

FCC Part 15E Measurement and Test Report

For

BBB Inc.

28, Yatap-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, South Korea

FCC ID: 2AKGP-EZ100W

FCC Rule(s): FCC Part 15E

Product Description: Mobile Phone

Tested Model: EZ-100

Report No.: STR17118174I-3

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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM Test Technology Co., Ltd.

TABLE OF CONTENTS

1. GENERAL INFORMATION.....	3
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	3
1.2 TEST STANDARDS.....	4
1.3 TEST METHODOLOGY.....	4
1.4 TABLE FOR PARAMETERS OF TEST SOFTWARE SETTING	4
1.5 EUT OPERATING DURING TEST	4
1.6 TEST FACILITY	5
1.7 EUT SETUP AND TEST MODE.....	5
1.8 MEASUREMENT UNCERTAINTY	6
1.9 TEST EQUIPMENT LIST AND DETAILS	6
2. SUMMARY OF TEST RESULTS	7
3. RF EXPOSURE	8
3.1 STANDARD APPLICABLE.....	8
3.2 TEST RESULT.....	8
4. ANTENNA REQUIREMENT	9
4.1 STANDARD APPLICABLE.....	9
4.2 EVALUATION INFORMATION	9
5. CONDUCTED EMISSIONS	10
5.1 TEST PROCEDURE.....	10
5.3 BASIC TEST SETUP BLOCK DIAGRAM.....	10
5.4 ENVIRONMENTAL CONDITIONS	11
5.5 TEST RECEIVER SETUP	11
5.6 SUMMARY OF TEST RESULTS/PLOTS	11
5.7 CONDUCTED EMISSIONS TEST DATA.....	11
6. POWER SPECTRAL DENSITY	14
6.1 STANDARD APPLICABLE.....	14
6.2 TEST PROCEDURE.....	14
6.3 ENVIRONMENTAL CONDITIONS	15
6.4 SUMMARY OF TEST RESULTS/PLOTS	15
7. EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH.....	35
7.1 STANDARD APPLICABLE.....	35
7.2 TEST PROCEDURE.....	35
7.3 ENVIRONMENTAL CONDITIONS	37
7.4 SUMMARY OF TEST RESULTS/PLOTS	37
8. MAXIMUM CONDUCTED OUTPUT POWER.....	56
8.1 STANDARD APPLICABLE.....	56
8.2 TEST PROCEDURE.....	56
8.3 ENVIRONMENTAL CONDITIONS	57
8.4 SUMMARY OF TEST RESULTS/PLOTS	57
9. RADIATED SPURIOUS EMISSIONS.....	76
9.1 STANDARD APPLICABLE.....	76
9.2 TEST PROCEDURE.....	76
9.3 TEST RECEIVER SETUP	77
9.4 CORRECTED AMPLITUDE & MARGIN CALCULATION.....	77
9.5 ENVIRONMENTAL CONDITIONS	77
9.6 SUMMARY OF TEST RESULTS/PLOTS	78
10. FREQUENCY STABILITY	164
10.1 STANDARD APPLICABLE.....	164
10.2 TEST PROCEDURE.....	164
10.3 ENVIRONMENTAL CONDITIONS	164
10.4 SUMMARY OF TEST RESULTS/PLOTS	164

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: BBB Inc.
Address of applicant: 28, Yatap-ro, Bundang-gu, Seongnam-si, Gyeonggi-do,
South Korea

Manufacturer: BBB Inc.
Address of manufacturer: 28, Yatap-ro, Bundang-gu, Seongnam-si, Gyeonggi-do,
South Korea

General Description of EUT	
Product Name:	Mobile Phone
Brand Name:	elemark, Mobihealth
Model No.:	EZ-100
Adding Model:	/
Hardware Version:	I3501-MB-V2
Software Version:	3501_65u_I1
Rated Voltage:	Battery DC3.8V
Battery capacity:	3000mAh
Power Adapter Model:	/
Note: The test data is gathered from a production sample provided by the manufacturer.	

Technical Characteristics of EUT	
Support Standards:	802.11a, 802.11n(HT20), 802.11n(HT40)
Frequency Range:	5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz
RF Output Power:	8.52dBm (Conducted)
Type of Modulation:	QPSK, 16QAM, 64QAM
Data Rate:	6-54Mbps, up to 150Mbps
Type of Antenna:	Integral
Antenna Gain:	1.92dBi
Lowest Internal Frequency	32.768kHz

1.2 Test Standards

The following report is prepared on behalf of the BBB Inc. in accordance with FCC Part 15, Subpart C&E, and section 15.203, 15.205, 15.207, 15.209 and 15.407 of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart C&E, and section 15.203, 15.205, 15.207, 15.209 and 15.407 of the Federal Communication Commissions rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. The measurement guide KDB 789033 D02 v01r02 for Unlicensed National Information Infrastructure (U-NII) Devices shall be performed also.

1.4 Table for parameters of Test Software setting

Enter “*##3646633*##” in the dialer of the device, slide to the left, choose connectivity, start to test. During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Mode	Test Frequency (MHz)													
	NCB: 20MHz													
	5180	5200	5240	5260	5280	5320	5500	5600	5700	5745	5785	5825		
802.11a 6Mbps	19	19	19	15	15	15	15	15	15	15	15	15		
802.11n-HT20 MCS0	19	19	19	15	15	15	15	15	15	15	15	15		
Mode	NCB: 40MHz													
	5190		5230	5270		5310		5510		5590		5670	5755	5795
802.11n-HT40 MCS0	19		19	15		15		15		15		15	15	15

1.5 EUT Operating during test

EUT was programmed to be in continuously transmitting mode. During the test, EUT operation to normal function and programs under Android were executed.

1.6 Test Facility

FCC – Registration No.: 125990

Shenzhen SEM Test Technology Co., Ltd. Laboratory has been recognized to perform compliance testing on equipment subject to the Commissions Declaration Of Conformity (DOC). The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

1.7 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	802.11a	5180MHz,5200MHz,5240MHz,5260MHz,5280MHz,5320MHz,5500MHz,5600MHz,5700MHz, 5745MHz, 5785MHz,5825MHz
TM2	802.11n-HT20	5180MHz,5200MHz,5240MHz,5260MHz,5280MHz,5320MHz,5500MHz,5600MHz,5700MHz, 5745MHz, 5785MHz,5825MHz
TM3	802.11n-HT40	5190MHz,5230MHz,5270MHz,5310MHz,5510MHz,5590MHz,5670MHz,5755MHz,5795MHz
Note: All test modes (different data rate and different modulation) are performed, but only the worst case is recorded in this report.		

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Core
/	/	/	/

Accessories Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
Earphone	1.5	Unshielded	Without Core
USB Cable	1.0	Shielded	Without Core

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Notebook	Lenovo	E445	/
AC to DC Adapter	/	Y733-20	/

1.8 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	$\pm 0.42\text{dB}$
Occupied Bandwidth	Conducted	$\pm 1.5\%$
Power Spectral Density	Conducted	$\pm 1.8\text{dB}$
Conducted Spurious Emission	Conducted	$\pm 2.17\text{dB}$
Conducted Emissions	Conducted	9-150kHz $\pm 3.74\text{dB}$
		0.15-30MHz $\pm 3.34\text{dB}$
Transmitter Spurious Emissions	Radiated	30-200MHz $\pm 4.52\text{dB}$
		0.2-1GHz $\pm 5.56\text{dB}$
		1-6GHz $\pm 3.84\text{dB}$
		6-18GHz $\pm 3.92\text{dB}$

1.9 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2017-06-12	2018-06-11
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2017-06-12	2018-06-11
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2017-06-12	2018-06-11
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2017-06-12	2018-06-11
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2017-06-12	2018-06-11
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2017-06-08	2018-06-07
SEMT-1042	Horn Antenna	ETS	3117	00086197	2017-06-08	2018-06-07
SEMT-1121	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170582	2017-06-08	2018-06-07
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2017-06-08	2018-06-07
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2017-06-12	2018-06-11
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2017-06-12	2018-06-11
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2017-06-12	2018-06-11
SEMT-1168	Pre-amplifier	Direction Systems Inc.	PAP-0126	14141-12838	2017-08-15	2018-08-14
SEMT-1169	Pre-amplifier	Direction Systems Inc.	PAP-2640	14145-14153	2017-08-15	2018-08-14
SEMT-1163	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2017-06-12	2018-06-11
SEMT-1170	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2017-03-09	2018-03-08

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 15.203; § 15.405	Antenna Requirement	Compliant
§ 15.207; § 15.407(b)(6)	Conducted Emission	Compliant
§ 15.407(a)(1),(2)	Power Spectral Density	Compliant
§ 15.407(e)	Emission Bandwidth and Occupied Bandwidth	Compliant
§ 15.407(a)(1),(2)	Maximum Conducted Output Power	Compliant
§ 15.407(b)(1),(2),(3)	Conducted Spurious Emission	Compliant
§ 15.205; § 15.407(b)(1),(2),(3)	Radiated Emission	Compliant
§ 15.407(g)	Frequency Stability	Compliant
§ 15.407(h)	Dynamic Frequency Selection (DFS)	Refer to DFS report

N/A: not applicable

3. RF Exposure

3.1 Standard Applicable

According to § 1.1307 and § 2.1093, the portable transmitter must comply the RF exposure requirements.

3.2 Test Result

This product complied with the requirement of the RF exposure, please see the SAR Report.

4. Antenna Requirement

4.1 Standard Applicable

According to FCC Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

4.2 Evaluation Information

This product has an integral antenna, fulfill the requirement of this section.

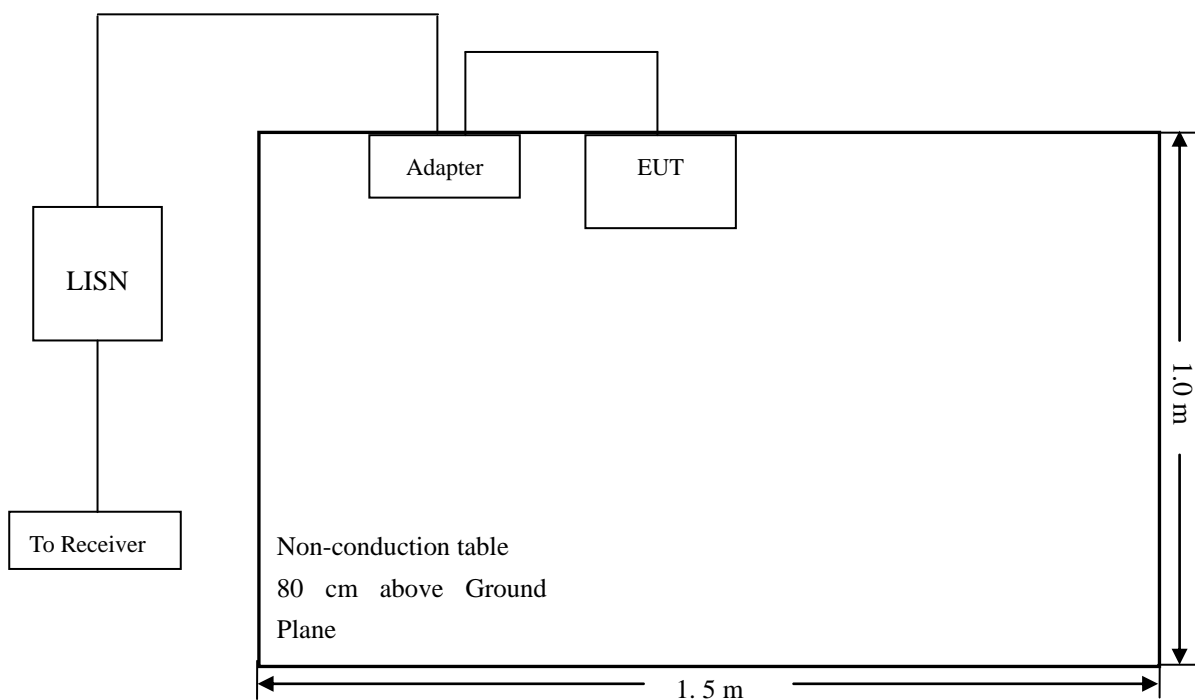
5. Conducted Emissions

5.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15.207 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.

5.3 Basic Test Setup Block Diagram



5.4 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

5.5 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency 150 kHz
Stop Frequency 30 MHz
Sweep Speed Auto
IF Bandwidth..... 10 kHz
Quasi-Peak Adapter Bandwidth 9 kHz
Quasi-Peak Adapter Mode Normal

5.6 Summary of Test Results/Plots

According to the data in section 5.7, the EUT complied with the FCC Part 15.207 Conducted margin for a Class B device, with the *worst* margin reading of:

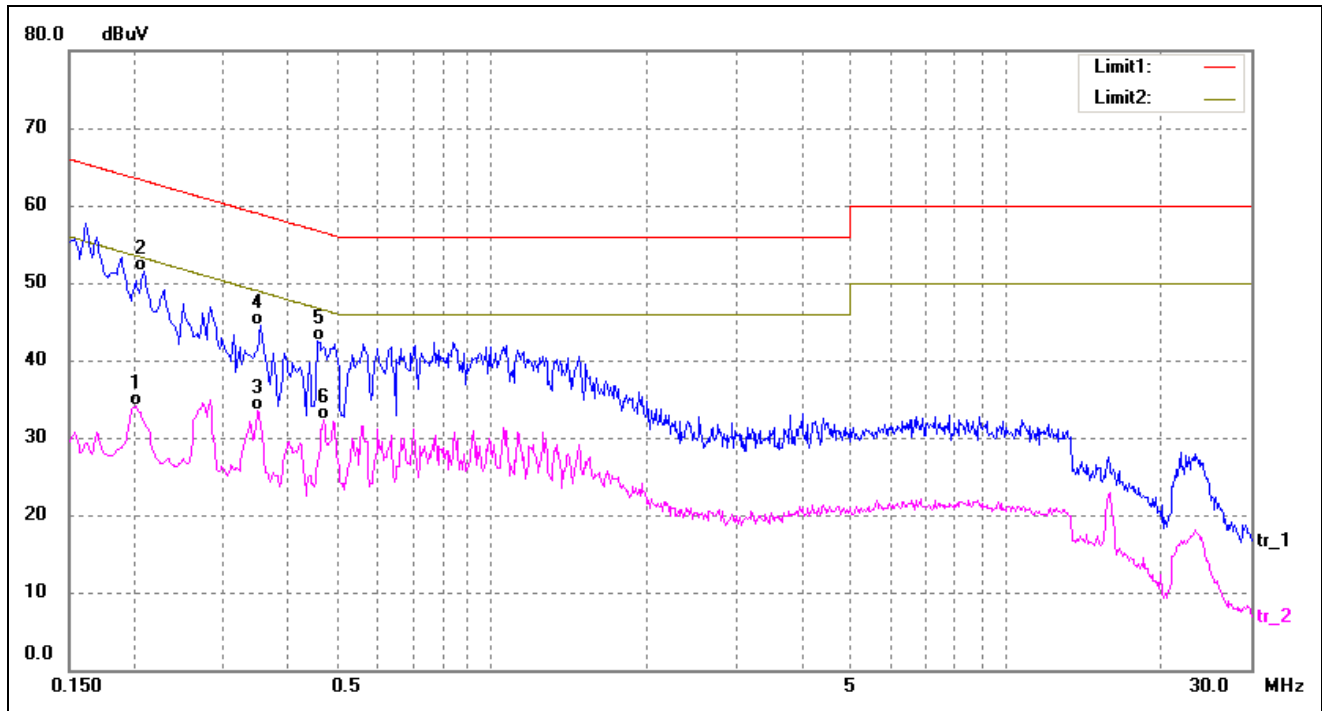
-11.69 dB at 0.2100 MHz in the Neutral, QP detector, 0.15-30MHz

5.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

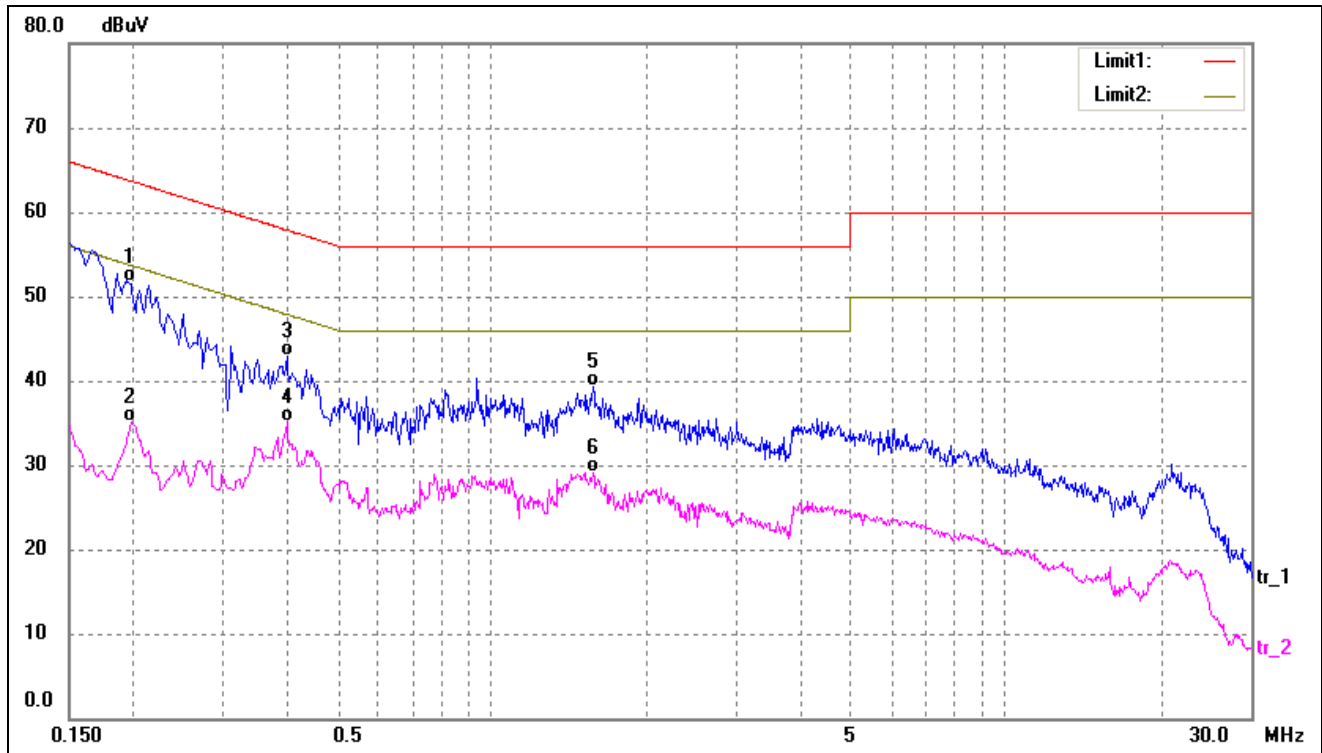
EUT: Mobile Phone
Tested Model: EZ-100
Operating Condition: Transmitting
Comment: AC 120V/60Hz;

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2020	24.25	9.80	34.05	53.53	-19.48	AVG
2*	0.2100	41.72	9.80	51.52	63.21	-11.69	QP
3	0.3500	23.67	9.80	33.47	48.96	-15.49	AVG
4	0.3540	34.64	9.80	44.44	58.87	-14.43	QP
5	0.4580	32.69	9.80	42.49	56.73	-14.24	QP
6	0.4700	22.42	9.80	32.22	46.51	-14.29	AVG

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1945	41.98	9.81	51.79	63.84	-12.05	QP
2	0.1980	25.31	9.80	35.11	53.69	-18.58	AVG
3	0.3980	33.11	9.80	42.91	57.90	-14.99	QP
4	0.3980	25.40	9.80	35.20	47.90	-12.70	AVG
5	1.5740	29.51	9.75	39.26	56.00	-16.74	QP
6	1.5740	19.29	9.75	29.04	46.00	-16.96	AVG

6. Power Spectral Density

6.1 Standard Applicable

Section 15.407(a) Power limits:

(1) For the band 5.15-5.25 GHz.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

6.2 Test Procedure

According to 789033 D02 General UNII Test Procedures New Rules v01, the following is the measurement procedure.

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth ($< 1 \text{ MHz}$, or $< 500 \text{ kHz}$) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set $RBW \geq 1/T$, where T is defined in section II.B.1.a).
- b) Set $VBW \geq 3 RBW$.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas $RBW (< 500 \text{ KHz})$ is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas $RBW (< 1 \text{ MHz})$ is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since $RBW=100 \text{ KHz}$ is available on nearly all spectrum analyzers.

6.3 Environmental Conditions

Temperature:	20° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

6.4 Summary of Test Results/Plots

5150-5250MHz

Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz)
802.11a	5180	1.964	11
	5200	1.723	11
	5240	2.199	11
802.11n-HT20	5180	1.425	11
	5200	1.792	11
	5240	2.179	11
802.11n-HT40	5190	-1.532	11
	5230	-0.659	11

5250-5350MHz

Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz))
802.11a	5260	2.122	11
	5280	1.273	11
	5320	1.521	11
802.11n-HT20	5260	1.765	11
	5280	1.765	11
	5320	1.696	11
802.11n-HT40	5270	-1.298	11
	5310	-1.373	11

5470-5725MHz

Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz)
802.11a	5500	-0.108	11
	5600	-0.880	11
	5700	-1.102	11
802.11n-HT20	5500	-0.025	11
	5600	-0.571	11
	5700	-0.765	11
802.11n-HT40	5510	-2.438	11
	5590	-3.746	11
	5670	-4.253	11

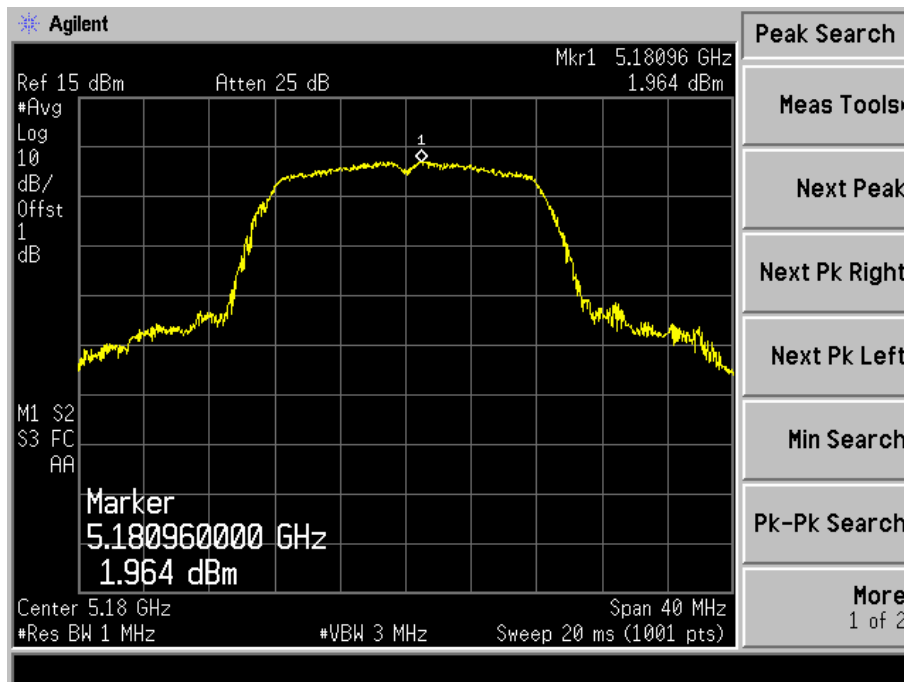
5725-5850MHz

Operating mode	Test Channel	Power Spectral Density dBm/510kHz	Power Spectral Density* dBm/500kHz	Limit (dBm/500kHz)
802.11a	5745	-1.553	1.447	30
	5785	-1.661	1.339	30
	5825	-2.146	0.854	30
802.11n-HT20	5745	-2.350	0.650	30
	5785	-1.864	1.136	30
	5825	-2.092	0.908	30
802.11n-HT40	5755	-5.620	-2.620	30
	5795	-5.198	-2.198	30
*Note: Maximum PSD=PSD(dBm/510kHz)+10log(1MHz/510kHz)=3				

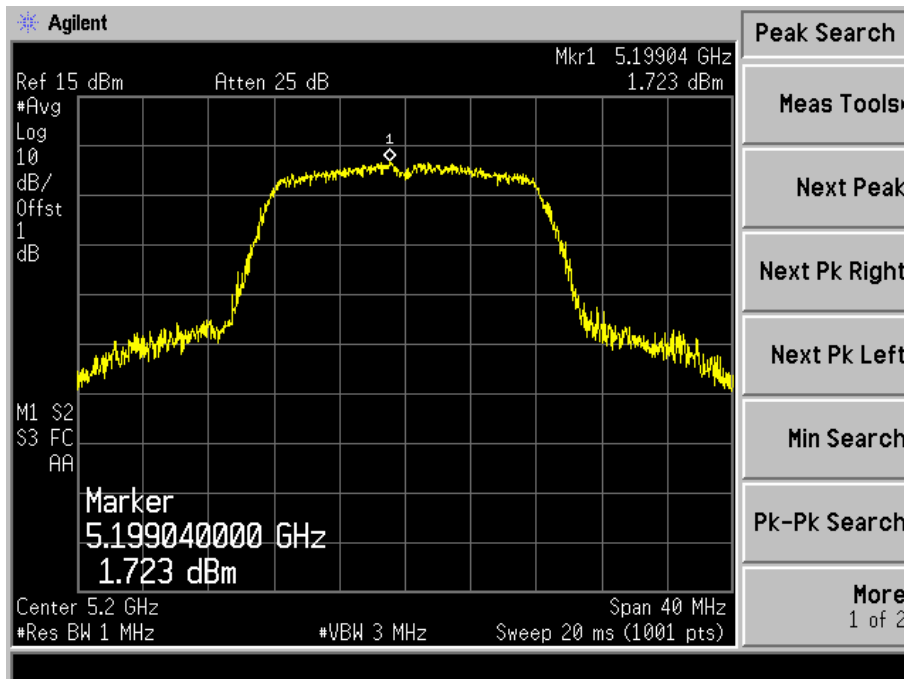
5150-5250MHz:

Test Mode: 802.11a

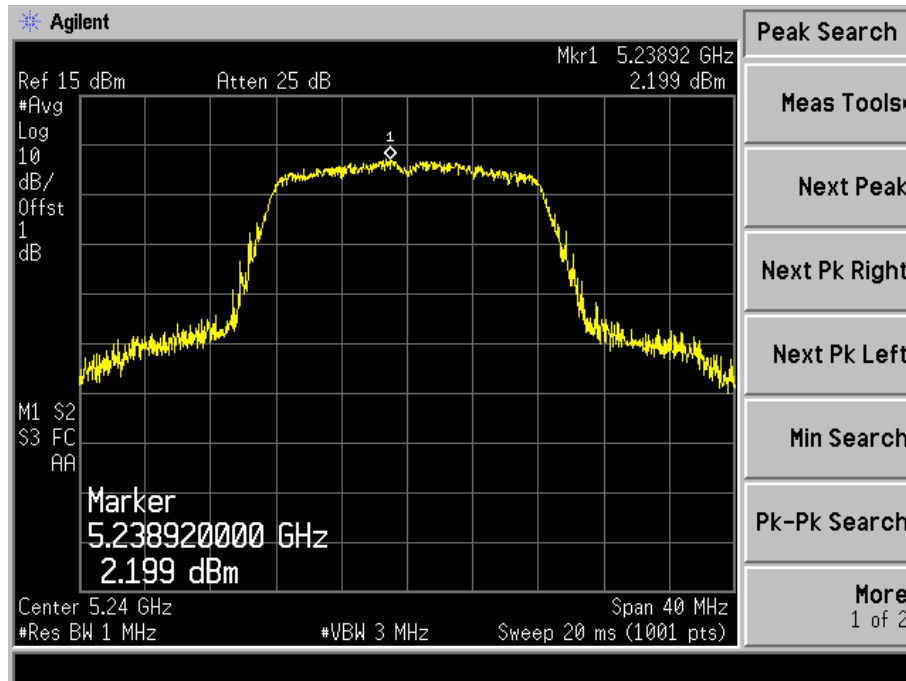
5180MHz



5200MHz

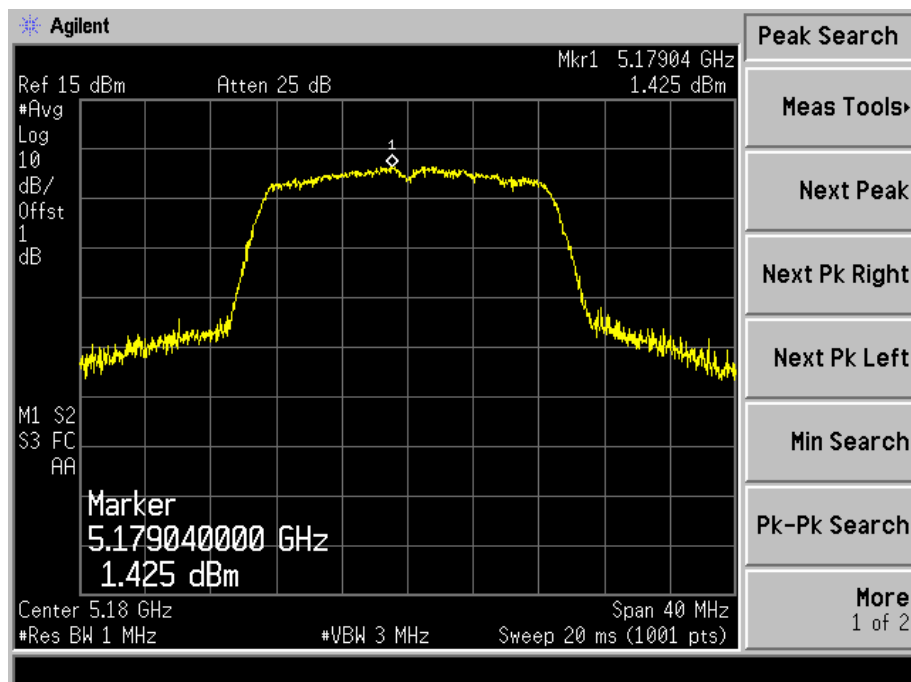


5240MHz

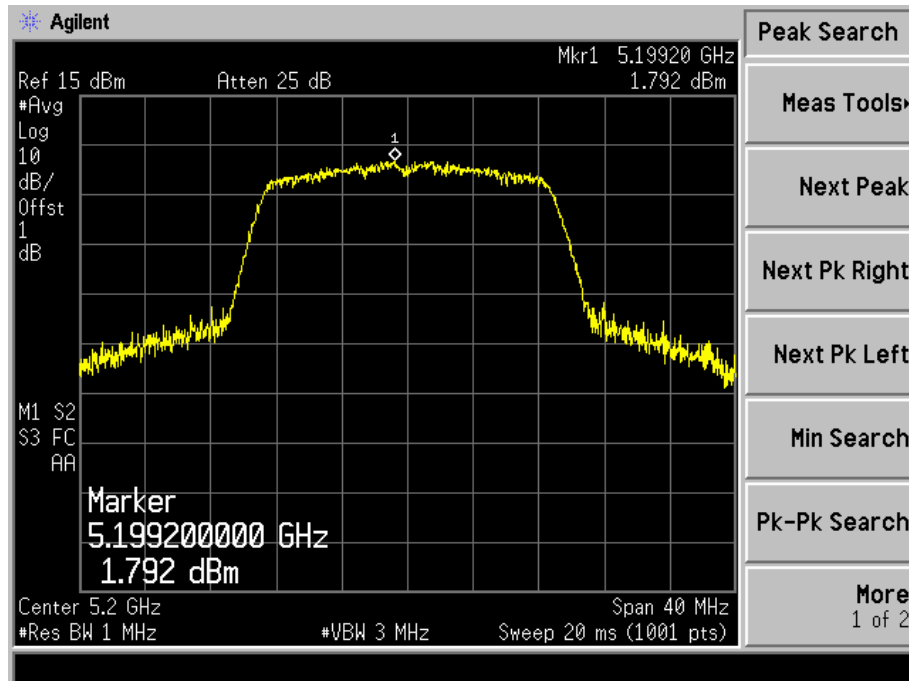


Test Mode: 802.11n-HT20

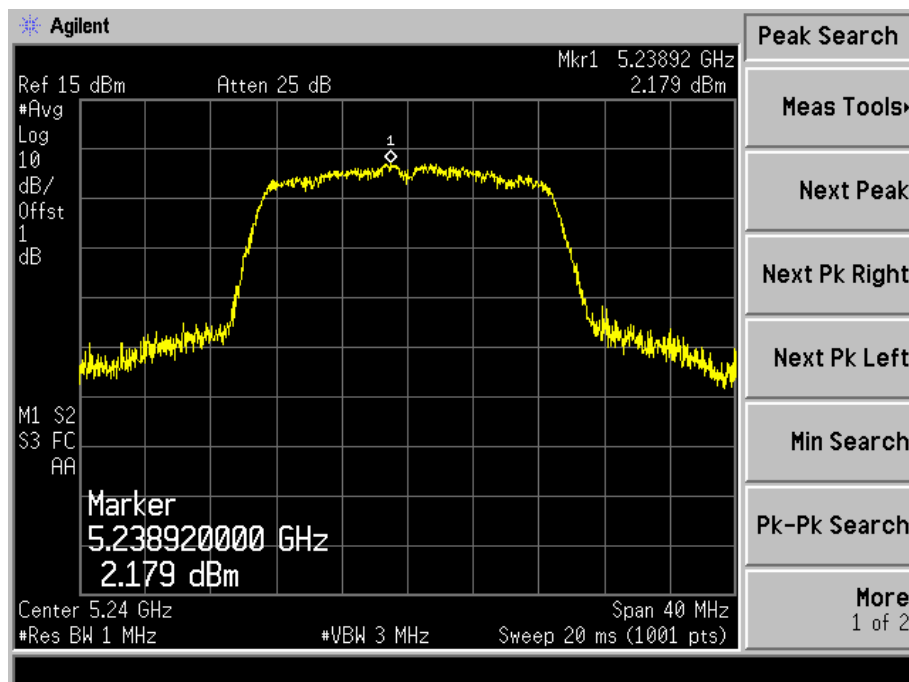
5180MHz



5200MHz

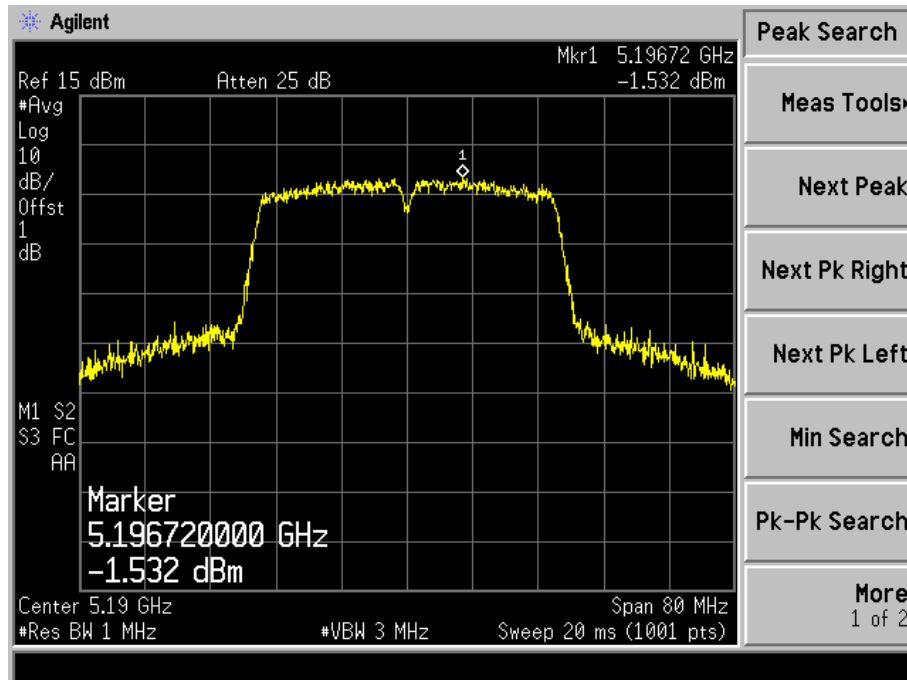


5240MHz

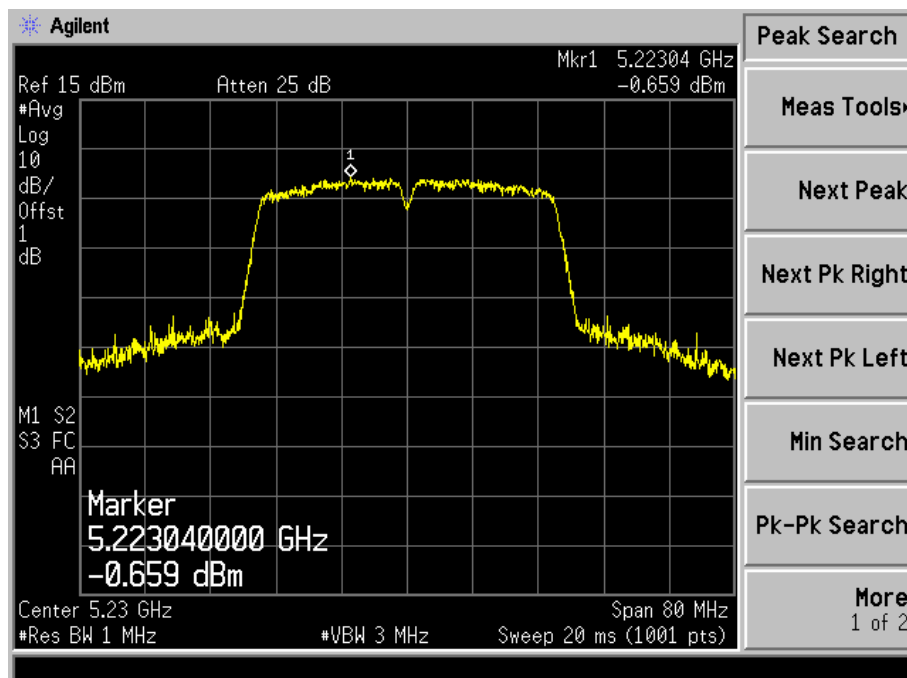


Test Mode: 802.11n-HT40

5190MHz



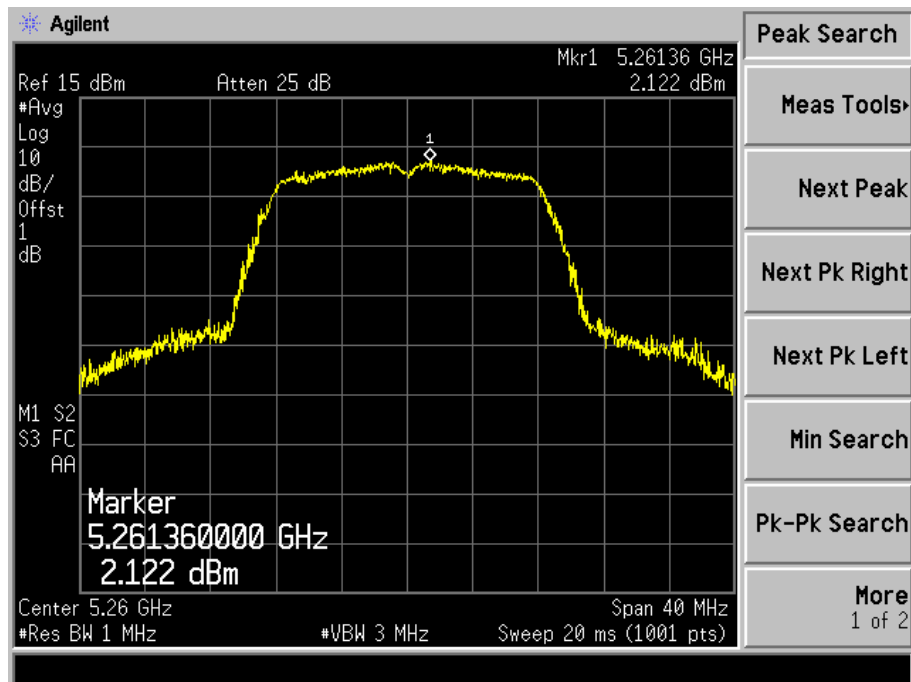
5230MHz



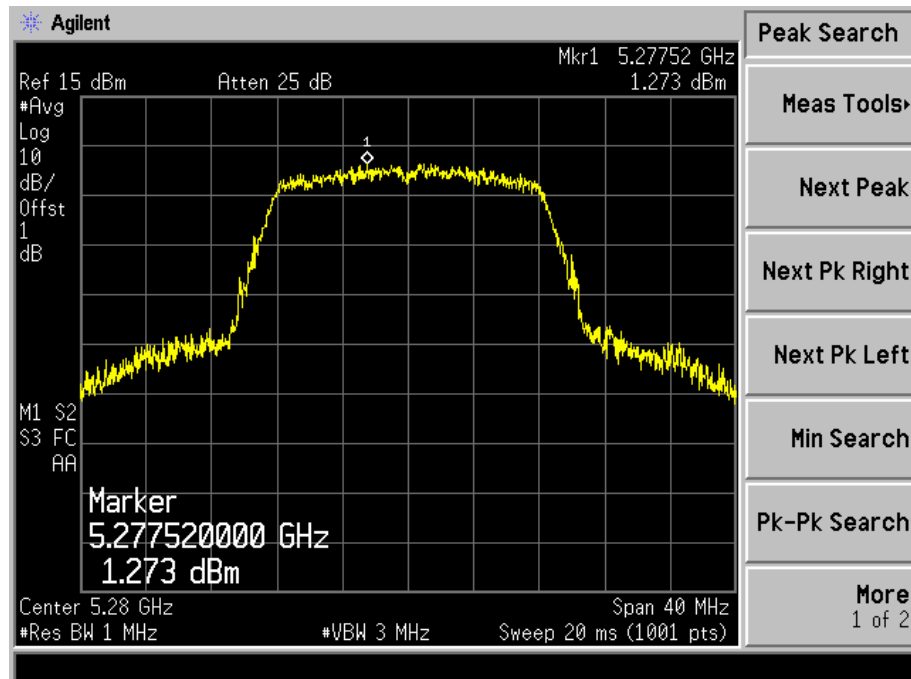
5250-5350MHz:

Test Mode: 802.11a

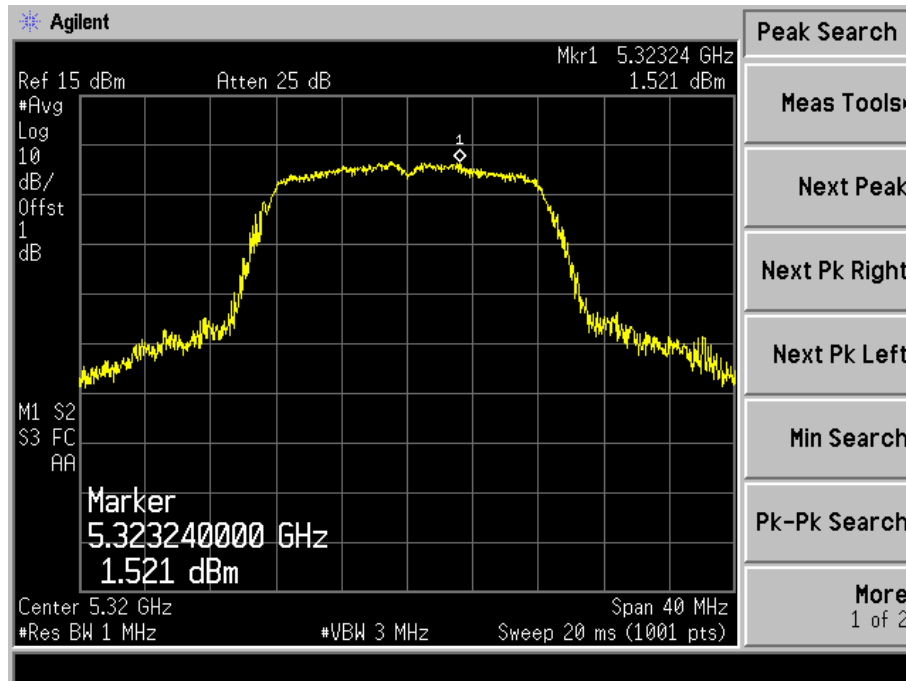
5260MHz



5280MHz

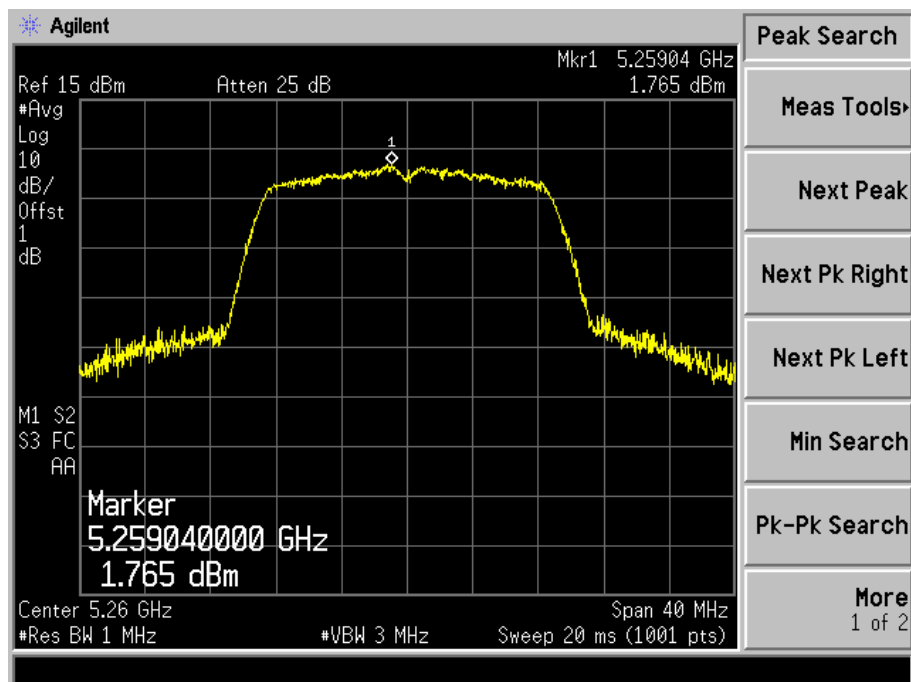


5320MHz

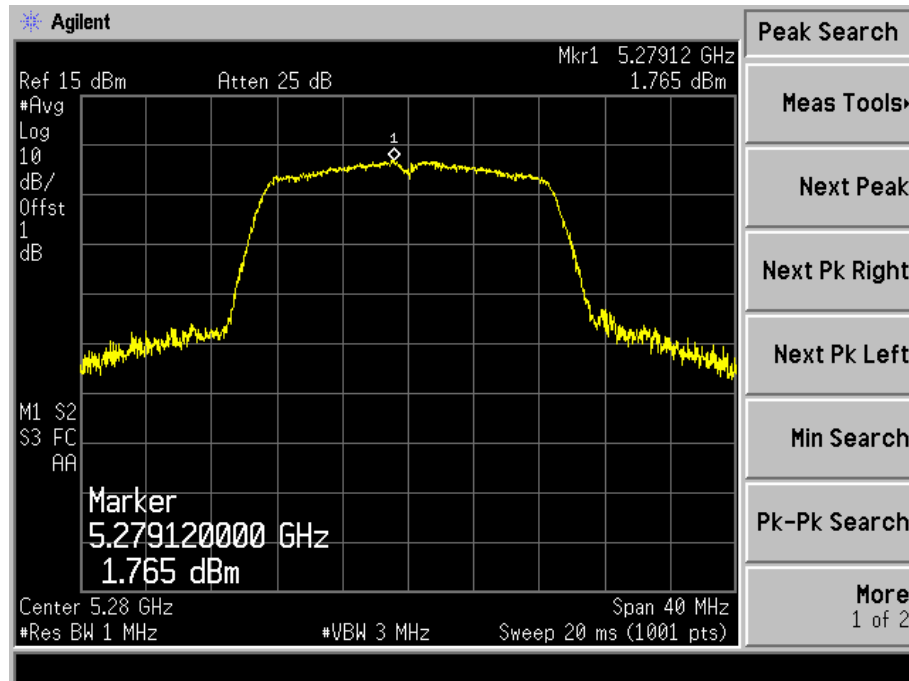


Test Mode: 802.11n-HT20

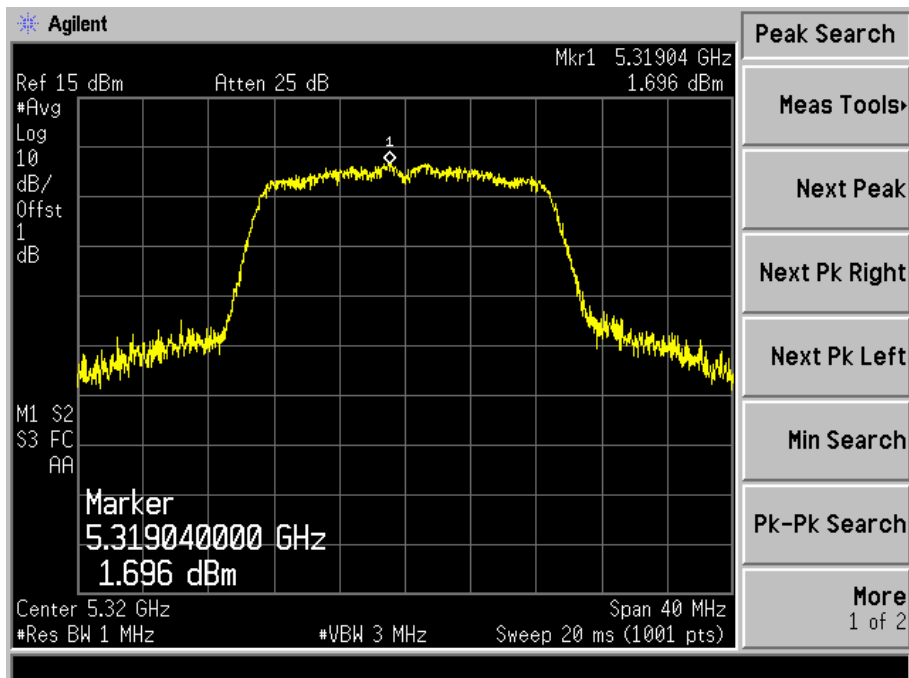
5260MHz



5280MHz

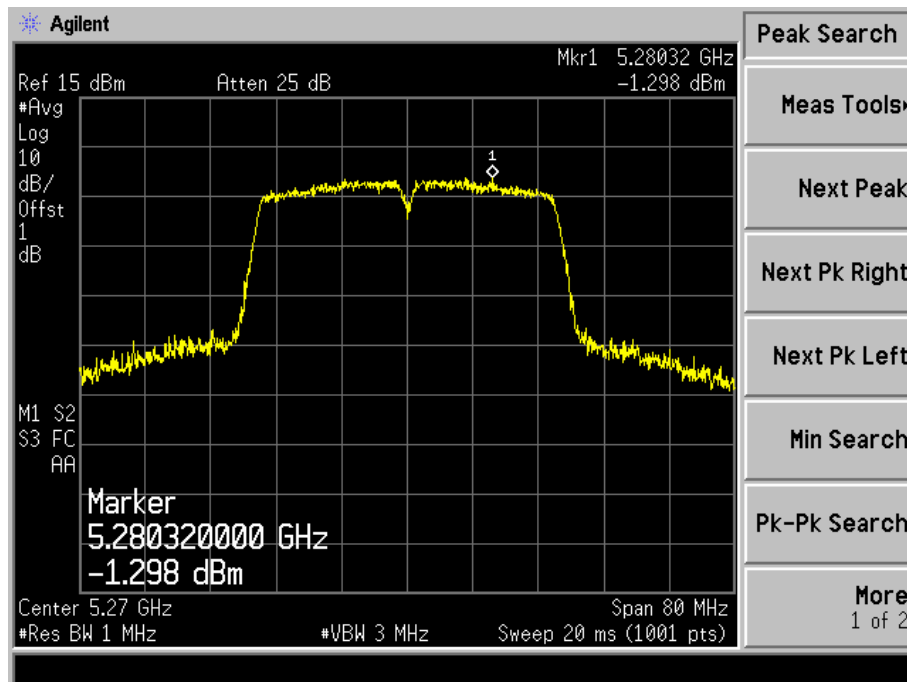


5320MHz

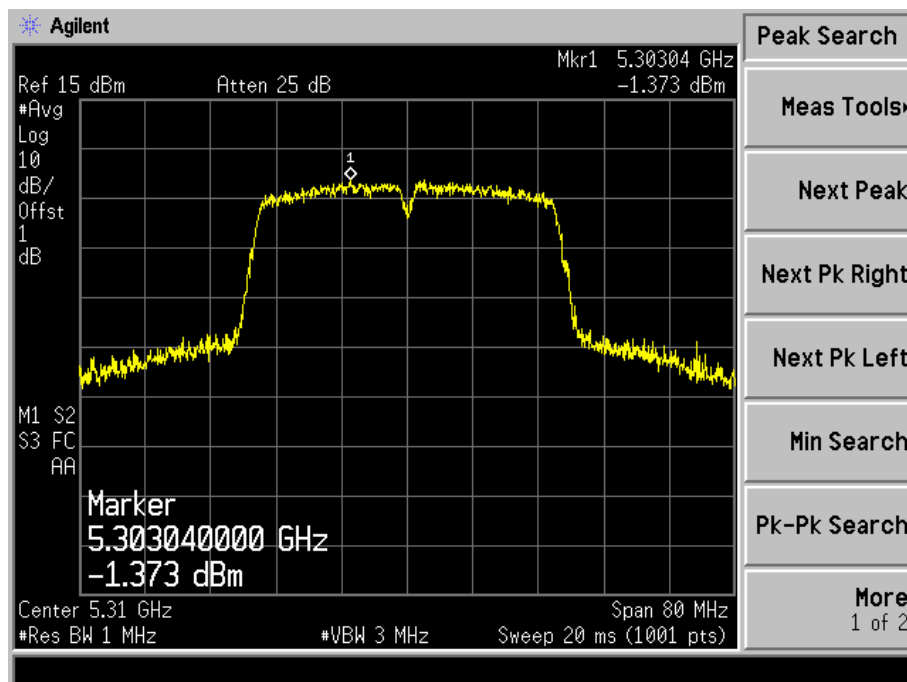


Test Mode: 802.11n-HT40

5270MHz



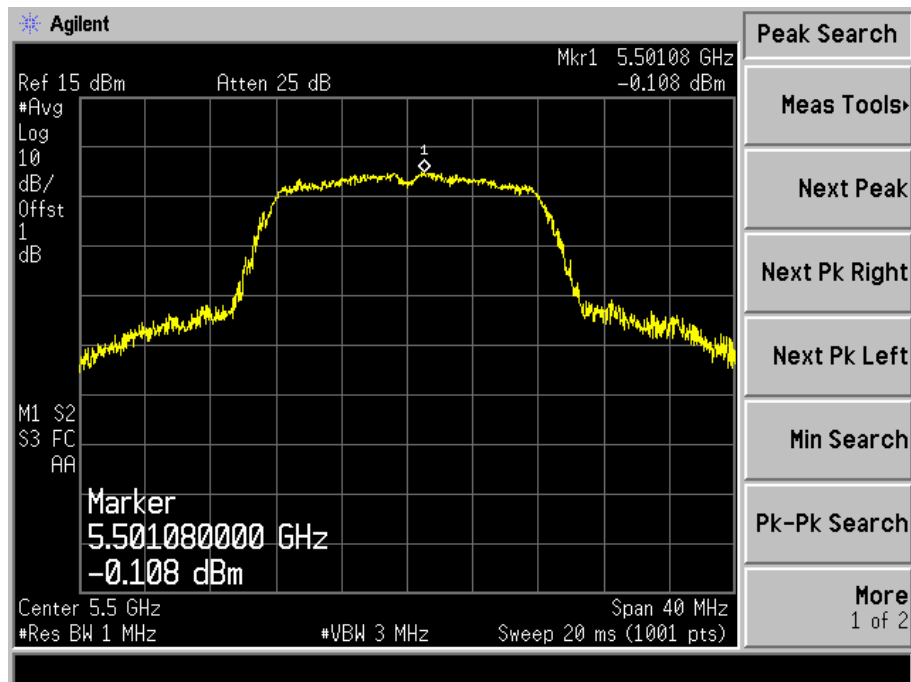
5310MHz



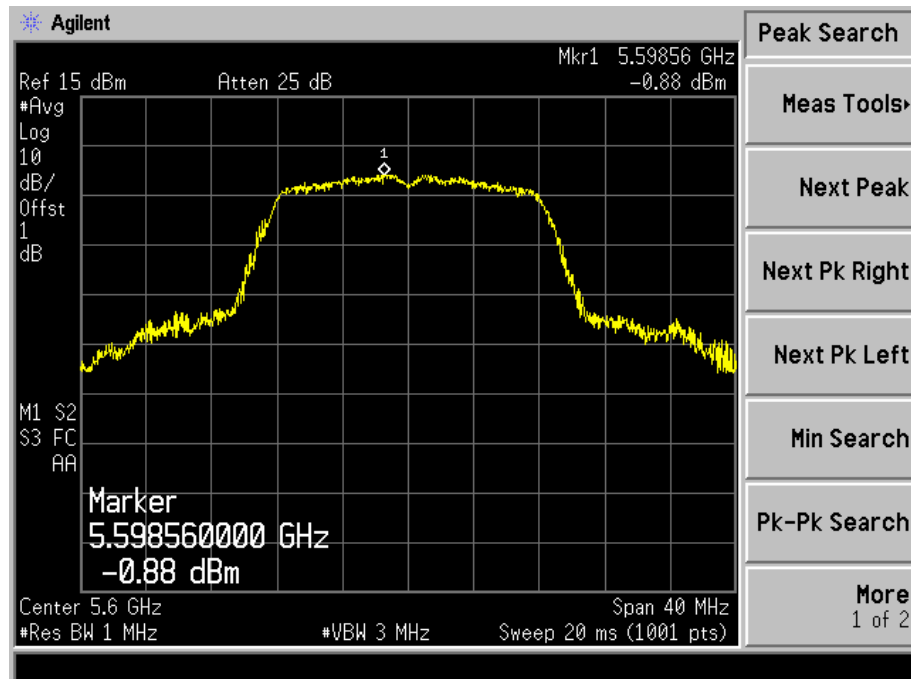
5470-5725MHz

Test Mode: 802.11a

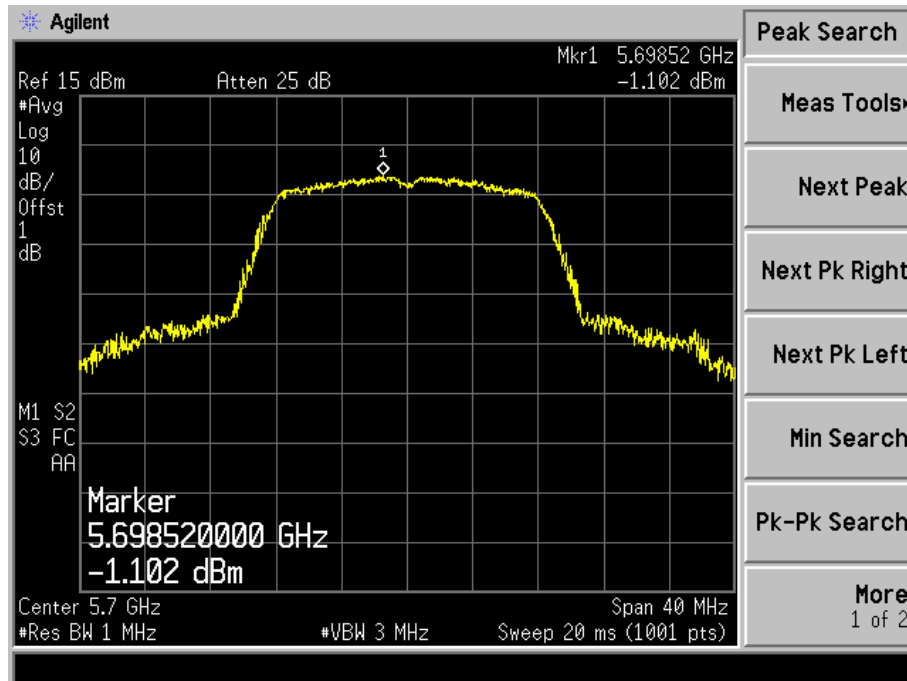
5500MHz



5600MHz

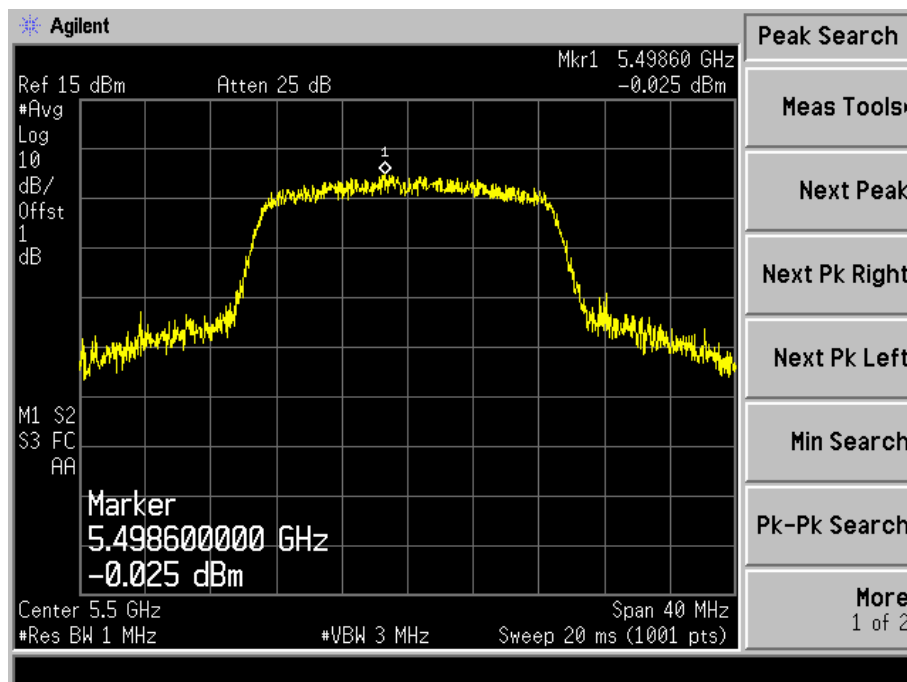


5700MHz

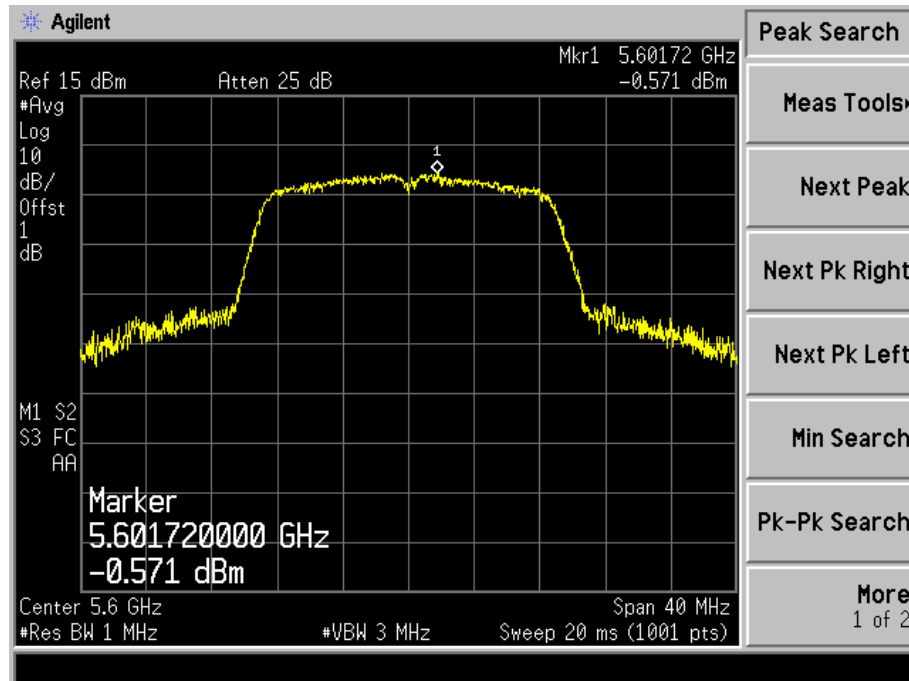


Test Mode: 802.11n-HT20

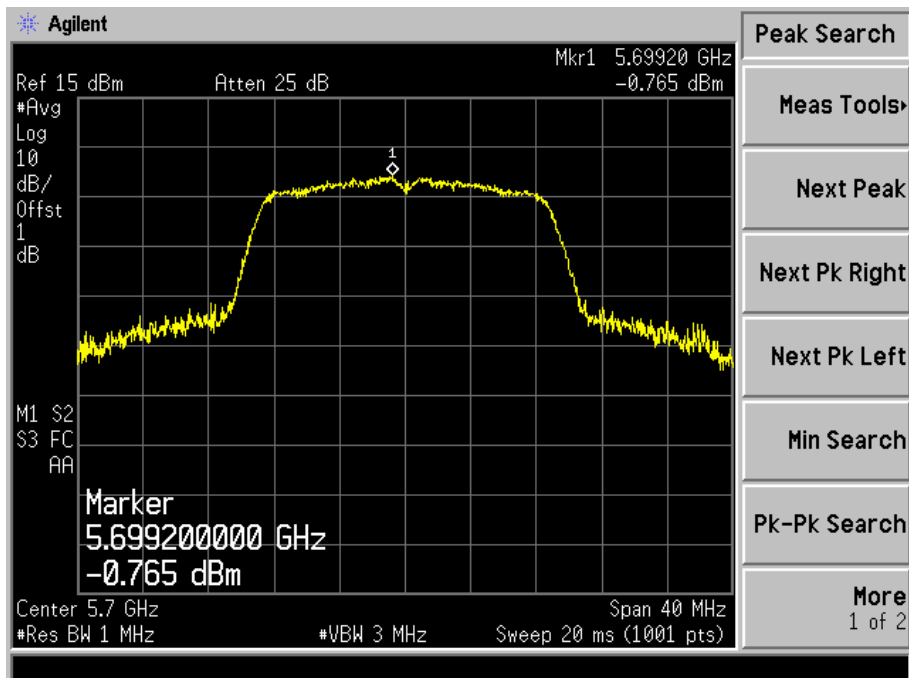
5500MHz



5600MHz

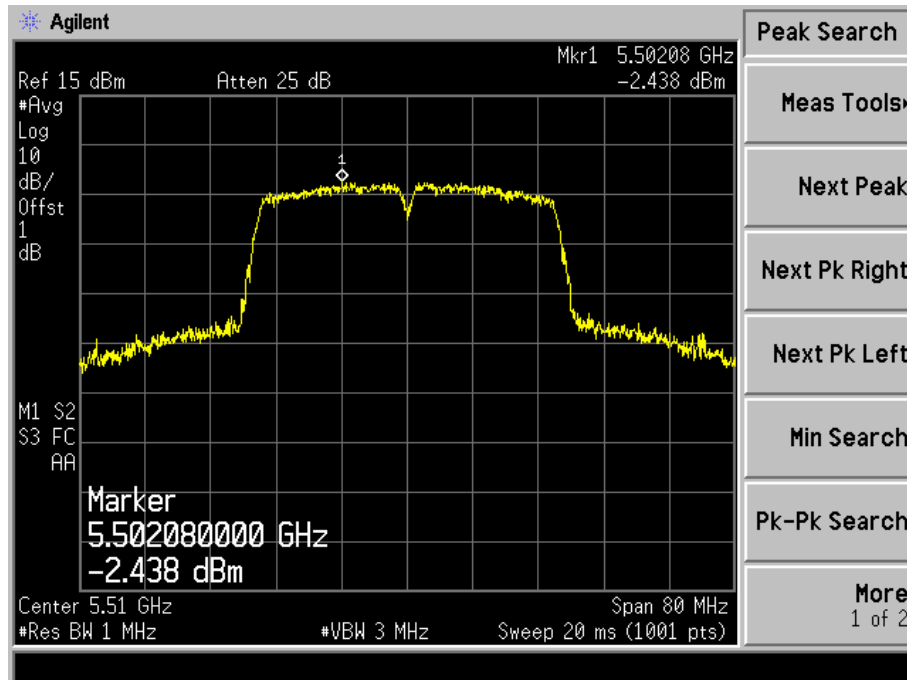


5700MHz

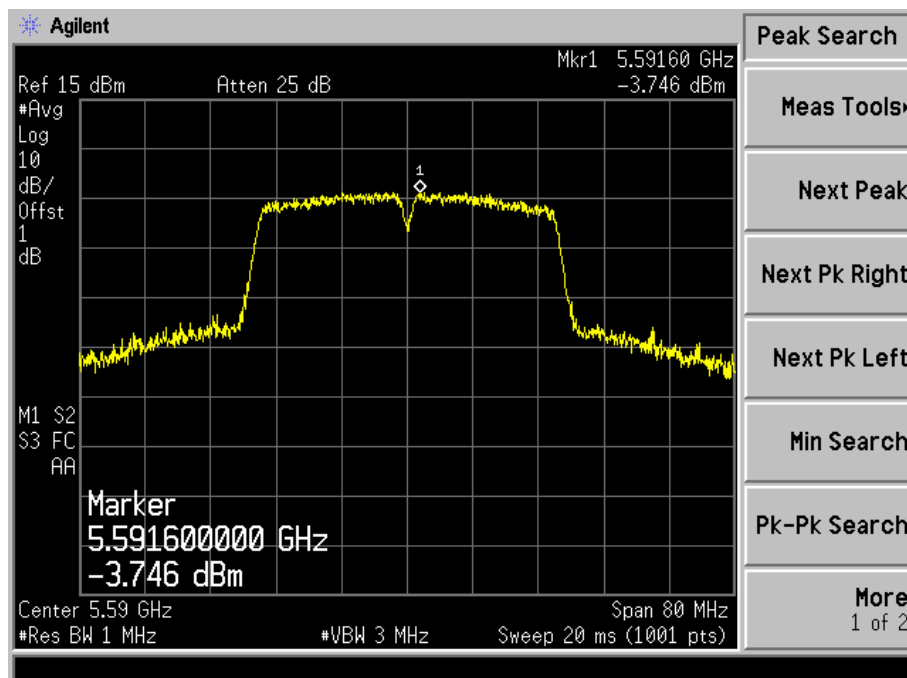


Test Mode: 802.11n-HT40

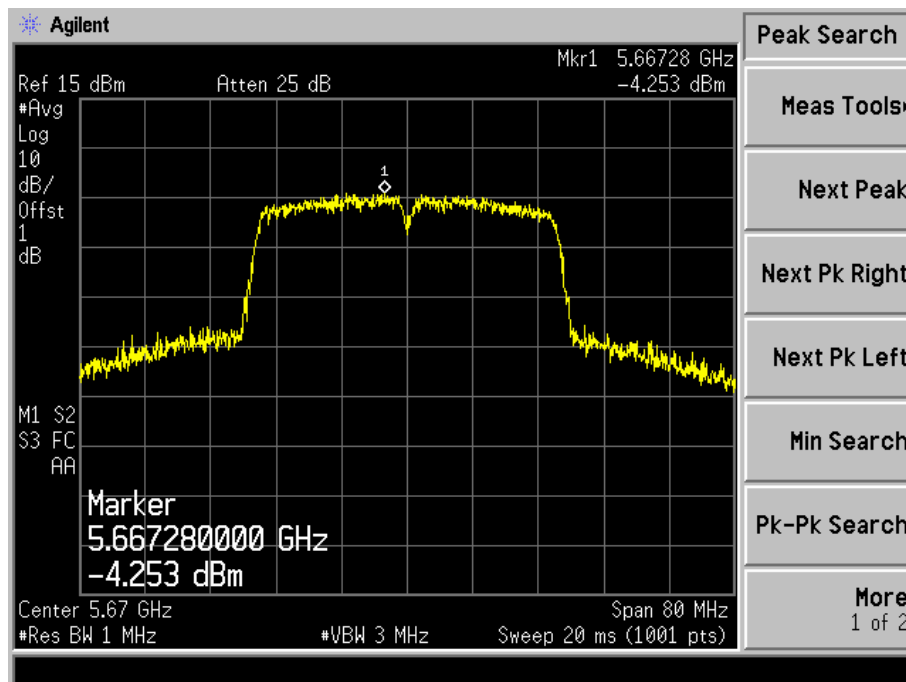
55100MHz



5590MHz



5670MHz



5725-5850MHz

Test Mode: 802.11a

5745MHz



5785MHz



5825MHz



Test Mode: 802.11n-HT20

5745MHz



5785MHz



5825MHz



Test Mode: 802.11n-HT40

5755MHz



5795MHz



7. Emission Bandwidth and Occupied Bandwidth

7.1 Standard Applicable

According to 15.407 (a) and (e)

(1) For the band 5.15-5.25 GHz.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(e) Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

7.2 Test Procedure

According to 789033 D02 v01r02 section C&D, the following is the measurement procedure.

1. Emission Bandwidth (EBW)

a) Set RBW = approximately 1% of the emission bandwidth.

b) Set the VBW > RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare

this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

2. Minimum Emission Bandwidth for the band 5.725-5.85 GHz

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

D. 99 Percent Occupied Bandwidth

The 99-percent occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission. Measurement of the 99-percent occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in section II.G.3.d). Measurements of 99-percent occupied bandwidth may also optionally be used in lieu of the EBW to 789033 D02 v01r02 General UNII Test Procedures New Rules v01 define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in section II.E. However, the EBW must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW $\geq 3 \cdot \text{RBW}$
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

7.3 Environmental Conditions

Temperature:	24° C
Relative Humidity:	53%
ATM Pressure:	1018 mbar

7.4 Summary of Test Results/Plots

5150-5250MHz

Test Mode	Test Channel MHz	26 dB Bandwidth MHz	99% Bandwidth MHz	Limit MHz
802.11a	5180	19.537	16.7136	Pass
	5200	19.817	16.7130	Pass
	5240	19.789	16.6963	Pass
802.11n-HT20	5180	19.992	17.6442	Pass
	5200	19.890	17.6674	Pass
	5240	19.939	17.6462	Pass
802.11n-HT40	5190	40.928	36.2349	Pass
	5230	40.928	36.2349	Pass

5250-5350MHz

Test Mode	Test Channel MHz	26 dB Bandwidth MHz	99% Bandwidth MHz	Limit MHz
802.11a	5260	19.903	16.8684	Pass
	5280	19.729	16.8002	Pass
	5320	19.663	16.6836	Pass
802.11n-HT20	5260	19.856	17.6429	Pass
	5280	19.918	17.6569	Pass
	5320	19.864	17.6456	Pass
802.11n-HT40	5270	40.769	36.1966	Pass
	5310	40.761	36.2262	Pass

5470-5725MHz

Test Mode	Test Channel MHz	26 dB Bandwidth MHz	99% Bandwidth MHz	Limit MHz
802.11a	5500	19.721	16.7810	Pass
	5600	19.981	16.7298	Pass
	5700	19.526	16.7215	Pass
802.11n-HT20	5500	19.905	17.6684	Pass
	5600	19.761	17.6983	Pass
	5700	19.886	17.6951	Pass
802.11n-HT40	5510	41.328	36.3634	Pass
	5590	40.960	36.2961	Pass
	5670	41.300	36.3434	Pass

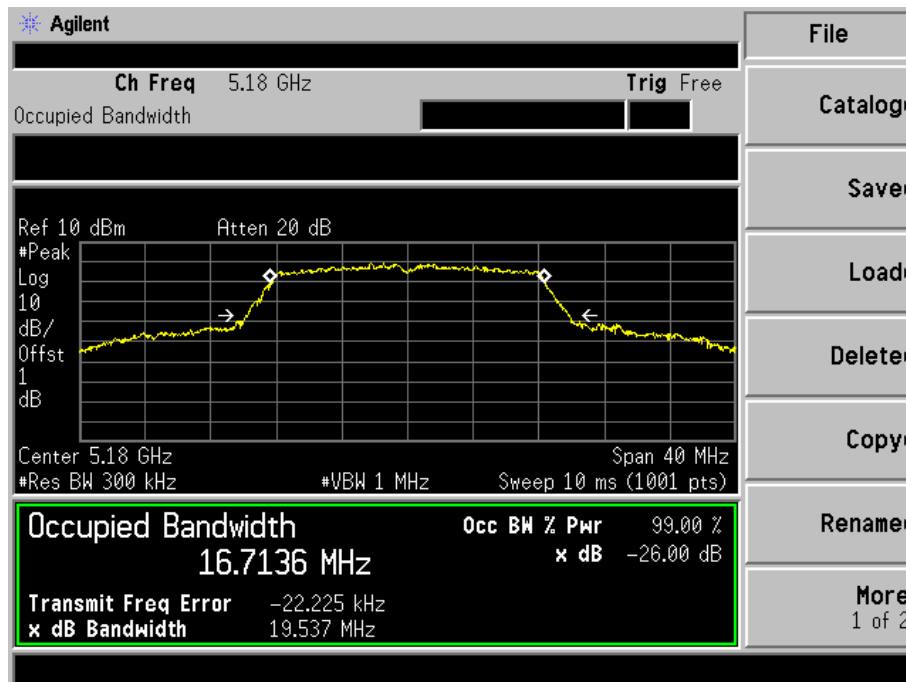
5725-5850MHz

Test Mode	Test Channel MHz	6 dB Bandwidth MHz	99% Bandwidth MHz	Limit MHz
802.11a	5745	16.278	16.7802	≥ 500
	5785	16.054	16.8195	≥ 500
	5825	16.157	16.7498	≥ 500
802.11n-HT20	5745	17.436	17.6599	≥ 500
	5785	17.418	17.6830	≥ 500
	5825	17.370	17.6674	≥ 500
802.11n-HT40	5755	36.04	36.012	≥ 500
	5795	35.81	35.995	≥ 500

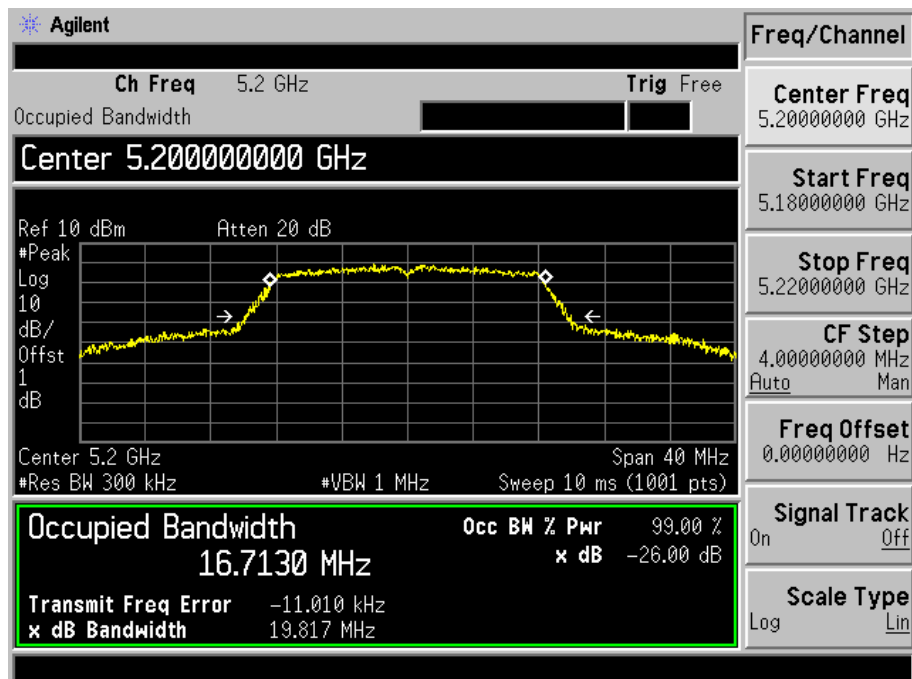
5150-5250MHz

Test mode: 802.11a

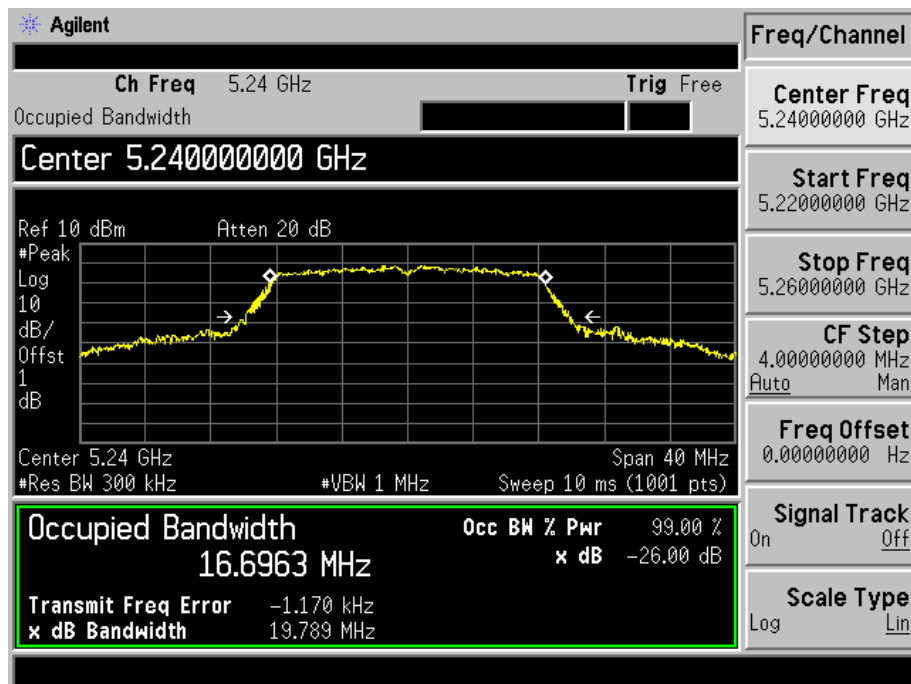
5180MHz



5200MHz

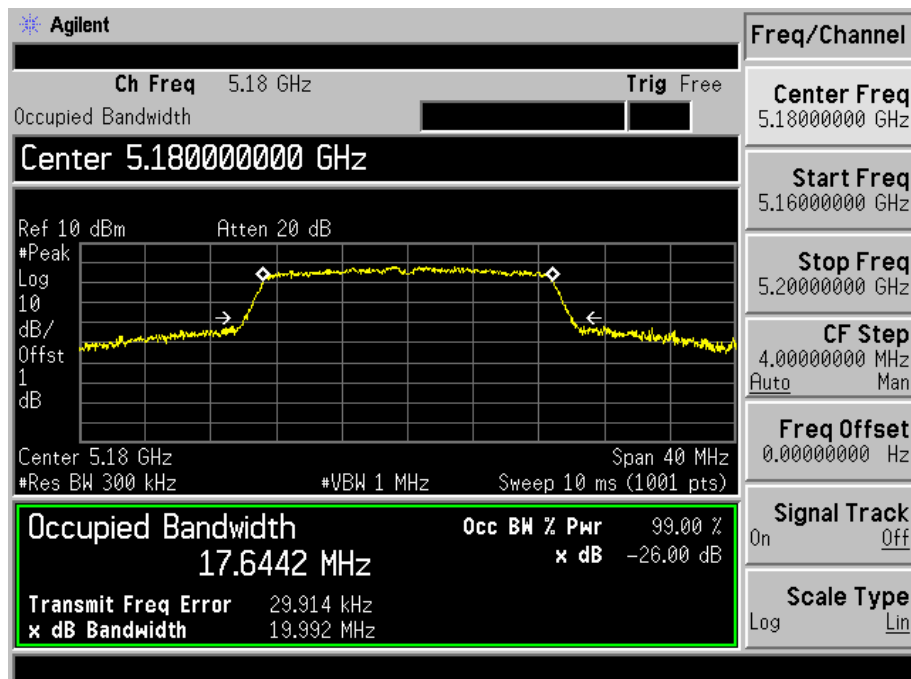


5240MHz

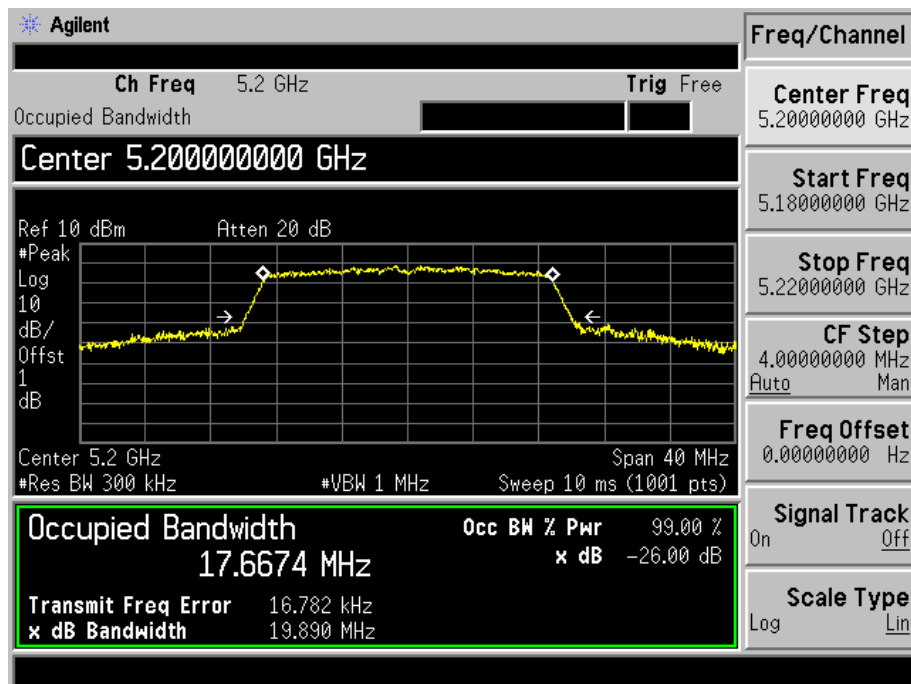


Test mode: 802.11n-HT20

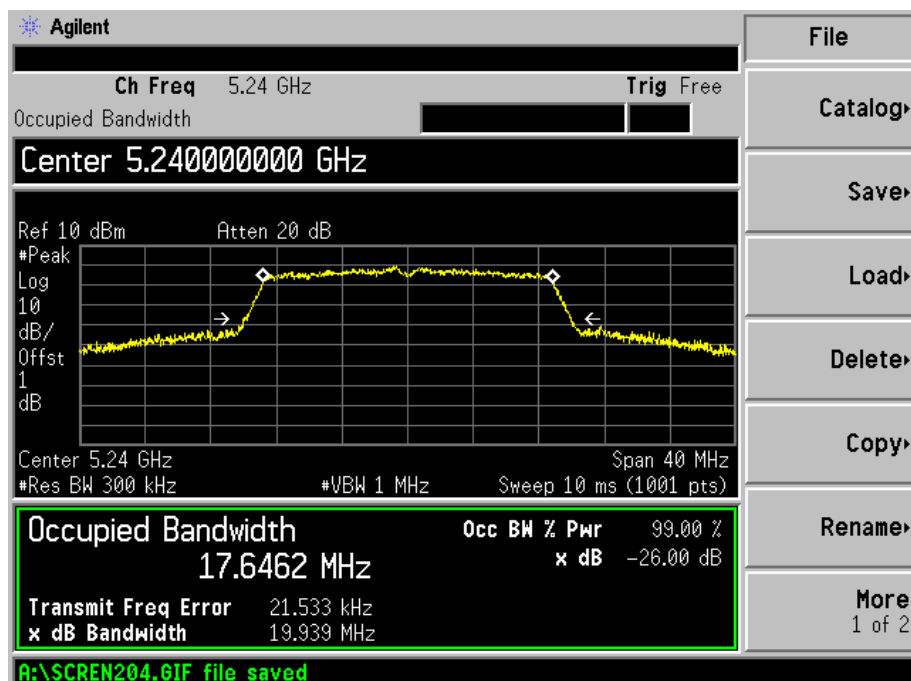
5180MHz



5200MHz

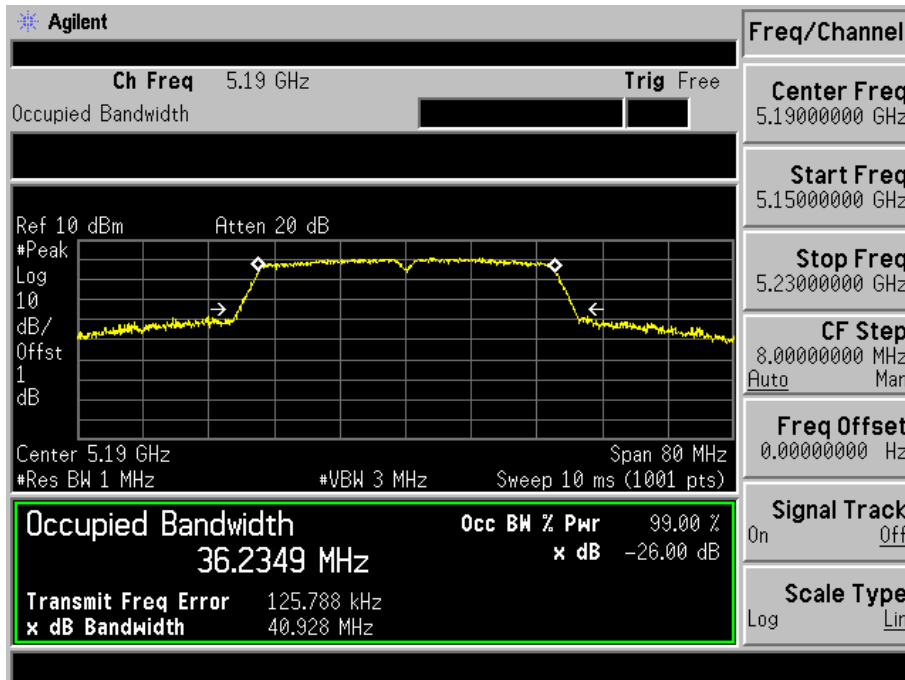


5240MHz

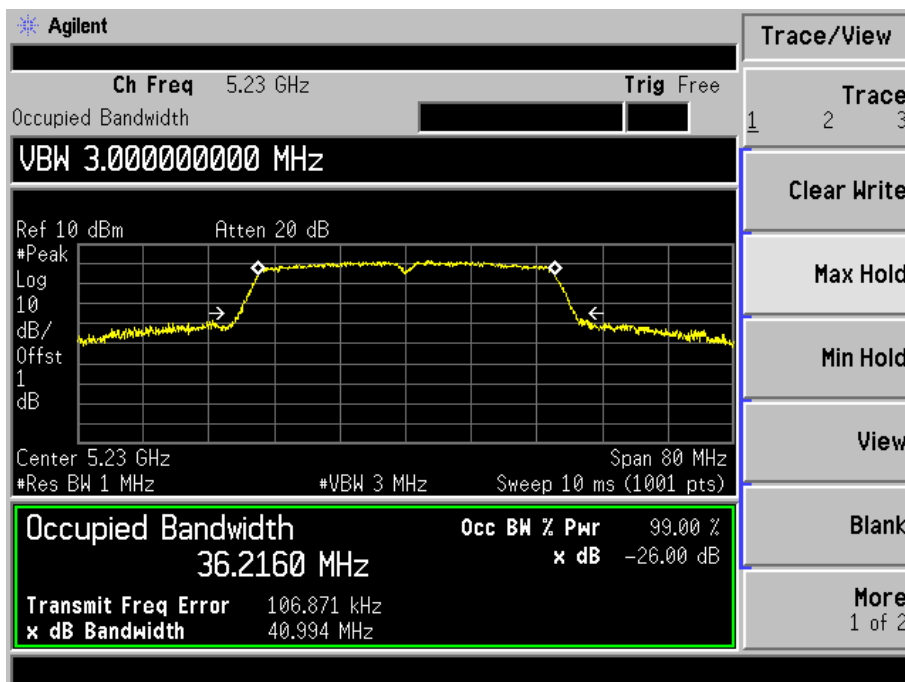


Test mode: 802.11n-HT40

5190MHz



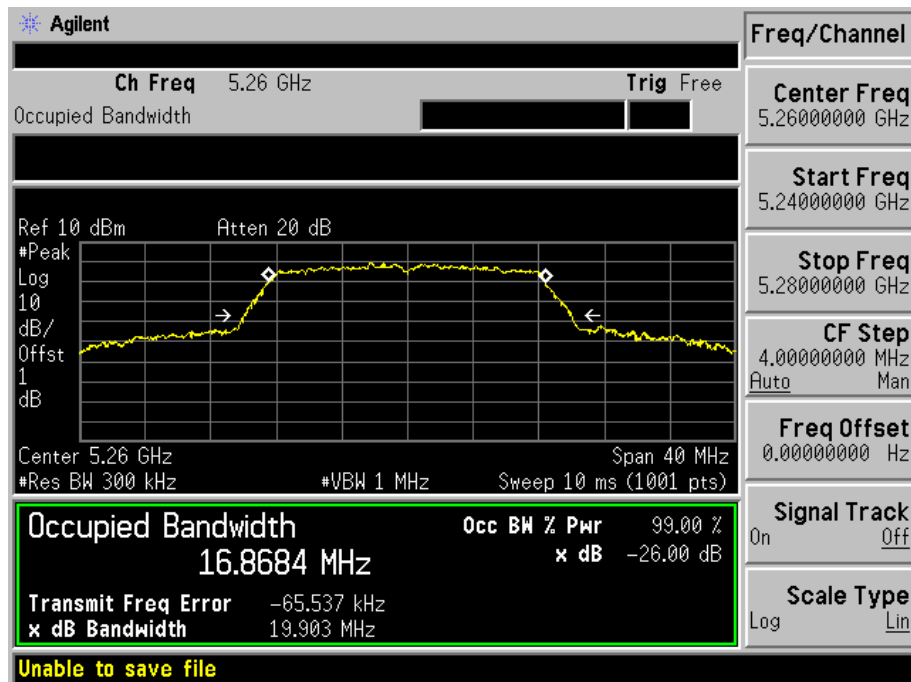
5230MHz



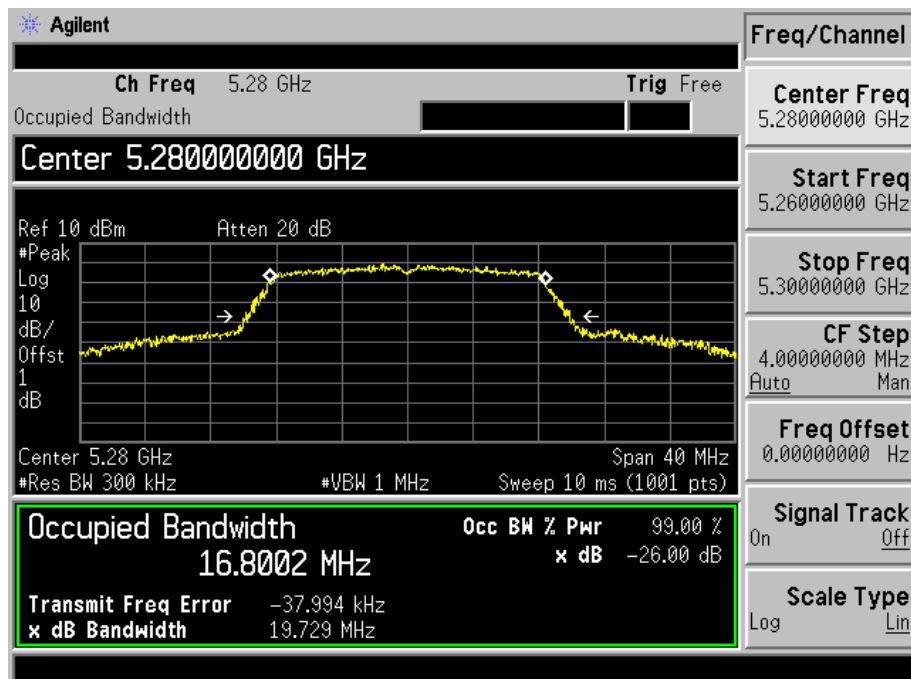
5250-5350MHz

Test mode: 802.11a

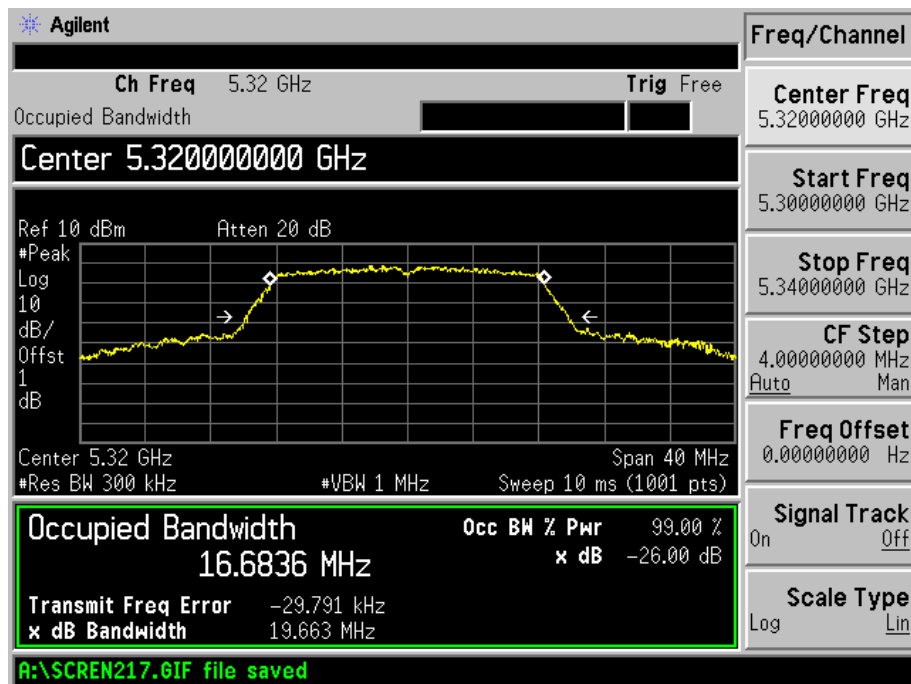
5260MHz



5280MHz

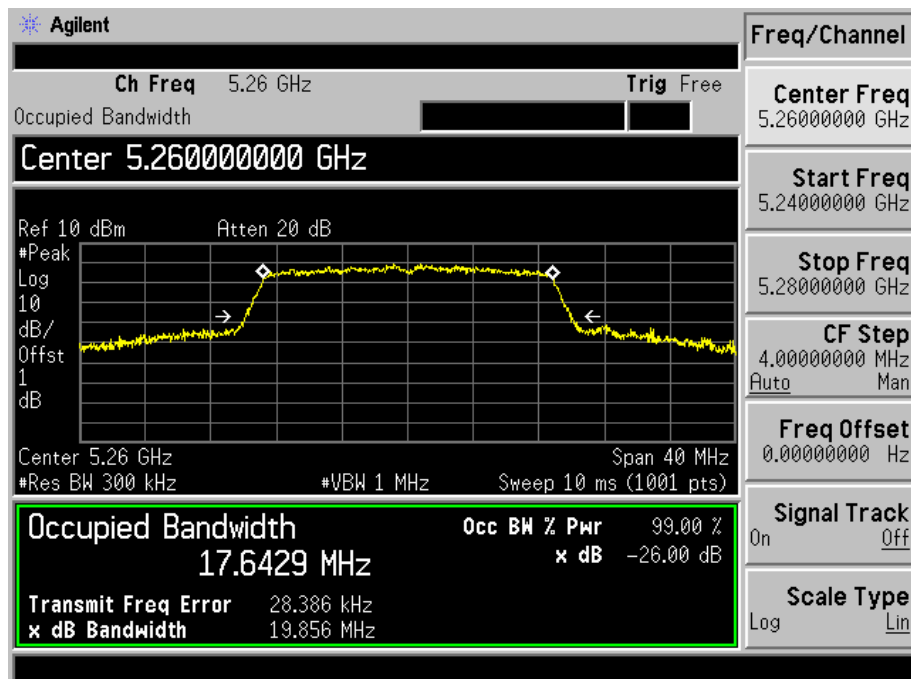


5260MHz

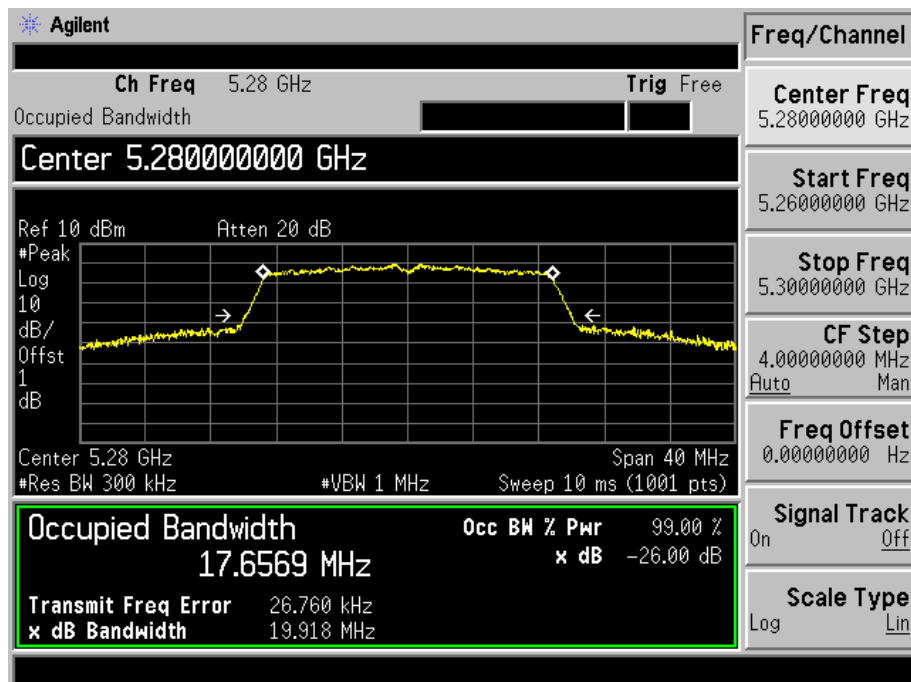


Test mode: 802.11n-HT20

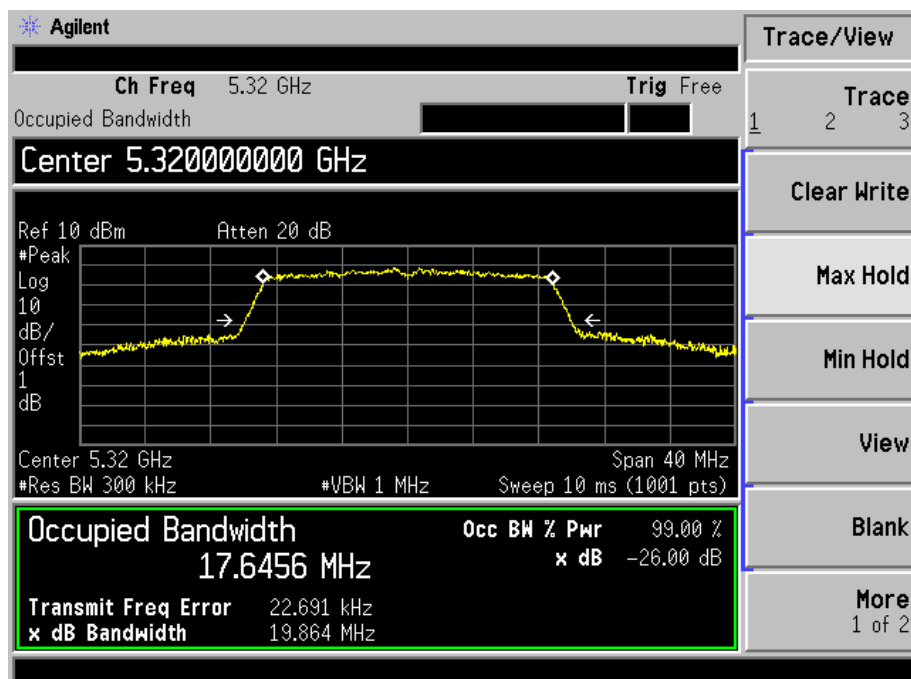
5260MHz



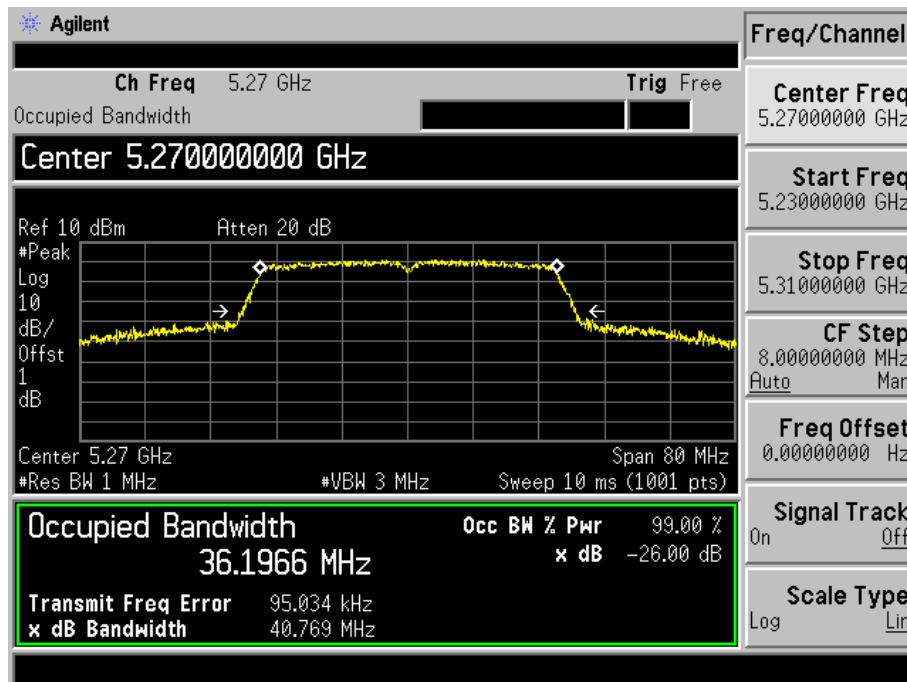
5280MHz



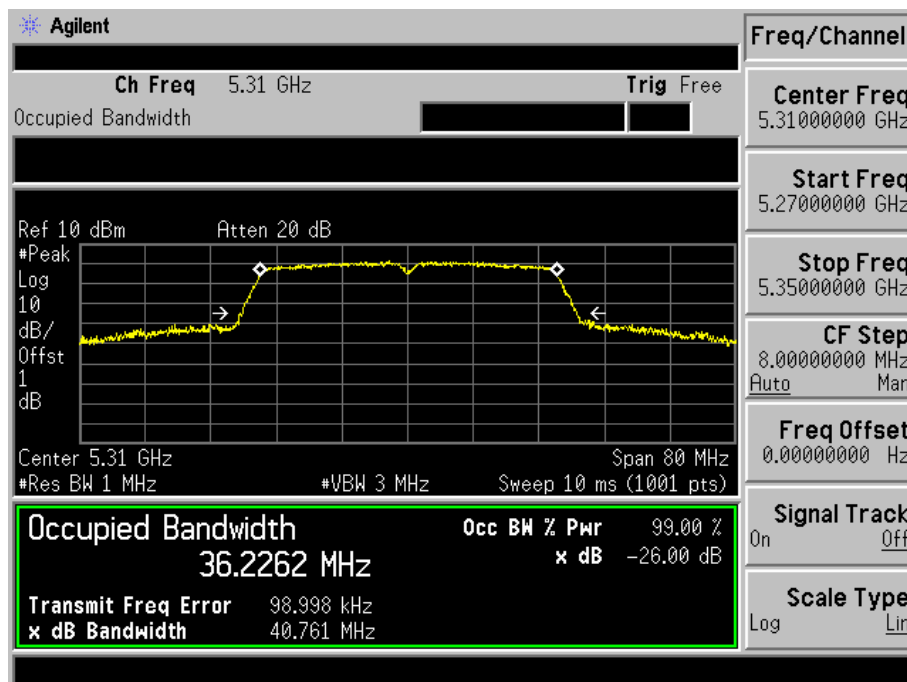
5260MHz



Test mode: 802.11n-HT40
5270MHz



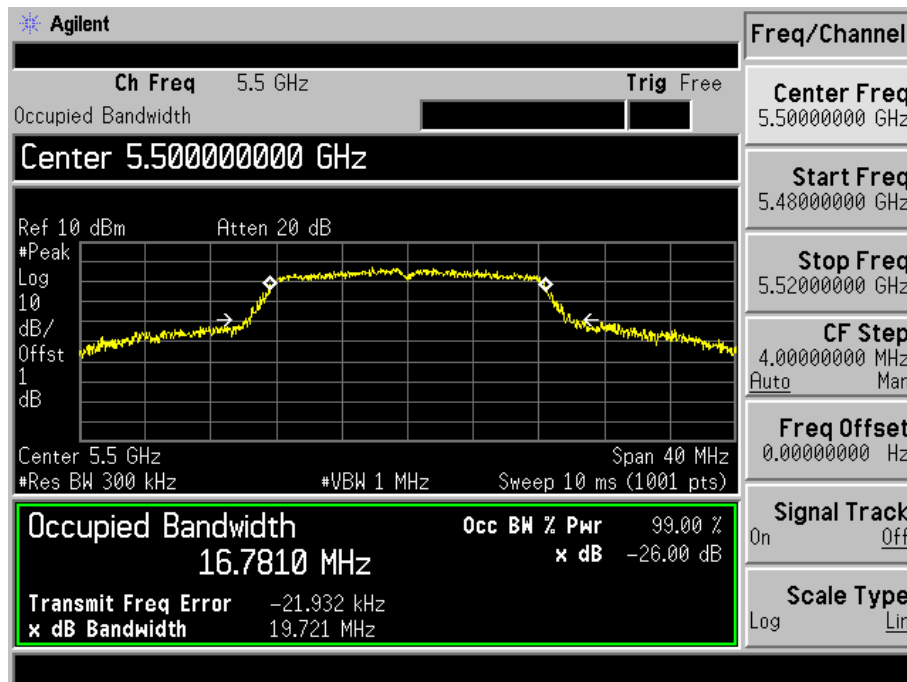
5310MHz



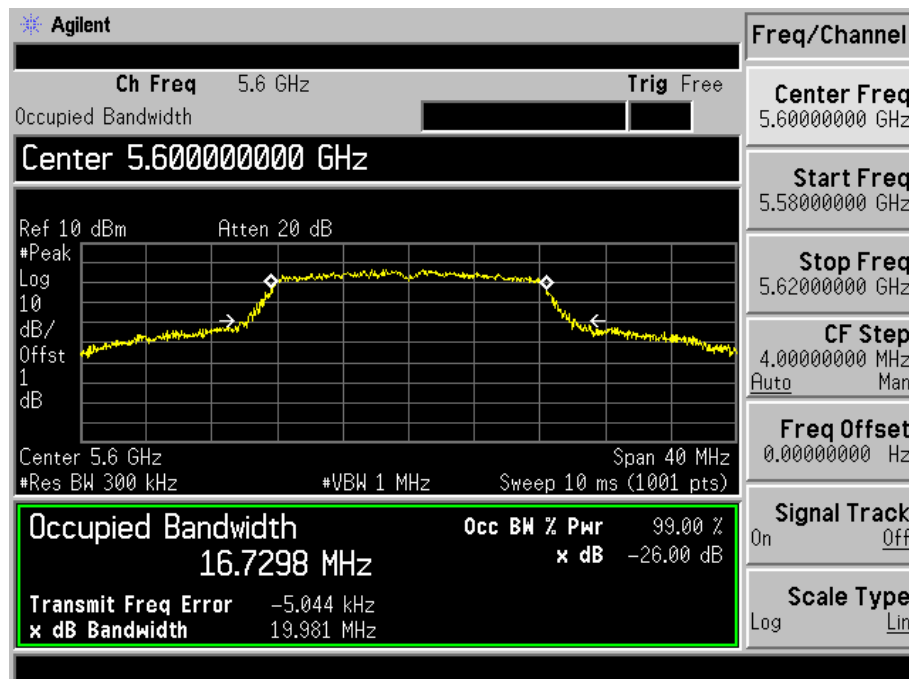
5470-5725MHz

Test mode: 802.11a

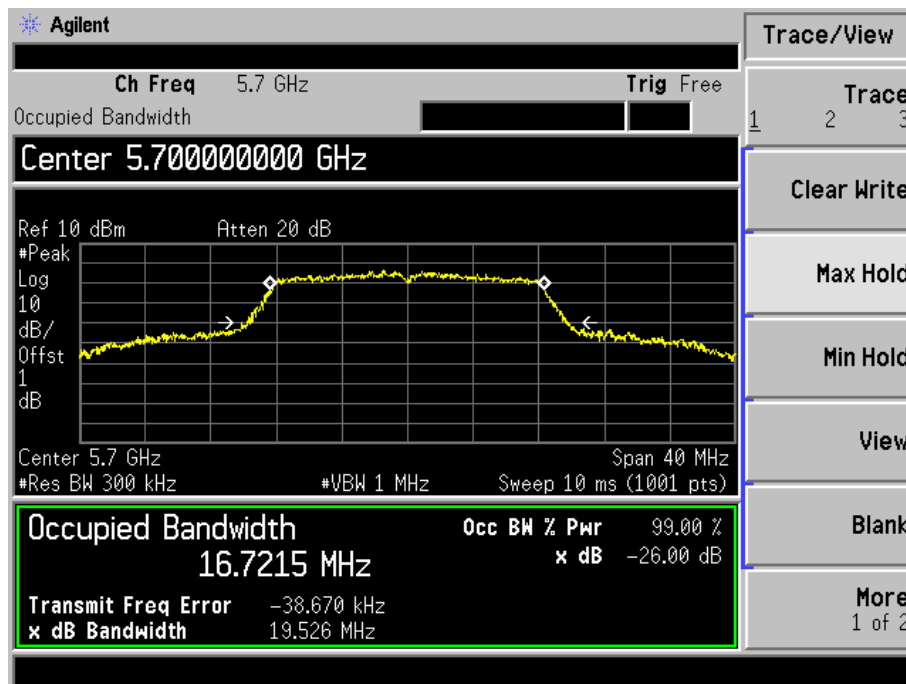
5500MHz



5600MHz

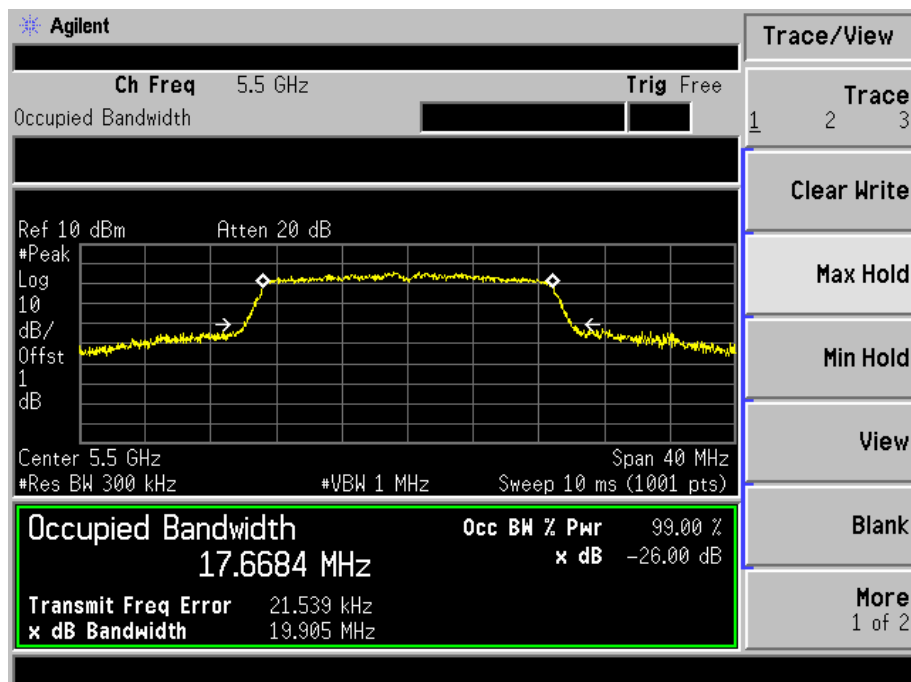


5700MHz

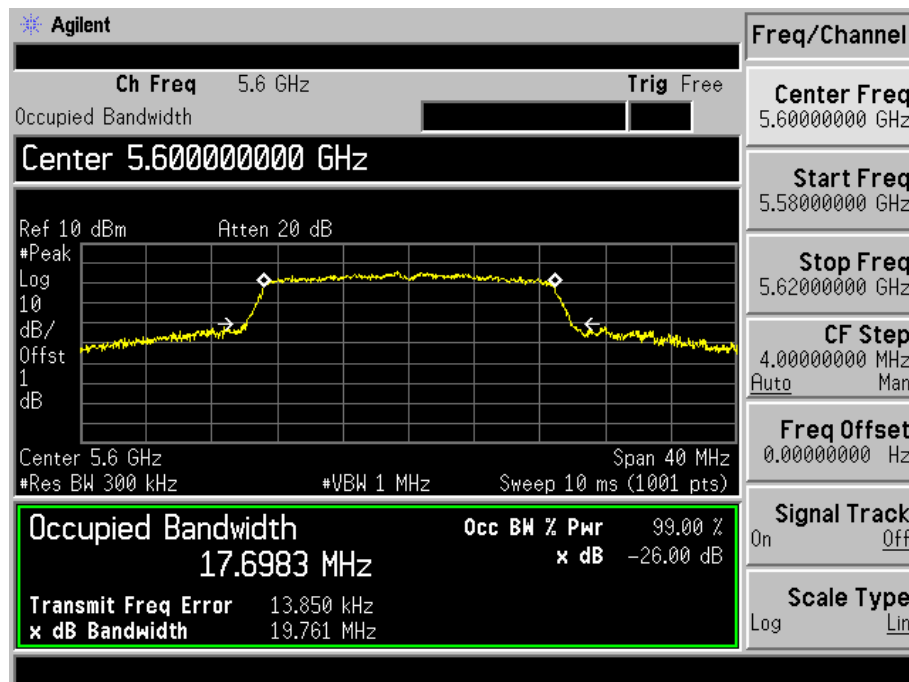


Test mode: 802.11-HT20

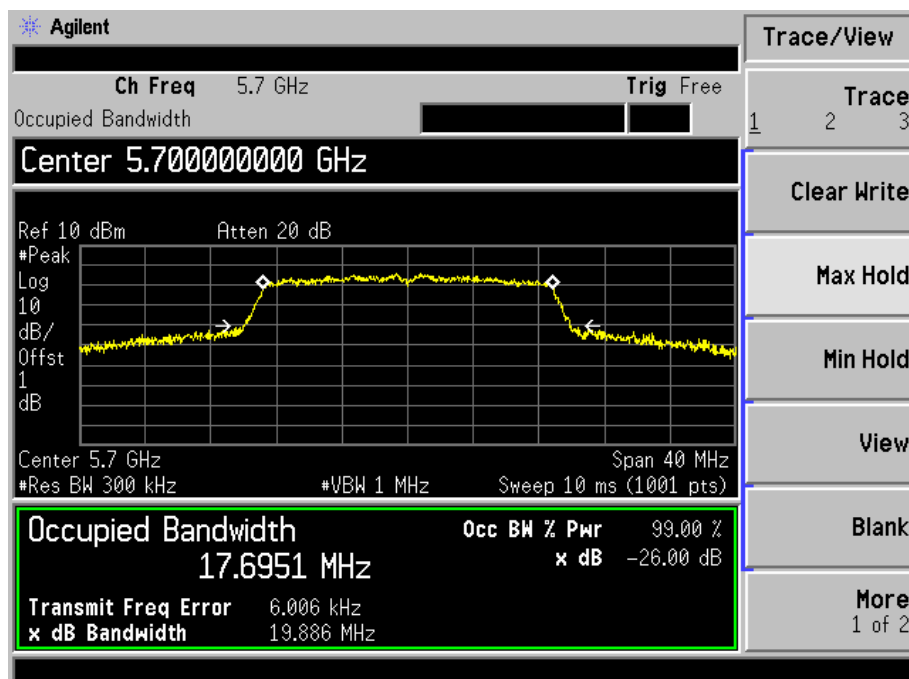
5500MHz



5600MHz

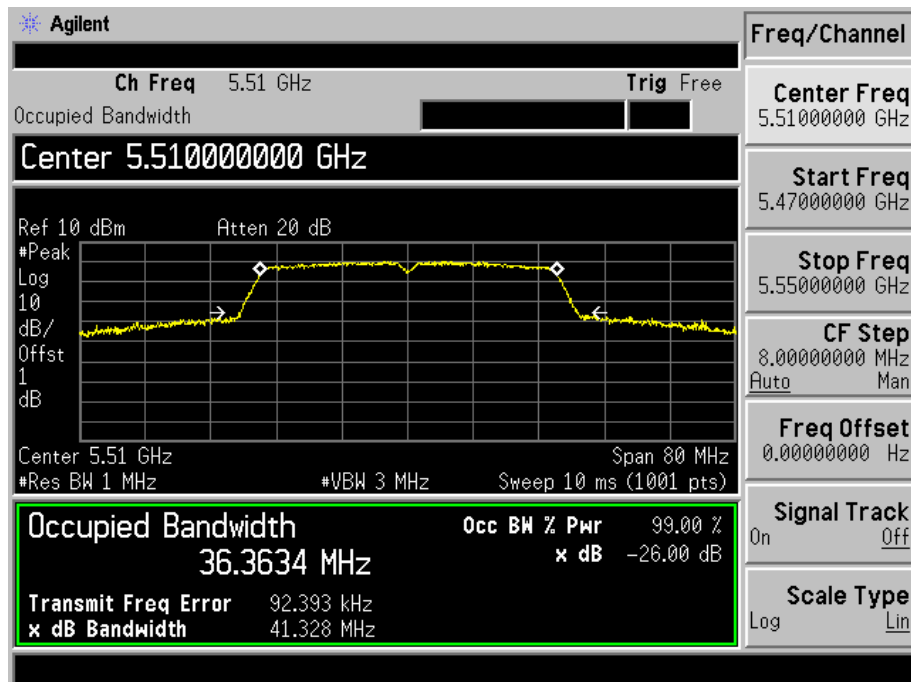


5700MHz

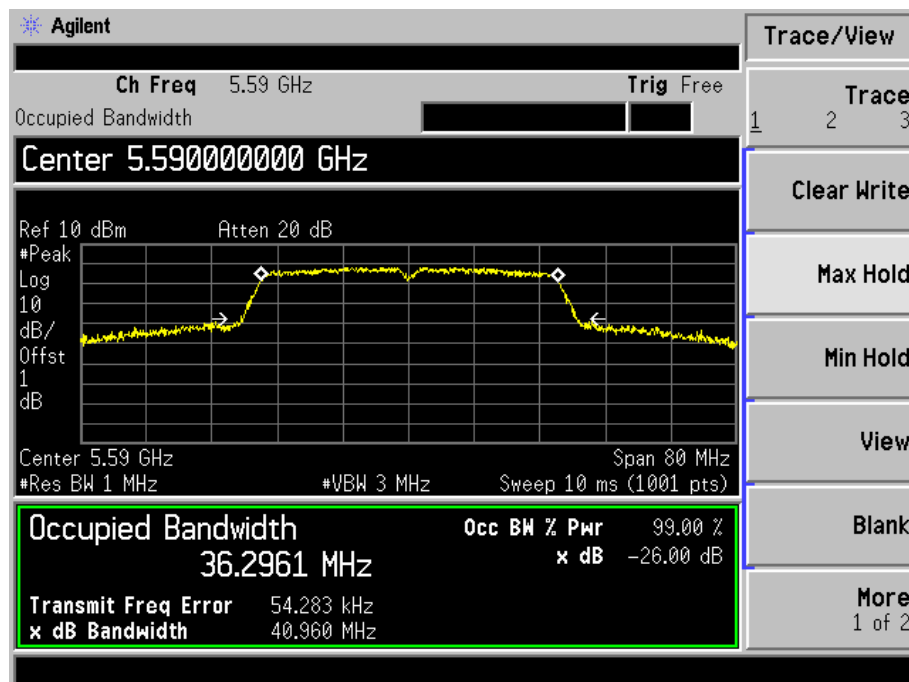


Test mode: 802.11-HT40

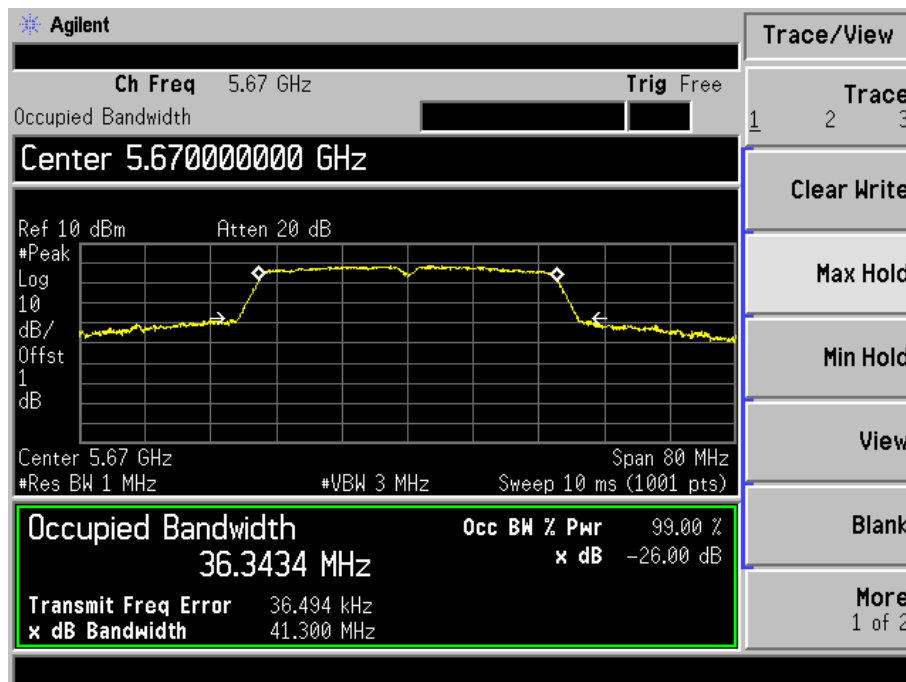
5510MHz



5590MHz



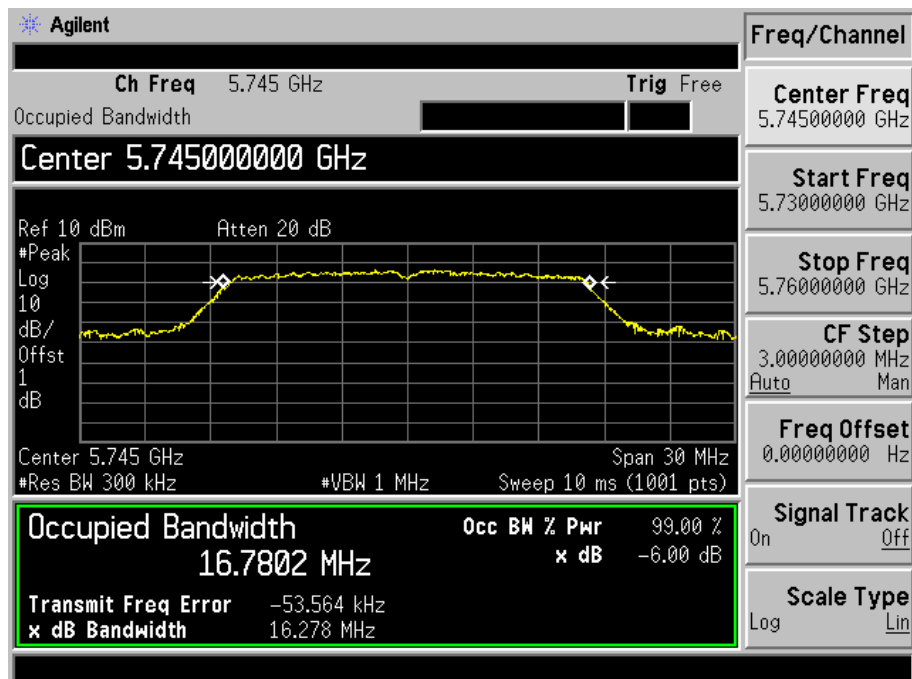
5670MHz



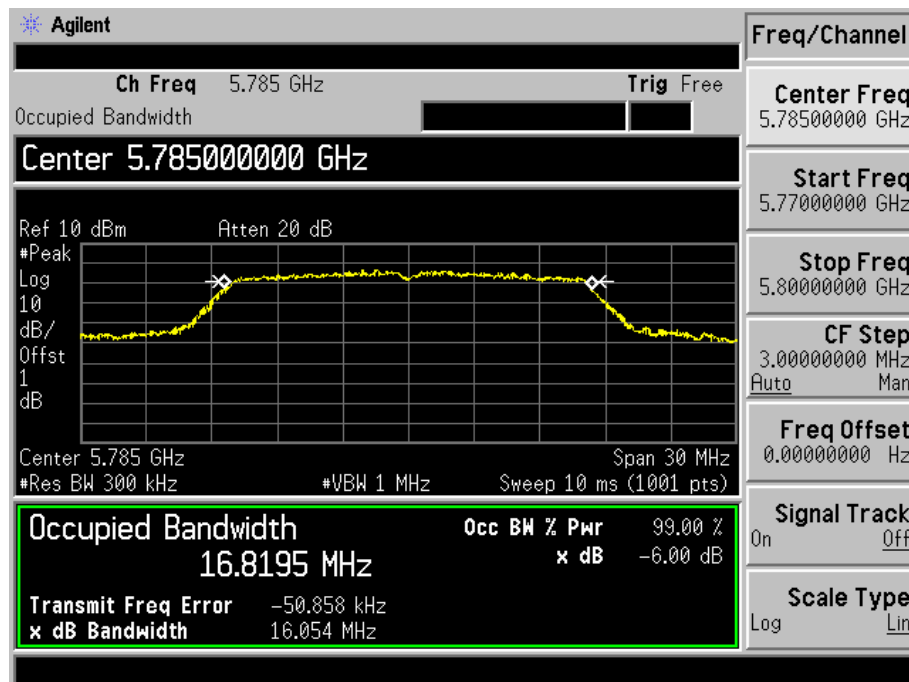
5725-5850MHz

Test mode: 802.11a

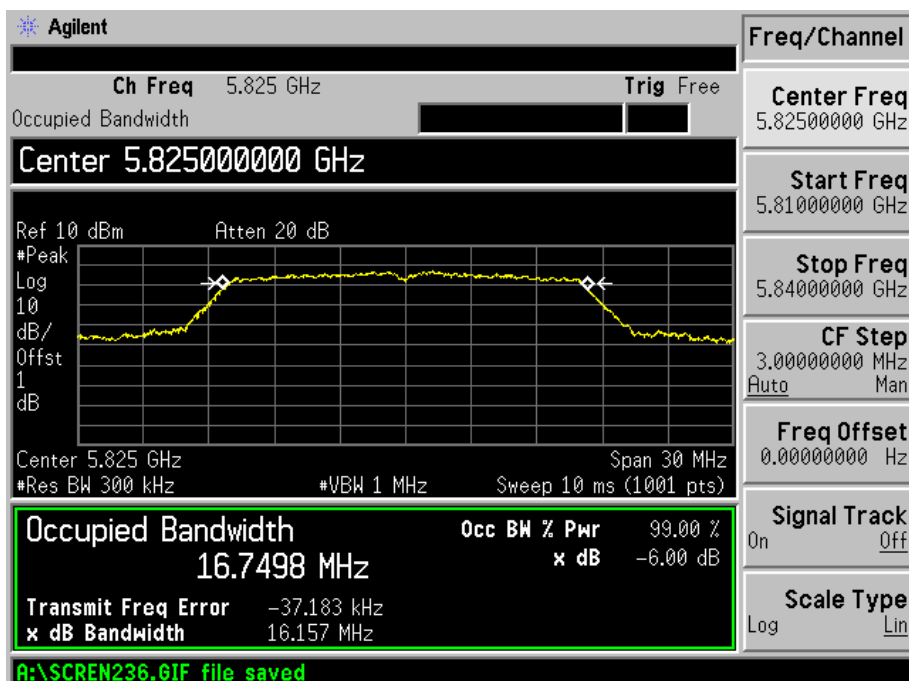
5745MHz



5785MHz

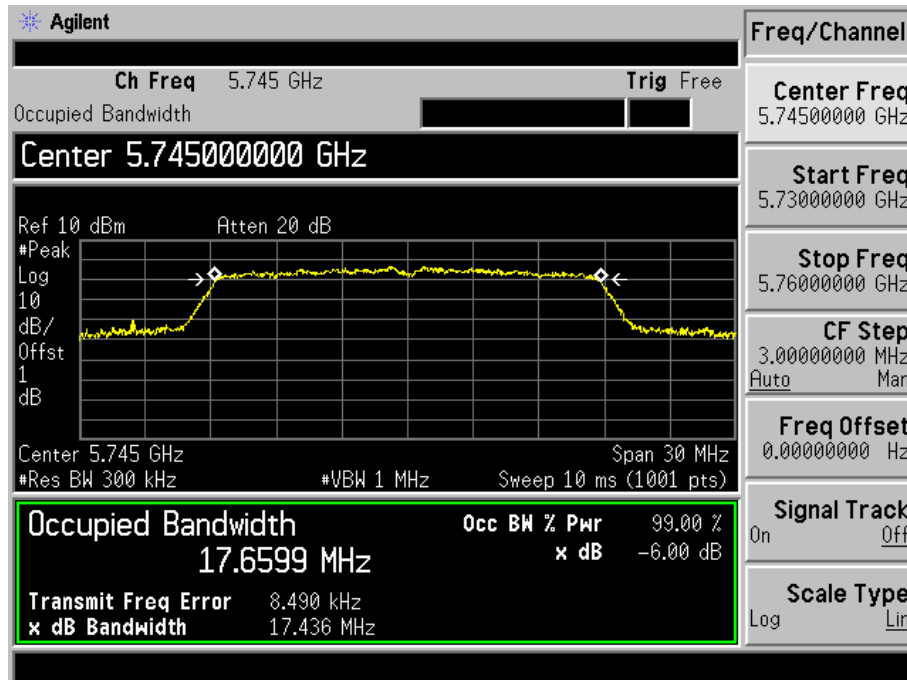


5825MHz

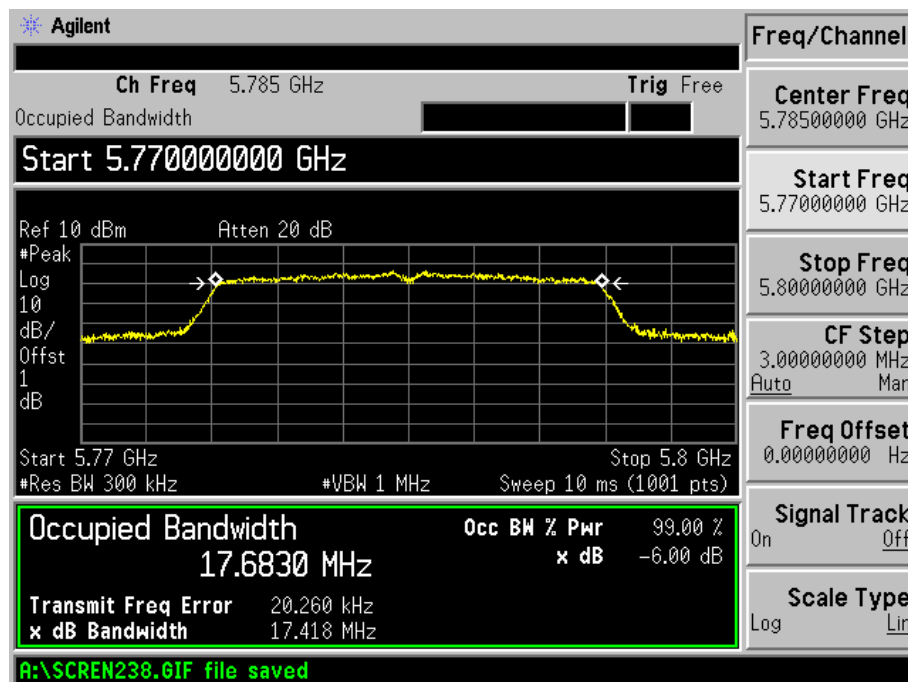


Test mode: 802.11-HT20

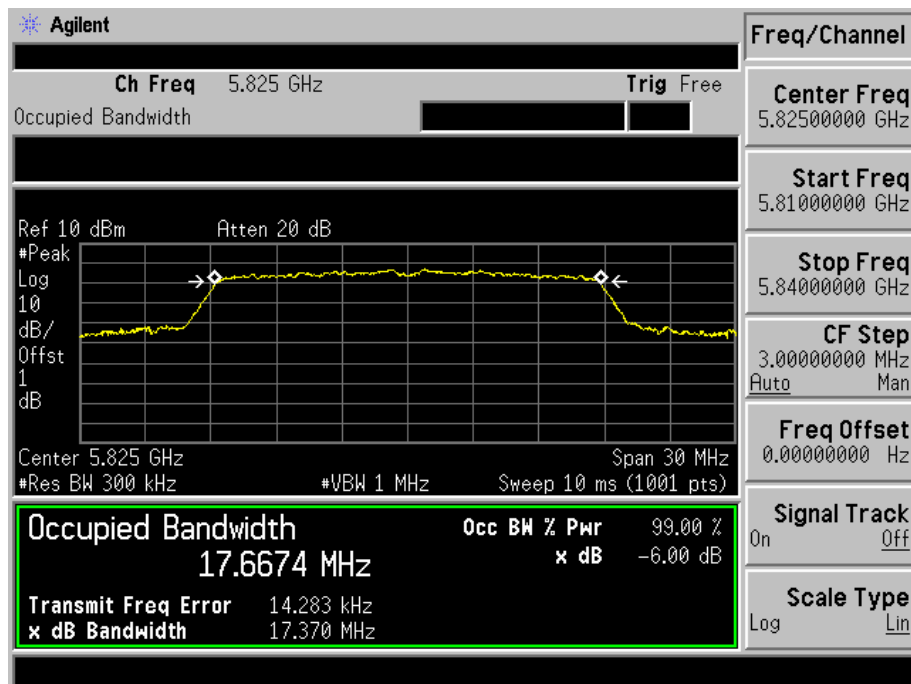
5745MHz



5785MHz



5825MHz

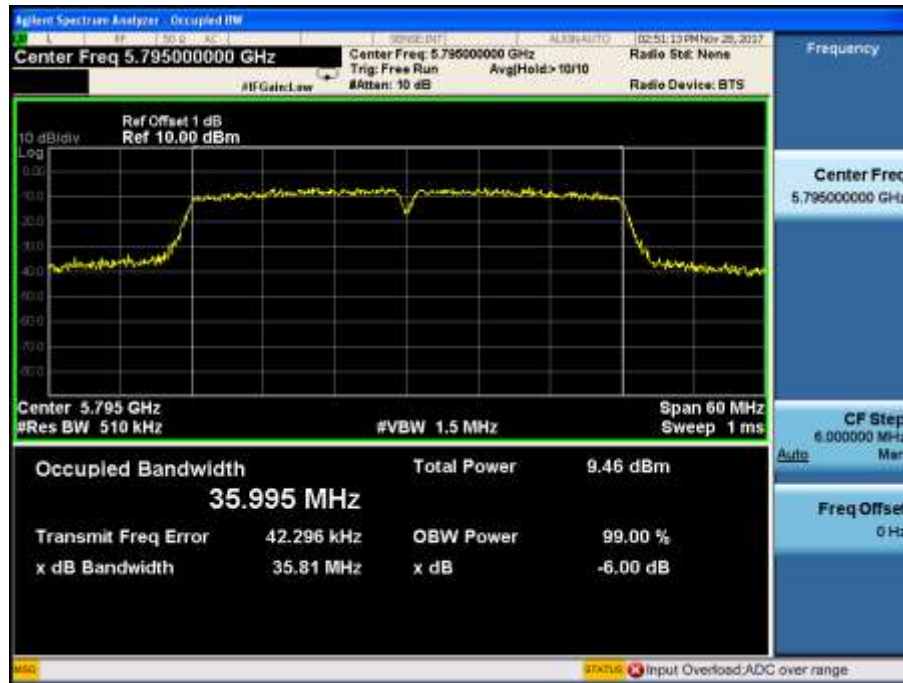


Test mode: 802.11-HT40

5755MHz



5795MHz



8. Maximum Conducted Output Power

8.1 Standard Applicable

Section 15.407(a) Power limits:

(1) For the band 5.15-5.25 GHz.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

8.2 Test Procedure

According to KDB789033 D02 v01r02 section E, the following is the measurement procedure.

- (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- (ii) Set RBW = 1 MHz.
- (iii) Set VBW ≥ 3 MHz.
- (iv) Number of points in sweep $\geq 2 \text{ Span} / \text{RBW}$. (This ensures that bin-to-bin spacing is $\leq \text{RBW}/2$, so that narrowband signals are not lost between frequency bins.)
- (v) Sweep time = auto.

- (vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- (vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle \geq 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run”.
- (viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- (ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

8.3 Environmental Conditions

Temperature:	26° C
Relative Humidity:	65%
ATM Pressure:	1011 mbar

8.4 Summary of Test Results/Plots

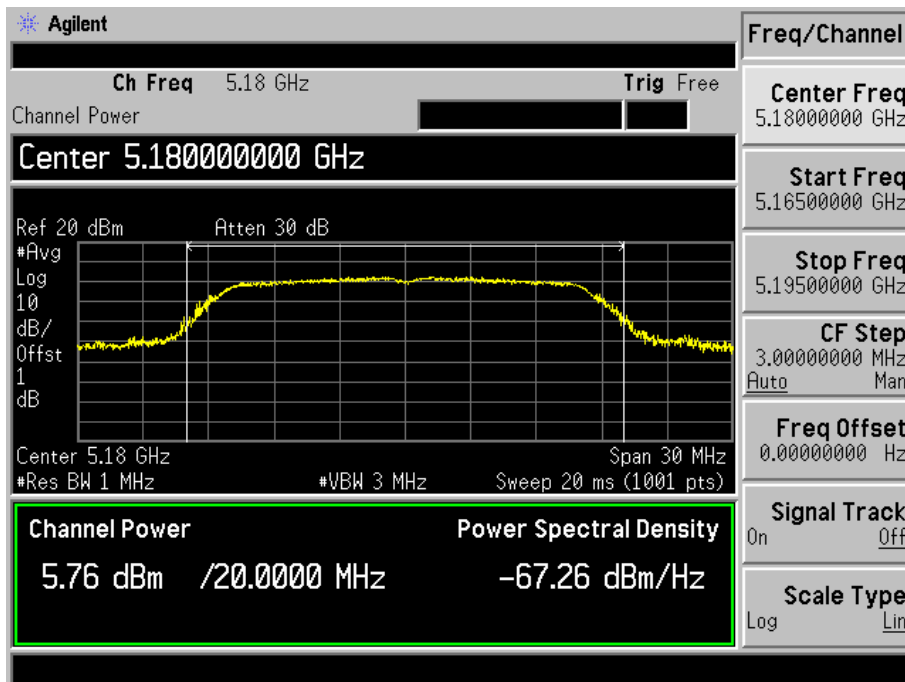
For the frequency band 5.15-5.25GHz, 5.250-5.350GHz, 5.470-5.725GHz, 5.725-5.850GHz

Test mode	Frequency MHz	Output Power dBm	Output Power mW	Limit mW
802.11a	5180	5.76	3.767	250
	5200	6.15	4.121	250
	5240	5.89	3.882	250
	5260	6.57	4.539	250
	5280	6.23	4.198	250
	5320	6.08	4.055	250
	5500	5.05	3.199	250
	5600	4.82	3.034	250
	5700	5.21	3.319	250
	5745	5.17	3.289	1000
	5785	4.90	3.090	1000
	5825	5.14	3.266	1000
802.11n-HT20	5180	7.88	6.138	250
	5200	8.52	7.112	250
	5240	8.51	7.096	250
	5260	5.28	3.373	250
	5280	7.23	5.284	250
	5320	7.16	5.200	250
	5500	5.33	3.412	250
	5600	5.87	3.864	250

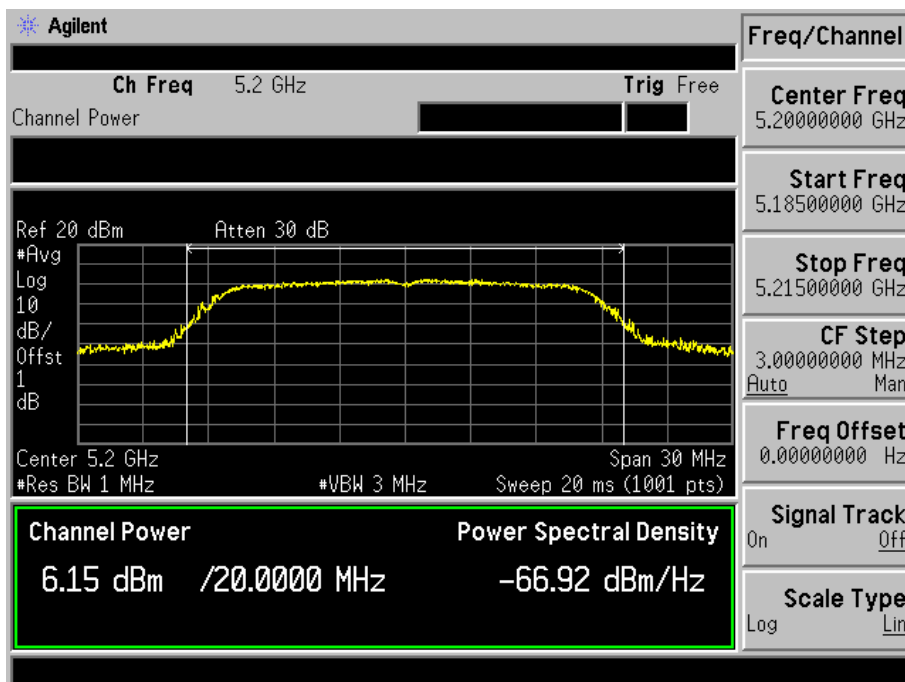
	5700	5.13	3.258	250
	5745	5.73	3.741	1000
	5785	5.89	3.882	1000
	5825	5.39	3.459	1000
802.11n-HT40	5190	5.57	3.606	250
	5230	6.35	4.315	250
	5270	6.30	3.365	250
	5310	6.25	3.396	250
	5510	5.61	3.639	250
	5590	4.95	3.126	250
	5670	4.40	2.754	250
	5755	4.79	3.013	1000
	5795	4.20	2.630	1000

Test Mode: 802.11a

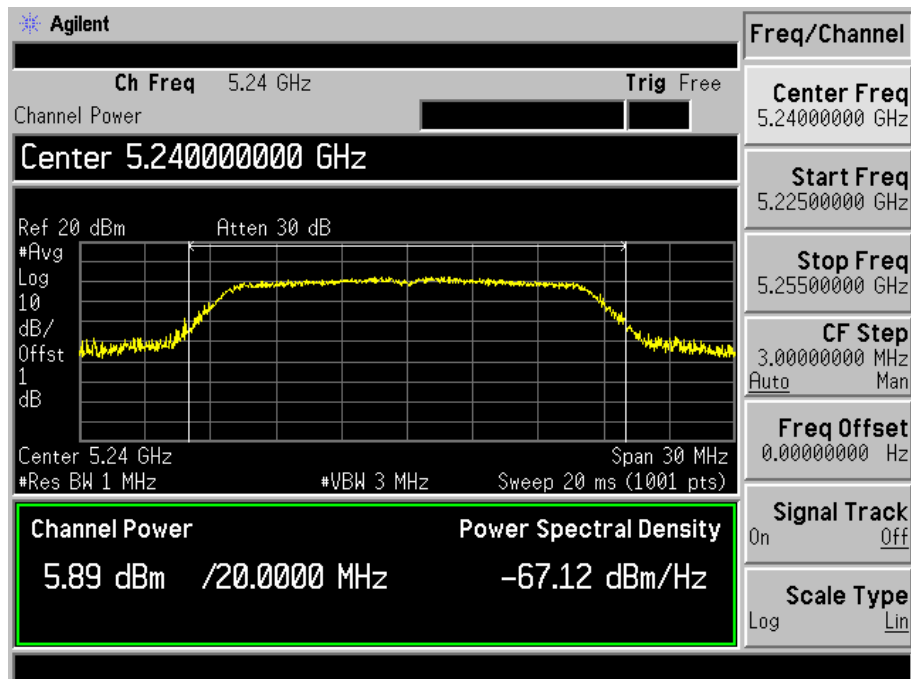
5180MHz



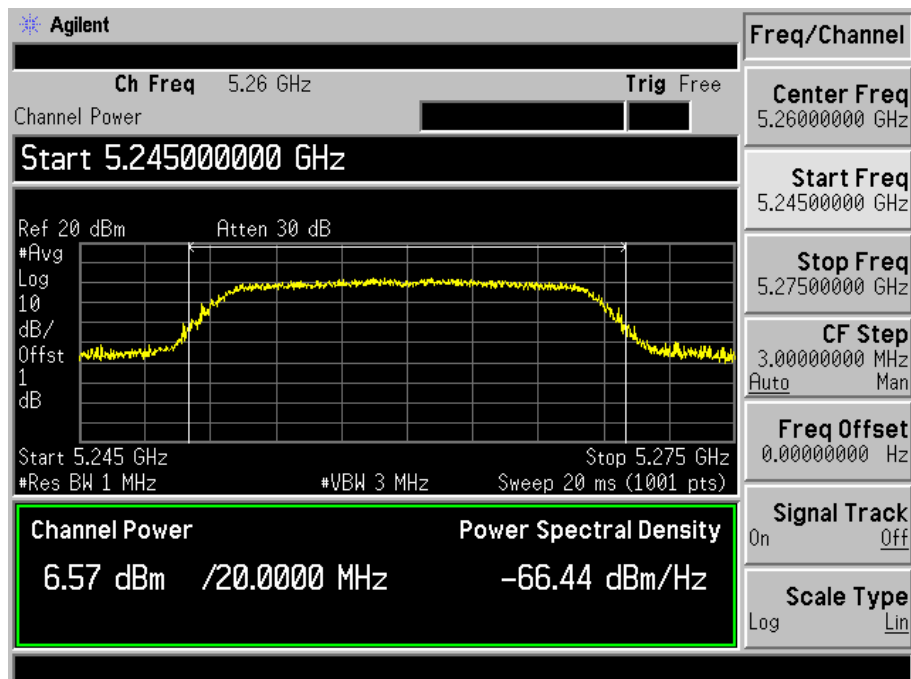
5200MHz



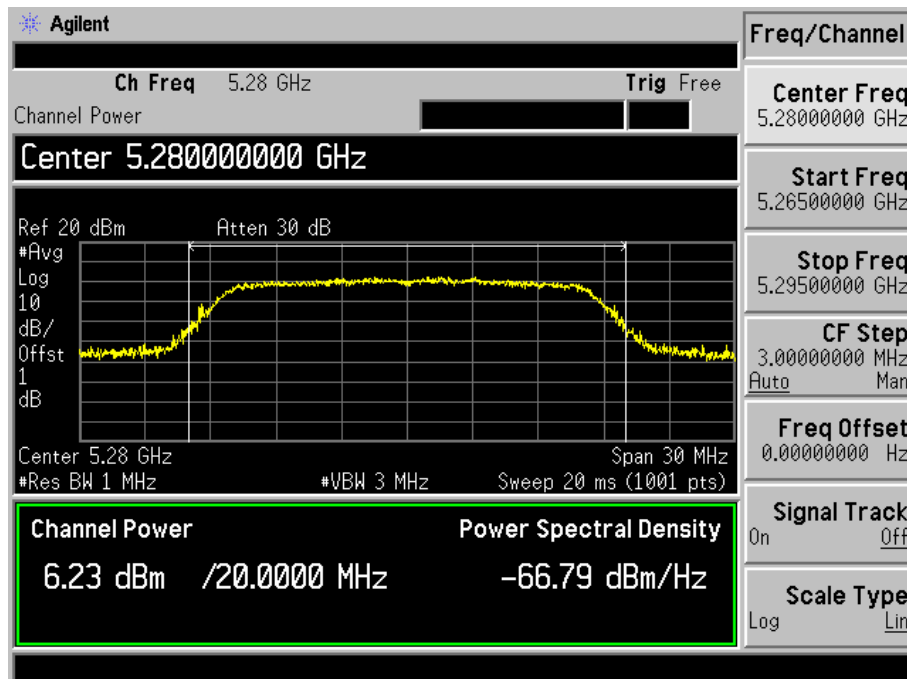
5240MHz



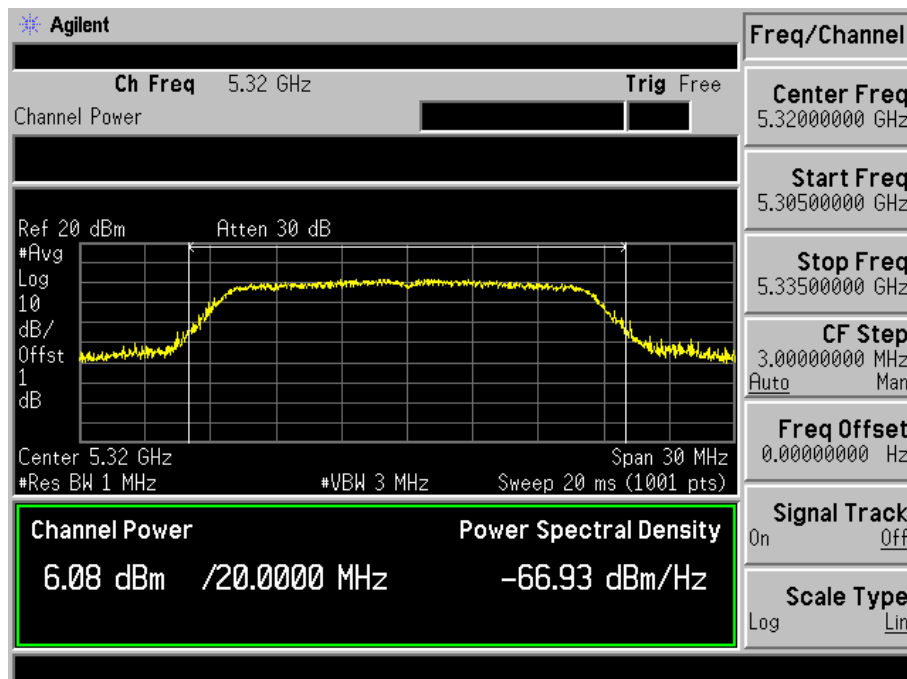
5260MHz



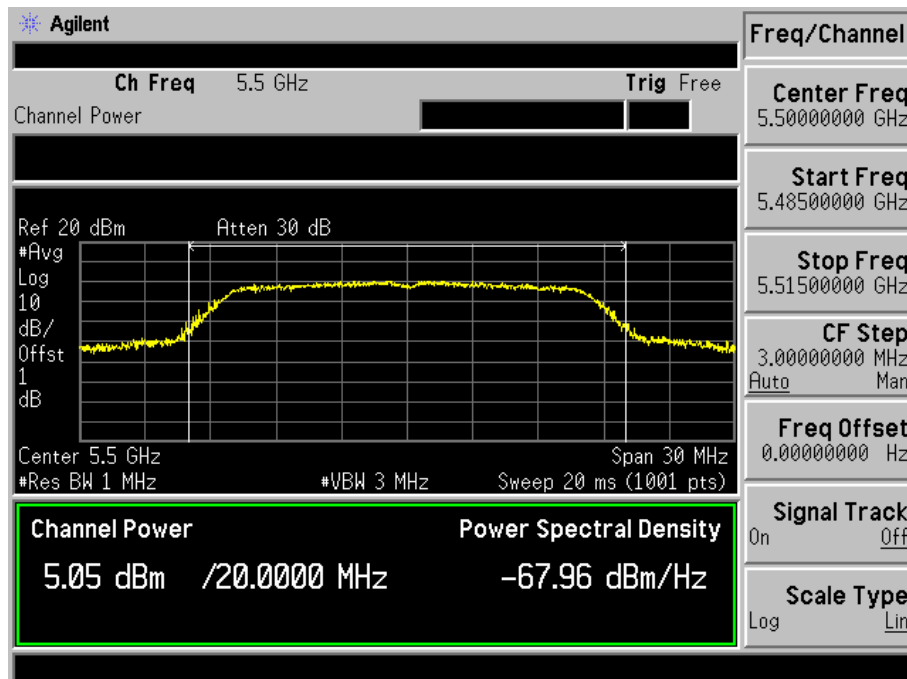
5280MHz



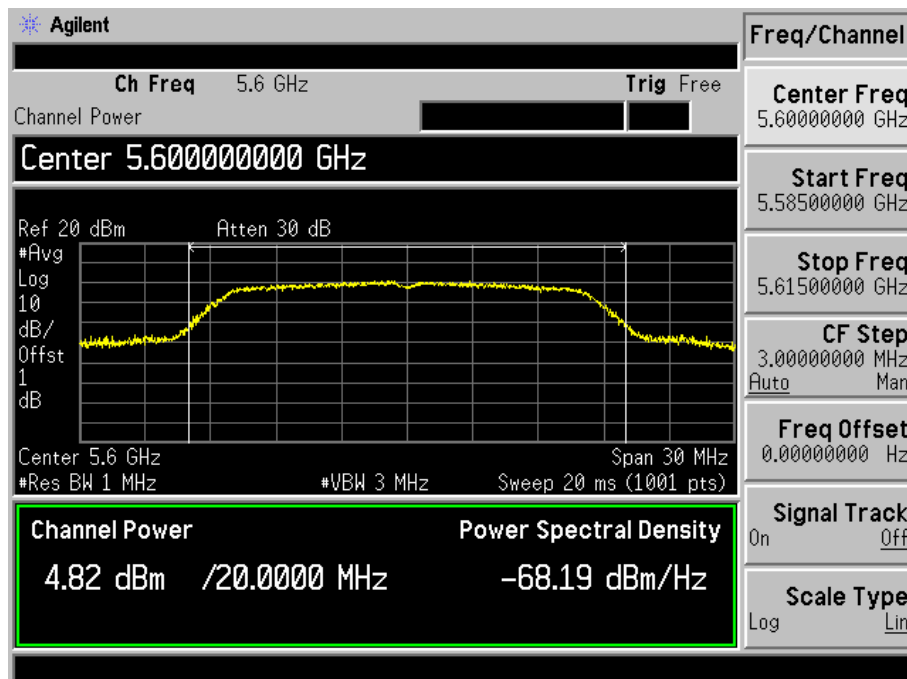
5320MHz



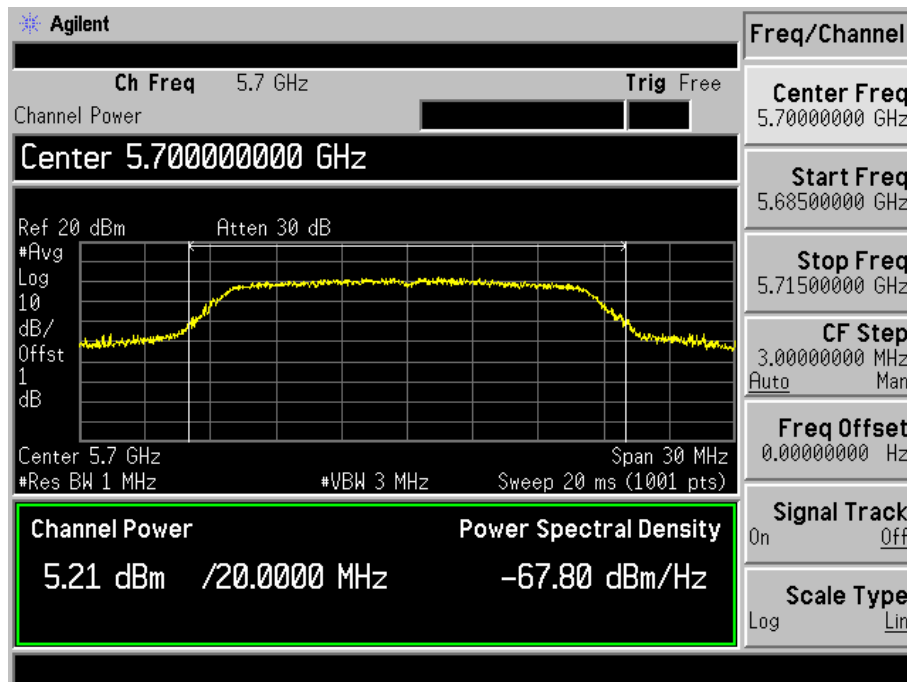
5500MHz



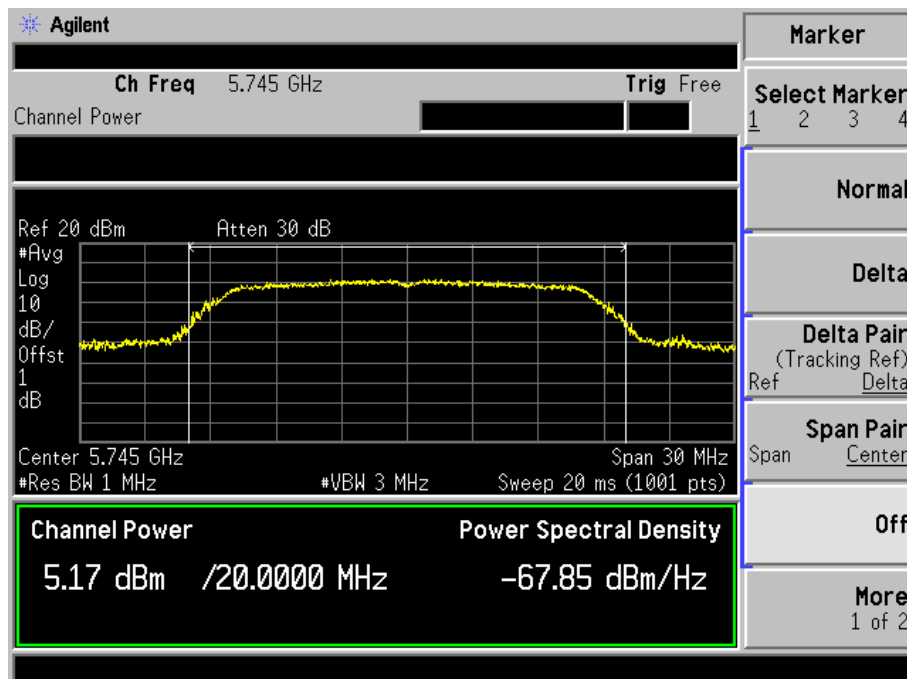
5600MHz



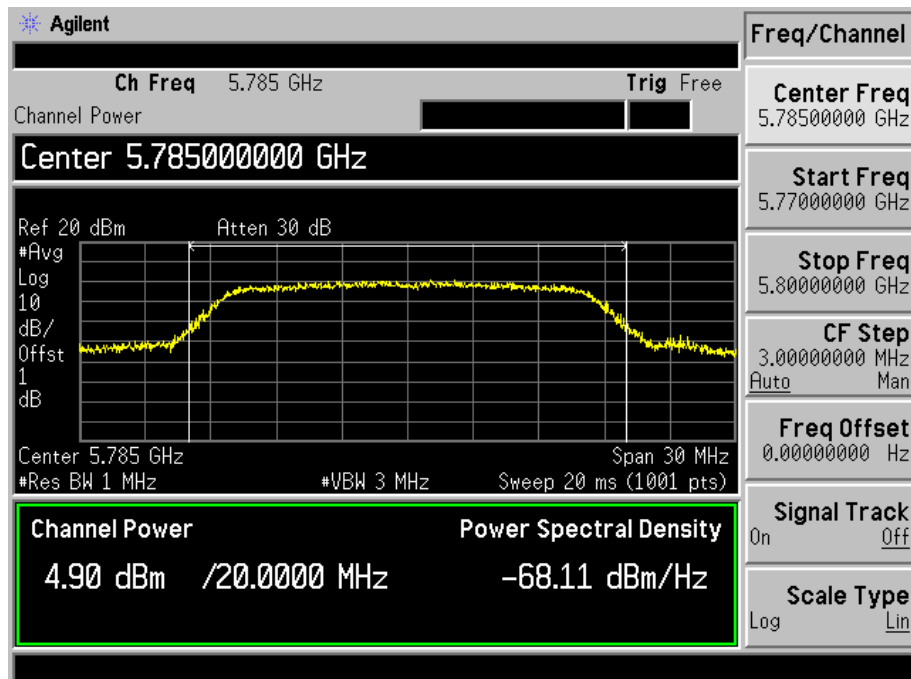
5700MHz



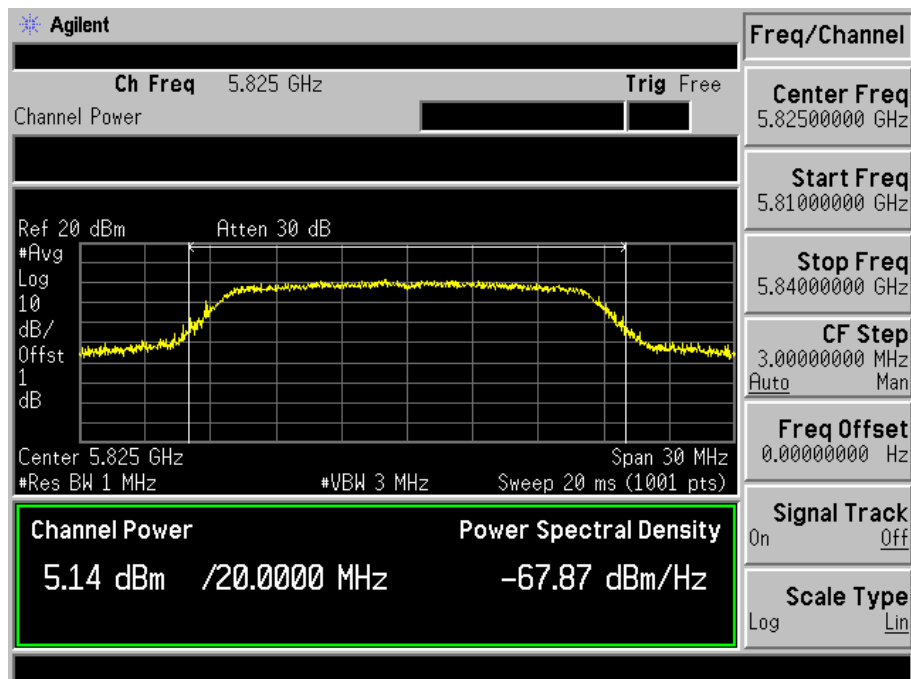
5745MHz



5785MHz

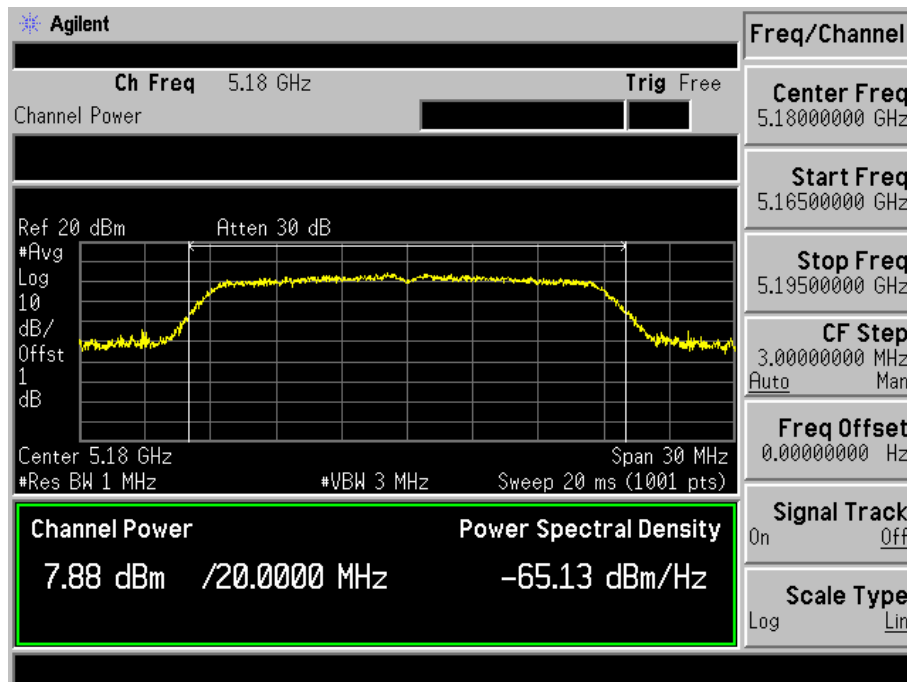


5825MHz

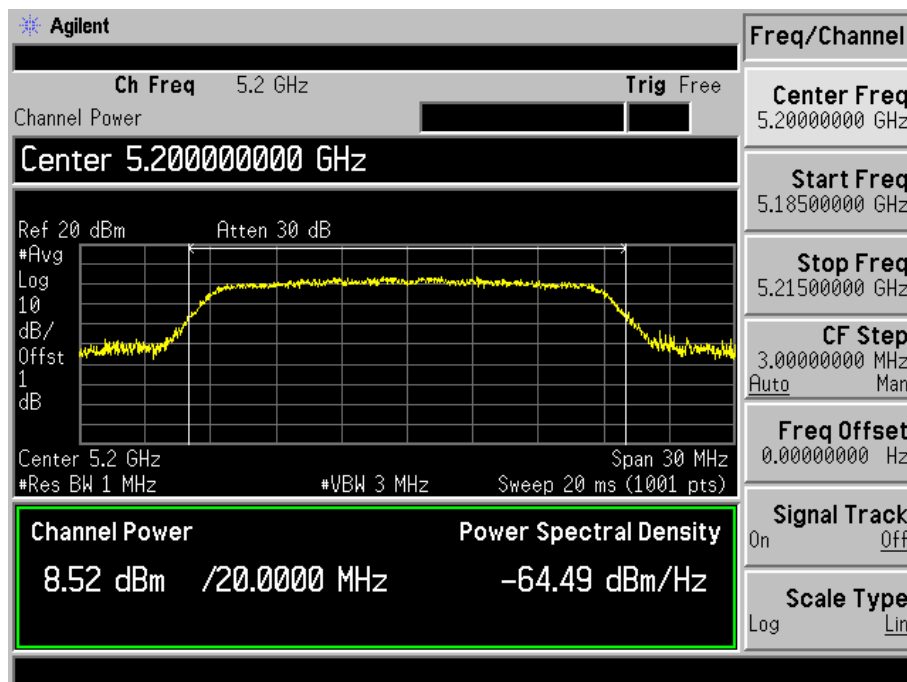


Test Mode: 802.11n-HT20

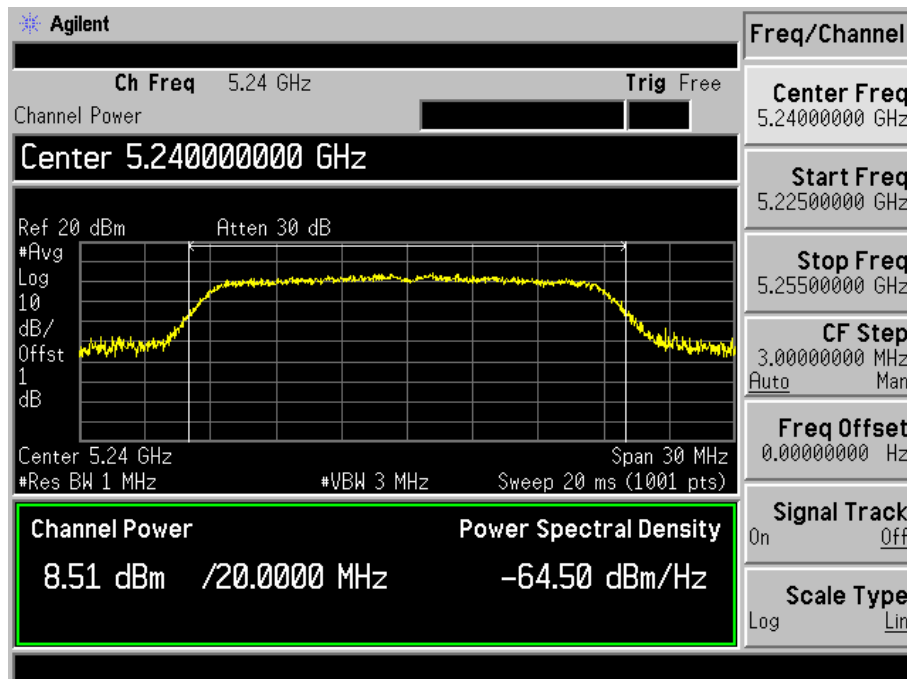
5180MHz



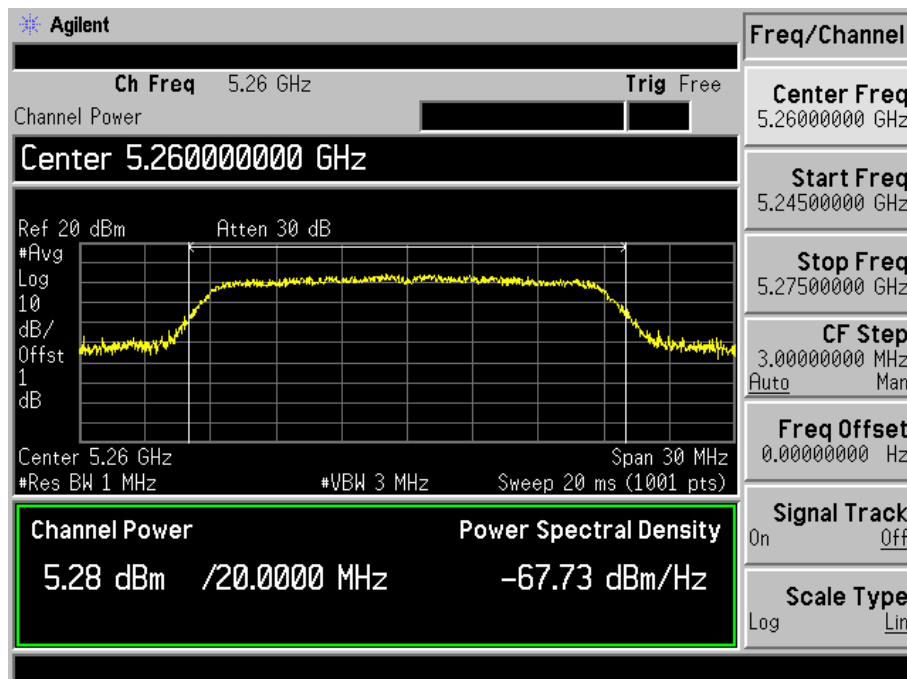
5200MHz



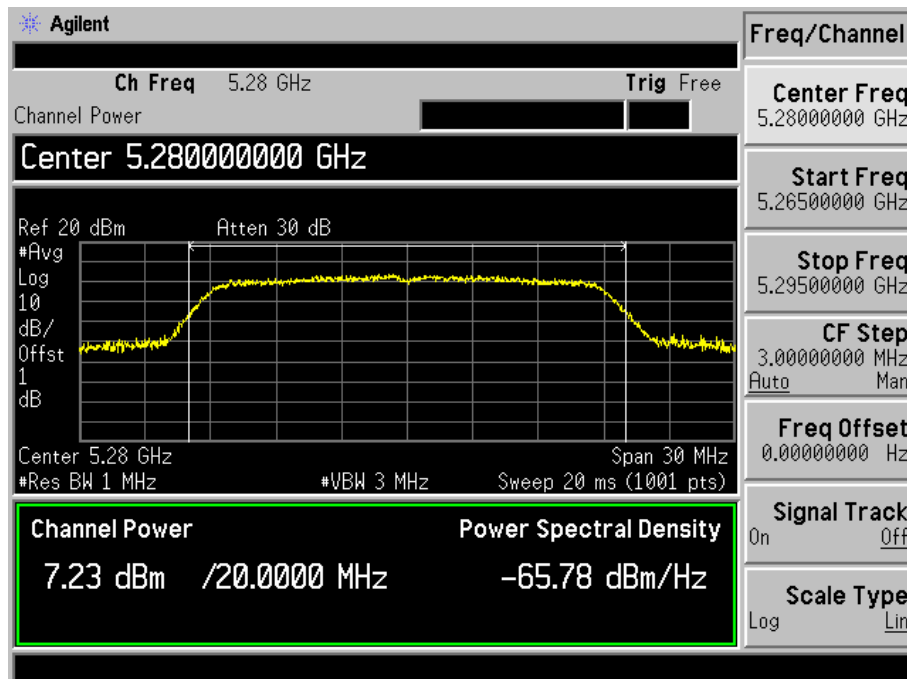
5240MHz



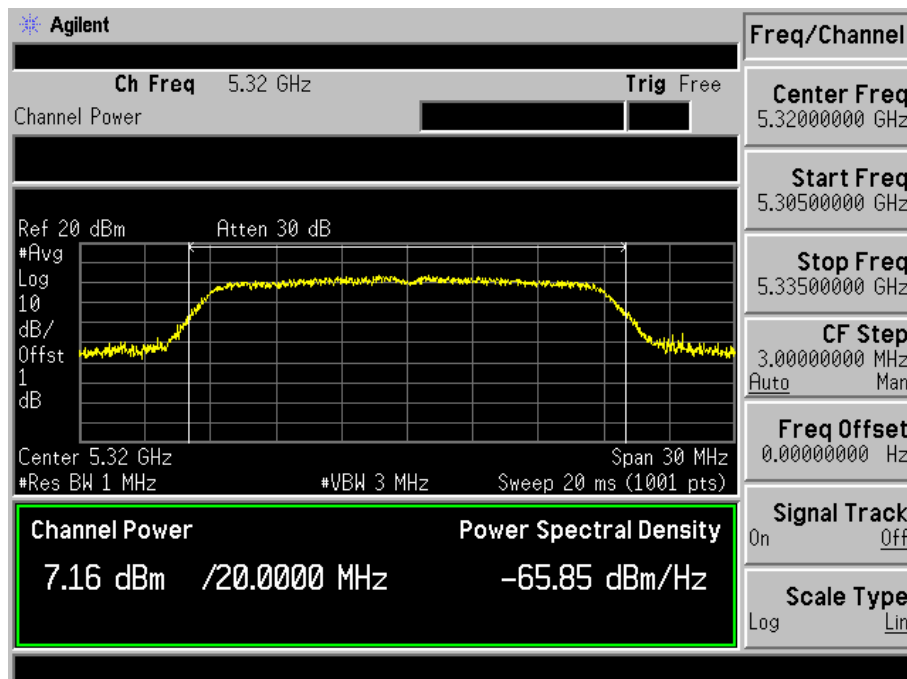
5260MHz



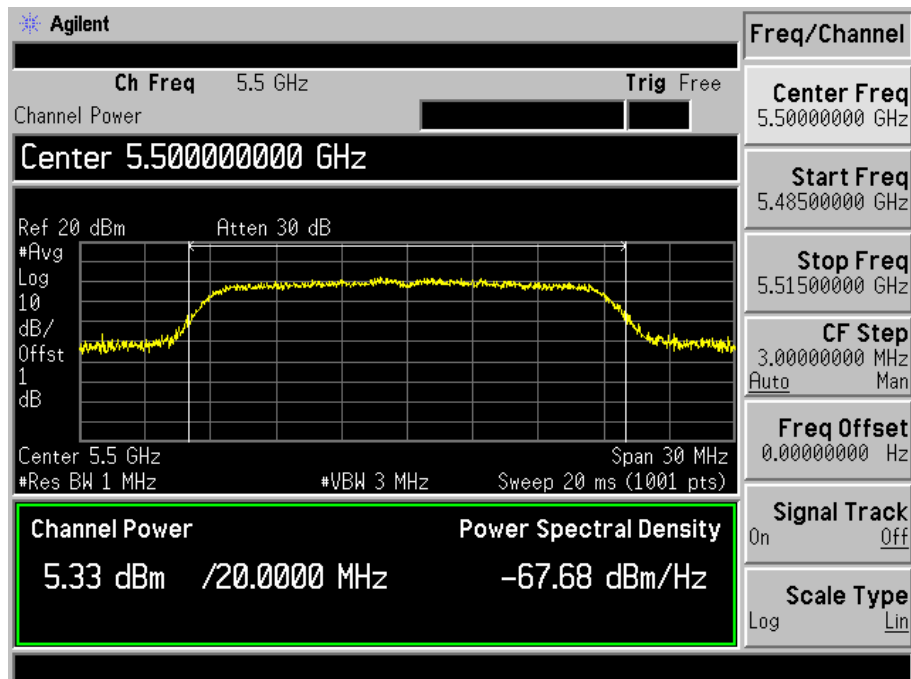
5280MHz



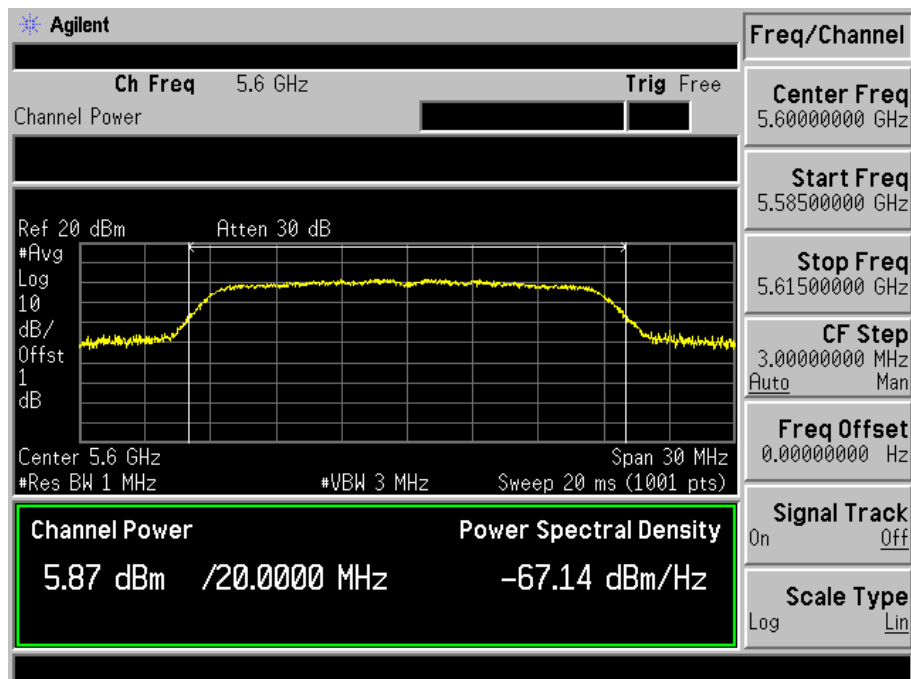
5320MHz



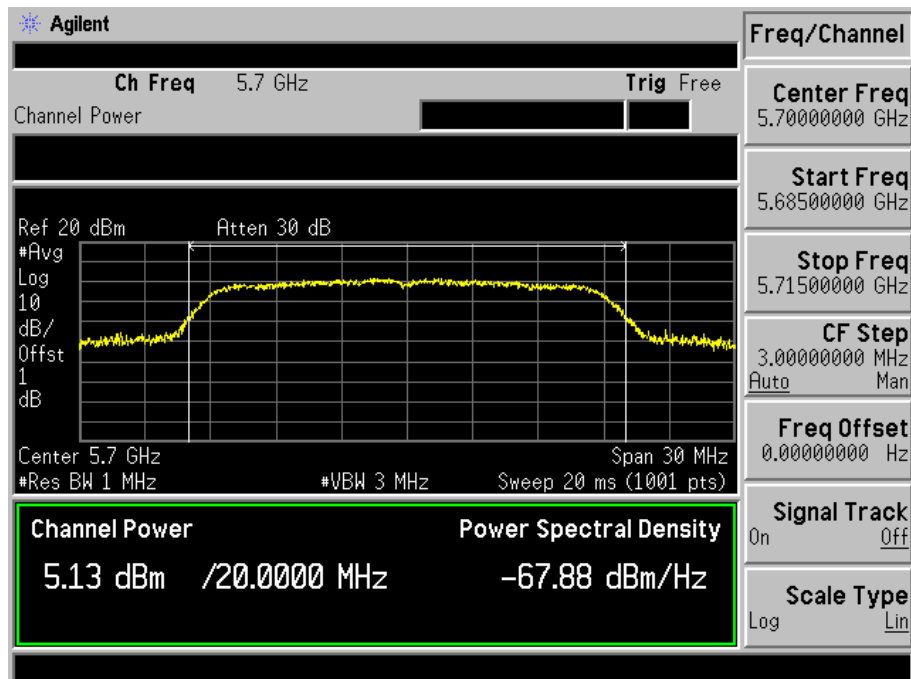
5500MHz



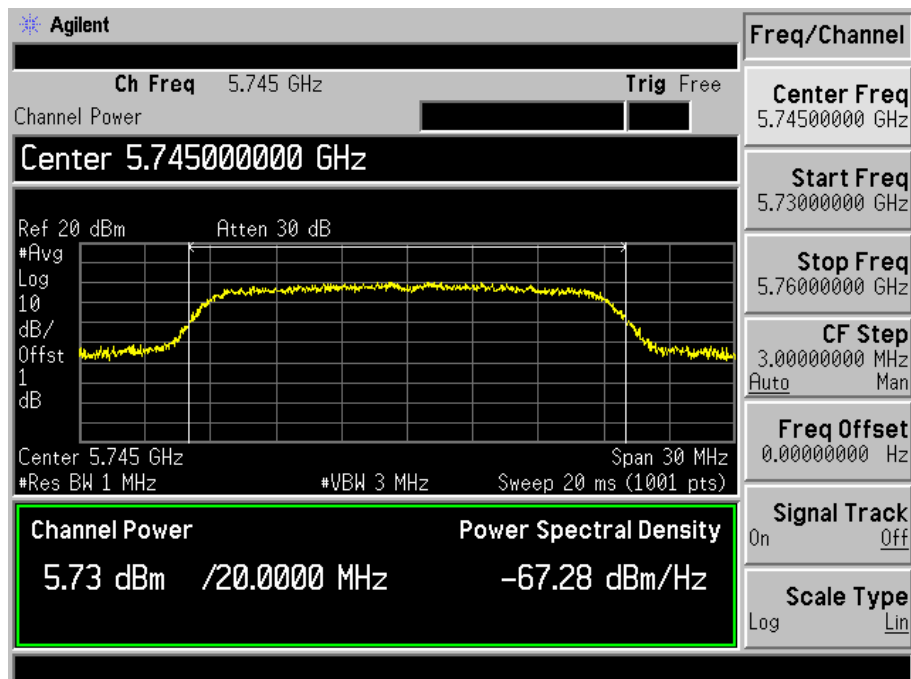
5600MHz



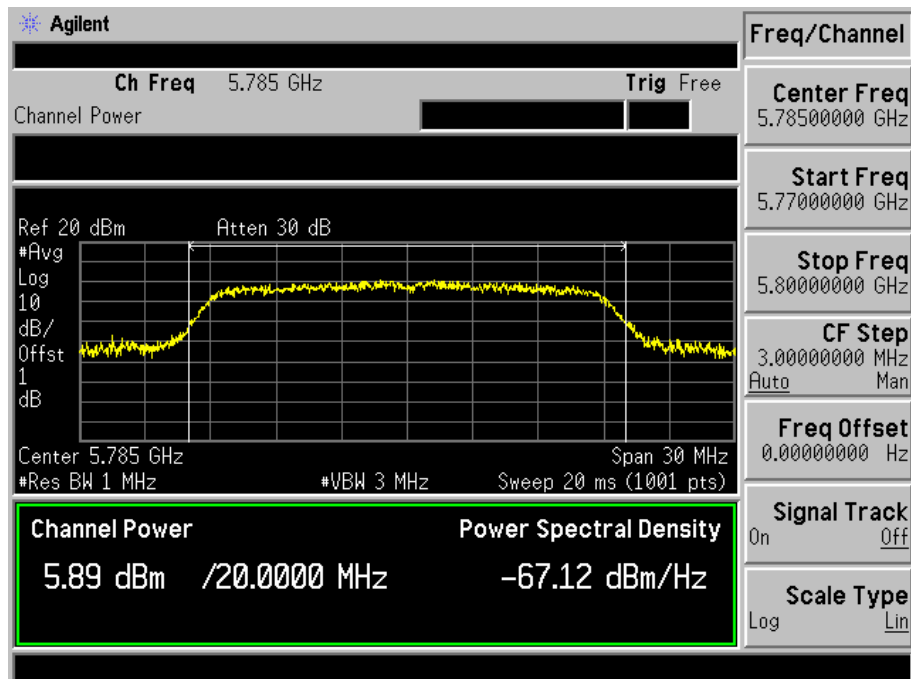
5700MHz



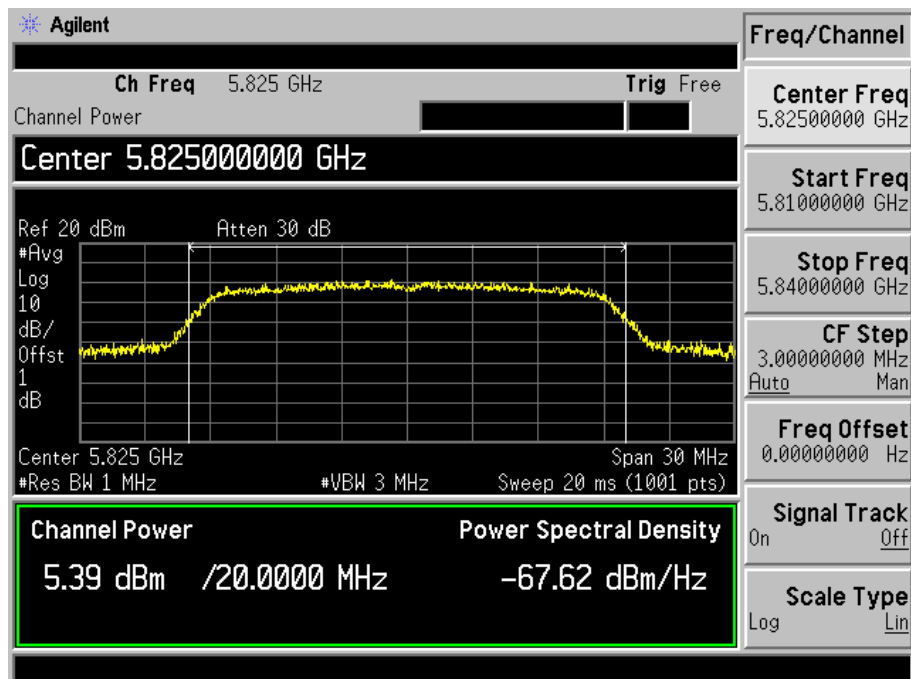
5745MHz



5785MHz

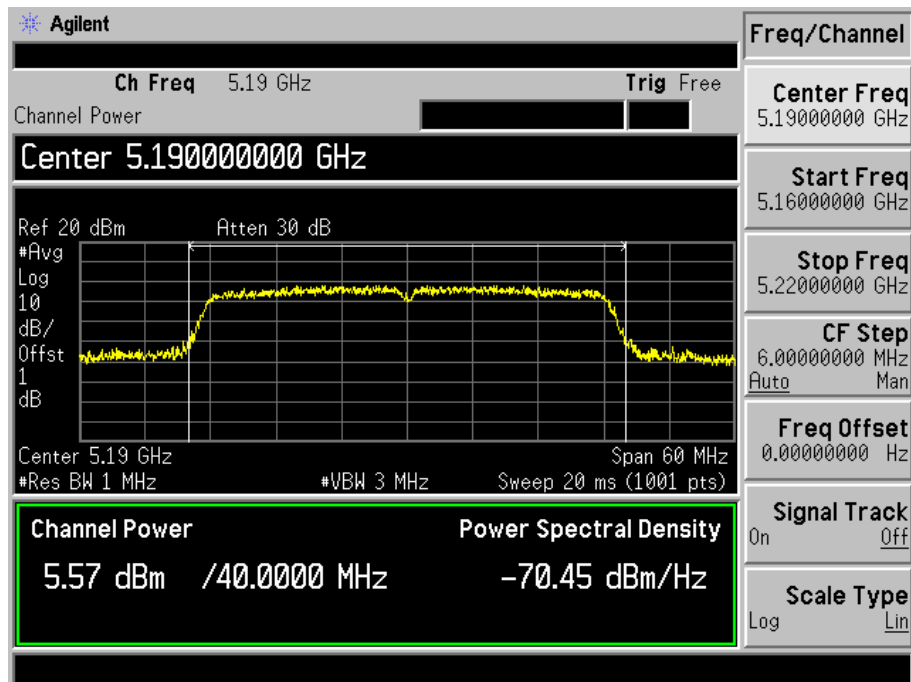


5825MHz

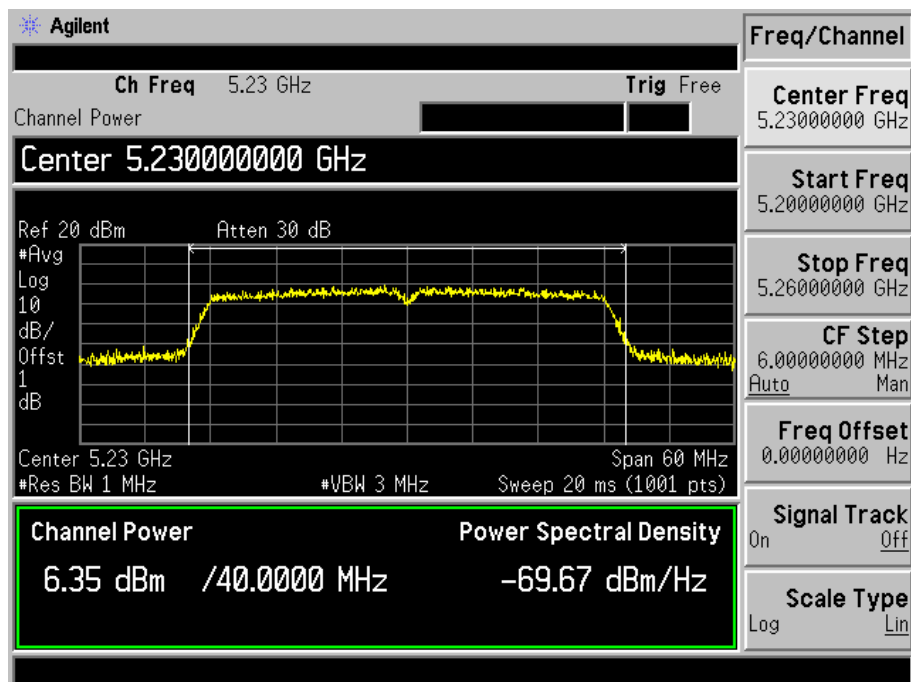


Test Mode: 802.11n-HT40

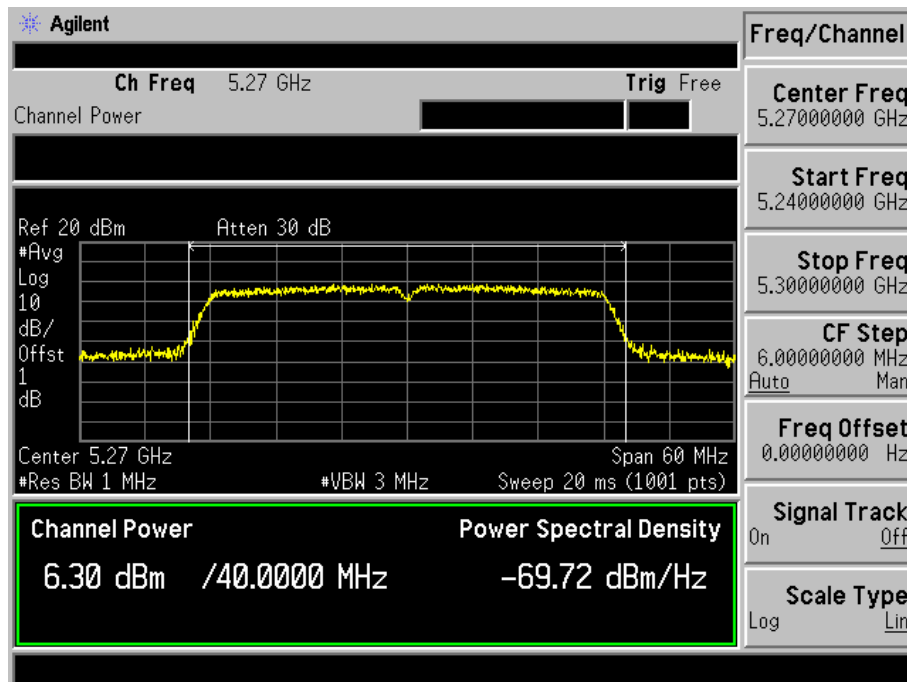
5190MHz



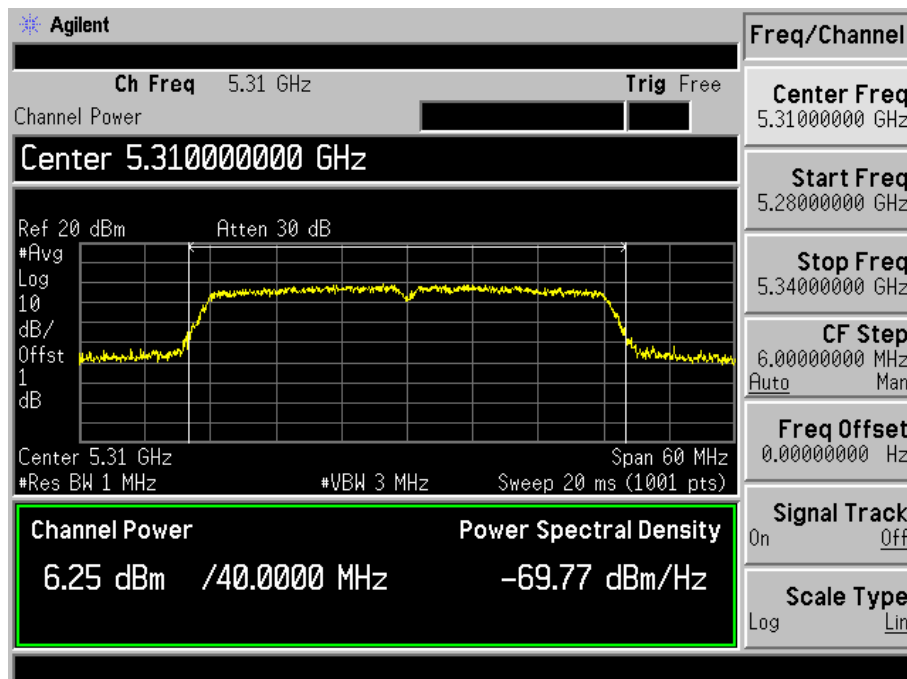
5230MHz



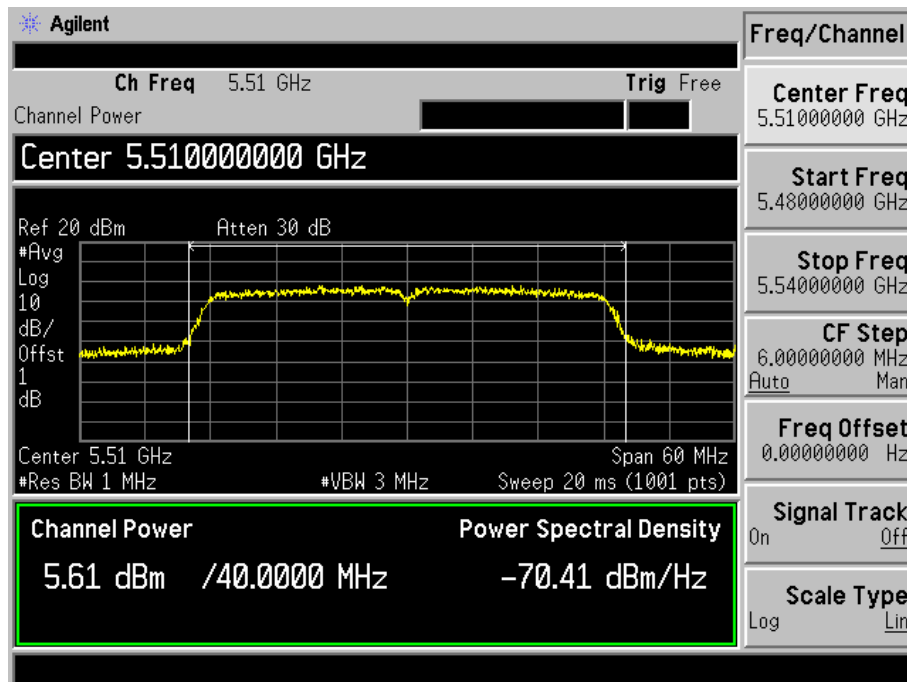
5270MHz



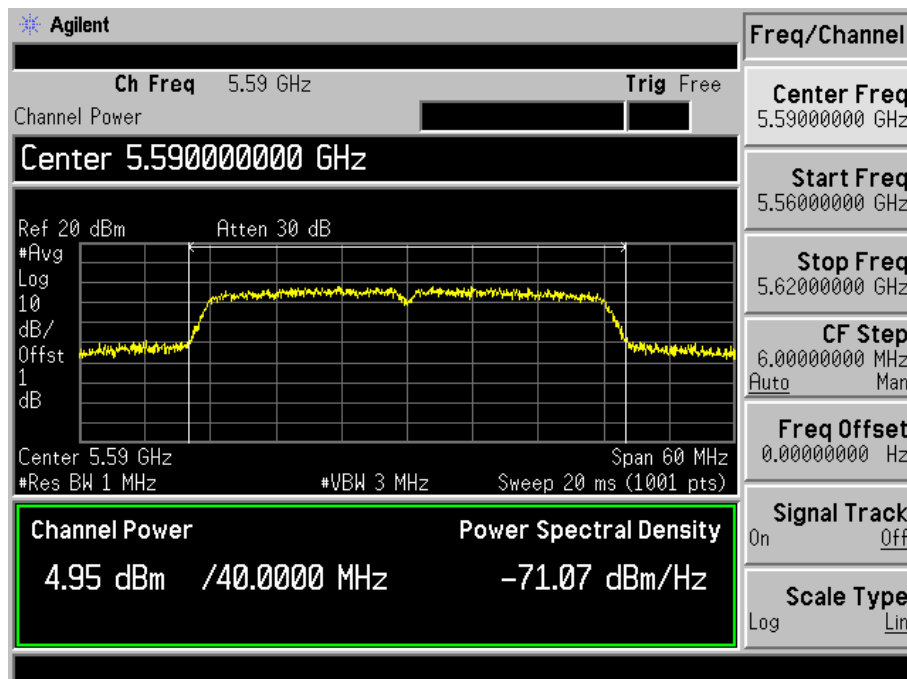
5310MHz



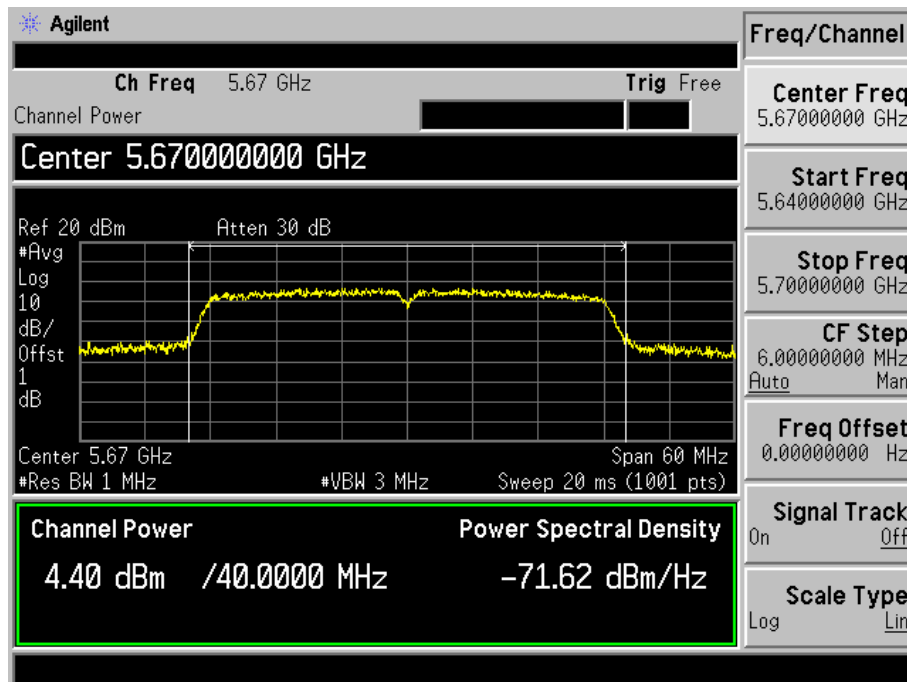
5510MHz



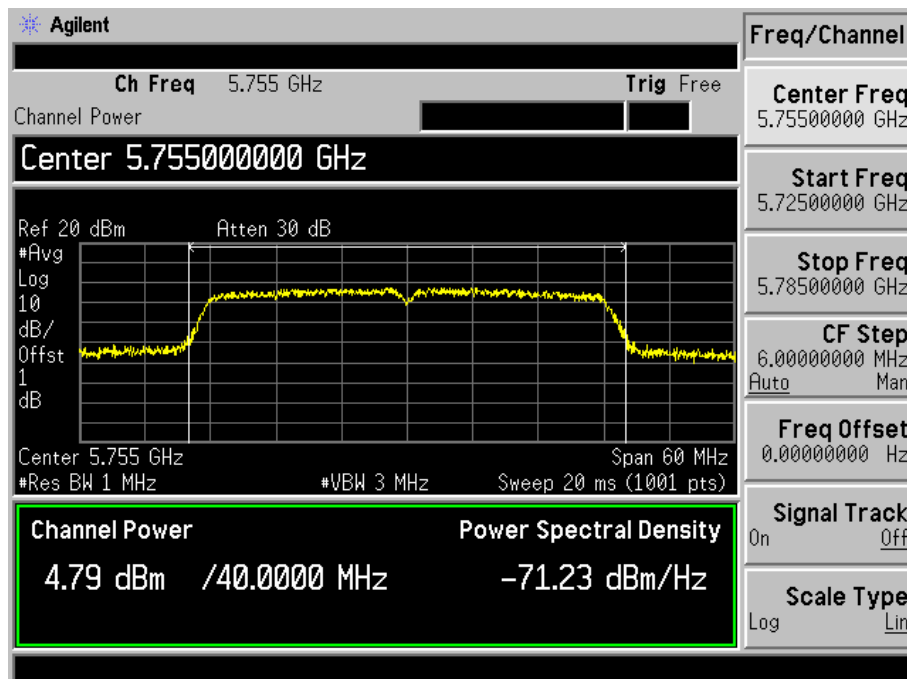
5590MHz



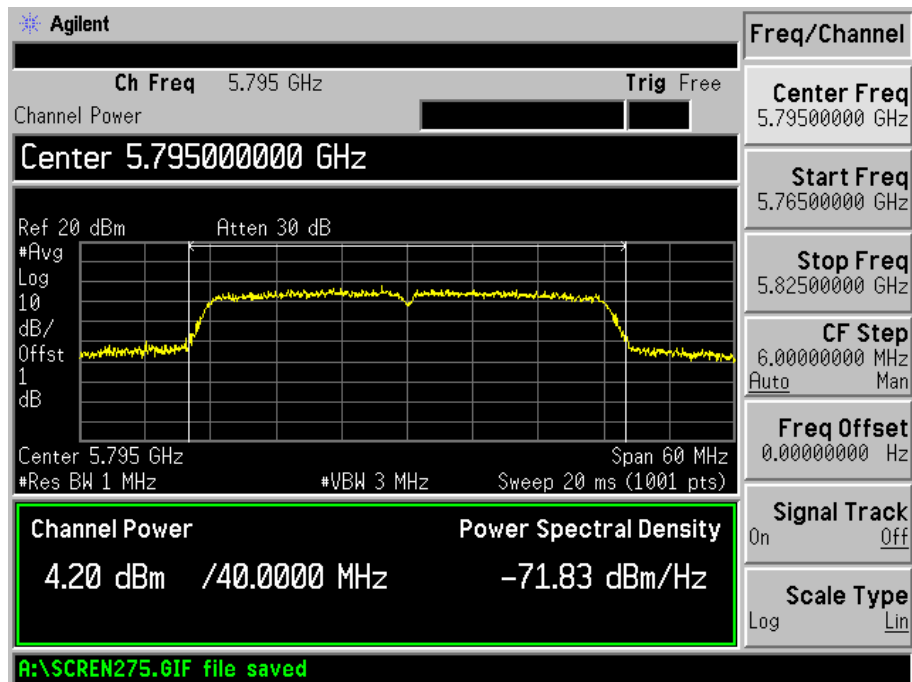
5670MHz



5755MHz



5795MHz



9. Radiated Spurious Emissions

9.1 Standard Applicable

According to §15.407(b)(6), Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in Section 15.209.

According to §15.407(b)(7), The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

789033 D02 v01r02 General UNII Test Procedures New Rules v01

If radiated measurements are performed, field strength is then converted to EIRP as follows:

$$\text{EIRP} = ((E \cdot d)^2) / 30$$

where:

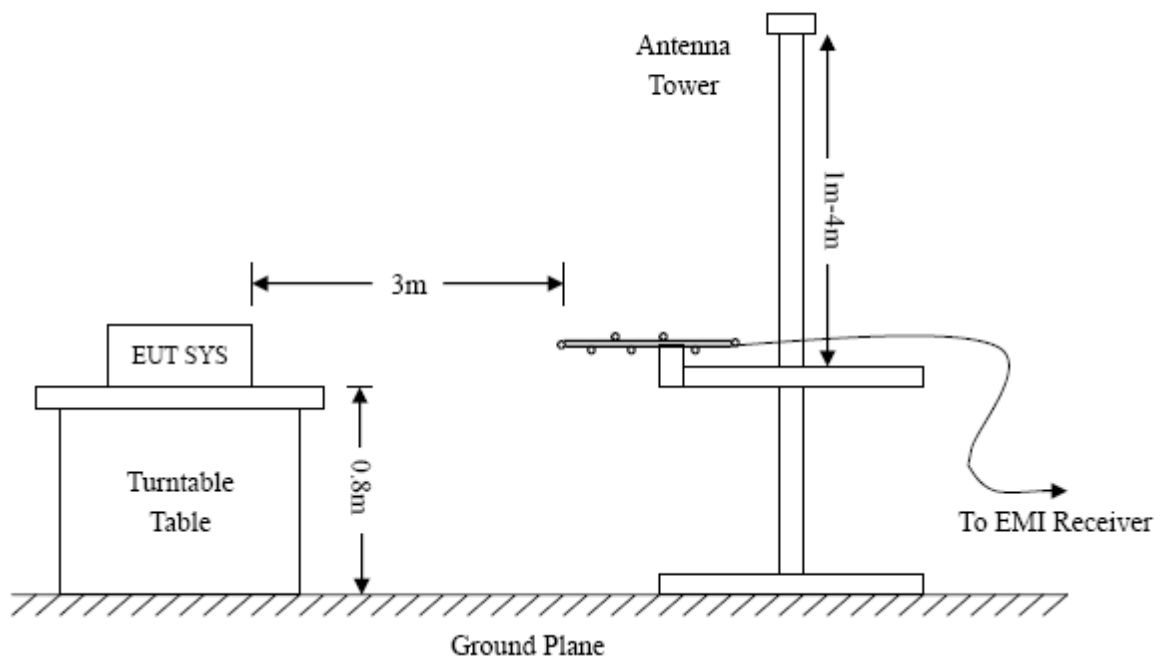
- E is the field strength in V/m;
- d is the measurement distance in meters;
- EIRP is the equivalent isotropically radiated power in watts.

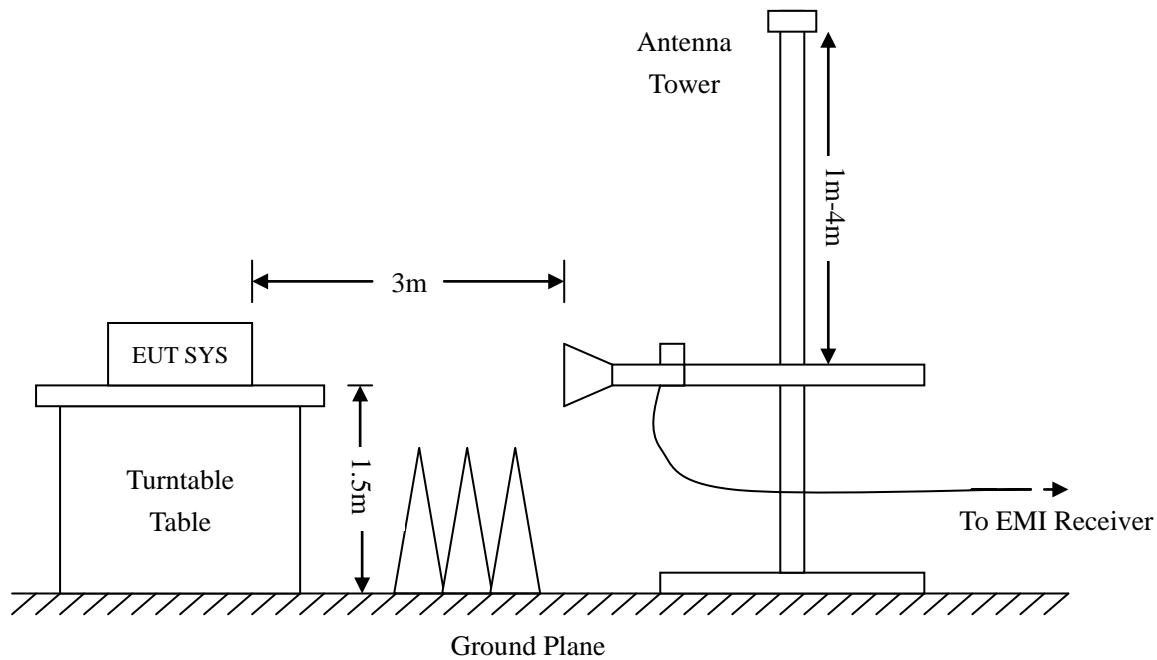
9.2 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 15.407(b)(6) and FCC Part 15.209 Limit..

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.





9.3 Test Receiver Setup

During the radiated emission test for above 1GHz, the test receiver was set with the following configurations:

For peak detector:

RBW = 1000kHz, VBW = 3000kHz, Sweep Time = Auto

For average detector:

RBW = 1000kHz, VBW = 10Hz, Sweep Time = Auto

9.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Ant. Factor} + \text{Cable Loss} - \text{Ampl. Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15 Limit}$$

9.5 Environmental Conditions

Temperature:	22° C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

9.6 Summary of Test Results/Plots

According to the data below, the FCC Part 15.205, 15.209 and 15.407(b)(6) standards, and had the worst margin of:

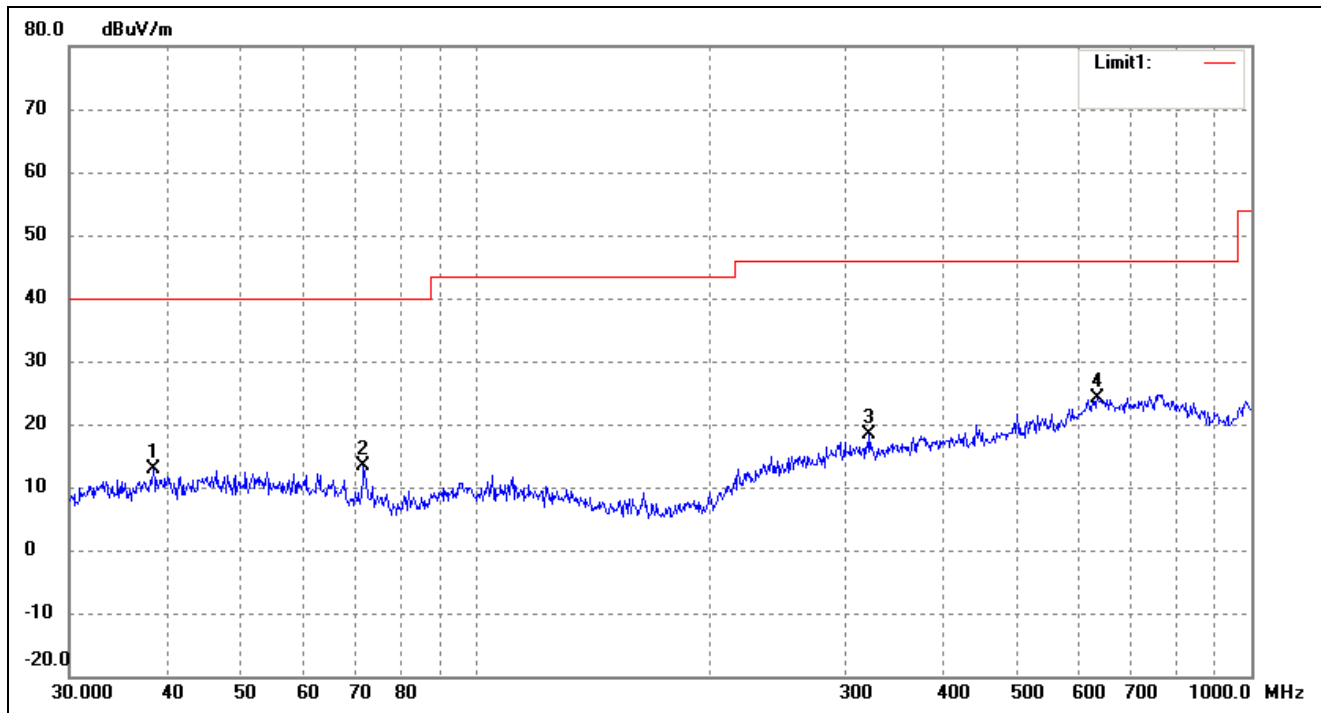
Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

For 802.11a

Spurious Emission From 30 MHz to 1 GHz

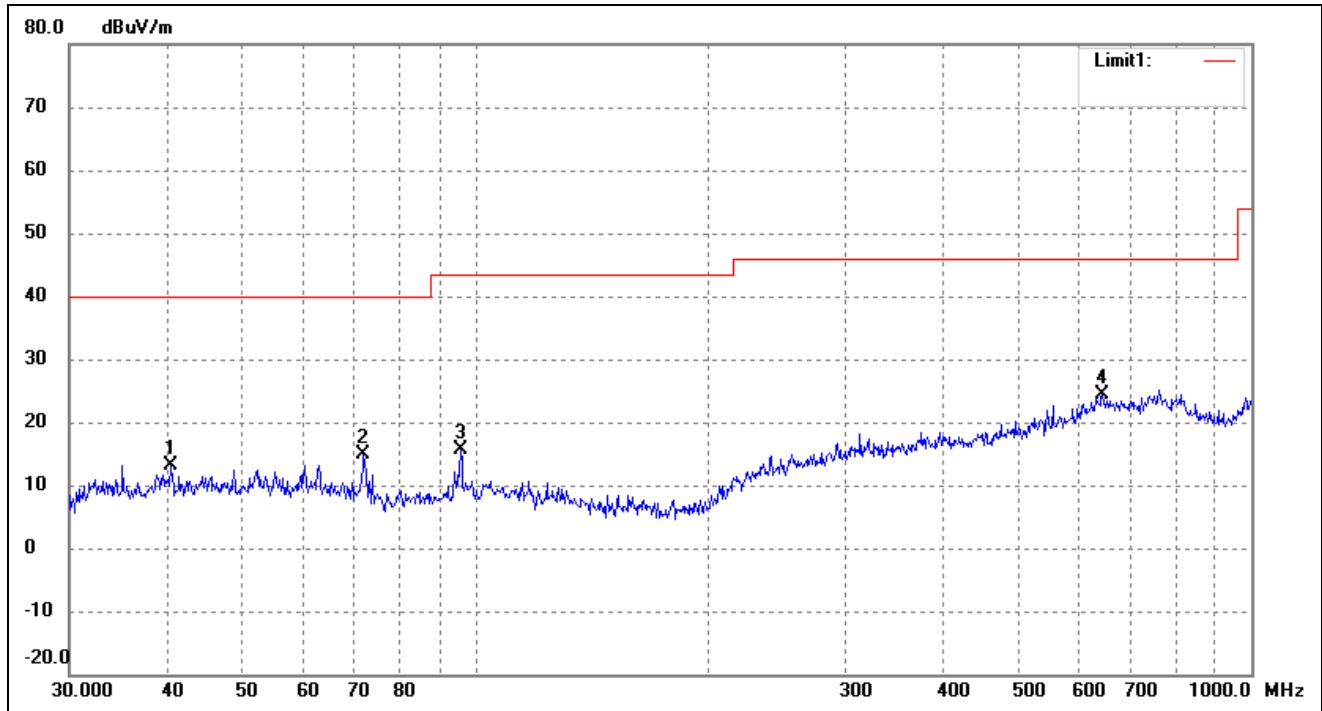
Test mode: Transmitting Channel 5180MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	38.4809	29.62	-16.78	12.84	40.00	-27.16	95	100	peak
2	71.8320	32.23	-18.94	13.29	40.00	-26.71	289	100	peak
3	322.1886	27.87	-9.38	18.49	46.00	-27.51	93	100	peak
4	633.9073	25.36	-1.21	24.15	46.00	-21.85	95	100	peak

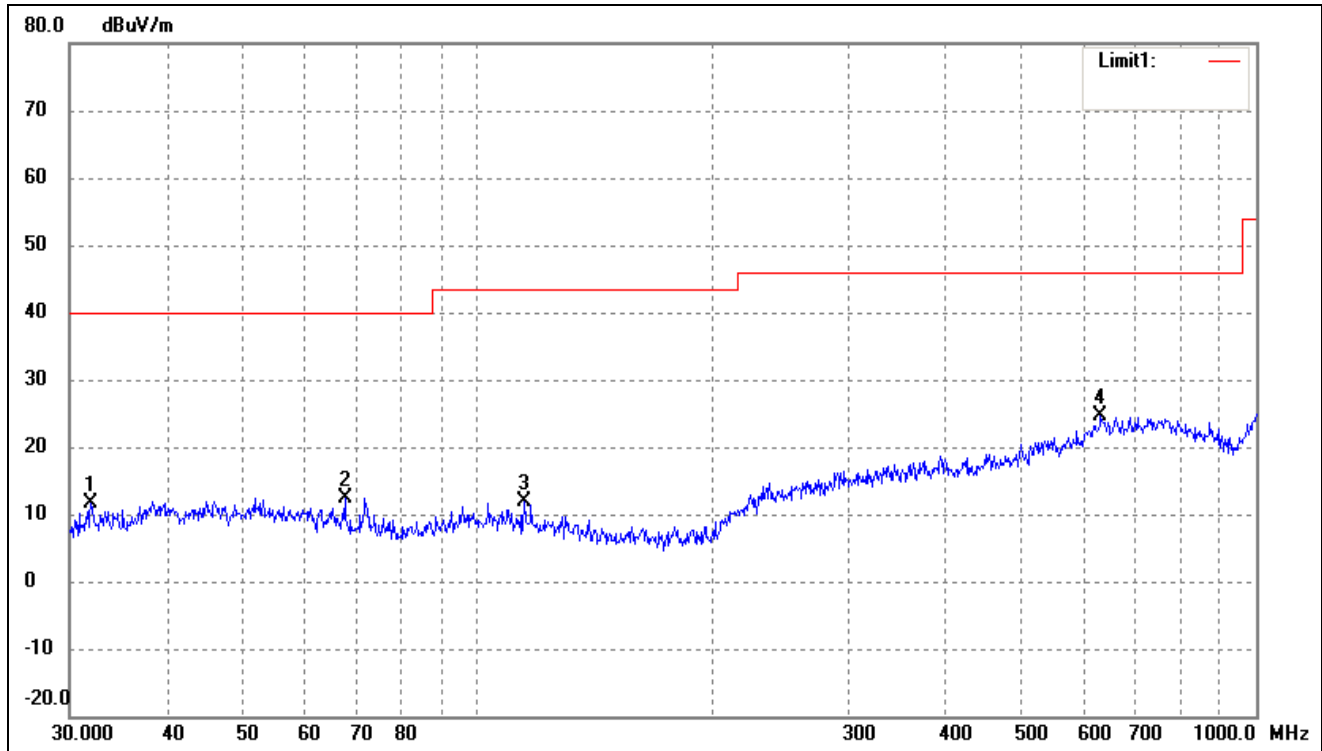
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.5591	29.78	-16.53	13.25	40.00	-26.75	200	100	peak
2	71.8320	33.84	-18.94	14.90	40.00	-25.10	129	100	peak
3	95.7622	32.82	-17.19	15.63	43.50	-27.87	127	100	peak
4	642.8613	25.53	-1.08	24.45	46.00	-21.55	90	100	peak

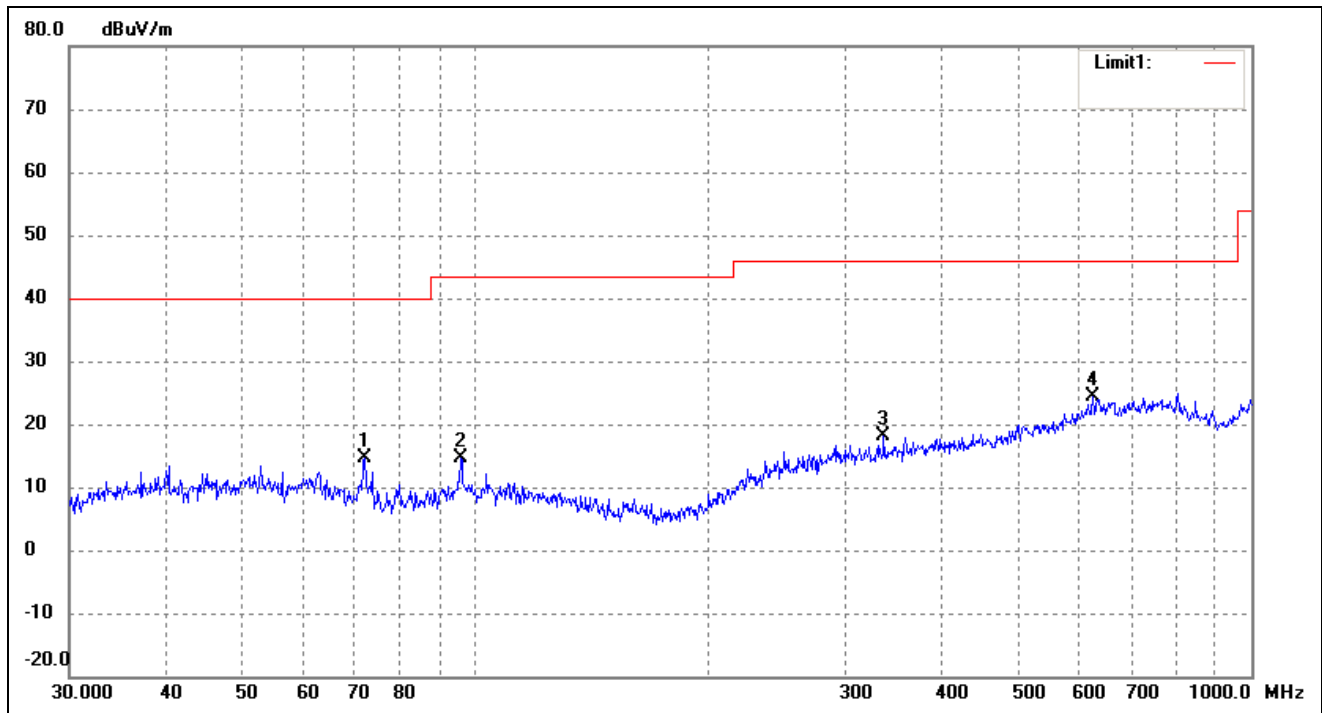
Test mode: Transmitting Channel 5200MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	31.9546	29.40	-17.85	11.55	40.00	-28.45	92	100	peak
2	67.6751	30.63	-18.21	12.42	40.00	-27.58	80	100	peak
3	114.9169	28.53	-16.64	11.89	43.50	-31.61	148	100	peak
4	631.6884	25.99	-1.29	24.70	46.00	-21.30	266	100	peak

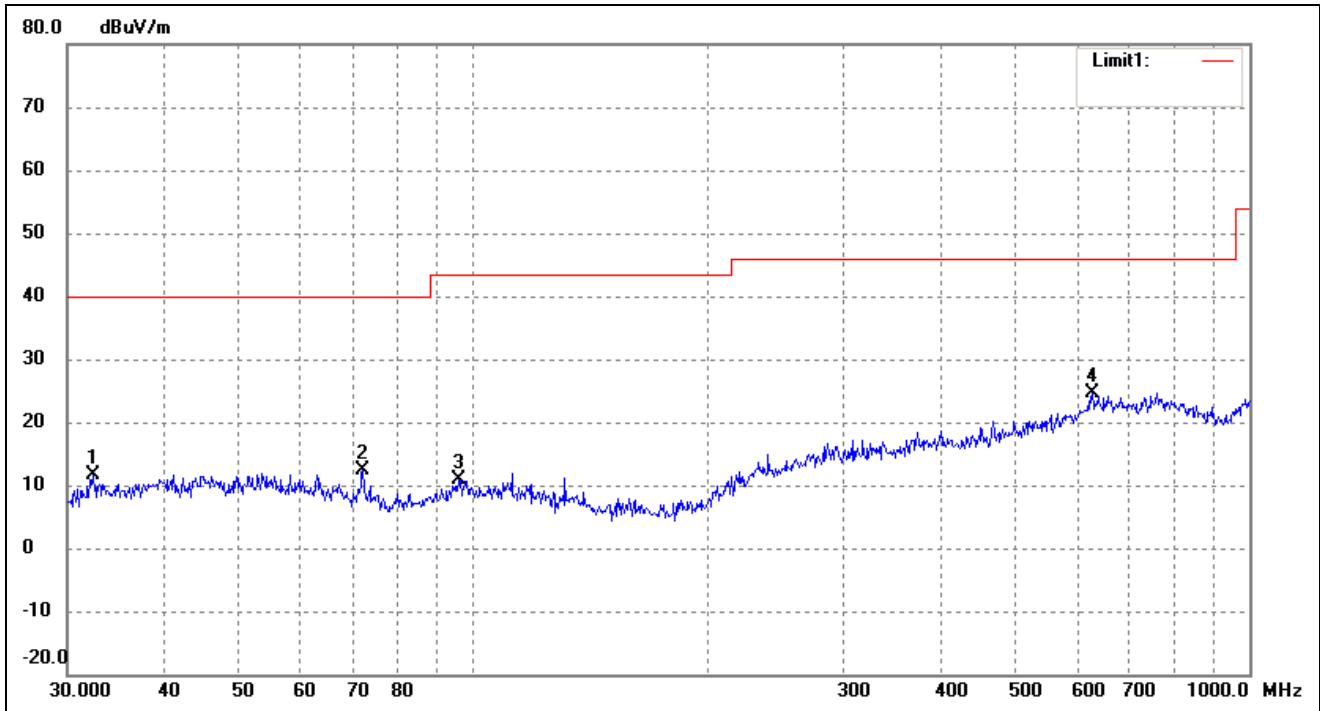
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	72.0843	33.48	-18.97	14.51	40.00	-25.49	52	100	peak
2	95.7622	31.74	-17.19	14.55	43.50	-28.95	173	100	peak
3	336.0352	27.73	-9.62	18.11	46.00	-27.89	65	100	peak
4	625.0780	25.96	-1.51	24.45	46.00	-21.55	102	100	peak

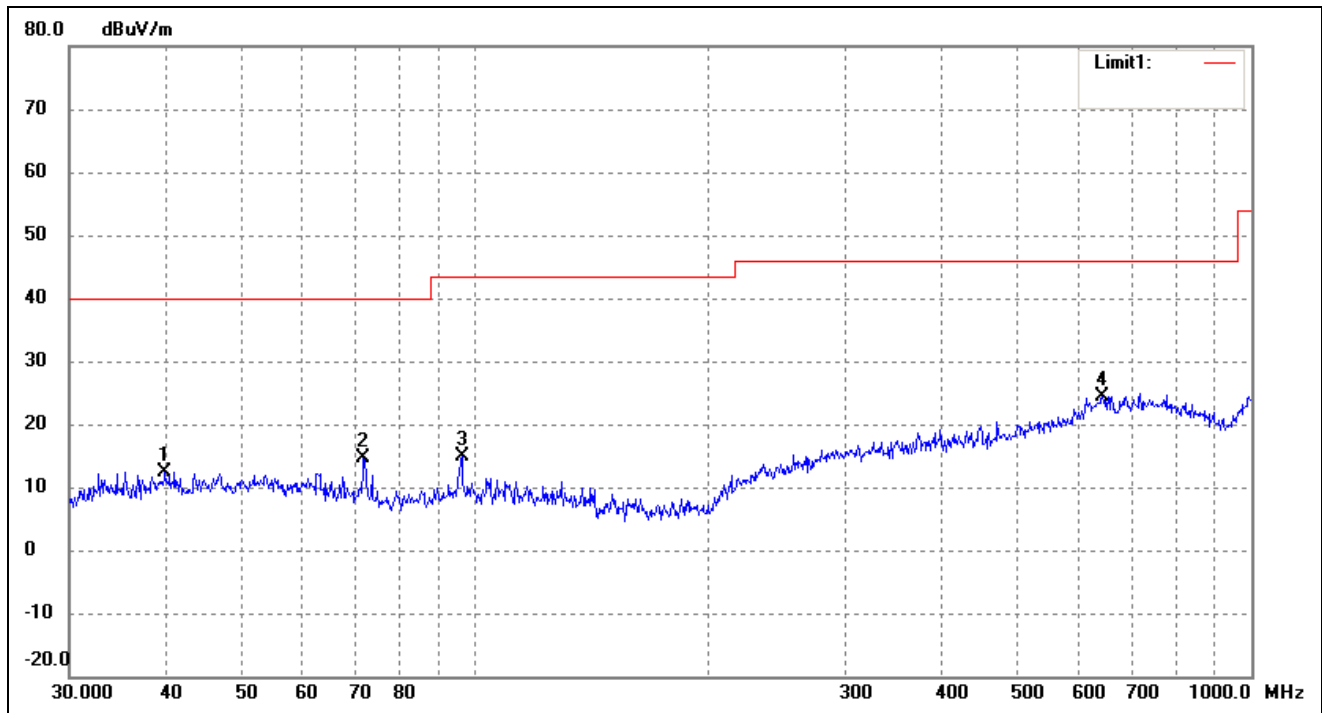
Test mode: Transmitting Channel 5240MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	32.4059	29.28	-17.77	11.51	40.00	-28.49	67	100	peak
2	72.0843	31.26	-18.97	12.29	40.00	-27.71	152	100	peak
3	95.7622	28.18	-17.19	10.99	43.50	-32.51	138	100	peak
4	627.2738	26.10	-1.45	24.65	46.00	-21.35	139	100	peak

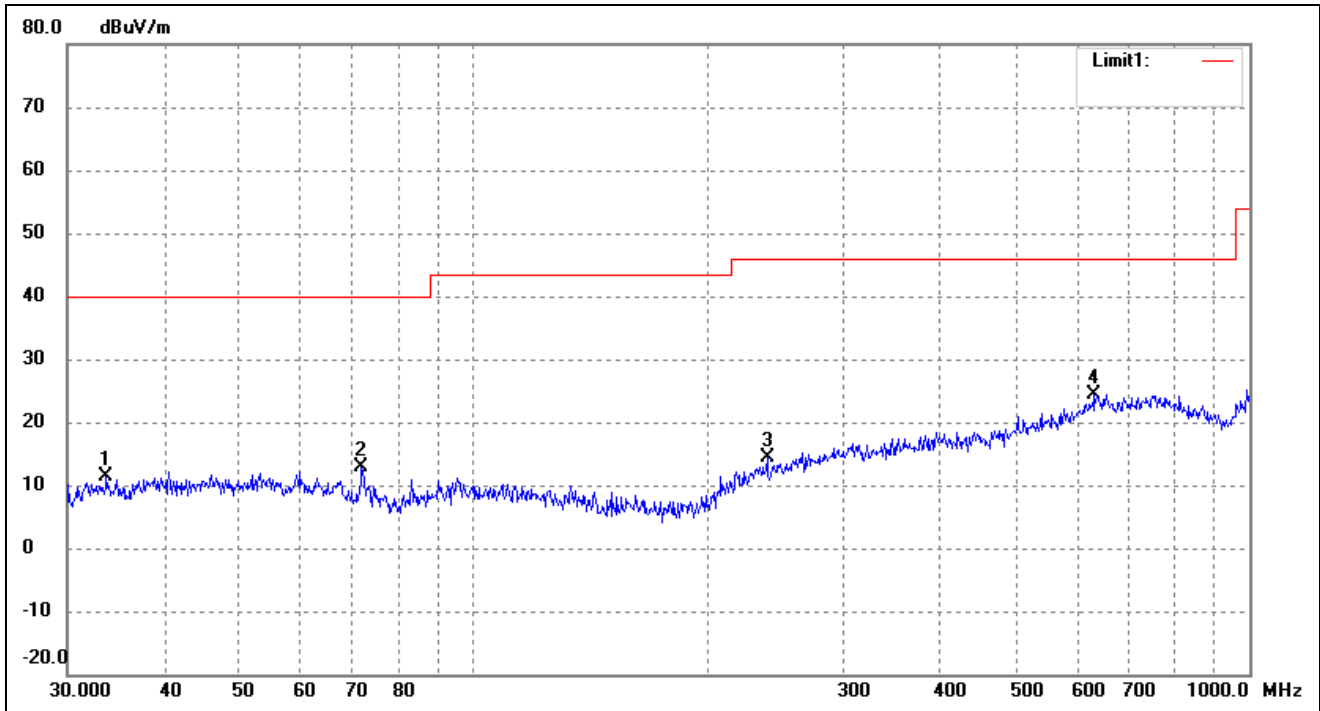
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.8542	29.02	-16.55	12.47	40.00	-27.53	94	100	peak
2	71.8320	33.68	-18.94	14.74	40.00	-25.26	165	100	peak
3	96.0986	32.03	-17.14	14.89	43.50	-28.61	138	100	peak
4	642.8613	25.56	-1.08	24.48	46.00	-21.52	109	100	peak

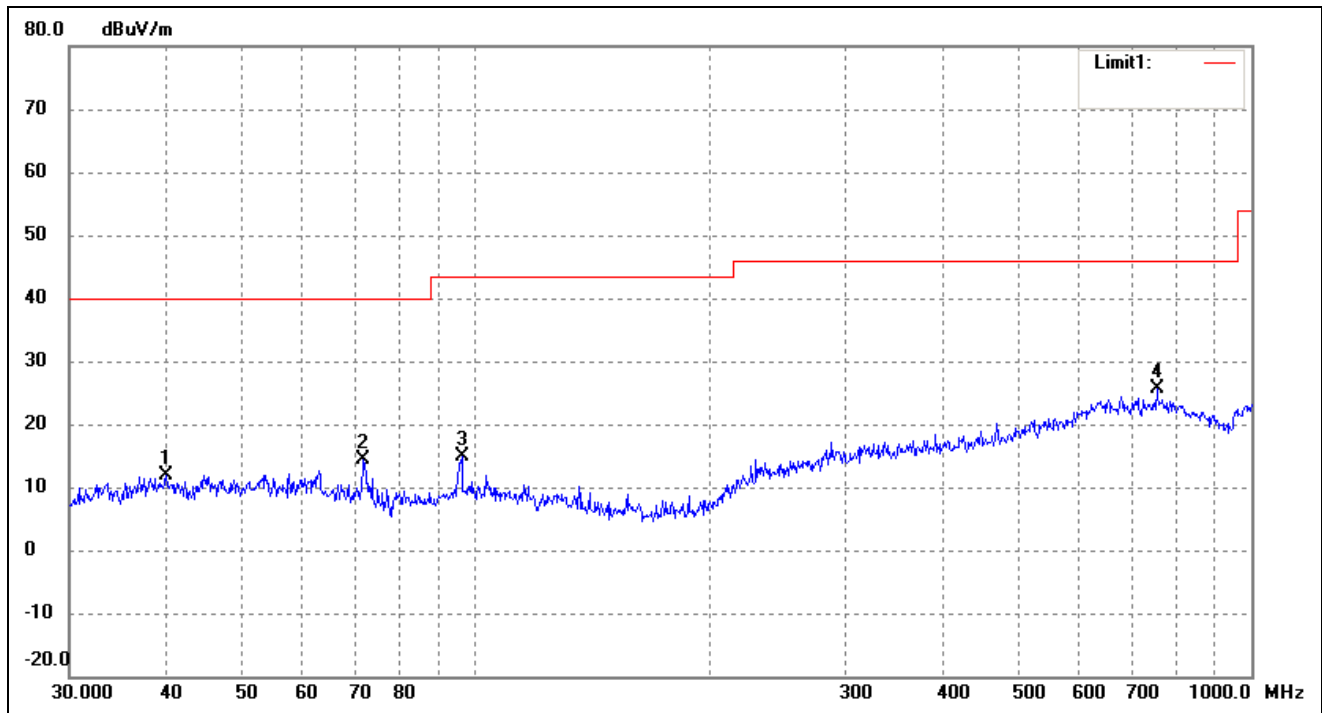
Test mode: Transmitting Channel 5260MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	33.6803	29.02	-17.54	11.48	40.00	-28.52	91	100	peak
2	71.8320	31.70	-18.94	12.76	40.00	-27.24	204	100	peak
3	239.1473	26.95	-12.60	14.35	46.00	-31.65	93	100	peak
4	631.6884	25.58	-1.29	24.29	46.00	-21.71	350	100	peak

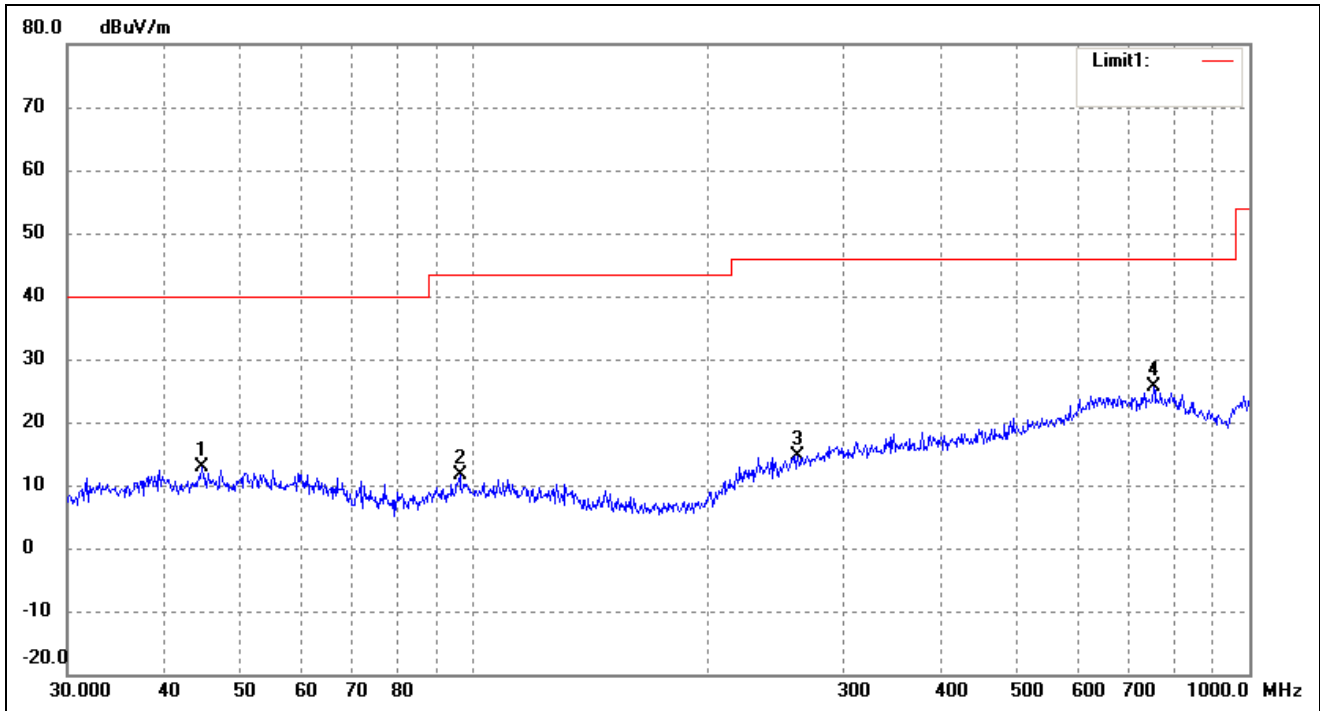
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.9942	28.40	-16.53	11.87	40.00	-28.13	286	100	peak
2	71.8320	33.20	-18.94	14.26	40.00	-25.74	92	100	peak
3	96.0986	32.06	-17.14	14.92	43.50	-28.58	351	100	peak
4	755.3873	26.01	-0.43	25.58	46.00	-20.42	101	100	peak

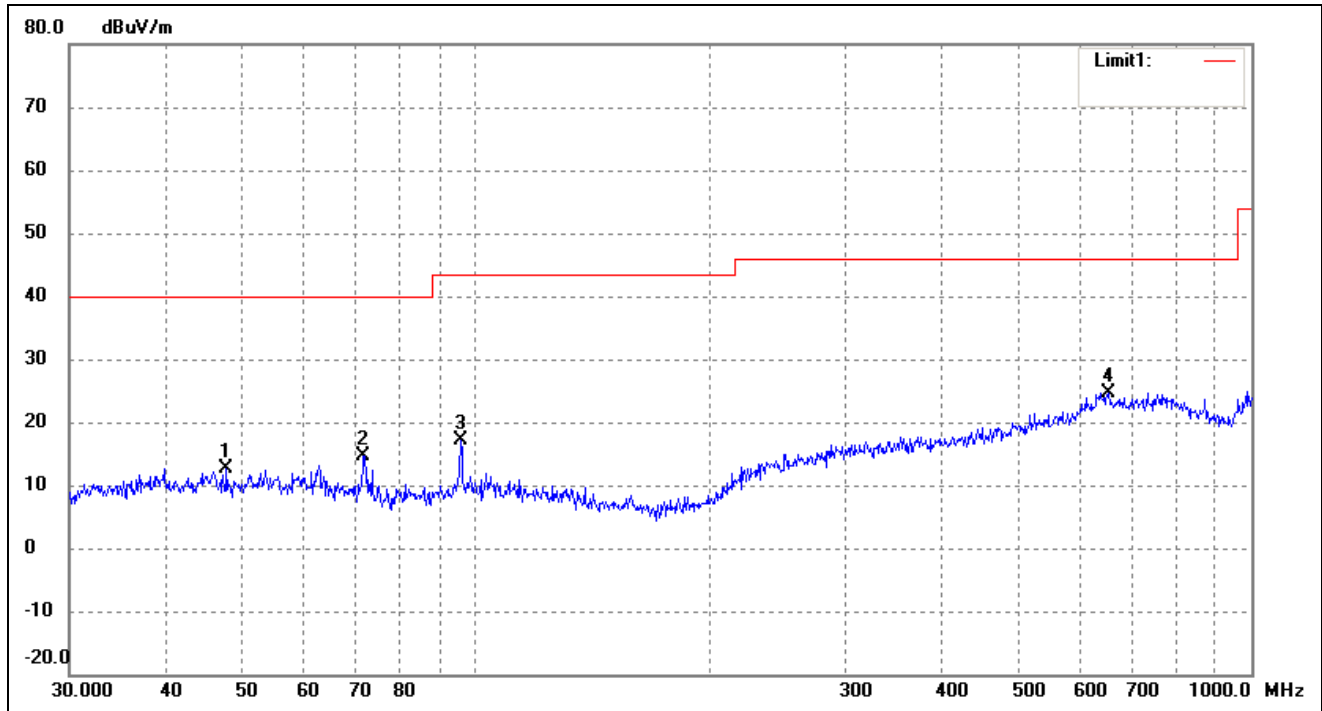
Test mode: Transmitting Channel 5280MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	44.7434	29.29	-16.48	12.81	40.00	-27.19	80	100	peak
2	96.0986	28.66	-17.14	11.52	43.50	-31.98	102	100	peak
3	261.9753	26.22	-11.64	14.58	46.00	-31.42	58	100	peak
4	752.7432	26.07	-0.33	25.74	46.00	-20.26	288	100	peak

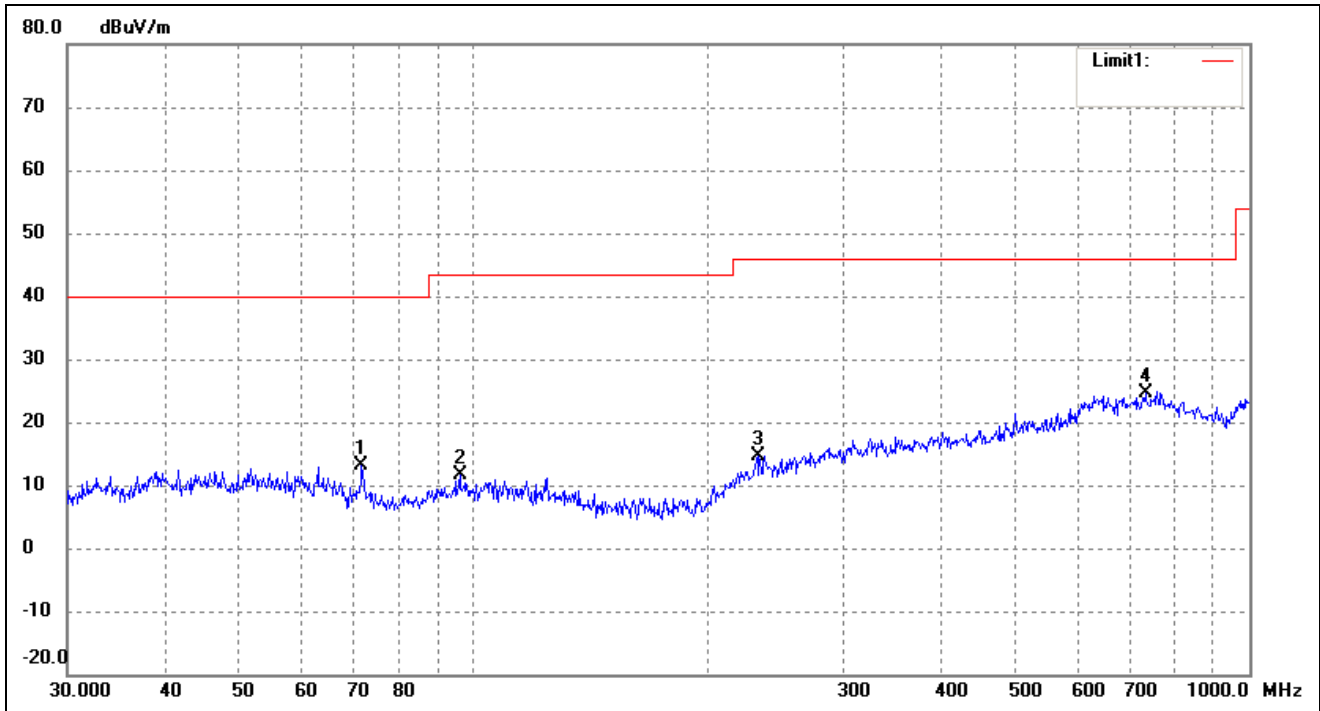
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	47.8260	29.22	-16.53	12.69	40.00	-27.31	152	100	peak
2	71.8320	33.58	-18.94	14.64	40.00	-25.36	126	100	peak
3	95.7622	34.42	-17.19	17.23	43.50	-26.27	125	100	peak
4	654.2318	26.00	-1.38	24.62	46.00	-21.38	358	100	peak

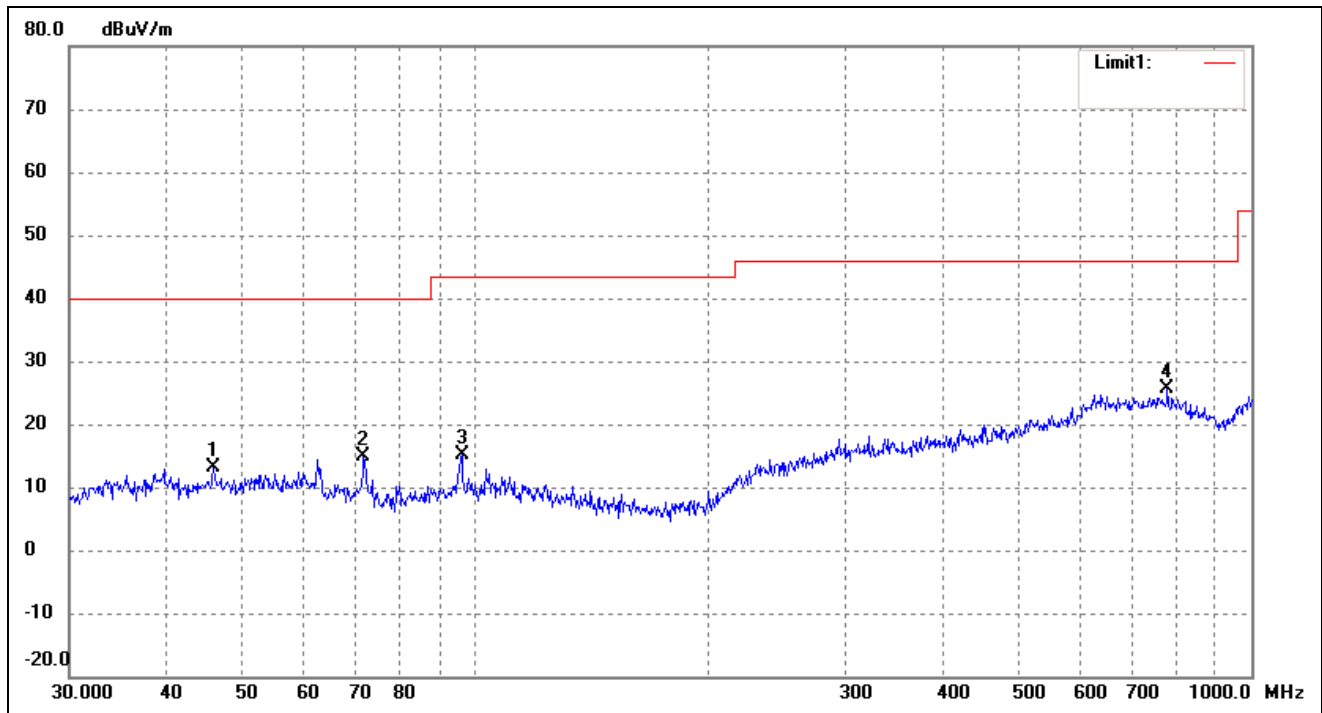
Test mode: Transmitting Channel 5320MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	71.8320	32.08	-18.94	13.14	40.00	-26.86	57	100	peak
2	96.0986	28.85	-17.14	11.71	43.50	-31.79	90	100	peak
3	232.5318	27.65	-13.03	14.62	46.00	-31.38	50	100	peak
4	734.4913	24.85	-0.18	24.67	46.00	-21.33	126	100	peak

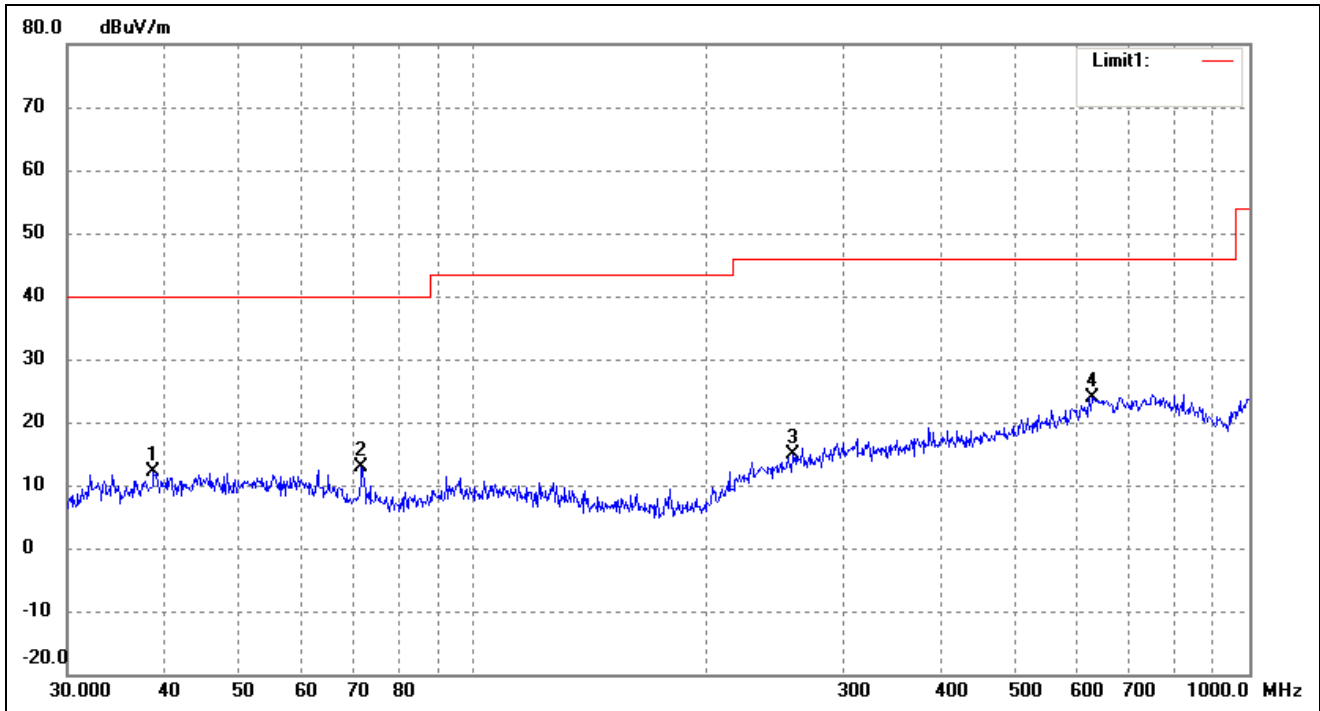
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	46.0164	29.72	-16.49	13.23	40.00	-26.77	107	100	peak
2	71.8320	33.90	-18.94	14.96	40.00	-25.04	190	100	peak
3	96.0986	32.31	-17.14	15.17	43.50	-28.33	67	100	peak
4	779.6068	27.38	-1.84	25.54	46.00	-20.46	96	100	peak

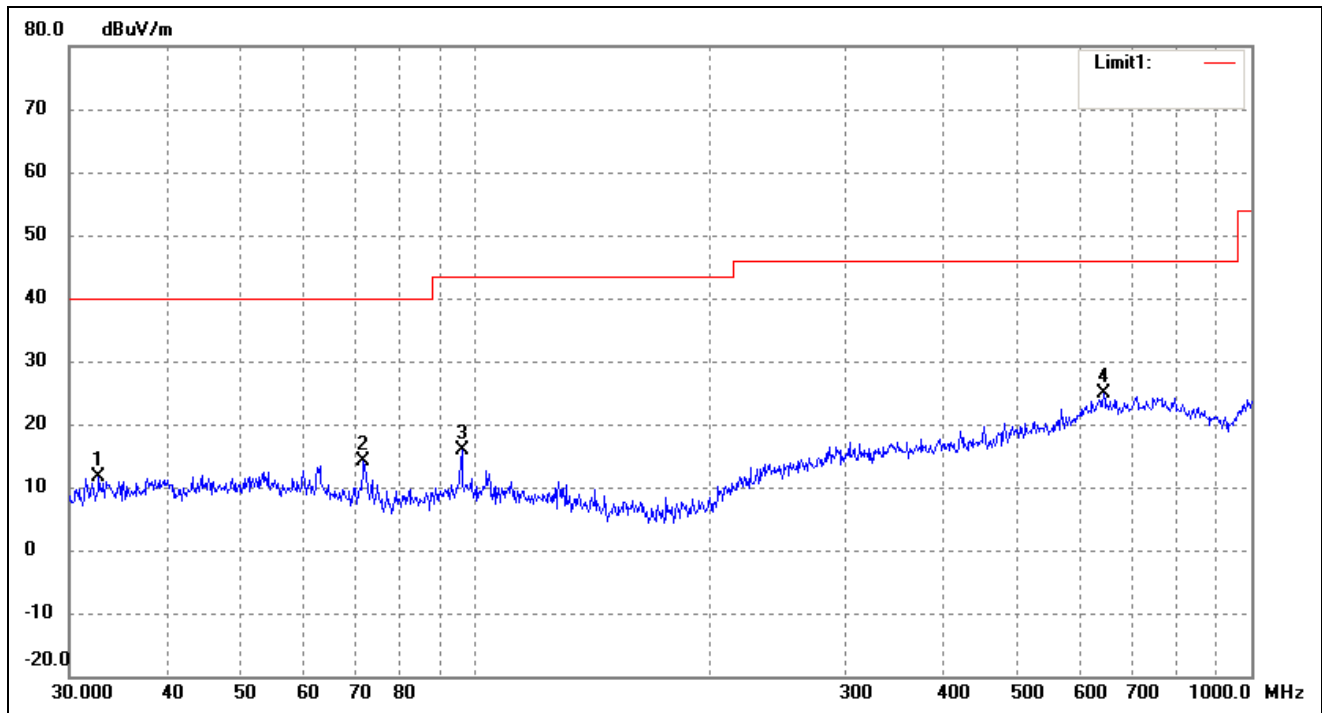
Test mode: Transmitting Channel 5500MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	38.7518	28.83	-16.73	12.10	40.00	-27.90	82	100	peak
2	71.8320	31.87	-18.94	12.93	40.00	-27.07	196	100	peak
3	258.3264	26.62	-11.85	14.77	46.00	-31.23	131	100	peak
4	627.2738	25.38	-1.45	23.93	46.00	-22.07	113	100	peak

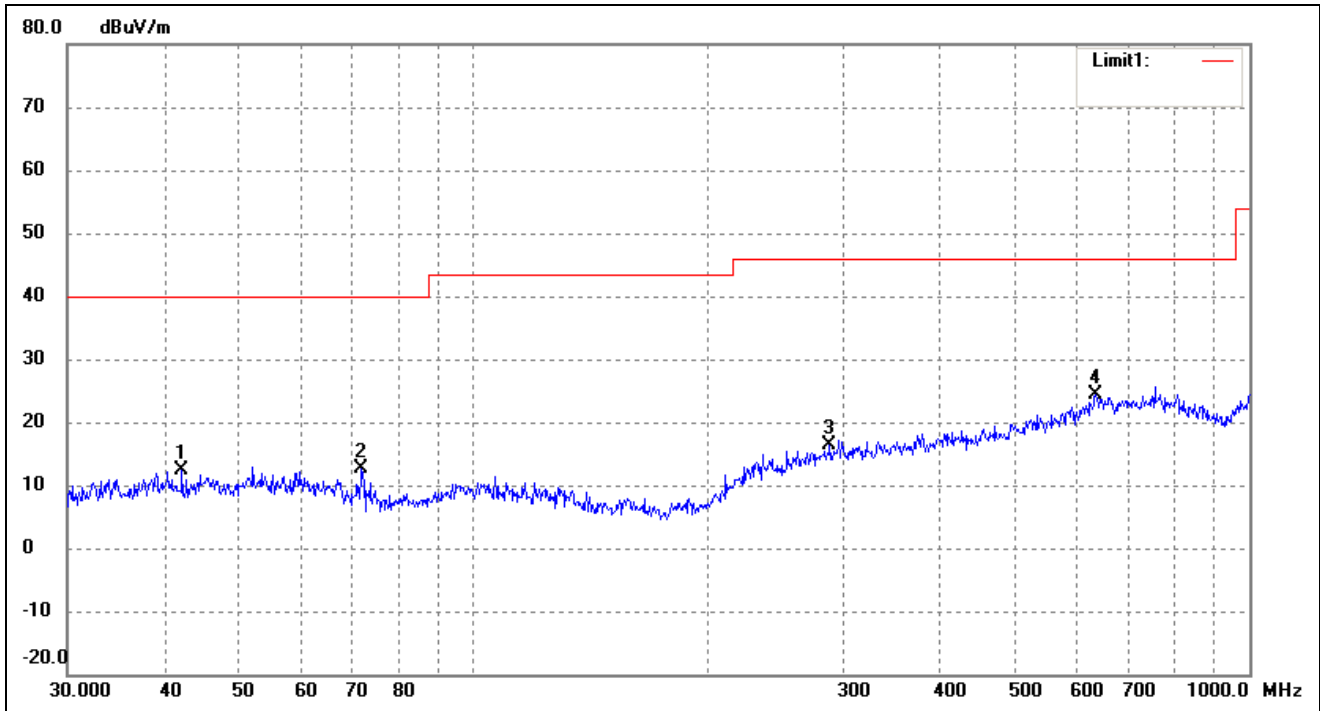
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	32.7486	29.41	-17.70	11.71	40.00	-28.29	210	100	peak
2	71.8320	33.18	-18.94	14.24	40.00	-25.76	212	100	peak
3	96.0986	32.92	-17.14	15.78	43.50	-27.72	53	100	peak
4	645.1195	26.06	-1.15	24.91	46.00	-21.09	92	100	peak

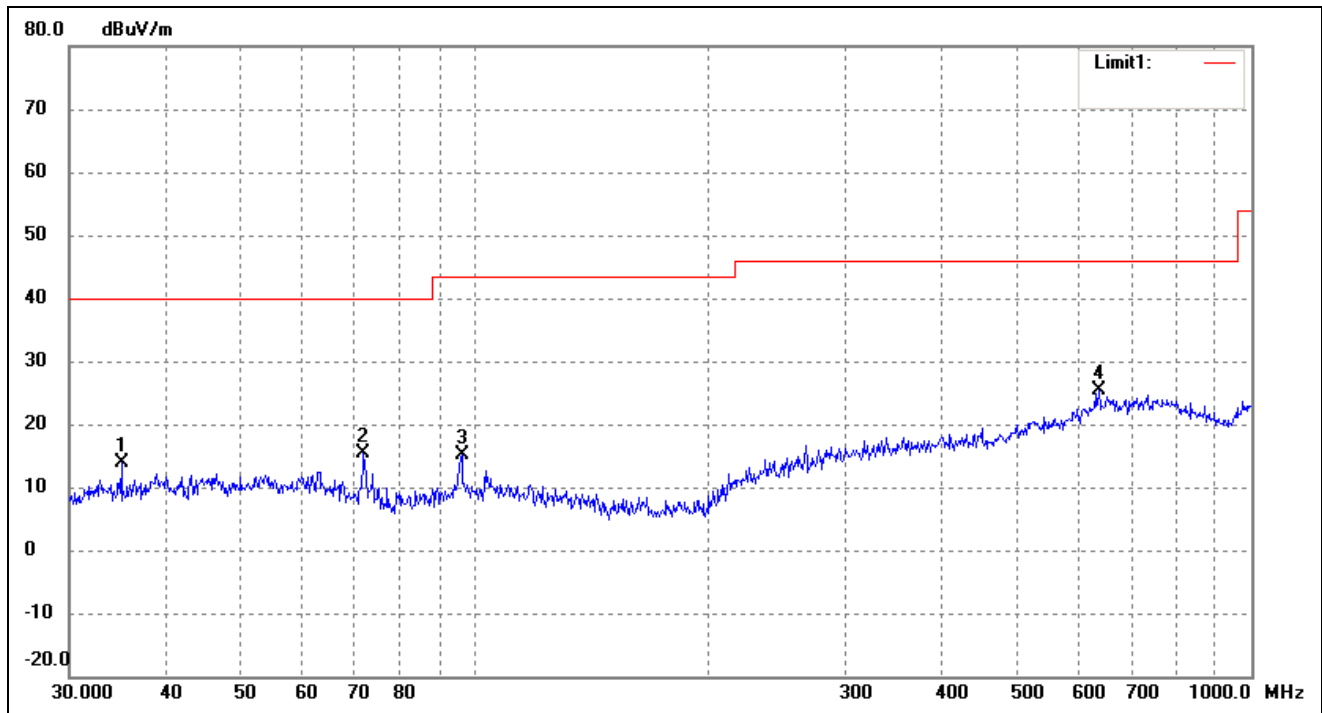
Test mode: Transmitting Channel 5600MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	42.1542	28.87	-16.50	12.37	40.00	-27.63	107	100	peak
2	71.8320	31.53	-18.94	12.59	40.00	-27.41	190	100	peak
3	287.9904	26.40	-10.05	16.35	46.00	-29.65	67	100	peak
4	633.9073	25.57	-1.21	24.36	46.00	-21.64	96	100	peak

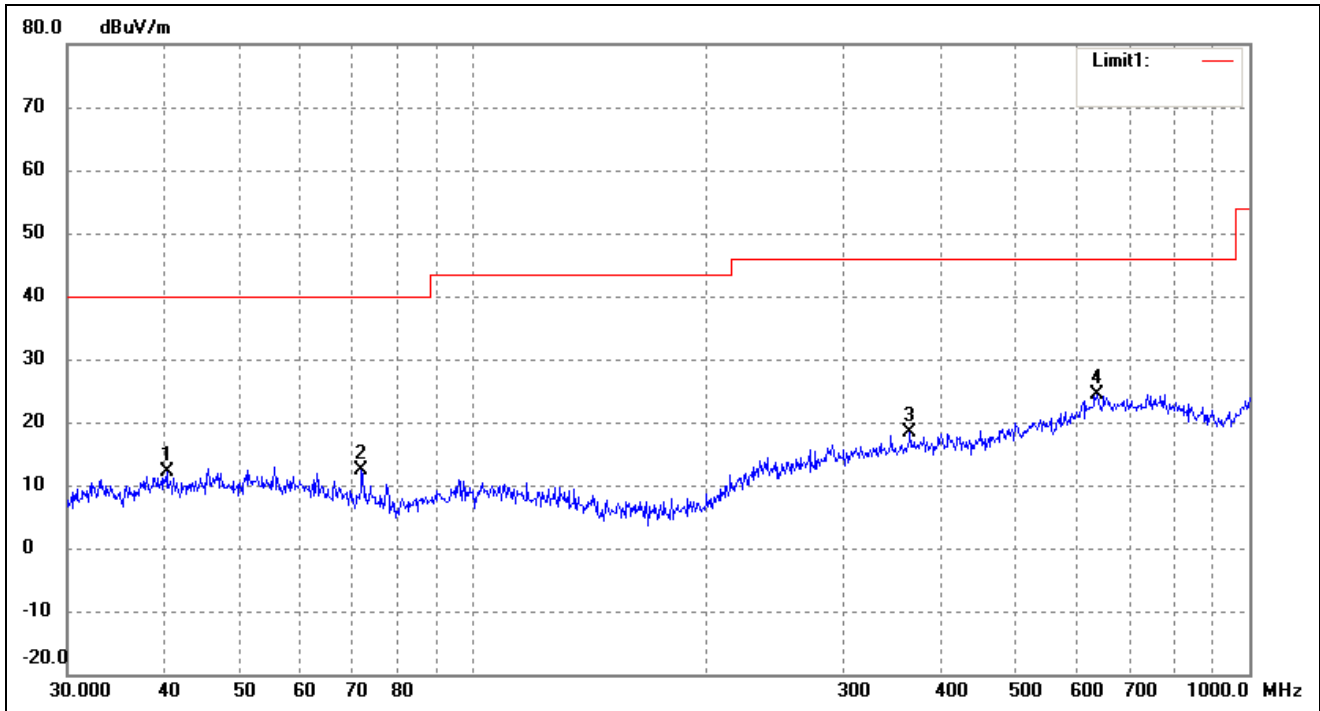
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	35.0048	31.16	-17.32	13.84	40.00	-26.16	94	100	peak
2	71.8320	34.32	-18.94	15.38	40.00	-24.62	226	100	peak
3	96.0986	32.27	-17.14	15.13	43.50	-28.37	99	100	peak
4	636.1340	26.53	-1.15	25.38	46.00	-20.62	65	100	peak

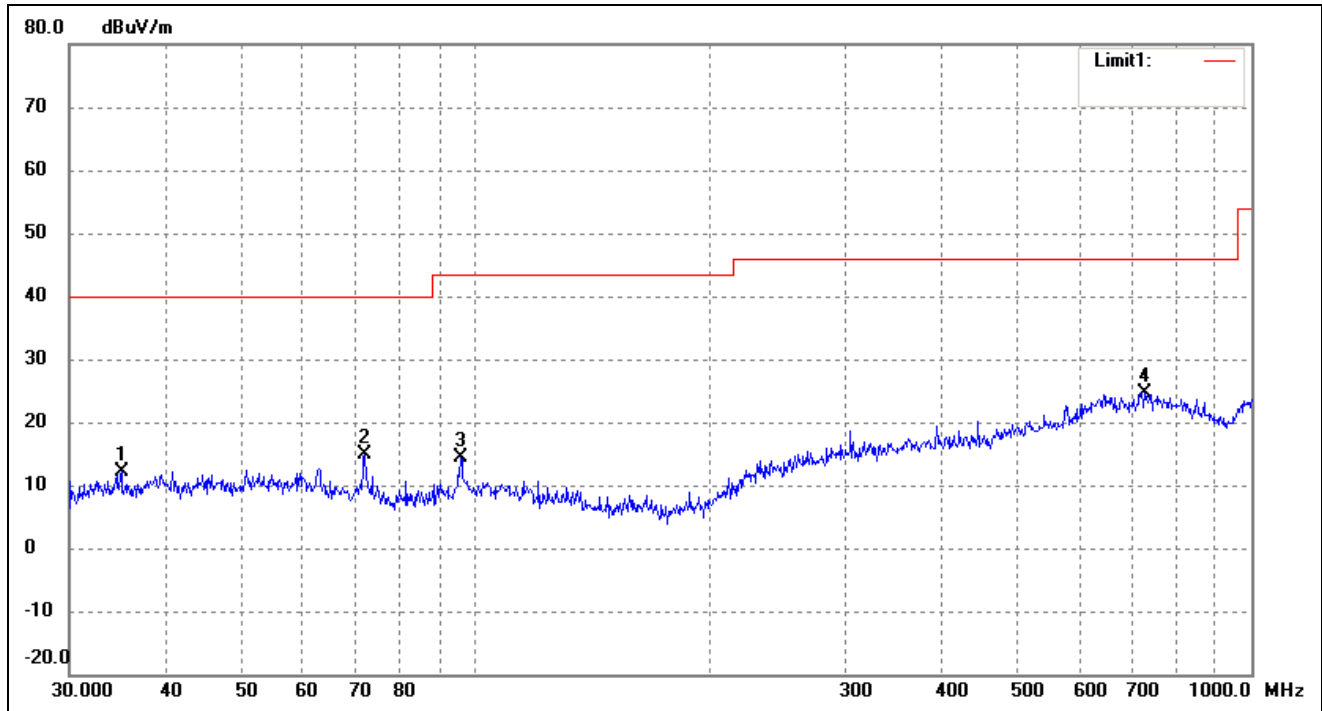
Test mode: Transmitting Channel 5700MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.2757	28.67	-16.53	12.14	40.00	-27.86	252	100	peak
2	71.8320	31.32	-18.94	12.38	40.00	-27.62	92	100	peak
3	365.5391	27.37	-8.91	18.46	46.00	-27.54	187	100	peak
4	636.1340	25.60	-1.15	24.45	46.00	-21.55	98	100	peak

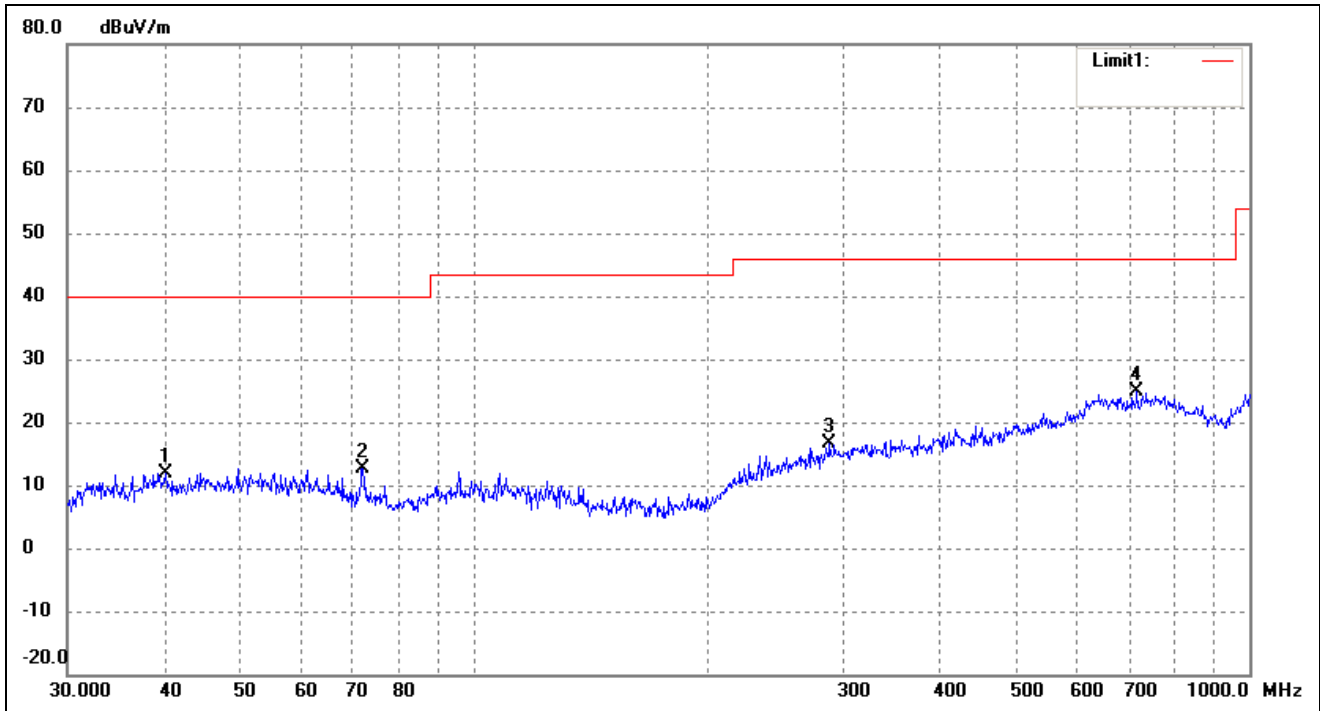
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	35.0048	29.56	-17.32	12.24	40.00	-27.76	210	100	peak
2	72.0843	33.80	-18.97	14.83	40.00	-25.17	212	100	peak
3	95.7622	31.59	-17.19	14.40	43.50	-29.10	53	100	peak
4	729.3583	25.17	-0.52	24.65	46.00	-21.35	92	100	peak

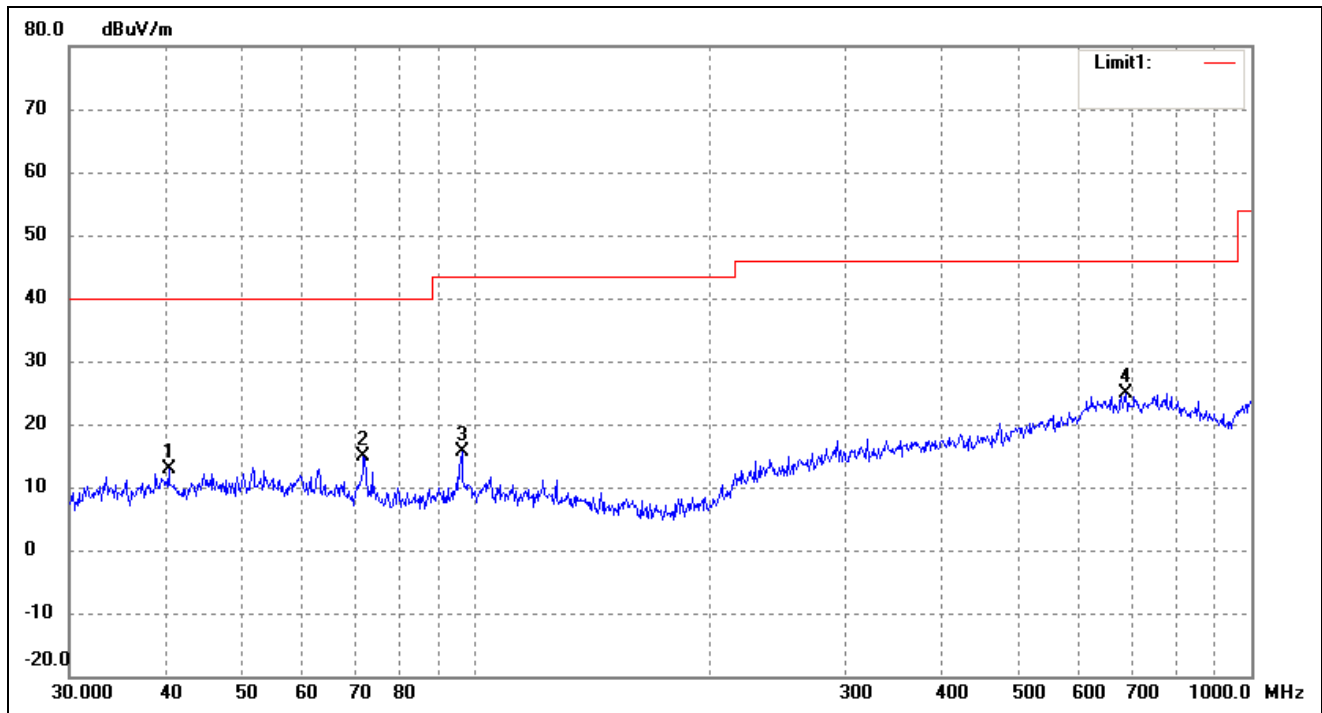
Test mode: Transmitting Channel 5745MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.1347	28.47	-16.53	11.94	40.00	-28.06	65	100	peak
2	72.0843	31.62	-18.97	12.65	40.00	-27.35	192	100	peak
3	287.9904	26.56	-10.05	16.51	46.00	-29.49	118	100	peak
4	716.6820	26.10	-1.25	24.85	46.00	-21.15	110	100	peak

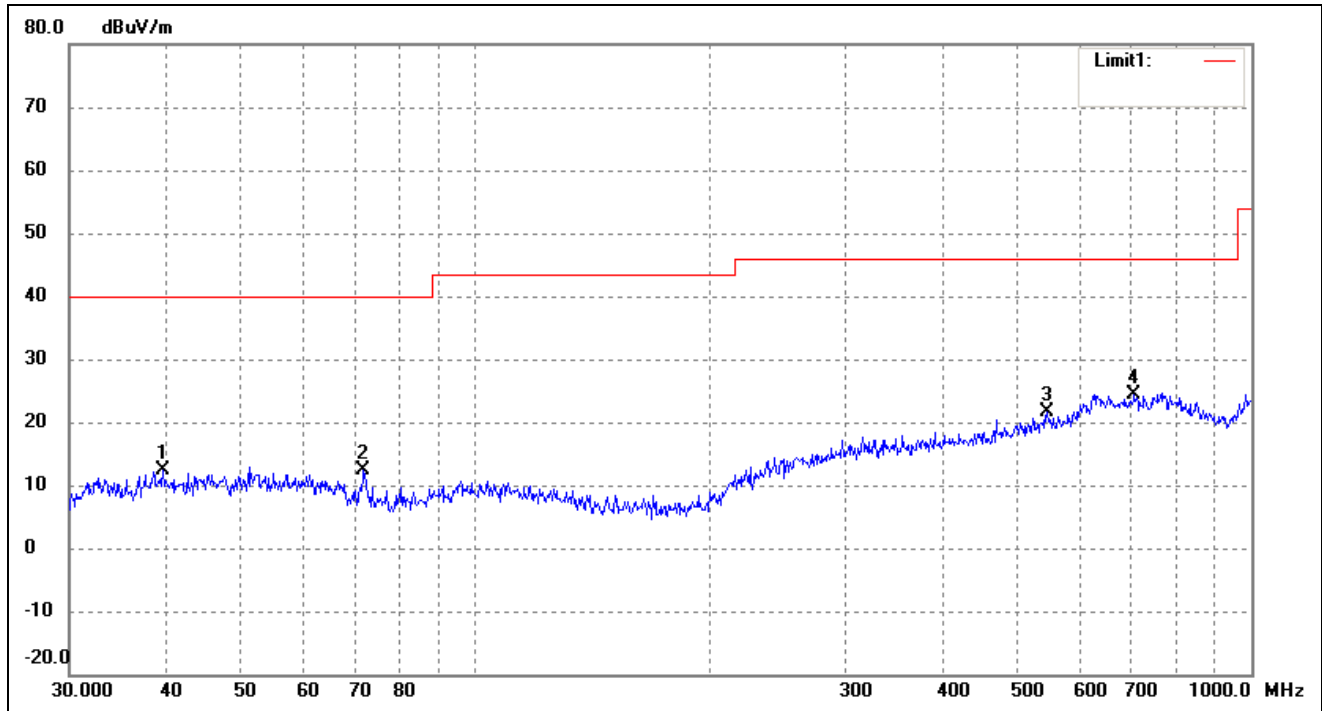
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.2757	29.47	-16.53	12.94	40.00	-27.06	51	100	peak
2	71.8320	33.89	-18.94	14.95	40.00	-25.05	114	100	peak
3	96.0986	32.67	-17.14	15.53	43.50	-27.97	101	100	peak
4	689.5644	25.89	-1.07	24.82	46.00	-21.18	90	100	peak

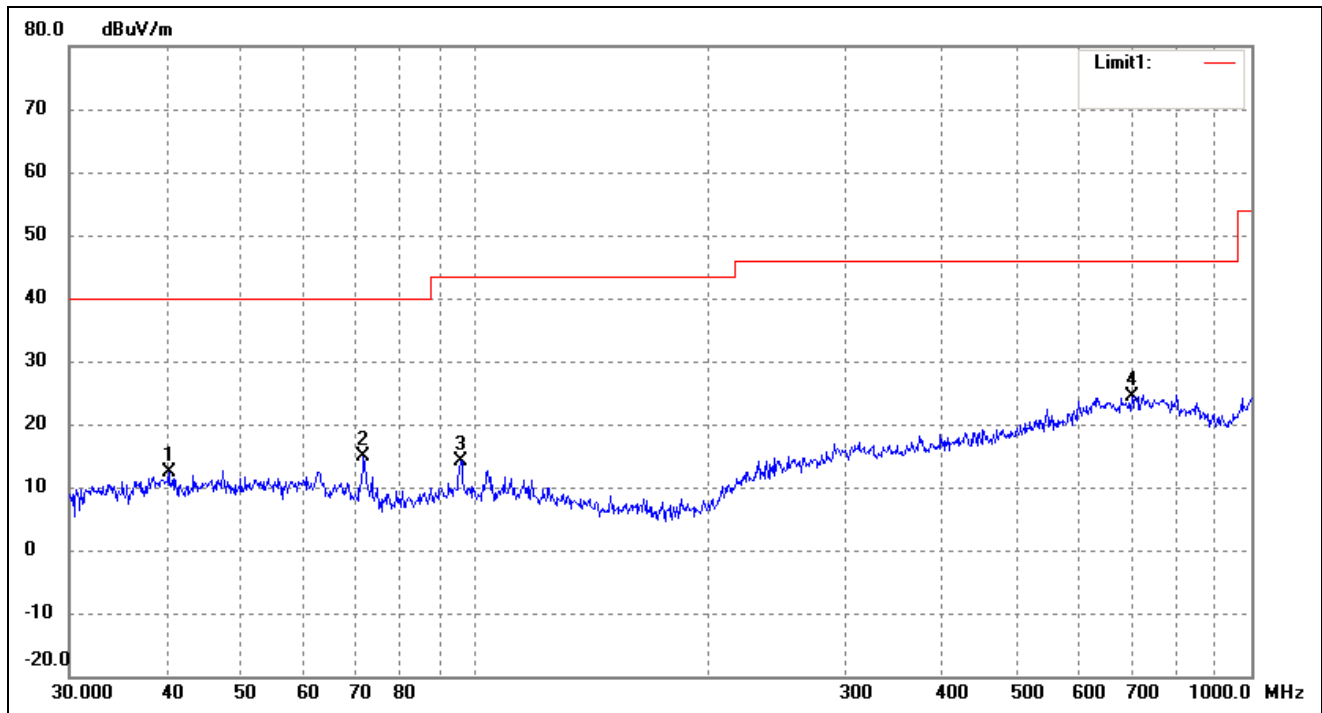
Test mode: Transmitting Channel 5785MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.5757	28.91	-16.59	12.32	40.00	-27.68	151	100	peak
2	71.8320	31.40	-18.94	12.46	40.00	-27.54	181	100	peak
3	545.1826	26.74	-5.14	21.60	46.00	-24.40	139	100	peak
4	706.6999	26.03	-1.59	24.44	46.00	-21.56	133	100	peak

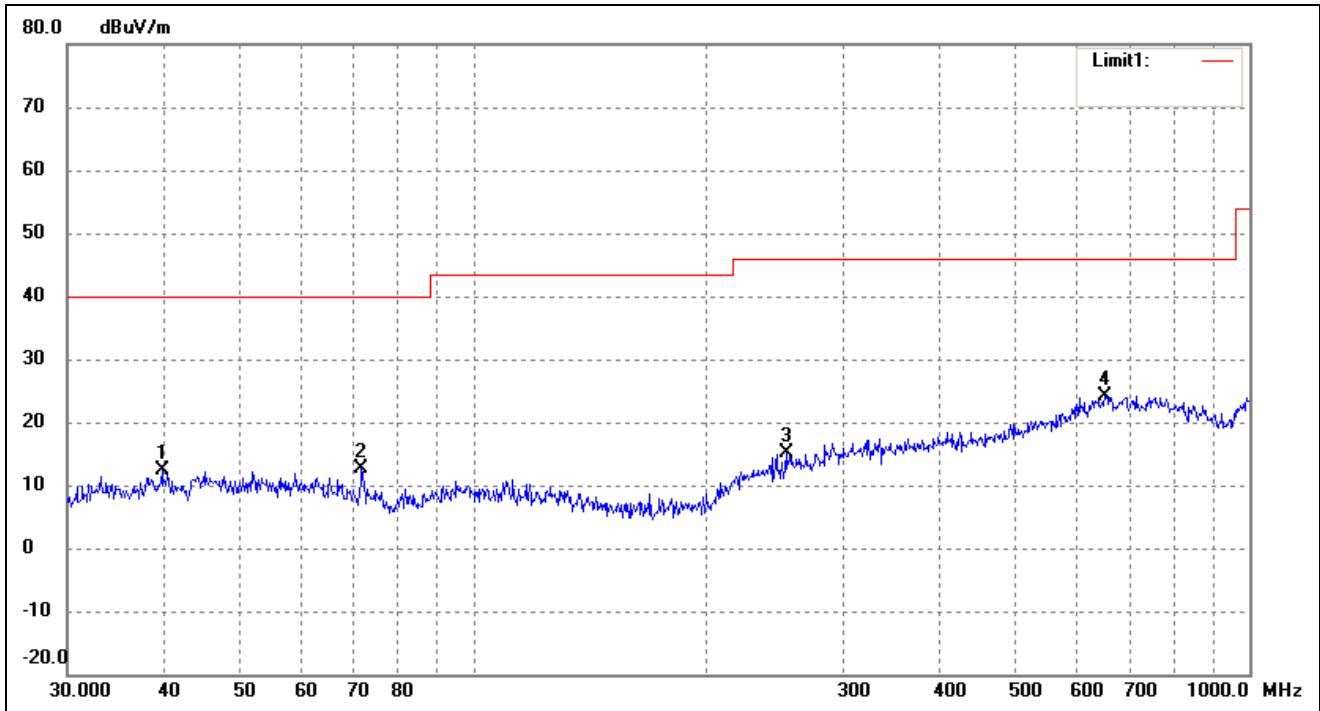
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.2757	28.85	-16.53	12.32	40.00	-27.68	97	100	peak
2	71.8320	33.90	-18.94	14.96	40.00	-25.04	137	100	peak
3	95.7622	31.42	-17.19	14.23	43.50	-29.27	111	100	peak
4	701.7610	26.05	-1.76	24.29	46.00	-21.71	346	100	peak

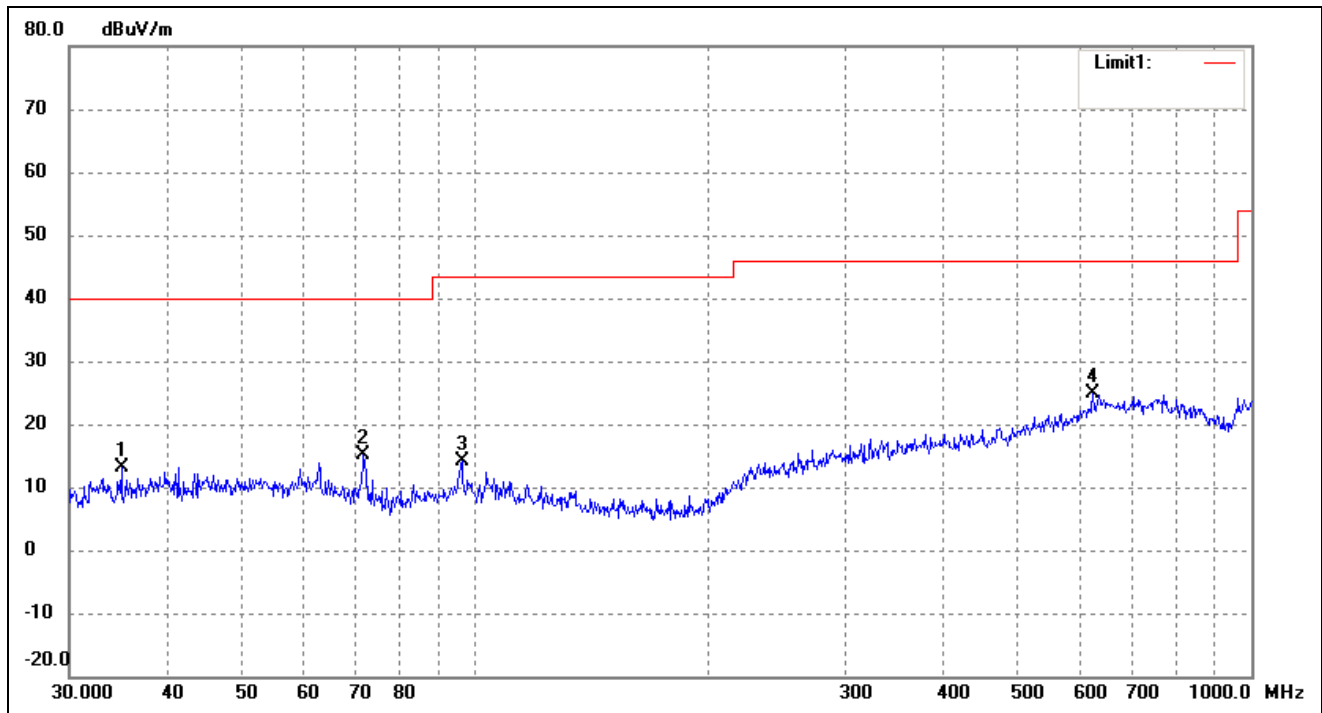
Test mode: Transmitting Channel 5825MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.7147	28.97	-16.57	12.40	40.00	-27.60	265	100	peak
2	71.8320	31.61	-18.94	12.67	40.00	-27.33	97	100	peak
3	252.9482	27.27	-12.03	15.24	46.00	-30.76	137	100	peak
4	651.9417	25.46	-1.32	24.14	46.00	-21.86	111	100	peak

Test Specification: Vertical

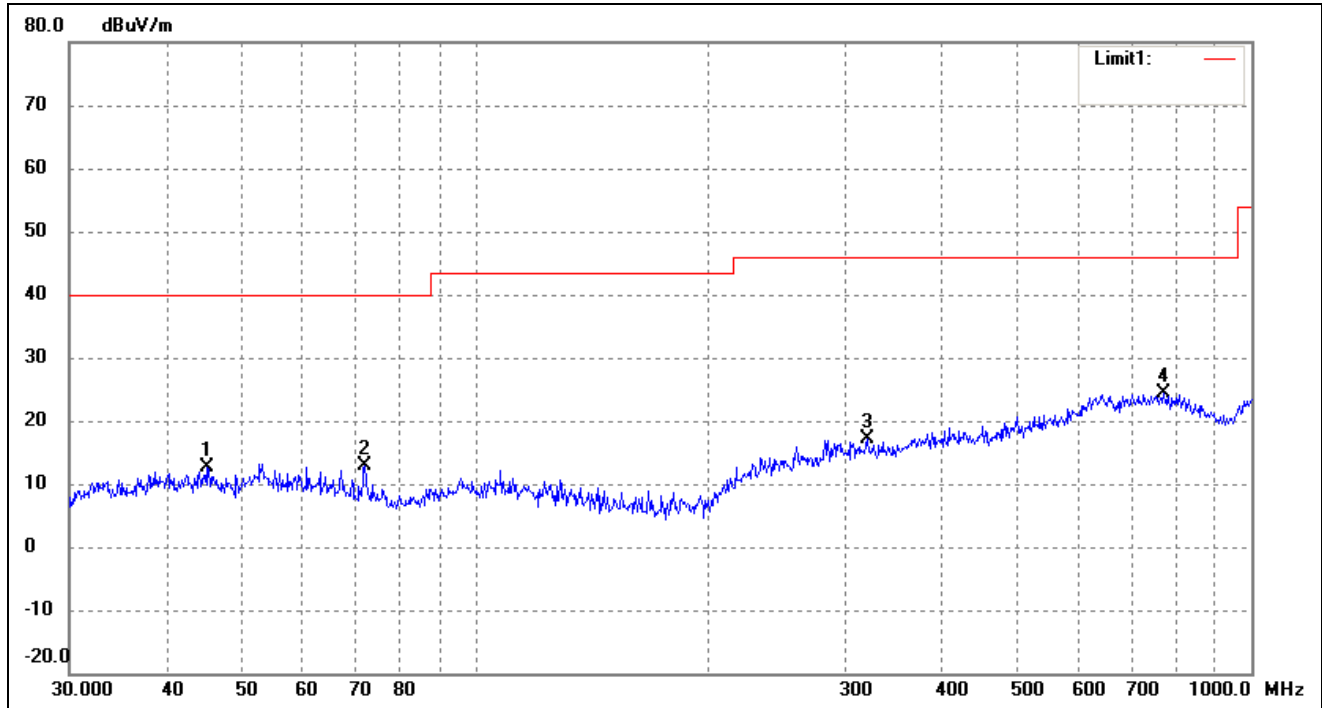


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	35.0048	30.41	-17.32	13.09	40.00	-26.91	215	100	peak
2	71.8320	34.16	-18.94	15.22	40.00	-24.78	292	100	peak
3	96.0986	31.32	-17.14	14.18	43.50	-29.32	56	100	peak
4	625.0780	26.38	-1.51	24.87	46.00	-21.13	311	100	peak

For 802.11n-HT20

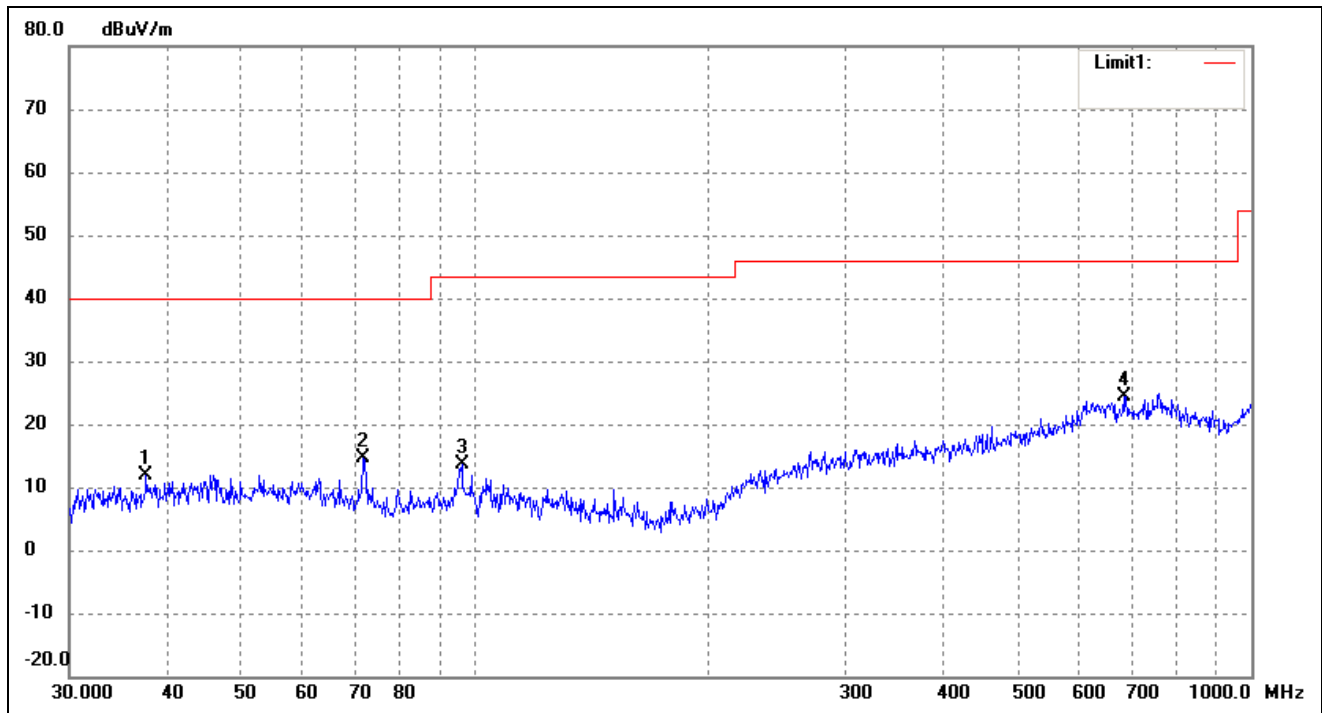
Test mode: Transmitting Channel 5180MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	45.0583	29.01	-16.48	12.53	40.00	-27.47	215	100	peak
2	72.0843	31.88	-18.97	12.91	40.00	-27.09	292	100	peak
3	319.9370	26.45	-9.34	17.11	46.00	-28.89	56	100	peak
4	771.4486	25.65	-1.29	24.36	46.00	-21.64	311	100	peak

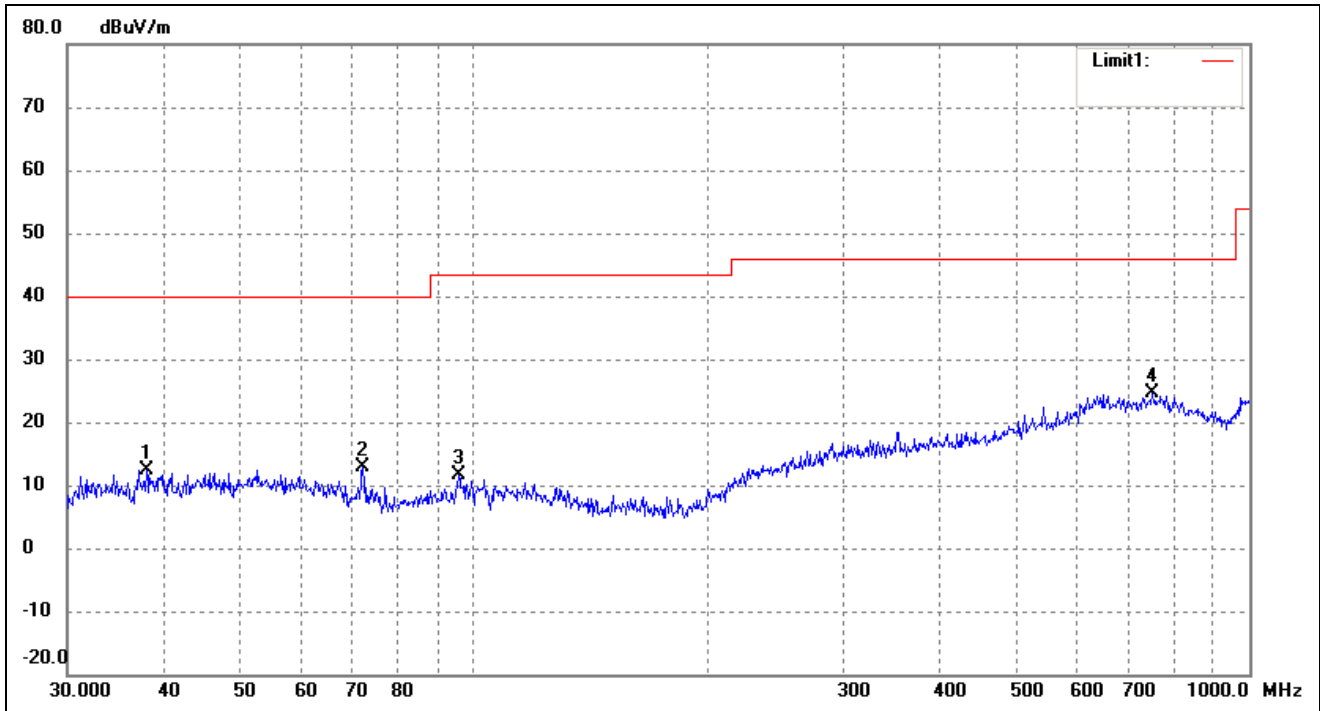
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	37.6798	28.74	-16.89	11.85	40.00	-28.15	151	100	peak
2	71.8320	33.56	-18.94	14.62	40.00	-25.38	181	100	peak
3	96.0986	30.77	-17.14	13.63	43.50	-29.87	139	100	peak
4	684.7454	25.10	-0.71	24.39	46.00	-21.61	133	100	peak

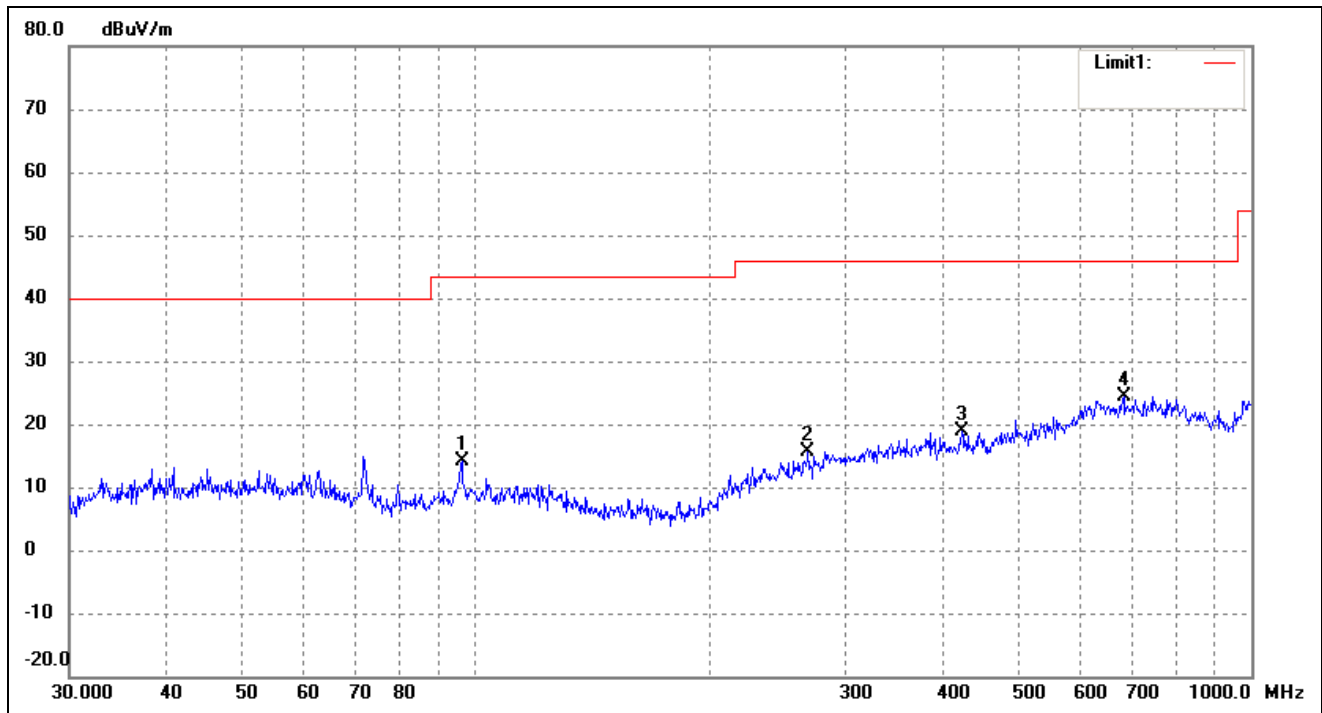
Test mode: Transmitting Channel 5200MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	37.9450	29.20	-16.85	12.35	40.00	-27.65	327	100	peak
2	72.0843	31.85	-18.97	12.88	40.00	-27.12	99	100	peak
3	95.7622	28.74	-17.19	11.55	43.50	-31.95	78	100	peak
4	750.1083	24.94	-0.23	24.71	46.00	-21.29	109	100	peak

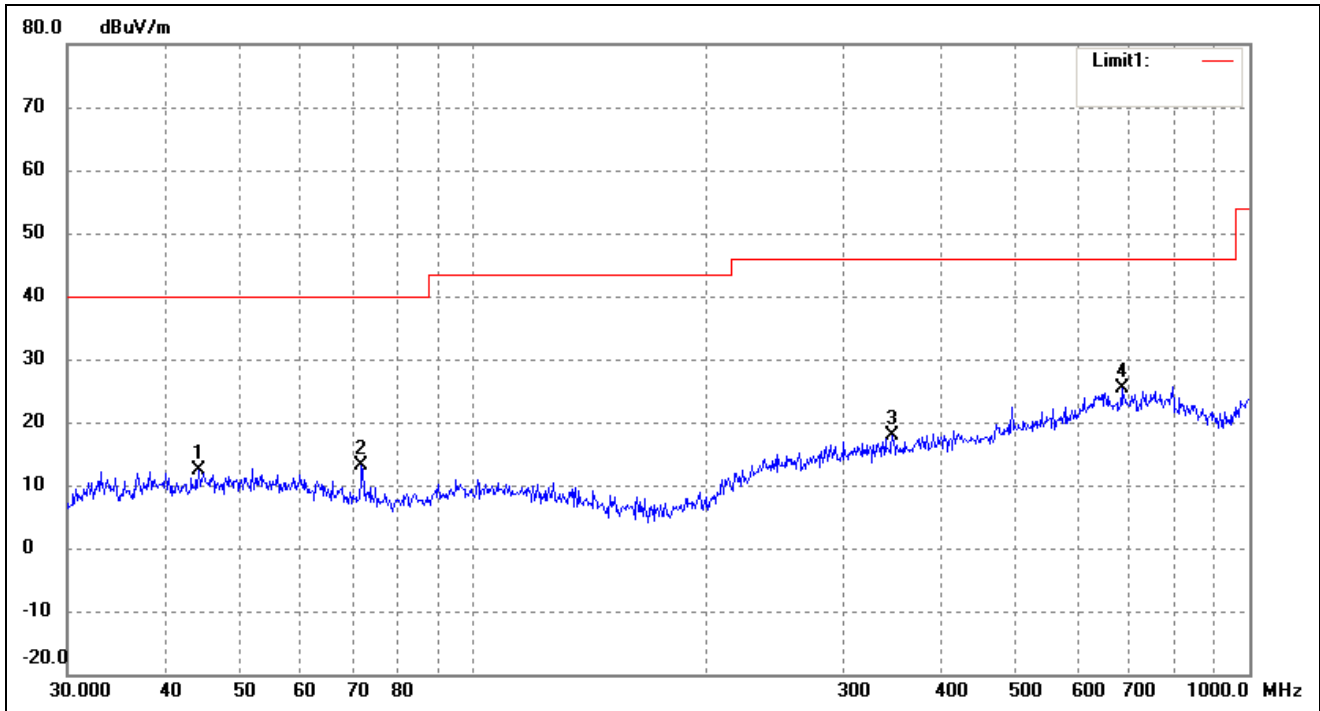
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	96.0986	31.24	-17.14	14.10	43.50	-29.40	265	100	peak
2	268.4853	26.89	-11.18	15.71	46.00	-30.29	97	100	peak
3	423.5403	27.04	-8.19	18.85	46.00	-27.15	137	100	peak
4	684.7454	24.99	-0.71	24.28	46.00	-21.72	111	100	peak

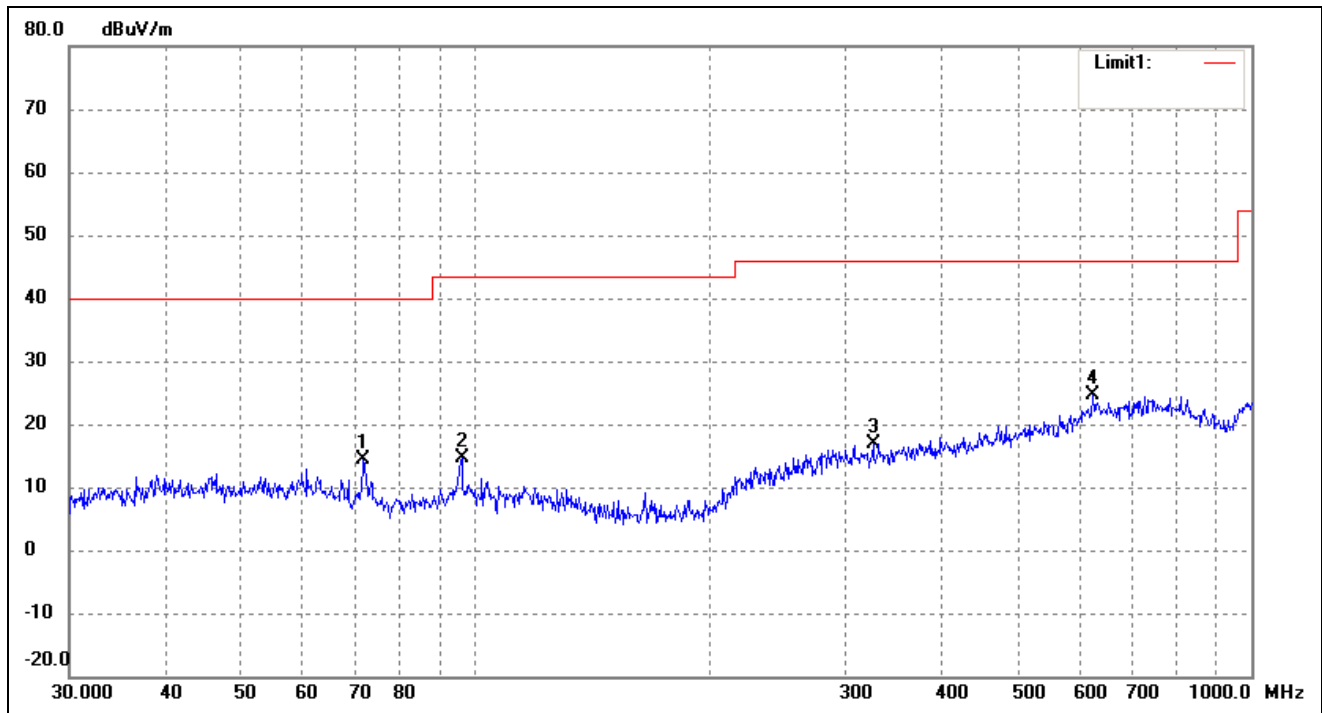
Test mode: Transmitting Channel 5240MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	44.2752	28.86	-16.49	12.37	40.00	-27.63	98	100	peak
2	71.8320	31.97	-18.94	13.03	40.00	-26.97	181	100	peak
3	346.8092	27.38	-9.40	17.98	46.00	-28.02	106	100	peak
4	684.7454	26.03	-0.71	25.32	46.00	-20.68	135	100	peak

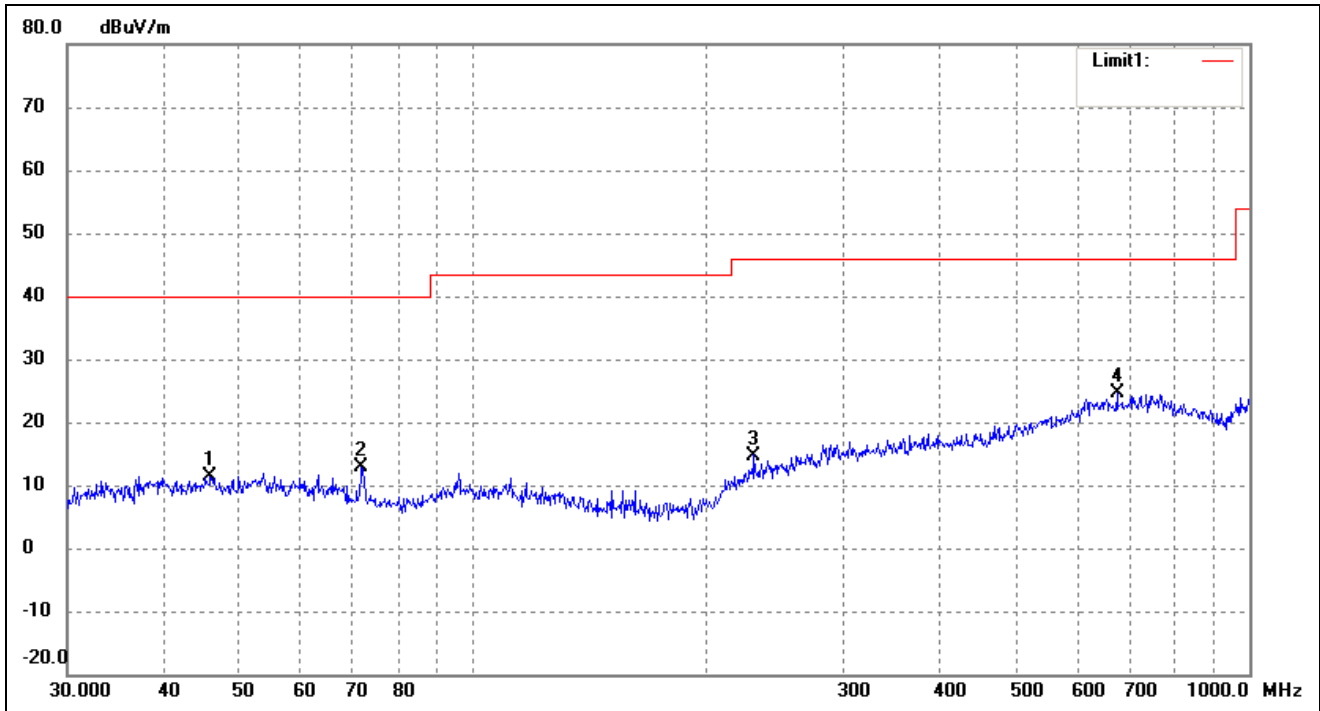
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	71.8320	33.33	-18.94	14.39	40.00	-25.61	101	100	peak
2	96.0986	31.67	-17.14	14.53	43.50	-28.97	103	100	peak
3	325.5958	26.28	-9.45	16.83	46.00	-29.17	134	100	peak
4	625.0780	26.25	-1.51	24.74	46.00	-21.26	64	100	peak

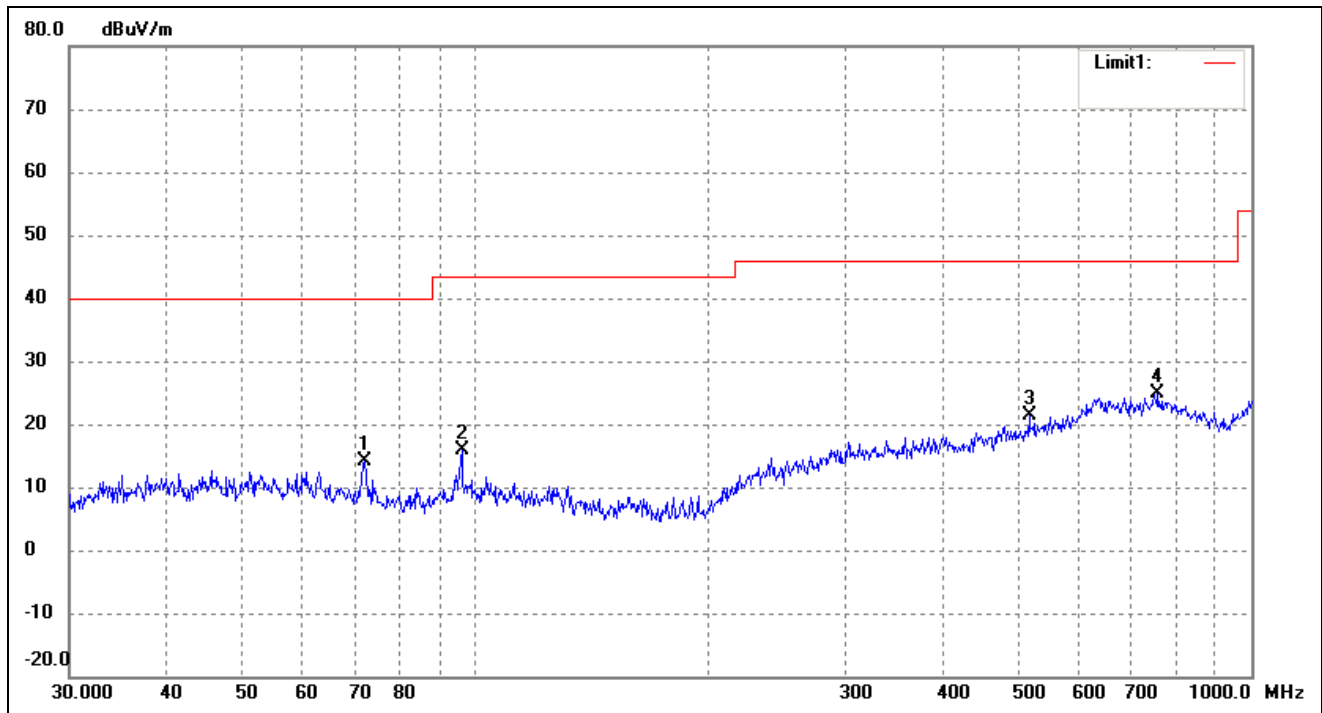
Test mode: Transmitting Channel 5260MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	45.8553	27.99	-16.50	11.49	40.00	-28.51	199	100	peak
2	71.8320	31.72	-18.94	12.78	40.00	-27.22	182	100	peak
3	230.0985	27.94	-13.19	14.75	46.00	-31.25	67	100	peak
4	675.2080	25.34	-0.63	24.71	46.00	-21.29	120	100	peak

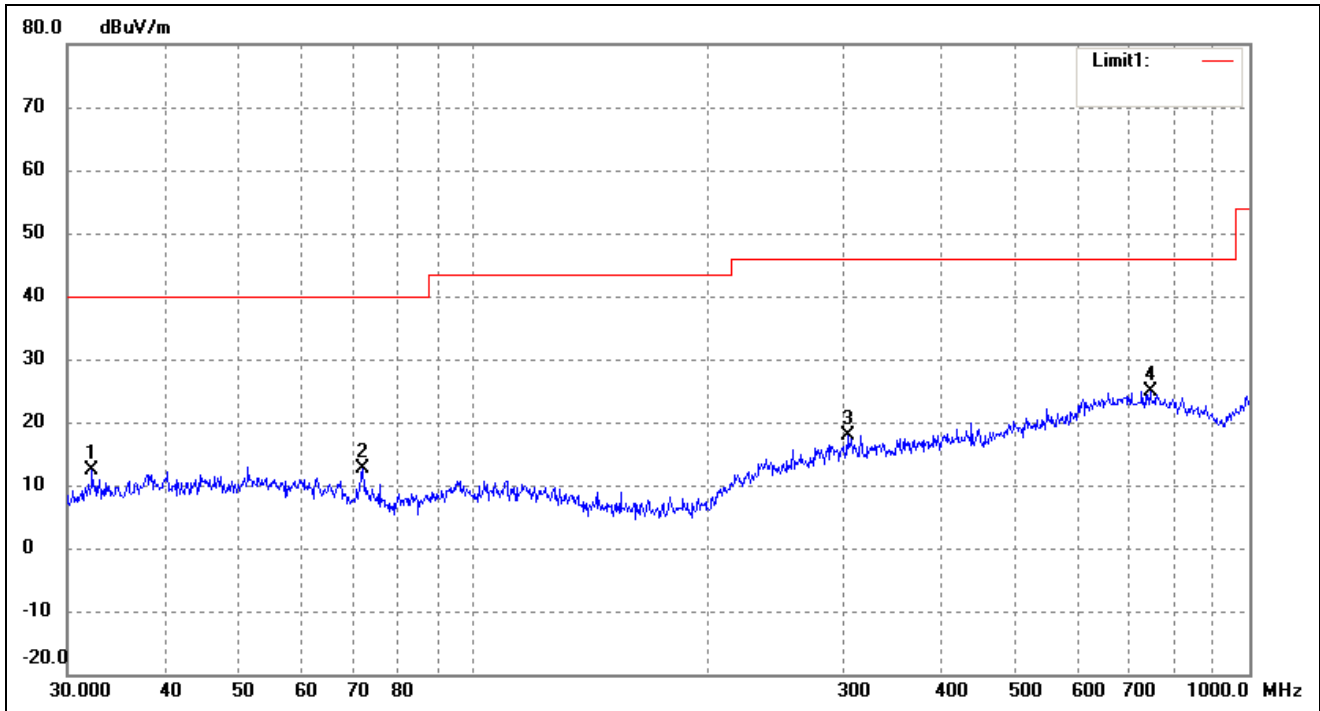
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	72.0843	33.03	-18.97	14.06	40.00	-25.94	94	100	peak
2	96.0986	32.96	-17.14	15.82	43.50	-27.68	160	100	peak
3	517.2480	26.77	-5.29	21.48	46.00	-24.52	110	100	peak
4	758.0408	25.38	-0.53	24.85	46.00	-21.15	221	100	peak

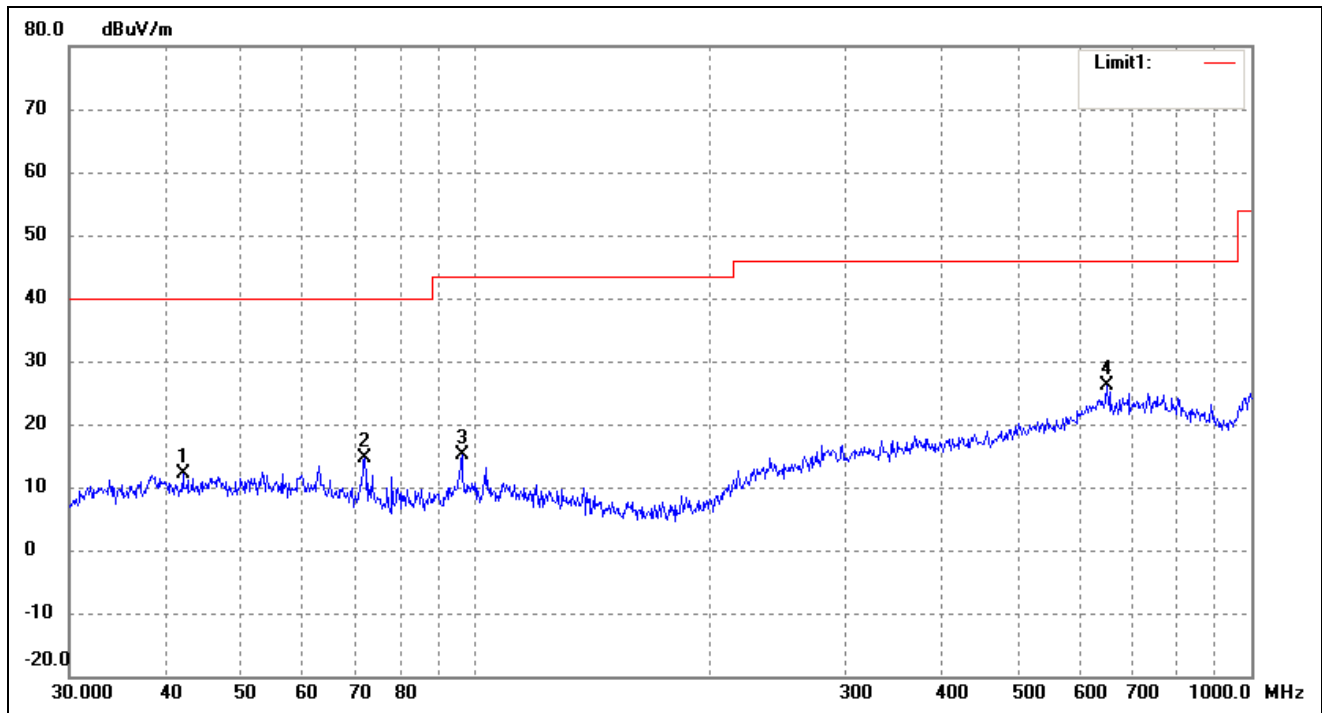
Test mode: Transmitting Channel 5280MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	32.2925	30.13	-17.79	12.34	40.00	-27.66	348	100	peak
2	72.0843	31.64	-18.97	12.67	40.00	-27.33	94	100	peak
3	303.5437	27.39	-9.56	17.83	46.00	-28.17	98	100	peak
4	744.8661	24.89	-0.03	24.86	46.00	-21.14	103	100	peak

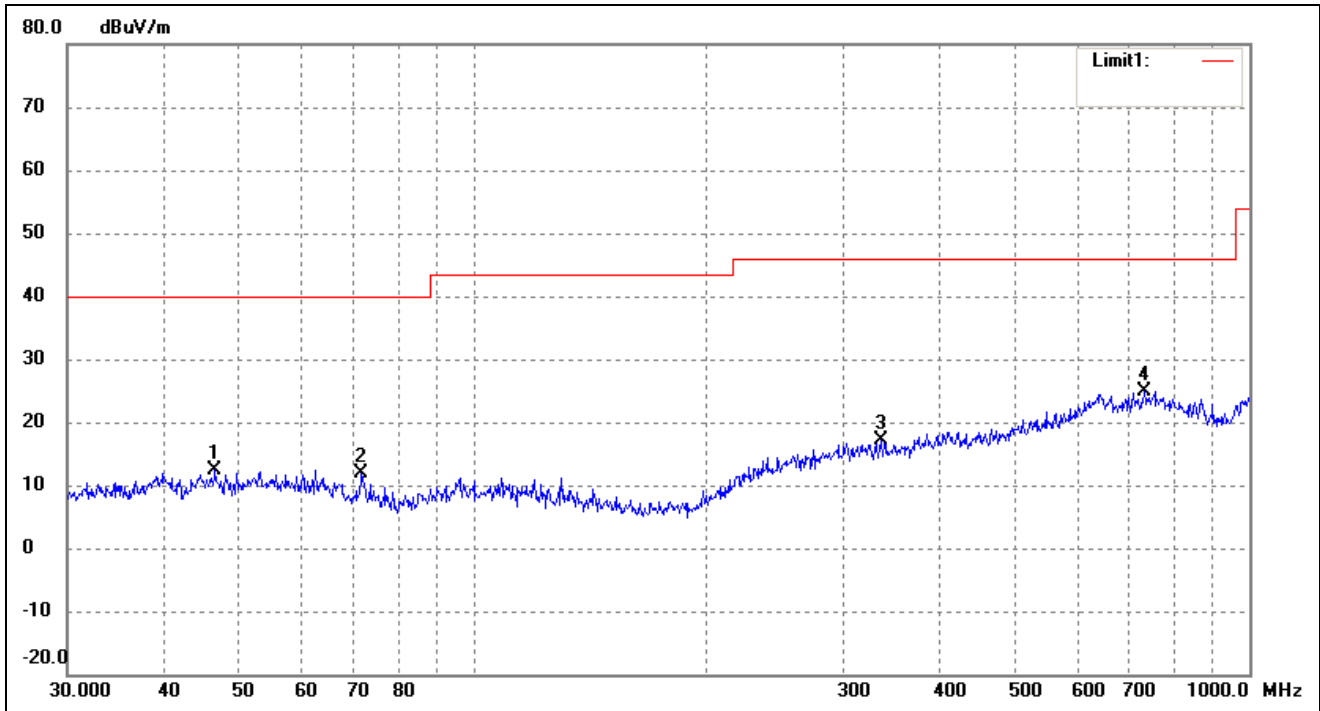
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	42.0066	28.56	-16.50	12.06	40.00	-27.94	86	100	peak
2	72.0843	33.64	-18.97	14.67	40.00	-25.33	178	100	peak
3	96.0986	32.33	-17.14	15.19	43.50	-28.31	90	100	peak
4	651.9417	27.34	-1.32	26.02	46.00	-19.98	116	100	peak

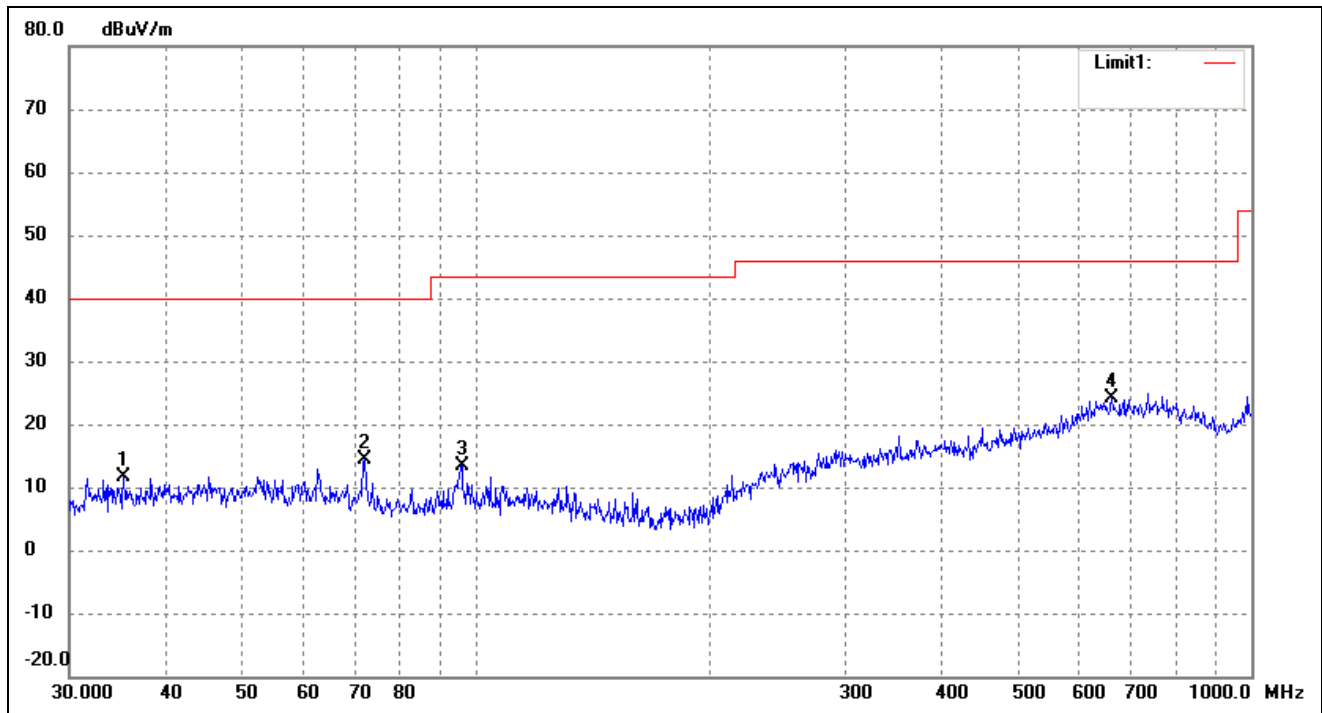
Test mode: Transmitting Channel 5320MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	46.5030	28.87	-16.50	12.37	40.00	-27.63	173	100	peak
2	71.8320	30.82	-18.94	11.88	40.00	-28.12	134	100	peak
3	336.0352	26.71	-9.62	17.09	46.00	-28.91	56	100	peak
4	731.9203	25.16	-0.35	24.81	46.00	-21.19	127	100	peak

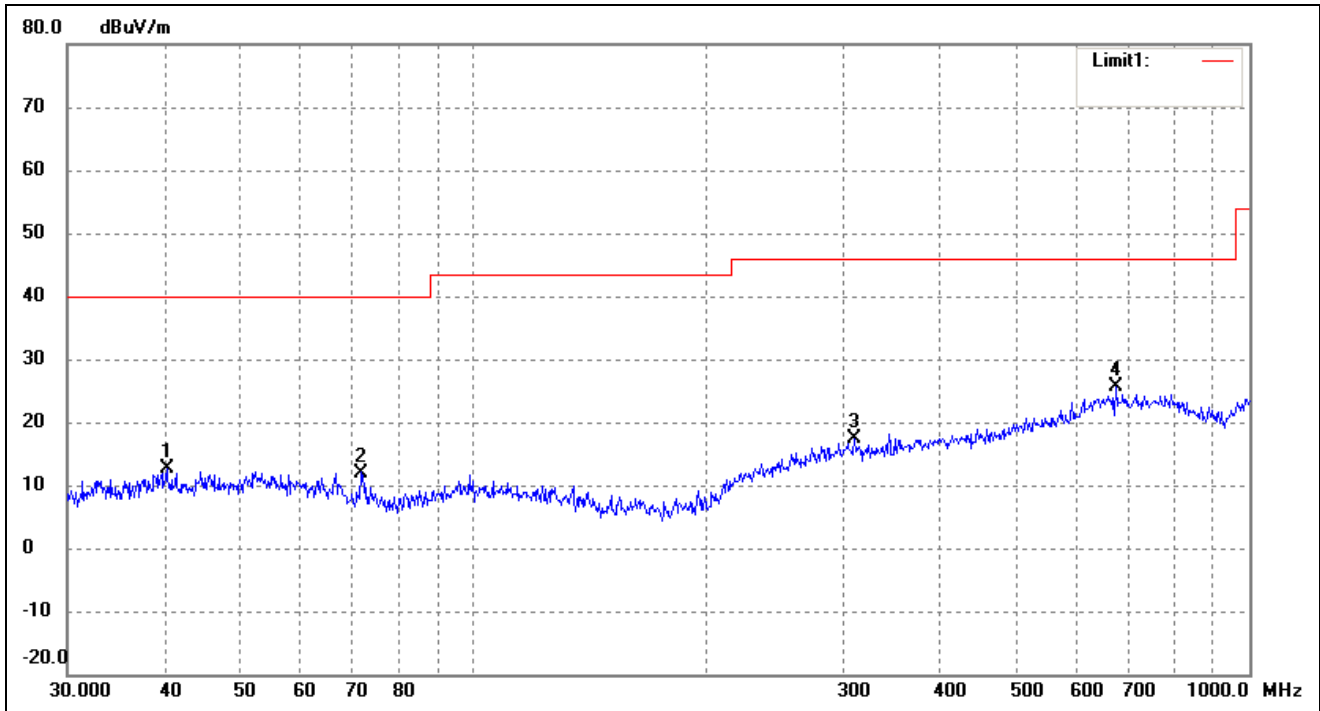
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	35.2512	28.95	-17.28	11.67	40.00	-28.33	84	100	peak
2	72.0843	33.31	-18.97	14.34	40.00	-25.66	145	100	peak
3	96.0986	30.62	-17.14	13.48	43.50	-30.02	68	100	peak
4	661.1505	25.49	-1.44	24.05	46.00	-21.95	95	100	peak

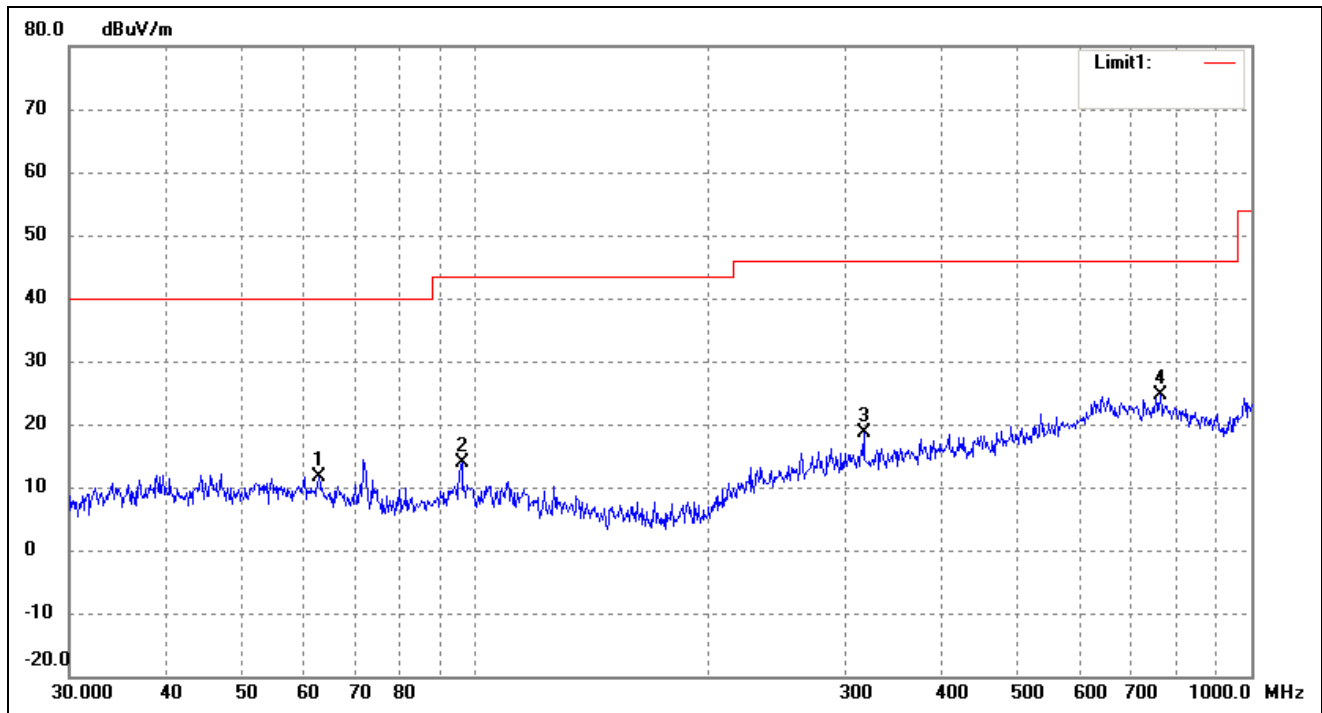
Test mode: Transmitting Channel 5500MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.2757	29.09	-16.53	12.56	40.00	-27.44	322	100	peak
2	71.8320	30.94	-18.94	12.00	40.00	-28.00	186	100	peak
3	309.9977	26.93	-9.46	17.47	46.00	-28.53	94	100	peak
4	672.8445	26.30	-0.77	25.53	46.00	-20.47	183	100	peak

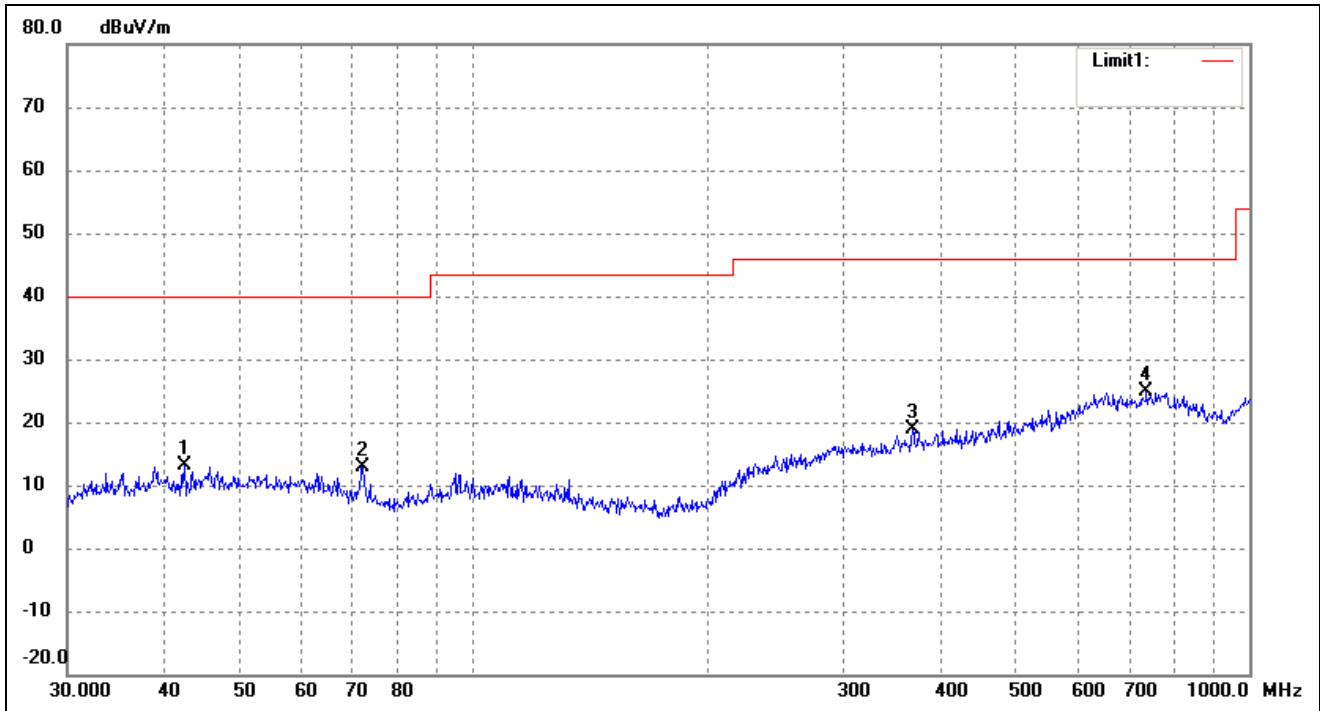
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	62.8708	28.87	-17.12	11.75	40.00	-28.25	69	100	peak
2	96.0986	30.92	-17.14	13.78	43.50	-29.72	189	100	peak
3	316.5890	27.99	-9.38	18.61	46.00	-27.39	89	100	peak
4	763.3757	25.46	-0.78	24.68	46.00	-21.32	149	100	peak

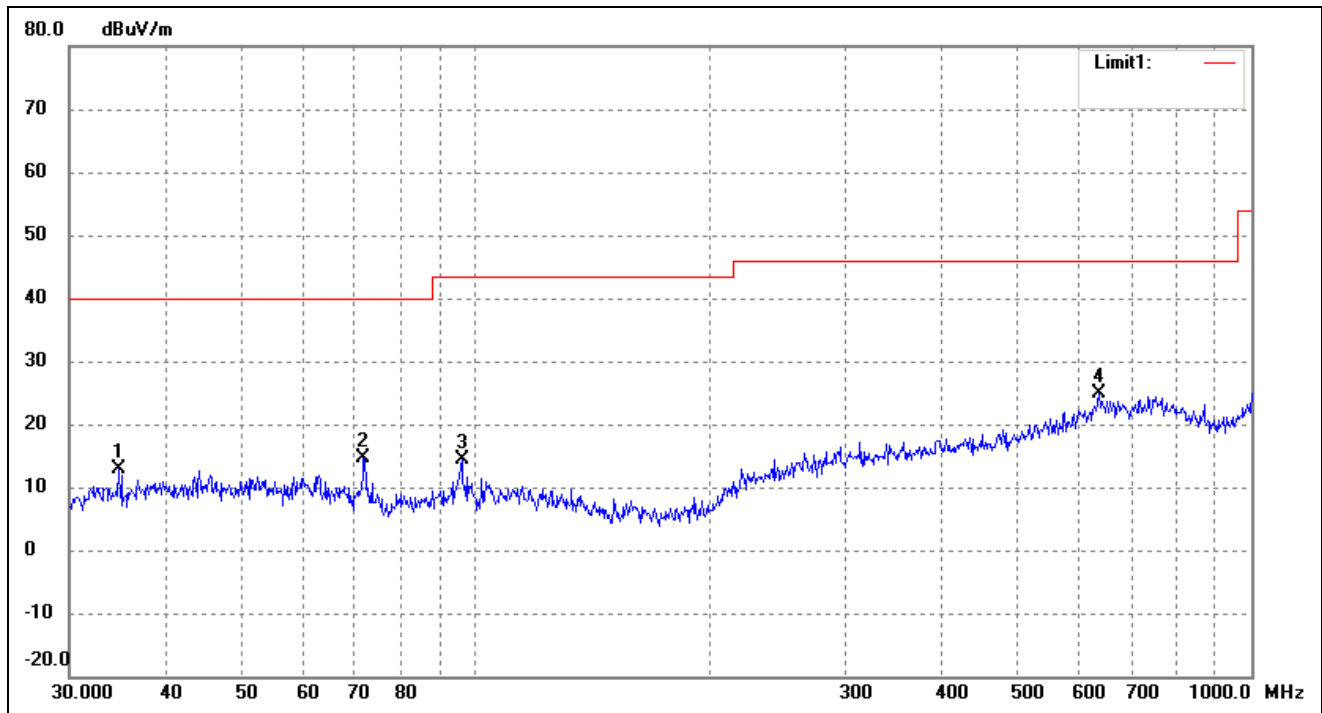
Test mode: Transmitting Channel 5600MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	42.4508	29.51	-16.50	13.01	40.00	-26.99	302	100	peak
2	72.0843	31.94	-18.97	12.97	40.00	-27.03	98	100	peak
3	368.1116	27.80	-8.90	18.90	46.00	-27.10	287	100	peak
4	737.0714	24.89	-0.02	24.87	46.00	-21.13	116	100	peak

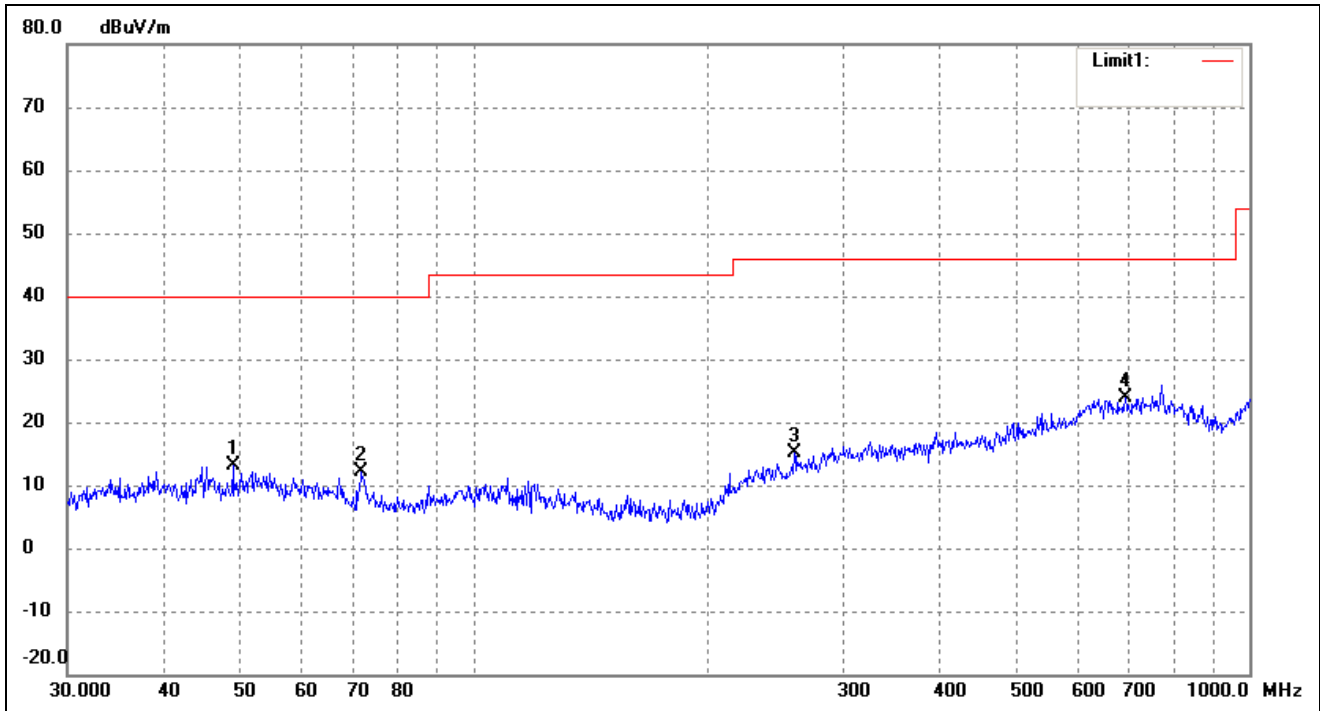
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	34.7602	30.18	-17.36	12.82	40.00	-27.18	217	100	peak
2	71.8320	33.52	-18.94	14.58	40.00	-25.42	99	100	peak
3	96.0986	31.54	-17.14	14.40	43.50	-29.10	328	100	peak
4	636.1340	25.95	-1.15	24.80	46.00	-21.20	91	100	peak

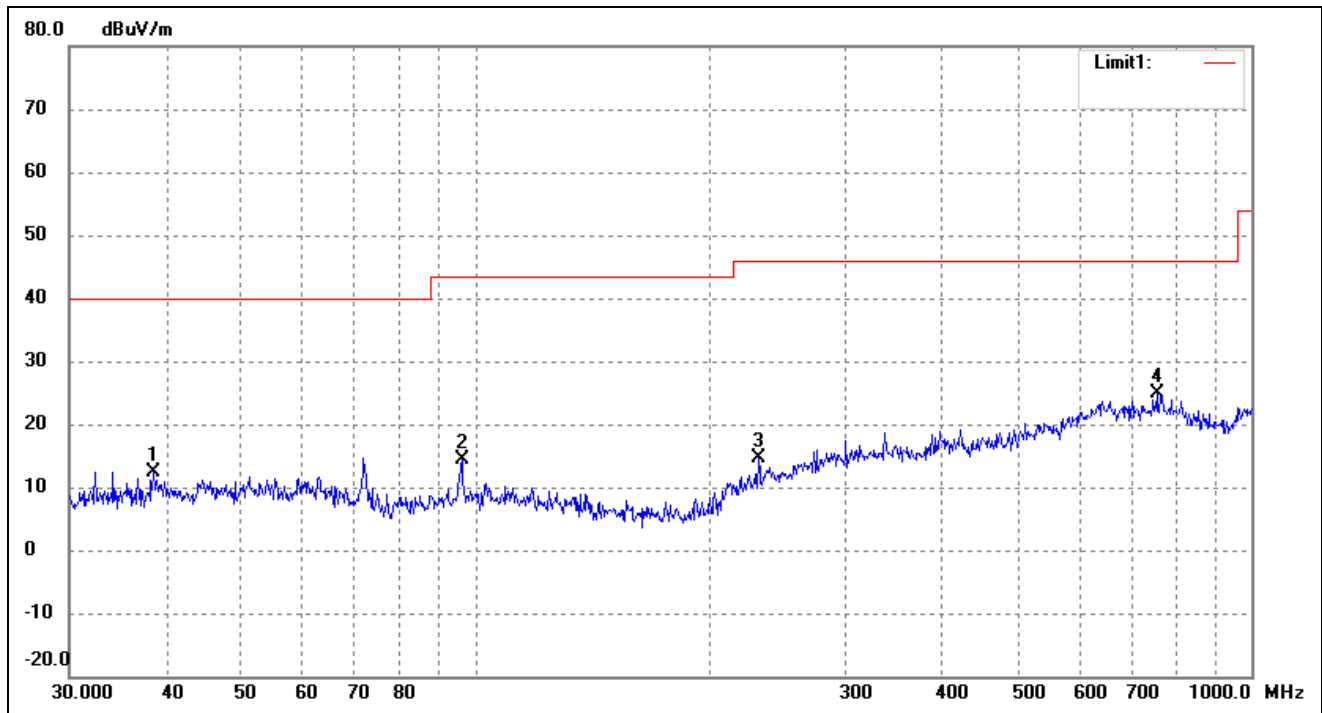
Test mode: Transmitting Channel 5700MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	49.0145	29.63	-16.54	13.09	40.00	-26.91	106	100	peak
2	71.8320	31.12	-18.94	12.18	40.00	-27.82	182	100	peak
3	259.2338	27.02	-11.80	15.22	46.00	-30.78	73	100	peak
4	691.9867	25.16	-1.25	23.91	46.00	-22.09	119	100	peak

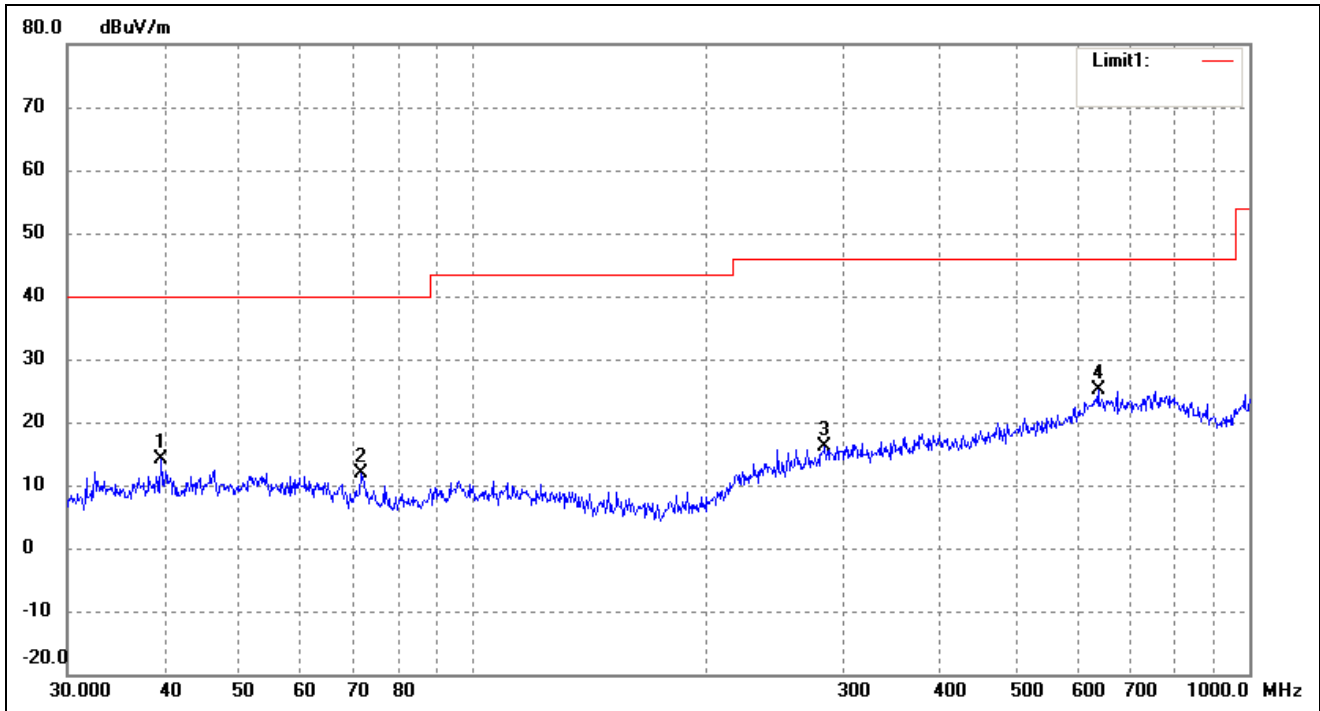
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	38.4809	29.18	-16.78	12.40	40.00	-27.60	83	100	peak
2	96.0986	31.44	-17.14	14.30	43.50	-29.20	136	100	peak
3	231.7179	27.80	-13.09	14.71	46.00	-31.29	85	100	peak
4	755.3873	25.40	-0.43	24.97	46.00	-21.03	109	100	peak

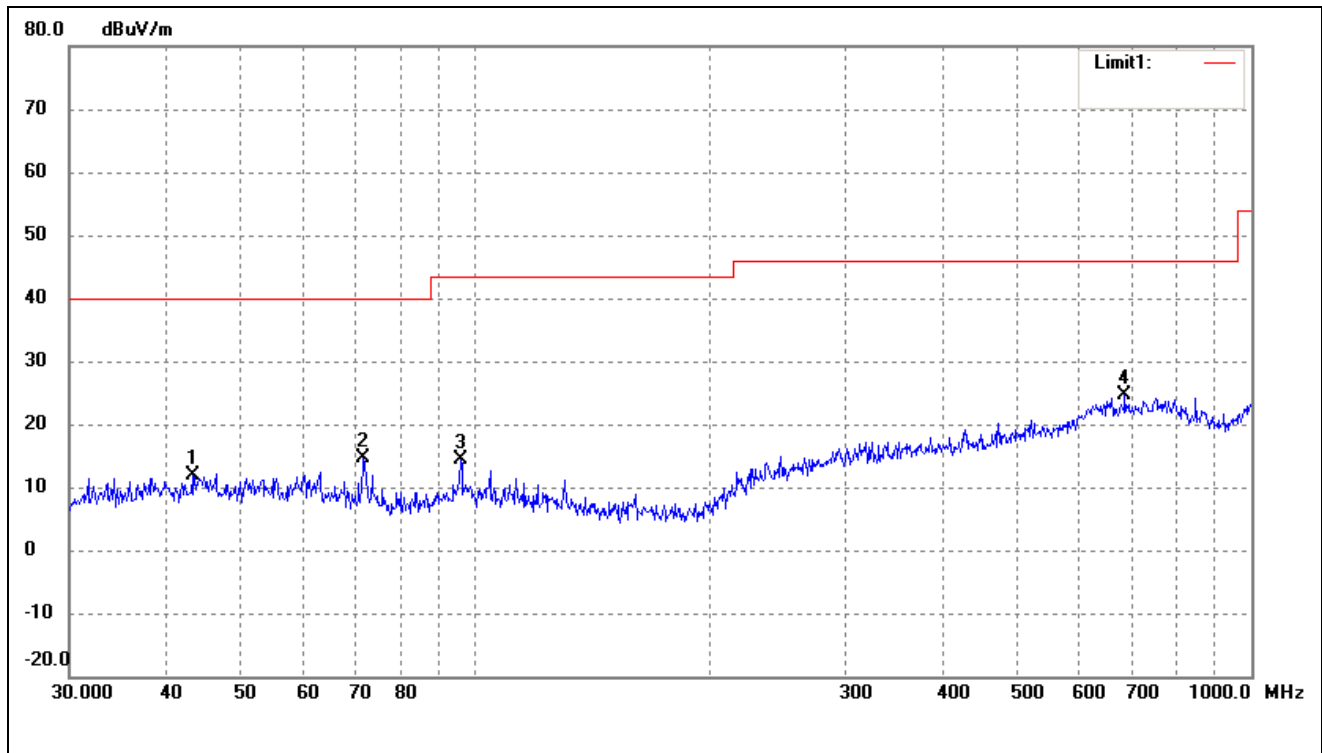
Test mode: Transmitting Channel 5745MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.5757	30.75	-16.59	14.16	40.00	-25.84	350	100	peak
2	71.5806	30.79	-18.92	11.87	40.00	-28.13	136	100	peak
3	283.9792	26.43	-10.21	16.22	46.00	-29.78	93	100	peak
4	638.3686	26.22	-1.06	25.16	46.00	-20.84	279	100	peak

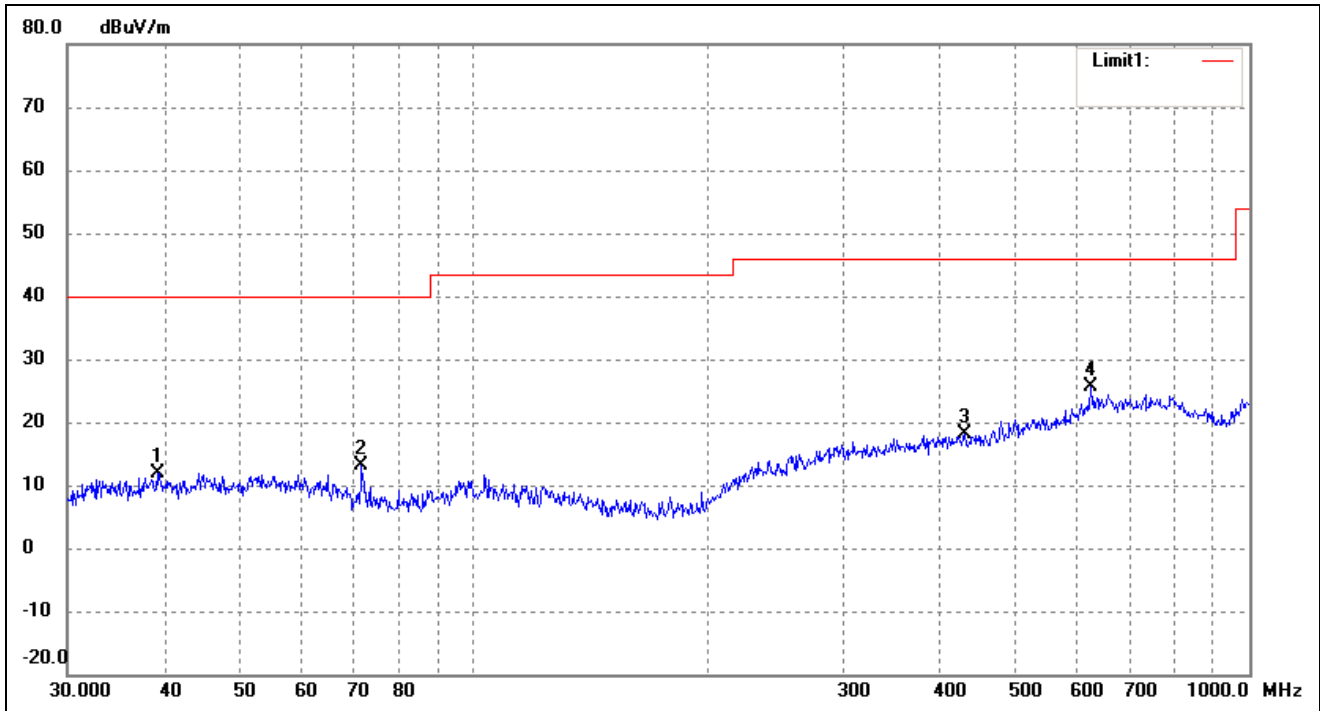
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	43.2017	28.42	-16.49	11.93	40.00	-28.07	80	100	peak
2	71.8320	33.49	-18.94	14.55	40.00	-25.45	167	100	peak
3	95.7622	31.56	-17.19	14.37	43.50	-29.13	77	100	peak
4	687.1507	25.54	-0.89	24.65	46.00	-21.35	112	100	peak

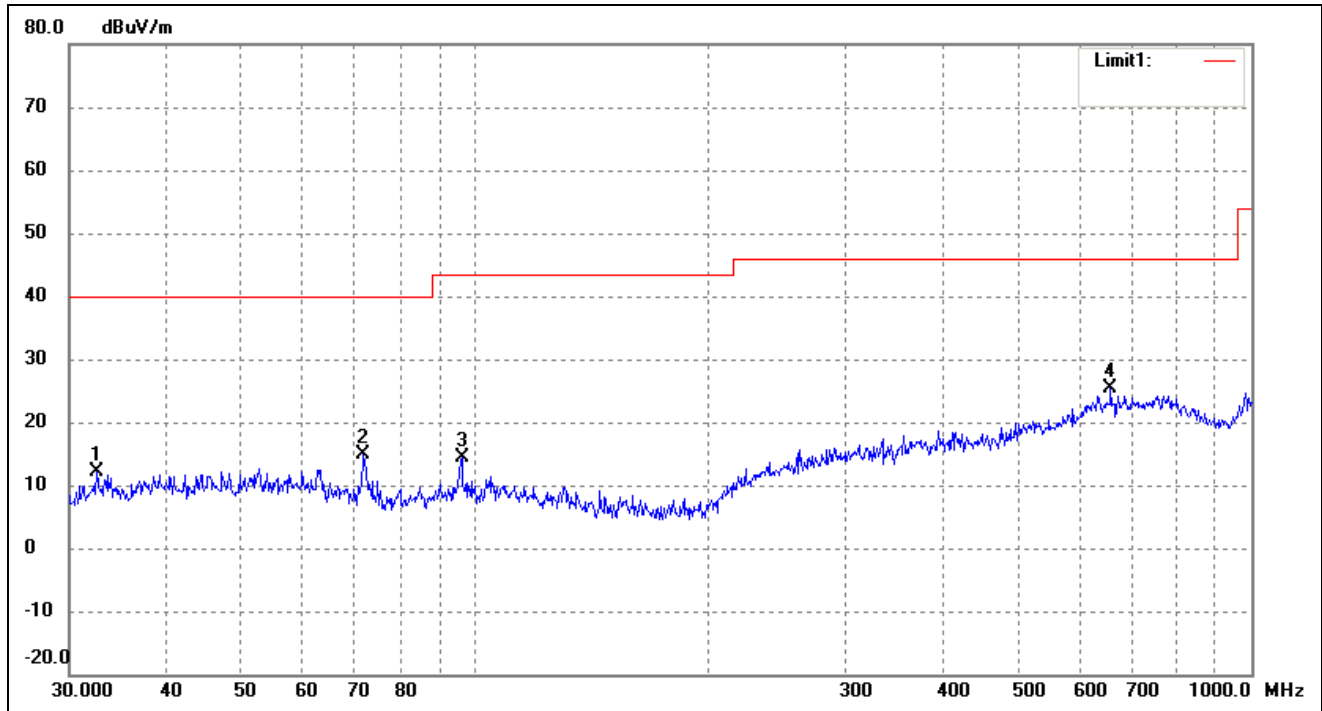
Test mode: Transmitting Channel 5785MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.1616	28.62	-16.67	11.95	40.00	-28.05	359	100	peak
2	71.8320	32.13	-18.94	13.19	40.00	-26.81	93	100	peak
3	429.5228	26.06	-7.93	18.13	46.00	-27.87	122	100	peak
4	625.0780	27.21	-1.51	25.70	46.00	-20.30	109	100	peak

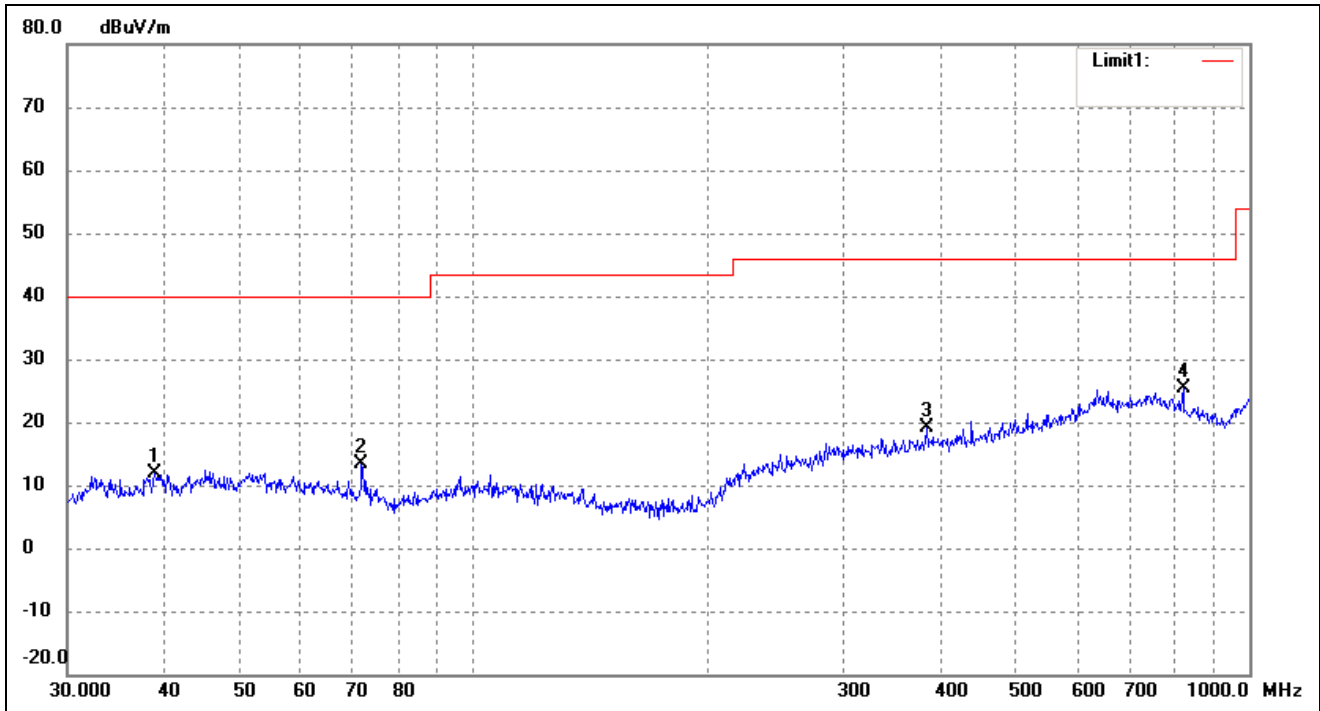
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	32.5198	29.91	-17.73	12.18	40.00	-27.82	329	100	peak
2	71.8320	33.76	-18.94	14.82	40.00	-25.18	99	100	peak
3	96.0986	31.48	-17.14	14.34	43.50	-29.16	169	100	peak
4	658.8362	26.88	-1.47	25.41	46.00	-20.59	113	100	peak

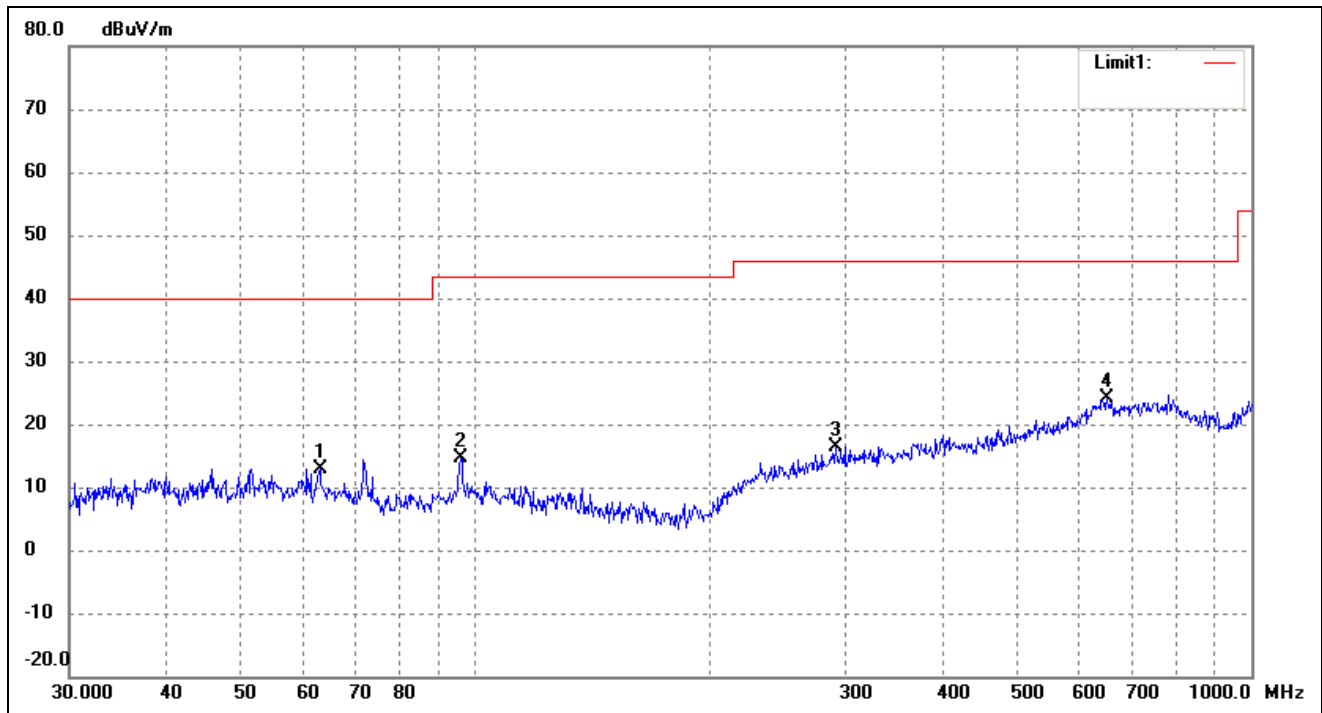
Test mode: Transmitting Channel 5825MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	38.8879	28.49	-16.71	11.78	40.00	-28.22	51	100	peak
2	71.8320	32.35	-18.94	13.41	40.00	-26.59	182	100	peak
3	383.9318	27.79	-8.64	19.15	46.00	-26.85	59	100	peak
4	821.7104	28.25	-2.78	25.47	46.00	-20.53	124	100	peak

Test Specification: Vertical

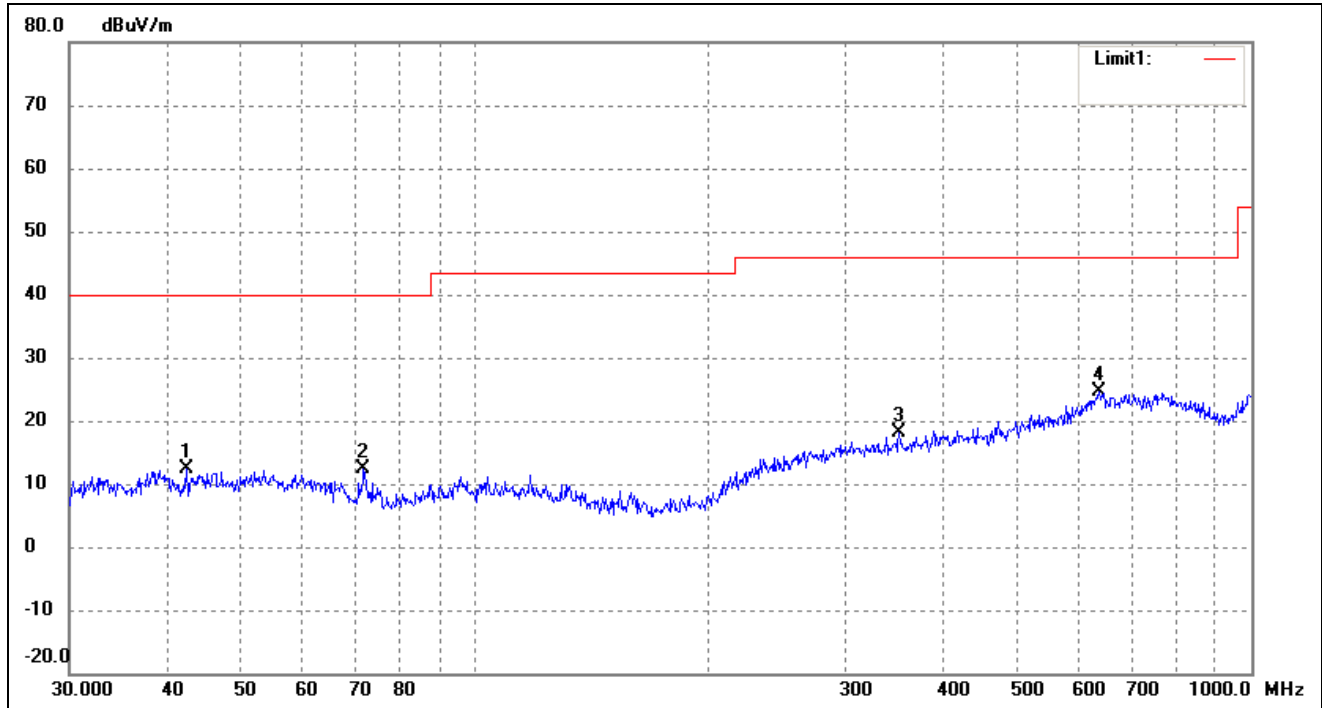


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	63.0916	30.05	-17.16	12.89	40.00	-27.11	117	100	peak
2	95.7622	31.91	-17.19	14.72	43.50	-28.78	109	100	peak
3	291.0360	26.25	-9.92	16.33	46.00	-29.67	92	100	peak
4	651.9417	25.56	-1.32	24.24	46.00	-21.76	180	100	peak

For 802.11n-HT40

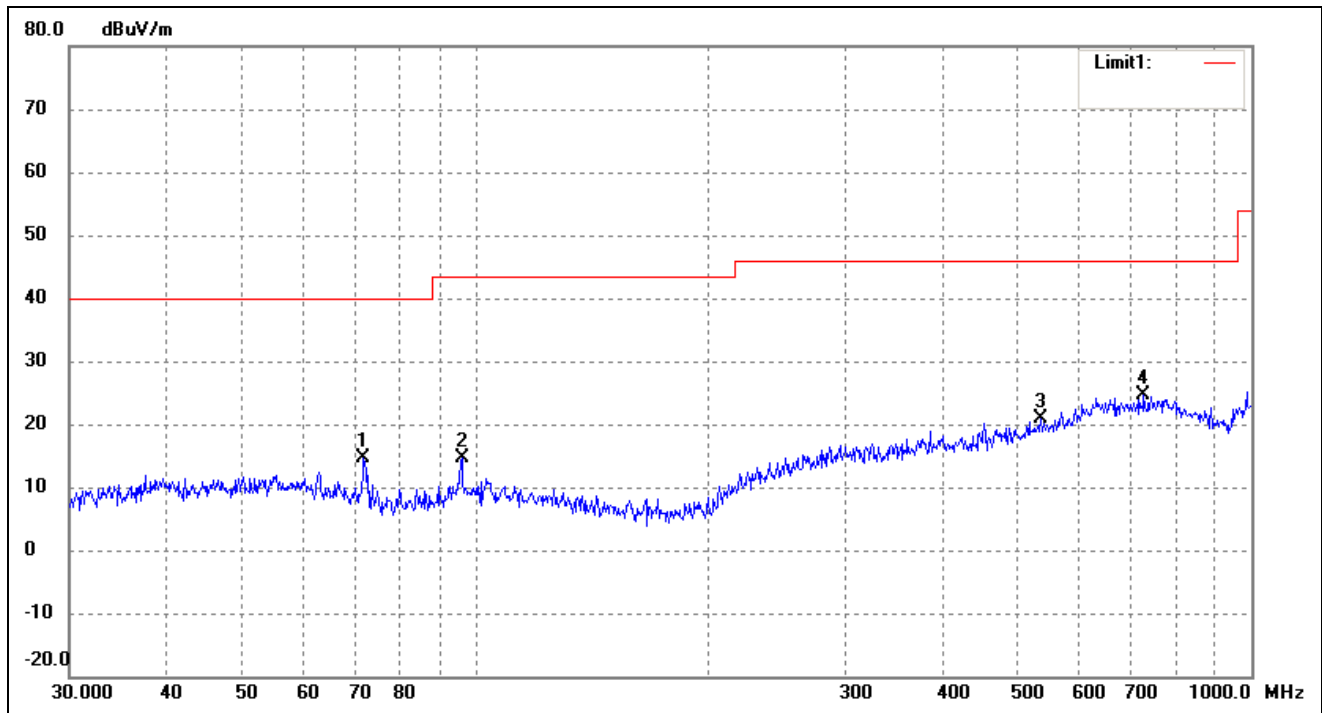
Test mode: Transmitting Channel 5190MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	42.4508	28.92	-16.50	12.42	40.00	-27.58	241	100	peak
2	71.8320	31.31	-18.94	12.37	40.00	-27.63	251	100	peak
3	351.7079	27.31	-9.21	18.10	46.00	-27.90	100	100	peak
4	636.1340	25.70	-1.15	24.55	46.00	-21.45	286	100	peak

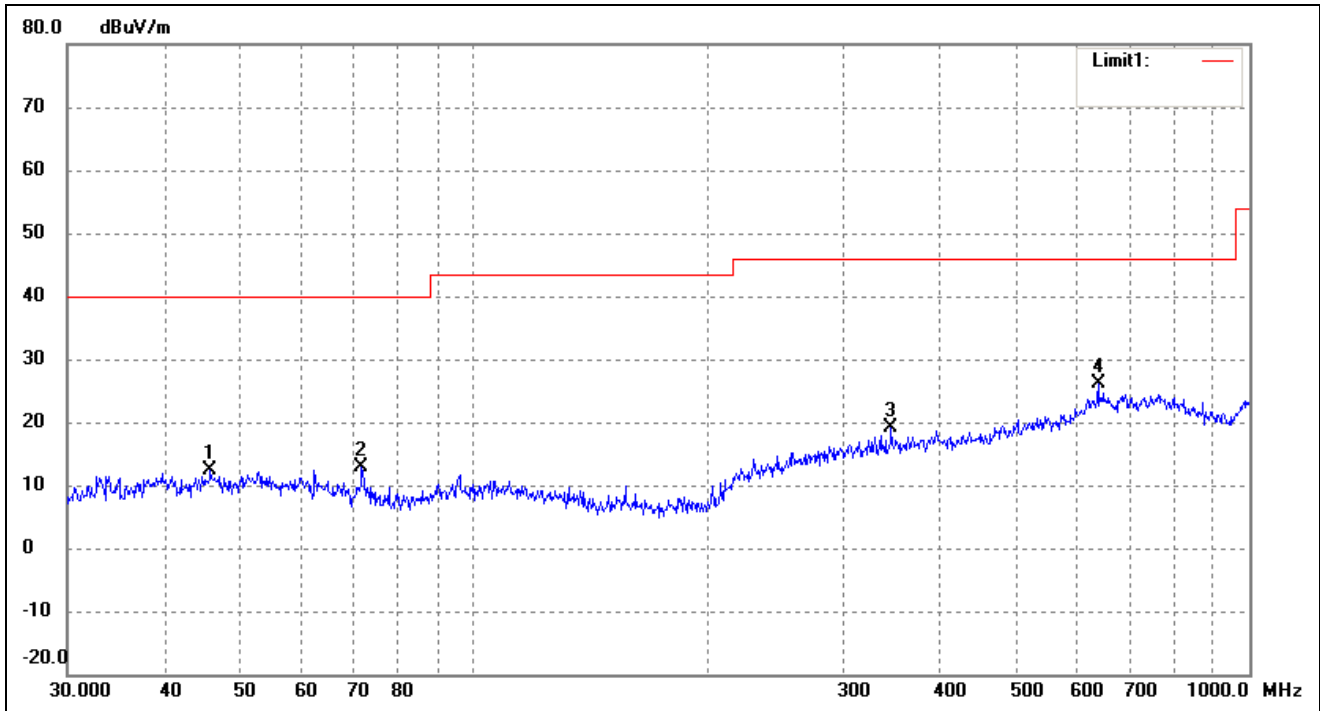
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	71.8320	33.54	-18.94	14.60	40.00	-25.40	51	100	peak
2	96.0986	31.74	-17.14	14.60	43.50	-28.90	154	100	peak
3	535.7073	26.17	-5.21	20.96	46.00	-25.04	133	100	peak
4	726.8052	25.31	-0.68	24.63	46.00	-21.37	101	100	peak

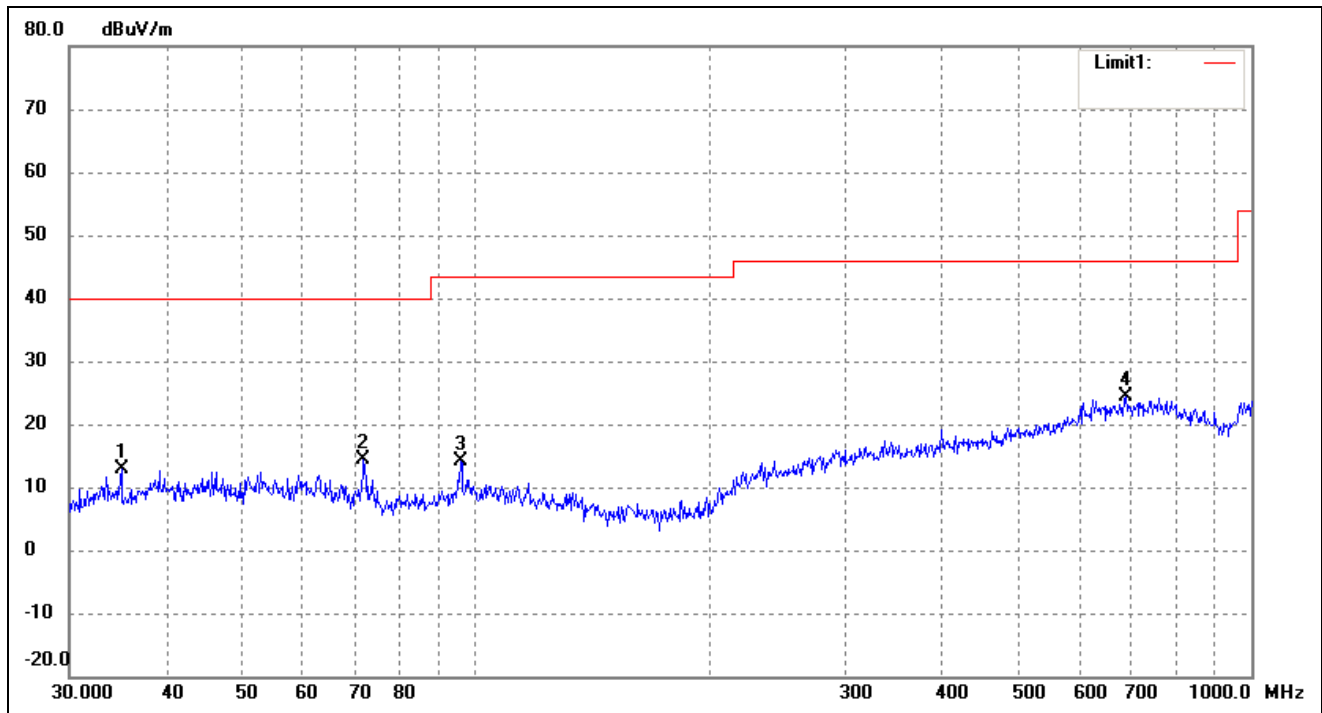
Test mode: Transmitting Channel 5230MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	45.8553	28.88	-16.50	12.38	40.00	-27.62	114	100	peak
2	71.8320	31.75	-18.94	12.81	40.00	-27.19	103	100	peak
3	345.5952	28.54	-9.45	19.09	46.00	-26.91	52	100	peak
4	638.3686	27.27	-1.06	26.21	46.00	-19.79	92	100	peak

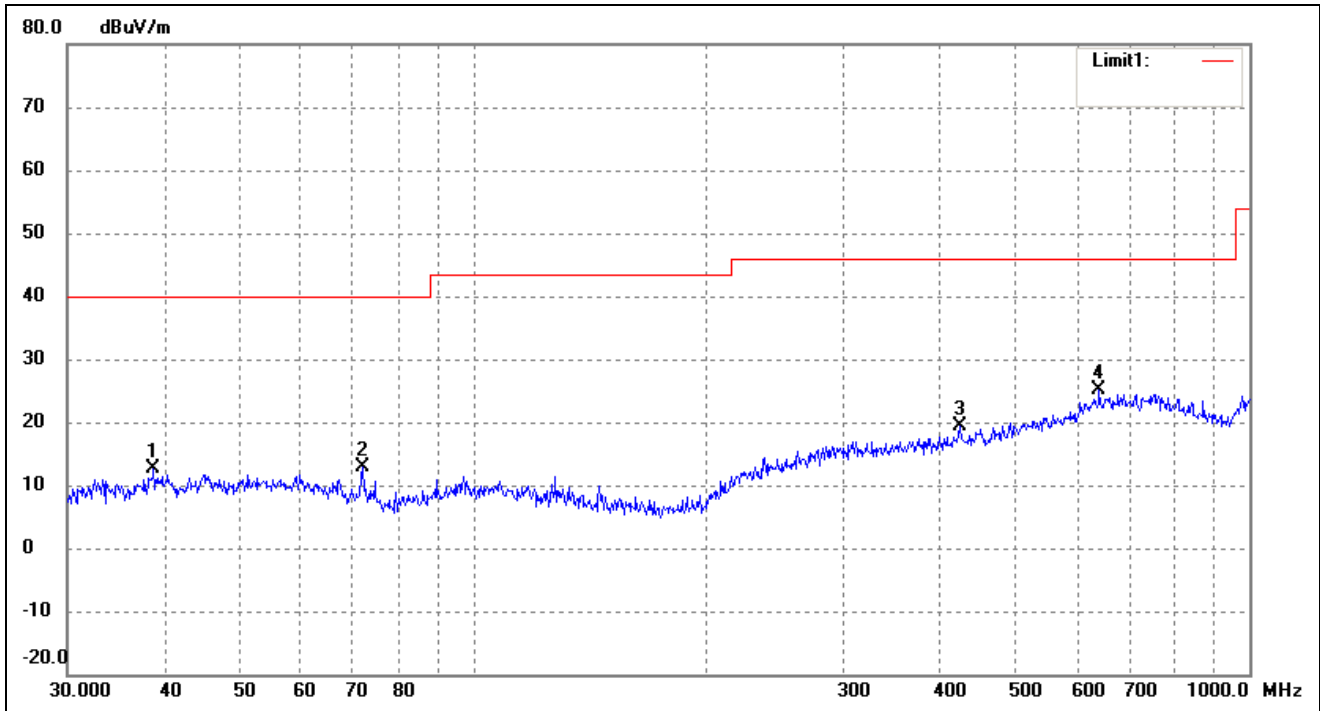
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	35.0048	30.11	-17.32	12.79	40.00	-27.21	62	100	peak
2	71.8320	33.40	-18.94	14.46	40.00	-25.54	97	100	peak
3	95.7622	31.20	-17.19	14.01	43.50	-29.49	136	100	peak
4	689.5644	25.33	-1.07	24.26	46.00	-21.74	115	100	peak

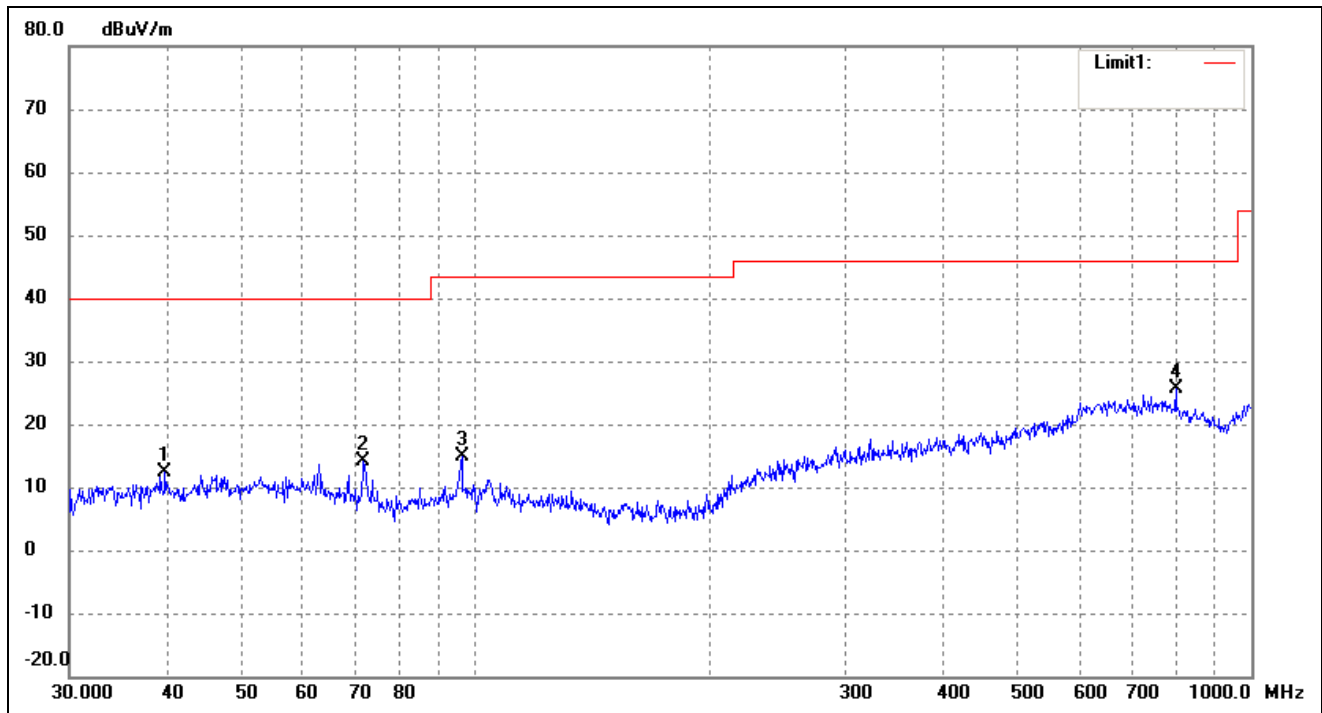
Test mode: Transmitting Channel 5270MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	38.7518	29.39	-16.73	12.66	40.00	-27.34	228	100	peak
2	72.0843	31.92	-18.97	12.95	40.00	-27.05	87	100	peak
3	423.5403	27.61	-8.19	19.42	46.00	-26.58	203	100	peak
4	640.6110	26.14	-1.03	25.11	46.00	-20.89	242	100	peak

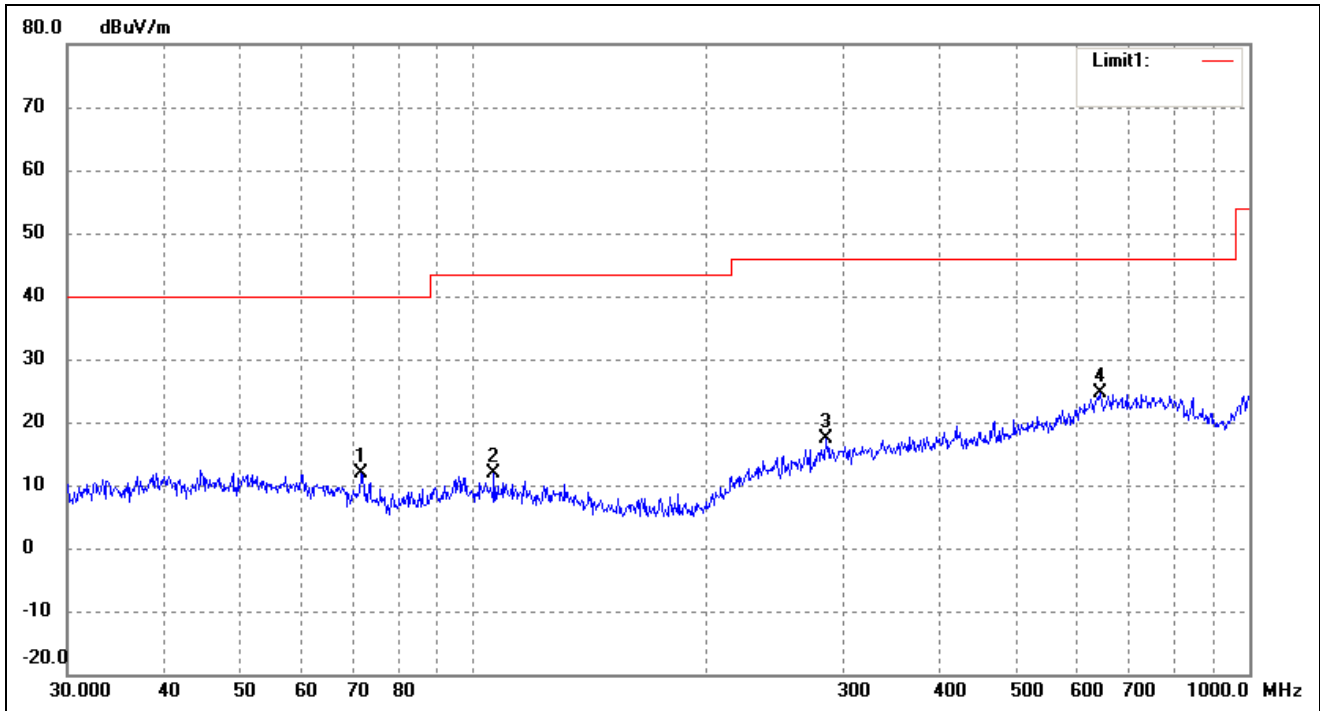
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.8542	28.90	-16.55	12.35	40.00	-27.65	94	100	peak
2	71.8320	33.19	-18.94	14.25	40.00	-25.75	61	100	peak
3	96.0986	31.97	-17.14	14.83	43.50	-28.67	108	100	peak
4	798.9797	27.92	-2.18	25.74	46.00	-20.26	258	100	peak

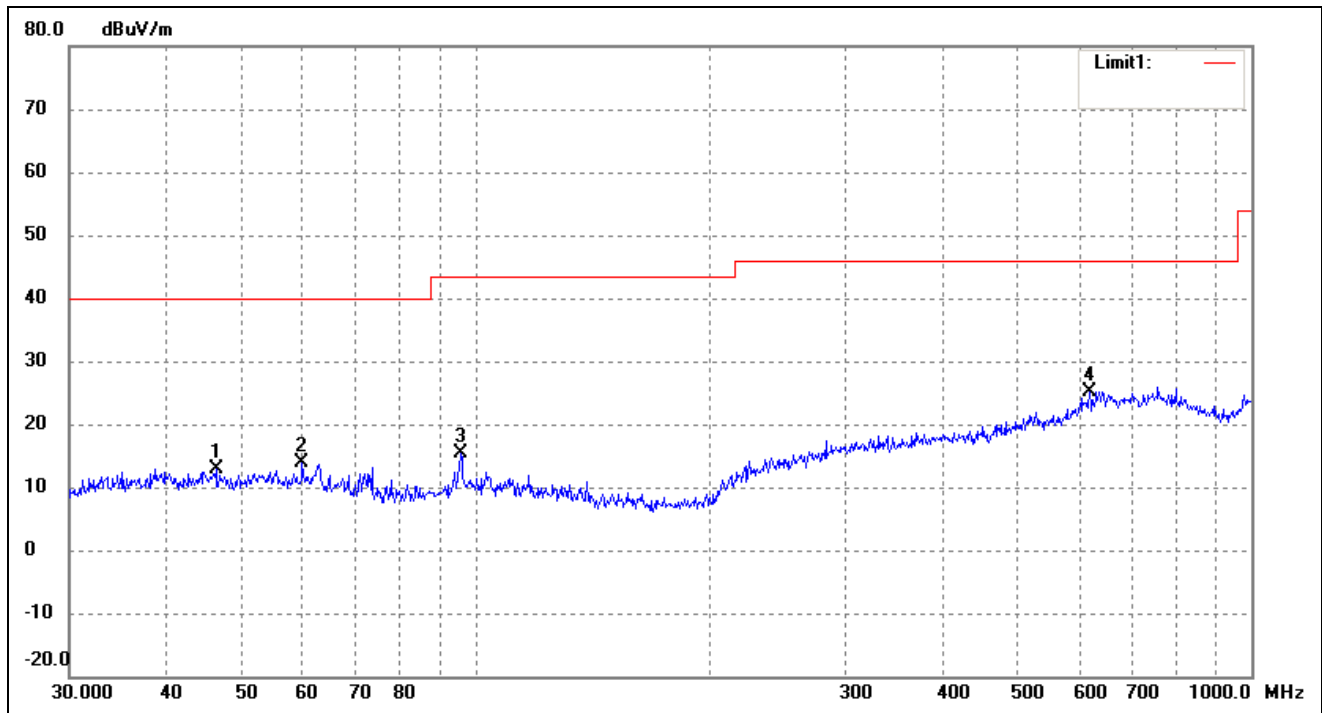
Test mode: Transmitting Channel 5310MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	71.8320	30.82	-18.94	11.88	40.00	-28.12	223	100	peak
2	106.3850	28.41	-16.60	11.81	43.50	-31.69	96	100	peak
3	284.9767	27.43	-10.17	17.26	46.00	-28.74	74	100	peak
4	642.8613	25.77	-1.08	24.69	46.00	-21.31	100	100	peak

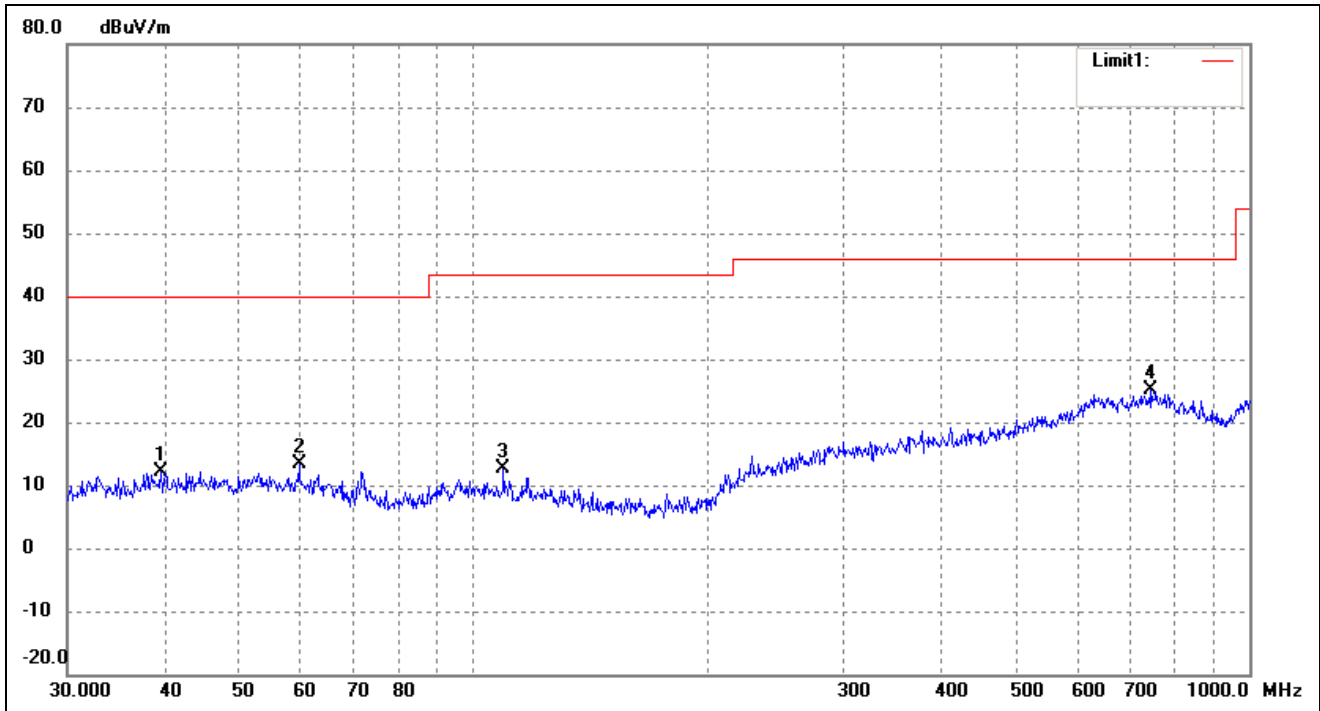
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	46.3402	29.40	-16.50	12.90	40.00	-27.10	97	100	peak
2	59.8588	30.35	-16.51	13.84	40.00	-26.16	131	100	peak
3	95.7622	32.45	-17.19	15.26	43.50	-28.24	99	100	peak
4	618.5369	26.69	-1.58	25.11	46.00	-20.89	268	100	peak

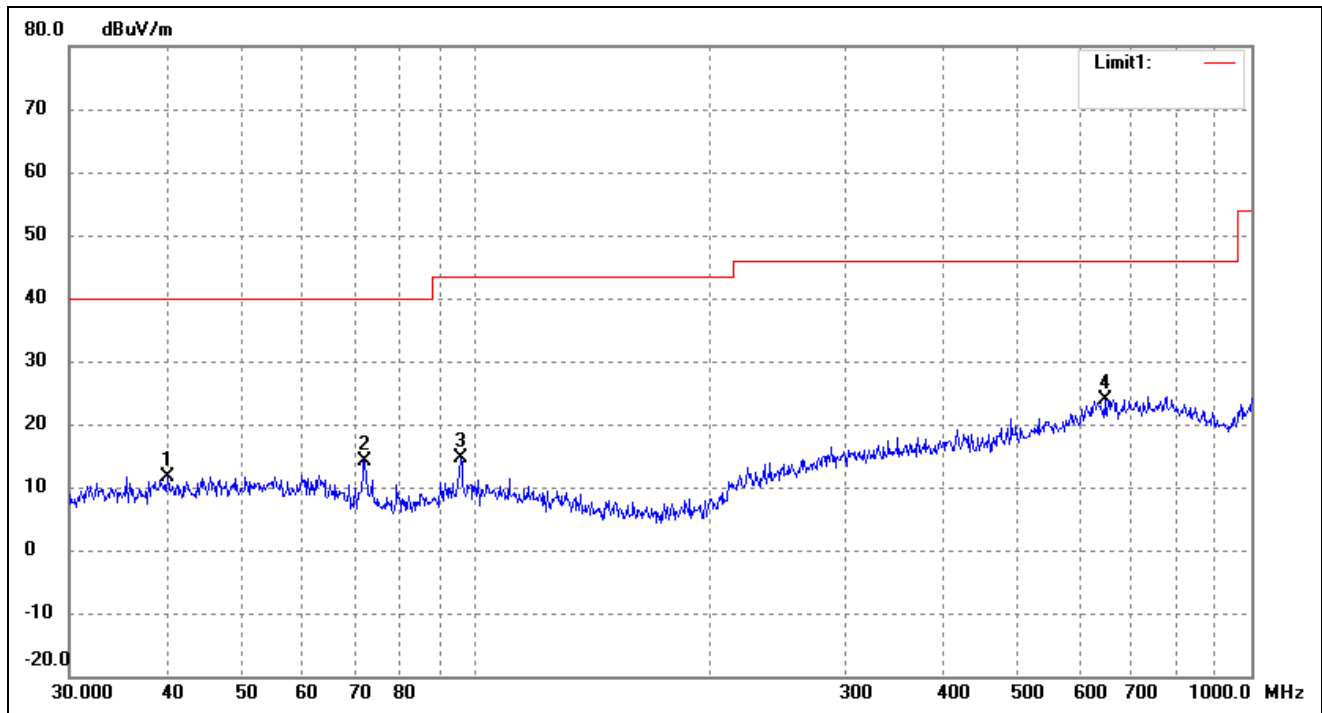
Test mode: Transmitting Channel 5785MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.5757	28.65	-16.59	12.06	40.00	-27.94	341	100	peak
2	59.6493	29.79	-16.51	13.28	40.00	-26.72	276	100	peak
3	109.4116	29.25	-16.62	12.63	43.50	-30.87	59	100	peak
4	747.4826	25.36	-0.13	25.23	46.00	-20.77	195	100	peak

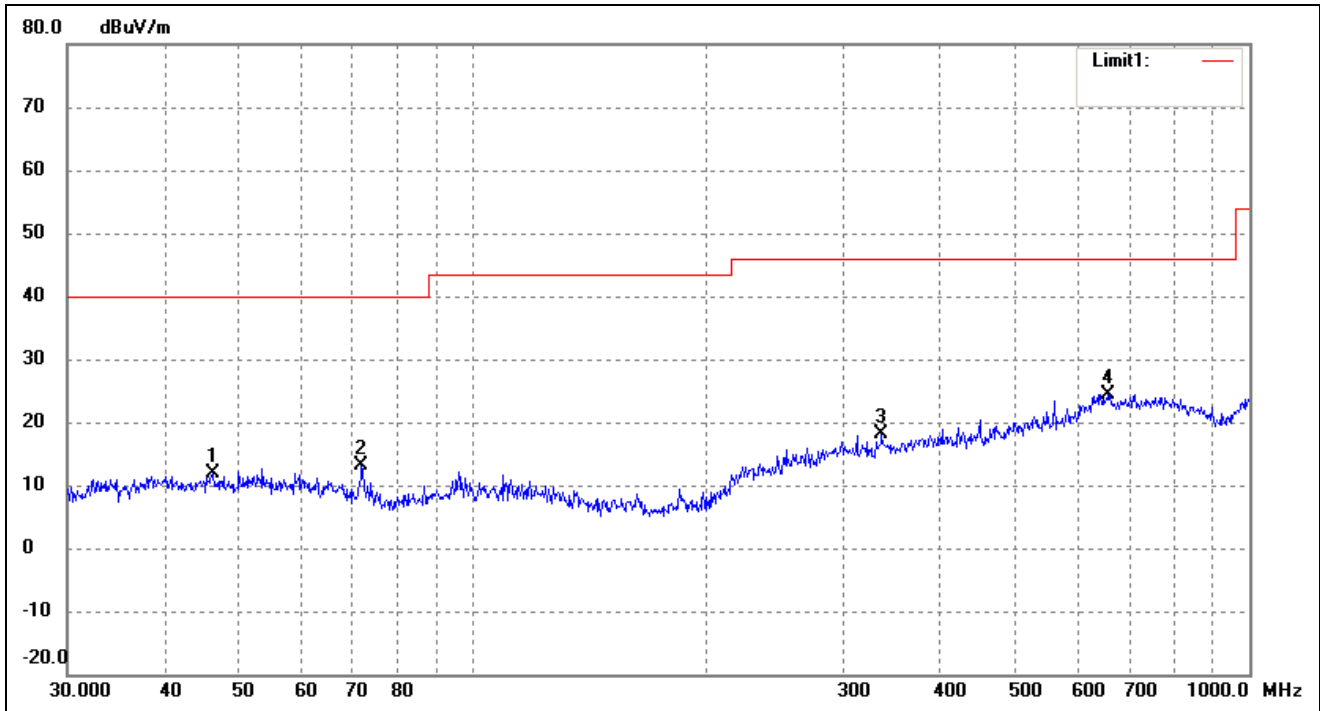
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.1347	28.23	-16.53	11.70	40.00	-28.30	144	100	peak
2	72.0843	33.13	-18.97	14.16	40.00	-25.84	92	100	peak
3	95.7622	31.87	-17.19	14.68	43.50	-28.82	123	100	peak
4	647.3856	25.11	-1.19	23.92	46.00	-22.08	234	100	peak

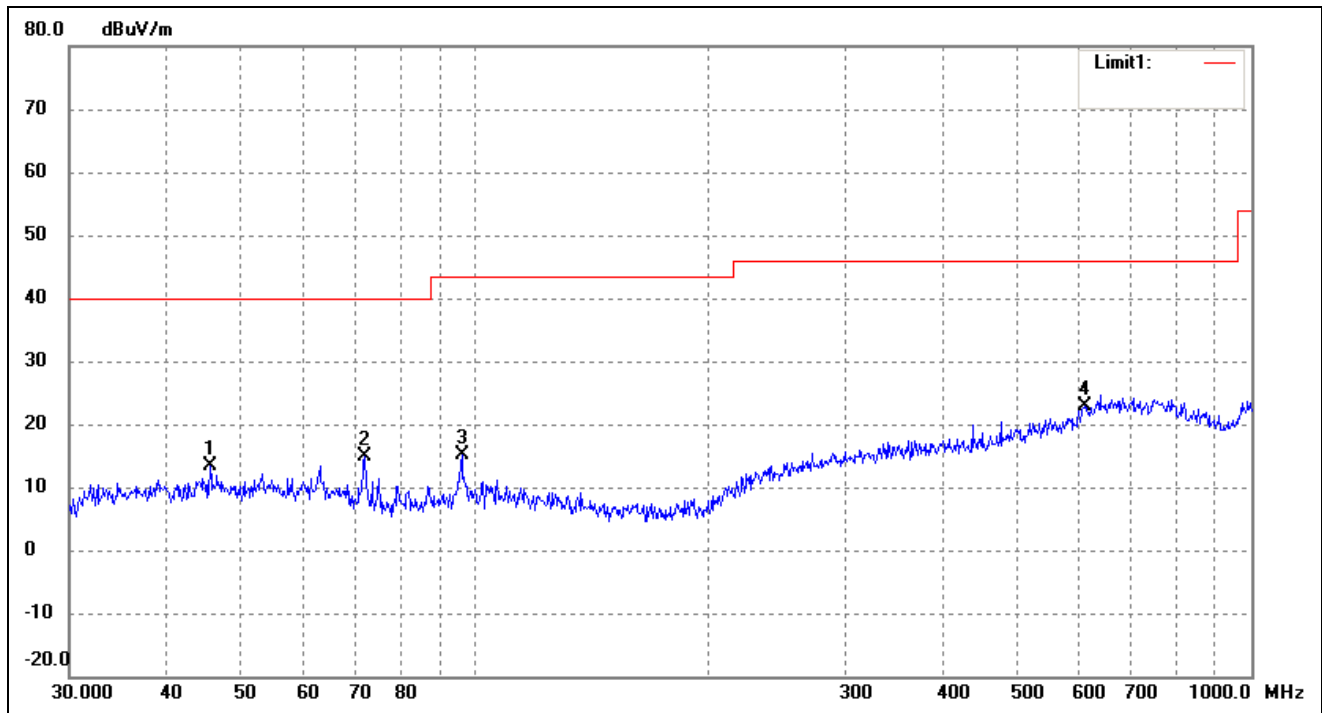
Test mode: Transmitting Channel 5510MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	46.1780	28.47	-16.49	11.98	40.00	-28.02	96	100	peak
2	71.8320	32.10	-18.94	13.16	40.00	-26.84	280	100	peak
3	336.0352	27.69	-9.62	18.07	46.00	-27.93	105	100	peak
4	656.5300	25.84	-1.41	24.43	46.00	-21.57	259	100	peak

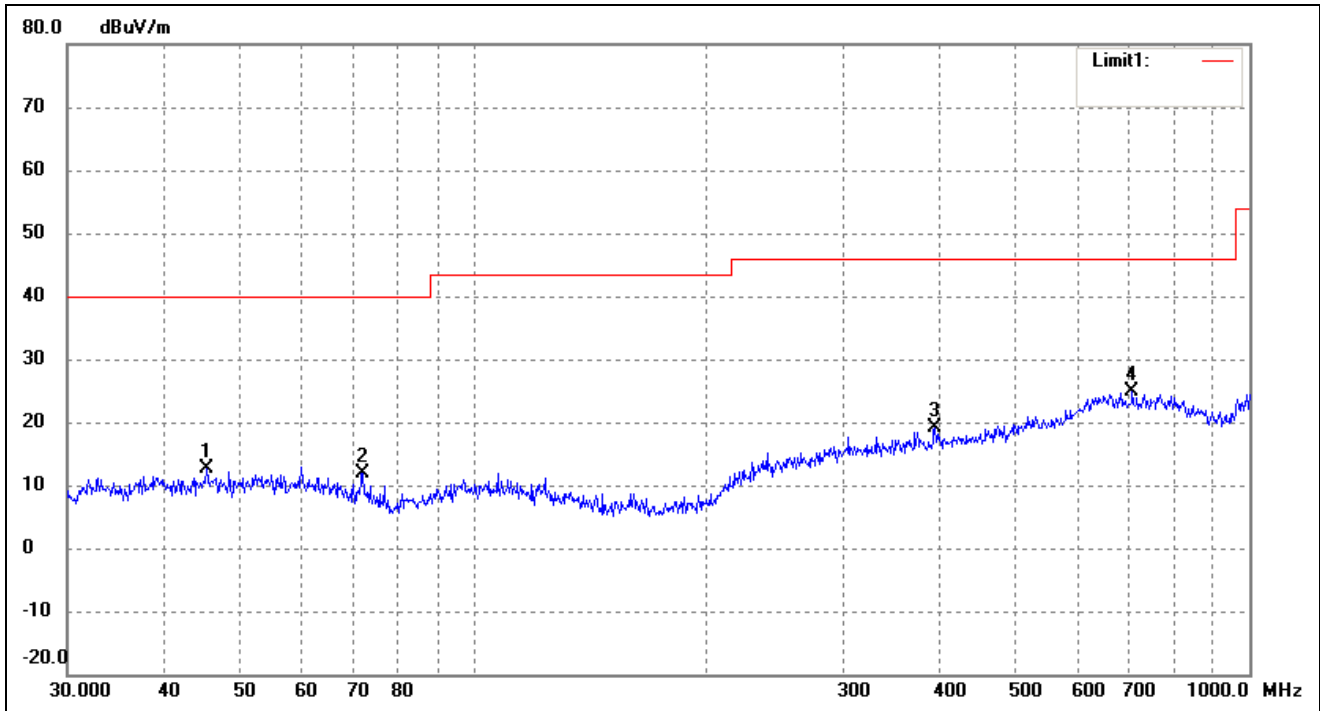
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	45.5348	29.78	-16.49	13.29	40.00	-26.71	314	100	peak
2	72.0843	33.76	-18.97	14.79	40.00	-25.21	99	100	peak
3	96.0986	32.31	-17.14	15.17	43.50	-28.33	199	100	peak
4	609.9217	23.96	-0.96	23.00	46.00	-23.00	111	100	peak

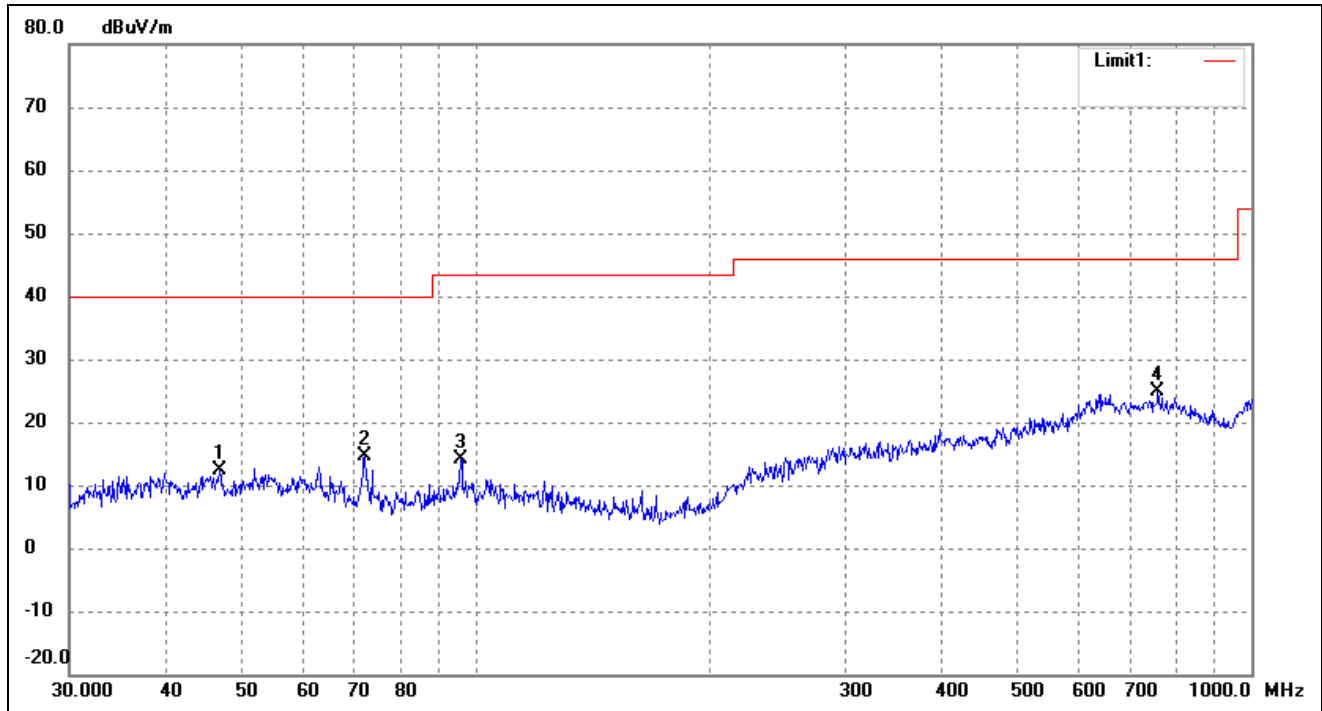
Test mode: Transmitting Channel 5590MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	45.3755	29.08	-16.49	12.59	40.00	-27.41	121	100	peak
2	72.0843	30.84	-18.97	11.87	40.00	-28.13	192	100	peak
3	393.4724	27.28	-8.14	19.14	46.00	-26.86	134	100	peak
4	706.6999	26.53	-1.59	24.94	46.00	-21.06	113	100	peak

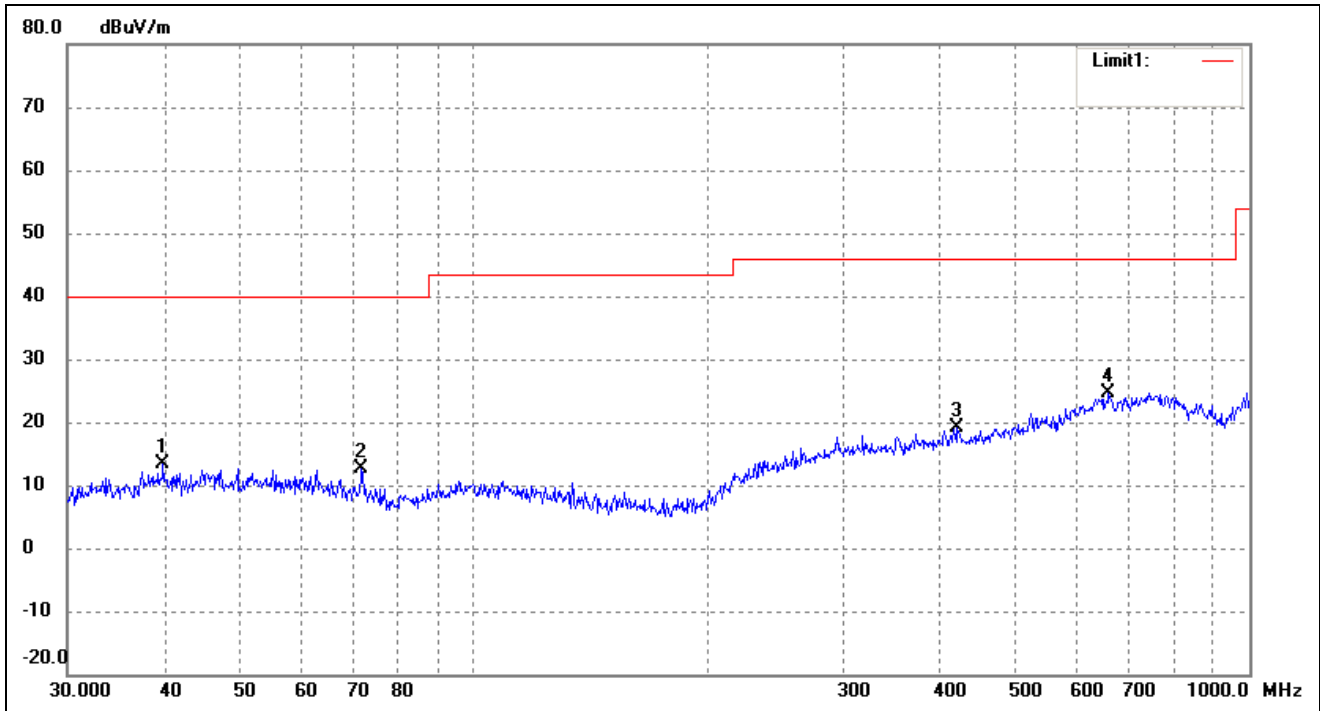
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	46.8303	28.95	-16.51	12.44	40.00	-27.56	81	100	peak
2	72.0843	33.51	-18.97	14.54	40.00	-25.46	148	100	peak
3	95.7622	31.25	-17.19	14.06	43.50	-29.44	72	100	peak
4	758.0408	25.34	-0.53	24.81	46.00	-21.19	102	100	peak

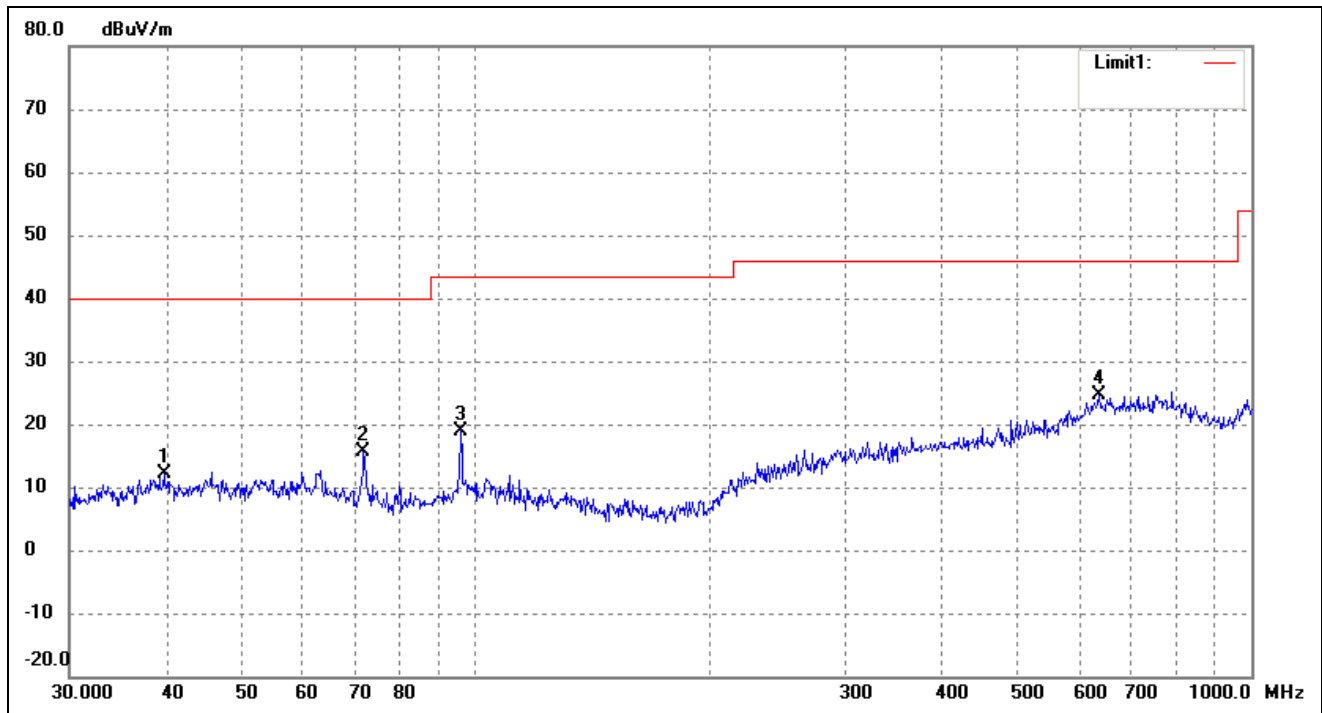
Test mode: Transmitting Channel 5670MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.8542	29.81	-16.55	13.26	40.00	-26.74	70	100	peak
2	71.8320	31.67	-18.94	12.73	40.00	-27.27	175	100	peak
3	420.5803	27.36	-8.32	19.04	46.00	-26.96	84	100	peak
4	658.8362	26.15	-1.47	24.68	46.00	-21.32	132	100	peak

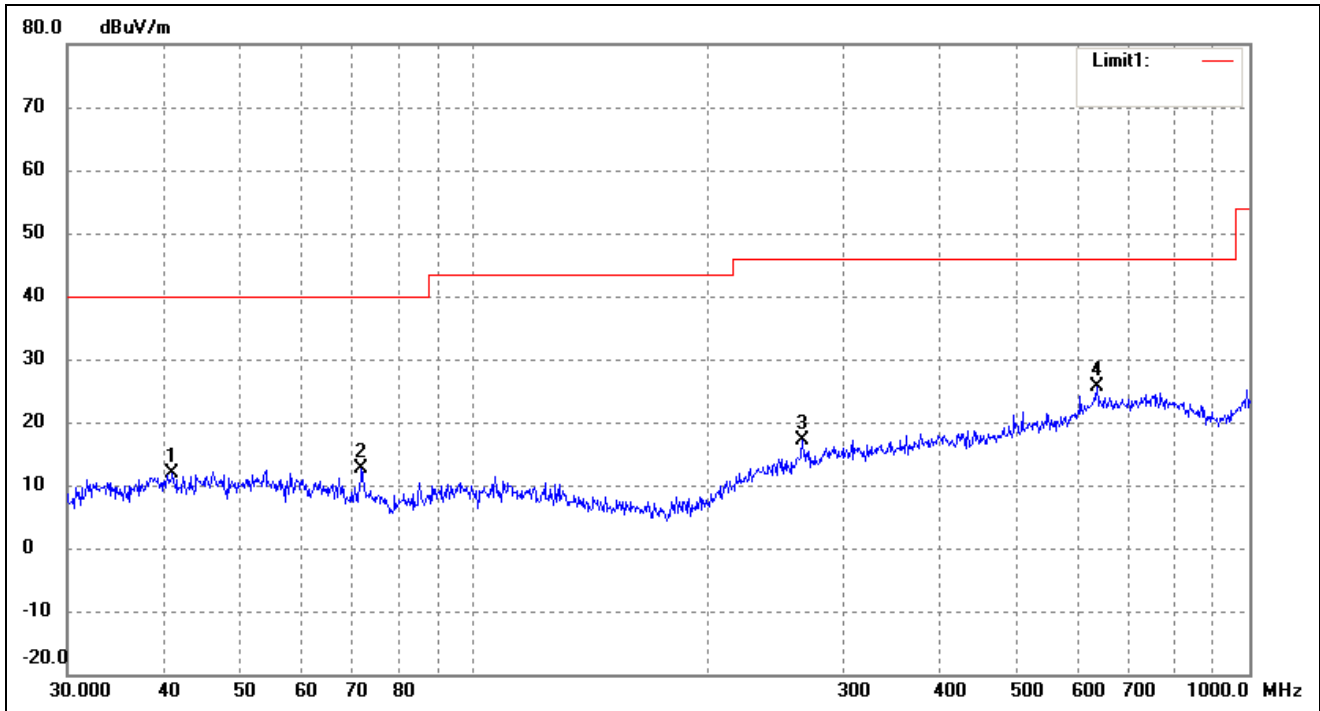
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.7147	28.74	-16.57	12.17	40.00	-27.83	338	100	peak
2	71.8320	34.45	-18.94	15.51	40.00	-24.49	67	100	peak
3	95.7622	36.19	-17.19	19.00	43.50	-24.50	141	100	peak
4	636.1340	25.79	-1.15	24.64	46.00	-21.36	338	100	peak

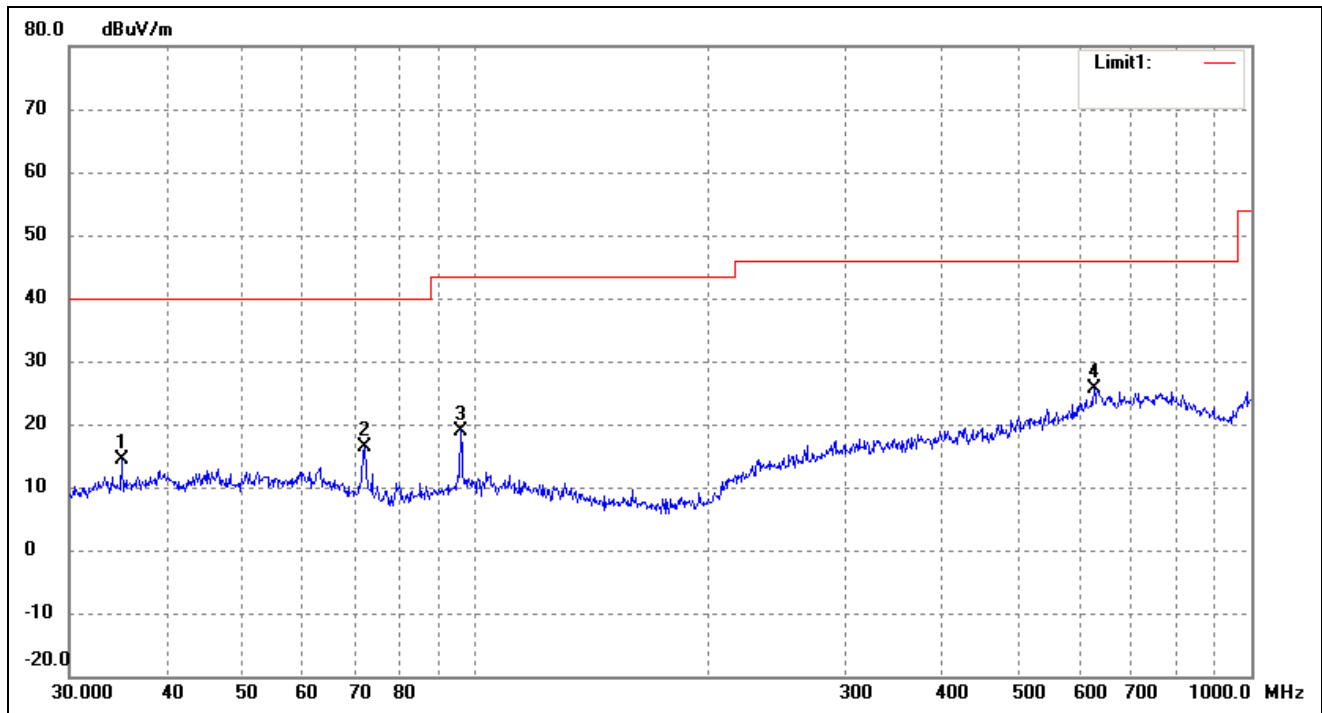
Test mode: Transmitting Channel 5755MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.9881	28.31	-16.52	11.79	40.00	-28.21	124	100	peak
2	71.8320	31.45	-18.94	12.51	40.00	-27.49	142	100	peak
3	265.6757	28.60	-11.38	17.22	46.00	-28.78	86	100	peak
4	636.1340	26.69	-1.15	25.54	46.00	-20.46	290	100	peak

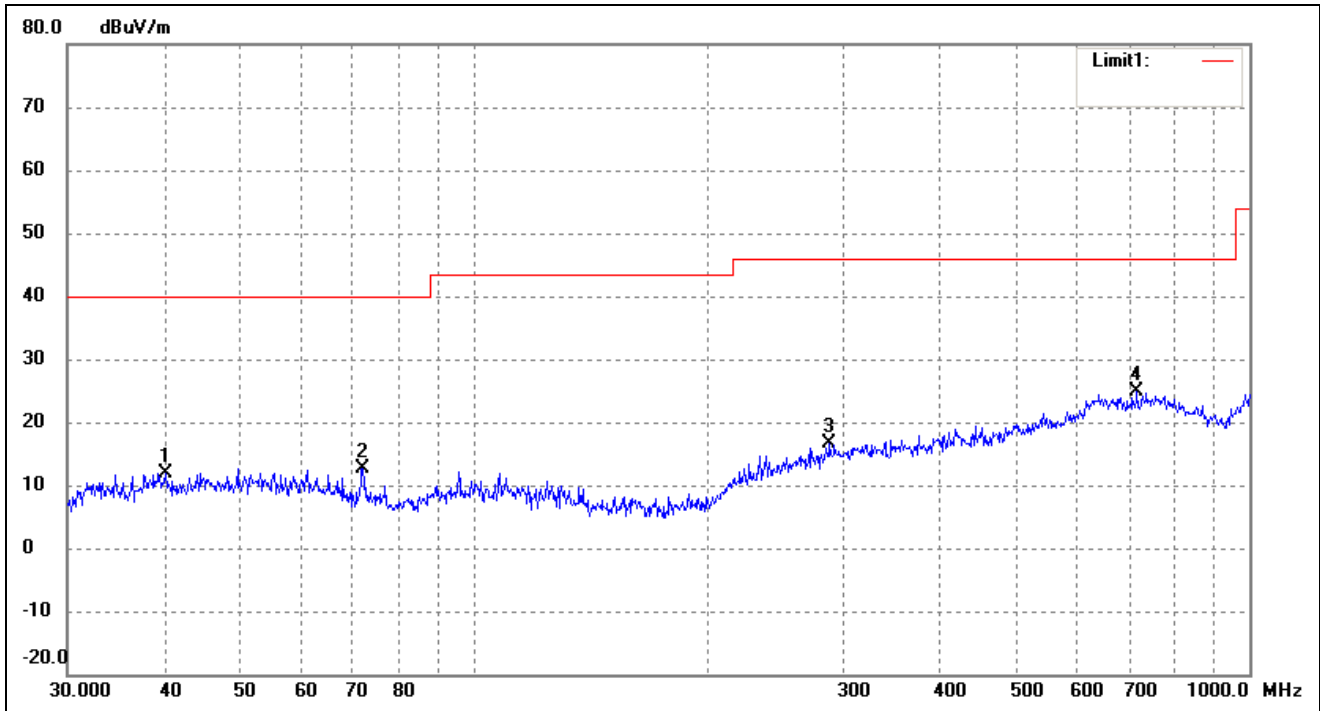
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	35.0048	31.73	-17.32	14.41	40.00	-25.59	90	100	peak
2	72.0843	35.34	-18.97	16.37	40.00	-23.63	270	100	peak
3	95.7622	36.19	-17.19	19.00	43.50	-24.50	91	100	peak
4	627.2738	27.01	-1.45	25.56	46.00	-20.44	75	100	peak

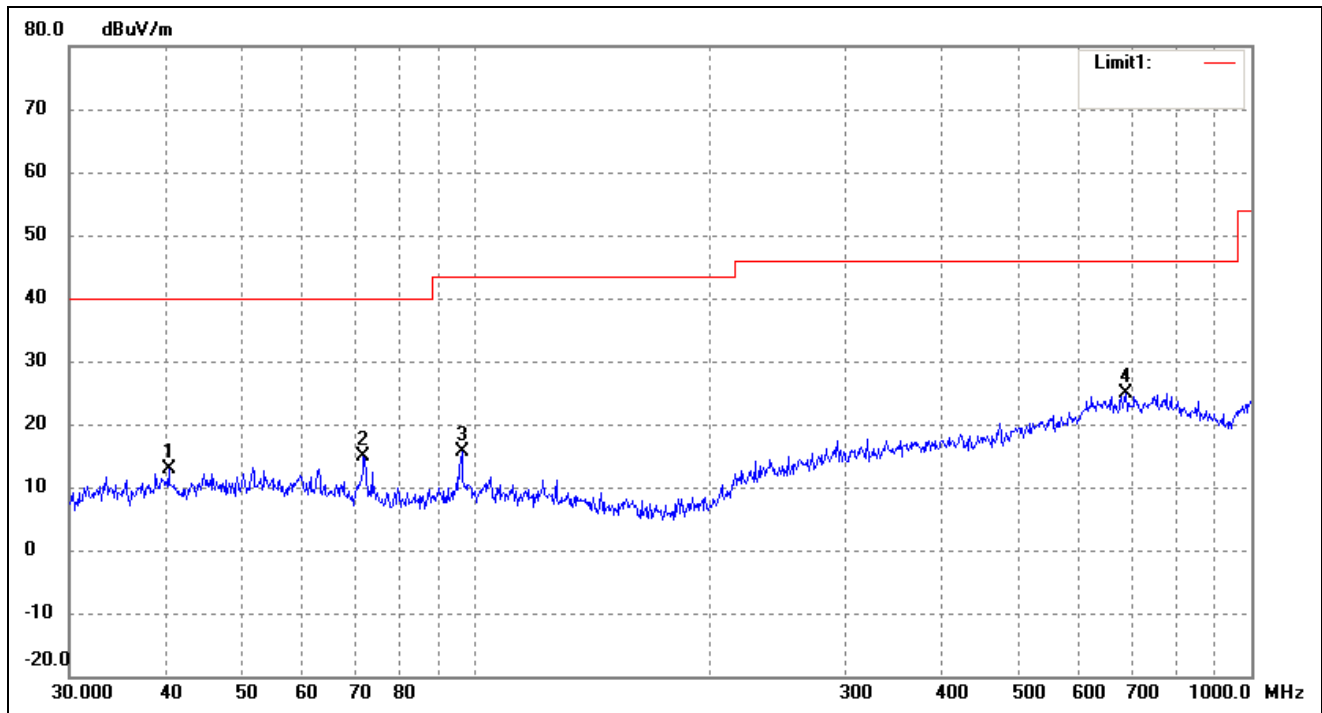
Test mode: Transmitting Channel 5795MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.1347	28.47	-16.53	11.94	40.00	-28.06	345	100	peak
2	72.0843	31.62	-18.97	12.65	40.00	-27.35	93	100	peak
3	287.9904	26.56	-10.05	16.51	46.00	-29.49	242	100	peak
4	716.6820	26.10	-1.25	24.85	46.00	-21.15	103	100	peak

Test Specification: Vertical

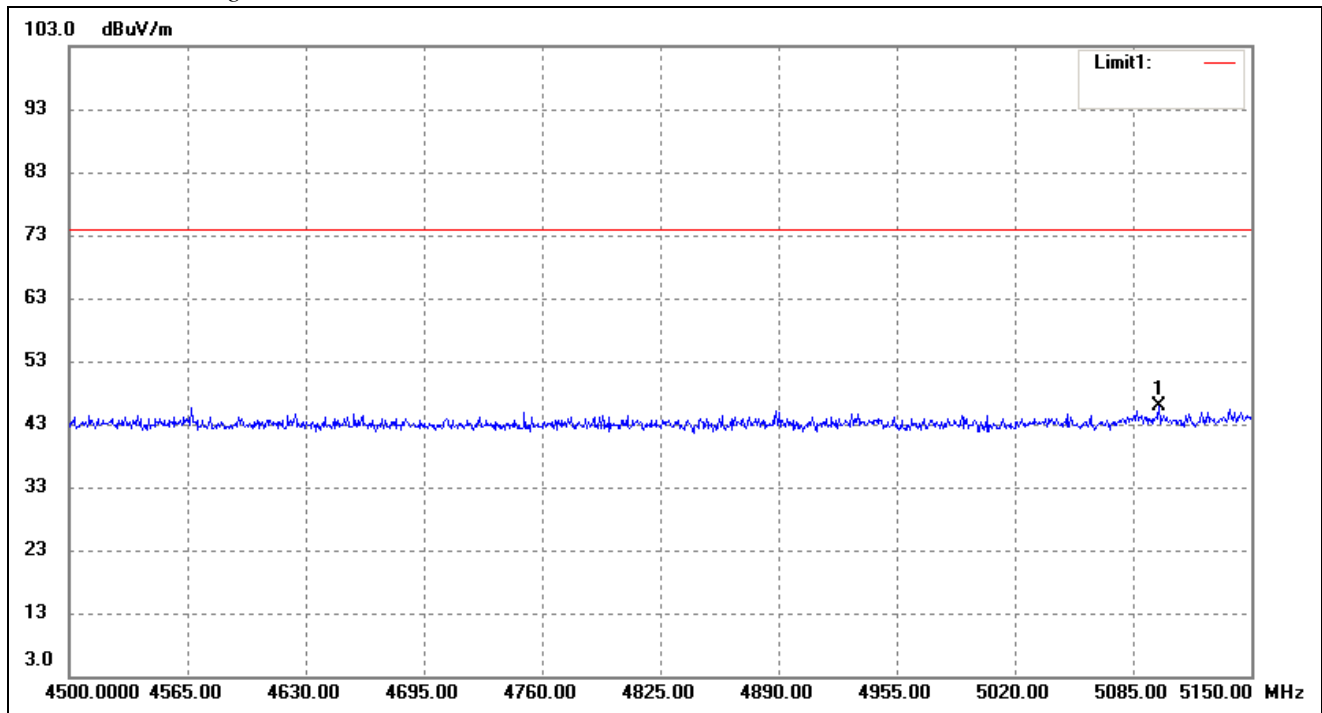


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.2757	29.47	-16.53	12.94	40.00	-27.06	238	100	peak
2	71.8320	33.89	-18.94	14.95	40.00	-25.05	90	100	peak
3	96.0986	32.67	-17.14	15.53	43.50	-27.97	270	100	peak
4	689.5644	25.89	-1.07	24.82	46.00	-21.18	91	100	peak

For 802.11a

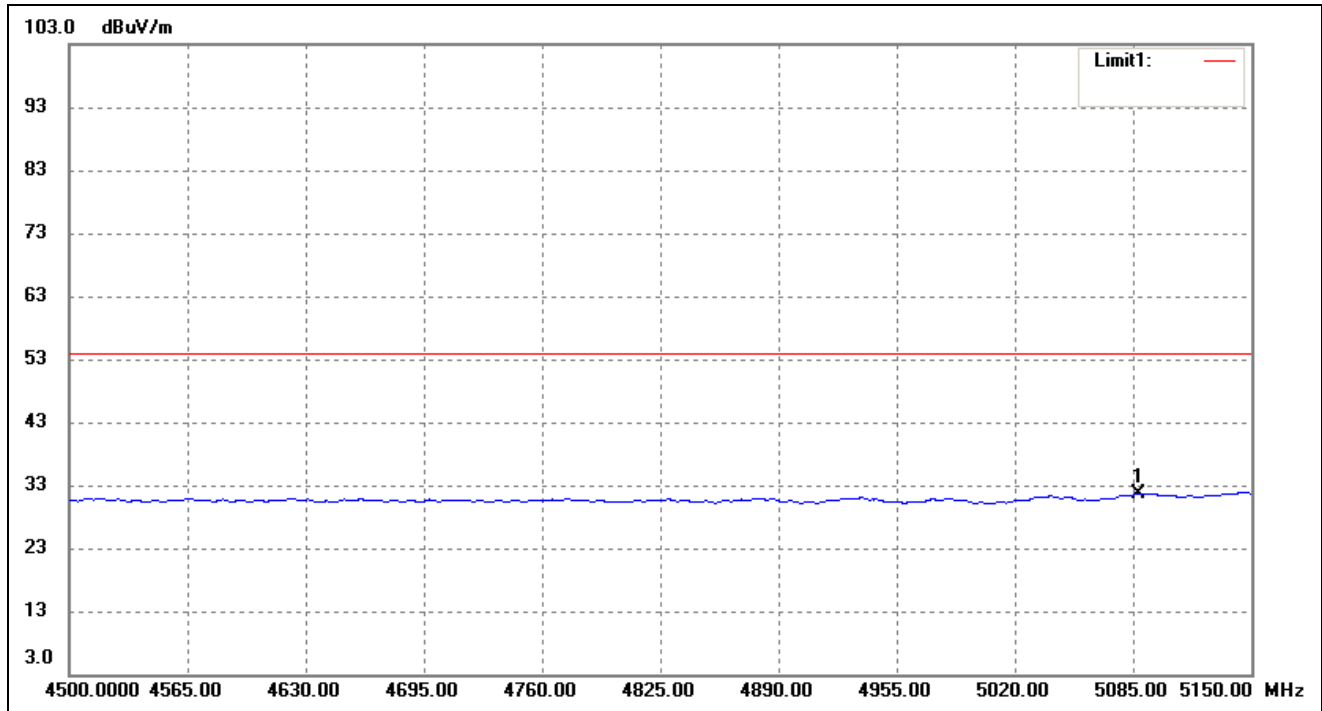
Spurious Emission above 1GHz

Restricted Bandedge Peak



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5099.300	51.16	-5.33	45.83	74.00	-28.17	80	100	peak

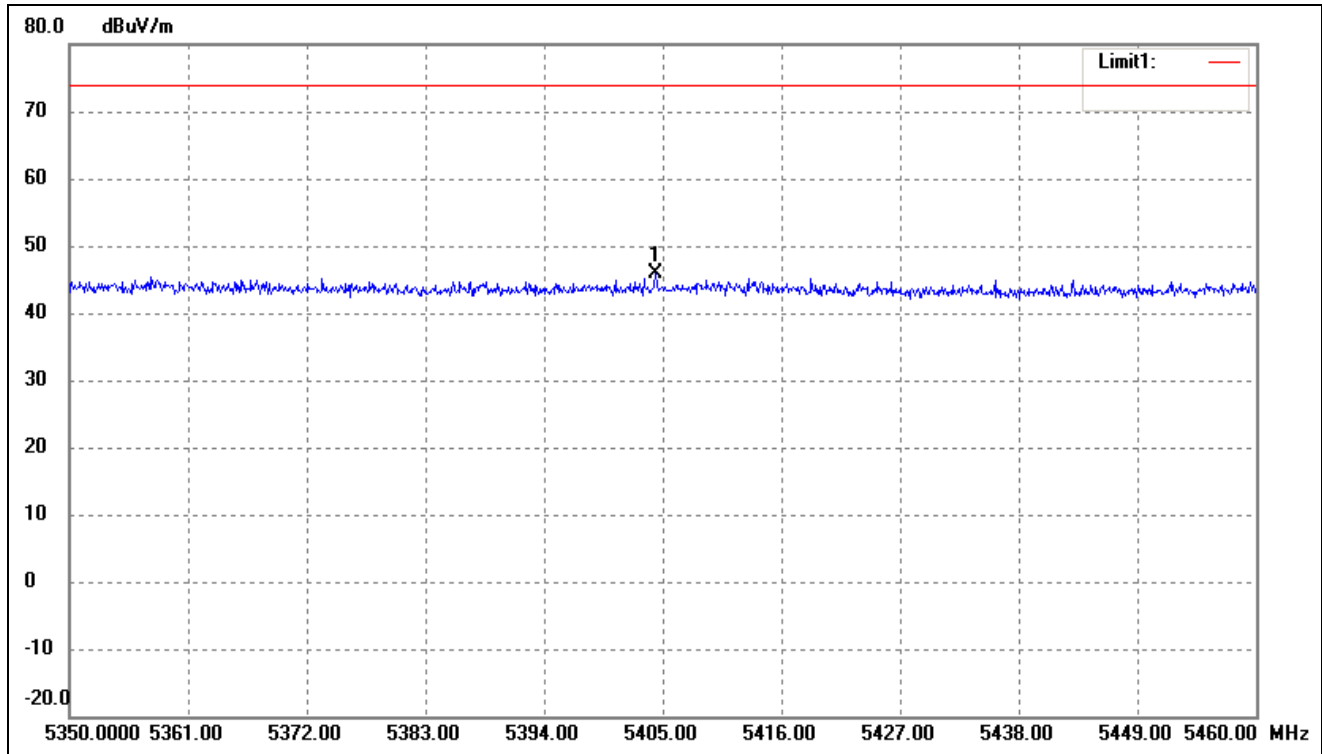
Restricted Bandedge Average



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5088.250	37.05	-5.37	31.68	54.00	-22.32	167	100	peak

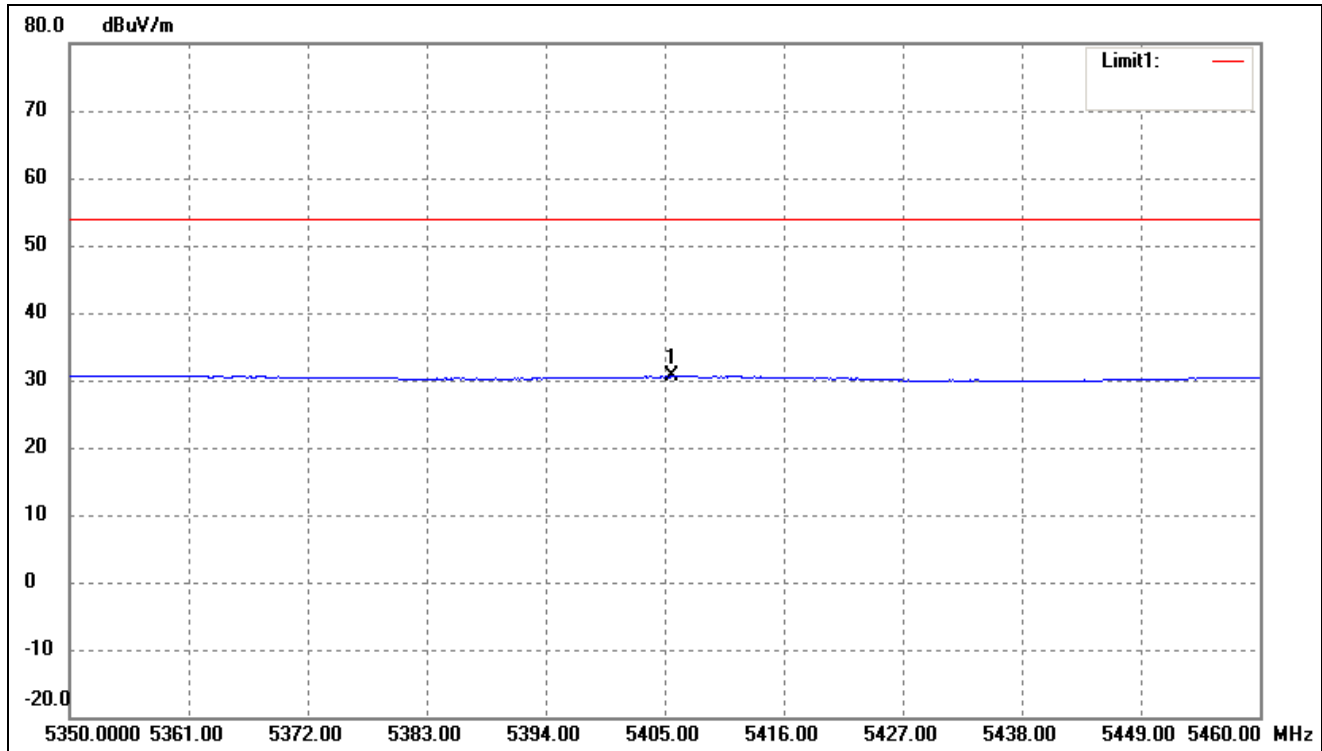
Note: this EUT was tested in the low, high channel and the worst case position data was reported.

Restricted Bandedge Peak



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5404.340	50.08	-4.11	45.97	74.00	-28.03	65	100	peak

Restricted Bandedge Average



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5405.660	34.64	-4.11	30.53	54.00	-23.47	65	100	peak

Note: this EUT was tested in the low, high channel and the worst case position data was reported.

Harmonics And Spurious Emissions 5.15-5.25GHz, 5.250-5.350GHz, 5.470-5.725GHz, 5.725-5.850GHz

Frequency MHz	Detector	Meter Reading dBuV	Direction Degree	Polar H / V	Antenna Loss dB	Cable loss dB	Amplifier dB	Correction Amplitude dBuV/m	Limit dBuV/m	Margin dB
Low Channel (5180MHz)										
15540	PK	48.98	196	V	40.7	10.9	39.6	60.98	74	-13.02
15540	PK	46.48	265	H	40.7	10.9	39.6	58.48	74	-15.52
15540	AV	35.98	165	V	40.7	10.9	39.6	47.98	54	-6.02
15540	AV	35.48	221	H	40.7	10.9	39.6	47.48	54	-6.52
High Channel (5240MHz)										
15720	PK	45.94	168	V	40.7	10.9	39.6	57.94	74	-16.06
15720	PK	44.57	235	H	40.7	10.9	39.6	56.57	74	-17.43
15720	AV	38.87	214	V	40.7	10.9	39.6	50.87	54	-3.13
15720	AV	34.69	159	H	40.7	10.9	39.6	46.69	54	-7.31
Low Channel (5260MHz)										
15780	PK	47.65	265	V	40.1	10.6	39.7	58.65	74	-15.35
15780	PK	46.65	155	H	40.1	10.6	39.7	57.65	74	-16.35
15780	AV	34.66	65	V	40.1	10.6	39.7	45.66	54	-8.34
15780	AV	34.65	159	H	40.1	10.6	39.7	45.65	54	-8.35
High Channel (5320MHz)										
15960	PK	49.32	162	V	39.5	10.4	39.7	59.52	74	-14.48
15960	PK	48.98	157	H	39.5	10.4	39.7	59.18	74	-14.82
15960	AV	35.65	58	V	39.5	10.4	39.7	45.85	54	-8.15
15960	AV	35.28	132	H	39.5	10.4	39.7	45.48	54	-8.52
Low Channel (5500MHz)										
16500	PK	47.68	226	V	39.3	10.3	39.7	57.58	74	-16.42
16500	PK	47.02	321	H	39.3	10.3	39.7	56.92	74	-17.08
16500	AV	34.61	155	V	39.3	10.3	39.7	44.51	54	-9.49
16500	AV	34.78	87	H	39.3	10.3	39.7	44.68	54	-9.32
High Channel (5700MHz)										
17100	PK	49.06	187	V	39.0	10.1	39.9	58.26	74	-15.74
17100	PK	48.35	169	H	39.0	10.1	39.9	57.55	74	-16.45
17100	AV	35.71	236	V	39.0	10.1	39.9	44.91	54	-9.09
17100	AV	35.67	279	H	39.0	10.1	39.9	44.87	54	-9.13
Low Channel (5745MHz)										
11490	PK	45.36	155	V	38.9	9.8	40.1	53.96	74	-20.04
11490	PK	48.61	171	H	38.9	9.8	40.1	57.21	74	-16.79
11490	AV	35.65	151	V	38.9	9.8	40.1	44.25	54	-9.75
11490	AV	36.75	216	H	38.9	9.8	40.1	45.35	54	-8.65

High Channel (5825MHz)										
11610	PK	48.54	158	V	38.9	9.8	40.1	57.14	74	-16.86
11610	PK	46.36	308	H	38.9	9.8	40.1	54.96	74	-19.04
11610	AV	34.64	285	V	38.9	9.8	40.1	43.24	54	-10.76
11610	AV	37.88	246	H	38.9	9.8	40.1	46.48	54	-7.52

Out of Band edge for 5150-5250MHz

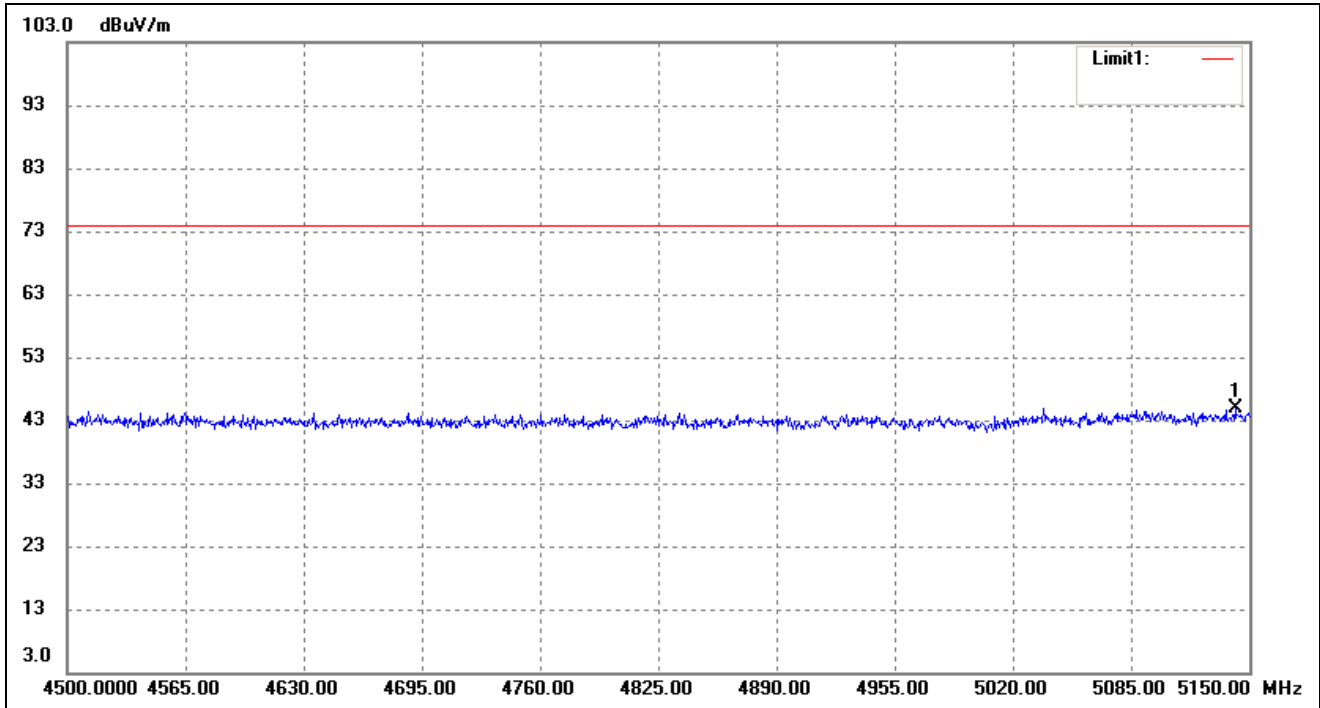
Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-42.65	-27
Highest	Above 5350	-45.65	-27
Note: the data just list the worst cases			

Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5715	-41.65	-27
	5715 to 5725	-40.32	-17
Highest	5850 to 5860	-43.51	-17
	Above 5860	-42.65	-27
Note: the data just list the worst cases			

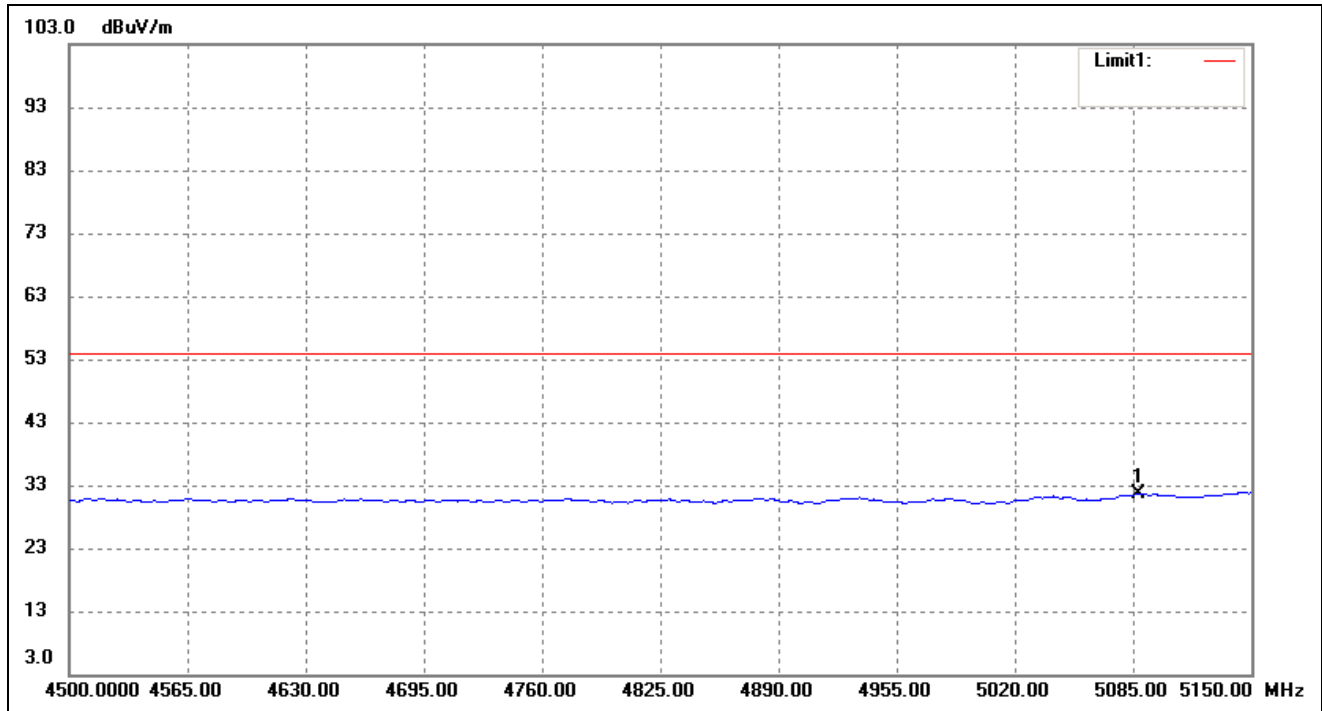
802.11n HT20

Restricted Bandedge Peak



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5142.200	50.05	-5.22	44.83	74.00	-29.17	167	100	peak

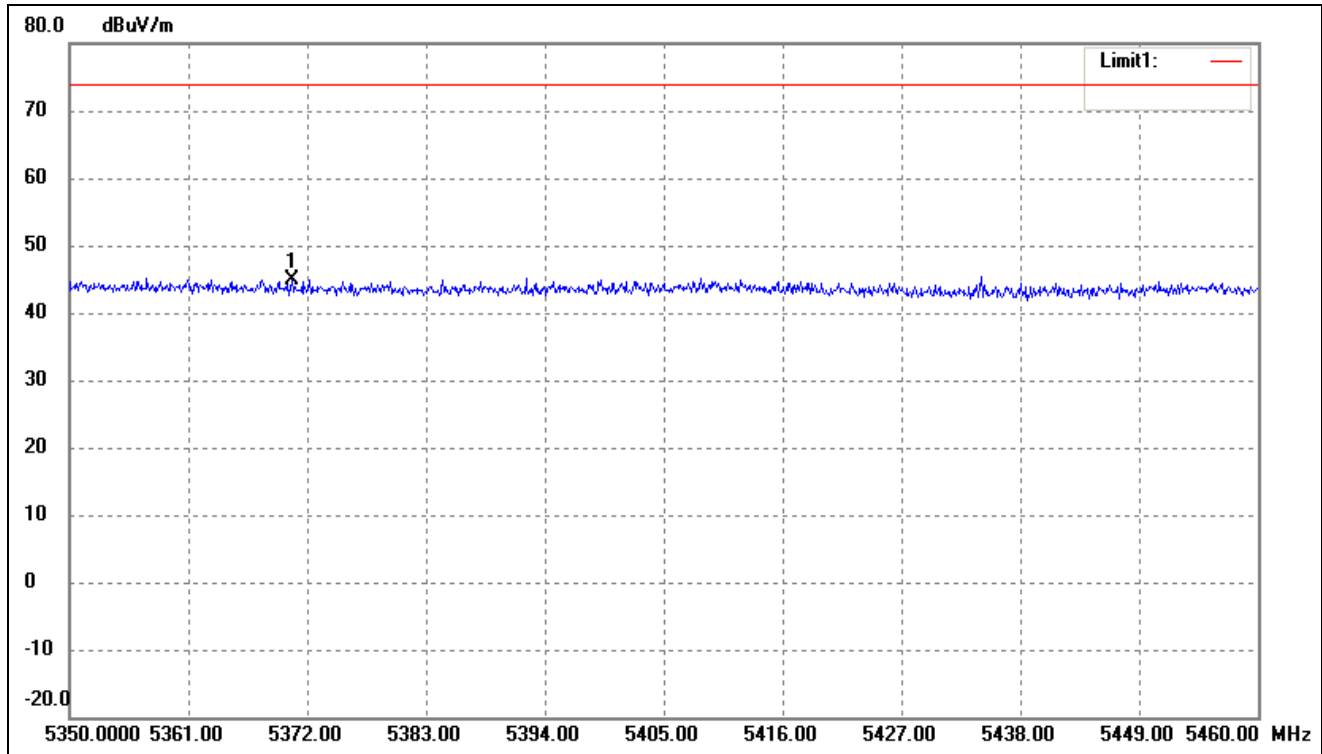
Restricted Bandedge Average



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5088.250	37.02	-5.37	31.65	54.00	-22.35	129	100	peak

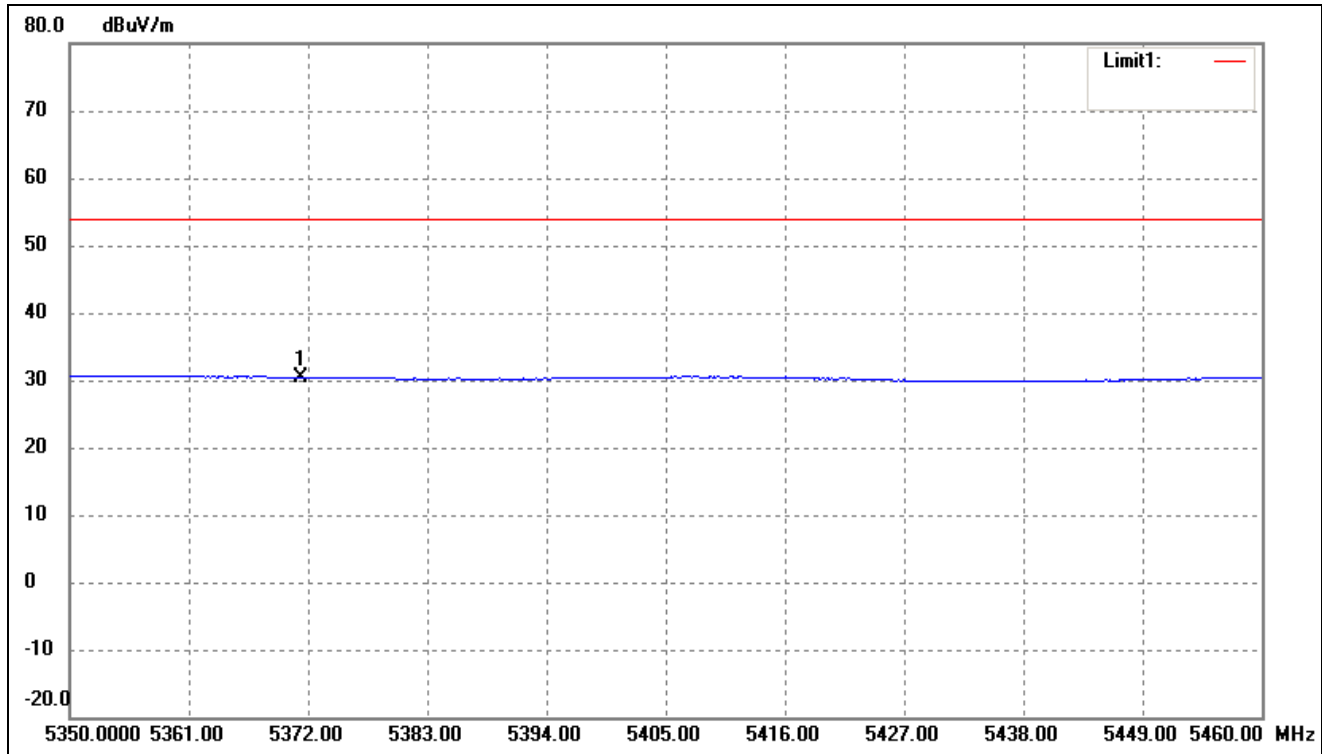
Note: this EUT was tested in the low, high channel and the worst case position data was reported.

Restricted Bandedge Peak



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5370.570	48.98	-4.12	44.86	74.00	-29.14	167	100	peak

Restricted Bandedge Average



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5371.340	34.53	-4.12	30.41	54.00	-23.59	167	100	peak

Note: this EUT was tested in the low, high channel and the worst case position data was reported.

Harmonics And Spurious Emissions 5.15-5.25GHz, 5.250-5.350GHz, 5.470-5.725GHz, 5.725-5.850GHz

Frequency MHz	Detector	Meter Reading dBuV	Direction Degree	Polar H / V	Antenna Loss dB	Cable loss dB	Amplifier dB	Correction Amplitude dBuV/m	Limit dBuV/m	Margin dB
Low Channel (5180MHz)										
15540	PK	48.65	196	V	40.7	10.9	39.6	60.65	74	-13.35
15540	PK	45.14	265	H	40.7	10.9	39.6	57.14	74	-16.86
15540	AV	34.65	165	V	40.7	10.9	39.6	46.65	54	-7.35
15540	AV	35.64	221	H	40.7	10.9	39.6	47.64	54	-6.36
High Channel (5240MHz)										
15720	PK	47.32	168	V	40.7	10.9	39.6	59.32	74	-14.68
15720	PK	45.28	235	H	40.7	10.9	39.6	57.28	74	-16.72
15720	AV	35.65	214	V	40.7	10.9	39.6	47.65	54	-6.35
15720	AV	34.21	159	H	40.7	10.9	39.6	46.21	54	-7.79
Low Channel (5260MHz)										
15780	PK	47.32	265	V	40.7	10.9	39.6	59.32	74	-14.68
15780	PK	45.28	155	H	40.7	10.9	39.6	57.28	74	-16.72
15780	AV	35.65	65	V	40.7	10.9	39.6	47.65	54	-6.35
15780	AV	34.21	159	H	40.7	10.9	39.6	46.21	54	-7.79
654High Channel (5320MHz)										
15960	PK	48.36	162	V	39.5	10.4	39.7	57.52	74	-16.48
15960	PK	45.65	157	H	39.5	10.4	39.7	55.48	74	-18.52
15960	AV	35.36	58	V	39.5	10.4	39.7	45.85	54	-8.15
15960	AV	34.31	132	H	39.5	10.4	39.7	44.41	54	-9.59
Low Channel (5500MHz)										
16500	PK	46.87	226	V	39.3	10.3	39.7	57.07	74	-16.93
16500	PK	43.65	321	H	39.3	10.3	39.7	53.85	74	-20.15
16500	AV	35.65	155	V	39.3	10.3	39.7	45.85	54	-8.15
16500	AV	34.65	87	H	39.3	10.3	39.7	44.85	54	-9.15
High Channel (5700MHz)										
17100	PK	45.47	187	V	39.0	10.1	39.9	54.67	74	-19.33
17100	PK	43.65	169	H	39.0	10.1	39.9	52.85	74	-21.15
17100	AV	32.36	236	V	39.0	10.1	39.9	41.56	54	-12.44
17100	AV	33.65	279	H	39.0	10.1	39.9	42.85	54	-11.15
Low Channel (5745MHz)										
11490	PK	46.87	155	V	38.9	9.8	40.1	55.47	74	-18.53
11490	PK	45.01	171	H	38.9	9.8	40.1	53.61	74	-20.39
11490	AV	36.31	151	V	38.9	9.8	40.1	44.91	54	-9.09
11490	AV	35.14	216	H	38.9	9.8	40.1	43.74	54	-10.26
High Channel (5825MHz)										

11610	PK	48.29	158	V	38.9	9.8	40.1	56.89	74	-17.11
11610	PK	46.74	308	H	38.9	9.8	40.1	55.34	74	-18.66
11610	AV	35.65	285	V	38.9	9.8	40.1	44.25	54	-9.75
11610	AV	34.36	246	H	38.9	9.8	40.1	42.96	54	-11.04

Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-41.65	-27
Highest	Above 5350	-39.36	-27

Note: the data just list the worst cases

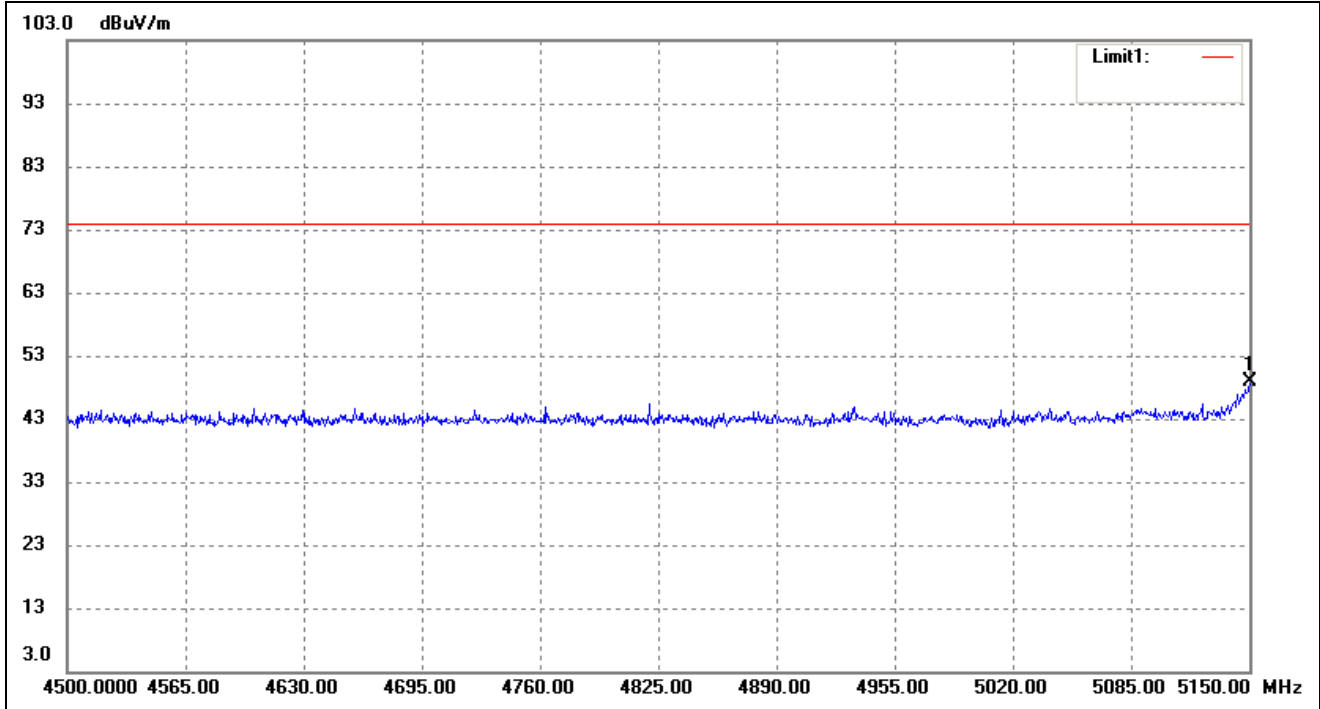
Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5715	-38.65	-27
	5715 to 5725	-37.32	-17
Highest	5850 to 5860	-39.65	-17
	Above 5860	-40.25	-27

Note: the data just list the worst cases

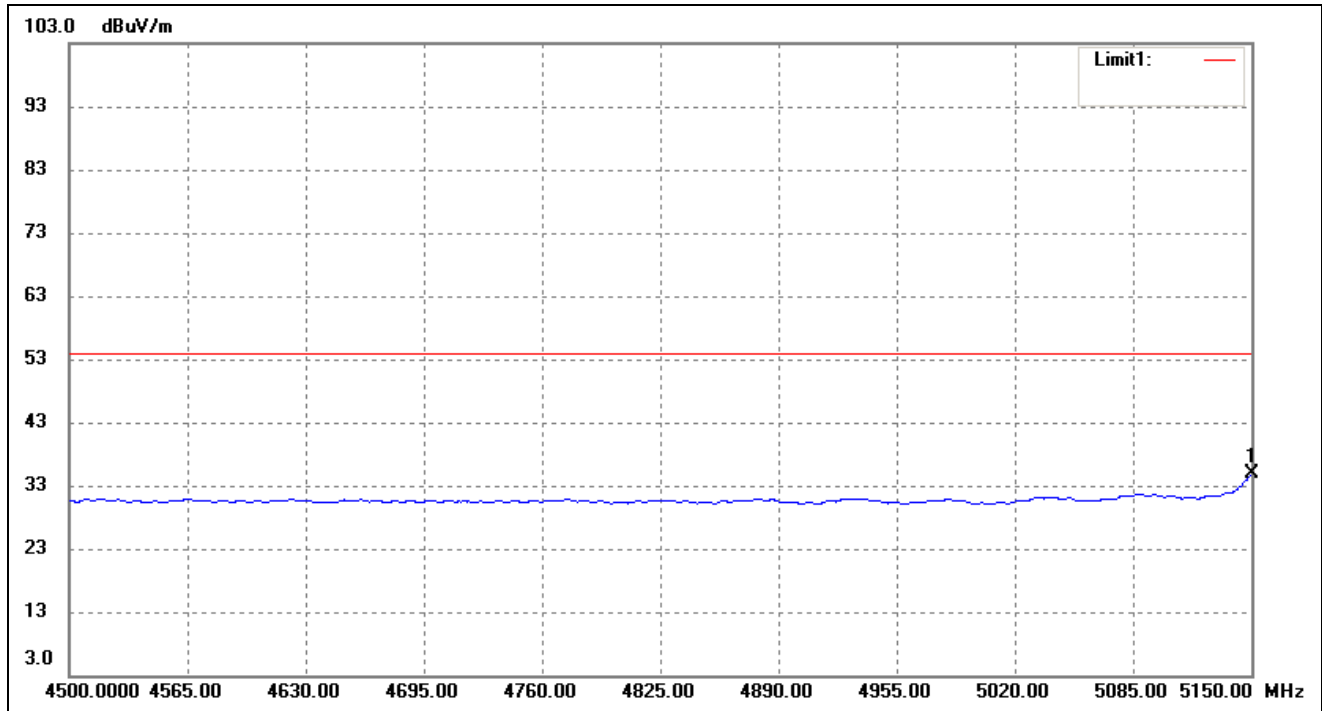
802.11n HT40

Restricted Bandedge Peak



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5150.000	54.06	-5.20	48.86	74.00	-25.14	95	100	peak

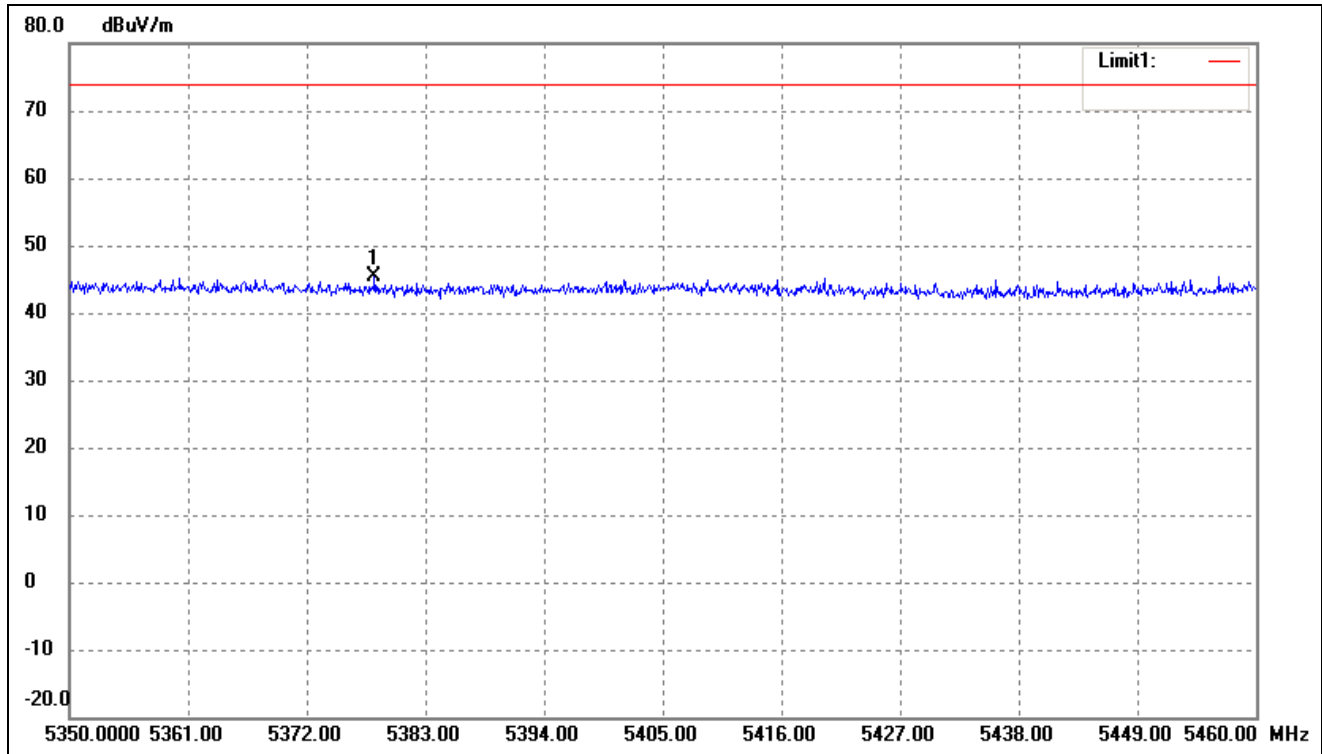
Restricted Bandedge Average



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5150.000	40.11	-5.20	34.91	54.00	-19.09	90	100	peak

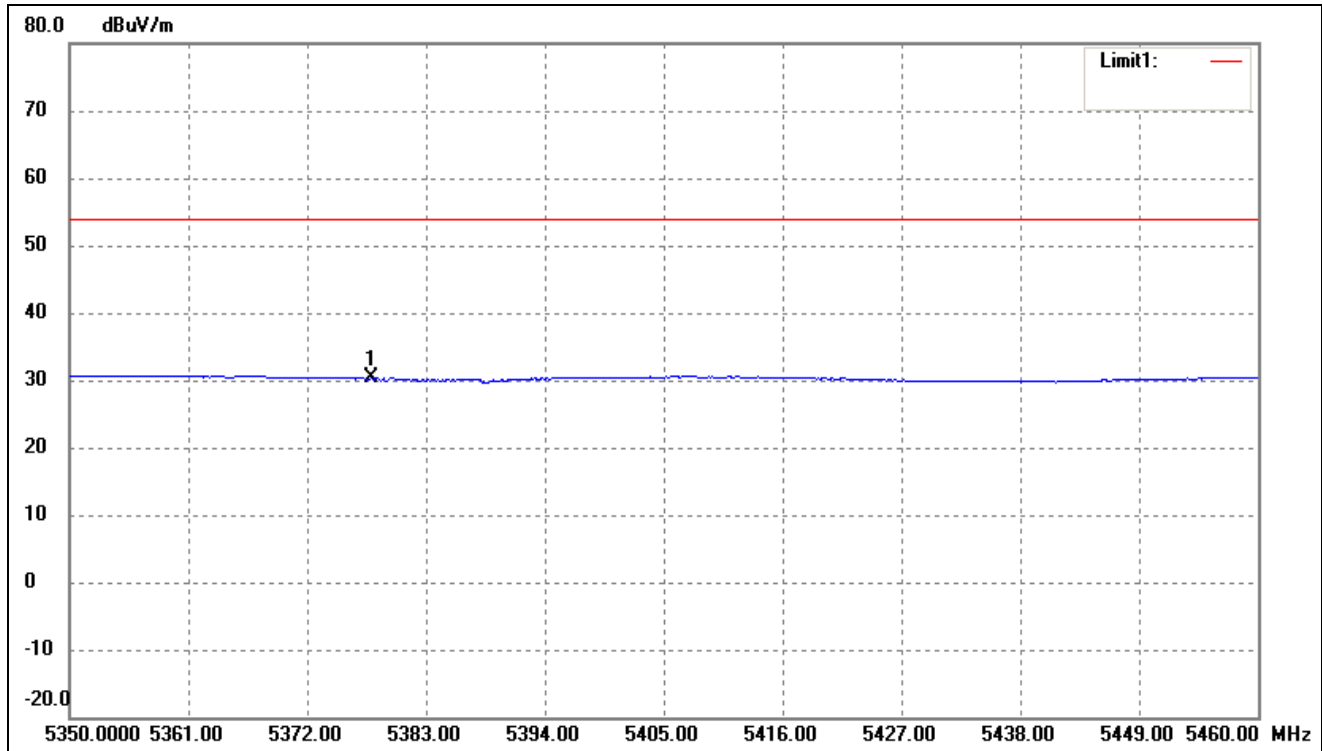
Note: this EUT was tested in the low, high channel and the worst case position data was reported.

Restricted Bandedge Peak



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5378.270	49.56	-4.10	45.46	74.00	-28.54	55	100	peak

Restricted Bandedge Average



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5377.940	34.44	-4.10	30.34	54.00	-23.66	55	100	peak

Note: this EUT was tested in the low, high channel and the worst case position data was reported.

Harmonics And Spurious Emissions 5.15-5.25GHz, 5.250-5.350GHz, 5.470-5.725GHz, 5.725-5.850GHz

Frequency MHz	Detector	Meter Reading dBuV	Direction Degree	Polar H / V	Antenna Loss dB	Cable loss dB	Amplifier dB	Correction Amplitude dBuV/m	Limit dBuV/m	Margin dB
Low Channel (5190MHz)										
15570	PK	45.98	196	V	40.7	10.9	39.6	57.98	74	-16.02
15570	PK	45.10	265	H	40.7	10.9	39.6	57.10	74	-16.90
15570	AV	36.32	165	V	40.7	10.9	39.6	48.32	54	-5.68
15570	AV	35.65	221	H	40.7	10.9	39.6	47.65	54	-6.35
High Channel (5230MHz)										
15690	PK	47.24	168	V	40.7	10.9	39.6	59.24	74	-14.76
15690	PK	46.69	235	H	40.7	10.9	39.6	58.69	74	-15.31
15690	AV	38.65	214	V	40.7	10.9	39.6	50.65	54	-3.35
15690	AV	37.31	159	H	40.7	10.9	39.6	49.31	54	-4.69
Low Channel (5270MHz)										
15810	PK	48.32	265	V	40.7	10.9	39.6	60.32	74	-13.68
15810	PK	47.66	155	H	40.7	10.9	39.6	59.66	74	-14.34
15810	AV	36.21	65	V	40.7	10.9	39.6	48.21	54	-5.79
15810	AV	35.98	159	H	40.7	10.9	39.6	47.98	54	-6.02
654High Channel (5310MHz)										
15930	PK	47.21	162	V	39.5	10.4	39.7	57.41	74	-16.59
15930	PK	45.68	157	H	39.5	10.4	39.7	55.88	74	-18.12
15930	AV	34.87	58	V	39.5	10.4	39.7	45.07	54	-8.93
15930	AV	35.64	132	H	39.5	10.4	39.7	45.84	54	-8.16
Low Channel (5510MHz)										
16530	PK	48.54	226	V	39.3	10.3	39.7	58.44	74	-15.56
16530	PK	46.61	321	H	39.3	10.3	39.7	56.51	74	-17.49
16530	AV	36.21	155	V	39.3	10.3	39.7	46.11	54	-7.89
16530	AV	34.36	87	H	39.3	10.3	39.7	44.26	54	-9.74
High Channel (5670MHz)										
17010	PK	47.38	187	V	39.0	10.1	39.9	56.58	74	-17.42
17010	PK	45.71	169	H	39.0	10.1	39.9	54.91	74	-19.09
17010	AV	34.25	236	V	39.0	10.1	39.9	43.45	54	-10.55
17010	AV	33.65	279	H	39.0	10.1	39.9	42.85	54	-11.15
Low Channel (5755MHz)										
17265	PK	47.10	155	V	38.9	9.8	40.1	55.70	74	-18.30
17265	PK	46.09	171	H	38.9	9.8	40.1	54.69	74	-19.31
17265	AV	38.65	151	V	38.9	9.8	40.1	47.25	54	-6.75
17265	AV	37.65	216	H	38.9	9.8	40.1	46.25	54	-7.75
High Channel (5795MHz)										

17385	PK	49.32	158	V	38.9	9.8	40.1	57.92	74	-16.08
17385	PK	48.71	308	H	38.9	9.8	40.1	57.31	74	-16.69
17385	AV	37.57	285	V	38.9	9.8	40.1	46.17	54	-7.83
17385	AV	37.27	246	H	38.9	9.8	40.1	45.87	54	-8.13

Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-45.21	-27
Highest	Above 5350	-41.54	-27

Note: the data just list the worst cases

Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5715	-41.54	-27
	5715 to 5725	-37.21	-17
Highest	5850 to 5860	-38.36	-17
	Above 5860	-40.65	-27

Note: the data just list the worst cases

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listed in the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

10. Frequency Stability

10.1 Standard Applicable

According to §15.407(g), Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

10.2 Test Procedure

According to §2.1055, the following test procedure was performed.

The Frequency Stability is measured directly with a Frequency Domain Analyzer. Frequency Deviation in ppm is calculated from the measured peak to peak value.

The Carrier Frequency Stability over Power Supply Voltage and over Temperature is measured with a Frequency Domain Analyzer in histogram mode

Temperature:	Supply Voltage
20°C	DC 3.5-4.35V declared by manufacturer
-30°C to +50°C	Normal

10.3 Environmental Conditions

Temperature:	20°C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

10.4 Summary of Test Results/Plots

5150-5250MHz

802.11a

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	121	0.0233
40	3.8	123	0.0237
30	3.8	98	0.0188
20	3.8	158	0.0304
10	3.8	197	0.0379
0	3.8	156	0.0300
-10	3.8	162	0.0312
-20	3.8	167	0.0321
-30	3.8	126	0.0242

802.11n_HT20

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	187	0.0360
40	3.8	144	0.0277
30	3.8	129	0.0248
20	3.8	102	0.0196
10	3.8	165	0.0317
0	3.8	126	0.0242
-10	3.8	121	0.0233
-20	3.8	164	0.0315
-30	3.8	135	0.0260

802.11n_HT40

Reference Frequency(Fixed Channel): 5230 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	126	0.0241
40	3.8	147	0.0281
30	3.8	189	0.0361
20	3.8	165	0.0315
10	3.8	147	0.0281
0	3.8	168	0.0321
-10	3.8	155	0.0296
-20	3.8	169	0.0323
-30	3.8	122	0.0233

5250-5350MHz

802.11a

Reference Frequency(Middle Channel): 5280 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	175	0.0331
40	3.8	136	0.0258
30	3.8	172	0.0326
20	3.8	169	0.0320
10	3.8	141	0.0267
0	3.8	129	0.0244
-10	3.8	169	0.0320
-20	3.8	157	0.0297
-30	3.8	117	0.0222

802.11n_HT20

Reference Frequency(Middle Channel): 5280MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	139	0.0263
40	3.8	147	0.0278
30	3.8	120	0.0227
20	3.8	189	0.0358
10	3.8	126	0.0239
0	3.8	122	0.0231
-10	3.8	136	0.0258
-20	3.8	157	0.0297
-30	3.8	189	0.0358

802.11n_HT40

Reference Frequency(Fixed Channel): 5310 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	176	0.0331
40	3.8	126	0.0237
30	3.8	147	0.0277
20	3.8	138	0.0260
10	3.8	195	0.0367
0	3.8	162	0.0305
-10	3.8	158	0.0298
-20	3.8	126	0.0237
-30	3.8	147	0.0277

5470-5725MHz

802.11a

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	139	0.0248
40	3.8	175	0.0313
30	3.8	126	0.0225
20	3.8	157	0.0280
10	3.8	148	0.0264
0	3.8	169	0.0302
-10	3.8	156	0.0279
-20	3.8	178	0.0318
-30	3.8	167	0.0298

802.11n_HT20

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	145	0.0259
40	3.8	165	0.0295
30	3.8	178	0.0318
20	3.8	175	0.0313
10	3.8	136	0.0243
0	3.8	158	0.0282
-10	3.8	138	0.0246
-20	3.8	187	0.0334
-30	3.8	175	0.0313

802.11n_HT40

Reference Frequency(Middle Channel): 5590 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	165	0.0295
40	3.8	147	0.0263
30	3.8	162	0.0290
20	3.8	116	0.0208
10	3.8	173	0.0309
0	3.8	114	0.0204
-10	3.8	168	0.0301
-20	3.8	114	0.0204
-30	3.8	135	0.0242

5725-5850MHz

802.11a

Reference Frequency(Middle Channel): 5785MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	168	0.0301
40	3.8	165	0.0295
30	3.8	157	0.0281
20	3.8	126	0.0225
10	3.8	127	0.0227
0	3.8	165	0.0295
-10	3.8	126	0.0225
-20	3.8	147	0.0263
-30	3.8	168	0.0301

802.11n_HT20

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	175	0.0303
40	3.8	126	0.0218
30	3.8	157	0.0271
20	3.8	165	0.0285
10	3.8	126	0.0218
0	3.8	177	0.0306
-10	3.8	165	0.0285
-20	3.8	136	0.0235
-30	3.8	165	0.0285

802.11n_HT40

Reference Frequency(Fixed Channel): 5755 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.8	174	0.0302
40	3.8	155	0.0269
30	3.8	121	0.0210
20	3.8	173	0.0301
10	3.8	125	0.0217
0	3.8	165	0.0287
-10	3.8	145	0.0252
-20	3.8	168	0.0292
-30	3.8	147	0.0255

So, Frequency Stability Versus Input Voltage is:

5150-5250MHz

802.11a

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.5	155	0.0298
	3.8	158	0.0304
	4.35	157	0.0302

802.11n_HT20

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	108	0.0208
	3.8	102	0.0196
	4.2	106	0.0204

802.11n_HT40

Reference Frequency(Middle Channel): 5230 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	168	0.0321
	3.8	165	0.0315
	4.2	165	0.0315

5250-5350MHz

802.11a

Reference Frequency(Middle Channel): 5280 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	168	0.0318
	3.8	169	0.0320
	4.2	177	0.0335

802.11n_HT20

Reference Frequency(Middle Channel): 5280 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	197	0.0373
	3.8	189	0.0358
	4.2	186	0.0352

802.11n_HT40

Reference Frequency(Fixed Channel): 5310 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	145	0.0273
	3.8	138	0.0260
	4.2	146	0.0275

5470-5725MHz

802.11a

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	165	0.0295
	3.8	157	0.0280
	4.2	159	0.0284

802.11n_HT20

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	178	0.0318
	3.8	175	0.0313
	4.2	181	0.0323

802.11n_HT40

Reference Frequency(Middle Channel): 5590 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	118	0.0211
	3.8	116	0.0208
	4.2	121	0.0216

5725-5850MHz

802.11a

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	127	0.0220
	3.8	126	0.0218
	4.2	122	0.0211

802.11n_HT20

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	165	0.0285
	3.8	165	0.0285
	4.2	167	0.0289

802.11n_HT40

Reference Frequency(Fixed Channel): 5755 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	3.3	169	0.0294
	3.8	173	0.0301
	4.2	177	0.0308

***** END OF REPORT *****