



FCC Test Report

Test report no.: EMC_831FCC15.247_2004_5745_5825_rev1

FCC Part 15.247 / CANADA RSS-210

EUT: WLAN Model: BCM94318MPAGH
HOST: Test Fixture (Modular Approval)

FCC ID: QDS-BRCM1017
IC ID: 4324A-BRCM1017
(This test report covers freq. 5745-5825MHz)



TTI-P-G 081/94-A0

Accredited according to **ISO/IEC 17025**



**Bluetooth Qualification
Test Facility
(BQTF)**



FCC listed # 101450

IC recognized # 3925

CETECOM Inc.

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CETECOM Inc. is a Delaware Corporation with Corporation number: 2113686
Board of Directors: Dr. Harald Ansorge, Dr. Klaus Matkey, Hans Peter May

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1	General information
1.1	Notes

The test results of this test report relate exclusively to the test item specified in 1.5. The CETECOM Inc. USA does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM Inc USA.

TEST REPORT PREPARED BY:

EMC Engineer: Harpreet Sidhu

1.2 Testing laboratory
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Phone: +1 408 586 6200 Fax: +1 408 586 6299
E-mail: lothar.schmidt@cetecomusa.com
Internet: www.cetecom.com

1.3 Details of applicant

Name : **Broadcom corporation**
Street : **190 Mathilda Place**
City / Zip Code : **Sunnyvale, CA 94086**
Country : **USA**
Contact : **Dan Lawless**
Telephone : **408-922-5870**
Tele-fax : **408-543-3399**
e-mail : dlawless@broadcom.com

1.4 Application details

Date of receipt test item : 2005-01-11
Date of test : 2005-01-11 to 2005-01-25

1.5 Test item

Manufacturer : Applicant
Model No. (EUT) : [BCM94318MPAGH \(sample# 2000\)](#)
Host : Test Fixture
Description : [WLAN MiniPCI Multiband card incorporating 2.4GHz and 5GHz radios](#)
FCC ID : QDS-BRCM1017
IC ID : 4324A-BRCM1017
Additional information
Frequency : 2412MHz – 2472MHz for 2.4GHz band (not covered in this test report)
5180MHz – 5320MHz for 5GHz band (not covered in this test report)
5745MHz – 5825MHz for 5GHz band (covered in this test report)
Type of modulation : DSSS / OFDM (orthogonal frequency division multiplexing)
Number of channels : 13 for 2.4GHz band
13 for 5GHz band
Antenna : 5.7dBi max. gain FPC antenna for 5745-5825GHz band
(Hitachi model HFT17-DL03)
4.49dBi max gain stamped metal sheet ant. for 5745-5825GHz band (Wistron NeWeb model EBB-Q)
Power supply : 3.3 VDC from Host
Output power : 14.11dBm (25.76mW) conducted power for 5745-5825GHz
Extreme temp. Tolerance : 0°C to +70°C

1.6 Test standards:

FCC Part 15 §15.247 / CANADA RSS-210
Measurements done as per DA 02-2138 / FCC04-165

PROJECT OVERVIEW:

This test report carries all measurements required as per FCC 15.247 on WLAN mini PCI card model# BCM94318MPAGH tested in test fixture as per DA001407 requirements for modular transmitter approval.

Test methods were followed as per DA02-2138 & FCC04-165

All measurements are done with under-mentioned max gain antennas for each antenna type.

WLAN was tested for spurious emissions at different data rates. Test report shows only worst-case test results of all data rates with following power levels.

802.11a Mode:

Channels 36-48:12.0dBm

Channels 52-64:15.0dBm

Channel 149-165:15.0dBm

Antenna Manufacturer	Antenna Type	Model	Peak gain @ 2400-2483.5MHz	Peak gain 5150-5350MHz	Peak gain @ 5725-5850
Wistron NeWeb	Metal sheet inverted F antenna	EBB-Q	1.51	2.51(Main)	4.49 (Aux)
Phycomp	Stamped Metal	CAN4313 384 012501B	Main 0.57 (H) white	3.74 (Main)	Main 3.56 (V) white
WNC	PIFA	81.ED415.002	3.24dBi (Main)	1.51dBi (Main)	Main -0.35dBi

Hitachi	FPC	HFT17-DL04	Main 2.1 (H) White	4.3 (aux)	Aux 3.6 (V) Black
Hitachi	FPC	HFT17-DL03	Main 1.5 (H)	Main 5.1 (V)	Main 5.7 (V+H)

2 Technical test**2.1 Summary of test results**

No deviations from the technical specification(s) were ascertained in the course of the tests
Performed

Final Verdict:
(Only “passed” if all single measurements are “passed”)

Passed

Technical responsibility for area of testing:

2005-02-01 EMC & Radio Lothar Schmidt (Manager)



Date

Section

Name

Signature

Responsible for test report and project leader:

2005-02-01 EMC & Radio Harpreet Sidhu (EMC Engineer)



Date

Section

Name

Signature

2.2 Test report

TEST REPORT

Test report no.: EMC_831FCC15.247_2005_5745_5825_rev1

TEST REPORT REFERENCE

LIST OF MEASUREMENTS		PAGE
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SPECTRUM BANDWIDTH OF DSSS SYSTEM**§15.247(a) (2)****6 dB bandwidth****(Data rate – 54Mbps)**

TEST CONDITIONS		6 dB BANDWIDTH (MHz)		
Frequency (MHz)		5745	5805	5825
T _{nom} (23)°C	V _{nom} (3.3) VDC	16.53	16.53	16.53

LIMIT**SUBCLAUSE §15.247(a) (2)****The minimum 6dB bandwidth shall be at least 500 KHz**

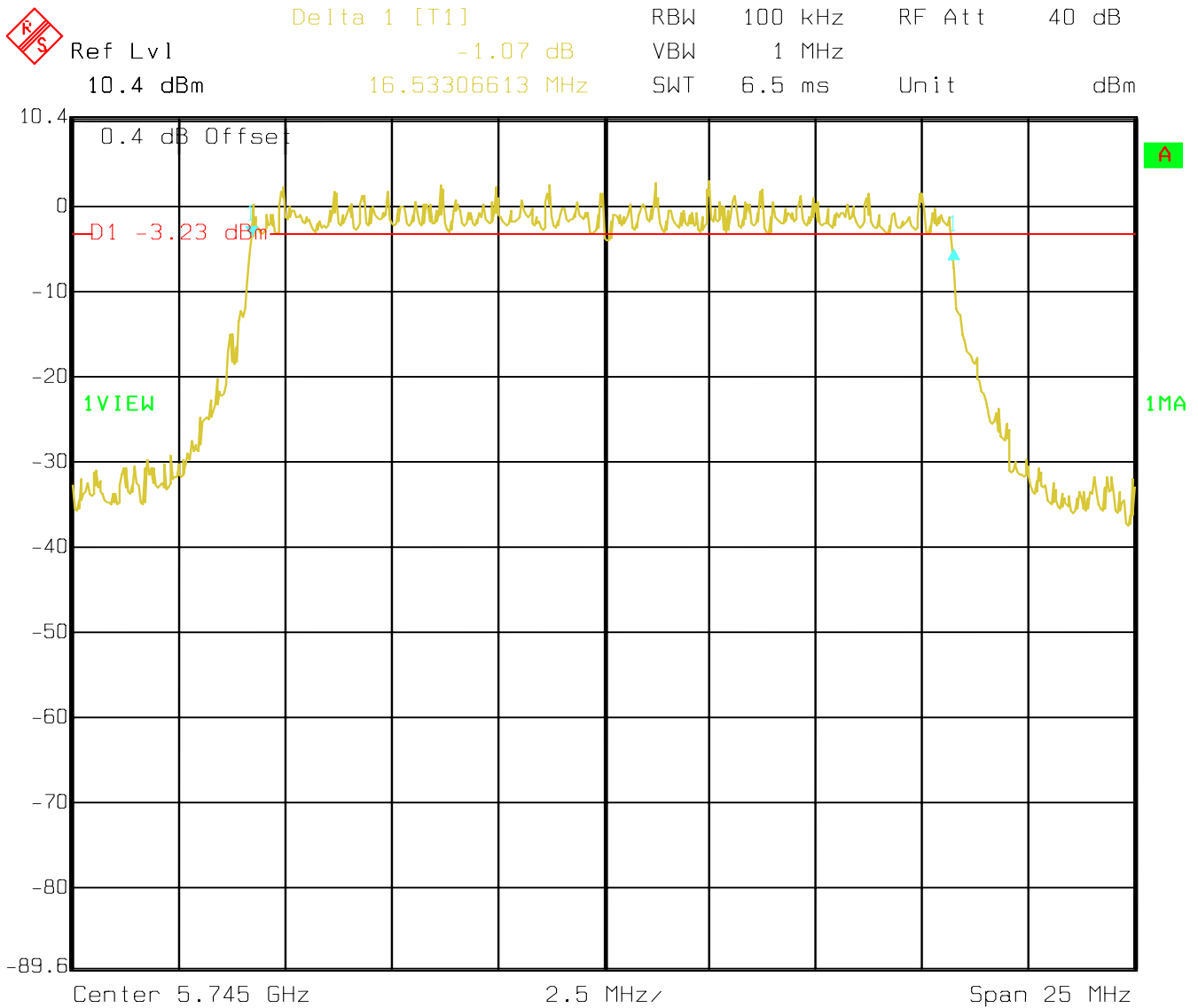
SPECTRUM BANDWIDTH OF DSSS SYSTEM

§15.247(a) (2)

6 dB bandwidth

(Data rate – 54Mbps)

Lowest Channel: 5745MHz



Date: 14.FEB.2005 14:14:25

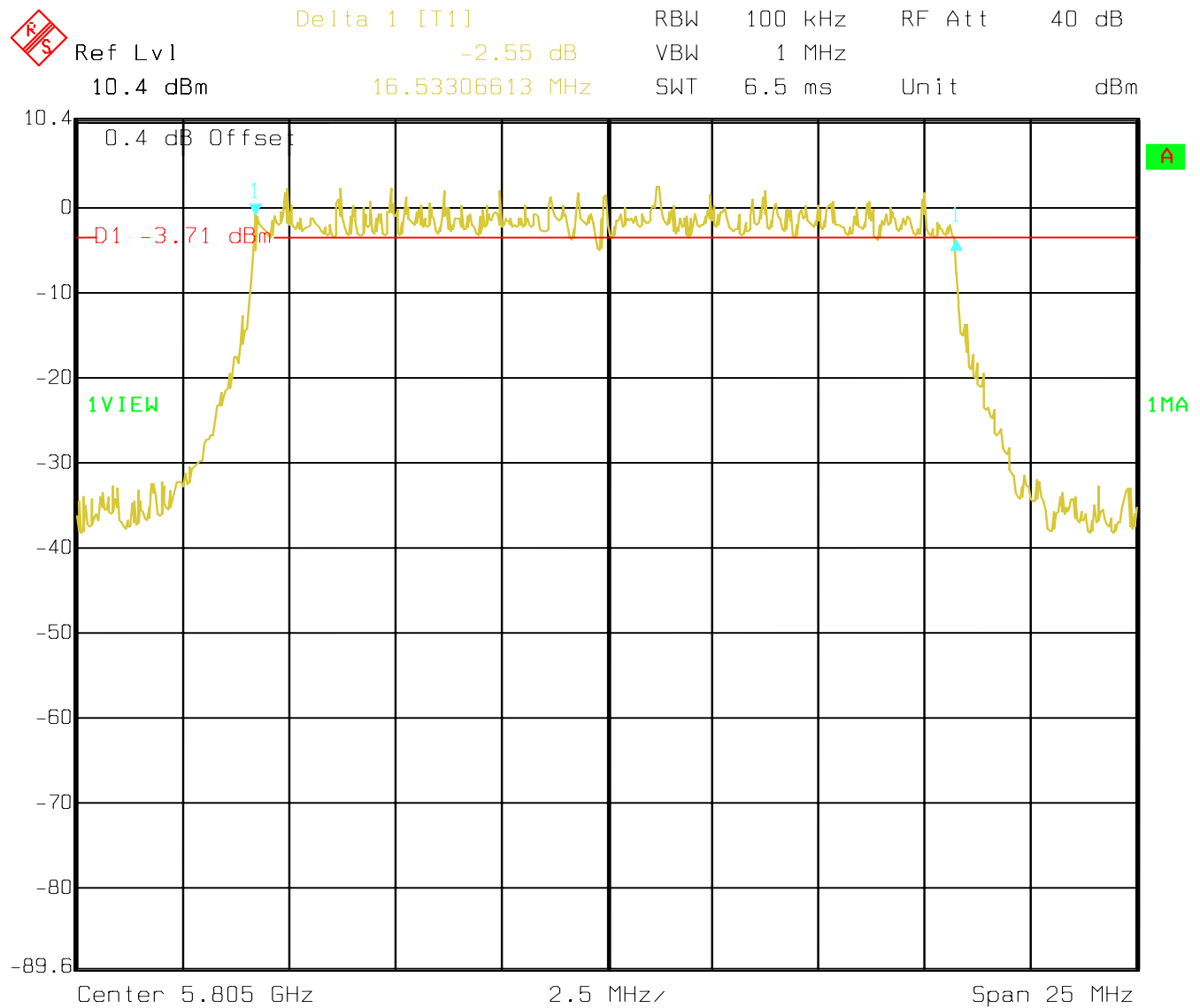
SPECTRUM BANDWIDTH OF DSSSS SYSTEM

§15.247(a) (2)

6 dB bandwidth

(Data rate – 54Mbps)

Mid Channel: 5805MHz



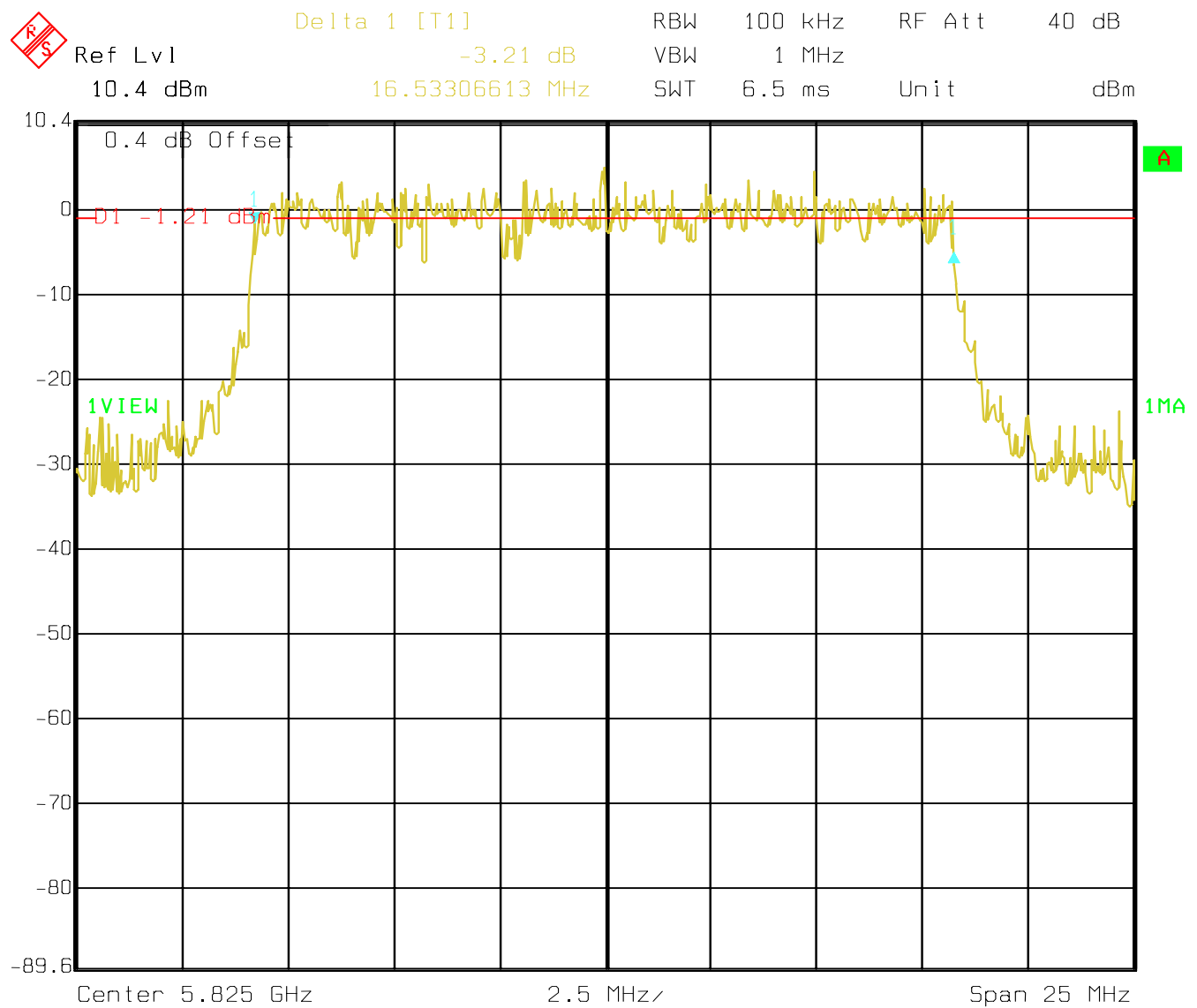
Date: 14.FEB.2005 14:15:18

§15.247(a) (2)

6 dB bandwidth

(Data rate – 54Mbps)

Highest Channel: 5825MHz



Date: 14.FEB.2005 14:16:30

OUTPUT POWER

§ 15.247 (b) (3)

(Conducted)

*Measurement procedure as per DA 02-2138 is used as directed by FCC 04-165.

Test Procedure:

DA 02-2138 Test method-3

TEST CONDITIONS		OUTPUT POWER (dBm)			
Frequency (MHz)		5745	5805	5825	
T _{nom} (23)°C	V _{nom} (3.3) VDC	Av	*14.11	*14.09	*13.83
Measurement uncertainty		±0.5dBm			

LIMIT

SUBCLAUSE § 15.247 (b) (3)

Frequency range	RF power output
5725-5850 MHz	1.0 Watt / 30dBm

**OUTPUT POWER
(RADIATED)**

§ 15.247 (b) (3)

Measurement procedure as per DA 02-2138 is used as directed by FCC 04-165.

EIRP:

TEST CONDITIONS		OUTPUT POWER EIRP(dBm)		
Frequency (MHz)		5745	5805	5825
T _{nom} (23)°C	V _{nom} (3.3) VDC	19.81	19.79	19.53
Measurement uncertainty		±0.5dBm		

*Note: EIRP is calculated based on 5.7dBi antenna gain and conducted peak power measurements.

LIMIT

SUBCLAUSE § 15.247 (b) (3)

Frequency range	RF power output
5725-5850 MHz	30dBm on Conducted

POWER SPECTRAL DENSITY

§15.247 (e)

Measurement procedure as per DA 02-2138 is used as directed by FCC 04-165.

Test Method-2

TEST CONDITIONS		POWER SPECTRAL DENSITY (dBm)		
Frequency (MHz)		5745	5805	5825
T _{nom} (23)°C	V _{nom} (3.3) VDC	2.37	1.45	2.21

LIMIT

SUBCLAUSE §15.247(e)

The peak power spectral density shall not be greater than 8dBm in any 3 kHz band

ANALYZER SETTINGS: RBW=1MHz, VBW=3MHz

POWER SPECTRAL DENSITY

§15.247(e)

5745MHz



Marker 1 [T1]

RBW

1 MHz

RF Att

20 dB

Ref Lvl

2.37 dBm

VBW

3 MHz

10.4 dBm

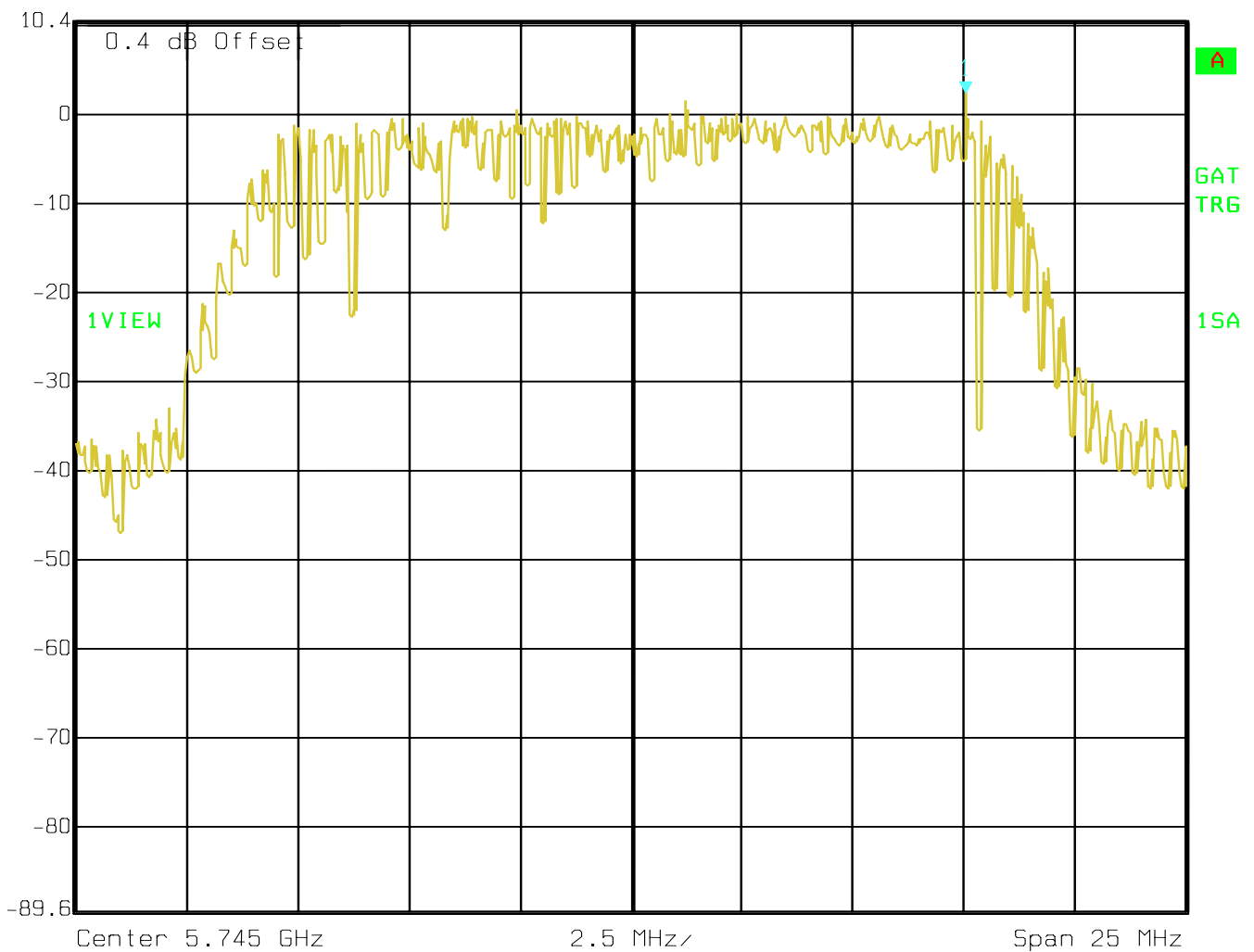
5.75254008 GHz

SWT

5 ms

Unit

dBm



Date: 26.JAN.2005 14:06:29

POWER SPECTRAL DENSITY

§15.247(e)

5805MHz



Marker 1 [T1]

RBW 1 MHz RF Att 30 dB

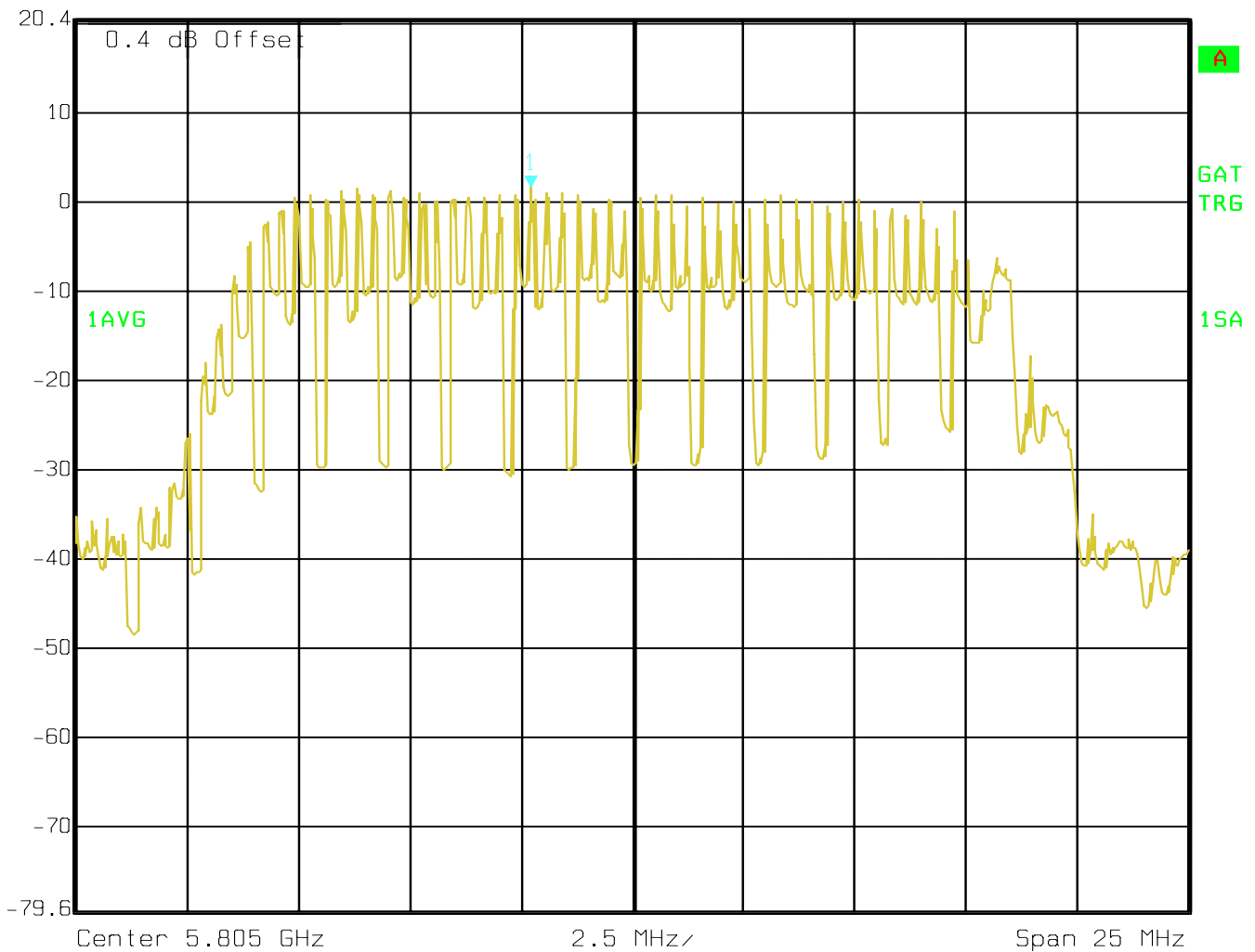
Ref Lvl 1.45 dBm

VBW 3 MHz

20.4 dBm 5.80272044 GHz

SWT 5 ms

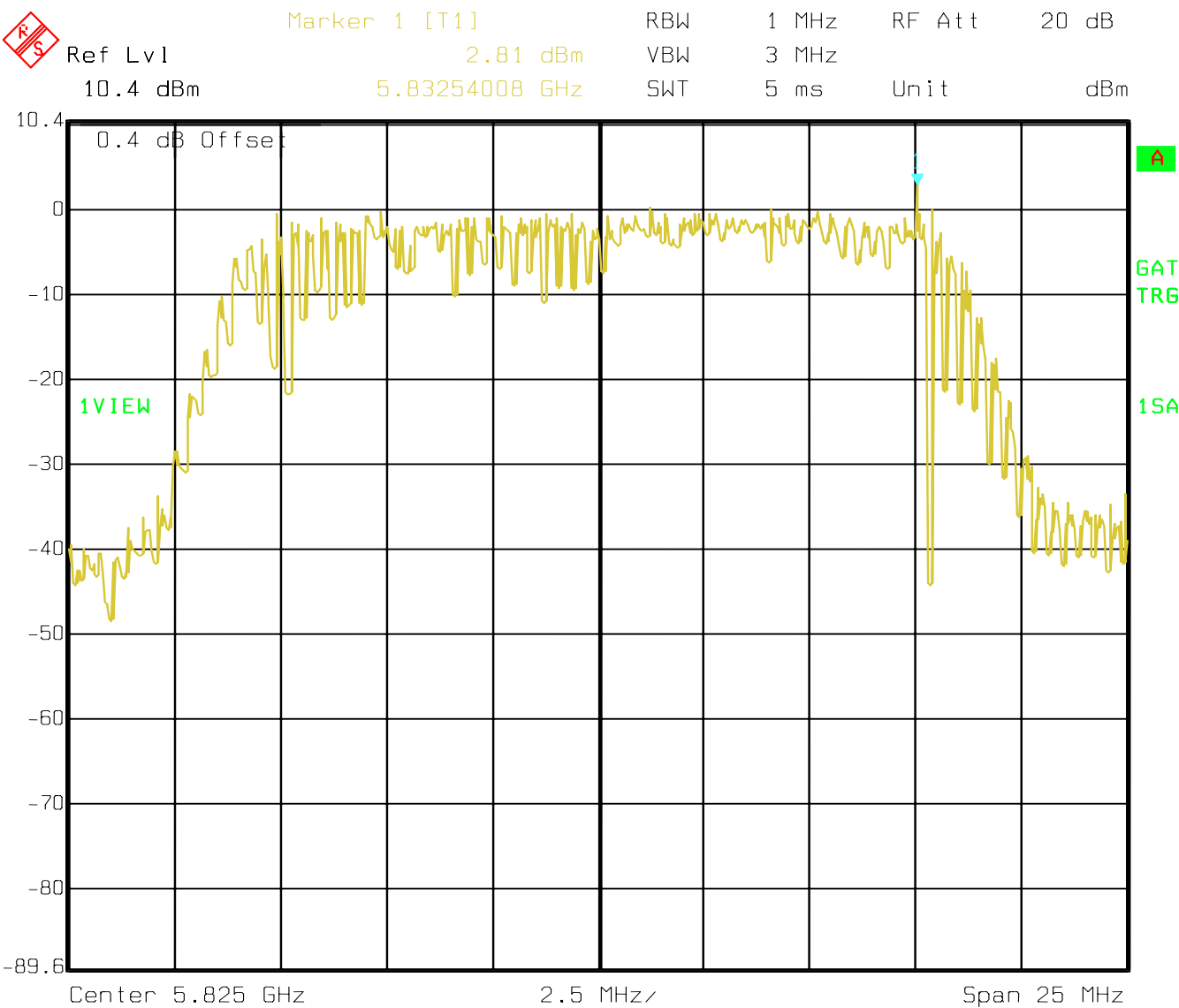
Unit dBm



Date: 14.FEB.2005 14:23:22

POWER SPECTRAL DENSITY §15.247(e)

5825MHz



Date: 26.JAN.2005 14:05:49

EMISSION LIMITATIONS
Transmitter (Radiated)

§ 15.247 (d)

LIMITS

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions, which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

NOTE:

1. The radiated emissions were done with different settings, using the relevant pre-amplifiers for the relevant frequency ranges. This is the reason that the graphs show different noise levels. In the range between 3 and 40 GHz very short cable connections to the antenna was used to minimize the noise level.
2. All measurements are done in peak mode unless specified with the plots.

Results for the radiated measurements below 30MHz according § 15.33

Frequency	Measured values	Remarks
9KHz – 30MHz	No emissions found, caused by the EUT	This is valid for all the tested channels

Hitachi FPC antenna

(Freq. band: 5745-5825MHz, Gain: 5.7dBi, Model HFT17-DL03)

EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

30MHz – 1GHz

Hitachi FPC Antenna

Antenna: Vertical

EUT plane: Horizontal with screen vertical @ 90°

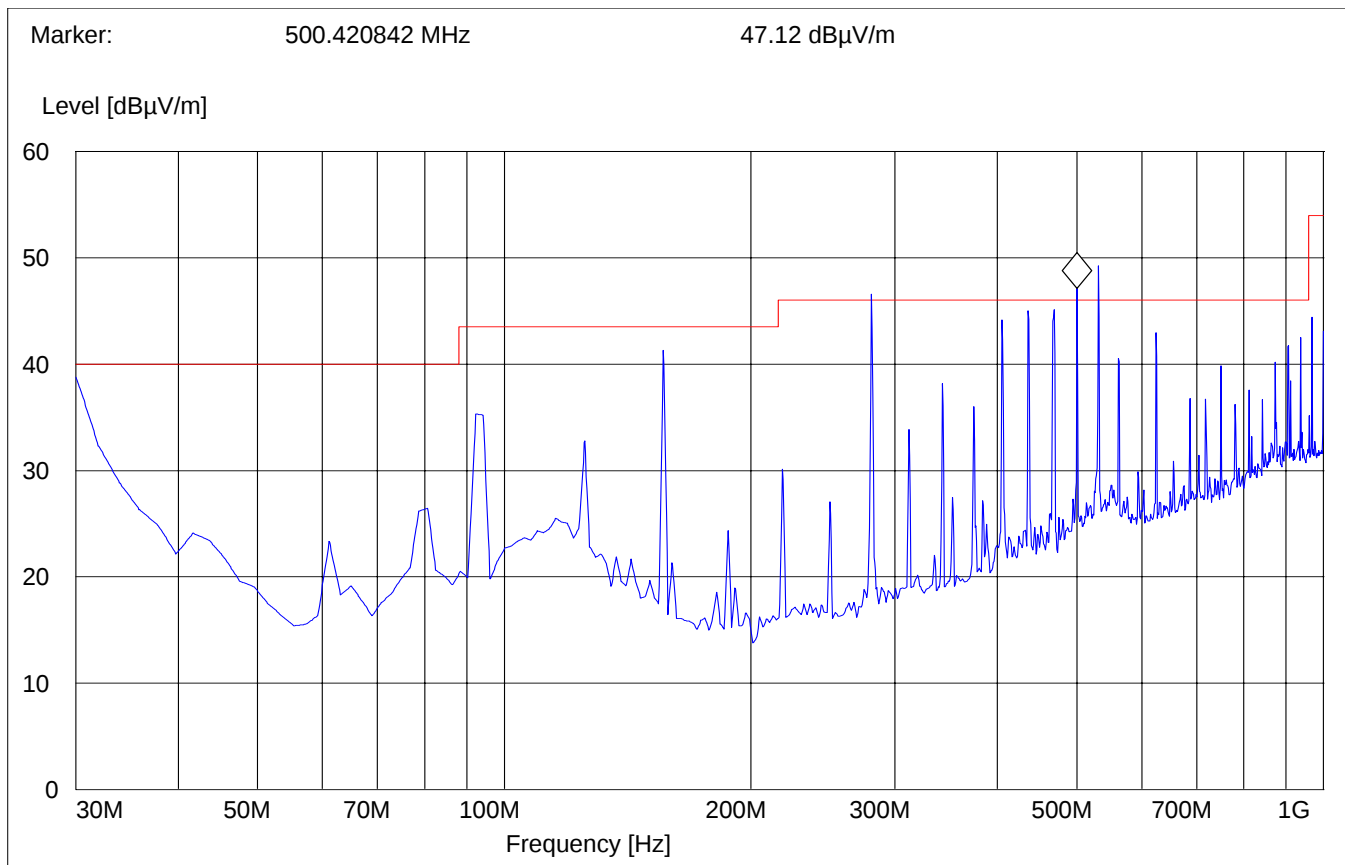
SWEEP TABLE: "FCC 15.407 30-1G_V"

Start	Stop	Detector	Meas. Time	RBW	Transducer
Frequency	Frequency			VBW	
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	3141-#1186

Note:

1. This plot is valid for low, mid, high channels (worst-case plot valid for all antennas)
2. All significant peaks were confirmed originating from test fixture, see plot on page 27 with test fixture tested alone with no WLAN card

Freq. (MHz)	Pk Level (dBμV/m)	QPk Level (dBμV/m)
280.76	46.55	43.55
500.42	47.12	42.12
531.523	49.24	43.24



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

30MHz – 1GHz

Hitachi FPC Antenna

Note:

1. This plot is valid for low, mid, high channels (worst-case plot valid for all antennas)
2. All significant peaks were confirmed originating from test fixture, see plot on page 27 with test fixture tested alone with no WLAN card

Antenna:

Horizontal

EUT plane:

Horizontal with screen vertical @ 90°

SWEEP TABLE:

"FCC 15.407 30-1G_H"

Start Stop
Frequency Frequency

Detector Meas. RBW Transducer
Time
Coupled

30.0 MHz 1.0 GHz

MaxPeak 100 kHz 3141-#1186

Freq. (MHz)

Pk Level (dBμV/m)

QPk Level (dBμV/m)

156.352

48.03

43.03

280.76

53.89

51.89

405.17

46.93

40.93

500.42

49.26

43.76

531.52

51.13

45.13

562.62

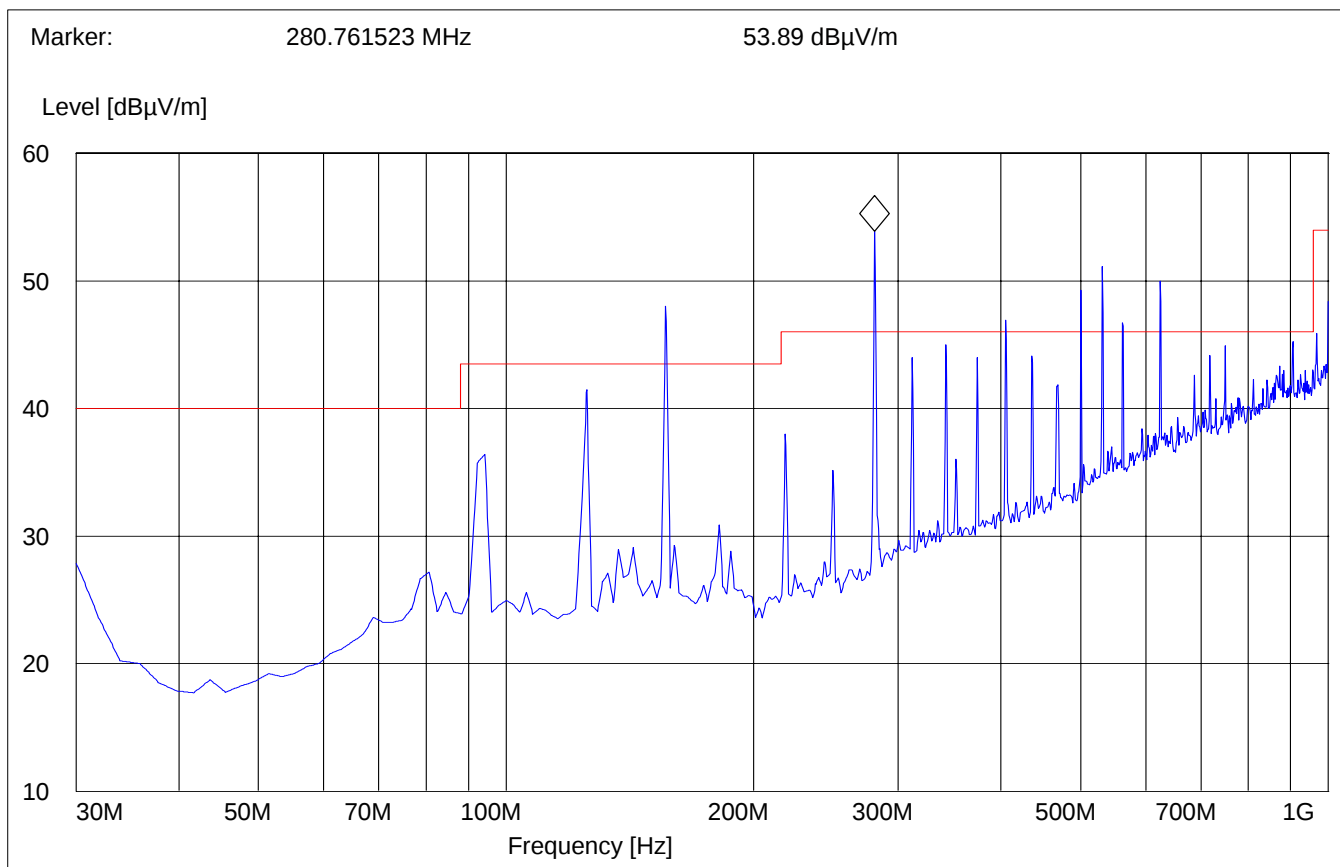
46.69

40.69

624.83

49.99

44.29

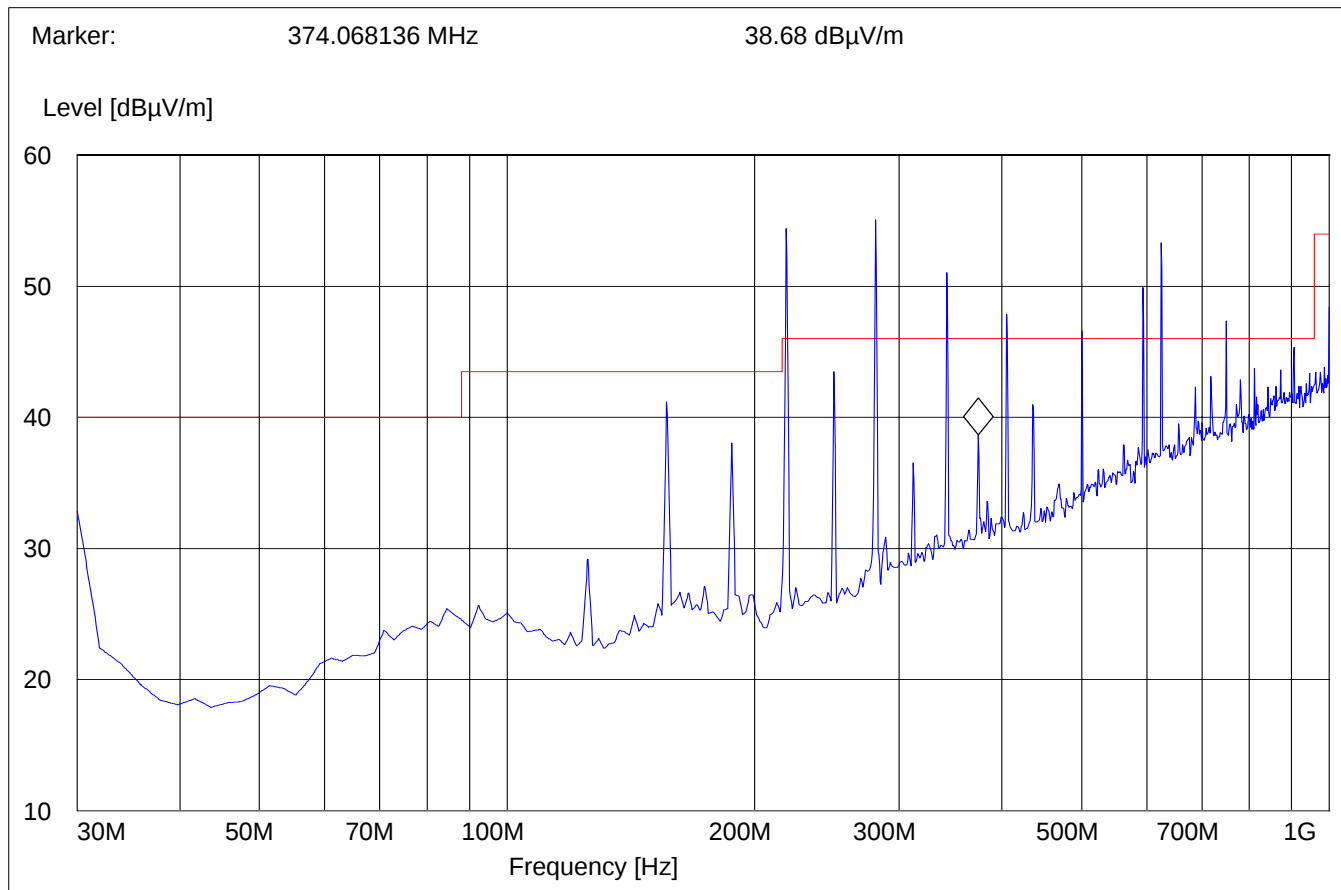


EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

30MHz – 1GHz

Test Fixture only (no WLAN card)



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

Lowest Channel (5745MHz): 1GHz – 7GHz

(Average)

Hitachi FPC Antenna

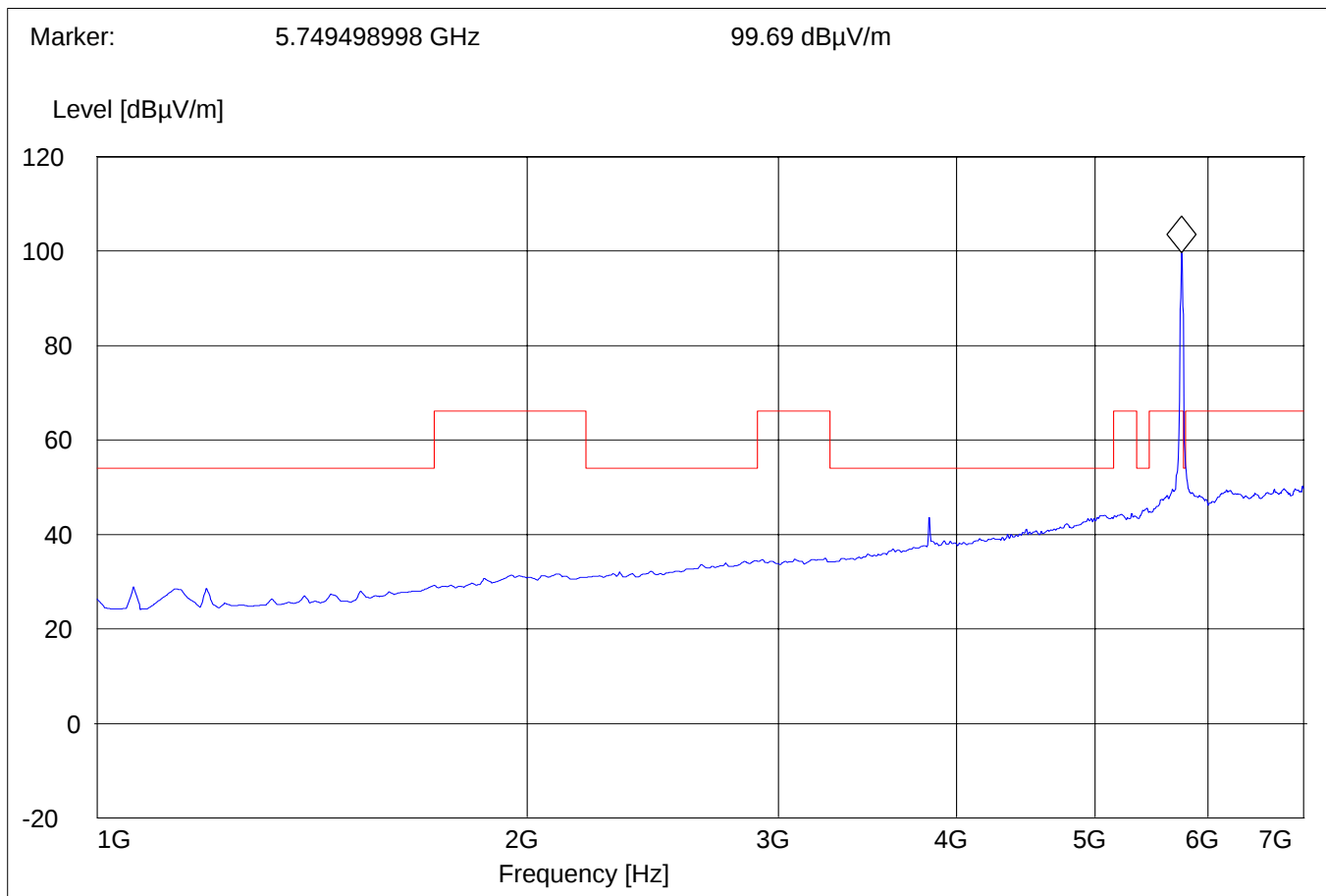
Antenna: Horizontal

EUT plane: Horizontal with screen vertical @ 90°

Note: The peak above the limit line is the carrier freq.

SWEEP TABLE: "FCC 15.407 1-7G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
1GHz	7.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

Lowest Channel (5745MHz): 7GHz – 18GHz

Average

Hitachi FPC Antenna

Antenna:

Horizontal

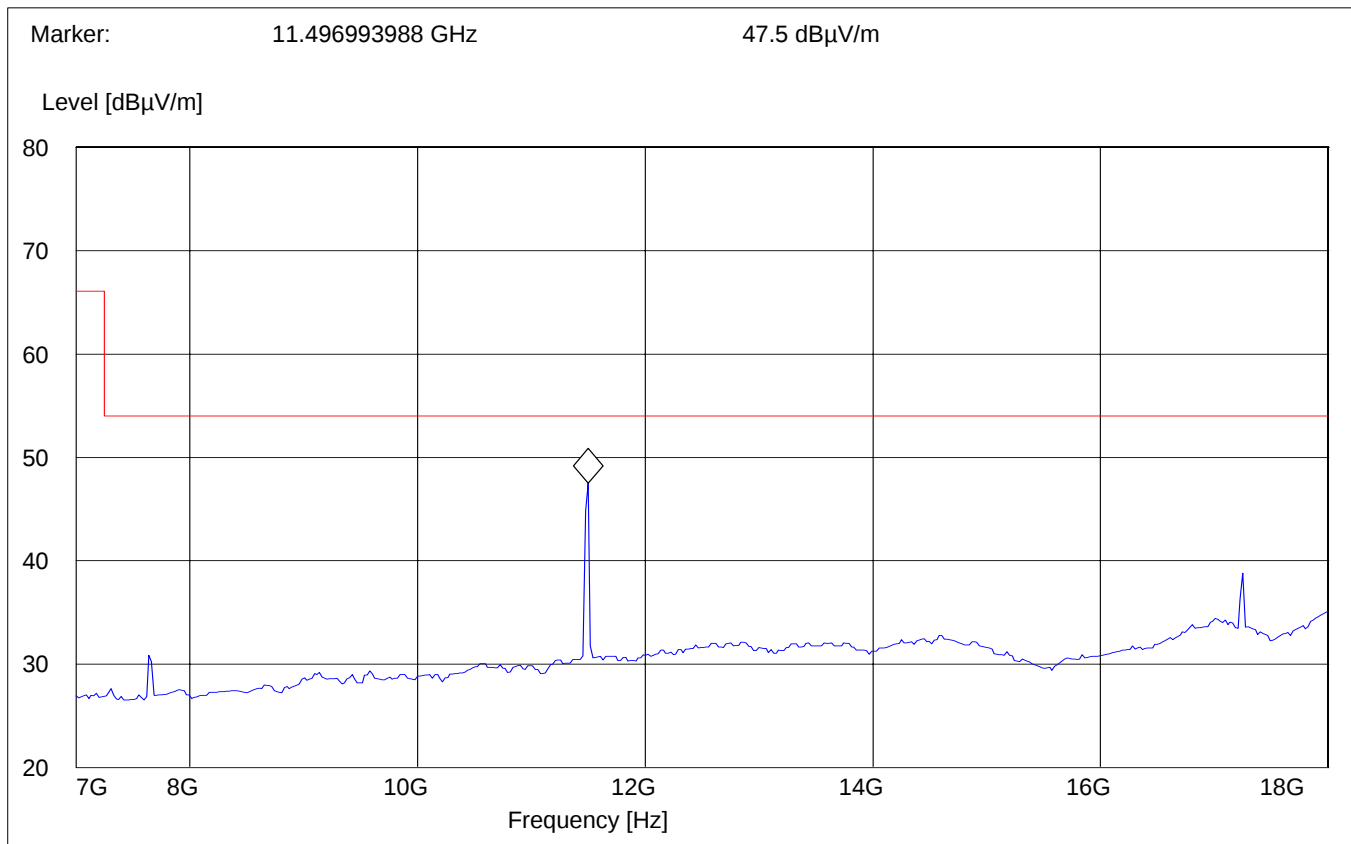
EUT plane:

Horizontal with screen vertical @ 90°

SWEEP TABLE:

"FCC 15.407 7-18G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
7GHz	18.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

Highest Channel (5805MHz): 1GHz – 7GHz

(Average)

Hitachi FPC Antenna

Antenna:

Horizontal

EUT plane:

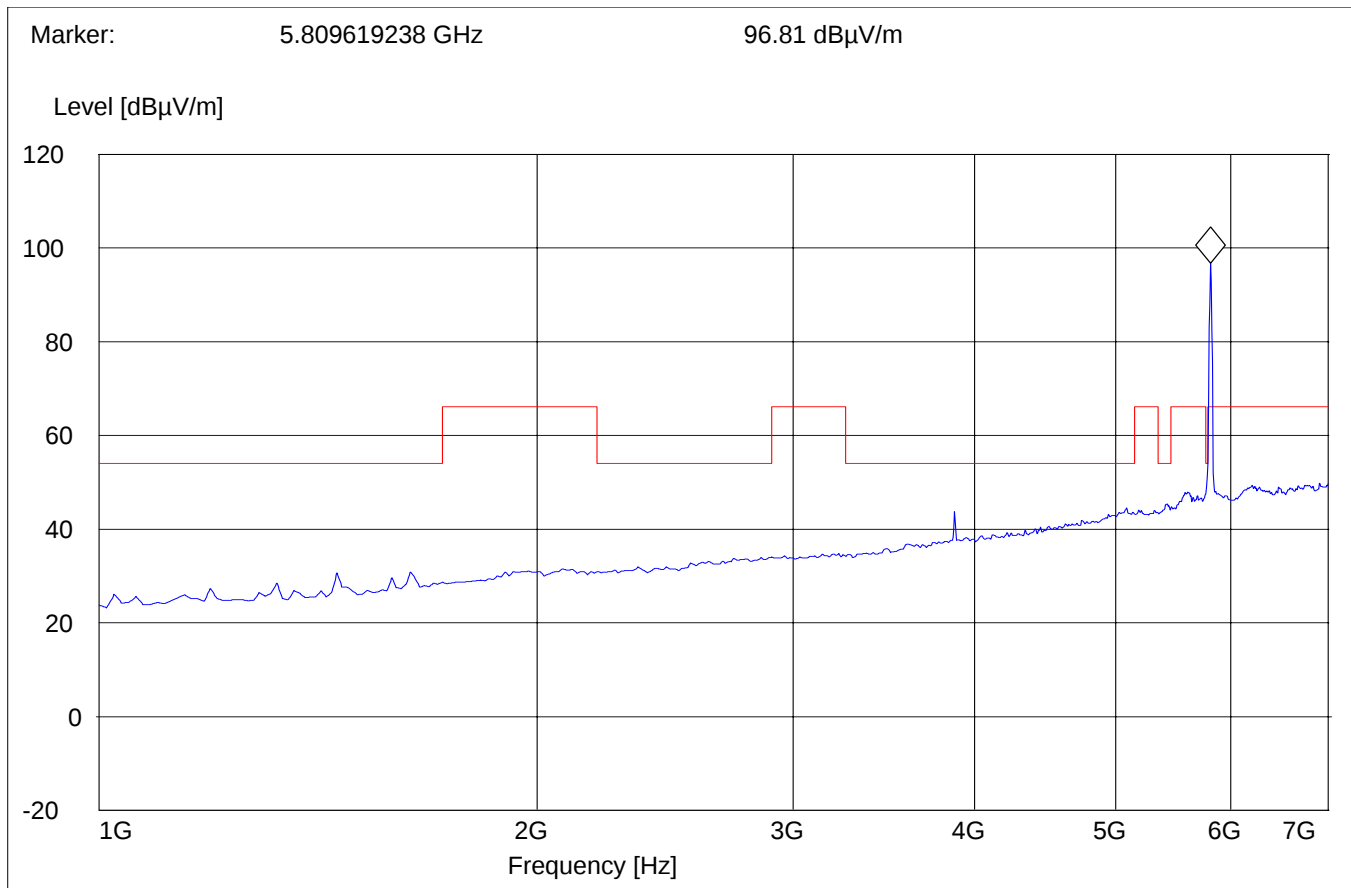
Horizontal with screen vertical @ 90°

Note: The peak above the limit line is the carrier freq.

SWEEP TABLE:

"FCC 15.407 1-7G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
1GHz	7.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

Highest Channel (5805MHz): 7GHz – 18GHz

Average

Hitachi FPC Antenna

Antenna:

Horizontal

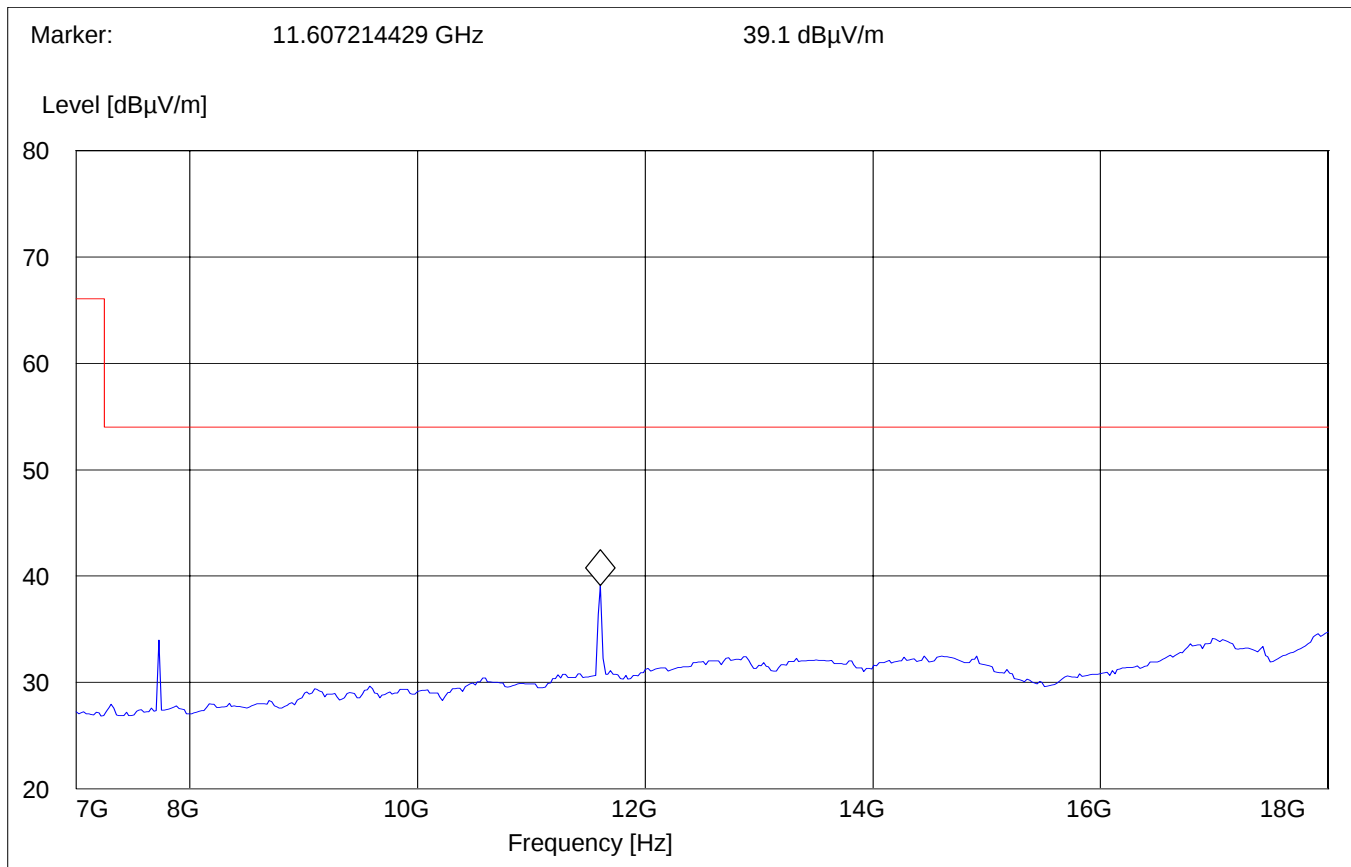
EUT plane:

Horizontal with screen vertical @ 90°

SWEEP TABLE:

"FCC 15.407 7-18G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
7GHz	18.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

(5825MHz): 1GHz – 7GHz

(Average)

Hitachi FPC Antenna

Antenna:

Horizontal

EUT plane:

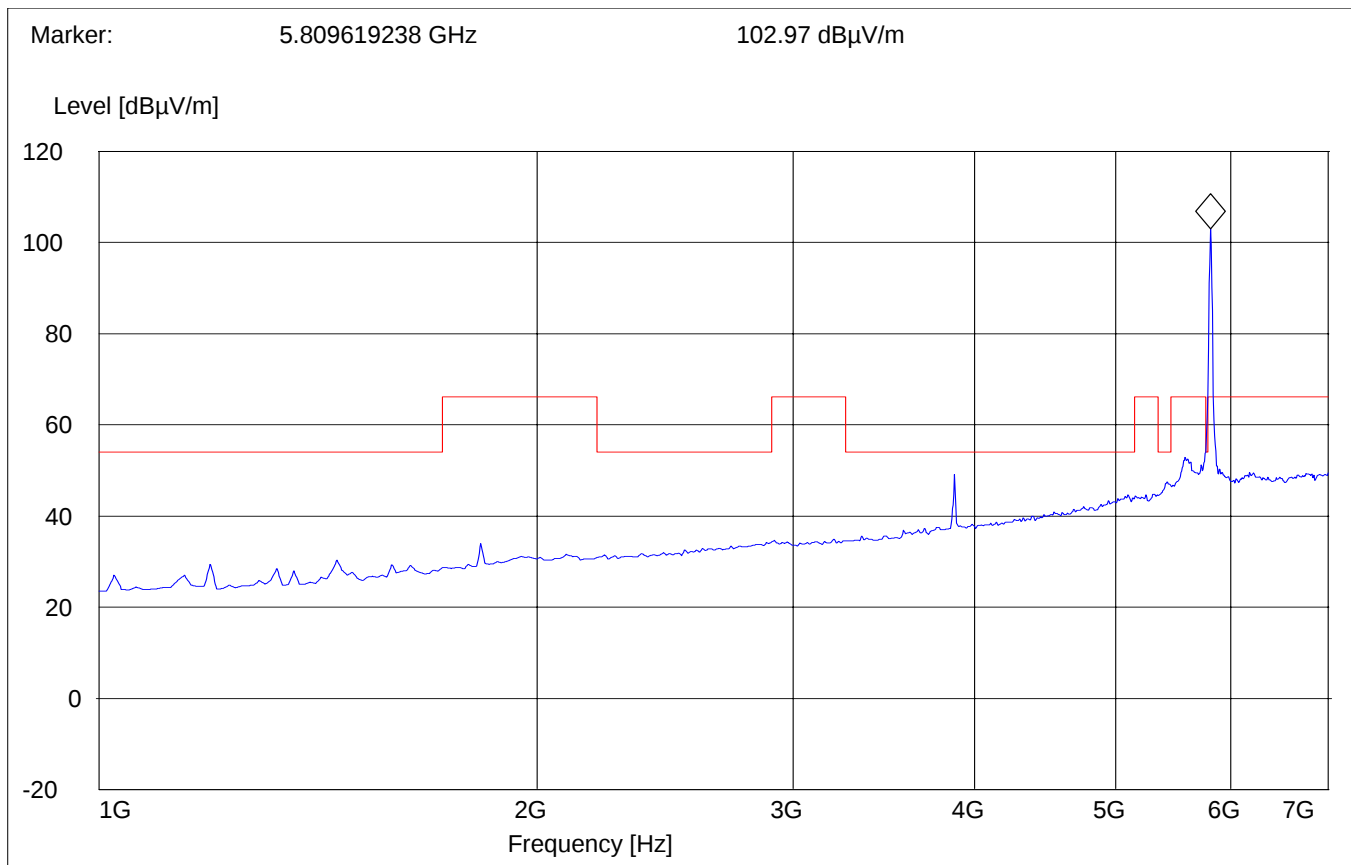
Horizontal with screen vertical @ 90°

Note: The peak above the limit line is the carrier freq.

SWEEP TABLE:

"FCC 15.407 1-7G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
1GHz	7.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter) (5825MHz): 7GHz – 18GHz

§ 15.247 (d)

Average

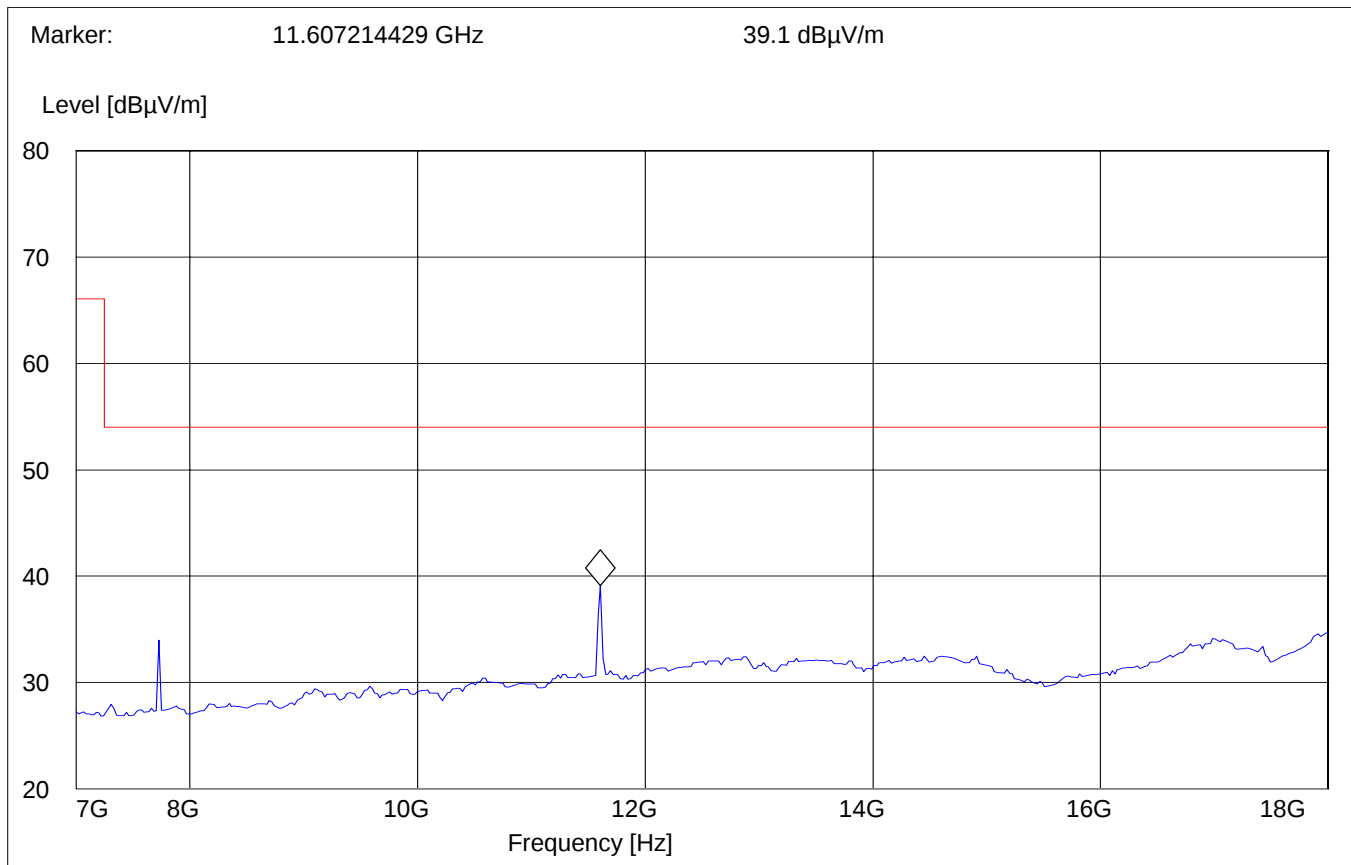
Hitachi FPC Antenna

Antenna: Horizontal

EUT plane: Horizontal with screen vertical @ 90°

SWEEP TABLE: "FCC 15.407 7-18G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
7GHz	18.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

18GHz – 26.5GHz

Hitachi FPC Antenna

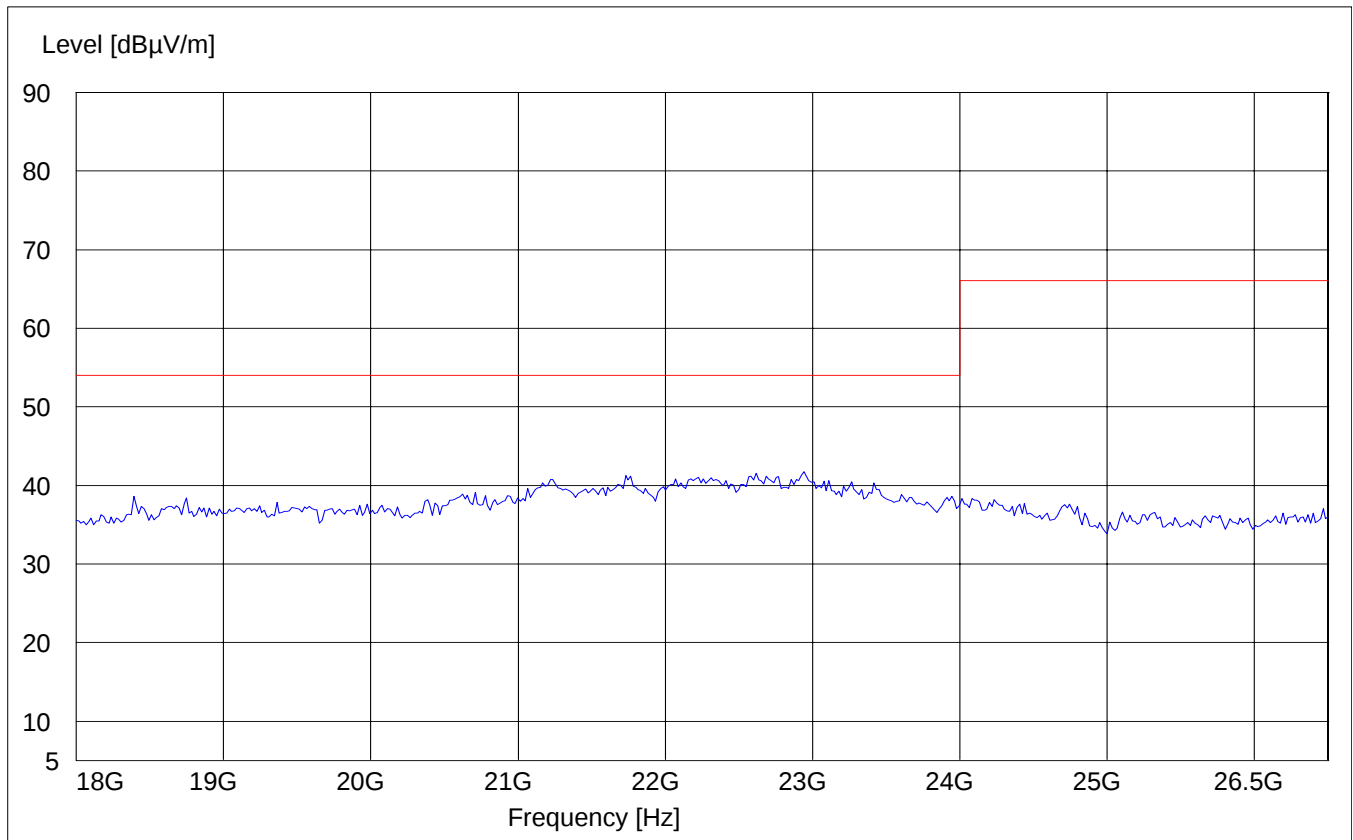
Antenna: Horizontal

EUT plane: Horizontal with screen vertical @ 90°

Note: This plot is valid for low & high channels (worst-case plot)

SWEEP TABLE: "FCC 15.407 18-26.5G"

Start	Stop	Detector	Meas.	RBW	Transducer
Frequency	Frequency		Time	VBW	
18GHz	26.5 GHz	MaxPeak	Coupled	1MHz	3160-09 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

26.5GHz – 40GHz

Hitachi FPC Antenna

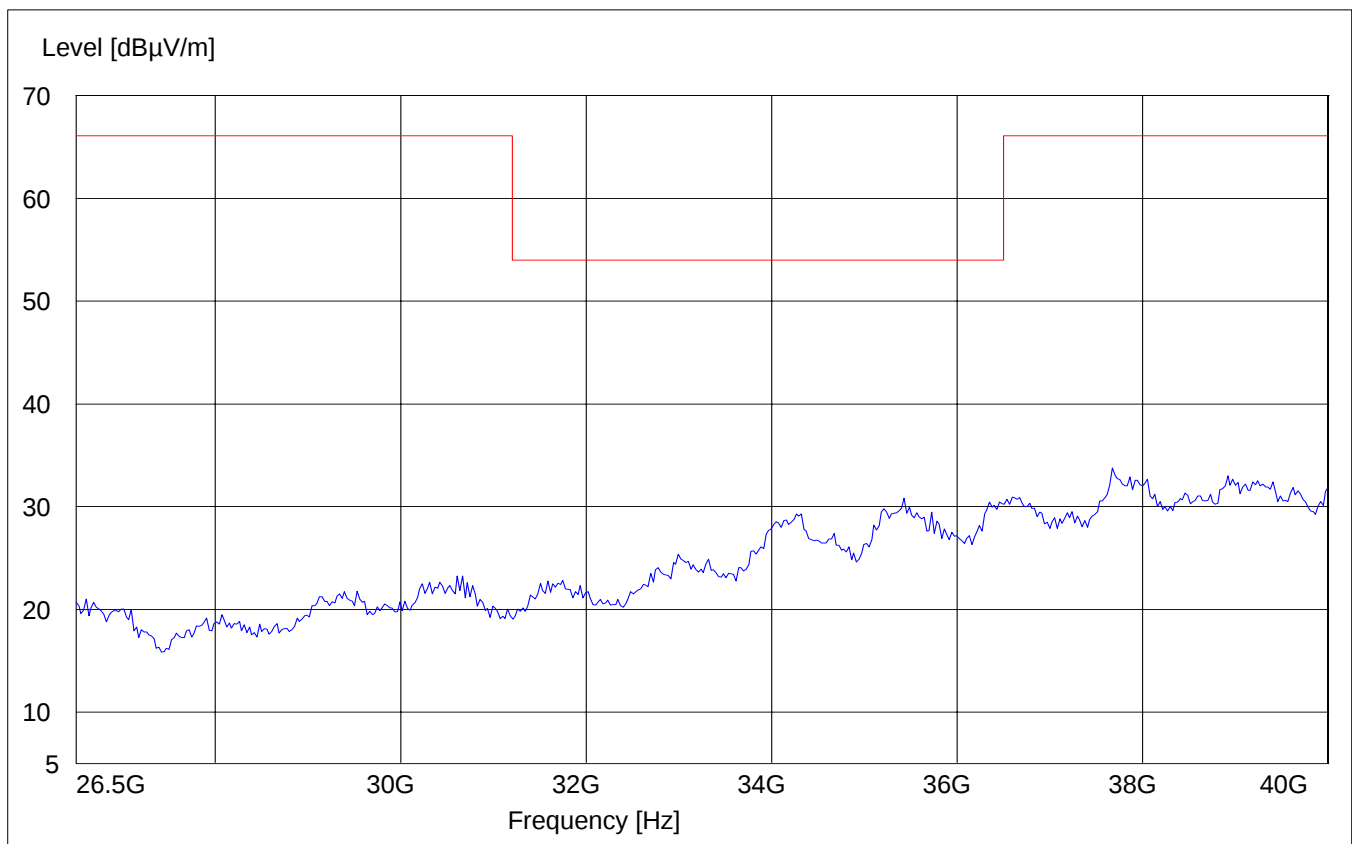
Antenna: Horizontal

EUT plane: Horizontal with screen vertical @ 90°

Note: This plot is valid for low & high channels (worst-case plot)

SWEEP TABLE: "FCC 15.407 26.5-40G"

Start	Stop	Detector	Meas.	RBW	Transducer
Frequency	Frequency		Time	VBW	
26.5GHz	40 GHz	MaxPeak	Coupled	1MHz	3160-10 horn



Wistron NeWeb Stamped Metal Sheet antenna
(Freq. band: 55745-5825MHz, Gain: 4.49dBi, Model EBB-Q)

EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

Lowest Channel (5745MHz): 1GHz – 7GHz

(Average)

Wistron NeWeb Antenna

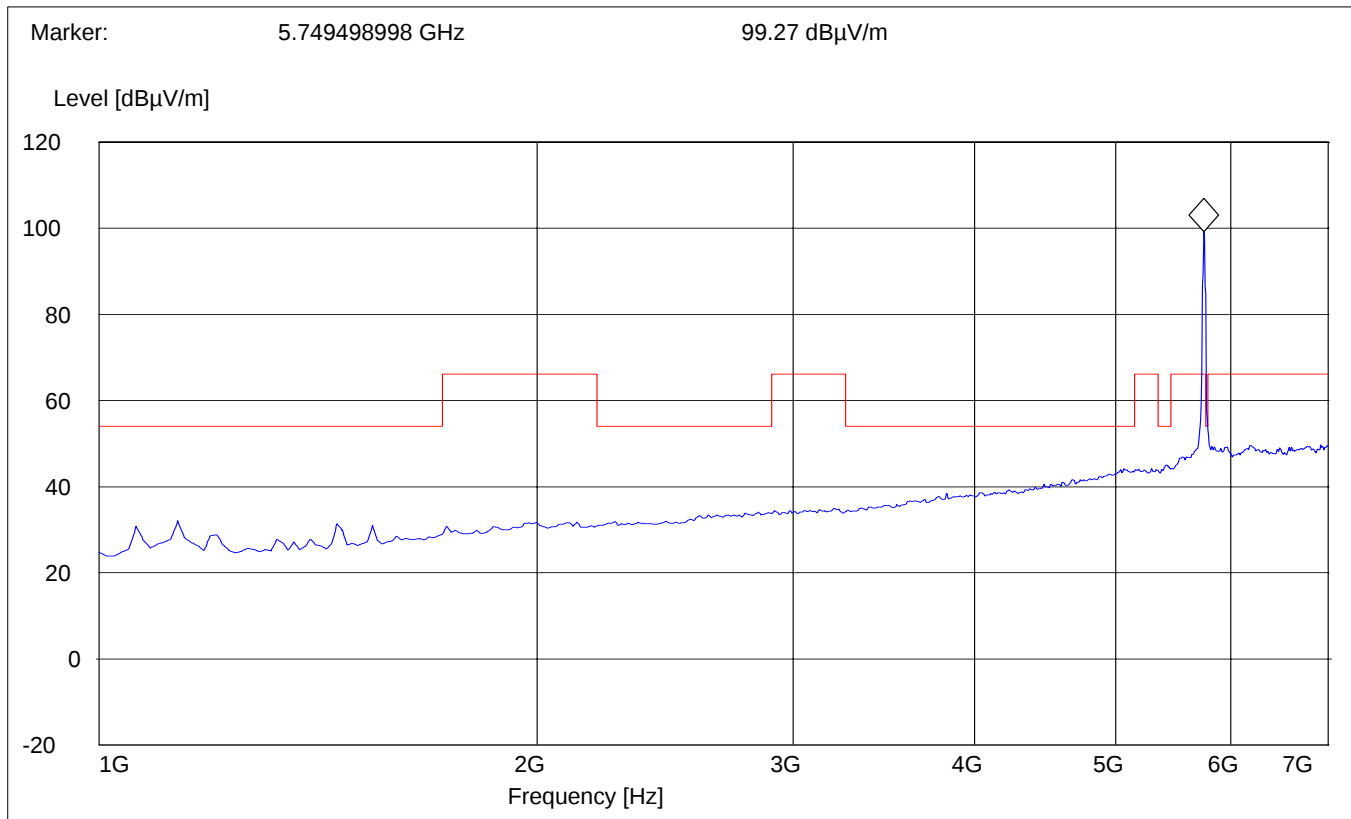
Antenna: Horizontal

EUT plane: Horizontal with screen vertical @ 90°

Note: The peak above the limit line is the carrier freq.

SWEEP TABLE: "FCC 15.407 1-7G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
1GHz	7.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

Lowest Channel (5745MHz): 7GHz – 18GHz

Average

Wistron NeWeb Antenna

Antenna:

Horizontal

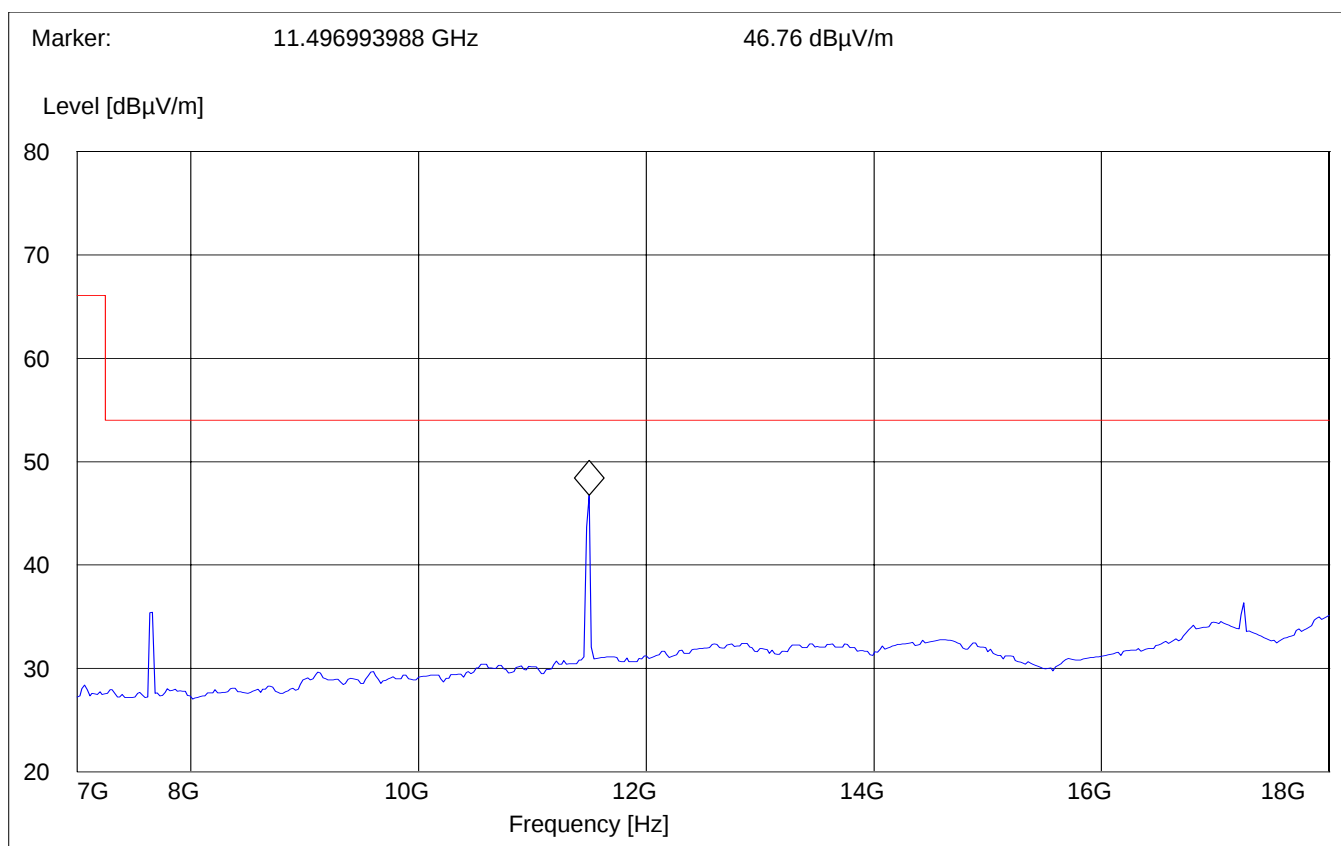
EUT plane:

Horizontal with screen vertical @ 90°

SWEEP TABLE:

"FCC 15.407 7-18G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
7GHz	18.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

Highest Channel (5805MHz): 1GHz – 7GHz

(Average)

Wistron NeWeb Antenna

Antenna:

Horizontal

EUT plane:

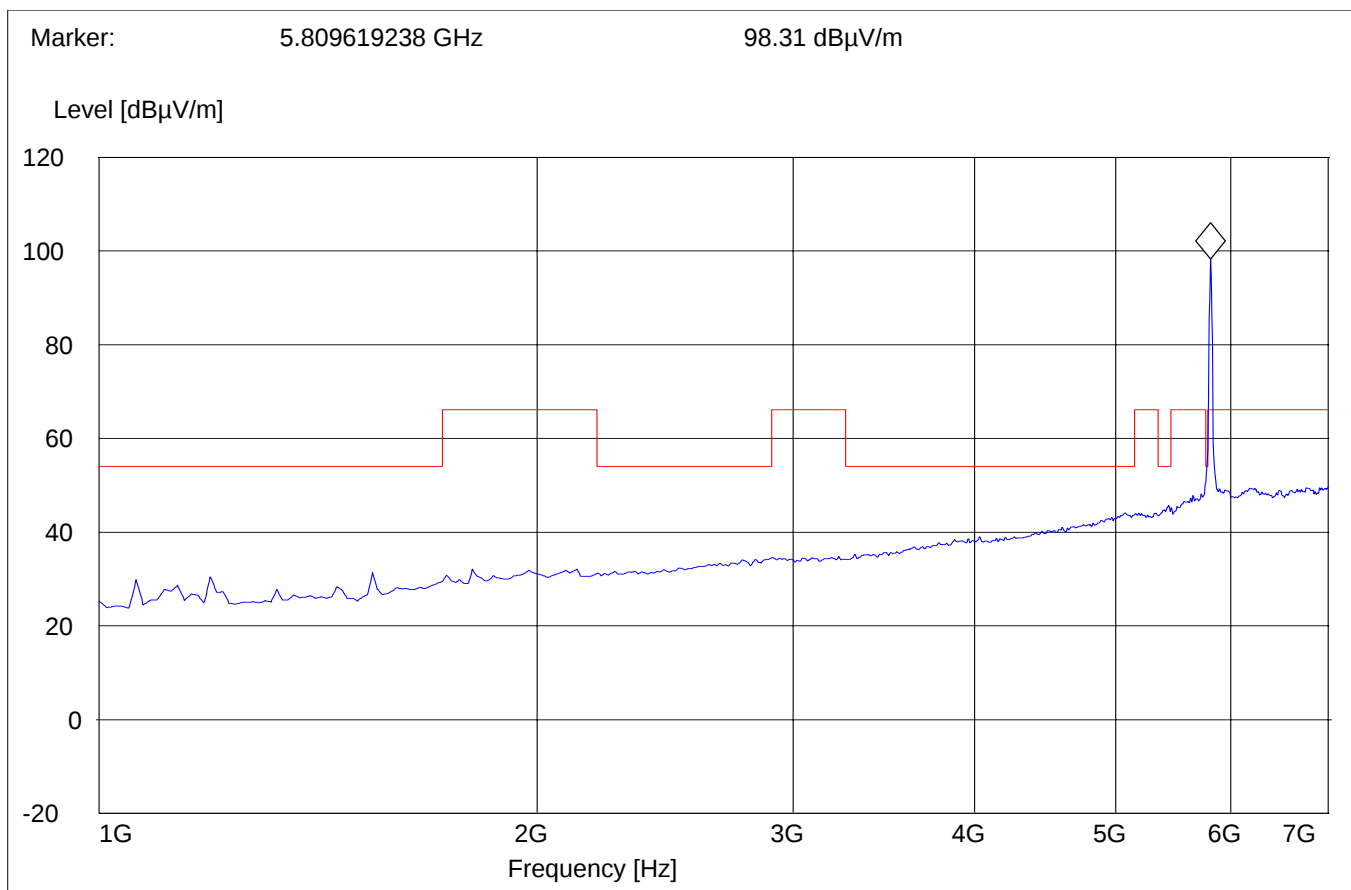
Horizontal with screen vertical @ 90°

Note: The peak above the limit line is the carrier freq.

SWEEP TABLE:

"FCC 15.407 1-7G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
1GHz	7.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

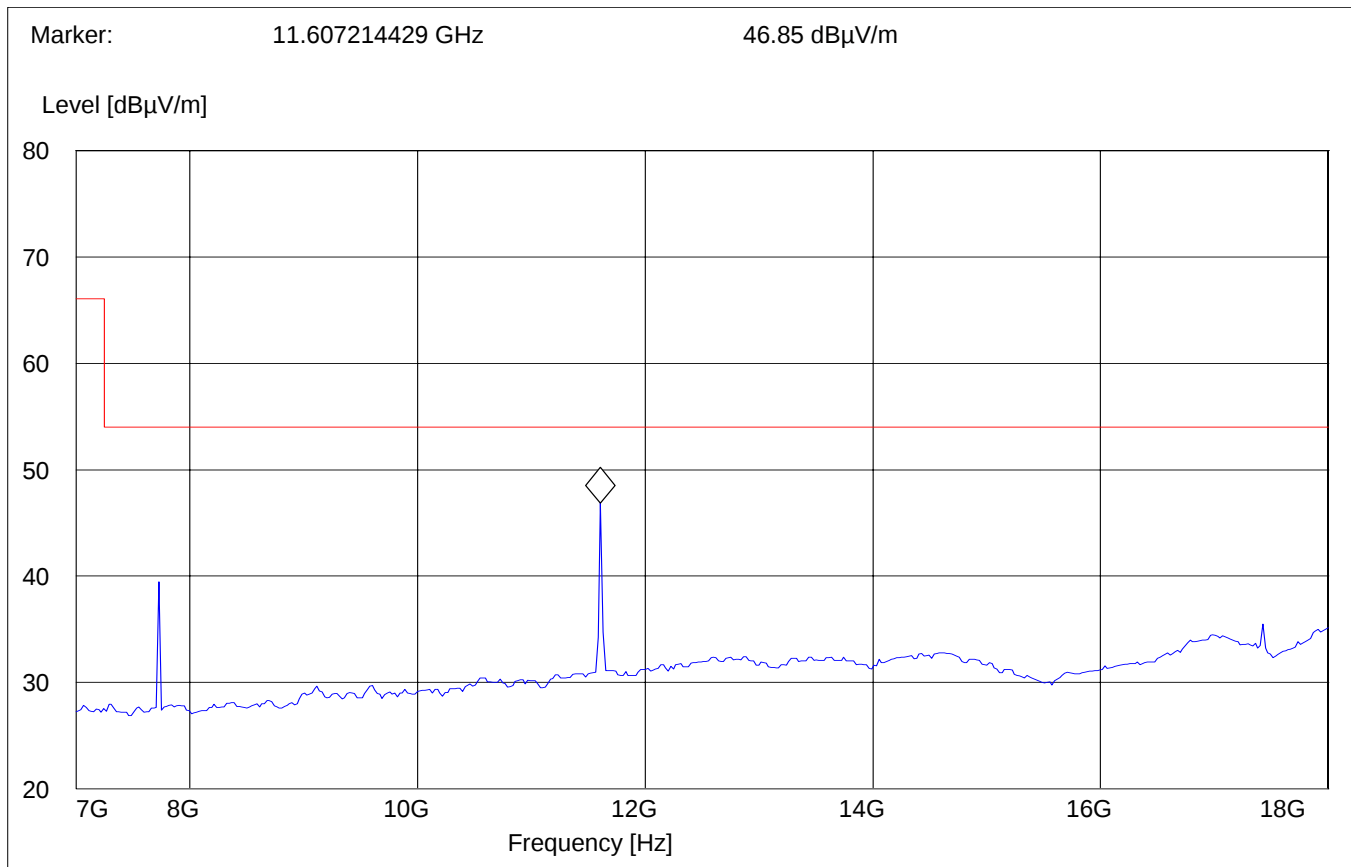
Highest Channel (5805MHz): 7GHz – 18GHz

Average

Wistron NeWeb Antenna

Antenna: Horizontal
EUT plane: Horizontal with screen vertical @ 90°

SWEEP TABLE:		"FCC 15.407 7-18G"				
Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
7GHz	18.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

(5825MHz): 1GHz – 7GHz

(Average)

Wistron NeWeb Antenna

Antenna:

Horizontal

EUT plane:

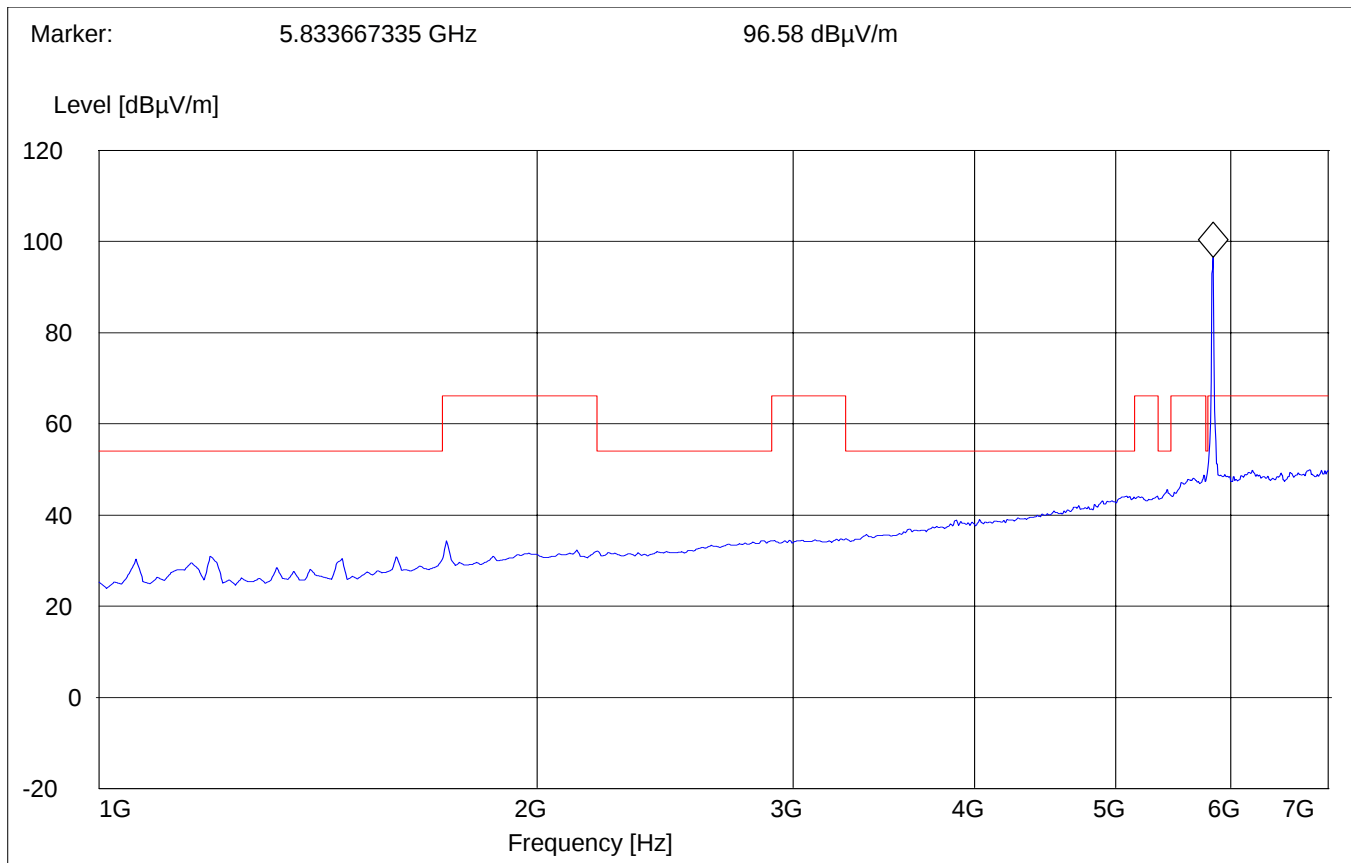
Horizontal with screen vertical @ 90°

Note: The peak above the limit line is the carrier freq.

SWEEP TABLE:

"FCC 15.407 1-7G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
1GHz	7.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

(5825MHz): 7GHz – 18GHz

Average

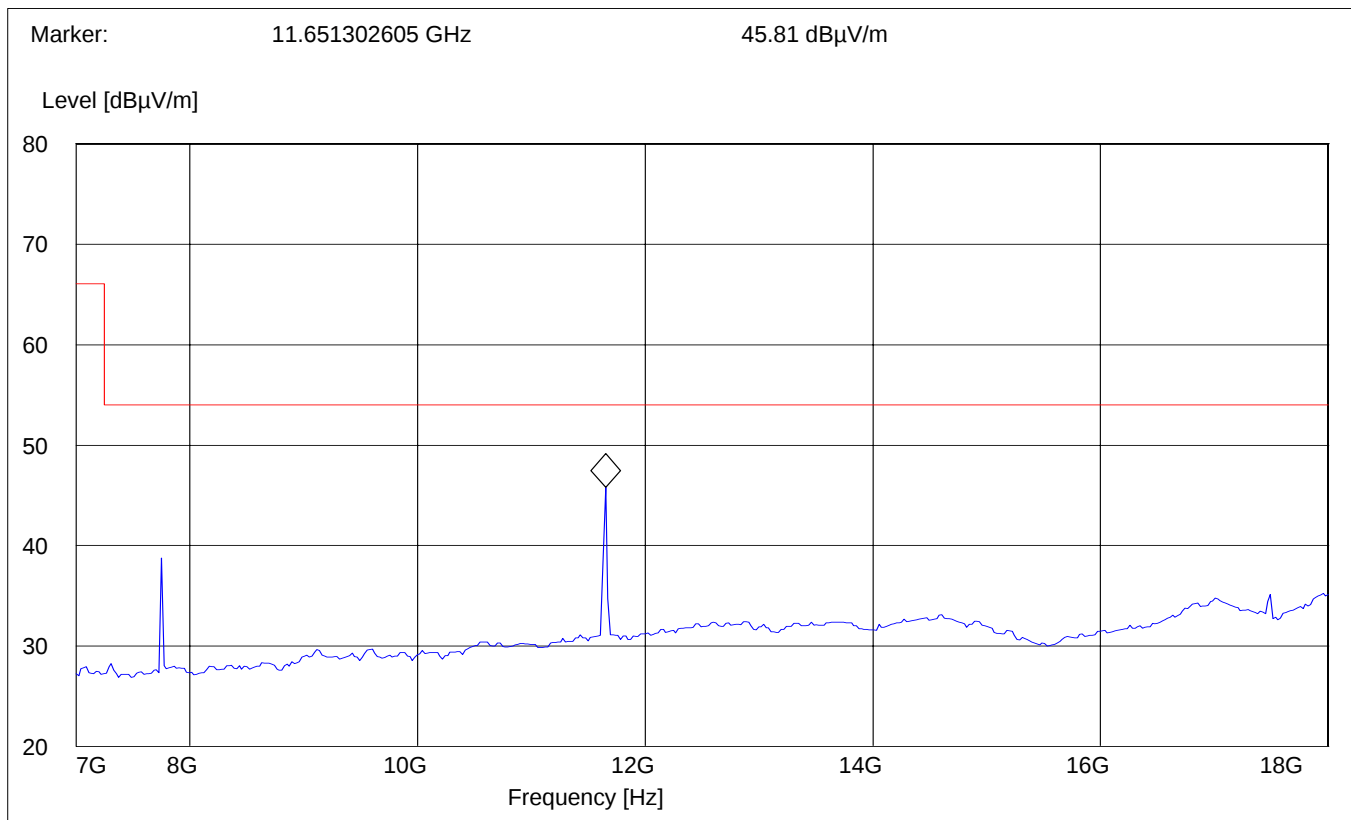
Wistron NeWeb Antenna

Antenna: Horizontal

EUT plane: Horizontal with screen vertical @ 90°

SWEEP TABLE: "FCC 15.407 7-18G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency		Time			
7GHz	18.0 GHz	MaxPeak	Coupled	1MHz	10Hz	326 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

18GHz – 26.5GHz

Wistron NeWeb Antenna

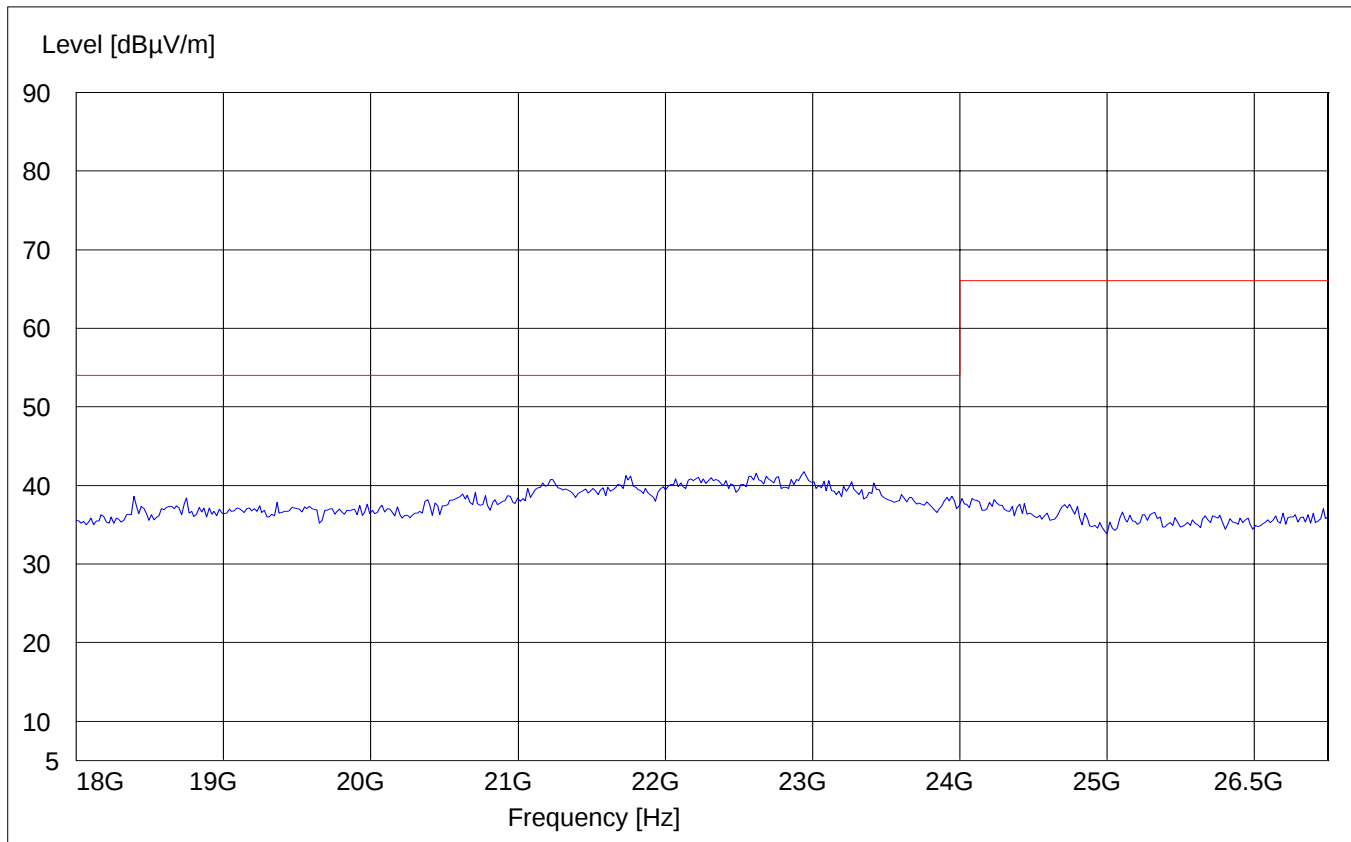
Antenna: Horizontal

EUT plane: Horizontal with screen vertical @ 90°

Note: This plot is valid for low & high channels (worst-case plot)

SWEEP TABLE: "FCC 15.407 18-26.5G"

Start	Stop	Detector	Meas.	RBW	Transducer
Frequency	Frequency		Time	VBW	
18GHz	26.5 GHz	MaxPeak	Coupled	1MHz	3160-09 horn



EMISSION LIMITATIONS - Radiated (Transmitter)

§ 15.247 (d)

26.5GHz – 40GHz

Wistron NeWeb Antenna

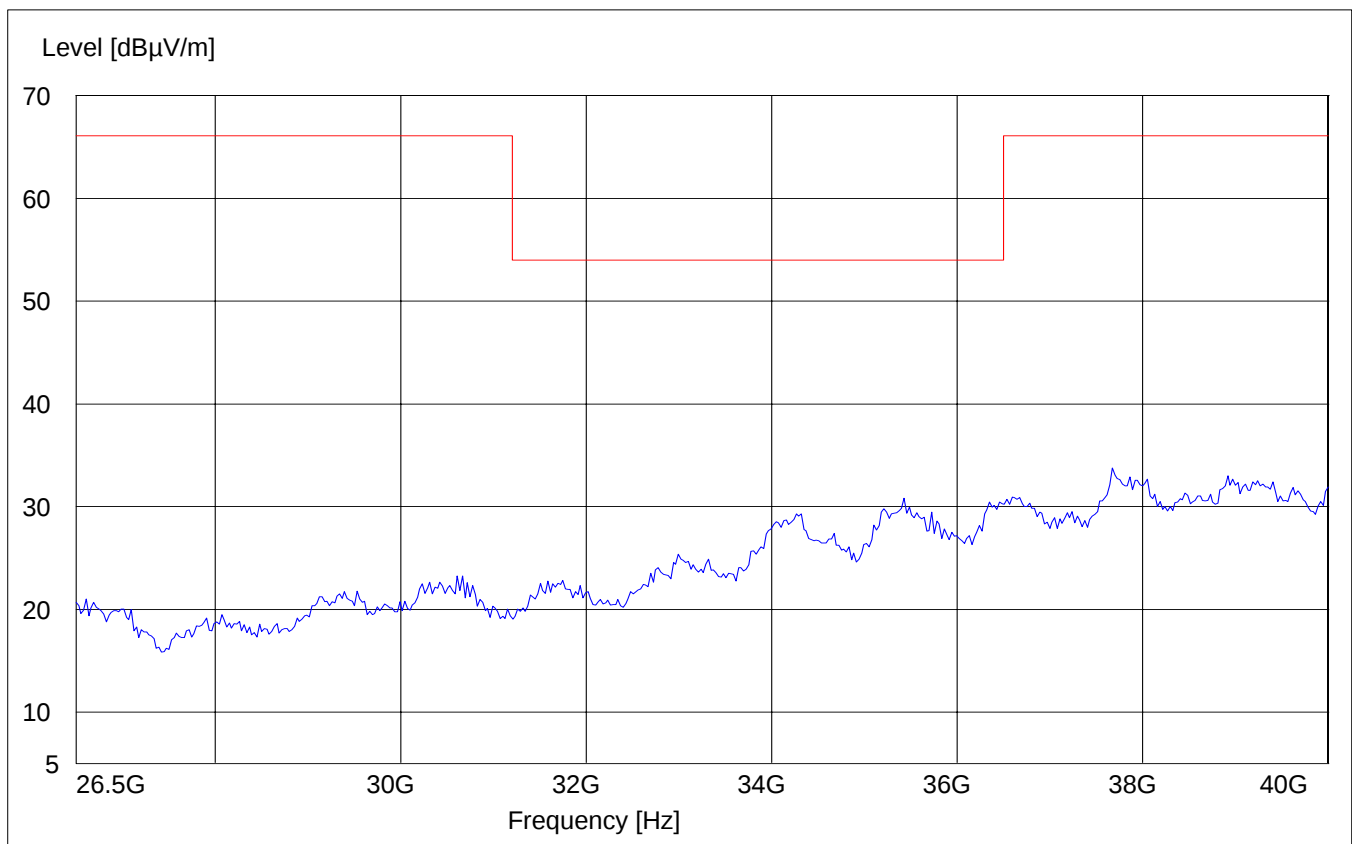
Antenna: Horizontal

EUT plane: Horizontal with screen vertical @ 90°

Note: This plot is valid for low & high channels (worst-case plot)

SWEEP TABLE: "FCC 15.407 26.5-40G"

Start	Stop	Detector	Meas.	RBW	Transducer
Frequency	Frequency		Time	VBW	
26.5GHz	40 GHz	MaxPeak	Coupled	1MHz	3160-10 horn



CONDUCTED EMISSIONS

§ 15.107/207

Measured with AC/DC power adapter

SWEEP TABLE: "55022 cond"

Short Description:		EN 55022 for 150KHz-30MHz			
Start	Stop	Detector	Meas	IF	Transducer
Frequency	Frequency		Time	Bandw.	
150.0 kHz	30.0 MHz	MaxPeak	Coupled	10 kHz	None

Technical specification: 15.107 / 15.207 (Revised as of August 20, 2002)

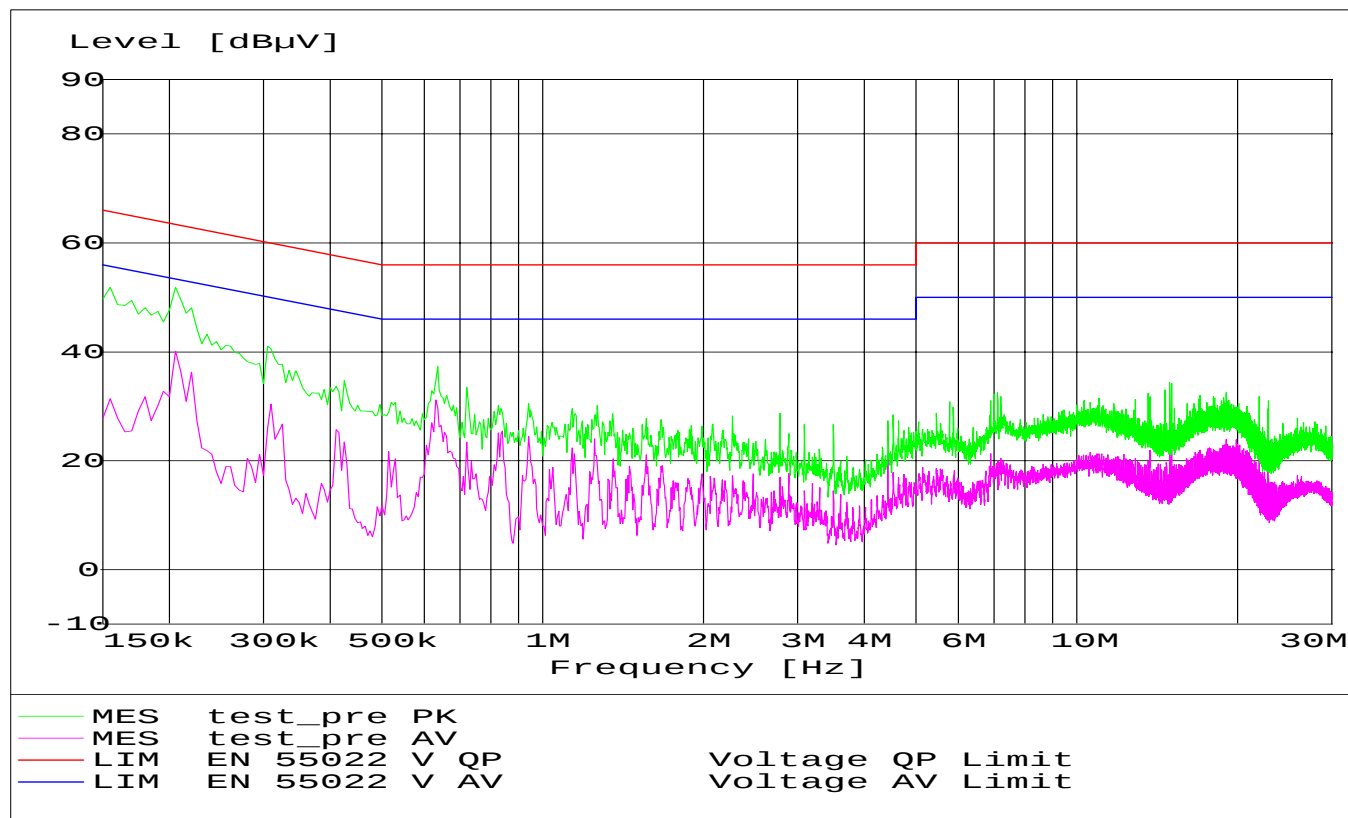
Limit

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi-Peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50

* Decreases with logarithm of the frequency

ANALYZER SETTINGS: RBW = 10KHz

VBW = 10KHz



RECEIVER SPURIOUS RADIATION**§ 15.209****Limits**

Frequency (MHz)	Field strength (µV/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

NOTE:

The radiated emissions were done with different settings, using the relevant pre-amplifiers for the relevant frequency ranges. This is the reason that the graphs show different noise levels. In the range between 3 and 40 GHz very short cable connections to the antenna was used to minimize the noise level.

RECEIVER SPURIOUS RADIATION

§ 15.209

(Data rate – 54Mbps)

Antenna: vertical

EUT plane: Horizontal with screen vertical @ 90°

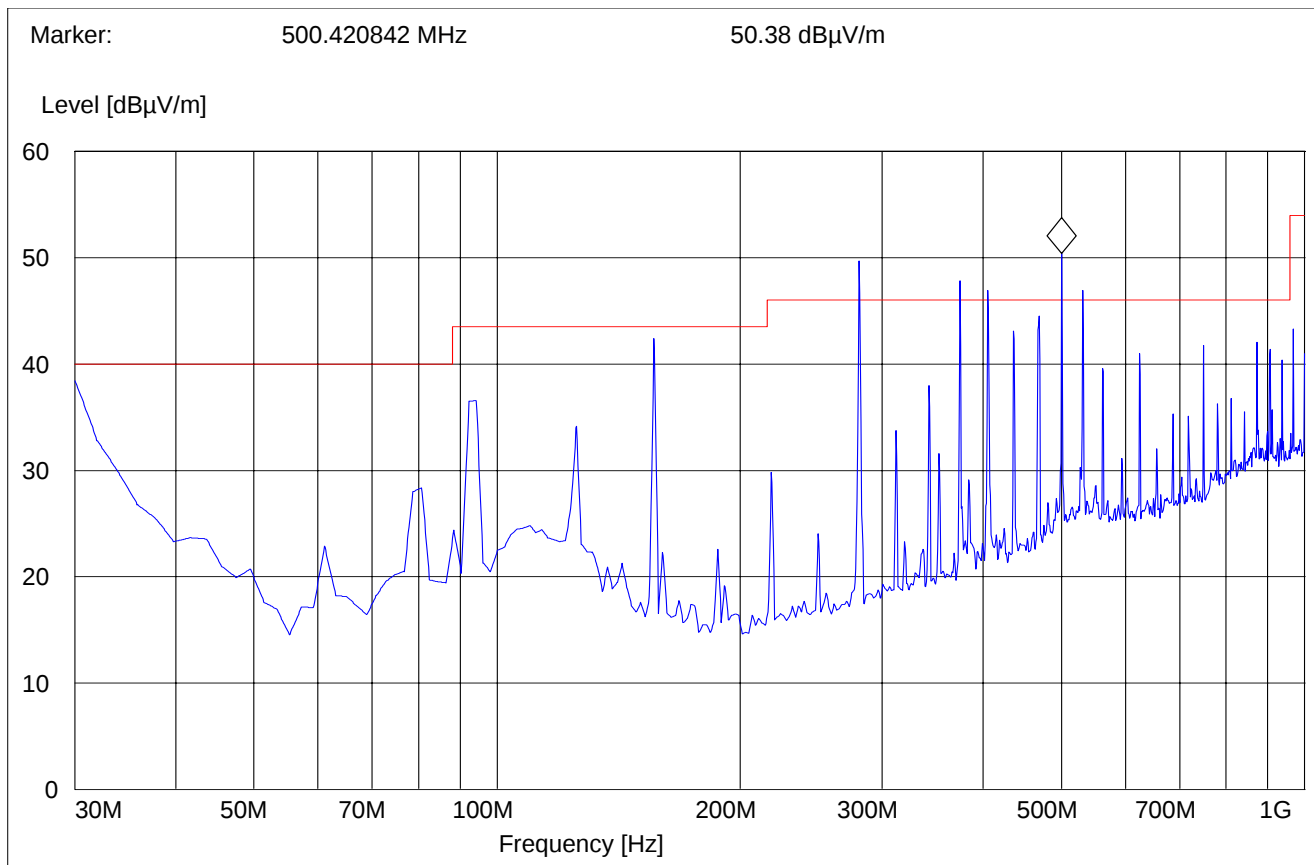
Note:

1. This plot is valid for low, mid, high channels (worst-case plot valid for all antennas)
2. All significant peaks were confirmed originating from test fixture, see plot on page 35 with test fixture tested alone with no WLAN card

SWEEP TABLE: "WLAN Spuri hi 30-1G"

Start Frequency	Stop Frequency	Detector	Meas. Time	RBW	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	3141-#1186

Freq.	Pk(dBm)	QPk(dBm)
280.761MHz	49.69	46.69
374.068MHz	47.83	41.83
405.17MHz	46.90	41.90
500.4208MHz	50.38	40.90
531.523MHz	46.90	40.90



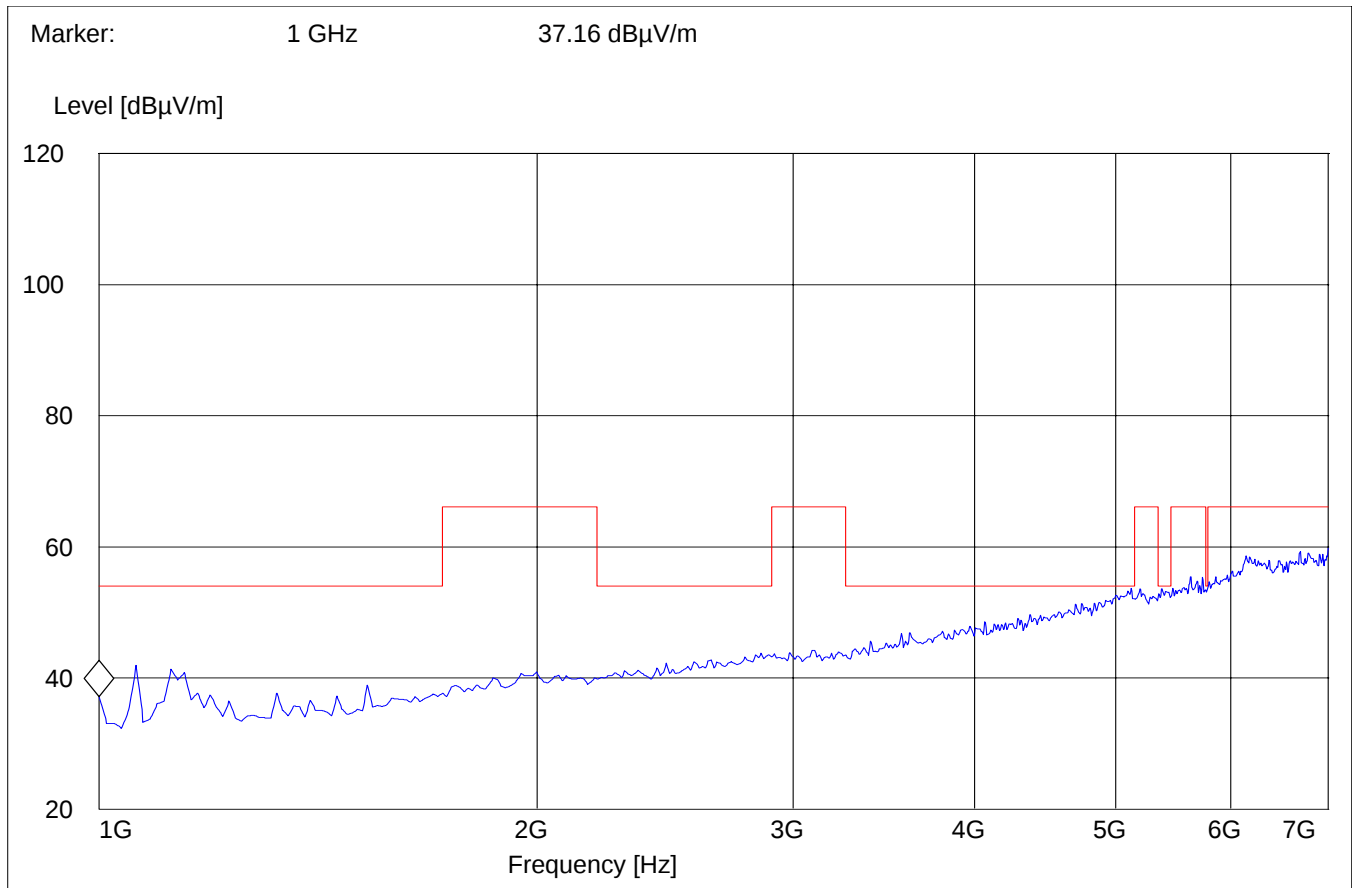
RECEIVER SPURIOUS RADIATION 1GHz – 7GHz

§ 15.209

Antenna: Horizontal
EUT plane: Horizontal with screen vertical @ 90°

SWEEP TABLE: "WLAN Spuri hi 1-7G"

Start	Stop	Detector	Meas.	RBW	VBW	Transducer
Frequency	Frequency	Time	Bandw.			
1.0 GHz	7.0 GHz	MaxPeak	Coupled	1 MHz	1MHz	#326 horn (dBi)



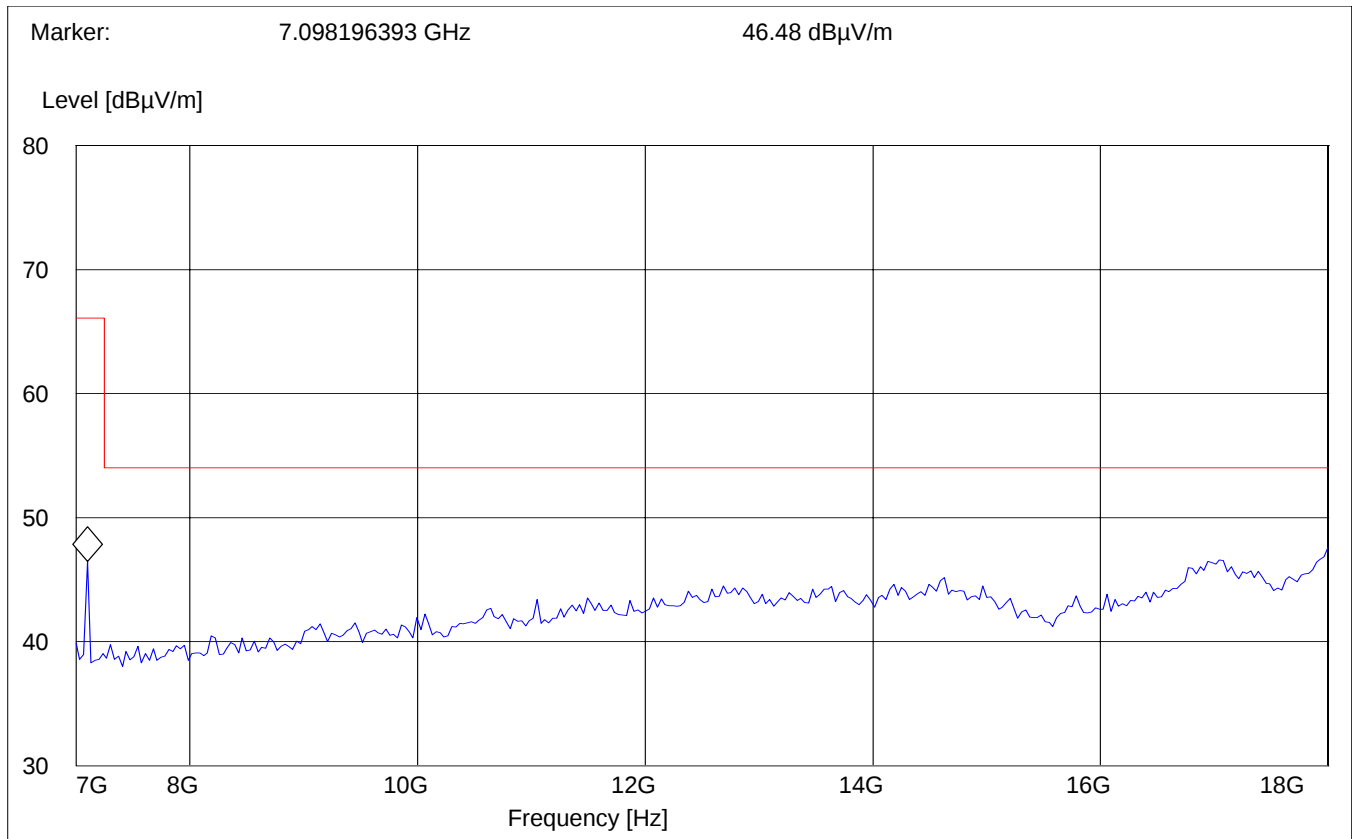
RECEIVER SPURIOUS RADIATION 7GHz – 18GHz

§ 15.209

Antenna: Horizontal
EUT plane: Horizontal with screen vertical @ 90°

SWEEP TABLE: "WLAN Spuri hi 7-18G"

Start	Stop	Detector	Meas.	RBW	Transducer
Frequency	Frequency	Time	Bandw.	VBW	
7.0 GHz	18 GHz	MaxPeak	Coupled	1 MHz	#326 horn (dBi)



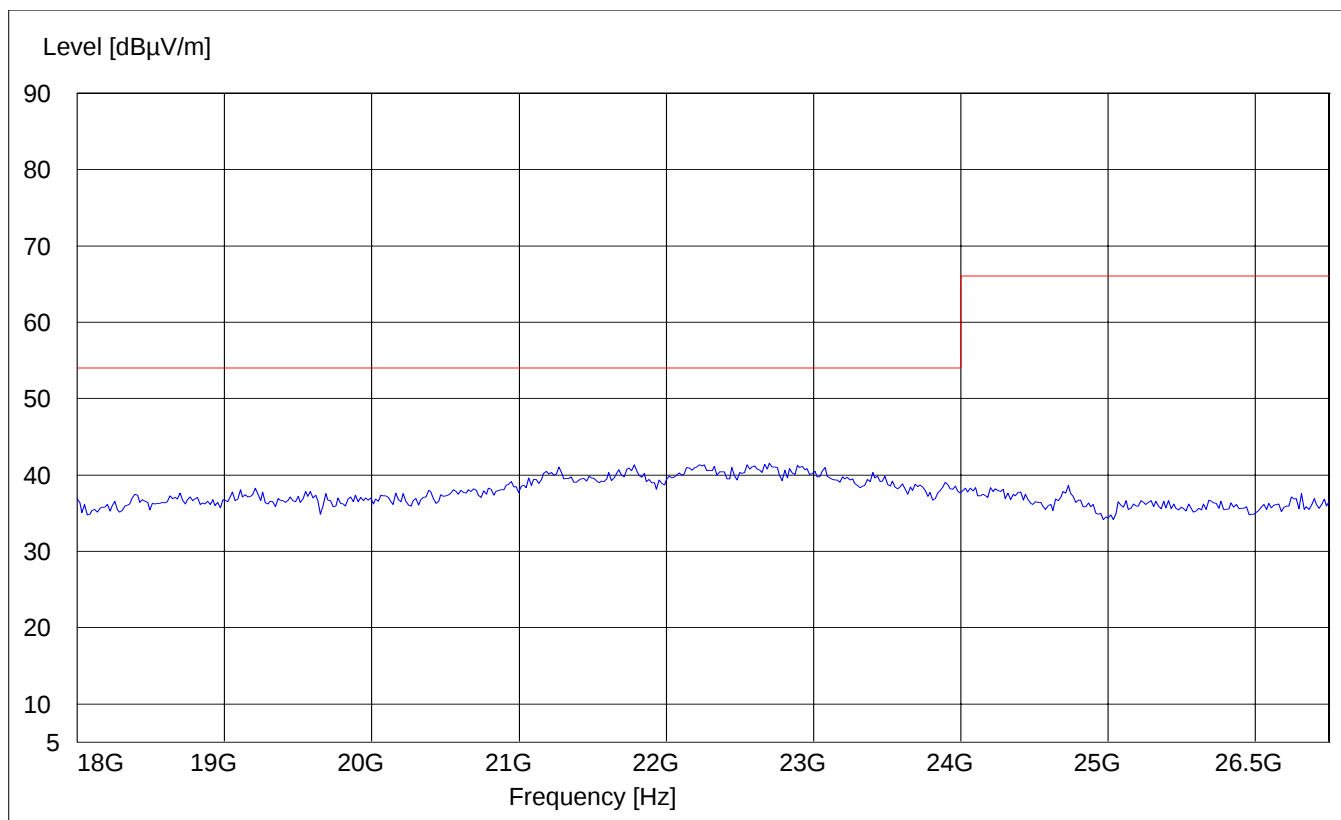
RECEIVER SPURIOUS RADIATION 18GHz – 26.5GHz

§ 15.209

Antenna: Horizontal
EUT plane: Horizontal with screen vertical @ 90°

SWEEP TABLE: "WLAN Spuri hi 18-26.5G"

Start	Stop	Detector	Meas.	RBW	Transducer
Frequency	Frequency	Time	Bandw.	VBW	
18 GHz	26.5 GHz	MaxPeak	Coupled	1 MHz	#141 horn (dBi)



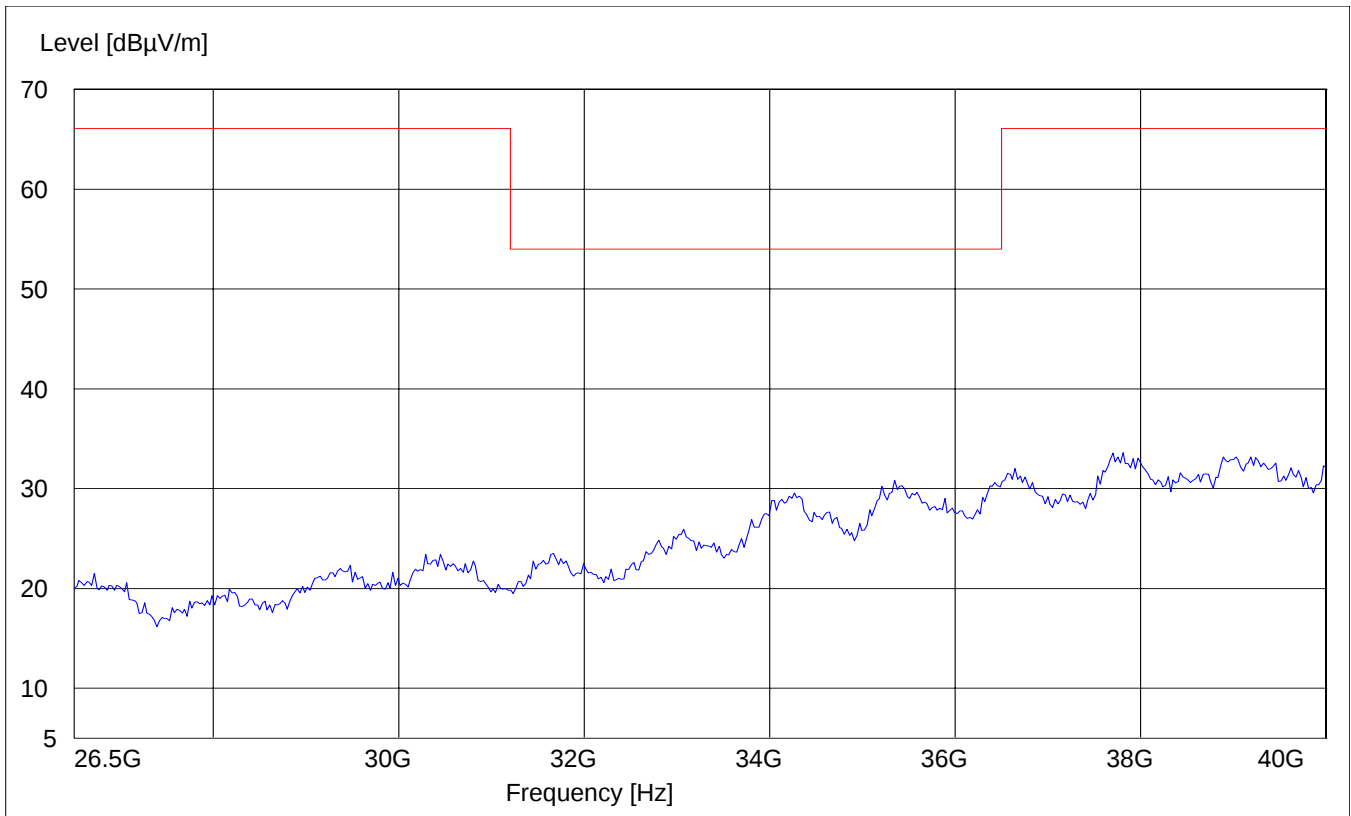
RECEIVER SPURIOUS RADIATION 26.5GHz – 40GHz

§ 15.209

Antenna: Horizontal
EUT plane: Horizontal with screen vertical @ 90°

SWEEP TABLE: "WLAN Spuri hi 26.5-40G"

Start	Stop	Detector	Meas.	RBW	Transducer
Frequency	Frequency	Time	Bandw.	VBW	
26.5 GHz	40 GHz	MaxPeak	Coupled	1 MHz	3160-10 horn



TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS

No	Instrument/Ancillary	Type	Manufacturer	Serial No.
01	Spectrum Analyzer	ESIB 40	Rohde & Schwarz	100107
02	Spectrum Analyzer	FSEM 30	Rohde & Schwarz	826880/010
03	Biconilog Antenna	3141	EMCO	0005-1186
04	Horn Antenna (700M-18GHz)	SAS-200/571	AH Systems	325
05	Horn Antenna (18-26.5GHz)	3160-09	EMCO	1240
06	2-3GHz Band reject filter	BRM50701	Microtronics	6
07	Power-Meter	NRVD	Rohde & Schwarz	0857.8008.02
08	Pre-Amplifier	TS-ANA	Rohde & Schwarz	--
09	Pre-Amplifier	JS4-00102600	Miteq	00616

BLOCK DIAGRAMS

Radiated Testing

ANECHOIC CHAMBER

