

Fig.A.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)

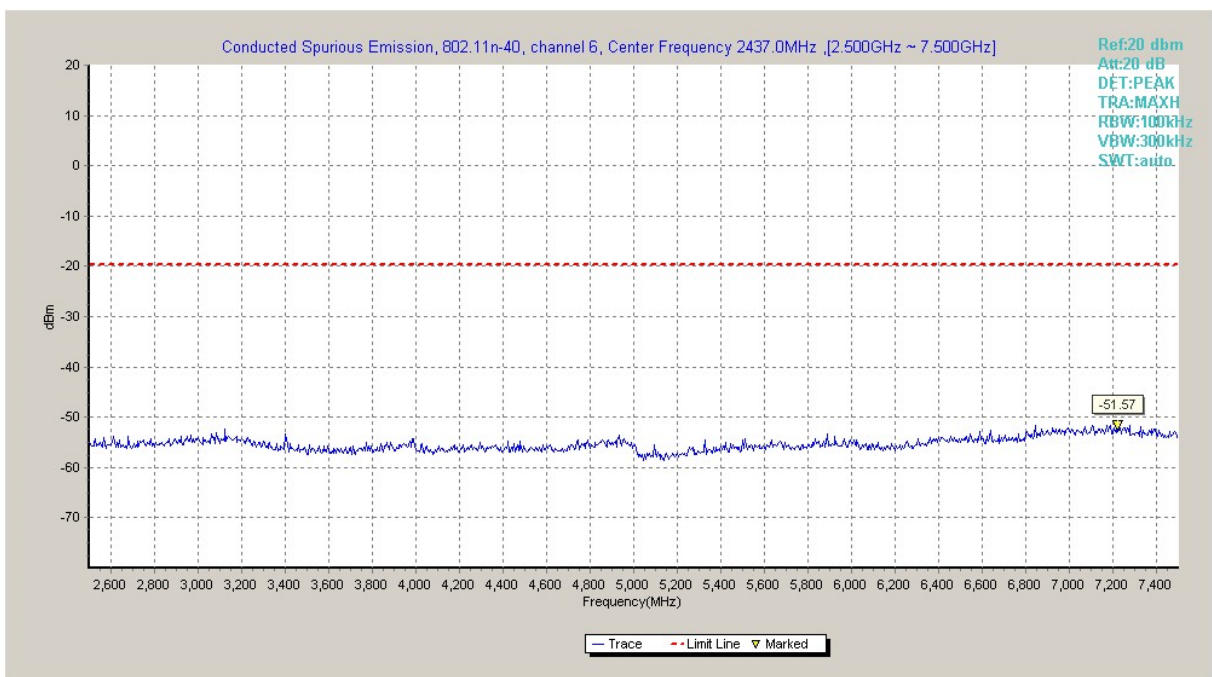


Fig.A.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)

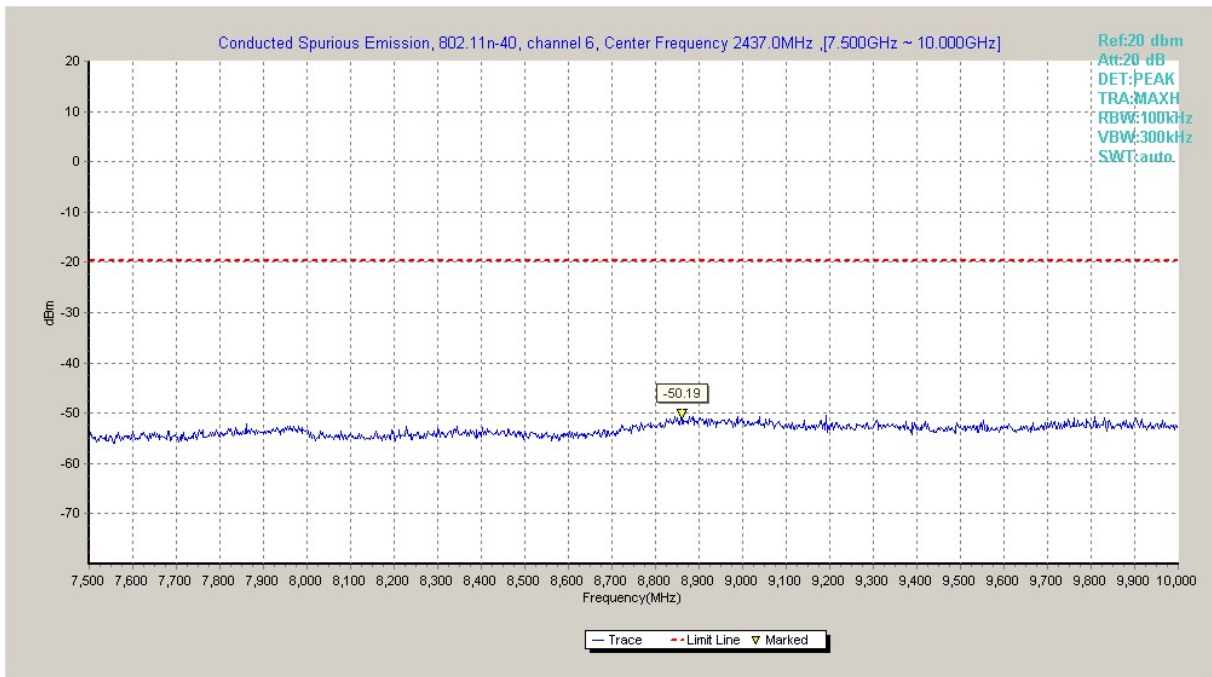


Fig.A.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)

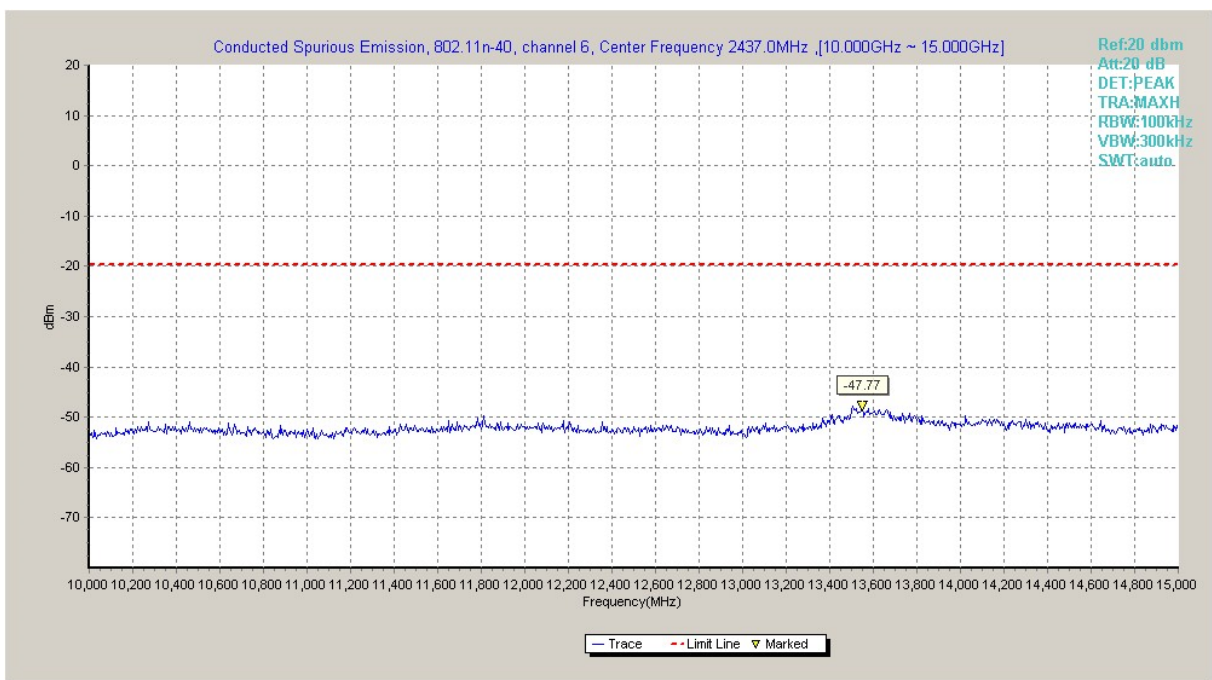


Fig.A.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)

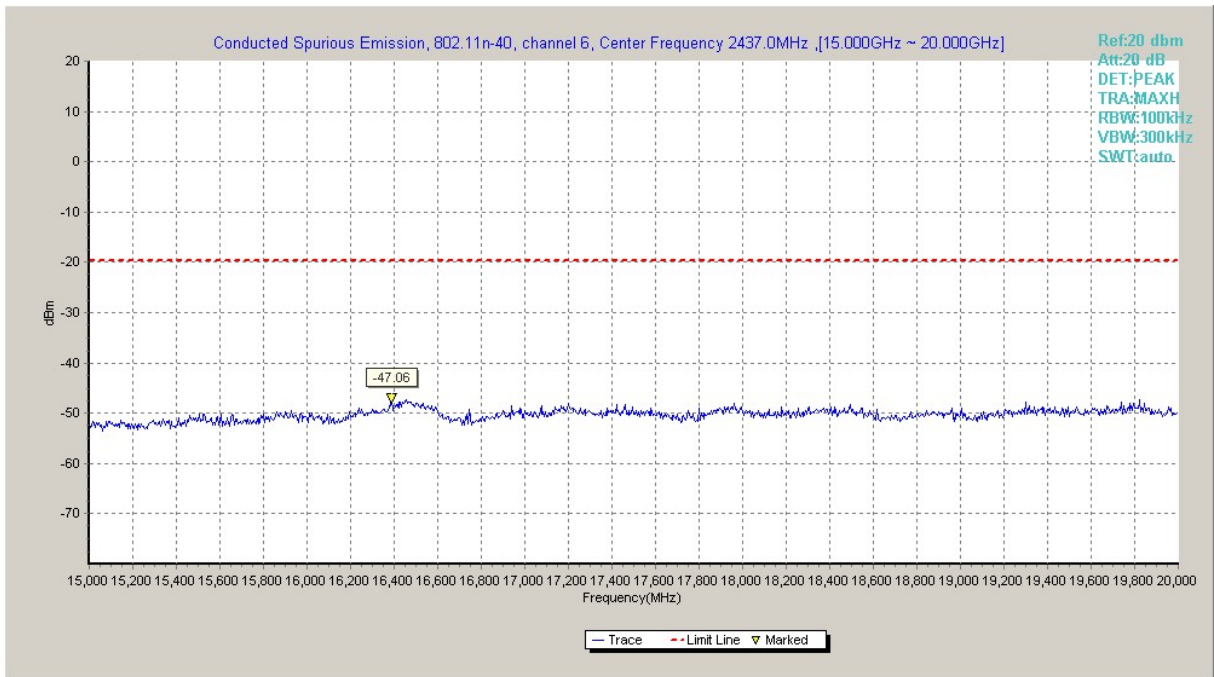


Fig.A.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)

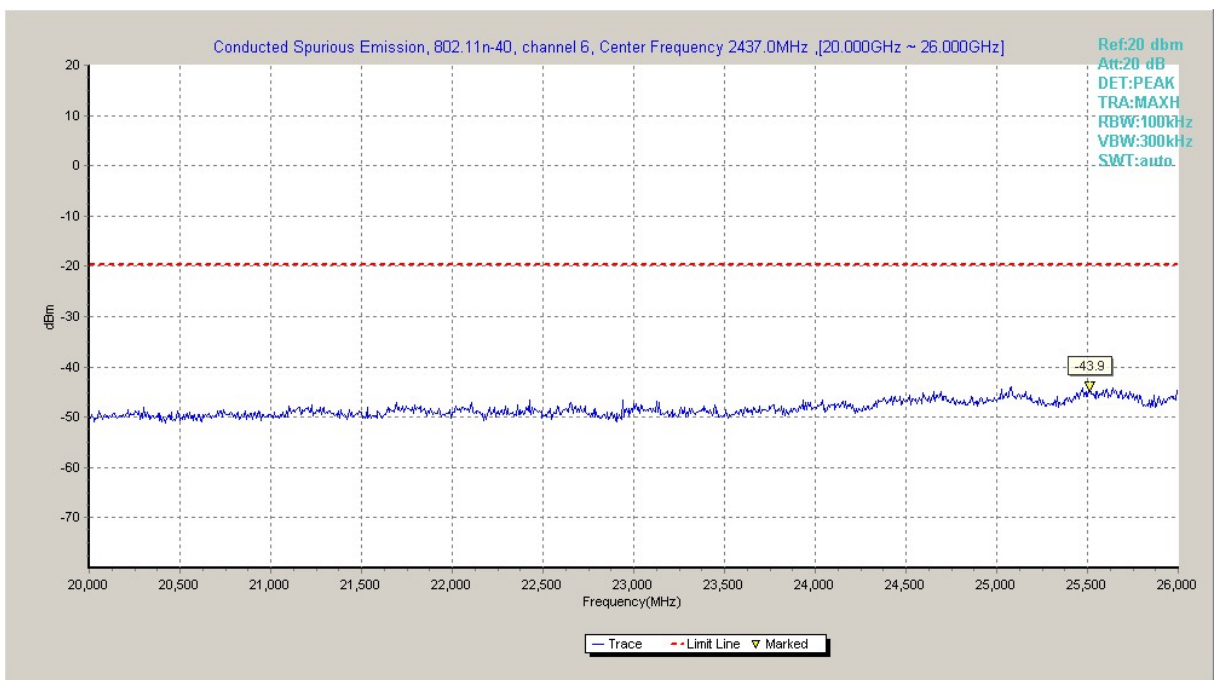


Fig.A.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)

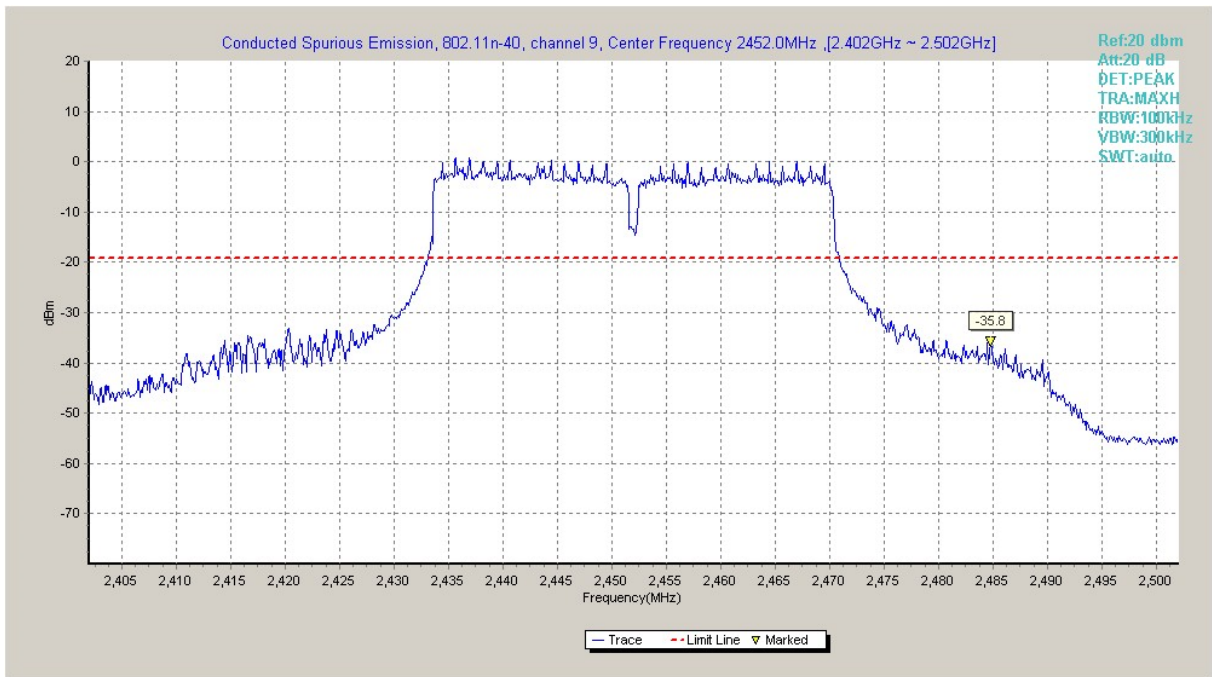


Fig.A.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)

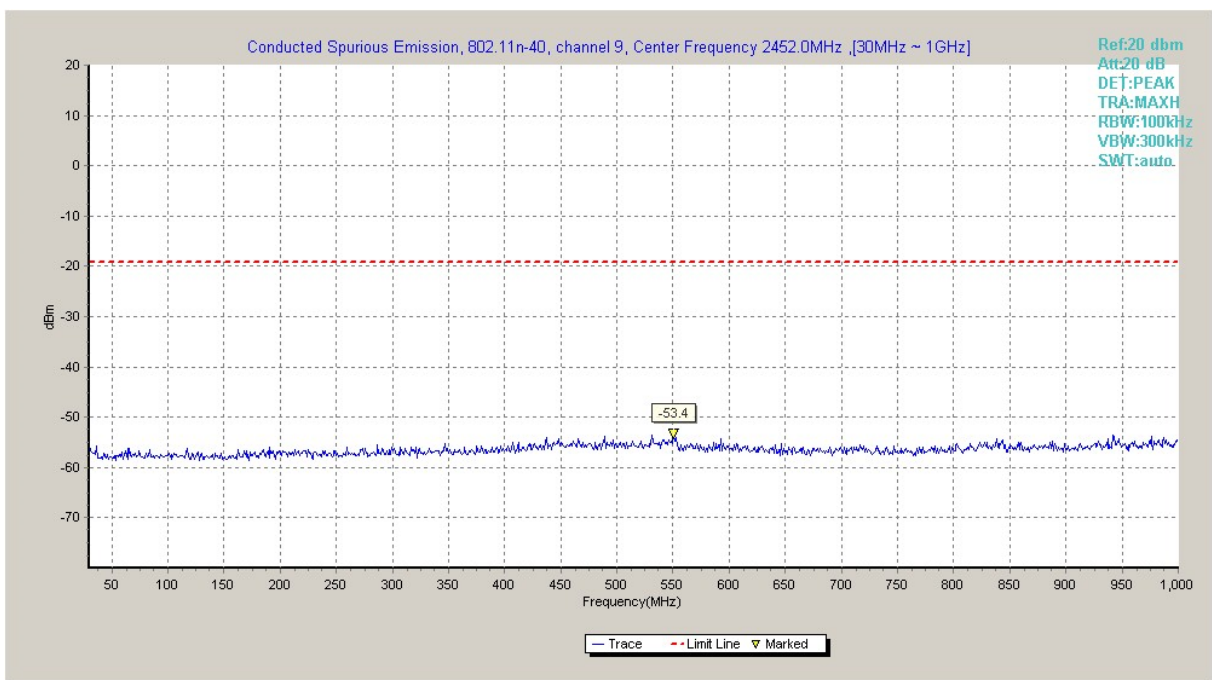


Fig.A.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)

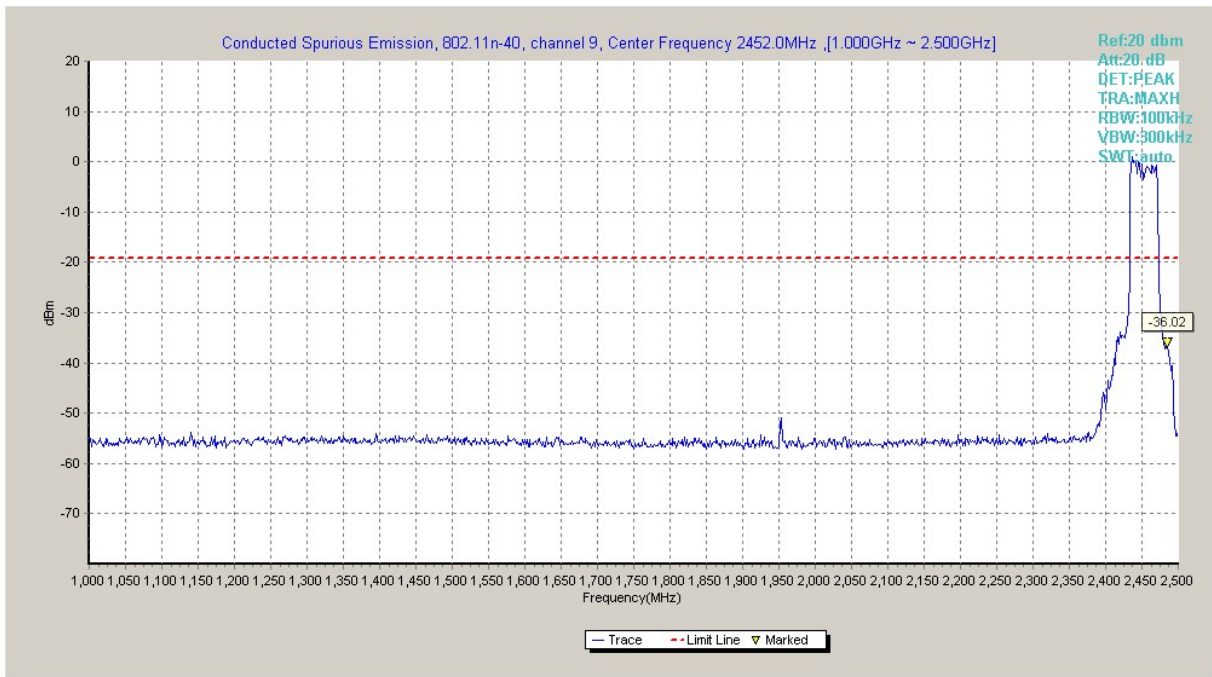


Fig.A.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)

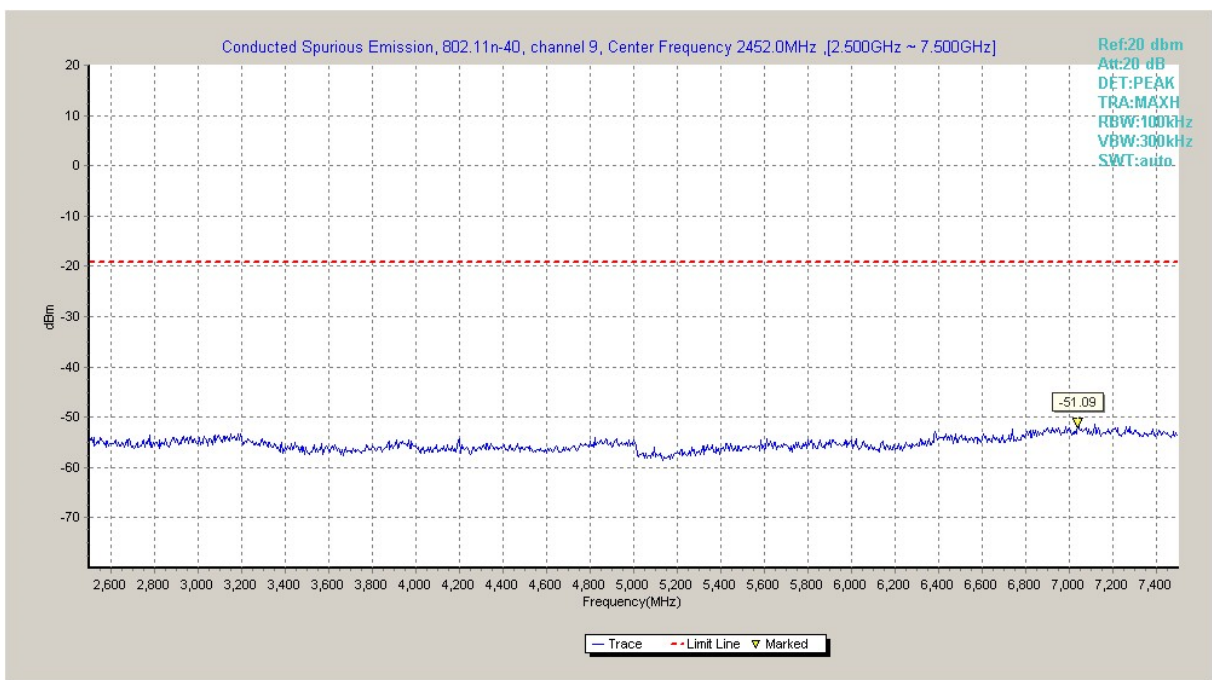


Fig.A.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)

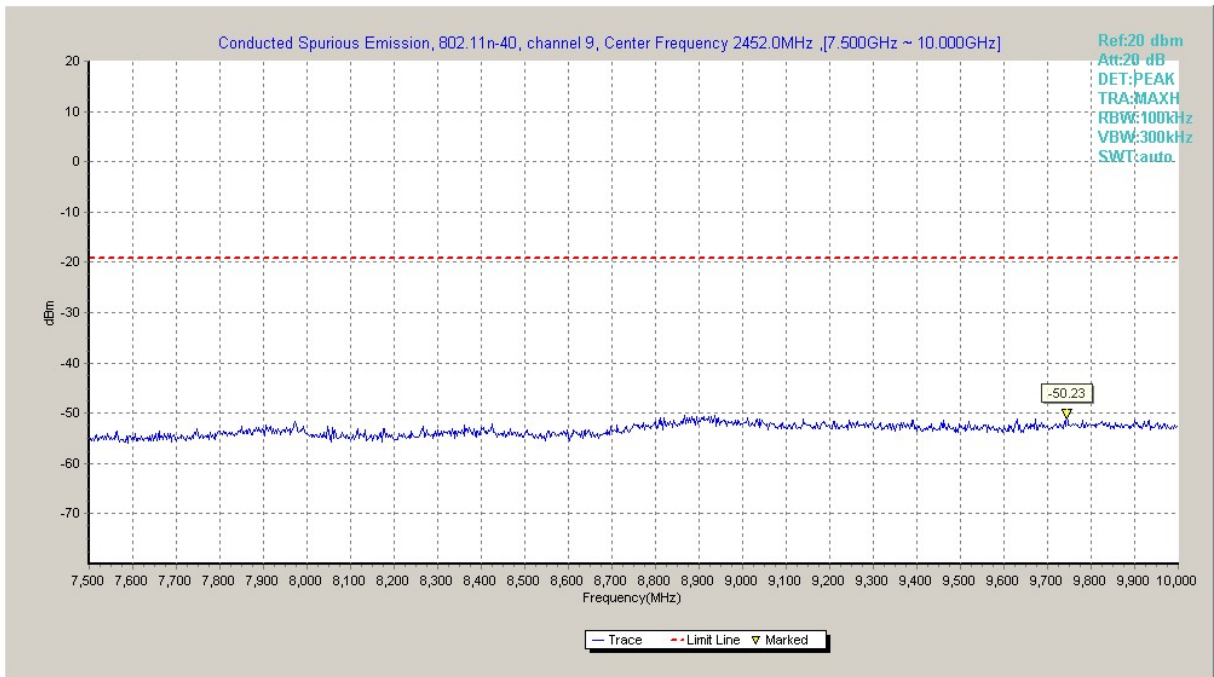


Fig.A.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)

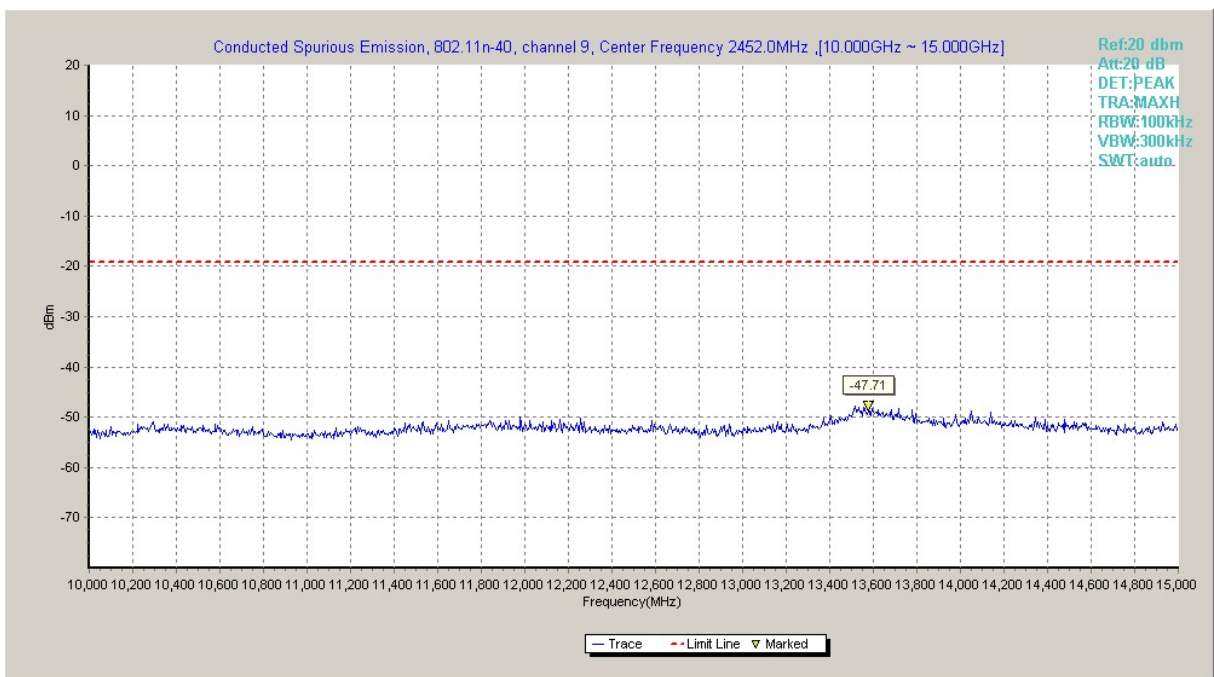


Fig.A.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)

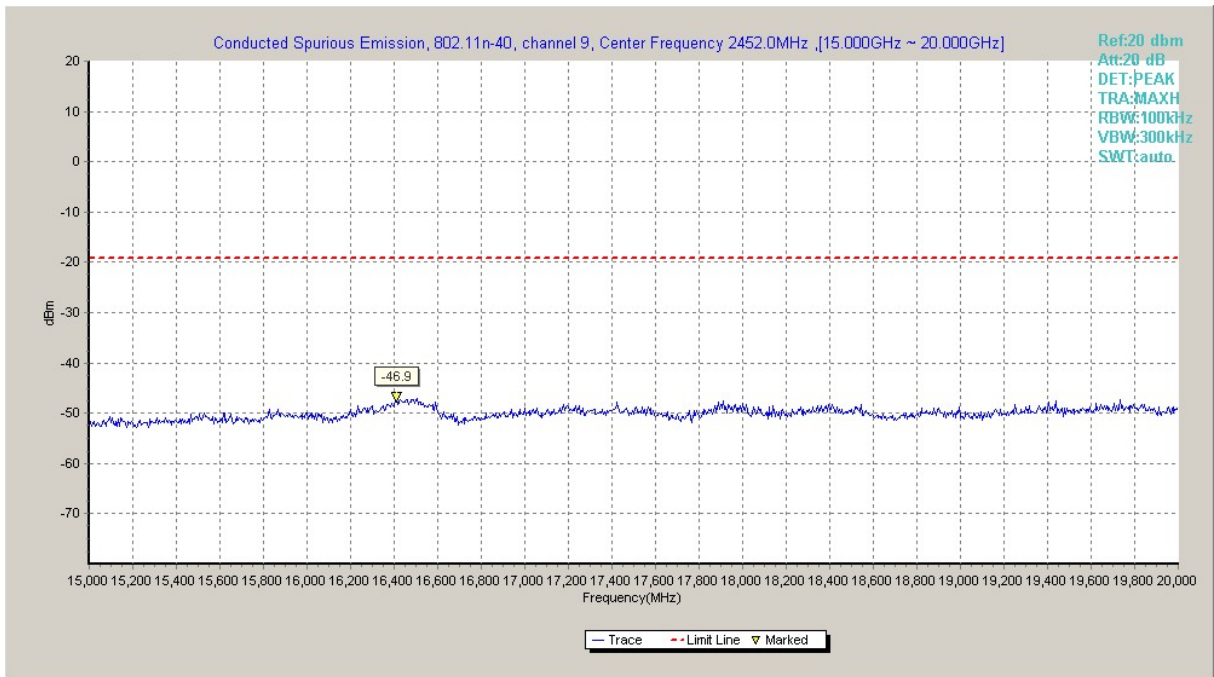


Fig.A.6.1.95 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 15 GHz-20 GHz)

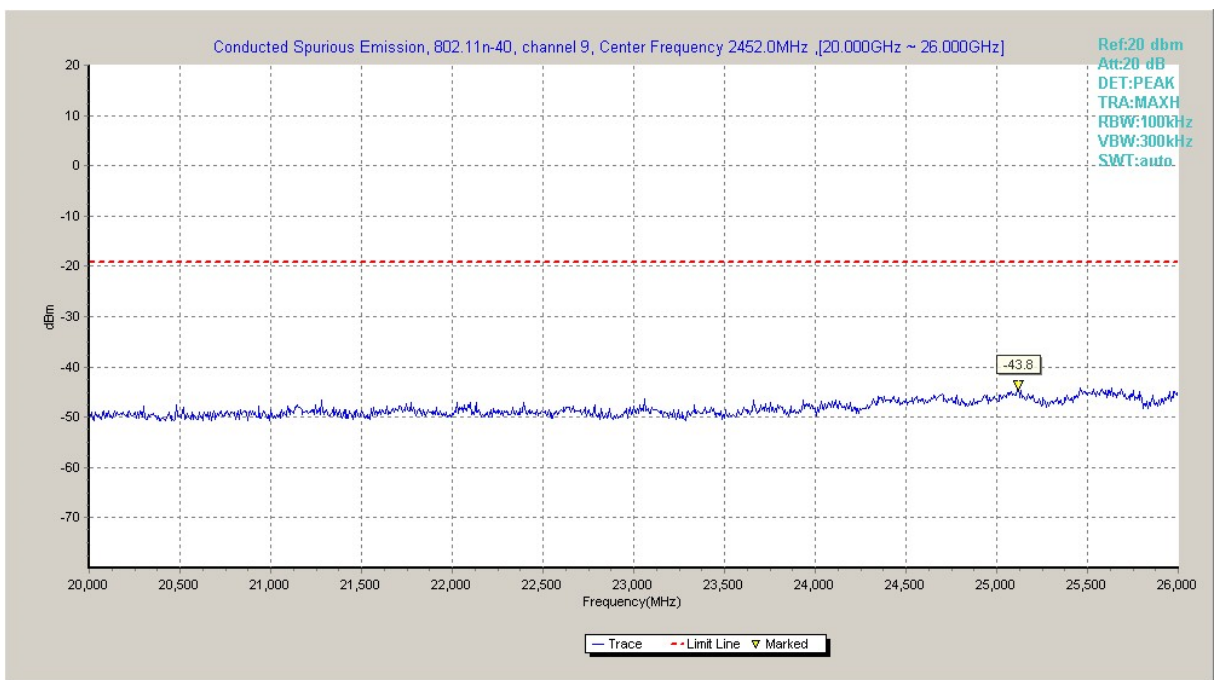


Fig.A.6.1.96 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 20 GHz-26 GHz)

A.6.2 Transmitter Spurious Emission - Radiated

Method of Measurement: See ANSI C63.10-2013-clause 6.4 & 6.5 & 6.6

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Frequency (MHz)	Field strength(μ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

Test Condition

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100KHz/300KHz	5
1000-4000	1MHz/1MHz	15
4000-18000	1MHz/1MHz	40
18000-26500	1MHz/1MHz	20

EUT ID: EUT1

Measurement Results for Set.12:
802.11b mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.31GHz~2.43GHz---L	Fig.A.6.2.1	P
	11	2.45GHz~2.50GHz---H	Fig.A.6.2.2	P

802.11g mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.31GHz~2.43GHz---L	Fig.A.6.2.3	P
	11	2.45GHz~2.50GHz---H	Fig.A.6.2.4	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	1	2.31GHz~2.43GHz---L	Fig.A.6.2.5	P
	11	2.45GHz~2.50GHz---H	Fig.A.6.2.6	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	3	2.31GHz~2.43GHz---L	Fig.A.6.2.7	P
	9	2.45GHz~2.50GHz---H	Fig.A.6.2.8	P

Conclusion: Pass

Note:

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.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

$$\text{Result} = P_{Mea} + A_{Rpl} = P_{Mea} + \text{Cable Loss} + \text{Antenna Factor}$$

Peak
802.11b
 Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2380.364	60.24	2.9	32.0	25.43	74.0	13.8	H	155	22
2385.698	60.91	2.9	32.0	26.09	74.0	13.1	H	155	44
4824.000	41.61	-35.2	34.1	42.76	74.0	32.4	H	155	242
7236.000	53.98	-32.4	35.8	50.63	74.0	20.0	V	155	176
9648.000	50.18	-30.1	36.8	43.54	74.0	23.8	V	155	88
12060.000	47.30	-31.0	38.9	39.42	74.0	26.7	H	155	22

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2326.000	49.07	-27.7	31.9	44.86	74.0	24.9	V	155	88
2557.800	47.76	-26.8	32.1	42.50	74.0	26.2	V	155	110
4874.000	43.70	-35.5	34.1	45.11	74.0	30.3	H	155	132
7311.000	60.86	-31.6	35.8	56.66	74.0	13.1	H	155	154
9748.000	49.74	-31.3	36.9	44.12	74.0	24.3	H	155	176
12185.000	47.79	-29.1	39.0	37.93	74.0	26.2	H	155	198

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2484.625	60.75	2.9	32.0	25.83	74.0	13.2	V	155	176
2487.085	60.92	2.9	32.0	25.99	74.0	13.1	V	155	198
4924.000	43.95	-35.2	34.1	45.03	74.0	30.0	H	155	220
7386.000	61.74	-31.2	35.8	57.17	74.0	12.3	V	155	242
9848.000	48.16	-30.5	37.0	41.69	74.0	25.8	H	155	66
12310.000	47.16	-31.6	39.0	39.73	74.0	26.8	V	155	88

802.11g

Ch1

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2389.702	60.26	2.9	32.0	25.43	74.0	13.7	H	155	44
2389.996	61.25	2.9	32.0	26.43	74.0	12.7	V	155	66
4824.000	41.46	-35.2	34.1	42.61	74.0	32.5	H	155	88
7236.000	47.97	-32.4	35.8	44.61	74.0	26.0	V	155	110
9648.000	50.16	-30.1	36.8	43.52	74.0	23.8	V	155	132
12060.000	48.52	-31.0	38.9	40.63	74.0	25.5	V	155	154

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2317.000	47.20	-27.8	31.9	43.03	74.0	26.8	V	155	0
2545.600	48.11	-26.8	32.1	42.86	74.0	25.9	H	155	22
4874.000	41.10	-35.5	34.1	42.52	74.0	32.9	V	155	66
7311.000	52.73	-31.6	35.8	48.53	74.0	21.3	H	155	132
9748.000	48.71	-31.3	36.9	43.09	74.0	25.3	H	155	88
12185.000	47.02	-29.1	39.0	37.16	74.0	27.0	V	155	44

Ch11

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.690	46.49	2.9	32.0	11.56	74.0	27.5	H	155	44
2484.285	64.68	2.9	32.0	29.75	74.0	9.3	V	155	66
4924.000	42.75	-35.2	34.1	43.83	74.0	31.2	V	155	88
7386.000	52.15	-31.2	35.8	47.58	74.0	21.9	V	155	264
9848.000	48.86	-30.5	37.0	42.39	74.0	25.1	V	155	286
12310.000	47.51	-31.6	39.0	40.08	74.0	26.5	H	155	308

802.11n-HT20

Ch1

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2389.772	62.61	2.9	32.0	27.78	74.0	11.4	V	155	0
2389.996	62.58	2.9	32.0	27.75	74.0	11.4	V	155	22
4824.000	40.21	-35.2	34.1	41.36	74.0	33.8	H	155	22
7236.000	51.11	-32.4	35.8	47.75	74.0	22.9	V	155	0
9648.000	51.25	-30.1	36.8	44.61	74.0	22.8	V	155	44
12060.000	48.29	-31.0	38.9	40.40	74.0	25.7	H	155	132

Ch6

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2339.600	48.12	-27.7	31.9	43.85	74.0	25.9	H	155	132
2563.800	48.45	-26.8	32.1	43.18	74.0	25.6	V	155	154
4874.000	41.20	-35.5	34.1	42.61	74.0	32.8	V	155	88
7311.000	49.39	-31.6	35.8	45.19	74.0	24.6	V	155	110
9748.000	49.23	-31.3	36.9	43.61	74.0	24.8	H	155	110
12185.000	47.46	-29.1	39.0	37.61	74.0	26.5	H	155	88

Ch11

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2483.565	64.83	2.9	32.0	29.90	74.0	9.2	H	155	44
2484.005	64.92	2.9	32.0	30.00	74.0	9.1	H	155	66
4924.000	42.17	-35.2	34.1	43.24	74.0	31.8	H	155	88
7386.000	52.17	-31.2	35.8	47.60	74.0	21.8	H	155	110
8848.000	48.31	-29.5	36.2	41.60	74.0	25.7	H	155	132
11948.000	48.60	-30.1	38.8	39.92	74.0	25.4	H	155	154

802.11n-HT40
Ch3

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2388.918	65.80	2.9	32.0	30.97	74.0	8.2	H	155	176
2389.366	65.81	2.9	32.0	30.99	74.0	8.2	H	155	198
4844.000	41.46	-35.4	34.1	42.77	74.0	32.5	H	155	220
7266.000	45.04	-32.5	35.8	41.74	74.0	29.0	V	155	242
9688.000	49.24	-30.7	36.8	43.10	74.0	24.8	H	155	66
12110.000	47.81	-30.7	38.9	39.53	74.0	26.2	H	155	88

Ch6

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2323.600	47.79	-27.7	31.9	43.59	74.0	26.2	H	155	22
2567.800	48.21	-26.8	32.1	42.94	74.0	25.8	H	155	66
4874.000	41.50	-35.5	34.1	42.92	74.0	32.5	V	155	132
7311.000	47.82	-31.6	35.8	43.61	74.0	26.2	H	155	0
9748.000	48.04	-31.3	36.9	42.41	74.0	26.0	V	155	88
12185.000	48.25	-29.1	39.0	38.39	74.0	25.8	V	155	242

Ch9

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
2485.105	64.97	2.9	32.0	30.04	74.0	9.0	H	155	22
2485.260	64.60	2.9	32.0	29.67	74.0	9.4	H	155	330
4904.000	41.38	-35.4	34.1	42.65	74.0	32.6	H	155	242
7356.000	46.63	-30.9	35.8	41.71	74.0	27.4	V	155	264
9808.000	49.03	-31.6	37.0	43.64	74.0	25.0	V	155	286
12260.000	48.12	-30.3	39.0	39.40	74.0	25.9	V	155	308