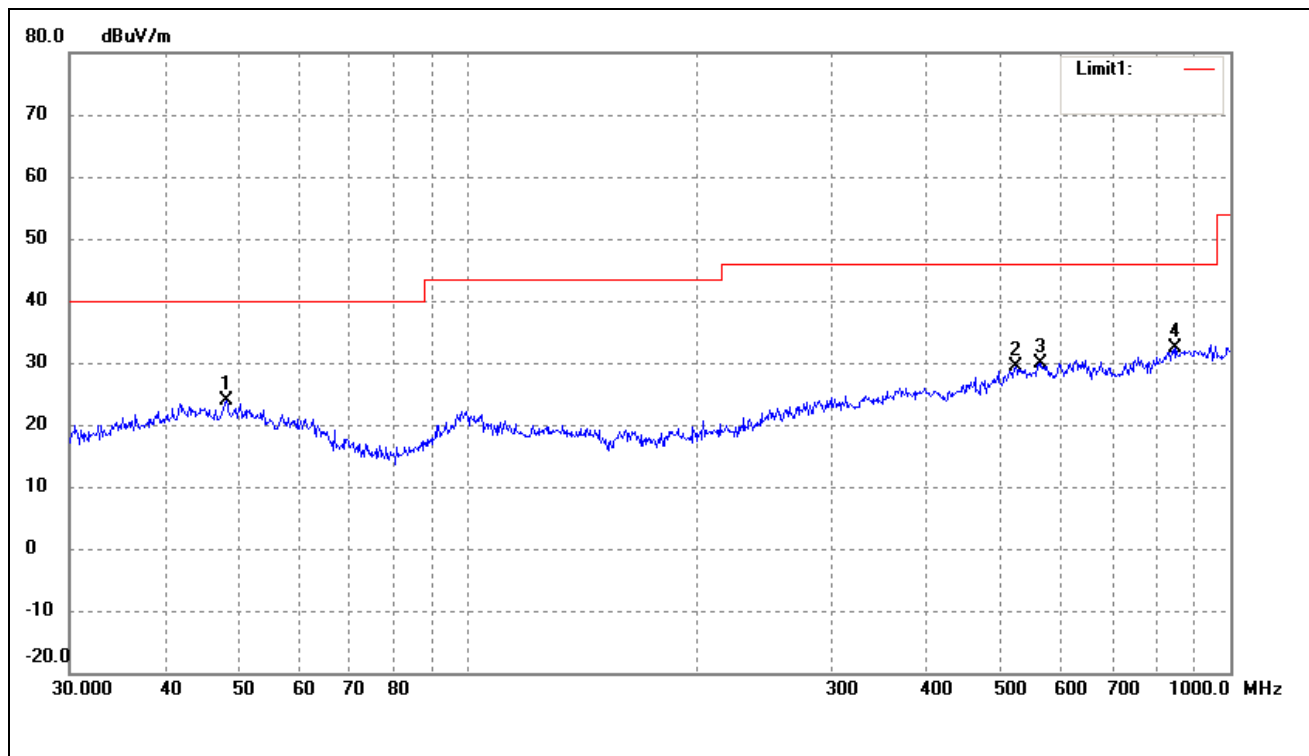


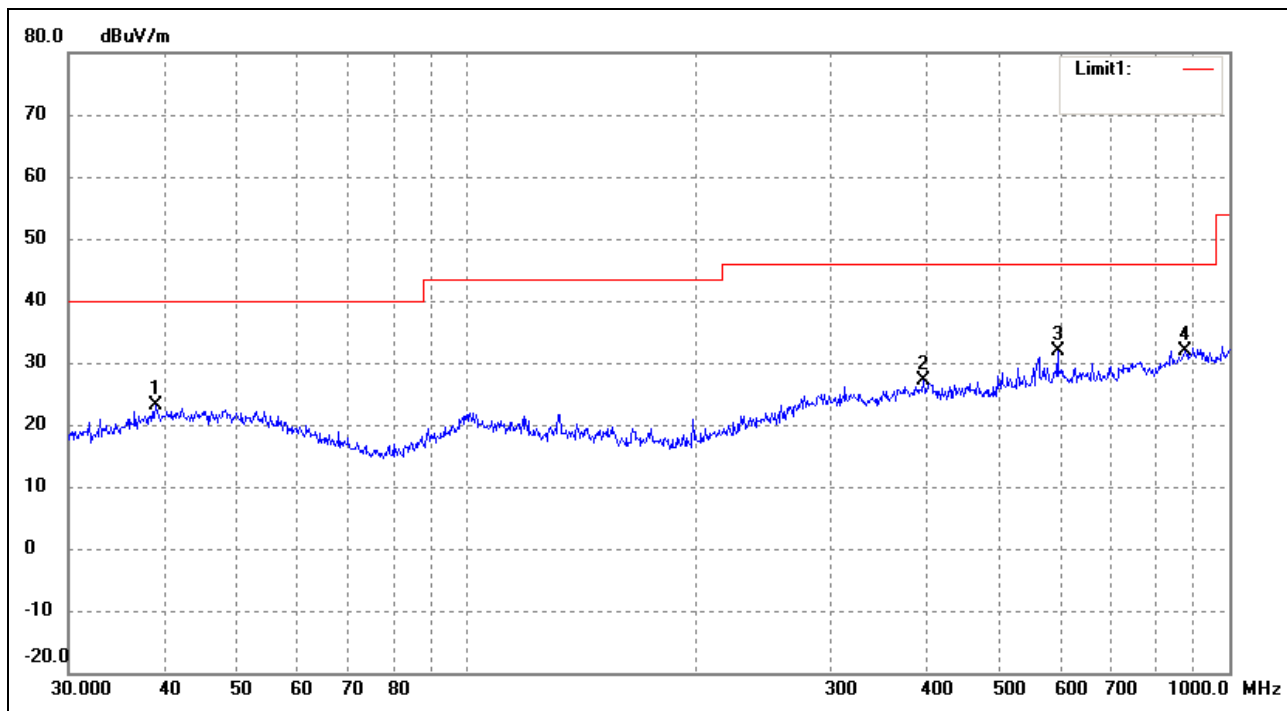
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	48.1625	16.97	6.81	23.78	40.00	-16.22	37	100	peak
2	522.7178	18.12	11.37	29.49	46.00	-16.51	204	100	peak
3	564.6389	18.12	11.77	29.89	46.00	-16.11	232	100	peak
4	848.0561	16.42	15.86	32.28	46.00	-13.72	268	100	peak

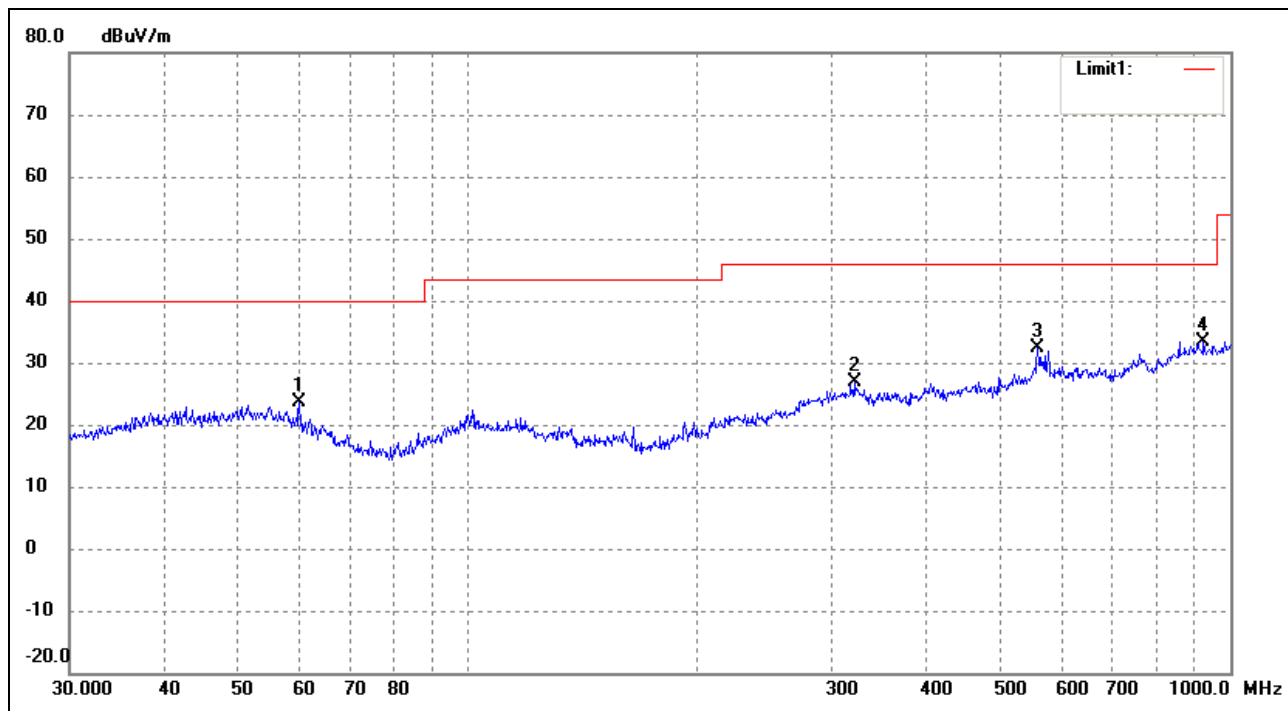
Test mode: Transmitting Channel 5200MHz

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	39.0245	14.03	9.08	23.11	40.00	-16.89	29	100	peak
2	396.2413	17.29	9.95	27.24	46.00	-18.76	135	100	peak
3	595.1326	18.85	13.14	31.99	46.00	-14.01	174	100	peak
4	875.2468	15.18	16.70	31.88	46.00	-14.12	218	100	peak

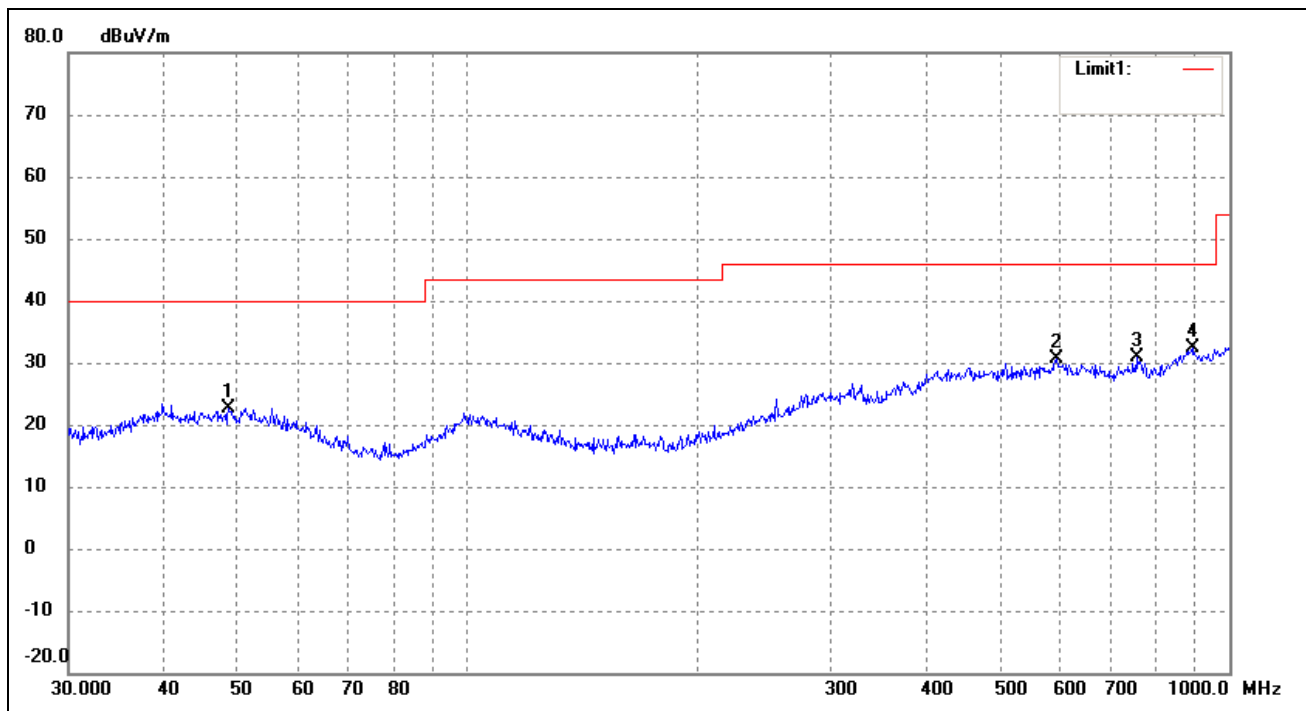
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	60.0690	18.15	5.36	23.51	40.00	-16.49	54	100	peak
2	321.0606	17.67	9.26	26.93	46.00	-19.07	165	100	peak
3	558.7300	20.75	11.52	32.27	46.00	-13.73	194	100	peak
4	922.5157	16.89	16.44	33.33	46.00	-12.67	237	100	peak

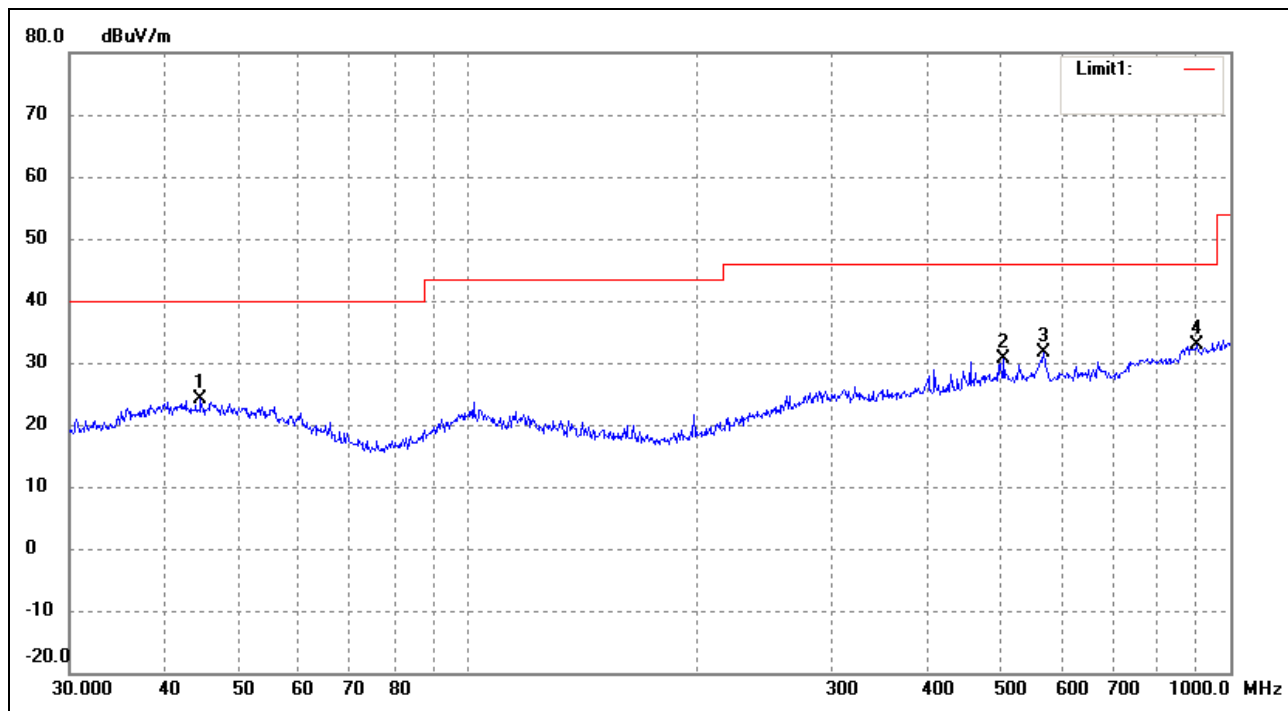
Test mode: Transmitting Channel 5220MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	48.6719	16.24	6.39	22.63	40.00	-17.37	36	100	peak
2	593.0497	17.45	13.06	30.51	46.00	-15.49	121	100	peak
3	755.3872	16.46	14.40	30.86	46.00	-15.14	167	100	peak
4	893.8567	15.46	16.85	32.31	46.00	-13.69	195	100	peak

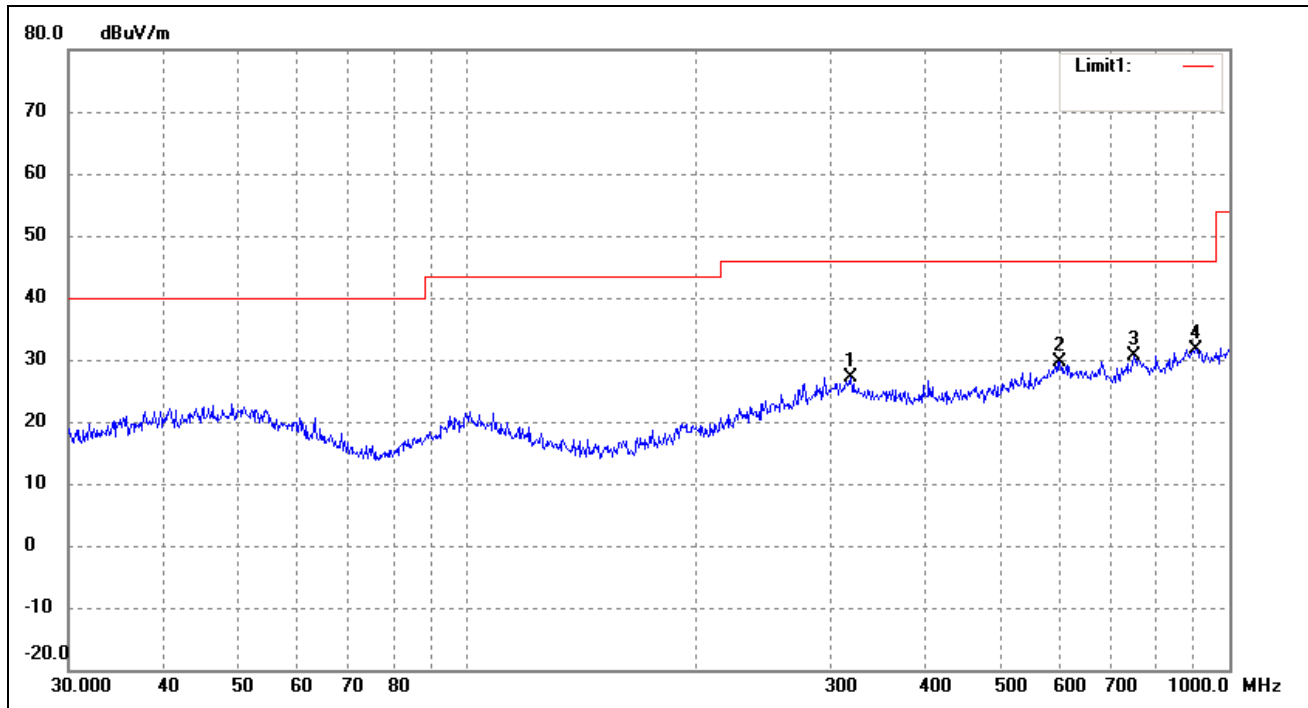
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	44.5867	16.15	7.88	24.03	40.00	-15.97	44	100	peak
2	504.7062	19.72	10.98	30.70	46.00	-15.30	135	100	peak
3	568.6127	19.54	11.98	31.52	46.00	-14.48	197	100	peak
4	903.3093	15.99	16.79	32.78	46.00	-13.22	251	100	peak

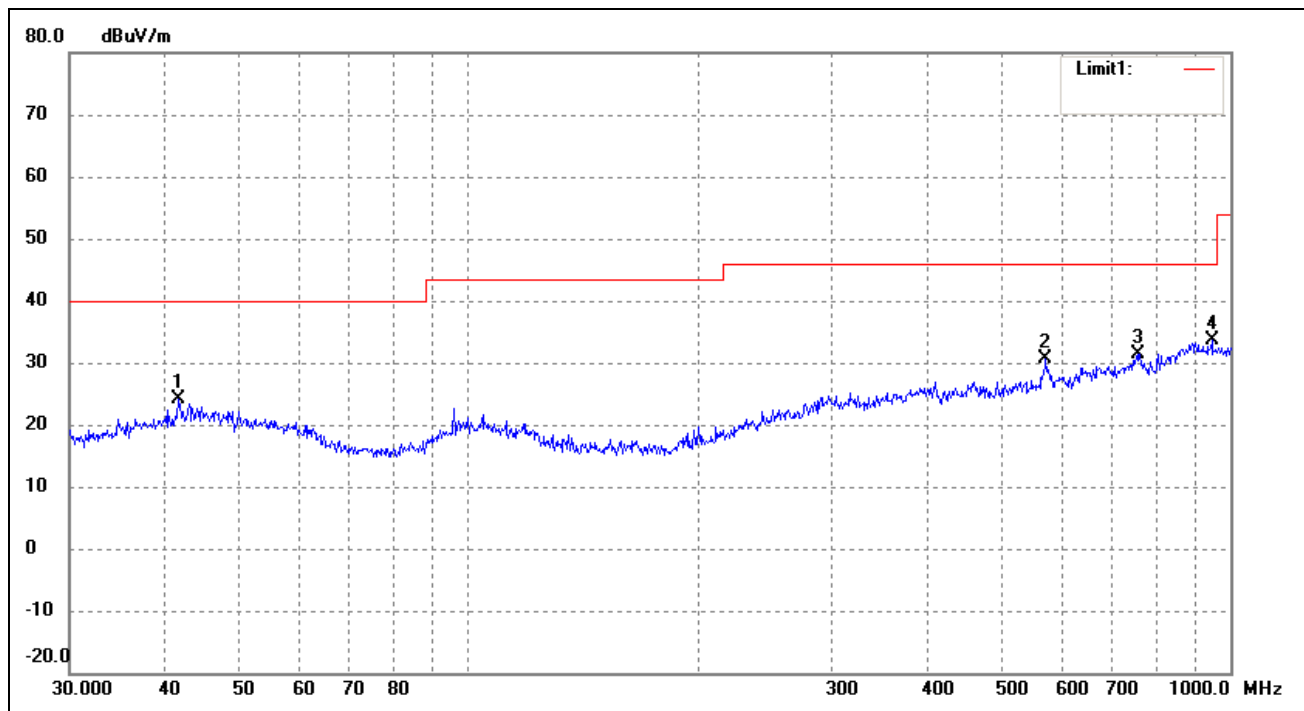
Test mode: Transmitting Channel 5745MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	318.8170	17.91	9.28	27.19	46.00	-18.81	85	100	peak
2	599.3212	16.34	13.30	29.64	46.00	-16.36	147	100	peak
3	750.1082	16.64	14.10	30.74	46.00	-15.26	203	100	peak
4	903.3093	14.92	16.79	31.71	46.00	-14.29	269	100	peak

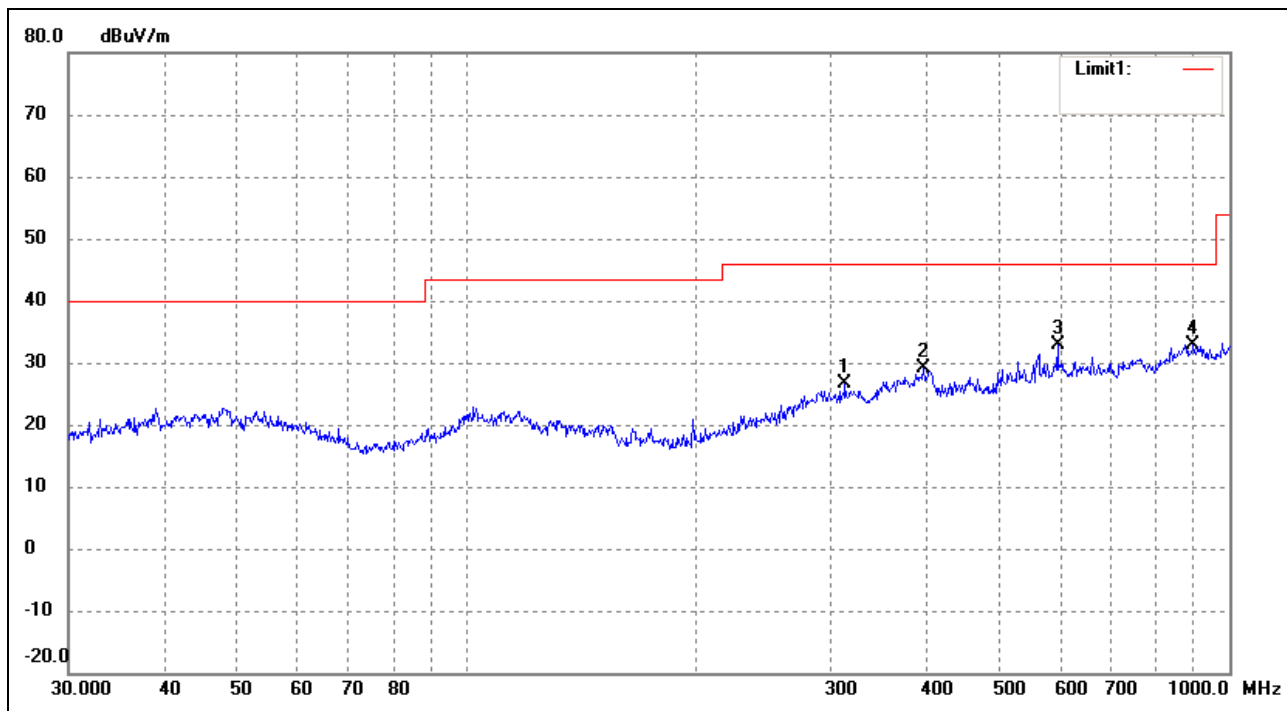
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	41.7130	15.31	8.74	24.05	40.00	-15.95	26	100	peak
2	572.6144	18.56	12.19	30.75	46.00	-15.25	164	100	peak
3	755.3872	16.60	14.86	31.46	46.00	-14.54	215	100	peak
4	945.4397	17.32	16.25	33.57	46.00	-12.43	283	100	peak

Test mode: Transmitting Channel 5785MHz

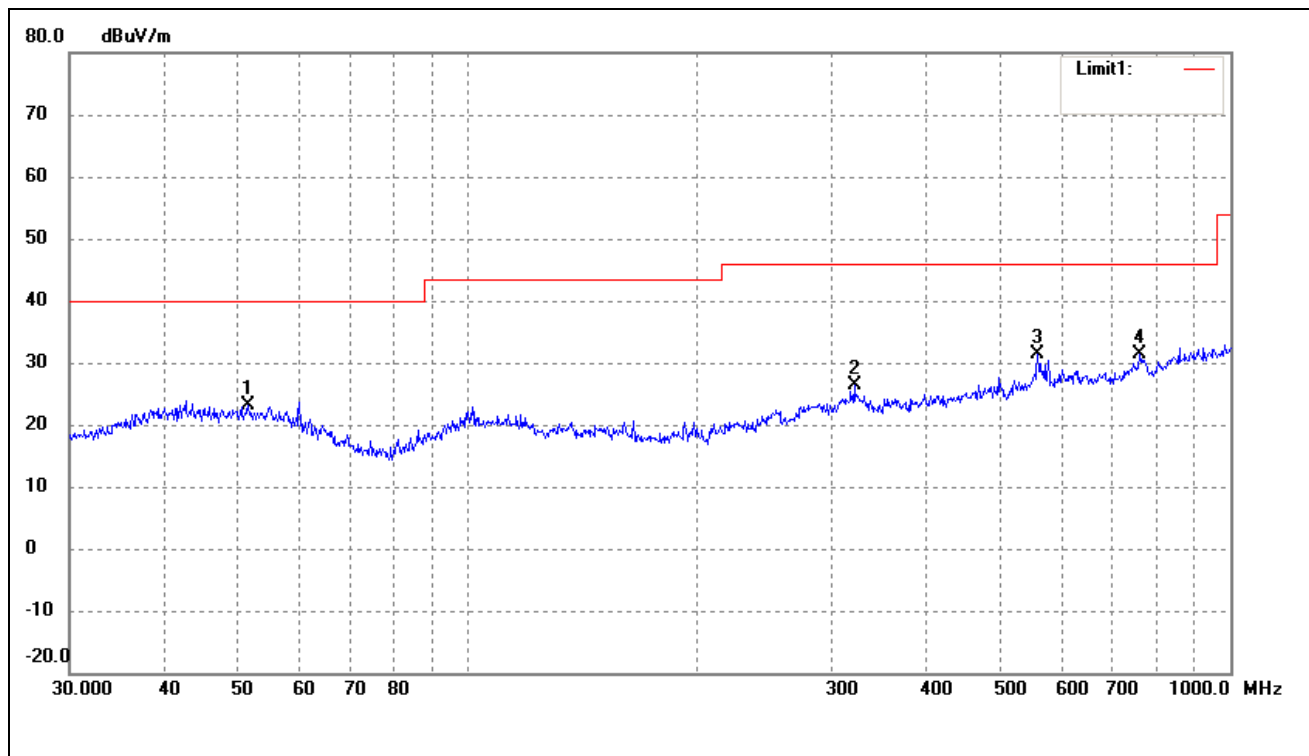
Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	313.2760	17.44	9.25	26.69	46.00	-19.31	99	100	peak
2	396.2413	19.29	9.95	29.24	46.00	-16.76	157	100	peak
3	595.1326	19.85	13.14	32.99	46.00	-13.01	216	200	peak
4	896.9963	16.12	16.85	32.97	46.00	-13.03	267	200	peak



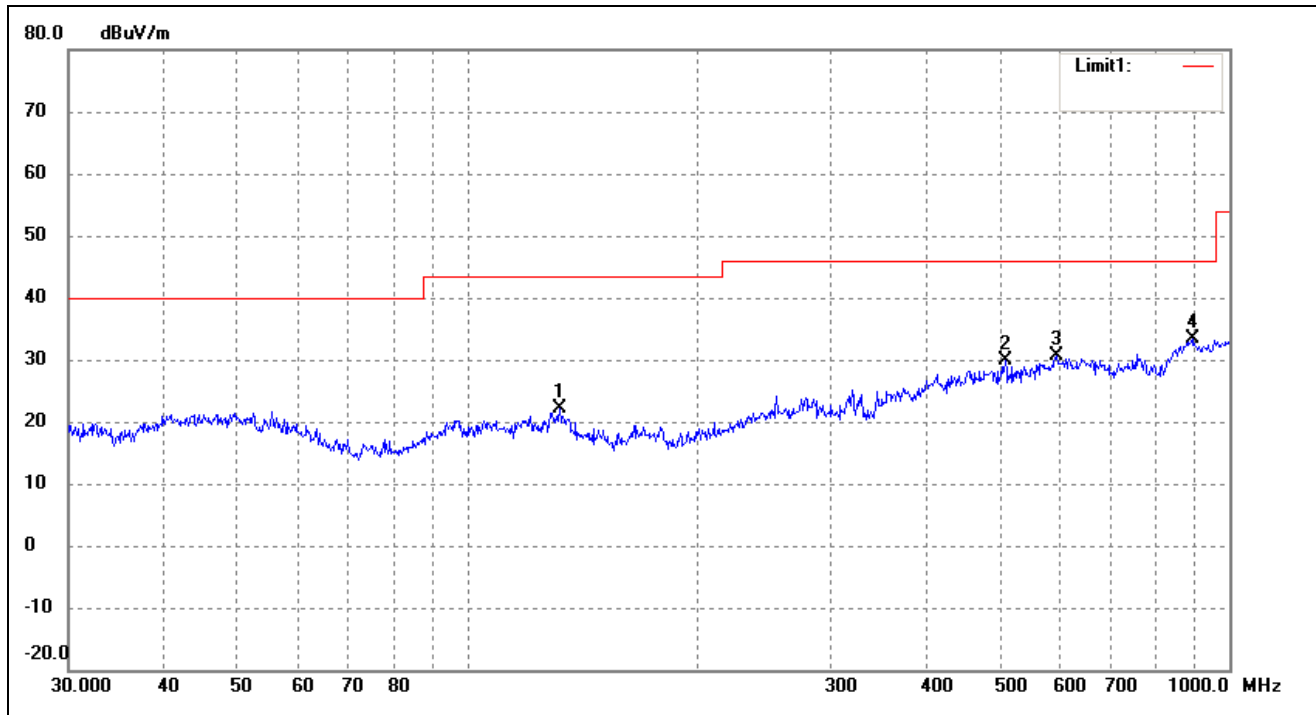
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	51.4806	16.91	6.14	23.05	40.00	-16.95	46	100	peak
2	321.0606	17.17	9.26	26.43	46.00	-19.57	135	100	peak
3	558.7300	19.75	11.52	31.27	46.00	-14.73	168	100	peak
4	760.7036	16.80	14.61	31.41	46.00	-14.59	225	100	peak

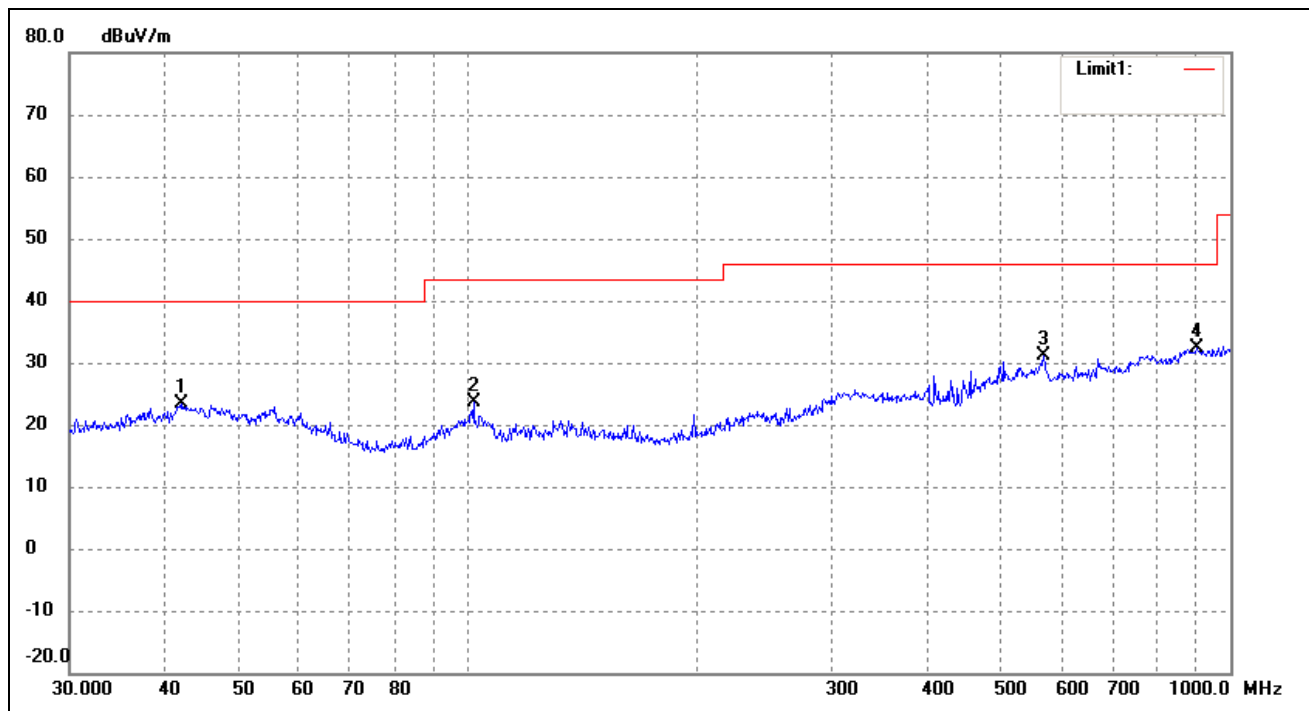
Test mode: Transmitting Channel 5825MHz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	132.2204	18.99	3.03	22.02	43.50	-21.48	76	100	peak
2	508.2581	18.81	11.07	29.88	46.00	-16.12	165	100	peak
3	593.0497	17.45	13.06	30.51	46.00	-15.49	199	100	peak
4	893.8567	16.46	16.85	33.31	46.00	-12.69	228	100	peak

Test Specification: Vertical



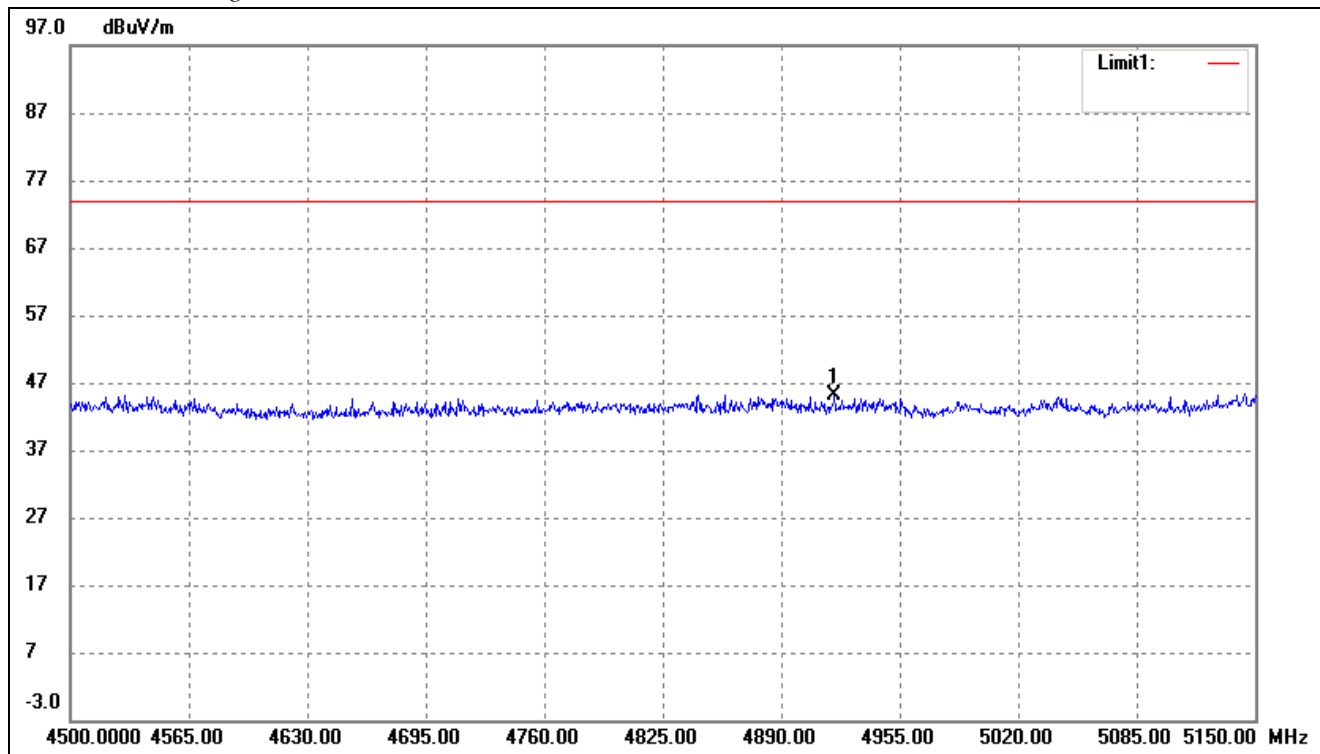
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	42.1542	14.73	8.60	23.33	40.00	-16.67	33	100	peak
2	101.6443	17.58	5.95	23.53	43.50	-19.97	82	100	peak
3	568.6127	19.04	11.98	31.02	46.00	-14.98	157	100	peak
4	903.3093	15.49	16.79	32.28	46.00	-13.72	252	100	peak

802.11n HT20

Spurious Emission above 1GHz

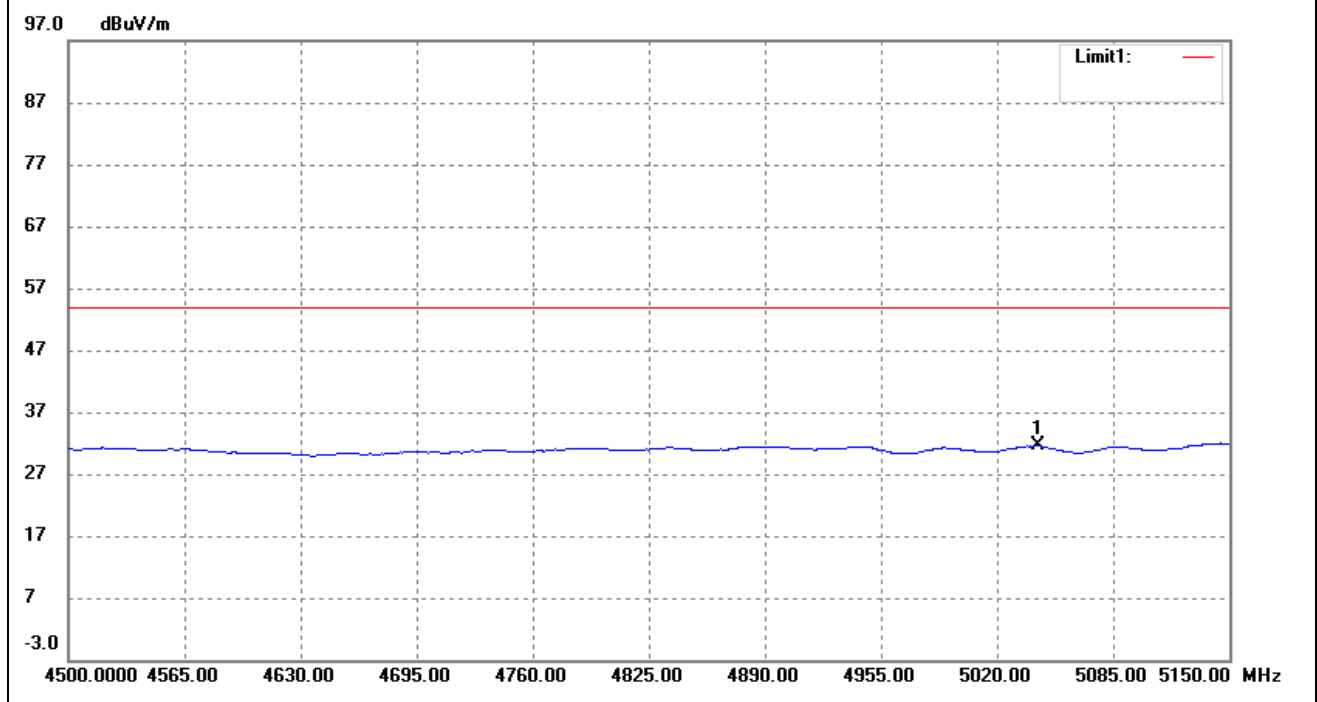
For the frequency band 5.15-5.25GHz(802.11n HT20)

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	4919.250	45.89	-0.69	45.20	74.00	-28.80	55	100	peak

### Restricted Bandedge Average



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(° )	(cm)	
1	5042.750	31.94	-0.38	31.56	54.00	-22.44	55	100	Ave

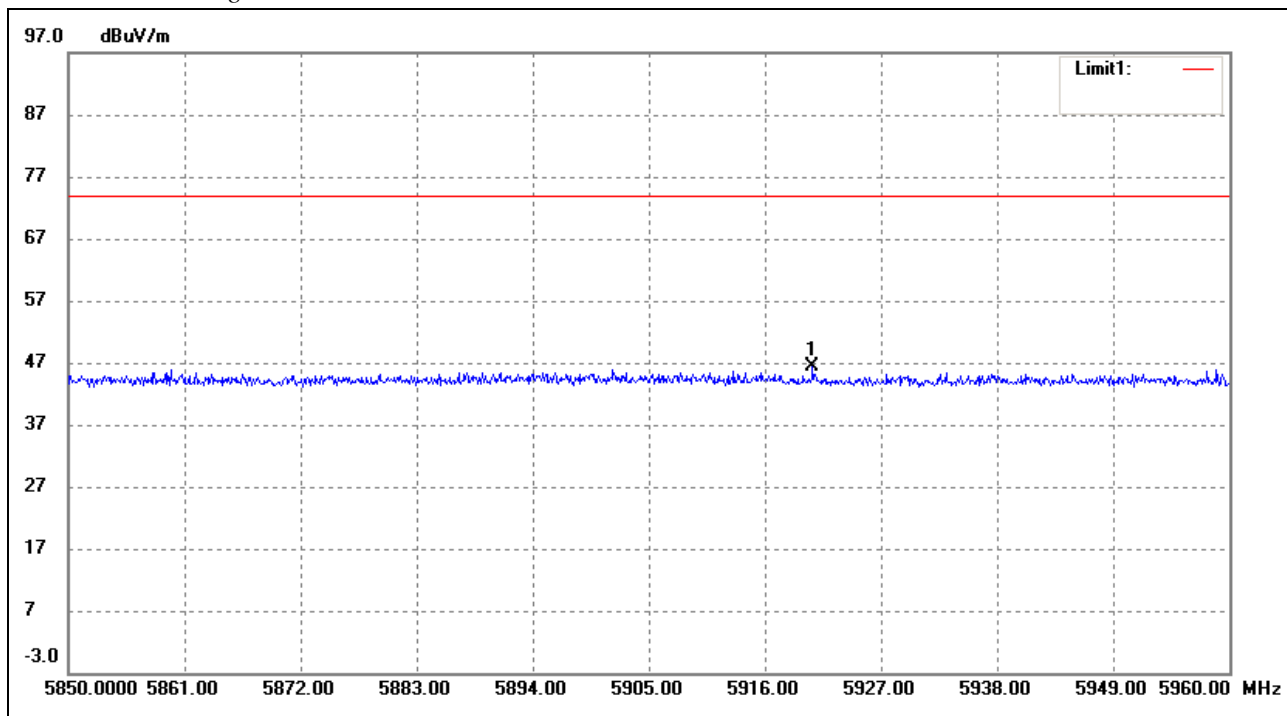
Note: this EUT was tested in the low, high channel and the worst case position data was reported.

### Restricted Band, Harmonics And Spurious Emissions

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	45.0	55	V	40.7	10.9	39.6	57.0	74	-17.0
15540	PK	46.1	55	H	40.7	10.9	39.6	58.1	74	-15.9
15540	AV	30.3	55	V	40.7	10.9	39.6	42.3	54	-11.7
15540	AV	30.4	55	H	40.7	10.9	39.6	42.4	54	-11.6
High Channel (5240MHz)										
15720	PK	46.3	55	V	40.7	10.9	39.6	58.3	74	-15.7
15720	PK	45.6	55	H	40.7	10.9	39.6	57.6	74	-16.4
15720	AV	31.2	55	V	40.7	10.9	39.6	43.2	54	-10.8
15720	AV	30.3	55	H	40.7	10.9	39.6	42.3	54	-11.7

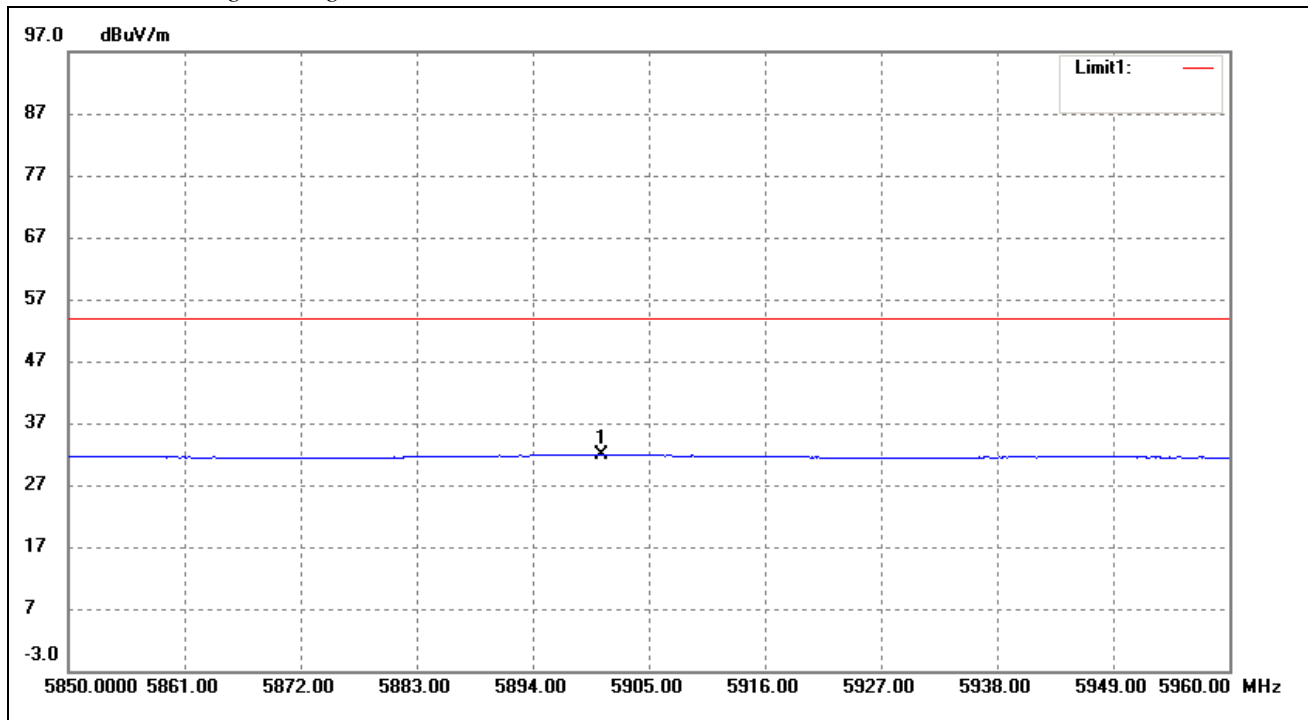
For the frequency band 5.725-5.825GHz (802.11n HT20)

Restricted Bandedge Peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(° )	(cm)	
1	5920.510	45.75	0.69	46.44	74.00	-27.56	55	100	peak

### Restricted Bandedge Average



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(° )	(cm)	
1	5900.490	31.22	0.64	31.86	54.00	-22.14	55	100	Ave

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



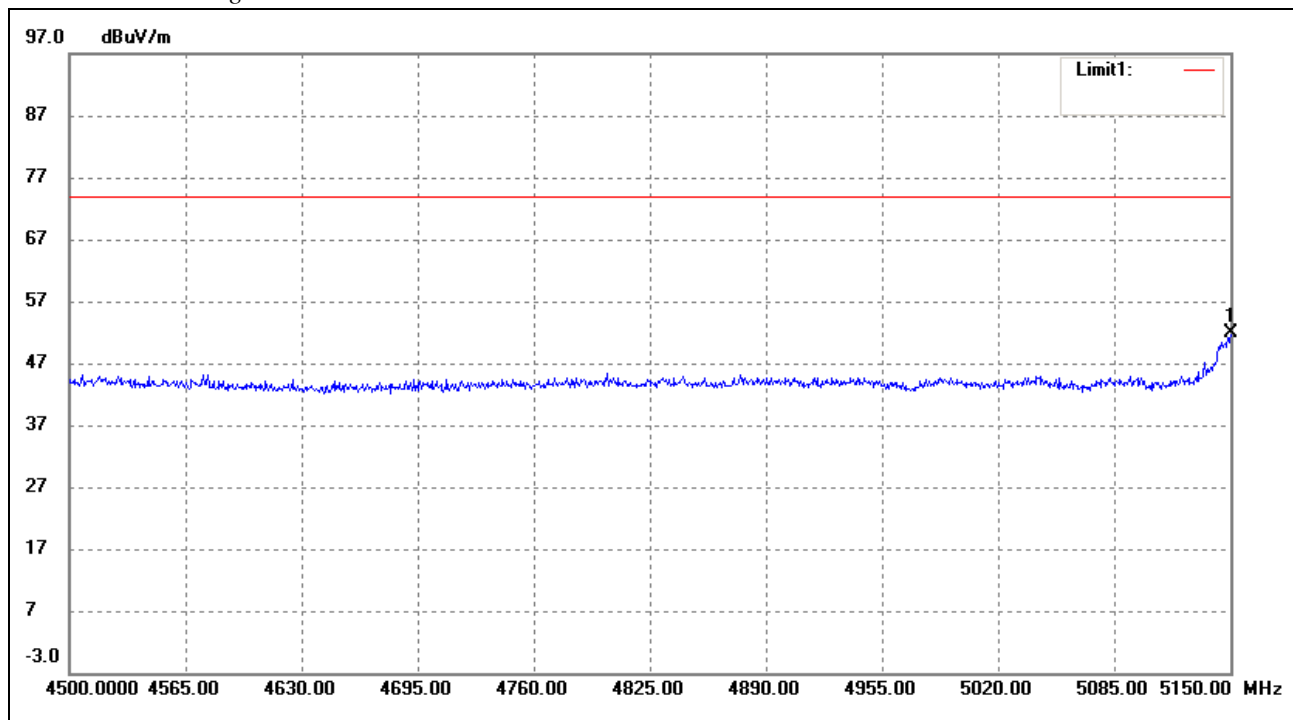
### Restricted Band, Harmonics And Spurious Emissions

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 (5725MHz)										
11450	PK	48.5	360	V	38.9	9.8	40.1	57.1	74	-16.9
11450	PK	49.3	360	H	38.9	9.8	40.1	57.9	74	-16.1
11450	AV	31.1	360	V	38.9	9.8	40.1	39.7	54	-14.3
11450	AV	31.3	360	H	38.9	9.8	40.1	39.9	54	-14.1
High Channel (5825MHz)										
11610	PK	48.9	360	V	38.9	9.8	40.1	57.5	74	-16.5
11610	PK	48.5	360	H	38.9	9.8	40.1	57.1	74	-16.9
11610	AV	32.2	360	V	38.9	9.8	40.1	40.8	54	-13.2
11610	AV	31.4	360	H	38.9	9.8	40.1	40.0	54	-14.0

802.11n HT40

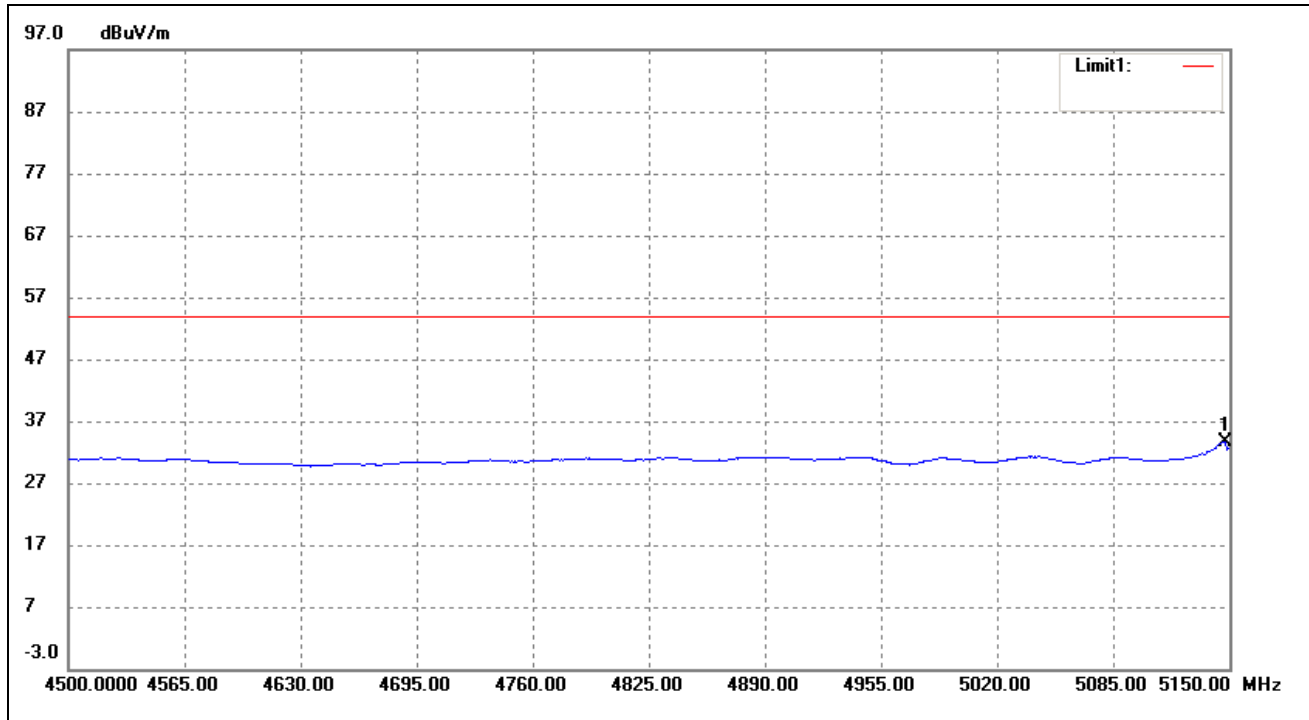
For the frequency band 5.15-5.25GHz(802.11n HT40)

Restricted Bandedge Peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(° )	(cm)	
1	5150.000	52.07	-0.13	51.94	74.00	-22.06	345	100	peak

### Restricted Bandedge Average



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(° )	(cm)	
1	5147.400	33.87	-0.14	33.73	54.00	-20.27	345	100	Ave

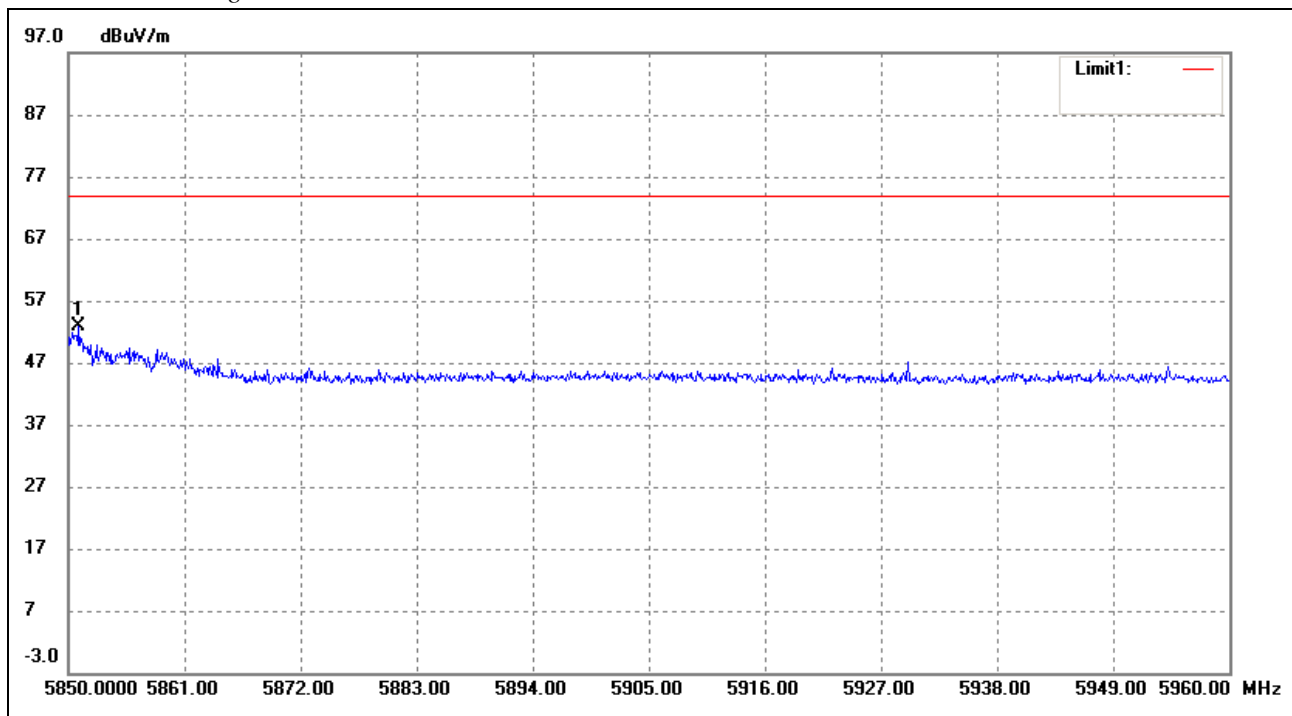
Note: this EUT was tested in the low, high channel and the worst case position data was reported.

*Restricted Band, Harmonics And Spurious Emissions*

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)										
10360	PK	44.4	360	V	40.7	10.9	39.6	56.4	74	-17.6
10360	PK	43.8	360	H	40.7	10.9	39.6	55.8	74	-18.2
10360	AV	29.8	360	V	40.7	10.9	39.6	41.8	54	-12.2
10360	AV	28.9	360	H	40.7	10.9	39.6	40.9	54	-13.1
High Channel (5240MHz)										
10480	PK	43.9	360	V	40.7	10.9	39.6	55.9	74	-18.1
10480	PK	43.3	360	H	40.7	10.9	39.6	55.3	74	-18.7
10480	AV	29.7	360	V	40.7	10.9	39.6	41.7	54	-12.3
10480	AV	28.2	360	H	40.7	10.9	39.6	40.2	54	-13.8

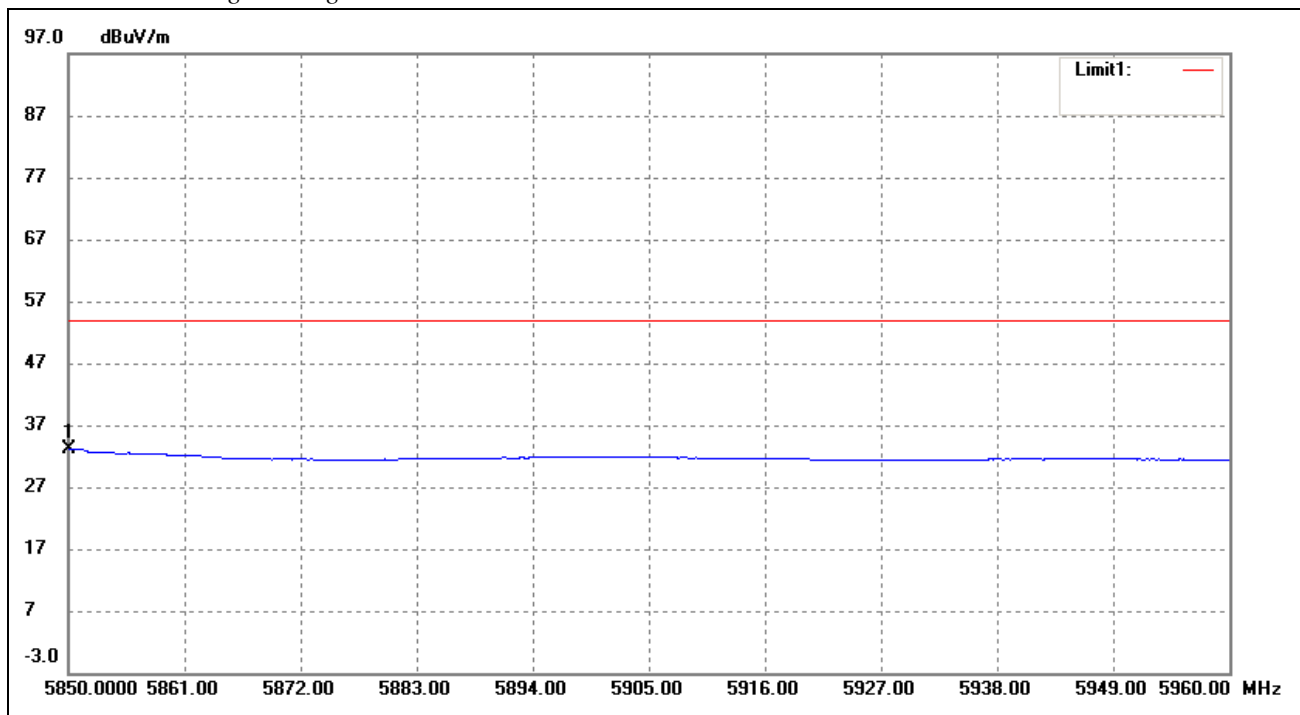
For the frequency band 5.725-5.825GHz(802.11n HT40)

Restricted Bandedge Peak



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(° )	(cm)	
1	5850.990	52.49	0.51	53.00	74.00	-21.00	345	100	peak

### Restricted Bandedge Average



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(° )	(cm)	
1	5850.000	32.69	0.51	33.20	54.00	-20.80	345	100	Ave

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

### Restricted Band, Harmonics And Spurious Emissions

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 (5745MHz)										
11490	PK	49.2	360	V	38.9	9.8	40.1	57.8	74	-16.2
11490	PK	48.7	360	H	38.9	9.8	40.1	57.3	74	-16.7
11490	AV	32.6	360	V	38.9	9.8	40.1	41.2	54	-12.8
11490	AV	32.0	360	H	38.9	9.8	40.1	40.6	54	-13.4
High Channel (5825MHz)										
11610	PK	48.6	360	V	38.9	9.8	40.1	57.2	74	-16.8
11610	PK	48.9	360	H	38.9	9.8	40.1	57.5	74	-16.5
11610	AV	32.5	360	V	38.9	9.8	40.1	41.1	54	-12.9
11610	AV	32.1	360	H	38.9	9.8	40.1	40.7	54	-13.3

*Note: Testing is carried out with frequency rang 9kHz to 40GHz, which above 3<sup>th</sup> Harmonics are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*

*The measurements greater than 20dB below the limit from 9kHz to 30MHz.*

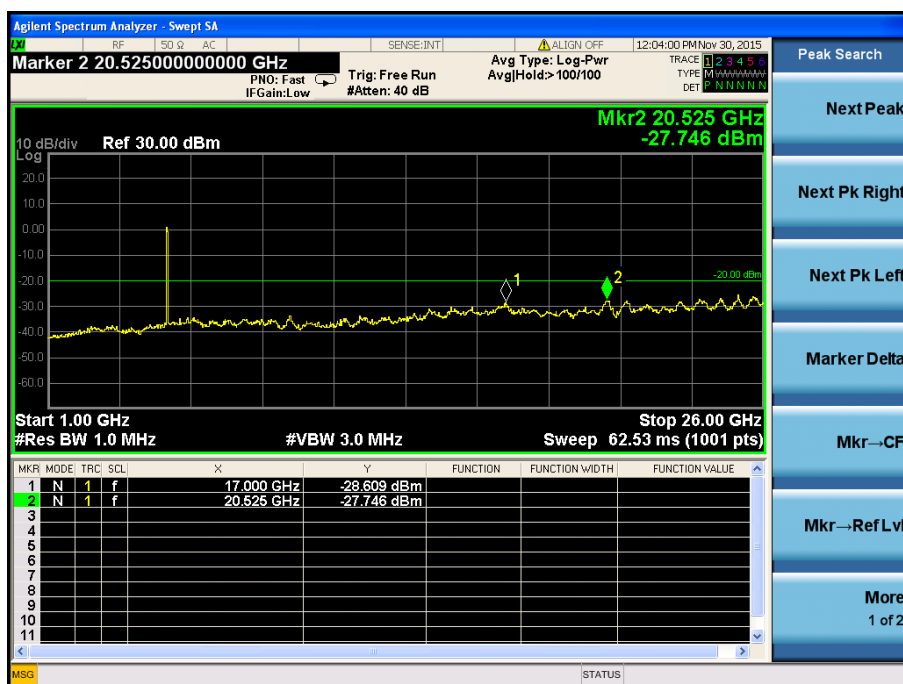
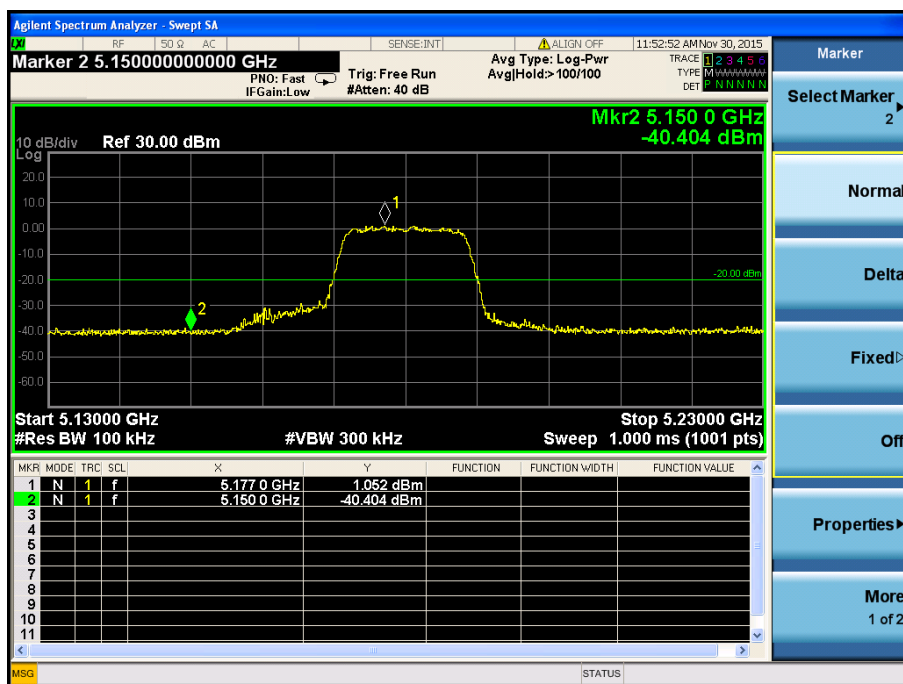
Emissions above 26.5GHz are attenuated more than 20dB below the permissible limits and test data are not reported.

Out-of-Band and Spurious Emission (Conducted)

Antenna 1

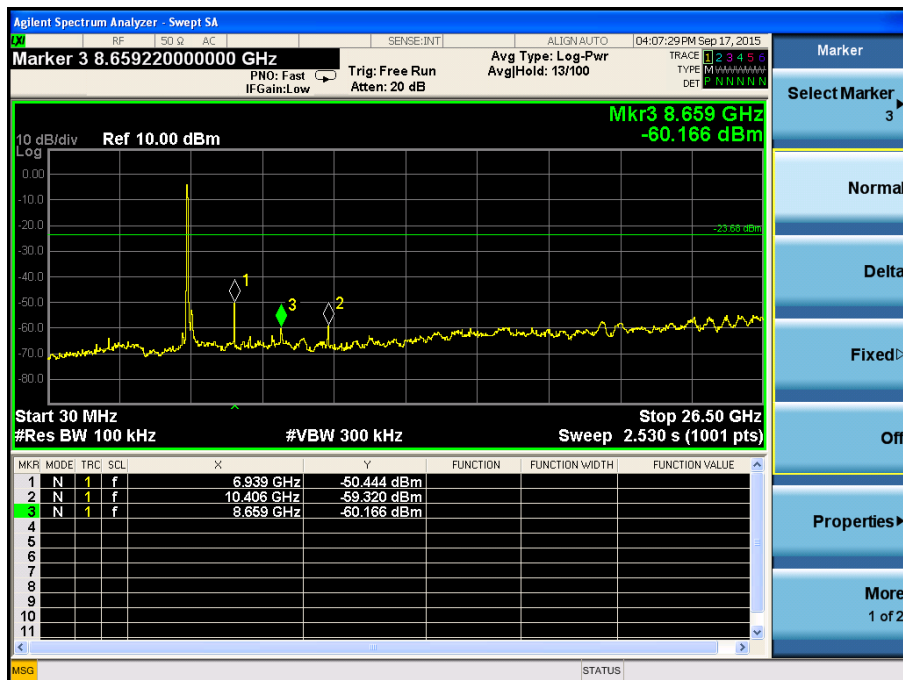
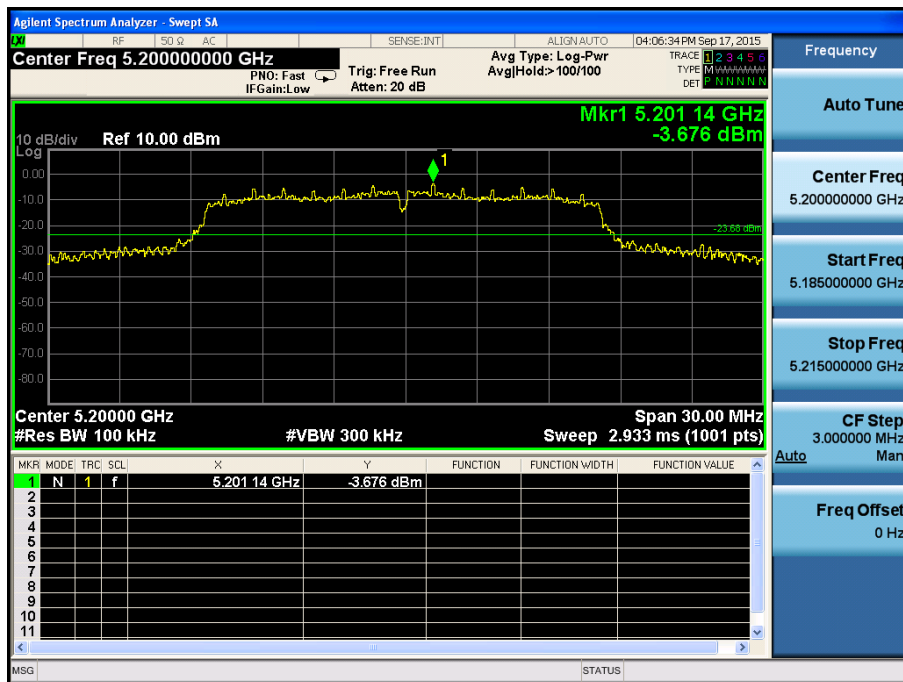
802.11n-HT20

5180MHz

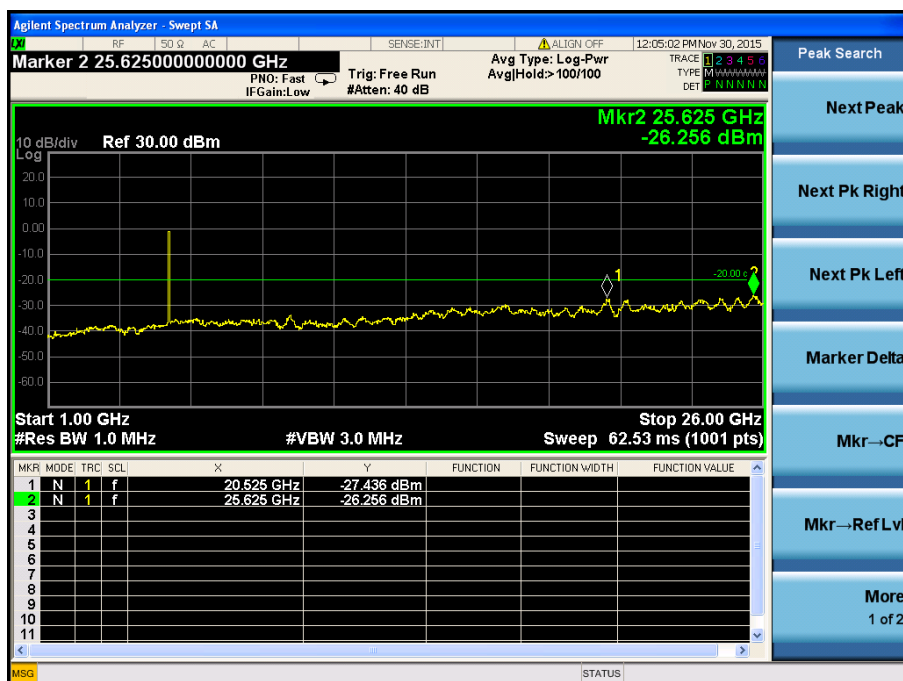
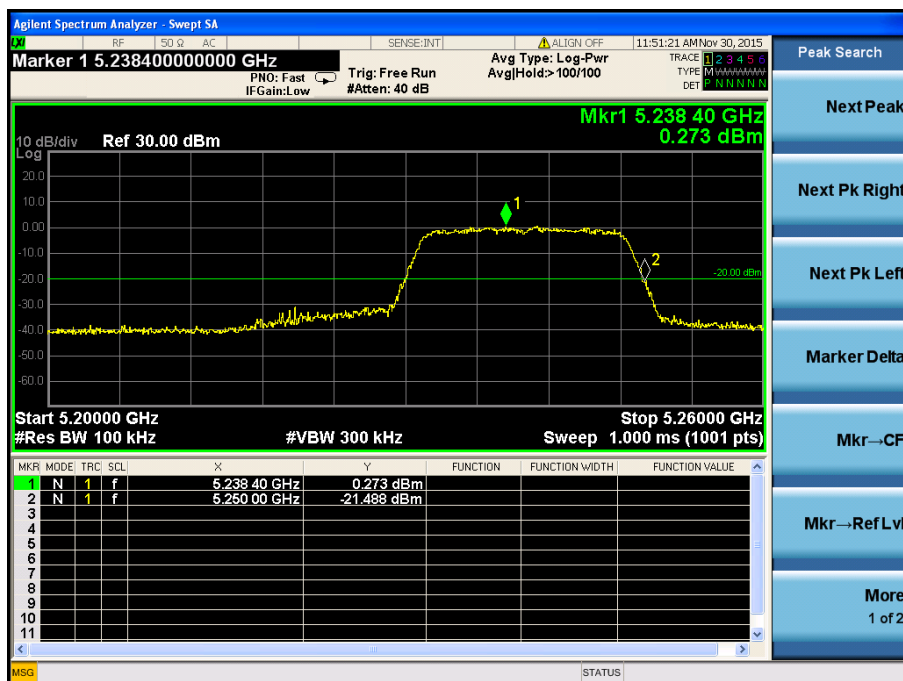




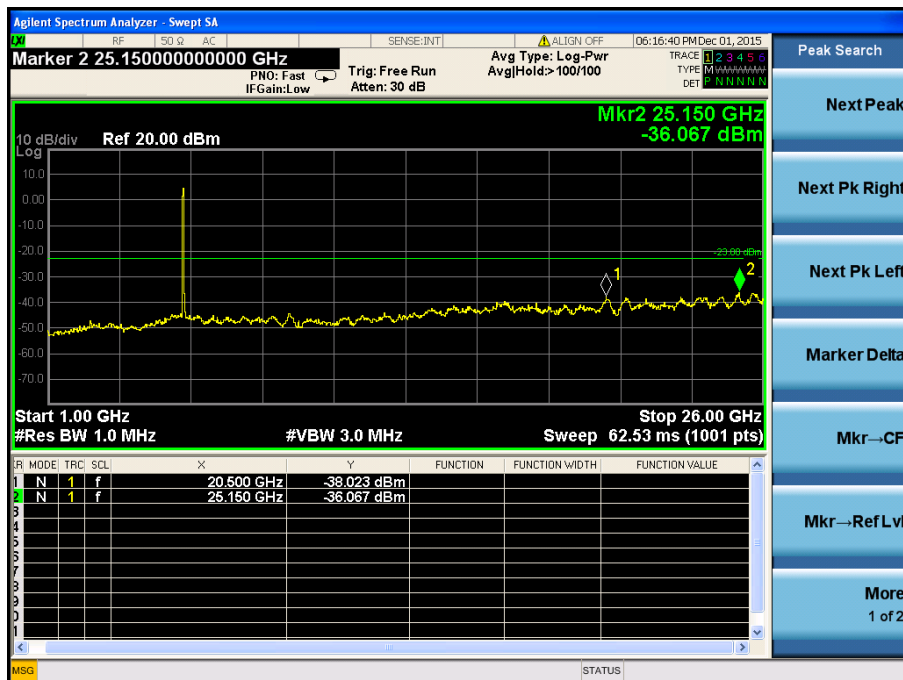
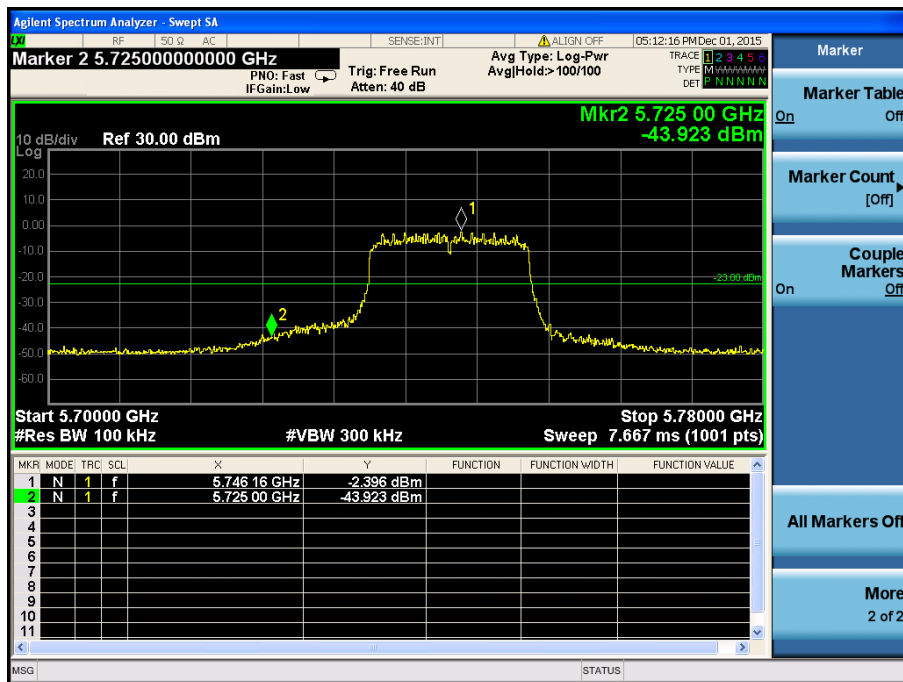
5200MHz



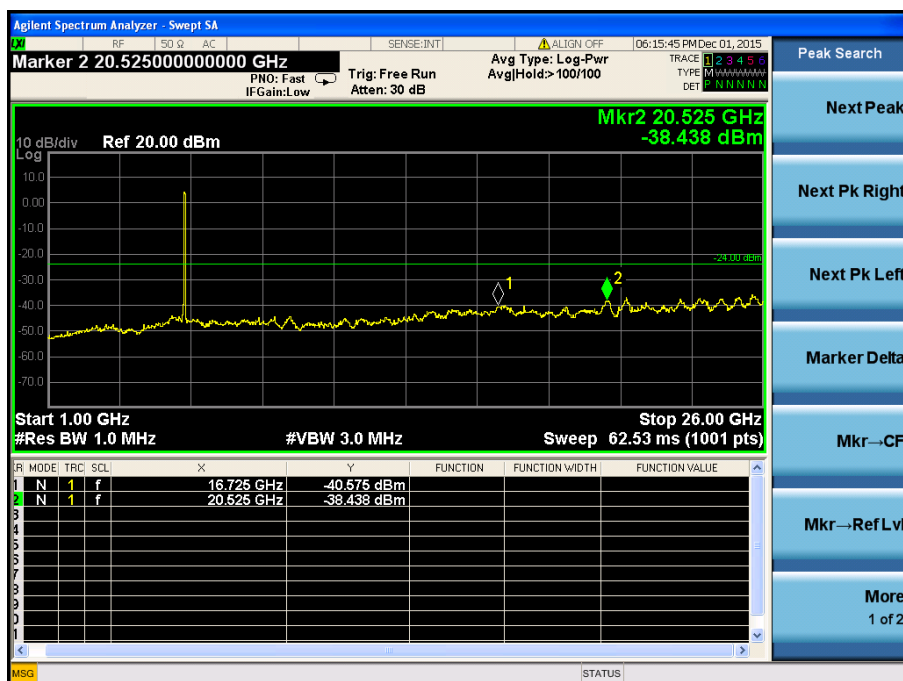
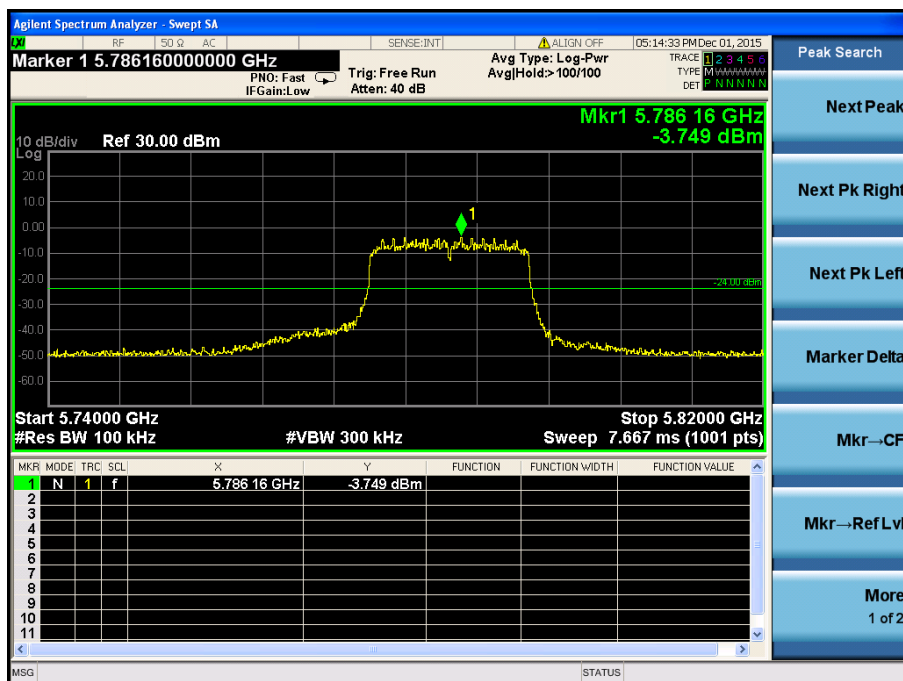
5240MHz



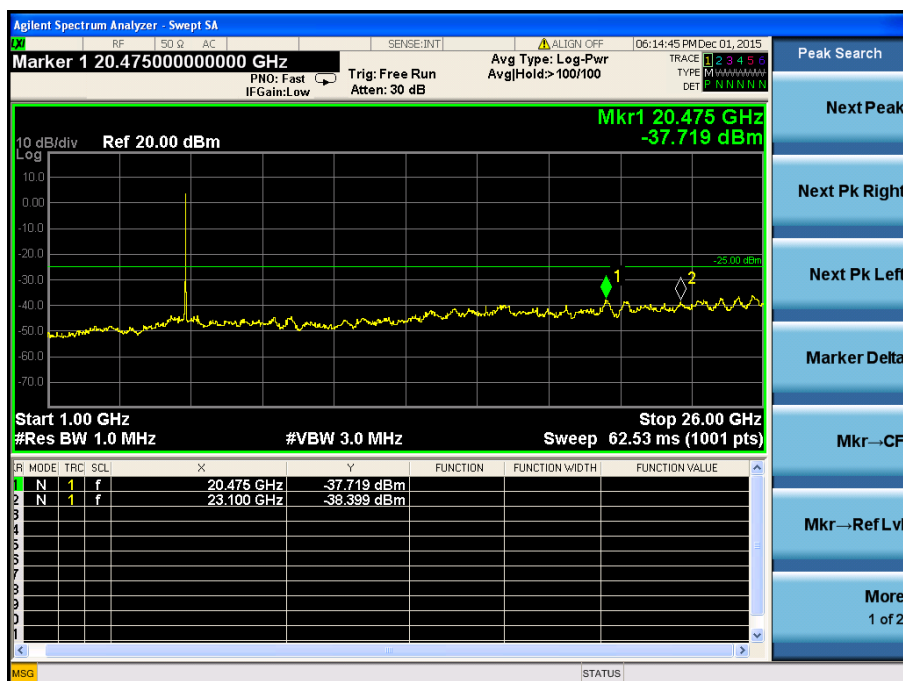
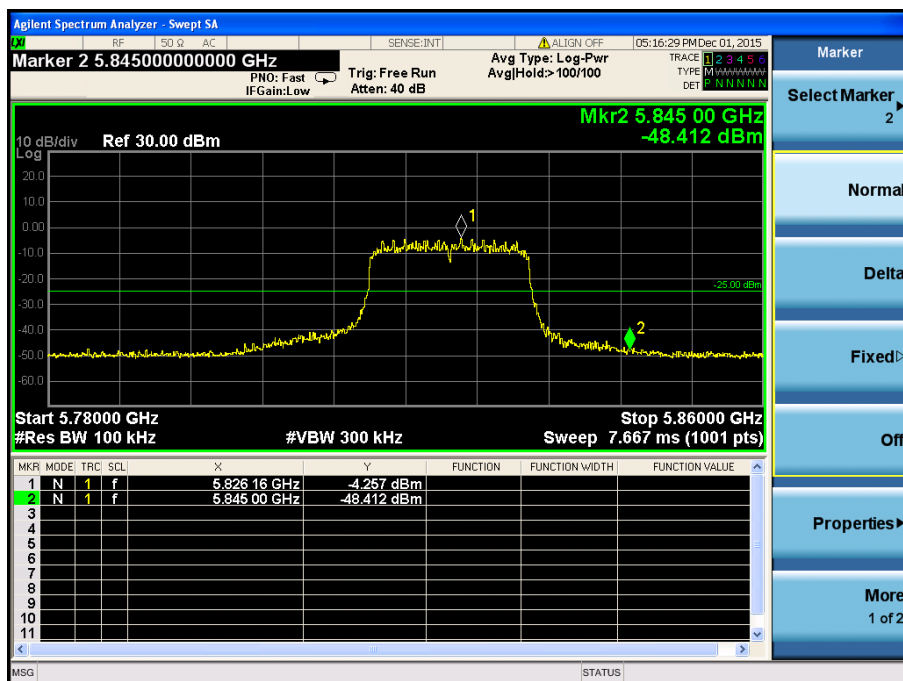
5745MHz



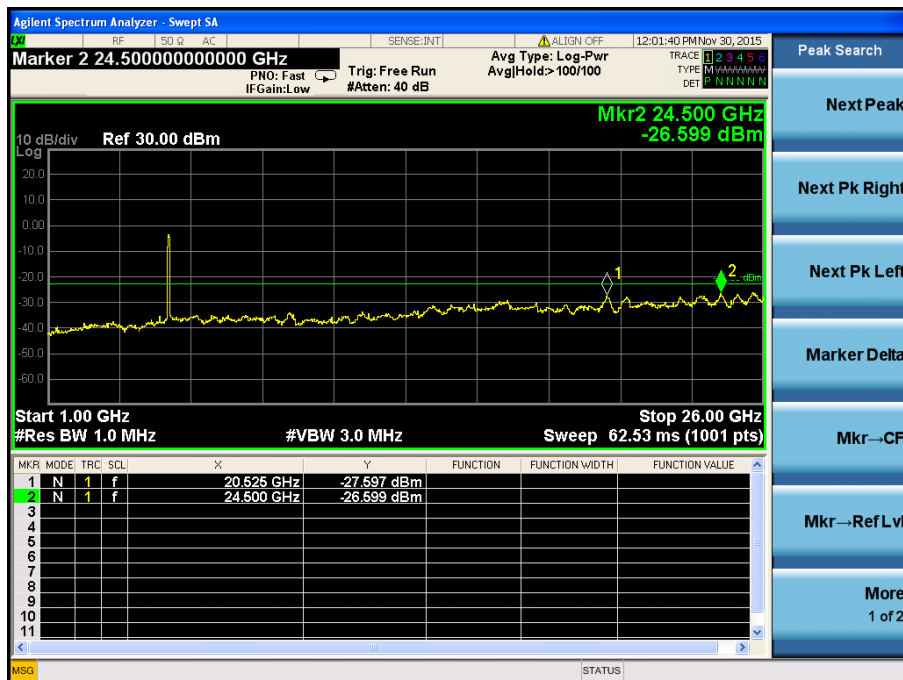
5785MHz



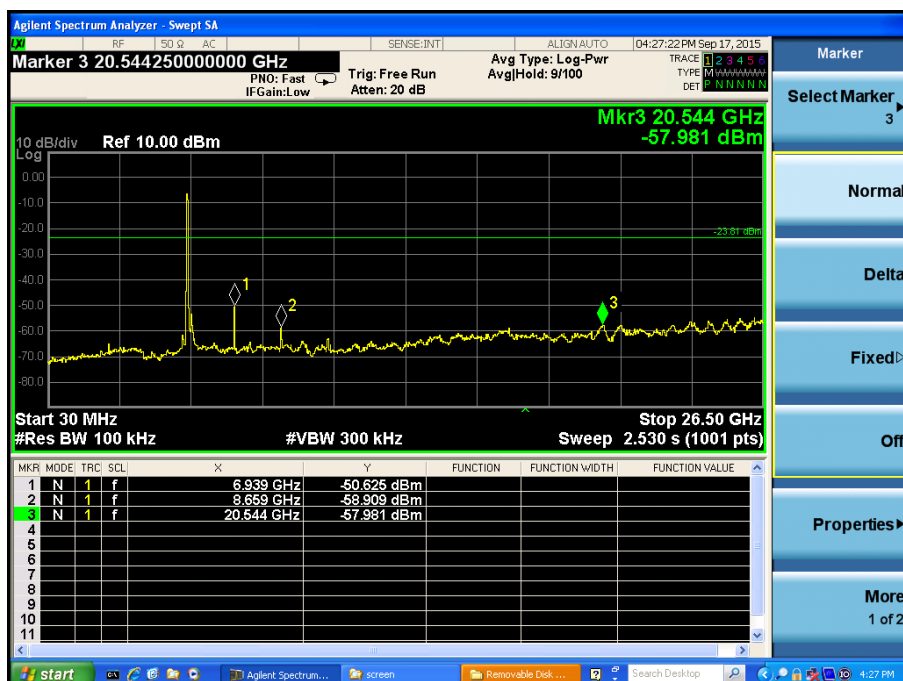
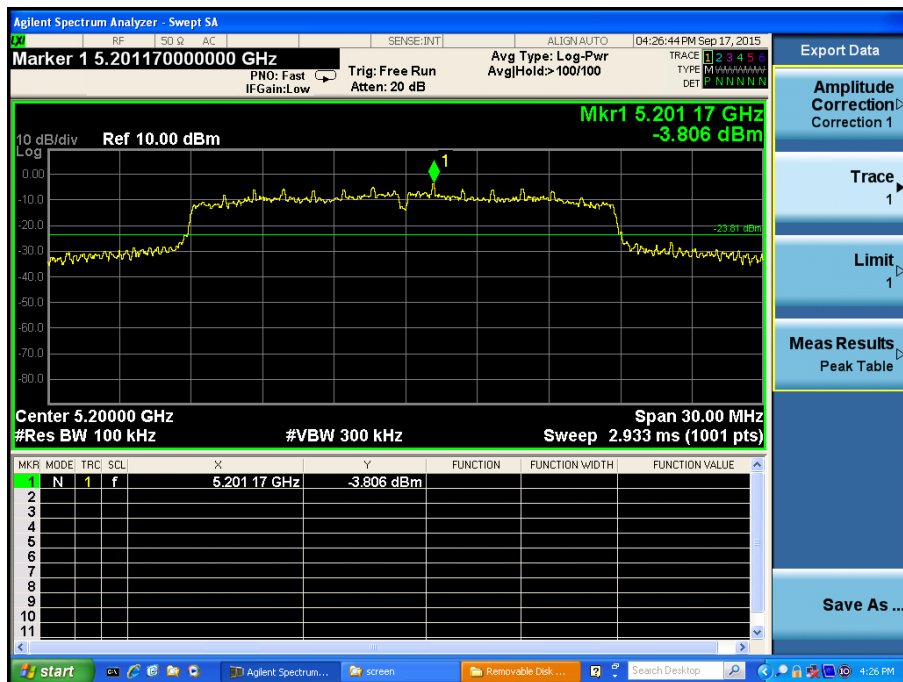
5825MHz



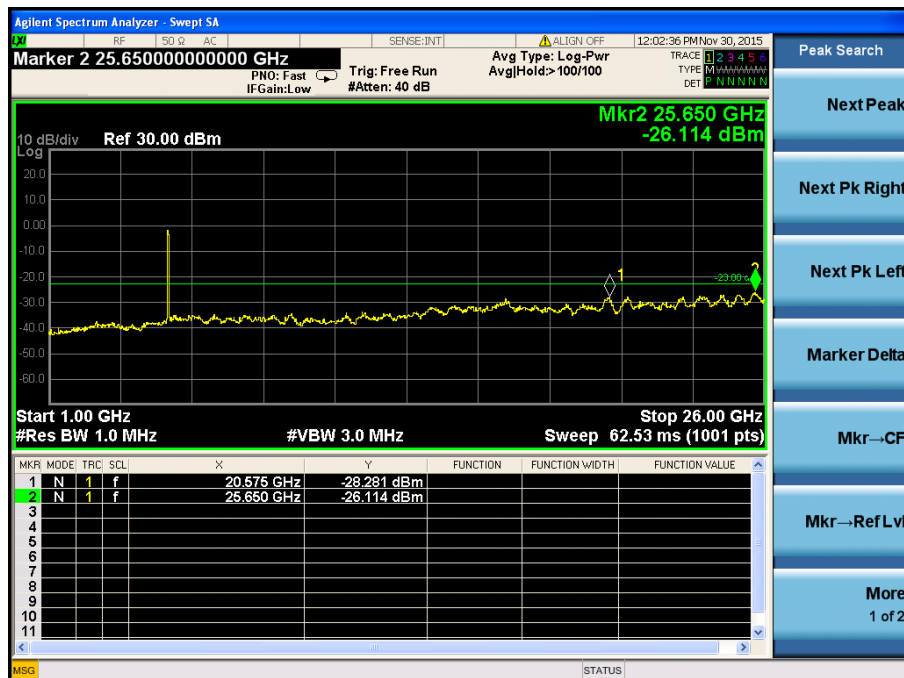
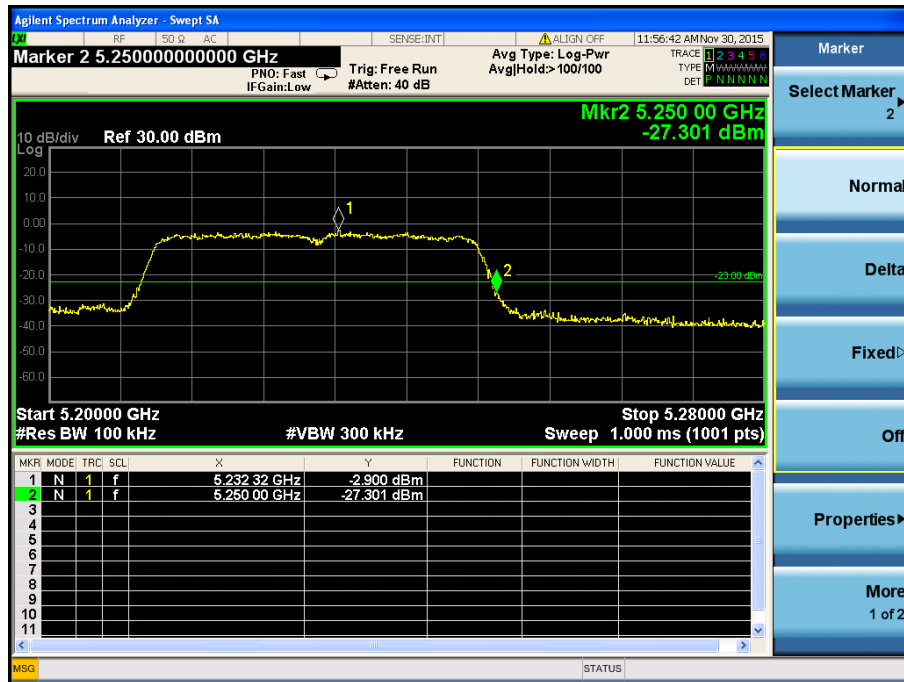
802.11n-HT40  
5180MHz



5200MHz

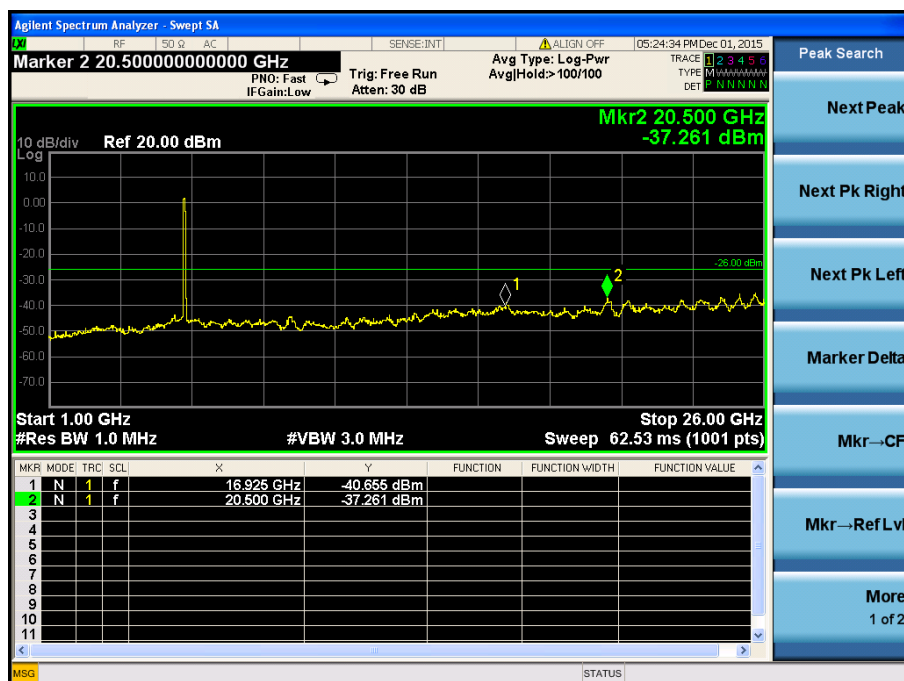
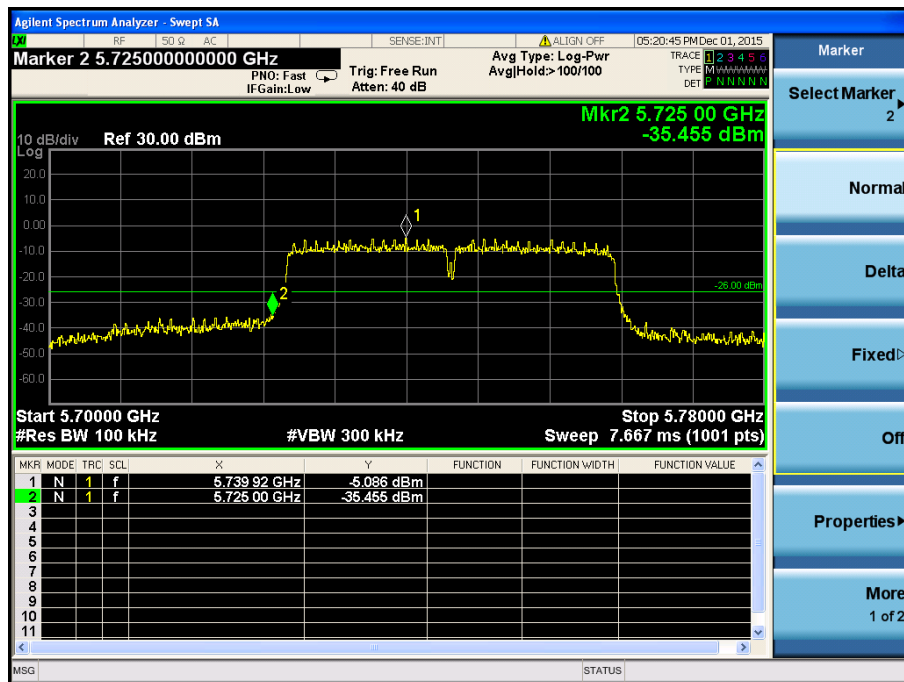


5220MHz

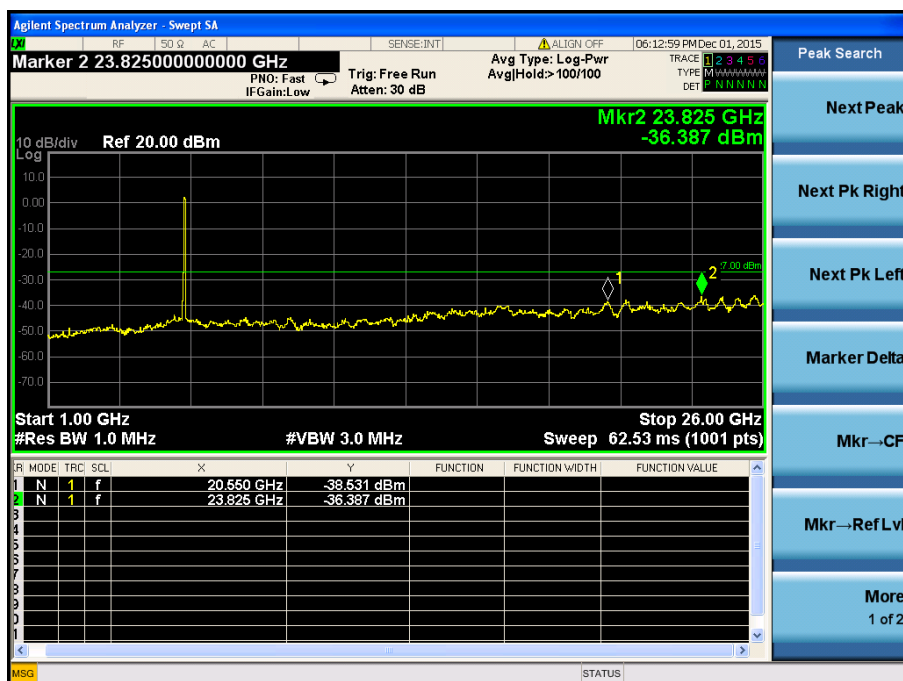
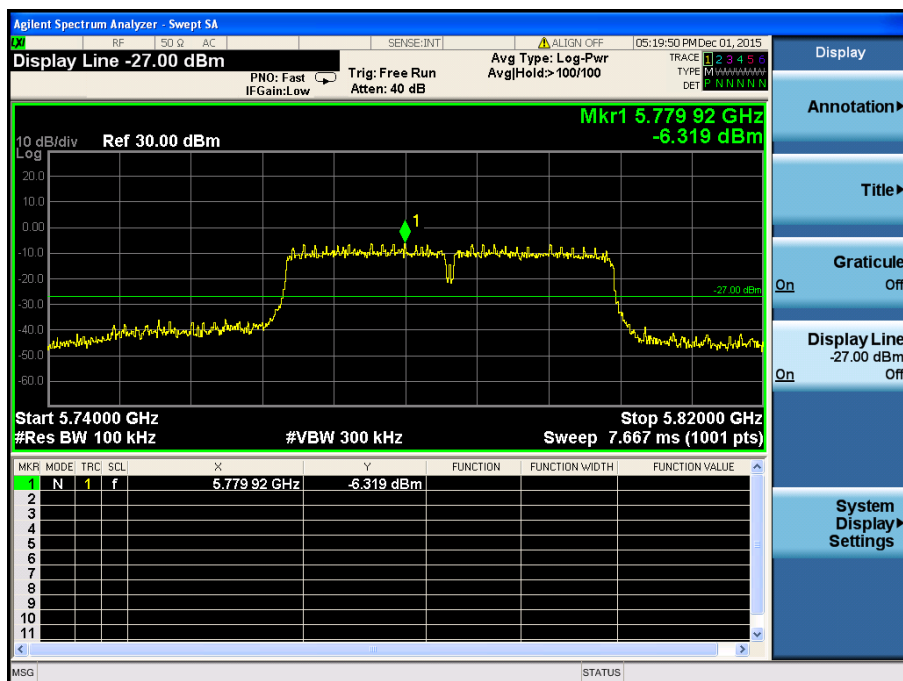




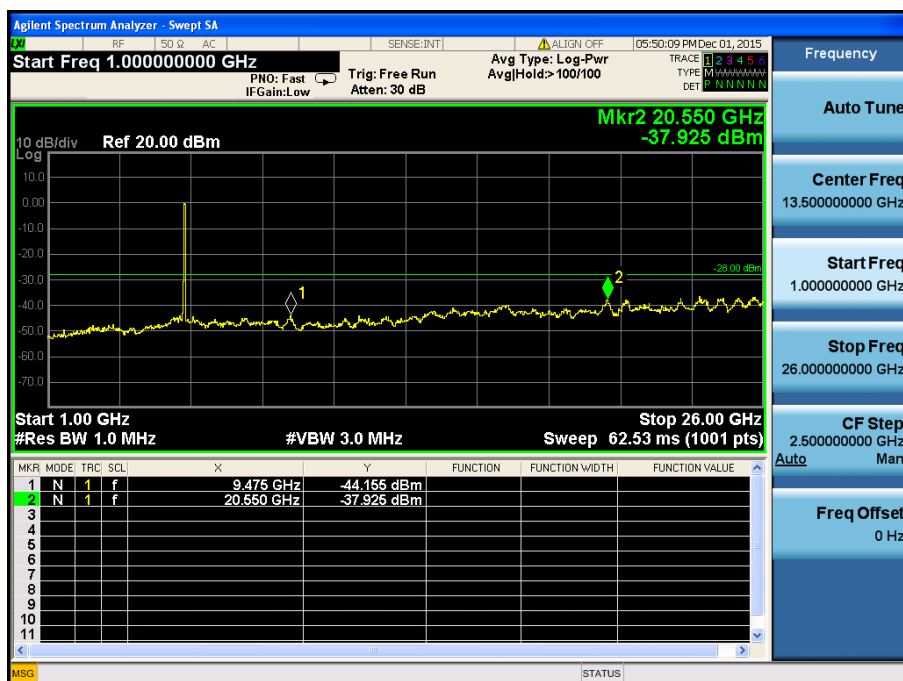
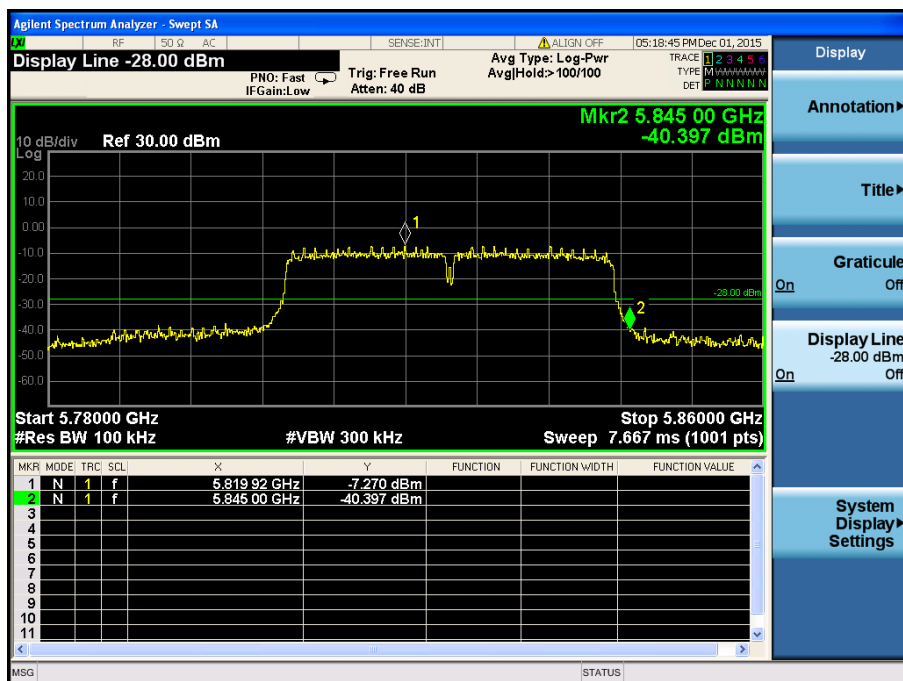
5745MHz



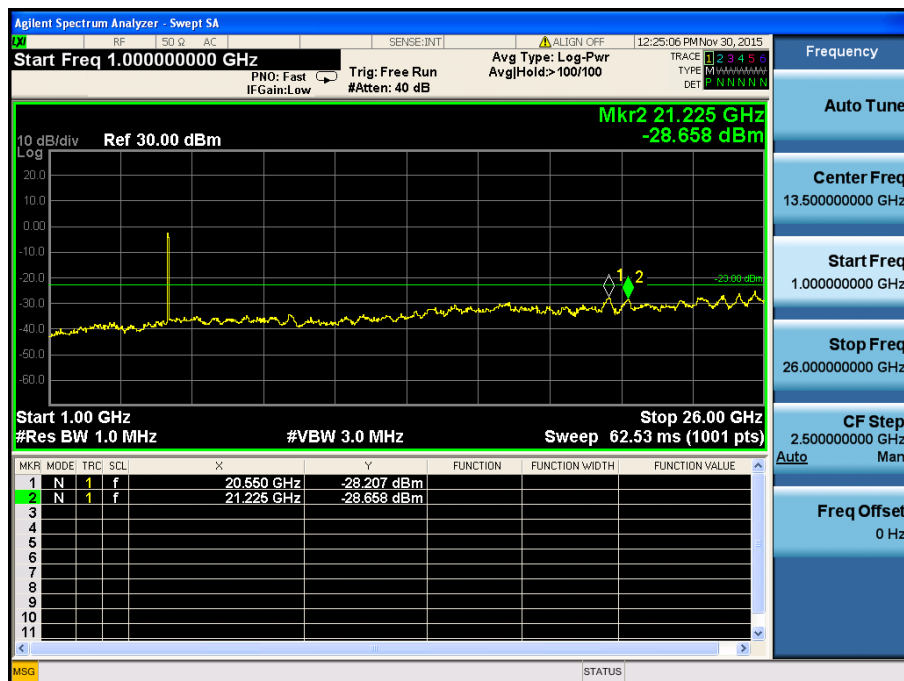
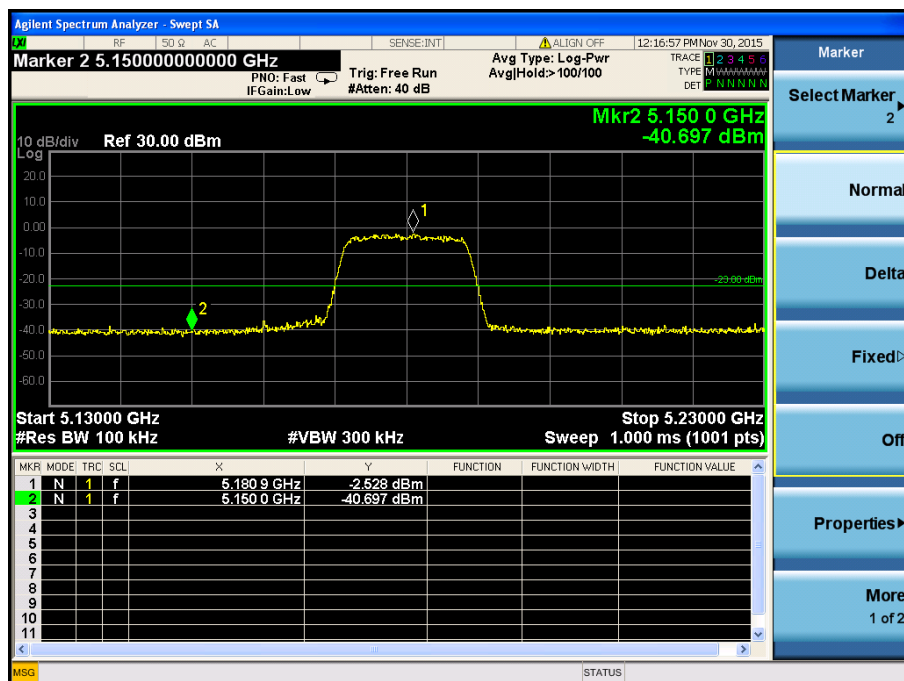
5785MHz



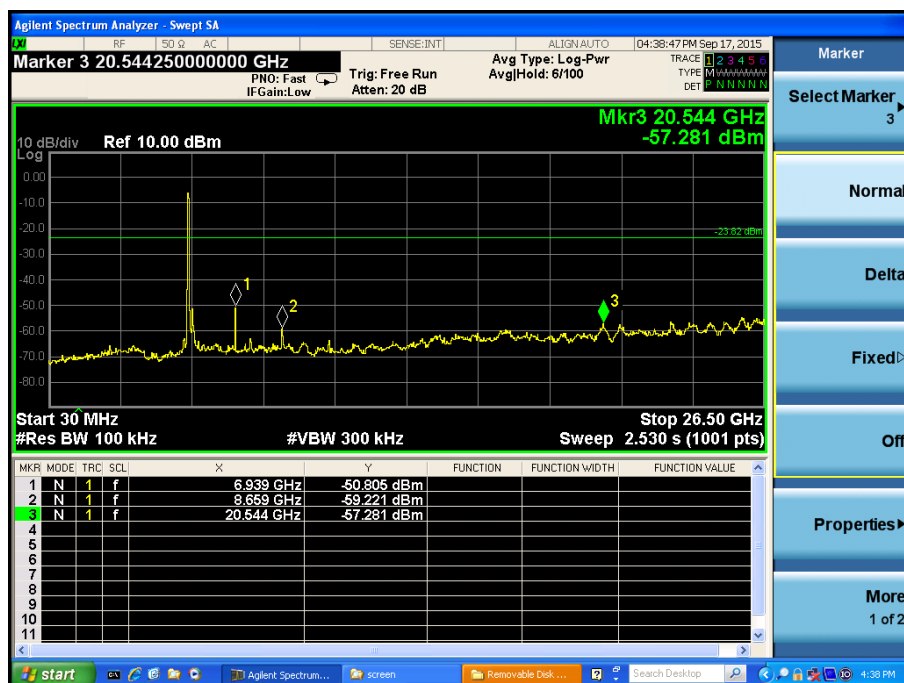
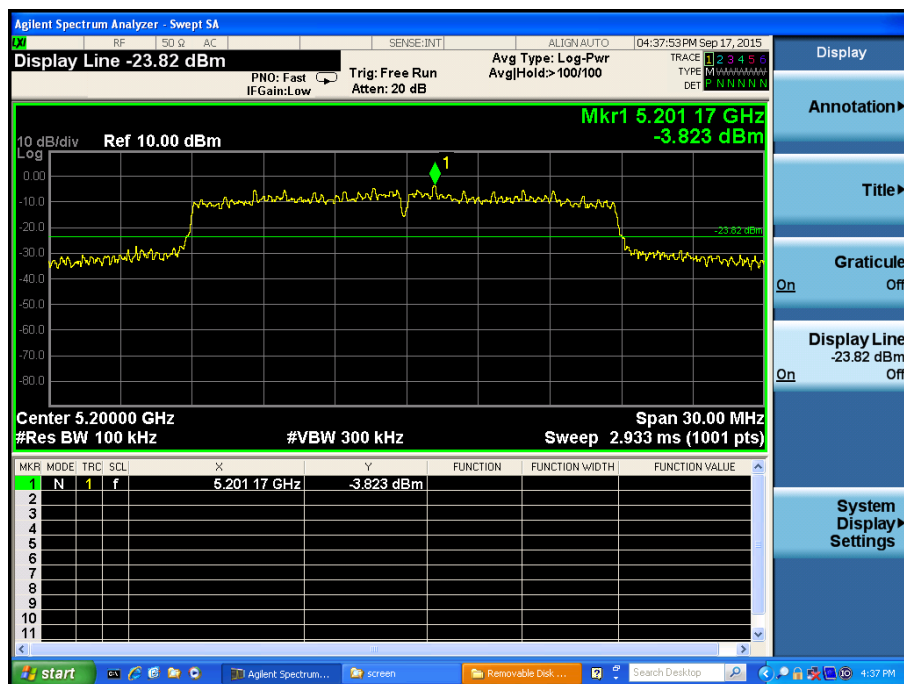
5825MHz



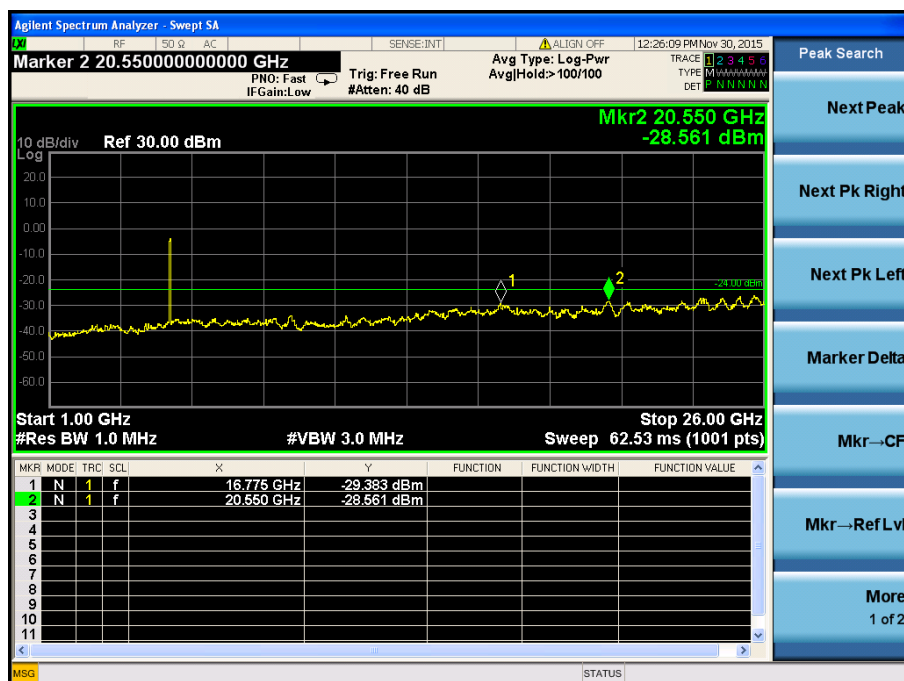
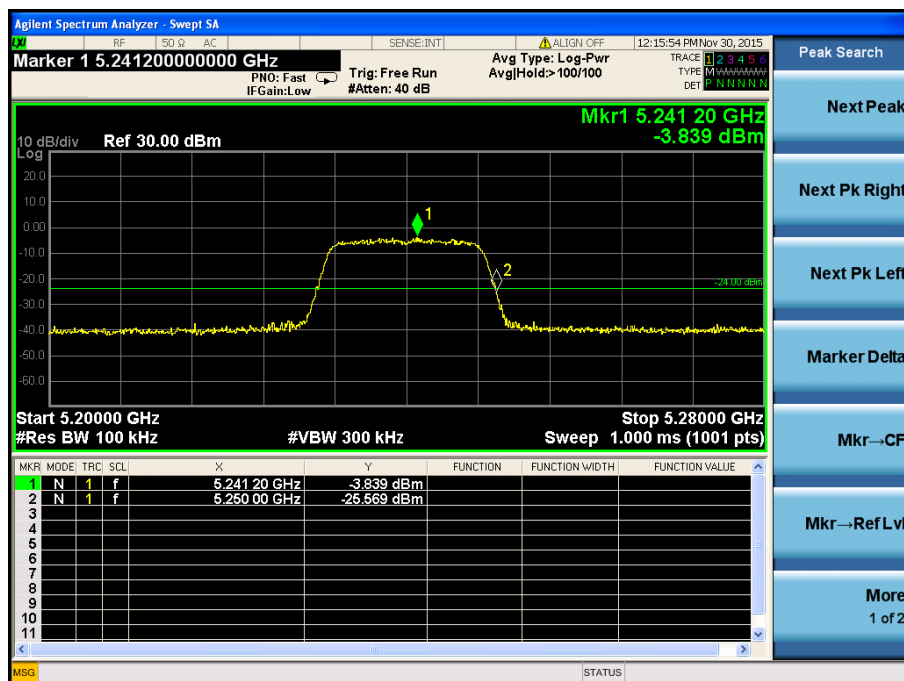
Antenna 2  
802.11n-HT20  
5180MHz



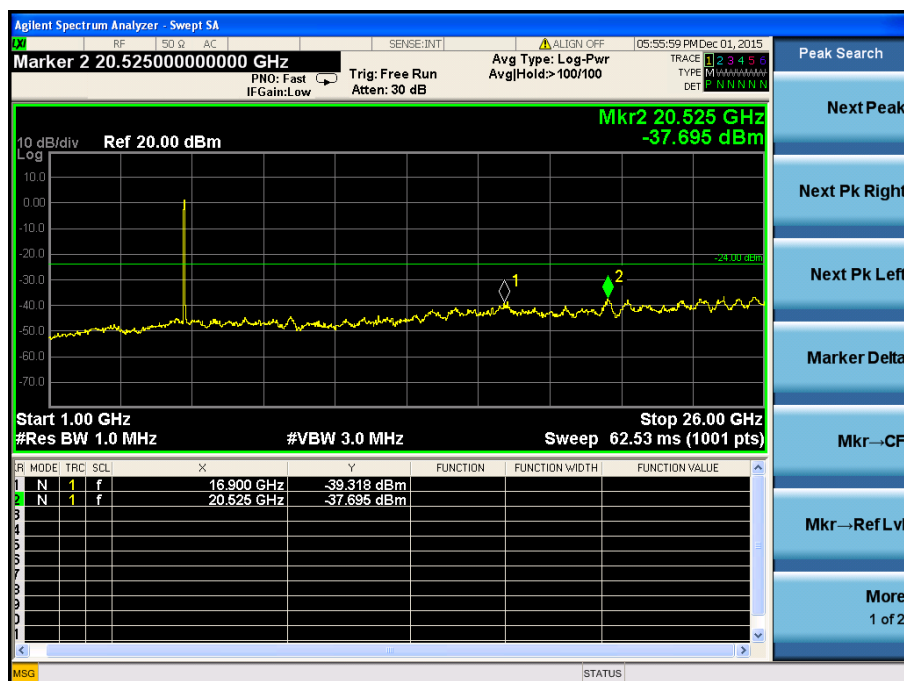
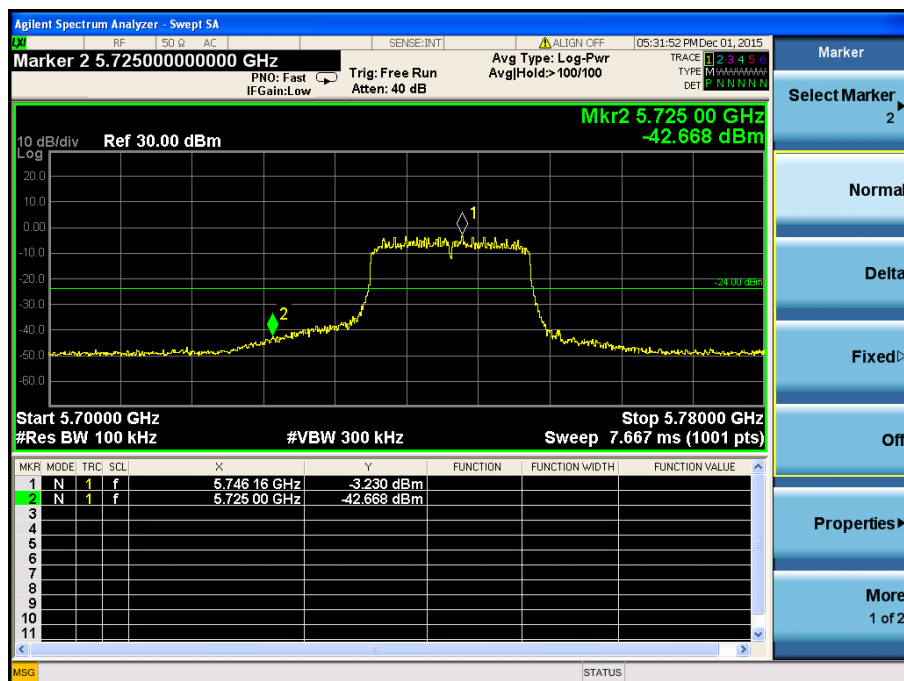
5200MHz



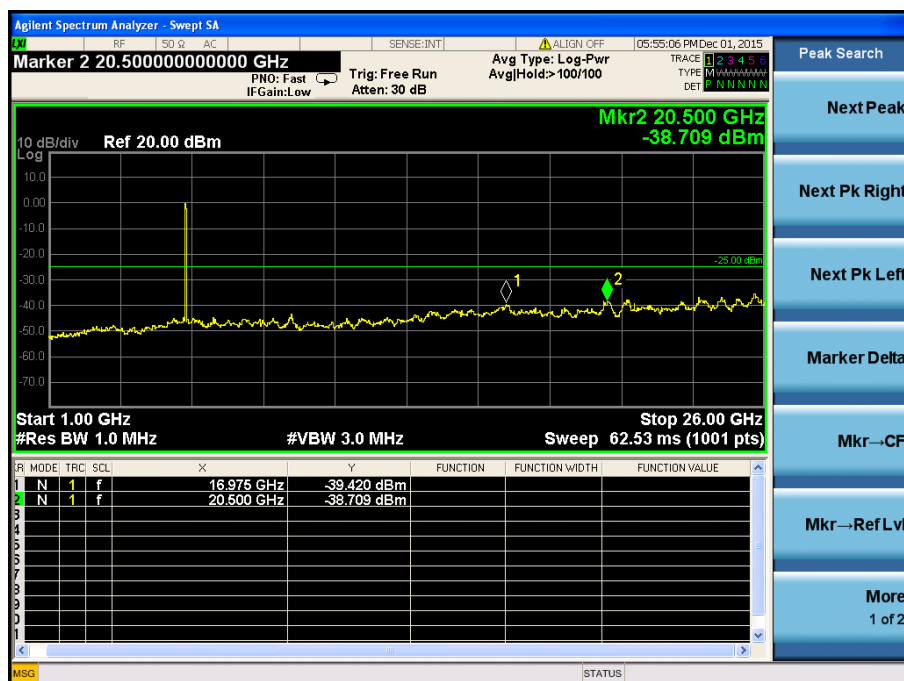
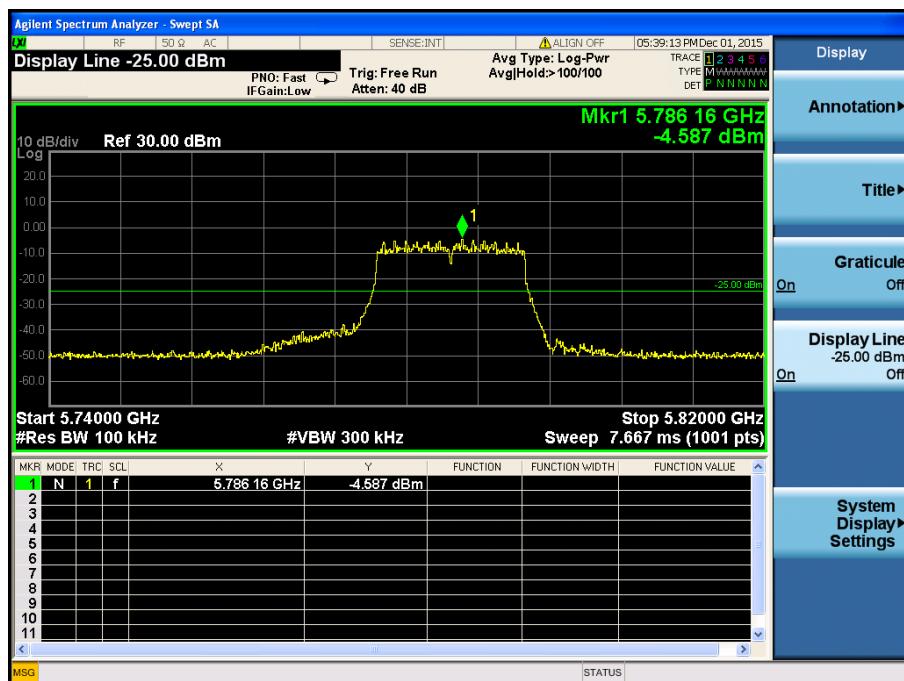
5240MHz



5745MHz

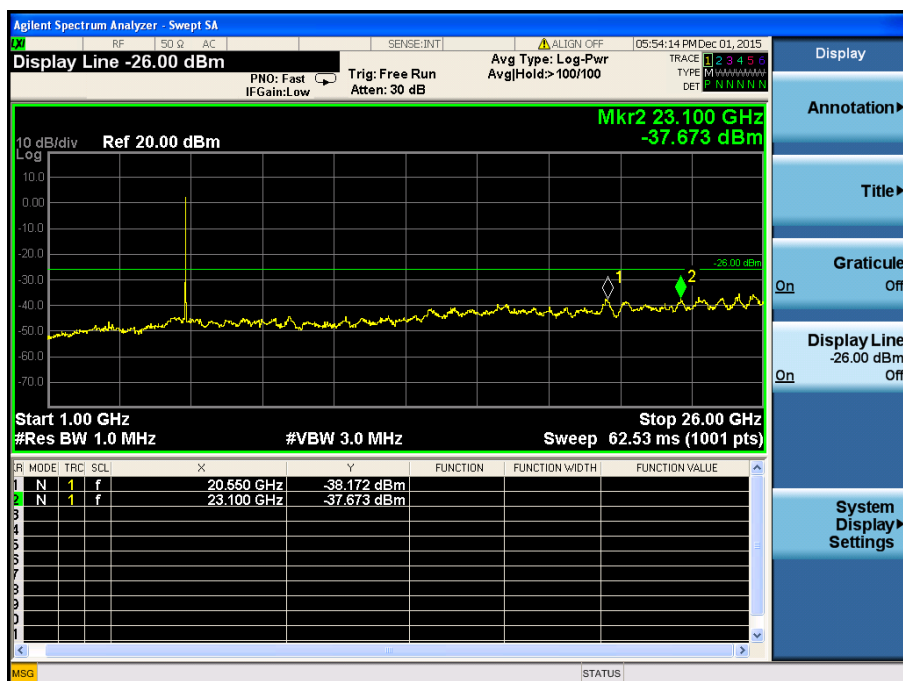
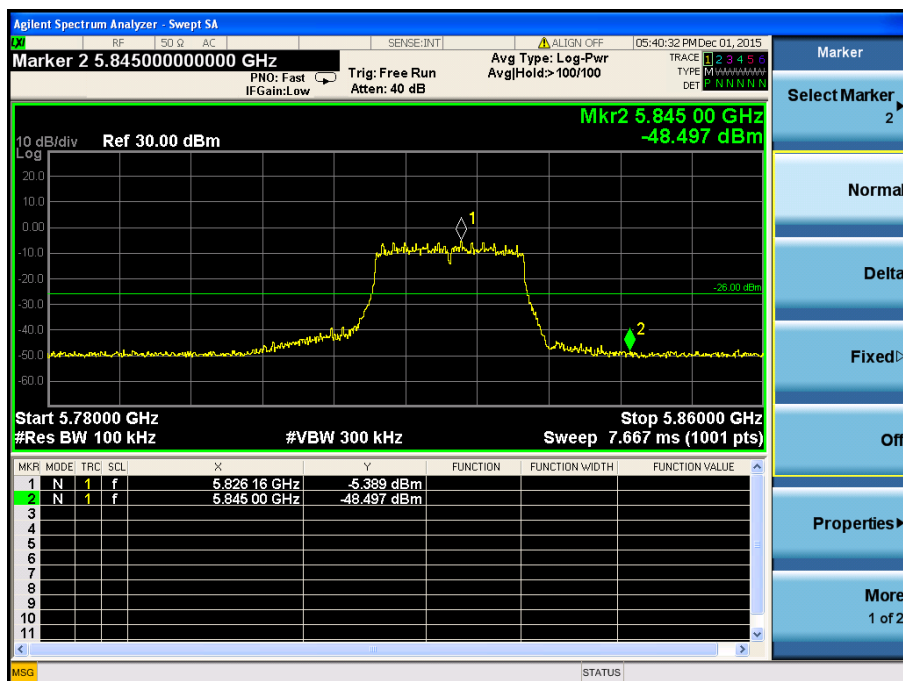


5785MHz



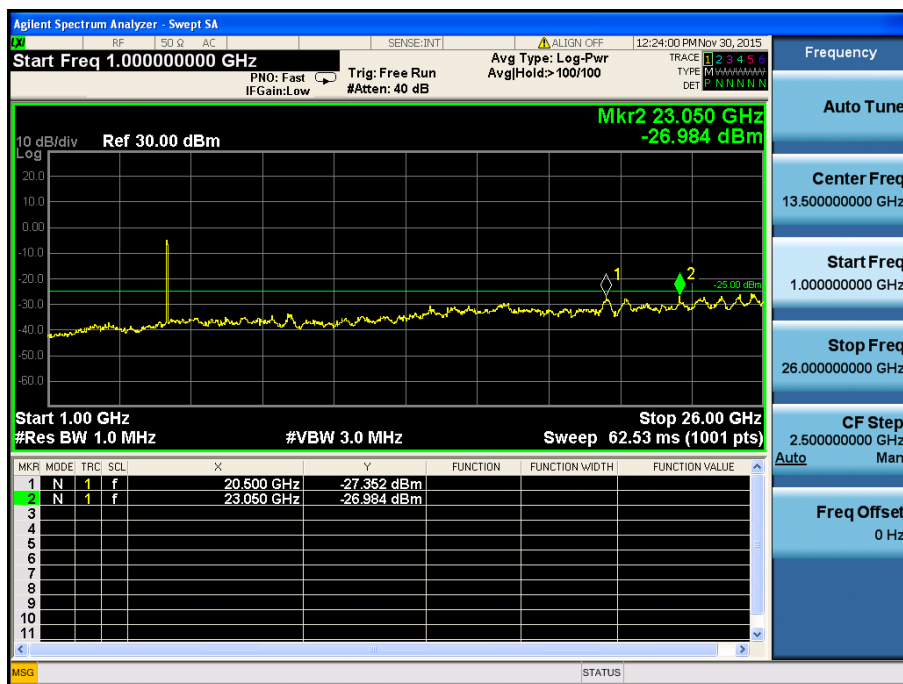
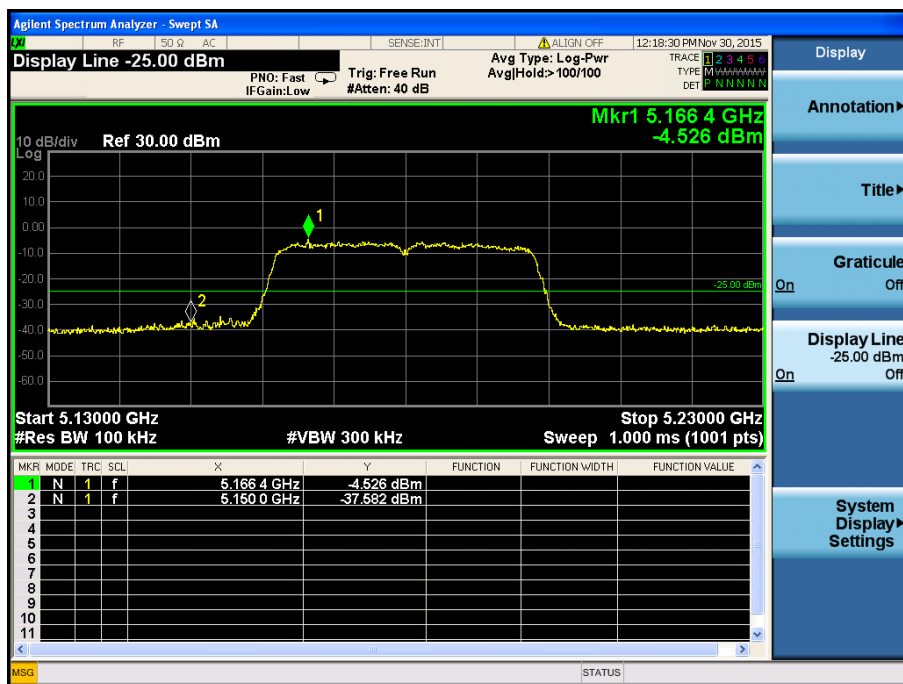


5825MHz

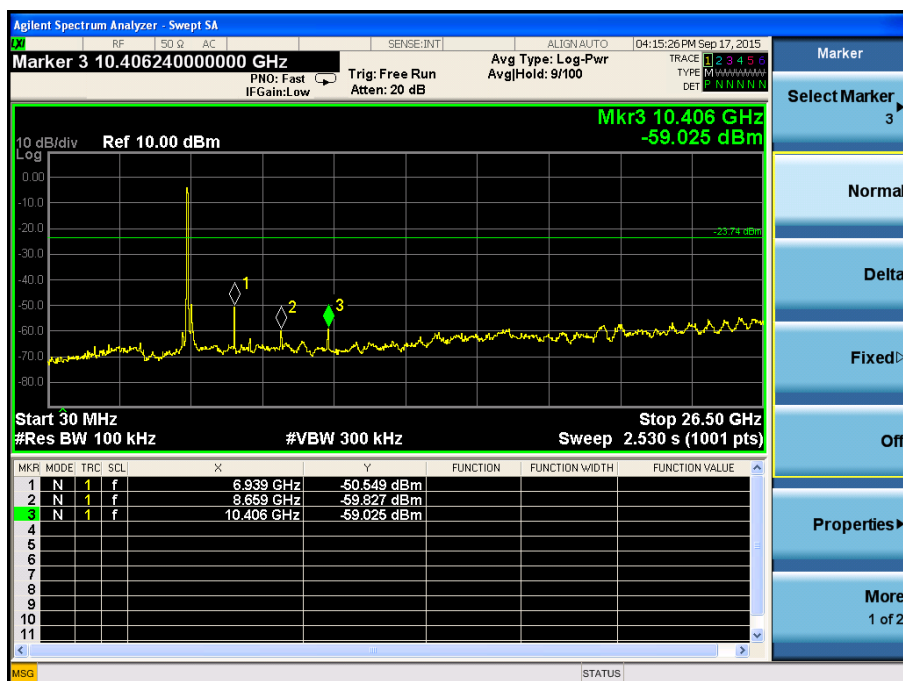
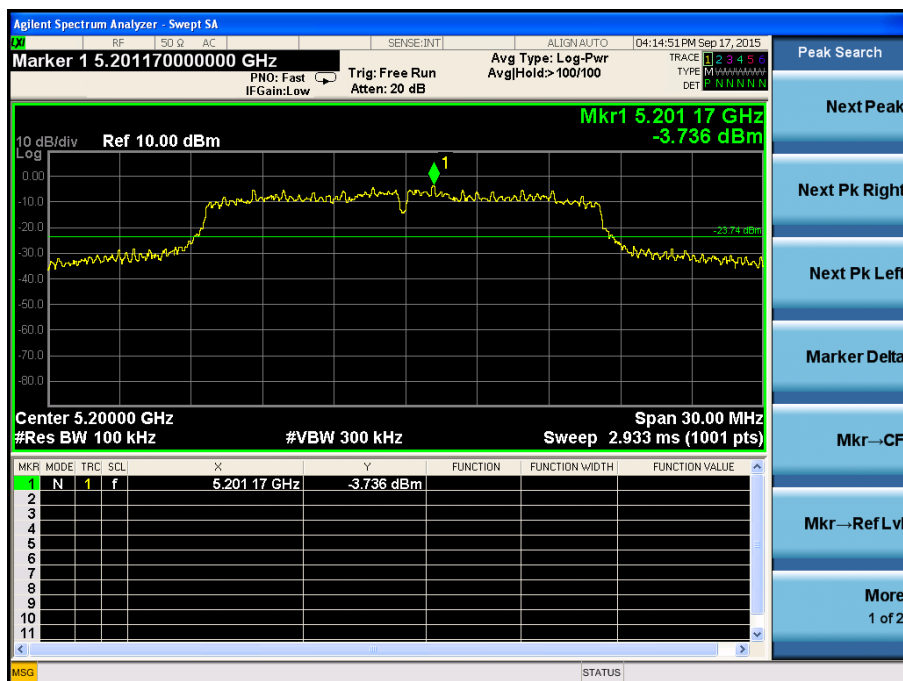


802.11n-HT40

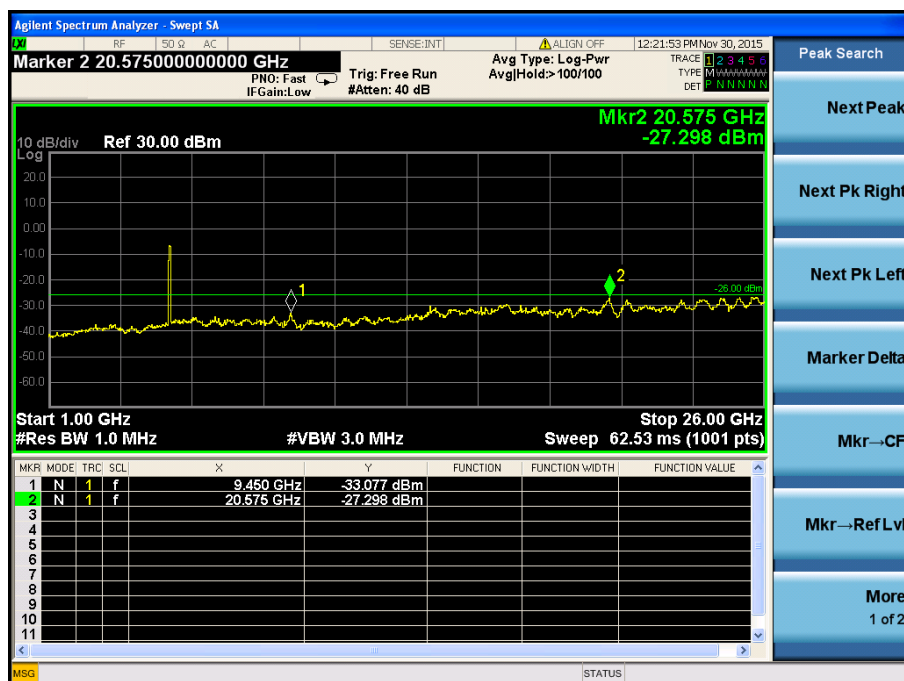
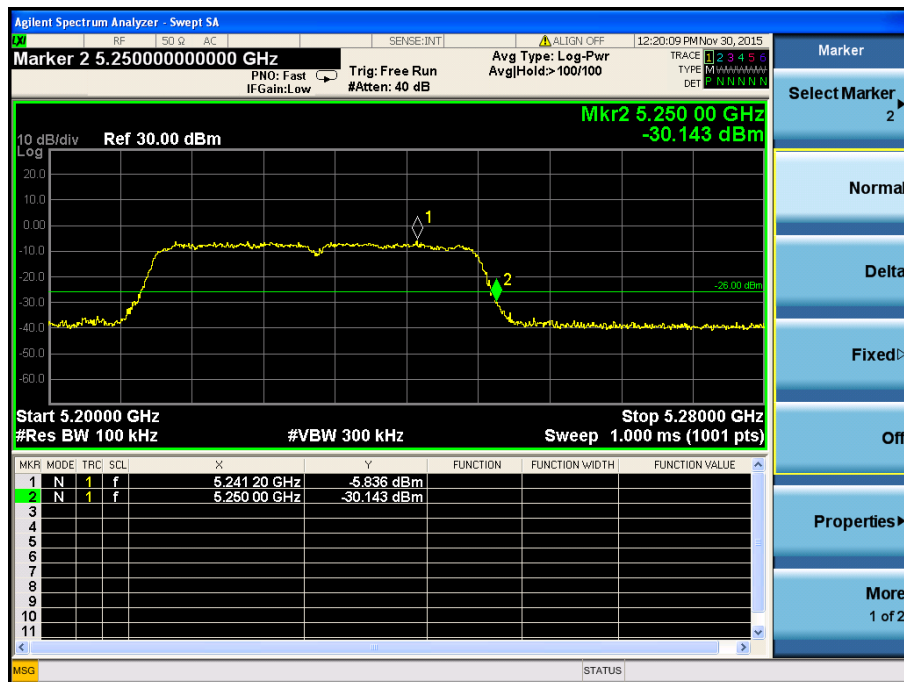
5180MHz



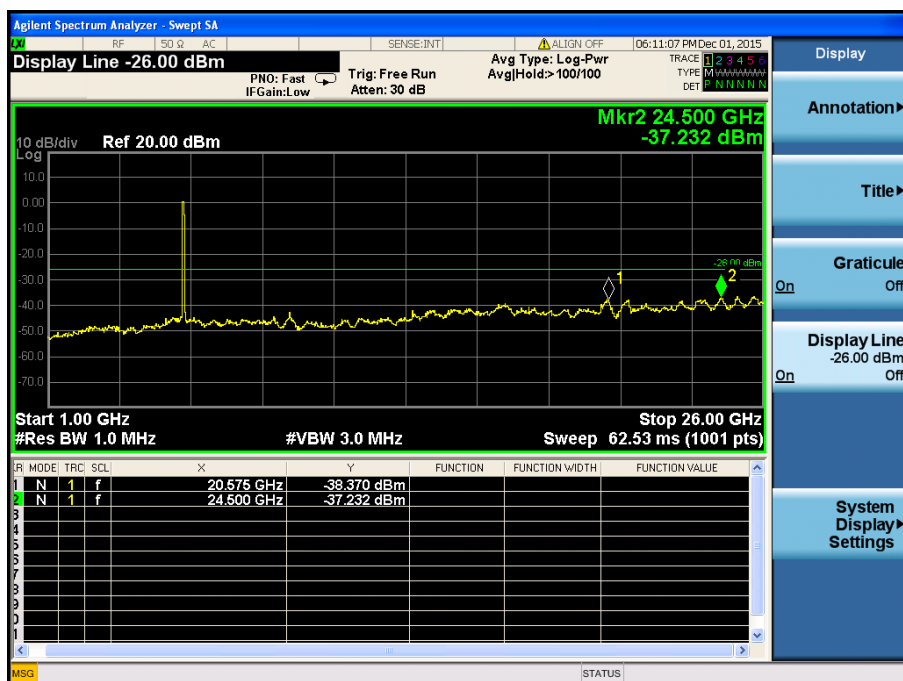
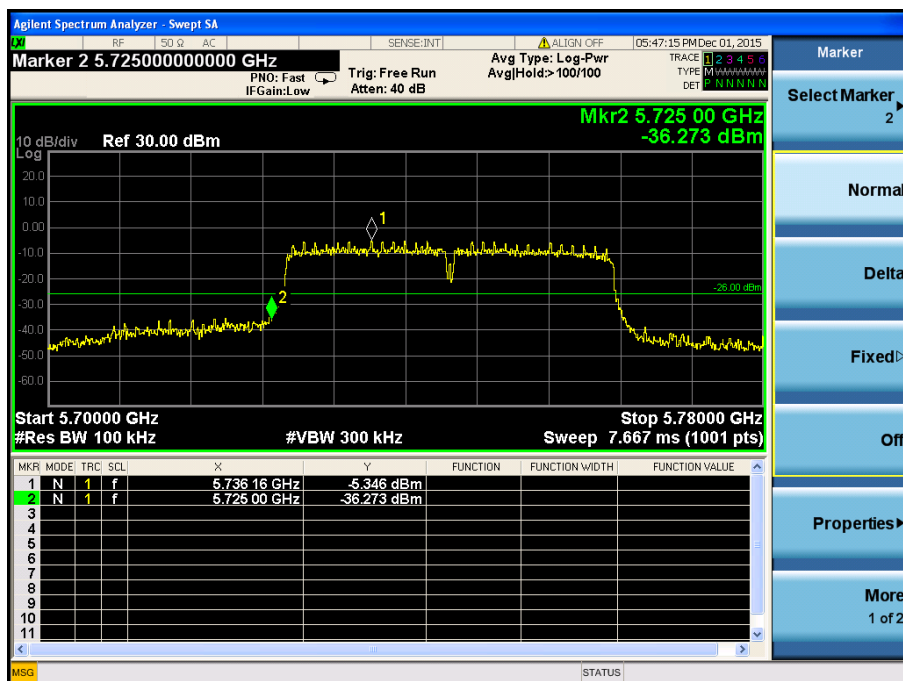
5200MHz



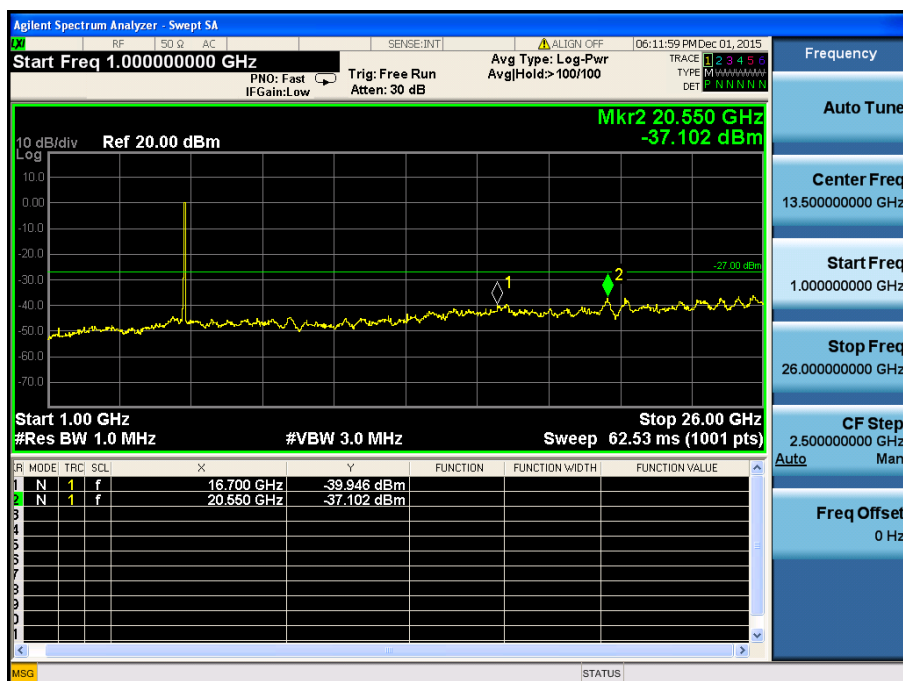
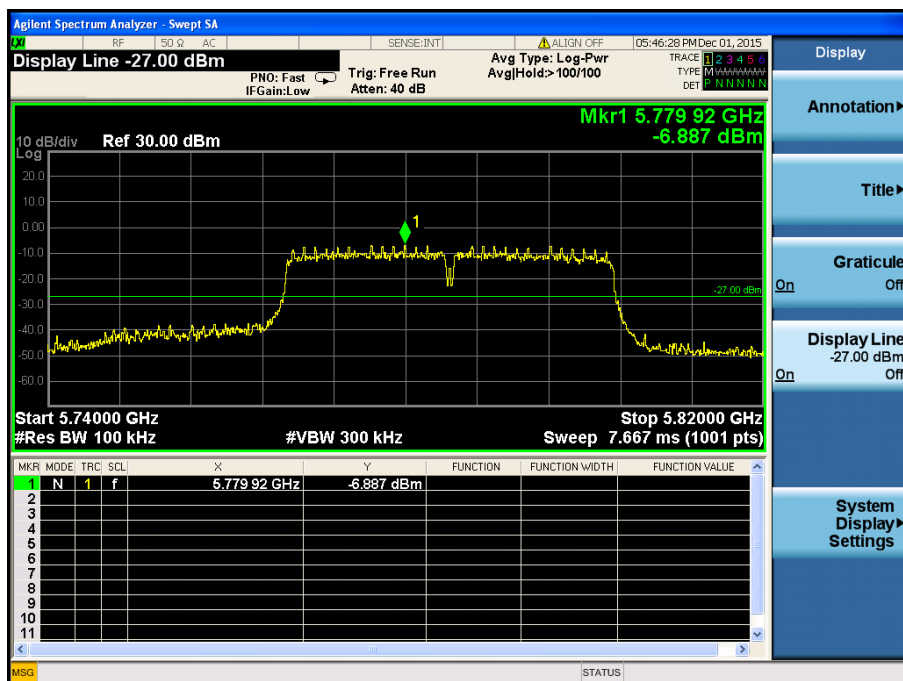
5220MHz



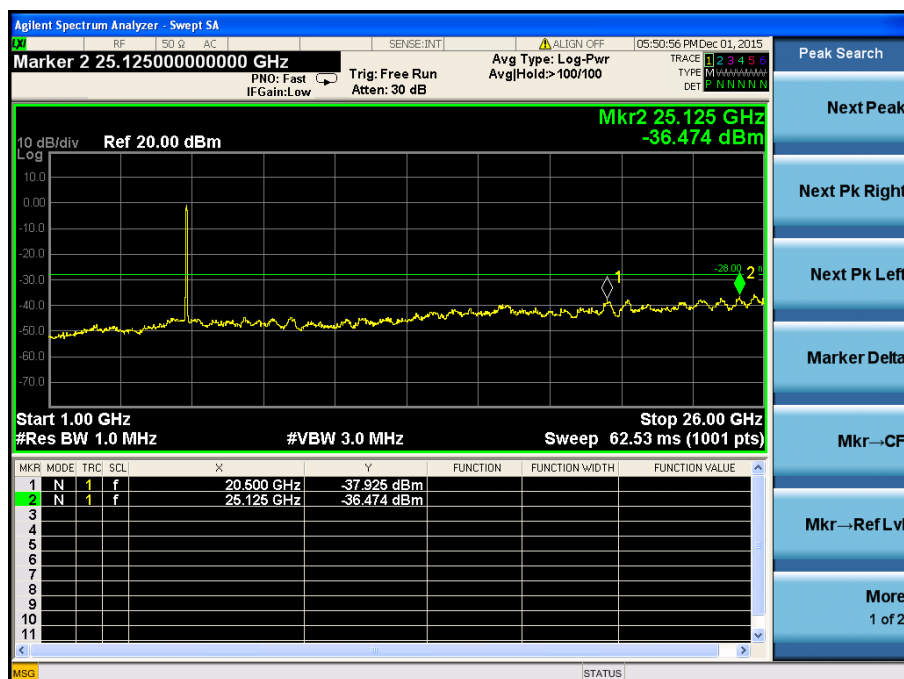
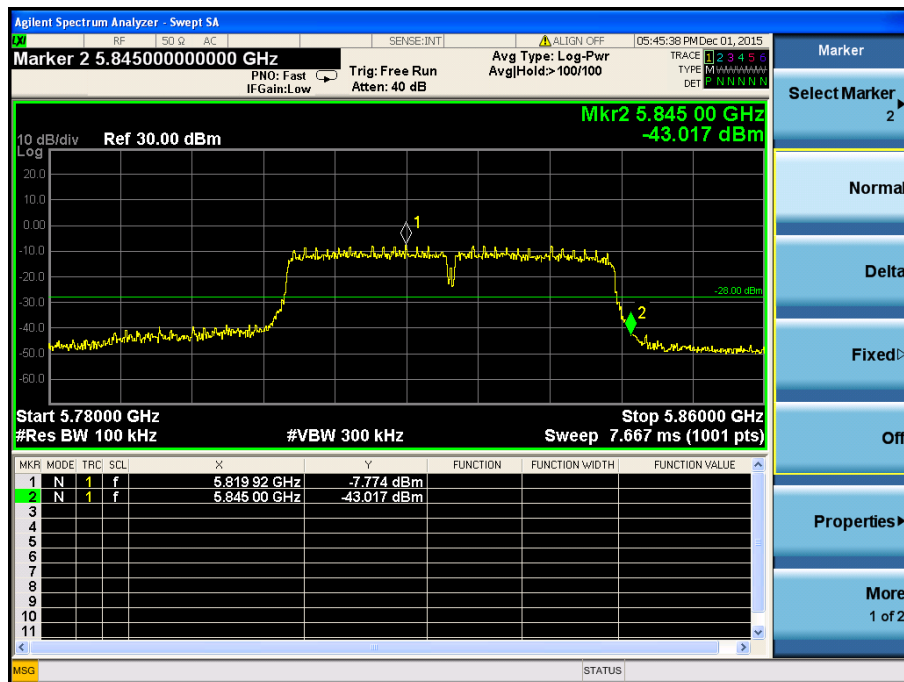
5745MHz



5785MHz



5825MHz



## 10. Frequency Stability

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### 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	85-115% of declared nominal voltage
-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

802.11n\_HT20

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.3	141	0.0269
40	3.3	128	0.0244
30	3.3	124	0.0237
20	3.3	154	0.0294
10	3.3	114	0.0218
0	3.3	134	0.0256
-10	3.3	147	0.0281
-20	3.3	118	0.0225
-30	3.3	126	0.0240

802.11n\_HT40

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.3	141	0.0270
40	3.3	145	0.0277
30	3.3	141	0.0270
20	3.3	131	0.0250
10	3.3	148	0.0283
0	3.3	152	0.0291
-10	3.3	158	0.0302
-20	3.3	151	0.0289
-30	3.3	149	0.0285

5725-5850MHz

802.11n\_HT20

Reference Frequency(Middle Channel): 5785MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.3	117	0.0267
40	3.3	127	0.0260
30	3.3	145	0.0271
20	3.3	154	0.0260
10	3.3	165	0.0265
0	3.3	185	0.0278
-10	3.3	154	0.0288
-20	3.3	181	0.0278
-30	3.3	157	0.0285

802.11n\_HT40

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	3.3	141	0.0254
40	3.3	148	0.0262
30	3.3	147	0.0251
20	3.3	134	0.0227
10	3.3	115	0.0227
0	3.3	185	0.0314
-10	3.3	155	0.0222
-20	3.3	152	0.0219
-30	3.3	145	0.0257

So, Frequency Stability Versus Input Voltage is:

5150-5250MHz

802.11n\_HT20

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	2.8	145	0.0277
	3.3	148	0.0282
	3.8	152	0.0290

802.11n\_HT40

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	2.8	145	0.0257
	3.3	148	0.0268
	3.8	152	0.0284

5725-5850MHz

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	2.8	184	0.0325
	3.3	149	0.0286
	3.8	158	0.0303

802.11n\_HT40

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	2.8	184	0.0257
	3.3	149	0.0388
	3.8	158	0.0342

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