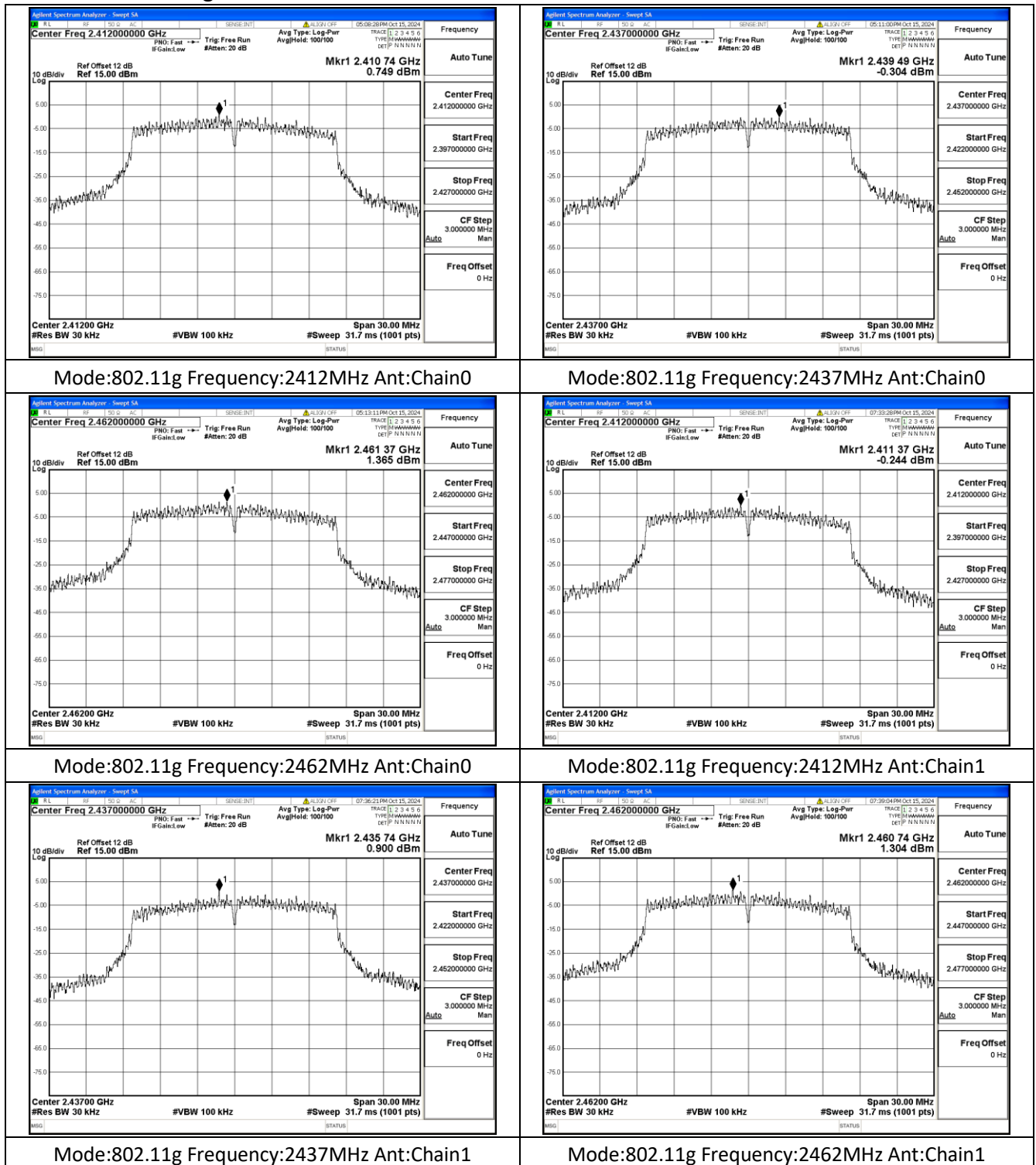




BUREAU
VERITAS

Test Report No.: PBJ-NQN2411050416RF01

Test Mode: 802.11g

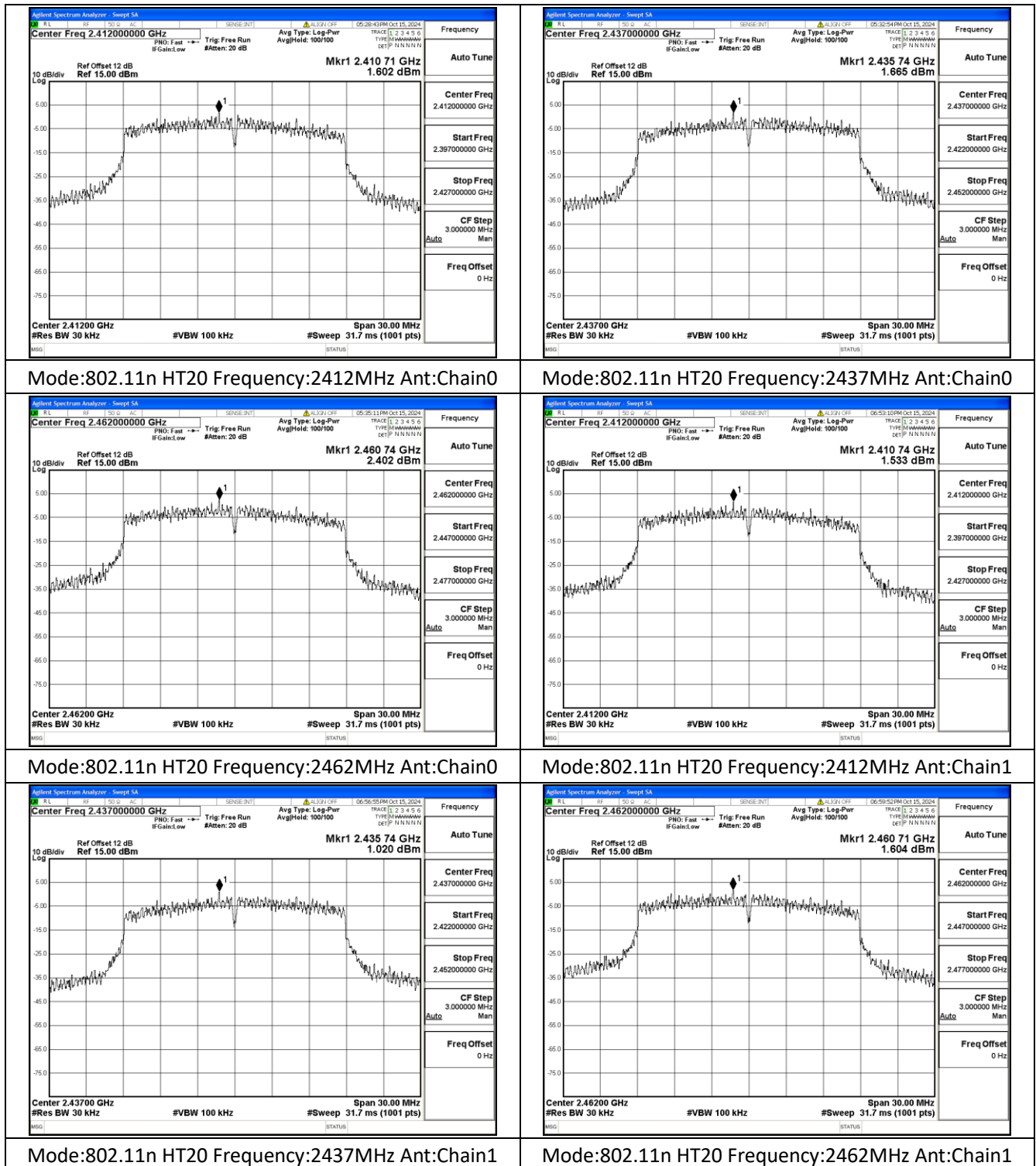




BUREAU
VERITAS

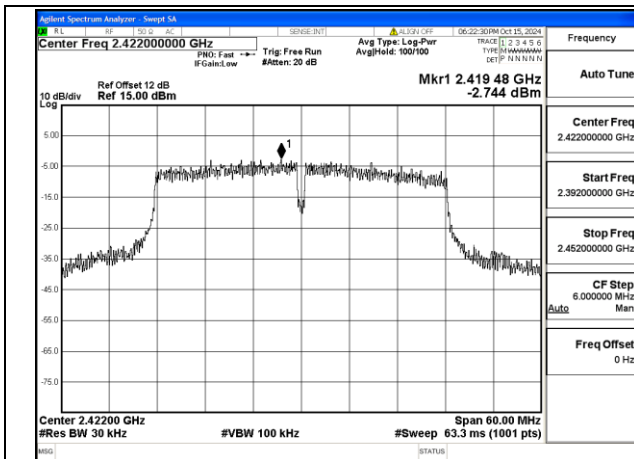
Test Report No.: PBJ-NQN2411050416RF01

Test Mode: 802.11n HT20

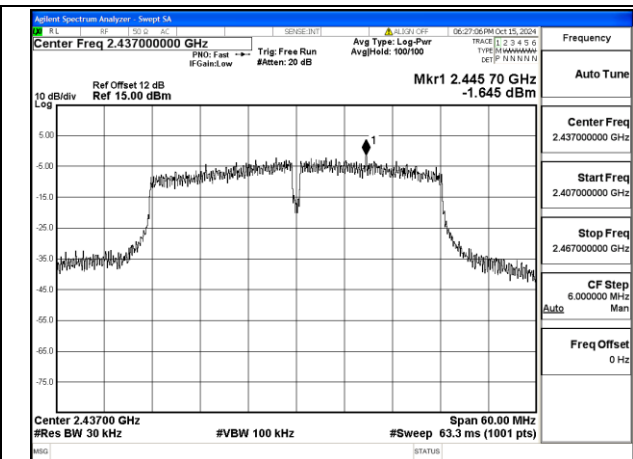




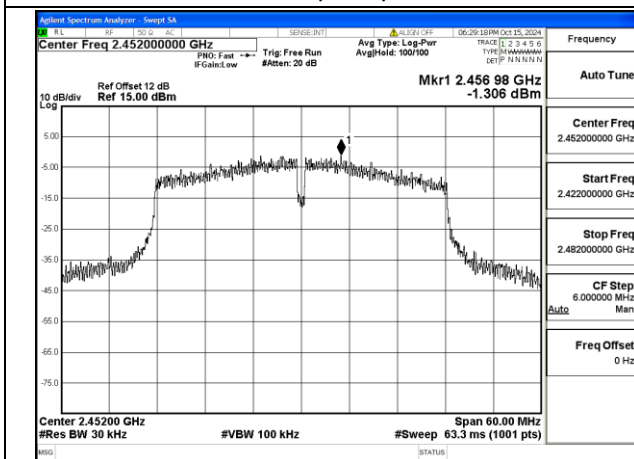
Test Mode: 802.11n HT40



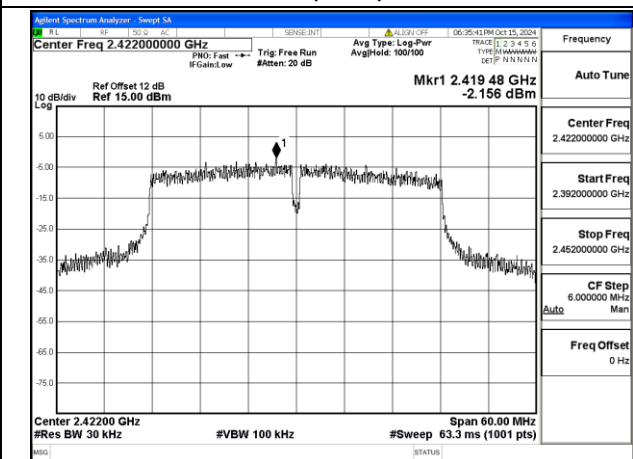
Mode:802.11n HT40 Frequency:2422MHz Ant:Chain0



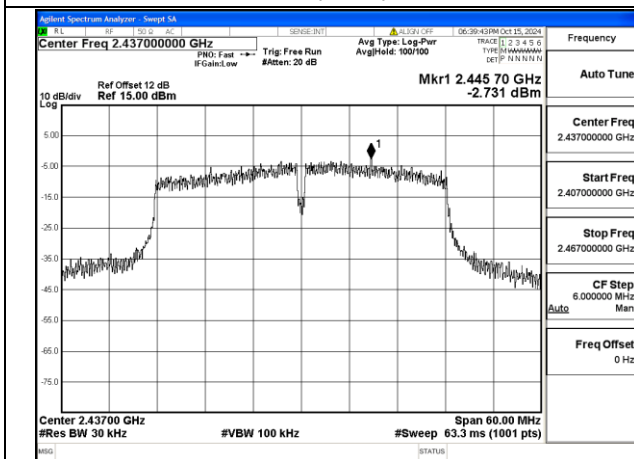
Mode:802.11n HT40 Frequency:2437MHz Ant:Chain0



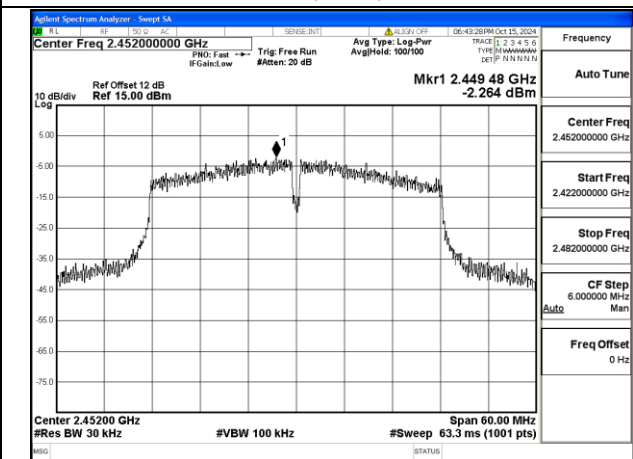
Mode:802.11n HT40 Frequency:2452MHz Ant:Chain0



Mode:802.11n HT40 Frequency:2422MHz Ant:Chain1



Mode:802.11n HT40 Frequency:2437MHz Ant:Chain1

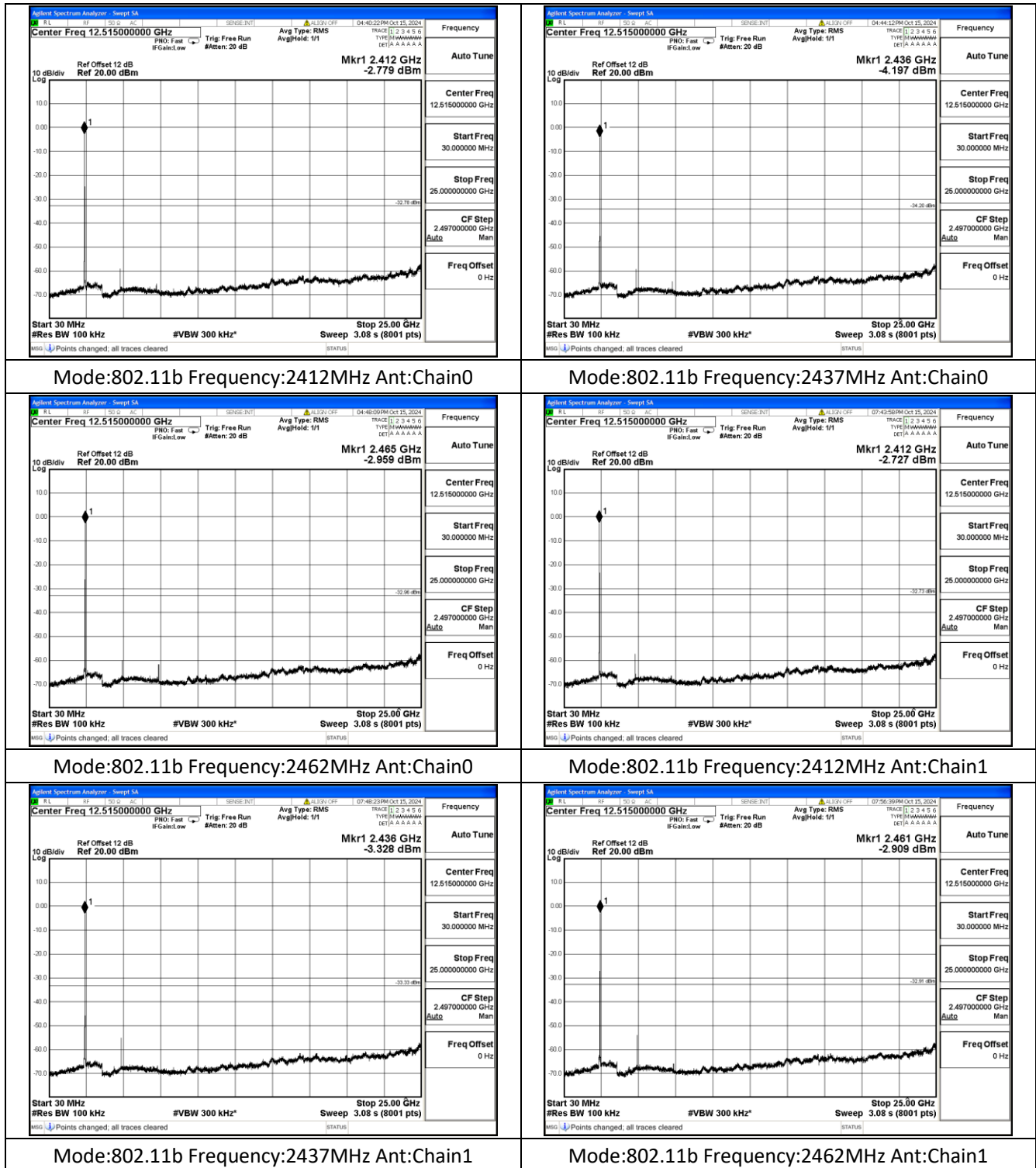


Mode:802.11n HT40 Frequency:2452MHz Ant:Chain1



Conducted Out of band emission measurement

Test Mode: 802.11b

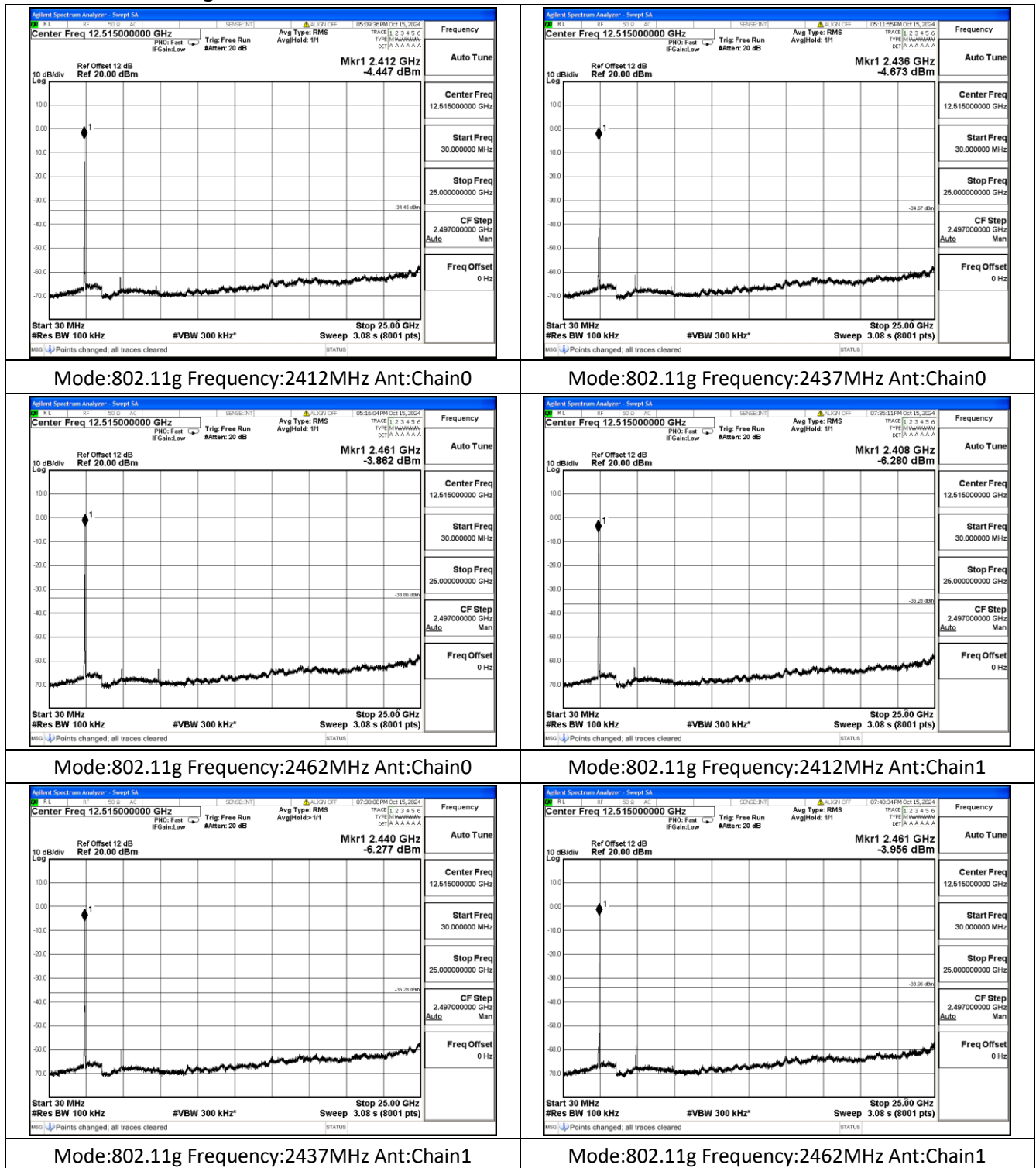




BUREAU
VERITAS

Test Report No.: PBJ-NQN2411050416RF01

Test Mode: 802.11g

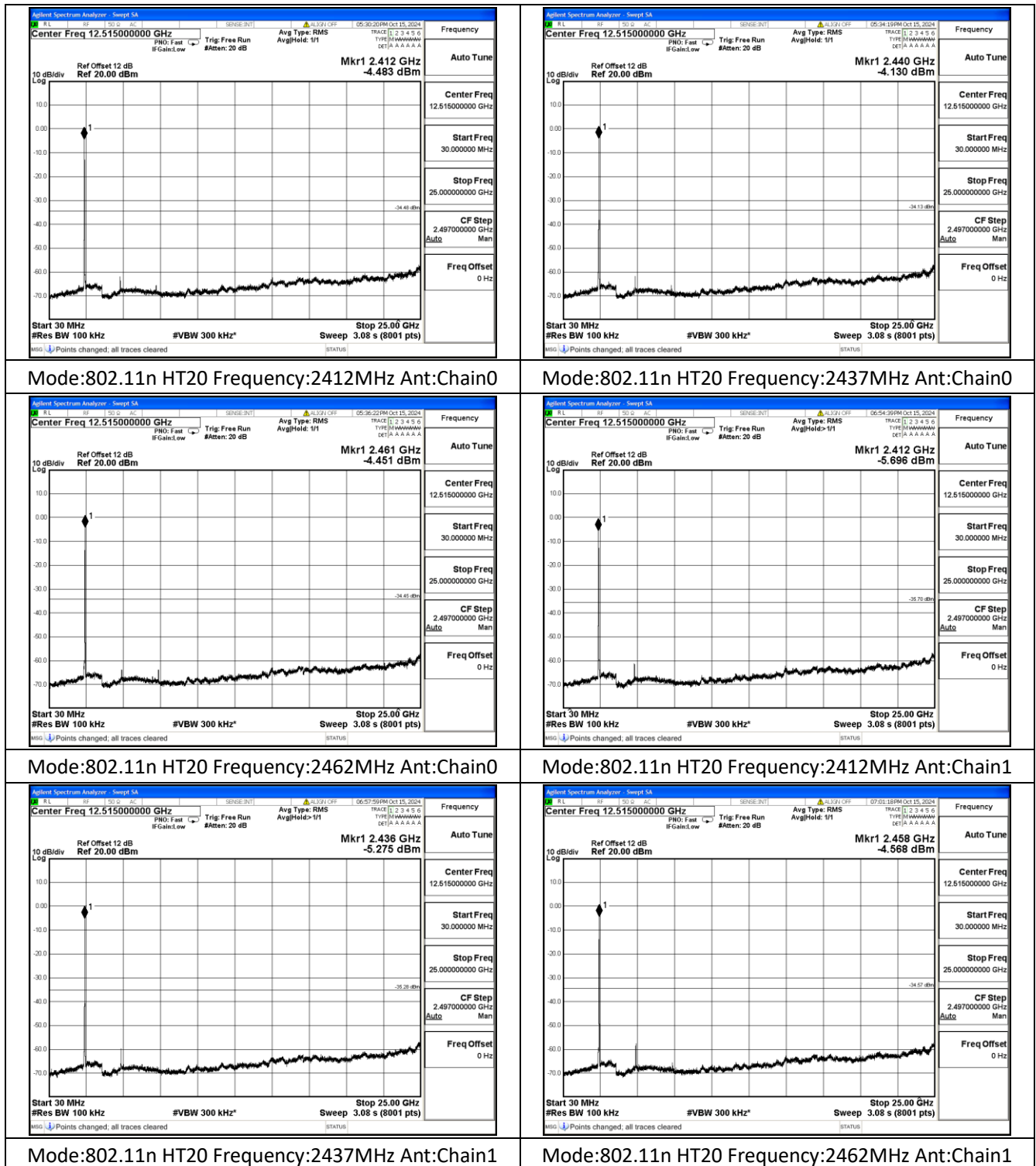




BUREAU
VERITAS

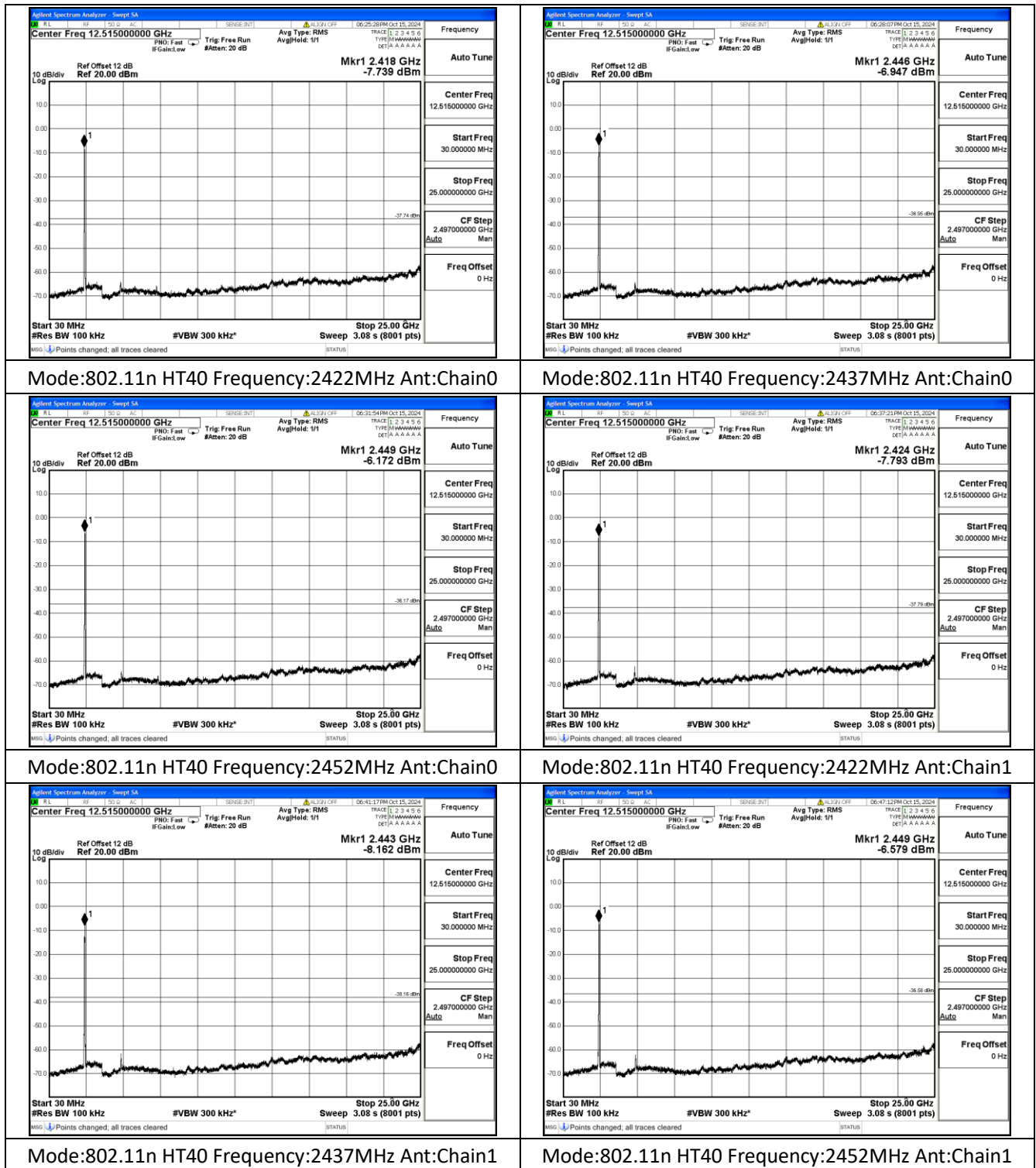
Test Report No.: PBJ-NQN2411050416RF01

Test Mode: 802.11n HT20





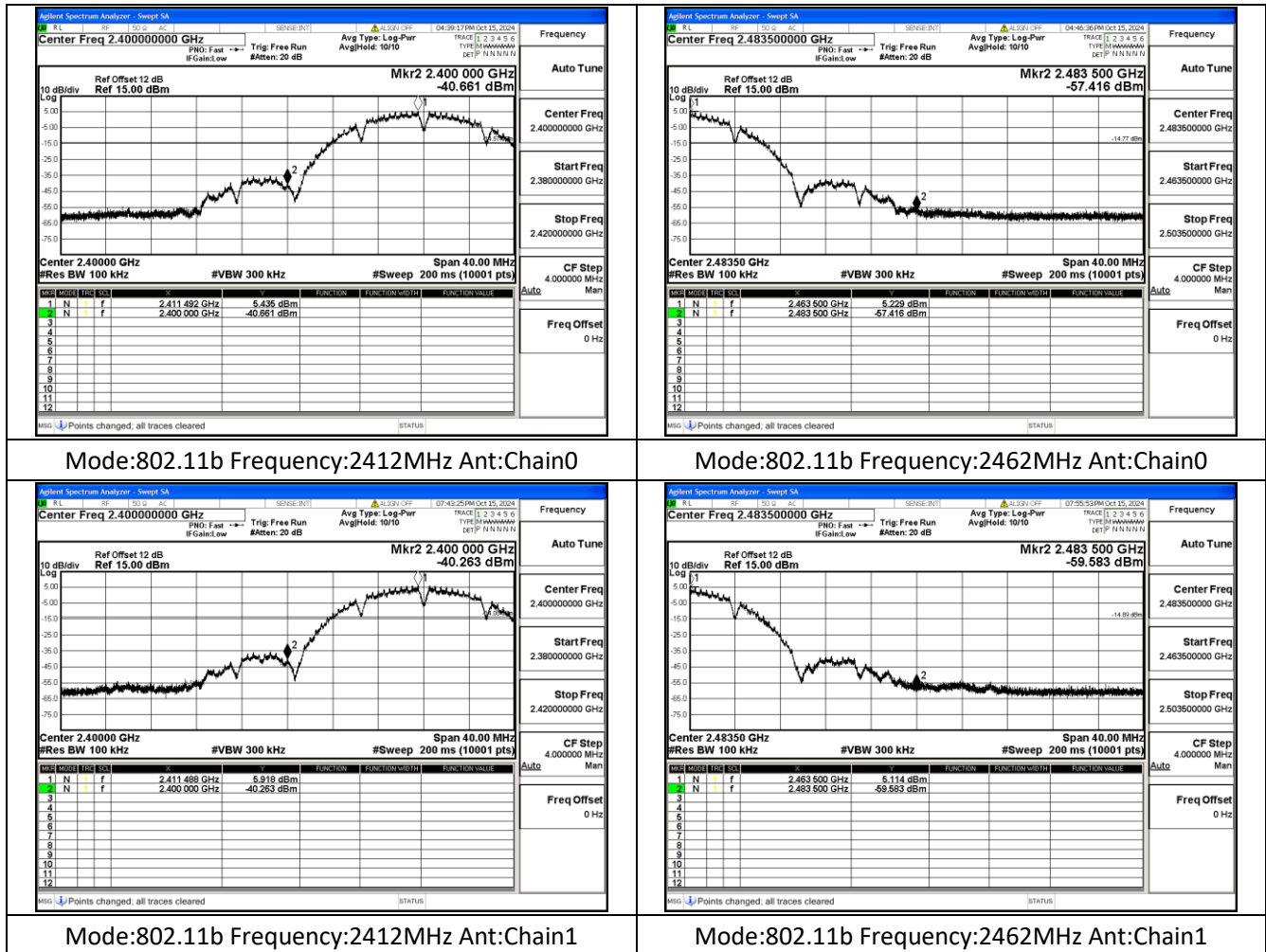
Test Mode: 802.11n HT40





Band edge measurement

Test Mode: 802.11b

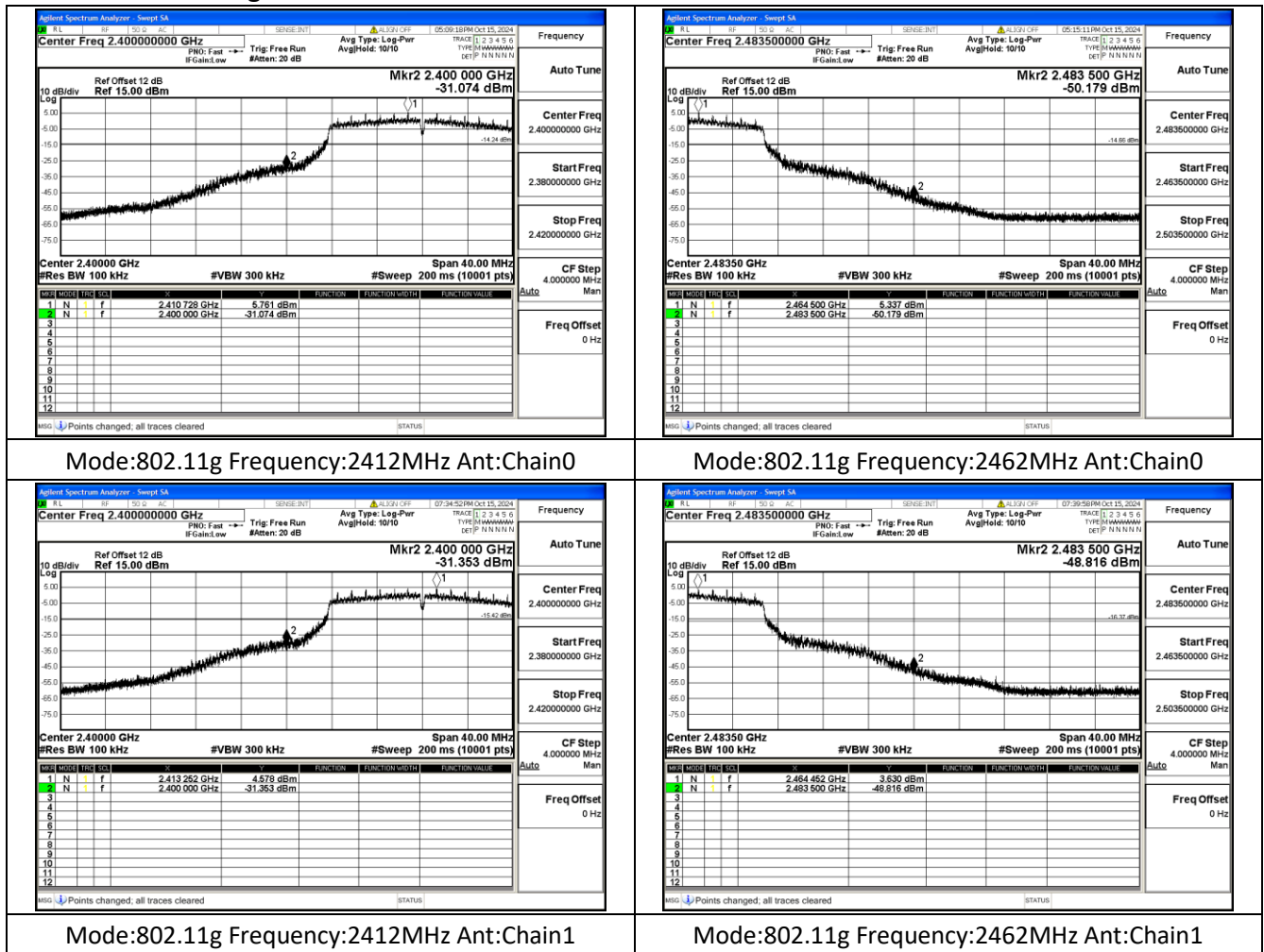




BUREAU
VERITAS

Test Report No.: PBJ-NQN2411050416RF01

Test Mode: 802.11g

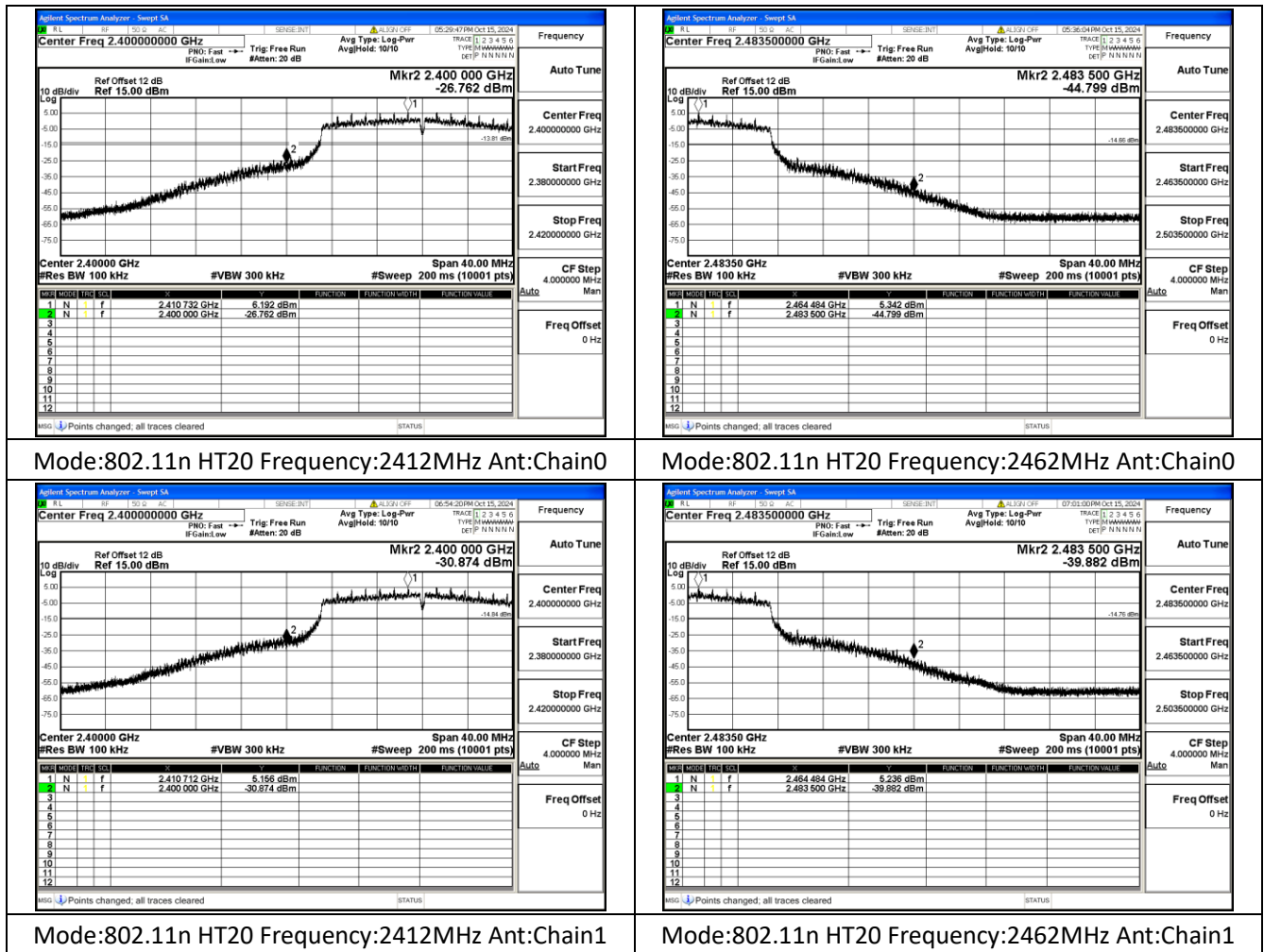




BUREAU
VERITAS

Test Report No.: PBJ-NQN2411050416RF01

Test Mode: 802.11n HT20

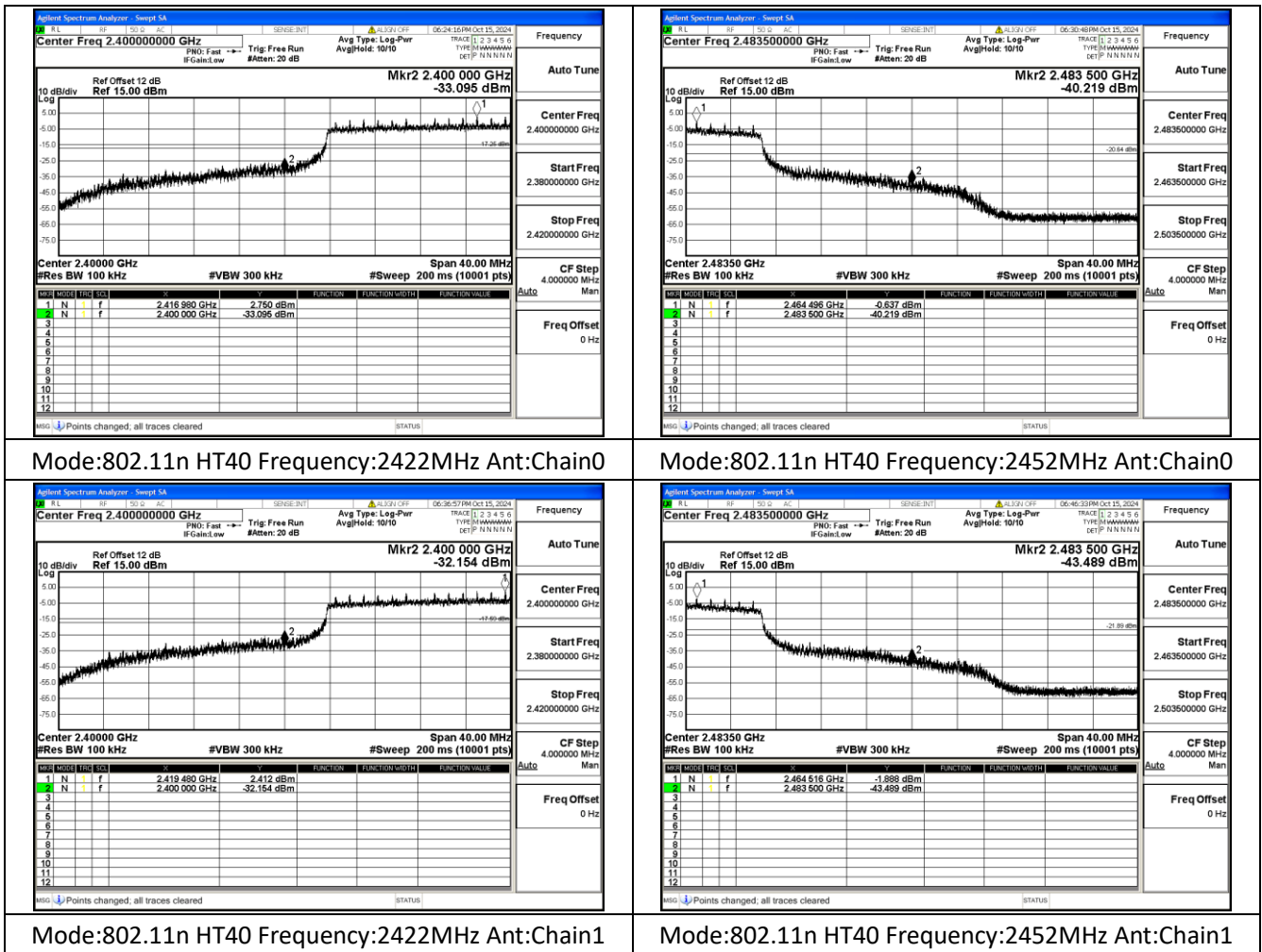




BUREAU
VERITAS

Test Report No.: PBJ-NQN2411050416RF01

Test Mode: 802.11n HT40



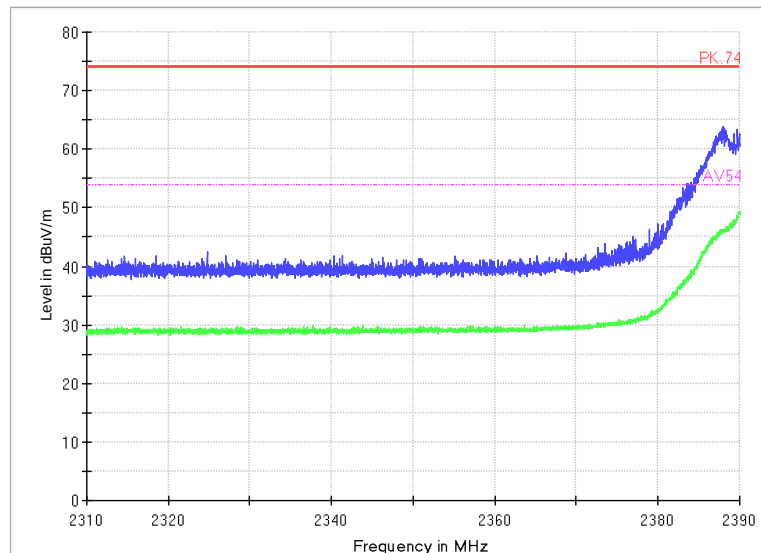


APPENDIX B – TEST DATA OF RADIATED EMISSION

Note: The worst channel results are reflected in the report.

Note: The scanned graph represents the maximum of both horizontal and vertical polarizations and is not a single horizontal or vertical polarization scan.

Radiated Emission Band Edge

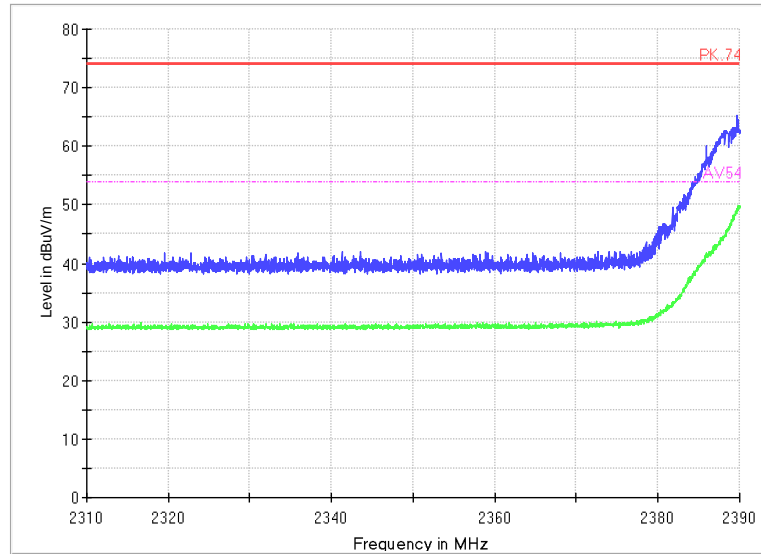


Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11b

Polarization: V

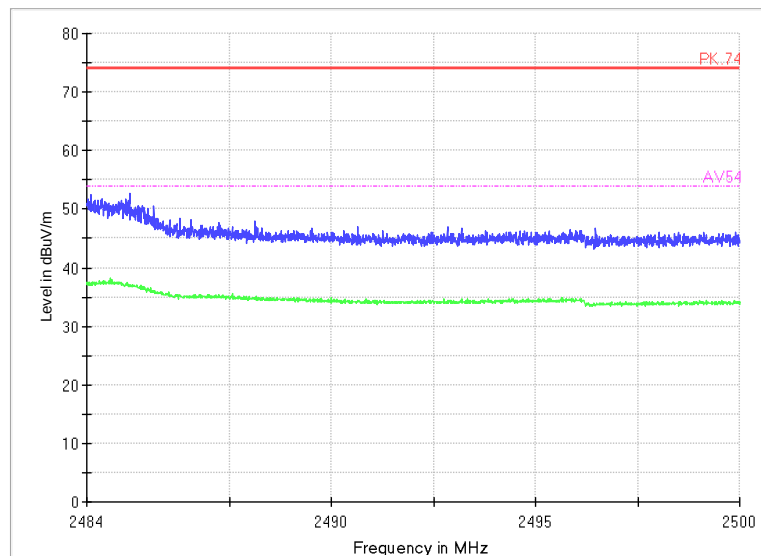


Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11b

Polarization: H

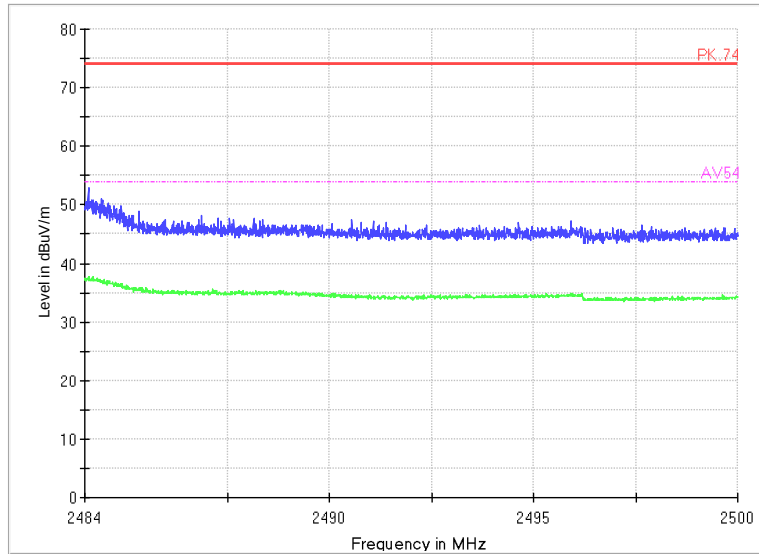


Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11b

Polarization: V

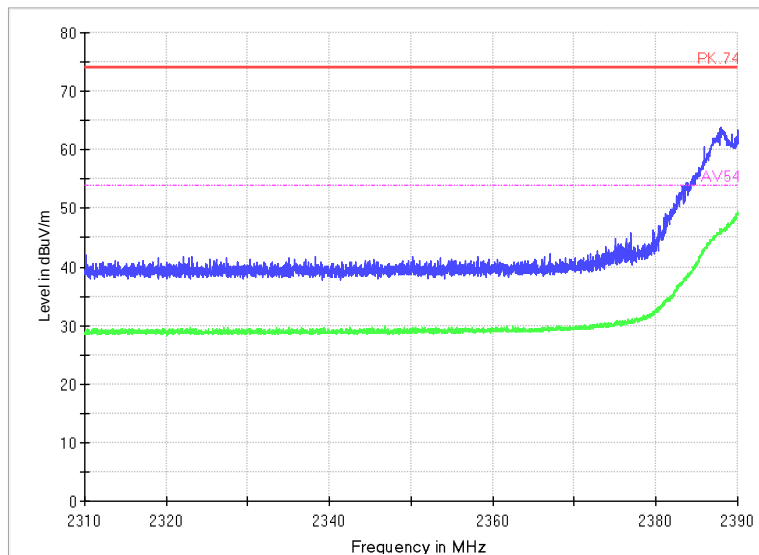


Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11b

Polarization: H

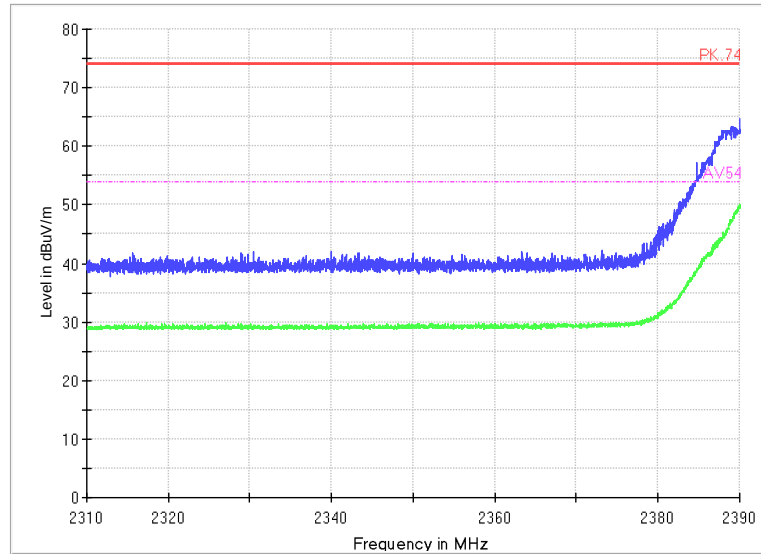


Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11g

Polarization: V

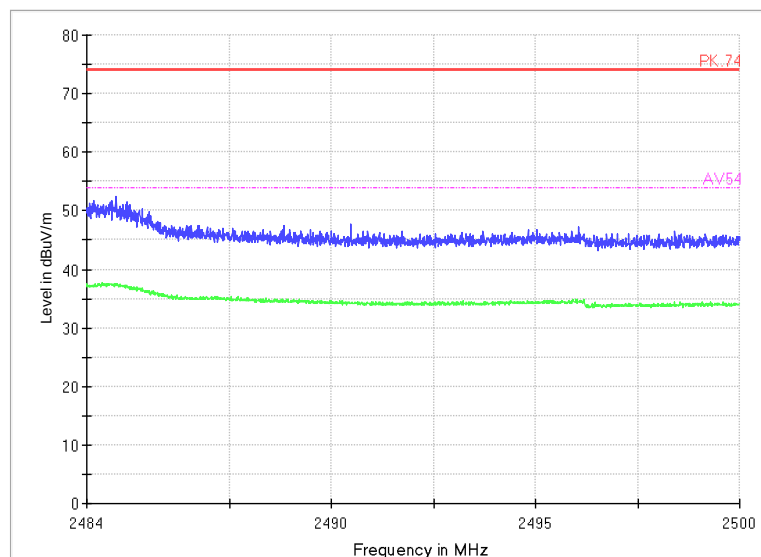


Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11g

Polarization: H

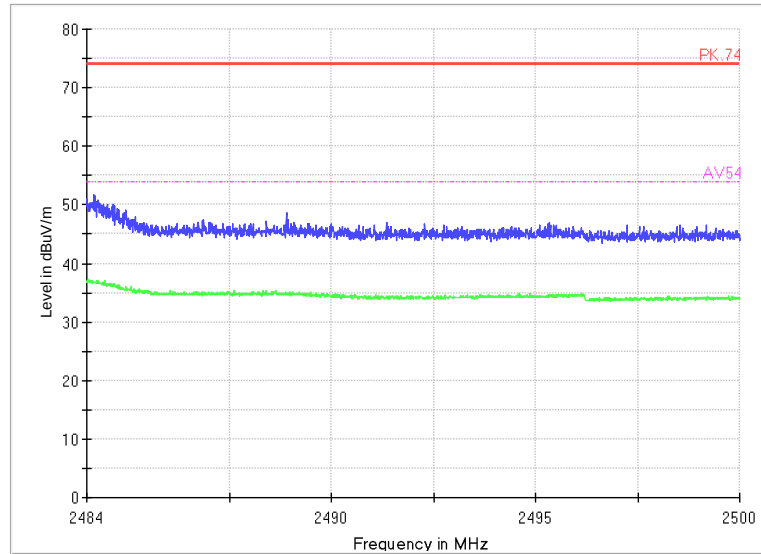


Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11g

Polarization: V

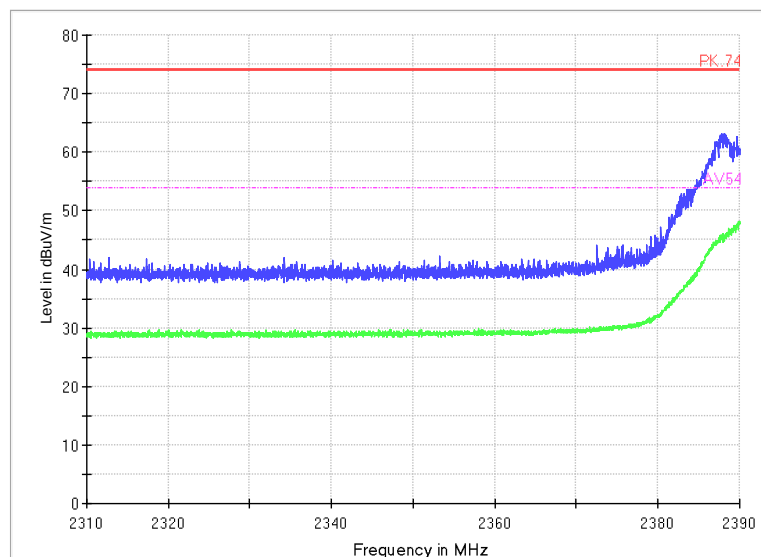


Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11g

Polarization: H

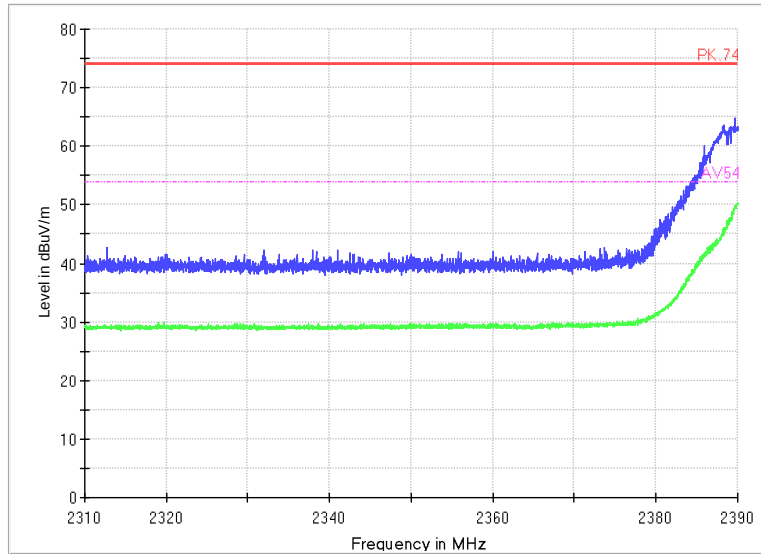


Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11n(HT20)

Polarization: V

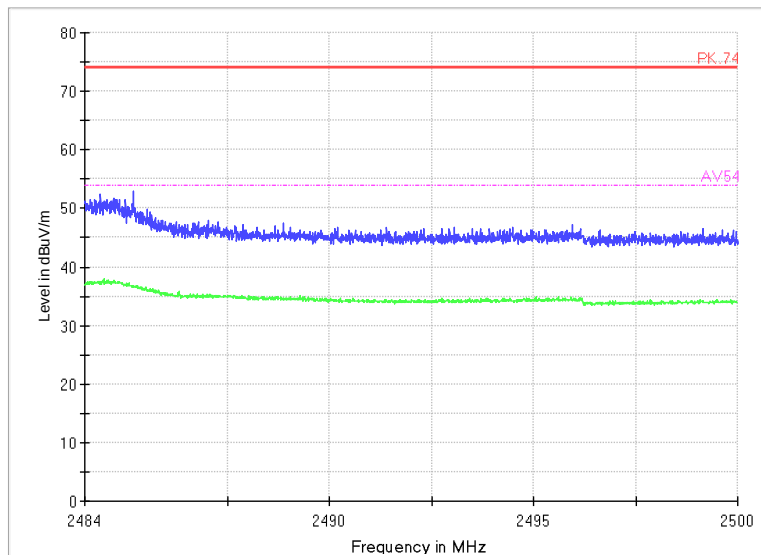


Radiated Emission Band Edge

Channel No.:1

Test Mode: 802.11n(HT20)

Polarization: H

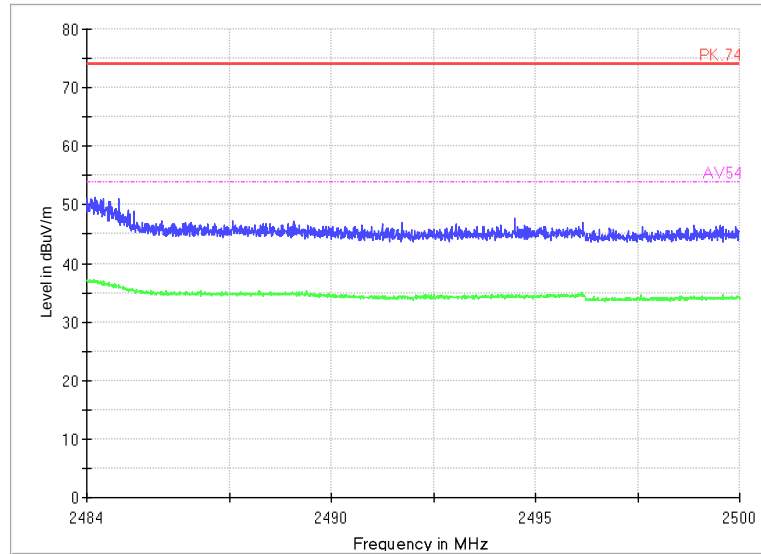


Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11n(HT20)

Polarization: V

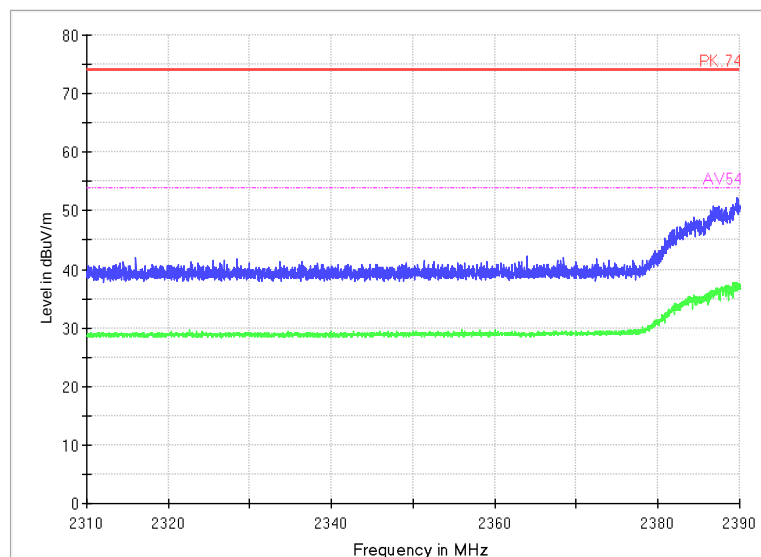


Radiated Emission Band Edge

Channel No.:11

Test Mode: 802.11n(HT20)

Polarization: H

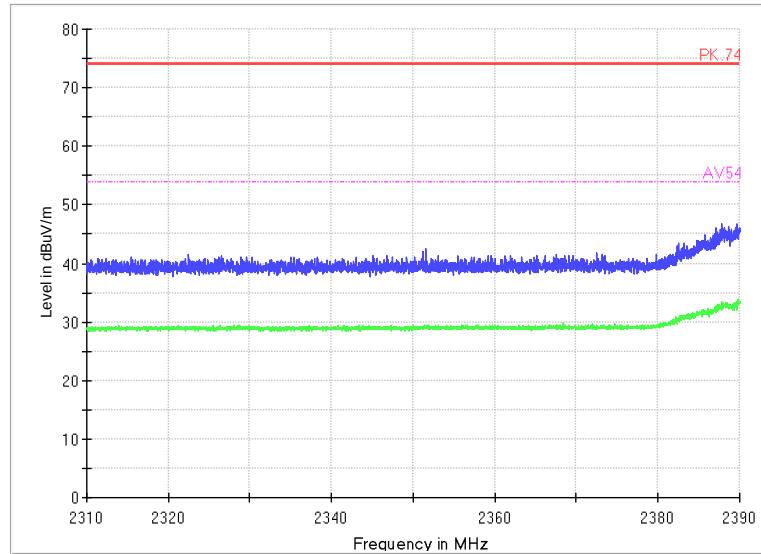


Radiated Emission Band Edge

Channel No.:3

Test Mode: 802.11n(HT40)

Polarization: V

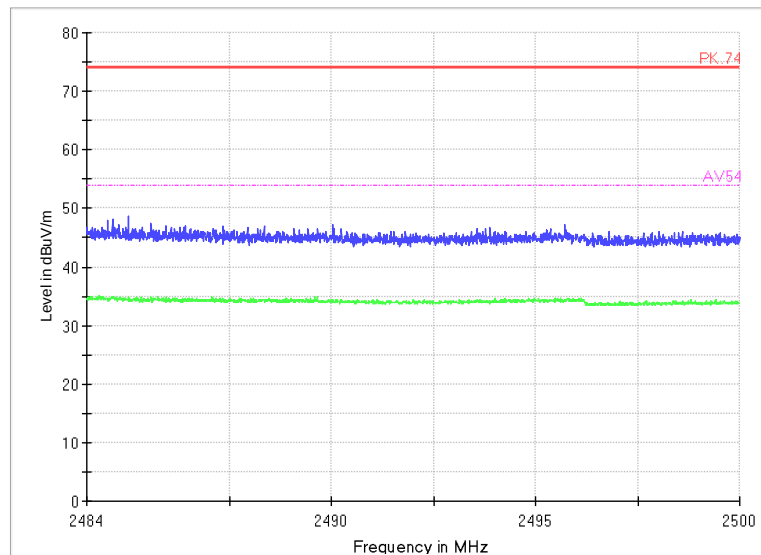


Radiated Emission Band Edge

Channel No.:3

Test Mode: 802.11n(HT40)

Polarization: H

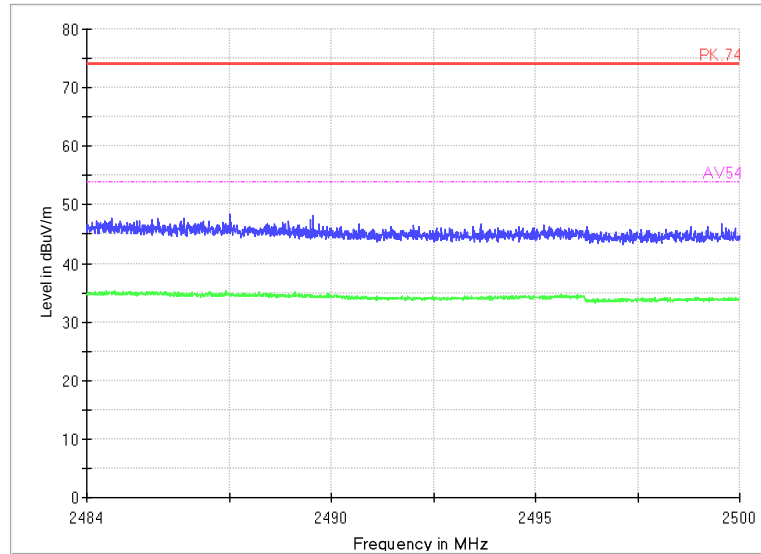


Radiated Emission Band Edge

Channel No.:9

Test Mode: 802.11n(HT40)

Polarization: V



Radiated Emission Band Edge

Channel No.:9

Test Mode: 802.11n(HT40)

Polarization: H

**Sample Calculations**

After comparison, the worst case attitude is EUT lay down.

For 802.11b、802.11g is ANT1 For 802.11n(HT20/HT40) is ANT MIMO

Determining Spurious Emissions Levels

A “reference path loss” is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

$$\text{Result} = P_{\text{mea}} + A_{Rpl}$$

Sample calculation: $(23.94 \text{ dB}\mu\text{V/m}) = (42.74 \text{ dB}\mu\text{V}) + (-18.8 \text{ dB/m})$, the corresponding frequency is 30.8245 MHz.

For 802.11b Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.8245	23.94	-18.8	42.74	Vertical	40	16.06
59.682	14.91	-16	30.91	Vertical	40	25.09
133.7415	16.53	-19.9	36.43	Vertical	43.5	26.97
300.824	13.63	-13.4	27.03	Vertical	46	32.37
374.9805	22.02	-11.5	33.52	Vertical	46	23.98
915.804	20.16	-0.5	20.66	Vertical	46	25.84

For 802.11g Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.5335	24.94	-18.7	43.64	Vertical	40	15.06
61.137	14.92	-16.2	31.12	Vertical	40	25.08
131.1225	14.52	-19.9	34.42	Vertical	43.5	28.98
269.299	13.24	-14.2	27.44	Vertical	46	32.76
436.3815	22.94	-9.5	32.44	Vertical	46	23.06
936.95	20.32	-0.3	20.62	Vertical	46	25.68

For 802.11n(HT20) Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.194	24.95	-18.5	43.45	Vertical	40	15.05
58.9545	13.89	-15.9	29.79	Vertical	40	26.11
131.365	15	-19.9	34.9	Vertical	43.5	28.5
249.996	18.55	-14.7	33.25	Vertical	46	27.45
436.3815	22.87	-9.5	32.37	Vertical	46	23.13
875.743	19.72	-0.9	20.62	Vertical	46	26.28

**For 802.11b Channel No.:6**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.194	24.73	-18.5	43.23	Vertical	40	15.27
59.5365	14.27	-16	30.27	Vertical	40	25.73
133.305	16.32	-19.8	36.12	Vertical	43.5	27.18
249.996	18.56	-14.7	33.26	Vertical	46	27.44
436.3815	22.92	-9.5	32.42	Vertical	46	23.08
931.421	20.53	-0.1	20.63	Vertical	46	25.47

For 802.11g Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.485	24.66	-18.7	43.36	Vertical	40	15.34
61.0885	14.93	-16.2	31.13	Vertical	40	25.07
132.7715	16.37	-19.7	36.07	Vertical	43.5	27.13
287.4865	14.03	-13.6	27.63	Vertical	46	31.97
374.9805	21.99	-11.5	33.49	Vertical	46	24.01
889.614	21.49	-1	22.49	Vertical	46	24.51

For 802.11n(HT20) Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.194	24.73	-18.5	43.23	Vertical	40	15.27
59.682	14.96	-16	30.96	Vertical	40	25.04
131.8985	15.72	-19.8	35.52	Vertical	43.5	27.78
249.996	18.58	-14.7	33.28	Vertical	46	27.42
436.333	21.99	-9.5	31.49	Vertical	46	24.01
889.614	23.26	-1	24.26	Vertical	46	22.74

For 802.11b Channel No.:11

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.485	24.62	-18.7	43.32	Vertical	40	15.38
60.943	13.34	-16.2	29.54	Vertical	40	26.66
132.6745	16.37	-19.7	36.07	Vertical	43.5	27.13
237.7255	12.61	-15.3	27.91	Vertical	46	33.39
331.864	15.78	-12.4	28.18	Vertical	46	30.22
870.1655	19.64	-1	20.64	Vertical	46	26.36



For 802.11g Channel No.:11

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.388	24.69	-18.6	43.29	Vertical	40	15.31
61.0885	15.05	-16.2	31.25	Vertical	40	24.95
131.6075	15.54	-19.9	35.44	Vertical	43.5	27.96
297.8655	13.92	-13.4	27.32	Vertical	46	32.08
436.333	22.01	-9.5	31.51	Vertical	46	23.99
921.042	20.36	-0.3	20.66	Vertical	46	25.64

For 802.11n(HT20) Channel No.:11

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.4365	25.02	-18.6	43.62	Vertical	40	14.98
60.9915	14.12	-16.2	30.32	Vertical	40	25.88
132.626	16.13	-19.7	35.83	Vertical	43.5	27.37
264.0125	18.14	-14.4	32.54	Vertical	46	27.86
331.9125	15.67	-12.4	28.07	Vertical	46	30.33
930.354	20.49	-0.1	20.59	Vertical	46	25.51

For 802.11n(HT40) Channel No.:3

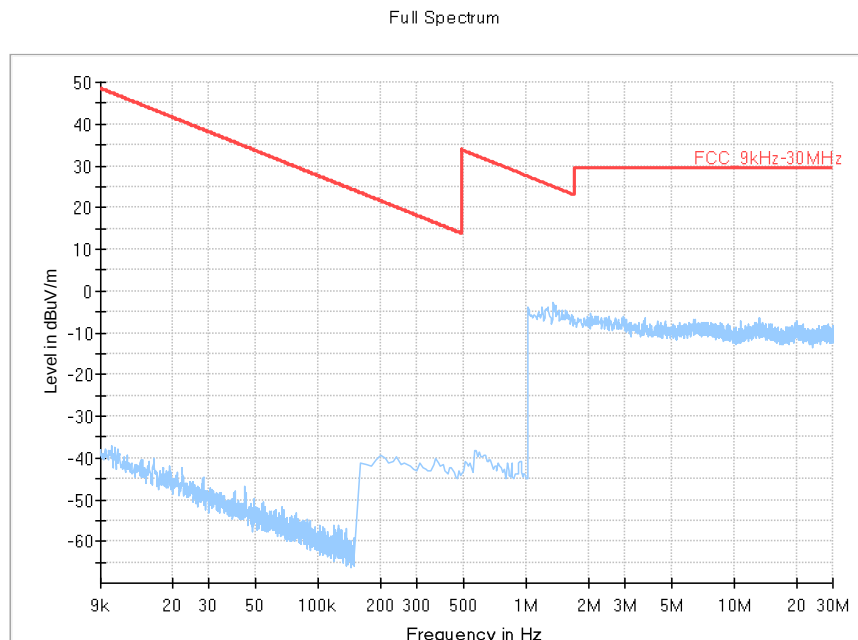
Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.3395	24.94	-18.6	43.54	Vertical	40	15.06
60.9915	14.1	-16.2	30.3	Vertical	40	25.9
133.9355	16.15	-20	36.15	Vertical	43.5	27.35
287.438	13.2	-13.6	26.8	Vertical	46	32.8
335.4045	14.74	-12.1	26.84	Vertical	46	31.26
929.3355	20.36	-0.1	20.46	Vertical	46	25.64

For 802.11n(HT40) Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.388	24.76	-18.6	43.36	Vertical	40	15.24
63.95	9.49	-17	26.49	Vertical	40	30.51
133.9355	15.97	-20	35.97	Vertical	43.5	27.53
287.438	13.21	-13.6	26.81	Vertical	46	32.79
335.356	15.37	-12.1	27.47	Vertical	46	30.63
949.463	19.88	-0.6	20.48	Vertical	46	26.12

For 802.11n(HT40) Channel No.:9

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
30.6305	25.19	-18.7	43.89	Vertical	40	14.81
61.719	12.5	-16.4	28.9	Vertical	40	27.5
132.044	16.03	-19.8	35.83	Vertical	43.5	27.47
249.996	18.4	-14.7	33.1	Vertical	46	27.6
436.3815	22.9	-9.5	32.4	Vertical	46	23.1
909.2565	19.86	-0.8	20.66	Vertical	46	26.14



Frequency Range: 9kHz -30MHz

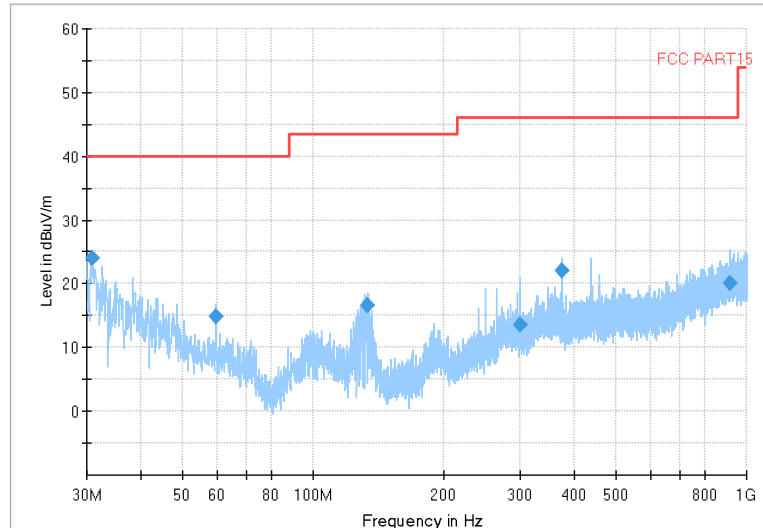
Detector: QP mode

Note: The relevant tests have been performed in order to verify in which mode would have the worst features, the result show above is the worst case.

Carrier frequency (MHz): 2412

Channel No.:1

Full Spectrum

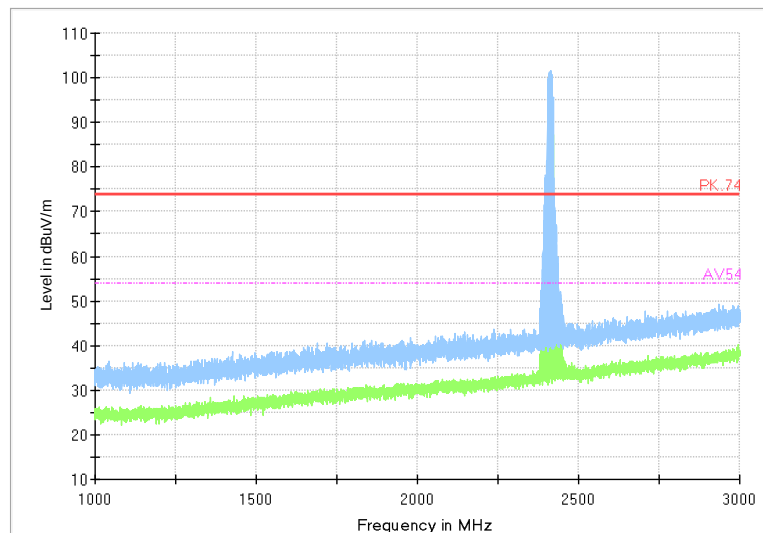


Frequency Range 30MHz -1GHz

Detector: QP mode

Modulation type: 802.11b

Full Spectrum

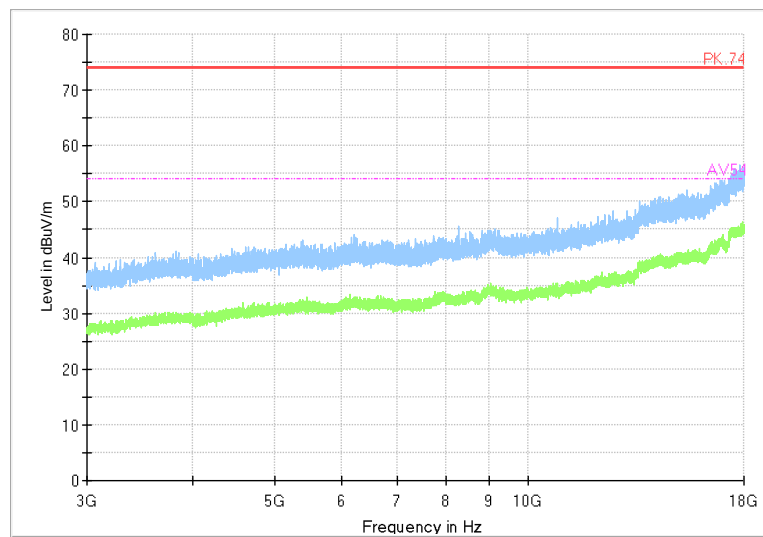


Frequency Range: 1GHz -3GHz

Detector:QP mode

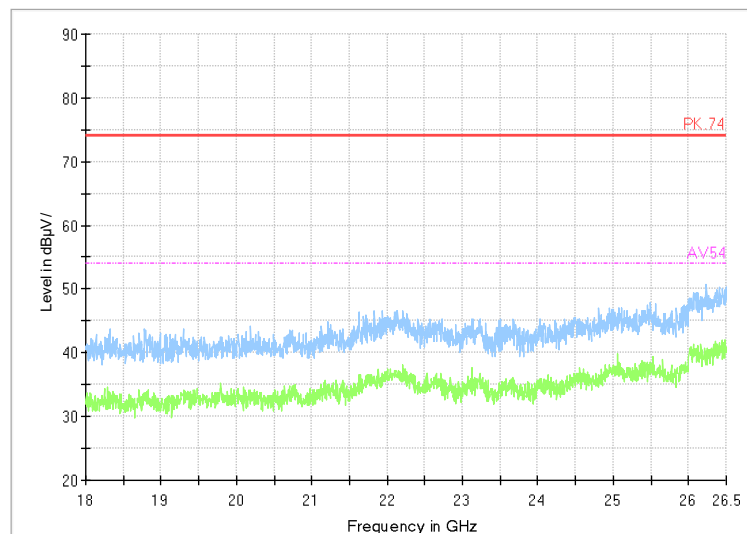
Modulation type: 802.11b

Full Spectrum



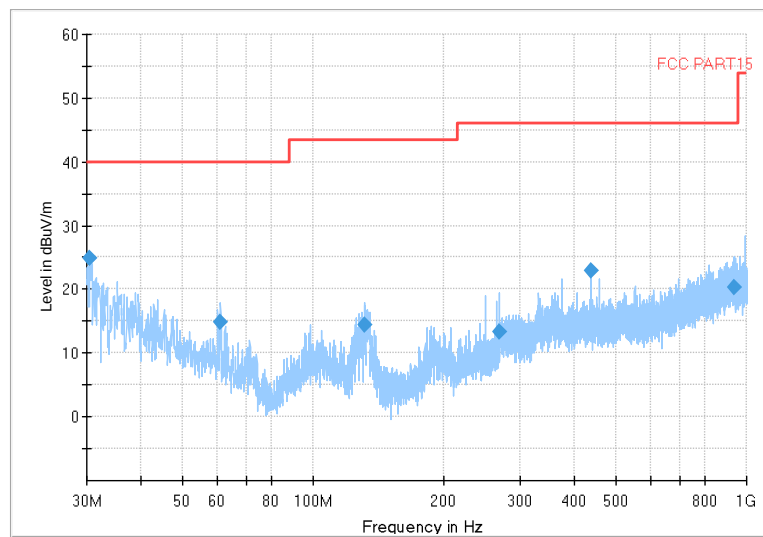
Frequency Range: 3GHz -18GHz
 Detector: Av mode and PK mode
 Modulation type: 802.11b

Full Spectrum



Frequency Range: 18GHz -26GHz
 Detector: Av mode and PK mode
 Modulation type: 802.11b

Full Spectrum

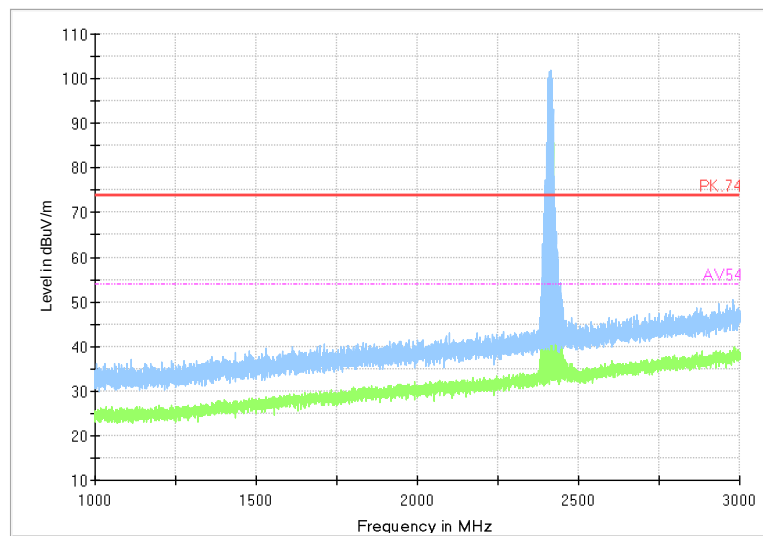


Frequency Range: 30MHz -1GHz

Detector: QP mode

Modulation type: 802.11g

Full Spectrum

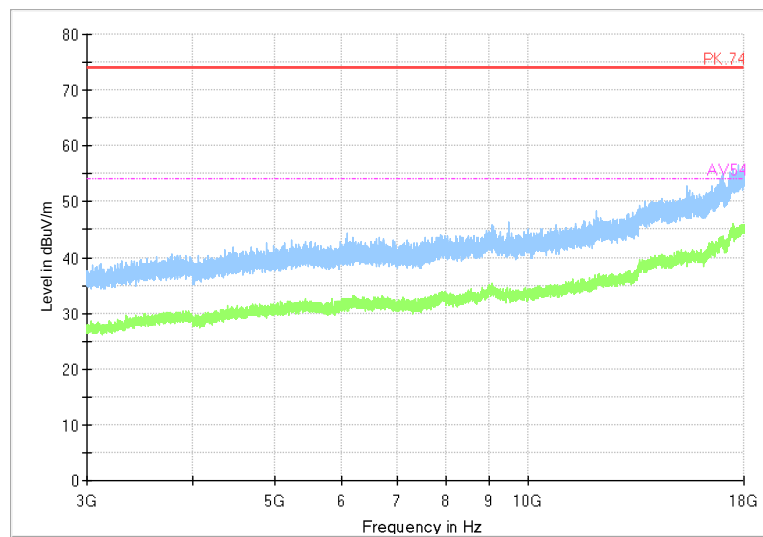


Frequency Range: 1GHz -3GHz

Detector: Av mode and PK mode

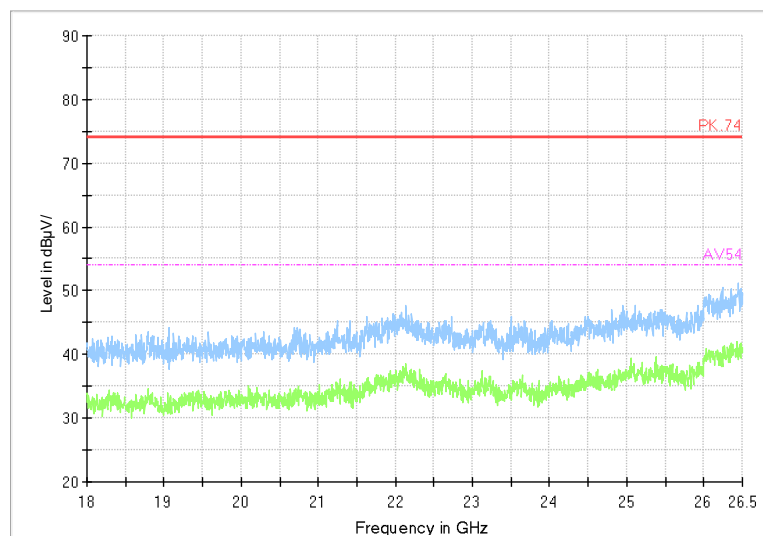
Modulation type: 802.11g

Full Spectrum



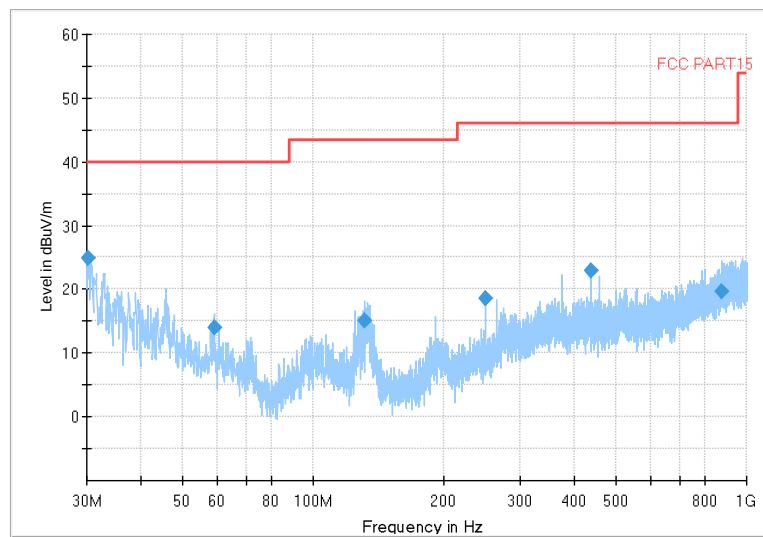
Frequency Range: 3GHz -18GHz
 Detector: Av mode and PK mode
 Modulation type: 802.11g

Full Spectrum



Frequency Range: 18GHz -26GHz
 Detector: Av mode and PK mode
 Modulation type: 802.11g

Full Spectrum

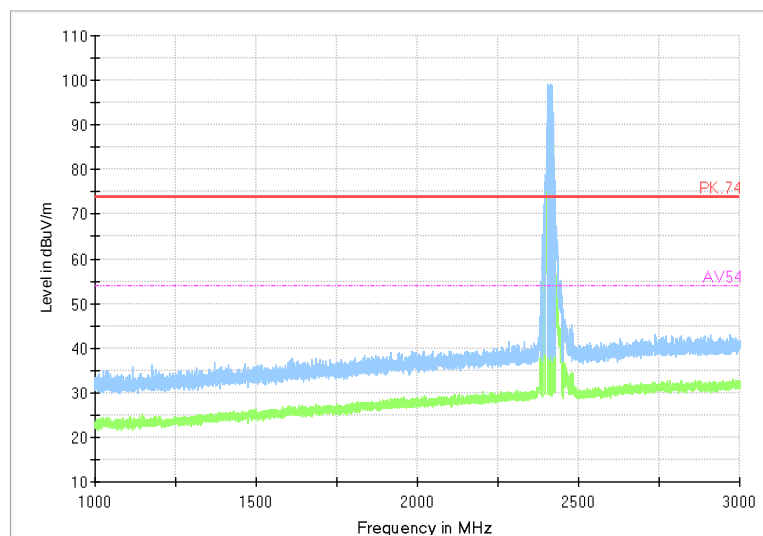


Frequency Range: 30MHz -1GHz

Detector:QP mode

Modulation type: 802.11n(HT20)

Full Spectrum

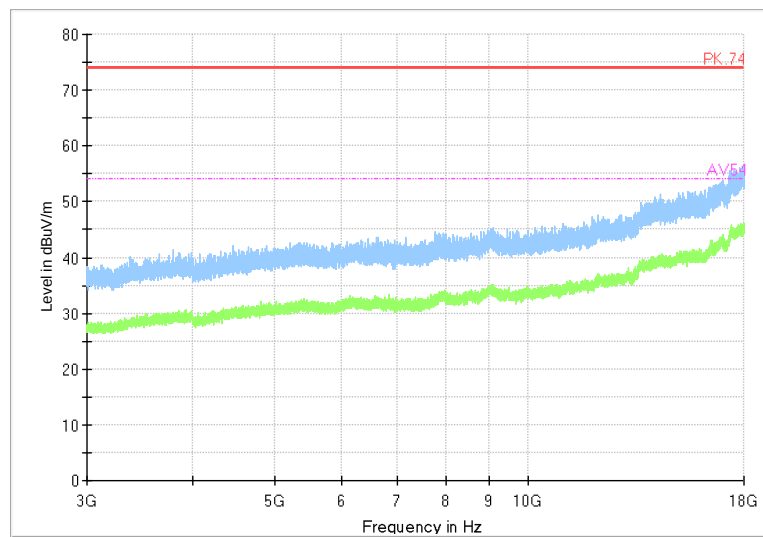


Frequency Range: 1GHz -3GHz

Detector: Av mode and PK mode

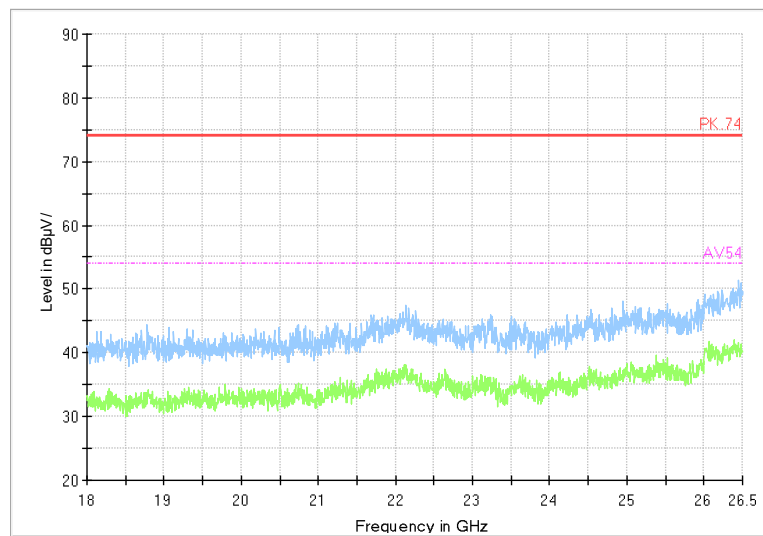
Modulation type: 802.11n(HT20)

Full Spectrum



Frequency Range: 3GHz -18GHz
 Detector: Av mode and PK mode
 Modulation type: 802.11n(HT20)

Full Spectrum



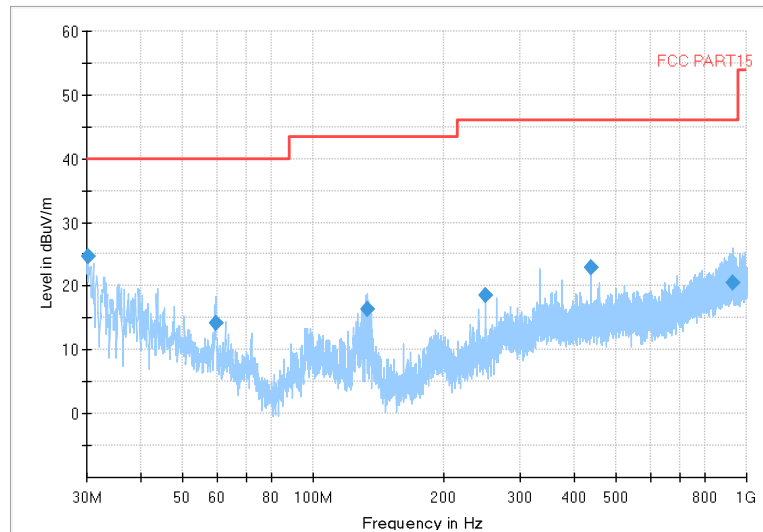
Frequency Range: 18GHz -26GHz
 Detector: Av mode and PK mode
 Modulation type: 802.11n(HT20)



Carrier frequency (MHz): 2437

Channel No.:6

Full Spectrum

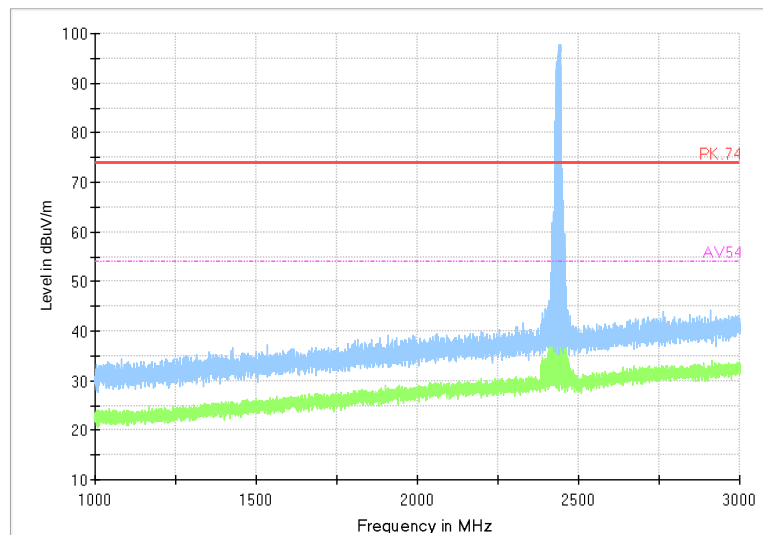


Frequency Range: 30MHz -1GHz

Detector:QP mode

Modulation type: 802.11b

Full Spectrum

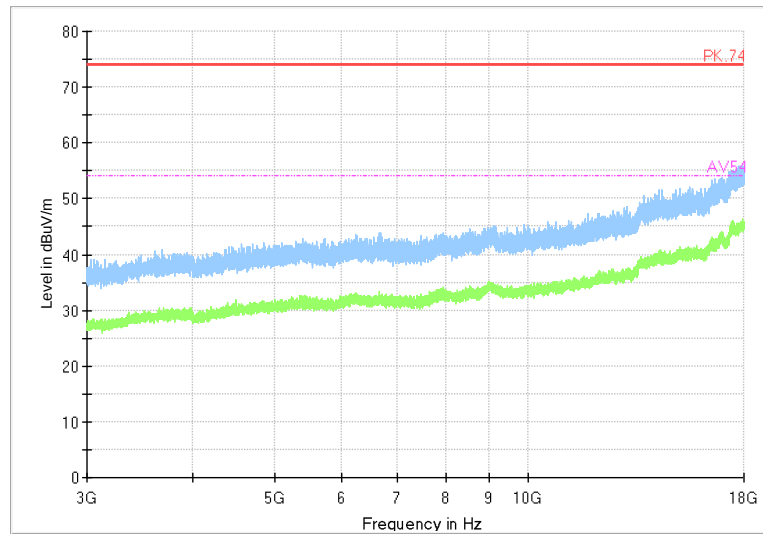


Frequency Range: 1GHz -3GHz

Detector: Av mode and PK mode

Modulation type: 802.11b

Full Spectrum

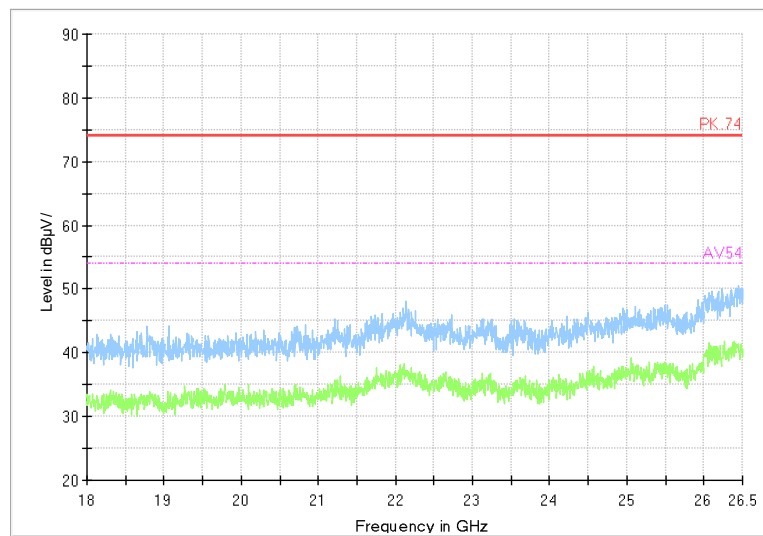


Frequency Range: 3GHz -18GHz

Detector: Av mode and PK mode

Modulation type: 802.11b

Full Spectrum



Frequency Range: 18GHz -26GHz

Detector: Av mode and PK mode

Modulation type: 802.11b