EUT (maybe per AC/DC Adapter) must be connected to LISN. The LISN shall be placed 0.8 m from the boundary of EUT and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance is between the closest points of the LISN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8 m from the LISN.

Ground connections, where required for safety purposes, shall be connected to the reference ground point of the LISN and, where not otherwise provided or specified by the manufacturer, shall be of same length as the mains cable and run parallel to the mains connection at a separation distance of not more than 0.1 m.



4.7 Test Conditions

Test Case	Test Conditions	
	Configuration	Description
DTS (6 dB) Bandwidth	Measurement Method	FCC KDB 558074 §8.2 Option 2.
	Test Environment	NTNV
	Test Setup	Test Setup 1
	EUT Configuration	11B_L, 11B_M, 11B_H 11G_L, 11G_M, 11G_H 11N20_L, 11 N20_M, 11 N20_H
Maximum Peak Conducted Output Power	Measurement Method	FCC KDB 558074 §9.1 .2 (integrated band power method).
	Test Environment	NTNV
	Test Setup	Test Setup 1
	EUT Configuration	11B_L, 11B_M, 11B_H 11G_L, 11G_M, 11G_H 11N20_L, 11 N20_M, 11 N20_H
Maximum Power Spectral Density Level	Measurement Method	FCC KDB 558074 §10.2 (peak PSD).
	Test Environment	NTNV
	Test Setup	Test Setup 1
	EUT Configuration	11B_L, 11B_M, 11B_H 11G_L, 11G_M, 11G_H 11N20_L, 11 N20_M, 11 N20_H
Band Edges Compliance	Measurement Method	FCC KDB 558074 §13.0.
	Test Environment	NTNV
	Test Setup	Test Setup 1
	EUT Configuration	11B_L, 11B_H 11G_L, 11G_H 11N20_L, 11 N20_H
Unwanted Emissions into Non-Restricted Frequency Bands	Measurement Method	FCC KDB 558074 §11.0
	Test Environment	NTNV
	Test Setup	Test Setup 1
	EUT Configuration	11B_L, 11B_M, 11B_H 11G_L, 11G_M, 11G_H 11N20_L, 11 N20_M, 11 N20_H
Unwanted Emissions into Restricted Frequency Bands (Radiated)	Measurement Method	ANSI C63.10; FCC KDB 558074 §12.1, Radiated
	Test Environment	NTNV
	Test Setup	Test Setup 2
	EUT Placement	<input type="checkbox"/> Flatwise, <input type="checkbox"/> Upright, <input type="checkbox"/> Hung
	EUT Configuration	(1) 30 MHz to 1 GHz: 11B_L (Worst Conf.). (2) 1 GHz to 3 GHz: 11B_L, 11B_H



Test Case	Test Conditions	
	Configuration	Description
		11G_L, 11G_H 11N20_L, 11 N20_H (3) 3 GHz to 18 GHz: 11B_L (Worse Conf.), 11B_H (Worse Conf.). (4) 18 GHz to 26.5 GHz: 11B_L (Worse Conf.), 11B_H (Worse Conf.).
	EUT Configuration	11x_RX
AC Power Line Conducted Emissions	Measurement Method	AC mains conducted.
	Test Environment	NTNV
	Test Setup	Test Setup 3
	EUT Configuration	11B_L(Worst Conf.).



4.8 Test Result

Radiated Spurious Emission & Spurious in Restricted Band

Note: Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

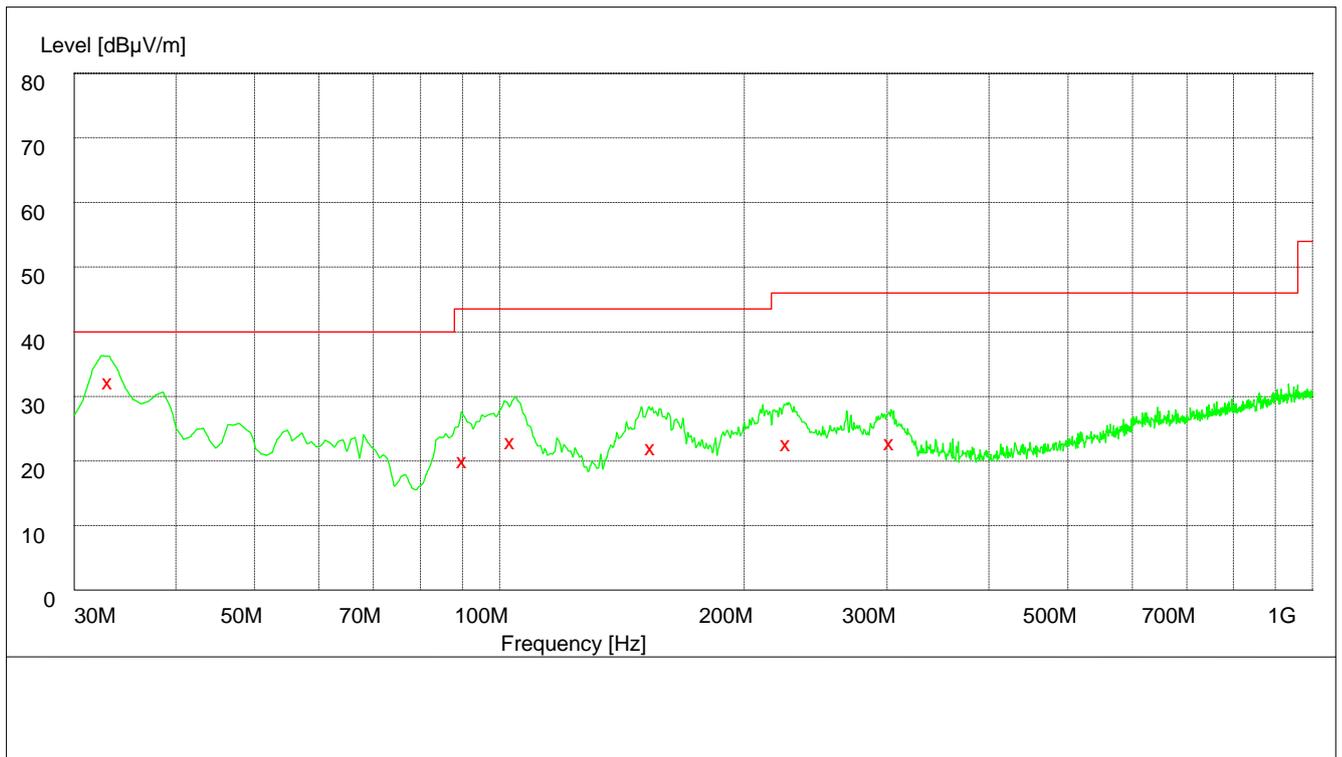
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

Part 1: Testing Range of “30 MHz to 1 GHz”

Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is **the WORST case for all Test Modes and Channels**. This range will not be presented for each Test Mode and each Channel.

Note 2: **The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).**



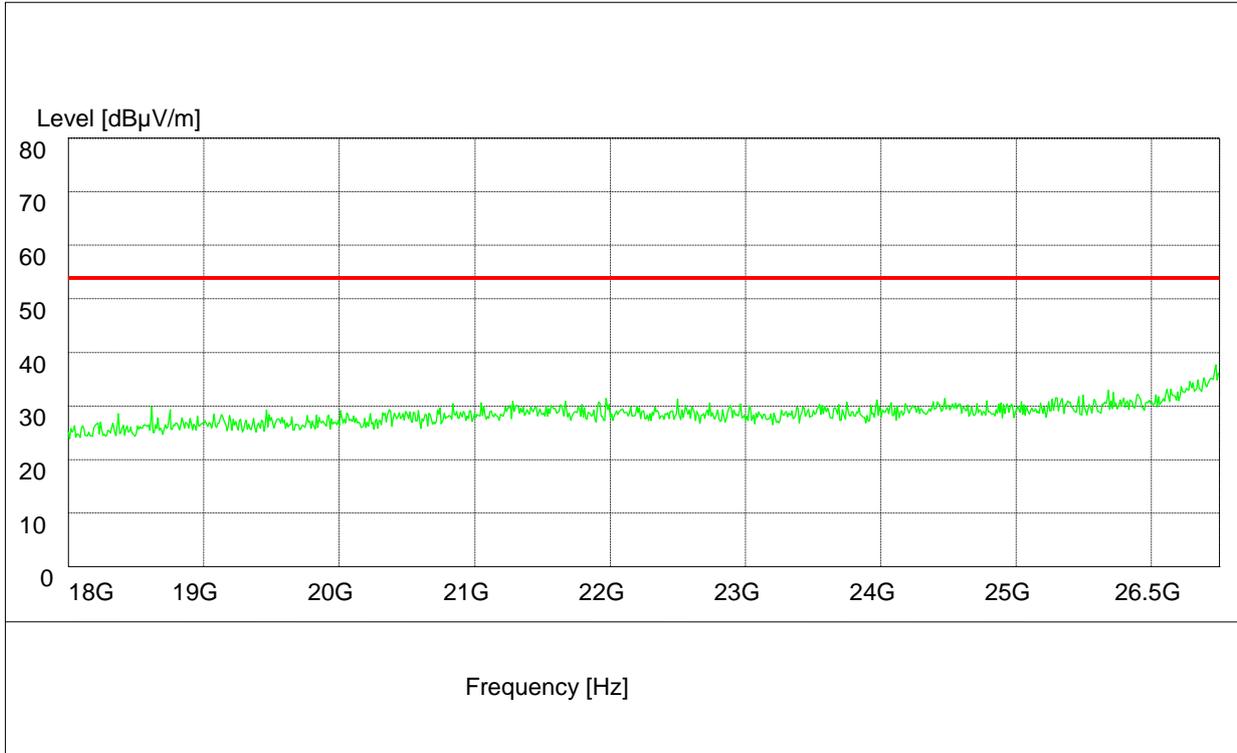
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Plarization
33.180000	33.80	14.2	40.0	6.2	100.0	360.00	VERTICAL
90.600000	21.50	11.9	43.5	22.0	143.0	102.00	VERTICAL
103.680000	24.50	13.2	43.5	19.0	100.0	44.00	VERTICAL
154.260000	23.50	10.1	43.5	20.0	100.0	98.00	VERTICAL



226.620000	24.20	13.2	46.0	21.8	143.0	124.00	HORIZONTAL
303.600000	24.30	15.3	46.0	21.7	100.0	111.00	HORIZONTAL

Part 2: Testing Range of “18 GHz to 26.5 GHz”

Note: No peak found in pre- test.

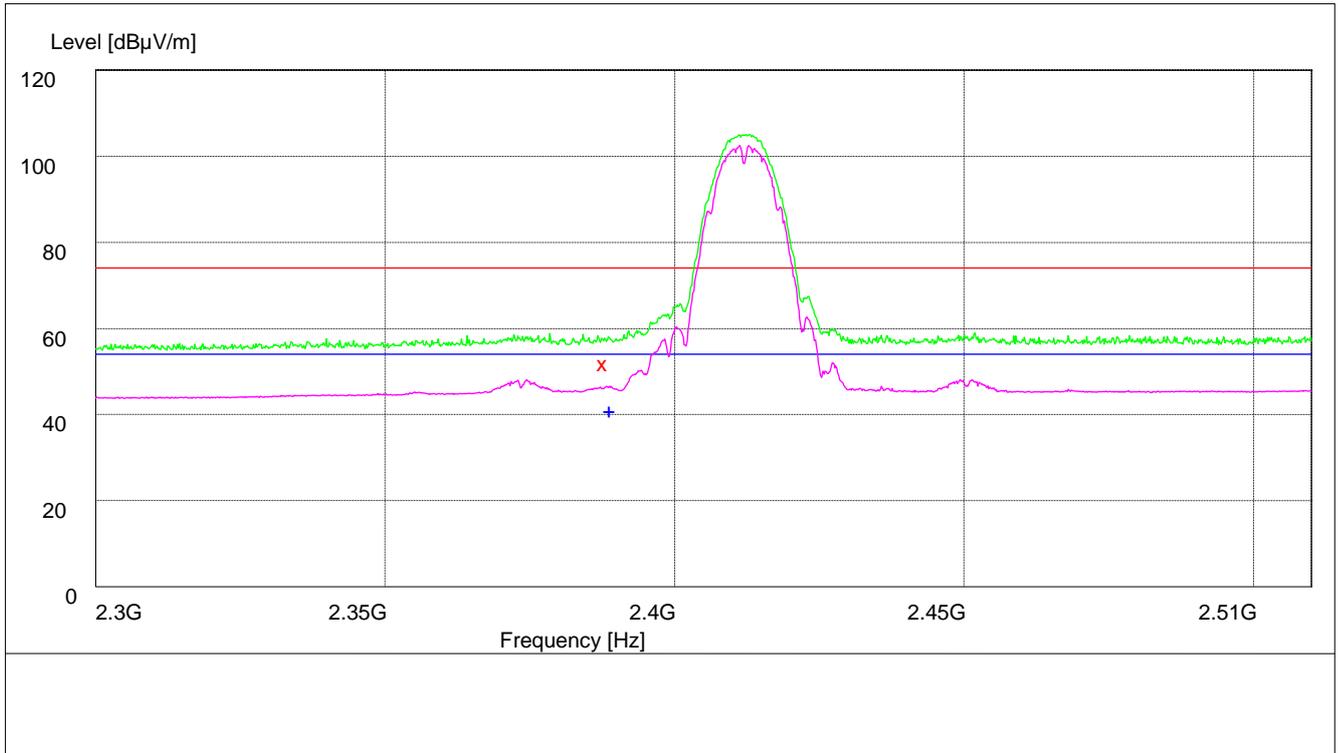


Part 3: Testing Range of “2.3GHz to 2.5GHz”

- Note 1: The testing range of “2.3 GHz to 2.5 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.
- Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB μ V/m) and Average Limit (54 dB μ V/m).
- Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

4.8.1 Test Mode: 11b

Channel 01



Note: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

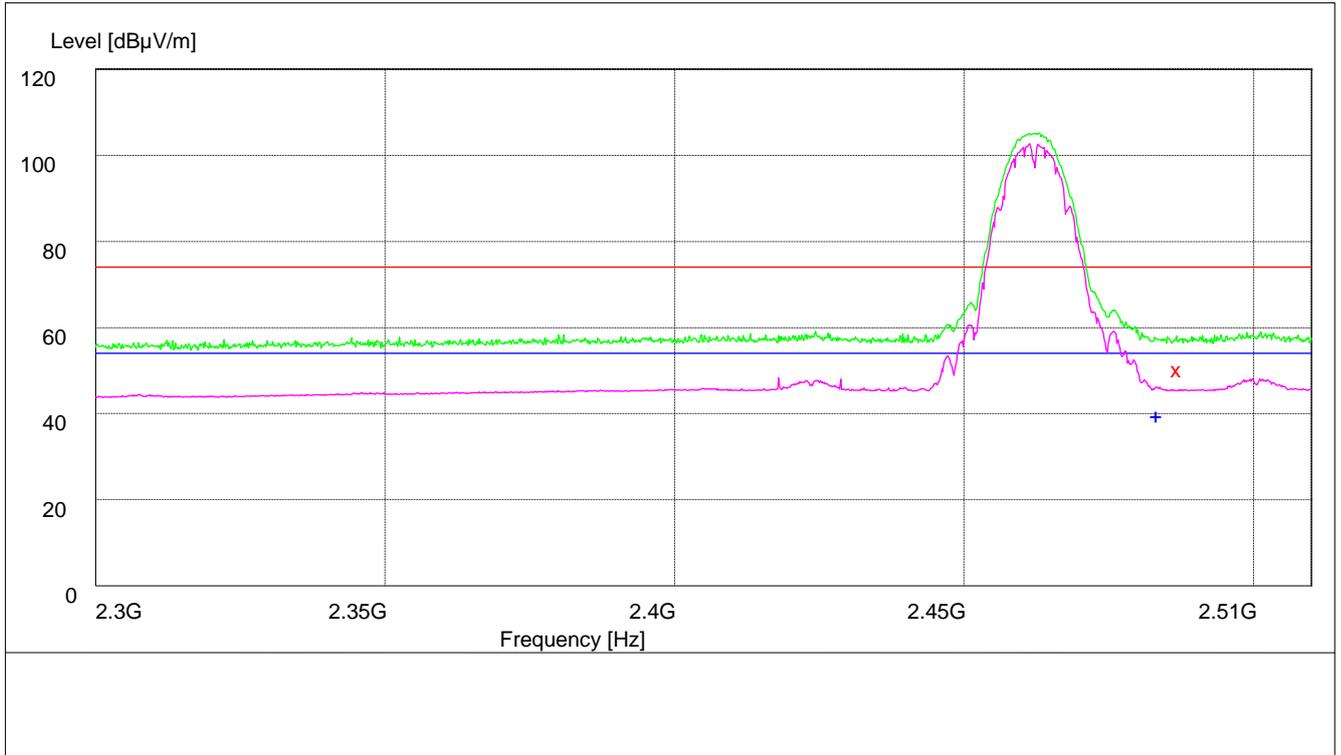
Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2388.000000	54.00	34.7	74.0	20.0	101.0	360.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dB μ V/m	Transd dB	Limit dB μ V/m	Margin dB	Height cm	Azimuth deg	Polarization
2389.000000	43.10	34.7	54.0	10.9	101.0	244.00	HORIZONTAL



Channel 11



Note: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

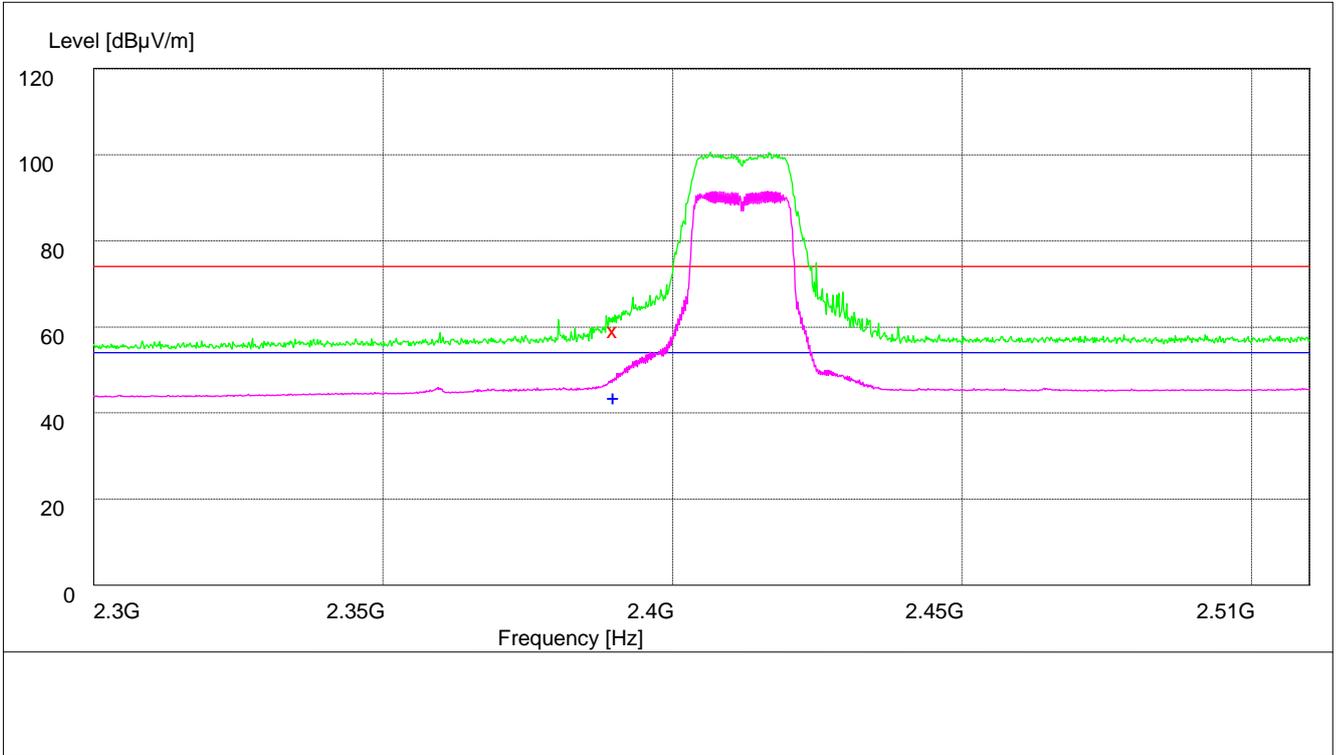
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2487.000000	52.40	35.0	74.0	21.6	186.0	0.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	41.70	35.0	54.0	12.3	118.0	244.00	HORIZONTAL

4.8.2 Test Mode: 11g

Channel 01



Note: The peak exceeds the limit line is carrier frequency.

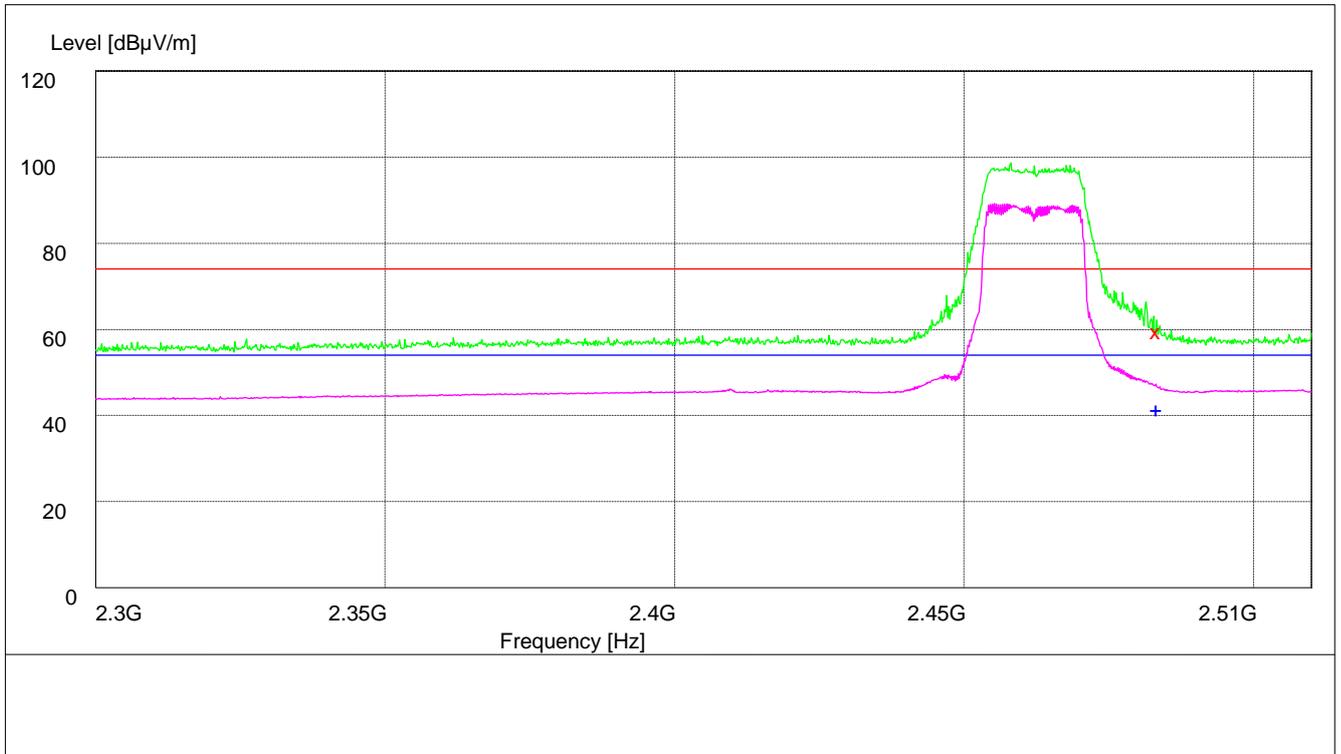
MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	61.40	34.7	74.0	12.6	101.0	348.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	45.80	34.7	54.0	8.2	122.0	247.00	HORIZONTAL

Channel 11



Note: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

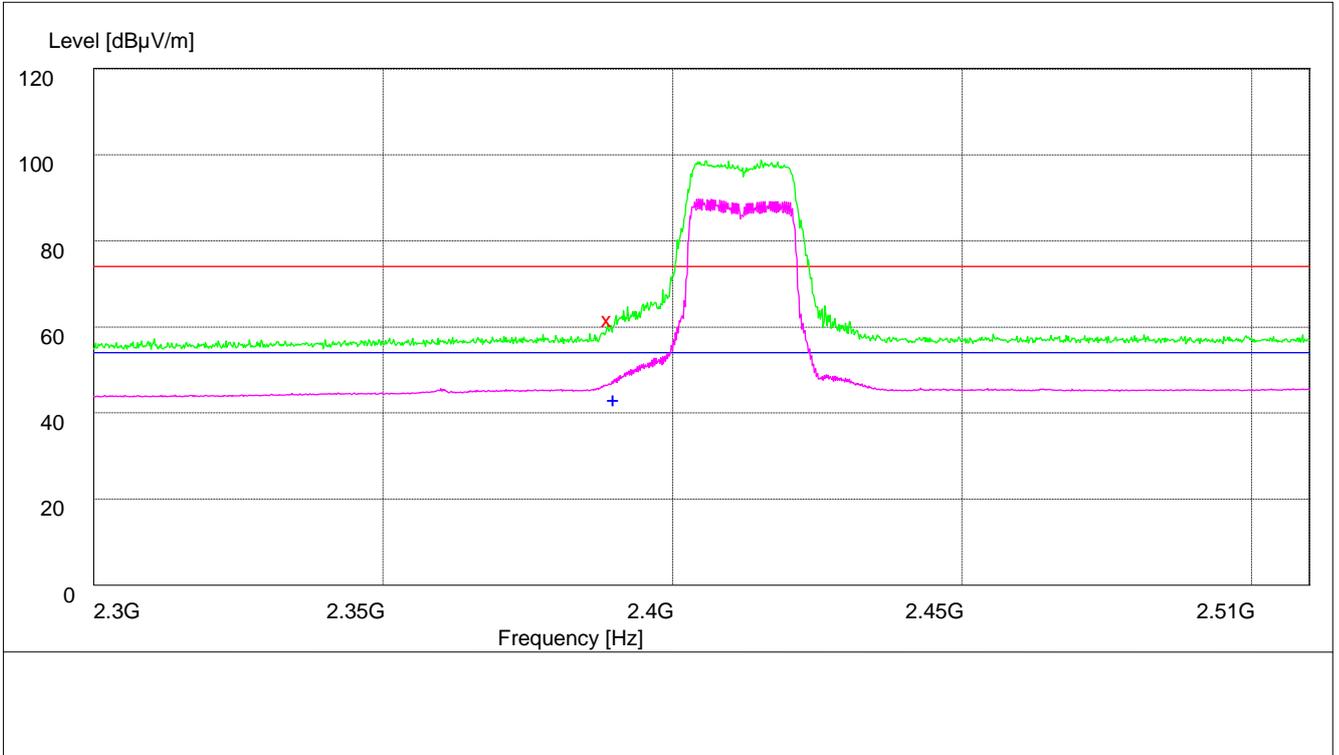
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	61.80	35.0	74.0	12.2	107.0	92.00	VERTICAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	43.60	35.0	54.0	10.4	100.0	231.00	HORIZONTAL

4.8.3 Test Mode: 11n

Channel 01



Note: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

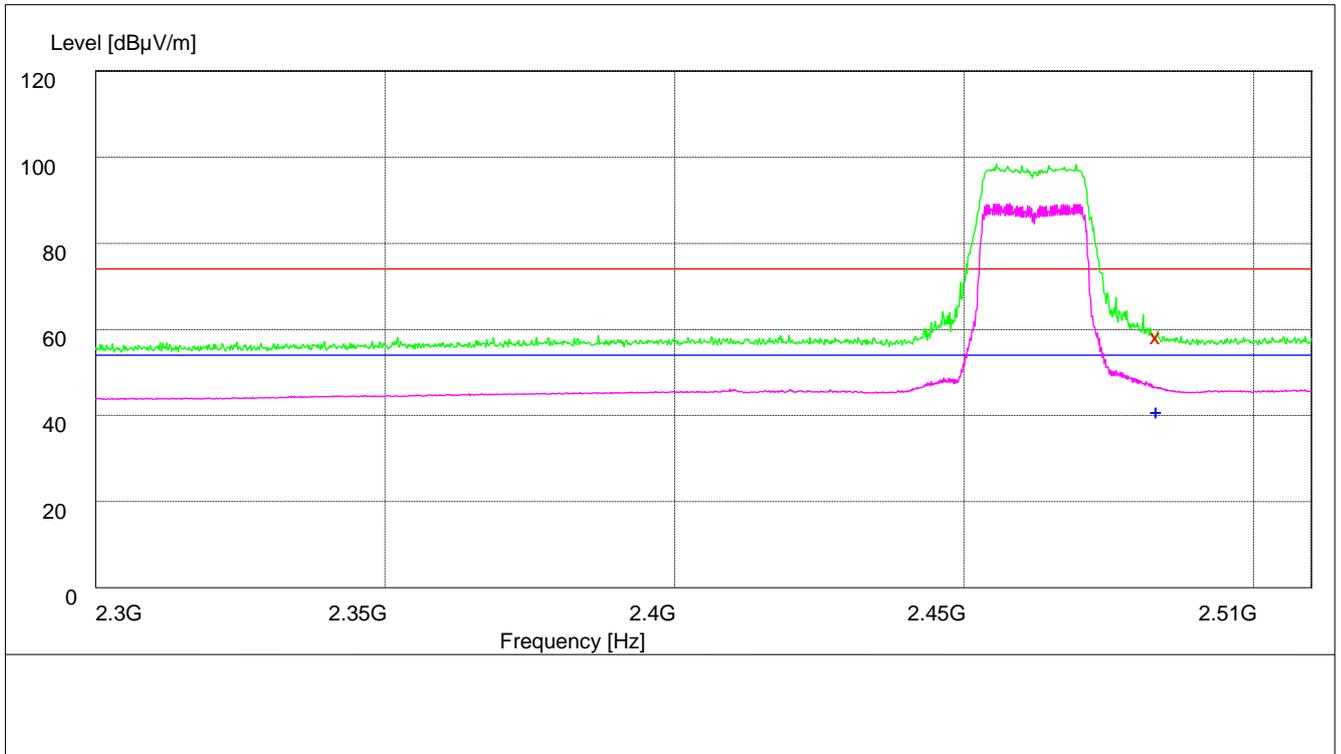
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2389.000000	63.90	34.7	74.0	10.1	100.0	245.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	45.40	34.7	54.0	8.6	100.0	247.00	HORIZONTAL



Channel 11



Note: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

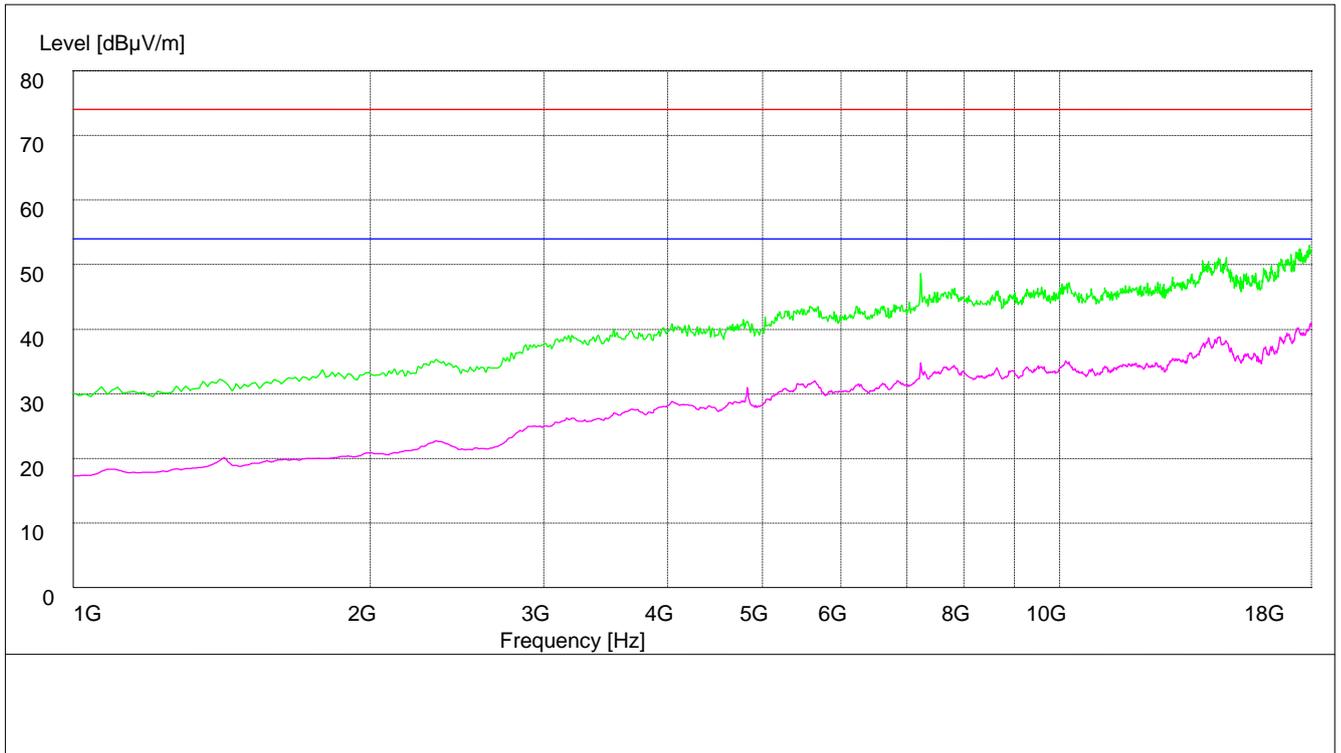
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	60.60	35.0	74.0	13.4	100.0	244.00	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	43.20	35.0	54.0	10.8	100.0	250.00	HORIZONTAL

Part 4: Testing Range of “1 GHz to 18 GHz”

- Note 1: The test results and plot for testing range of “1 GHz to 18 GHz” showed as below is **the WORST case for all Test Modes and Channels**. This range will not be presented for each Test Mode and each Channel.
- Note 2: The testing range of “1 GHz to 18 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.
- Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dB μ V/m) and Average Limit (54 dB μ V/m).



**5 Main Test Instruments**

Equipment Name	Manufacturer	Model	Serial Number	Cal Date	Cal- Due
Power supply	KEITHLEY	2303	1288003	2012-11-19	2014-11-18
Wireless Communication Test set	Agilent	N4010A	MY49081592	2013-10-29	2014-10-28
Universal Radio Communication Tester	R&S	CMU200	113164	2013-07-18	2014-07-17
Universal Radio Communication Tester	R & S	CMW500	126855	2013-08-08	2015-08-09
Spectrum Analyzer	Agilent	E4440A	MY48250119	2013-08-09	2014-08-08
Signal Analyzer	R&S	FSQ31	200021	2013-10-29	2014-10-28
Spectrum Analyzer	Agilent	N9030A	MY49431698	2013-10-29	2014-10-28
Temperature Chamber	WEISS	WKL64	56246002940010	2014-02-25	2015-02-24
Temperature Chamber	ESPEC	MW3030	06114003	2014-05-09	2015-05-08
Signal generator	Agilent	E8257D	MY51500314	2014-05-09	2015-05-08
Vector Signal Generator	R&S	SMU200A	104162	2013-10-29	2014-10-28
Test receiver	R&S	ESU26	100150	2013-05-15	2014-05-14
Spectrum analyzer	R&S	FSU3	200474	2013-12-24	2014-12-23
Spectrum analyzer	R&S	FSU43	100144	2013-12-24	2014-12-23
Double-Ridged Waveguide Horn Antenna (1G~18GHz)	R&S	HF907	100304	2013-02-02	2015-02-01
Trilog Broadband Antenna (30M~3GHz)	SCHWARZBECK	VULB 9163	9163-490	2013-02-02	2015-02-01
LOOP Antennas(9kHz-30MHz)	R&S	HFH2-Z2	100262	2013-03-23	2015-03-22
Pyramidal Horn Antenna(18GHz-26-5GHz)	ETS-LINDGREN	3160-09	5140299	2013-03-05	2015-03-04
Artificial Mains Network	R&S	ENV4200	100134	2013-12-24	2014-12-23
Artificial Mains Network	R&S	ENV216	100382	2013-12-24	2014-12-23

END