

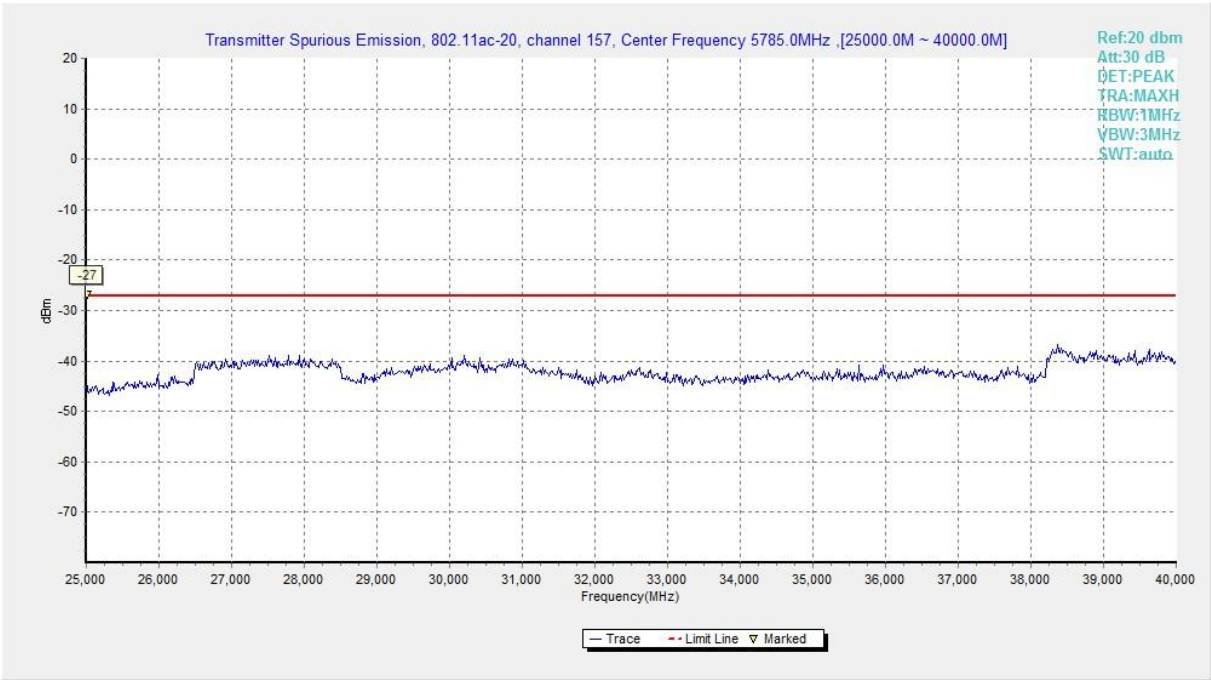


Fig. 46 Conducted Spurious Emission (802.11ac-HT20, Ch157, 25 GHz-40 GHz)

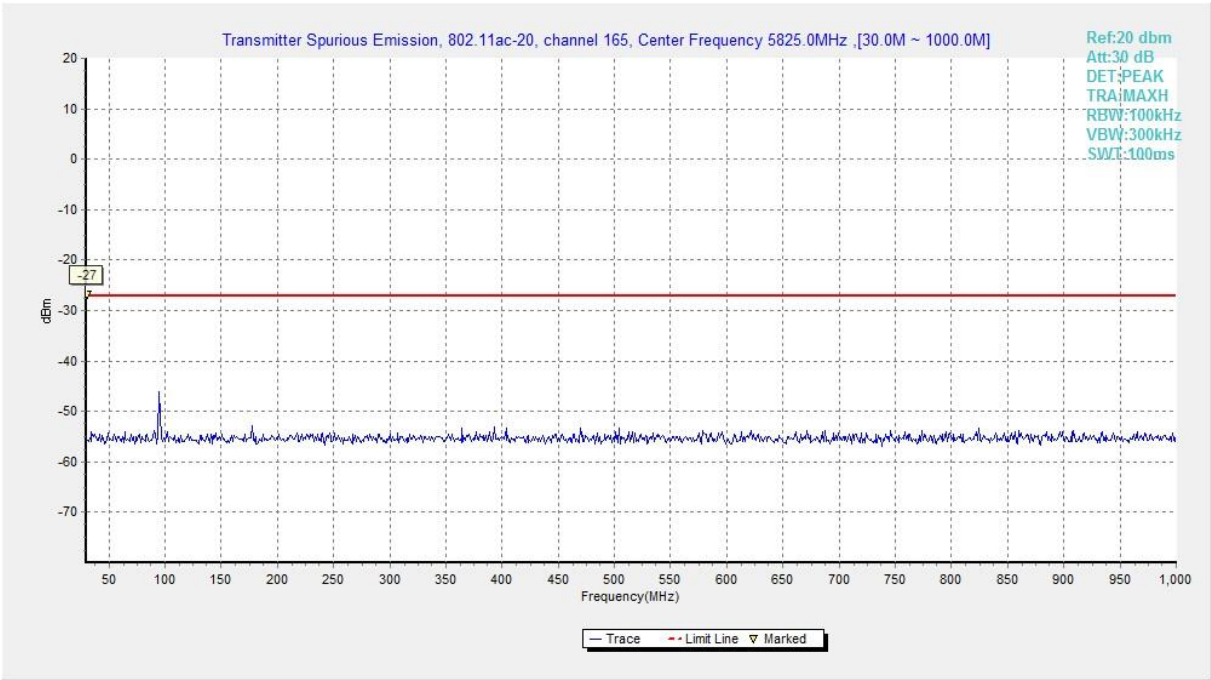


Fig. 47 Conducted Spurious Emission (802.11ac-HT20, Ch165, 30 MHz-1 GHz)

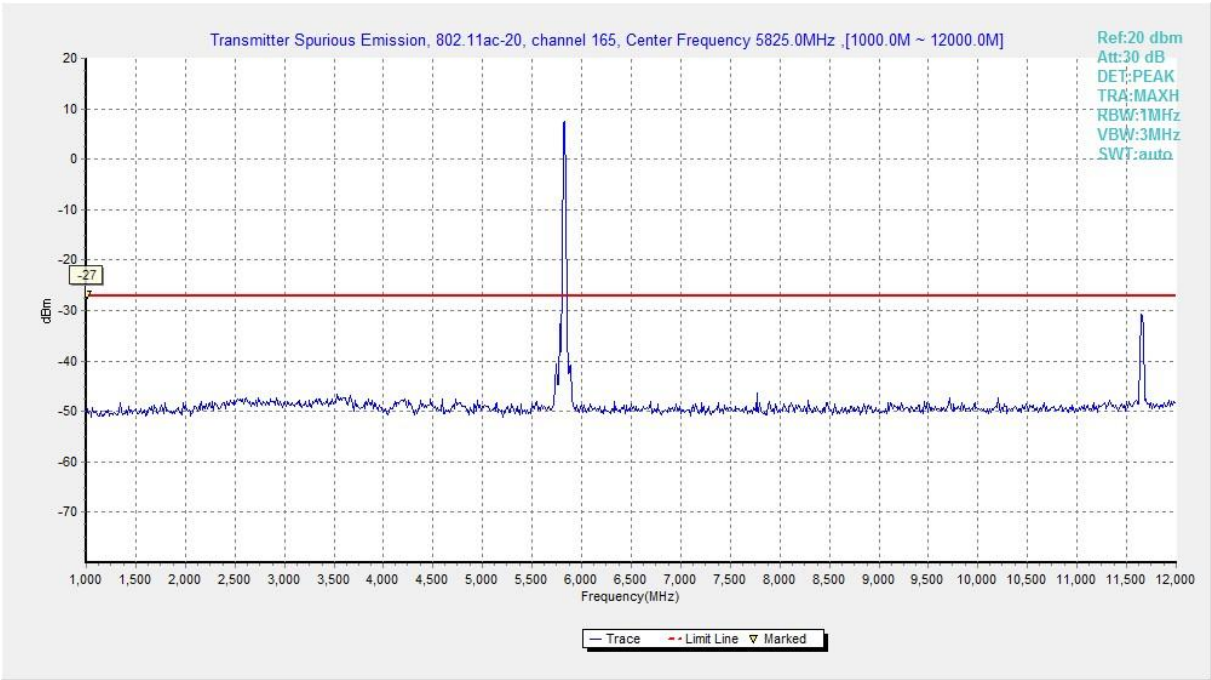


Fig. 48 Conducted Spurious Emission (802.11ac-HT20, Ch165, 1 GHz -12 GHz)

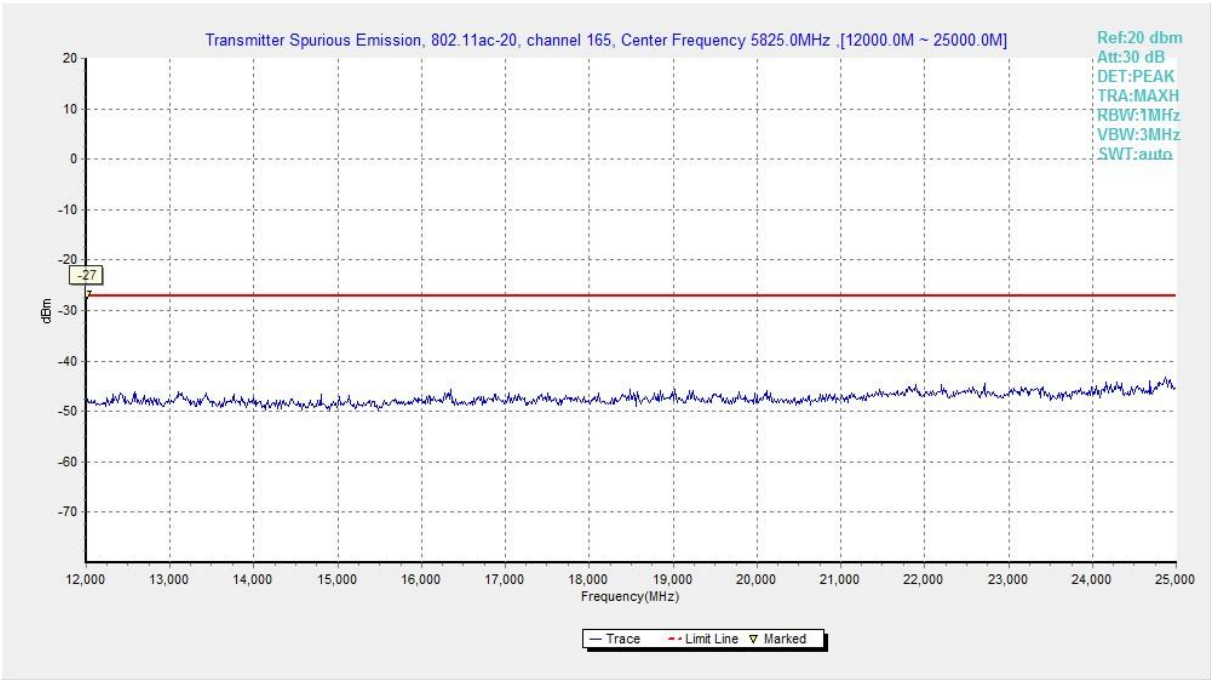


Fig. 49 Conducted Spurious Emission (802.11ac-HT20, Ch165, 12 GHz-25 GHz)

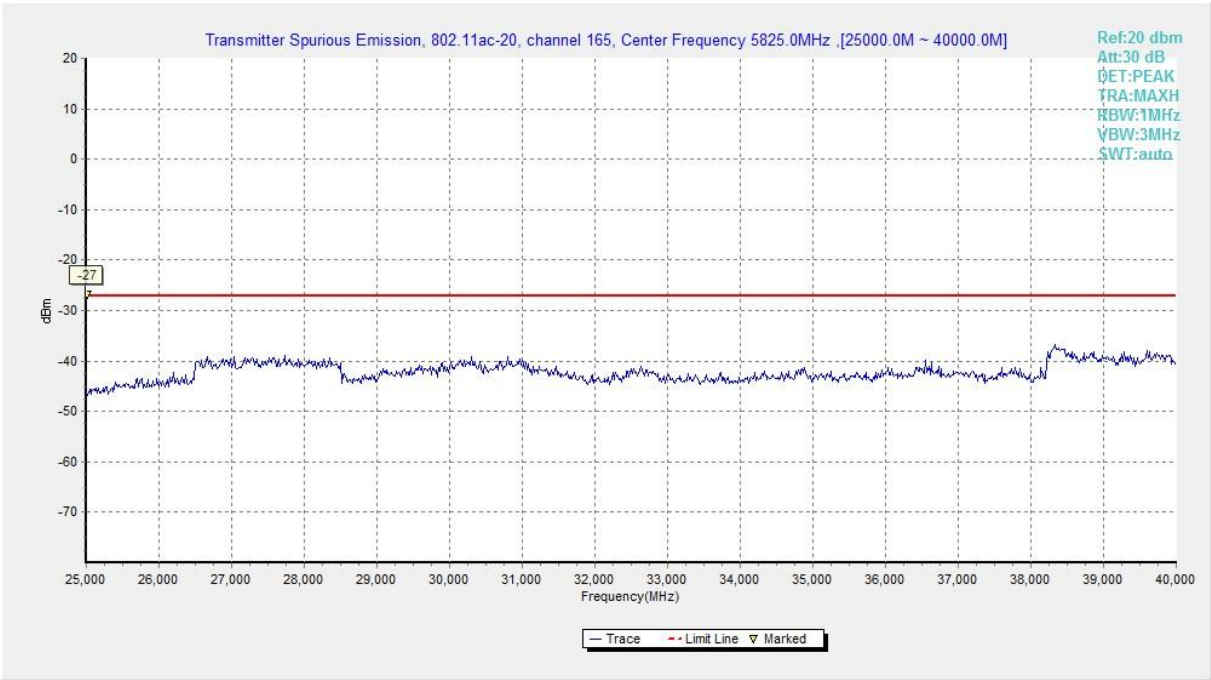


Fig. 50 Conducted Spurious Emission (802.11ac-HT20, Ch165, 25 GHz-40 GHz)

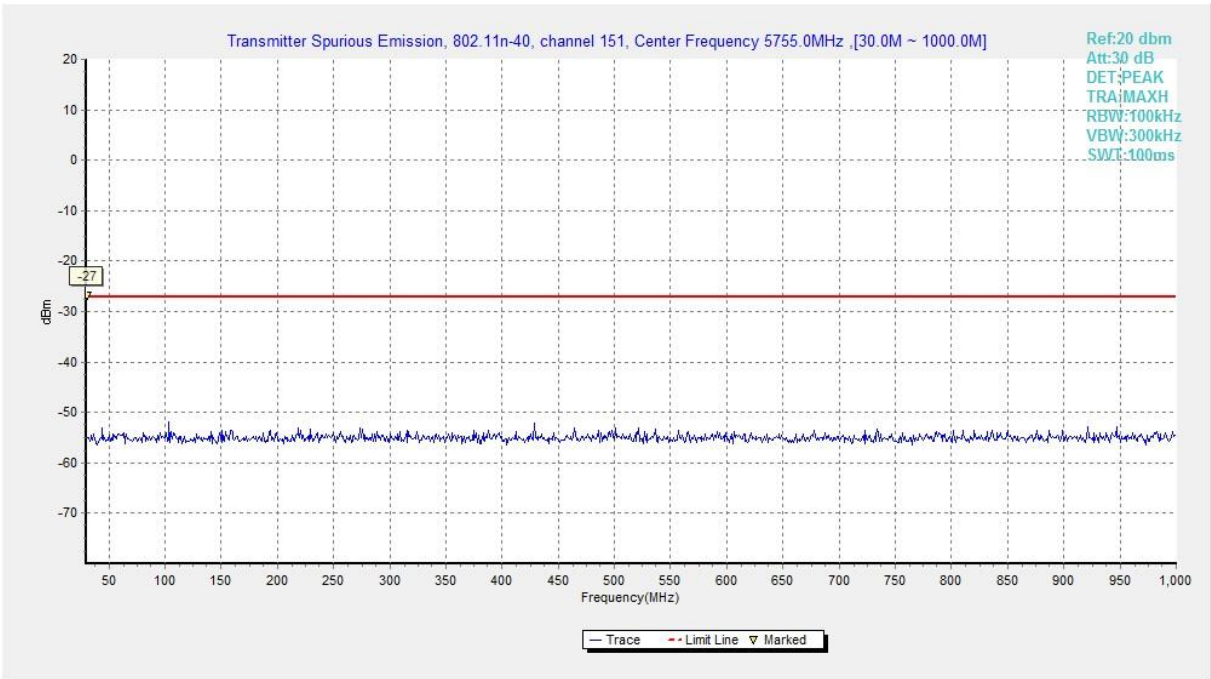


Fig. 51 Conducted Spurious Emission (802.11n-HT40, Ch151, 30 MHz-1 GHz)

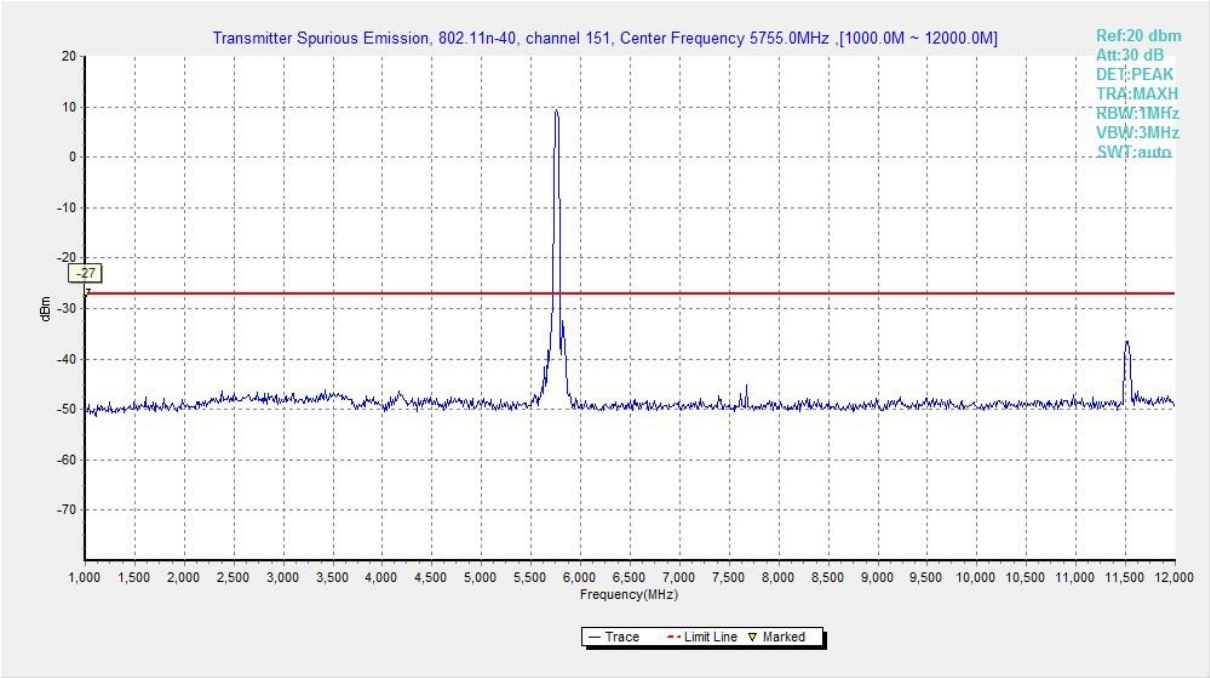


Fig. 52 Conducted Spurious Emission (802.11n-HT40, Ch151, 1 GHz -12 GHz)

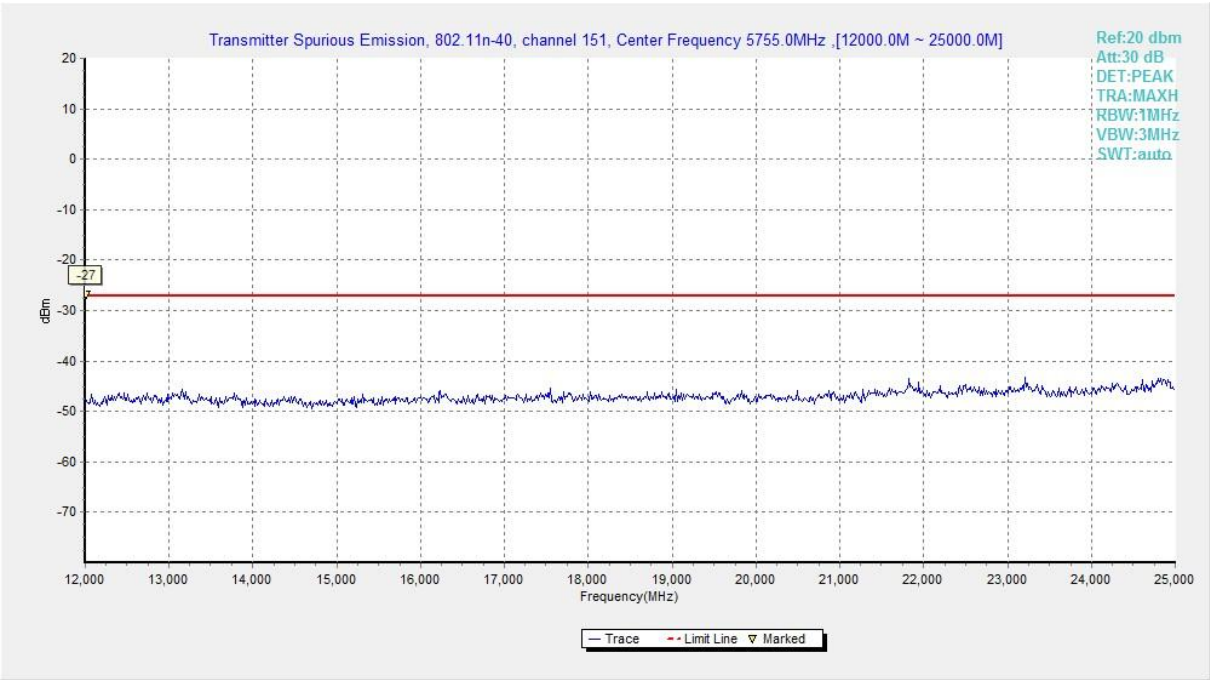


Fig. 53 Conducted Spurious Emission (802.11n-HT40, Ch151, 12 GHz-25 GHz)

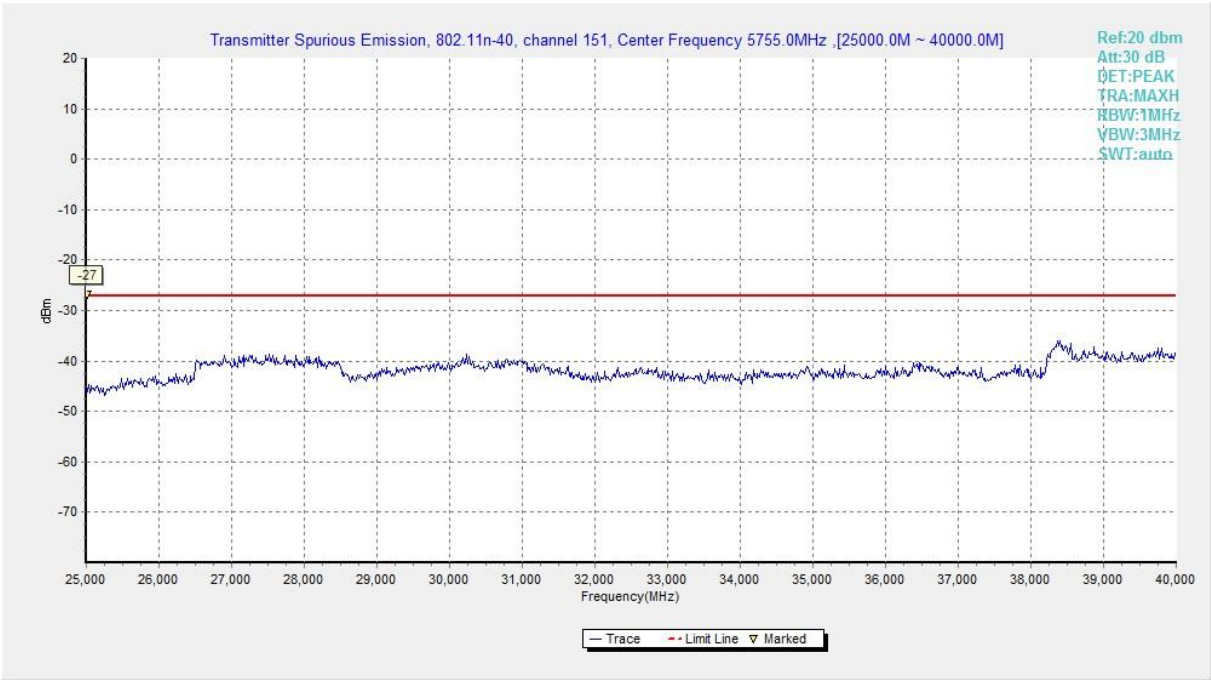


Fig. 54 Conducted Spurious Emission (802.11n-HT40, Ch151, 25 GHz-40 GHz)

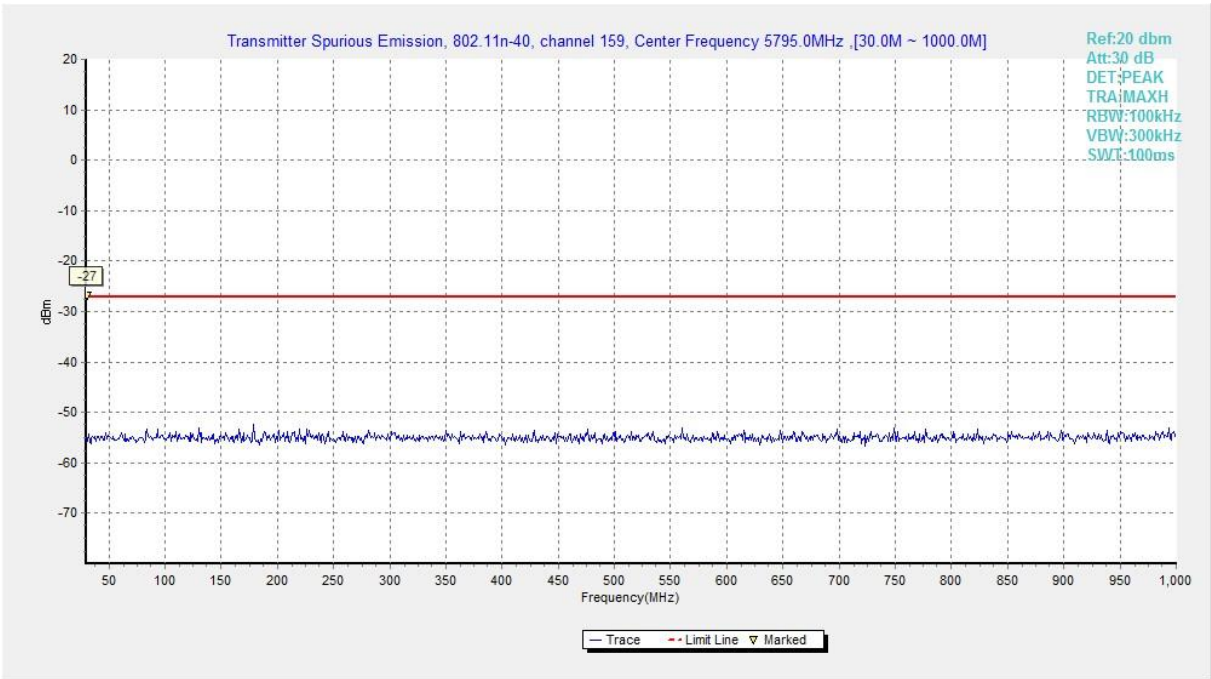


Fig. 55 Conducted Spurious Emission (802.11n-HT40, Ch159, 30 MHz-1 GHz)

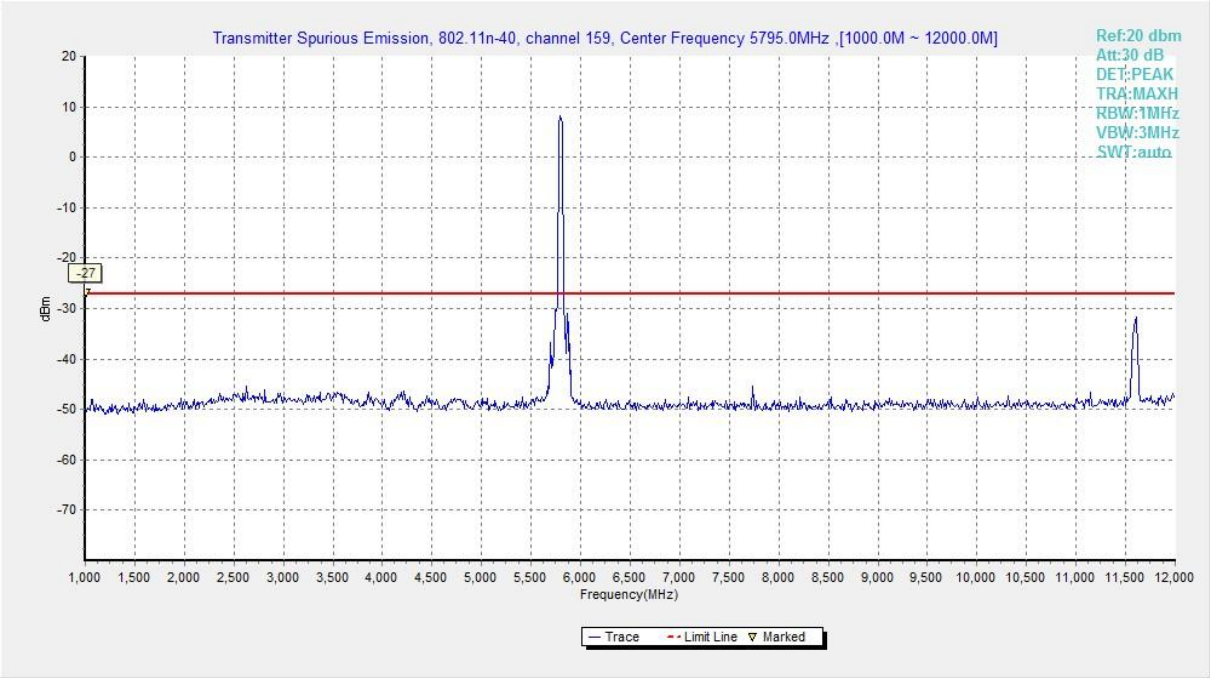


Fig. 56 Conducted Spurious Emission (802.11n-HT40, Ch159, 1 GHz -12 GHz)

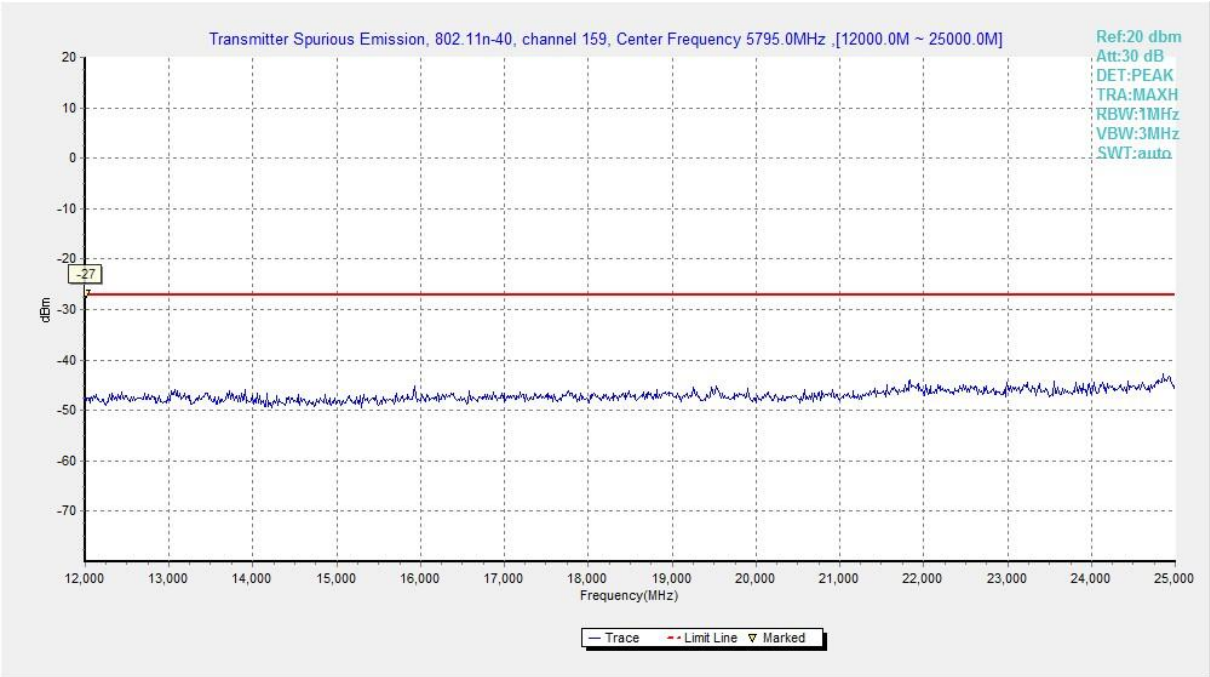


Fig. 57 Conducted Spurious Emission (802.11n-HT40, Ch159, 12 GHz-25 GHz)

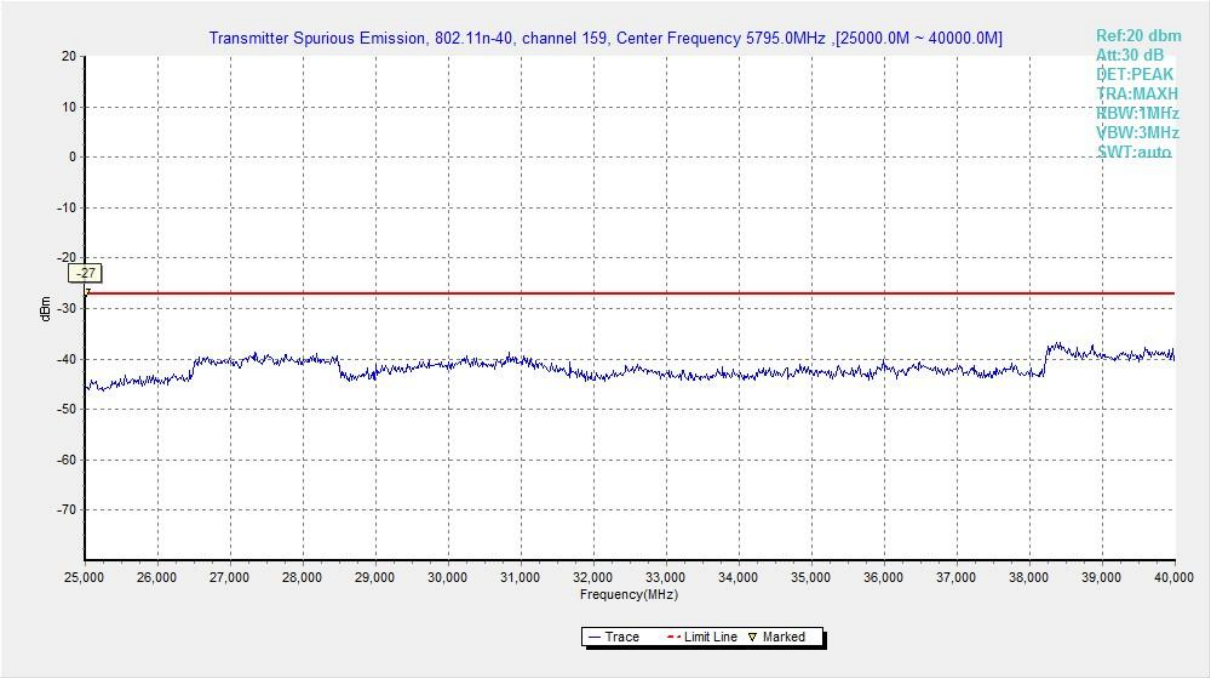


Fig. 58 Conducted Spurious Emission (802.11n-HT40, Ch159, 25 GHz-40 GHz)

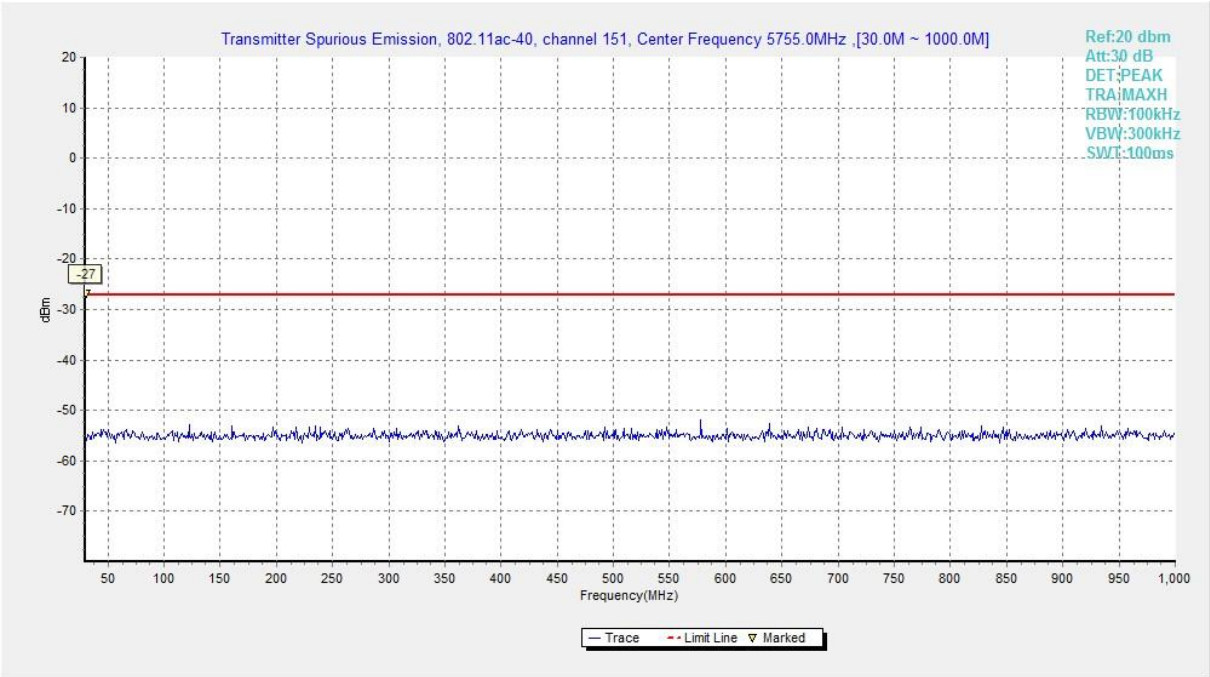


Fig. 59 Conducted Spurious Emission (802.11ac-HT40, Ch151, 30 MHz-1 GHz)

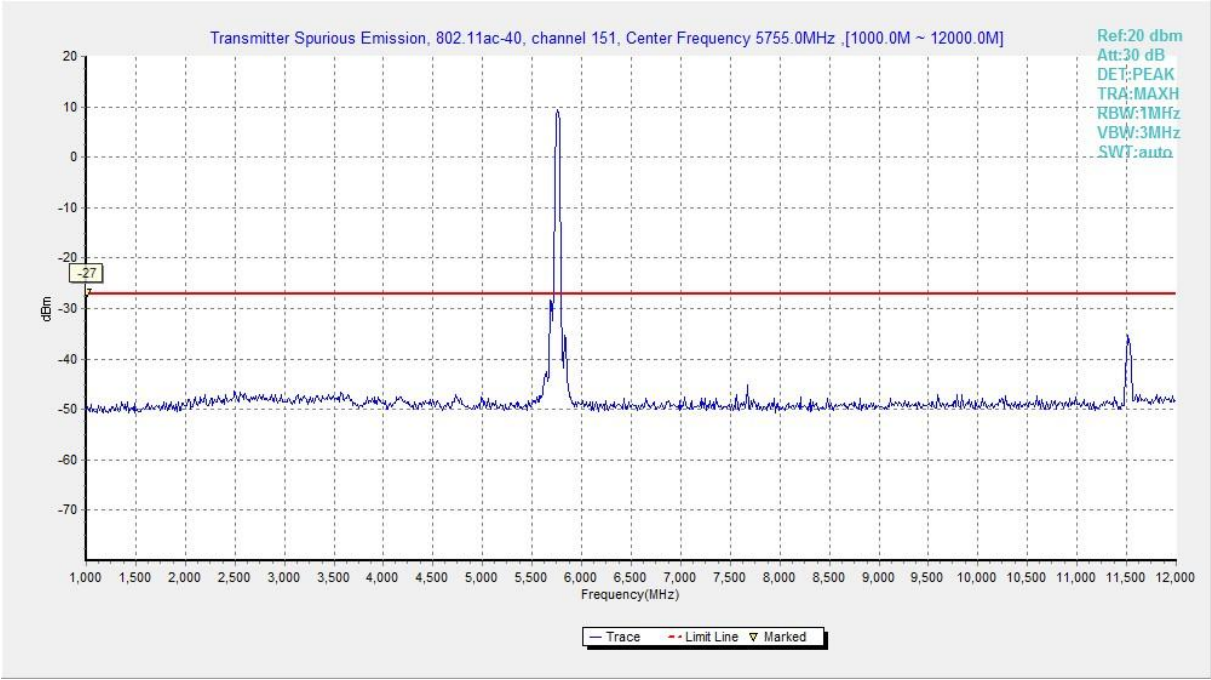


Fig. 60 Conducted Spurious Emission (802.11ac-HT40, Ch151, 1 GHz -12 GHz)

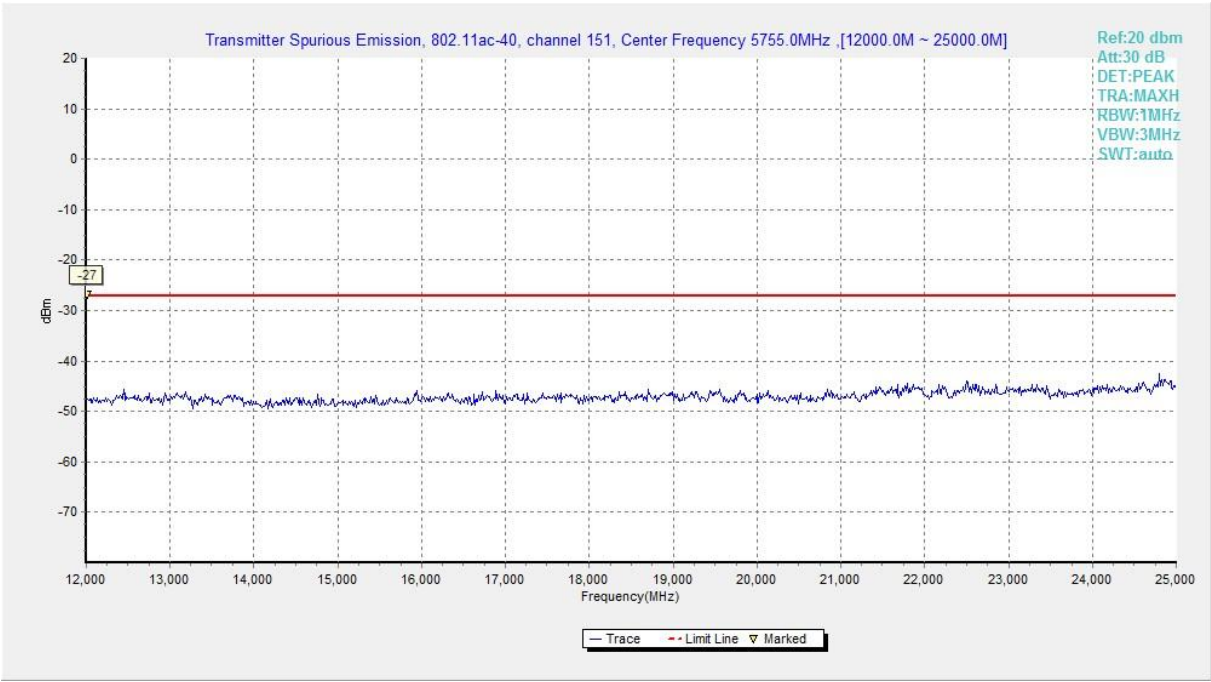


Fig. 61 Conducted Spurious Emission (802.11ac-HT40, Ch151, 12 GHz-25 GHz)

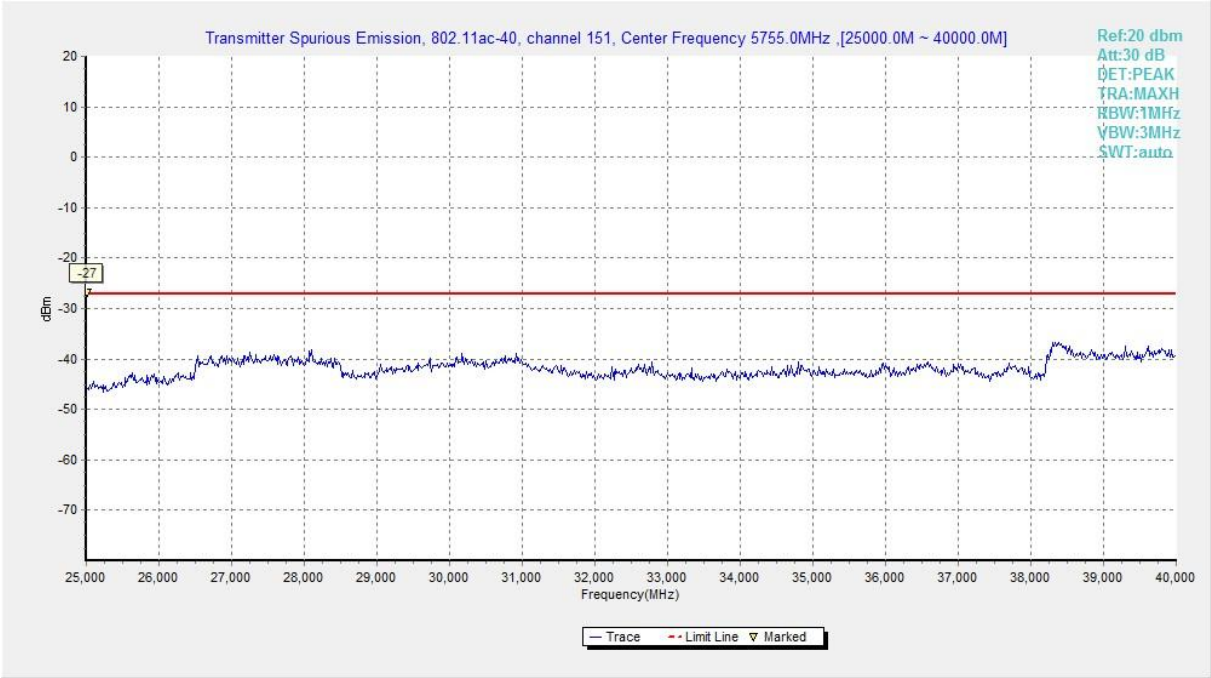


Fig. 62 Conducted Spurious Emission (802.11ac-HT40, Ch151, 25 GHz-40 GHz)

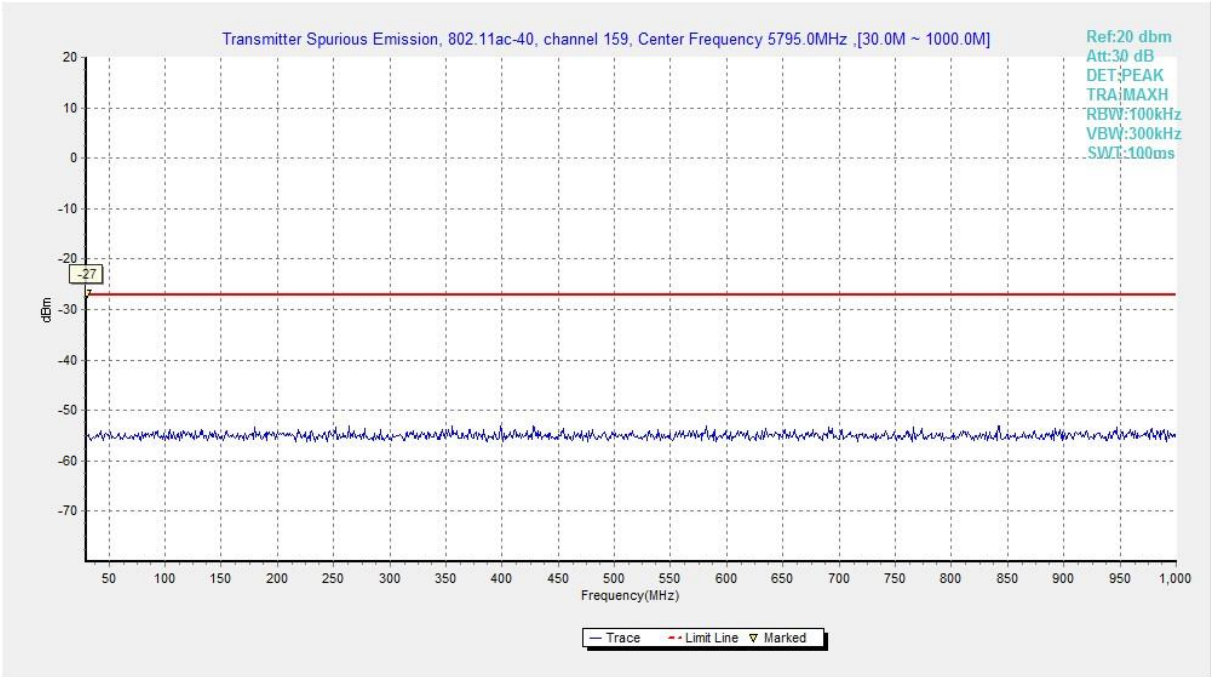


Fig. 63 Conducted Spurious Emission (802.11ac-HT40, Ch159, 30 MHz-1 GHz)

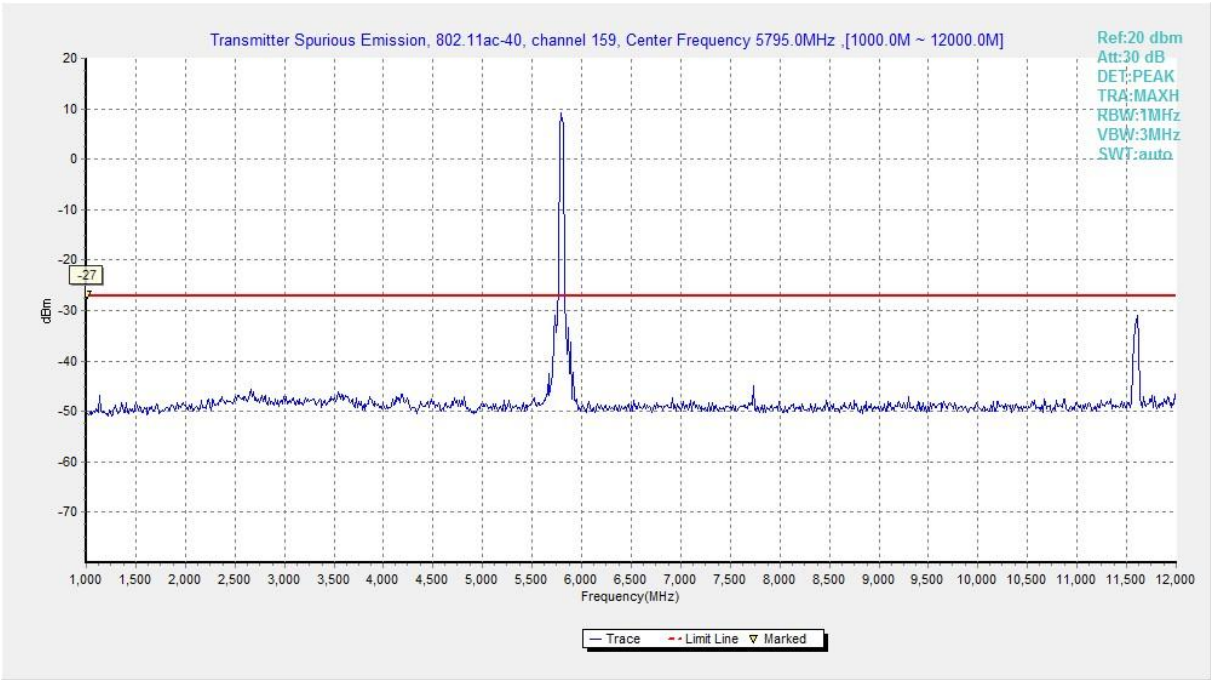


Fig. 64 Conducted Spurious Emission (802.11ac-HT40, Ch159, 1 GHz -12 GHz)

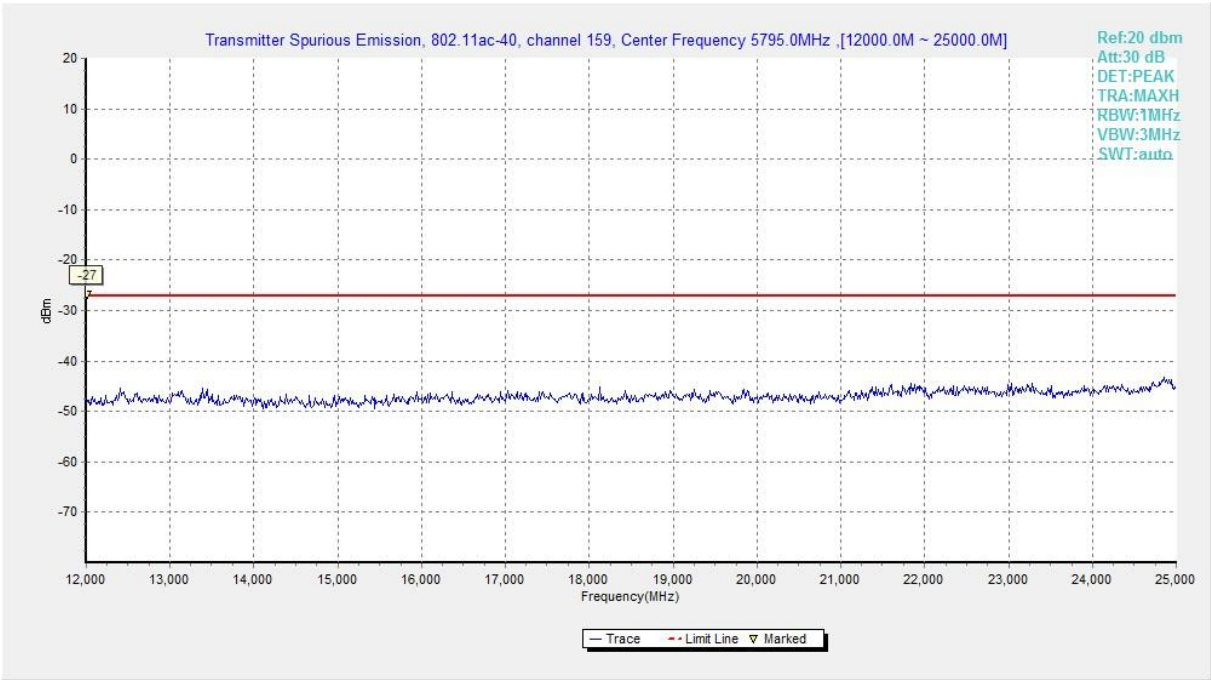


Fig. 65 Conducted Spurious Emission (802.11ac-HT40, Ch159, 12 GHz-25 GHz)

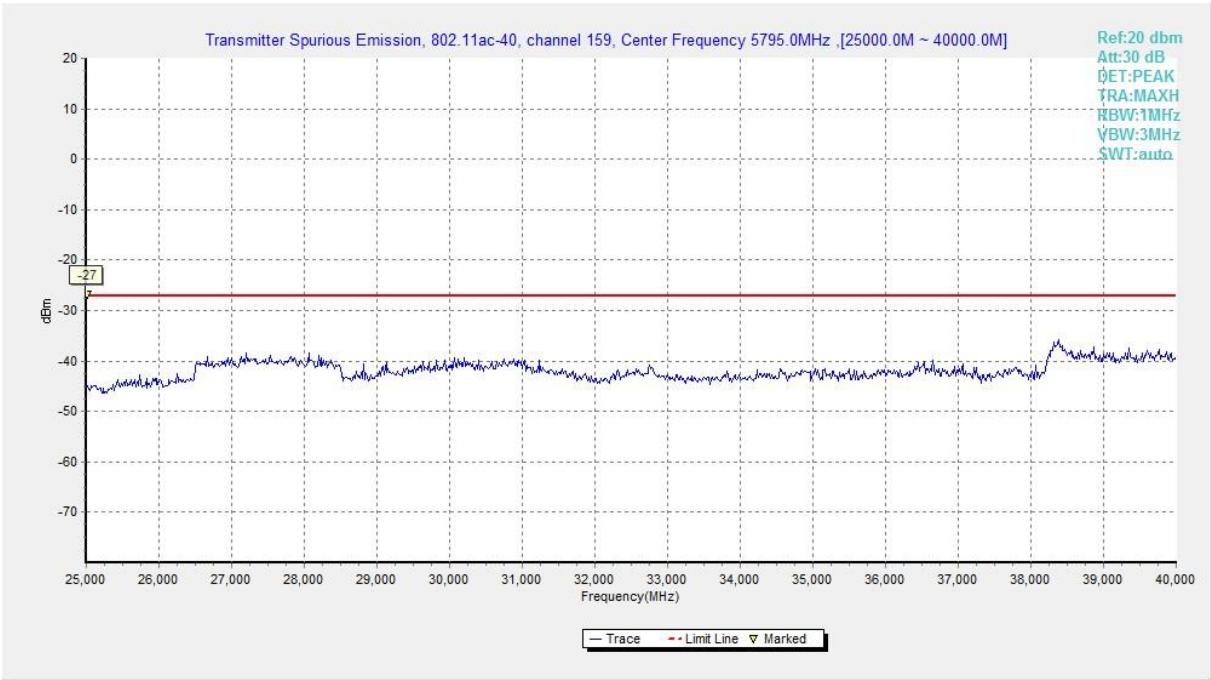


Fig. 66 Conducted Spurious Emission (802.11ac-HT40, Ch159, 25 GHz-40 GHz)

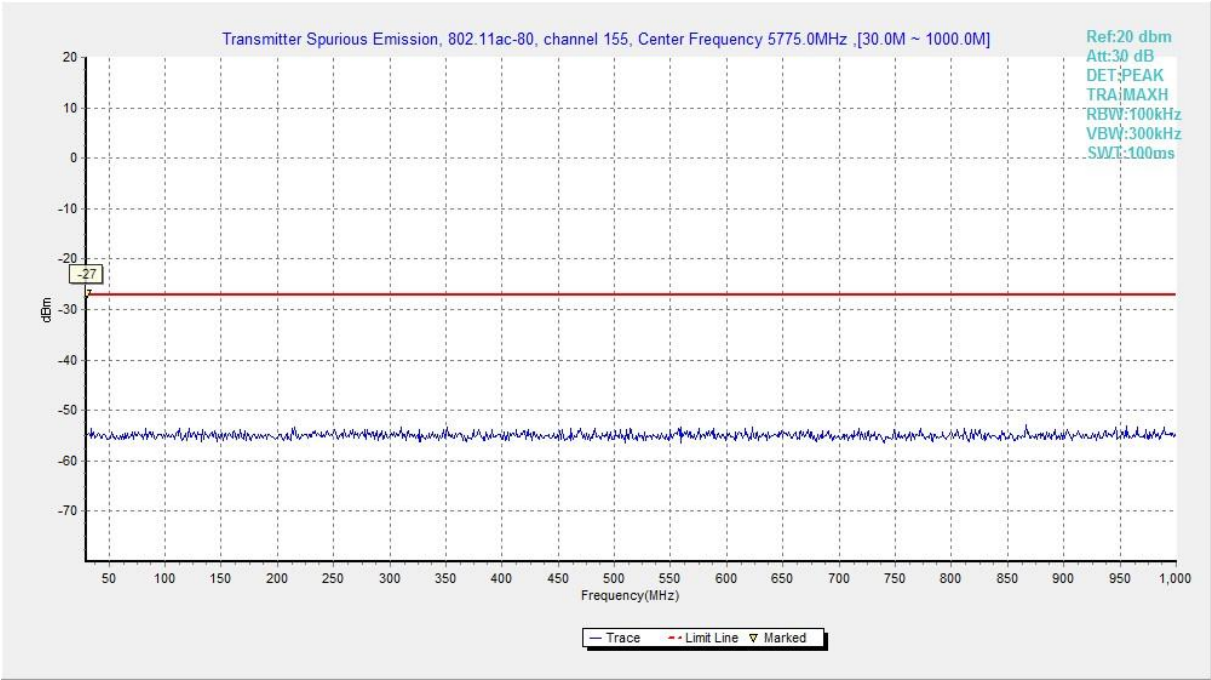


Fig. 67 Conducted Spurious Emission (802.11ac-HT80, Ch155, 30 MHz-1 GHz)

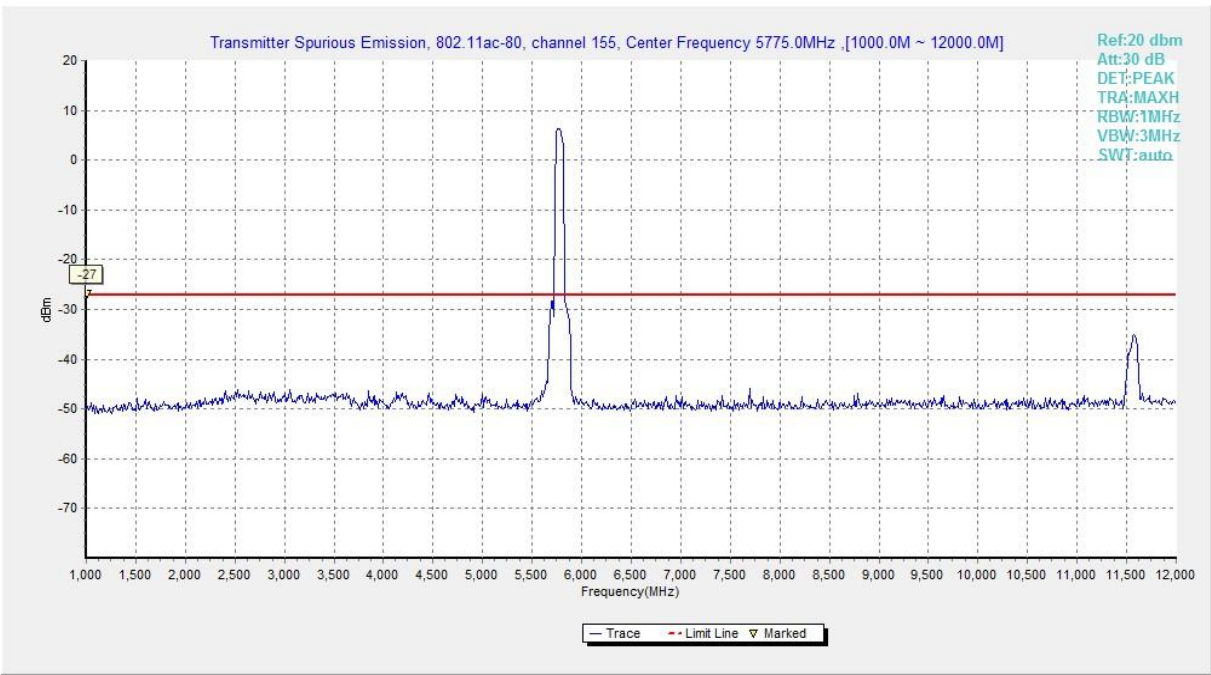


Fig. 68 Conducted Spurious Emission (802.11ac-HT80, Ch155, 1 GHz -12 GHz)

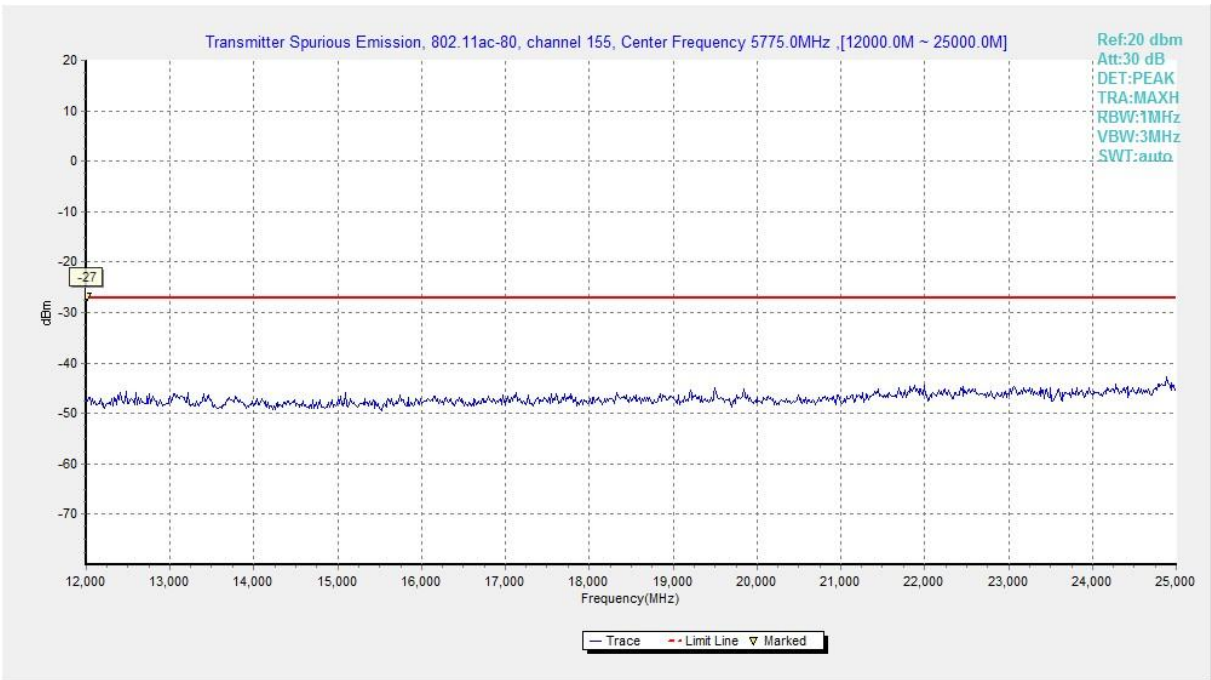


Fig. 69 Conducted Spurious Emission (802.11ac-HT80, Ch155, 12 GHz-25 GHz)

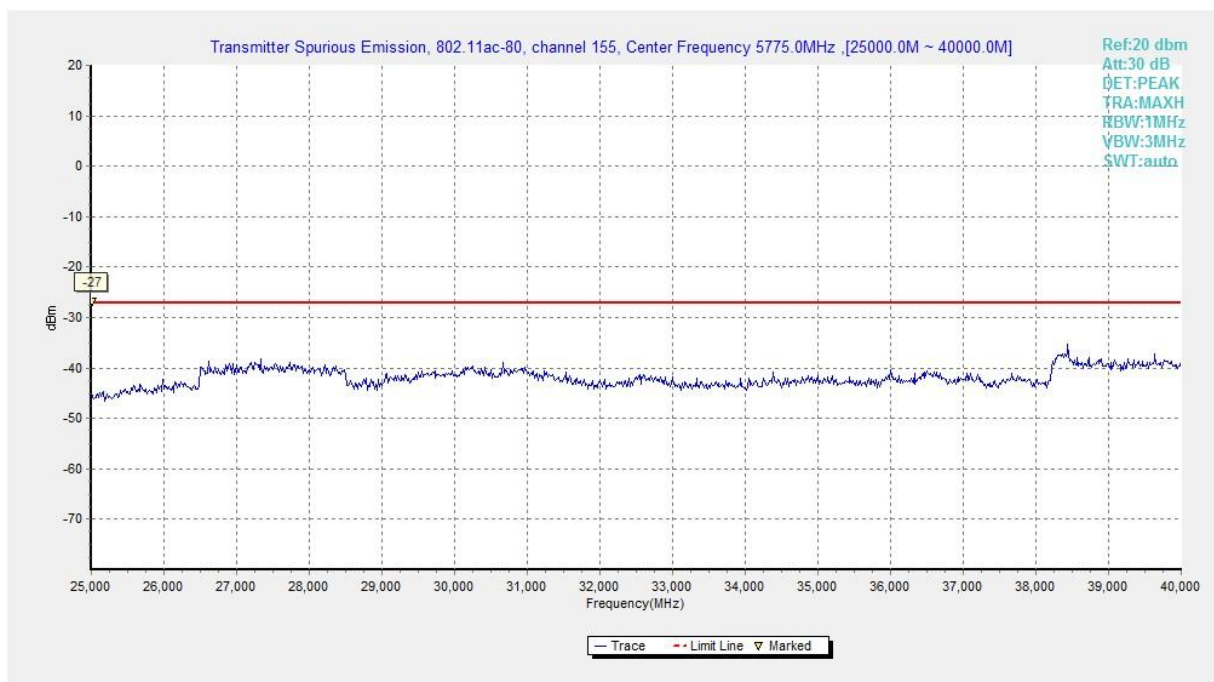


Fig. 70 Conducted Spurious Emission (802.11ac-HT80, Ch155, 25 GHz-40 GHz)

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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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 (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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:

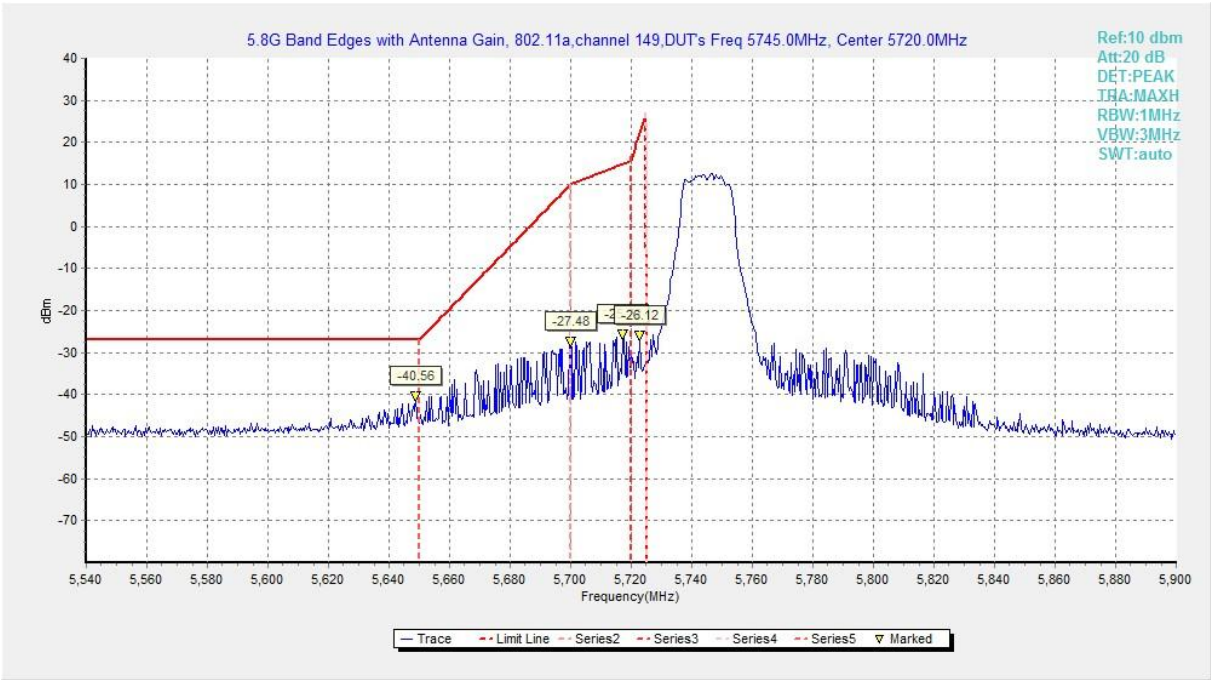


Fig. 71 Band Edges (802.11a, 5745MHz)

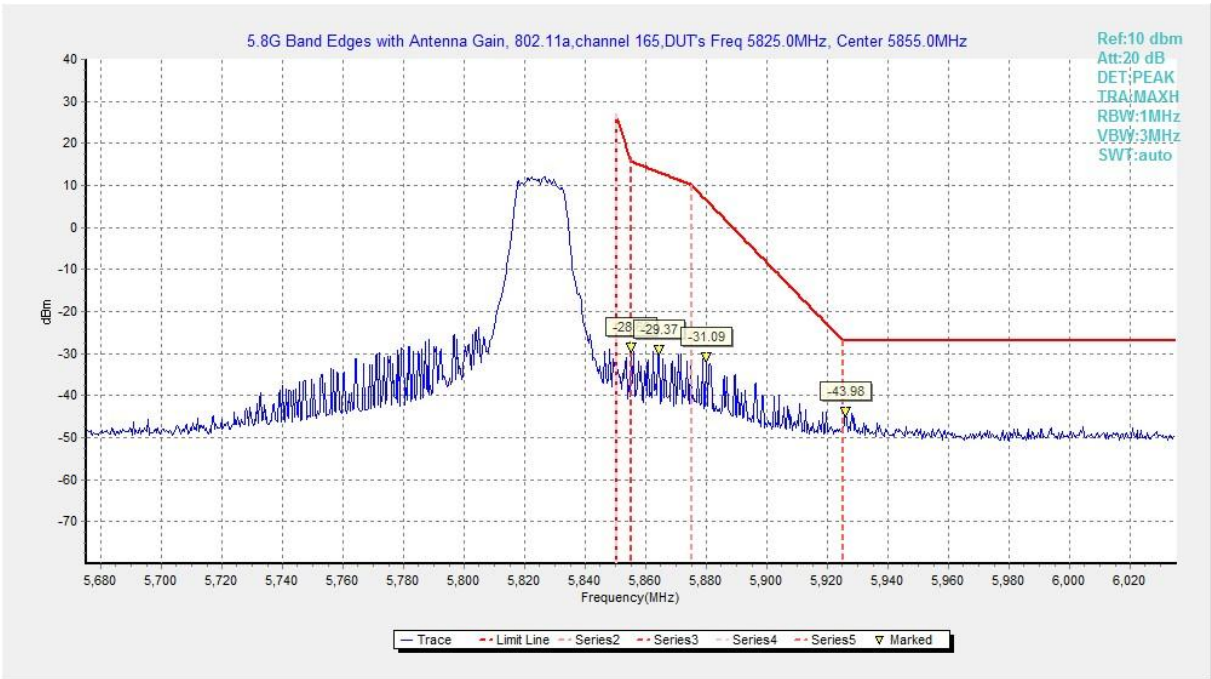


Fig. 72 Band Edges (802.11a, 5825MHz)

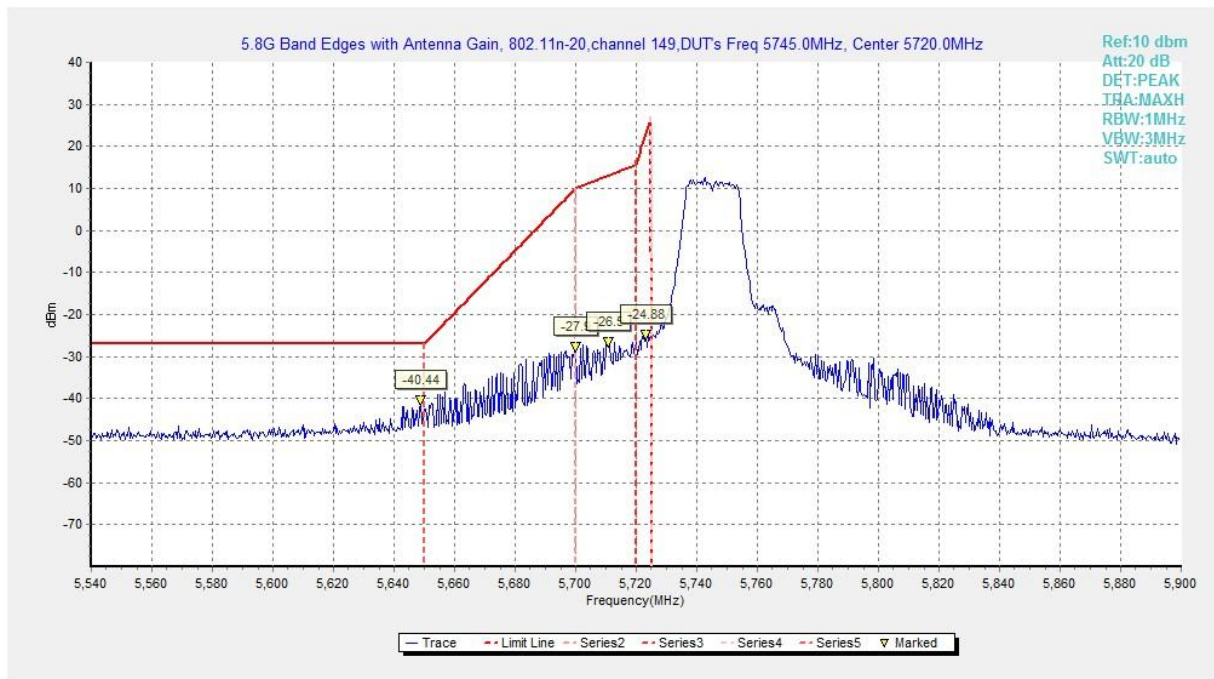


Fig. 73 Band Edges (802.11n-HT20, 5745MHz)

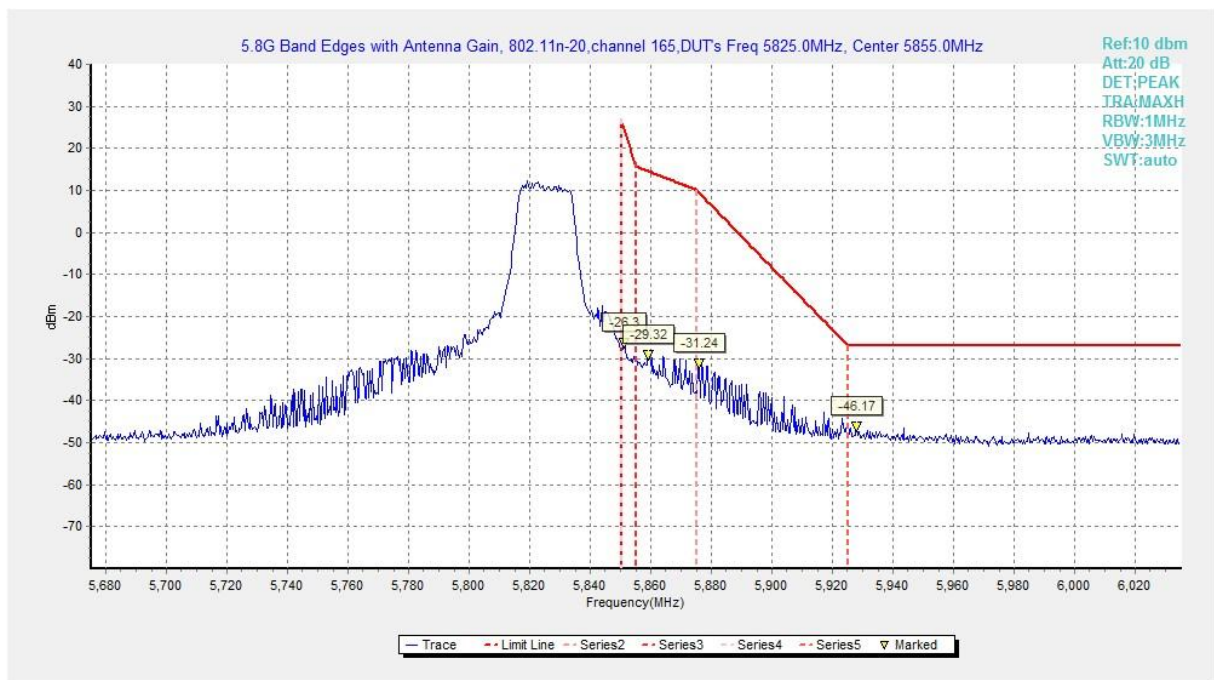


Fig. 74 Band Edges (802.11n-HT20, 5825MHz)

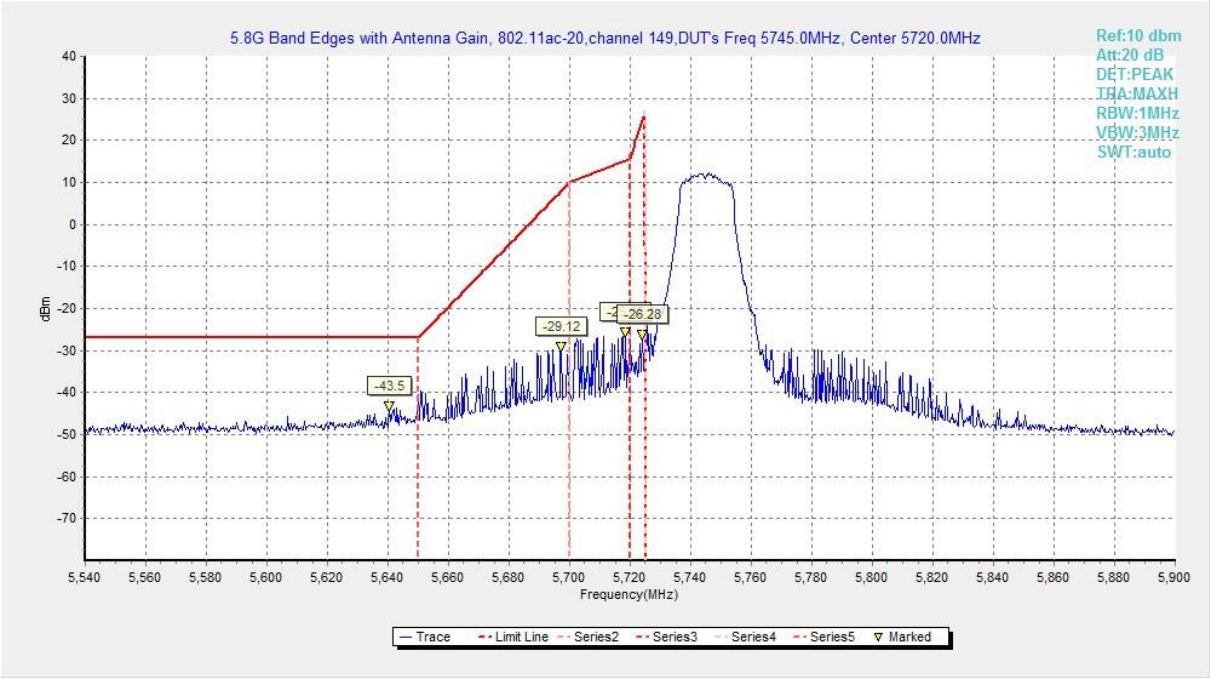


Fig. 75 Band Edges (802.11ac-HT20, 5745MHz)

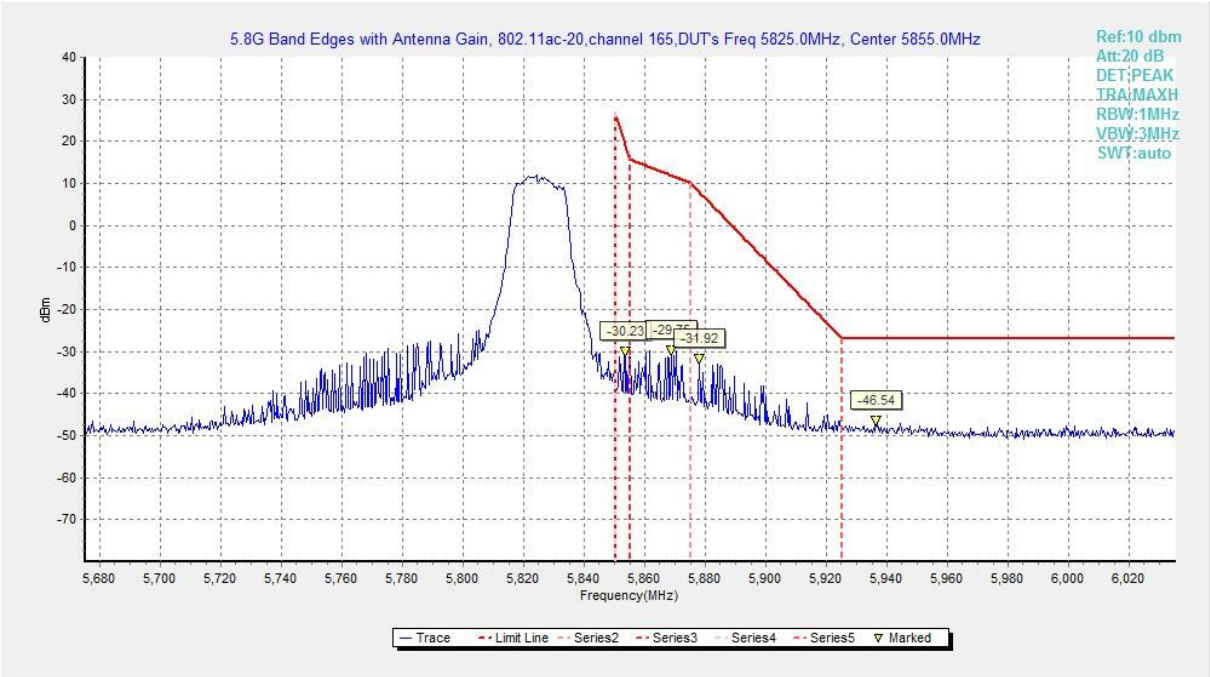


Fig. 76 Band Edges (802.11ac-HT20, 5825MHz)

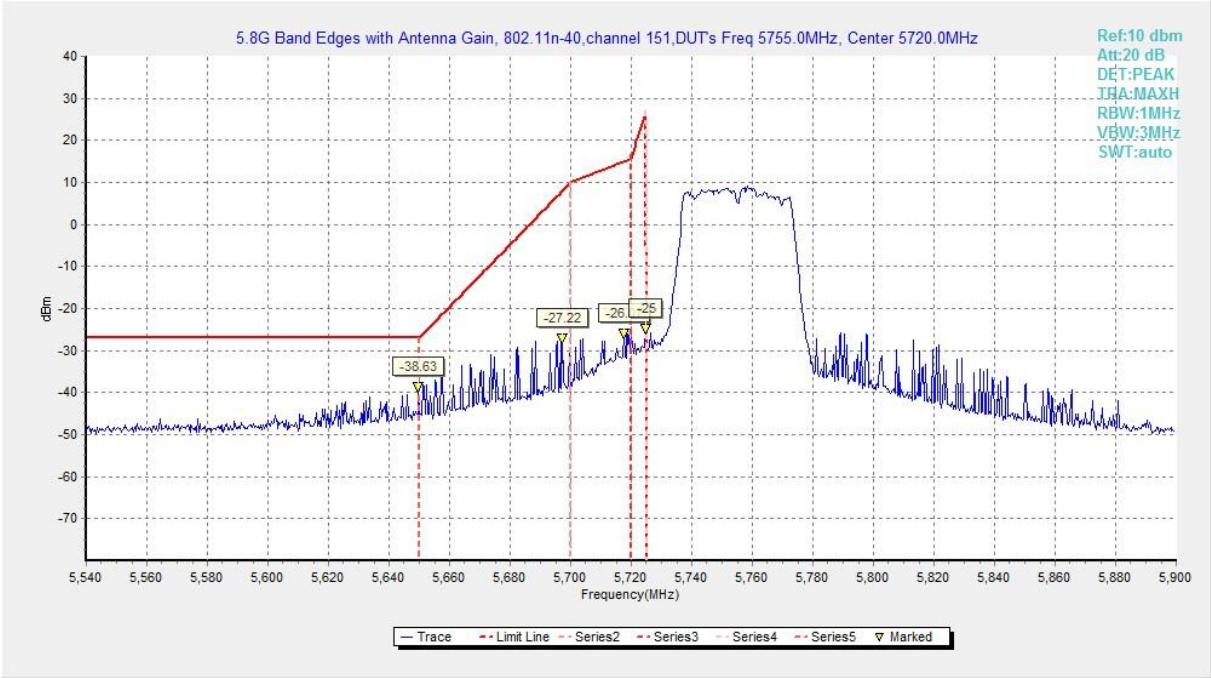


Fig. 77 Band Edges (802.11n-HT40, 5755MHz)

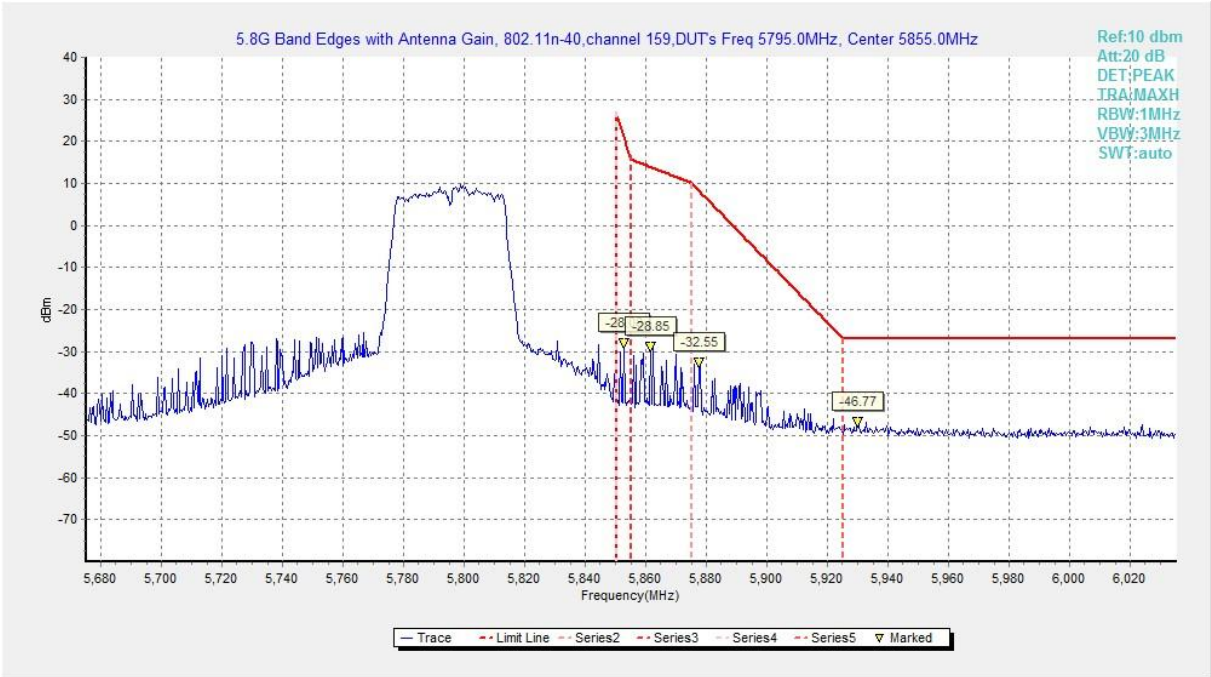


Fig. 78 Band Edges (802.11n-HT40, 5795MHz)

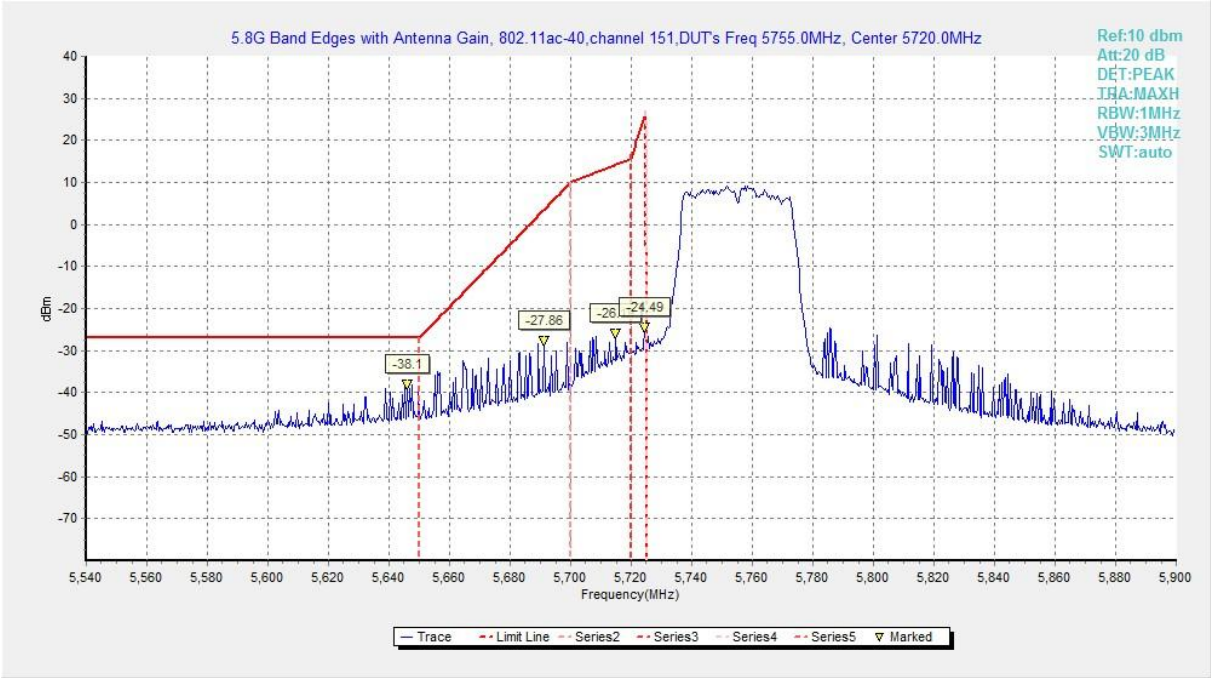


Fig. 79 Band Edges (802.11ac-HT40, 5755MHz)

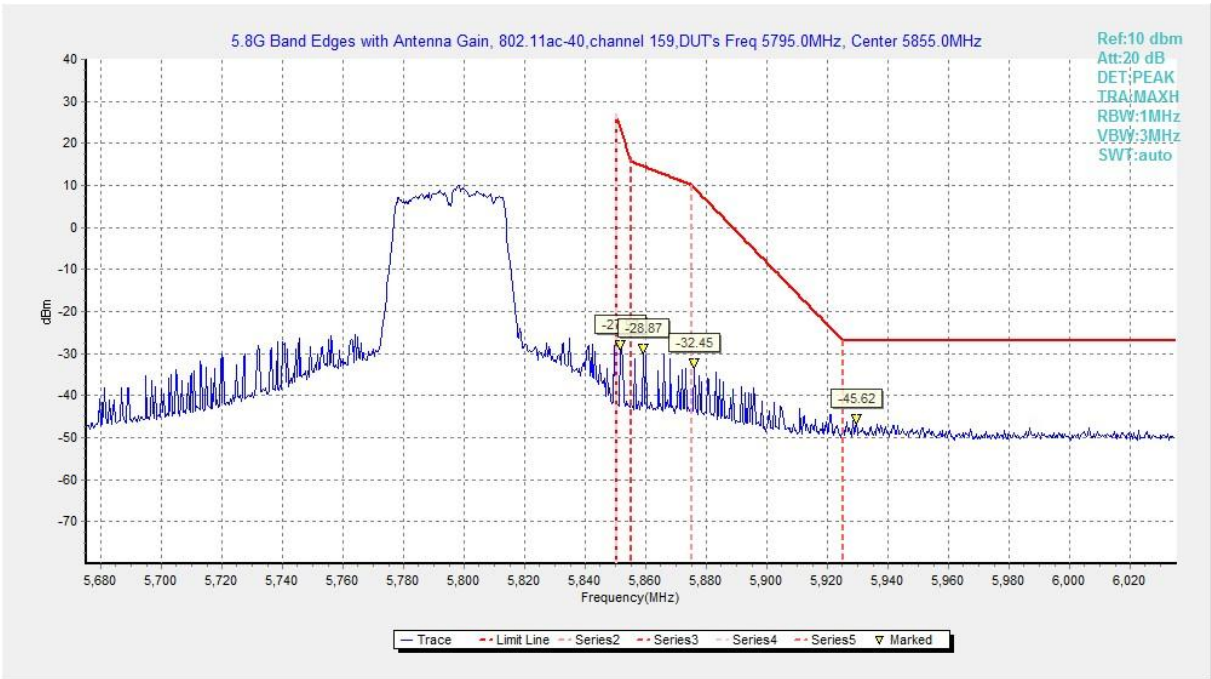


Fig. 80 Band Edges (802.11ac-HT40, 5795MHz)

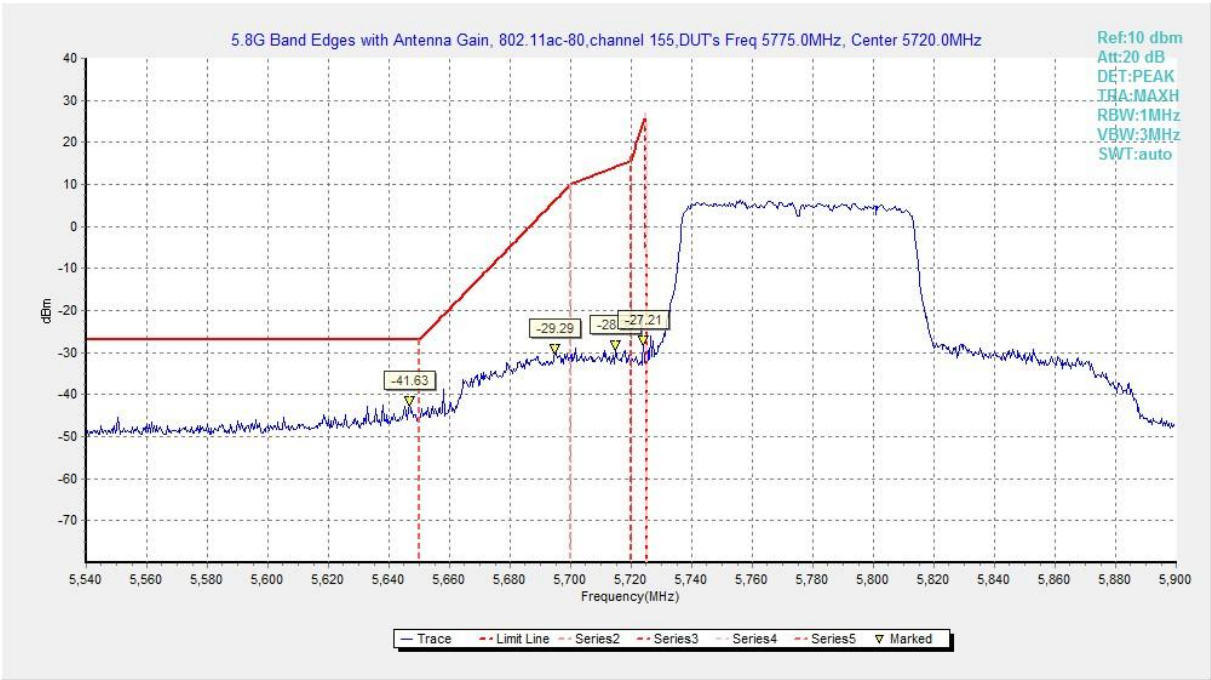


Fig. 81 Band Edges (802.11ac-HT80, 5775MHz)



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 HT20	5745 MHz	Fig.85	P
	5825 MHz	Fig.86	P
802.11n HT40	5755 MHz	Fig.87	P
	5795 MHz	Fig.88	P
802.11ac HT20	5745 MHz	Fig.89	P
	5825 MHz	Fig.90	P
802.11ac HT40	5755 MHz	Fig.91	P
	5795 MHz	Fig.92	P
802.11ac HT80	5775 MHz	Fig.93	P

Conclusion: PASS

Test graphs as below:

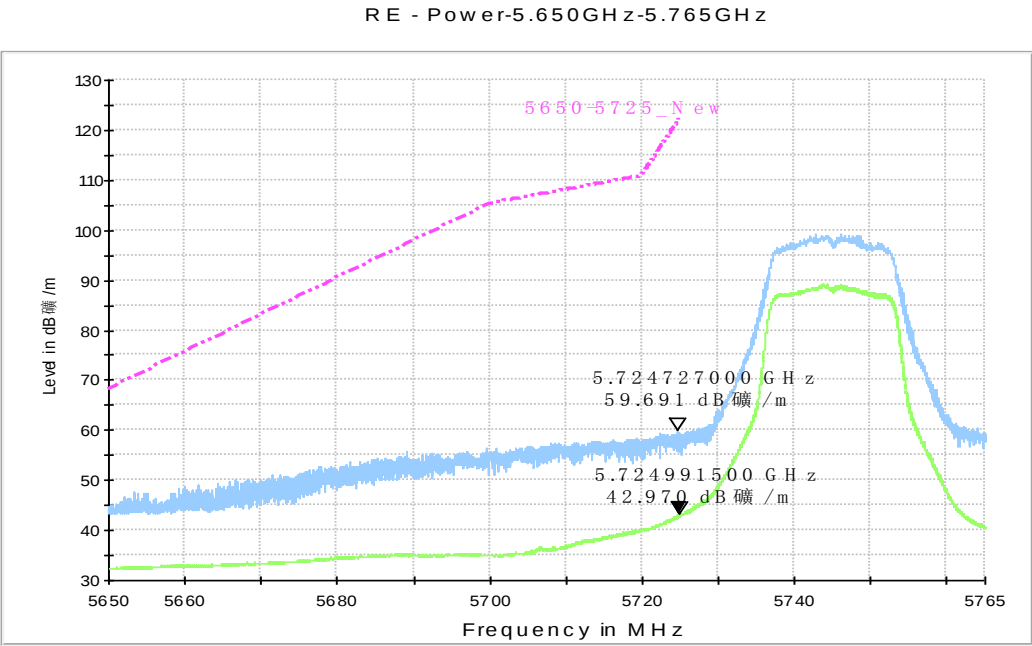


Fig. 83 Band Edges (802.11a, 5745MHz)

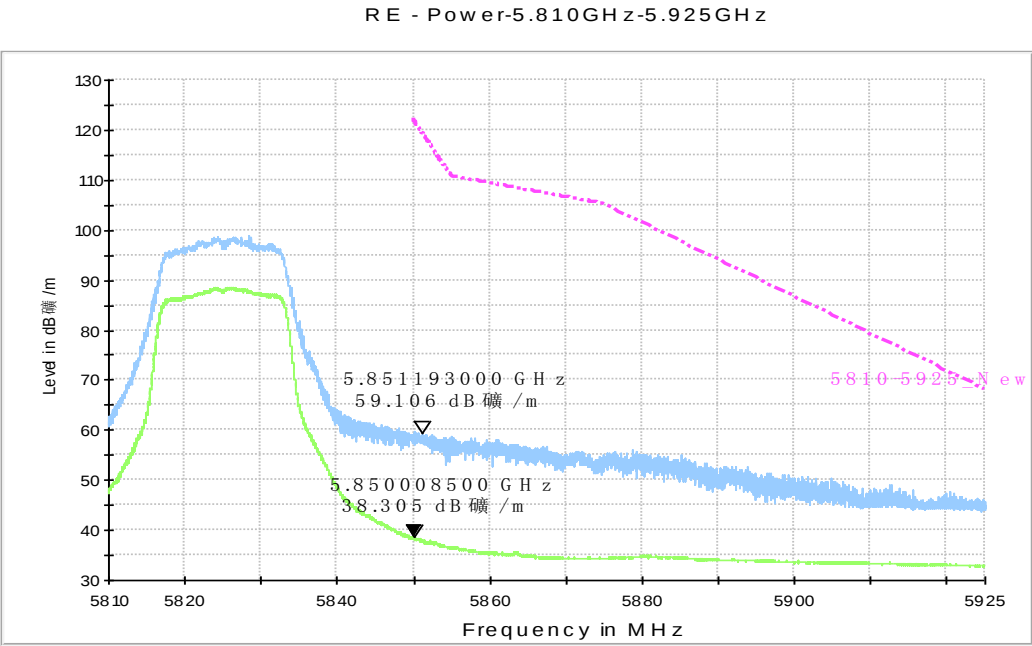


Fig. 84 Band Edges (802.11a, 5825MHz)

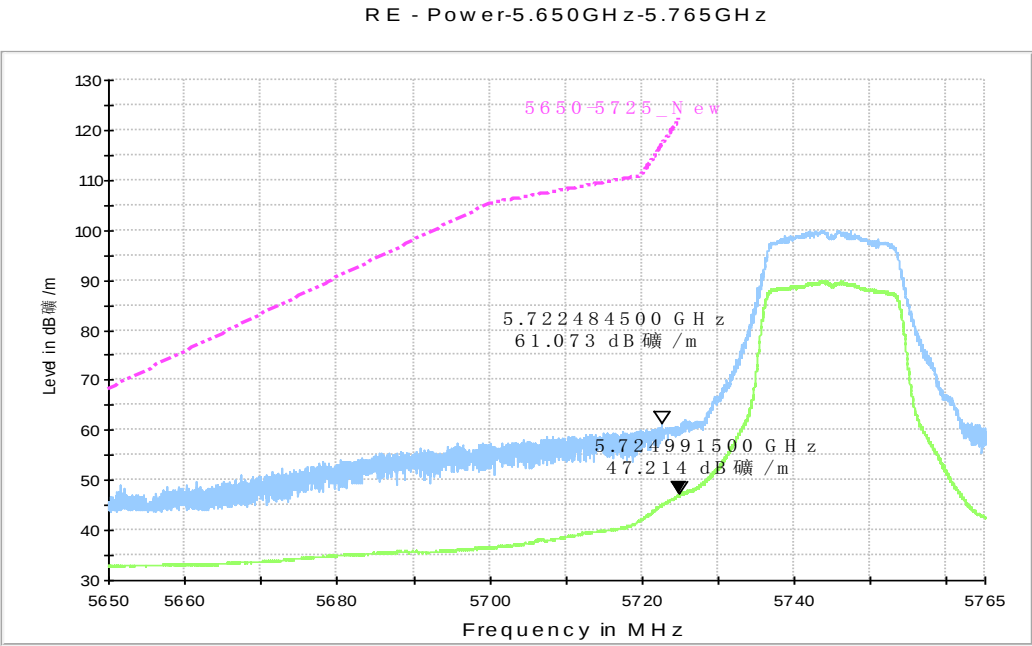


Fig. 85 Band Edges (802.11n-HT20, 5745MHz)

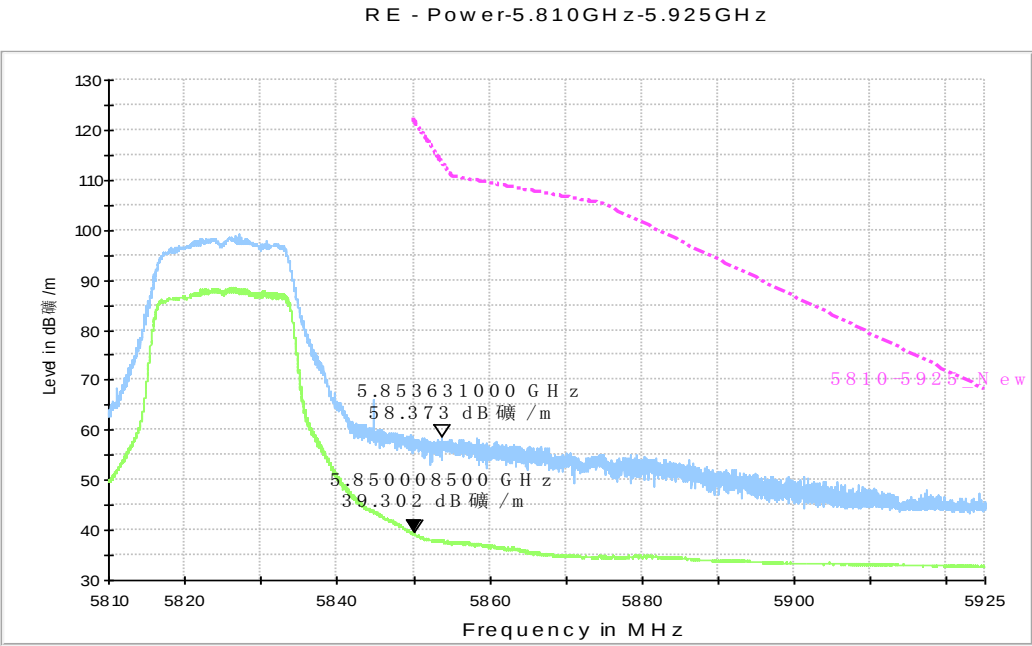


Fig. 86 Band Edges (802.11n-HT20, 5825MHz)

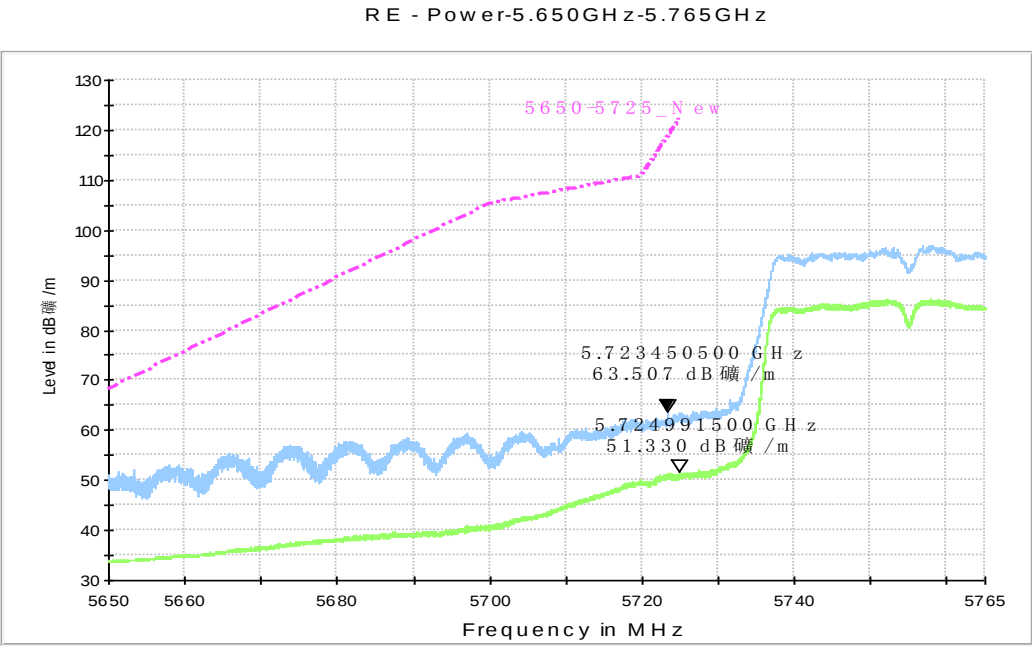


Fig. 87 Band Edges (802.11n-HT40, 5755MHz)

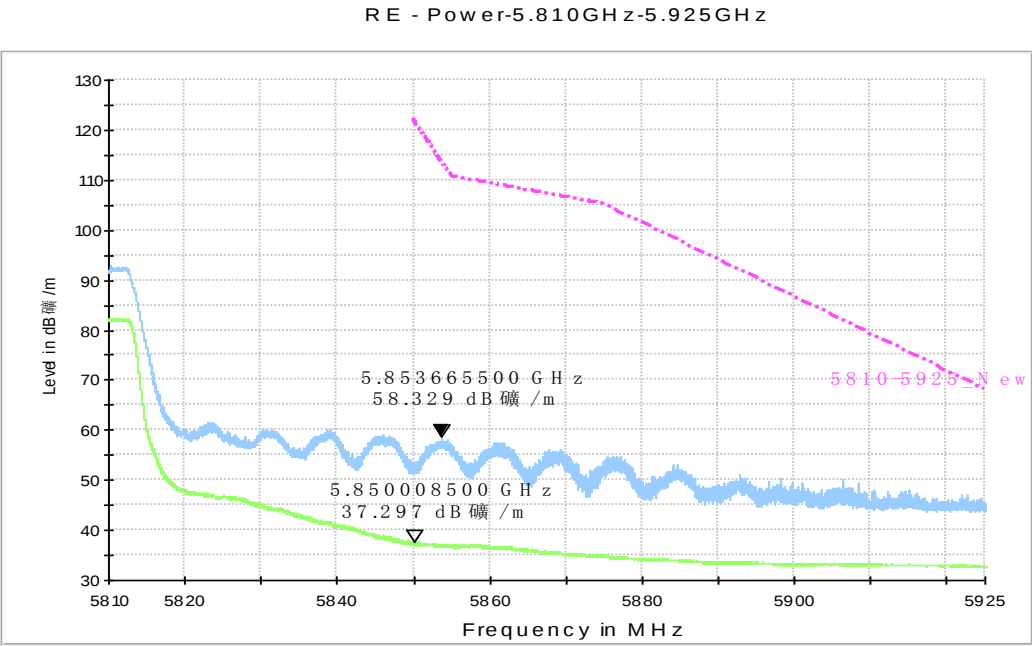


Fig. 88 Band Edges (802.11n-HT40, 5795MHz)

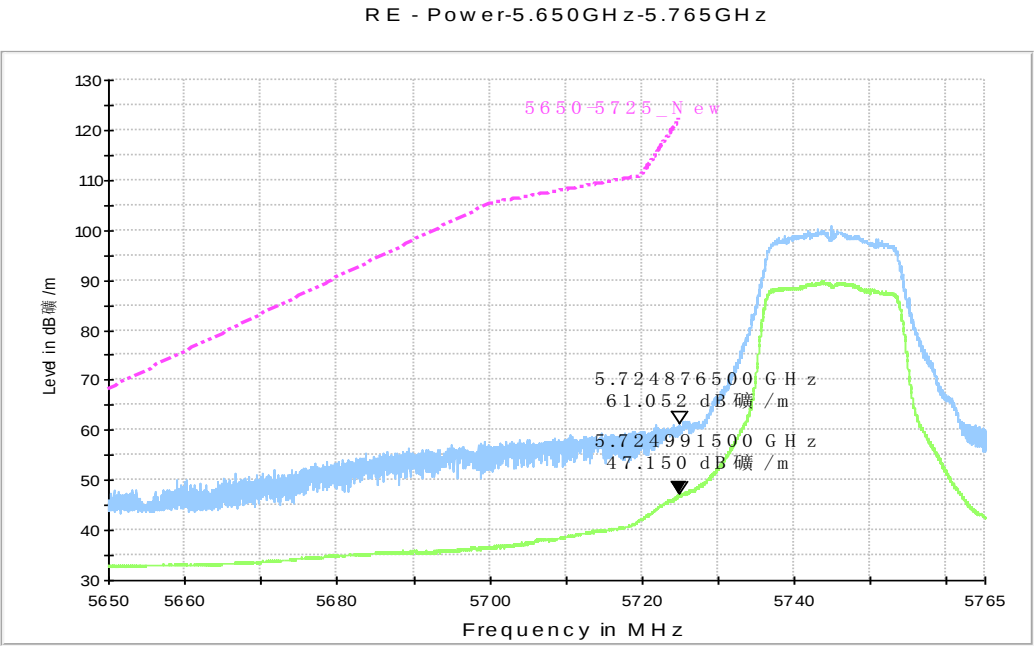


Fig. 89 Band Edges (802.11ac-HT20, 5745MHz)

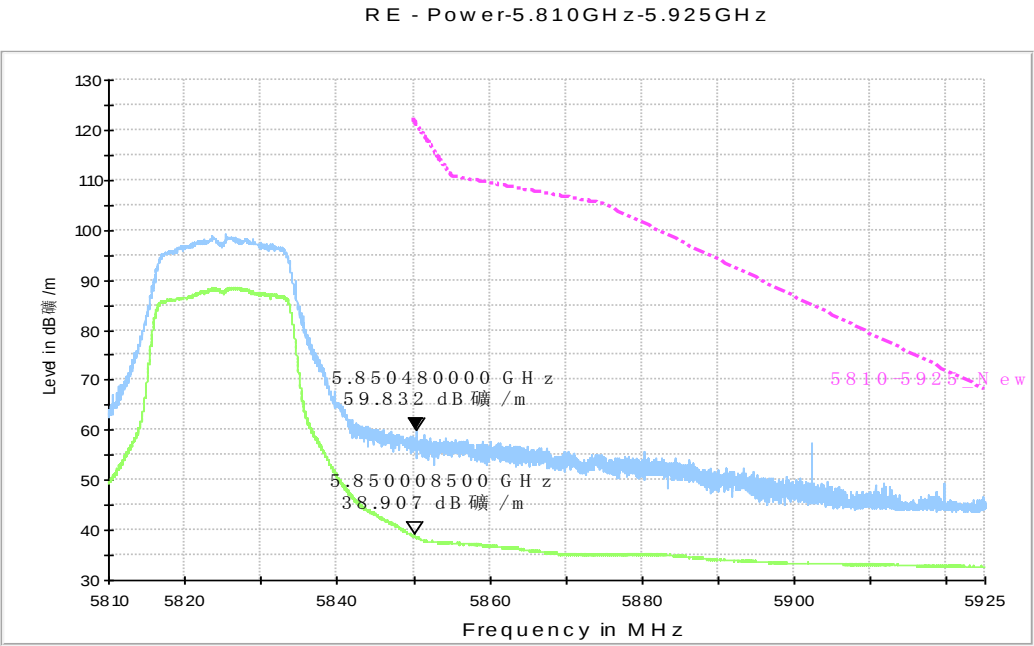


Fig. 90 Band Edges (802.11ac-HT20, 5825MHz)

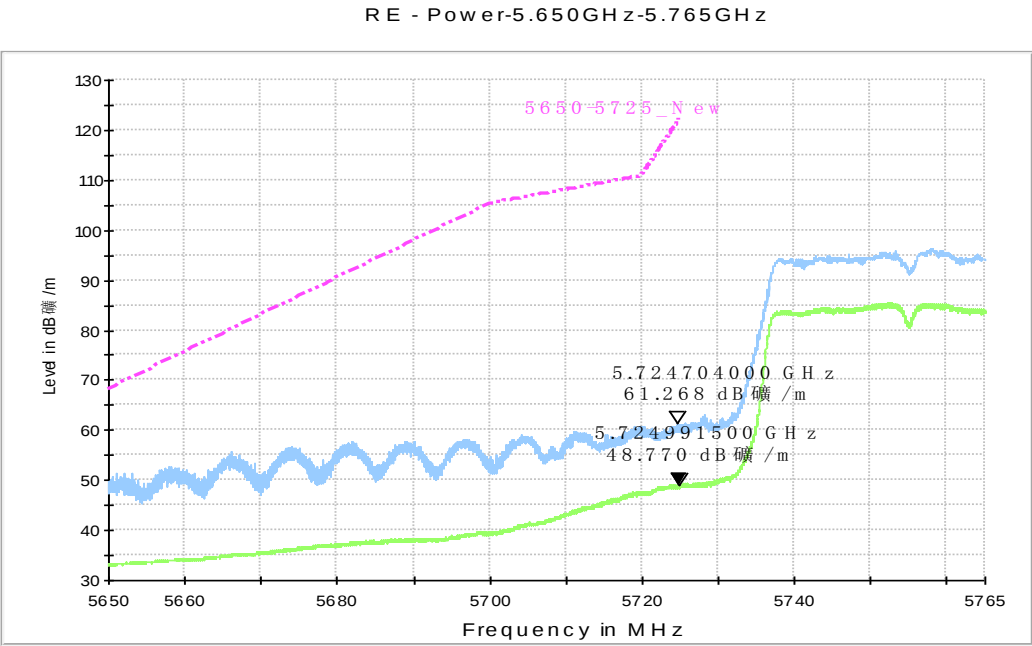


Fig. 91 Band Edges (802.11ac-HT40, 5755MHz)

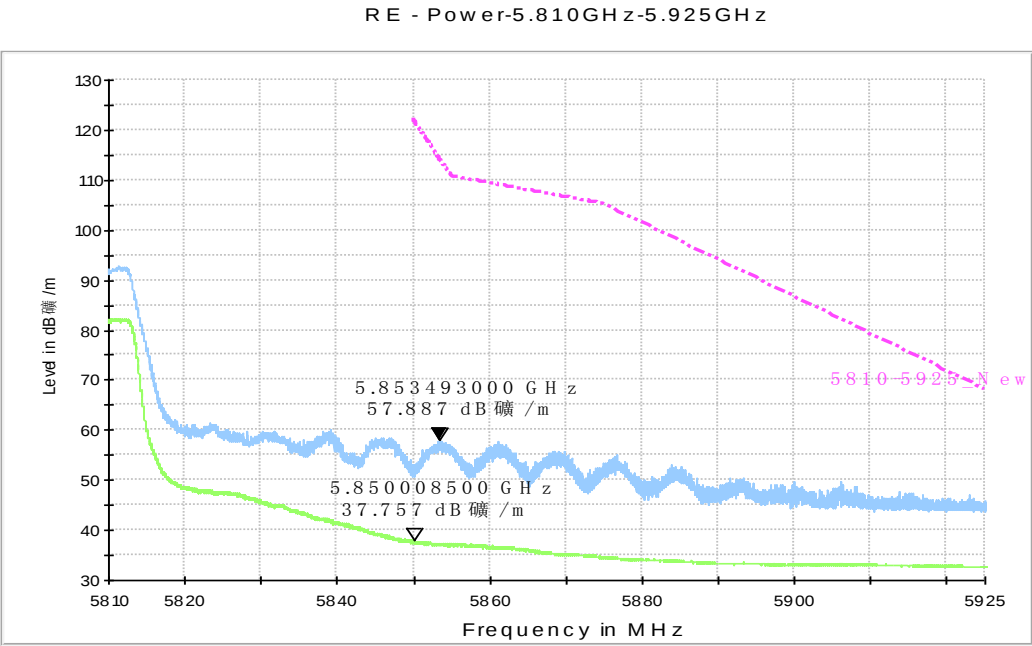


Fig. 92 Band Edges (802.11ac-HT40, 5795MHz)

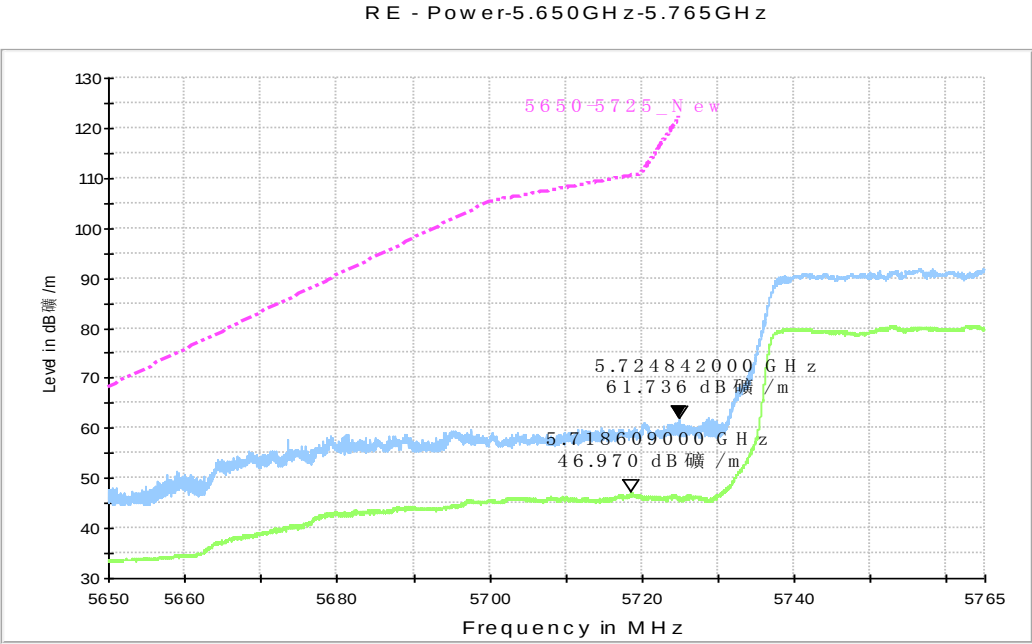


Fig. 93 Band Edges (802.11ac-HT80, 5775MHz)

A.7. AC Powerline Conducted Emission**Test Condition:**

Voltage (V)	Frequency (Hz)
110	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is $U = 3.2\text{dB}$, $k=2$.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	66 to 56	Fig.94	Fig.95	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.94	Fig.95	P
0.5 to 5	46			
5 to 30	50			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

The measurement is made according to ANSI C63.10 .

Conclusion: PASS

Test graphs as below:

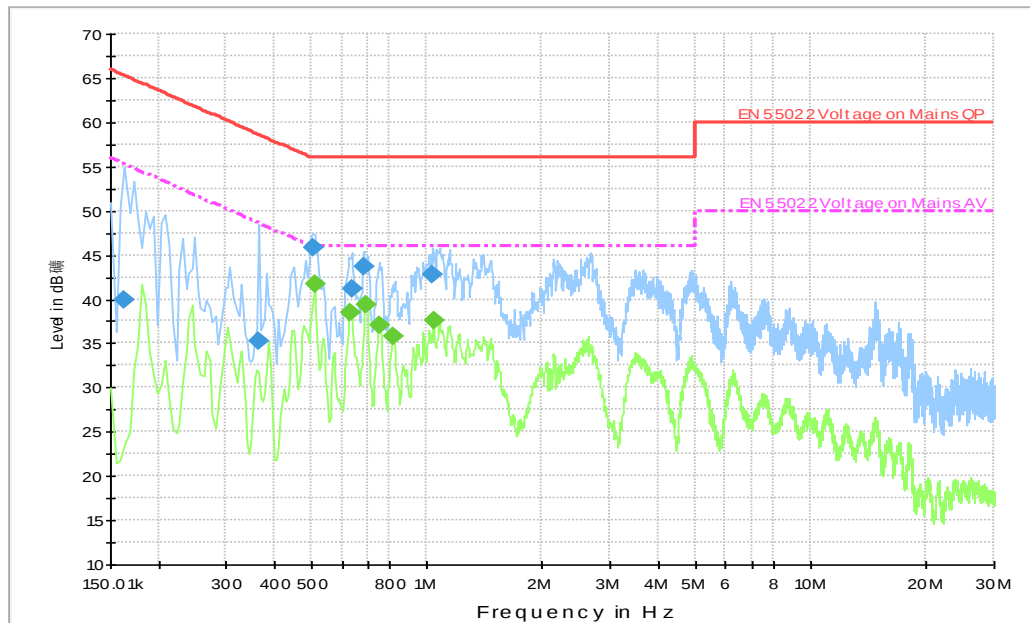


Fig. 94 AC Powerline Conducted Emission-802.11a

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
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 (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
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

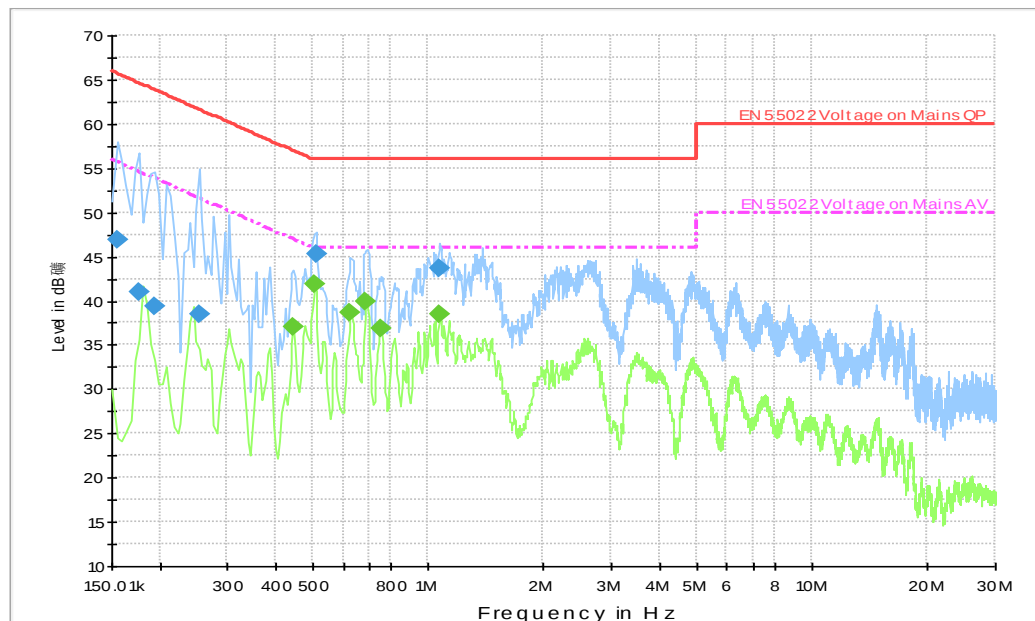


Fig. 95 AC Powerline Conducted Emission-Idle

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
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 (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
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

United States Department of Commerce National Institute of Standards and Technology NVLAP[®] Certificate of Accreditation to ISO/IEC 17025:2005 NVLAP LAB CODE: 600118-0 Telecommunication Technology Labs, CAICT Beijing China <i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i> Electromagnetic Compatibility & Telecommunications <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> <table><tr><td> 2018-09-28 through 2019-09-30 <i>Effective Dates</i> </td><td></td><td>  <i>For the National Voluntary Laboratory Accreditation Program</i> </td></tr></table>		2018-09-28 through 2019-09-30 <i>Effective Dates</i>		 <i>For the National Voluntary Laboratory Accreditation Program</i>
2018-09-28 through 2019-09-30 <i>Effective Dates</i>		 <i>For the National Voluntary Laboratory Accreditation Program</i>		

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