

Fig. 46 Conducted Spurious Emission (802.11ac-HT20, Ch157, 25 GHz-40 GHz)

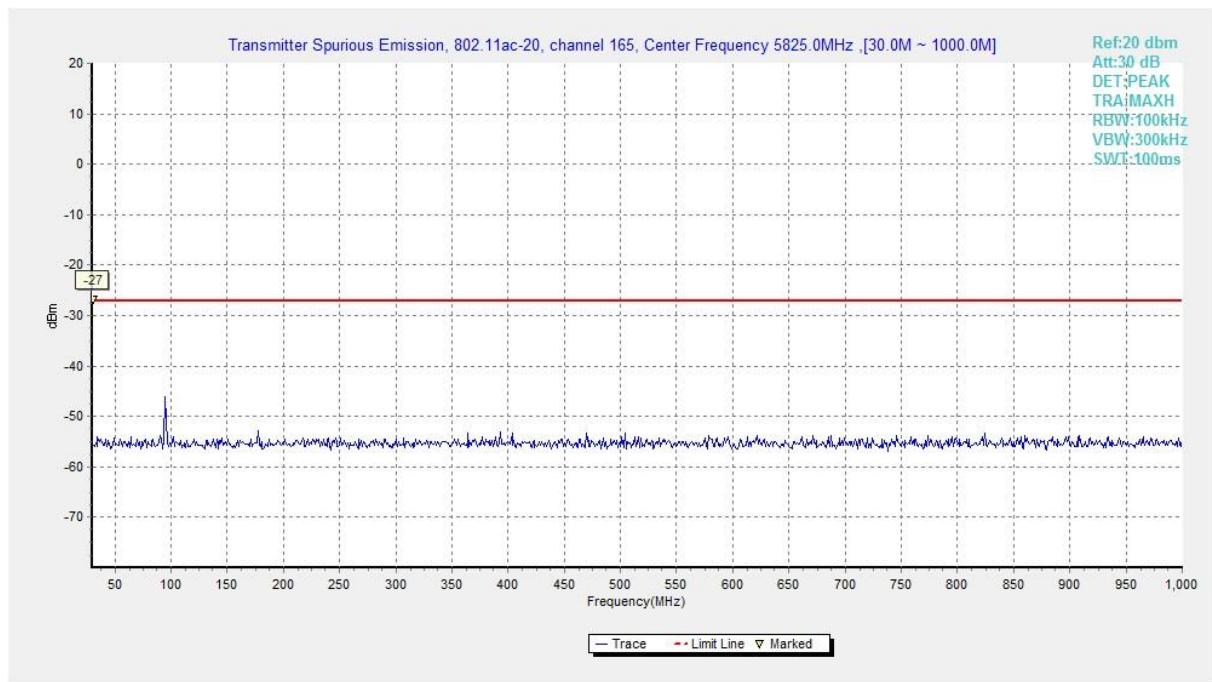


Fig. 47 Conducted Spurious Emission (802.11ac-HT20, Ch165, 30 MHz-1 GHz)

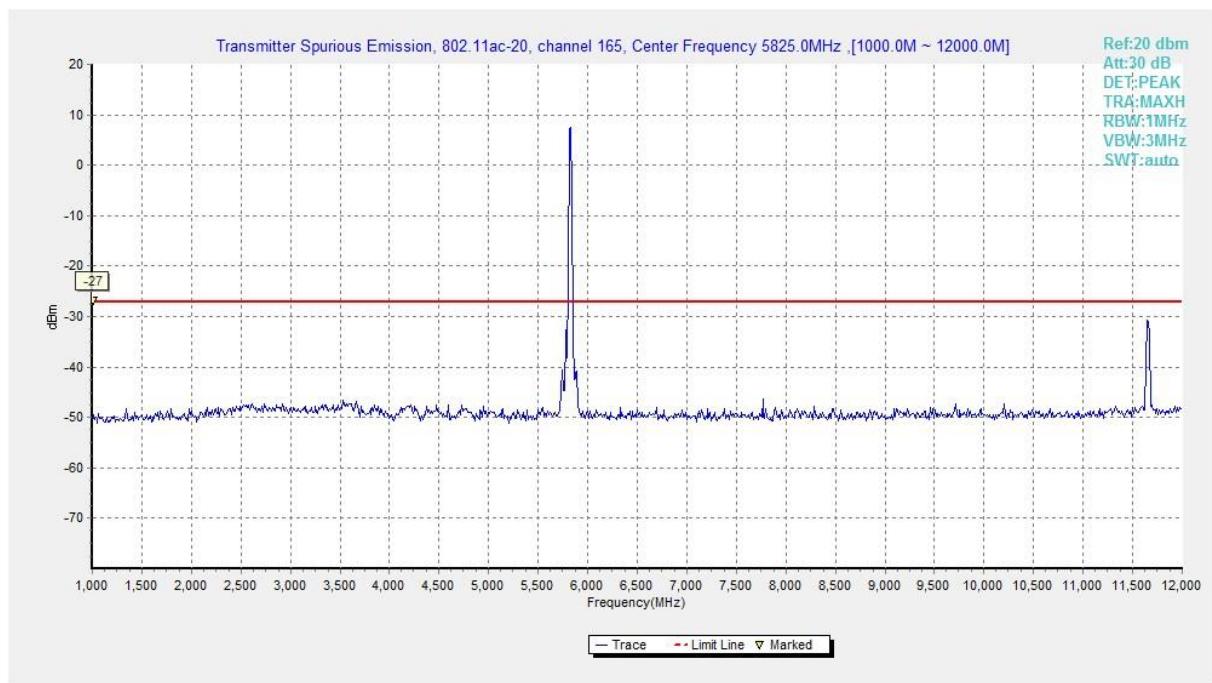


Fig. 48 Conducted Spurious Emission (802.11ac-HT20, Ch165, 1 GHz -12 GHz)

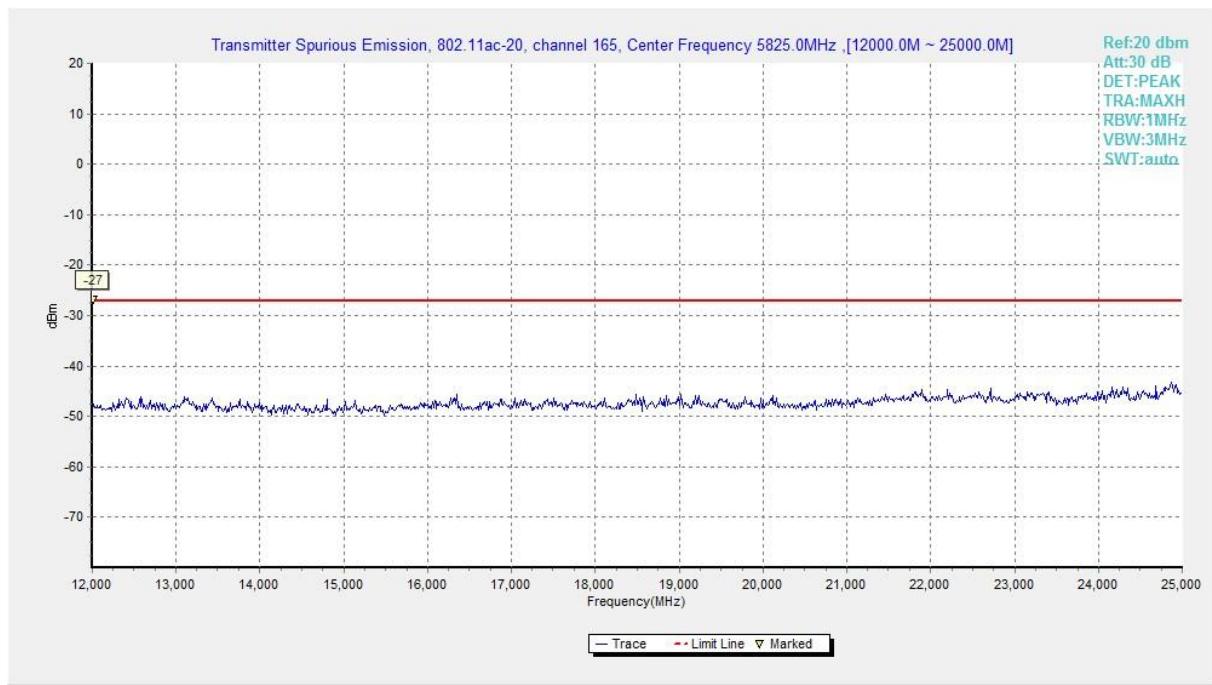


Fig. 49 Conducted Spurious Emission (802.11ac-HT20, Ch165, 12 GHz-25 GHz)

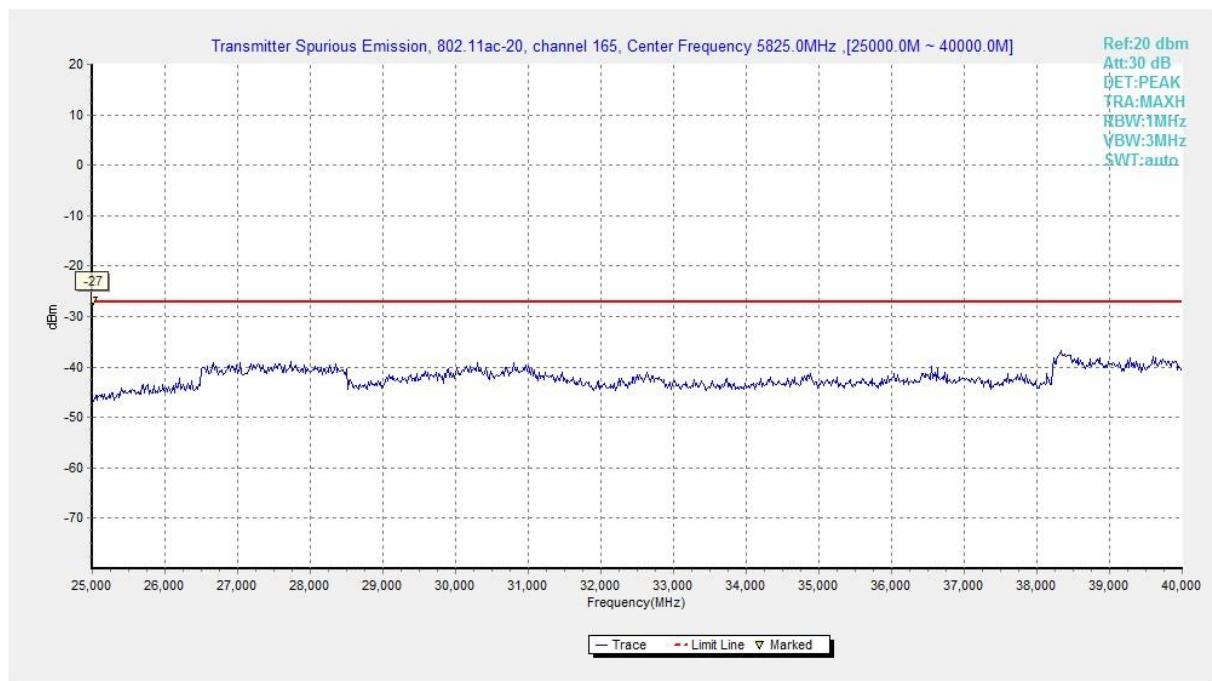


Fig. 50 Conducted Spurious Emission (802.11ac-HT20, Ch165, 25 GHz-40 GHz)

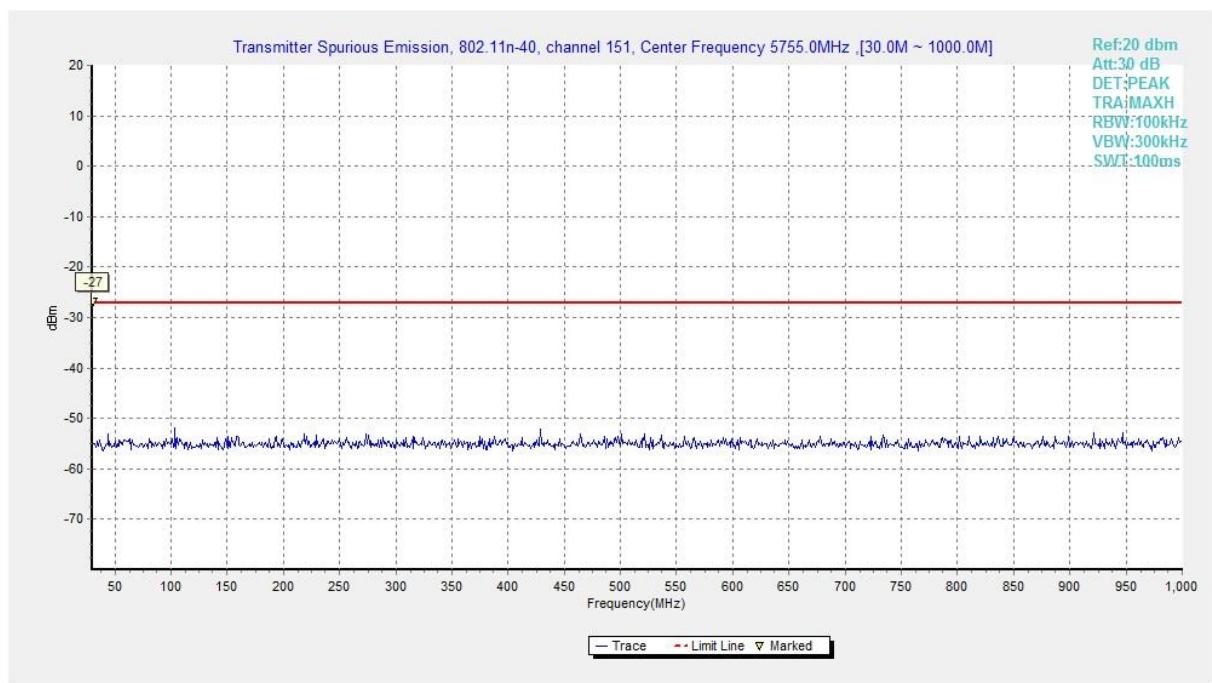


Fig. 51 Conducted Spurious Emission (802.11n-HT40, Ch151, 30 MHz-1 GHz)

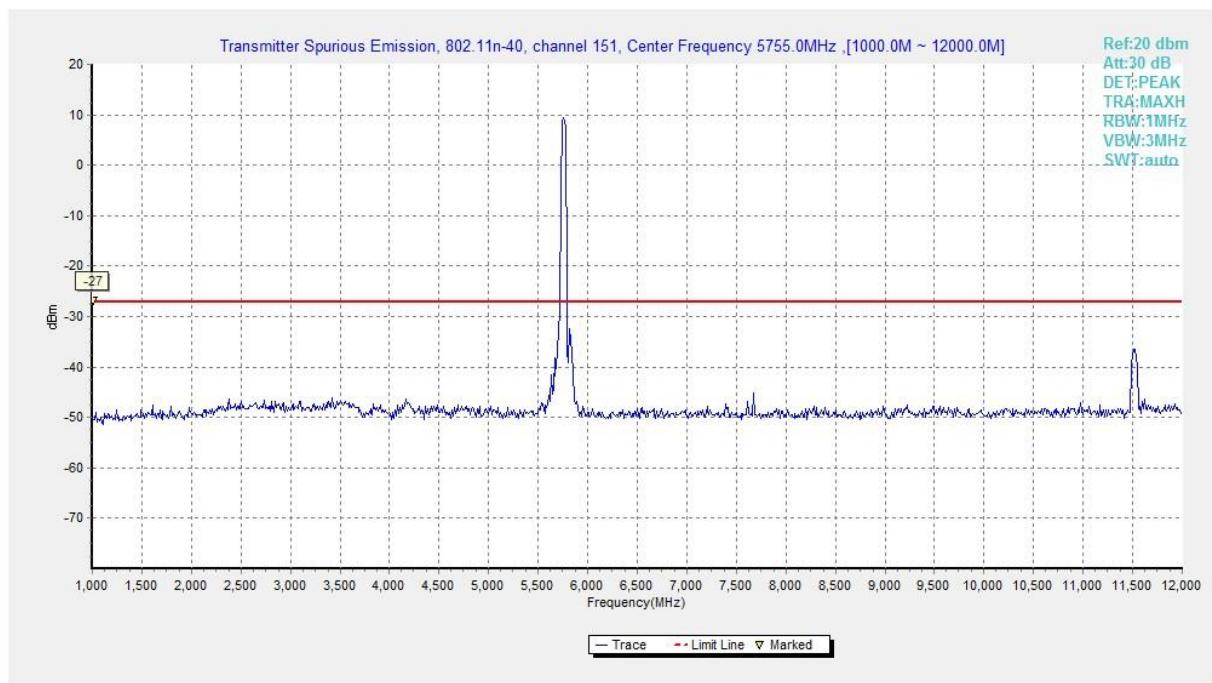


Fig. 52 Conducted Spurious Emission (802.11n-HT40, Ch151, 1 GHz -12 GHz)

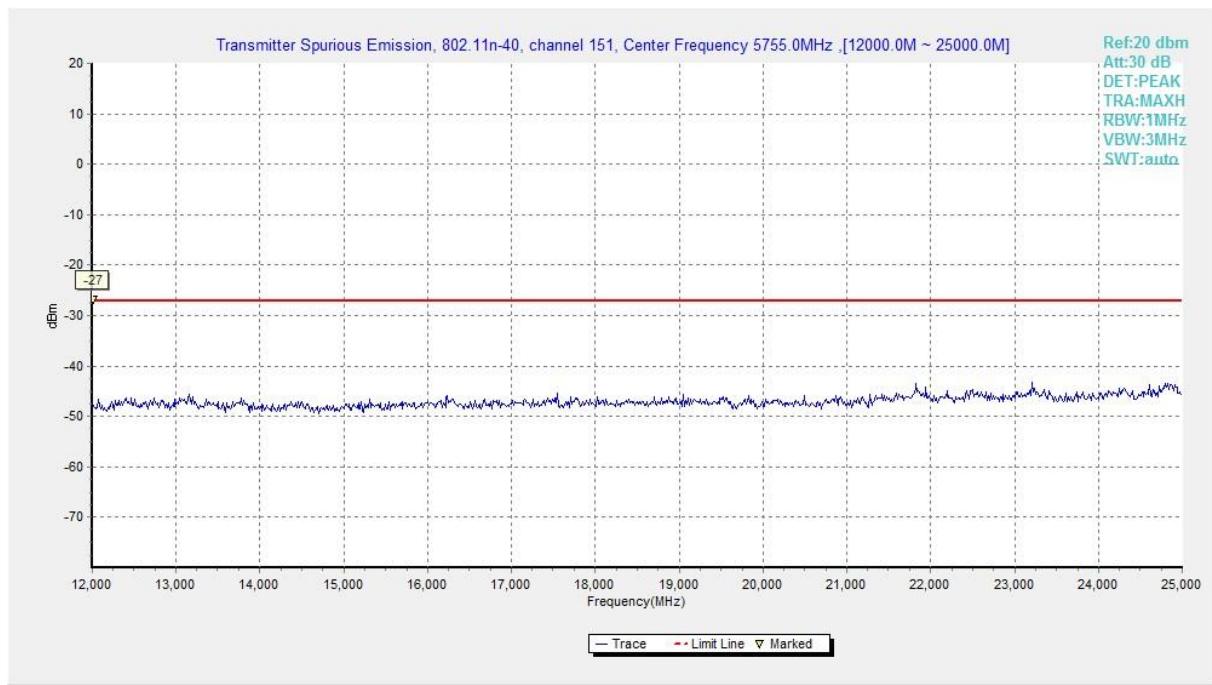


Fig. 53 Conducted Spurious Emission (802.11n-HT40, Ch151, 12 GHz-25 GHz)

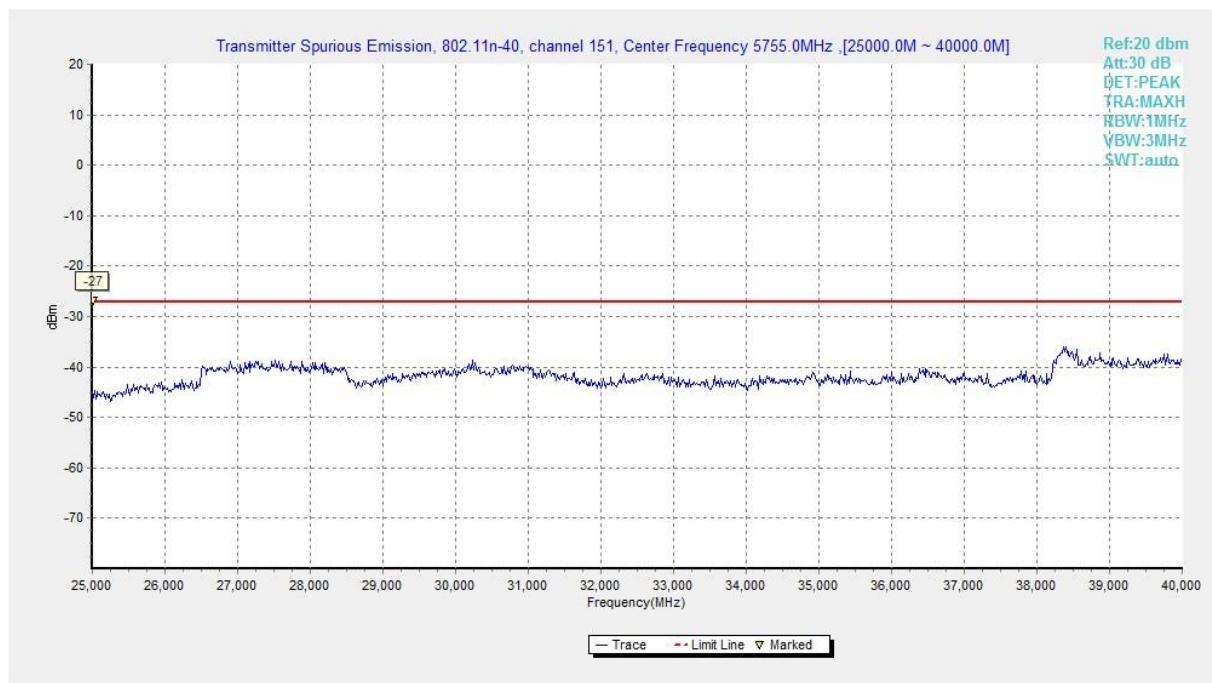


Fig. 54 Conducted Spurious Emission (802.11n-HT40, Ch151, 25 GHz-40 GHz)

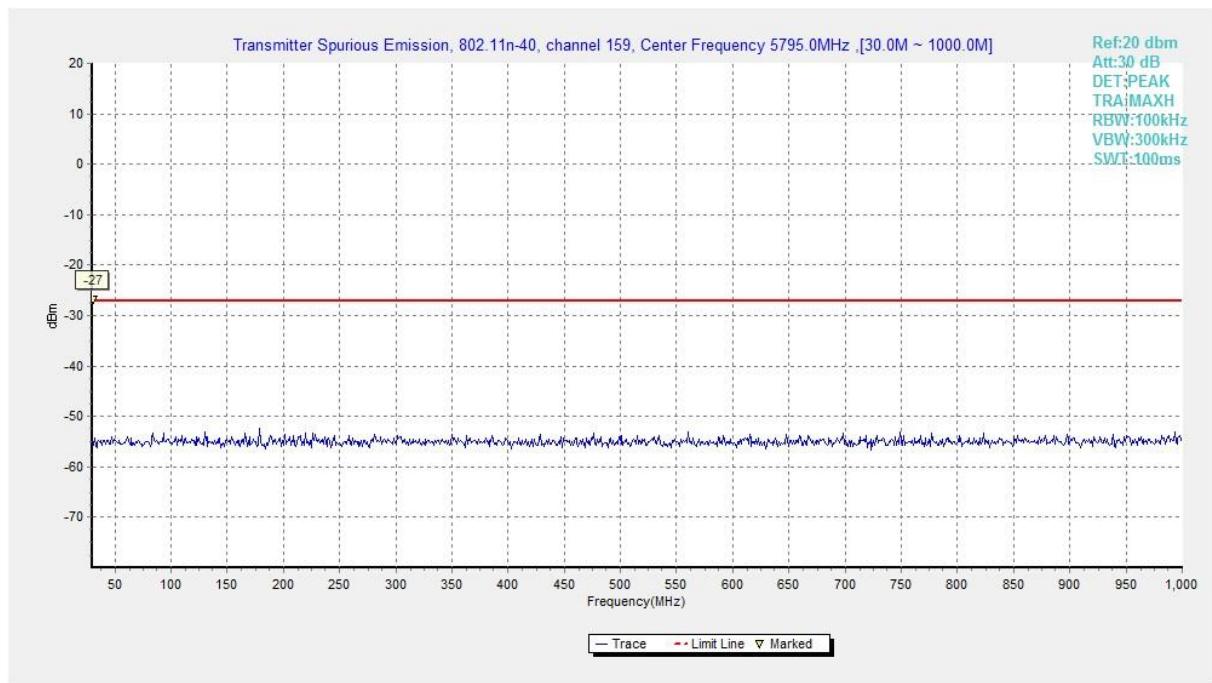


Fig. 55 Conducted Spurious Emission (802.11n-HT40, Ch159, 30 MHz-1 GHz)

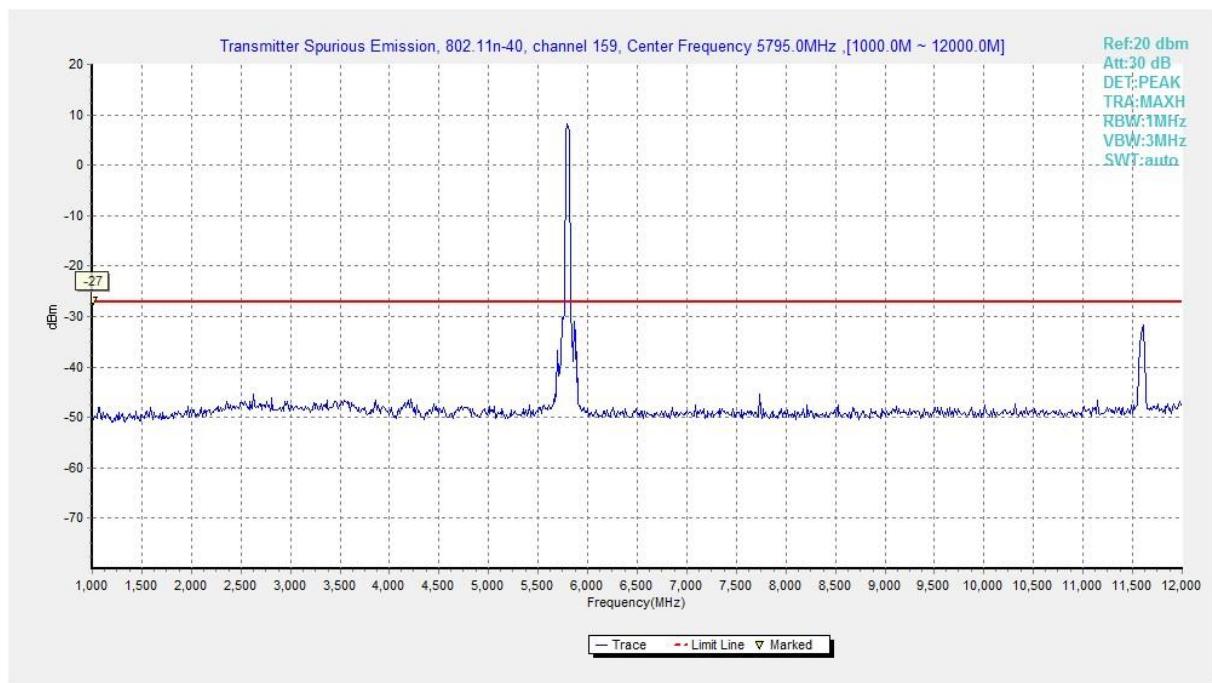


Fig. 56 Conducted Spurious Emission (802.11n-HT40, Ch159, 1 GHz -12 GHz)

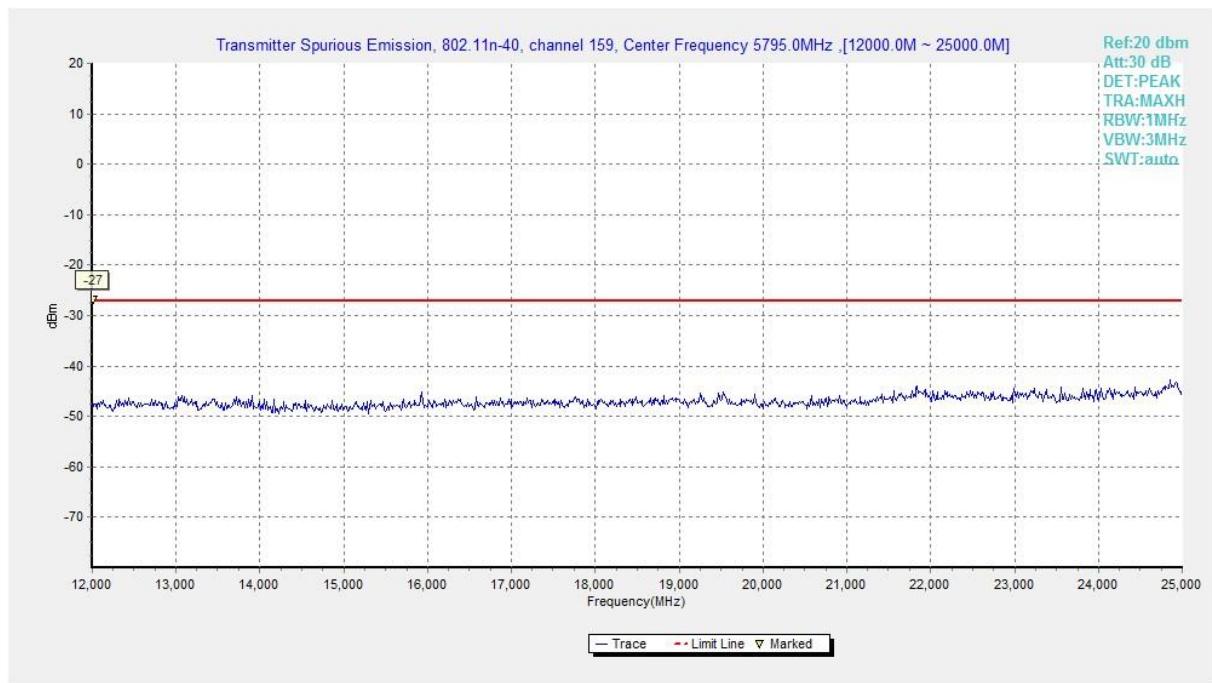


Fig. 57 Conducted Spurious Emission (802.11n-HT40, Ch159, 12 GHz-25 GHz)

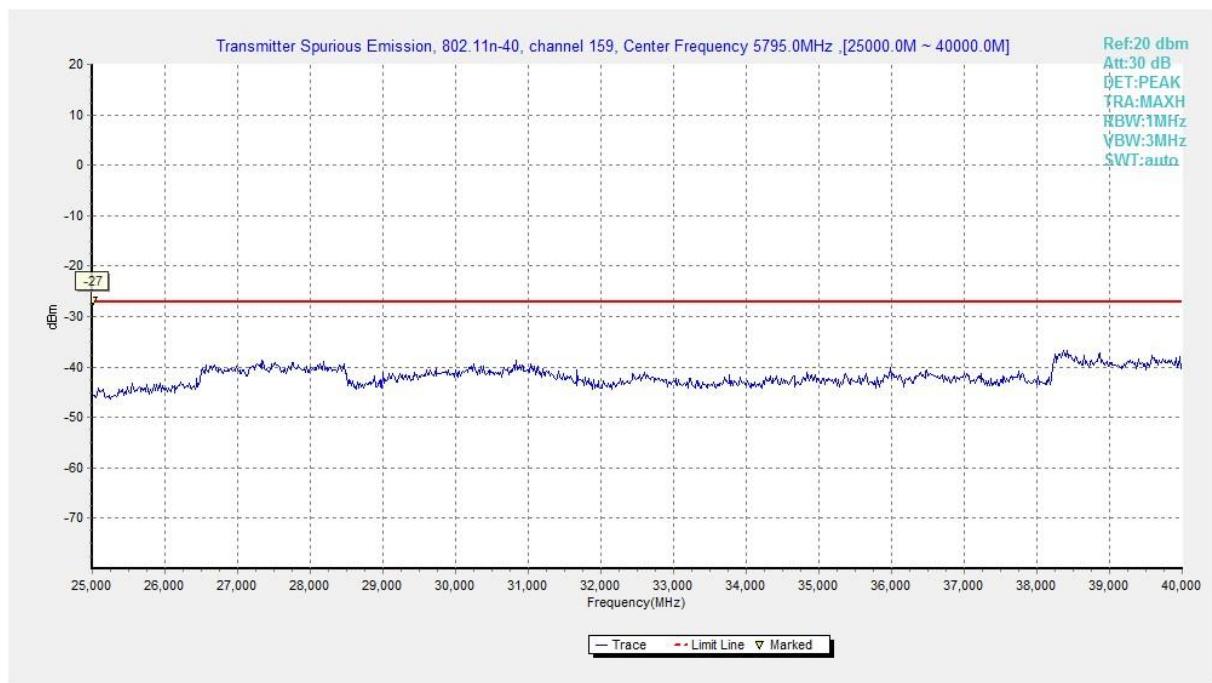


Fig. 58 Conducted Spurious Emission (802.11n-HT40, Ch159, 25 GHz-40 GHz)

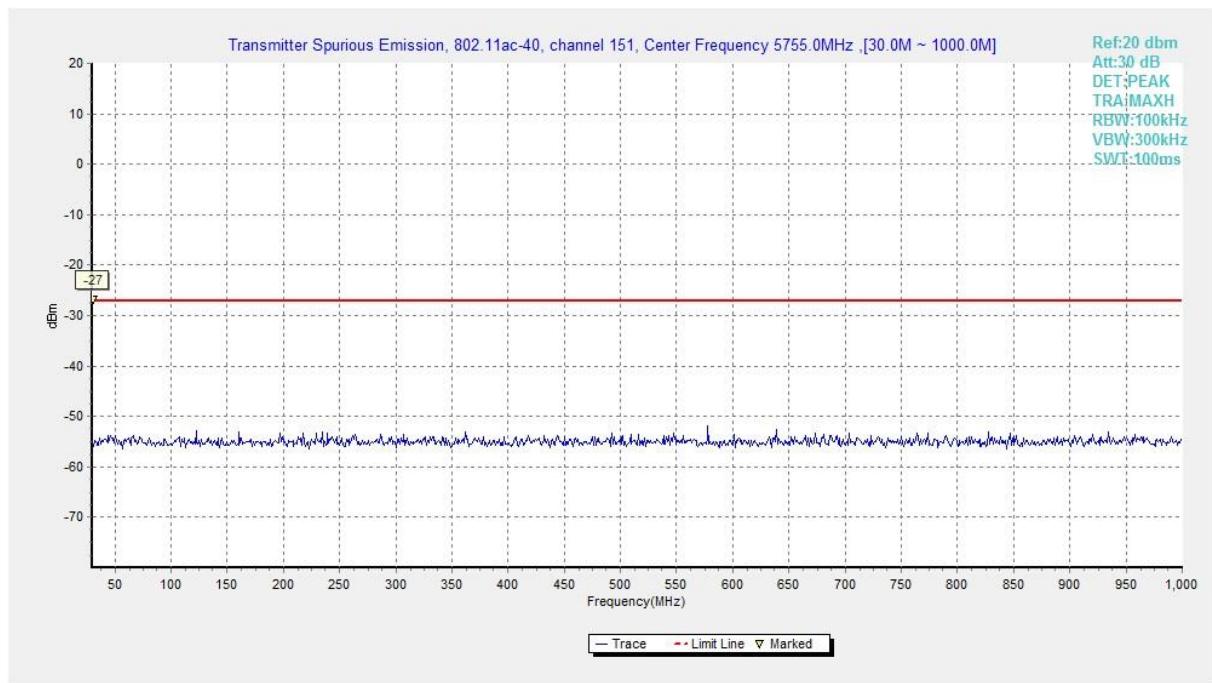


Fig. 59 Conducted Spurious Emission (802.11ac-HT40, Ch151, 30 MHz-1 GHz)

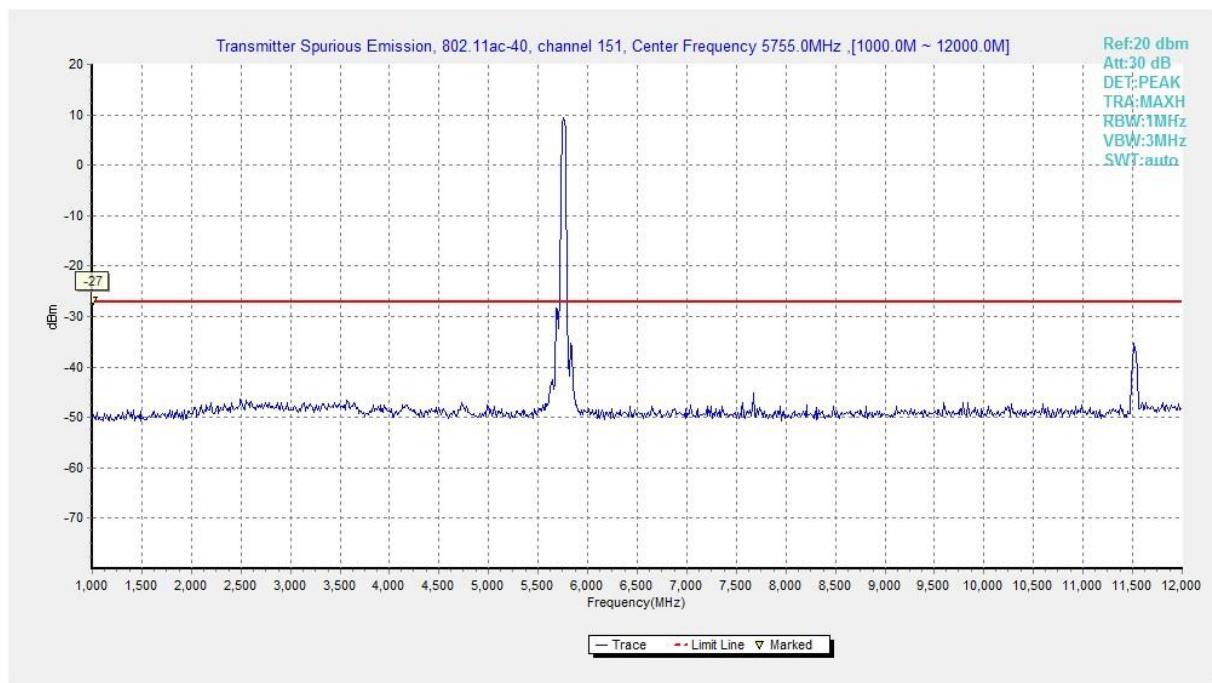


Fig. 60 Conducted Spurious Emission (802.11ac-HT40, Ch151, 1 GHz -12 GHz)

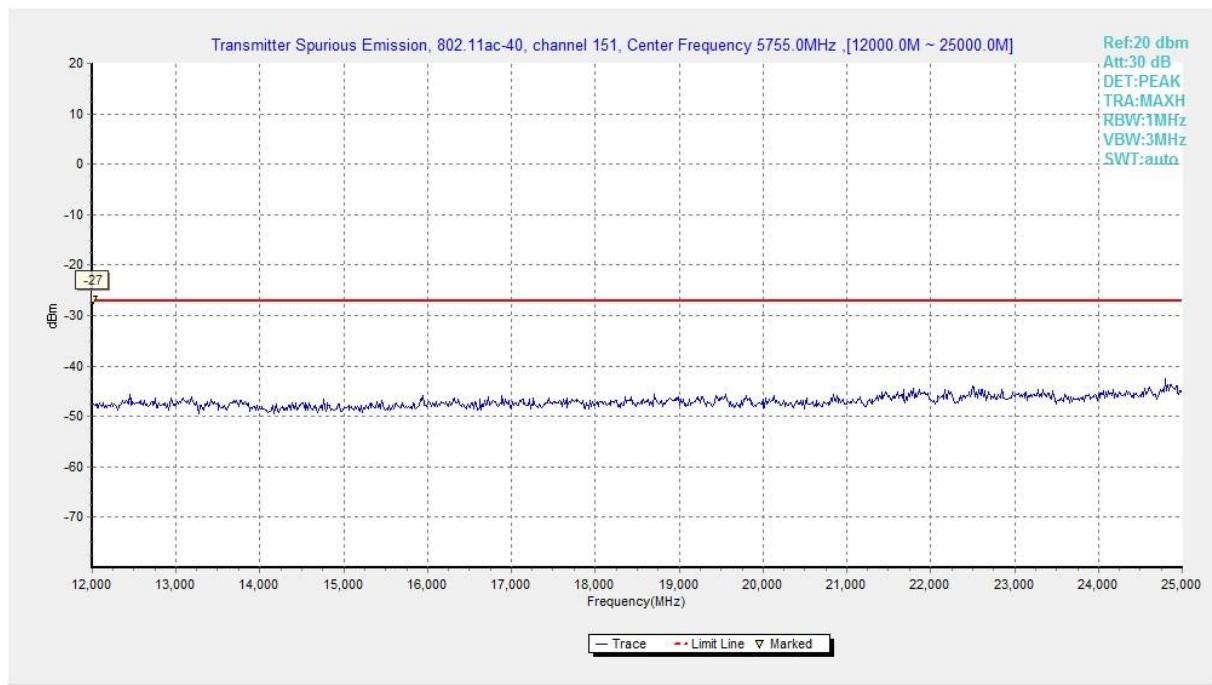


Fig. 61 Conducted Spurious Emission (802.11ac-HT40, Ch151, 12 GHz-25 GHz)

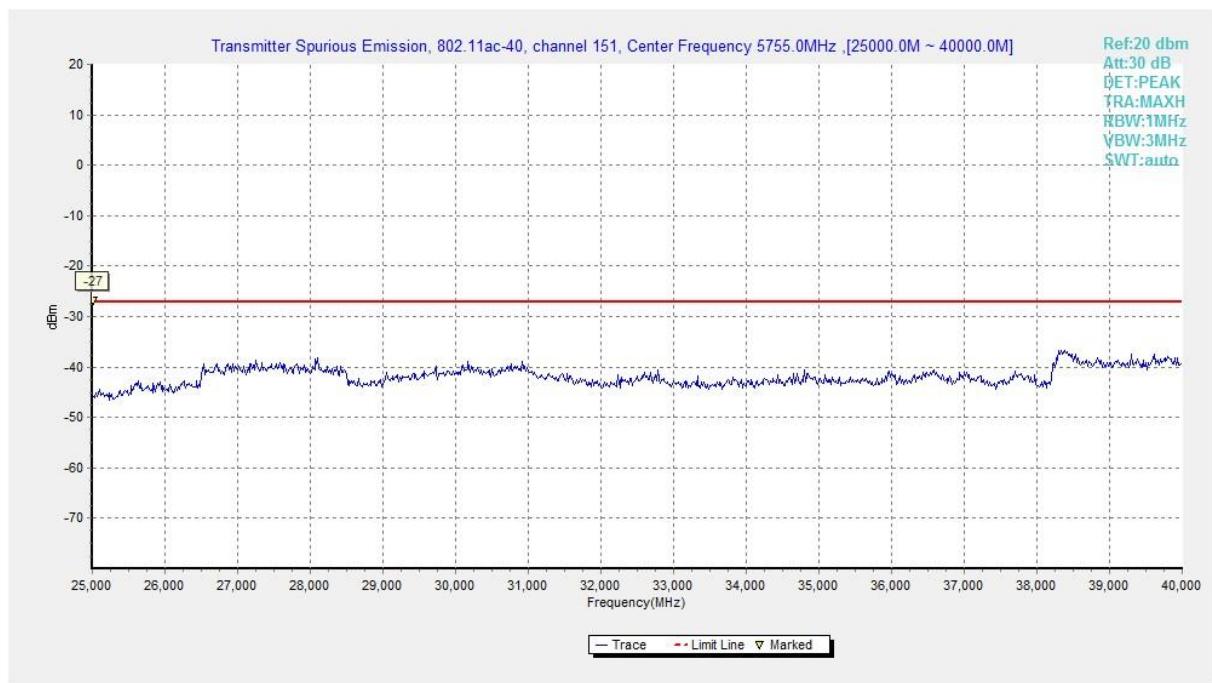


Fig. 62 Conducted Spurious Emission (802.11ac-HT40, Ch151, 25 GHz-40 GHz)

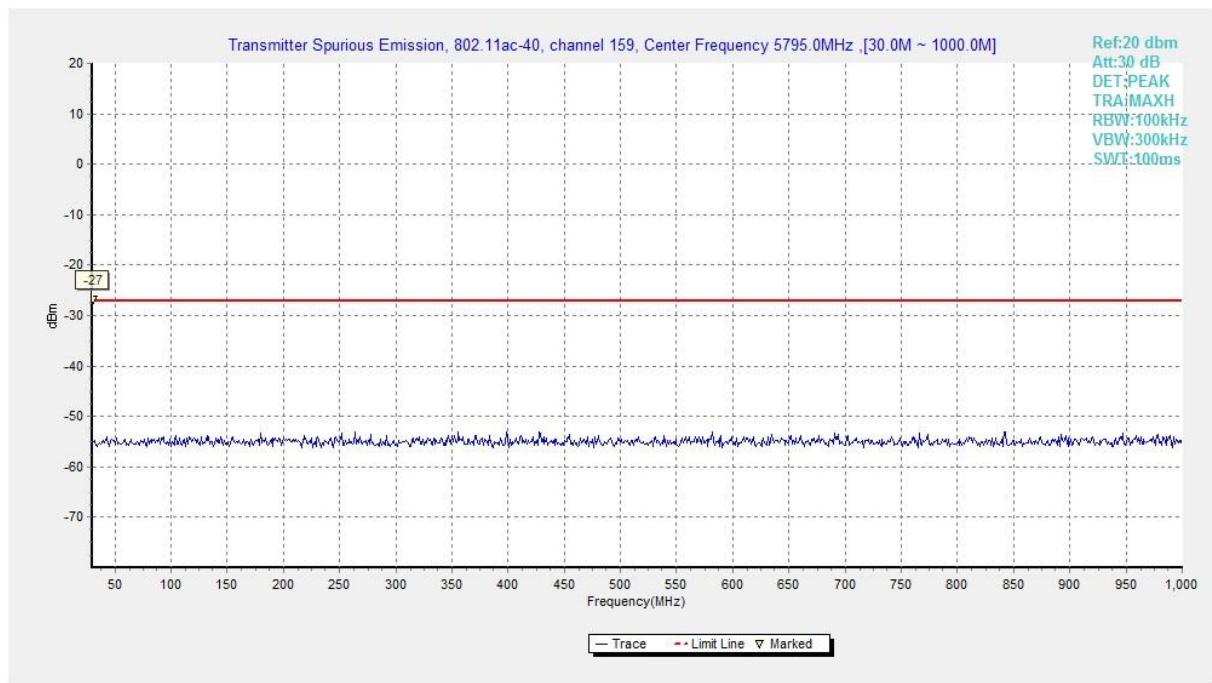


Fig. 63 Conducted Spurious Emission (802.11ac-HT40, Ch159, 30 MHz-1 GHz)

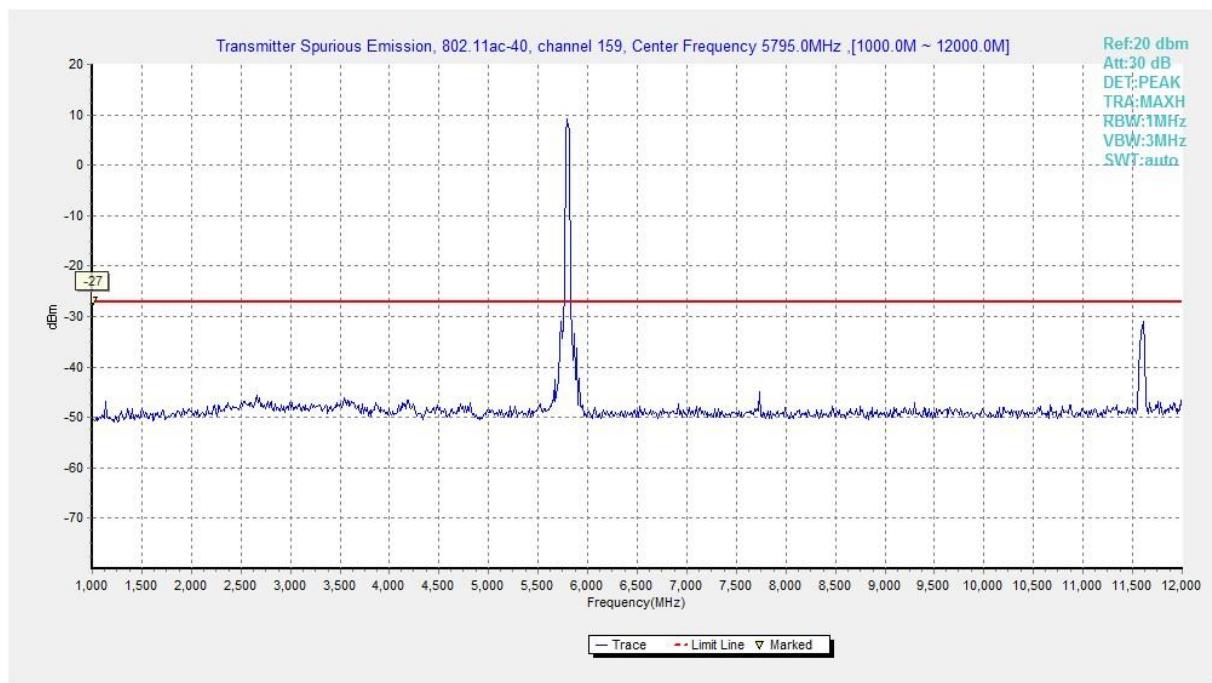


Fig. 64 Conducted Spurious Emission (802.11ac-HT40, Ch159, 1 GHz -12 GHz)

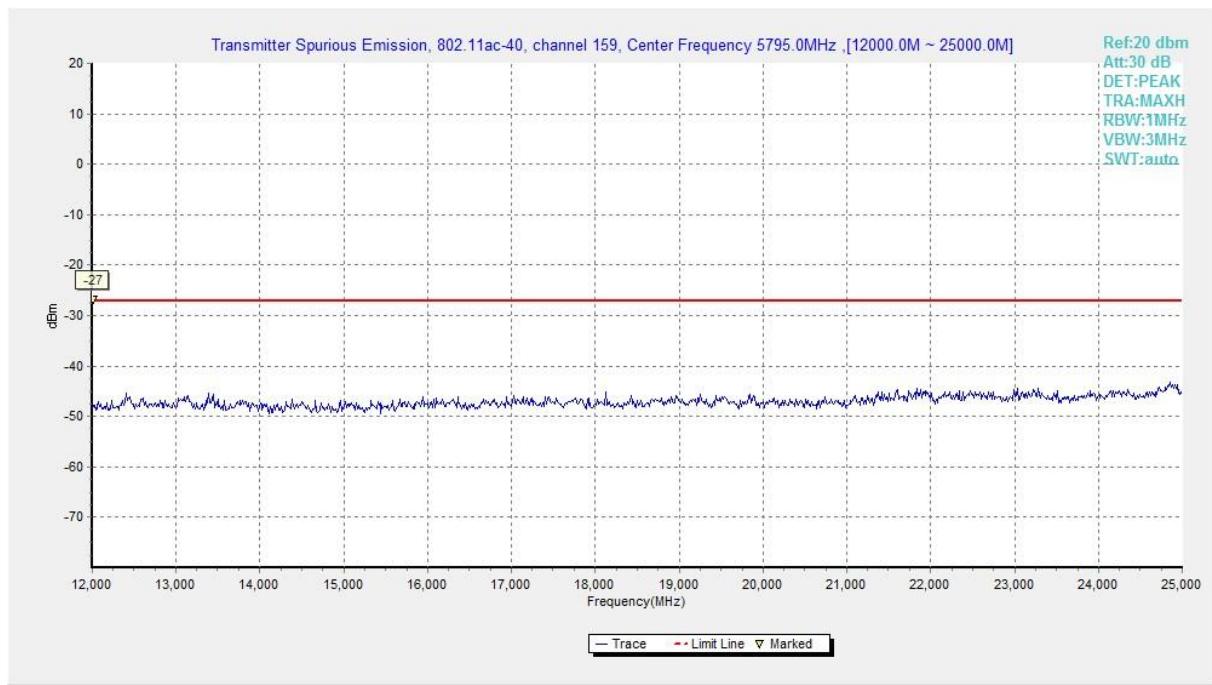


Fig. 65 Conducted Spurious Emission (802.11ac-HT40, Ch159, 12 GHz-25 GHz)

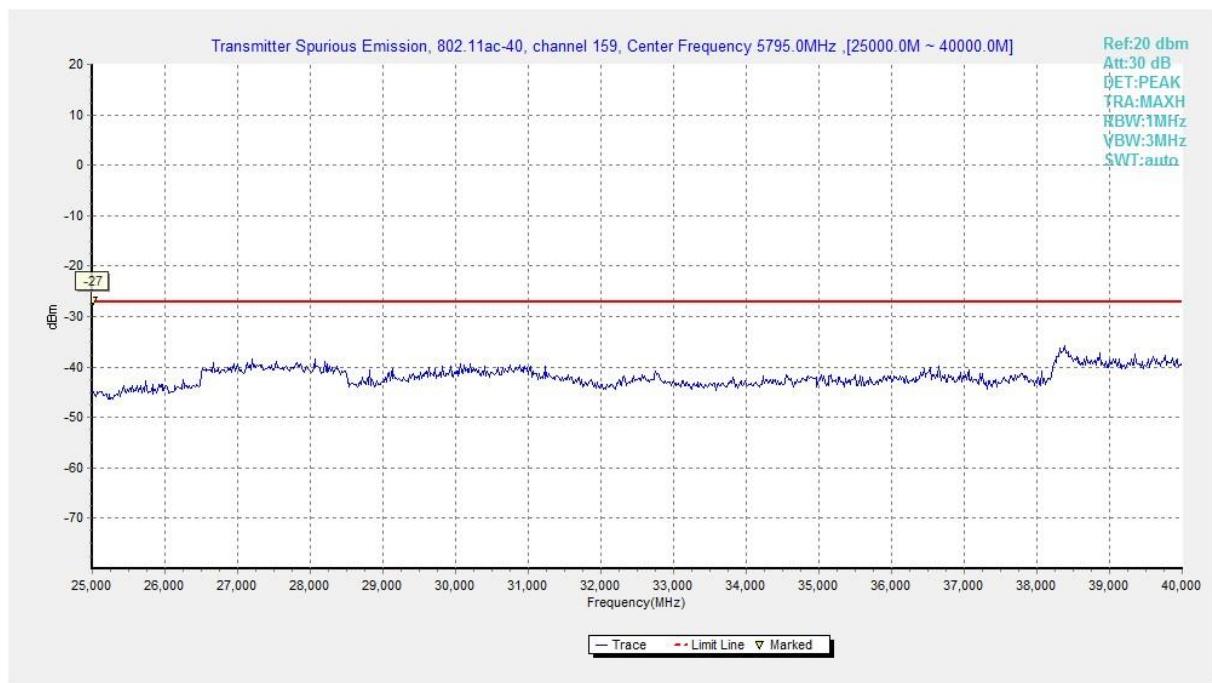


Fig. 66 Conducted Spurious Emission (802.11ac-HT40, Ch159, 25 GHz-40 GHz)

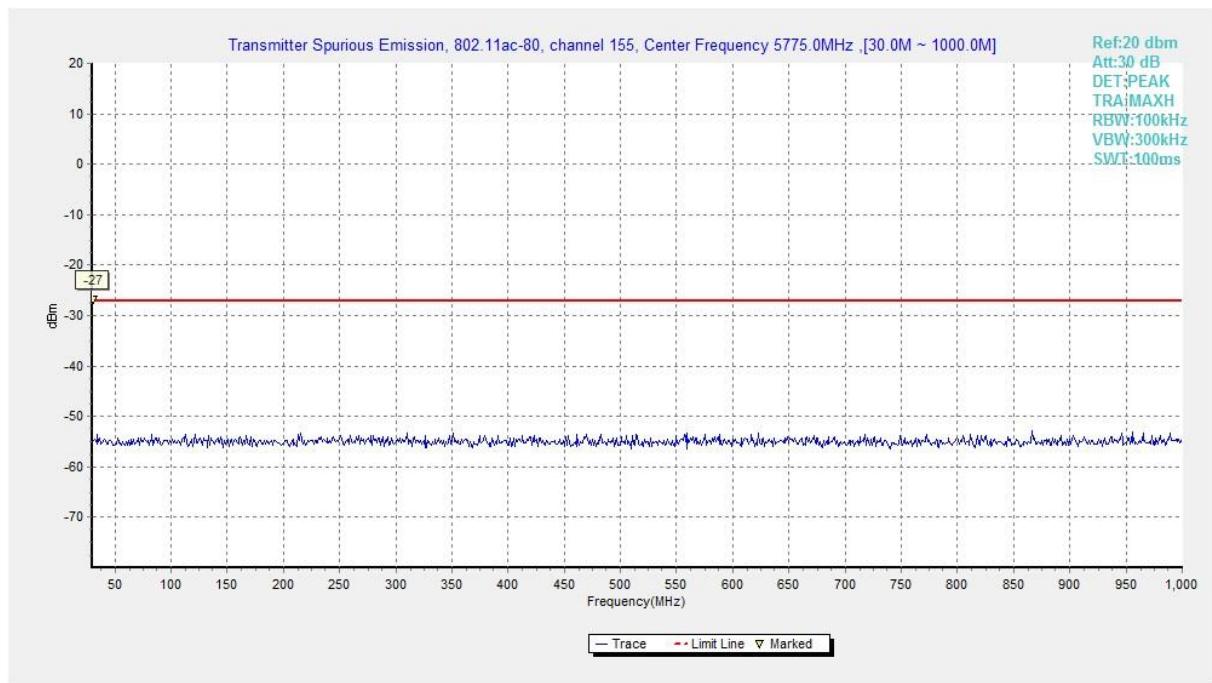


Fig. 67 Conducted Spurious Emission (802.11ac-HT80, Ch155, 30 MHz-1 GHz)

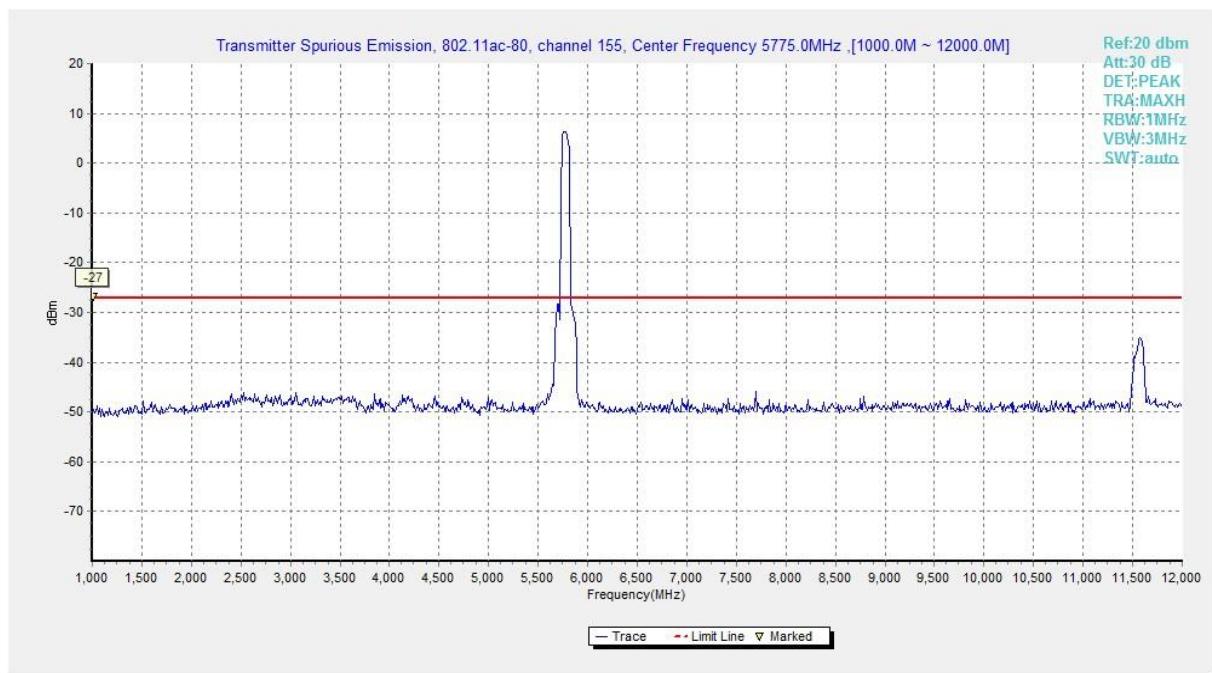


Fig. 68 Conducted Spurious Emission (802.11ac-HT80, Ch155, 1 GHz -12 GHz)

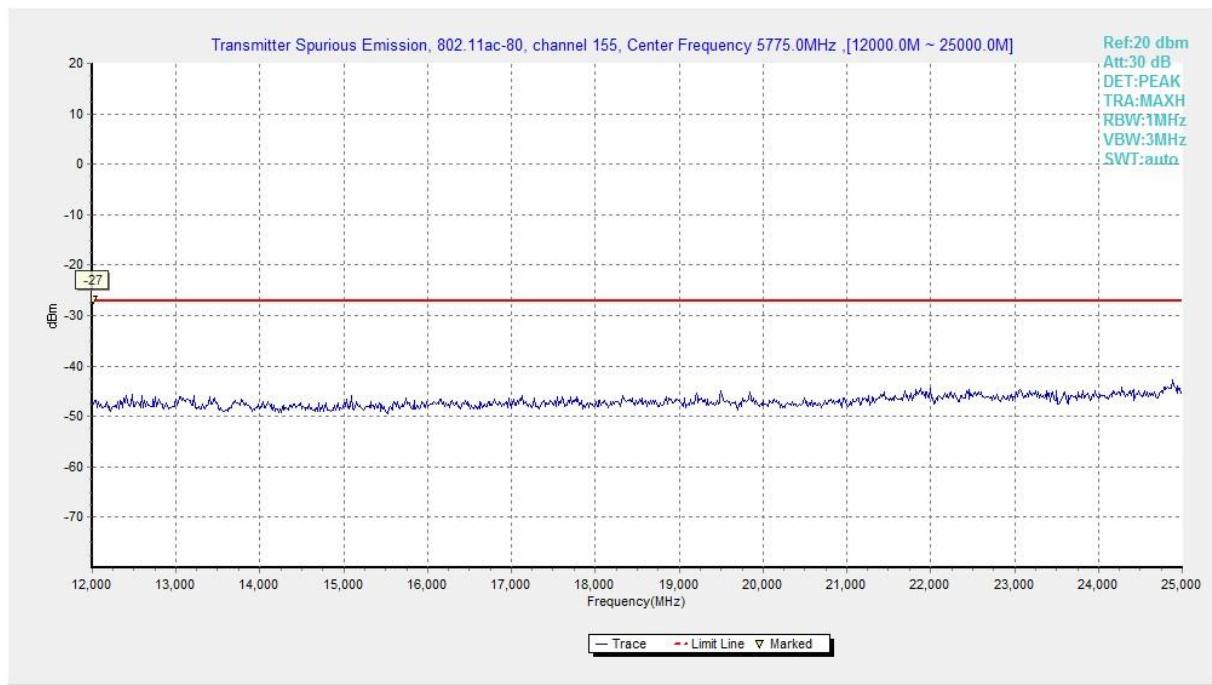


Fig. 69 Conducted Spurious Emission (802.11ac-HT80, Ch155, 12 GHz-25 GHz)

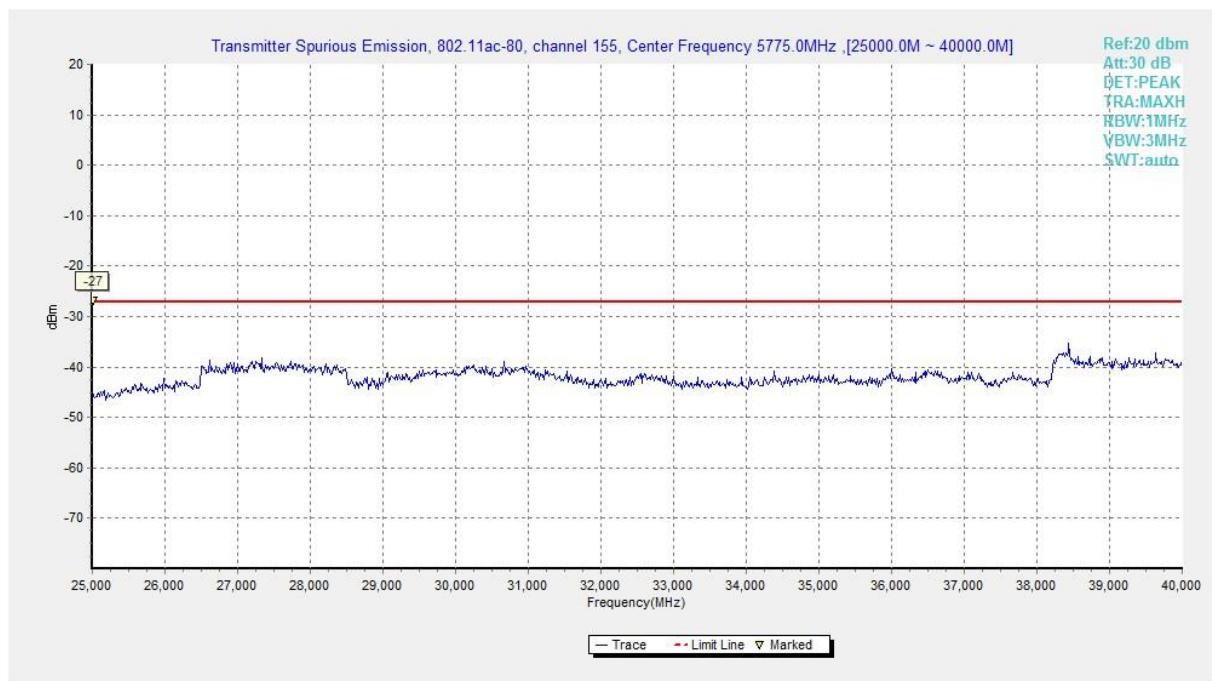


Fig. 70 Conducted Spurious Emission (802.11ac-HT80, Ch155, 25 GHz-40 GHz)

A.5.2 Transmitter Spurious Emission – Radiated

Measurement Limit:

Frequency Range	Uncertainty(dB)
$f \leq 1\text{GHz}$	3.9
$f > 1\text{GHz}$	4.3

Measurement Results:

802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	149	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	157	30 MHz ~ 1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	165	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	149	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	157	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	165	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	151	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	159	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11ac-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	149	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	157	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	165	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11ac-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	151	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P
	159	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

802.11ac-HT80 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT80)	155	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz~ 40 GHz	---	P

Conclusion: PASS

Note:

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

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

Average Results:

802.11a

Ch149

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5720.000	39.4	-32.7	34.8	37.32	90.8	51.4	H	155	24
5723.200	40.8	-32.7	34.8	38.70	98.1	57.3	H	155	46
11489.600	48.9	-30.3	38.2	41.04	54.0	5.1	H	155	6
17235.200	38.5	-26.2	41.7	23.00	54.0	15.5	H	155	5
17604.800	38.2	-25.3	41.5	22.00	54.0	15.8	H	155	25
17958.400	38.6	-25.2	41.4	22.31	54.0	15.4	H	155	184

Ch157

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5746.800	38.1	-32.7	34.9	35.96	54.0	15.9	H	155	184
5823.600	38.3	-32.0	35.0	35.32	54.0	15.7	H	155	6
11569.600	52.8	-30.5	38.3	44.93	54.0	1.2	H	155	26
17355.200	38.2	-26.1	41.6	22.68	54.0	15.8	H	155	246
17629.600	38.5	-25.2	41.5	22.16	54.0	15.5	H	155	8
17980.000	38.6	-25.0	41.4	22.17	54.0	15.4	H	155	2

Ch165

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5850.000	39.4	-31.7	35.0	36.17	102.2	62.8	H	155	8
5852.800	38.9	-31.7	35.0	35.59	95.8	57.0	H	155	28
11649.600	51.1	-30.4	38.4	43.06	54.0	2.9	H	155	246
17475.200	37.9	-25.8	41.5	22.27	54.0	16.1	H	155	249
17624.800	38.4	-25.2	41.5	22.16	54.0	15.6	H	155	186
17980.800	38.6	-25.0	41.4	22.17	54.0	15.4	H	155	128

802.11n-HT20

Ch149

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5723.200	45.1	-32.7	34.8	43.01	98.1	53.0	H	155	92
5724.800	46.1	-32.8	34.8	44.06	101.7	55.6	H	155	26
11488.800	50.1	-30.3	38.2	42.17	54.0	3.9	H	155	222
17238.400	38.9	-26.2	41.7	23.45	54.0	15.1	H	155	248
17630.400	38.4	-25.2	41.5	22.14	54.0	15.6	H	155	46
17996.800	38.7	-24.9	41.4	22.23	54.0	15.3	H	155	68

Ch157

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5734.400	37.7	-32.8	34.8	35.68	54.0	16.3	H	155	24

5823.200	38.3	-32.0	35.0	35.36	54.0	15.7	H	155	336
11569.600	53.5	-30.5	38.3	45.70	54.0	0.5	H	155	248
17356.000	38.3	-26.1	41.6	22.79	54.0	15.7	H	155	268
17621.600	38.5	-25.2	41.5	22.29	54.0	15.5	H	155	290
17964.000	38.6	-25.1	41.4	22.28	54.0	15.4	H	155	300

Ch165

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5850.000	40.1	-31.7	35.0	36.82	102.2	62.1	H	155	16
5851.200	39.5	-31.7	35.0	36.27	99.5	59.9	H	155	48
11649.600	51.8	-30.4	38.4	43.79	54.0	2.2	H	155	80
17475.200	38.2	-25.8	41.5	22.51	54.0	15.8	H	155	8
17628.800	38.5	-25.2	41.5	22.20	54.0	15.5	H	155	102
17960.800	38.6	-25.1	41.4	22.30	54.0	15.4	H	155	118

802.11n-HT40

Ch151

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5719.200	48.4	-32.7	34.8	46.24	90.6	42.2	H	155	20
5724.800	50.0	-32.8	34.8	47.97	101.7	51.7	H	155	18
11509.600	48.3	-30.3	38.2	40.37	54.0	5.7	H	155	90
17264.800	38.2	-26.2	41.6	22.70	54.0	15.8	H	155	114
17627.200	38.5	-25.2	41.5	22.22	54.0	15.5	H	155	36
17980.000	38.7	-25.0	41.4	22.30	54.0	15.3	H	155	2

Ch159

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5850.000	39.1	-31.7	35.0	35.83	102.2	63.1	H	155	8
5854.800	38.7	-31.7	35.0	35.43	91.3	52.6	H	155	46
11589.600	49.6	-30.5	38.3	41.77	54.0	4.4	H	155	20
17384.800	37.7	-26.0	41.6	22.14	54.0	16.3	H	155	118
17636.000	38.4	-25.2	41.5	22.14	54.0	15.6	H	155	82
17989.600	38.5	-25.0	41.4	22.12	54.0	15.5	H	155	46

802.11ac-HT20

Ch149

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5723.200	45.0	-32.7	34.8	42.96	98.1	53.1	H	155	28
5724.800	46.0	-32.8	34.8	43.97	101.7	55.7	H	155	46
11489.600	50.2	-30.3	38.2	42.27	54.0	3.8	H	155	8
17233.600	38.8	-26.2	41.7	23.31	54.0	15.2	H	155	6
17624.000	38.4	-25.2	41.5	22.18	54.0	15.6	H	155	24
17972.800	38.6	-25.1	41.4	22.28	54.0	15.4	H	155	185

Ch157

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5746.400	38.5	-32.7	34.9	36.40	54.0	15.5	H	155	28
5816.400	38.4	-32.1	34.9	35.56	54.0	15.6	H	155	248
11569.600	53.6	-30.5	38.3	45.72	54.0	0.4	H	155	38
17357.600	38.3	-26.1	41.6	22.79	54.0	15.7	H	155	98
17628.800	38.4	-25.2	41.5	22.15	54.0	15.6	H	155	183
17960.000	38.6	-25.1	41.4	22.29	54.0	15.5	H	155	356

Ch165

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5850.000	39.8	-31.7	35.0	36.56	102.2	62.4	H	155	354
5852.800	38.9	-31.7	35.0	35.62	95.8	56.9	H	155	28
11648.800	51.8	-30.4	38.4	43.77	54.0	2.2	H	155	348
17475.200	38.1	-25.8	41.5	22.47	54.0	15.9	H	155	345
17624.000	38.6	-25.2	41.5	22.28	54.0	15.4	H	155	184
17972.800	38.5	-25.1	41.4	22.21	54.0	15.5	H	155	182

802.11ac-HT40

Ch151

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5719.600	46.9	-32.7	34.8	44.80	90.7	43.8	H	155	142
5724.800	48.0	-32.8	34.8	45.94	101.7	53.7	H	155	168
11509.600	48.1	-30.3	38.2	40.21	54.0	5.9	H	155	90
17264.800	38.1	-26.2	41.6	22.66	54.0	15.9	H	155	102
17628.800	38.4	-25.2	41.5	22.08	54.0	15.6	H	155	118
17976.000	38.6	-25.0	41.4	22.23	54.0	15.4	H	155	94

Ch159

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5850.000	39.3	-31.7	35.0	36.09	102.2	62.9	H	155	94
5852.800	38.9	-31.7	35.0	35.67	95.8	56.9	H	155	136
11589.600	49.8	-30.5	38.3	42.00	54.0	4.2	H	155	4
17384.800	37.7	-26.0	41.6	22.19	54.0	16.3	H	155	68
17616.800	38.4	-25.2	41.5	22.20	54.0	15.6	H	155	46
17972.800	38.6	-25.1	41.4	22.25	54.0	15.4	H	155	246

802.11ac-HT80

Ch155

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5718.400	49.3	-32.7	34.8	47.19	90.4	41.0	H	155	28
5724.000	50.0	-32.8	34.8	47.93	99.9	49.9	H	155	46
11568.000	44.8	-30.5	38.3	36.94	54.0	9.2	H	155	8
17324.800	37.7	-26.1	41.6	22.22	54.0	16.3	H	155	6
17622.400	38.4	-25.2	41.5	22.17	54.0	15.6	H	155	24
17978.400	38.7	-25.0	41.4	22.30	54.0	15.3	H	155	185

Peak Results:

802.11a

Ch149

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5722.450	59.5	-32.7	34.8	60.20	116.4	56.9	H	155	22
5724.727	59.7	-32.8	34.8	59.78	121.6	61.9	H	155	44
11491.850	62.5	-30.3	38.2	40.36	74.0	11.5	V	155	0
17234.950	52.5	-26.2	41.7	37.08	74.0	21.5	H	155	0
17555.600	55.7	-25.5	41.5	40.09	74.0	18.3	V	155	22
17962.600	55.7	-25.1	41.4	39.69	74.0	18.3	H	155	176

Ch157

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5703.600	48.3	-32.5	34.8	46.01	74.0	25.7	H	155	176
5856.200	48.0	-31.7	35.0	44.74	74.0	26.0	H	155	0
11572.150	65.8	-30.5	38.3	57.98	74.0	8.2	V	155	22
17037.500	55.3	-26.0	41.8	39.52	74.0	18.7	V	155	352
17354.850	53.3	-26.1	41.6	37.80	74.0	20.7	V	155	0
17947.750	55.6	-25.2	41.4	39.38	74.0	18.4	H	155	0

Ch165

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5850.009	58.9	-31.7	35.0	55.69	122.2	63.2	H	155	248
5851.193	59.1	-31.7	35.0	55.85	119.5	60.4	H	155	268
11651.360	65.8	-30.4	38.4	57.76	74.0	8.2	V	155	352
17069.400	55.8	-26.1	41.8	40.09	74.0	18.2	V	155	352
17474.750	53.7	-25.8	41.5	38.05	74.0	20.3	V	155	176
17571.550	55.5	-25.4	41.5	39.42	74.0	18.5	H	155	132

802.11n-HT20

Ch149

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5722.485	61.1	-32.7	34.8	58.99	116.5	55.4	H	155	88
5724.601	60.7	-32.8	34.8	58.68	121.3	60.6	H	155	22
11488.000	66.3	-30.3	38.2	58.41	74.0	7.7	V	155	220
16504.550	55.6	-25.8	41.5	39.88	74.0	18.4	V	155	242
17234.950	52.9	-26.2	41.7	37.38	74.0	21.1	V	155	44
17996.700	56.0	-24.9	41.4	39.53	74.0	18.0	V	155	66

Ch157

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5706.600	49.4	-32.5	34.8	47.15	74.0	24.6	H	155	110
5855.200	48.1	-31.7	35.0	44.87	74.0	25.9	V	155	132
11568.850	68.2	-30.5	38.3	60.40	74.0	5.8	H	155	242
17354.850	52.9	-26.1	41.6	37.37	74.0	21.1	V	155	264
17839.400	55.5	-25.9	41.4	39.91	74.0	18.5	V	155	286
17987.900	55.5	-25.0	41.4	39.05	74.0	18.5	V	155	308

Ch165

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5853.631	58.4	-31.7	35.0	55.12	113.9	55.5	H	155	22
5858.404	58.3	-31.7	35.0	55.05	103.0	44.7	H	155	44
11642.000	67.9	-30.4	38.4	59.90	74.0	6.1	V	155	88
17474.750	53.1	-25.8	41.5	37.46	74.0	20.9	V	155	0
17464.850	56.3	-25.9	41.5	40.71	74.0	17.7	H	155	110
17978.000	55.5	-25.0	41.4	39.09	74.0	18.5	H	155	132

802.11n-HT40

Ch151

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5723.451	63.5	-32.7	34.8	61.44	118.7	55.2	H	155	22
5724.865	63.3	-32.8	34.8	61.24	121.9	58.6	H	155	22
11515.500	61.1	-30.3	38.2	53.17	74.0	12.9	H	155	88
16481.450	55.4	-25.8	41.5	39.67	74.0	18.6	V	155	110
17265.200	53.2	-26.2	41.6	37.70	74.0	20.8	V	155	44
17592.450	55.5	-25.3	41.5	39.31	74.0	18.5	H	155	0

Ch159

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5853.666	58.3	-31.7	35.0	55.07	113.8	55.5	H	155	0
5854.413	58.2	-31.7	35.0	54.97	112.1	53.9	H	155	44
11579.850	62.6	-30.5	38.3	54.80	74.0	11.4	V	155	22
17385.100	53.6	-26.0	41.6	38.10	74.0	20.4	H	155	110
17501.700	55.4	-25.7	41.5	39.58	74.0	18.6	H	155	88
17901.000	55.4	-25.5	41.4	39.44	74.0	18.6	H	155	44

802.11ac-HT20

Ch149

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5721.875	61.0	-32.7	34.8	58.95	115.1	54.0	H	155	22
5724.877	61.1	-32.8	34.8	59.00	121.9	60.9	H	155	44
11494.600	64.9	-30.3	38.2	57.03	74.0	9.1	V	155	0
17234.950	52.8	-26.2	41.7	37.30	74.0	21.2	H	155	0
17604.550	55.6	-25.3	41.5	39.37	74.0	18.4	V	155	22
17953.800	55.8	-25.2	41.4	39.52	74.0	18.2	H	155	176

Ch157

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5717.400	52.3	-32.7	34.8	50.17	74.0	21.7	H	155	22
5851.200	50.5	-31.7	35.0	47.29	74.0	23.5	H	155	242
11574.350	68.6	-30.5	38.3	60.76	74.0	5.4	V	155	44
16347.250	55.7	-25.7	41.3	40.05	74.0	18.3	H	155	88
17354.850	52.5	-26.1	41.6	36.94	74.0	21.5	V	155	176
17524.800	55.9	-25.6	41.5	39.99	74.0	18.1	H	155	0

Ch165

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5850.480	59.8	-31.7	35.0	56.58	121.1	61.3	H	155	0
5902.288	57.4	-31.8	35.1	54.13	85.0	27.6	H	155	22
11654.650	67.3	-30.4	38.4	59.30	74.0	6.7	V	155	352
17474.750	53.0	-25.8	41.5	37.29	74.0	21.0	V	155	352
17614.450	55.6	-25.2	41.5	39.38	74.0	18.4	H	155	176
17991.200	55.6	-25.0	41.4	39.21	74.0	18.4	V	155	176

802.11ac-HT40

Ch151

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5724.589	61.3	-32.8	34.8	59.20	121.3	60.0	H	155	132
5724.704	61.3	-32.8	34.8	59.21	121.5	60.3	V	155	154
11515.500	61.6	-30.3	38.2	53.74	74.0	12.4	H	155	88
17265.200	52.5	-26.2	41.6	37.03	74.0	21.5	V	155	110
17307.550	55.4	-26.1	41.6	39.89	74.0	18.6	V	155	110
17702.450	55.6	-25.5	41.5	39.61	74.0	18.4	V	155	88

Ch159

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5853.493	57.9	-31.7	35.0	54.63	114.2	56.3	H	155	88
5854.057	57.3	-31.7	35.0	54.01	113.0	55.7	H	155	132
11580.950	62.6	-30.5	38.3	54.76	74.0	11.4	H	155	0
16913.750	56.7	-25.8	41.7	40.76	74.0	17.3	V	155	66
17385.100	53.3	-26.0	41.6	37.76	74.0	20.7	V	155	44
17941.700	55.5	-25.3	41.4	39.37	74.0	18.5	H	155	242

802.11ac-HT80

Ch155

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5720.392	61.0	-32.7	34.8	58.88	111.7	50.7	H	155	28
5724.842	61.7	-32.8	34.8	59.68	121.8	60.1	H	155	46
11568.300	60.3	-30.5	38.3	52.47	74.0	13.7	H	155	8
17107.350	55.6	-26.2	41.7	40.08	74.0	18.4	H	155	6
17325.150	51.8	-26.1	41.6	36.32	74.0	22.2	H	155	24
17365.850	55.2	-26.1	41.6	39.65	74.0	18.8	H	155	185

A.6. Band Edges Compliance

A6.1 Band Edges - conducted

Measurement Limit:

Standard	Limit (dBm/MHz)
FCC 47 CFR Part 15.407(b)(4)	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

The measurement is made according to KDB 789033 D02

Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5745 MHz	Fig.71	P
	5825 MHz	Fig.72	P
802.11n HT20	5745 MHz	Fig.73	P
	5825 MHz	Fig.74	P
802.11ac HT20	5745 MHz	Fig.75	P
	5825 MHz	Fig.76	P
802.11n HT40	5755 MHz	Fig.77	P
	5795 MHz	Fig.78	P
802.11ac HT40	5755 MHz	Fig.79	P
	5795 MHz	Fig.80	P
802.11ac HT80	5775 MHz	Fig.81	P
	5775 MHz	Fig.82	P

Conclusion: PASS

Test graphs as below:

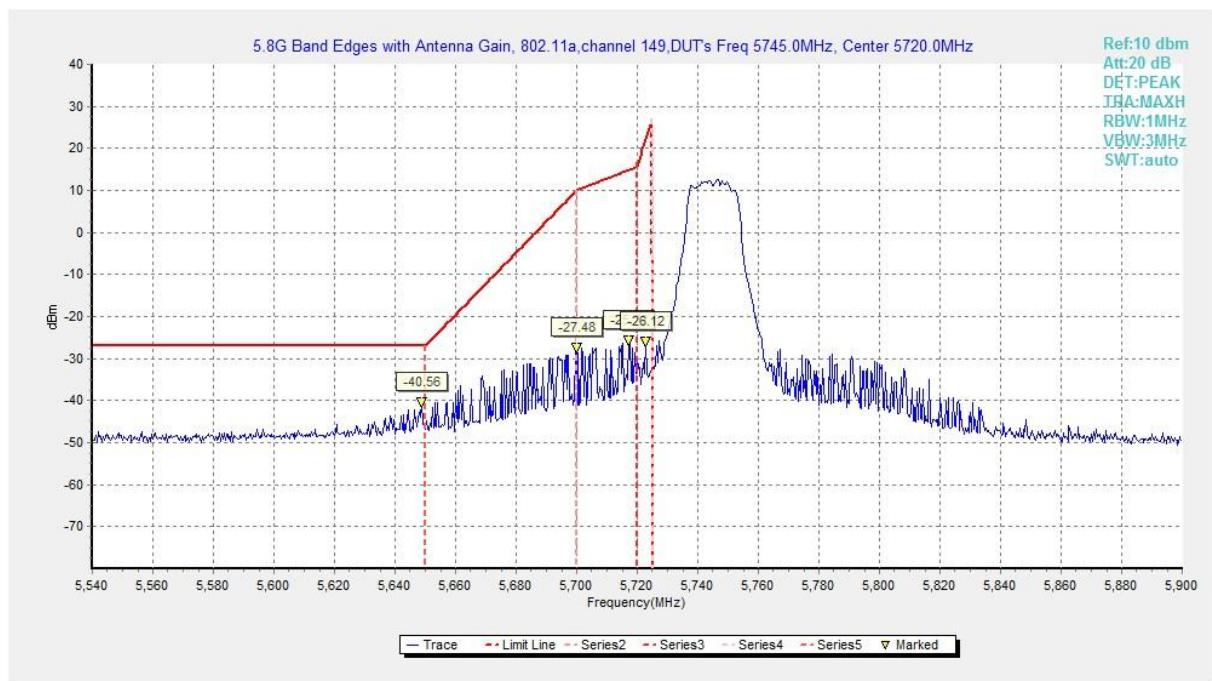


Fig. 71 Band Edges (802.11a, 5745MHz)

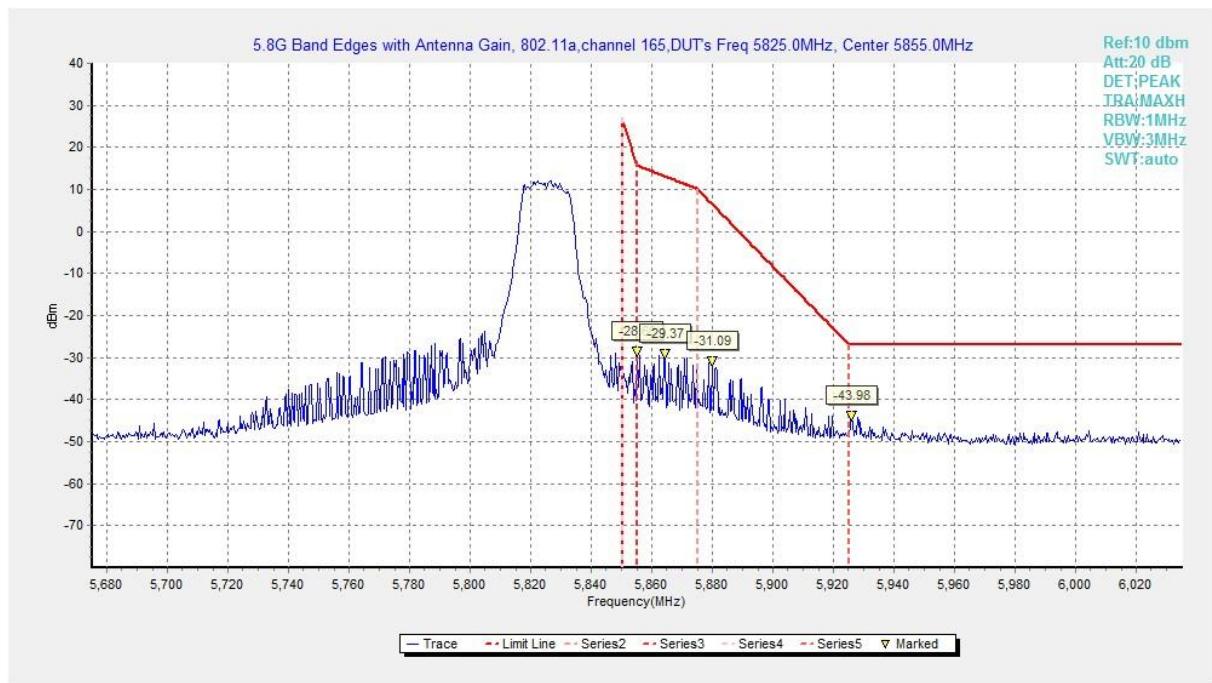


Fig. 72 Band Edges (802.11a, 5825MHz)

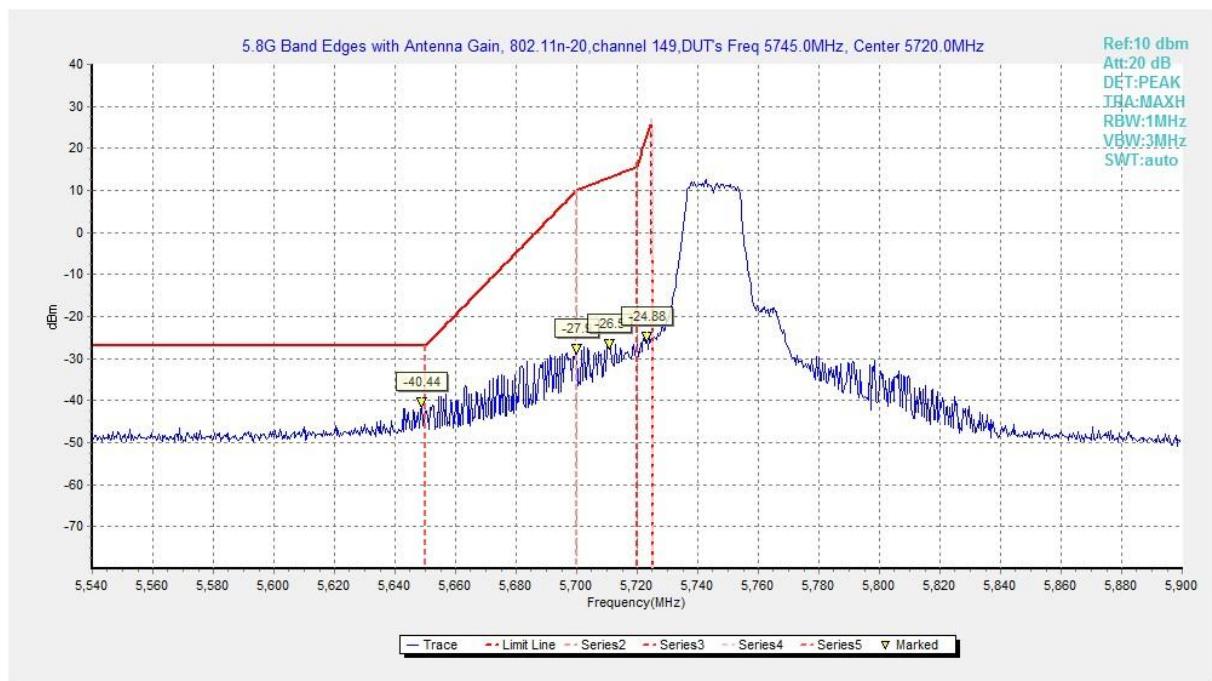


Fig. 73 Band Edges (802.11n-HT20, 5745MHz)

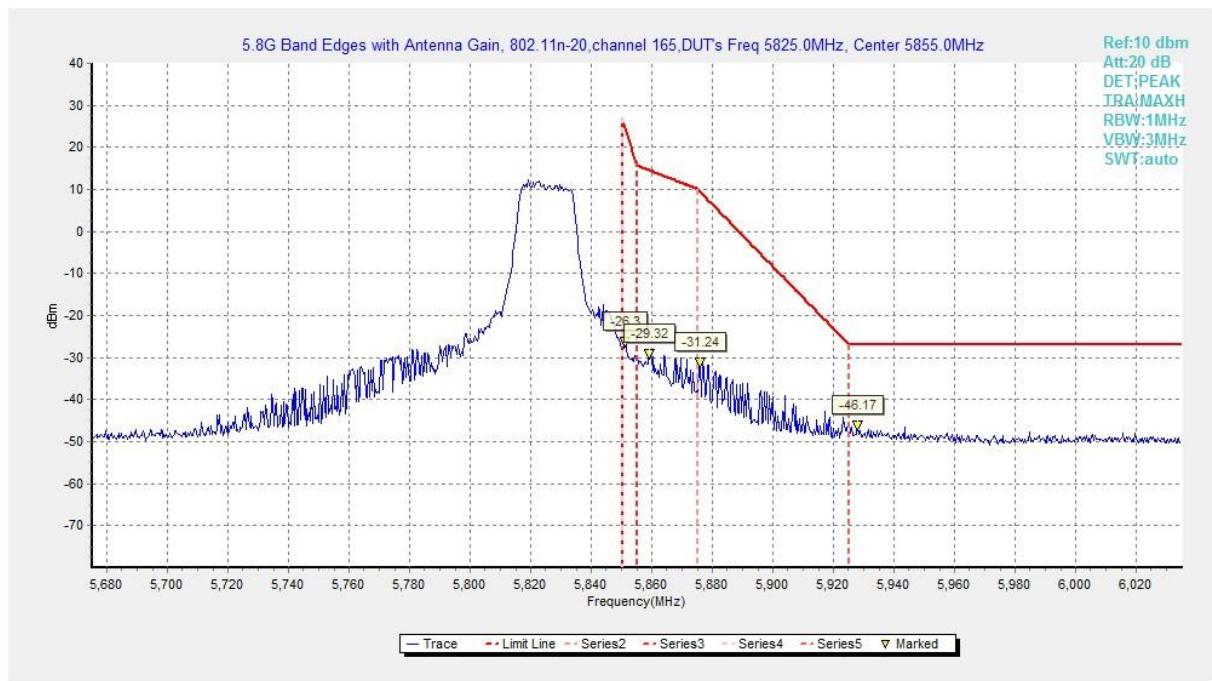


Fig. 74 Band Edges (802.11n-HT20, 5825MHz)

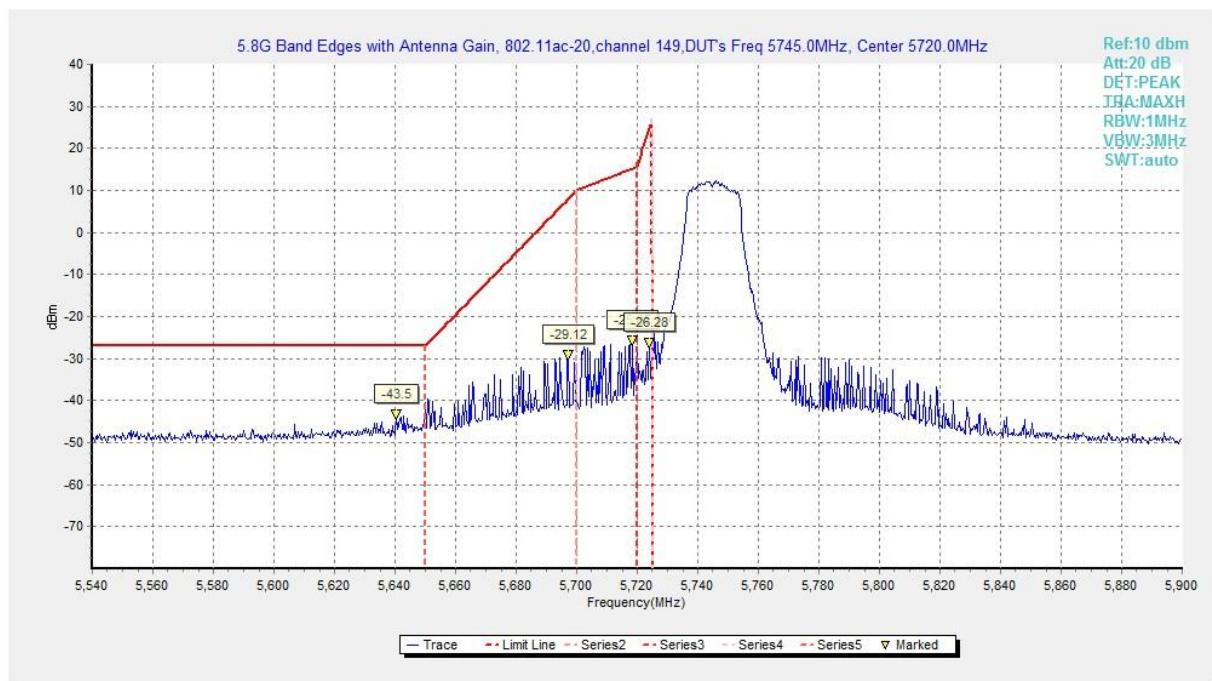


Fig. 75 Band Edges (802.11ac-HT20, 5745MHz)

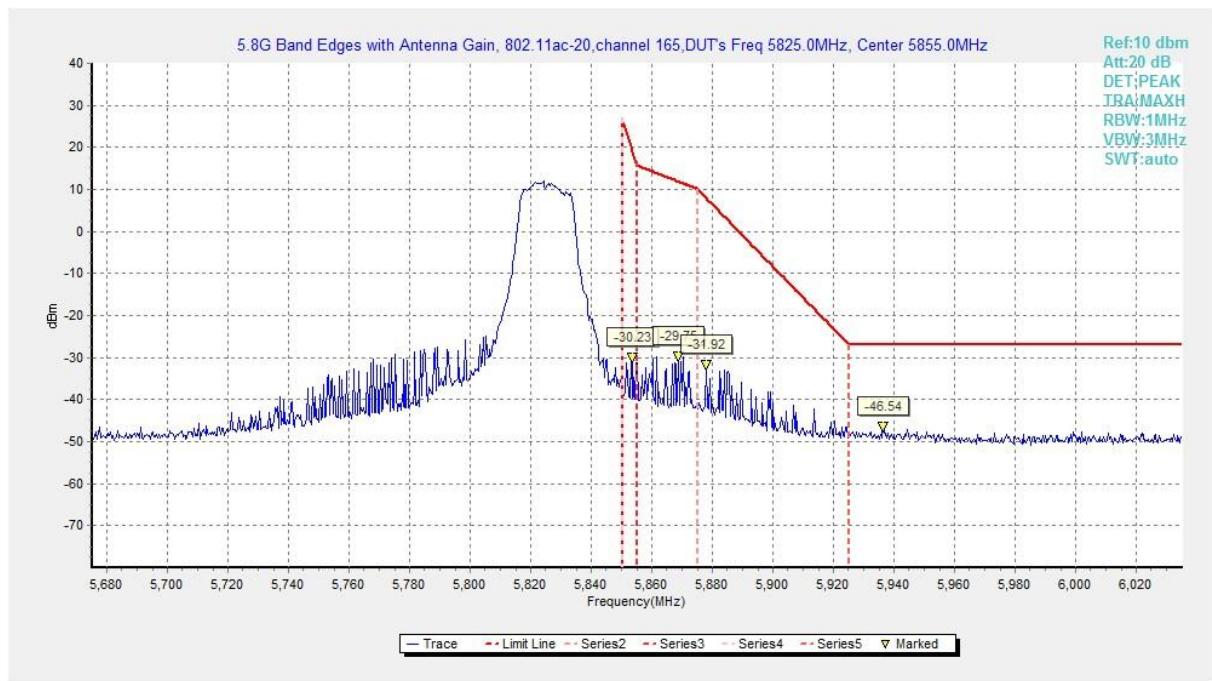


Fig. 76 Band Edges (802.11ac-HT20, 5825MHz)

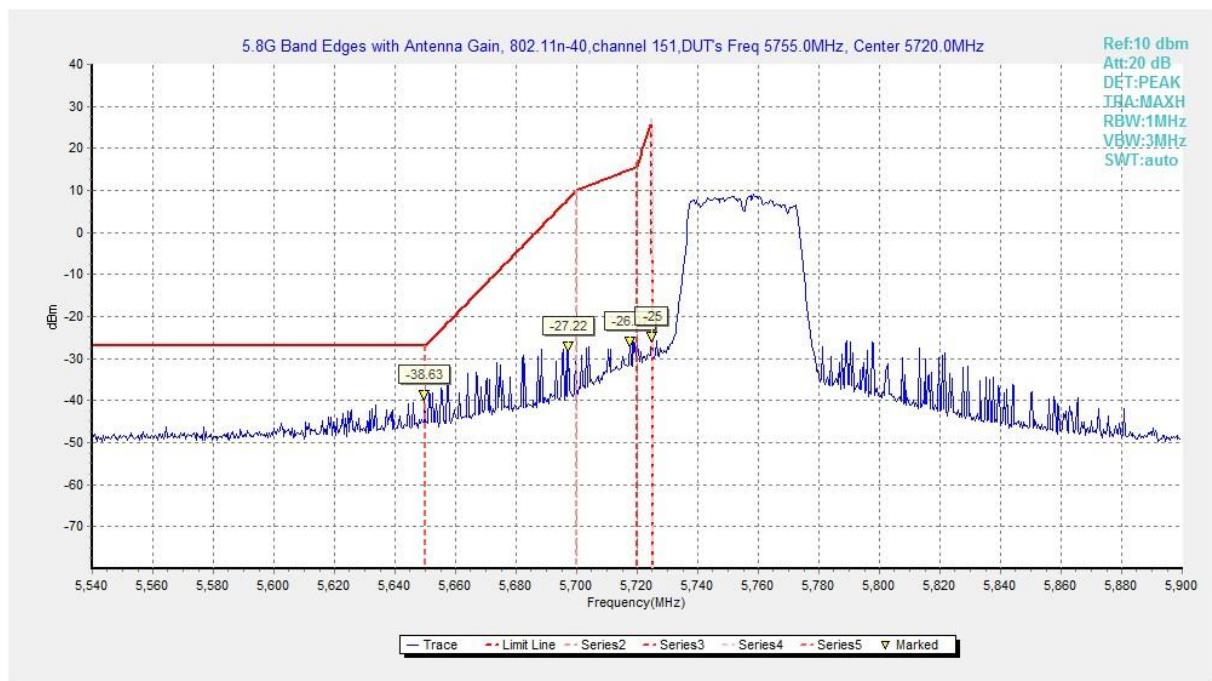


Fig. 77 Band Edges (802.11n-HT40, 5755MHz)

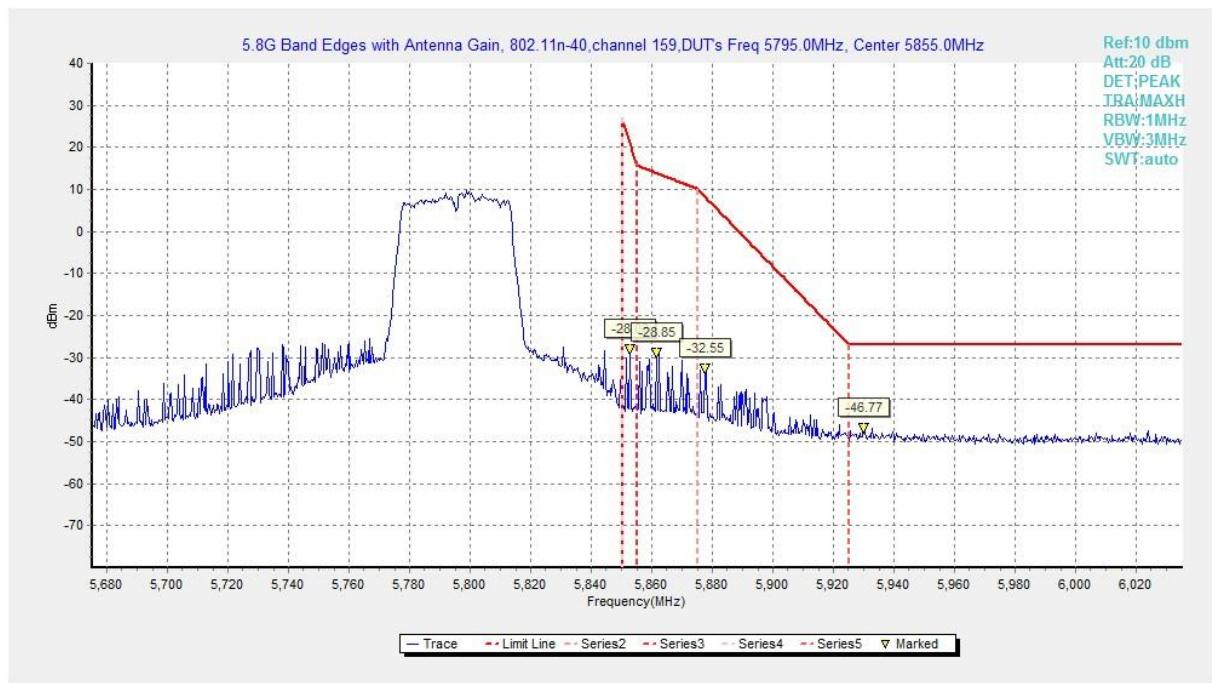


Fig. 78 Band Edges (802.11n-HT40, 5795MHz)

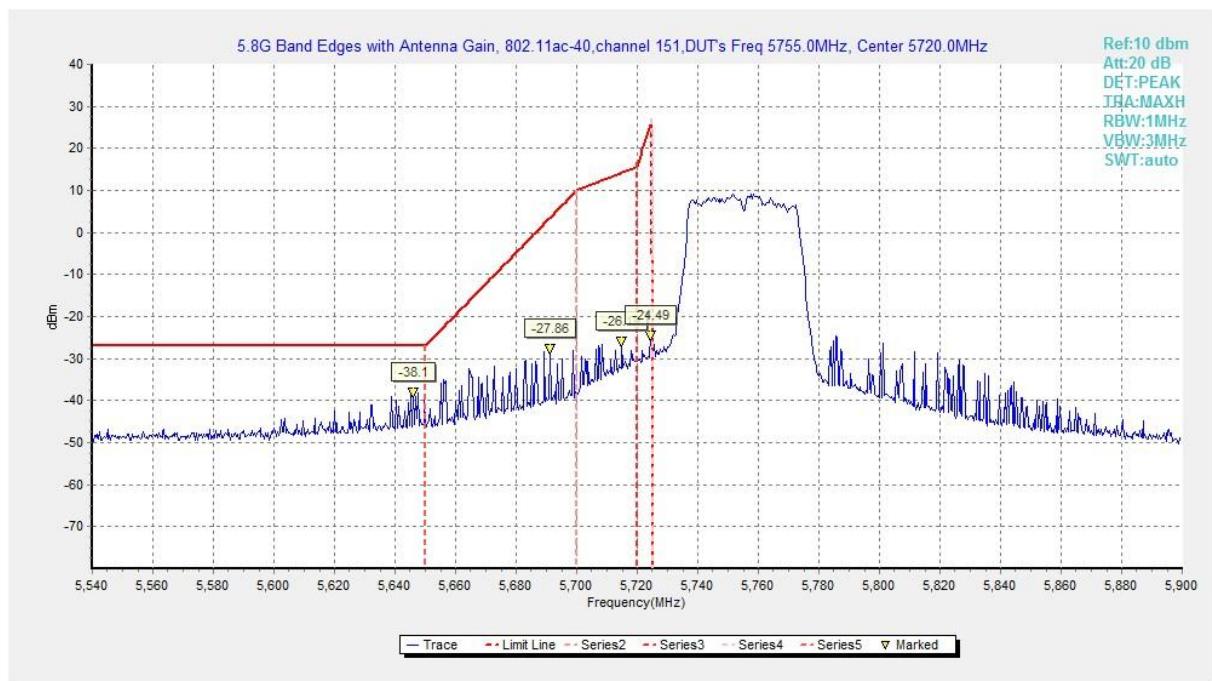


Fig. 79 Band Edges (802.11ac-HT40, 5755MHz)

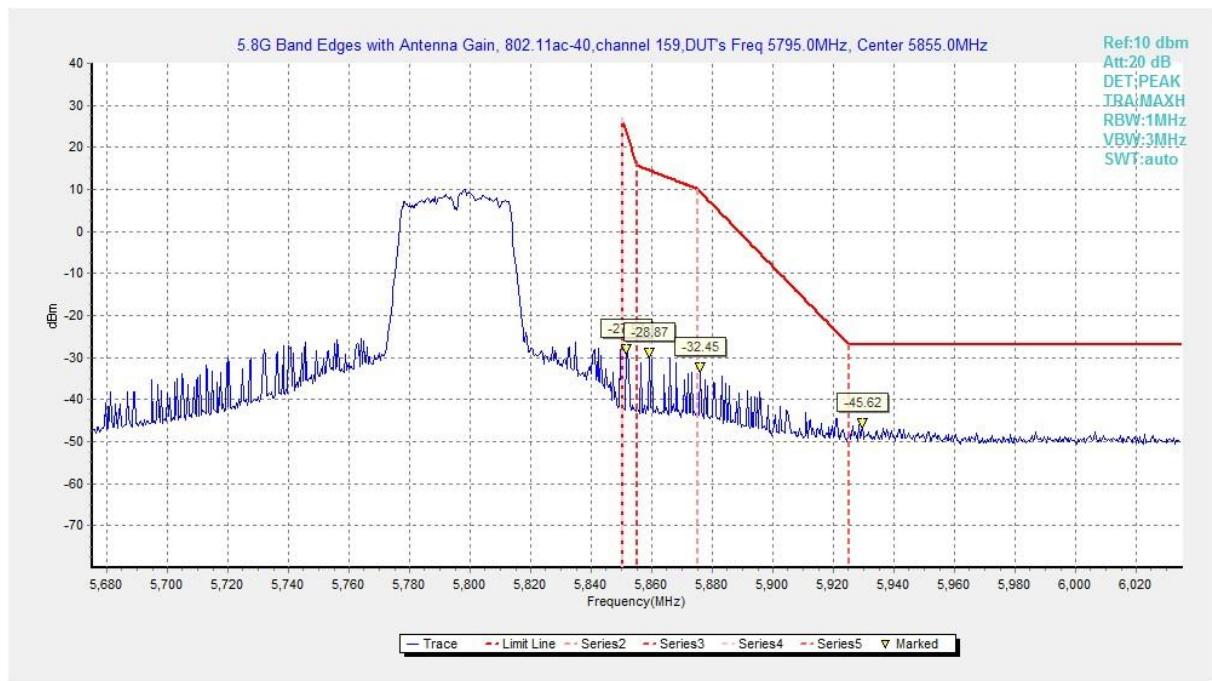


Fig. 80 Band Edges (802.11ac-HT40, 5795MHz)



Fig. 81 Band Edges (802.11ac-HT80, 5775MHz)



Fig. 82 Band Edges (802.11ac-HT80, 5775MHz)

A6.2 Band Edges - Radiated

Measurement Limit:

Standard	Limit (dBm/MHz)	
FCC 47 CFR Part 15.407	at the band edge	27
	at 5 MHz above or below the band edge	15.6
	at 25 MHz above or below the band edge	10
	at 75 MHz or more above or below the band edge	-27
Note: increasing linearly from point to point.		

Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5745 MHz	Fig.83	P
	5825 MHz	Fig.84	P
802.11n	5745 MHz	Fig.85	P
	5825 MHz	Fig.86	P
802.11n	5755 MHz	Fig.87	P
	5795 MHz	Fig.88	P
802.11ac	5745 MHz	Fig.89	P
	5825 MHz	Fig.90	P
802.11ac	5755 MHz	Fig.91	P
	5795 MHz	Fig.92	P
802.11ac HT80	5775 MHz	Fig.93	P

Conclusion: PASS

Test graphs as below:

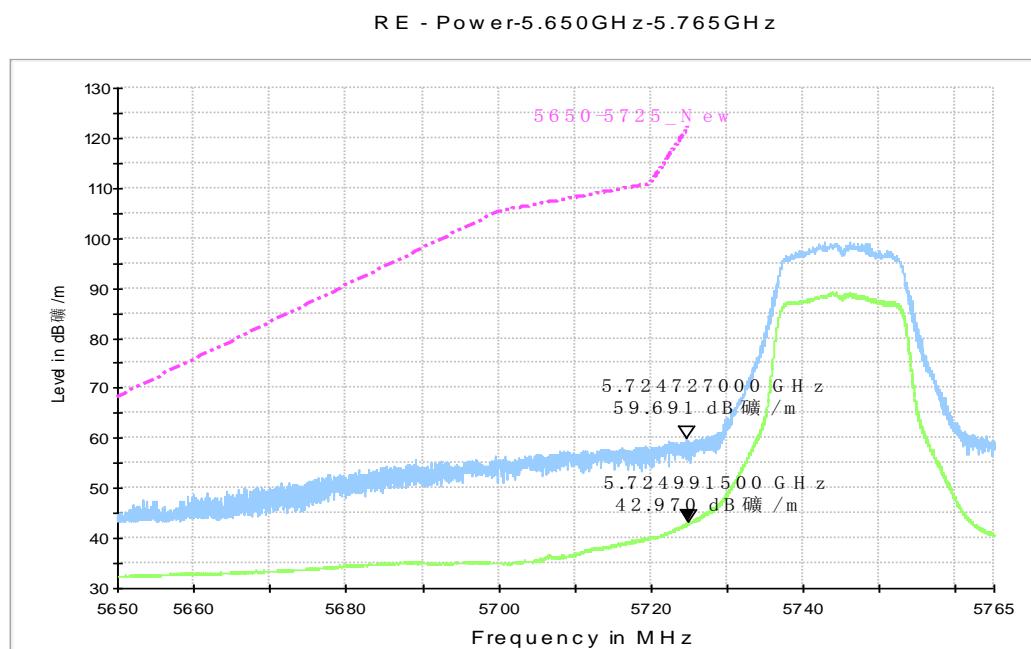


Fig. 83 Band Edges (802.11a, 5745MHz)

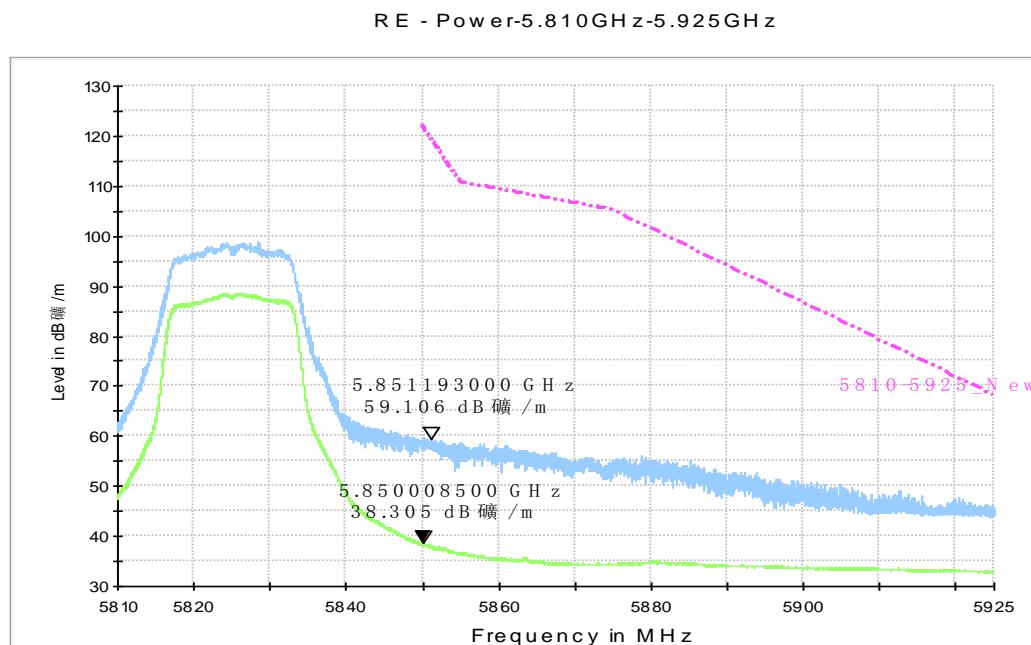


Fig. 84 Band Edges (802.11a, 5825MHz)

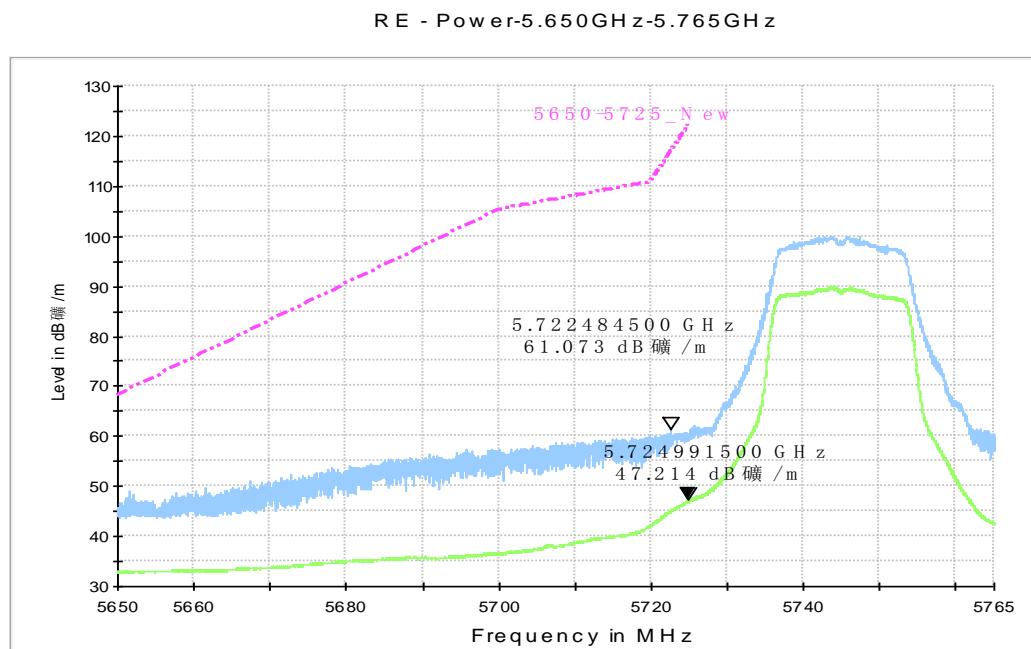


Fig. 85 Band Edges (802.11n-HT20, 5745MHz)

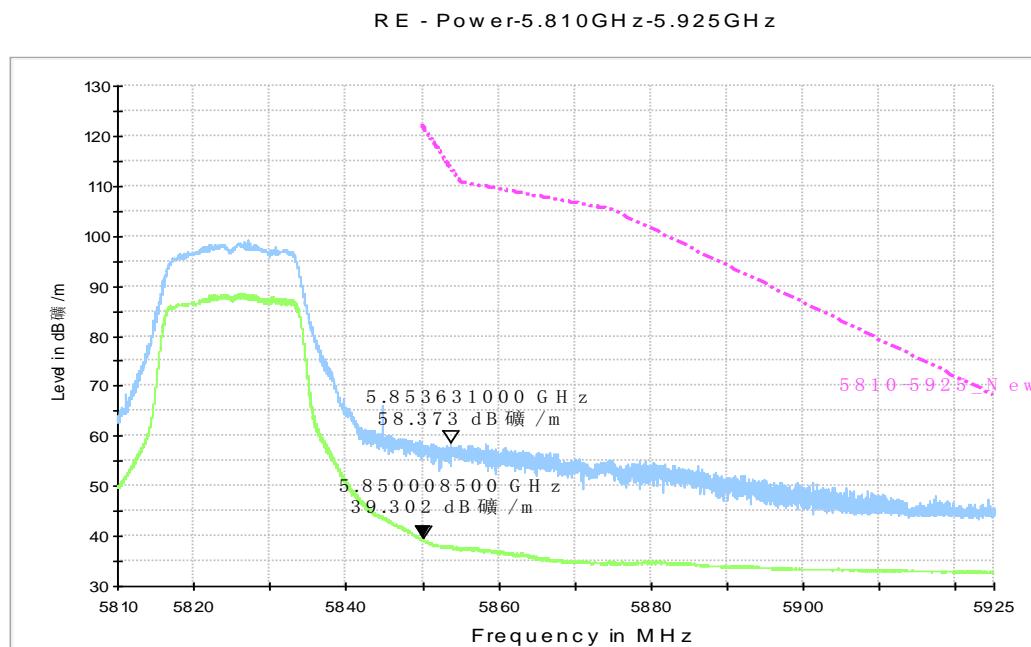


Fig. 86 Band Edges (802.11n-HT20, 5825MHz)

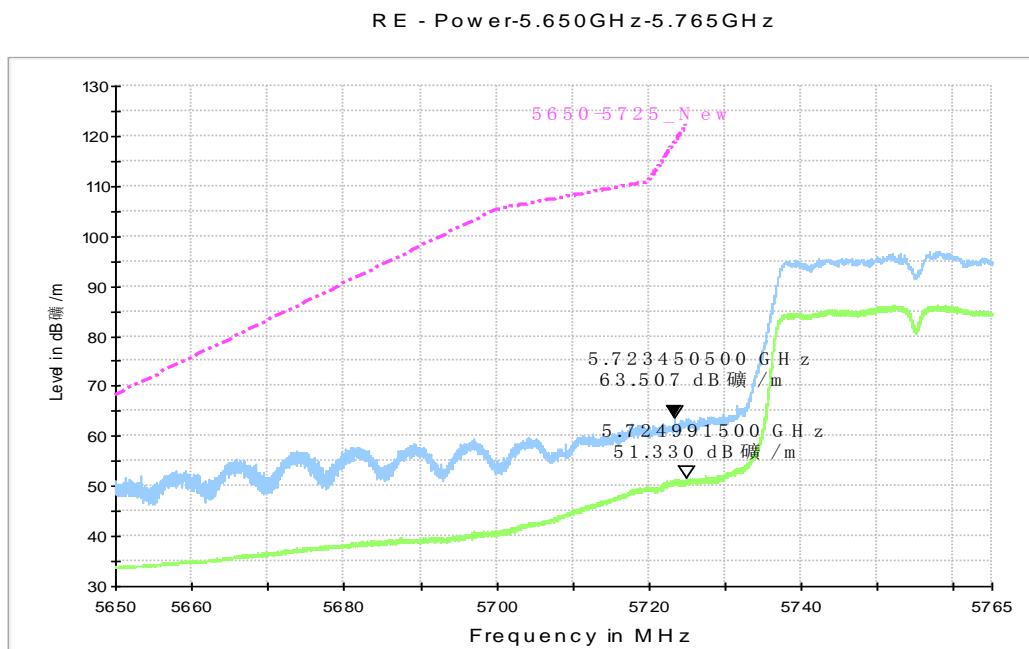


Fig. 87 Band Edges (802.11n-HT40, 5755MHz)

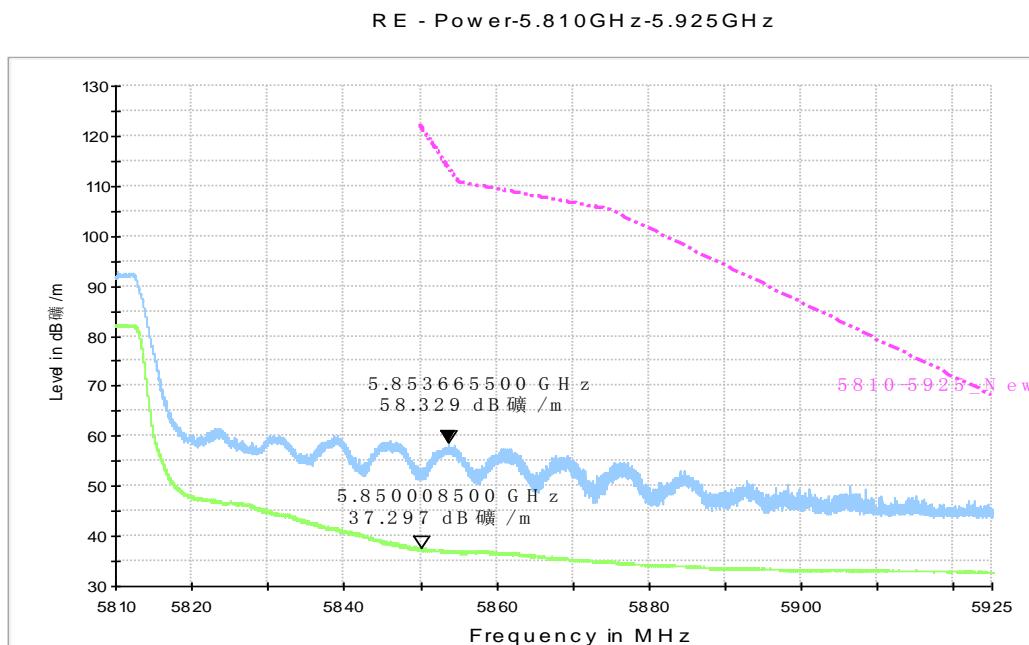


Fig. 88 Band Edges (802.11n-HT40, 5795MHz)

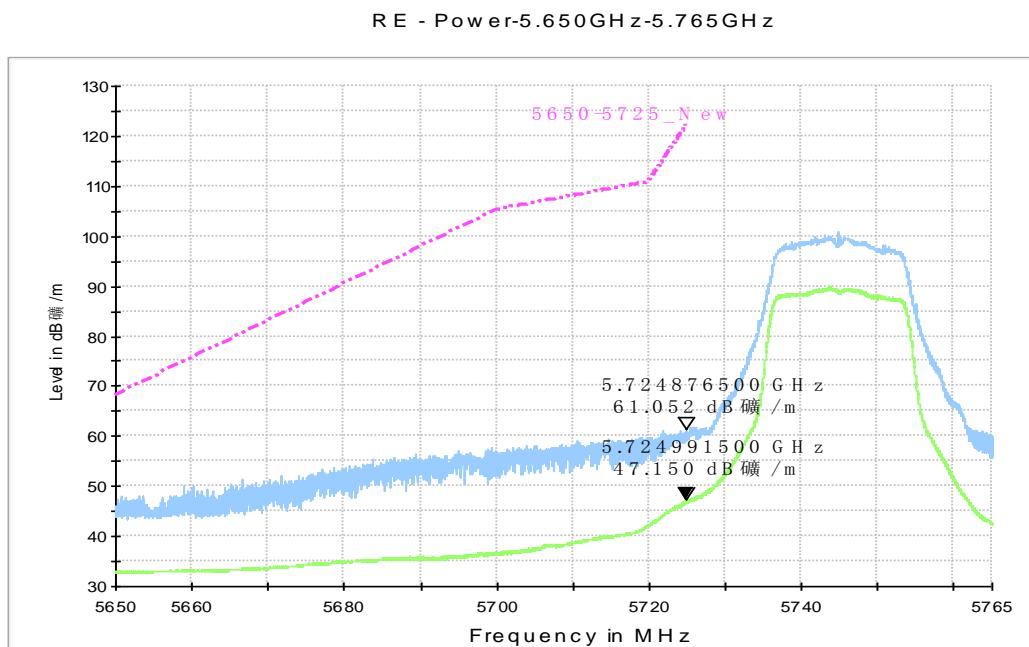


Fig. 89 Band Edges (802.11ac-HT20, 5745MHz)

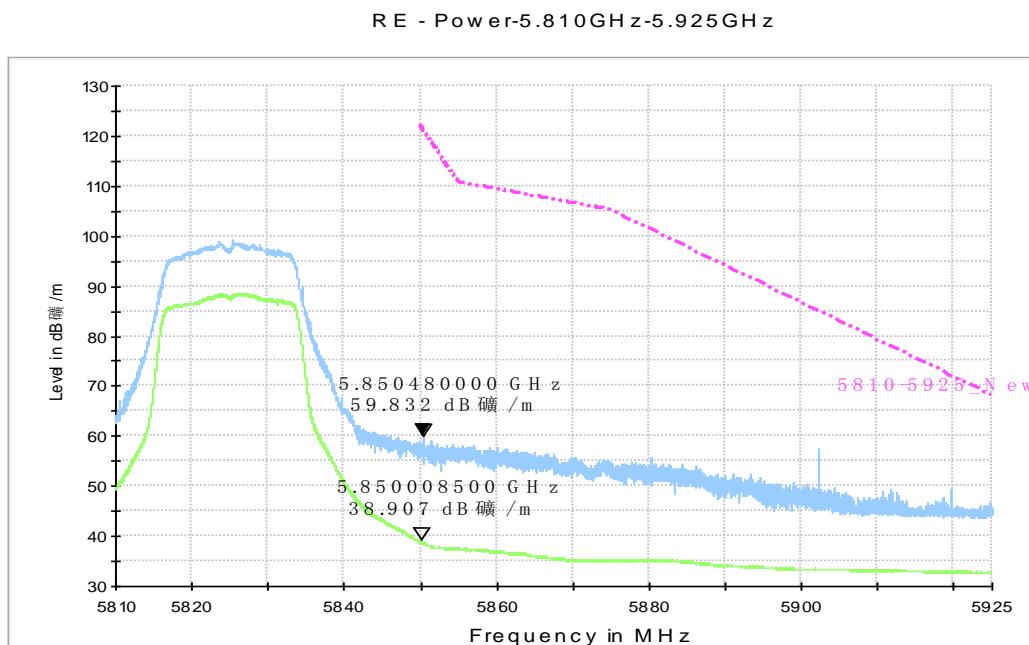


Fig. 90 Band Edges (802.11ac-HT20, 5825MHz)

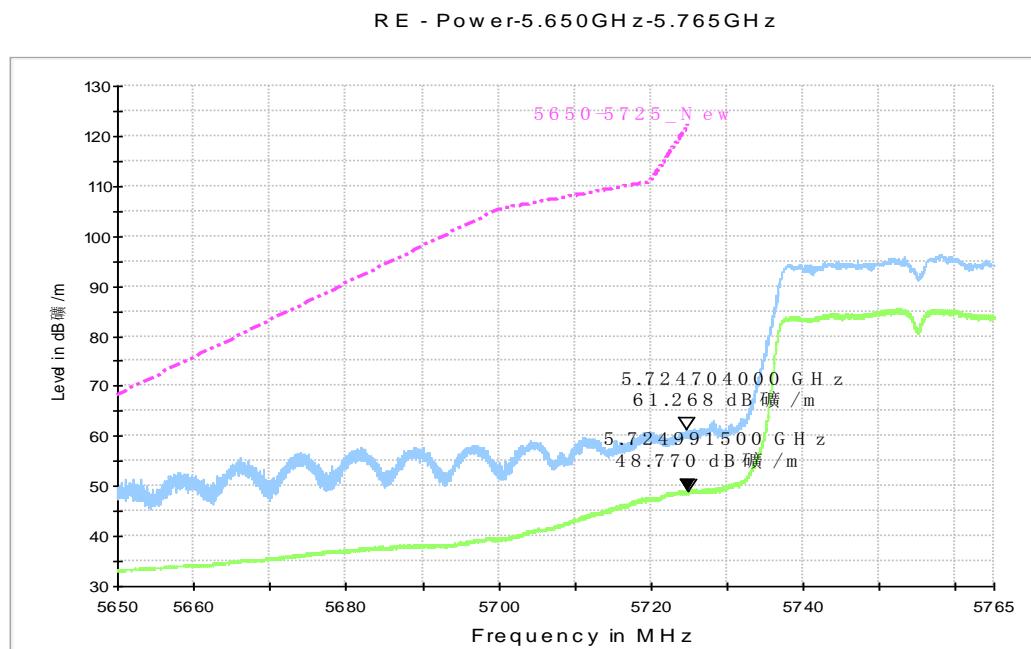


Fig. 91 Band Edges (802.11ac-HT40, 5755MHz)

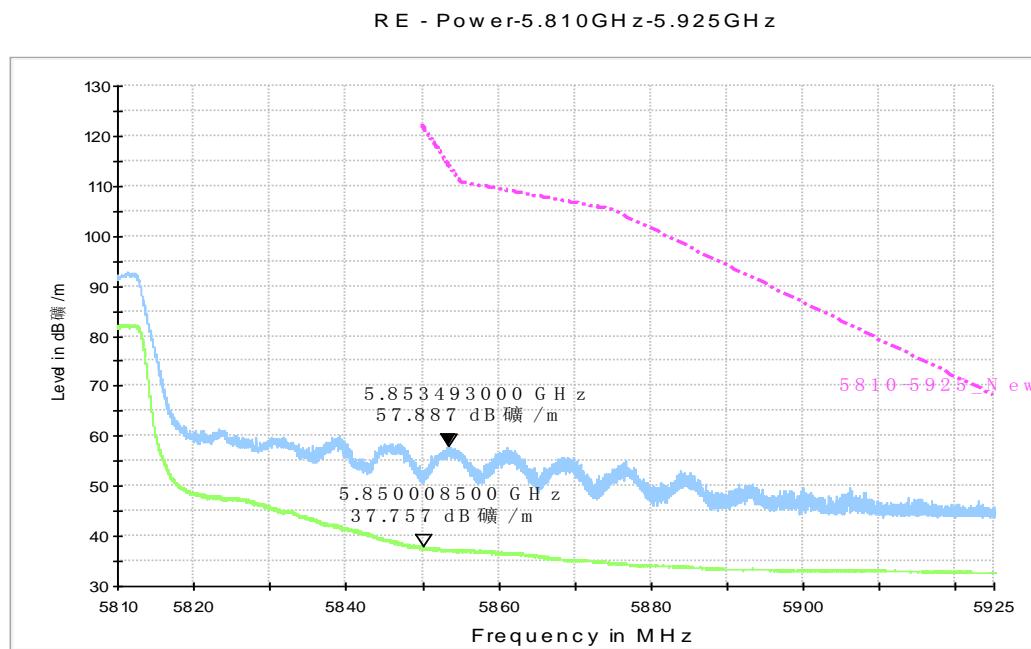


Fig. 92 Band Edges (802.11ac-HT40, 5795MHz)

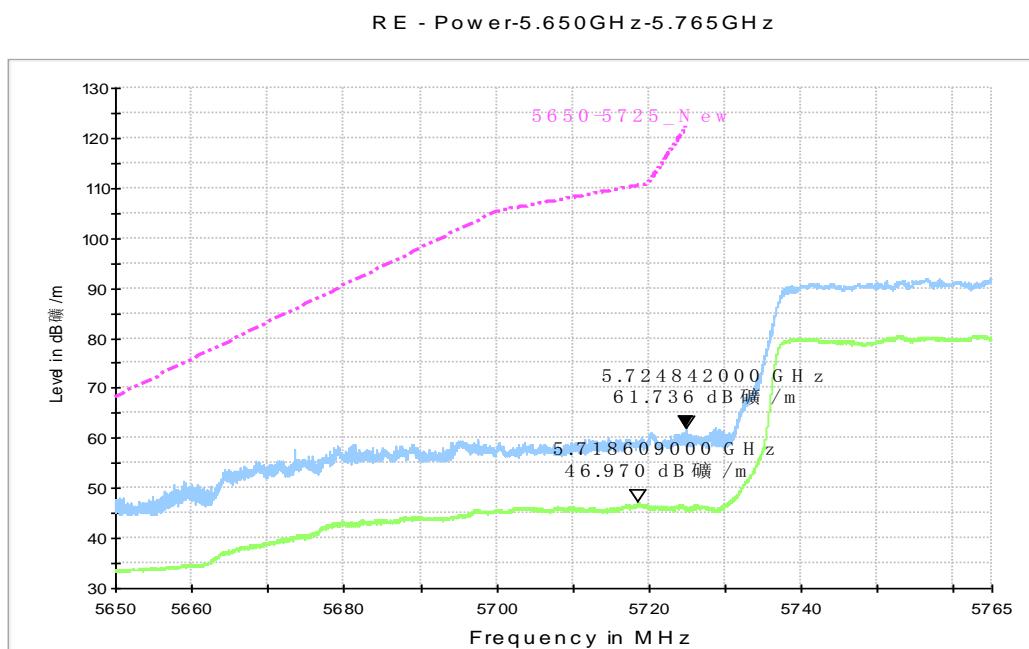


Fig. 93 Band Edges (802.11ac-HT80, 5775MHz)

A.7. AC Powerline Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
110	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is U =3.2dB, k=2.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion	
		With charger			
		802.11a	Idle		
0.15 to 0.5	66 to 56				
0.5 to 5	56			P	
5 to 30	60				

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

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB μ V)	Result (dB μ V)		Conclusion	
		With charger			
		802.11a	Idle		
0.15 to 0.5	56 to 46				
0.5 to 5	46			P	
5 to 30	50				

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

The measurement is made according to ANSI C63.10 .

Conclusion: PASS

Test graphs as below:

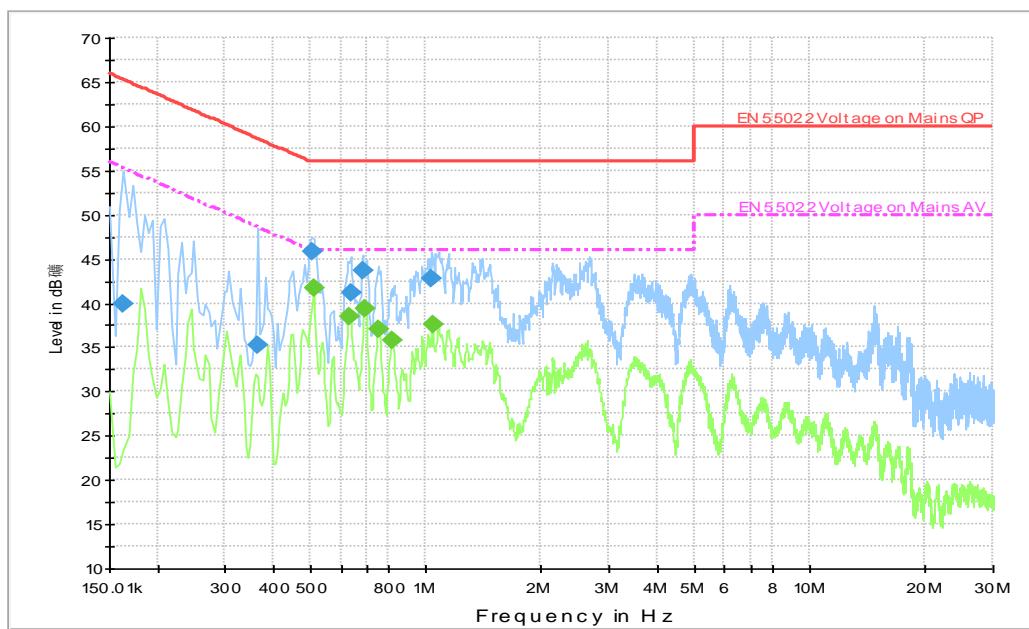


Fig. 94 AC Powerline Conducted Emission-802.11a

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.163500	39.9	2000.0	9.000	GND	N	10.4	25.3	65.3
0.366000	35.3	2000.0	9.000	GND	N	10.4	23.3	58.6
0.505500	45.8	2000.0	9.000	GND	N	10.4	10.2	56.0
0.636000	41.1	2000.0	9.000	GND	N	10.4	14.9	56.0
0.685500	43.8	2000.0	9.000	GND	N	10.5	12.2	56.0
1.036500	42.7	2000.0	9.000	GND	N	10.4	13.3	56.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.510000	41.6	2000.0	9.000	GND	N	10.4	4.4	46.0
0.631500	38.5	2000.0	9.000	GND	N	10.4	7.5	46.0
0.694500	39.3	2000.0	9.000	GND	N	10.5	6.7	46.0
0.757500	37.1	2000.0	9.000	GND	N	10.5	8.9	46.0
0.820500	35.7	2000.0	9.000	GND	N	10.5	10.3	46.0
1.041000	37.6	2000.0	9.000	GND	N	10.4	8.4	46.0

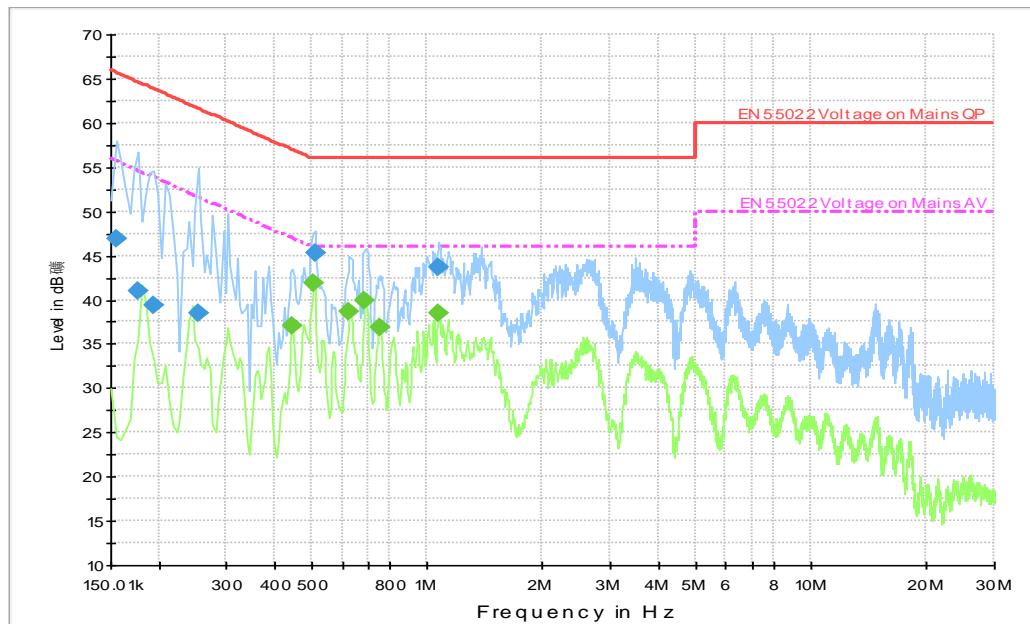


Fig. 95 AC Powerline Conducted Emission-Idle

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.154500	46.9	2000.0	9.000	GND	L1	10.3	18.8	65.8
0.177000	41.1	2000.0	9.000	GND	N	10.4	23.6	64.6
0.195000	39.4	2000.0	9.000	GND	N	10.4	24.4	63.8
0.253500	38.4	2000.0	9.000	GND	N	10.4	23.2	61.6
0.510000	45.3	2000.0	9.000	GND	N	10.4	10.7	56.0
1.072500	43.6	2000.0	9.000	GND	N	10.4	12.4	56.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.447000	37.1	2000.0	9.000	GND	N	10.4	9.8	46.9
0.505500	41.9	2000.0	9.000	GND	N	10.4	4.1	46.0
0.627000	38.6	2000.0	9.000	GND	N	10.4	7.4	46.0
0.690000	39.9	2000.0	9.000	GND	N	10.5	6.1	46.0
0.757500	36.9	2000.0	9.000	GND	N	10.5	9.1	46.0
1.072500	38.5	2000.0	9.000	GND	N	10.4	7.5	46.0

ANNEX B: Accreditation Certificate

<p style="text-align: center;">United States Department of Commerce National Institute of Standards and Technology</p> <p style="text-align: center;"></p>	
<p style="text-align: center;">Certificate of Accreditation to ISO/IEC 17025:2005</p>	
<p style="text-align: center;">NVLAP LAB CODE: 600118-0</p>	
<p style="text-align: center;">Telecommunication Technology Labs, CAICT Beijing China</p>	
<p style="text-align: center;"><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p>	
<p style="text-align: center;">Electromagnetic Compatibility & Telecommunications</p>	
<p style="text-align: center;"><i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).</i></p>	
<p style="text-align: center;">2018-09-28 through 2019-09-30 <i>Effective Dates</i></p>	<p style="text-align: center;"> <i>For the National Voluntary Laboratory Accreditation Program</i></p>

*** END OF REPORT BODY ***