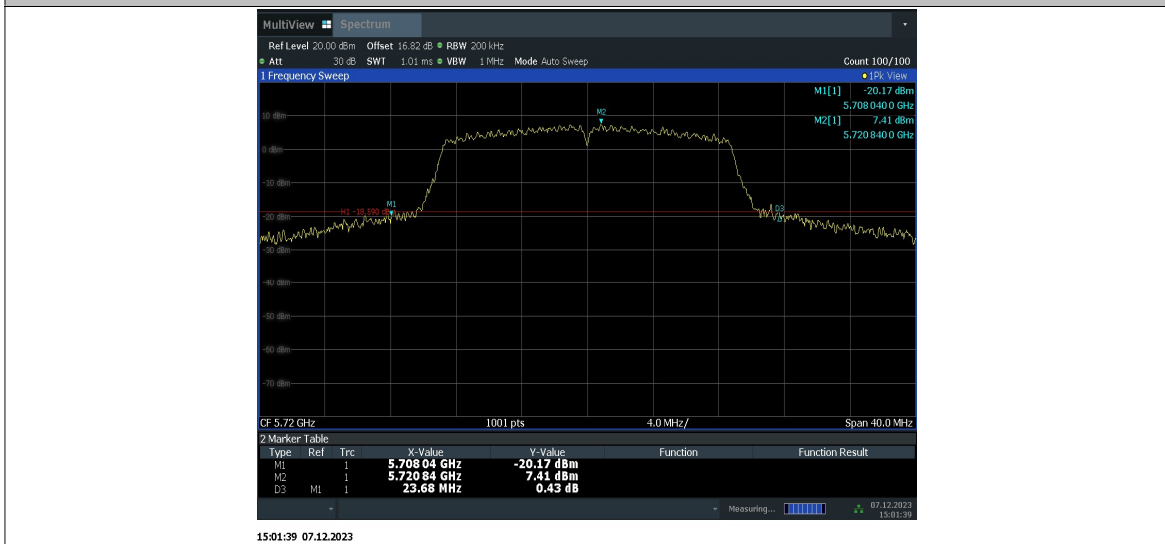
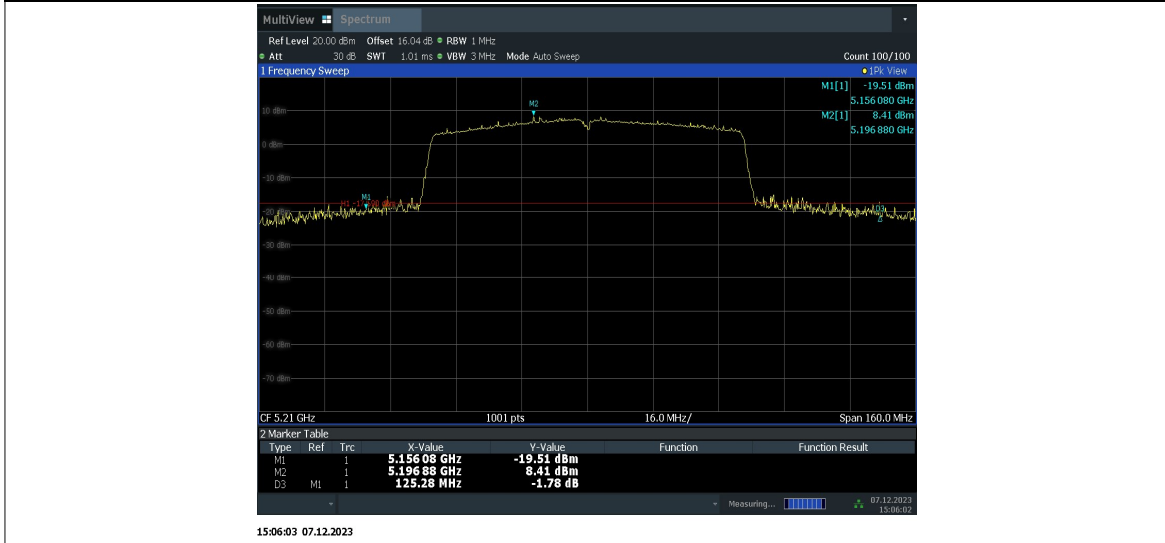


11AC20SISO\_Ant1\_5720



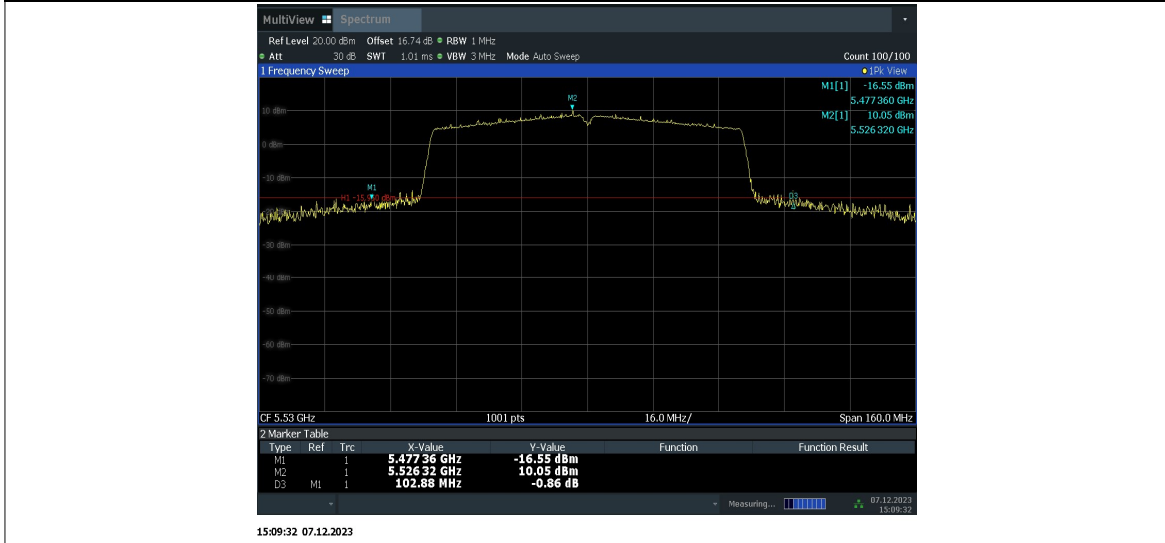
11AC80SISO\_Ant1\_5210



11AC80SISO\_Ant1\_5290



11AC80SISO\_Ant1\_5530



11AC80SISO\_Ant1\_5610



11AC80SISO\_Ant1\_5690



**Conclusion: PASS**

## A.5. Radiated Unwanted Emission

### A.5.1 Limits

Unwanted Emissions in the unrestricted bands shall not exceed the limits that shown in 15.407:

Standard	Limit
FCC 47 CFR Part 15.407	(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of $-27$ dBm/MHz. (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of $-27$ dBm/MHz. (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of $-27$ dBm/MHz.

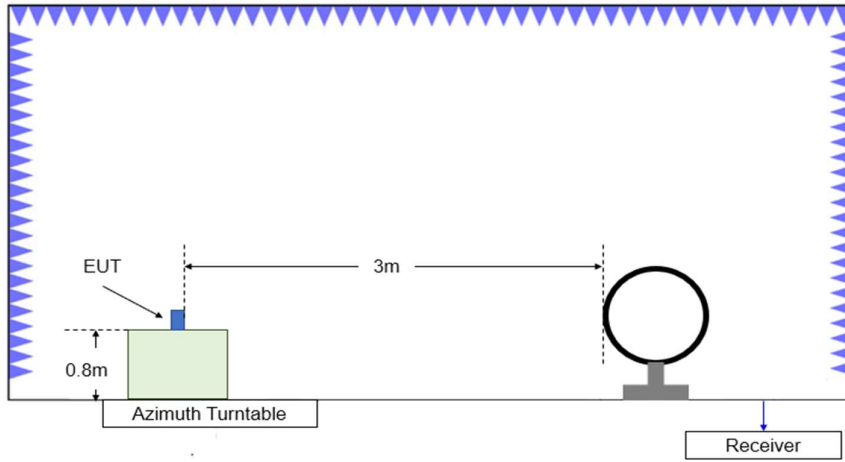
In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))

Frequency (MHz)	Field strength( $\mu$ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

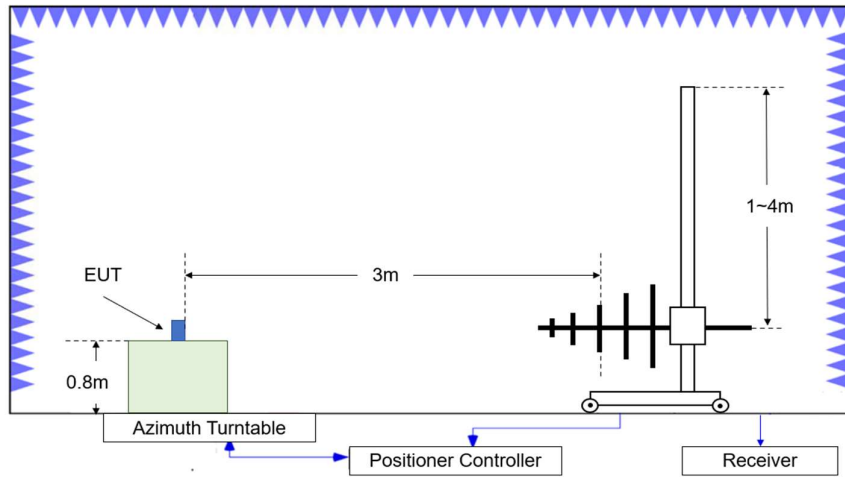
Frequency of emission (MHz)	Field strength ( $\mu$ V/m)	Field strength (dBuV/m)	Measurement distance (m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Note: When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor (as defined in KDB 789033 II.G.2.d).

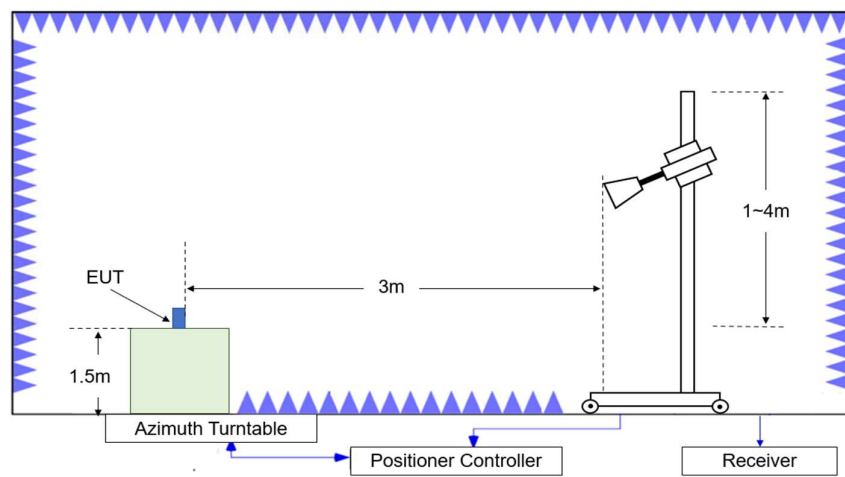
**A.5.2 Test setup**



**Test Site Diagram (9kHz-30MHz)**



**Test Site Diagram (30MHz-1GHz)**



**Test Site Diagram (1GHz-40GHz)**

### A.5.3 Test Procedures

Radiated unwanted emissions from the EUT were measured according to ANSI C63.10 and KDB 789033 D02 v02r01.

#### Test setting

Frequency of emission (MHz)	RBW/VBW
30-1000	100kHz/300kHz
1000-4000	1MHz/3MHz
4000-18000	1MHz/3MHz
18000-26500	1MHz/3MHz
26500-40000	1MHz/3MHz

### A.5.4 Calculation

1. The measurement results reported below is calculated by:

Measurement Results (dB $\mu$ V/m) = P<sub>measurement</sub> (dB $\mu$ V) + Cable Loss(dB) + Antenna Factor (dB/m)

Where: P<sub>measurement</sub> is the field strength recorded from the instrument

2. Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20 \log(D) + 104.77$$

Where:

$E$  is the field strength in dB $\mu$ V/m

$D$  is the measurement distance in meters

EIRP is the equivalent isotropically radiated power in dBm

### Test note

1. The EUT is operating at its maximum duty cycle and its maximum power control level.
2. Investigation has been done on all modes and modulations/data rates. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.
3. Spurious emissions for all channels were investigated and almost the same below 1GHz. According to FCC 47 CFR §15.31, emission levels are not report much lower than the limit by over 20dB
4. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept.
5. EUT in each of three orthogonal axis emissions had been tested out only the worst case (axis data) recorded in the report.
6. Measurement frequencies were performed from 9 kHz to the 10<sup>th</sup> harmonic of highest fundamental frequency or 40GHz, whichever is lower.
7. No spurious emissions were detected within 20dB of the limit below 30MHz. OFS and semi-chamber comparison testing had been performed and the result came out very similar. (KDB 414788)

**Measurement Results:**
**Average Results:**
**802.11a**

## Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
15538.200	44.65	-29.88	38.55	35.98	54.00	9.35	H
15543.700	44.39	-29.88	38.55	35.72	54.00	9.61	H
12309.333	37.36	-32.12	39.00	30.48	54.00	16.64	V
12330.967	37.24	-32.39	38.95	30.68	54.00	16.76	V
5149.580	41.91	-28.00	34.00	35.91	54.00	12.09	V
5149.850	41.90	-28.00	34.00	35.90	54.00	12.10	V

## Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
15598.333	45.22	-29.74	38.35	36.61	54.00	8.78	H
15600.167	45.18	-29.74	38.35	36.57	54.00	8.82	H
11988.133	37.21	-32.66	39.00	30.87	54.00	16.79	H
12305.667	37.18	-32.12	39.00	30.30	54.00	16.82	H
8319.633	36.19	-34.93	37.20	33.92	54.00	17.81	V
8320.000	36.06	-34.93	37.20	33.79	54.00	17.94	H

## Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17950.500	41.60	-29.59	45.95	25.24	54.00	12.40	V
17937.300	41.57	-29.59	45.95	25.21	54.00	12.43	V
8383.800	38.89	-34.42	37.30	36.01	54.00	15.11	V
8383.433	38.15	-34.42	37.30	35.27	54.00	15.85	V
12330.967	38.11	-32.39	38.95	31.55	54.00	15.89	H
12332.800	37.84	-32.39	38.95	31.28	54.00	16.16	V



## Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17950.867	41.62	-29.59	45.95	25.26	54.00	12.38	H
17972.133	41.58	-29.59	45.95	25.22	54.00	12.42	H
8415.700	38.01	-34.42	37.30	35.13	54.00	15.99	H
12260.200	37.76	-32.37	38.95	31.18	54.00	16.24	V
12265.700	37.63	-32.37	38.95	31.05	54.00	16.37	H
8416.067	36.76	-34.69	37.40	34.05	54.00	17.24	H

## Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17911.267	41.85	-29.59	45.95	25.49	54.00	12.15	H
17951.233	41.62	-29.59	45.95	25.26	54.00	12.38	H
12329.133	38.02	-32.39	38.95	31.46	54.00	15.98	V
12332.067	37.93	-32.39	38.95	31.37	54.00	16.07	H
8447.600	37.38	-34.69	37.40	34.67	54.00	16.62	H
8447.967	36.73	-34.69	37.40	34.02	54.00	17.27	H

## Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
15971.967	42.29	-29.36	38.30	33.35	54.00	11.71	H
15964.633	42.17	-29.36	38.30	33.23	54.00	11.83	H
12303.833	37.73	-32.12	39.00	30.85	54.00	16.27	H
12311.533	37.65	-32.12	39.00	30.77	54.00	16.35	V
5350.864	41.85	-27.82	34.20	35.47	54.00	12.15	V
5350.160	41.60	-27.82	34.20	35.22	54.00	12.40	H

## Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17975.800	41.03	-29.59	45.95	24.67	54.00	12.97	H
17971.033	41.00	-29.59	45.95	24.64	54.00	13.00	H
12332.067	37.40	-32.39	38.95	30.84	54.00	16.60	V
12308.967	37.32	-32.12	39.00	30.44	54.00	16.68	H
5459.920	46.84	-27.49	34.20	40.13	54.00	7.16	H
5459.155	46.11	-27.49	34.20	39.40	54.00	7.89	H

## Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17977.267	41.32	-29.59	45.95	24.96	54.00	12.68	V
17951.967	40.81	-29.59	45.95	24.45	54.00	13.19	H
12314.467	38.20	-32.12	39.00	31.32	54.00	15.80	H
12330.967	38.14	-32.39	38.95	31.58	54.00	15.86	V
8344.200	33.86	-34.93	37.20	31.59	54.00	20.14	H
8353.367	33.81	-34.93	37.20	31.54	54.00	20.19	V

## Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17960.033	41.22	-29.59	45.95	24.86	54.00	12.78	H
17946.467	41.20	-29.59	45.95	24.84	54.00	12.80	H
12333.167	38.04	-32.39	38.95	31.48	54.00	15.96	H
12310.433	37.53	-32.12	39.00	30.65	54.00	16.47	H
8486.100	33.81	-34.28	37.30	30.79	54.00	20.19	V
8353.367	33.59	-34.93	37.20	31.32	54.00	20.41	H

## Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17947.933	41.15	-29.59	45.95	24.79	54.00	12.85	H
17923.733	41.07	-29.59	45.95	24.71	54.00	12.93	V
12333.167	37.99	-32.39	38.95	31.43	54.00	16.01	H
12331.700	37.86	-32.39	38.95	31.30	54.00	16.14	H
8458.967	33.50	-34.69	37.40	30.79	54.00	20.50	H

8309.367	33.45	-34.84	37.10	31.18	54.00	20.55	V
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## Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17918.233	41.52	-29.59	45.95	25.16	54.00	12.48	V
17953.800	41.44	-29.59	45.95	25.08	54.00	12.56	H
8287.733	38.59	-34.84	37.10	36.32	54.00	15.41	V
12331.333	37.61	-32.39	38.95	31.05	54.00	16.39	H
5149.390	43.04	-28.00	34.00	37.04	54.00	10.96	V
5147.430	42.29	-27.79	34.00	36.08	54.00	11.71	H

## Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17943.533	41.64	-29.59	45.95	25.28	54.00	12.36	H
17952.700	41.64	-29.59	45.95	25.28	54.00	12.36	H
8319.633	37.97	-34.93	37.20	35.70	54.00	16.03	H
8320.000	37.58	-34.93	37.20	35.31	54.00	16.42	V
12332.433	37.41	-32.39	38.95	30.85	54.00	16.59	H
12288.433	37.30	-32.12	39.00	30.42	54.00	16.70	H

## Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17973.967	41.91	-29.59	45.95	25.55	54.00	12.09	H
17932.900	41.90	-29.59	45.95	25.54	54.00	12.10	V
8383.433	38.29	-34.42	37.30	35.41	54.00	15.71	H
12332.067	38.01	-32.39	38.95	31.45	54.00	15.99	H
8383.800	37.99	-34.42	37.30	35.11	54.00	16.01	H
12263.867	37.70	-32.37	38.95	31.12	54.00	16.30	H

## Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17943.900	41.63	-29.59	45.95	25.27	54.00	12.37	V
17980.200	41.53	-29.59	45.95	25.17	54.00	12.47	H
12331.700	37.82	-32.39	38.95	31.26	54.00	16.18	H
8415.700	37.63	-34.42	37.30	34.75	54.00	16.37	H
12262.033	37.58	-32.37	38.95	31.00	54.00	16.42	V
8415.333	36.71	-34.42	37.30	33.83	54.00	17.29	V

## Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17930.333	41.97	-29.59	45.95	25.61	54.00	12.03	H
17929.967	41.59	-29.59	45.95	25.23	54.00	12.41	H
12331.700	37.95	-32.39	38.95	31.39	54.00	16.05	H
12305.667	37.86	-32.12	39.00	30.98	54.00	16.14	V
8447.600	37.10	-34.69	37.40	34.39	54.00	16.90	H
8447.967	36.47	-34.69	37.40	33.76	54.00	17.53	H

## Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
15963.167	43.06	-29.36	38.30	34.12	54.00	10.94	V
15965.367	43.06	-29.36	38.30	34.12	54.00	10.94	V
12333.167	37.62	-32.39	38.95	31.06	54.00	16.38	V
12311.167	37.59	-32.12	39.00	30.71	54.00	16.41	V
5401.376	40.78	-27.94	34.30	34.42	54.00	13.22	V
5350.336	40.62	-27.82	34.20	34.24	54.00	13.38	V

## Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.567	40.73	-29.59	45.95	24.37	54.00	13.27	H
17939.867	40.64	-29.59	45.95	24.28	54.00	13.36	V
12331.333	37.47	-32.39	38.95	30.91	54.00	16.53	V
12311.167	37.44	-32.12	39.00	30.56	54.00	16.56	H
5458.765	45.72	-27.49	34.20	39.01	54.00	8.28	H
5458.547	45.15	-27.49	34.20	38.44	54.00	8.85	H

## Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17950.500	41.19	-29.59	45.95	24.83	54.00	12.81	H
17979.833	41.13	-29.59	45.95	24.77	54.00	12.87	V
12333.167	37.71	-32.39	38.95	31.15	54.00	16.29	H
12332.800	37.54	-32.39	38.95	30.98	54.00	16.46	H
8358.500	33.59	-34.93	37.20	31.32	54.00	20.41	V
8346.767	33.48	-34.93	37.20	31.21	54.00	20.52	H

## Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17953.067	41.04	-29.59	45.95	24.68	54.00	12.96	V
17952.333	40.67	-29.59	45.95	24.31	54.00	13.33	H
12307.133	37.71	-32.12	39.00	30.83	54.00	16.29	V
12332.433	37.61	-32.39	38.95	31.05	54.00	16.39	H
9150.133	33.56	-34.20	37.70	30.06	54.00	20.44	H
8335.033	33.49	-34.93	37.20	31.22	54.00	20.51	H

## Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17952.700	41.22	-29.59	45.95	24.86	54.00	12.78	H
17942.433	41.13	-29.59	45.95	24.77	54.00	12.87	V
12332.433	38.14	-32.39	38.95	31.58	54.00	15.86	V
12332.800	37.75	-32.39	38.95	31.19	54.00	16.25	H
8496.367	33.55	-34.28	37.30	30.53	54.00	20.45	H

9439.067	33.44	-33.60	37.90	29.14	54.00	20.56	H
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## Channel 38

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17868.733	41.52	-29.59	45.95	25.16	54.00	12.48	H
17907.967	41.47	-29.59	45.95	25.11	54.00	12.53	V
8303.867	37.93	-34.84	37.10	35.66	54.00	16.07	V
12292.467	37.93	-32.12	39.00	31.05	54.00	16.07	V
5149.860	47.60	-28.00	34.00	41.60	54.00	6.40	H
5149.070	46.74	-28.00	34.00	40.74	54.00	7.26	H

## Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17954.533	42.03	-29.59	45.95	25.67	54.00	11.97	V
17994.867	41.69	-29.59	45.95	25.33	54.00	12.31	V
8367.667	38.51	-34.42	37.30	35.63	54.00	15.49	H
12330.233	37.94	-32.39	38.95	31.38	54.00	16.06	V
12330.967	37.79	-32.39	38.95	31.23	54.00	16.21	H
8368.033	37.27	-34.42	37.30	34.39	54.00	16.73	H

## Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17865.067	41.28	-29.59	45.95	24.92	54.00	12.72	V
17949.033	41.10	-29.59	45.95	24.74	54.00	12.90	V
12329.867	38.63	-32.39	38.95	32.07	54.00	15.37	V
12331.700	37.92	-32.39	38.95	31.36	54.00	16.08	V
8431.467	37.19	-34.69	37.40	34.48	54.00	16.81	V
8431.833	36.78	-34.69	37.40	34.07	54.00	17.22	V

## Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17974.333	41.70	-29.59	45.95	25.34	54.00	12.30	V
17938.033	41.37	-29.59	45.95	25.01	54.00	12.63	H
12331.700	37.58	-32.39	38.95	31.02	54.00	16.42	H
8495.633	37.53	-34.28	37.30	34.51	54.00	16.47	H
5351.840	52.80	-27.82	34.20	46.42	54.00	1.20	H
5351.568	52.50	-27.82	34.20	46.12	54.00	1.50	H

## Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17955.633	41.14	-29.59	45.95	24.78	54.00	12.86	H
17953.067	40.79	-29.59	45.95	24.43	54.00	13.21	H
12330.600	38.43	-32.39	38.95	31.87	54.00	15.57	H
12333.167	38.07	-32.39	38.95	31.51	54.00	15.93	H
5458.743	48.61	-27.49	34.20	41.90	54.00	5.39	V
5459.275	48.60	-27.49	34.20	41.89	54.00	5.40	H

## Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17946.100	40.95	-29.59	45.95	24.59	54.00	13.05	V
17956.367	40.81	-29.59	45.95	24.45	54.00	13.19	V
12330.967	37.58	-32.39	38.95	31.02	54.00	16.42	V
11851.733	37.39	-32.73	39.15	30.97	54.00	16.61	H
8281.133	33.79	-34.84	37.10	31.52	54.00	20.21	V
8386.367	33.57	-34.42	37.30	30.69	54.00	20.43	V

## Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17935.100	41.86	-29.59	45.95	25.50	54.00	12.14	H
17979.467	41.21	-29.59	45.95	24.85	54.00	12.79	H
12309.333	38.23	-32.12	39.00	31.35	54.00	15.77	H
12306.400	38.14	-32.12	39.00	31.26	54.00	15.86	H
8280.400	33.61	-34.84	37.10	31.34	54.00	20.39	H

8361.800	33.61	-34.93	37.20	31.34	54.00	20.39	H
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## Channel 142

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17972.867	41.35	-29.59	45.95	24.99	54.00	12.65	H
17910.900	41.28	-29.59	45.95	24.92	54.00	12.72	V
12330.967	37.72	-32.39	38.95	31.16	54.00	16.28	V
12310.433	37.69	-32.12	39.00	30.81	54.00	16.31	H
8495.267	33.68	-34.28	37.30	30.66	54.00	20.32	H
9171.767	33.43	-34.47	37.70	30.20	54.00	20.57	H

**802.11ac-HT20**

## Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17975.067	42.24	-29.59	45.95	25.88	54.00	11.76	V
17976.167	41.84	-29.59	45.95	25.48	54.00	12.16	V
8287.733	38.53	-34.84	37.10	36.26	54.00	15.47	V
12267.533	37.69	-32.37	38.95	31.11	54.00	16.31	V
5149.920	43.02	-28.00	34.00	37.02	54.00	10.98	H
5149.810	42.61	-28.00	34.00	36.61	54.00	11.39	V

## Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17943.167	42.36	-29.59	45.95	26.00	54.00	11.64	V
17975.067	41.97	-29.59	45.95	25.61	54.00	12.03	H
8319.633	37.68	-34.93	37.20	35.41	54.00	16.32	H
12306.400	37.56	-32.12	39.00	30.68	54.00	16.44	V
12327.667	37.51	-32.39	38.95	30.95	54.00	16.49	V
8320.000	37.28	-34.93	37.20	35.01	54.00	16.72	H



## Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17884.133	41.65	-29.59	45.95	25.29	54.00	12.35	V
17978.000	41.36	-29.59	45.95	25.00	54.00	12.64	V
8383.800	38.66	-34.42	37.30	35.78	54.00	15.34	V
12328.767	38.53	-32.39	38.95	31.97	54.00	15.47	H
12333.167	37.71	-32.39	38.95	31.15	54.00	16.29	V
8383.433	37.33	-34.42	37.30	34.45	54.00	16.67	H

## Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17949.033	41.24	-29.59	45.95	24.88	54.00	12.76	H
17863.600	41.21	-29.59	45.95	24.85	54.00	12.79	V
12307.867	38.14	-32.12	39.00	31.26	54.00	15.86	H
8415.700	37.81	-34.42	37.30	34.93	54.00	16.19	V
12332.433	37.63	-32.39	38.95	31.07	54.00	16.37	H
8416.067	37.17	-34.69	37.40	34.46	54.00	16.83	V

## Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17974.333	41.81	-29.59	45.95	25.45	54.00	12.19	H
17998.533	41.69	-29.59	45.95	25.33	54.00	12.31	H
12328.400	37.98	-32.39	38.95	31.42	54.00	16.02	H
12329.500	37.84	-32.39	38.95	31.28	54.00	16.16	H
8447.600	37.36	-34.69	37.40	34.65	54.00	16.64	H
8447.967	37.27	-34.69	37.40	34.56	54.00	16.73	V

## Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17943.900	42.52	-29.59	45.95	26.16	54.00	11.48	H
15965.733	42.05	-29.36	38.30	33.11	54.00	11.95	H
12330.600	38.94	-32.39	38.95	32.38	54.00	15.06	V
12332.433	38.03	-32.39	38.95	31.47	54.00	15.97	H
5350.424	41.17	-27.82	34.20	34.79	54.00	12.83	V
5354.312	41.05	-27.82	34.20	34.67	54.00	12.95	V

## Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17952.700	41.40	-29.59	45.95	25.04	54.00	12.60	V
17947.933	41.10	-29.59	45.95	24.74	54.00	12.90	V
12312.633	37.73	-32.12	39.00	30.85	54.00	16.27	V
12329.867	37.47	-32.39	38.95	30.91	54.00	16.53	H
5459.417	45.83	-27.49	34.20	39.12	54.00	8.17	V
5458.540	45.67	-27.49	34.20	38.96	54.00	8.33	V

## Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17947.933	41.22	-29.59	45.95	24.86	54.00	12.78	H
17955.633	40.94	-29.59	45.95	24.58	54.00	13.06	V
12332.800	37.63	-32.39	38.95	31.07	54.00	16.37	V
12307.867	37.49	-32.12	39.00	30.61	54.00	16.51	V
8359.600	33.65	-34.93	37.20	31.38	54.00	20.35	H
8348.967	33.61	-34.93	37.20	31.34	54.00	20.39	V

## Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17954.167	41.20	-29.59	45.95	24.84	54.00	12.80	V
17944.267	40.80	-29.59	45.95	24.44	54.00	13.20	V
12313.367	38.30	-32.12	39.00	31.42	54.00	15.70	H
12330.967	37.80	-32.39	38.95	31.24	54.00	16.20	H
9169.933	33.44	-34.47	37.70	30.21	54.00	20.56	V

9104.667	33.38	-34.52	37.70	30.20	54.00	20.62	V
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**Channel 144**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17946.467	41.14	-29.59	45.95	24.78	54.00	12.86	H
17948.667	41.03	-29.59	45.95	24.67	54.00	12.97	H
12330.233	37.64	-32.39	38.95	31.08	54.00	16.36	H
12332.800	37.44	-32.39	38.95	30.88	54.00	16.56	H
9480.133	33.58	-34.40	37.70	30.28	54.00	20.42	H
8449.067	33.28	-34.69	37.40	30.57	54.00	20.72	H

**802.11ac-HT40**
**Channel 38**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17945.367	41.68	-29.59	45.95	25.32	54.00	12.32	V
17935.833	41.64	-29.59	45.95	25.28	54.00	12.36	H
12328.767	38.52	-32.39	38.95	31.96	54.00	15.48	V
8303.867	37.97	-34.84	37.10	35.70	54.00	16.03	H
5147.960	46.53	-27.79	34.00	40.32	54.00	7.47	H
5149.080	46.45	-28.00	34.00	40.45	54.00	7.55	H

**Channel 46**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.933	41.52	-29.59	45.95	25.16	54.00	12.48	V
17975.800	41.40	-29.59	45.95	25.04	54.00	12.60	V
8367.667	38.38	-34.42	37.30	35.50	54.00	15.62	H
12333.167	38.26	-32.39	38.95	31.70	54.00	15.74	H
12305.667	37.53	-32.12	39.00	30.65	54.00	16.47	H
8368.033	37.50	-34.42	37.30	34.62	54.00	16.50	V

## Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17993.033	41.92	-29.59	45.95	25.56	54.00	12.08	H
17906.867	41.36	-29.59	45.95	25.00	54.00	12.64	H
12311.167	37.96	-32.12	39.00	31.08	54.00	16.04	H
12328.767	37.71	-32.39	38.95	31.15	54.00	16.29	H
8431.833	37.28	-34.69	37.40	34.57	54.00	16.72	H
8431.467	37.07	-34.69	37.40	34.36	54.00	16.93	H

## Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17946.467	41.38	-29.59	45.95	25.02	54.00	12.62	H
17882.300	41.30	-29.59	45.95	24.94	54.00	12.70	H
12331.700	37.61	-32.39	38.95	31.05	54.00	16.39	V
12330.600	37.43	-32.39	38.95	30.87	54.00	16.57	V
5352.800	53.53	-27.82	34.20	47.15	54.00	0.47	H
5352.344	53.27	-27.82	34.20	46.89	54.00	0.73	V

## Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17986.433	41.24	-29.59	45.95	24.88	54.00	12.76	V
17984.233	41.05	-29.59	45.95	24.69	54.00	12.95	H
12333.167	37.65	-32.39	38.95	31.09	54.00	16.35	V
12332.067	37.52	-32.39	38.95	30.96	54.00	16.48	V
5459.530	45.94	-27.49	34.20	39.23	54.00	8.06	V
5459.432	45.93	-27.49	34.20	39.22	54.00	8.07	H

## Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17954.900	41.09	-29.59	45.95	24.73	54.00	12.91	V
17980.567	41.04	-29.59	45.95	24.68	54.00	12.96	H
12333.167	37.75	-32.39	38.95	31.19	54.00	16.25	H
12310.067	37.49	-32.12	39.00	30.61	54.00	16.51	V
9131.800	33.35	-34.20	37.70	29.85	54.00	20.65	H

8323.300	33.32	-34.93	37.20	31.05	54.00	20.68	H
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**Channel 134**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17976.900	41.28	-29.59	45.95	24.92	54.00	12.72	V
17980.567	40.98	-29.59	45.95	24.62	54.00	13.02	V
12330.967	37.36	-32.39	38.95	30.80	54.00	16.64	H
12311.900	37.35	-32.12	39.00	30.47	54.00	16.65	H
8214.033	33.95	-34.94	36.90	31.99	54.00	20.05	H
8429.633	33.62	-34.69	37.40	30.91	54.00	20.38	V

**Channel 142**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17914.933	41.11	-29.59	45.95	24.75	54.00	12.89	H
17939.867	41.06	-29.59	45.95	24.70	54.00	12.94	H
12309.700	37.79	-32.12	39.00	30.91	54.00	16.21	V
12330.233	37.78	-32.39	38.95	31.22	54.00	16.22	H
8323.667	33.37	-34.93	37.20	31.10	54.00	20.63	H
8492.333	33.36	-34.28	37.30	30.34	54.00	20.64	H

**802.11ac-HT80**
**Channel 42**

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17945.000	42.00	-29.59	45.95	25.64	54.00	12.00	H
17975.433	41.70	-29.59	45.95	25.34	54.00	12.30	H
8335.767	38.02	-34.93	37.20	35.75	54.00	15.98	H
12312.267	37.94	-32.12	39.00	31.06	54.00	16.06	V
5145.410	52.36	-27.79	34.00	46.15	54.00	1.64	H
5147.900	51.38	-27.79	34.00	45.17	54.00	2.62	V

## Channel 58

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17937.300	41.71	-29.59	45.95	25.35	54.00	12.29	H
17950.867	41.46	-29.59	45.95	25.10	54.00	12.54	H
12330.967	38.44	-32.39	38.95	31.88	54.00	15.56	H
12330.600	38.06	-32.39	38.95	31.50	54.00	15.94	V
5351.000	54.17	-27.82	34.20	47.79	54.00	-0.17	V
5355.640	53.71	-27.82	34.20	47.33	54.00	0.29	V

## Channel 106

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17954.533	41.07	-29.59	45.95	24.71	54.00	12.93	H
17952.700	40.87	-29.59	45.95	24.51	54.00	13.13	H
12311.900	37.71	-32.12	39.00	30.83	54.00	16.29	H
12333.167	37.37	-32.39	38.95	30.81	54.00	16.63	H
5457.873	53.70	-27.49	34.20	46.99	54.00	0.30	H
5457.280	53.68	-27.49	34.20	46.97	54.00	0.32	H

## Channel 122

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17984.600	41.57	-29.59	45.95	25.21	54.00	12.43	H
17952.700	41.52	-29.59	45.95	25.16	54.00	12.48	H
12332.433	38.01	-32.39	38.95	31.45	54.00	15.99	V
12331.333	37.89	-32.39	38.95	31.33	54.00	16.11	H
8368.400	34.04	-34.42	37.30	31.16	54.00	19.96	H
8199.367	34.00	-34.94	36.90	32.04	54.00	20.00	H

## Channel 138

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17942.433	41.44	-29.59	45.95	25.08	54.00	12.56	H
17868.000	41.12	-29.59	45.95	24.76	54.00	12.88	V
12333.167	38.12	-32.39	38.95	31.56	54.00	15.88	H
12331.700	37.86	-32.39	38.95	31.30	54.00	16.14	V
8351.900	34.01	-34.93	37.20	31.74	54.00	19.99	V

8492.333	33.96	-34.28	37.30	30.94	54.00	20.04	V
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**PEAK Results:**
**802.11a**

## Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
15545.167	52.51	-29.86	38.50	43.87	74.00	21.49	H
15540.400	52.42	-29.88	38.55	43.75	74.00	21.58	H
11629.533	46.48	-32.72	39.20	40.00	74.00	27.52	H
12265.700	45.65	-32.37	38.95	39.07	74.00	28.35	H
5149.560	54.77	-28.00	34.00	48.77	74.00	19.23	V
5147.920	54.54	-27.79	34.00	48.33	74.00	19.46	V

## Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
15608.600	54.34	-29.74	38.35	45.73	74.00	19.66	H
15604.200	54.28	-29.74	38.35	45.67	74.00	19.72	H
11511.100	46.15	-32.80	39.10	39.85	74.00	27.85	H
12333.167	45.69	-32.39	38.95	39.13	74.00	28.31	H
8463.367	44.32	-34.69	37.40	41.61	74.00	29.68	V
9833.967	43.93	-33.95	37.90	39.98	68.20	24.27	H

## Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17059.867	50.40	-29.30	41.10	38.60	68.20	17.80	H
17338.533	50.38	-28.74	43.40	35.72	68.20	17.82	V
12002.433	46.38	-32.66	39.00	40.04	74.00	27.62	V
12315.200	46.22	-32.12	39.00	39.34	74.00	27.78	V
10148.567	44.26	-33.67	38.05	39.88	68.20	23.94	H
8383.433	44.15	-34.42	37.30	41.27	74.00	29.85	V

## Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
15785.333	50.90	-30.05	38.10	42.85	74.00	23.10	H
16906.233	50.46	-29.28	40.30	39.44	68.20	17.74	H
12310.433	46.55	-32.12	39.00	39.67	74.00	27.45	H
12329.500	46.50	-32.39	38.95	39.94	74.00	27.50	H
10168.733	43.39	-33.67	38.05	39.01	68.20	24.81	H
8504.800	43.37	-34.28	37.30	40.35	68.20	24.83	H

## Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17095.800	50.47	-29.25	41.40	38.32	68.20	17.73	V
17337.067	50.42	-28.74	43.40	35.76	68.20	17.78	H
12329.500	46.30	-32.39	38.95	39.74	74.00	27.70	H
12331.700	46.22	-32.39	38.95	39.66	74.00	27.78	V
10241.333	43.22	-34.09	38.00	39.31	68.20	24.98	H
8447.967	43.04	-34.69	37.40	40.33	74.00	30.96	H

## Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17932.167	50.56	-29.59	45.95	34.20	74.00	23.44	V
15956.933	50.39	-29.36	38.30	41.45	74.00	23.61	H
12326.933	45.68	-32.39	38.95	39.12	74.00	28.32	V
12333.167	45.59	-32.39	38.95	39.03	74.00	28.41	H
5353.720	54.13	-27.82	34.20	47.75	74.00	19.87	V
5350.744	53.05	-27.82	34.20	46.67	74.00	20.95	H



## Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16498.867	51.26	-29.90	39.00	42.16	68.20	16.94	H
16504.367	51.14	-29.90	39.00	42.04	68.20	17.06	V
12302.000	45.57	-32.12	39.00	38.69	74.00	28.43	H
11763.733	45.55	-32.71	39.20	39.06	74.00	28.45	H
5457.828	59.59	-27.49	34.20	52.88	74.00	14.41	V
5467.315	64.74	-27.49	34.20	58.03	68.20	3.46	V

## Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16803.200	51.10	-29.24	39.85	40.49	68.20	17.10	H
16806.500	50.25	-29.24	39.85	39.64	68.20	17.95	V
12309.700	46.16	-32.12	39.00	39.28	74.00	27.84	H
12315.200	45.36	-32.12	39.00	38.48	74.00	28.64	H
10275.433	42.68	-33.82	38.00	38.50	68.20	25.52	H
9279.200	42.46	-34.14	37.60	39.00	68.20	25.74	V

## Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17106.800	55.81	-29.25	41.40	43.66	68.20	12.39	H
17104.233	55.65	-29.25	41.40	43.50	68.20	12.55	H
12306.033	45.58	-32.12	39.00	38.70	74.00	28.42	H
12330.967	45.41	-32.39	38.95	38.85	74.00	28.59	H
5725.801	64.13	-27.47	34.10	57.50	68.20	4.07	V
5725.792	63.88	-27.47	34.10	57.25	68.20	4.32	V

## Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17171.700	50.75	-29.31	41.70	38.36	68.20	17.45	V
17170.233	50.58	-29.31	41.70	38.19	68.20	17.62	H
12307.133	46.13	-32.12	39.00	39.25	74.00	27.87	H
12309.700	46.08	-32.12	39.00	39.20	74.00	27.92	H
10234.000	43.68	-34.09	38.00	39.77	68.20	24.52	H

10239.133	42.96	-34.09	38.00	39.05	68.20	25.24	H
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## Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17933.267	50.85	-29.59	45.95	34.49	74.00	23.15	V
17823.267	50.55	-29.59	45.95	34.19	74.00	23.45	H
12299.800	45.95	-32.12	39.00	39.07	74.00	28.05	H
12322.533	45.78	-32.12	39.00	38.90	74.00	28.22	H
5148.830	56.55	-28.00	34.00	50.55	74.00	17.45	V
5149.570	55.98	-28.00	34.00	49.98	74.00	18.02	H

## Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17725.367	50.08	-29.47	45.90	33.65	74.00	23.92	V
17918.233	50.03	-29.59	45.95	33.67	74.00	23.97	H
11713.500	46.15	-32.70	39.20	39.65	74.00	27.85	H
12324.000	46.06	-32.12	39.00	39.18	74.00	27.94	H
8320.367	43.64	-34.93	37.20	41.37	74.00	30.36	V
8319.633	43.28	-34.93	37.20	41.01	74.00	30.72	H

## Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17953.067	50.09	-29.59	45.95	33.73	74.00	23.91	H
17952.700	49.95	-29.59	45.95	33.59	74.00	24.05	V
12267.167	46.80	-32.37	38.95	40.22	74.00	27.20	V
12332.067	46.25	-32.39	38.95	39.69	74.00	27.75	H
8383.800	43.96	-34.42	37.30	41.08	74.00	30.04	H
10262.600	43.50	-33.82	38.00	39.32	68.20	24.70	H

## Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16993.133	50.08	-29.38	40.85	38.61	68.20	18.12	H
17943.900	50.02	-29.59	45.95	33.66	74.00	23.98	V
12309.333	46.15	-32.12	39.00	39.27	74.00	27.85	V
12299.800	45.94	-32.12	39.00	39.06	74.00	28.06	H
8308.633	43.16	-34.84	37.10	40.89	74.00	30.84	H
8415.700	43.03	-34.42	37.30	40.15	74.00	30.97	V

## Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17930.333	50.44	-29.59	45.95	34.08	74.00	23.56	H
17928.500	50.24	-29.59	45.95	33.88	74.00	23.76	V
12299.067	45.78	-32.12	39.00	38.90	74.00	28.22	V
12329.867	45.78	-32.39	38.95	39.22	74.00	28.22	V
10149.667	43.62	-33.67	38.05	39.24	68.20	24.58	V
9993.833	43.20	-34.00	37.95	39.25	68.20	25.00	V

## Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
15967.933	51.63	-29.36	38.30	42.69	74.00	22.37	V
15965.367	51.50	-29.36	38.30	42.56	74.00	22.50	V
12328.400	46.54	-32.39	38.95	39.98	74.00	27.46	V
12310.433	46.53	-32.12	39.00	39.65	74.00	27.47	H
5350.248	51.92	-27.82	34.20	45.54	74.00	22.08	V
5351.480	51.67	-27.82	34.20	45.29	74.00	22.33	H

## Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16504.000	51.25	-29.90	39.00	42.15	68.20	16.95	H
16495.933	50.92	-29.90	39.00	41.82	68.20	17.28	H
12314.100	46.04	-32.12	39.00	39.16	74.00	27.96	H
12282.567	45.99	-32.12	39.00	39.11	74.00	28.01	V
5456.350	59.00	-27.49	34.20	52.29	74.00	15.00	H
5469.910	62.80	-27.49	34.20	56.09	68.20	5.40	H

## Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16569.633	49.95	-29.97	39.20	40.72	68.20	18.25	V
16812.000	49.51	-29.24	39.85	38.90	68.20	18.69	H
12330.967	46.23	-32.39	38.95	39.67	74.00	27.77	V
12305.300	45.73	-32.12	39.00	38.85	74.00	28.27	V
10228.867	43.07	-34.09	38.00	39.16	68.20	25.13	V
10154.800	42.63	-33.67	38.05	38.25	68.20	25.57	V

## Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17098.733	55.28	-29.25	41.40	43.13	68.20	12.92	V
17104.600	55.21	-29.25	41.40	43.06	68.20	12.99	H
12315.200	46.55	-32.12	39.00	39.67	74.00	27.45	H
12330.967	46.25	-32.39	38.95	39.69	74.00	27.75	H
5725.005	64.17	-27.47	34.10	57.54	68.20	4.03	H
5725.574	63.70	-27.47	34.10	57.07	68.20	4.50	V

## Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17151.533	50.70	-29.31	41.70	38.31	68.20	17.50	H
17164.000	50.40	-29.31	41.70	38.01	68.20	17.80	H
12331.700	45.80	-32.39	38.95	39.24	74.00	28.20	H
12329.500	45.70	-32.39	38.95	39.14	74.00	28.30	V
10135.000	42.96	-34.28	38.10	39.14	68.20	25.24	V
10146.000	42.80	-34.28	38.10	38.98	68.20	25.40	H

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## Channel 38

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17970.667	50.42	-29.59	45.95	34.06	74.00	23.58	V
17345.133	49.84	-28.74	43.40	35.18	68.20	18.36	V
12322.167	46.00	-32.12	39.00	39.12	74.00	28.00	V
12301.633	45.85	-32.12	39.00	38.97	74.00	28.15	V
5149.100	60.88	-28.00	34.00	54.88	74.00	13.12	H
5149.850	60.29	-28.00	34.00	54.29	74.00	13.71	V

## Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17941.700	50.58	-29.59	45.95	34.22	74.00	23.42	V
17952.333	50.15	-29.59	45.95	33.79	74.00	23.85	V
11538.600	46.07	-32.86	39.15	39.78	74.00	27.93	V
12331.333	45.99	-32.39	38.95	39.43	74.00	28.01	V
8368.033	43.63	-34.42	37.30	40.75	74.00	30.37	H
8552.467	43.45	-33.81	37.40	39.86	68.20	24.75	V

## Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17973.600	50.41	-29.59	45.95	34.05	74.00	23.59	V
17927.400	49.95	-29.59	45.95	33.59	74.00	24.05	H
12330.967	45.63	-32.39	38.95	39.07	74.00	28.37	H
12311.533	45.26	-32.12	39.00	38.38	74.00	28.74	V
10292.667	42.71	-33.82	38.00	38.53	68.20	25.49	V
8431.467	42.59	-34.69	37.40	39.88	74.00	31.41	V

## Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17963.333	50.18	-29.59	45.95	33.82	74.00	23.82	H
17337.433	50.06	-28.74	43.40	35.40	68.20	18.14	V
12219.867	45.73	-32.12	38.90	38.95	74.00	28.27	H
12325.833	45.67	-32.12	39.00	38.79	74.00	28.33	H
5350.160	66.29	-27.82	34.20	59.91	74.00	7.71	H
5352.304	66.18	-27.82	34.20	59.80	74.00	7.82	V

## Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16536.633	50.38	-29.97	39.20	41.15	68.20	17.82	H
16528.200	50.21	-29.90	39.00	41.11	68.20	17.99	H
11974.200	45.91	-32.42	39.05	39.28	74.00	28.09	V
12332.067	45.84	-32.39	38.95	39.28	74.00	28.16	V
5452.262	60.68	-27.49	34.20	53.97	74.00	13.32	V
5469.873	66.94	-27.49	34.20	60.23	68.20	1.26	H

## Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17976.900	49.57	-29.59	45.95	33.21	74.00	24.43	V
17979.100	49.17	-29.59	45.95	32.81	74.00	24.83	V
12305.300	46.10	-32.12	39.00	39.22	74.00	27.90	V
12313.733	45.78	-32.12	39.00	38.90	74.00	28.22	V
8376.100	43.46	-34.42	37.30	40.58	74.00	30.54	V
10292.300	43.10	-33.82	38.00	38.92	68.20	25.10	V

## Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17027.967	50.08	-29.38	40.85	38.61	68.20	18.12	H
16008.633	49.90	-29.04	38.20	40.74	74.00	24.10	H
12309.700	46.00	-32.12	39.00	39.12	74.00	28.00	H
12288.067	45.99	-32.12	39.00	39.11	74.00	28.01	H
5727.542	58.82	-27.47	34.10	52.19	68.20	9.38	H
5734.271	58.59	-27.47	34.10	51.96	68.20	9.61	V

## Channel 142

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17096.167	54.94	-29.25	41.40	42.79	68.20	13.26	H
17087.733	54.87	-29.25	41.40	42.72	68.20	13.33	H
12329.867	45.99	-32.39	38.95	39.43	74.00	28.01	V
12328.400	45.84	-32.39	38.95	39.28	74.00	28.16	H
10262.967	43.30	-33.82	38.00	39.12	68.20	24.90	H
10126.933	43.05	-34.28	38.10	39.23	68.20	25.15	H

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## Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17612.433	50.19	-29.60	45.15	34.64	68.20	18.01	H
17946.100	49.97	-29.59	45.95	33.61	74.00	24.03	H
12303.833	46.45	-32.12	39.00	39.57	74.00	27.55	V
12332.800	46.36	-32.39	38.95	39.80	74.00	27.64	V
5149.800	56.06	-28.00	34.00	50.06	74.00	17.94	V
5147.510	55.59	-27.79	34.00	49.38	74.00	18.41	H

## Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16980.300	50.35	-29.38	40.85	38.88	68.20	17.85	V
17132.833	50.35	-29.31	41.70	37.96	68.20	17.85	H
12327.300	46.05	-32.39	38.95	39.49	74.00	27.95	H
12330.233	45.94	-32.39	38.95	39.38	74.00	28.06	V
8319.633	42.91	-34.93	37.20	40.64	74.00	31.09	H
10238.033	42.77	-34.09	38.00	38.86	68.20	25.43	V

## Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17016.233	50.63	-29.38	40.85	39.16	68.20	17.57	V
17094.700	49.94	-29.25	41.40	37.79	68.20	18.26	H
12332.800	46.21	-32.39	38.95	39.65	74.00	27.79	V
12333.167	46.14	-32.39	38.95	39.58	74.00	27.86	V
8383.800	43.53	-34.42	37.30	40.65	74.00	30.47	V
10202.100	43.08	-34.09	38.00	39.17	68.20	25.12	V



## Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17949.767	50.34	-29.59	45.95	33.98	74.00	23.66	H
17944.633	50.17	-29.59	45.95	33.81	74.00	23.83	V
12325.100	46.70	-32.12	39.00	39.82	74.00	27.30	V
12323.633	46.48	-32.12	39.00	39.60	74.00	27.52	V
10126.567	44.15	-34.28	38.10	40.33	68.20	24.05	H
10306.600	43.38	-33.88	38.00	39.26	68.20	24.82	H

## Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17966.633	51.40	-29.59	45.95	35.04	74.00	22.60	H
17974.333	50.18	-29.59	45.95	33.82	74.00	23.82	H
12330.233	46.44	-32.39	38.95	39.88	74.00	27.56	V
12327.667	46.21	-32.39	38.95	39.65	74.00	27.79	H
10148.567	44.39	-33.67	38.05	40.01	68.20	23.81	H
10304.767	42.97	-33.88	38.00	38.85	68.20	25.23	H

## Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
15960.967	51.88	-29.36	38.30	42.94	74.00	22.12	H
15962.067	50.64	-29.36	38.30	41.70	74.00	23.36	V
12332.433	46.14	-32.39	38.95	39.58	74.00	27.86	V
12264.600	46.12	-32.37	38.95	39.54	74.00	27.88	H
5350.096	52.35	-27.82	34.20	45.97	74.00	21.65	H
5350.744	52.07	-27.82	34.20	45.69	74.00	21.93	V

## Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16502.900	52.58	-29.90	39.00	43.48	68.20	15.62	V
16493.733	51.87	-29.90	39.00	42.77	68.20	16.33	V
12315.567	45.27	-32.12	39.00	38.39	74.00	28.73	V
12329.867	45.25	-32.39	38.95	38.69	74.00	28.75	V
5459.890	59.27	-27.49	34.20	52.56	74.00	14.73	V
5469.445	62.75	-27.49	34.20	56.04	68.20	5.45	H

## Channel 120

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16497.767	50.09	-29.90	39.00	40.99	68.20	18.11	V
16581.733	49.68	-29.97	39.20	40.45	68.20	18.52	H
12222.433	45.93	-32.12	38.90	39.15	74.00	28.07	V
12328.033	45.63	-32.39	38.95	39.07	74.00	28.37	V
10291.200	42.81	-33.82	38.00	38.63	68.20	25.39	V
10319.800	42.74	-33.88	38.00	38.62	68.20	25.46	H

## Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17098.367	54.51	-29.25	41.40	42.36	68.20	13.69	V
17103.500	54.15	-29.25	41.40	42.00	68.20	14.05	V
12311.900	46.28	-32.12	39.00	39.40	74.00	27.72	V
12308.233	45.49	-32.12	39.00	38.61	74.00	28.51	V
5725.215	64.95	-27.47	34.10	58.32	68.20	3.25	H
5725.932	64.51	-27.47	34.10	57.88	68.20	3.69	H

## Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17160.700	51.42	-29.31	41.70	39.03	68.20	16.78	H
17159.967	50.25	-29.31	41.70	37.86	68.20	17.95	H
12331.333	45.71	-32.39	38.95	39.15	74.00	28.29	H
12329.867	45.35	-32.39	38.95	38.79	74.00	28.65	H
10105.300	44.04	-34.28	38.10	40.22	68.20	24.16	H
10280.567	42.96	-33.82	38.00	38.78	68.20	25.24	H

**802.11ac-HT40**

## Channel 38

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.567	50.24	-29.59	45.95	33.88	74.00	23.76	H
17909.067	49.95	-29.59	45.95	33.59	74.00	24.05	V
11475.167	46.11	-33.09	39.05	40.15	74.00	27.89	H
12329.867	45.82	-32.39	38.95	39.26	74.00	28.18	V
5149.460	61.74	-28.00	34.00	55.74	74.00	12.26	V
5148.950	60.31	-28.00	34.00	54.31	74.00	13.69	V

## Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17057.300	49.78	-29.30	41.10	37.98	68.20	18.42	H
16918.333	49.77	-29.28	40.30	38.75	68.20	18.43	V
12293.200	46.55	-32.12	39.00	39.67	74.00	27.45	H
12331.333	46.51	-32.39	38.95	39.95	74.00	27.49	V
8367.667	43.31	-34.42	37.30	40.43	74.00	30.69	H
8368.033	43.19	-34.42	37.30	40.31	74.00	30.81	V

## Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17936.933	50.13	-29.59	45.95	33.77	74.00	23.87	H
17993.033	50.00	-29.59	45.95	33.64	74.00	24.00	H
12328.033	46.92	-32.39	38.95	40.36	74.00	27.08	H
12307.133	45.95	-32.12	39.00	39.07	74.00	28.05	H
8431.833	43.25	-34.69	37.40	40.54	74.00	30.75	H
9706.733	43.16	-34.44	37.80	39.80	68.20	25.04	H

## Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17841.600	50.50	-29.59	45.95	34.14	74.00	23.50	V
17368.600	50.30	-28.74	43.40	35.64	68.20	17.90	H
12127.467	45.75	-32.38	38.90	39.23	74.00	28.25	H
12332.800	45.56	-32.39	38.95	39.00	74.00	28.44	H
5352.344	69.57	-27.82	34.20	63.19	74.00	4.43	V
5352.800	69.15	-27.82	34.20	62.77	74.00	4.85	H

## Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16535.900	50.60	-29.97	39.20	41.37	68.20	17.60	H
16534.800	50.52	-29.97	39.20	41.29	68.20	17.68	V
12319.233	45.76	-32.12	39.00	38.88	74.00	28.24	H
12310.433	45.38	-32.12	39.00	38.50	74.00	28.62	V
5456.898	57.58	-27.49	34.20	50.87	74.00	16.42	H
5468.005	65.15	-27.49	34.20	58.44	68.20	3.05	V

## Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16507.667	50.14	-29.90	39.00	41.04	68.20	18.06	V
17689.433	49.51	-29.82	45.65	33.68	68.20	18.69	H
11926.900	44.79	-32.53	39.10	38.22	74.00	29.21	V
12311.167	44.71	-32.12	39.00	37.83	74.00	29.29	V
8358.133	42.95	-34.93	37.20	40.68	74.00	31.05	V
8394.067	42.68	-34.42	37.30	39.80	74.00	31.32	H

## Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17407.100	49.66	-29.44	43.80	35.30	68.20	18.54	H
17792.833	49.35	-29.59	45.95	32.99	74.00	24.65	H
12311.900	46.45	-32.12	39.00	39.57	74.00	27.55	V
12329.133	46.43	-32.39	38.95	39.87	74.00	27.57	H
5727.919	59.38	-27.47	34.10	52.75	68.20	8.82	V
5728.977	58.92	-27.47	34.10	52.29	68.20	9.28	V

## Channel 142

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17098.733	55.54	-29.25	41.40	43.39	68.20	12.66	V
17093.967	55.13	-29.25	41.40	42.98	68.20	13.07	H
12310.067	46.14	-32.12	39.00	39.26	74.00	27.86	H
12263.500	45.69	-32.37	38.95	39.11	74.00	28.31	H
10271.767	43.92	-33.82	38.00	39.74	68.20	24.28	V
10150.400	43.60	-33.67	38.05	39.22	68.20	24.60	V

**802.11ac-HT80**

## Channel 42

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17341.100	50.85	-28.74	43.40	36.19	68.20	17.35	V
17875.700	50.47	-29.59	45.95	34.11	74.00	23.53	H
12283.300	46.02	-32.12	39.00	39.14	74.00	27.98	H
12333.167	46.01	-32.39	38.95	39.45	74.00	27.99	V
5145.410	66.72	-27.79	34.00	60.51	74.00	7.28	H
5148.970	64.97	-28.00	34.00	58.97	74.00	9.03	H

## Channel 58

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17317.633	49.82	-29.54	42.90	36.46	68.20	18.38	V
17978.367	49.77	-29.59	45.95	33.41	74.00	24.23	H
12307.867	46.45	-32.12	39.00	39.57	74.00	27.55	V
12332.800	45.39	-32.39	38.95	38.83	74.00	28.61	V
5356.136	68.28	-27.82	34.20	61.90	74.00	5.72	H
5350.856	66.95	-27.82	34.20	60.57	74.00	7.05	H

## Channel 106

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
16585.033	50.66	-29.22	39.40	40.48	68.20	17.54	H
16605.933	49.57	-29.22	39.40	39.39	68.20	18.63	H
12264.233	45.72	-32.37	38.95	39.14	74.00	28.28	H
12304.200	44.96	-32.12	39.00	38.08	74.00	29.04	H
5456.905	66.00	-27.49	34.20	59.29	74.00	8.00	V
5468.417	67.74	-27.49	34.20	61.03	68.20	0.46	H

## Channel 122

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17947.567	50.62	-29.59	45.95	34.26	74.00	23.38	V
16847.200	50.07	-29.50	40.00	39.57	68.20	18.13	H
12330.967	46.24	-32.39	38.95	39.68	74.00	27.76	H
12328.400	45.68	-32.39	38.95	39.12	74.00	28.32	H
5725.845	59.93	-27.47	34.10	53.30	68.20	8.27	H
5735.094	58.15	-27.47	34.10	51.52	68.20	10.05	V

## Channel 138

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17067.567	52.67	-29.30	41.10	40.87	68.20	15.53	H
17057.300	52.20	-29.30	41.10	40.40	68.20	16.00	H
12330.233	46.14	-32.39	38.95	39.58	74.00	27.86	H
12307.867	46.08	-32.12	39.00	39.20	74.00	27.92	V
10145.267	43.98	-34.28	38.10	40.16	68.20	24.22	H
10248.300	43.60	-33.82	38.00	39.42	68.20	24.60	H

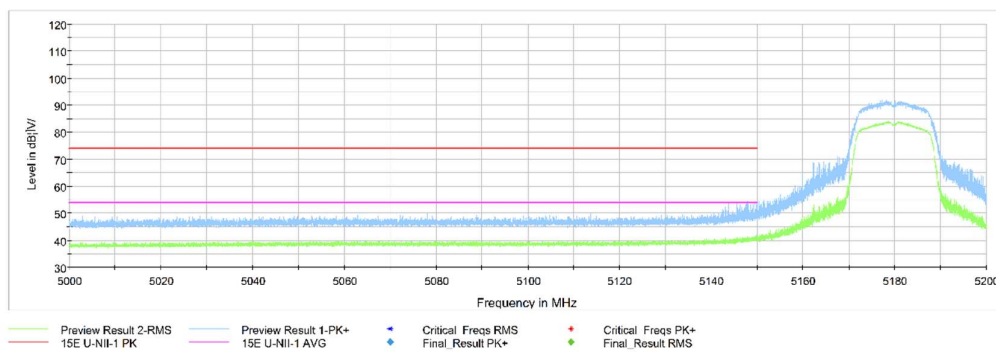
**Conclusion: PASS**

**Band edge compliance**

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.1	P
	5320 MHz	Fig.2	P
	5500 MHz	Fig.3	P
	5700 MHz	Fig.4	P
802.11n HT20	5180 MHz	Fig.5	P
	5320 MHz	Fig.6	P
	5500 MHz	Fig.7	P
	5700 MHz	Fig.8	P
802.11n HT40	5190 MHz	Fig.9	P
	5310 MHz	Fig.10	P
	5510 MHz	Fig.11	P
	5670 MHz	Fig.12	P
802.11ac HT20	5180 MHz	Fig.13	P
	5320 MHz	Fig.14	P
	5500 MHz	Fig.15	P
	5700 MHz	Fig.16	P
802.11ac HT40	5190 MHz	Fig.17	P
	5310 MHz	Fig.18	P
	5510 MHz	Fig.19	P
	5670 MHz	Fig.20	P
802.11ac HT80	5210MHz	Fig.21	P
	5290MHz	Fig.22	P
	5530MHz	Fig.23	P
	5610MHz	Fig.24	P

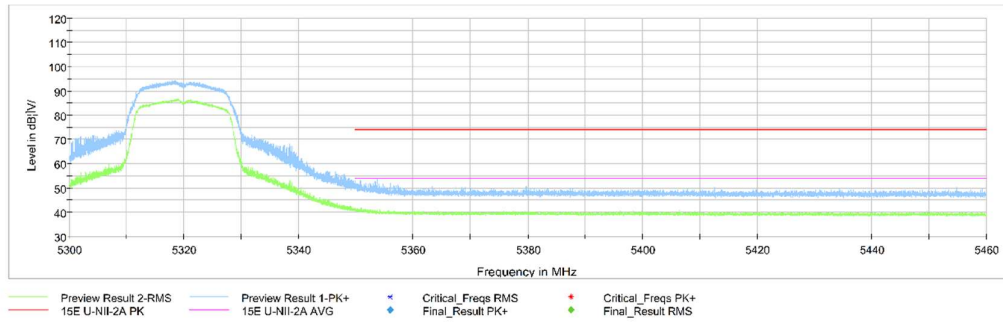
**Conclusion: PASS**

**Test graphs as below:**

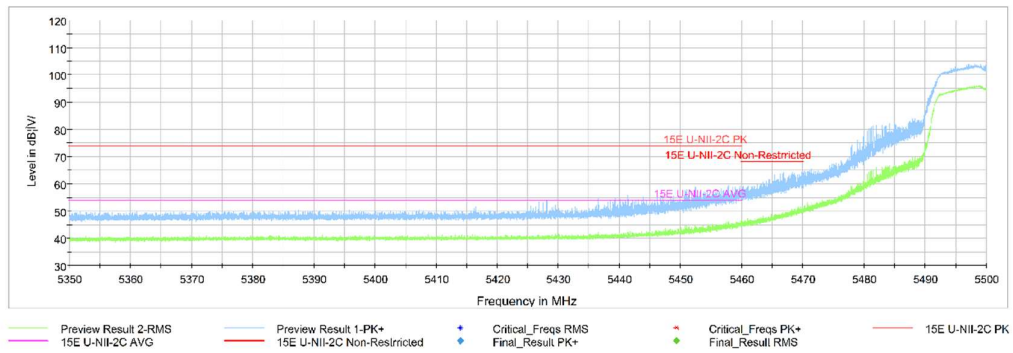


**Fig. 1 Band Edges (802.11a Ch36, 5180MHz)**

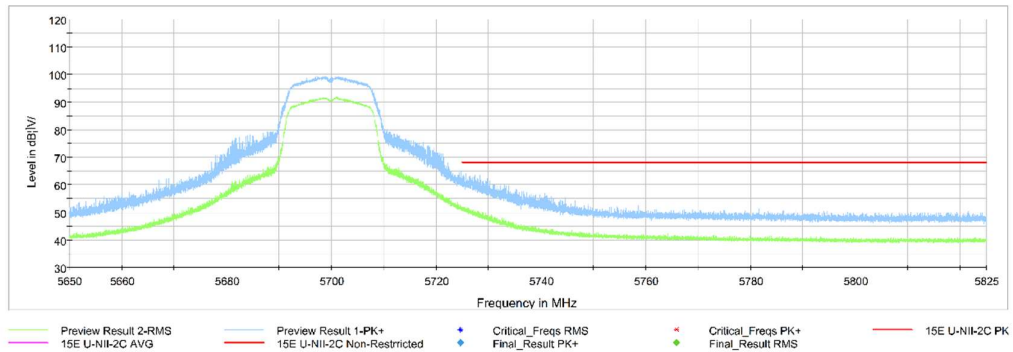




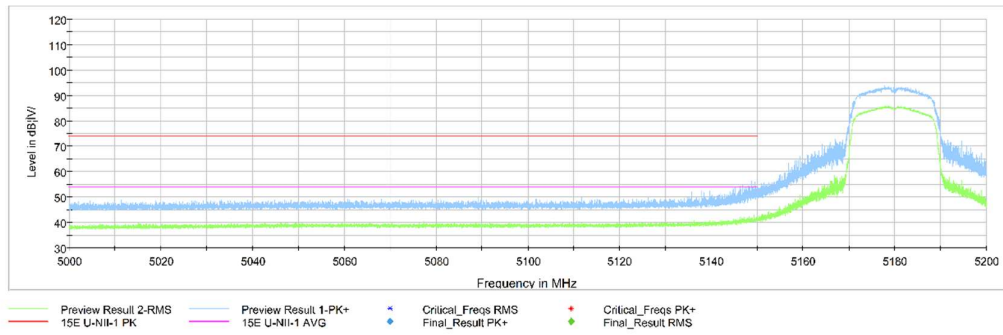
**Fig. 2 Band Edges (802.11a Ch64, 5320MHz)**



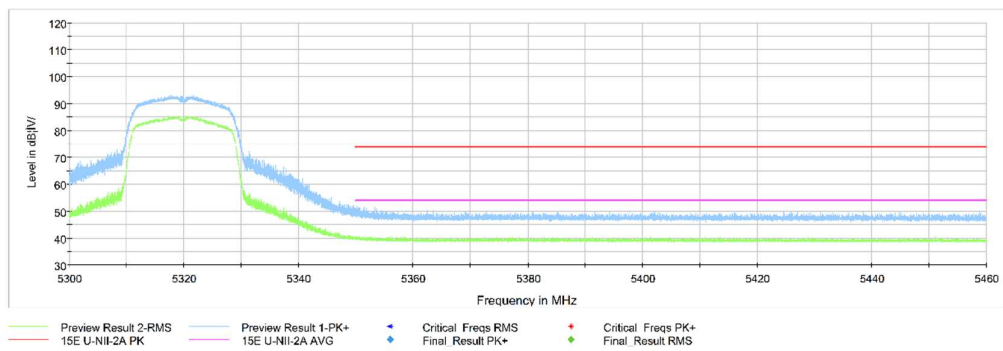
**Fig. 3 Band Edges (802.11a Ch100, 5500MHz)**



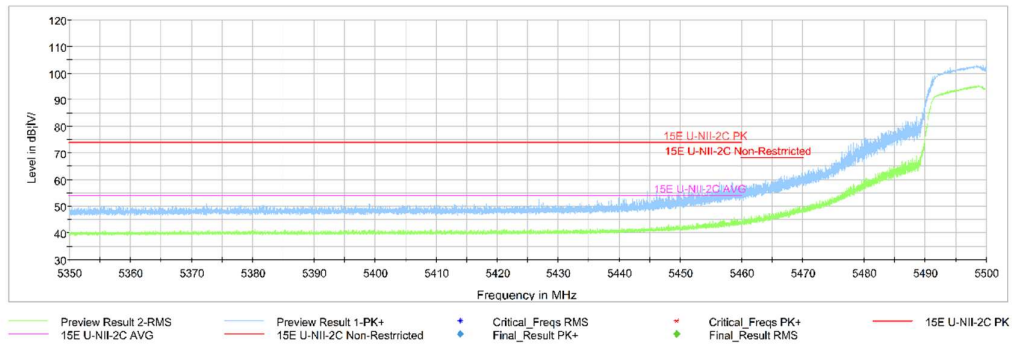
**Fig. 4 Band Edges (802.11a Ch140, 5700MHz)**



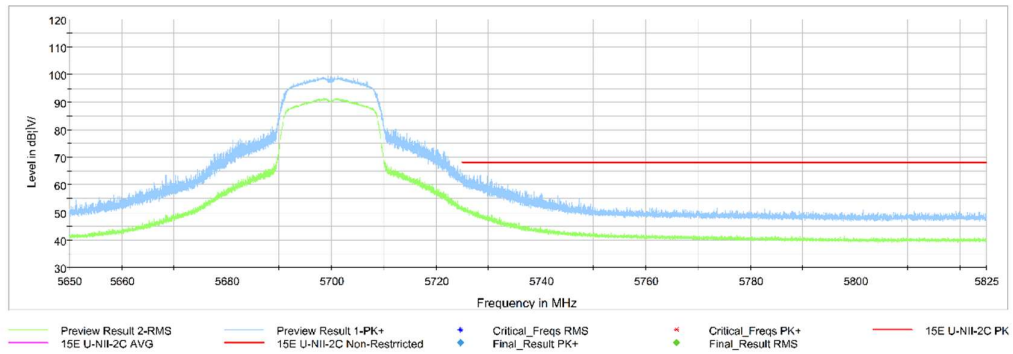
**Fig. 5 Band Edges (802.11n-HT20 Ch36, 5180MHz)**



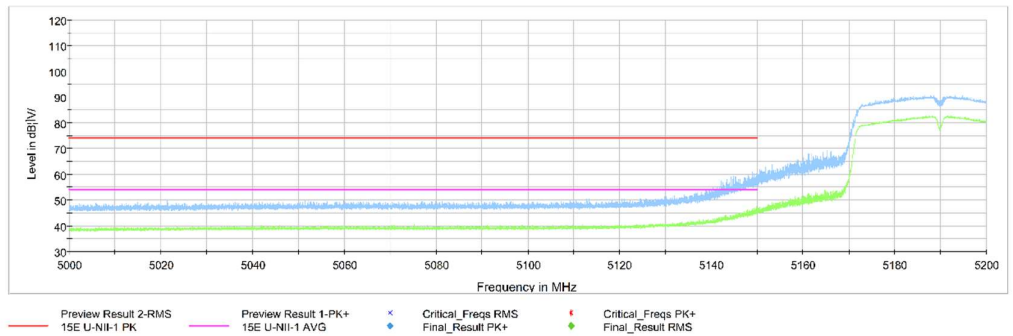
**Fig. 6 Band Edges (802.11n-HT20 Ch64, 5320MHz)**



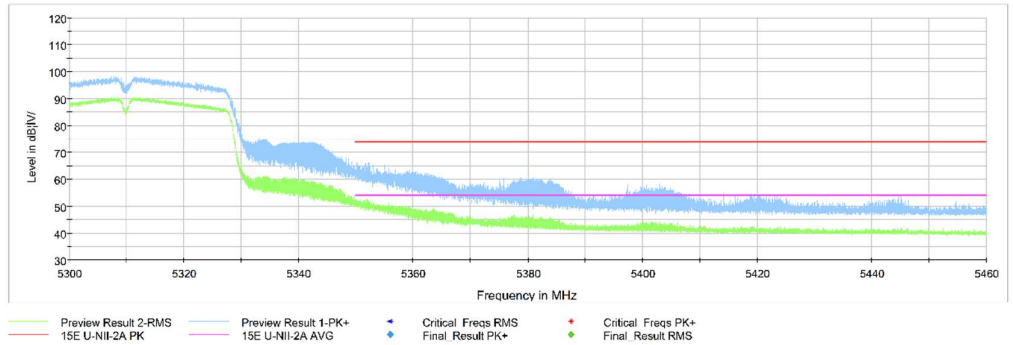
**Fig. 7 Band Edges (802.11n-HT20 Ch100, 5500MHz)**



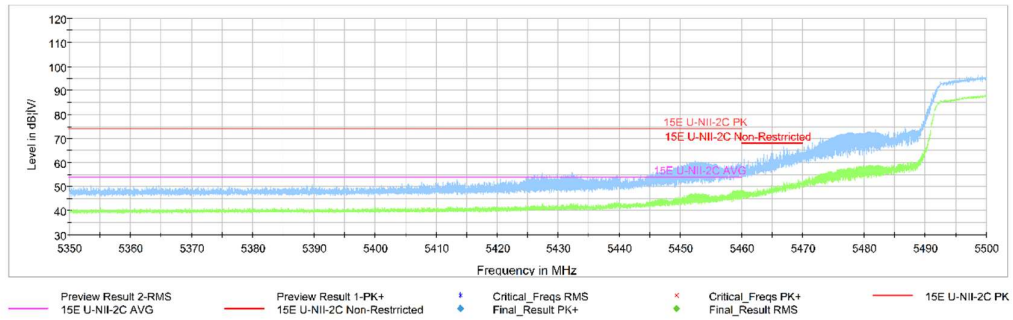
**Fig. 8 Band Edges (802.11n-HT20 Ch140, 5700MHz)**



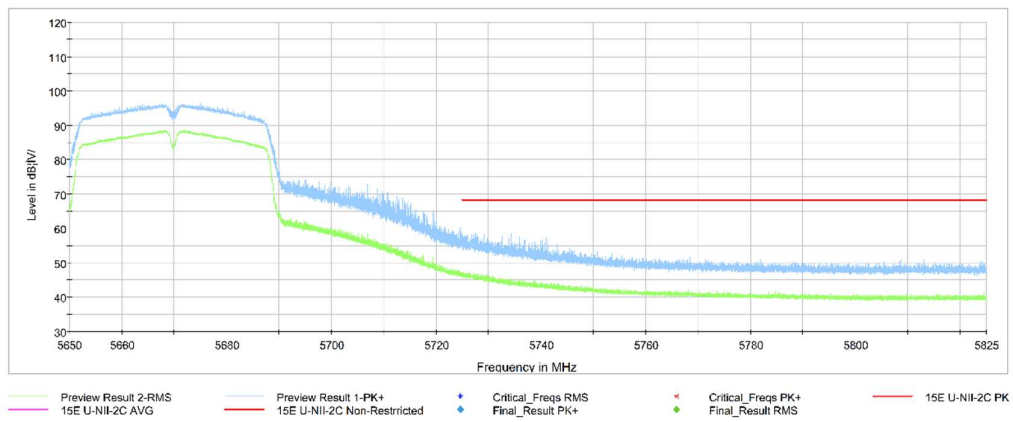
**Fig. 9 Band Edges (802.11n-HT40 Ch38, 5190MHz)**



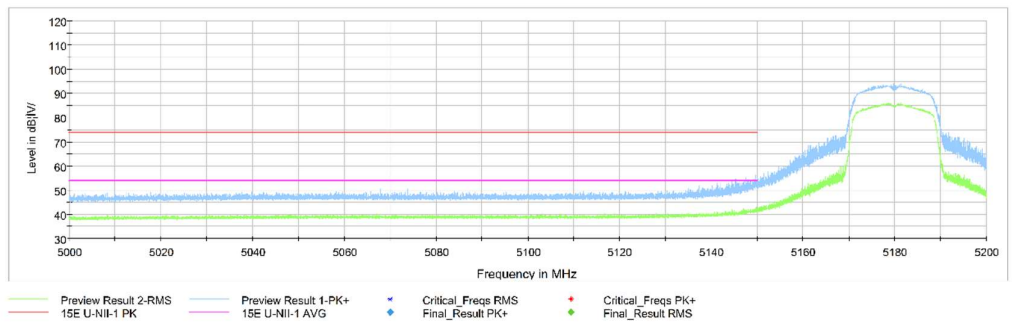
**Fig. 10 Band Edges (802.11n-HT40 Ch62, 5310MHz)**



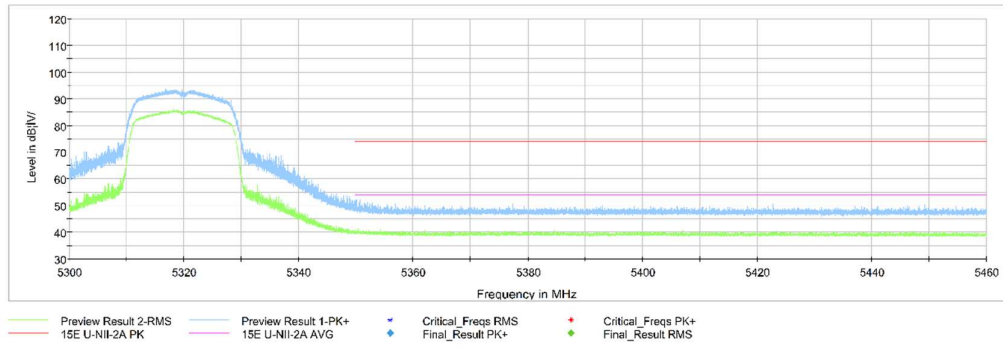
**Fig. 11 Band Edges (802.11n-HT40 Ch102, 5510MHz)**



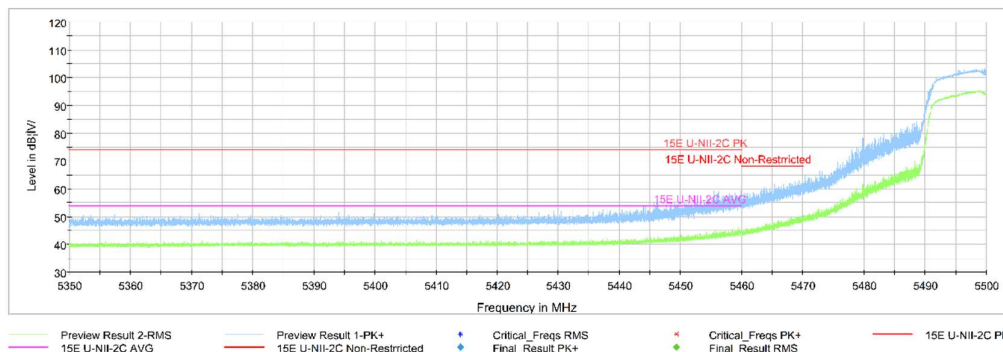
**Fig. 12 Band Edges (802.11n-HT40 Ch134, 5670MHz)**



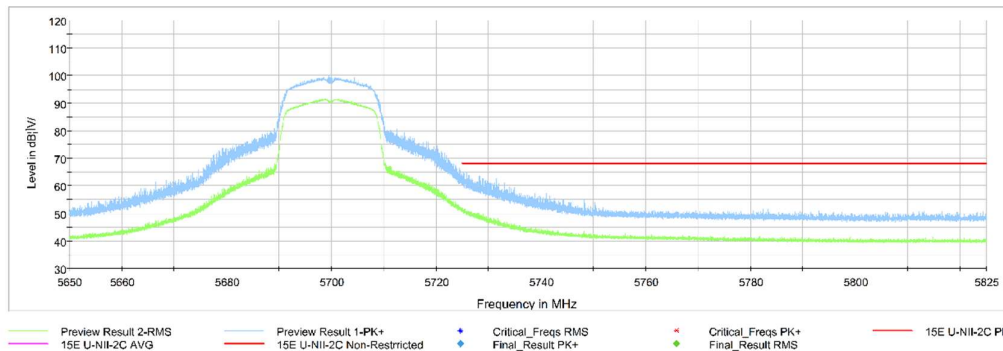
**Fig. 13 Band Edges (802.11ac-HT20 Ch36, 5180MHz)**



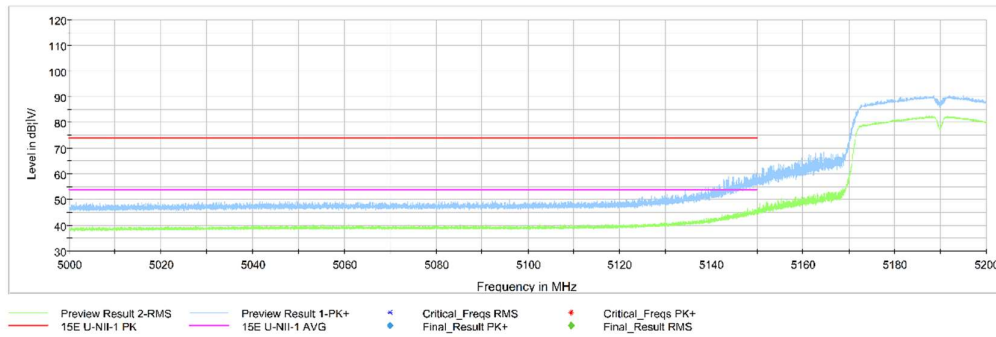
**Fig. 14 Band Edges (802.11ac-HT20 Ch64, 5320MHz)**



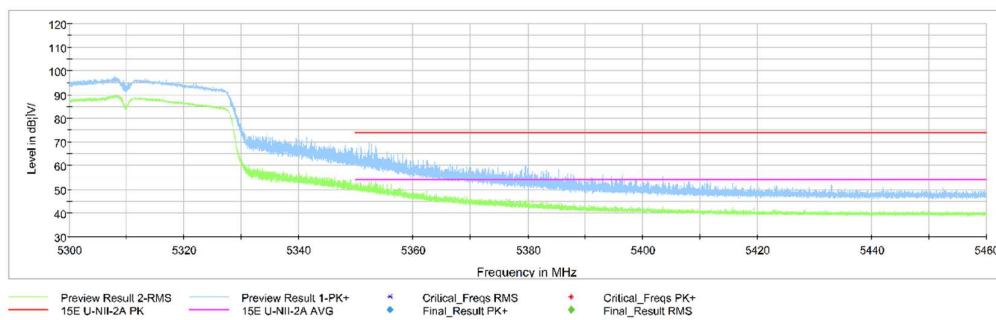
**Fig. 15 Band Edges (802.11ac-HT20 Ch100, 5500MHz)**



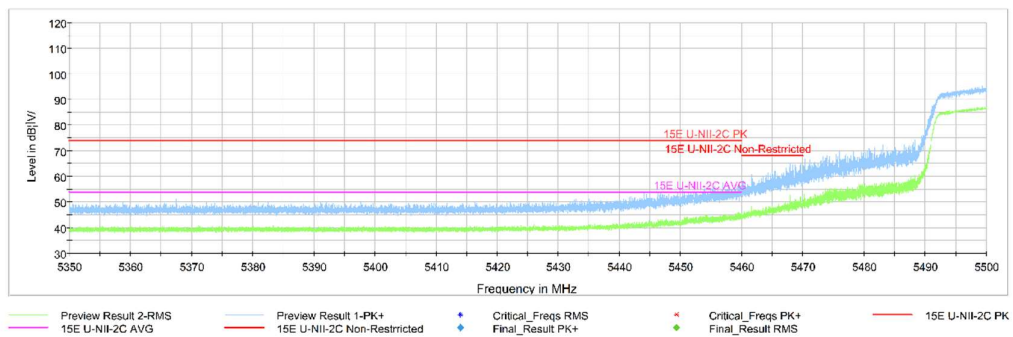
**Fig. 16 Band Edges (802.11ac-HT20 Ch140, 5700MHz)**



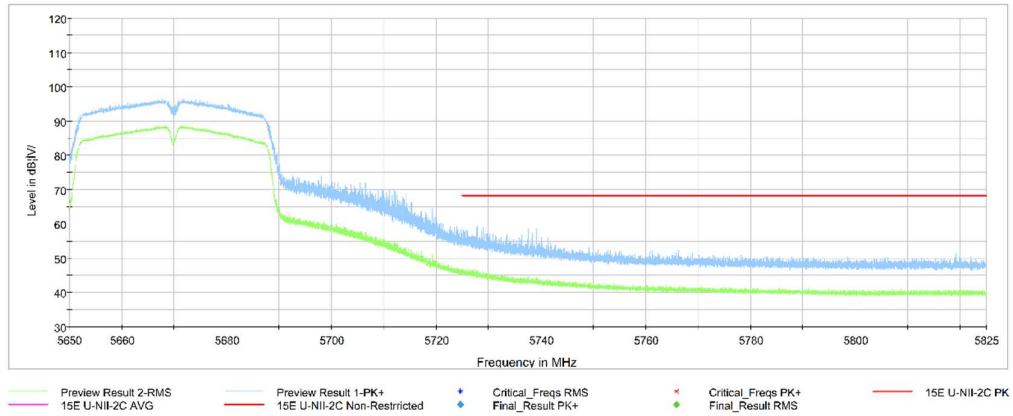
**Fig. 17 Band Edges (802.11ac-HT40 Ch38, 5190MHz)**



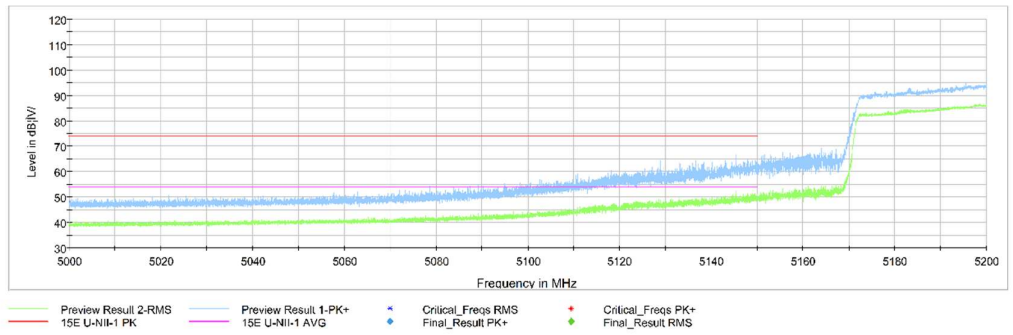
**Fig. 18 Band Edges (802.11ac-HT40 Ch62, 5310MHz)**



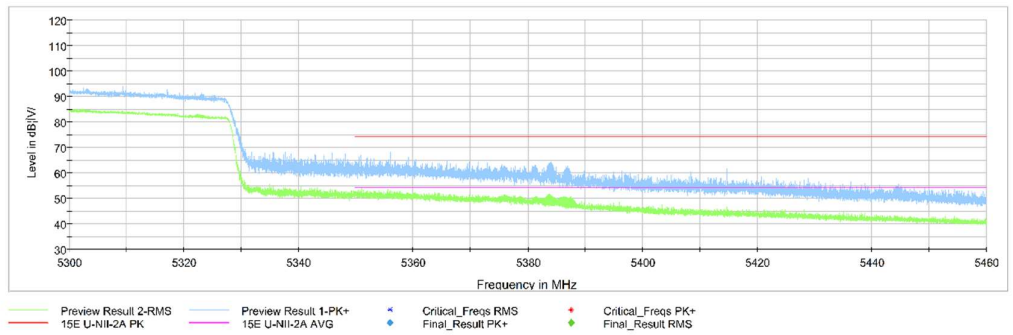
**Fig. 19 Band Edges (802.11ac-HT40 Ch102, 5510MHz)**



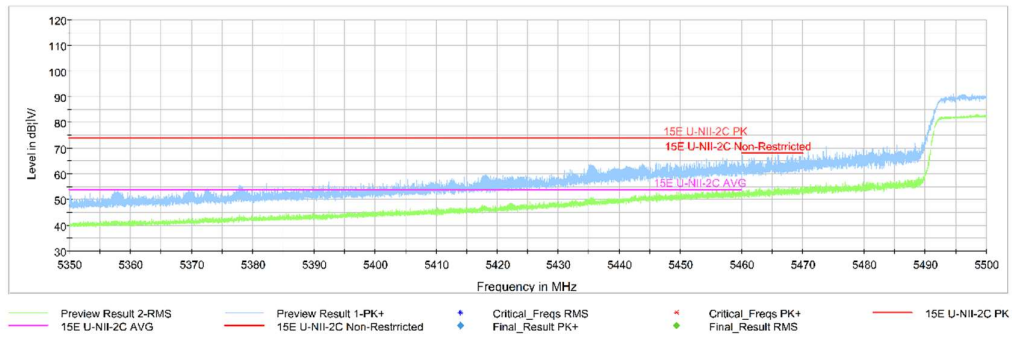
**Fig. 20 Band Edges (802.11ac-HT40 Ch134, 5670MHz)**



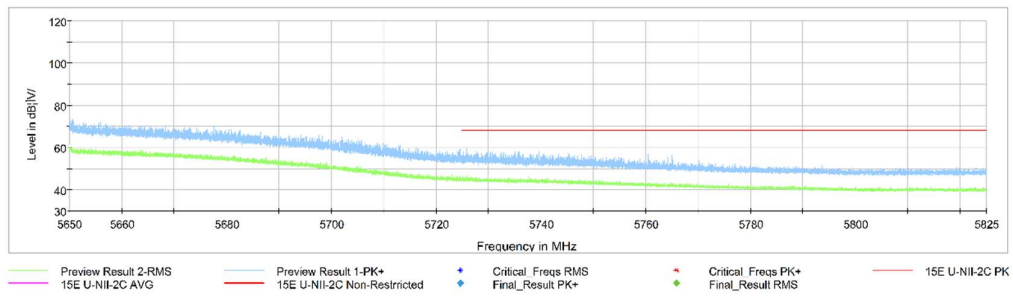
**Fig. 21 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)**



**Fig. 22 Band Edges (802.11ac-HT80 Ch58, 5290MHz)**



**Fig. 23 Band Edges (802.11ac-HT80 Ch106, 5530MHz)**



**Fig. 24 Band Edges (802.11ac-HT80 Ch122, 5610MHz)**



## **A.6. AC Powerline Conducted Emission (150kHz- 30MHz)**

### **A.6.1 Summary**

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section

### **A.6.2 Method of Measurement**

See Clause 6.2 of ANSI C63.10 specifically.

See Clause 4 and Clause 5 of ANSI C63.10 generally.

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

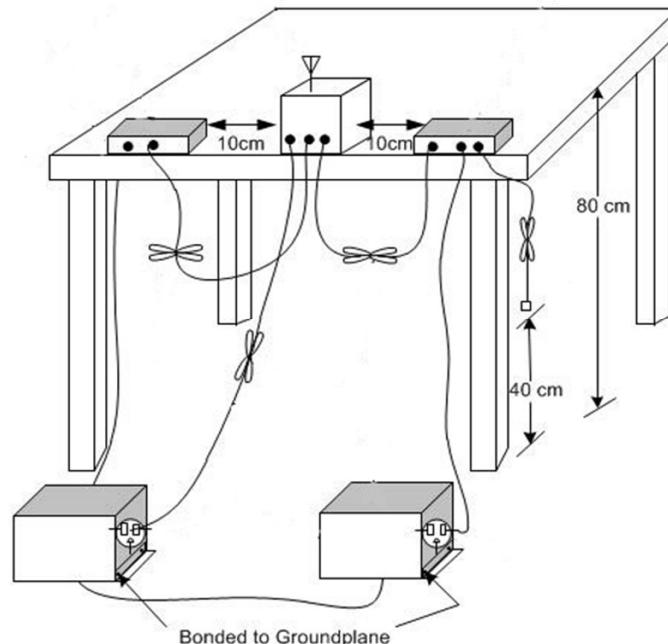
The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/IF bandwidth
0.15-30	9kHz

### **A.6.3 Test Condition**

Voltage (V)	Frequency (Hz)
120	60

### **A.6.4 Test setup**



**Measurement Result and limit:**

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	66 to 56	Fig.25	Fig.26	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.

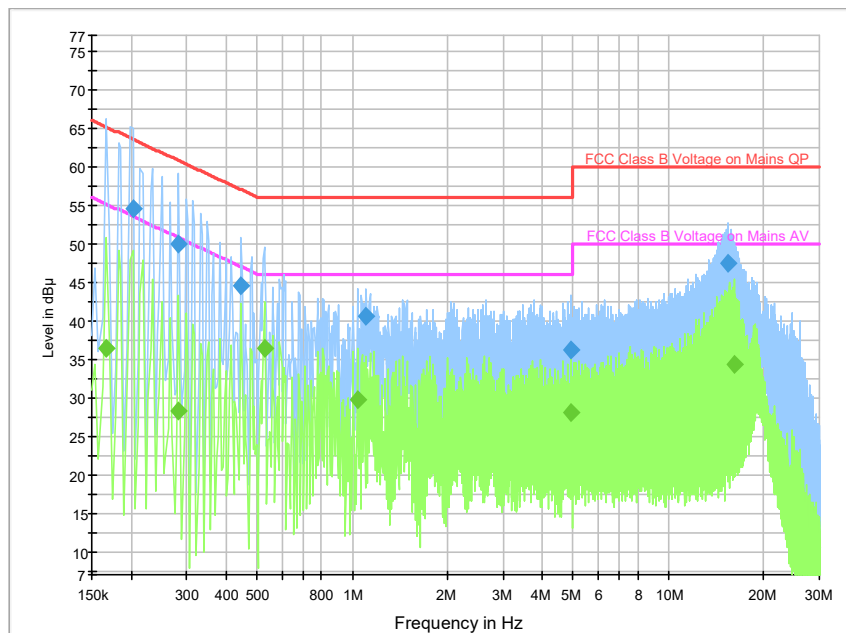
WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	56 to 46	Fig.25	Fig.26	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.

**Conclusion: PASS**

**Test graphs as below:**



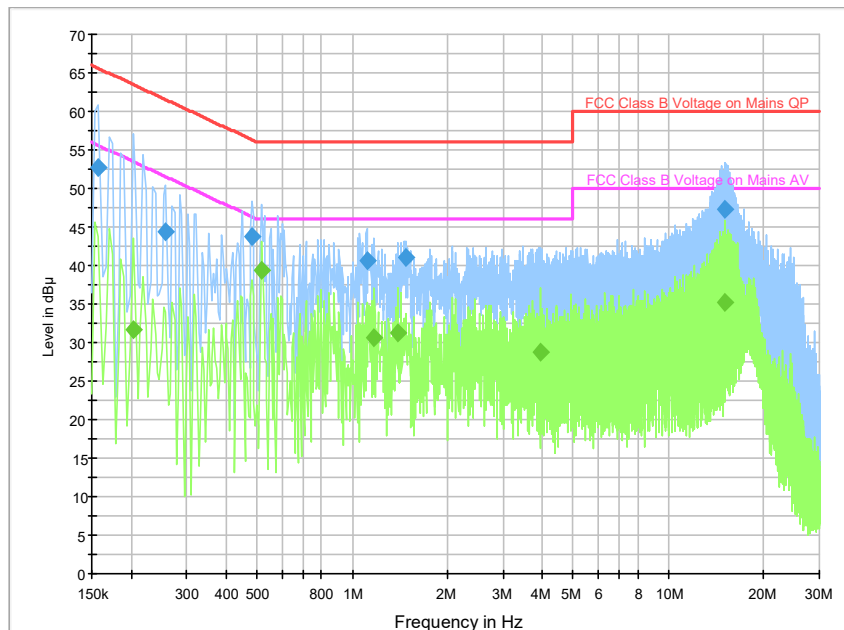
**Fig. 25 Conducted Emission(802.11a, Ch36, TX)**

**Final Result 1**

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.202000	54.5	2000.0	9.000	On	N	19.7	9.1	63.5
0.282000	50.0	2000.0	9.000	On	L1	19.7	10.8	60.8
0.446000	44.5	2000.0	9.000	On	L1	19.7	12.4	56.9
1.106000	40.5	2000.0	9.000	On	L1	19.6	15.5	56.0
4.910000	36.2	2000.0	9.000	On	L1	19.6	19.8	56.0
15.406000	47.4	2000.0	9.000	On	L1	19.7	12.6	60.0

**Final Result 2**

Frequency (MHz)	CAverage (dB $\mu$ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.166000	36.3	2000.0	9.000	On	L1	19.8	18.8	55.2
0.282000	28.3	2000.0	9.000	On	L1	19.7	22.4	50.8
0.526000	36.4	2000.0	9.000	On	L1	19.7	9.6	46.0
1.038000	29.6	2000.0	9.000	On	L1	19.7	16.4	46.0
4.910000	28.0	2000.0	9.000	On	L1	19.6	18.0	46.0
16.174000	34.3	2000.0	9.000	On	L1	19.7	15.7	50.0


**Fig. 26 Conducted Emission(802.11a, IDLE)**

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.158000	52.7	2000.0	9.000	On	N	19.7	12.9	65.6
0.258000	44.3	2000.0	9.000	On	N	19.7	17.2	61.5
0.482000	43.9	2000.0	9.000	On	L1	19.7	12.5	56.3
1.110000	40.7	2000.0	9.000	On	L1	19.6	15.3	56.0
1.474000	41.0	2000.0	9.000	On	L1	19.7	15.0	56.0
15.054000	47.3	2000.0	9.000	On	L1	19.7	12.7	60.0

**Final Result 2**

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.202000	31.6	2000.0	9.000	On	L1	19.7	21.9	53.5
0.514000	39.4	2000.0	9.000	On	L1	19.7	6.6	46.0
1.174000	30.6	2000.0	9.000	On	L1	19.7	15.4	46.0
1.390000	31.2	2000.0	9.000	On	L1	19.6	14.8	46.0
3.922000	28.7	2000.0	9.000	On	L1	19.6	17.3	46.0
15.082000	35.2	2000.0	9.000	On	L1	19.7	14.8	50.0

### **A.7. 99% Occupied bandwidth**

Method of Measurement: See ANSI C63.10-2013-clause 12.4.2.

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than  $[10 \log (OBW/RBW)]$  below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

#### **Measurement Uncertainty:**

Measurement Uncertainty	60.80Hz
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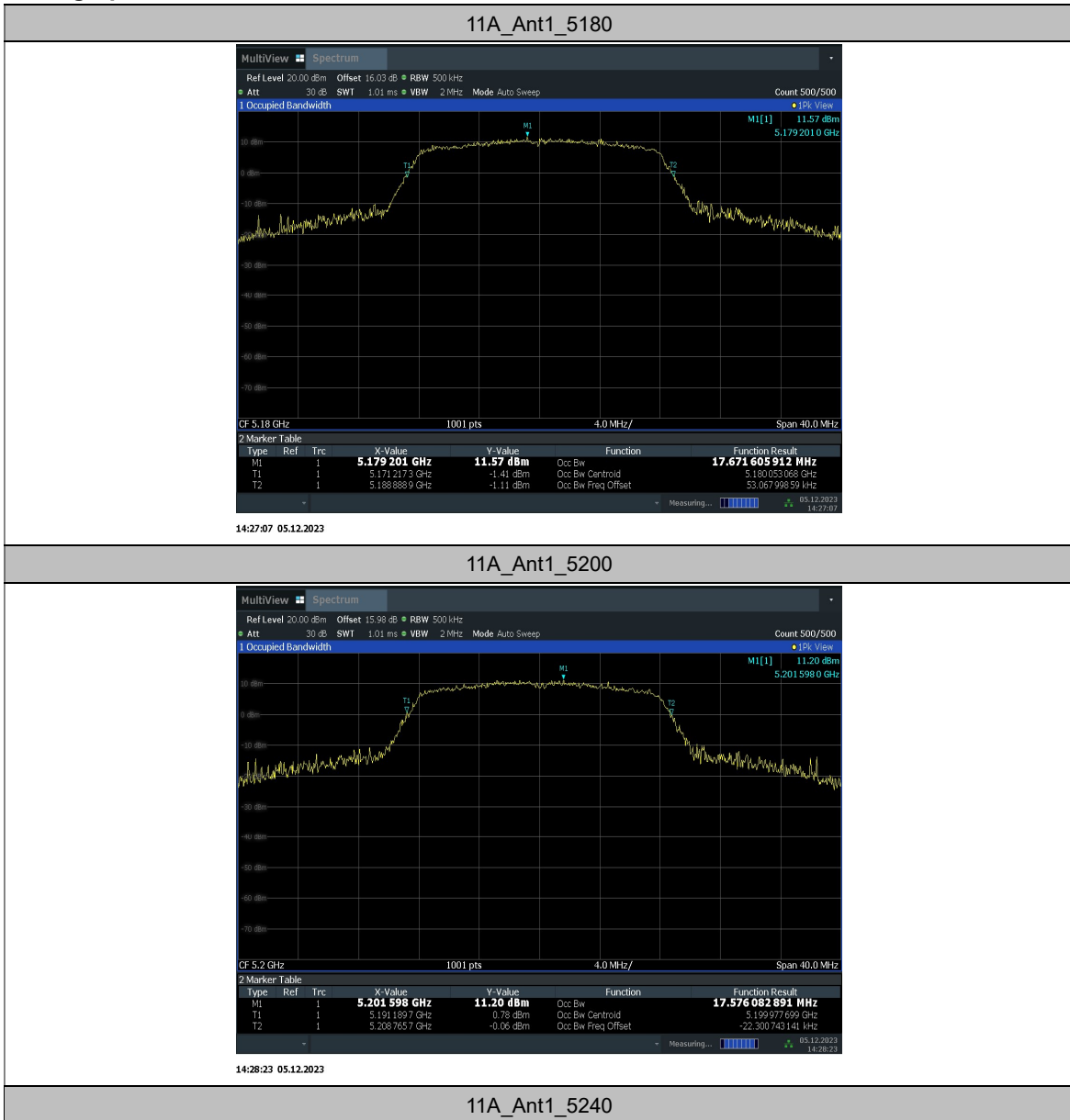
#### **EUT ID: UT46a**

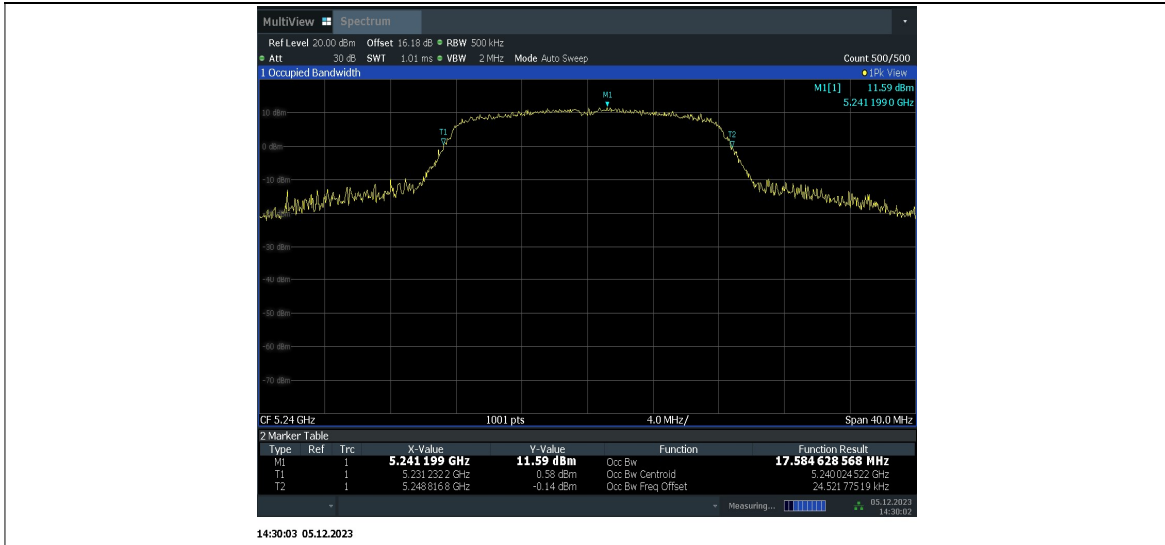
#### **Measurement Result:**

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.672	5171.2173	5188.8889	---	---
		5200	17.576	5191.1897	5208.7657	---	---
		5240	17.585	5231.2322	5248.8168	---	---
		5260	17.825	5251.0656	5268.8908	---	---
		5280	17.569	5271.2624	5288.8311	---	---
		5320	17.764	5311.1270	5328.8912	---	---
		5500	17.789	5491.0638	5508.8533	---	---
		5580	17.731	5571.0815	5588.8123	---	---
		5700	17.622	5691.1359	5708.7576	---	---
		5720	17.714	5711.1573	5728.8709	---	---
11N40SISO	Ant1	5190	36.724	5171.5969	5208.3212	---	---

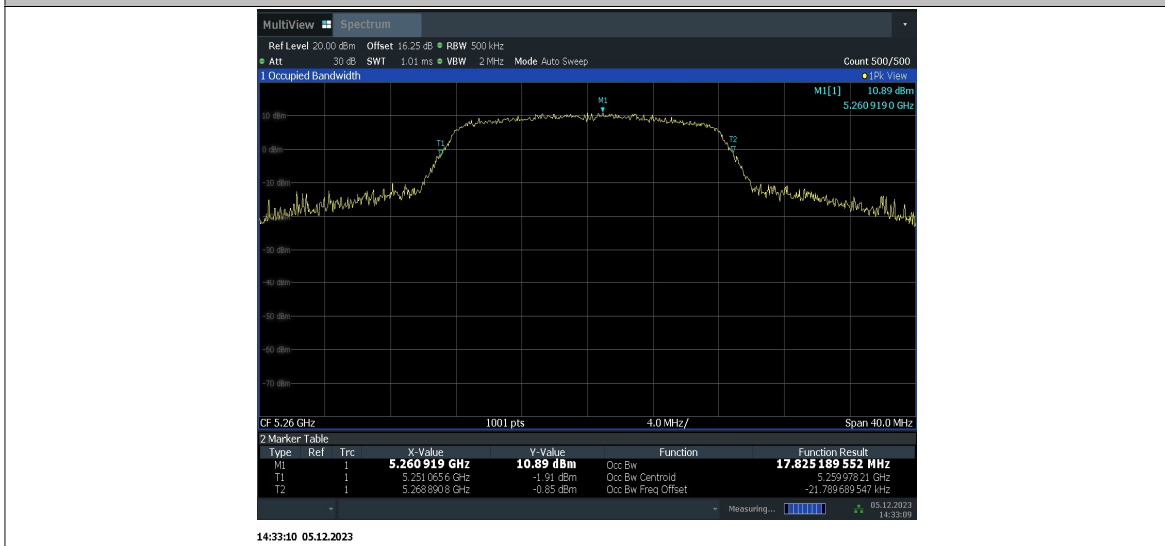
		5230	36.686	5211.6249	5248.3109	---	---
		5270	36.872	5251.5807	5288.4527	---	---
		5310	36.96	5291.5467	5328.5062	---	---
		5510	36.795	5491.6018	5528.3970	---	---
		5550	36.944	5531.4523	5568.3964	---	---
		5670	36.832	5651.6023	5688.4347	---	---
		5710	36.878	5691.4246	5728.3030	---	---
11AC20SISO	Ant1	5180	18.329	5170.8642	5189.1931	---	---
		5200	18.264	5190.8538	5209.1178	---	---
		5240	18.286	5230.8339	5249.1197	---	---
		5260	18.426	5250.7625	5269.1883	---	---
		5280	18.235	5270.8937	5289.1284	---	---
		5320	18.349	5310.8378	5329.1873	---	---
		5500	18.315	5490.8319	5509.1468	---	---
		5580	18.307	5570.7998	5589.1068	---	---
		5700	18.262	5690.8205	5709.0825	---	---
		5720	18.309	5710.8403	5729.1495	---	---
11AC80SISO	Ant1	5210	75.763	5172.1565	5247.9199	---	---
		5290	75.921	5252.0275	5327.9490	---	---
		5530	75.89	5491.9719	5567.8615	---	---
		5610	75.934	5571.8999	5647.8342	---	---
		5690	75.728	5652.0542	5727.7824	---	---

Test graphs as below:





11A\_Ant1\_5260



11A\_Ant1\_5280