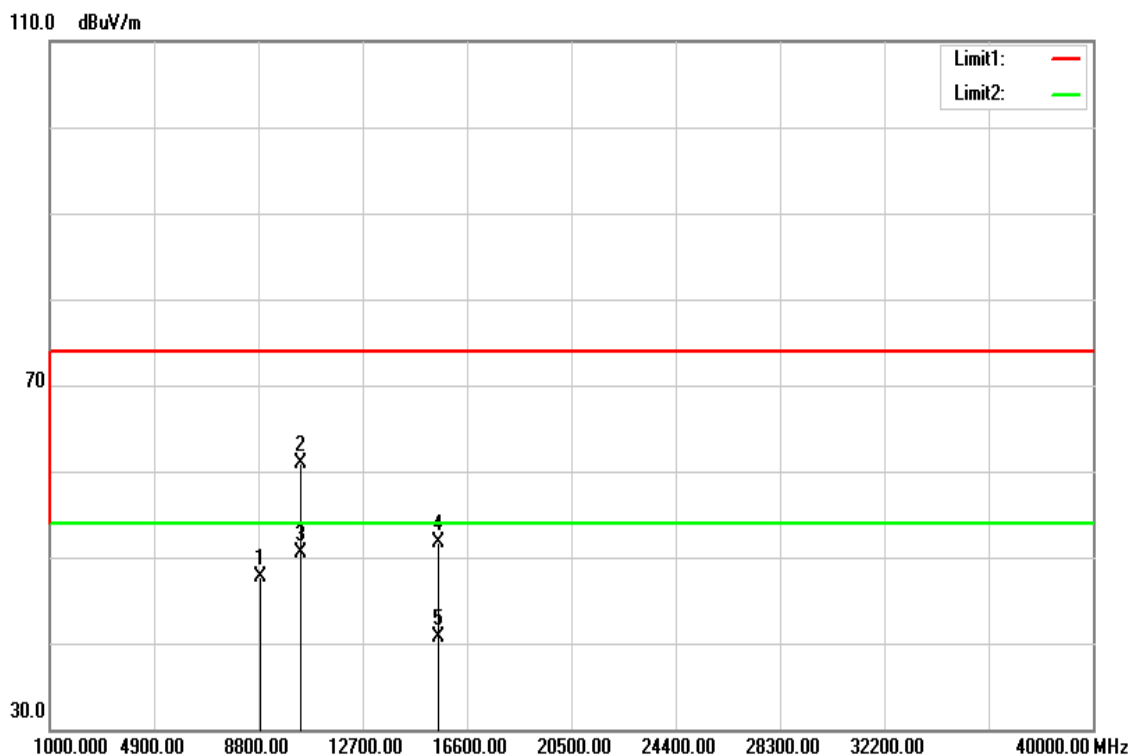


Above 1G Test Data for UNII-1

Test Mode	IEEE 802.11a / 5180MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

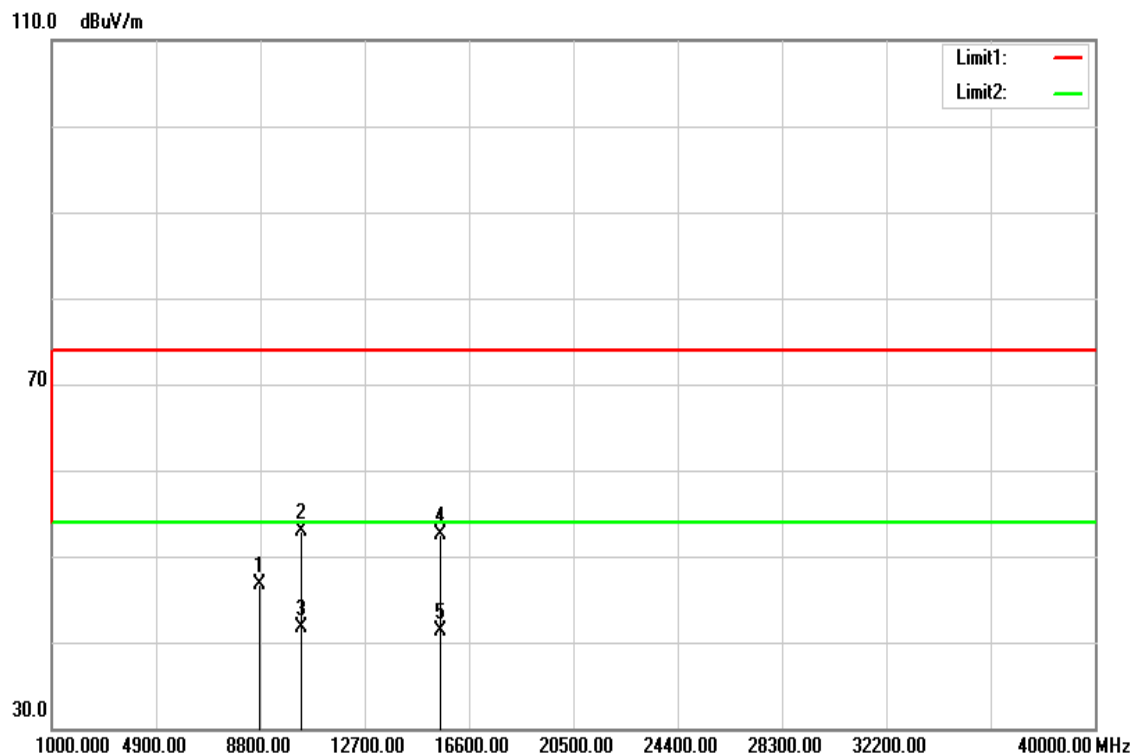


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8870.000	33.93	13.81	47.74	74.00	-26.26	peak
10360.000	44.32	16.52	60.84	74.00	-13.16	peak
10360.000	33.89	16.52	50.41	54.00	-3.59	AVG
15540.000	32.62	19.04	51.66	74.00	-22.34	peak
15540.000	21.73	19.04	40.77	54.00	-13.23	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5180MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

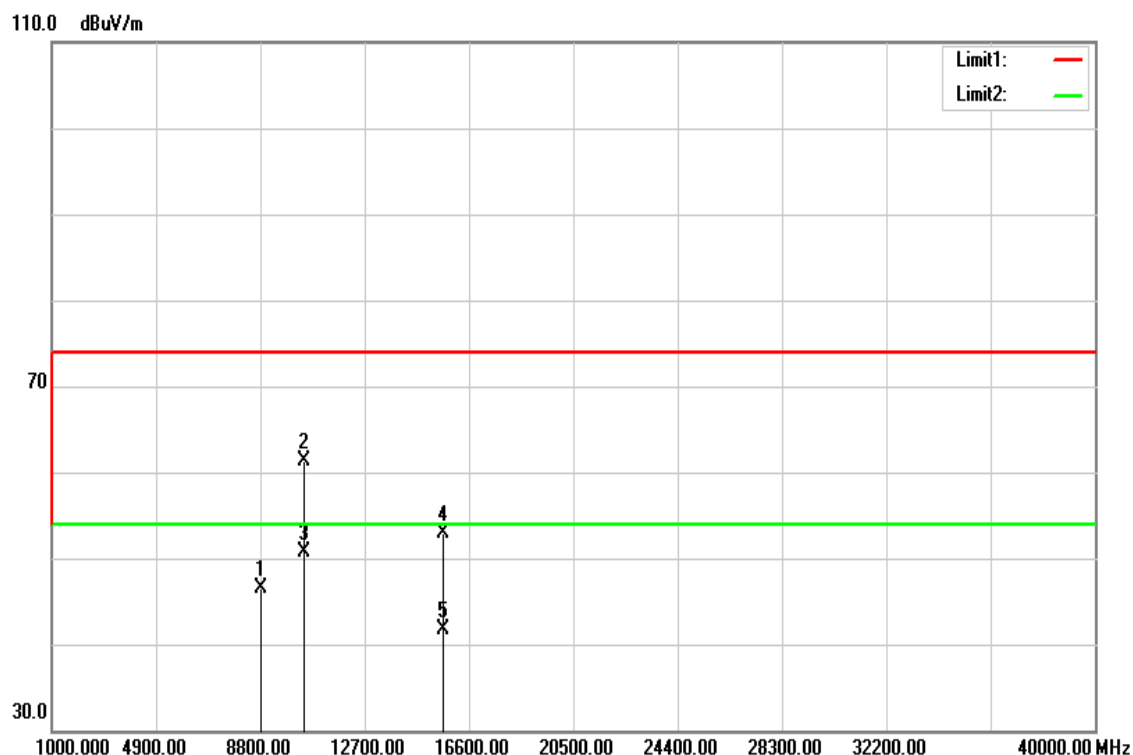


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8760.000	33.00	13.76	46.76	74.00	-27.24	peak
10350.000	36.38	16.48	52.86	74.00	-21.14	peak
10350.000	25.18	16.48	41.66	54.00	-12.34	AVG
15540.000	33.54	19.04	52.58	74.00	-21.42	peak
15540.000	22.20	19.04	41.24	54.00	-12.76	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5520MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

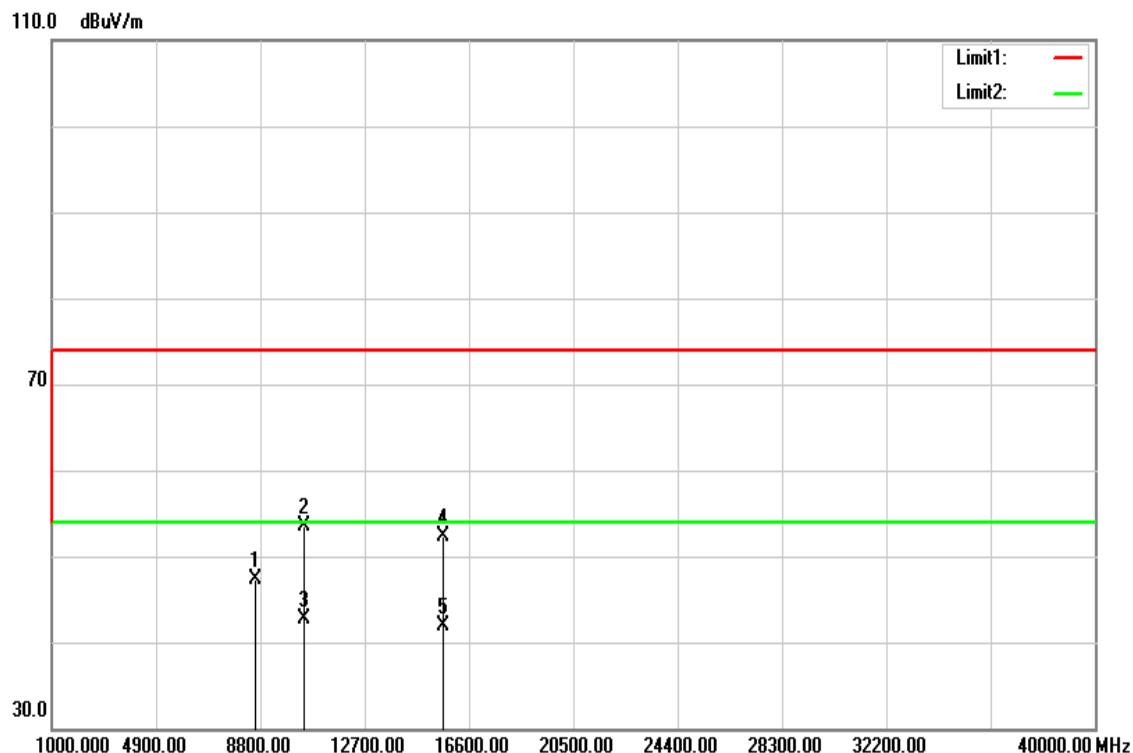


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8840.000	32.67	13.80	46.47	74.00	-27.53	peak
10440.000	44.41	16.89	61.30	74.00	-12.70	peak
10440.000	33.87	16.89	50.76	54.00	-3.24	AVG
15660.000	33.75	19.14	52.89	74.00	-21.11	peak
15660.000	22.48	19.14	41.62	54.00	-12.38	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5520MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

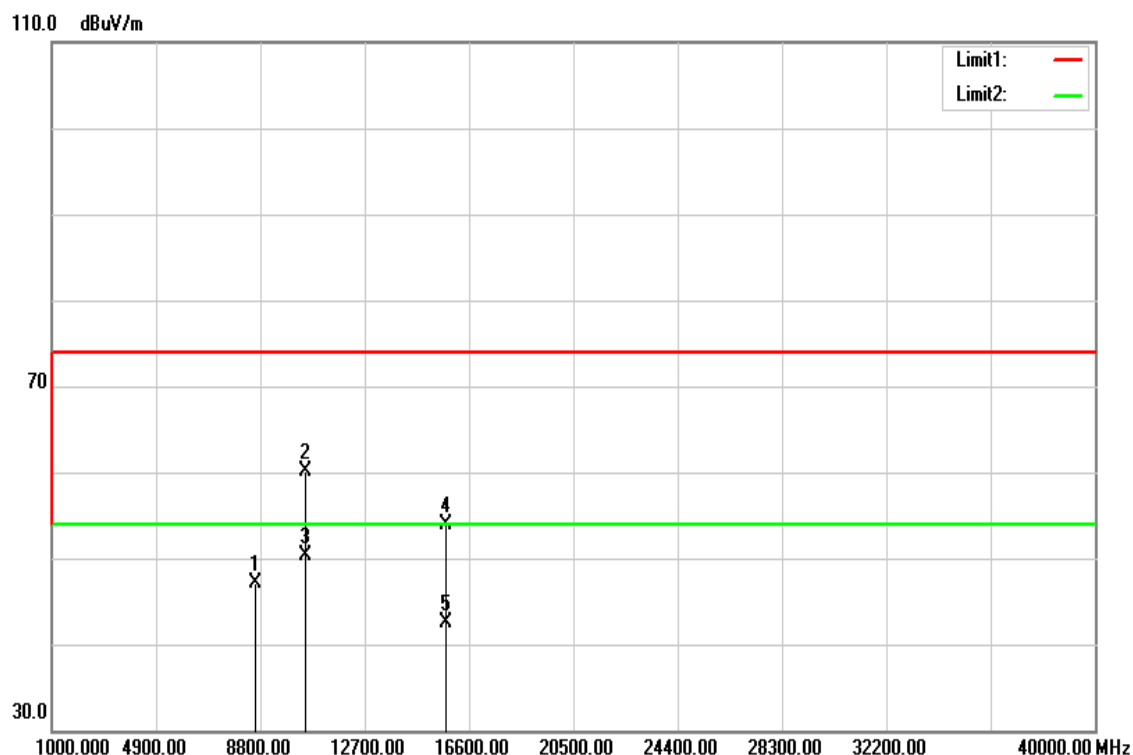


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8620.000	33.61	13.70	47.31	74.00	-26.69	peak
10440.000	36.66	16.89	53.55	74.00	-20.45	peak
10440.000	25.73	16.89	42.62	54.00	-11.38	AVG
15660.000	33.20	19.14	52.34	74.00	-21.66	peak
15660.000	22.69	19.14	41.83	54.00	-12.17	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5240MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

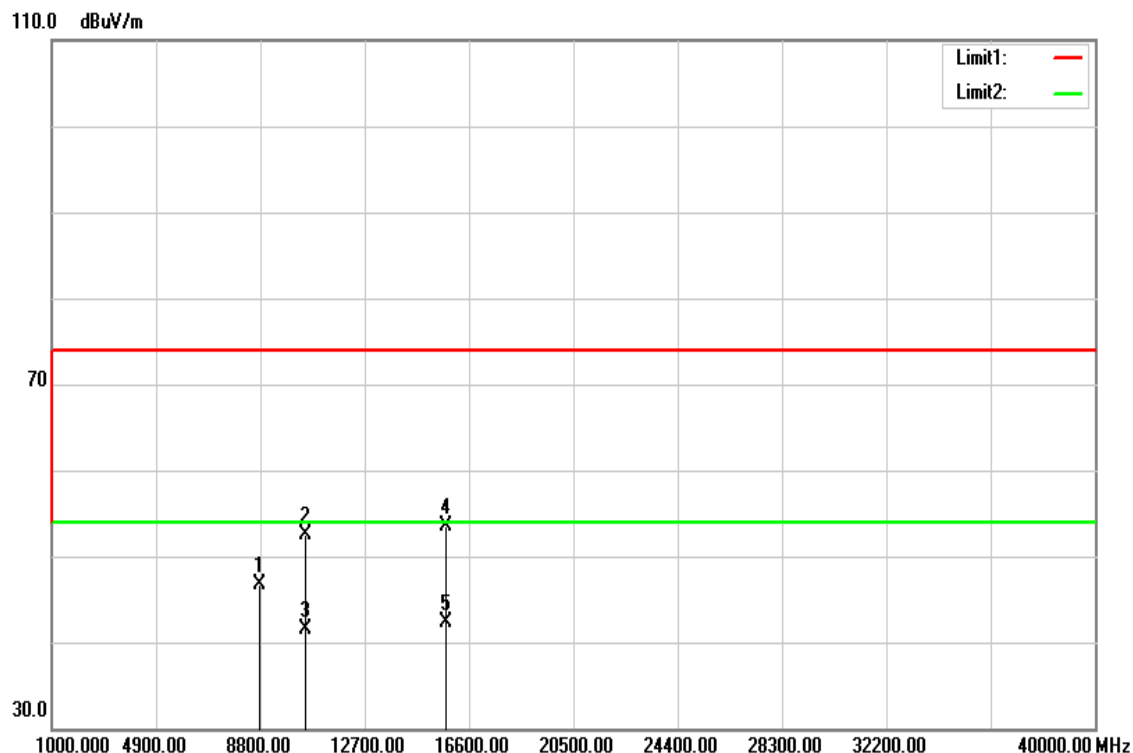


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8640.000	33.37	13.70	47.07	74.00	-26.93	peak
10480.000	42.98	17.07	60.05	74.00	-13.95	peak
10480.000	33.30	17.07	50.37	54.00	-3.63	AVG
15720.000	34.62	19.19	53.81	74.00	-20.19	peak
15720.000	23.27	19.19	42.46	54.00	-11.54	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5240MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

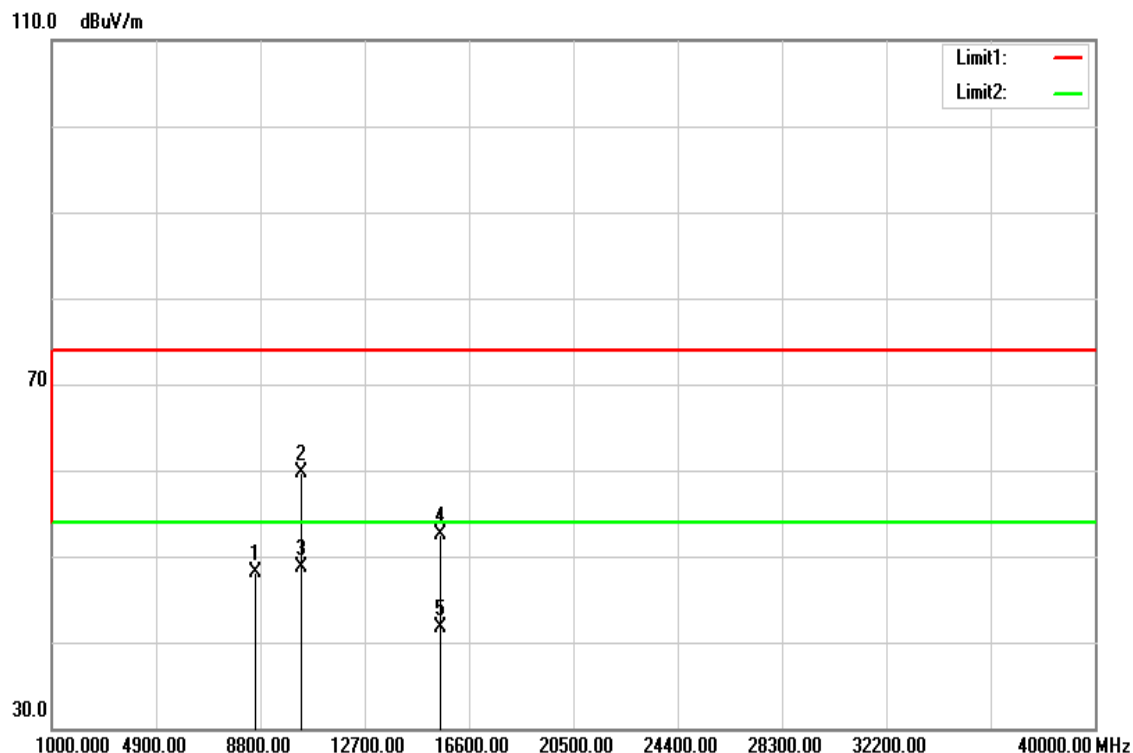


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8780.000	32.84	13.77	46.61	74.00	-27.39	peak
10480.000	35.51	17.07	52.58	74.00	-21.42	peak
10480.000	24.48	17.07	41.55	54.00	-12.45	AVG
15720.000	34.31	19.19	53.50	74.00	-20.50	peak
15720.000	23.13	19.19	42.32	54.00	-11.68	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5180MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

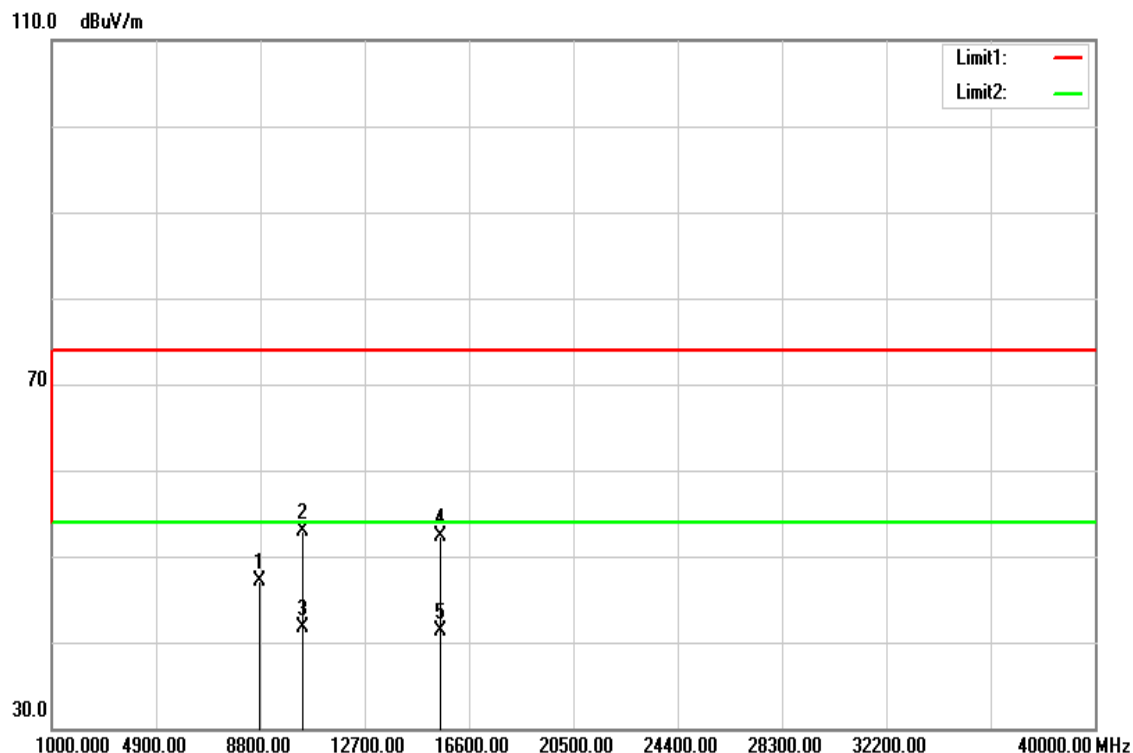


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8640.000	34.38	13.70	48.08	74.00	-25.92	peak
10350.000	43.29	16.48	59.77	74.00	-14.23	peak
10350.000	32.15	16.48	48.63	54.00	-5.37	AVG
15540.000	33.50	19.04	52.54	74.00	-21.46	peak
15540.000	22.69	19.04	41.73	54.00	-12.27	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20/ 5180MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

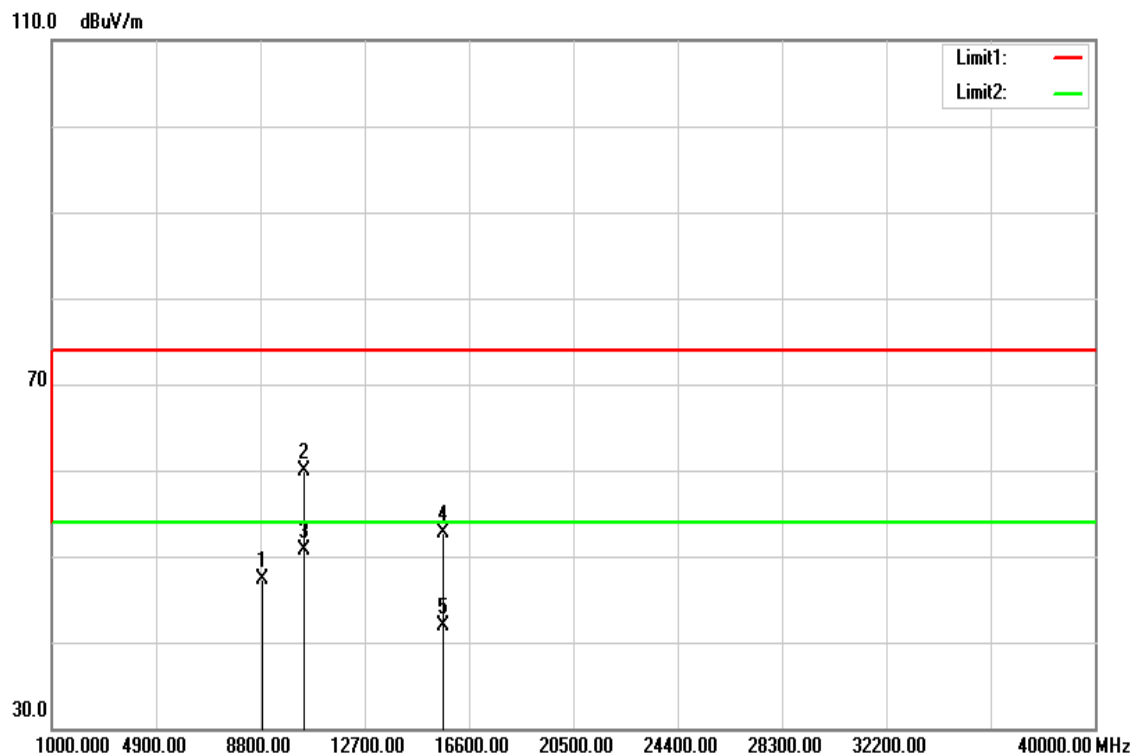


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	33.29	13.75	47.04	74.00	-26.96	peak
10360.000	36.41	16.52	52.93	74.00	-21.07	peak
10360.000	25.13	16.52	41.65	54.00	-12.35	AVG
15540.000	33.22	19.04	52.26	74.00	-21.74	peak
15540.000	22.36	19.04	41.40	54.00	-12.60	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5220MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

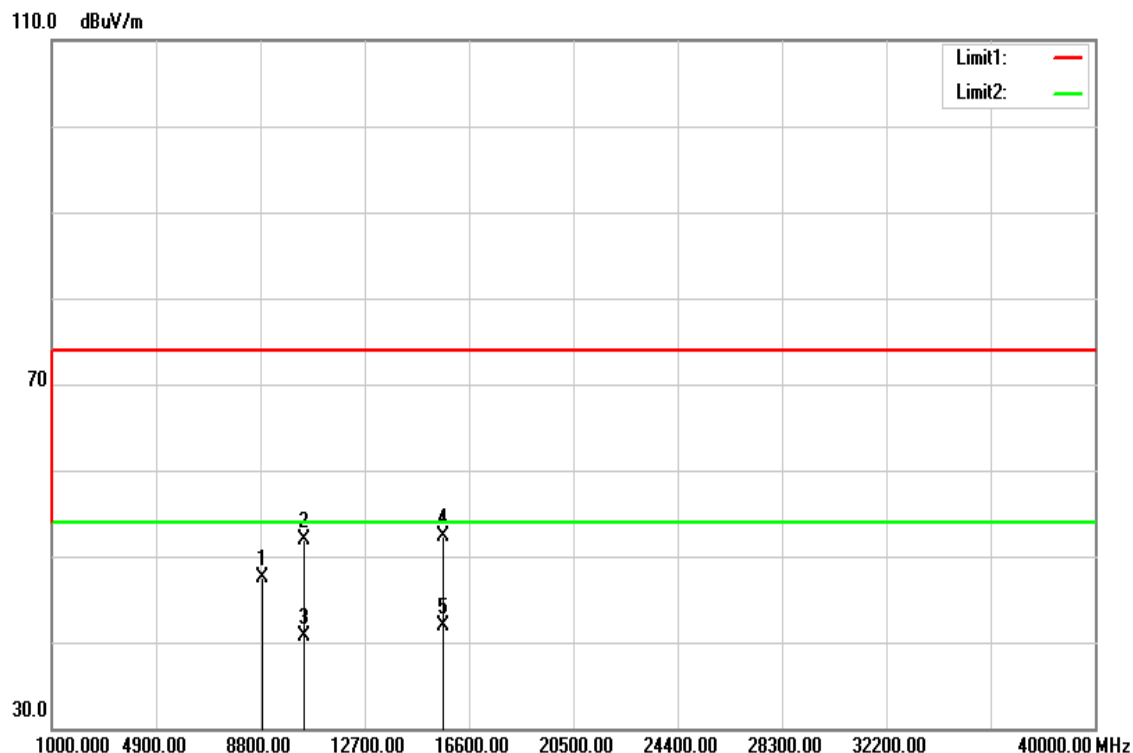


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8860.000	33.49	13.81	47.30	74.00	-26.70	peak
10440.000	43.11	16.89	60.00	74.00	-14.00	peak
10440.000	33.85	16.89	50.74	54.00	-3.26	AVG
15660.000	33.63	19.14	52.77	74.00	-21.23	peak
15660.000	22.79	19.14	41.93	54.00	-12.07	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5220MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

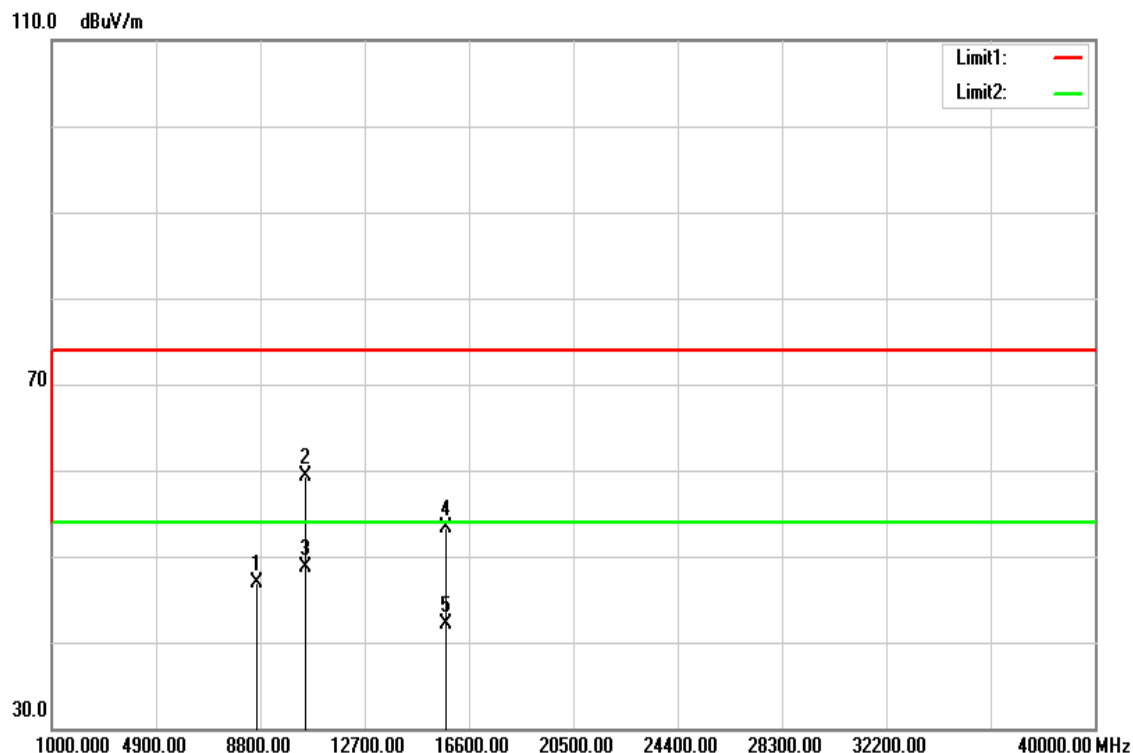


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8860.000	33.62	13.81	47.43	74.00	-26.57	peak
10440.000	34.99	16.89	51.88	74.00	-22.12	peak
10440.000	23.84	16.89	40.73	54.00	-13.27	AVG
15660.000	33.21	19.14	52.35	74.00	-21.65	peak
15660.000	22.71	19.14	41.85	54.00	-12.15	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5240MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

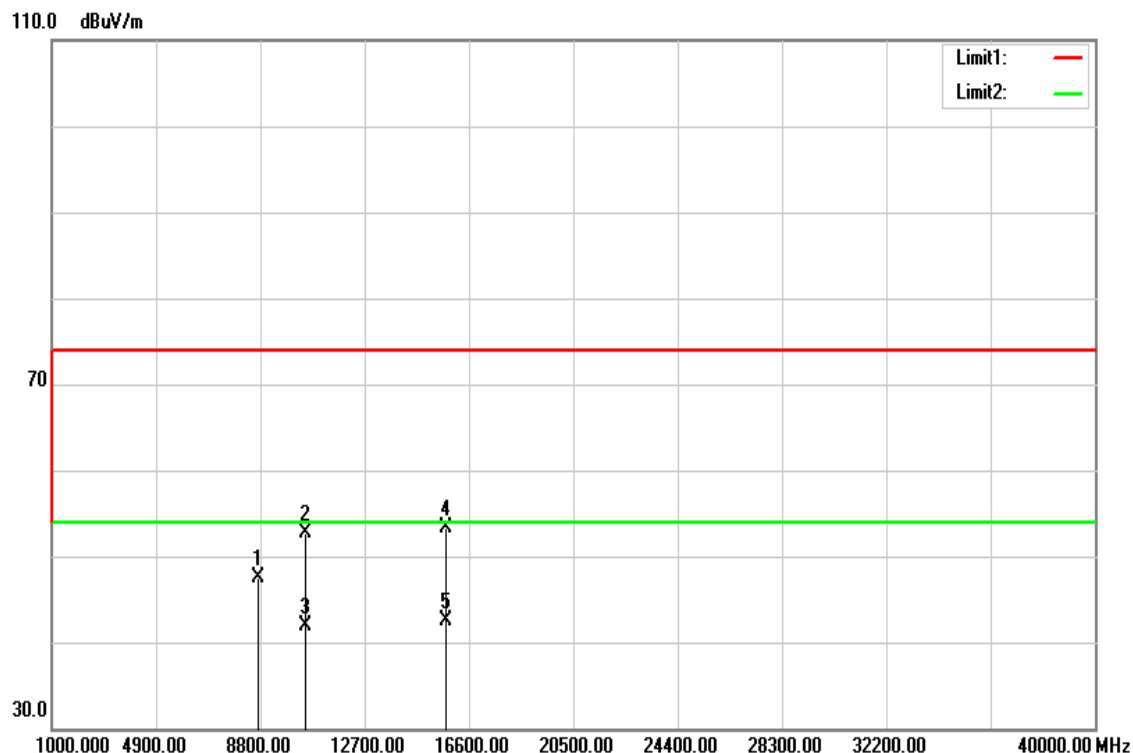


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	33.22	13.73	46.95	74.00	-27.05	peak
10480.000	42.19	17.07	59.26	74.00	-14.74	peak
10480.000	31.56	17.07	48.63	54.00	-5.37	AVG
15720.000	34.11	19.19	53.30	74.00	-20.70	peak
15720.000	22.91	19.19	42.10	54.00	-11.90	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5240MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

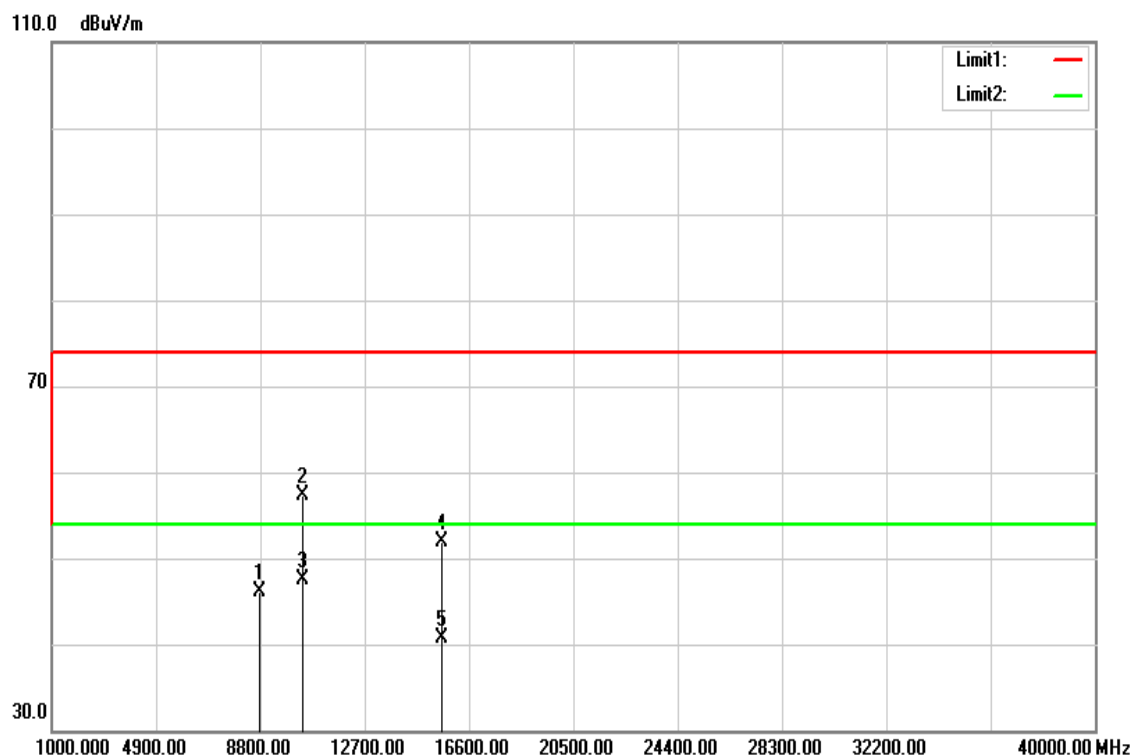


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8740.000	33.79	13.75	47.54	74.00	-26.46	peak
10480.000	35.73	17.07	52.80	74.00	-21.20	peak
10480.000	24.86	17.07	41.93	54.00	-12.07	AVG
15720.000	34.02	19.19	53.21	74.00	-20.79	peak
15720.000	23.39	19.19	42.58	54.00	-11.42	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5190MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

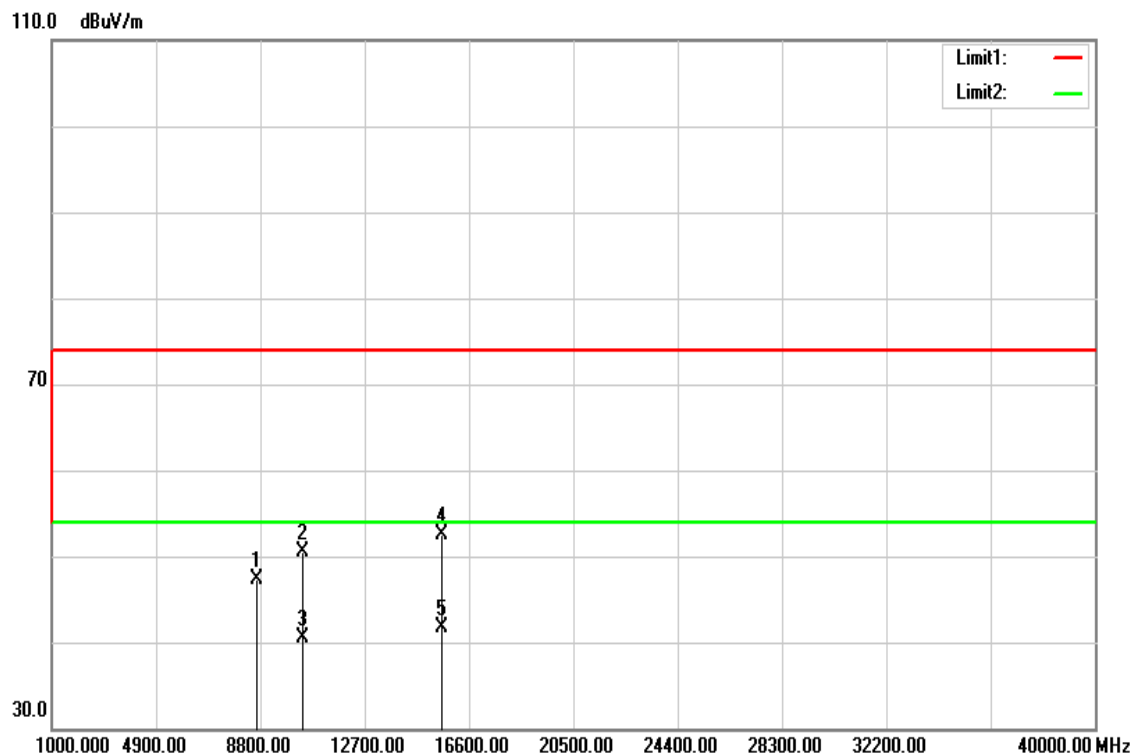


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	32.37	13.75	46.12	74.00	-27.88	peak
10380.000	40.68	16.62	57.30	74.00	-16.70	peak
10380.000	30.96	16.62	47.58	54.00	-6.42	AVG
15570.000	32.89	19.07	51.96	74.00	-22.04	peak
15570.000	21.65	19.07	40.72	54.00	-13.28	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5190MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

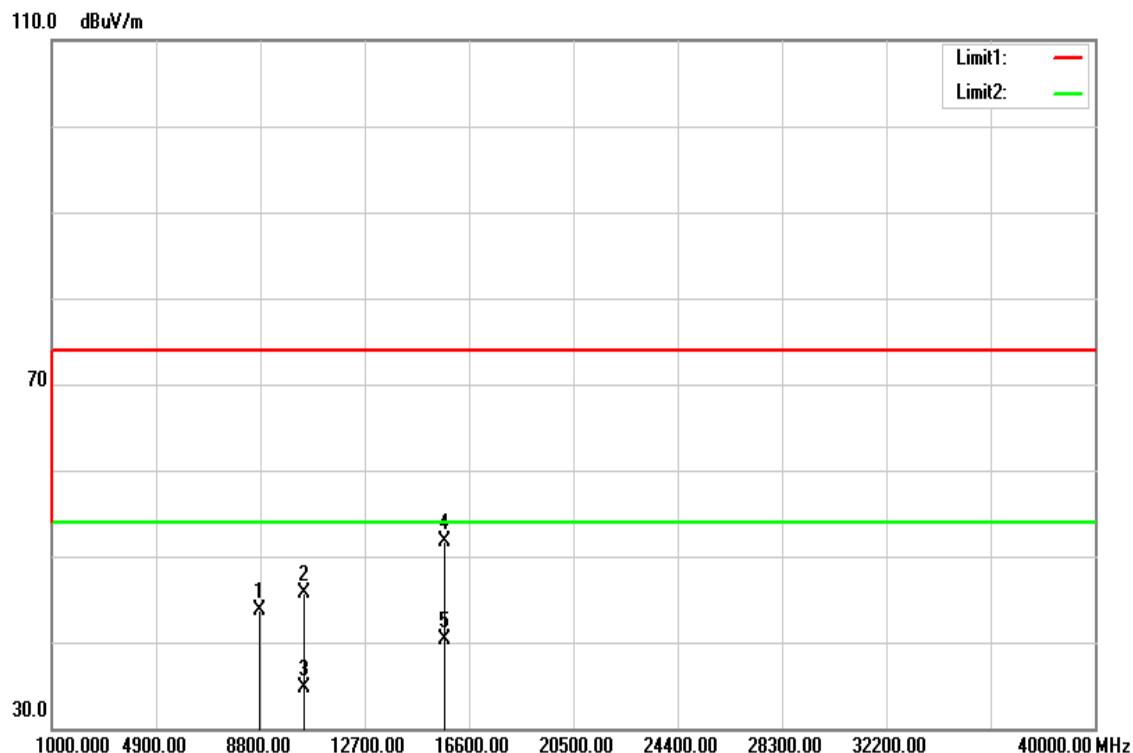


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	33.57	13.73	47.30	74.00	-26.70	peak
10380.000	33.85	16.62	50.47	74.00	-23.53	peak
10380.000	23.90	16.62	40.52	54.00	-13.48	AVG
15570.000	33.52	19.07	52.59	74.00	-21.41	peak
15570.000	22.67	19.07	41.74	54.00	-12.26	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5230MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

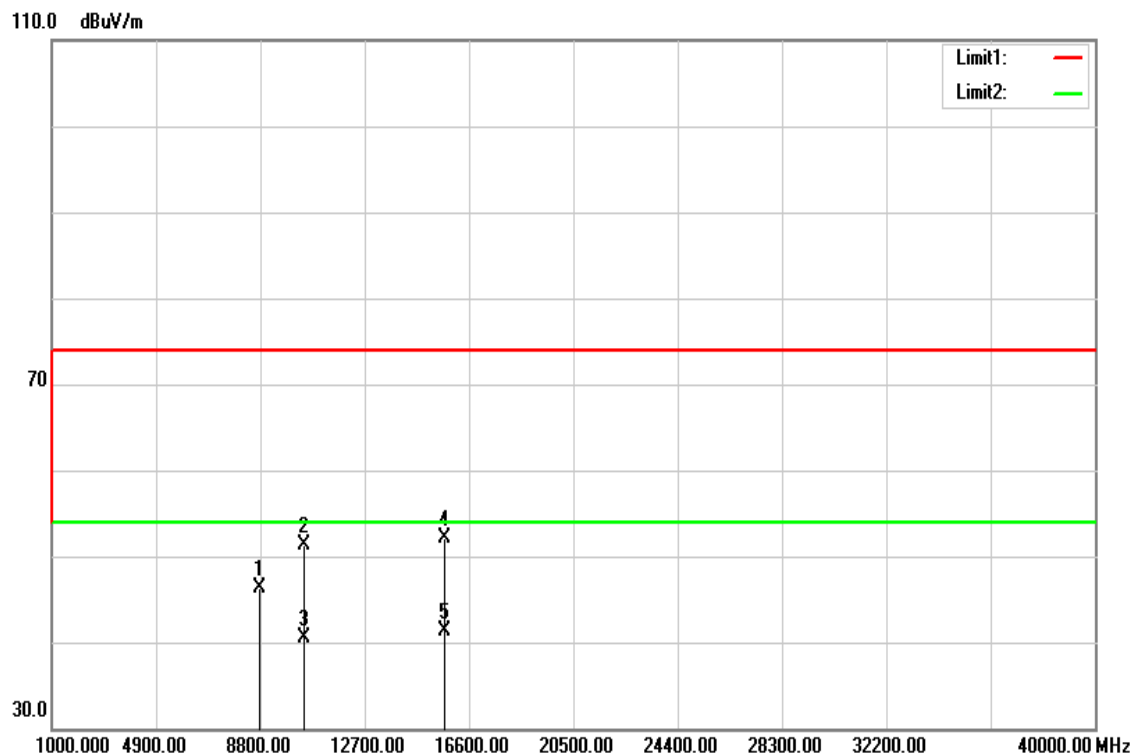


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	29.86	13.75	43.61	74.00	-30.39	peak
10460.000	28.65	16.98	45.63	74.00	-28.37	peak
10460.000	17.70	16.98	34.68	54.00	-19.32	AVG
15690.000	32.44	19.17	51.61	74.00	-22.39	peak
15690.000	21.07	19.17	40.24	54.00	-13.76	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5230MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

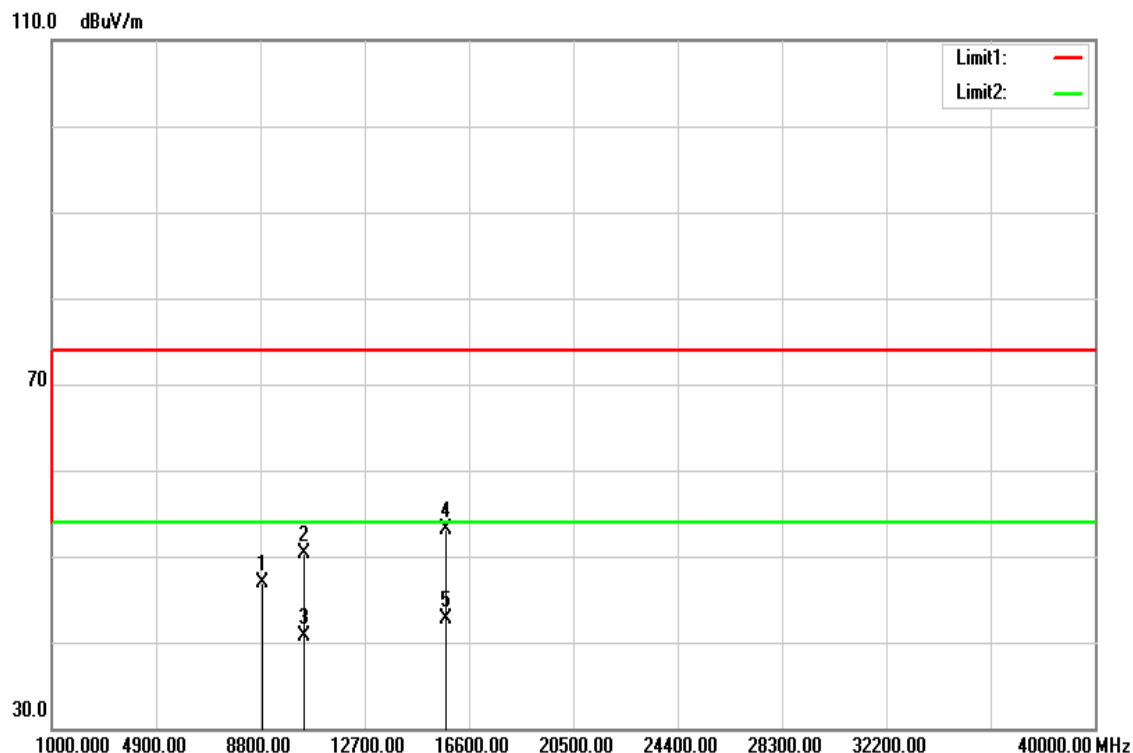


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	32.49	13.75	46.24	74.00	-27.76	peak
10460.000	34.26	16.98	51.24	74.00	-22.76	peak
10460.000	23.60	16.98	40.58	54.00	-13.42	AVG
15690.000	32.99	19.17	52.16	74.00	-21.84	peak
15690.000	22.17	19.17	41.34	54.00	-12.66	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11ac VHT80 / 5210MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

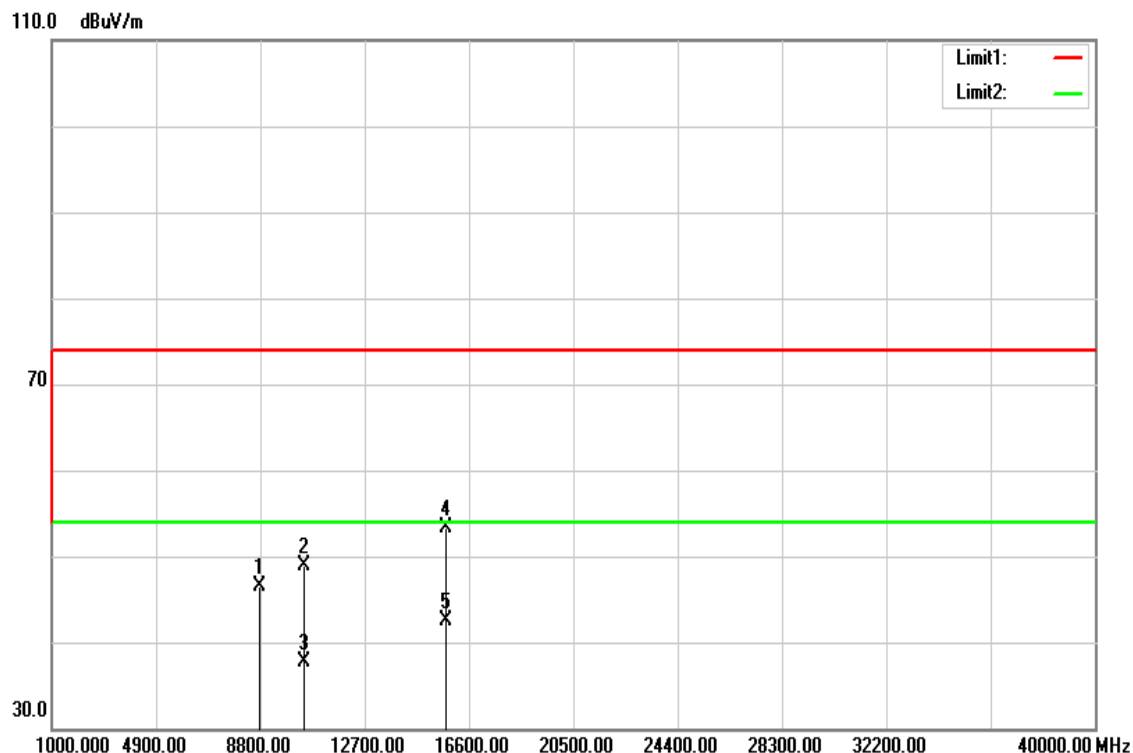


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8860.000	33.08	13.81	46.89	74.00	-27.11	peak
10420.000	33.45	16.80	50.25	74.00	-23.75	peak
10420.000	23.93	16.80	40.73	54.00	-13.27	AVG
15720.000	33.97	19.19	53.16	74.00	-20.84	peak
15720.000	23.45	19.19	42.64	54.00	-11.36	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11ac VHT80 / 5210MHZ	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz



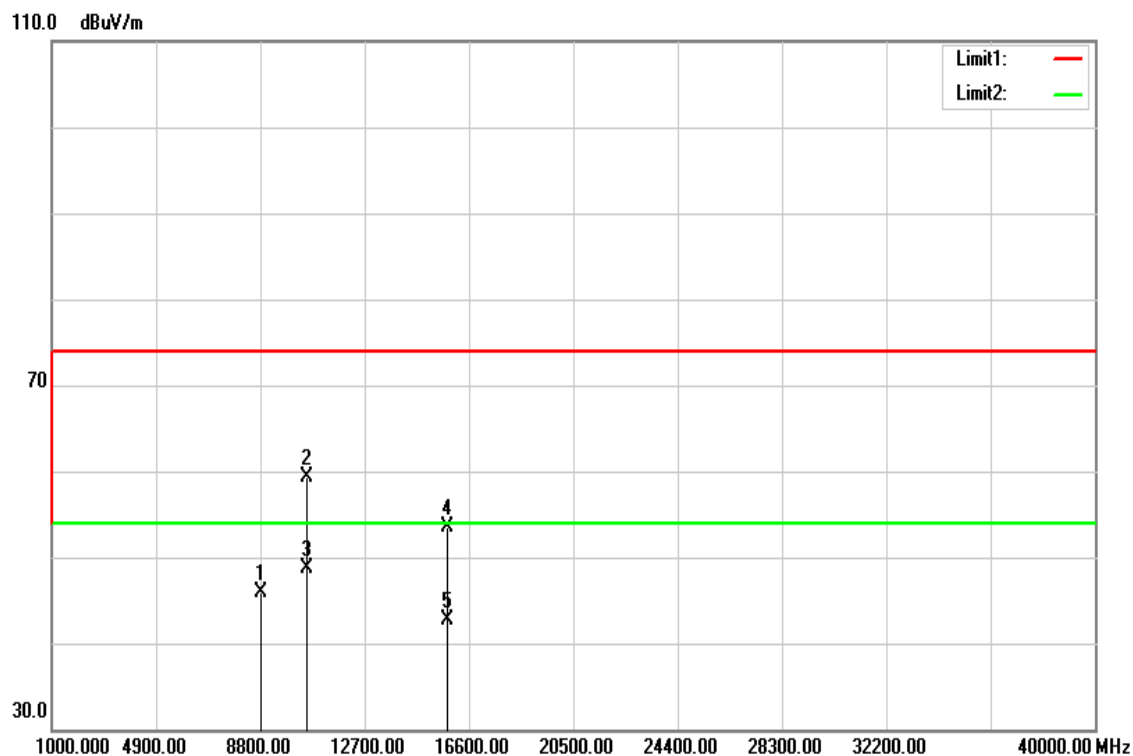
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8760.000	32.77	13.76	46.53	74.00	-27.47	peak
10420.000	32.08	16.80	48.88	74.00	-25.12	peak
10420.000	20.84	16.80	37.64	54.00	-16.36	AVG
15720.000	34.20	19.19	53.39	74.00	-20.61	peak
15720.000	23.25	19.19	42.44	54.00	-11.56	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Above 1G Test Data for UNII-2a

Test Mode	IEEE 802.11a / 5260 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

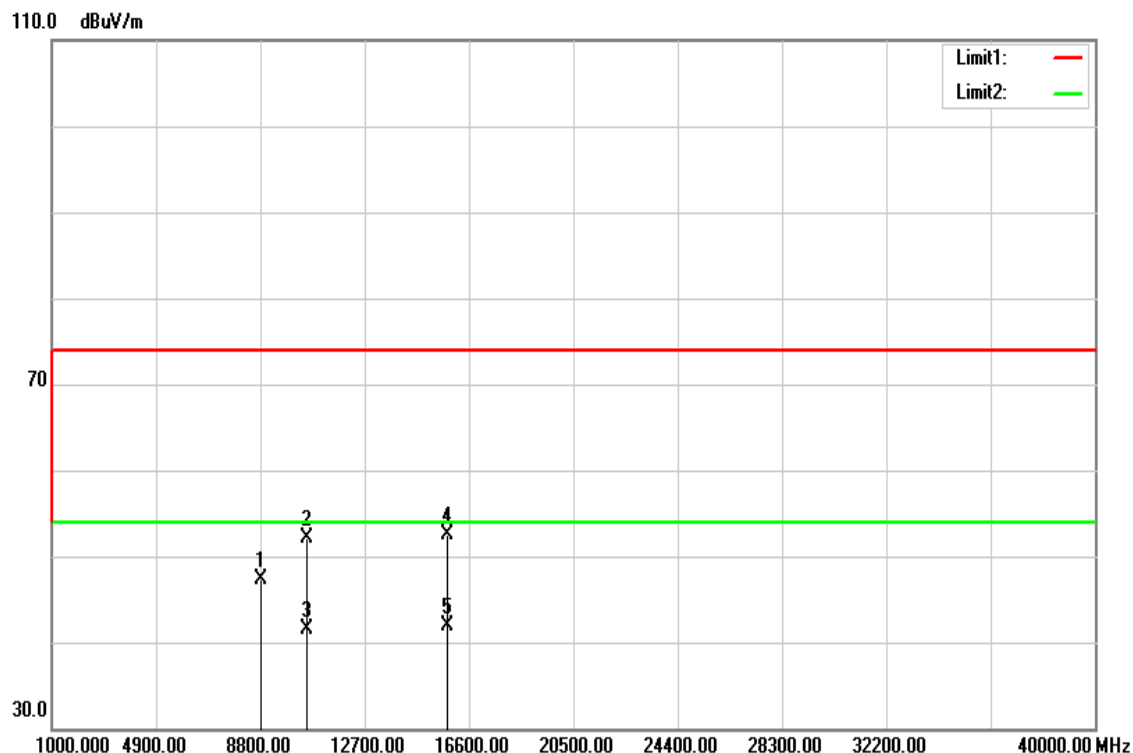


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8850.000	32.17	13.80	45.97	74.00	-28.03	peak
10520.000	42.21	17.14	59.35	74.00	-14.65	peak
10520.000	31.52	17.14	48.66	54.00	-5.34	AVG
15780.000	34.31	19.25	53.56	74.00	-20.44	peak
15780.000	23.46	19.25	42.71	54.00	-11.29	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5260 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

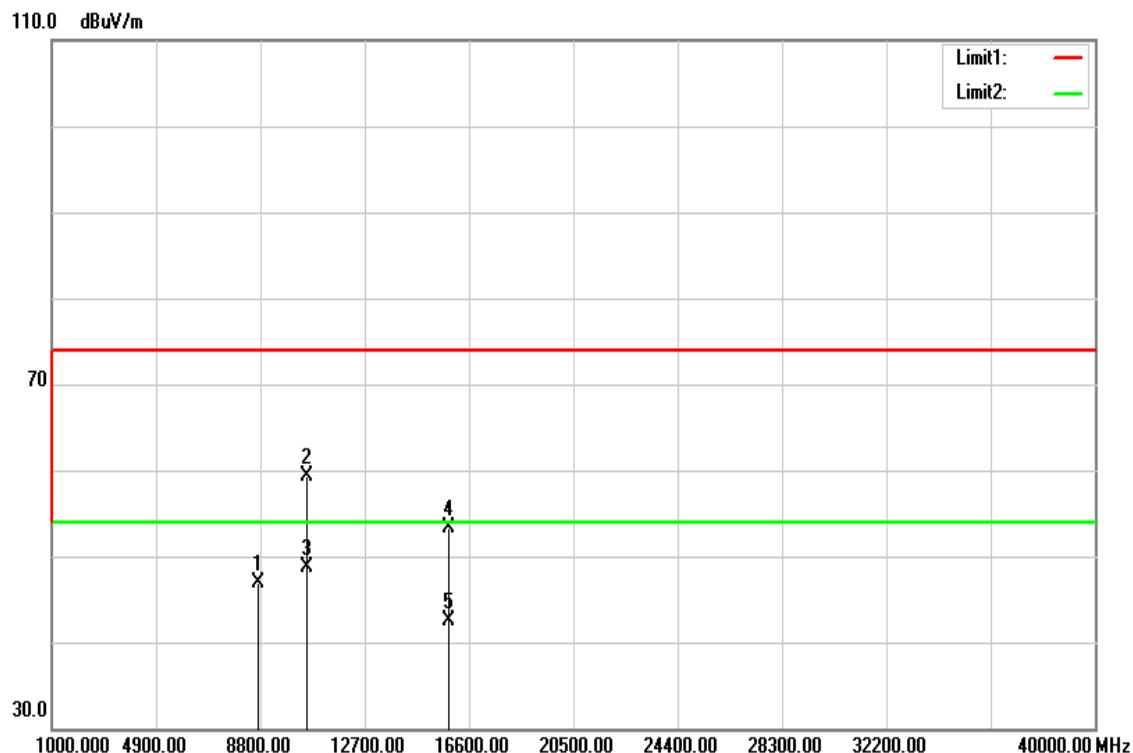


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8820.000	33.48	13.79	47.27	74.00	-26.73	peak
10520.000	34.96	17.14	52.10	74.00	-21.90	peak
10520.000	24.43	17.14	41.57	54.00	-12.43	AVG
15780.000	33.32	19.25	52.57	74.00	-21.43	peak
15780.000	22.68	19.25	41.93	54.00	-12.07	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5280 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

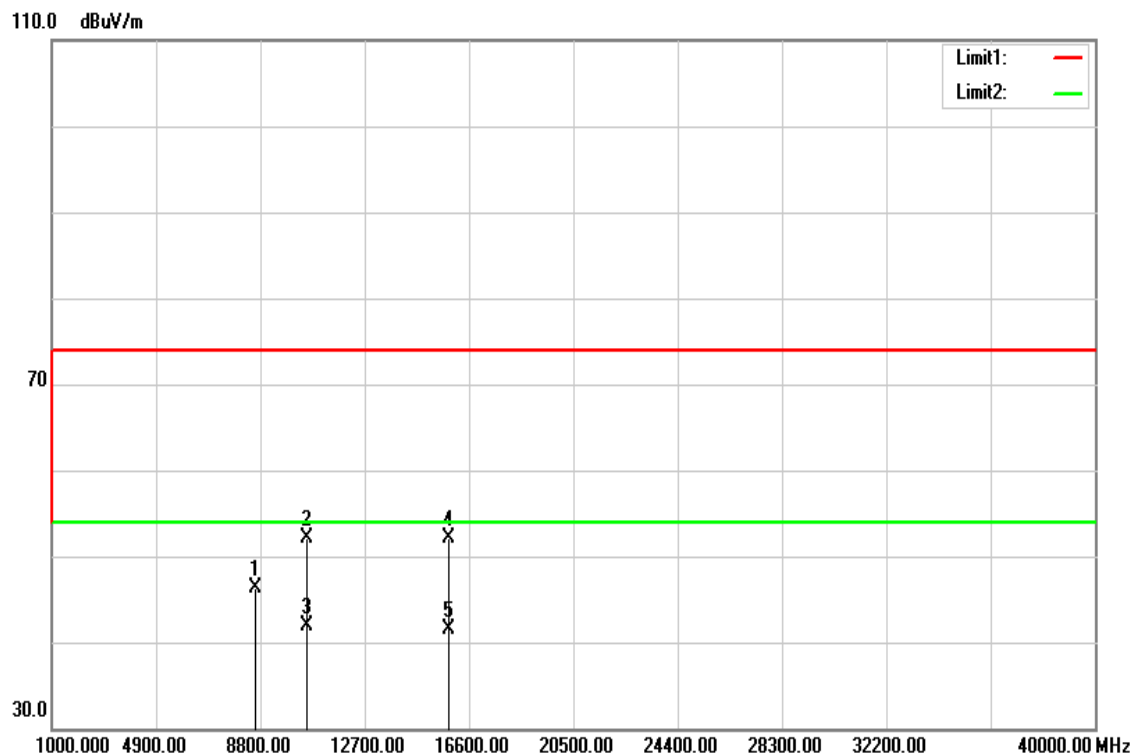


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8730.000	33.14	13.75	46.89	74.00	-27.11	peak
10560.000	42.22	17.11	59.33	74.00	-14.67	peak
10560.000	31.68	17.11	48.79	54.00	-5.21	AVG
15840.000	33.99	19.30	53.29	74.00	-20.71	peak
15840.000	23.28	19.30	42.58	54.00	-11.42	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5280 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

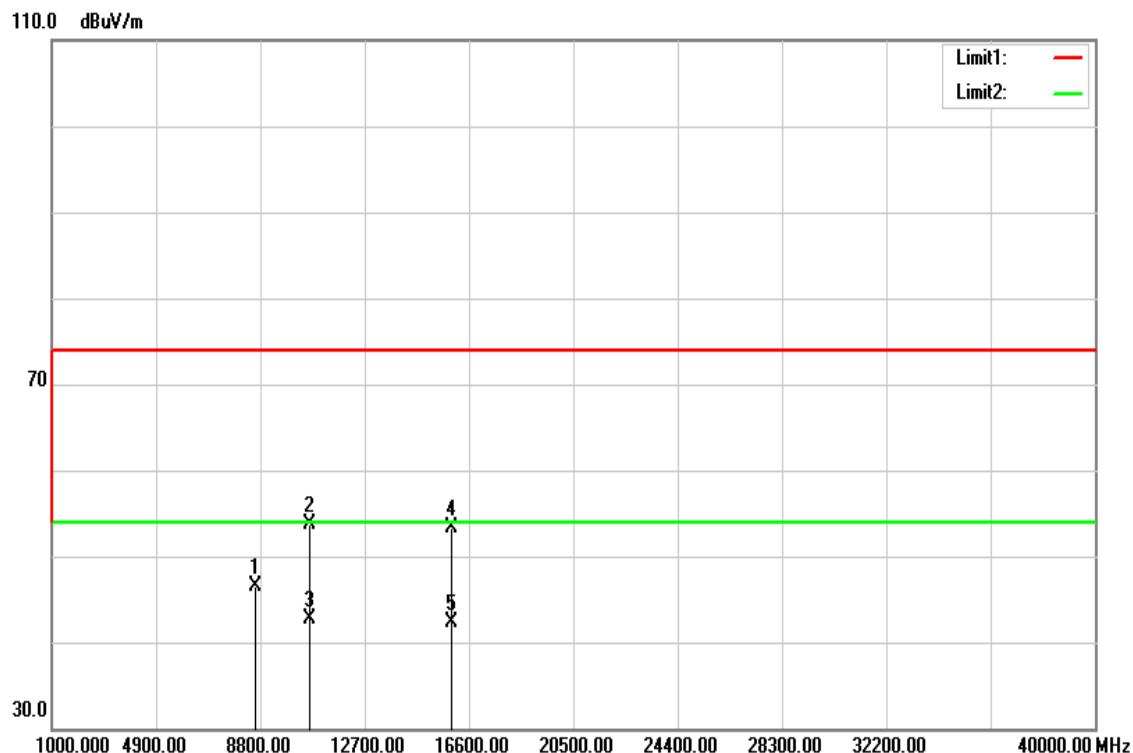


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8610.000	32.62	13.69	46.31	74.00	-27.69	peak
10560.000	35.01	17.11	52.12	74.00	-21.88	peak
10560.000	24.81	17.11	41.92	54.00	-12.08	AVG
15840.000	32.75	19.30	52.05	74.00	-21.95	peak
15840.000	22.16	19.30	41.46	54.00	-12.54	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5320 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

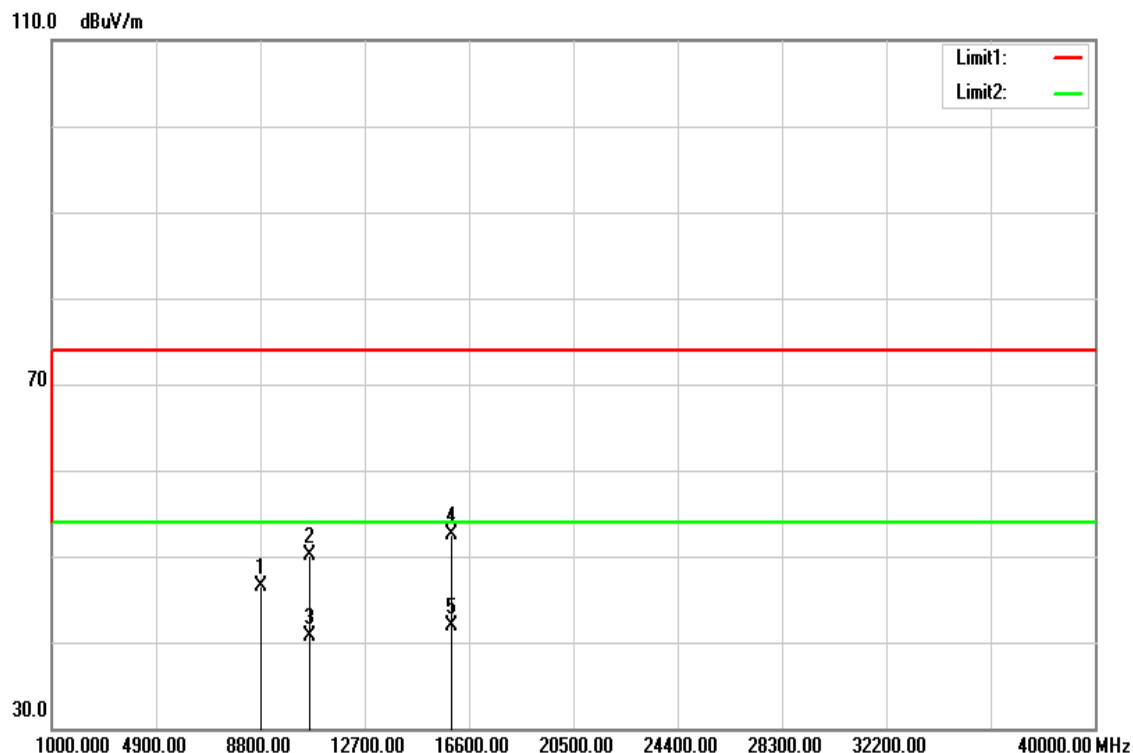


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8630.000	32.83	13.70	46.53	74.00	-27.47	peak
10640.000	36.76	17.04	53.80	74.00	-20.20	peak
10640.000	25.62	17.04	42.66	54.00	-11.34	AVG
15960.000	33.85	19.40	53.25	74.00	-20.75	peak
15960.000	22.94	19.40	42.34	54.00	-11.66	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5320 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

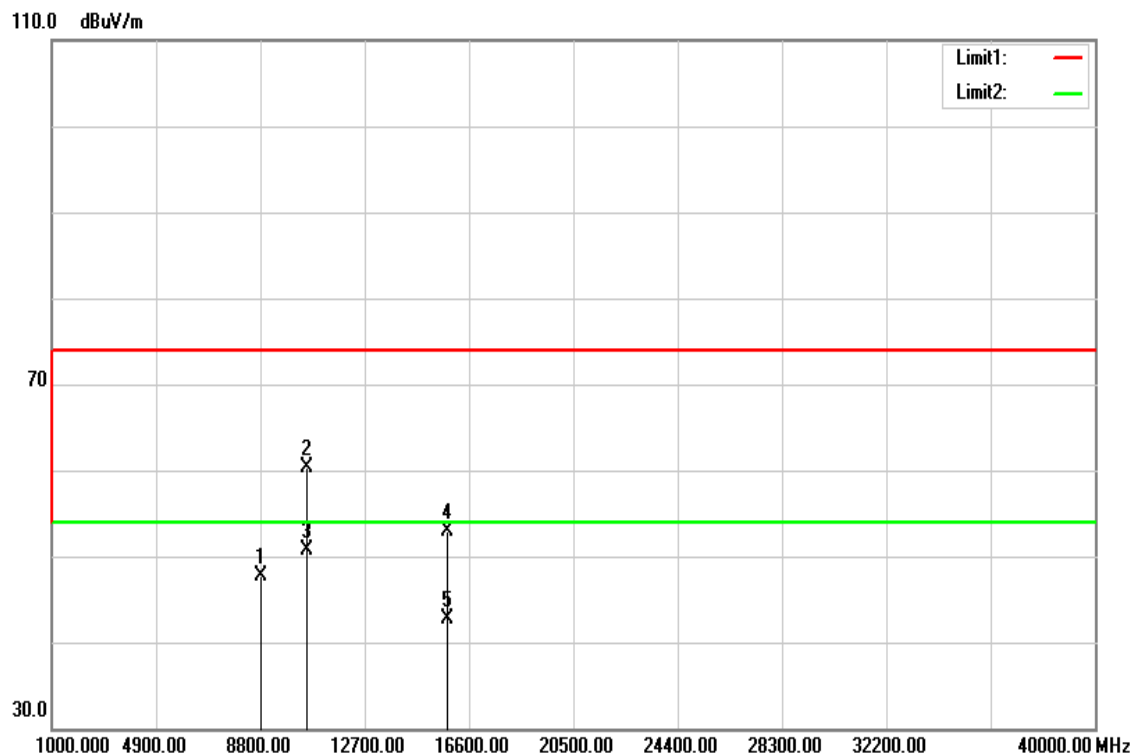


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8850.000	32.80	13.80	46.60	74.00	-27.40	peak
10640.000	33.03	17.04	50.07	74.00	-23.93	peak
10640.000	23.58	17.04	40.62	54.00	-13.38	AVG
15960.000	33.17	19.40	52.57	74.00	-21.43	peak
15960.000	22.57	19.40	41.97	54.00	-12.03	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5260 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

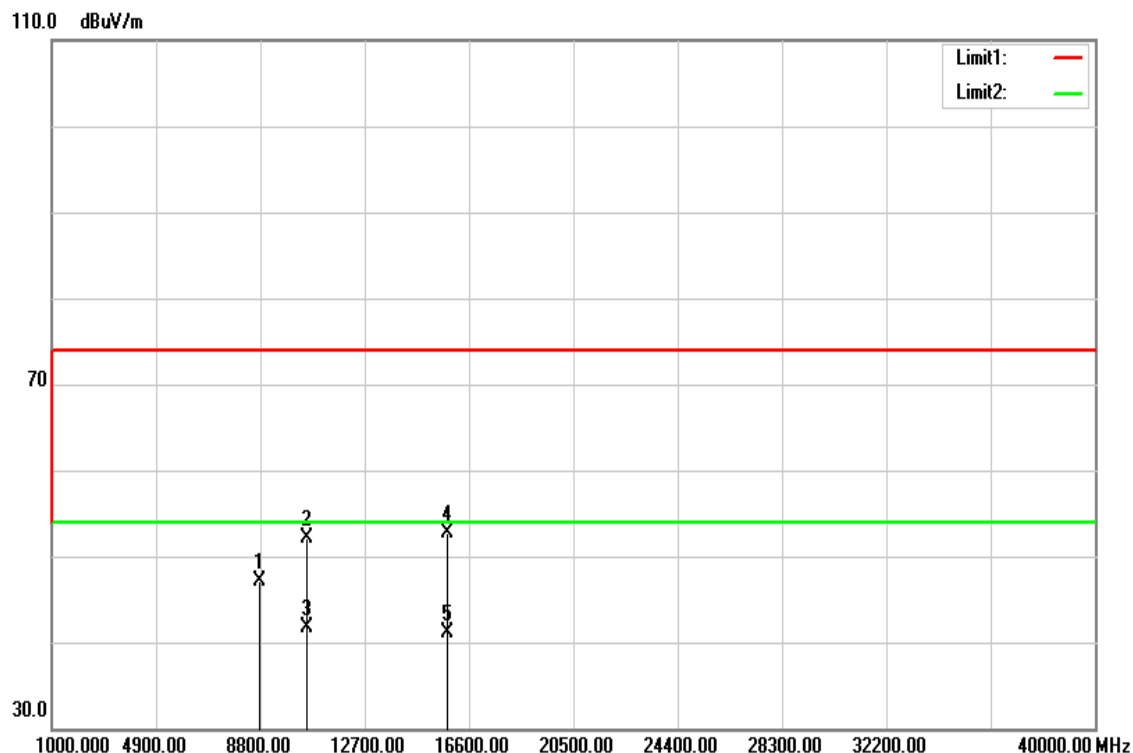


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8830.000	33.86	13.79	47.65	74.00	-26.35	peak
10530.000	43.26	17.13	60.39	74.00	-13.61	peak
10530.000	33.61	17.13	50.74	54.00	-3.26	AVG
15780.000	33.75	19.25	53.00	74.00	-21.00	peak
15780.000	23.37	19.25	42.62	54.00	-11.38	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5260 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

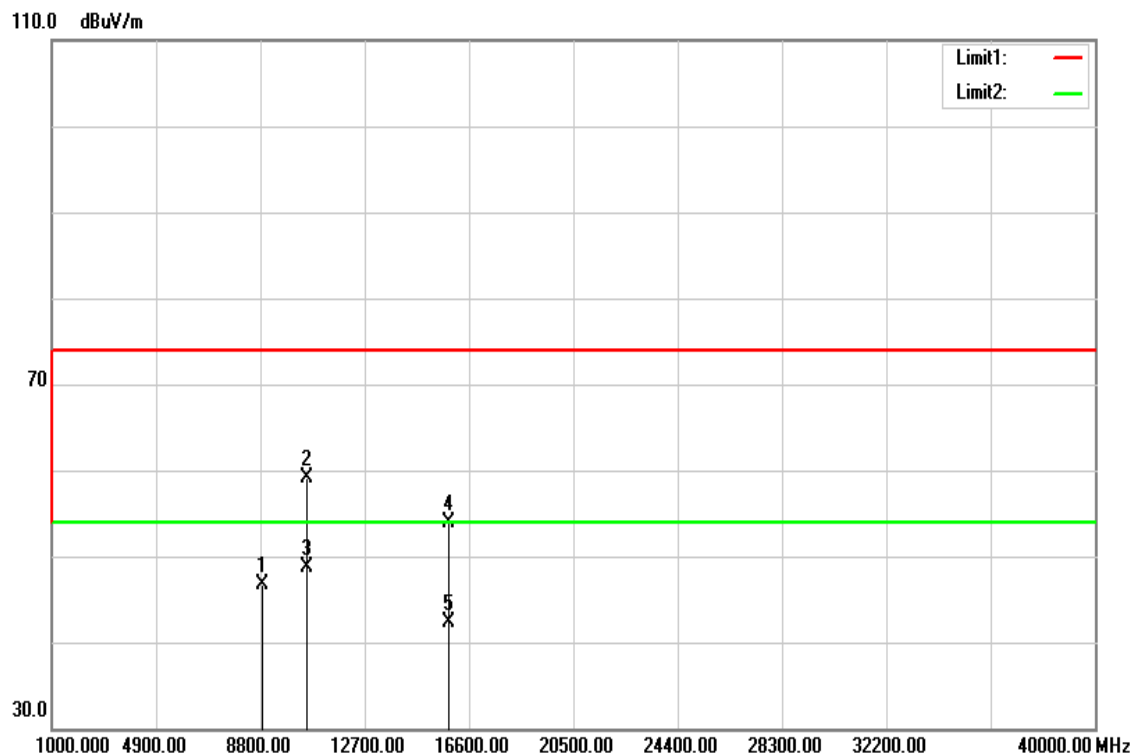


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	33.38	13.75	47.13	74.00	-26.87	peak
10520.000	35.00	17.14	52.14	74.00	-21.86	peak
10520.000	24.55	17.14	41.69	54.00	-12.31	AVG
15780.000	33.55	19.25	52.80	74.00	-21.20	peak
15780.000	21.89	19.25	41.14	54.00	-12.86	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5280 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

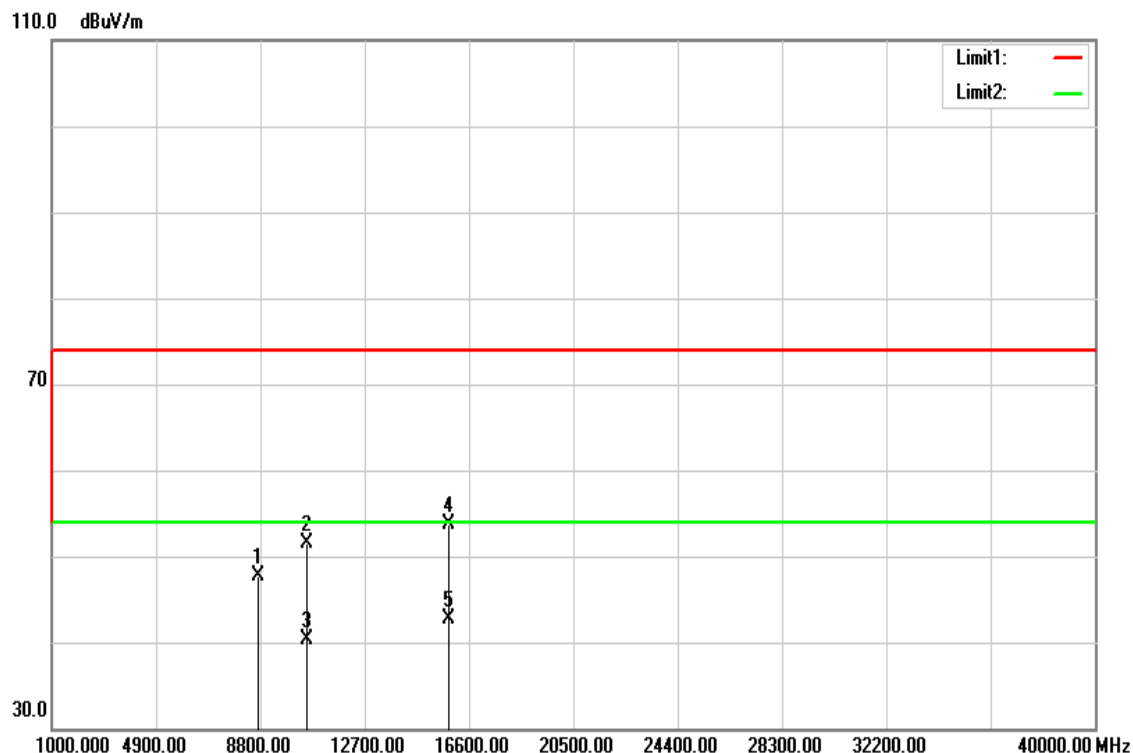


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8860.000	32.85	13.81	46.66	74.00	-27.34	peak
10560.000	41.91	17.11	59.02	74.00	-14.98	peak
10560.000	31.56	17.11	48.67	54.00	-5.33	AVG
15840.000	34.62	19.30	53.92	74.00	-20.08	peak
15840.000	23.04	19.30	42.34	54.00	-11.66	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5280 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

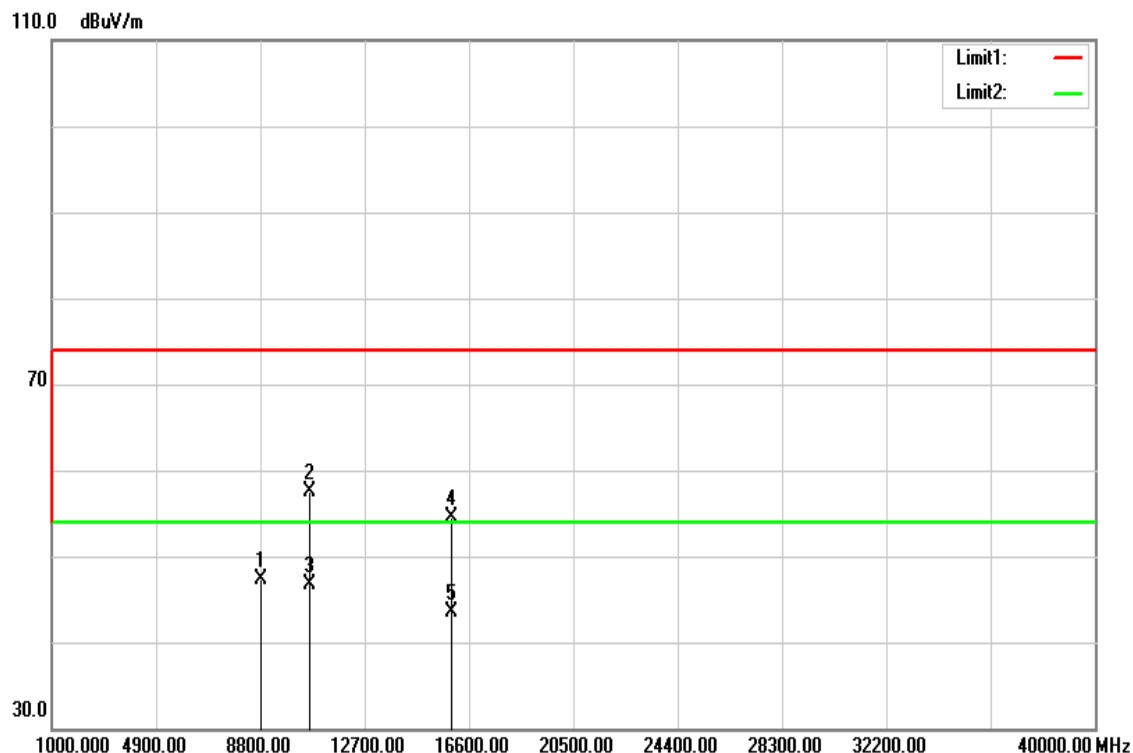


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8720.000	33.90	13.74	47.64	74.00	-26.36	peak
10560.000	34.40	17.11	51.51	74.00	-22.49	peak
10560.000	23.27	17.11	40.38	54.00	-13.62	AVG
15840.000	34.47	19.30	53.77	74.00	-20.23	peak
15840.000	23.34	19.30	42.64	54.00	-11.36	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5320 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

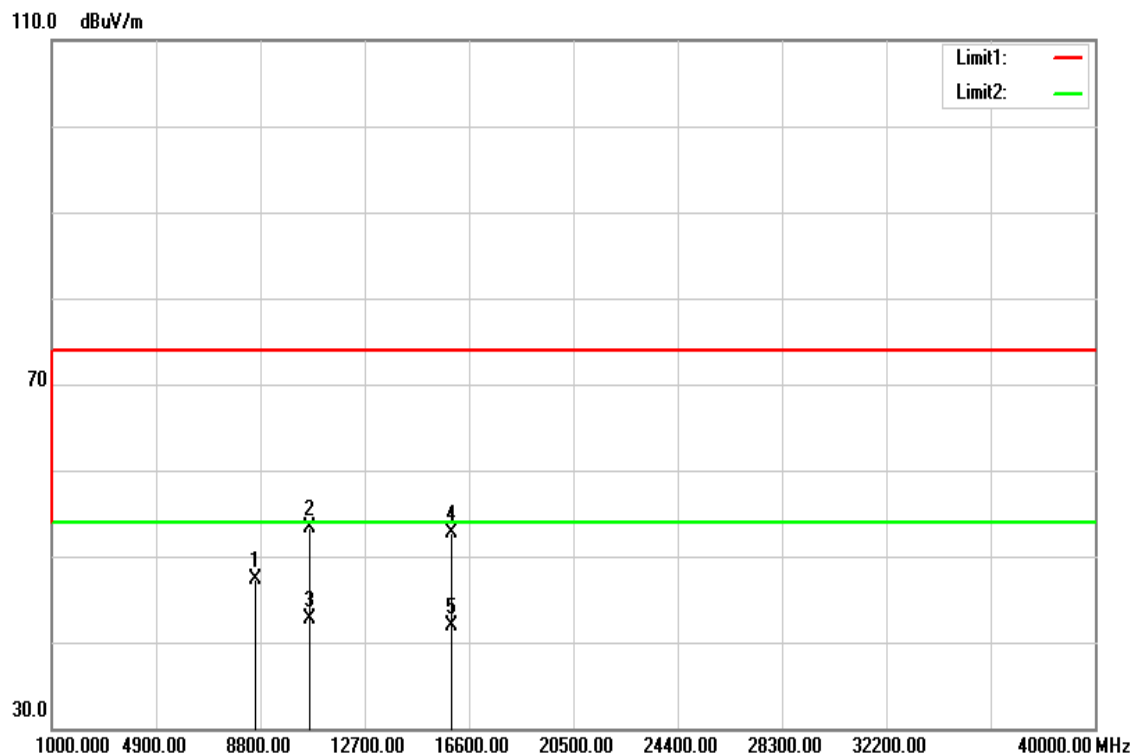


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8830.000	33.57	13.79	47.36	74.00	-26.64	peak
10640.000	40.44	17.04	57.48	74.00	-16.52	peak
10640.000	29.68	17.04	46.72	54.00	-7.28	AVG
15960.000	35.07	19.40	54.47	74.00	-19.53	peak
15960.000	24.11	19.40	43.51	54.00	-10.49	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5320 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

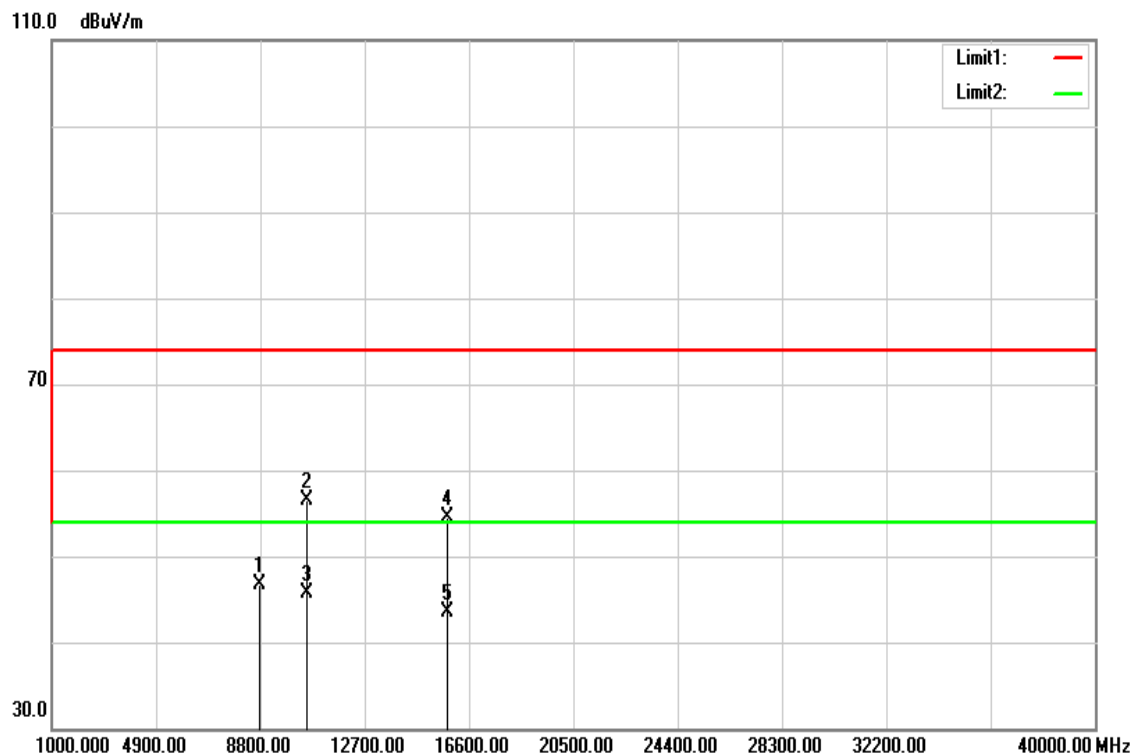


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8610.000	33.60	13.69	47.29	74.00	-26.71	peak
10630.000	36.19	17.05	53.24	74.00	-20.76	peak
10630.000	25.58	17.05	42.63	54.00	-11.37	AVG
15960.000	33.27	19.40	52.67	74.00	-21.33	peak
15960.000	22.44	19.40	41.84	54.00	-12.16	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5270 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

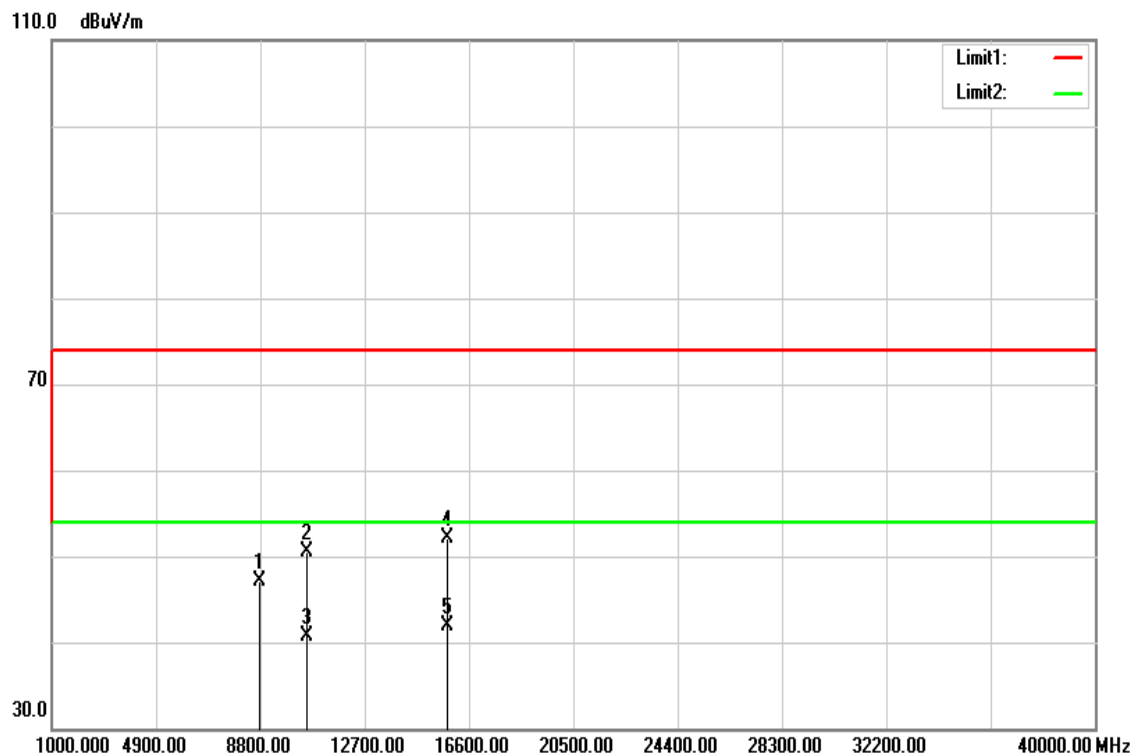


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	32.92	13.75	46.67	74.00	-27.33	peak
10540.000	39.31	17.13	56.44	74.00	-17.56	peak
10540.000	28.55	17.13	45.68	54.00	-8.32	AVG
15810.000	35.16	19.27	54.43	74.00	-19.57	peak
15810.000	24.31	19.27	43.58	54.00	-10.42	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5270 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

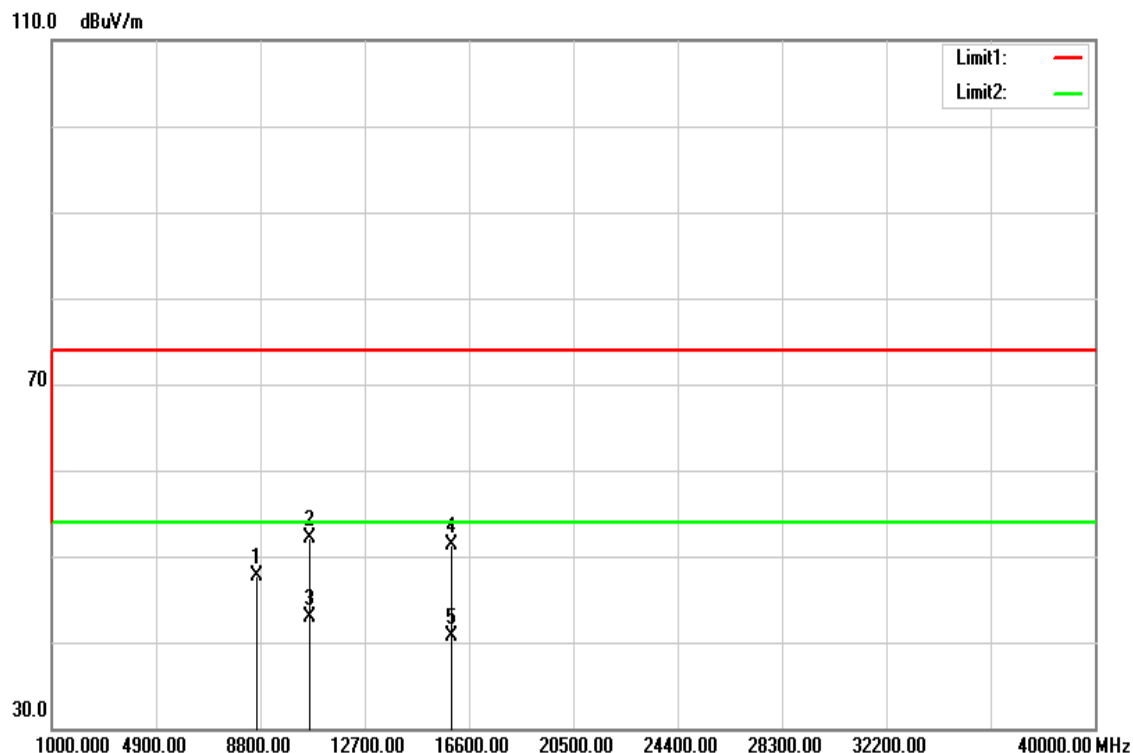


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8760.000	33.43	13.76	47.19	74.00	-26.81	peak
10540.000	33.38	17.13	50.51	74.00	-23.49	peak
10540.000	23.52	17.13	40.65	54.00	-13.35	AVG
15810.000	32.86	19.27	52.13	74.00	-21.87	peak
15810.000	22.57	19.27	41.84	54.00	-12.16	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5310 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

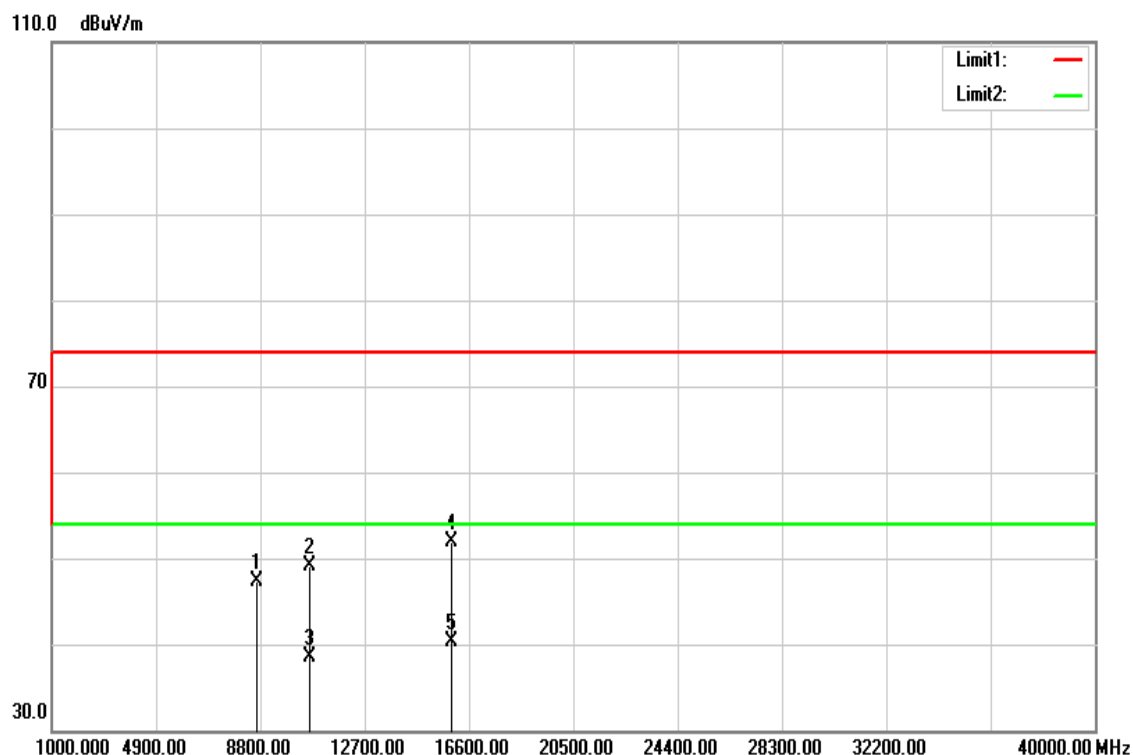


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	33.89	13.73	47.62	74.00	-26.38	peak
10620.000	34.99	17.06	52.05	74.00	-21.95	peak
10620.000	25.78	17.06	42.84	54.00	-11.16	AVG
15930.000	31.84	19.37	51.21	74.00	-22.79	peak
15930.000	21.26	19.37	40.63	54.00	-13.37	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5310 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

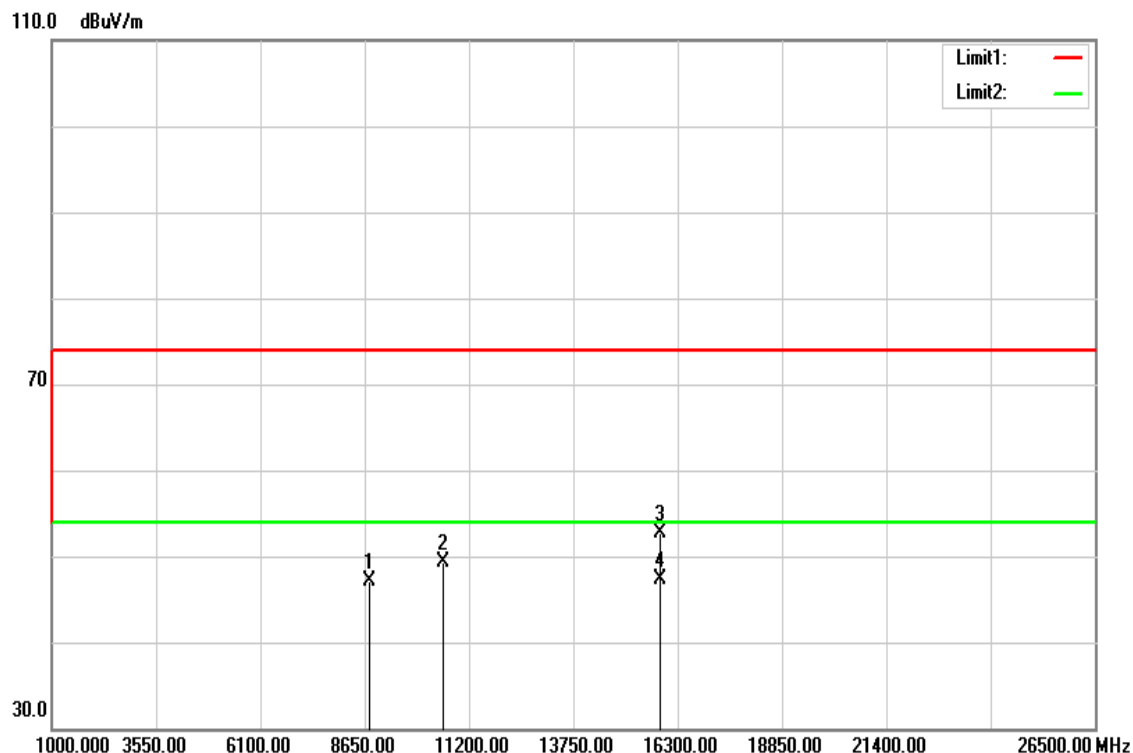


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	33.49	13.73	47.22	74.00	-26.78	peak
10620.000	31.98	17.06	49.04	74.00	-24.96	peak
10620.000	21.42	17.06	38.48	54.00	-15.52	AVG
15930.000	32.47	19.37	51.84	74.00	-22.16	peak
15930.000	20.97	19.37	40.34	54.00	-13.66	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11ac VHT80 / 5290 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

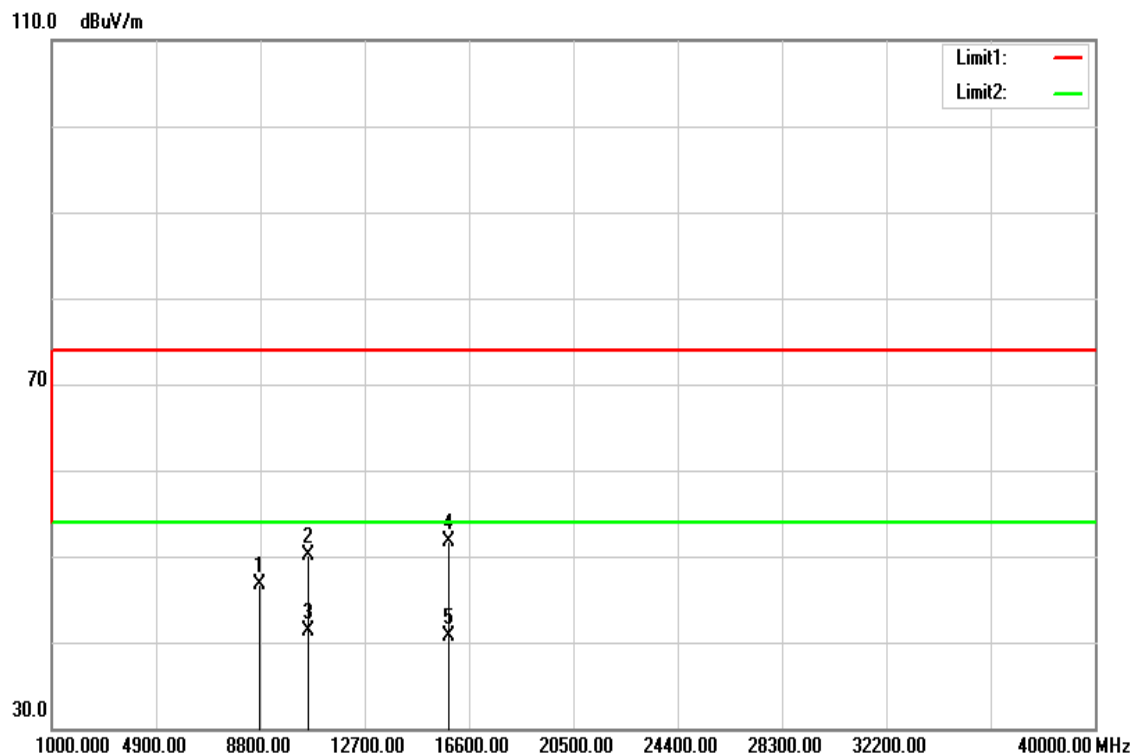


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8670.000	33.41	13.72	47.13	74.00	-26.87	peak
10580.000	32.31	17.09	49.40	74.00	-24.60	peak
10580.000	21.55	17.09	38.64	54.00	-15.36	AVG
15870.000	33.08	19.32	52.40	74.00	-21.60	peak
15870.000	22.56	19.32	41.88	54.00	-12.12	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11ac VHT80 / 5290 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz



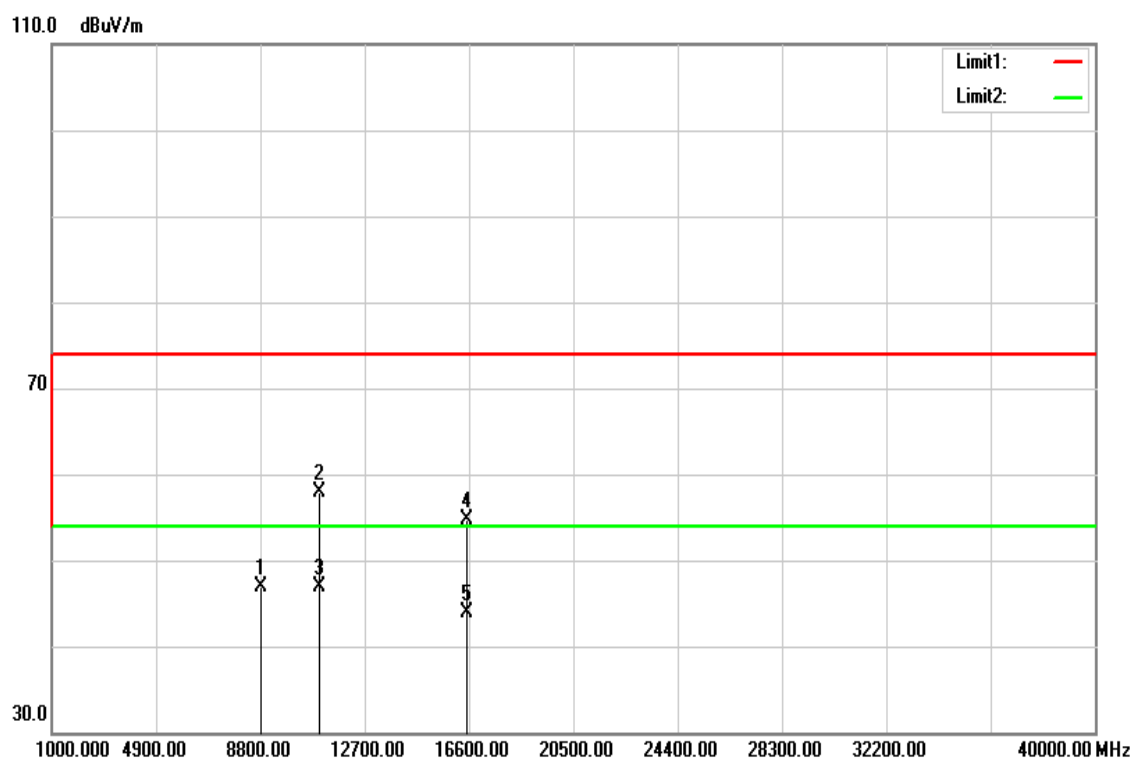
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8790.000	32.97	13.77	46.74	74.00	-27.26	peak
10580.000	33.04	17.09	50.13	74.00	-23.87	peak
10580.000	24.15	17.09	41.24	54.00	-12.76	AVG
15870.000	32.48	19.32	51.80	74.00	-22.20	peak
15870.000	21.45	19.32	40.77	54.00	-13.23	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Above 1G Test Data for UNII-2c

Test Mode	IEEE 802.11a / 5500 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

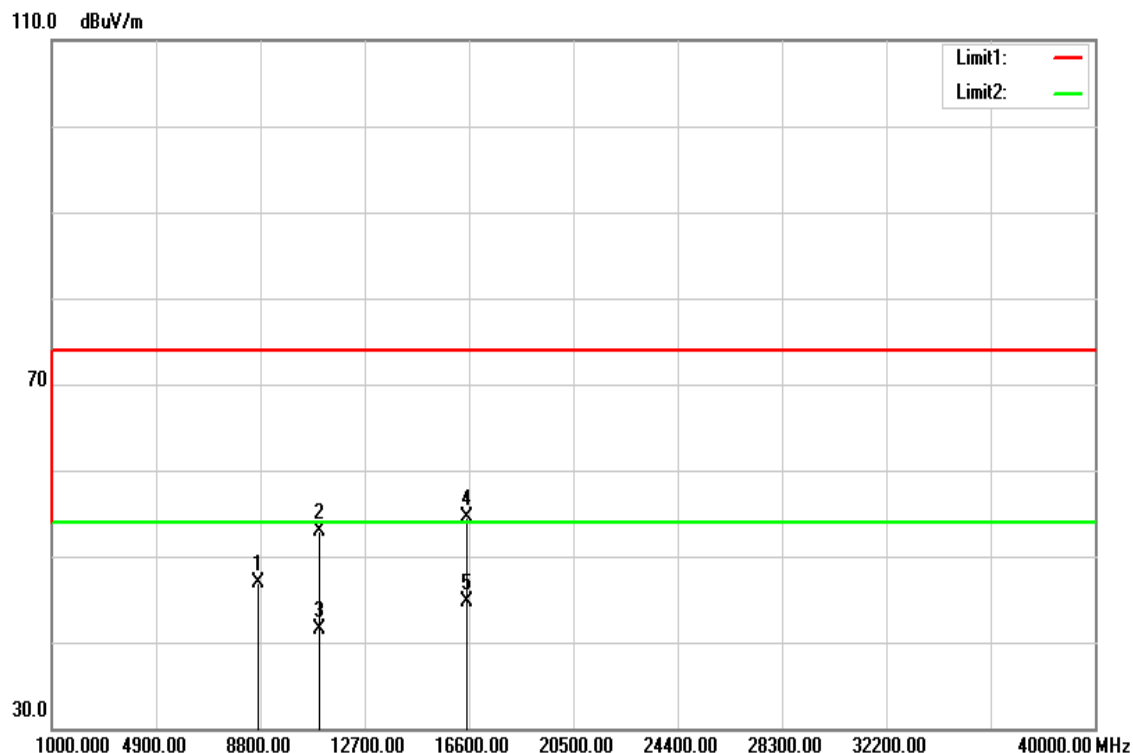


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8820.000	33.07	13.79	46.86	74.00	-27.14	peak
11010.000	41.17	16.73	57.90	74.00	-16.10	peak
11010.000	30.15	16.73	46.88	54.00	-7.12	AVG
16500.000	33.27	21.39	54.66	74.00	-19.34	peak
16500.000	22.58	21.39	43.97	54.00	-10.03	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5500 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

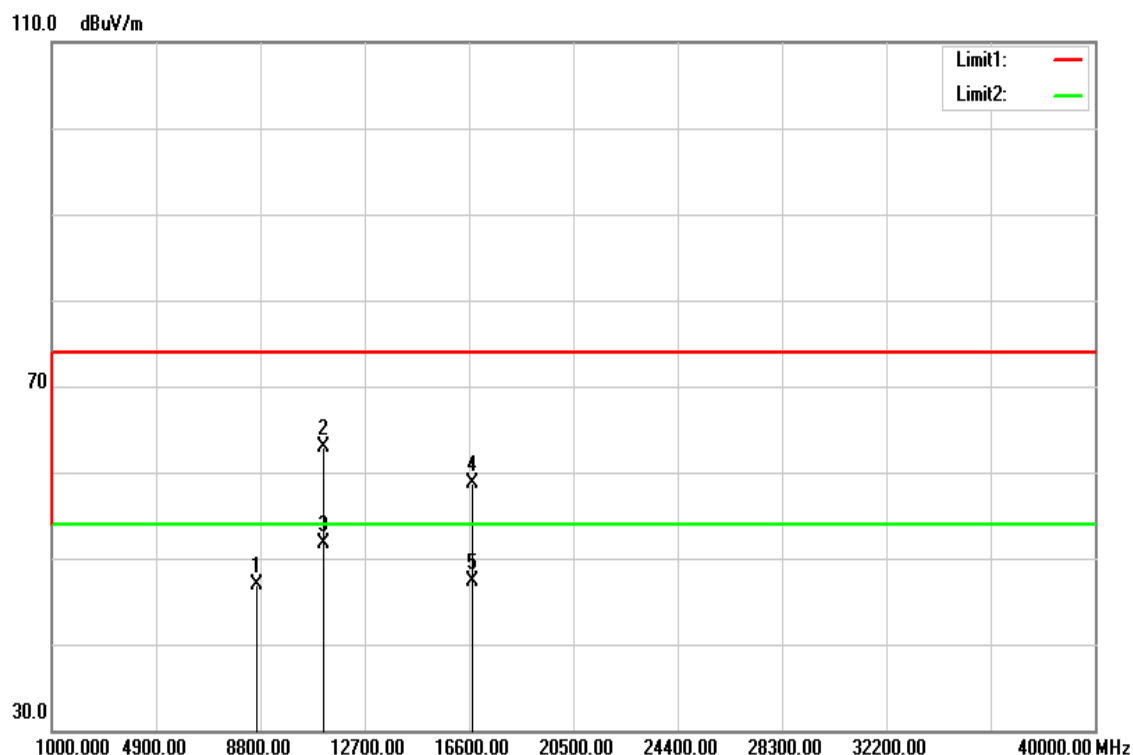


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8730.000	33.10	13.75	46.85	74.00	-27.15	peak
11000.000	36.23	16.73	52.96	74.00	-21.04	peak
11000.000	24.79	16.73	41.52	54.00	-12.48	AVG
16500.000	33.19	21.39	54.58	74.00	-19.42	peak
16500.000	23.29	21.39	44.68	54.00	-9.32	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5580 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

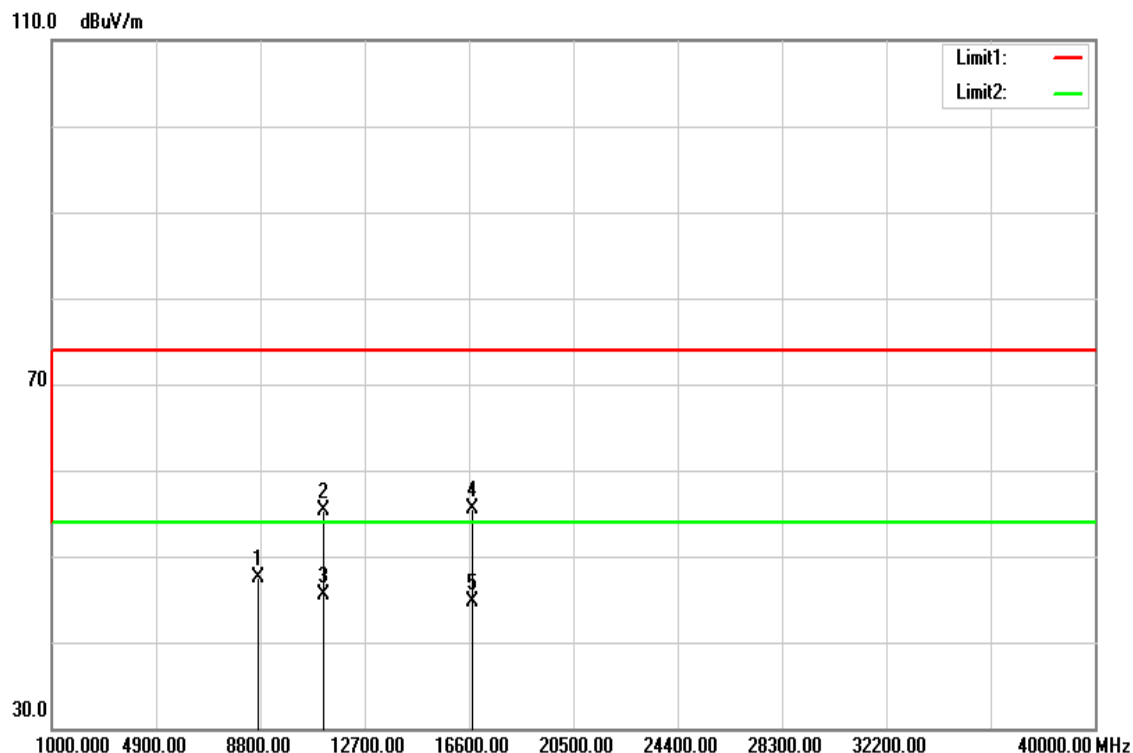


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	33.27	13.73	47.00	74.00	-27.00	peak
11160.000	46.21	16.75	62.96	74.00	-11.04	peak
11160.000	34.97	16.75	51.72	54.00	-2.28	AVG
16740.000	35.88	22.82	58.70	74.00	-15.30	peak
16740.000	24.42	22.82	47.24	54.00	-6.76	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5580 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

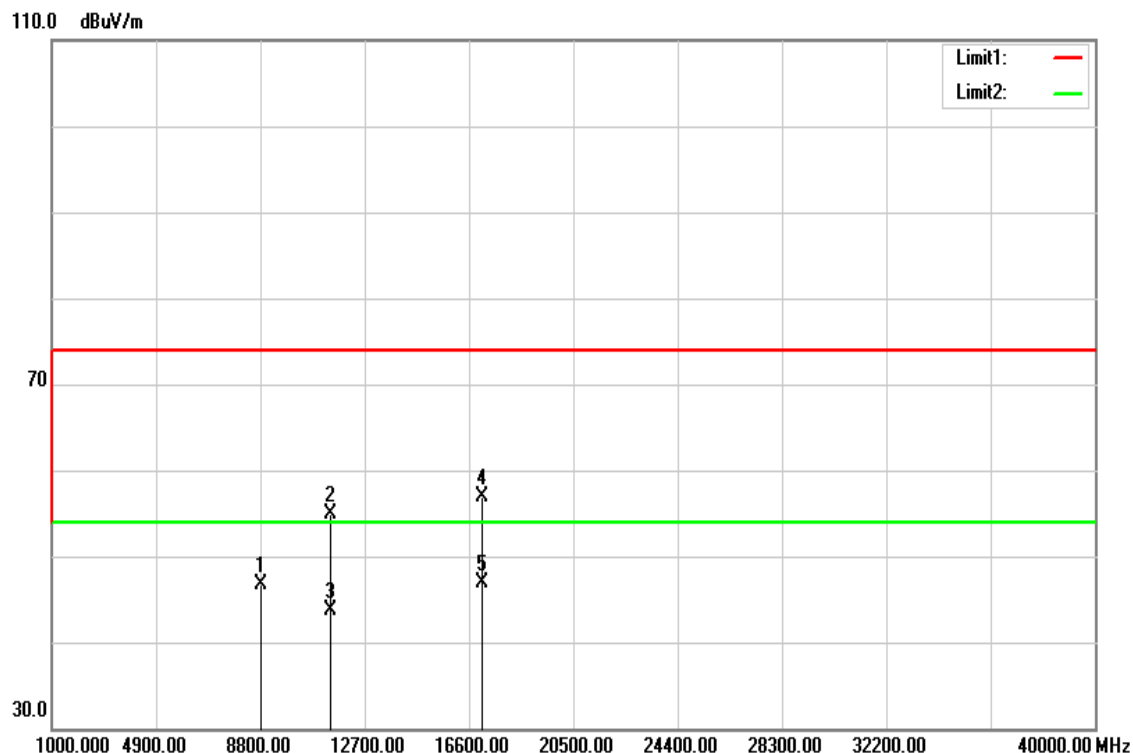


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8710.000	33.80	13.74	47.54	74.00	-26.46	peak
11160.000	38.52	16.75	55.27	74.00	-18.73	peak
11160.000	28.85	16.75	45.60	54.00	-8.40	AVG
16740.000	32.78	22.82	55.60	74.00	-18.40	peak
16740.000	21.96	22.82	44.78	54.00	-9.22	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5700 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

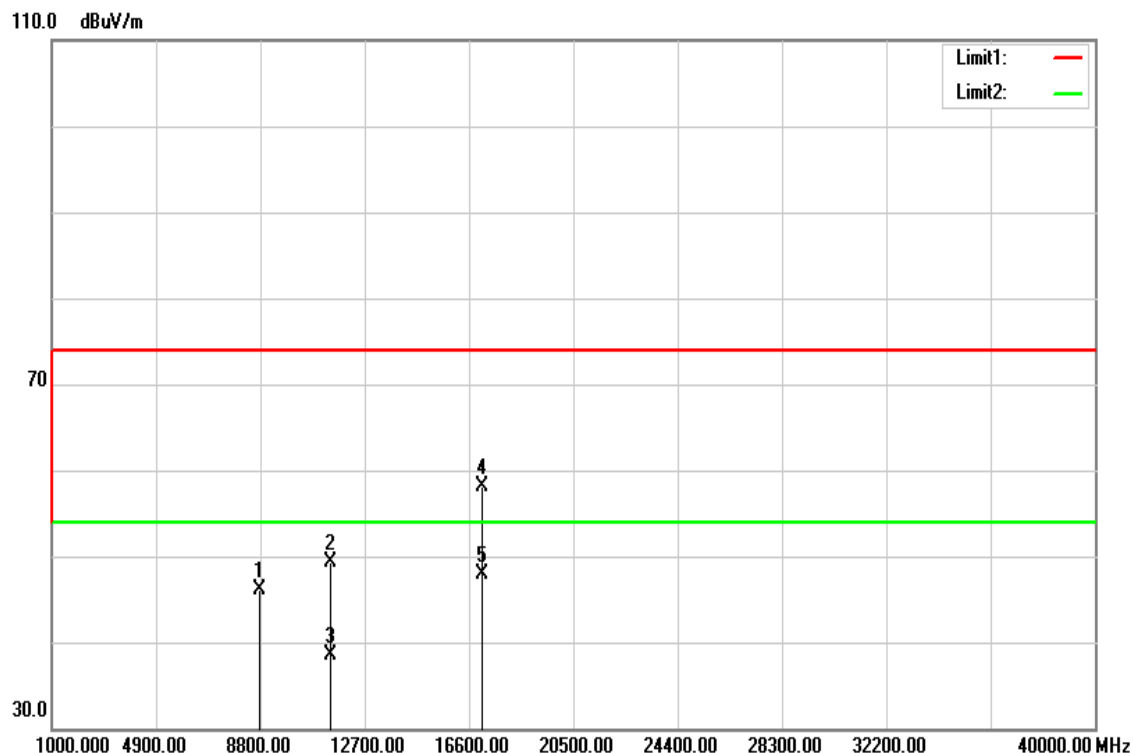


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8850.000	32.91	13.80	46.71	74.00	-27.29	peak
11400.000	38.11	16.77	54.88	74.00	-19.12	peak
11400.000	26.85	16.77	43.62	54.00	-10.38	AVG
17100.000	32.25	24.75	57.00	74.00	-17.00	peak
17100.000	22.08	24.75	46.83	54.00	-7.17	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5700 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

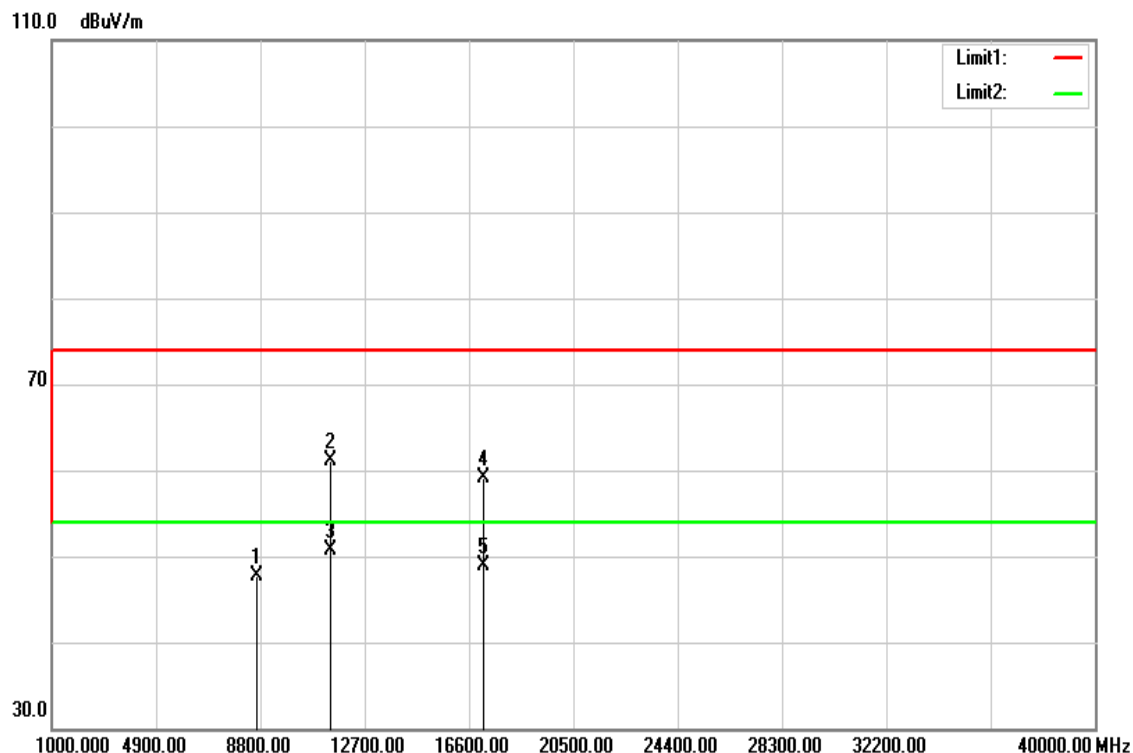


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	32.38	13.75	46.13	74.00	-27.87	peak
11400.000	32.43	16.77	49.20	74.00	-24.80	peak
11400.000	21.71	16.77	38.48	54.00	-15.52	AVG
17100.000	33.32	24.75	58.07	74.00	-15.93	peak
17100.000	23.17	24.75	47.92	54.00	-6.08	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5720 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

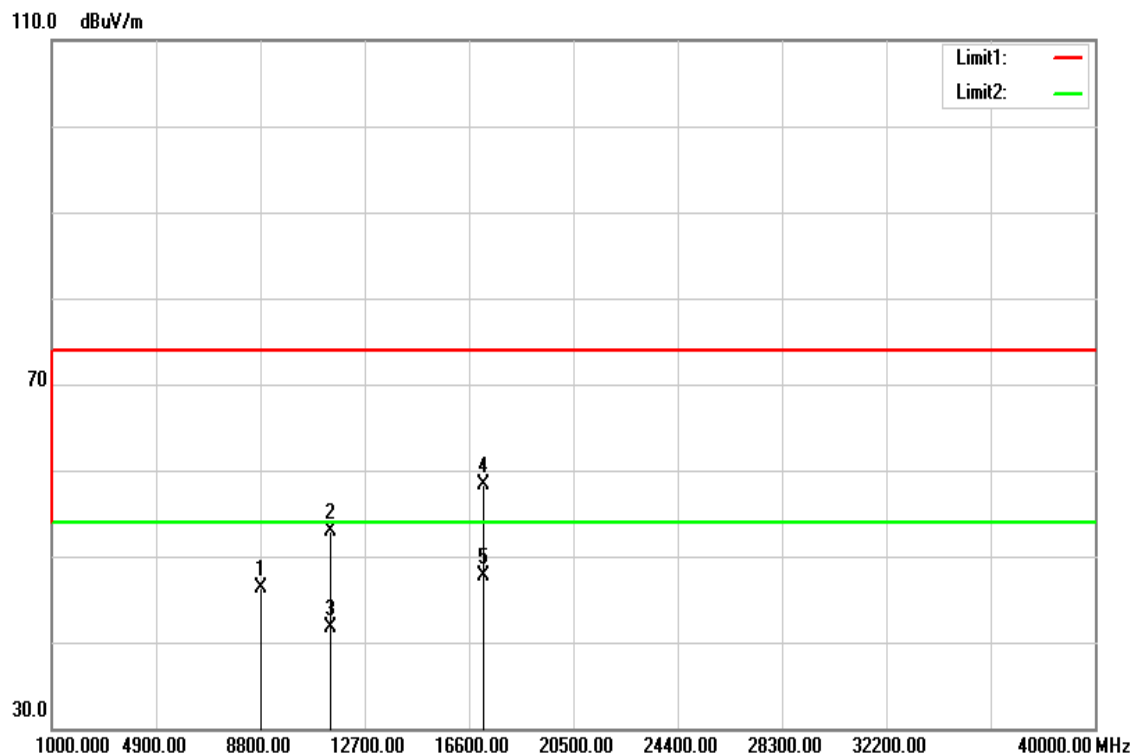


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	33.97	13.73	47.70	74.00	-26.30	peak
11440.000	44.32	16.77	61.09	74.00	-12.91	peak
11440.000	33.97	16.77	50.74	54.00	-3.26	AVG
17160.000	34.11	24.99	59.10	74.00	-14.90	peak
17160.000	23.93	24.99	48.92	54.00	-5.08	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5720 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

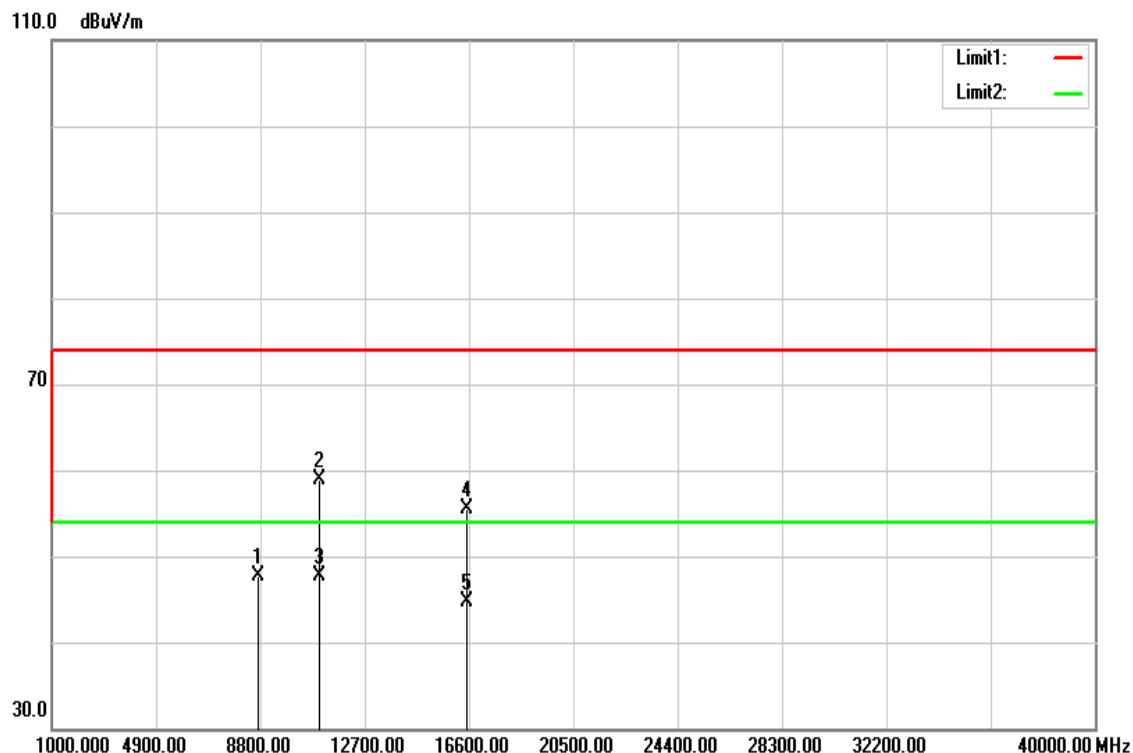


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8830.000	32.55	13.79	46.34	74.00	-27.66	peak
11440.000	36.13	16.77	52.90	74.00	-21.10	peak
11440.000	24.97	16.77	41.74	54.00	-12.26	AVG
17160.000	33.31	24.99	58.30	74.00	-15.70	peak
17160.000	22.64	24.99	47.63	54.00	-6.37	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5500 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

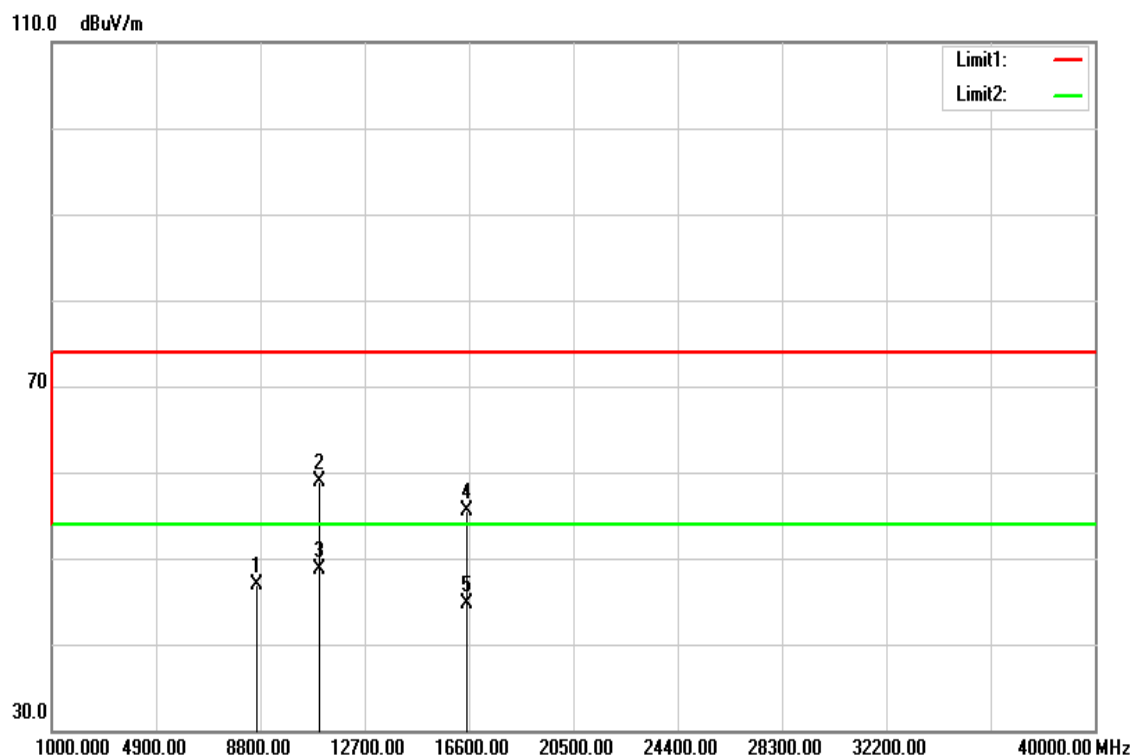


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8740.000	34.02	13.75	47.77	74.00	-26.23	peak
11010.000	42.24	16.73	58.97	74.00	-15.03	peak
11010.000	30.91	16.73	47.64	54.00	-6.36	AVG
16500.000	34.03	21.39	55.42	74.00	-18.58	peak
16500.000	23.38	21.39	44.77	54.00	-9.23	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5500 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

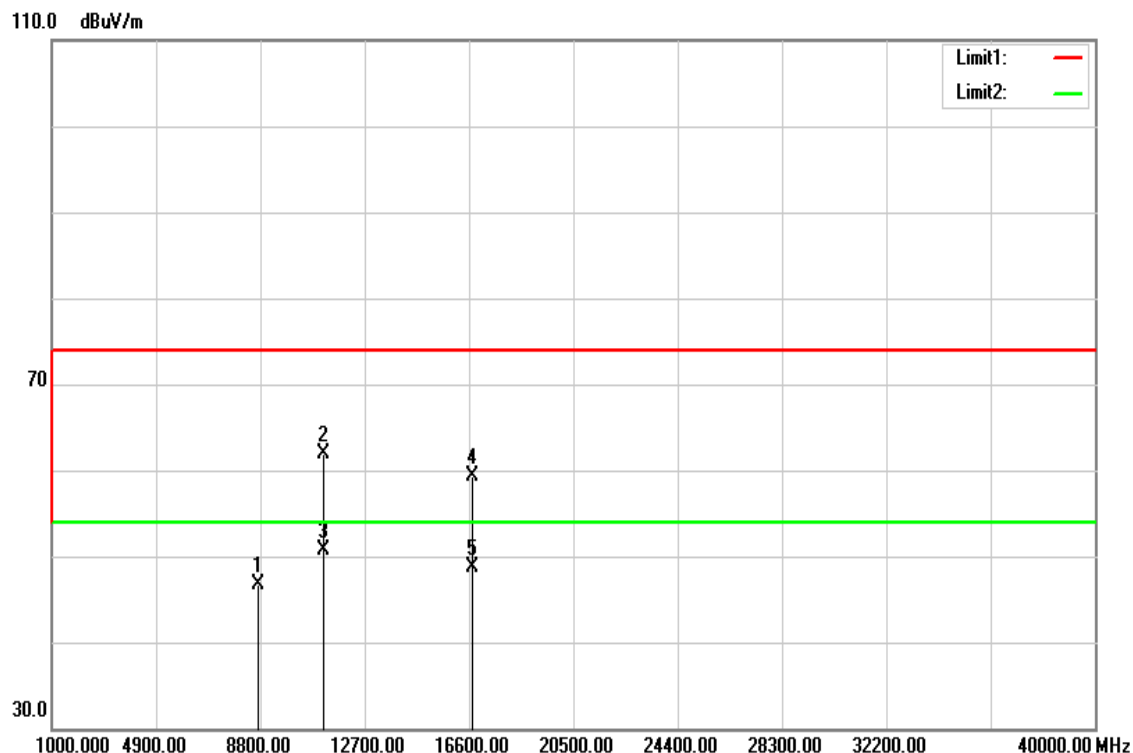


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	33.27	13.73	47.00	74.00	-27.00	peak
10990.000	42.26	16.74	59.00	74.00	-15.00	peak
10990.000	31.98	16.74	48.72	54.00	-5.28	AVG
16500.000	34.07	21.39	55.46	74.00	-18.54	peak
16500.000	23.24	21.39	44.63	54.00	-9.37	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5580 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

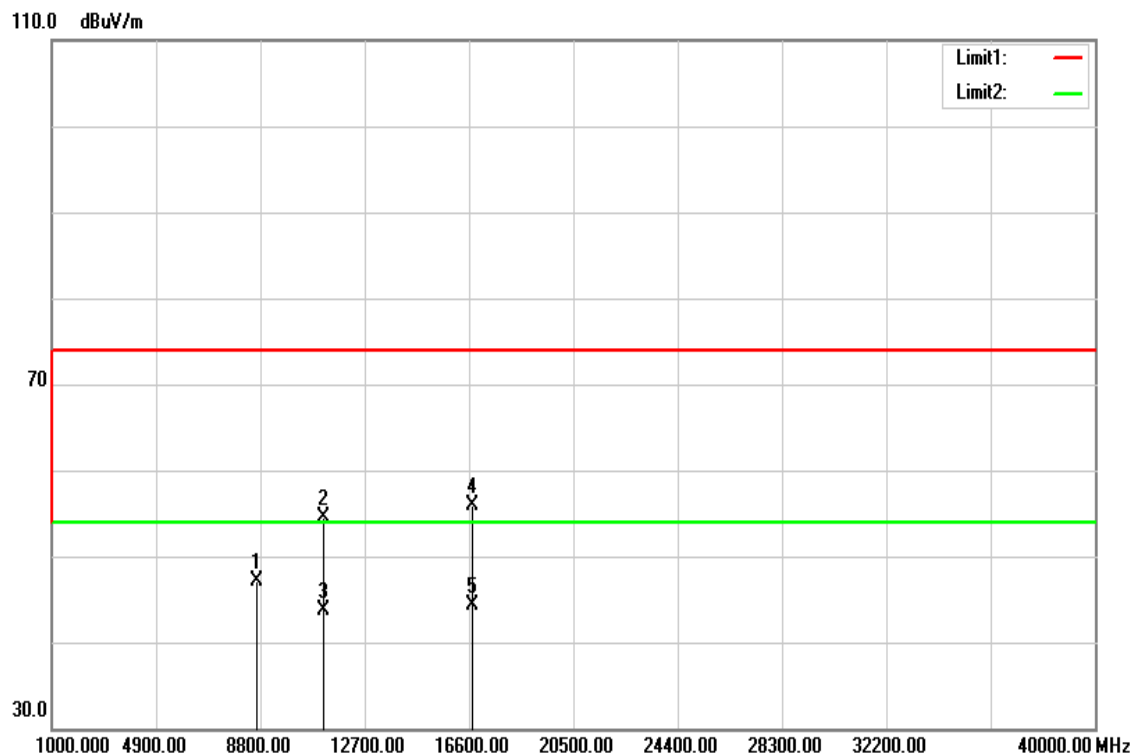


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8730.000	33.03	13.75	46.78	74.00	-27.22	peak
11160.000	45.06	16.75	61.81	74.00	-12.19	peak
11160.000	34.02	16.75	50.77	54.00	-3.23	AVG
16740.000	36.42	22.82	59.24	74.00	-14.76	peak
16740.000	25.81	22.82	48.63	54.00	-5.37	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5580 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

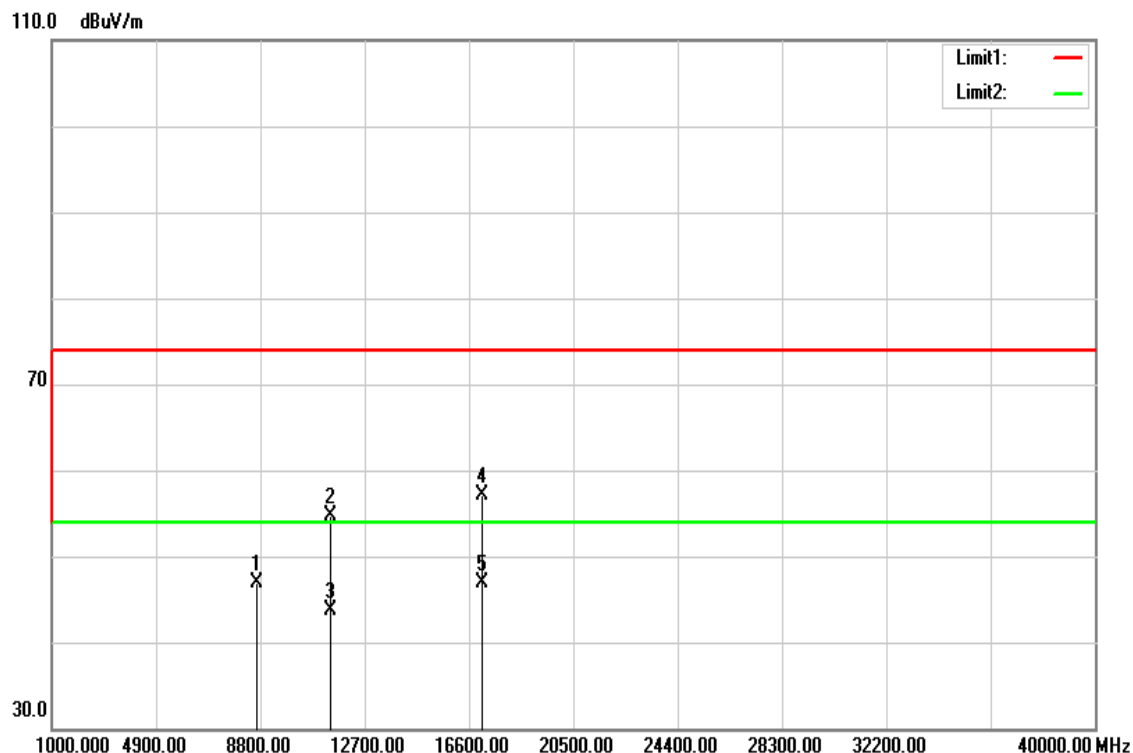


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	33.32	13.73	47.05	74.00	-26.95	peak
11160.000	37.78	16.75	54.53	74.00	-19.47	peak
11160.000	26.87	16.75	43.62	54.00	-10.38	AVG
16740.000	33.13	22.82	55.95	74.00	-18.05	peak
16740.000	21.45	22.82	44.27	54.00	-9.73	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5700 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

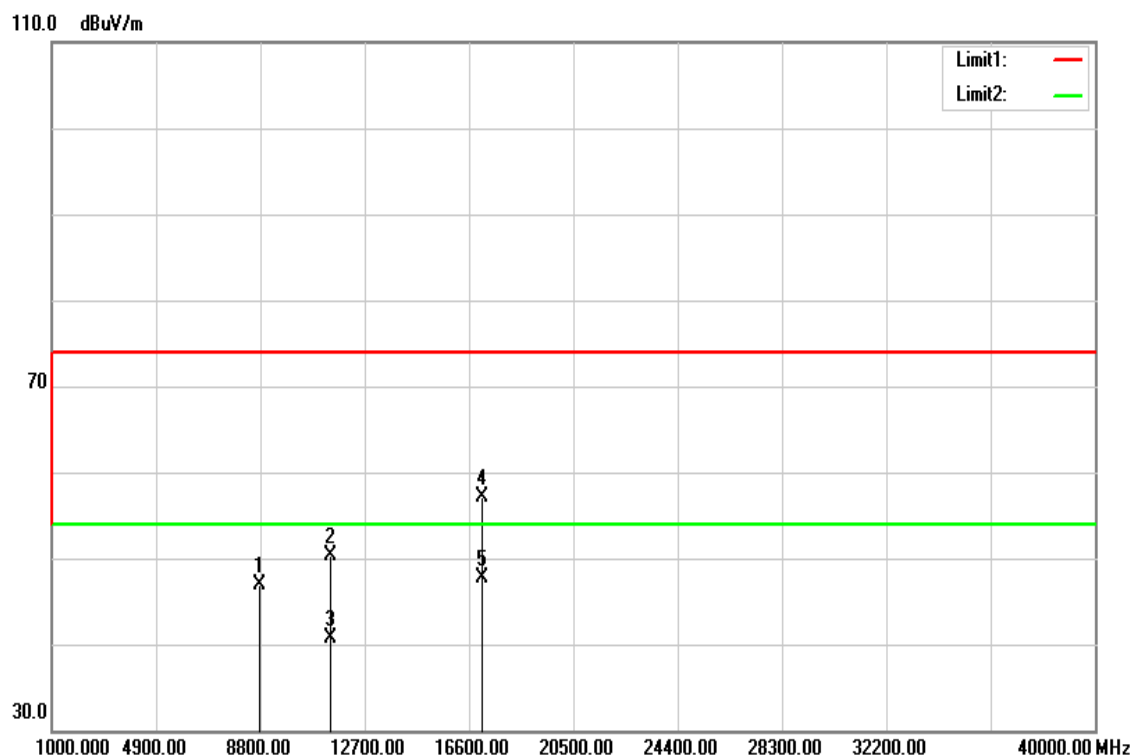


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8650.000	33.22	13.71	46.93	74.00	-27.07	peak
11400.000	37.89	16.77	54.66	74.00	-19.34	peak
11400.000	27.02	16.77	43.79	54.00	-10.21	AVG
17100.000	32.27	24.75	57.02	74.00	-16.98	peak
17100.000	22.07	24.75	46.82	54.00	-7.18	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5700 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

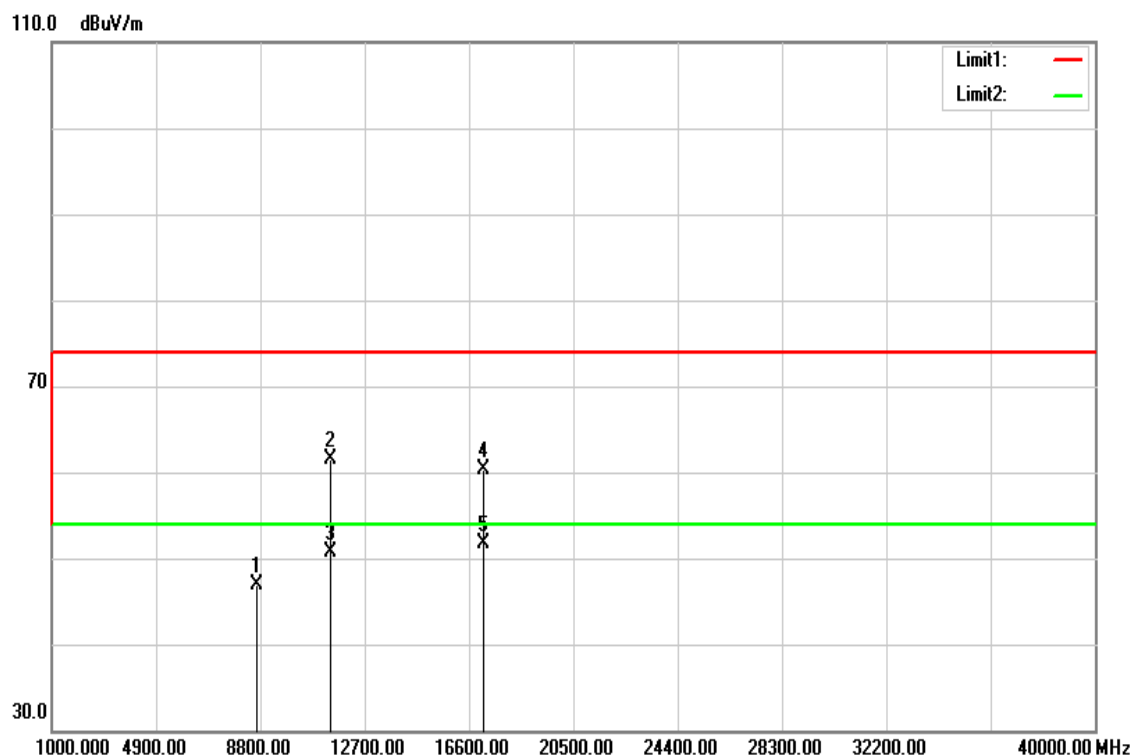


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8760.000	33.11	13.76	46.87	74.00	-27.13	peak
11400.000	33.62	16.77	50.39	74.00	-23.61	peak
11400.000	23.98	16.77	40.75	54.00	-13.25	AVG
17100.000	32.37	24.75	57.12	74.00	-16.88	peak
17100.000	22.87	24.75	47.62	54.00	-6.38	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5720 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

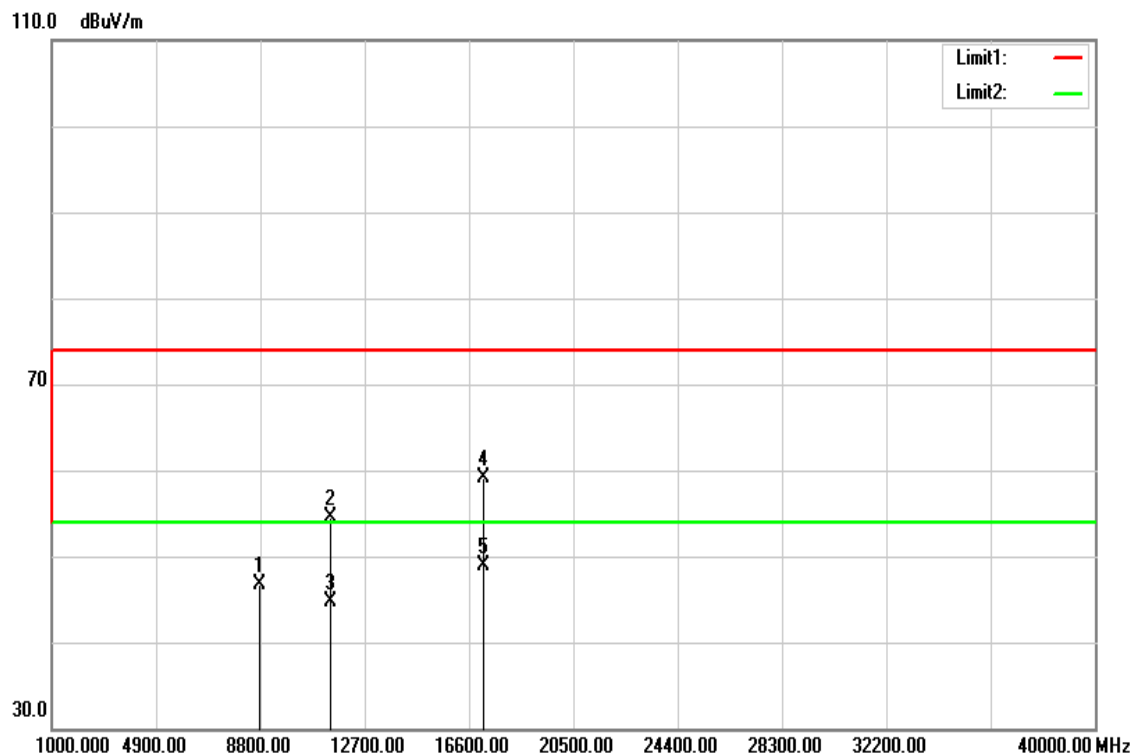


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8670.000	33.25	13.72	46.97	74.00	-27.03	peak
11440.000	44.83	16.77	61.60	74.00	-12.40	peak
11440.000	33.85	16.77	50.62	54.00	-3.38	AVG
17160.000	35.26	24.99	60.25	74.00	-13.75	peak
17160.000	26.75	24.99	51.74	54.00	-2.26	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5720 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

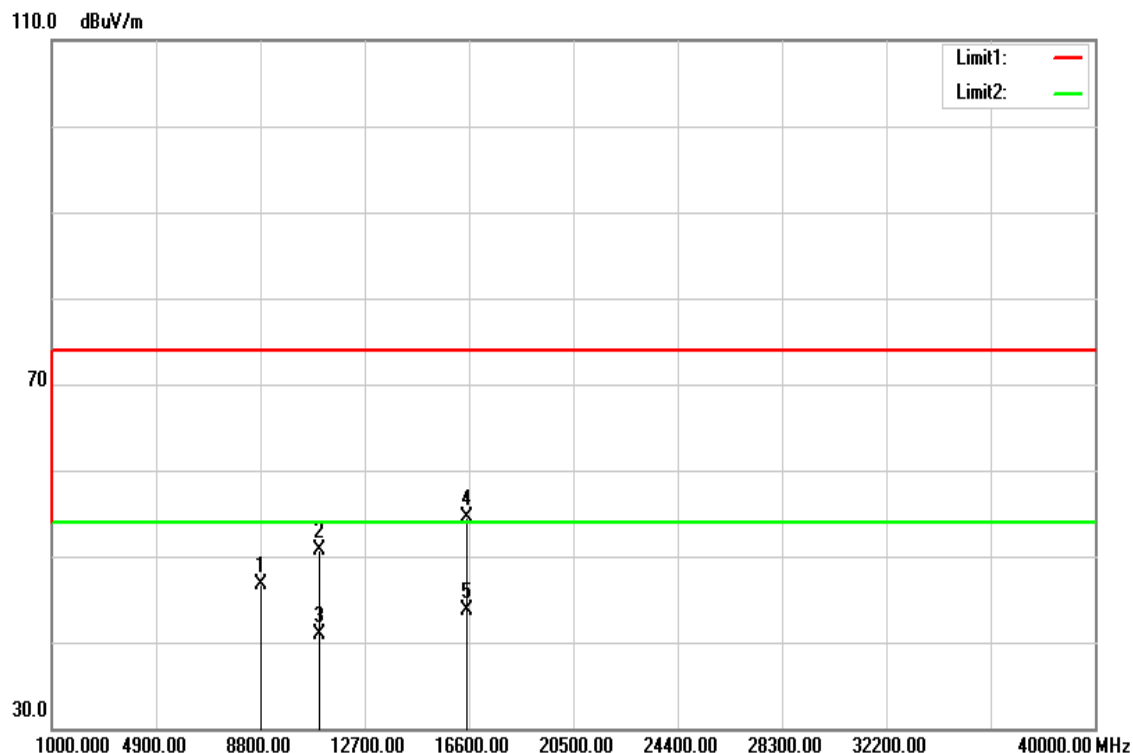


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	33.03	13.75	46.78	74.00	-27.22	peak
11440.000	37.73	16.77	54.50	74.00	-19.50	peak
11440.000	27.85	16.77	44.62	54.00	-9.38	AVG
17160.000	34.11	24.99	59.10	74.00	-14.90	peak
17160.000	23.98	24.99	48.97	54.00	-5.03	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5510 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

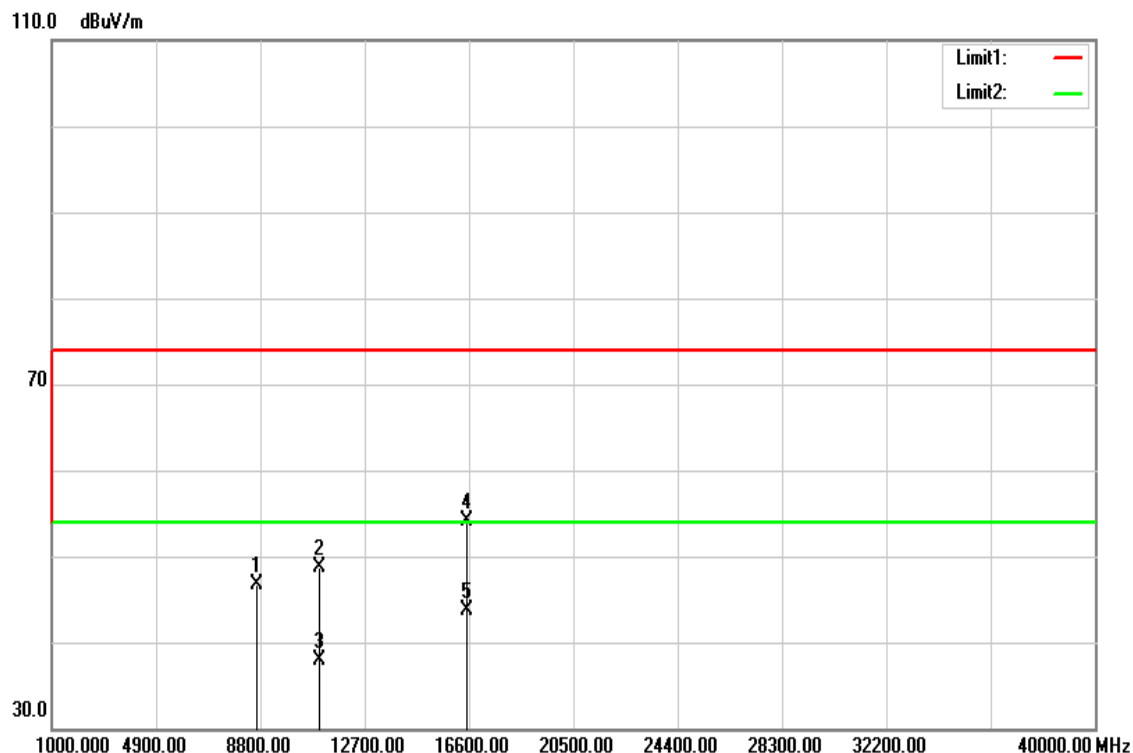


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8840.000	32.96	13.80	46.76	74.00	-27.24	peak
11020.000	33.92	16.73	50.65	74.00	-23.35	peak
11020.000	24.25	16.73	40.98	54.00	-13.02	AVG
16530.000	32.93	21.57	54.50	74.00	-19.50	peak
16530.000	22.04	21.57	43.61	54.00	-10.39	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5510 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

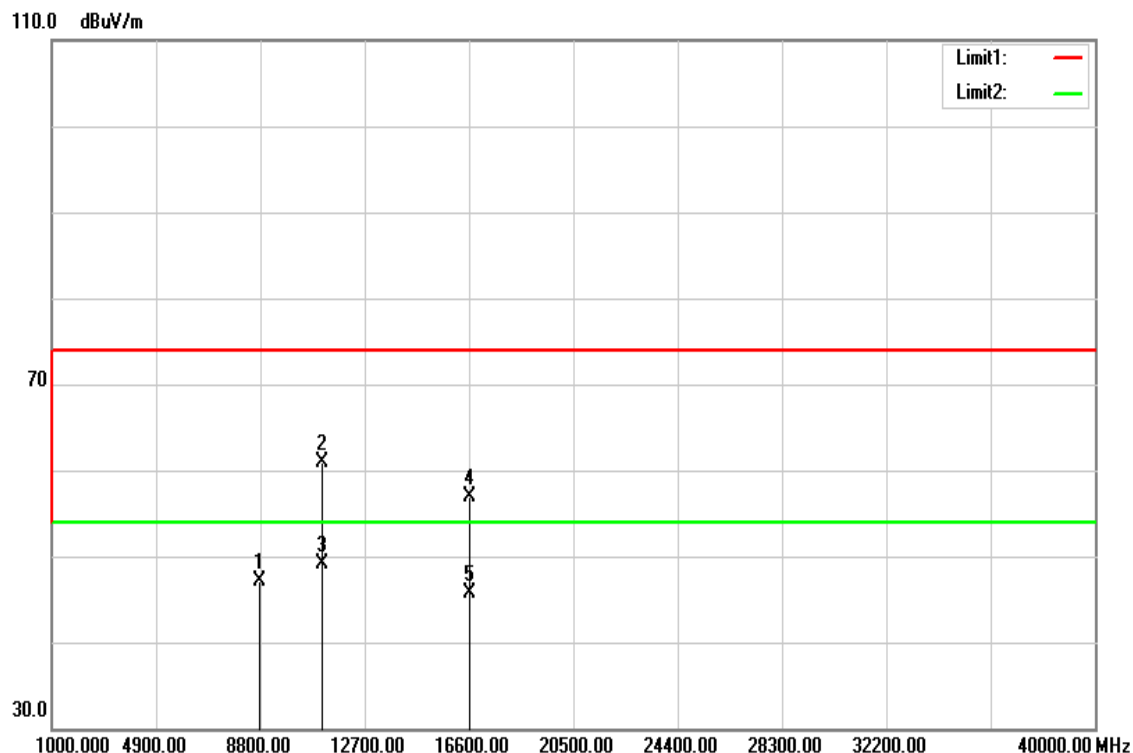


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	32.96	13.73	46.69	74.00	-27.31	peak
11020.000	31.93	16.73	48.66	74.00	-25.34	peak
11020.000	21.11	16.73	37.84	54.00	-16.16	AVG
16530.000	32.47	21.57	54.04	74.00	-19.96	peak
16530.000	22.05	21.57	43.62	54.00	-10.38	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5550 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

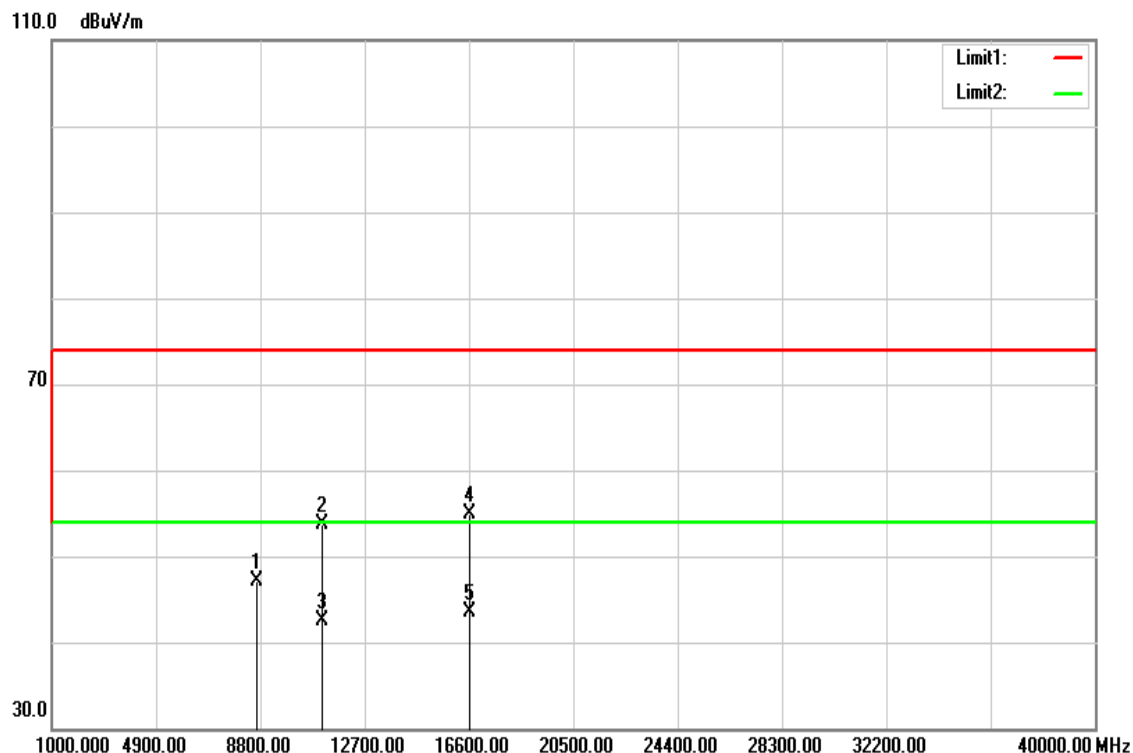


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	33.32	13.75	47.07	74.00	-26.93	peak
11110.000	44.17	16.74	60.91	74.00	-13.09	peak
11110.000	32.42	16.74	49.16	54.00	-4.84	AVG
16650.000	34.56	22.28	56.84	74.00	-17.16	peak
16650.000	23.34	22.28	45.62	54.00	-8.38	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5550 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

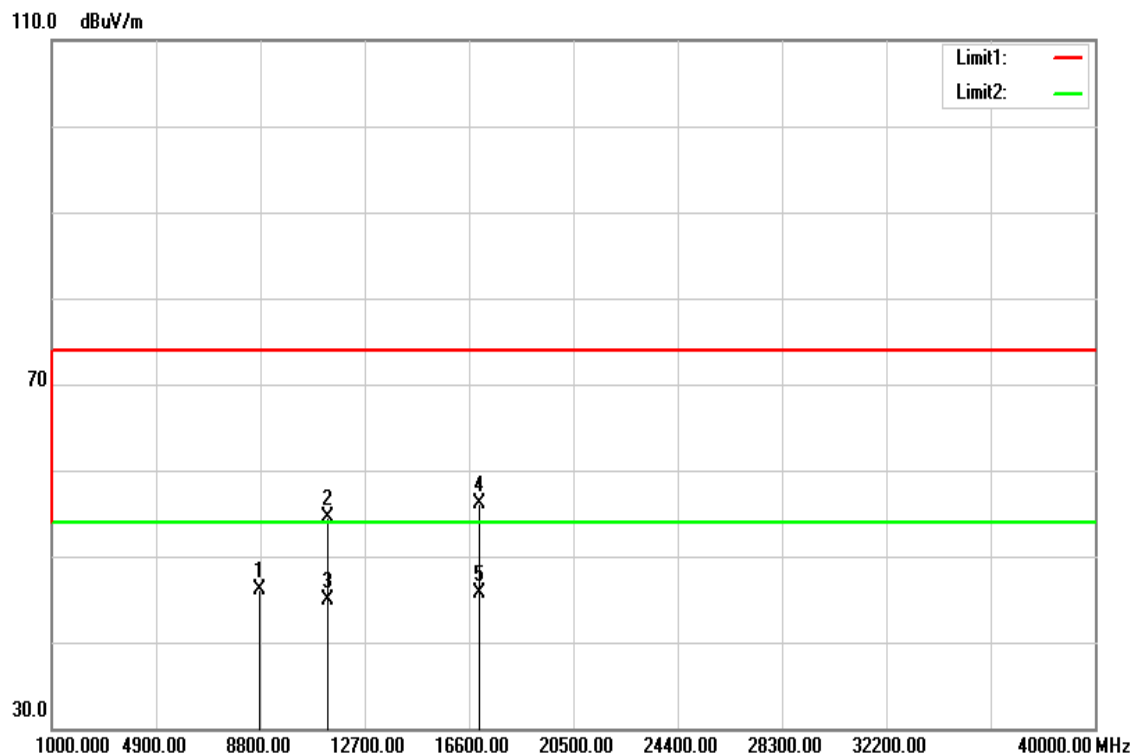


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8680.000	33.41	13.72	47.13	74.00	-26.87	peak
11110.000	36.96	16.74	53.70	74.00	-20.30	peak
11110.000	25.81	16.74	42.55	54.00	-11.45	AVG
16650.000	32.66	22.28	54.94	74.00	-19.06	peak
16650.000	21.13	22.28	43.41	54.00	-10.59	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5670 MHz	Temp/Hum	21(°C) / 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

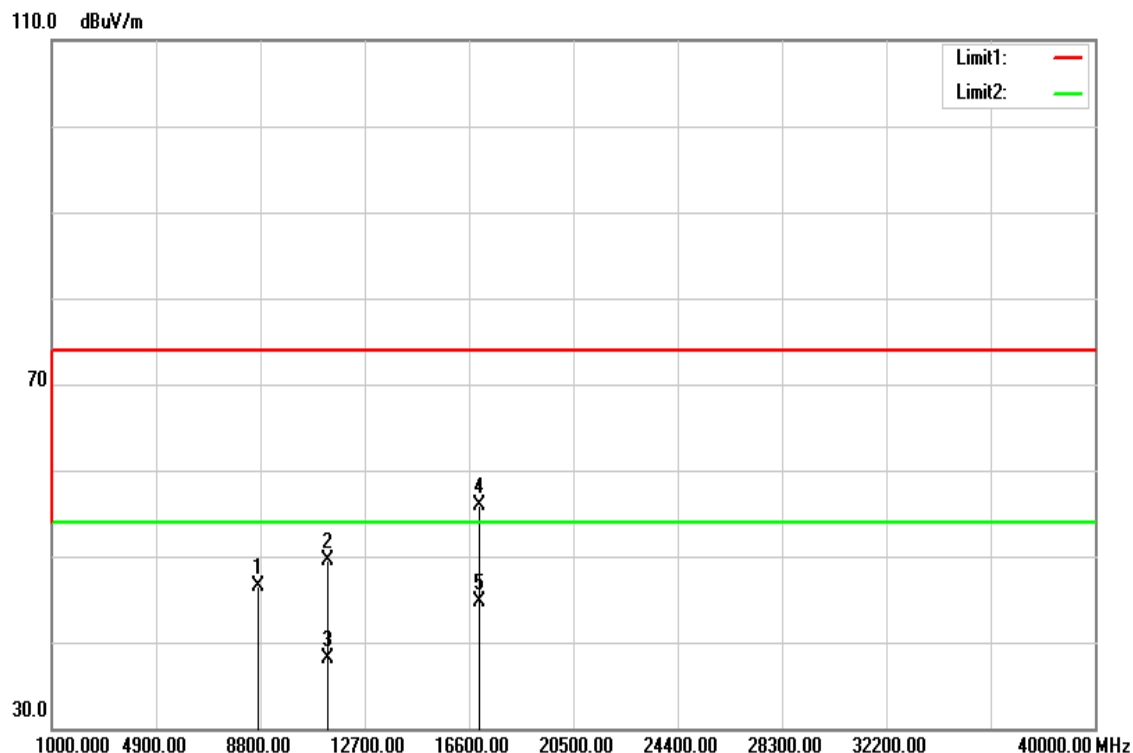


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8760.000	32.32	13.76	46.08	74.00	-27.92	peak
11340.000	37.71	16.76	54.47	74.00	-19.53	peak
11340.000	28.06	16.76	44.82	54.00	-9.18	AVG
17010.000	31.64	24.40	56.04	74.00	-17.96	peak
17010.000	21.23	24.40	45.63	54.00	-8.37	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5670 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

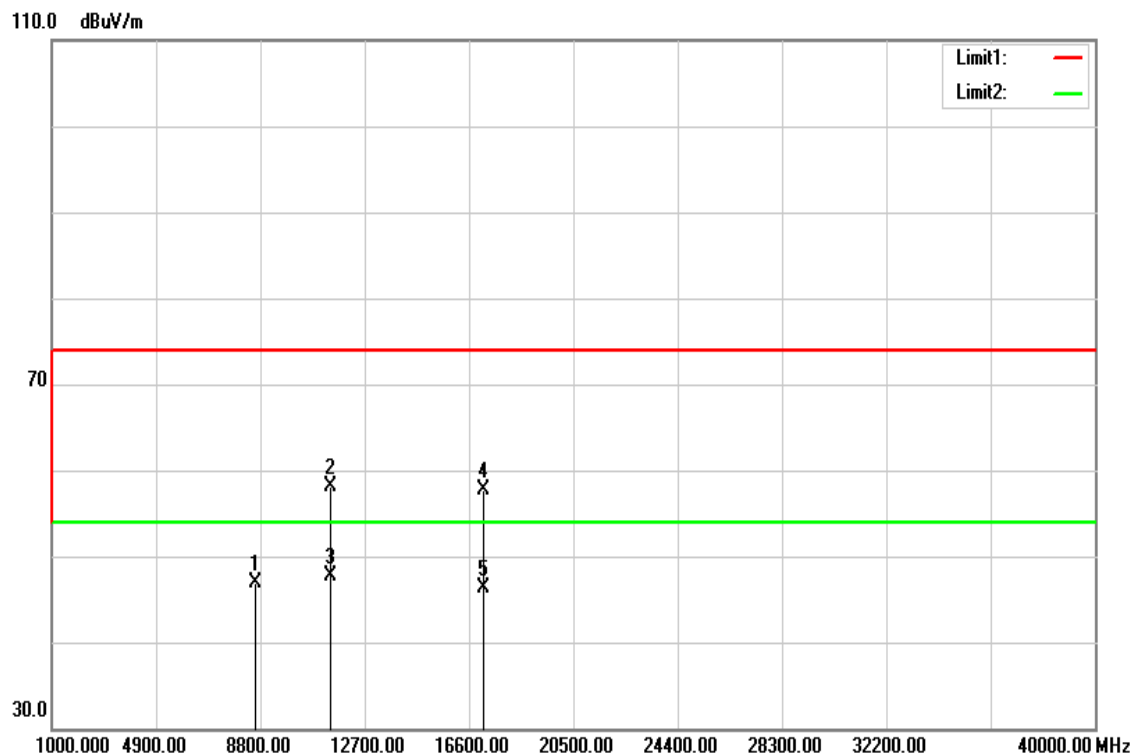


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8740.000	32.74	13.75	46.49	74.00	-27.51	peak
11340.000	32.73	16.76	49.49	74.00	-24.51	peak
11340.000	21.41	16.76	38.17	54.00	-15.83	AVG
17010.000	31.55	24.40	55.95	74.00	-18.05	peak
17010.000	20.34	24.40	44.74	54.00	-9.26	AVG

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5710 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

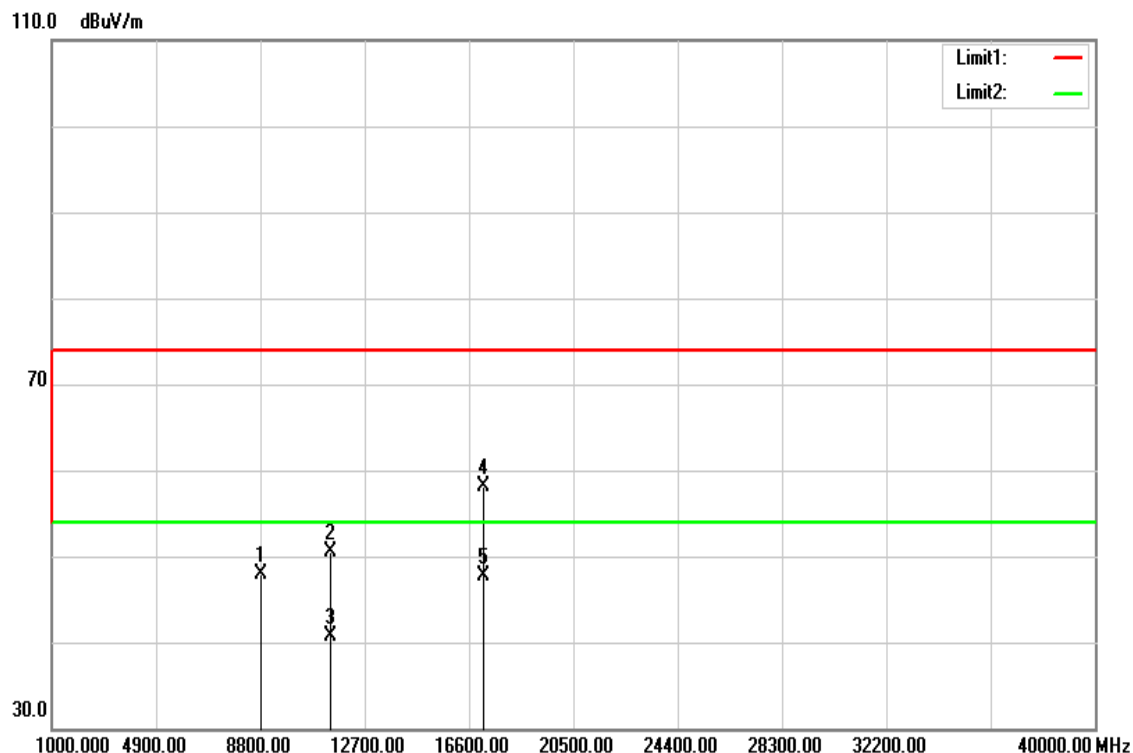


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8640.000	33.20	13.70	46.90	74.00	-27.10	peak
11420.000	41.40	16.77	58.17	74.00	-15.83	peak
11420.000	30.85	16.77	47.62	54.00	-6.38	AVG
17130.000	32.91	24.87	57.78	74.00	-16.22	peak
17130.000	21.37	24.87	46.24	54.00	-7.76	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40 / 5710 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

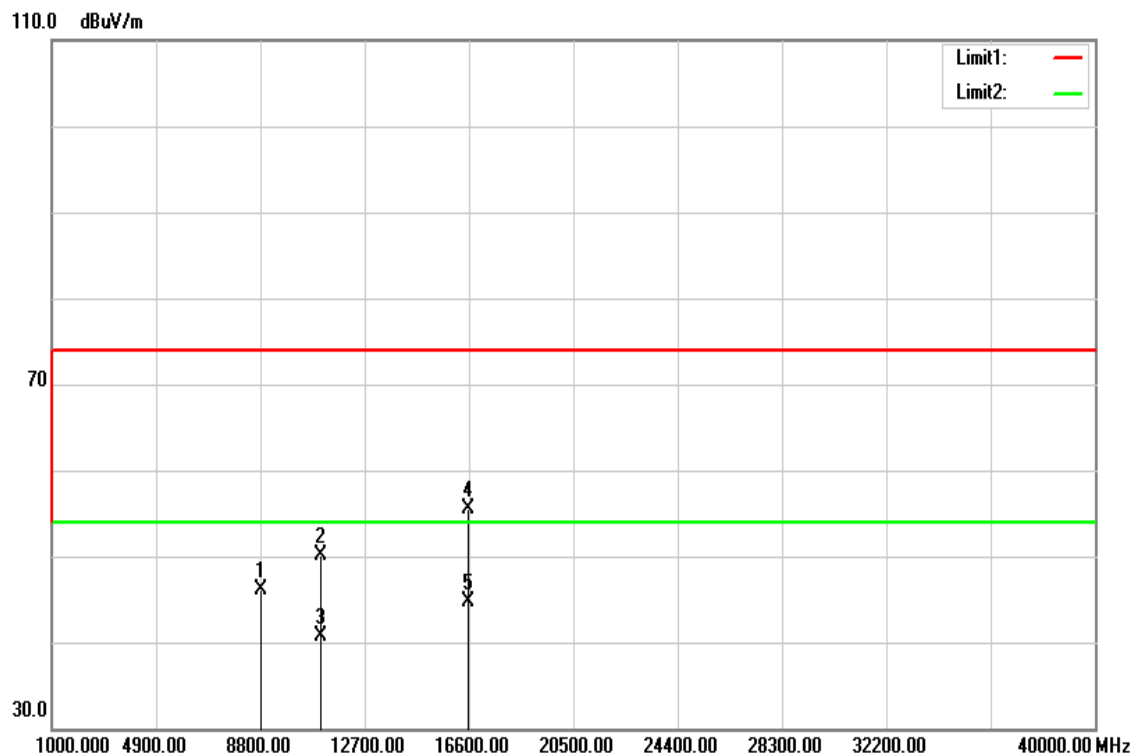


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8820.000	34.02	13.79	47.81	74.00	-26.19	peak
11420.000	33.81	16.77	50.58	74.00	-23.42	peak
11420.000	23.97	16.77	40.74	54.00	-13.26	AVG
17130.000	33.22	24.87	58.09	74.00	-15.91	peak
17130.000	22.76	24.87	47.63	54.00	-6.37	peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11ac VHT80 / 5530 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

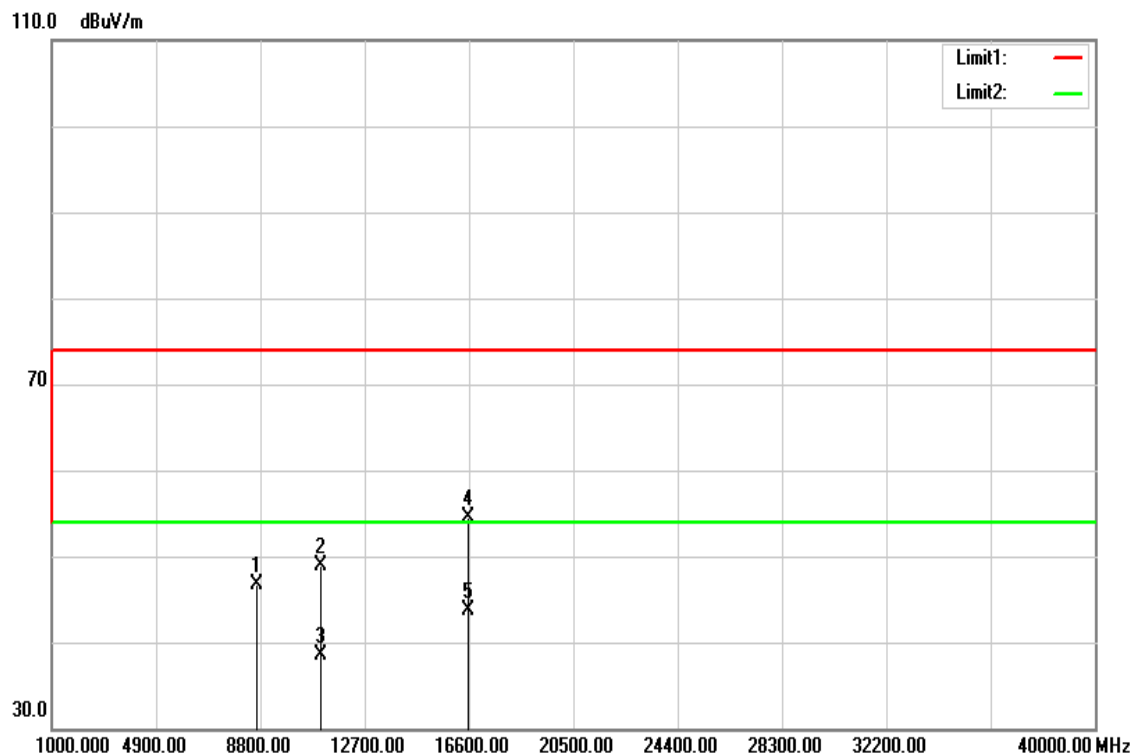


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8850.000	32.27	13.80	46.07	74.00	-27.93	peak
11060.000	33.39	16.74	50.13	74.00	-23.87	peak
11060.000	24.03	16.74	40.77	54.00	-13.23	AVG
16590.000	33.67	21.92	55.59	74.00	-18.41	peak
16590.000	22.76	21.92	44.68	54.00	-9.32	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11ac VHT80 / 5530 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

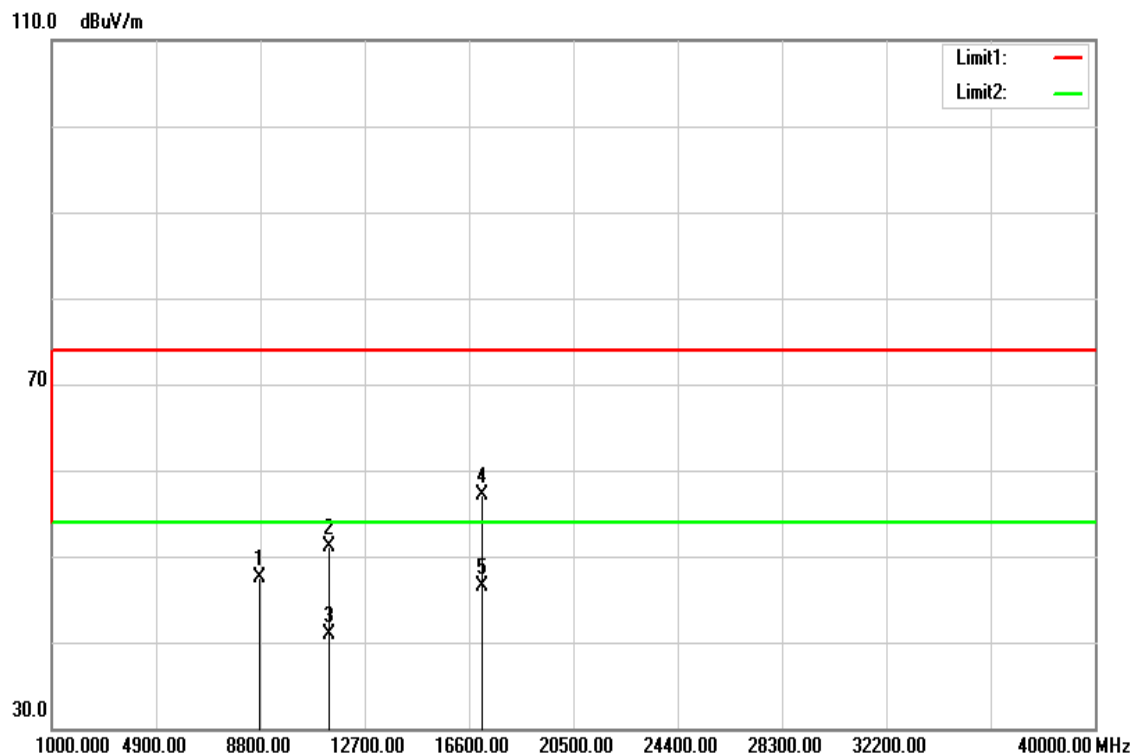


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	32.89	13.73	46.62	74.00	-27.38	peak
11060.000	32.26	16.74	49.00	74.00	-25.00	peak
11060.000	21.73	16.74	38.47	54.00	-15.53	AVG
16590.000	32.59	21.92	54.51	74.00	-19.49	peak
16590.000	21.72	21.92	43.64	54.00	-10.36	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11ac VHT80 / 5690 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

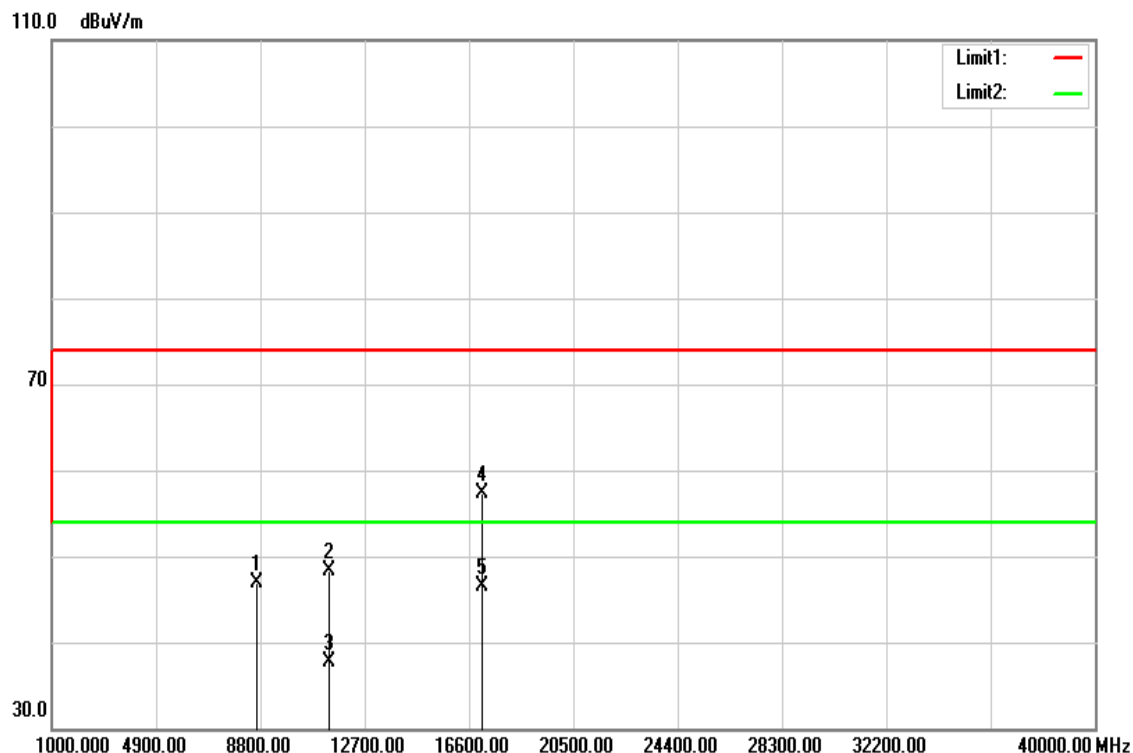


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8790.000	33.76	13.77	47.53	74.00	-26.47	peak
11380.000	34.29	16.77	51.06	74.00	-22.94	peak
11380.000	24.10	16.77	40.87	54.00	-13.13	AVG
17070.000	32.51	24.63	57.14	74.00	-16.86	peak
17070.000	21.92	24.63	46.55	54.00	-7.45	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11ac VHT80 / 5690 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz



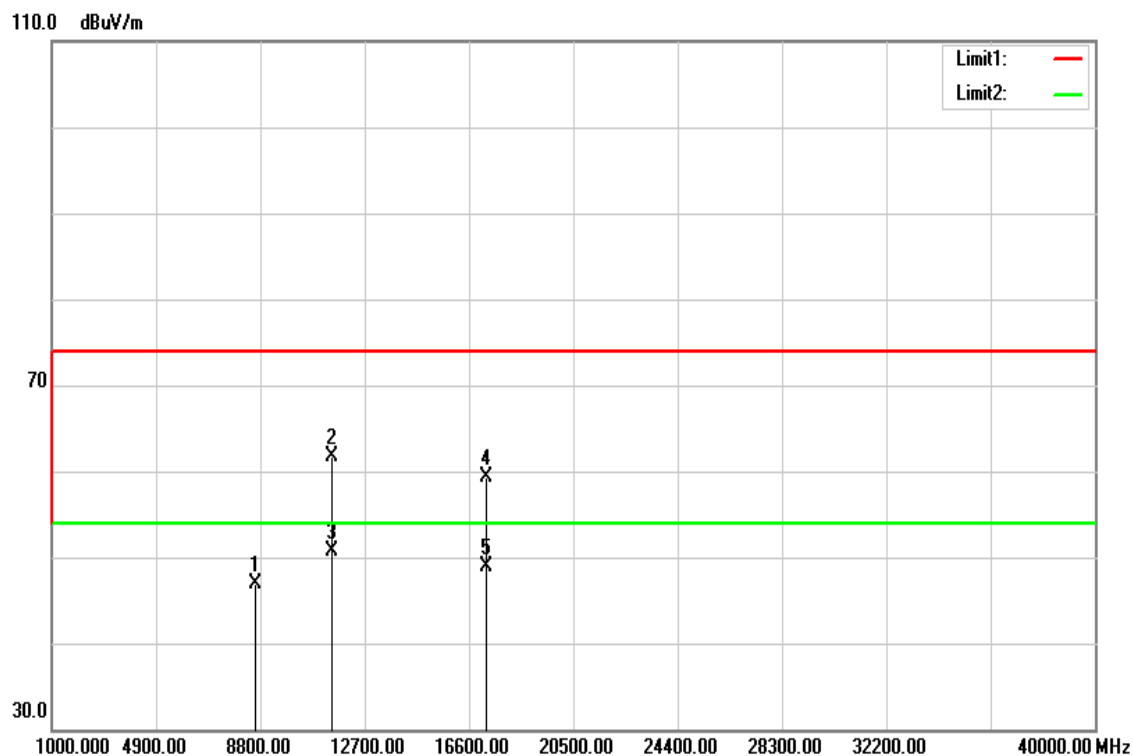
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	33.26	13.73	46.99	74.00	-27.01	peak
11380.000	31.47	16.77	48.24	74.00	-25.76	peak
11380.000	20.91	16.77	37.68	54.00	-16.32	AVG
17070.000	32.70	24.63	57.33	74.00	-16.67	peak
17070.000	21.78	24.63	46.41	54.00	-7.59	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Above 1G Test Data for UNII-3

Test Mode	IEEE 802.11a / 5745 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

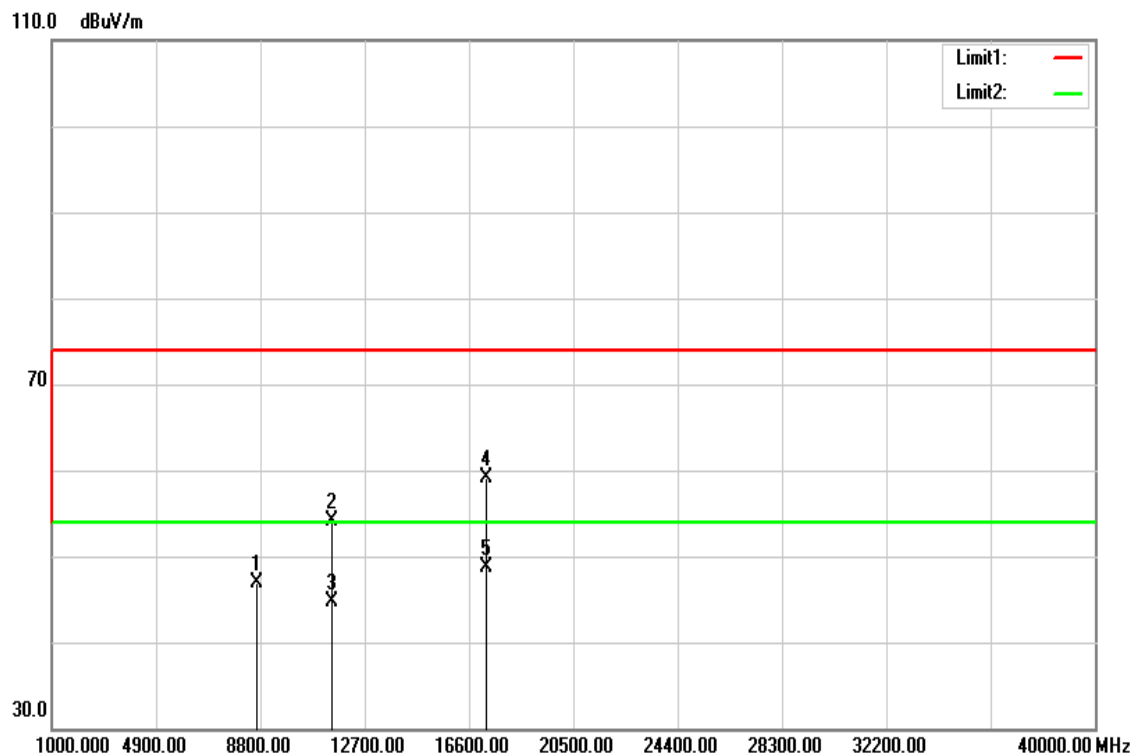


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8640.000	33.25	13.70	46.95	74.00	-27.05	peak
11490.000	44.89	16.78	61.67	74.00	-12.33	peak
11490.000	33.96	16.78	50.74	54.00	-3.26	AVG
17235.000	34.07	25.28	59.35	74.00	-14.65	peak
17235.000	23.64	25.28	48.92	54.00	-5.08	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5745 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

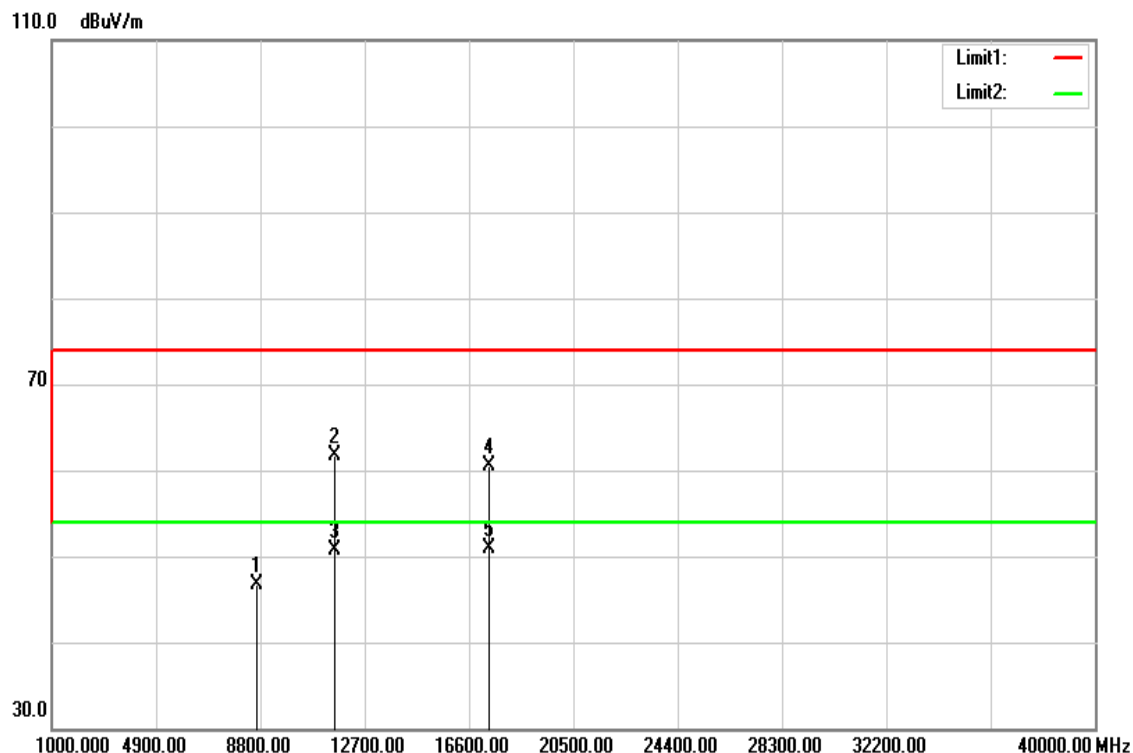


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	33.23	13.73	46.96	74.00	-27.04	peak
11490.000	37.37	16.78	54.15	74.00	-19.85	peak
11490.000	27.91	16.78	44.69	54.00	-9.31	AVG
17235.000	33.92	25.28	59.20	74.00	-14.80	peak
17235.000	23.44	25.28	48.72	54.00	-5.28	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5745 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

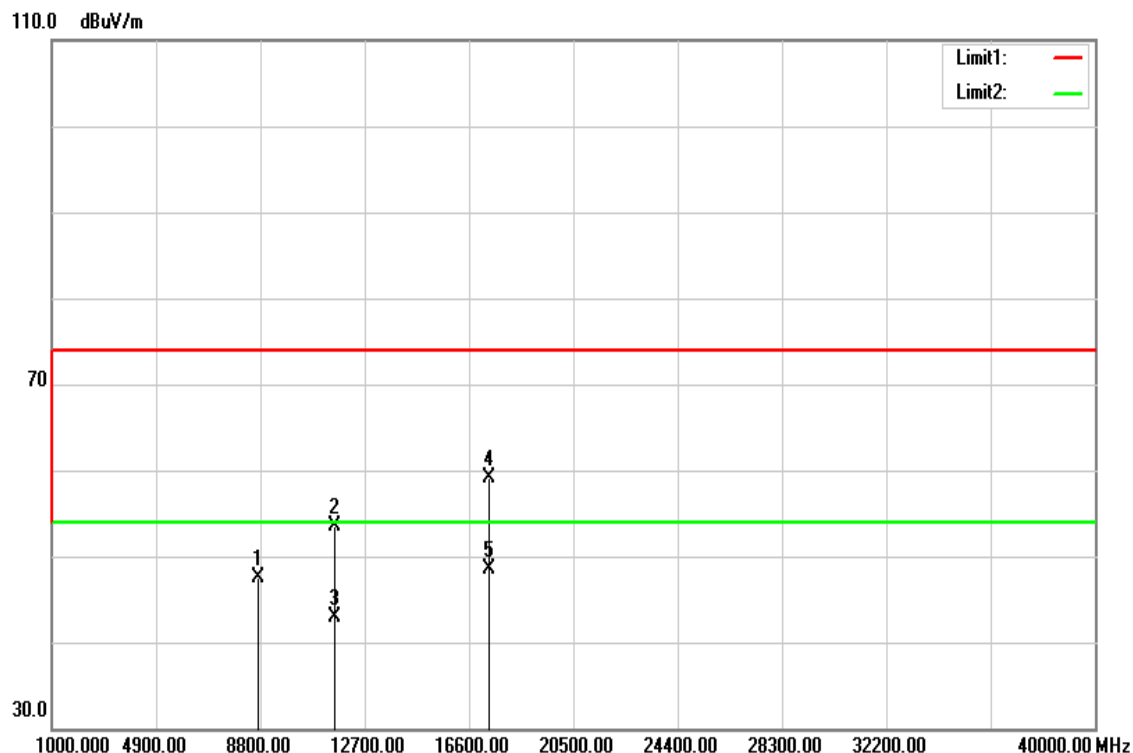


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8650.000	32.95	13.71	46.66	74.00	-27.34	peak
11580.000	44.79	16.85	61.64	74.00	-12.36	peak
11580.000	33.83	16.85	50.68	54.00	-3.32	AVG
17355.000	34.66	25.75	60.41	74.00	-13.59	peak
17355.000	25.16	25.75	50.91	54.00	-3.09	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5745 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

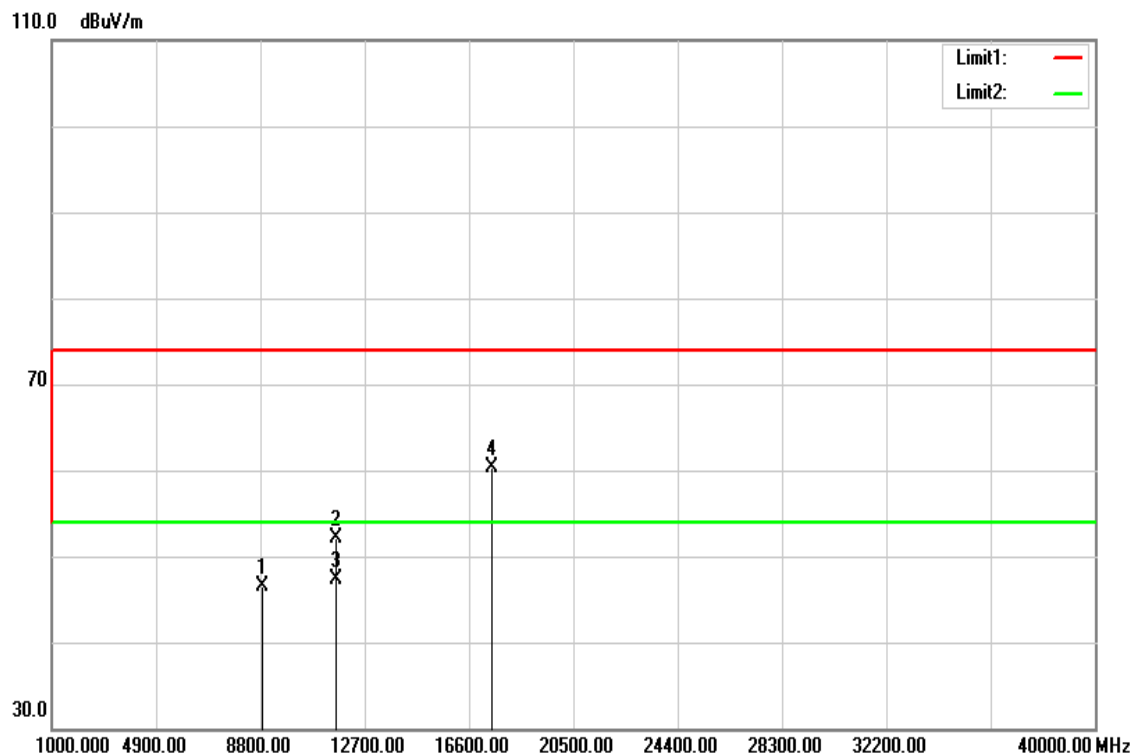


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8710.000	33.75	13.74	47.49	74.00	-26.51	peak
11570.000	36.68	16.84	53.52	74.00	-20.48	peak
11570.000	26.08	16.84	42.92	54.00	-11.08	AVG
17355.000	33.44	25.75	59.19	74.00	-14.81	peak
17355.000	22.68	25.75	48.43	54.00	-5.57	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5825 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

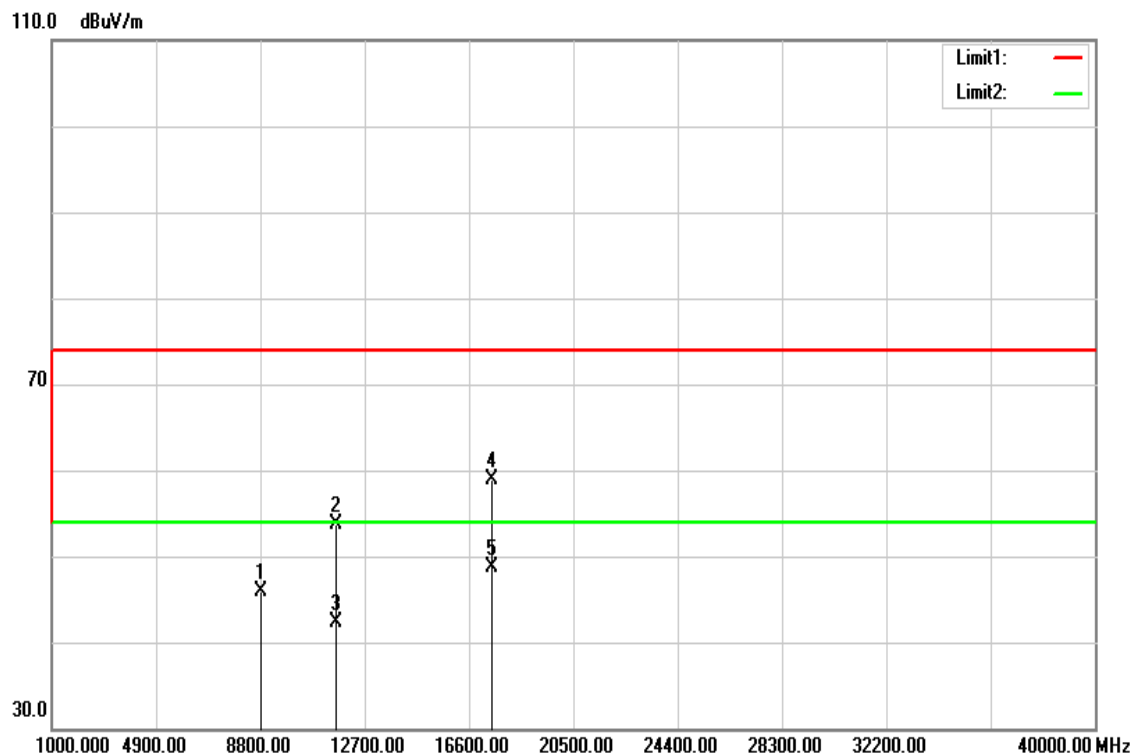


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	33.01	13.75	46.76	74.00	-27.24	peak
11650.000	43.15	16.91	60.06	74.00	-13.94	peak
11650.000	33.72	16.91	50.63	54.00	-3.37	AVG
17475.000	33.17	26.22	59.39	74.00	-14.61	peak
17475.000	22.20	26.22	48.42	54.00	-5.58	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11a / 5825 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

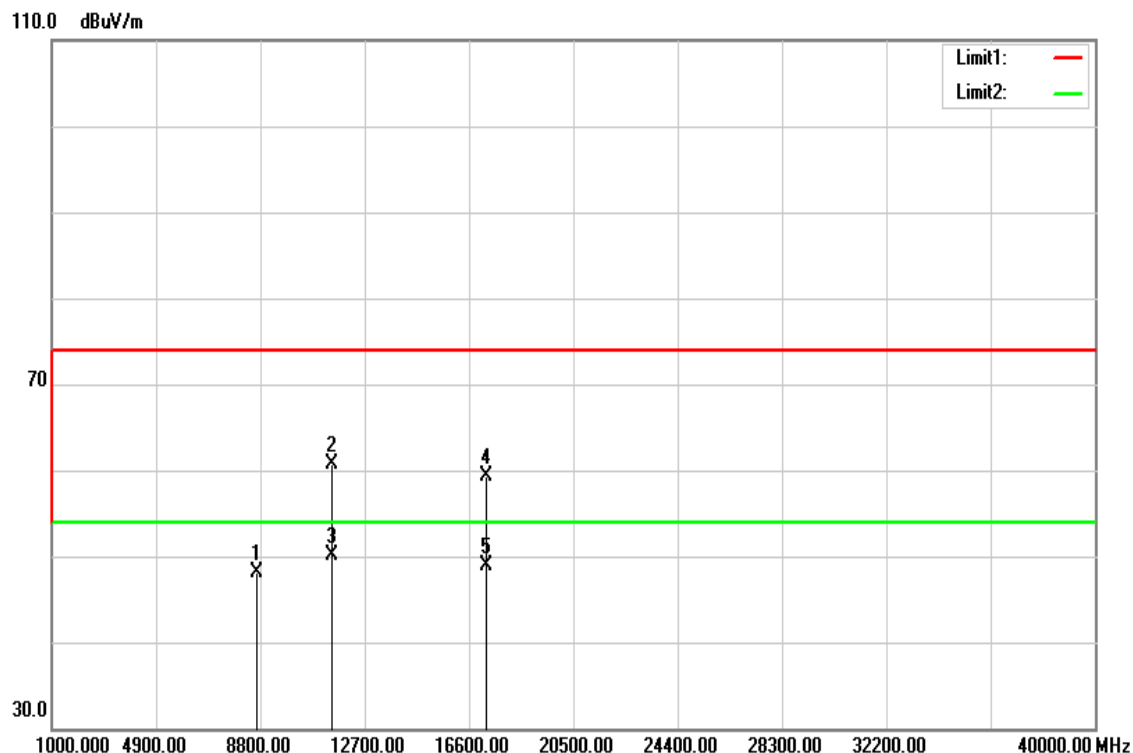


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8820.000	32.16	13.79	45.95	74.00	-28.05	peak
11650.000	36.78	16.91	53.69	74.00	-20.31	peak
11650.000	25.41	16.91	42.32	54.00	-11.68	AVG
17475.000	32.60	26.22	58.82	74.00	-15.18	peak
17475.000	22.42	26.22	48.64	54.00	-5.36	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5745 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

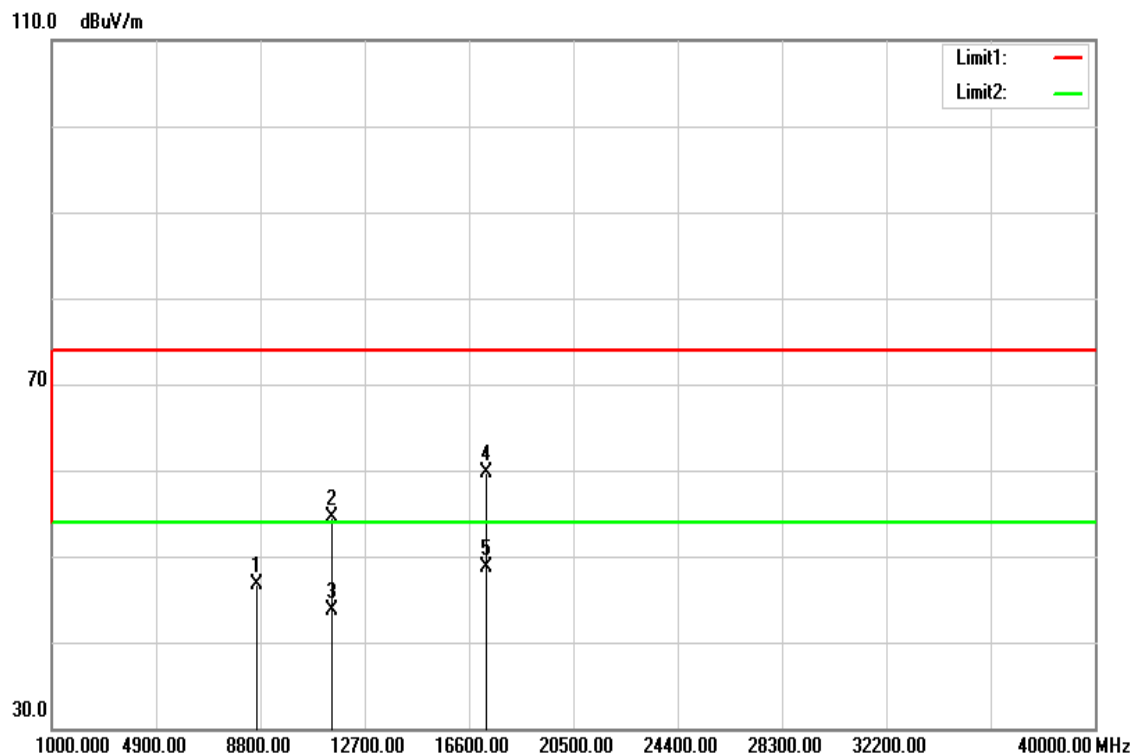


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8660.000	34.45	13.71	48.16	74.00	-25.84	peak
11490.000	43.98	16.78	60.76	74.00	-13.24	peak
11490.000	33.34	16.78	50.12	54.00	-3.88	AVG
17235.000	34.01	25.28	59.29	74.00	-14.71	peak
17235.000	23.66	25.28	48.94	54.00	-5.06	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20 / 5745 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

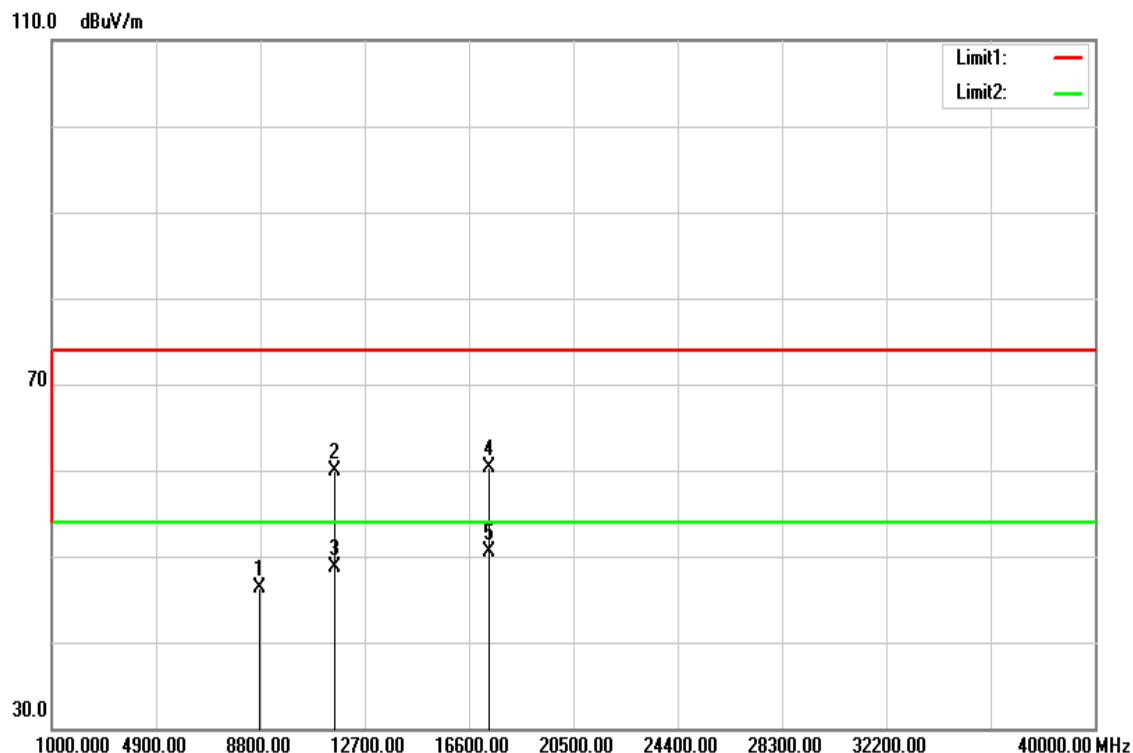


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8690.000	32.91	13.73	46.64	74.00	-27.36	peak
11490.000	37.79	16.78	54.57	74.00	-19.43	peak
11490.000	26.93	16.78	43.71	54.00	-10.29	AVG
17235.000	34.42	25.28	59.70	74.00	-14.30	peak
17235.000	23.34	25.28	48.62	54.00	-5.38	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20/ 5785 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

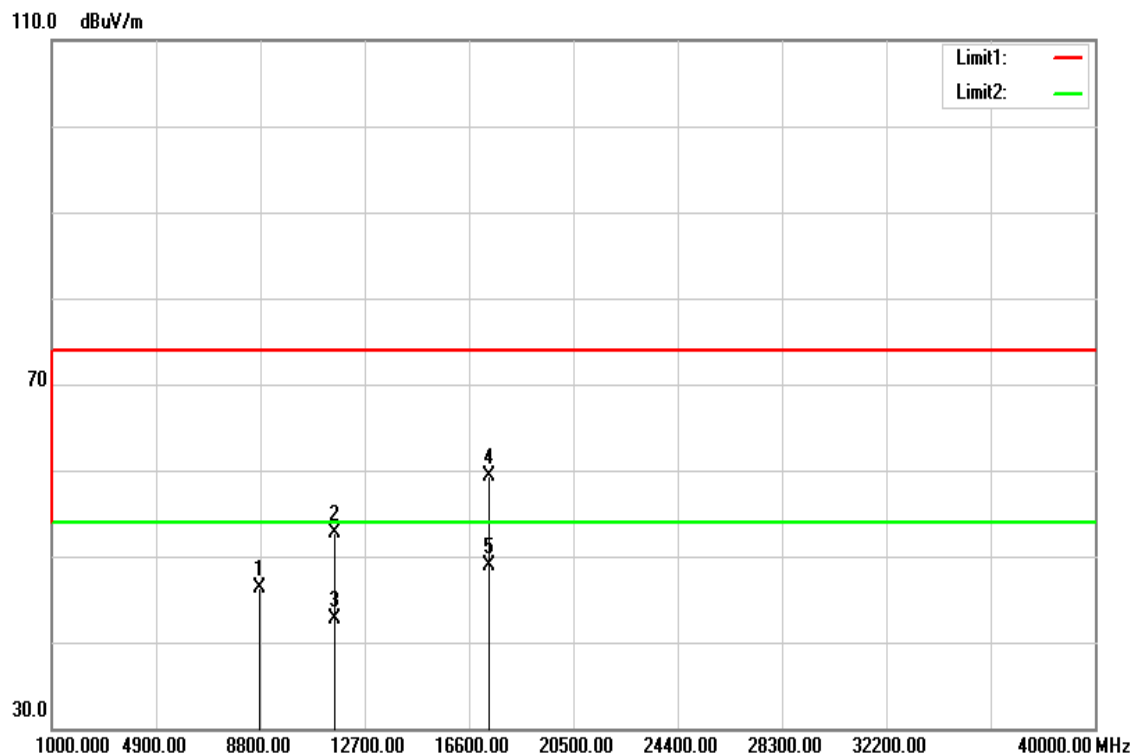


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8780.000	32.63	13.77	46.40	74.00	-27.60	peak
11570.000	43.12	16.84	59.96	74.00	-14.04	peak
11570.000	31.83	16.84	48.67	54.00	-5.33	AVG
17355.000	34.55	25.75	60.30	74.00	-13.70	peak
17355.000	24.69	25.75	50.44	54.00	-3.56	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20/ 5785 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

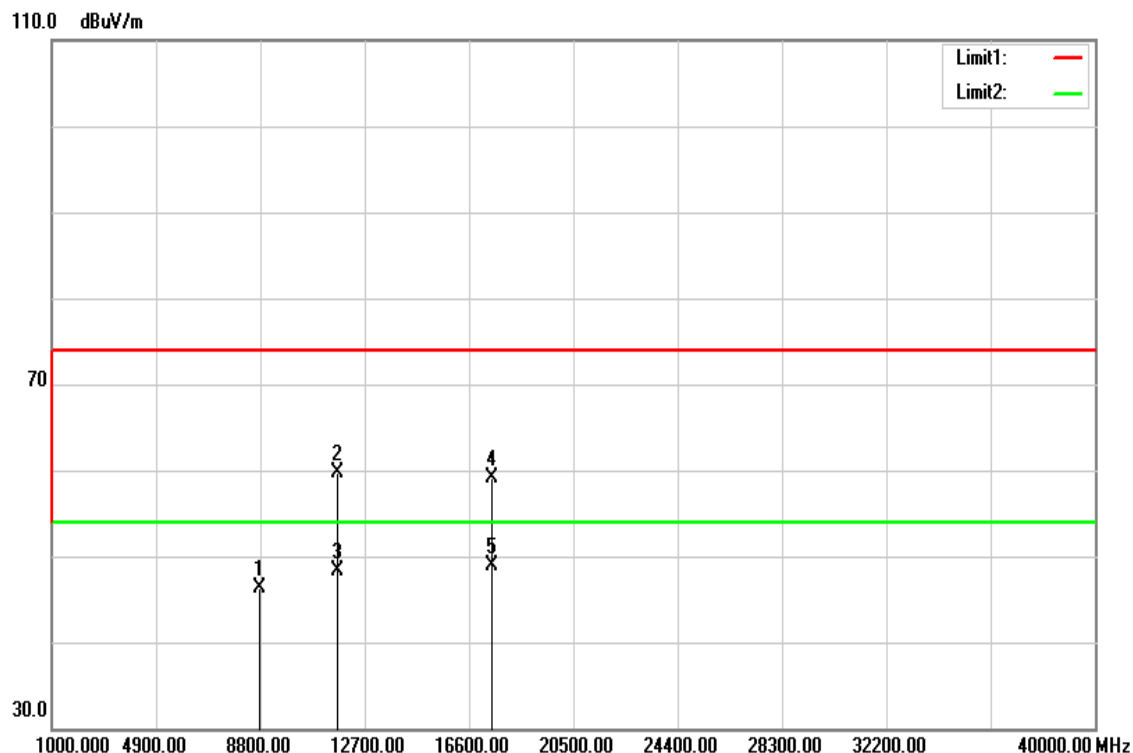


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8790.000	32.61	13.77	46.38	74.00	-27.62	peak
11570.000	35.91	16.84	52.75	74.00	-21.25	peak
11570.000	25.84	16.84	42.68	54.00	-11.32	AVG
17355.000	33.62	25.75	59.37	74.00	-14.63	peak
17355.000	23.18	25.75	48.93	54.00	-5.07	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20/ 5825 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

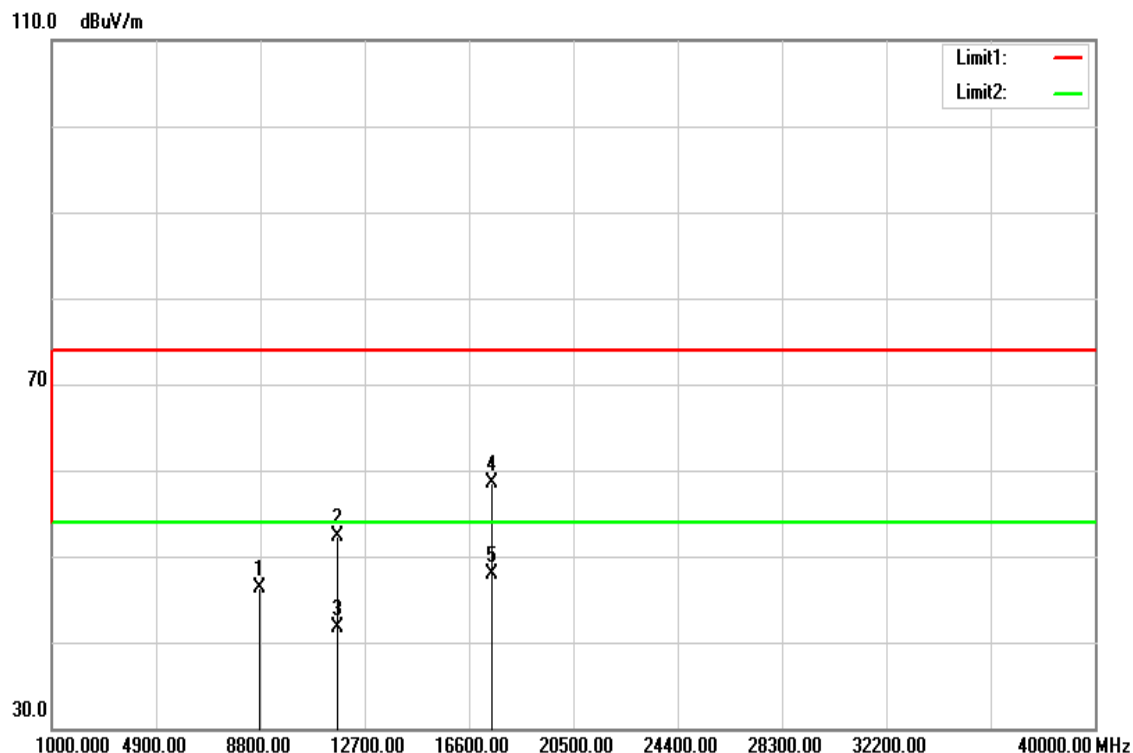


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8750.000	32.46	13.75	46.21	74.00	-27.79	peak
11660.000	42.78	16.92	59.70	74.00	-14.30	peak
11660.000	31.35	16.92	48.27	54.00	-5.73	AVG
17475.000	32.80	26.22	59.02	74.00	-14.98	peak
17475.000	22.71	26.22	48.93	54.00	-5.07	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT20/ 5825 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

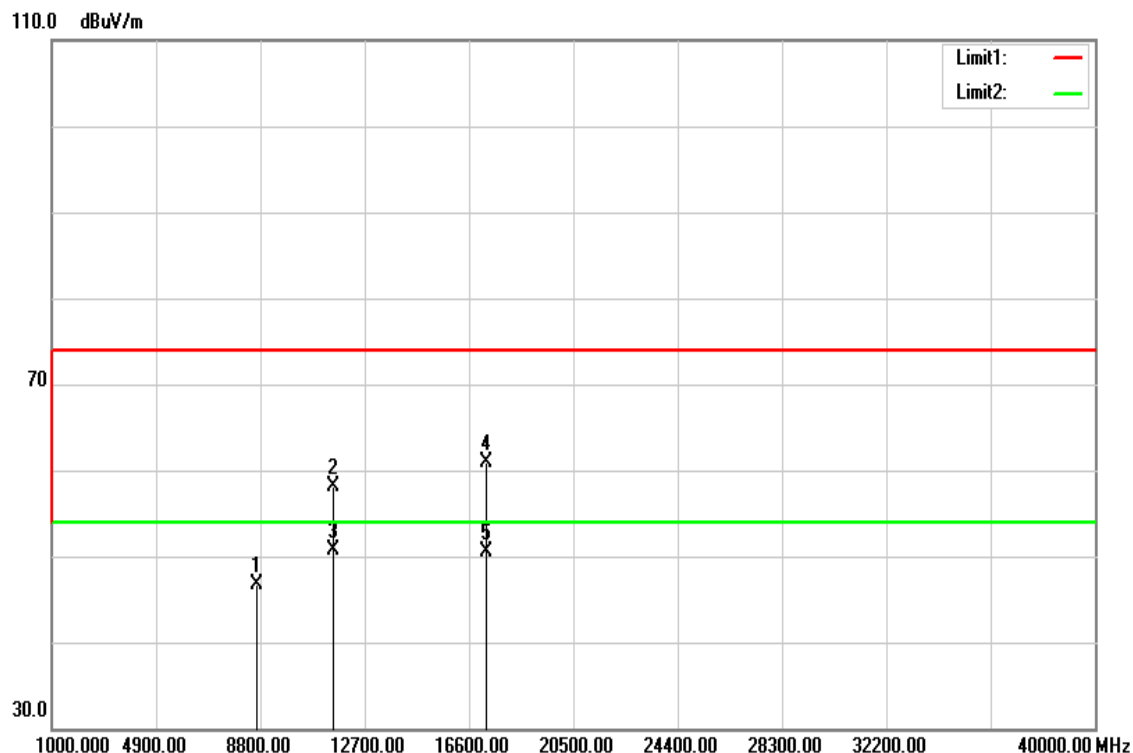


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8760.000	32.51	13.76	46.27	74.00	-27.73	peak
11660.000	35.42	16.92	52.34	74.00	-21.66	peak
11660.000	24.76	16.92	41.68	54.00	-12.32	AVG
17475.000	32.27	26.22	58.49	74.00	-15.51	peak
17475.000	21.72	26.22	47.94	54.00	-6.06	AVG

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40/ 5755 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

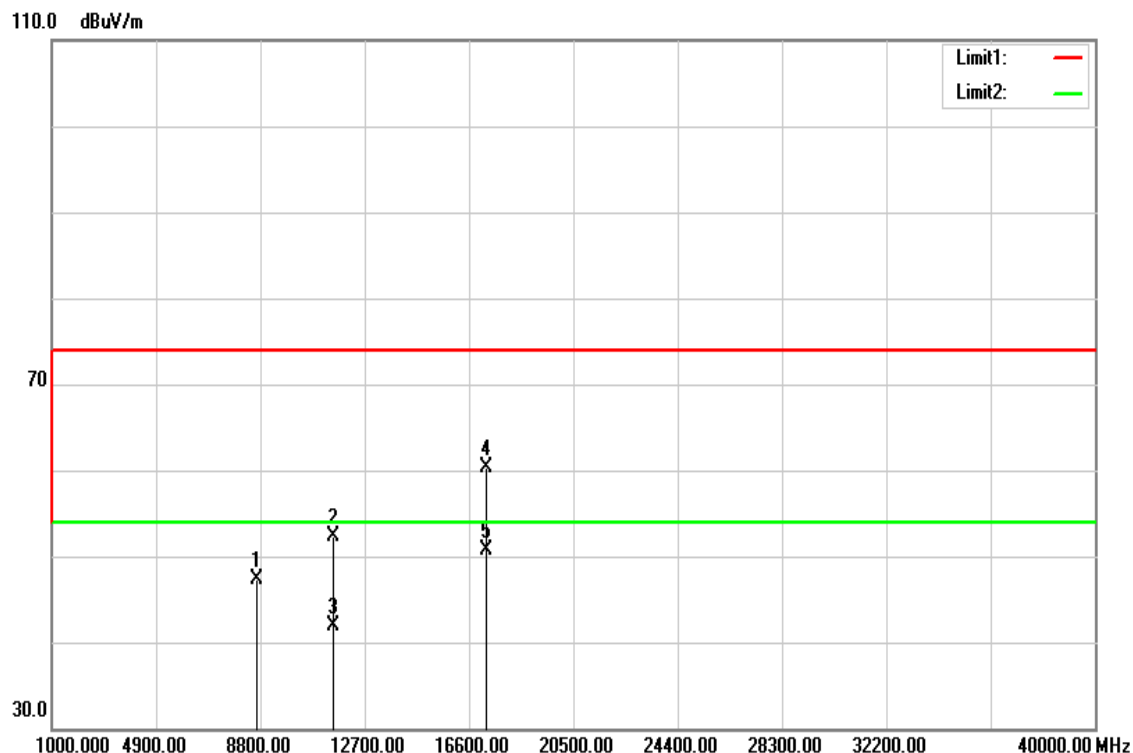


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8660.000	32.90	13.71	46.61	74.00	-27.39	peak
11510.000	41.37	16.79	58.16	74.00	-15.84	peak
11510.000	33.83	16.79	50.62	54.00	-3.38	AVG
17265.000	35.59	25.40	60.99	74.00	-13.01	peak
17265.000	25.08	25.40	50.48	54.00	-3.52	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40/ 5755 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

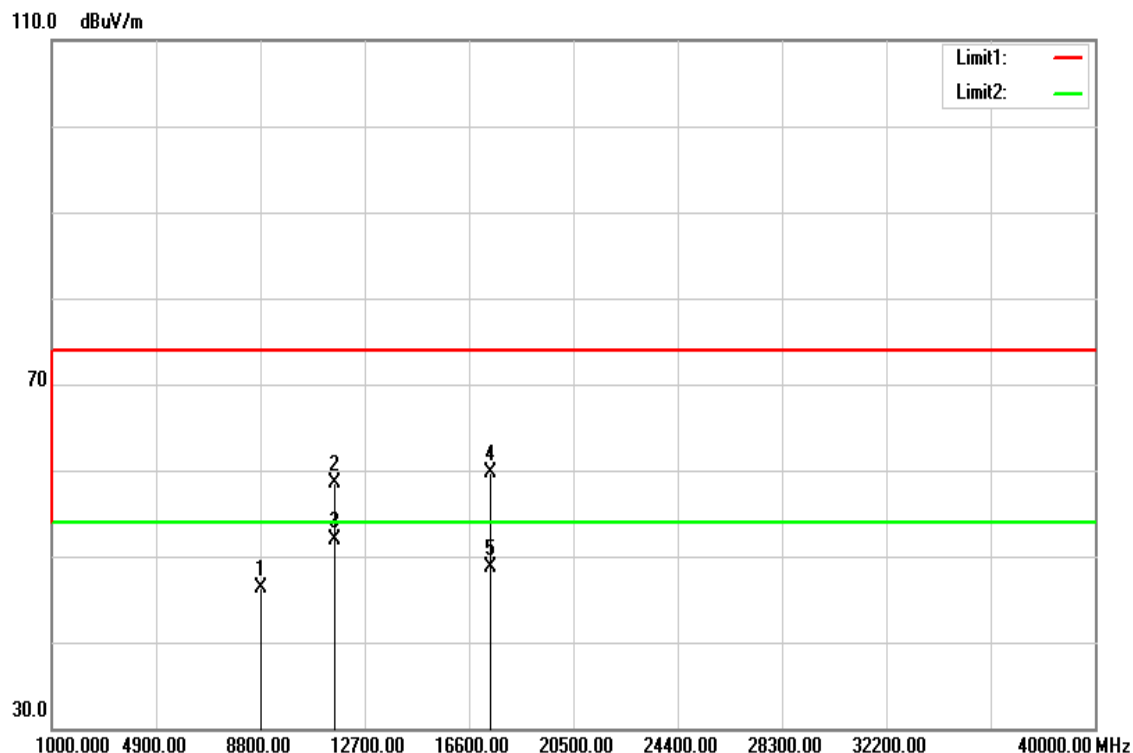


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8660.000	33.56	13.71	47.27	74.00	-26.73	peak
11510.000	35.45	16.79	52.24	74.00	-21.76	peak
11510.000	25.04	16.79	41.83	54.00	-12.17	AVG
17265.000	34.99	25.40	60.39	74.00	-13.61	peak
17265.000	25.29	25.40	50.69	54.00	-3.31	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40/ 5795 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

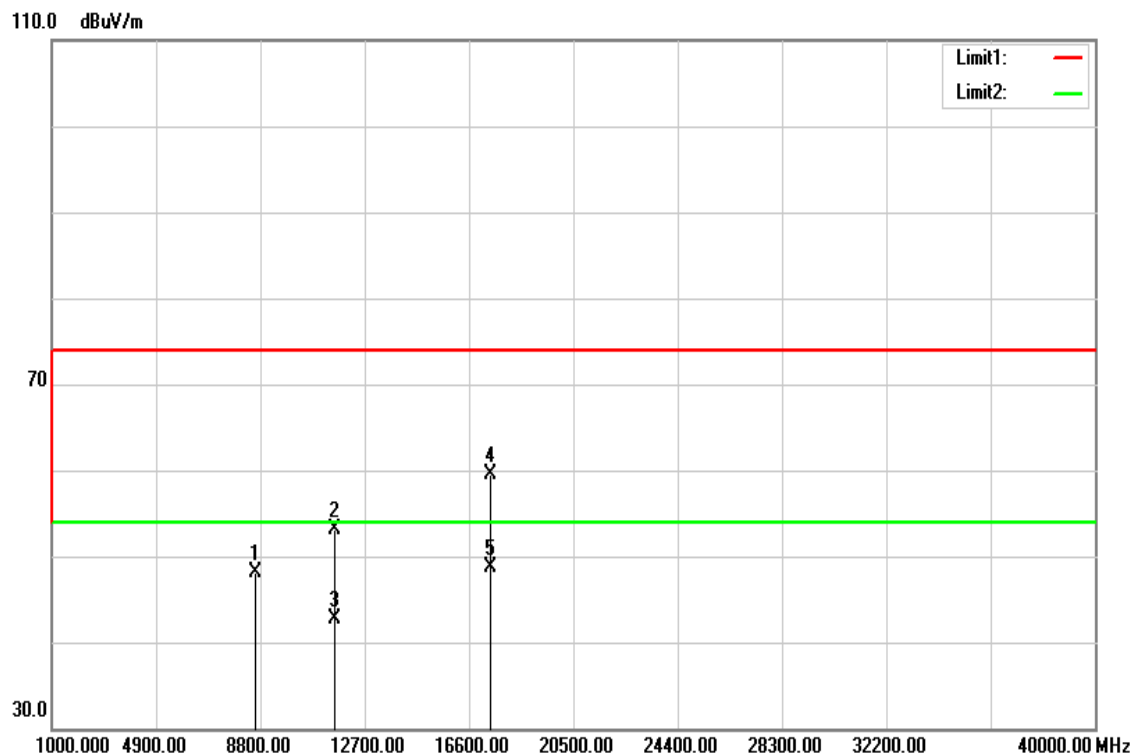


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8850.000	32.48	13.80	46.28	74.00	-27.72	peak
11590.000	41.55	16.86	58.41	74.00	-15.59	peak
11590.000	35.08	16.86	51.94	54.00	-2.06	AVG
17385.000	33.82	25.87	59.69	74.00	-14.31	peak
17385.000	22.75	25.87	48.62	54.00	-5.38	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11n HT40/ 5795 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

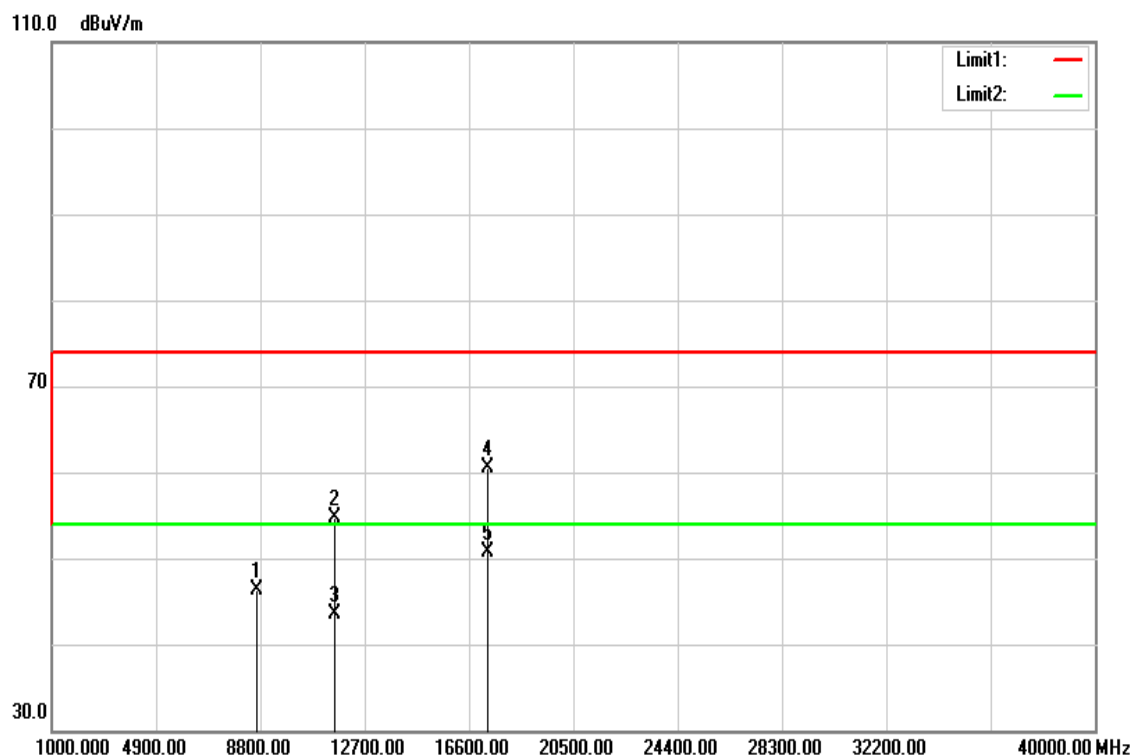


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8640.000	34.48	13.70	48.18	74.00	-25.82	peak
11590.000	36.29	16.86	53.15	74.00	-20.85	peak
11590.000	25.77	16.86	42.63	54.00	-11.37	AVG
17385.000	33.56	25.87	59.43	74.00	-14.57	peak
17385.000	22.87	25.87	48.74	54.00	-5.26	AVG

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11ac VHT80/ 5775 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

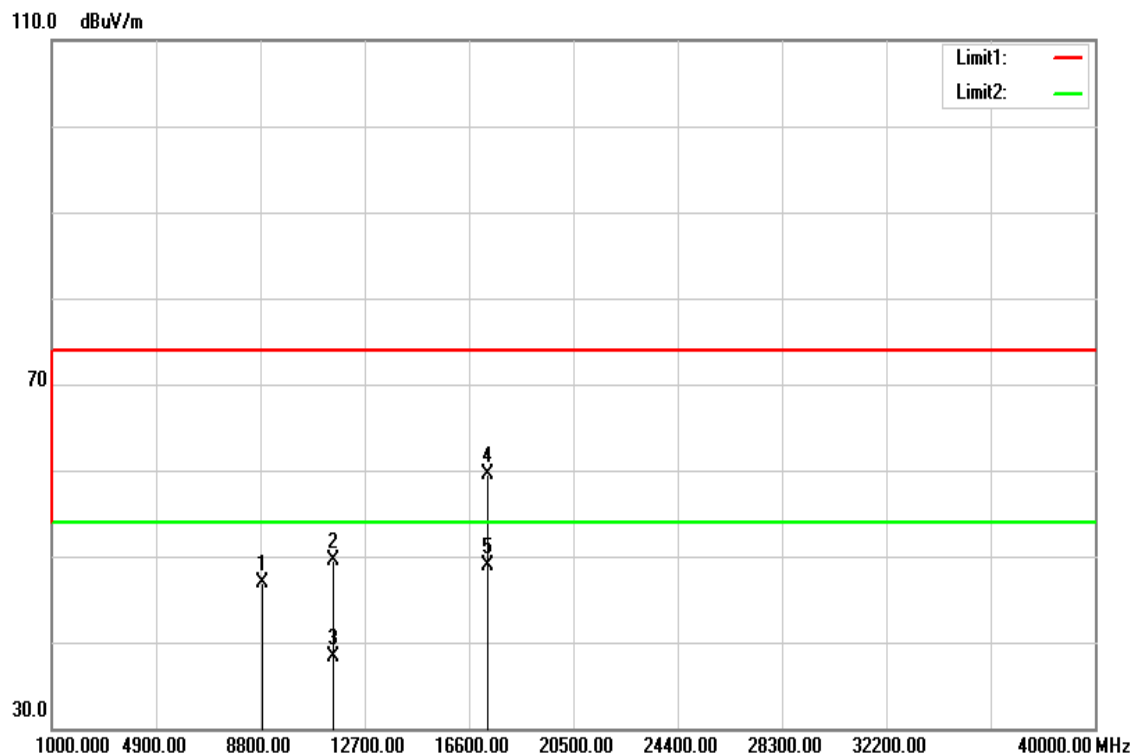


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8680.000	32.50	13.72	46.22	74.00	-27.78	peak
11570.000	37.92	16.84	54.76	74.00	-19.24	peak
11570.000	26.67	16.84	43.51	54.00	-10.49	AVG
17325.000	34.89	25.63	60.52	74.00	-13.48	peak
17325.000	25.04	25.63	50.67	54.00	-3.33	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	IEEE 802.11ac VHT80/ 5775 MHz	Temp/Hum	21(°C)/ 58%RH
Test Item	Harmonic	Test Date	Mar 28, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8870.000	33.07	13.81	46.88	74.00	-27.12	peak
11550.000	32.67	16.82	49.49	74.00	-24.51	peak
11550.000	21.46	16.82	38.28	54.00	-15.72	AVG
17325.000	33.97	25.63	59.60	74.00	-14.40	peak
17325.000	23.34	25.63	48.97	54.00	-5.03	AVG

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

4.6 FREQUENCY STABILITY

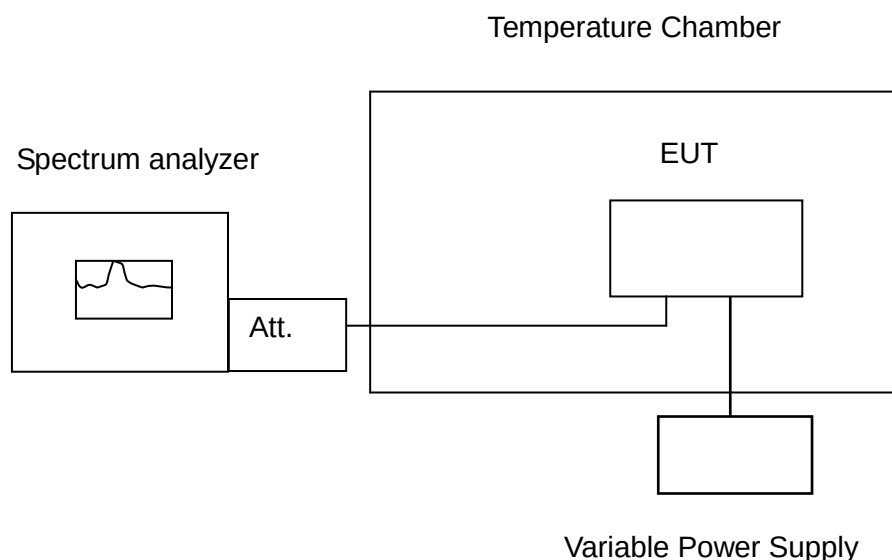
4.6.1 Test Limit

According to §15.407(g) manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the operational description.

4.6.2 Test Procedure

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

4.6.3 Test Setup



4.6.4 Test Result

Temp. (°C)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	5	5180.04698	5180.04564	5180.04324	5180.04485	9.0695	8.8108	8.3475	8.6583	
40	5	5180.04322	5180.04213	5180.04894	5180.04549	8.3436	8.1332	9.4479	8.7819	
30	5	5180.03864	5180.03896	5180.03846	5180.03564	7.4595	7.5212	7.4247	6.8803	
20	5	5180.03256	5180.03126	5180.03082	5180.03039	6.2857	6.0347	5.9498	5.8668	
10	5	5180.02543	5180.02584	5180.02847	5180.02864	4.9093	4.9884	5.4961	5.5290	
0	5	5180.01984	5180.01954	5180.01989	5180.01915	3.8301	3.7722	3.8398	3.6969	
-10	5	5180.00786	5180.00774	5180.00727	5180.00695	1.5174	1.4942	1.4035	1.3417	
-20	5	5179.99655	5179.99642	5179.99624	5179.99578	-0.6660	-0.6911	-0.7259	-0.8147	
Temp. (°C)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	4.5	5180.03505	5180.03531	5180.03556	5180.03577	6.7664	6.8166	6.8649	6.9054	
20	5	5180.03256	5180.03126	5180.03082	5180.03039	6.2857	6.0347	5.9498	5.8668	
20	5.5	5180.03154	5180.03168	5180.03177	5180.03198	6.0888	6.1158	6.1332	6.1737	

Temp. (°C)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	5	5260.04486	5260.04645	5260.04562	5260.04132	8.5285	8.8308	8.6730	7.8555	Pass
40	5	5260.03864	5260.03651	5260.03544	5260.03894	7.3460	6.9411	6.7376	7.4030	Pass
30	5	5260.02556	5260.02856	5260.02159	5260.02896	4.8593	5.4297	4.1046	5.5057	Pass
20	5	5260.01997	5260.01737	5260.01606	5260.01563	3.7966	3.3023	3.0532	2.9715	Pass
10	5	5260.00856	5260.00854	5260.00485	5260.00856	1.6274	1.6236	0.9221	1.6274	Pass
0	5	5259.99564	5259.99584	5259.99514	5259.99897	-0.8289	-0.7909	-0.9240	-0.1958	Pass
-10	5	5259.97648	5259.97513	5259.99854	5259.99096	-4.4715	-4.7281	-0.2776	-1.7186	Pass
-20	5	5259.97615	5259.97145	5259.97485	5259.96847	-4.5342	-5.4278	-4.7814	-5.9943	Pass
Temp. (°C)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	4.5	5260.01932	5260.01769	5260.01686	5260.01568	3.6730	3.3622	3.2061	2.9817	Pass
20	5	5260.01997	5260.01737	5260.01606	5260.01563	3.7966	3.3023	3.0532	2.9715	Pass
20	5.5	5260.01957	5260.01765	5260.01684	5260.01584	3.7202	3.3555	3.2015	3.0114	Pass

Temp. (°C)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	5	5500.04516	5500.04214	5500.04821	5500.04284	8.2109	7.6618	8.7655	7.7891	Pass
40	5	5500.03134	5500.03984	5500.03880	5500.03546	5.6982	7.2436	7.0536	6.4473	Pass
30	5	5500.02432	5500.02685	5500.02891	5500.02891	4.4218	4.8818	5.2564	5.2564	Pass
20	5	5500.01693	5500.01737	5500.01693	5500.01650	3.0782	3.1582	3.0782	3.0000	Pass
10	5	5500.00849	5500.00815	5500.00651	5500.00849	1.5436	1.4818	1.1836	1.5436	Pass
0	5	5499.99516	5499.99213	5499.99945	5499.99861	-0.8800	-1.4309	-0.1000	-0.2527	Pass
-10	5	5499.98484	5499.98849	5499.98561	5499.98516	-2.7564	-2.0927	-2.6164	-2.6982	Pass
-20	5	5499.98516	5499.98216	5499.98411	5499.98546	-2.6982	-3.2436	-2.8891	-2.6436	Pass
Temp. (°C)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	4.5	5500.01851	5500.01849	5500.01546	5500.01891	3.3655	3.3618	2.8109	3.4382	Pass
20	5	5500.01693	5500.01737	5500.01693	5500.01650	3.0782	3.1582	3.0782	3.0000	Pass
20	5.5	5500.01754	5500.01785	5500.01984	5500.01849	3.1891	3.2453	3.6073	3.3618	Pass

Temp. (°C)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	5	5745.04461	5745.04216	5745.04514	5745.04169	7.7650	7.3386	7.8573	7.2567	Pass
40	5	5745.03548	5745.03747	5745.03848	5745.03849	6.1758	6.5222	6.6980	6.6997	Pass
30	5	5745.02549	5745.02516	5745.02546	5745.02849	4.4369	4.3795	4.4317	4.9591	Pass
20	5	5745.01693	5745.01650	5745.01606	5745.01563	2.9469	2.8721	2.7955	2.7206	Pass
10	5	5745.00874	5745.00849	5745.00156	5745.00496	1.5213	1.4778	0.2715	0.8634	Pass
0	5	5744.99213	5744.99189	5744.99189	5744.99254	-1.3699	-1.4117	-1.4117	-1.2985	Pass
-10	5	5744.98564	5744.98126	5744.98546	5744.98570	-2.4996	-3.2620	-2.5309	-2.4891	Pass
-20	5	5744.98546	5744.98195	5744.98150	5744.98125	-2.5309	-3.1419	-3.2202	-3.2637	Pass
Temp. (°C)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	4.5	5745.01719	5745.01894	5745.01665	5745.01965	2.9922	3.2968	2.8982	3.4204	Pass
20	5	5745.01693	5745.01650	5745.01606	5745.01563	2.9469	2.8721	2.7955	2.7206	Pass
20	5.5	5745.01562	5745.01896	5745.01895	5745.01984	2.7185	3.3003	3.2988	3.4534	Pass

4.7 DYNAMIC FREQUENCY SELECTION

4.7.1 Test Limit

FCC according to §15.407 (h), KDB 905462 D02 "compliance measurement procedures for unlicensed-national information infrastructure devices operating in the 5250-5350 MHz and 5470-5725 MHz bands incorporating dynamic frequency selection". and KDB 905462 D03 " U-NII client devices without radar detection capability.

IC according RSS-247 section 6.3, and it harmonized with FCC Part 15 DFS rules.

The EIRP refer section 4.3 output power measurement in this report.

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client(with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth mods	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

Table 3: Interference Threshold values, Master or Client incorporating In-Service

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note 3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	Roundup $\left\{ \left(\frac{1}{360} \right) \cdot \left(\frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

Table 6 – Long Pulse Radar Test Signal

Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

4.7.2 Test Procedure

Overview Of EUT With Respect To §15.407 (H) Requirements

The firmware installed in the EUT during testing was:

Firmware Rev: JEDI.MP2.mt76x2u.wifi.v3.1.0

The EUT operates over the 5250-5350 MHz range as a Client Device that does not have radar detection capability.

The EUT uses one transmitter connected to two 50-ohm coaxial antenna ports via a diversity switch. Only one antenna port is connected to the test system since the EUT has one antenna only.

The Slave device associated with the EUT during these tests does not have radar detection capability.

WLAN traffic is generated by streaming the video file TestFile.mp2 “6 ½ Magic Hours” from the Master to the Slave in full motion video mode using the media player with the V2.61 Codec package.

The EUT utilizes the 802.11a architecture, with a nominal channel bandwidth of 20 MHz.

The rated output power of the Master unit is < 23dBm (EIRP). Therefore the required interference threshold level is -62 dBm. After correction for antenna gain and procedural adjustments, the required conducted threshold at the antenna port is $-62 + 5 = -57\text{dBm}$.

The calibrated conducted DFS Detection Threshold level is set to -57 dBm. The tested level is lower than the required level hence it provides margin to the limit.

Manufacturer’s Statement Regarding Uniform Channel Spreading

The end product implements an automatic channel selection feature at startup such that operation commences on channels distributed across the entire set of allowed 5GHz channels. This feature will ensure uniform spreading is achieved while avoiding non-allowed channels due to prior radar events.

TEST AND MEASUREMENT SYSTEM

System Overview

The measurement system is based on a conducted test method.

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

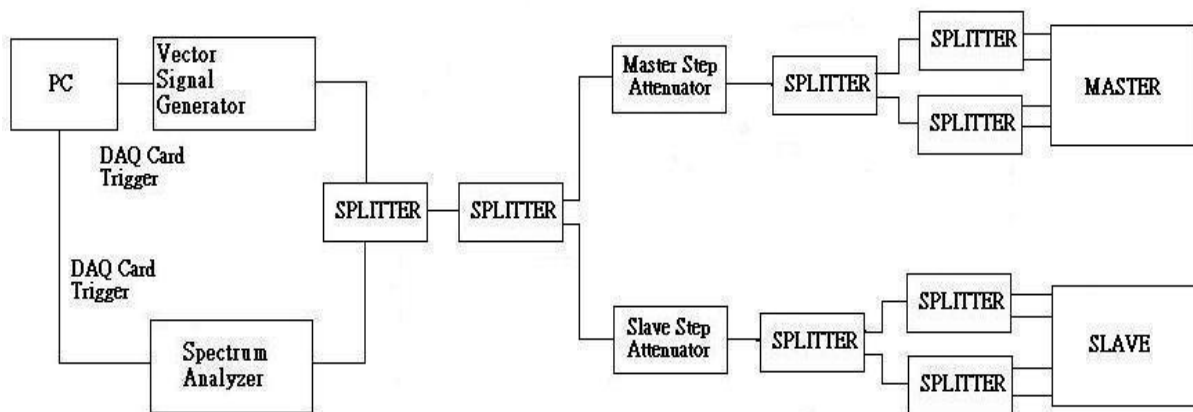
The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from FL to FH for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer set to display 8001 bins on the horizontal axis. The time-domain resolution is 2 msec / bin with a 16 second sweep time, meeting the 10 second short pulse reporting criteria. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold. The time-domain resolution is 3 msec / bin with a 24 second sweep time, meeting the 22 second long pulse reporting criteria and allowing a minimum of 10 seconds after the end of the long pulse waveform.

Should multiple RF ports be utilized for the Master and/or Slave devices (for example, for diversity or MIMO implementations), 50 ohm termination would be removed from the splitter so that connection can be established between splitter and the Master and/or Slave devices.

Conducted Method System Block Diagram



System Calibration

Connect the spectrum analyzer to the test system in place of the master device. Set the signal generator to CW mode. Adjust the amplitude of the signal generator to yield a measured level of –62 dBm on the spectrum analyzer.

Without changing any of the instrument settings, reconnect the spectrum analyzer to the Common port of the Spectrum Analyzer Combiner/Divider and connect a 50 ohm load to the Master Device port of the test system.

Measure the amplitude and calculate the difference from –62 dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference. Confirm that the signal is displayed at –62 dBm. Readjust the RBW and VBW to 3 MHz, set the span to 10 MHz, and confirm that the signal is still displayed at –62 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –62 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

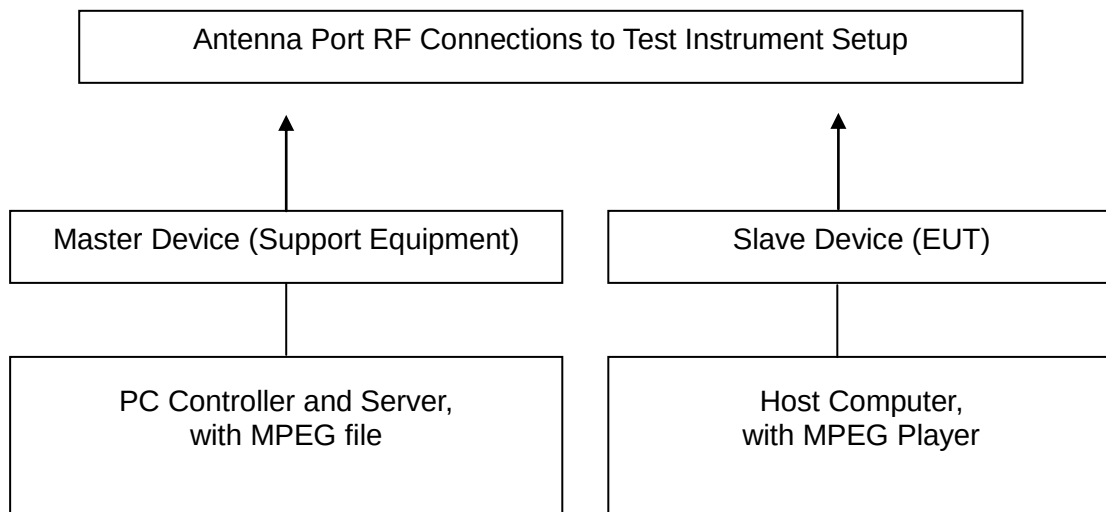
Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection threshold. Separate signal generator amplitude settings are determined as required for each radar type.

Adjustment Of Displayed Traffic Level

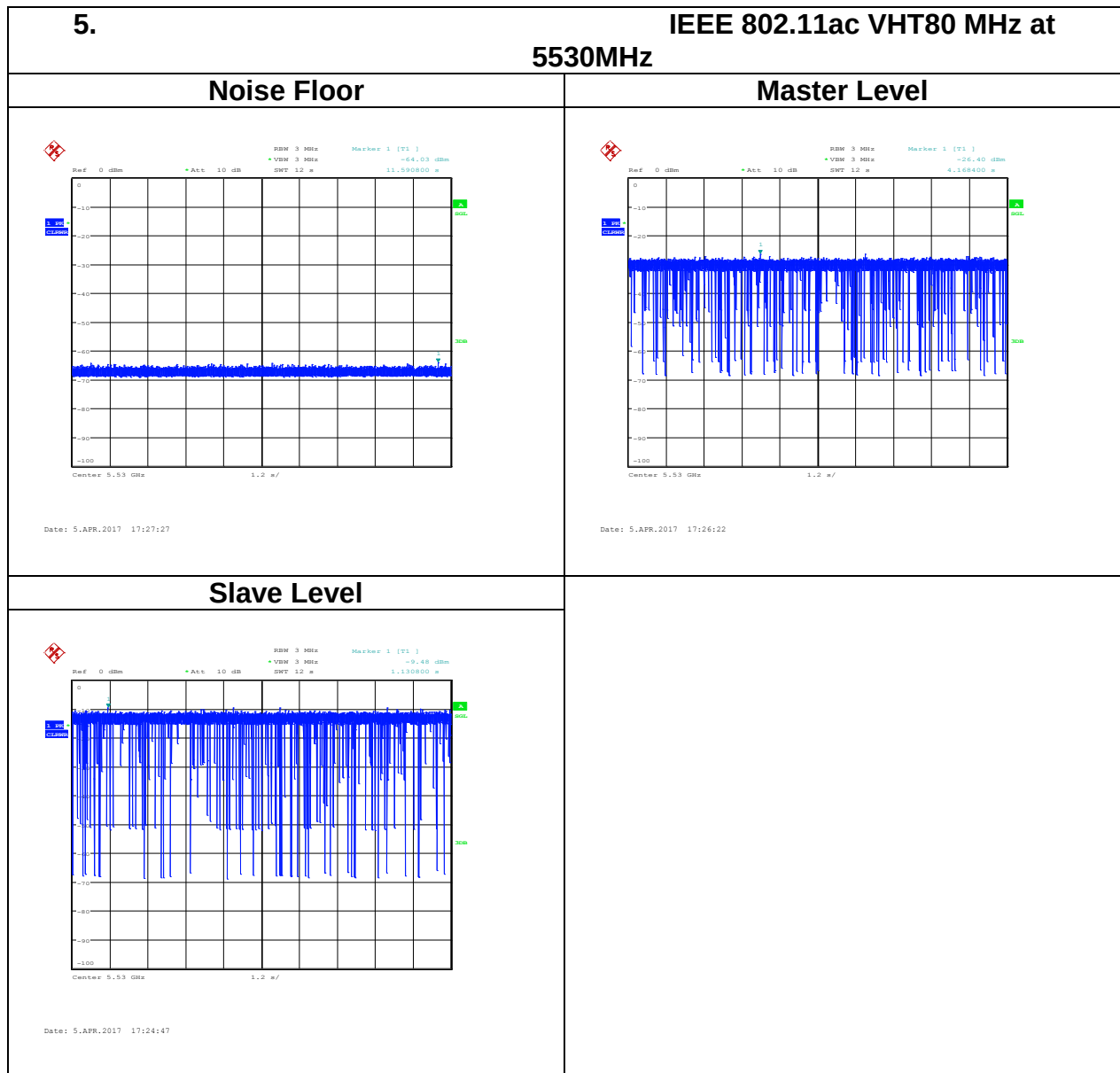
Establish a link between the Master and Slave, adjusting the Link Step Attenuator as needed to provide a suitable received level at the Master and Slave devices. Stream the video test file to generate WLAN traffic. Confirm that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold. Confirm that the displayed traffic is from the Master Device. For Master Device testing confirm that the displayed traffic does not include Slave Device traffic. For Slave Device testing confirm that the displayed traffic does not include Master Device traffic.

If a different setting of the Master Step Attenuator is required to meet the above conditions, perform a new System Calibration for the new Master Step Attenuator setting.

4.7.3 Test Setup

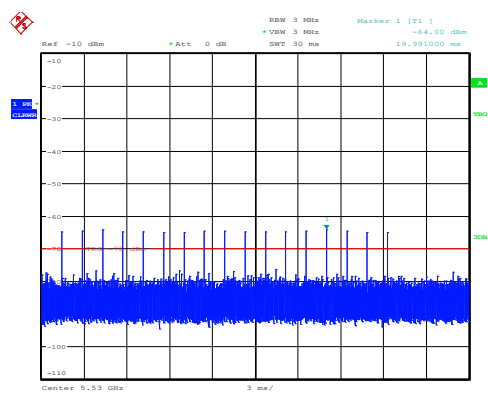


4.7.4 Test Result



Radar Waveforms

Sample of short Pluse Radar Type 0



Date: 5.APR.2017 16:23:47

TEST CHANNEL AND METHOD

All tests were performed at a channel center frequency of 5530 MHz utilizing a conducted test method.

CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME**GENERAL REPORTING NOTES**

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =

(Number of analyzer bins showing transmission) * (dwell time per bin)

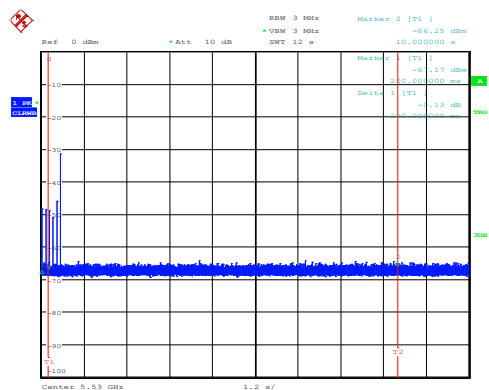
The observation period over which the aggregate time is calculated

Begins at (Reference Marker + 200 msec) and

Ends no earlier than (Reference Marker + 10 sec).

IEEE 802.11ac VHT 80 MHz at 5530

Type 1_Channel Move Time



Date: 5.APR.2017 17:39:34

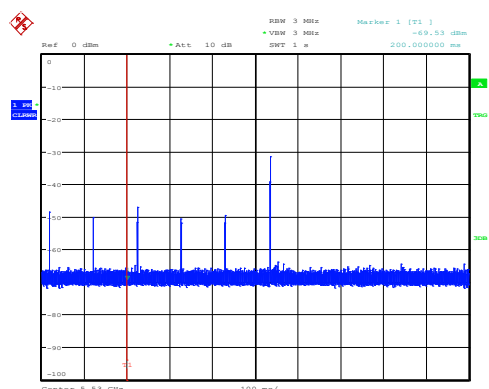
Channel Move Time
(ms)

200

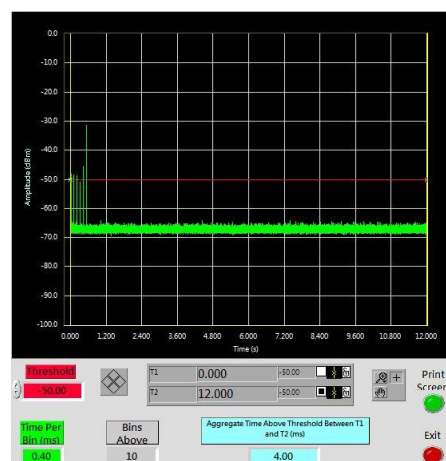
Limit
(s)

10

IEEE 802.11ac VHT 80 MHz at 5530

Type 1_Channel closing transmisssion
time

Date: 5.APR.2017 17:49:45

Type 1_Channel closing transmisssion
time-caculateAggregate Transmission Time
(ms)

4

Limit
(ms)

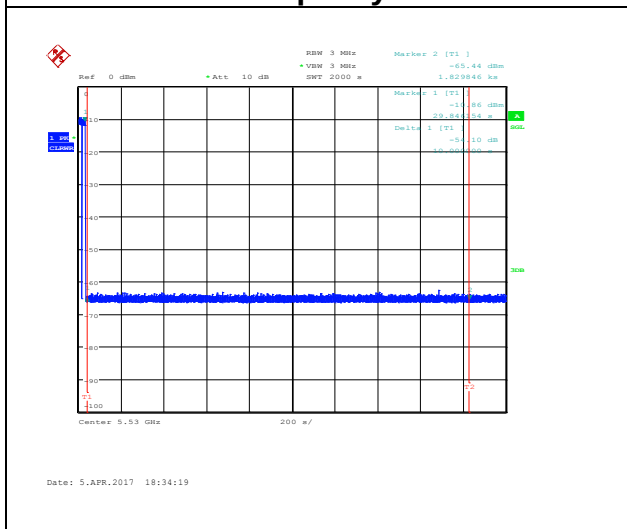
60

Margin
(ms)

-54

IEEE 802.11ac VHT 80 MHz at 5530

Non-Occupancy Period



Remark :

1. No EUT transmissions were observed on the test channel during the 30 minute observation time.