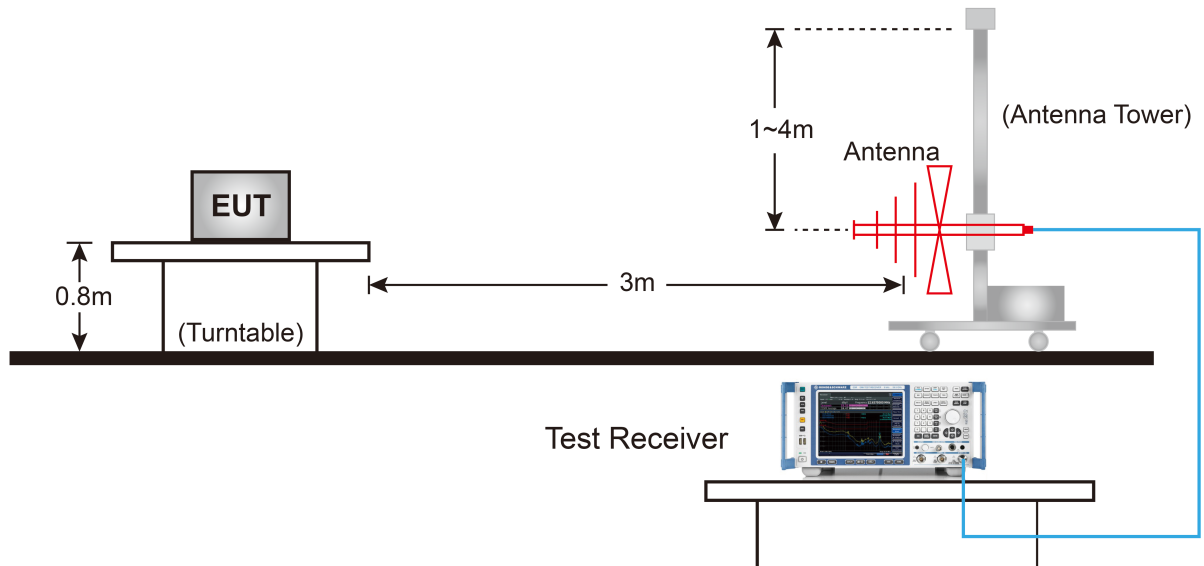
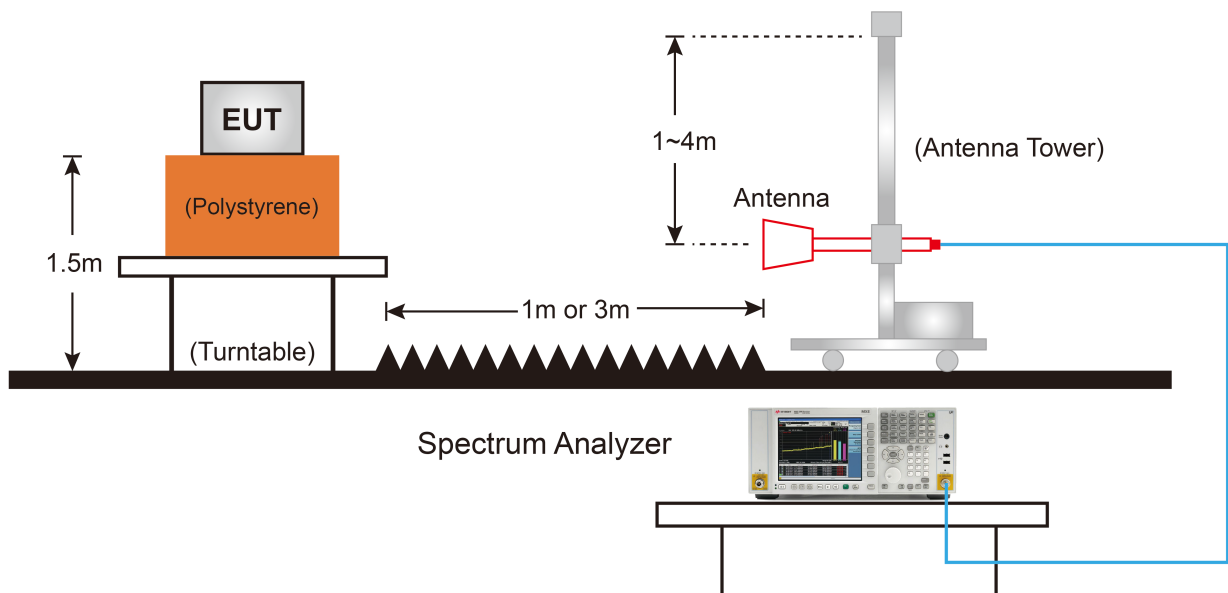


6.6.4. Test Setup

Below 1GHz Test Setup:

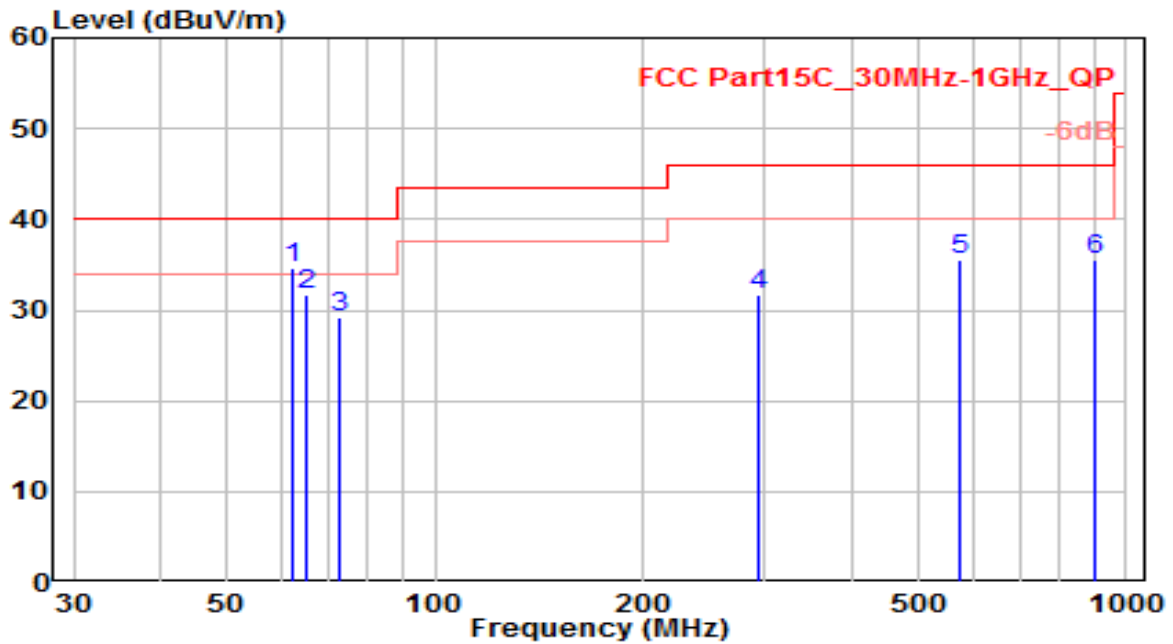


Above 1GHz Test Setup:



6.6.5. Test Result

EUT	AP351	Date of Test	2021-05-14
Factor	VULB 9162	Temp. / Humidity	25°C /62%
Polarity	Horizontal	Site / Test Engineer	AC1 / Hance
Test Mode	BLE_TX_1Mbps_CH 19	Test Voltage	By PoE

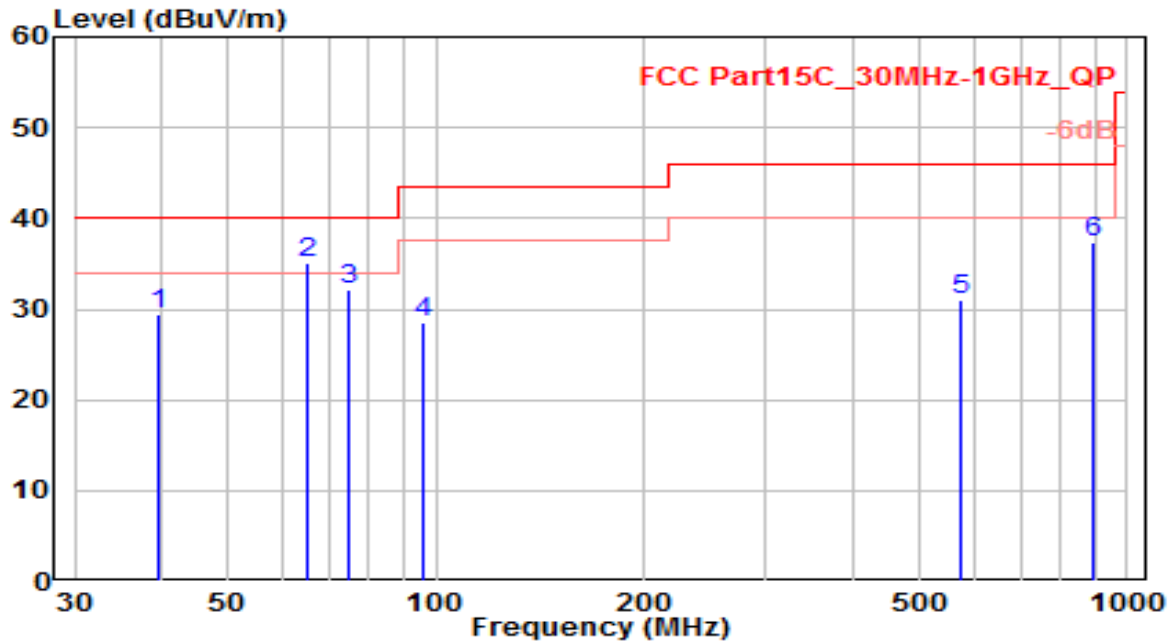


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	62.010	15.08	19.56	34.64	-5.36	40.00	100	25	QP
2		64.920	13.00	18.62	31.62	-8.38	40.00	140	100	QP
3		72.680	12.90	16.27	29.17	-10.83	40.00	100	30	QP
4		293.840	10.39	21.36	31.75	-14.25	46.00	100	120	QP
5		576.110	8.20	27.33	35.52	-10.48	46.00	110	360	QP
6		897.180	3.76	31.75	35.51	-10.49	46.00	110	160	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-14
Factor	VULB 9162	Temp. / Humidity	25°C /62%
Polarity	Vertical	Site / Test Engineer	AC1 / Hance
Test Mode	BLE_TX_1Mbps_CH 19	Test Voltage	By PoE

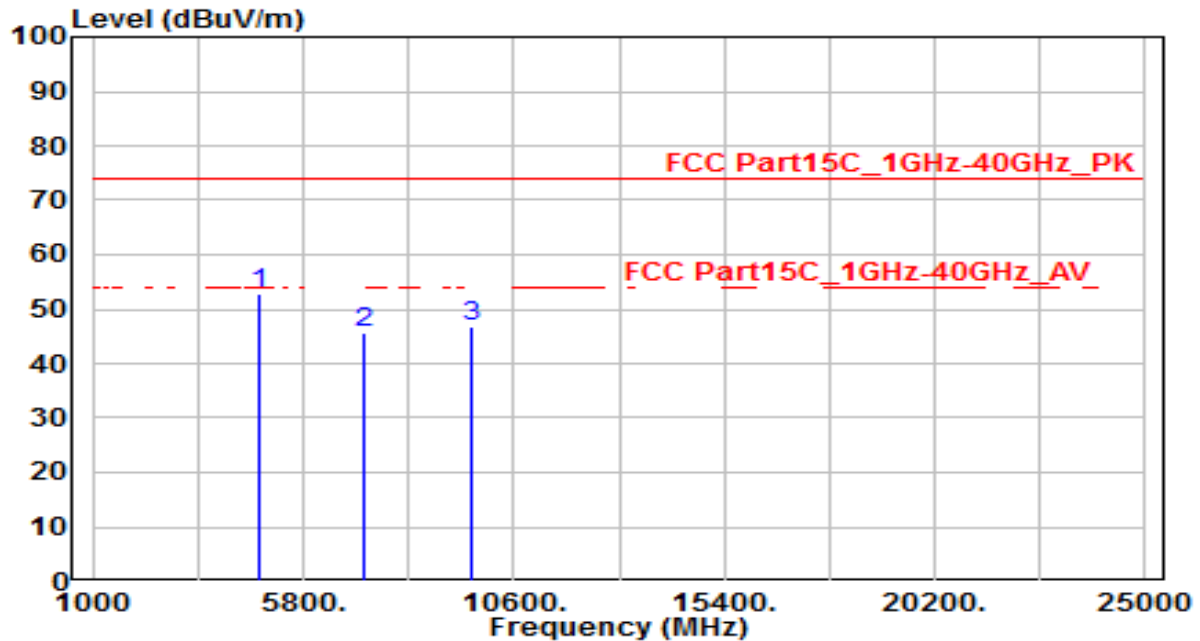


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	39.700	8.46	20.96	29.41	-10.59	40.00	100	20	QP
2	* 64.920	16.50	18.62	35.12	-4.88	40.00	100	240	QP
3	74.620	16.44	15.76	32.20	-7.80	40.00	100	160	QP
4	95.960	10.28	18.25	28.53	-14.97	43.50	110	250	QP
5	576.110	3.68	27.33	31.01	-14.99	46.00	100	290	QP
6	896.210	5.65	31.75	37.40	-8.60	46.00	120	0	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_1Mbps_CH 0	Test Voltage	By PoE

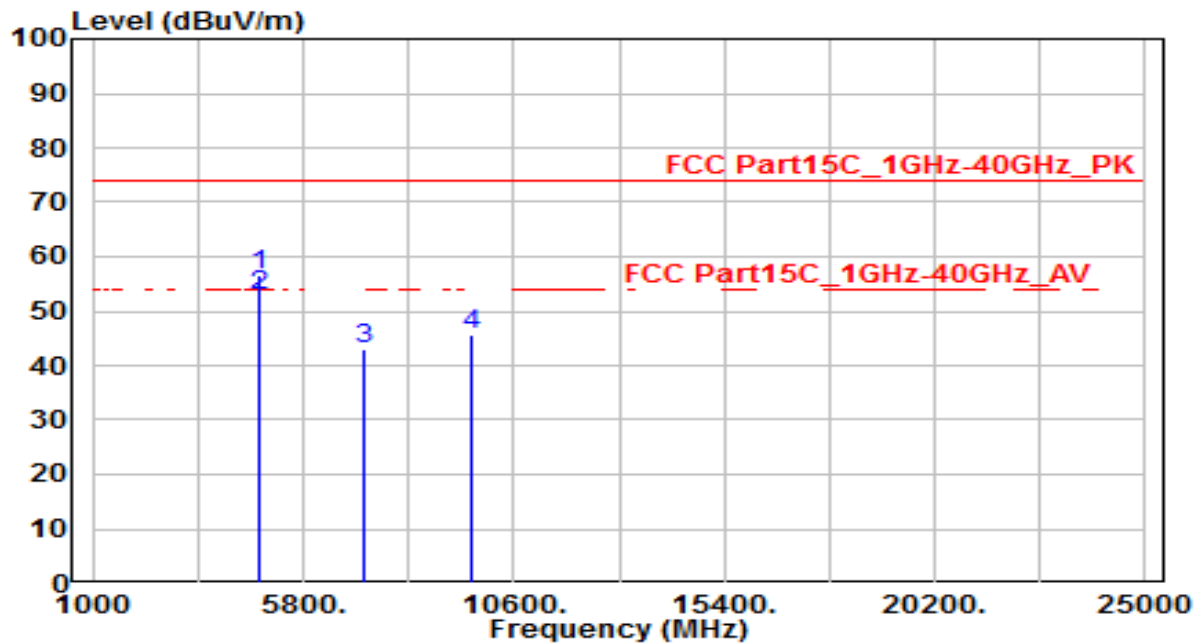


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	4804.000	49.31	3.60	52.91	-21.09	74.00	150	360	Peak
2		7206.000	34.06	11.71	45.77	-28.23	74.00	150	360	Peak
3		9608.000	30.72	15.90	46.62	-27.38	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_1Mbps_CH 0	Test Voltage	By PoE

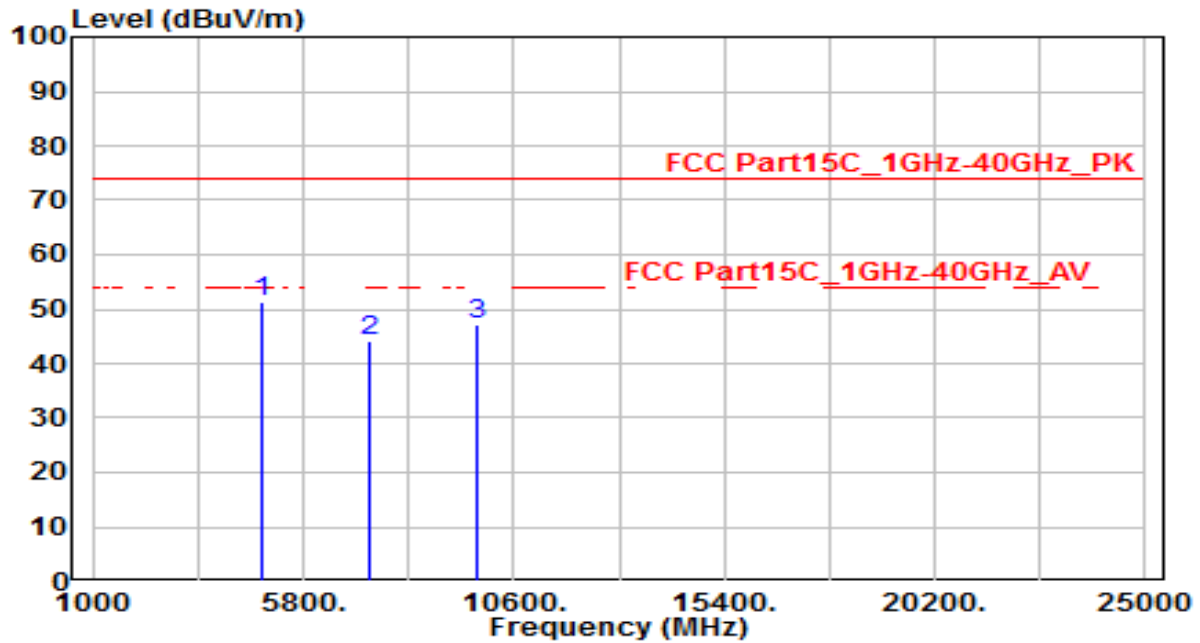


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	4804.000	53.04	3.60	56.63	-17.37	74.00	235	170	Peak
2	*	4804.000	49.08	3.60	52.68	-1.32	54.00	235	170	Average
3		7206.000	31.20	11.71	42.91	-31.09	74.00	150	360	Peak
4		9608.000	29.64	15.90	45.54	-28.46	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_1Mbps_CH 19	Test Voltage	By PoE

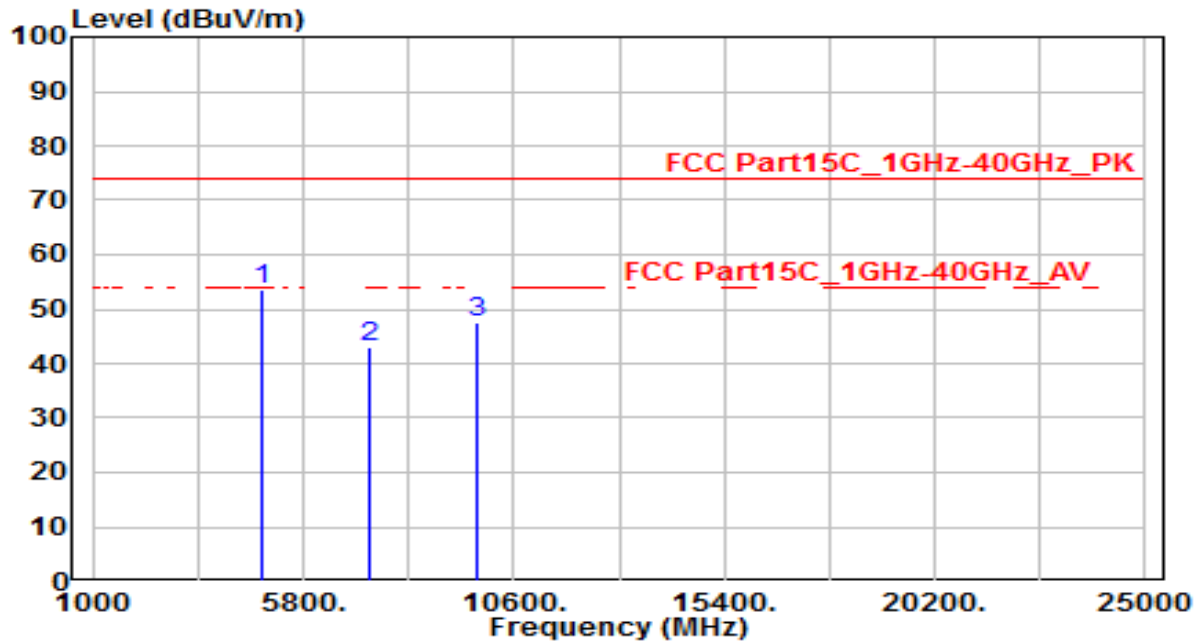


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	4880.000	47.67	3.73	51.41	-22.59	74.00	150	360	Peak
2		7320.000	32.06	12.22	44.28	-29.72	74.00	150	360	Peak
3		9760.000	31.08	16.16	47.24	-26.76	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_1Mbps_CH 19	Test Voltage	By PoE

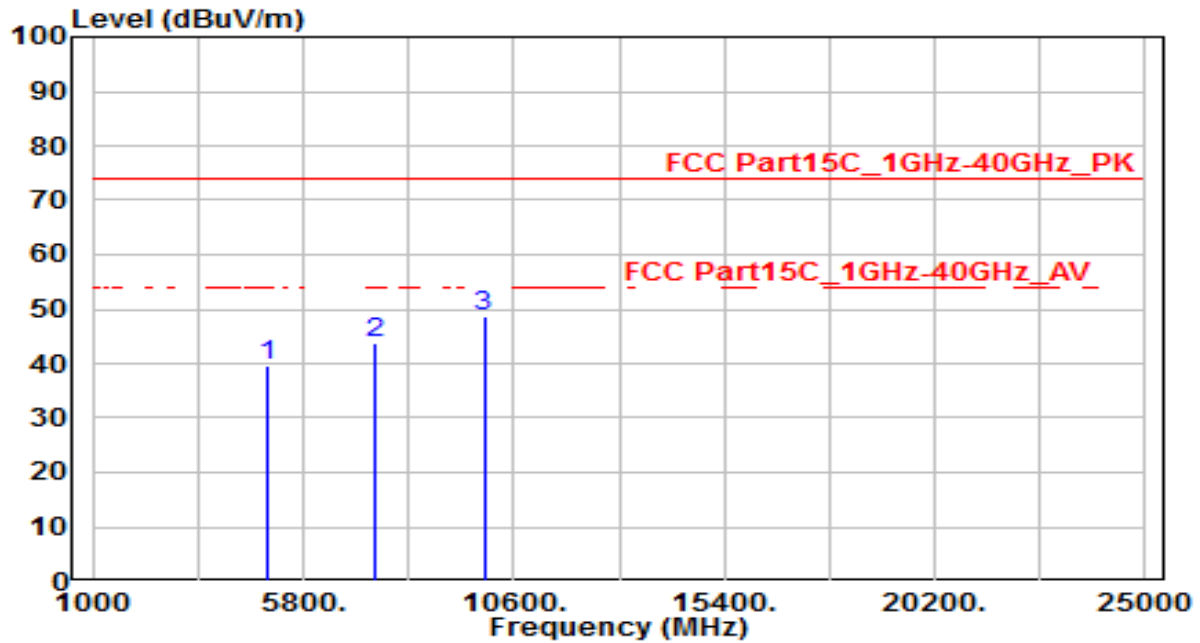


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	4880.000	49.73	3.73	53.47	-20.53	74.00	150	360	Peak
2		7320.000	30.77	12.22	42.99	-31.01	74.00	150	360	Peak
3		9760.000	31.28	16.16	47.43	-26.57	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_1Mbps_CH 39	Test Voltage	By PoE

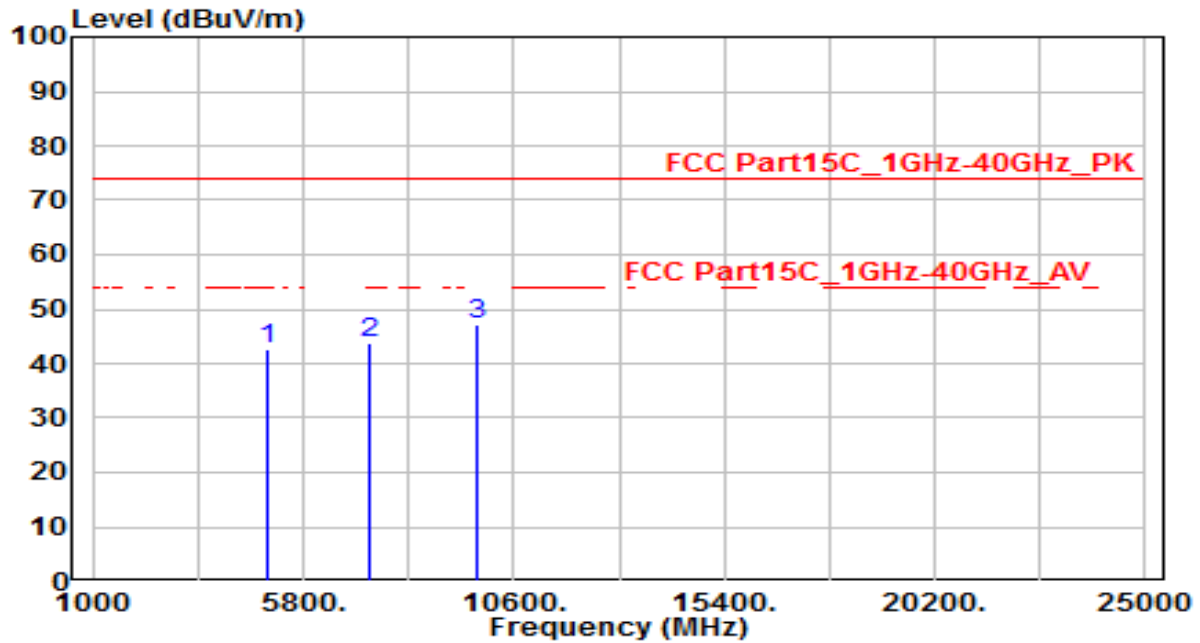


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	4960.000	35.65	3.88	39.53	-34.47	74.00	150	360	Peak
2	7440.000	30.98	12.75	43.73	-30.27	74.00	150	360	Peak
3	* 9920.000	32.08	16.43	48.51	-25.49	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_1Mbps_CH 39	Test Voltage	By PoE

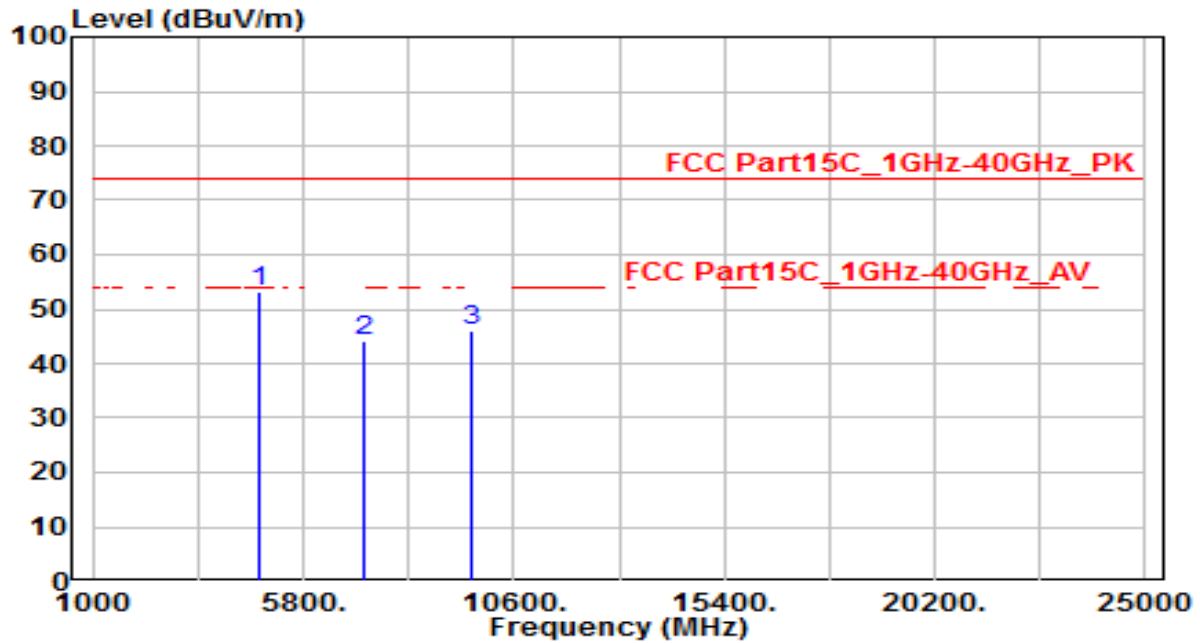


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	4960.000	38.77	3.88	42.65	-31.35	74.00	150	360	Peak
2	7320.000	31.64	12.22	43.86	-30.14	74.00	150	360	Peak
3	* 9760.000	30.99	16.16	47.15	-26.85	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_2Mbps_CH 0	Test Voltage	By PoE

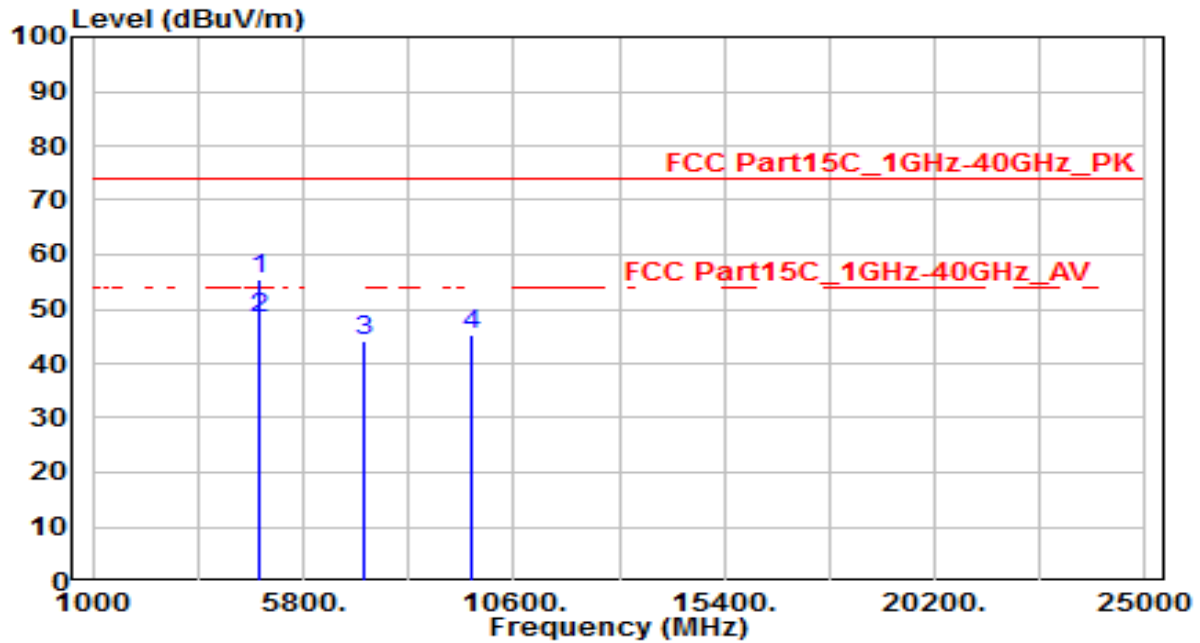


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	4804.000	49.72	3.60	53.32	-20.68	74.00	150	360	Peak
2		7206.000	32.38	11.71	44.10	-29.90	74.00	150	360	Peak
3		9608.000	30.23	15.90	46.13	-27.87	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_2Mbps_CH 0	Test Voltage	By PoE

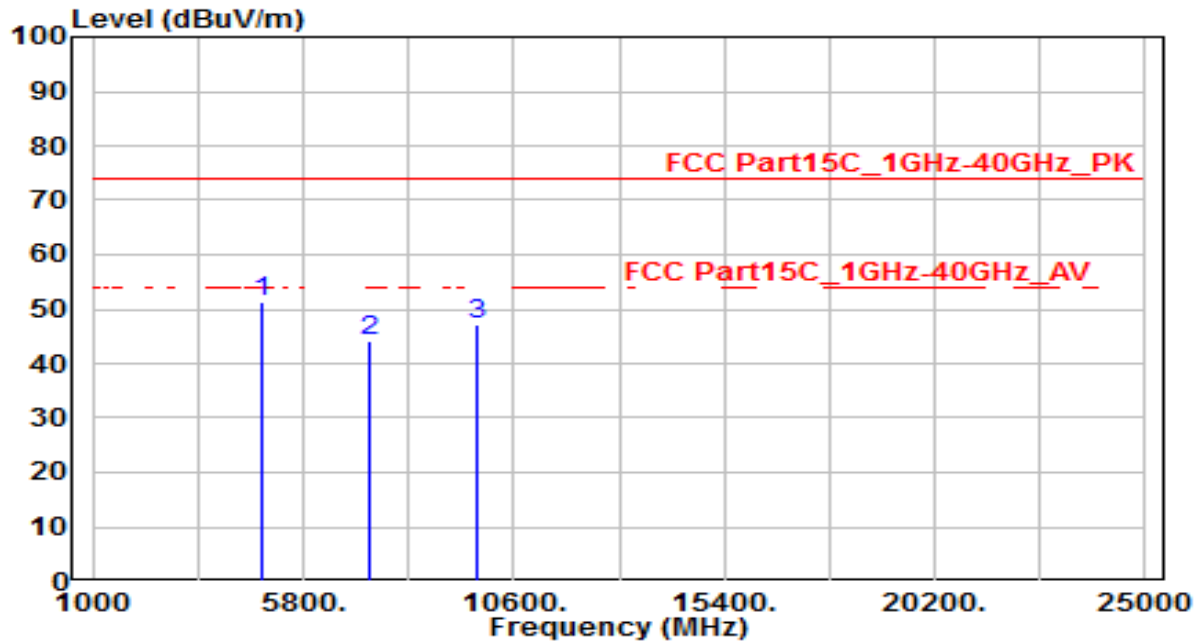


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	4804.000	52.03	3.60	55.63	-18.37	74.00	235	170	Peak
2	*	4804.000	44.55	3.60	48.15	-5.85	54.00	235	170	Average
3		7206.000	32.42	11.71	44.13	-29.87	74.00	150	360	Peak
4		9608.000	29.45	15.90	45.36	-28.64	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_2Mbps_CH 19	Test Voltage	By PoE

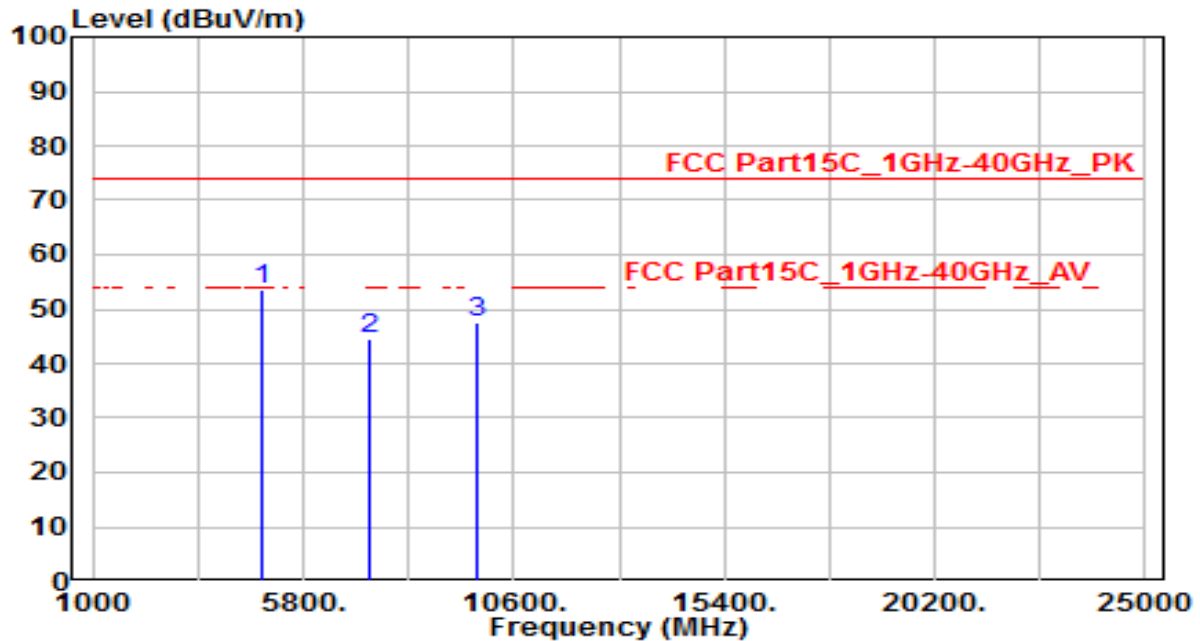


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	4880.000	47.52	3.73	51.26	-22.74	74.00	150	360	Peak
2		7320.000	31.99	12.22	44.21	-29.79	74.00	150	360	Peak
3		9760.000	30.92	16.16	47.08	-26.92	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_2Mbps_CH 19	Test Voltage	By PoE

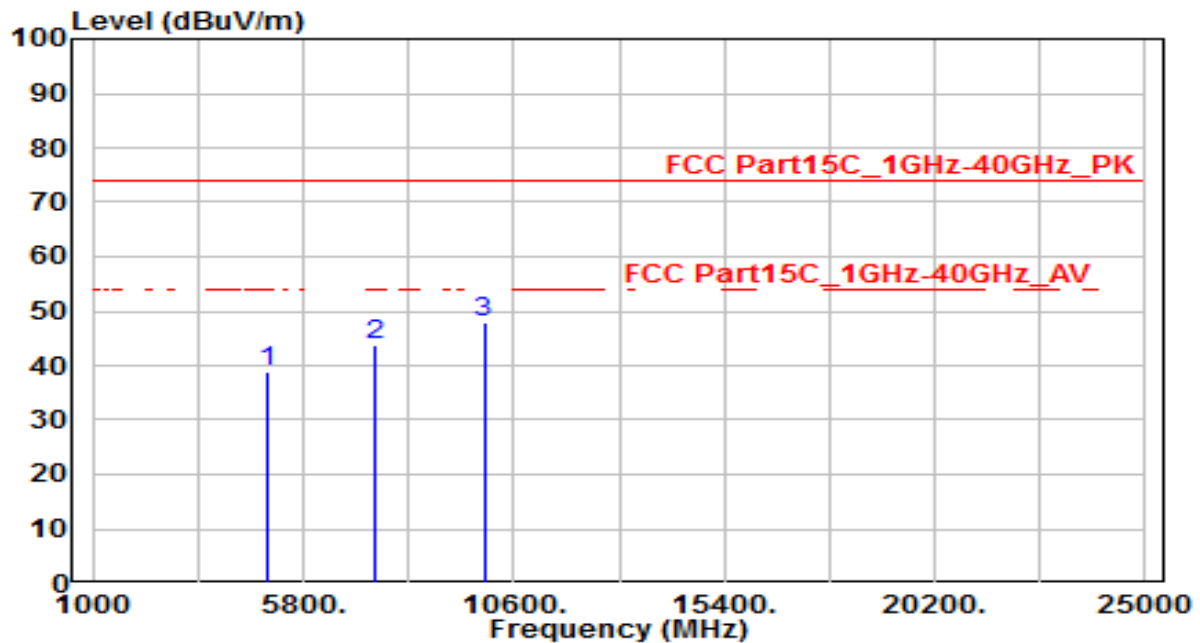


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	4880.000	49.83	3.73	53.57	-20.43	74.00	150	360	Peak
2		7320.000	32.44	12.22	44.66	-29.34	74.00	150	360	Peak
3		9760.000	31.55	16.16	47.70	-26.30	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Horizontal	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_2Mbps_CH 39	Test Voltage	By PoE

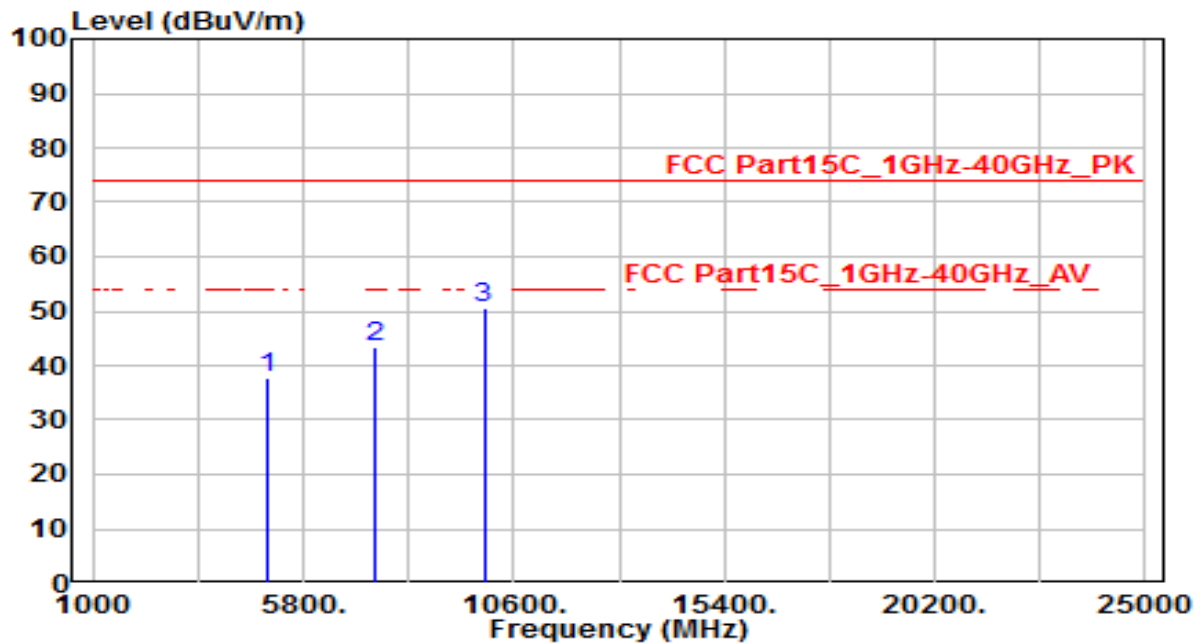


No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	4960.000	34.96	3.88	38.84	-35.16	74.00	150	360	Peak
2	7440.000	31.04	12.75	43.79	-30.21	74.00	150	360	Peak
3	* 9920.000	31.68	16.43	48.11	-25.89	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

EUT	AP351	Date of Test	2021-05-18
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	24°C /64%
Polarity	Vertical	Site / Test Engineer	AC1 / Kaunaz
Test Mode	BLE_TX_2Mbps_CH 39	Test Voltage	By PoE



No	Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	4960.000	33.91	3.88	37.79	-36.21	74.00	150	360	Peak
2	7440.000	30.60	12.75	43.35	-30.65	74.00	150	360	Peak
3	* 9920.000	34.00	16.43	50.43	-23.57	74.00	150	360	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB/m)+ Cable Loss (dB) – Preamplifier(dB).
3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

6.7. Radiated Restricted Band Edge Measurement

6.7.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.7.2.Test Procedure Used

ANSI C63.10-2013 - Section 6.3

ANSI C63.10-2013 - Section 6.6

ANSI C63.10-2013 - Section 11.13

6.7.3.Test Setting

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces