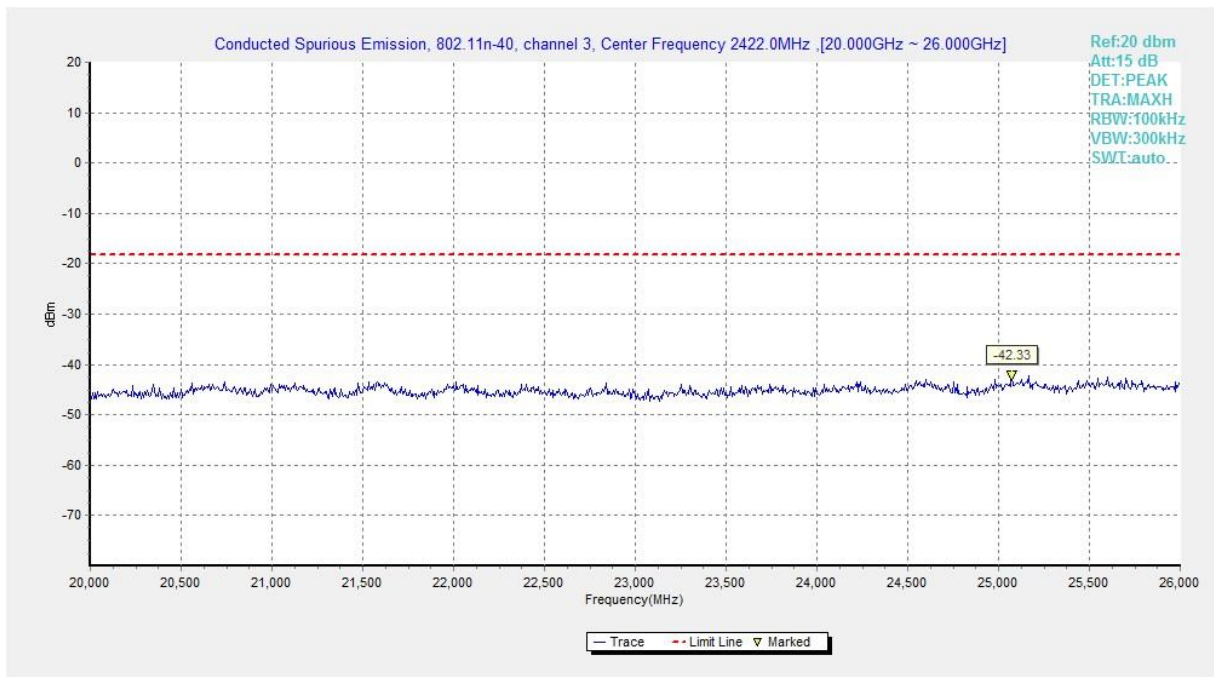
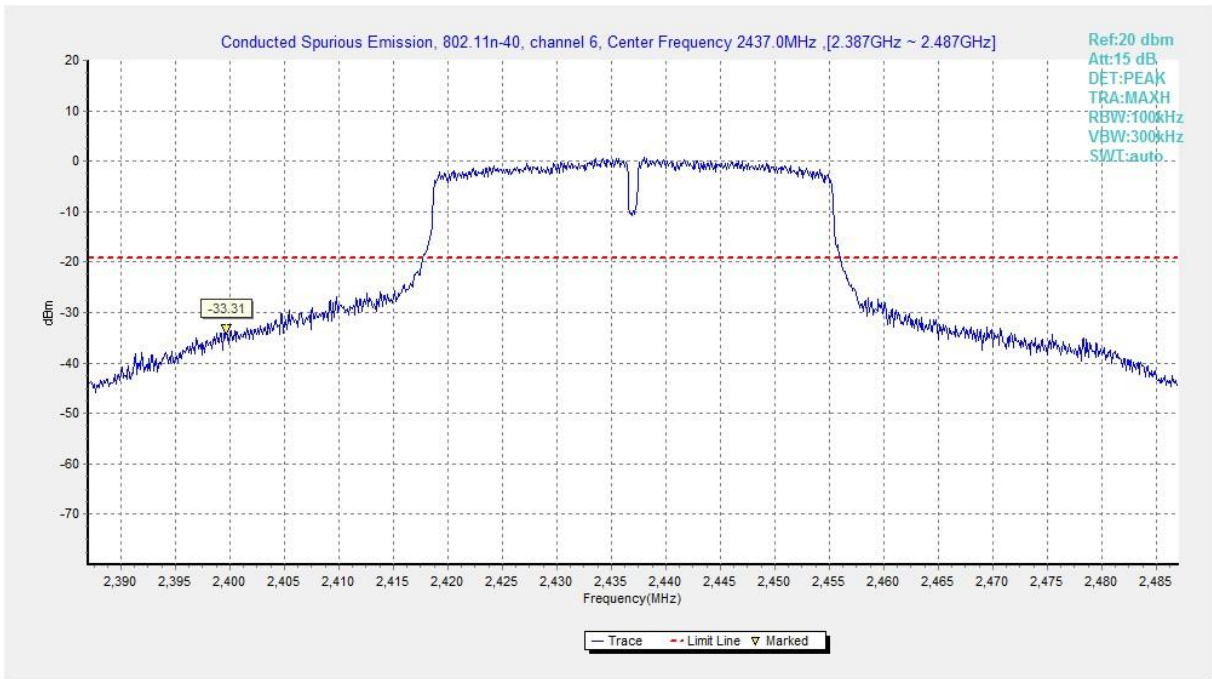


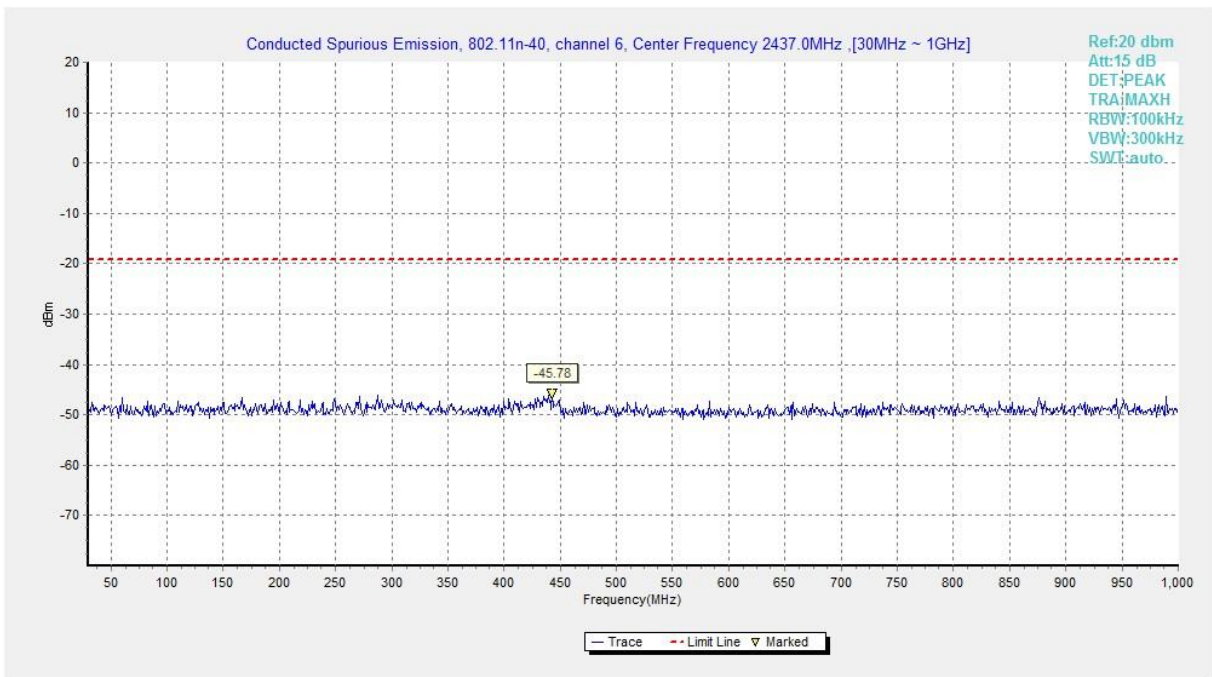
**Fig.A.6.1.79 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 15 GHz-20 GHz)**



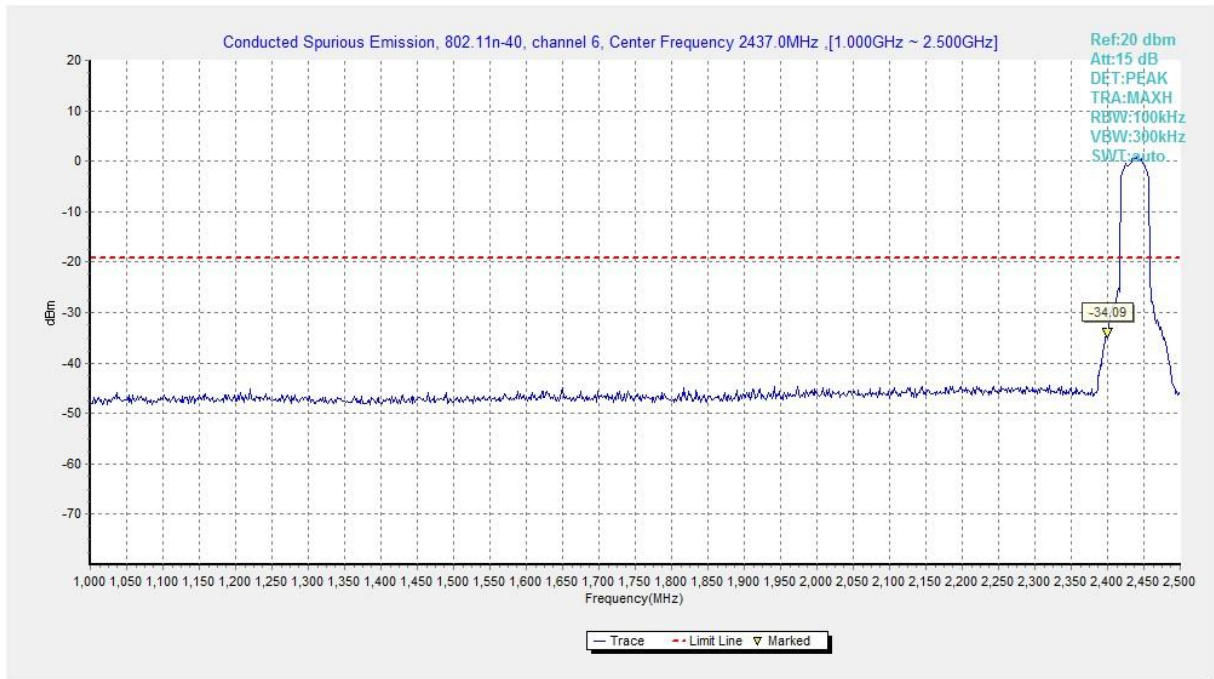
**Fig.A.6.1.80 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)**



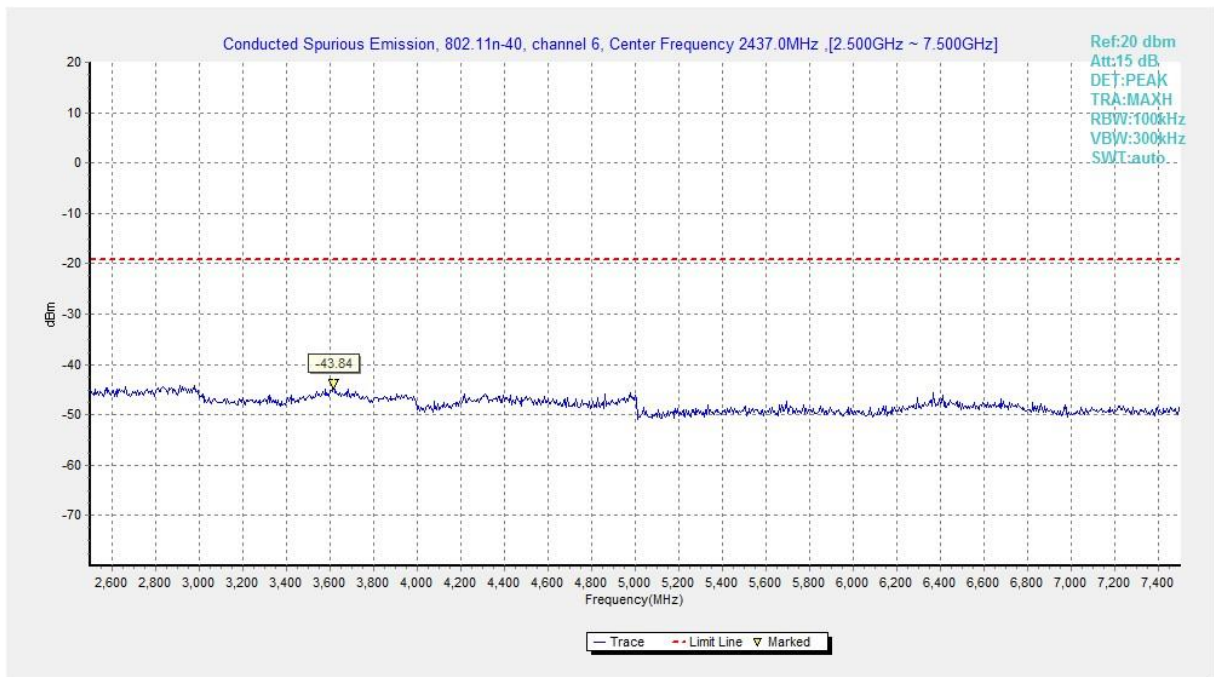
**Fig.A.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)**



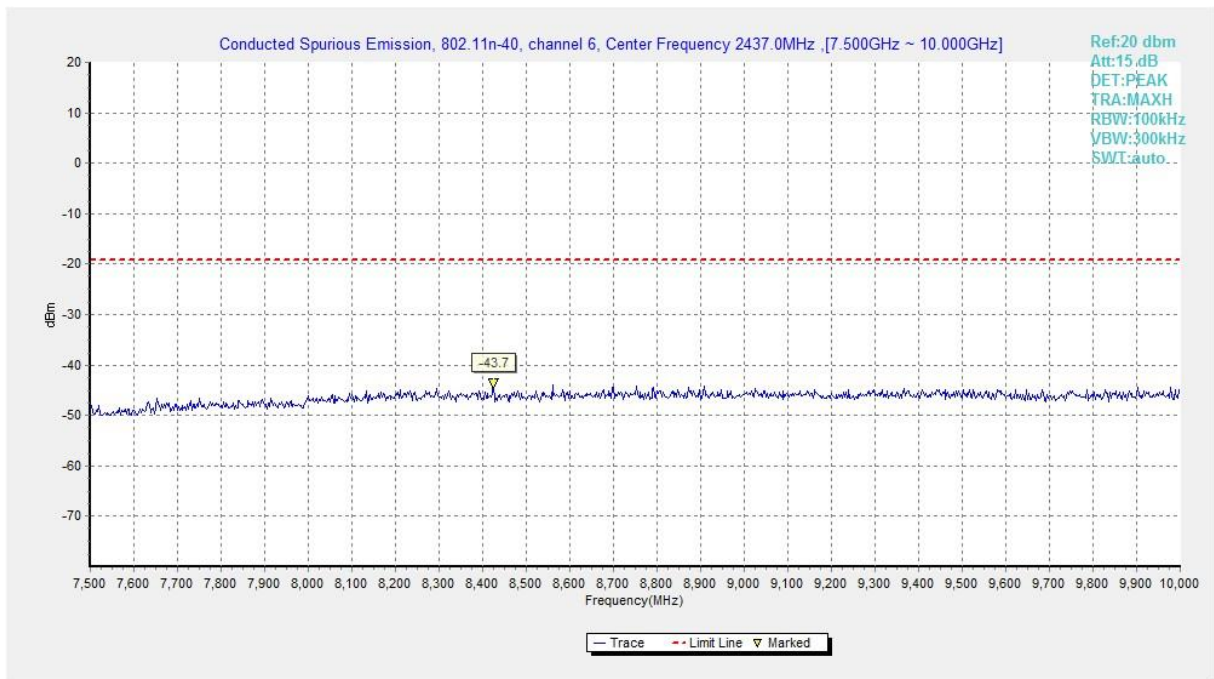
**Fig.A.6.1.82 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 30 MHz-1 GHz)**



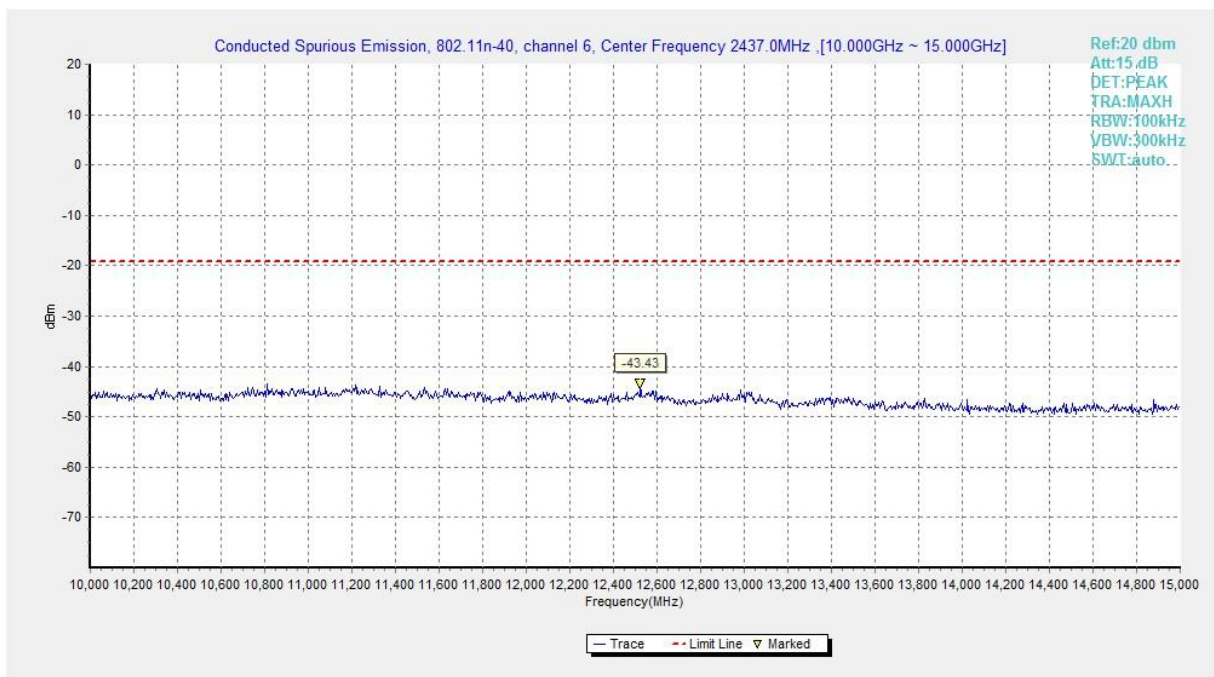
**Fig.A.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)**



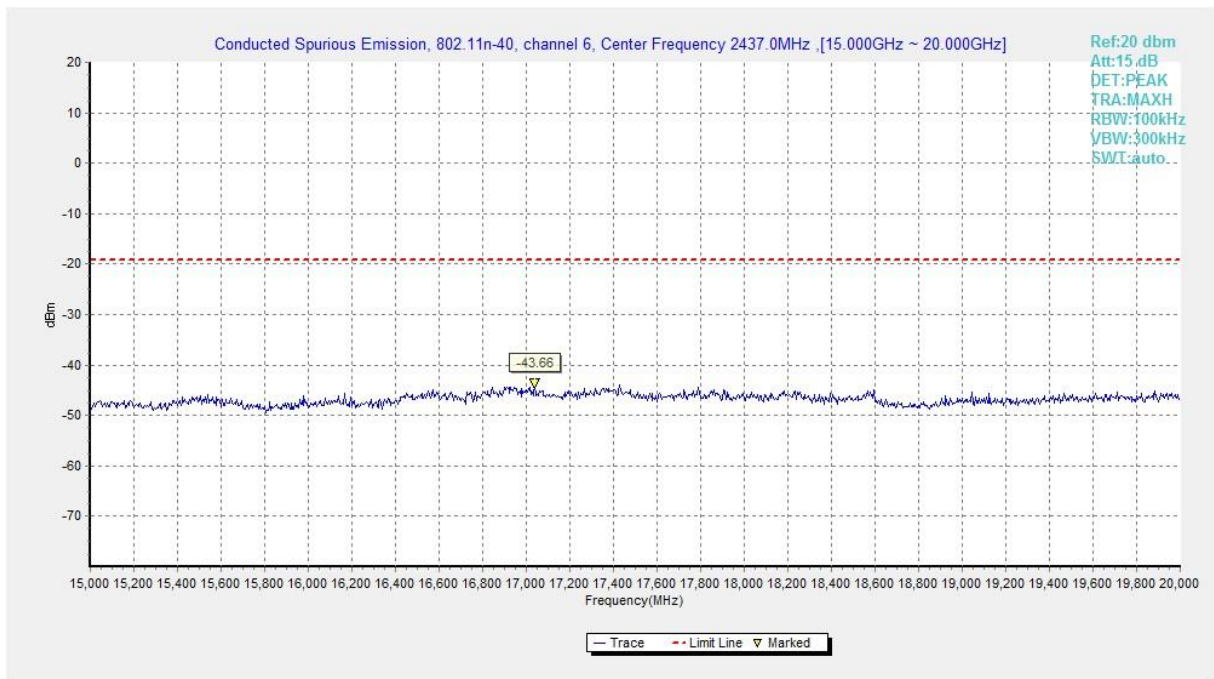
**Fig.A.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)**



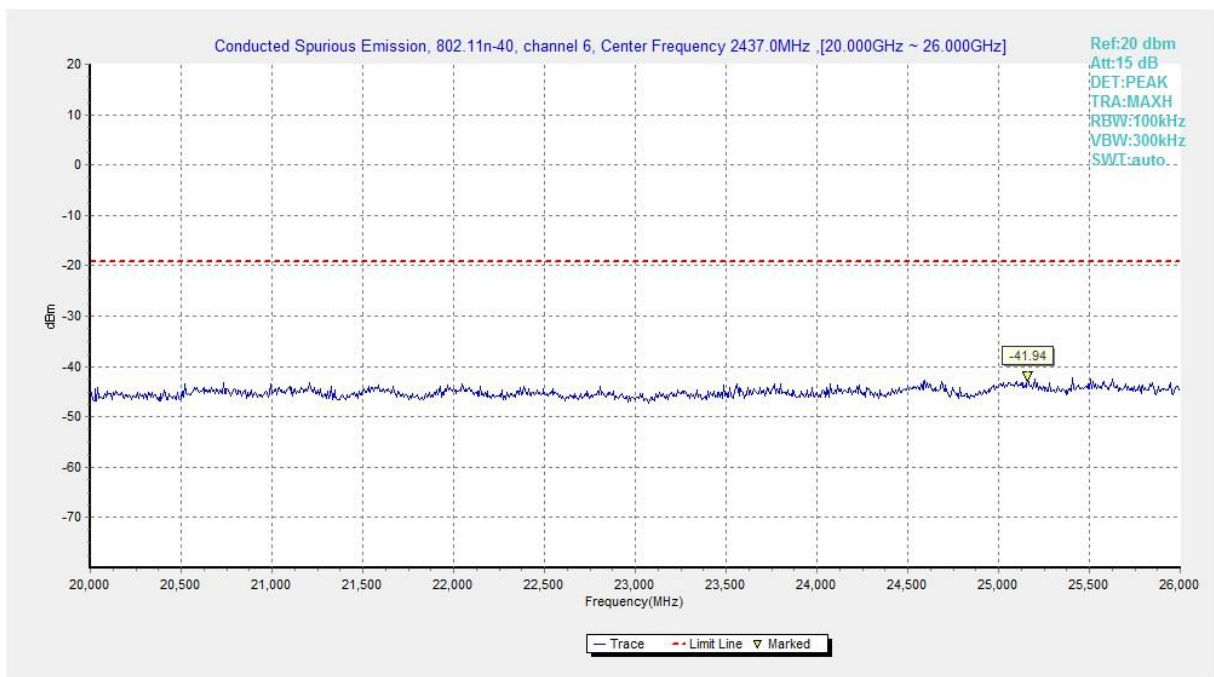
**Fig.A.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)**



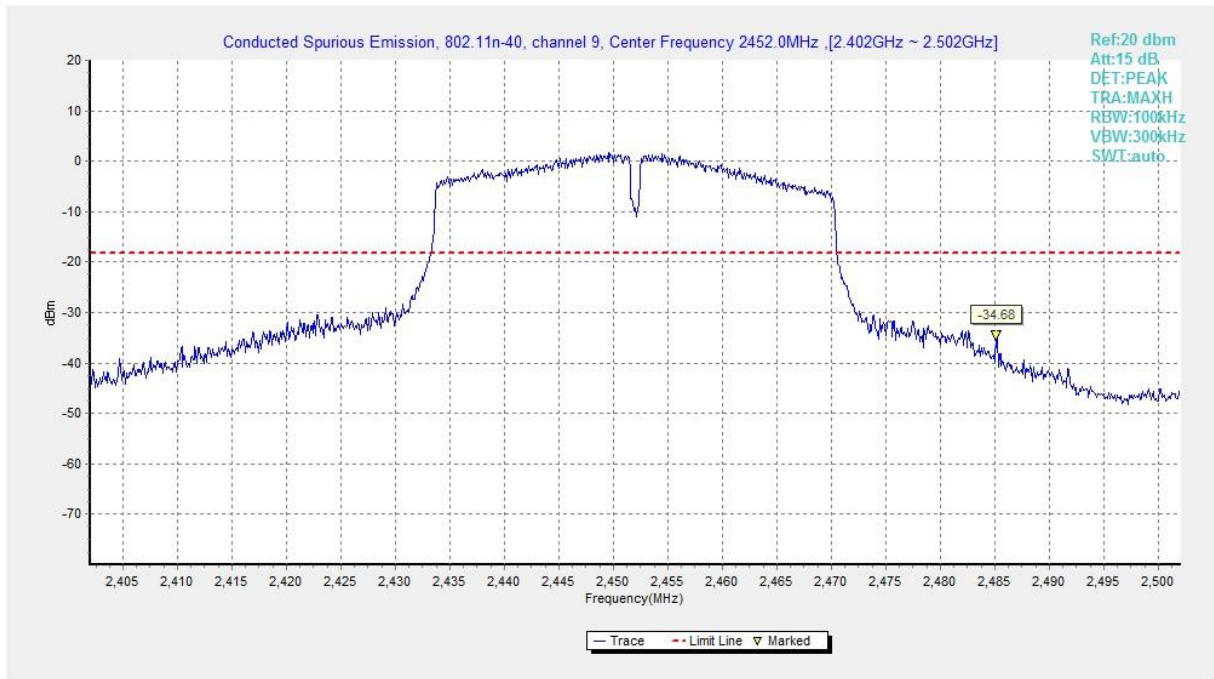
**Fig.A.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)**



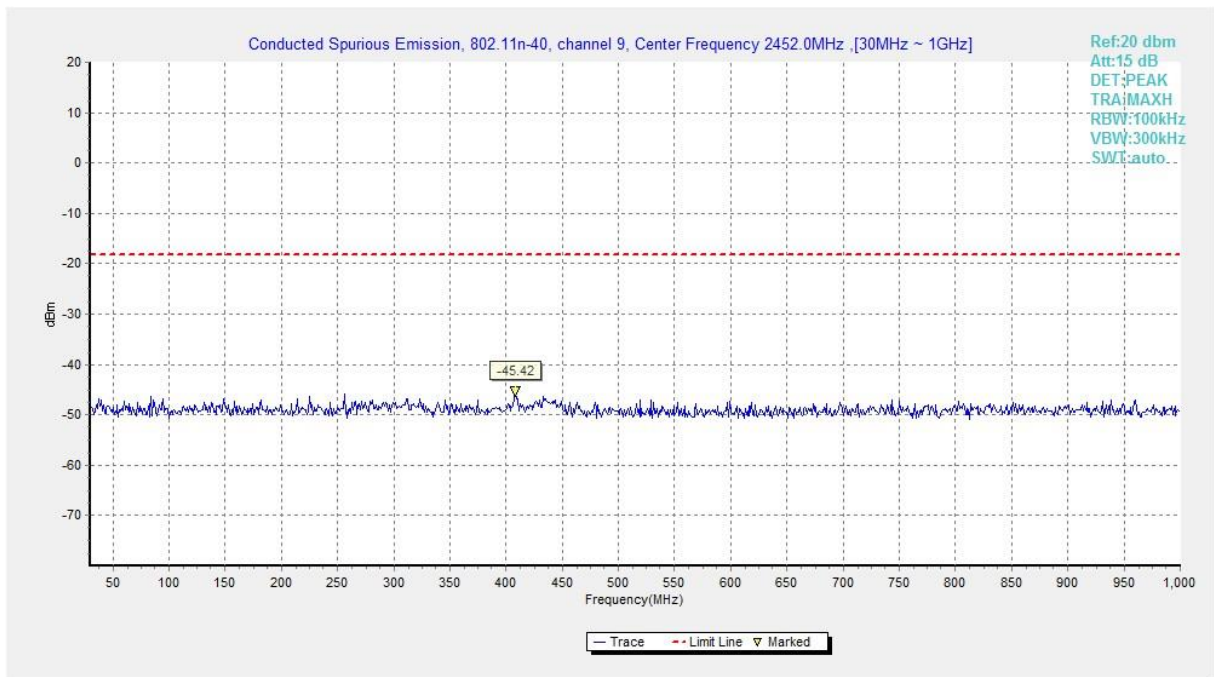
**Fig.A.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)**



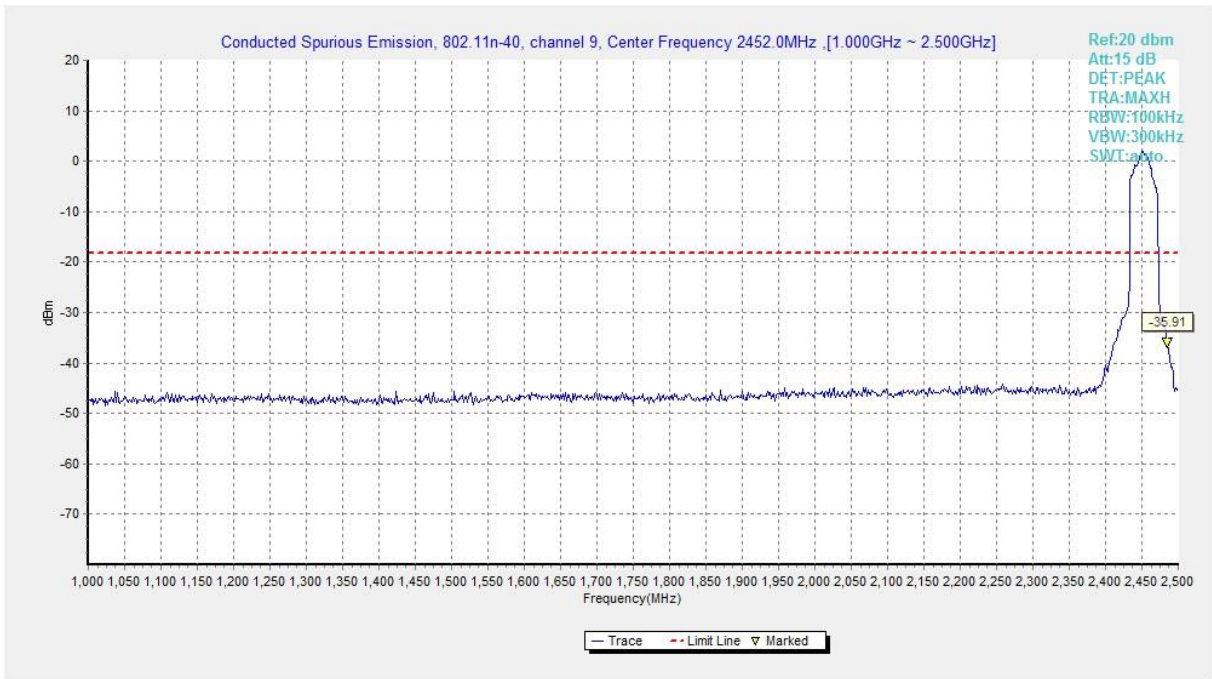
**Fig.A.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)**



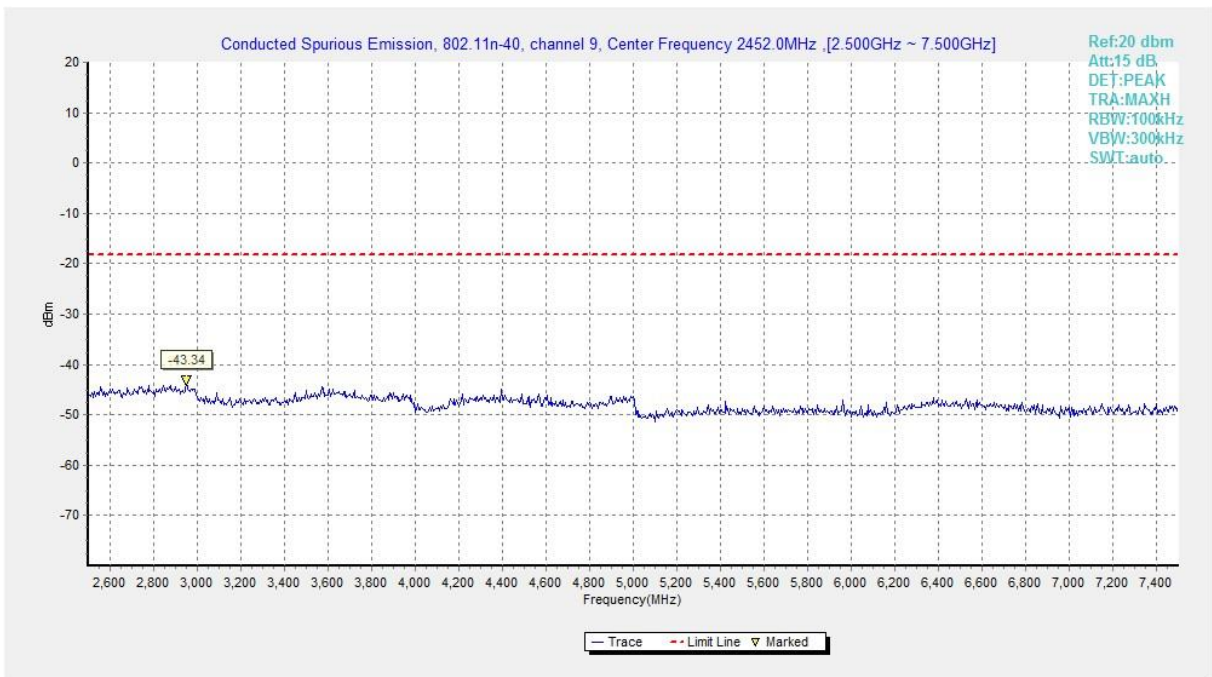
**Fig.A.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)**



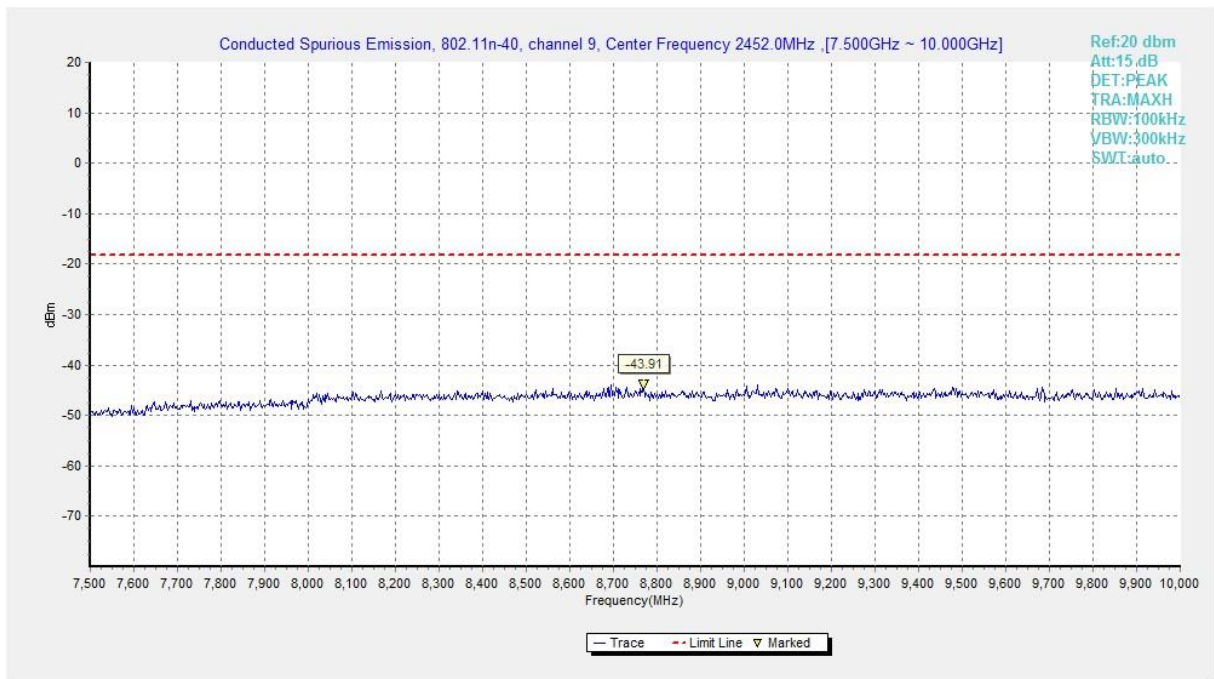
**Fig.A.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)**



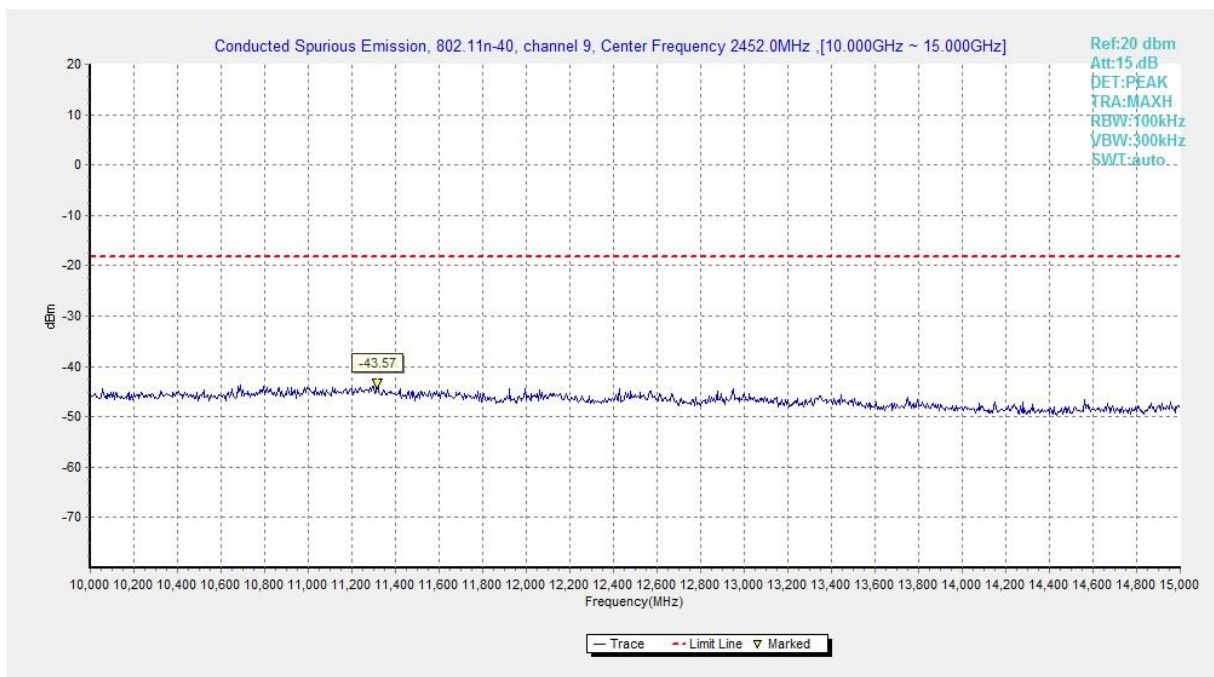
**Fig.A.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)**



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

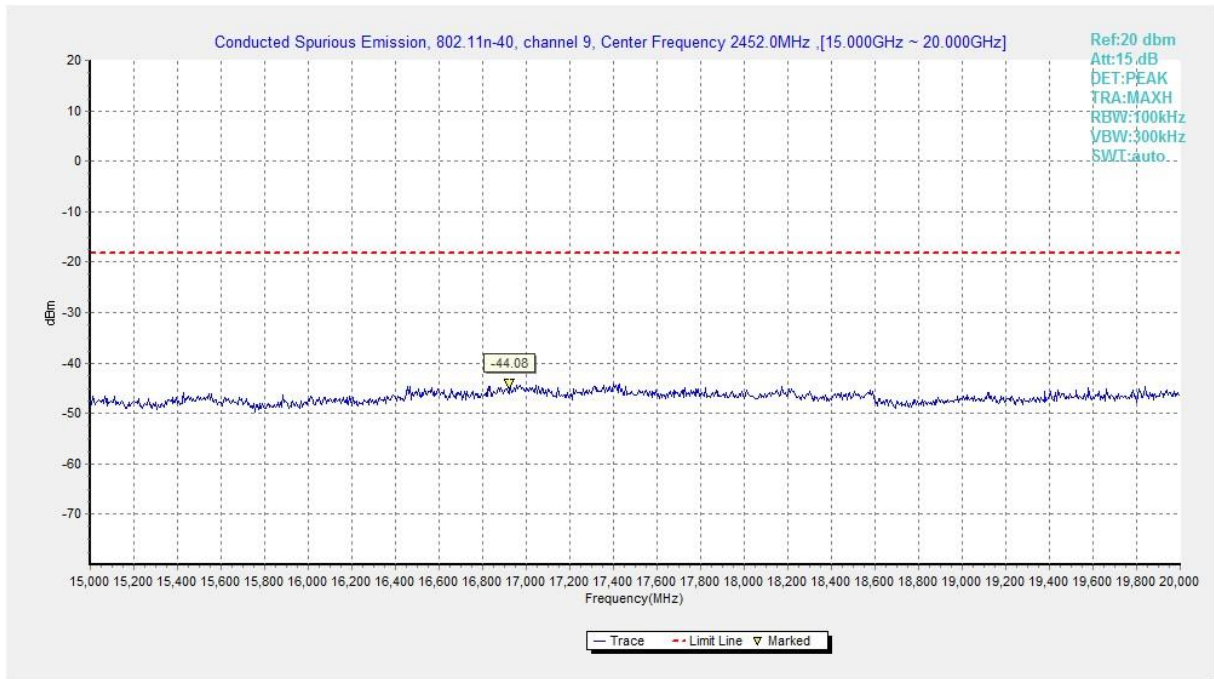


**Fig.A.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)**

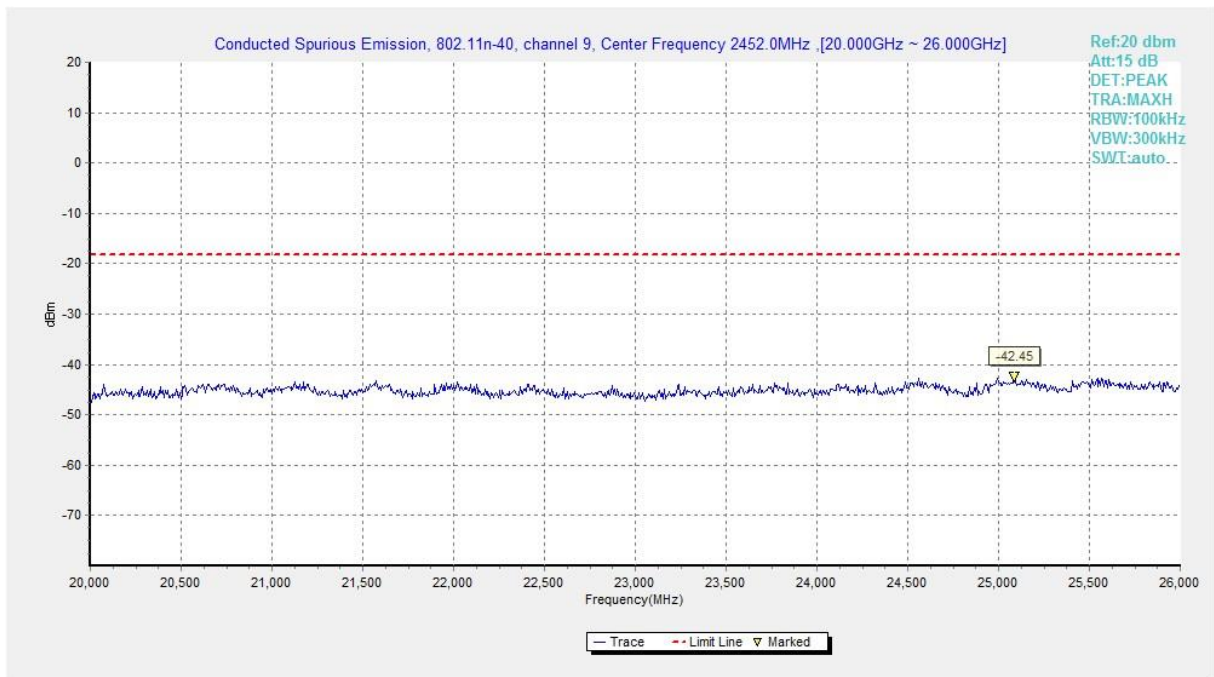


**Fig.A.6.1.94 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 10 GHz-15 GHz)**





**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( $\mu\text{V}/\text{m}$ )	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( $\mu\text{V}/\text{m}$ )	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/3MHz	15
4000-18000	1MHz/3MHz	40
18000-26500	1MHz/3MHz	20

**EUT ID:** UT12a

**Measurement results for Set.1:**
**802.11b mode**

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

**802.11g mode**

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

**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	<b>P</b>
	11	2.45GHz~2.50GHz---H	Fig.A.6.2.6	<b>P</b>

**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	<b>P</b>
	9	2.45GHz~2.50GHz---H	Fig.A.6.2.8	<b>P</b>

**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 (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16820.500	50.16	-29.20	39.90	39.56	74.00	23.84	H
12541.500	47.14	-31.20	39.20	39.14	74.00	26.86	V
14535.500	46.98	-30.60	41.90	35.68	74.00	27.02	V
8457.500	42.85	-35.10	37.40	40.55	74.00	31.15	V
7999.500	42.17	-35.40	36.90	40.67	74.00	31.83	V
2379.000	55.57	-19.80	28.20	47.17	74.00	18.43	V

## Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17949.000	50.19	-29.40	46.00	33.59	74.00	23.81	V
12610.500	46.60	-32.20	39.30	39.50	74.00	27.40	V
14489.000	46.46	-29.70	41.90	34.26	74.00	27.54	V
8142.500	43.15	-35.20	37.00	41.35	74.00	30.85	H
7935.500	41.74	-35.40	36.80	40.34	74.00	32.26	H
4428.500	38.60	-37.90	32.30	44.20	74.00	35.40	V

## Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17942.500	50.17	-29.40	46.00	33.57	74.00	23.83	H
12683.500	47.72	-31.90	39.50	40.12	74.00	26.28	H
14508.500	46.52	-30.60	41.90	35.22	74.00	27.48	V
7982.500	42.71	-35.40	36.90	41.21	74.00	31.29	V
8288.000	42.66	-34.90	37.10	40.46	74.00	31.34	H
2486.400	55.47	-19.70	28.20	46.97	74.00	18.53	H

**802.11g**

## Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17910.500	50.02	-29.40	46.00	33.42	74.00	23.98	V
12563.500	46.74	-31.20	39.20	38.74	74.00	27.26	V
14533.500	46.51	-30.60	41.90	35.21	74.00	27.49	V
8535.500	43.83	-34.30	37.40	40.73	74.00	30.17	H
7988.000	42.34	-35.40	36.90	40.84	74.00	31.66	V
2390.000	64.57	-19.80	28.20	56.17	74.00	9.43	V

## Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16163.500	50.01	-30.20	38.20	42.01	74.00	23.99	V
14533.500	47.13	-30.60	41.90	35.83	74.00	26.87	H
12545.000	46.88	-31.20	39.20	38.88	74.00	27.12	V
8683.000	42.87	-34.40	37.70	39.57	74.00	31.13	V
7987.000	41.87	-35.40	36.90	40.37	74.00	32.13	V
4371.500	38.46	-37.70	32.20	43.96	74.00	35.54	H

## Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17938.000	50.92	-29.40	46.00	34.32	74.00	23.08	H
12105.000	46.42	-32.60	38.90	40.12	74.00	27.58	V
14650.000	46.33	-30.80	41.70	35.43	74.00	27.67	V
9583.500	42.72	-34.30	37.50	39.52	74.00	31.28	H
7999.500	41.74	-35.40	36.90	40.24	74.00	32.26	V
2485.300	57.54	-19.70	28.20	49.04	74.00	16.46	V

**802.11n-HT20**

## Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17974.500	50.73	-29.40	46.00	34.13	74.00	23.27	H
12040.000	46.98	-32.20	39.00	40.28	74.00	27.02	H
14739.500	46.63	-30.20	41.40	35.53	74.00	27.37	H
8543.500	43.00	-34.30	37.40	39.90	74.00	31.00	V
7996.000	41.66	-35.40	36.90	40.16	74.00	32.34	H
2389.200	64.88	-19.80	28.20	56.48	74.00	9.12	H

## Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17941.500	50.69	-29.40	46.00	34.09	74.00	23.31	V
12538.000	46.53	-31.20	39.20	38.53	74.00	27.47	H
14536.500	46.29	-30.60	41.90	34.99	74.00	27.71	V
8496.000	44.07	-34.60	37.30	41.37	74.00	29.93	V
7978.000	42.27	-35.40	36.90	40.77	74.00	31.73	H
4444.500	37.93	-37.90	32.30	43.53	74.00	36.07	V

## Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17952.000	50.34	-29.40	46.00	33.74	74.00	23.66	V
12563.500	47.08	-31.20	39.20	39.08	74.00	26.92	V
14539.000	46.81	-30.60	41.90	35.51	74.00	27.19	H
8126.500	42.72	-35.20	37.00	40.92	74.00	31.28	V
7985.000	42.25	-35.40	36.90	40.75	74.00	31.75	V
2485.100	59.24	-19.70	28.20	50.74	74.00	14.76	V

**802.11n-HT40**

## Ch3

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17941.000	50.05	-29.40	46.00	33.45	74.00	23.95	V
12567.000	47.31	-31.20	39.20	39.31	74.00	26.69	V
14531.500	46.49	-30.60	41.90	35.19	74.00	27.51	H
8623.000	43.21	-34.00	37.50	39.71	74.00	30.79	V
7986.500	42.41	-35.40	36.90	40.91	74.00	31.59	V
2389.300	62.60	-19.80	28.20	54.20	74.00	11.40	V

## Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17979.000	49.70	-29.40	46.00	33.10	74.00	24.30	V
14741.500	47.34	-30.20	41.40	36.24	74.00	26.66	V
12563.500	46.56	-31.20	39.20	38.56	74.00	27.44	V
8400.000	43.21	-34.40	37.30	40.31	74.00	30.79	V
7967.500	41.91	-35.40	36.80	40.51	74.00	32.09	V
4034.500	38.51	-38.00	32.20	44.31	74.00	35.49	V

## Ch9

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17950.500	49.75	-29.40	46.00	33.15	74.00	24.25	H
14531.500	46.92	-30.60	41.90	35.62	74.00	27.08	V
12565.500	46.44	-31.20	39.20	38.44	74.00	27.56	H
8280.500	43.63	-34.90	37.10	41.43	74.00	30.37	V
7956.000	41.97	-35.40	36.80	40.57	74.00	32.03	H
2485.000	62.87	-19.70	28.20	54.37	74.00	11.13	V

**Average**
**802.11b**
**Ch1**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17978.500	40.55	-29.40	46.00	23.95	54.00	13.45	V
12567.000	37.21	-31.20	39.20	29.21	54.00	16.79	V
14768.500	37.13	-30.40	41.20	26.33	54.00	16.87	H
8677.500	33.44	-34.40	37.70	30.14	54.00	20.56	H
7990.500	32.15	-35.40	36.90	30.65	54.00	21.85	H
2386.100	45.41	-19.80	28.20	37.01	54.00	8.59	H

**Ch6**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16860.500	40.44	-29.60	40.00	30.04	54.00	13.56	V
12565.000	37.64	-31.20	39.20	29.64	54.00	16.36	V
14535.000	37.09	-30.60	41.90	25.79	54.00	16.91	H
8467.500	33.09	-34.60	37.30	30.39	54.00	20.91	V
7985.000	32.57	-35.40	36.90	31.07	54.00	21.43	V
4406.000	28.79	-37.90	32.30	34.39	54.00	25.21	V

**Ch11**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17976.000	40.34	-29.40	46.00	23.74	54.00	13.66	H
12563.000	37.70	-31.20	39.20	29.70	54.00	16.30	H
14535.500	37.03	-30.60	41.90	25.73	54.00	16.97	H
8646.000	33.31	-34.00	37.50	29.81	54.00	20.69	H
7989.000	32.57	-35.40	36.90	31.07	54.00	21.43	H
2499.700	45.58	-19.70	28.20	37.08	54.00	8.42	H



**802.11g**
**Ch1**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17978.000	40.83	-29.40	46.00	24.23	54.00	13.17	H
14535.000	37.84	-30.60	41.90	26.54	54.00	16.16	H
12563.000	37.33	-31.20	39.20	29.33	54.00	16.67	H
8288.000	33.26	-34.90	37.10	31.06	54.00	20.74	V
7988.000	32.19	-35.40	36.90	30.69	54.00	21.81	H
2390.000	50.15	-19.80	28.20	41.75	54.00	3.85	V

**Ch6**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17977.500	40.25	-29.40	46.00	23.65	54.00	13.75	V
12560.500	37.24	-31.20	39.20	29.24	54.00	16.76	V
14530.000	37.10	-30.60	41.90	25.80	54.00	16.90	H
8467.000	33.09	-34.60	37.30	30.39	54.00	20.91	H
7979.000	32.37	-35.40	36.90	30.87	54.00	21.63	H
4381.500	28.66	-37.70	32.20	34.16	54.00	25.34	H

**Ch11**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17979.500	40.73	-29.40	46.00	24.13	54.00	13.27	V
12565.000	37.23	-31.20	39.20	29.23	54.00	16.77	V
14538.000	37.07	-30.60	41.90	25.77	54.00	16.93	H
8654.500	33.21	-34.00	37.50	29.71	54.00	20.79	H
7986.000	32.18	-35.40	36.90	30.68	54.00	21.82	V
2485.200	46.80	-19.70	28.20	38.30	54.00	7.20	V

**802.11n-HT20**

## Ch1

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17951.500	40.61	-29.40	46.00	24.01	54.00	13.39	H
12566.000	37.48	-31.20	39.20	29.48	54.00	16.52	H
14533.000	37.13	-30.60	41.90	25.83	54.00	16.87	H
8252.000	32.98	-34.70	37.00	30.68	54.00	21.02	H
7991.500	32.29	-35.40	36.90	30.79	54.00	21.71	V
2389.600	50.94	-19.80	28.20	42.54	54.00	3.06	H

## Ch6

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17982.500	40.24	-29.40	46.00	23.64	54.00	13.76	V
14531.500	37.25	-30.60	41.90	25.95	54.00	16.75	V
12564.000	36.86	-31.20	39.20	28.86	54.00	17.14	H
8681.000	33.31	-34.40	37.70	30.01	54.00	20.69	V
7987.500	32.40	-35.40	36.90	30.90	54.00	21.60	V
4351.500	28.60	-37.80	32.20	34.20	54.00	25.40	V

## Ch11

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17953.500	40.34	-29.40	46.00	23.74	54.00	13.66	V
14531.500	37.96	-30.60	41.90	26.66	54.00	16.04	V
12562.000	37.24	-31.20	39.20	29.24	54.00	16.76	V
8677.500	33.32	-34.40	37.70	30.02	54.00	20.68	V
7992.500	32.34	-35.40	36.90	30.84	54.00	21.66	V
2485.700	46.89	-19.70	28.20	38.39	54.00	7.11	V

**802.11n-HT40**
**Ch3**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17979.500	40.47	-29.40	46.00	23.87	54.00	13.53	V
12563.000	37.29	-31.20	39.20	29.29	54.00	16.71	H
14762.000	36.98	-30.40	41.20	26.18	54.00	17.02	H
8602.000	33.07	-35.00	37.50	30.57	54.00	20.93	H
7989.000	32.52	-35.40	36.90	31.02	54.00	21.48	V
2389.300	50.13	-19.80	28.20	41.73	54.00	3.87	H

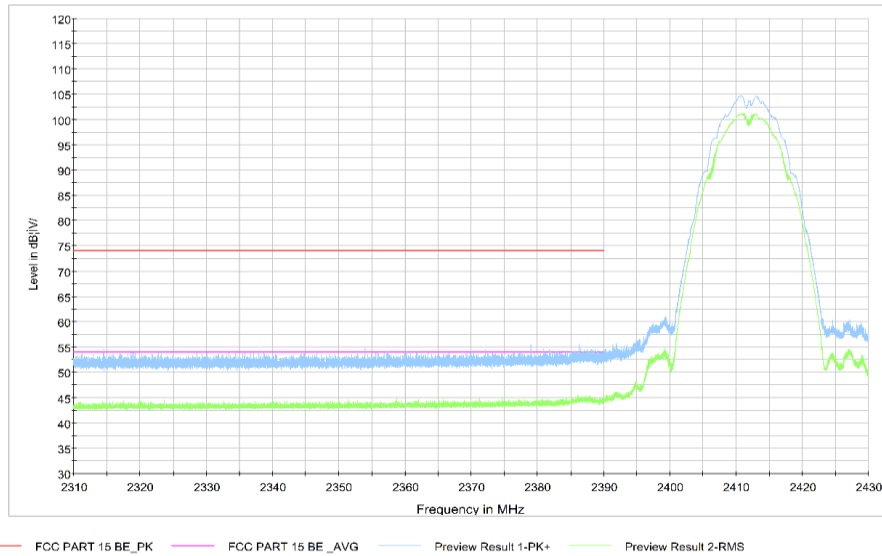
**Ch6**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17974.000	40.25	-29.40	46.00	23.65	54.00	13.75	H
12561.500	37.64	-31.20	39.20	29.64	54.00	16.36	H
14530.000	36.92	-30.60	41.90	25.62	54.00	17.08	H
8264.500	33.25	-34.70	37.00	30.95	54.00	20.75	V
7989.500	32.66	-35.40	36.90	31.16	54.00	21.34	H
4380.500	29.06	-37.70	32.20	34.56	54.00	24.94	V

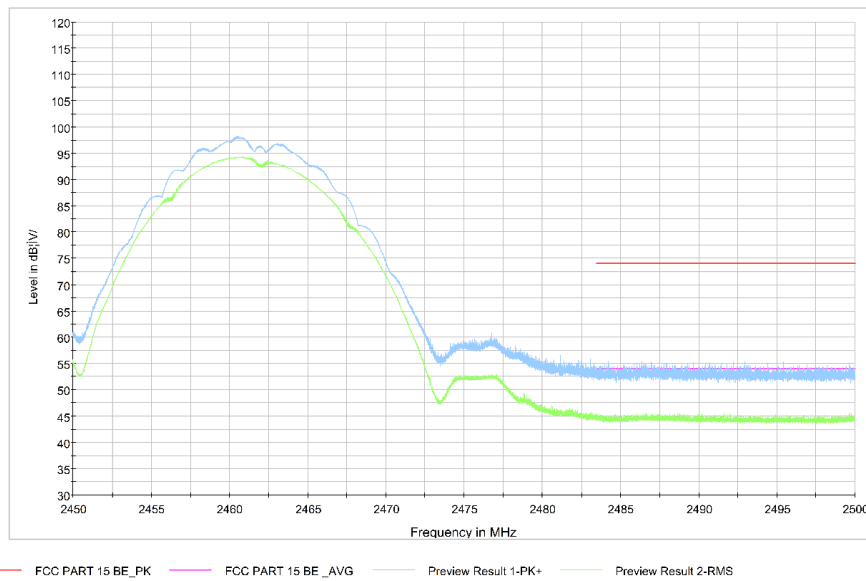
**Ch9**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17980.500	40.38	-29.40	46.00	23.78	54.00	13.62	H
12560.500	37.35	-31.20	39.20	29.35	54.00	16.65	H
14490.000	37.12	-29.70	41.90	24.92	54.00	16.88	H
8497.000	33.16	-34.60	37.30	30.46	54.00	20.84	V
7995.500	32.55	-35.40	36.90	31.05	54.00	21.45	H
2485.100	48.91	-19.70	28.20	40.41	54.00	5.09	V

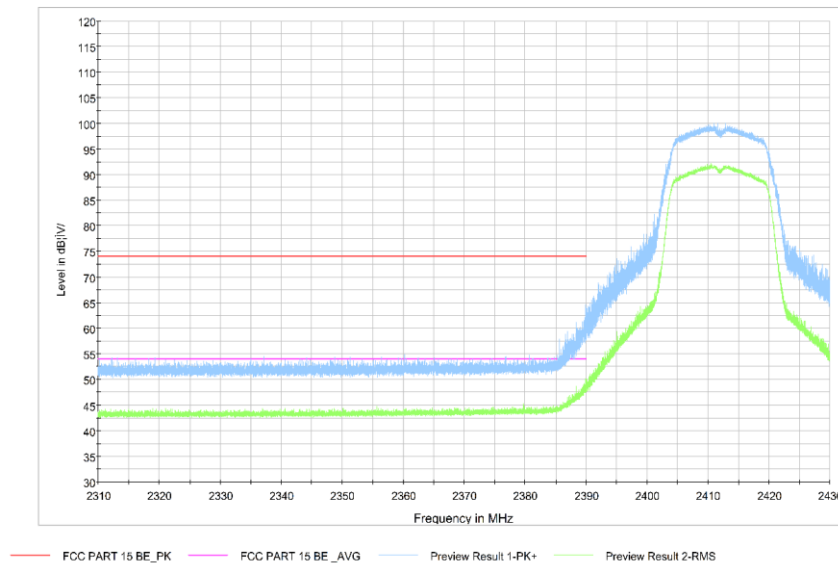
Test graphs as below:



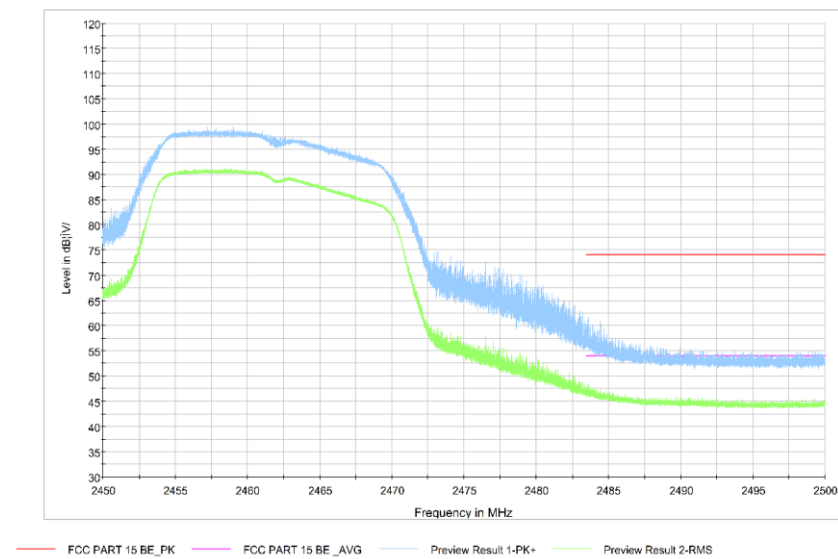
**Fig.A.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.43GHz**



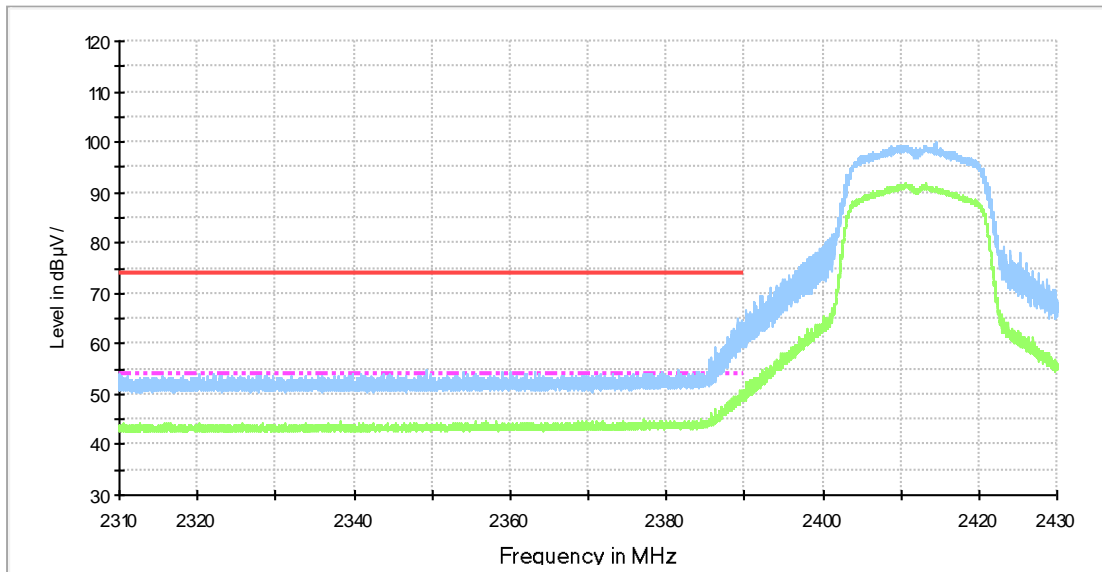
**Fig.A.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz**



**Fig.A.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.43GHz**

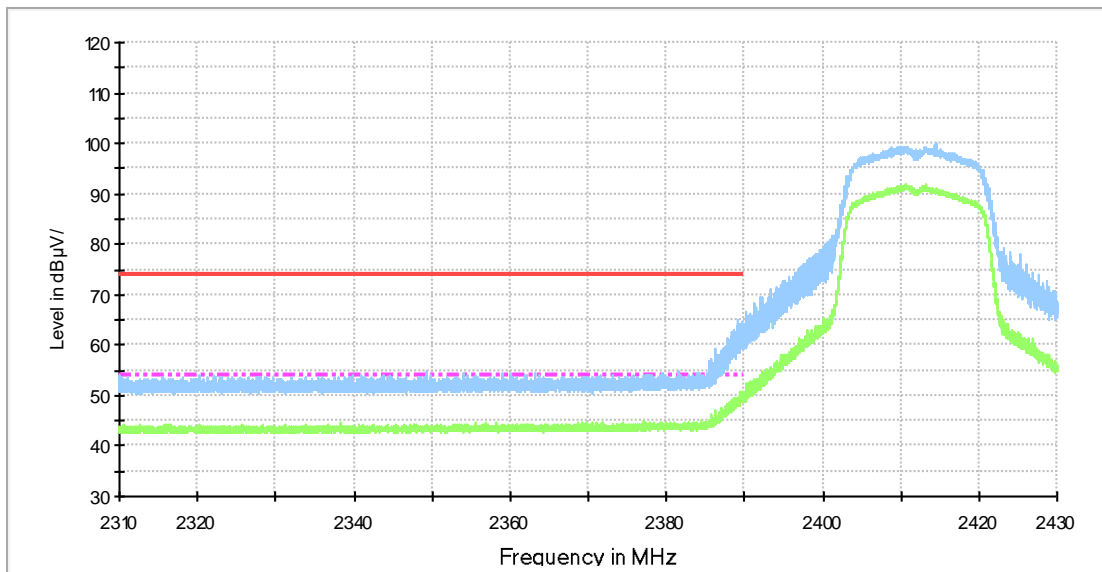


**Fig.A.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**



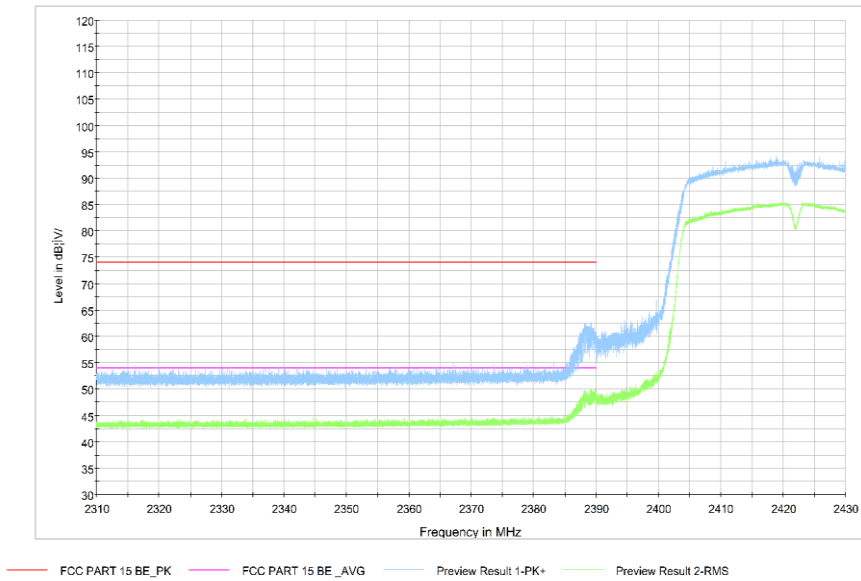
— FCC PART 15 BE\_PK      ⋯ FCC PART 15 BE\_AVG  
— Preview Result 1-PK+      — Preview Result 2-RMS

**Fig.A.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.43GHz**

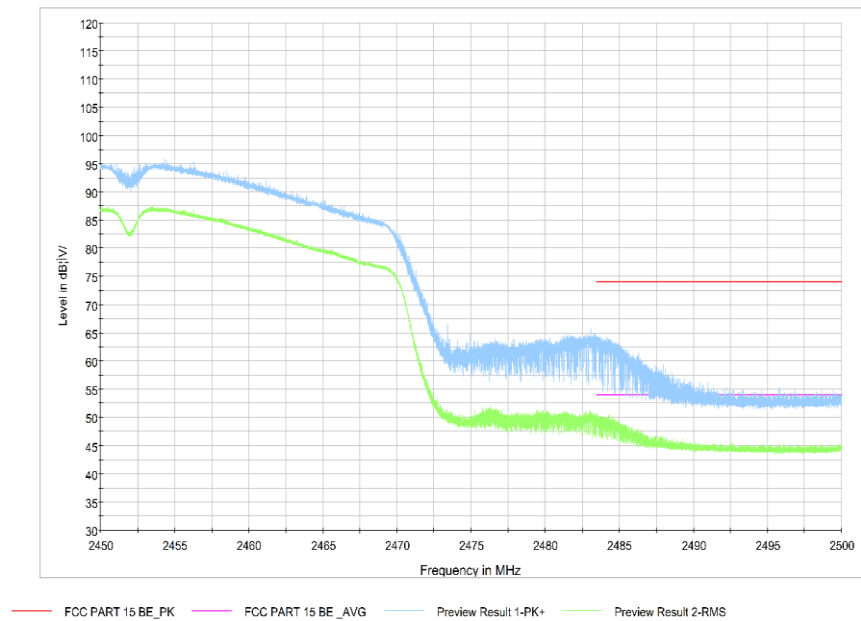


— FCC PART 15 BE\_PK      ⋯ FCC PART 15 BE\_AVG  
— Preview Result 1-PK+      — Preview Result 2-RMS

**Fig.A.6.2.6 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.50GHz**



**Fig.A.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.43GHz**



**Fig.A.6.2.8 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch9, 2.45 GHz - 2.50GHz**

## **A.7. AC Power-line Conducted Emission**

### **Method of Measurement: See ANSI C63.10-2013-clause 6.2**

- 1 The one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.
- 2 If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.
- 3 The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.
- 4 If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.
- 5 If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements within the fundamental emission band of the transmitter, but only for those measurements.<sup>36</sup> Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

### **Test Condition:**

<b>Voltage (V)</b>	<b>Frequency (Hz)</b>
120	60



**Measurement Result and limit:**

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	66 to 56	Fig.A.7.1	Fig.A.7.2	<b>P</b>
0.5 to 5	56			
5 to 30	60			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

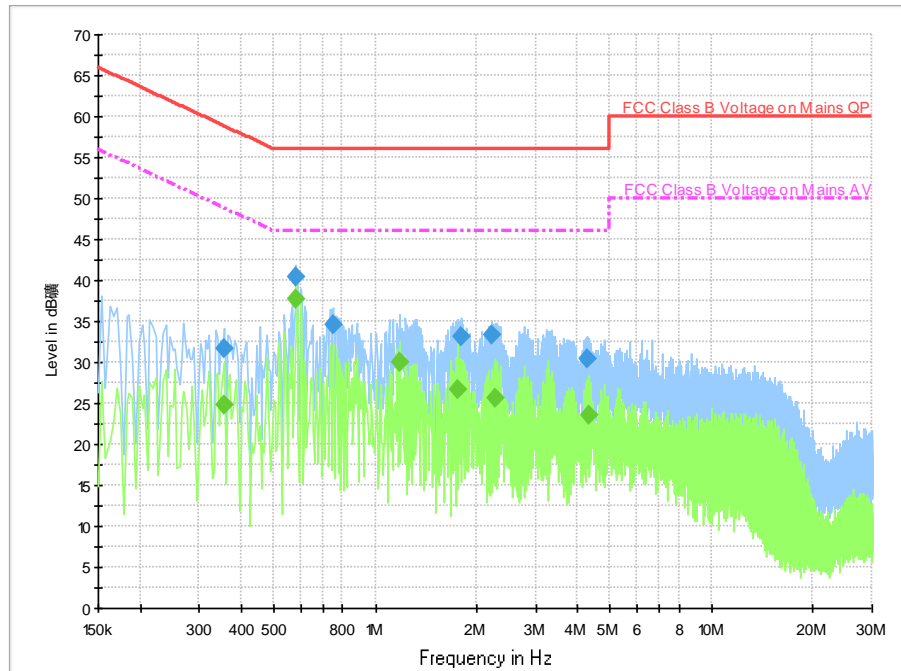
WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.A.7.1	Fig.A.7.2	<b>P</b>
0.5 to 5	46			
5 to 30	50			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

**Conclusion: Pass**
**Test graphs as below:**

**Measurement results for Set.1:**  
**Result for Traffic:**



**Fig.A.7.1 AC Powerline Conducted Emission-802.11b**

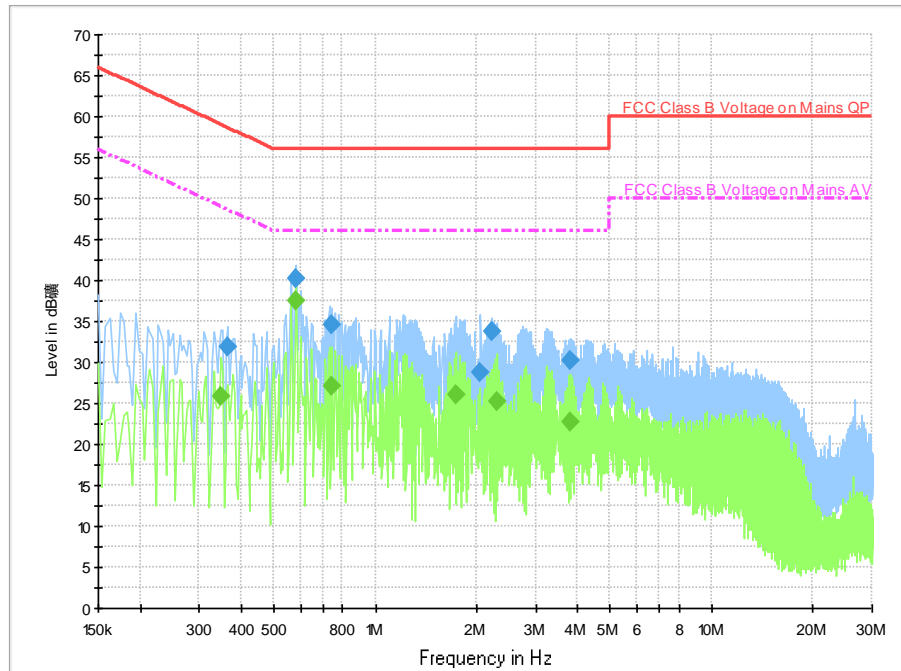
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.354000	31.6	2000.0	9.000	On	L1	19.7	27.3	58.9	
0.582000	40.3	2000.0	9.000	On	L1	19.7	15.7	56.0	
0.754000	34.7	2000.0	9.000	On	L1	19.7	21.3	56.0	
1.810000	33.1	2000.0	9.000	On	L1	19.6	22.9	56.0	
2.214000	33.4	2000.0	9.000	On	L1	19.6	22.6	56.0	
4.250000	30.5	2000.0	9.000	On	L1	19.6	25.5	56.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.354000	24.9	2000.0	9.000	On	L1	19.7	24.0	48.9	
0.582000	37.7	2000.0	9.000	On	L1	19.7	8.3	46.0	
1.182000	30.1	2000.0	9.000	On	L1	19.7	15.9	46.0	
1.762000	26.8	2000.0	9.000	On	L1	19.6	19.2	46.0	
2.262000	25.6	2000.0	9.000	On	L1	19.6	20.4	46.0	
4.326000	23.5	2000.0	9.000	On	L1	19.6	22.5	46.0	

**Measurement results for Set.1:**
**Result for Idle:**

**Fig.A.7.2 AC Powerline Conducted Emission-Idle**

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.366000	31.9	2000.0	9.000	On	L1	19.7	26.7	58.6	
0.582000	40.2	2000.0	9.000	On	L1	19.7	15.8	56.0	
0.746000	34.6	2000.0	9.000	On	L1	19.7	21.4	56.0	
2.058000	28.7	2000.0	9.000	On	L1	19.6	27.3	56.0	
2.210000	33.8	2000.0	9.000	On	L1	19.6	22.2	56.0	
3.806000	30.2	2000.0	9.000	On	L1	19.6	25.8	56.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.346000	25.9	2000.0	9.000	On	L1	19.7	23.1	49.1	
0.582000	37.6	2000.0	9.000	On	L1	19.7	8.4	46.0	
0.746000	27.1	2000.0	9.000	On	L1	19.7	18.9	46.0	
1.738000	26.0	2000.0	9.000	On	L1	19.6	20.0	46.0	
2.298000	25.3	2000.0	9.000	On	L1	19.6	20.7	46.0	
3.790000	22.8	2000.0	9.000	On	L1	19.6	23.2	46.0	

## ANNEX B: EUT parameters

Disclaimer: The antenna gain and worse case provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

## ANNEX C: Accreditation Certificate



### Accredited Laboratory

A2LA has accredited

## TELECOMMUNICATION TECHNOLOGY LABS, CAICT

Beijing, People's Republic of China

for technical competence in the field of

### Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 26<sup>th</sup> day of June 2023.



Mr. Trace McInturf, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 7049.01  
Valid to July 31, 2024

*For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.*

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