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A				12.05 2015	M. Reuben	S. Cohen

EMC Laboratory

WipAir 8000-5X GHz

**Manufactured by
WaveIP LTD.**

FCC ID: QQ2-WA8K 5X

EMC Test Report

**According to FCC CFR 47 Part 90 subpart Y
and
RSS-111 Issue 3**

	Fonction/Title	Name	Signature	Date
Prepared by:	Technical Writer	M. Reuben		05.01 2015
Checked by:	Test Engineer	I. Arbitman		05.01.2015
Approved By:	EMC Lab. Manager	S. Cohen		19-May-15

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1. ADMINISTRATIVE DATA

1.1. Scope

This document describes the measurement procedures and tests for Radiated and conducted emission testing of the WipAir 8000 5X GHz manufactured by WaveIP Ltd.

2. GENERAL INFORMATION

2.1. Description of equipment Under Test

Equipment Under Test	WipAir 8000-5X GHz
FCCID	QQ2-WA8K 5X
Manufacturer	WaveIP Ltd.
Serial Numbers	041A04000100
Mode of Operation	Tranceiver MODE
Receiver operating frequency	4949 MHz – 4990 MHz
Year of Manufacture	2014

2.2. Applicant Information:

Applicant	WaveIP Ltd
Applicant Address	Teradion Industrial park, Misgav 20179, Israel
Telephone	+972-4-9027000
FAX	+972-4-9990324
The testing was observed by	AMIT ARAZI

2.3. Test Performance:

Dates of testing	January – April 2015
Test Laboratory Location	Elbit Systems Land and C ⁴ I Ltd., EMC LAB, Hashoftim 26 Holon 58102 ISRAEL Tel: 972-3-5574476 Fax: 972-3-5575320
Applicable EMC Specification	Federal Communication Commission (FCC), FCC CFR Part 90 subpart Y and RSS-111 Issue 3

3. TEST SUMMARY AND SIGNATURES.

Elbit Systems Land and C⁴I Ltd., EMC Laboratory has completed testing of E.U.T in accordance with the requirements of the FCC sections 90.205, 90.1215, RSS-111 section 5.3.

The E.U.T was found to comply with the requirements of the FCC Part 15 Regulations given below

Test	Test Description	Section	Pass/Fail
1	Occupied bandwidth	FCC sections 90.209, RSS-Gen section 4.6.1	Pass
2	Maximum output power and Peak power spectral density	FCC sections 90.205, 90.1215, RSS-111 section 5.3, Part 15	Pass
3	Emission mask	FCC sections 90.210(m), RSS-111 section 5.4	Pass
4	Conducted spurious emissions	FCC sections 90.210, RSS-111 section 5.4	Pass
5	Receiver spurious emissions	RSS-111 section 5.5	Pass
6	Radiated spurious emissions	FCC sections 90.210, RSS-111 section 5.4	Pass

3.1. Test performed by:

I. Arbitman



3.2. Test Report prepared by:

M. Reuben



3.3. Test Report Approved by:

Mr. Samuel Cohen EMC Lab. Manager



4. E.U.T INFORMATION

4.1. E.U.T description

WipAir 8000-5X GHz is WaveIP's wireless point-to-point and point to multi point broadband wireless communication system. The system uses dual or single radio channels, (defined by software) in the 5GHz bands, utilizing 5, 10, 20 MHz channels, OFDM modulation, and TDD Spectrum Management.

The total conducted output power is up to 1 Watt (sum of both channels), with dynamic range of ~ 45 dB.

EUT was tested in MIMO mode (dual channel)

EUT Technical characteristics

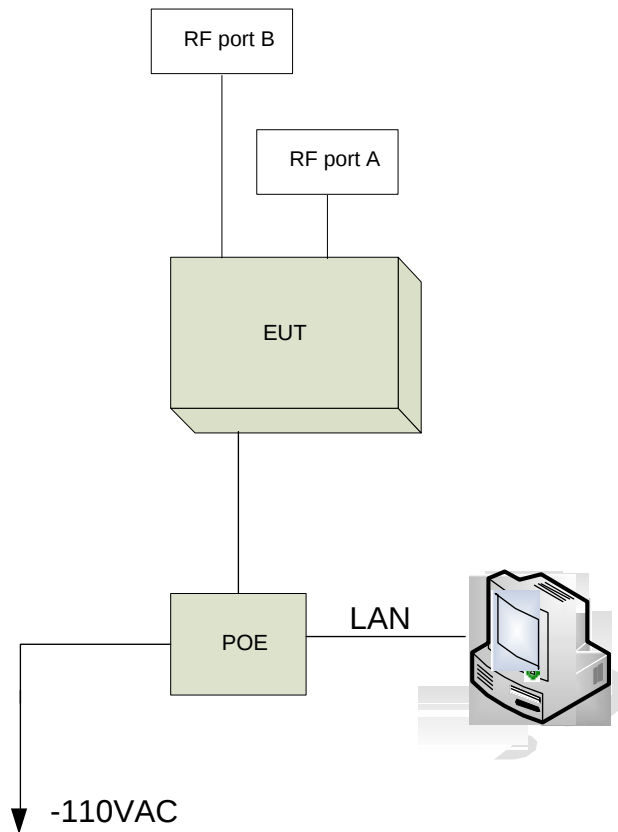
Transmitter characteristics		Notes
Assigned frequency	4940-4990MHZ	
Operating Frequency range	4942.5-4987.5MHZ	5MHz Channel
	4945-4985MHZ	10MHz Channel
	4950-4980MHZ	20MHz Channel
Antenna Ports	TNC	For detached option only
Modulations type	QPSK, 4QAM, 16QAM, 64QAM	
Multiplexing type	OFDM	
Modulating Test Signal	PRBS 100% duty cycle	

Antenna type

Antenna Type	Model	Gain 4.9 GHz (dBi)	Beam Width	Dimension
Flat panel	DA-5X-230D-010	22	10° x 10°	305x305x15
	DP-5X-230D-010	22	10° x 10°	371x371x40
	IDP-5X-250D-009	23	9° x 9°	371x371x40
	IDP-5X-230D-010	22	10° x 10°	305x305x40
	SDP-5X-170D-090	16	90°	430x165x35
	SDP-5X-170D-060	16	60°	430x165x35
	SA-5X-150D-120	14	120°	450x165x35
	SA-5X-170D-090	16	90°	450x165x35
	SA-5X-180D-060	17	60°	450x165x35
Dish	DP-5X-285D-005	27	5° x 5°	2ft

E.U.T Test Configuration

E.U.T. test configuration is shown in figure below:



5. OCCUPIED BANDWIDTH

Equipment Under Test	WipAir 8000-5X GHz
Test Method	FCC sections 90.209, RSS-Gen section 4.6.1
Date	05.01.2015
Relative Humidity	40%
Ambient Temperature	25 ⁰ C
Air Pressure	1010 hPa
Test Setup	Figure 1

Testing Engineer: I. Arbitman 

Date 05.01.2015

5.1. Test Results Summary & Conclusions

The E.U.T was found in compliance with Bandwidth of the emission fundamental frequency requirement.

5.2. Limits of bandwidth

The test unit shall meet the limits of Table 1

Table 1: Bandwidth Limits

Assigned Frequency (MHz)	Channel Bandwidth (MHz)	Maximum Allowed Bandwidth (MHz)
4940-4990	5	5
	10	10
	20	20

5.3. Test Instrumentation and Equipment

Table 2: Test Instrumentation and Equipment

Item	Model	P/N	Manufacturer	Next Date Calibration
Spectrum Analyzer	N9020A	20041738908	Agilent	04.04.2015
20 dB Attenuator	8343-206		TENULINE	13.03.2016

5.4. Test Procedure

As per 47 CFR, Section 2.1049

The EUT was set up as shown in Figure 1. The EUT was started and sufficient time for stabilization was allowed.

The total output power integrated over the emission bandwidth of carrier was taken as the reference level.

The transmitter occupied bandwidth was measured with spectrum analyzer as a frequency delta between the reference points on the modulation envelope and are shown in the Tables Nos. 3, 4 & 5

5.5. Test Setup

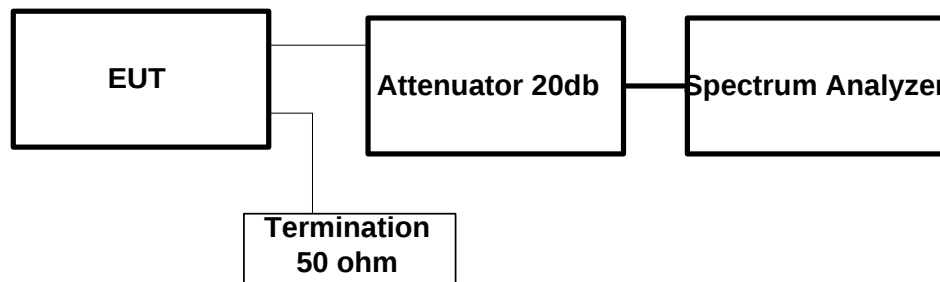


Figure 1: Occupied Bandwidth Test Setup

5.6. Results for Port A

Table 3: 5 MHz Bandwidth Test Result

Frequency (MHz)	Bandwidth (MHz)	Limits (MHz)	Margin (MHz)	Plot No	PASS/FAIL
Low - 4943	4.2108	5	0.7892	1	Pass
Middle – 4963	4.2154	5	0.7846	2	Pass
High - 4987	4.2160	5	0.7840	3	Pass

Table 4: 10 MHz Bandwidth Test Result

Frequency (MHz)	Bandwidth (MHz)	Limits (MHz)	Margin (MHz)	Plot No	PASS/FAIL
Low - 4945	8.3017	10	1.6983	4	Pass
Middle – 4963	8.2986	10	1.7014	5	Pass
High - 4985	8.3064	10	1.6936	6	Pass

Table 5: 20 MHz Bandwidth Test Result

Frequency (MHz)	Bandwidth (MHz)	Limits (MHz)	Margin (MHz)	Plot No	PASS/FAIL
Low - 4950	16.689	20	3.3110	7	Pass
Middle – 4963	16.666	20	3.3340	8	Pass
High - 4980	16.673	20	3.3270	9	Pass

Table 6: 5 MHz Bandwidth Test Result

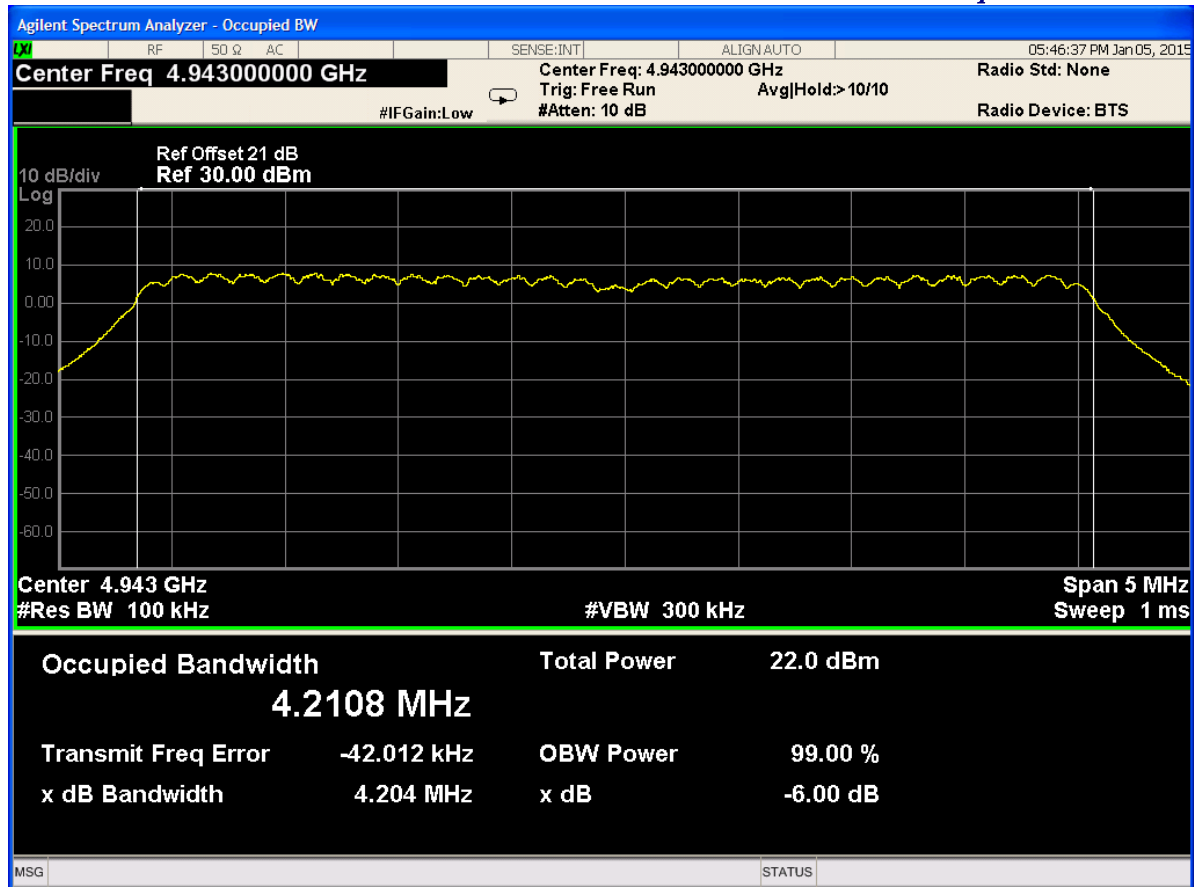
Frequency (MHz)	Bandwidth (MHz)	Limits (MHz)	Margin (MHz)	Plot No	PASS/FAIL
Low - 4943	4.2635	5	0.7365	10	Pass
Middle – 4963	4.2194	5	0.7806	11	Pass
High - 4987	4.2181	5	0.7819	12	Pass

Table 7: 10 MHz Bandwidth Test Result

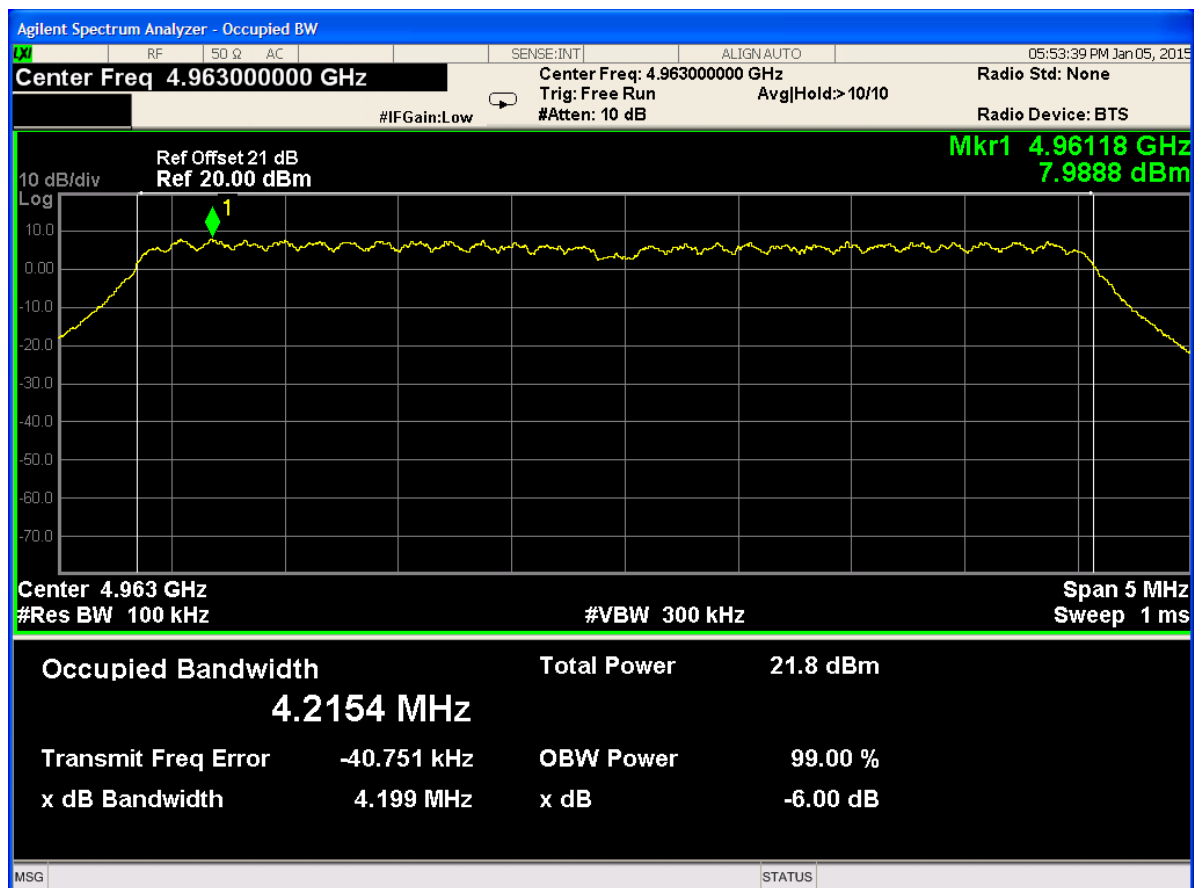
Frequency (MHz)	Bandwidth (MHz)	Limits (MHz)	Margin (MHz)	Plot No	PASS/FAIL
Low - 4945	8.2898	10	1.7102	13	Pass
Middle – 4963	8.2867	10	1.7133	14	Pass
High - 4985	8.2922	10	1.7078	15	Pass

Table 8: 20 MHz Bandwidth Test Result

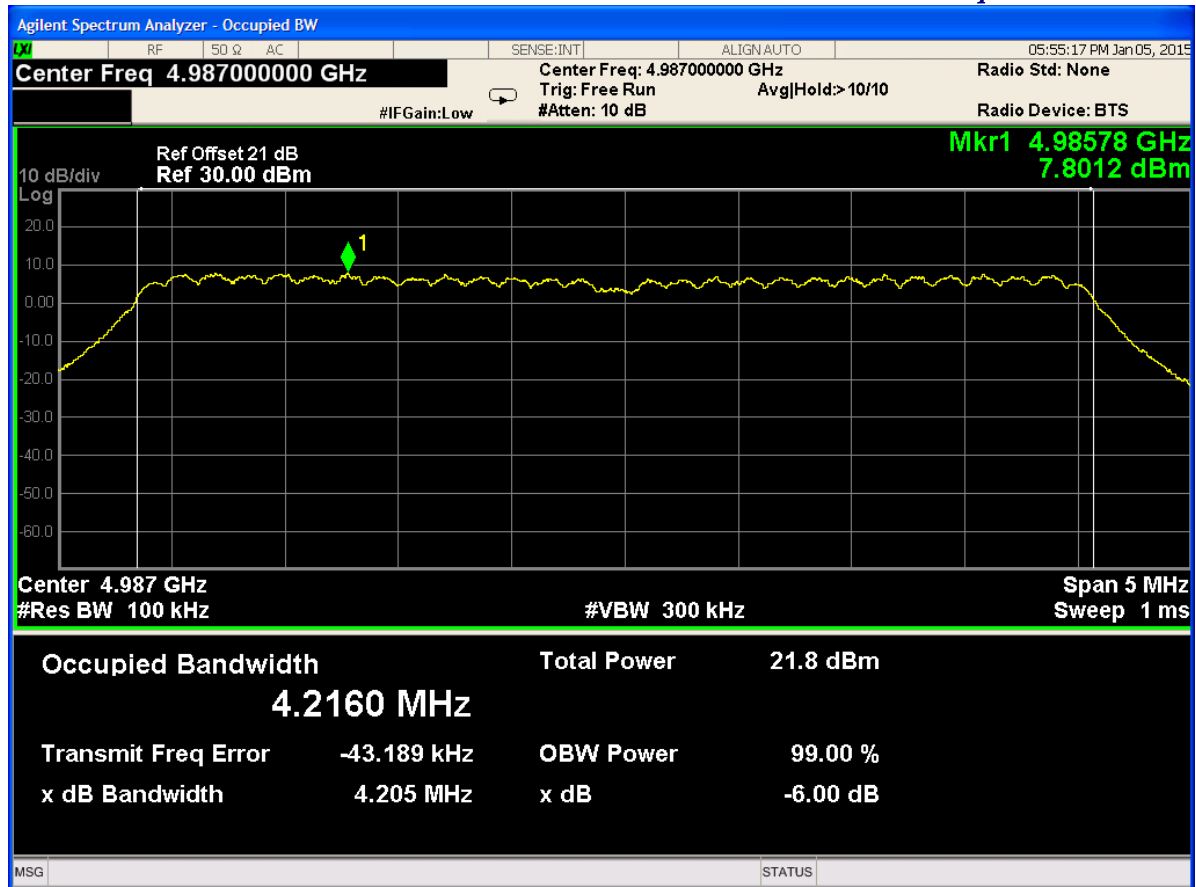
Frequency (MHz)	Bandwidth (MHz)	Limits (MHz)	Margin (MHz)	Plot No	PASS/FAIL
Low - 4950	16.657	20	3.3430	16	Pass
Middle – 4963	16.648	20	3.3520	17	Pass
High - 4980	16.657	20	3.3430	18	Pass



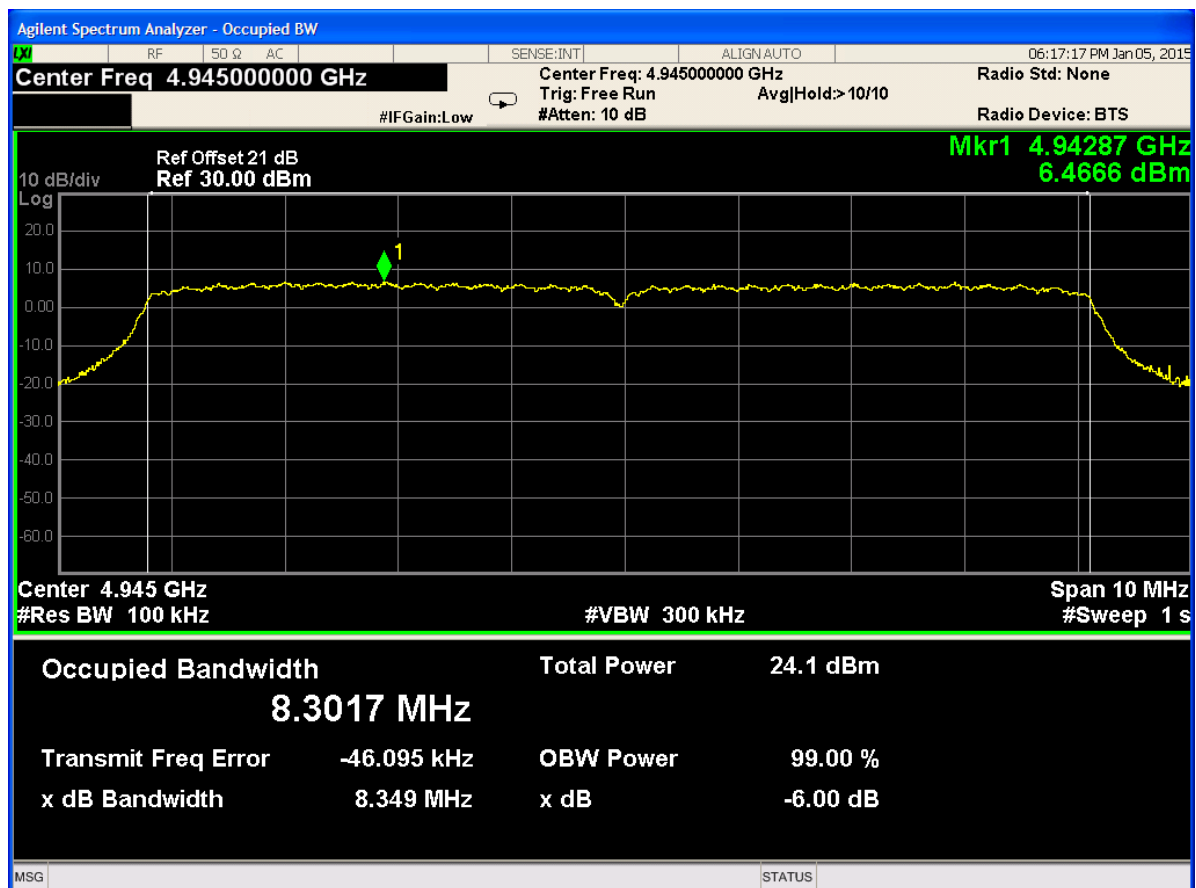
Plot Occupied BW 6dB/ 1



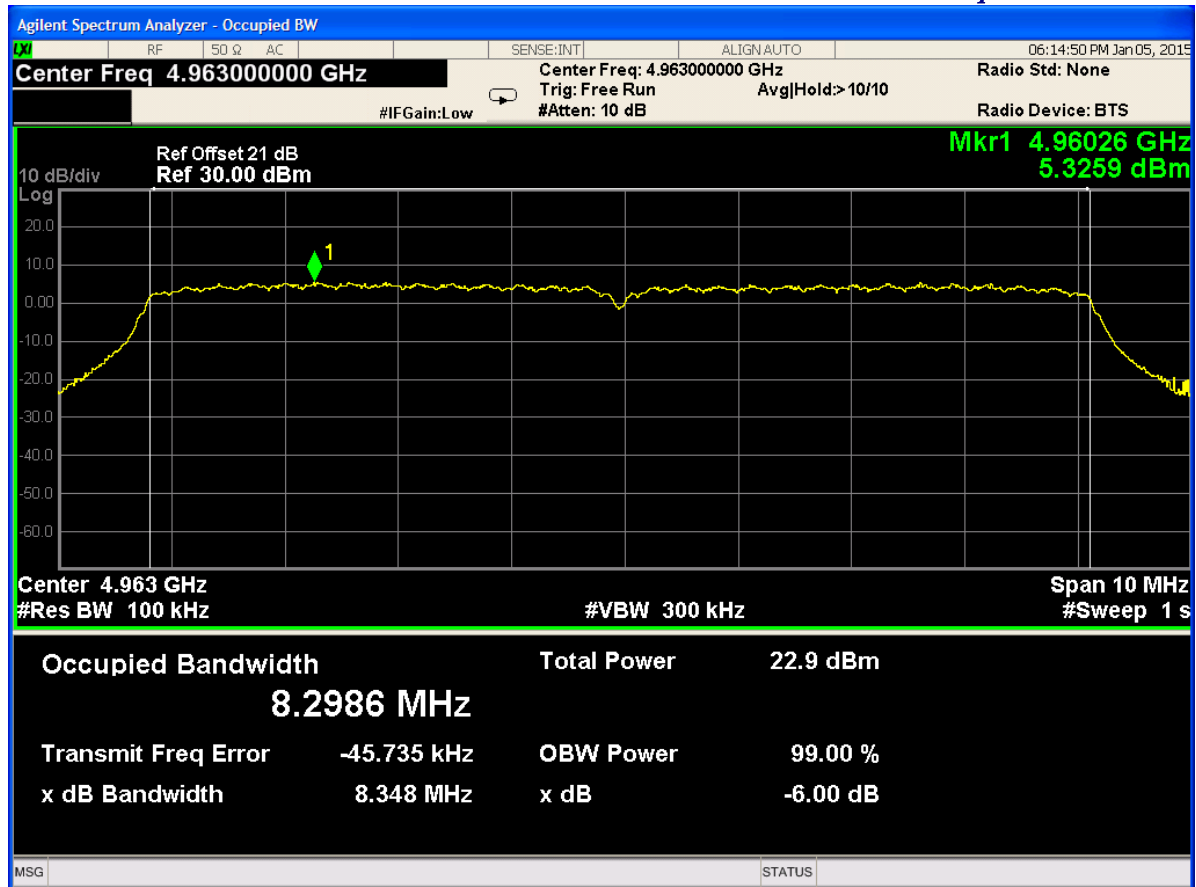
Plot Occupied BW 6dB/ 2



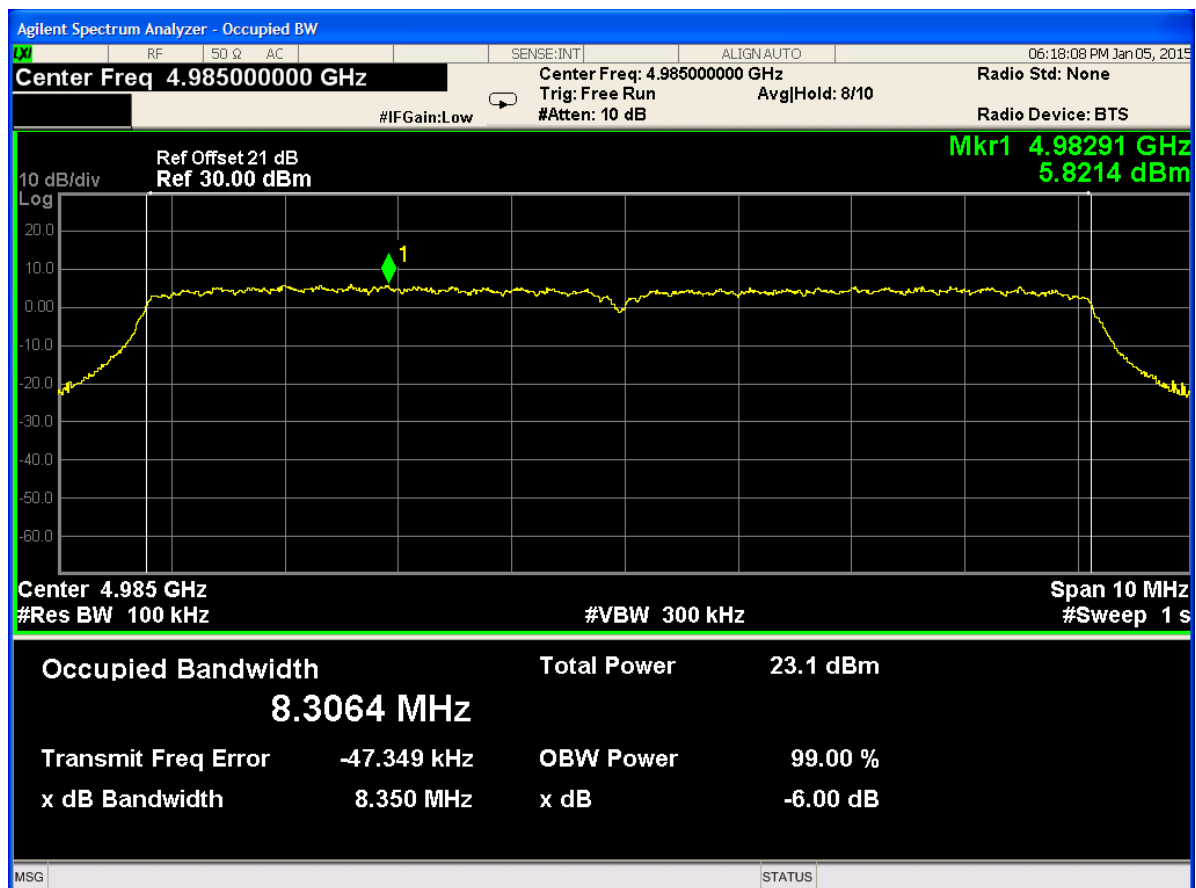
Plot Occupied BW 6dB/ 3



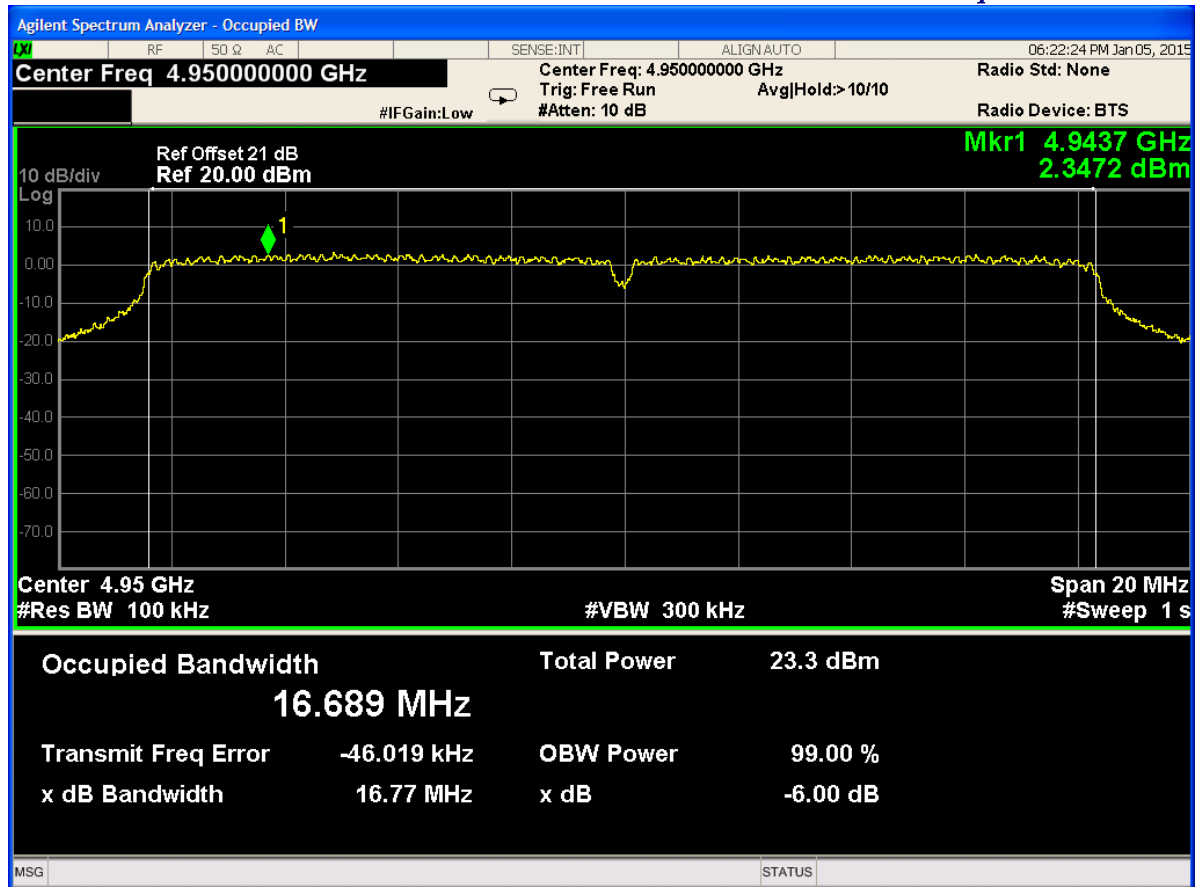
Plot Occupied BW 6dB/ 4



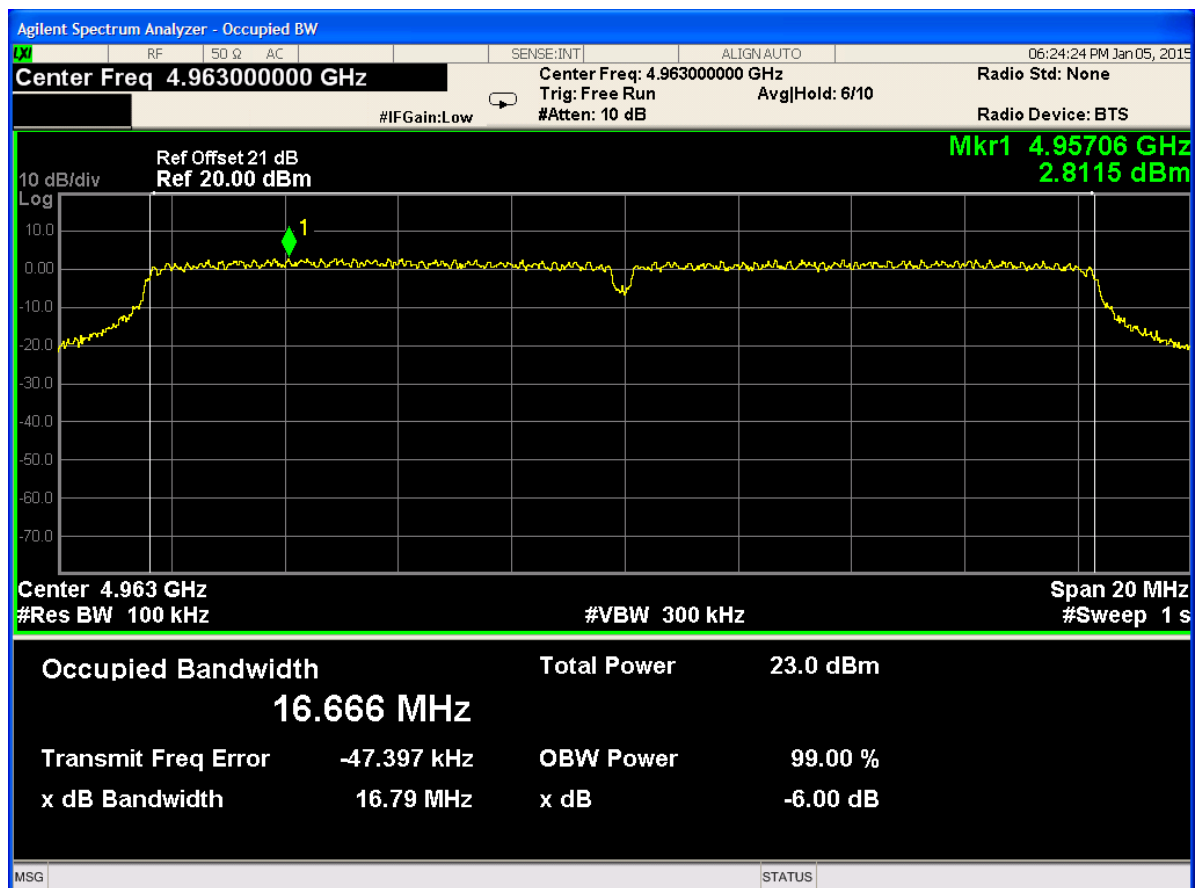
Plot Occupied BW 6dB/ 5



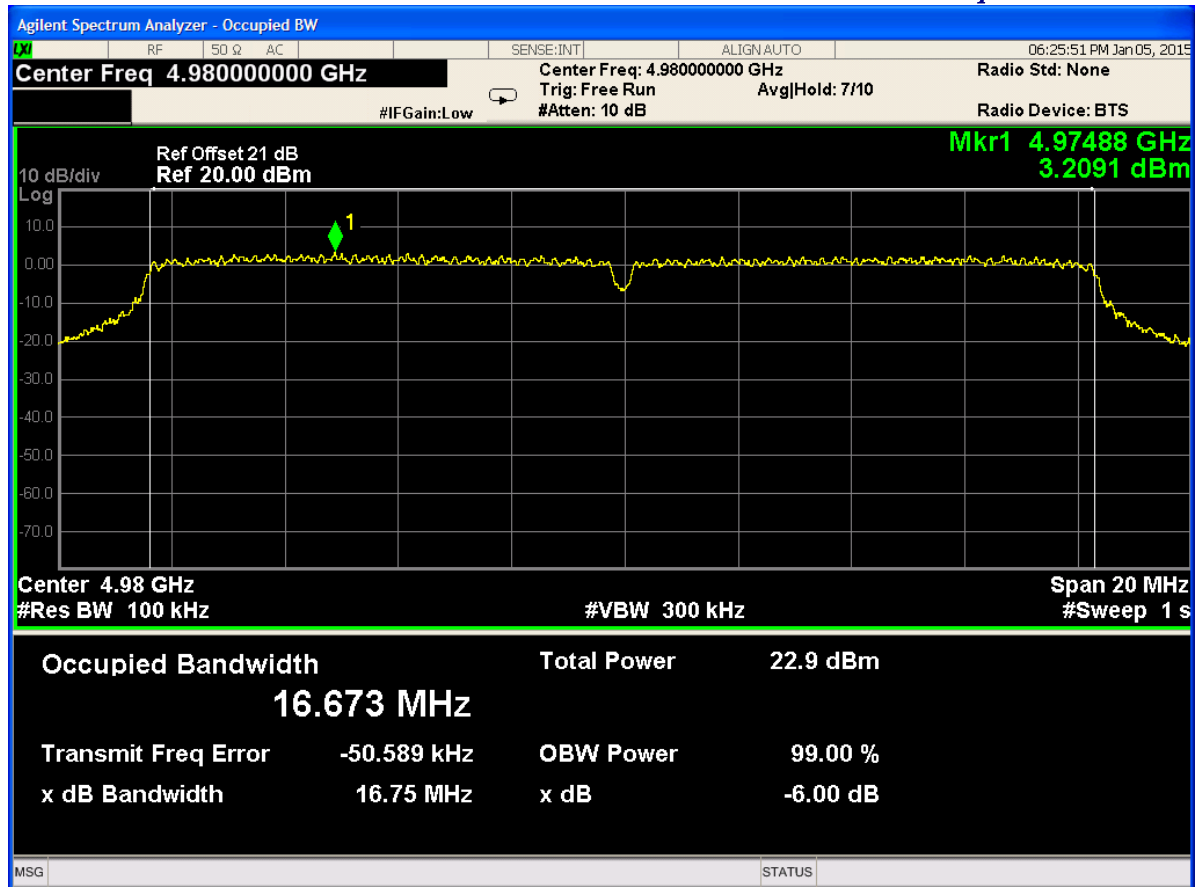
Plot Occupied BW 6dB/ 6



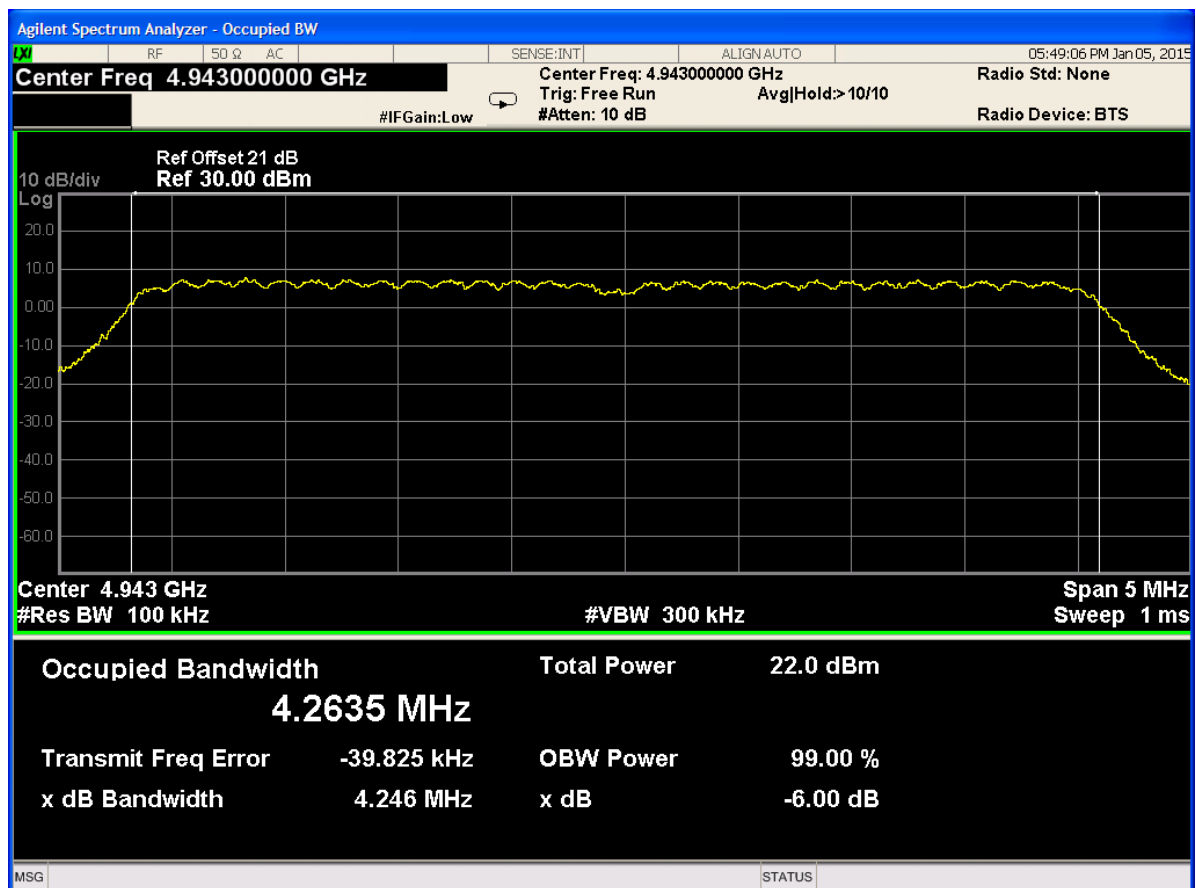
Plot Occupied BW 6dB/ 7



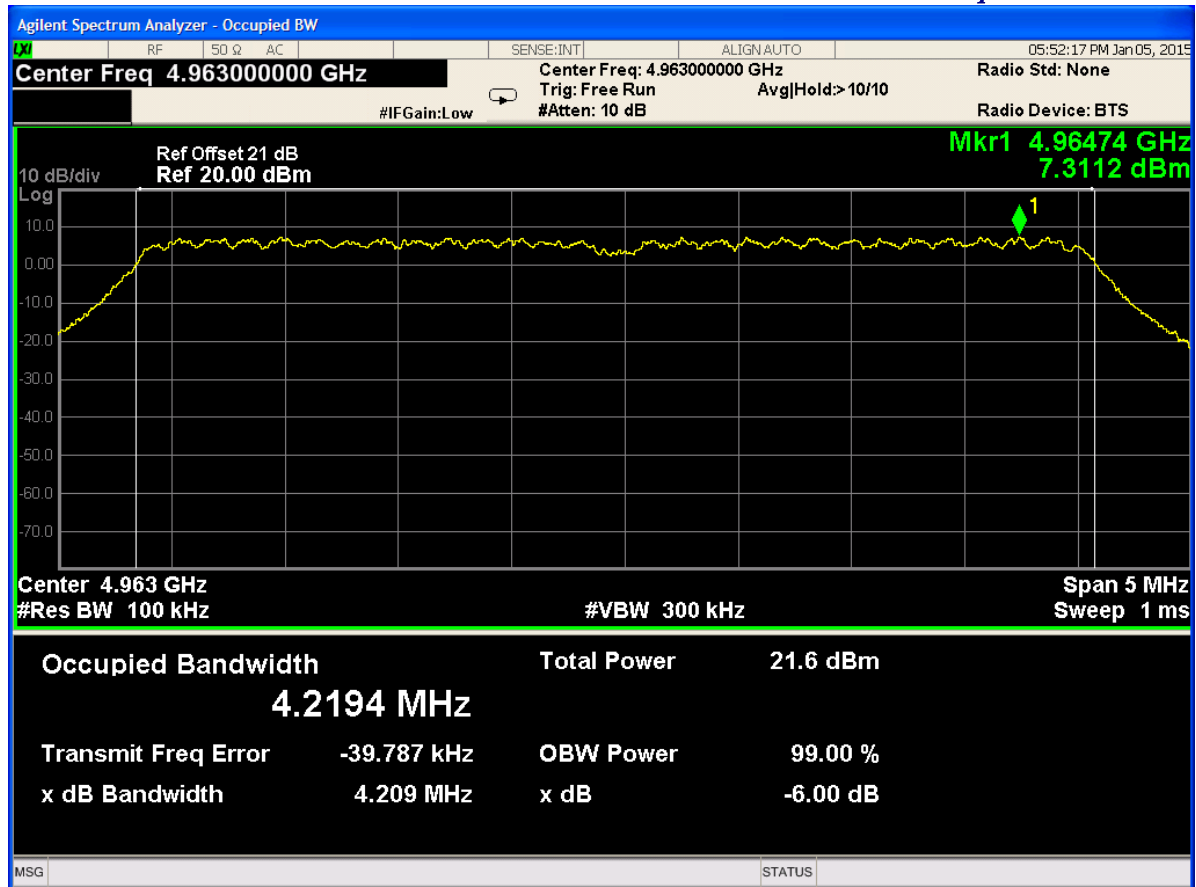
Plot Occupied BW 6dB/ 8



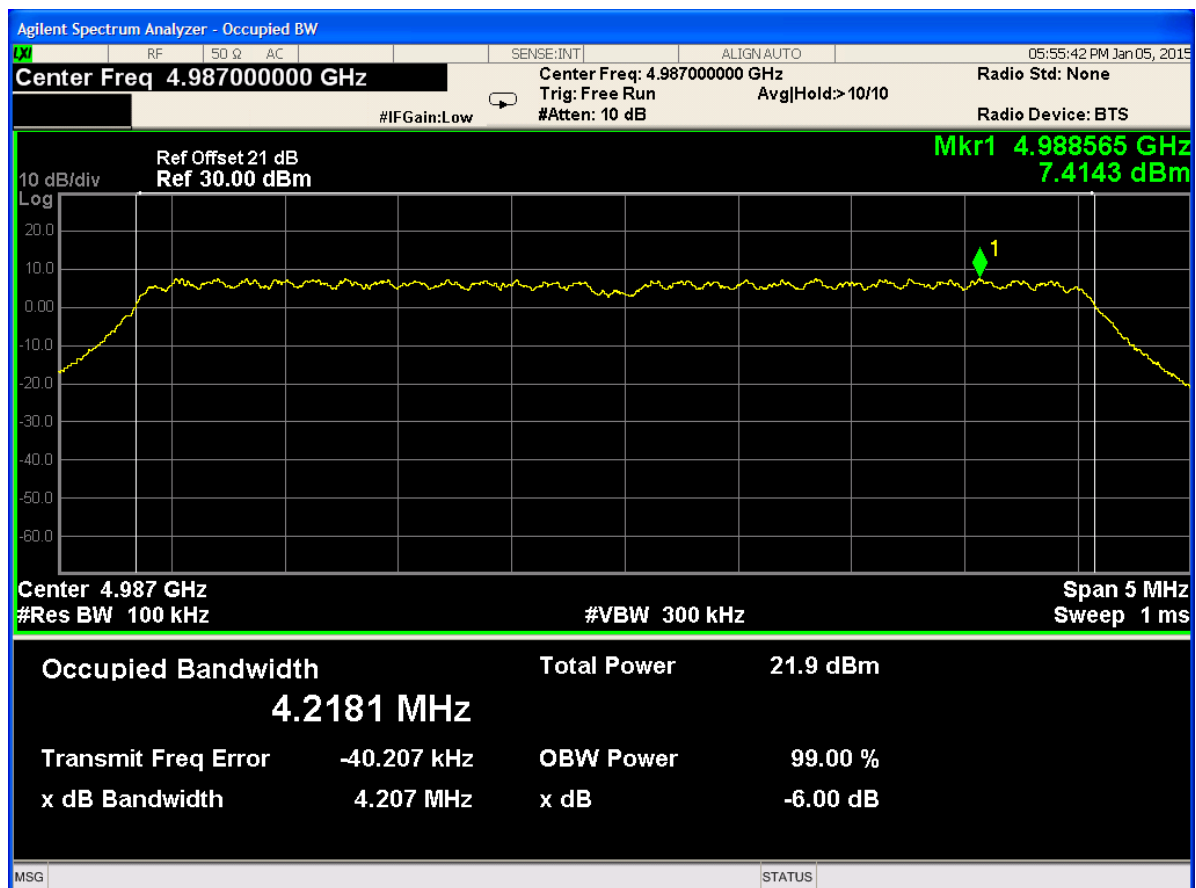
Plot Occupied BW 6dB/ 9



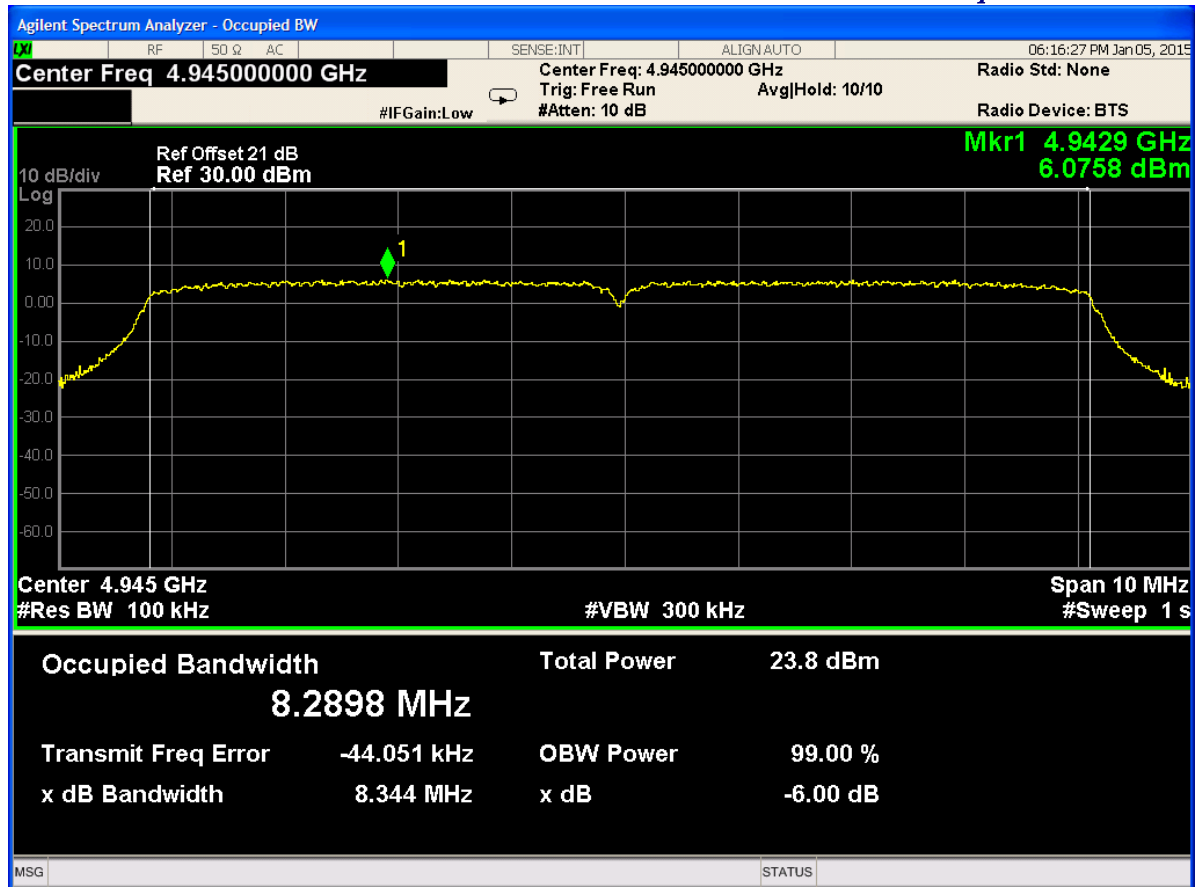
Plot Occupied BW 6dB/ 10



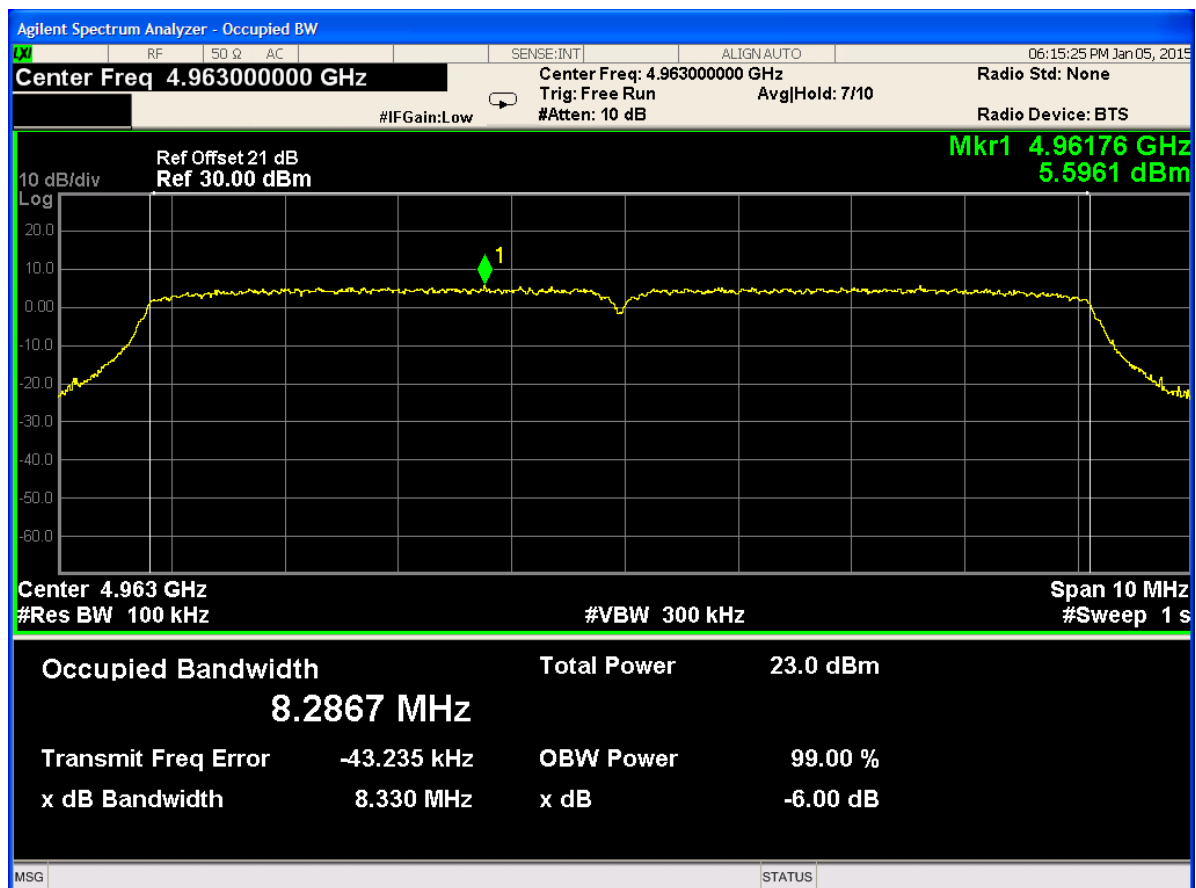
Plot Occupied BW 6dB/ 11



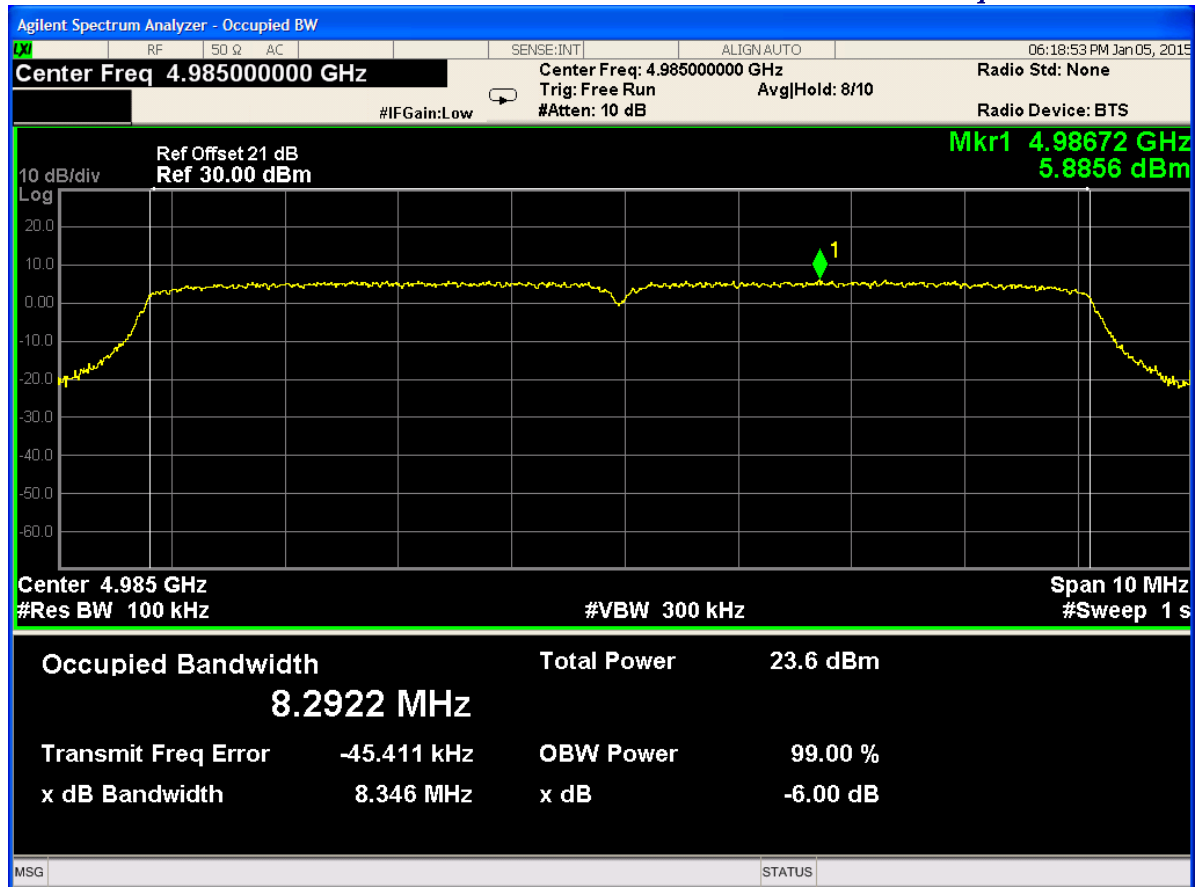
Plot Occupied BW 6dB/ 12



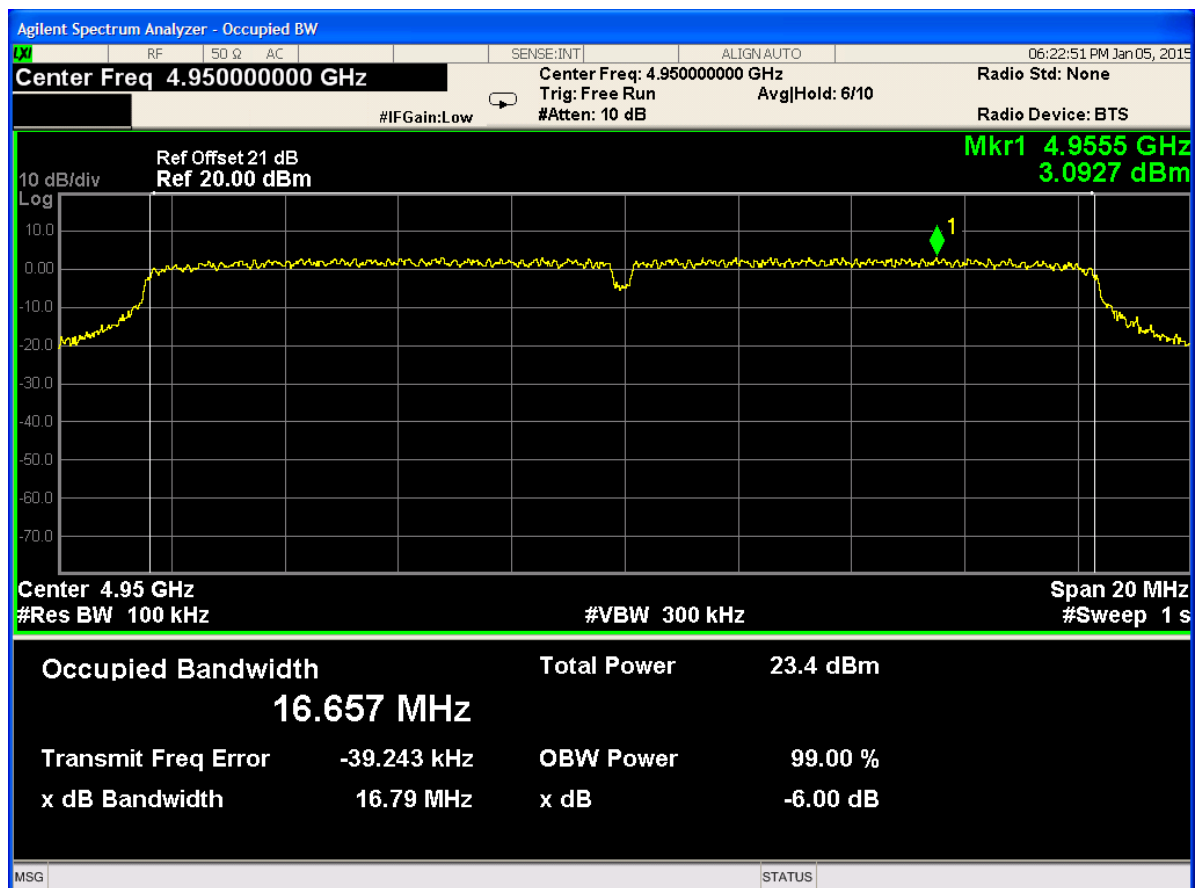
Plot Occupied BW 6dB/ 13



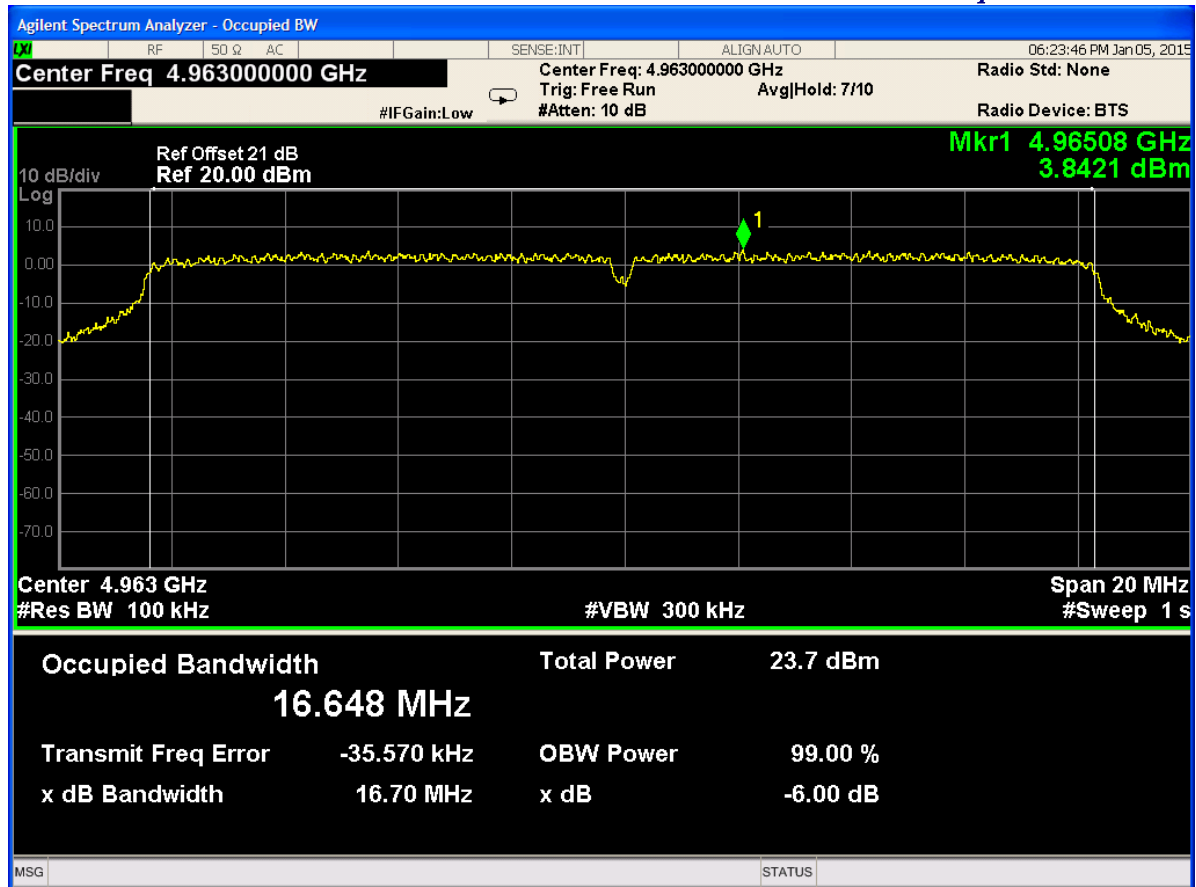
Plot Occupied BW 6dB/ 14



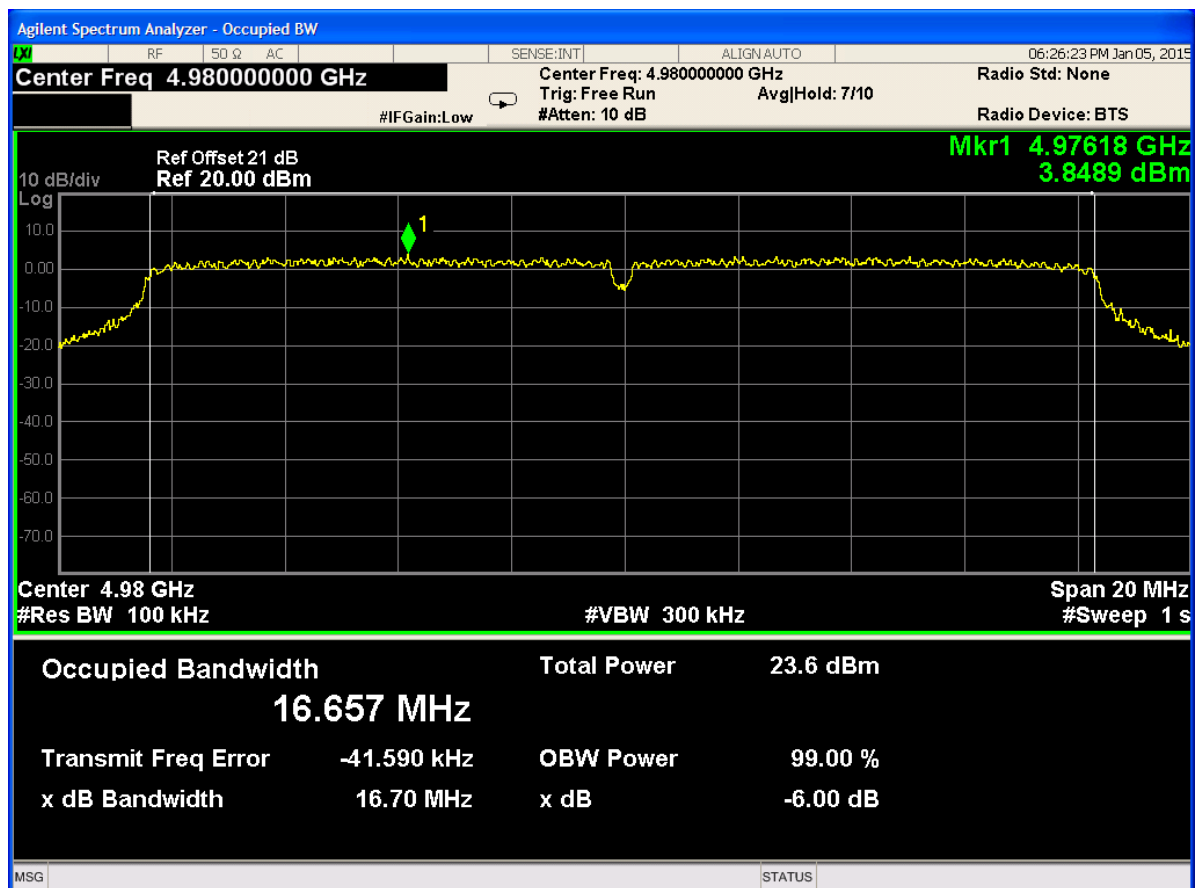
Plot Occupied BW 6dB/ 15



Plot Occupied BW 6dB/ 16



Plot Occupied BW 6dB/ 17



Plot Occupied BW 6dB/ 18

6. PEAK OUTPUT POWER AND POWER SPECTRAL DENSITY

Equipment Under Test	WipAir 8000-5X GHz
Test Method	FCC sections 90.1215, RSS-111 section 5.3
Date	05.01.2015
Relative Humidity	40%
Ambient Temperature	25 ⁰ C
Air Pressure	1010 hPa
Test Setup	Figure 2

Testing Engineer: I. Arbitman 

Date 05.01.2015

6.1. Test Results Summary & Conclusions

The E.U.T was found in compliance with Peak Output Power requirements

6.2. Limits of Peak Output Power according to 90.1215

The tests shall meet the limits of Table 9.

Table 9: Limits for Peak Output Power and Spectral Density

Assigned Frequency (MHz)	Channel Bandwidth (MHz)	Maximum Peak Output Power		Power Spectral Density dBm/MHz
		mW	dBm	
4940 - 4990	5	500	27.0	21
	10	1000	30.0	
	20	2000	33.0	

*: If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power limit shall be reduced below the .stated value as follows:

- By the amount in dB that the directional gain of antenna exceeds 9 dBi.
- Without any corresponding reduction for high power devices fixed-point-to-point and point-to-multipoint transmitters employing antennas with directional gain up to 26 dBi
- Corresponding reduction in the peak output power and peak power spectral density limit should be the amount in dB that the directional gain of antenna exceeds 26 dBi for high power devices.

6.3. Test Instrumentation and Equipment

Table 10: Test Instrumentation and Equipment

Item	Model	P/N	Manufacturer	Next Date Calibration
Spectrum Analyzer	N9020A	20041738908	Agilent	04.04.2015
20 dB Attenuator	8343-206		TENULINE	13.03.2016

6.4. Test Procedure

As per 47 CFR, Section 2.1046 TIA/EIA-603-C, Section 2.2.1

The test setup is shown in Figure 2

The EUT was set to transmit at 100% duty cycle, at highest transmitting power and sufficient time for stabilization was allowed.

Power measurements were performed for top, middle and bottom frequencies, for each channel, BW 5, 10, and 20 MHz

The EUT was connected to the spectrum analyzer through an appropriate attenuator and accounted for cable loss in the settings.

Note: The 20dB attenuator has been considered in the measurements results.

Total output power was calculated as a sum of 'Peak output power Channel A + Peak output power Channel B'.

6.5. Test Setup

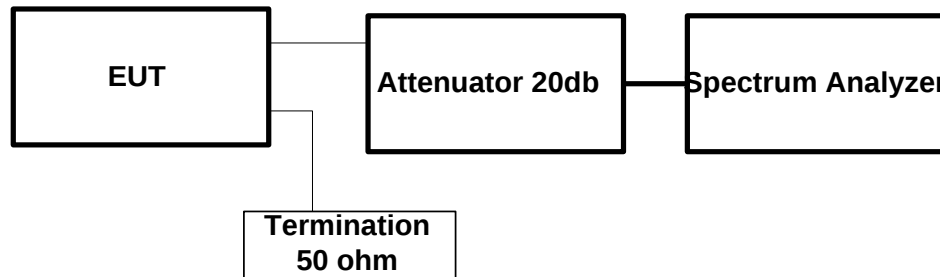


Figure 2: Field strength of fundamental test setup

6.6. Output Power Test Results for Port A

Table 11: 5 MHz BW Test Results

Frequency (MHz)	Measured Peak Output Power (dBm)	Margin (dBm)	Limit (dBm)	Plot Reference	Pass/Fail
4943	22.30	4.70	27	1	Pass
4963	22.35	4.65	27	2	Pass
4987	22.28	4.72	27	3	Pass

Table 12: 10 MHz BW Test Results

Frequency (MHz)	Measured Peak Output Power (dBm)	Margin (dBm)	Limit (dBm)	Plot Reference	Pass/Fail
4945	25.07	4.93	30	4	Pass
4963	24.94	5.06	30	5	Pass
4985	25.4	4.60	30	6	Pass

Table 13: 20 MHz BW Test Results

Frequency (MHz)	Measured Peak Output Power (dBm)	Margin (dBm)	Limit (dBm)	Plot Reference	Pass/Fail
4950	26.27	6.73	33	7	Pass
4963	25.68	7.32	33	8	Pass
4980	26.35	6.65	33	9	Pass

6.7. Output Power Test Results for Port B

Table 14: 5 MHz BW Test Results

Frequency (MHz)	Measured Peak Output Power (dBm)	Margin (dBm)	Limit (dBm)	Plot Reference	Pass/Fail
4943	21.93	5.07	27	10	Pass
4963	22.39	4.61	27	11	Pass
4987	22.72	4.28	27	12	Pass

Table 15: 10 MHz BW Test Results

Frequency (MHz)	Measured Peak Output Power (dBm)	Margin (dBm)	Limit (dBm)	Plot Reference	Pass/Fail
4945	25.01	4.99	30	13	Pass
4963	25.25	4.75	30	14	Pass
4985	25.93	4.07	30	15	Pass

Table 16: 20 MHz BW Test Results

Frequency (MHz)	Measured Peak Output Power (dBm)	Margin (dBm)	Limit (dBm)	Plot Reference	Pass/Fail
4950	25.91	7.09	33	16	Pass
4963	26.44	6.56	33	17	Pass
4980	26.08	6.92	33	18	Pass

6.8. Peak Output Power Calculated Results for both ports

- RF output power = SA reading at outputs summed in linear terms = $10 \log [10^{(P_{ant1}/10)} + 10^{(P_{ant2}/10)}]$

Table 17: 5 MHz BW Test Results

Frequency (MHz)	Peak Output Power (dBm)		Calculated Peak Output Power (dBm)	Limit (dBm)	Pass/Fail
	Port A	Port B			
4943	22.3	21.93	25.129	27	Pass
4963	22.35	22.39	25.38	27	Pass
4987	22.28	22.72	25.515	27	Pass

Table 18: 10 MHz BW Test Results

Frequency (MHz)	Peak Output Power (dBm)		Calculated Peak Output Power (dBm)	Limit (dBm)	Pass/Fail
	Port A	Port B			
4945	25.07	25.01	28.05	30	Pass
4963	24.94	25.25	28.108	30	Pass
4985	25.4	25.93	28.702	30	Pass

Table 19: 20 MHz BW Test Results

Frequency (MHz)	Peak Output Power (dBm)		Calculated Peak Output Power (dBm)	Limit (dBm)	Pass/Fail
	Port A	Port B			
4950	26.27	25.91	29.104	33	Pass
4963	25.68	26.44	29.087	33	Pass
4980	26.35	26.08	28.771	33	Pass

6.9. Power Spectral Density Test Results

Table 20: 5 MHz BW Test Results

Frequency (MHz)	Measured Peak Output Power (dBm/Hz)		Power Density (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Pass/Fail
	Port A	Port B				
4943	15.31	14.94	18.139	20	1.861	Pass
4963	15.36	15.4	18.39	20	1.610	Pass
4987	15.3	15.73	18.53	20	1.470	Pass

Table 21: 10 MHz BW Test Results

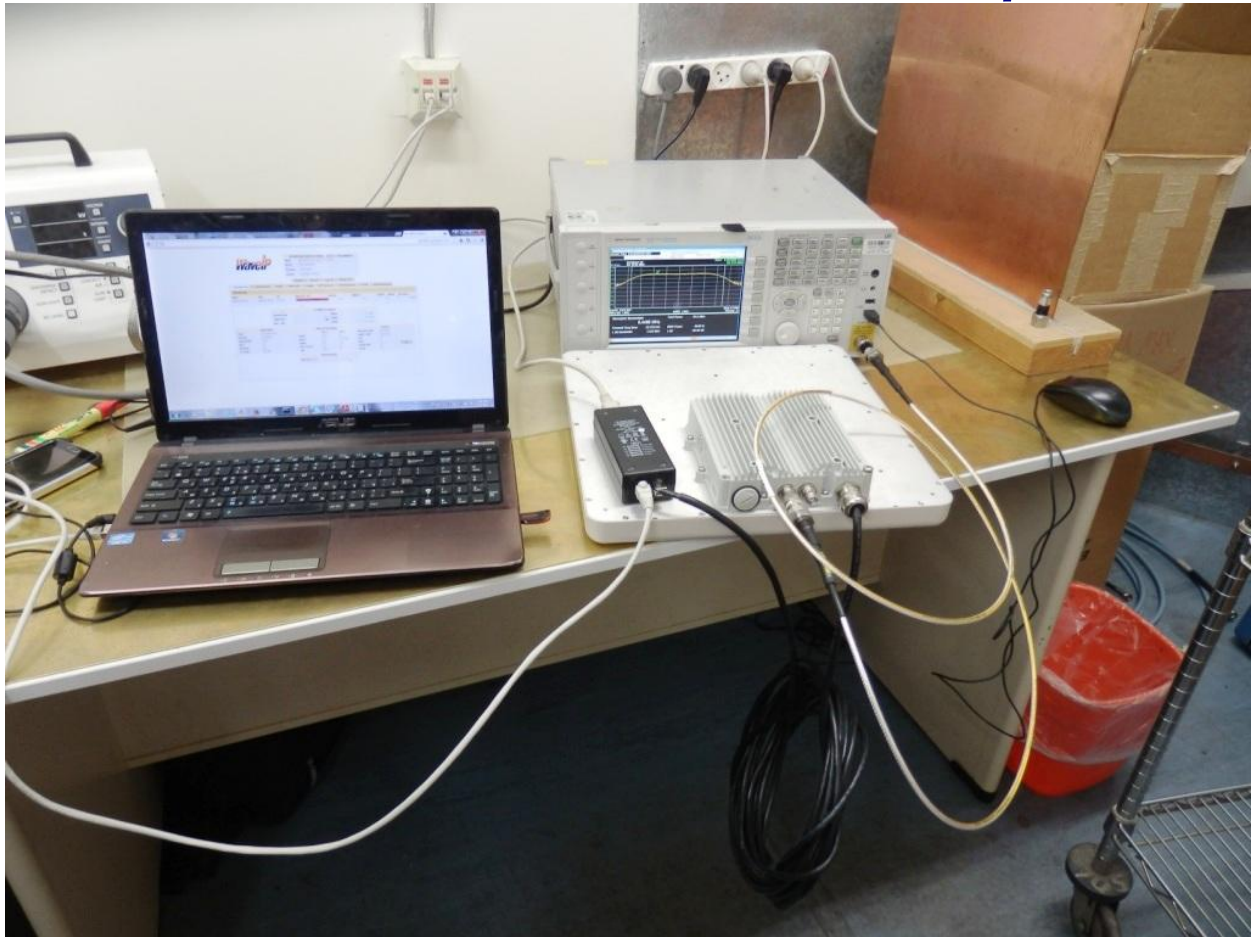
Frequency (MHz)	Measured Peak Output Power (dBm/Hz)		Power Density (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Pass/Fail
	Port A	Port B				
4945	15.07	15.01	18.05	20	1.950	Pass
4963	14.94	15.25	18.108	20	1.892	Pass
4985	15.4	15.93	18.683	20	1.317	Pass

Table 22: 20 MHz BW Test Results

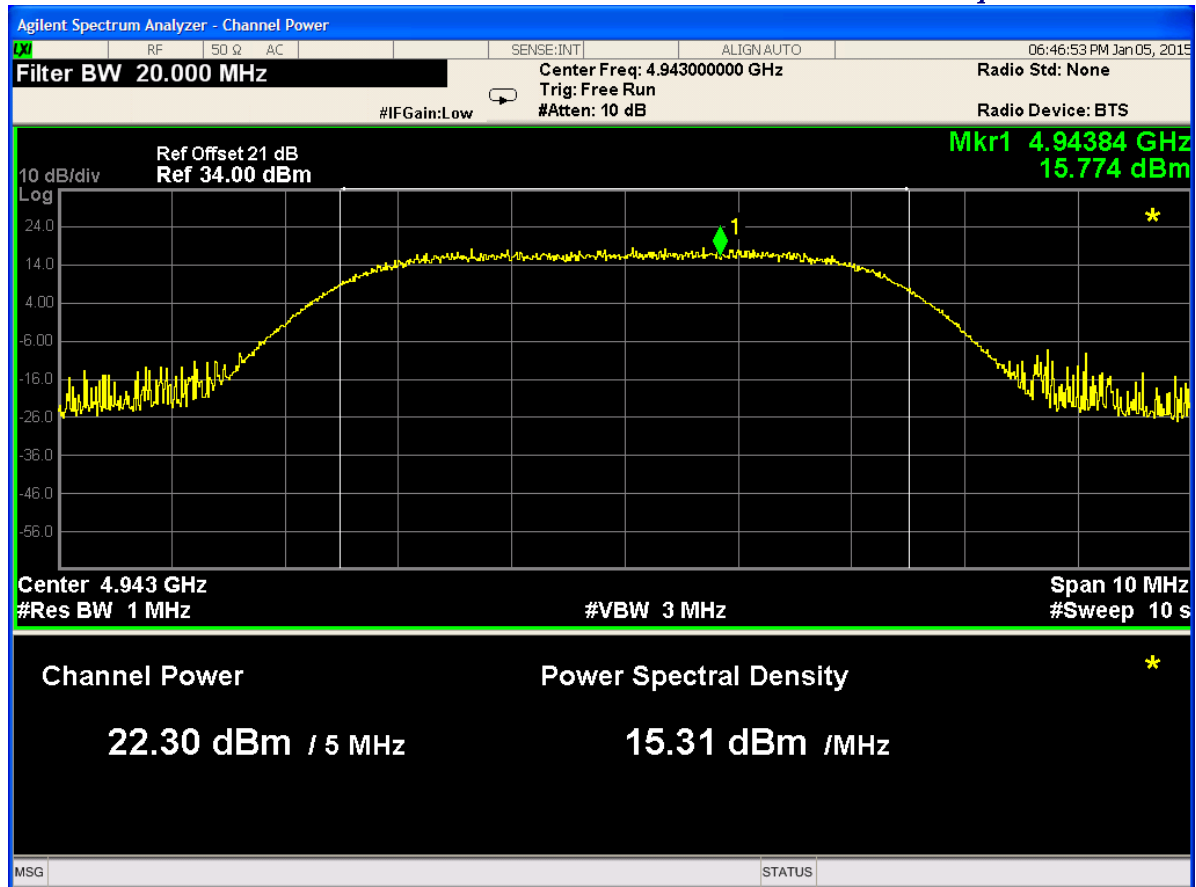
Frequency (MHz)	Measured Peak Output Power (dBm/Hz)		Power Density (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Pass/Fail
	Port A	Port B				
4950	13.25	12.9	16.088	20	3.914	Pass
4963	12.67	13.43	16.07	20	3.930	Pass
4980	13.34	13.07	16.364	20	3.636	Pass

- Power density SA reading at both ports are summed in linear terms as follows:

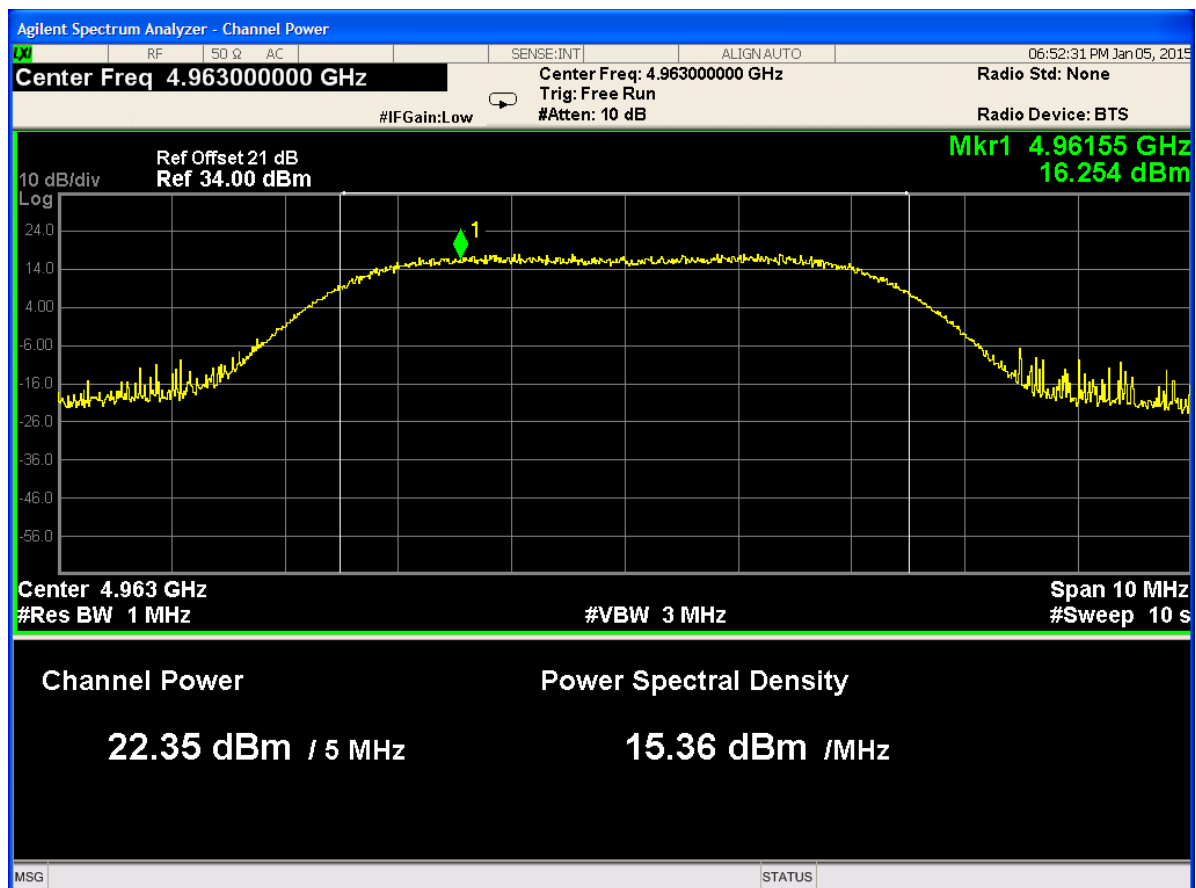
$$PD = 10 \log [10^{\{(PSD_{ant1} + 60)/10\}} + 10^{\{(PSD_{ant2} + 60)/10\}}]$$



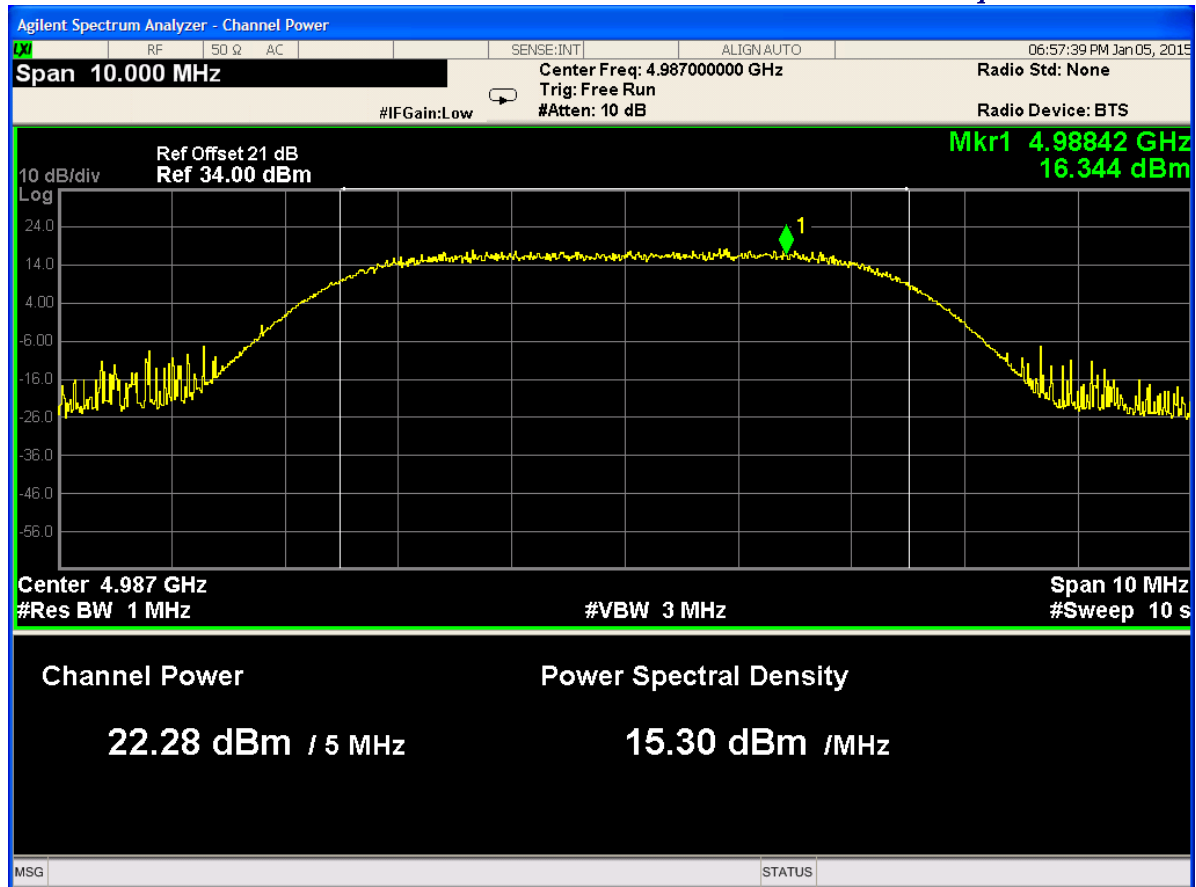
Photograph for Conducted Measurement Test Setup/ 1



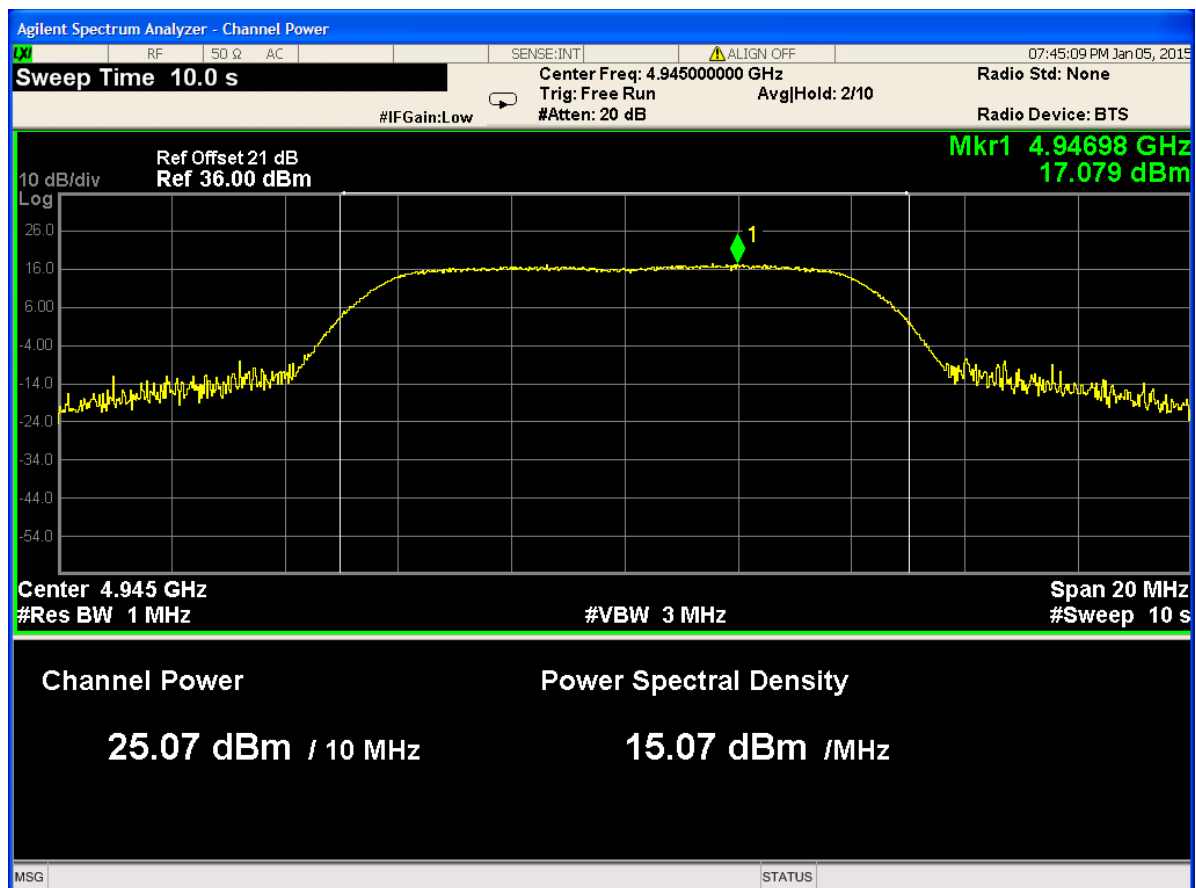
Plot Peak Output Power/ 1



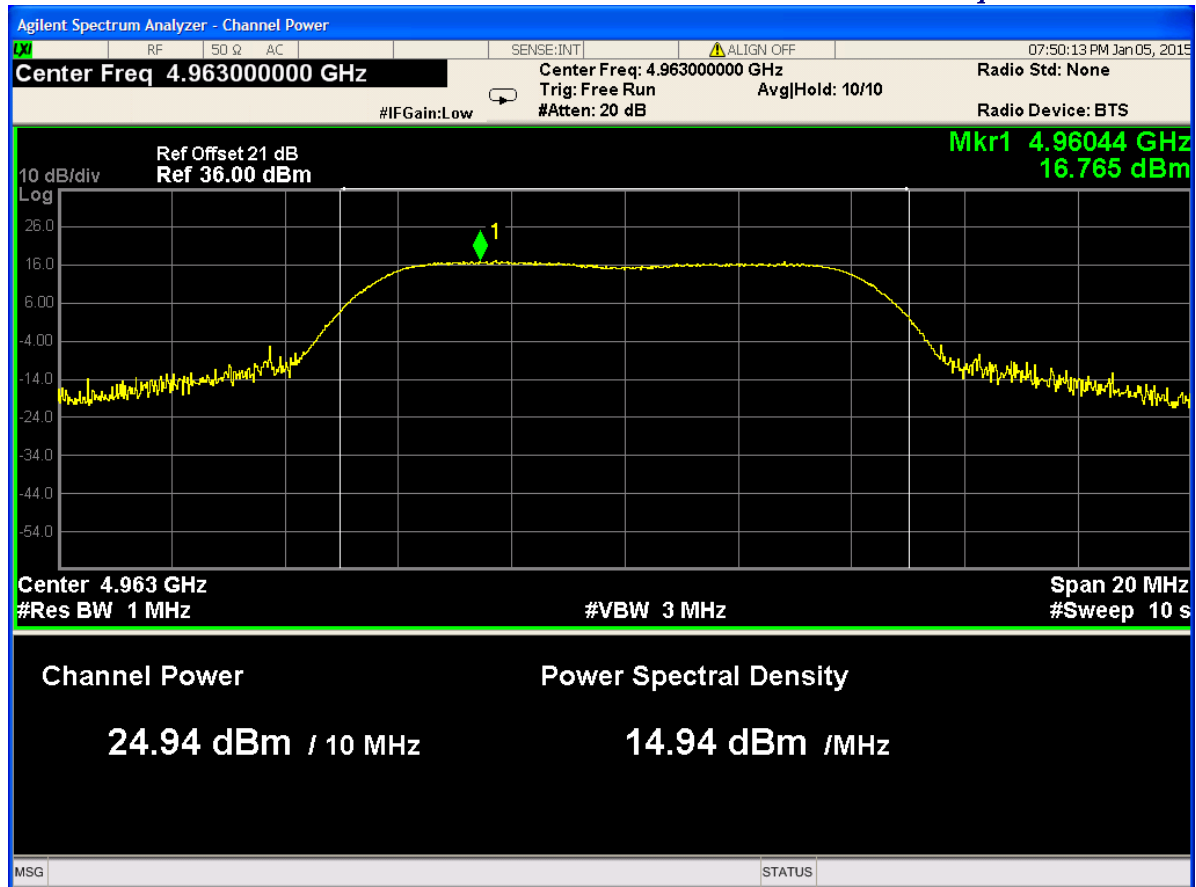
Plot Peak Output Power/ 2



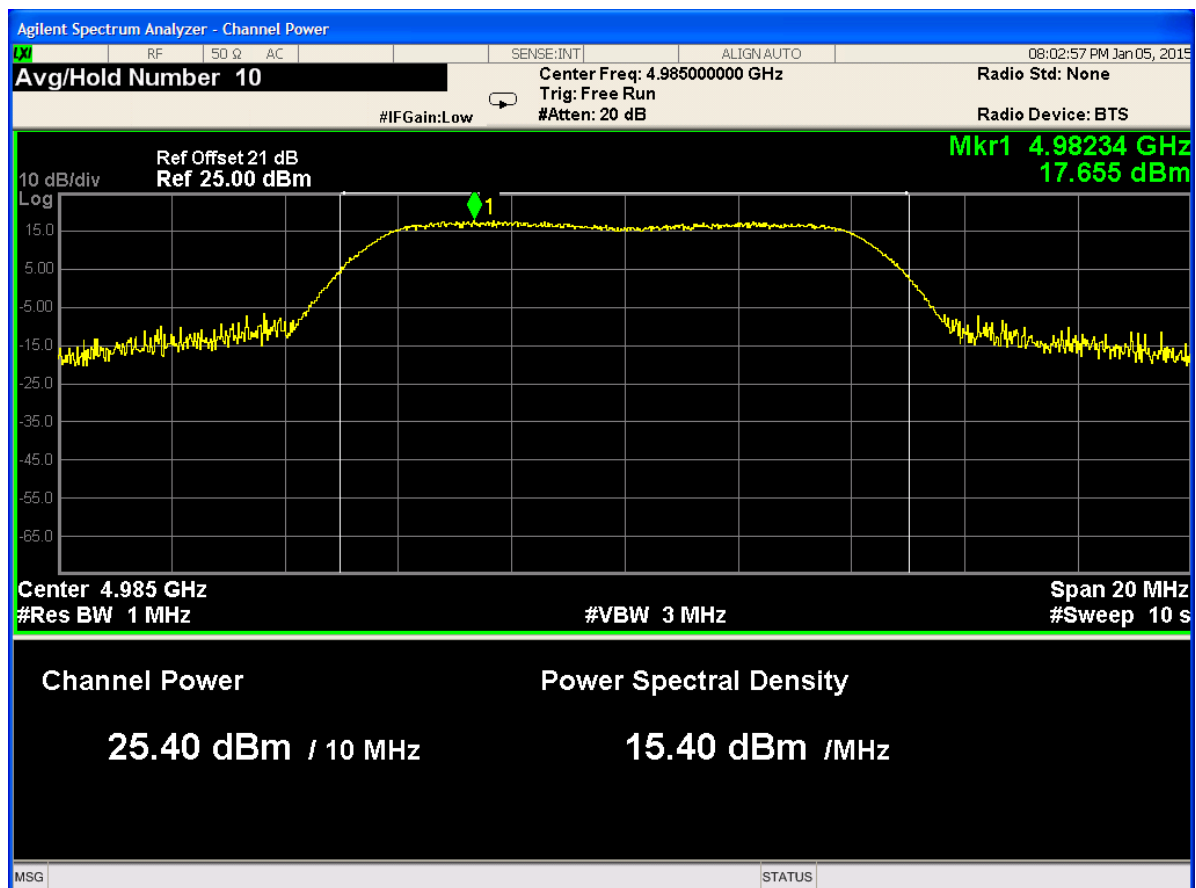
Plot Peak Output Power/ 3



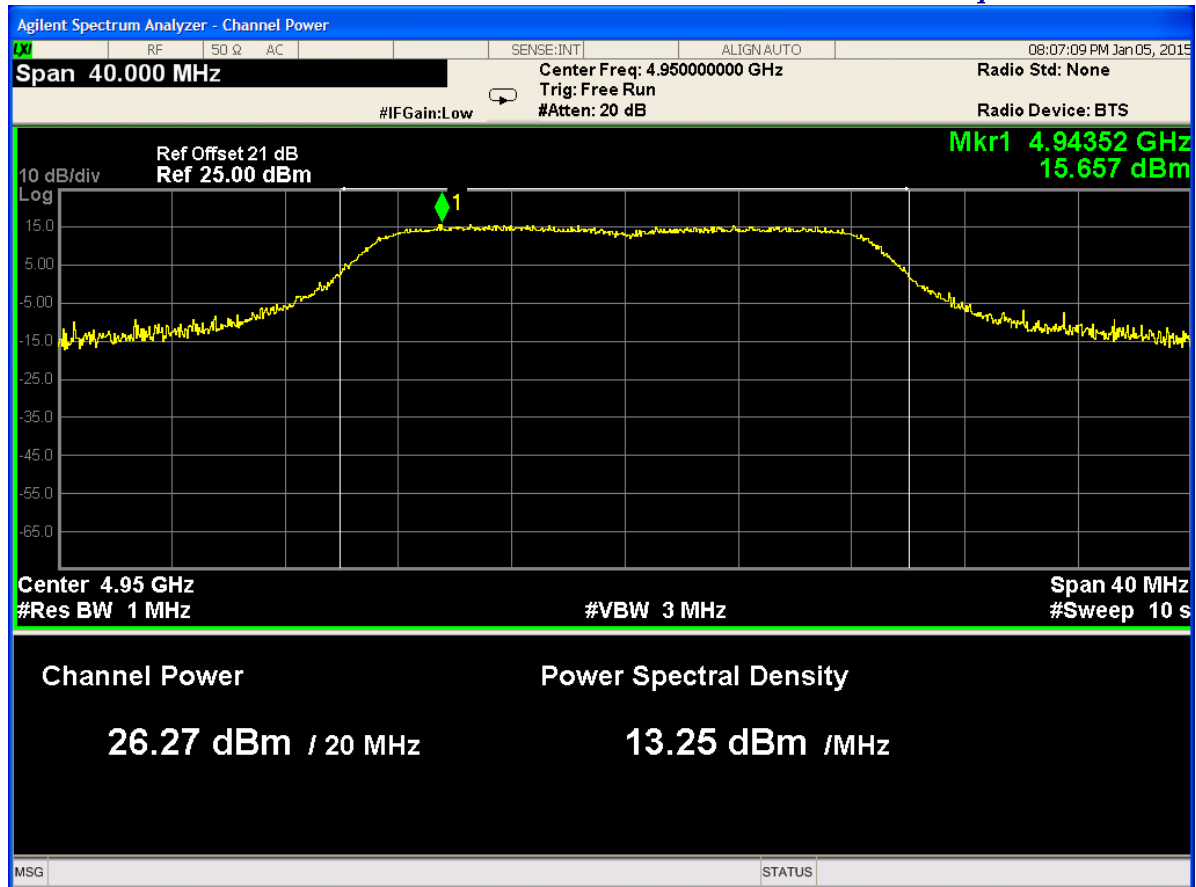
Plot Peak Output Power/ 4



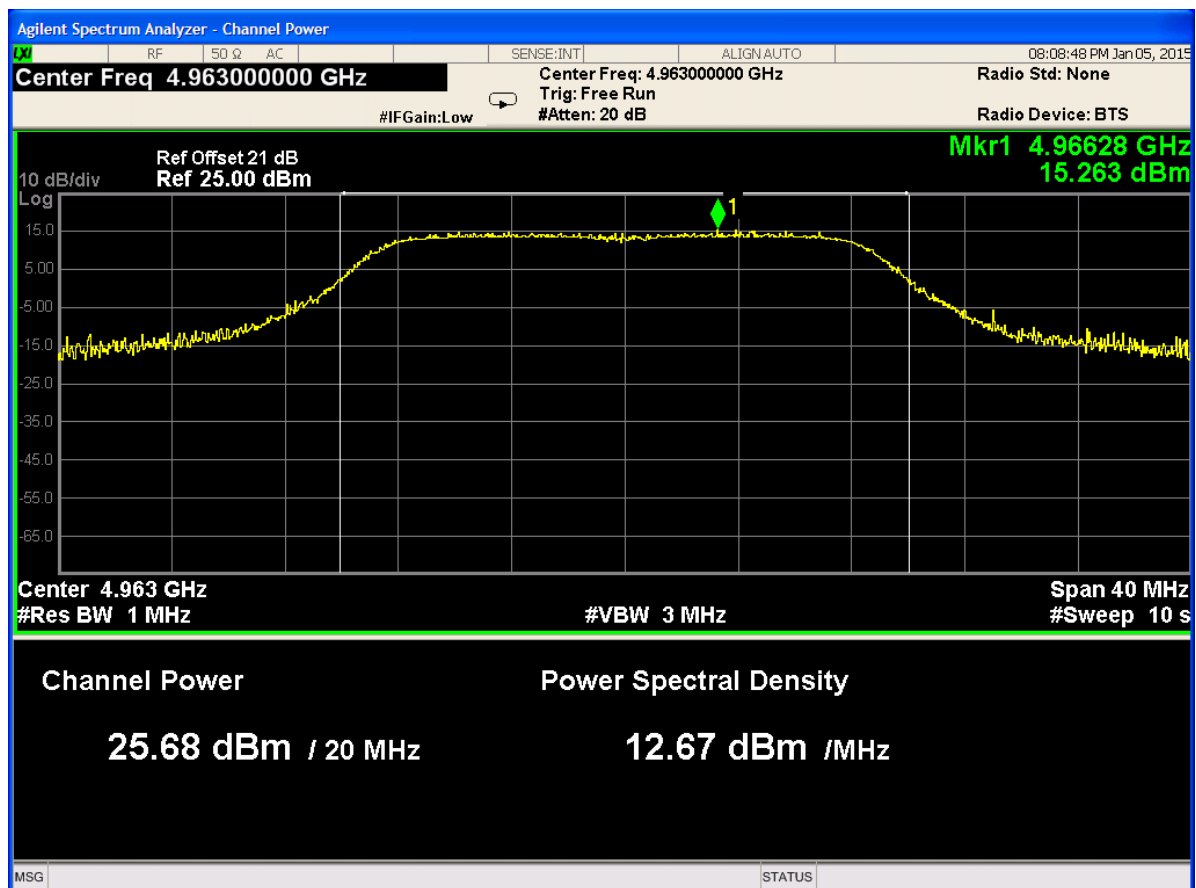
Plot Peak Output Power/ 5



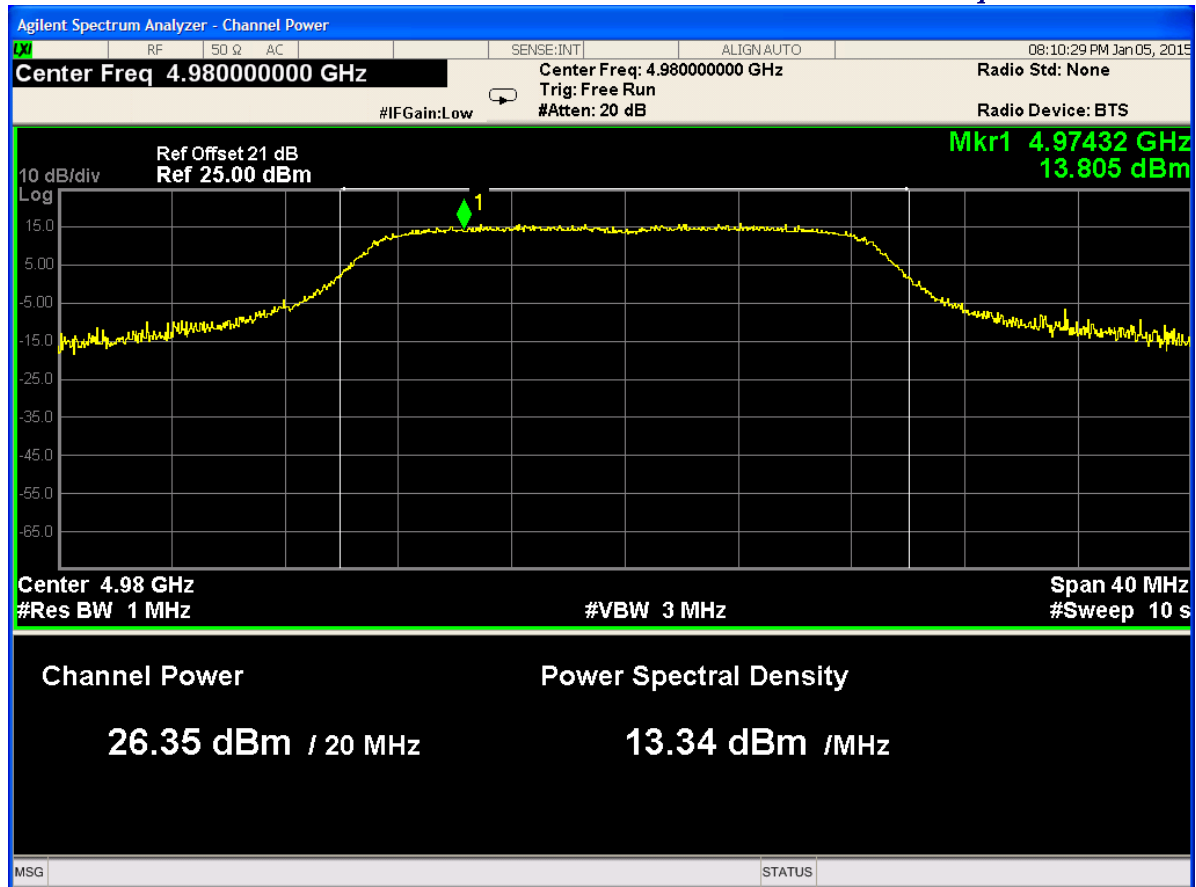
Plot Peak Output Power/ 6



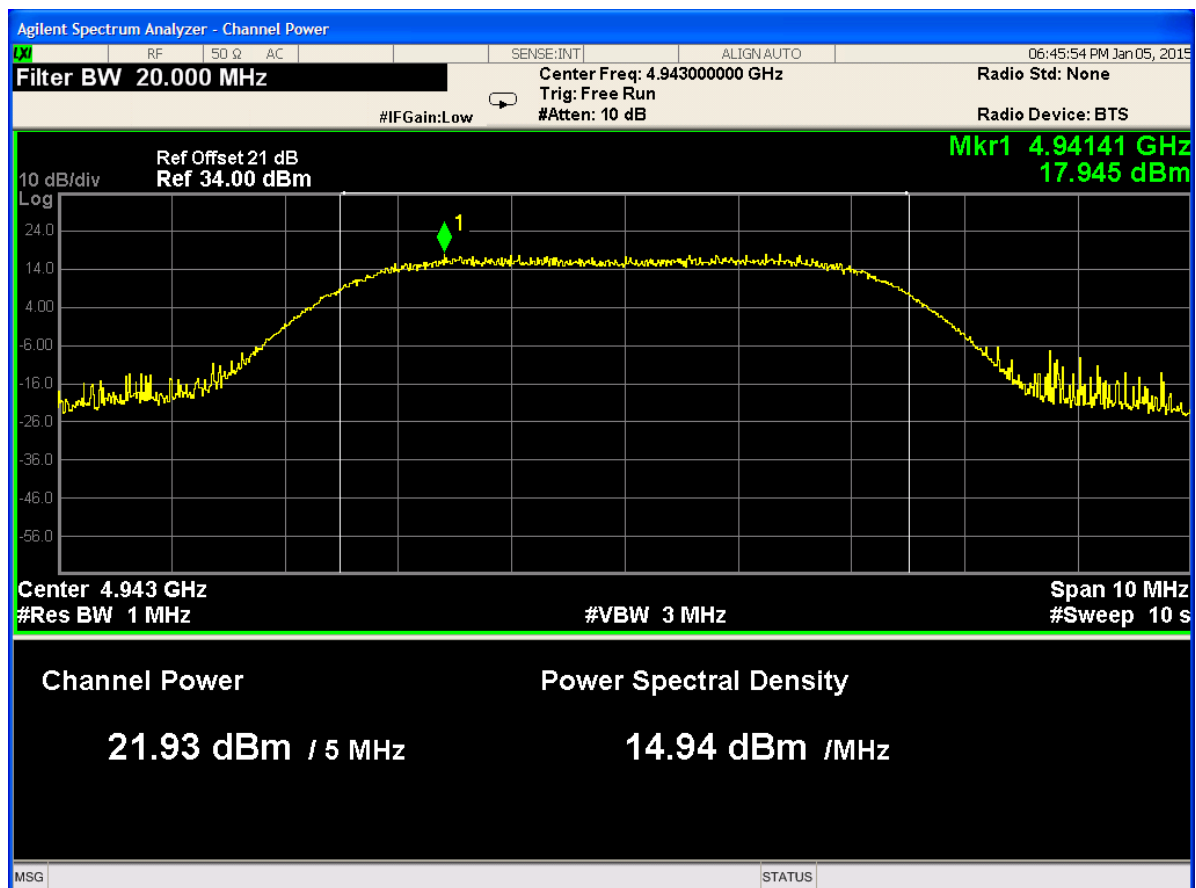
Plot Peak Output Power/ 7



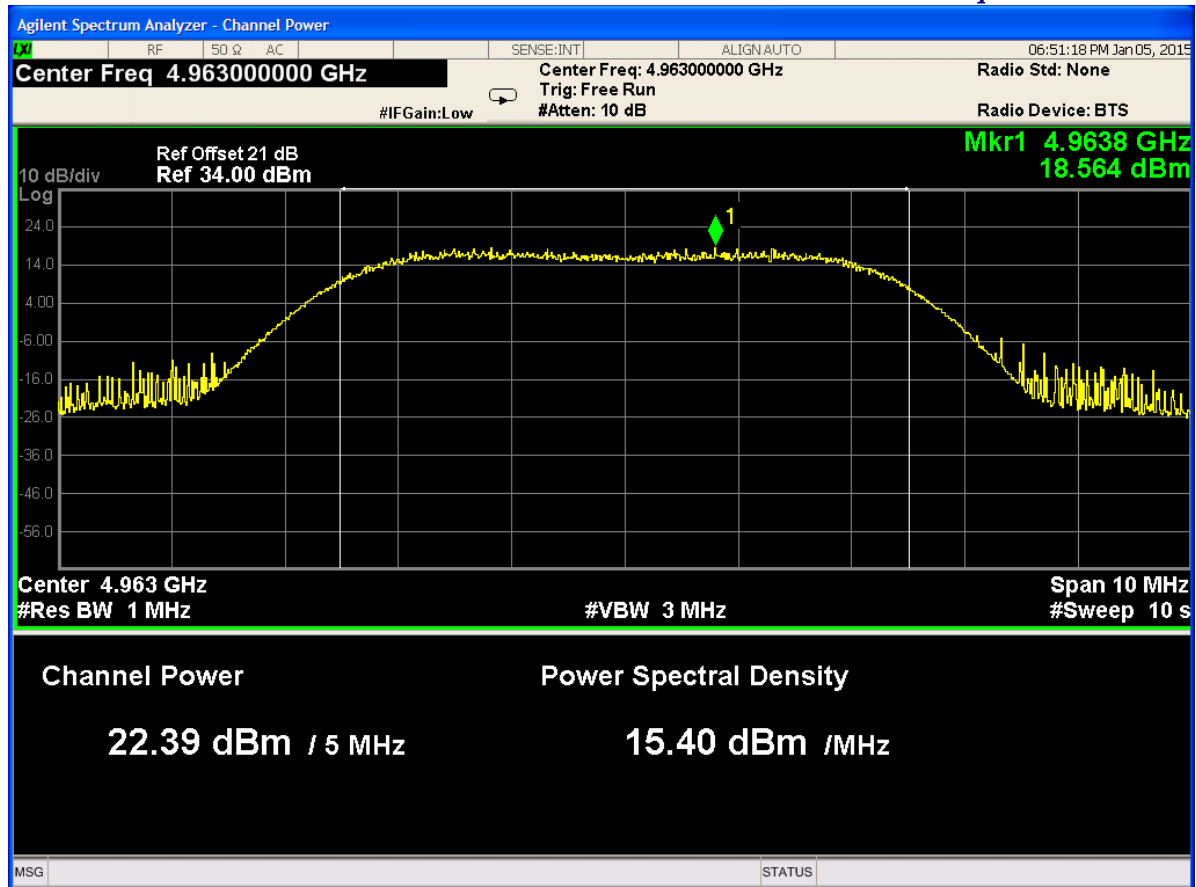
Plot Peak Output Power/ 8



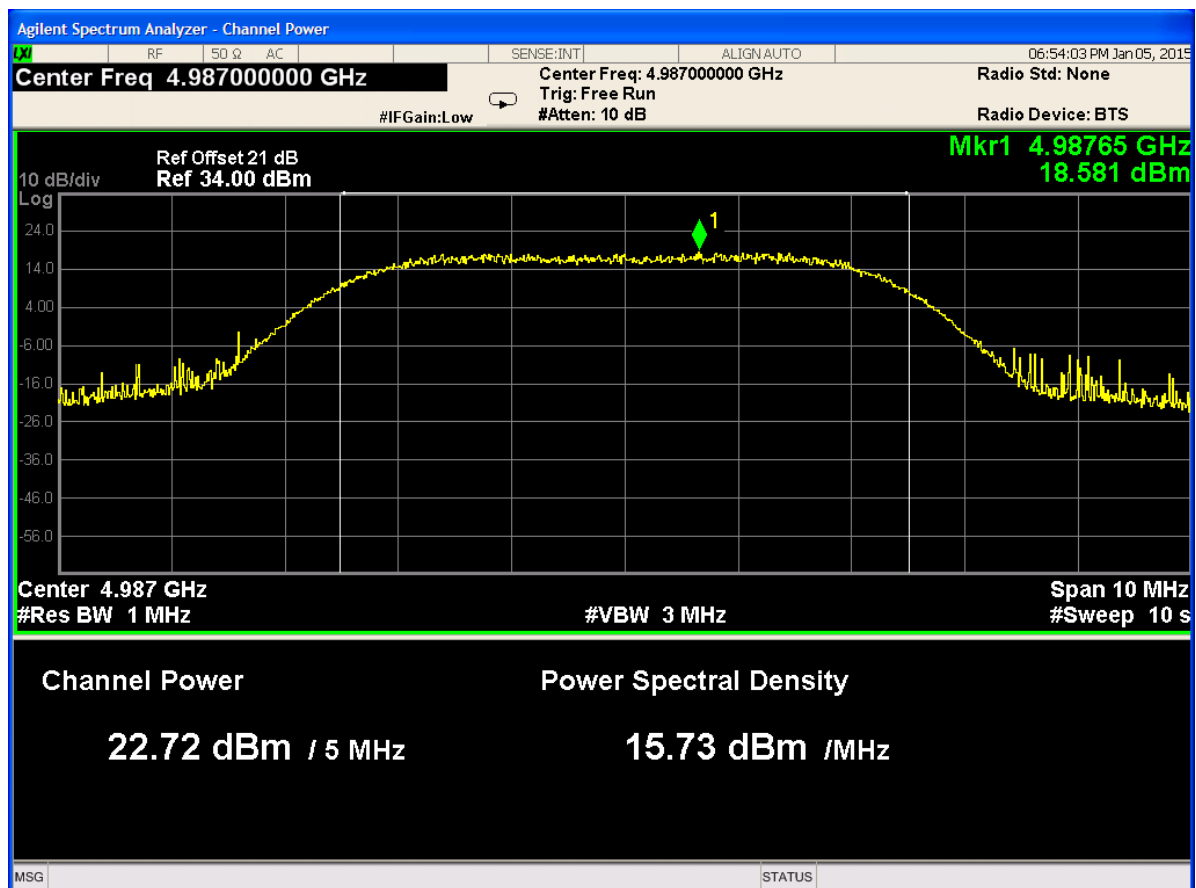
Plot Peak Output Power/ 9



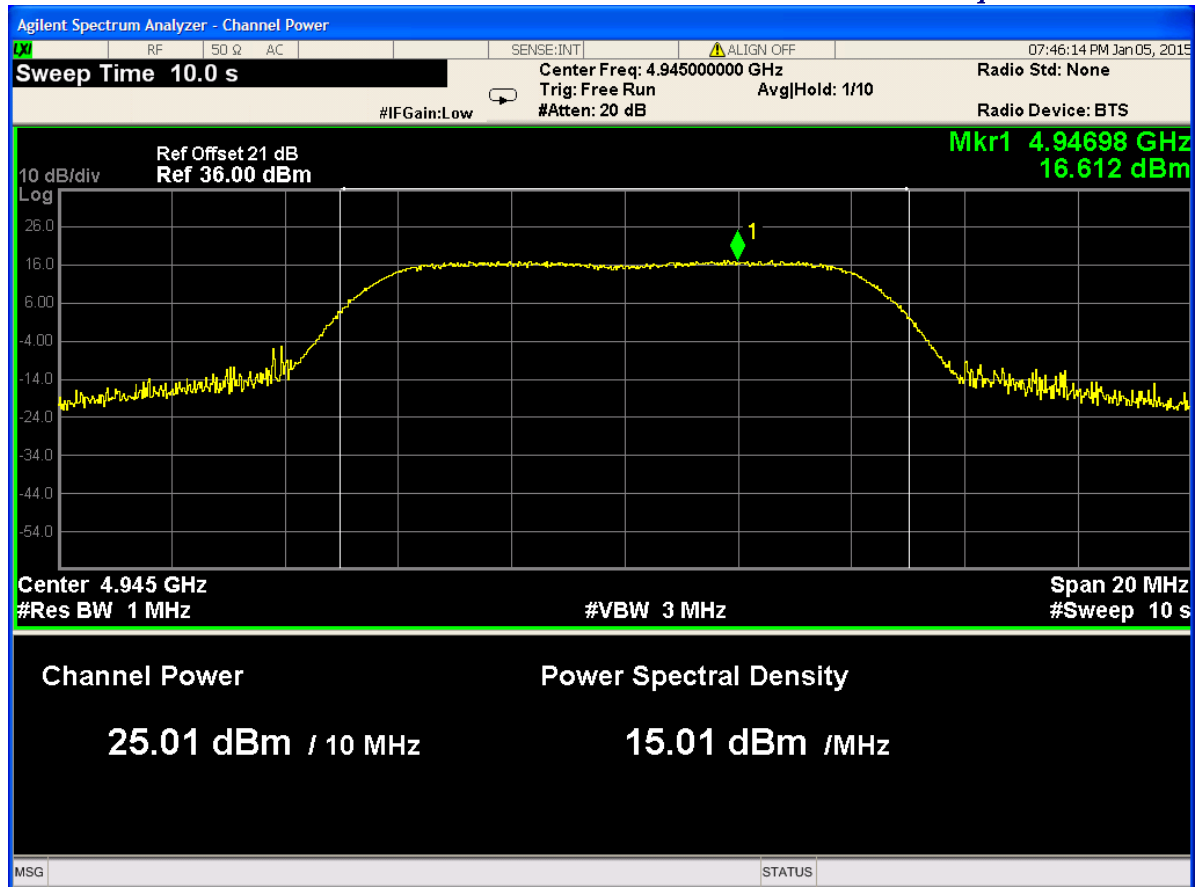
Plot Peak Output Power/ 10



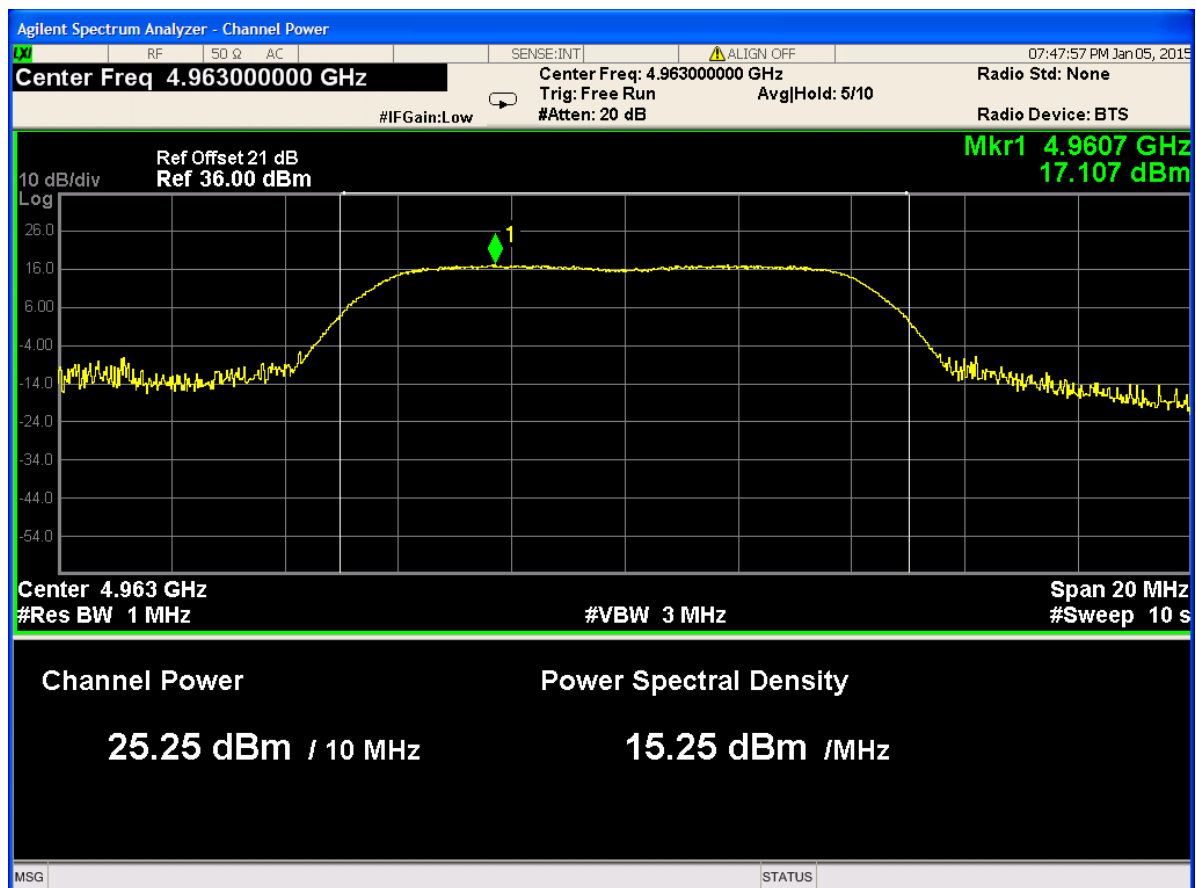
Plot Peak Output Power/ 11



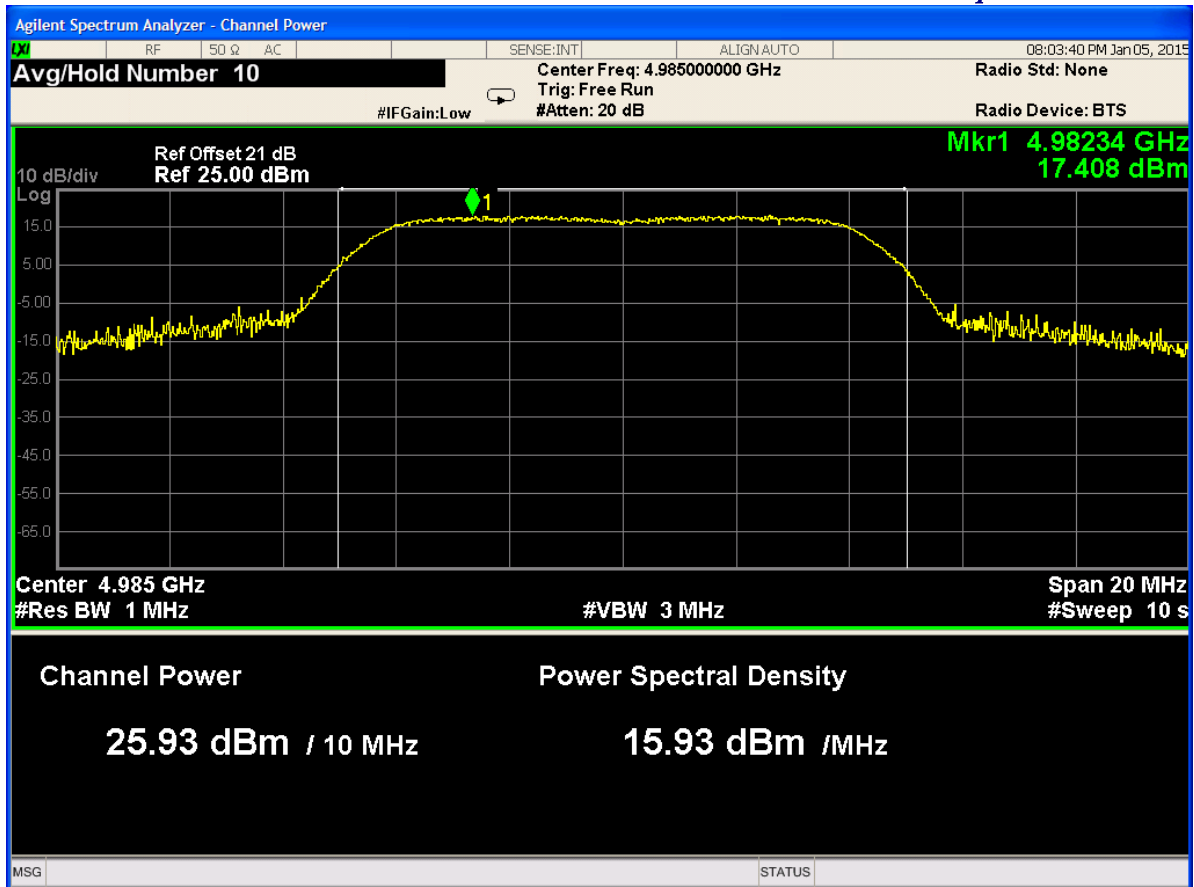
Plot Peak Output Power/ 12



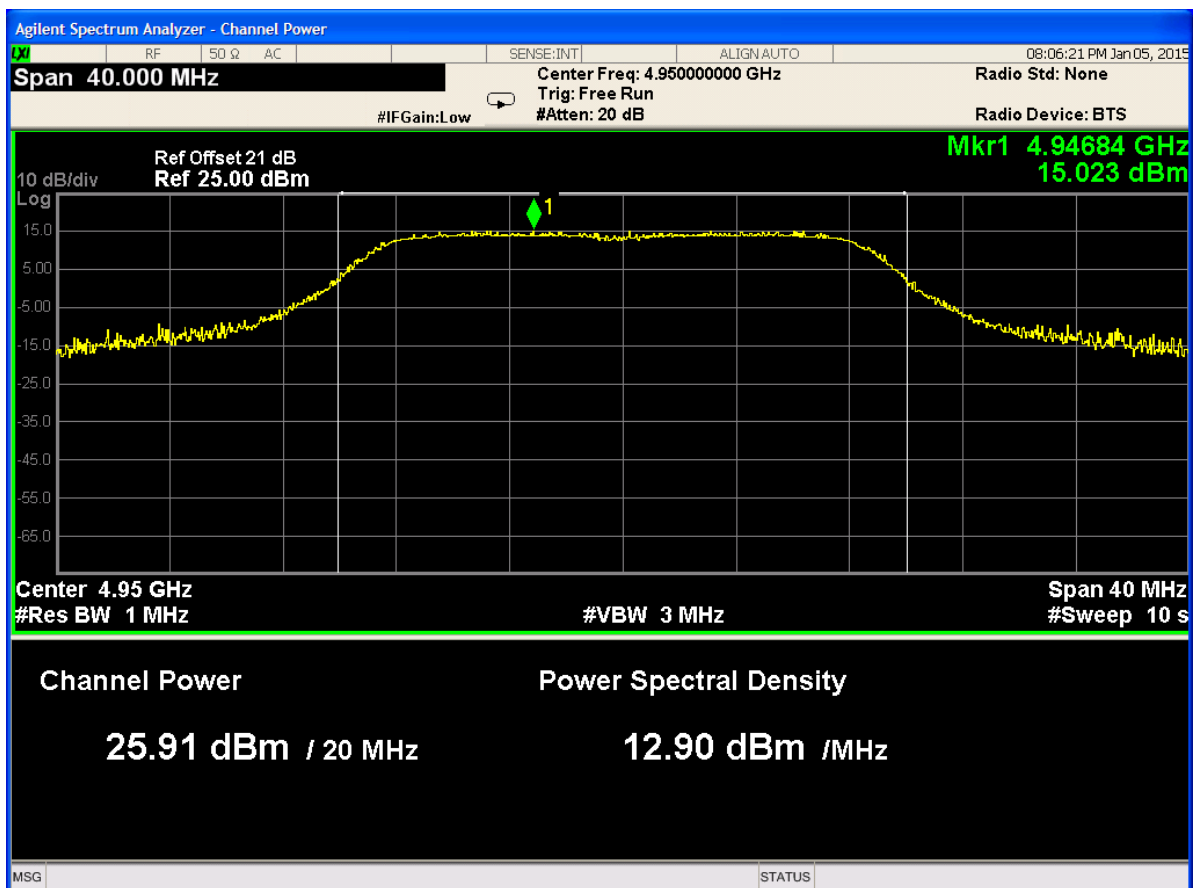
Plot Peak Output Power/ 13



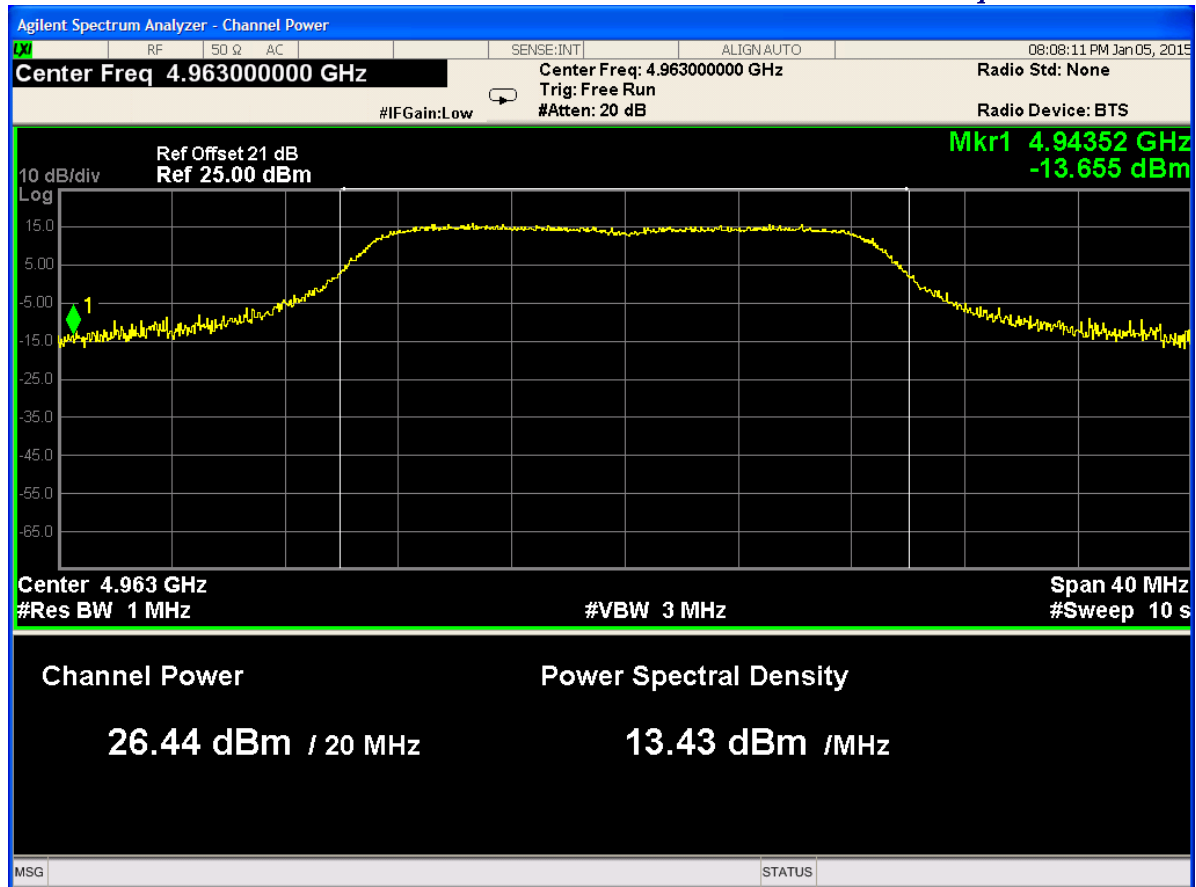
Plot Peak Output Power/ 14



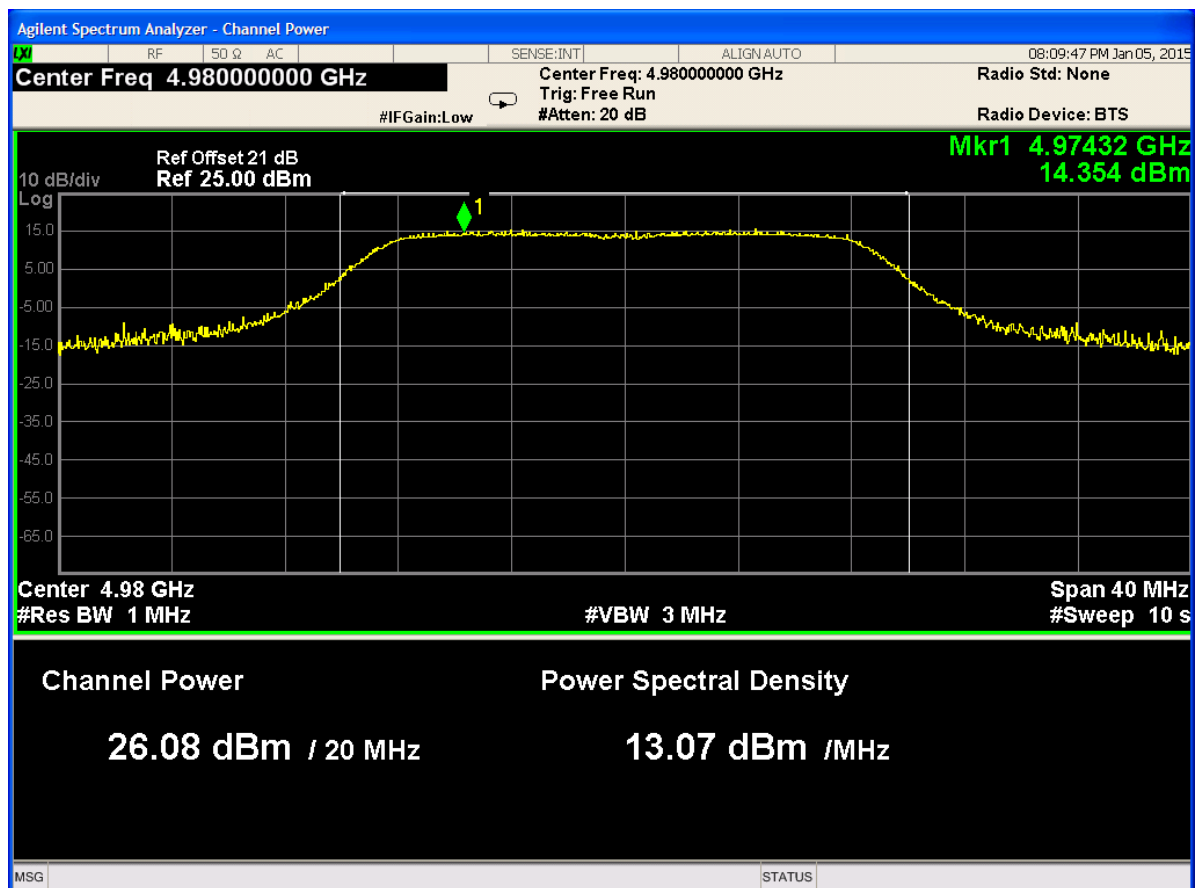
Plot Peak Output Power/ 15



Plot Peak Output Power/ 16



Plot Peak Output Power/ 17



Plot Peak Output Power/ 18

7. EMISSION MASK TEST

Equipment Under Test	WipAir 8000-5X GHz
Test Method	FCC sections 90.210(m), RSS-111 section 5.4
Date	05.01.2015
Relative Humidity	40%
Ambient Temperature	25 ⁰ C
Air Pressure	1010 hPa
Test Setup	Figure 2

Testing Engineer: I. Arbitman 

Date : 05.01.2015

7.1. Test Results Summary & Conclusions

The E.U.T was found in compliance with 90.210(m) Emission Mask Test requirements

7.2. Limits of Conducted Emission at Antenna Terminals

The tests shall meet the limits of Table 20 for FCC Section 90.210(m).

Table 23: Limits for Emission mask M for 5 MHz Bandwidth as per 90.210(m)

Frequency displacement from carrier (MHz)	Attenuation below carrier (dBc)
0 – 2.25	0
2.25 – 2.5	568log(F*/2.25)
2.5 – 2.75	26+145log(F*/2.5)
2.75 – 5.0	32+31log(F*/2.75)
5.0 – 7.5	40+57log(F*/5.0)
More than** 7.5	50 or 55+10logP(W) (whichever is lesser attenuation)

*: Frequency in MHz removed from center.

** : Emission mask includes carrier modulation envelope within $\pm 150\%$ of the authorized bandwidth; the frequency range removed beyond $\pm 150\%$ of the authorized bandwidth from carrier was investigated as spurious emission

Table 24: Limits for Emission mask M for 10 MHz Bandwidth as per 90.210(m)

Frequency displacement from carrier (MHz)	Attenuation below carrier (dBc)
0 – 4.5	0
4.5 – 5	568log(F*/4.5)
5 – 5.5	26+145log(F*/5.0)
5.5 – 10.0	32+31log(F*/5.5)
10.0 – 15	40+57log(F*/10.0)
More than** 15	50 or 55+10logP(W) (whichever is lesser attenuation)

*: Frequency in MHz removed from center.

** : Emission mask includes carrier modulation envelope within $\pm 150\%$ of the authorized bandwidth; the frequency range removed beyond $\pm 150\%$ of the authorized bandwidth from carrier was investigated as spurious emission

Table 25: Limits for Emission mask M for 20 MHz Bandwidth as per 90.210(m)

Frequency displacement from carrier (MHz)	Attenuation below carrier (dBc)
0 – 9	0
9 – 10	$568\log(F^*/9.0)$
10 – 11	$26+145\log(F^*/10.0)$
11 – 20	$32+31\log(F^*/11.0)$
20 – 30	$40+57\log(F^*/20.0)$
More than** 30	50 or $55+10\log P(W)$ (whichever is lesser attenuation)

*: Frequency in MHz removed from center.

**: Emission mask includes carrier modulation envelope within $\pm 150\%$ of the authorized bandwidth; the frequency range removed beyond $\pm 150\%$ of the authorized bandwidth from carrier was investigated as spurious emission

7.3. Test Instrumentation and Equipment

Table 26: Test Instrumentation and Equipment

Item	Model	P/N	Manufacturer	Next Date Calibration
Spectrum Analyzer	N9020A	20041738908	Agilent	04.04.2015
20 dB Attenuator	8343-206		TENULINE	13.03.2016

7.4. Test Procedure

As per 47 CFR, Section 2.1051, 2.1047 and 90.210(m); TIA/EIA-C, Section 2.2.13

The test was performed to measure the emission mask at RF antenna connector.

The EUT was set up as shown in Figure 3. The EUT was started and sufficient time for stabilization was allowed.

The emission mask was measured using the spectrum analyzer.

Measurements were done for top, middle and bottom frequencies, for each channel BW 5, 10, and 20 MHz

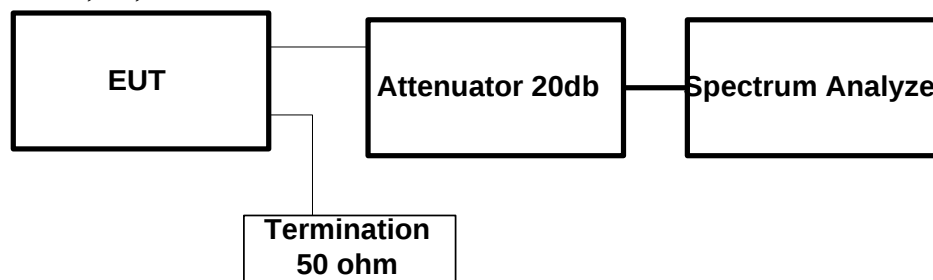


Figure 3: Test Setup for Emission Mask

7.5. Test Results for Port A

Table 27: 5 MHz BW Test Results

Frequency (MHz)	Limit (dBc)	Plot Reference	Pass/ Fail
4943	Emission mask M	1	Pass
4963		2	Pass
4987		3	Pass

Table 28: 10 MHz BW Test Results

Frequency (MHz)	Limit (dBc)	Plot Reference	Pass/ Fail
4945	Emission mask M	4	Pass
4965		5	Pass
4985		6	Pass

Table 29: 20 MHz BW Test Results

Frequency (MHz)	Limit (dBc)	Plot Reference	Pass/ Fail
4950	Emission mask M	7	Pass
4965		8	Pass
4980		9	Pass

7.6. Test Results for Port B

Table 30: 5 MHz BW Test Results

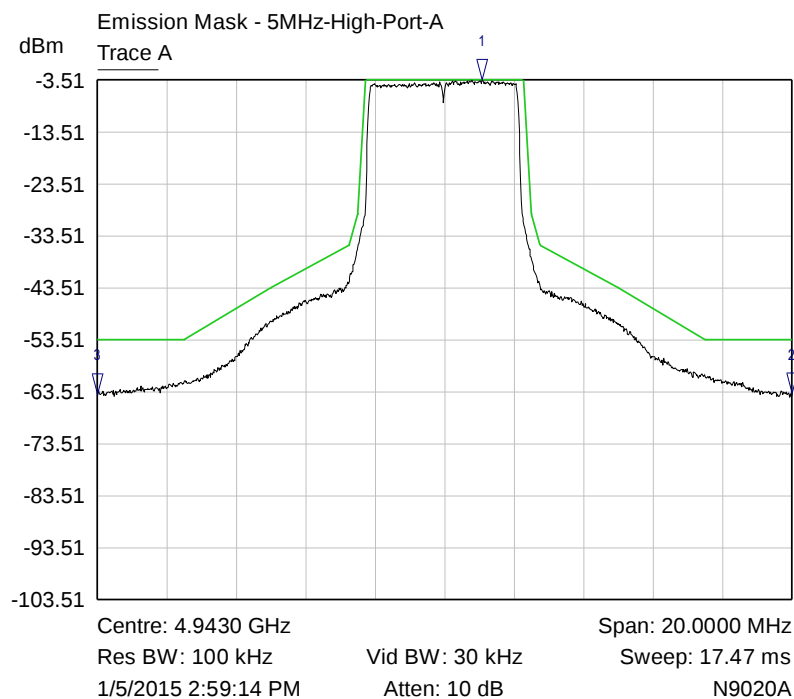
Frequency (MHz)	Limit (dBc)	Plot Reference	Pass/ Fail
4943	Emission mask M	10	Pass
4963		11	Pass
4987		12	Pass

Table 31: 10 MHz BW Test Results

Frequency (MHz)	Limit (dBc)	Plot Reference	Pass/ Fail
4945	Emission mask M	13	Pass
4965		14	Pass
4985		15	Pass

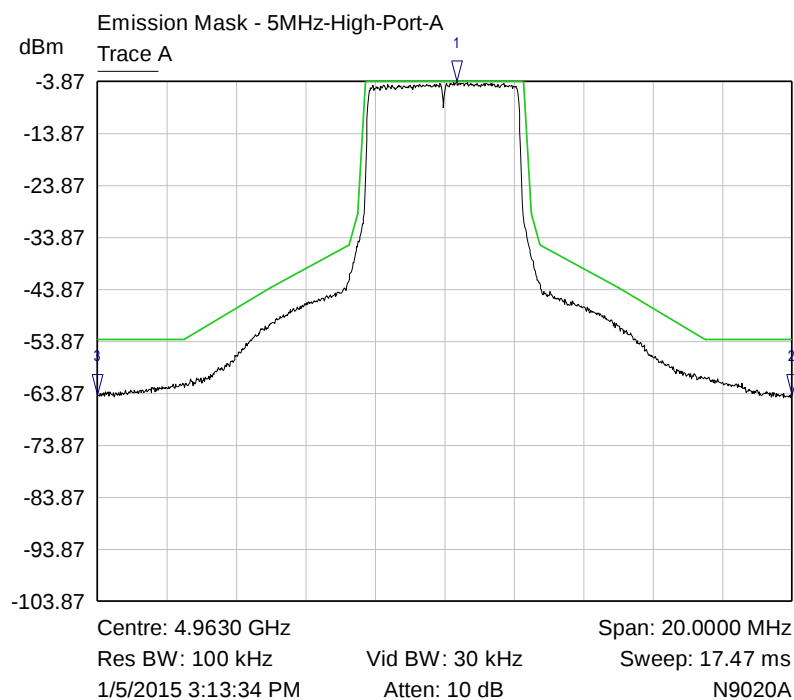
Table 32: 20 MHz BW Test Results

Frequency (MHz)	Limit (dBc)	Plot Reference	Pass/ Fail
4950	Emission mask M	16	Pass
4965		17	Pass
4980		18	Pass



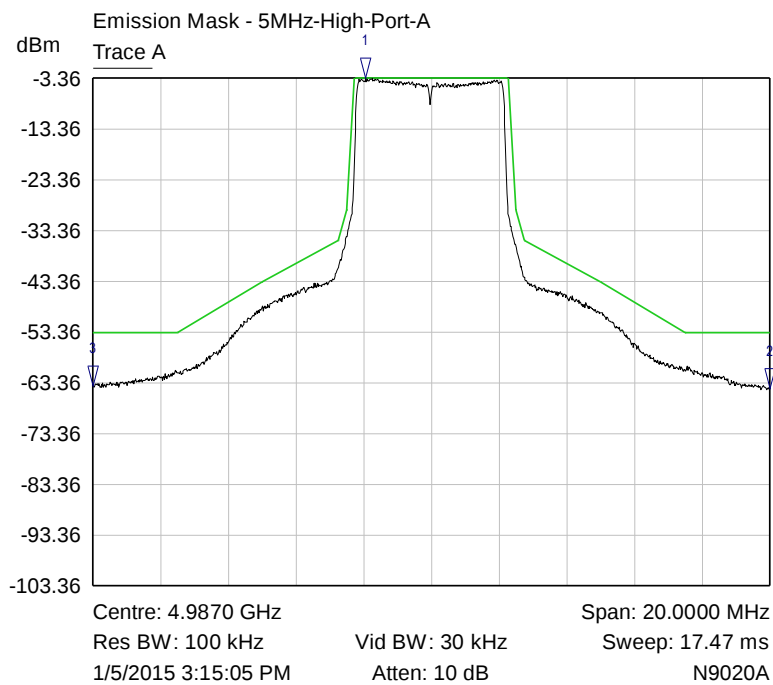
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9441 GHz	-3.51 dBm	
2 ▽	Trace A	4.9530 GHz	-63.81 dBm	
3 ▽	Trace A	4.9330 GHz	-63.96 dBm	

Plot Emission Mask/ 1



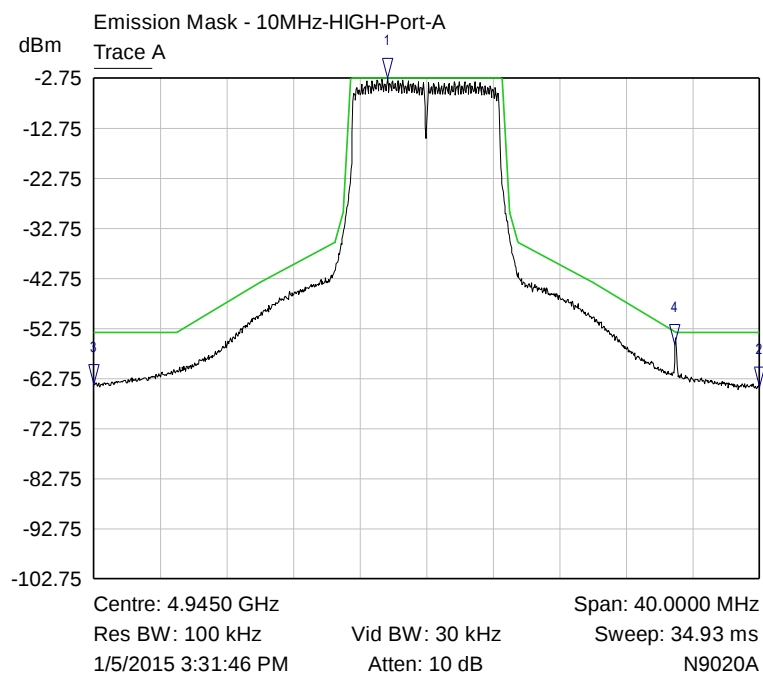
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9633 GHz	-3.87 dBm	
2 ▽	Trace A	4.9730 GHz	-64.18 dBm	
3 ▽	Trace A	4.9530 GHz	-64.24 dBm	

Plot Emission Mask/ 2



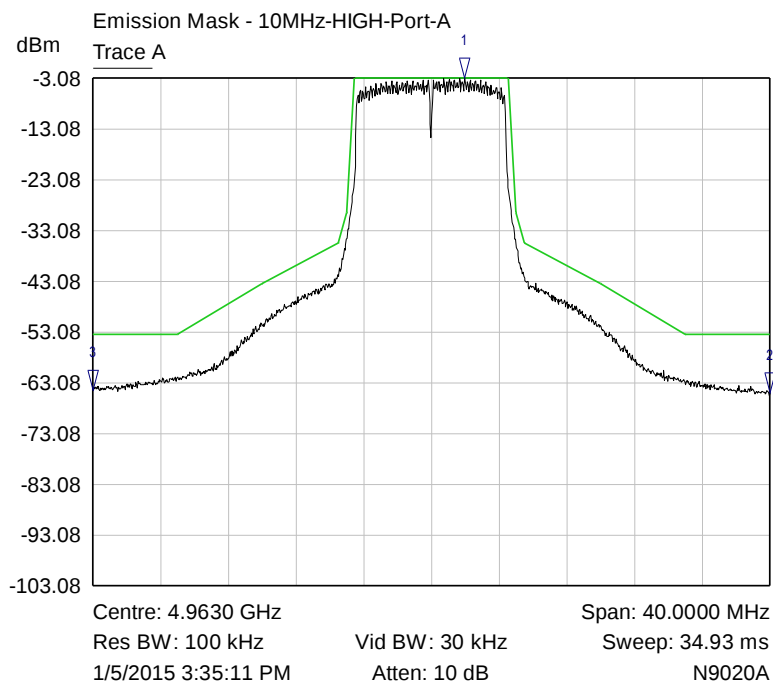
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9851 GHz	-3.36 dBm	
2 ▽	Trace A	4.9970 GHz	-64.55 dBm	
3 ▽	Trace A	4.9770 GHz	-63.98 dBm	

Plot Emission Mask/ 3



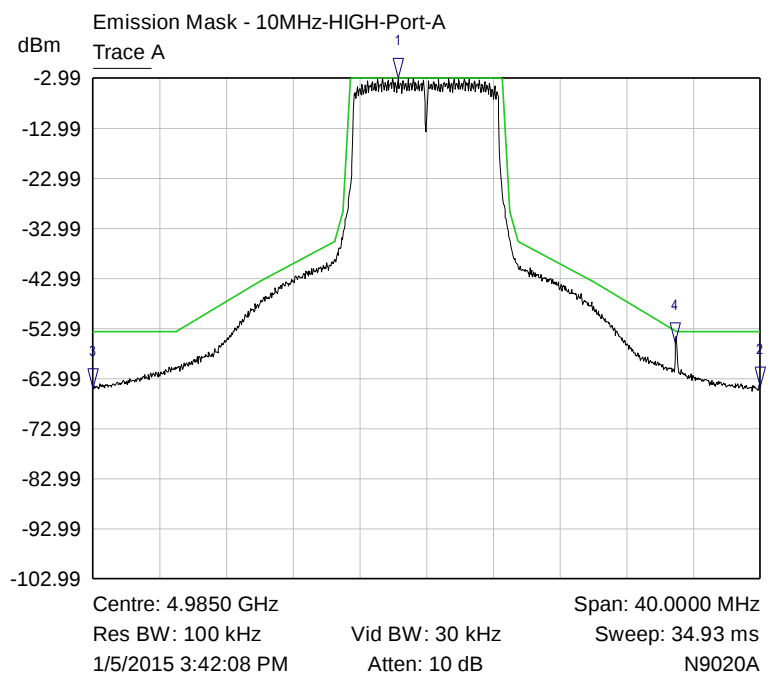
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9426 GHz	-2.75 dBm	
2 ▽	Trace A	4.9650 GHz	-64.37 dBm	
3 ▽	Trace A	4.9250 GHz	-63.91 dBm	
4 ▽	Trace A	4.9599 GHz	-55.84 dBm	

Plot Emission Mask/ 4



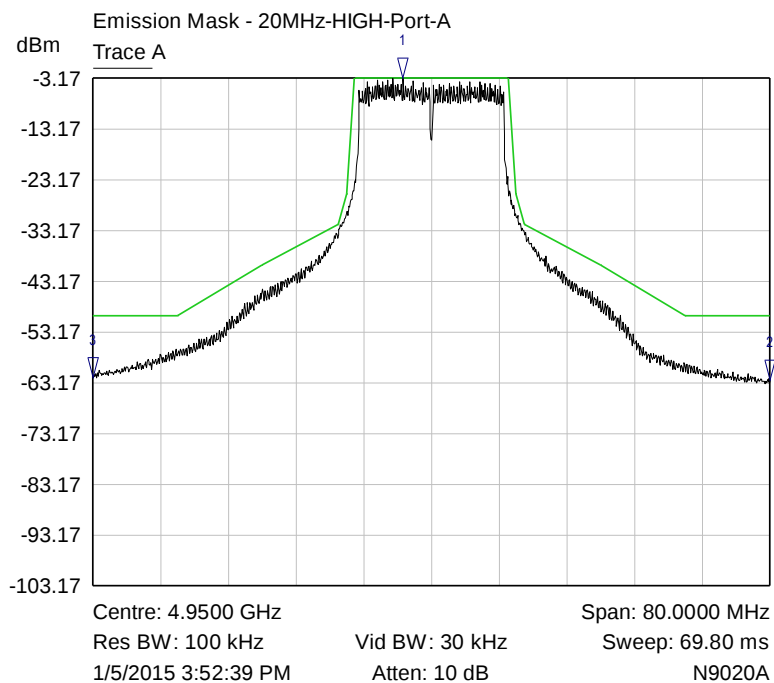
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9650 GHz	-3.08 dBm	
2 ▽	Trace A	4.9830 GHz	-65.04 dBm	
3 ▽	Trace A	4.9430 GHz	-64.60 dBm	

Plot Emission Mask/ 5



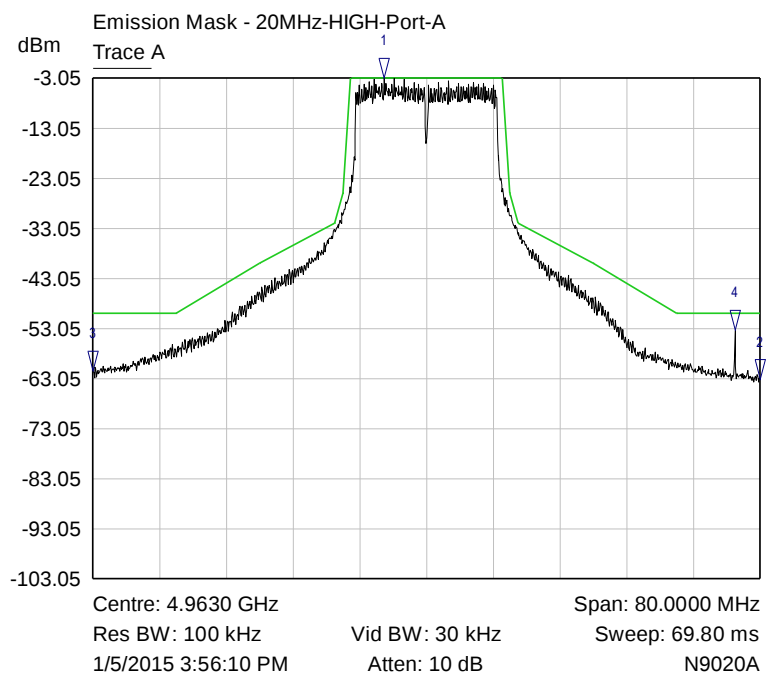
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9833 GHz	-2.99 dBm	
2 ▽	Trace A	5.0050 GHz	-64.67 dBm	
3 ▽	Trace A	4.9650 GHz	-64.94 dBm	
4 ▽	Trace A	4.9999 GHz	-55.83 dBm	

Plot Emission Mask/ 6



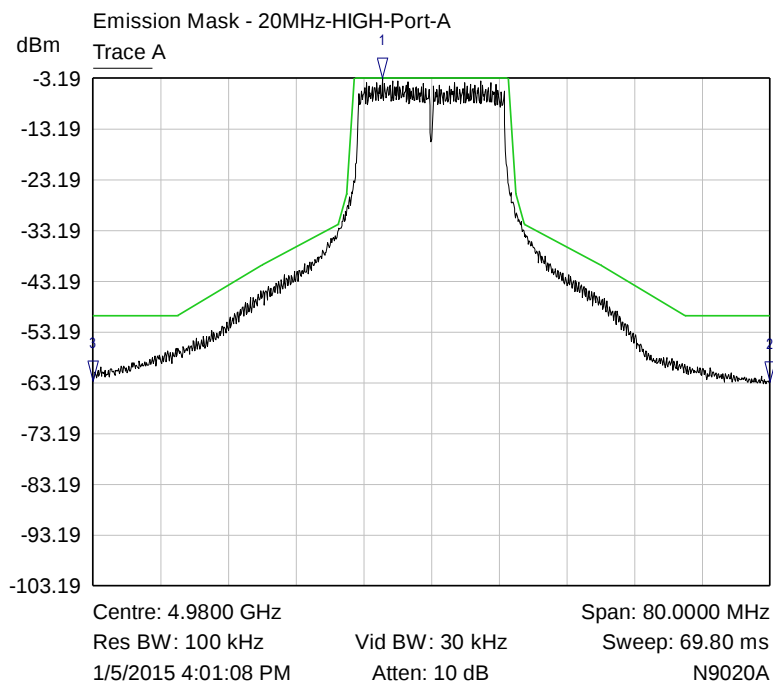
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9466 GHz	-3.17 dBm	
2 ▽	Trace A	4.9900 GHz	-62.68 dBm	
3 ▽	Trace A	4.9100 GHz	-62.24 dBm	

Plot Emission Mask/ 7



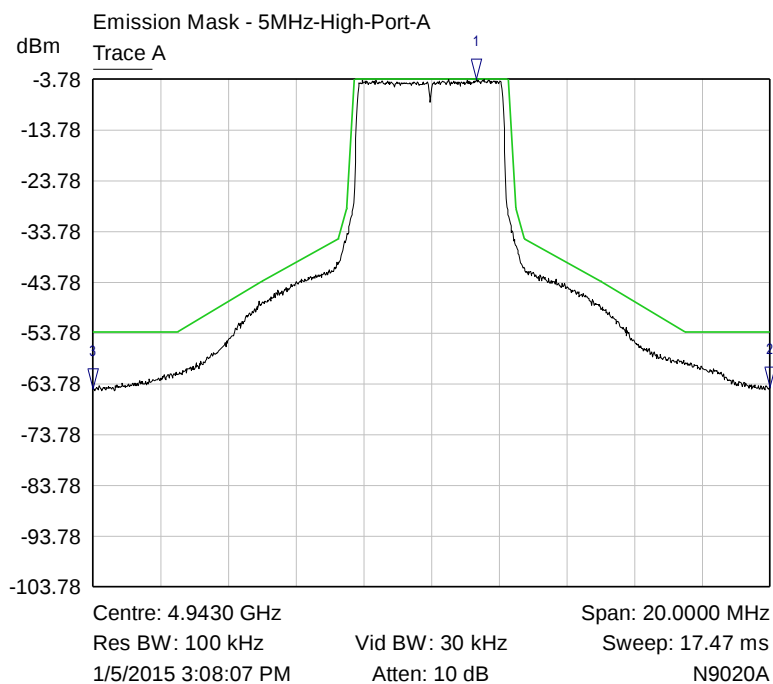
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9579 GHz	-3.05 dBm	
2 ▽	Trace A	5.0030 GHz	-63.20 dBm	
3 ▽	Trace A	4.9230 GHz	-61.54 dBm	
4 ▽	Trace A	5.0000 GHz	-53.40 dBm	

Plot Emission Mask/ 8



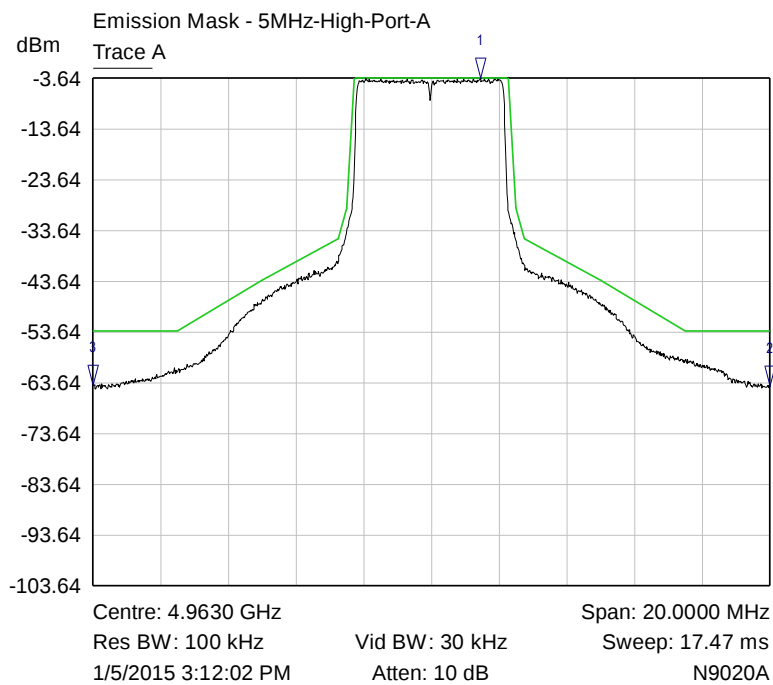
Mkr	Trace	X-Axis	Value	Notes
1 ▾	Trace A	4.9742 GHz	-3.19 dBm	
2 ▾	Trace A	5.0200 GHz	-63.03 dBm	
3 ▾	Trace A	4.9400 GHz	-62.91 dBm	

Plot Emission Mask/ 9



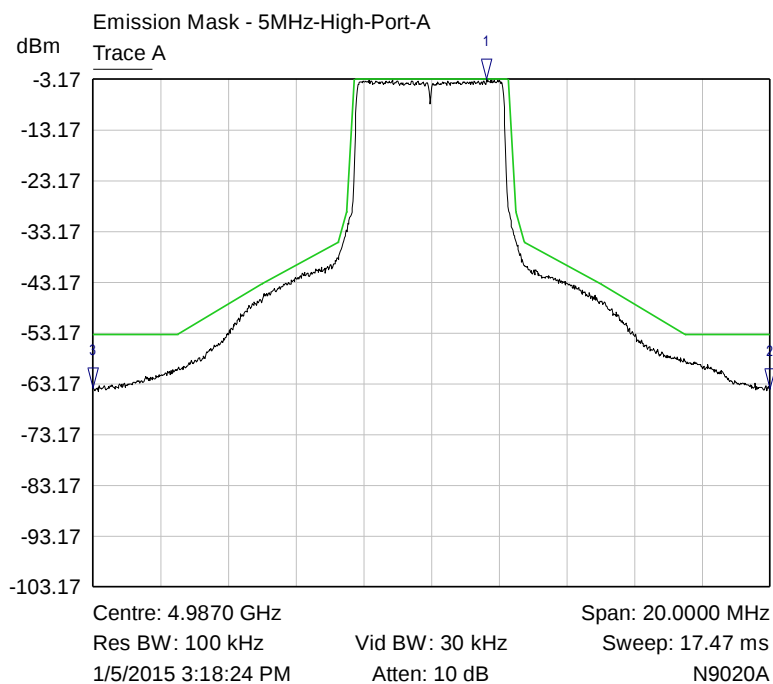
Mkr	Trace	X-Axis	Value	Notes
1 ▾	Trace A	4.9443 GHz	-3.78 dBm	
2 ▾	Trace A	4.9530 GHz	-64.51 dBm	
3 ▾	Trace A	4.9330 GHz	-64.80 dBm	

Plot Emission Mask/ 10



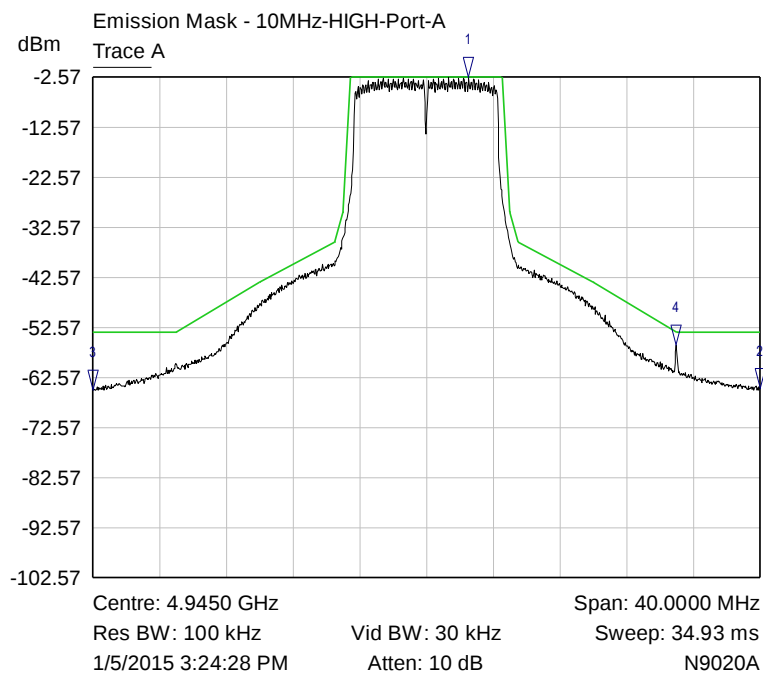
Mkr	Trace	X-Axis	Value	Notes
1 ▾	Trace A	4.9644 GHz	-3.64 dBm	
2 ▾	Trace A	4.9730 GHz	-64.37 dBm	
3 ▾	Trace A	4.9530 GHz	-64.22 dBm	

Plot Emission Mask/ 11



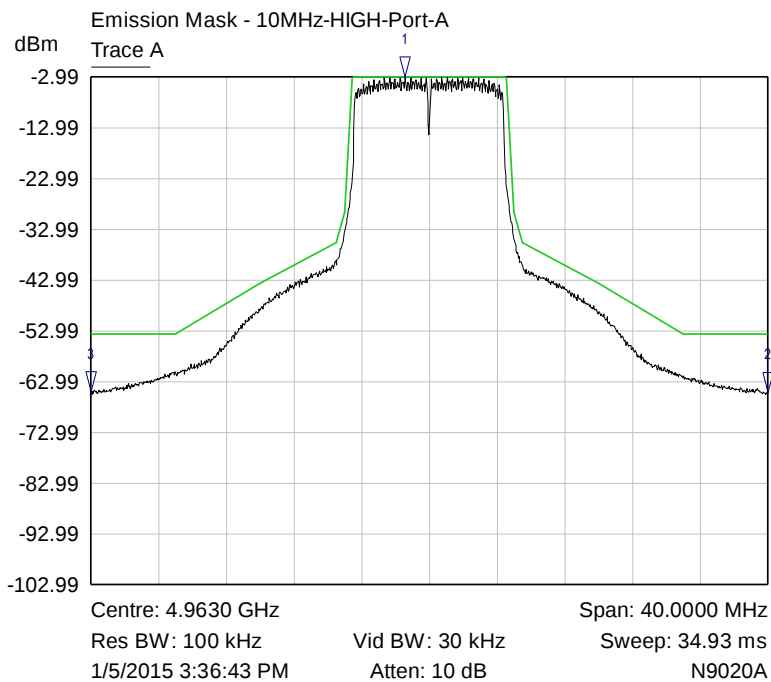
Mkr	Trace	X-Axis	Value	Notes
1 ▾	Trace A	4.9886 GHz	-3.17 dBm	
2 ▾	Trace A	4.9970 GHz	-64.15 dBm	
3 ▾	Trace A	4.9770 GHz	-64.03 dBm	

Plot Emission Mask/ 12



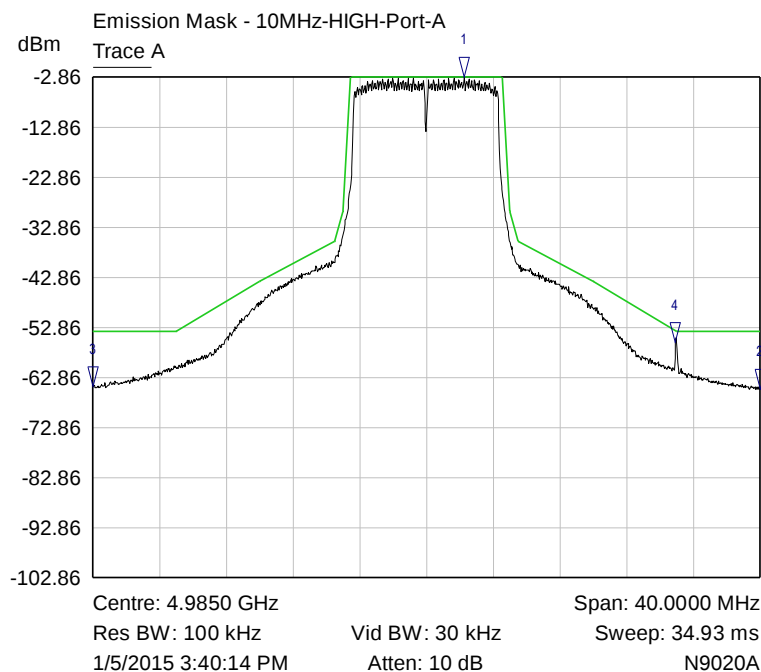
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9475 GHz	-2.57 dBm	
2 ▽	Trace A	4.9650 GHz	-64.74 dBm	
3 ▽	Trace A	4.9250 GHz	-64.99 dBm	
4 ▽	Trace A	4.9600 GHz	-56.15 dBm	

Plot Emission Mask/ 13



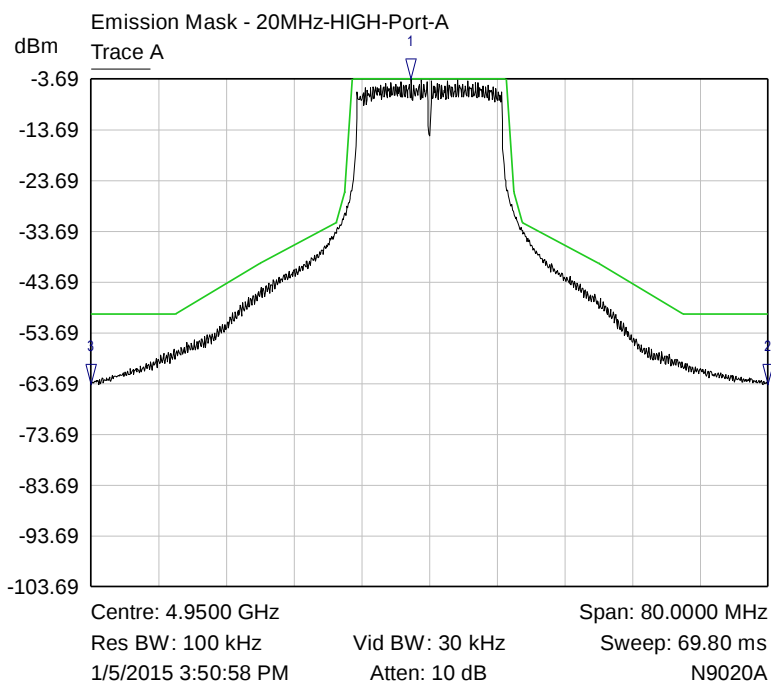
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9616 GHz	-2.99 dBm	
2 ▽	Trace A	4.9830 GHz	-65.15 dBm	
3 ▽	Trace A	4.9430 GHz	-65.02 dBm	

Plot Emission Mask/ 14



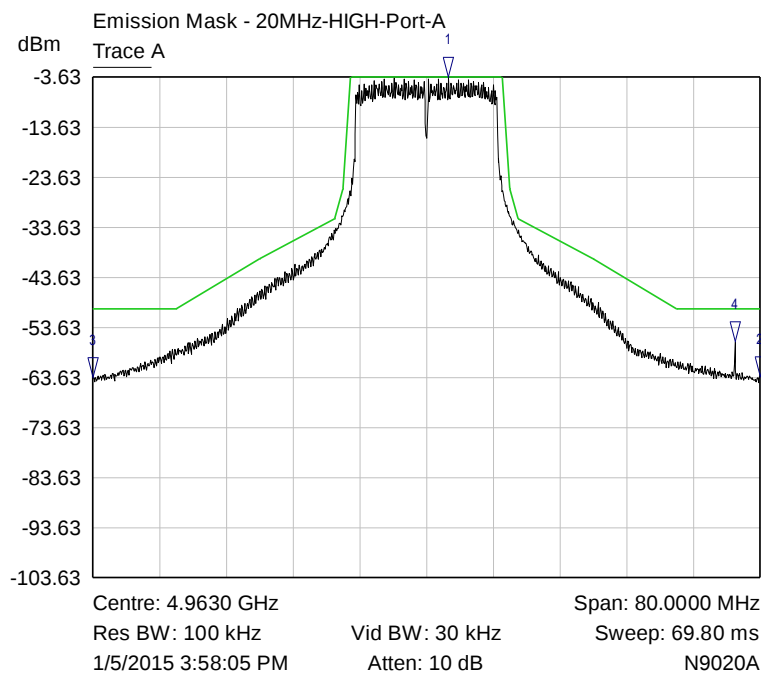
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9872 GHz	-2.86 dBm	
2 ▽	Trace A	5.0050 GHz	-65.19 dBm	
3 ▽	Trace A	4.9650 GHz	-64.76 dBm	
4 ▽	Trace A	4.9999 GHz	-55.82 dBm	

Plot Emission Mask/ 15



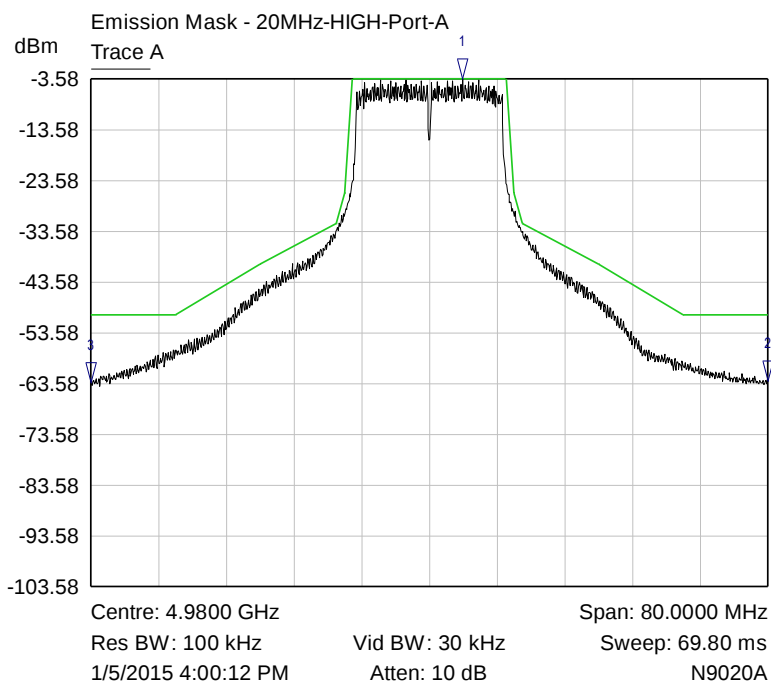
Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9478 GHz	-3.69 dBm	
2 ▽	Trace A	4.9900 GHz	-63.83 dBm	
3 ▽	Trace A	4.9100 GHz	-63.81 dBm	

Plot Emission Mask/ 16



Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9656 GHz	-3.63 dBm	
2 ▽	Trace A	5.0030 GHz	-63.52 dBm	
3 ▽	Trace A	4.9230 GHz	-63.62 dBm	
4 ▽	Trace A	5.0000 GHz	-56.53 dBm	

Plot Emission Mask/ 17



Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	4.9839 GHz	-3.58 dBm	
2 ▽	Trace A	5.0200 GHz	-63.03 dBm	
3 ▽	Trace A	4.9400 GHz	-63.35 dBm	

Plot Emission Mask/ 18

8. CONDUCTED SPURIOUS EMISSIONS

Equipment Under Test	WipAir 8000-5X GHz
Test Method	FCC sections 90.210, RSS-111 section 5.4
Date	08.01.2015
Relative Humidity	40%
Ambient Temperature	25 ⁰ C
Air Pressure	1010 hPa
Test Setup	Figure 2

Testing Engineer: I. Arbitman 

Date : 08.01.2015

8.1. Test Results Summary & Conclusions

The E.U.T was found in compliance with 90.210 Conducted Spurious Emissions test requirements

8.2. Limits of Conducted Emission at Antenna Terminals

The test unit shall meet the limits of Table 25 for 90.210.

Table 33: Limits for Receiver Spurious Emission as per FCC Part 15 Para 90.210

Frequency (MHz)	Attenuation below carrier (dBc)	ERP of Spurious** (dBm)	
0.009 – 10 th harmonic*	50 (mask M) 55+10logP (W)	Low carrier frequency	-25
		Mid carrier frequency y	-25
		High carrier frequency	-25

* Spurious emission limits do not apply to the band emission within $\pm 150\%$ of the authorized bandwidth from the carrier, investigated in the course of emission mask testing.

** -ERP of spurious = P (dBm) – {55 + 10 log P (W)} = -25 dBm

8.3. Test Instrumentation and Equipment

Table 34: Test Instrumentation and Equipment

Item	Model	P/N	Manufacturer	Next Date Calibration
Spectrum Analyzer	N9020A	20041738908	Agilent	04.04.2015
20 dB Attenuator	8343-206		TENULINE	13.03.2016
Splitter	11667A		Agilent	22.10.2015

8.4. Test Procedure

As per 47 CFR, Sections 2.1051 and 90.210(m), TIA/EIA-603-C, Section 2.2.13

8.4.1. Test Procedure for Combined TX chain testing

The EUT was started and set in receive mode. Sufficient time for stabilization was allowed.

The EUT was adjusted to produce maximum available to end user RF output power and the highest emission level within the authorized band was measured.

Measurements were done for top, middle and bottom frequencies, for worst case highest output power utilizing 20 MHz channel band width using Spectrum Analyzer.

The test set up is shown in Figure 4 below.

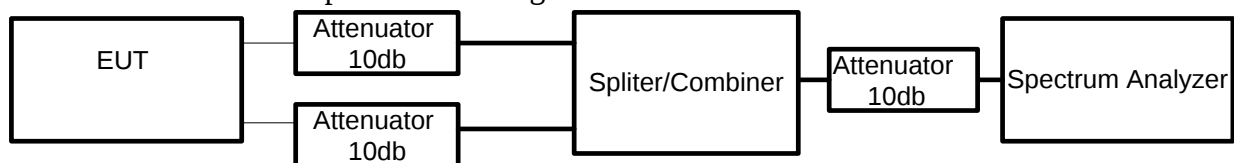
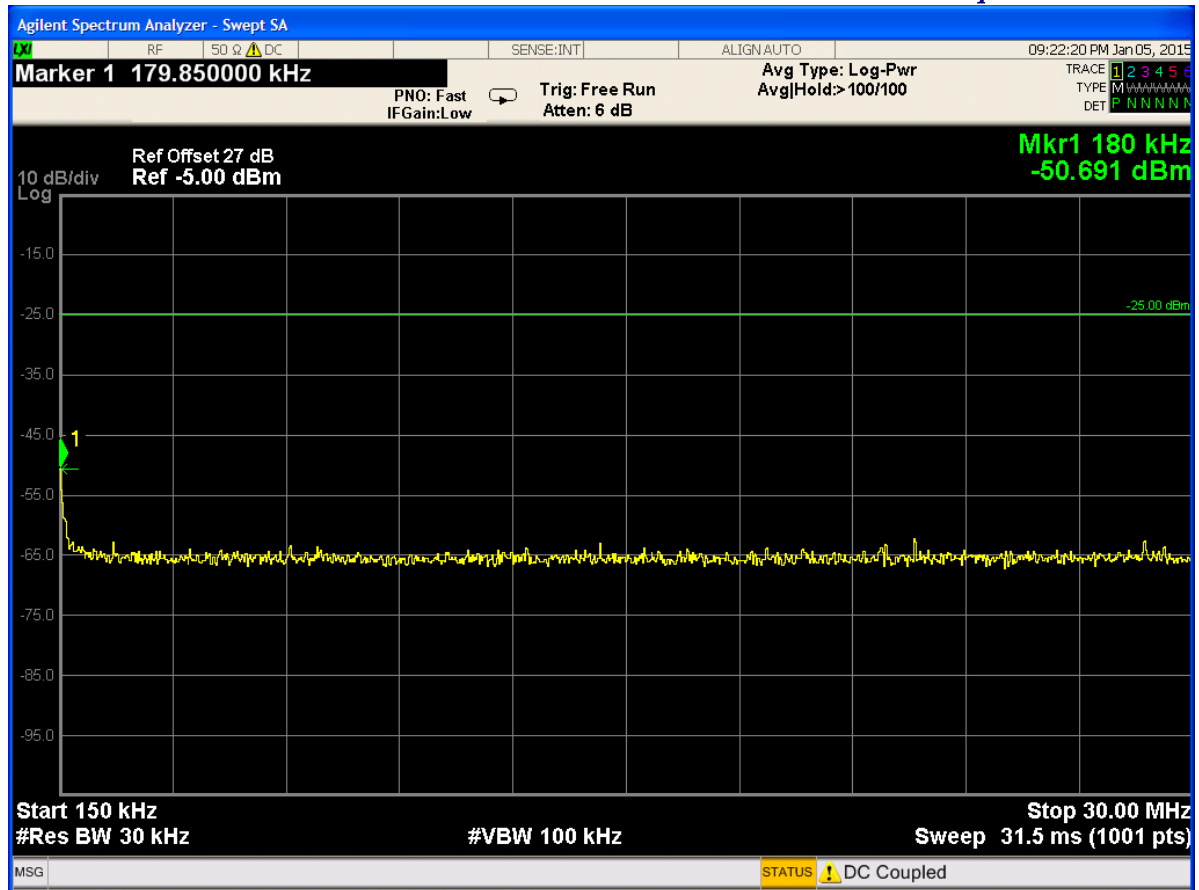


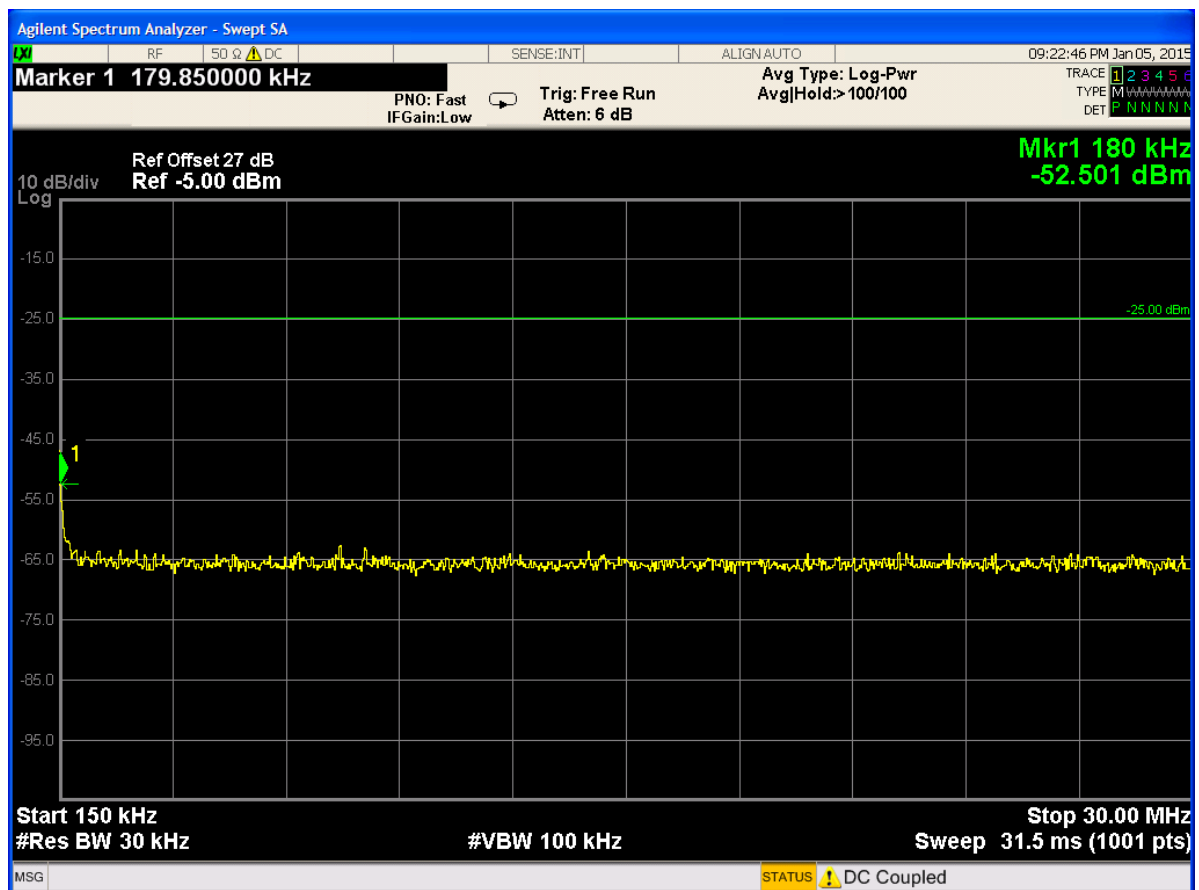
Figure 4: Test Setup for Spurious Emission Test – Combined TX Chains Measurements

Table 35: Test Results for Combined TX Chain

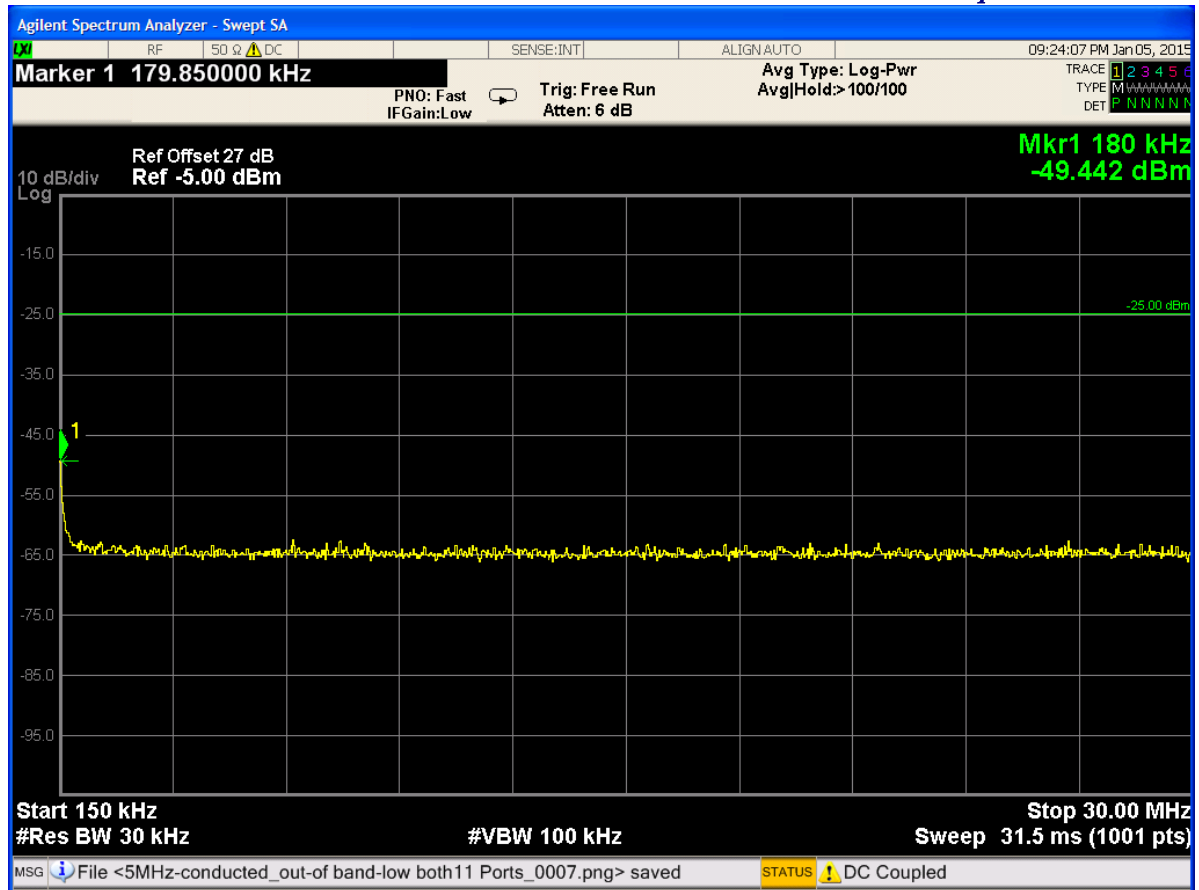
Frequency Range (MHz)	Spurious Emission (dBm)	Margin (dB)	Plot Reference	Pass/Fail
0.15 – 30	No emissions noted		1, 2, 3	Pass
30 – 26,500			4, 5, 6	Pass
26500 – 40000			7, 8, 9	Pass



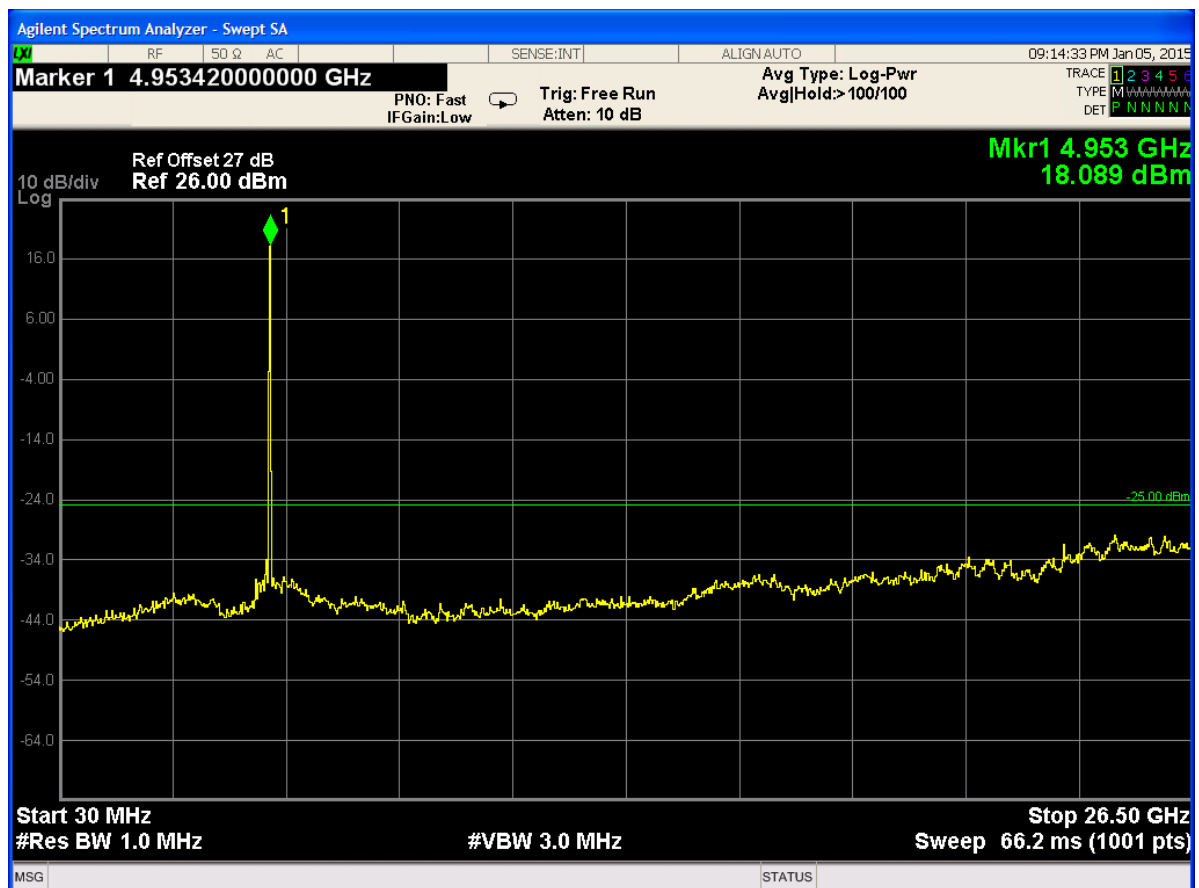
Plot Conducted Spurious Emissions/ 1



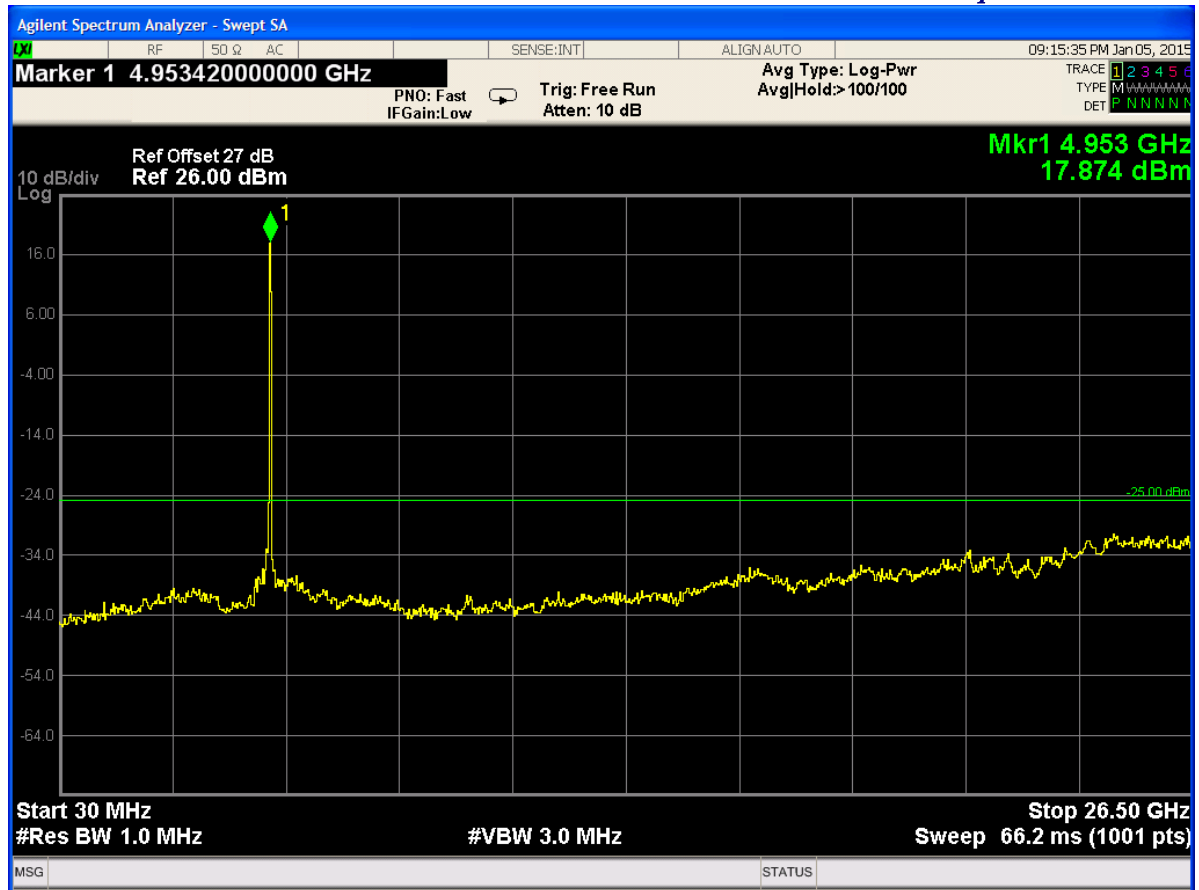
Plot Conducted Spurious Emissions/ 2



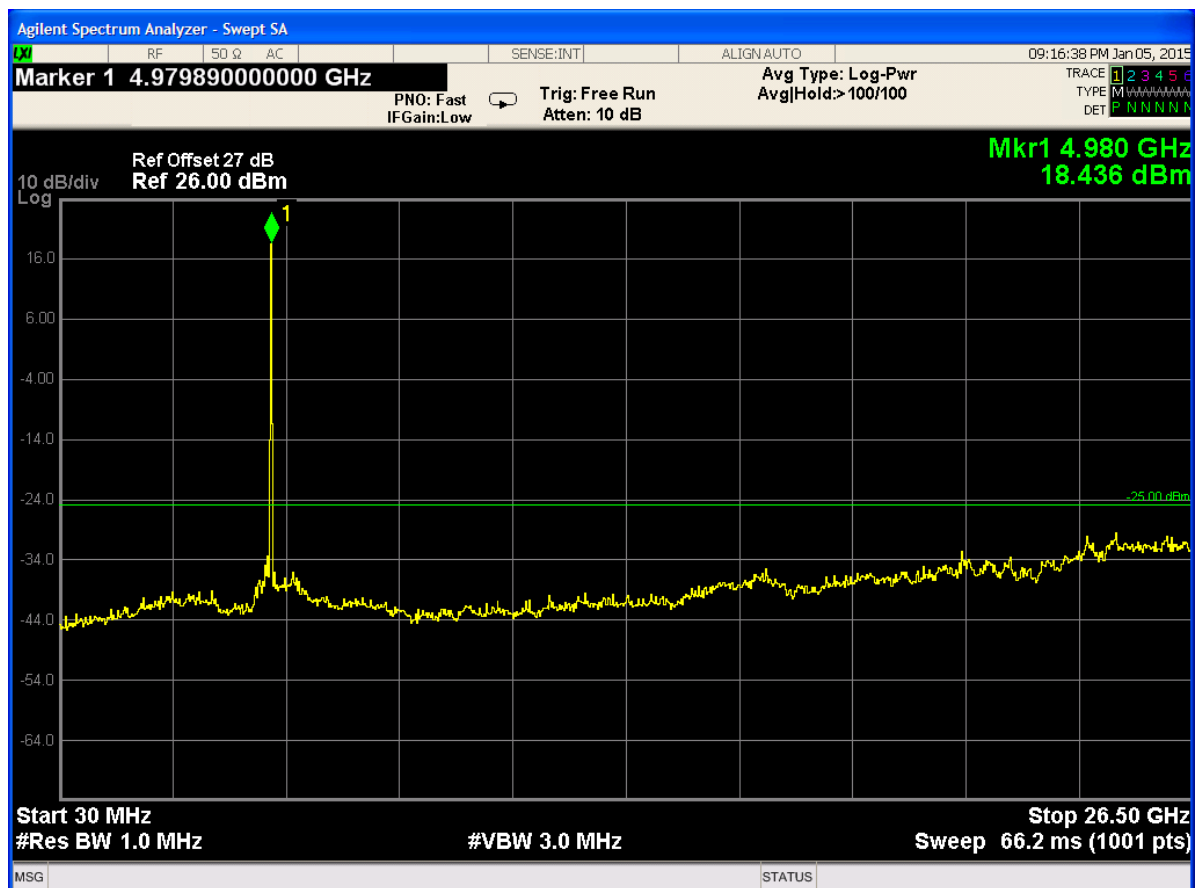
Plot Conducted Spurious Emissions/ 3



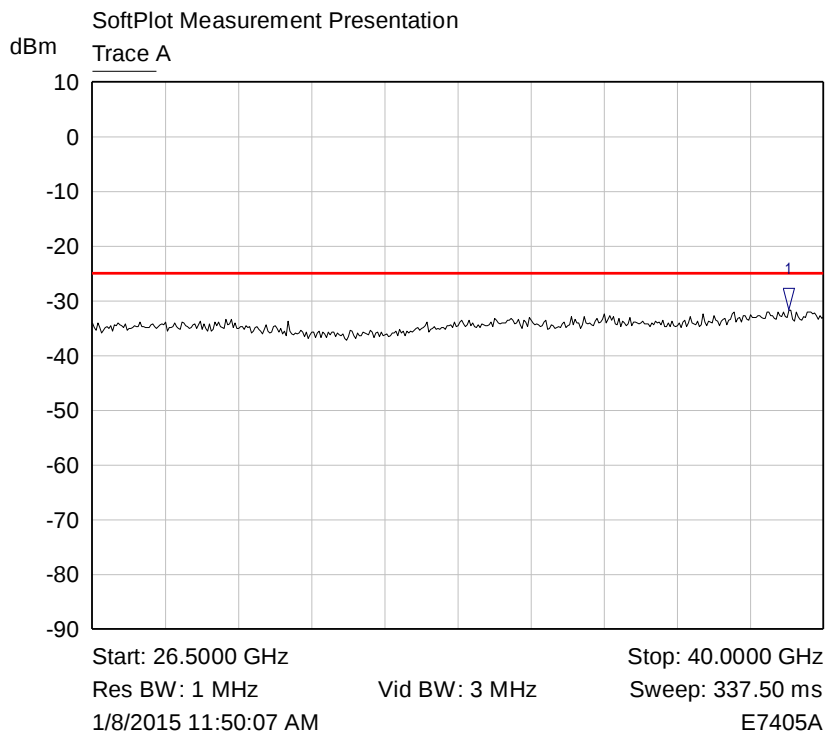
Plot Conducted Spurious Emissions/ 4



Plot Conducted Spurious Emissions/ 5

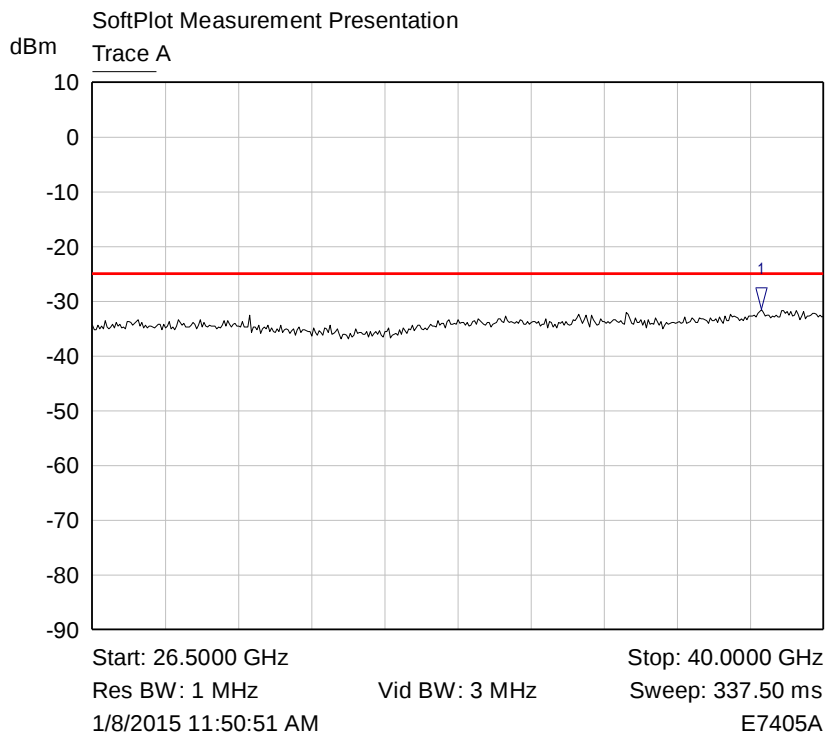


Plot Conducted Spurious Emissions/ 6



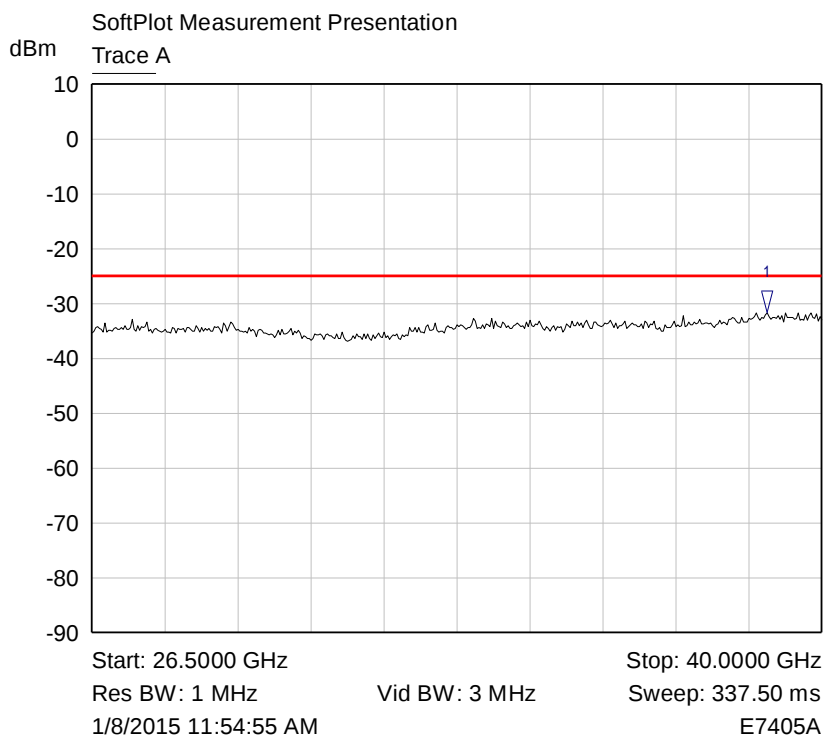
Mkr	Trace	X-Axis	Value	Notes
1 ▾	Trace A	39.3588 GHz	-31.62 dBm	

Plot Conducted Spurious Emissions/ 7



Mkr	Trace	X-Axis	Value	Notes
1 ▾	Trace A	38.8525 GHz	-31.54 dBm	

Plot Conducted Spurious Emissions/ 8



Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	38.9875 GHz	-31.63 dBm	

Plot Conducted Spurious Emissions/ 9

9. RECEIVER SPURIOUS EMISSIONS

Equipment Under Test	WipAir 8000-5X GHz
Test Method	RSS-111 section 5.5
Date	05.01.2015
Relative Humidity	40%
Ambient Temperature	25 ⁰ C
Air Pressure	1010 hPa
Test Setup	Figure 2

Testing Engineer: I. Arbitman 

Date : 05.01.2015

9.1. Test Results Summary & Conclusions

The E.U.T was found in compliance with RSS-111 section 5.5 Receiver Spurious Emissions requirements

9.2. Limits of Conducted Emission at Antenna Terminals

The test unit shall meet the limits of Table 34 for RSS-111 section 5.5.

Table 36: Limits for Receiver Spurious Emission as per RSS-111 section 5.5

Frequency Range (MHz)	Maximum ERP (nW)	Maximum ERP (dBm)	Measurement Bandwidth, (min) (kHz)
30 – 1000	2	-57	4
1000 - 15000	5	-53	4

9.3. Test Instrumentation and Equipment

Table 37: Test Instrumentation and Equipment

Item	Model	P/N	Manufacturer	Next Date Calibration
Spectrum Analyzer	N9020A	20041738908	Agilent	04.04.2015
20 dB Attenuator	8343-206		TENULINE	13.03.2016
Splitter	11667A		Agilent	22.10.2015

9.4. Test Procedure

As per 47 CFR, Section 2.1051, and 90.210(m); TIA/EIA-C, Section 2.2.13

The EUT was started and set in receive mode. Sufficient time for stabilization was allowed.

Measurements were done at EUT set to RX mode, measuring both ports combined.

The test set up is shown in Figure 5 below.

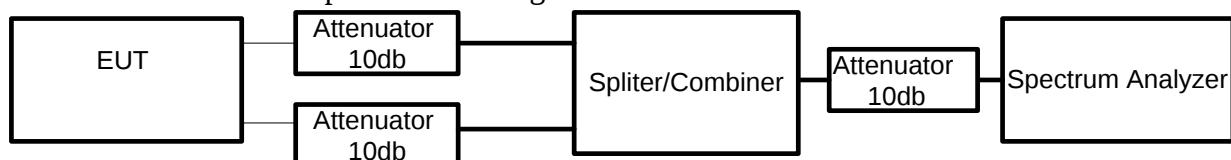
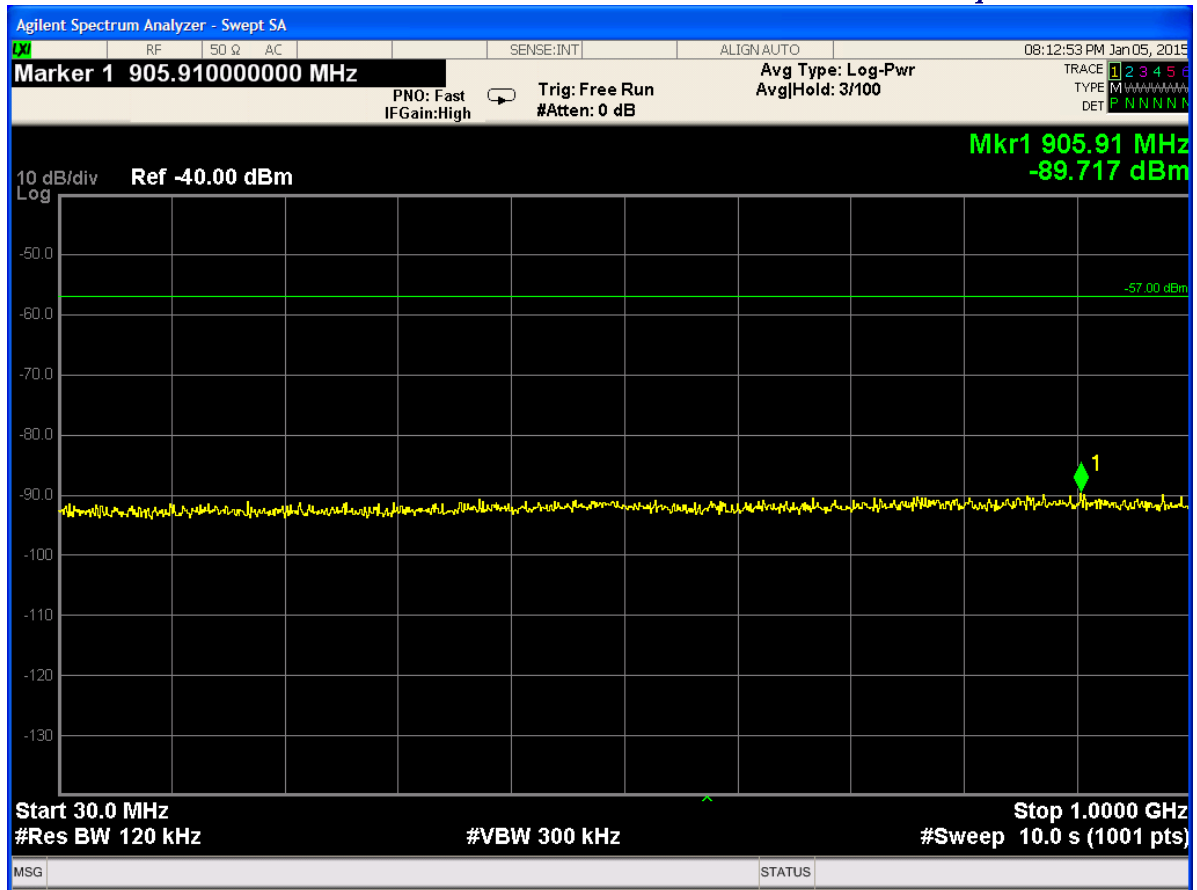


Figure 5: Test Setup for Receiver Spurious Emission Measurements

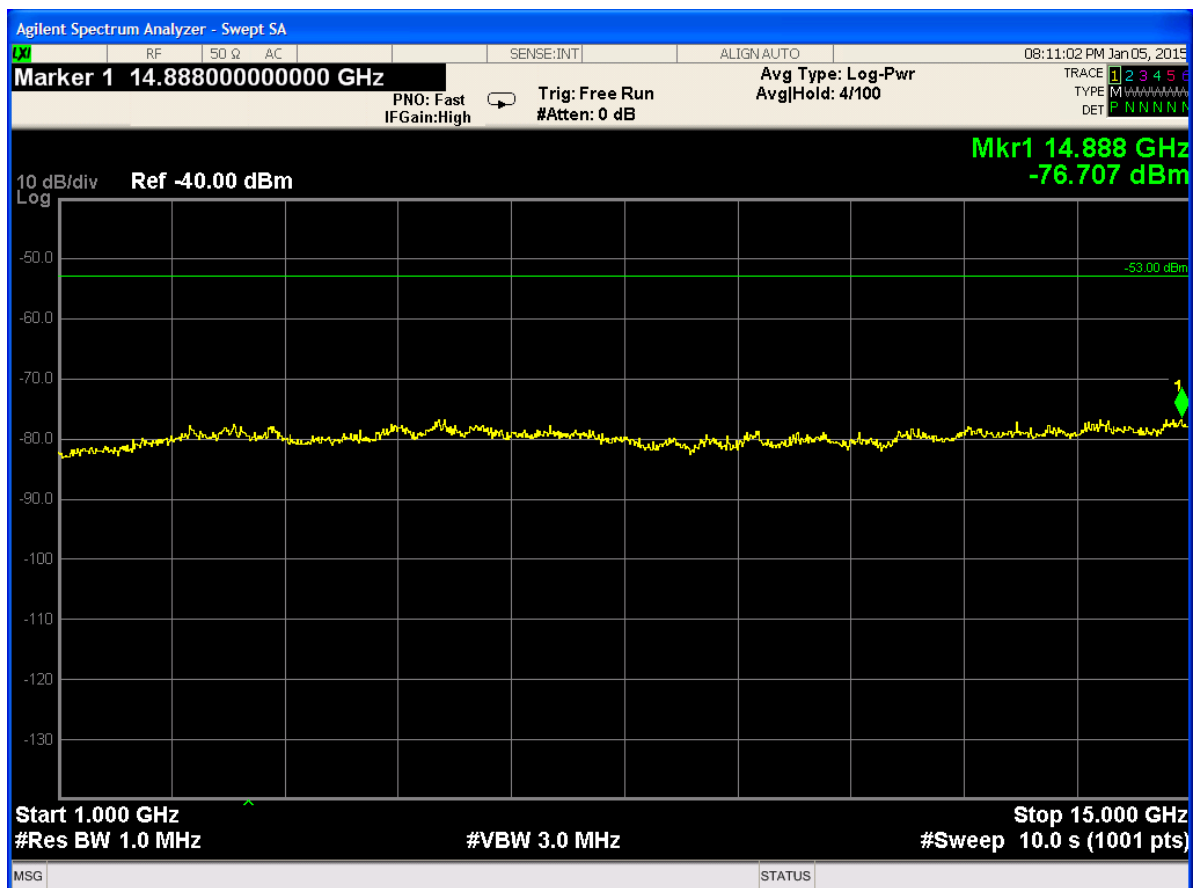
9.5. Test Results

Table 38: Port A Test Results

Frequency Range (MHz)	Spurious Emission (dBm)	Margin (dB)	Plot Reference	Pass/Fail
30 - 1000	No emissions noted	-	1	Pass
1000 - 15000	No emissions noted	-	2	Pass



Plot Receiver Spurious Emission for Both Ports/ 1



Plot Receiver Spurious Emission for Both Ports/ 2

10. RADIATED EMISSION

Equipment Under Test	WipAir 8000-5X GHz
Test Method	FCC section 90.210, RSS-111 section 5.4
Date	14.04.2015
Relative Humidity	40%
Ambient Temperature	25 ⁰ C
Air Pressure	1010 hPa
Test Setup	Figure 1

Testing Engineer: I. Arbitman



Date 14.04.2015

10.1. Test Results Summary & Conclusions

The E.U.T was found in compliance with 90.210 for Radiated Emission requirements.

No spurious or harmonic emissions found 6dBs below limits. **No emissions found that could be substituted.**

10.2. Limits of Radiated Interference Field Strength according 90.210

The test unit shall meet the limits of Table 38.

Table 39: Limits For 90.210

Frequency MHz	Attenuation below Carrier dBc	ERP of Spurious, dBm*	Equivalent Field Strength Limit @ 3m dB (μV/m)**
0.009 - 40000	55+10logP	-25	70.23

ERP Spurious = P (dBm) –[55 + 10log P (W)] = -25 dBm,

*: Excluding the band emission within ± 150 % of the authorized bandwidth from the carrier

**: Equivalent field strength limit was calculated from the maximum allowed ERP of spurious as follows:

$E = \sqrt{30 \cdot P \cdot 1.64} / r$, where P is ERP in Watts; 1.64 is the numeric gain of ideal dipole and r is antenna to EUT distance in meters.

10.3. Test Instrumentation and Equipment

Table 40: Test Instrumentation and Equipment

Item	Model	P/N	Manufacturer	Next Date Calibration
Spectrum Analyzer	E7405A	20041738908	Agilent	04.04.2015
Broadband Antenna	BTA-L		Frankonia	28.07.2015
Loop Antenna	HFH2-Z2		R&S	21.07.2016
Double Ridged Guide Antenna (1 - 18) GHz	DRG-118/A	20043115301	ARA	21.07.2016
Double Ridge Guide Antenna(18-40GHz)	DRG-1840/A		ARA	09.12.2015
Low Noise Amplifier (0-1GHz)	AM-1300-N		MITEQ	19.05.2015
Low Noise Amplifier (1-4GHz)	AMM 003N		AVANTEK	19.05.2015
Low Noise Amplifier (1-18GHz)	PE 2-38		Planner	07.08.2015
Low Noise Amplifier (1-18 GHz)	PE 2-38-218-3R5		Planer	07.08.2015
Low Noise Amplifier (10 k – 1 GHz)	AM-1300-N	20042213104	MITEQ	07.08.2015
Low Noise Amplifier (18-26GHz)	PTB-33-18G-26G		Planar	19.05.2015
Low Noise Amplifier (26-40GHz)	SLKa-35-4		Spacek	21.07.2016
Preselected RF section 26.5-40GHz	11974A		HP	08.06.2015

10.4. Test Procedure

As per 47 CFR, Sections 2.1053 and 90.210 (m); TIA/EIA-603-C, section 2.2.12 Preliminary Test Procedure

- 10.4.1. The EUT was placed on the top of a rotating table 0.8 meters above the ground in a shielded chamber
- 10.4.2. The E.U.T was set 3 meters away from the receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 10.4.3. The Antenna height varied from one meter to 1.8 meters above the ground and the table was rotated 360° to determine the maximum value of the field strength
- 10.4.4. The antenna was set both horizontal and vertical polarization.

Final Test Procedure

- 10.4.5. The EUT was tested at open area for each emission,
- 10.4.6. The test procedure was performed as before but the Antenna height varied from one meter to four meters above the ground

10.5. Final Test Setup

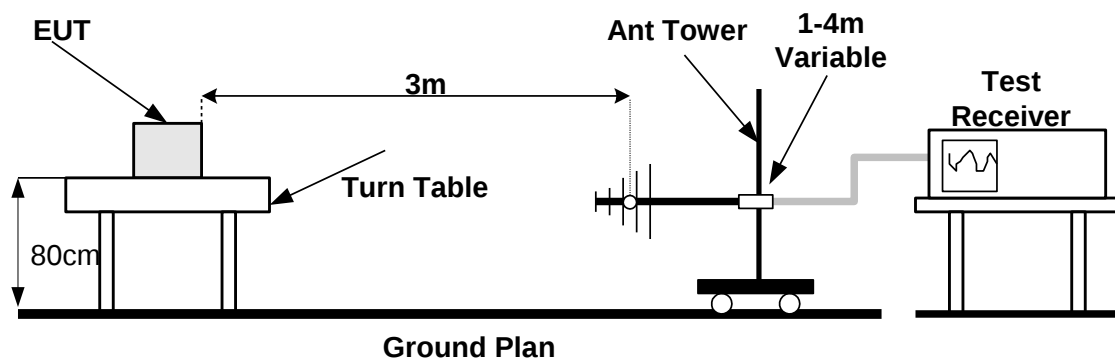


Figure 4: Radiated Emission Test Configuration

10.6. Test Results

10.6.1. 9 kHz – 150 kHz

Table 41: 5 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4943	Vertical	0.2	1	Pass
	Horizontal		2	Pass
Middle - 4963	Vertical		3	Pass
	Horizontal		4	Pass
High - 4987	Vertical		5	Pass
	Horizontal		6	Pass

- 50 Ohm termination for both RF ports

Table 42: 10 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4945	Vertical	0.2	7	Pass
	Horizontal		8	Pass
Middle - 4963	Vertical		9	Pass
	Horizontal		10	Pass
High - 4985	Vertical		11	Pass
	Horizontal		12	Pass

- 50 Ohm termination for both RF ports

Table 43: 20 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4950	Vertical	0.2	13	Pass
	Horizontal		14	Pass
Middle - 4963	Vertical		15	Pass
	Horizontal		16	Pass
High - 4980	Vertical		17	Pass
	Horizontal		18	Pass

- 50 Ohm termination for both RF ports

10.6.2. 150 kHz-30 MHz

Table 44: 5 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4943	Vertical	9	19	Pass
	Horizontal		20	Pass
Middle - 4963	Vertical		21	Pass
	Horizontal		22	Pass
High - 4987	Vertical		23	Pass
	Horizontal		24	Pass

- 50 Ohm termination for both RF ports

Table 45: 10 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4945	Vertical	9	25	Pass
	Horizontal		26	Pass
Middle - 4963	Vertical		27	Pass
	Horizontal		28	Pass
High - 4985	Vertical		29	Pass
	Horizontal		30	Pass

- 50 Ohm termination for both RF ports

Table 46: 20 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4950	Vertical	9	31	Pass
	Horizontal		32	Pass
Middle - 4963	Vertical		33	Pass
	Horizontal		34	Pass
High - 4980	Vertical		35	Pass
	Horizontal		36	Pass

- 50 Ohm termination for both RF ports

10.6.3. 30 MHz-1 GHz

Table 47: 5 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4943	Horizontal & Vertical	120	37	Pass
Middle - 4963			38	Pass
High - 4987			39	Pass

- 50 Ohm termination for both RF ports

Table 48: 10 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4945	Horizontal & Vertical	120	40	Pass
Middle - 4963			41	Pass
High - 4985			42	Pass

- 50 Ohm termination for both RF ports

Table 49: 20 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4950	Horizontal & Vertical	120	43	Pass
Middle - 4963			44	Pass
High - 4980			45	Pass

- 50 Ohm termination for both RF ports

10.6.4. 1-18 GHz

Table 50: 5 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4943	Horizontal & Vertical	1000	46	Pass
Middle - 4963			47	Pass
High - 4987			48	Pass

- 50 Ohm termination for both RF ports

Table 51: 10 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4945	Horizontal & Vertical	1000	49	Pass
Middle - 4963			50	Pass
High - 4985			51	Pass

- 50 Ohm termination for both RF ports

Table 52: 20 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4950	Horizontal & Vertical	1000	52	Pass
Middle - 4963			53	Pass
High - 4980			54	Pass
For Rx mode	Horizontal		55	

- 50 Ohm termination for both RF ports

10.6.5. 18-26.5 GHz

Table 53: 5 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4943	Horizontal & Vertical	1000	56	Pass
Middle - 4963			57	Pass
High - 4987			58	Pass

- 50 Ohm termination for both RF ports

Table 54: 10 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4945	Horizontal & Vertical	1000	59	Pass
Middle - 4963			60	Pass
High - 4985			61	Pass

- 50 Ohm termination for both RF ports

Table 55: 20 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4950	Horizontal & Vertical	1000	62	Pass
Middle - 4963			63	Pass
High - 4980			64	Pass

- 50 Ohm termination for both RF ports

10.6.6. 26.5 – 40 GHz

Table 56: 5 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4943	Horizontal & Vertical	1000	65	Pass
Middle - 4963			66	Pass
High - 4987			67	Pass

- 50 Ohm termination for both RF ports

Table 57: 10 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4945	Horizontal & Vertical	1000	68	Pass
Middle - 4963			69	Pass
High - 4985			70	Pass

- 50 Ohm termination for both RF ports

Table 58: 20 MHz Bandwidth Test Result

Frequency (MHz)	Polarization	Res. BW (kHz)	Plot No.	PASS/FAIL
Low - 4950	Horizontal & Vertical	1000	71	Pass
Middle - 4963			72	Pass
High - 4980			73	Pass
For Rx mode		3000	74	

- 50 Ohm termination for both RF ports



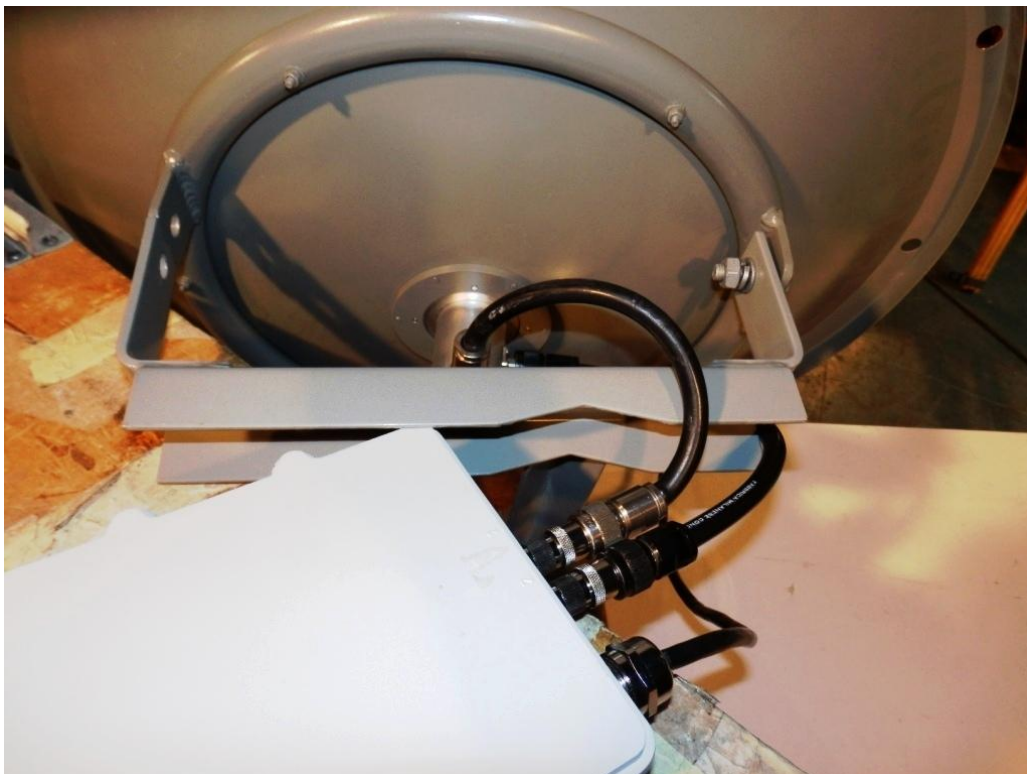
Photograph for Radiated Emission Test Setup/ 1



Photograph for Radiated Emission Test Setup/ 2



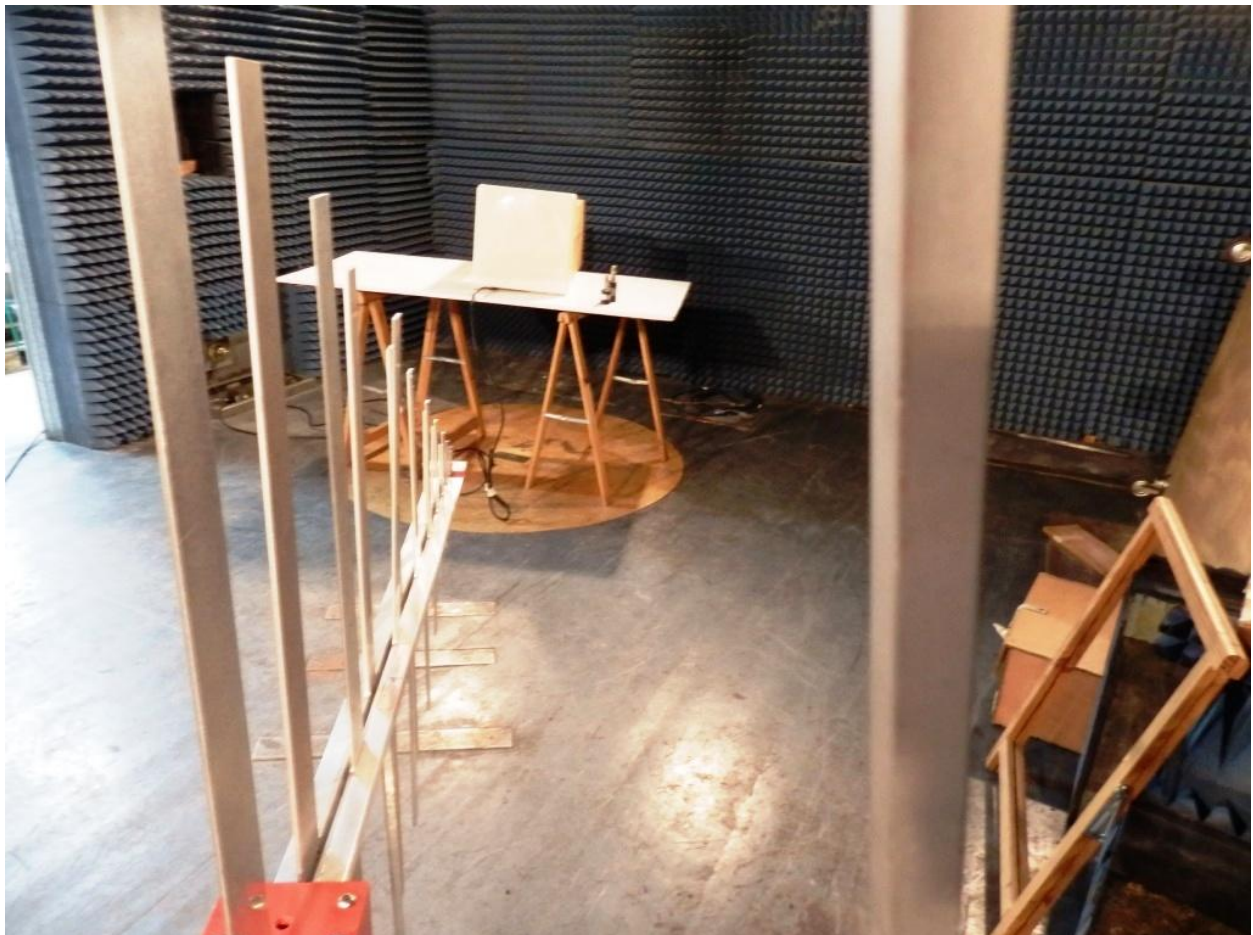
Photograph for Radiated Emission Test Setup/ 3



Photograph for Radiated Emission Test Setup/ 4



Photograph for Radiated Emission Test Setup/ 5



Photograph for Radiated Emission Test Setup/ 6

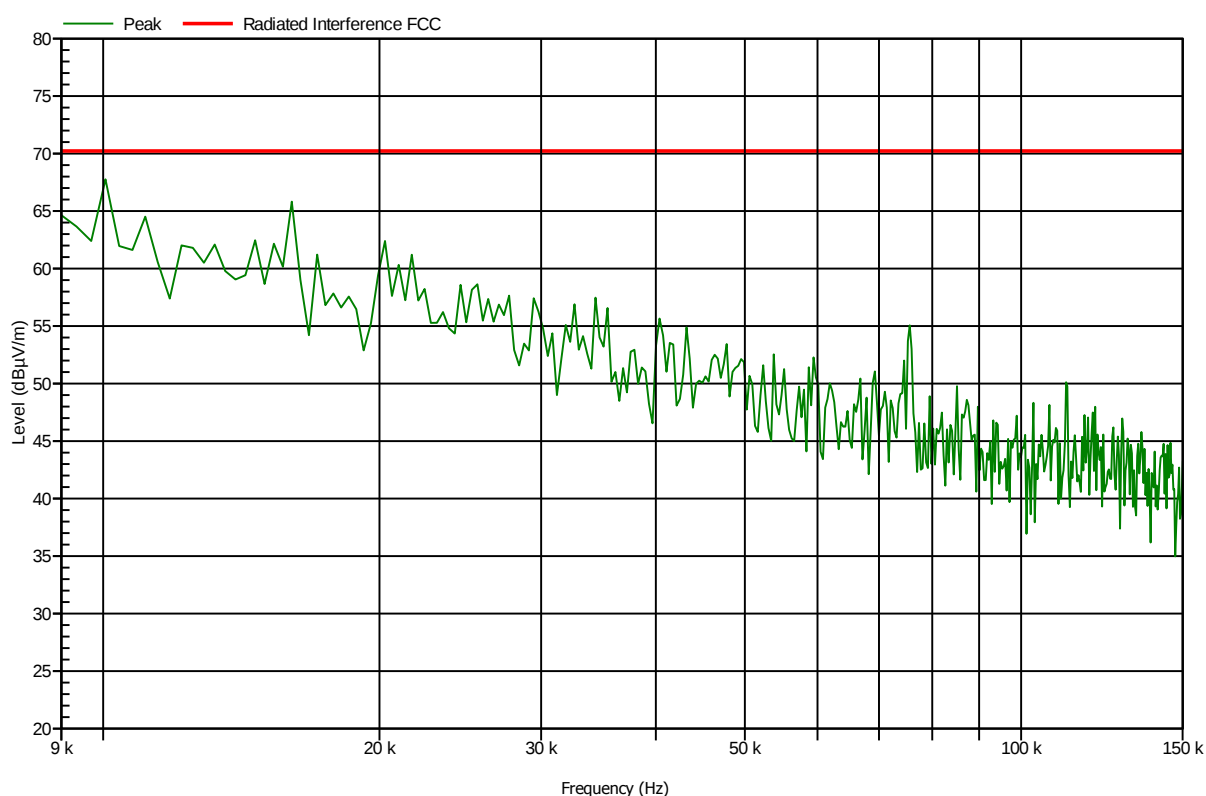
Test Results Plot No 1

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz VERTICAL- 5 MHz LOW; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.009	64.7	70.2		0	1	H
2	0.01	67.8	70.2		0	1	V
3	0.011	64.5	70.2		0	1	H
4	0.016	65.8	70.2		0	1	H

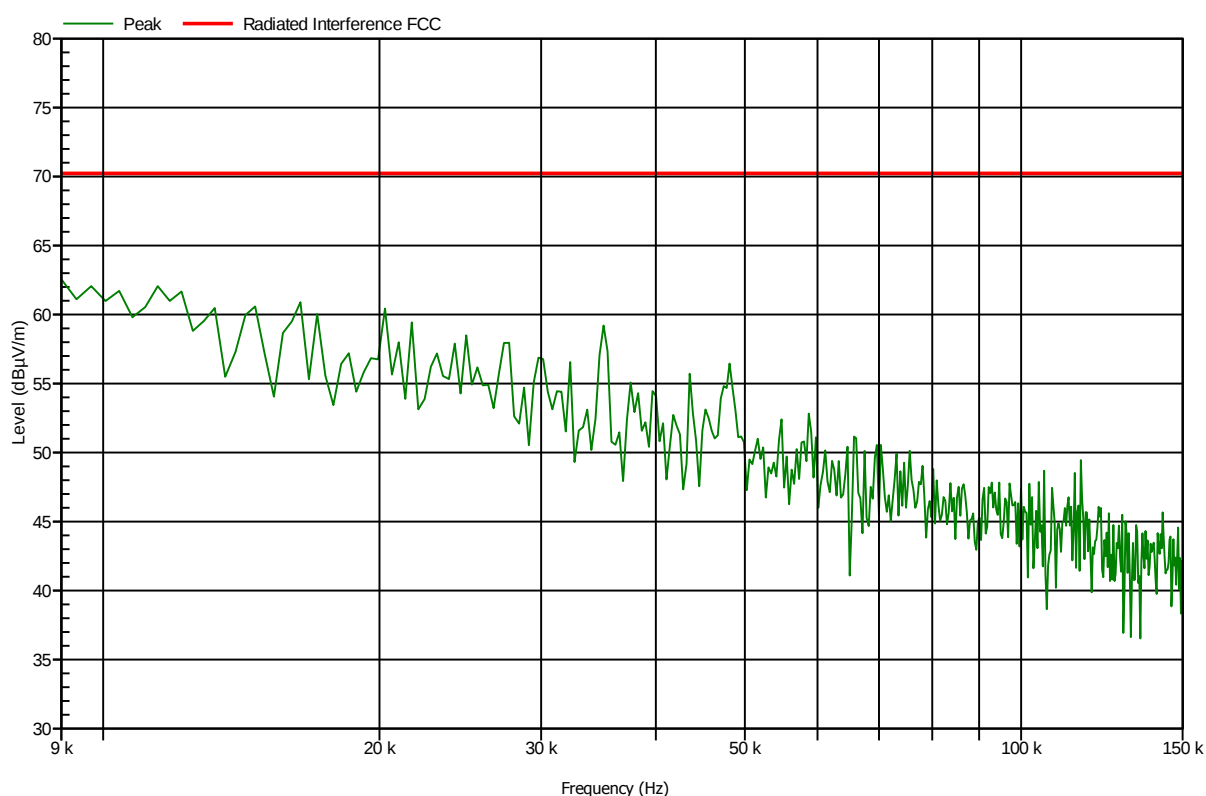
Test Results Plot No 2

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz HORIZONTAL- 5 MHz LOW; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

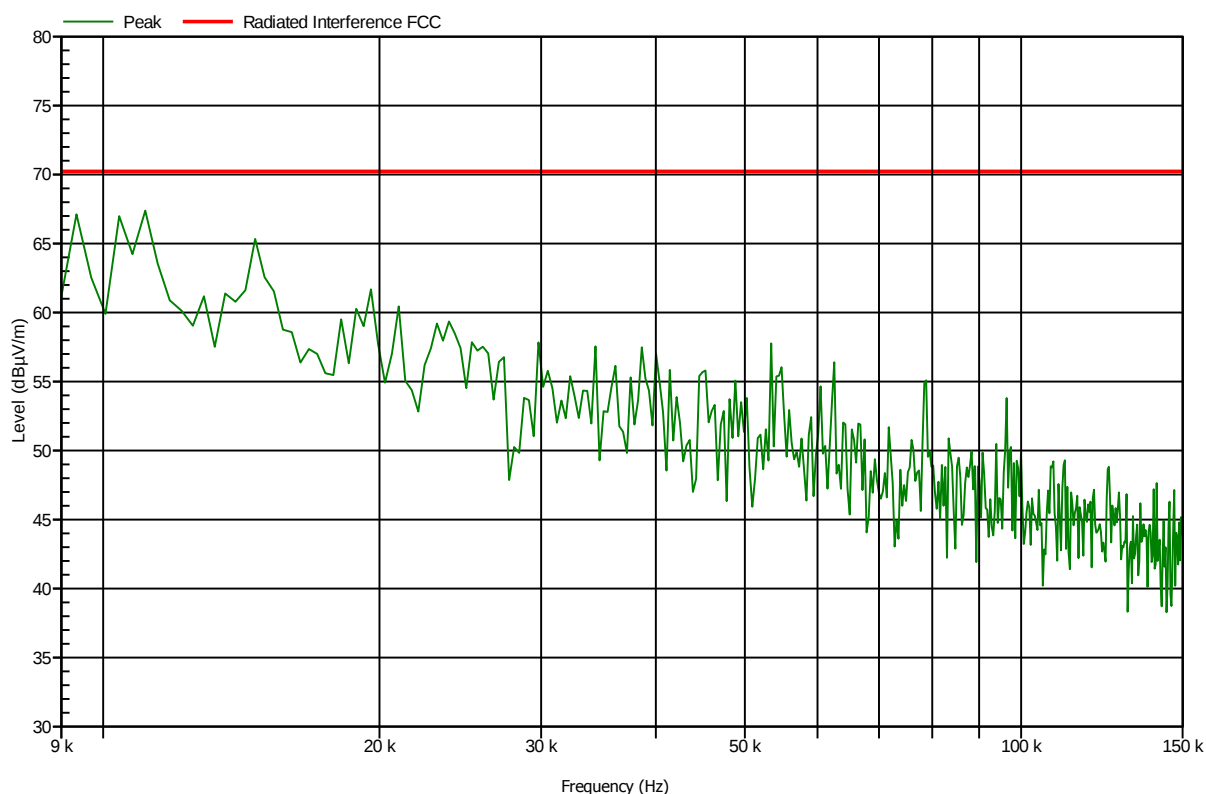
Test Results Plot No 3

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz VERTICAL- 5 MHz MID; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.009	67.1	70.2		0	1	H
2	0.01	67	70.2		0	1	H
3	0.011	67.4	70.2		0	1	H
4	0.015	65.3	70.2		0	1	H

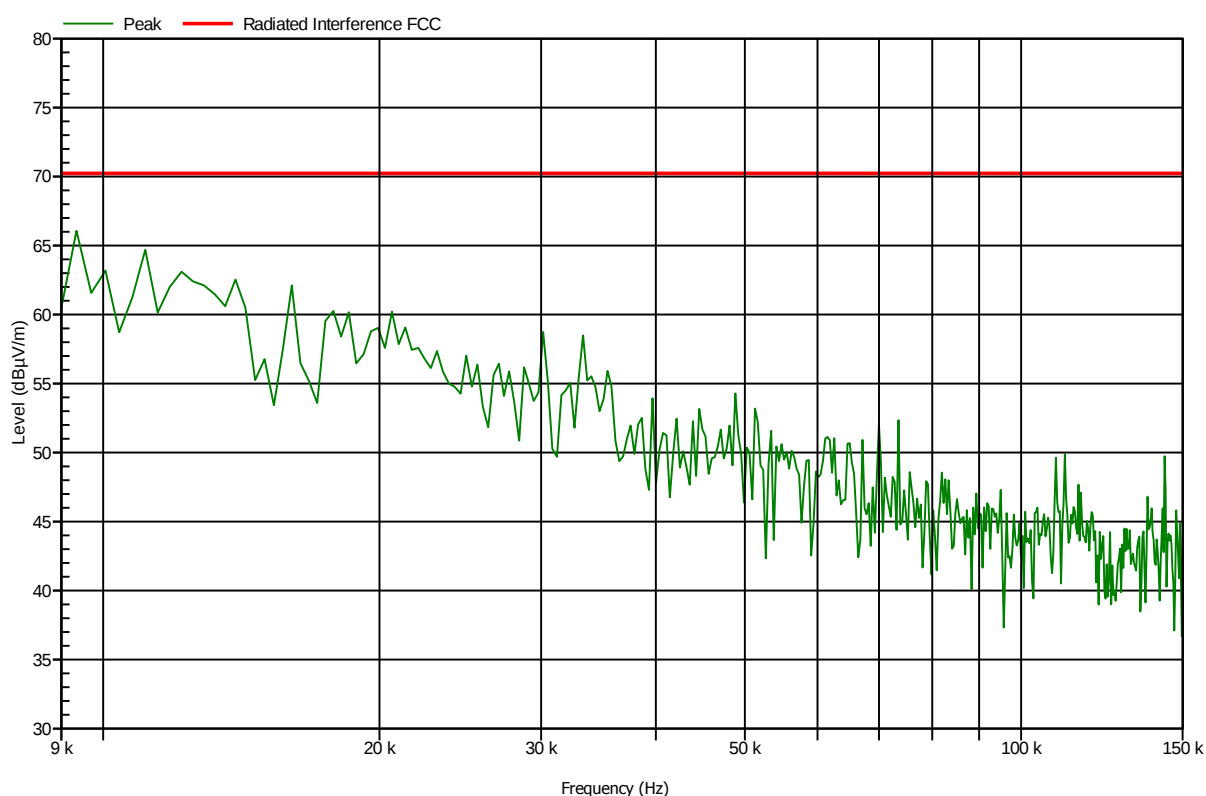
Test Results Plot No 4

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz HORIZONTAL- 5 MHz MID; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.009	66.1	70.2		0	1	V
2	0.011	64.7	70.2		0	1	V

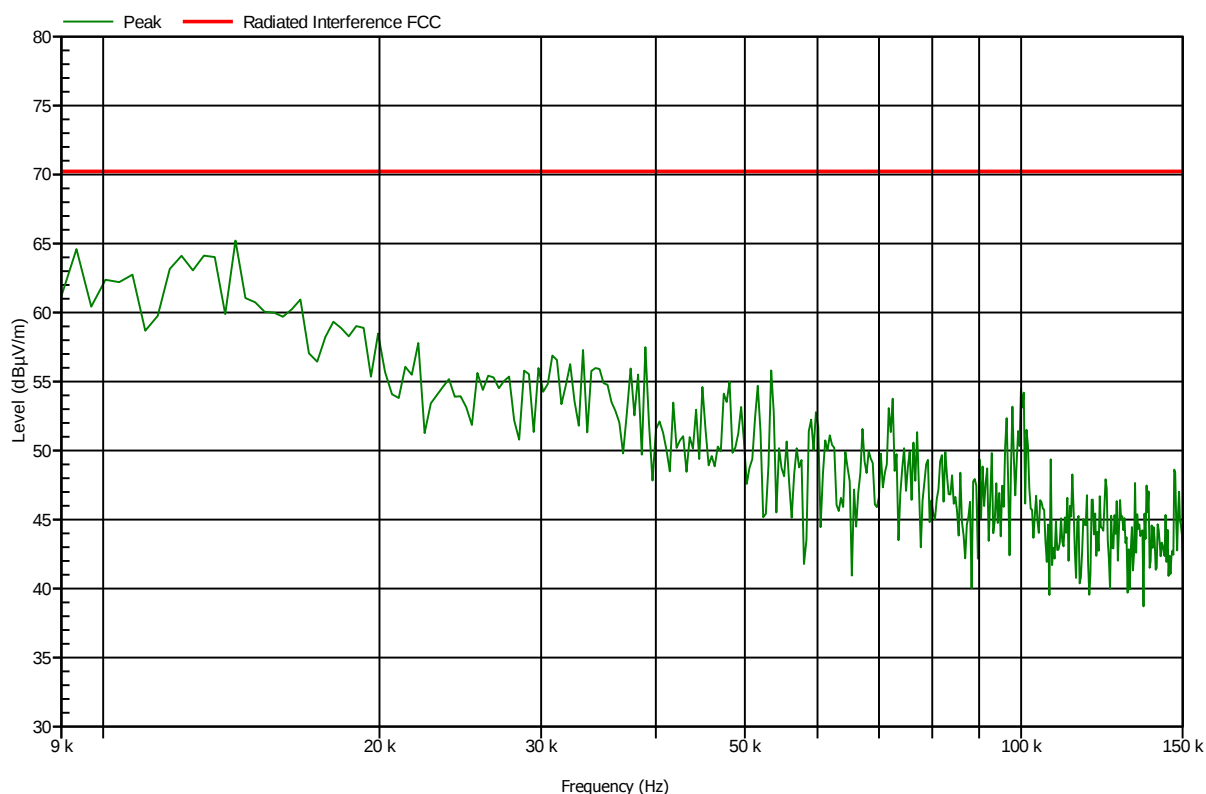
Test Results Plot No 5

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz VERTICAL- 5 MHz HIGH; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.009	64.6	70.2		0	1	V
2	0.014	65.2	70.2		0	1	H

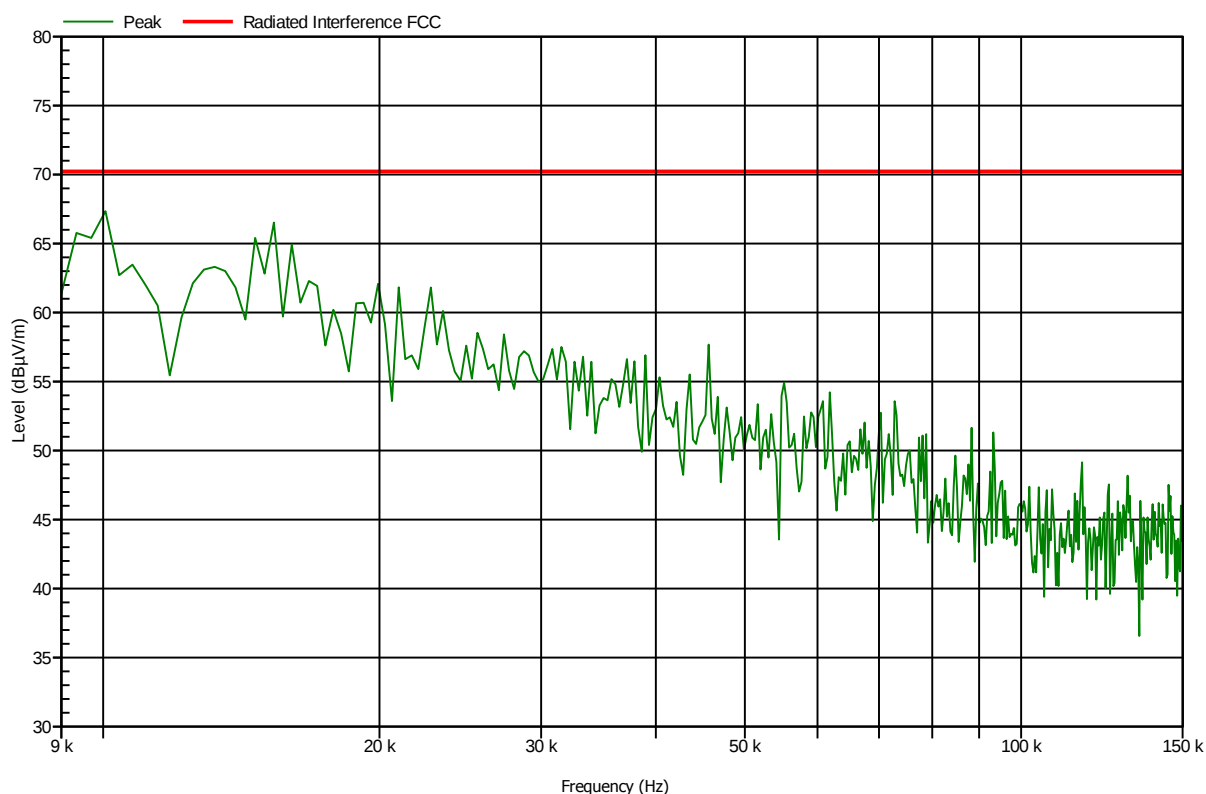
Test Results Plot No 6

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz HORIZONTAL- 5 MHz HIGH; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.009	65.8	70.2		0	1	H
2	0.01	67.3	70.2		0	1	V
3	0.015	65.4	70.2		0	1	V
4	0.015	66.5	70.2		0	1	V
5	0.016	64.9	70.2		0	1	V

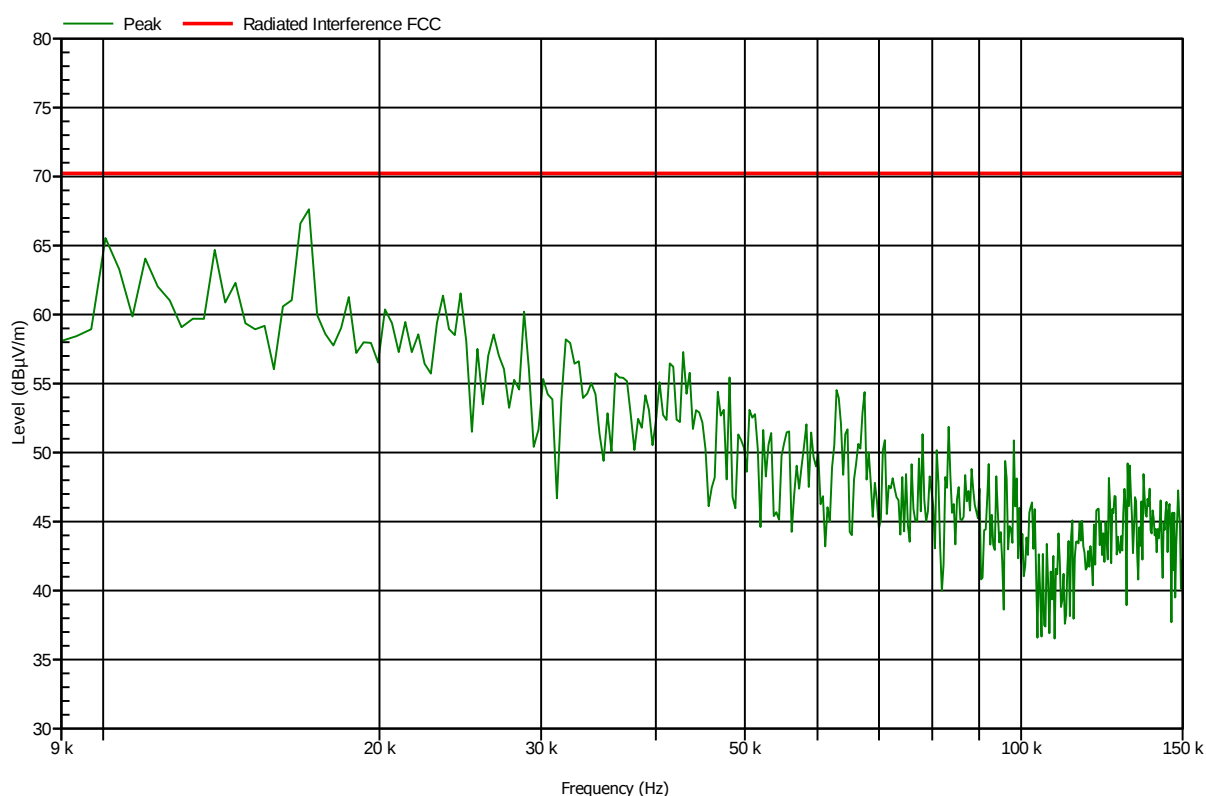
Test Results Plot No 7

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz VERTICAL- 10 MHz LOW; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.01	65.5	70.2		0	1	V
2	0.013	64.7	70.2		0	1	V
3	0.017	67.6	70.2		0	1	V

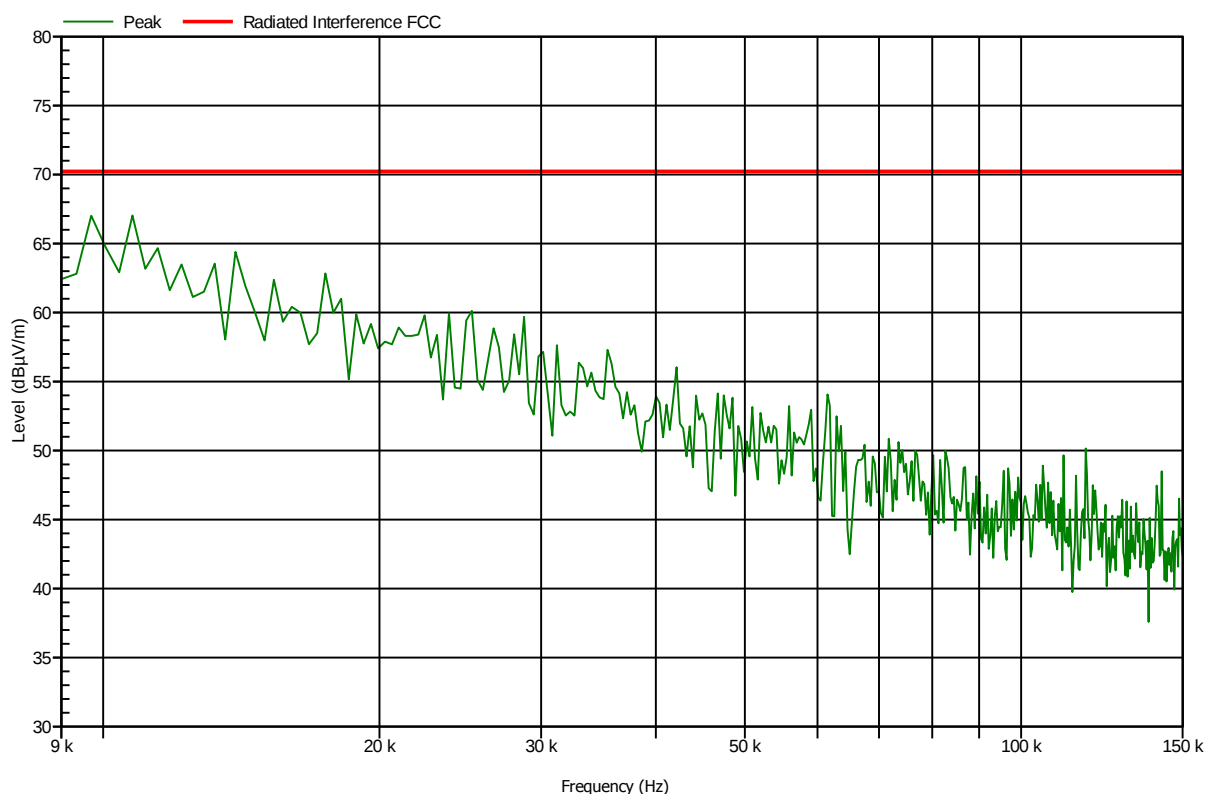
Test Results Plot No 8

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz HORIZONTAL- 10 MHz LOW; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.01	67	70.2		0	1	H
2	0.01	64.8	70.2		0	1	V
3	0.011	67	70.2		0	1	H
4	0.011	64.7	70.2		0	1	V
5	0.014	64.4	70.2		0	1	V

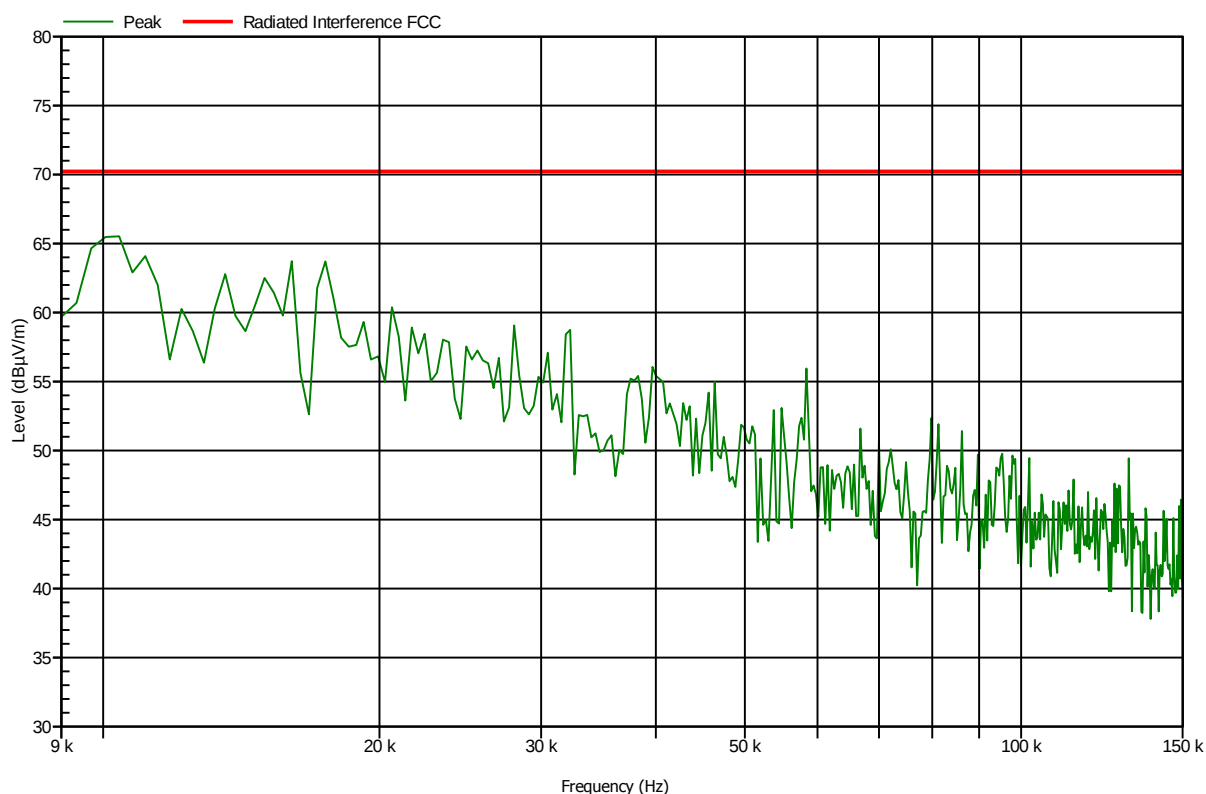
Test Results Plot No 9

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz VERTICAL- 10 MHz MID; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.01	65.5	70.2		0	1	V

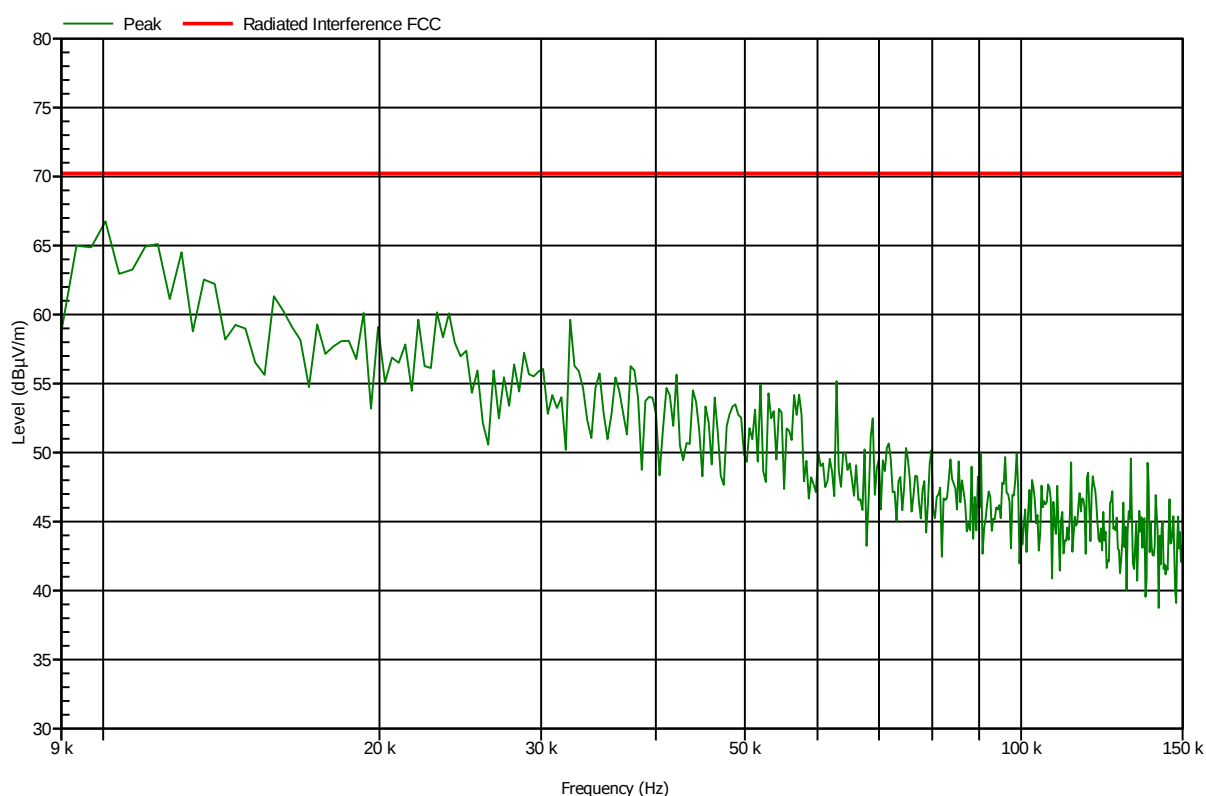
Test Results Plot No 10

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz HORIZONTAL- 10 MHz MID; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.009	65	70.2		0	1	V
2	0.01	66.8	70.2		0	1	H
3	0.011	65.1	70.2		0	1	H
4	0.012	64.5	70.2		0	1	H

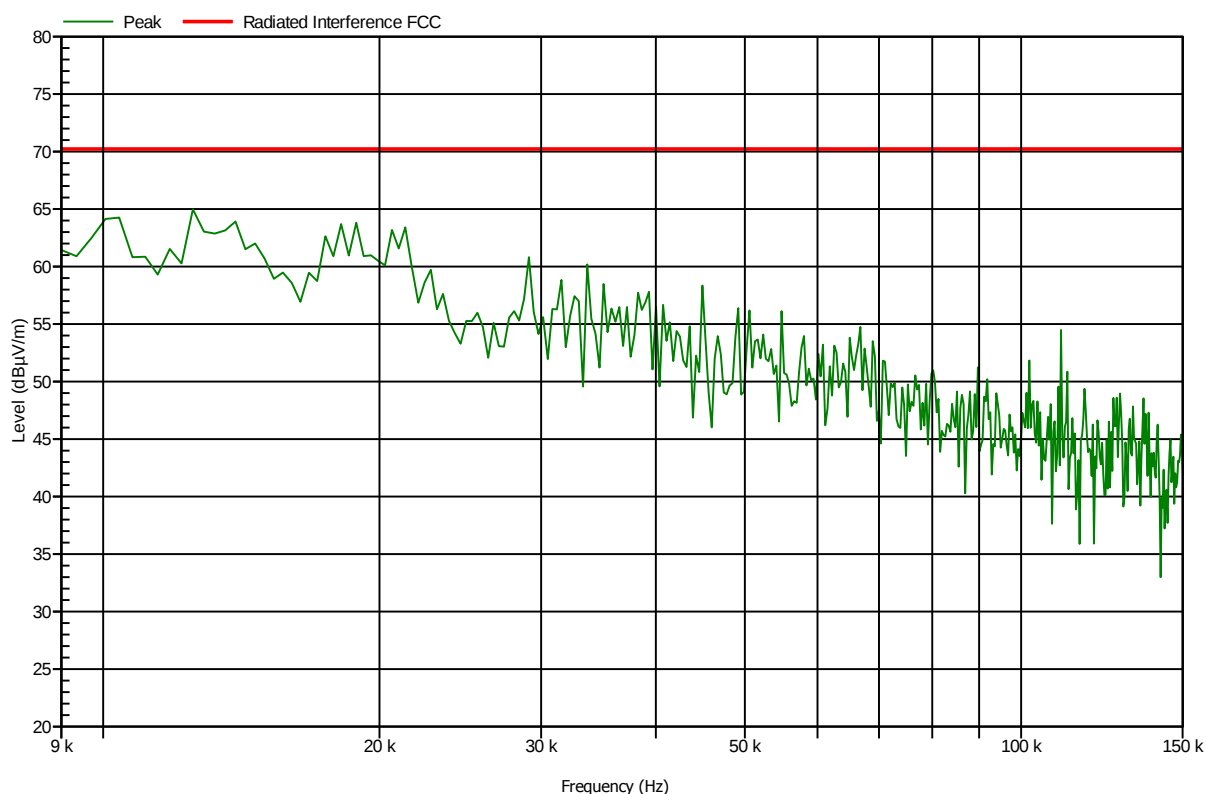
Test Results Plot No 11

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz VERTICAL- 10 MHz HIGH; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.01	64.3	70.2		0	1	V
2	0.013	65	70.2		0	1	V

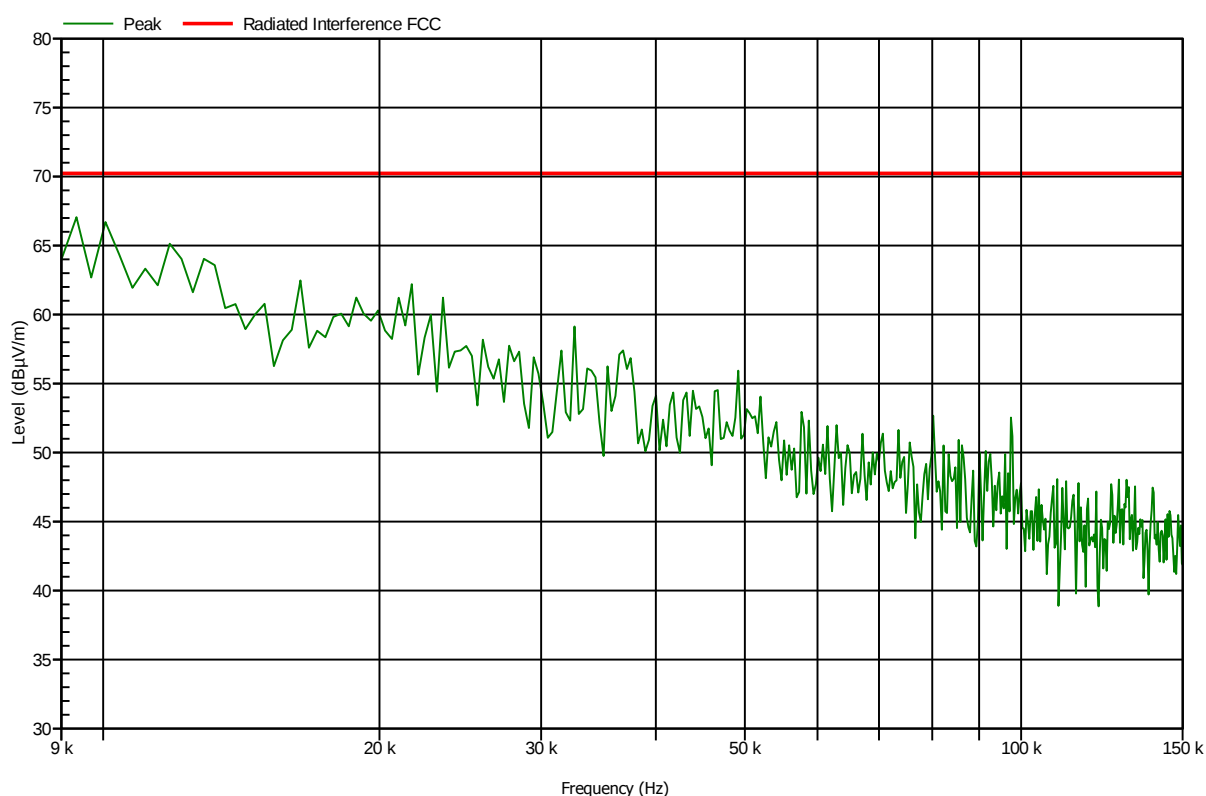
Test Results Plot No 12

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz HORIZONTAL- 10 MHz HIGH; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.009	67.1	70.2		0	1	V
2	0.01	66.7	70.2		0	1	H
3	0.012	65.1	70.2		0	1	V

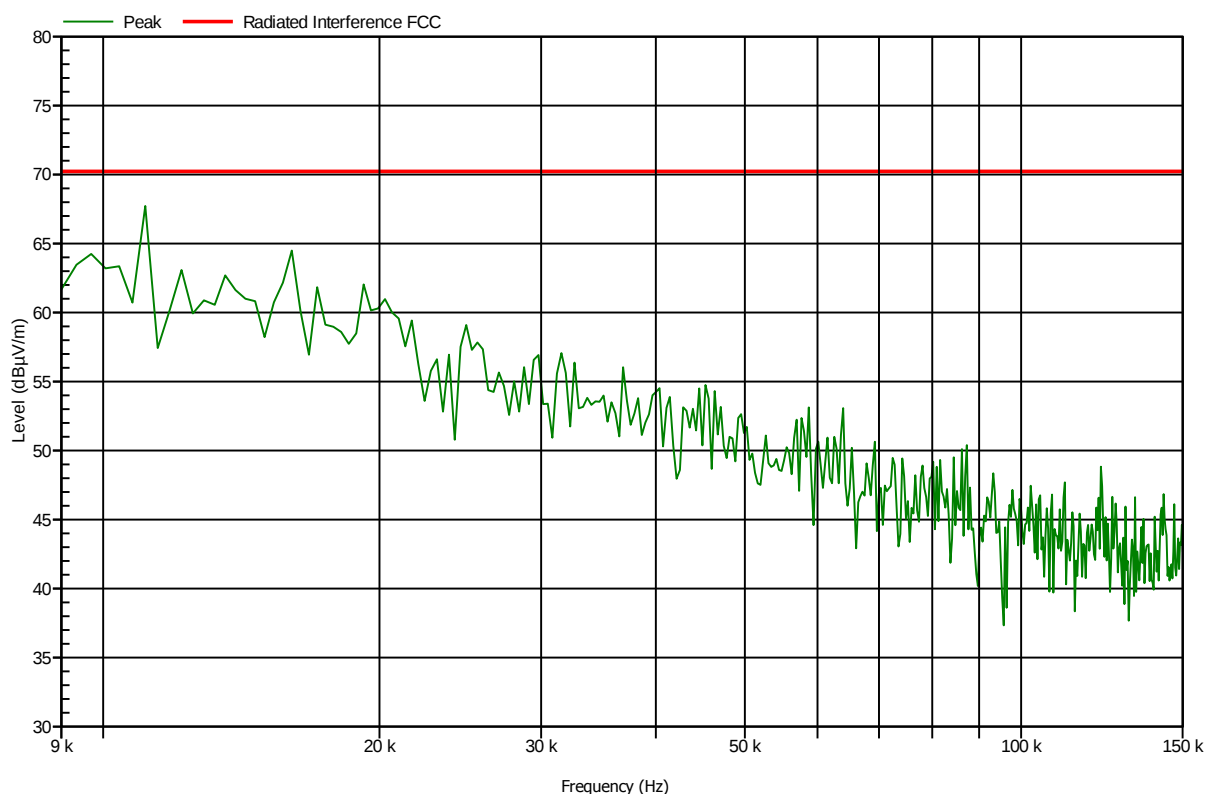
Test Results Plot No 13

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz vertical- 20 MHz LOW; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.01	64.2	70.2		0	1	H
2	0.011	67.7	70.2		0	1	V
3	0.016	64.5	70.2		0	1	V

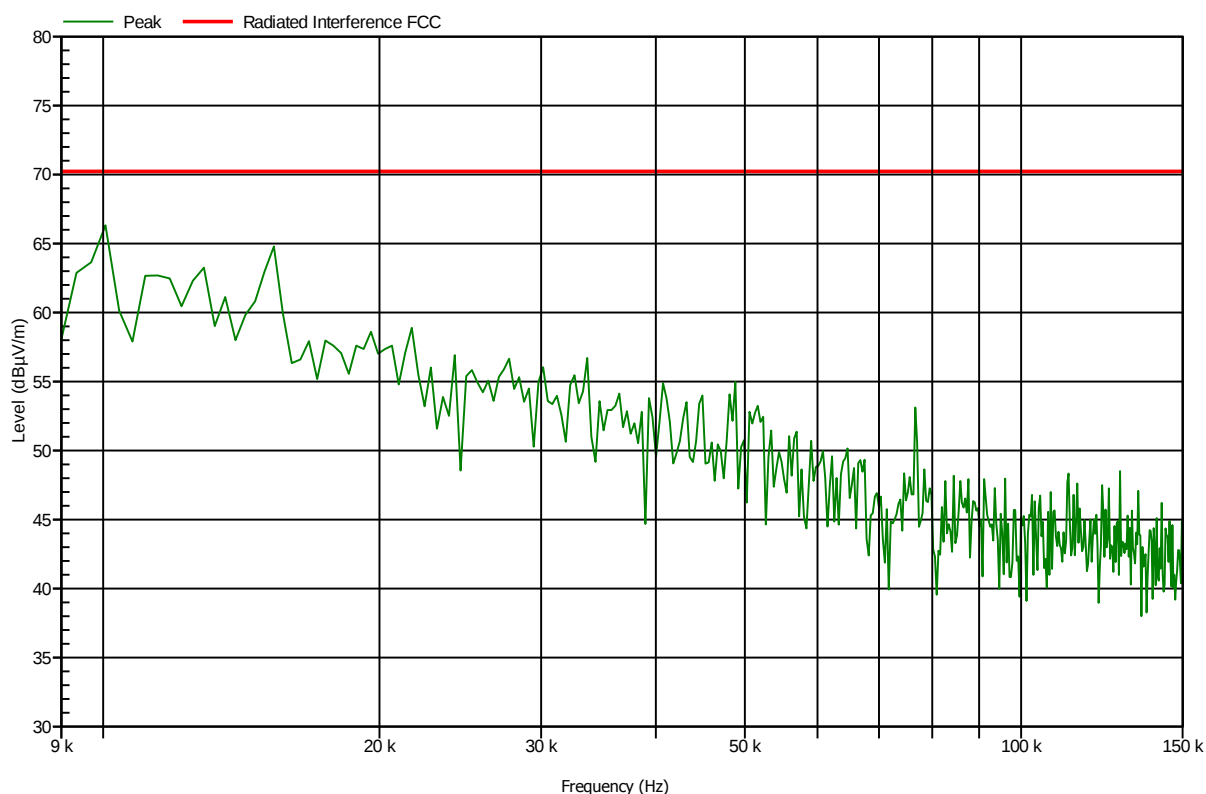
Test Results Plot No 14

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz HORIZONTAL- 20 MHz LOW; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.01	66.3	70.2		0	1	V
2	0.015	64.8	70.2		0	1	H

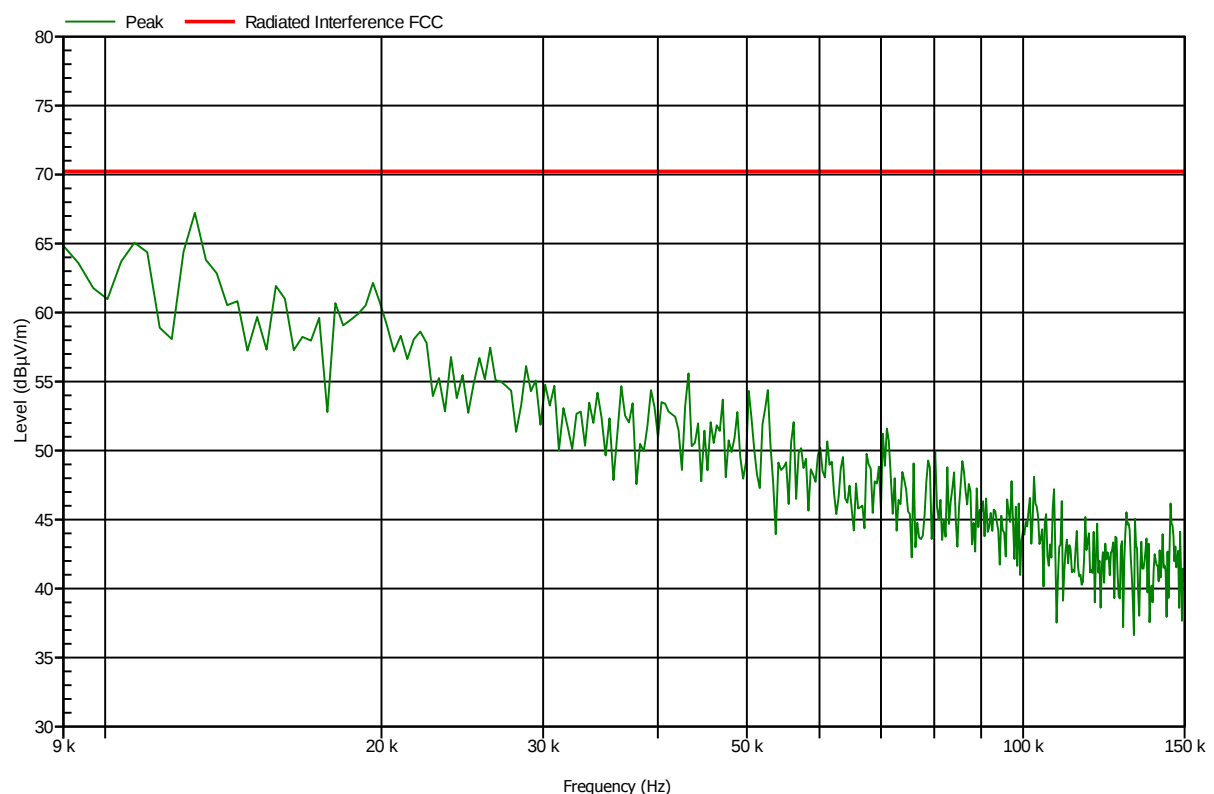
Test Results Plot No 15

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz vertical- 20 MHz MID; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.009	64.9	70.2		0	1	H
2	0.011	65.1	70.2		0	1	H
3	0.011	64.4	70.2		0	1	V
4	0.013	67.2	70.2		0	1	V

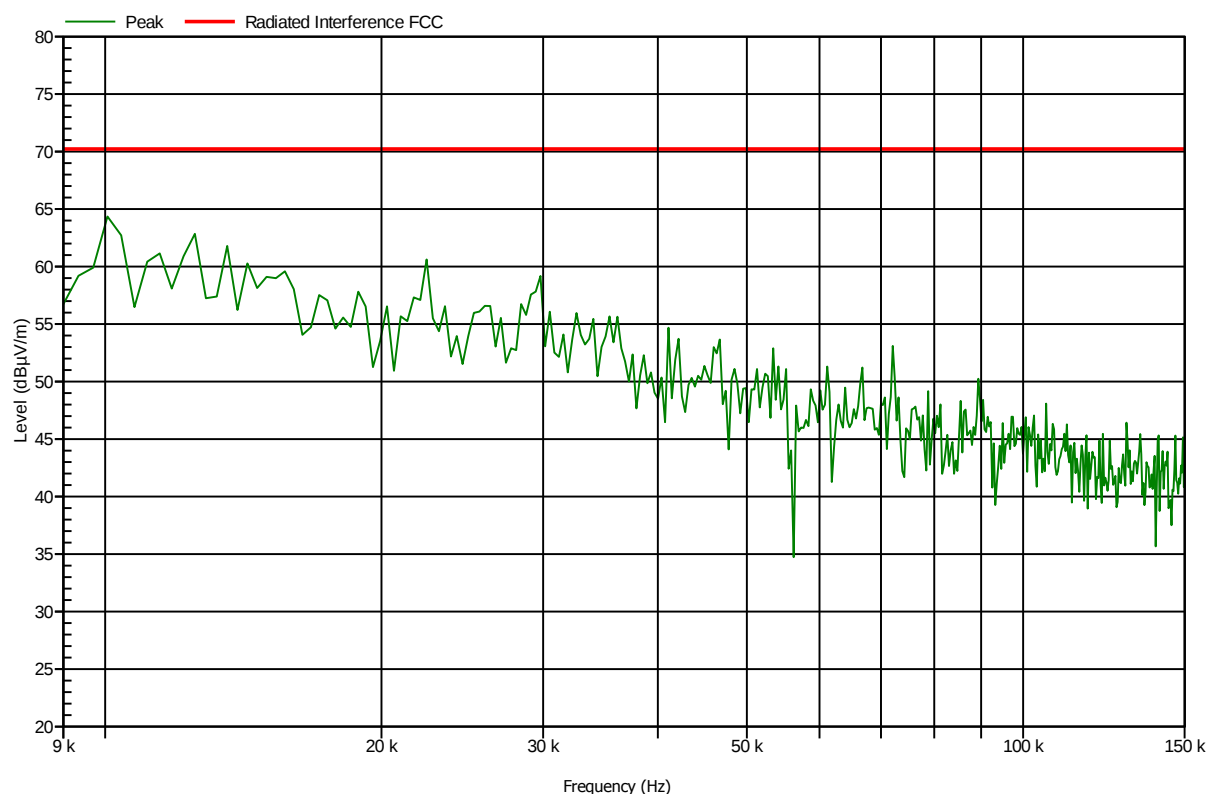
Test Results Plot No 16

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz HORIZONTAL- 20 MHz MID; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.01	64.4	70.2		0	1	V

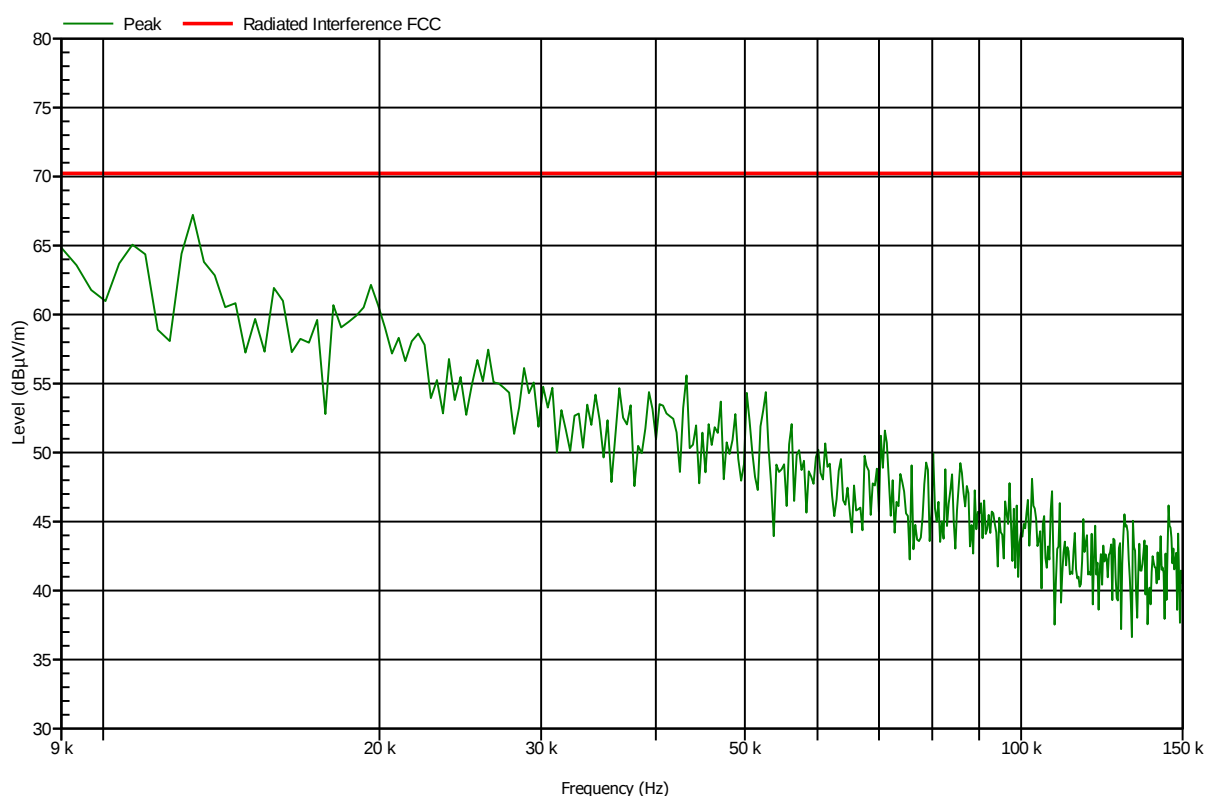
Test Results Plot No 17

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz vertical- 20 MHz HIGH; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

Nr	Frequency (MHz)	PK MaxHold (dB μ V/m)	PK Limit (dB μ V/m)	Result	Angle (degrees)	Height (m)	H/V
1	0.009	64.9	70.2		0	1	H
2	0.011	65.1	70.2		0	1	H

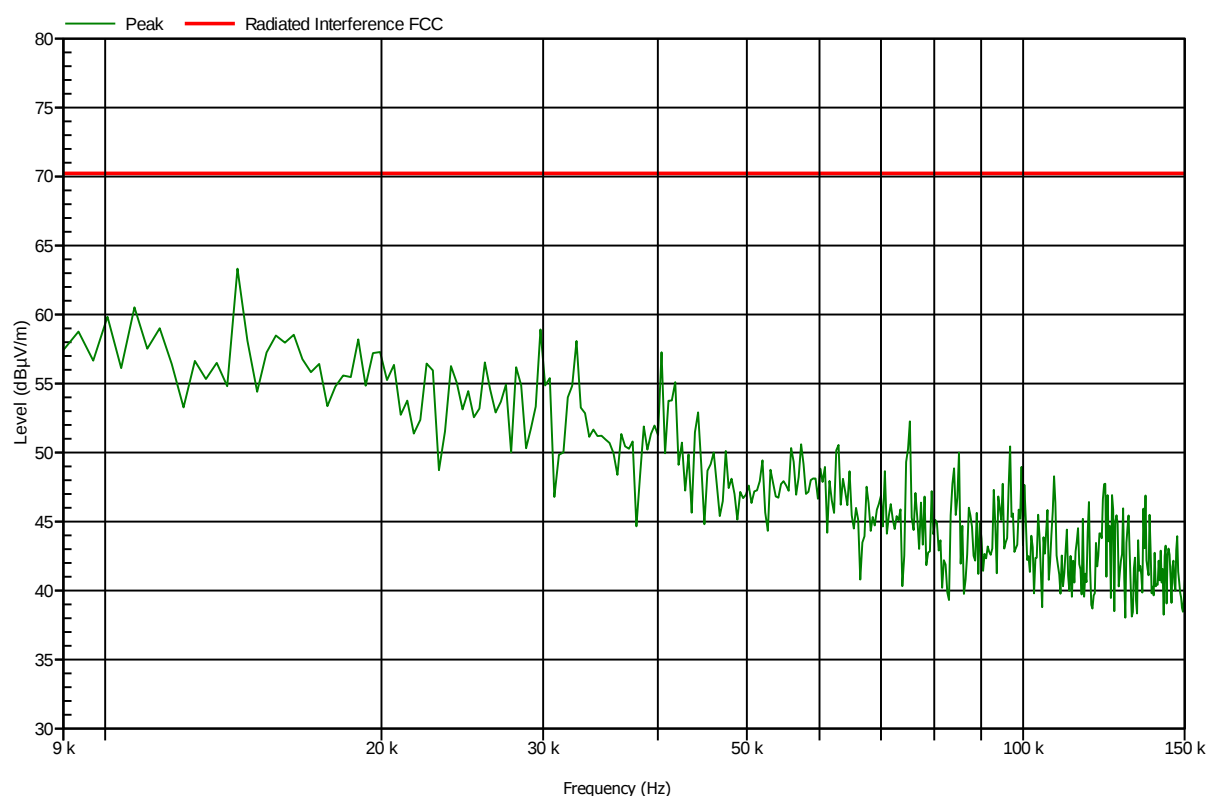
Test Results Plot No 18

9 kHz-150 kHz Spurious Emission

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	200 Hz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [12.69 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

9-150 KHz HORIZONTAL- 20 MHz HIGH; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

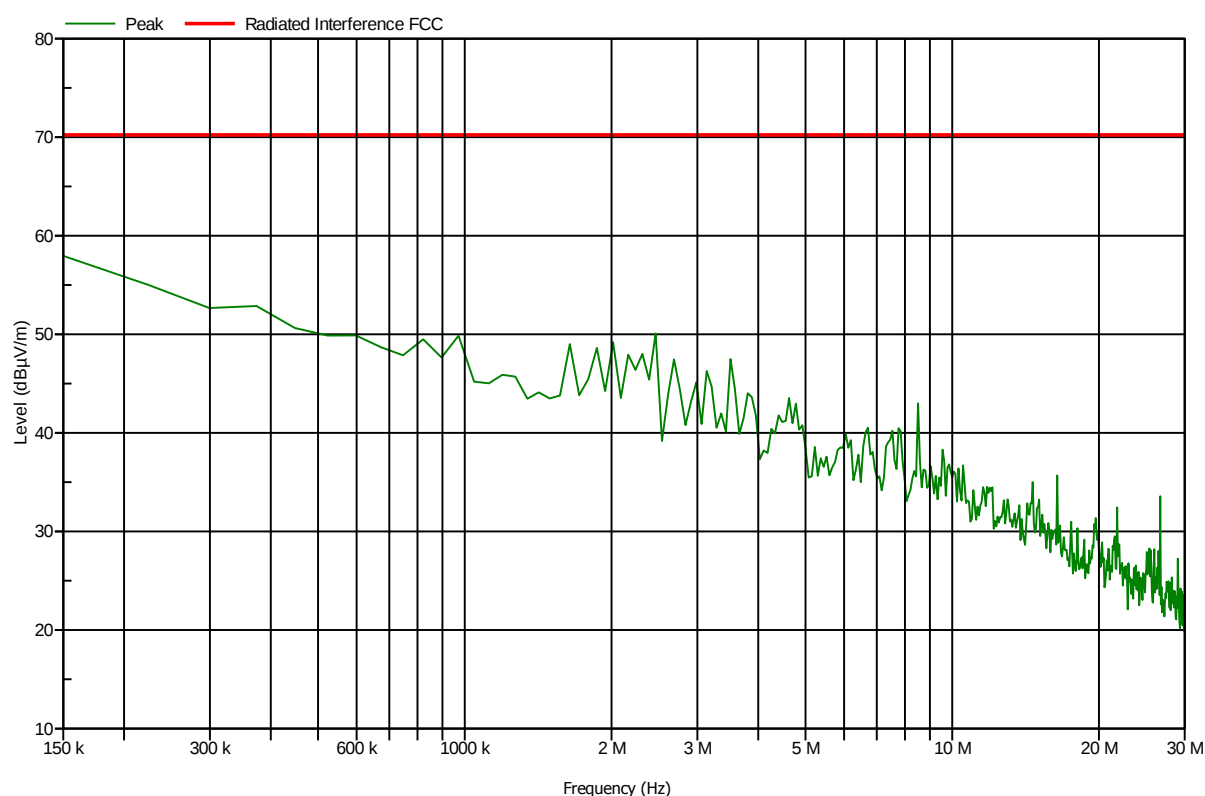
Test Results Plot No 19

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz VERTICAL- 5 MHz LOW; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

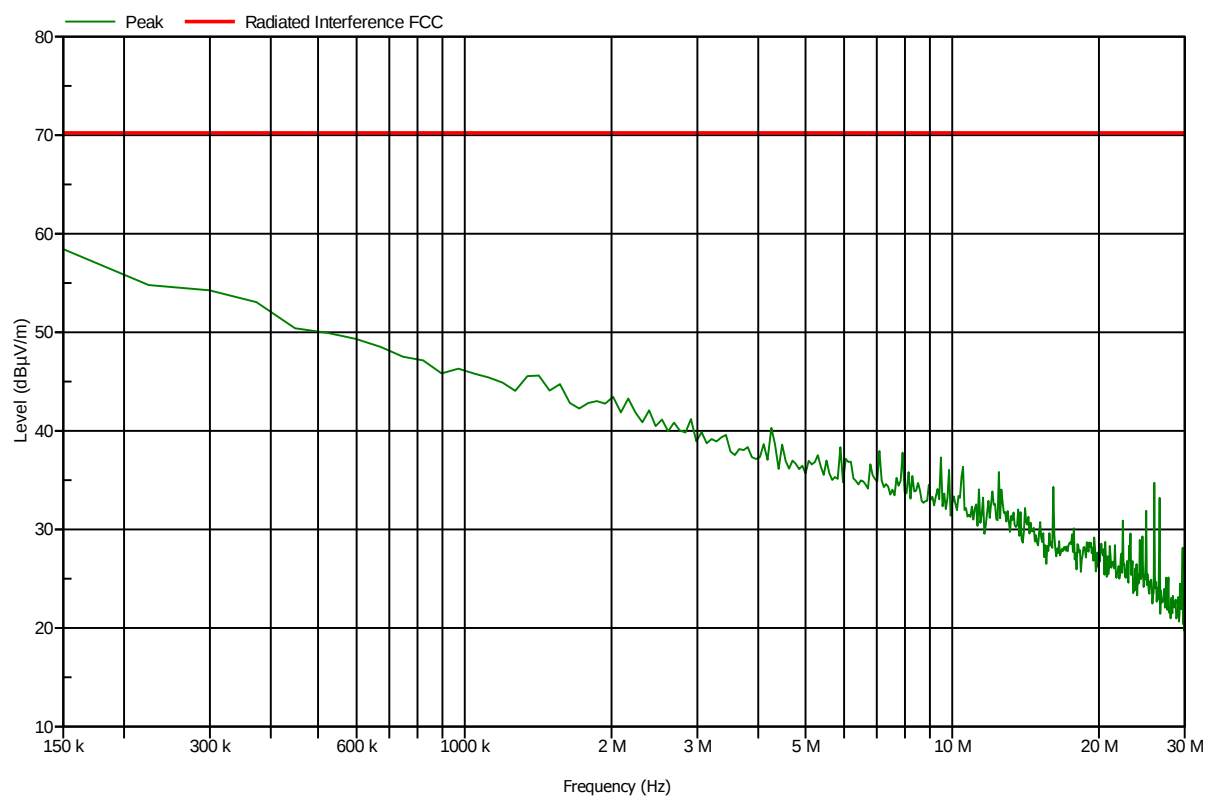
Test Results Plot No 20

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz HORIZONTAL- 5 MHz LOW; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

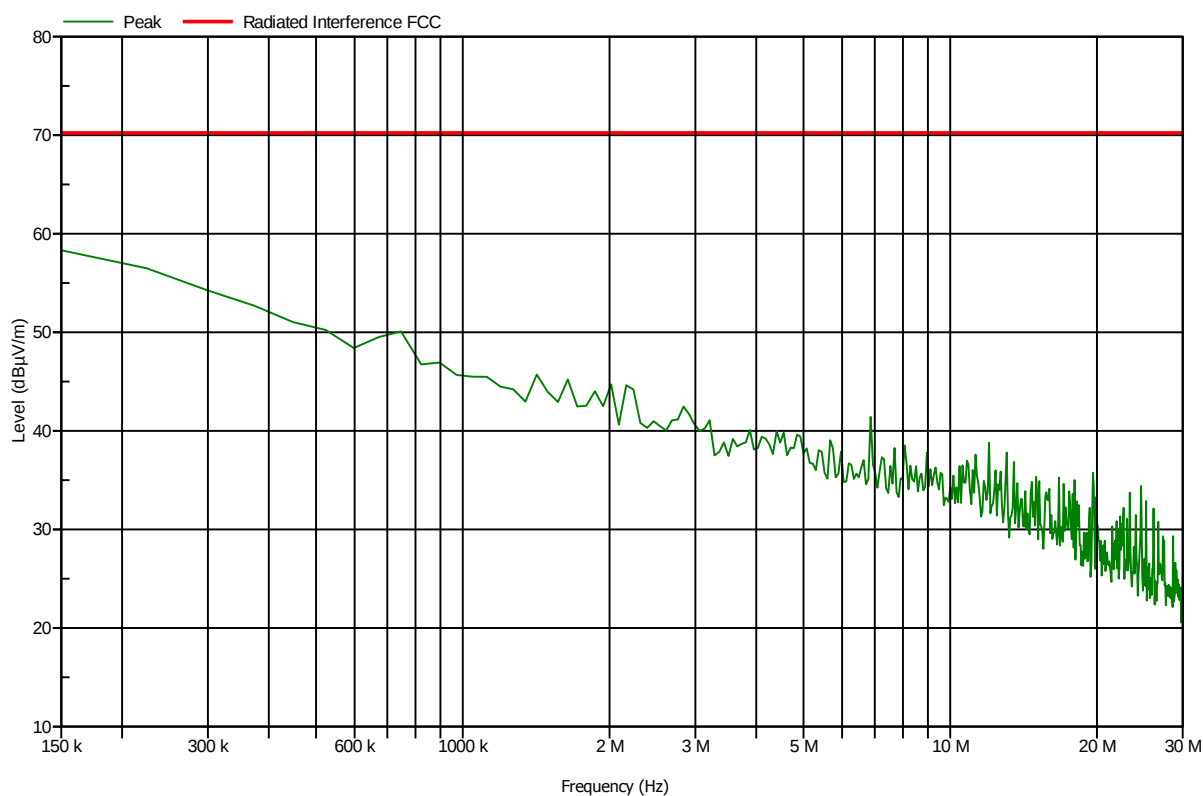
Test Results Plot No 21

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz VERTICAL- 5 MHz MID; 50 Ohm termination for both RF ports



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

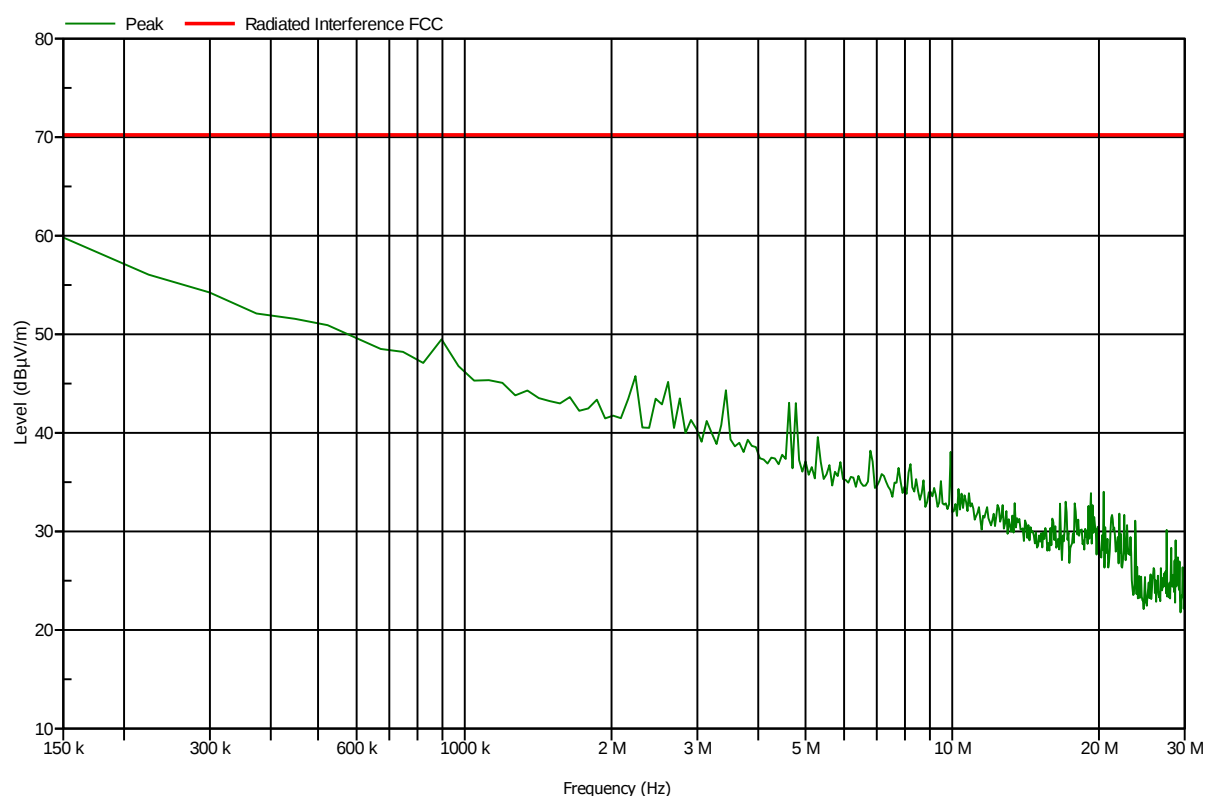
Test Results Plot No 22

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz HORIZONTAL- 5 MHz MID; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

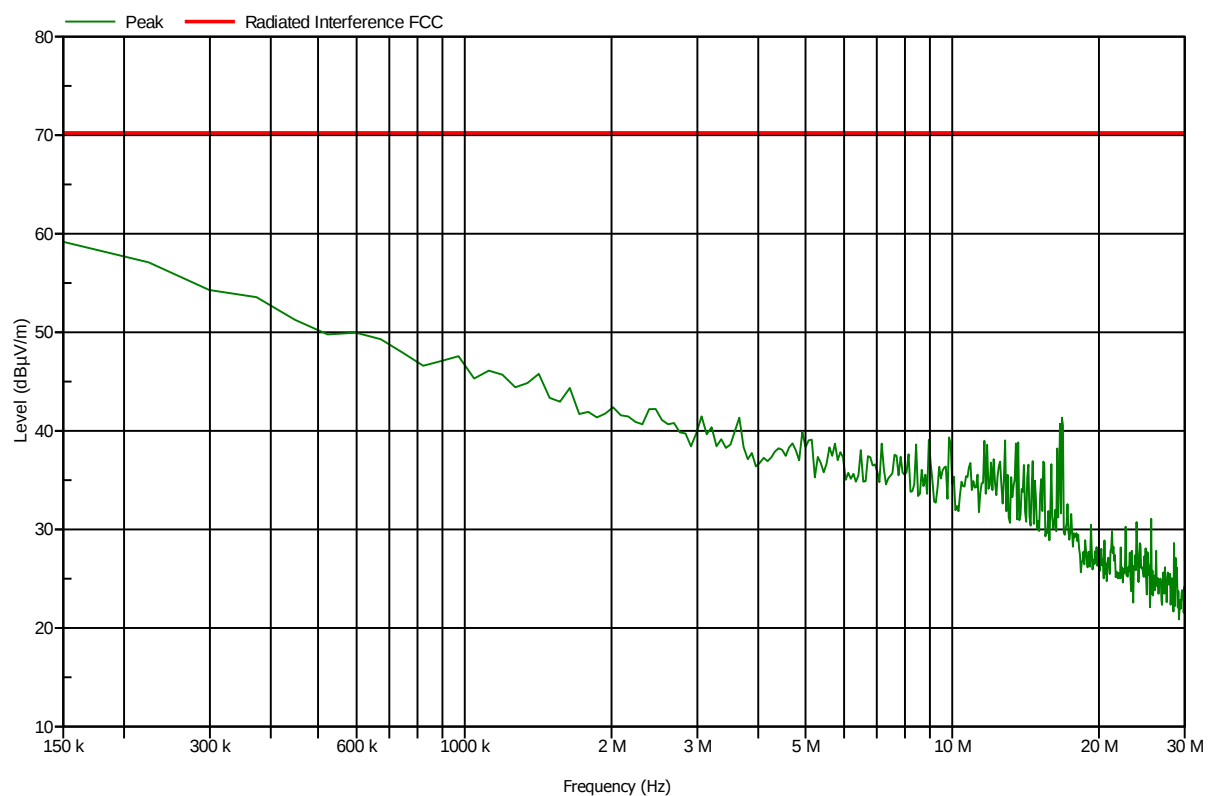
Test Results Plot No 23

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz VERTICAL- 5 MHz HIGH; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

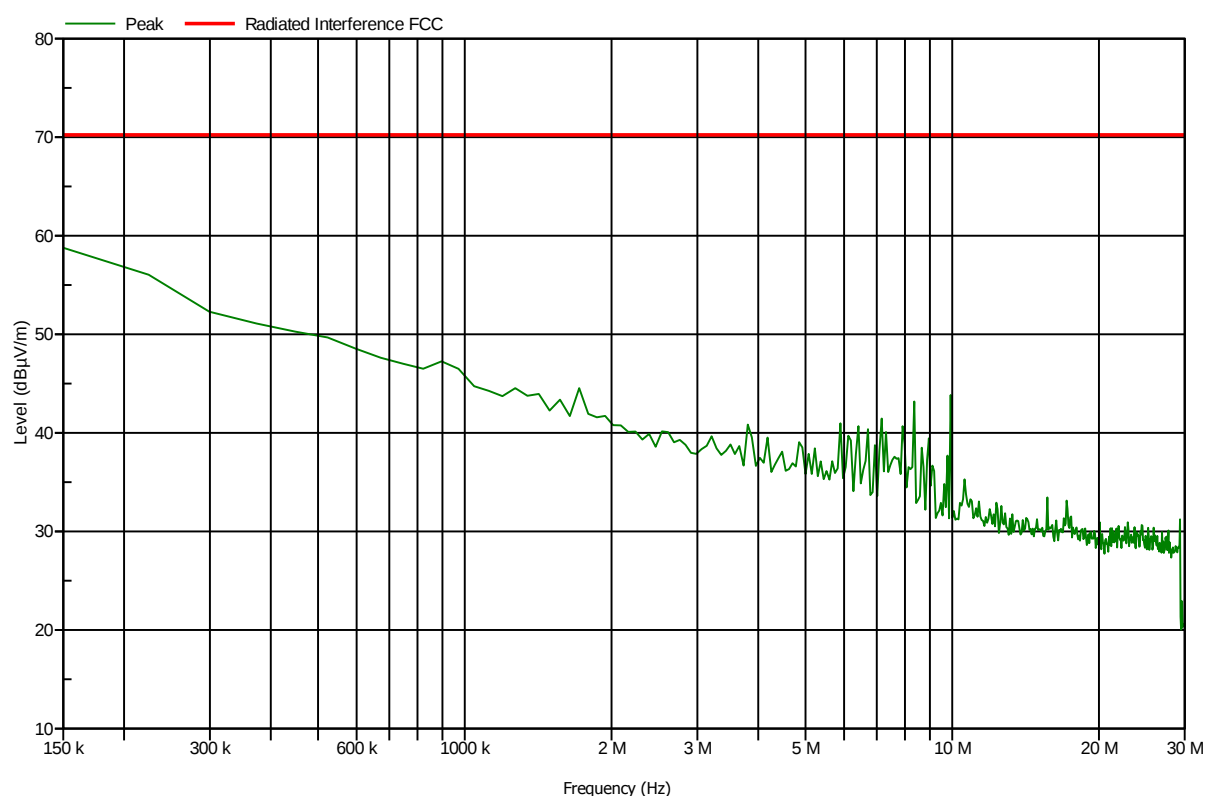
Test Results Plot No 24

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz HORIZONTAL- 5 MHz HIGH; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

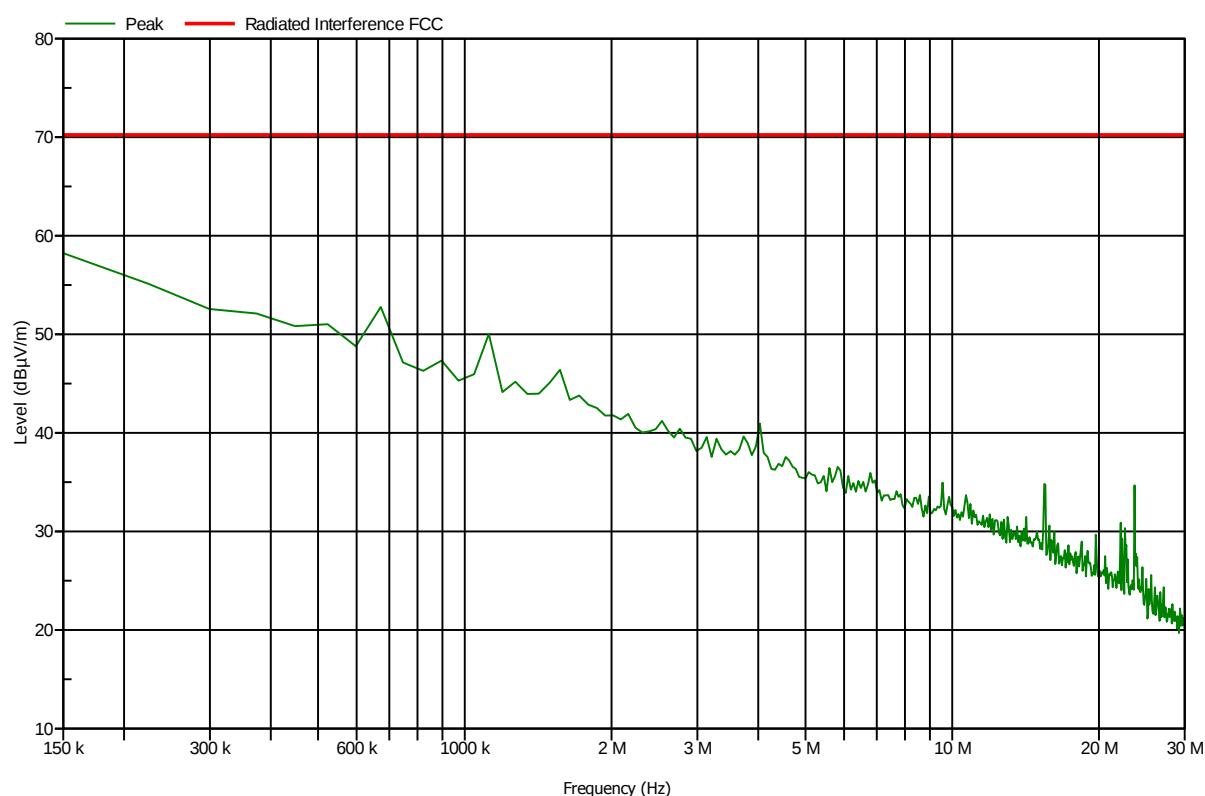
Test Results Plot No 25

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz VERTICAL- 10 MHz LOW; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

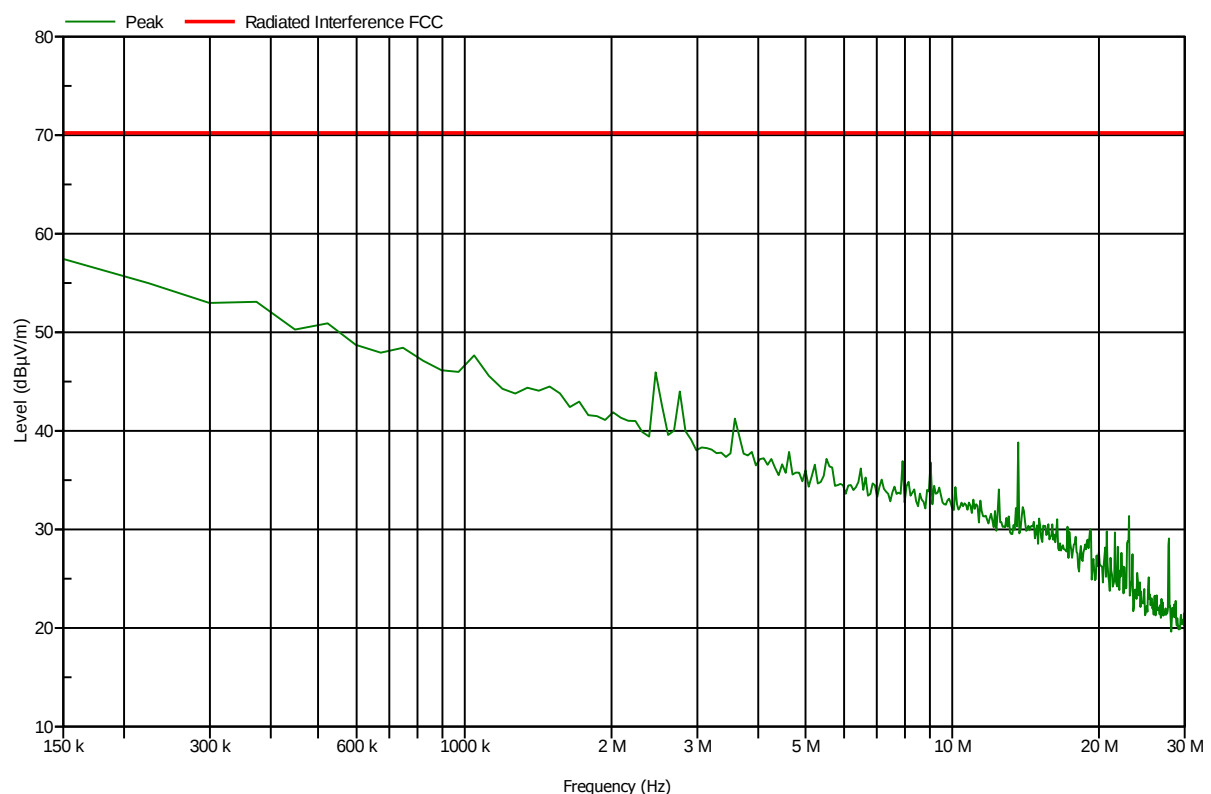
Test Results Plot No 26

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz HORIZONTAL- 10 MHz LOW; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

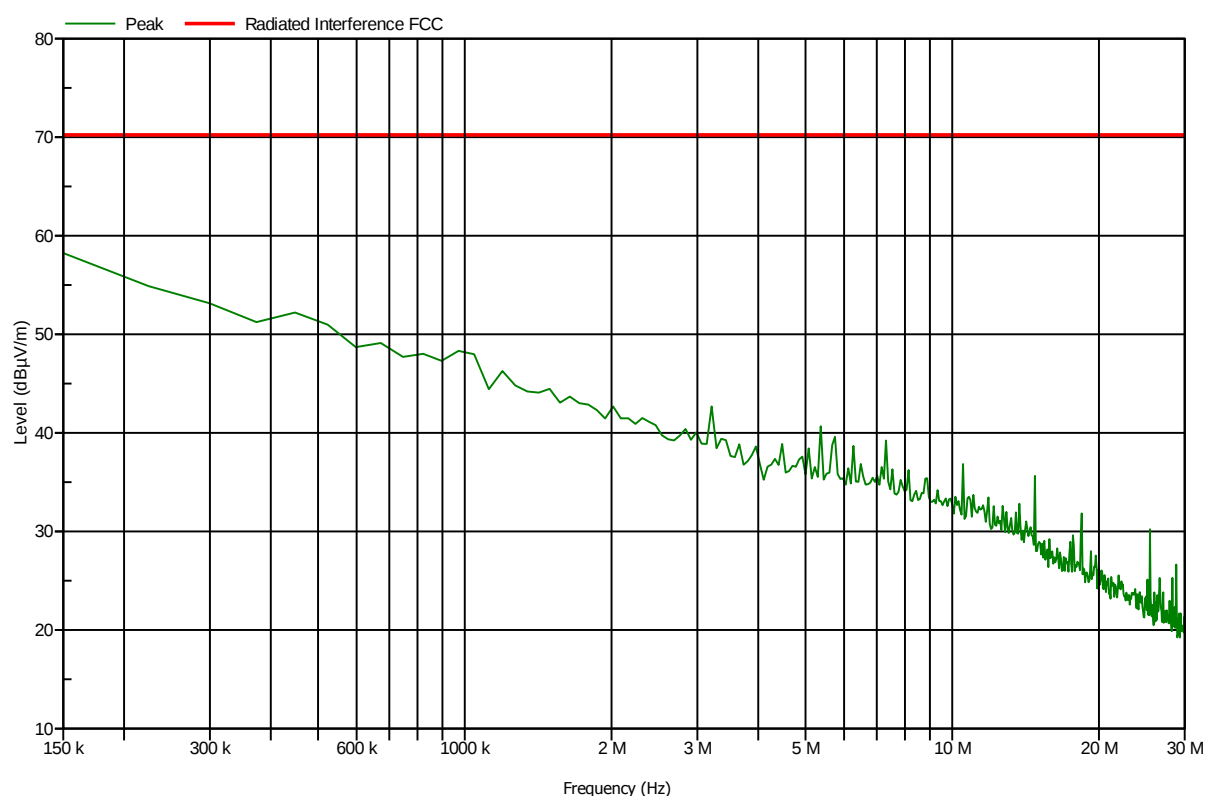
Test Results Plot No 27

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz VERTICAL- 10 MHz MID; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

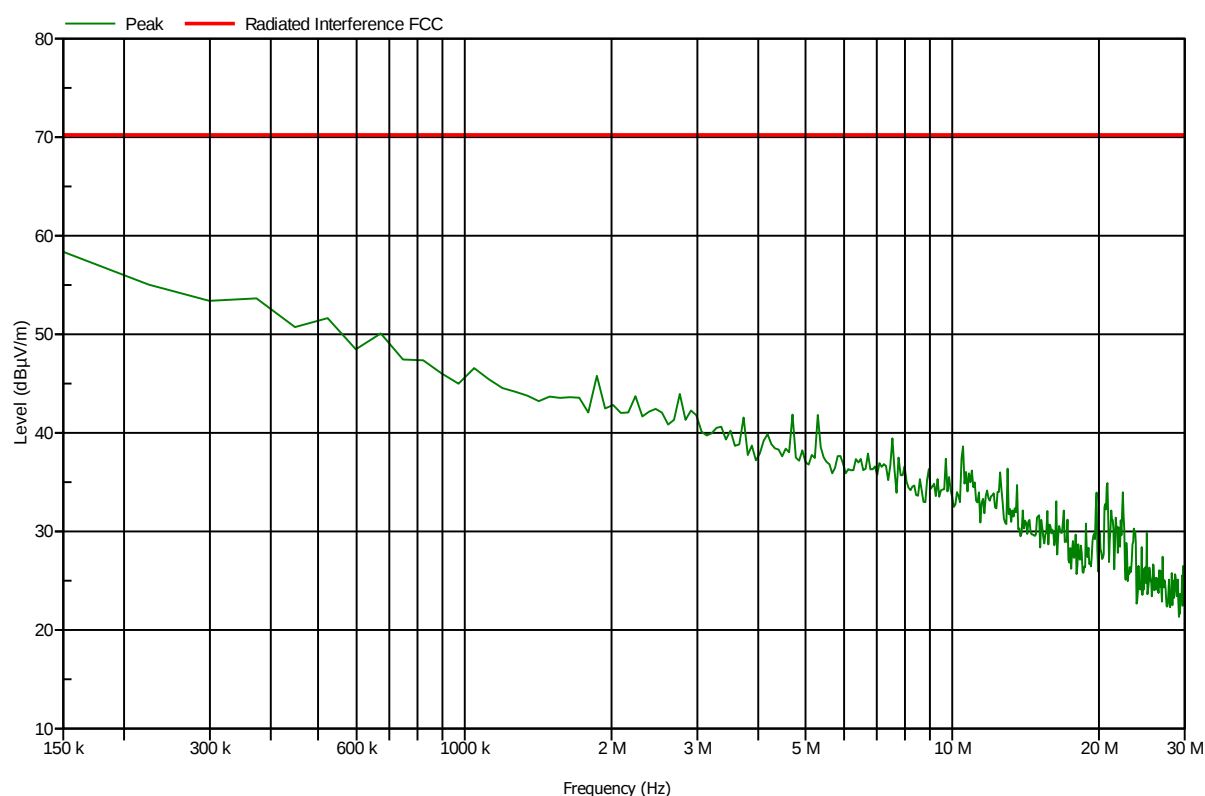
Test Results Plot No 28

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz HORIZONTAL- 10 MHz MID; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

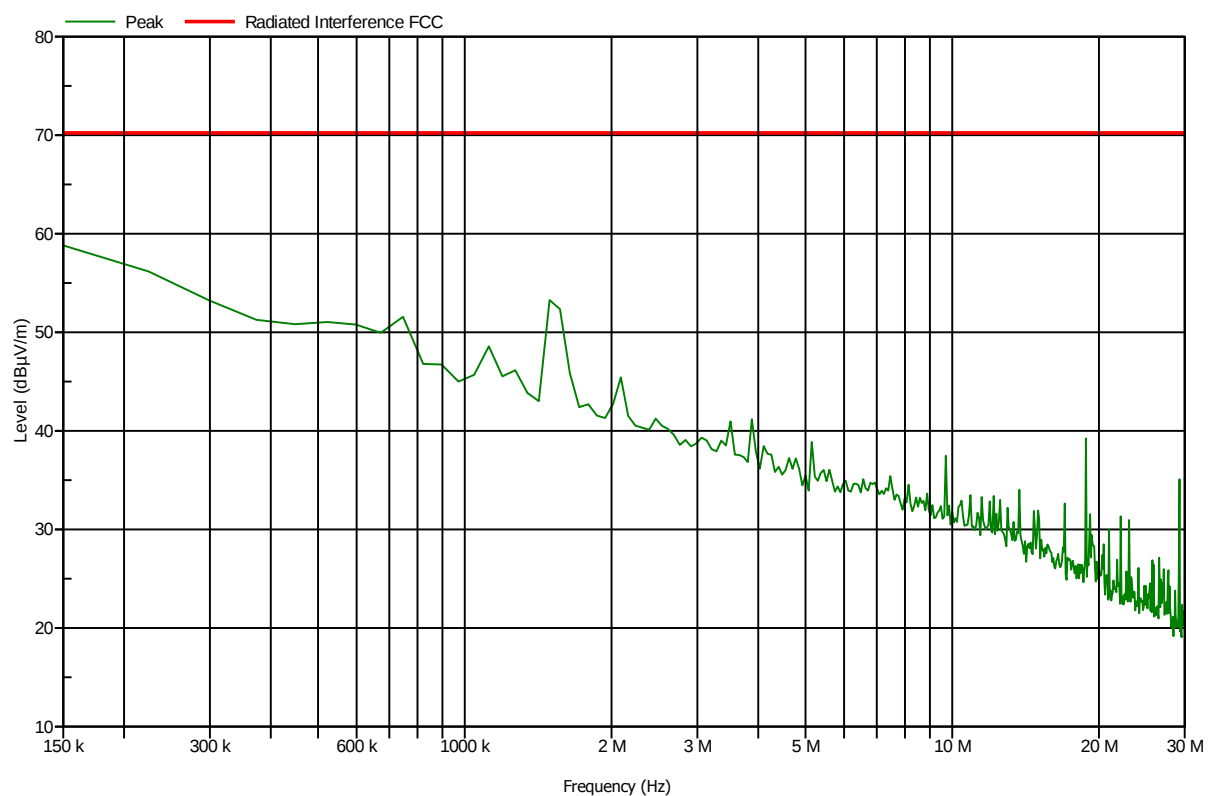
Test Results Plot No 29

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz VERTICAL- 10 MHz HIGH; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

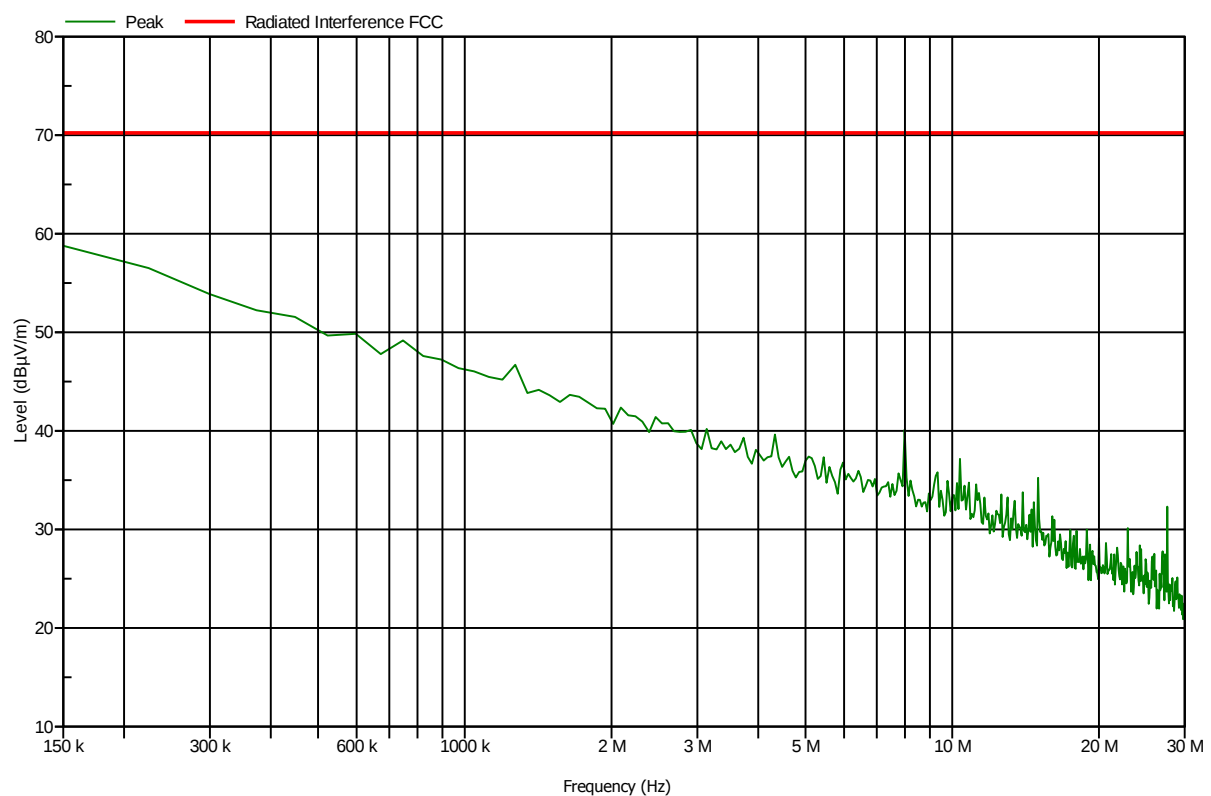
Test Results Plot No 30

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz HORIZONTAL- 10 MHz HIGH; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

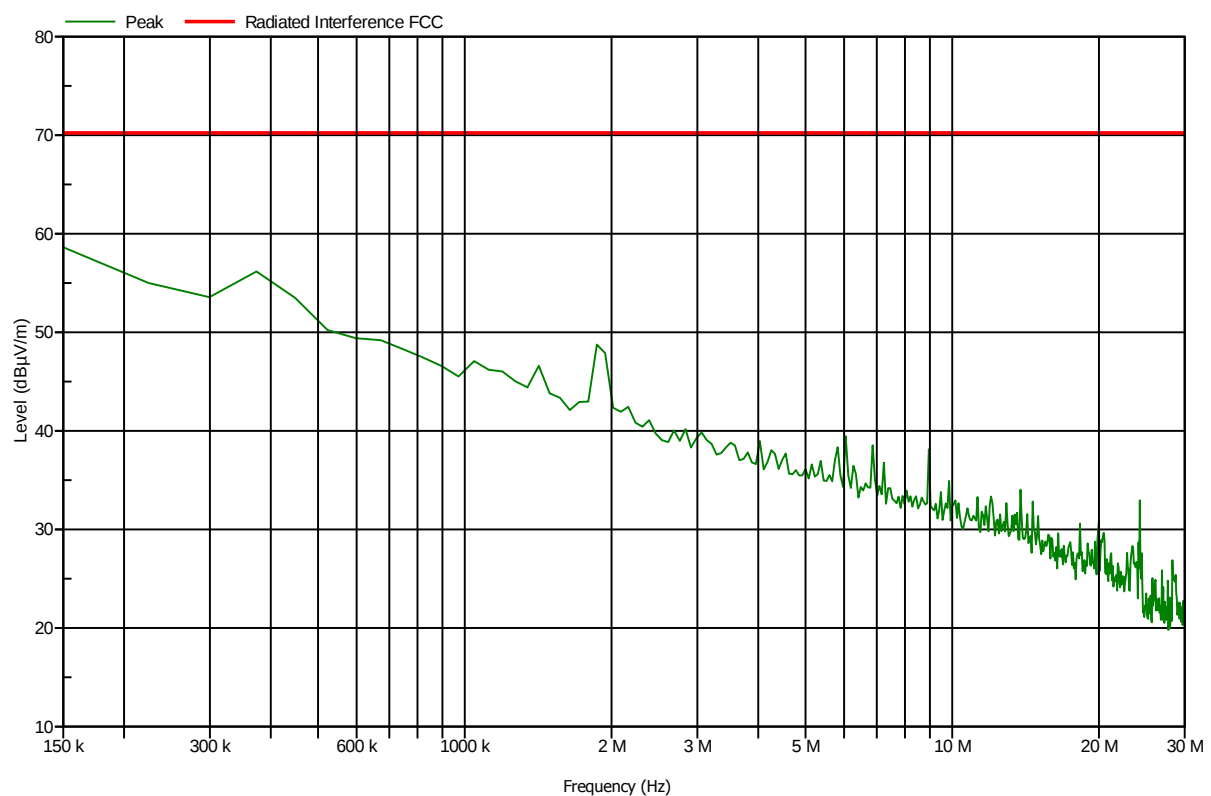
Test Results Plot No 31

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz VERTICAL- 20 MHz LOW; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

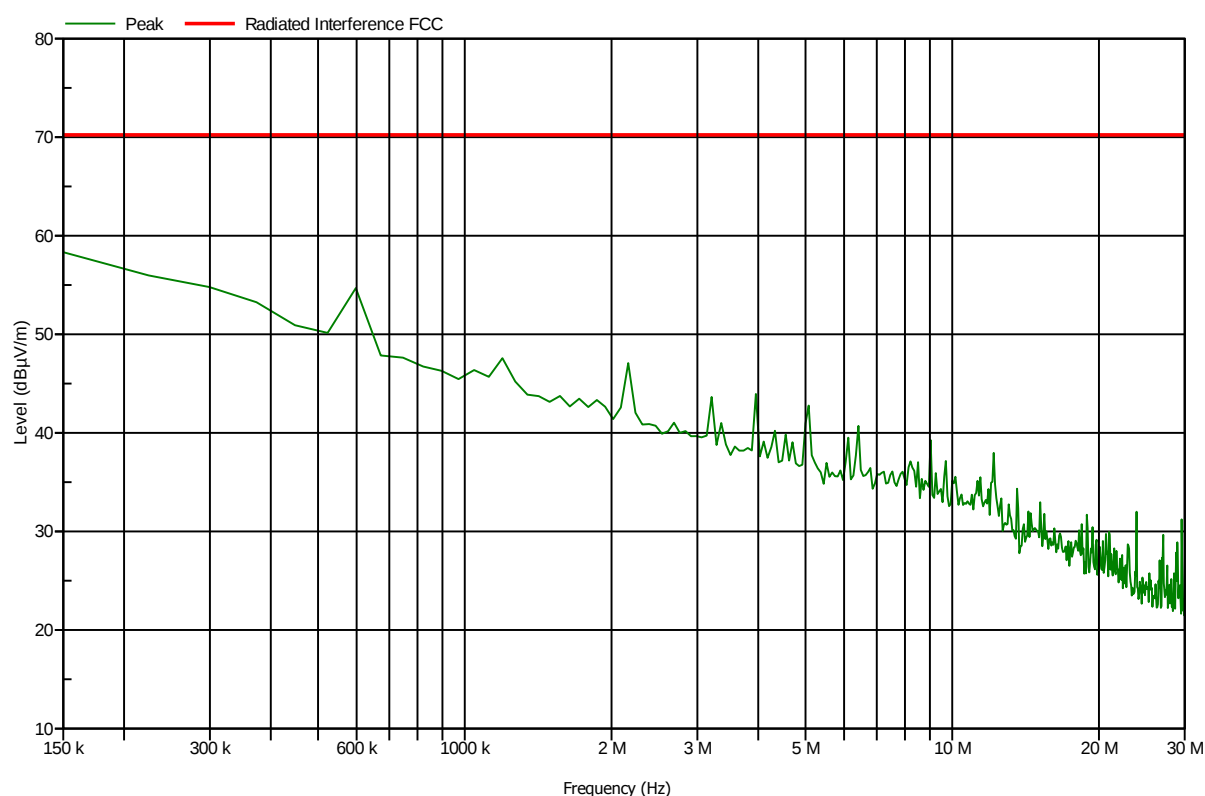
Test Results Plot No 32

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz HORIZONTAL- 20 MHz LOW; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

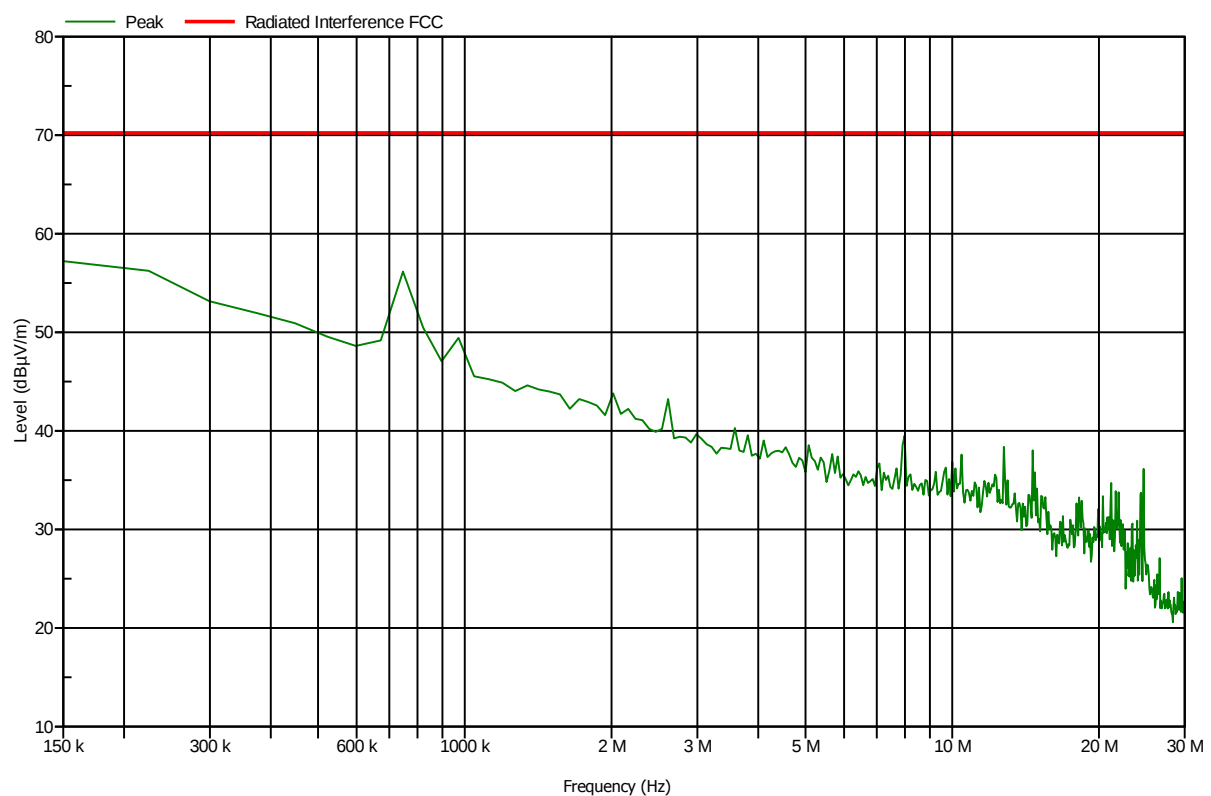
Test Results Plot No 33

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz VERTICAL- 20 MHz MID; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

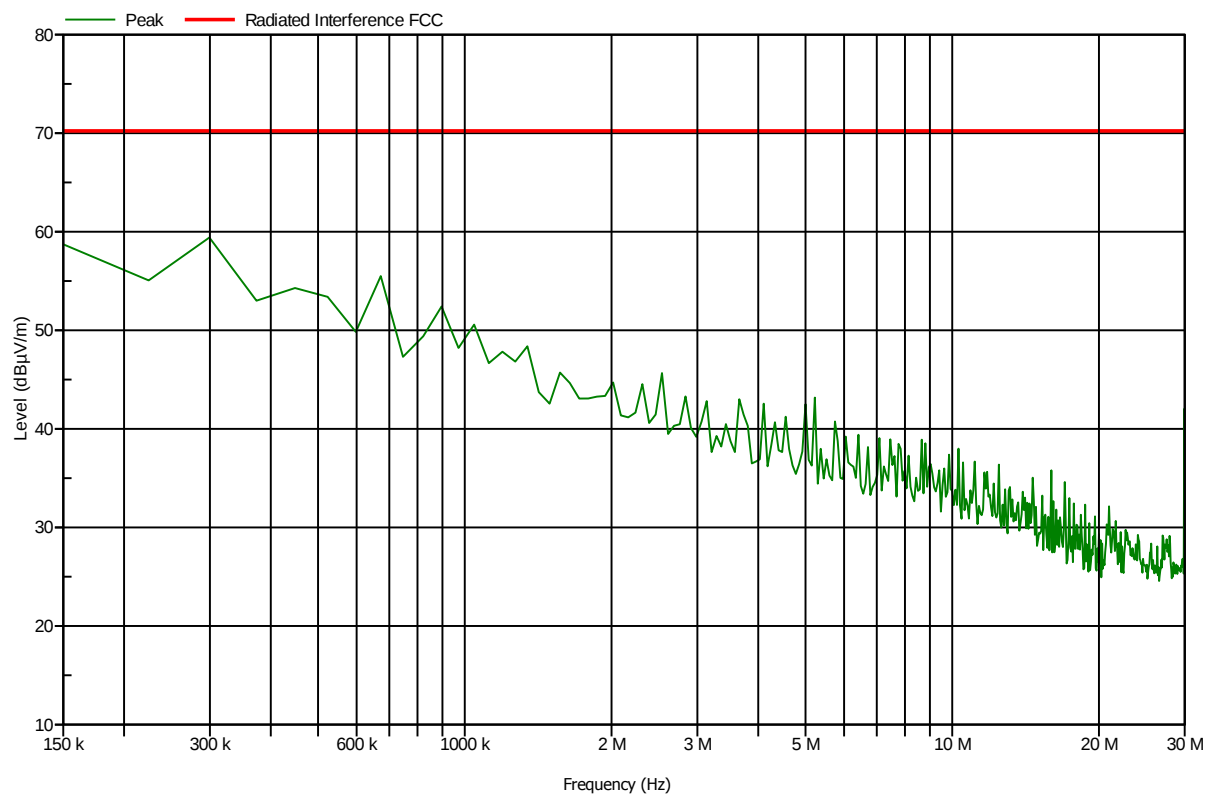
Test Results Plot No 34

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz HORIZONTAL- 20 MHz MID; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

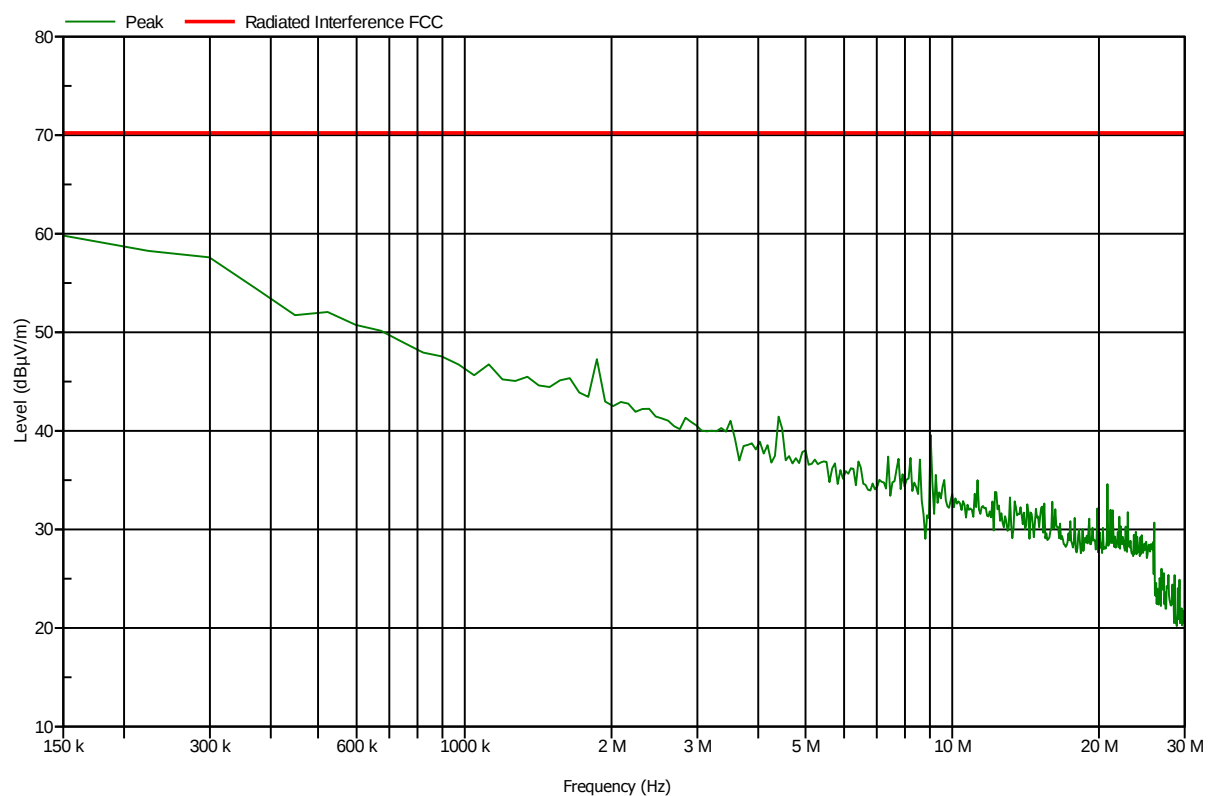
Test Results Plot No 35

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz VERTICAL- 20 MHz HIGH; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

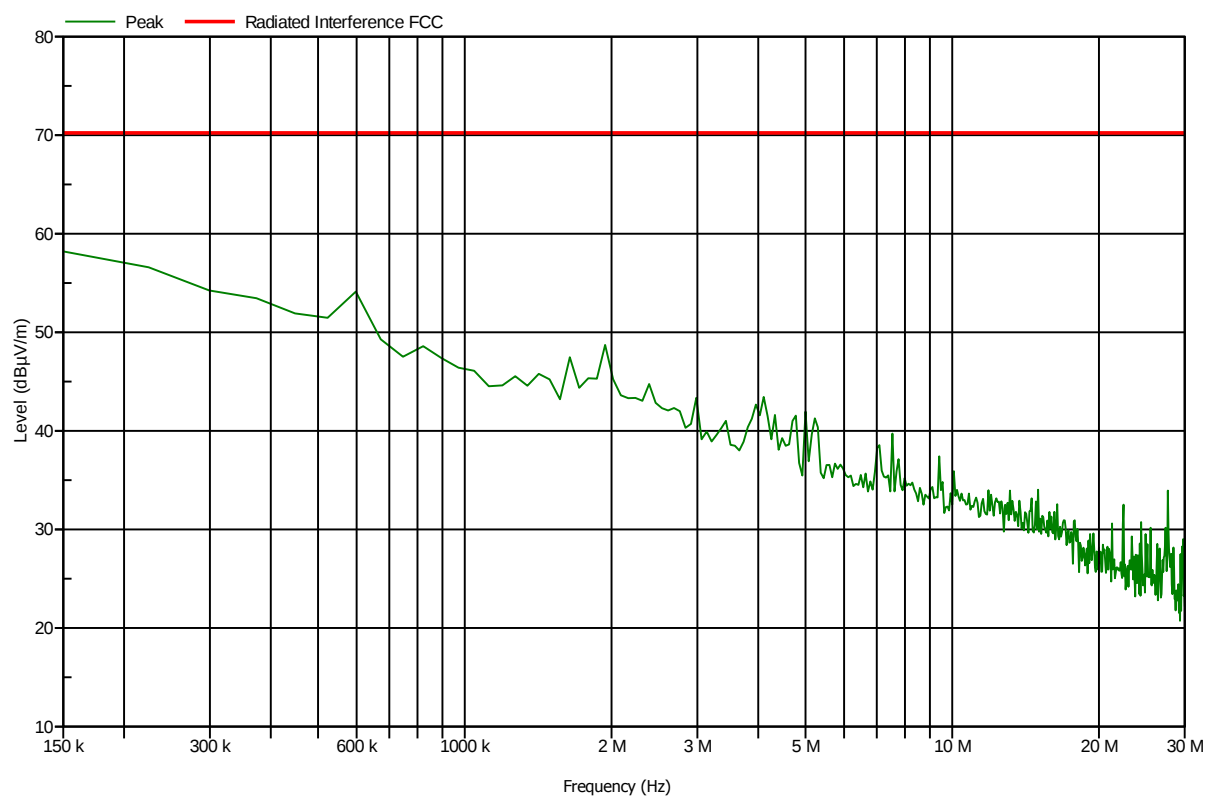
Test Results Plot No 36

FCC 90.210 0.15-30 MHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Hewlett Packard 7405A DC Coupling
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	9 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 Hz
Antenna:	E-Field R&S 9K-30M Antenna	Sweep Time:	Auto [13.5 s]
Polarization:	Horizontal	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Tuesday, April 14, 2015

0.15-30 MHz HORIZONTAL – 20 MHz HIGH; 50 Ohm termination for both RF port



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

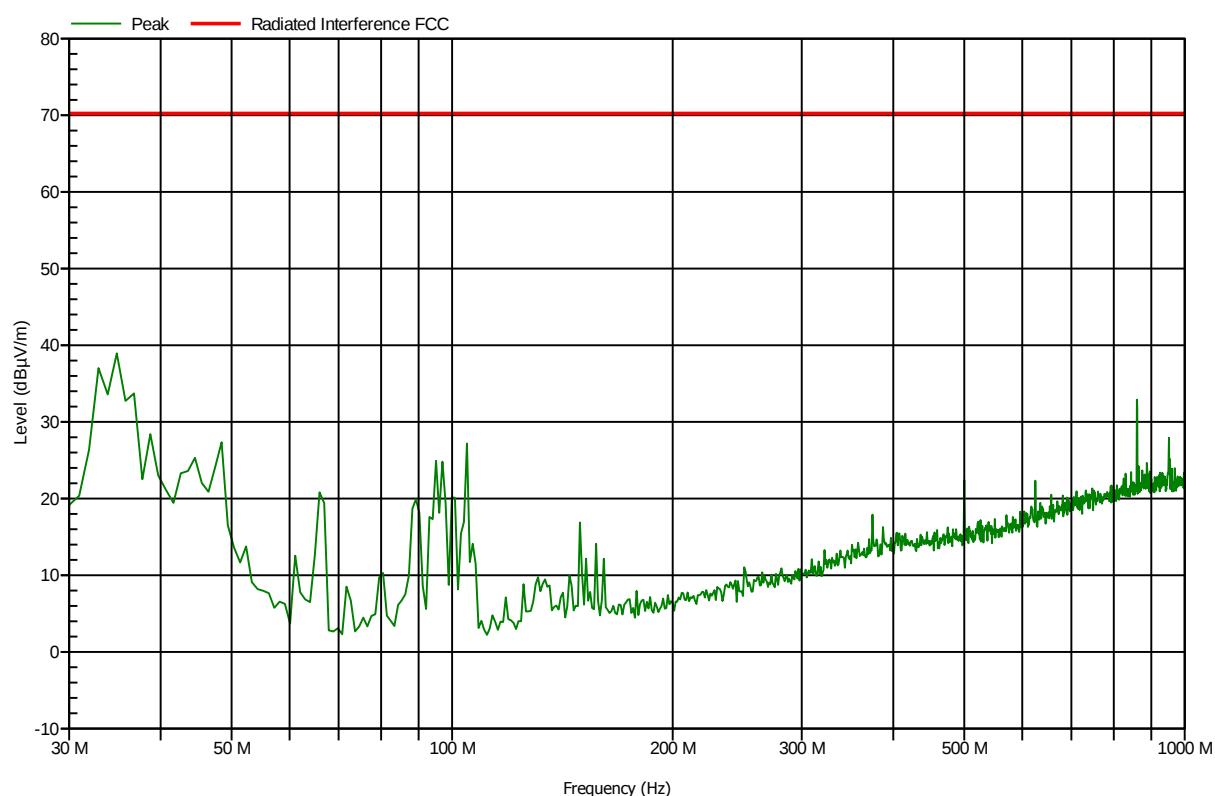
Test Results Plot No 37

FCC 90.210 30 MHz-1 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	100 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 kHz
Antenna:	Frankonia gray BTA-L_B 3m	Sweep Time:	Auto [694.64 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Monday, April 13, 2015 10:26:06 AM

5 MHz - Low Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

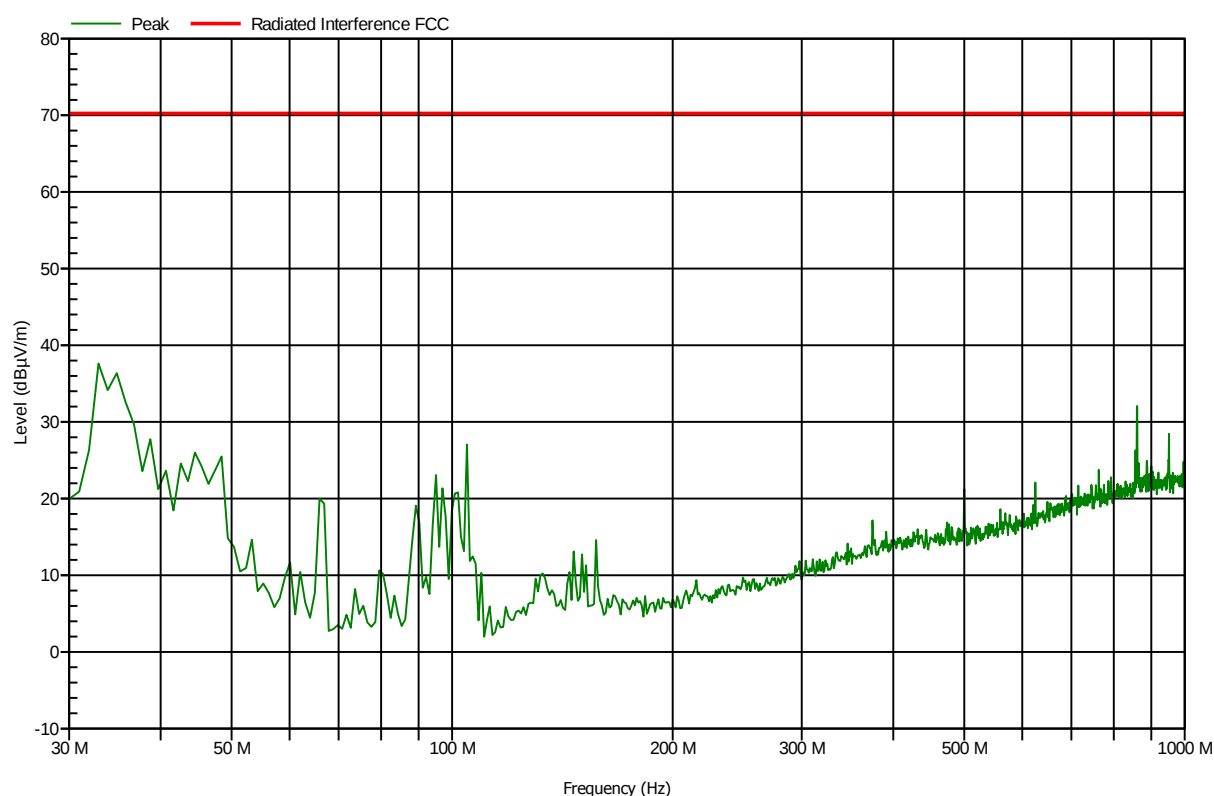
Test Results Plot No 38

FCC 90.210 30 MHz-1 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	100 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 kHz
Antenna:	Frankonia gray BTA-L_B 3m	Sweep Time:	Auto [694.64 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Monday, April 13, 2015 10:30:11 AM

5 MHz - MID Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

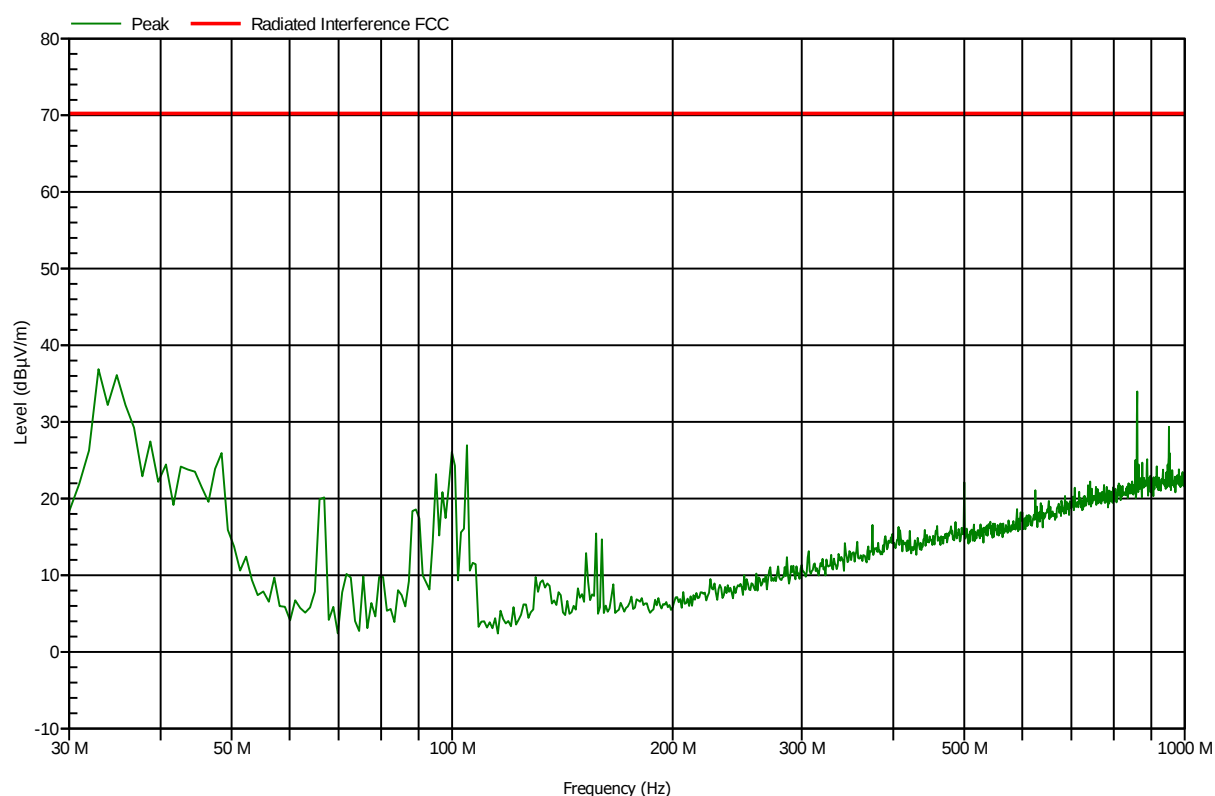
Test Results Plot No 39

FCC 90.210 30 MHz-1 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	100 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 kHz
Antenna:	Frankonia gray BTA-L_B 3m	Sweep Time:	Auto [694.64 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Monday, April 13, 2015 10:35:17 AM

5 MHz - High Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

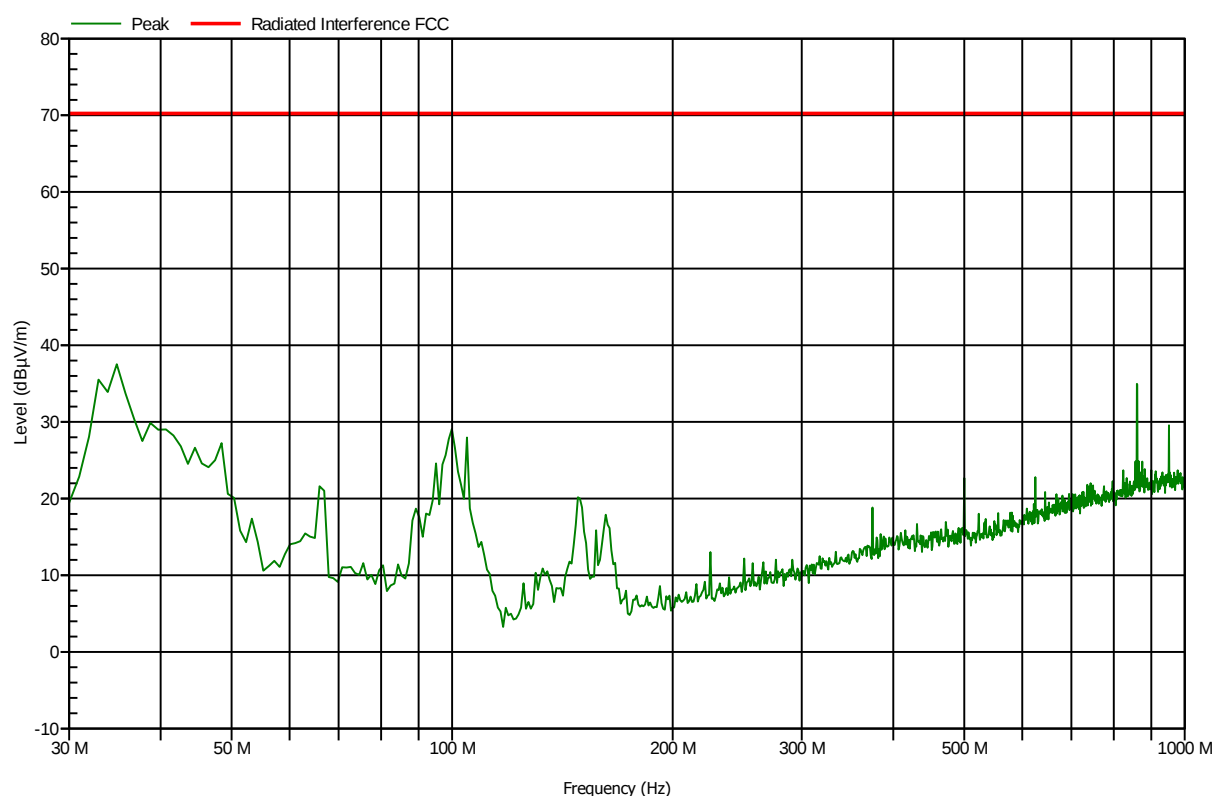
Test Results Plot No 40

FCC 90.210 30 MHz-1 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	100 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 kHz
Antenna:	Frankonia gray BTA-L_B 3m	Sweep Time:	Auto [694.64 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Monday, April 13, 2015 10:39:10 AM

10 MHz - Low Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

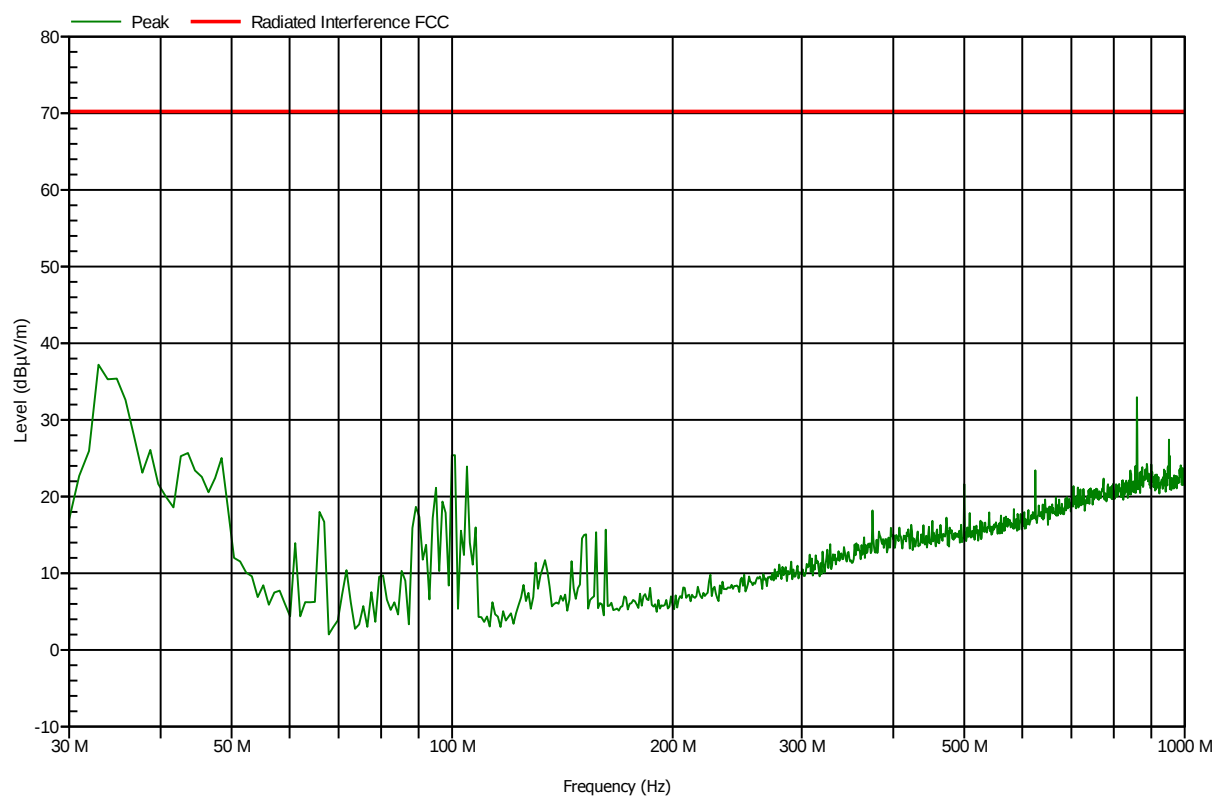
Test Results Plot No 41

FCC 90.210 30 MHz-1 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	100 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 kHz
Antenna:	Frankonia gray BTA-L_B 3m	Sweep Time:	Auto [694.64 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Monday, April 13, 2015 10:43:42 AM

10 MHz - Mid Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

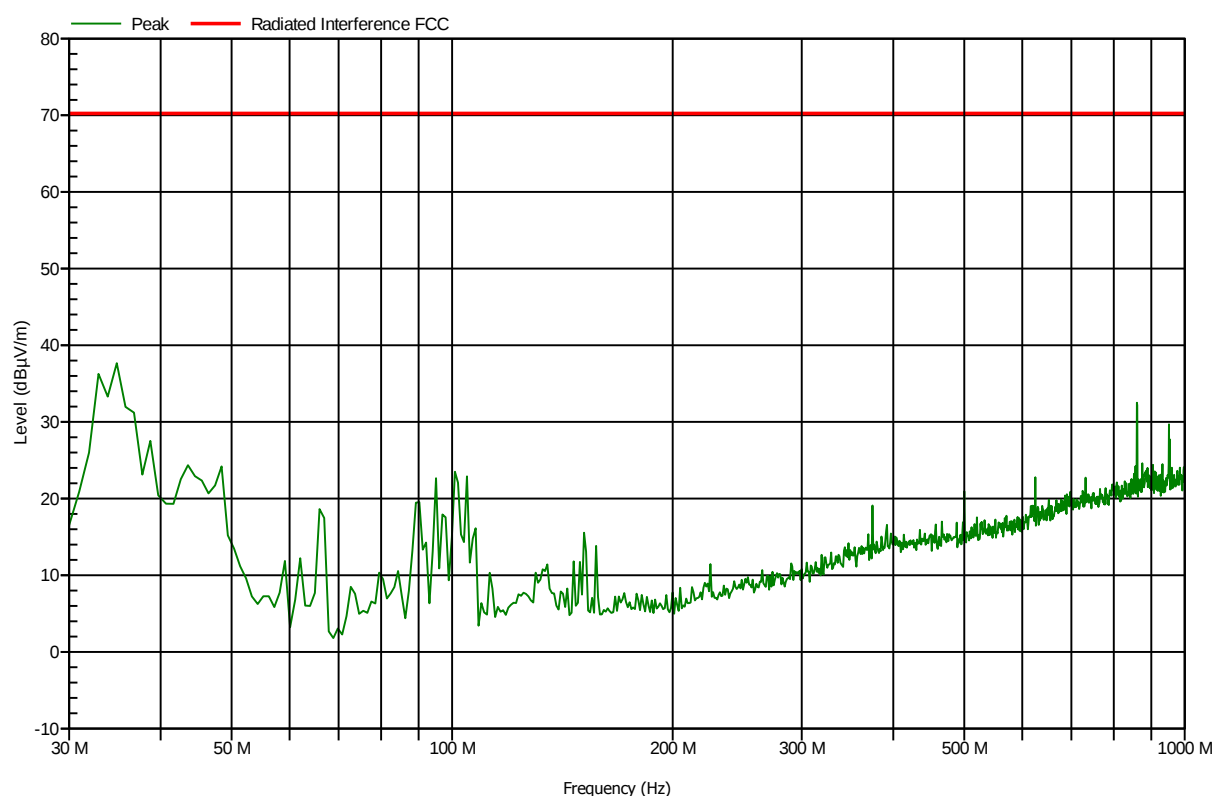
Test Results Plot No 42

FCC 90.210 30 MHz-1 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	100 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 kHz
Antenna:	Frankonia gray BTA-L_B 3m	Sweep Time:	Auto [694.64 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Monday, April 13, 2015 10:49:20 AM

10 MHz - High Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

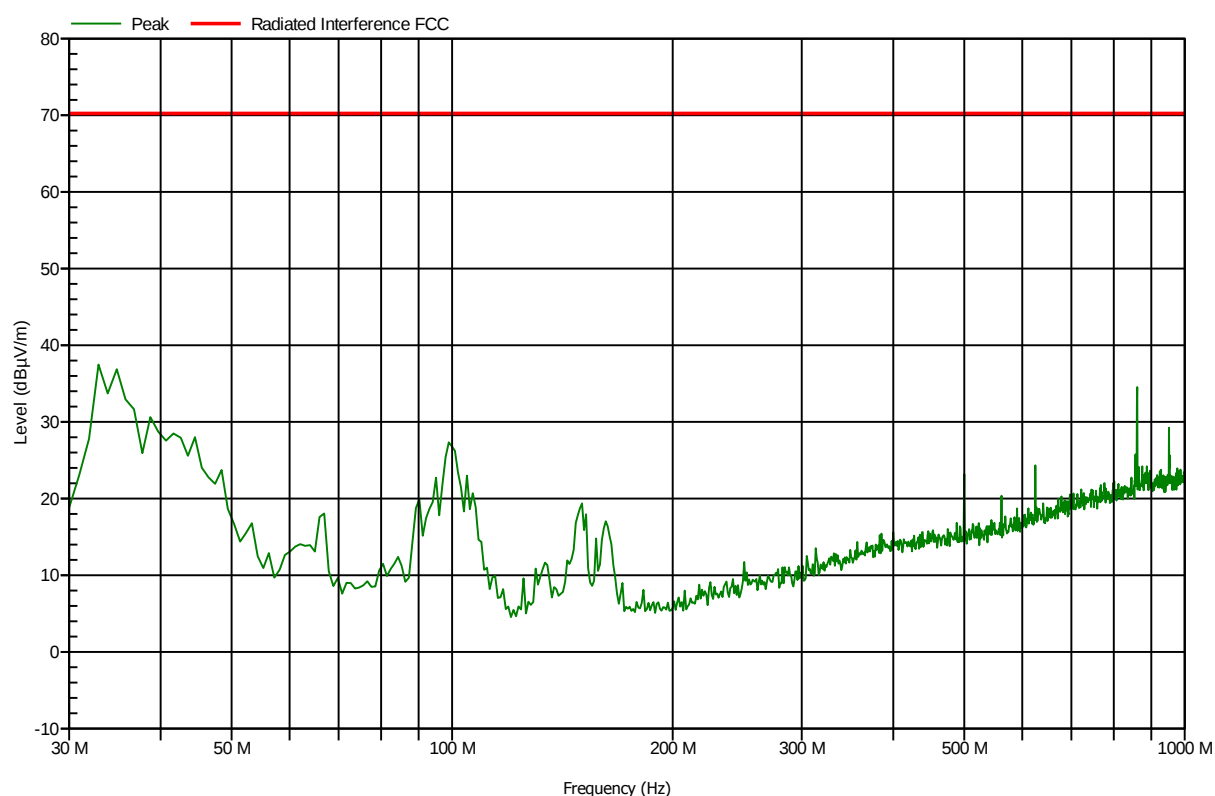
Test Results Plot No 43

FCC 90.210 30 MHz-1 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	100 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 kHz
Antenna:	Frankonia gray BTA-L_B 3m	Sweep Time:	Auto [694.64 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Monday, April 13, 2015 10:54:57 AM

20 MHz - Low Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

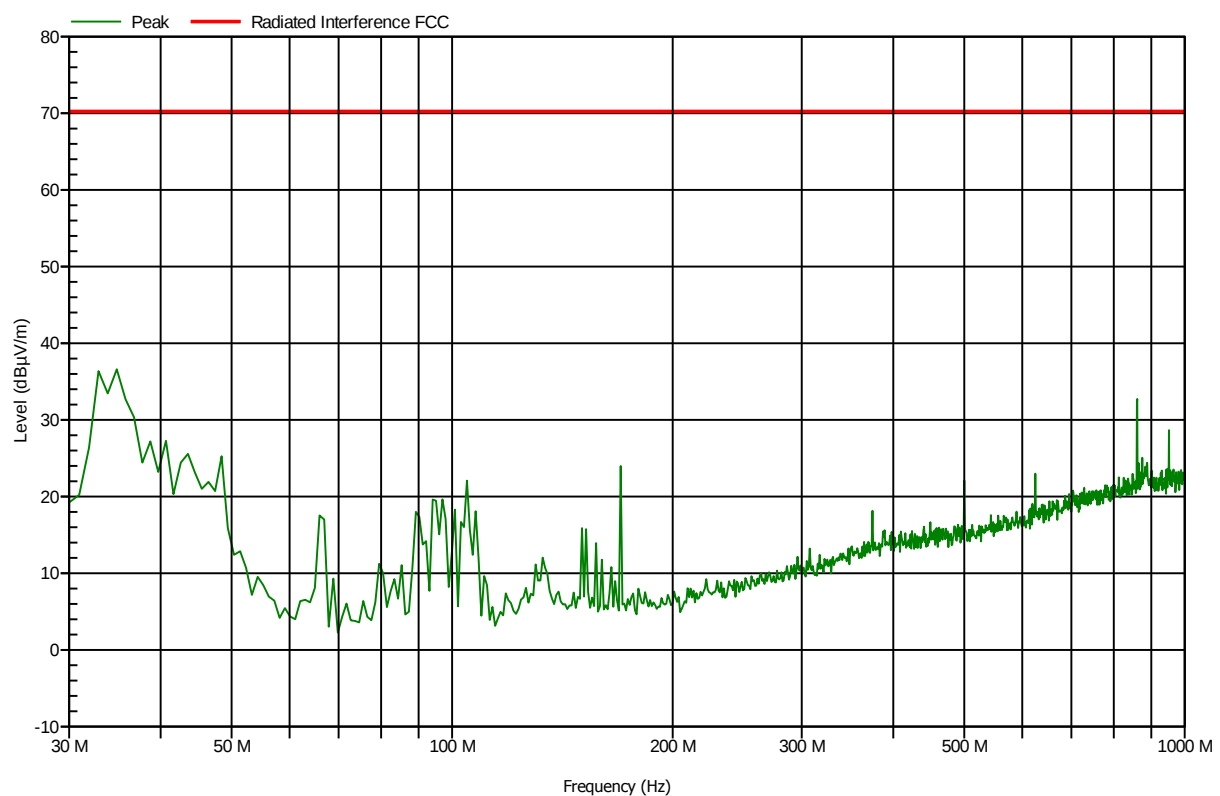
Test Results Plot No 44

FCC 90.210 30 MHz-1 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	100 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 kHz
Antenna:	Frankonia gray BTA-L_B 3m	Sweep Time:	Auto [694.64 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Monday, April 13, 2015 10:59:35 AM

20 MHz - Mid Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

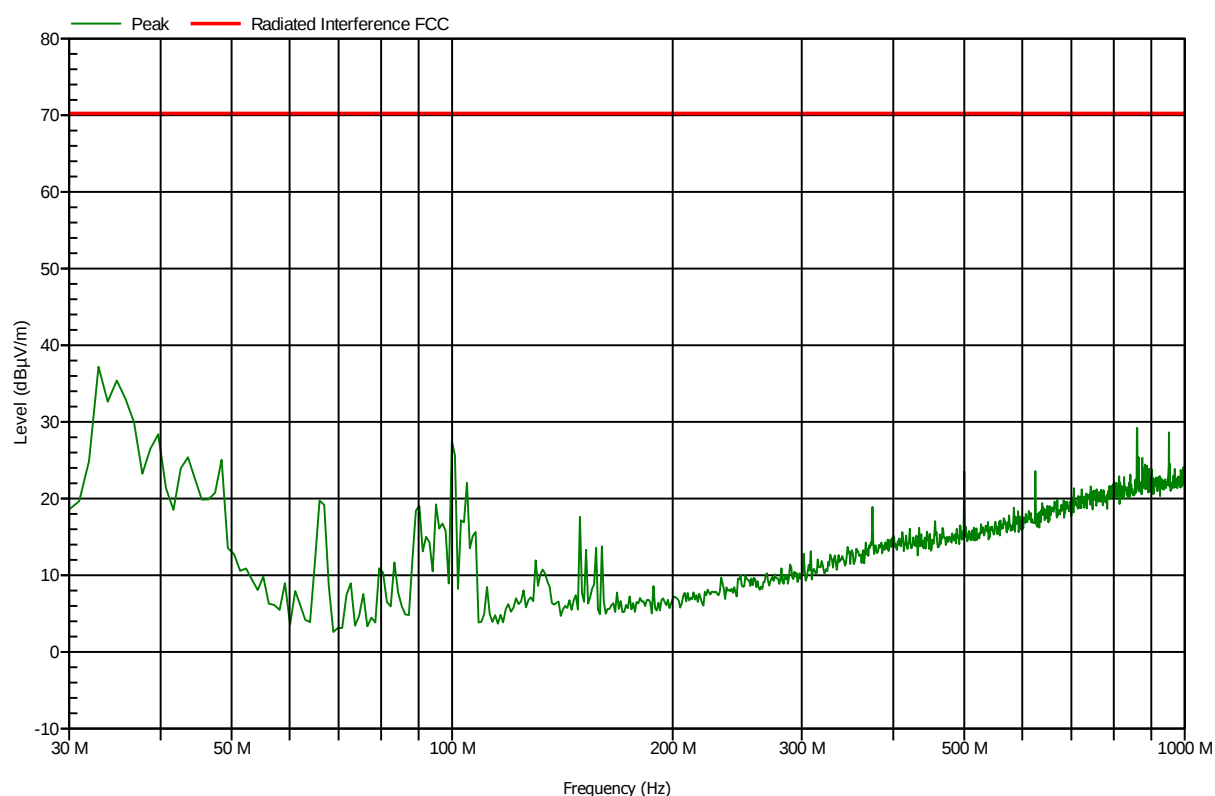
Test Results Plot No 45

FCC 90.210 30 MHz-1 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	100 kHz
Test Engineer:	Ilya Arbitman	VBW:	300 kHz
Antenna:	Frankonia gray BTA-L_B 3m	Sweep Time:	Auto [694.64 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	LNA MITEQ 0.01-1GHz No-2

TEST REMARKS: Monday, April 13, 2015, 11:04:31 AM

20 MHz - High Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

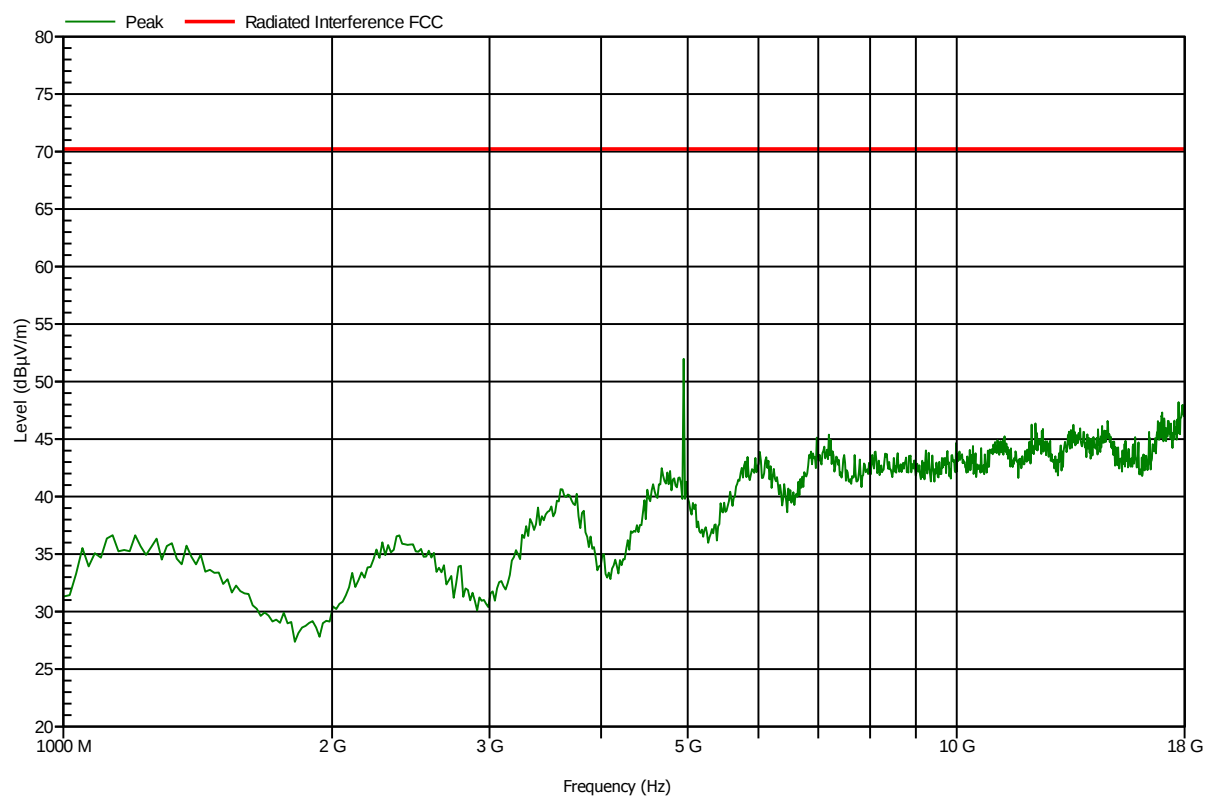
Test Results Plot No 46

FCC 90.210 1-18 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118/A 1-18 GHz 1319	Sweep Time:	Auto [170.03 ms]
Polarization:	Horizontal	Pre Amplifier	pre amp 1 GHz-18 GHz

TEST REMARKS: Tuesday, April 14, 2015

BW 5MHz Low 4943 MHz; RF Ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

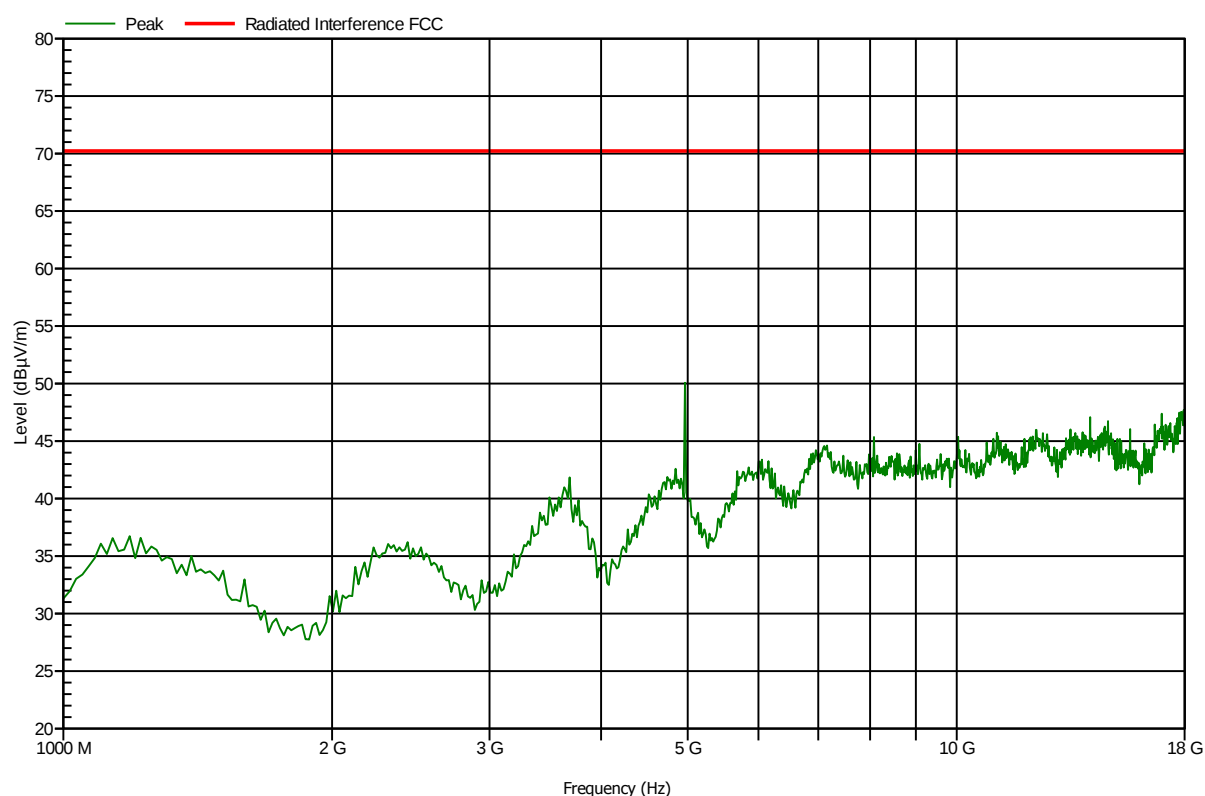
Test Results Plot No 47

FCC 90.210 1-18 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118/A 1-18 GHz 1319	Sweep Time:	Auto [170.03 ms]
Polarization:	Horizontal	Pre Amplifier	pre amp 1 GHz-18 GHz

TEST REMARKS: Tuesday, April 14, 2015

BW 5MHz Mid 4963 MHz; RF Ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

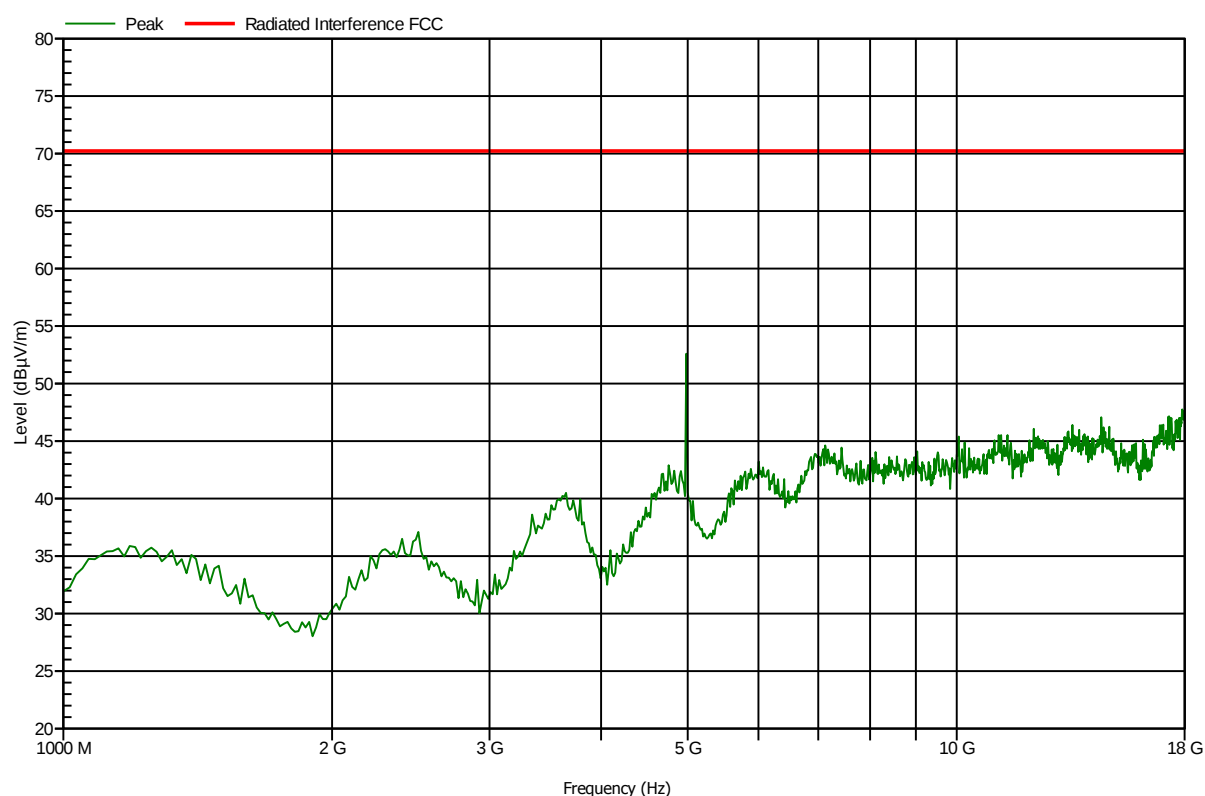
Test Results Plot No 48

FCC 90.210 1-18 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118/A 1-18 GHz 1319	Sweep Time:	Auto [170.03 ms]
Polarization:	Horizontal	Pre Amplifier	pre amp 1 GHz-18 GHz

TEST REMARKS: Tuesday, April 14, 2015

BW 5MHz High 4987 MHz; RF Ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

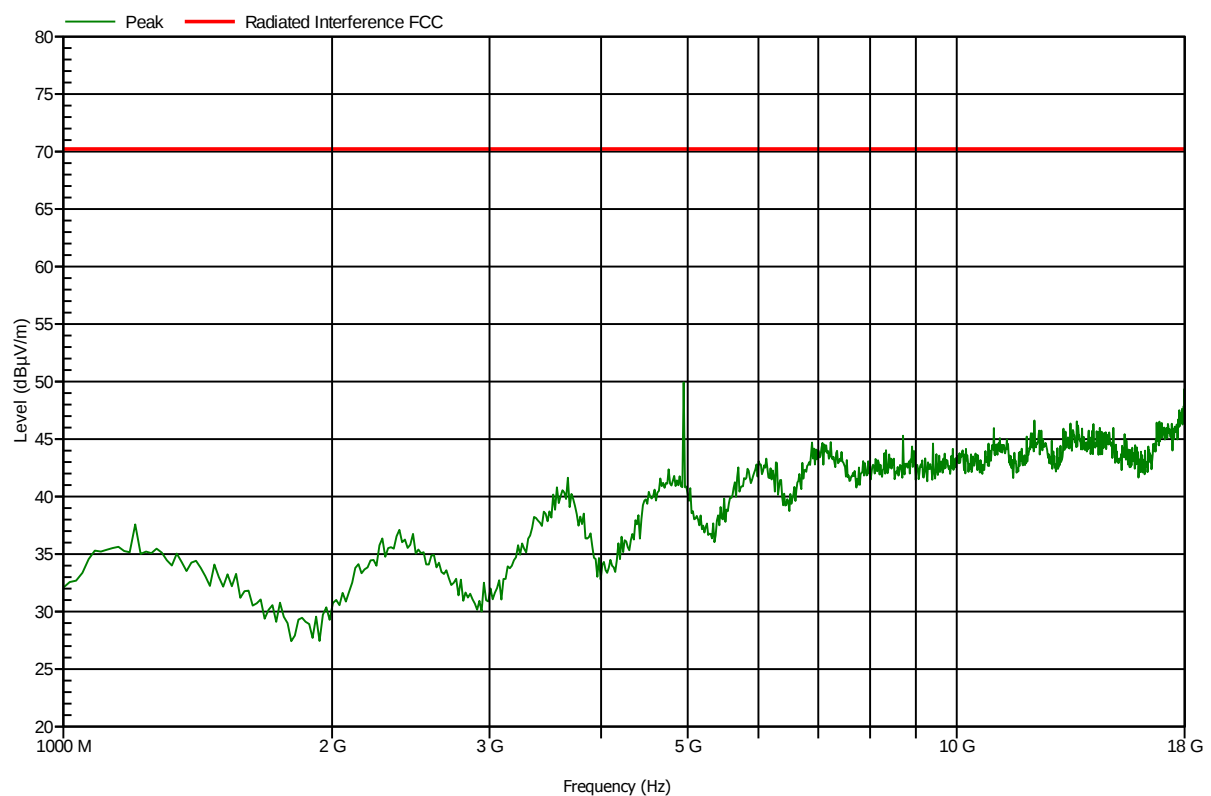
Test Results Plot No 49

FCC 90.210 1-18 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118/A 1-18 GHz 1319	Sweep Time:	Auto [170.03 ms]
Polarization:	Horizontal	Pre Amplifier	pre amp 1 GHz-18 GHz

TEST REMARKS: Tuesday, April 14, 2015

BW 10 MHz Low 4945 MHz; RF Ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

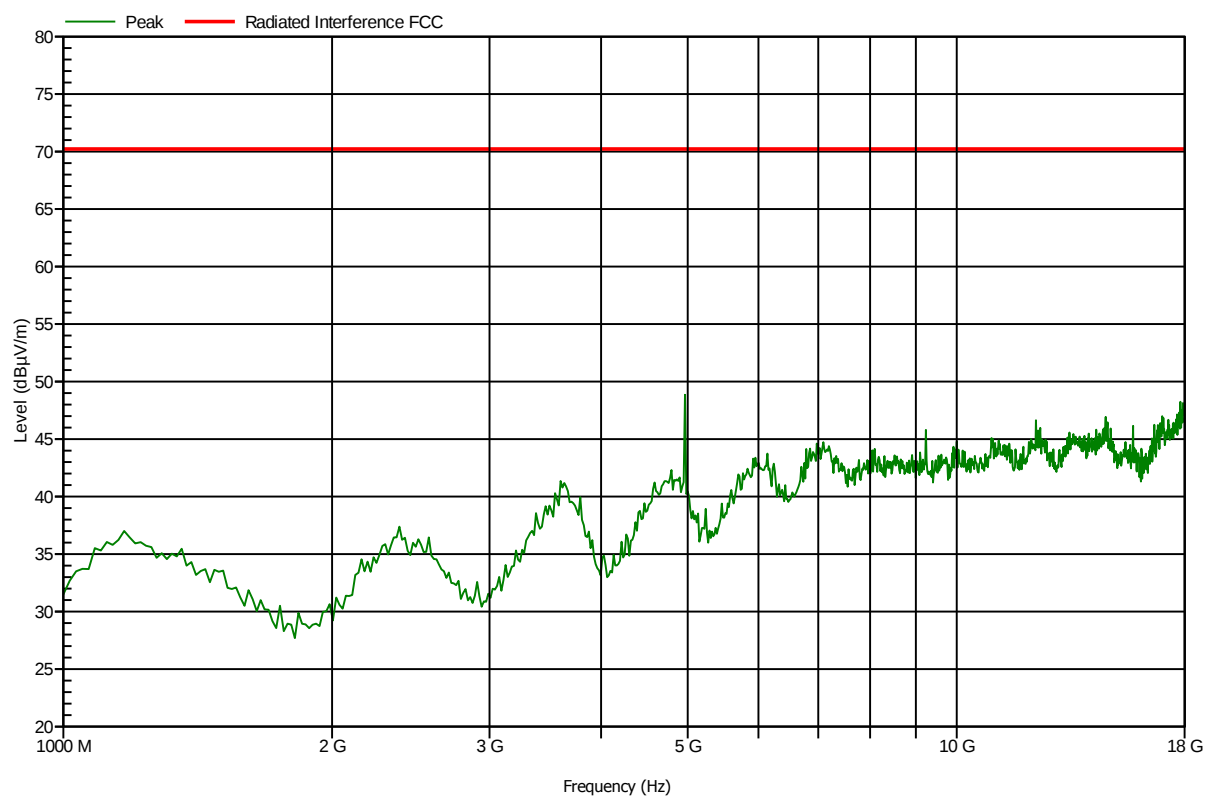
Test Results Plot No 50

FCC 90.210 1-18 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118/A 1-18GHz 1319	Sweep Time:	Auto [170.03 ms]
Polarization:	Horizontal	Pre Amplifier	pre amp 1 GHz-18 GHz

TEST REMARKS: Tuesday, April 14, 2015

BW 10MHz Mid 4963 MHz; RF Ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

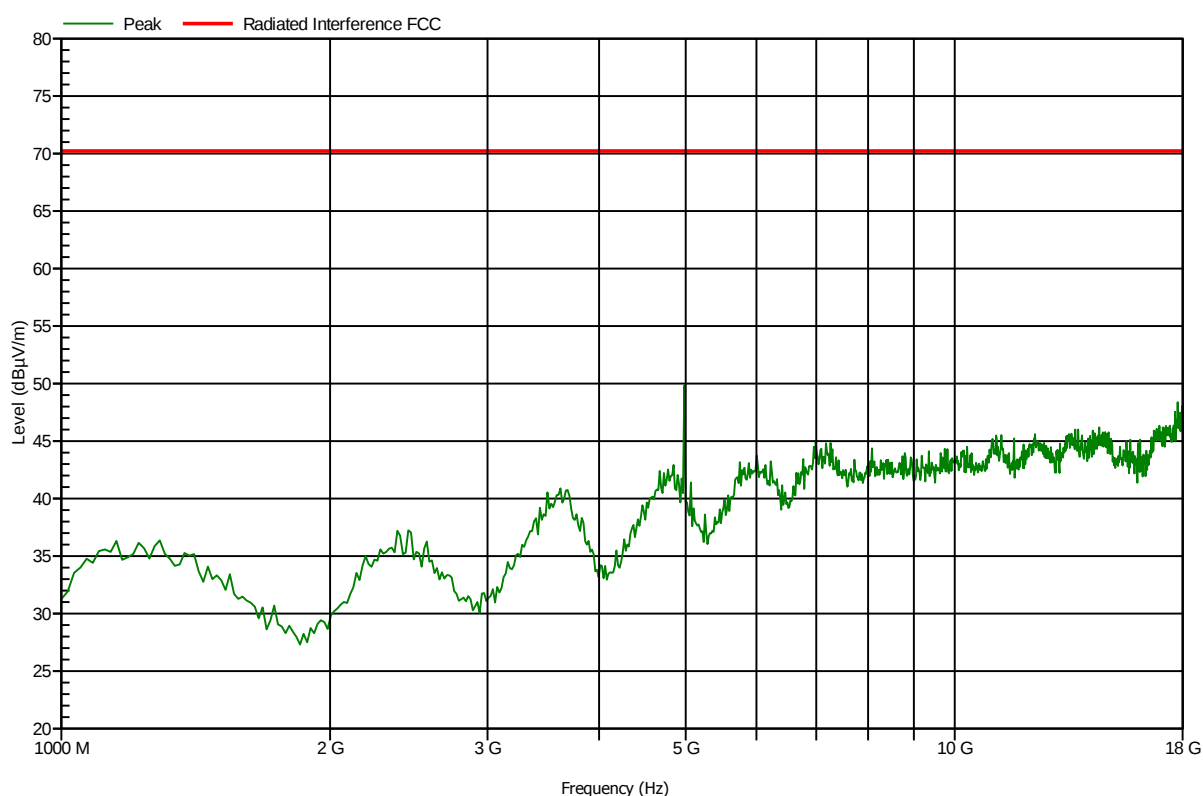
Test Results Plot No 51

FCC 90.210 1-18 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118/A 1-18GHz 1319	Sweep Time:	Auto [170.03 ms]
Polarization:	Horizontal	Pre Amplifier	pre amp 1 GHz-18 GHz

TEST REMARKS: Tuesday, April 14, 2015

BW 10MHz High 4985 MHz; RF Ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

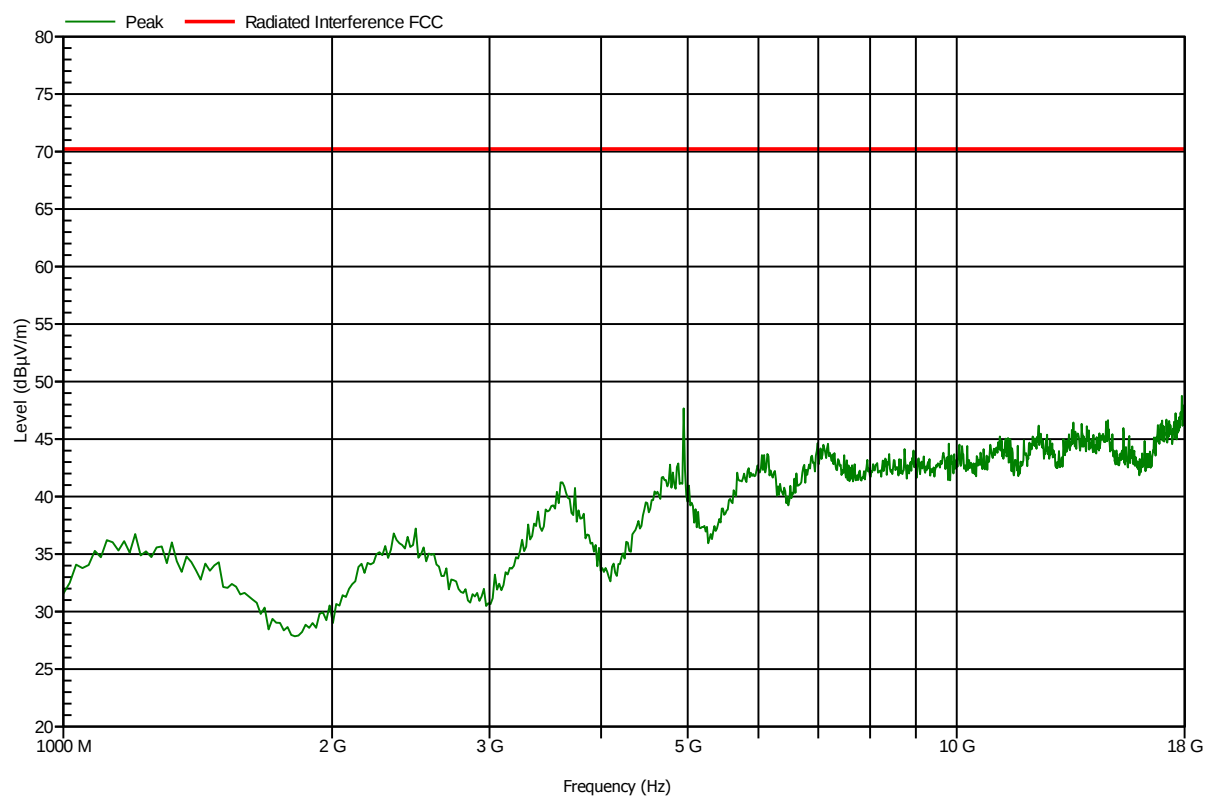
Test Results Plot No 52

FCC 90.210 1-18 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118/A 1-18GHz 1319	Sweep Time:	Auto [170.03 ms]
Polarization:	Horizontal	Pre Amplifier	pre amp 1 GHz-18 GHz

TEST REMARKS: Tuesday, April 14, 2015

BW 20MHz Low 4950 MHz; RF Ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

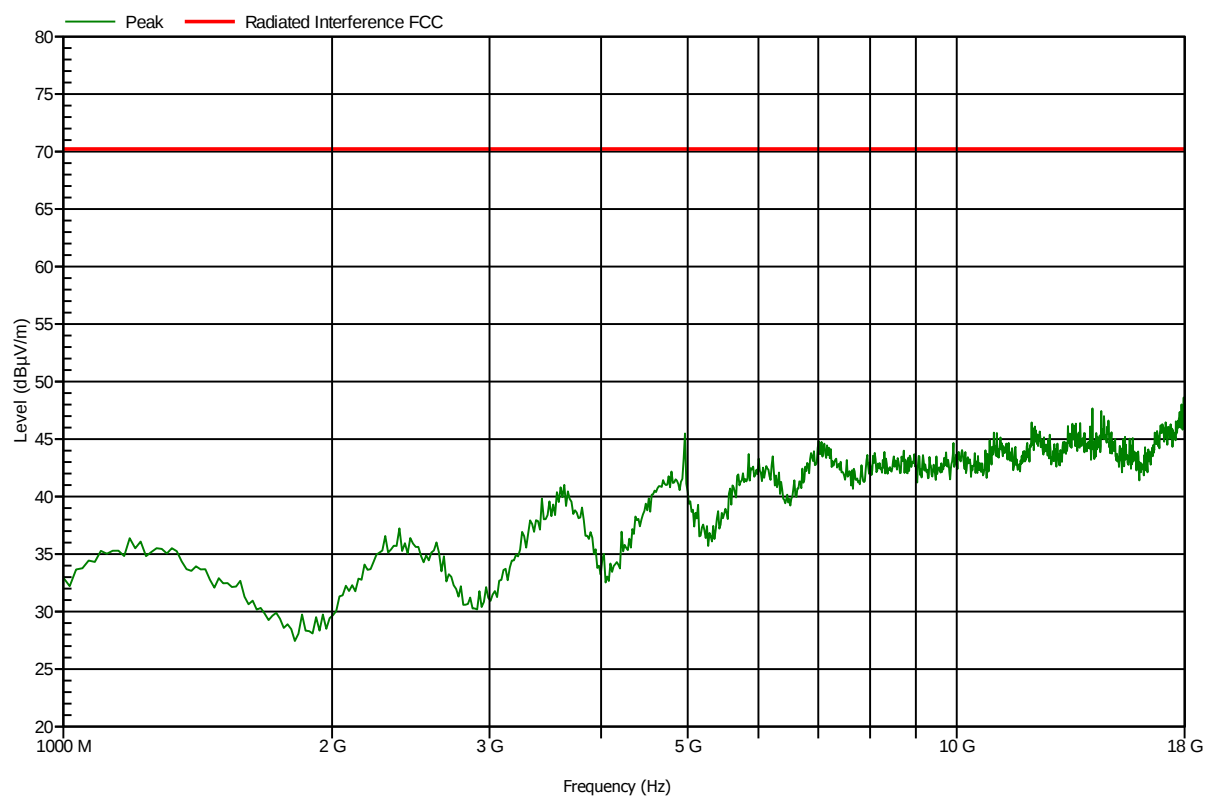
Test Results Plot No 53

FCC 90.210 1-18 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118/A 1-18GHz 1319	Sweep Time:	Auto [170.03 ms]
Polarization:	Horizontal	Pre Amplifier	pre amp 1 GHz-18 GHz

TEST REMARKS: Tuesday, April 14, 2015

BW 20MHz Mid 4963 MHz; RF Ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

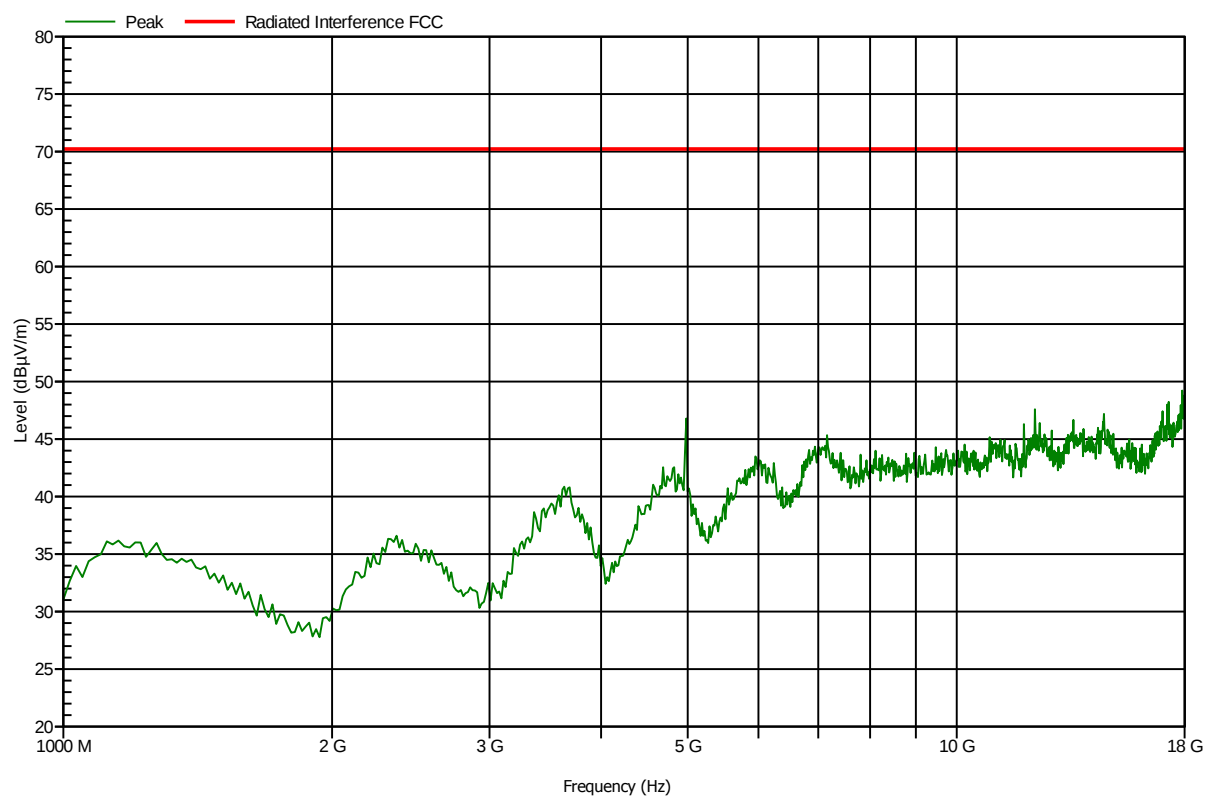
Test Results Plot No 54

FCC 90.210 1-18 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118/A 1-18GHz 1319	Sweep Time:	Auto [170.03 ms]
Polarization:	Horizontal	Pre Amplifier	pre amp 1 GHz-18 GHz

TEST REMARKS: Tuesday, April 14, 2015

BW 20MHz High 4980 MHz; RF Ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

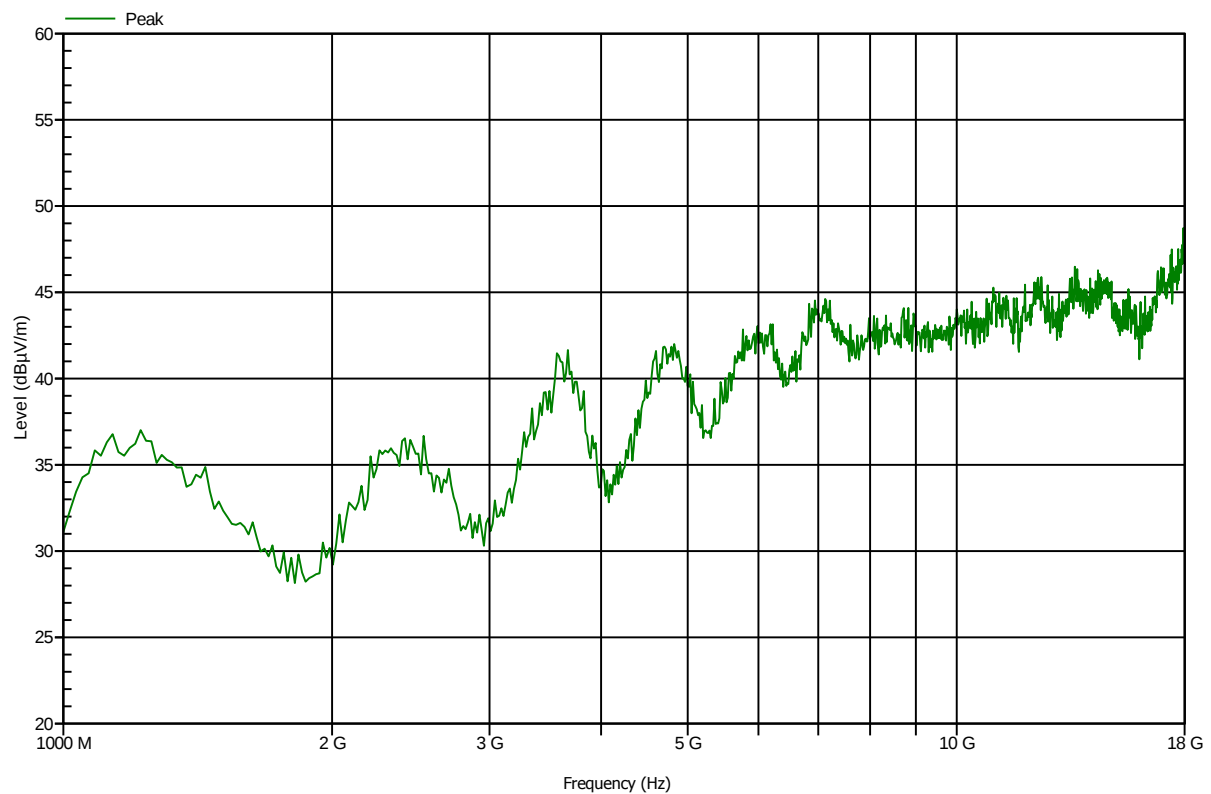
None

Test Results Plot No 55

FCC 90.210 RX mode 1-18 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	14.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG-118/A 1-18GHz 1319	Sweep Time:	Auto [170.03 ms]
Polarization:	Horizontal	Pre Amplifier	pre amp 1 GHz-18 GHz

TEST REMARKS:



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

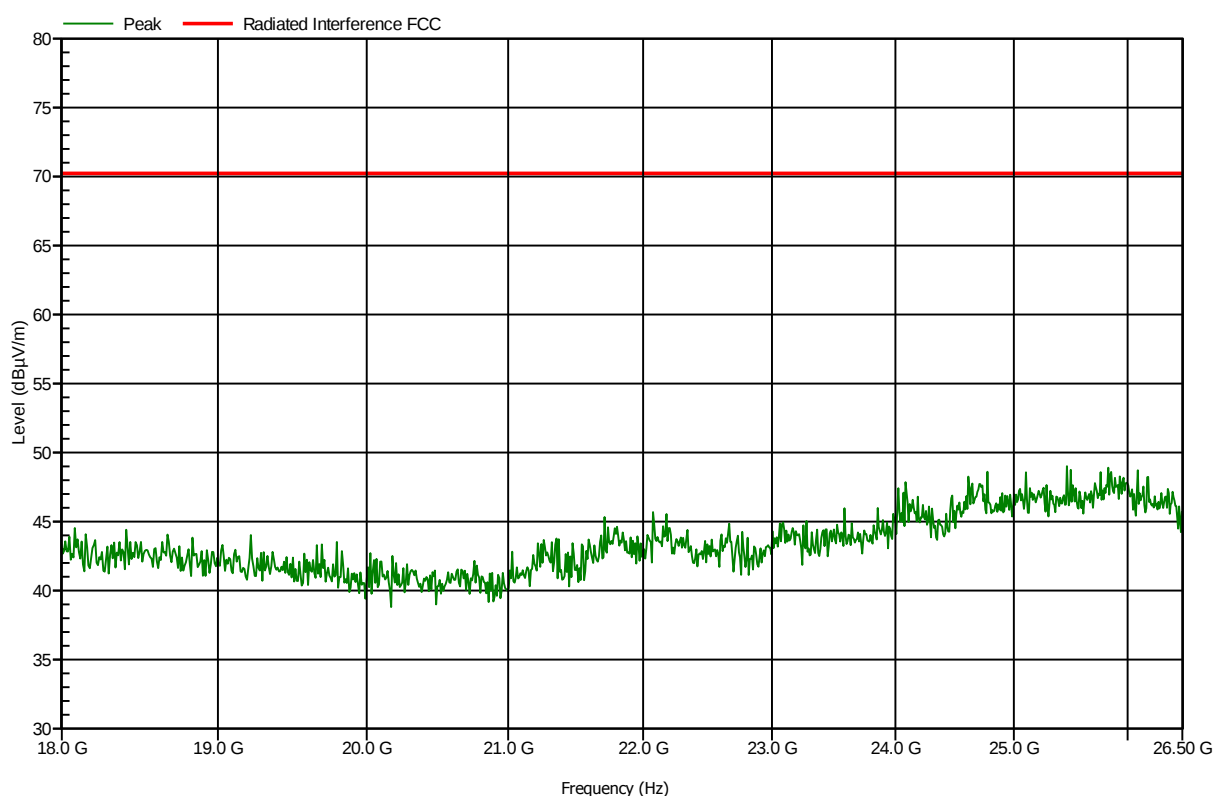
Test Results Plot No 56

FCC 90.210 18-26 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG1840 18-40GHz SER-1058	Sweep Time:	Auto [85.05 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	18-26.5 GHz Pre Amplifier

TEST REMARKS: Monday, April 13, 2015

5MHz - Low Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

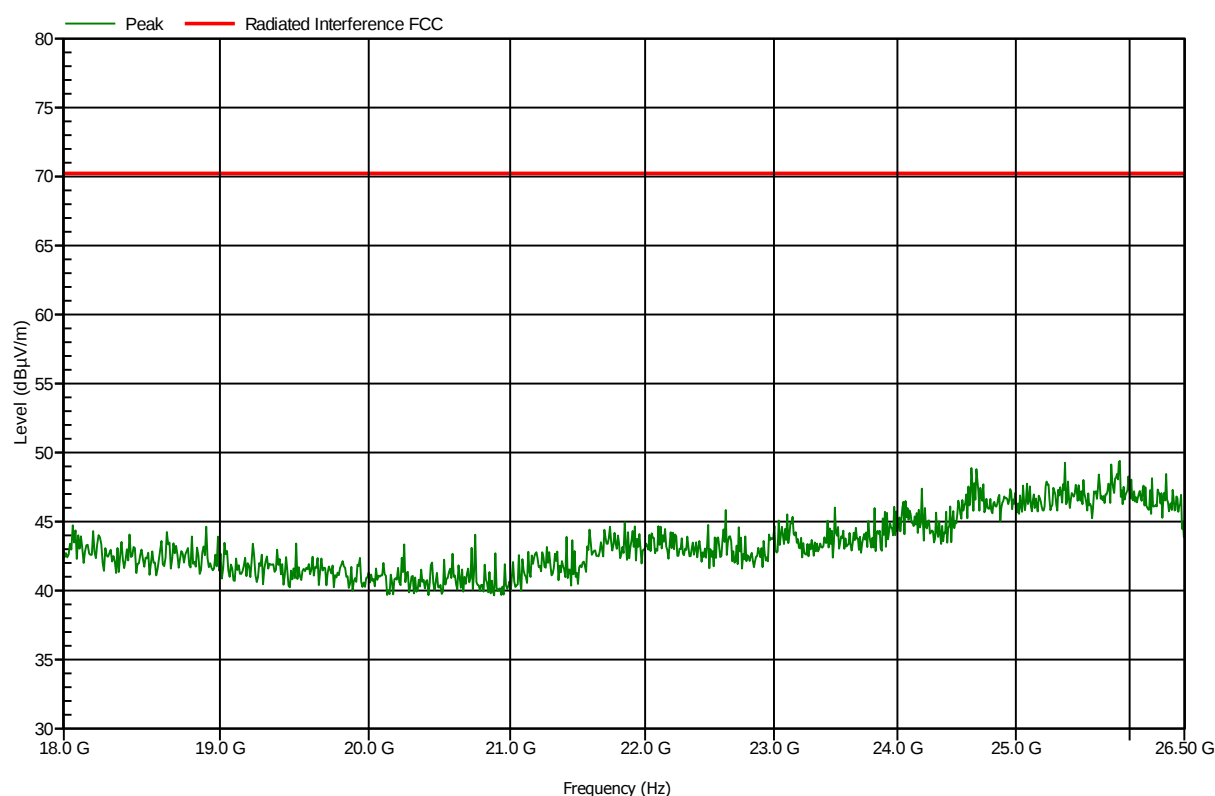
Test Results Plot No 57

FCC 90.210 18-26 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG1840 18-40 GHz SER-1058	Sweep Time:	Auto [85.05 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	18-26.5 GHz Pre Amplifier

TEST REMARKS: Monday, April 13, 2015

5MHz - Mid Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

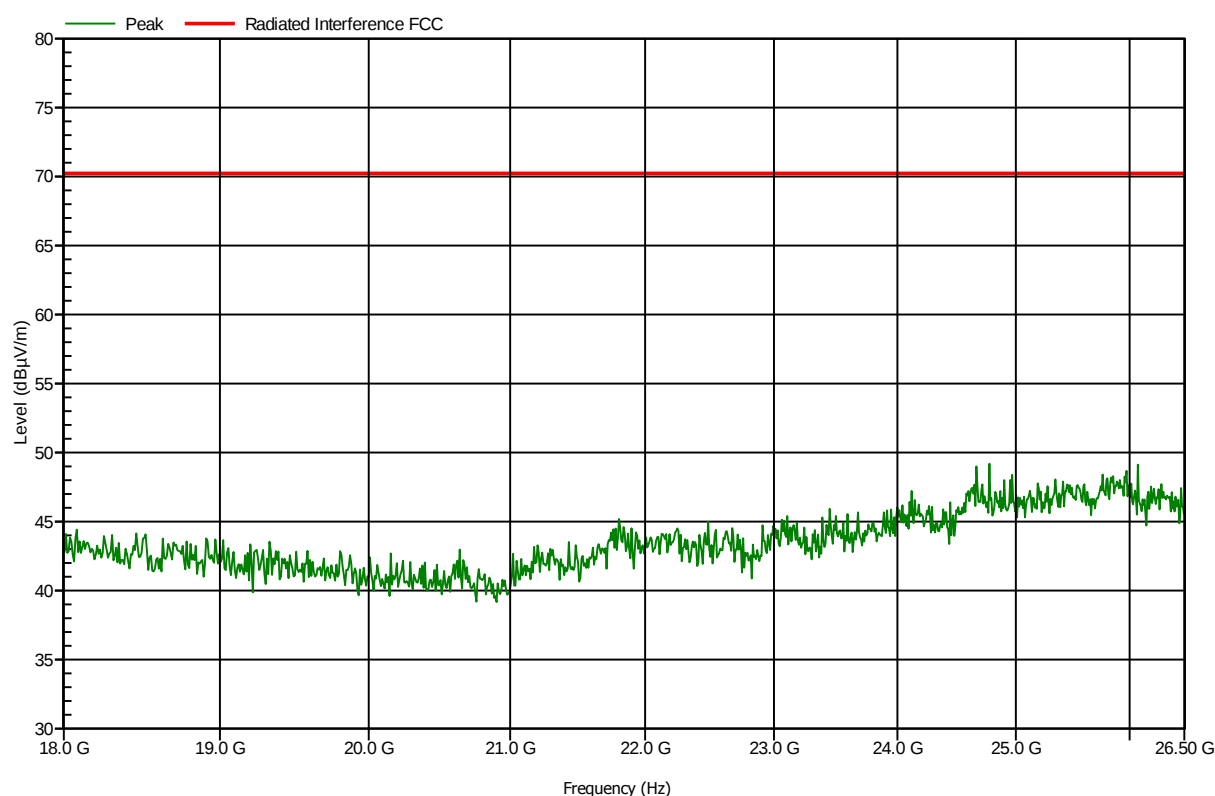
Test Results Plot No 58

FCC 90.210 18-26 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG1840 18-40 GHz SER-1058	Sweep Time:	Auto [85.05 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	18-26.5 GHz Pre Amplifier

TEST REMARKS: Monday, April 13, 2015

5MHz - High Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

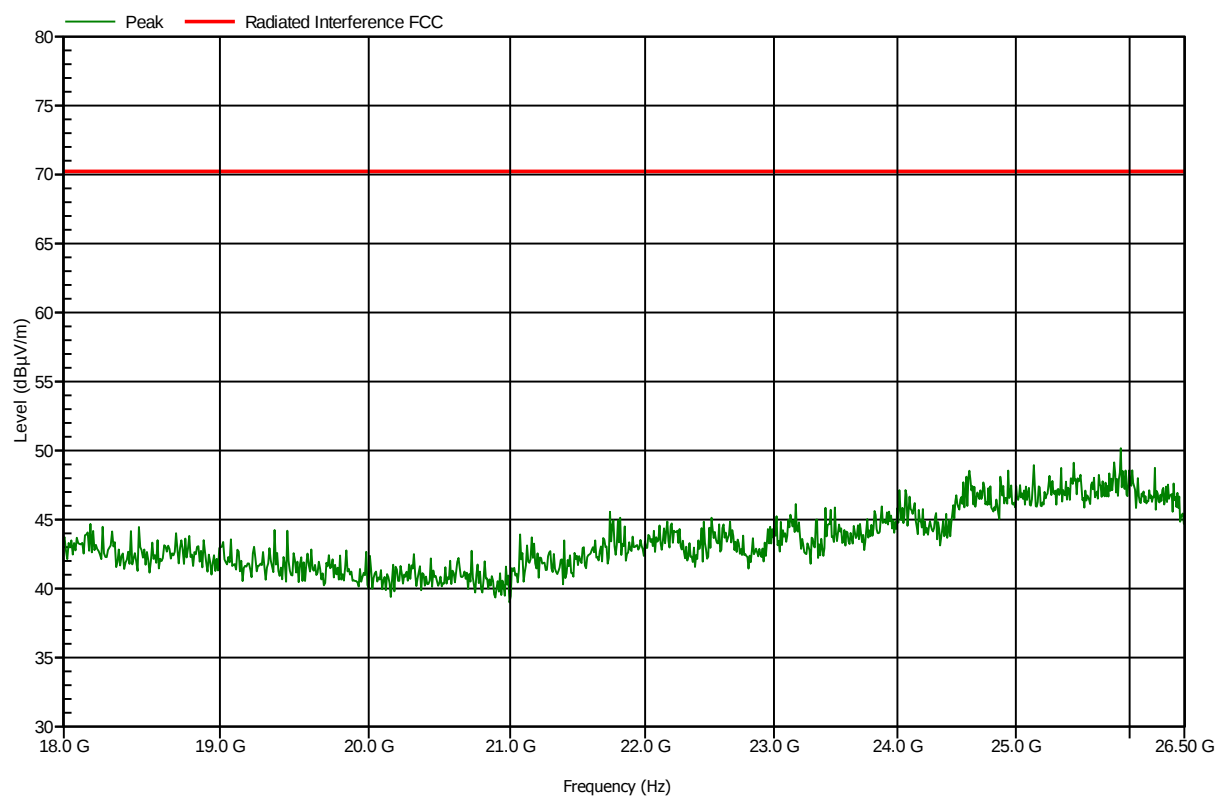
Test Results Plot No 59

FCC 90.210 18-26 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG1840 18-40 GHz SER-1058	Sweep Time:	Auto [85.05 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	18-26.5 GHz Pre Amplifier

TEST REMARKS: Monday, April 13, 2015

10 MHz - Low Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

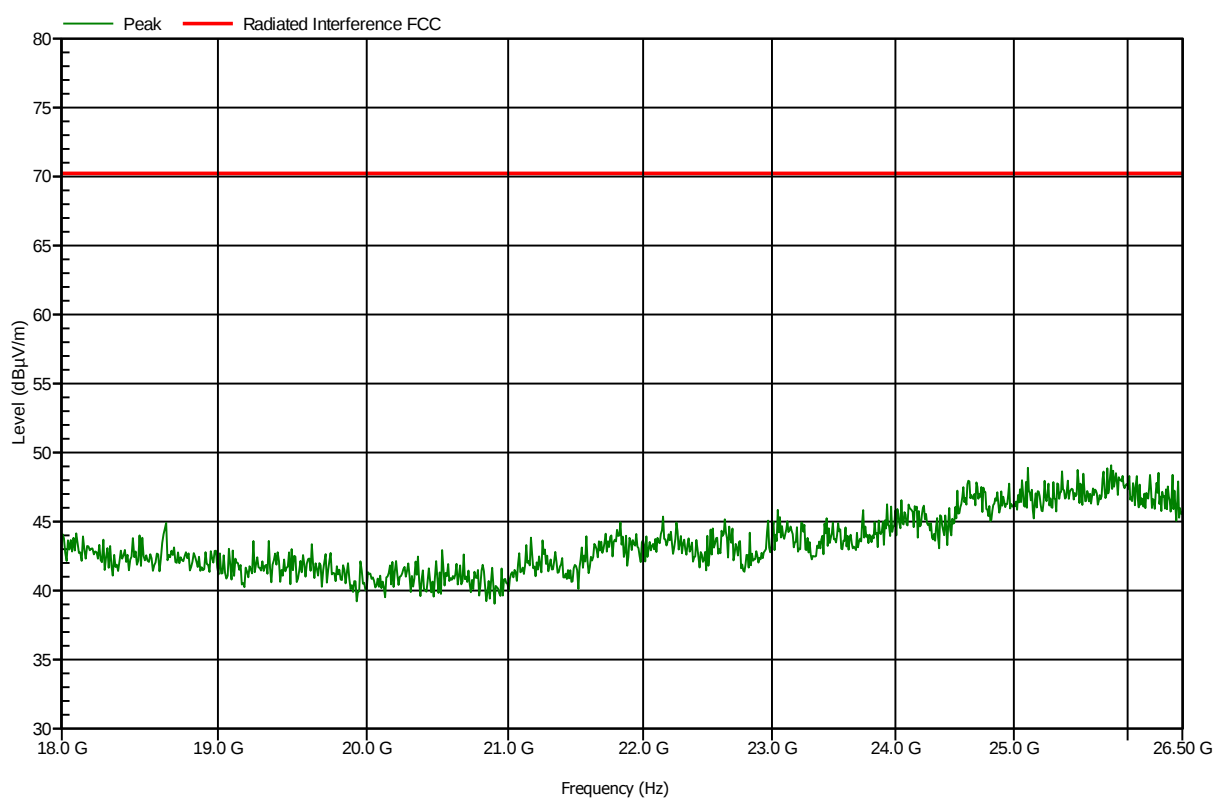
Test Results Plot No 60

FCC 90.210 18-26 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG1840 18-40 GHz SER-1058	Sweep Time:	Auto [85.05 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	18-26.5 GHz Pre Amplifier

TEST REMARKS: Monday, April 13, 2015

10 MHz - Mid Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

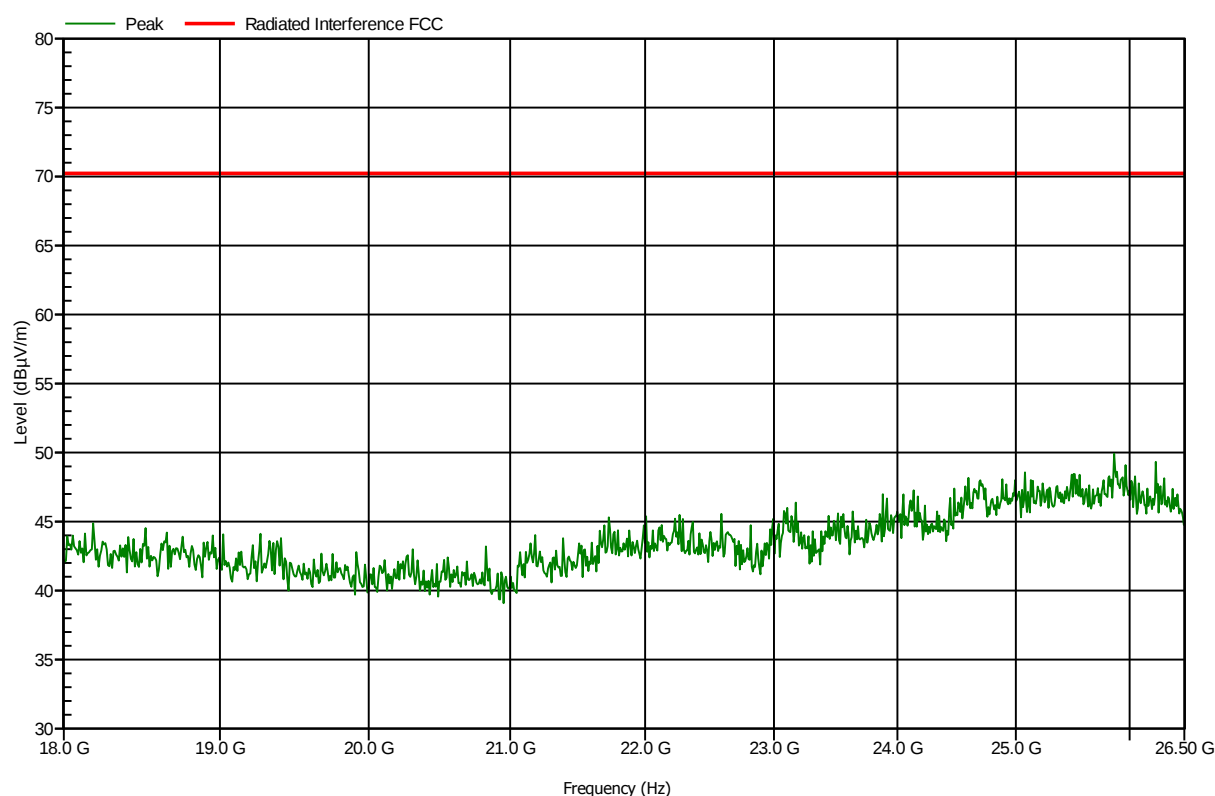
Test Results Plot No 61

FCC 90.210 18-26 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG1840 18-40 GHz SER-1058	Sweep Time:	Auto [85.05 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	18-26.5 GHz Pre Amplifier

TEST REMARKS: Monday, April 13, 2015

10MHz -High Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

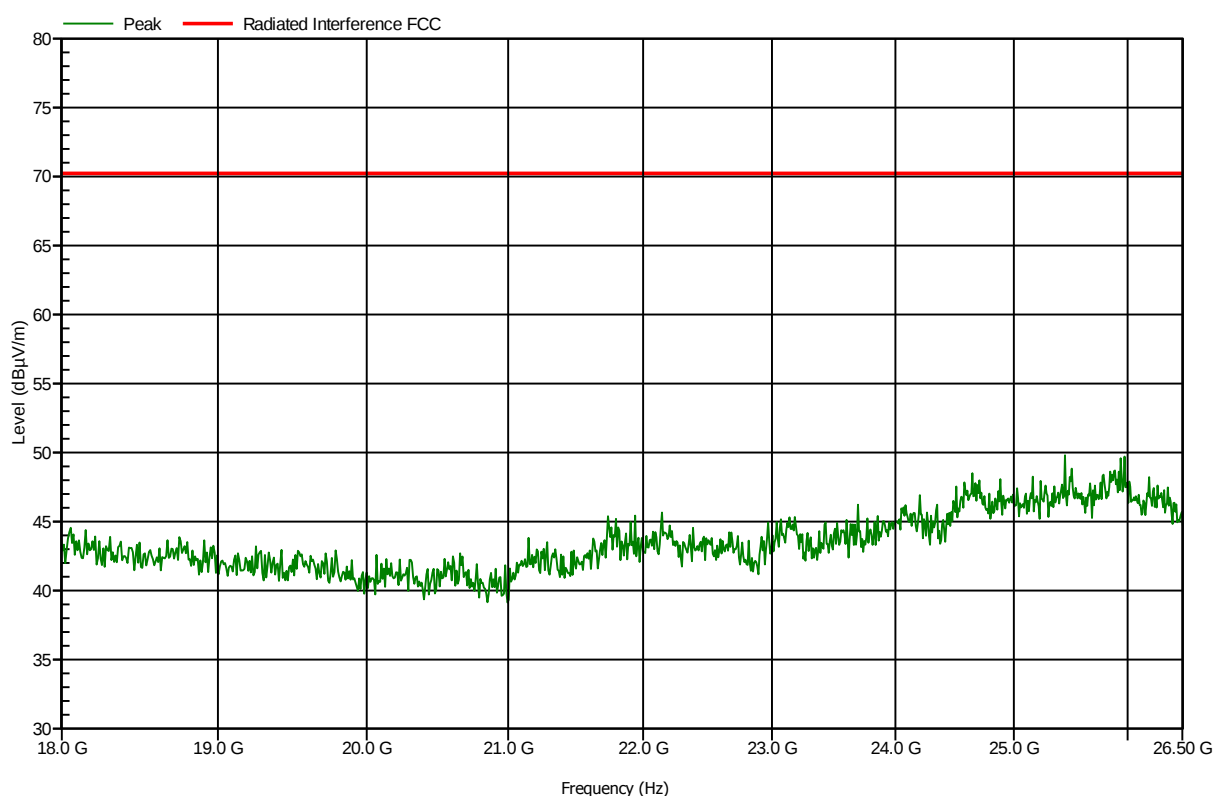
Test Results Plot No 62

FCC 90.210 18-26GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG1840 18-40 GHz SER-1058	Sweep Time:	Auto [85.05 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	18-26.5 GHz Pre Amplifier

TEST REMARKS: Monday, April 13, 2015

20MHz - Low Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

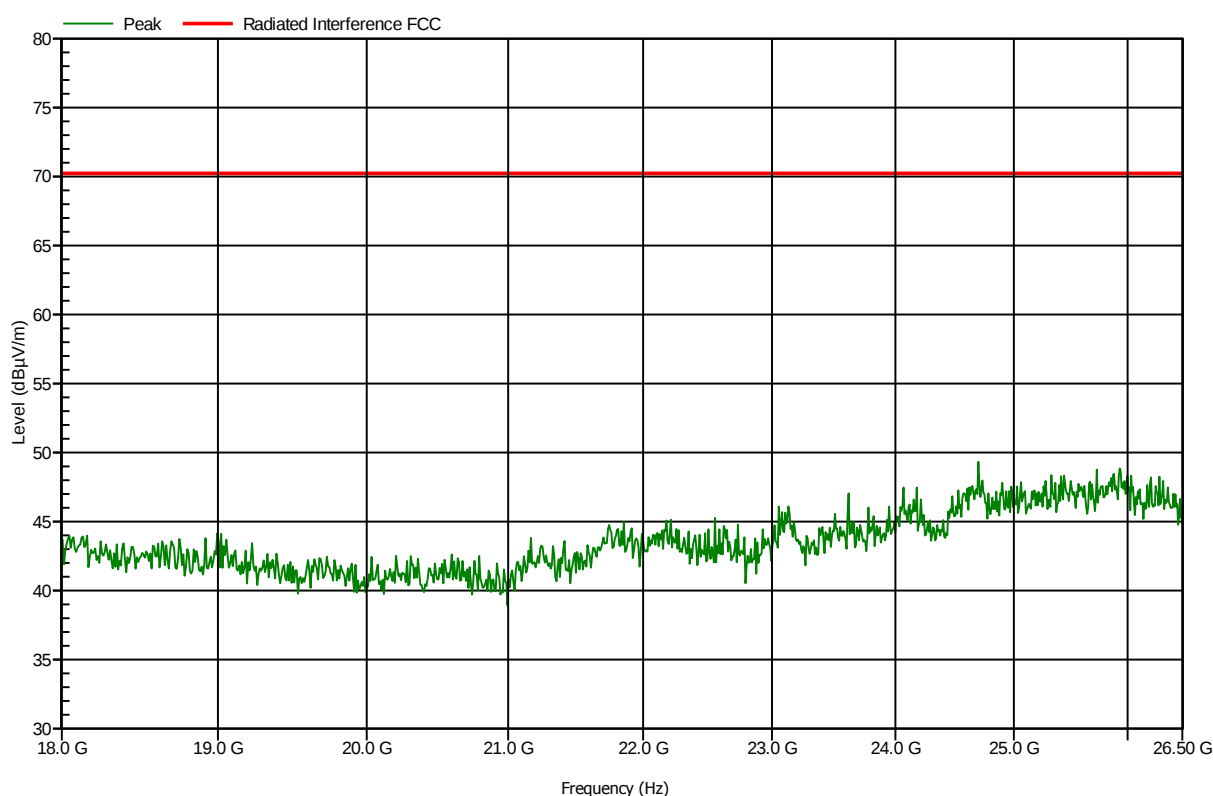
Test Results Plot No 63

FCC 90.210 18-26 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG1840 18-40 GHz SER-1058	Sweep Time:	Auto [85.05 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	18-26.5 GHz Pre Amplifier

TEST REMARKS: Monday, April 13, 2015

20 MHz - Mid Frequency; RF ports terminated to 50 Ohm



MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

None

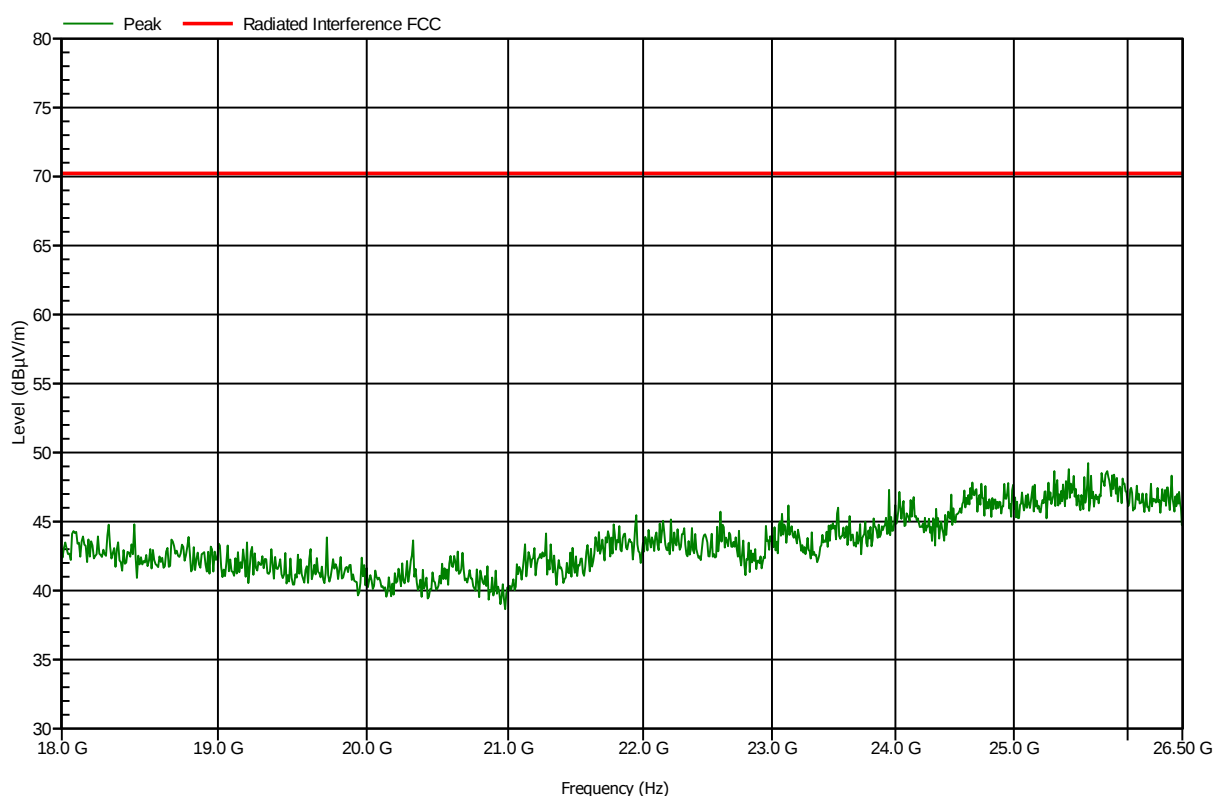
Test Results Plot No 64

FCC 90.210 18-26 GHz

Test & EUT General Information		Receiver Setting	
EUT Name:	WA 8000-5X	Spect Analyzer	Agilent Technologies N9020A
S/N:	041A04000100	Ref. Level:	80 dB μ V
Date of Test:	13.04.2015	RBW:	1000 kHz
Test Engineer:	Ilya Arbitman	VBW:	3 MHz
Antenna:	ARA DRG1840 18-40 GHz SER-1058	Sweep Time:	Auto [85.05 ms]
Polarization:	Horizontal and Vertical	Pre Amplifier	18-26.5 GHz Pre Amplifier

TEST REMARKS: Monday, April 13, 2015

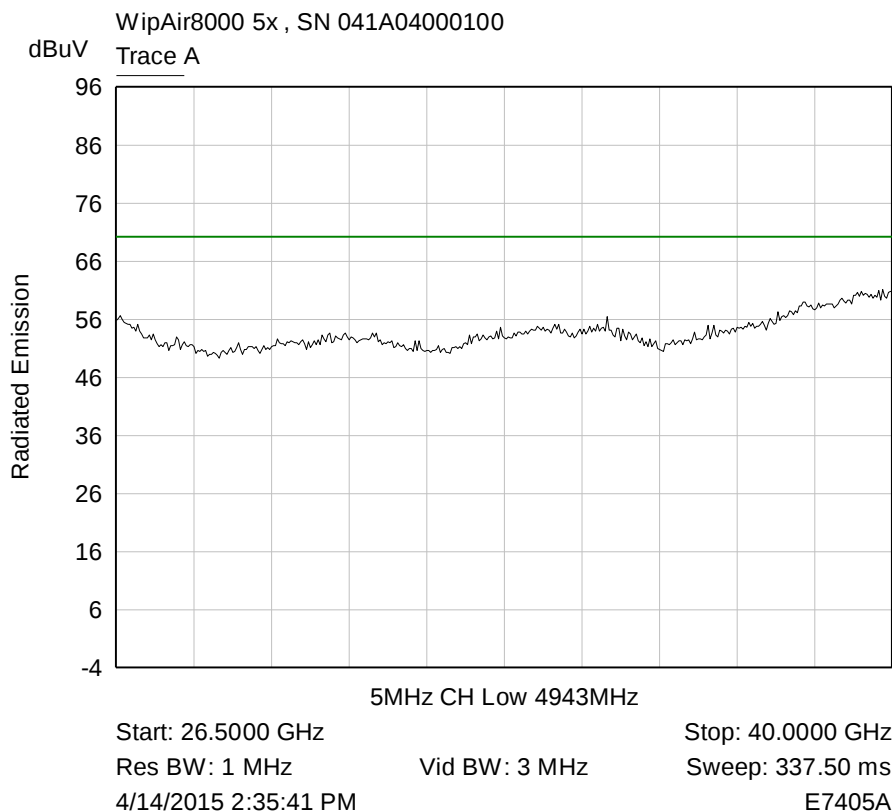
20 MHz - High Frequency; RF ports terminated to 50 Ohm



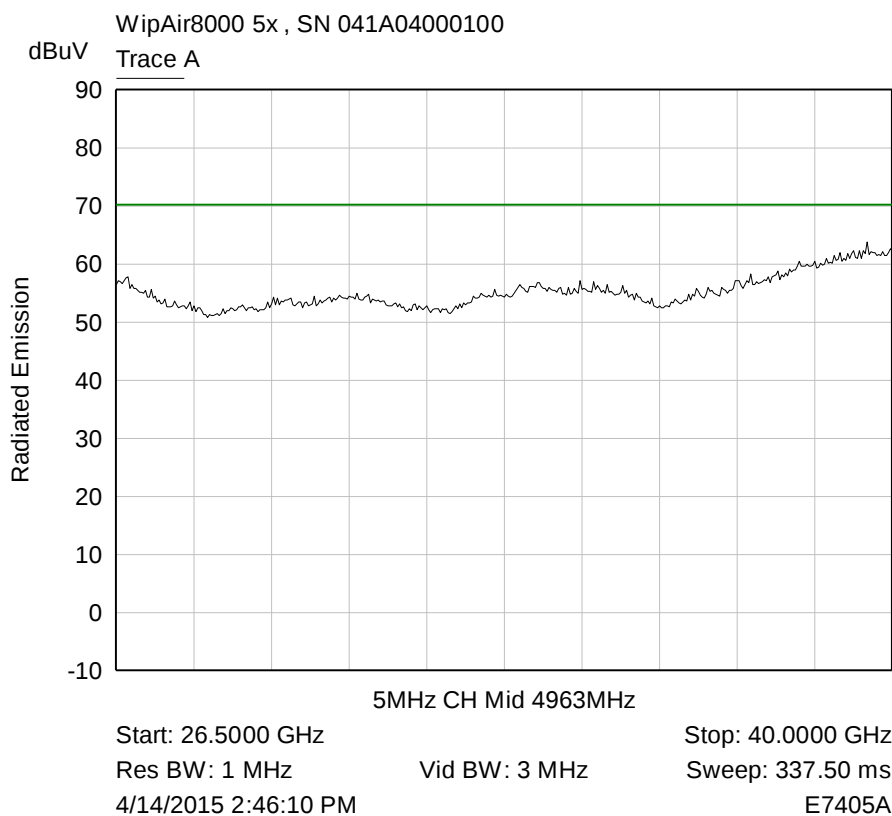
MAXIMUM RESULT DEVIATION:

Detect all peaks above 6 dB below the limit line with a maximum of 6 peaks.

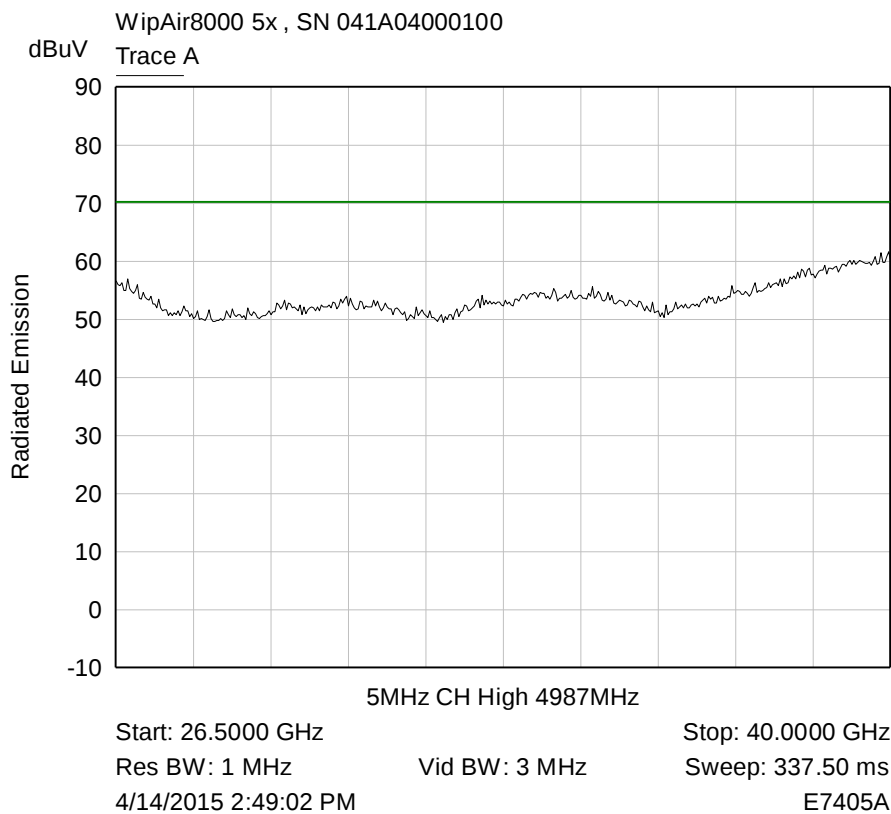
None



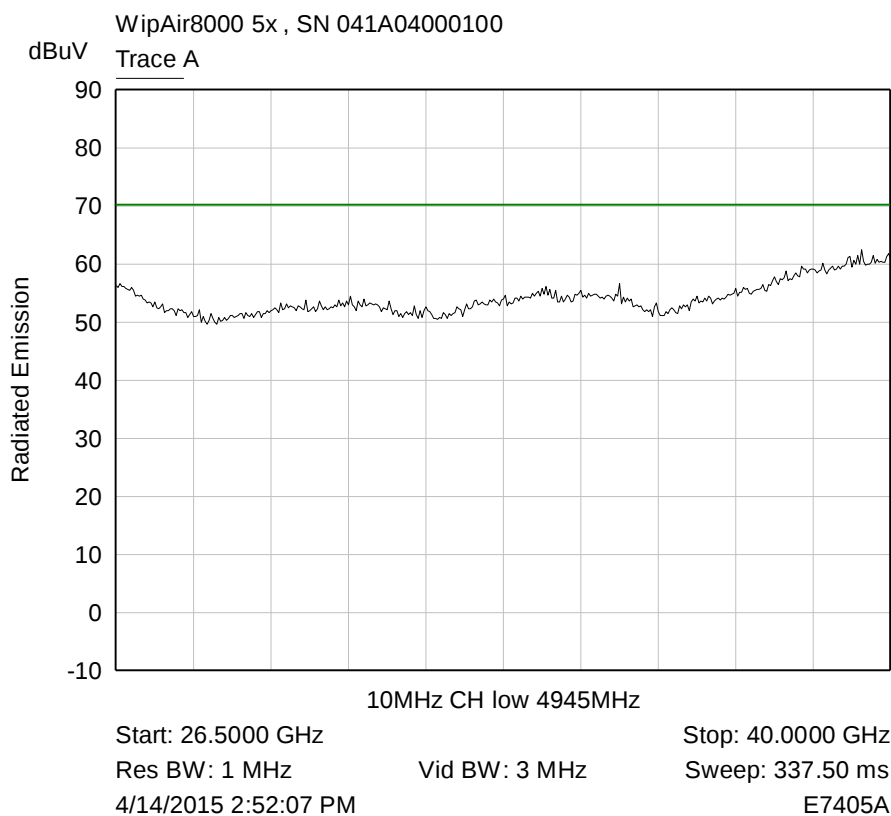
Test Results Plot No 65



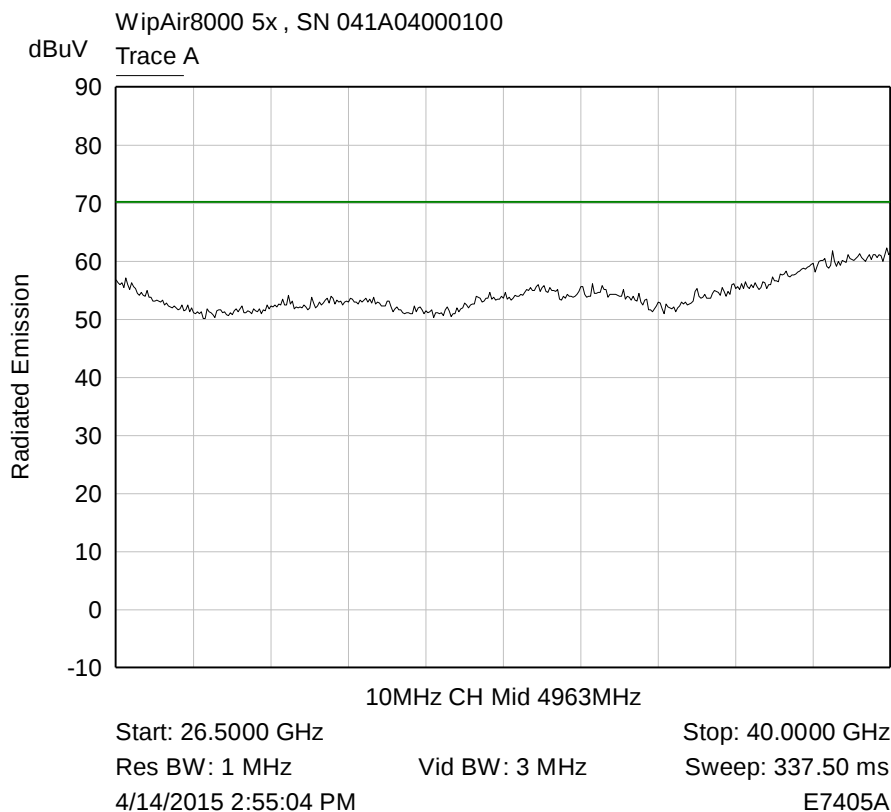
Test Results Plot No 66



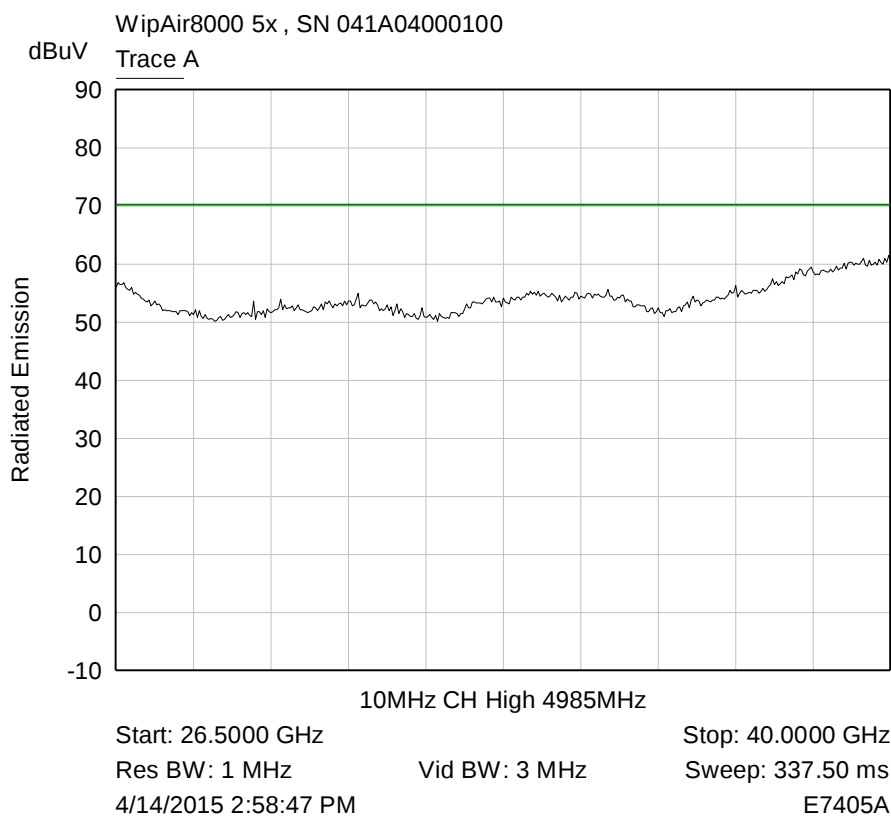
Test Results Plot No 67



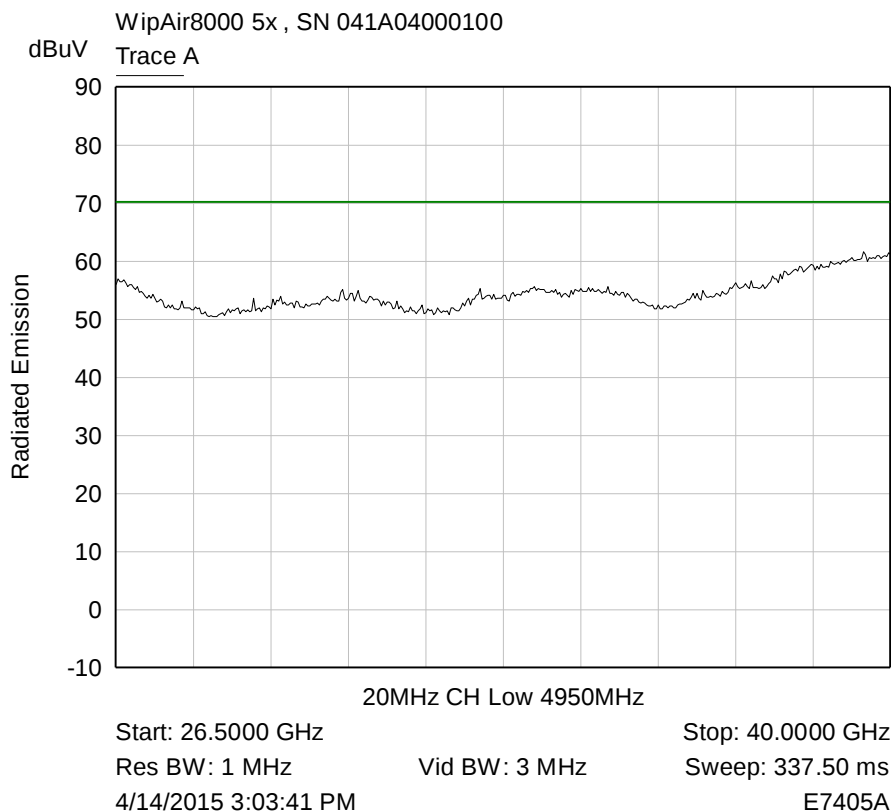
Test Results Plot No 68



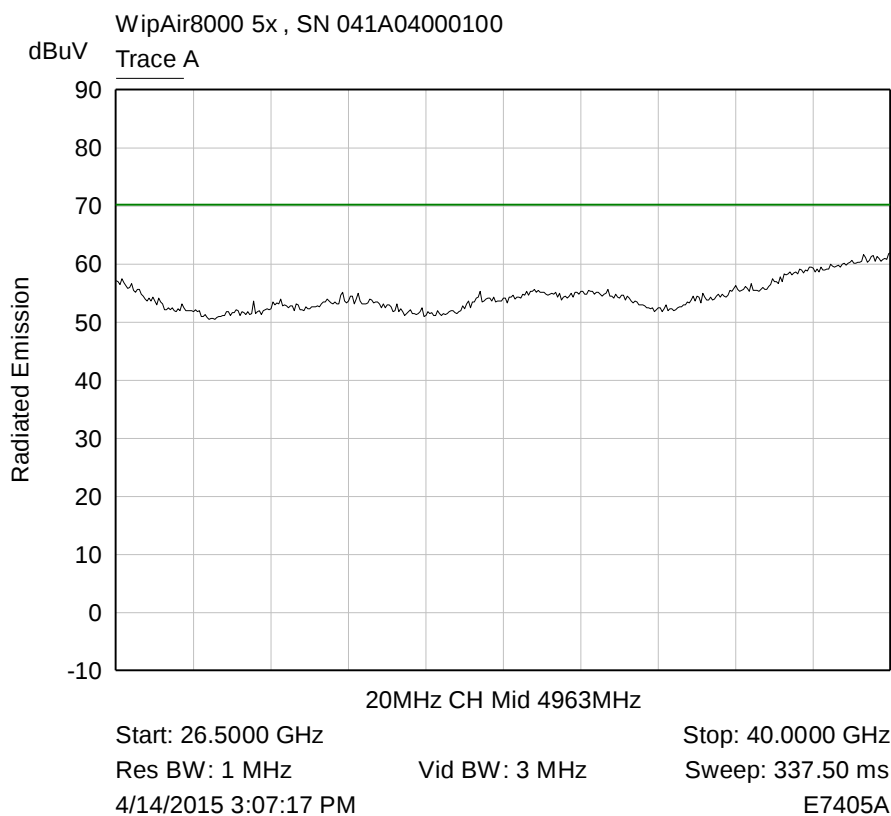
Test Results Plot No 69



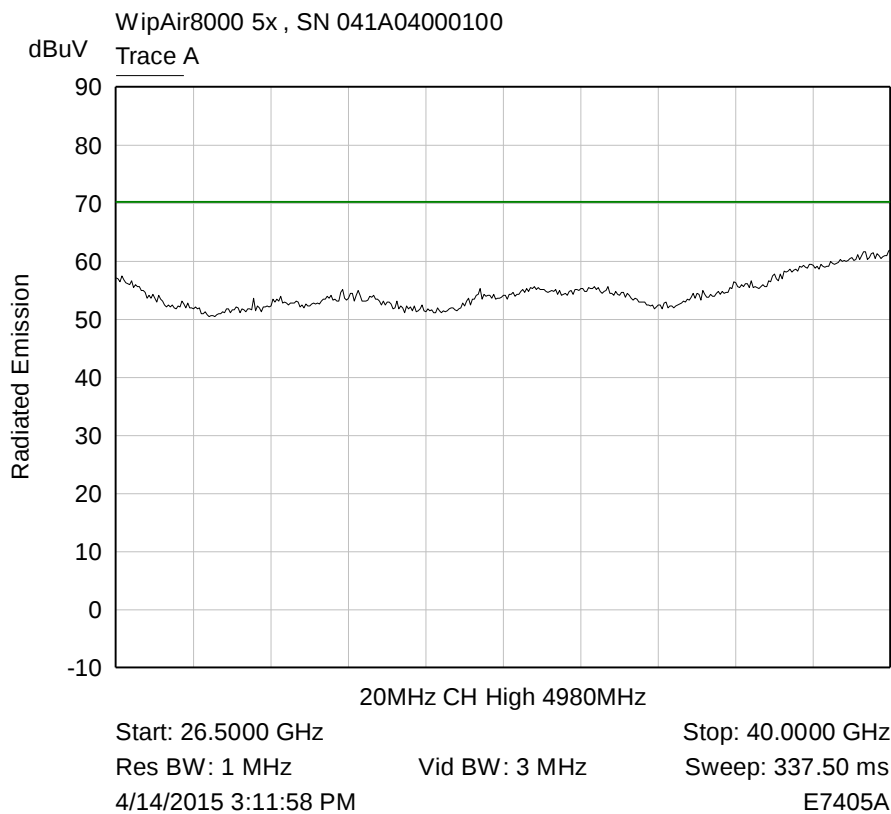
Test Results Plot No 70



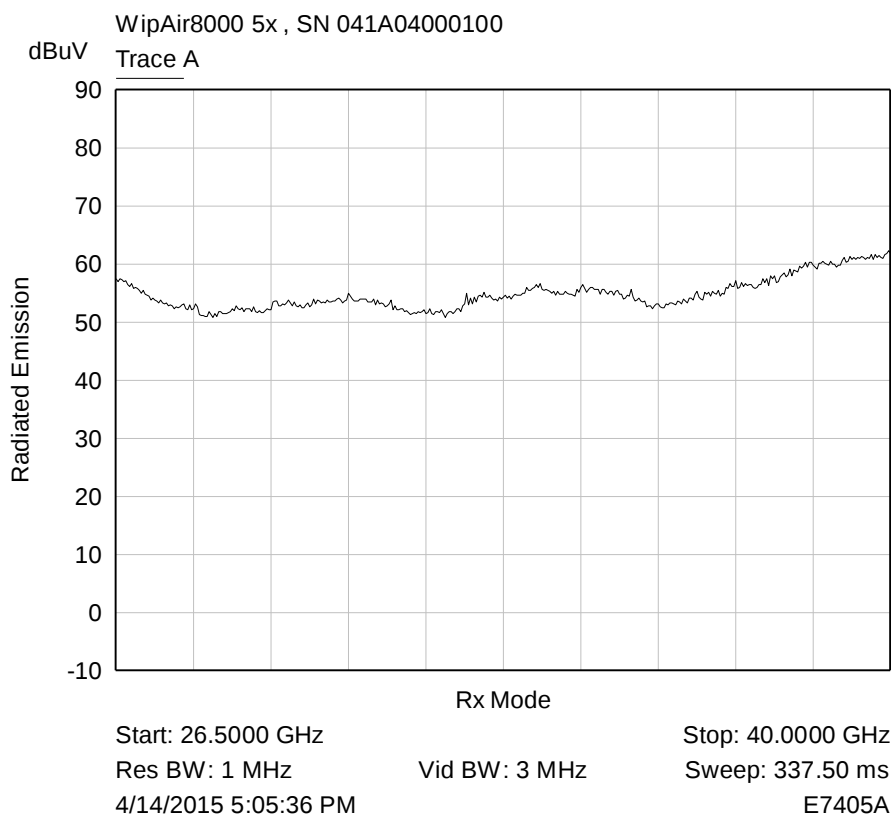
Test Results Plot No 71



Test Results Plot No 72



Test Results Plot No 73



Test Results Plot No 74