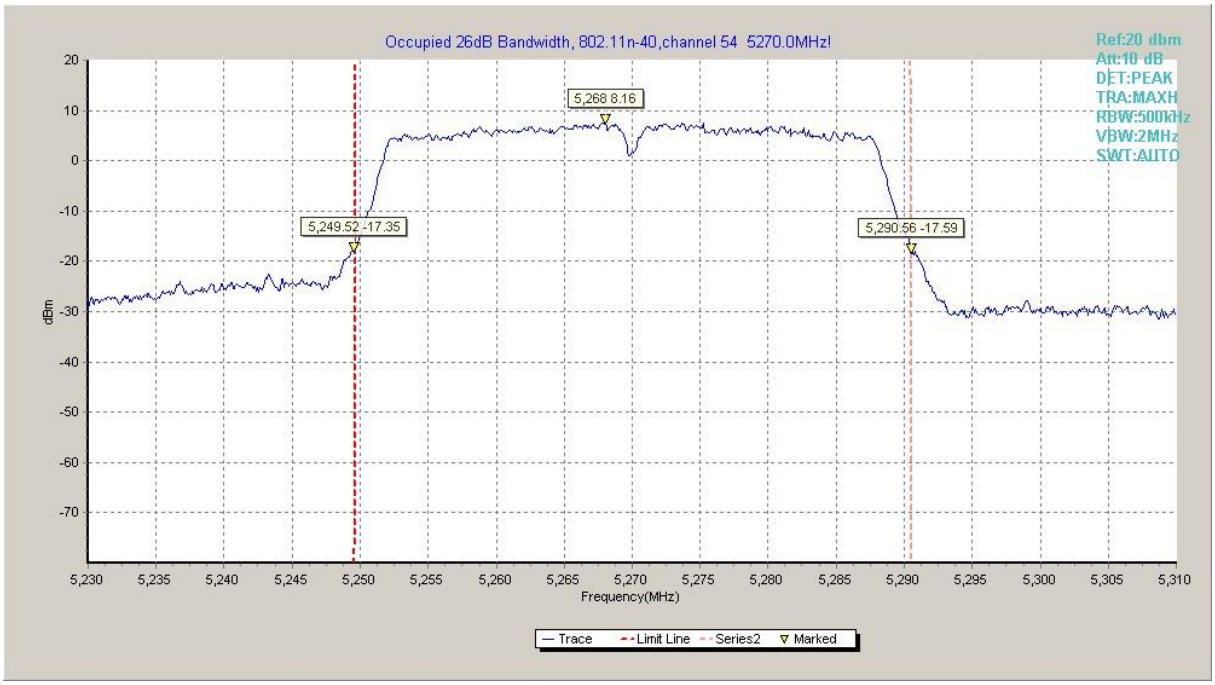

Fig.33 Occupied 26dB Bandwidth (802.11n-HT40, 5270MHz)

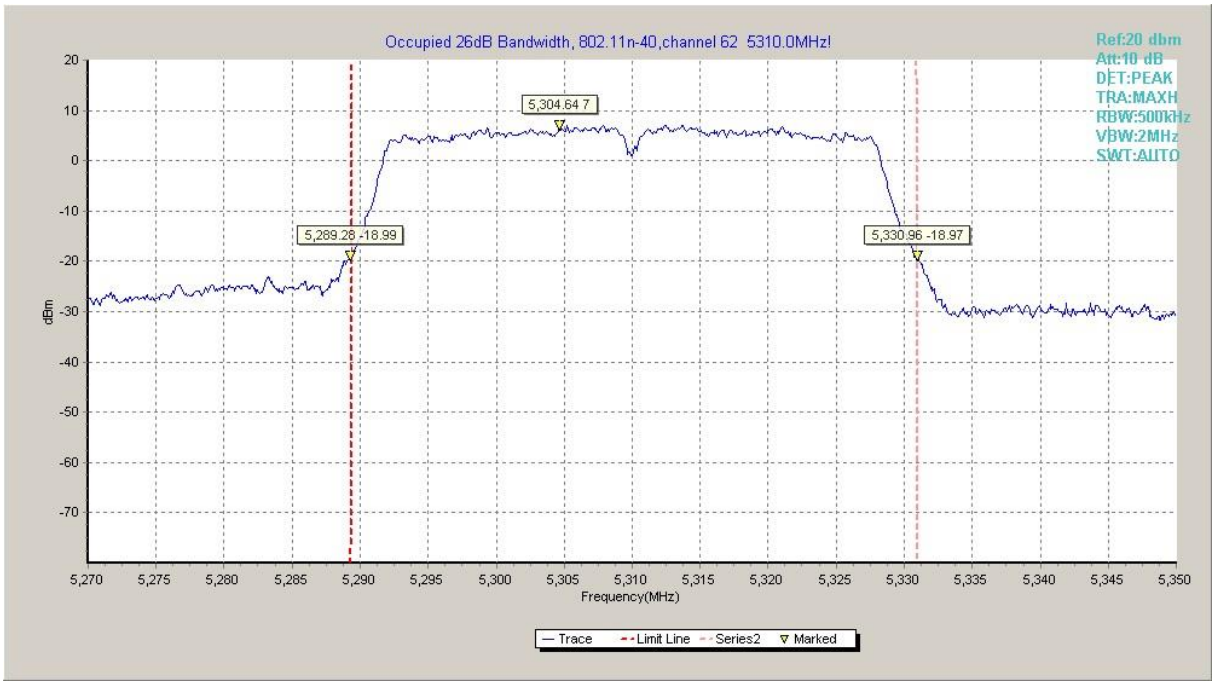

Fig.34 Occupied 26dB Bandwidth (802.11n-HT40, 5310MHz)

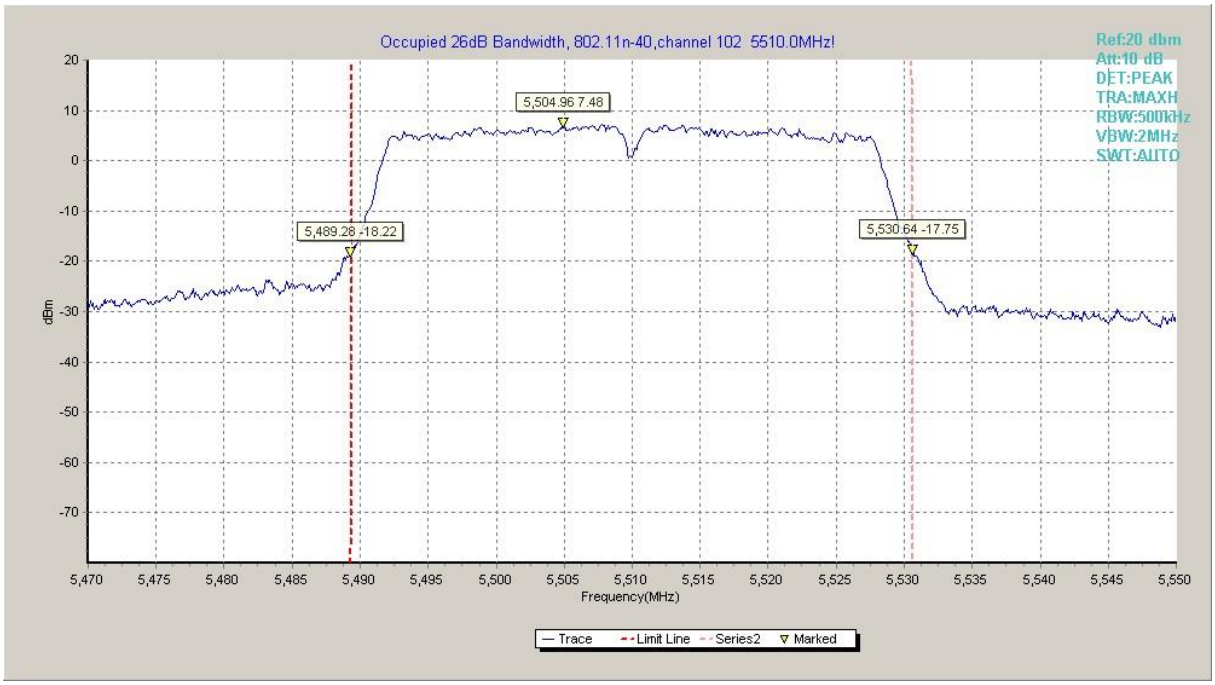

Fig.35 Occupied 26dB Bandwidth (802. 11n-HT40, 5510MHz)

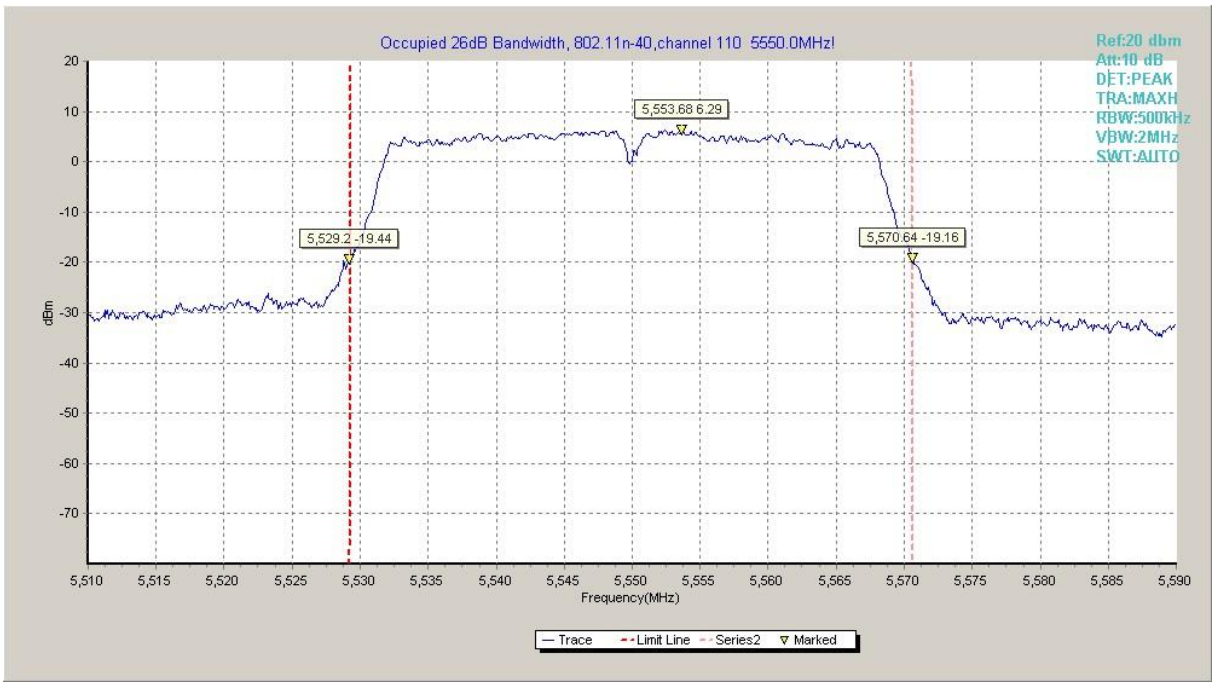

Fig.36 Occupied 26dB Bandwidth (802. 11n-HT40, 5590MHz)

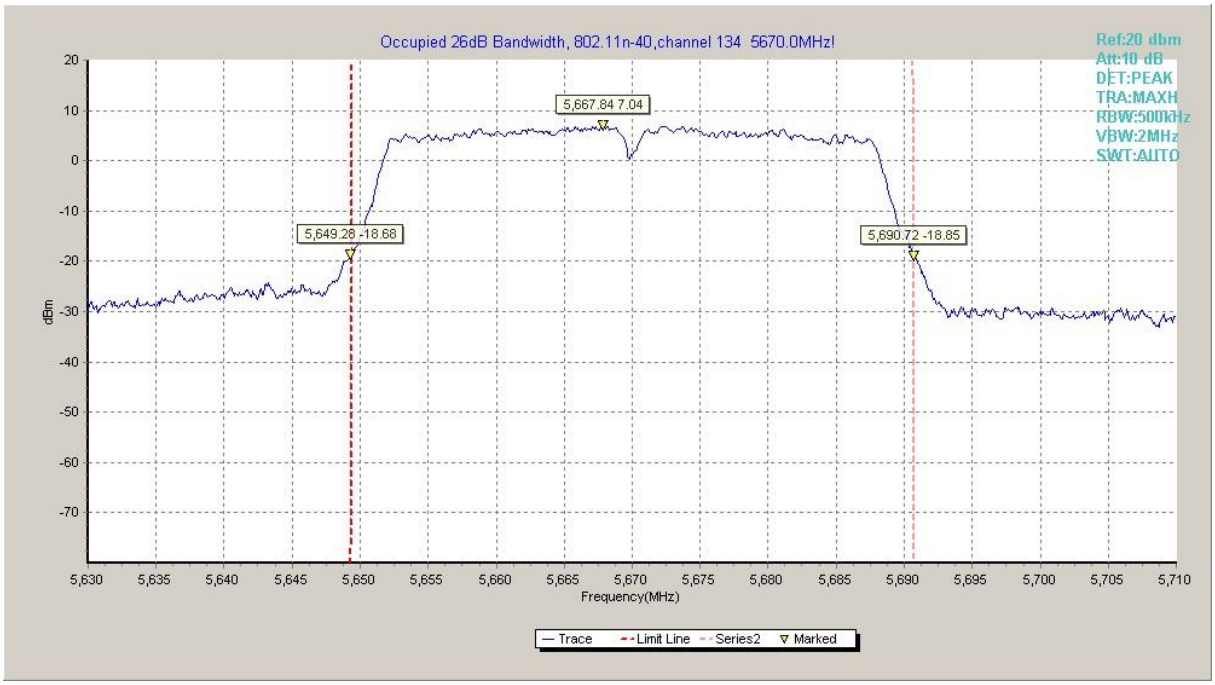

Fig.37 Occupied 26dB Bandwidth (802. 11n-HT40, 5670MHz)

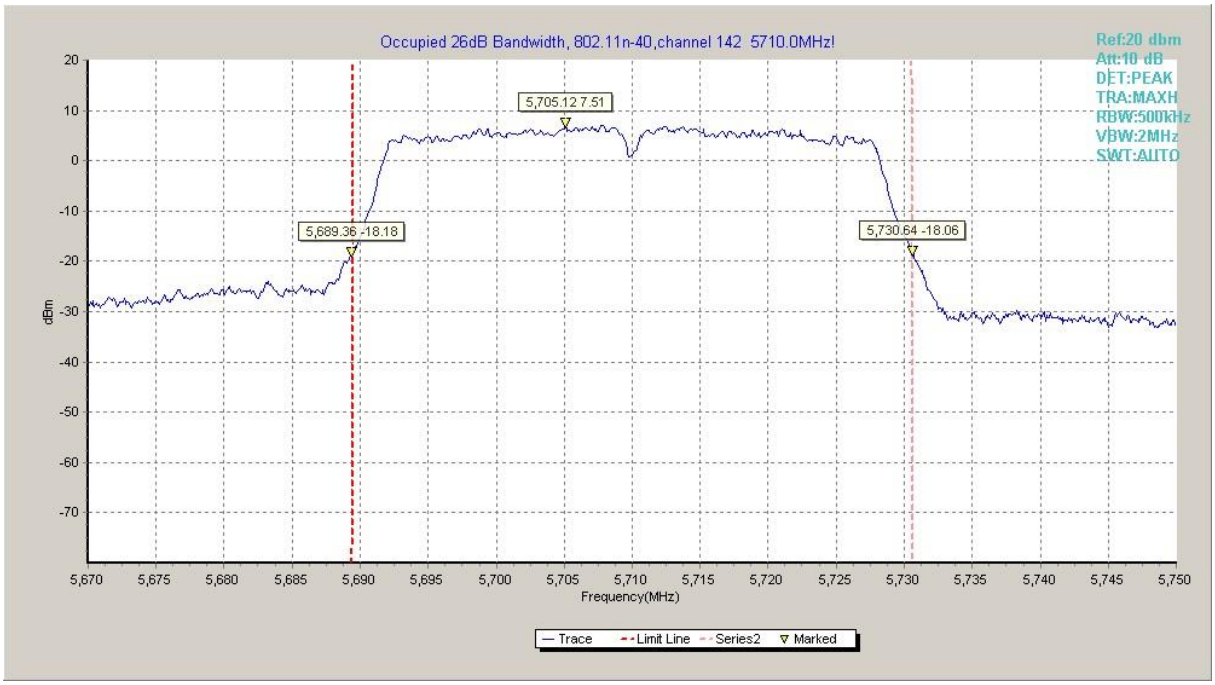

Fig.38 Occupied 26dB Bandwidth (802. 11n-HT40, 5710MHz)

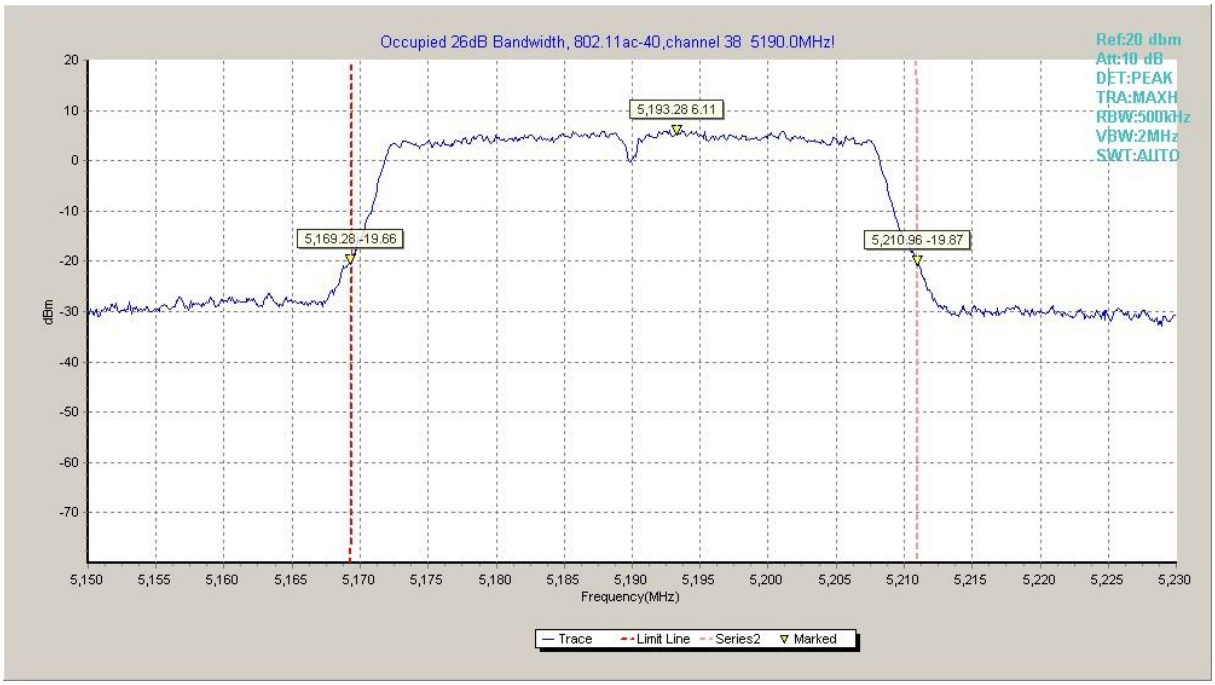

Fig.39 Occupied 26dB Bandwidth (802.11ac-HT40, 5190MHz)

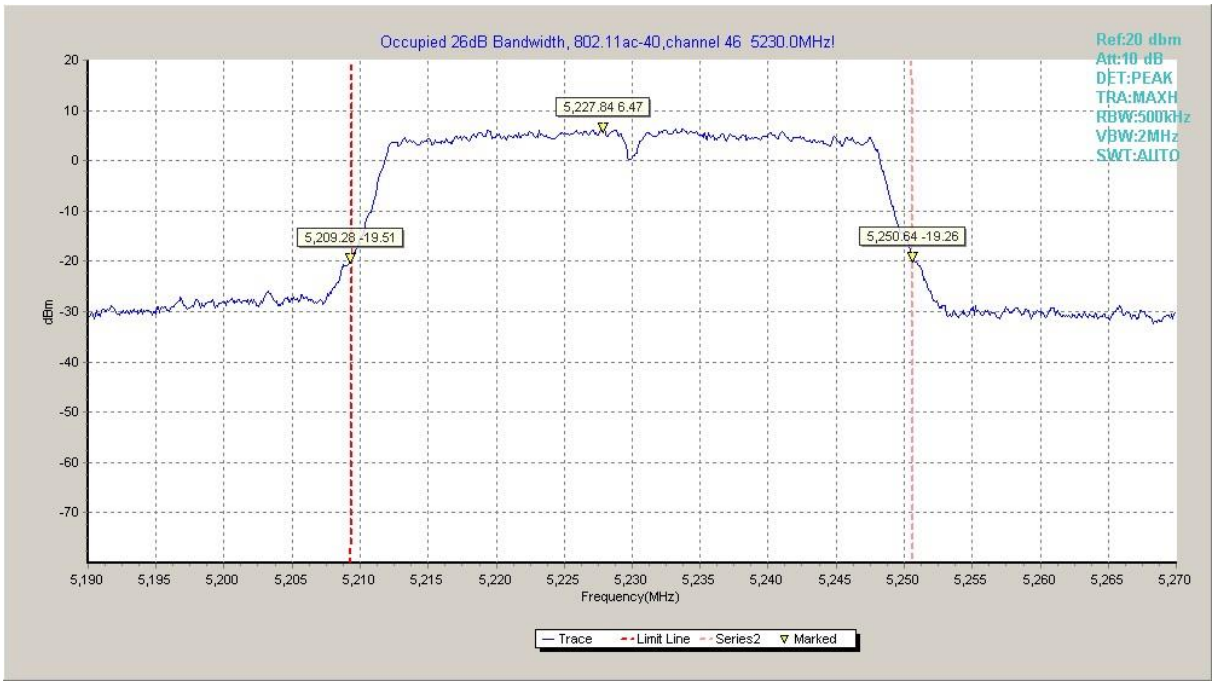

Fig.40 Occupied 26dB Bandwidth (802.11ac-HT40, 5230MHz)

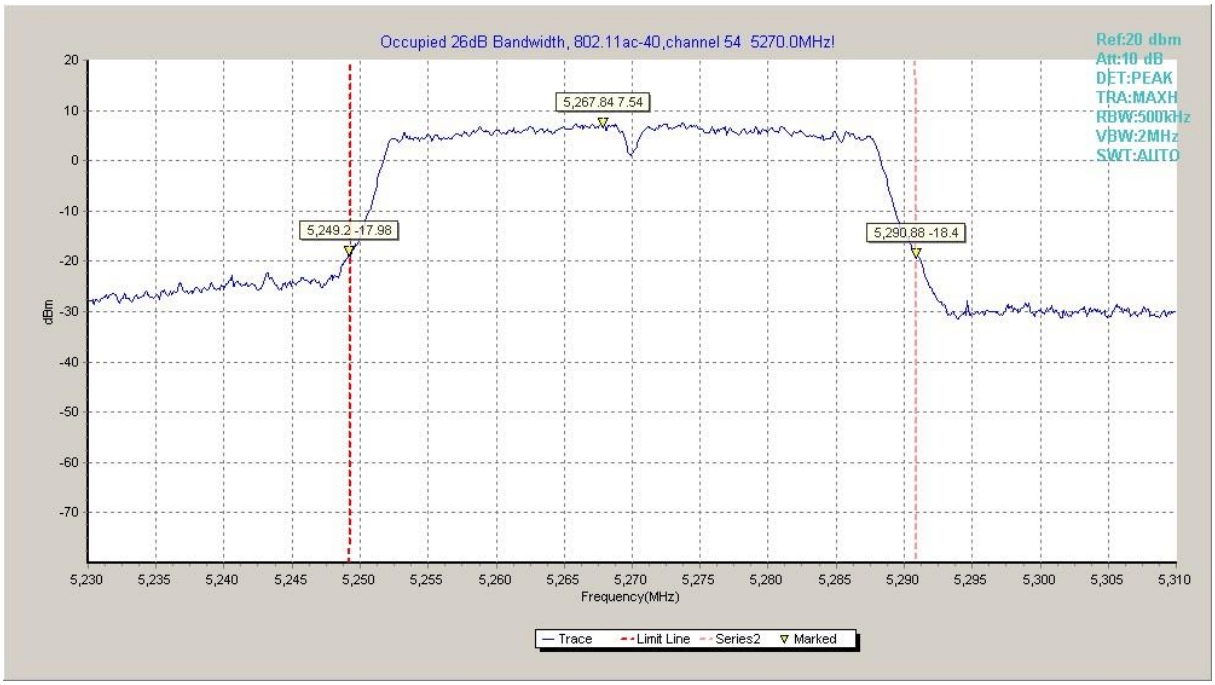

Fig.41 Occupied 26dB Bandwidth (802.11ac-HT40, 5270MHz)

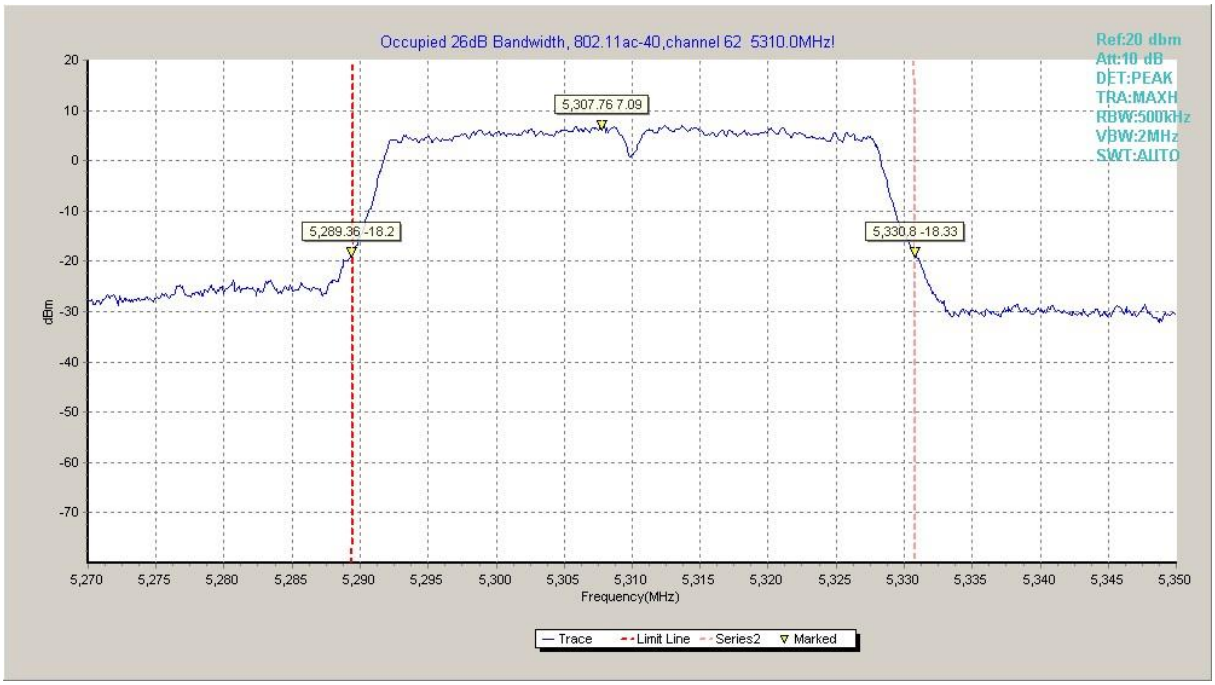

Fig.42 Occupied 26dB Bandwidth (802.11ac-HT40, 5310MHz)

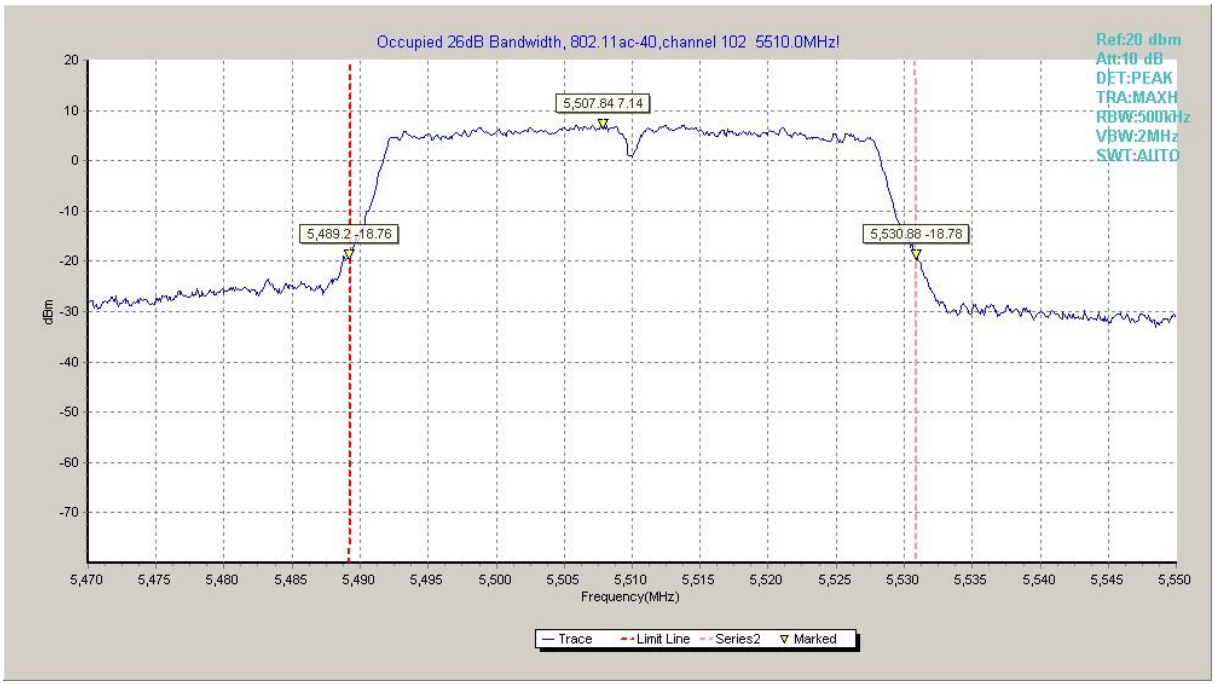

Fig.43 Occupied 26dB Bandwidth (802. 11ac-HT40, 5510MHz)

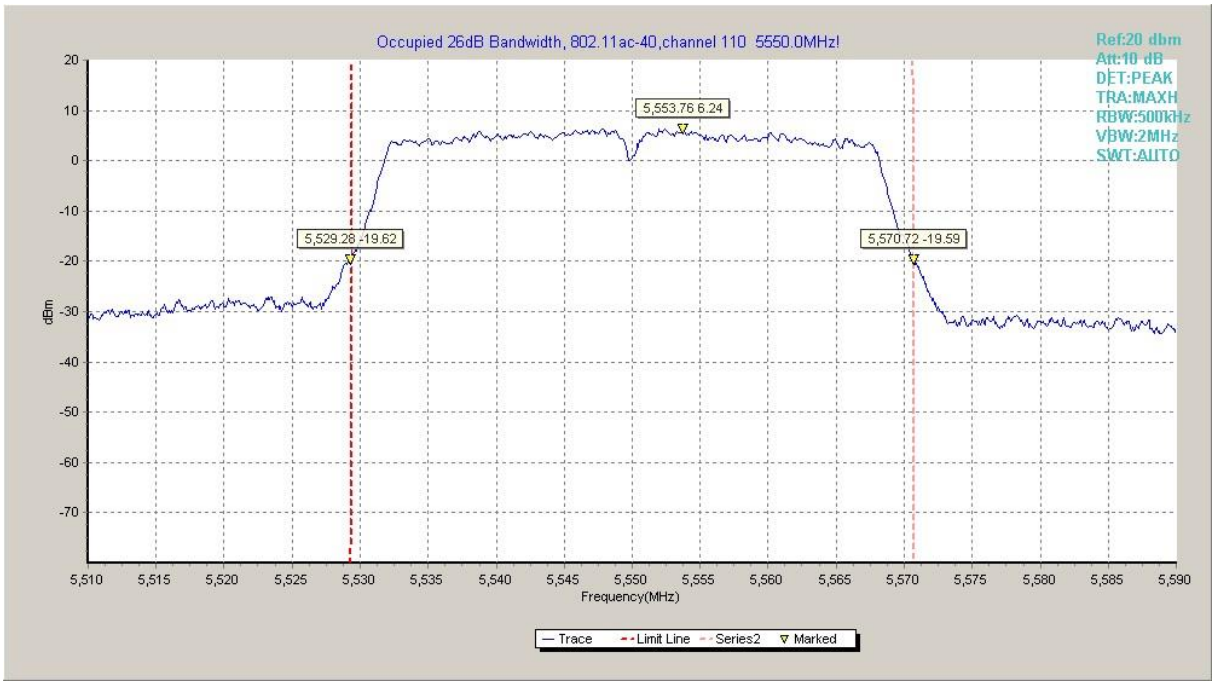

Fig.44 Occupied 26dB Bandwidth (802. 11ac-HT40, 5550MHz)

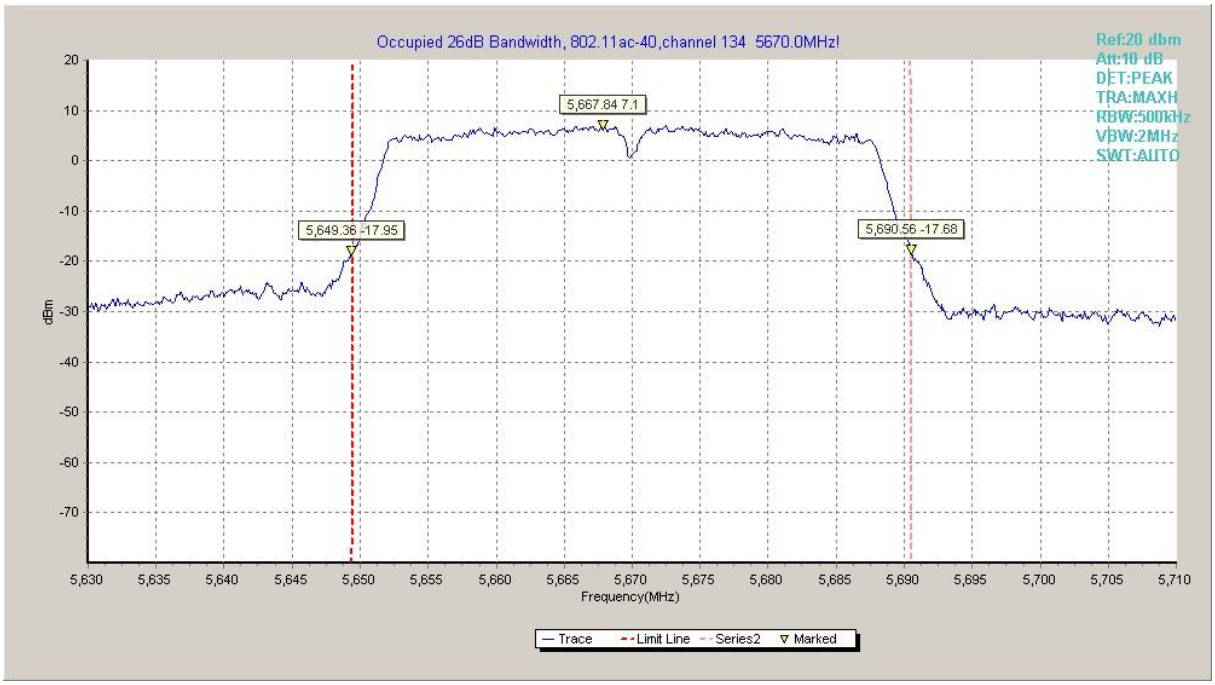

Fig.45 Occupied 26dB Bandwidth (802. 11ac-HT40, 5670MHz)

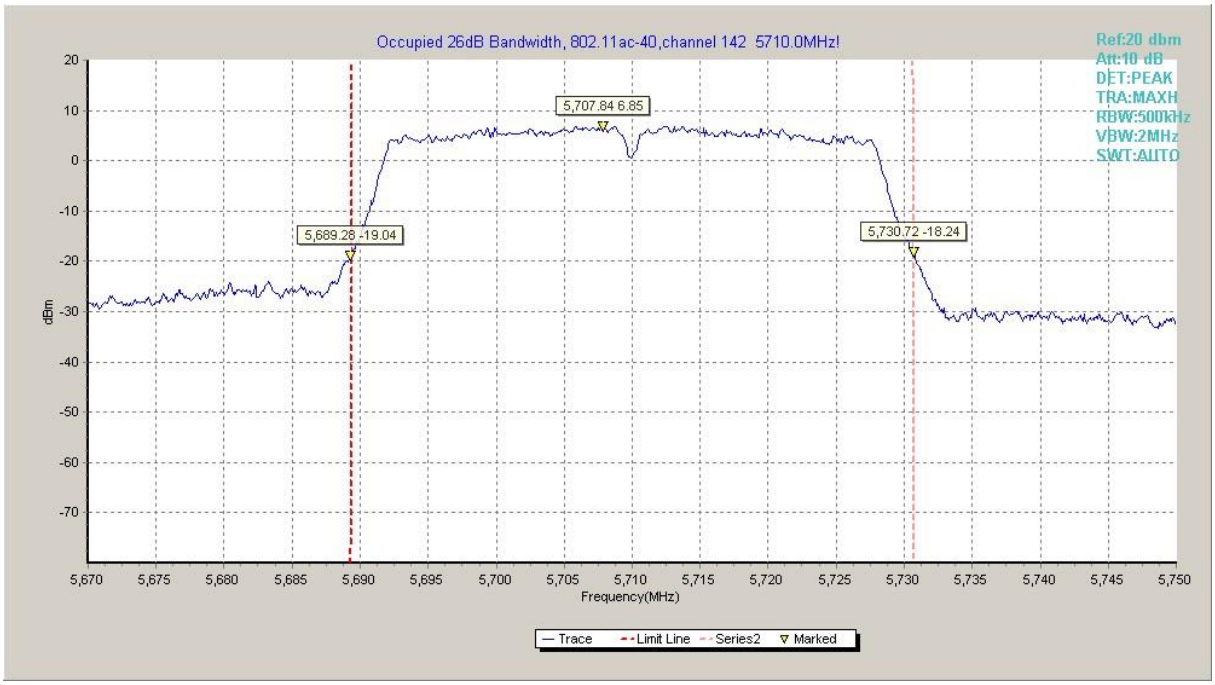

Fig.46 Occupied 26dB Bandwidth (802. 11ac-HT40, 5710MHz)

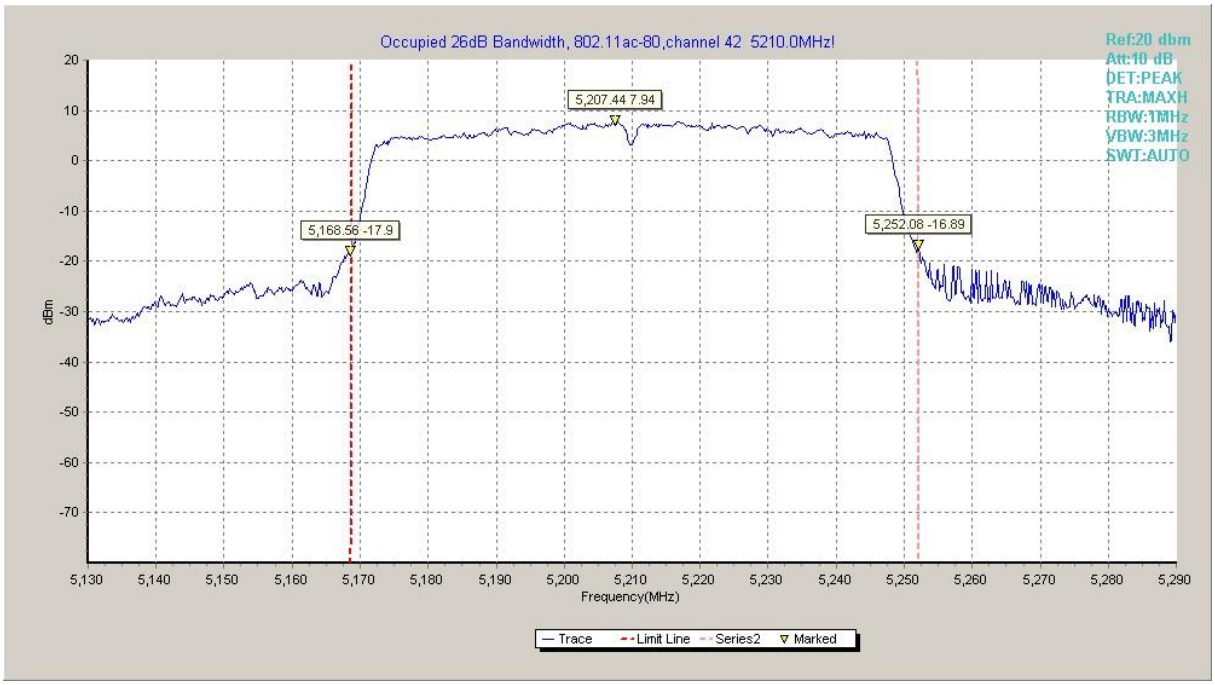

Fig.47 Occupied 26dB Bandwidth (802. 11ac-HT80, 5210MHz)

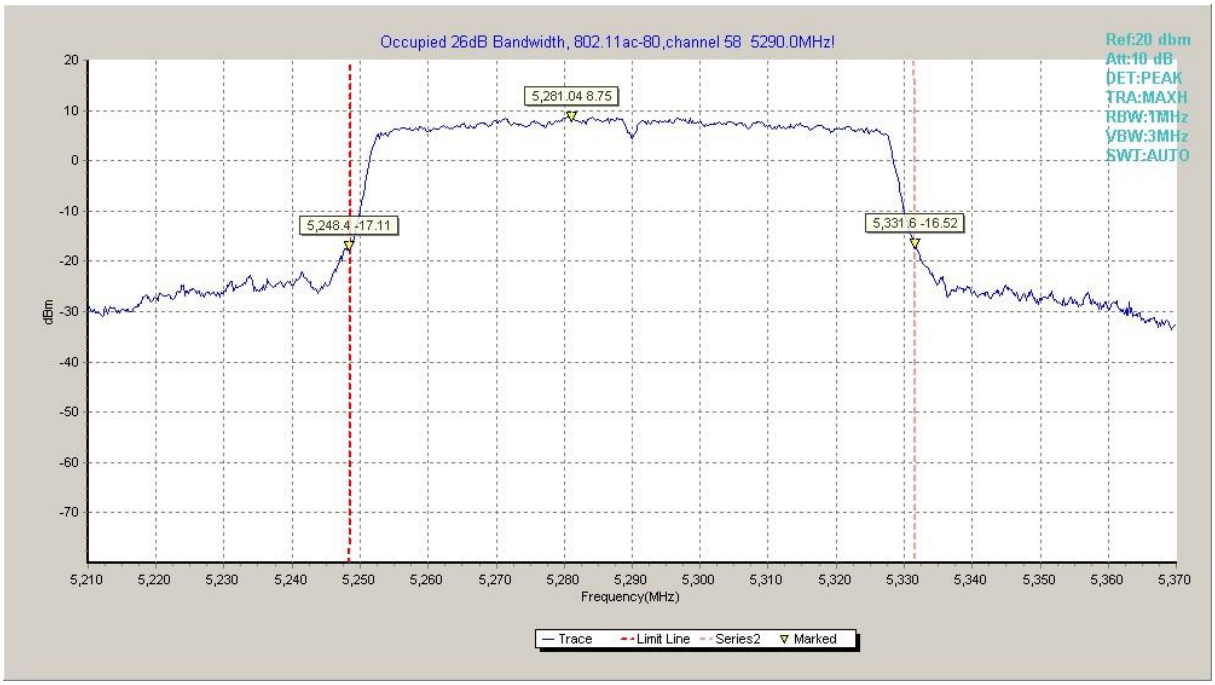

Fig.48 Occupied 26dB Bandwidth (802. 11ac-HT80, 5290MHz)

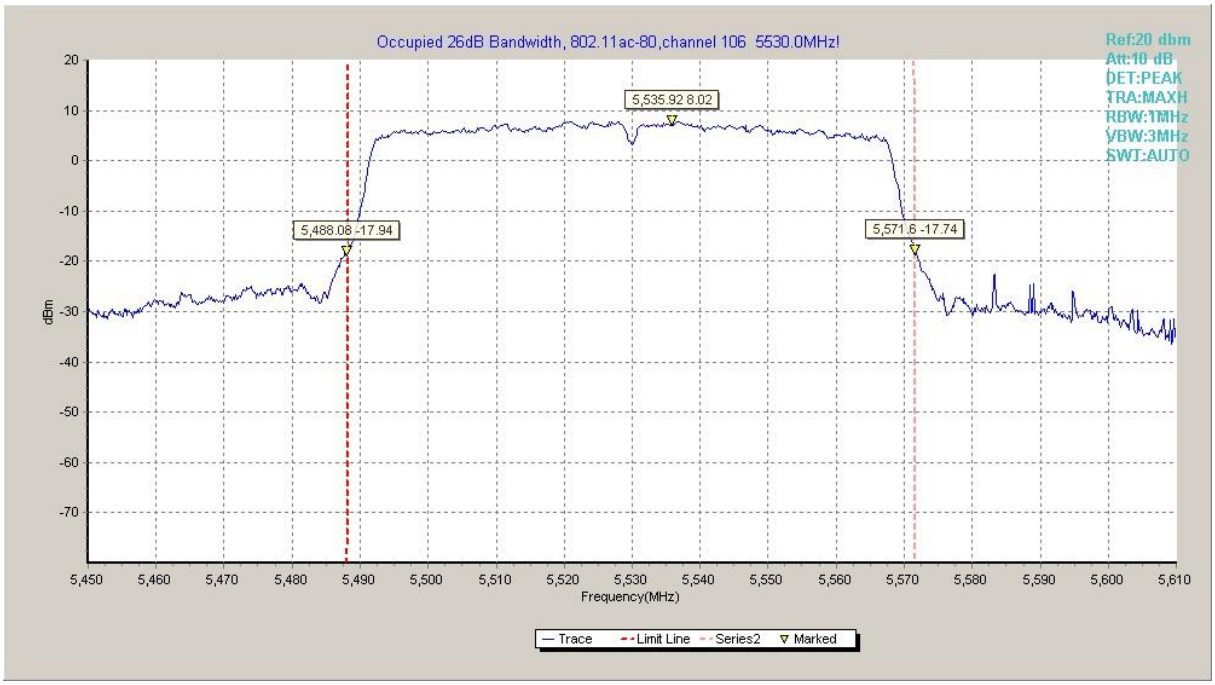

Fig.49 Occupied 26dB Bandwidth (802. 11ac-HT80, 5530MHz)

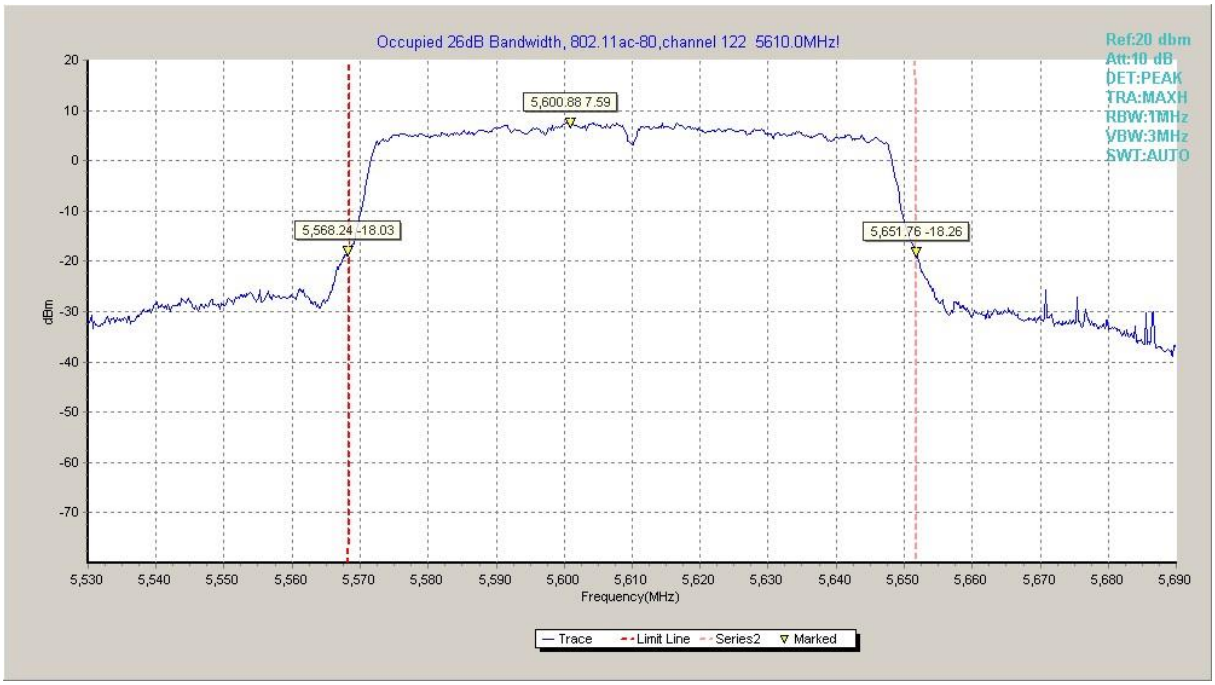

Fig.50 Occupied 26dB Bandwidth (802. 11ac-HT80, 5610MHz)

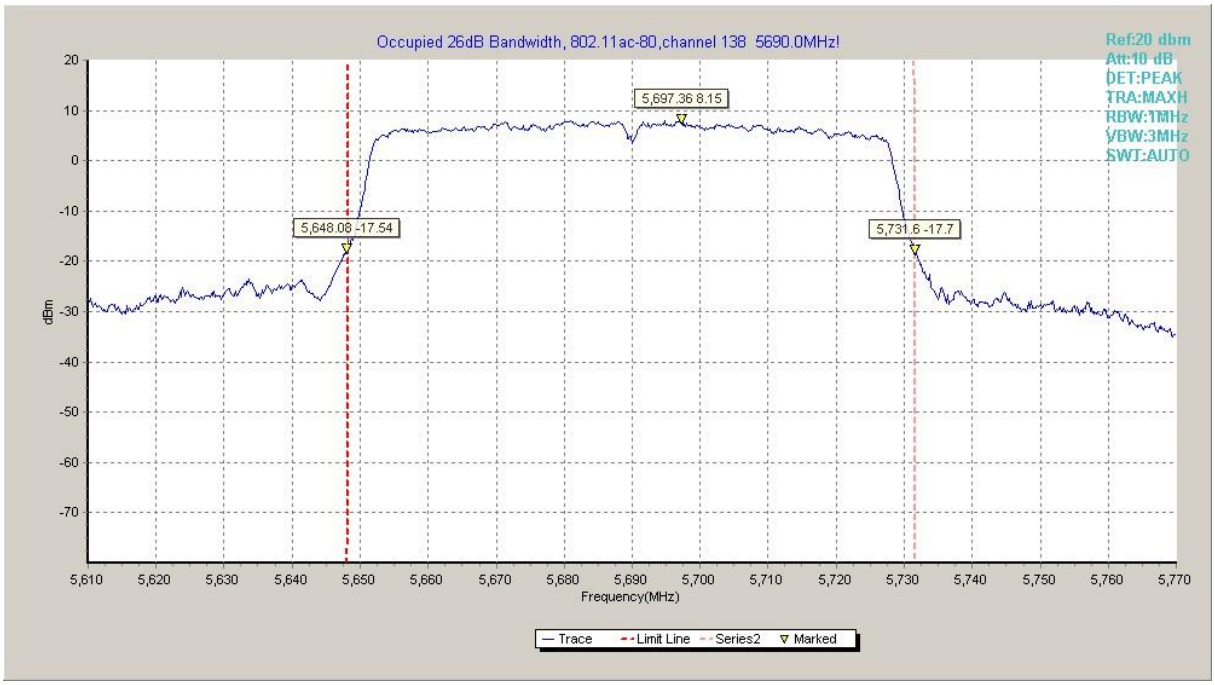

Fig.51 Occupied 26dB Bandwidth (802. 11ac-HT80, 5690MHz)

A.5. Band Edges Compliance

A5.1 Band Edges - Radiated

Measurement Limit:

Standard	Limit (dB μ V/m)	
FCC 47 CFR Part 15.209	Peak	74
	Average	54

The measurement is made according to KDB 789033

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Measurement Uncertainty:

Measurement Uncertainty	0.75dB

Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.52	P
	5320 MHz	Fig.53	P
	5500 MHz	Fig.54	P
	5700 MHz	Fig.55	P
	5720 MHz	Fig.56	P
	5720 MHz	Fig.57	P
802.11n HT20	5180 MHz	Fig.58	P
	5320 MHz	Fig.59	P
	5500 MHz	Fig.60	P
	5700 MHz	Fig.61	P
	5720 MHz	Fig.62	P
	5720 MHz	Fig.63	P
802.11ac HT20	5180 MHz	Fig.64	P
	5320 MHz	Fig.65	P
	5500 MHz	Fig.66	P
	5700 MHz	Fig.67	P
	5720 MHz	Fig.68	P
	5720 MHz	Fig.69	P
802.11n HT40	5190 MHz	Fig.70	P
	5310 MHz	Fig.71	P
	5510 MHz	Fig.72	P
	5670 MHz	Fig.73	P
	5710 MHz	Fig.74	P
	5710 MHz	Fig.75	P
802.11ac HT40	5190 MHz	Fig.76	P
	5310 MHz	Fig.77	P

	5510 MHz	Fig.78	P
	5670 MHz	Fig.79	P
	5710 MHz	Fig.80	P
	5710 MHz	Fig.81	P
802.11ac HT80	5210MHz	Fig.82	P
	5290MHz	Fig.83	P
	5530MHz	Fig.84	P
	5690 MHz	Fig.85	P
	5690 MHz	Fig.86	P

Conclusion: PASS

Test graphs as below:

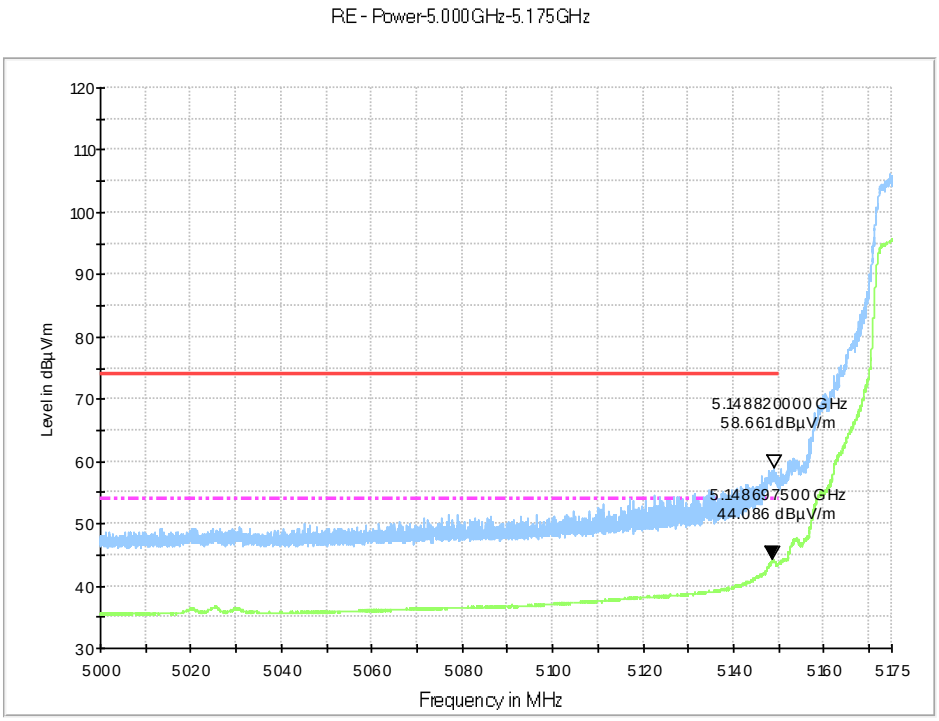

Fig.52 Band Edges (802.11a, 5180MHz)

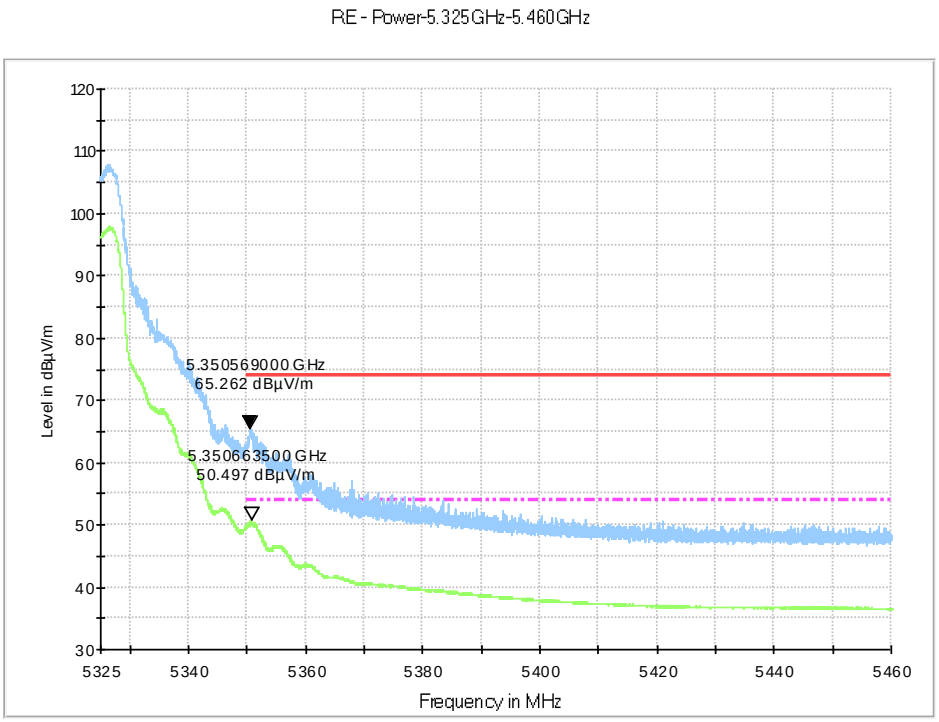

Fig.53 Band Edges (802.11a, 5320MHz)

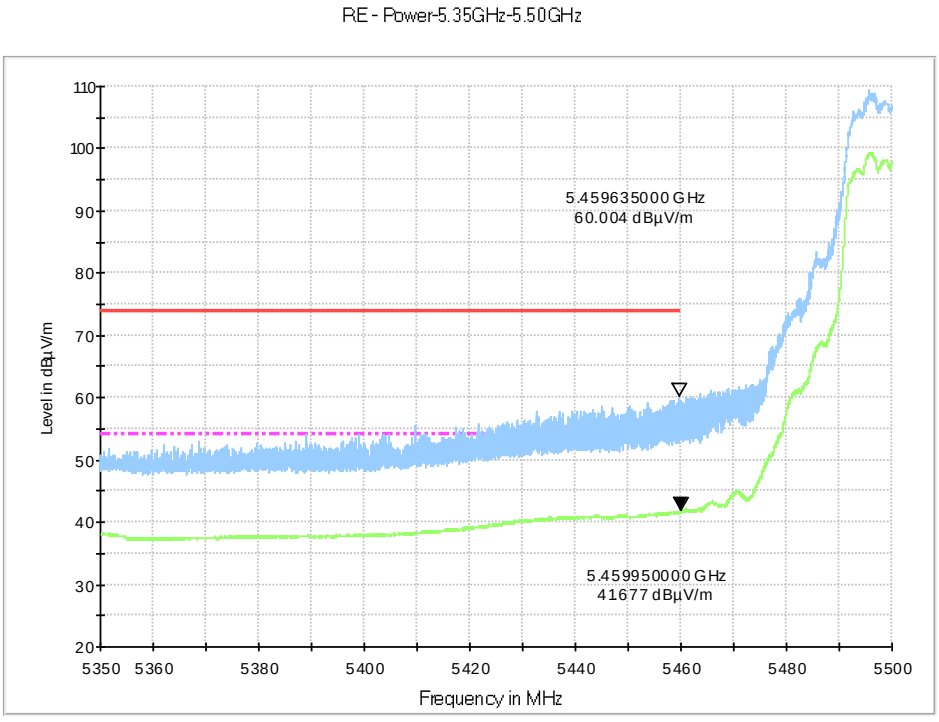

Fig.54 Band Edges (802.11a, 5500MHz)

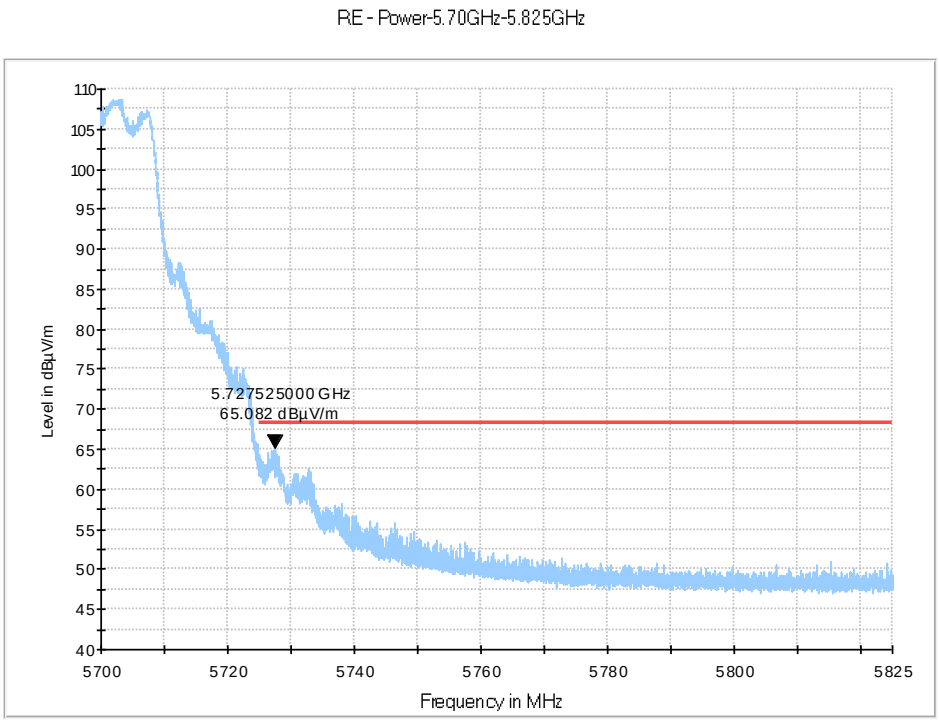

Fig.55 Band Edges (802.11a, 5700MHz)

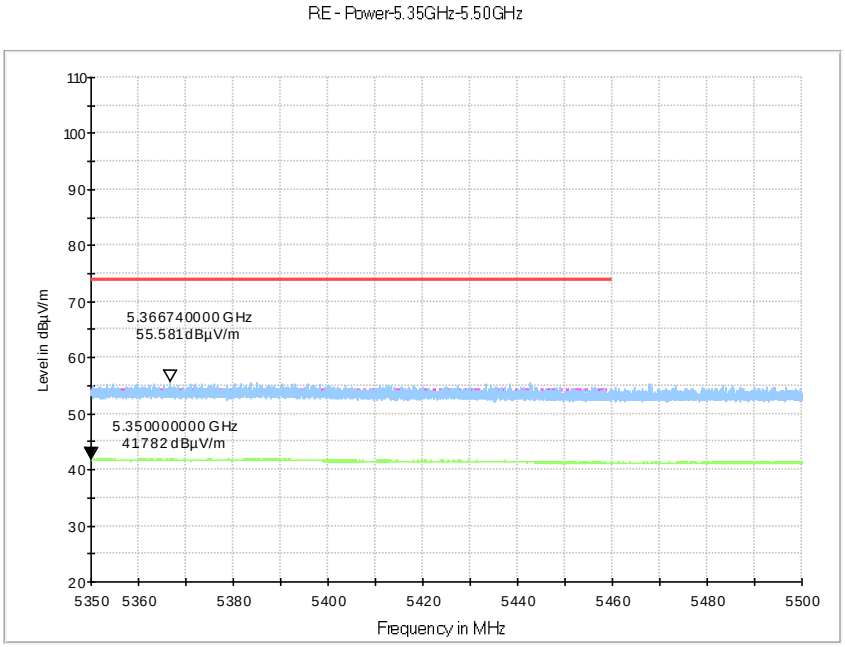

Fig.56 Band Edges (802.11a, 5720MHz)

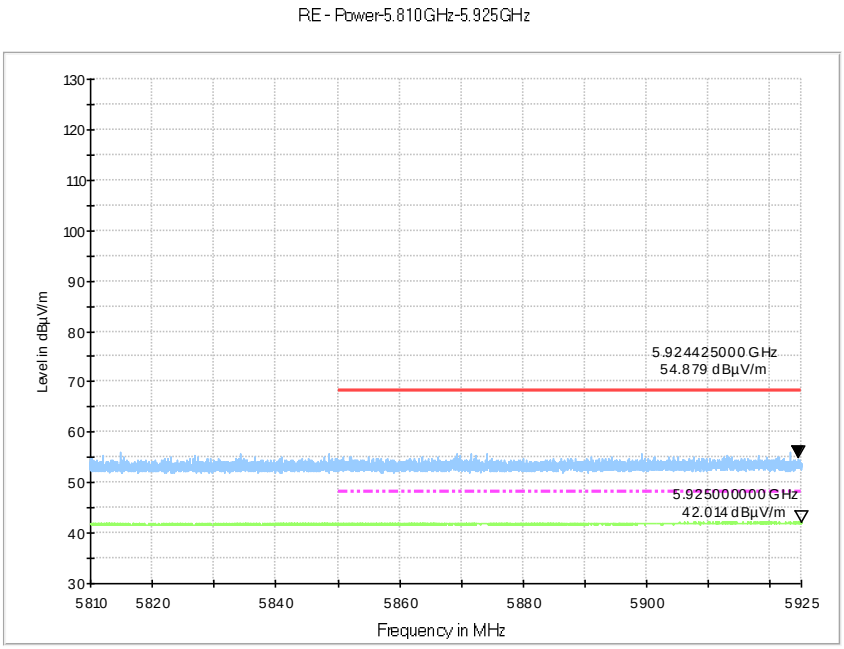

Fig.57 Band Edges (802.11a, 5720MHz)

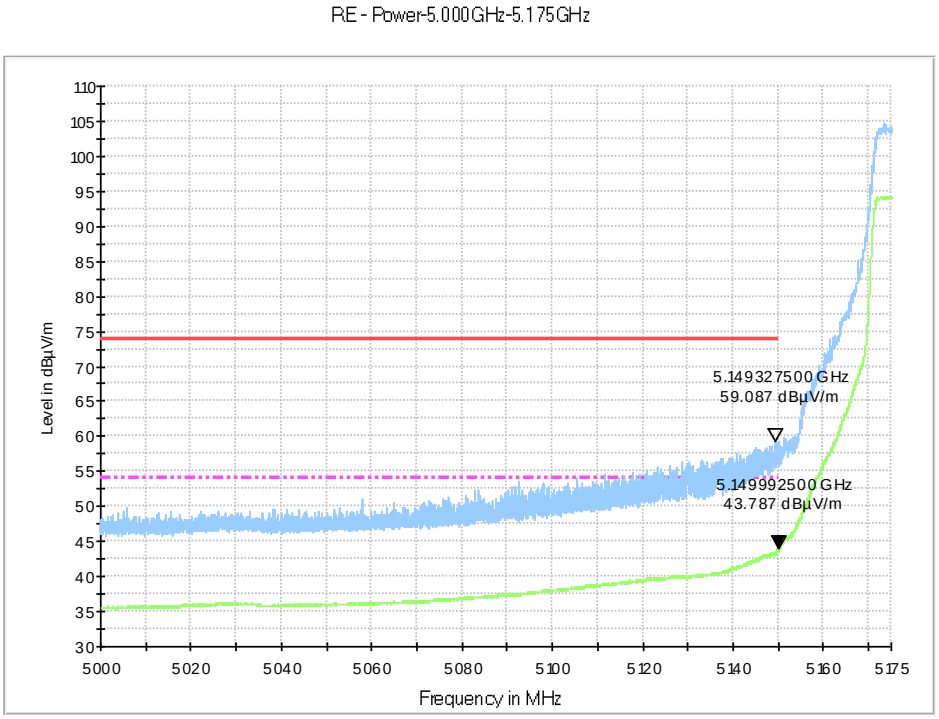

Fig.58 Band Edges (802.11n-HT20, 5180MHz)

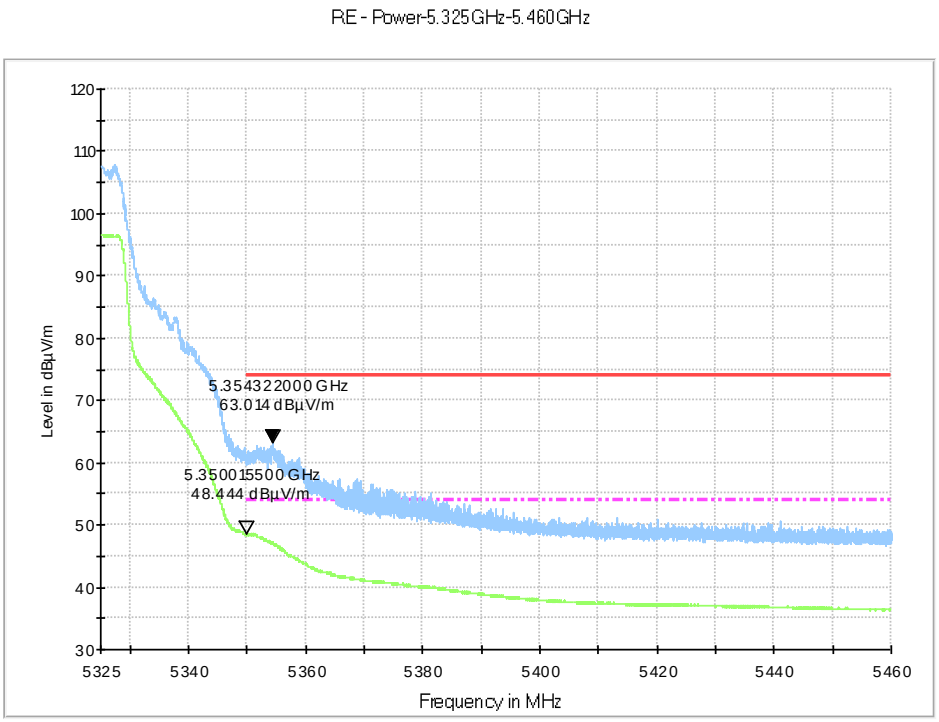

Fig.59 Band Edges (802.11n-HT20, 5320MHz)

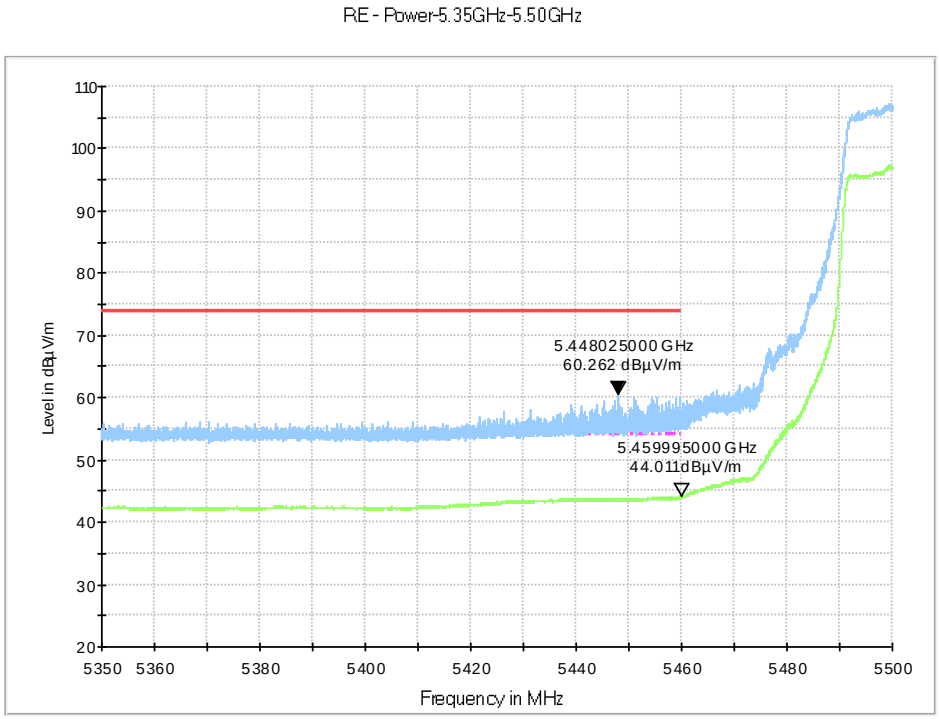

Fig.60 Band Edges (802.11n-HT20, 5500MHz)

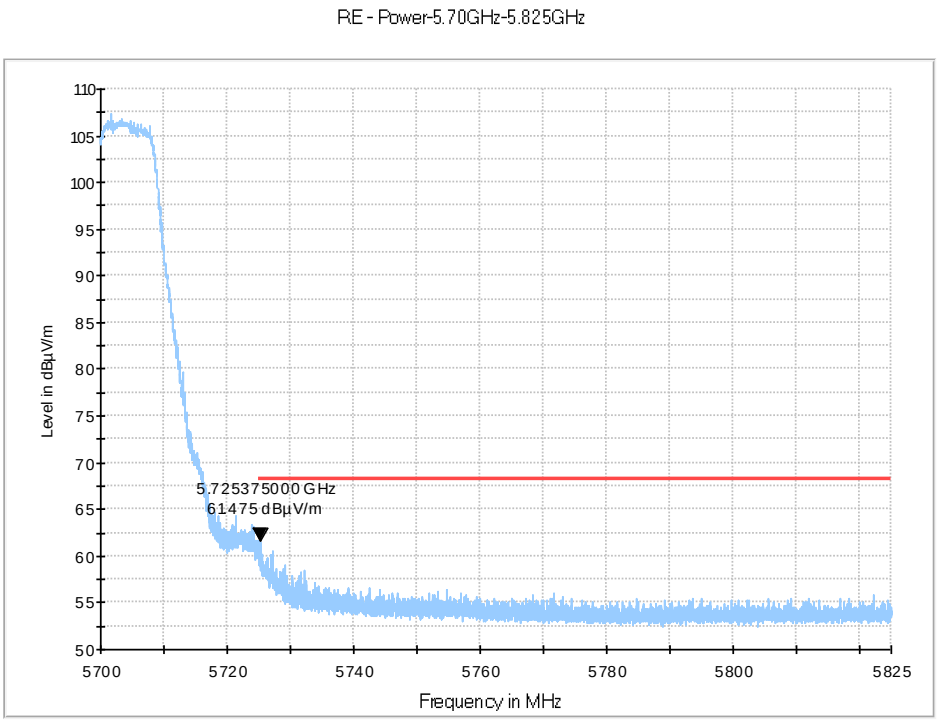

Fig.61 Band Edges (802.11n-HT20, 5700MHz)

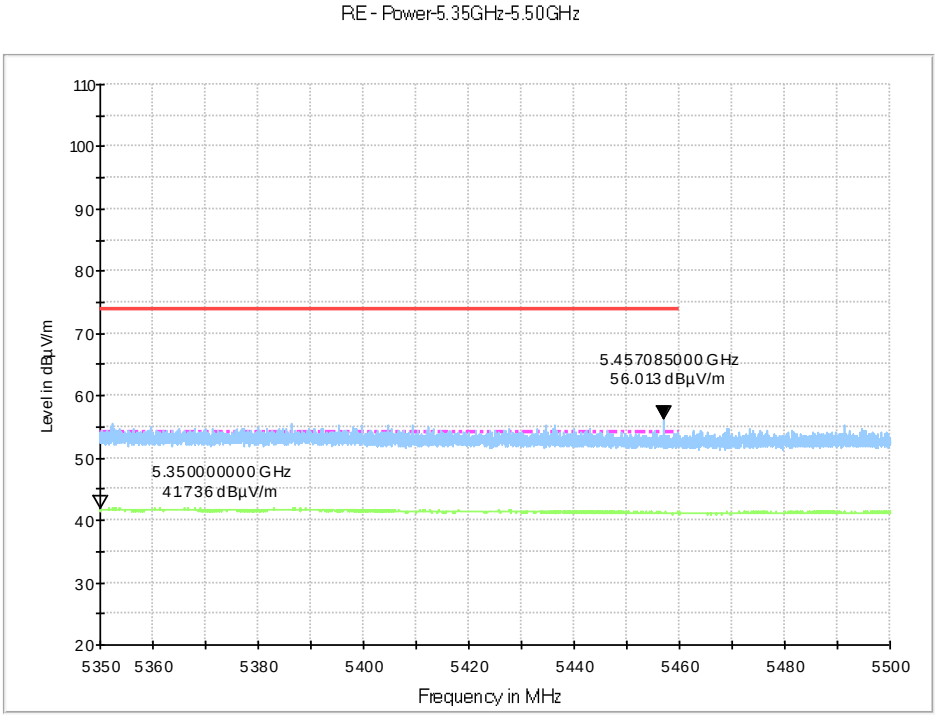

Fig.62 Band Edges (802.11n, 5720MHz)

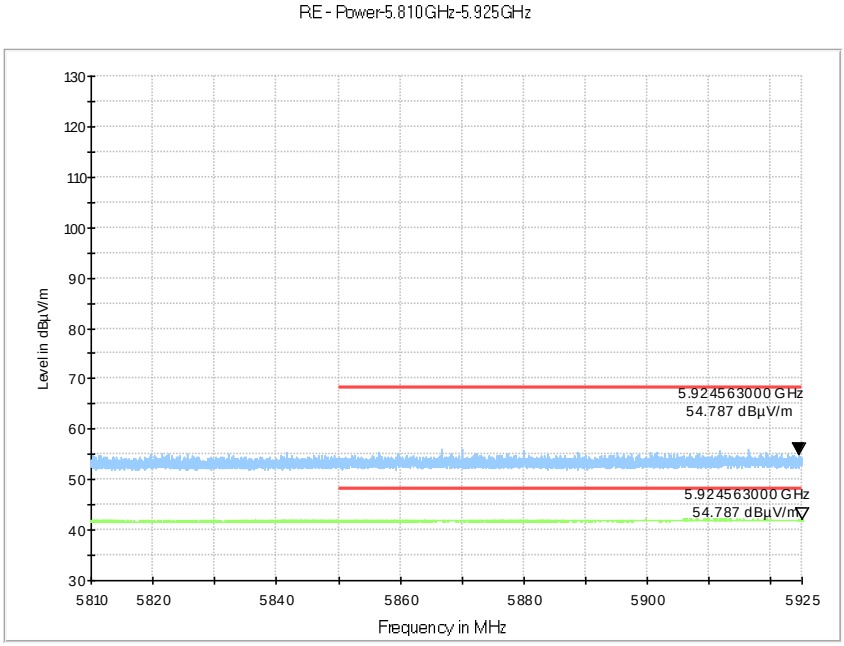

Fig.63 Band Edges (802.11n, 5720MHz)

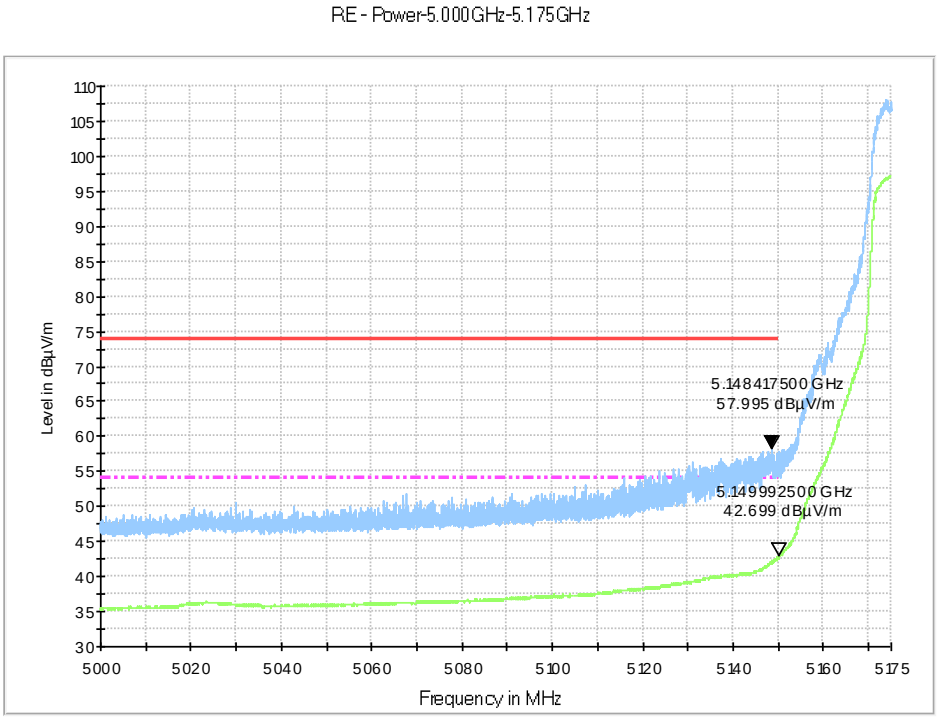

Fig.64 Band Edges (802.11ac-HT20, 5180MHz)

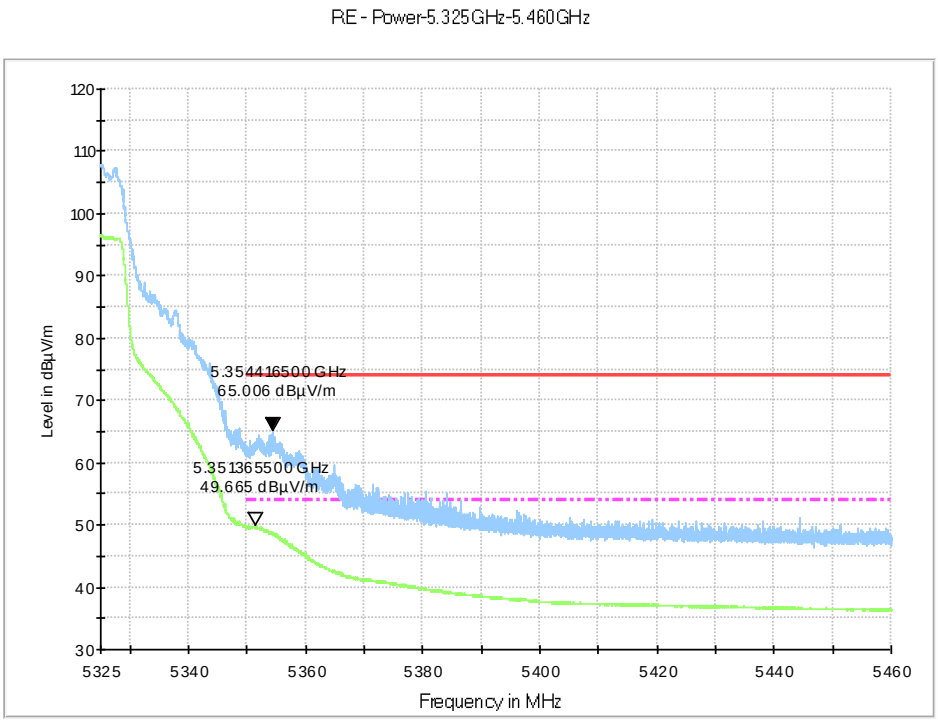

Fig.65 Band Edges (802.11ac-HT20, 5320MHz)

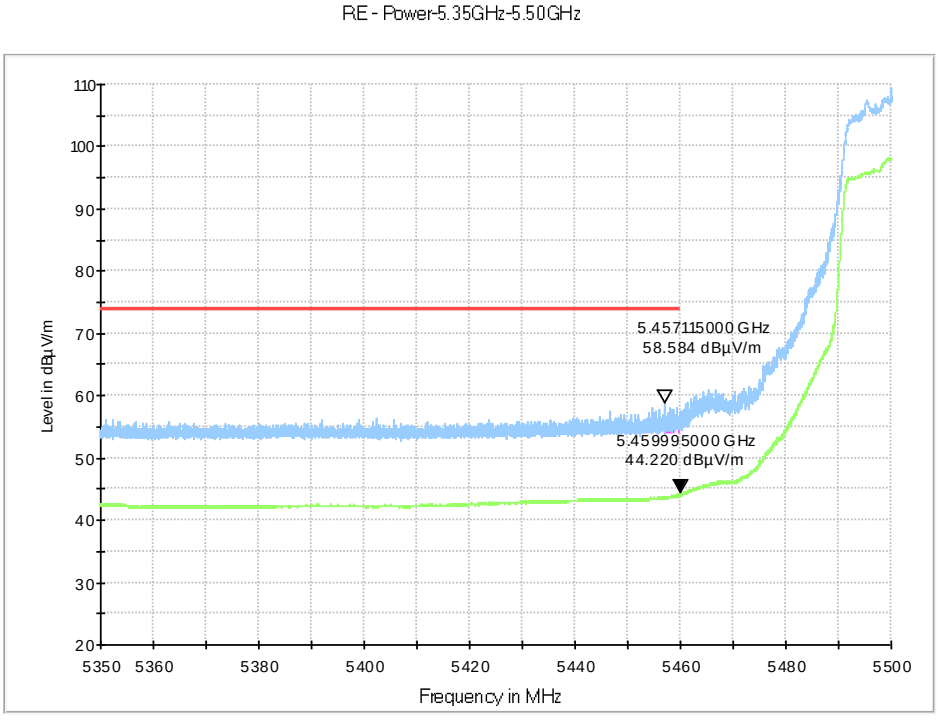

Fig.66 Band Edges (802.11ac-HT20, 5500MHz)

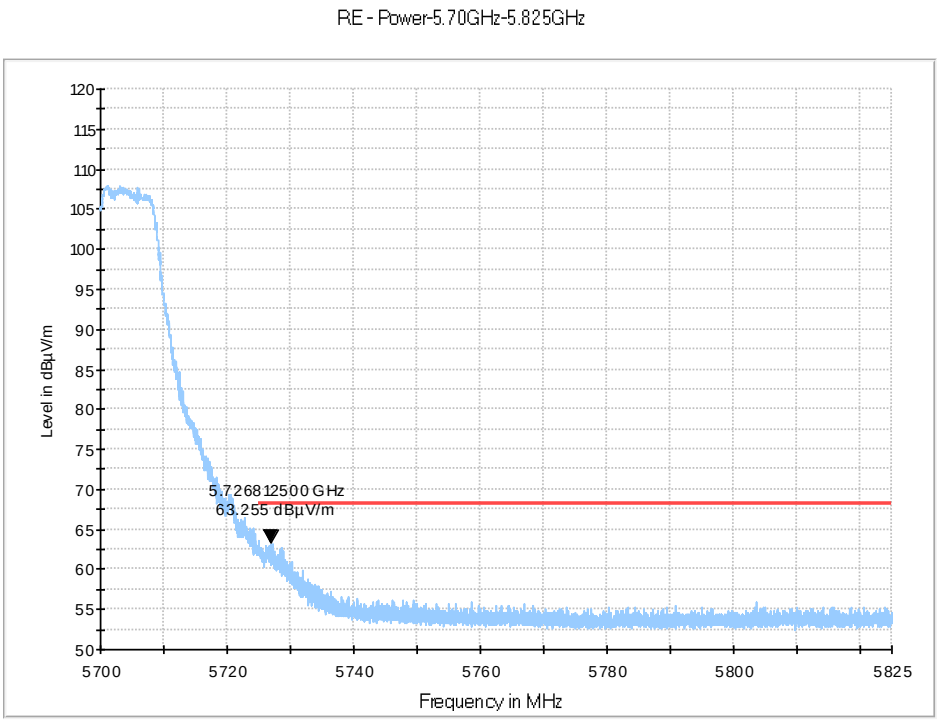

Fig.67 Band Edges (802.11ac-HT20, 5700MHz)

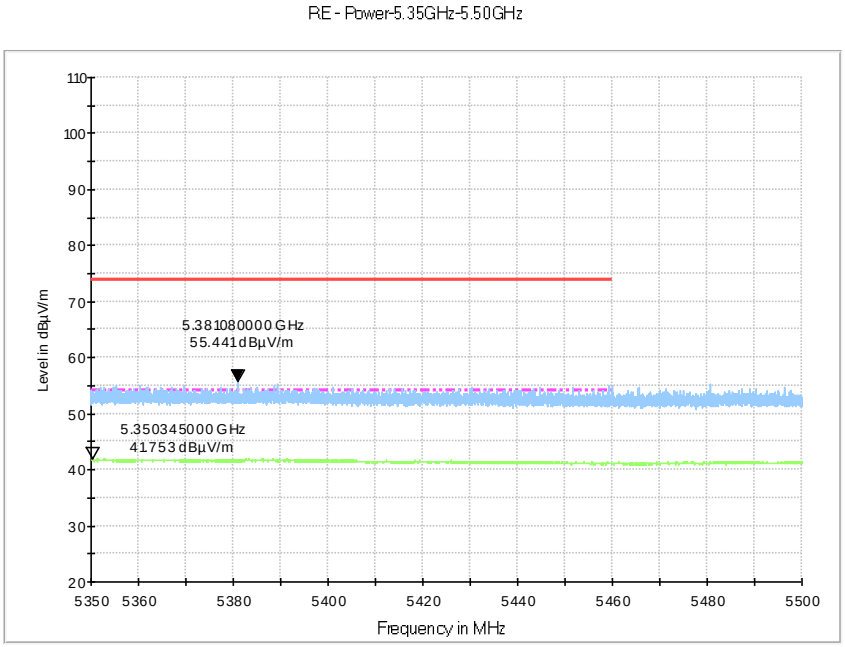

Fig.68 Band Edges (802.11ac, 5720MHz)

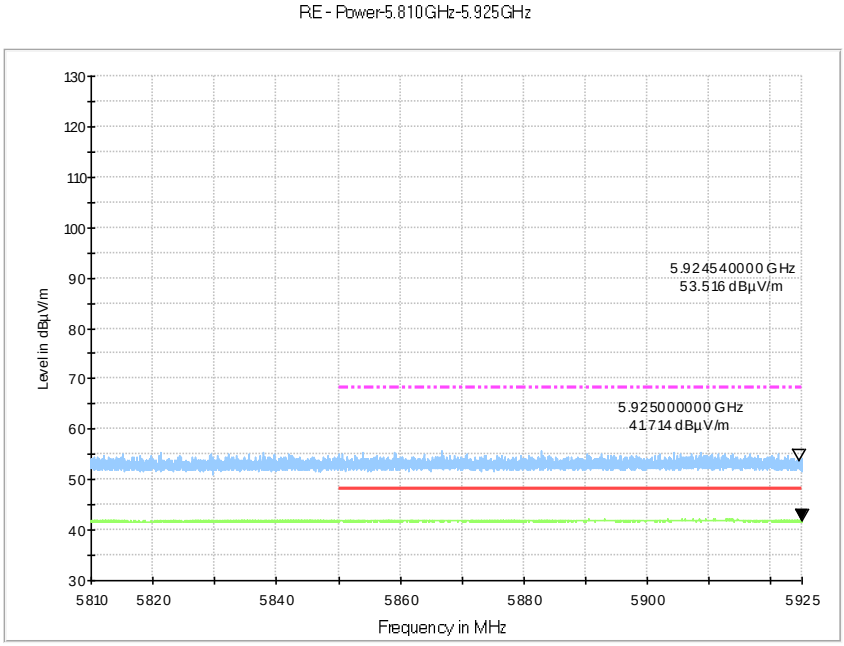

Fig.69 Band Edges (802.11ac, 5720MHz)

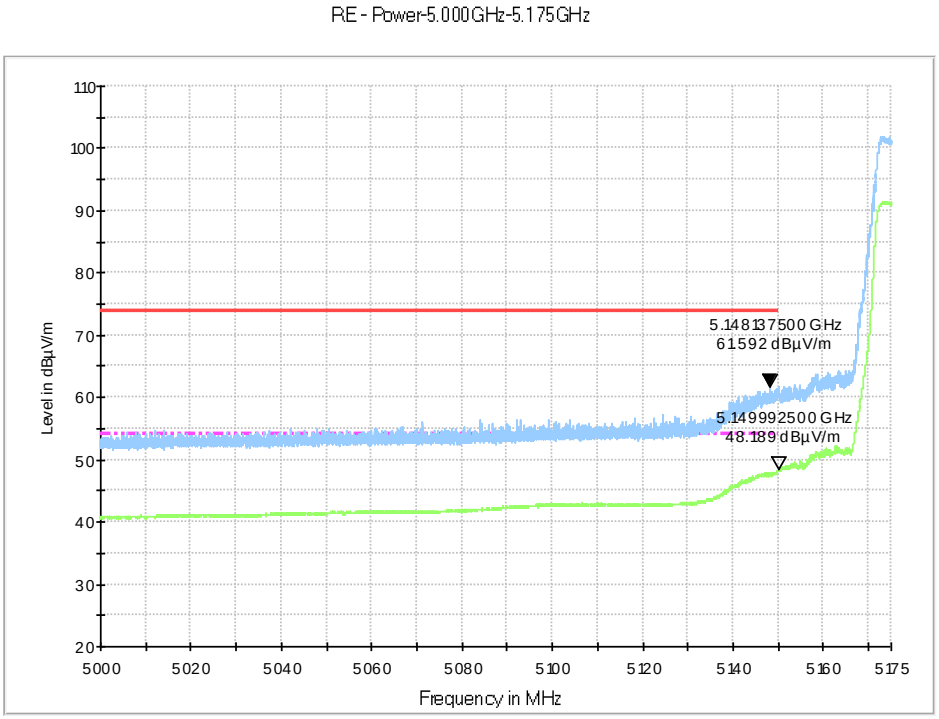

Fig.70 Band Edges (802.11n-HT40, 5190MHz)

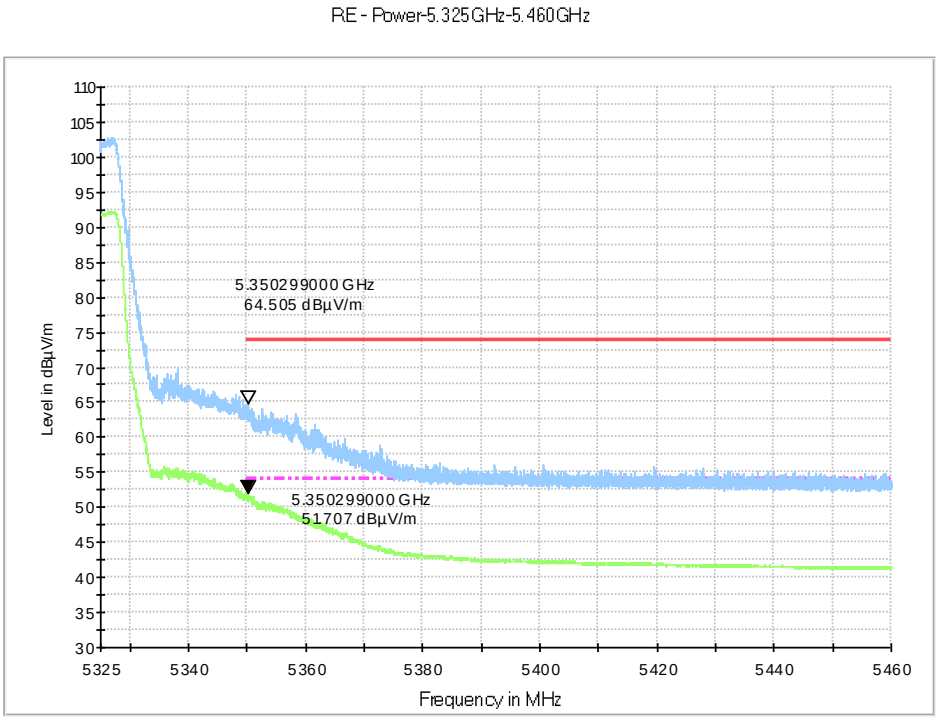

Fig.71 Band Edges (802.11n-HT40, 5310MHz)

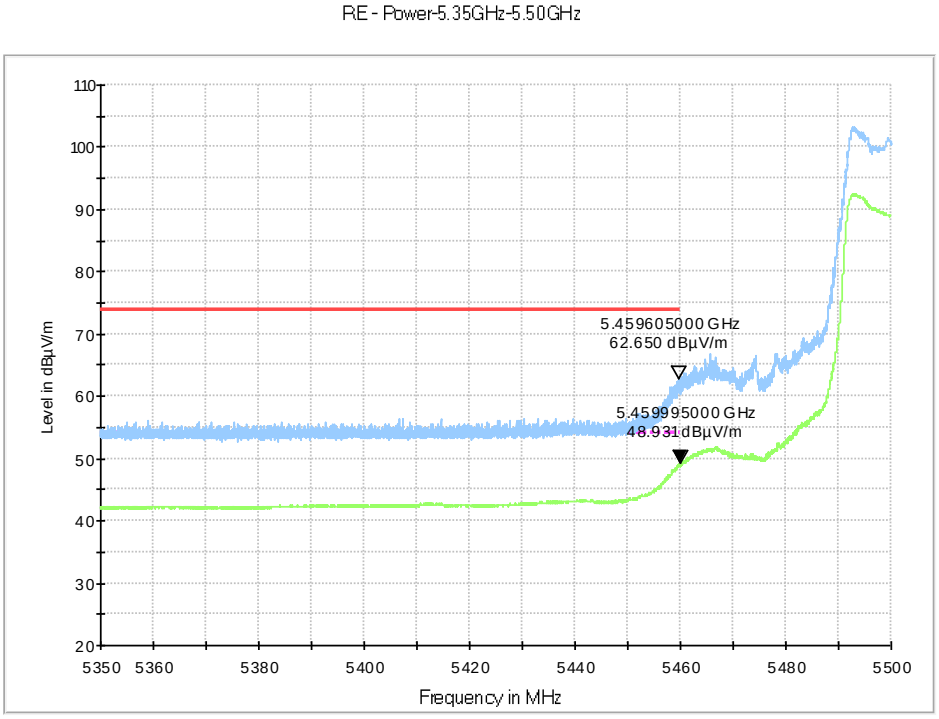

Fig.72 Band Edges (802.11n-HT40, 5510MHz)

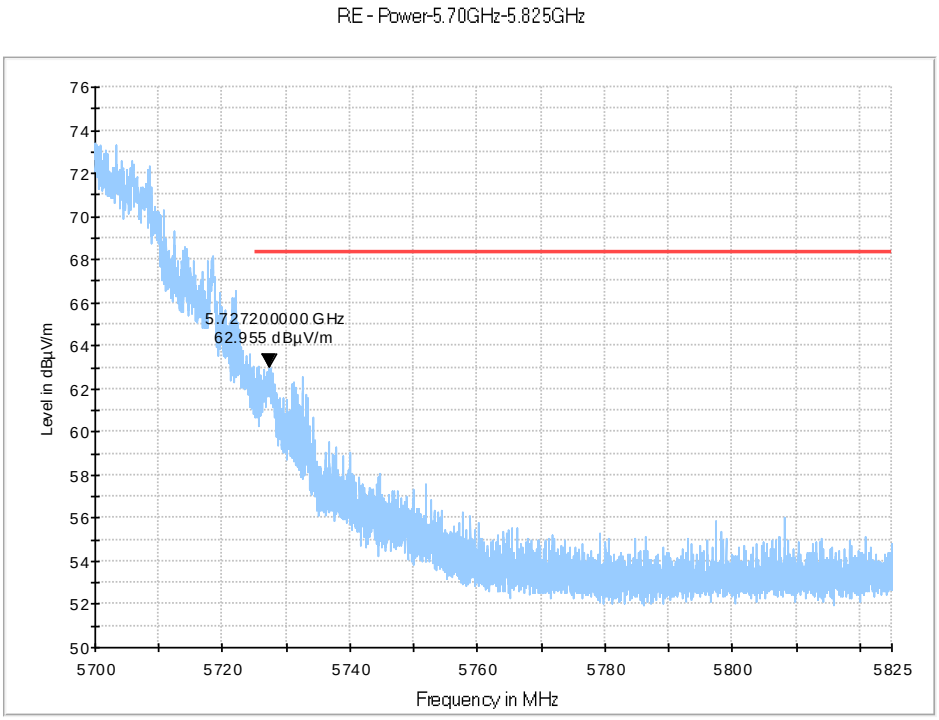

Fig.73 Band Edges (802.11n-HT40, 5670MHz)

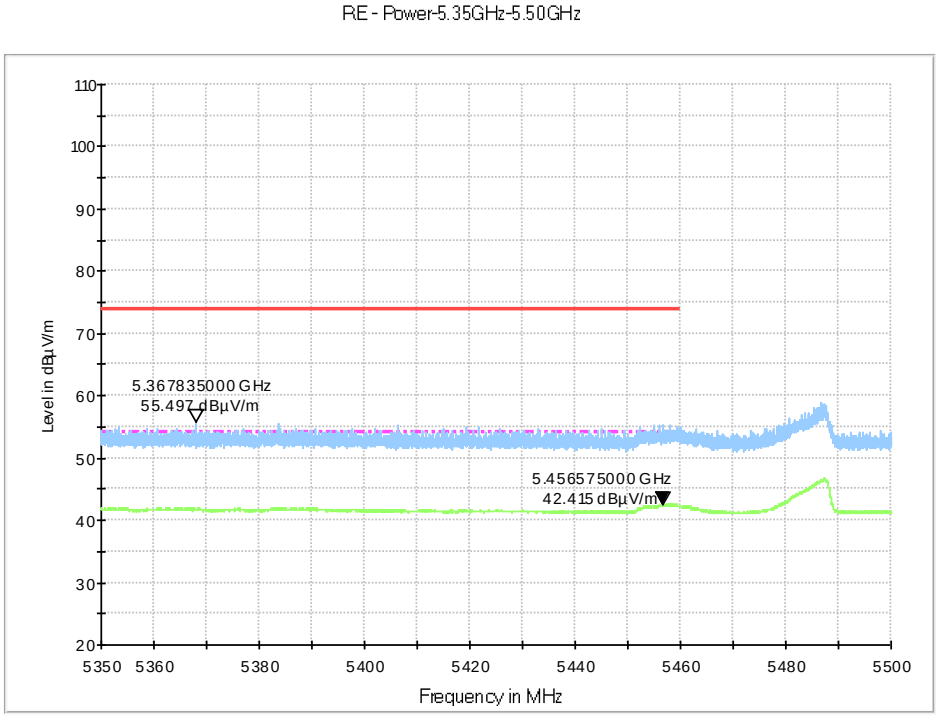

Fig.74 Band Edges (802.11n-HT40, 5710MHz)

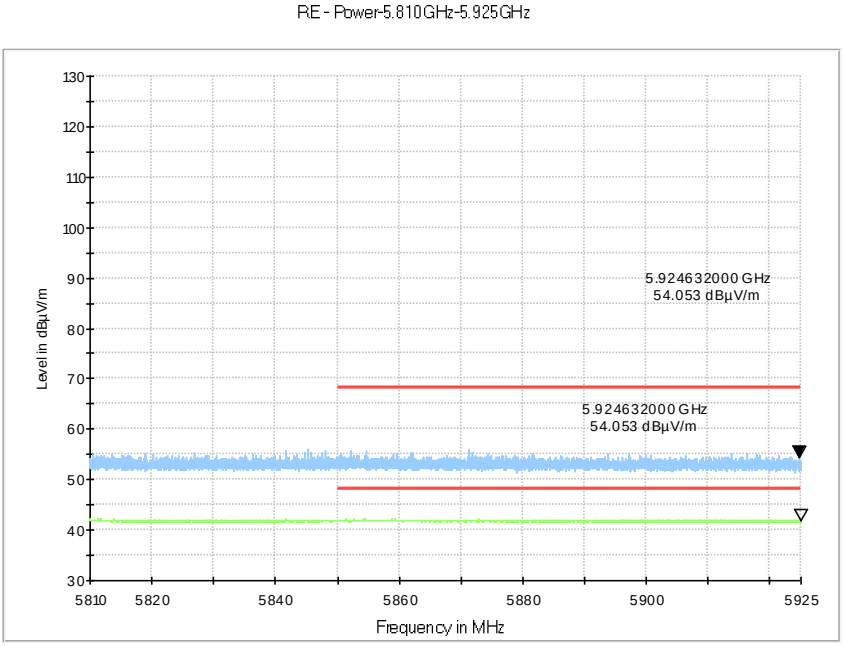

Fig.75 Band Edges (802.11n-HT40, 5710MHz)

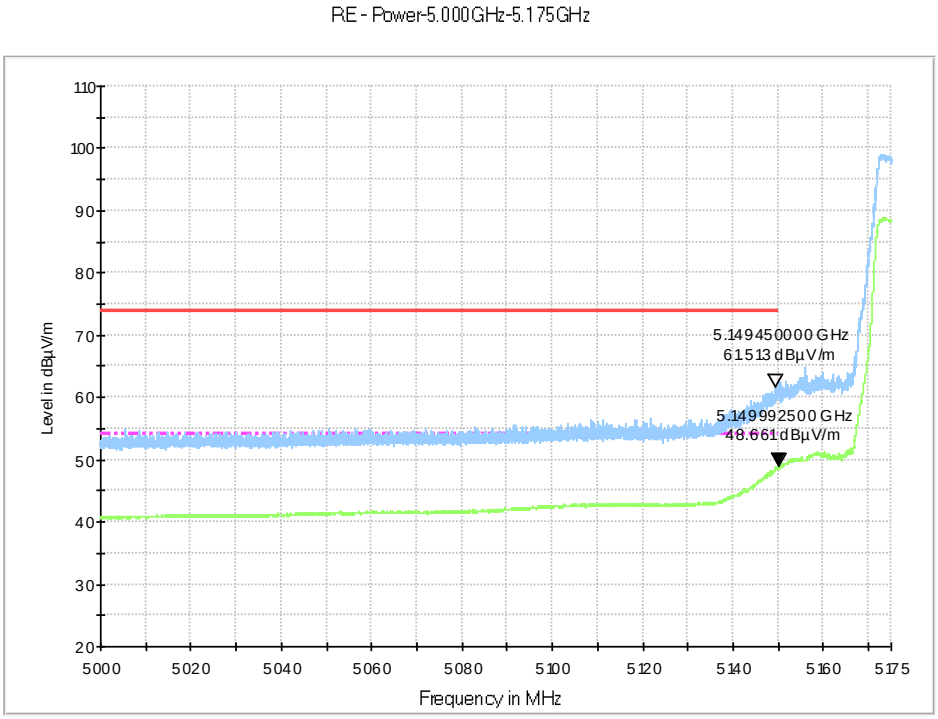

Fig.76 Band Edges (802.11ac-HT40, 5190MHz)

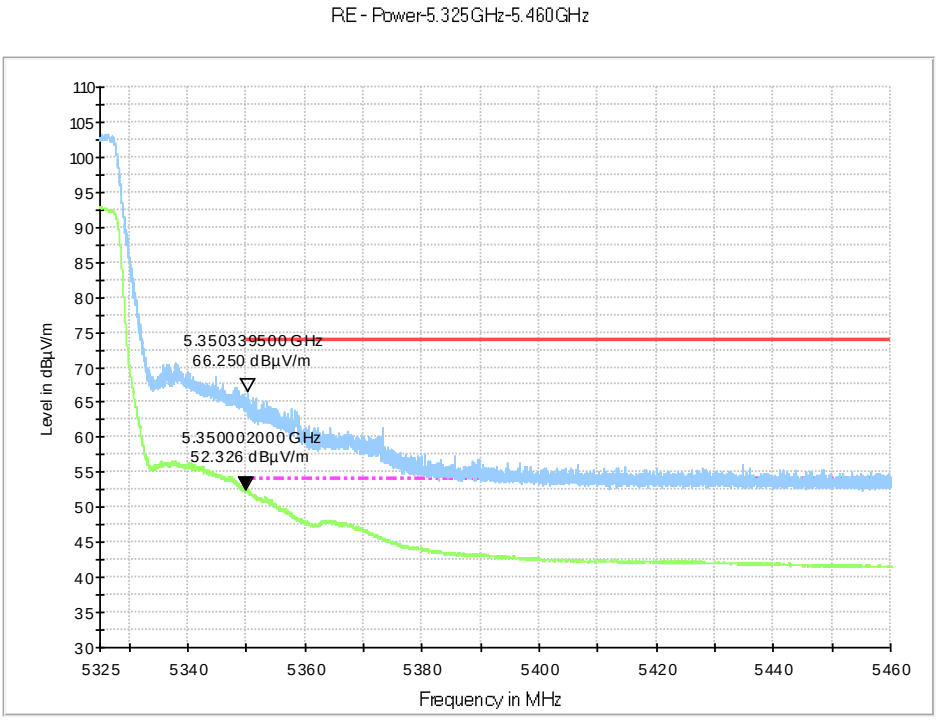

Fig.77 Band Edges (802.11ac-HT40, 5310MHz)

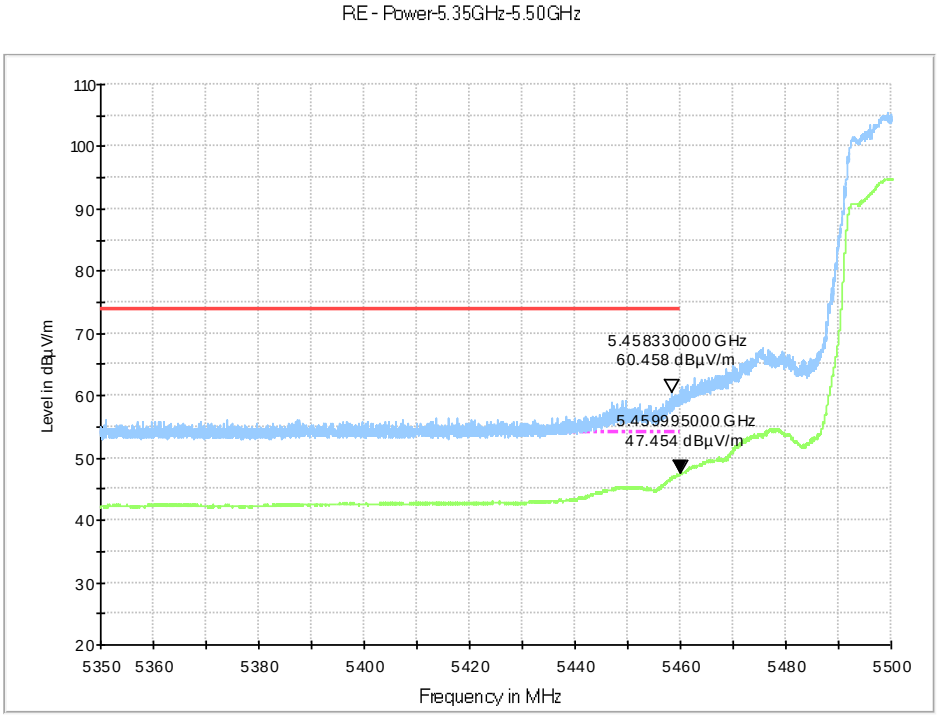

Fig.78 Band Edges (802.11ac-HT40, 5510MHz)

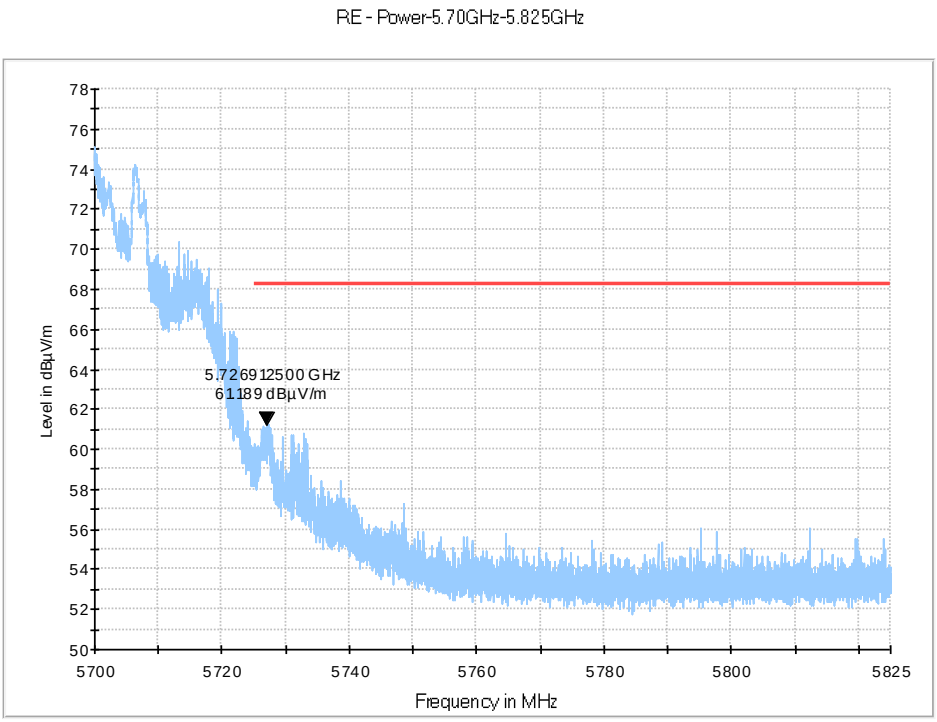

Fig.79 Band Edges (802.11ac-HT40, 5670MHz)

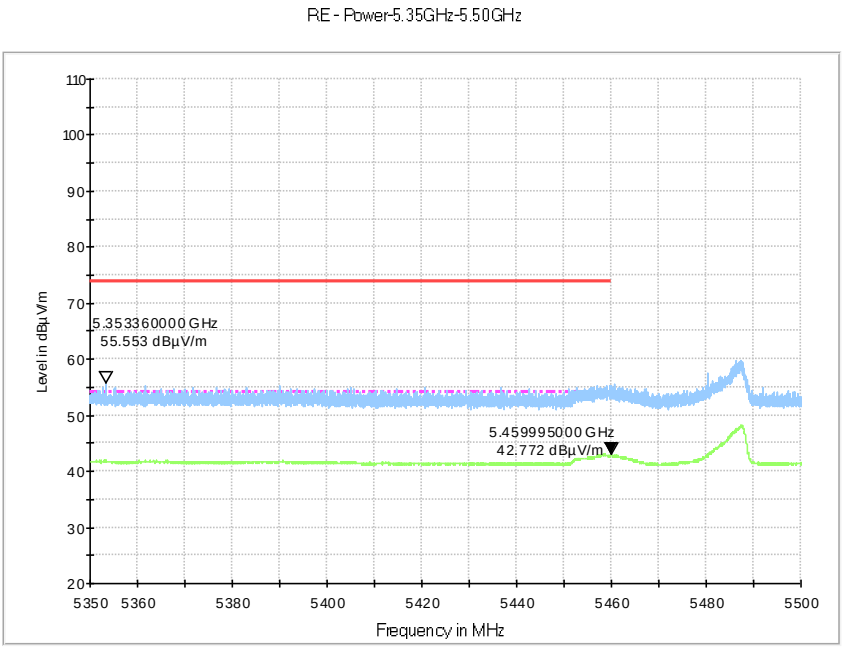

Fig.80 Band Edges (802.11ac-HT40, 5710MHz)

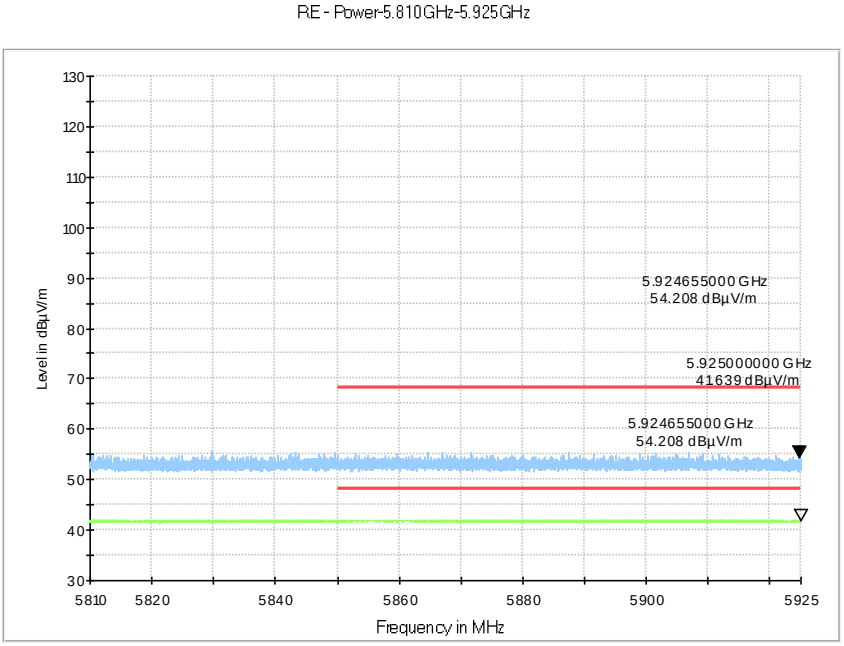

Fig.81 Band Edges (802.11ac-HT40, 5710MHz)

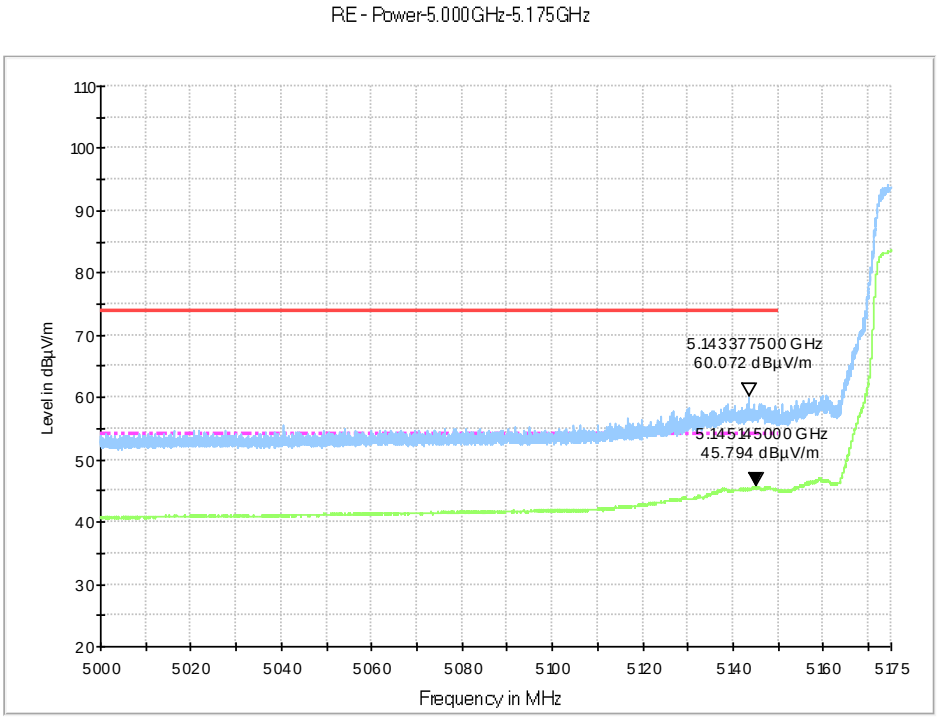

Fig.82 Band Edges (802.11ac-HT80, 5210MHz)

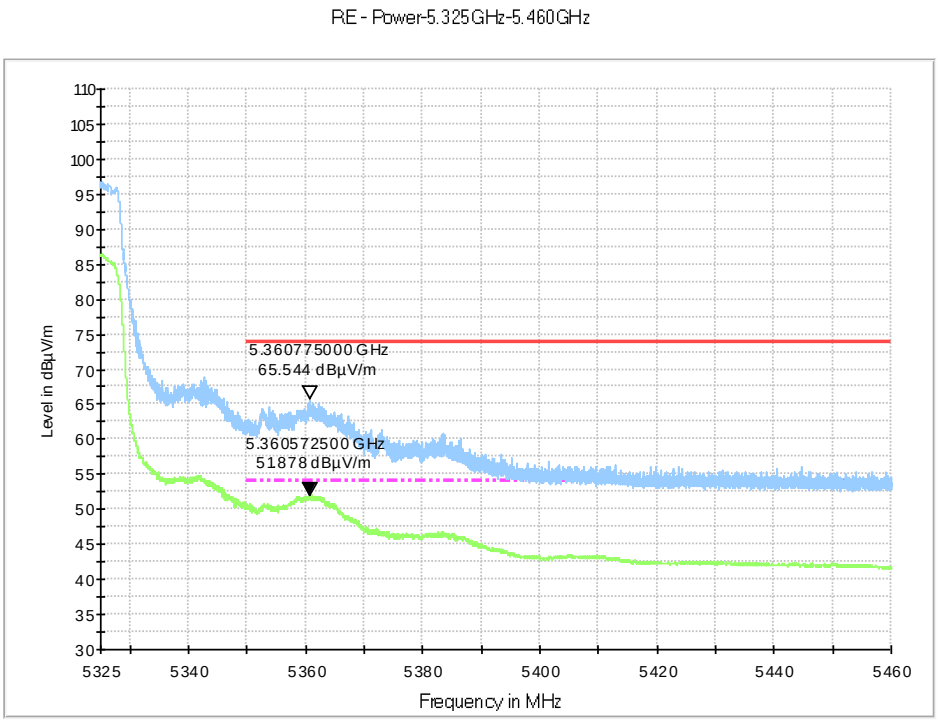

Fig.83 Band Edges (802.11ac-HT80, 5290MHz)

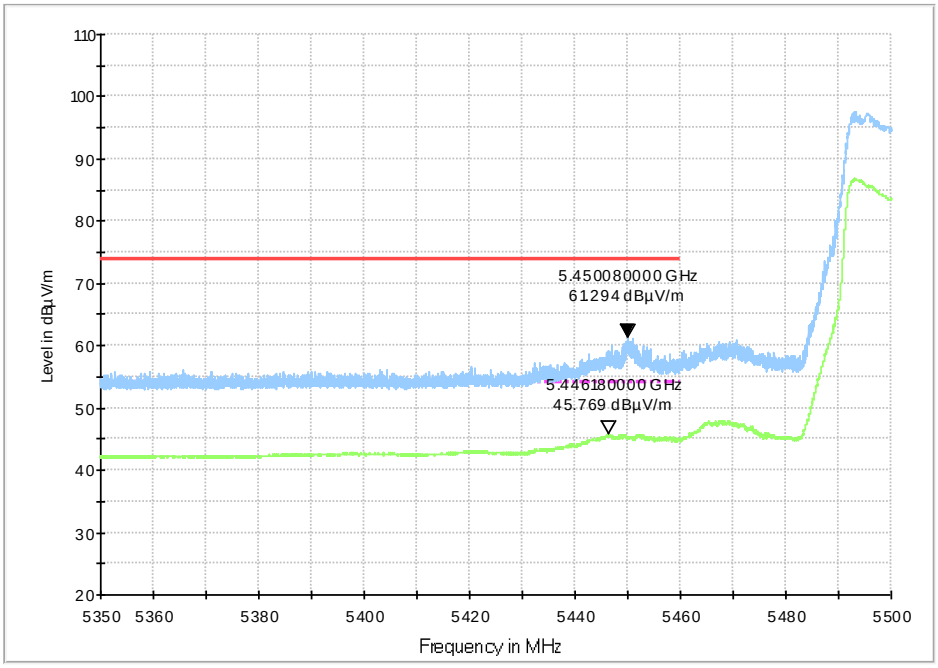

Fig.84 Band Edges (802.11ac-HT80, 5530MHz)

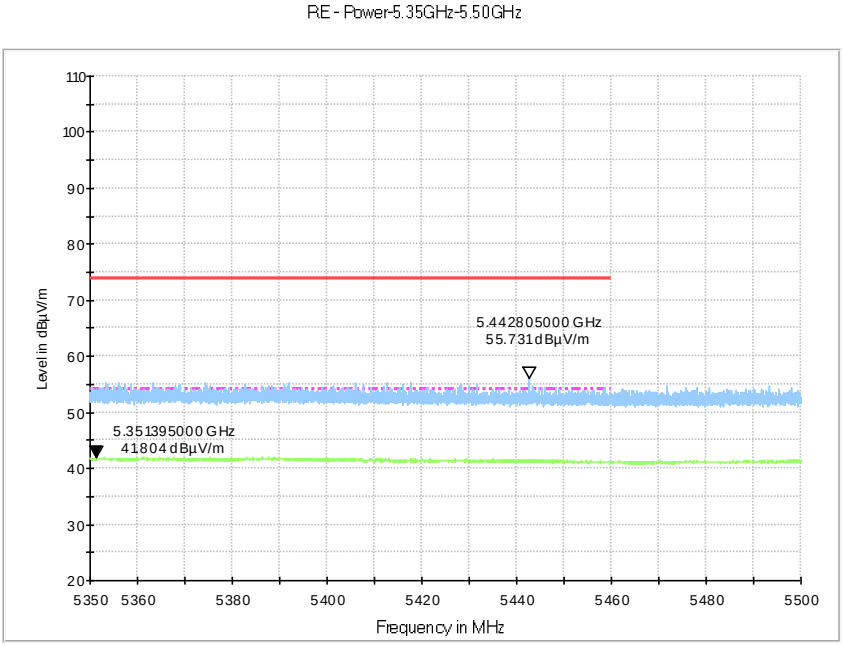

Fig.85 Band Edges (802.11ac-HT80, 5690MHz)

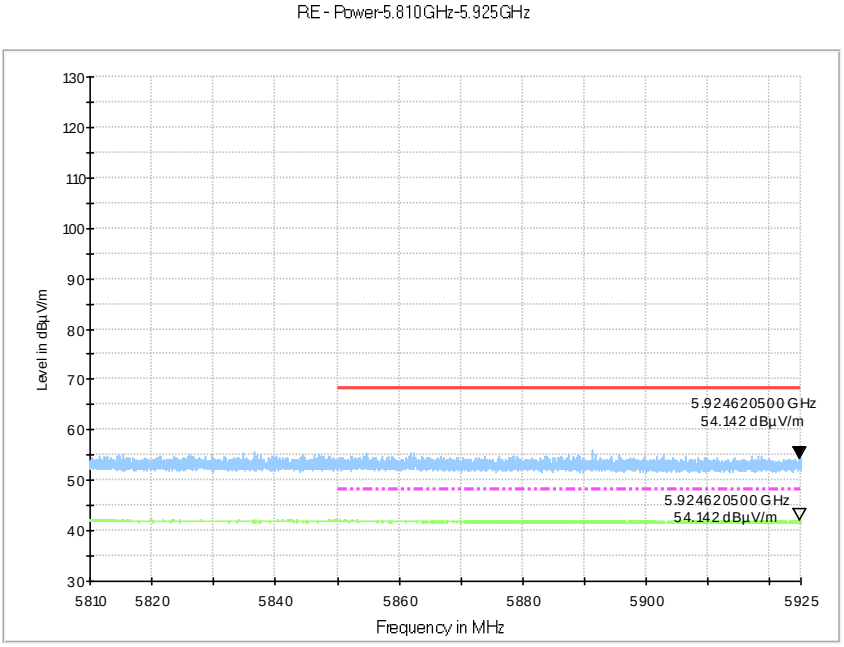

Fig.86 Band Edges (802.11ac-HT80, 5690MHz)

A.6. Transmitter Spurious Emission

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

The measurement is made according to KDB 789033

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength(dBμV/m)	Measurement distance(m)
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

Note: for frequency range below 960MHz, the limit in 15.209 is defined in 10m test distance. The limit used above is calculated from 10m to 3m

Measurement uncertainty:

Expanded measurement uncertainty for this test item is U =3.9dB, k=2.

Measurement Results:

Conclusion: PASS

Note:

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

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

The measurement results are obtained as described below:

Result=P_{Mea}+$A_{Rpl=}$ P_{Mea}+Cable Loss+Antenna Factor

Average

802.11a

Channel 36

Frequency (MHz)	Meas. 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)
5149.600	41.6	-33.3	34.3	40.50	54.0	12.4	H	155	175
5150.000	42.0	-33.3	34.3	40.91	54.0	12.0	H	155	5
10603.600	33.6	-29.2	37.7	25.21	54.0	20.4	H	155	26
15517.230	36.7	-24.5	40.2	20.94	54.0	17.3	H	155	355
17919.700	38.7	-22.7	41.3	20.05	54.0	15.3	H	155	6
17817.450	38.5	-22.4	41.3	19.67	54.0	15.5	H	155	12

Channel 40

Frequency (MHz)	Meas. 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)
4722.750	30.6	-33.3	34.1	29.77	54.0	23.4	H	155	4
5346.250	31.6	-32.3	34.5	29.37	54.0	22.4	H	155	2
10604.700	32.0	-29.2	37.7	23.54	54.0	22.0	H	155	25
13268.900	34.3	-27.9	39.0	23.11	54.0	19.7	H	155	350
14475.560	34.5	-25.1	39.6	20.01	54.0	19.5	H	155	92
17699.780	38.7	-22.2	41.2	19.63	54.0	15.3	H	155	85

Channel 48

Frequency (MHz)	Meas. 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)
5133.500	30.6	-33.3	34.3	29.63	54.0	23.4	H	155	20
5325.250	32.7	-32.4	34.5	30.66	54.0	21.3	H	155	40
12699.100	34.1	-27.9	39.1	22.94	54.0	19.9	H	155	56
13398.200	33.8	-27.6	39.0	22.51	54.0	20.2	H	155	4
14498.850	34.8	-25.1	39.6	20.24	54.0	19.2	H	155	18
15369.900	35.4	-24.4	40.1	19.79	54.0	18.6	H	155	48

Channel 52

Frequency (MHz)	Meas. 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)
5149.600	35.8	-33.3	34.3	34.76	54.0	18.2	H	155	24
5351.200	37.3	-32.3	34.5	35.08	54.0	16.7	H	155	46
10725.630	32.8	-29.7	37.7	24.75	54.0	21.3	H	155	6
10985.600	33.5	-29.9	37.9	25.46	54.0	20.6	H	155	5
13384.500	34.7	-27.6	39.0	23.29	54.0	19.4	H	155	25
17708.560	38.9	-22.2	41.2	19.90	54.0	15.1	H	155	184

Channel 56

Frequency (MHz)	Meas. 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)
5148.000	35.3	-33.3	34.3	34.30	54.0	18.7	H	155	28
5353.600	38.0	-32.3	34.5	35.77	54.0	16.0	H	155	248
11056.800	33.5	-29.8	38.0	25.32	54.0	20.6	H	155	38
16352.780	34.7	-23.1	41.2	16.57	54.0	19.3	H	155	98
14658.390	34.7	-25.1	39.7	20.12	54.0	19.3	H	155	183
17789.650	38.4	-22.4	41.3	19.55	54.0	15.6	H	155	356

Channel 64

Frequency (MHz)	Meas. 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)
5350.000	48.1	-32.3	34.5	45.92	54.0	5.9	H	155	354
5353.200	47.2	-32.3	34.5	44.96	54.0	6.8	H	155	28
12654.850	34.1	-28.0	39.1	23.06	54.0	19.9	H	155	348
13385.600	34.0	-27.6	39.0	22.66	54.0	20.0	H	155	345
14468.590	34.9	-25.0	39.6	20.34	54.0	19.2	H	155	184
16164.580	35.2	-23.3	41.0	17.52	54.0	18.8	H	155	182

Channel 100

Frequency (MHz)	Meas. 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)
5433.250	32.9	-32.6	34.5	30.89	54.0	21.1	H	155	5
5334.680	32.9	-32.4	34.5	30.83	54.0	21.1	H	155	25
11050.500	33.5	-29.8	38.0	25.34	54.0	20.5	H	155	356
16354.500	34.7	-23.1	41.2	16.59	54.0	19.3	H	155	350
14660.500	34.7	-25.1	39.7	20.11	54.0	19.3	H	155	185
17788.600	38.4	-22.4	41.3	19.51	54.0	15.6	H	155	187

Channel 120

Frequency (MHz)	Meas. 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)
5445.200	36.6	-32.7	34.6	34.75	54.0	17.4	H	155	170
5681.200	36.8	-32.9	34.8	34.86	54.0	17.2	H	155	150
12415.500	34.0	-28.2	39.0	23.19	54.0	20.0	H	155	20
13385.500	33.7	-27.6	39.0	22.31	54.0	20.3	H	155	180
14491.600	34.5	-25.1	39.6	19.98	54.0	19.5	H	155	202
17878.500	38.5	-22.6	41.3	19.84	54.0	15.5	H	155	8

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Channel 36

Frequency (MHz)	Meas. 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)
5149.200	41.3	-33.3	34.3	40.30	54.0	12.7	H	155	20
5150.000	42.2	-33.3	34.3	41.15	54.0	11.8	H	155	45
10615.250	32.0	-29.2	37.7	23.50	54.0	22.0	H	155	240
13274.250	34.3	0.0	0.0	34.33	54.0	19.7	H	155	180
14478.230	34.5	-25.1	39.6	20.00	54.0	19.5	H	155	85
17700.240	38.7	-22.2	41.2	19.66	54.0	15.3	H	155	25

Channel 40

Frequency (MHz)	Meas. 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)
5100.250	30.6	-33.4	34.3	29.74	54.0	23.4	H	155	92
5257.250	33.2	-33.1	34.4	31.91	54.0	20.8	H	155	248
12547.230	34.2	-28.3	39.0	23.48	54.0	19.8	H	155	132
13388.320	33.8	-27.6	39.0	22.49	54.0	20.2	H	155	8
14486.500	34.7	-25.1	39.6	20.16	54.0	19.3	H	155	36
16195.230	36.9	-23.2	41.0	19.06	54.0	17.2	H	155	28

Channel 48

Frequency (MHz)	Meas. 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)
5149.750	31.0	-33.3	34.3	29.97	54.0	23.0	H	155	28
5288.500	34.1	-32.7	34.4	32.39	54.0	19.9	H	155	48
10625.380	32.1	-29.2	37.7	23.66	54.0	21.9	H	155	92
13274.680	34.4	-27.9	39.0	23.26	54.0	19.6	H	155	72
14495.360	34.6	-25.1	39.6	20.11	54.0	19.4	H	155	226
17842.650	38.8	-22.5	41.3	19.99	54.0	15.2	H	155	4

Channel 52

Frequency (MHz)	Meas. 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)
5148.400	35.7	-33.3	34.3	34.60	54.0	18.3	H	155	6
5350.800	37.1	-32.3	34.5	34.90	54.0	16.9	H	155	26
12425.680	34.0	-28.2	39.0	23.24	54.0	20.0	H	155	92
13385.670	33.8	-27.6	39.0	22.40	54.0	20.2	H	155	24
14486.590	34.7	-25.1	39.6	20.16	54.0	19.3	H	155	136
17882.600	38.4	-22.6	41.3	19.73	54.0	15.6	H	155	356

Channel 56

Frequency (MHz)	Meas. 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)
5148.800	35.6	-33.3	34.3	34.57	54.0	18.4	H	155	18
5352.000	38.1	-32.3	34.5	35.95	54.0	15.9	H	155	4
11583.600	32.5	-29.3	38.6	23.15	54.0	21.6	H	155	20
13458.600	34.2	-27.7	38.9	22.97	54.0	19.8	H	155	28
14495.630	34.6	-25.1	39.6	20.11	54.0	19.4	H	155	4
17735.640	38.8	-22.3	41.2	19.76	54.0	15.3	H	155	40

Channel 64

Frequency (MHz)	Meas. 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)
5350.000	47.2	-32.3	34.5	45.01	54.0	6.8	H	155	92
5351.200	46.8	-32.3	34.5	44.59	54.0	7.2	H	155	26
12056.800	34.1	-28.7	38.9	23.92	54.0	19.9	H	155	222
13352.850	34.1	-27.6	39.0	22.70	54.0	19.9	H	155	248
15468.500	35.6	-24.5	40.2	19.92	54.0	18.4	H	155	46
17824.600	38.5	-22.5	41.3	19.74	54.0	15.5	H	155	68

Channel 100

Frequency (MHz)	Meas. 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)
5458.400	42.9	-32.7	34.6	41.03	54.0	11.1	H	155	86
5460.000	42.9	-32.7	34.6	41.02	54.0	11.1	H	155	107
12579.600	33.9	-28.2	39.0	23.10	54.0	20.1	H	155	130
13394.600	33.5	-27.6	39.0	22.14	54.0	20.5	H	155	152
16080.500	36.7	-23.5	40.9	19.26	54.0	17.3	H	155	174
17838.500	38.3	-22.5	41.3	19.56	54.0	15.7	H	155	195

Channel 120

Frequency (MHz)	Meas. 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)
5540.000	41.8	-32.6	34.6	39.81	54.0	12.2	H	155	135
5677.600	41.6	-32.9	34.8	39.67	54.0	12.4	H	155	160
12055.500	34.1	-28.7	38.9	23.92	54.0	19.9	H	155	92
13346.500	34.2	-27.6	39.0	22.79	54.0	19.8	H	155	115
15471.500	35.7	-24.5	40.2	20.02	54.0	18.3	H	155	112
17833.600	38.5	-22.5	41.3	19.71	54.0	15.5	H	155	85

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Channel 38

Frequency (MHz)	Meas. 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)
5149.200	46.9	-33.3	34.3	45.86	54.0	7.1	H	155	20
5150.000	47.5	-33.3	34.3	46.44	54.0	6.5	H	155	248
10945.300	32.4	-30.0	37.9	24.53	54.0	21.6	H	155	49
13456.800	34.8	-27.7	38.9	23.54	54.0	19.3	H	155	335
14835.600	35.2	-25.1	39.7	20.53	54.0	18.8	H	155	180
17703.500	38.7	-22.2	41.2	19.67	54.0	15.3	H	155	8

Channel 46

Frequency (MHz)	Meas. 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)
5006.800	42.8	-33.7	34.2	42.24	54.0	11.2	H	155	180
5452.400	45.0	-32.7	34.6	43.18	54.0	9.0	H	155	204
11348.600	32.9	-30.0	38.3	24.52	54.0	21.2	H	155	222
13286.400	33.8	-27.8	39.0	22.55	54.0	20.2	H	155	245
14486.950	34.9	-25.1	39.6	20.33	54.0	19.2	H	155	72
17854.630	38.4	-22.5	41.3	19.63	54.0	15.6	H	155	94