

Test Mode M (External antenna - PN: ATS-OP-245-810-4RPSP-36 + Eth7 Radio)

1TX

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	17.28
40	5200	20.52
48	5240	18.12
149	5745	30.60
157	5785	29.52
165	5825	30.60

802.11ax (HE20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	18.12
40	5200	22.68
48	5240	19.68
149	5745	32.76
157	5785	31.44
165	5825	31.92

802.11ax (HE40)

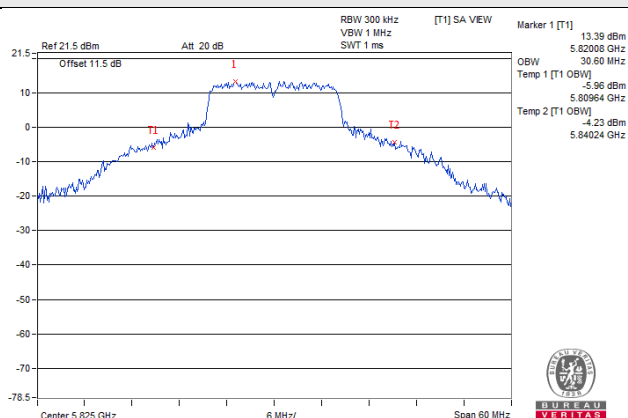
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
38	5190	36.84
46	5230	38.40
151	5755	45.00
159	5795	44.28

802.11ax (HE80)

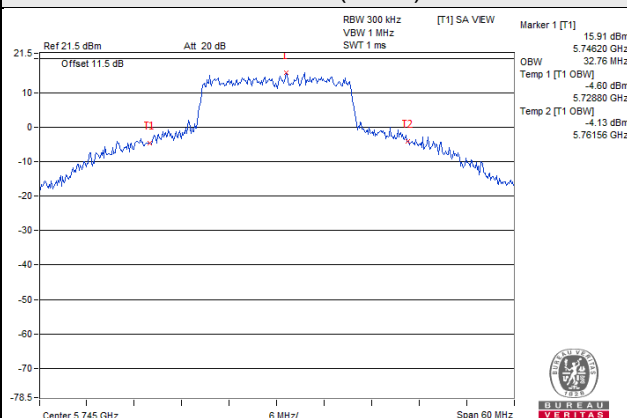
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
42	5210	75.84
155	5775	79.44

Spectrum Plot of Worst Value

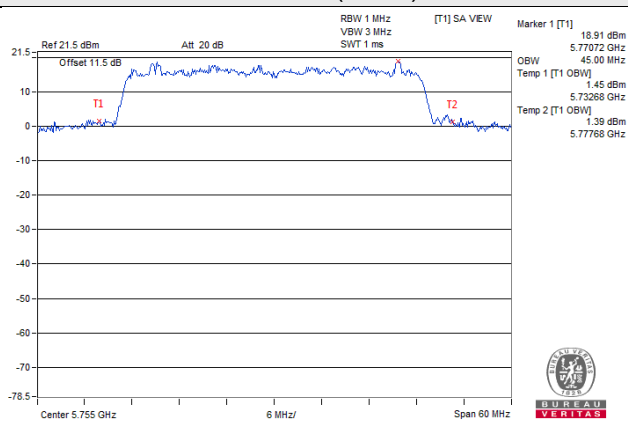
802.11a



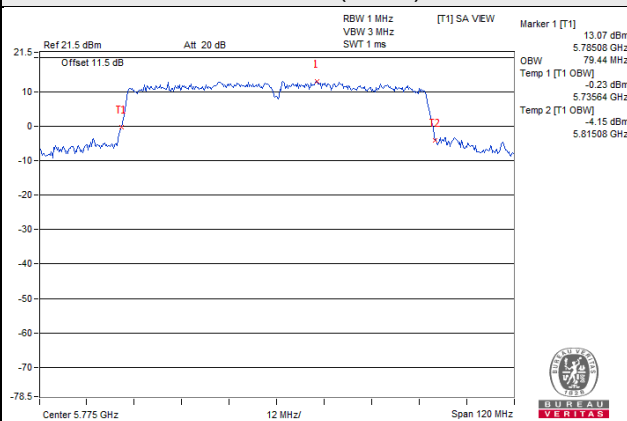
802.11ax (HE20)



802.11ax (HE40)

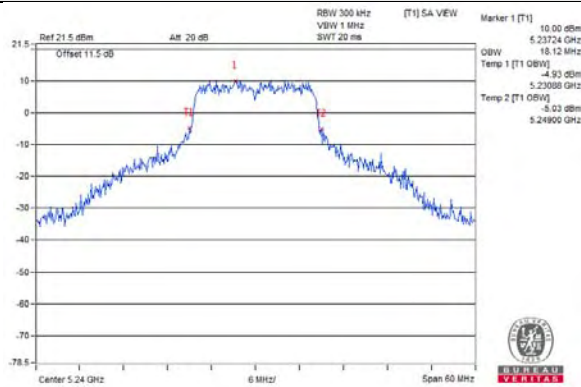


802.11ax (HE80)

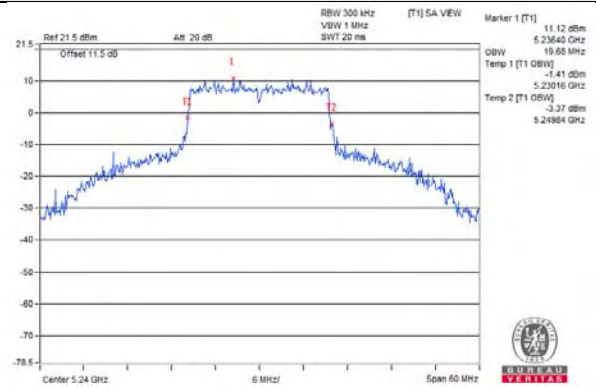


Spectrum Plot for near By DFS Band

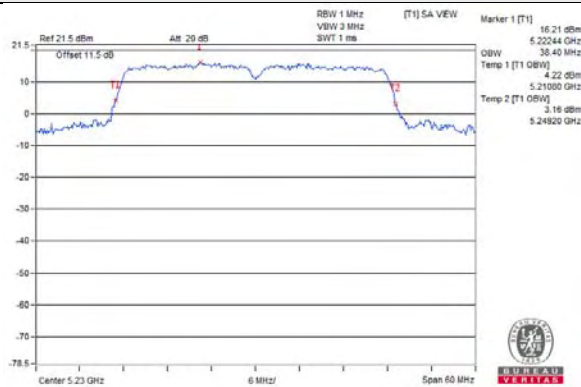
802.11a / CH 48



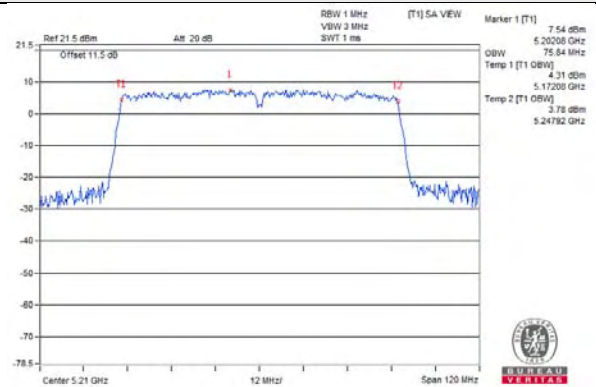
802.11ax (HE20) / CH 48



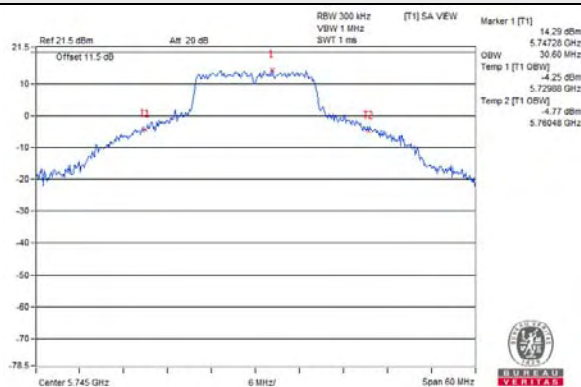
802.11ax (HE40) / CH 46



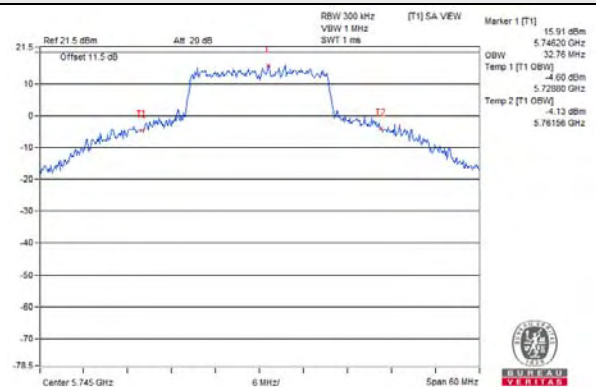
802.11ax (HE80) / CH 42



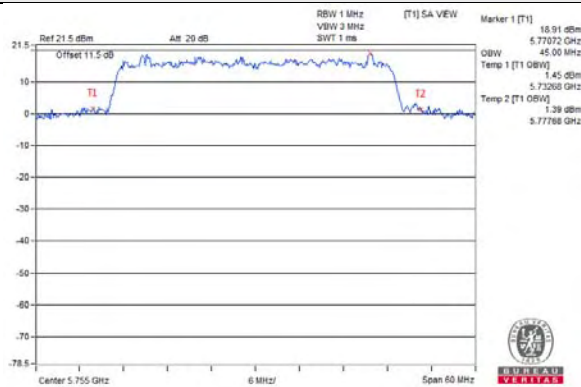
802.11a / CH 149



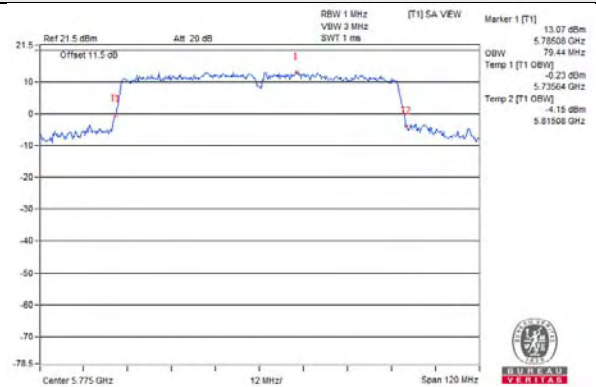
802.11ax (HE20) / CH 149



802.11ax (HE40) / CH 151



802.11ax (HE80) / CH 155



2TX

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.04	16.92
40	5200	18.00	17.28
48	5240	18.12	17.40
149	5745	30.60	22.56
157	5785	29.52	19.92
165	5825	30.60	19.32

802.11ax (HE20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.12	17.88
40	5200	18.96	18.36
48	5240	19.68	19.08
149	5745	32.76	23.88
157	5785	31.44	19.92
165	5825	31.92	19.80

802.11ax (HE40)

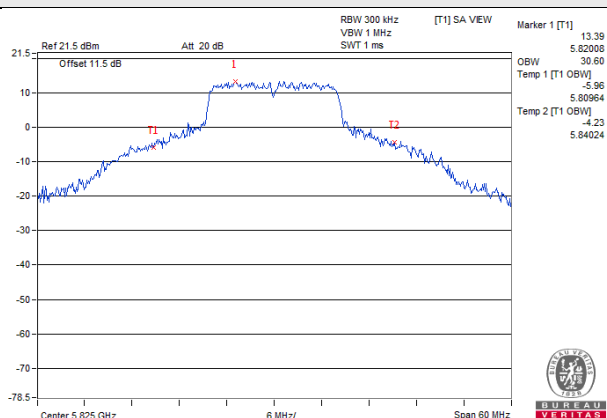
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.60	36.48
46	5230	38.04	37.80
151	5755	45.00	38.40
159	5795	44.28	38.16

802.11ax (HE80)

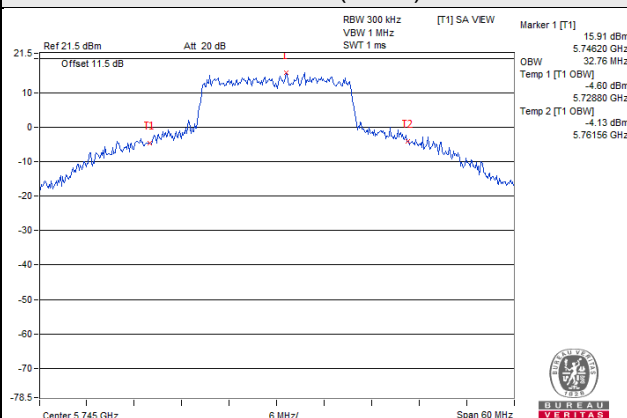
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.84	75.84
155	5775	76.32	76.08

Spectrum Plot of Worst Value

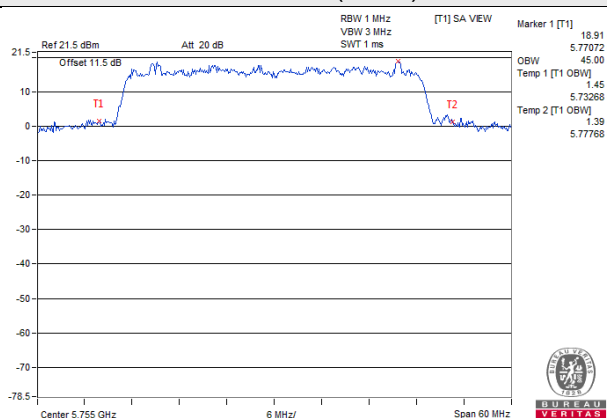
802.11a



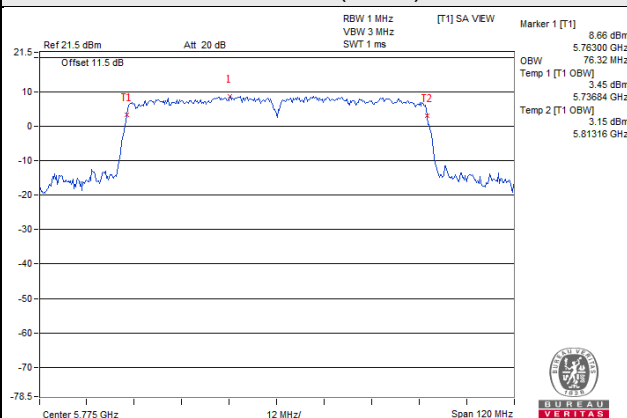
802.11ax (HE20)



802.11ax (HE40)

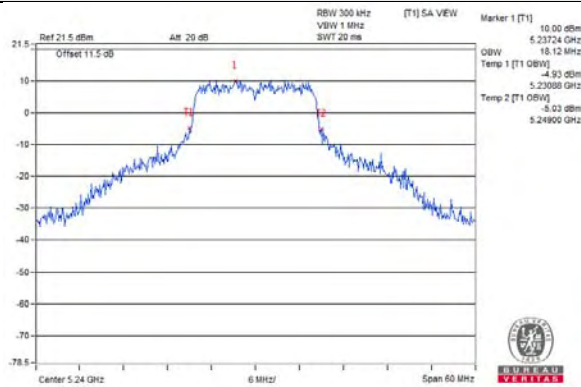


802.11ax (HE80)

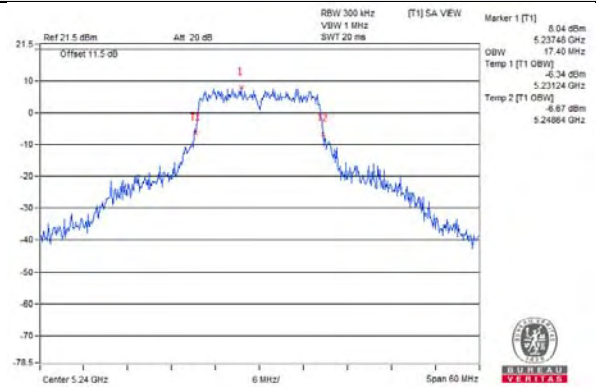


Spectrum Plot for near By DFS Band

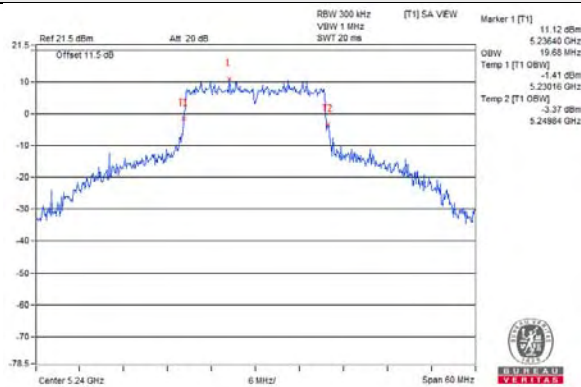
802.11a / Chain 0 / CH 48



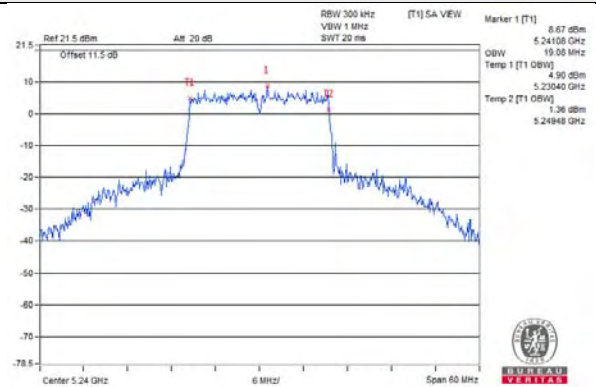
802.11a / Chain 1 / CH 48



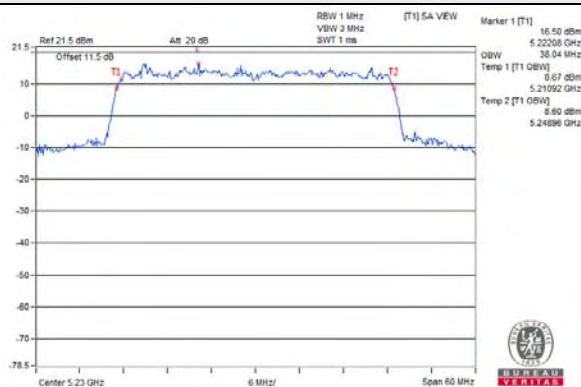
802.11ax (HE20) / Chain 0 / CH 48



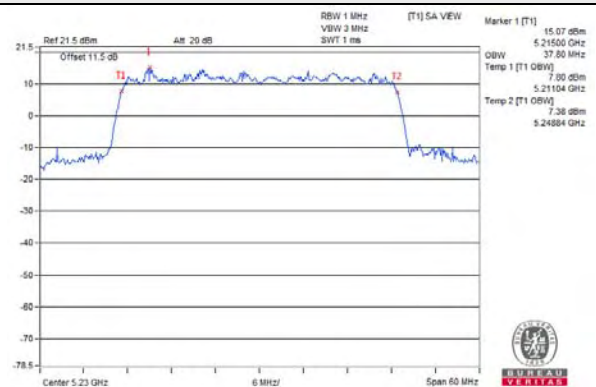
802.11ax (HE20) / Chain 1 / CH 48



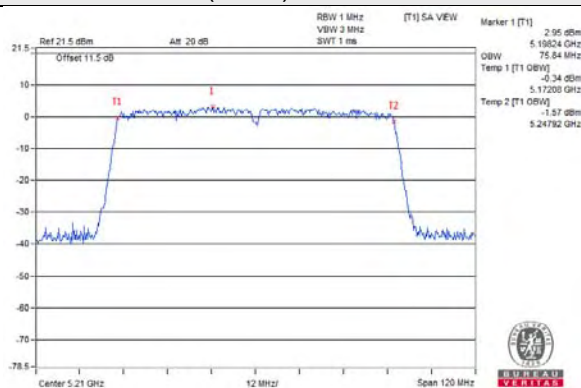
802.11ax (HE40) / Chain 0 / CH 46



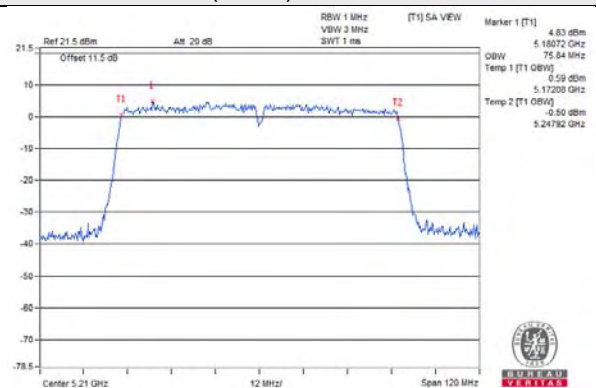
802.11ax (HE40) / Chain 1 / CH 46



802.11ax (HE80) / Chain 0 / CH 42

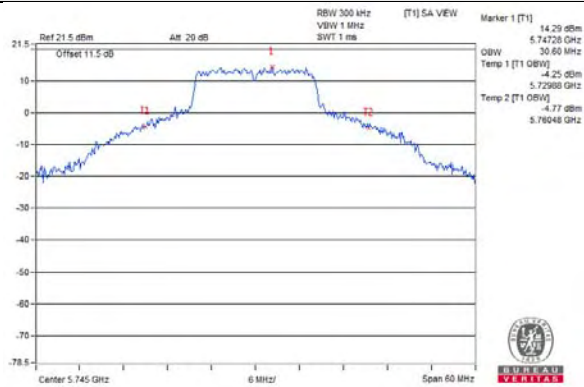


802.11ax (HE80) / Chain 1 / CH 42

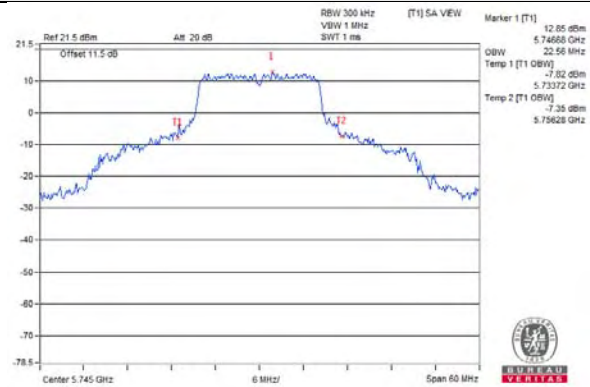


Spectrum Plot for near By DFS Band

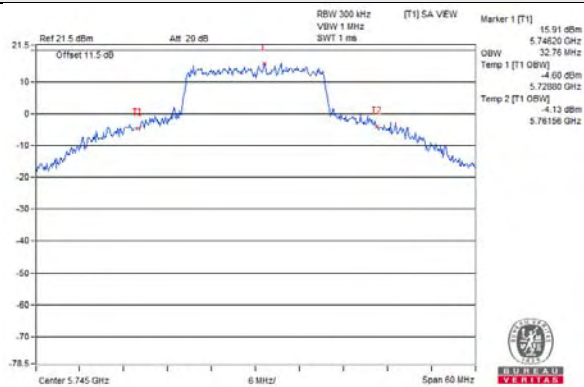
802.11a / Chain 0 / CH 149



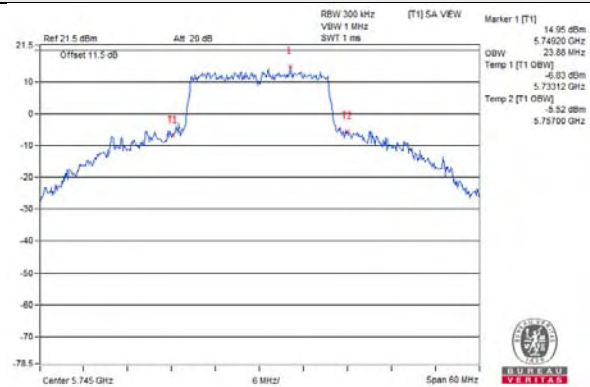
802.11a / Chain 1 / CH 149



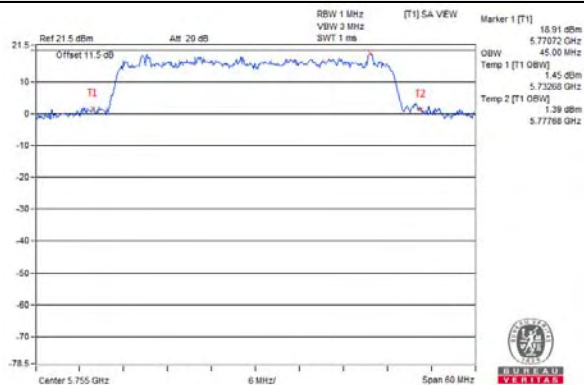
802.11ax (HE20) / Chain 0 / CH 149



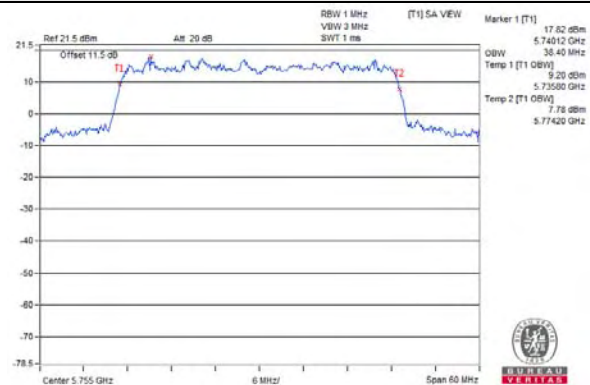
802.11ax (HE20) / Chain 1 / CH 149



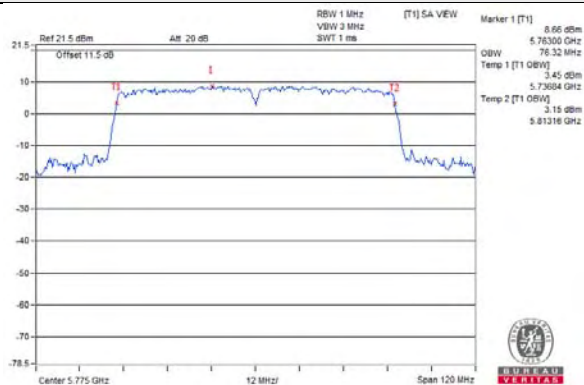
802.11ax (HE40) / Chain 0 / CH 151



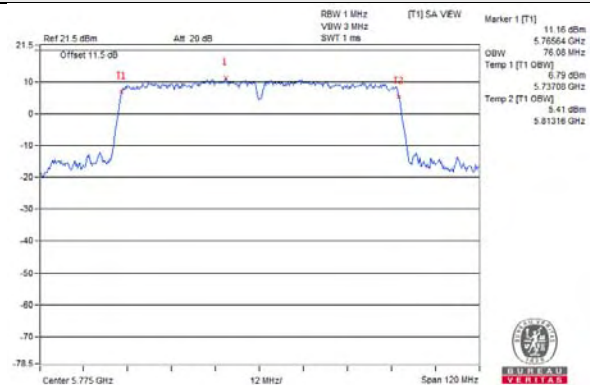
802.11ax (HE40) / Chain 1 / CH 151



802.11ax (HE80) / Chain 0 / CH 155



802.11ax (HE80) / Chain 1 / CH 155

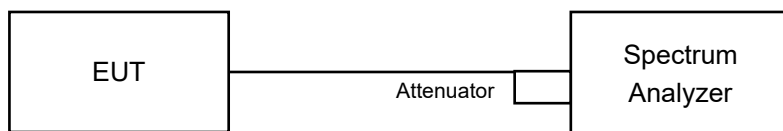


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
	√	Indoor Access Point	
		Mobile and Portable client device	11dBm/ MHz
U-NII-2A			11dBm/ MHz
U-NII-2C			11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1:

Using method SA-2

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS
- Set Channel power measure = 1MHz
- Sweep time = auto, trigger set to “free run”.
- Trace average at least 100 traces in power averaging mode.
- Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
- Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
- Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500 \text{ kHz} / 300 \text{ kHz})$
- Sweep time = auto, trigger set to “free run”.
- Trace average at least 100 traces in power averaging mode.
- Record the max value and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as 4.3.6.

4.5.7 Test Results

Test Mode A (Internal antenna + Eth6 Radio)

1TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	4.09	0.23	4.32	17.00	Pass
40	5200	5.95	0.23	6.18	17.00	Pass
48	5240	3.80	0.23	4.03	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	3.59	0.23	3.82	17.00	Pass
40	5200	5.98	0.23	6.21	17.00	Pass
48	5240	3.88	0.23	4.11	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-0.46	0.51	0.05	17.00	Pass
46	5230	1.49	0.51	2.00	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

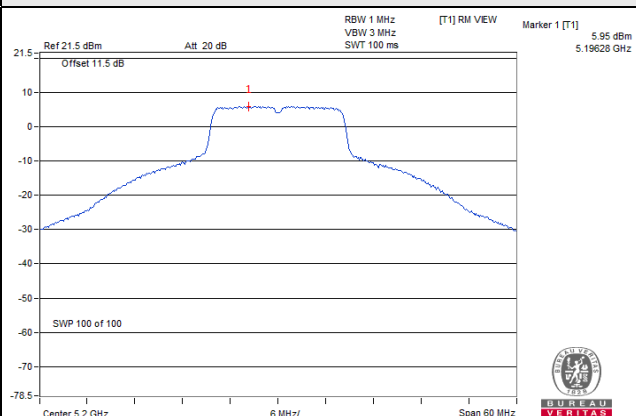
802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-3.70	0.35	-3.35	17.00	Pass

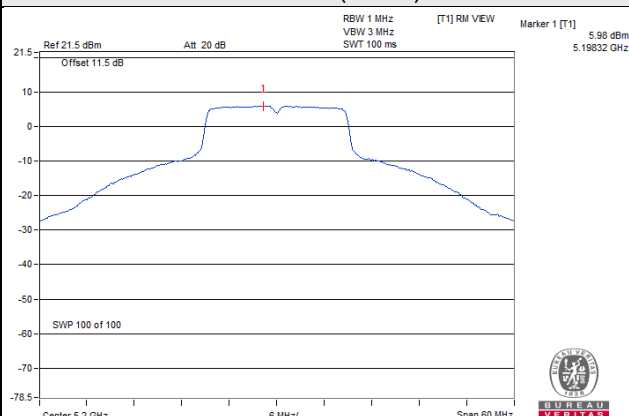
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

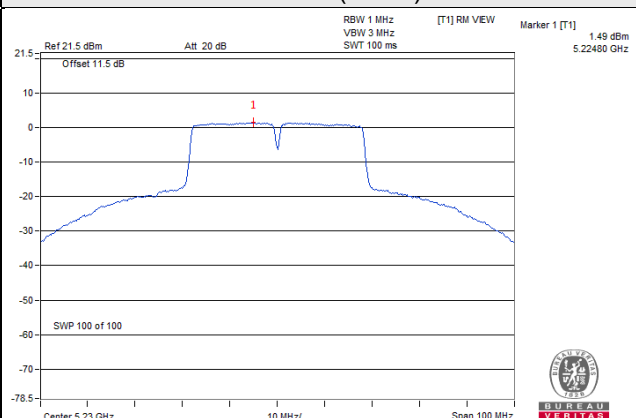
802.11a



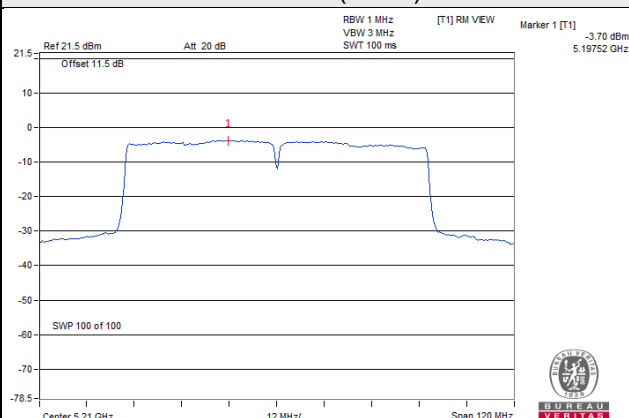
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-2.42	-0.20	0.23	0.03	30.00	Pass
157	5785	-2.40	-0.18	0.23	0.05	30.00	Pass
165	5825	-1.72	0.50	0.23	0.73	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-3.00	-0.78	0.23	-0.55	30.00	Pass
157	5785	-2.79	-0.57	0.23	-0.34	30.00	Pass
165	5825	-2.35	-0.13	0.23	0.10	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-5.62	-3.40	0.51	-2.89	30.00	Pass
159	5795	-5.46	-3.24	0.51	-2.73	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

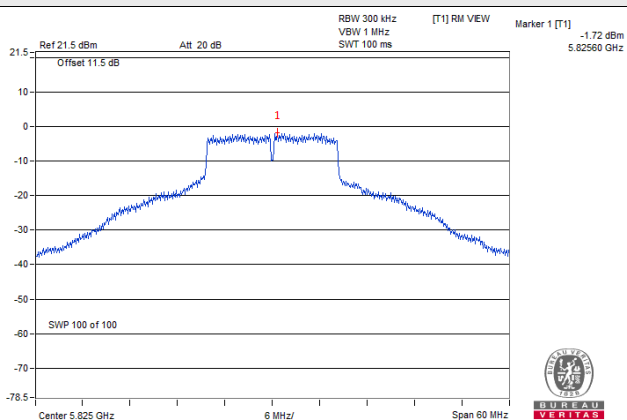
802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-8.88	-6.66	0.35	-6.31	30.00	Pass

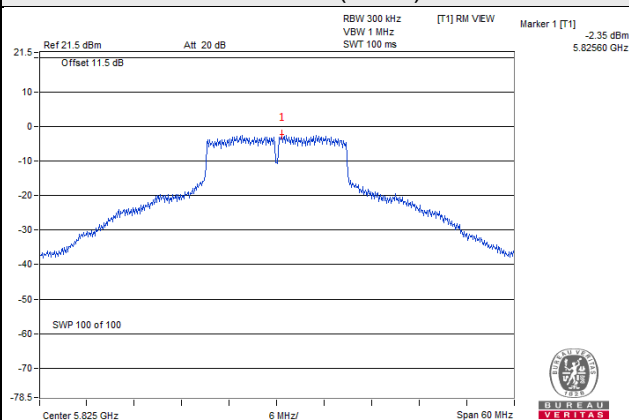
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

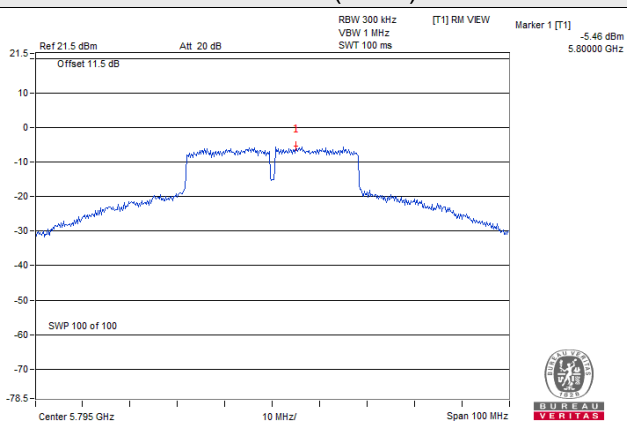
802.11a



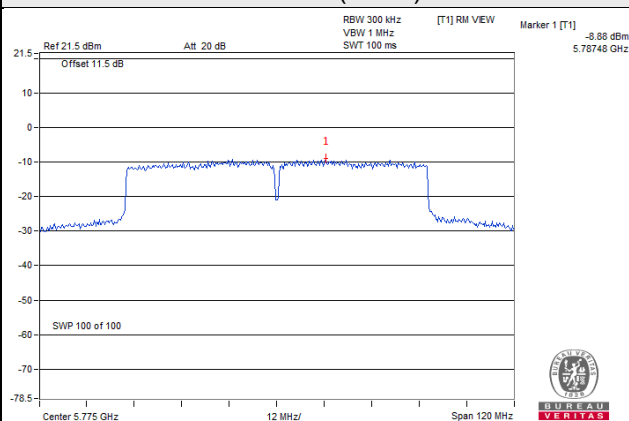
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



2TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 2	Chain 3				
36	5180	3.16	4.19	0.22	6.94	14.24	Pass
40	5200	5.31	6.52	0.22	9.19	14.24	Pass
48	5240	3.67	4.32	0.22	7.24	14.24	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.76\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(8.76-6) = 14.24\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 2	Chain 3				
36	5180	2.31	3.06	0.23	5.94	14.24	Pass
40	5200	5.10	5.91	0.23	8.76	14.24	Pass
48	5240	3.34	3.94	0.23	6.89	14.24	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.76\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(8.76-6) = 14.24\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 2	Chain 3				
38	5190	-2.22	-1.14	0.44	1.80	14.24	Pass
46	5230	1.19	2.23	0.44	5.19	14.24	Pass

Note:

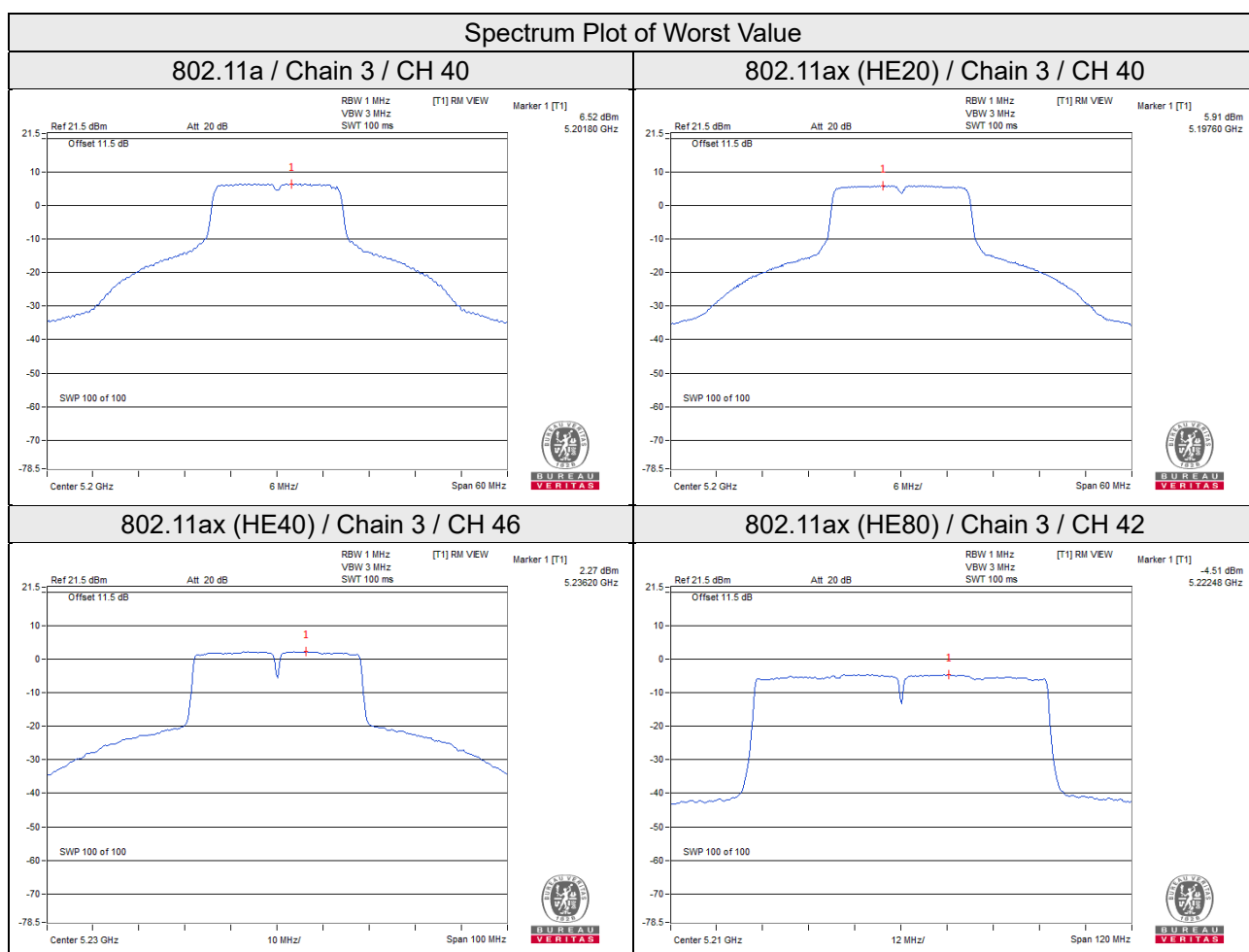
- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.76\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(8.76-6) = 14.24\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 2	Chain 3				
42	5210	-4.62	-4.61	0.35	-1.26	14.24	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.76\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(8.76-6) = 14.24\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.



For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
2	149	5745	-2.42	-0.20	3.01	0.22	3.03	27.24	Pass
	157	5785	-2.40	-0.18	3.01	0.22	3.05	27.24	Pass
	165	5825	-1.72	0.50	3.01	0.22	3.73	27.24	Pass
3	149	5745	-1.96	0.26	3.01	0.22	3.49	27.24	Pass
	157	5785	-1.85	0.37	3.01	0.22	3.60	27.24	Pass
	165	5825	-1.55	0.67	3.01	0.22	3.90	27.24	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.76\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(8.76-6) = 27.24\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
2	149	5745	-3.00	-0.78	3.01	0.23	2.46	27.24	Pass
	157	5785	-2.79	-0.57	3.01	0.23	2.67	27.24	Pass
	165	5825	-2.35	-0.13	3.01	0.23	3.11	27.24	Pass
3	149	5745	-2.43	-0.21	3.01	0.23	3.03	27.24	Pass
	157	5785	-2.17	0.05	3.01	0.23	3.29	27.24	Pass
	165	5825	-1.68	0.54	3.01	0.23	3.78	27.24	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.76\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(8.76-6) = 27.24\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
2	151	5755	-5.62	-3.40	3.01	0.44	0.05	27.24	Pass
	159	5795	-5.46	-3.24	3.01	0.44	0.21	27.24	Pass
3	151	5755	-6.67	-4.45	3.01	0.44	-1.00	27.24	Pass
	159	5795	-6.00	-3.78	3.01	0.44	-0.33	27.24	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.76\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(8.76-6) = 27.24\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

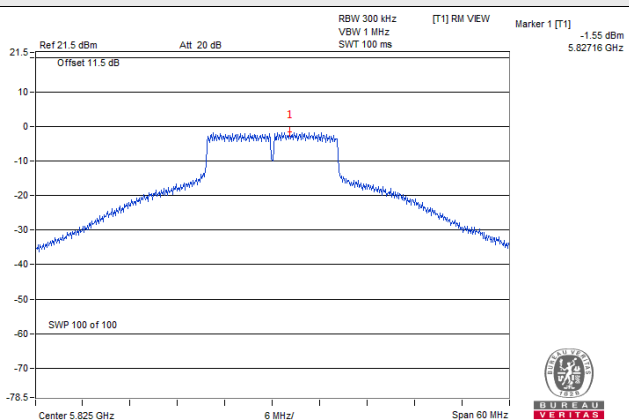
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
2	155	5775	-12.03	-9.81	3.01	0.35	-6.45	27.24	Pass
3	155	5775	-11.50	-9.28	3.01	0.35	-5.92	27.24	Pass

Note:

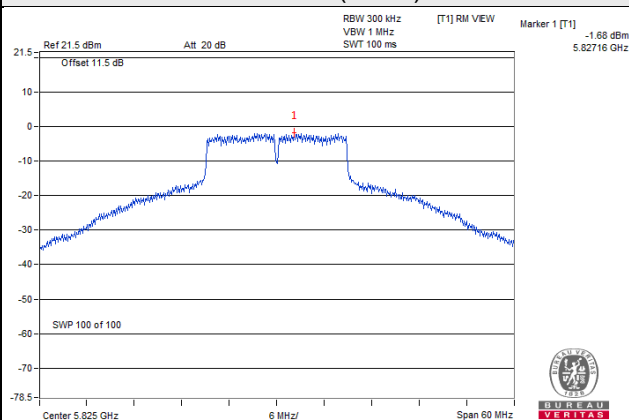
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.76\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(8.76-6) = 27.24\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

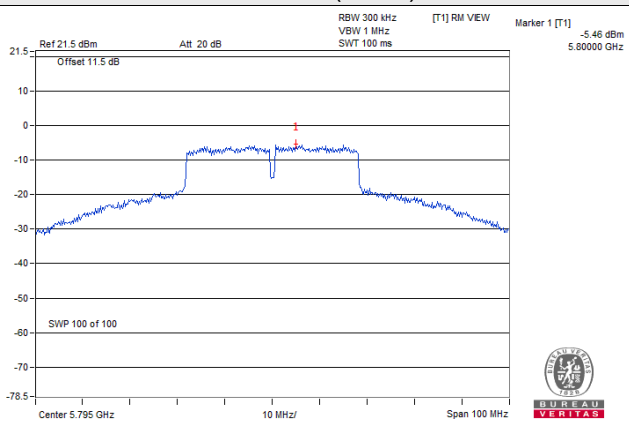
802.11a



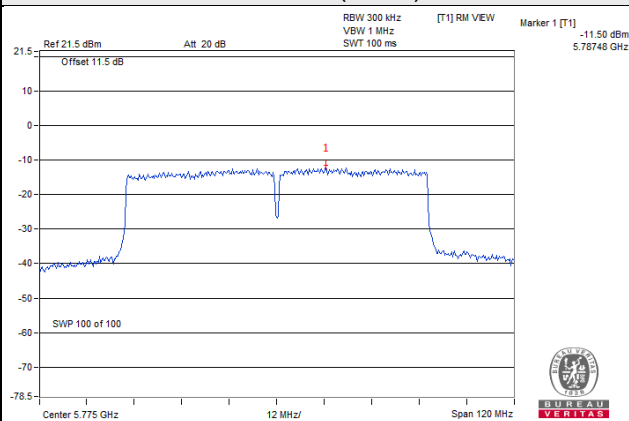
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



3TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3				
36	5180	3.25	3.58	2.42	0.22	8.10	12.59	Pass
40	5200	4.98	5.08	4.19	0.22	9.76	12.59	Pass
48	5240	4.74	4.16	3.82	0.22	9.25	12.59	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 10.41\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(10.41-6) = 12.59\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3				
36	5180	2.07	2.49	1.32	0.23	6.99	12.59	Pass
40	5200	4.45	4.64	3.48	0.23	9.22	12.59	Pass
48	5240	3.44	4.05	3.16	0.23	8.57	12.59	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 10.41\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(10.41-6) = 12.59\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3				
38	5190	-2.49	-2.43	-3.05	0.44	2.56	12.59	Pass
46	5230	0.93	1.62	0.90	0.44	6.37	12.59	Pass

Note:

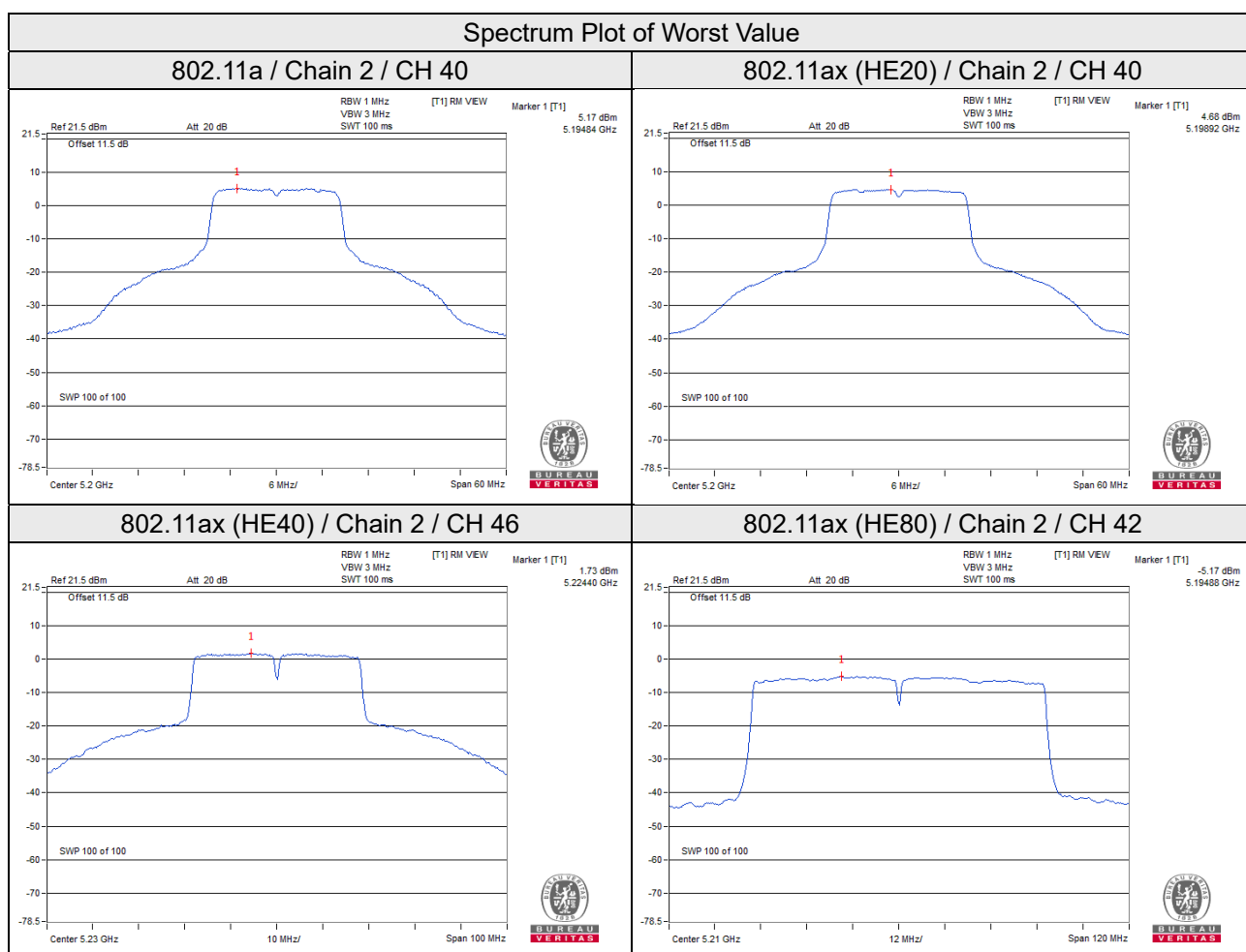
- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 10.41\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(10.41-6) = 12.59\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3				
42	5210	-5.81	-5.17	-5.18	0.35	-0.26	12.59	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 10.41 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $17 - (10.41 - 6) = 12.59 \text{ dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.



For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	149	5745	-1.96	0.26	4.77	0.22	5.25	25.59	Pass
	157	5785	-1.85	0.37	4.77	0.22	5.36	25.59	Pass
	165	5825	-1.55	0.67	4.77	0.22	5.66	25.59	Pass
2	149	5745	-2.28	-0.06	4.77	0.22	4.93	25.59	Pass
	157	5785	-2.10	0.12	4.77	0.22	5.11	25.59	Pass
	165	5825	-1.77	0.45	4.77	0.22	5.44	25.59	Pass
3	149	5745	-2.42	-0.20	4.77	0.22	4.79	25.59	Pass
	157	5785	-2.40	-0.18	4.77	0.22	4.81	25.59	Pass
	165	5825	-1.72	0.50	4.77	0.22	5.49	25.59	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 10.41\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(10.41-6) = 25.59\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	149	5745	-2.43	-0.21	4.77	0.23	4.79	25.59	Pass
	157	5785	-2.17	0.05	4.77	0.23	5.05	25.59	Pass
	165	5825	-1.68	0.54	4.77	0.23	5.54	25.59	Pass
2	149	5745	-2.63	-0.41	4.77	0.23	4.59	25.59	Pass
	157	5785	-2.19	0.03	4.77	0.23	5.03	25.59	Pass
	165	5825	-2.12	0.10	4.77	0.23	5.10	25.59	Pass
3	149	5745	-3.00	-0.78	4.77	0.23	4.22	25.59	Pass
	157	5785	-2.79	-0.57	4.77	0.23	4.43	25.59	Pass
	165	5825	-2.35	-0.13	4.77	0.23	4.87	25.59	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 10.41\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(10.41-6) = 25.59\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	151	5755	-6.67	-4.45	4.77	0.44	0.76	25.59	Pass
	159	5795	-6.00	-3.78	4.77	0.44	1.43	25.59	Pass
2	151	5755	-6.45	-4.23	4.77	0.44	0.98	25.59	Pass
	159	5795	-6.04	-3.82	4.77	0.44	1.39	25.59	Pass
3	151	5755	-5.62	-3.40	4.77	0.44	1.81	25.59	Pass
	159	5795	-5.46	-3.24	4.77	0.44	1.97	25.59	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 10.41\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(10.41-6) = 25.59\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

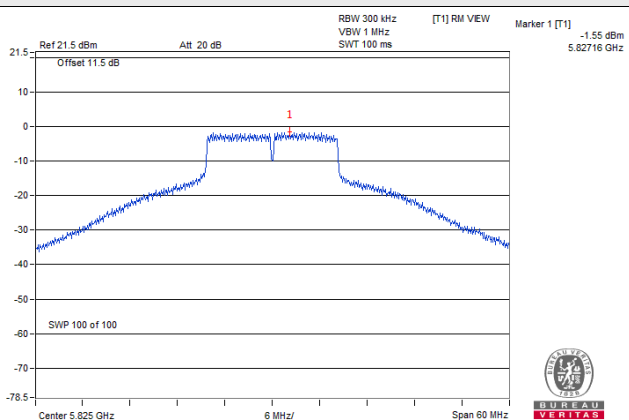
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	155	5775	-12.55	-10.33	4.77	0.35	-5.21	25.59	Pass
2	155	5775	-12.01	-9.79	4.77	0.35	-4.67	25.59	Pass
3	155	5775	-12.26	-10.04	4.77	0.35	-4.92	25.59	Pass

Note:

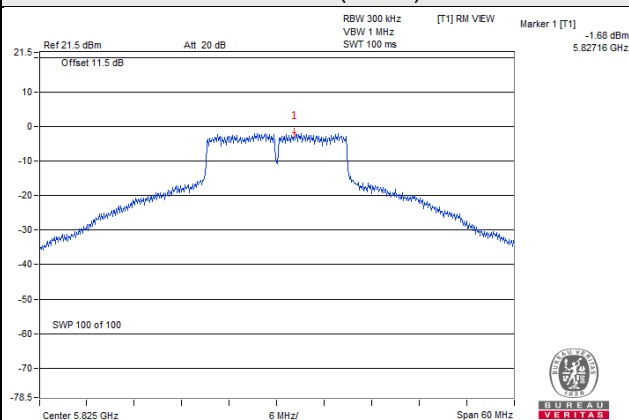
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 10.41\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(10.41-6) = 25.59\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

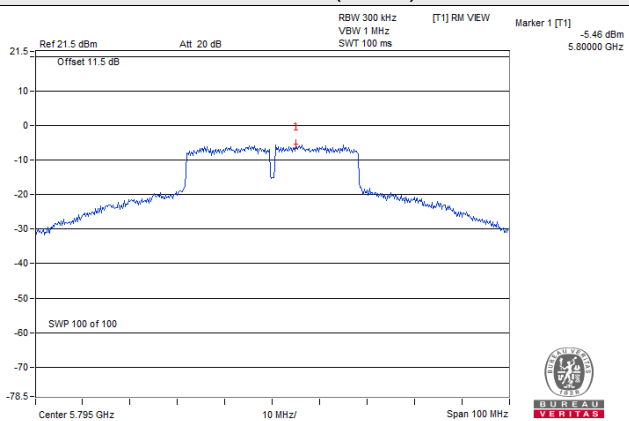
802.11a



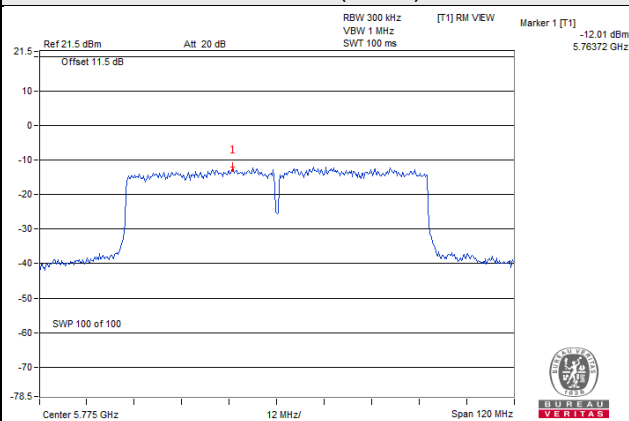
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode C (Internal antenna + Eth7 Radio)

1TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	4.96	0.30	5.26	17.00	Pass
40	5200	7.03	0.30	7.33	17.00	Pass
48	5240	6.31	0.30	6.61	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	4.17	0.27	4.44	17.00	Pass
40	5200	6.64	0.27	6.91	17.00	Pass
48	5240	5.58	0.27	5.85	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-0.81	0.48	-0.33	17.00	Pass
46	5230	2.45	0.48	2.93	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

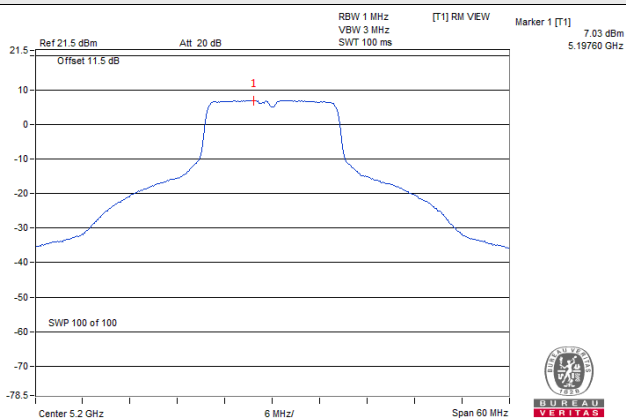
802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-5.05	0.35	-4.70	17.00	Pass

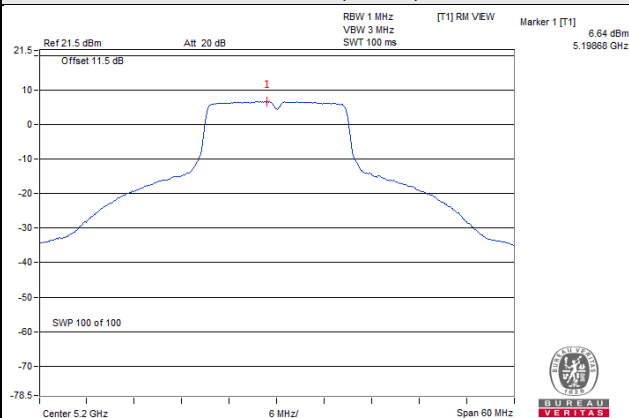
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

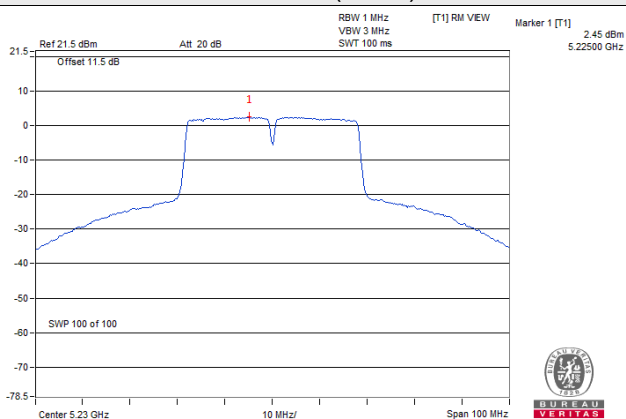
802.11a



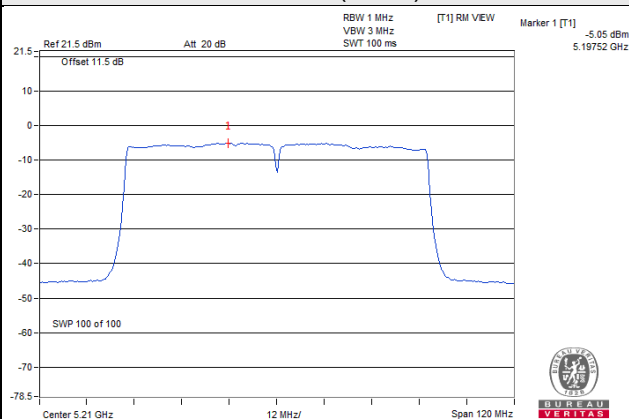
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-0.06	2.16	0.30	2.46	30.00	Pass
157	5785	-0.56	1.66	0.30	1.96	30.00	Pass
165	5825	-1.05	1.17	0.30	1.47	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	0.10	2.32	0.27	2.59	30.00	Pass
157	5785	-0.45	1.77	0.27	2.04	30.00	Pass
165	5825	-1.21	1.01	0.27	1.28	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-3.97	-1.75	0.48	-1.27	30.00	Pass
159	5795	-4.20	-1.98	0.48	-1.50	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

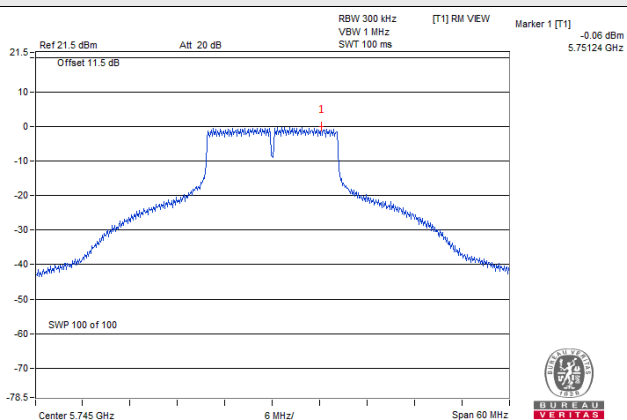
802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-7.71	-5.49	0.35	-5.14	30.00	Pass

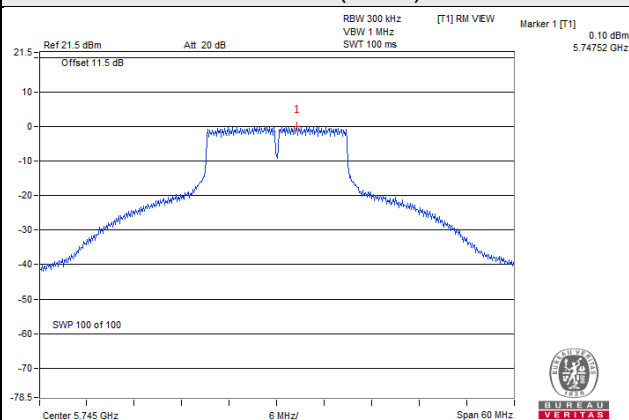
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

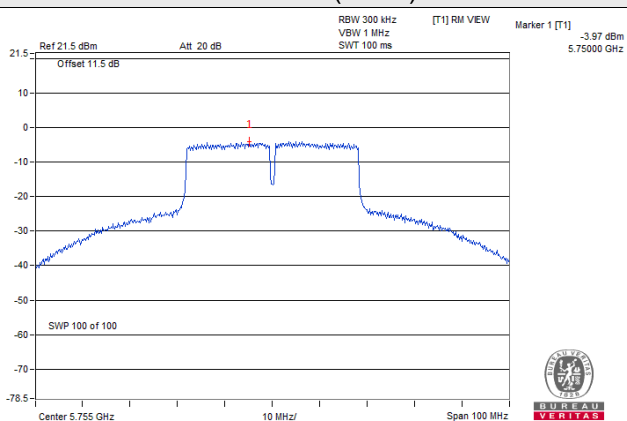
802.11a



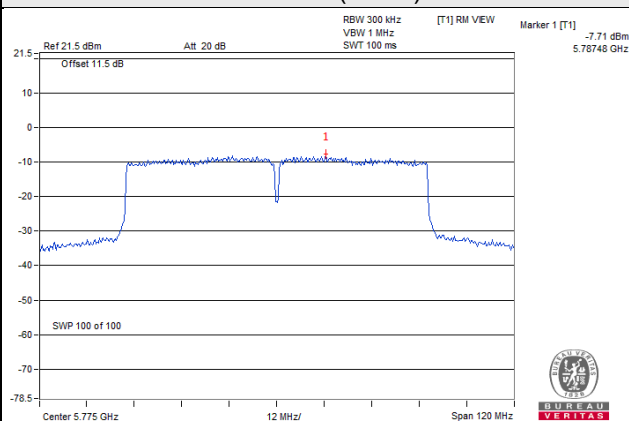
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode E (Internal antenna + Eth8 Radio)

1TX

For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-0.37	1.85	0.29	2.14	30.00	Pass
157	5785	-0.18	2.04	0.29	2.33	30.00	Pass
165	5825	-0.58	1.64	0.29	1.93	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-1.51	0.71	0.10	0.81	30.00	Pass
157	5785	-1.48	0.74	0.10	0.84	30.00	Pass
165	5825	-1.82	0.40	0.10	0.50	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-3.30	-1.08	0.17	-0.91	30.00	Pass
159	5795	-4.01	-1.79	0.17	-1.62	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

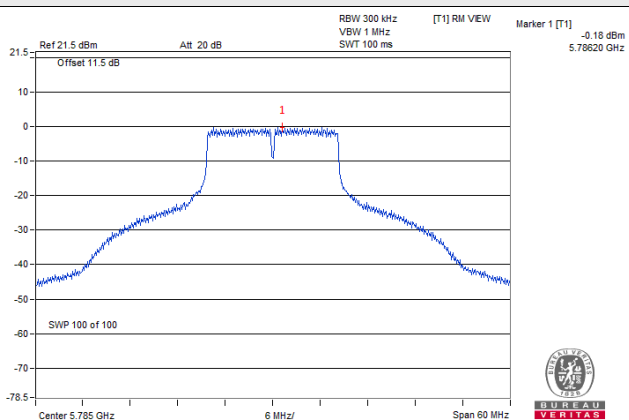
802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-6.32	-4.10	0.35	-3.75	30.00	Pass

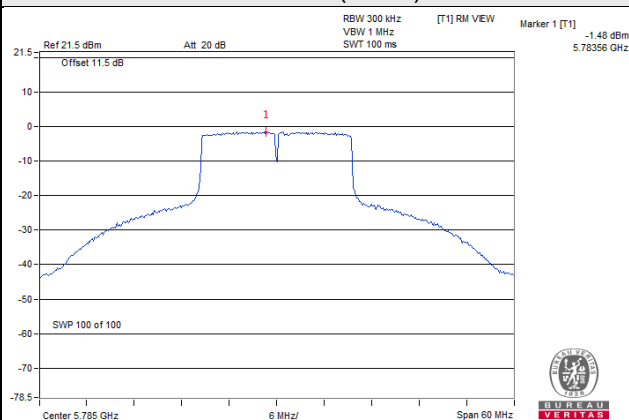
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

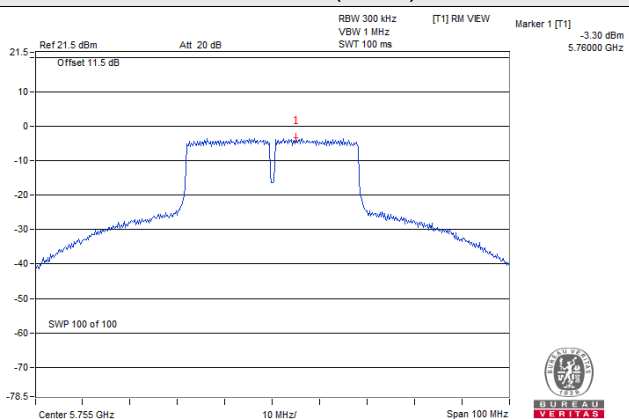
802.11a



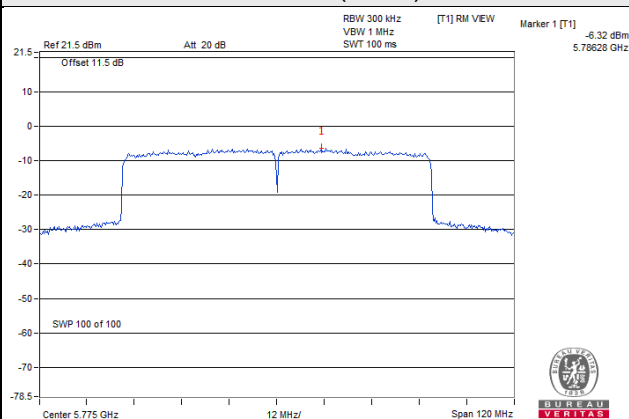
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



2TX

For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	149	5745	-0.31	1.91	3.01	0.29	5.21	27.68	Pass
	157	5785	0.65	2.87	3.01	0.29	6.17	27.68	Pass
	165	5825	-0.75	1.47	3.01	0.29	4.77	27.68	Pass
2	149	5745	-0.37	1.85	3.01	0.29	5.15	27.68	Pass
	157	5785	-0.18	2.04	3.01	0.29	5.34	27.68	Pass
	165	5825	-0.58	1.64	3.01	0.29	4.94	27.68	Pass

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.32\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(8.32-6) = 27.68\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	149	5745	-0.46	1.76	3.01	0.10	4.87	27.68	Pass
	157	5785	-1.34	0.88	3.01	0.10	3.99	27.68	Pass
	165	5825	-2.05	0.17	3.01	0.10	3.28	27.68	Pass
2	149	5745	-1.51	0.71	3.01	0.10	3.82	27.68	Pass
	157	5785	-1.48	0.74	3.01	0.10	3.85	27.68	Pass
	165	5825	-1.82	0.40	3.01	0.10	3.51	27.68	Pass

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.32\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(8.32-6) = 27.68\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	151	5755	-2.06	0.16	3.01	0.17	3.34	27.68	Pass
	159	5795	-3.81	-1.59	3.01	0.17	1.59	27.68	Pass
2	151	5755	-3.30	-1.08	3.01	0.17	2.10	27.68	Pass
	159	5795	-4.01	-1.79	3.01	0.17	1.39	27.68	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.32\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (8.32 - 6) = 27.68\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

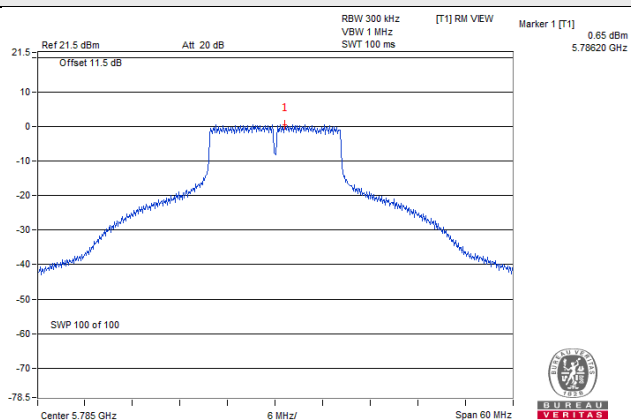
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	155	5775	-7.55	-5.33	3.01	0.35	-1.97	27.68	Pass
2	155	5775	-8.26	-6.04	3.01	0.35	-2.68	27.68	Pass

Note:

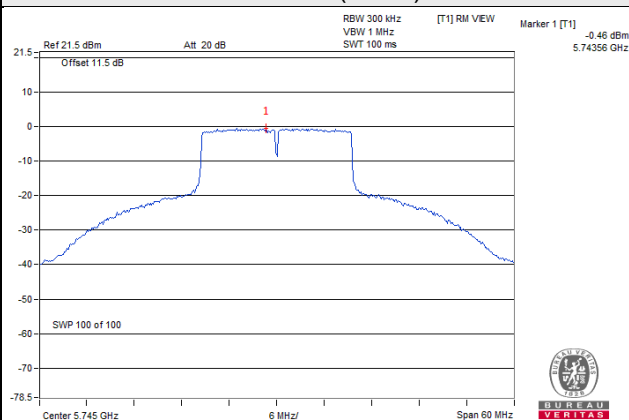
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/2] = 8.32\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (8.32 - 6) = 27.68\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

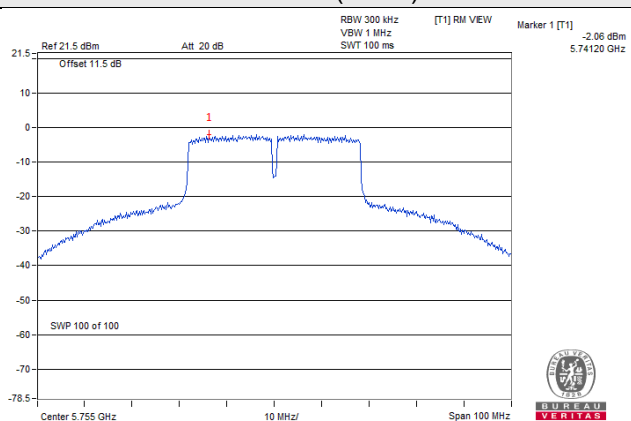
802.11a



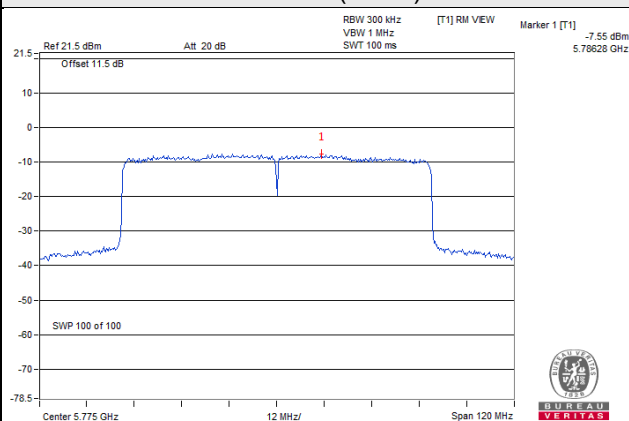
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



3TX

For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	149	5745	-0.31	1.91	4.77	0.29	6.97	26.25	Pass
	157	5785	0.65	2.87	4.77	0.29	7.93	26.25	Pass
	165	5825	-0.75	1.47	4.77	0.29	6.53	26.25	Pass
2	149	5745	0.92	3.14	4.77	0.29	8.20	26.25	Pass
	157	5785	0.92	3.14	4.77	0.29	8.20	26.25	Pass
	165	5825	0.52	2.74	4.77	0.29	7.80	26.25	Pass
3	149	5745	-0.37	1.85	4.77	0.29	6.91	26.25	Pass
	157	5785	-0.18	2.04	4.77	0.29	7.10	26.25	Pass
	165	5825	-0.58	1.64	4.77	0.29	6.70	26.25	Pass

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 9.75\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(9.75-6) = 26.25\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	149	5745	-0.46	1.76	4.77	0.10	6.63	26.25	Pass
	157	5785	-1.34	0.88	4.77	0.10	5.75	26.25	Pass
	165	5825	-2.05	0.17	4.77	0.10	5.04	26.25	Pass
2	149	5745	-0.32	1.90	4.77	0.10	6.77	26.25	Pass
	157	5785	-0.27	1.95	4.77	0.10	6.82	26.25	Pass
	165	5825	-0.58	1.64	4.77	0.10	6.51	26.25	Pass
3	149	5745	-1.51	0.71	4.77	0.10	5.58	26.25	Pass
	157	5785	-1.48	0.74	4.77	0.10	5.61	26.25	Pass
	165	5825	-1.82	0.40	4.77	0.10	5.27	26.25	Pass

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 9.75\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(9.75-6) = 26.25\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	151	5755	-2.06	0.16	4.77	0.17	5.10	26.25	Pass
	159	5795	-3.81	-1.59	4.77	0.17	3.35	26.25	Pass
2	151	5755	-2.78	-0.56	4.77	0.17	4.38	26.25	Pass
	159	5795	-3.56	-1.34	4.77	0.17	3.60	26.25	Pass
3	151	5755	-3.30	-1.08	4.77	0.17	3.86	26.25	Pass
	159	5795	-4.01	-1.79	4.77	0.17	3.15	26.25	Pass

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 9.75\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(9.75-6) = 26.25\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

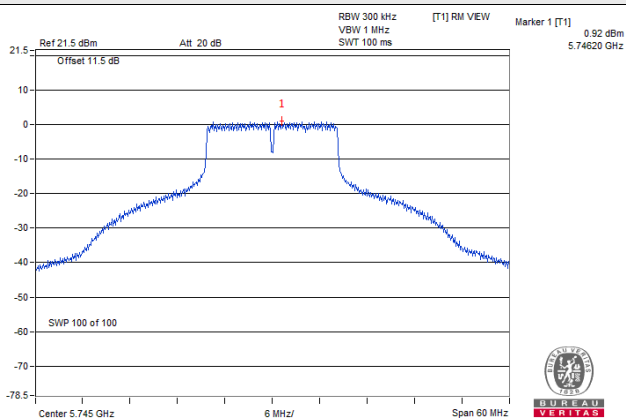
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	155	5775	-9.40	-7.18	4.77	0.35	-2.06	26.25	Pass
2	155	5775	-9.70	-7.48	4.77	0.35	-2.36	26.25	Pass
3	155	5775	-10.29	-8.07	4.77	0.35	-2.95	26.25	Pass

Note:

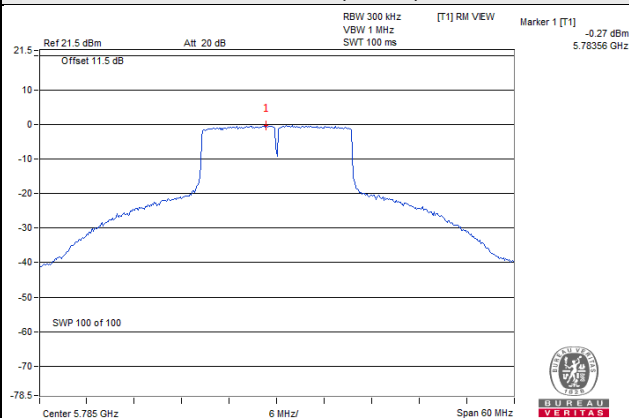
- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 9.75\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(9.75-6) = 26.25\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

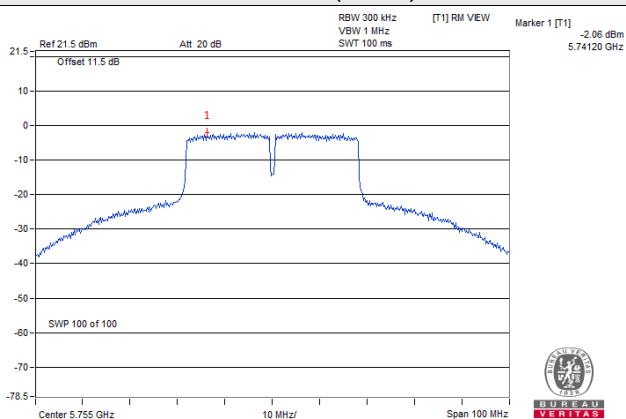
802.11a



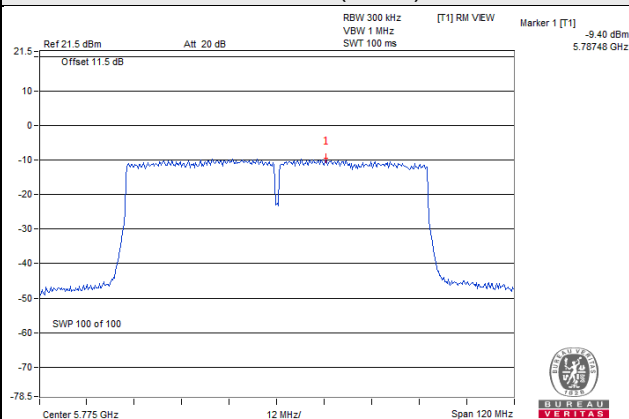
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode G (External antenna - PN: ATS-OO-245-46-4RPSP-36 + Eth6 Radio)

1TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	4.80	0.31	5.11	17.00	Pass
40	5200	7.09	0.31	7.40	17.00	Pass
48	5240	5.33	0.31	5.64	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	3.61	0.23	3.84	17.00	Pass
40	5200	6.80	0.23	7.03	17.00	Pass
48	5240	5.18	0.23	5.41	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-1.03	0.48	-0.55	17.00	Pass
46	5230	2.78	0.48	3.26	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

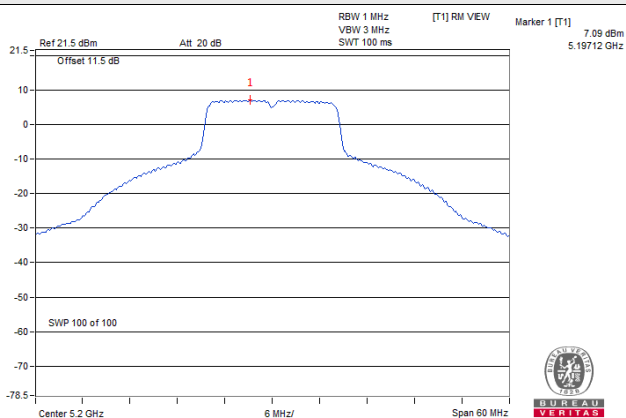
802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-3.76	0.28	-3.48	17.00	Pass

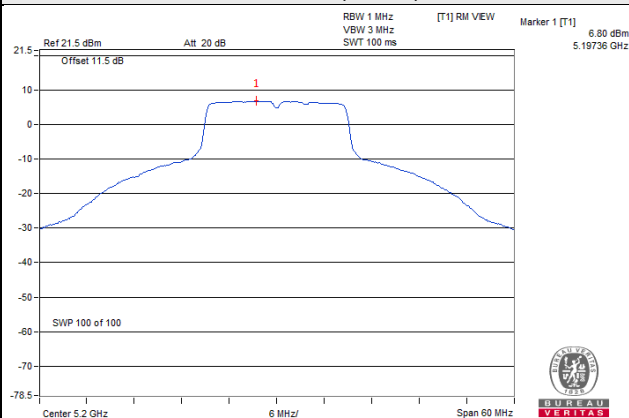
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

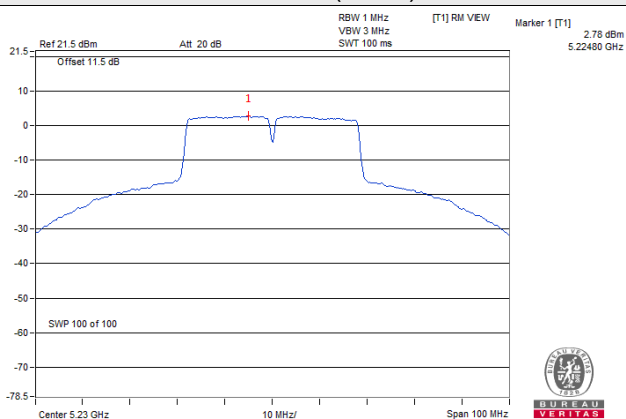
802.11a



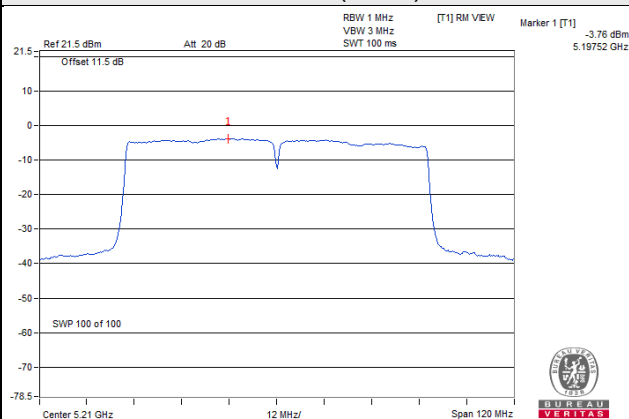
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-1.85	0.37	0.31	0.68	30.00	Pass
157	5785	-1.88	0.34	0.31	0.65	30.00	Pass
165	5825	-2.07	0.15	0.31	0.46	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-1.90	0.32	0.23	0.55	30.00	Pass
157	5785	-2.03	0.19	0.23	0.42	30.00	Pass
165	5825	-1.49	0.73	0.23	0.96	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-4.58	-2.36	0.48	-1.88	30.00	Pass
159	5795	-4.12	-1.90	0.48	-1.42	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

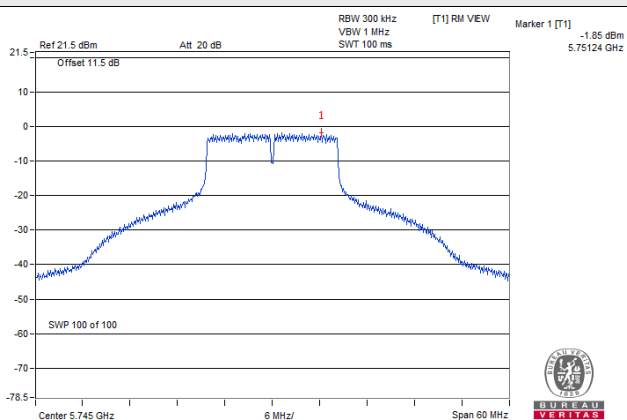
802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-7.44	-5.22	0.28	-4.94	30.00	Pass

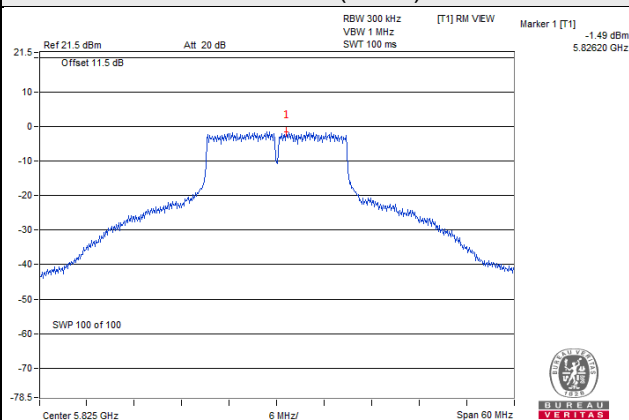
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

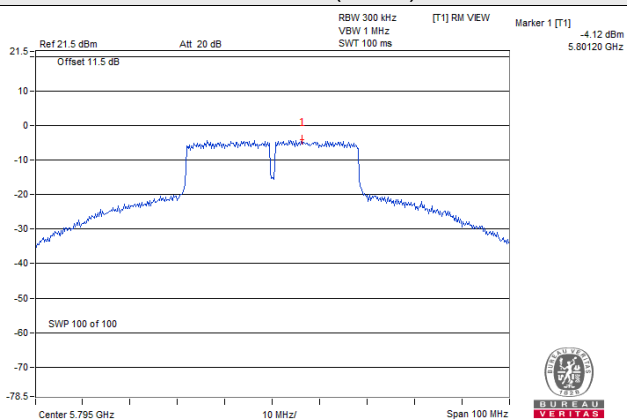
802.11a



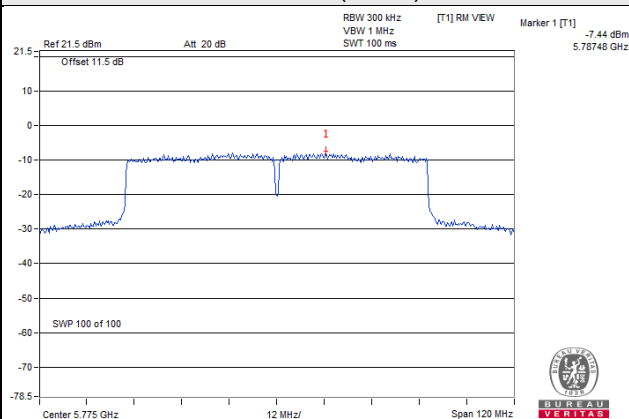
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



2TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 1	Chain 2				
36	5180	4.45	3.98	0.31	7.54	13.99	Pass
40	5200	7.15	6.72	0.31	10.26	13.99	Pass
48	5240	6.05	5.83	0.31	9.26	13.99	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $6\text{dBi} + 10\log(2) = 9.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(9.01-6) = 13.99\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 1	Chain 2				
36	5180	3.43	3.08	0.23	6.50	13.99	Pass
40	5200	6.75	6.38	0.23	9.81	13.99	Pass
48	5240	5.70	4.98	0.23	8.60	13.99	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $6\text{dBi} + 10\log(2) = 9.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(9.01-6) = 13.99\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 1	Chain 2				
38	5190	-1.43	-2.06	0.48	1.76	13.99	Pass
46	5230	2.71	2.13	0.48	5.92	13.99	Pass

Note:

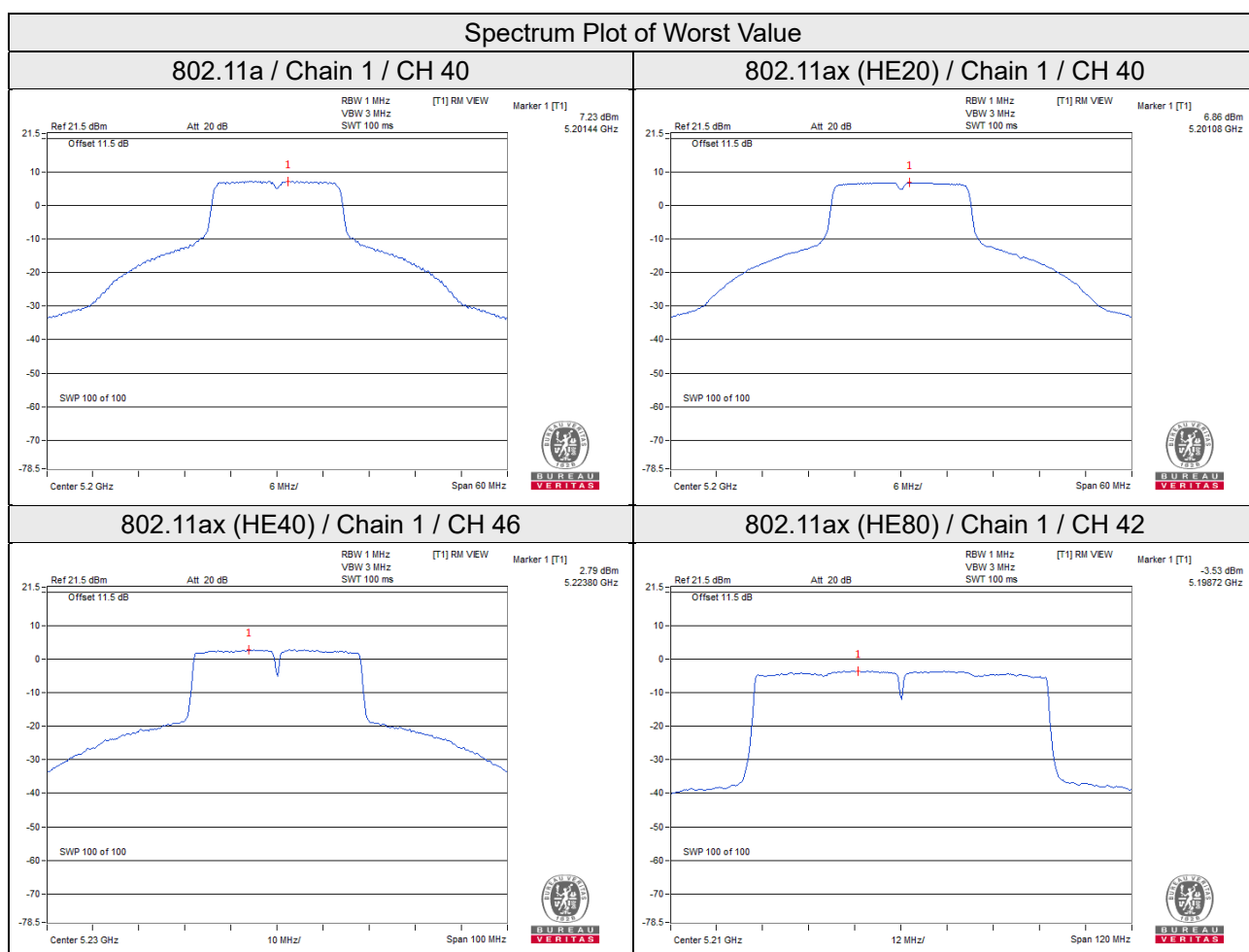
- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $6\text{dBi} + 10\log(2) = 9.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(9.01-6) = 13.99\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 1	Chain 2				
42	5210	-3.53	-4.33	0.28	-0.62	13.99	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $6\text{dBi} + 10\log(2) = 9.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(9.01-6) = 13.99\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.



For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	149	5745	-0.84	1.38	3.01	0.31	4.70	26.99	Pass
	157	5785	-0.67	1.55	3.01	0.31	4.87	26.99	Pass
	165	5825	-1.76	0.46	3.01	0.31	3.78	26.99	Pass
2	149	5745	-1.85	0.37	3.01	0.31	3.69	26.99	Pass
	157	5785	-1.88	0.34	3.01	0.31	3.66	26.99	Pass
	165	5825	-2.07	0.15	3.01	0.31	3.47	26.99	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $6\text{dBi} + 10\log(2) = 9.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(9.01-6) = 26.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	149	5745	-1.16	1.06	3.01	0.23	4.30	26.99	Pass
	157	5785	-1.00	1.22	3.01	0.23	4.46	26.99	Pass
	165	5825	-1.55	0.67	3.01	0.23	3.91	26.99	Pass
2	149	5745	-1.90	0.32	3.01	0.23	3.56	26.99	Pass
	157	5785	-2.03	0.19	3.01	0.23	3.43	26.99	Pass
	165	5825	-1.49	0.73	3.01	0.23	3.97	26.99	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $6\text{dBi} + 10\log(2) = 9.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(9.01-6) = 26.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	151	5755	-4.66	-2.44	3.01	0.48	1.05	26.99	Pass
	159	5795	-3.42	-1.20	3.01	0.48	2.29	26.99	Pass
2	151	5755	-4.58	-2.36	3.01	0.48	1.13	26.99	Pass
	159	5795	-4.12	-1.90	3.01	0.48	1.59	26.99	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = 6dBi + 10log(2) = 9.01dBi > 6dBi, so the power density limit shall be reduced to 30-(9.01-6) = 26.99dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

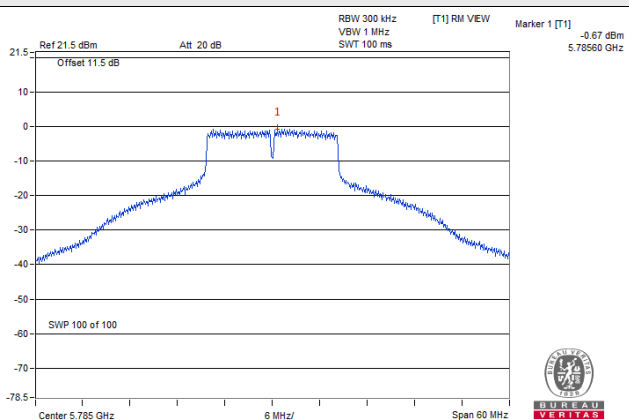
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
1	155	5775	-10.38	-8.16	3.01	0.28	-4.87	26.99	Pass
2	155	5775	-10.78	-8.56	3.01	0.28	-5.27	26.99	Pass

Note:

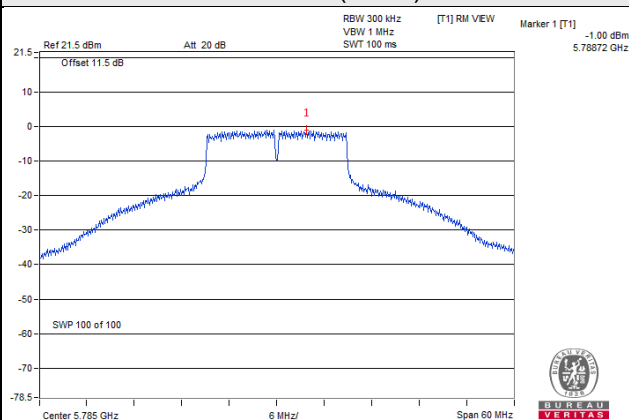
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = 6dBi + 10log(2) = 9.01dBi > 6dBi, so the power density limit shall be reduced to 30-(9.01-6) = 26.99dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

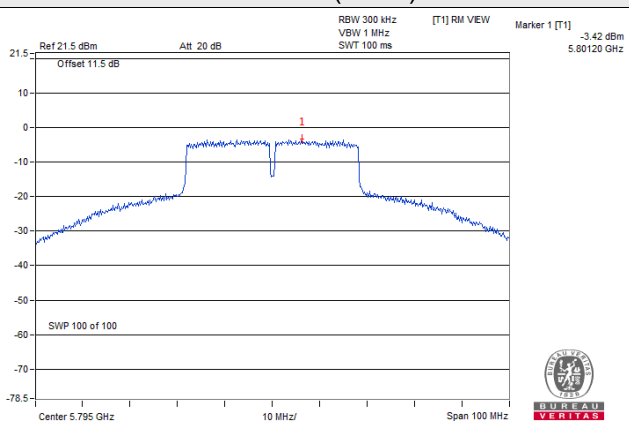
802.11a



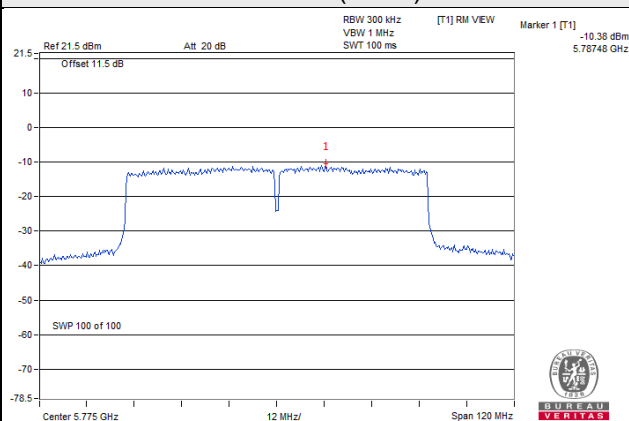
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



3TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
36	5180	2.32	4.14	3.56	0.48	8.66	12.23	Pass
40	5200	4.00	4.98	5.21	0.48	10.01	12.23	Pass
48	5240	3.35	4.71	4.87	0.48	9.61	12.23	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (10.77 - 6) = 12.23\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
36	5180	2.56	3.02	2.32	0.29	7.70	12.23	Pass
40	5200	5.29	5.97	4.96	0.29	10.49	12.23	Pass
48	5240	4.88	5.36	4.82	0.29	10.09	12.23	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (10.77 - 6) = 12.23\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
38	5190	-2.66	-2.10	-2.70	0.24	2.53	12.23	Pass
46	5230	1.81	2.49	1.45	0.24	6.95	12.23	Pass

Note:

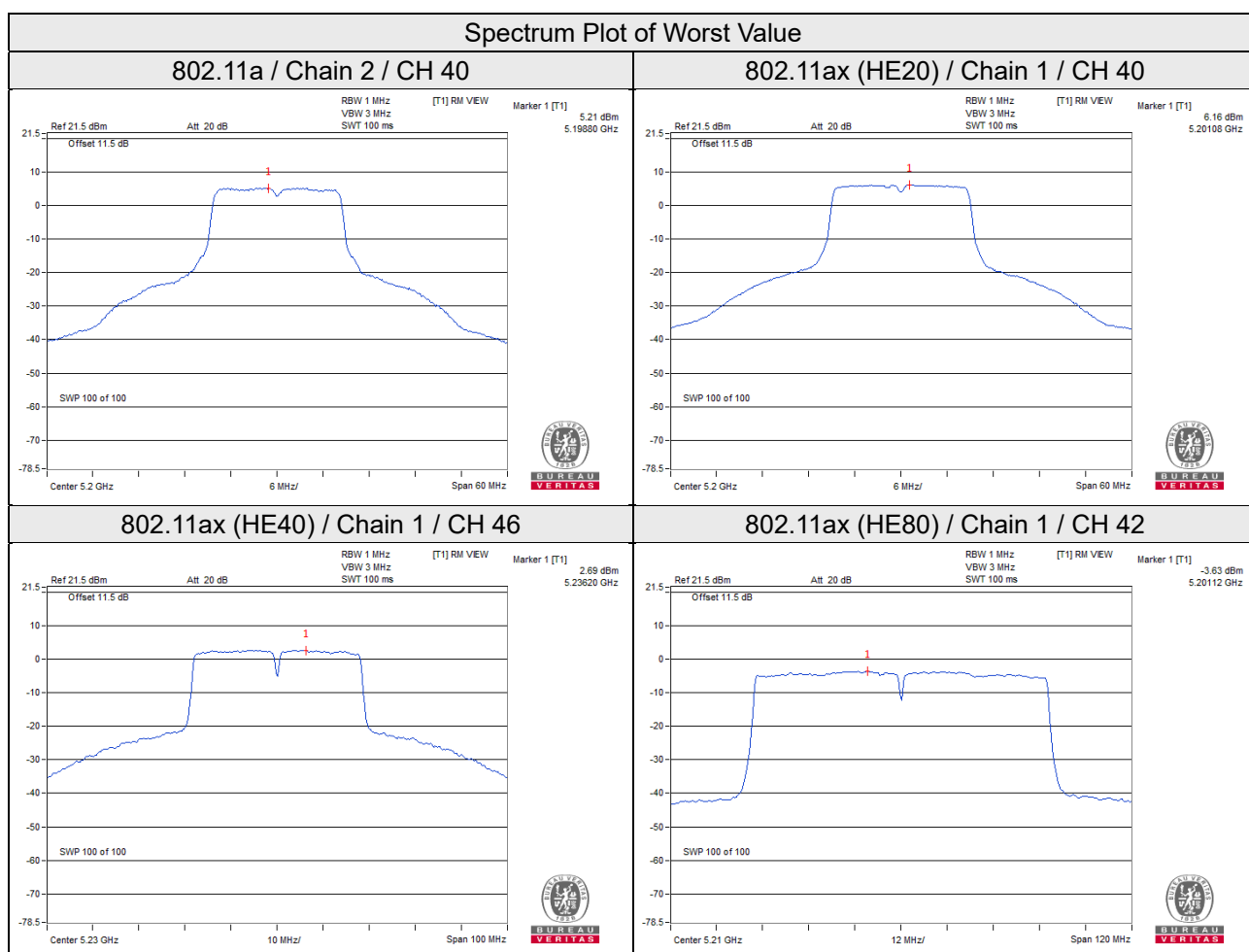
- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (10.77 - 6) = 12.23\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
42	5210	-4.51	-3.68	-4.88	0.33	0.77	12.23	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (10.77 - 6) = 12.23\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.



For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-1.85	0.37	4.77	0.48	5.62	25.23	Pass
	157	5785	-1.88	0.34	4.77	0.48	5.59	25.23	Pass
	165	5825	-2.90	-0.68	4.77	0.48	4.57	25.23	Pass
1	149	5745	-0.84	1.38	4.77	0.48	6.63	25.23	Pass
	157	5785	-0.67	1.55	4.77	0.48	6.80	25.23	Pass
	165	5825	-1.35	0.87	4.77	0.48	6.12	25.23	Pass
2	149	5745	-1.02	1.20	4.77	0.48	6.45	25.23	Pass
	157	5785	-0.67	1.55	4.77	0.48	6.80	25.23	Pass
	165	5825	-1.51	0.71	4.77	0.48	5.96	25.23	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (10.77 - 6) = 25.23\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-1.90	0.32	4.77	0.29	5.38	25.23	Pass
	157	5785	-2.03	0.19	4.77	0.29	5.25	25.23	Pass
	165	5825	-2.56	-0.34	4.77	0.29	4.72	25.23	Pass
1	149	5745	-1.16	1.06	4.77	0.29	6.12	25.23	Pass
	157	5785	-1.00	1.22	4.77	0.29	6.28	25.23	Pass
	165	5825	-1.15	1.07	4.77	0.29	6.13	25.23	Pass
2	149	5745	-0.94	1.28	4.77	0.29	6.34	25.23	Pass
	157	5785	-0.73	1.49	4.77	0.29	6.55	25.23	Pass
	165	5825	-0.97	1.25	4.77	0.29	6.31	25.23	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (10.77 - 6) = 25.23\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-4.58	-2.36	4.77	0.24	2.65	25.23	Pass
	159	5795	-5.50	-3.28	4.77	0.24	1.73	25.23	Pass
1	151	5755	-4.69	-2.47	4.77	0.24	2.54	25.23	Pass
	159	5795	-5.12	-2.90	4.77	0.24	2.11	25.23	Pass
2	151	5755	-5.10	-2.88	4.77	0.24	2.13	25.23	Pass
	159	5795	-5.60	-3.38	4.77	0.24	1.63	25.23	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (10.77 - 6) = 25.23\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

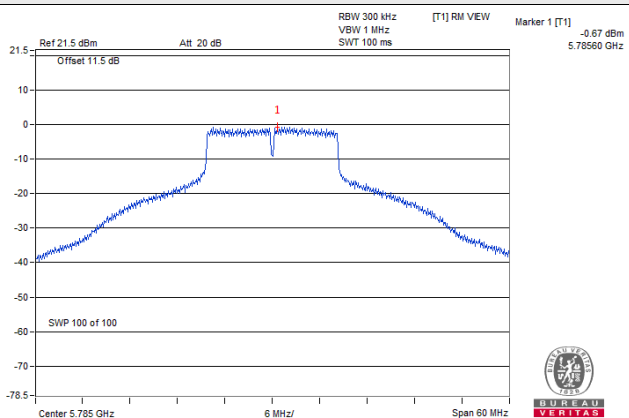
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-13.15	-10.93	4.77	0.33	-5.83	25.23	Pass
1	155	5775	-11.20	-8.98	4.77	0.33	-3.88	25.23	Pass
2	155	5775	-12.86	-10.64	4.77	0.33	-5.54	25.23	Pass

Note:

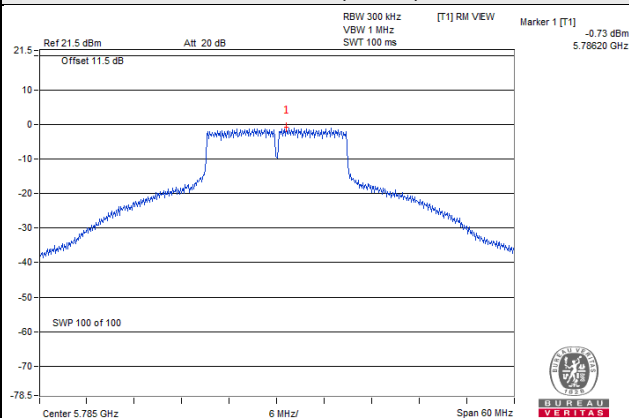
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $6\text{dBi} + 10\log(3) = 10.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (10.77 - 6) = 25.23\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

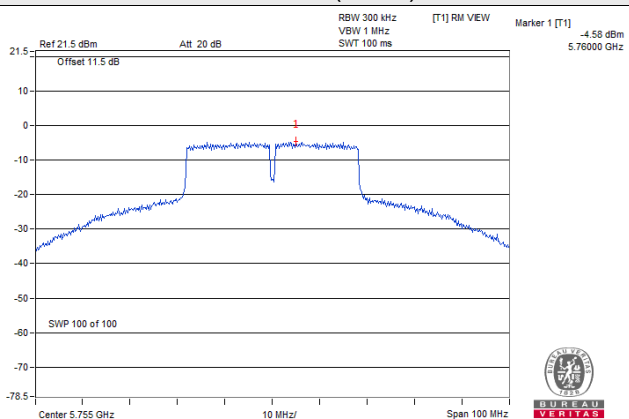
802.11a



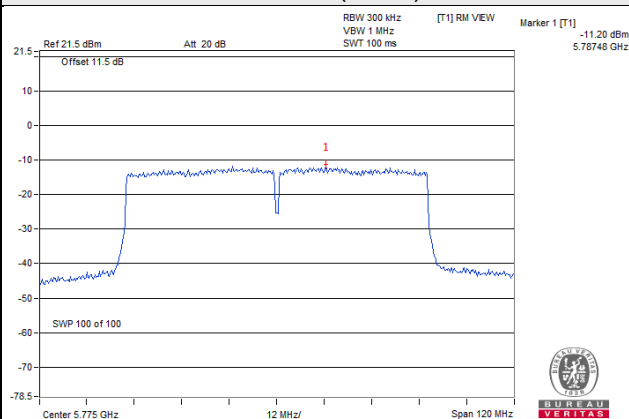
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode I (External antenna – PN: ATS-OO-245-46-4RPSP-36 + Eth7 Radio)

1TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	7.65	0.24	7.89	17.00	Pass
40	5200	9.58	0.24	9.82	17.00	Pass
48	5240	7.62	0.24	7.86	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	6.31	0.19	6.50	17.00	Pass
40	5200	8.31	0.19	8.50	17.00	Pass
48	5240	6.81	0.19	7.00	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	1.52	0.18	1.70	17.00	Pass
46	5230	5.11	0.18	5.29	17.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

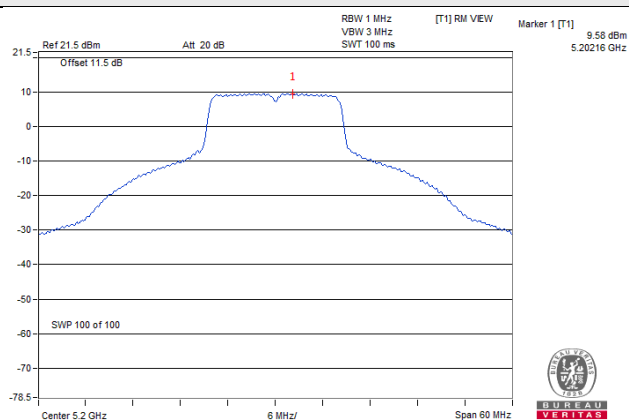
802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-1.00	0.42	-0.58	17.00	Pass

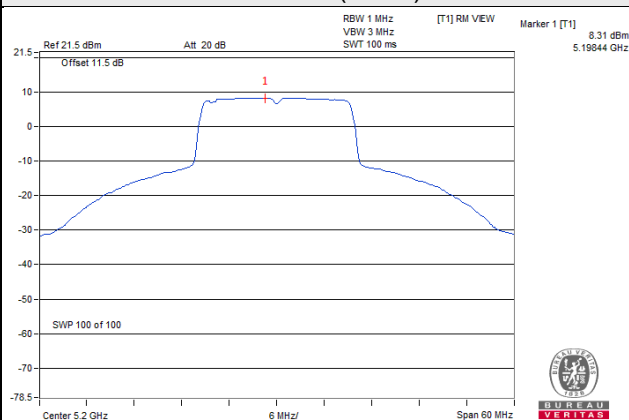
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

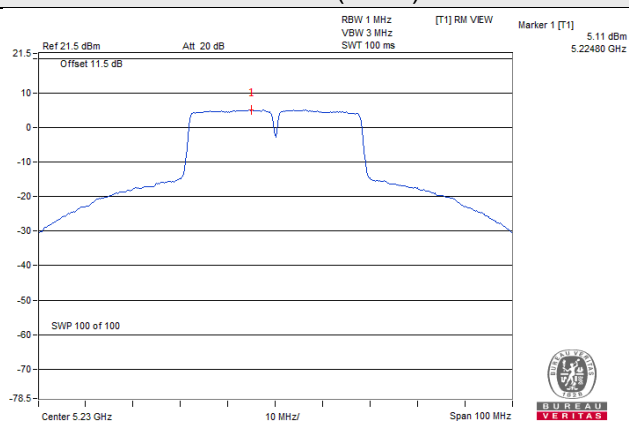
802.11a



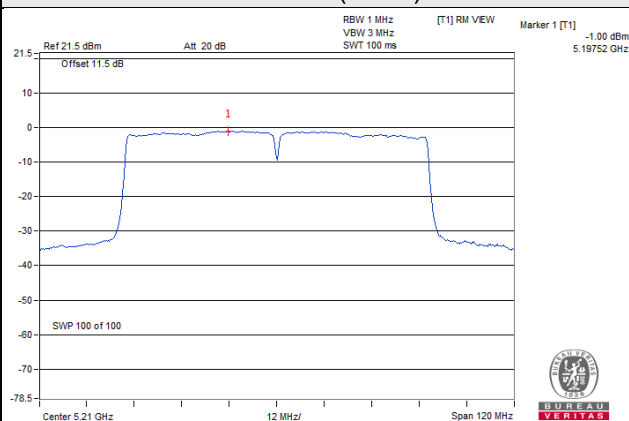
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	1.42	3.64	0.24	3.88	30.00	Pass
157	5785	0.98	3.20	0.24	3.44	30.00	Pass
165	5825	0.53	2.75	0.24	2.99	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	0.27	2.49	0.19	2.68	30.00	Pass
157	5785	0.24	2.46	0.19	2.65	30.00	Pass
165	5825	-0.49	1.73	0.19	1.92	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-2.62	-0.40	0.18	-0.22	30.00	Pass
159	5795	-2.74	-0.52	0.18	-0.34	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

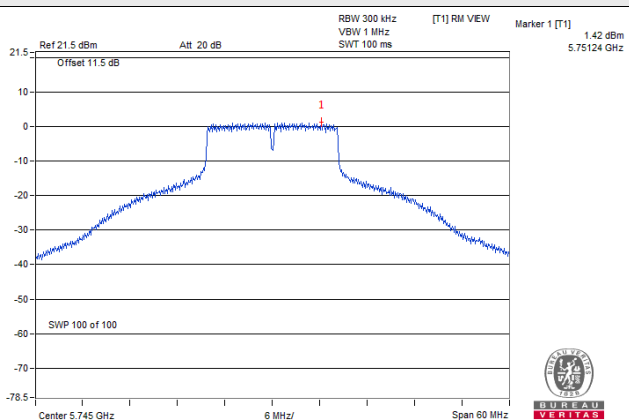
802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-6.61	-4.39	0.42	-3.97	30.00	Pass

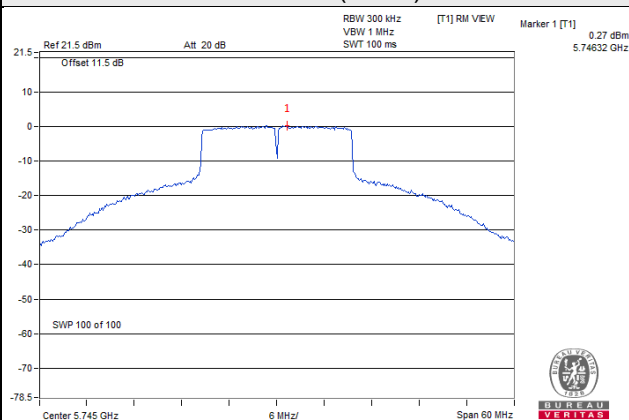
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

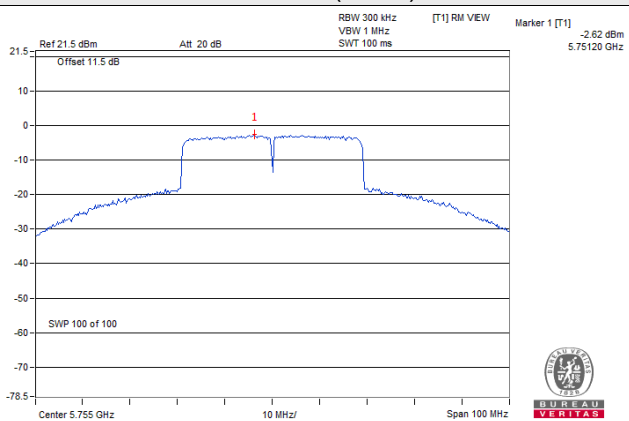
802.11a



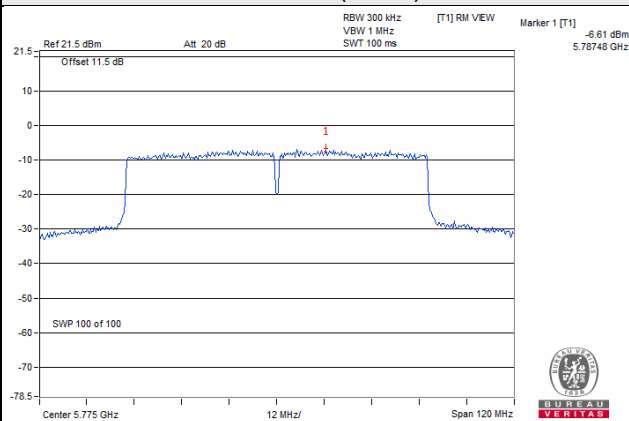
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode K (External antenna – PN: ATS-OP-245-810-4RPSP-36 + Eth6 Radio)

1TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	4.72	0.32	5.04	13.00	Pass
40	5200	7.30	0.32	7.62	13.00	Pass
48	5240	5.15	0.32	5.47	13.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $17-(10-6) = 13.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	3.75	0.23	3.98	13.00	Pass
40	5200	6.59	0.23	6.82	13.00	Pass
48	5240	4.81	0.23	5.04	13.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $17-(10-6) = 13.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-0.62	0.45	-0.17	13.00	Pass
46	5230	2.62	0.45	3.07	13.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $17-(10-6) = 13.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

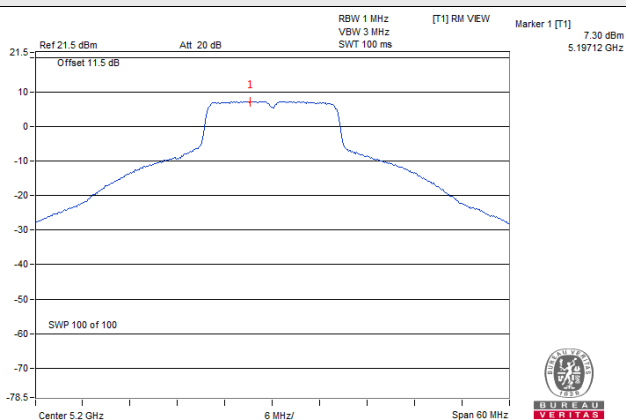
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-3.57	0.27	-3.30	13.00	Pass

Note:

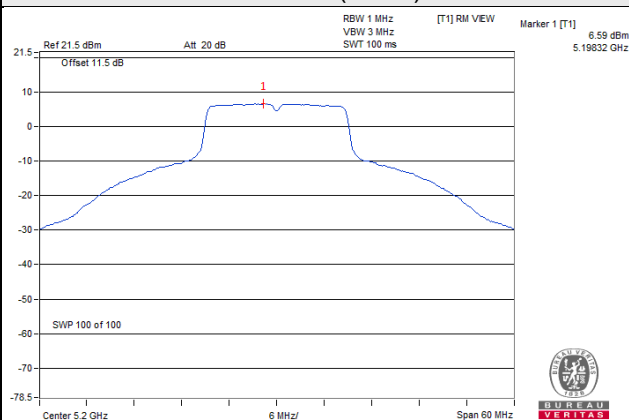
1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $17-(10-6) = 13.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

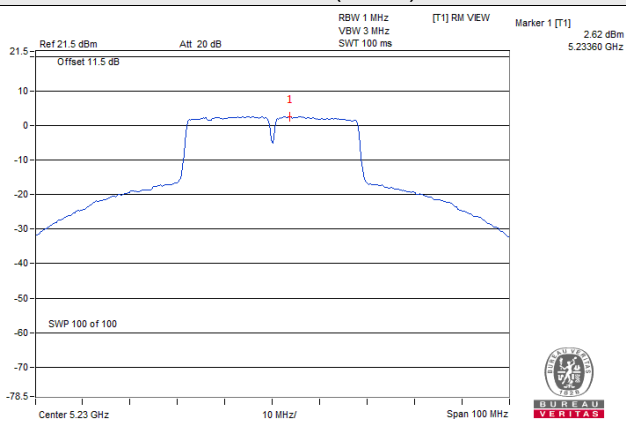
802.11a



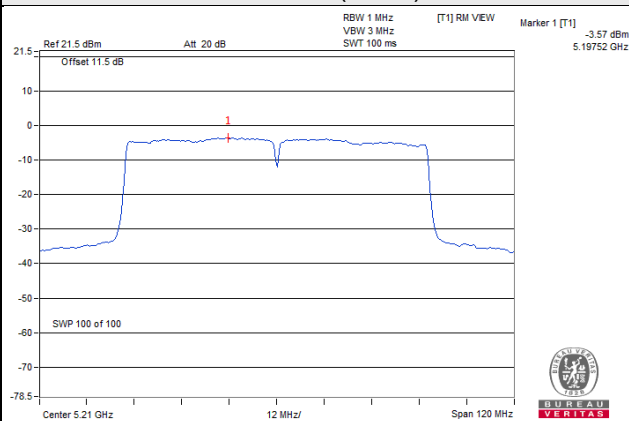
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-2.11	0.11	0.32	0.43	26.00	Pass
157	5785	-2.17	0.05	0.32	0.37	26.00	Pass
165	5825	-2.42	-0.20	0.32	0.12	26.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $30-(10-6) = 26.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-2.23	-0.01	0.23	0.22	26.00	Pass
157	5785	-2.74	-0.52	0.23	-0.29	26.00	Pass
165	5825	-2.62	-0.40	0.23	-0.17	26.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $30-(10-6) = 26.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-5.47	-3.25	0.45	-2.80	26.00	Pass
159	5795	-5.42	-3.20	0.45	-2.75	26.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $30-(10-6) = 26.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

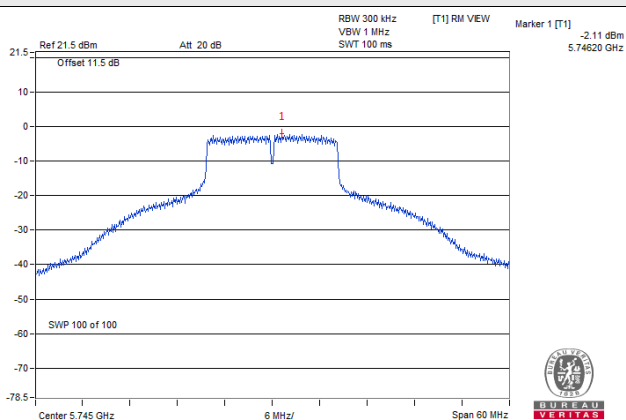
Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-7.56	-5.34	0.27	-5.07	26.00	Pass

Note:

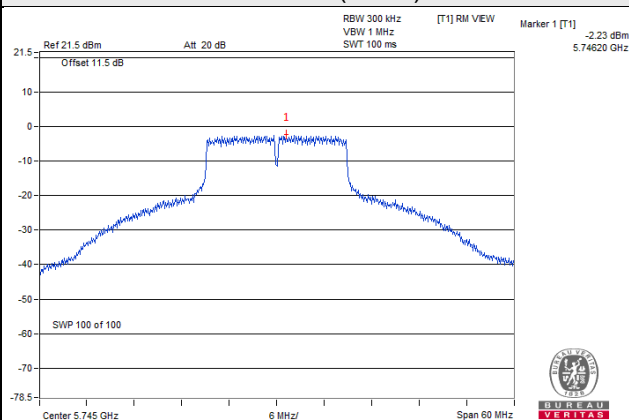
1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $30-(10-6) = 26.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

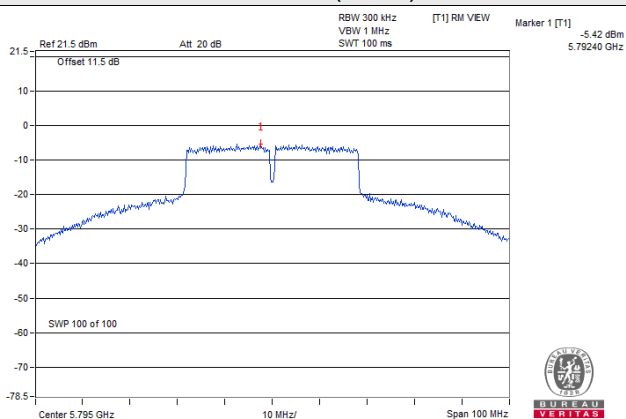
802.11a



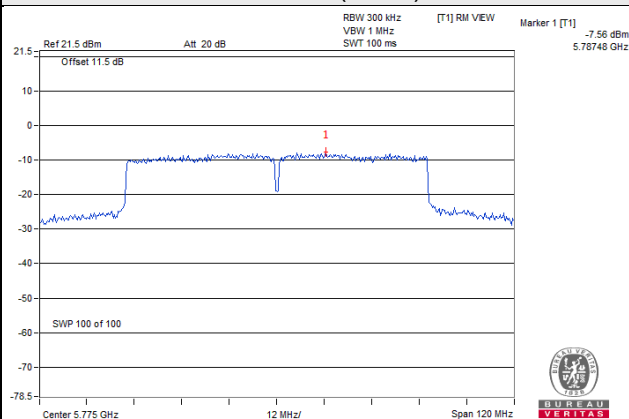
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



2TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	4.39	4.50	0.32	7.78	9.99	Pass
40	5200	6.32	6.28	0.32	9.63	9.99	Pass
48	5240	5.11	5.26	0.32	8.52	9.99	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(13.01-6) = 9.99\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	2.57	3.24	0.23	6.16	9.99	Pass
40	5200	6.20	6.68	0.23	9.69	9.99	Pass
48	5240	4.81	4.74	0.23	8.02	9.99	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(13.01-6) = 9.99\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-1.61	-0.78	0.45	2.28	9.99	Pass
46	5230	2.62	2.90	0.45	6.22	9.99	Pass

Note:

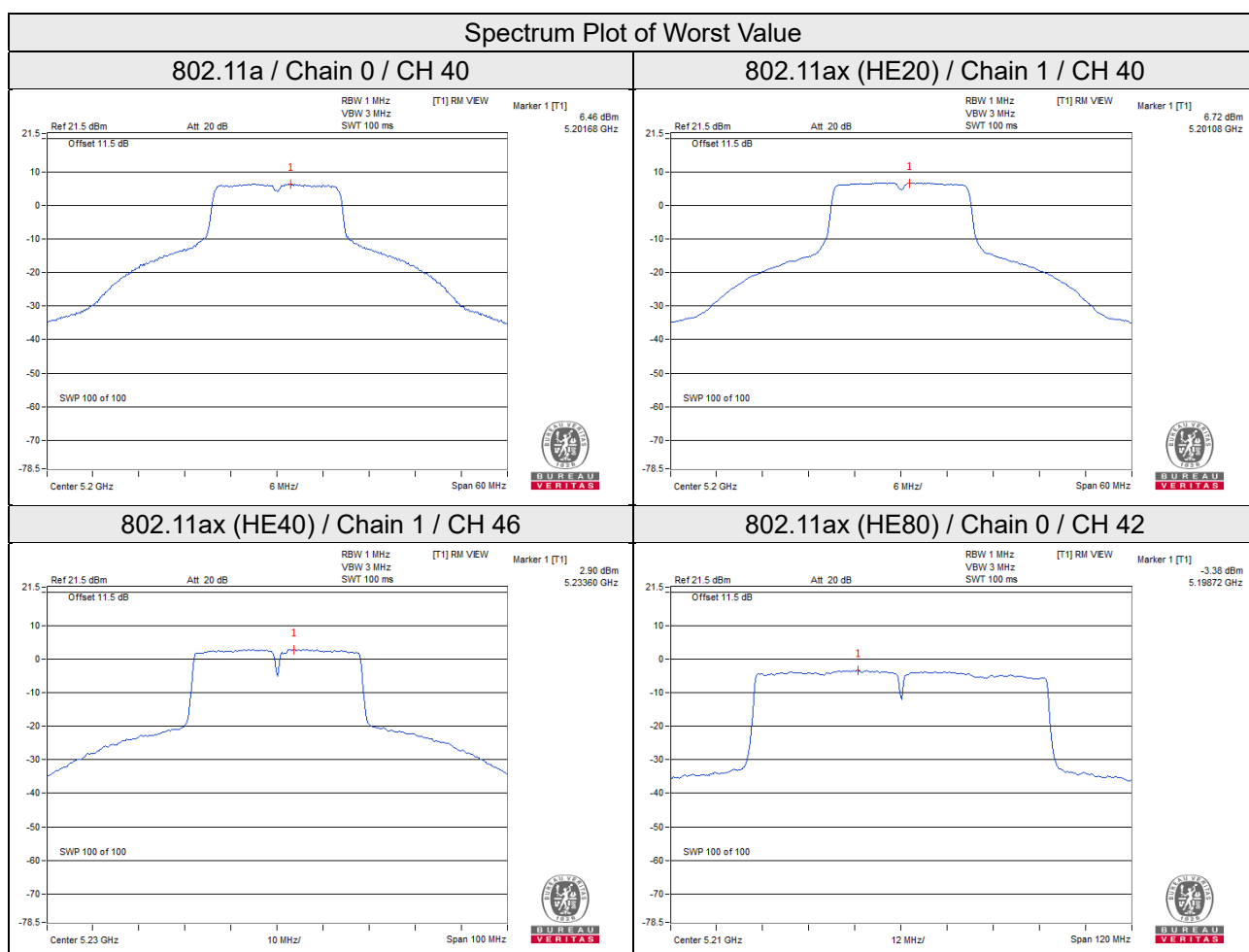
- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(13.01-6) = 9.99\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-3.38	-4.18	0.27	-0.48	9.99	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10dBi + 10log(2) = 13.01dBi > 6dBi, so the power density limit shall be reduced to 17-(13.01-6) = 9.99dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.



For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-2.11	0.11	3.01	0.32	3.44	22.99	Pass
	157	5785	-2.17	0.05	3.01	0.32	3.38	22.99	Pass
	165	5825	-2.42	-0.20	3.01	0.32	3.13	22.99	Pass
1	149	5745	-2.02	0.20	3.01	0.32	3.53	22.99	Pass
	157	5785	-1.49	0.73	3.01	0.32	4.06	22.99	Pass
	165	5825	-1.05	1.17	3.01	0.32	4.50	22.99	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(13.01-6) = 22.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-2.23	-0.01	3.01	0.23	3.23	22.99	Pass
	157	5785	-2.74	-0.52	3.01	0.23	2.72	22.99	Pass
	165	5825	-2.62	-0.40	3.01	0.23	2.84	22.99	Pass
1	149	5745	-2.23	-0.01	3.01	0.23	3.23	22.99	Pass
	157	5785	-2.17	0.05	3.01	0.23	3.29	22.99	Pass
	165	5825	-1.84	0.38	3.01	0.23	3.62	22.99	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(13.01-6) = 22.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-5.47	-3.25	3.01	0.45	0.21	22.99	Pass
	159	5795	-5.42	-3.20	3.01	0.45	0.26	22.99	Pass
1	151	5755	-5.48	-3.26	3.01	0.45	0.20	22.99	Pass
	159	5795	-5.15	-2.93	3.01	0.45	0.53	22.99	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(13.01-6) = 22.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

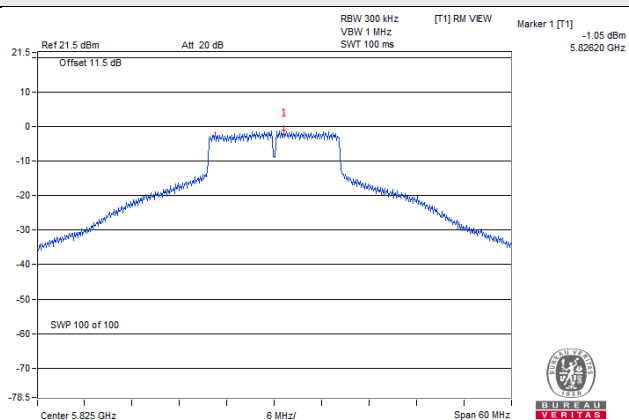
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-7.56	-5.34	3.01	0.27	-2.06	22.99	Pass
1	155	5775	-7.03	-4.81	3.01	0.27	-1.53	22.99	Pass

Note:

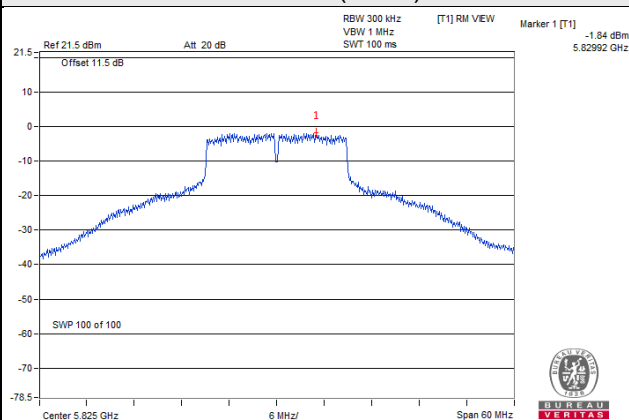
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(13.01-6) = 22.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

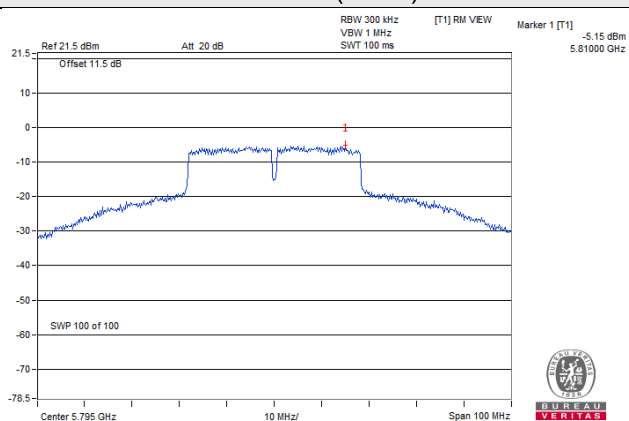
802.11a



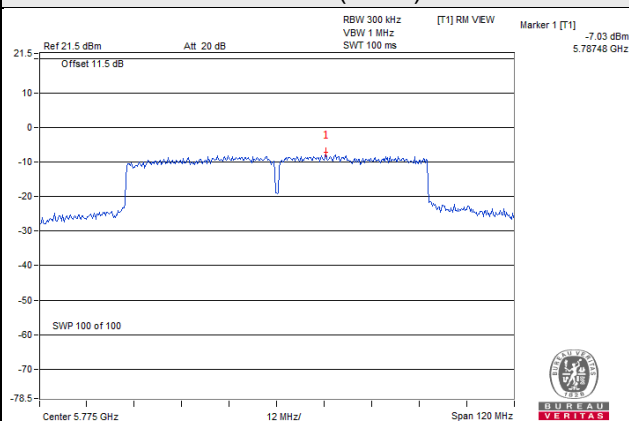
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



3TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
36	5180	2.88	3.20	2.90	0.32	8.09	8.23	Pass
40	5200	3.18	2.79	2.95	0.32	8.07	8.23	Pass
48	5240	3.47	2.81	3.09	0.32	8.22	8.23	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10\text{dBi} + 10\log(3) = 14.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(14.77-6) = 8.23\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
36	5180	1.84	2.26	2.90	0.23	7.36	8.23	Pass
40	5200	2.98	3.21	3.13	0.23	8.11	8.23	Pass
48	5240	3.41	2.79	2.96	0.23	8.06	8.23	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10\text{dBi} + 10\log(3) = 14.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(14.77-6) = 8.23\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
38	5190	-1.45	-0.95	-0.40	0.45	4.31	8.23	Pass
46	5230	1.60	1.62	2.62	0.45	7.19	8.23	Pass

Note:

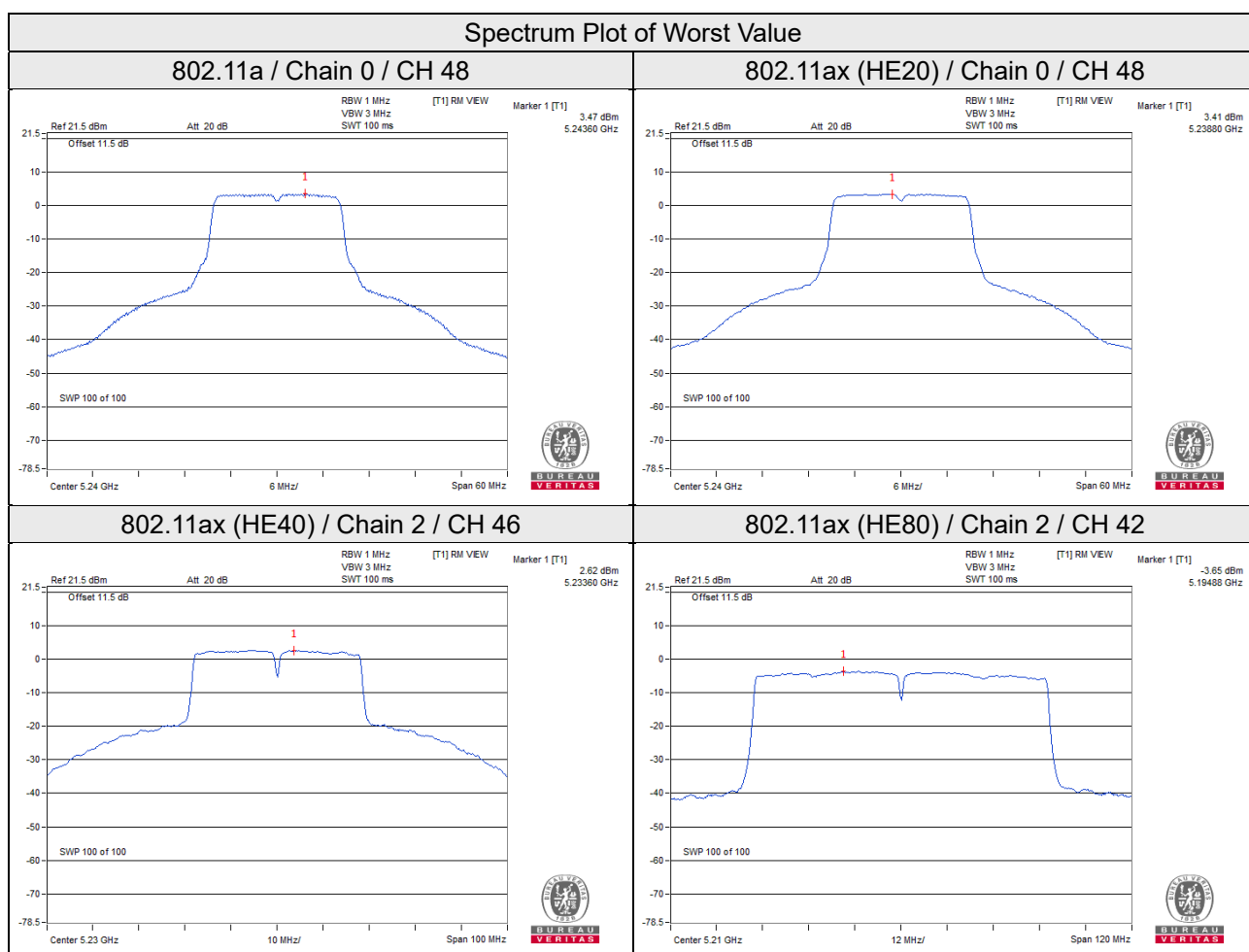
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10\text{dBi} + 10\log(3) = 14.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(14.77-6) = 8.23\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)			Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
42	5210	-4.14	-4.26	-3.68	0.27	1.02	8.23	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10\text{dBi} + 10\log(3) = 14.77\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (14.77 - 6) = 8.23\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.



For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-2.11	0.11	4.77	0.32	5.20	21.23	Pass
	157	5785	-2.17	0.05	4.77	0.32	5.14	21.23	Pass
	165	5825	-2.42	-0.20	4.77	0.32	4.89	21.23	Pass
1	149	5745	-2.02	0.20	4.77	0.32	5.29	21.23	Pass
	157	5785	-1.49	0.73	4.77	0.32	5.82	21.23	Pass
	165	5825	-1.05	1.17	4.77	0.32	6.26	21.23	Pass
2	149	5745	-1.43	0.79	4.77	0.32	5.88	21.23	Pass
	157	5785	-1.32	0.90	4.77	0.32	5.99	21.23	Pass
	165	5825	-1.32	0.90	4.77	0.32	5.99	21.23	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = 10dBi + 10log(3) = 14.77dBi > 6dBi, so the power density limit shall be reduced to 30-(14.77-6) = 21.23dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-2.23	-0.01	4.77	0.23	4.99	21.23	Pass
	157	5785	-2.74	-0.52	4.77	0.23	4.48	21.23	Pass
	165	5825	-2.62	-0.40	4.77	0.23	4.60	21.23	Pass
1	149	5745	-2.23	-0.01	4.77	0.23	4.99	21.23	Pass
	157	5785	-2.17	0.05	4.77	0.23	5.05	21.23	Pass
	165	5825	-1.84	0.38	4.77	0.23	5.38	21.23	Pass
2	149	5745	-1.86	0.36	4.77	0.23	5.36	21.23	Pass
	157	5785	-1.99	0.23	4.77	0.23	5.23	21.23	Pass
	165	5825	-1.84	0.38	4.77	0.23	5.38	21.23	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = 10dBi + 10log(3) = 14.77dBi > 6dBi, so the power density limit shall be reduced to 30-(14.77-6) = 21.23dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-5.47	-3.25	4.77	0.45	1.97	21.23	Pass
	159	5795	-5.42	-3.20	4.77	0.45	2.02	21.23	Pass
1	151	5755	-5.48	-3.26	4.77	0.45	1.96	21.23	Pass
	159	5795	-5.15	-2.93	4.77	0.45	2.29	21.23	Pass
2	151	5755	-6.25	-4.03	4.77	0.45	1.19	21.23	Pass
	159	5795	-6.06	-3.84	4.77	0.45	1.38	21.23	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = 10dBi + 10log(3) = 14.77dBi > 6dBi, so the power density limit shall be reduced to 30-(14.77-6) = 21.23dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

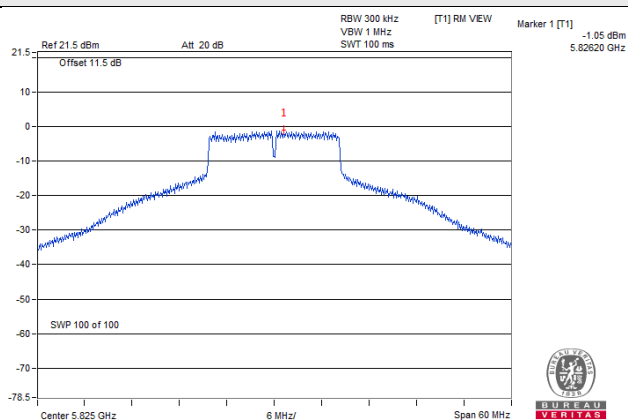
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=3) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-8.95	-6.73	4.77	0.27	-1.69	21.23	Pass
1	155	5775	-7.02	-4.80	4.77	0.27	0.24	21.23	Pass
2	155	5775	-8.05	-5.83	4.77	0.27	-0.79	21.23	Pass

Note:

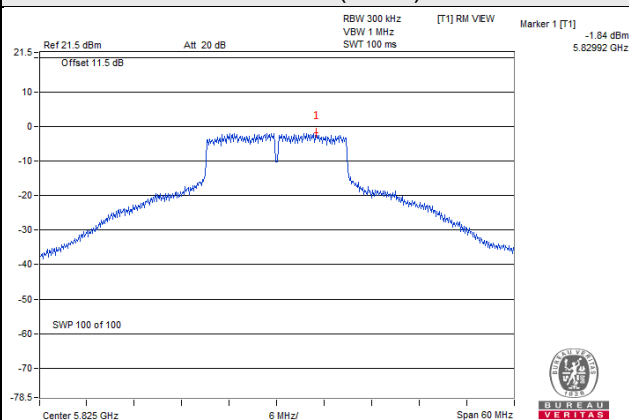
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = 10dBi + 10log(3) = 14.77dBi > 6dBi, so the power density limit shall be reduced to 30-(14.77-6) = 21.23dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

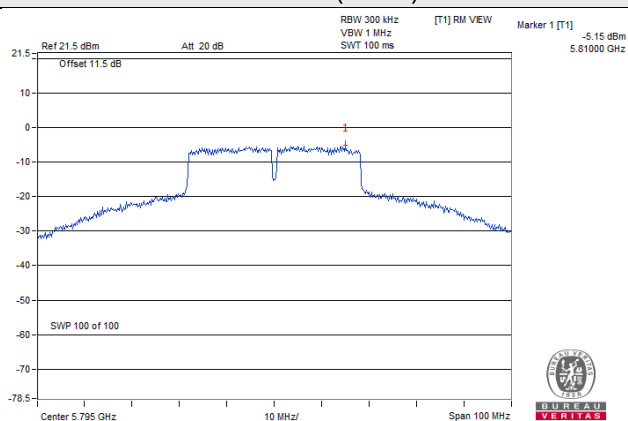
802.11a



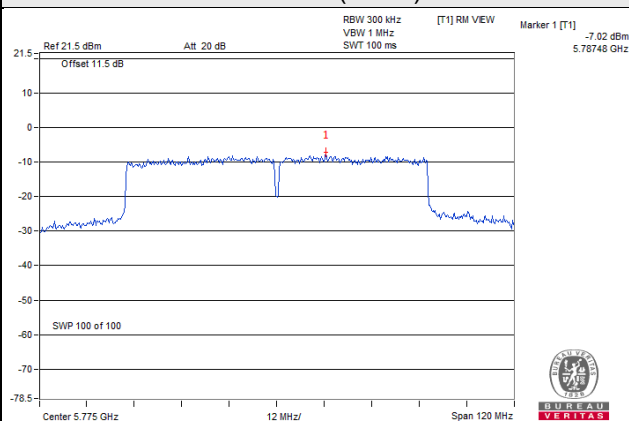
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



4TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	0.14	0.35	0.43	0.35	0.32	6.66	6.98	Pass
40	5200	0.09	0.63	0.29	0.45	0.32	6.71	6.98	Pass
48	5240	0.29	0.41	0.23	0.75	0.32	6.77	6.98	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10\text{dBi} + 10\log(4) = 16.02\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(16.02-6) = 6.98\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	0.54	0.54	0.46	0.45	0.23	6.75	6.98	Pass
40	5200	0.26	0.72	0.55	0.62	0.23	6.79	6.98	Pass
48	5240	0.56	0.78	0.42	0.46	0.23	6.81	6.98	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10\text{dBi} + 10\log(4) = 16.02\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(16.02-6) = 6.98\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	-2.99	-2.07	-2.99	-3.04	0.45	3.72	6.98	Pass
46	5230	0.32	0.66	-0.10	-0.40	0.45	6.61	6.98	Pass

Note:

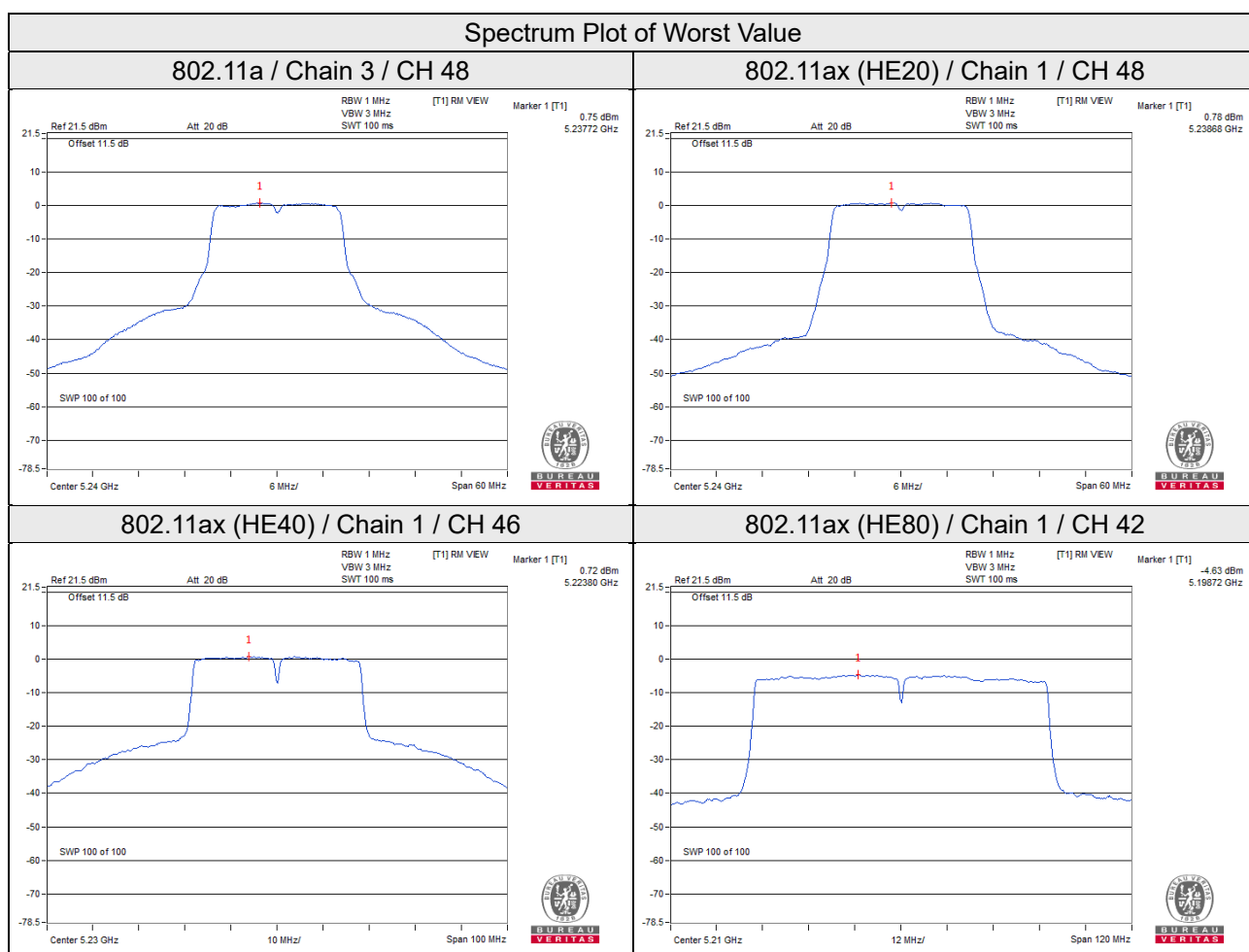
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10\text{dBi} + 10\log(4) = 16.02\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(16.02-6) = 6.98\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-5.51	-4.63	-5.88	-5.56	0.27	0.92	6.98	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10\text{dBi} + 10\log(4) = 16.02\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (16.02 - 6) = 6.98\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.



For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-2.11	0.11	6.02	0.32	6.45	19.98	Pass
	157	5785	-2.17	0.05	6.02	0.32	6.39	19.98	Pass
	165	5825	-2.42	-0.20	6.02	0.32	6.14	19.98	Pass
1	149	5745	-2.02	0.20	6.02	0.32	6.54	19.98	Pass
	157	5785	-1.49	0.73	6.02	0.32	7.07	19.98	Pass
	165	5825	-1.05	1.17	6.02	0.32	7.51	19.98	Pass
2	149	5745	-1.43	0.79	6.02	0.32	7.13	19.98	Pass
	157	5785	-1.32	0.90	6.02	0.32	7.24	19.98	Pass
	165	5825	-1.32	0.90	6.02	0.32	7.24	19.98	Pass
3	149	5745	-3.14	-0.92	6.02	0.32	5.42	19.98	Pass
	157	5785	-3.12	-0.90	6.02	0.32	5.44	19.98	Pass
	165	5825	-2.81	-0.59	6.02	0.32	5.75	19.98	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $10\text{dBi} + 10\log(4) = 16.02\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (16.02 - 6) = 19.98\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-2.23	-0.01	6.02	0.23	6.24	19.98	Pass
	157	5785	-2.74	-0.52	6.02	0.23	5.73	19.98	Pass
	165	5825	-2.62	-0.40	6.02	0.23	5.85	19.98	Pass
1	149	5745	-2.23	-0.01	6.02	0.23	6.24	19.98	Pass
	157	5785	-2.17	0.05	6.02	0.23	6.30	19.98	Pass
	165	5825	-1.84	0.38	6.02	0.23	6.63	19.98	Pass
2	149	5745	-1.86	0.36	6.02	0.23	6.61	19.98	Pass
	157	5785	-1.99	0.23	6.02	0.23	6.48	19.98	Pass
	165	5825	-1.84	0.38	6.02	0.23	6.63	19.98	Pass
3	149	5745	-3.83	-1.61	6.02	0.23	4.64	19.98	Pass
	157	5785	-3.37	-1.15	6.02	0.23	5.10	19.98	Pass
	165	5825	-3.19	-0.97	6.02	0.23	5.28	19.98	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $10\text{dBi} + 10\log(4) = 16.02\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (16.02 - 6) = 19.98\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-5.47	-3.25	6.02	0.45	3.22	19.98	Pass
	159	5795	-5.42	-3.20	6.02	0.45	3.27	19.98	Pass
1	151	5755	-5.48	-3.26	6.02	0.45	3.21	19.98	Pass
	159	5795	-5.15	-2.93	6.02	0.45	3.54	19.98	Pass
2	151	5755	-6.25	-4.03	6.02	0.45	2.44	19.98	Pass
	159	5795	-6.06	-3.84	6.02	0.45	2.63	19.98	Pass
3	151	5755	-6.99	-4.77	6.02	0.45	1.70	19.98	Pass
	159	5795	-6.52	-4.30	6.02	0.45	2.17	19.98	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = 10dBi + 10log(4) = 16.02dBi > 6dBi, so the power density limit shall be reduced to 30-(16.02-6) = 19.98dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

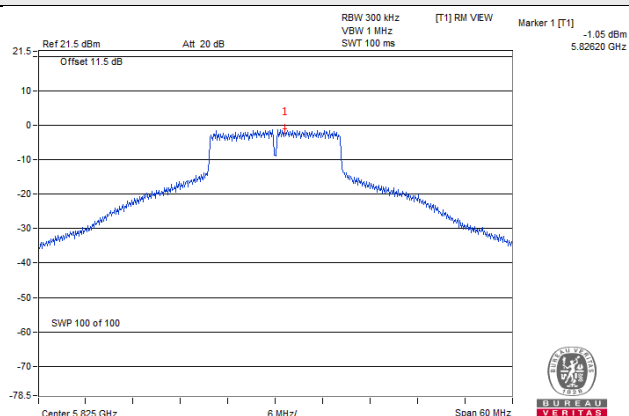
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-9.90	-7.68	6.02	0.27	-1.39	19.98	Pass
1	155	5775	-9.74	-7.52	6.02	0.27	-1.23	19.98	Pass
2	155	5775	-9.88	-7.66	6.02	0.27	-1.37	19.98	Pass
3	155	5775	-10.87	-8.65	6.02	0.27	-2.36	19.98	Pass

Note:

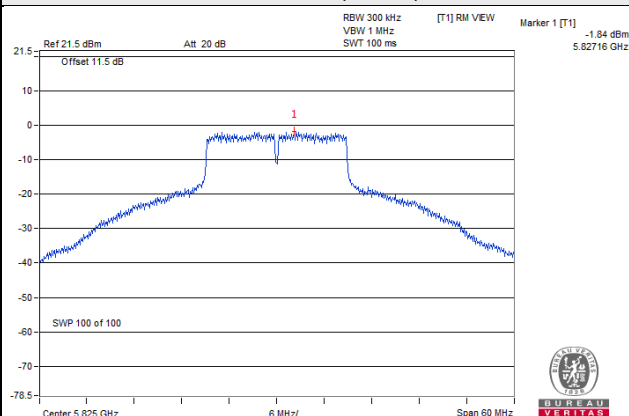
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. Directional gain = 10dBi + 10log(4) = 16.02dBi > 6dBi, so the power density limit shall be reduced to 30-(16.02-6) = 19.98dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

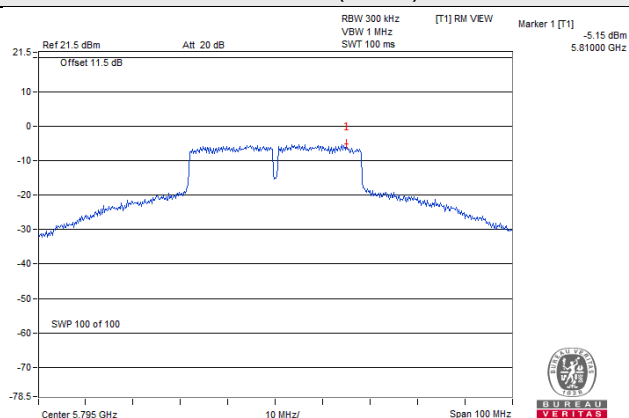
802.11a



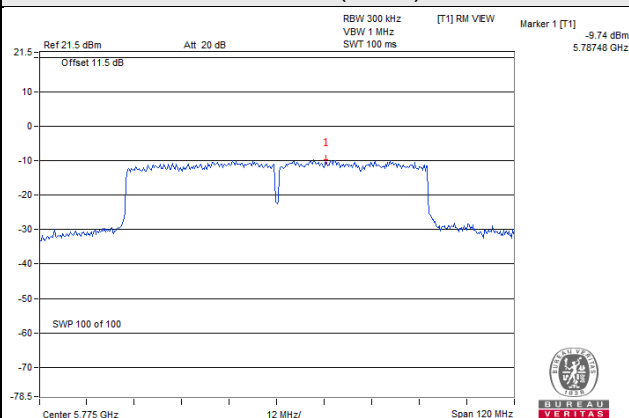
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode M (External antenna – PN: ATS-OP-245-810-4RPSP-36 + Eth7 Radio)

1TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	5.85	0.24	6.09	13.00	Pass
40	5200	8.82	0.24	9.06	13.00	Pass
48	5240	5.87	0.24	6.11	13.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $17-(10-6) = 13.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	4.77	0.19	4.96	13.00	Pass
40	5200	8.63	0.19	8.82	13.00	Pass
48	5240	4.93	0.19	5.12	13.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $17-(10-6) = 13.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	1.00	0.18	1.18	13.00	Pass
46	5230	5.33	0.18	5.51	13.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $17-(10-6) = 13.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

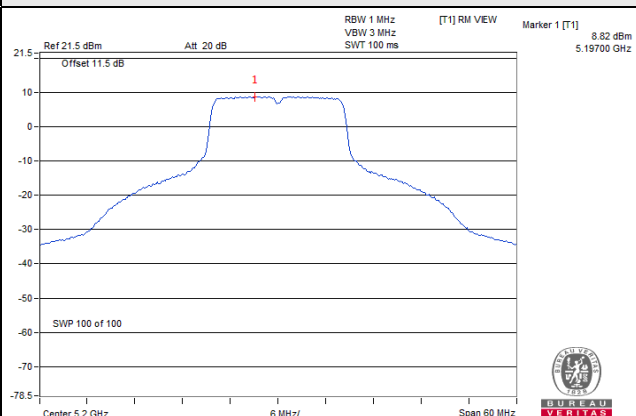
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-2.16	0.42	-1.74	13.00	Pass

Note:

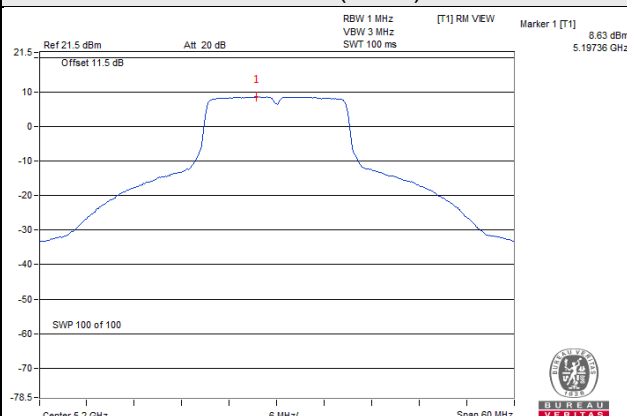
1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $17-(10-6) = 13.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

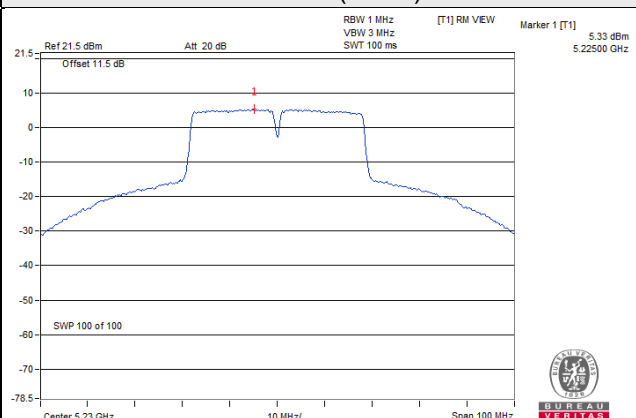
802.11a



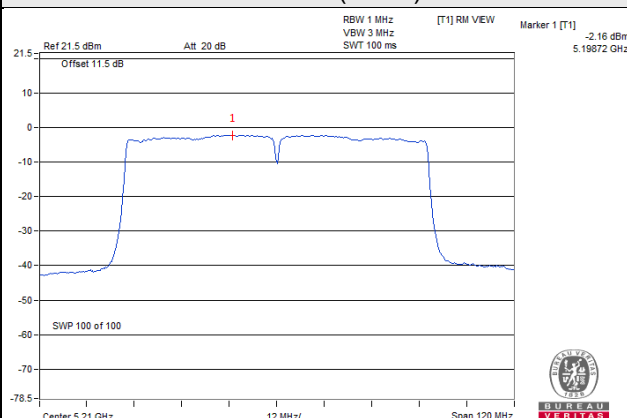
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	1.42	3.64	0.24	3.88	26.00	Pass
157	5785	0.98	3.20	0.24	3.44	26.00	Pass
165	5825	0.53	2.75	0.24	2.99	26.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $30-(10-6) = 26.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	0.27	2.49	0.19	2.68	26.00	Pass
157	5785	0.24	2.46	0.19	2.65	26.00	Pass
165	5825	-0.49	1.73	0.19	1.92	26.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $30-(10-6) = 26.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-2.62	-0.40	0.18	-0.22	26.00	Pass
159	5795	-2.74	-0.52	0.18	-0.34	26.00	Pass

Note:

1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $30-(10-6) = 26.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

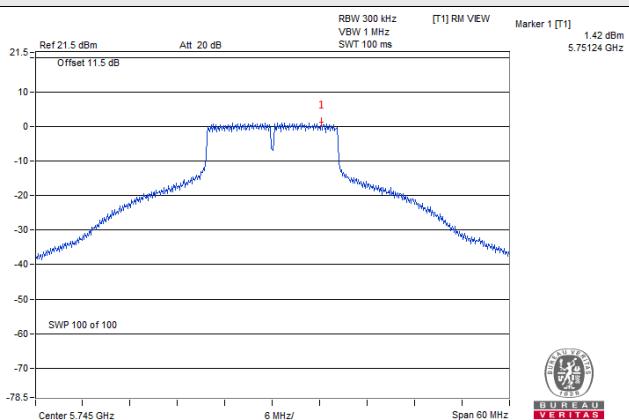
Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-5.31	-3.09	0.42	-2.67	26.00	Pass

Note:

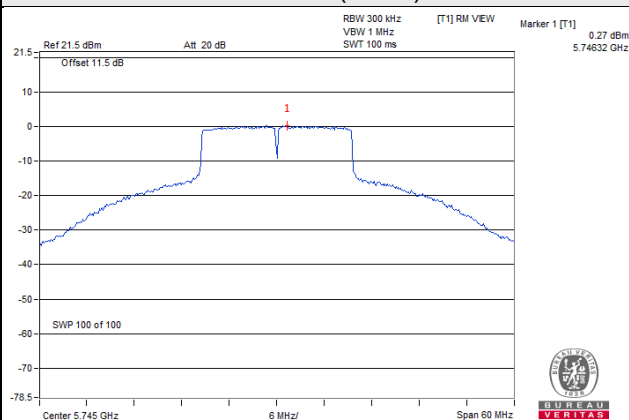
1. Gain = 10dBi > 6dBi, so the power density limit shall be reduced to $30-(10-6) = 26.00\text{dBm}$.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

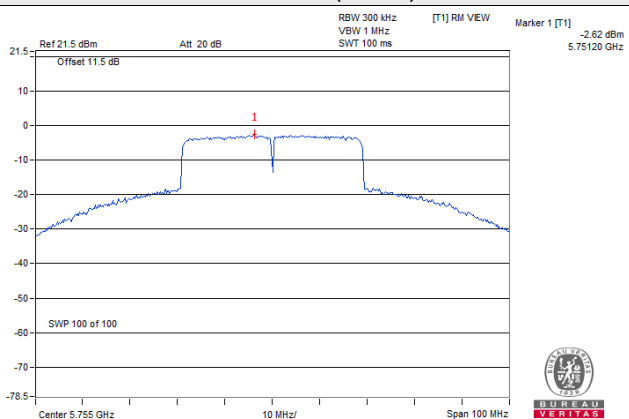
802.11a



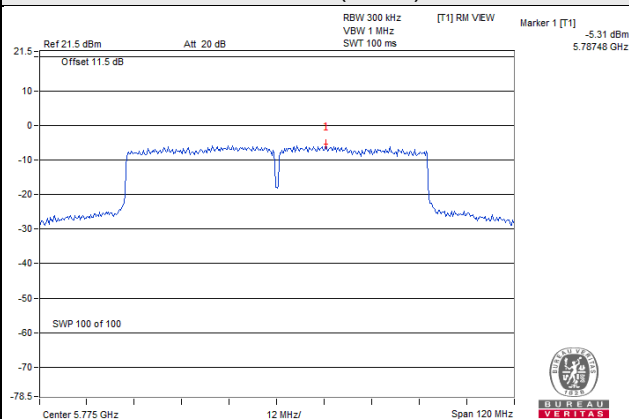
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



2TX

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	2.59	3.11	0.24	6.11	9.99	Pass
40	5200	6.58	6.74	0.24	9.91	9.99	Pass
48	5240	5.87	3.19	0.24	7.98	9.99	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(13.01-6) = 9.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	0.68	1.50	0.19	4.31	9.99	Pass
40	5200	6.65	6.68	0.19	9.87	9.99	Pass
48	5240	4.92	2.34	0.19	7.02	9.99	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(13.01-6) = 9.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-2.25	-2.05	0.18	1.04	9.99	Pass
46	5230	3.65	1.91	0.18	6.06	9.99	Pass

Note:

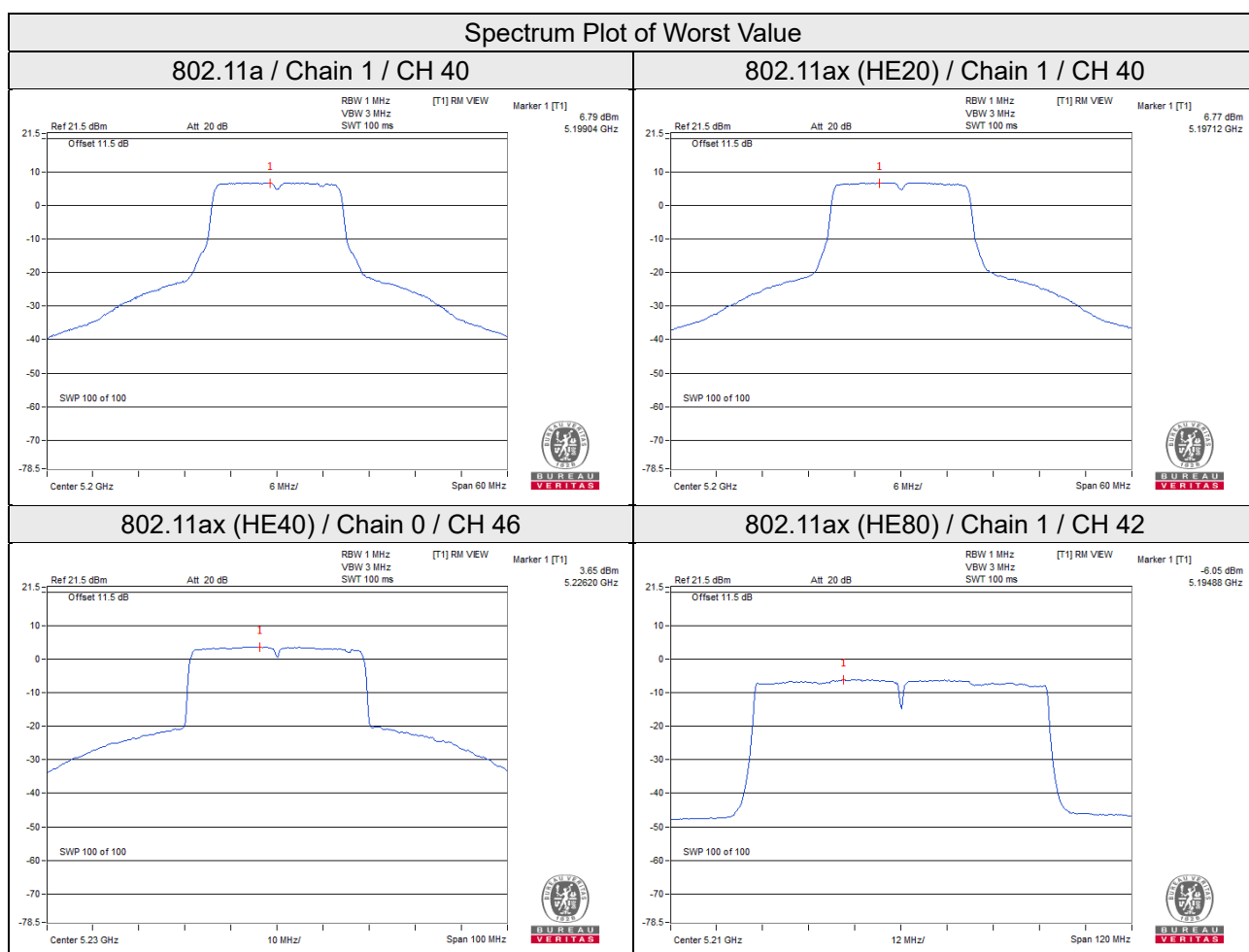
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $17-(13.01-6) = 9.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-6.82	-6.07	0.42	-3.00	9.99	Pass

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = 10dBi + 10log(2) = 13.01dBi > 6dBi, so the power density limit shall be reduced to 17-(13.01-6) = 9.99dBm.
- Refer to section 3.3 for duty cycle spectrum plot.



For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	1.42	3.64	3.01	0.24	6.89	22.99	Pass
	157	5785	0.98	3.20	3.01	0.24	6.45	22.99	Pass
	165	5825	0.53	2.75	3.01	0.24	6.00	22.99	Pass
1	149	5745	0.15	2.37	3.01	0.24	5.62	22.99	Pass
	157	5785	-0.12	2.10	3.01	0.24	5.35	22.99	Pass
	165	5825	-0.27	1.95	3.01	0.24	5.20	22.99	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(13.01-6) = 22.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	0.27	2.49	3.01	0.19	5.69	22.99	Pass
	157	5785	0.24	2.46	3.01	0.19	5.66	22.99	Pass
	165	5825	-0.49	1.73	3.01	0.19	4.93	22.99	Pass
1	149	5745	-1.11	1.11	3.01	0.19	4.31	22.99	Pass
	157	5785	-1.35	0.87	3.01	0.19	4.07	22.99	Pass
	165	5825	-1.27	0.95	3.01	0.19	4.15	22.99	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30-(13.01-6) = 22.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-2.62	-0.40	3.01	0.18	2.79	22.99	Pass
	159	5795	-2.74	-0.52	3.01	0.18	2.67	22.99	Pass
1	151	5755	-4.16	-1.94	3.01	0.18	1.25	22.99	Pass
	159	5795	-4.31	-2.09	3.01	0.18	1.10	22.99	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (13.01 - 6) = 22.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

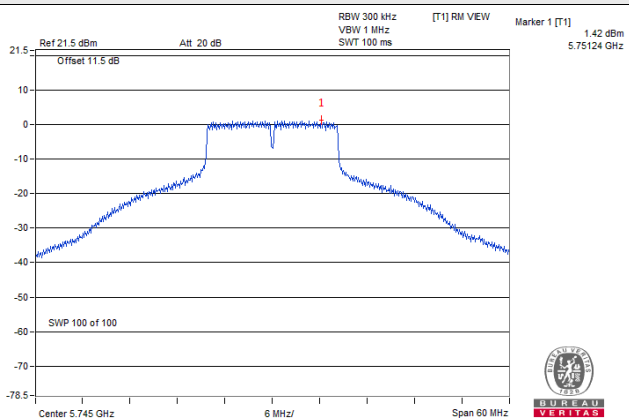
TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-9.42	-7.20	3.01	0.42	-3.77	22.99	Pass
1	155	5775	-8.43	-6.21	3.01	0.42	-2.78	22.99	Pass

Note:

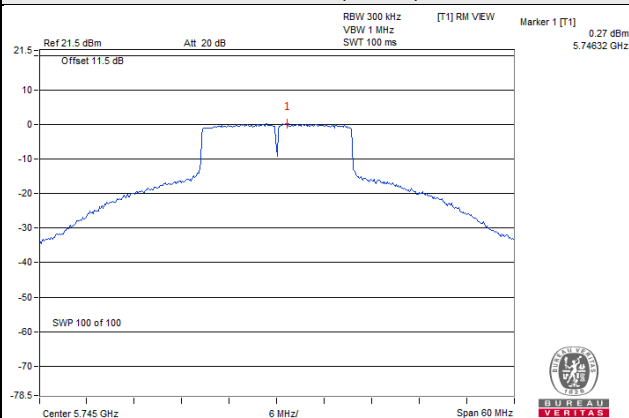
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add $10 \log (N_{ANT})$ dB.
2. Directional gain = $10\text{dBi} + 10\log(2) = 13.01\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (13.01 - 6) = 22.99\text{dBm}$.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

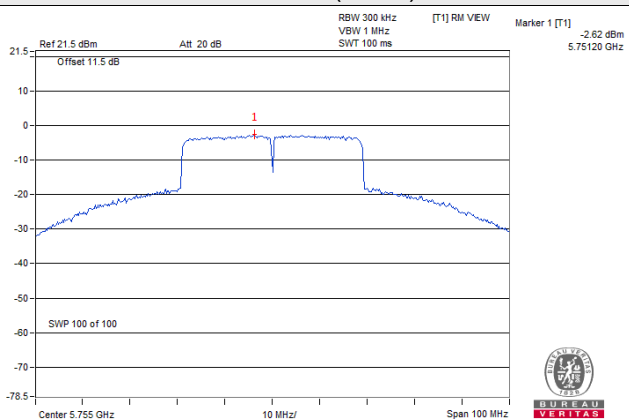
802.11a



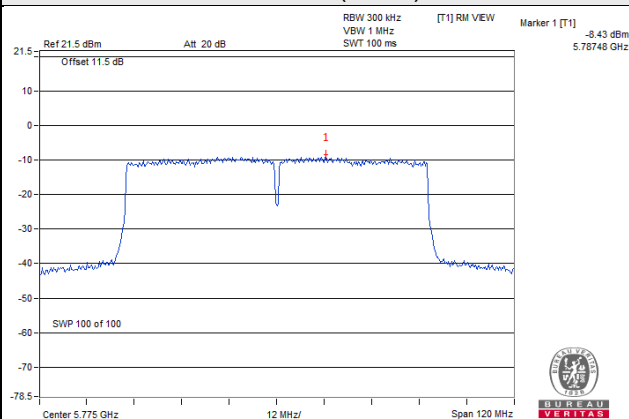
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)

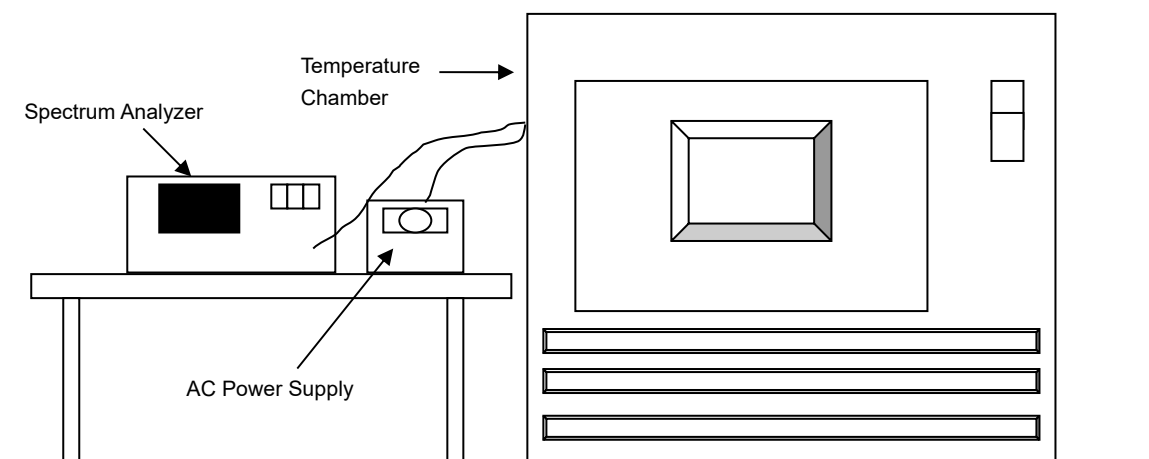


4.6 Frequency Stability

4.6.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation

4.6.2 Test Setup



4.6.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 25, 2018	Sep. 24, 2019
			Sep. 23, 2019	Sep. 22, 2020
Standard Temperature And Humidity Chamber TERCHY	MHU-225AU	920842	Jun. 01, 2018	May 31, 2019
			May 31, 2019	May 30, 2020
Digital Multimeter Fluke	87-III	70360742	Jun. 29, 2018	Jun. 28, 2019
			Jun. 28, 2019	Jun. 27, 2020
AC Power Supply Extech	CFW-105	E000603	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- Repeat step d with every 10 degrees reduction until the lowest temperature achieved.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 Test Results

Test Mode A (Internal antenna + Eth6 Radio)

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	120	5179.9845	Pass	5179.9856	Pass	5179.986	Pass	5179.9874	Pass
40	120	5180.0065	Pass	5180.0043	Pass	5180.004	Pass	5180.0044	Pass
30	120	5180.0053	Pass	5180.0038	Pass	5180.0038	Pass	5180.0075	Pass
20	120	5180.0205	Pass	5180.018	Pass	5180.0194	Pass	5180.0202	Pass
10	120	5180.0208	Pass	5180.0228	Pass	5180.0182	Pass	5180.021	Pass
0	120	5179.989	Pass	5179.9916	Pass	5179.9892	Pass	5179.99	Pass
-10	120	5179.9782	Pass	5179.9789	Pass	5179.9797	Pass	5179.9798	Pass
-20	120	5179.9914	Pass	5179.9941	Pass	5179.9938	Pass	5179.9943	Pass
-30	120	5179.9967	Pass	5179.9963	Pass	5179.9986	Pass	5179.9967	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5180.0207	Pass	5180.0182	Pass	5180.0203	Pass	5180.0203	Pass
	120	5180.0205	Pass	5180.018	Pass	5180.0194	Pass	5180.0202	Pass
	102	5180.0213	Pass	5180.0179	Pass	5180.0193	Pass	5180.021	Pass

Test Mode C (Internal antenna + Eth7 Radio)

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	120	5180.0183	Pass	5180.0173	Pass	5180.0189	Pass	5180.0167	Pass
40	120	5179.9844	Pass	5179.9868	Pass	5179.9881	Pass	5179.984	Pass
30	120	5180.0201	Pass	5180.0187	Pass	5180.0185	Pass	5180.0179	Pass
20	120	5179.9768	Pass	5179.9769	Pass	5179.9758	Pass	5179.9788	Pass
10	120	5180.012	Pass	5180.0122	Pass	5180.0132	Pass	5180.0146	Pass
0	120	5179.988	Pass	5179.9881	Pass	5179.9881	Pass	5179.987	Pass
-10	120	5179.9898	Pass	5179.985	Pass	5179.9868	Pass	5179.9892	Pass
-20	120	5179.9934	Pass	5179.9933	Pass	5179.9909	Pass	5179.9929	Pass
-30	120	5179.9812	Pass	5179.9831	Pass	5179.9787	Pass	5179.9814	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5179.9761	Pass	5179.976	Pass	5179.9761	Pass	5179.9787	Pass
	120	5179.9768	Pass	5179.9769	Pass	5179.9758	Pass	5179.9788	Pass
	102	5179.9768	Pass	5179.9765	Pass	5179.976	Pass	5179.9786	Pass

Test Mode E (Internal antenna + Eth8 Radio)

Frequency Stability Versus Temp.									
Operating Frequency: 5745MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	120	5744.9949	Pass	5744.9948	Pass	5744.9939	Pass	5744.9928	Pass
40	120	5745.008	Pass	5745.0086	Pass	5745.0095	Pass	5745.0098	Pass
30	120	5744.9897	Pass	5744.9887	Pass	5744.99	Pass	5744.9864	Pass
20	120	5745.0032	Pass	5744.9999	Pass	5744.999	Pass	5745.0019	Pass
10	120	5745.0108	Pass	5745.0094	Pass	5745.0097	Pass	5745.0127	Pass
0	120	5744.9922	Pass	5744.9901	Pass	5744.9899	Pass	5744.9921	Pass
-10	120	5745.021	Pass	5745.0243	Pass	5745.0208	Pass	5745.0245	Pass
-20	120	5745.0178	Pass	5745.0147	Pass	5745.0172	Pass	5745.0155	Pass
-30	120	5744.9771	Pass	5744.9738	Pass	5744.9741	Pass	5744.9778	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5745.003	Pass	5745.0004	Pass	5744.9988	Pass	5745.0014	Pass
	120	5745.0032	Pass	5744.9999	Pass	5744.999	Pass	5745.0019	Pass
	102	5745.0035	Pass	5744.9992	Pass	5744.9999	Pass	5745.002	Pass

Test Mode G (External antenna – PN: ATS-OO-245-46-4RPSP-36 + Eth6 Radio)

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	120	5179.9845	Pass	5179.9856	Pass	5179.986	Pass	5179.9874	Pass
40	120	5180.0065	Pass	5180.0043	Pass	5180.004	Pass	5180.0044	Pass
30	120	5180.0053	Pass	5180.0038	Pass	5180.0038	Pass	5180.0075	Pass
20	120	5180.0205	Pass	5180.018	Pass	5180.0194	Pass	5180.0202	Pass
10	120	5180.0208	Pass	5180.0228	Pass	5180.0182	Pass	5180.021	Pass
0	120	5179.989	Pass	5179.9916	Pass	5179.9892	Pass	5179.99	Pass
-10	120	5179.9782	Pass	5179.9789	Pass	5179.9797	Pass	5179.9798	Pass
-20	120	5179.9914	Pass	5179.9941	Pass	5179.9938	Pass	5179.9943	Pass
-30	120	5179.9967	Pass	5179.9963	Pass	5179.9986	Pass	5179.9967	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5180.0207	Pass	5180.0182	Pass	5180.0203	Pass	5180.0203	Pass
	120	5180.0205	Pass	5180.018	Pass	5180.0194	Pass	5180.0202	Pass
	102	5180.0213	Pass	5180.0179	Pass	5180.0193	Pass	5180.021	Pass

Test Mode I (External antenna – PN: ATS-OO-245-46-4RPSP-36 + Eth7 Radio)

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	120	5180.0054	Pass	5180.0036	Pass	5180.0046	Pass	5180.0078	Pass
40	120	5179.992	Pass	5179.9953	Pass	5179.9925	Pass	5179.995	Pass
30	120	5180.014	Pass	5180.0179	Pass	5180.0171	Pass	5180.014	Pass
20	120	5180.004	Pass	5180.0011	Pass	5179.9995	Pass	5180.0012	Pass
10	120	5180.0181	Pass	5180.0195	Pass	5180.019	Pass	5180.0181	Pass
0	120	5180.0175	Pass	5180.0149	Pass	5180.0163	Pass	5180.0157	Pass
-10	120	5180.0198	Pass	5180.0221	Pass	5180.023	Pass	5180.0187	Pass
-20	120	5179.9777	Pass	5179.9738	Pass	5179.9737	Pass	5179.9758	Pass
-30	120	5180.0105	Pass	5180.0123	Pass	5180.0103	Pass	5180.0093	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5180.0043	Pass	5180.0021	Pass	5180.0002	Pass	5180.0015	Pass
	120	5180.004	Pass	5180.0011	Pass	5179.9995	Pass	5180.0012	Pass
	102	5180.0049	Pass	5180.0012	Pass	5179.9985	Pass	5180.0003	Pass

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

- Set resolution bandwidth (RBW) = 100kHz
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.7 Test Results

Test Mode A (Internal antenna + Eth6 Radio)

1TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.37	0.5	Pass
157	5785	16.36	0.5	Pass
165	5825	16.39	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.60	0.5	Pass
157	5785	17.60	0.5	Pass
165	5825	17.62	0.5	Pass

802.11ax (HE40)

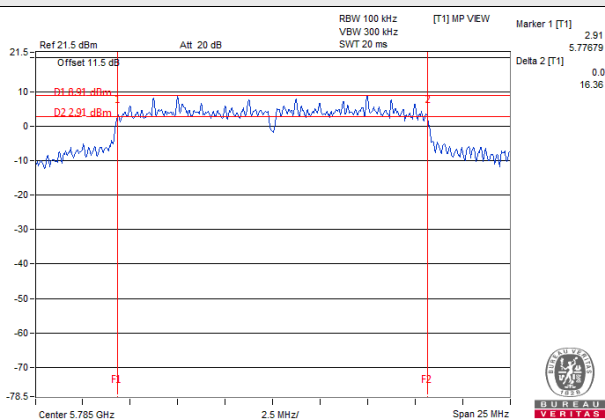
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	35.87	0.5	Pass
159	5795	35.88	0.5	Pass

802.11ax (HE80)

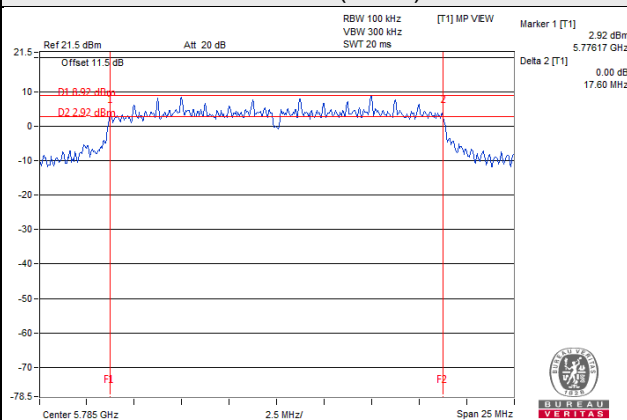
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.47	0.5	Pass

Spectrum Plot of Worst Value

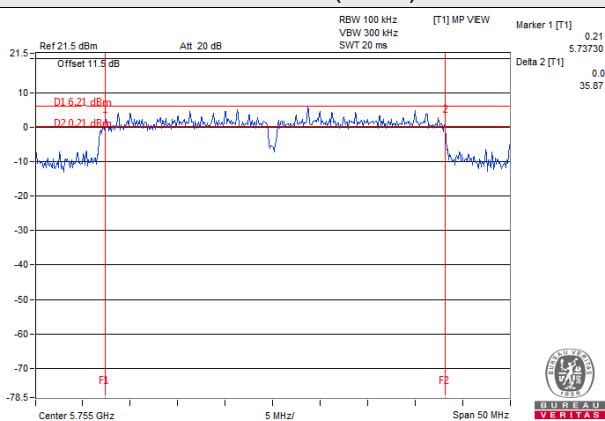
802.11a



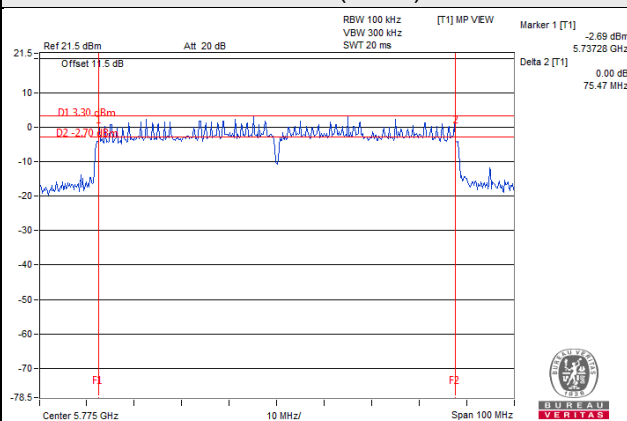
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



2TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 2	Chain 3		
149	5745	16.37	16.40	0.5	Pass
157	5785	16.36	16.41	0.5	Pass
165	5825	16.39	16.42	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 2	Chain 3		
149	5745	17.60	17.62	0.5	Pass
157	5785	17.60	17.65	0.5	Pass
165	5825	17.62	17.66	0.5	Pass

802.11ax (HE40)

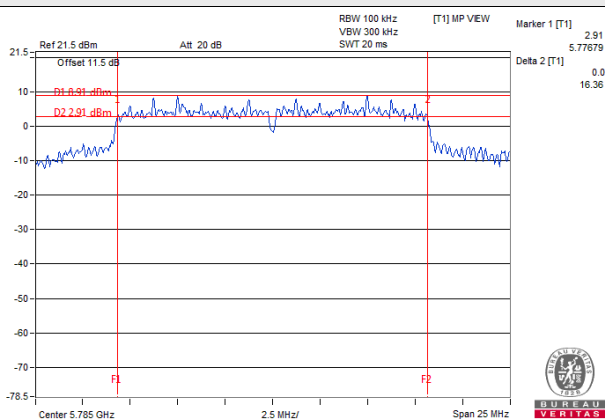
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 2	Chain 3		
151	5755	35.87	36.29	0.5	Pass
159	5795	35.88	36.26	0.5	Pass

802.11ax (HE80)

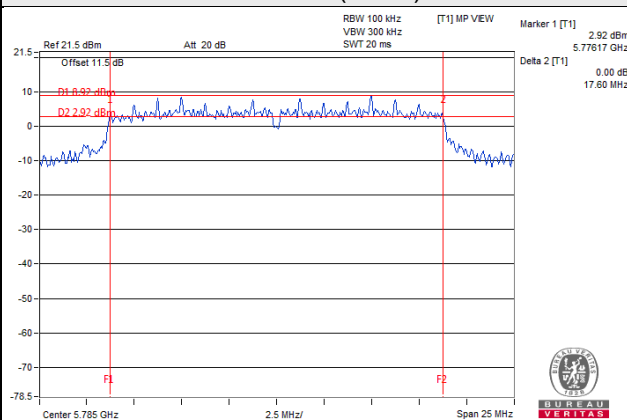
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 2	Chain 3		
155	5775	75.64	75.76	0.5	Pass

Spectrum Plot of Worst Value

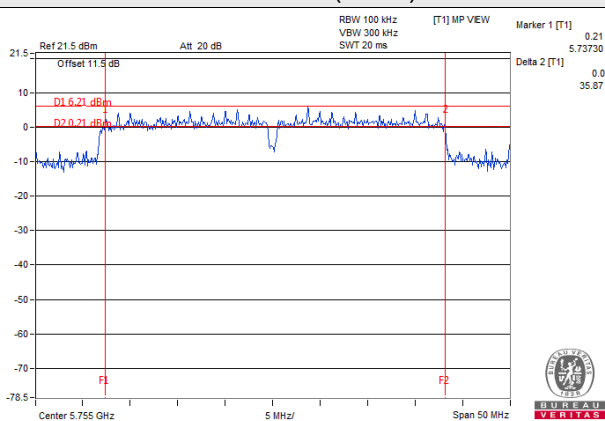
802.11a



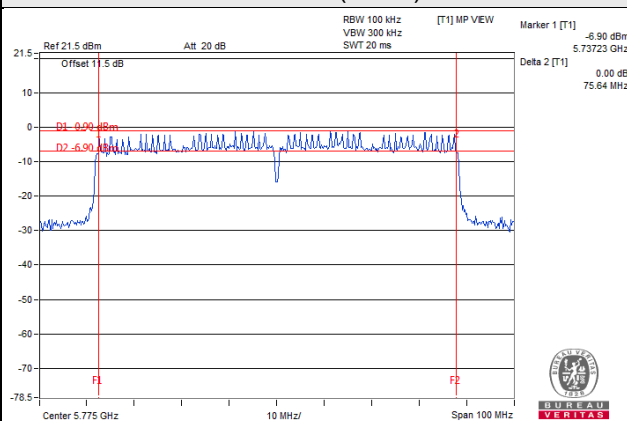
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



3TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3		
149	5745	16.40	16.36	16.37	0.5	Pass
157	5785	16.41	16.38	16.36	0.5	Pass
165	5825	16.42	16.40	16.39	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3		
149	5745	17.62	17.60	17.60	0.5	Pass
157	5785	17.65	17.65	17.60	0.5	Pass
165	5825	17.66	17.62	17.62	0.5	Pass

802.11ax (HE40)

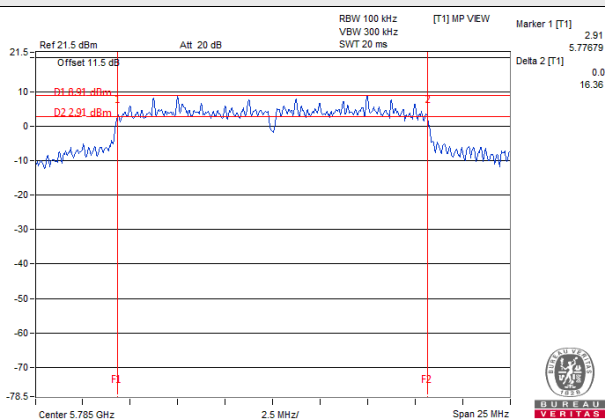
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3		
151	5755	36.29	36.25	35.87	0.5	Pass
159	5795	36.26	36.22	35.88	0.5	Pass

802.11ax (HE80)

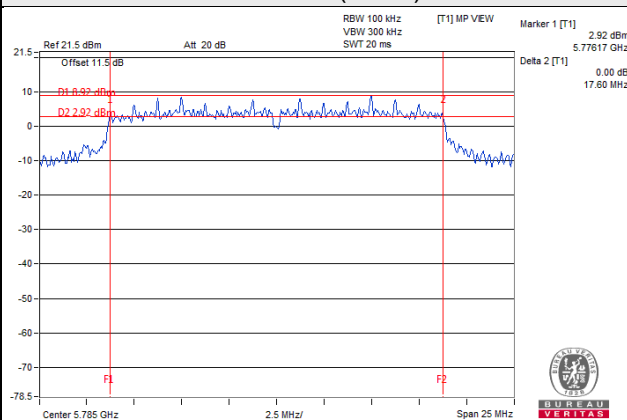
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3		
155	5775	76.03	75.49	75.50	0.5	Pass

Spectrum Plot of Worst Value

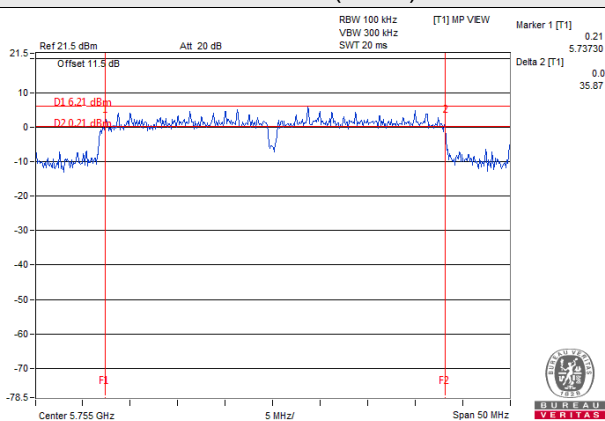
802.11a



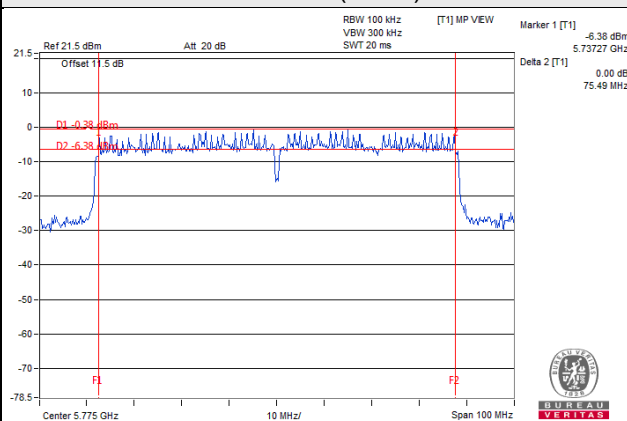
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode C (Internal antenna + Eth7 Radio)

1TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.40	0.5	Pass
157	5785	16.40	0.5	Pass
165	5825	16.39	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.63	0.5	Pass
157	5785	17.65	0.5	Pass
165	5825	17.65	0.5	Pass

802.11ax (HE40)

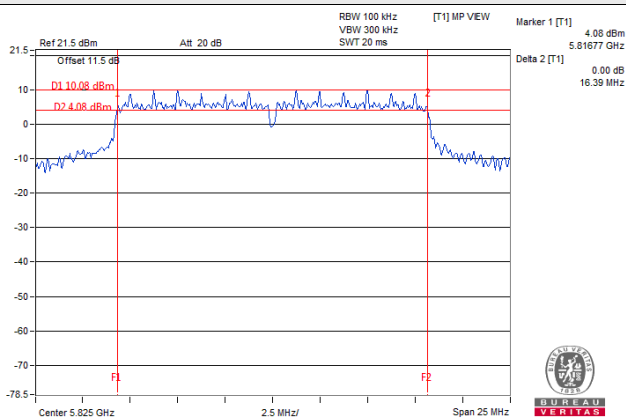
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.22	0.5	Pass
159	5795	36.36	0.5	Pass

802.11ax (HE80)

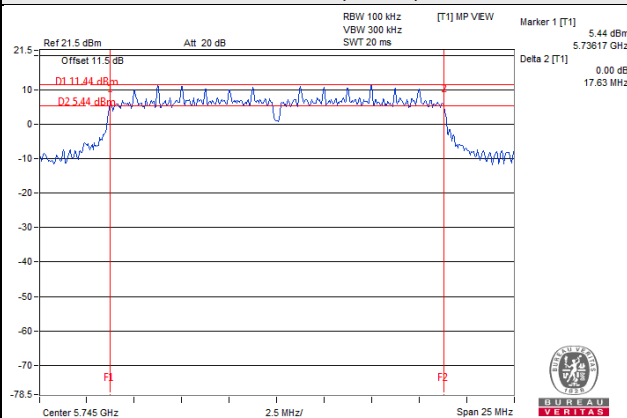
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.56	0.5	Pass

Spectrum Plot of Worst Value

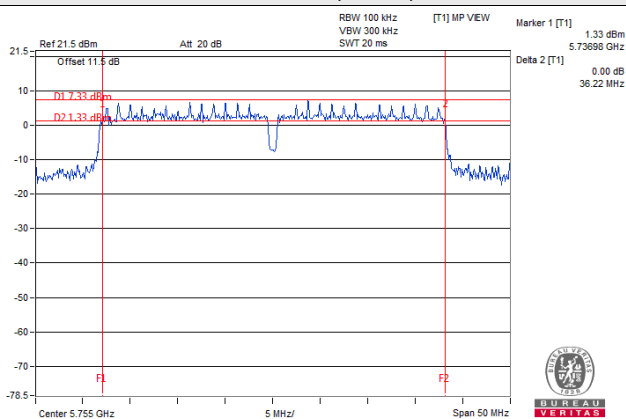
802.11a



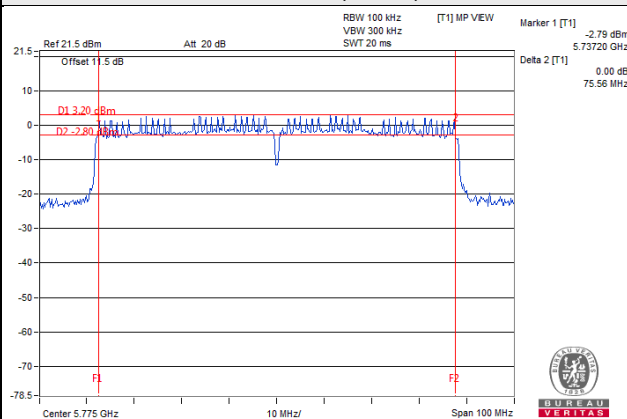
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode E (Internal antenna + Eth8 Radio)

1TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.38	0.5	Pass
157	5785	16.40	0.5	Pass
165	5825	16.41	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	18.96	0.5	Pass
157	5785	18.97	0.5	Pass
165	5825	18.99	0.5	Pass

802.11ax (HE40)

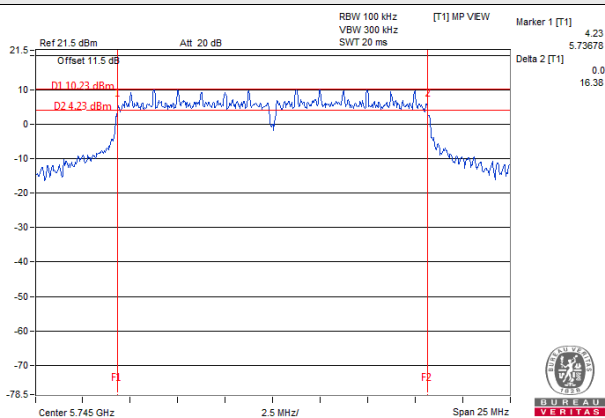
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.13	0.5	Pass
159	5795	37.44	0.5	Pass

802.11ax (HE80)

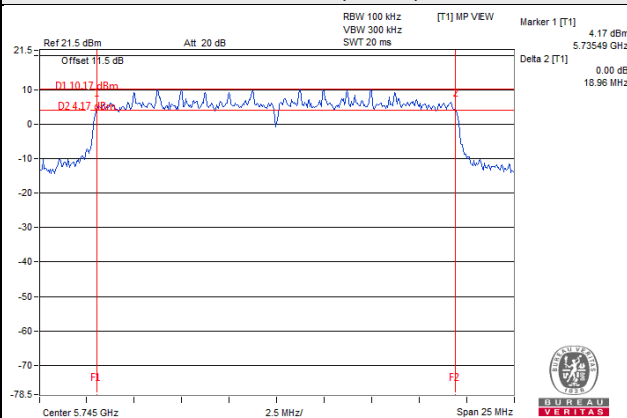
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.80	0.5	Pass

Spectrum Plot of Worst Value

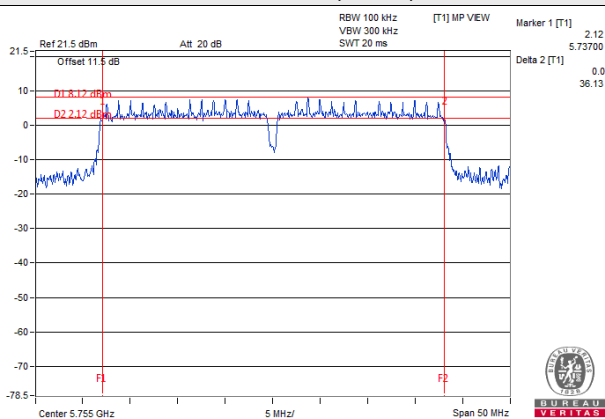
802.11a



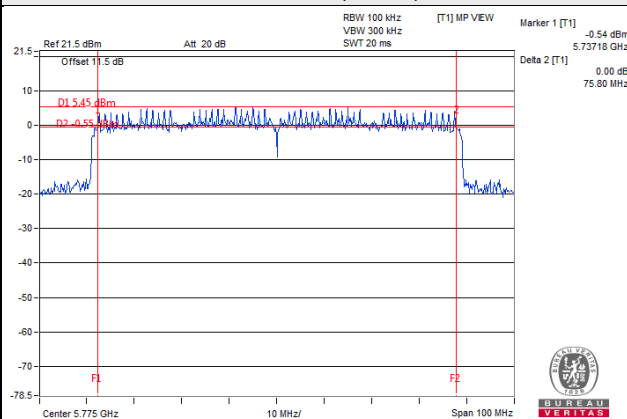
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



2TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2		
149	5745	16.37	16.38	0.5	Pass
157	5785	16.40	16.40	0.5	Pass
165	5825	16.39	16.41	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2		
149	5745	18.79	18.96	0.5	Pass
157	5785	18.87	18.97	0.5	Pass
165	5825	18.83	18.99	0.5	Pass

802.11ax (HE40)

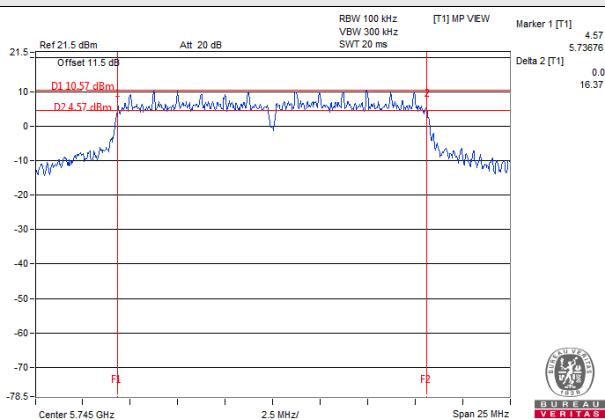
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2		
151	5755	36.41	36.13	0.5	Pass
159	5795	37.04	37.44	0.5	Pass

802.11ax (HE80)

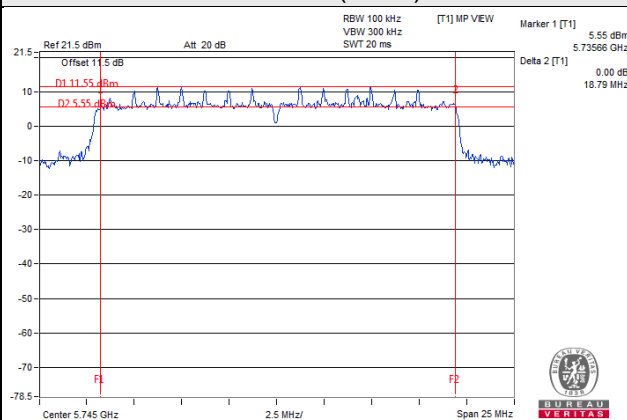
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2		
155	5775	75.70	76.74	0.5	Pass

Spectrum Plot of Worst Value

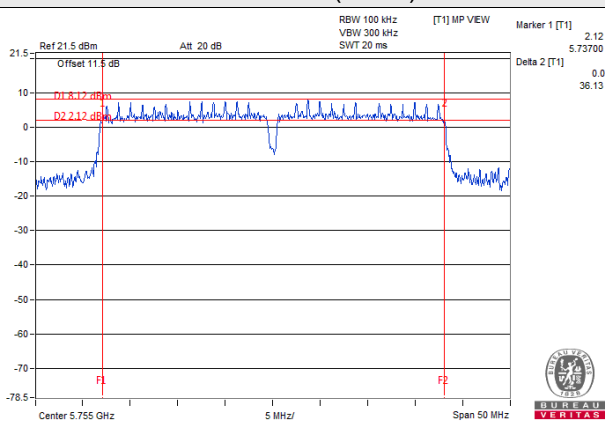
802.11a



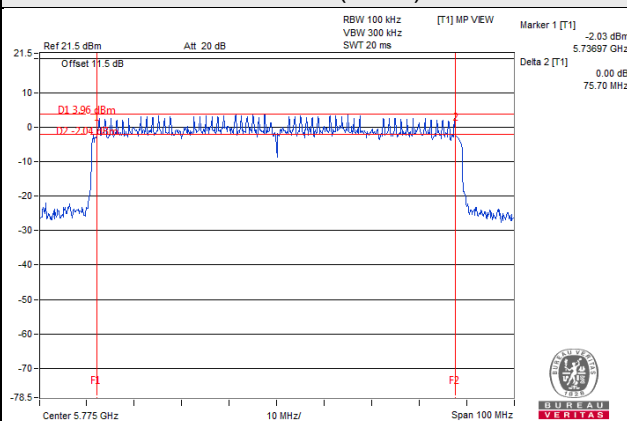
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



3TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3		
149	5745	16.37	16.37	16.38	0.5	Pass
157	5785	16.40	16.41	16.40	0.5	Pass
165	5825	16.39	16.40	16.41	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3		
149	5745	18.79	18.80	18.96	0.5	Pass
157	5785	18.87	18.80	18.97	0.5	Pass
165	5825	18.83	18.89	18.99	0.5	Pass

802.11ax (HE40)

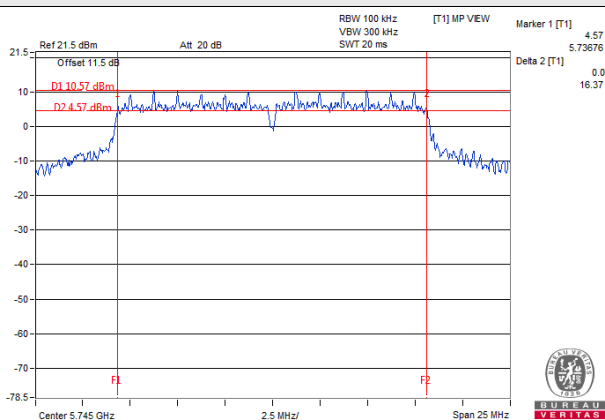
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3		
151	5755	36.41	36.40	36.13	0.5	Pass
159	5795	37.04	37.44	37.44	0.5	Pass

802.11ax (HE80)

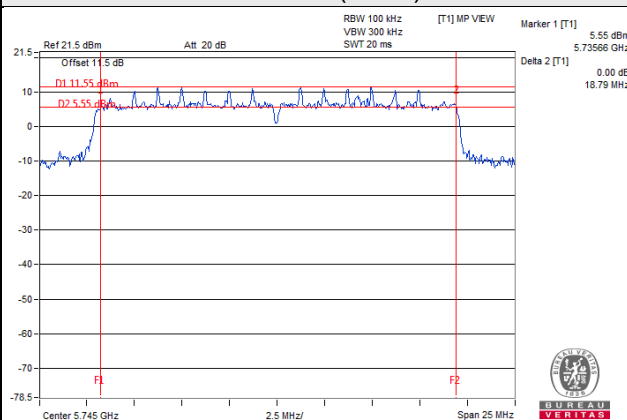
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2	Chain 3		
155	5775	76.44	75.99	75.48	0.5	Pass

Spectrum Plot of Worst Value

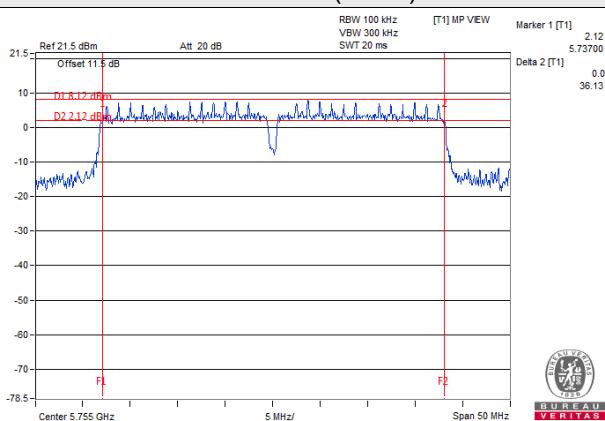
802.11a



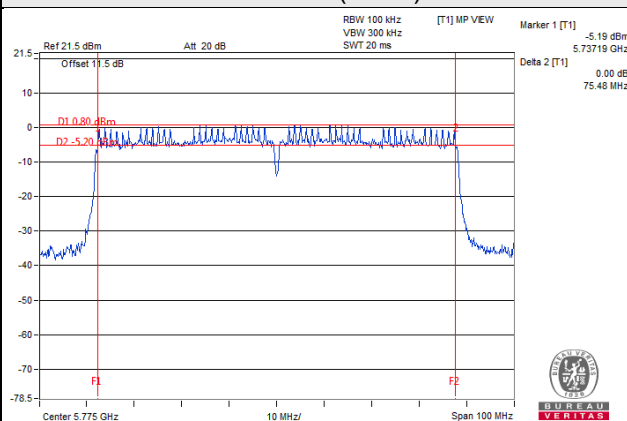
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode G (External antenna - PN: ATS-OO-245-46-4RPSP-36 + Eth6 Radio)

1TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.40	0.5	Pass
157	5785	16.38	0.5	Pass
165	5825	16.38	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.63	0.5	Pass
157	5785	17.64	0.5	Pass
165	5825	17.64	0.5	Pass

802.11ax (HE40)

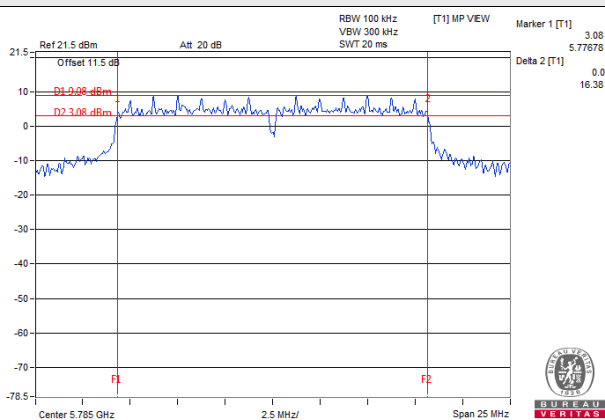
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.24	0.5	Pass
159	5795	36.08	0.5	Pass

802.11ax (HE80)

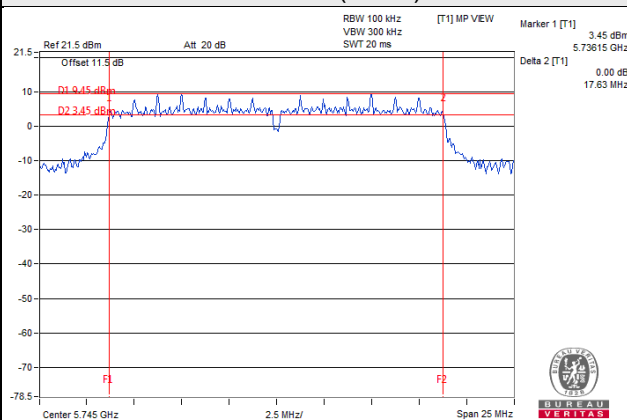
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.50	0.5	Pass

Spectrum Plot of Worst Value

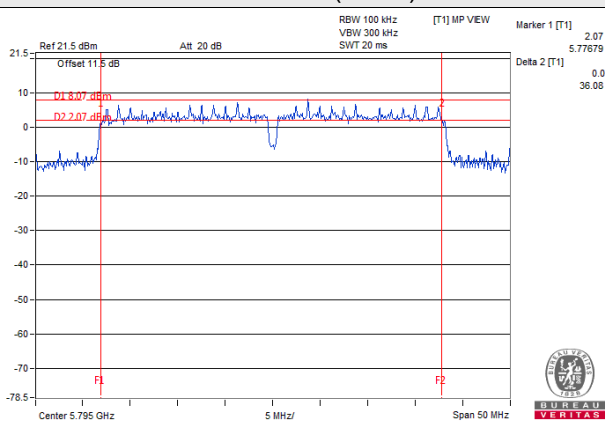
802.11a



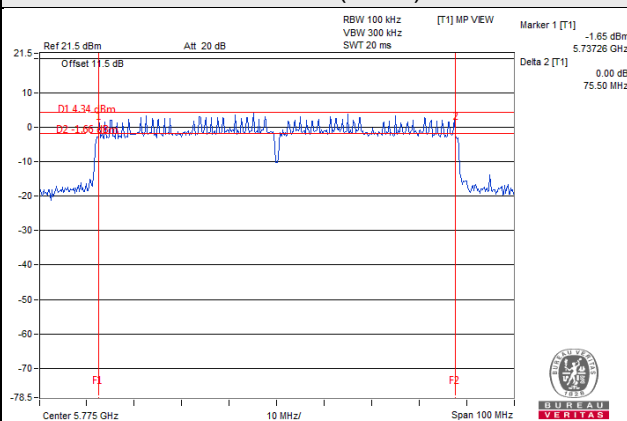
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



2TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2		
149	5745	16.38	16.40	0.5	Pass
157	5785	16.41	16.38	0.5	Pass
165	5825	16.41	16.38	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2		
149	5745	17.65	17.63	0.5	Pass
157	5785	17.66	17.64	0.5	Pass
165	5825	17.65	17.64	0.5	Pass

802.11ax (HE40)

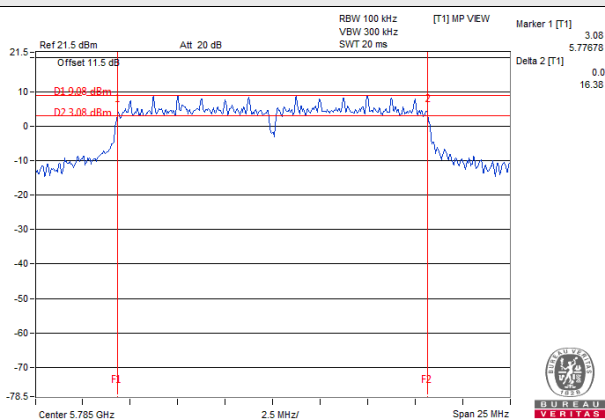
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2		
151	5755	36.44	36.24	0.5	Pass
159	5795	36.47	36.08	0.5	Pass

802.11ax (HE80)

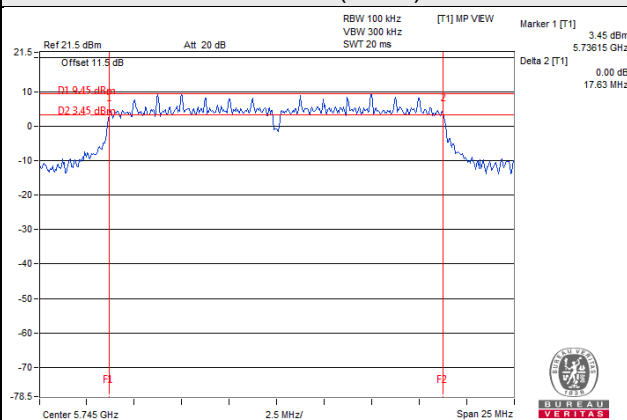
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 2		
155	5775	76.00	75.61	0.5	Pass

Spectrum Plot of Worst Value

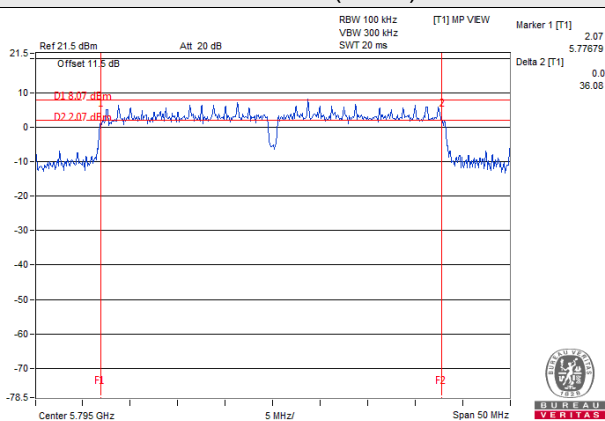
802.11a



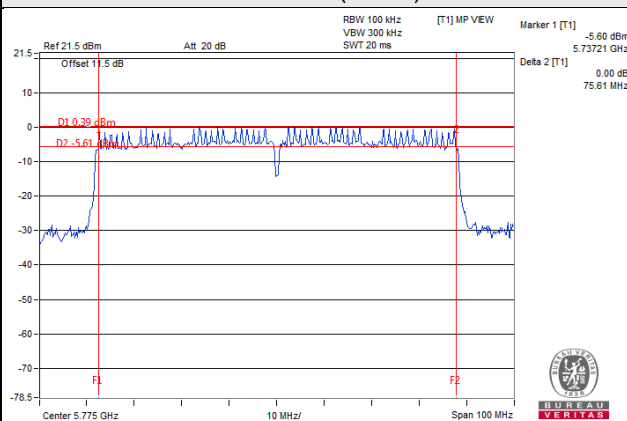
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



3TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
149	5745	16.40	16.38	16.39	0.5	Pass
157	5785	16.38	16.41	16.39	0.5	Pass
165	5825	16.38	16.41	16.39	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
149	5745	17.63	17.65	17.61	0.5	Pass
157	5785	17.64	17.66	17.62	0.5	Pass
165	5825	17.63	17.64	17.63	0.5	Pass

802.11ax (HE40)

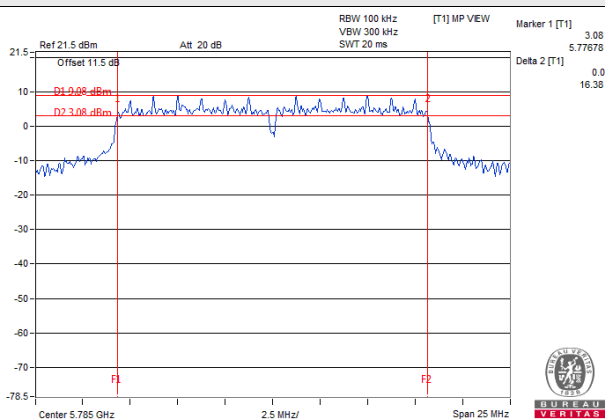
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
151	5755	36.24	36.44	36.43	0.5	Pass
159	5795	36.24	36.45	36.44	0.5	Pass

802.11ax (HE80)

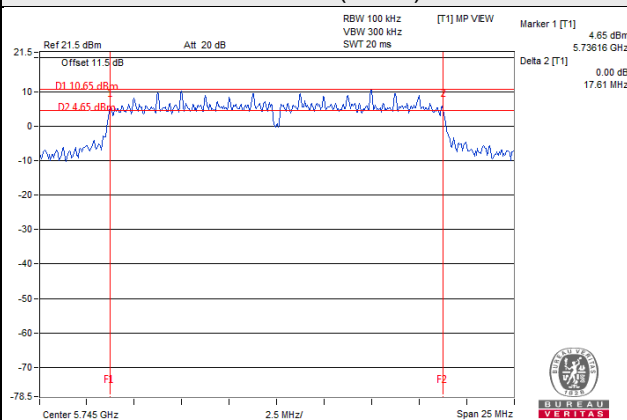
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
155	5775	75.75	76.13	75.60	0.5	Pass

Spectrum Plot of Worst Value

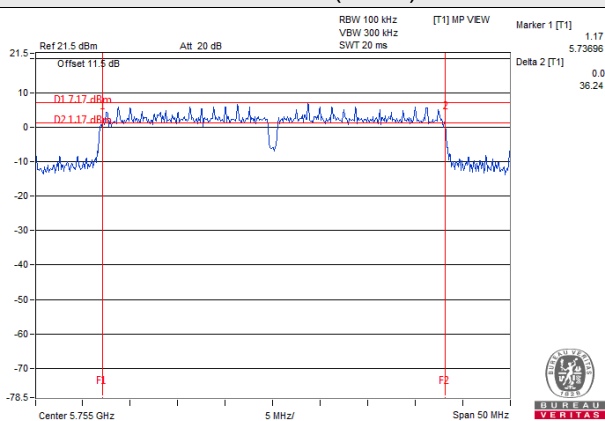
802.11a



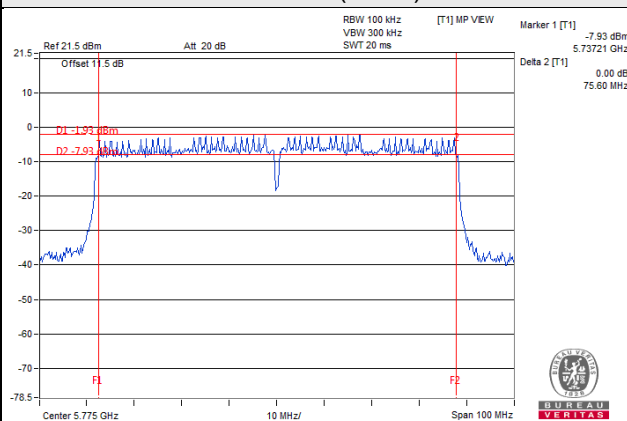
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode I (External antenna - PN: ATS-OO-245-46-4RPSP-36 + Eth7 Radio)

1TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.38	0.5	Pass
157	5785	16.38	0.5	Pass
165	5825	16.39	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	18.57	0.5	Pass
157	5785	18.75	0.5	Pass
165	5825	18.77	0.5	Pass

802.11ax (HE40)

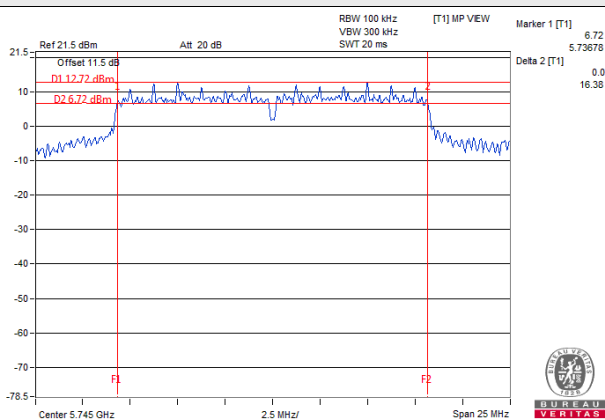
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	37.75	0.5	Pass
159	5795	37.74	0.5	Pass

802.11ax (HE80)

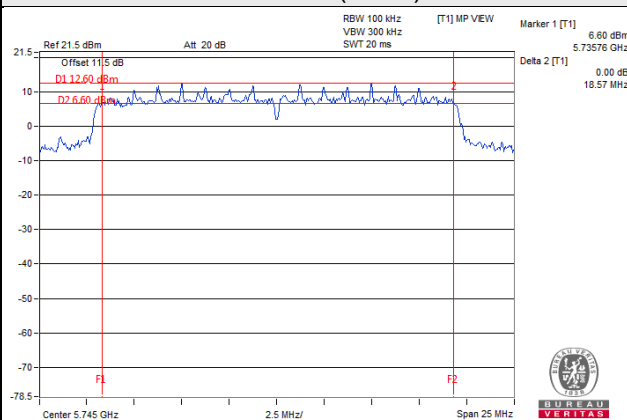
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.52	0.5	Pass

Spectrum Plot of Worst Value

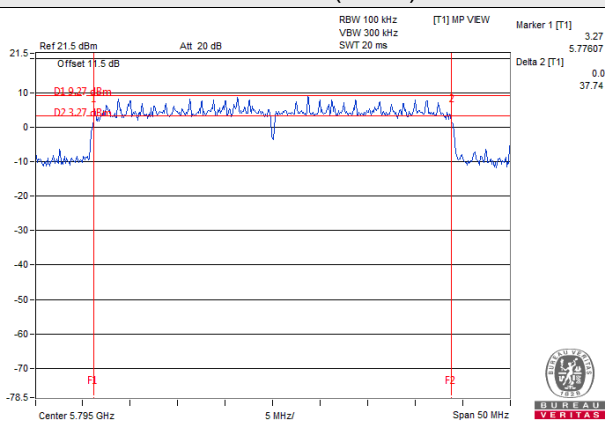
802.11a



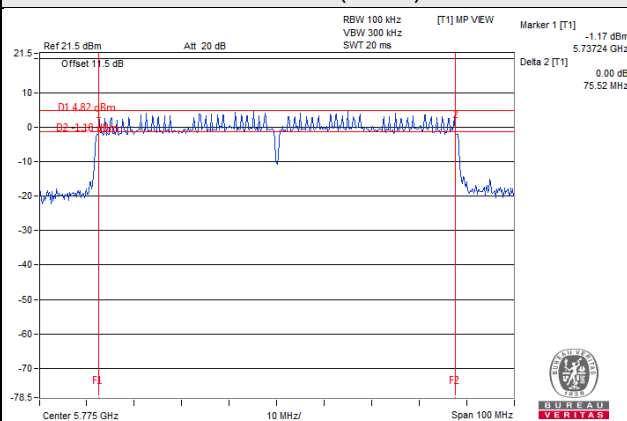
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode K (External antenna – PN: ATS-OP-245-810-4RPSP-36 + Eth6 Radio)

1TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.37	0.5	Pass
157	5785	16.40	0.5	Pass
165	5825	16.44	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.64	0.5	Pass
157	5785	17.64	0.5	Pass
165	5825	17.66	0.5	Pass

802.11ax (HE40)

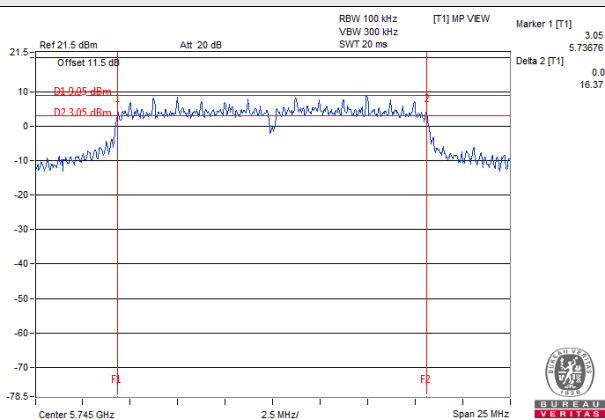
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.20	0.5	Pass
159	5795	36.18	0.5	Pass

802.11ax (HE80)

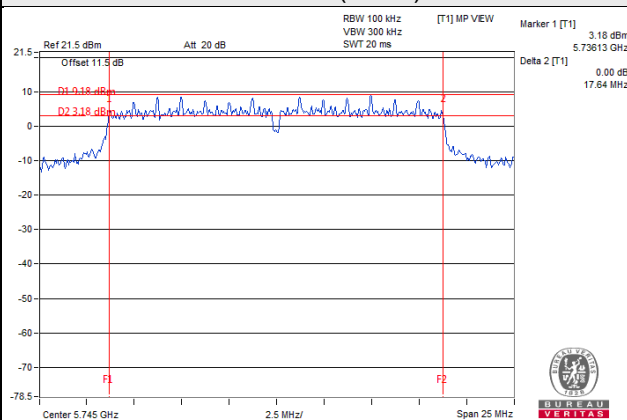
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.48	0.5	Pass

Spectrum Plot of Worst Value

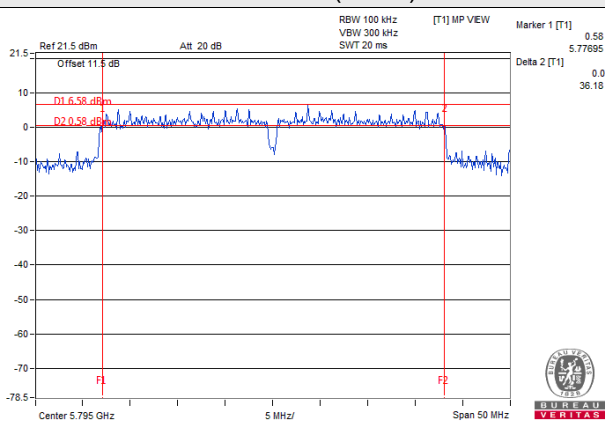
802.11a



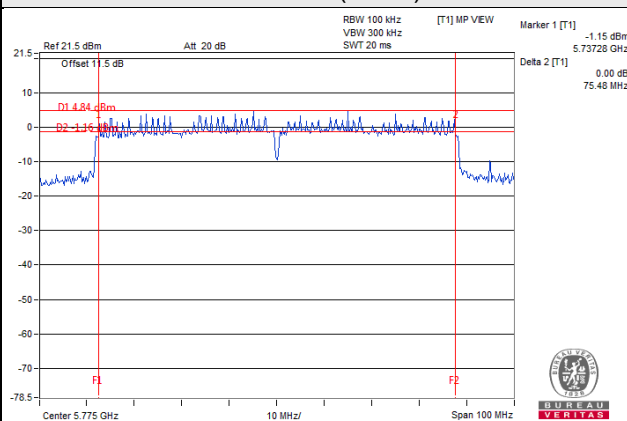
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



2TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.37	16.41	0.5	Pass
157	5785	16.40	16.42	0.5	Pass
165	5825	16.44	16.42	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.64	17.66	0.5	Pass
157	5785	17.64	17.63	0.5	Pass
165	5825	17.66	17.66	0.5	Pass

802.11ax (HE40)

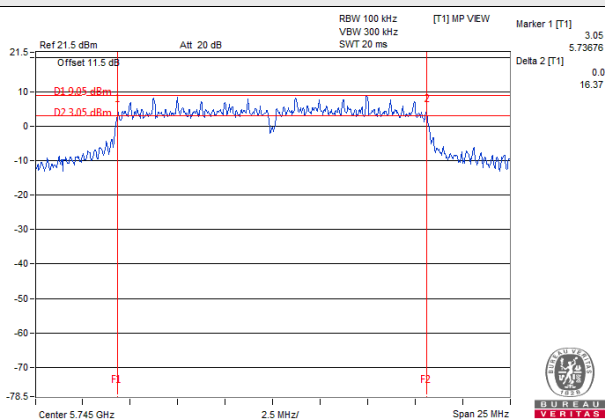
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	36.20	36.42	0.5	Pass
159	5795	36.18	36.19	0.5	Pass

802.11ax (HE80)

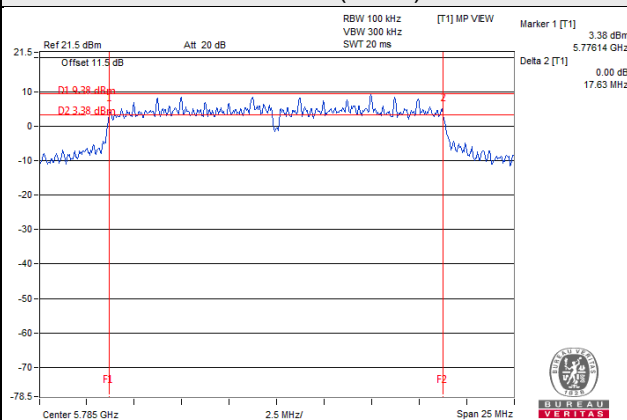
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	75.48	75.45	0.5	Pass

Spectrum Plot of Worst Value

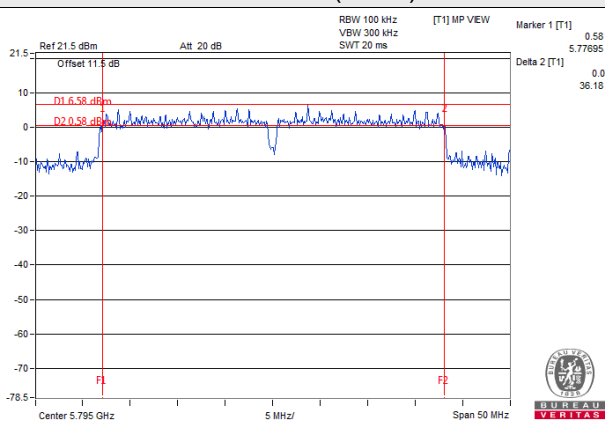
802.11a



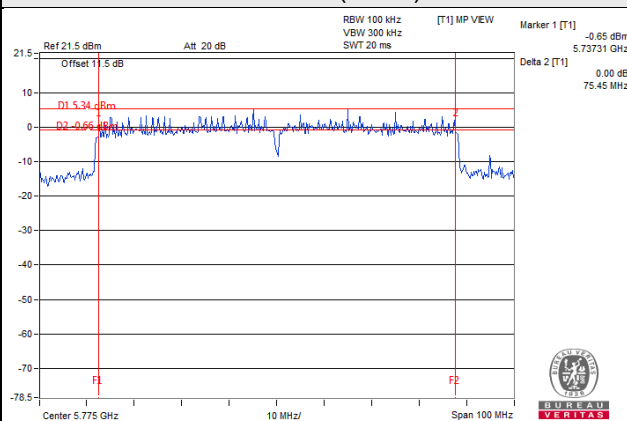
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



3TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
149	5745	16.37	16.41	16.40	0.5	Pass
157	5785	16.40	16.42	16.42	0.5	Pass
165	5825	16.44	16.42	16.41	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
149	5745	17.64	17.66	17.63	0.5	Pass
157	5785	17.64	17.63	17.63	0.5	Pass
165	5825	17.66	17.66	17.64	0.5	Pass

802.11ax (HE40)

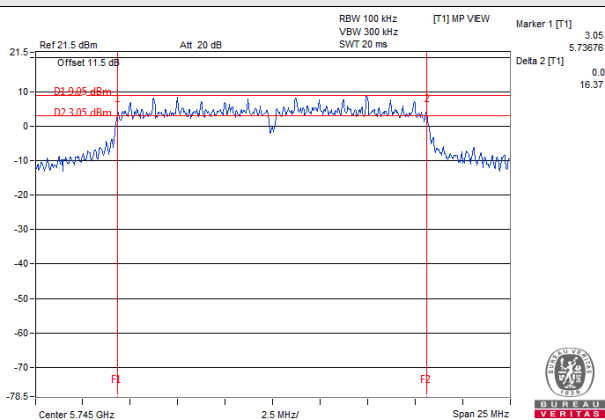
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
151	5755	36.20	36.42	36.25	0.5	Pass
159	5795	36.18	36.19	36.43	0.5	Pass

802.11ax (HE80)

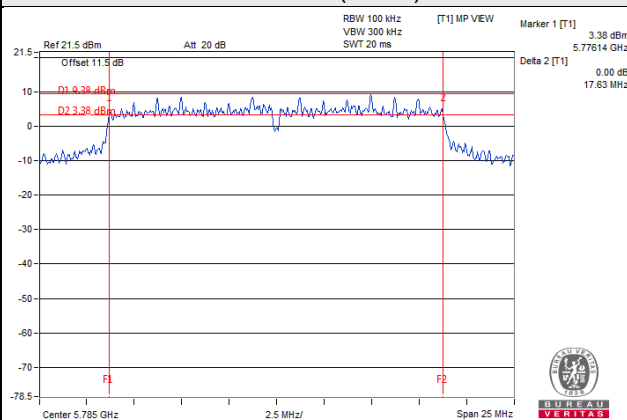
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
155	5775	75.44	75.51	75.42	0.5	Pass

Spectrum Plot of Worst Value

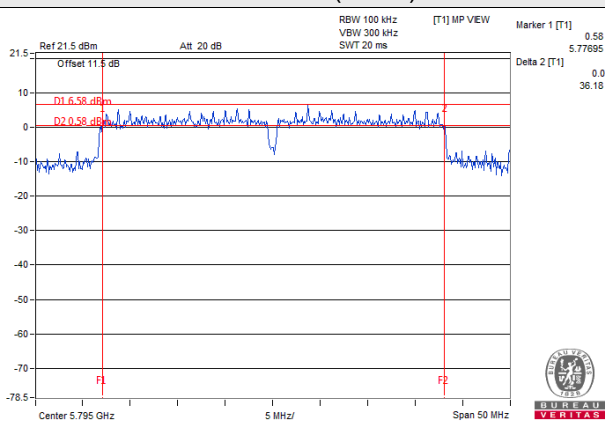
802.11a



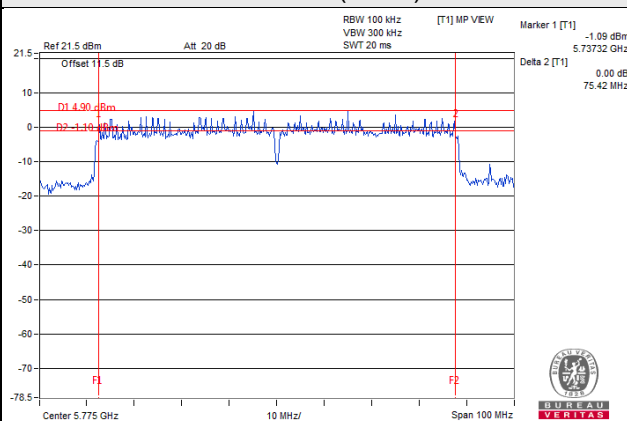
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



4TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	16.37	16.41	16.40	16.42	0.5	Pass
157	5785	16.40	16.42	16.42	16.43	0.5	Pass
165	5825	16.44	16.42	16.41	16.42	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	17.64	17.66	17.63	17.65	0.5	Pass
157	5785	17.64	17.63	17.63	17.63	0.5	Pass
165	5825	17.66	17.66	17.64	17.66	0.5	Pass

802.11ax (HE40)

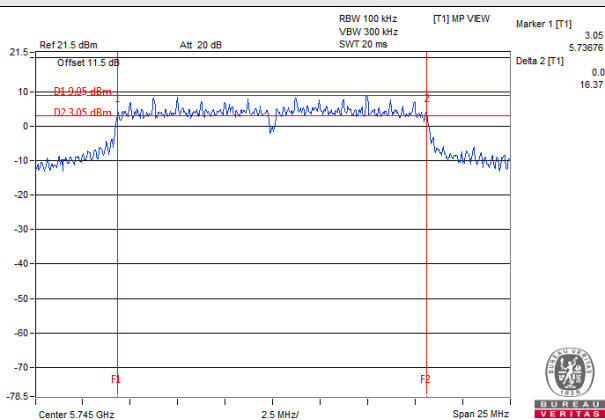
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	36.20	36.42	36.25	36.17	0.5	Pass
159	5795	36.18	36.19	36.43	36.07	0.5	Pass

802.11ax (HE80)

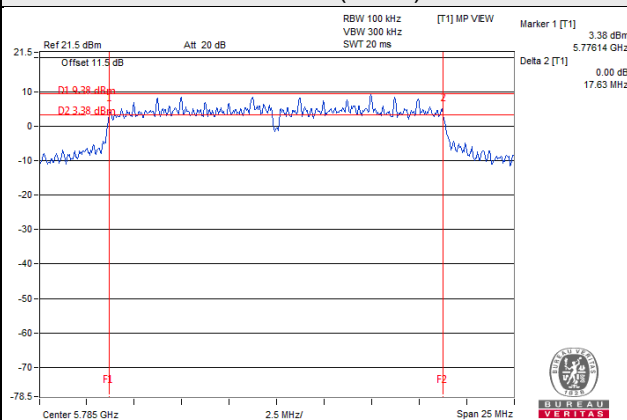
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	75.55	75.56	75.96	75.53	0.5	Pass

Spectrum Plot of Worst Value

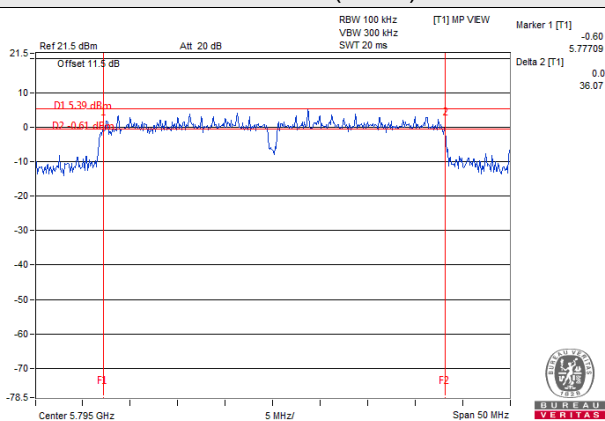
802.11a



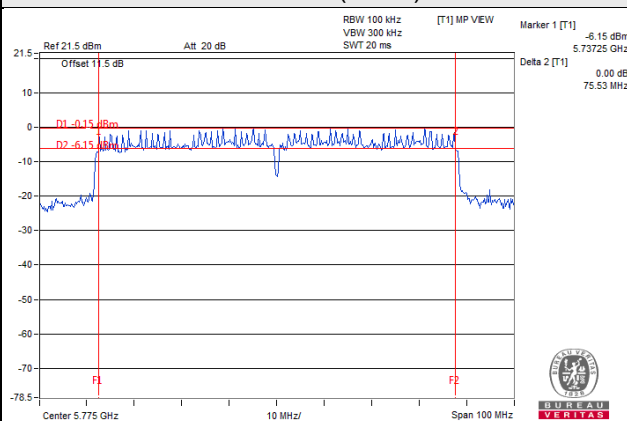
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Test Mode M (External antenna – PN: ATS-OP-245-810-4RPSP-36 + Eth7 Radio)

1TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.38	0.5	Pass
157	5785	16.38	0.5	Pass
165	5825	16.39	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	18.57	0.5	Pass
157	5785	18.75	0.5	Pass
165	5825	18.77	0.5	Pass

802.11ax (HE40)

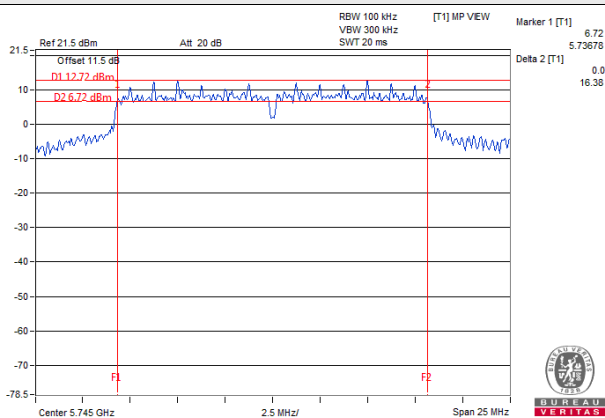
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	37.75	0.5	Pass
159	5795	37.74	0.5	Pass

802.11ax (HE80)

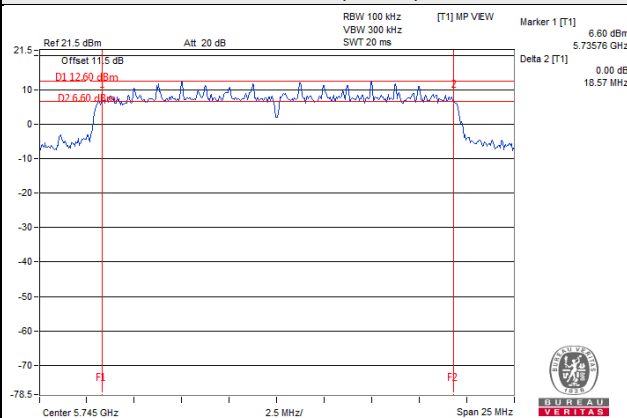
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.48	0.5	Pass

Spectrum Plot of Worst Value

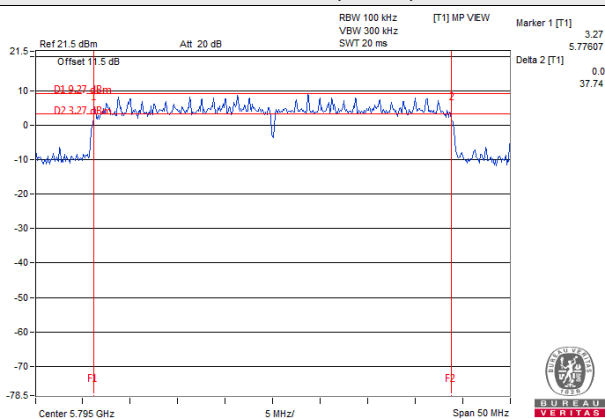
802.11a



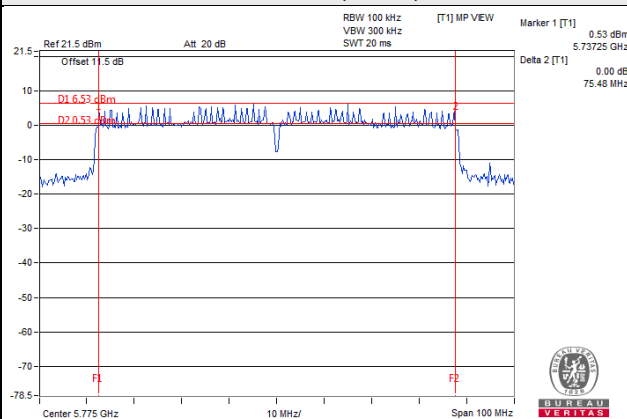
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



2TX

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.38	16.39	0.5	Pass
157	5785	16.38	16.38	0.5	Pass
165	5825	16.39	16.40	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	18.57	18.90	0.5	Pass
157	5785	18.75	18.81	0.5	Pass
165	5825	18.77	18.84	0.5	Pass

802.11ax (HE40)

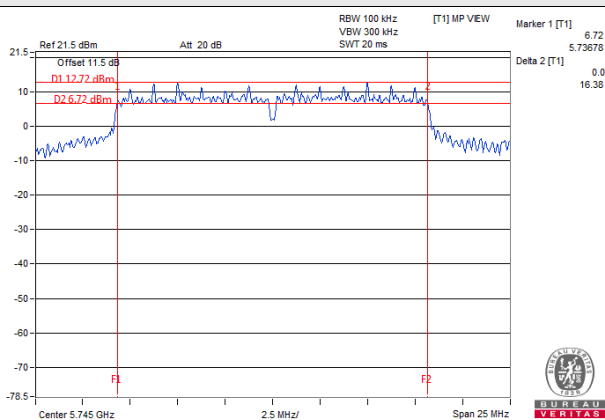
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	37.75	37.74	0.5	Pass
159	5795	37.74	37.65	0.5	Pass

802.11ax (HE80)

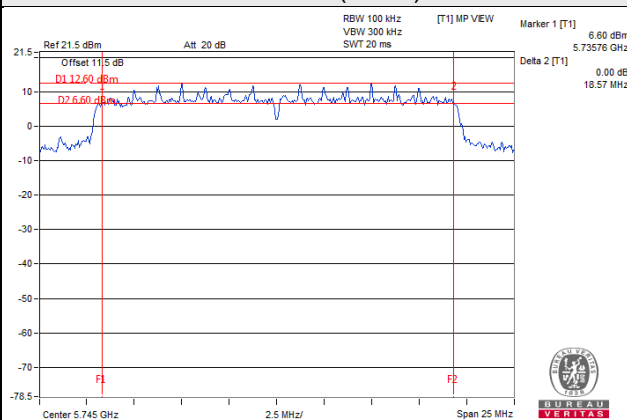
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	75.54	76.06	0.5	Pass

Spectrum Plot of Worst Value

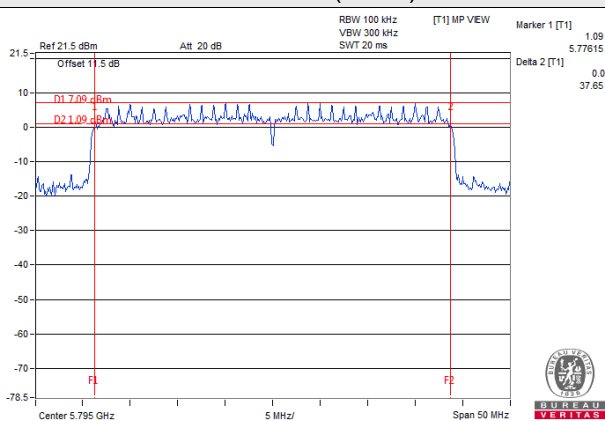
802.11a



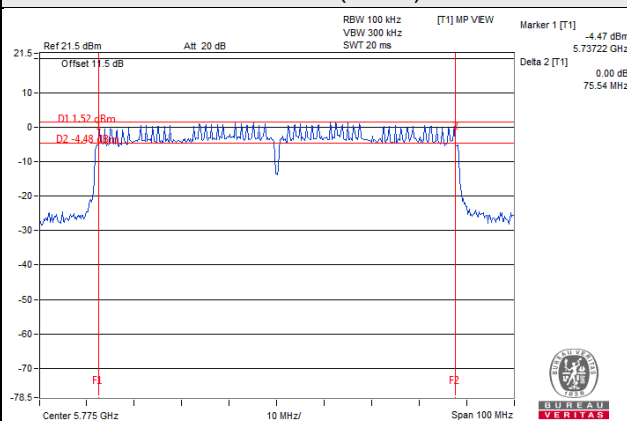
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



5 Pictures of Test Arrangements

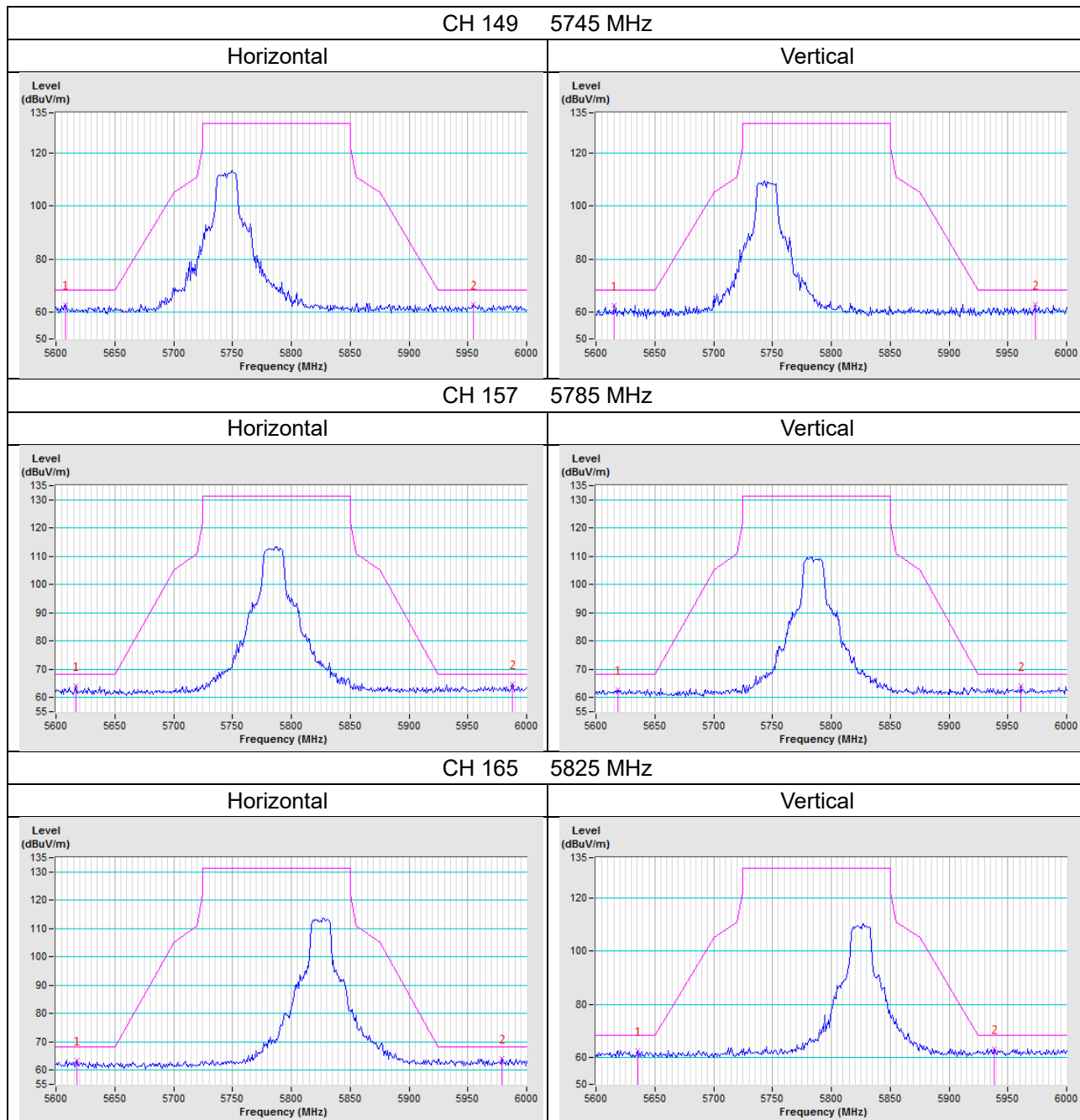
Please refer to the attached file (Test Setup Photo).

Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

Test Mode A (Internal antenna + Eth6 Radio)

1TX

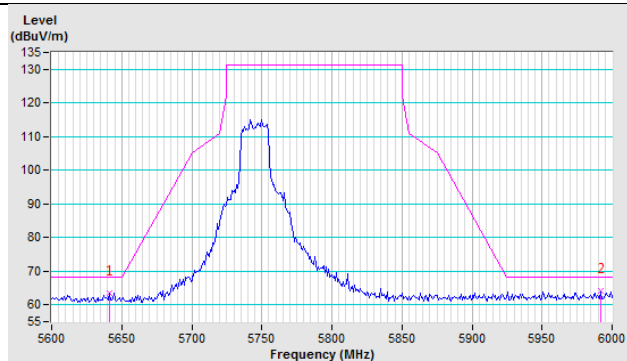
802.11a



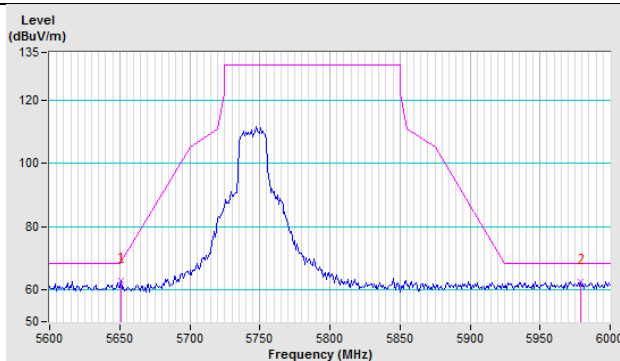
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

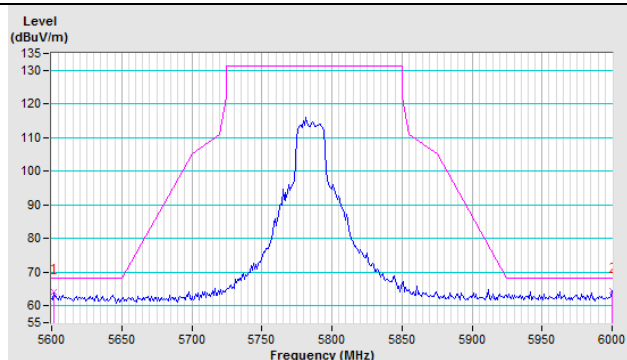


Vertical

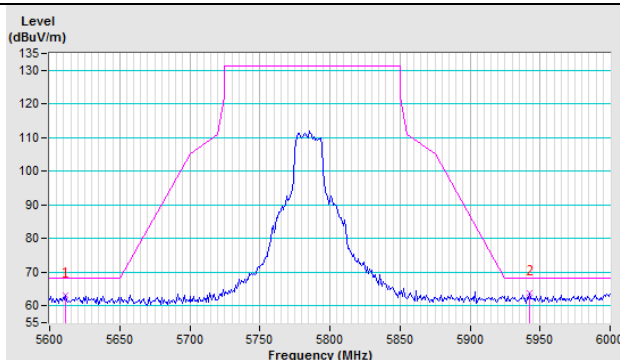


CH 157 5785 MHz

Horizontal

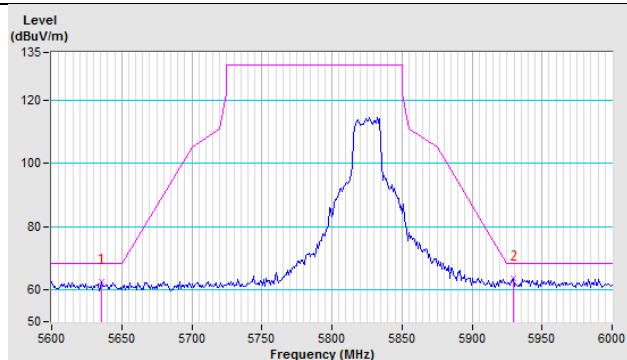


Vertical

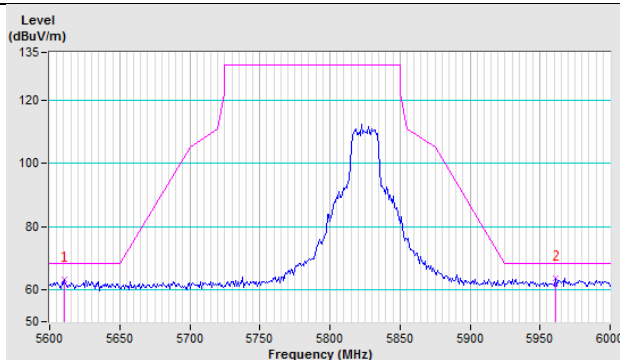


CH 165 5825 MHz

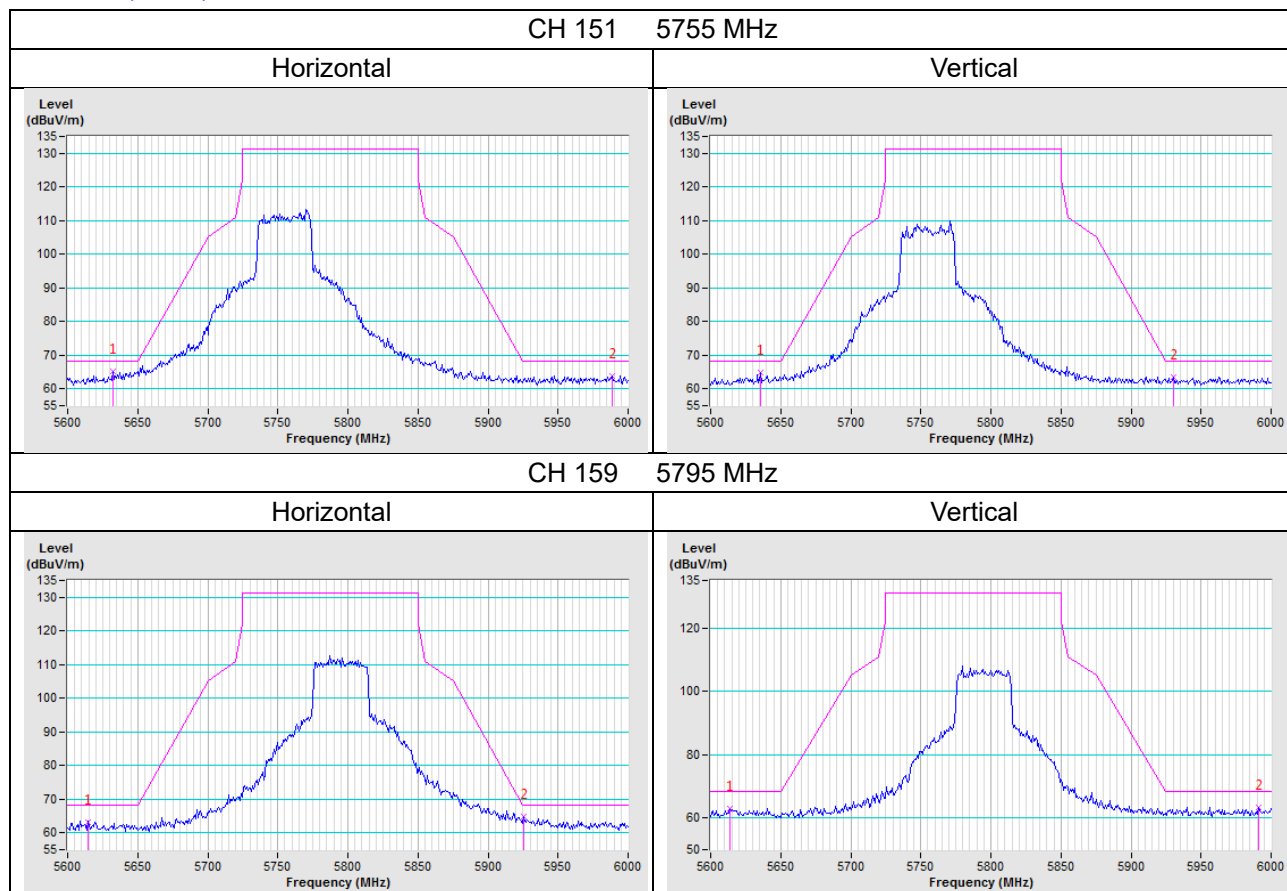
Horizontal



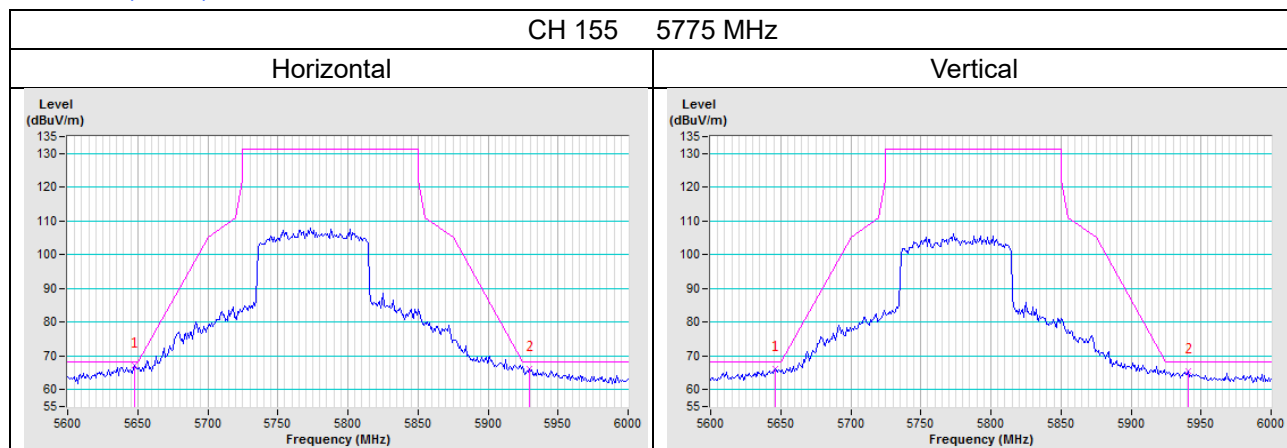
Vertical



802.11ax (HE40)

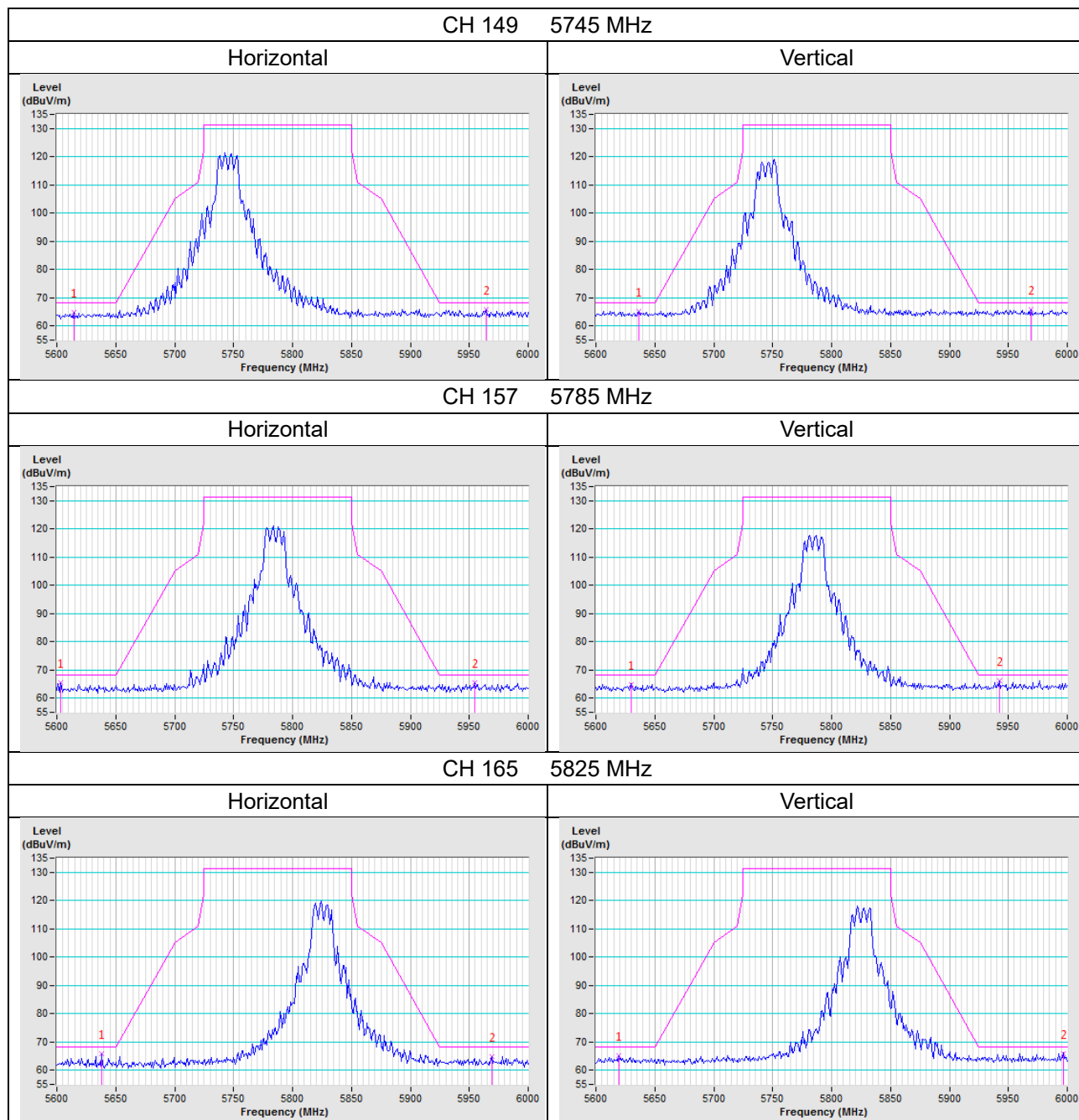


802.11ax (HE80)

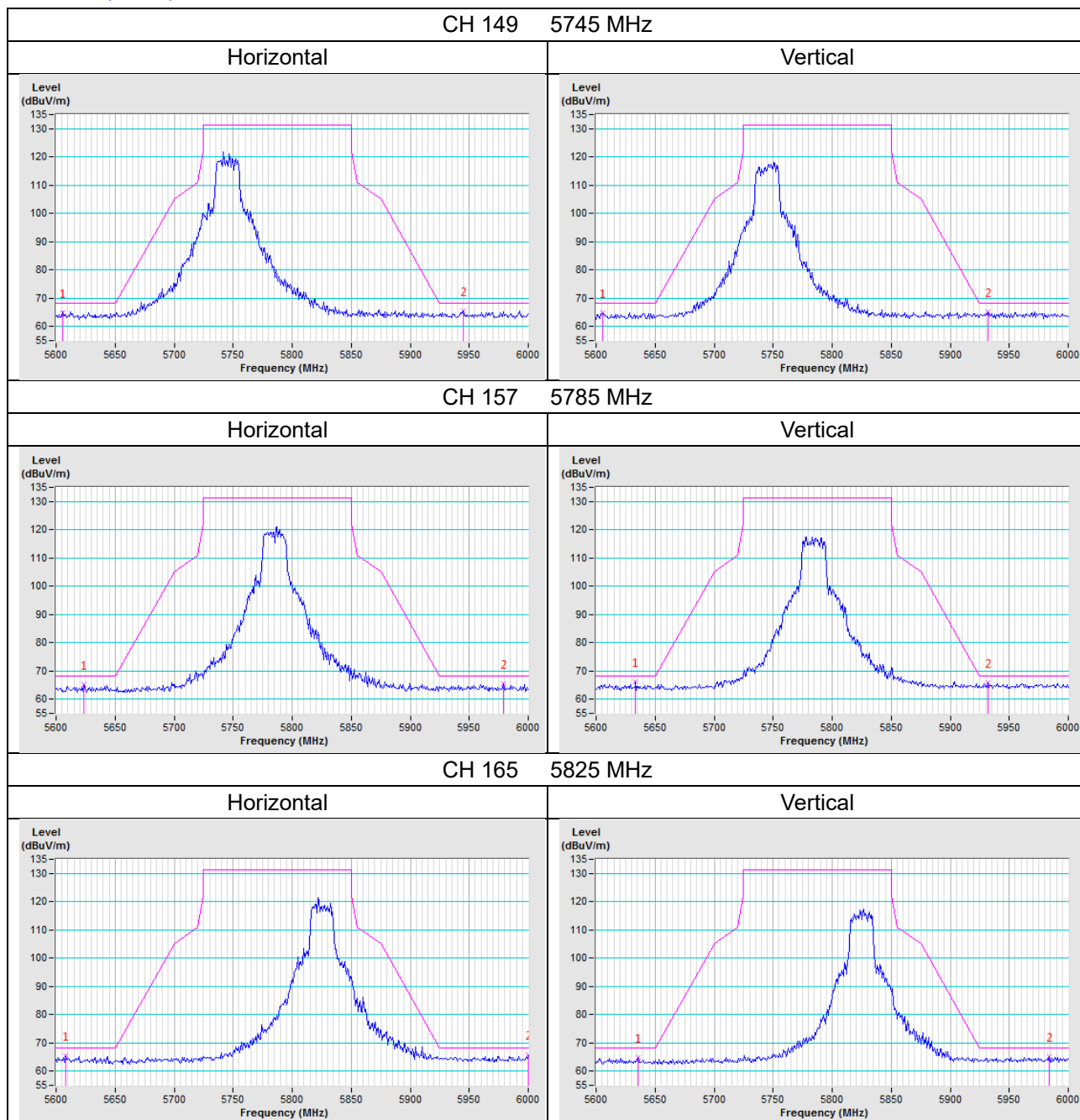


2TX

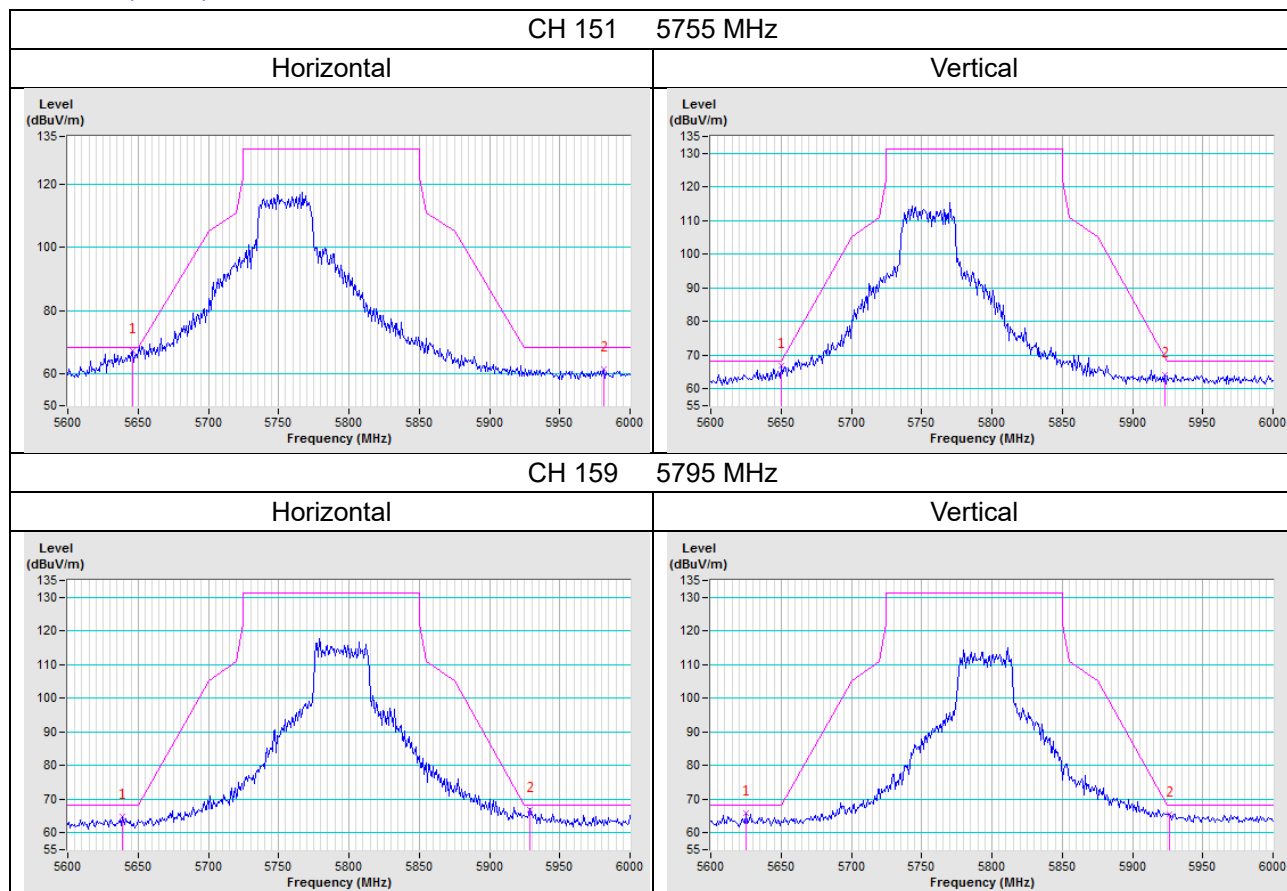
802.11a



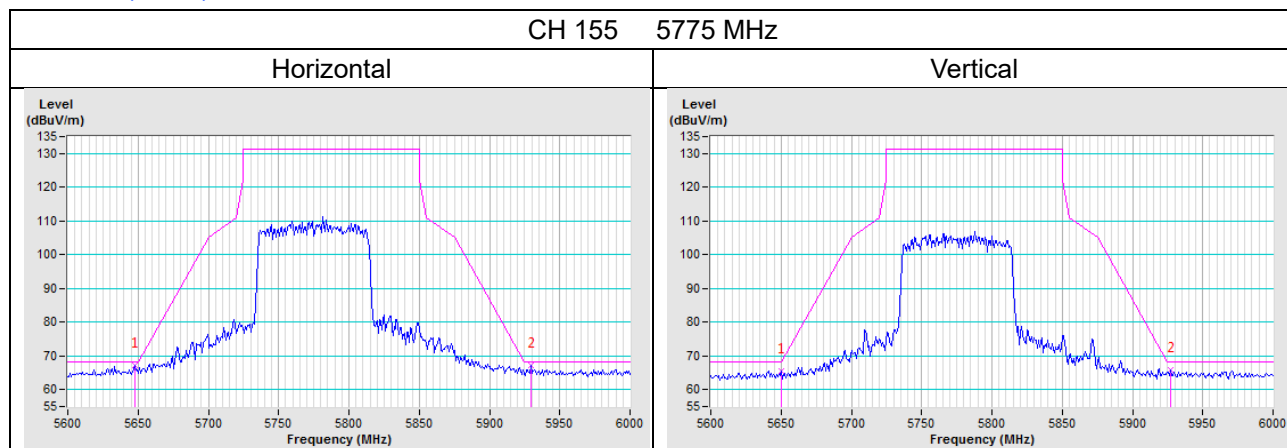
802.11ax (HE20)



802.11ax (HE40)

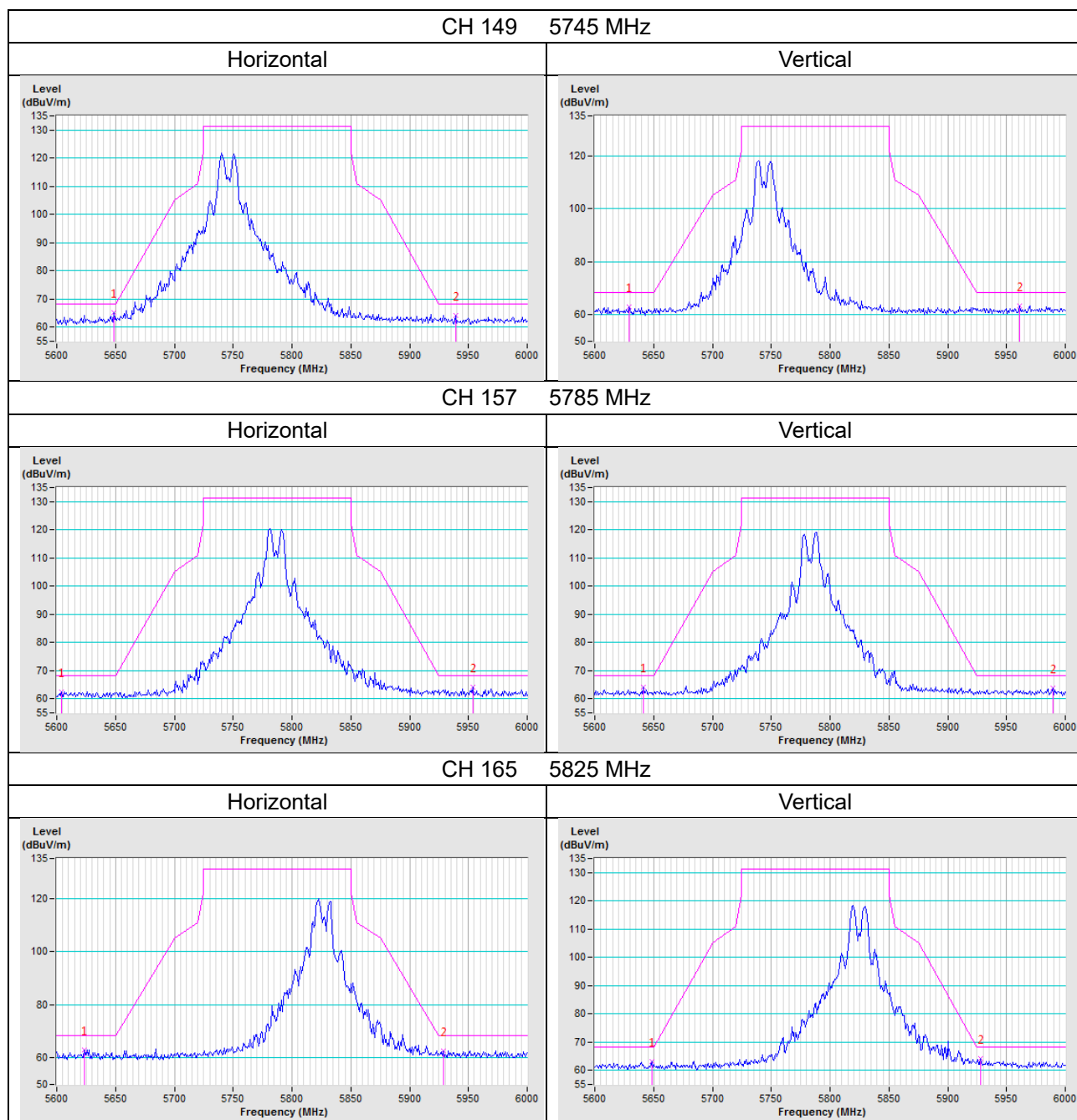


802.11ax (HE80)



3TX

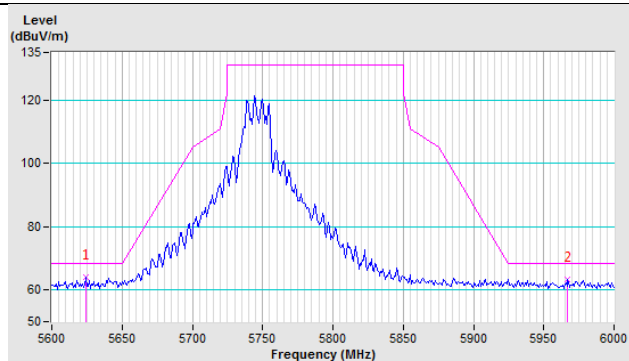
802.11a



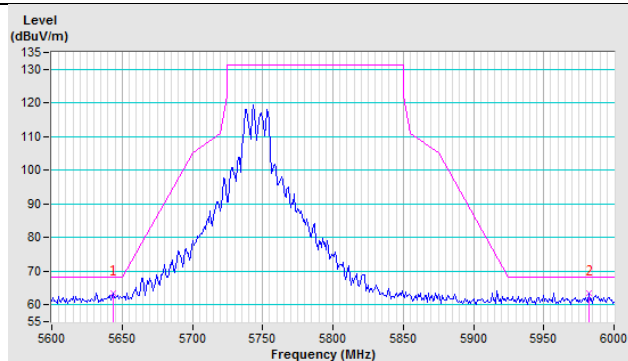
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

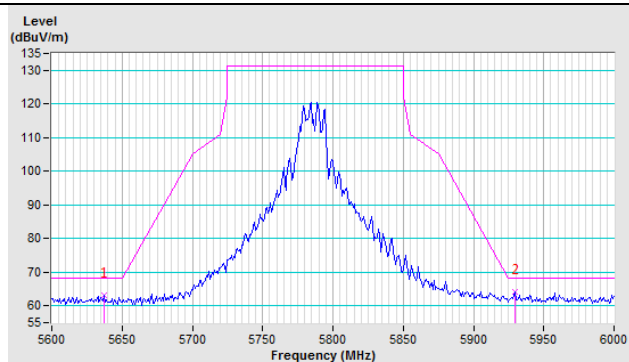


Vertical

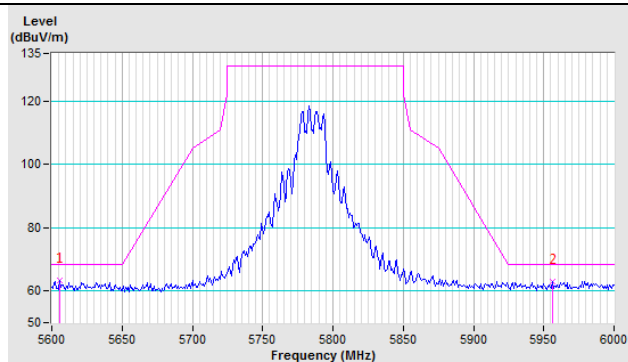


CH 157 5785 MHz

Horizontal

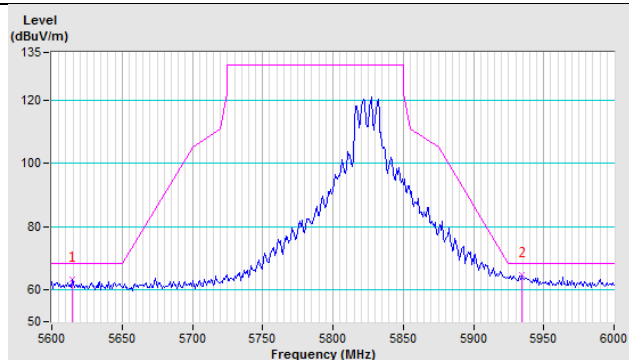


Vertical

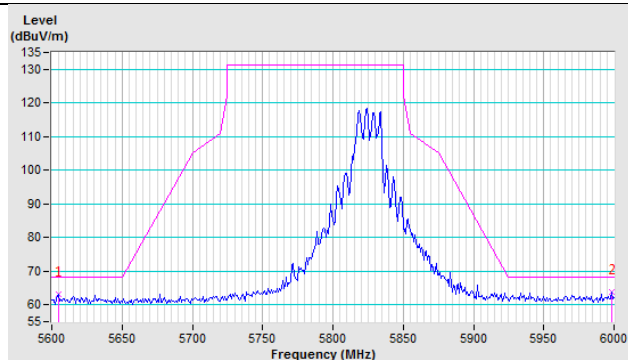


CH 165 5825 MHz

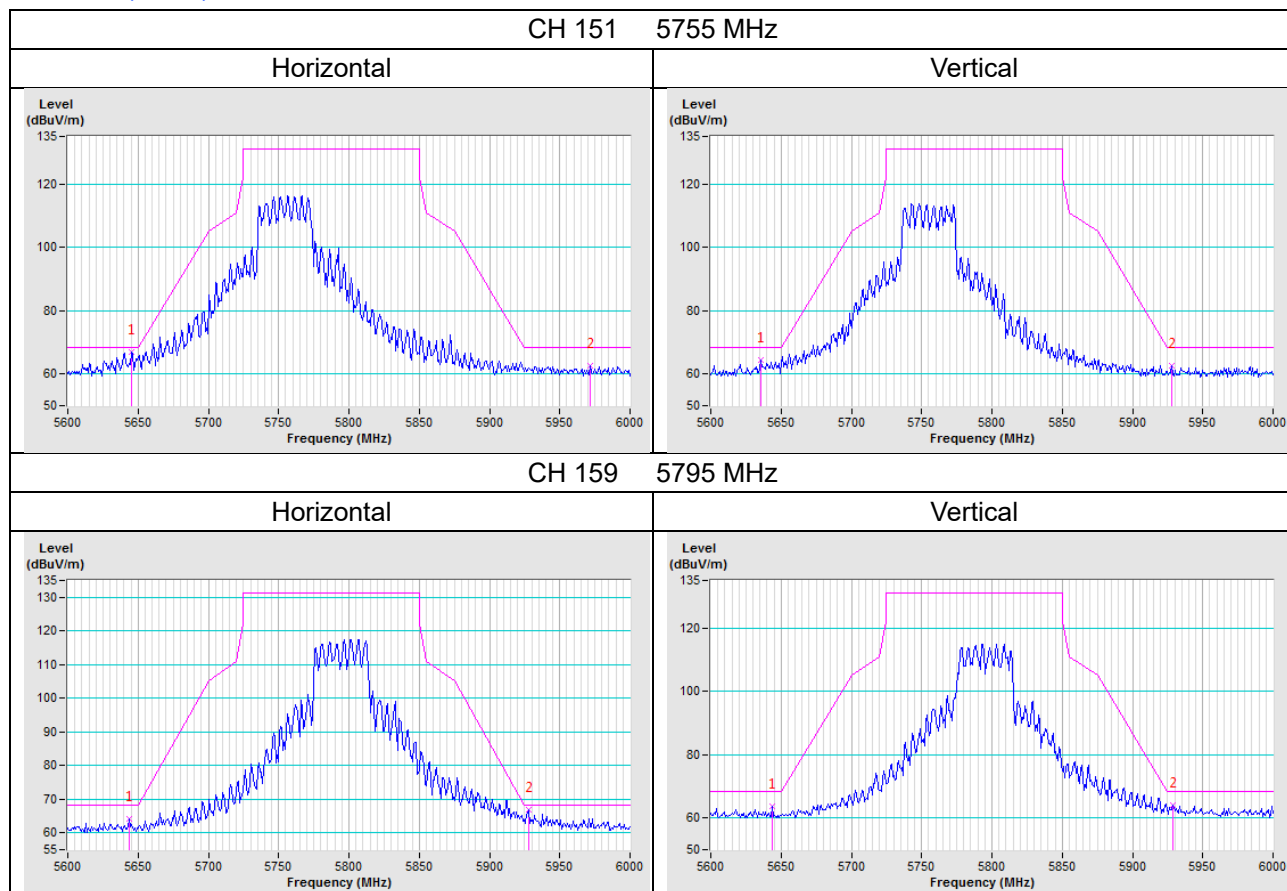
Horizontal



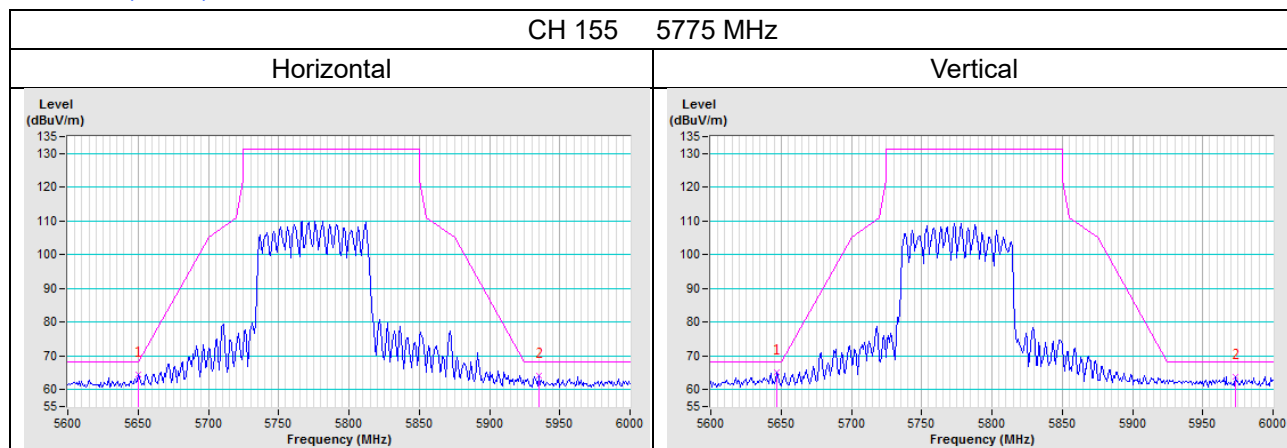
Vertical



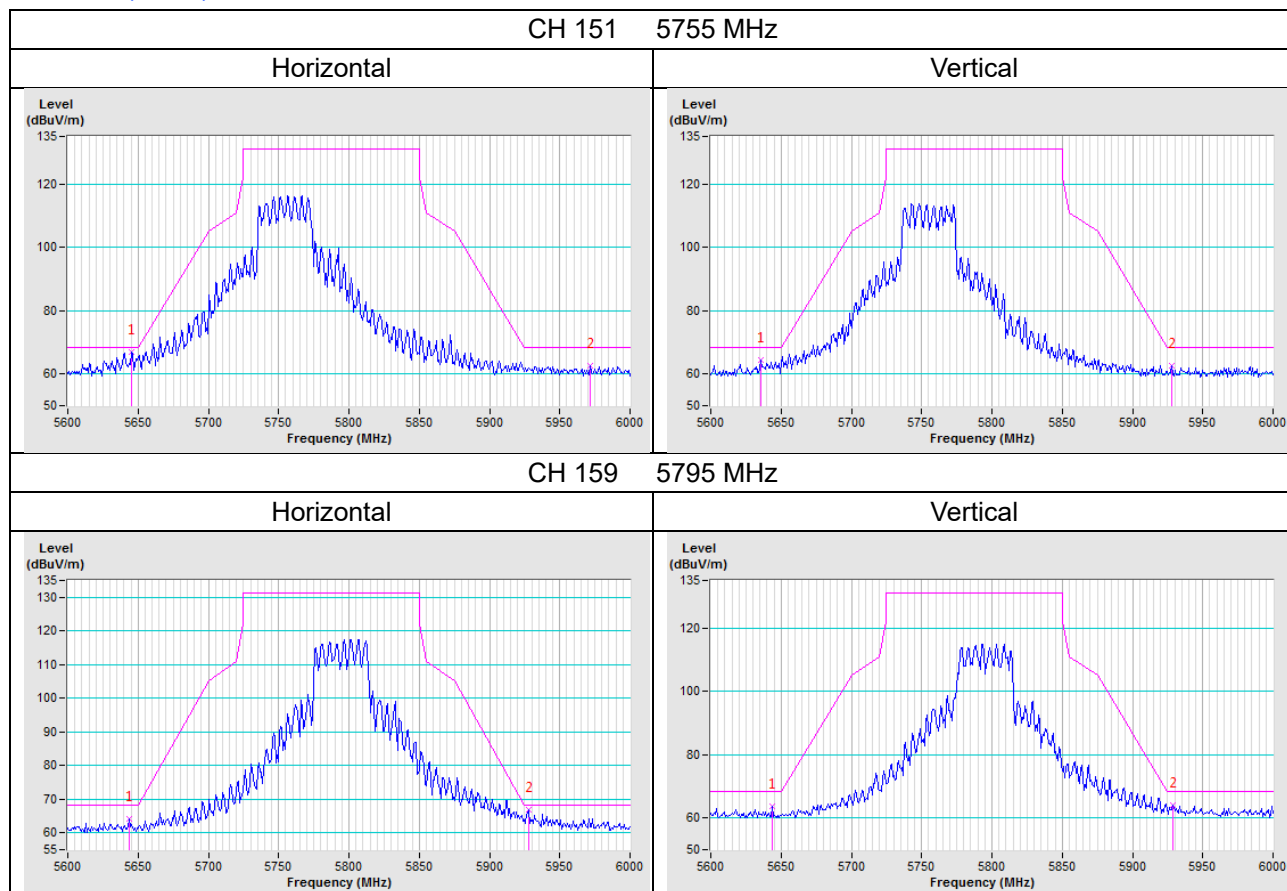
802.11ax (HE40)



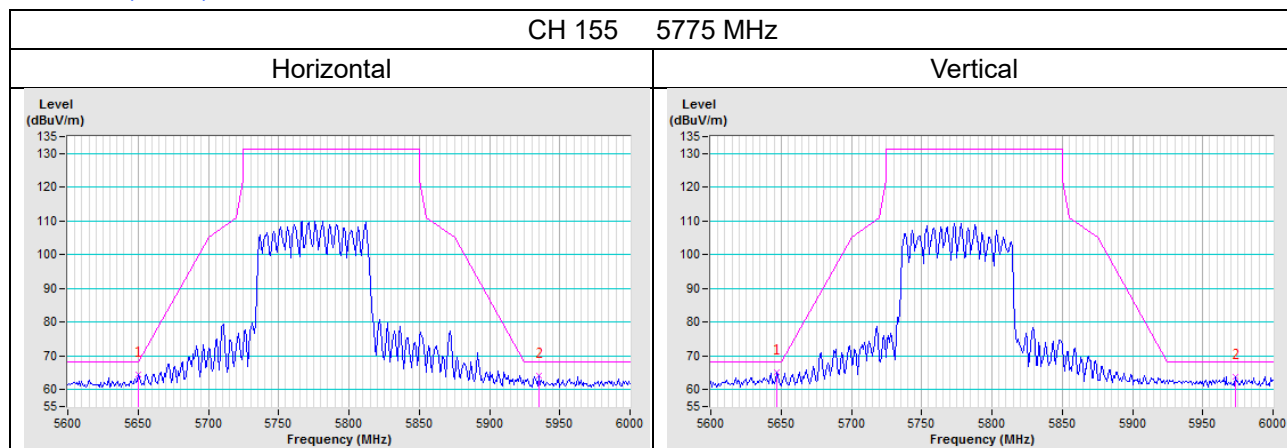
802.11ax (HE80)



802.11ax (HE40)



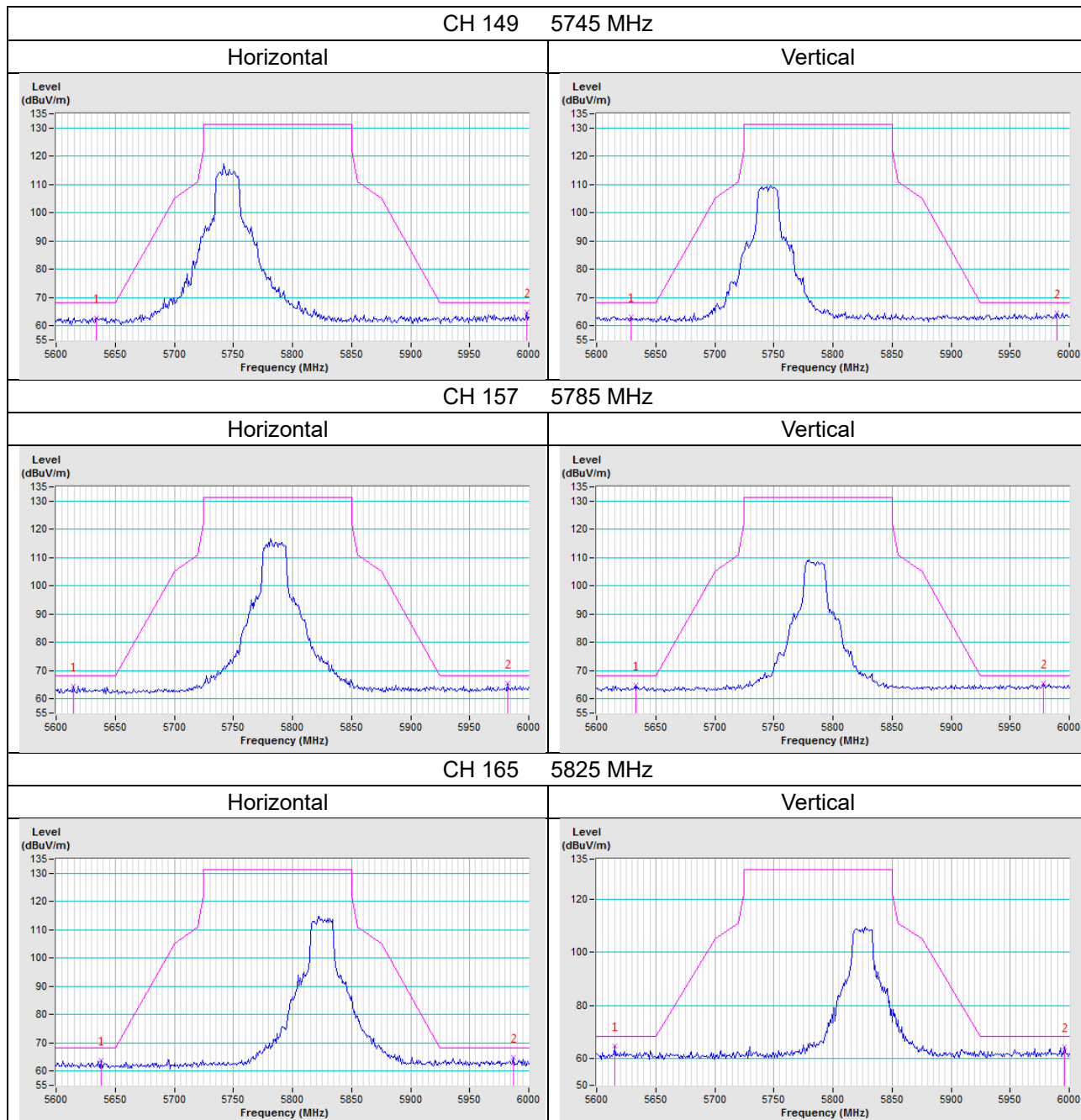
802.11ax (HE80)



Test Mode C (Internal antenna + Eth7 Radio)

1TX

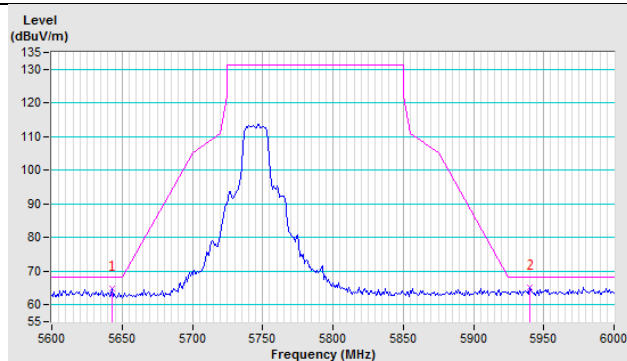
802.11a



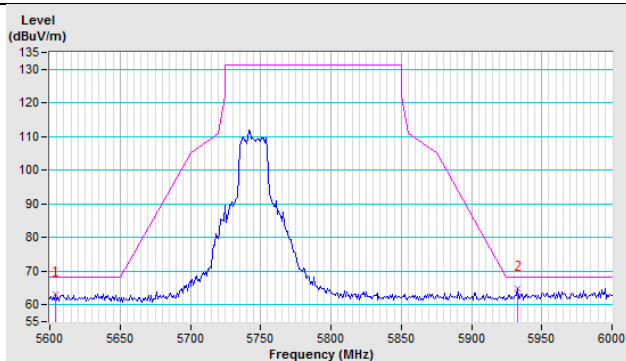
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

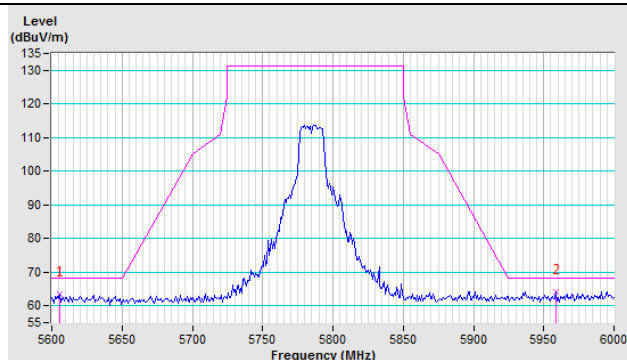


Vertical

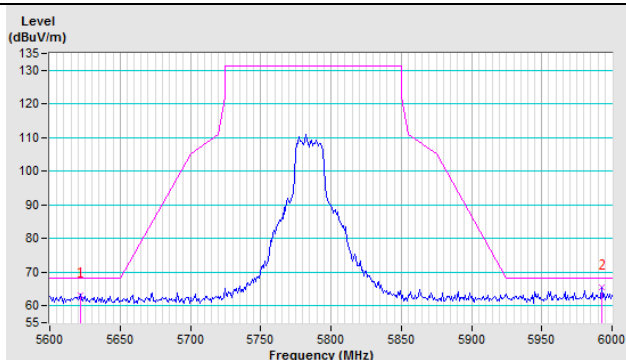


CH 157 5785 MHz

Horizontal

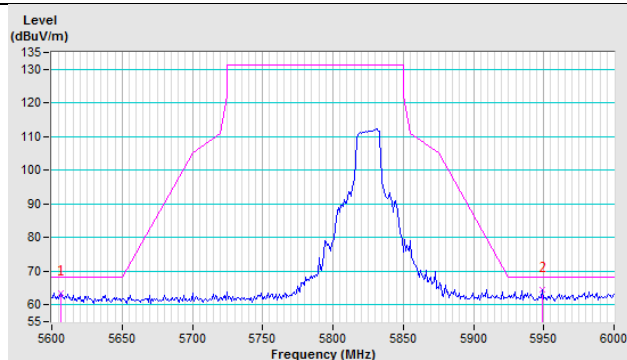


Vertical

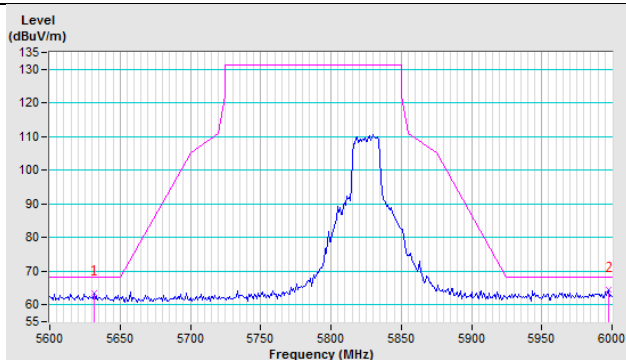


CH 165 5825 MHz

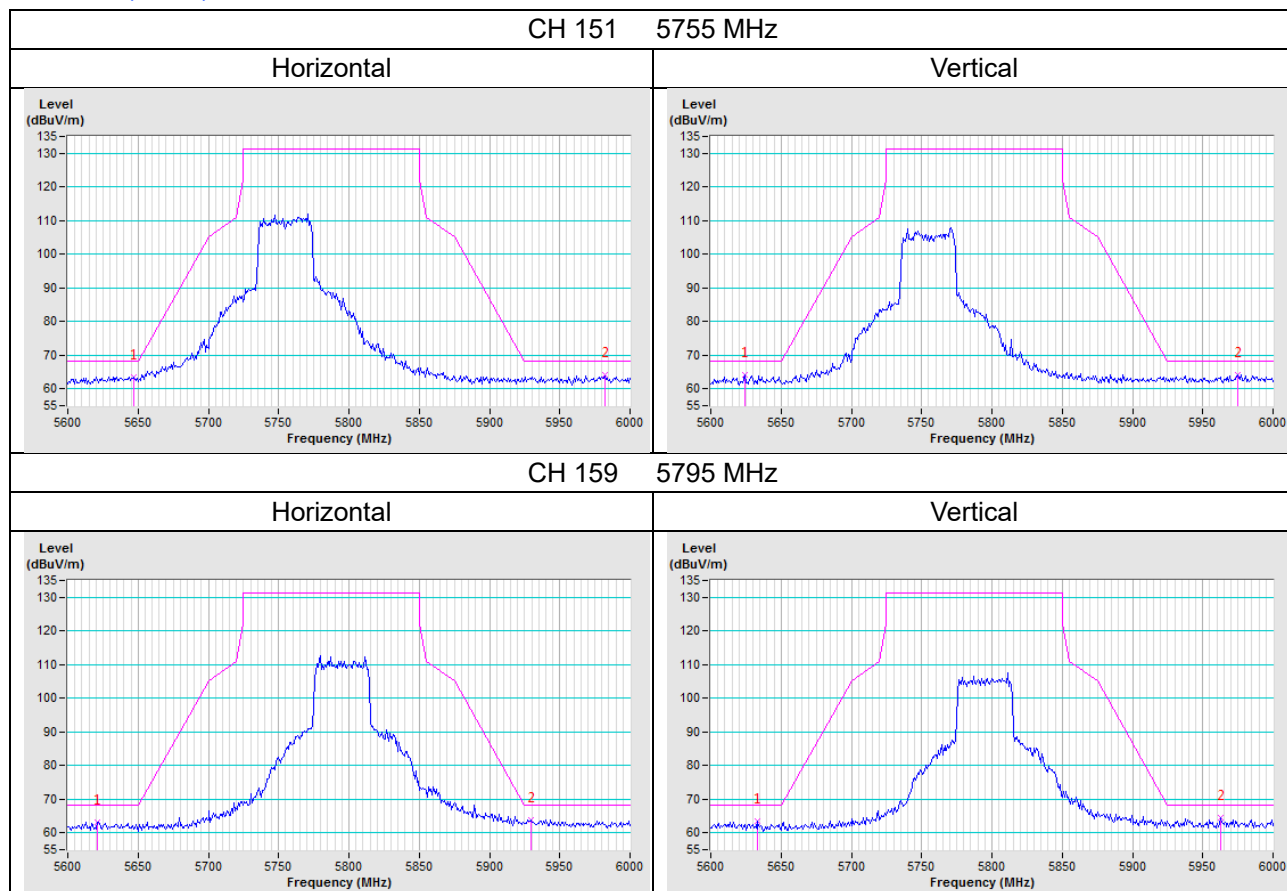
Horizontal



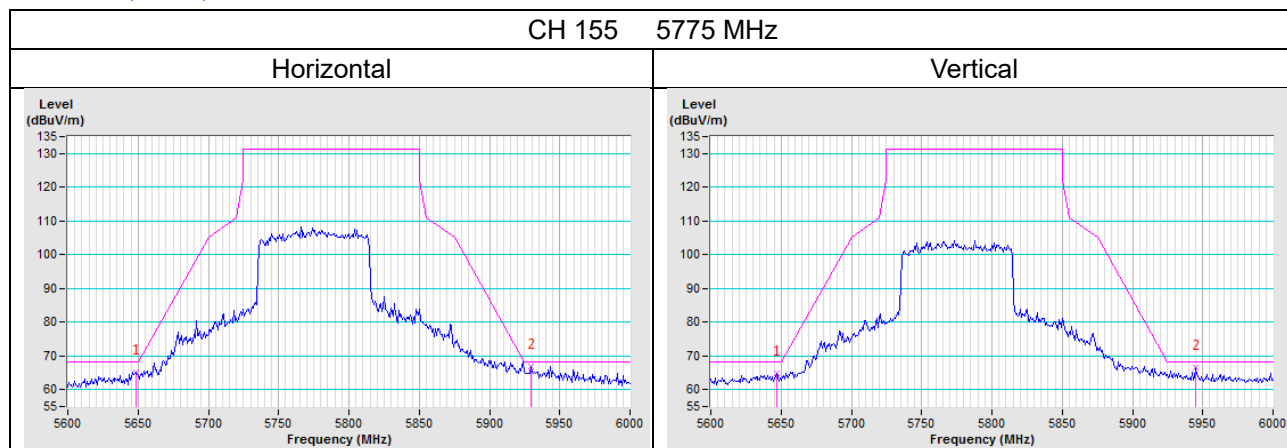
Vertical



802.11ax (HE40)



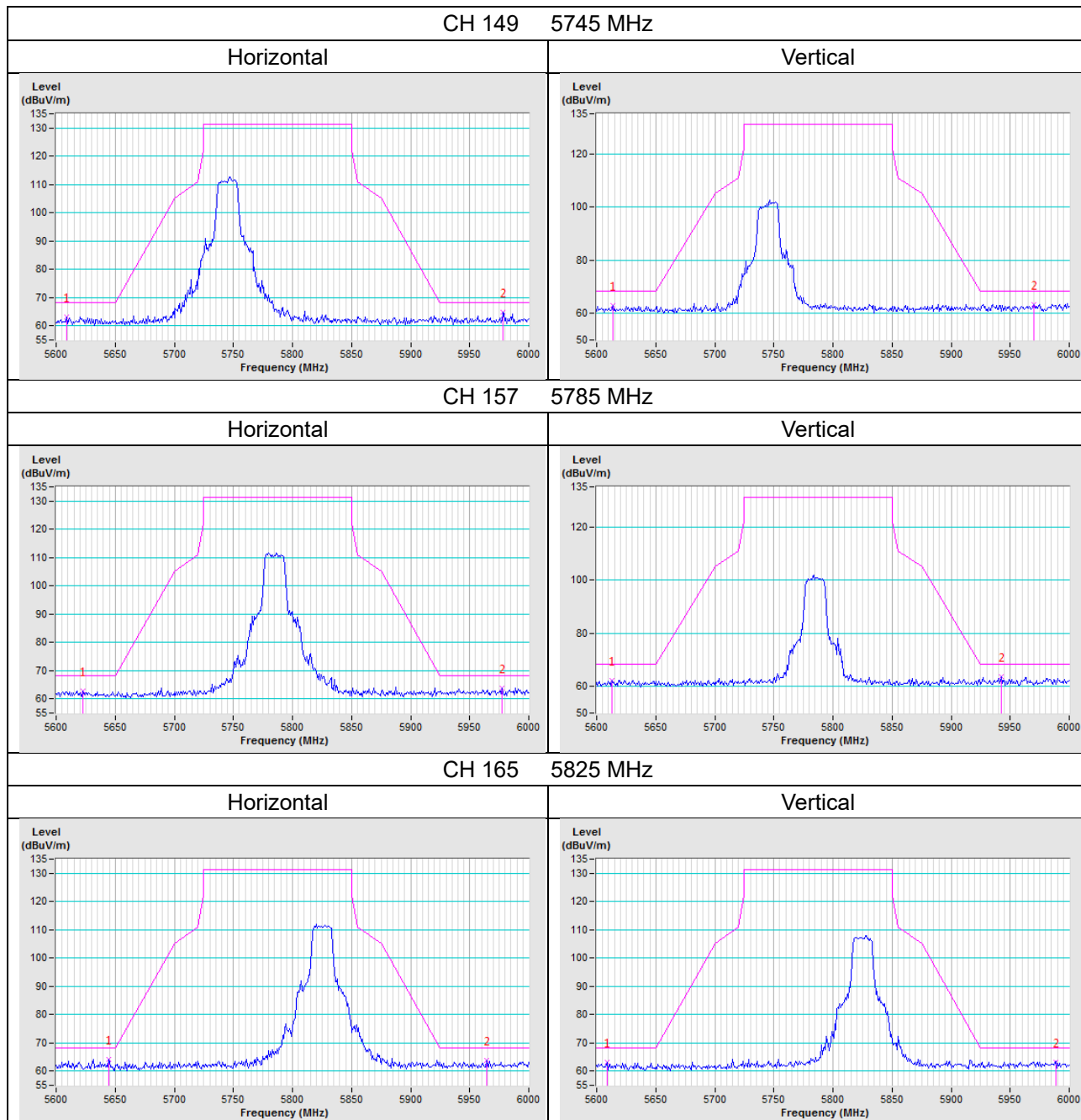
802.11ax (HE80)



Test Mode E (Internal antenna + Eth8 Radio)

1TX

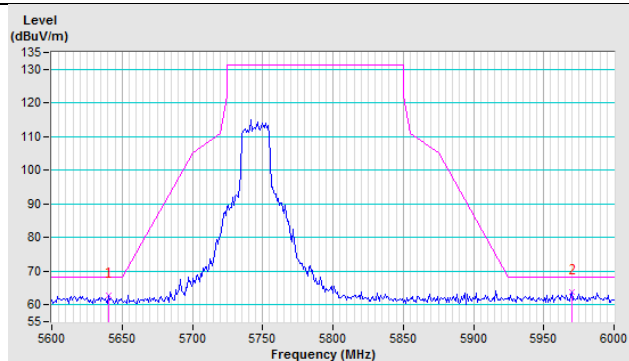
802.11a



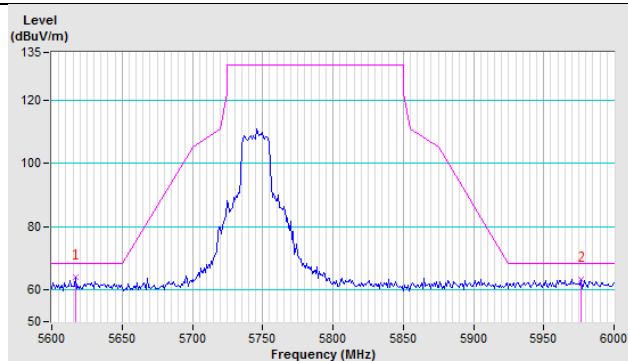
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

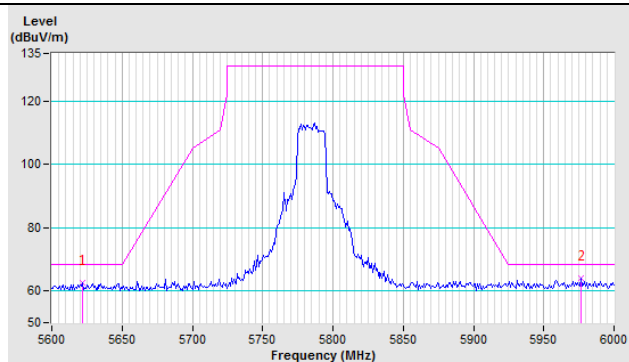


Vertical

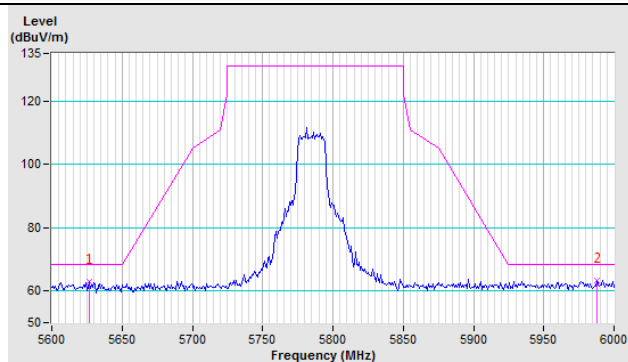


CH 157 5785 MHz

Horizontal

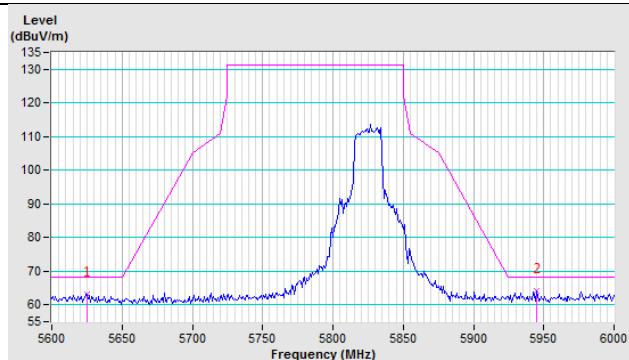


Vertical

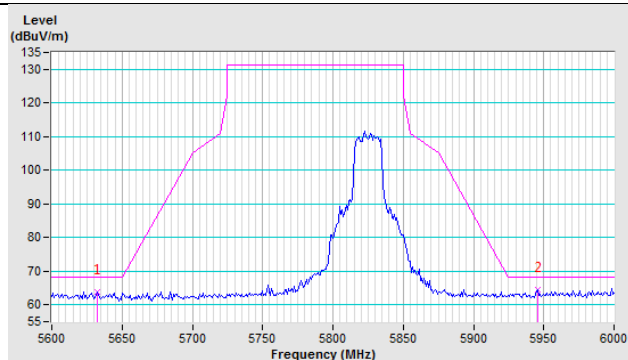


CH 165 5825 MHz

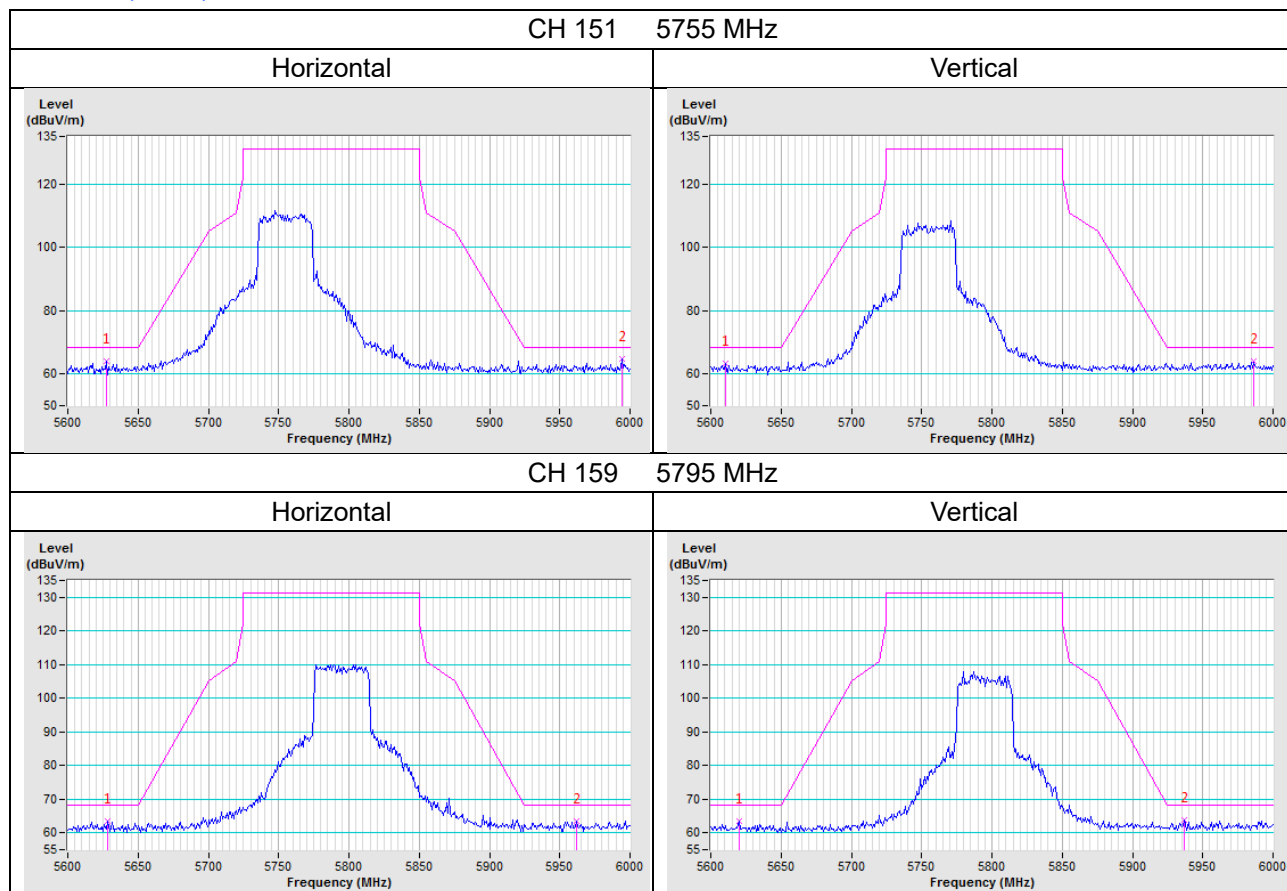
Horizontal



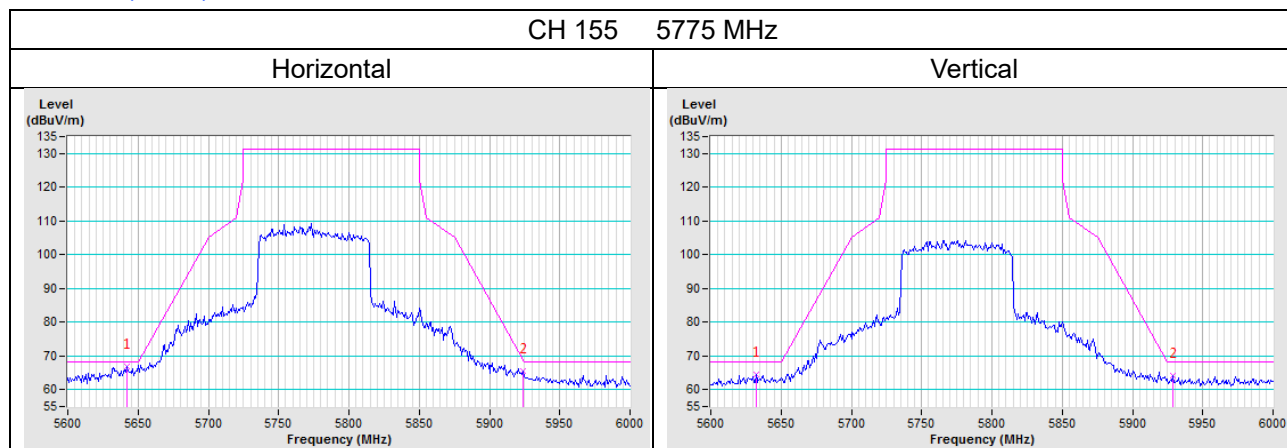
Vertical



802.11ax (HE40)

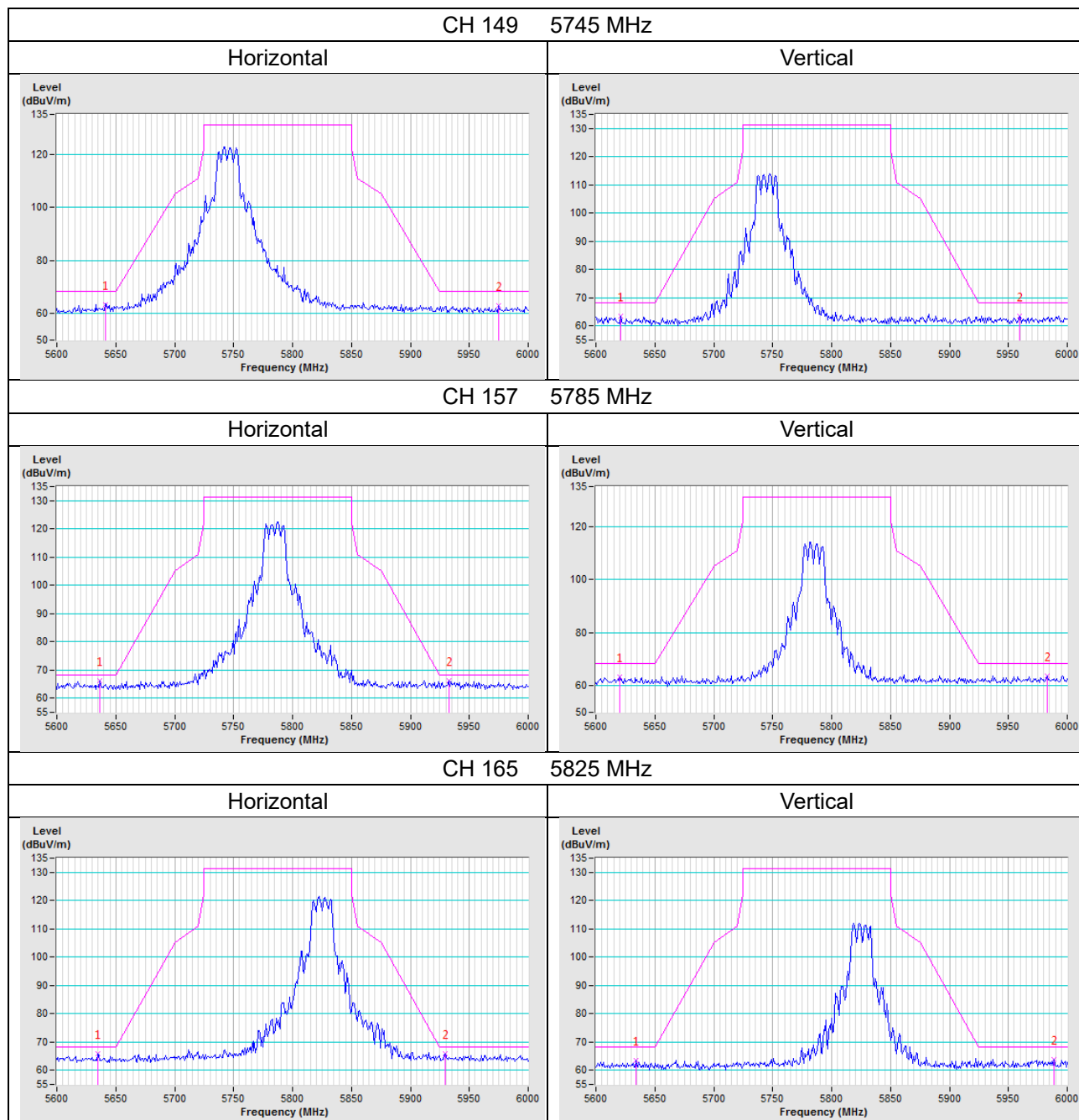


802.11ax (HE80)



2TX

802.11a

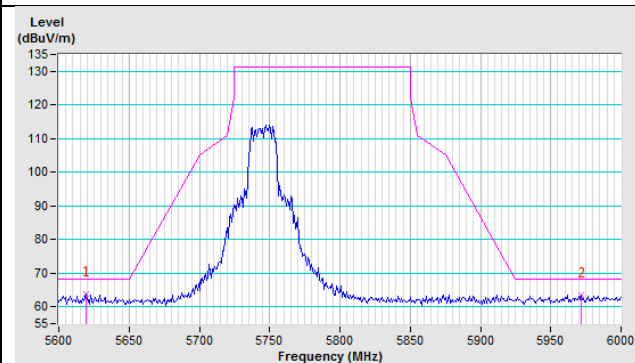
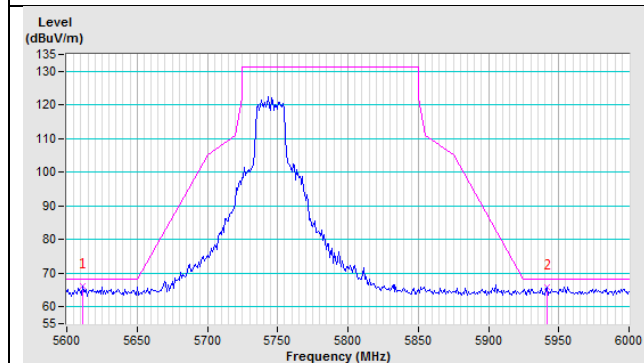


802.11ax (HE20)

CH 149 5745 MHz

Horizontal

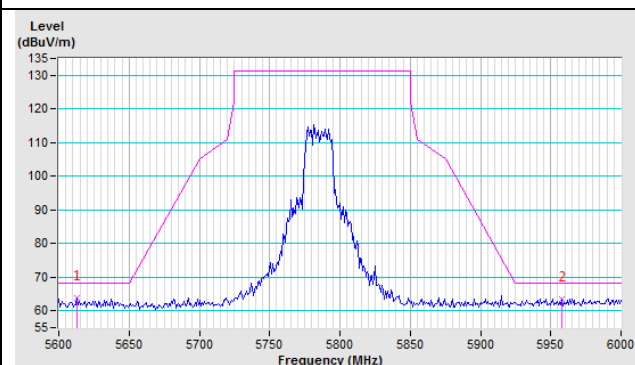
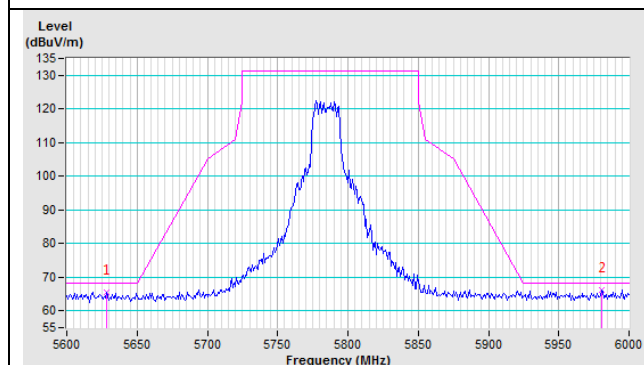
Vertical



CH 157 5785 MHz

Horizontal

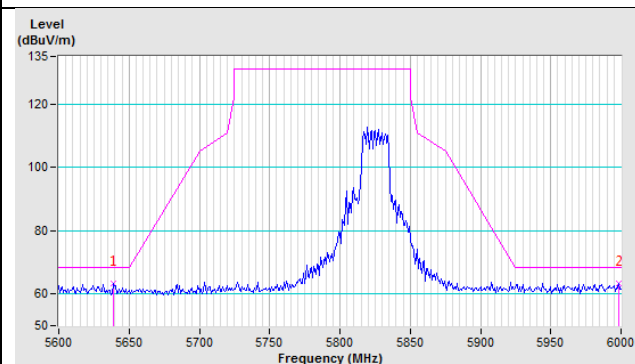
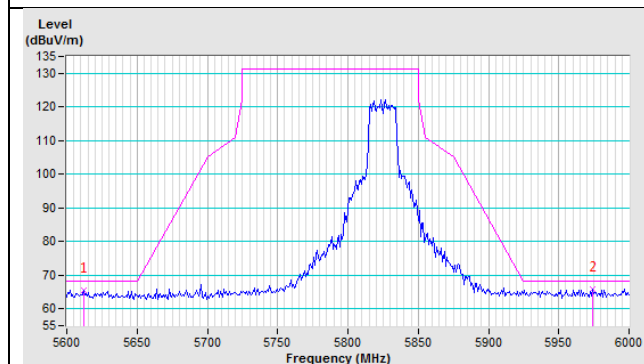
Vertical



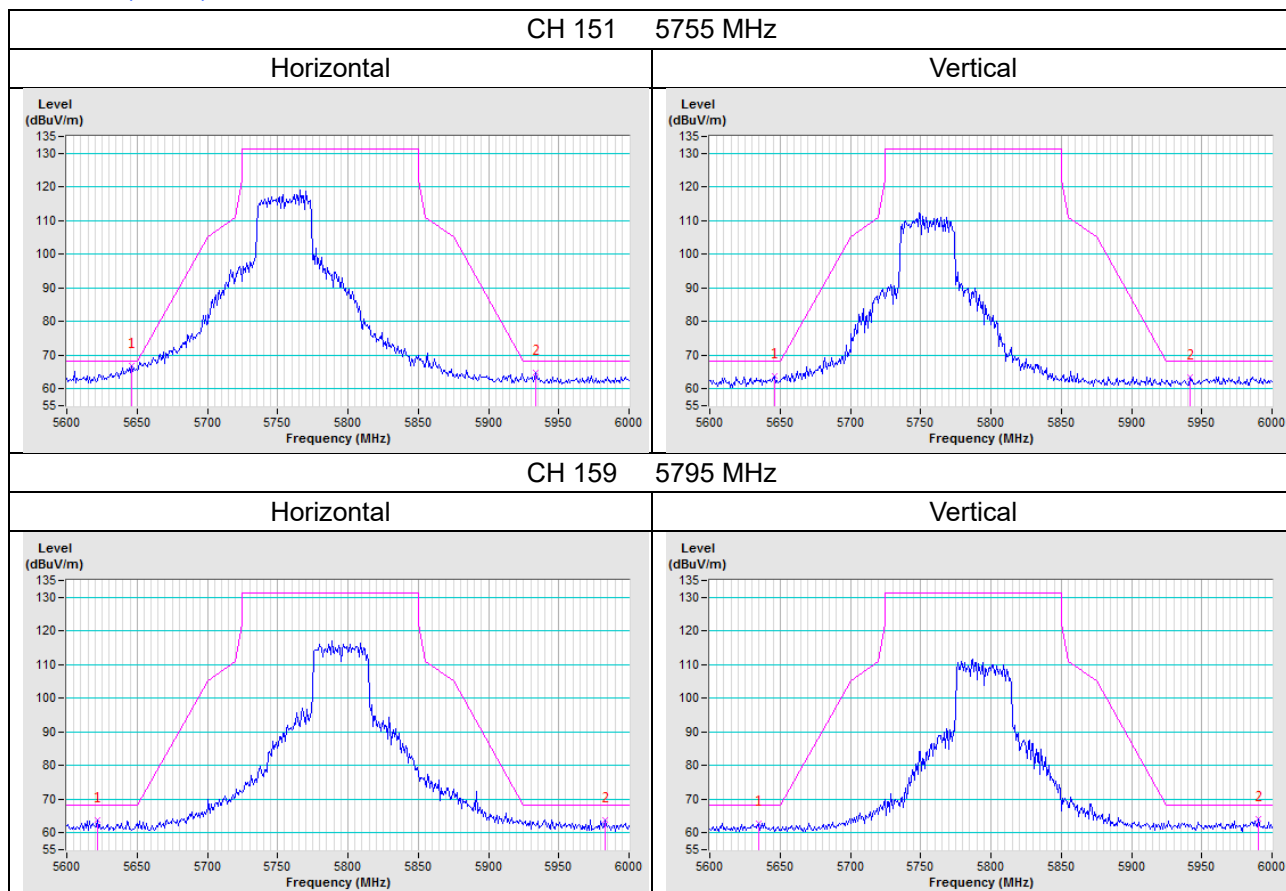
CH 165 5825 MHz

Horizontal

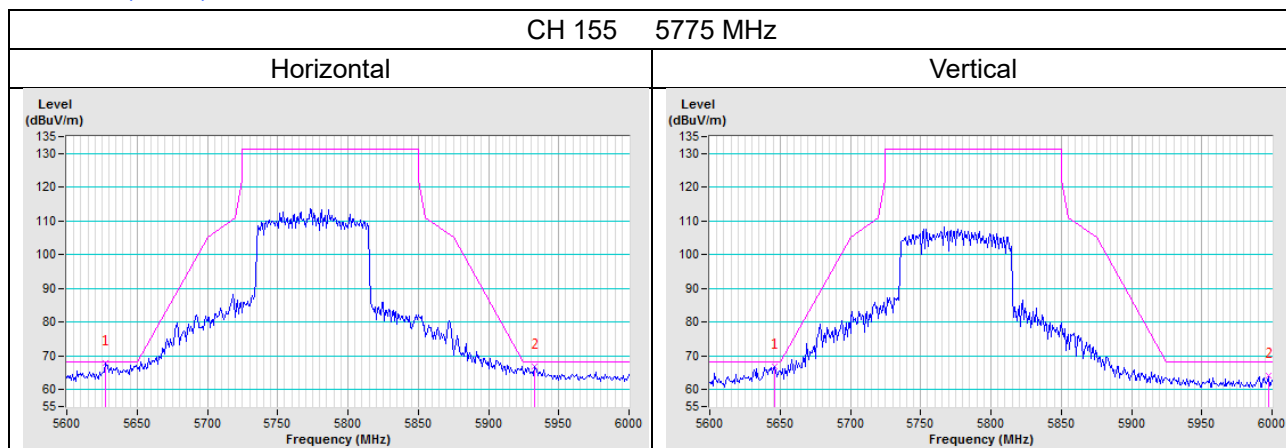
Vertical



802.11ax (HE40)

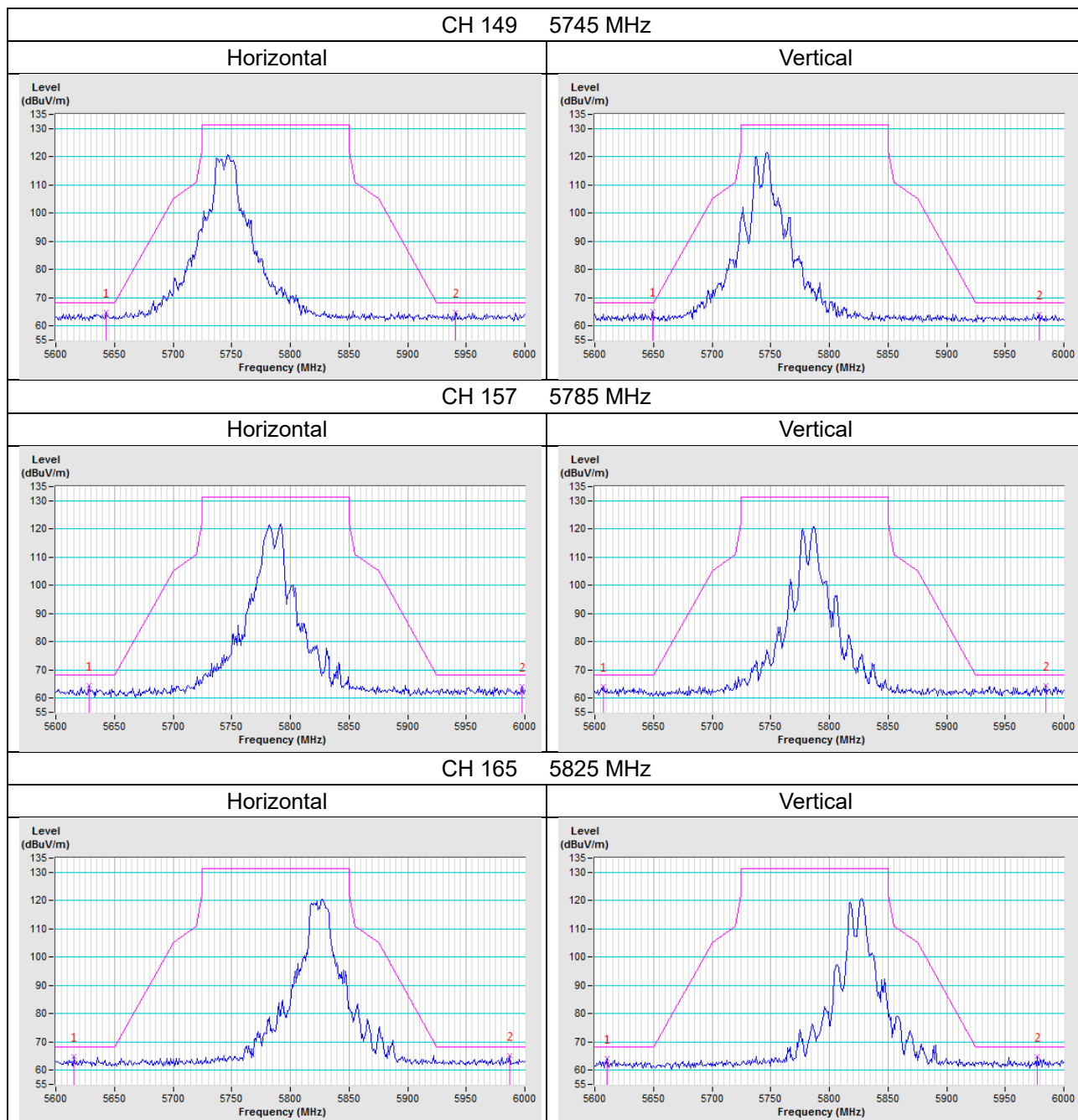


802.11ax (HE80)



3TX

802.11a

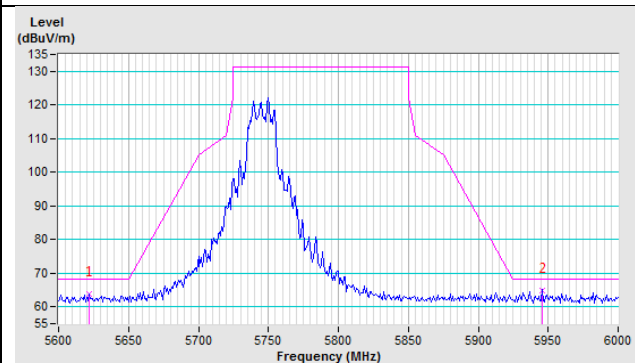
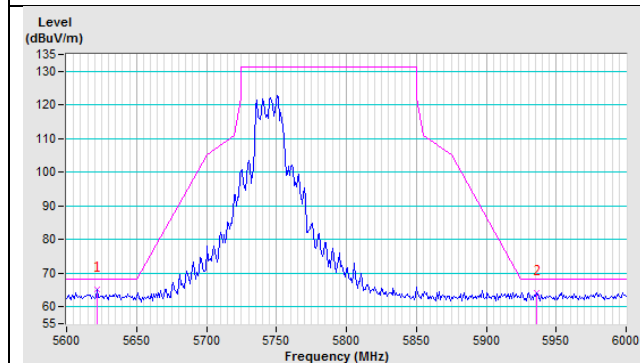


802.11ax (HE20)

CH 149 5745 MHz

Horizontal

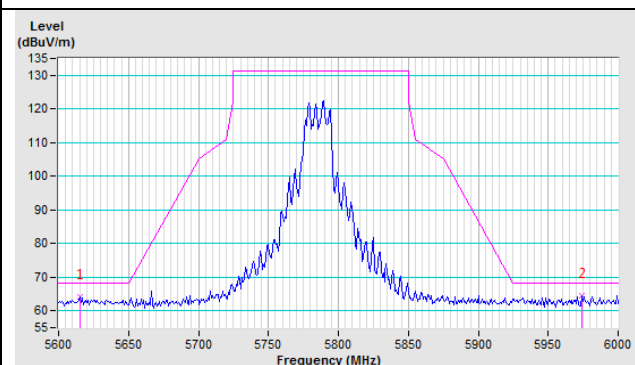
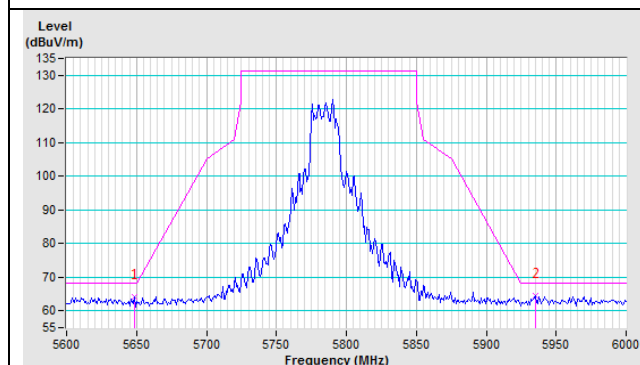
Vertical



CH 157 5785 MHz

Horizontal

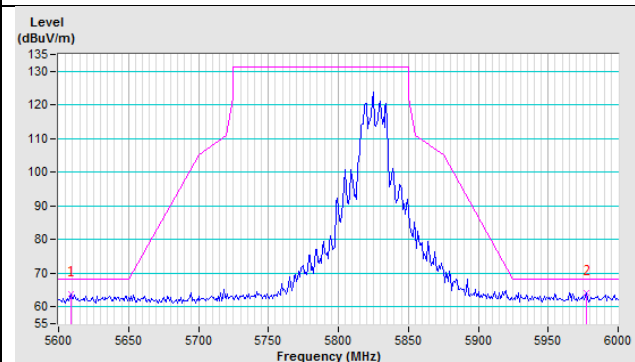
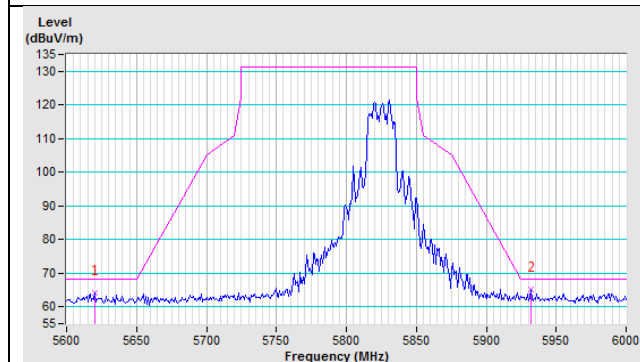
Vertical



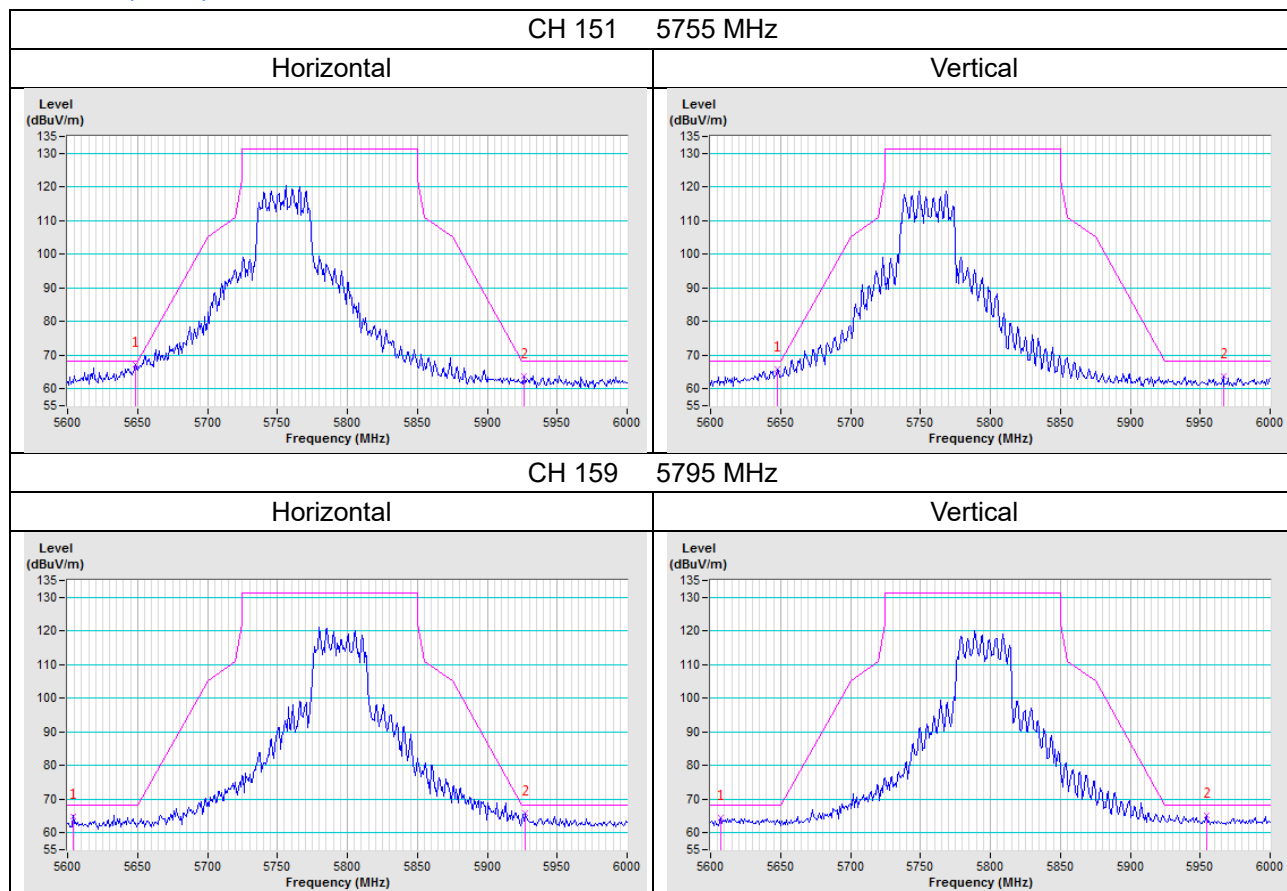
CH 165 5825 MHz

Horizontal

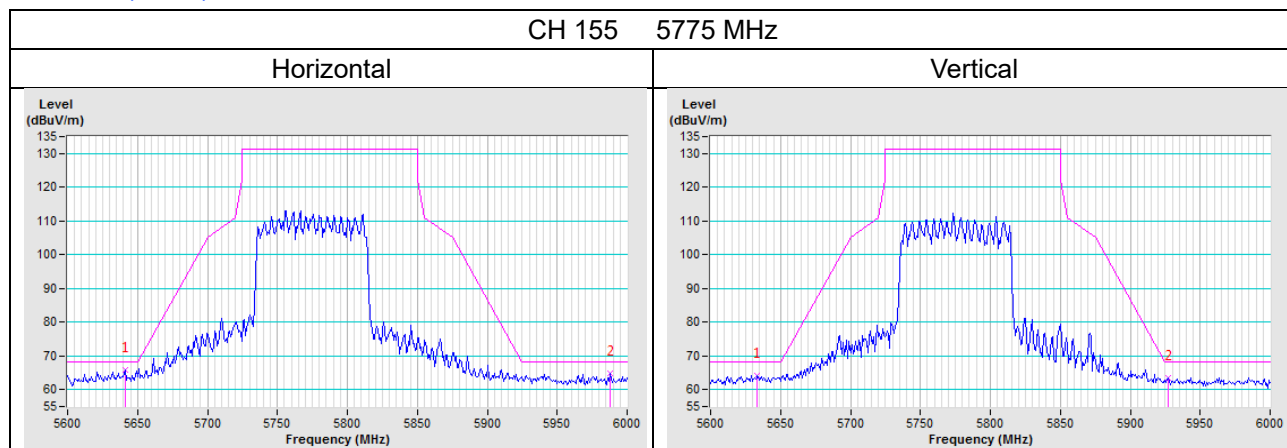
Vertical



802.11ax (HE40)



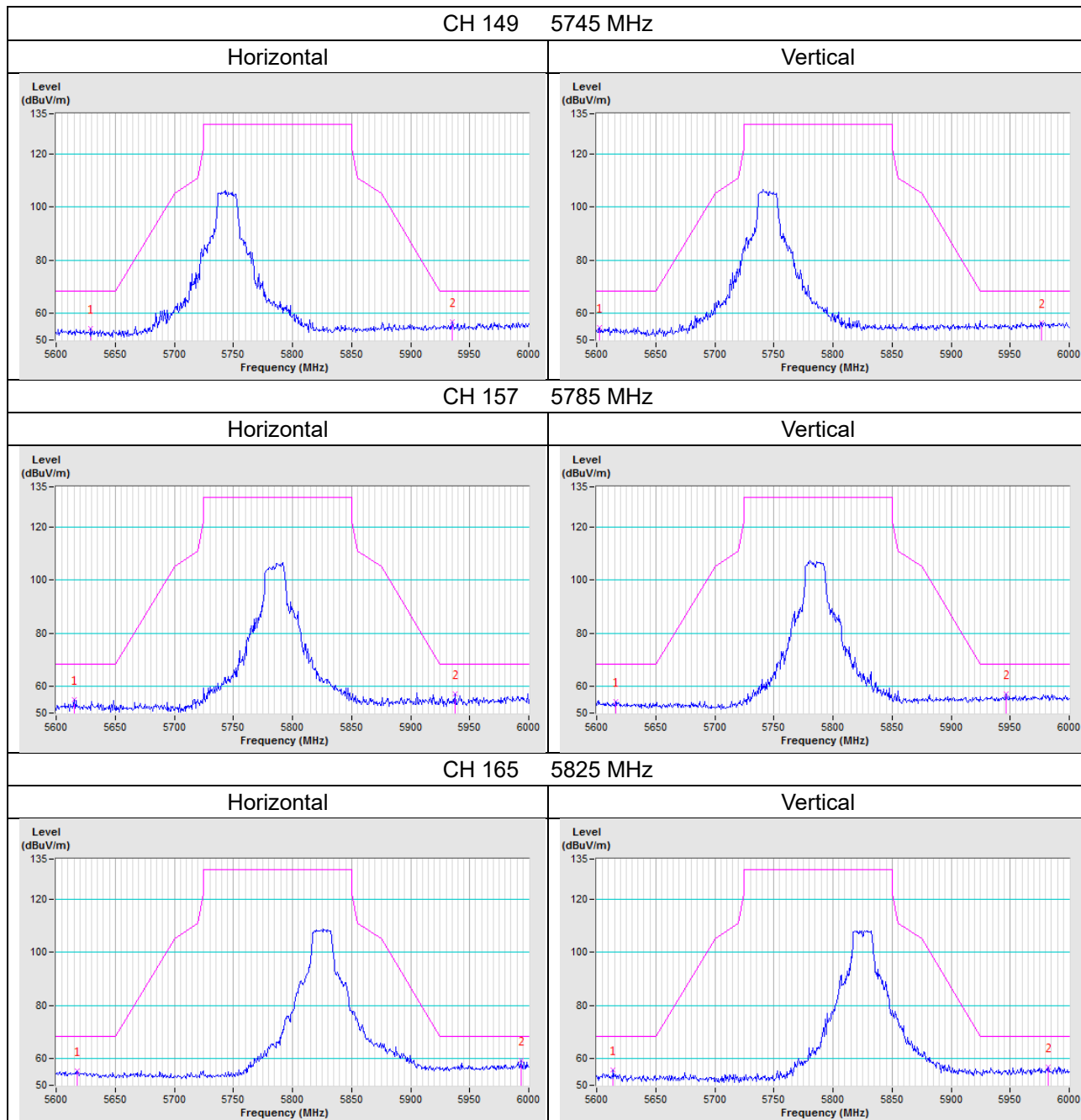
802.11ax (HE80)



Test Mode G (External antenna – PN: ATS-OO-245-46-4RPSP-36 + Eth6 Radio)

1TX

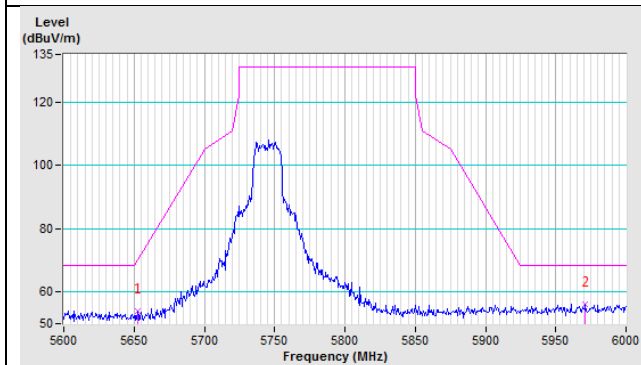
802.11a



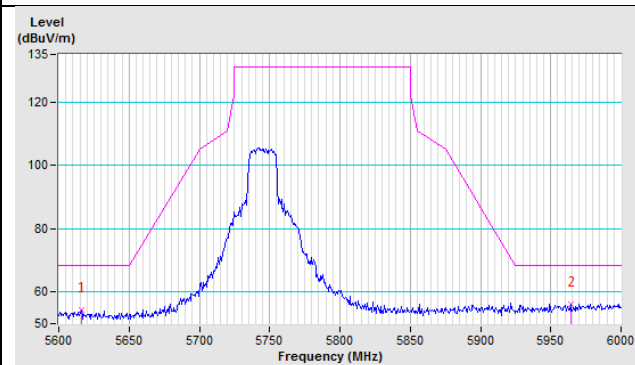
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

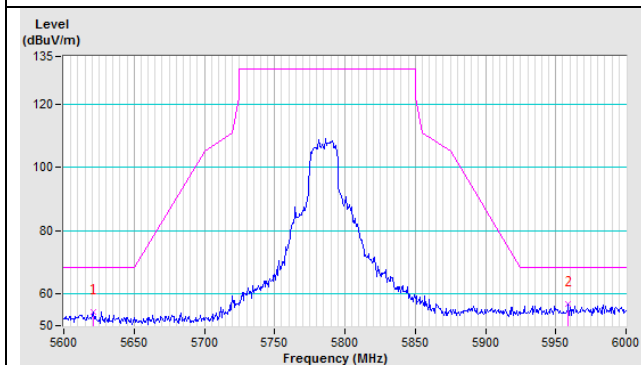


Vertical

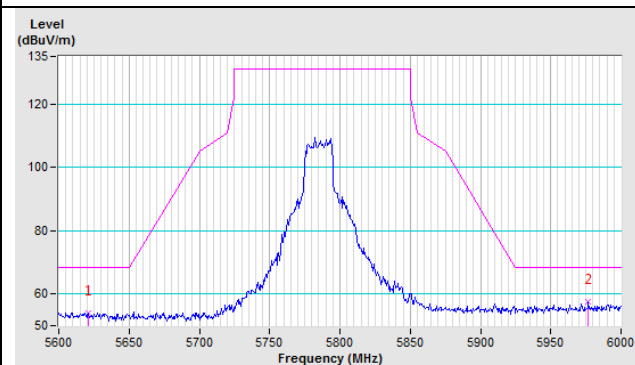


CH 157 5785 MHz

Horizontal

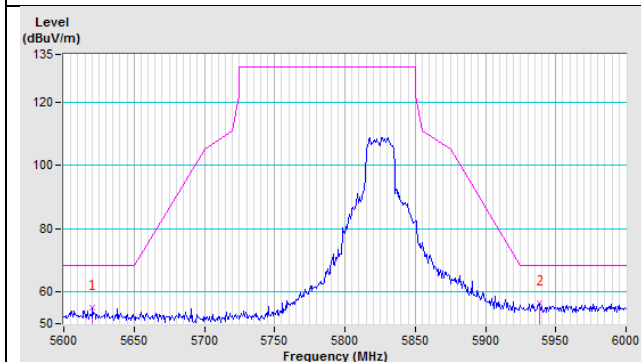


Vertical

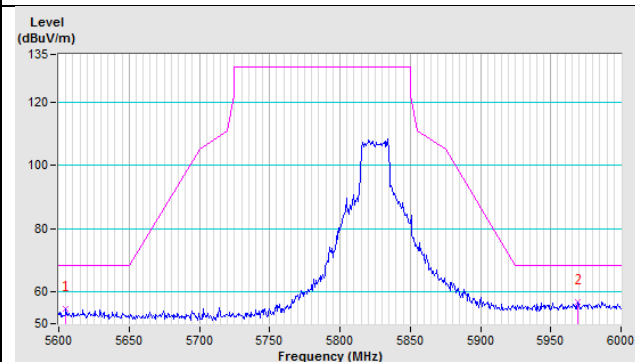


CH 165 5825 MHz

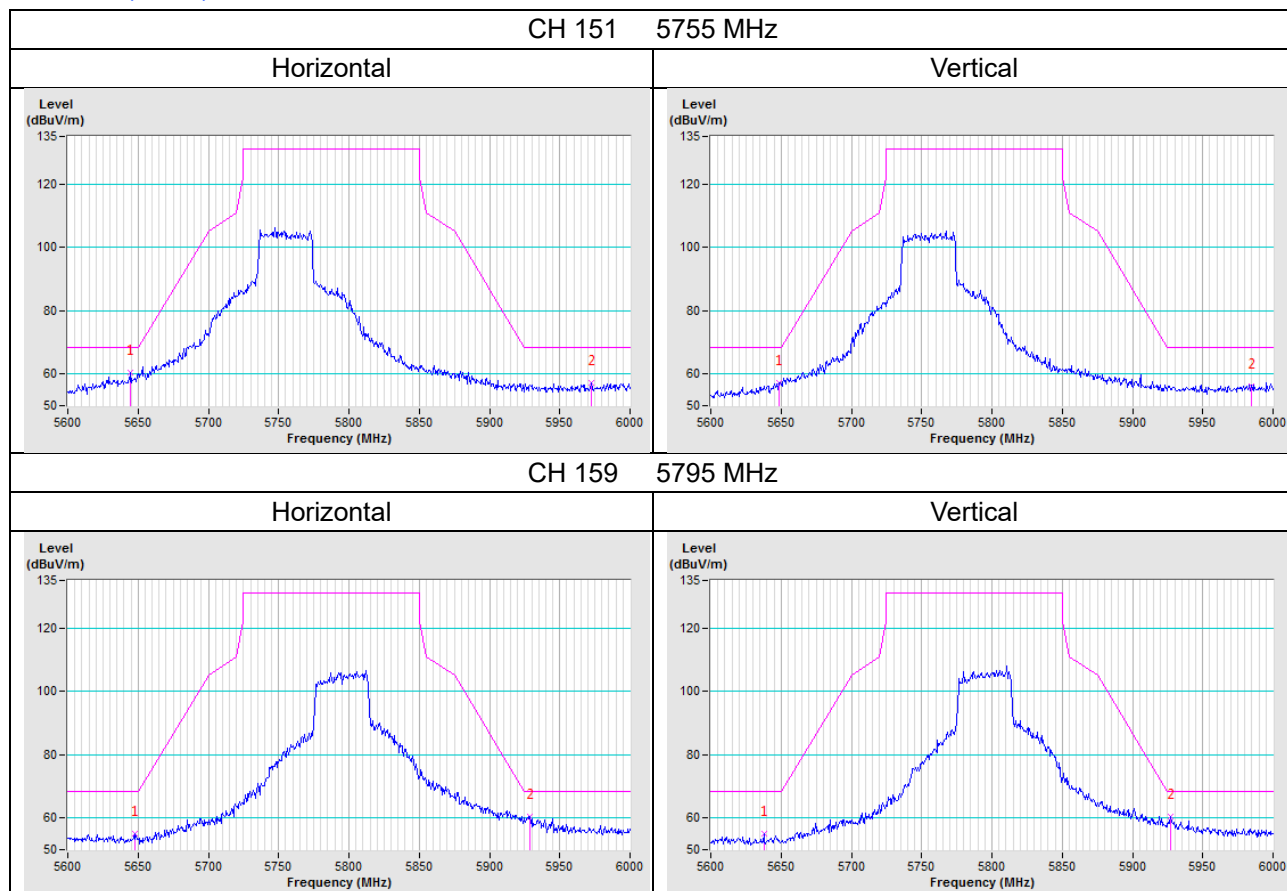
Horizontal



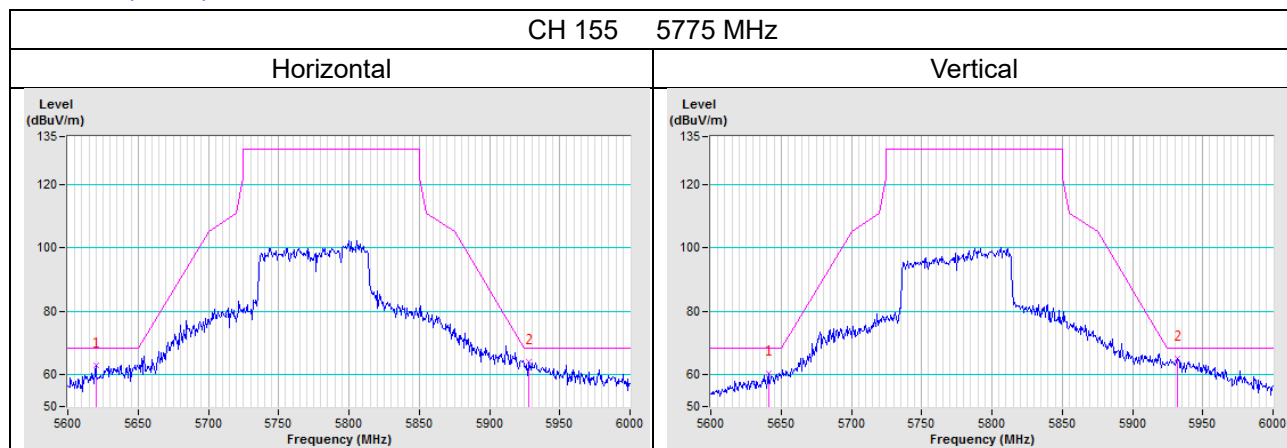
Vertical



802.11ax (HE40)

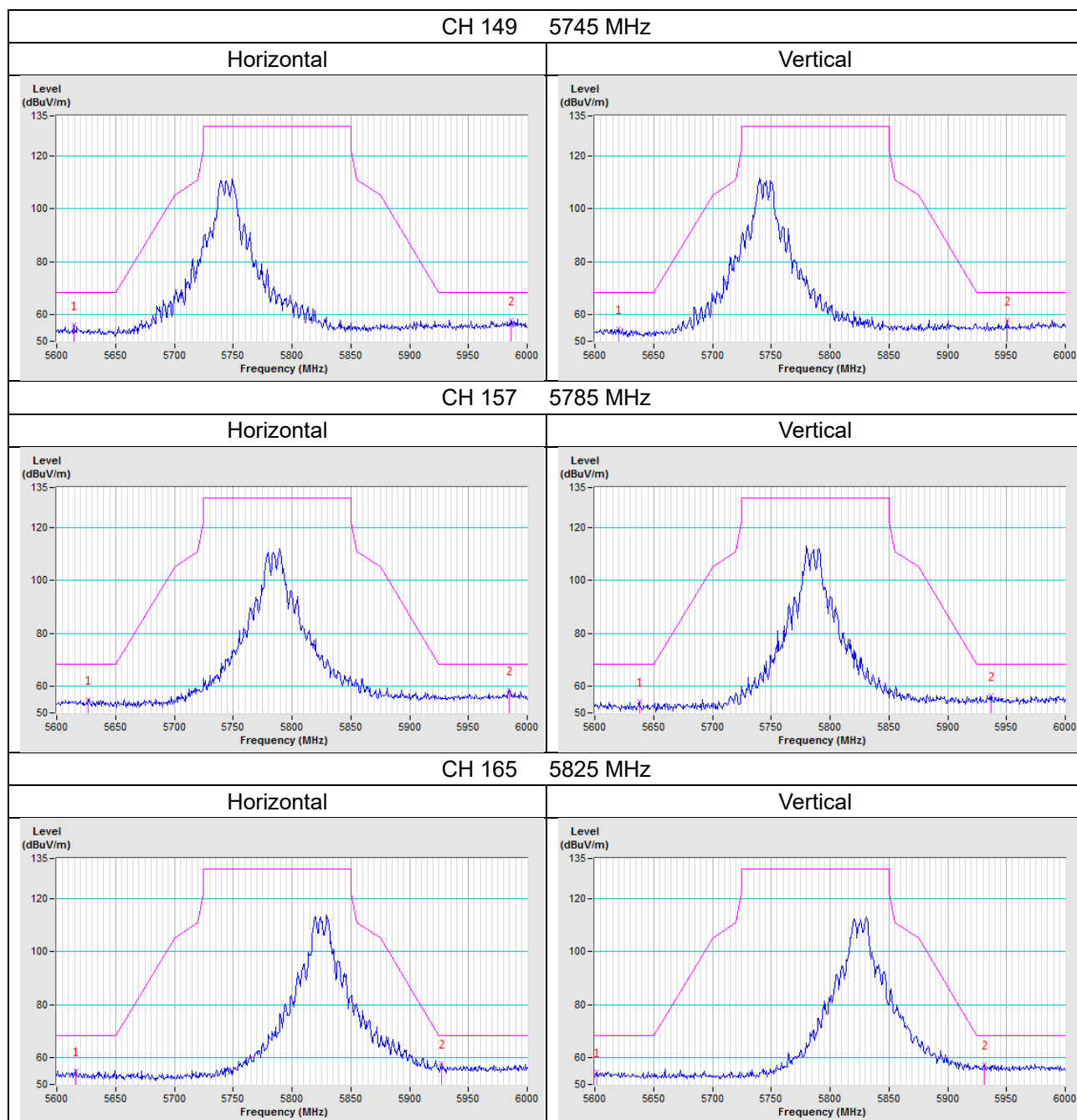


802.11ax (HE80)

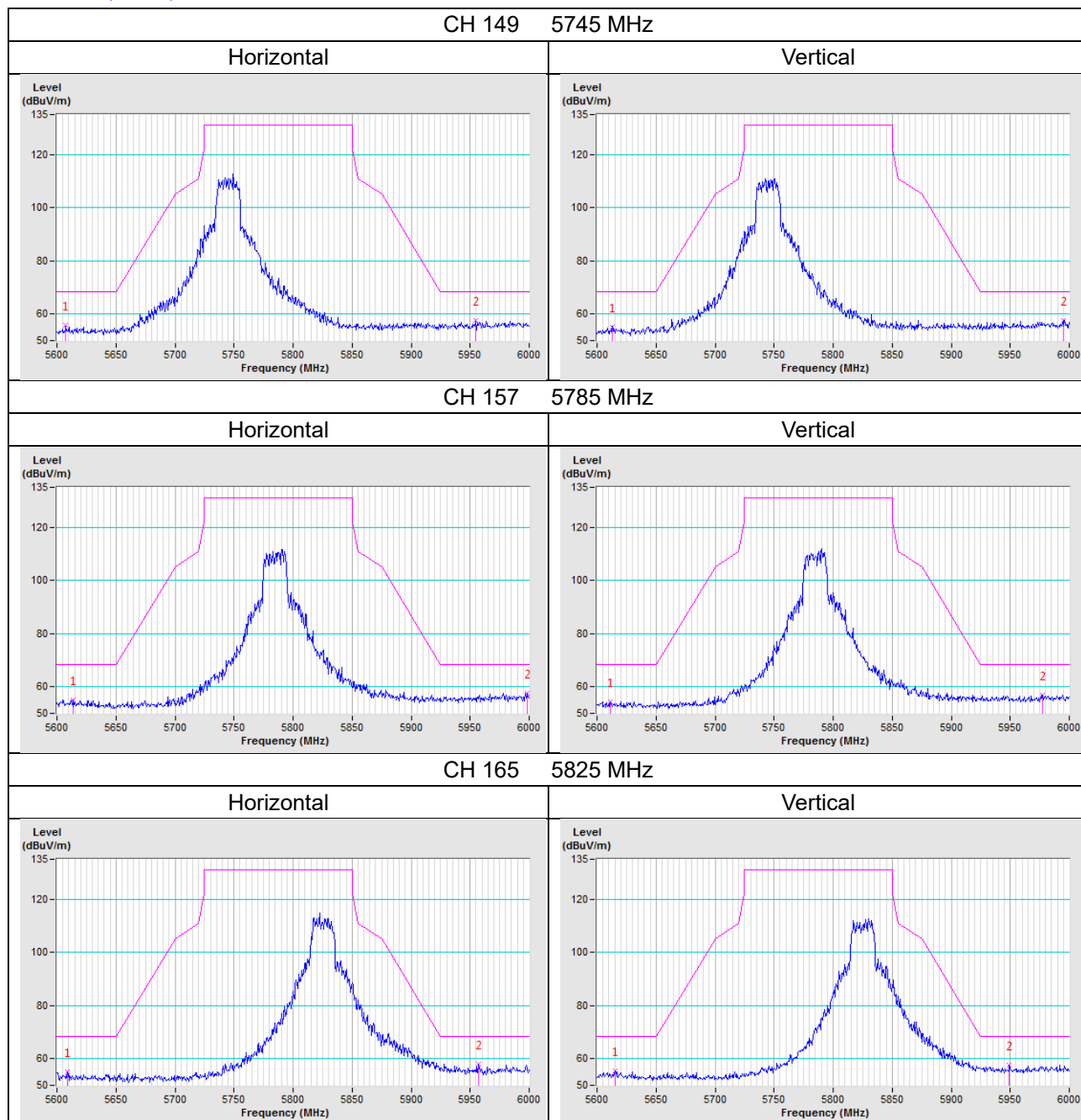


2TX

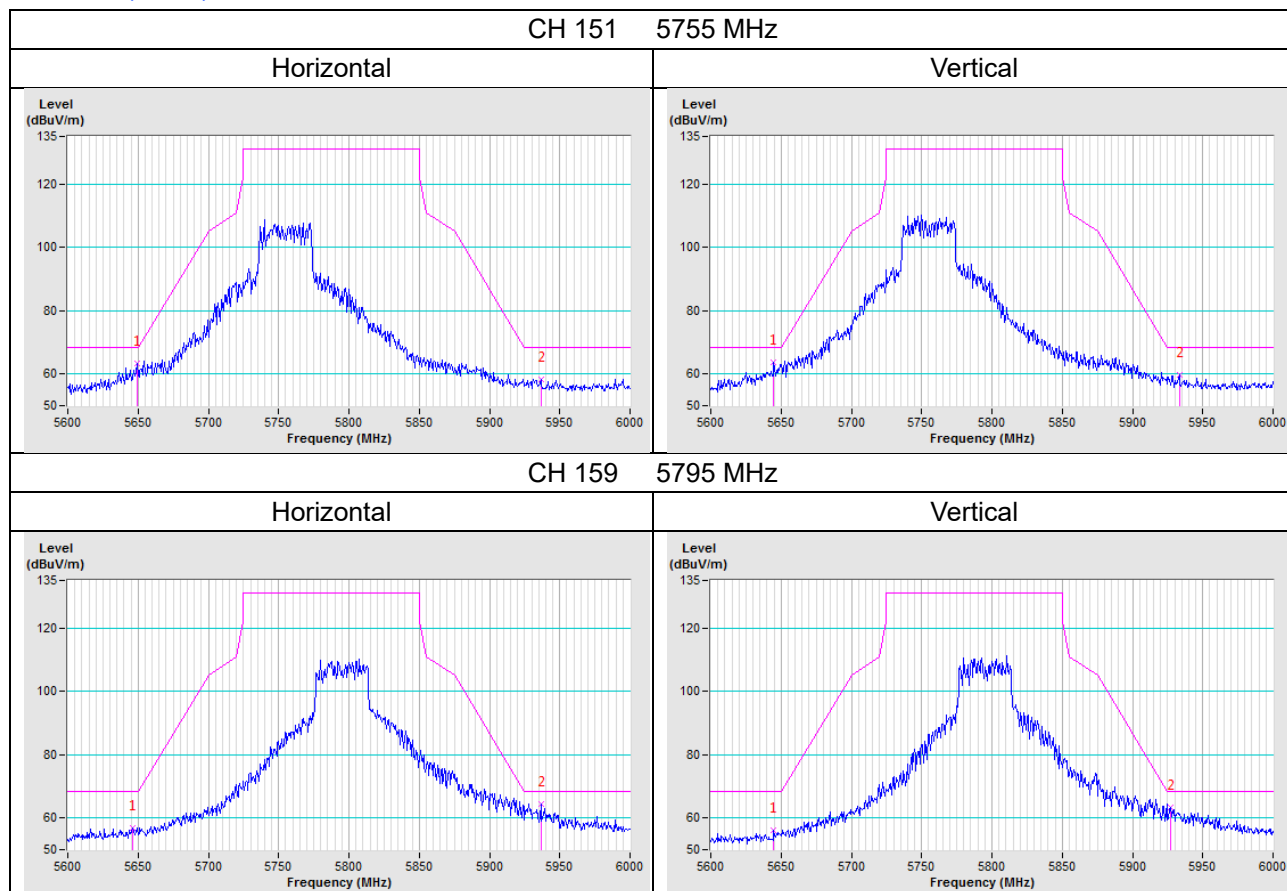
802.11a



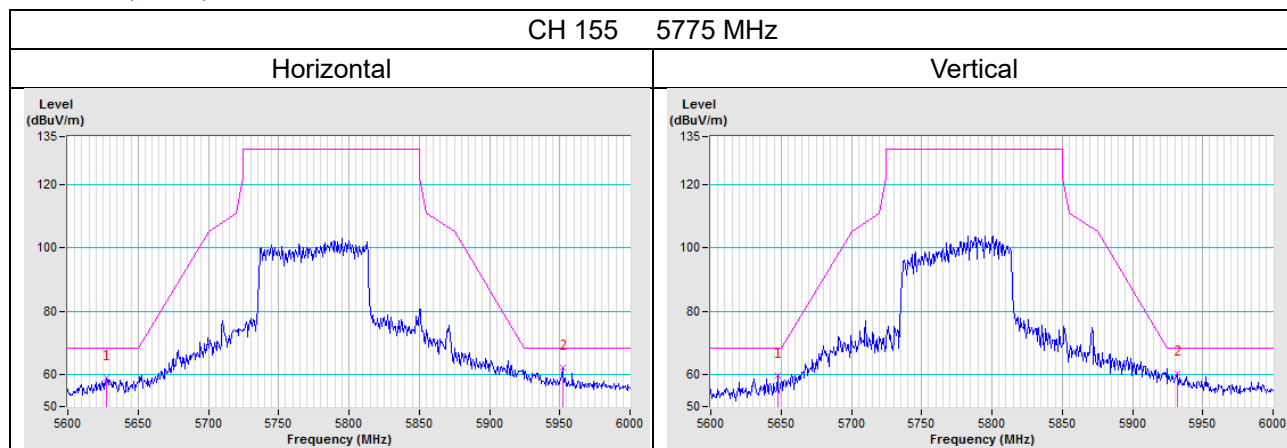
802.11ax (HE20)



802.11ax (HE40)

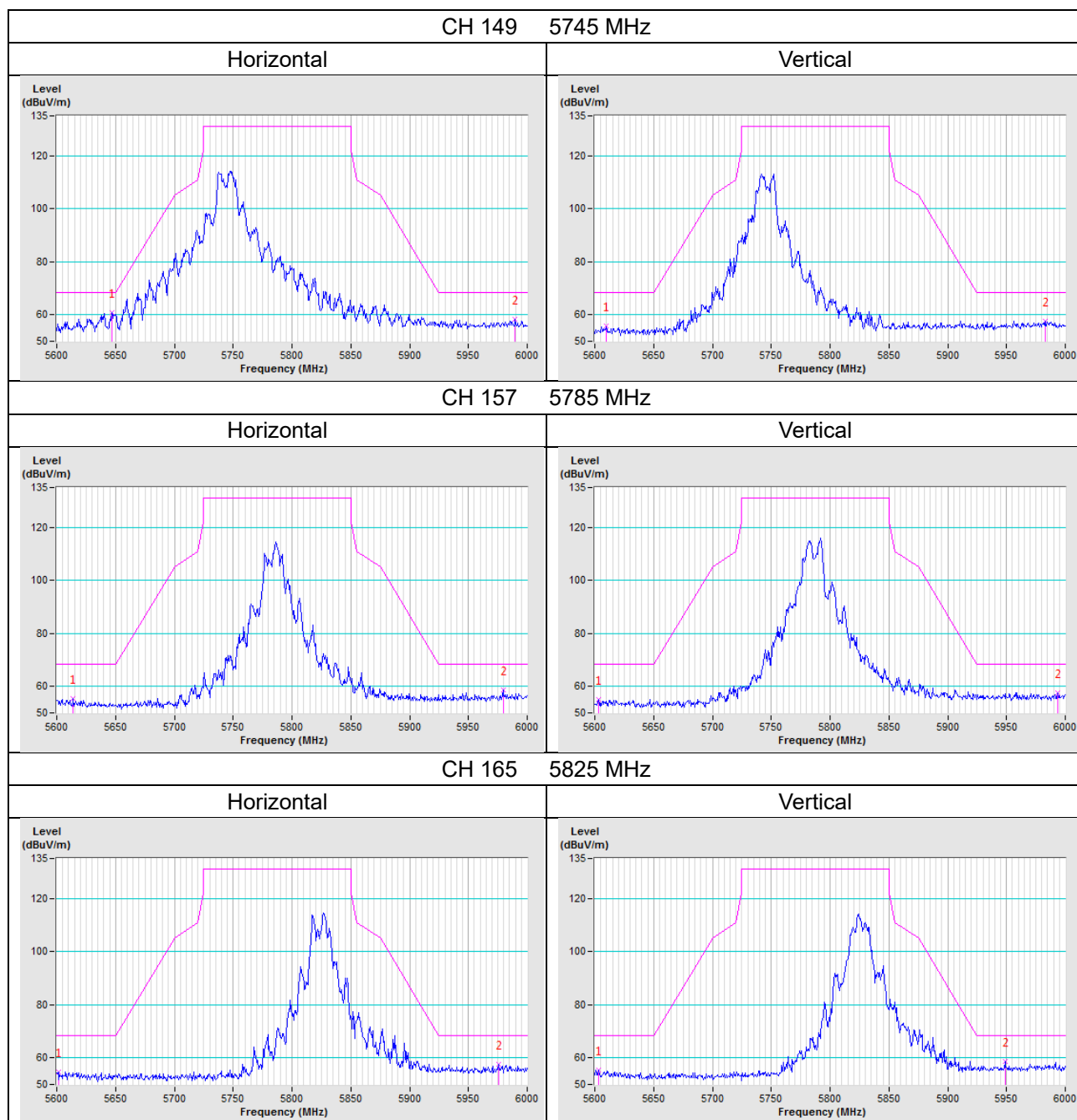


802.11ax (HE80)



3TX

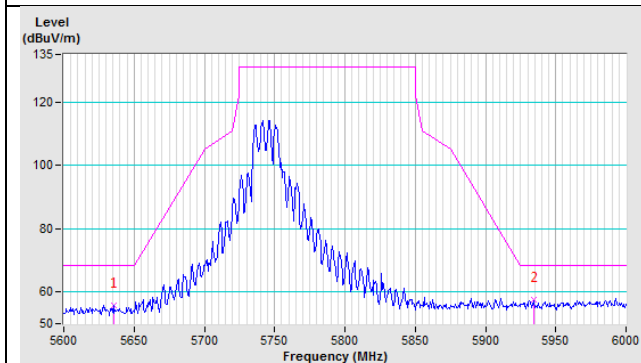
802.11a



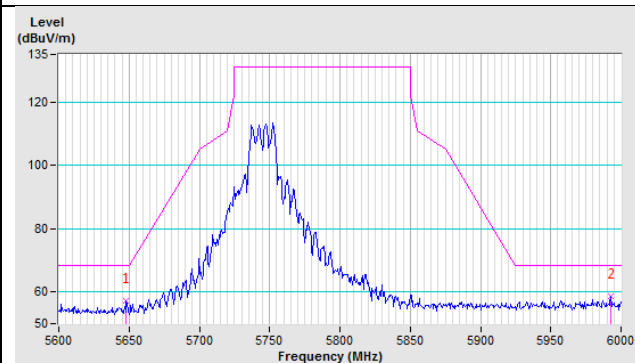
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

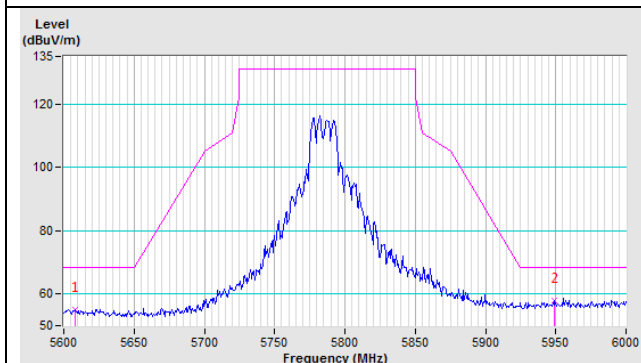


Vertical

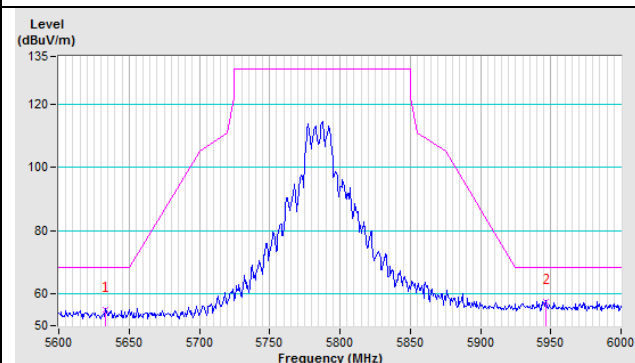


CH 157 5785 MHz

Horizontal

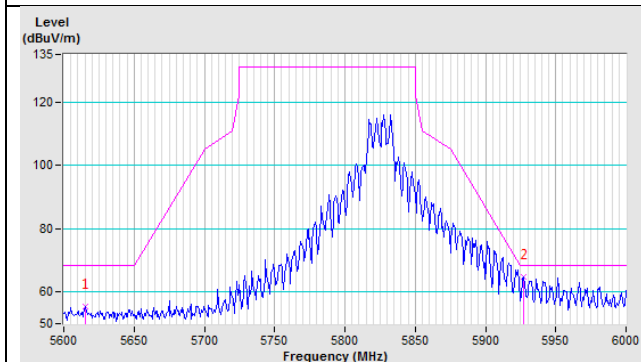


Vertical

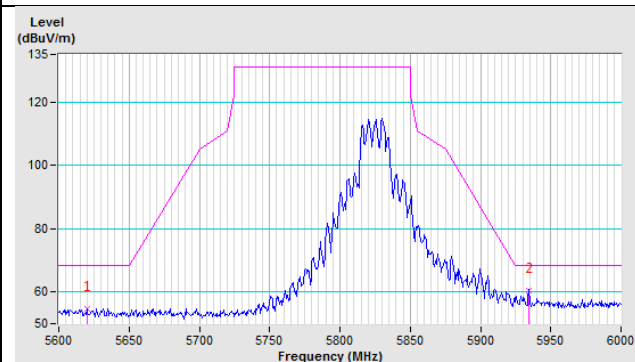


CH 165 5825 MHz

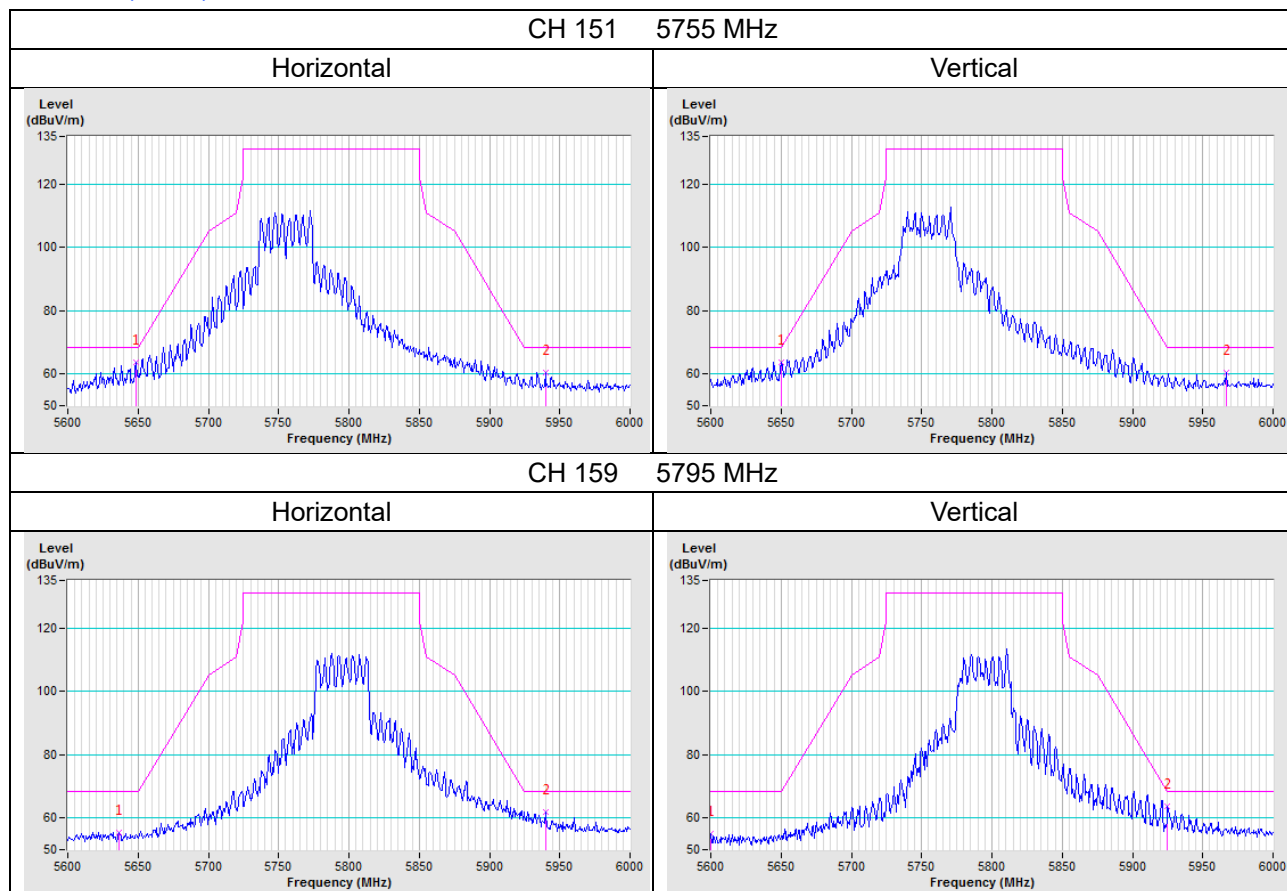
Horizontal



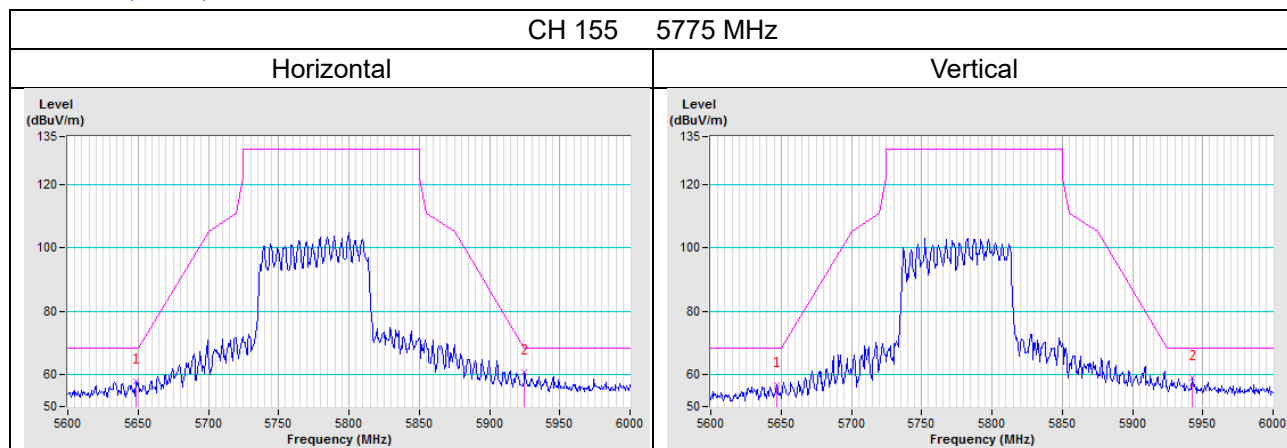
Vertical



802.11ax (HE40)



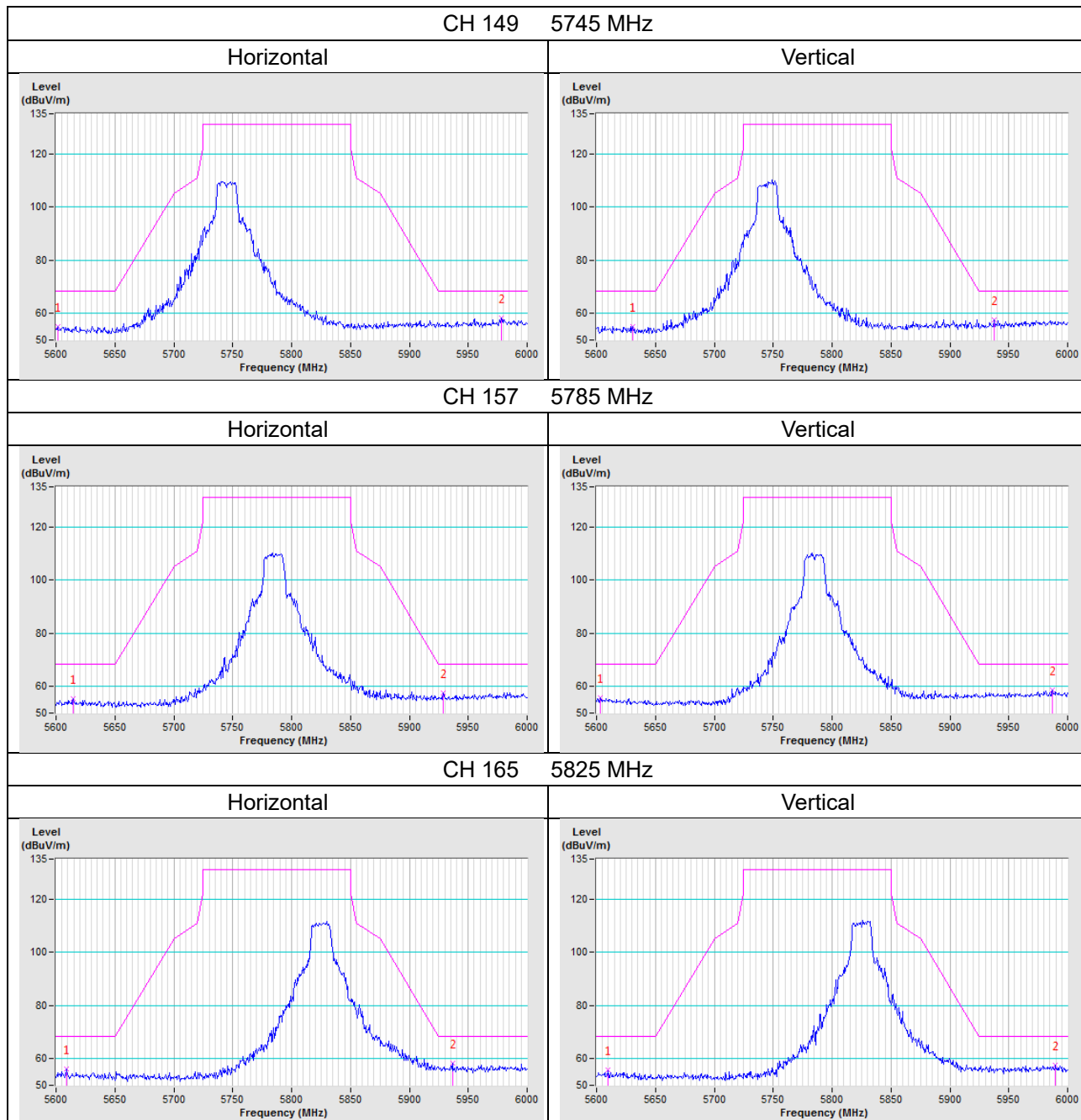
802.11ax (HE80)



Test Mode I (External antenna – PN: ATS-OO-245-46-4RPSP-36 + Eth7 Radio)

1TX

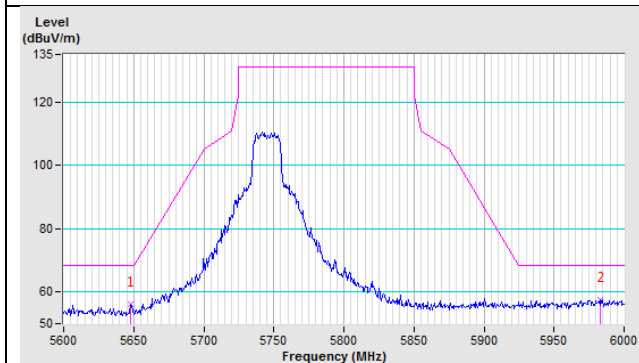
802.11a



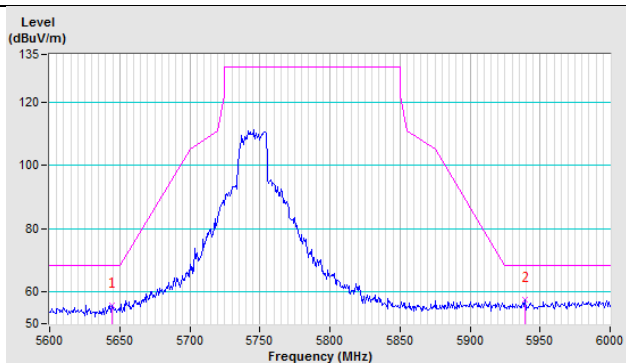
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

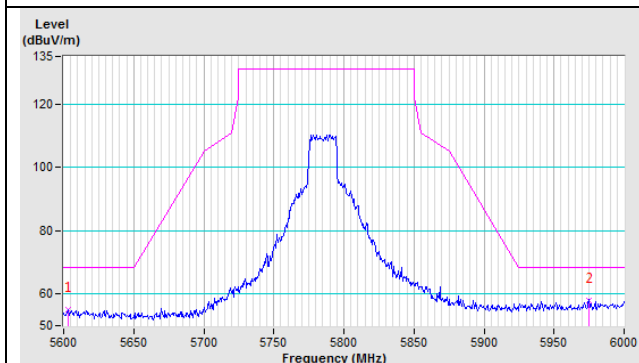


Vertical

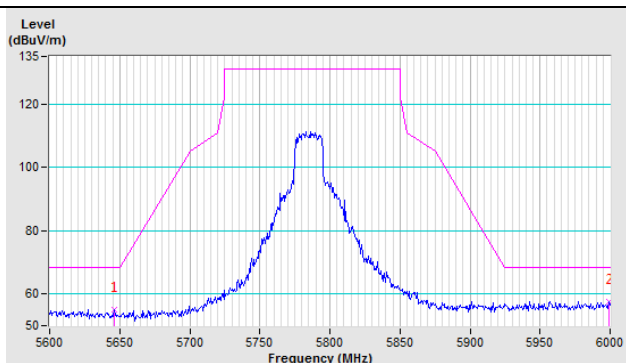


CH 157 5785 MHz

Horizontal

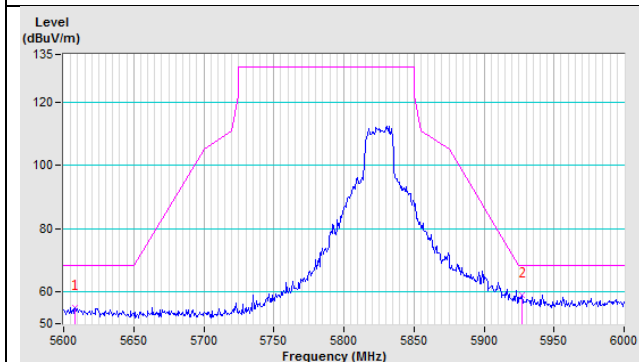


Vertical

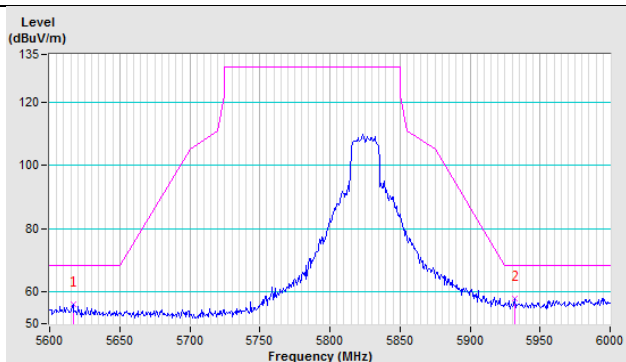


CH 165 5825 MHz

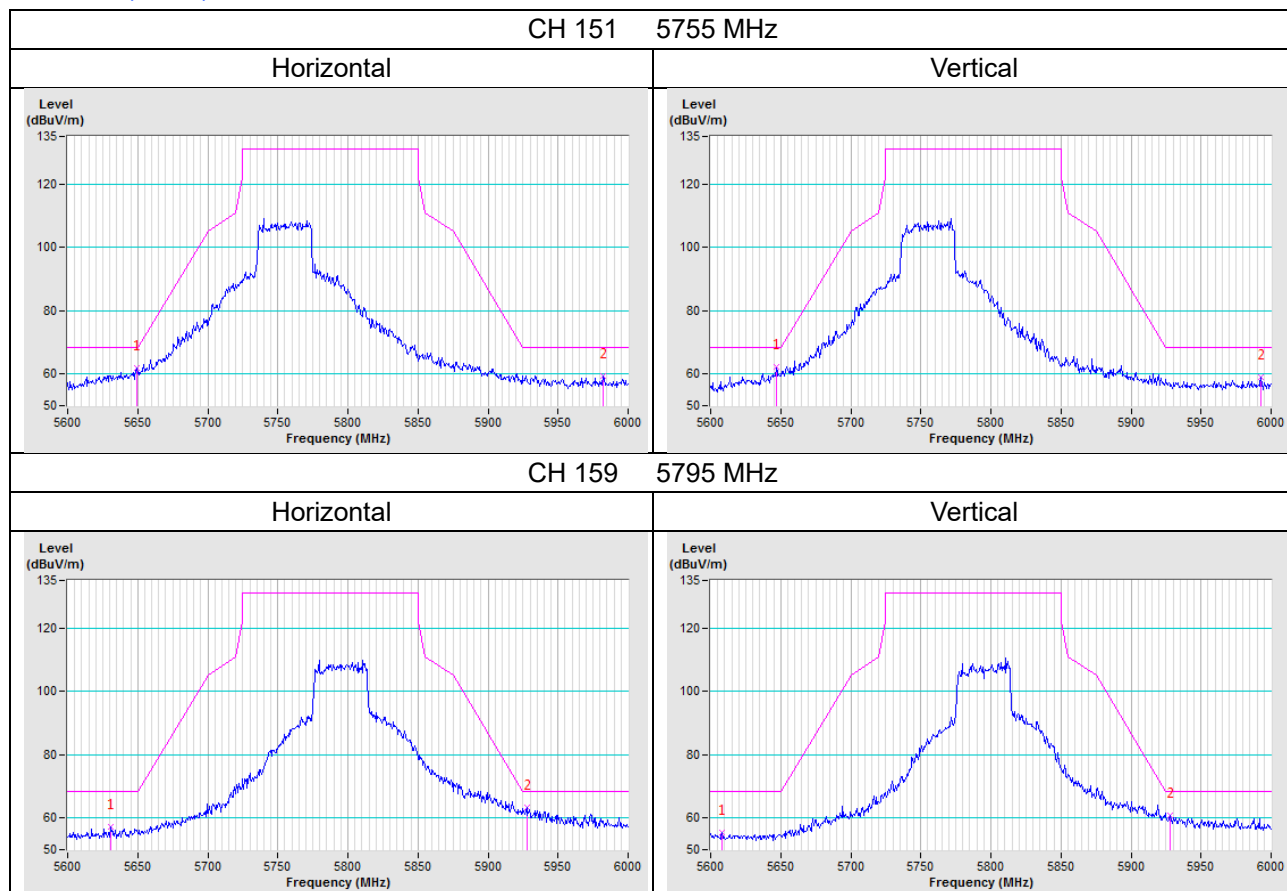
Horizontal



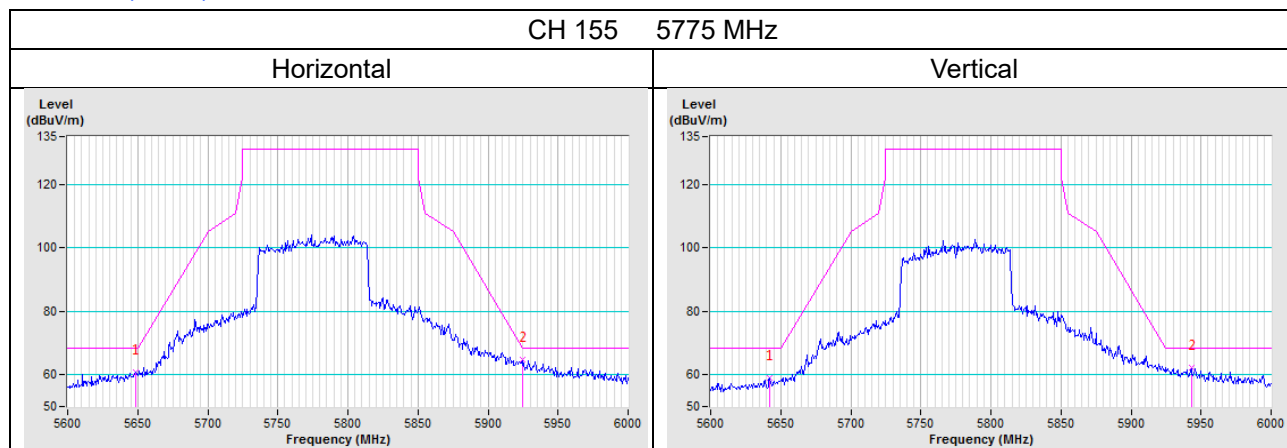
Vertical



802.11ax (HE40)



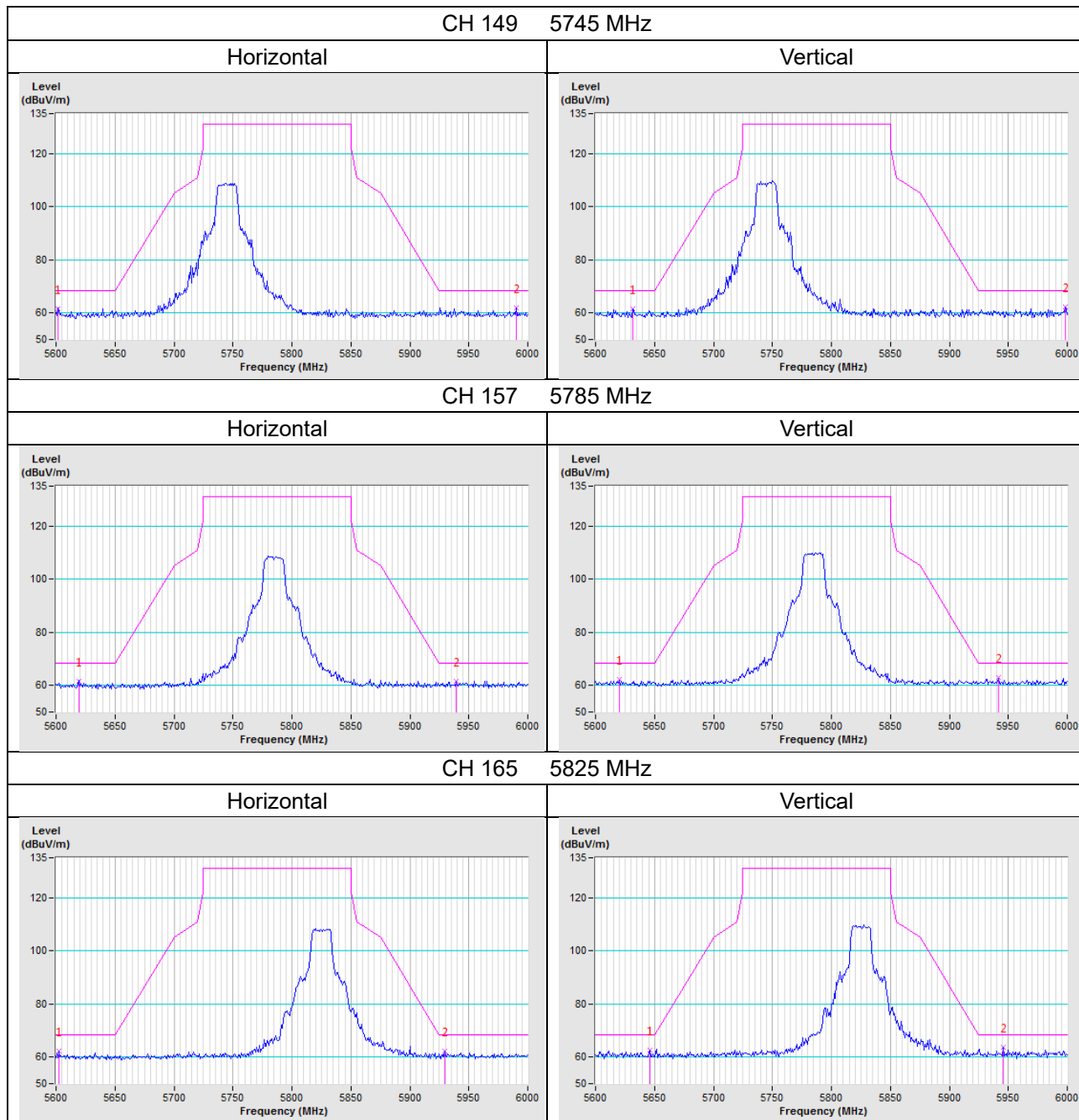
802.11ax (HE80)



Test Mode K (External antenna – PN: ATS-OP-245-810-4RPSP-36 + Eth6 Radio)

1TX

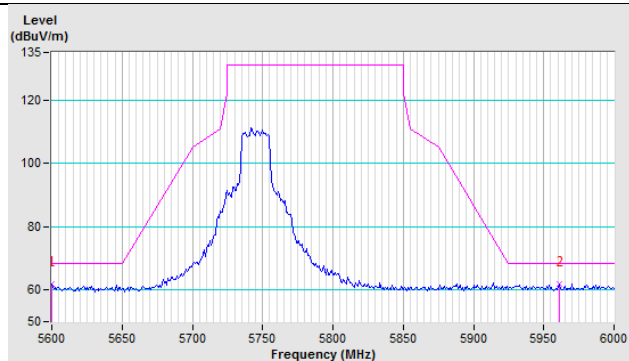
802.11a



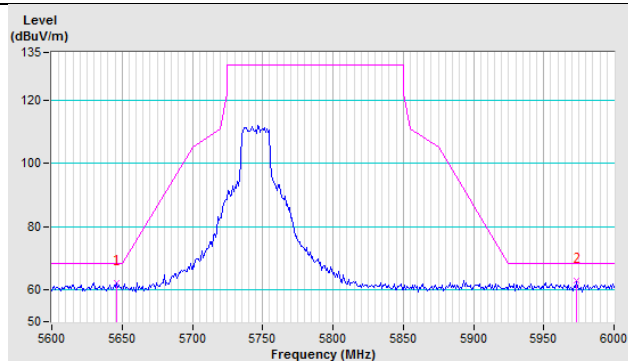
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

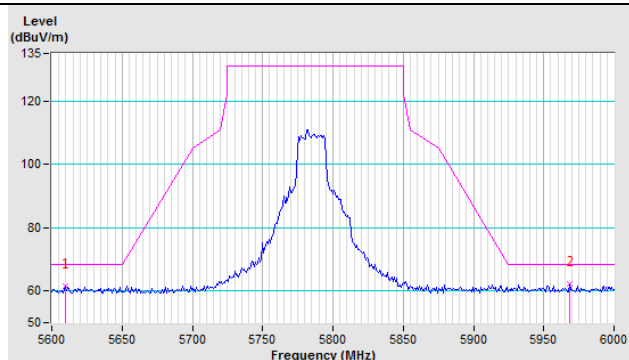


Vertical

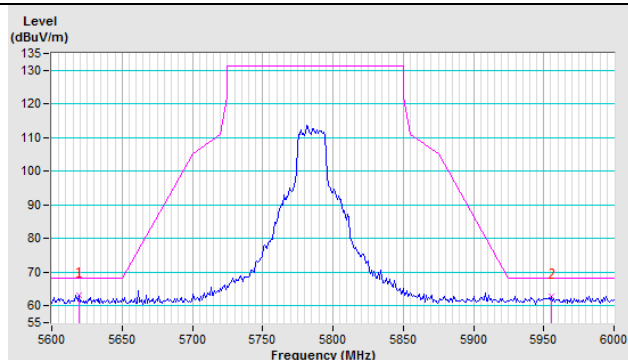


CH 157 5785 MHz

Horizontal

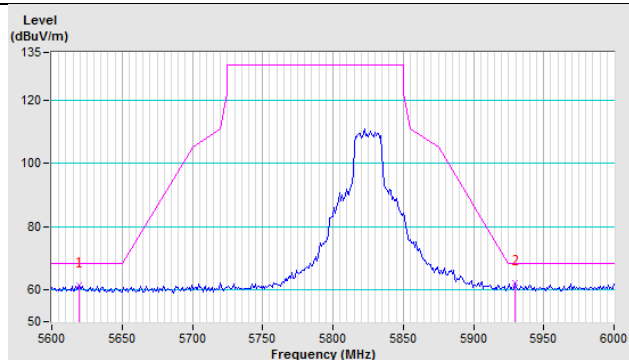


Vertical

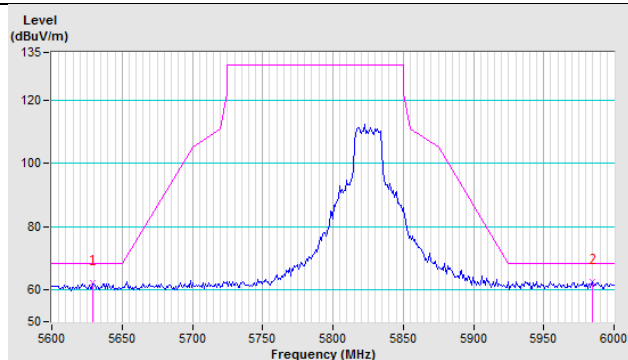


CH 165 5825 MHz

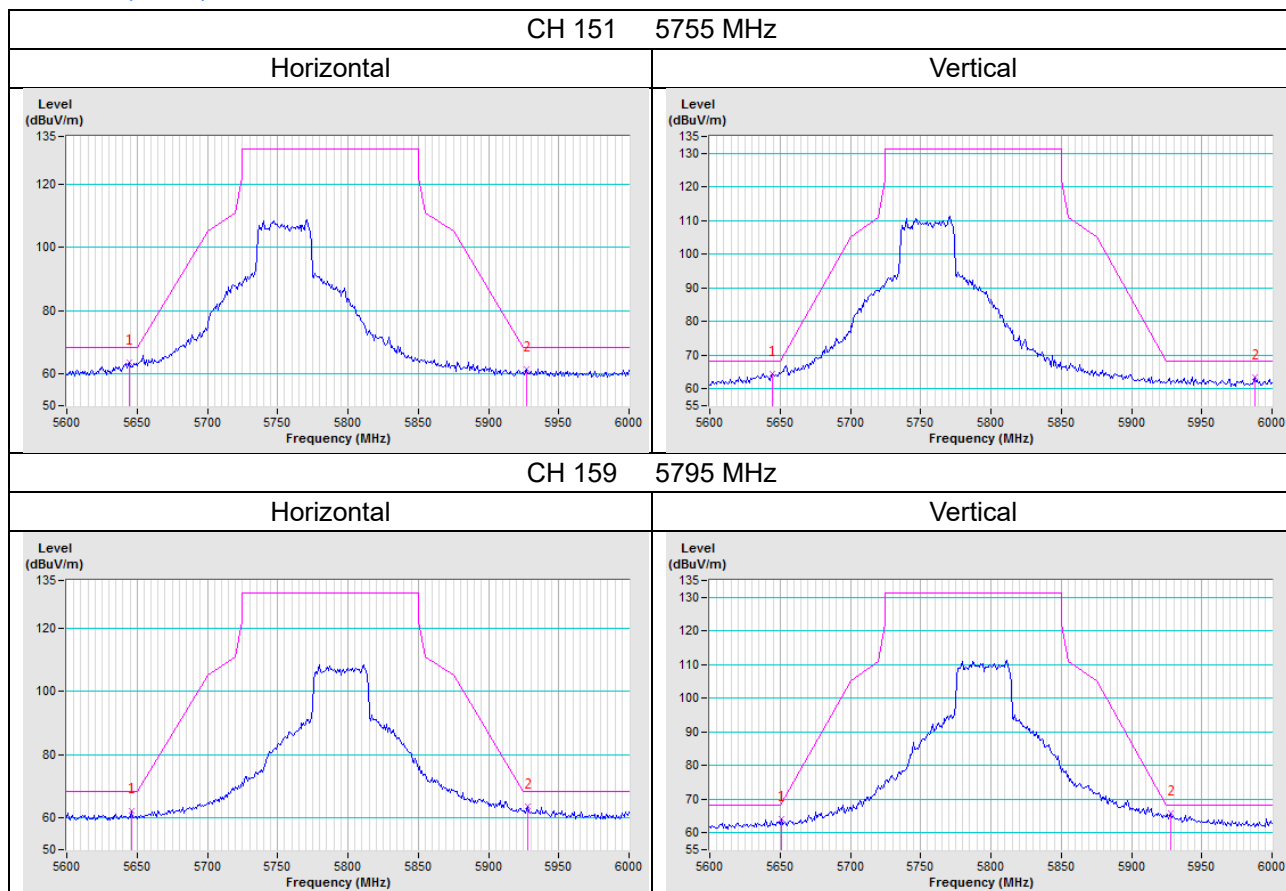
Horizontal



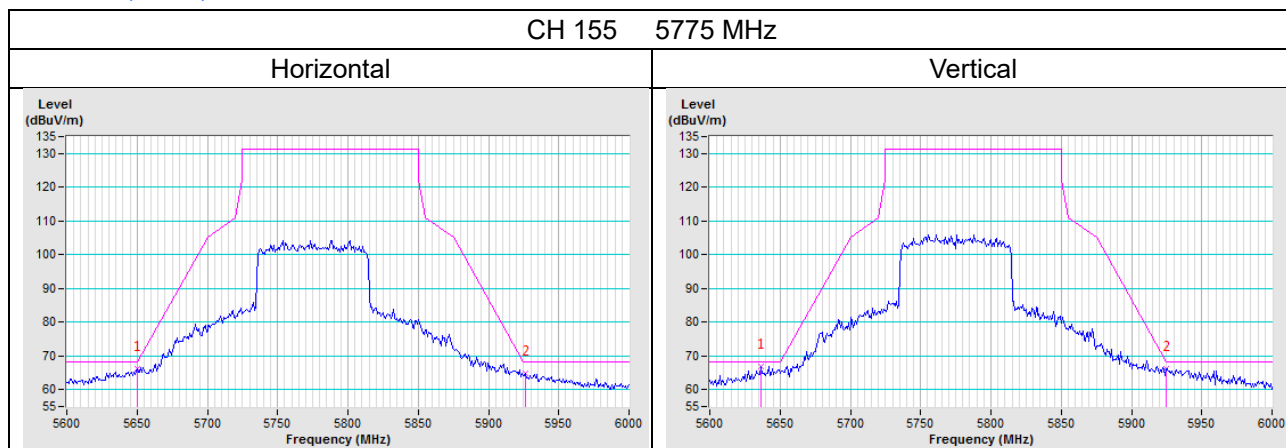
Vertical



802.11ax (HE40)

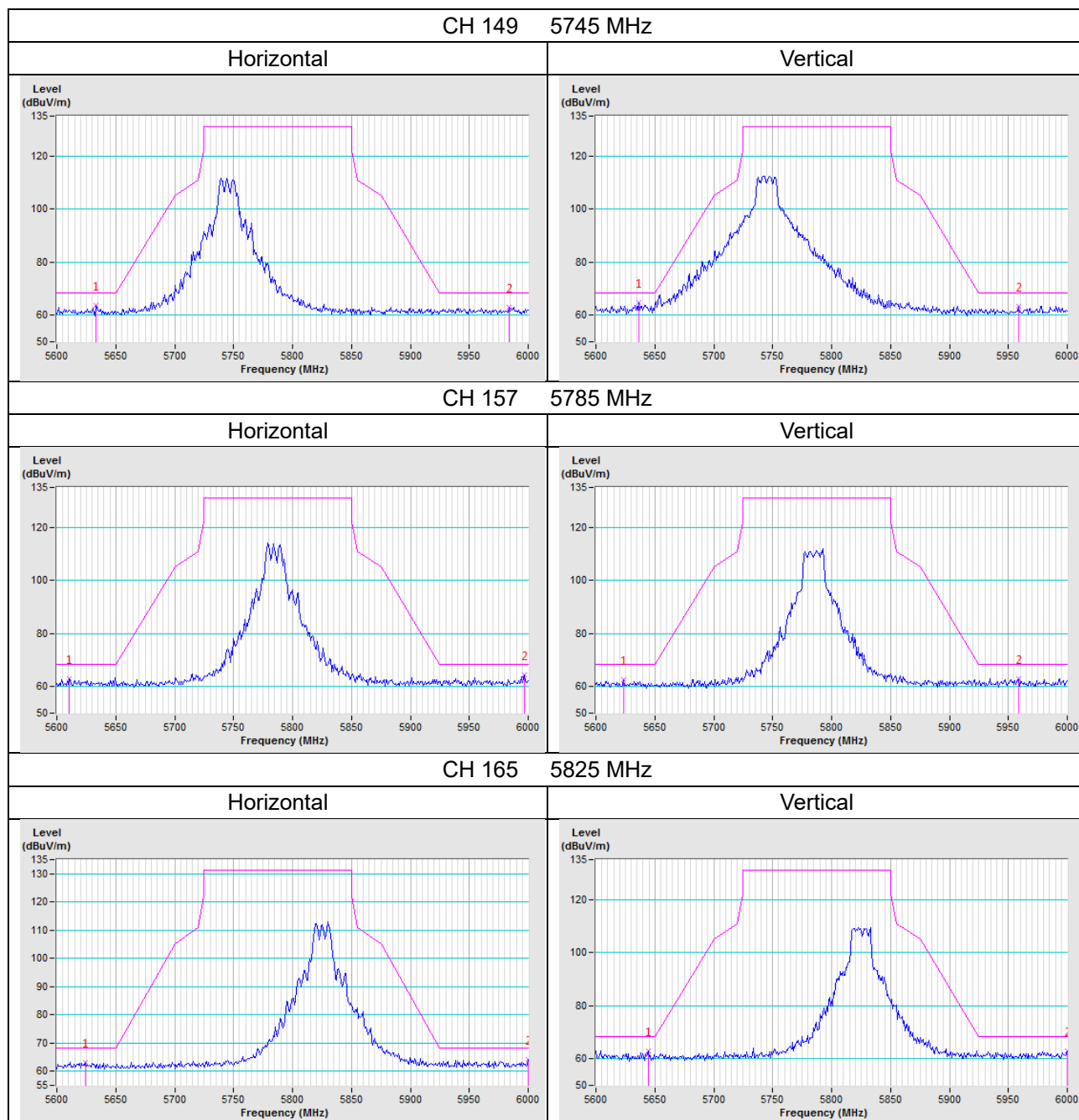


802.11ax (HE80)



2TX

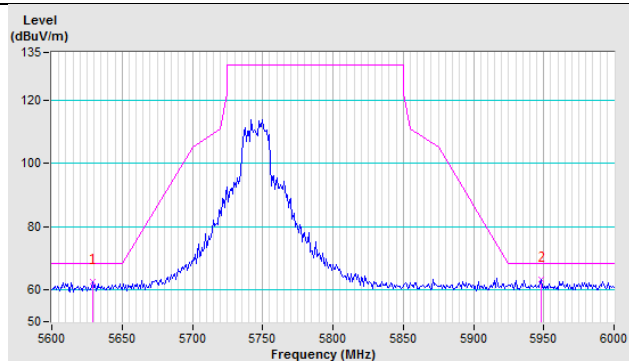
802.11a



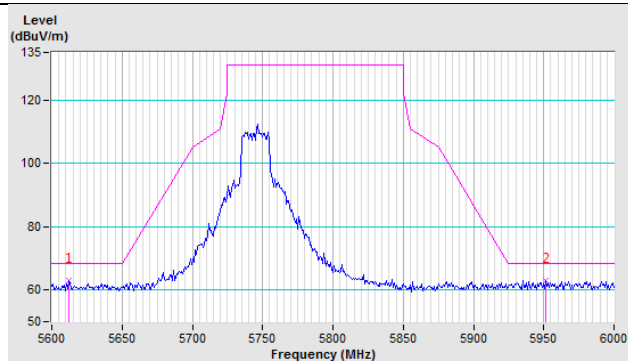
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

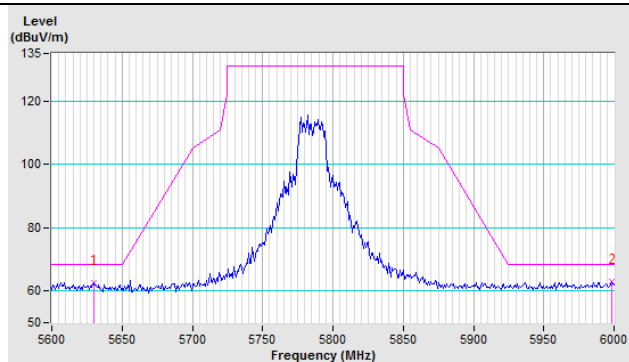


Vertical

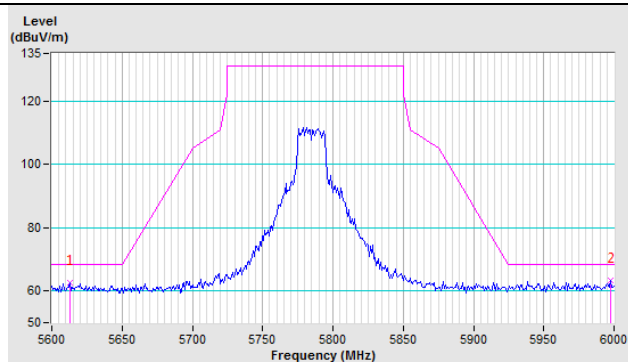


CH 157 5785 MHz

Horizontal

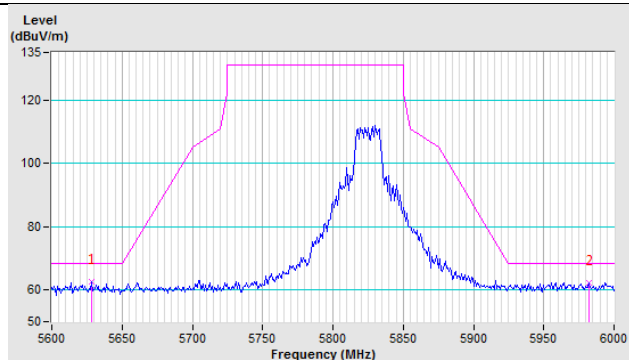


Vertical

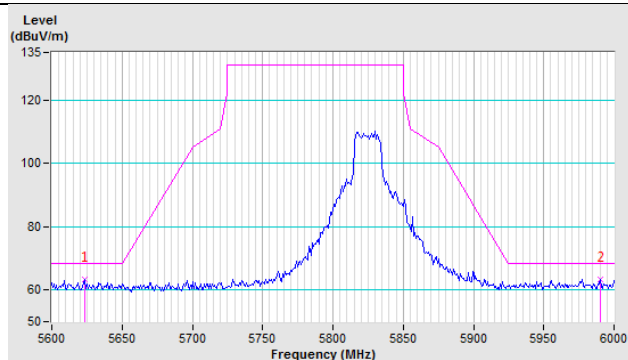


CH 165 5825 MHz

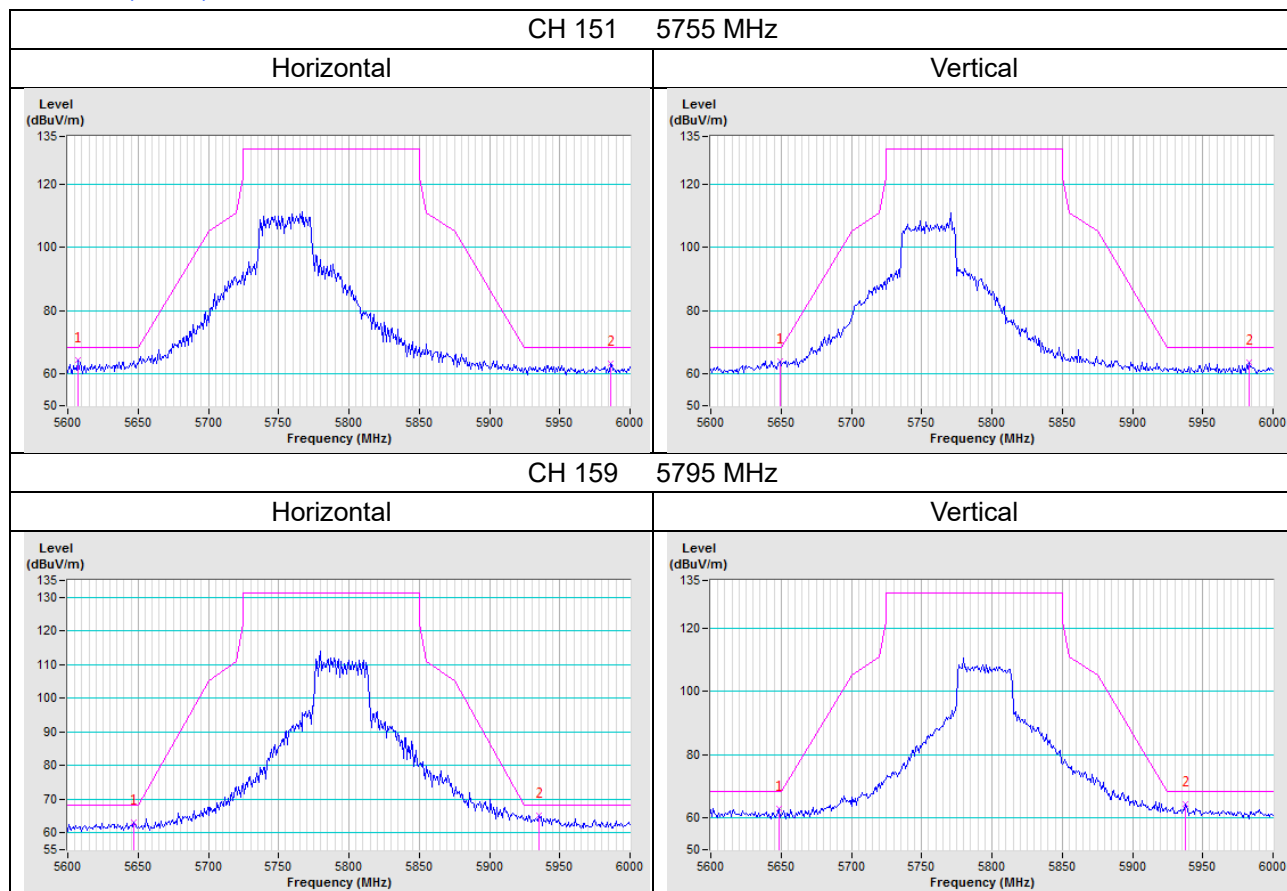
Horizontal



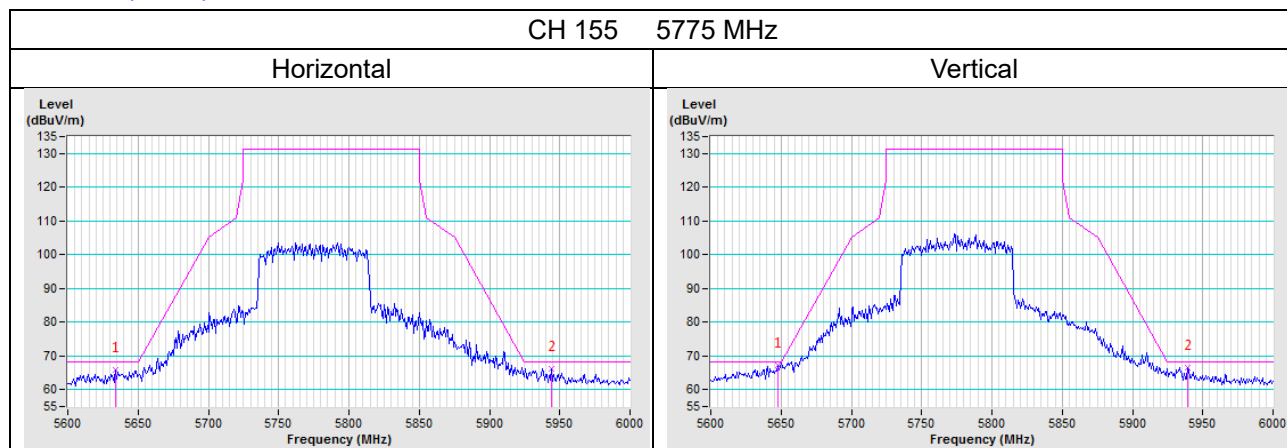
Vertical



802.11ax (HE40)

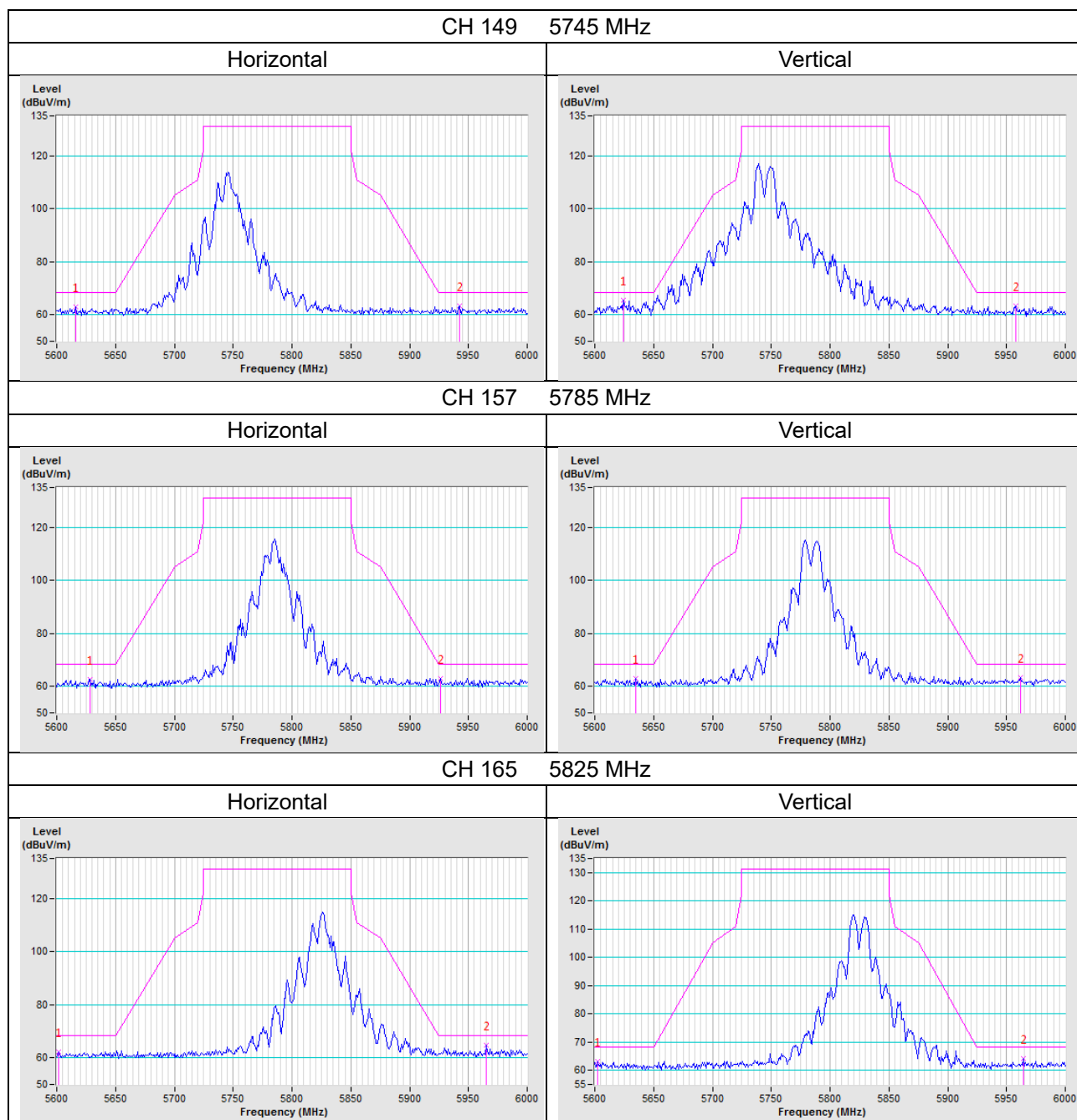


802.11ax (HE80)



3TX

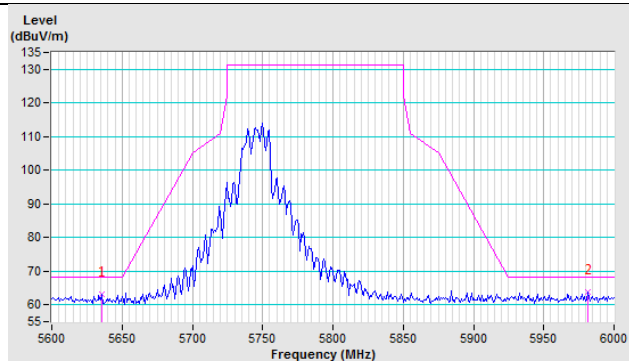
802.11a



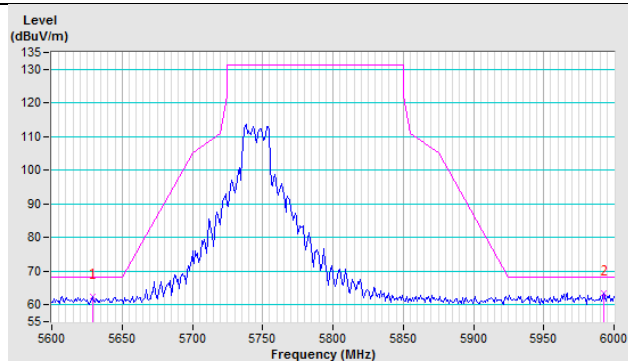
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

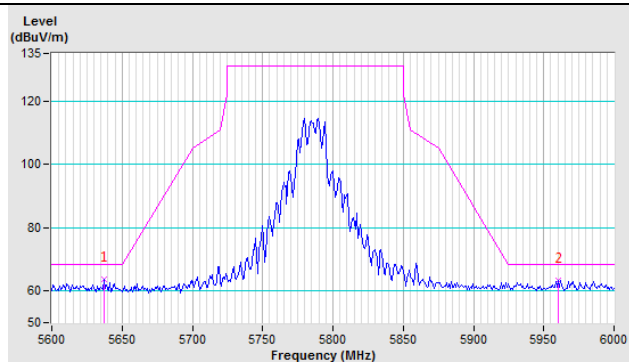


Vertical

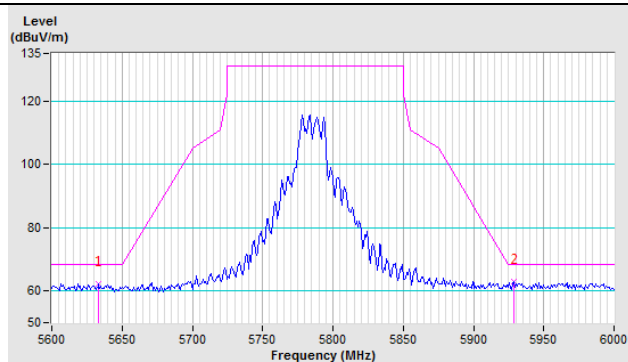


CH 157 5785 MHz

Horizontal

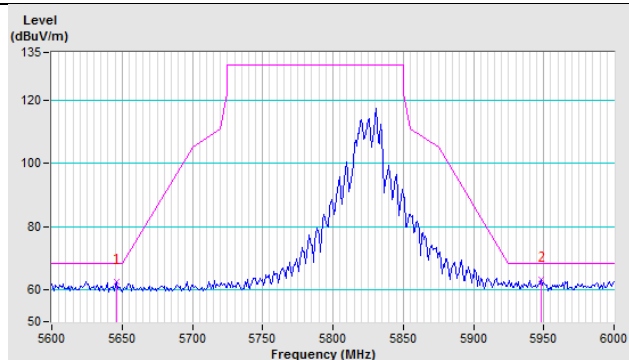


Vertical

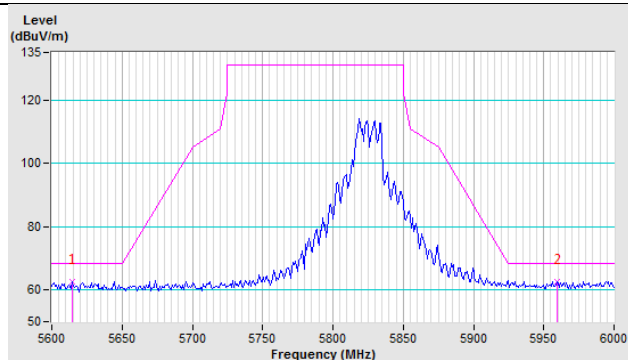


CH 165 5825 MHz

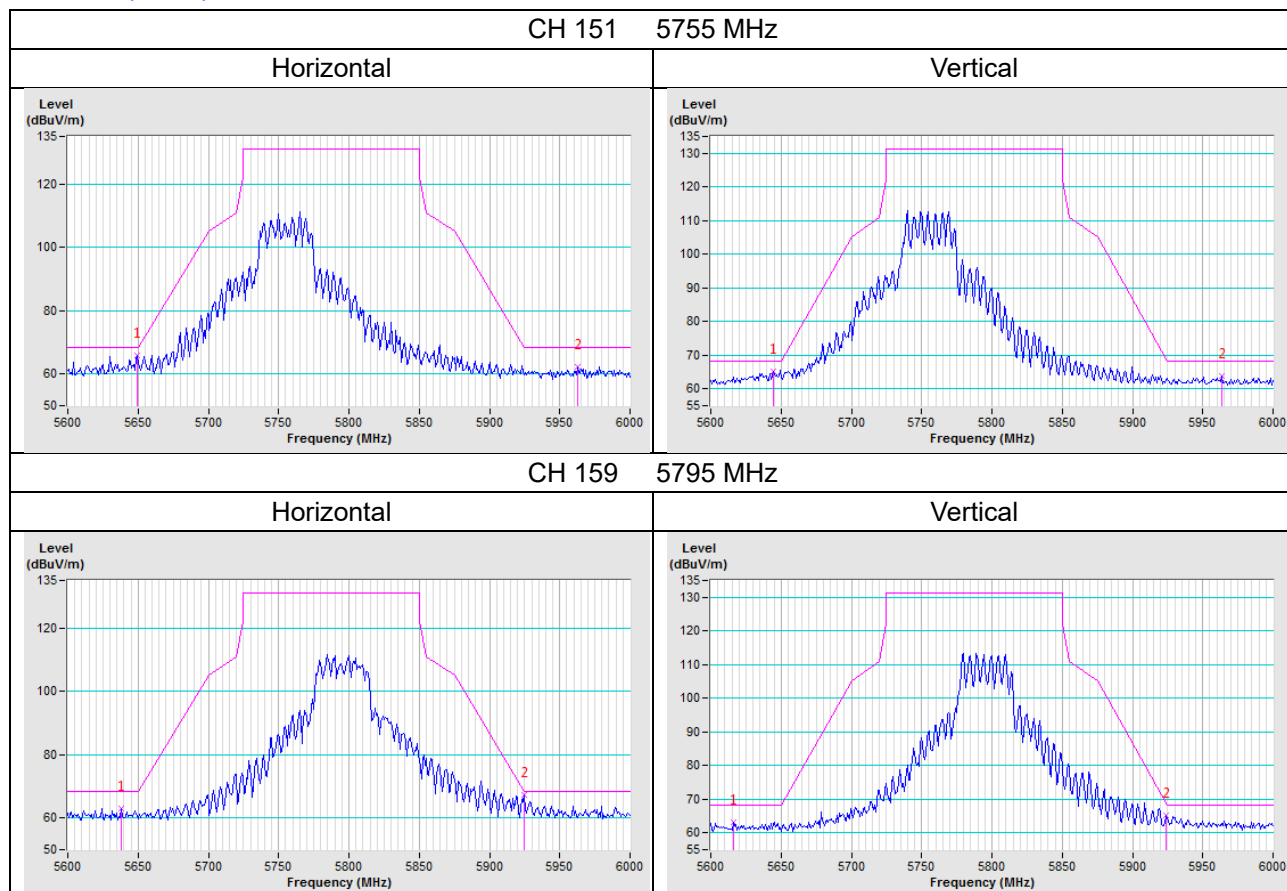
Horizontal



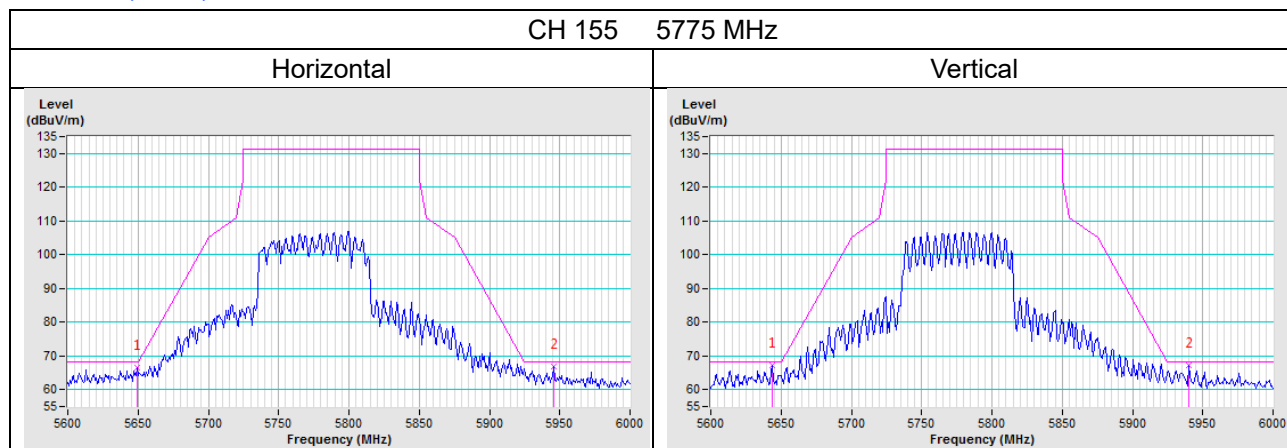
Vertical



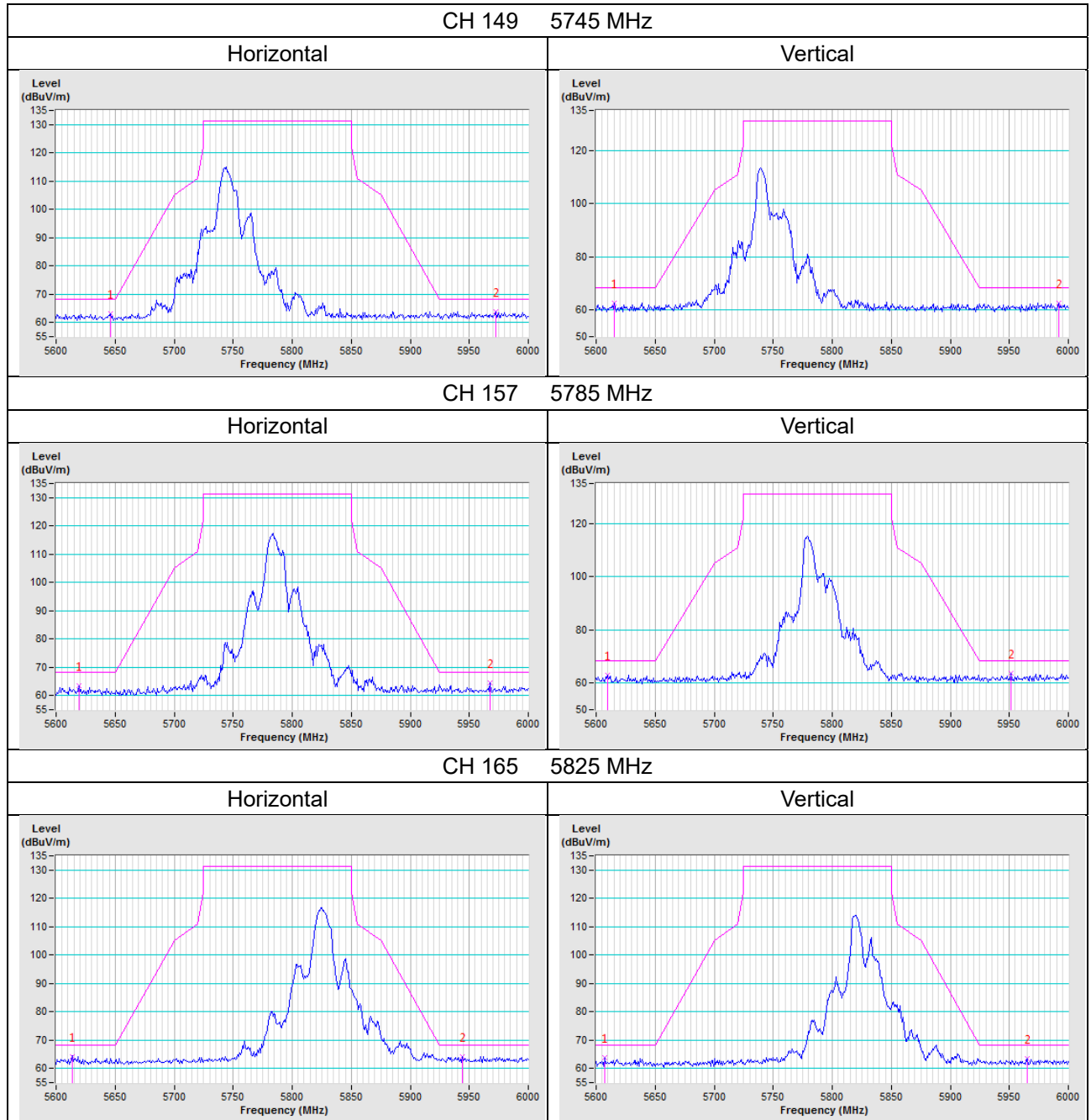
802.11ax (HE40)



802.11ax (HE80)



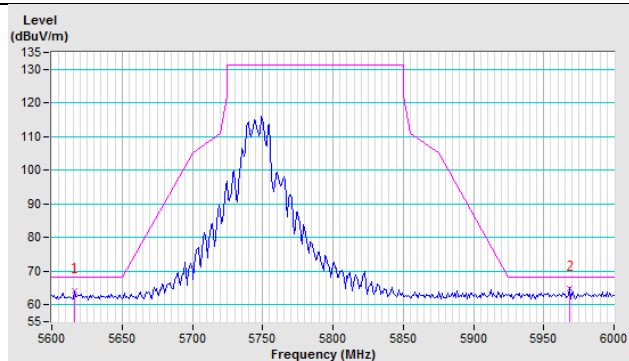
4TX
802.11a



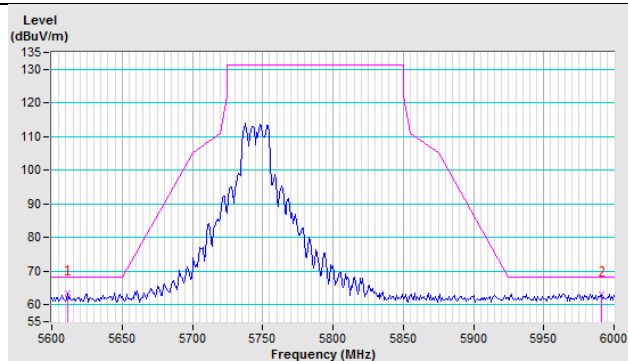
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

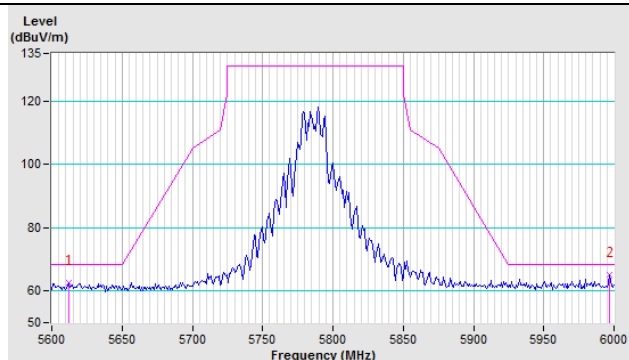


Vertical

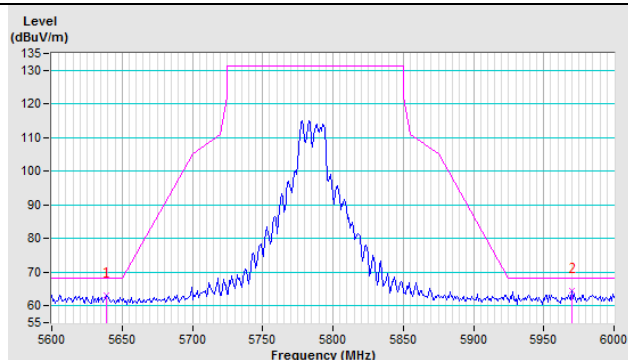


CH 157 5785 MHz

Horizontal

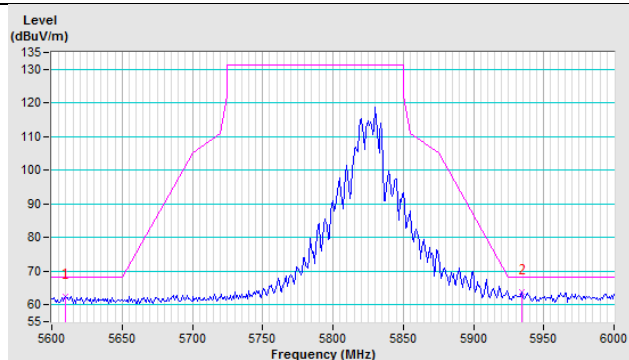


Vertical

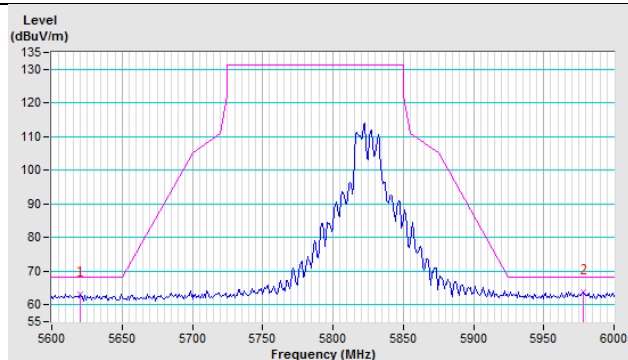


CH 165 5825 MHz

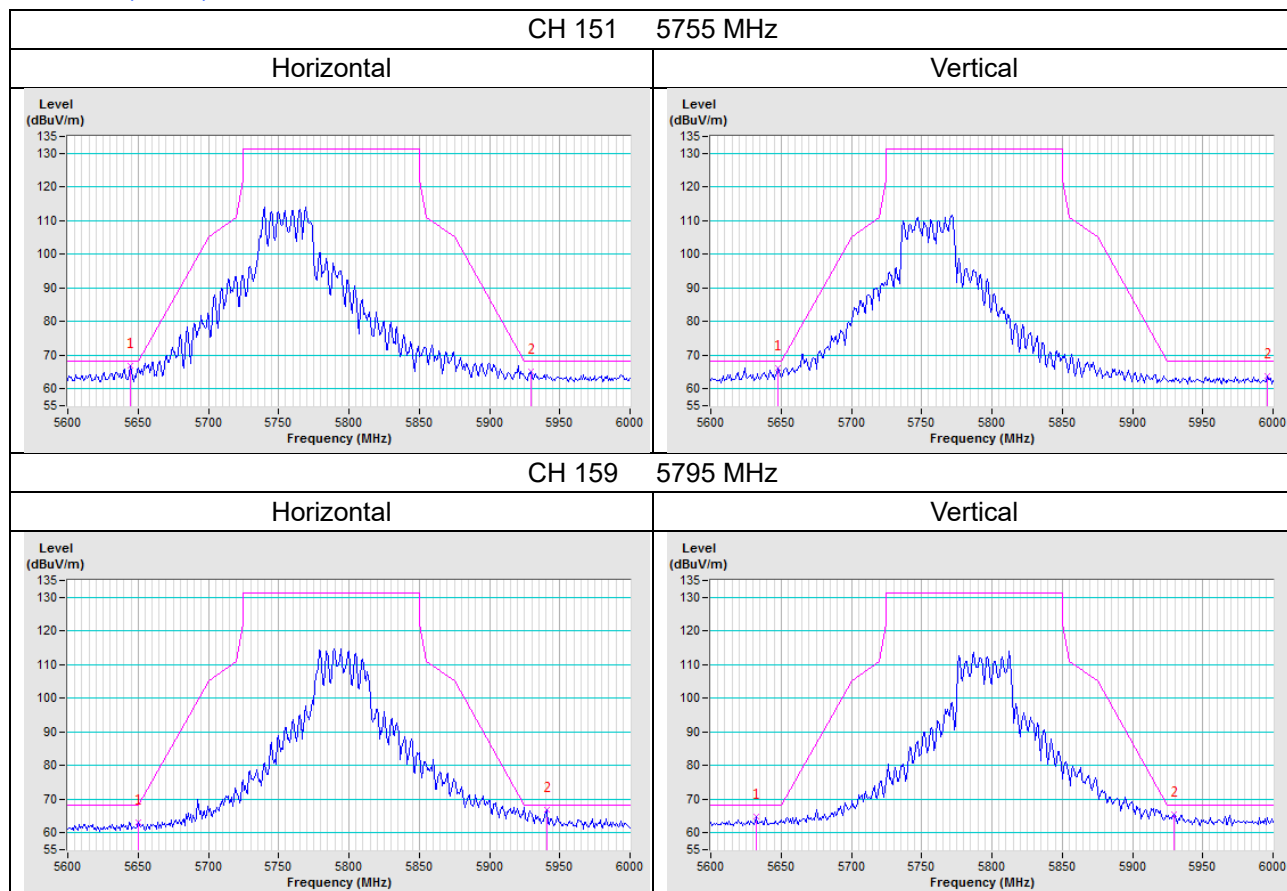
Horizontal



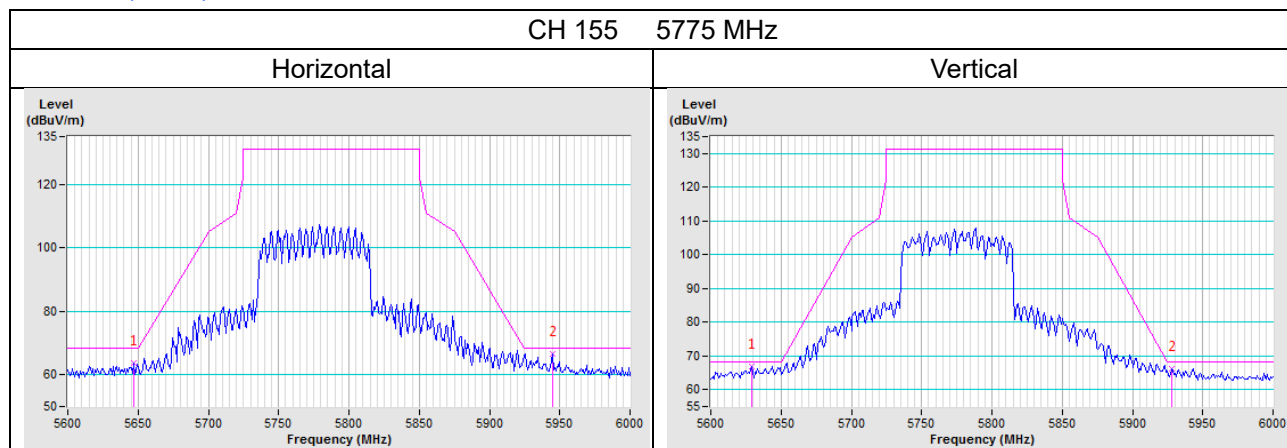
Vertical



802.11ax (HE40)



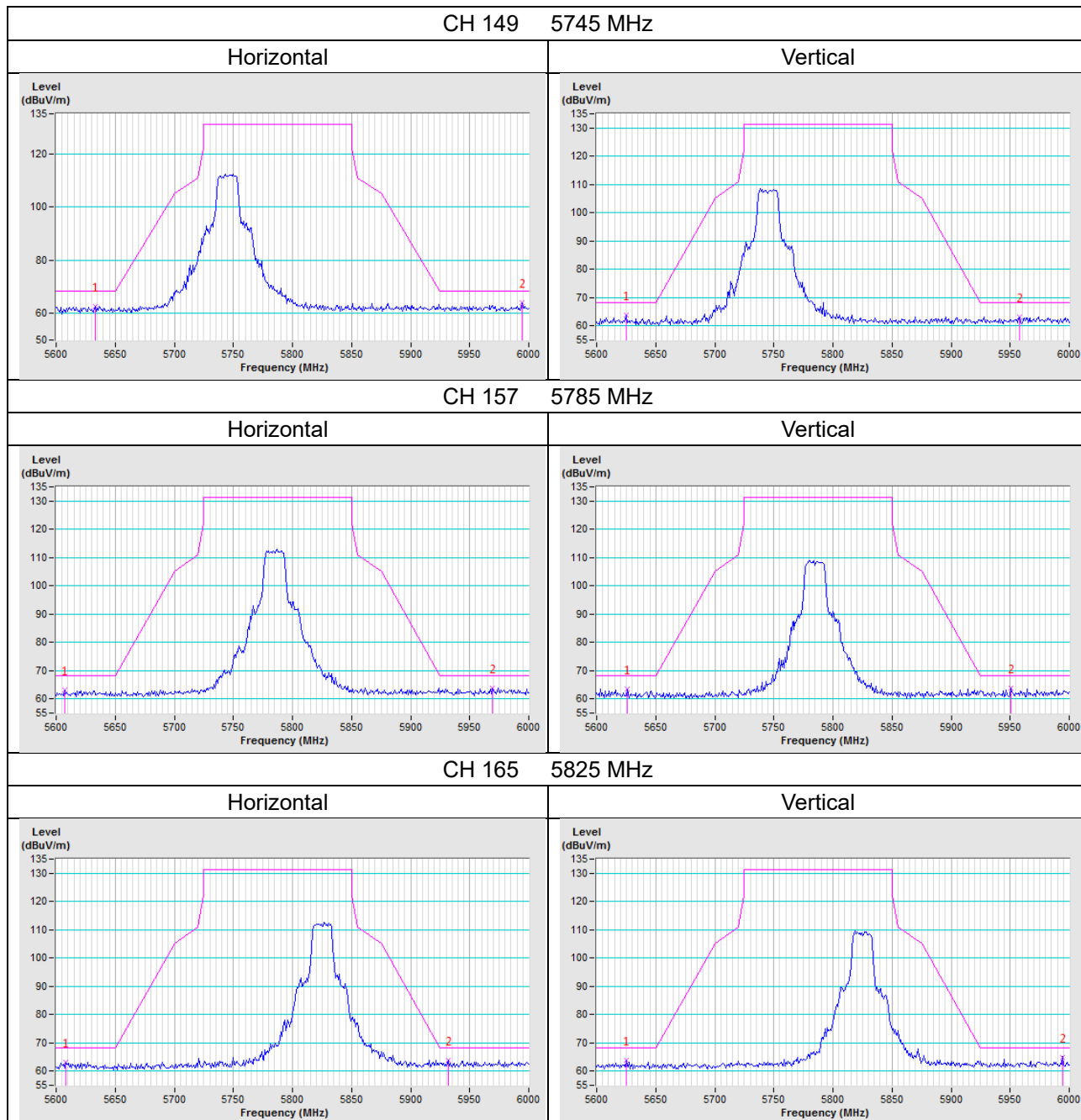
802.11ax (HE80)



Test Mode M (External antenna – PN: ATS-OP-245-810-4RPSP-36 + Eth7 Radio)

1TX

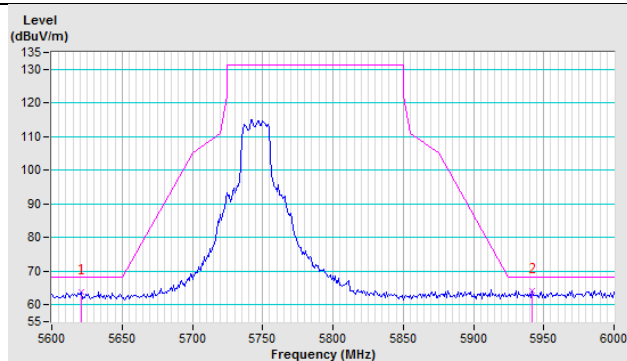
802.11a



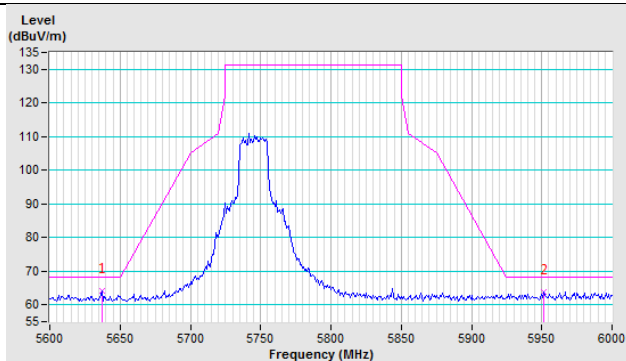
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

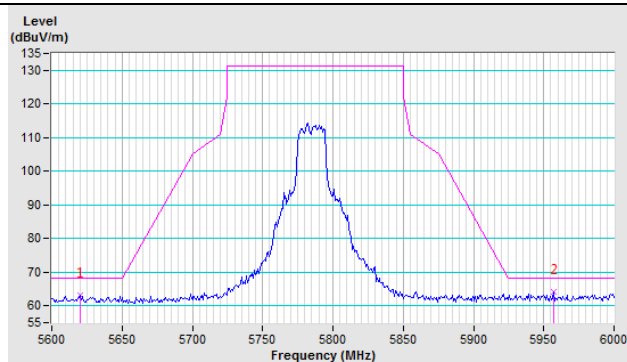


Vertical

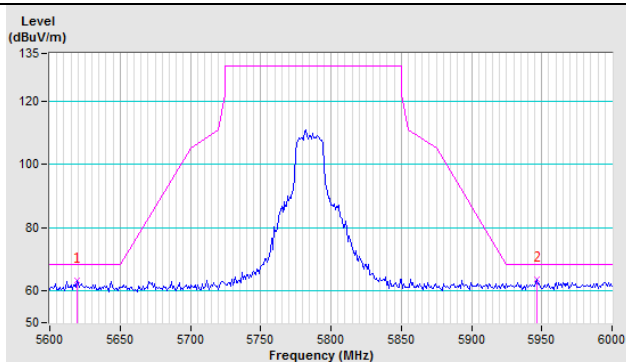


CH 157 5785 MHz

Horizontal

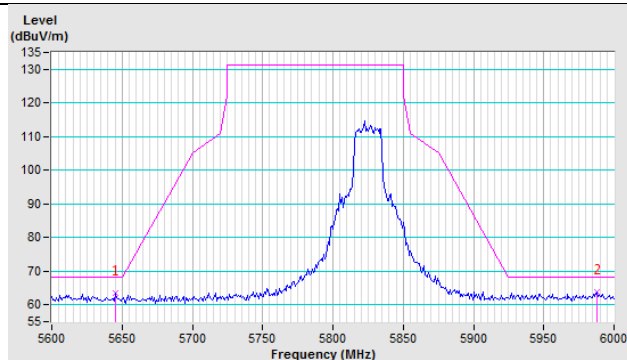


Vertical

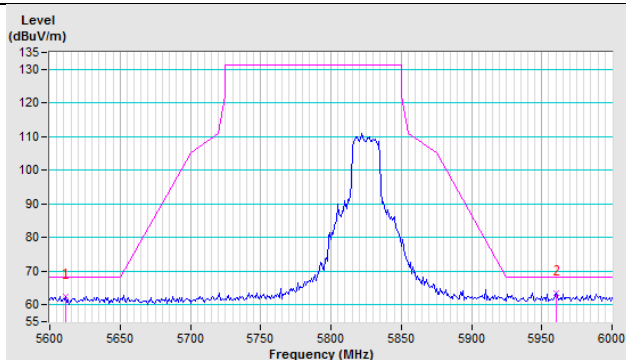


CH 165 5825 MHz

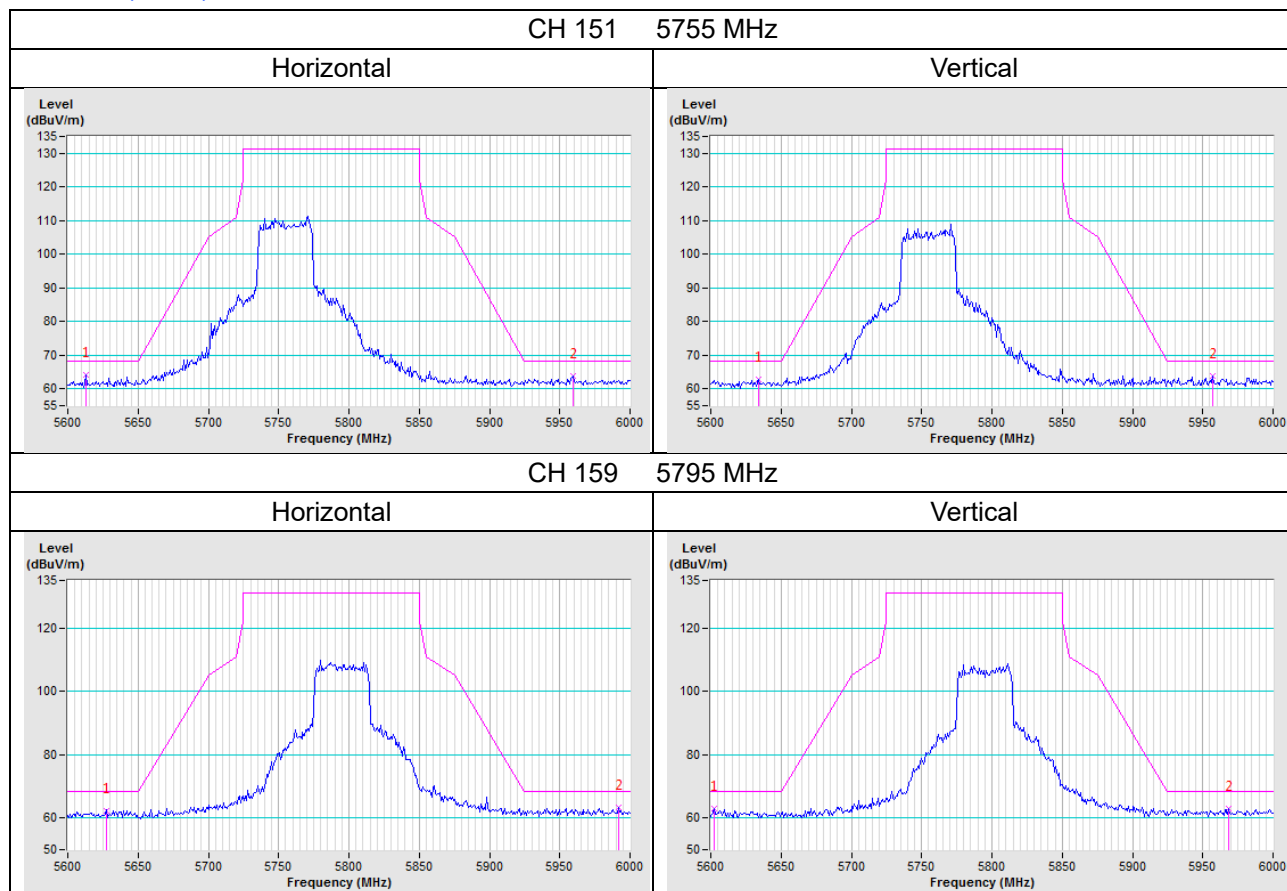
Horizontal



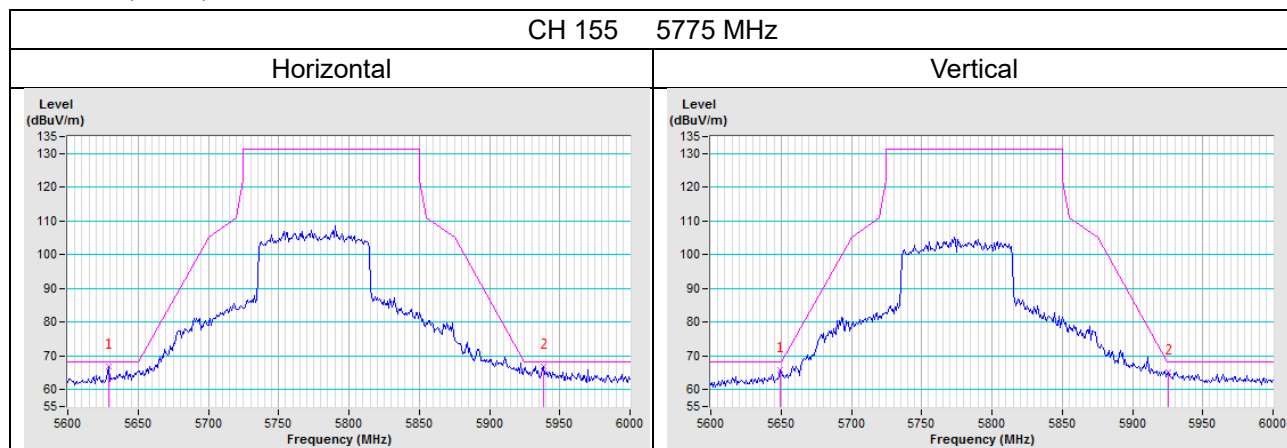
Vertical



802.11ax (HE40)

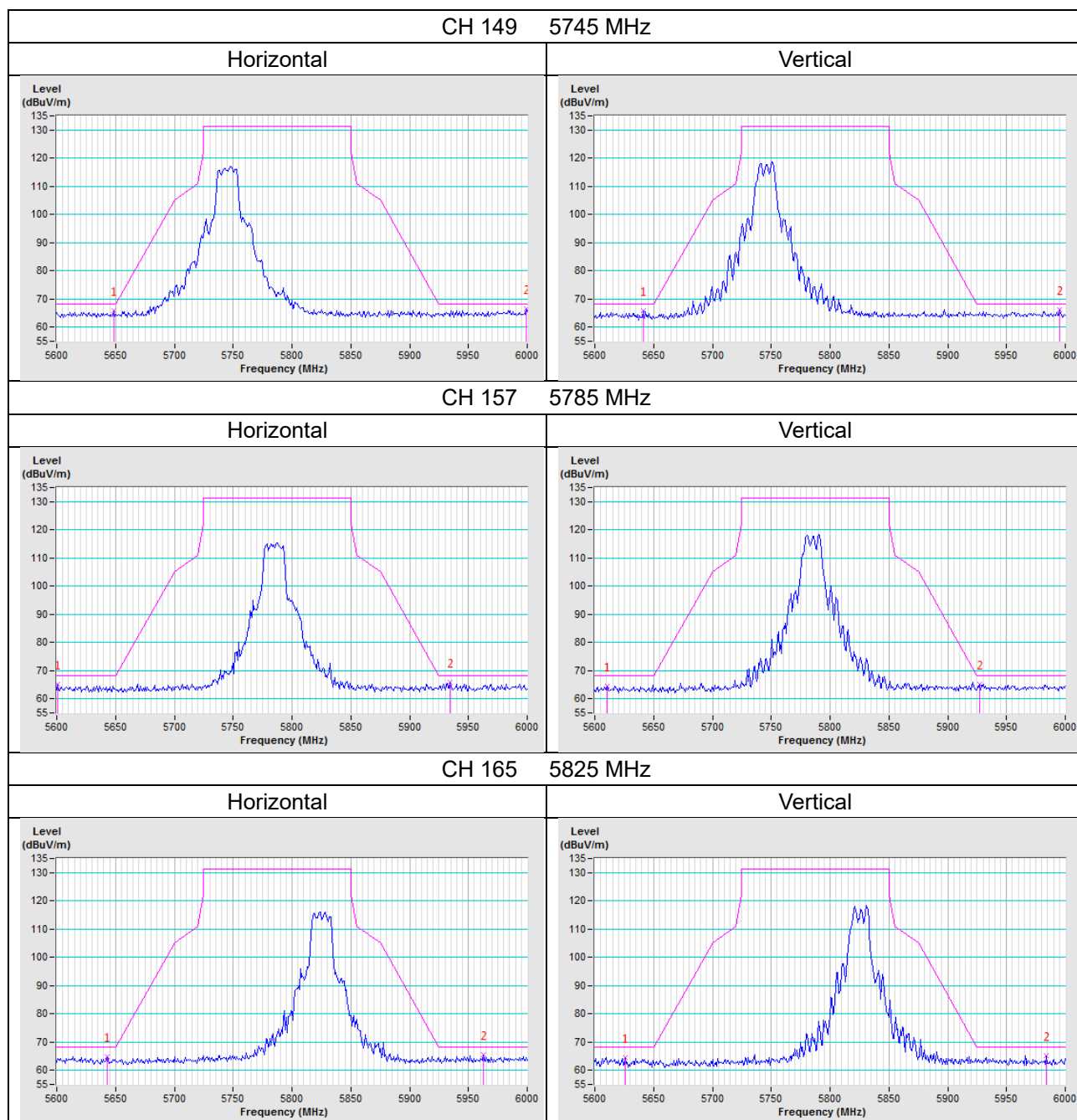


802.11ax (HE80)



2TX

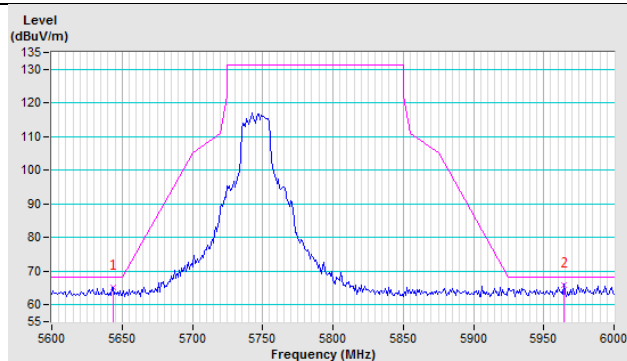
802.11a



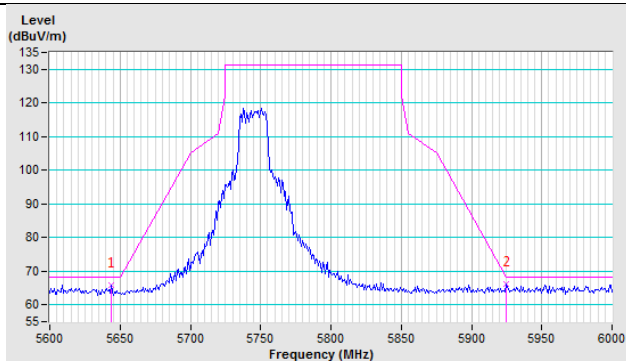
802.11ax (HE20)

CH 149 5745 MHz

Horizontal

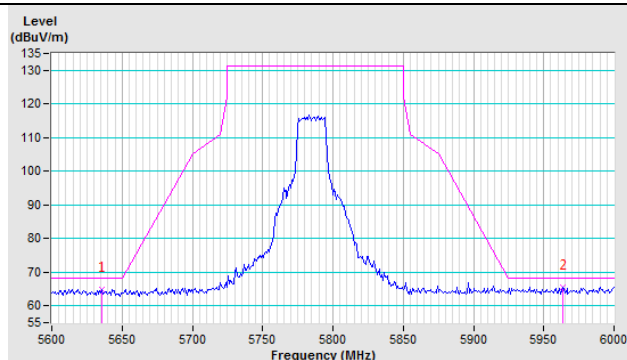


Vertical

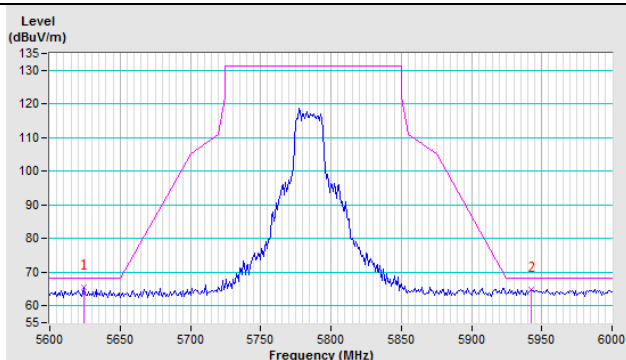


CH 157 5785 MHz

Horizontal

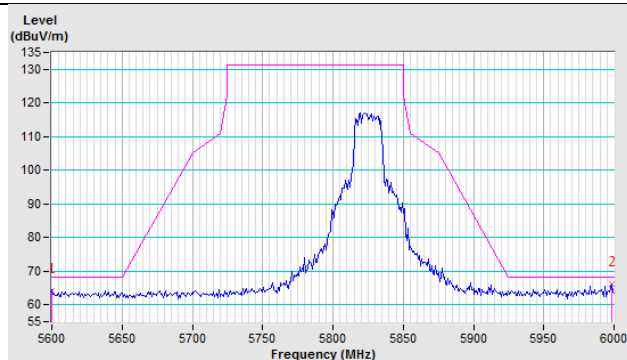


Vertical

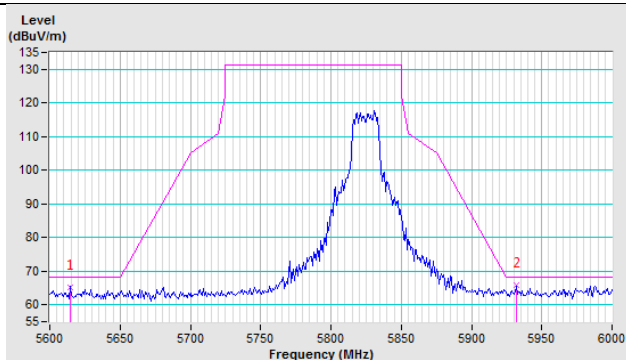


CH 165 5825 MHz

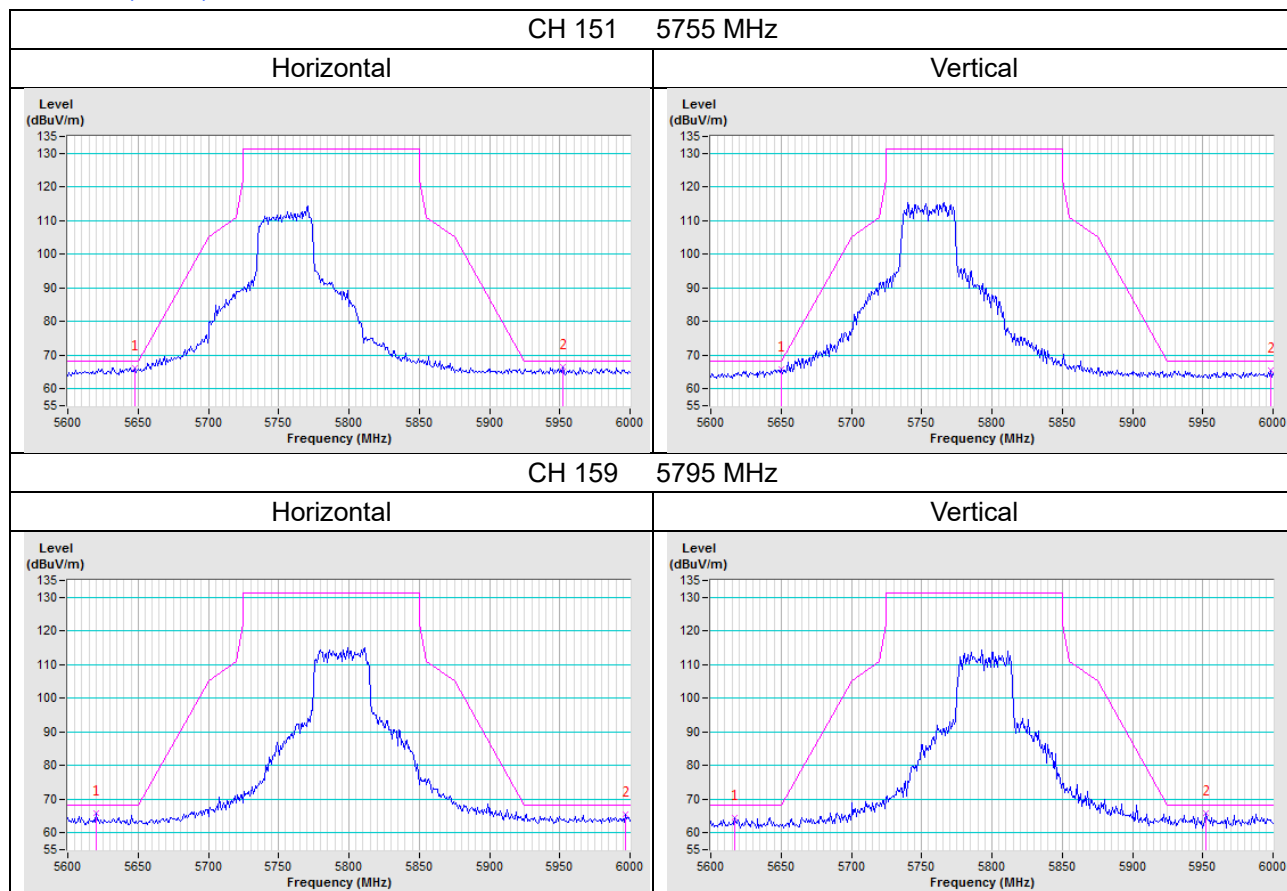
Horizontal



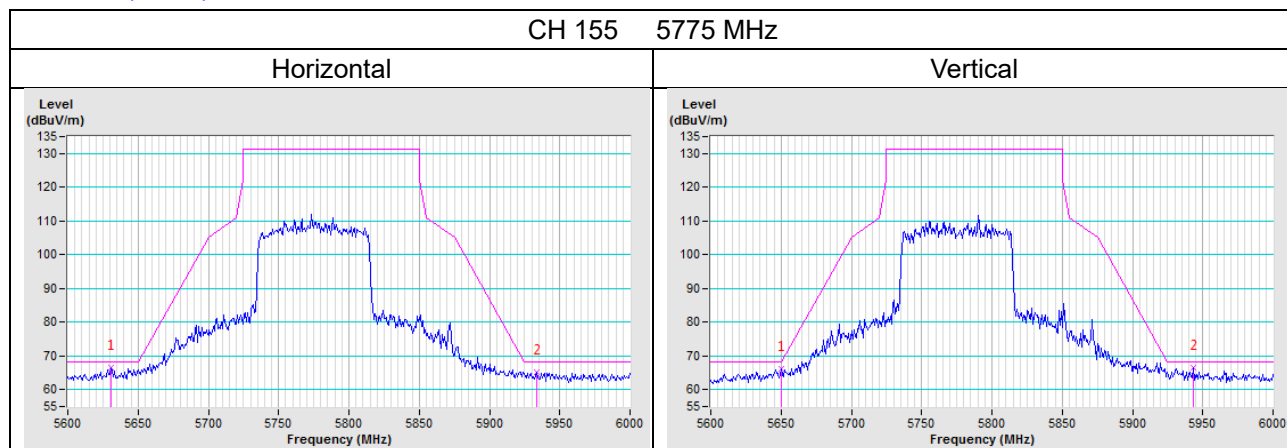
Vertical



802.11ax (HE40)



802.11ax (HE80)

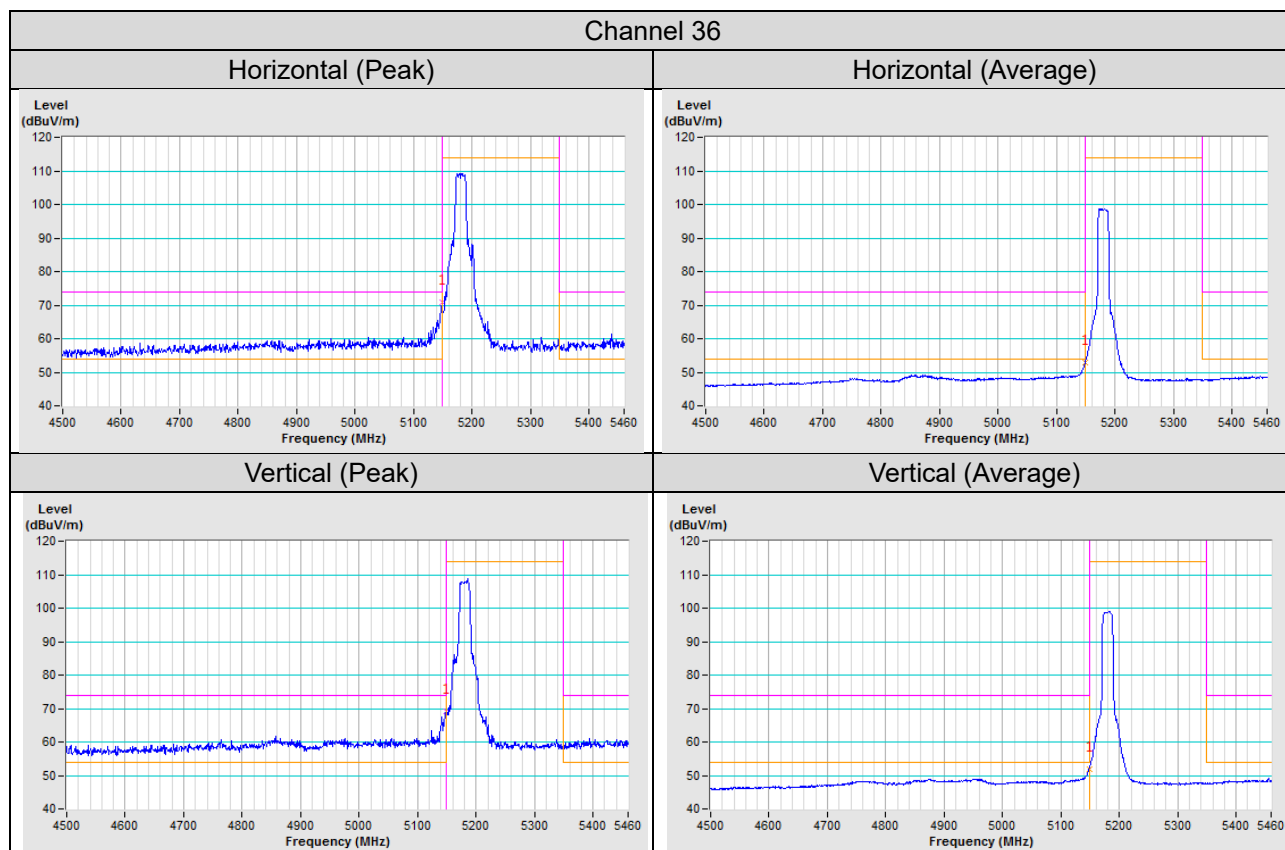


Annex B- Band Edge Measurement

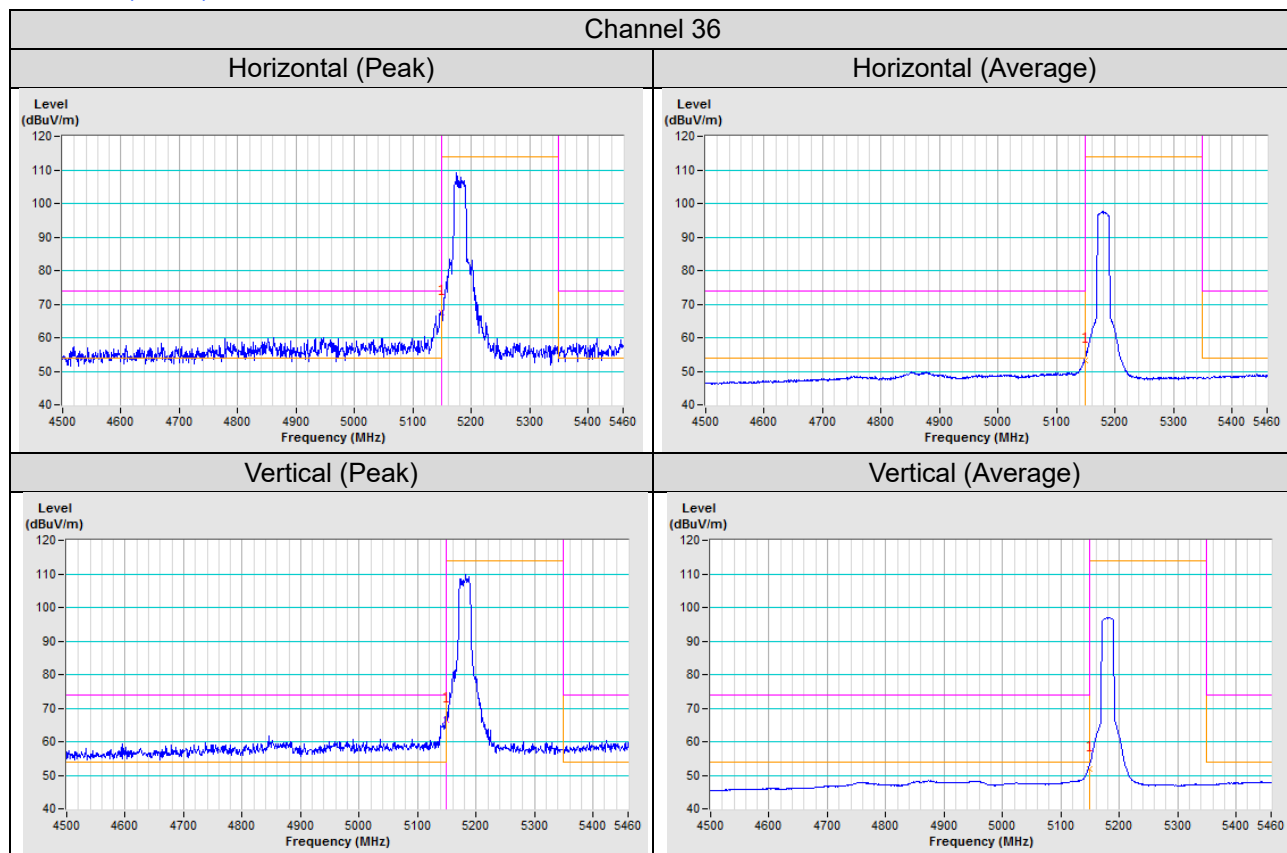
Test Mode A (Internal antenna + Eth6 Radio)

1TX

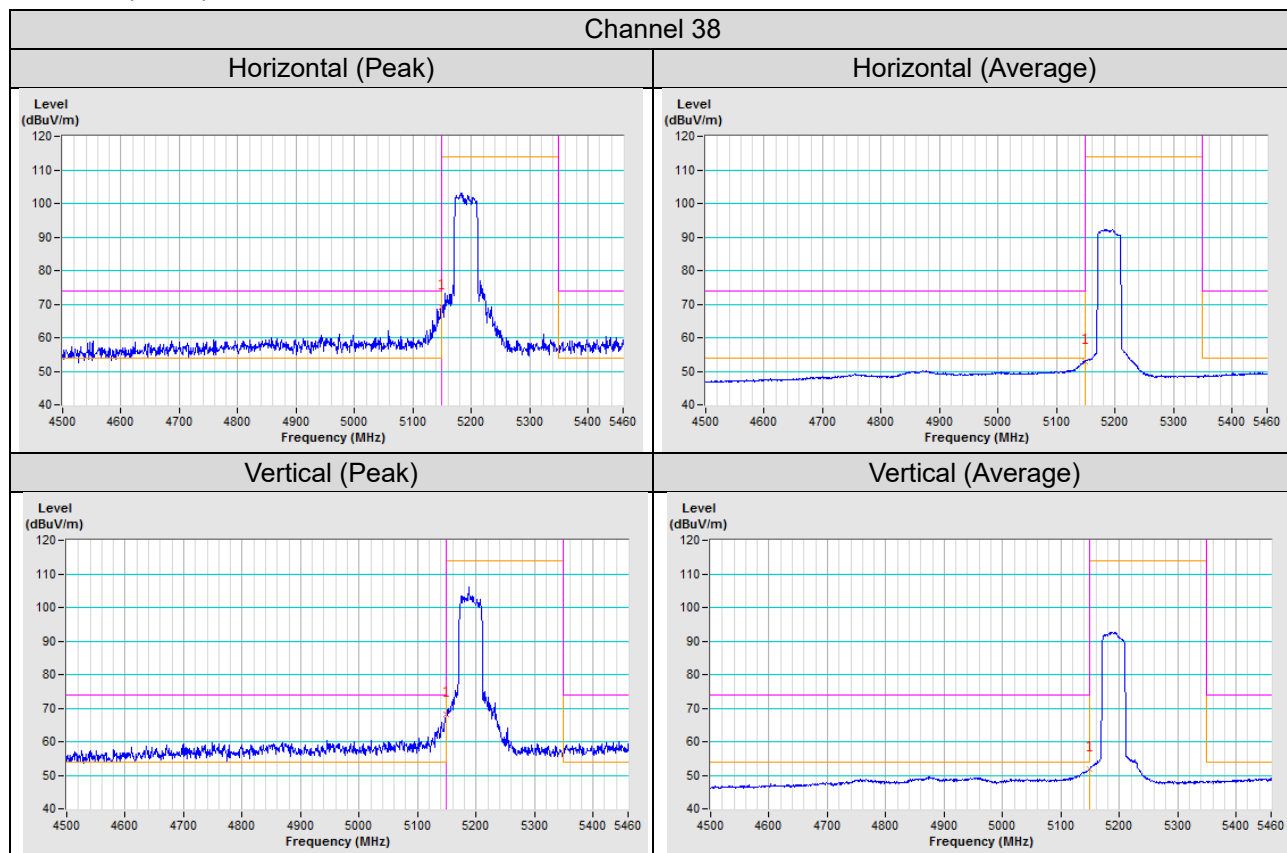
802.11a



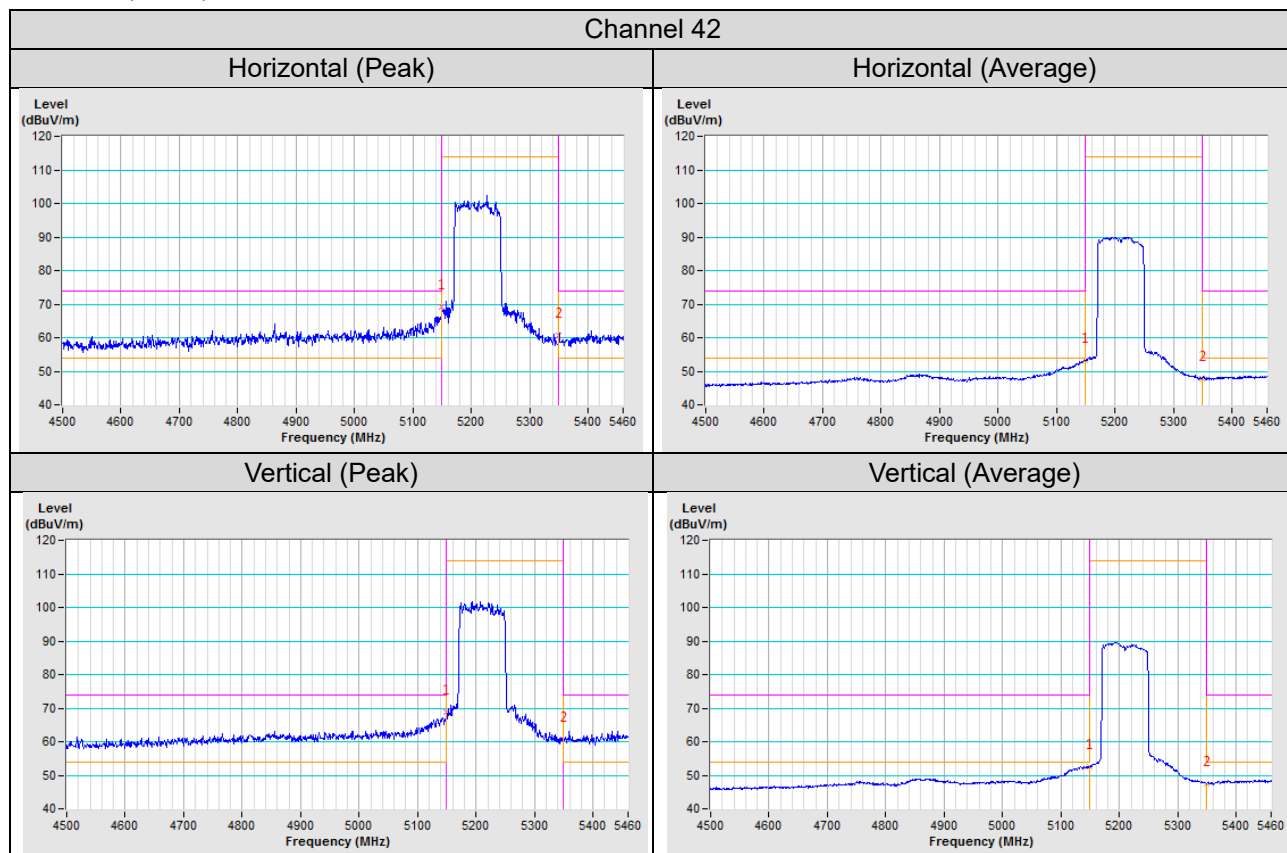
802.11ax (HE20)



802.11ax (HE40)

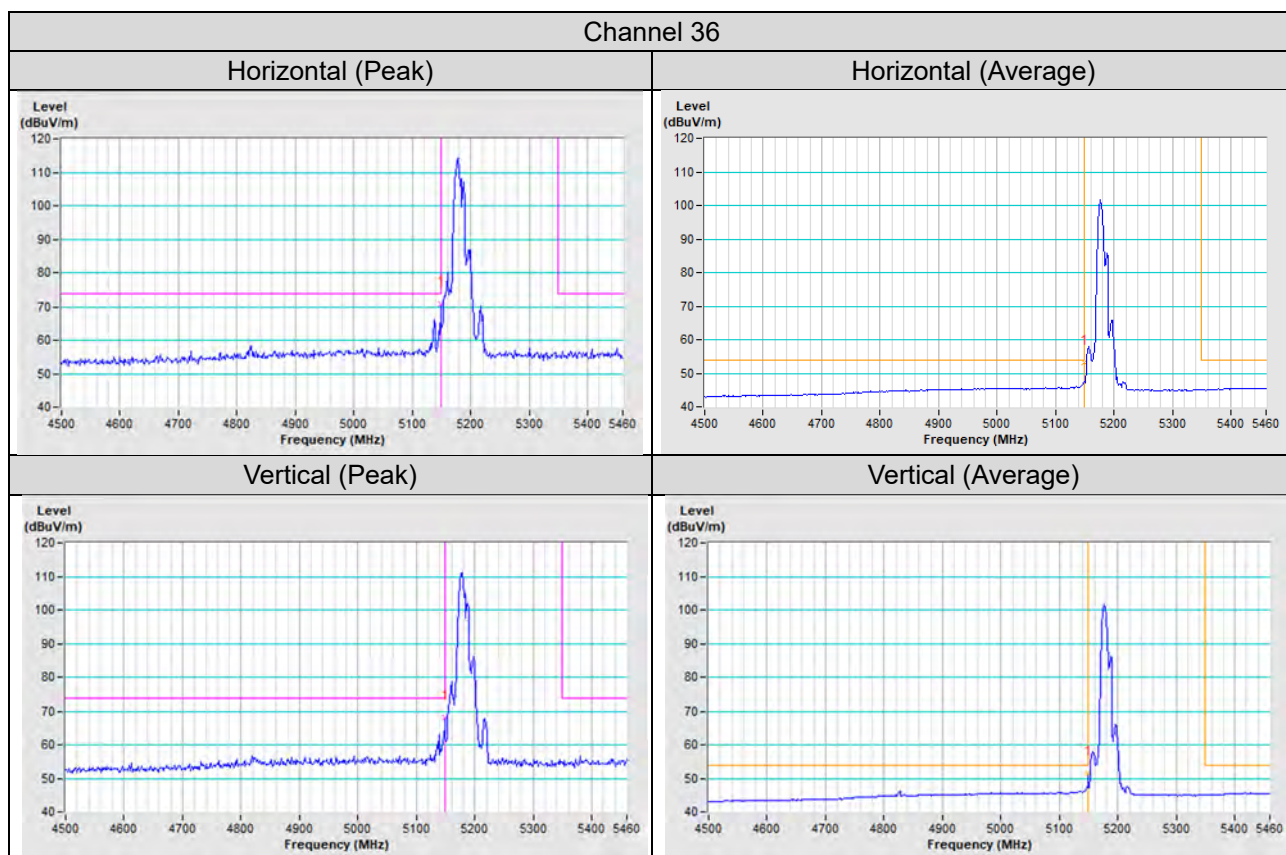


802.11ax (HE80)

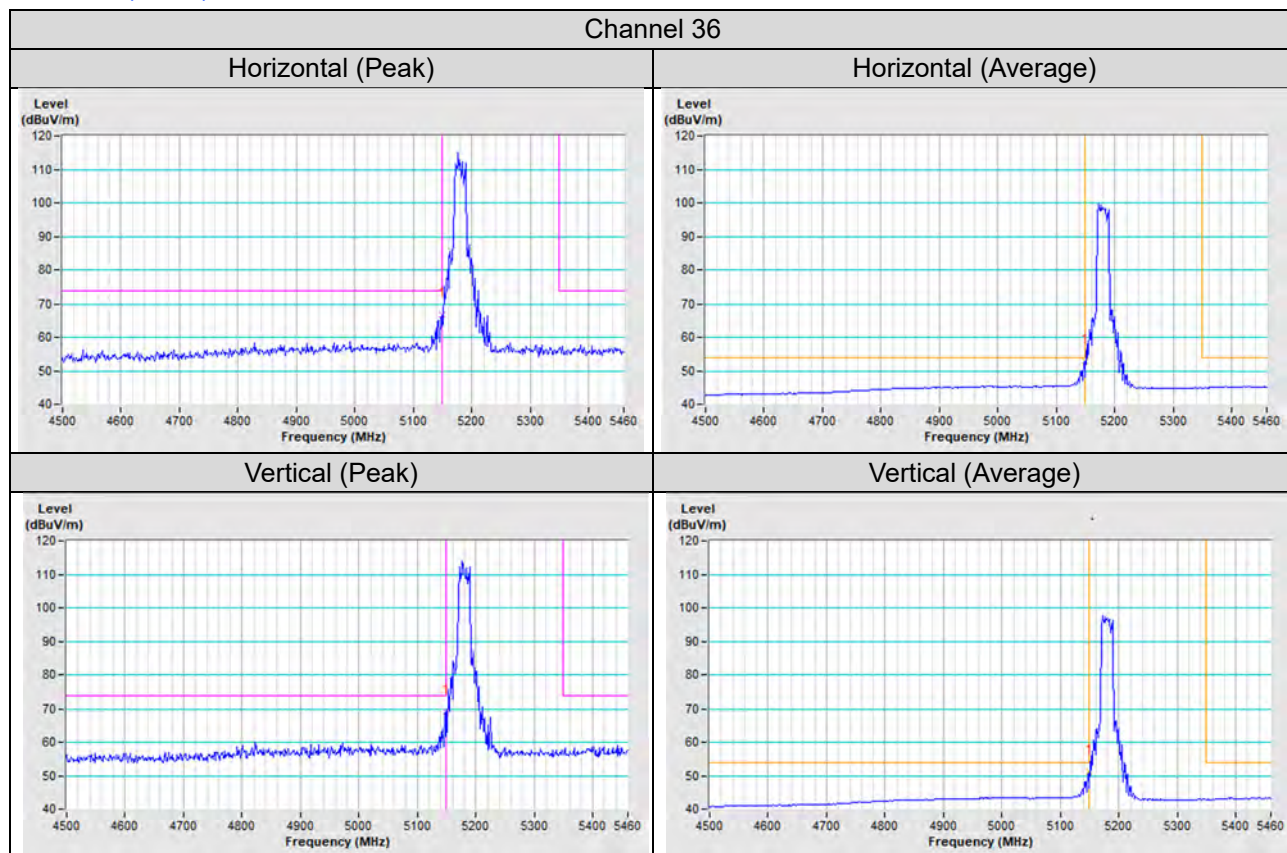


2TX

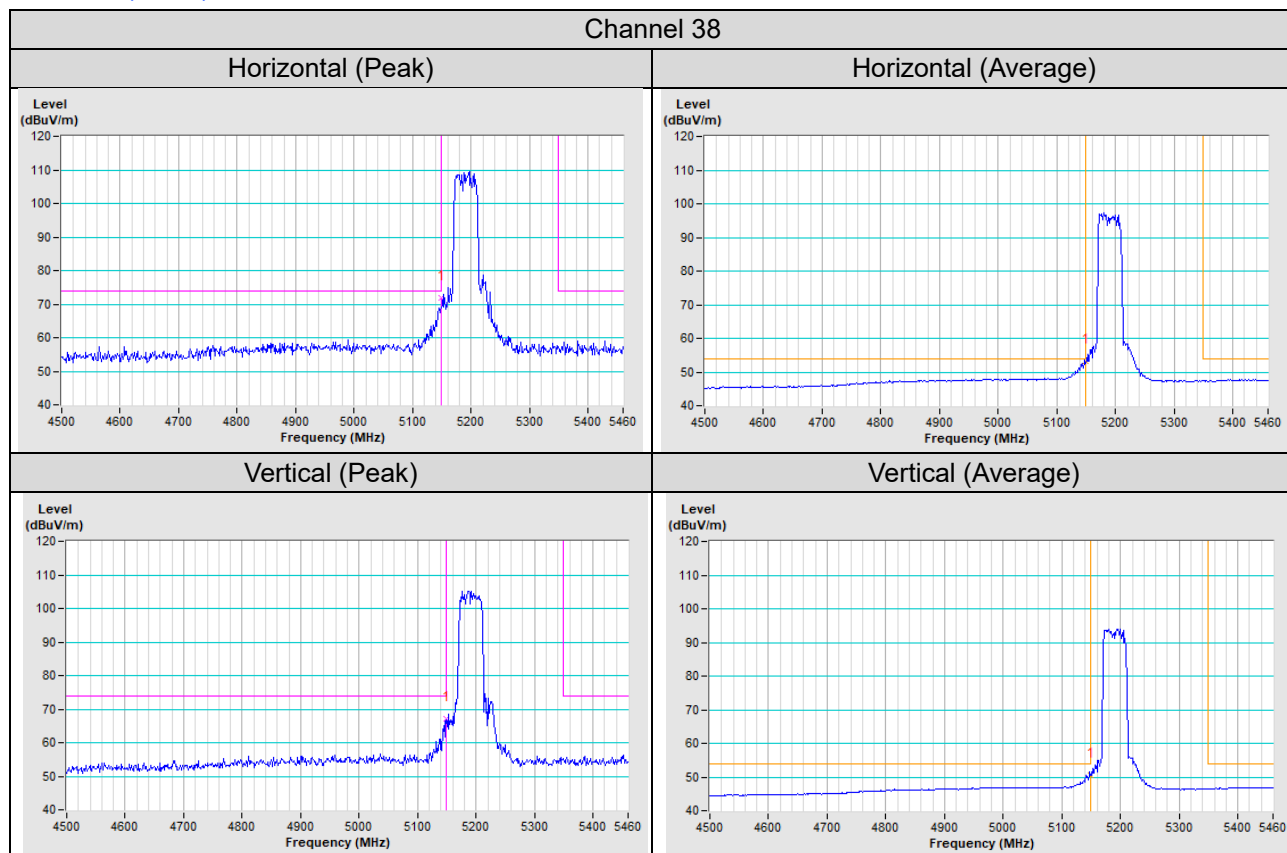
802.11a



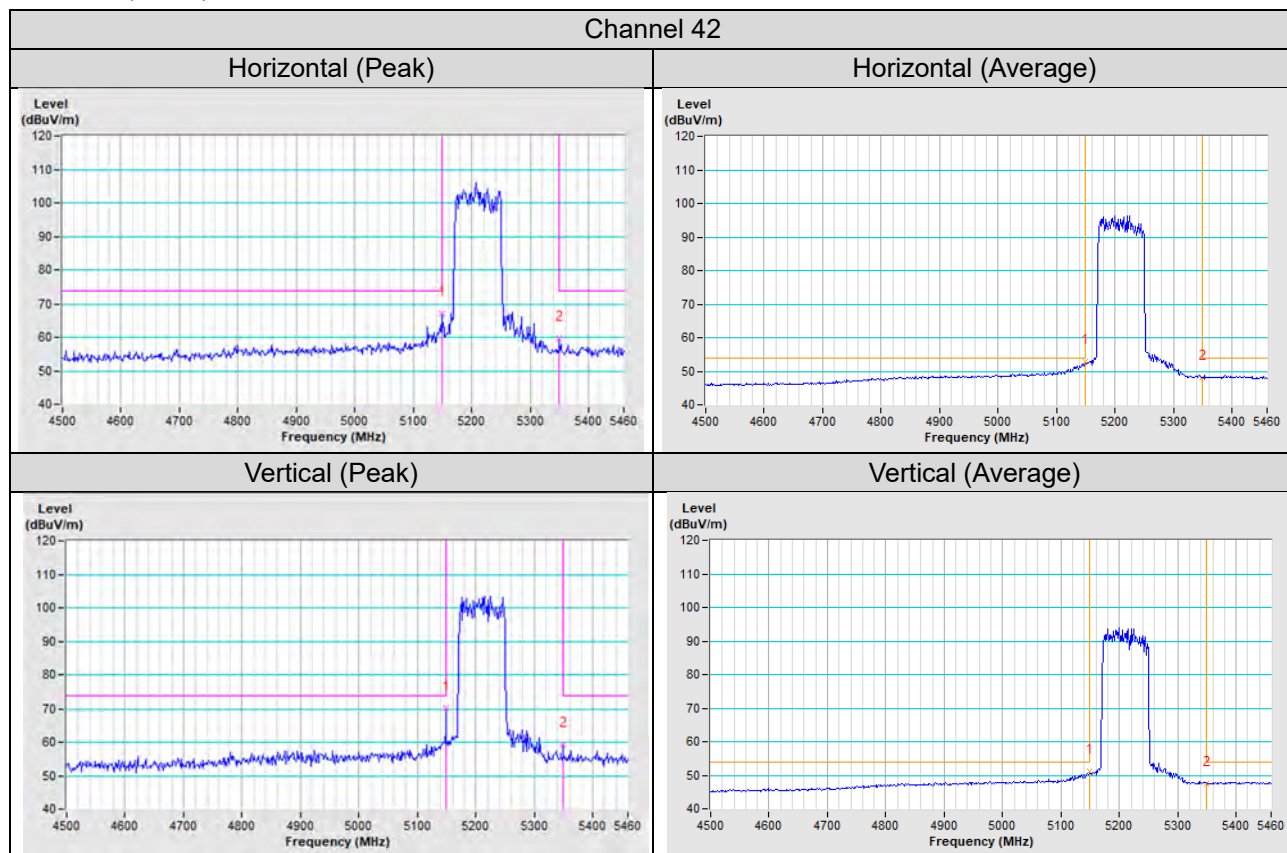
802.11ax (HE20)



802.11ax (HE40)

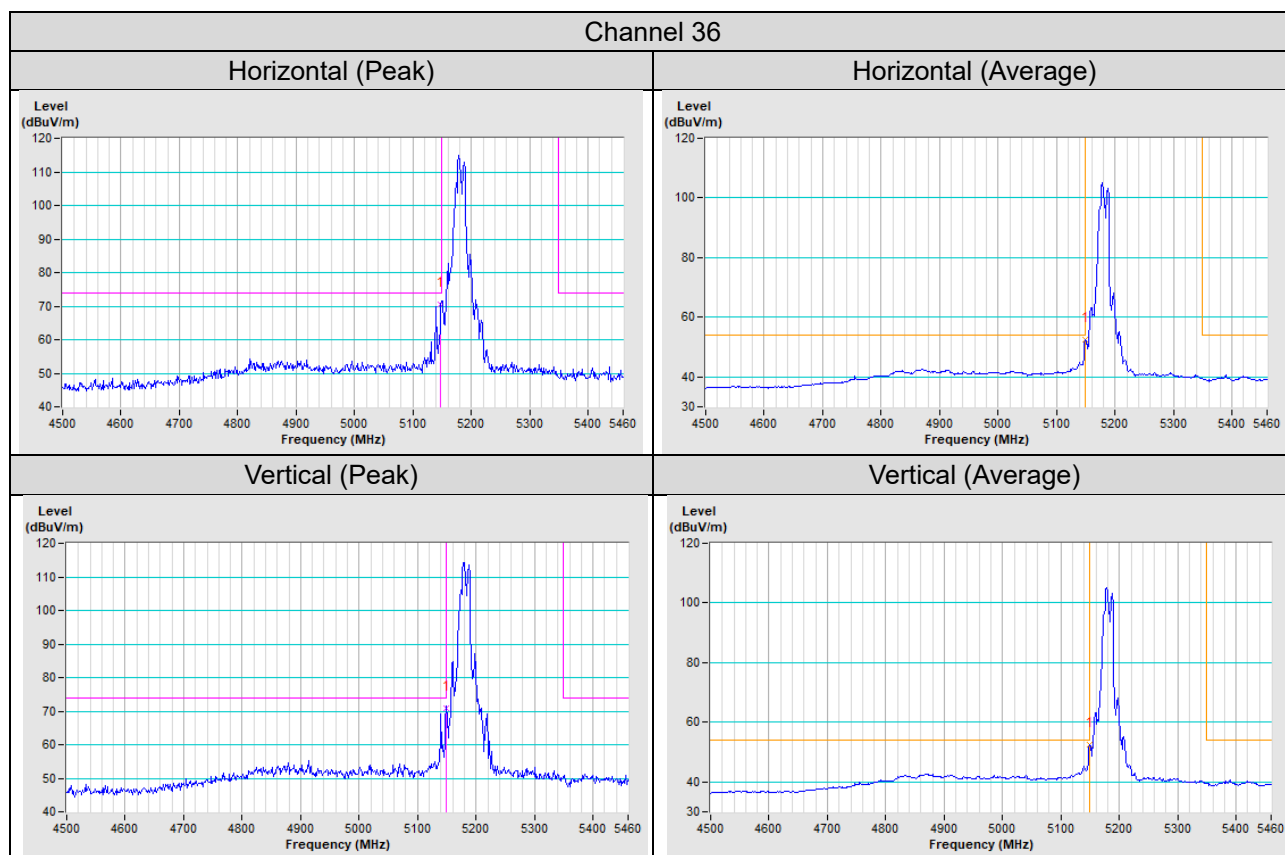


802.11ax (HE80)

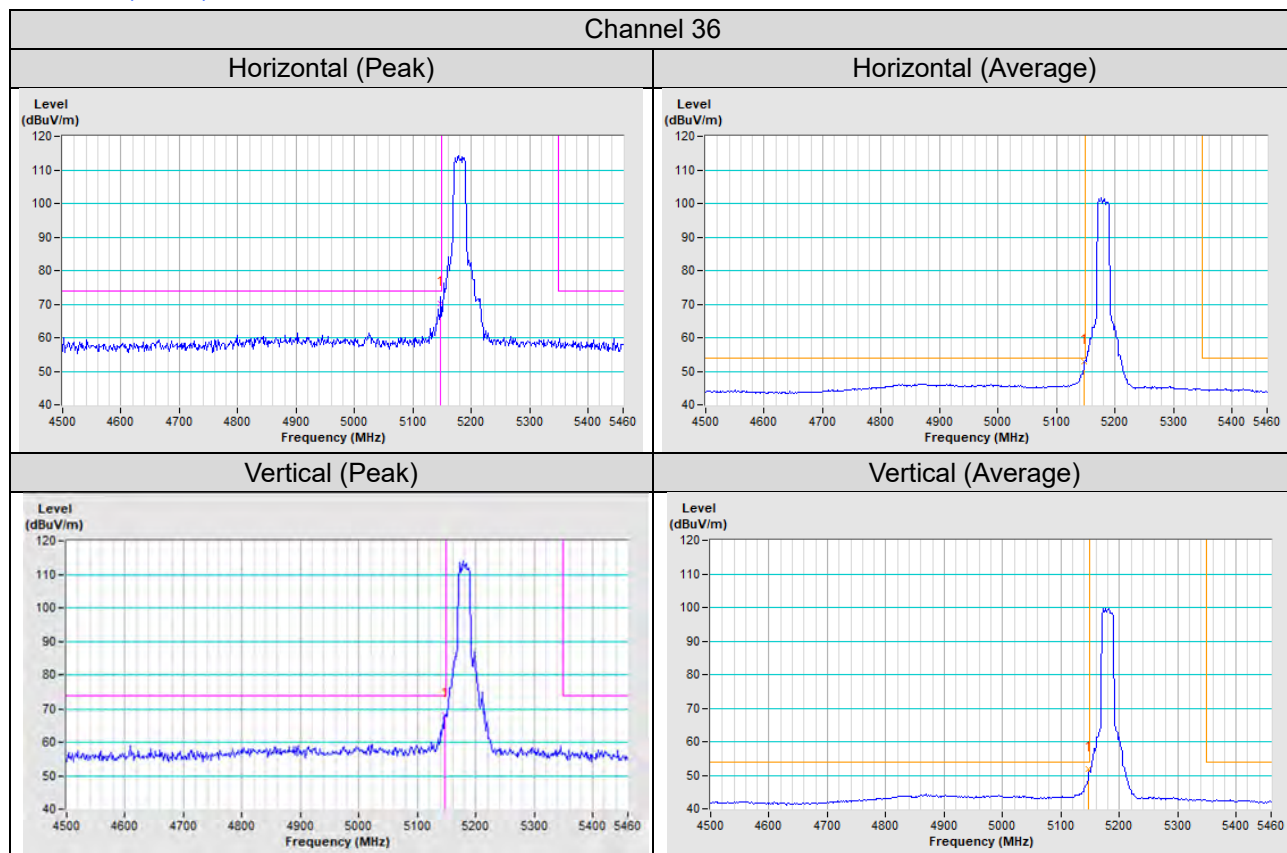


3TX

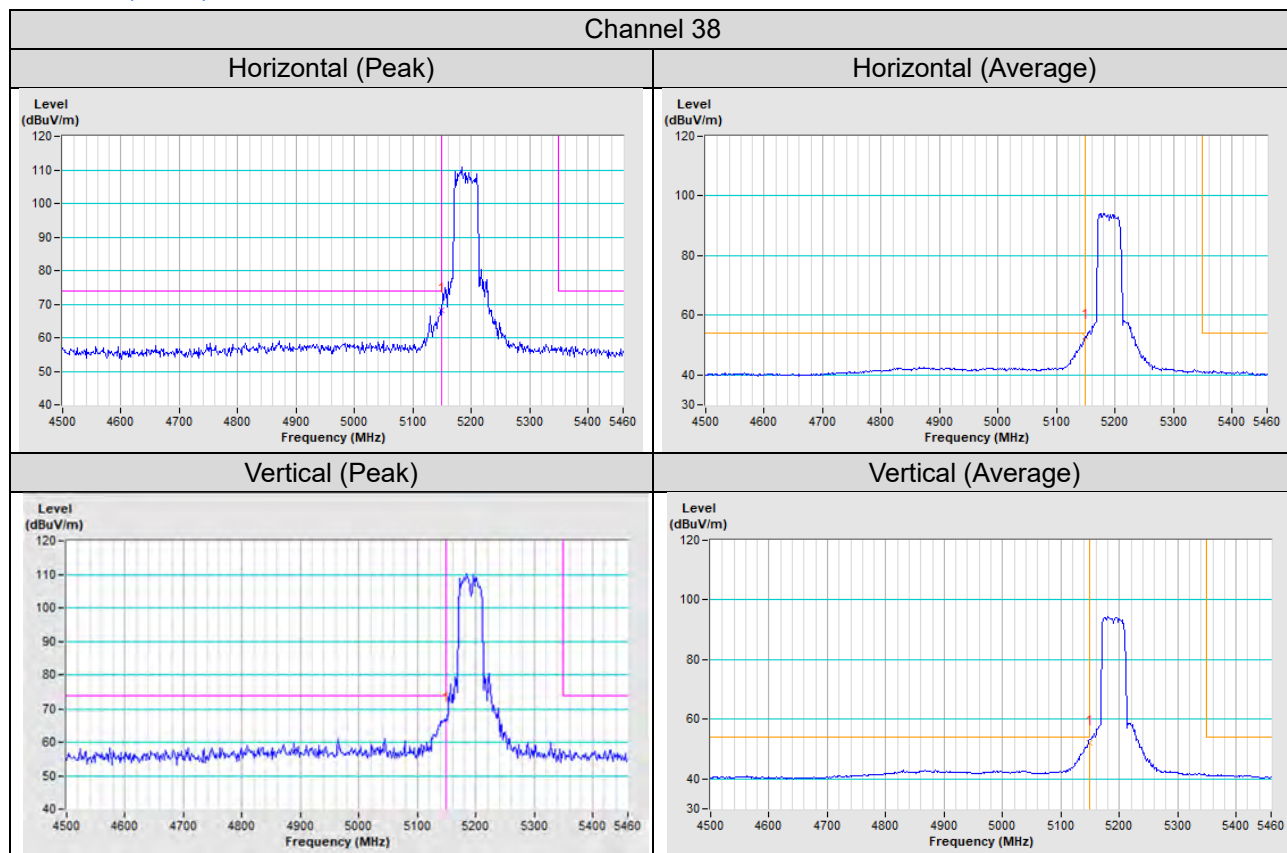
802.11a



802.11ax (HE20)



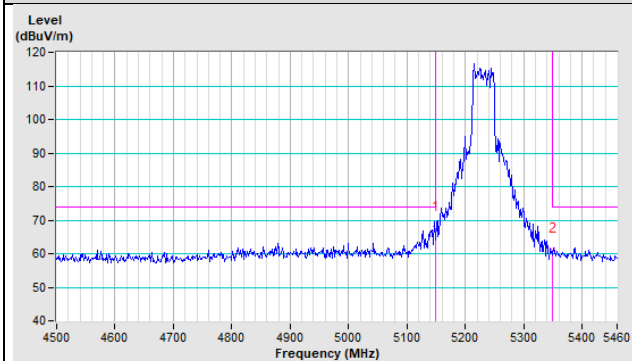
802.11ax (HE40)



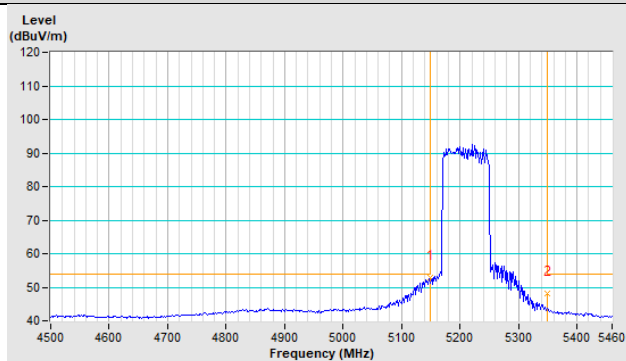
802.11ax (HE80)

Channel 42

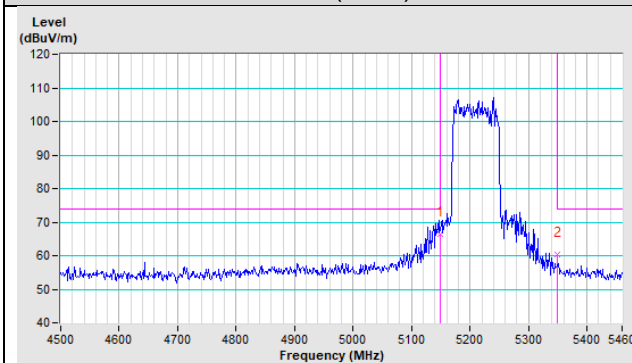
Horizontal (Peak)



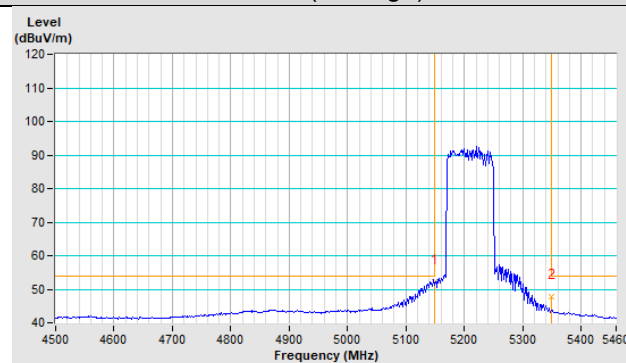
Horizontal (Average)



Vertical (Peak)



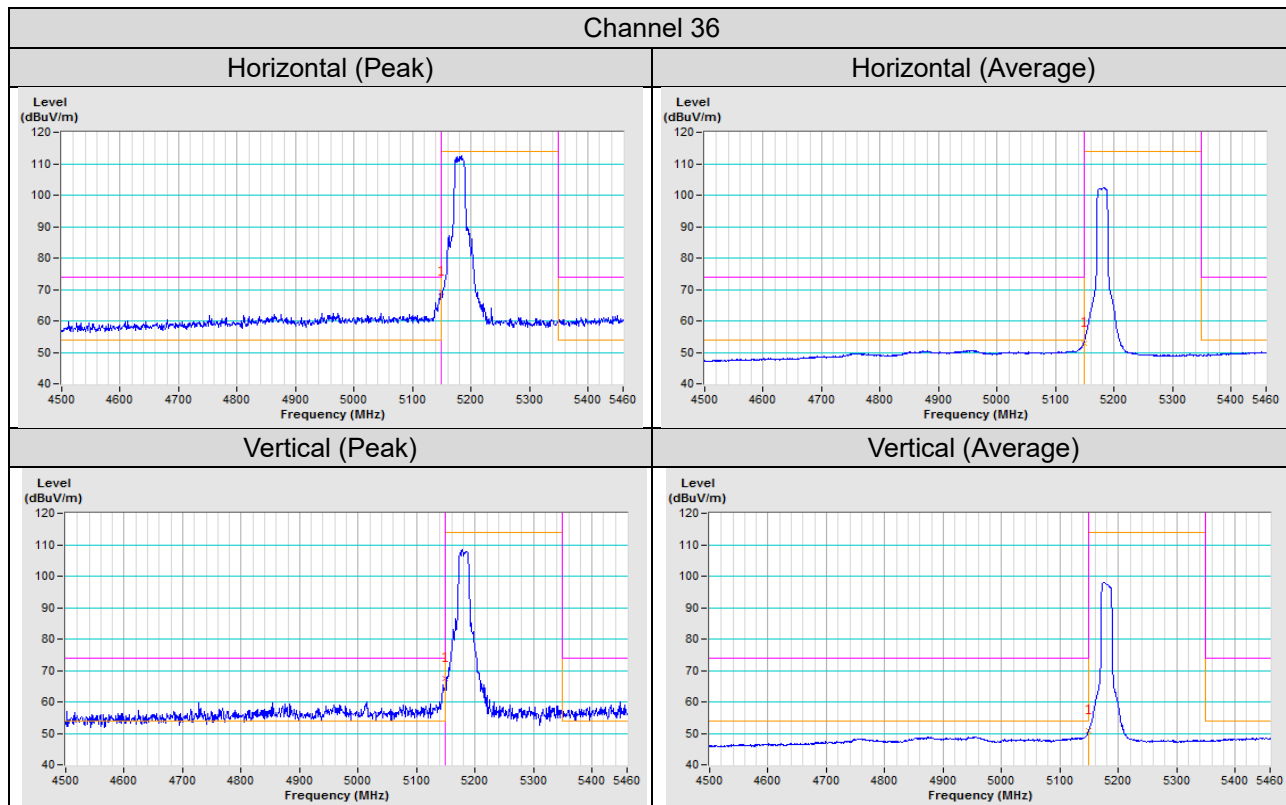
Vertical (Average)



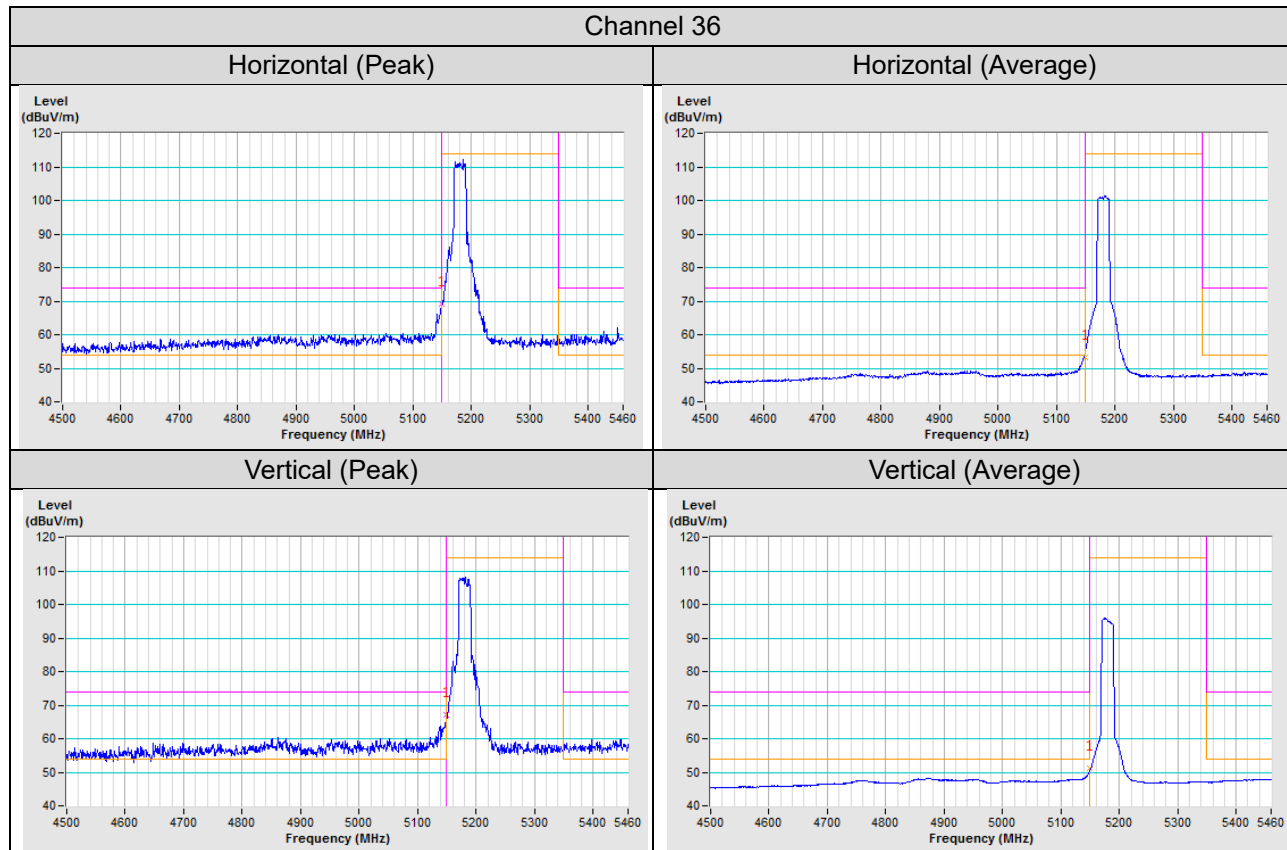
Test Mode C (Internal antenna + Eth7 Radio)

1TX

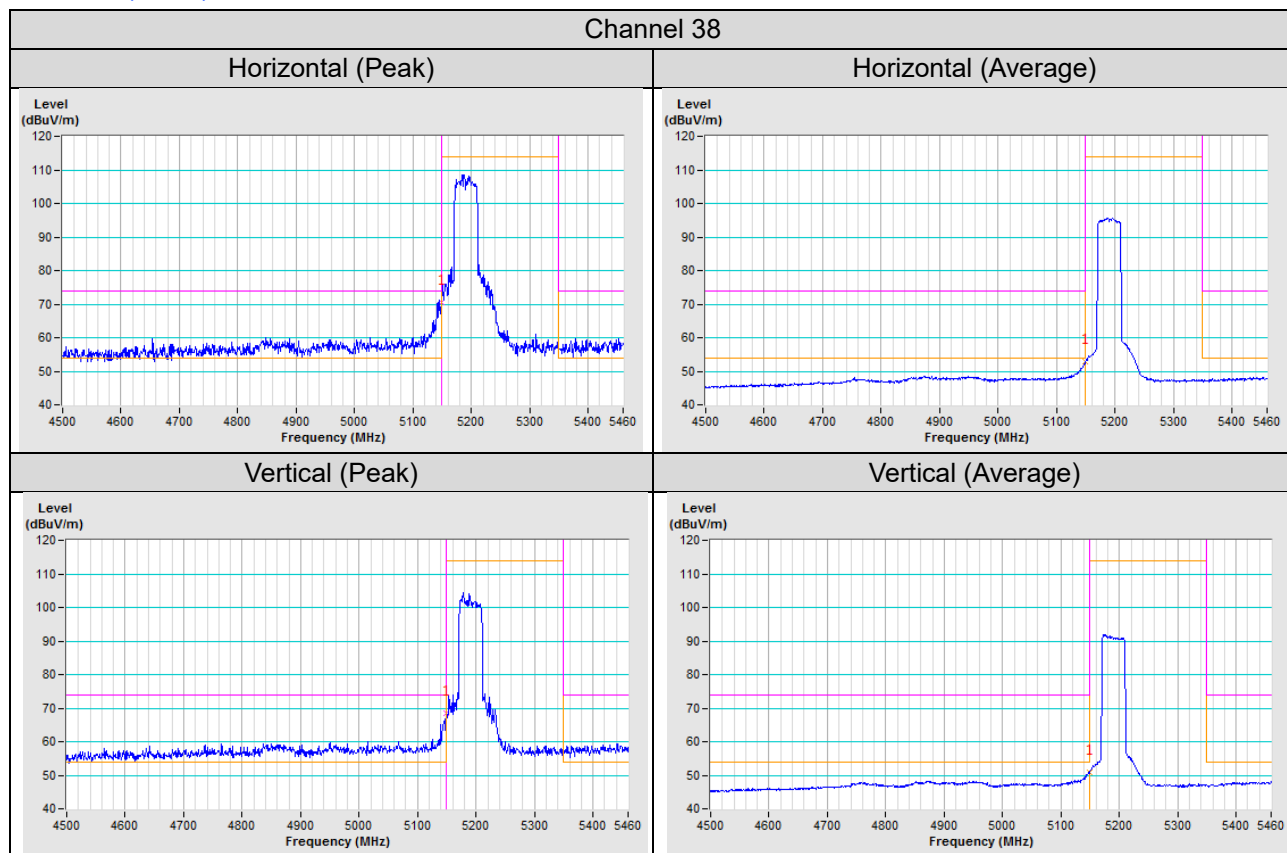
802.11a



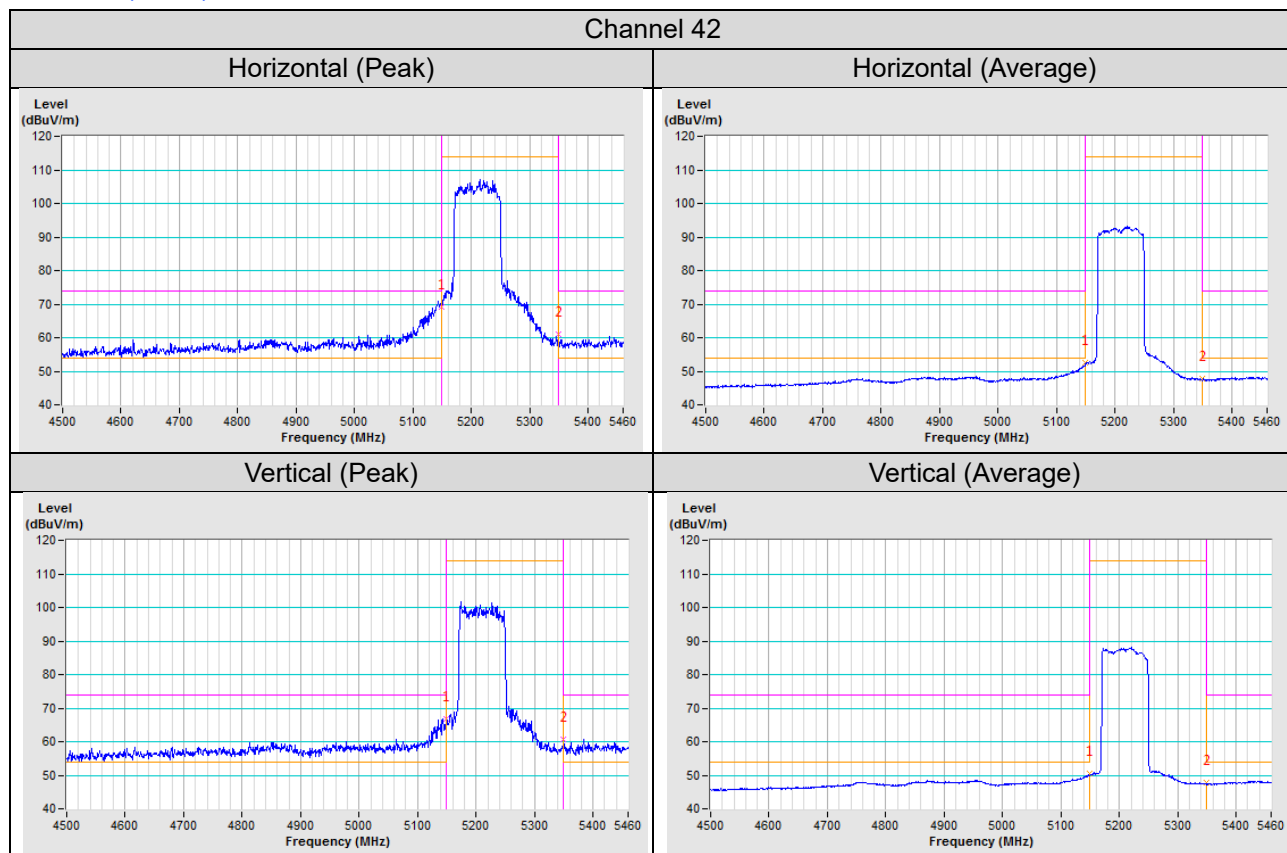
802.11ax (HE20)



802.11ax (HE40)



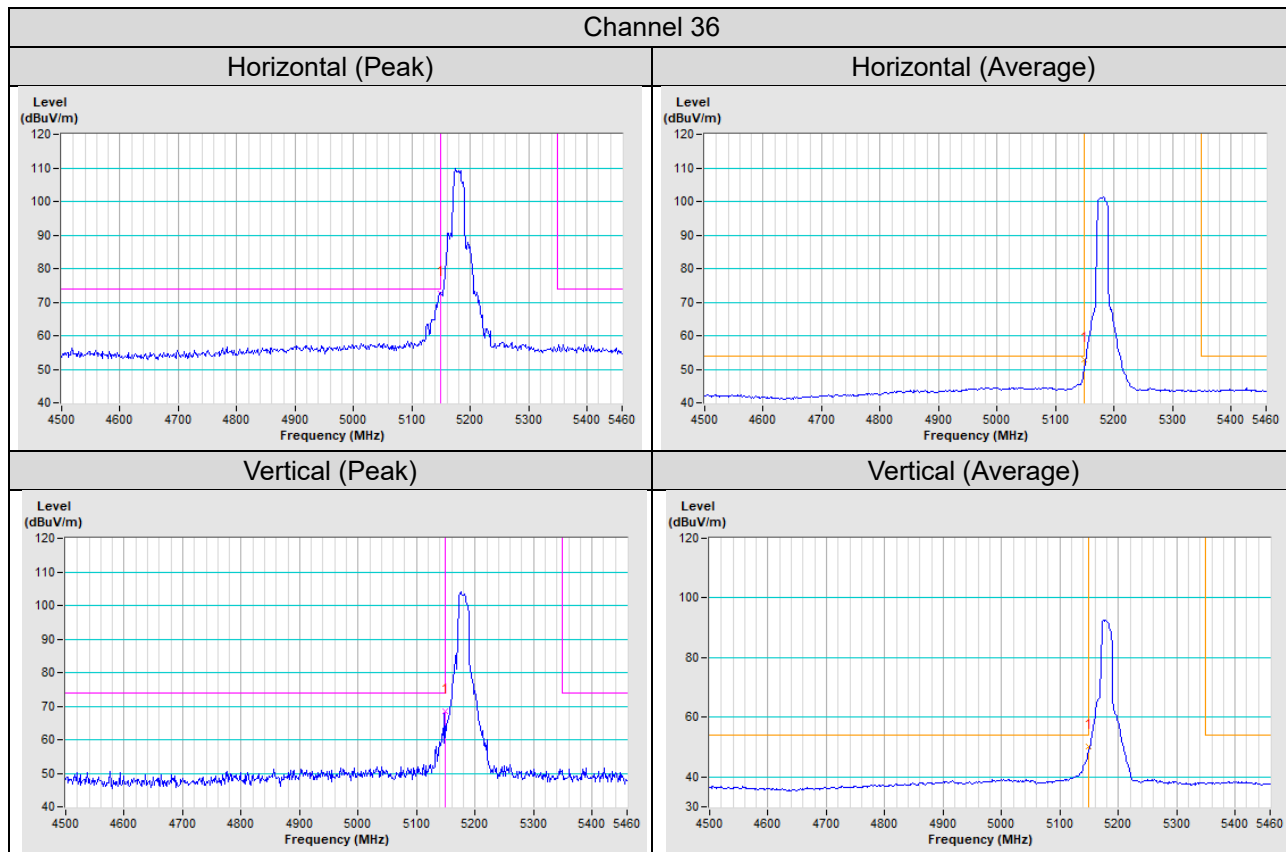
802.11ax (HE80)



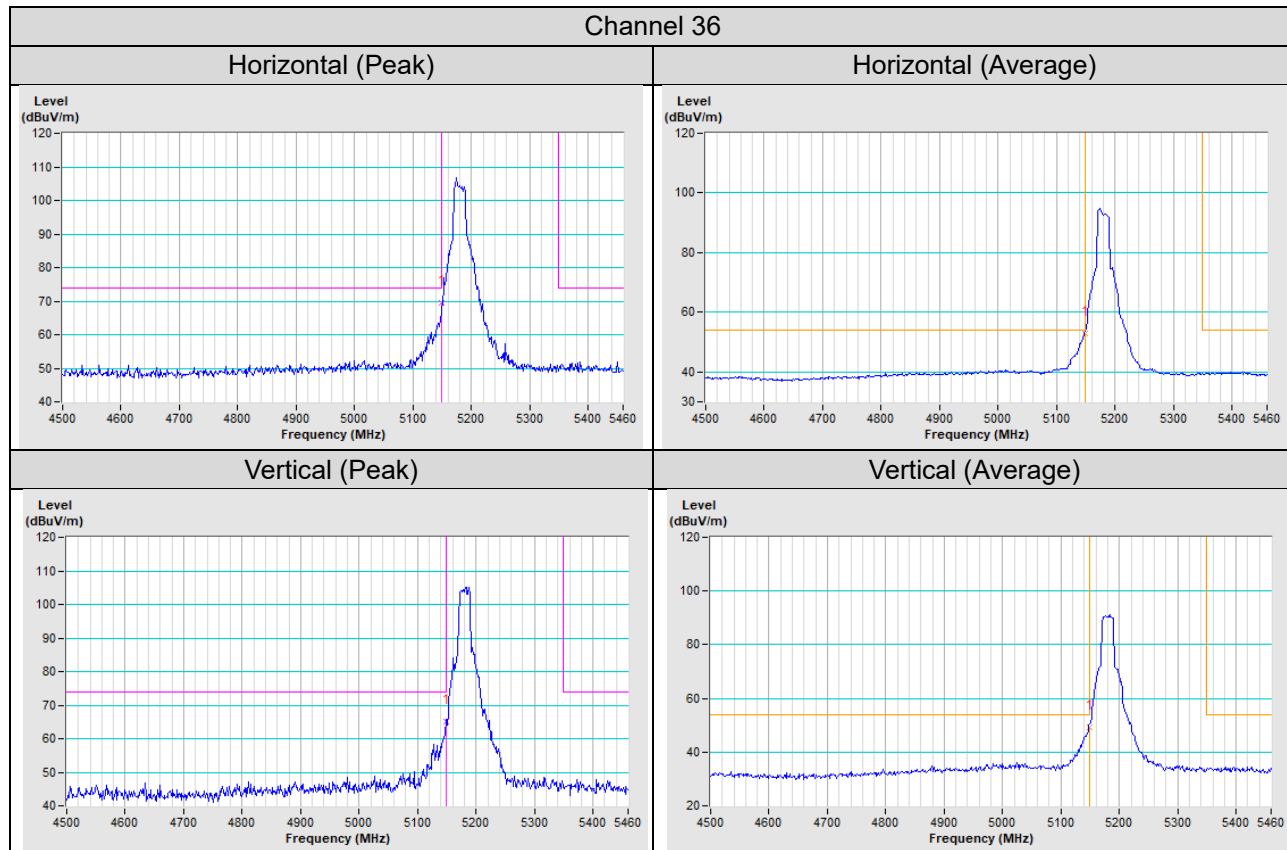
Test Mode G (External antenna - PN: ATS-OO-245-46-4RPSP-36 + Eth6 Radio)

1TX

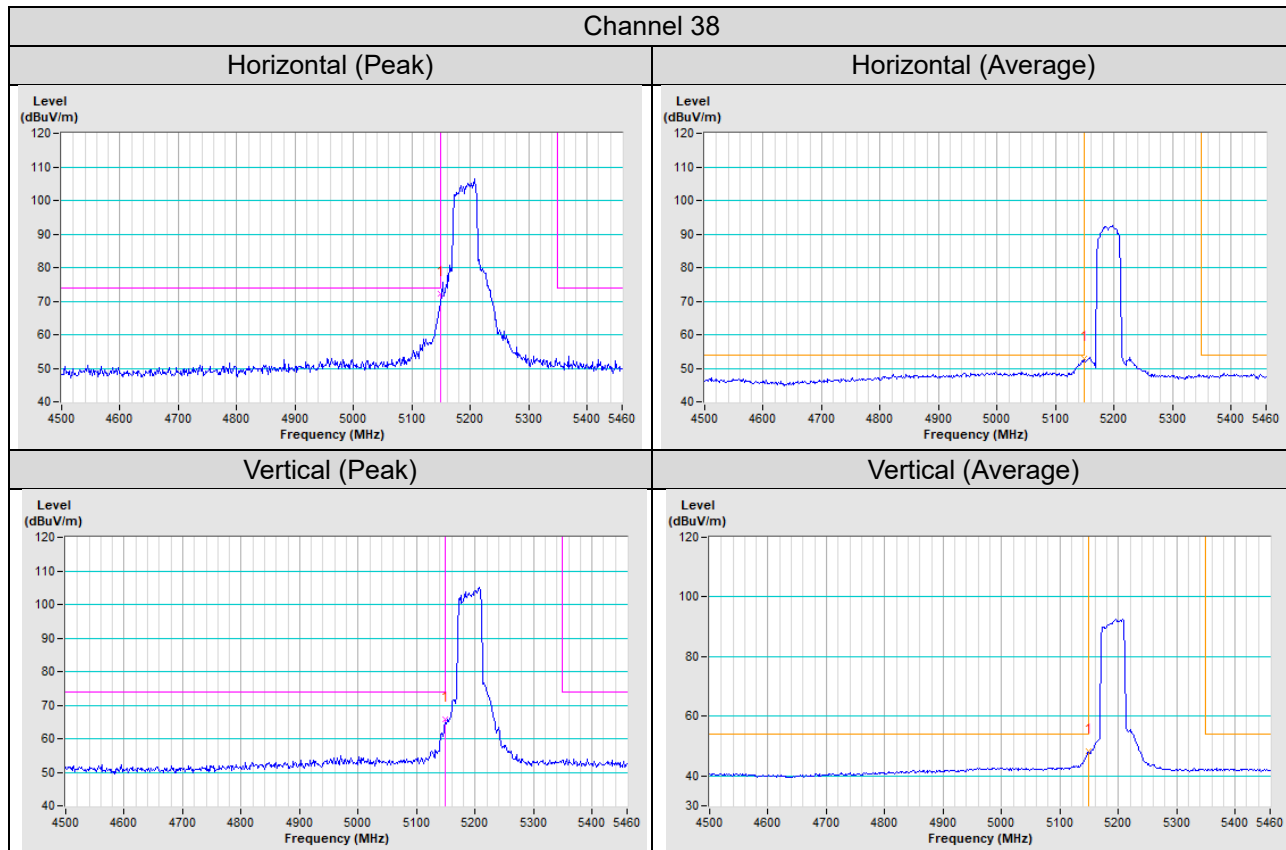
802.11a



802.11ax (HE20)



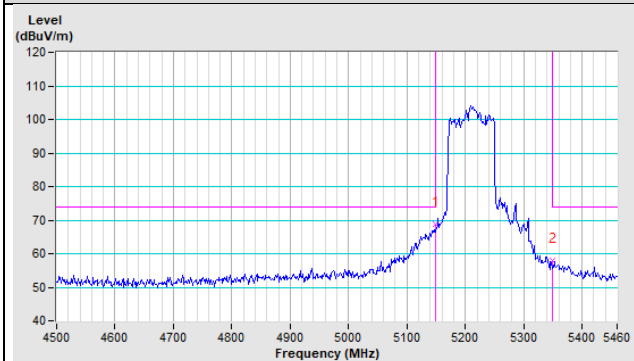
802.11ax (HE40)



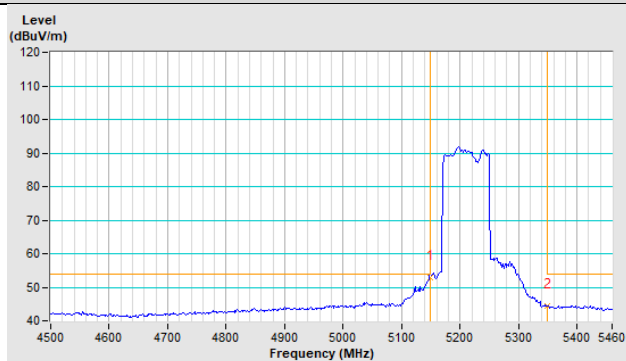
802.11ax (HE80)

Channel 42

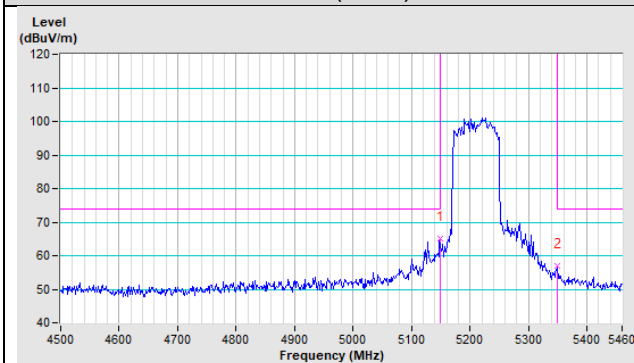
Horizontal (Peak)



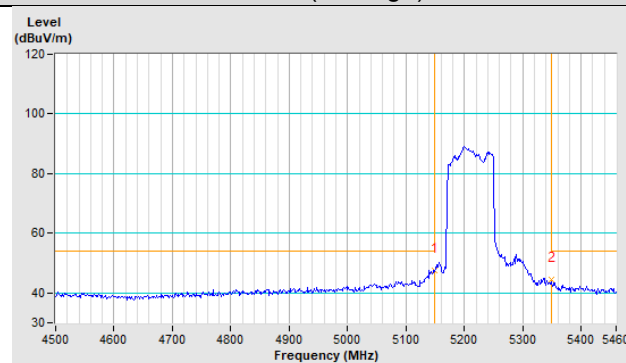
Horizontal (Average)



Vertical (Peak)

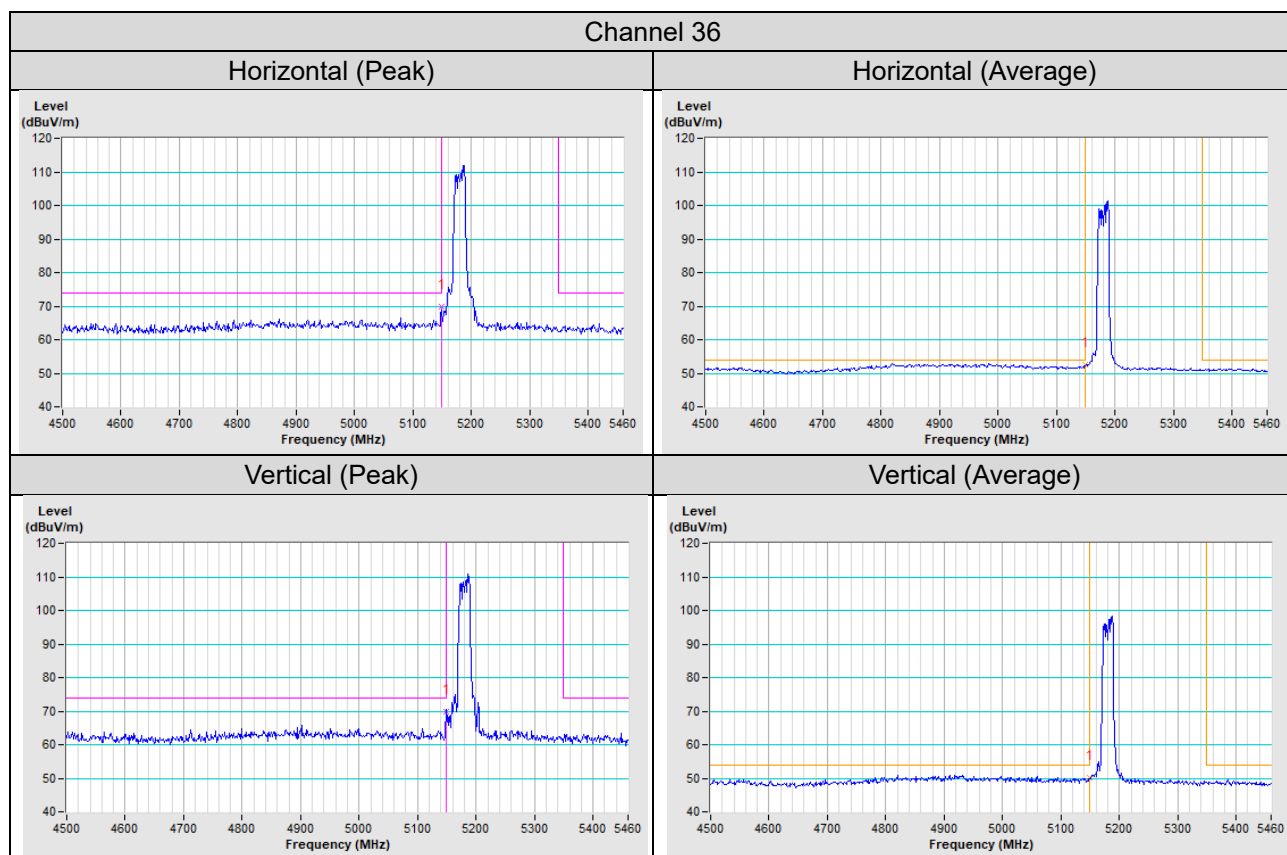


Vertical (Average)

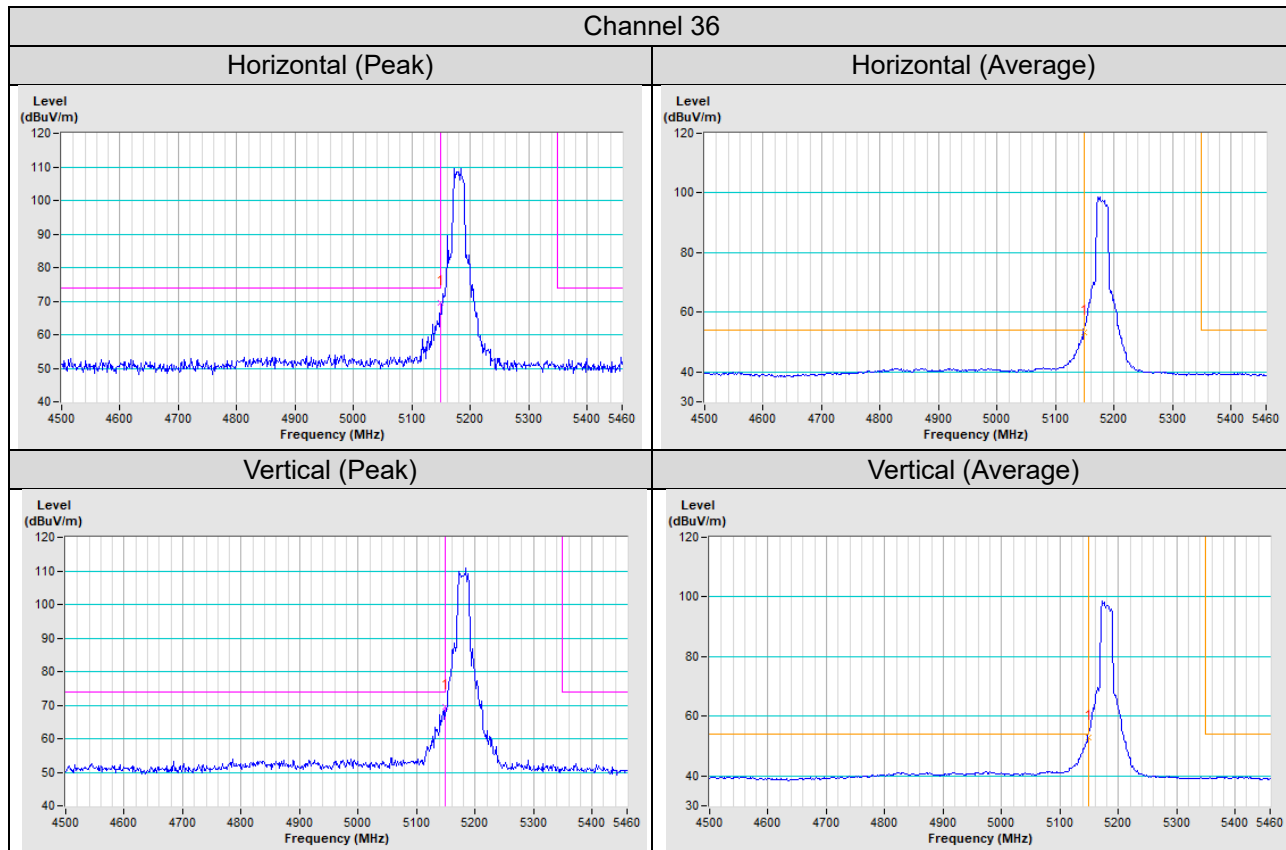


2TX

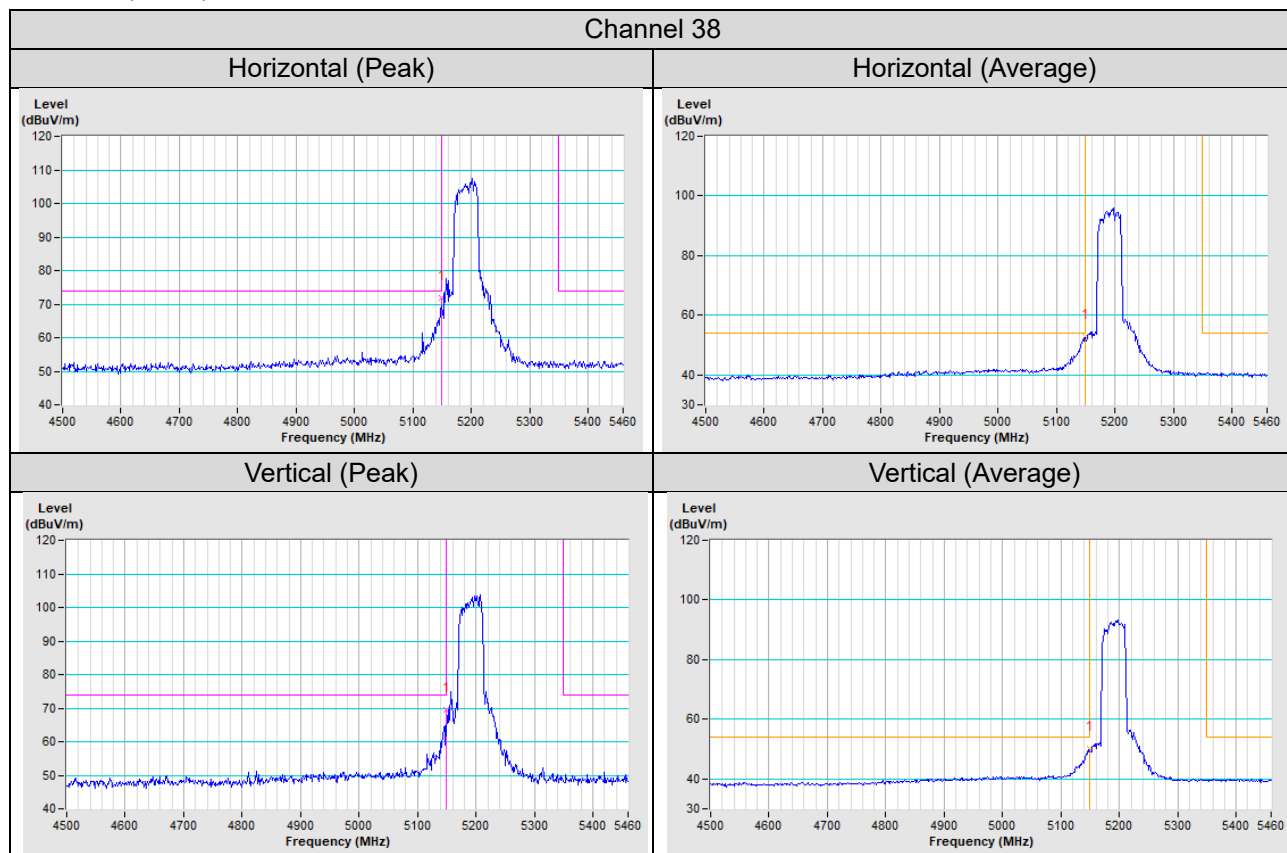
802.11a



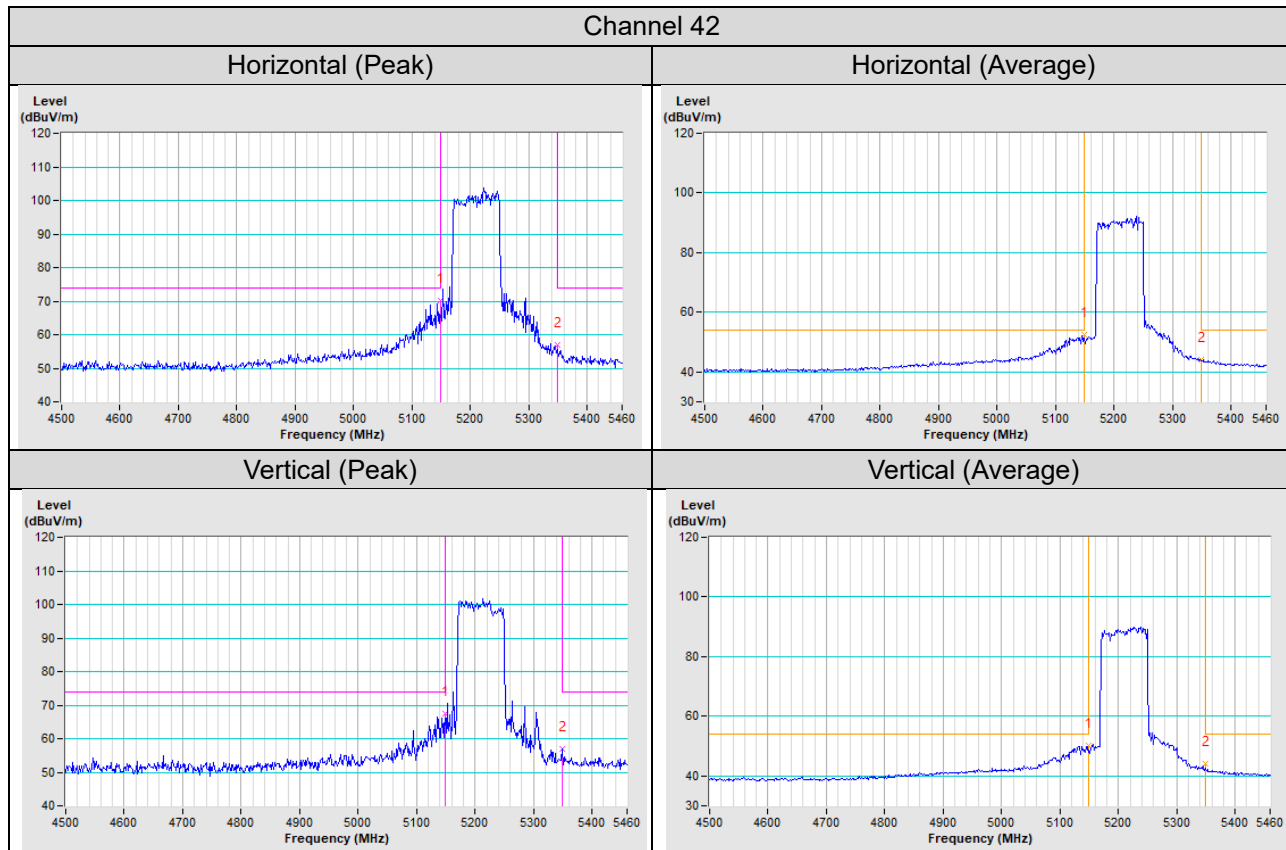
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)

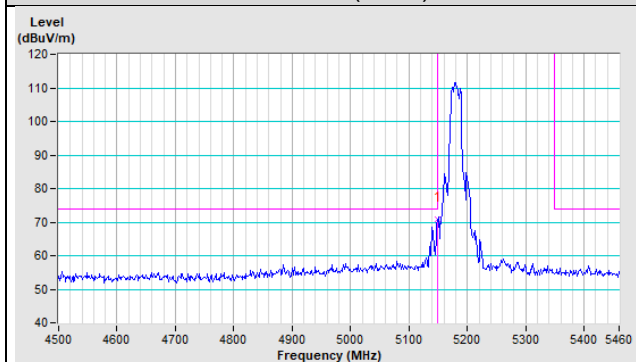


3TX

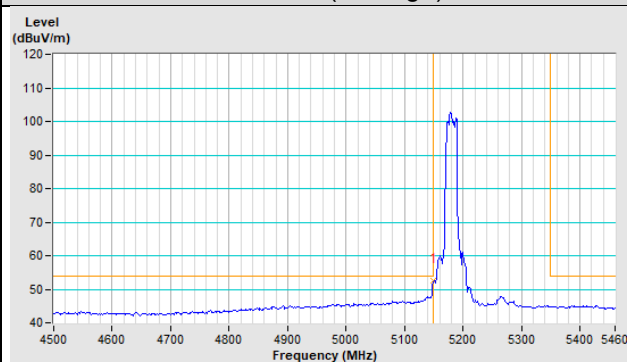
802.11a

Channel 36

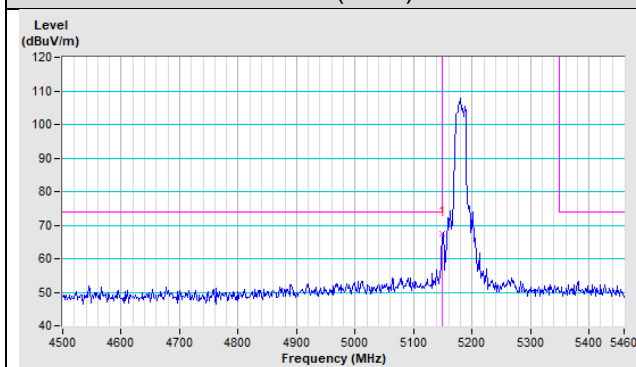
Horizontal (Peak)



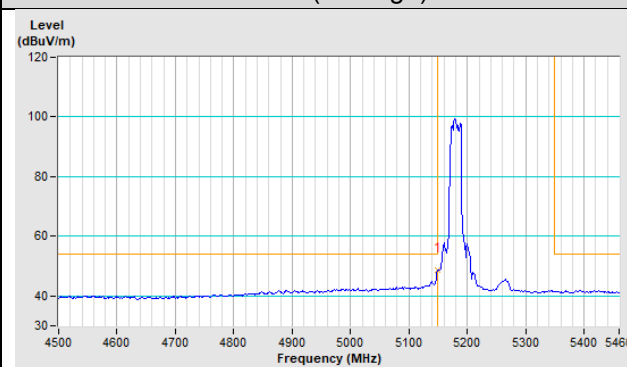
Horizontal (Average)



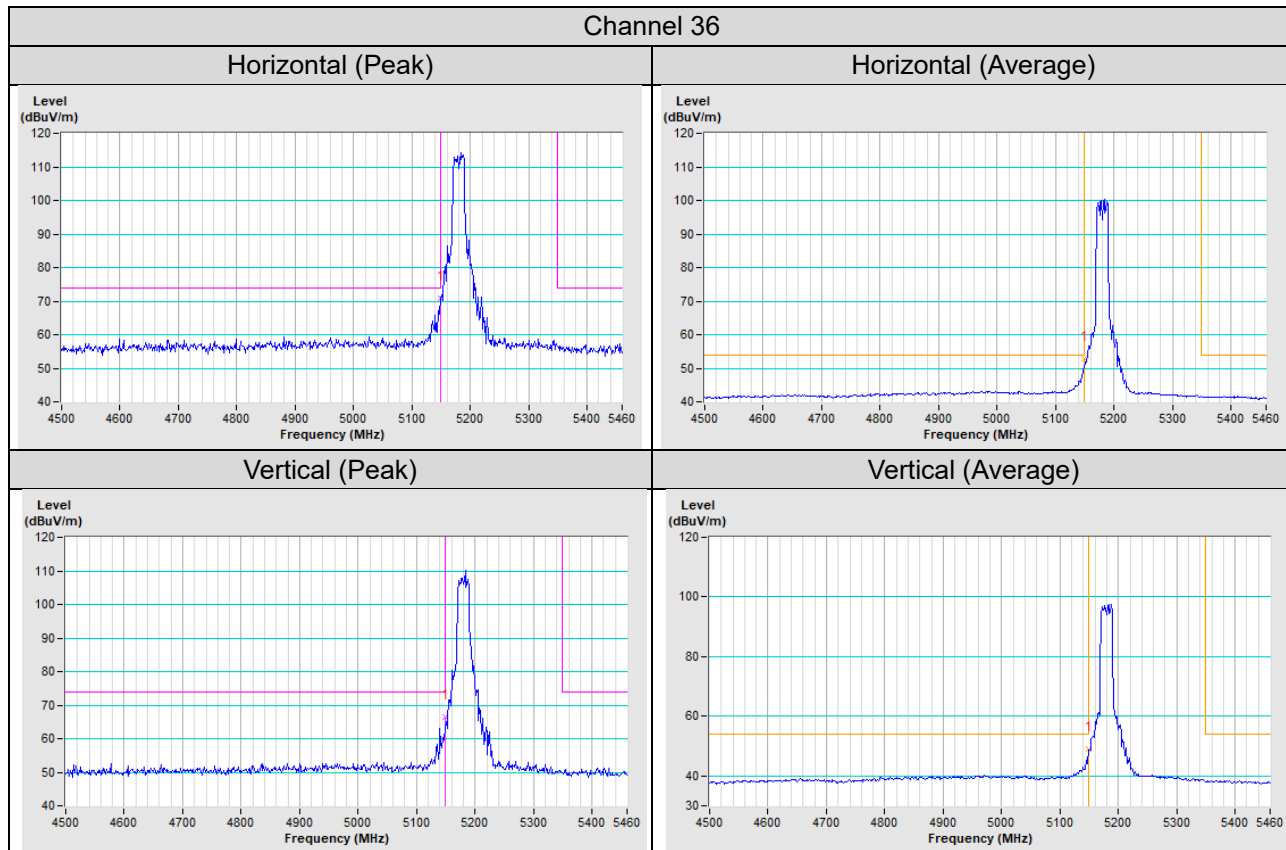
Vertical (Peak)



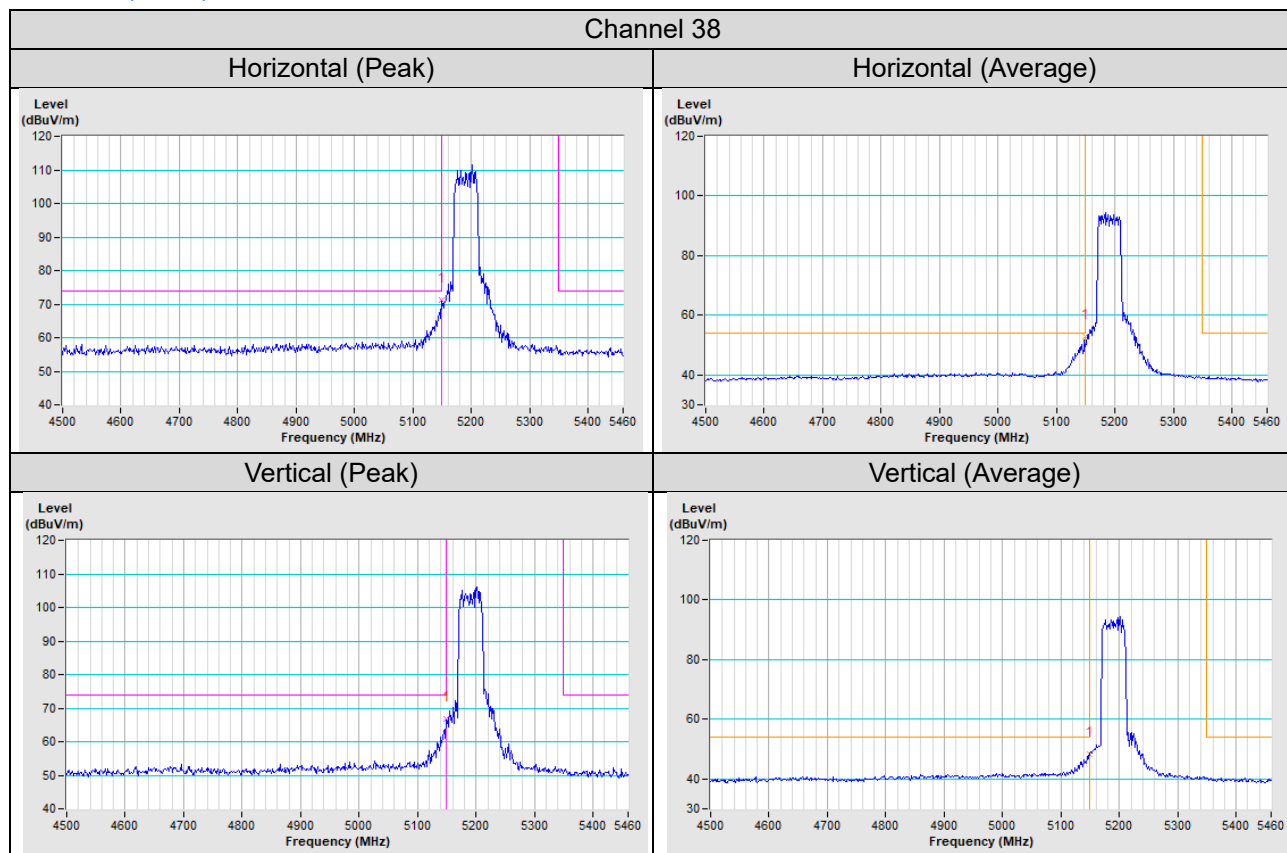
Vertical (Average)



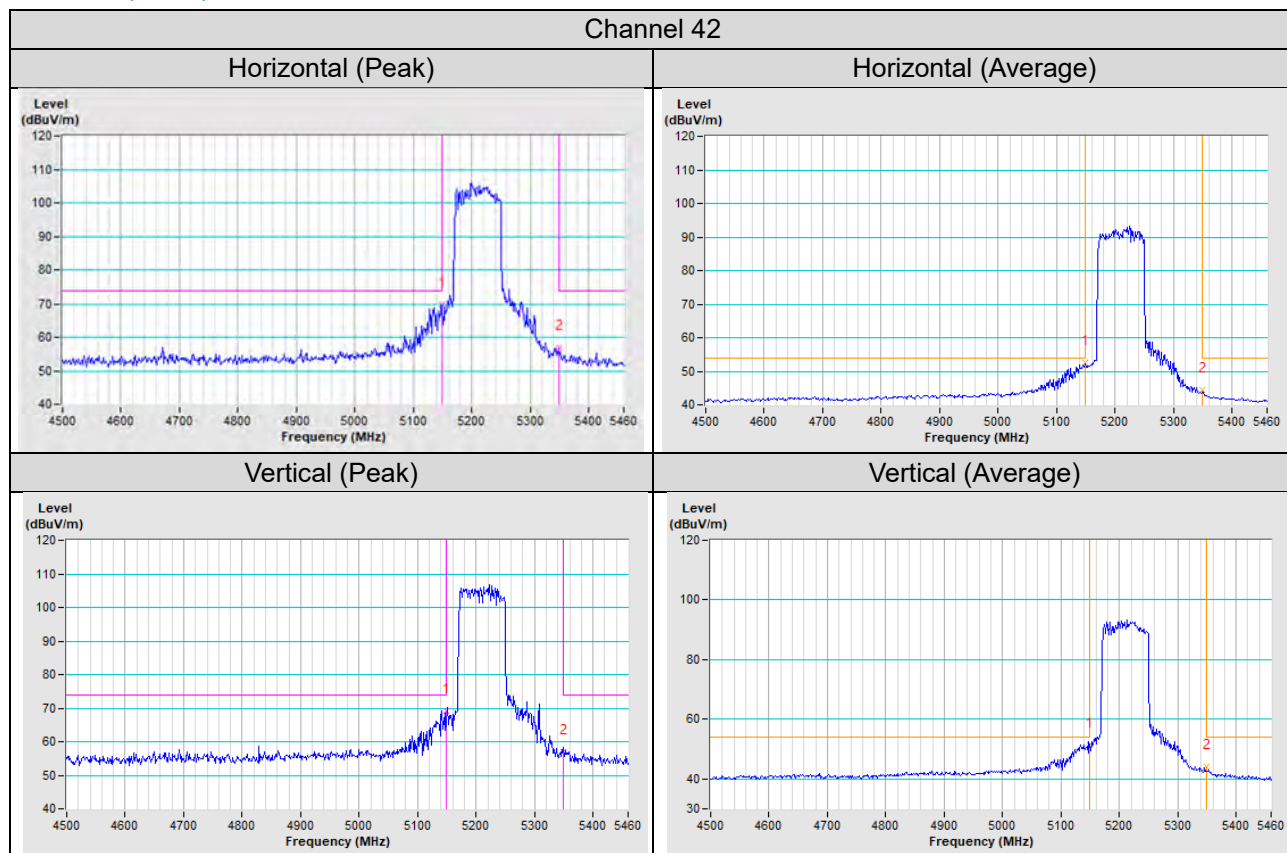
802.11ax (HE20)



802.11ax (HE40)



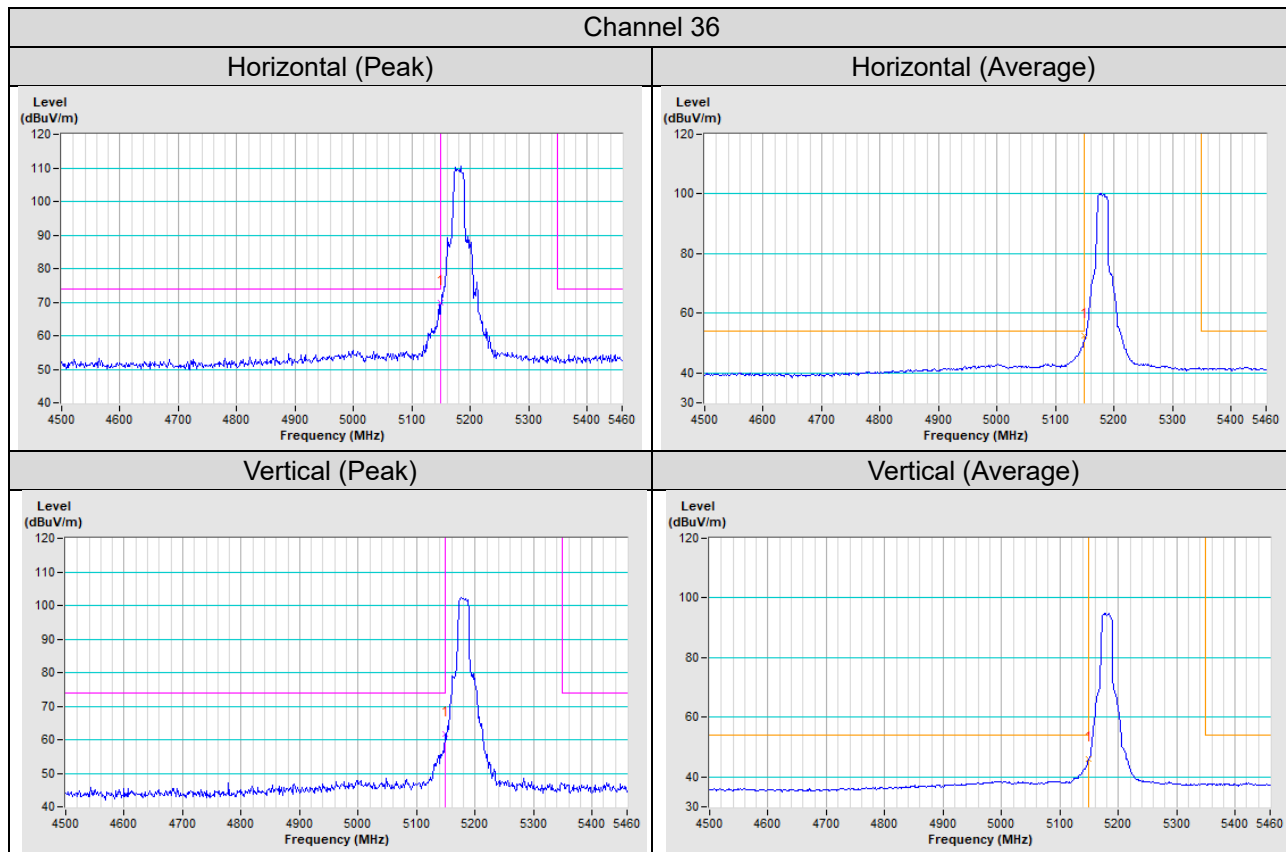
802.11ax (HE80)



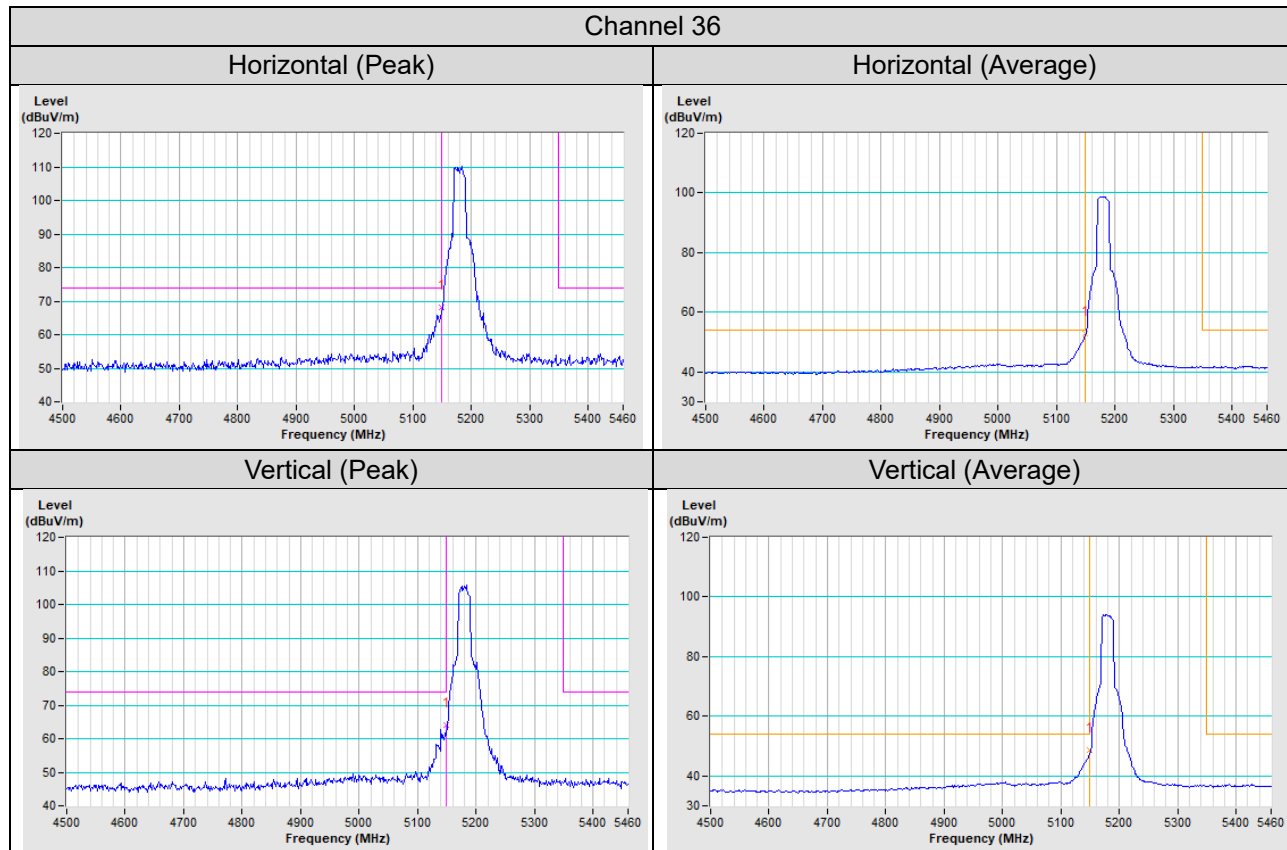
Test Mode I (External antenna - PN: ATS-OO-245-46-4RPSP-36 + Eth7 Radio)

1TX

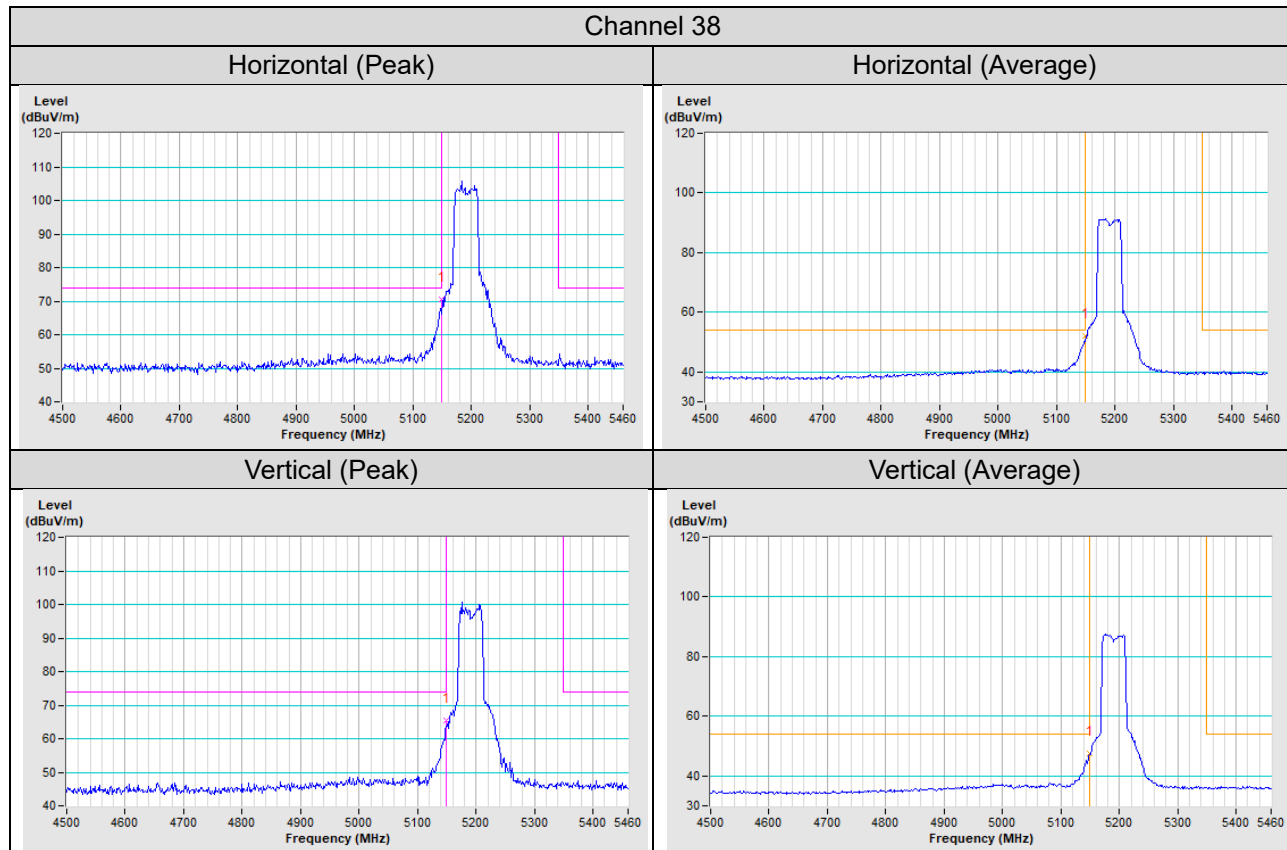
802.11a



802.11ax (HE20)



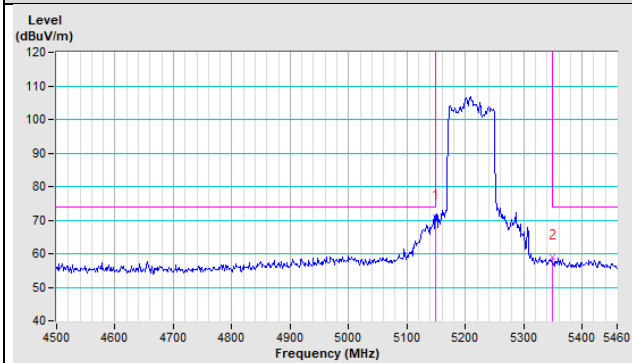
802.11ax (HE40)



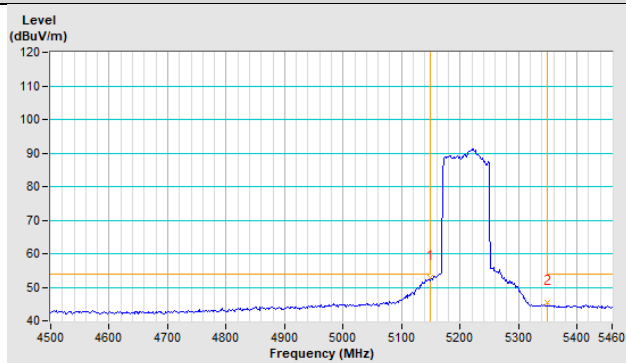
802.11ax (HE80)

Channel 42

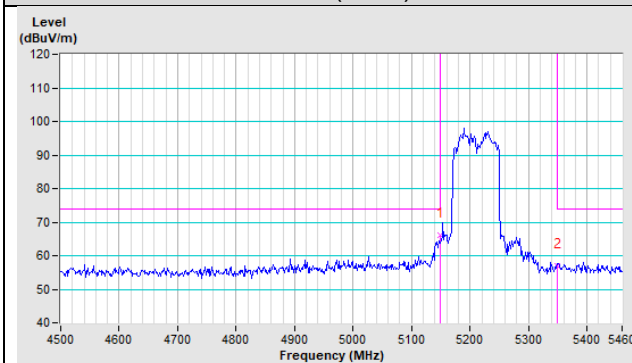
Horizontal (Peak)



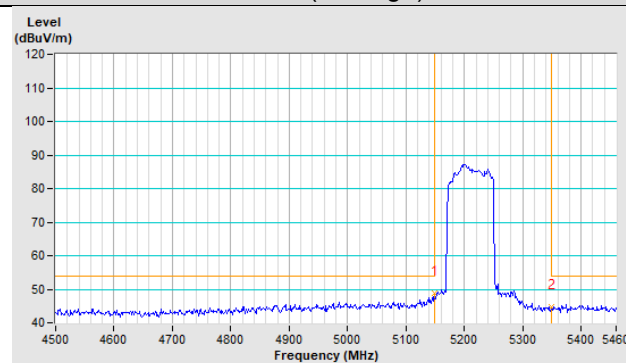
Horizontal (Average)



Vertical (Peak)



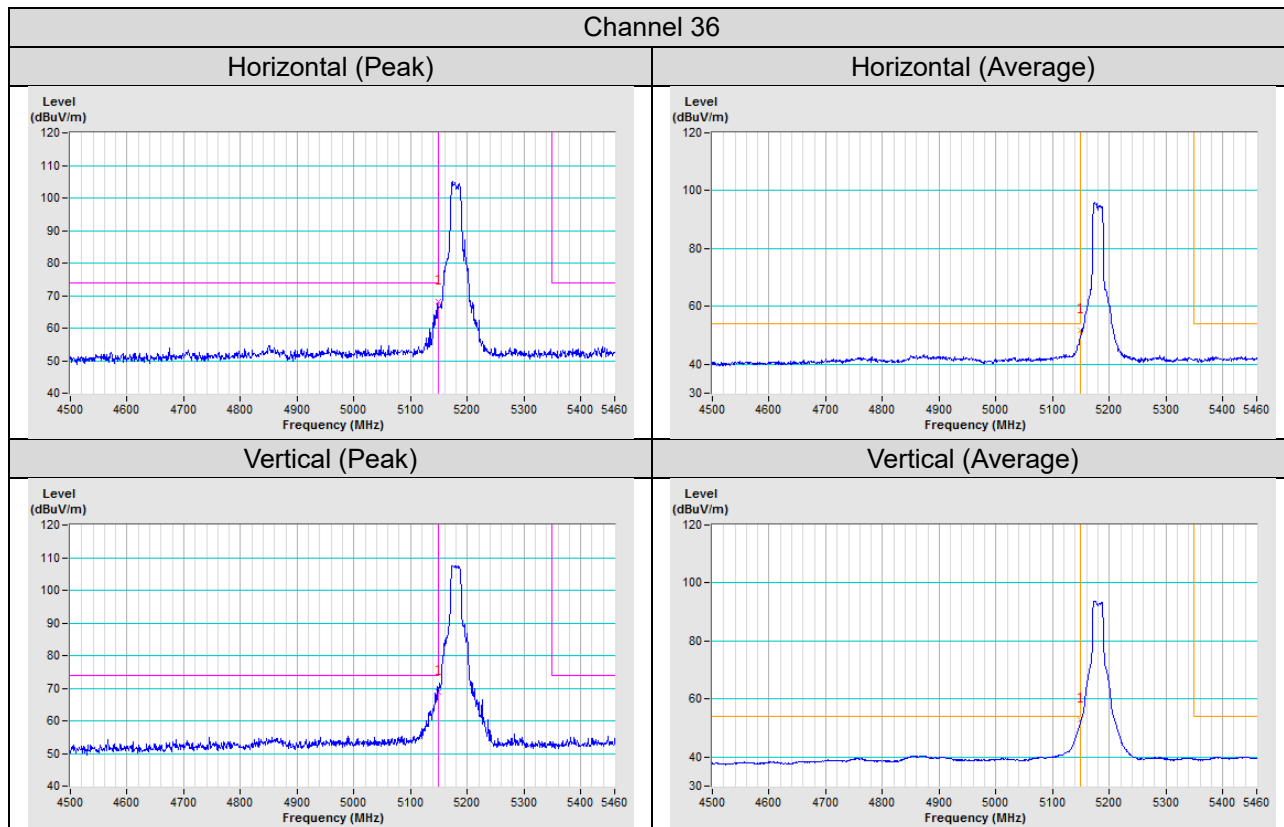
Vertical (Average)



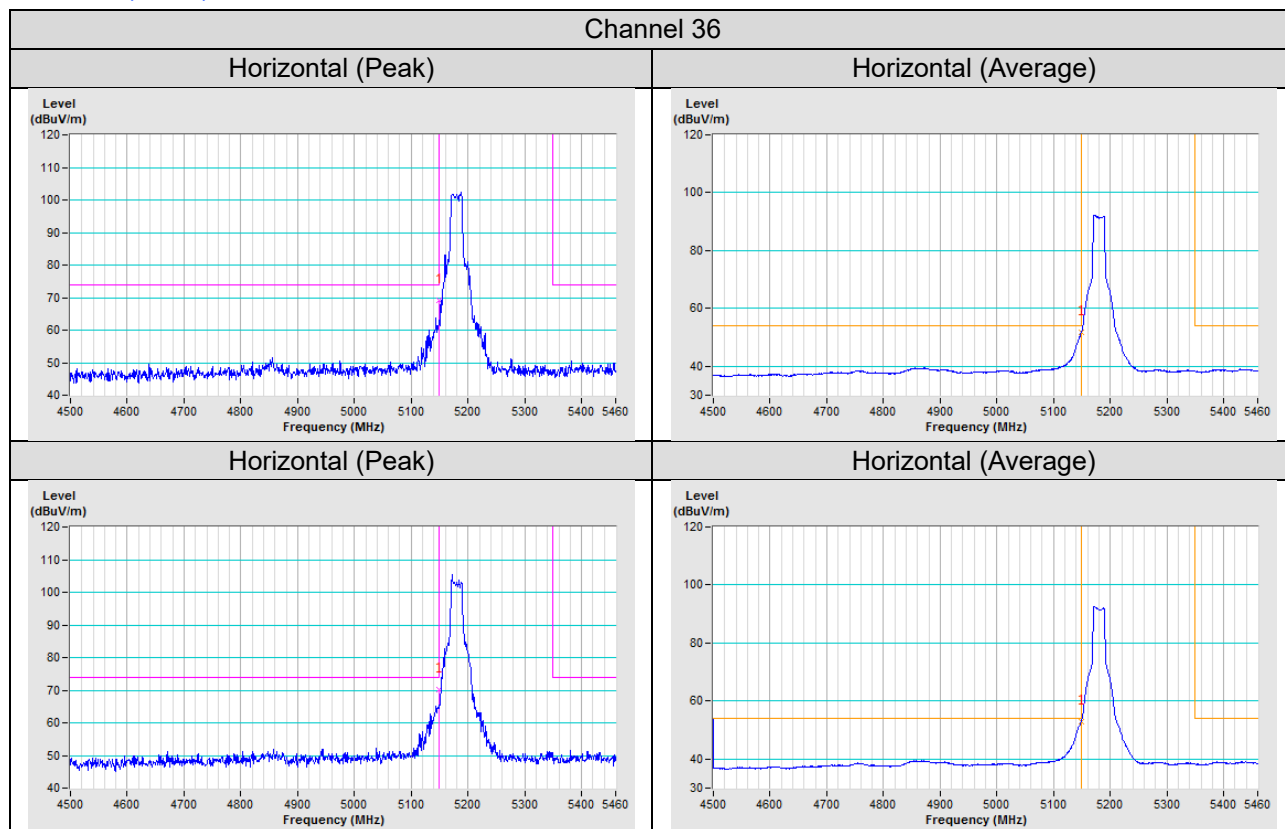
Test Mode K (External antenna - PN: ATS-OP-245-810-4RPSP-36 + Eth6 Radio)

1TX

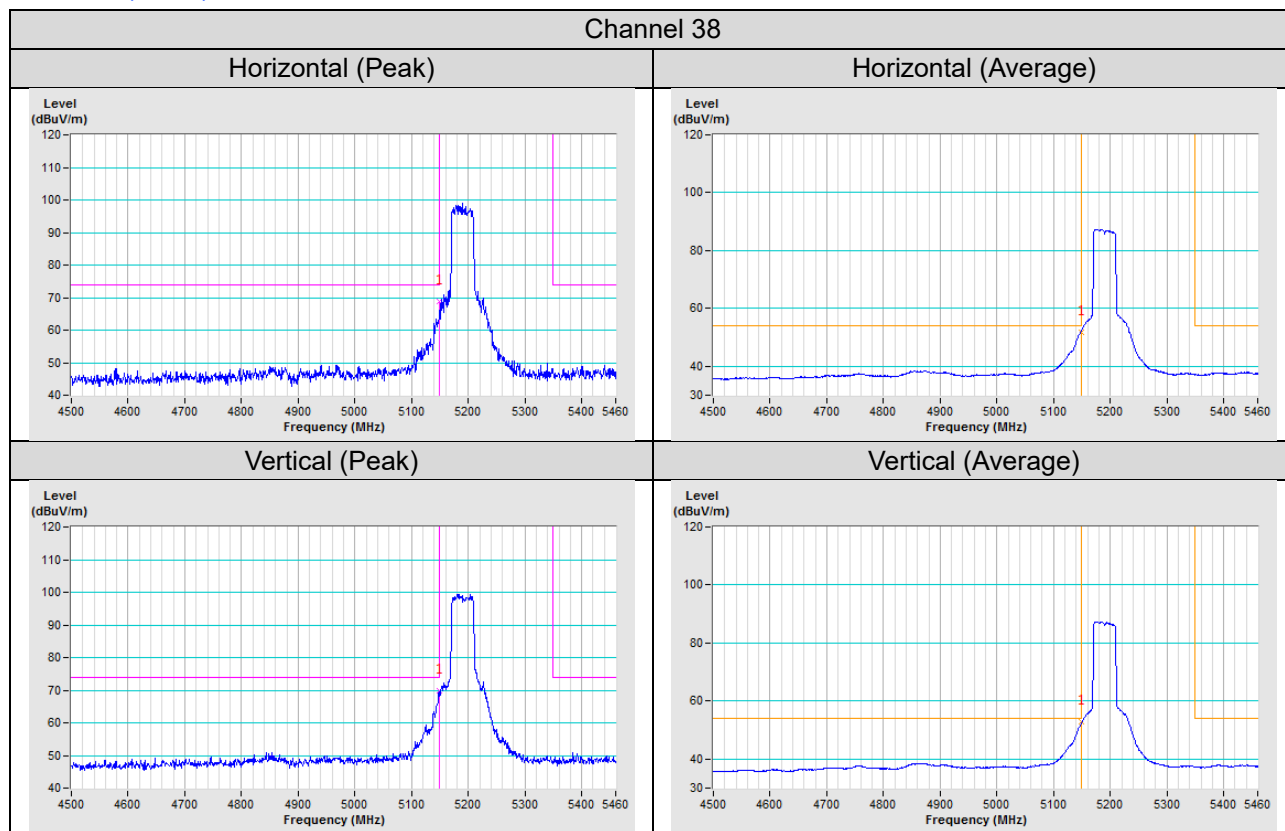
802.11a



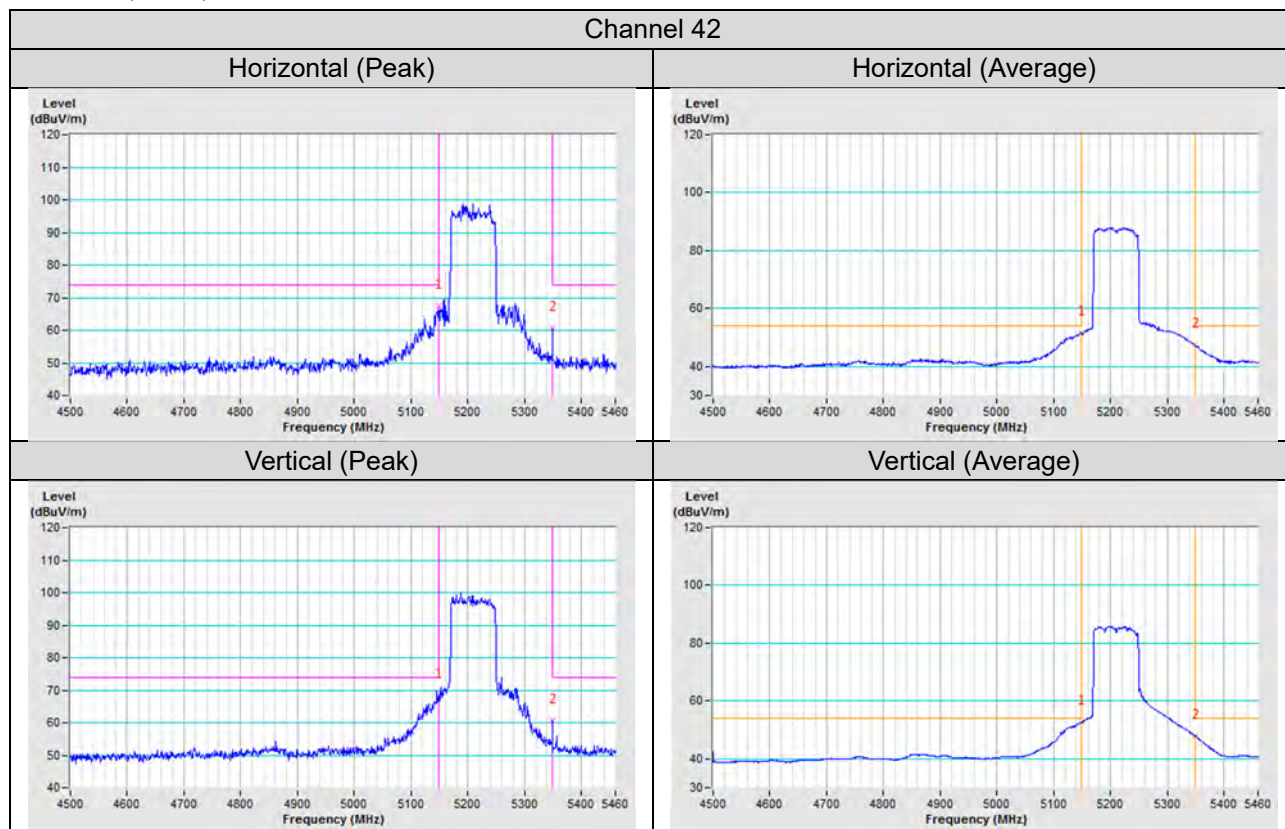
802.11ax (HE20)



802.11ax (HE40)

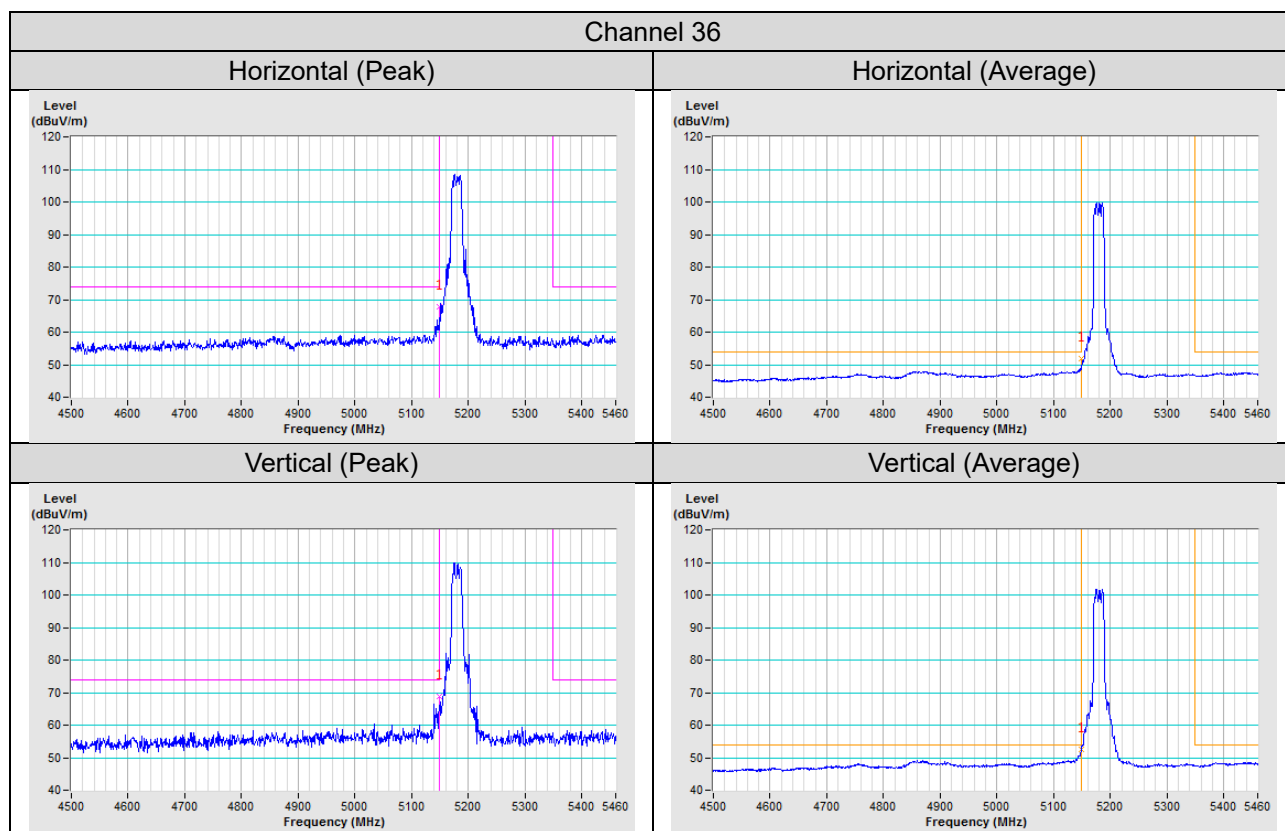


802.11ax (HE80)

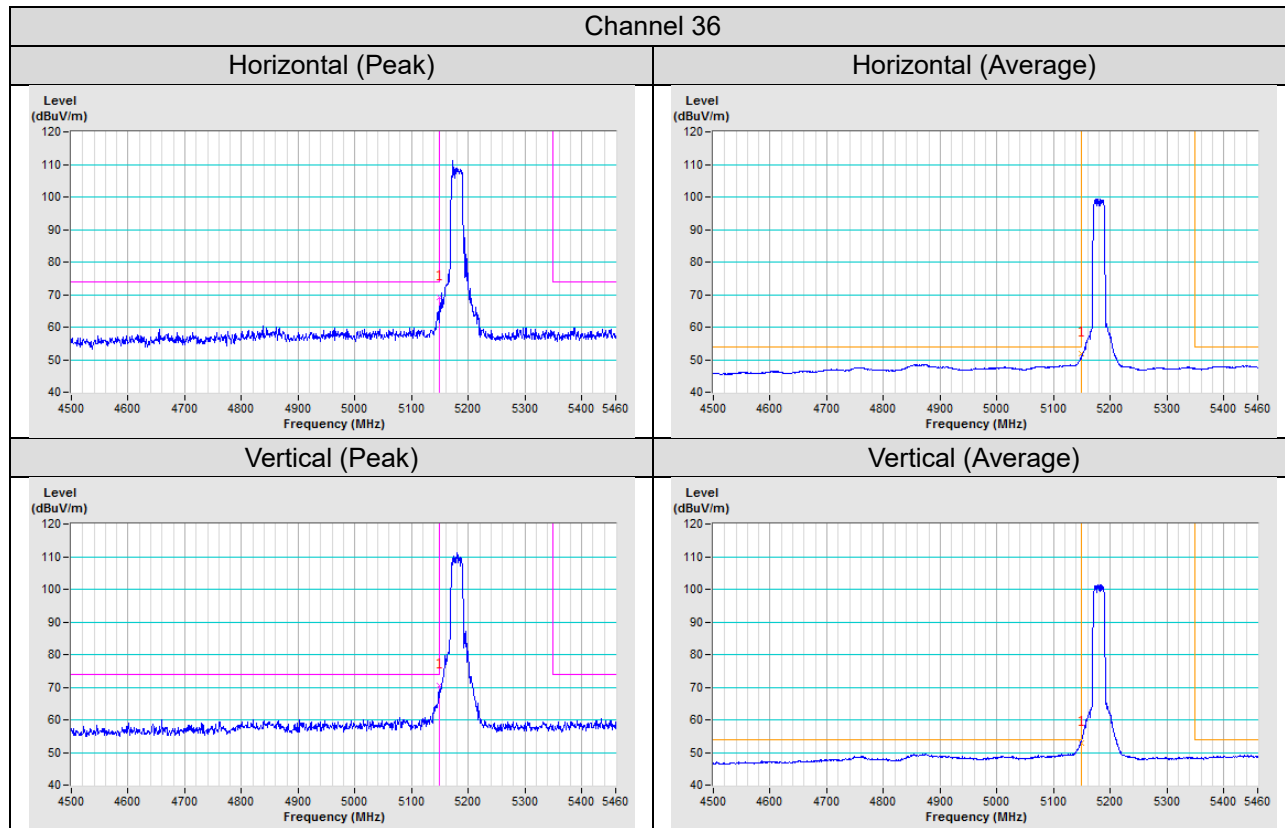


2TX

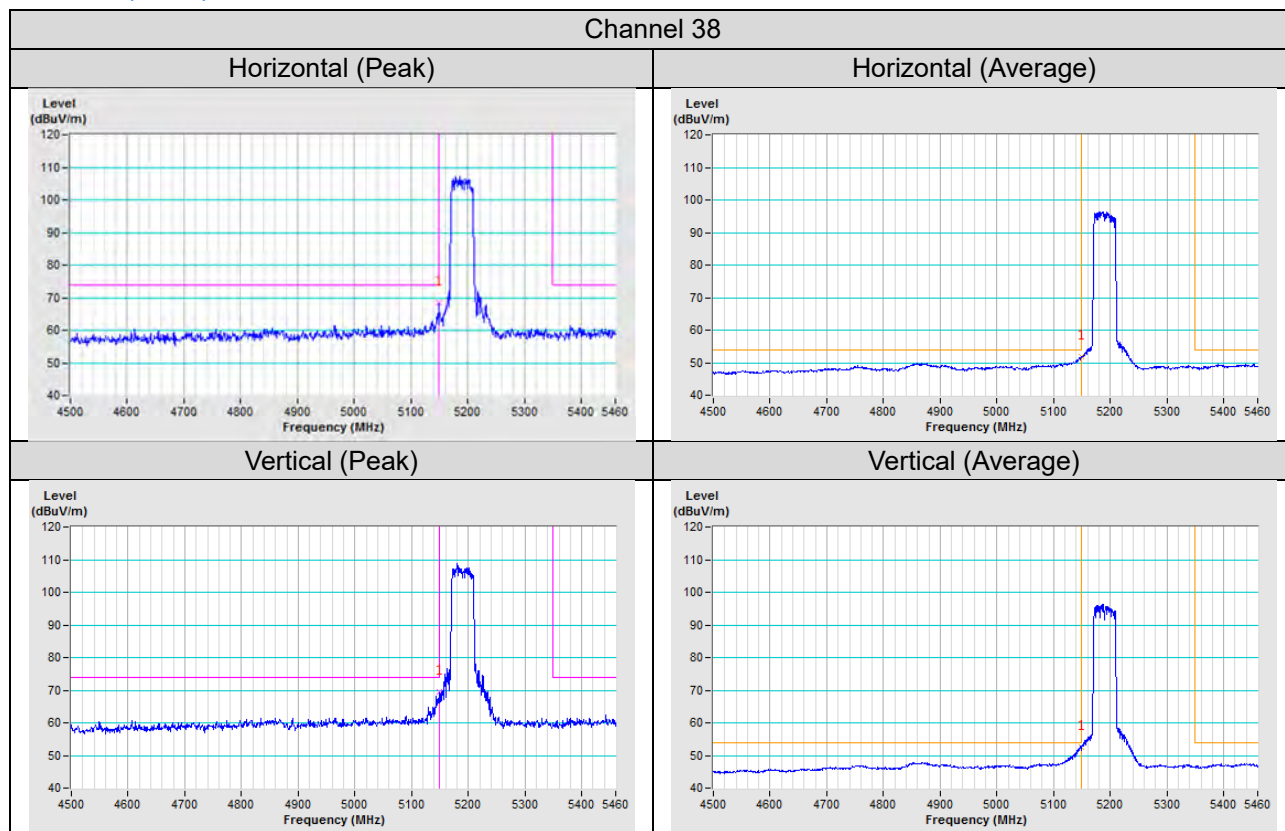
802.11a



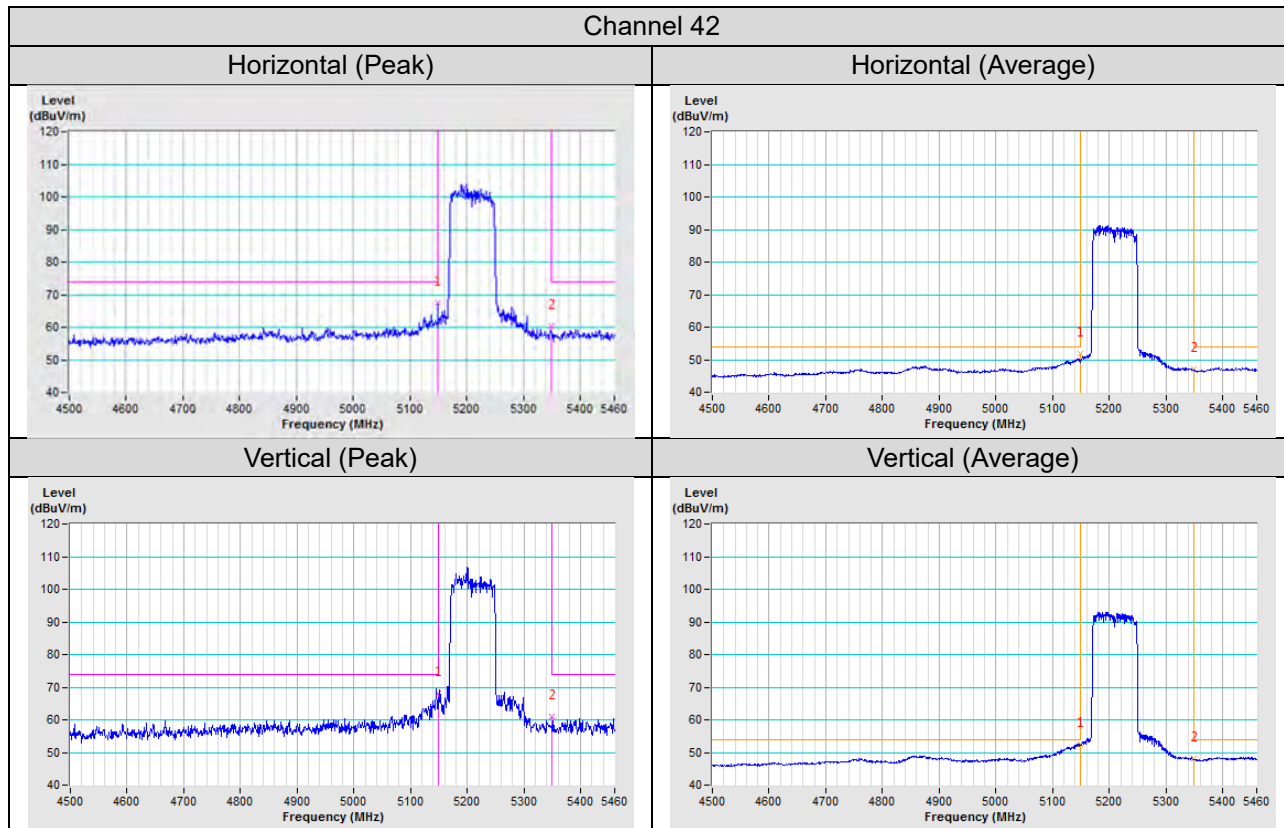
802.11ax (HE20)



802.11ax (HE40)

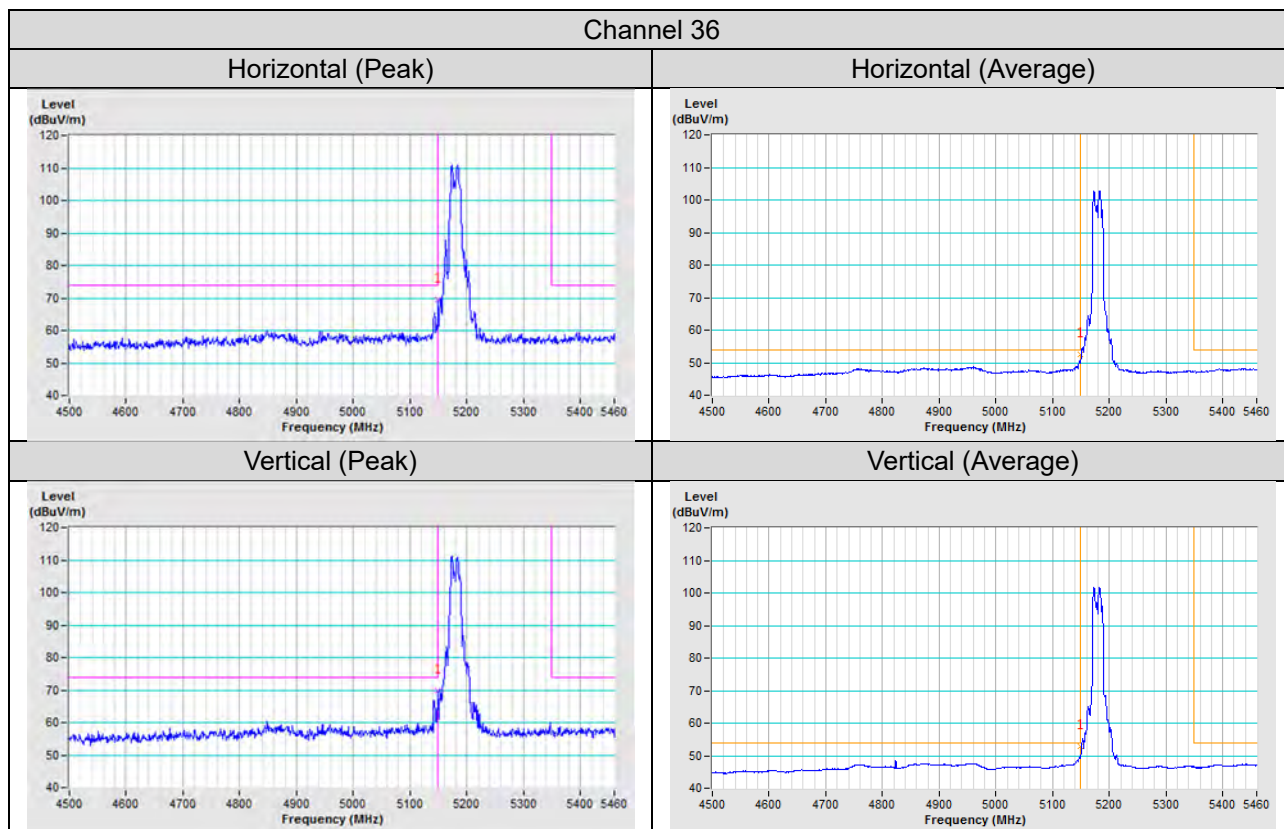


802.11ax (HE80)

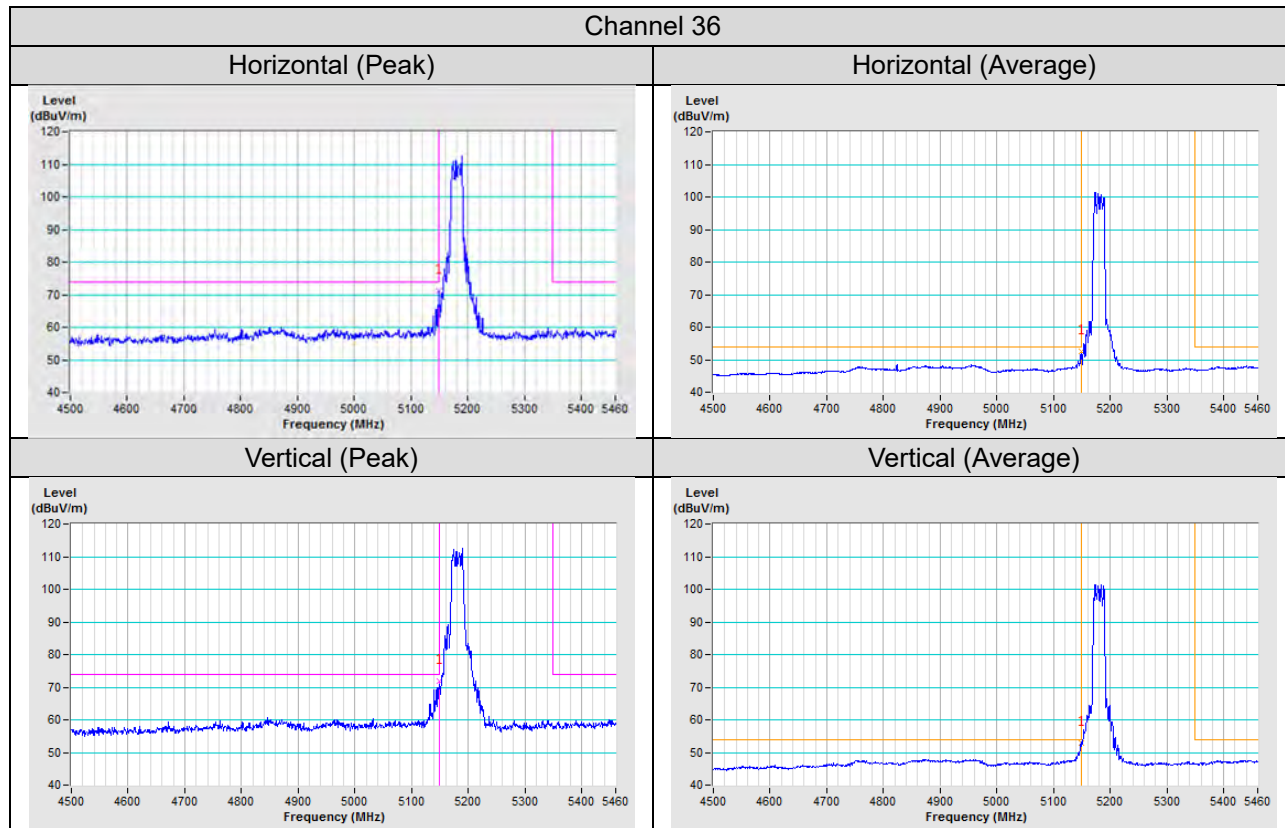


3TX

802.11a



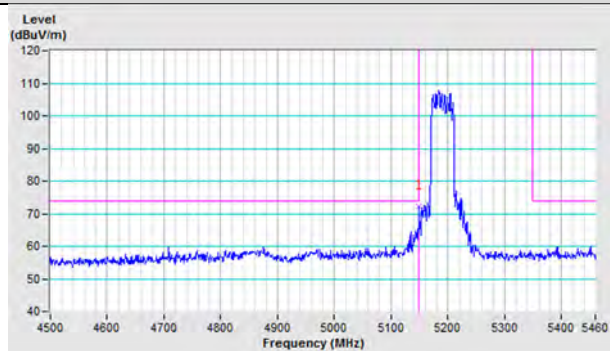
802.11ax (HE20)



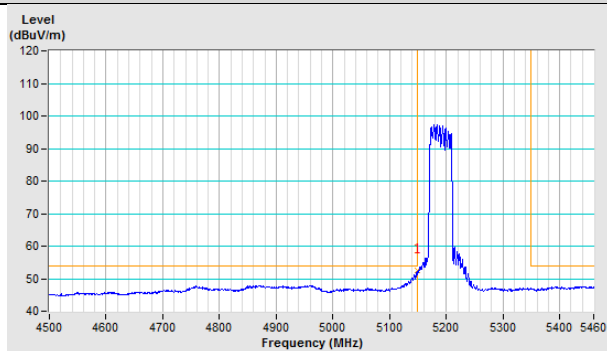
802.11ax (HE40)

Channel 38

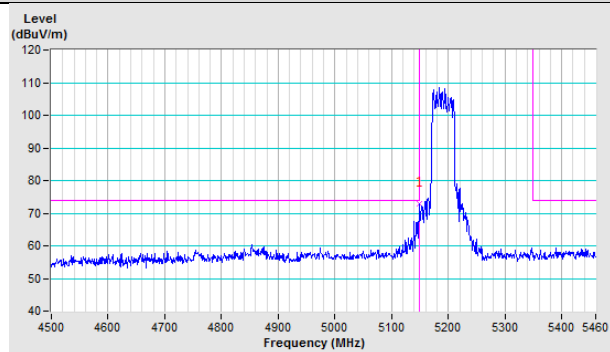
Horizontal (Peak)



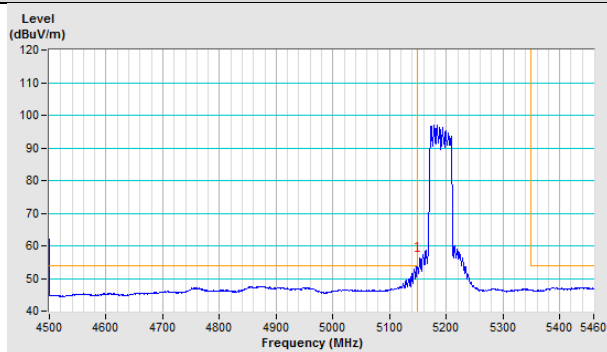
Horizontal (Average)



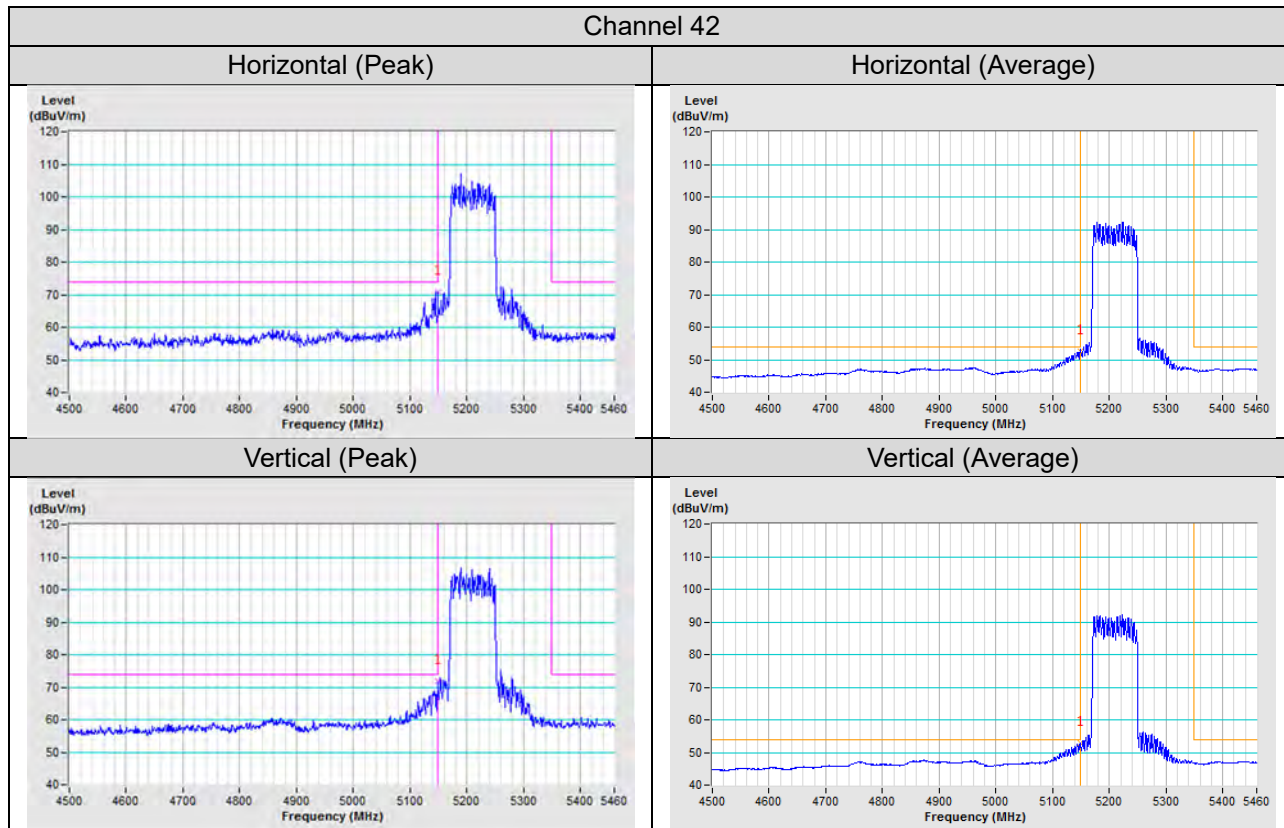
Vertical (Peak)



Vertical (Average)

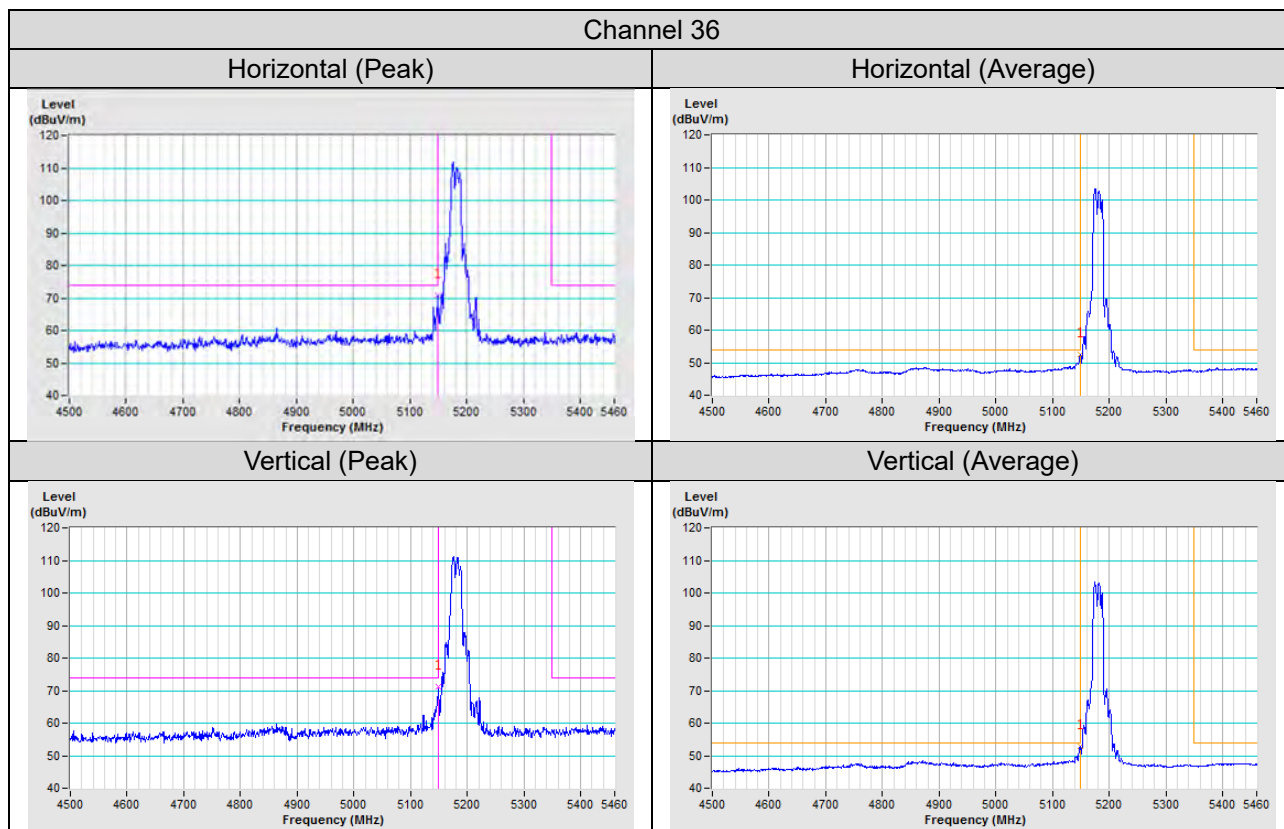


802.11ax (HE80)

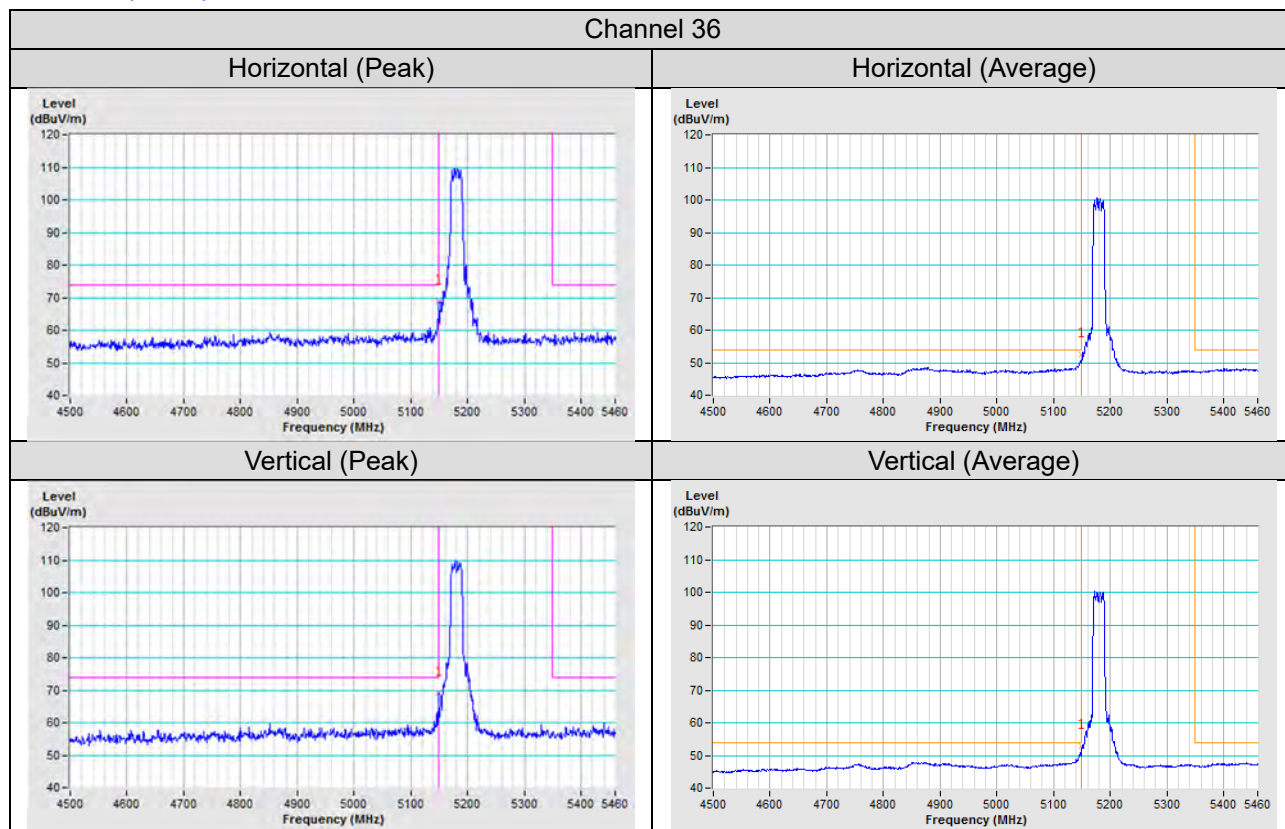


4TX

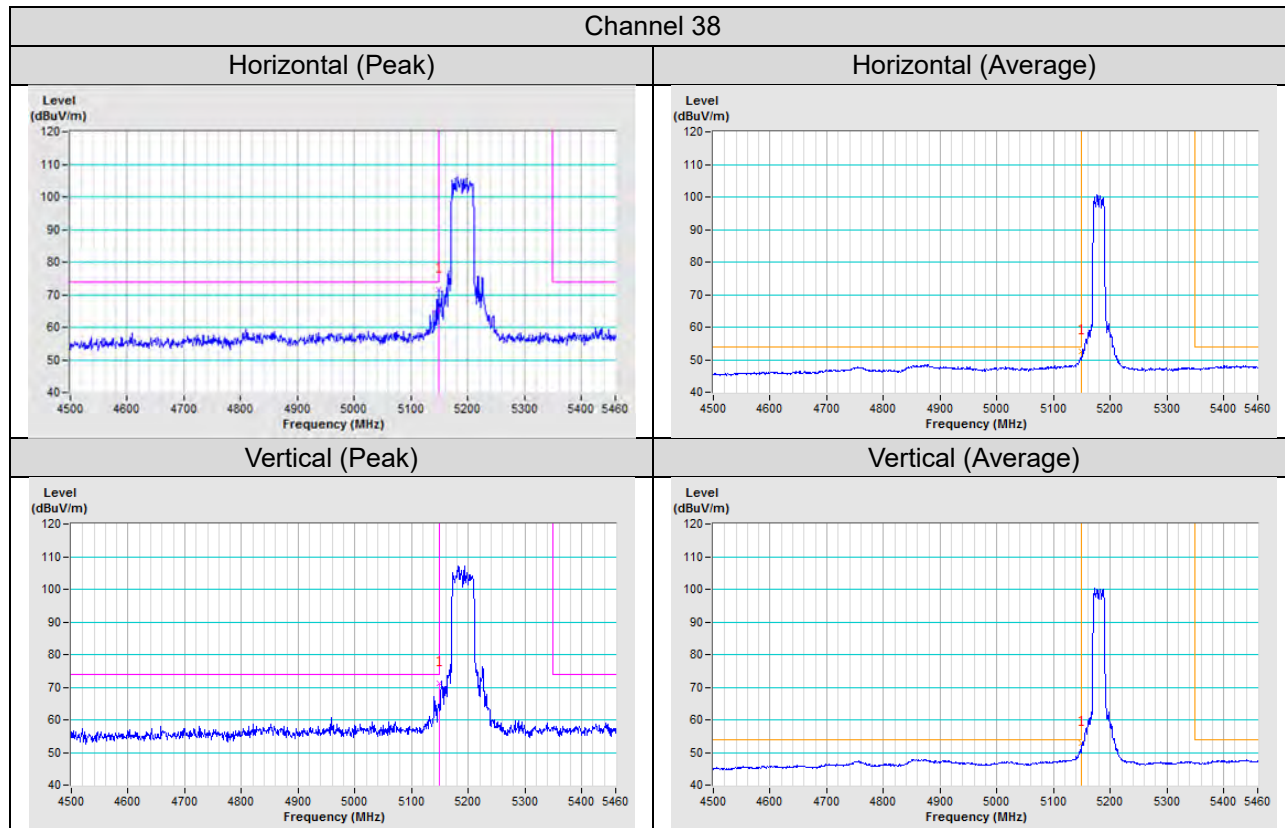
802.11a



802.11ax (HE20)



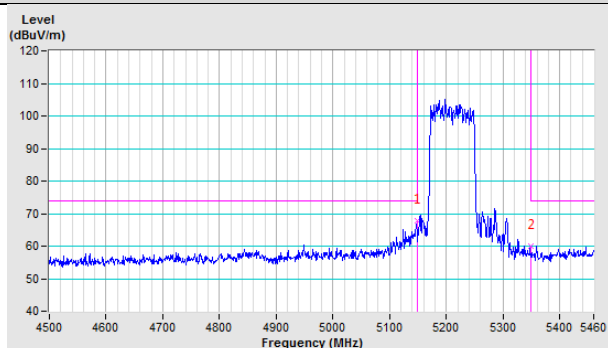
802.11ax (HE40)



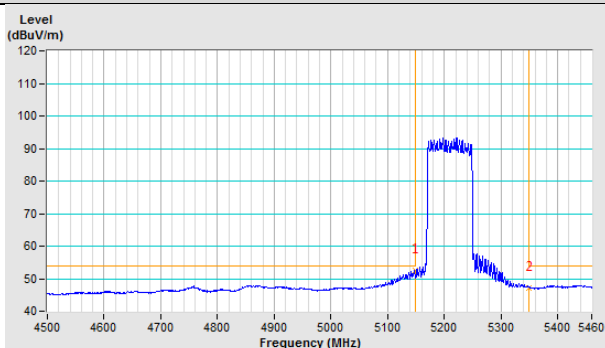
802.11ax (HE80)

Channel 42

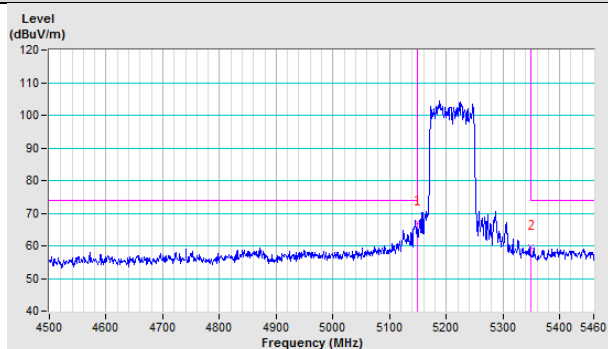
Horizontal (Peak)



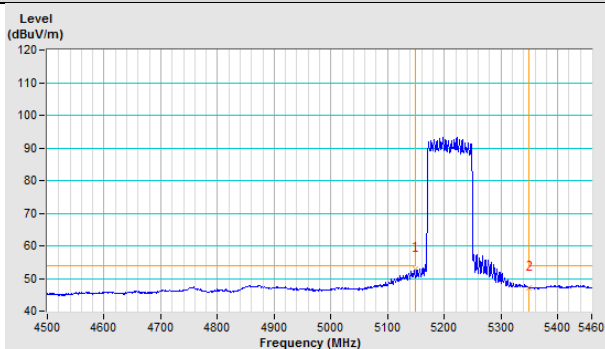
Horizontal (Average)



Vertical (Peak)



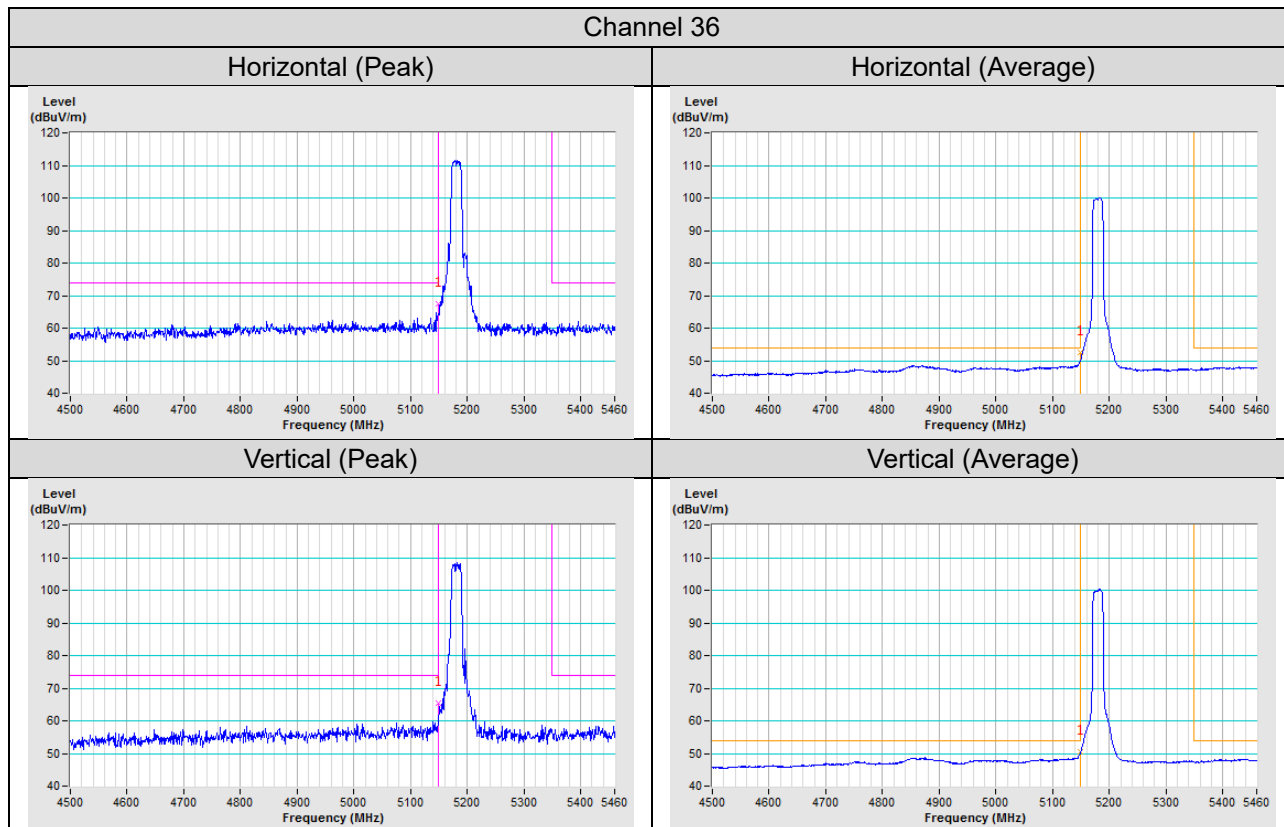
Vertical (Average)



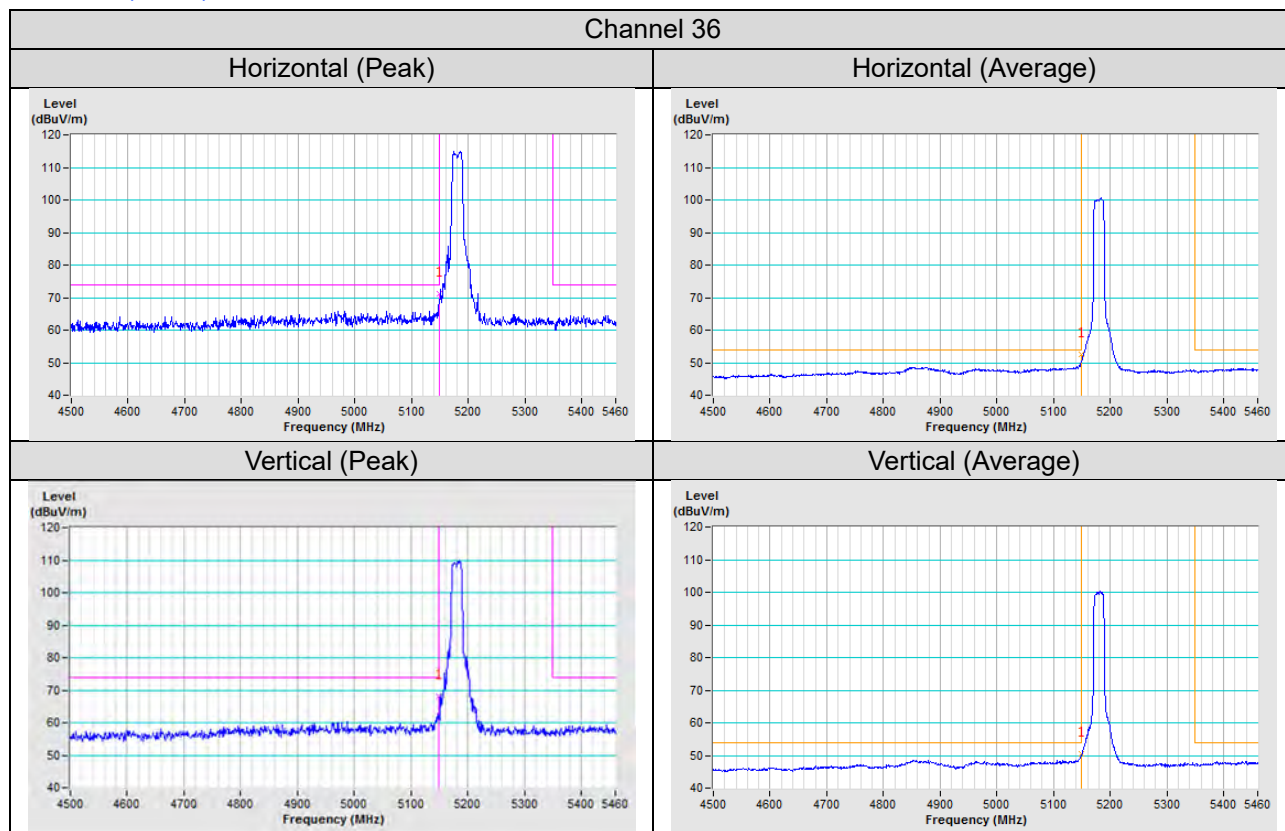
Test Mode M (External antenna - PN: ATS-OP-245-810-4RPSP-36 + Eth7 Radio)

1TX

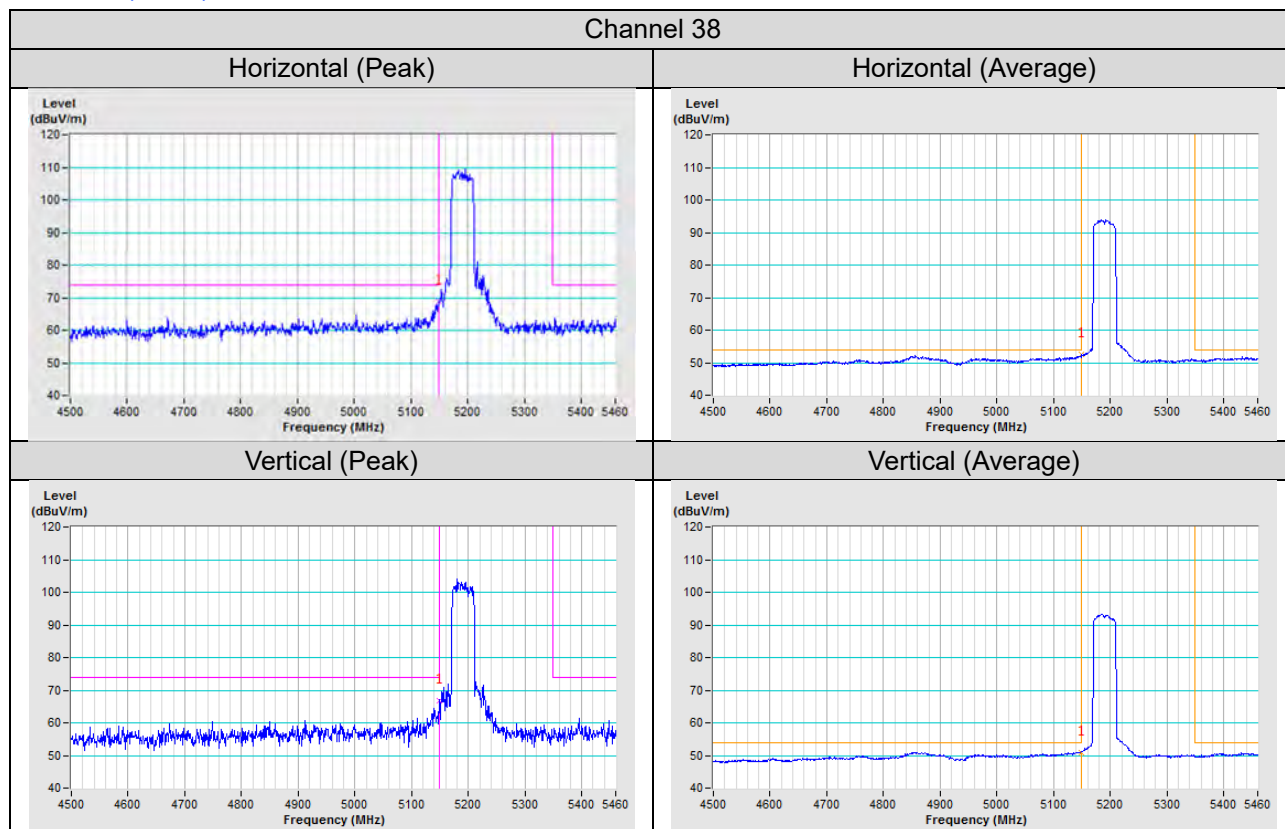
802.11a



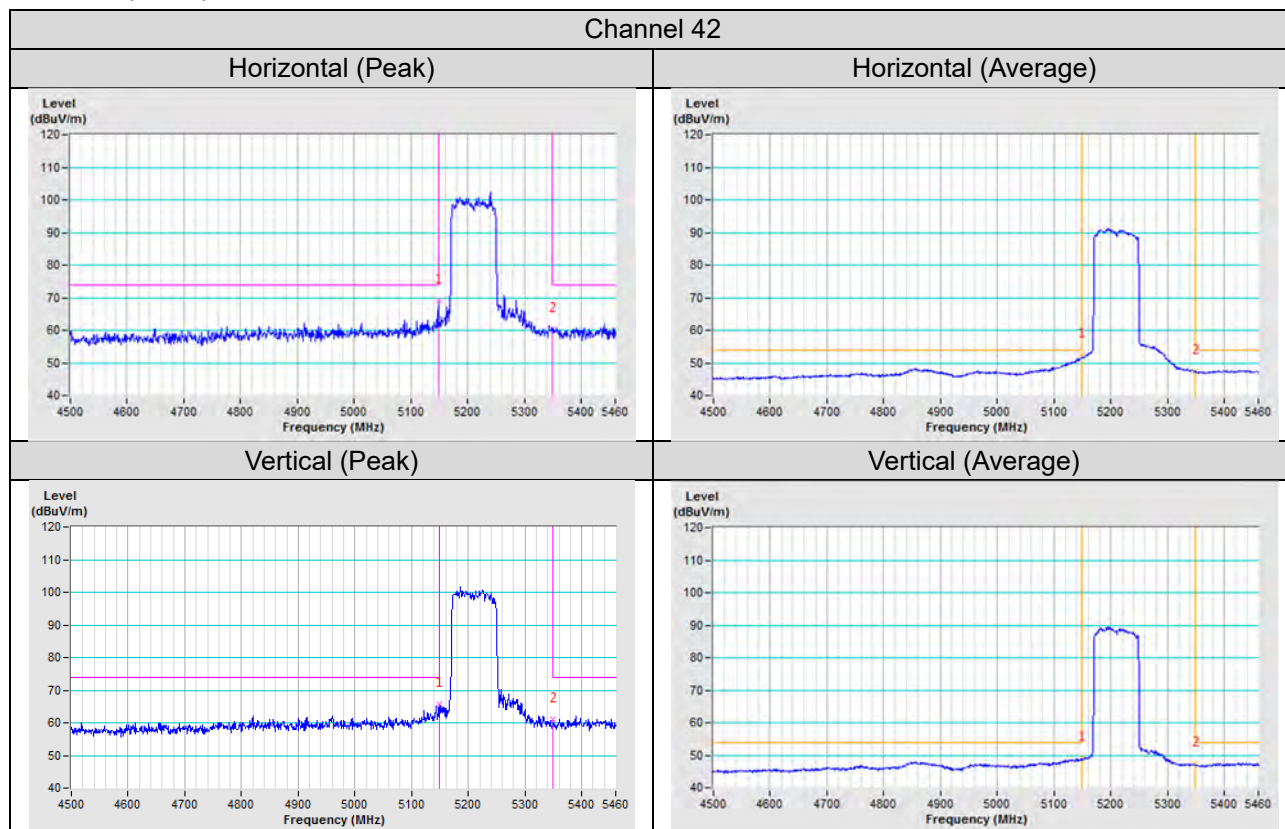
802.11ax (HE20)



802.11ax (HE40)

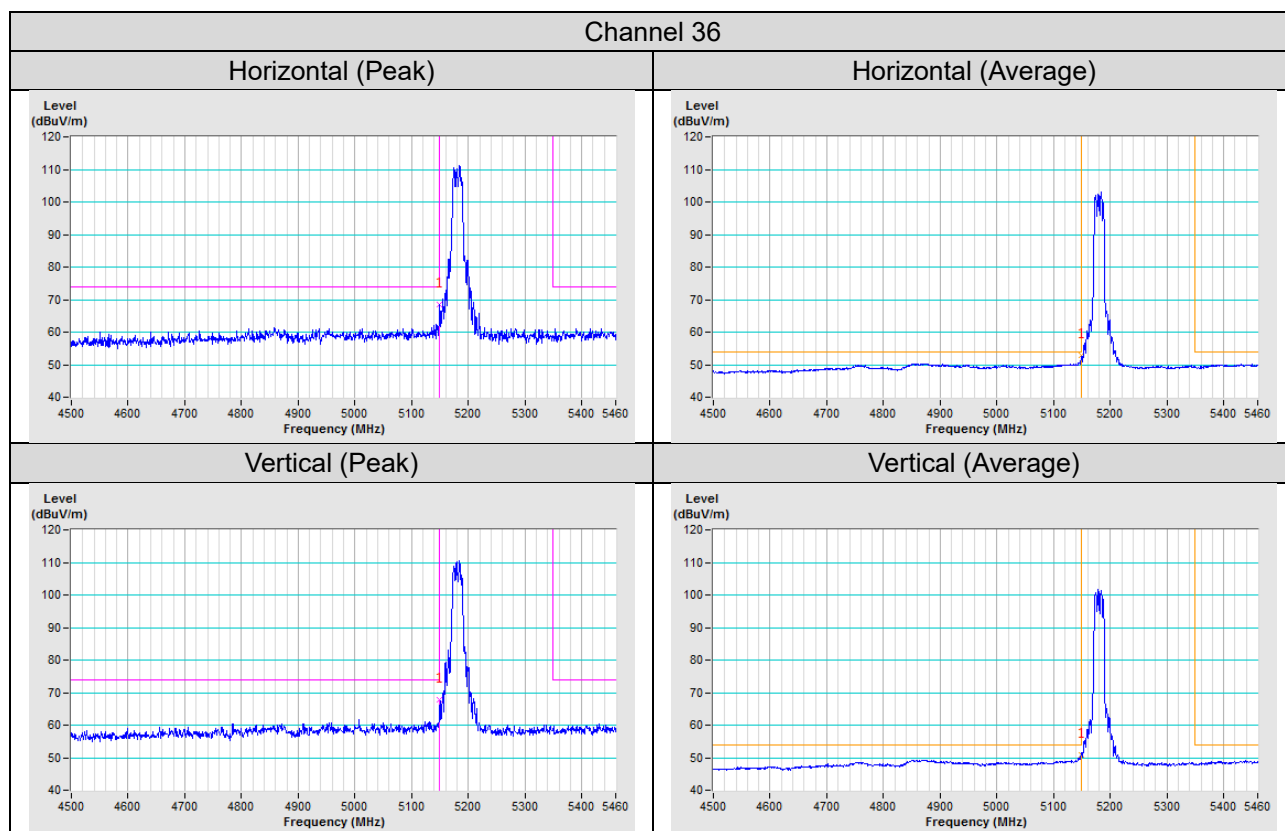


802.11ax (HE80)

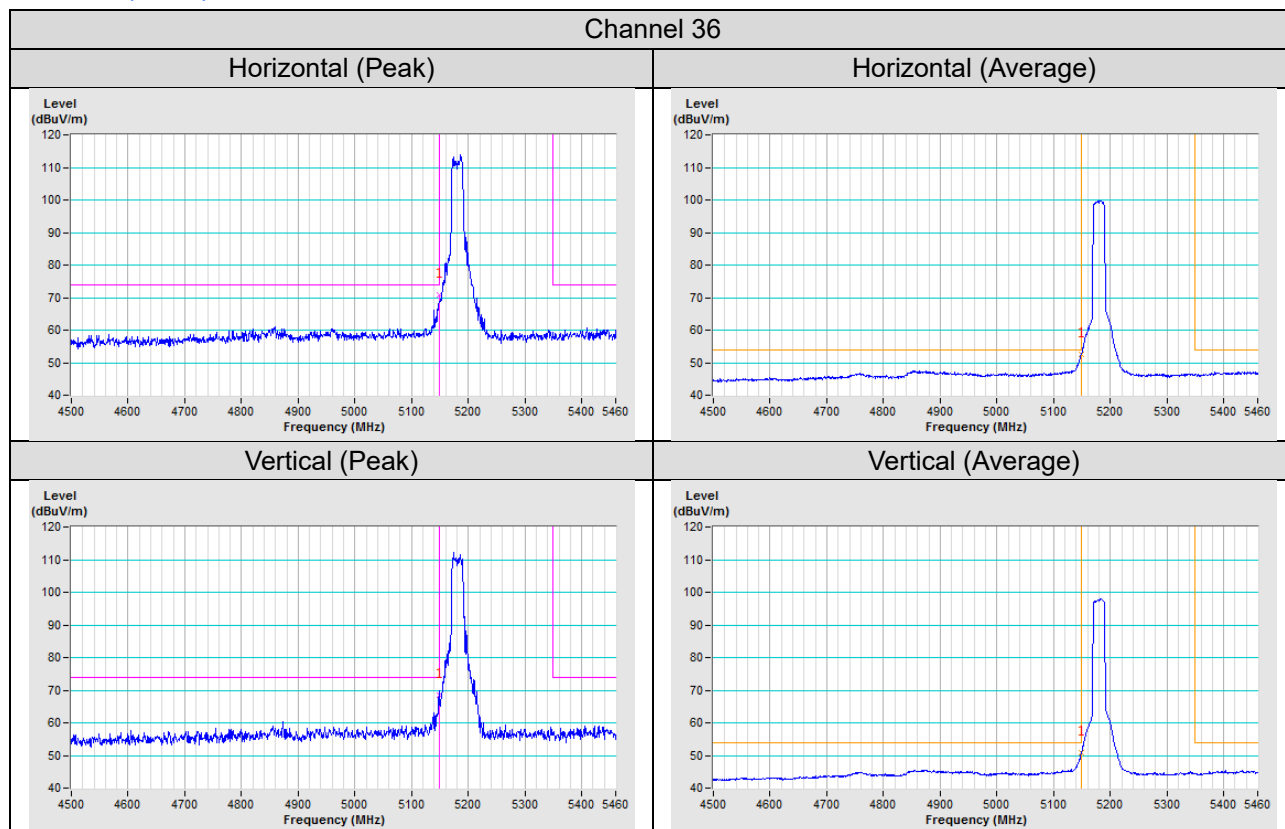


2TX

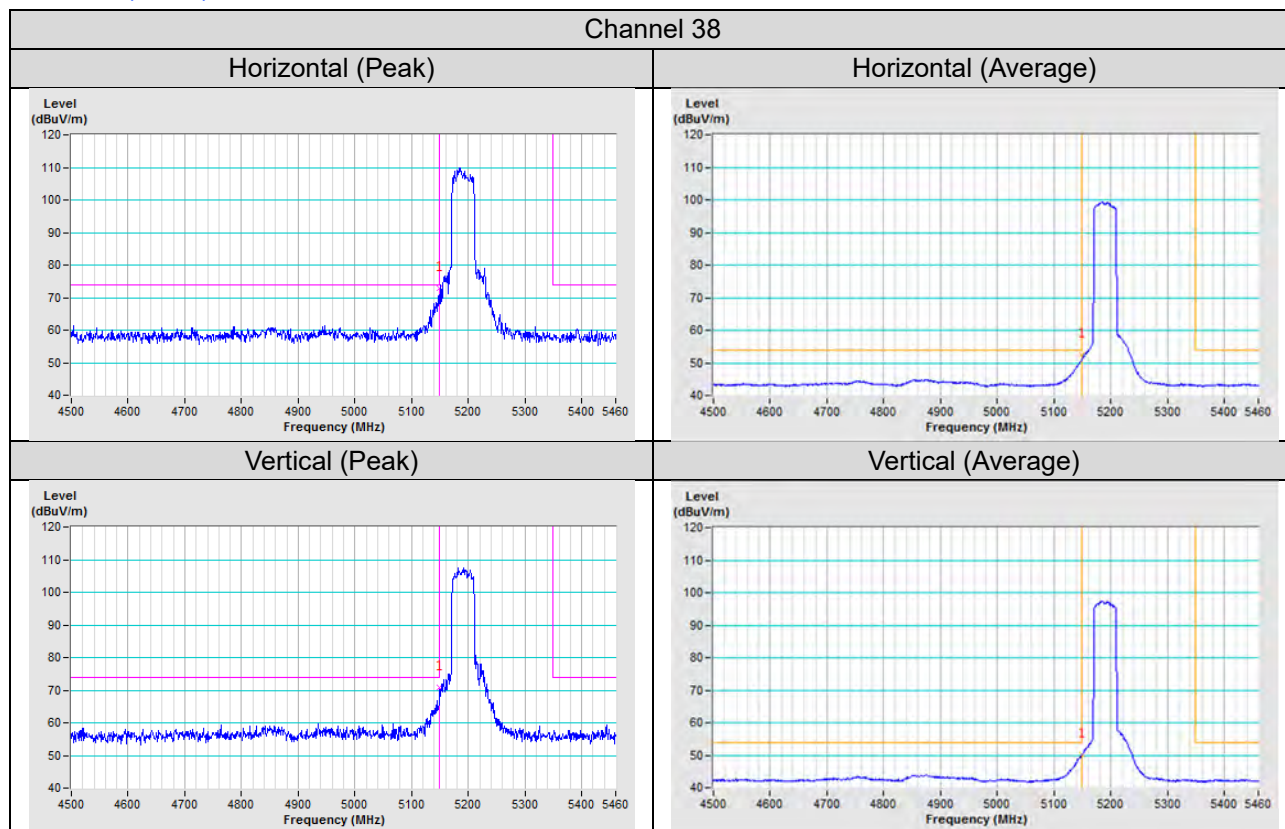
802.11a



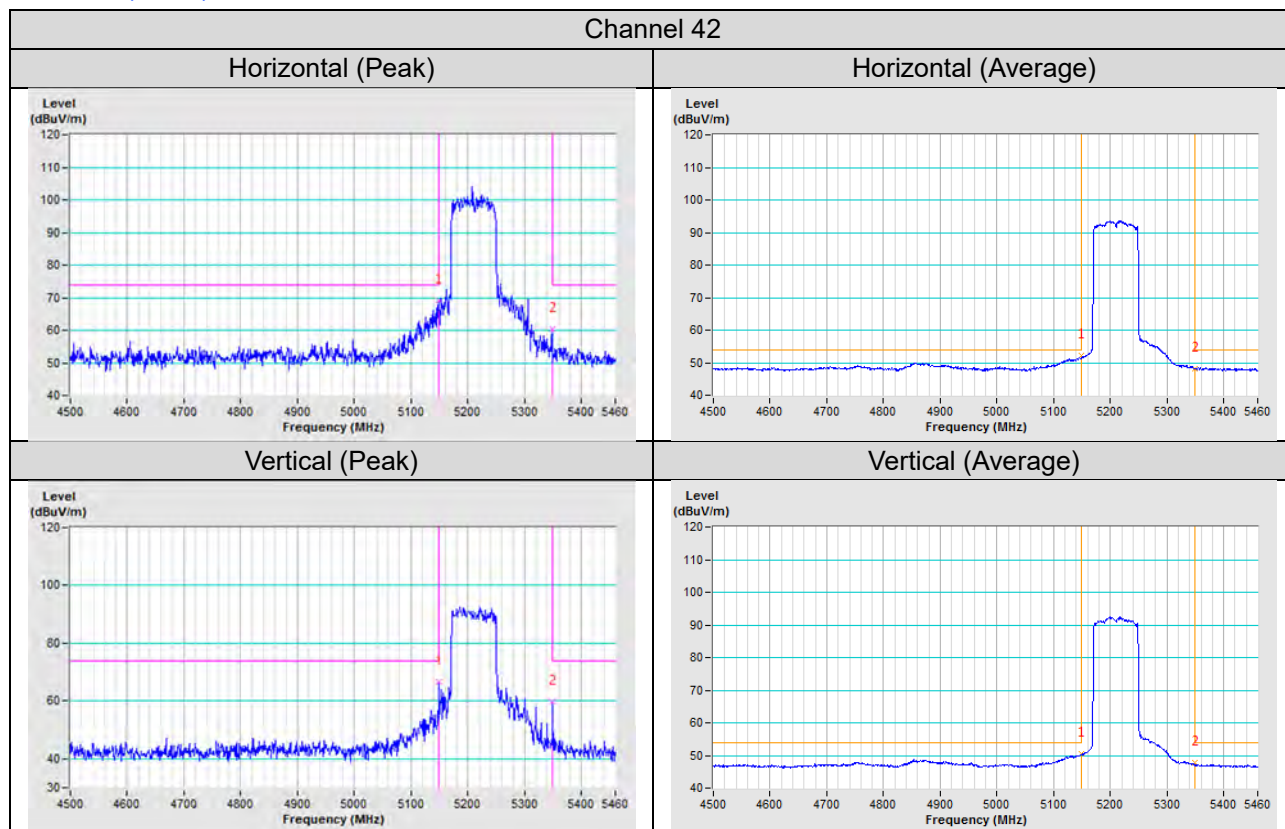
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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