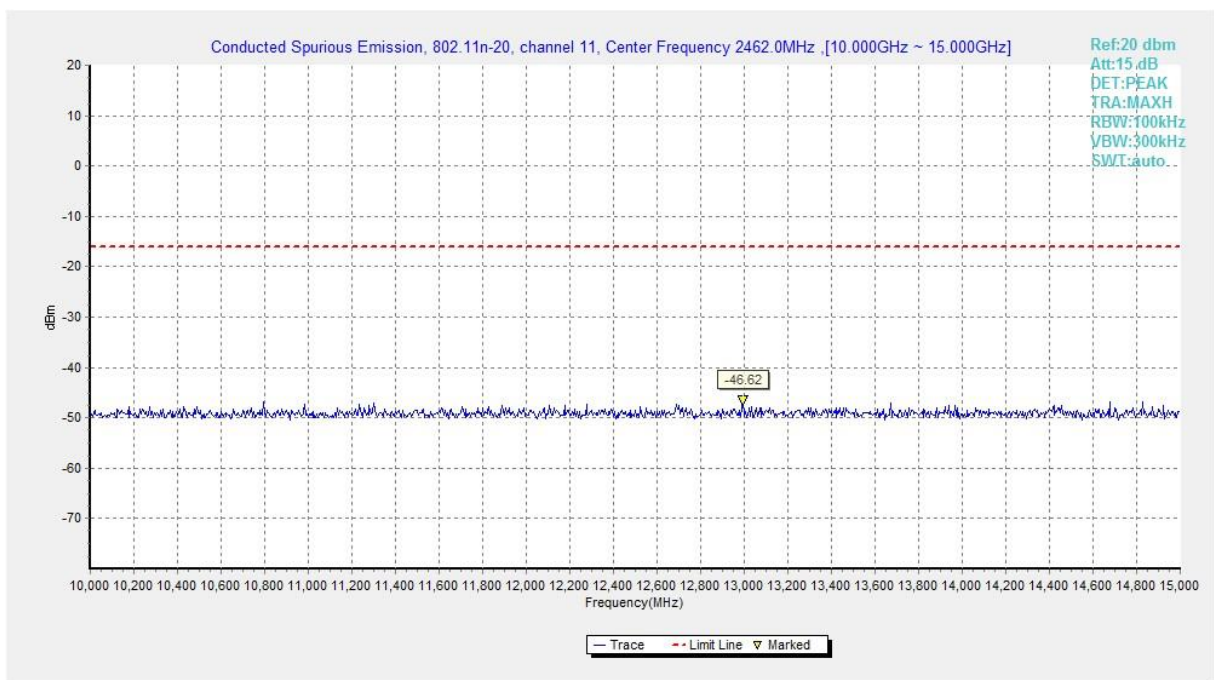
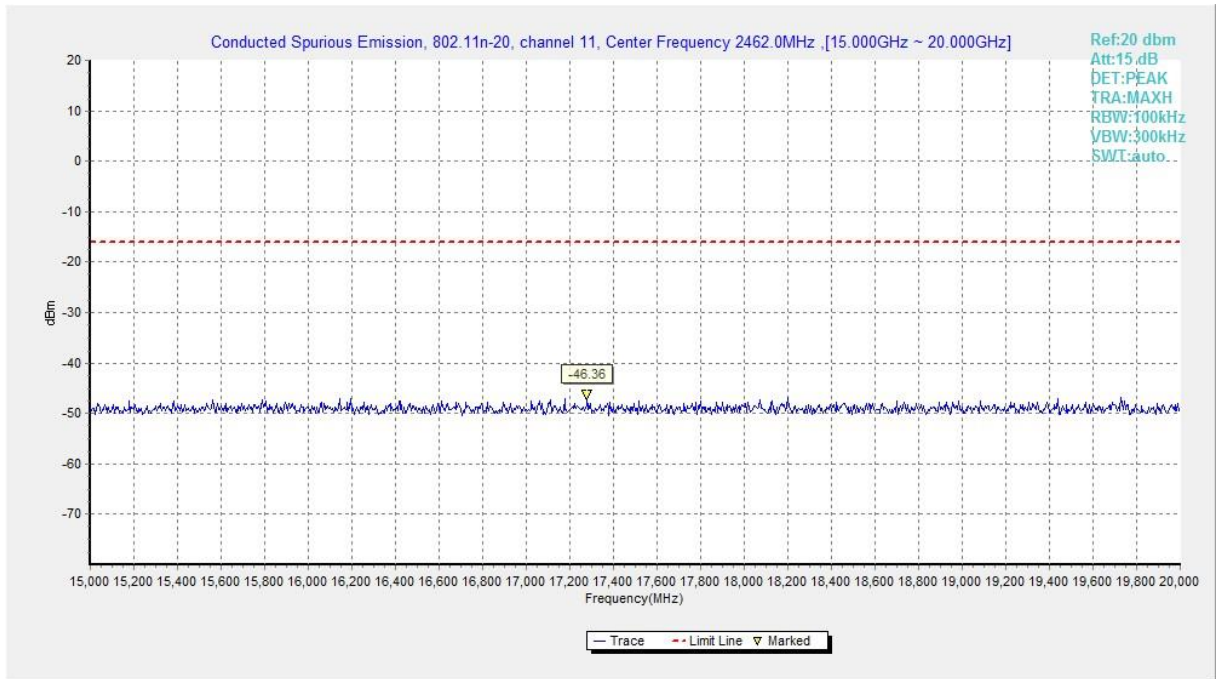


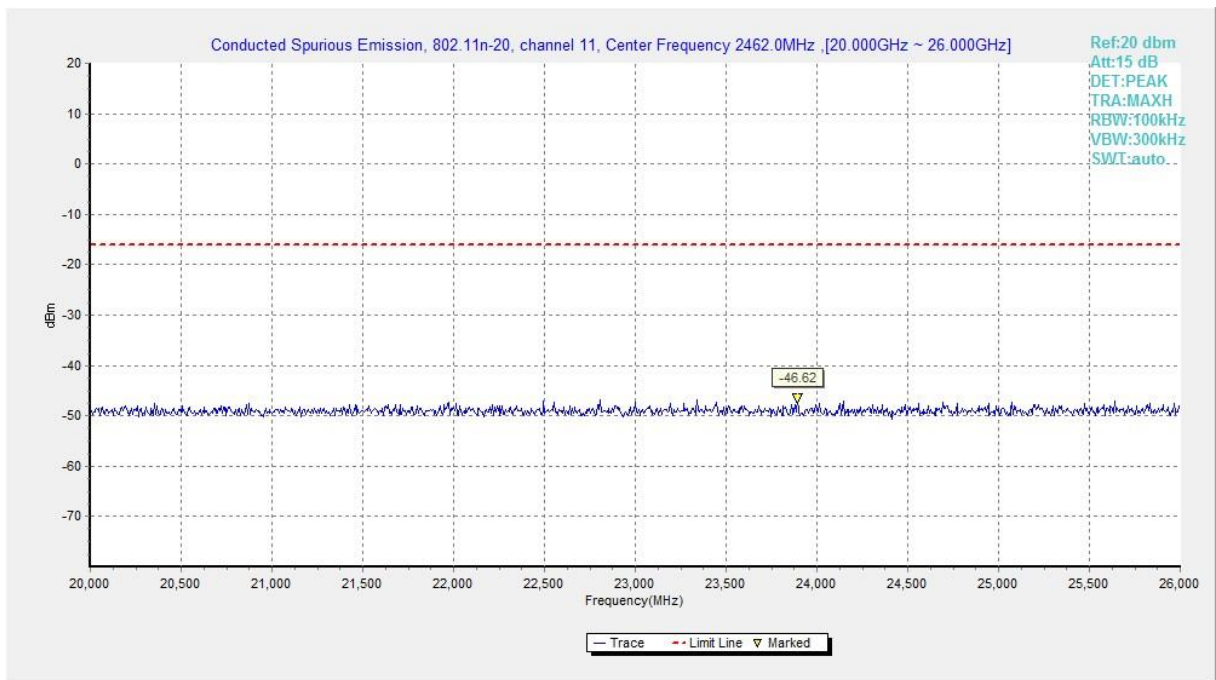
**Fig.B.6.1.69 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)**



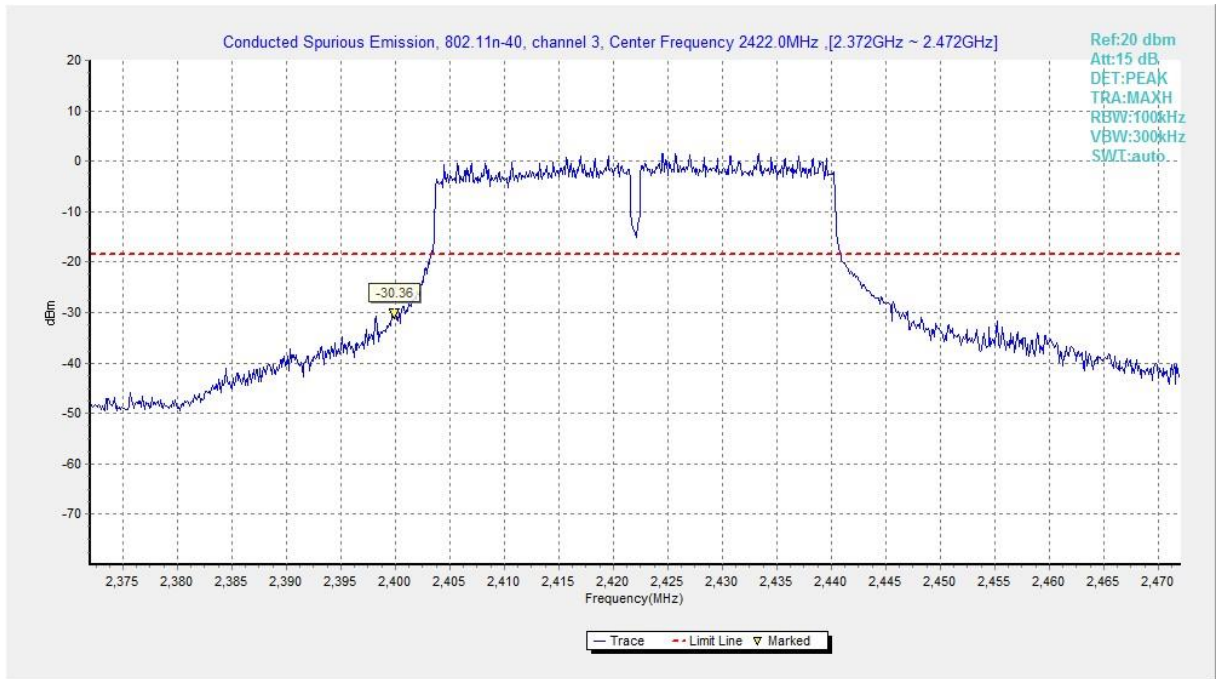
**Fig.B.6.1.70 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 10 GHz-15 GHz)**



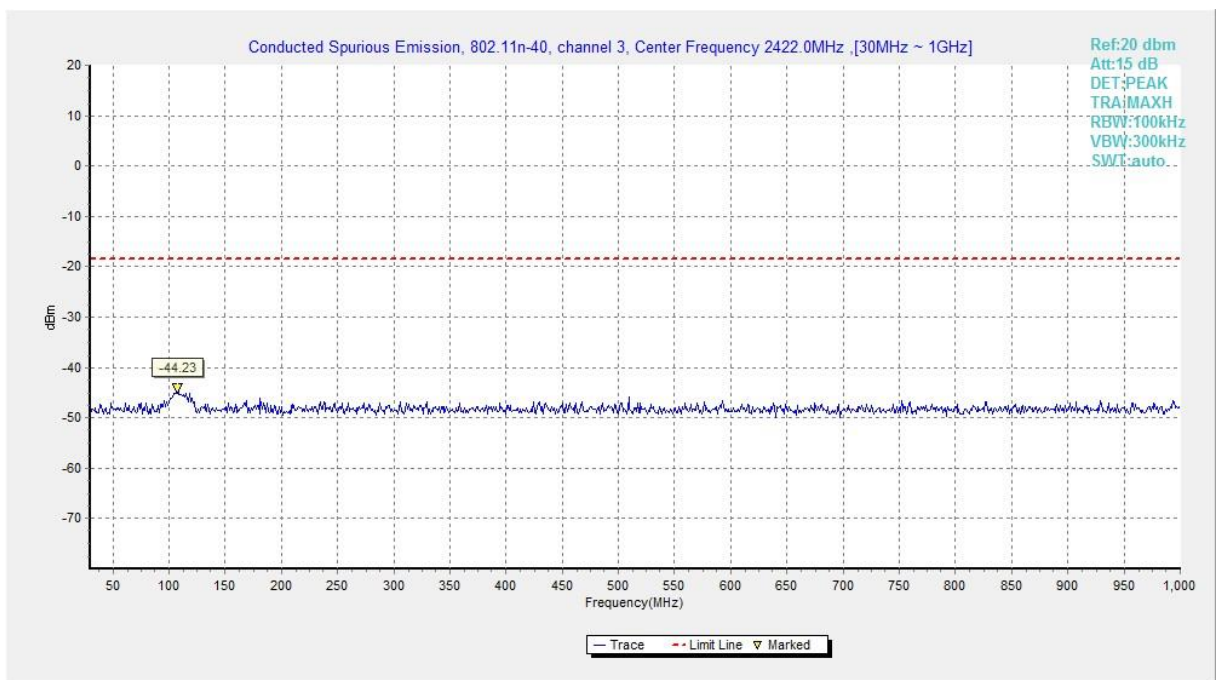
**Fig.B.6.1.71 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 15 GHz-20 GHz)**



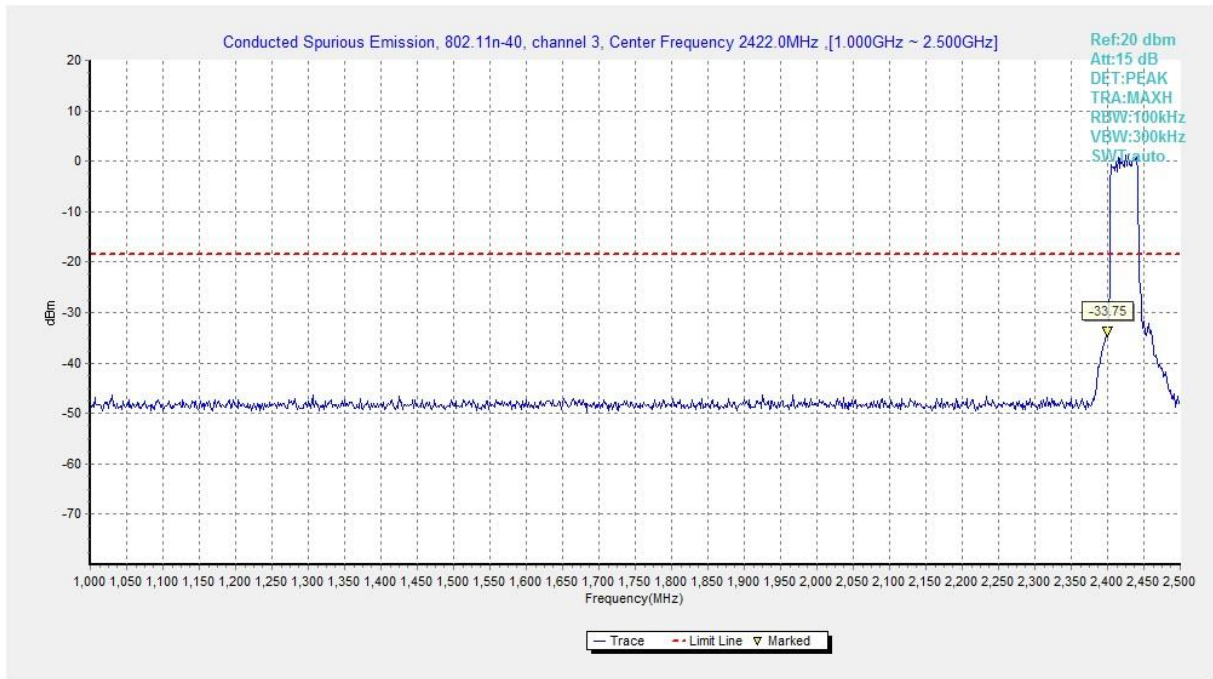
**Fig.B.6.1.72 Transmitter Spurious Emission - Conducted (802.11n-HT20, Ch11, 20 GHz-26 GHz)**



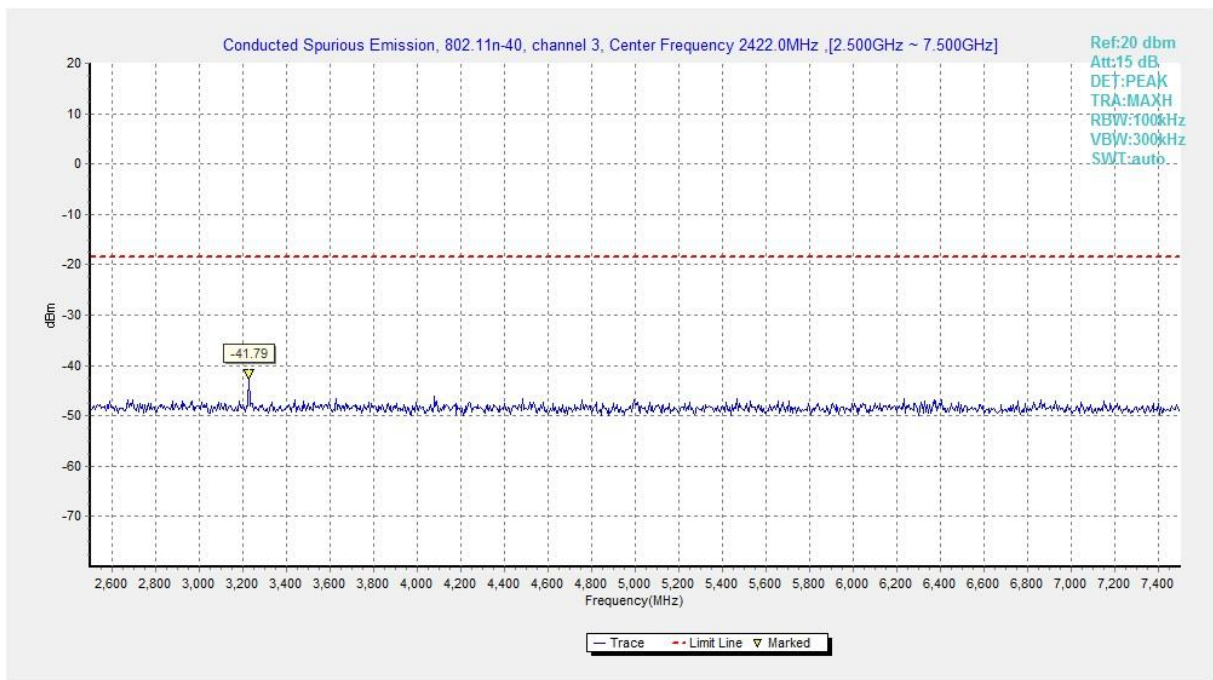
**Fig.B.6.1.73 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, Center Frequency)**



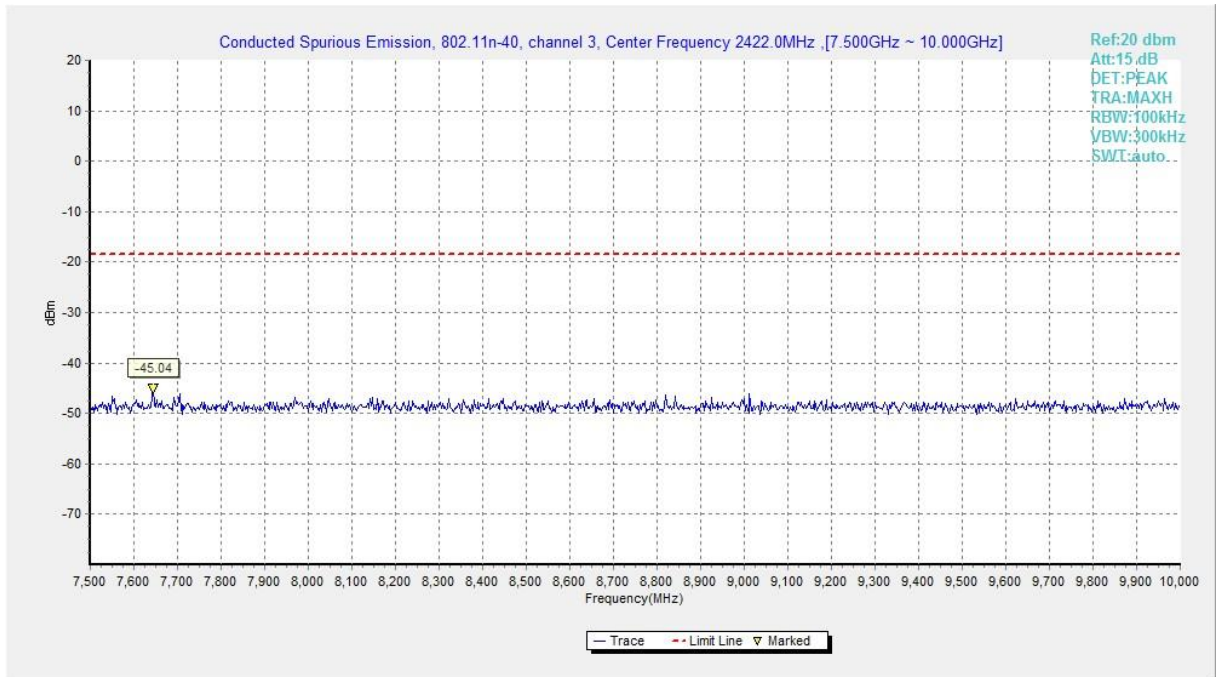
**Fig.B.6.1.74 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 30 MHz-1 GHz)**



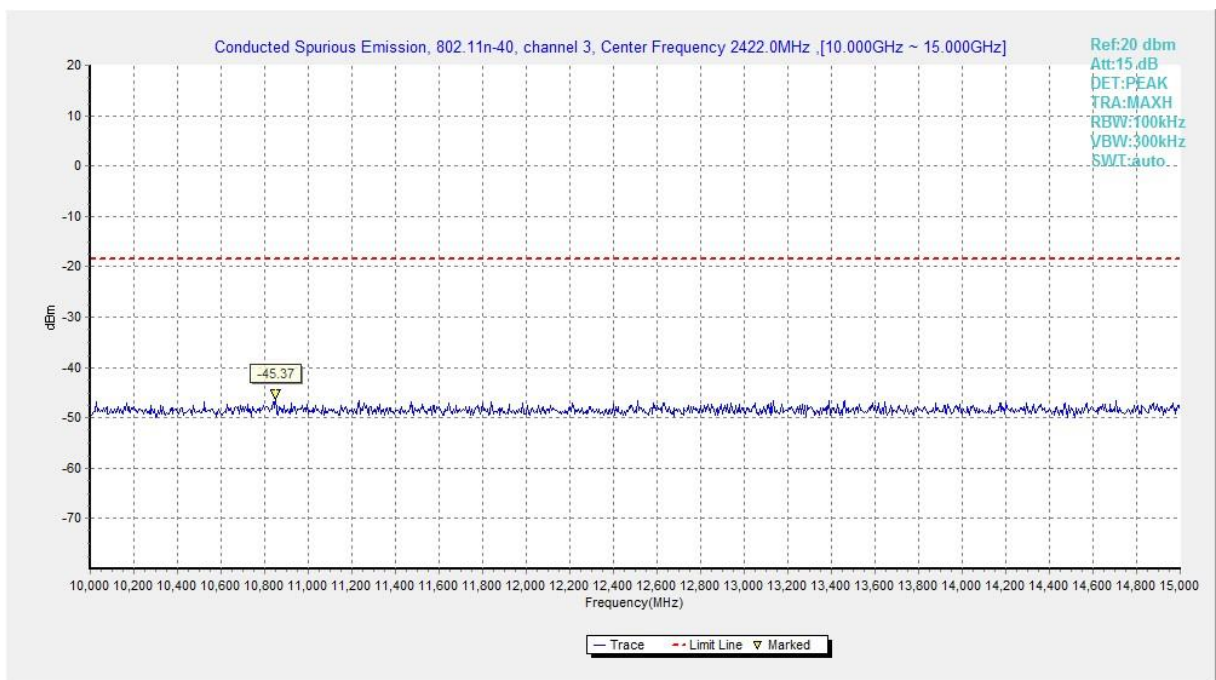
**Fig.B.6.1.75 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 1 GHz-2.5 GHz)**



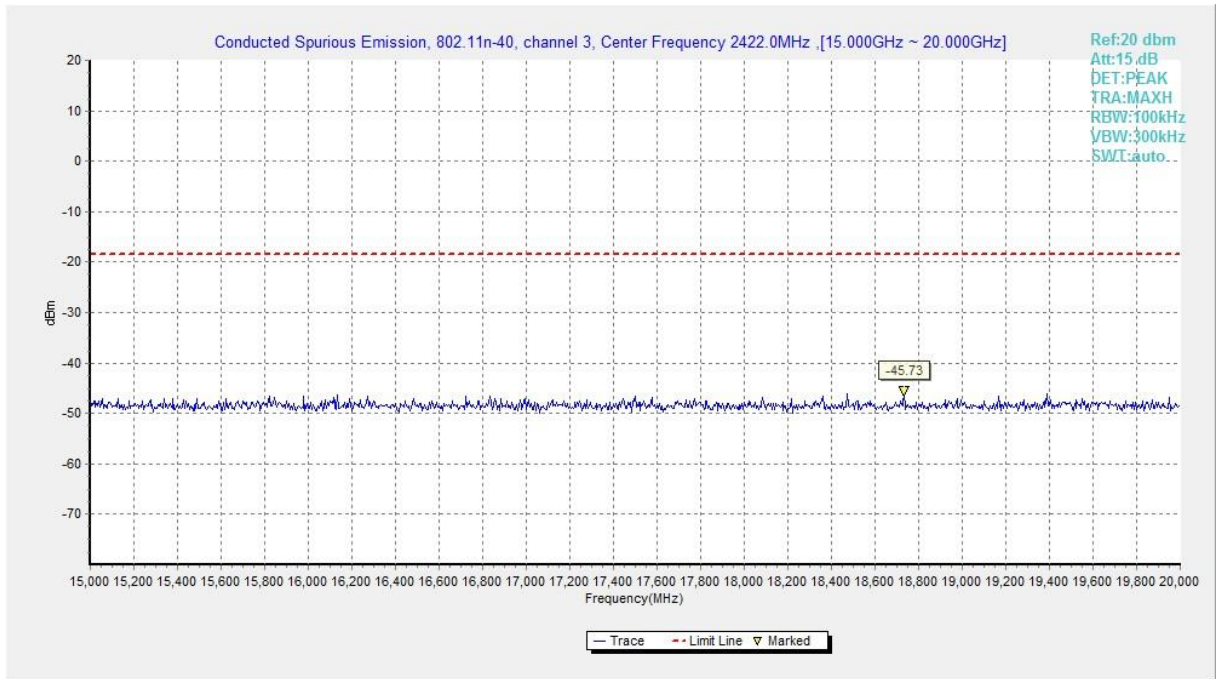
**Fig.B.6.1.76 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 2.5 GHz-7.5 GHz)**



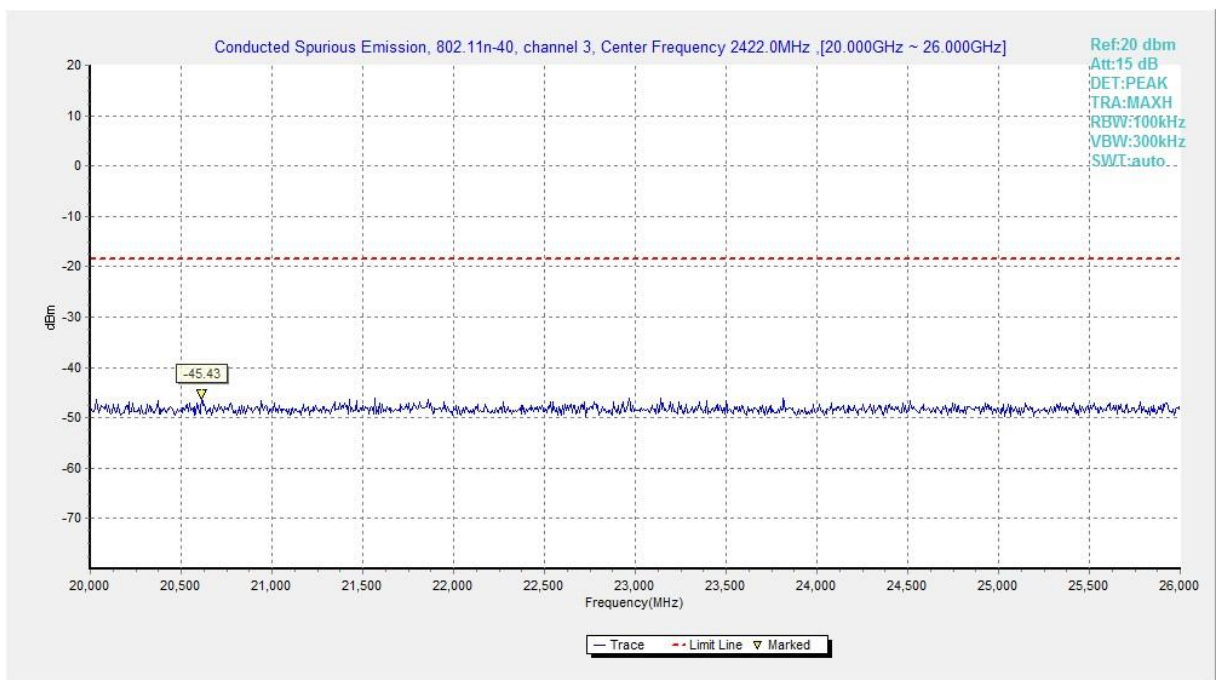
**Fig.B.6.1.77 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 7.5 GHz-10 GHz)**



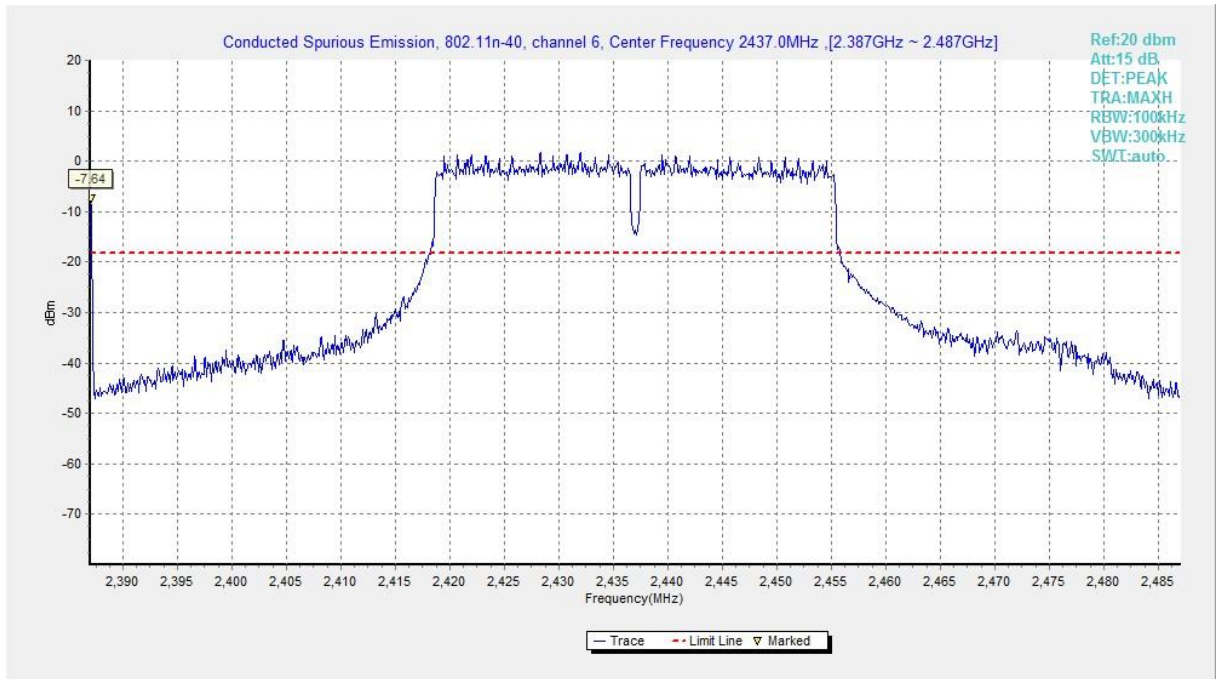
**Fig.B.6.1.78 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 10 GHz-15 GHz)**



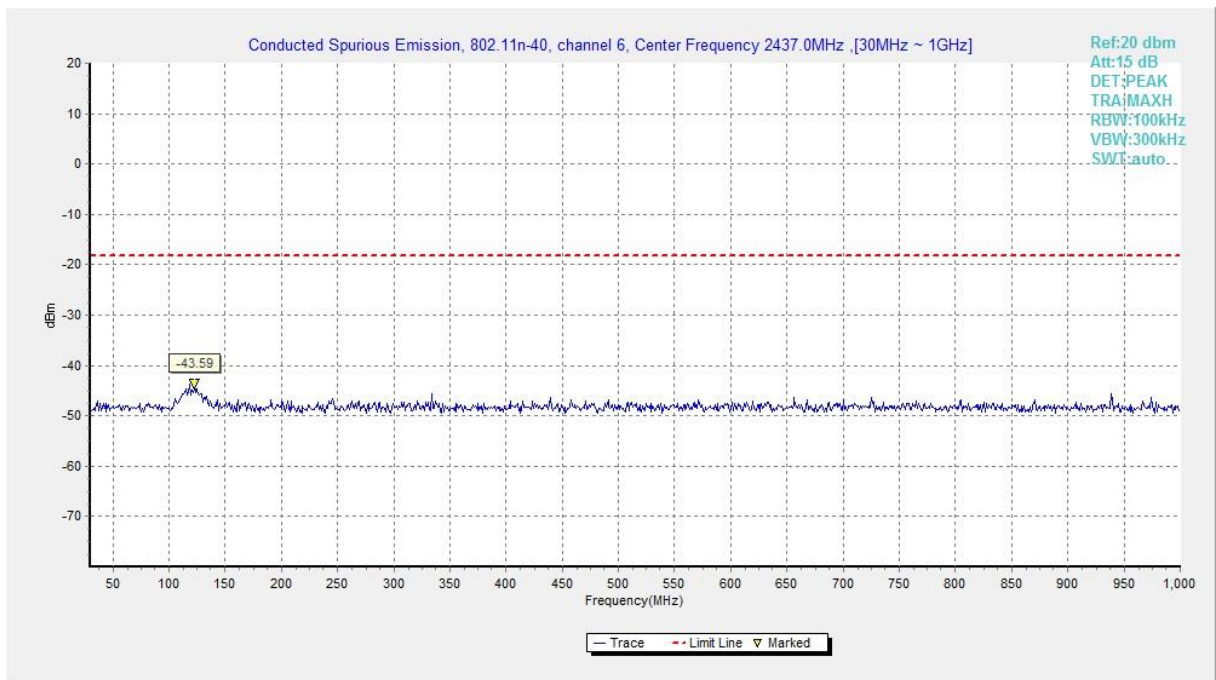
**Fig.B.6.1.79 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 15 GHz-20 GHz)**



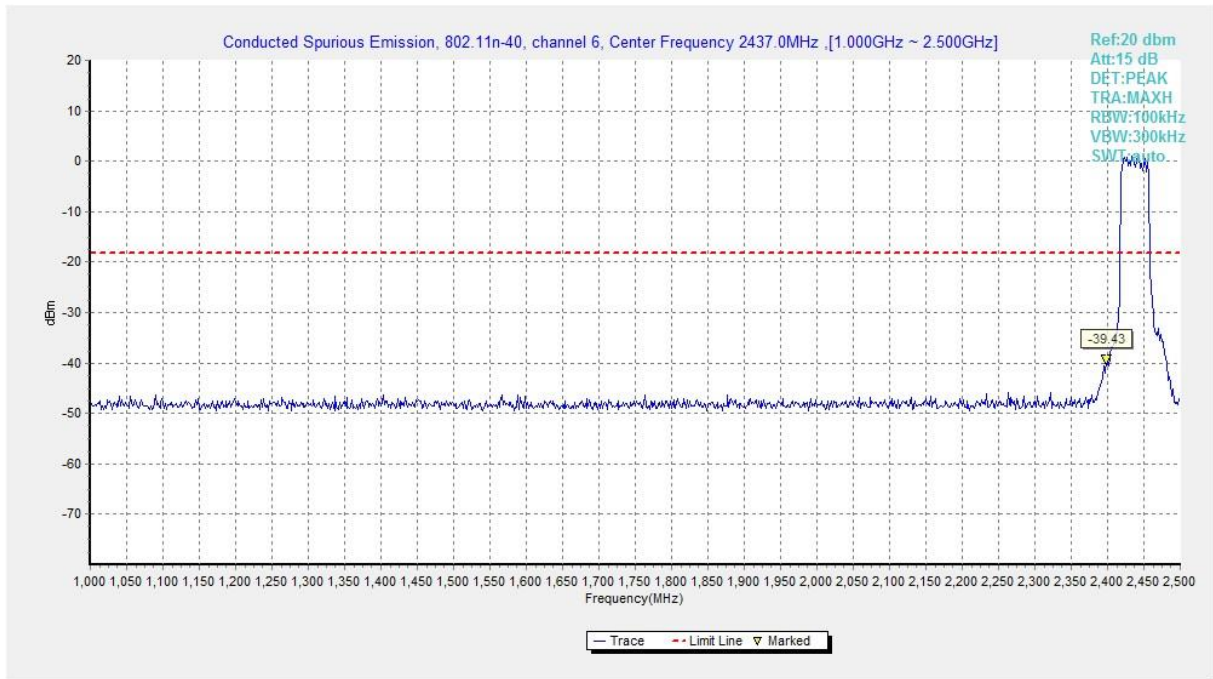
**Fig.B.6.1.80 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch3, 20 GHz-26 GHz)**



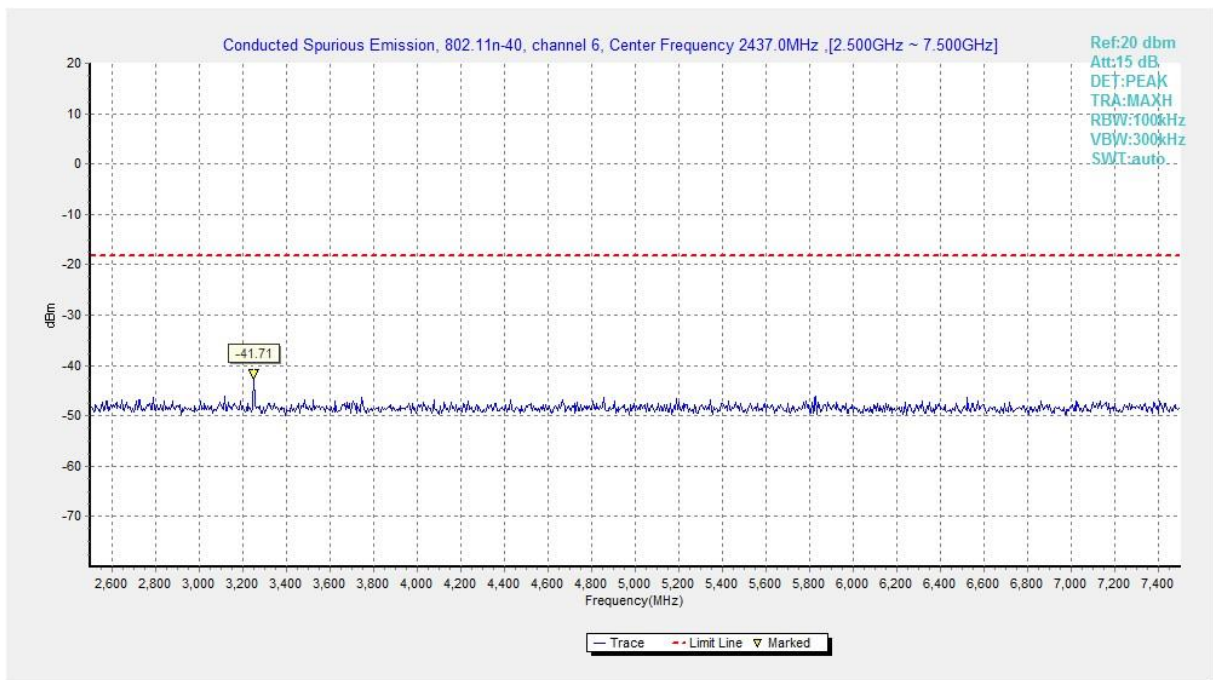
**Fig.B.6.1.81 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, Center Frequency)**



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

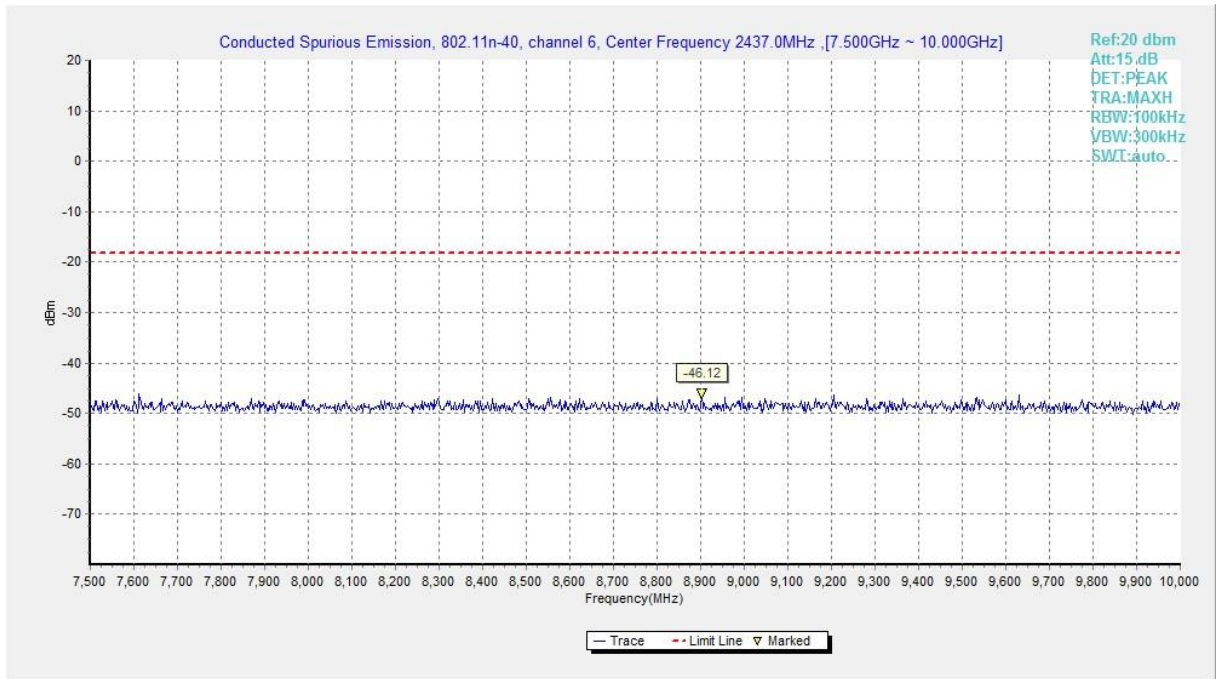


**Fig.B.6.1.83 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 1 GHz-2.5 GHz)**

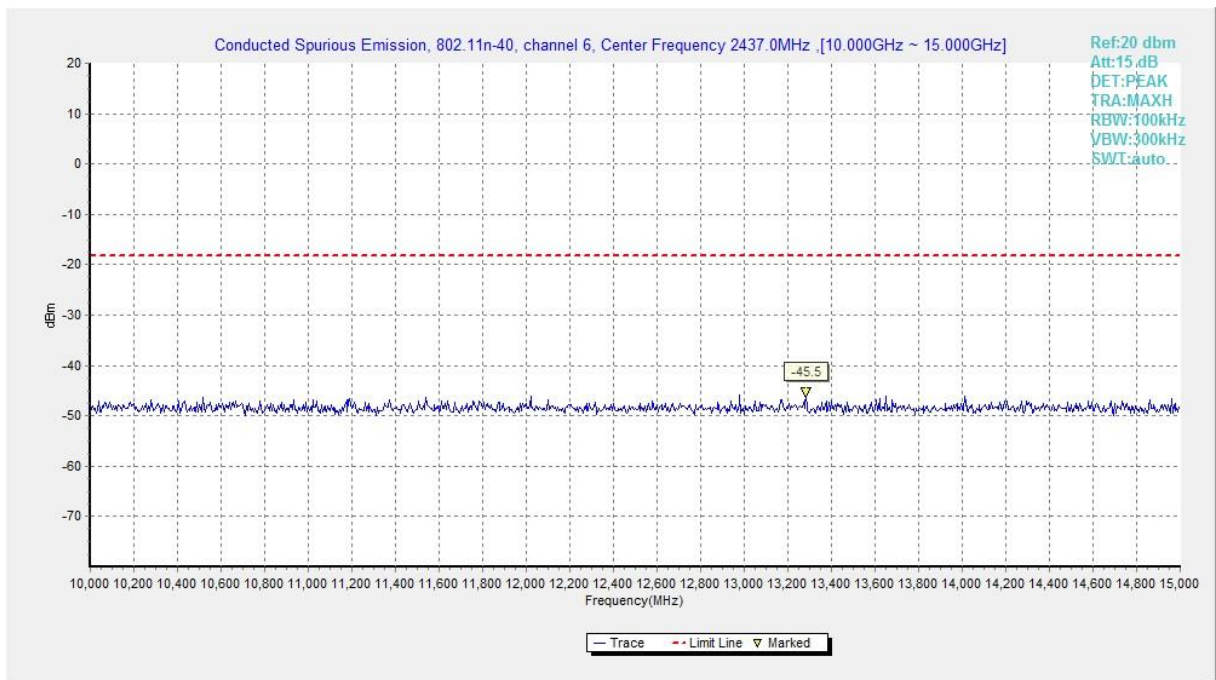


**Fig.B.6.1.84 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 2.5 GHz-7.5 GHz)**

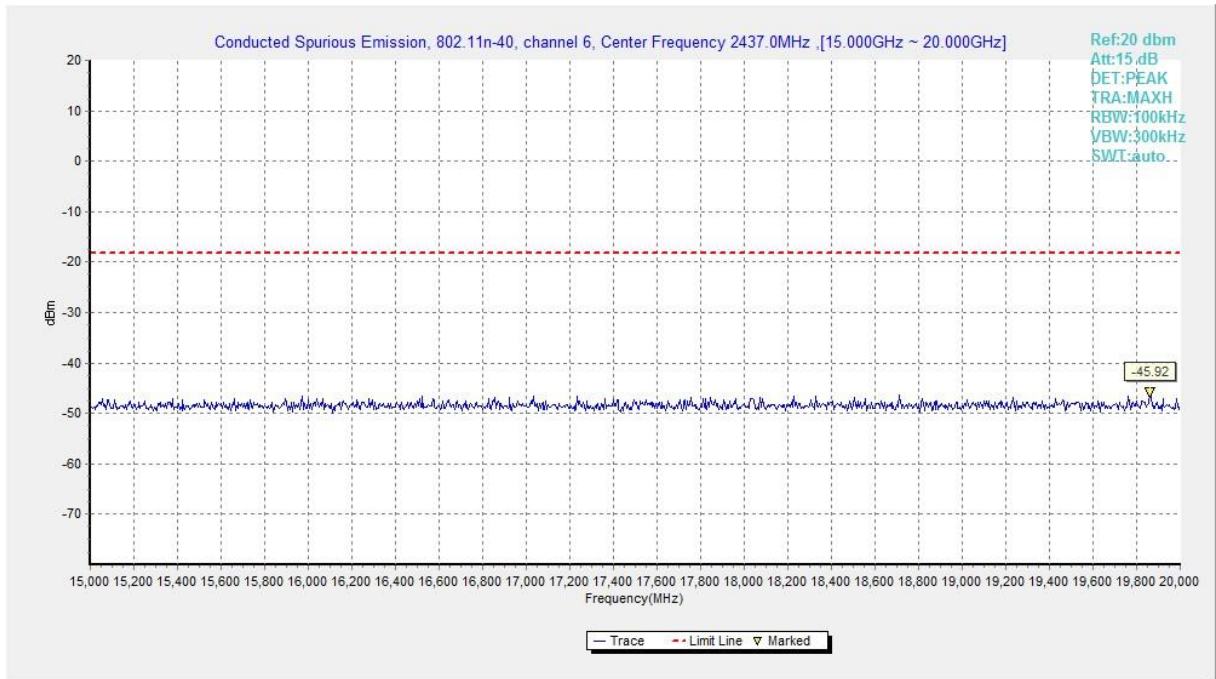




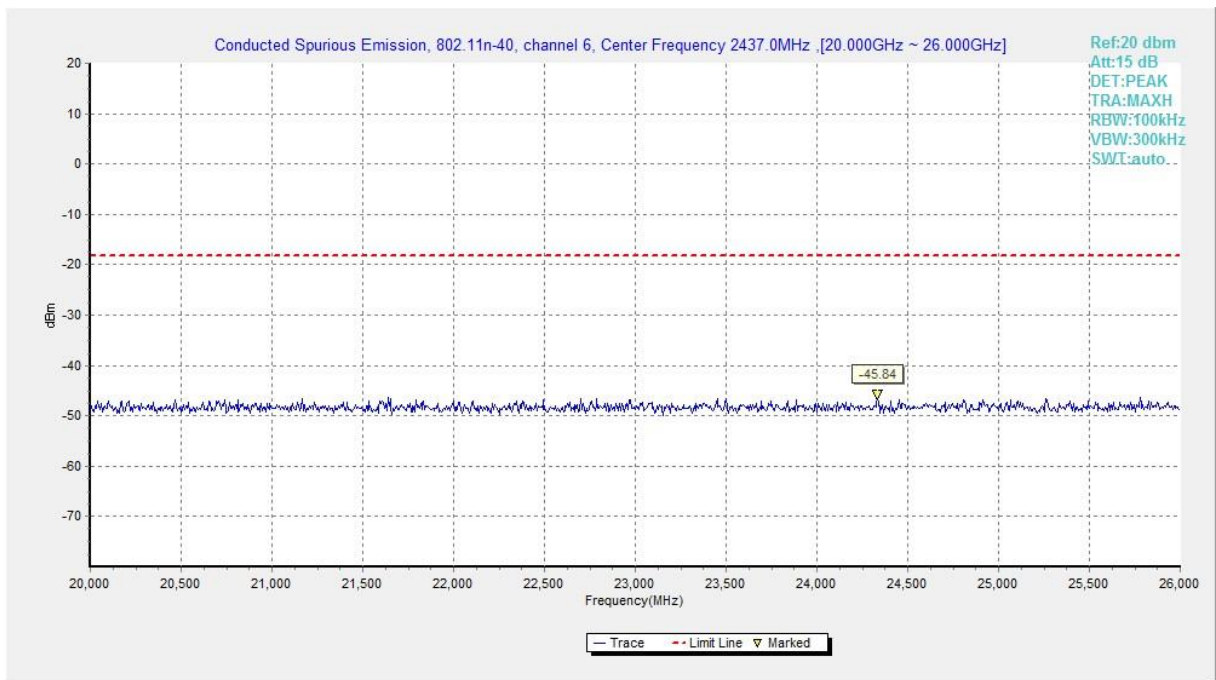
**Fig.B.6.1.85 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 7.5 GHz-10 GHz)**



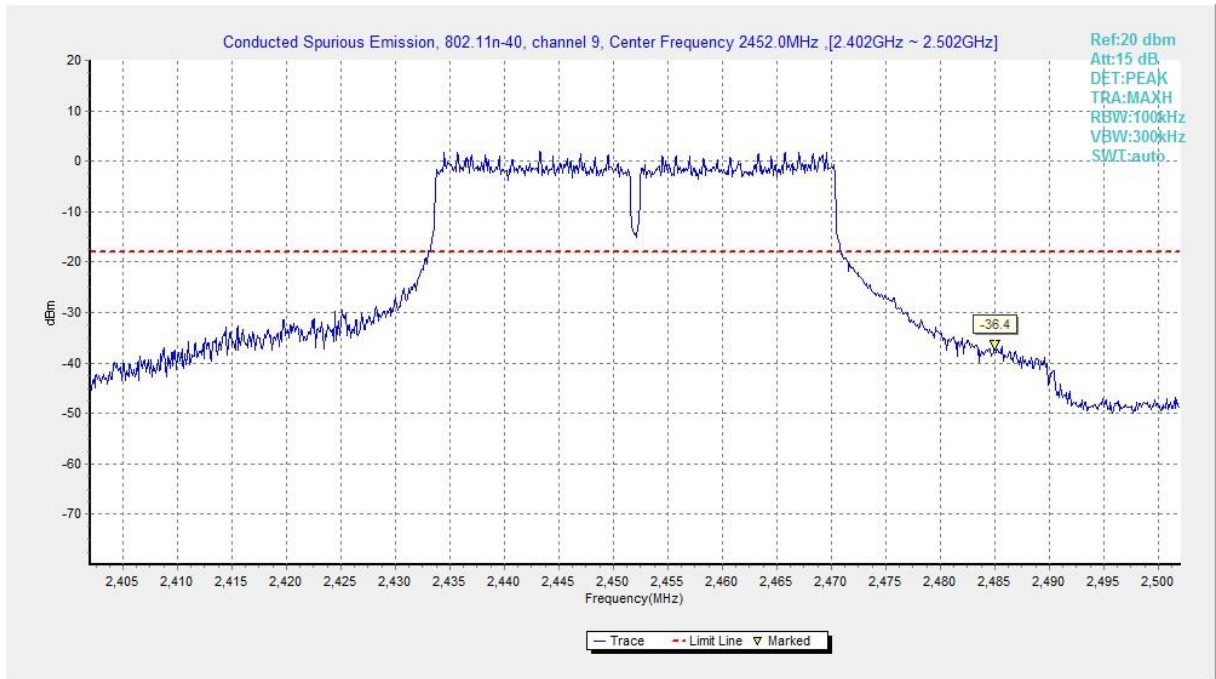
**Fig.B.6.1.86 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 10 GHz-15 GHz)**



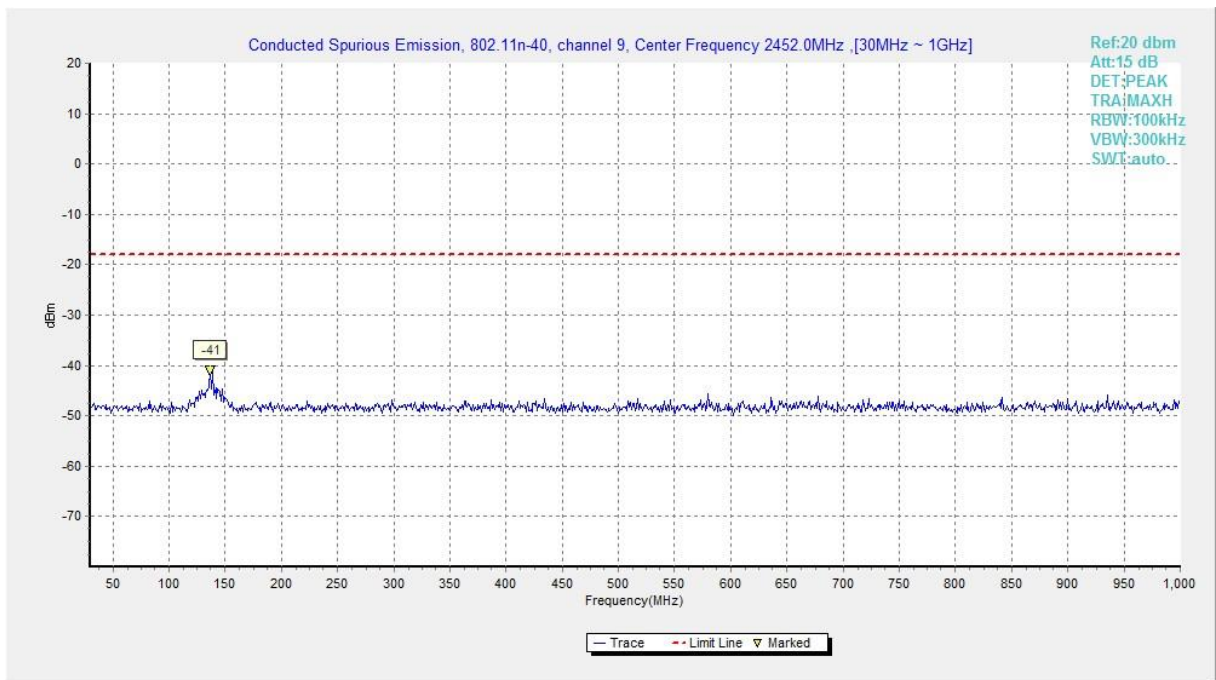
**Fig.B.6.1.87 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 15 GHz-20 GHz)**



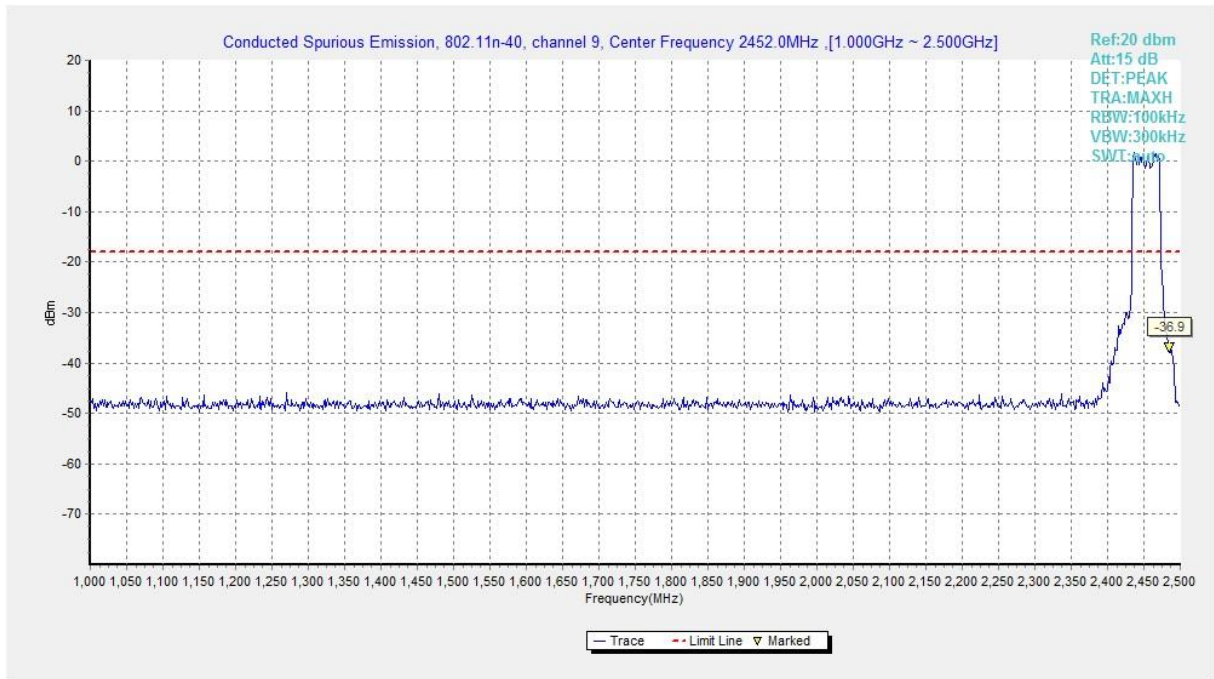
**Fig.B.6.1.88 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch6, 20 GHz-26 GHz)**



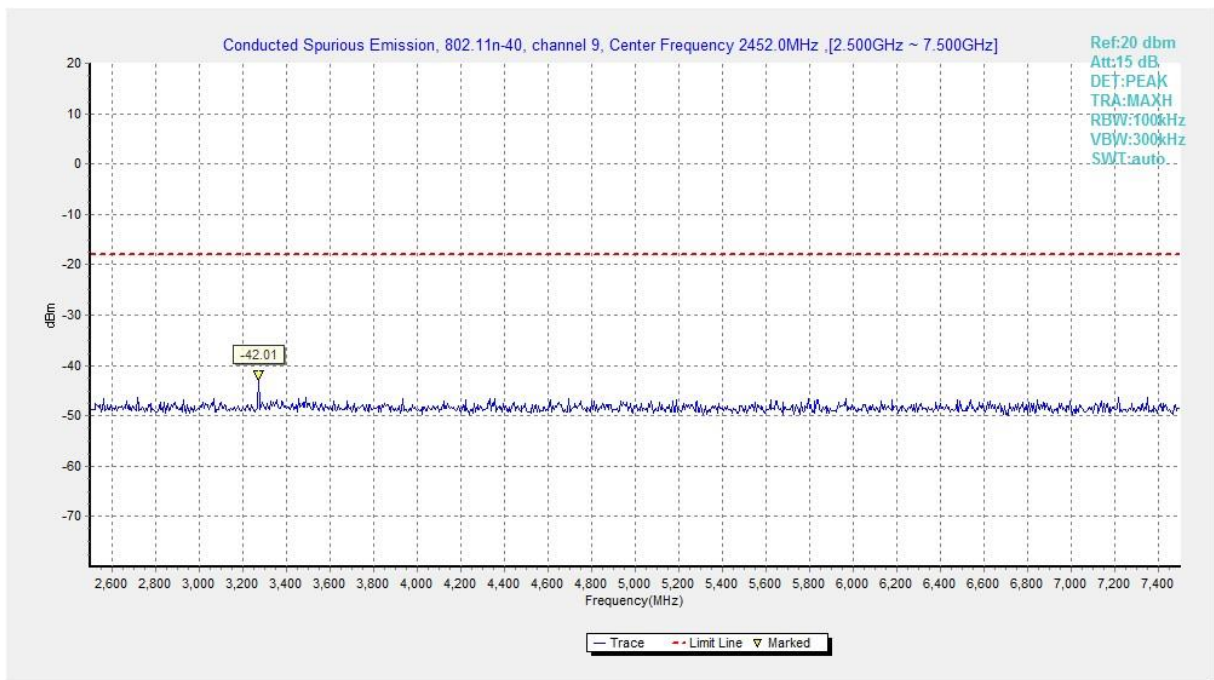
**Fig.B.6.1.89 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, Center Frequency)**



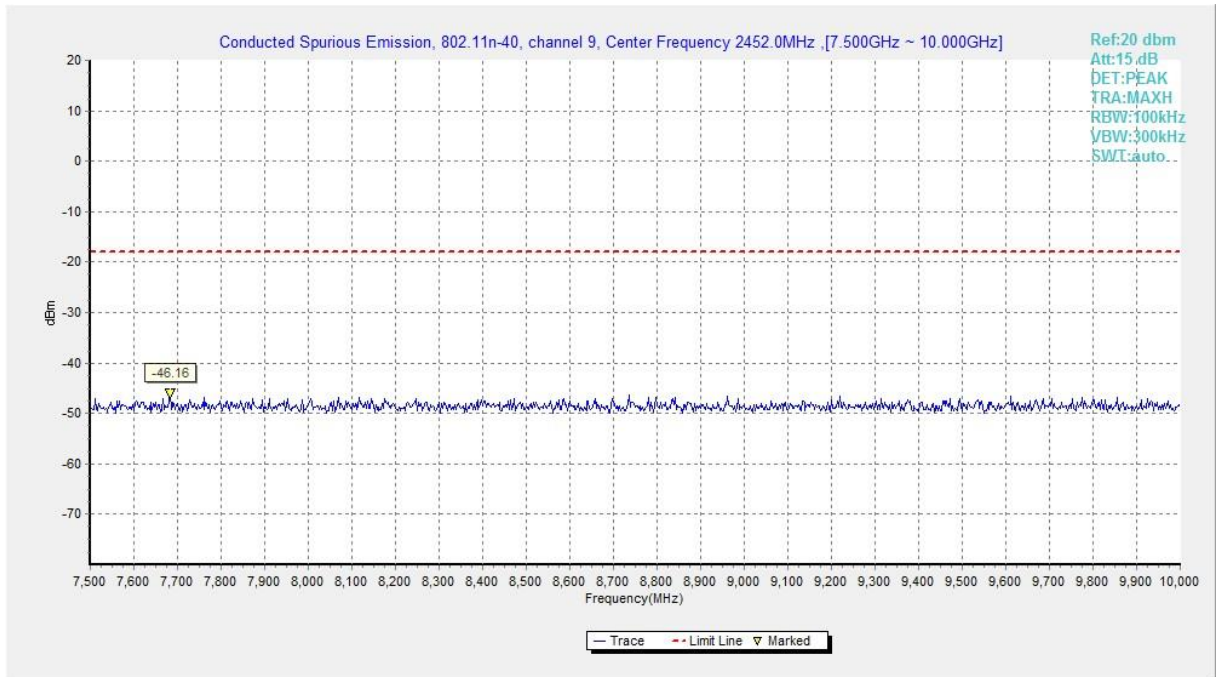
**Fig.B.6.1.90 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 30 MHz-1 GHz)**



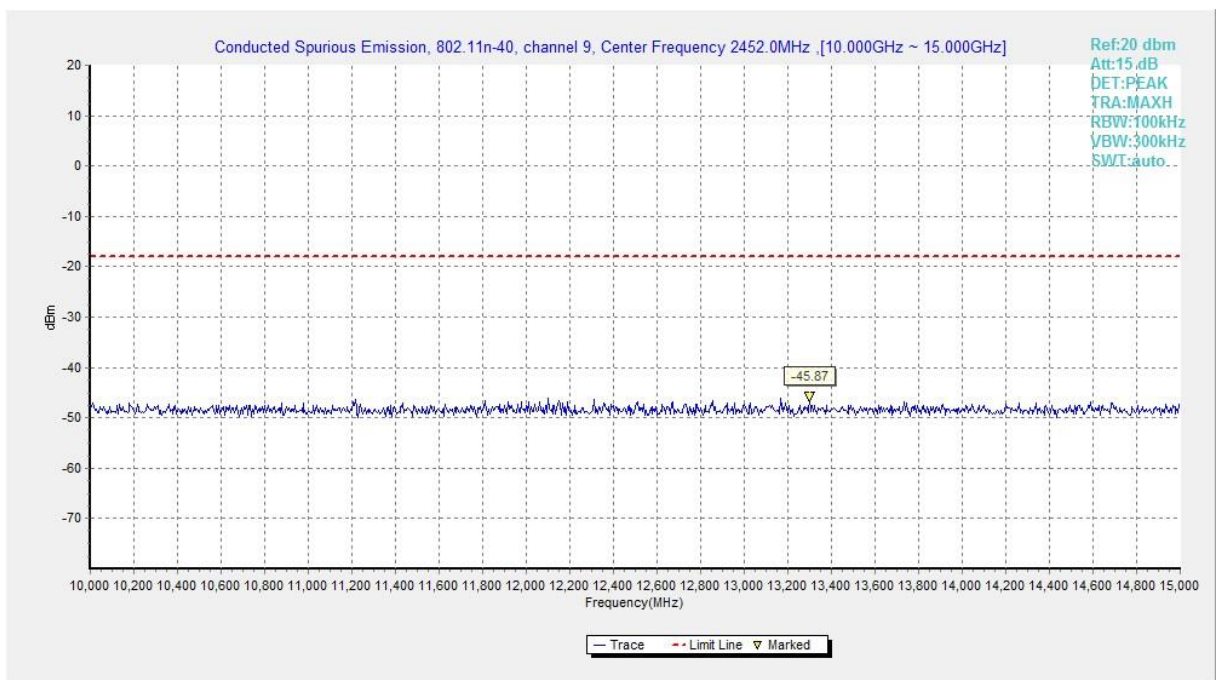
**Fig.B.6.1.91 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 1 GHz-2.5 GHz)**



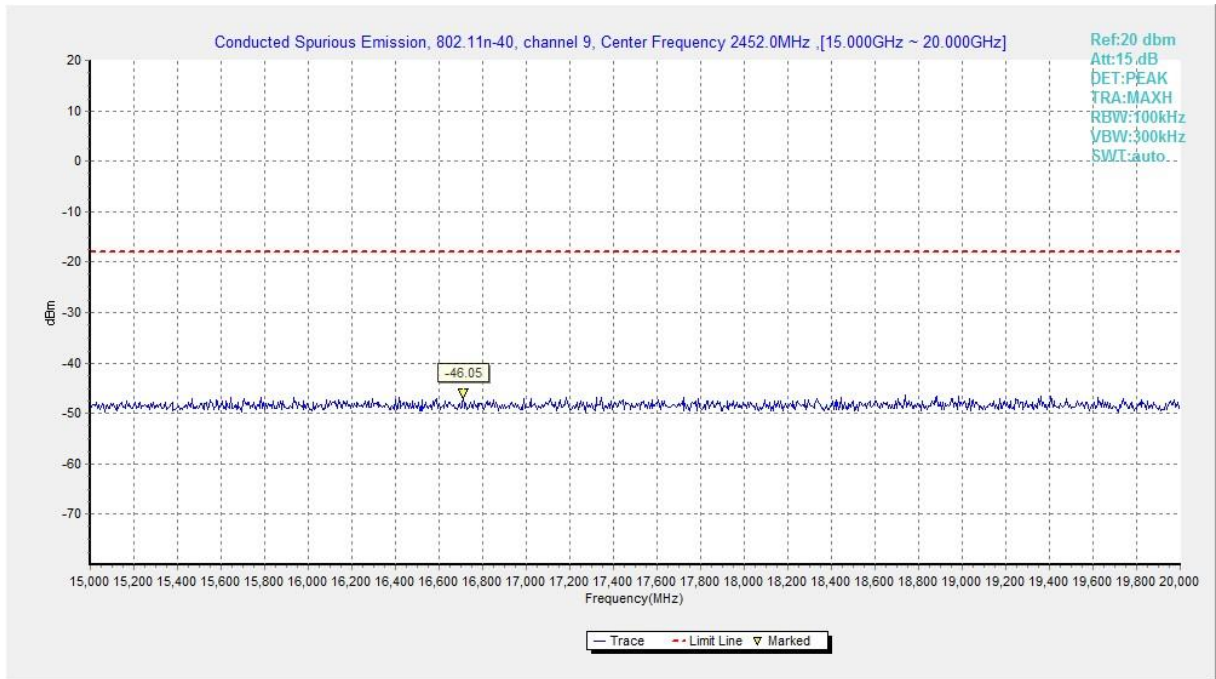
**Fig.B.6.1.92 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 2.5 GHz-7.5 GHz)**



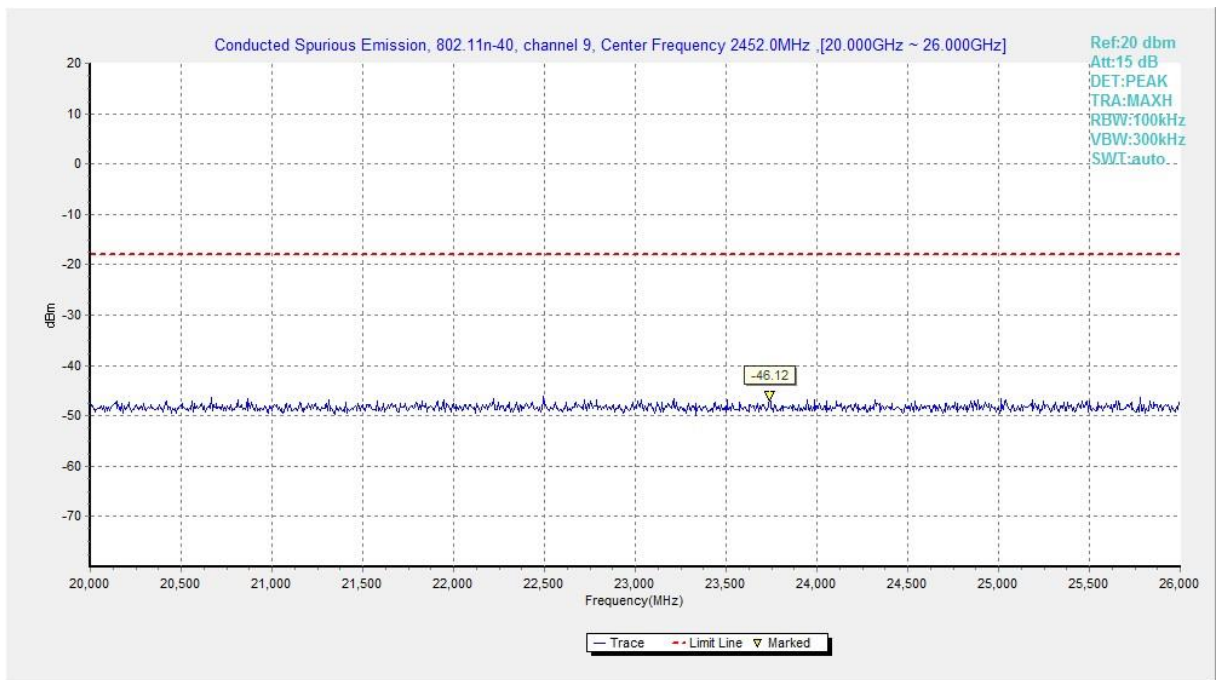
**Fig.B.6.1.93 Transmitter Spurious Emission - Conducted (802.11n-HT40, Ch9, 7.5 GHz-10 GHz)**



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



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



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

## B.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(μV/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:** EUT1

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

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.31GHz~2.43GHz---L	Fig.B.6.2.1	<b>P</b>
	11	2.45GHz~2.50GHz---H	Fig.B.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.B.6.2.3	<b>P</b>
	11	2.45GHz~2.50GHz---H	Fig.B.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.B.6.2.5	<b>P</b>
	11	2.45GHz~2.50GHz---H	Fig.B.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.B.6.2.7	<b>P</b>
	9	2.45GHz~2.50GHz---H	Fig.B.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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17997.5	58.2	-25.5	46.7	37.0	74.0	37.0	V
17981.5	58.1	-25.5	46.7	36.9	74.0	37.1	V
17998	58	-25.5	46.7	36.8	74.0	37.2	V
17927	57.6	-25.5	46.7	36.4	74.0	37.6	V
17944.5	57.6	-25.5	46.7	36.4	74.0	37.6	V
2371.1	54.5	-20.1	28	46.5	74.0	27.5	V

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)
17981.5	58.6	-25.5	46.7	37.4	74.0	36.6	H
17972.5	58.1	-25.5	46.7	36.9	74.0	37.1	H
17943	57.6	-25.5	46.7	36.4	74.0	37.6	V
17913	57.5	-25.5	46.7	36.3	74.0	37.7	H
17964.5	57.5	-25.5	46.7	36.3	74.0	37.7	V
17972	57.3	-25.5	46.7	36.1	74.0	37.9	V

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)
17971	57.9	-25.5	46.7	36.7	74.0	37.3	H
17989.5	57.3	-25.5	46.7	36.1	74.0	37.9	V
17889.5	57.1	-25.5	46.7	35.9	74.0	38.1	H
17901.5	57.1	-25.5	46.7	35.9	74.0	38.1	H
17998.5	57.1	-25.5	46.7	35.9	74.0	38.1	H
2498	54.3	-20	28.4	45.9	74.0	28.1	V

**802.11g**

## Ch1

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17984.5	57.7	-25.5	46.7	36.5	74.0	37.5	H
17937.5	57.6	-25.5	46.7	36.4	74.0	37.6	H
17998.5	57.2	-25.5	46.7	36.0	74.0	38.0	V
17891.5	57.1	-25.5	46.7	35.9	74.0	38.1	H
17922.5	57.1	-25.5	46.7	35.9	74.0	38.1	H
2384.9	54.8	-20	28.1	46.8	74.0	27.2	V

## Ch6

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17791.5	57.1	-25.5	46.7	35.9	74.0	38.1	H
17900.5	57.1	-25.5	46.7	35.9	74.0	38.1	V
17971.5	57.1	-25.5	46.7	35.9	74.0	38.1	V
17994.5	57.1	-25.5	46.7	35.9	74.0	38.1	V
17889	57	-25.5	46.7	35.8	74.0	38.2	V
17963.5	57	-25.5	46.7	35.8	74.0	38.2	H

## Ch11

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17944.5	58.2	-25.5	46.7	37.0	74.0	37.0	H
17926.5	57.4	-25.5	46.7	36.2	74.0	37.8	V
17966.5	57.4	-25.5	46.7	36.2	74.0	37.8	H
17960.5	57.3	-25.5	46.7	36.1	74.0	37.9	H
17935.5	57.2	-25.5	46.7	36.0	74.0	38.0	H
2495.9	54.4	-20	28.3	46.1	74.0	27.9	V

**802.11n-HT20**
**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)
17983.5	57.6	-25.5	46.7	36.4	74.0	37.6	H
17966.5	57.4	-25.5	46.7	36.2	74.0	37.8	V
17877.5	57.3	-25.5	46.7	36.1	74.0	37.9	V
17976	57.3	-25.5	46.7	36.1	74.0	37.9	V
17785.5	57.1	-25.5	46.7	35.9	74.0	38.1	V
2389.8	55.3	-20	28.1	47.3	74.0	26.7	H

**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)
17957.5	57.8	-25.5	46.7	36.6	74.0	37.4	V
17836.5	57.5	-25.5	46.7	36.3	74.0	37.7	V
17951.5	57.5	-25.5	46.7	36.3	74.0	37.7	V
17986	57.5	-25.5	46.7	36.3	74.0	37.7	V
17961	57.3	-25.5	46.7	36.1	74.0	37.9	V
17944	57.2	-25.5	46.7	36.0	74.0	38.0	V

**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)
17984.5	57.4	-25.5	46.7	36.2	74.0	37.8	V
17923	57.3	-25.5	46.7	36.1	74.0	37.9	H
17942	57.3	-25.5	46.7	36.1	74.0	37.9	V
17945.5	57.3	-25.5	46.7	36.1	74.0	37.9	H
17931.5	57.2	-25.5	46.7	36.0	74.0	38.0	V
2498.4	55	-20	28.4	46.6	74.0	27.4	V

**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)
17946.5	58.3	-25.5	46.7	37.1	74.0	36.9	H
17947	58.1	-25.5	46.7	36.9	74.0	37.1	H
17989	57.7	-25.5	46.7	36.5	74.0	37.5	H
17950	57.6	-25.5	46.7	36.4	74.0	37.6	V
17975	57.5	-25.5	46.7	36.3	74.0	37.7	V
2388.1	55.6	-20	28.1	47.6	74.0	26.4	H

**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)
17898	57.8	-25.5	46.7	36.6	74.0	37.4	H
17998	57.6	-25.5	46.7	36.4	74.0	37.6	V
17937.5	57.3	-25.5	46.7	36.1	74.0	37.9	H
17995	57.3	-25.5	46.7	36.1	74.0	37.9	H
17857	57.1	-25.5	46.7	35.9	74.0	38.1	H
17866	57.1	-25.5	46.7	35.9	74.0	38.1	V

**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)
17985	58.3	-25.5	46.7	37.1	74.0	36.9	H
17958	58.1	-25.5	46.7	36.9	74.0	37.1	V
17896.5	57.3	-25.5	46.7	36.1	74.0	37.9	V
17958.5	57.2	-25.5	46.7	36.0	74.0	38.0	H
17950	57	-25.5	46.7	35.8	74.0	38.2	V
2494.4	54.8	-20	28.3	46.5	74.0	27.5	V

**Average**
**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)
17956.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
17980.5	46.3	-25.5	46.7	25.1	54.0	28.9	V
17965	46.2	-25.5	46.7	25.0	54.0	29.0	H
17981.5	46.2	-25.5	46.7	25.0	54.0	29.0	V
17924	46.1	-25.5	46.7	24.9	54.0	29.1	V
2387.1	42.1	-20	28.1	34.1	54.0	19.9	H

**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)
17972	46.7	-25.5	46.7	25.5	54.0	28.5	V
17974.5	46.6	-25.5	46.7	25.4	54.0	28.6	V
17969	46.5	-25.5	46.7	25.3	54.0	28.7	V
17932.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
17989	46.4	-25.5	46.7	25.2	54.0	28.8	H
17958	46.3	-25.5	46.7	25.1	54.0	28.9	V

**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)
17988.5	46.3	-25.5	46.7	25.1	54.0	28.9	V
17992.5	46.3	-25.5	46.7	25.1	54.0	28.9	H
17886	46.2	-25.5	46.7	25.0	54.0	29.0	H
17973	46.2	-25.5	46.7	25.0	54.0	29.0	V
17936	46.1	-25.5	46.7	24.9	54.0	29.1	H
2499.2	41.8	-20	28.4	33.4	54.0	20.6	V

**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)
17988	46.6	-25.5	46.7	25.4	54.0	28.6	V
17975.5	46.5	-25.5	46.7	25.3	54.0	28.7	V
17991	46.5	-25.5	46.7	25.3	54.0	28.7	V
17954.5	46.4	-25.5	46.7	25.2	54.0	28.8	H
17972.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
2389	42.4	-20	28.1	34.4	54.0	19.6	H

**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)
17994.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
17949.5	46.3	-25.5	46.7	25.1	54.0	28.9	H
17962.5	46.2	-25.5	46.7	25.0	54.0	29.0	V
17970	46.2	-25.5	46.7	25.0	54.0	29.0	V
17982.5	46.2	-25.5	46.7	25.0	54.0	29.0	V
17995.5	46.2	-25.5	46.7	25.0	54.0	29.0	H

**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)
17988	46.7	-25.5	46.7	25.5	54.0	28.5	V
17951.5	46.4	-25.5	46.7	25.2	54.0	28.8	V
17937.5	46.3	-25.5	46.7	25.1	54.0	28.9	V
17934	46.2	-25.5	46.7	25.0	54.0	29.0	H
17962.5	46.2	-25.5	46.7	25.0	54.0	29.0	H
2499.9	41.8	-20	28.4	33.4	54.0	20.6	V

**802.11n-HT20**

## 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)
17970	46.6	-25.5	46.7	25.4	54.0	28.6	V
17939.5	46.4	-25.5	46.7	25.2	54.0	28.8	H
17963	46.3	-25.5	46.7	25.1	54.0	28.9	V
17973	46.3	-25.5	46.7	25.1	54.0	28.9	V
17980.5	46.3	-25.5	46.7	25.1	54.0	28.9	H
2389.8	42.5	-20	28.1	34.5	54.0	19.5	H

## 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)
17957.5	46.5	-25.5	46.7	25.3	54.0	28.7	V
17981.5	46.5	-25.5	46.7	25.3	54.0	28.7	H
17997.5	46.5	-25.5	46.7	25.3	54.0	28.7	V
17964.5	46.3	-25.5	46.7	25.1	54.0	28.9	H
17986	46.3	-25.5	46.7	25.1	54.0	28.9	V
17987	46.3	-25.5	46.7	25.1	54.0	28.9	V

## 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)
17971	46.6	-25.5	46.7	25.4	54.0	28.6	H
17998	46.6	-25.5	46.7	25.4	54.0	28.6	H
17940	46.4	-25.5	46.7	25.2	54.0	28.8	V
17968	46.4	-25.5	46.7	25.2	54.0	28.8	H
17970.5	46.3	-25.5	46.7	25.1	54.0	28.9	V
2486.8	41.6	-20	28.3	33.3	54.0	20.7	V

**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)
17969	46.4	-25.5	46.7	25.2	54.0	28.8	V
17988	46.3	-25.5	46.7	25.1	54.0	28.9	H
17968.5	46.2	-25.5	46.7	25.0	54.0	29.0	V
17979	46.2	-25.5	46.7	25.0	54.0	29.0	H
17987.5	46.2	-25.5	46.7	25.0	54.0	29.0	H
2389.9	43.7	-20	28.1	35.7	54.0	18.3	H

**Ch6**

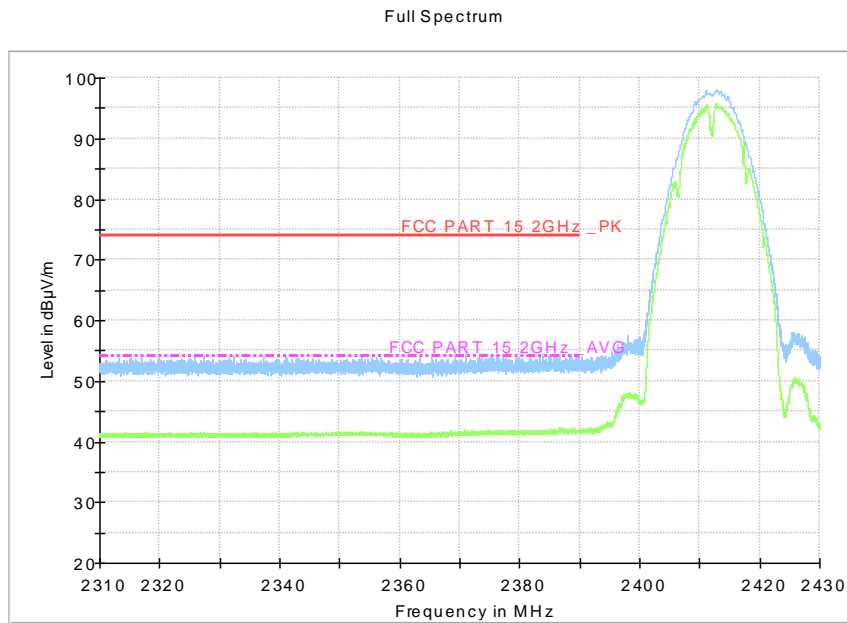
Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17959	46.4	-25.5	46.7	25.2	54.0	28.8	V
17960	46.4	-25.5	46.7	25.2	54.0	28.8	V
17968.5	46.3	-25.5	46.7	25.1	54.0	28.9	H
17979.5	46.3	-25.5	46.7	25.1	54.0	28.9	H
17956	46.2	-25.5	46.7	25.0	54.0	29.0	V
17962	46.2	-25.5	46.7	25.0	54.0	29.0	H

**Ch9**

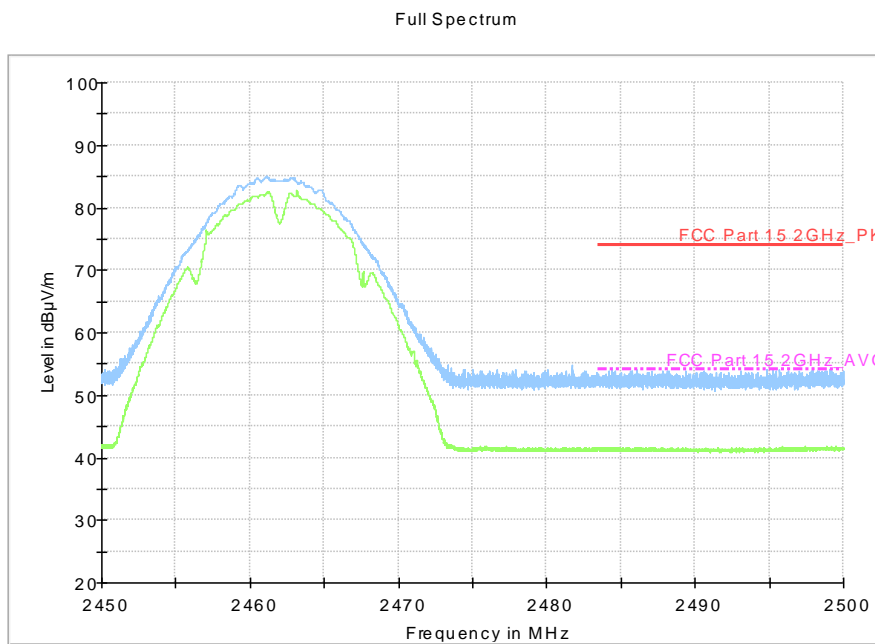
Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17986.5	46.7	-25.5	46.7	25.5	54.0	28.5	H
17986	46.5	-25.5	46.7	25.3	54.0	28.7	V
17931	46.4	-25.5	46.7	25.2	54.0	28.8	H
17981.5	46.4	-25.5	46.7	25.2	54.0	28.8	H
17991	46.4	-25.5	46.7	25.2	54.0	28.8	V
2499.6	41.7	-20	28.4	33.3	54.0	20.7	V



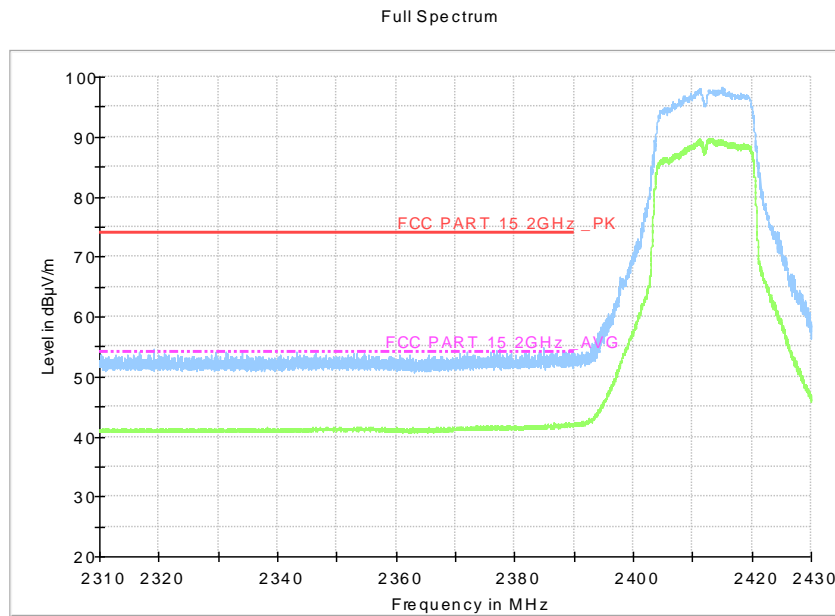
Test graphs as below:



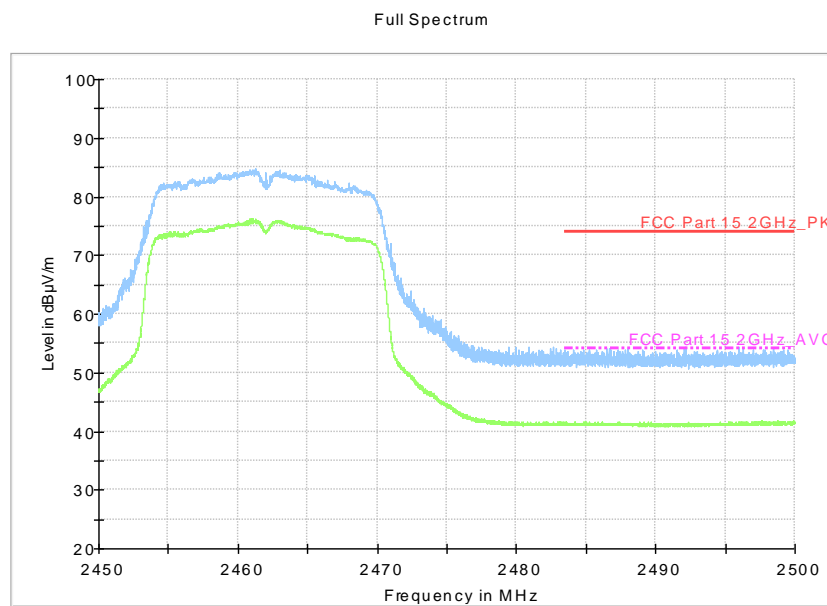
**Fig.B.6.2.1 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch1, 2.31 GHz – 2.45GHz**



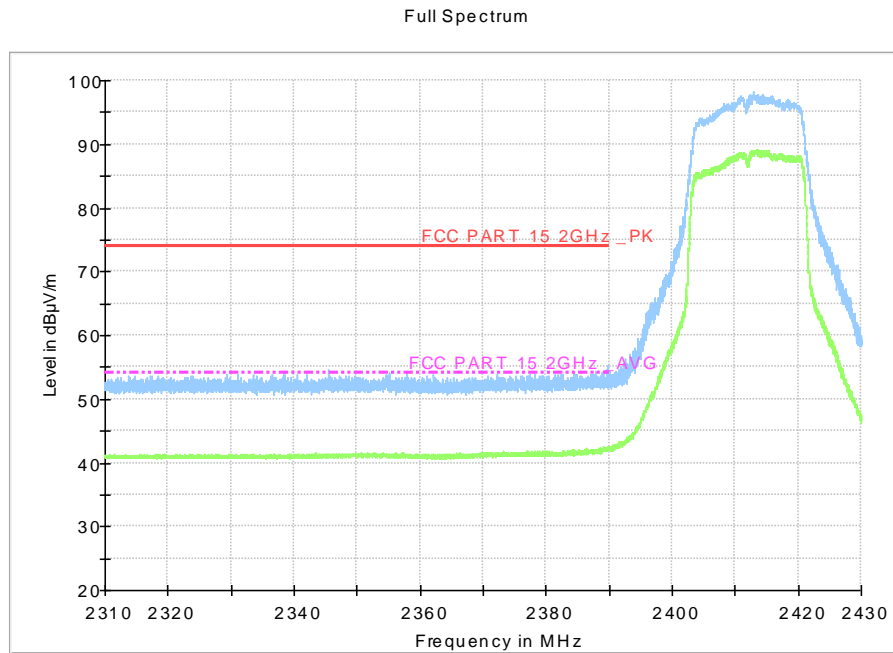
**Fig.B.6.2.2 Transmitter Spurious Emission - Radiated (Power): 802.11b, ch11, 2.45 GHz - 2.50GHz**



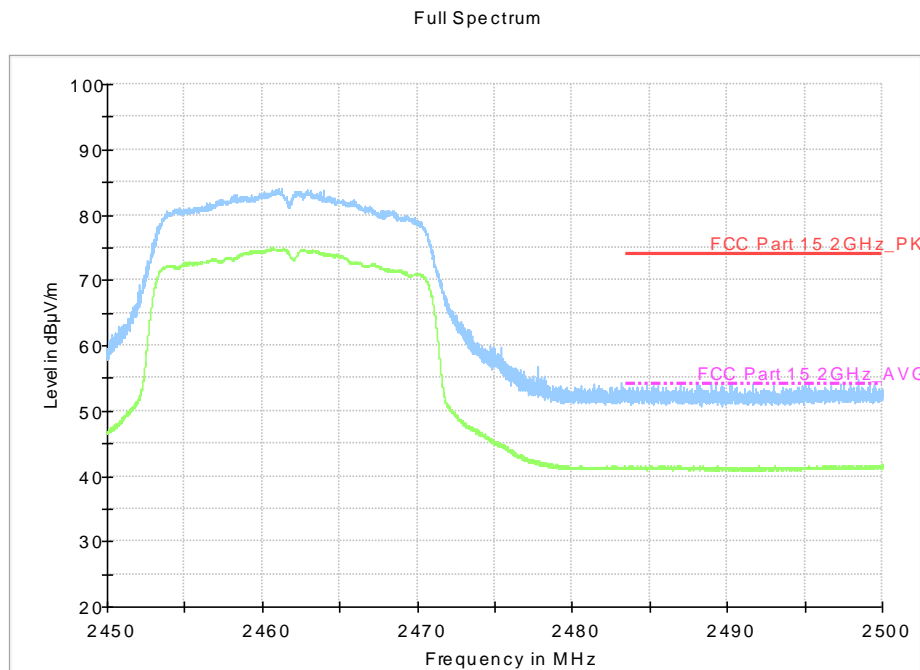
**Fig.B.6.2.3 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch1, 2.31 GHz - 2.45GHz**



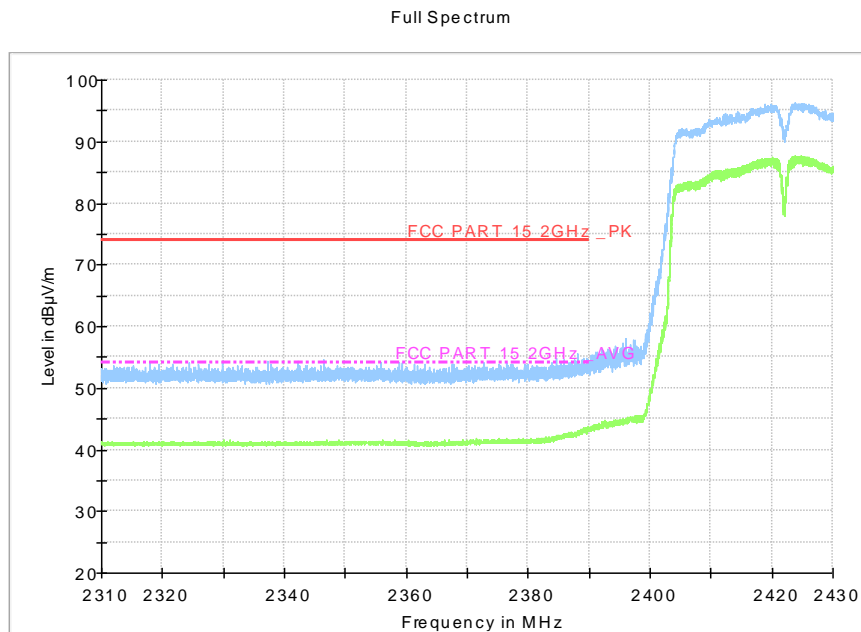
**Fig.B.6.2.4 Transmitter Spurious Emission - Radiated (Power): 802.11g, ch11, 2.45 GHz - 2.50GHz**



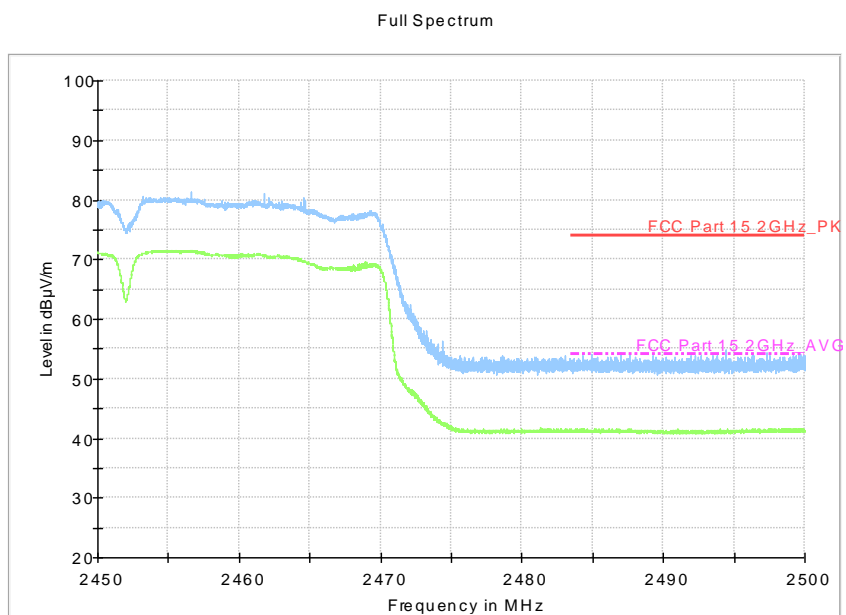
**Fig.B.6.2.5 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT20, ch1, 2.31 GHz - 2.45GHz**



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



**Fig.B.6.2.7 Transmitter Spurious Emission - Radiated (Power): 802.11n-HT40, ch3, 2.31 GHz - 2.45GHz**



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

## **B.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 AE5		
		802.11b	Idle	
0.15 to 0.5	66 to 56	Fig.B.7.1	Fig.B.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 AE5		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.B.7.1	Fig.B.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.

## WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger AE6		
		802.11b	Idle	
0.15 to 0.5	67 to 56	Fig.B.7.3	Fig.B.7.4	<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 AE6		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.B.7.3	Fig.B.7.4	<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.

## WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger AE7		
		802.11b	Idle	

0.15 to 0.5	68 to 56	Fig.B.7.5	Fig.B.7.6	<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 AE7		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.B.7.5	Fig.B.7.6	<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.

**WLAN (Quasi-peak Limit)**

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger AE8		
		802.11b	Idle	
0.15 to 0.5	69 to 56	Fig.B.7.7	Fig.B.7.8	<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 AE8		
		802.11b	Idle	
0.15 to 0.5	56 to 46	Fig.B.7.7	Fig.B.7.8	<b>P</b>
0.5 to 5	46			
5 to 30	50			

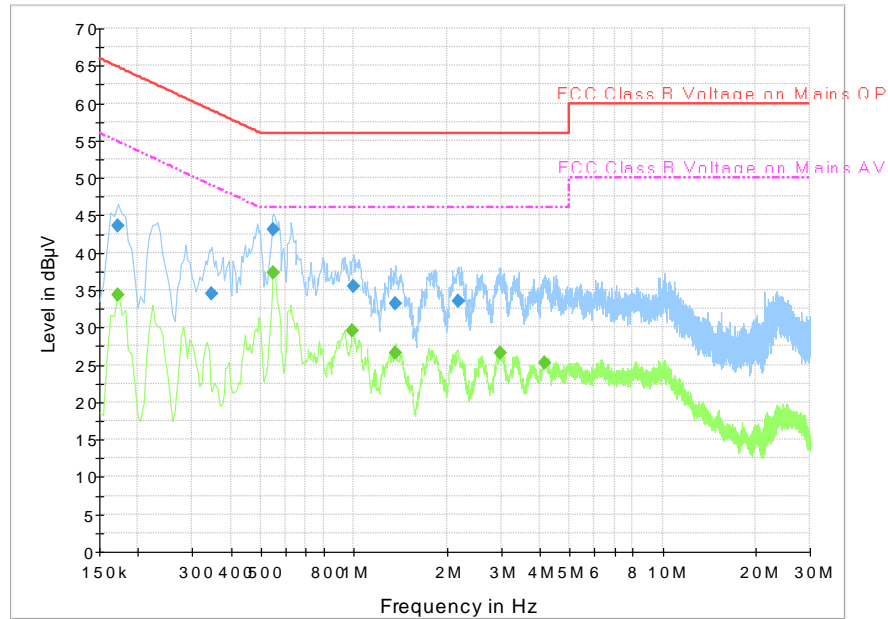
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

**Conclusion: Pass**

**Test graphs as below:**

**Measurement results for Set.1:**

**Result for Traffic:**



**Fig.B.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
0.172500	43.6	1000.0	9.000	On	L1	19.7	21.2	64.8	
0.348000	34.5	1000.0	9.000	On	L1	19.6	24.5	59.0	
0.550500	43.1	1000.0	9.000	On	L1	19.6	12.9	56.0	
1.000500	35.6	1000.0	9.000	On	L1	19.6	20.4	56.0	
1.365000	33.1	1000.0	9.000	On	L1	19.6	22.9	56.0	
2.184000	33.5	1000.0	9.000	On	N	19.5	22.5	56.0	

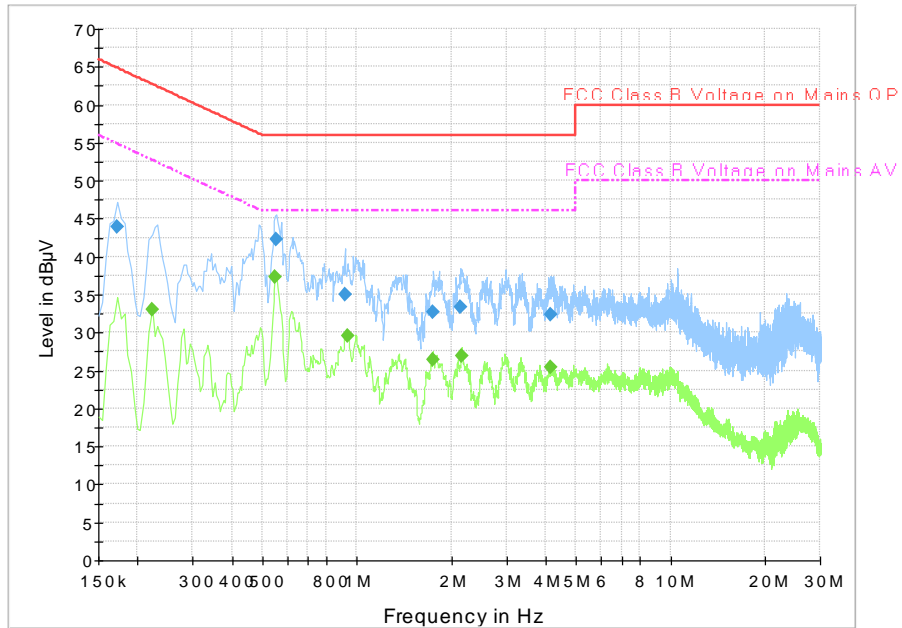
**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.172500	34.4	1000.0	9.000	On	L1	19.7	20.4	54.8	
0.550500	37.4	1000.0	9.000	On	L1	19.6	8.6	46.0	
0.991500	29.5	1000.0	9.000	On	L1	19.6	16.5	46.0	
1.360500	26.5	1000.0	9.000	On	L1	19.6	19.5	46.0	
2.971500	26.6	1000.0	9.000	On	N	19.6	19.4	46.0	
4.164000	25.2	1000.0	9.000	On	N	19.7	20.8	46.0	



**Measurement results for Set.1:**

**Result for Idle:**



**Fig.B.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**

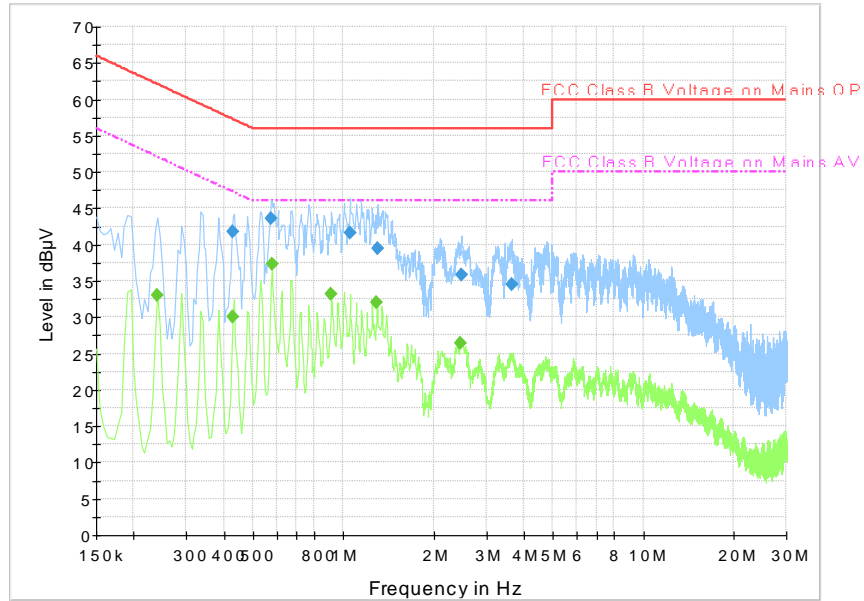
Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.172500	44.0	1000.0	9.000	On	N	19.5	20.9	64.8	
0.555000	42.3	1000.0	9.000	On	L1	19.6	13.7	56.0	
0.915000	34.9	1000.0	9.000	On	L1	19.6	21.1	56.0	
1.756500	32.7	1000.0	9.000	On	L1	19.5	23.3	56.0	
2.143500	33.4	1000.0	9.000	On	N	19.5	22.6	56.0	
4.137000	32.4	1000.0	9.000	On	N	19.7	23.6	56.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.222000	32.9	1000.0	9.000	On	L1	19.6	19.8	52.7	
0.550500	37.3	1000.0	9.000	On	N	19.5	8.7	46.0	
0.933000	29.6	1000.0	9.000	On	N	19.6	16.4	46.0	
1.743000	26.5	1000.0	9.000	On	L1	19.5	19.5	46.0	
2.161500	26.9	1000.0	9.000	On	L1	19.6	19.1	46.0	
4.155000	25.4	1000.0	9.000	On	N	19.7	20.6	46.0	

**Measurement results for Set.2:**

**Result for Traffic:**



**Fig.B.7.3 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**

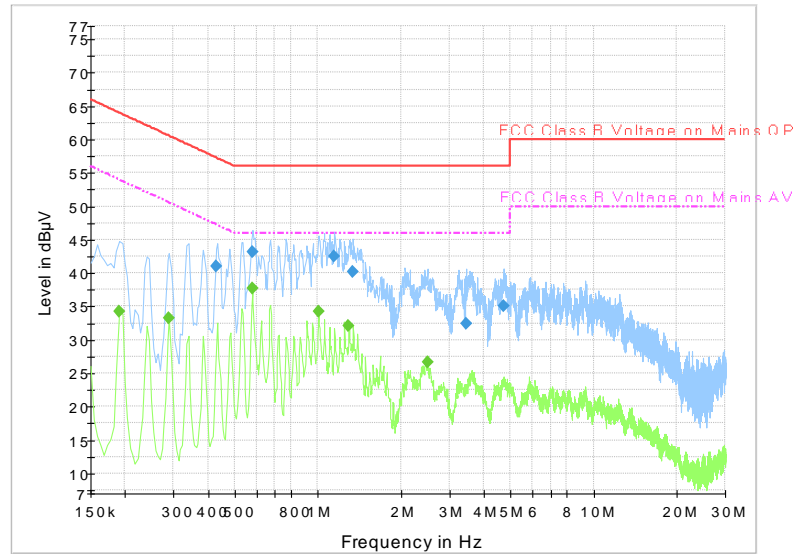
Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.429000	41.8	1000.0	9.000	On	N	19.6	15.5	57.3	
0.573000	43.6	1000.0	9.000	On	N	19.5	12.4	56.0	
1.050000	41.7	1000.0	9.000	On	N	19.6	14.3	56.0	
1.306500	39.4	1000.0	9.000	On	L1	19.6	16.6	56.0	
2.472000	35.9	1000.0	9.000	On	N	19.6	20.1	56.0	
3.646500	34.6	1000.0	9.000	On	N	19.6	21.4	56.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.240000	32.9	1000.0	9.000	On	N	19.6	19.1	52.1	
0.429000	30.1	1000.0	9.000	On	N	19.6	17.2	47.3	
0.577500	37.3	1000.0	9.000	On	N	19.5	8.7	46.0	
0.910500	33.1	1000.0	9.000	On	N	19.5	12.9	46.0	
1.293000	32.0	1000.0	9.000	On	L1	19.6	14.0	46.0	
2.449500	26.4	1000.0	9.000	On	N	19.6	19.6	46.0	

### Measurement results for Set.2:

#### Result for Idle:



**Fig.B.7.4 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

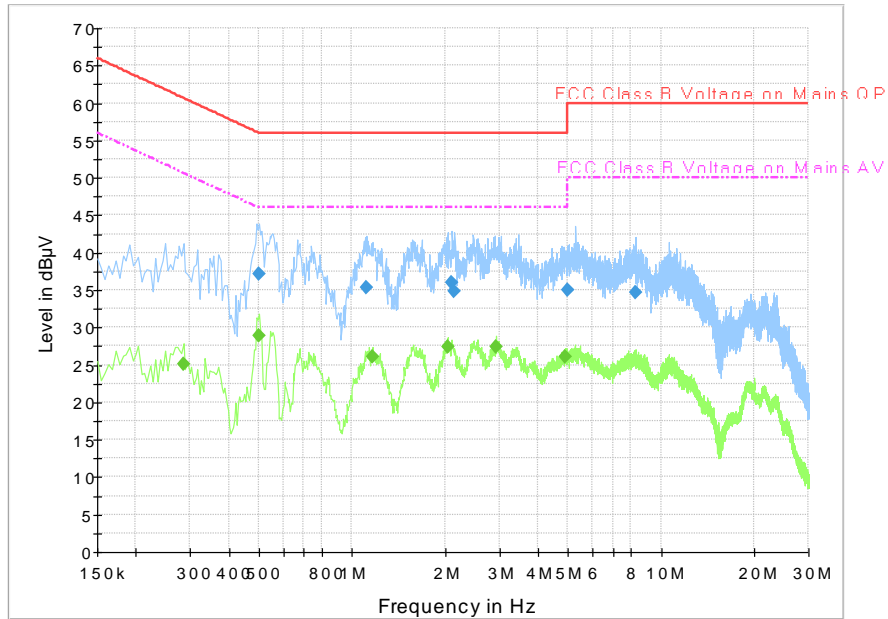
Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.429000	41.0	1000.0	9.000	On	N	19.6	16.3	57.3	
0.582000	43.1	1000.0	9.000	On	N	19.5	12.9	56.0	
1.149000	42.5	1000.0	9.000	On	L1	19.6	13.5	56.0	
1.338000	40.2	1000.0	9.000	On	L1	19.6	15.8	56.0	
3.439500	32.5	1000.0	9.000	On	L1	19.7	23.5	56.0	
4.722000	35.0	1000.0	9.000	On	N	19.7	21.0	56.0	

#### Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.190500	34.3	1000.0	9.000	On	L1	19.7	19.7	54.0	
0.289500	33.2	1000.0	9.000	On	N	19.6	17.3	50.5	
0.577500	37.7	1000.0	9.000	On	L1	19.6	8.3	46.0	
1.005000	34.2	1000.0	9.000	On	L1	19.6	11.8	46.0	
1.293000	32.2	1000.0	9.000	On	L1	19.6	13.8	46.0	
2.494500	26.6	1000.0	9.000	On	L1	19.6	19.4	46.0	

**Measurement results for Set.3:**

**Result for Traffic:**



**Fig.B.7.5 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**

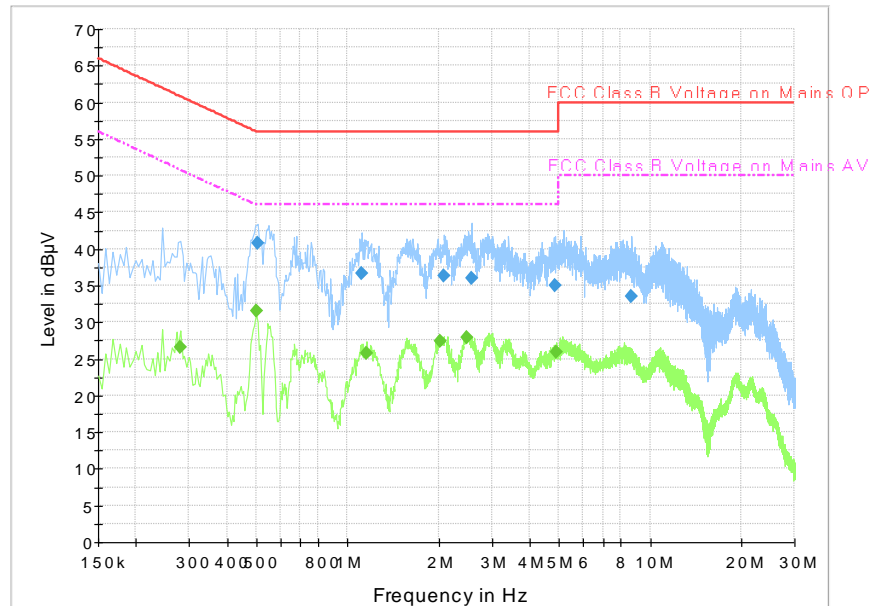
Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.501000	37.2	1000.0	9.000	On	N	19.6	18.8	56.0	
1.117500	35.3	1000.0	9.000	On	N	19.6	20.7	56.0	
2.107500	36.0	1000.0	9.000	On	L1	19.5	20.0	56.0	
2.148000	34.9	1000.0	9.000	On	N	19.5	21.1	56.0	
4.974000	35.0	1000.0	9.000	On	L1	19.8	21.0	56.0	
8.263500	34.6	1000.0	9.000	On	L1	19.8	25.4	60.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.285000	25.1	1000.0	9.000	On	N	19.6	25.6	50.7	
0.501000	28.9	1000.0	9.000	On	N	19.6	17.1	46.0	
1.162500	26.1	1000.0	9.000	On	L1	19.6	19.9	46.0	
2.035500	27.4	1000.0	9.000	On	L1	19.5	18.6	46.0	
2.931000	27.5	1000.0	9.000	On	N	19.6	18.5	46.0	
4.902000	26.0	1000.0	9.000	On	L1	19.8	20.0	46.0	

### Measurement results for Set.3:

#### Result for Idle:



**Fig.B.7.6 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

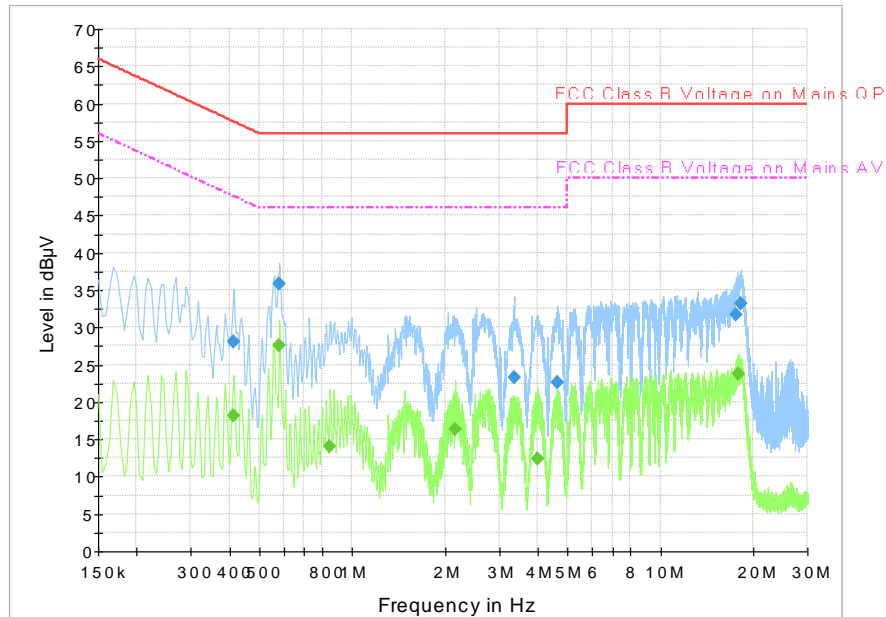
Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.505500	40.7	1000.0	9.000	On	N	19.6	15.3	56.0	
1.117500	36.7	1000.0	9.000	On	N	19.6	19.3	56.0	
2.085000	36.3	1000.0	9.000	On	N	19.5	19.7	56.0	
2.562000	36.1	1000.0	9.000	On	N	19.6	19.9	56.0	
4.866000	34.9	1000.0	9.000	On	L1	19.8	21.1	56.0	
8.704500	33.5	1000.0	9.000	On	L1	19.8	26.5	60.0	

### Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.280500	26.7	1000.0	9.000	On	N	19.6	24.1	50.8	
0.501000	31.6	1000.0	9.000	On	N	19.6	14.4	46.0	
1.158000	25.7	1000.0	9.000	On	L1	19.6	20.3	46.0	
2.017500	27.4	1000.0	9.000	On	N	19.5	18.6	46.0	
2.476500	27.9	1000.0	9.000	On	N	19.6	18.1	46.0	
4.911000	25.9	1000.0	9.000	On	N	19.7	20.1	46.0	

**Measurement results for Set.4:**

**Result for Traffic:**



**Fig.B.7.7 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**

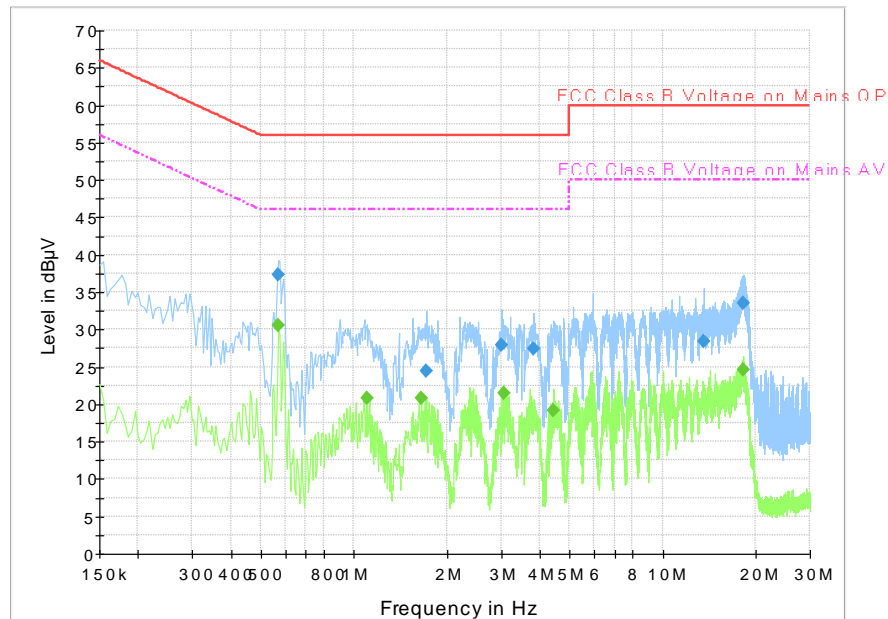
Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.411000	28.0	1000.0	9.000	On	N	19.6	29.6	57.6	
0.582000	35.8	1000.0	9.000	On	N	19.5	20.2	56.0	
3.345000	23.3	1000.0	9.000	On	N	19.6	32.7	56.0	
4.636500	22.7	1000.0	9.000	On	N	19.7	33.3	56.0	
17.659500	31.7	1000.0	9.000	On	L1	19.8	28.3	60.0	
18.213000	33.2	1000.0	9.000	On	L1	19.8	26.8	60.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.411000	18.1	1000.0	9.000	On	L1	19.6	29.5	47.6	
0.582000	27.6	1000.0	9.000	On	L1	19.6	18.4	46.0	
0.847500	14.0	1000.0	9.000	On	N	19.5	32.0	46.0	
2.157000	16.4	1000.0	9.000	On	N	19.5	29.6	46.0	
3.984000	12.5	1000.0	9.000	On	N	19.7	33.6	46.0	
17.848500	23.8	1000.0	9.000	On	N	19.9	26.2	50.0	

**Measurement results for Set.4:**

**Result for Idle:**



**Fig.B.7.8 AC Powerline Conducted Emission-Idle**

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



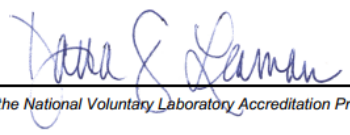
**Final Result 1**

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.568500	37.3	1000.0	9.000	On	L1	19.6	18.7	56.0	
1.720500	24.5	1000.0	9.000	On	L1	19.6	31.5	56.0	
3.007500	27.9	1000.0	9.000	On	L1	19.6	28.1	56.0	
3.831000	27.4	1000.0	9.000	On	L1	19.7	28.6	56.0	
13.600500	28.4	1000.0	9.000	On	L1	20.0	31.6	60.0	
18.258000	33.6	1000.0	9.000	On	N	19.9	26.4	60.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.568500	30.5	1000.0	9.000	On	L1	19.6	15.5	46.0	
1.099500	20.8	1000.0	9.000	On	L1	19.6	25.2	46.0	
1.648500	20.8	1000.0	9.000	On	L1	19.6	25.2	46.0	
3.070500	21.5	1000.0	9.000	On	L1	19.6	24.5	46.0	
4.447500	19.2	1000.0	9.000	On	L1	19.8	26.8	46.0	
18.240000	24.6	1000.0	9.000	On	L1	19.8	25.4	50.0	

## ANNEX C: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p> <div style="display: flex; justify-content: space-around; align-items: center;"><div style="font-size: 2em; font-weight: bold; letter-spacing: 0.5em;">NVLAP<sup>®</sup></div><div style="text-align: center;"></div></div> <hr/> <p style="font-size: 1.2em; font-weight: bold; text-align: center;">Certificate of Accreditation to ISO/IEC 17025:2017</p> <hr/> <p style="text-align: center;">NVLAP LAB CODE: 600118-0</p> <p style="text-align: center; font-weight: bold;">Telecommunication Technology Labs, CAICT</p> <p style="text-align: center;">Beijing China</p> <p style="text-align: center; font-size: 0.8em;"><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p> <p style="text-align: center; font-weight: bold;">Electromagnetic Compatibility &amp; Telecommunications</p> <p style="text-align: center; font-size: 0.8em;"><i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).</i></p> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"><div style="text-align: center;"><hr style="width: 30%;"/><p style="font-size: 0.8em;">2020-09-29 through 2021-09-30 <i>Effective Dates</i></p></div><div style="text-align: center;"></div><div style="text-align: center;"> <hr style="width: 30%;"/><p style="font-size: 0.8em;"><i>For the National Voluntary Laboratory Accreditation Program</i></p></div></div>	
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