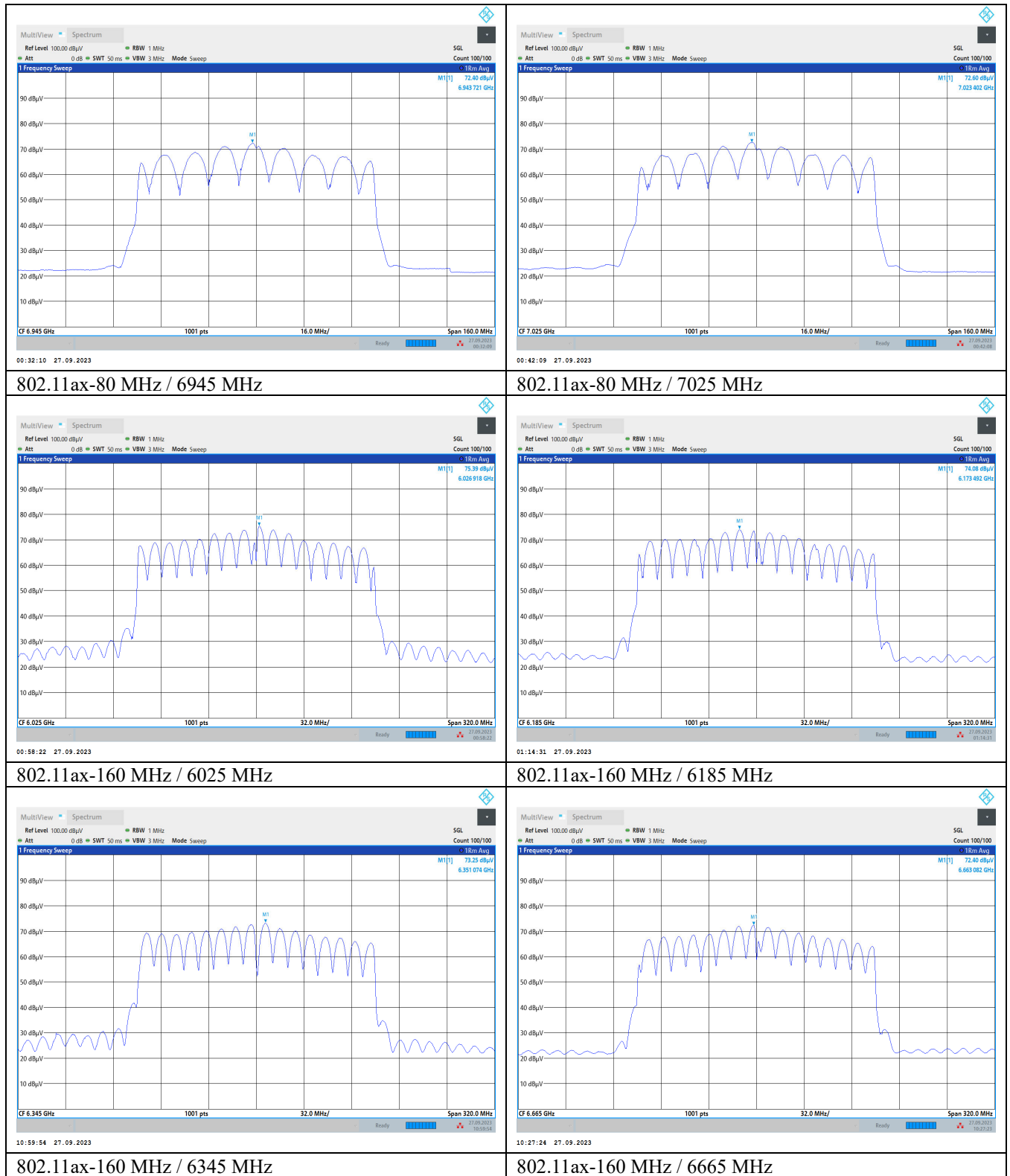
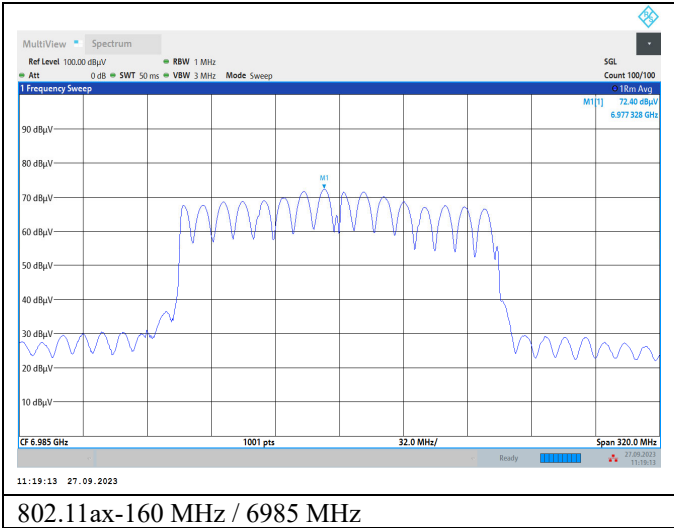


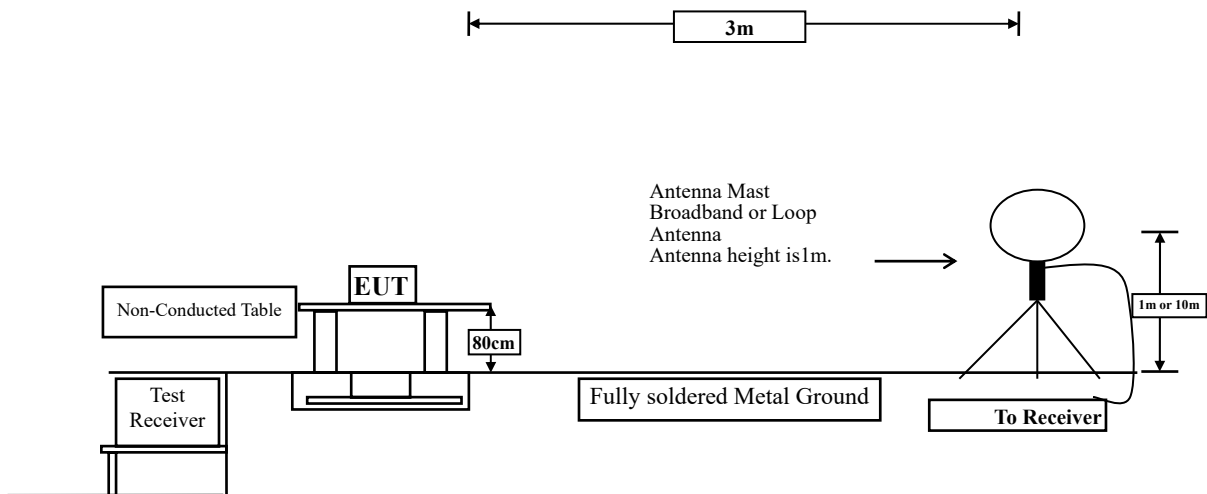




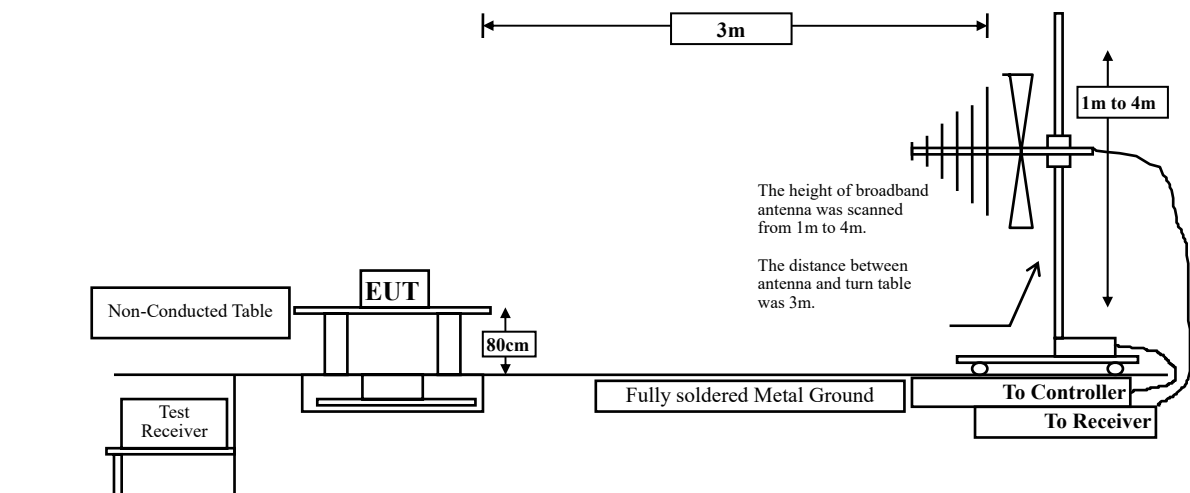
6. Radiated Emission

6.1. Test Setup

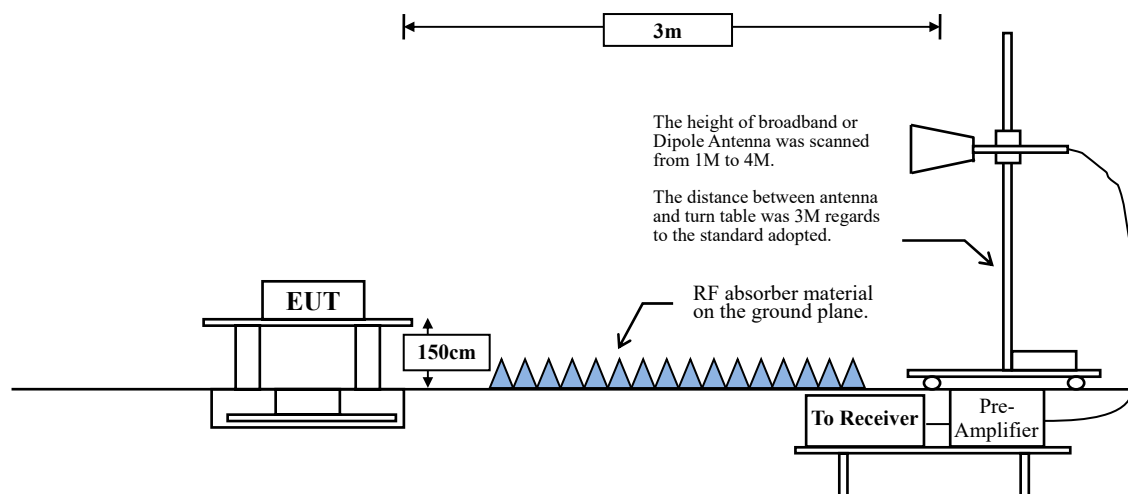
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



6.2. Limits

General Radiated Emission Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section. Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission Limits specified in Section 15.209:

FCC CFR Title 47 Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	$\mu\text{V/m @3m}$	$\text{dB}\mu\text{V/m@3m}$
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

Remark:

1. RF Voltage ($\text{dB}\mu\text{V/m}$) = $20 \log \text{RF Voltage } (\mu\text{V/m})$
2. In the Above Table, the tighter Limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Unwanted Emission out of the restricted bands Limits

FCC CFR Title 47 Part 15 Subpart E Paragraph 15.407(b) Limits		
Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength ($\text{dB}\mu\text{V/m@3m}$)
5925 MHz > F 7125 MHz	Peak: -7	88.2
	Average: -27	68.2

Remark:

The following formula is used to convert the equipment isotropic radiated power (e.i.r.p) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \text{ uV/m, where P is the eirp (Watts).}$$

6.3. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 KHz, above 1GHz are 1 MHz.

The frequency range from 30MHz to 10th harmonics and included The frequency range from the lowest oscillator frequency generated within the device up to the 10th harmonic was checked is checked.

RBW and VBW Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW $\geq$ 3 MHz.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW = 10 Hz, when duty cycle $\geq$ 98 %

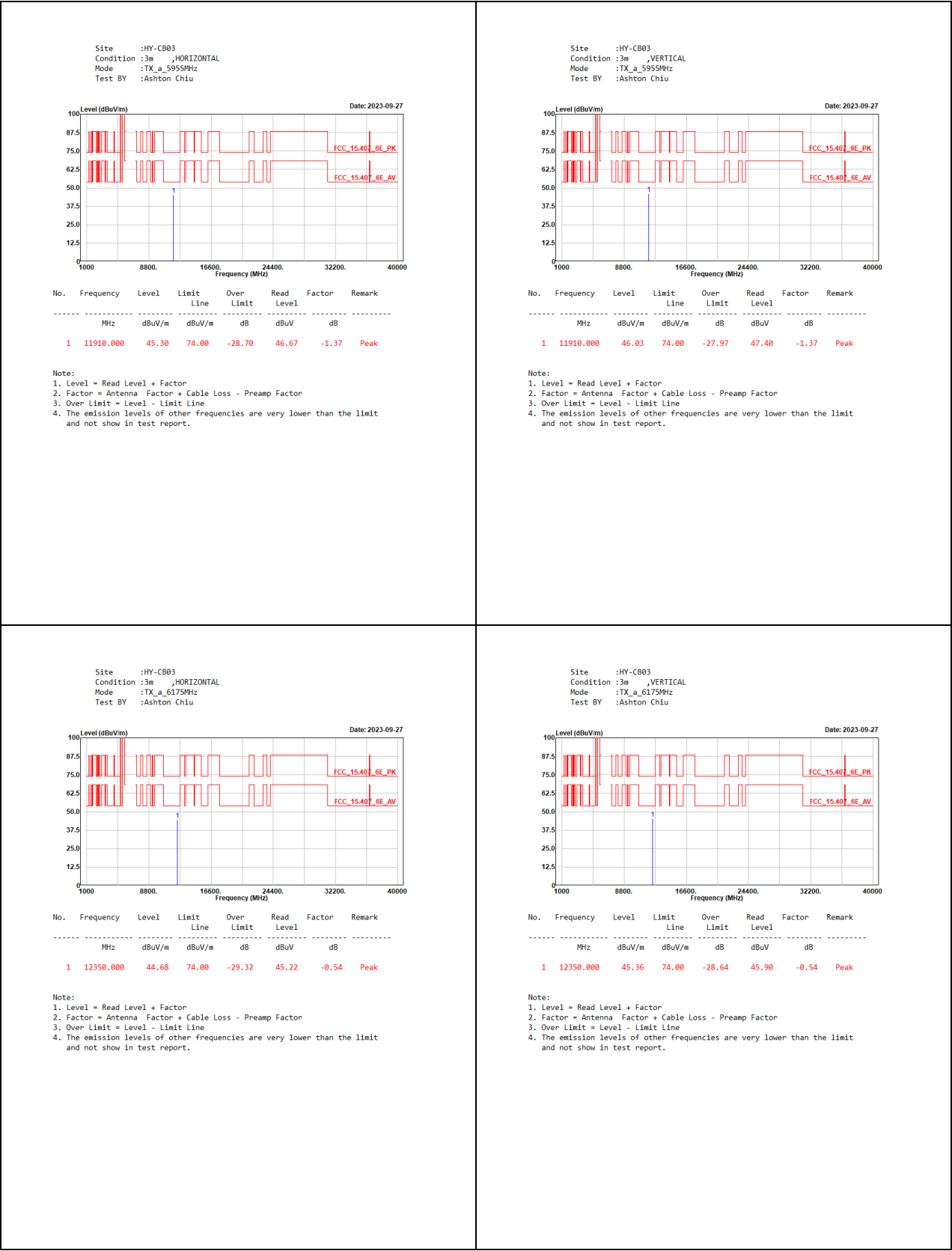
VBW $\geq$ 1/T, when duty cycle < 98 %

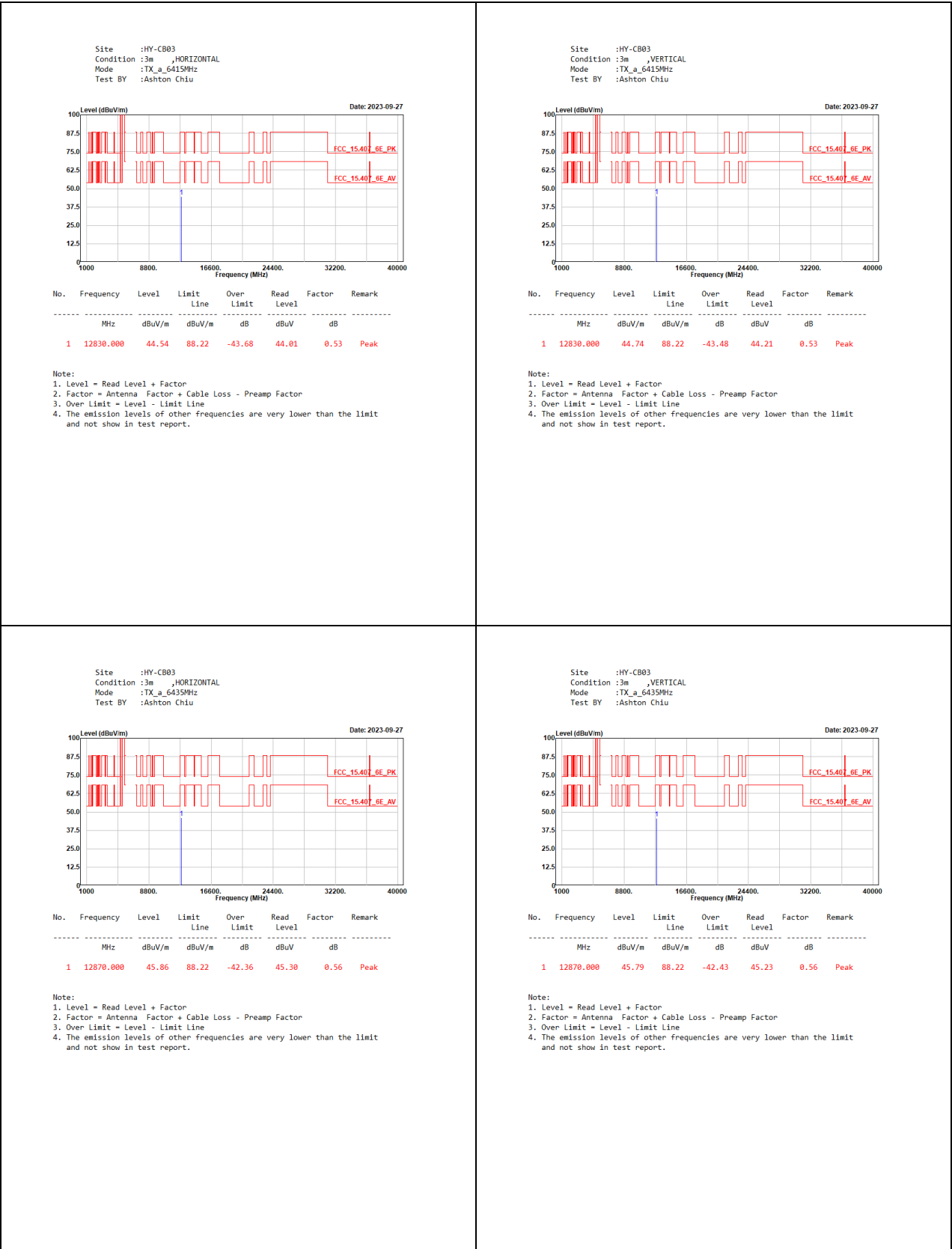
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

6 GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11a	49.43	1.0320	969	1000
802.11ax-20 MHz	79.30	5.4080	185	200
802.11ax-40 MHz	88.26	4.0600	246	300
802.11ax-80 MHz	87.64	2.3400	427	500
802.11ax-160 MHz	81.20	2.1600	463	500

Note: Duty Cycle Refer to Section 10.

6.4. Test Result of Radiated Emissions

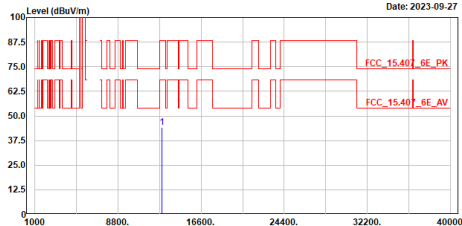




Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_a 6475MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12950.000	44.04	88.22	-44.18	43.54	0.50	Peak

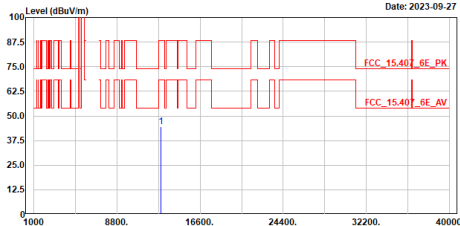
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_a 6475MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12950.000	44.38	88.22	-43.84	43.88	0.50	Peak

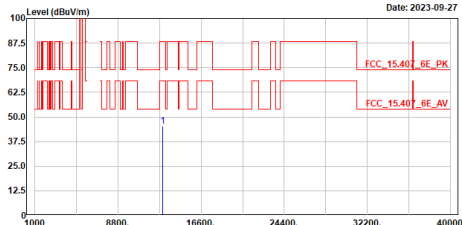
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_a 6515MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13030.000	45.13	88.22	-43.09	44.69	0.44	Peak

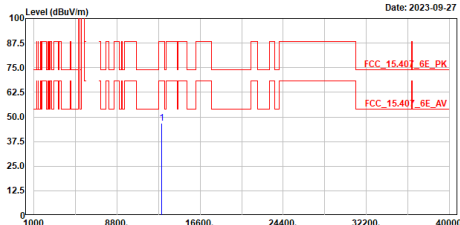
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_a 6515MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



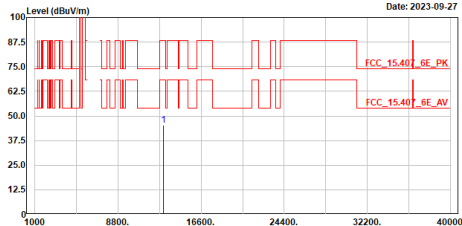
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13030.000	46.89	88.22	-41.33	46.45	0.44	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_a_6535MHz
Test BY :Ashton Chiu

Date: 2023-09-27



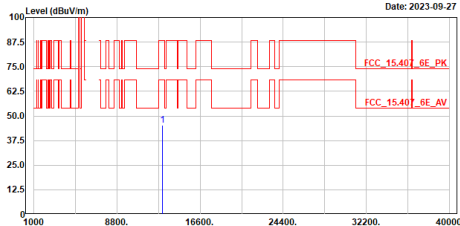
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13070.000	45.25	88.22	-42.97	44.72	0.53	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_a_6535MHz
Test BY :Ashton Chiu

Date: 2023-09-27



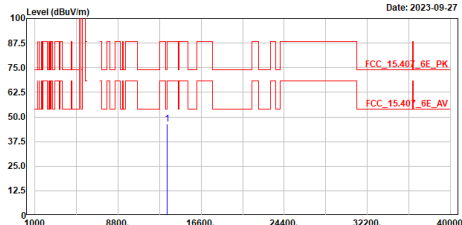
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13070.000	45.19	88.22	-43.03	44.66	0.53	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_a_6695MHz
Test BY :Ashton Chiu

Date: 2023-09-27



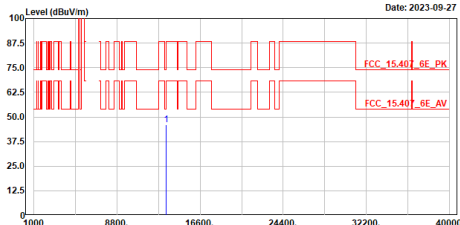
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13390.000	46.28	74.00	-27.72	45.08	1.20	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_a_6695MHz
Test BY :Ashton Chiu

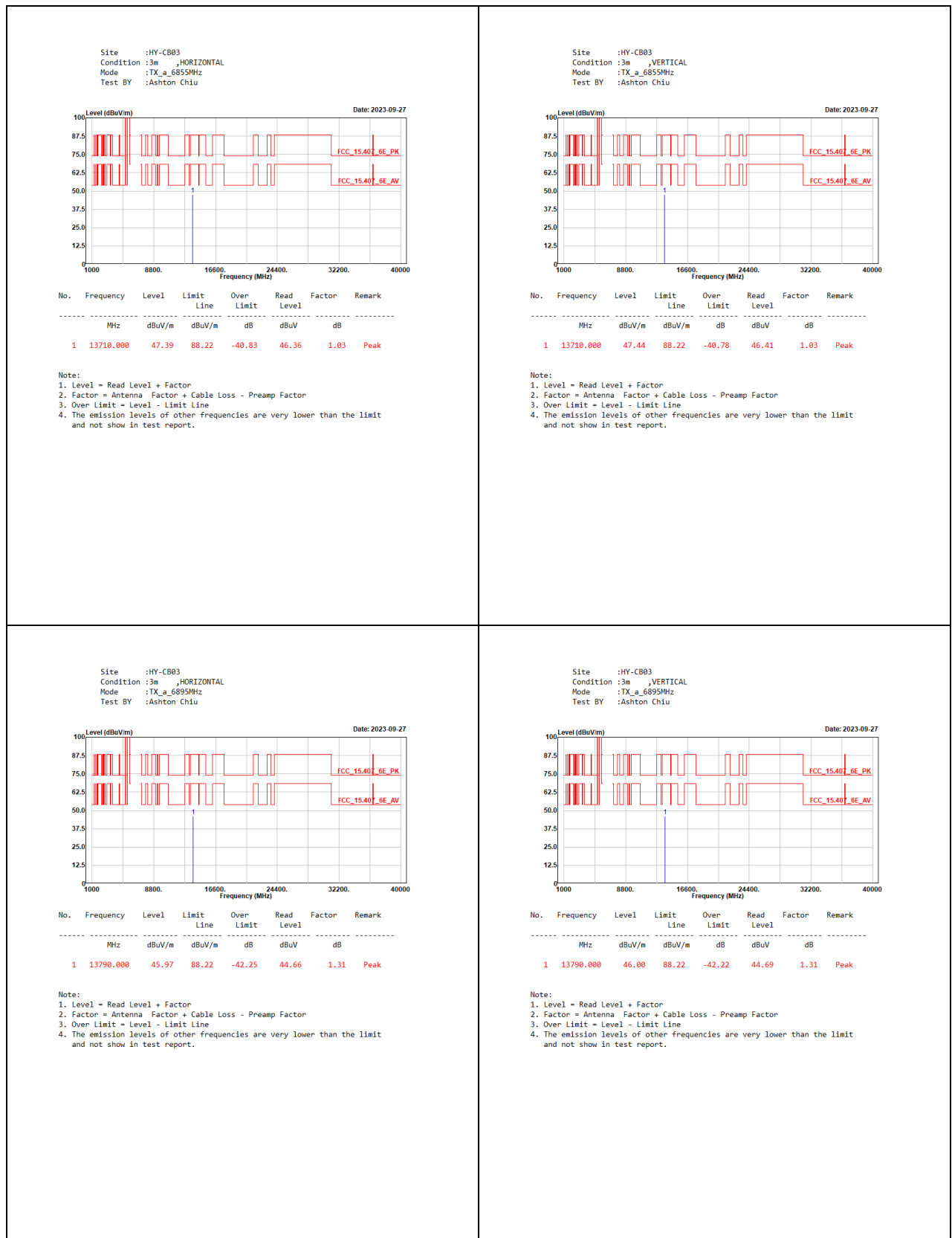
Date: 2023-09-27

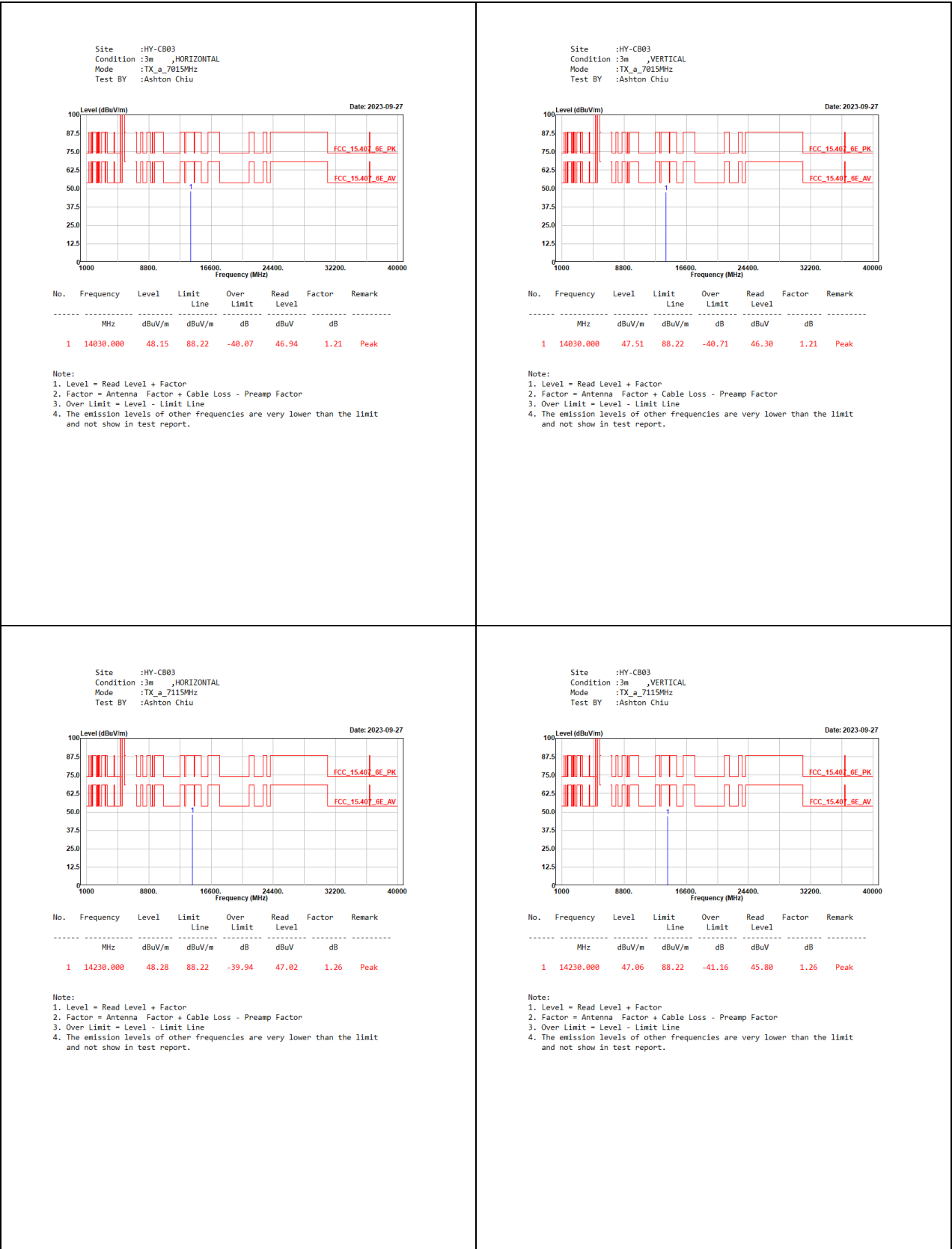


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13390.000	46.00	74.00	-28.00	44.80	1.20	Peak

Note:

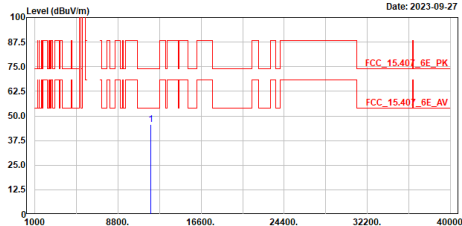
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.





Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax20_5955MHz
Test BY :Ashton Chiu

Date: 2023-09-27



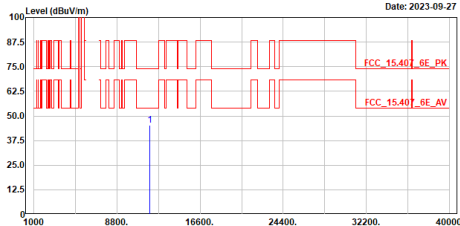
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11910.000	45.77	74.00	-28.23	47.14	-1.37	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax20_5955MHz
Test BY :Ashton Chiu

Date: 2023-09-27



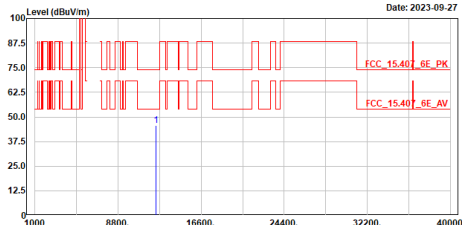
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11910.000	45.32	74.00	-28.68	46.69	-1.37	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax20_6175MHz
Test BY :Ashton Chiu

Date: 2023-09-27



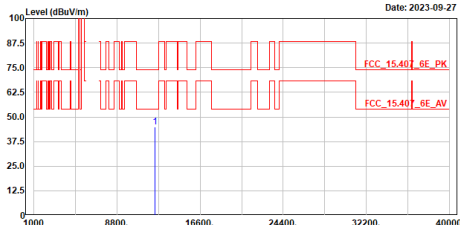
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12350.000	45.74	74.00	-28.26	46.28	-0.54	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax20_6175MHz
Test BY :Ashton Chiu

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12350.000	44.87	74.00	-29.13	45.41	-0.54	Peak

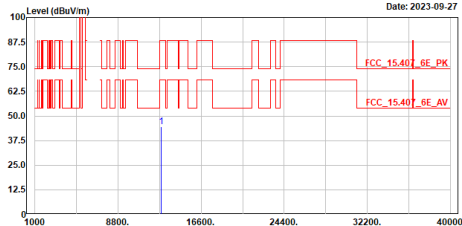
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax20_6415MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12830.000	44.65	88.22	-43.57	44.12	0.53	Peak

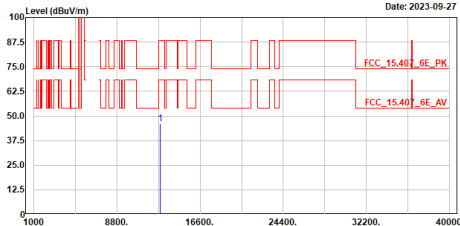
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax20_6415MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12830.000	46.06	88.22	-42.16	45.53	0.53	Peak

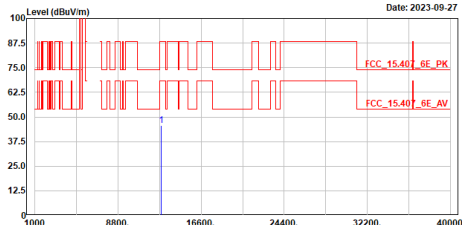
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax20_6435MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12870.000	45.58	88.22	-42.64	45.02	0.56	Peak

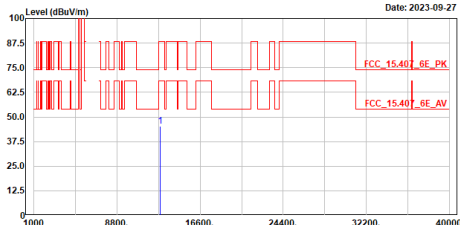
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax20_6435MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12870.000	45.44	88.22	-42.78	44.88	0.56	Peak

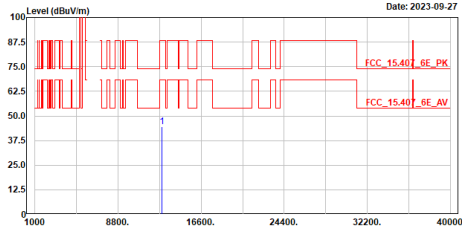
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax20_6475MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12950.000	44.64	88.22	-43.58	44.14	0.50	Peak

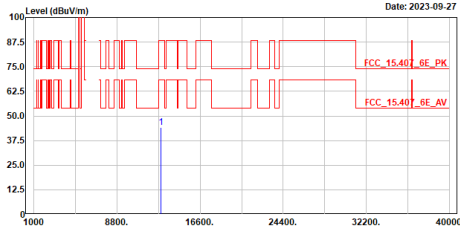
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax20_6475MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12950.000	44.33	88.22	-43.89	43.83	0.50	Peak

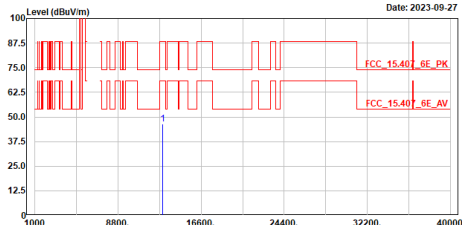
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax20_6515MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13030.000	46.36	88.22	-41.86	45.92	0.44	Peak

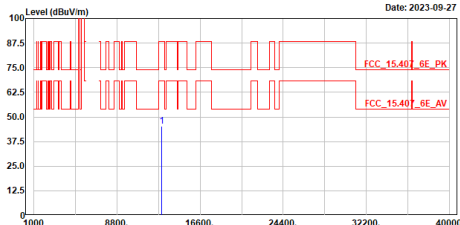
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax20_6515MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13030.000	45.38	88.22	-42.84	44.94	0.44	Peak

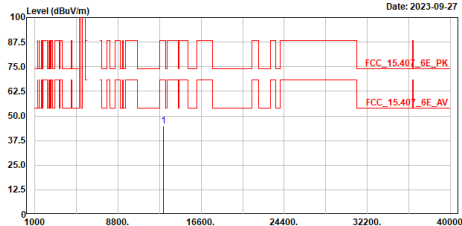
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax20_6535MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13070.000	45.05	88.22	-43.17	44.52	0.53	Peak

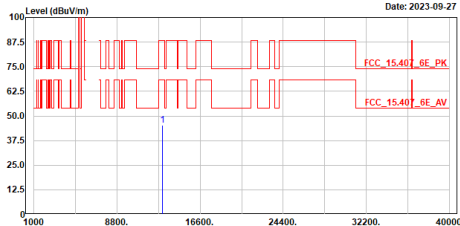
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax20_6535MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13070.000	45.45	88.22	-42.77	44.92	0.53	Peak

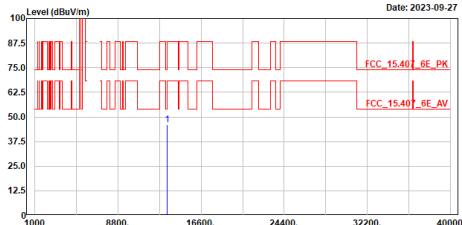
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax20_6695MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13390.000	45.98	74.00	-28.02	44.78	1.20	Peak

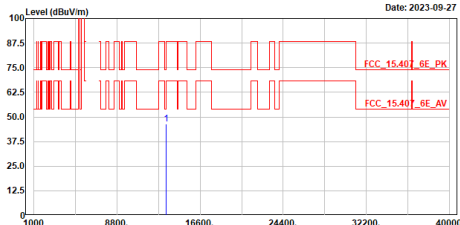
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax20_6695MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13390.000	46.24	74.00	-27.76	45.04	1.20	Peak

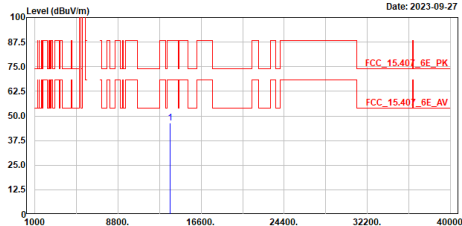
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax20_6855MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13710.000	46.39	88.22	-41.83	45.36	1.03	Peak

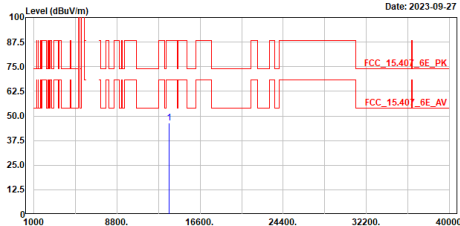
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax20_6855MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13710.000	46.28	88.22	-41.94	45.25	1.03	Peak

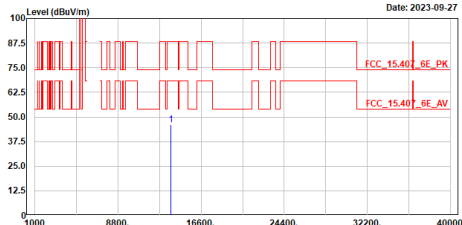
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax20_6895MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13790.000	46.10	88.22	-42.12	44.79	1.31	Peak

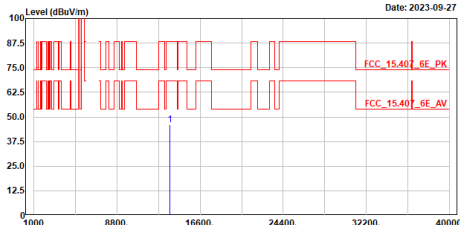
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax20_6895MHz
Test BY :Ashton Chiu

Level (dBuV/m)

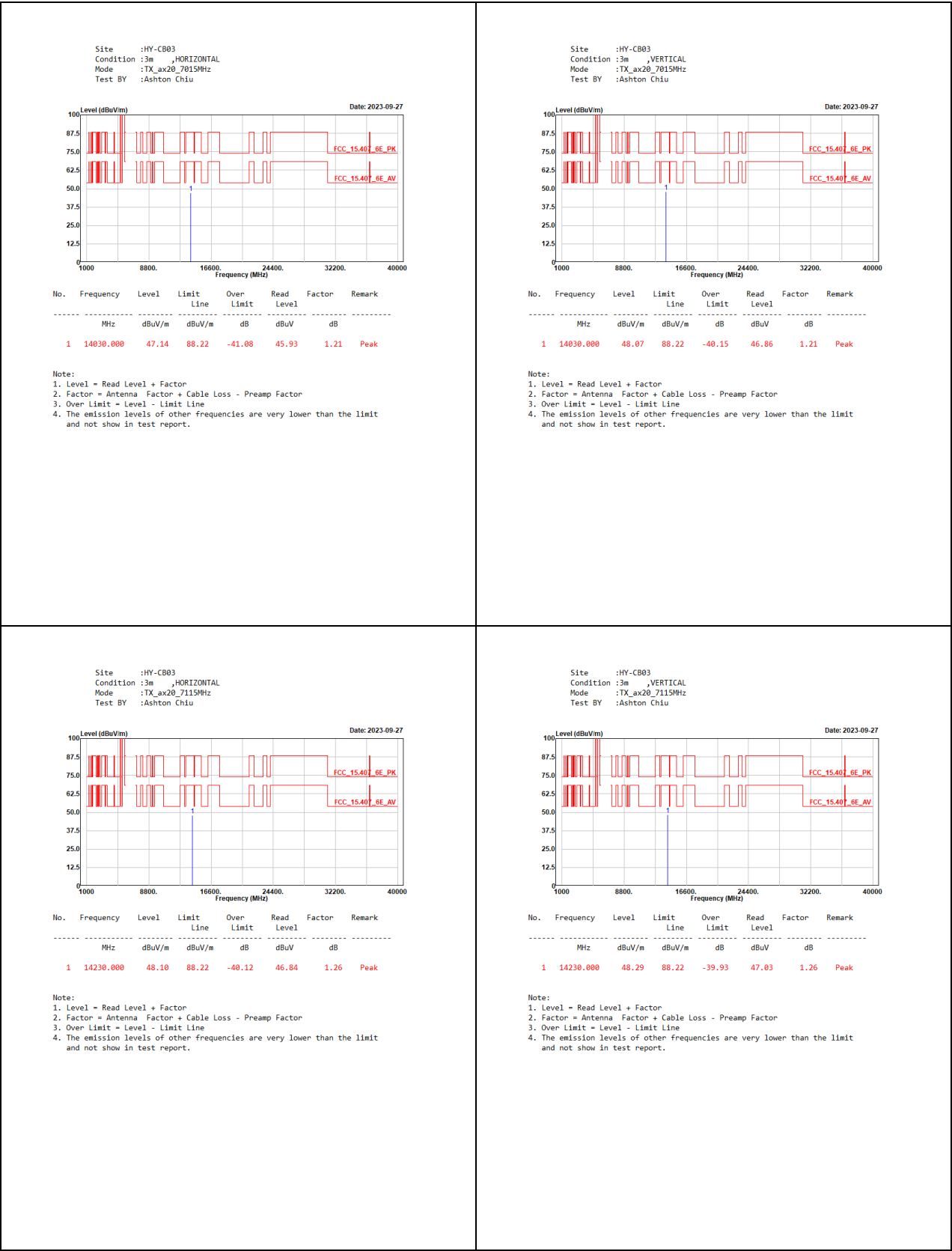
Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13790.000	46.08	88.22	-42.14	44.77	1.31	Peak

Note:

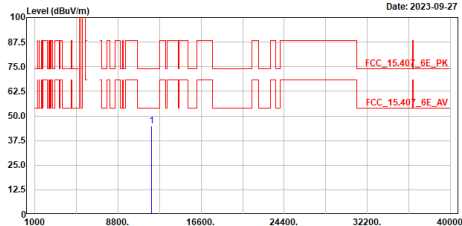
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.



Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax40.5965MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11930.000	45.08	74.00	-28.92	46.29	-1.21	Peak

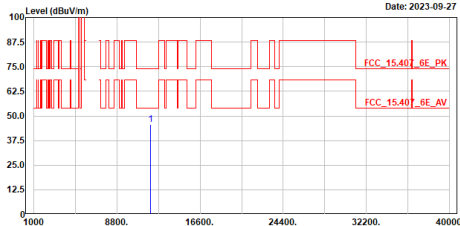
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax40.5965MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	11930.000	45.51	74.00	-28.49	46.72	-1.21	Peak

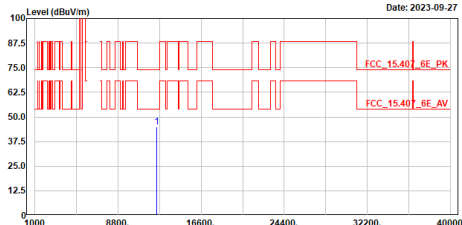
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax40.6205MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12410.000	44.88	74.00	-29.12	45.19	-0.31	Peak

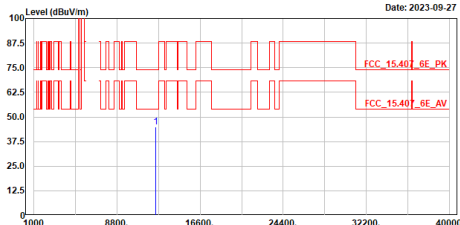
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax40.6205MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



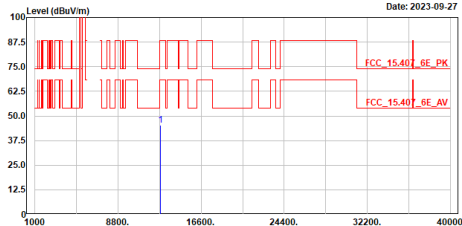
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12410.000	45.07	74.00	-28.93	45.38	-0.31	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax40_6405MHz
Test BY :Ashton Chiu

Date: 2023-09-27



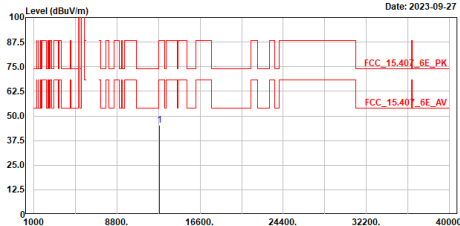
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12810.000	45.45	88.22	-42.77	44.94	0.51	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax40_6405MHz
Test BY :Ashton Chiu

Date: 2023-09-27



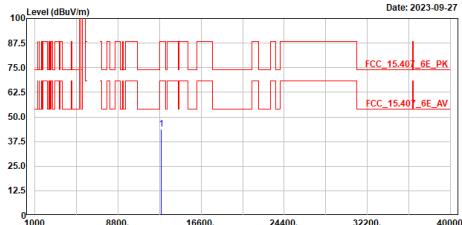
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12810.000	45.43	88.22	-42.79	44.92	0.51	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax40_6445MHz
Test BY :Ashton Chiu

Date: 2023-09-27



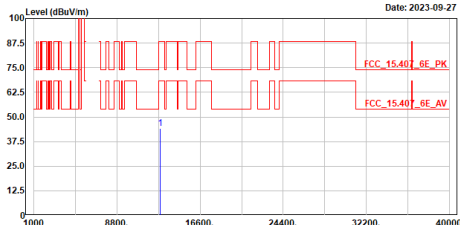
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12890.000	43.68	88.22	-44.54	43.15	0.53	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax40_6445MHz
Test BY :Ashton Chiu

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12890.000	44.05	88.22	-44.17	43.52	0.53	Peak

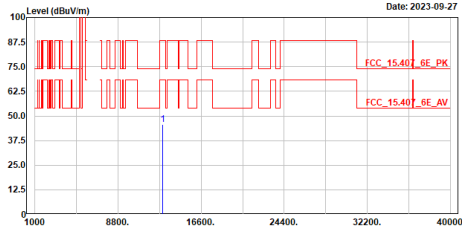
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax40.6485MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12970.000	45.48	88.22	-42.74	45.03	0.45	Peak

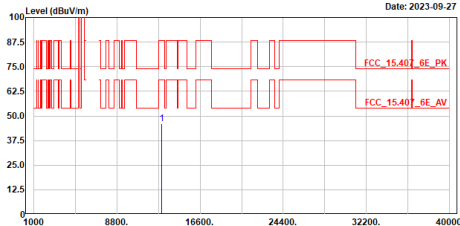
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax40.6485MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12970.000	46.02	88.22	-42.20	45.57	0.45	Peak

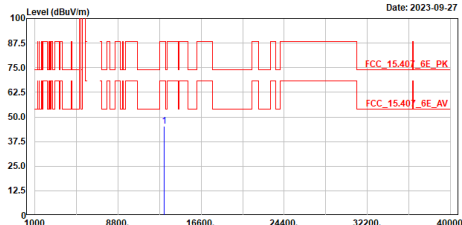
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax40.6565MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13130.000	45.15	88.22	-43.07	44.39	0.76	Peak

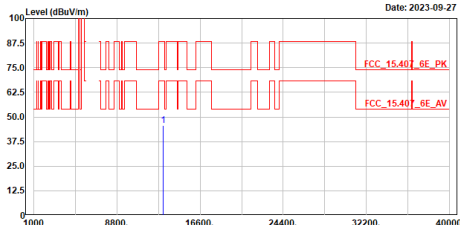
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax40.6565MHz
Test BY :Ashton Chiu

Level (dBuV/m)

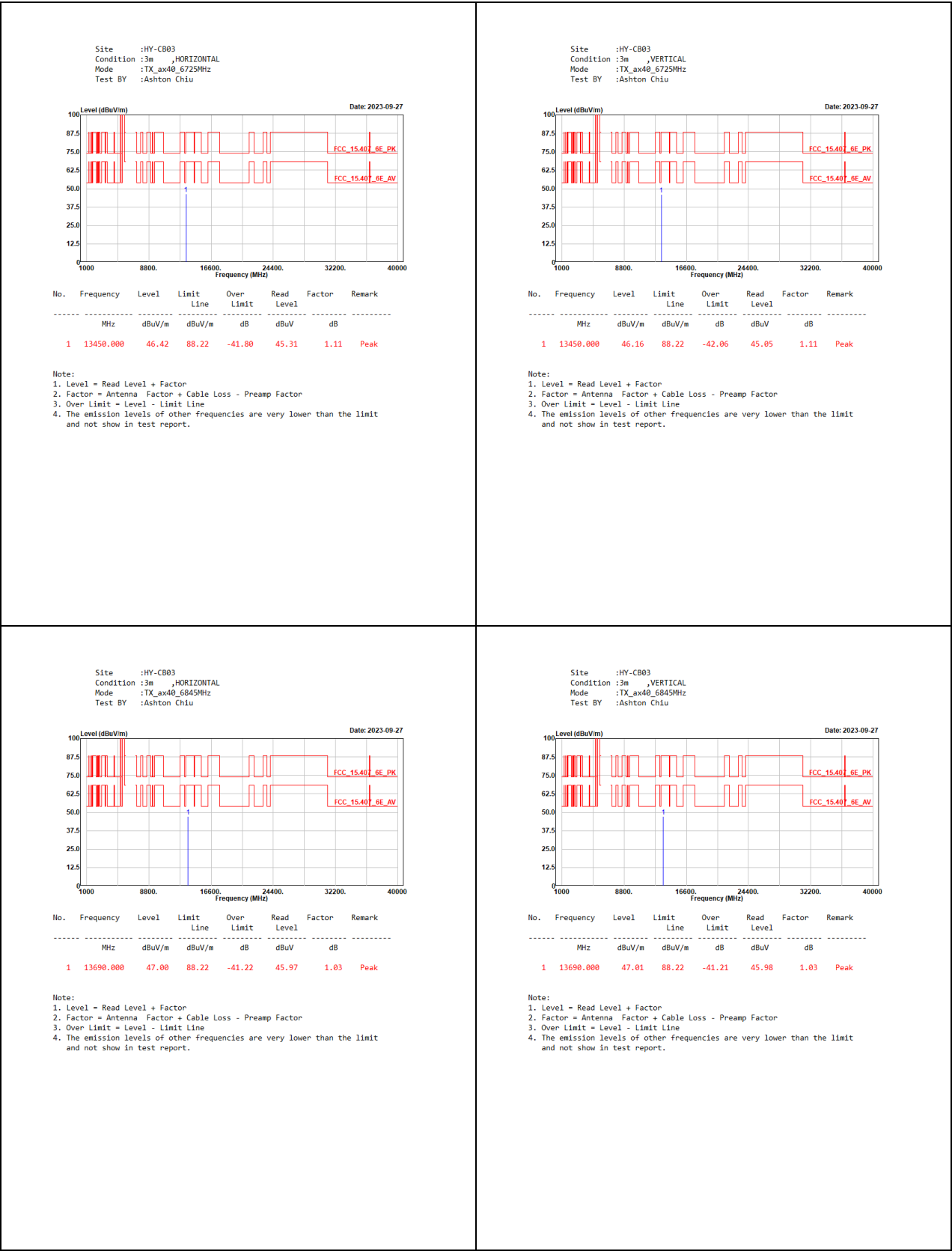
Date: 2023-09-27

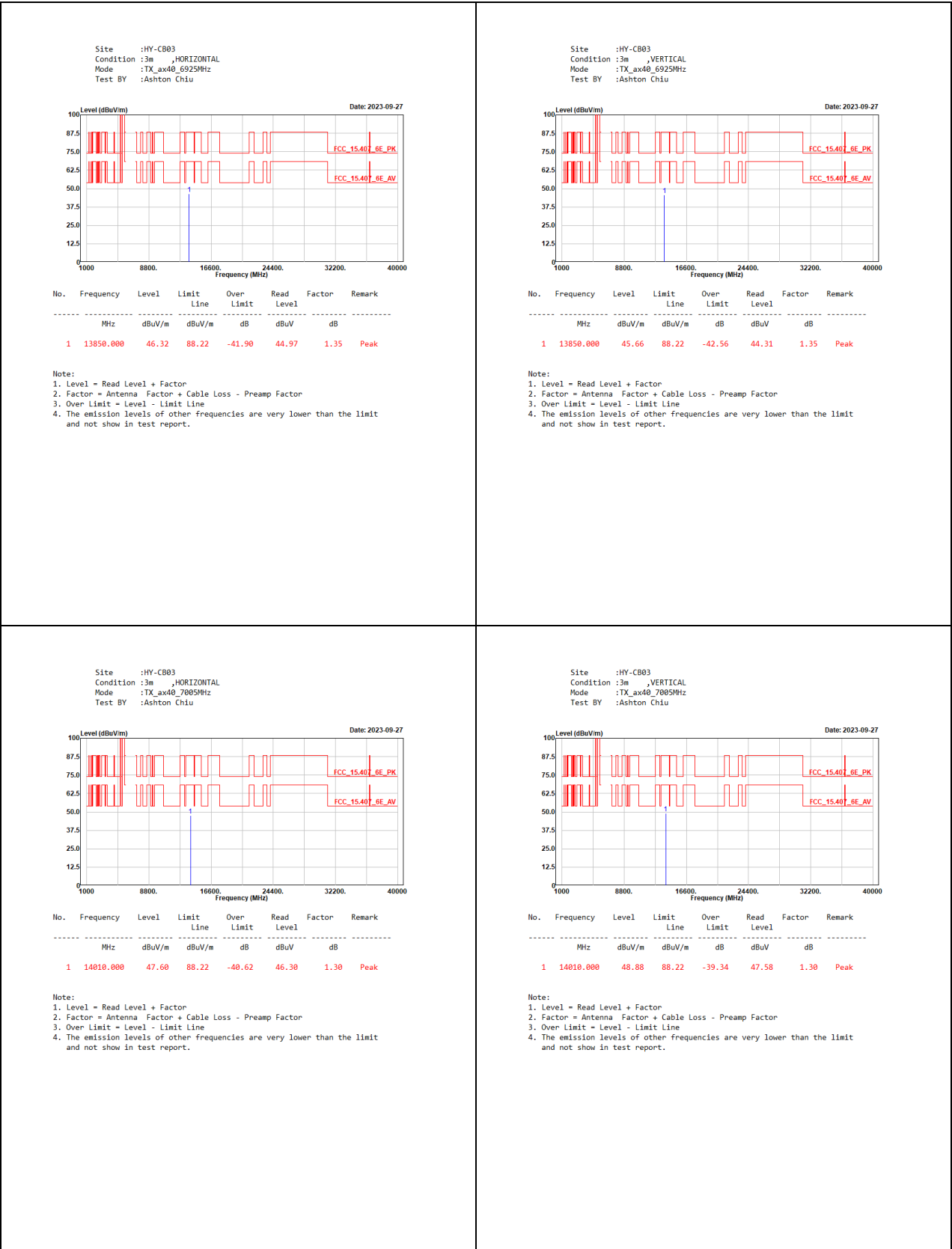


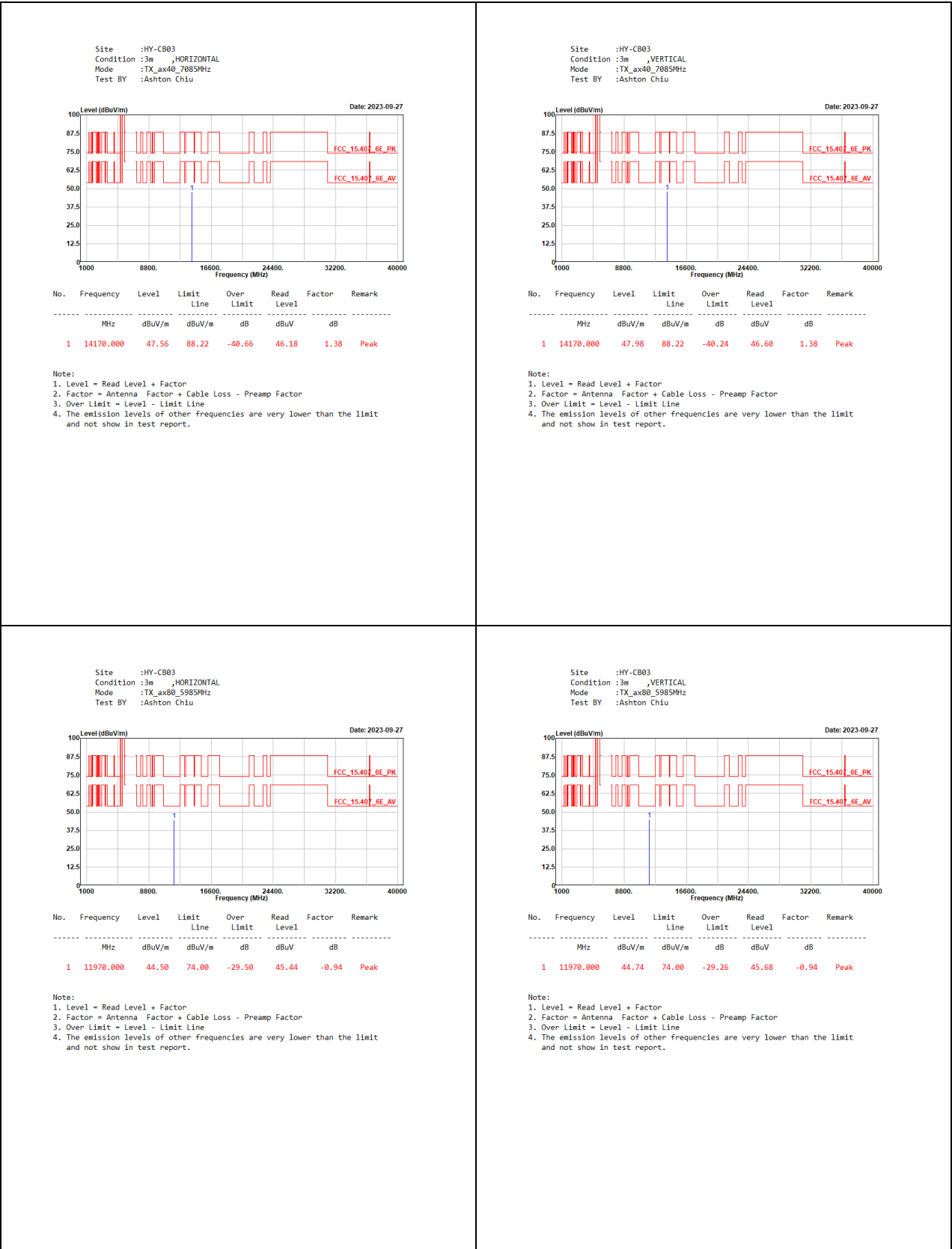
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13130.000	45.67	88.22	-42.55	44.91	0.76	Peak

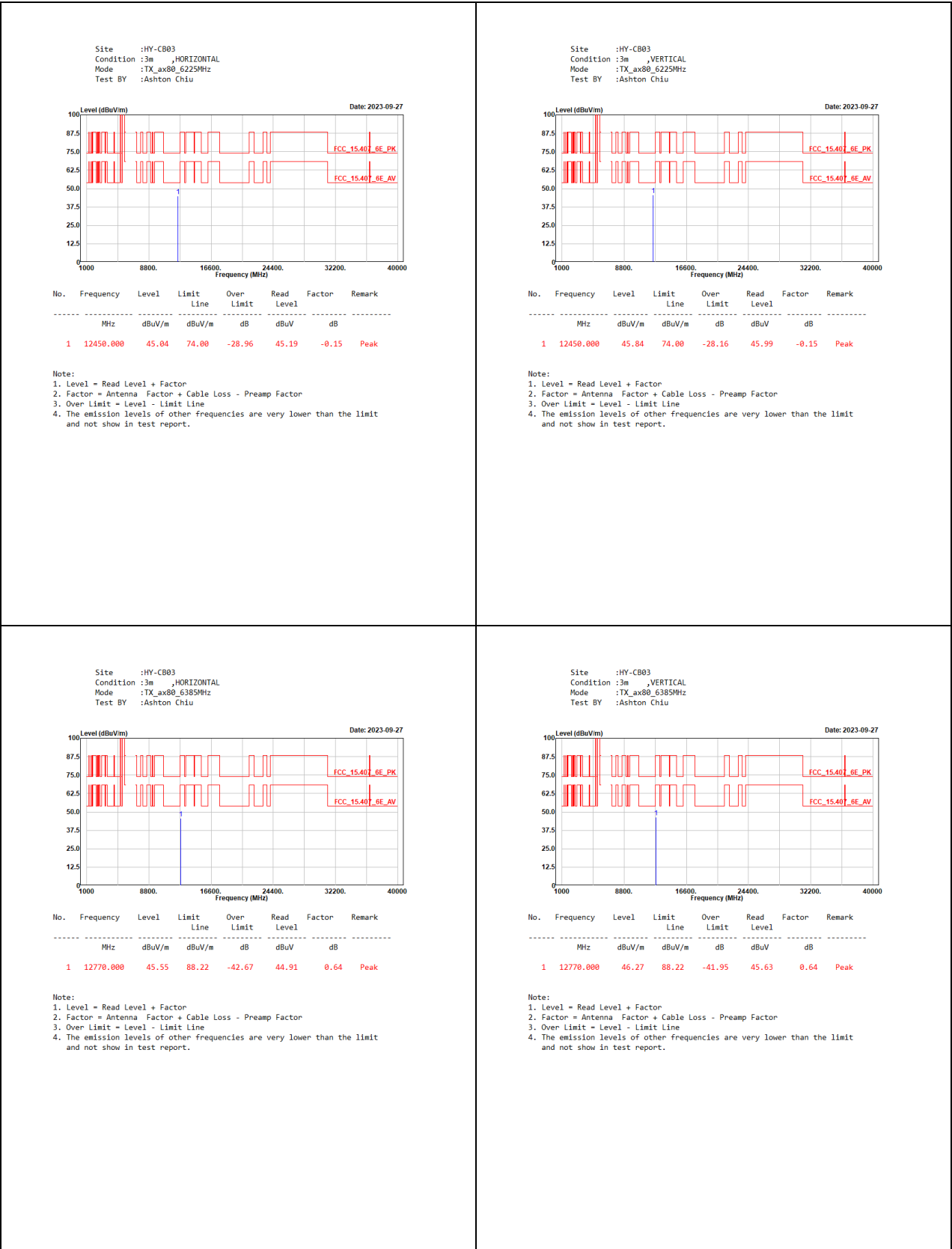
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.





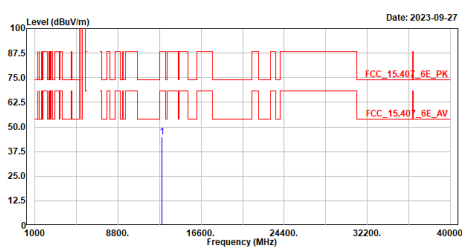




Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax80_6465MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



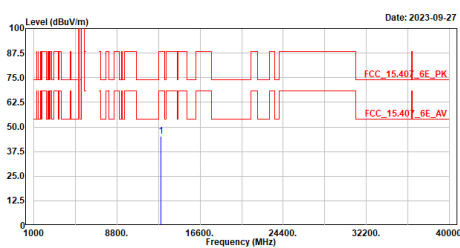
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12930.000	44.73	88.22	-43.49	44.22	0.51	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax80_6465MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



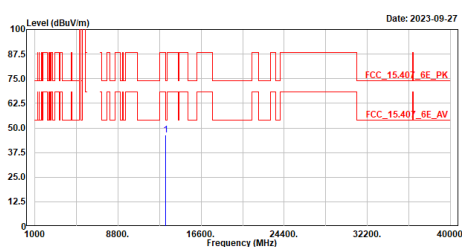
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12930.000	45.33	88.22	-42.89	44.82	0.51	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax80_6625MHz
Test BY :Ashton Chiu

Level (dBuV/m)

Date: 2023-09-27



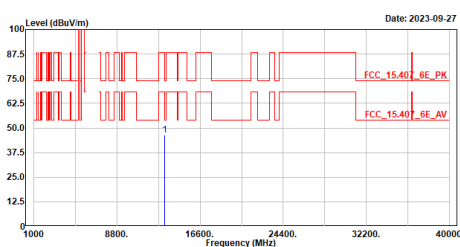
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13250.000	46.29	74.00	-27.71	45.13	1.16	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax80_6625MHz
Test BY :Ashton Chiu

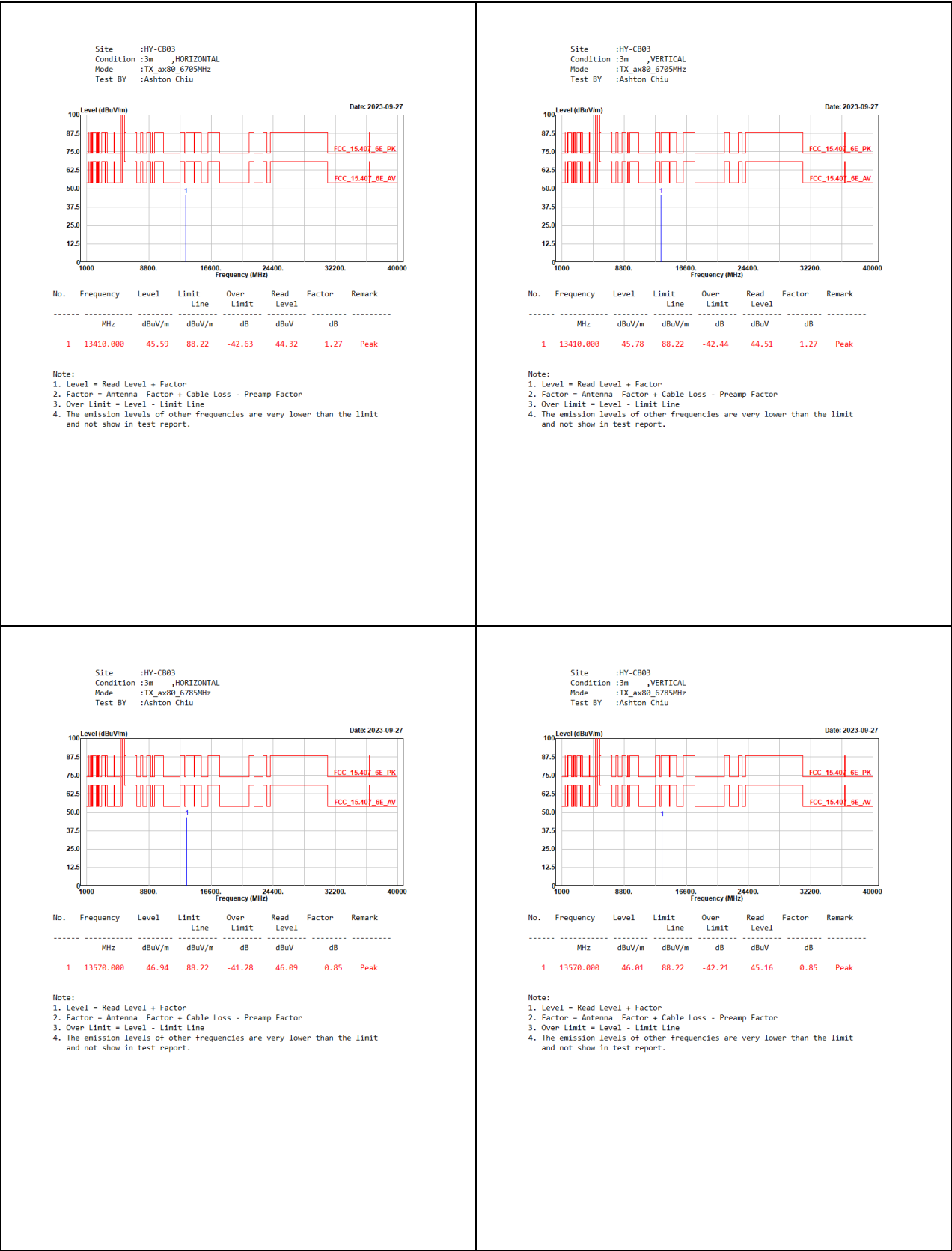
Level (dBuV/m)

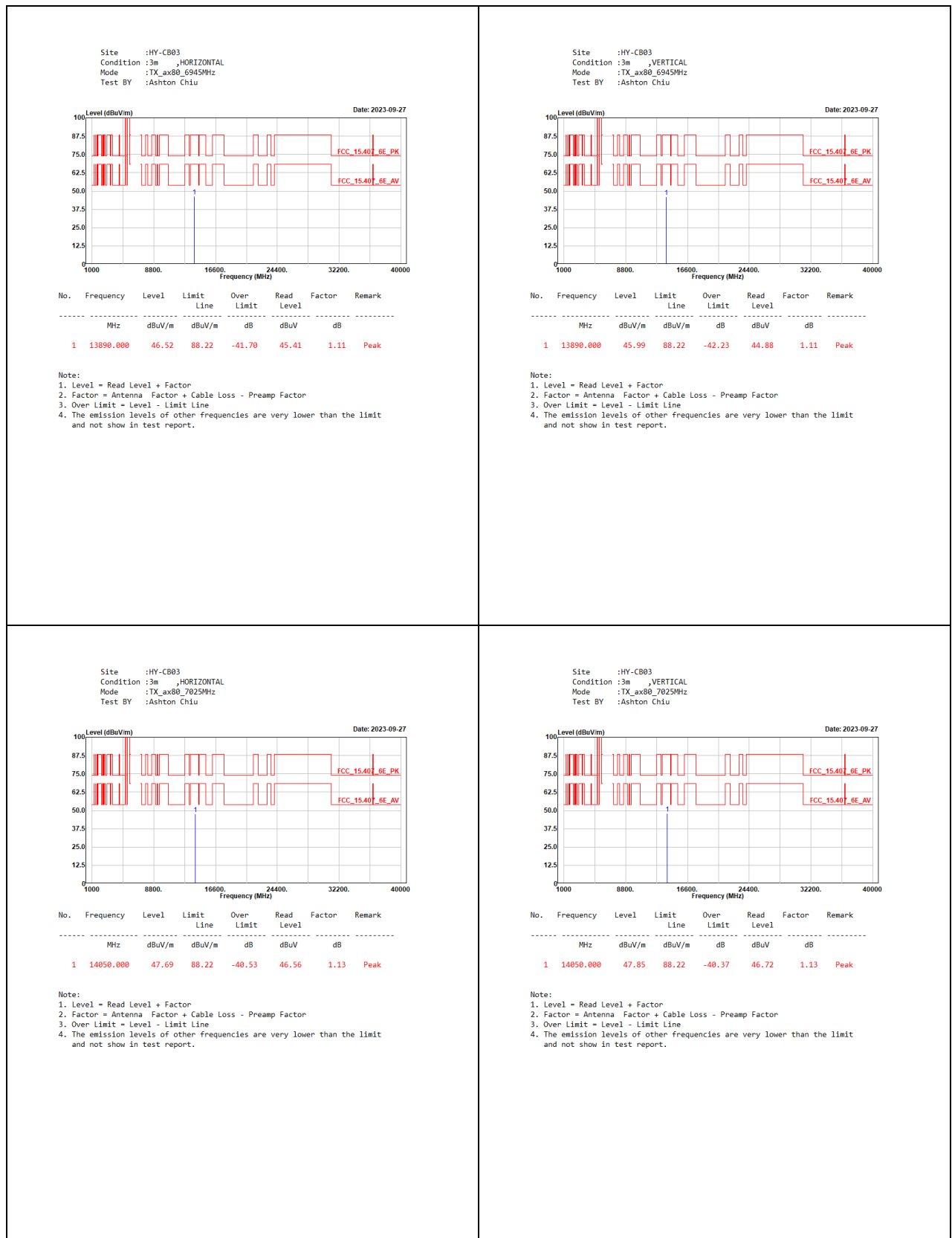
Date: 2023-09-27



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13250.000	46.52	74.00	-27.48	45.36	1.16	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.





Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax160_6025MHz
Test BY :Peter

Date: 2023-09-27

No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12050.000	46.19	74.00	-27.81	47.28	-1.09	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax160_6025MHz
Test BY :Peter

Date: 2023-09-27

No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12050.000	44.43	74.00	-29.57	45.52	-1.09	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax160_6185MHz
Test BY :Peter

Date: 2023-09-27

No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12370.000	44.51	74.00	-29.49	44.95	-0.44	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax160_6185MHz
Test BY :Peter

Date: 2023-09-27

No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12370.000	43.97	74.00	-30.03	44.41	-0.44	Peak

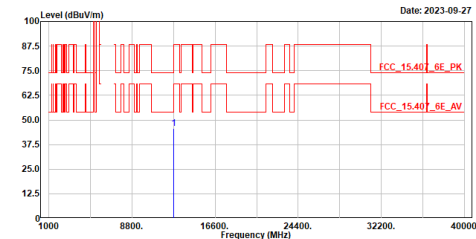
Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax160_6345MHz
Test BY :Peter

Level (dBuV/m)

Date: 2023-09-27



Frequency (MHz)

FCC_15.407_6E_PK

FCC_15.407_6E_AV

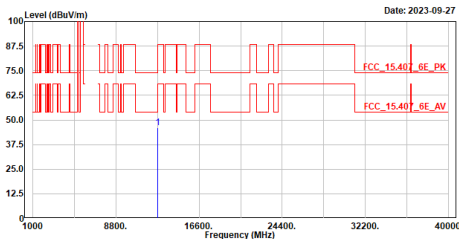
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12690.000	45.56	74.00	-28.44	45.09	0.47	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax160_6345MHz
Test BY :Peter

Level (dBuV/m)

Date: 2023-09-27



Frequency (MHz)

FCC_15.407_6E_PK

FCC_15.407_6E_AV

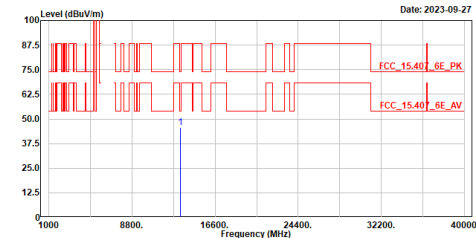
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	12690.000	46.22	74.00	-27.78	45.75	0.47	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ax160_6665MHz
Test BY :Peter

Level (dBuV/m)

Date: 2023-09-27



Frequency (MHz)

FCC_15.407_6E_PK

FCC_15.407_6E_AV

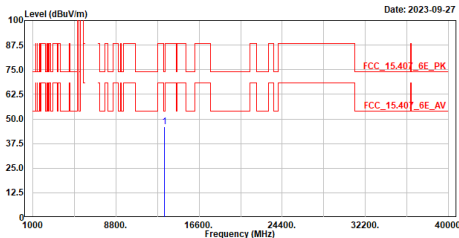
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13330.000	45.72	74.00	-28.28	44.72	1.00	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ax160_6665MHz
Test BY :Peter

Level (dBuV/m)

Date: 2023-09-27



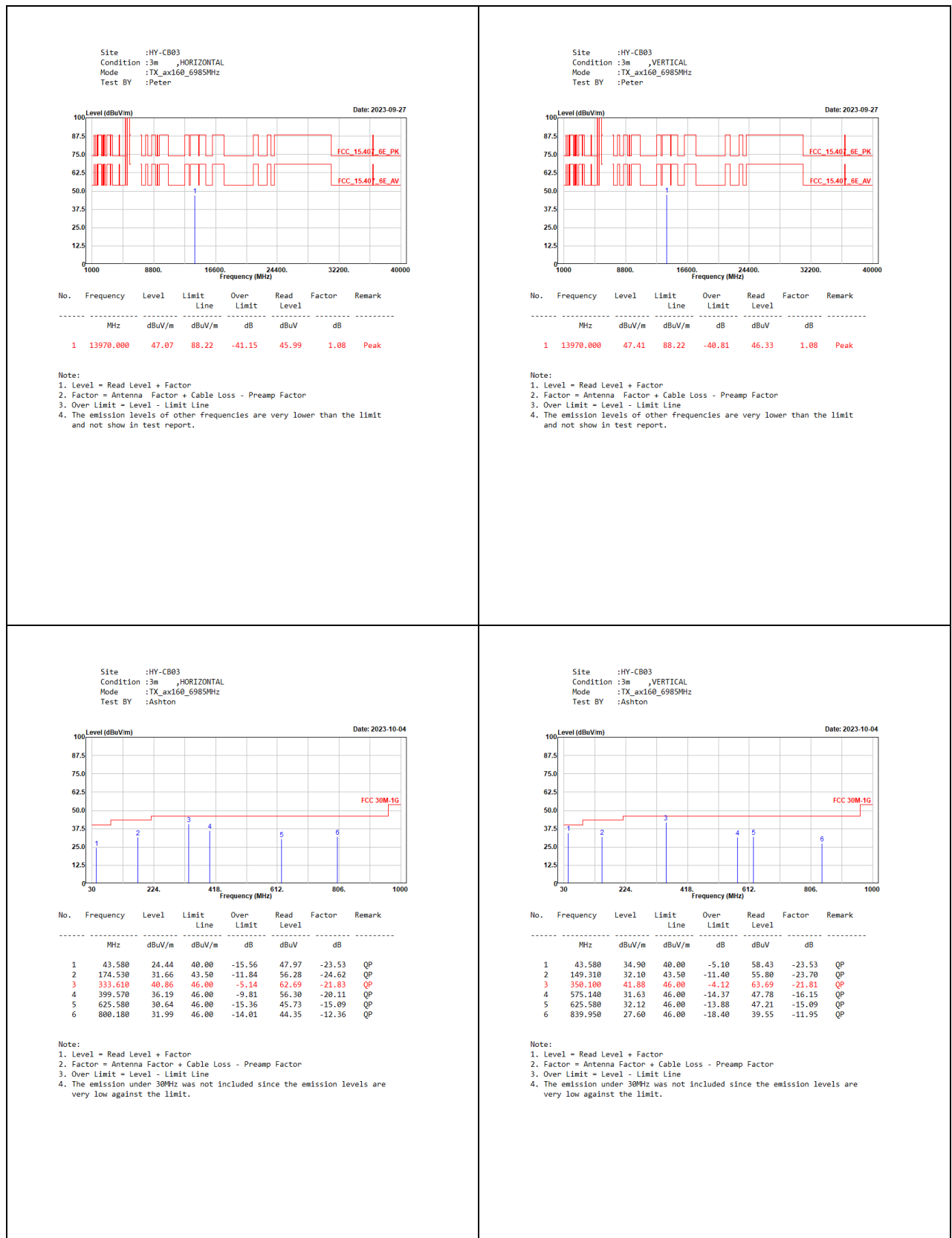
Frequency (MHz)

FCC_15.407_6E_PK

FCC_15.407_6E_AV

No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	13330.000	46.03	74.00	-27.97	45.03	1.00	Peak

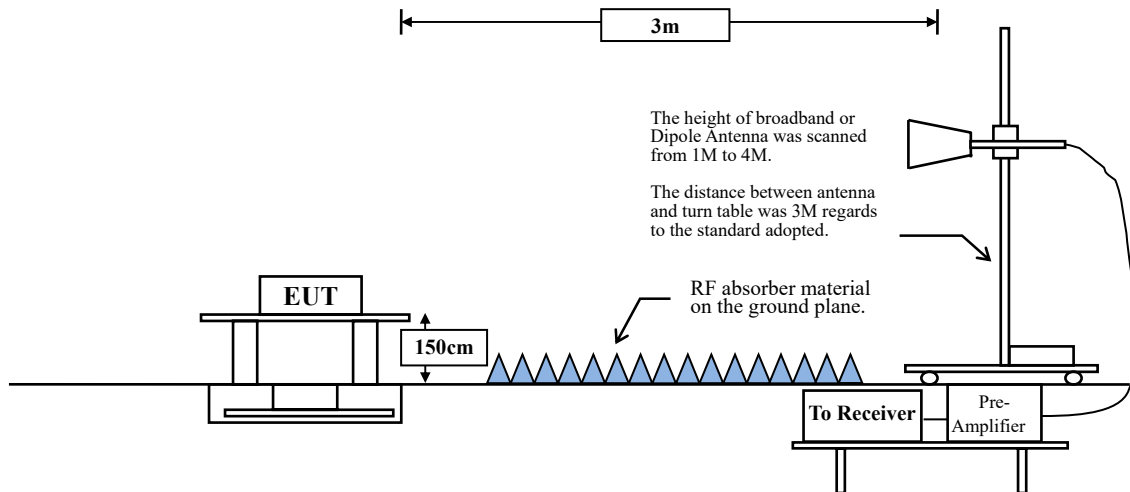
Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.



7. Band Edge

7.1. Test Setup

Radiated Emission Above 1GHz



7.2. Limits

General Radiated Emission Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section. Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission Limits specified in Section 15.209:

FCC CFR Title 47 Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	$\mu\text{V/m @3m}$	$\text{dB}\mu\text{V/m@3m}$
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

Remark:

1. RF Voltage ($\text{dB}\mu\text{V/m}$) = $20 \log \text{RF Voltage } (\mu\text{V/m})$
2. In the Above Table, the tighter Limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Unwanted Emission out of the restricted bands Limits

FCC CFR Title 47 Part 15 Subpart E Paragraph 15.407(b) Limits		
Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength (dBμV/m@3m)
5925 MHz > F 7125 MHz	Peak: -7	88.2
	Average: -27	68.2

Remark:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \text{ uV/m, where P is the eirp (Watts).}$$

7.3. Test Procedure

The EUT and its simulators are placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 KHz, above 1GHz are 1 MHz.

RBW and VBW Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW $\geq$ 3 MHz.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW = 10 Hz, when duty cycle $\geq$ 98 %

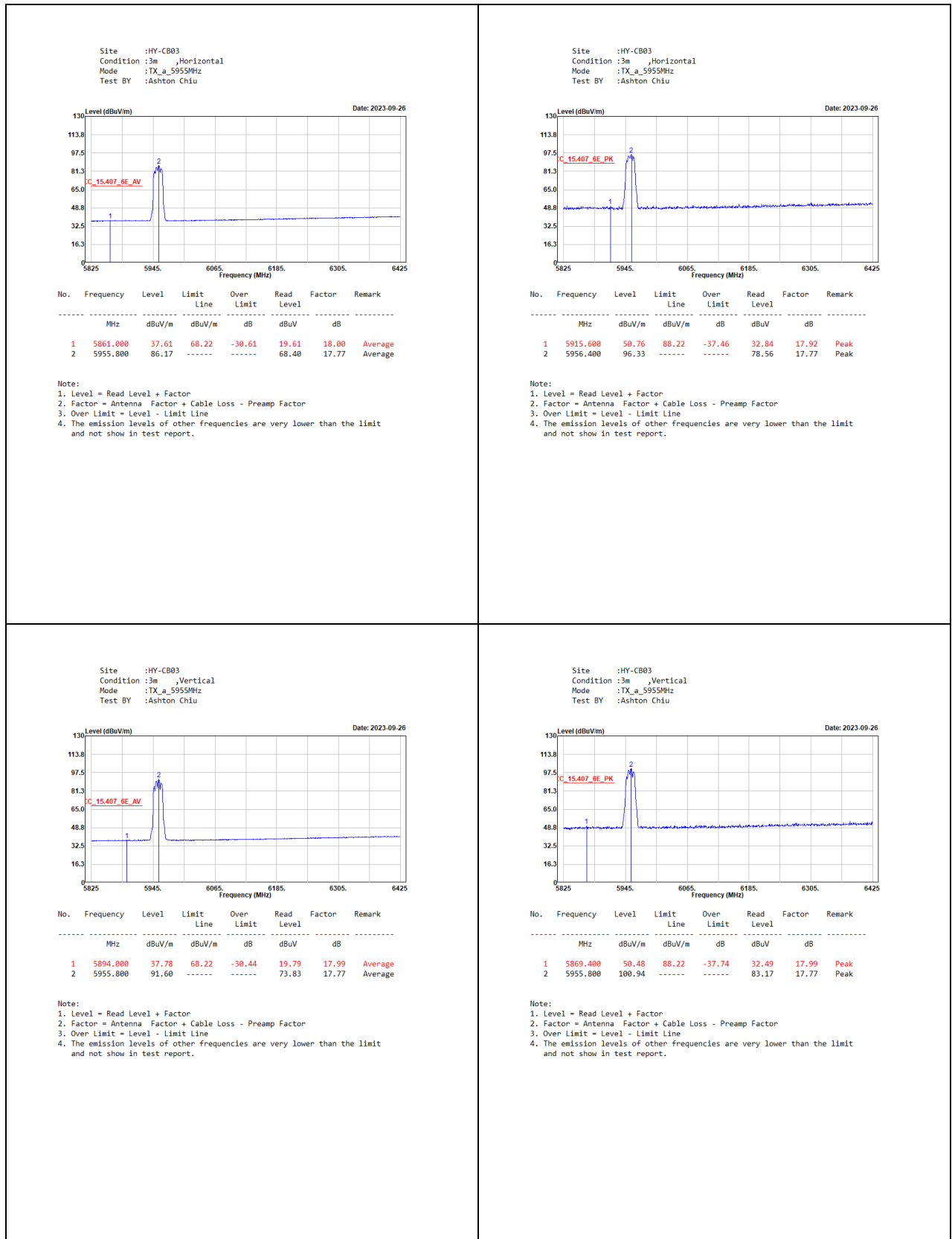
VBW $\geq$ 1/T, when duty cycle < 98 %

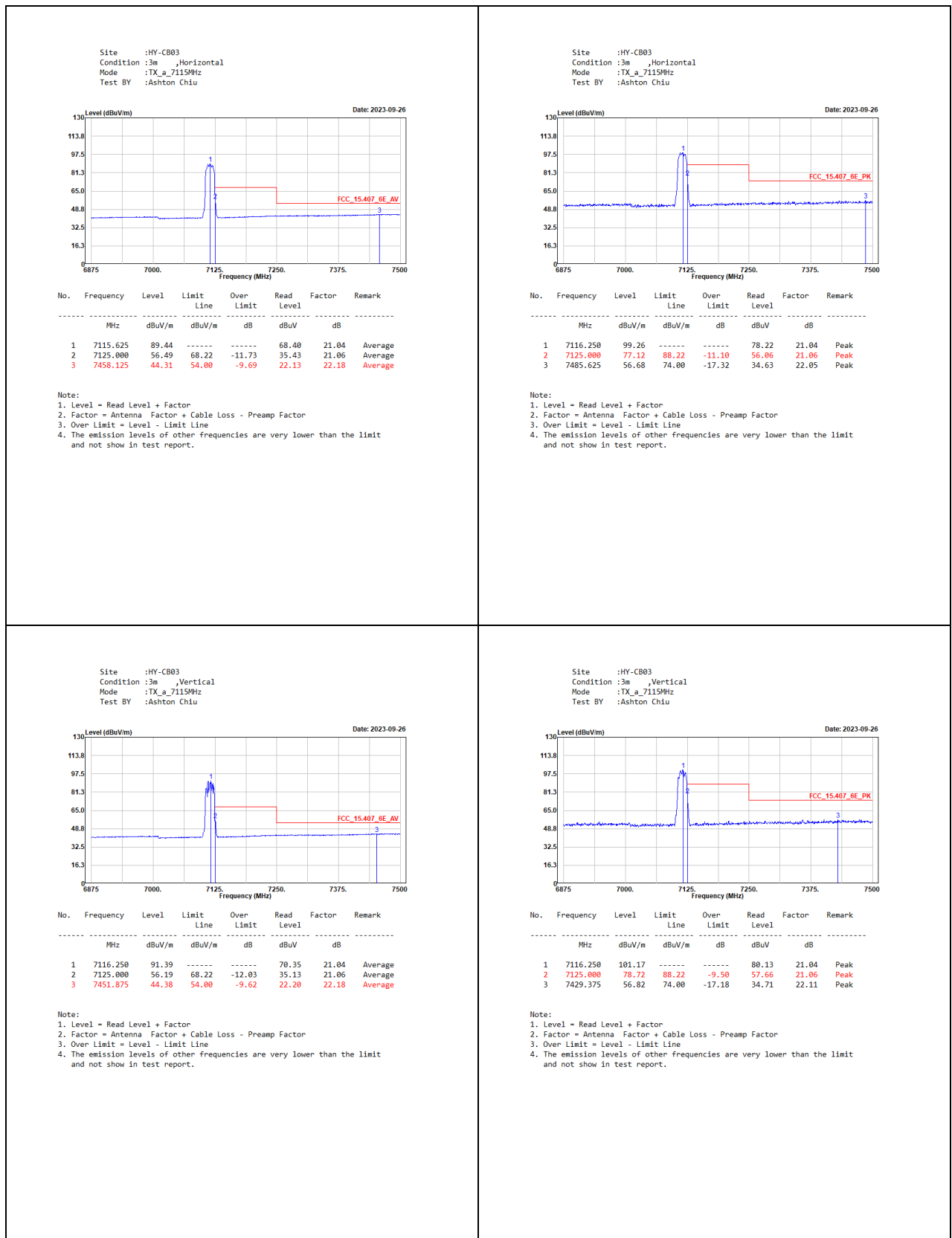
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

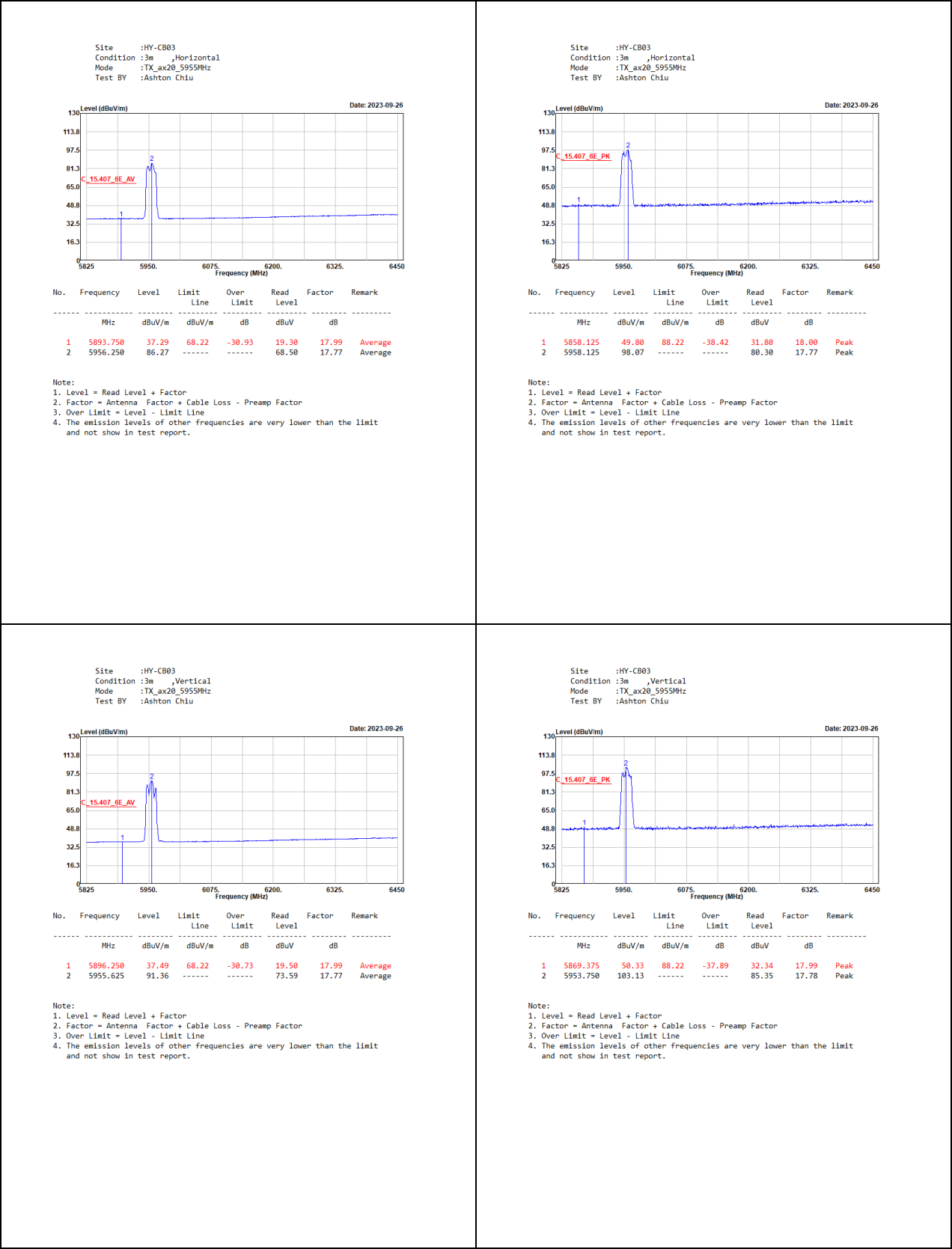
6 GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11a	49.43	1.0320	969	1000
802.11ax-20 MHz	79.30	5.4080	185	200
802.11ax-40 MHz	88.26	4.0600	246	300
802.11ax-80 MHz	87.64	2.3400	427	500
802.11ax-160 MHz	81.20	2.1600	463	500

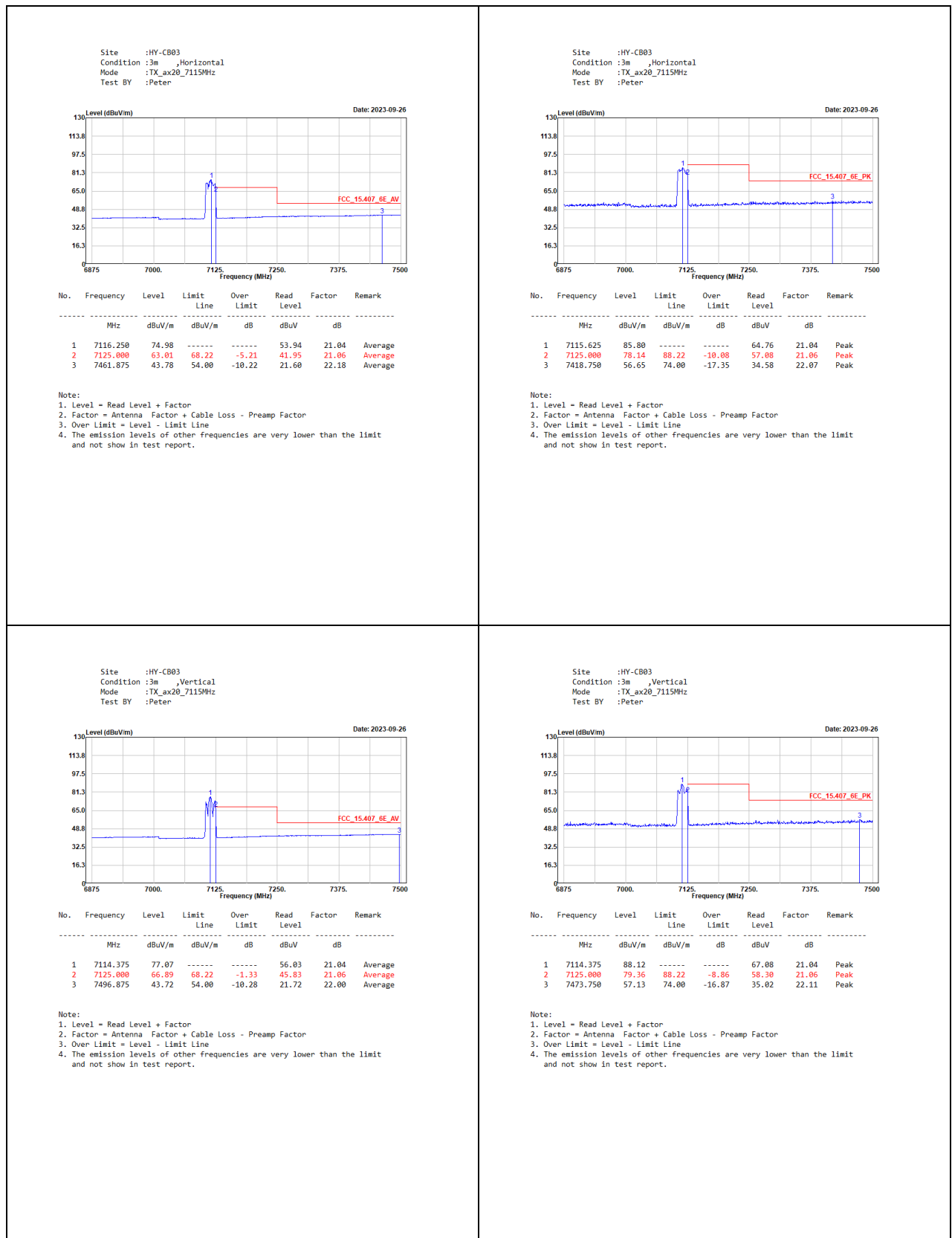
Note: Duty Cycle Refer to Section 10.

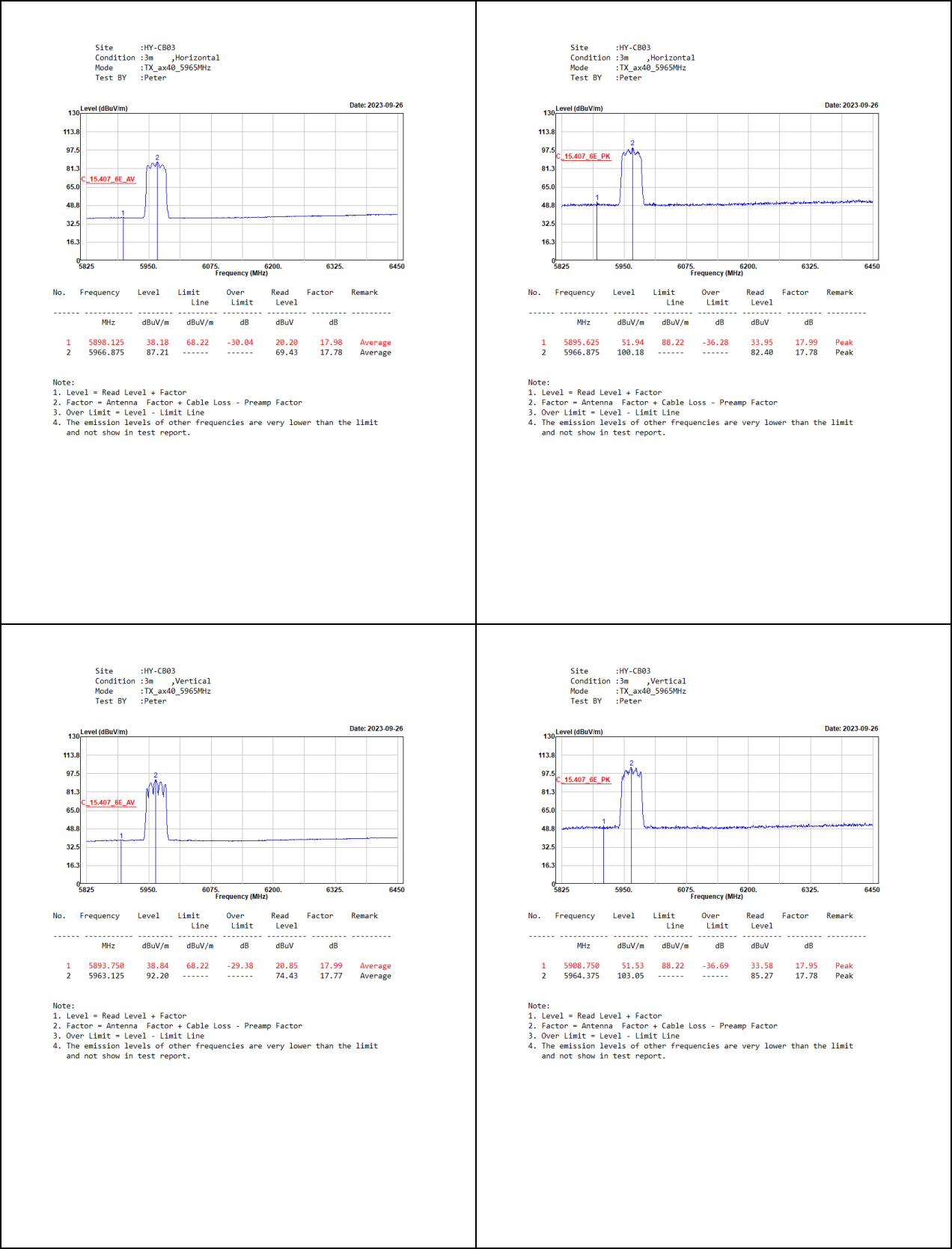
7.4. Test Result of Band Edge

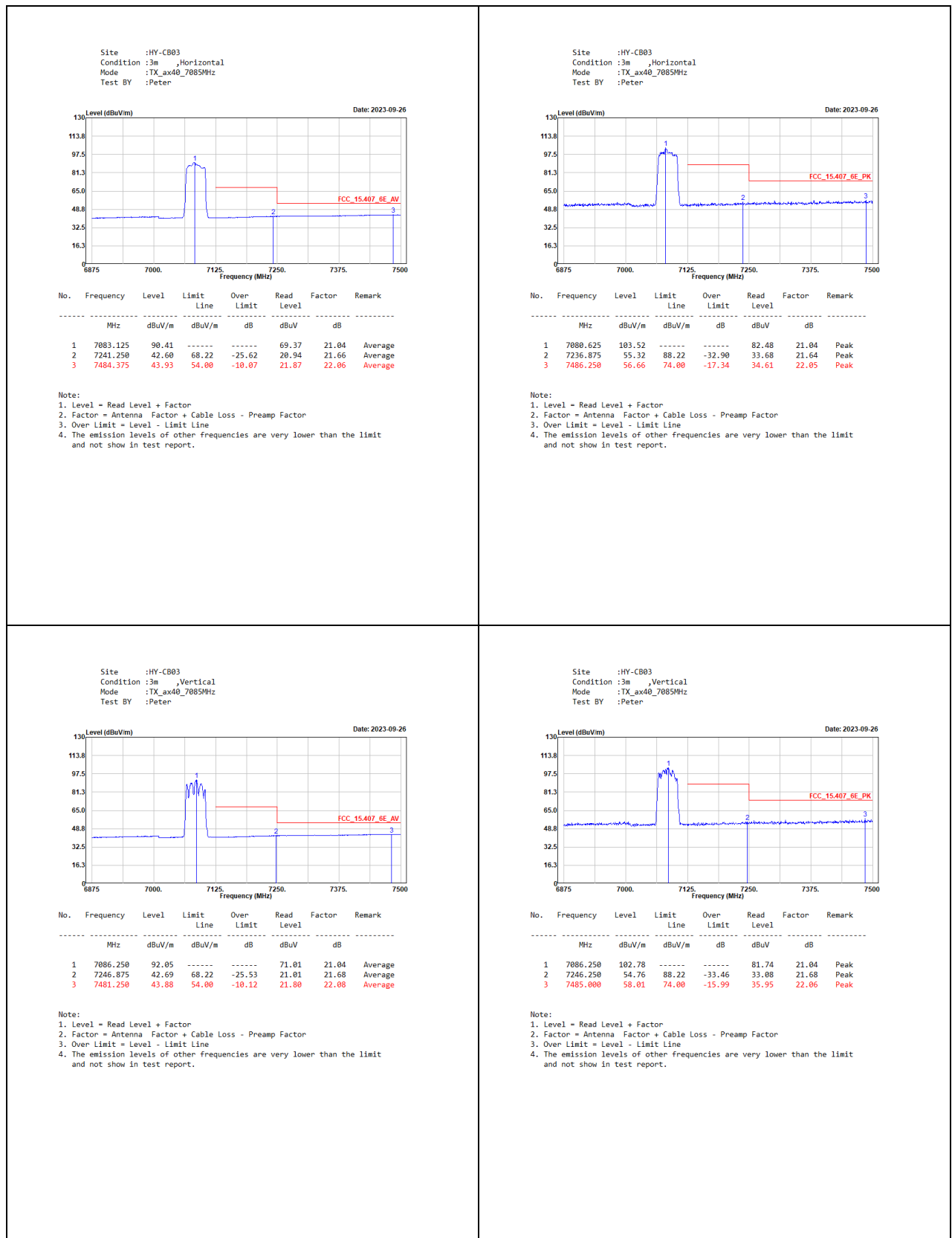






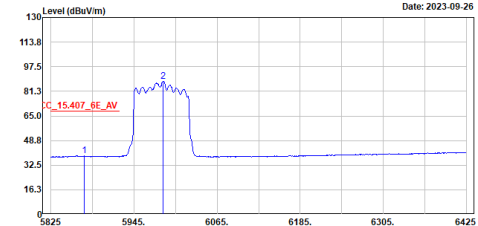






Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ax80_5985MHz
Test BY :Peter

Date: 2023-09-26

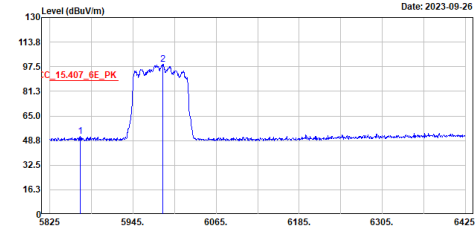


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5873.600	38.62	68.22	-29.60	20.63	17.99	Average
2	5987.000	87.73	-----	-----	69.95	17.78	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ax80_5985MHz
Test BY :Peter

Date: 2023-09-26

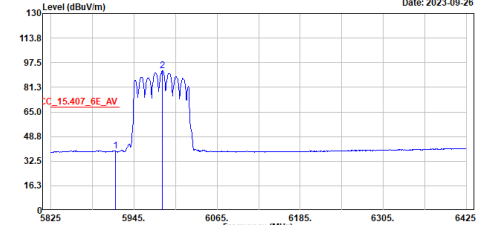


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5868.800	51.57	88.22	-36.65	33.58	17.99	Peak
2	5987.600	99.18	-----	-----	81.40	17.78	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ax80_5985MHz
Test BY :Peter

Date: 2023-09-26

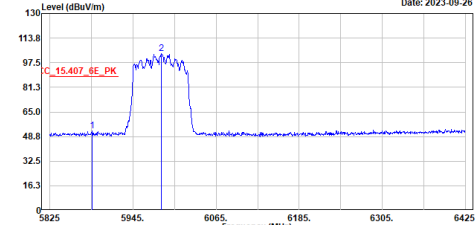


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5918.000	39.36	68.22	-28.86	21.46	17.90	Average
2	5985.800	92.38	-----	-----	74.60	17.78	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

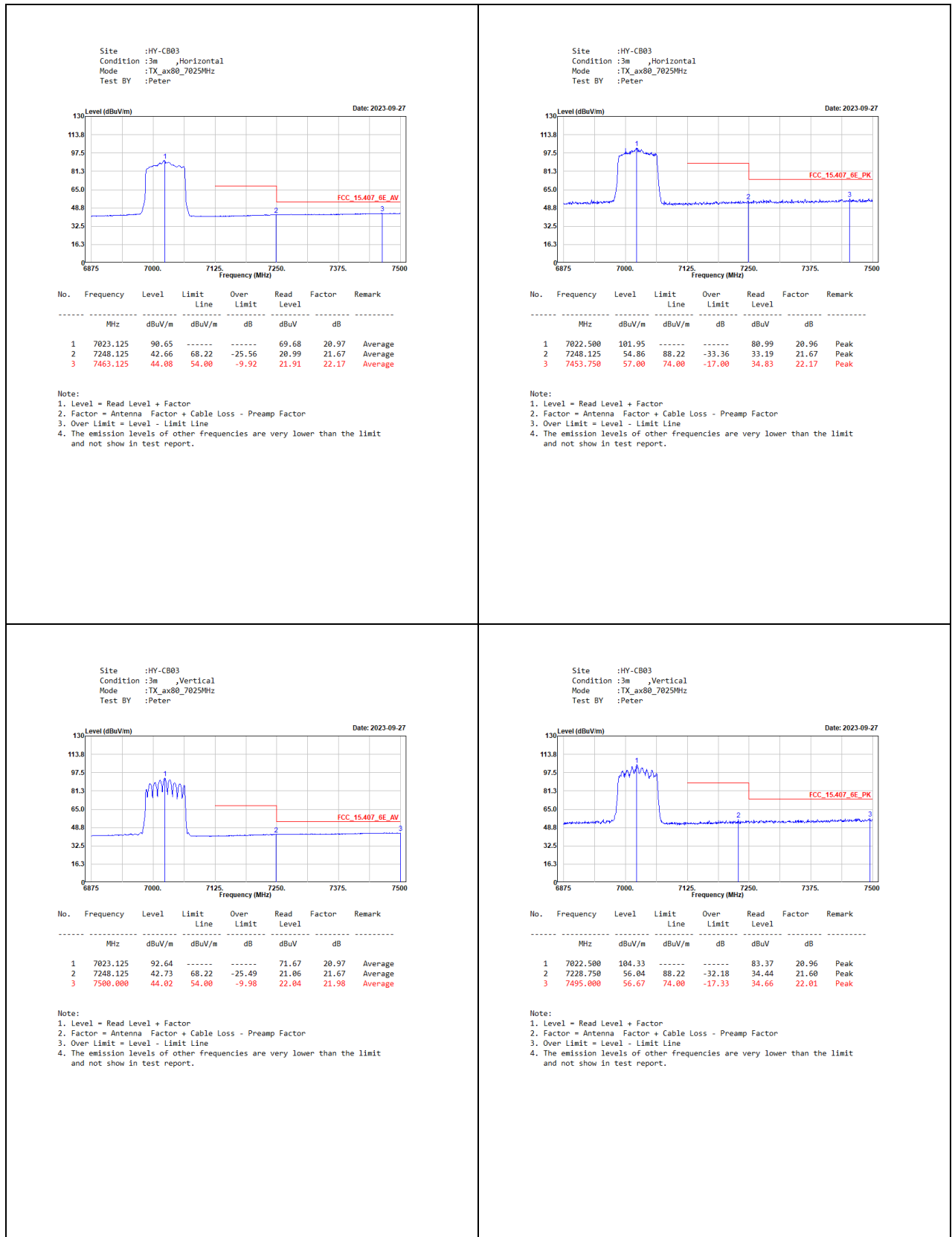
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ax80_5985MHz
Test BY :Peter

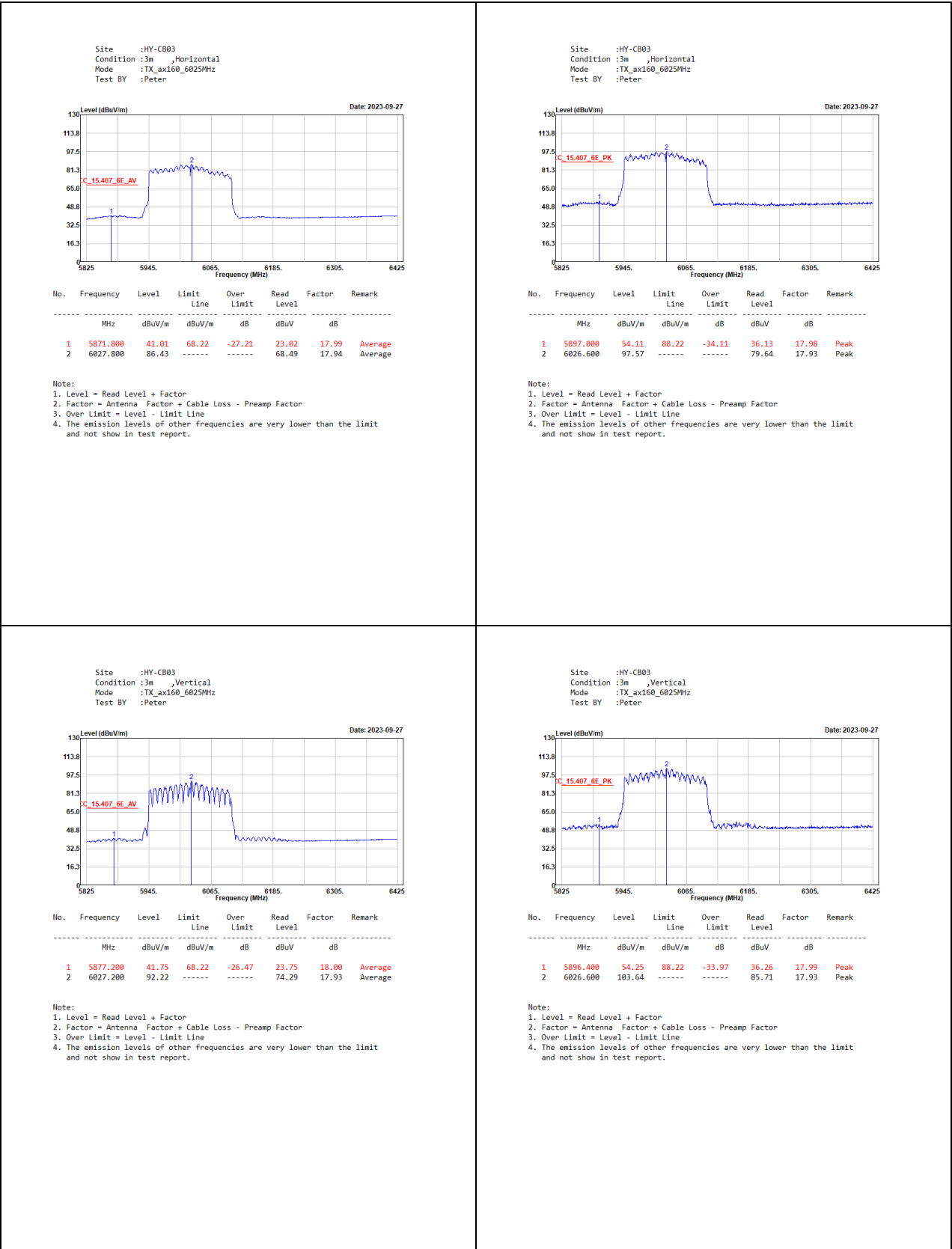
Date: 2023-09-26

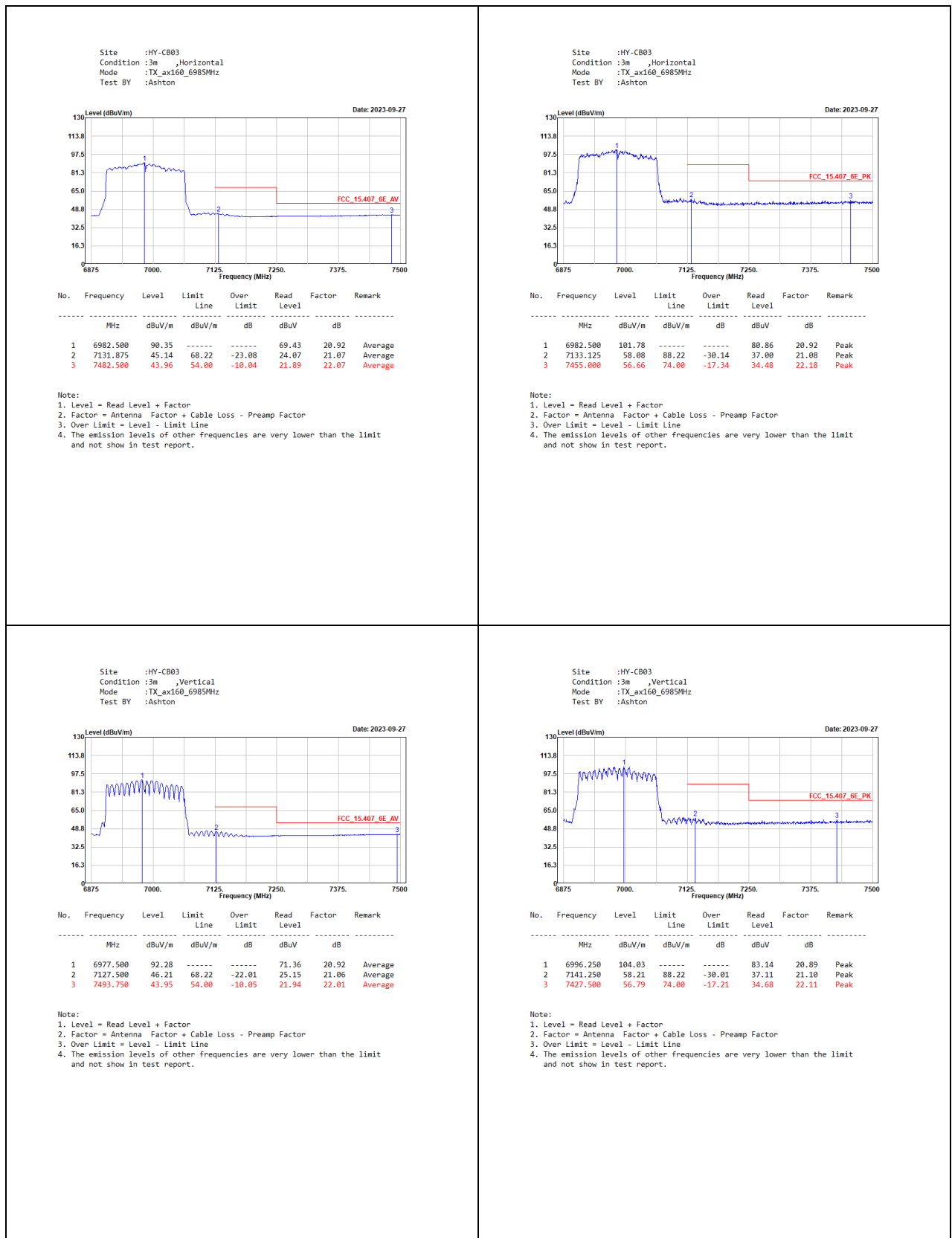


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	5885.600	52.40	88.22	-35.82	34.41	17.99	Peak
2	5985.800	103.32	-----	-----	85.54	17.78	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

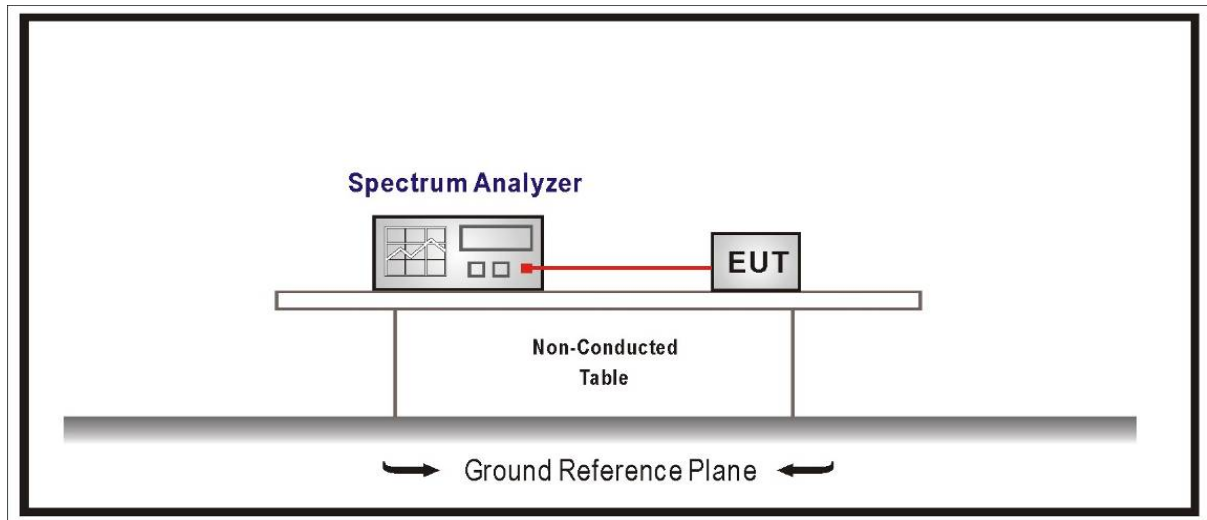






8. In-Band Emission (Mask)

8.1. Test Setup



8.2. Limits

Test Items	Frequencies (MHz)	(X) dBc *1
Emission Mask	At 1MHz outside of channel edge	20
	At one channel bandwidth from the channel center*2	28
	At one- and one-half times the channel bandwidth away from channel center*3	40
	More than one- and one-half times the channel bandwidth	40

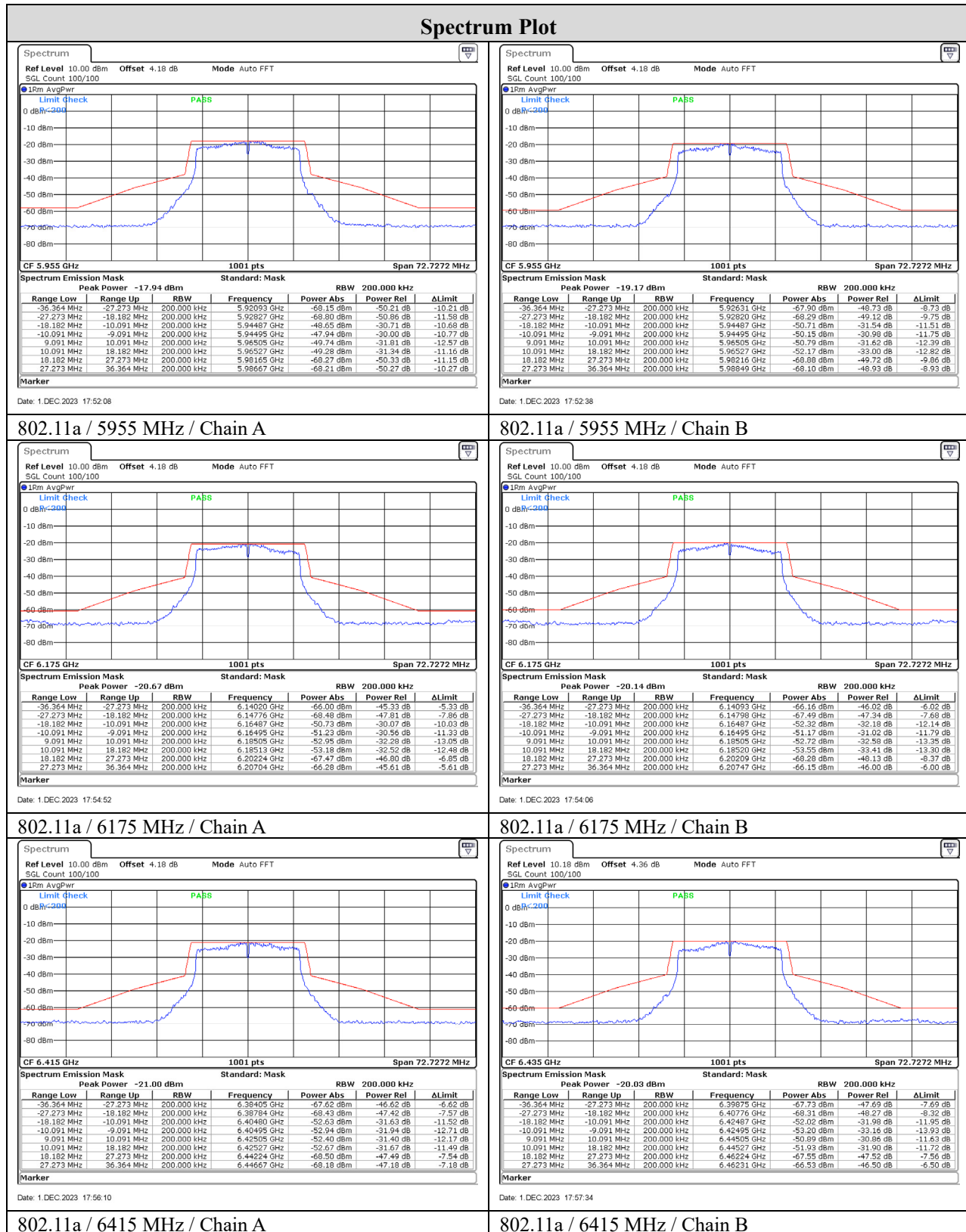
Remark:

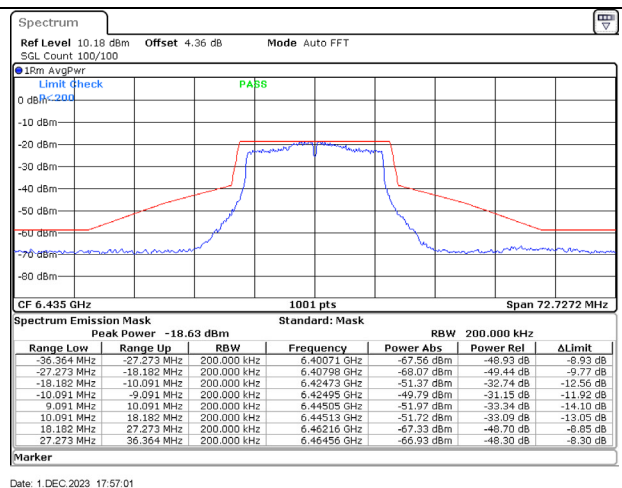
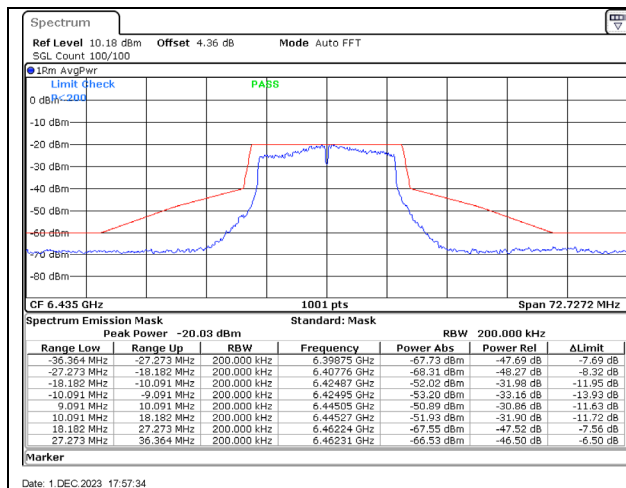
1. The power spectral density must be suppressed by “x” dB.
2. At frequencies between one megahertz outside an unlicensed device’s channel edge and one channel bandwidth from the center of the channel, the Limits must be linearly interpolated between 20dB and 28dB suppression.
3. At frequencies between one and one- and one-half times an unlicensed device’s channel bandwidth, the Limits must be linearly interpolated between 28dB and 40dB suppression.

8.3. Test Procedure

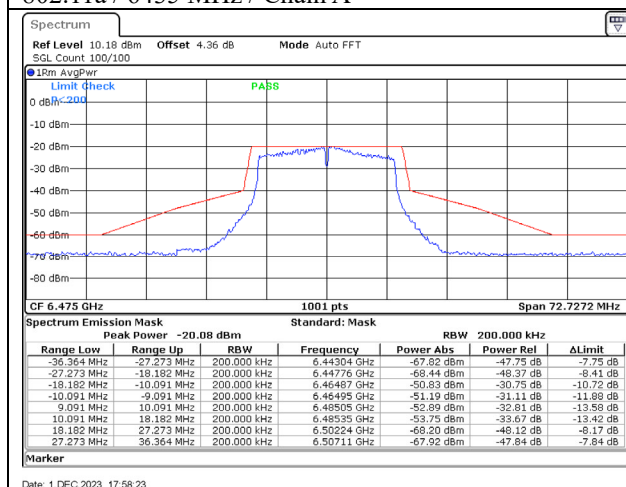
1. Connect output of the antenna port to a spectrum analyzer and adjust appropriate attenuation.
2. Measure the 26 dB EBW using the test procedure 12.4.1 of ANSI C63.10-2013. (Determine the channel edge.)
3. Measure the power spectral density (for emissions mask reference) using the following procedure:
 - (1) Set the span to encompass the entire 26 dB EBW of the signal.
 - (2) Set RBW = same RBW used for 26 dB EBW measurement.
 - (3) Set VBW $\geq 3 \times$ RBW
 - (4) Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
 - (5) Sweep time = auto.
 - (6) Detector = RMS (i.e., power averaging)
 - (7) Trace average at least 100 traces in power averaging (rms) mode.
 - (8) Use the peak search function on the instrument to find the peak of the spectrum.
4. Using the measuring equipment Limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:
 - (1) Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)
 - (2) Suppressed by 28 dB at one channel bandwidth from the channel center.
 - (3) Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.
5. Adjust the span to encompass the entire mask as necessary and clear trace.
6. Trace average at least 100 traces in power averaging (rms) mode.
7. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask.

8.4. Test Result of In-Band Emission (Mask)

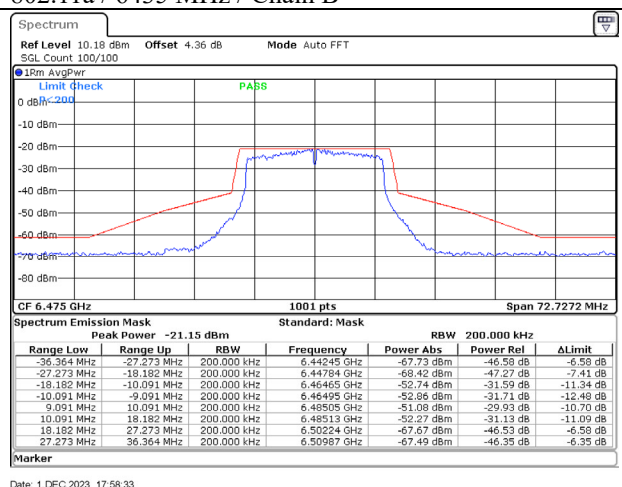




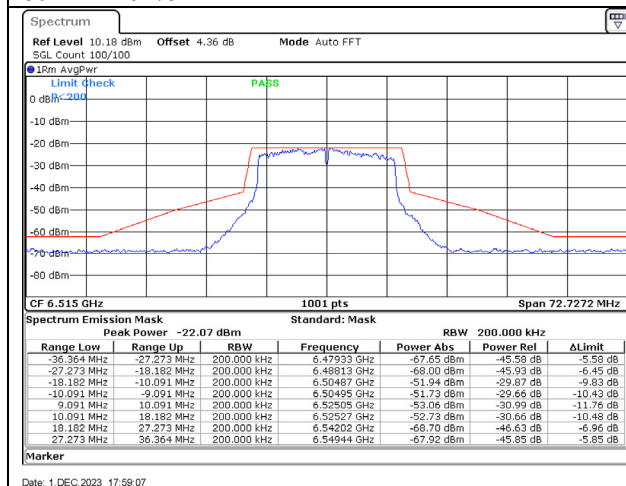
802.11a / 6435 MHz / Chain A



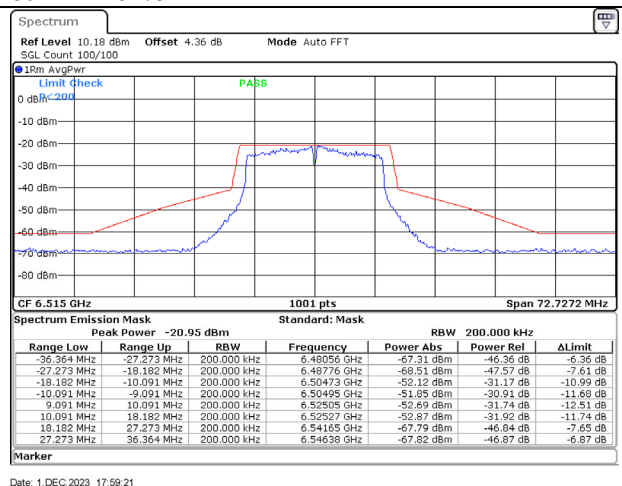
802.11a / 6435 MHz / Chain B



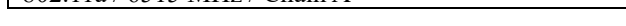
802.11a / 6475 MHz / Chain A



802.11a / 6475 MHz / Chain B



802.11a / 6515 MHz / Chain A



802.11a / 6515 MHz / Chain B

