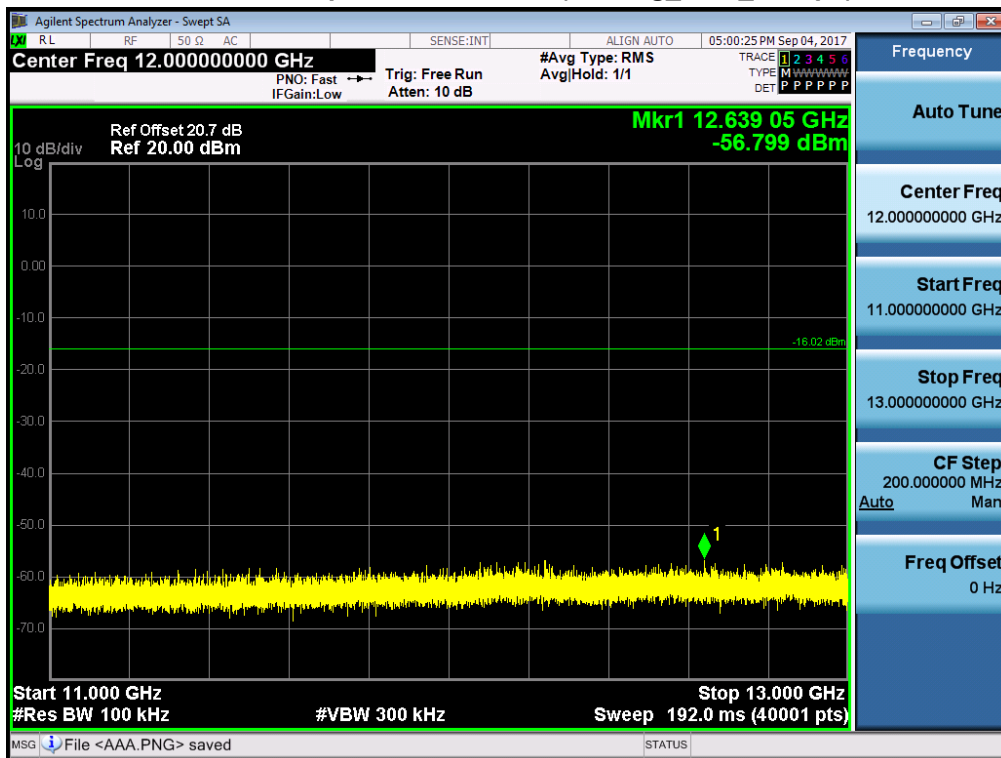


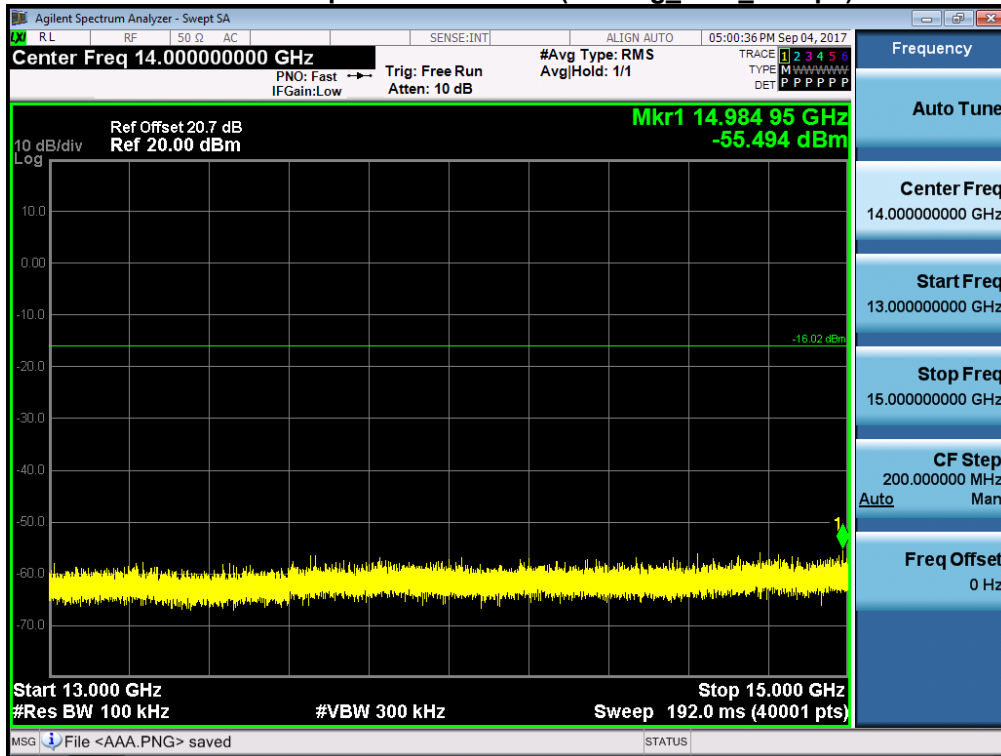
11 GHz ~ 13 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



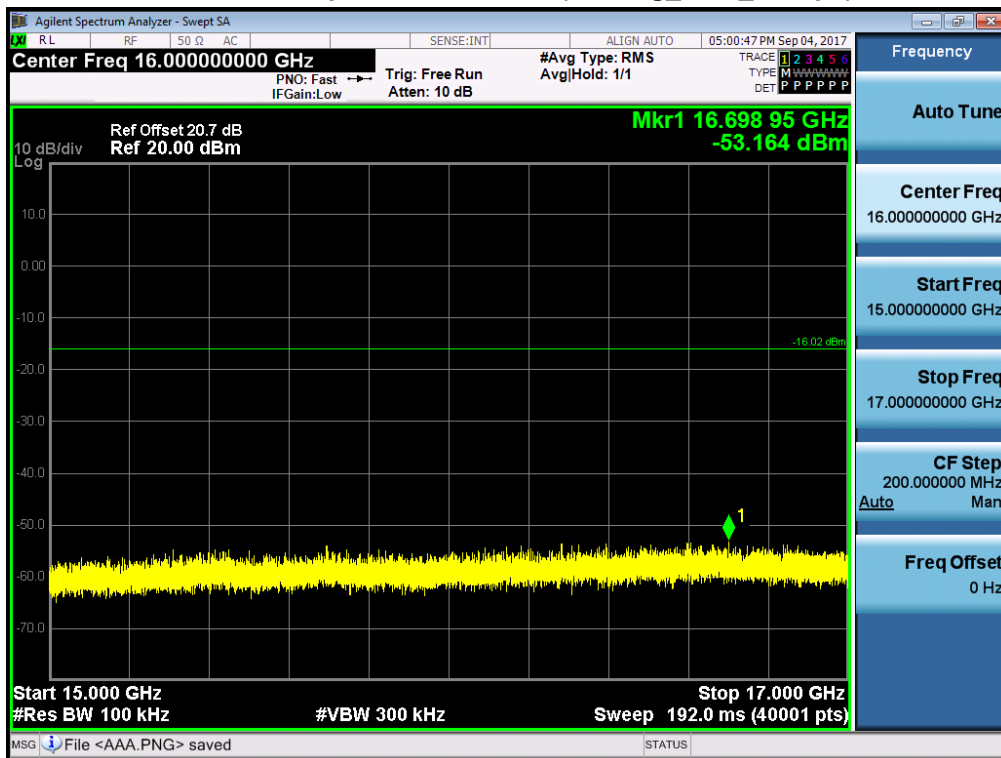
13 GHz ~ 15 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



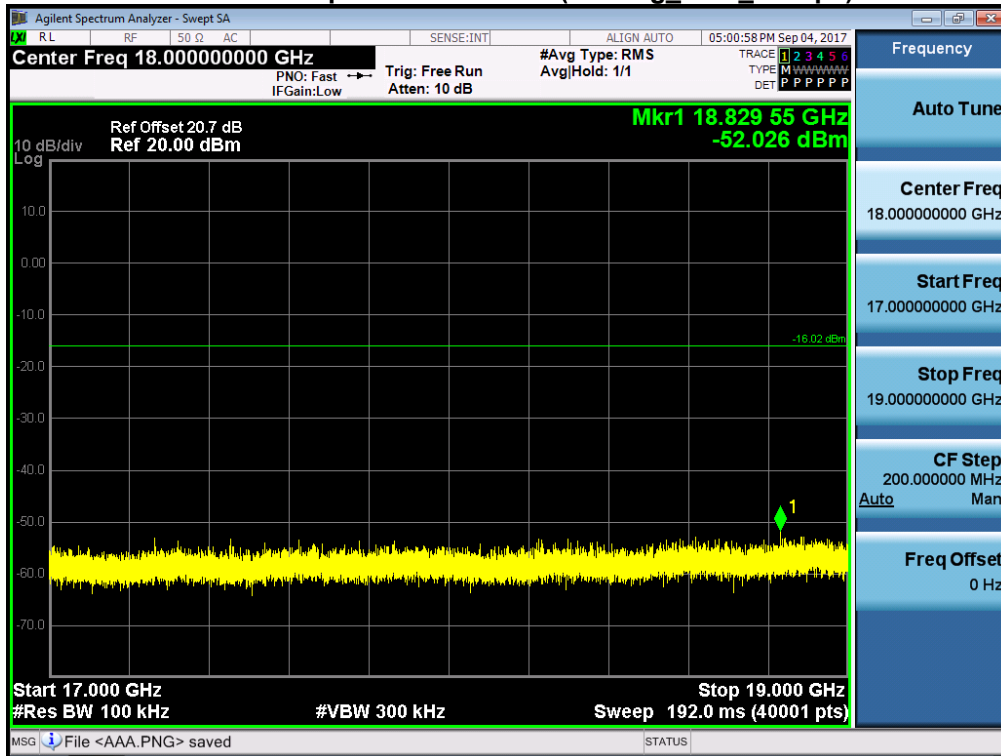
15 GHz ~ 17 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



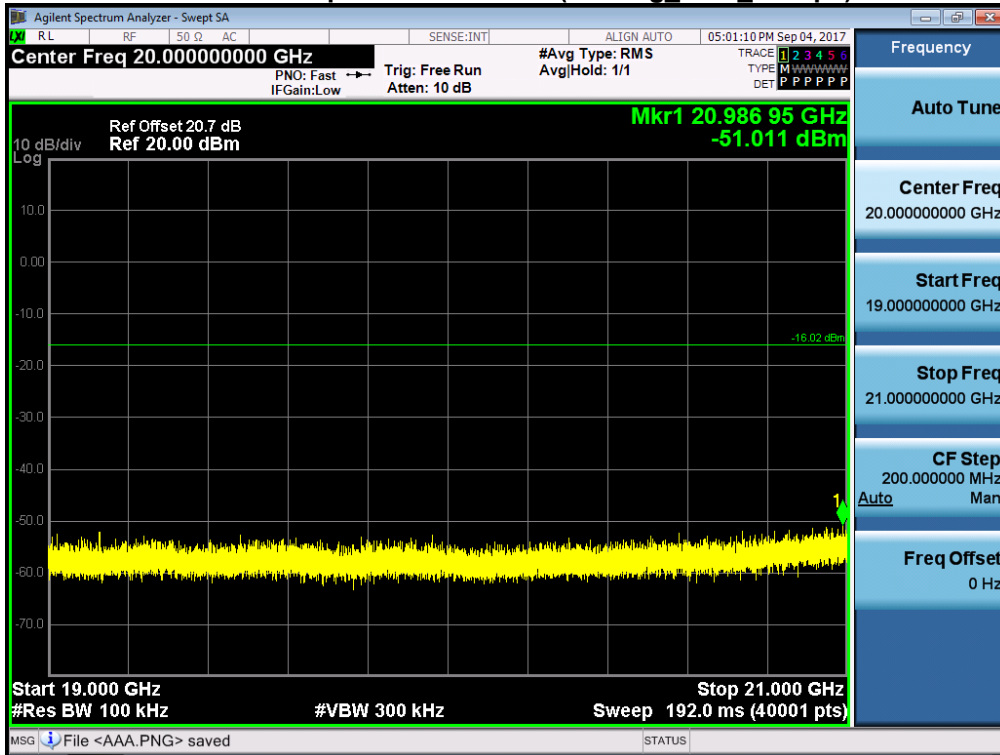
17 GHz ~ 19 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



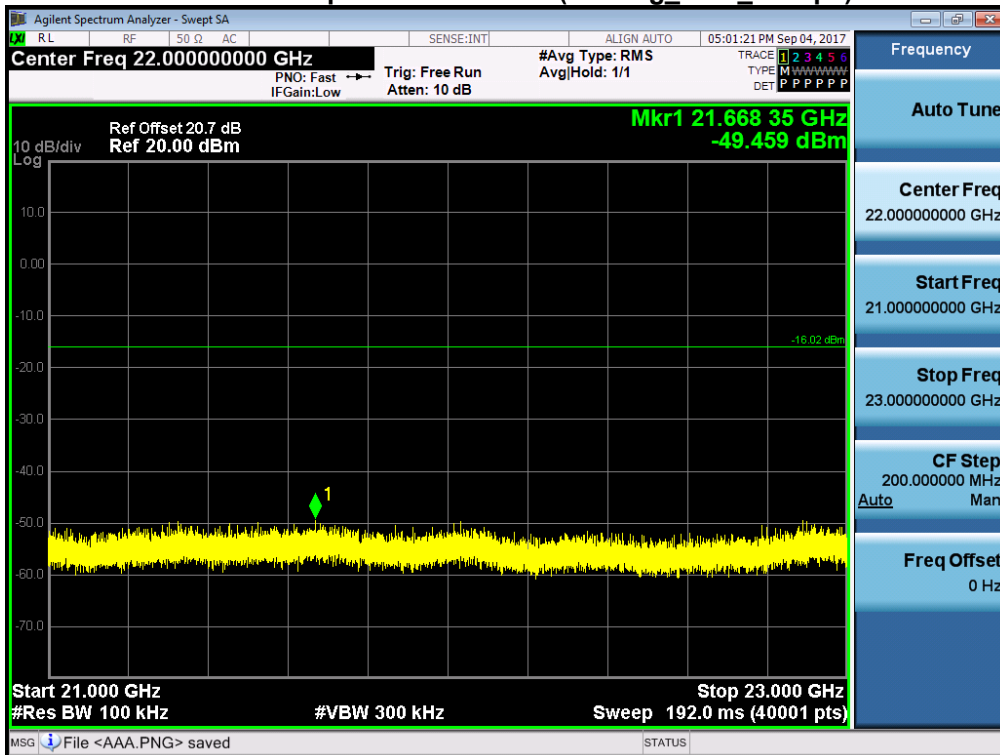
19 GHz ~ 21 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



21 GHz ~ 23 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



23 GHz ~ 25 GHz

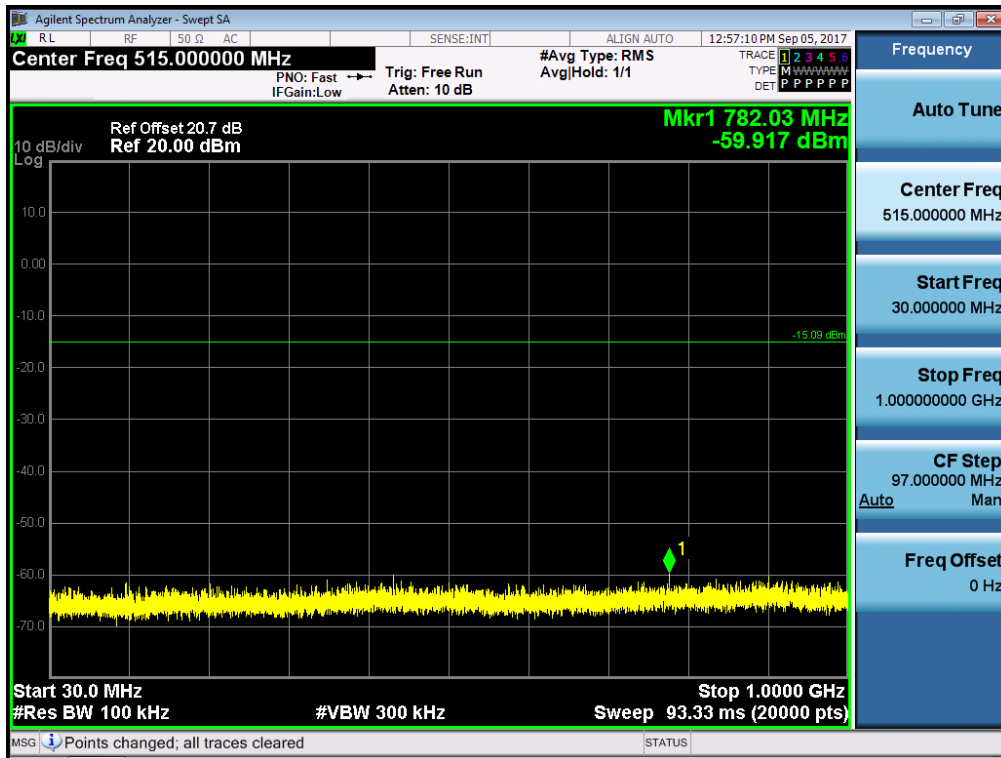
Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



[Ant.2]

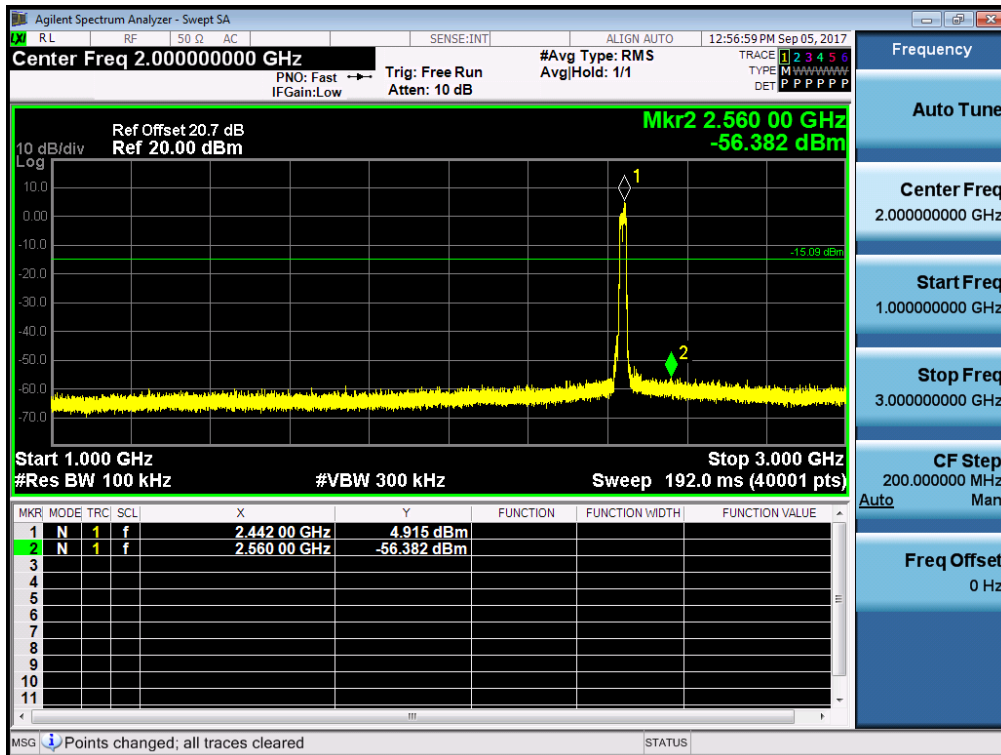
30 MHz ~ 1 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



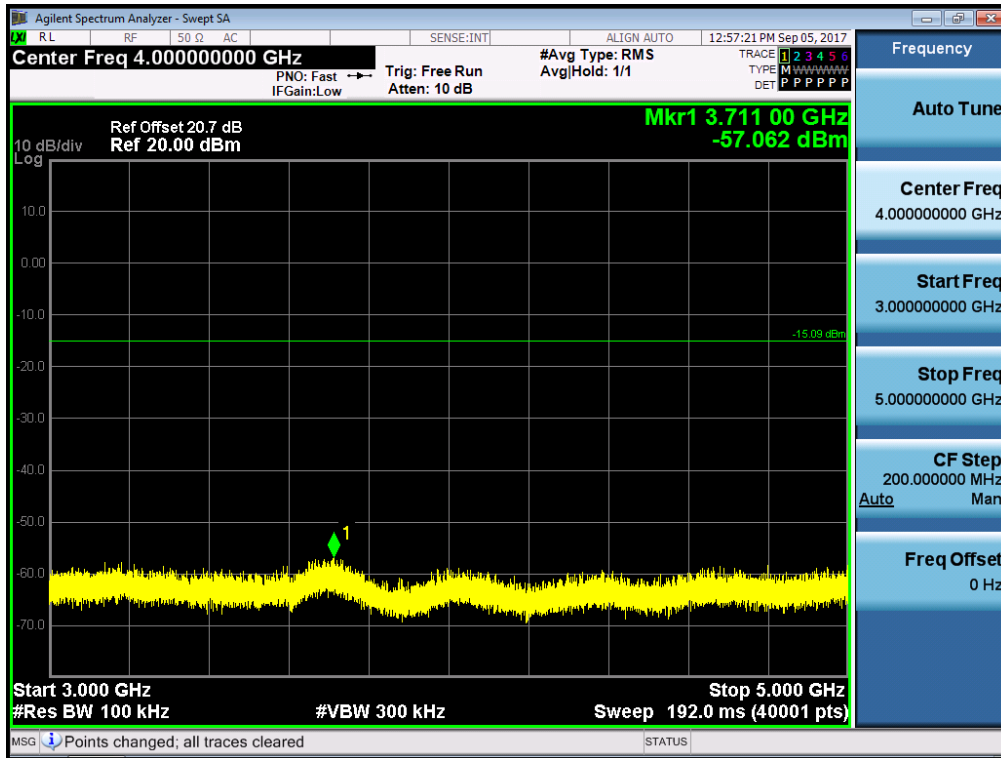
1 GHz ~ 3 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



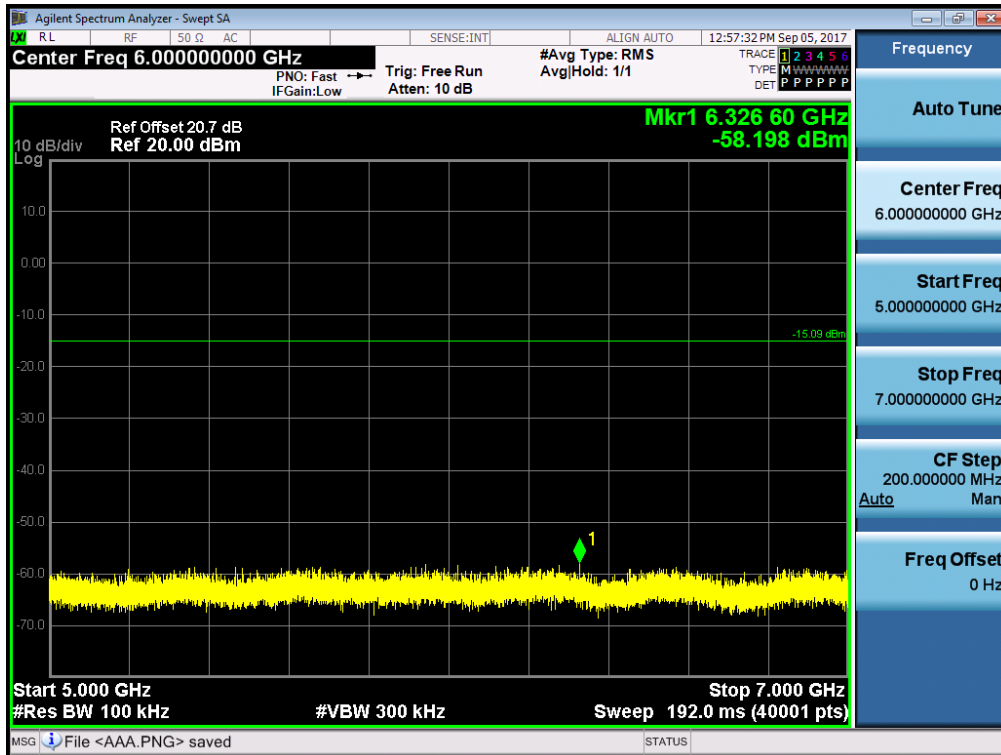
3 GHz ~ 5 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



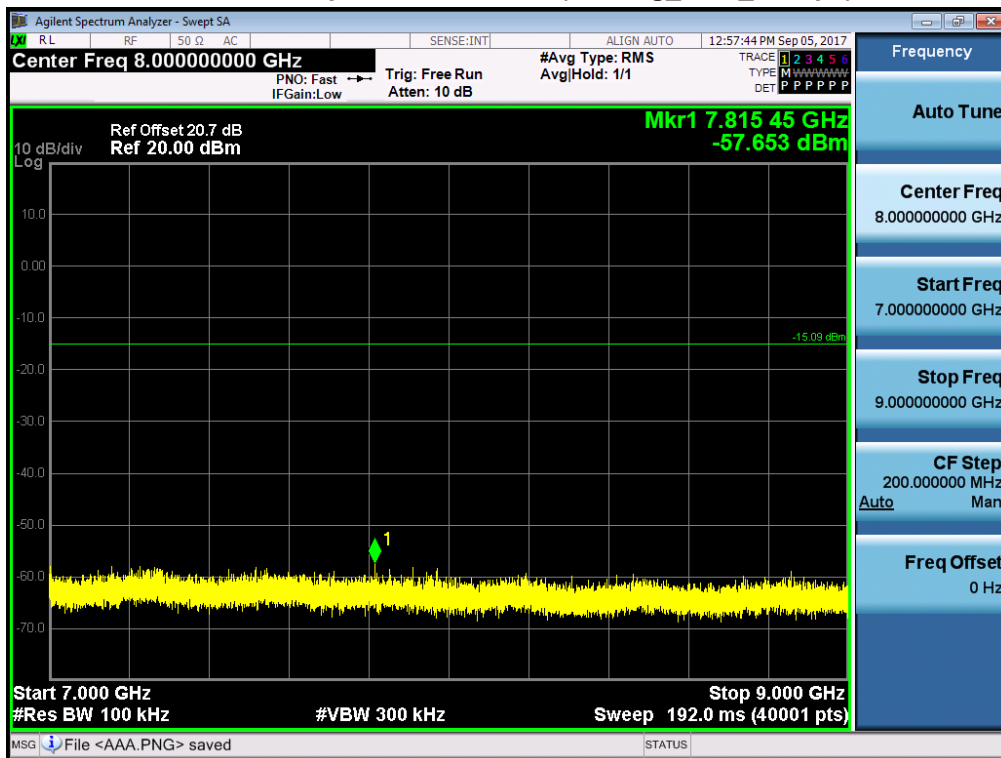
5 GHz ~ 7 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



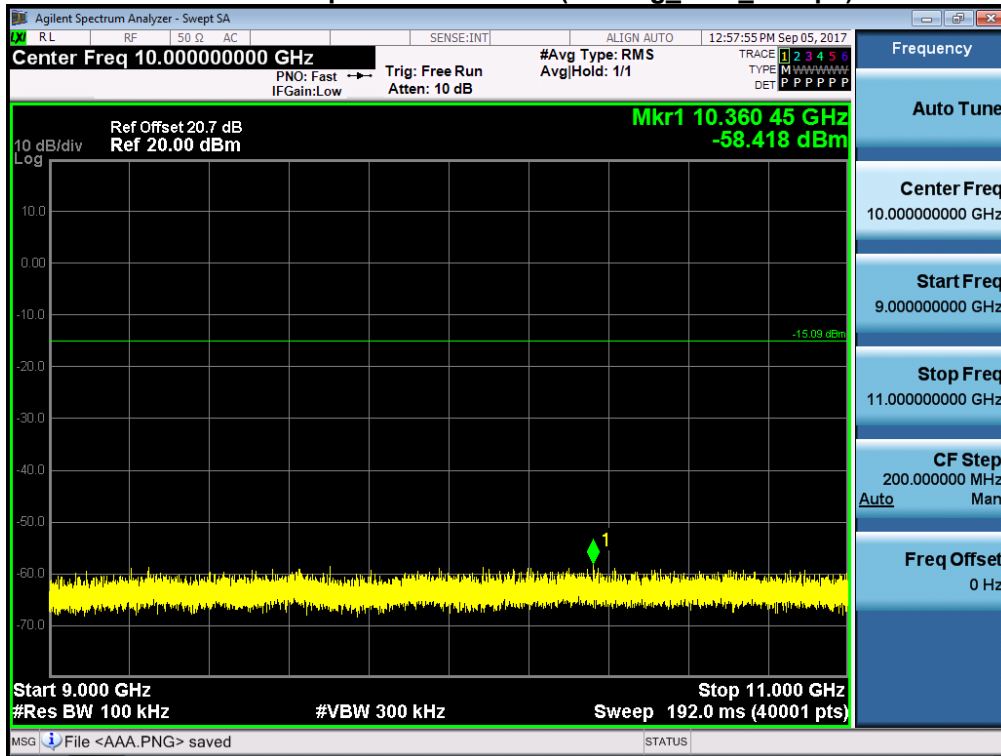
7 GHz ~ 9 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



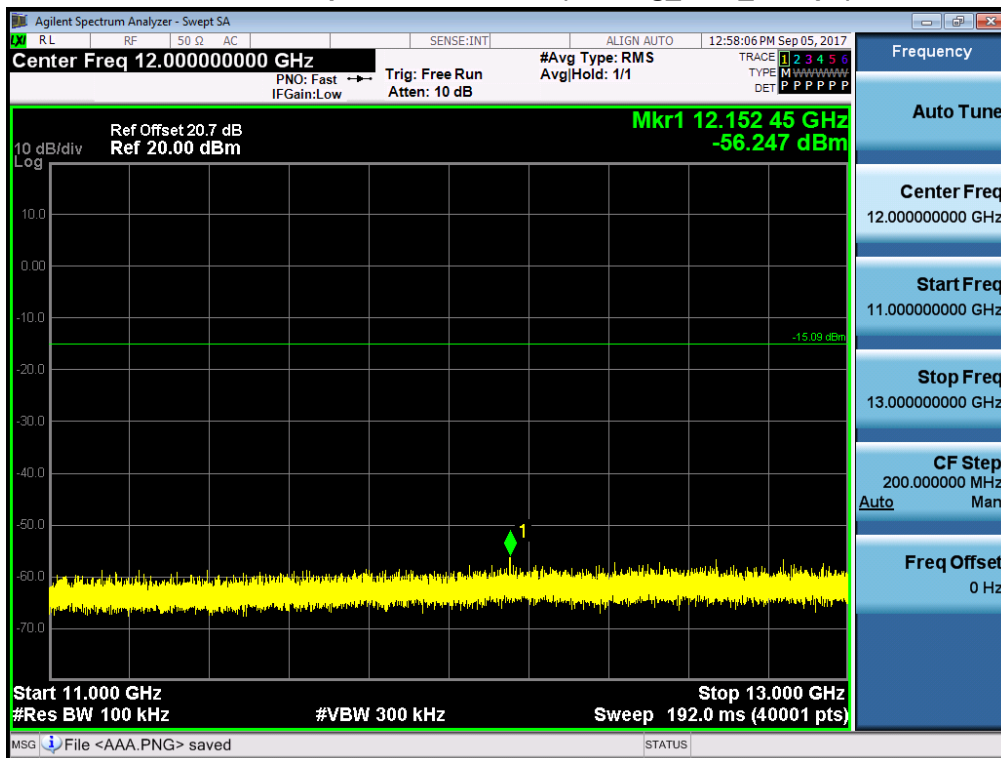
9 GHz ~ 11 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



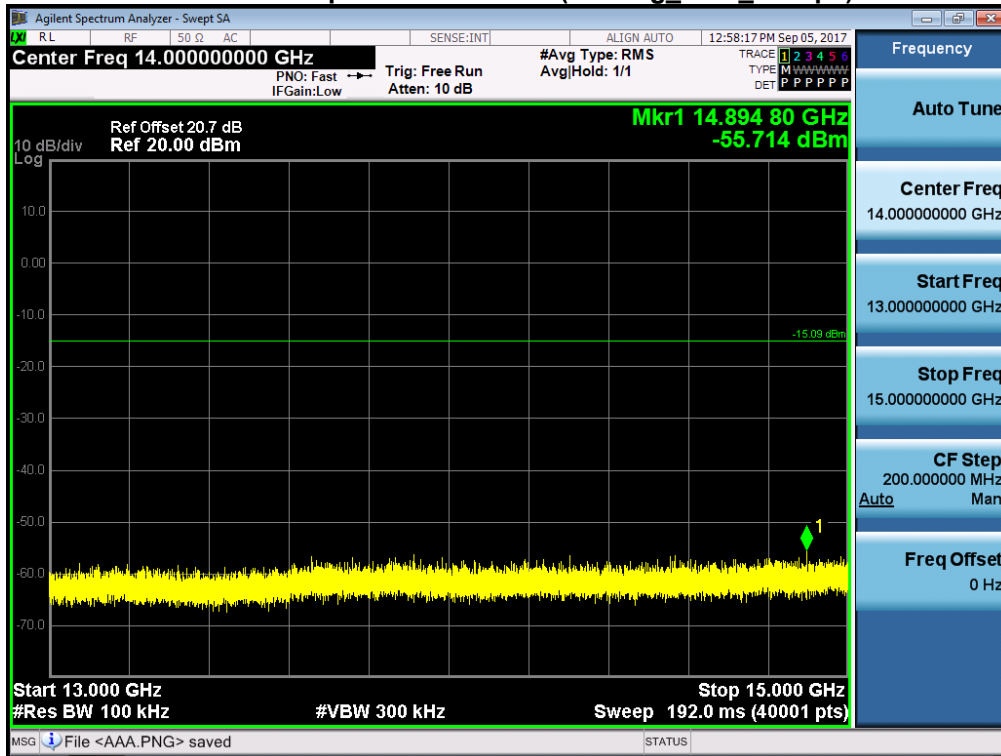
11 GHz ~ 13 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



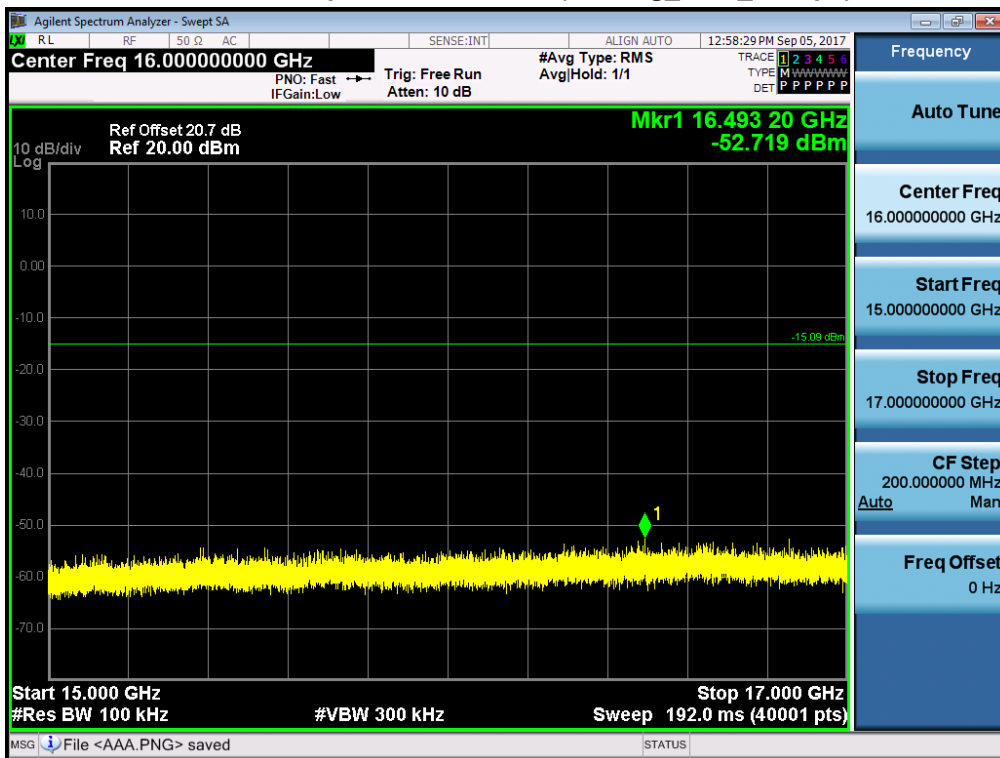
13 GHz ~ 15 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



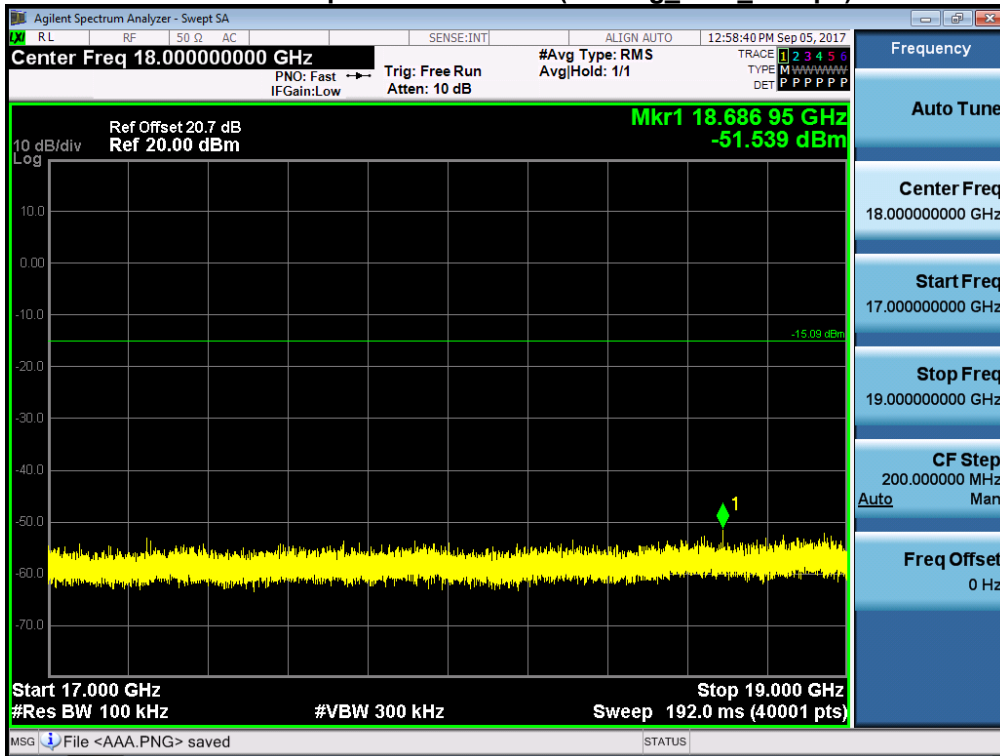
15 GHz ~ 17 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



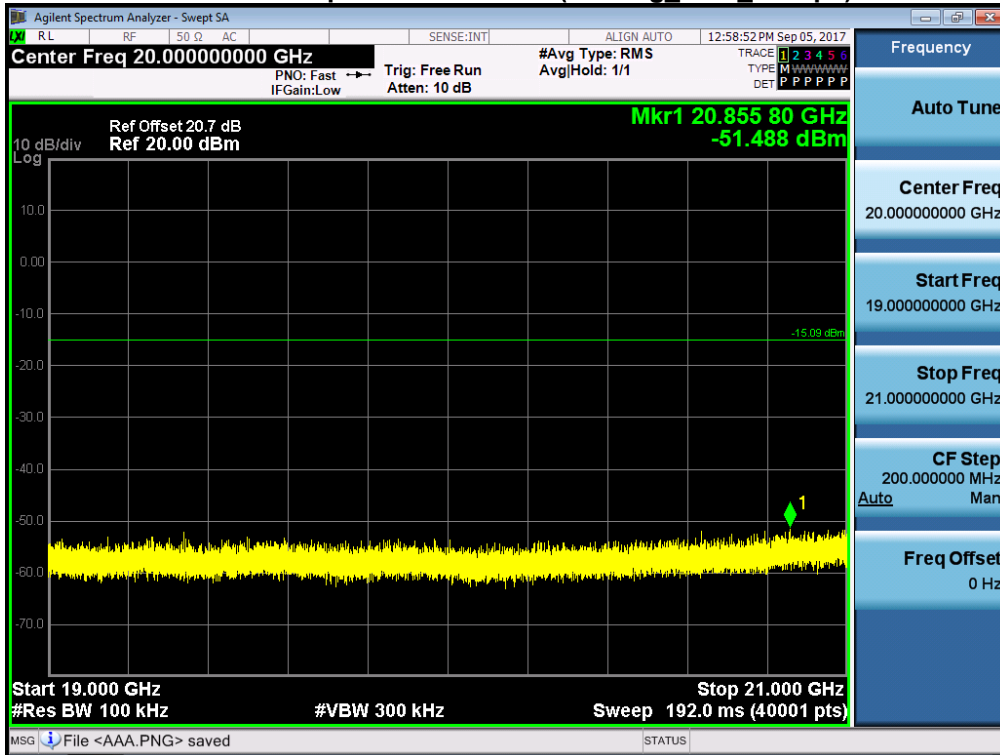
17 GHz ~ 19 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



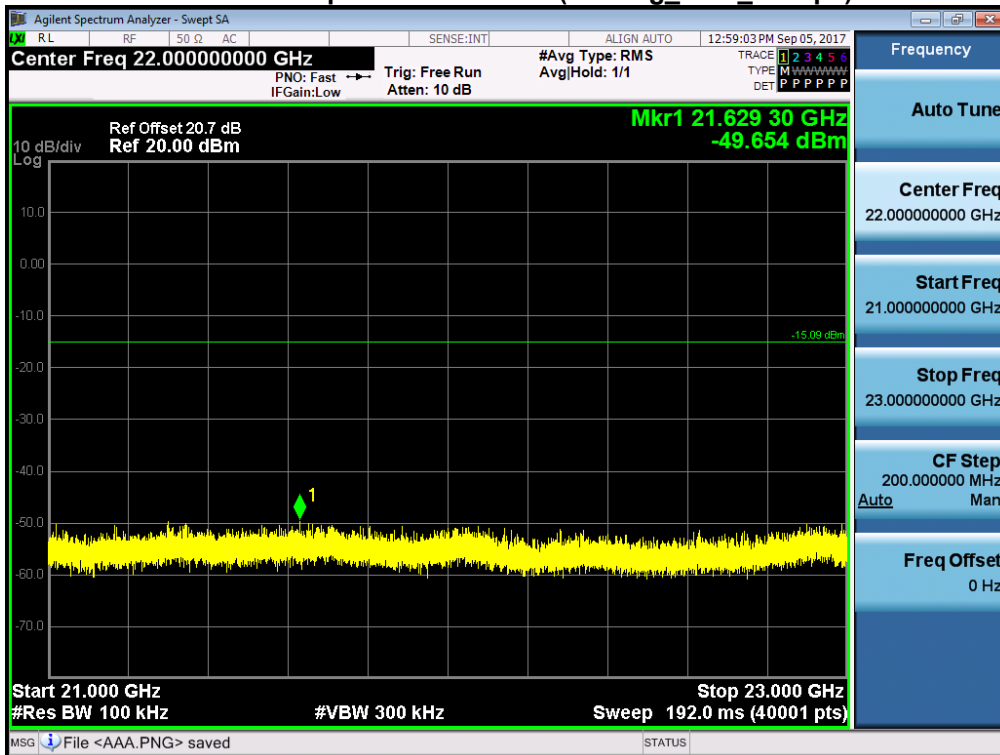
19 GHz ~ 21 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



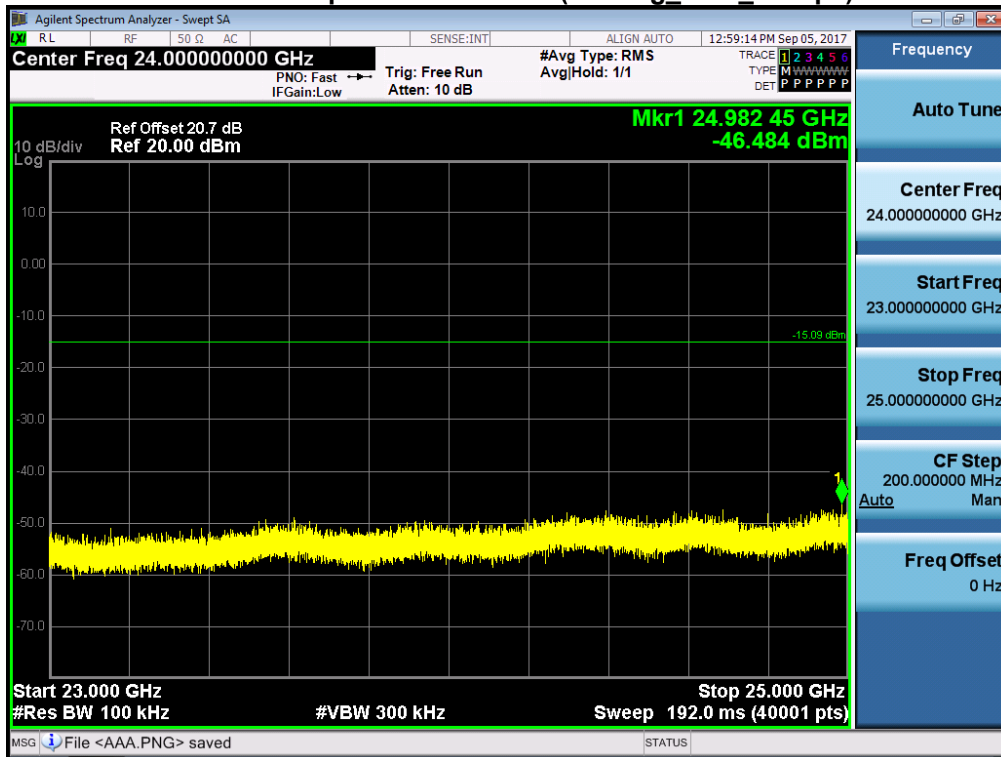
21 GHz ~ 23 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



23 GHz ~ 25 GHz

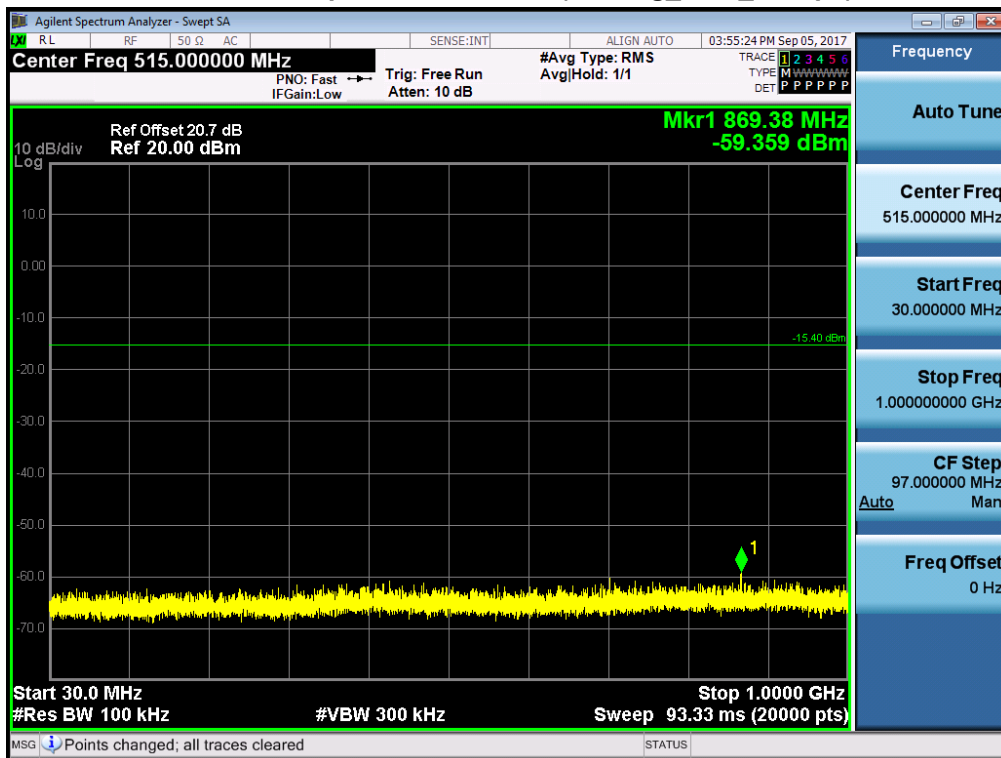
Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



[Ant.3]

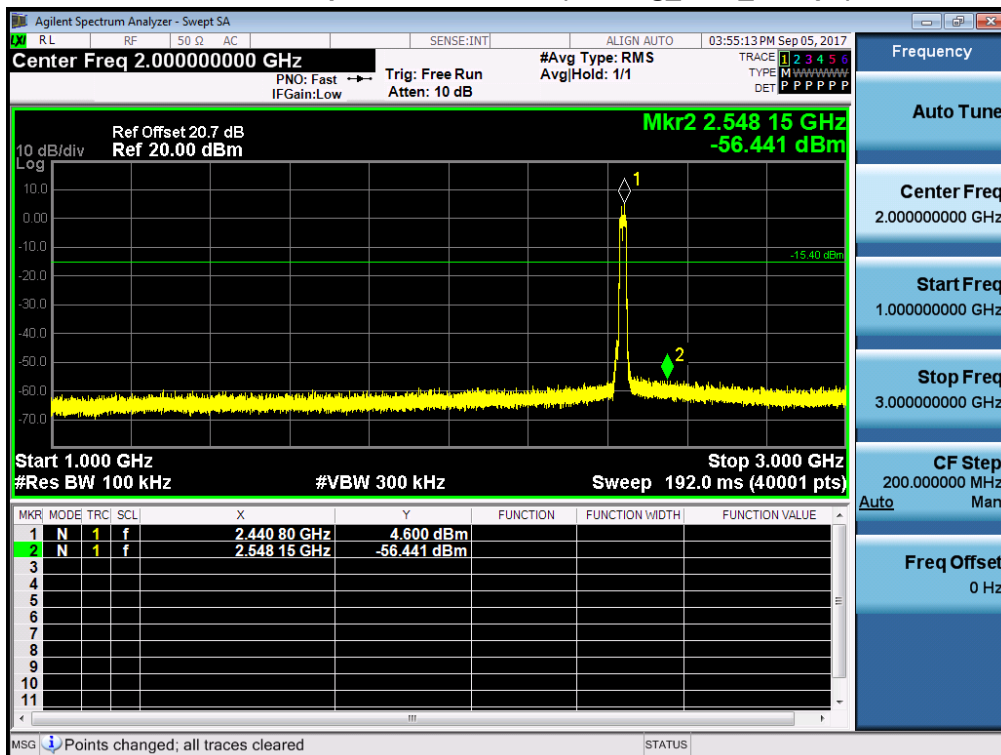
30 MHz ~ 1 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



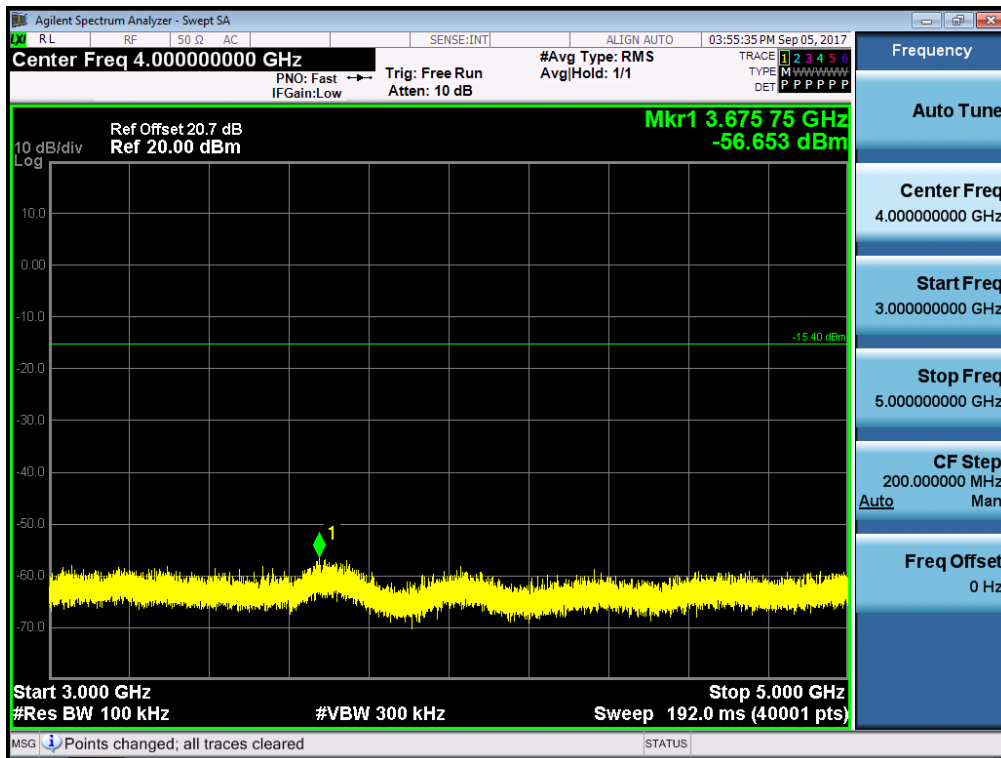
1 GHz ~ 3 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



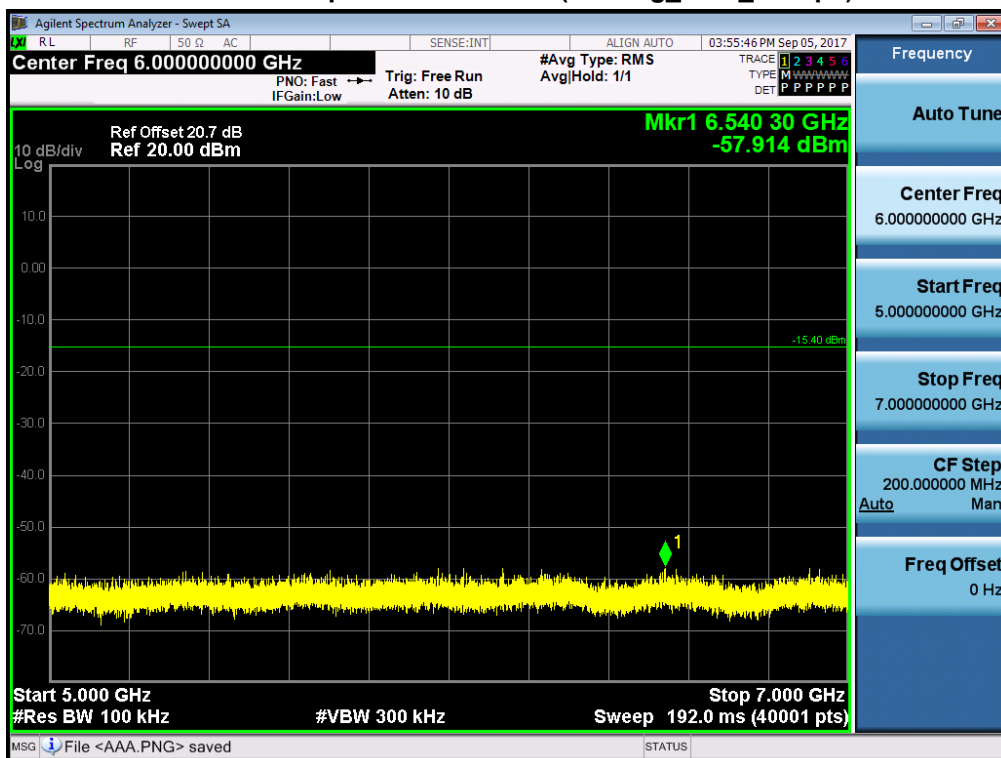
3 GHz ~ 5 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



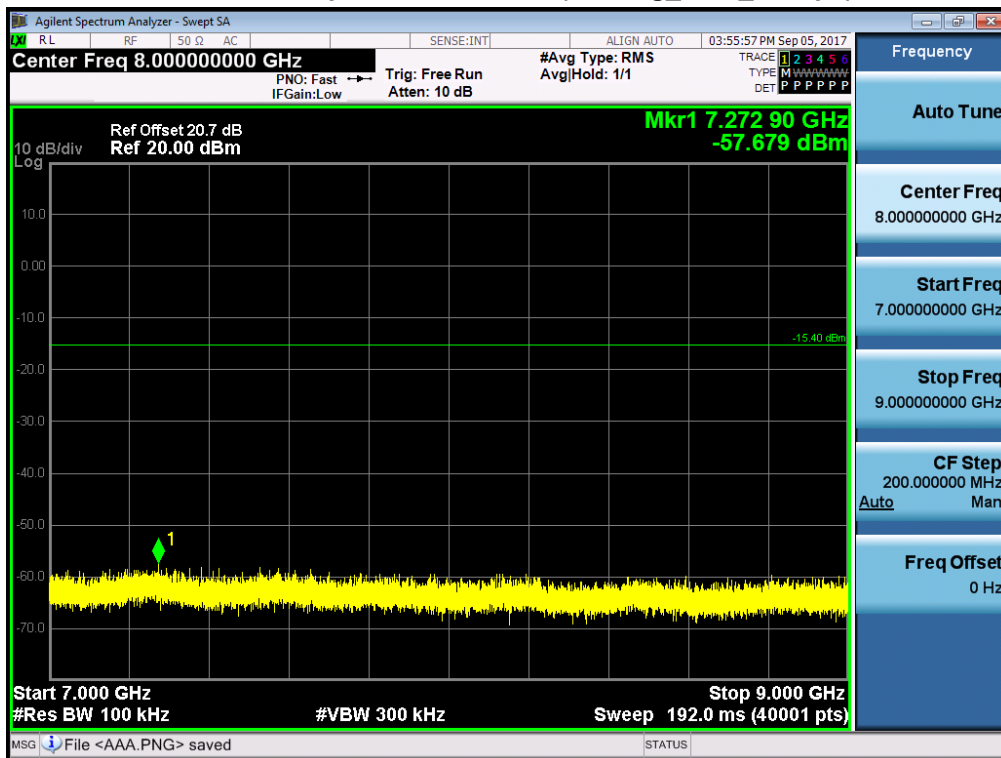
5 GHz ~ 7 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



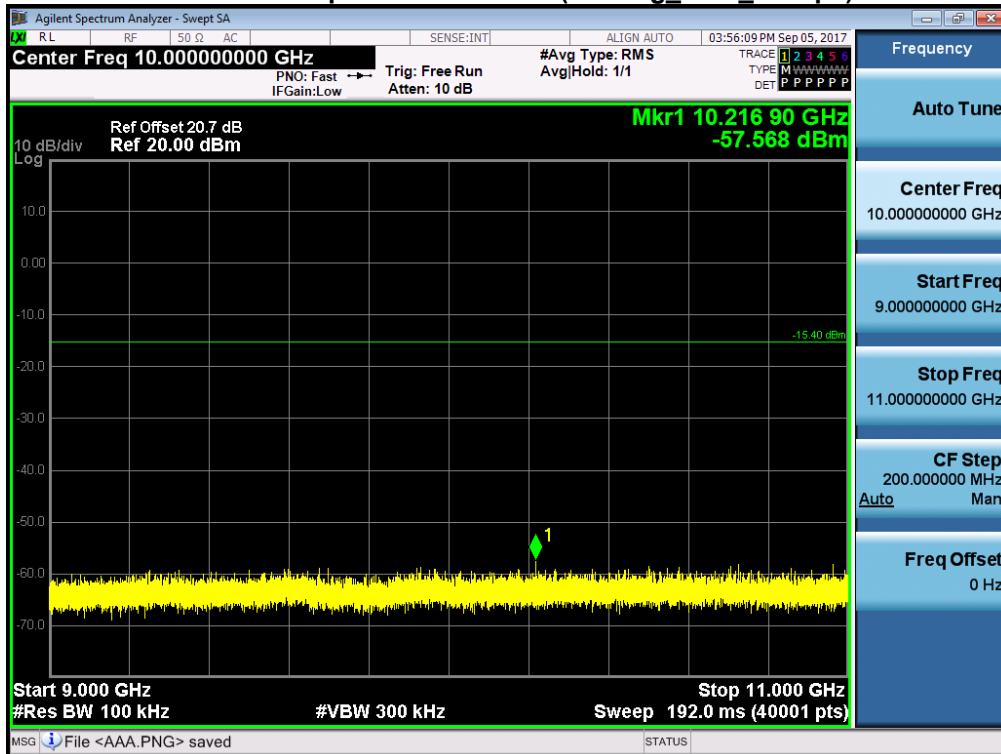
7 GHz ~ 9 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



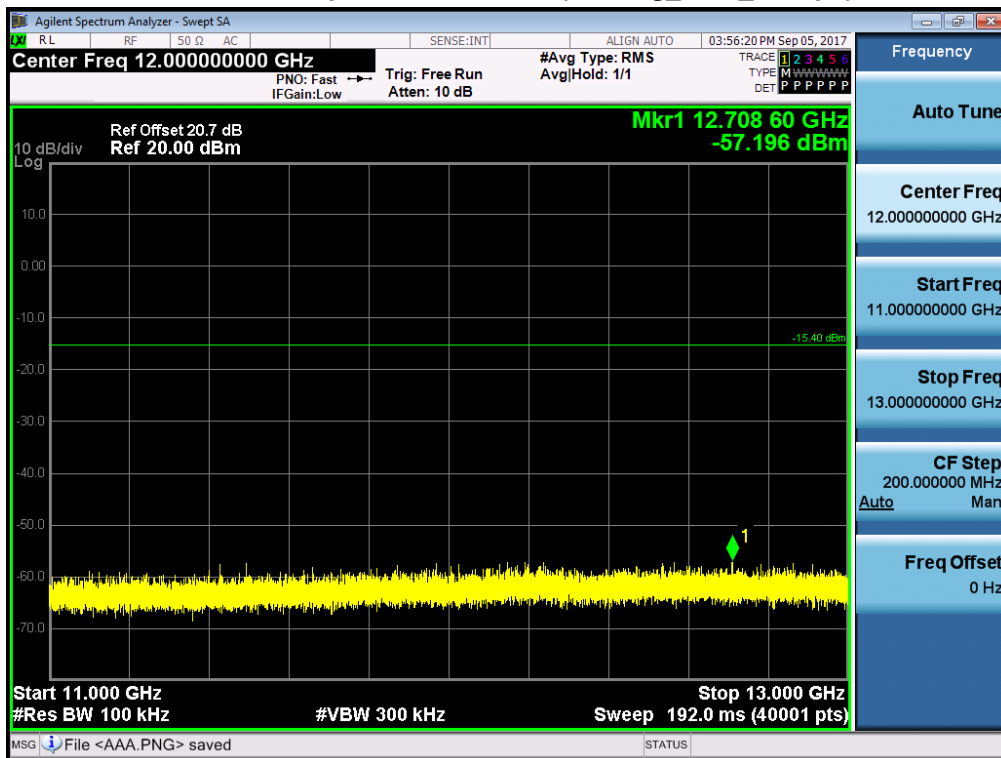
9 GHz ~ 11 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



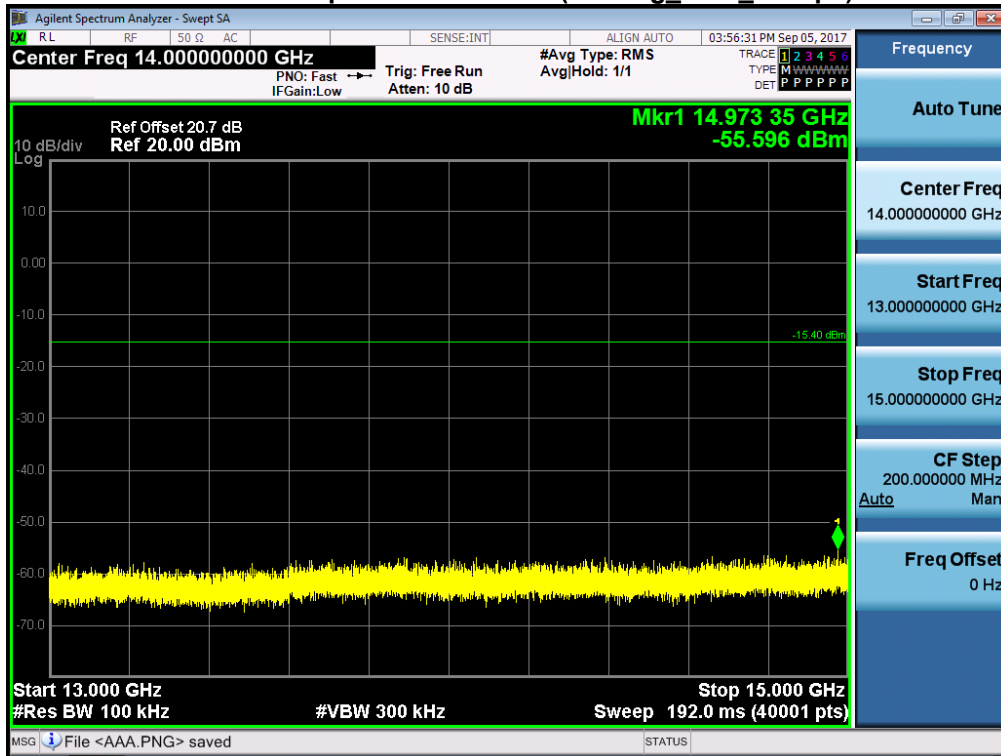
11 GHz ~ 13 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



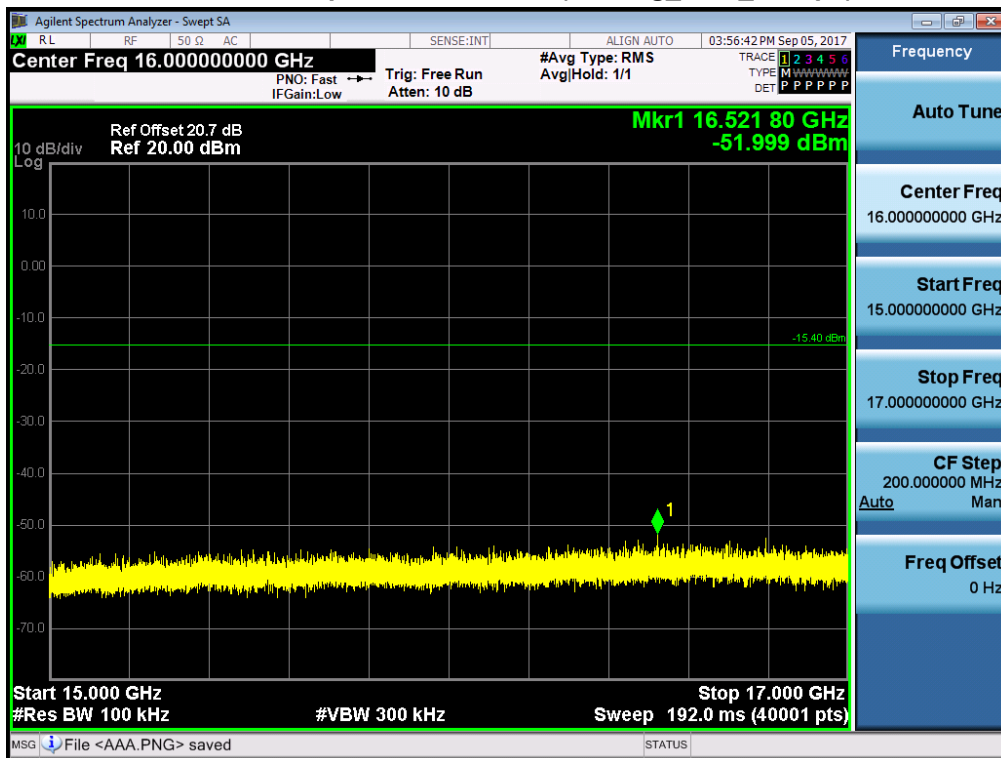
13 GHz ~ 15 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



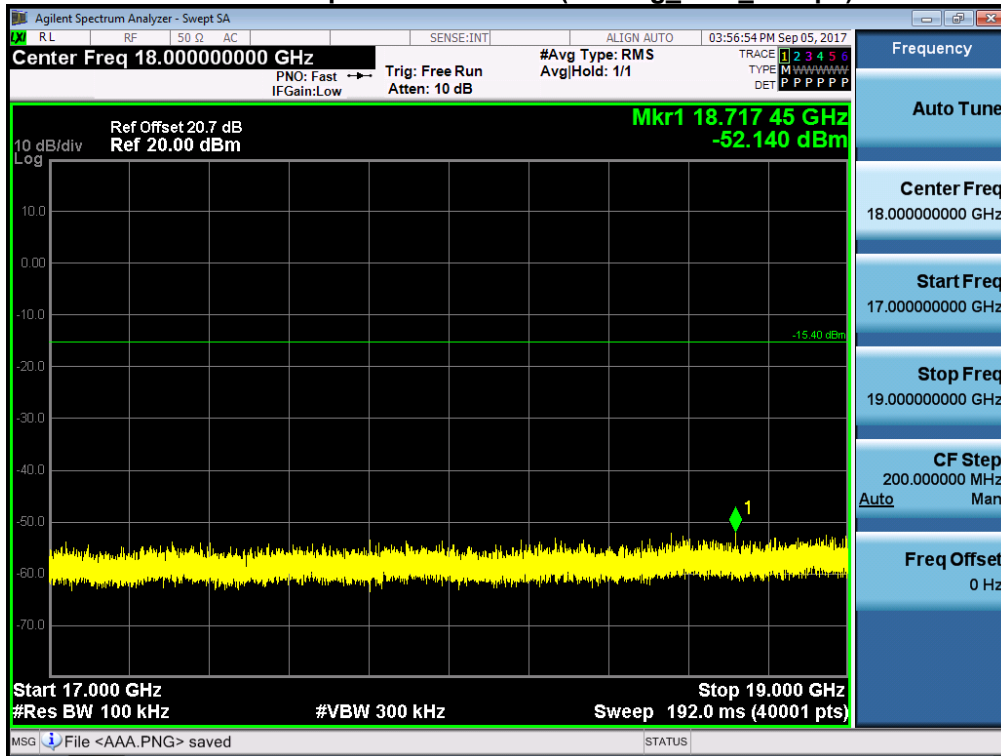
15 GHz ~ 17 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



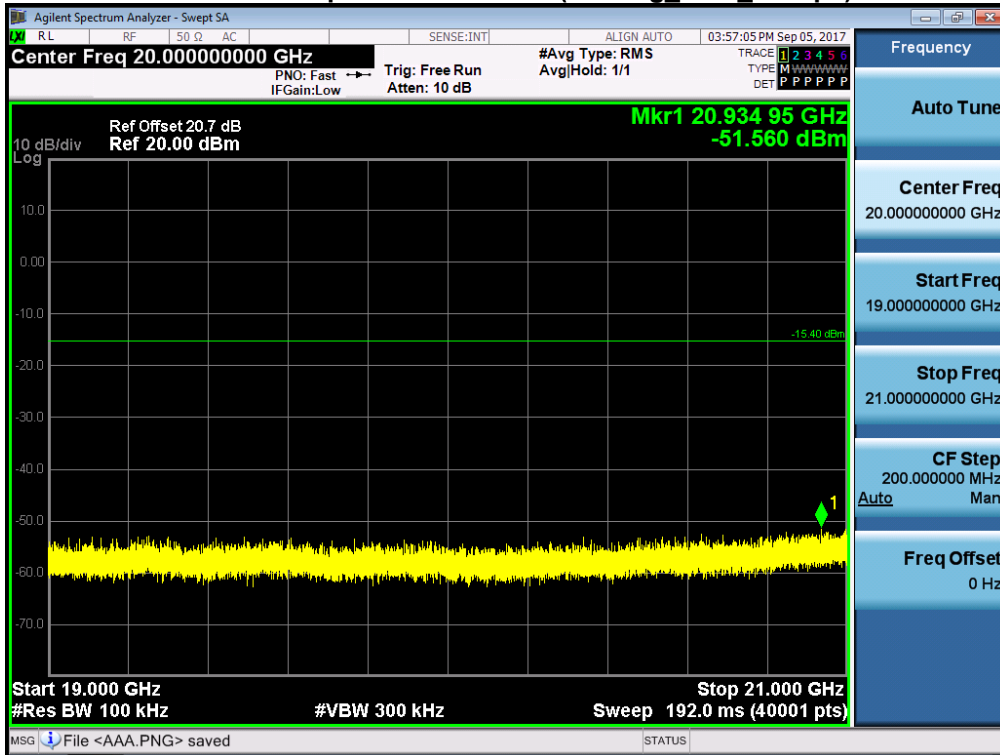
17 GHz ~ 19 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



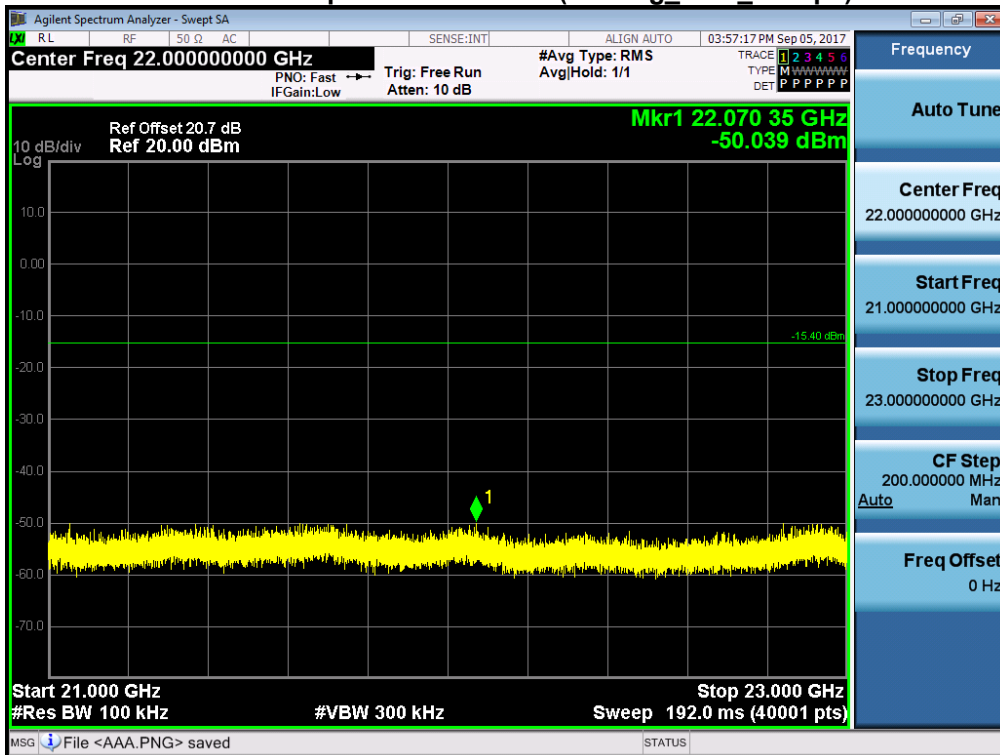
19 GHz ~ 21 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



21 GHz ~ 23 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



23 GHz ~ 25 GHz

Conducted Spurious Emission (802.11g_Ch.6_6 Mbps)



9.6 RADIATED MEASUREMENT

9.6.1 RADIATED SPURIOUS EMISSIONS.

Test Requirements and limit, §15.205, §15.209

Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

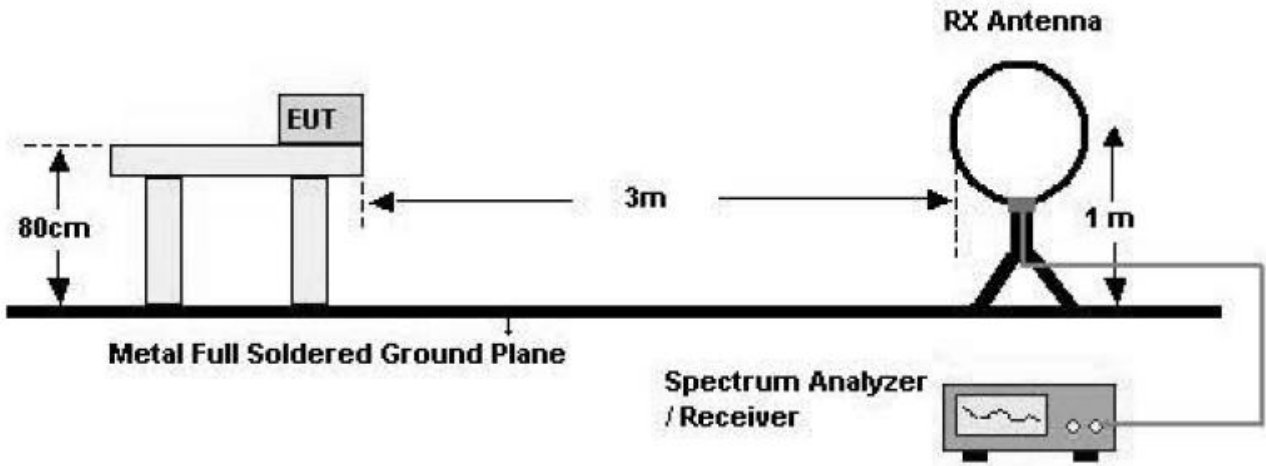
Test case

Mode	Operating Mode	Operating Ant.
802.11b/g/n	SISO	Ant 0
		Ant 1
		Ant 2
		Ant 3
802.11b/g/n	MIMO	Ant 0 & 1 & 2 & 3

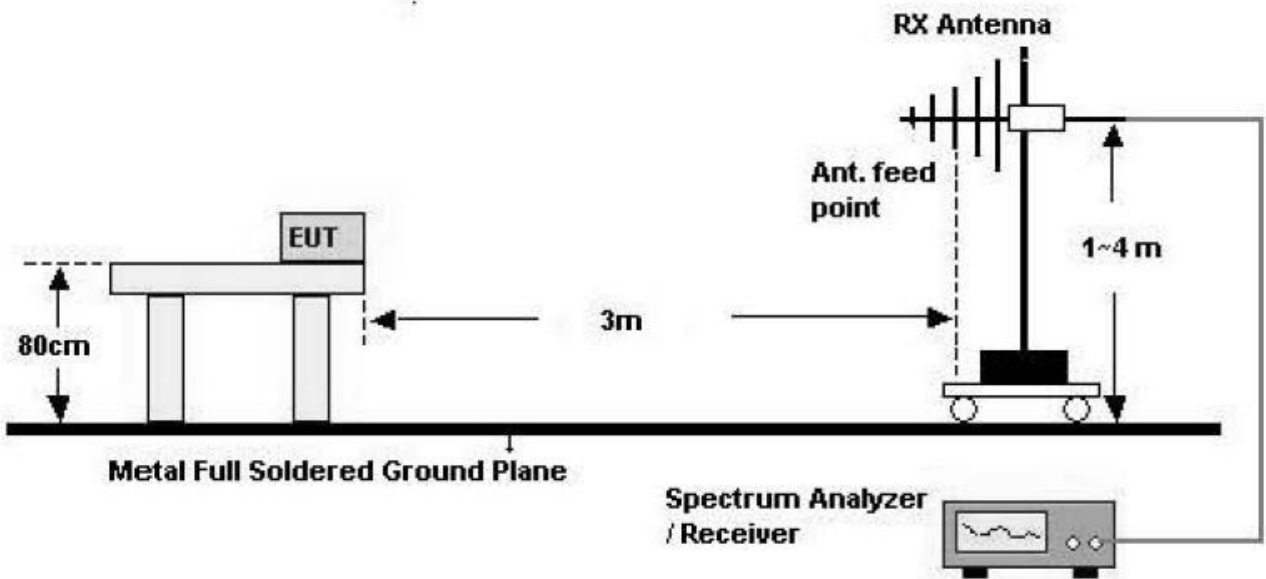
Note : In case of radiation test, we have done all test case. Worst case is MIMO(CDD) for 802.11g/n_HT20, HT40 mode and Ant.0(SISO) for 802.11b mode.

Test Configuration

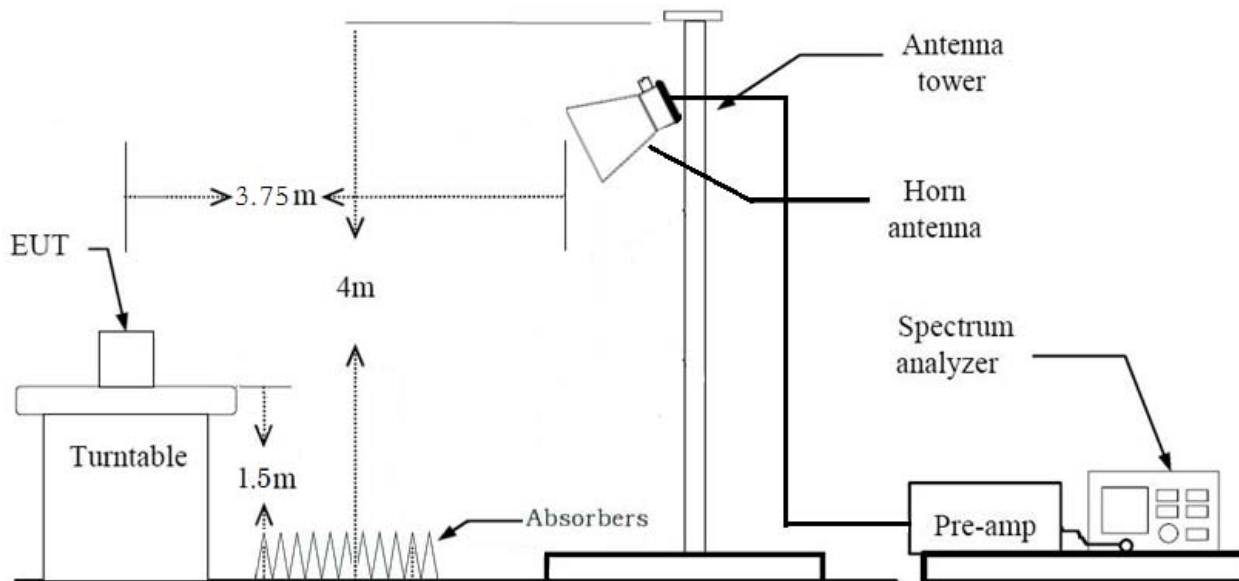
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



TEST PROCEDURE USED

Method 12.2.4 in KDB 558074 v04

Spectrum Setting

- Peak

Peak emission levels are measured by setting the instrument as follows:

RBW = cf. Table 1.

VBW $\geq 3 \times$ RBW.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweeps to continue until the trace stabilizes.

(Note that the required measurement time may be longer for low duty cycle applications).

Table 1 —RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

- Average (duty cycle 98%)

Set RBW = 1 MHz

Set VBW $\geq 3 \times$ RBW

Detector = RMS

Averaging type = power (*i.e.*, RMS).

Sweep time = auto.

Trace mode = average (at least 100 traces).

- Average (duty cycle < 98%, duty cycle variations are less than $\pm 2\%$)

Set RBW = 1 MHz

Set VBW $\geq 3 \times$ RBW

Detector = RMS.

Averaging type = power (*i.e.*, RMS).

Sweep time = auto.

Trace mode = average (at least 100 traces).

A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle.

Note :

1. According to SVSWR requirement in ANSI 63.4-2014, We performed the radiated test at 3.75 m distance from center of turn table. So, we applied the distance factor(reference distance : 3 m).
2. The duty cycle factor for 802.11 b/g/n_HT20, 40

[Ant 0] _Omni

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
b	1	12.418	12.508	99.28	0.031
g	6	2.067	2.132	96.95	0.134
n_HT20	MCS 0	5.003	5.064	98.81	0.052
n_HT40	MCS 0	2.427	2.492	97.38	0.115

[Ant 1] _Omni

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
b	1	12.418	12.508	99.28	0.031
g	6	2.062	2.131	96.76	0.143
n_HT20	MCS 0	5.003	5.074	98.61	0.061
n_HT40	MCS 0	2.427	2.493	97.36	0.116

[Ant 2] _Omni

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
b	1	12.448	12.508	99.52	0.021
g	6	2.062	2.127	96.94	0.135
n_HT20	MCS 0	5.003	5.074	98.61	0.061
n_HT40	MCS 0	2.427	2.493	97.36	0.116

[Ant 3] _Omni

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
b	1	12.448	12.508	99.52	0.021
g	6	2.063	2.132	96.75	0.144
n_HT20	MCS 0	5.003	5.074	98.61	0.061
n_HT40	MCS 0	2.427	2.493	97.36	0.116

[Ant 0] _Directional

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
b	1	12.418	12.508	99.28	0.031
g	6	2.067	2.132	96.95	0.134
n_HT20	MCS 0	5.003	5.064	98.81	0.052
n_HT40	MCS 0	2.427	2.492	97.38	0.115

[Ant 1] _Directional

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
b	1	12.418	12.508	99.28	0.031
g	6	2.067	2.132	96.95	0.134
n_HT20	MCS 0	5.003	5.064	98.81	0.052
n_HT40	MCS 0	2.427	2.492	97.38	0.115

[Ant 2] _Directional

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
b	1	12.418	12.508	99.28	0.031
g	6	2.067	2.132	96.95	0.134
n_HT20	MCS 0	5.003	5.064	98.81	0.052
n_HT40	MCS 0	2.427	2.492	97.38	0.115

[Ant 3] _Directional

Mode	Worst Data rate (Mbps)	T _{on} (ms)	T _{total} (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
b	1	12.418	12.508	99.28	0.031
g	6	2.067	2.132	96.95	0.134
n_HT20	MCS 0	5.003	5.064	98.81	0.052
n_HT40	MCS 0	2.427	2.492	97.38	0.115

TEST RESULTS**9 kHz – 30MHz****Operation Mode:** Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB μ V	dB /m	dB	(H/V)	dB μ V/m	dB μ V/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 9 kHz to the 30MHz.
2. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
3. Distance extrapolation factor = $40 \log$ (specific distance / test distance) (dB)
4. Limit line = specific Limits (dB μ V) + Distance extrapolation factor
5. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
6. The test results for below 30 MHz is correlated to an open site.
The result on OATS is about 2 dB higher than semi-anechoic chamber (10 m chamber)

TEST RESULTS**Below 1 GHz****Operation Mode:** Normal Mode

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dB μ V	dB /m	dB	(H/V)	dB μ V/m	dB μ V/m	dB
No Critical peaks found							

Notes:

1. Measuring frequencies from 30 MHz to the 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

[Omni]

Above 1 GHz

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	53.20	-4.16	V	49.04	73.98	24.94	PK
4824	40.65	-4.16	V	36.49	53.98	17.49	AV
7236	53.29	2.48	V	55.77	73.98	18.21	PK
7236	41.12	2.48	V	43.60	53.98	10.38	AV
4824	53.02	-4.16	H	48.86	73.98	25.12	PK
4824	40.52	-4.16	H	36.36	53.98	17.62	AV
7236	53.04	2.48	H	55.52	73.98	18.46	PK
7236	40.98	2.48	H	43.46	53.98	10.52	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2412
Channel No.	01 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	53.02	0.00	-4.16	V	48.86	73.98	25.12	PK
4824	40.91	0.14	-4.16	V	36.89	53.98	17.09	AV
7236	53.69	0.00	2.48	V	56.17	73.98	17.81	PK
7236	41.15	0.14	2.48	V	43.77	53.98	10.21	AV
4824	52.86	0.00	-4.16	H	48.70	73.98	25.28	PK
4824	40.79	0.14	-4.16	H	36.77	53.98	17.21	AV
7236	53.33	0.00	2.48	H	55.81	73.98	18.17	PK
7236	40.98	0.14	2.48	H	43.60	53.98	10.38	AV

Operation Mode: 802.11 n_HT20
 Transfer MCS Index: 0
 Operating Frequency: 2412
 Channel No.: 01 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	53.40	-4.16	V	49.24	73.98	24.74	PK
4824	42.36	-4.16	V	38.20	53.98	15.78	AV
7236	53.21	2.48	V	55.69	73.98	18.29	PK
7236	41.09	2.48	V	43.57	53.98	10.41	AV
4824	53.19	-4.16	H	49.03	73.98	24.95	PK
4824	42.13	-4.16	H	37.97	53.98	16.01	AV
7236	53.08	2.48	H	55.56	73.98	18.42	PK
7236	40.91	2.48	H	43.39	53.98	10.59	AV

Operation Mode: 802.11 n_HT40
 Transfer MCS Index: 0
 Operating Frequency: 2422
 Channel No.: 03 Ch

Frequency [MHz]	Reading [dBuV]	Duty Cycle Factor [dB]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4844	54.11	0.00	-4.10	V	50.01	73.98	23.97	PK
4844	42.98	0.12	-4.10	V	39.00	53.98	14.98	AV
7266	53.08	0.00	2.84	V	55.92	73.98	18.06	PK
7266	41.55	0.12	2.84	V	44.51	53.98	9.47	AV
4844	53.98	0.00	-4.10	H	49.88	73.98	24.10	PK
4844	43.12	0.12	-4.10	H	39.14	53.98	14.84	AV
7266	52.27	0.00	2.84	H	55.11	73.98	18.87	PK
7266	41.33	0.12	2.84	H	44.29	53.98	9.69	AV

* A.F.: Ant. Factor / C.L.: Cable Loss / A.G.: Amp. Gain / D.F.: Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor(802.11b/n_HT20)
5. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor + Duty Cycle Factor(802.11g/n_HT40)
6. We have done 802.11b/g/n mode and all data rate. Worst data rate is the lowest data of each mode.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode: 802.11 b
 Transfer Rate: 1 Mbps
 Operating Frequency: 2437
 Channel No.: 06 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	53.66	-4.01	V	49.65	73.98	24.33	PK
4874	41.40	-4.01	V	37.39	53.98	16.59	AV
7311	53.41	2.86	V	56.27	73.98	17.71	PK
7311	41.48	2.86	V	44.34	53.98	9.64	AV
4874	53.27	-4.01	H	49.26	73.98	24.72	PK
4874	41.11	-4.01	H	37.10	53.98	16.88	AV
7311	53.11	2.86	H	55.97	73.98	18.01	PK
7311	41.16	2.86	H	44.02	53.98	9.96	AV

Operation Mode: 802.11 g
 Transfer Rate: 6 Mbps
 Operating Frequency: 2437
 Channel No.: 06 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	56.42	0.00	-4.01	V	52.41	73.98	21.57	PK
4874	44.13	0.14	-4.01	V	40.26	53.98	13.72	AV
7311	53.76	0.00	2.86	V	56.62	73.98	17.36	PK
7311	41.79	0.14	2.86	V	44.79	53.98	9.19	AV
4874	56.17	0.00	-4.01	H	52.16	73.98	21.82	PK
4874	43.88	0.14	-4.01	H	40.01	53.98	13.97	AV
7311	53.48	0.00	2.86	H	56.34	73.98	17.64	PK
7311	41.42	0.14	2.86	H	44.42	53.98	9.56	AV

Operation Mode: 802.11 n_HT20
 Transfer MCS Index: 0
 Operating Frequency 2437
 Channel No. 06 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	58.34	-4.01	V	54.33	73.98	19.65	PK
4874	43.84	-4.01	V	39.83	53.98	14.15	AV
7311	53.13	2.86	V	55.99	73.98	17.99	PK
7311	41.28	2.86	V	44.14	53.98	9.84	AV
4874	58.13	-4.01	H	54.12	73.98	19.86	PK
4874	43.57	-4.01	H	39.56	53.98	14.42	AV
7311	52.91	2.86	H	55.77	73.98	18.21	PK
7311	41.02	2.86	H	43.88	53.98	10.10	AV

Operation Mode: 802.11 n_HT40
 Transfer MCS Index: 0
 Operating Frequency 2437
 Channel No. 06 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	54.93	0.00	-4.01	V	50.92	73.98	23.06	PK
4874	43.63	0.12	-4.01	V	39.74	53.98	14.24	AV
7311	53.38	0.00	2.86	V	56.24	73.98	17.74	PK
7311	41.87	0.12	2.86	V	44.85	53.98	9.13	AV
4874	54.62	0.00	-4.01	H	50.61	73.98	23.37	PK
4874	43.38	0.12	-4.01	H	39.49	53.98	14.49	AV
7311	53.07	0.00	2.86	H	55.93	73.98	18.05	PK
7311	41.55	0.12	2.86	H	44.53	53.98	9.45	AV

* A.F.: Ant. Factor / C.L.: Cable Loss / A.G.: Amp. Gain / D.F: Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor(802.11b/n_HT20)
5. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor + Duty Cycle Factor(802.11g/n_HT40)
6. We have done 802.11b/g/n mode and all data rate. Worst data rate is the lowest data of each mode.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode: 802.11 b
 Transfer Rate: 1 Mbps
 Operating Frequency: 2462
 Channel No. 11 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	58.17	-3.74	V	54.43	73.98	19.55	PK
4924	43.03	-3.74	V	39.29	53.98	14.69	AV
7386	53.08	3.04	V	56.12	73.98	17.86	PK
7386	41.21	3.04	V	44.25	53.98	9.73	AV
4924	57.92	-3.74	H	54.18	73.98	19.80	PK
4924	42.84	-3.74	H	39.10	53.98	14.88	AV
7386	52.96	3.04	H	56.00	73.98	17.98	PK
7386	41.00	3.04	H	44.04	53.98	9.94	AV

Operation Mode: 802.11 g
 Transfer Rate: 6 Mbps
 Operating Frequency: 2462
 Channel No. 11 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	53.84	0.00	-3.74	V	50.10	73.98	23.88	PK
4924	41.00	0.14	-3.74	V	37.40	53.98	16.58	AV
7386	53.18	0.00	3.04	V	56.22	73.98	17.76	PK
7386	41.69	0.14	3.04	V	44.87	53.98	9.11	AV
4924	53.65	0.00	-3.74	H	49.91	73.98	24.07	PK
4924	40.80	0.14	-3.74	H	37.20	53.98	16.78	AV
7386	52.76	0.00	3.04	H	55.80	73.98	18.18	PK
7386	41.42	0.14	3.04	H	44.60	53.98	9.38	AV

Operation Mode: 802.11 n_HT20
 Transfer MCS Index: 0
 Operating Frequency: 2462
 Channel No.: 11 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	52.60	-3.74	V	48.86	73.98	25.12	PK
4924	40.70	-3.74	V	36.96	53.98	17.02	AV
7386	53.61	3.04	V	56.65	73.98	17.33	PK
7386	41.35	3.04	V	44.39	53.98	9.59	AV
4924	52.37	-3.74	H	48.63	73.98	25.35	PK
4924	40.28	-3.74	H	36.54	53.98	17.44	AV
7386	53.33	3.04	H	56.37	73.98	17.61	PK
7386	41.09	3.04	H	44.13	53.98	9.85	AV

Operation Mode: 802.11 n_HT40
 Transfer MCS Index: 0
 Operating Frequency: 2452
 Channel No.: 9 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4904	54.10	0.00	-4.08	V	50.02	73.98	23.96	PK
4904	42.88	0.12	-4.08	V	38.92	53.98	15.06	AV
7356	53.07	0.00	3.00	V	56.07	73.98	17.91	PK
7356	41.27	0.12	3.00	V	44.39	53.98	9.59	AV
4904	54.16	0.00	-4.08	H	50.08	73.98	23.90	PK
4904	43.23	0.12	-4.08	H	39.27	53.98	14.71	AV
7356	52.43	0.00	3.00	H	55.43	73.98	18.55	PK
7356	40.96	0.12	3.00	H	44.08	53.98	9.90	AV

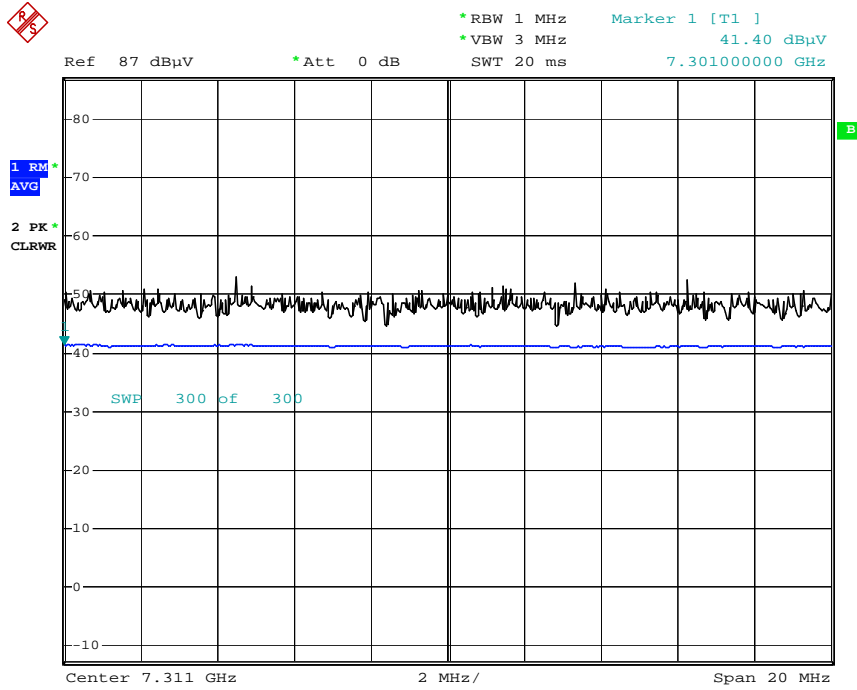
* A.F.: Ant. Factor / C.L.: Cable Loss / A.G.: Amp. Gain / D.F: Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor(802.11b/n_HT20)
5. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor + Duty Cycle Factor(802.11g/n_HT40)
6. We have done 802.11b/g/n mode and all data rate. Worst data rate is the lowest data of each mode.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

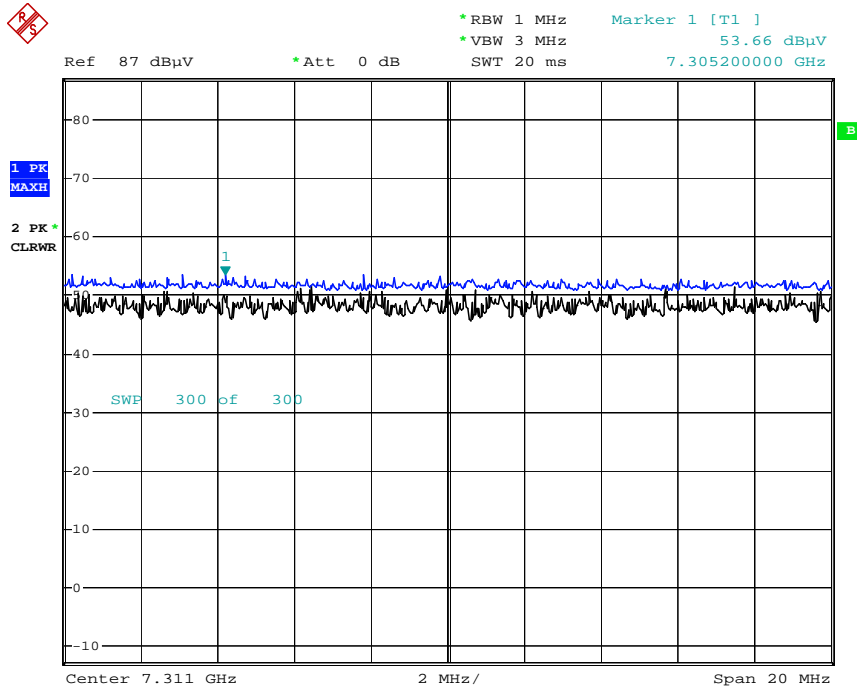
RESULT PLOTS (Worst Case: X-V)

Radiated Spurious Emissions plot – Average Reading (802.11b, Ch.6 2nd Harmonic)



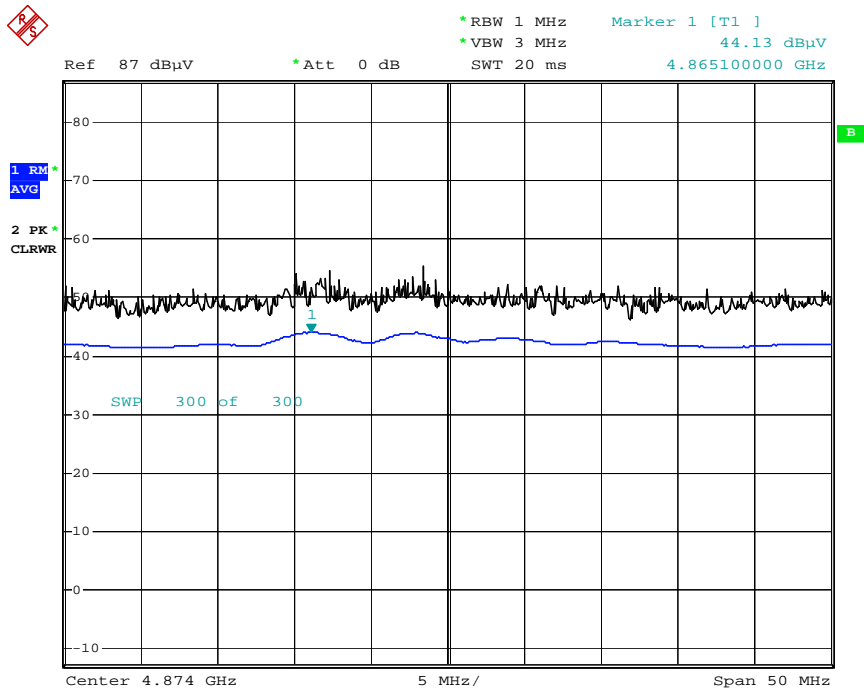
Date: 10.AUG.2017 07:43:45

Radiated Spurious Emissions plot – Peak Reading (802.11b, Ch.6 2nd Harmonic)



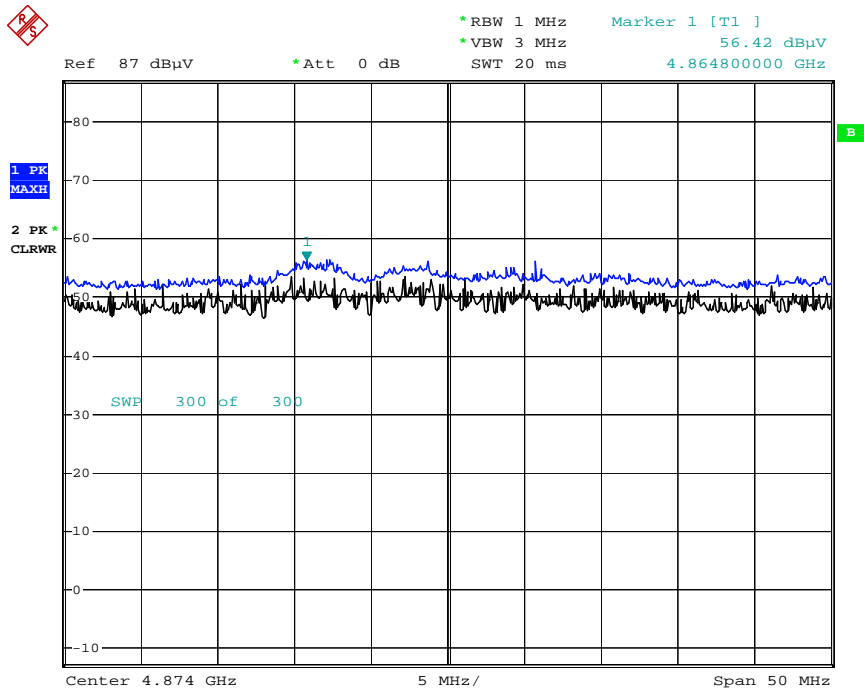
Date: 10.AUG.2017 07:44:45

Radiated Spurious Emissions plot – Average Reading (802.11g, Ch.6 2nd Harmonic)



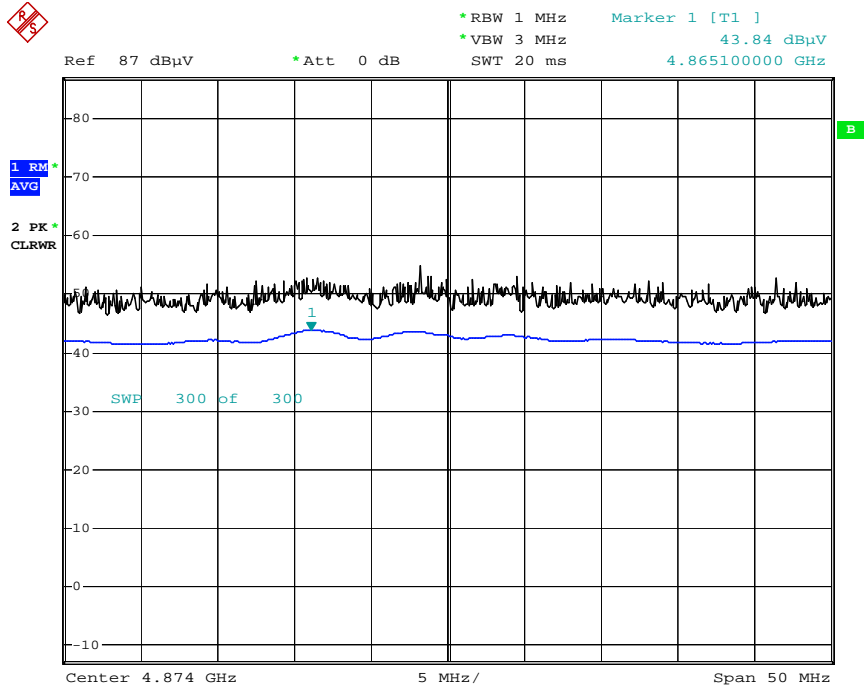
Date: 10.AUG.2017 07:51:54

Radiated Spurious Emissions plot – Peak Reading (802.11g, Ch.6 2nd Harmonic)



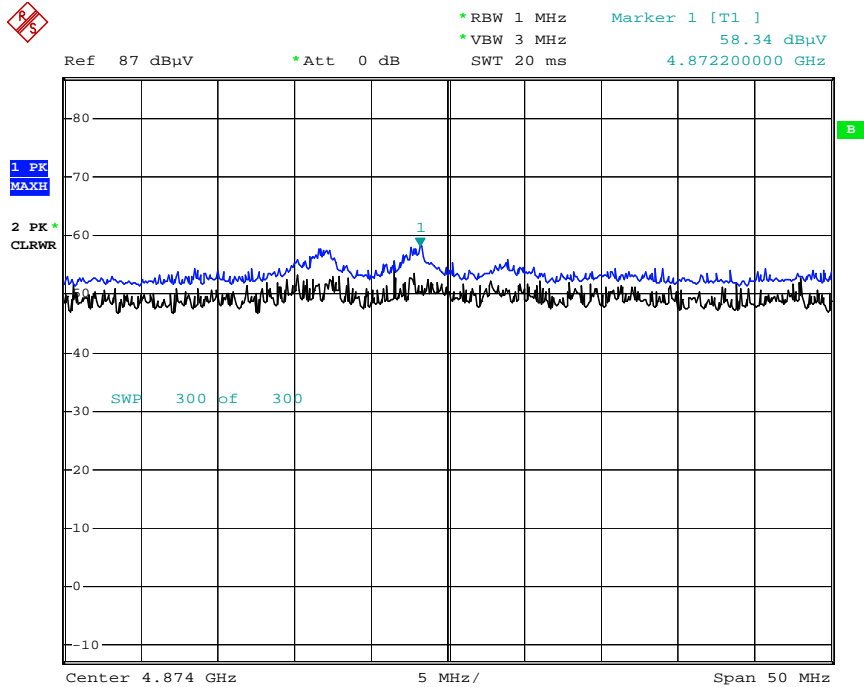
Date: 10.AUG.2017 07:52:29

Radiated Spurious Emissions plot – Average Reading (802.11n_HT20, Ch.6 2nd Harmonic)



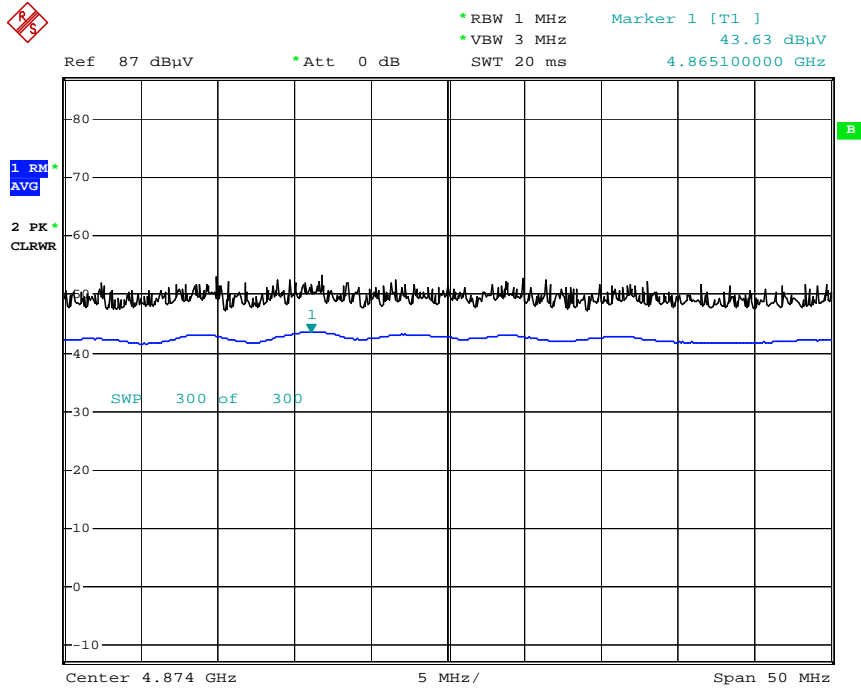
Date: 10.AUG.2017 07:55:19

Radiated Spurious Emissions plot – Peak Reading (802.11n_HT20, Ch.6 2nd Harmonic)



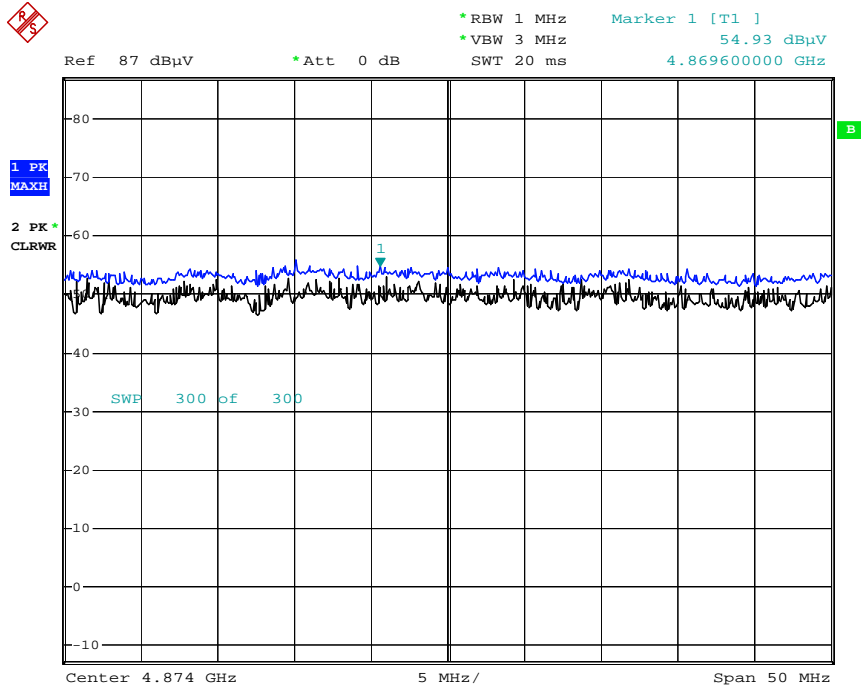
Date: 10.AUG.2017 08:07:35

Radiated Spurious Emissions plot – Average Reading (802.11n_HT40, Ch.6 2nd Harmonic)



Date: 10.AUG.2017 08:02:31

Radiated Spurious Emissions plot – Peak Reading (802.11n_HT40, Ch.6 2nd Harmonic)



Date: 10.AUG.2017 08:03:07

Note : Only the worst case plots for Radiated Spurious Emissions.

[Directional]

Above 1 GHz

Operation Mode: 802.11 b
 Transfer Rate: 1 Mbps
 Operating Frequency: 2412
 Channel No. 01 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	52.61	-4.16	V	48.45	73.98	25.53	PK
4824	41.33	-4.16	V	37.17	53.98	16.81	AV
7236	53.27	2.48	V	55.75	73.98	18.23	PK
7236	40.98	2.48	V	43.46	53.98	10.52	AV
4824	53.90	-4.16	H	49.74	73.98	24.24	PK
4824	42.56	-4.16	H	38.40	53.98	15.58	AV
7236	53.73	2.48	H	56.21	73.98	17.77	PK
7236	41.25	2.48	H	43.73	53.98	10.25	AV

Operation Mode: 802.11 g
 Transfer Rate: 6 Mbps
 Operating Frequency: 2412
 Channel No. 01 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	53.57	0.00	-4.16	V	49.41	73.98	24.57	PK
4824	42.11	0.13	-4.16	V	38.08	53.98	15.90	AV
7236	53.44	0.00	2.48	V	55.92	73.98	18.06	PK
7236	40.91	0.13	2.48	V	43.52	53.98	10.46	AV
4824	53.89	0.00	-4.16	H	49.73	73.98	24.25	PK
4824	42.42	0.13	-4.16	H	38.39	53.98	15.59	AV
7236	53.78	0.00	2.48	H	56.26	73.98	17.72	PK
7236	41.28	0.13	2.48	H	43.89	53.98	10.09	AV

Operation Mode: 802.11 n_HT20
 Transfer MCS Index: 0
 Operating Frequency 2412
 Channel No. 01 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4824	53.49	-4.16	V	49.33	73.98	24.65	PK
4824	42.02	-4.16	V	37.86	53.98	16.12	AV
7236	53.17	2.48	V	55.65	73.98	18.33	PK
7236	40.99	2.48	V	43.47	53.98	10.51	AV
4824	53.84	-4.16	H	49.68	73.98	24.30	PK
4824	42.37	-4.16	H	38.21	53.98	15.77	AV
7236	53.58	2.48	H	56.06	73.98	17.92	PK
7236	41.28	2.48	H	43.76	53.98	10.22	AV

Operation Mode: 802.11 n_HT40
 Transfer MCS Index: 0
 Operating Frequency 2422
 Channel No. 03 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4844	53.48	0.00	-4.10	V	49.38	73.98	24.60	PK
4844	41.88	0.12	-4.10	V	37.90	53.98	16.09	AV
7266	53.37	0.00	2.84	V	56.21	73.98	17.77	PK
7266	41.11	0.12	2.84	V	44.07	53.98	9.92	AV
4844	53.68	0.00	-4.10	H	49.58	73.98	24.40	PK
4844	42.24	0.12	-4.10	H	38.26	53.98	15.73	AV
7266	53.44	0.00	2.84	H	56.28	73.98	17.70	PK
7266	41.37	0.12	2.84	H	44.33	53.98	9.65	AV

* A.F.: Ant. Factor / C.L.: Cable Loss / A.G.: Amp. Gain / D.F: Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor(802.11b/n_HT20)
5. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor + Duty Cycle Factor(802.11g/n_HT40)
6. We have done 802.11b/g/n mode and all data rate. Worst data rate is the lowest data of each mode.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode:	802.11 b
Transfer Rate:	1 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	53.54	-4.01	V	49.53	73.98	24.45	PK
4874	44.20	-4.01	V	40.19	53.98	13.79	AV
7311	51.67	2.86	V	54.53	73.98	19.45	PK
7311	39.84	2.86	V	42.70	53.98	11.28	AV
4874	55.74	-4.01	H	51.73	73.98	22.25	PK
4874	46.11	-4.01	H	42.10	53.98	11.88	AV
7311	53.87	2.86	H	56.73	73.98	17.25	PK
7311	41.49	2.86	H	44.35	53.98	9.63	AV

Operation Mode:	802.11 g
Transfer Rate:	6 Mbps
Operating Frequency	2437
Channel No.	06 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	53.70	0.00	-4.01	V	49.69	73.98	24.29	PK
4874	42.49	0.13	-4.01	V	38.61	53.98	15.37	AV
7311	51.68	0.00	2.86	V	54.54	73.98	19.44	PK
7311	39.57	0.13	2.86	V	42.56	53.98	11.42	AV
4874	55.75	0.00	-4.01	H	51.74	73.98	22.24	PK
4874	43.84	0.13	-4.01	H	39.96	53.98	14.02	AV
7311	53.46	0.00	2.86	H	56.32	73.98	17.66	PK
7311	41.46	0.13	2.86	H	44.45	53.98	9.53	AV

Operation Mode: 802.11 n_HT20
 Transfer MCS Index: 0
 Operating Frequency 2437
 Channel No. 06 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	53.08	-4.01	V	49.07	73.98	24.91	PK
4874	41.61	-4.01	V	37.60	53.98	16.38	AV
7311	51.69	2.86	V	54.55	73.98	19.43	PK
7311	39.12	2.86	V	41.98	53.98	12.00	AV
4874	55.21	-4.01	H	51.20	73.98	22.78	PK
4874	43.73	-4.01	H	39.72	53.98	14.26	AV
7311	53.37	2.86	H	56.23	73.98	17.75	PK
7311	41.51	2.86	H	44.37	53.98	9.61	AV

Operation Mode: 802.11 n_HT40
 Transfer MCS Index: 0
 Operating Frequency 2437
 Channel No. 06 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4874	53.00	0.00	-4.01	V	48.99	73.98	24.99	PK
4874	41.52	0.12	-4.01	V	37.63	53.98	16.36	AV
7311	52.38	0.00	2.86	V	55.24	73.98	18.74	PK
7311	39.86	0.12	2.86	V	42.84	53.98	11.15	AV
4874	55.06	0.00	-4.01	H	51.05	73.98	22.93	PK
4874	43.71	0.12	-4.01	H	39.82	53.98	14.17	AV
7311	54.40	0.00	2.86	H	57.26	73.98	16.72	PK
7311	41.50	0.12	2.86	H	44.48	53.98	9.51	AV

* A.F.: Ant. Factor / C.L.: Cable Loss / A.G.: Amp. Gain / D.F: Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor(802.11b/n_HT20)
5. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor + Duty Cycle Factor(802.11g/n_HT40)
6. We have done 802.11b/g/n mode and all data rate. Worst data rate is the lowest data of each mode.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

Operation Mode: 802.11 b
 Transfer Rate: 1 Mbps
 Operating Frequency: 2462
 Channel No. 11 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	53.29	-3.74	V	49.55	73.98	24.43	PK
4924	41.89	-3.74	V	38.15	53.98	15.83	AV
7386	53.48	3.04	V	56.52	73.98	17.46	PK
7386	40.83	3.04	V	43.87	53.98	10.11	AV
4924	53.62	-3.74	H	49.88	73.98	24.10	PK
4924	42.23	-3.74	H	38.49	53.98	15.49	AV
7386	53.77	3.04	H	56.81	73.98	17.17	PK
7386	41.05	3.04	H	44.09	53.98	9.89	AV

Operation Mode: 802.11 g
 Transfer Rate: 6 Mbps
 Operating Frequency: 2462
 Channel No. 11 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	53.22	0.00	-3.74	V	49.48	73.98	24.50	PK
4924	41.89	0.13	-3.74	V	38.28	53.98	15.70	AV
7386	53.27	0.00	3.04	V	56.31	73.98	17.67	PK
7386	40.84	0.13	3.04	V	44.01	53.98	9.97	AV
4924	53.57	0.00	-3.74	H	49.83	73.98	24.15	PK
4924	42.11	0.13	-3.74	H	38.50	53.98	15.48	AV
7386	53.65	0.00	3.04	H	56.69	73.98	17.29	PK
7386	41.08	0.13	3.04	H	44.25	53.98	9.73	AV

Operation Mode: 802.11 n_HT20
 Transfer MCS Index: 0
 Operating Frequency 2462
 Channel No. 11 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.-A.G.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4924	53.30	-3.74	V	49.56	73.98	24.42	PK
4924	41.76	-3.74	V	38.02	53.98	15.96	AV
7386	53.21	3.04	V	56.25	73.98	17.73	PK
7386	40.82	3.04	V	43.86	53.98	10.12	AV
4924	53.67	-3.74	H	49.93	73.98	24.05	PK
4924	42.08	-3.74	H	38.34	53.98	15.64	AV
7386	53.59	3.04	H	56.63	73.98	17.35	PK
7386	41.17	3.04	H	44.21	53.98	9.77	AV

Operation Mode: 802.11 n_HT40
 Transfer MCS Index: 0
 Operating Frequency 2452
 Channel No. 9 Ch

Frequency [MHz]	Reading [dBuV]	Ducy Cycle Factor [dB]	A.F.+C.L.-A.G.+D,F, [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
4904	53.27	0.00	-4.08	V	49.19	73.98	24.79	PK
4904	42.29	0.12	-4.08	V	38.33	53.98	15.66	AV
7356	53.00	0.00	3.00	V	56.00	73.98	17.98	PK
7356	41.17	0.12	3.00	V	44.29	53.98	9.69	AV
4904	53.58	0.00	-4.08	H	49.50	73.98	24.48	PK
4904	42.51	0.12	-4.08	H	38.55	53.98	15.44	AV
7356	53.27	0.00	3.00	H	56.27	73.98	17.71	PK
7356	41.22	0.12	3.00	H	44.34	53.98	9.65	AV

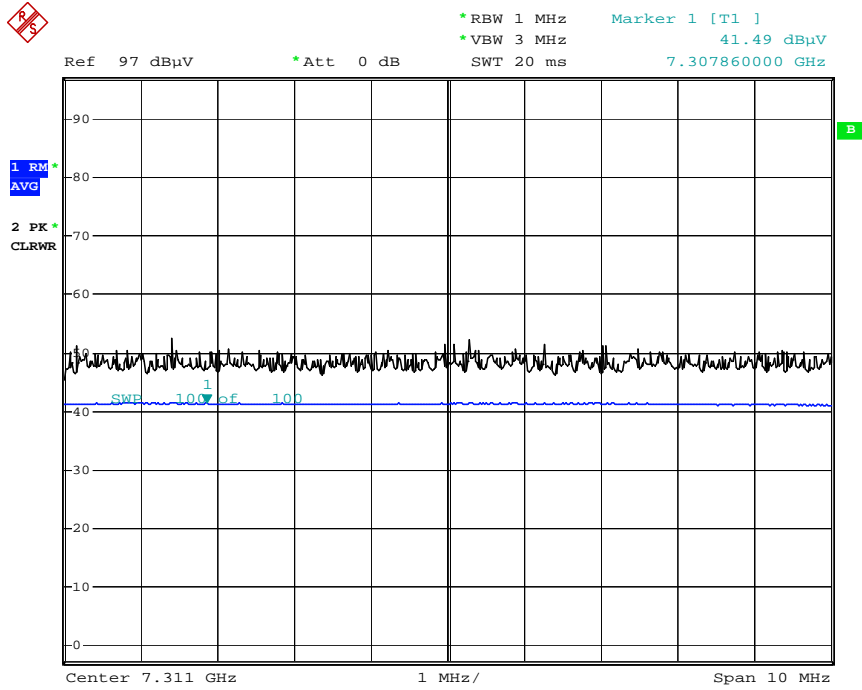
* A.F.: Ant. Factor / C.L.: Cable Loss / A.G.: Amp. Gain / D.F: Distance Factor

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor(802.11b/n_HT20)
5. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor + Duty Cycle Factor(802.11g/n_HT40)
6. We have done 802.11b/g/n mode and all data rate. Worst data rate is the lowest data of each mode.
7. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

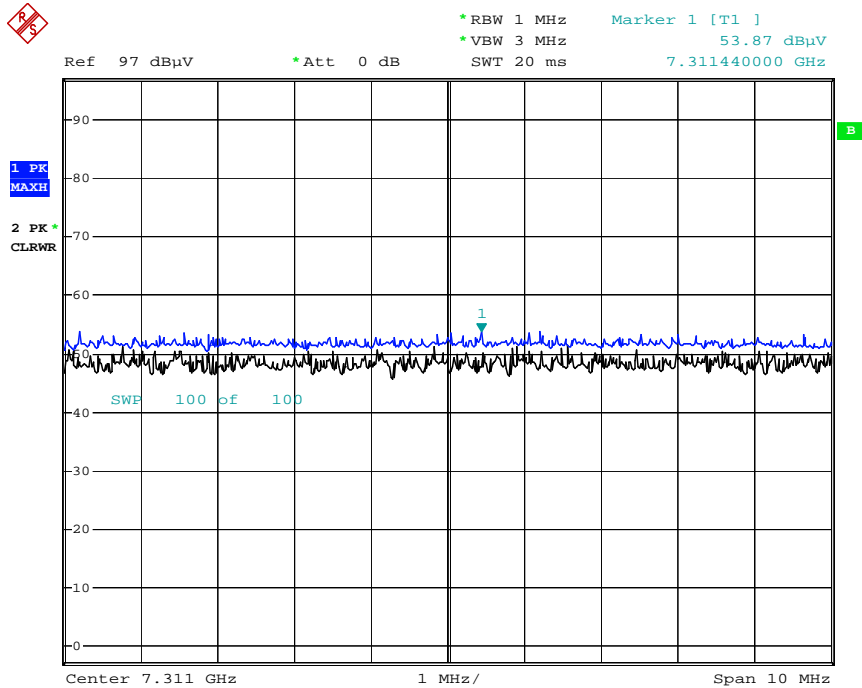
RESULT PLOTS (Worst Case: X-H)

Radiated Spurious Emissions plot – Average Reading (802.11b, Ch.6 3rd Harmonic)



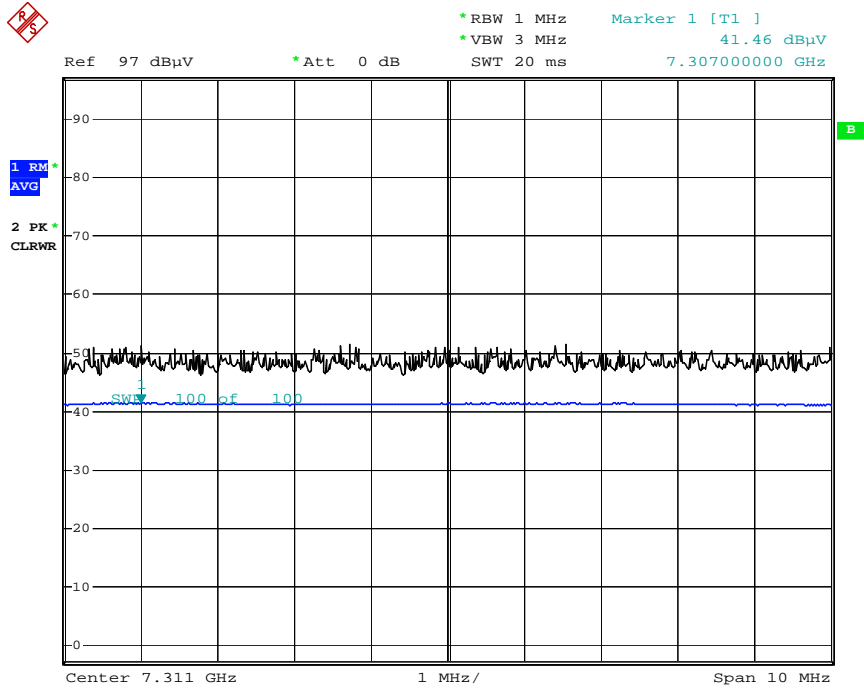
Date: 14.AUG.2017 09:17:00

Radiated Spurious Emissions plot – Peak Reading (802.11b, Ch.6 3rd Harmonic)



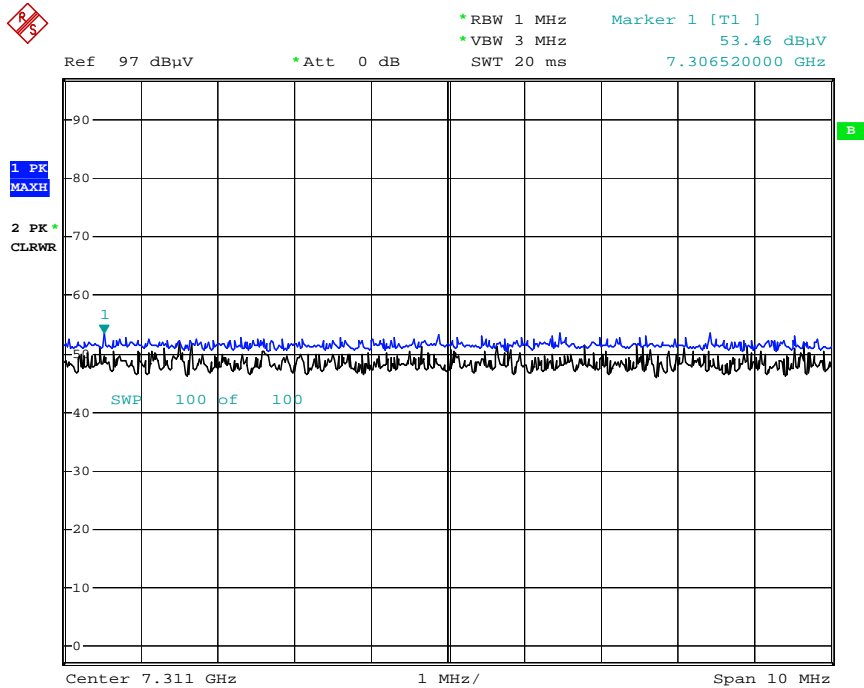
Date: 14.AUG.2017 09:16:29

Radiated Spurious Emissions plot – Average Reading (802.11g, Ch.6 3rd Harmonic)



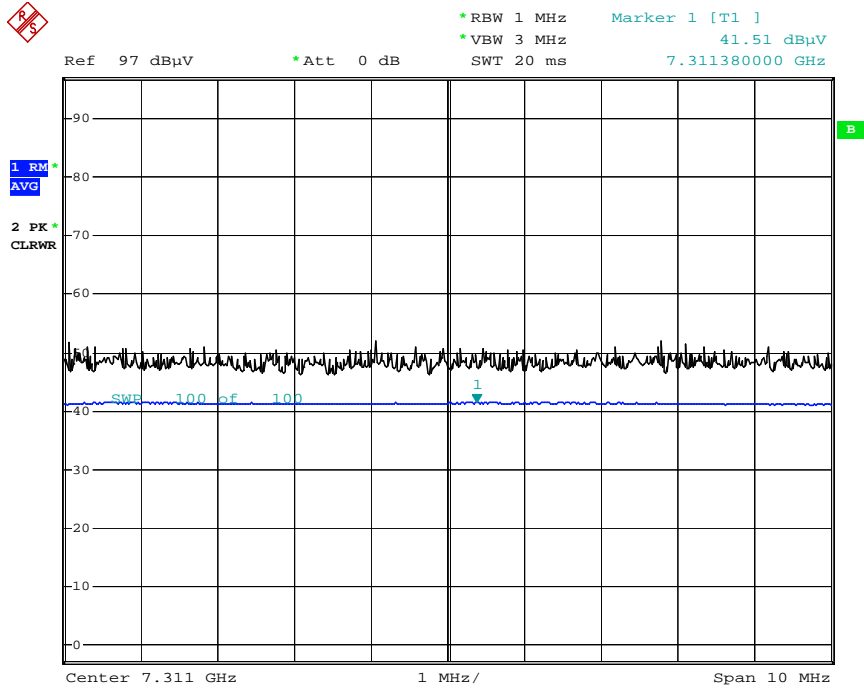
Date: 14.AUG.2017 09:20:16

Radiated Spurious Emissions plot – Peak Reading (802.11g, Ch.6 3rd Harmonic)



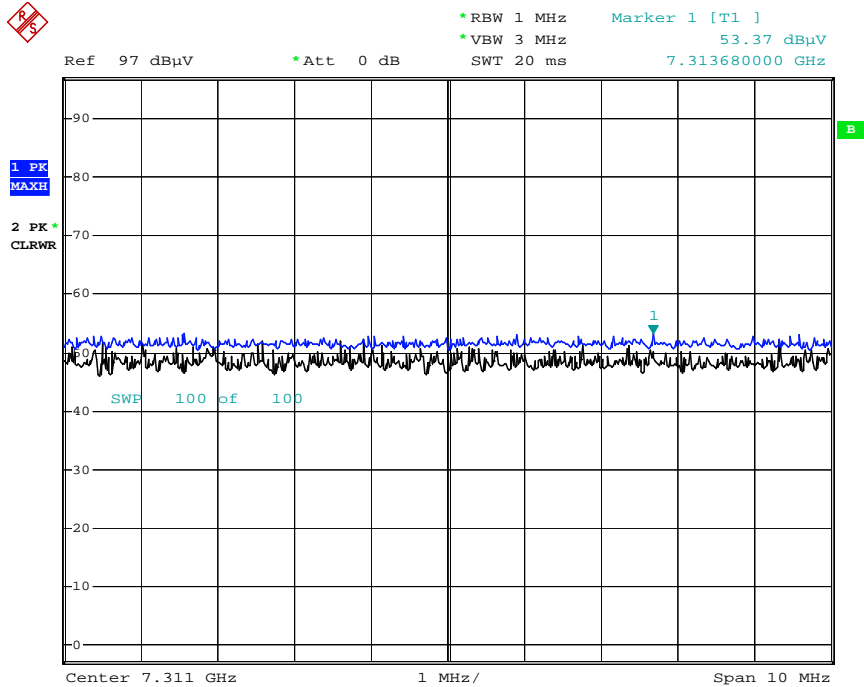
Date: 14.AUG.2017 09:20:36

Radiated Spurious Emissions plot – Average Reading (802.11n_HT20, Ch.6 3rd Harmonic)



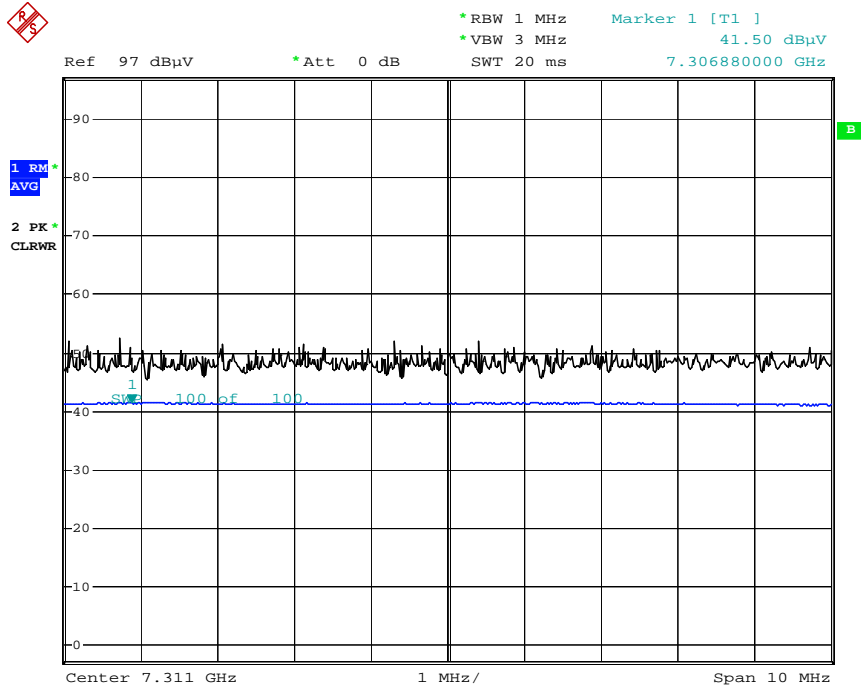
Date: 14.AUG.2017 09:23:00

Radiated Spurious Emissions plot – Peak Reading (802.11n_HT20, Ch.6 3rd Harmonic)



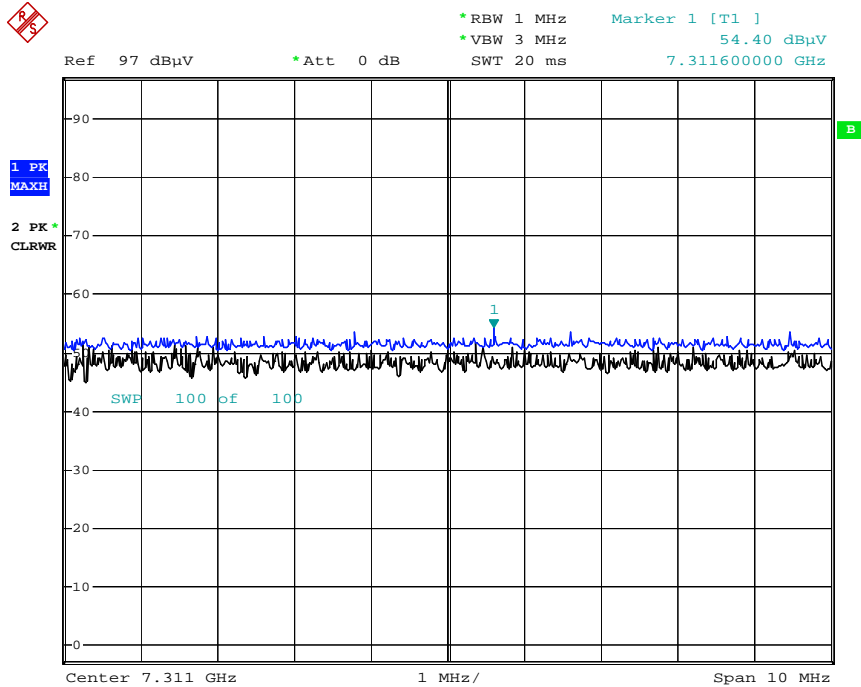
Date: 14.AUG.2017 09:22:39

Radiated Spurious Emissions plot – Average Reading (802.11n_HT40, Ch.6 3rd Harmonic)



Date: 14.AUG.2017 09:25:00

Radiated Spurious Emissions plot – Peak Reading (802.11n_HT40, Ch.6 3rd Harmonic)



Date: 14.AUG.2017 09:25:30

9.6.2 RADIATED RESTRICTED BAND EDGES

Test Requirements and limit, §15.247(d) §15.205, §15.209

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c)).

[Omni]

Operation Mode:	802.11g
Transfer Rate:	6 Mbps
Operating Frequency	2412 MHz, 2462 MHz
Channel No.	01 Ch, 11 Ch

Frequency [MHz]	Reading [dBuV]	Duty Cycle Factor [dB]	A.F.+C.L.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	31.39	0.00	33.95	H	65.34	73.98	8.64	PK
2390.0	17.57	0.14	33.95	H	51.66	53.98	2.32	AV
2390.0	31.16	0.00	33.95	V	65.11	73.98	8.87	PK
2390.0	17.24	0.14	33.95	V	51.33	53.98	2.65	AV
2483.5	28.82	0.00	34.05	H	62.87	73.98	11.11	PK
2483.5	17.31	0.14	34.05	H	51.50	53.98	2.48	AV
2483.5	28.62	0.00	34.05	V	62.67	73.98	11.31	PK
2483.5	17.21	0.14	34.05	V	51.40	53.98	2.58	AV

Operation Mode: 802.11b
 Transfer Rate: 1 Mbps
 Operating Frequency: 2412 MHz, 2462 MHz
 Channel No. 01 Ch, 11 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	35.22	33.95	H	69.17	73.98	4.81	PK
2390.0	17.33	33.95	H	51.28	53.98	2.70	AV
2390.0	34.99	33.95	V	68.94	73.98	5.04	PK
2390.0	17.16	33.95	V	51.11	53.98	2.87	AV
2483.5	31.16	34.05	H	65.21	73.98	8.77	PK
2483.5	17.61	34.05	H	51.66	53.98	2.32	AV
2483.5	30.97	34.05	V	65.02	73.98	8.96	PK
2483.5	17.42	34.05	V	51.47	53.98	2.51	AV

Operation Mode: 802.11n_HT20
 Transfer MCS Index: 0
 Operating Frequency: 2412 MHz, 2462 MHz
 Channel No. 01 Ch, 11 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	29.23	33.95	H	63.18	73.98	10.80	PK
2390.0	17.48	33.95	H	51.43	53.98	2.55	AV
2390.0	29.01	33.95	V	62.96	73.98	11.02	PK
2390.0	17.11	33.95	V	51.06	53.98	2.92	AV
2483.5	31.67	34.05	H	65.72	73.98	8.26	PK
2483.5	17.92	34.05	H	51.97	53.98	2.01	AV
2483.5	31.37	34.05	V	65.42	73.98	8.56	PK
2483.5	17.62	34.05	V	51.67	53.98	2.31	AV

Operation Mode: 802.11n_HT40
 Transfer MCS Index: 0
 Operating Frequency: 2422 MHz, 2452 MHz
 Channel No.: 03 Ch, 9 Ch

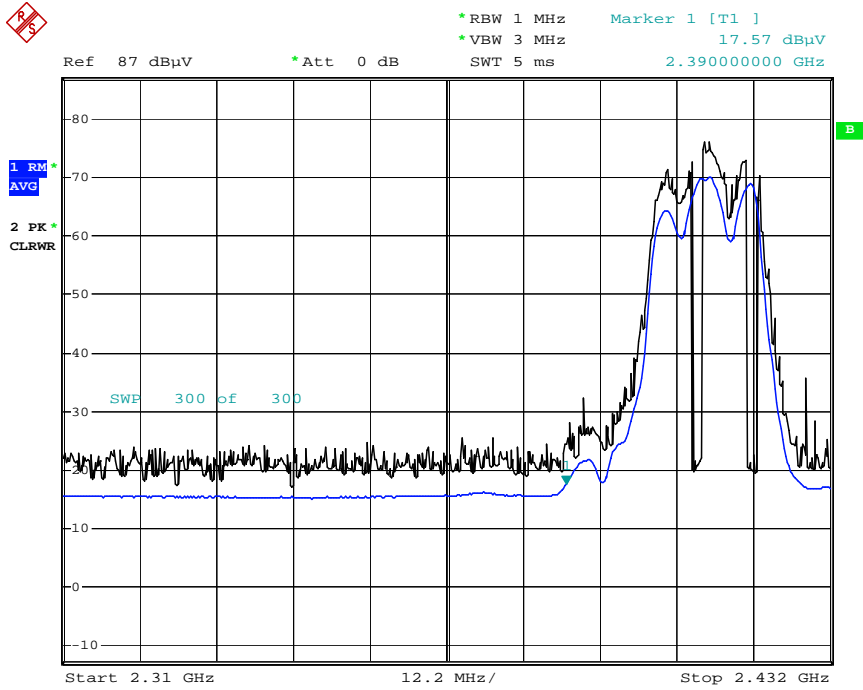
Frequency [MHz]	Reading [dBuV]	Duty Cycle Factor [dB]	A.F.+C.L.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	29.79	0.00	33.95	H	63.74	73.98	10.24	PK
2390.0	17.35	0.12	33.95	H	51.42	53.98	2.56	AV
2390.0	29.54	0.00	33.95	V	63.49	73.98	10.49	PK
2390.0	17.05	0.12	33.95	V	51.12	53.98	2.86	AV
2483.5	33.46	0.00	34.05	H	67.51	73.98	6.47	PK
2483.5	17.53	0.12	34.05	H	51.70	53.98	2.28	AV
2483.5	33.14	0.00	34.05	V	67.19	73.98	6.79	PK
2483.5	17.22	0.12	34.05	V	51.39	53.98	2.59	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss +Distance Factor + Duty Cycle Factor(802.11g, n_HT40)
2. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor(802.11b/n_HT20)
3. We have done 802.11b/g/n mode and all data rate. Worst data rate is the lowest data of each mode.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

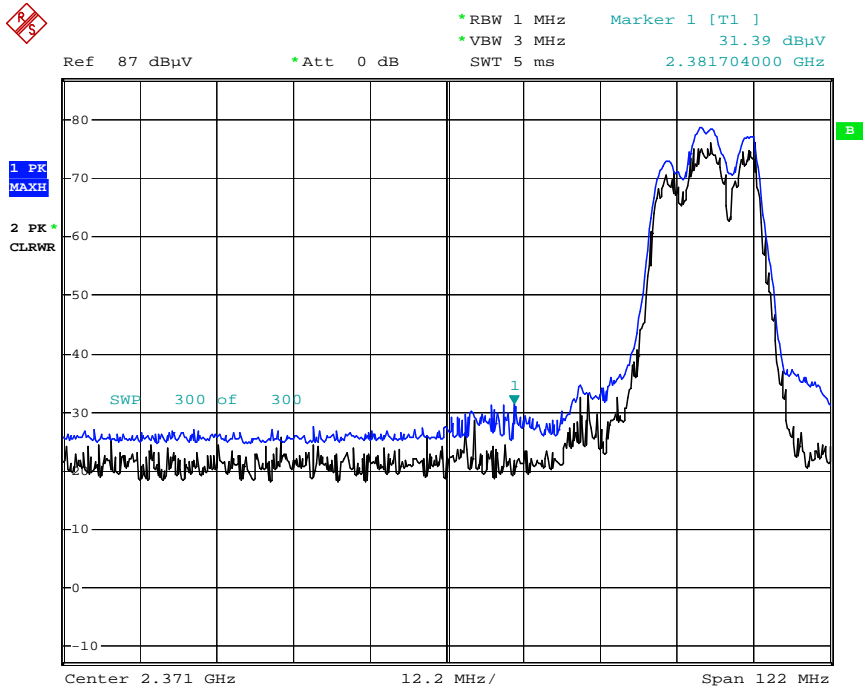
RESULT PLOTS(Worst Case: Y-V)_MIMO

Radiated Restricted Band Edges plot – Average Reading (802.11g, Ch.1)



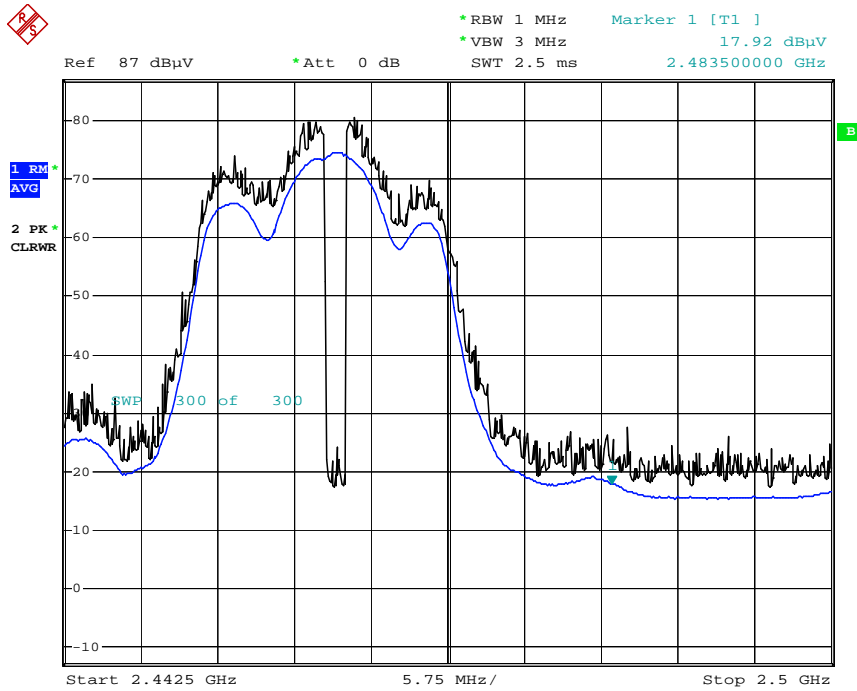
Date: 10.AUG.2017 08:36:51

Radiated Restricted Band Edges plot – Peak Reading (802.11g, Ch.1)



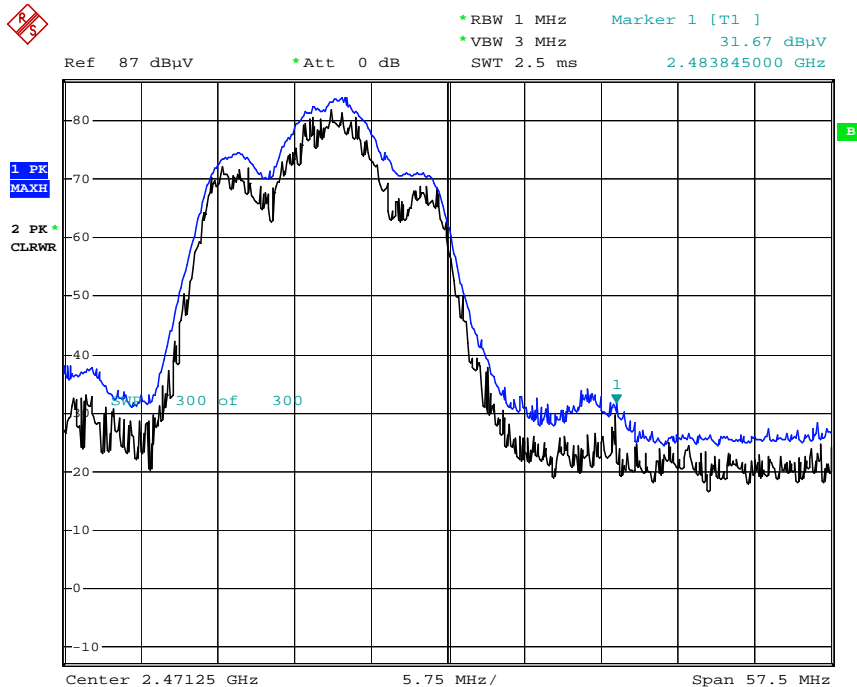
Date: 10.AUG.2017 08:37:28

Radiated Restricted Band Edges plot – Average Reading (802.11n_HT20, Ch.11)



Date: 10.AUG.2017 08:28:07

Radiated Restricted Band Edges plot – Peak Reading (802.11n_HT20, Ch.11)



Date: 10.AUG.2017 08:29:03

Note : Only the worst case plots for Radiated Restricted Band Edges.

[Directional]

Operation Mode: 802.11g
 Transfer Rate: 6 Mbps
 Operating Frequency 2412 MHz, 2462 MHz
 Channel No. 01 Ch, 11 Ch

Frequency [MHz]	Reading [dBuV]	Duty Cycle Factor [dB]	A.F.+C.L.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	28.15	0.00	33.95	H	62.10	73.98	11.88	PK
2390.0	17.37	0.13	33.95	H	51.45	53.98	2.53	AV
2390.0	26.61	0.00	33.95	V	60.56	73.98	13.42	PK
2390.0	16.22	0.13	33.95	V	50.30	53.98	3.68	AV
2483.5	32.12	0.00	34.05	H	66.17	73.98	7.81	PK
2483.5	17.46	0.13	34.05	H	51.64	53.98	2.34	AV
2483.5	31.07	0.00	34.05	V	65.12	73.98	8.86	PK
2483.5	16.38	0.13	34.05	V	50.56	53.98	3.42	AV

Operation Mode: 802.11b
 Transfer Rate: 1 Mbps
 Operating Frequency 2412 MHz, 2462 MHz
 Channel No. 01 Ch, 11 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	28.48	33.95	H	62.43	73.98	11.55	PK
2390.0	17.83	33.95	H	51.78	53.98	2.20	AV
2390.0	26.84	33.95	V	60.79	73.98	13.19	PK
2390.0	16.70	33.95	V	50.65	53.98	3.33	AV
2483.5	35.46	34.05	H	69.51	73.98	4.47	PK
2483.5	17.77	34.05	H	51.82	53.98	2.16	AV
2483.5	34.27	34.05	V	68.32	73.98	5.66	PK
2483.5	16.58	34.05	V	50.63	53.98	3.35	AV

Operation Mode: 802.11n_HT20
Transfer MCS Index: 0
Operating Frequency 2412 MHz, 2462 MHz
Channel No. 01 Ch, 11 Ch

Frequency [MHz]	Reading [dBuV]	A.F.+C.L.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	28.63	33.95	H	62.58	73.98	11.40	PK
2390.0	17.53	33.95	H	51.48	53.98	2.50	AV
2390.0	26.36	33.95	V	60.31	73.98	13.67	PK
2390.0	16.89	33.95	V	50.84	53.98	3.14	AV
2483.5	32.02	34.05	H	66.07	73.98	7.91	PK
2483.5	17.59	34.05	H	51.64	53.98	2.34	AV
2483.5	31.09	34.05	V	65.14	73.98	8.84	PK
2483.5	16.44	34.05	V	50.49	53.98	3.49	AV

Operation Mode: 802.11n_HT40
Transfer MCS Index: 0
Operating Frequency 2422 MHz, 2452 MHz
Channel No. 03 Ch, 9 Ch

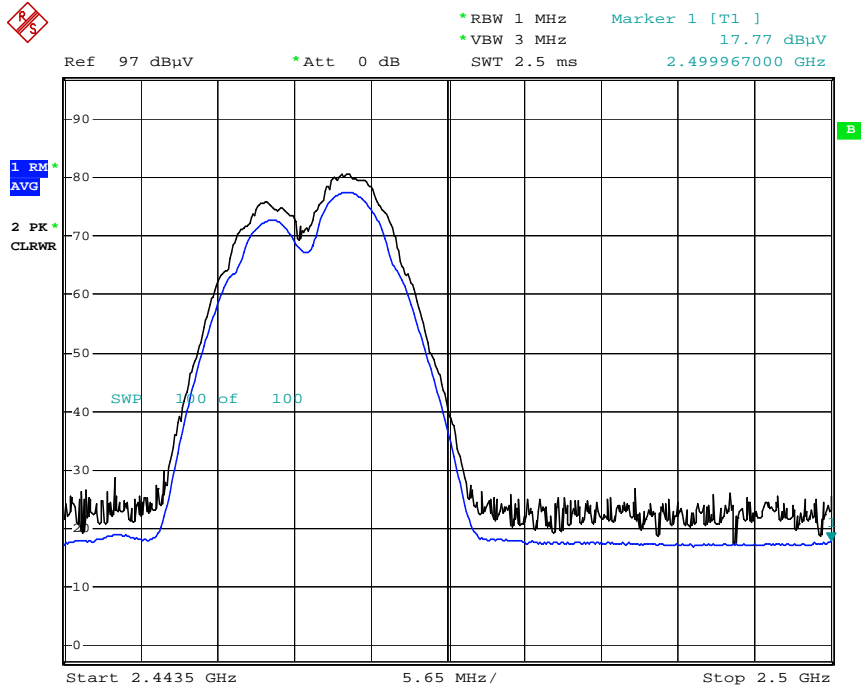
Frequency [MHz]	Reading [dBuV]	Duty Cycle Factor [dB]	A.F.+C.L.+D.F. [dB]	ANT. POL [H/V]	Total [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Measurement Type
2390.0	29.73	0.00	33.95	H	63.68	73.98	10.30	PK
2390.0	17.30	0.12	33.95	H	51.37	53.98	2.61	AV
2390.0	28.34	0.00	33.95	V	62.29	73.98	11.69	PK
2390.0	16.86	0.12	33.95	V	50.93	53.98	3.06	AV
2483.5	29.89	0.00	34.05	H	63.94	73.98	10.04	PK
2483.5	17.53	0.12	34.05	H	51.70	53.98	2.29	AV
2483.5	28.51	0.00	34.05	V	62.56	73.98	11.42	PK
2483.5	16.37	0.12	34.05	V	50.54	53.98	3.45	AV

Notes:

1. Total = Reading Value + Antenna Factor + Cable Loss + Distance Factor +
Duty Cycle Factor(802.11g, n_HT40)
2. Total = Reading Value + Antenna Factor + Cable Loss - Amp Gain + Distance Factor(802.11b/n_HT20)
3. We have done 802.11b/g/n mode and all data rate. Worst data rate is the lowest data of each mode.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.

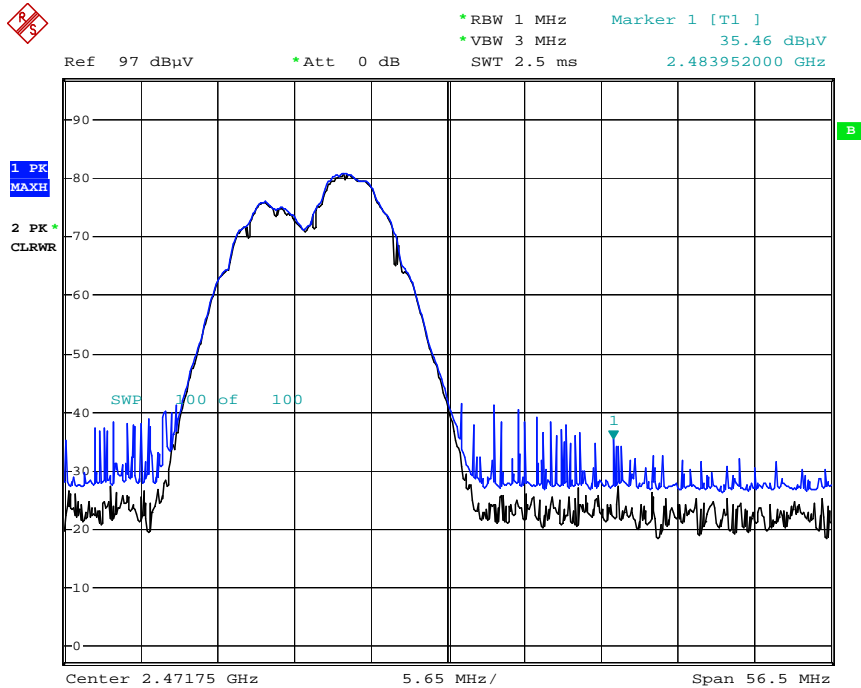
RESULT PLOTS

Radiated Restricted Band Edges plot – Average Reading (802.11b, Ch.11, Y-H)



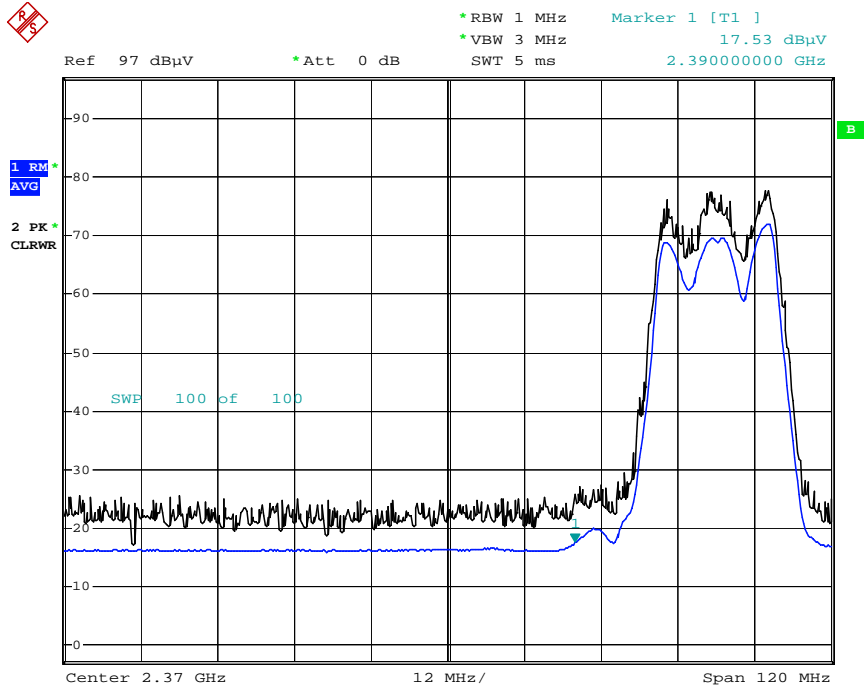
Date: 14.AUG.2017 10:15:19

Radiated Restricted Band Edges plot – Peak Reading (802.11b, Ch.11, Y-H)



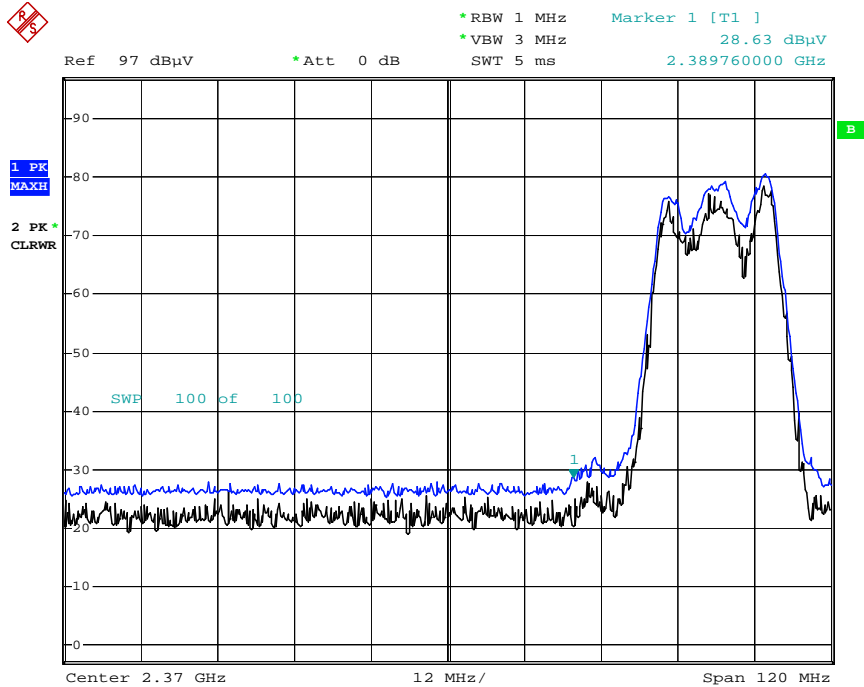
Date: 14.AUG.2017 10:17:14

Radiated Restricted Band Edges plot – Average Reading (802.11n_HT20, Ch.1, Z-H)



Date: 14.AUG.2017 10:08:29

Radiated Restricted Band Edges plot – Peak Reading (802.11n_HT20, Ch.1, Z-H)



Date: 14.AUG.2017 10:09:47

10. LIST OF TEST EQUIPMENT

10.1 LIST OF TEST EQUIPMENT(Conducted Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216 / LISN	12/23/2016	Annual	100073
Rohde & Schwarz	ESCI / Test Receiver	12/23/2016	Annual	100584
Agilent	N9020A / Signal Analyzer	06/13/2017	Annual	MY51110085
Agilent	N9030A / Signal Analyzer	11/30/2016	Annual	MY49431210
Agilent	N1911A / Power Meter	04/17/2017	Annual	MY45100523
Agilent	N1921A / Power Sensor	04/17/2017	Annual	MY52260025
Agilent	87300B / Directional Coupler	11/23/2016	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	06/12/2017	Annual	05001
Hewlett Packard	E3632A / DC Power Supply	06/30/2017	Annual	KR75303960
Agilent	8493C / Attenuator(10 dB)	07/10/2017	Annual	07560
MCE / Weinschel	2-3 / Attenuator(20 dB)	10/24/2017	Annual	BR0592

10.2 LIST OF TEST EQUIPMENT(Radiated Test)

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Innco system	MA4000-EP / Antenna Position Tower	N/A	N/A	N/A
Innco system	CT0800 / Turn Table	N/A	N/A	N/A
Innco system	CO3000 / Controller(Antenna mast)	N/A	N/A	CO3000-4p
ETS	2090 / Controller(Turn table)	N/A	N/A	1646
Rohde & Schwarz	Loop Antenna	04/19/2017	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	04/06/2017	Biennial	760
Schwarzbeck	BBHA 9120D / Horn Antenna	08/25/2016	Biennial	1300
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	04/25/2017	Biennial	BBHA9170124
Rohde & Schwarz	FSP / Spectrum Analyzer	09/06/2017	Annual	100688
Rohde & Schwarz	FSV40-N / Spectrum Analyzer	09/27/2017	Annual	101068-SZ
Wainwright Instruments	WHKX10-2700-3000-18000-40SS / High Pass Filter	07/20/2017	Annual	4
Wainwright Instruments	WHKX8-6090-7000-18000-40SS / High Pass Filter	07/11/2017	Annual	5
Wainwright Instruments	WRCJV2400/2483.5-2370/2520-60/12SS / Band Reject Filter	06/30/2017	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/24/2017	Annual	2
Hewlett Packard	8493C / Attenuator(10 dB)	07/10/2017	Annual	07560
CERNEX	CBLU1183540 / Power Amplifier	01/25/2017	Annual	24614
CERNEX	CBL06185030 / Power Amplifier	01/25/2017	Annual	24615
CERNEX	CBL18265035 / Power Amplifier	01/23/2017	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	06/30/2017	Annual	25956