7.8. Radiated Spurious Emission Measurement

7.8.1. Test Limit

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 [V/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

7.8.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.12.1

7.8.3. Test Setting

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3 * RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold

7. Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

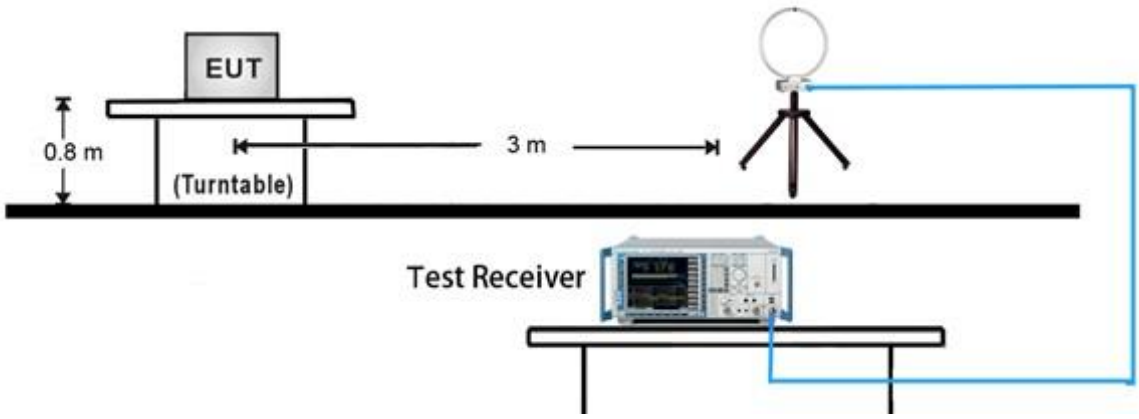
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

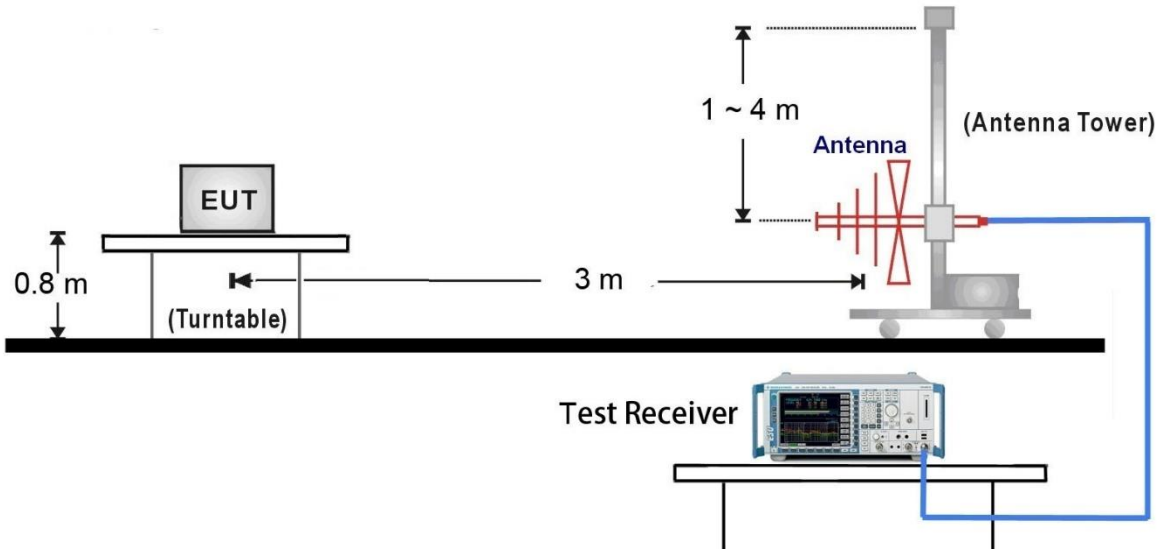
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW ≥ 1/T
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). 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

7.8.4. Test Setup

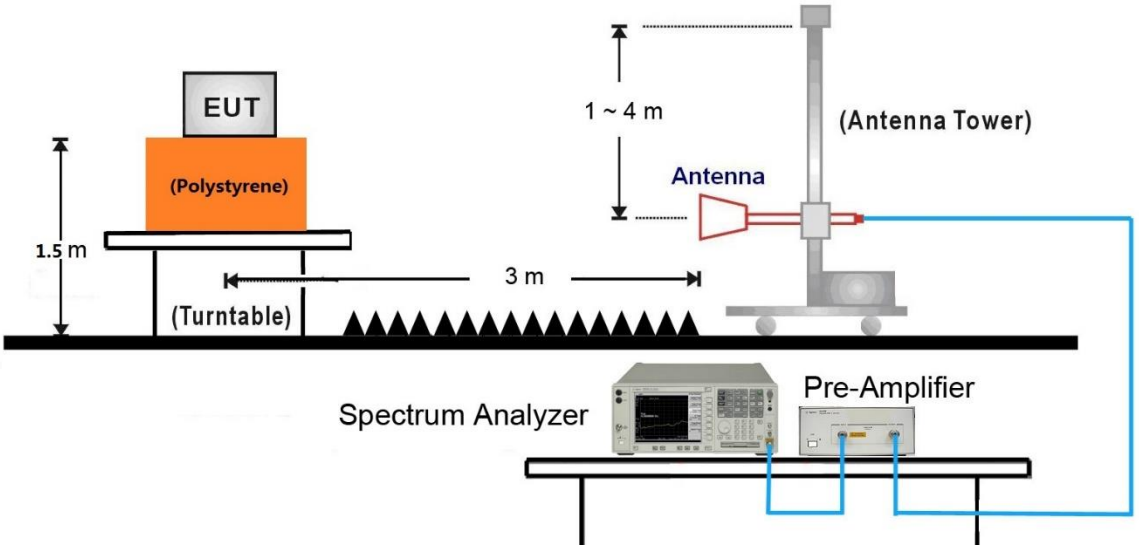
9kHz ~ 30MHz Test Setup:



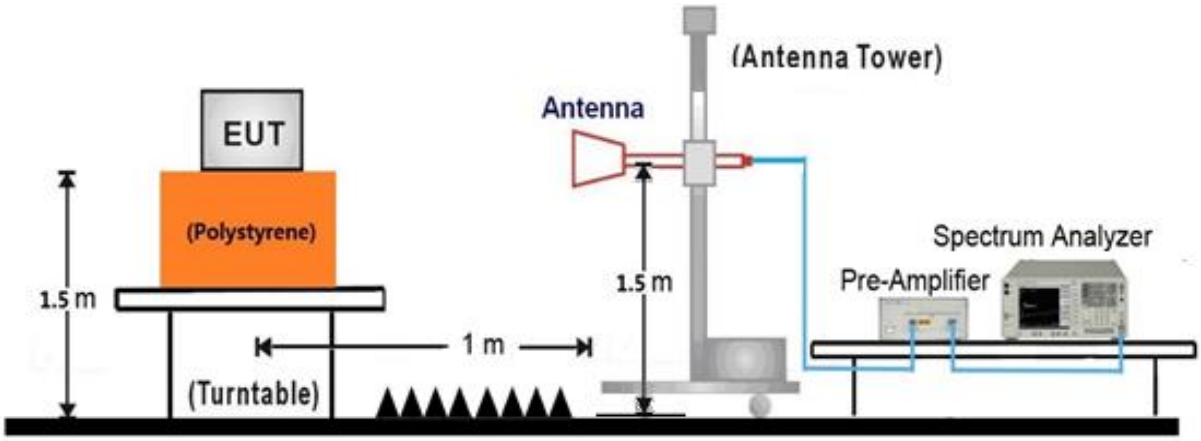
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:

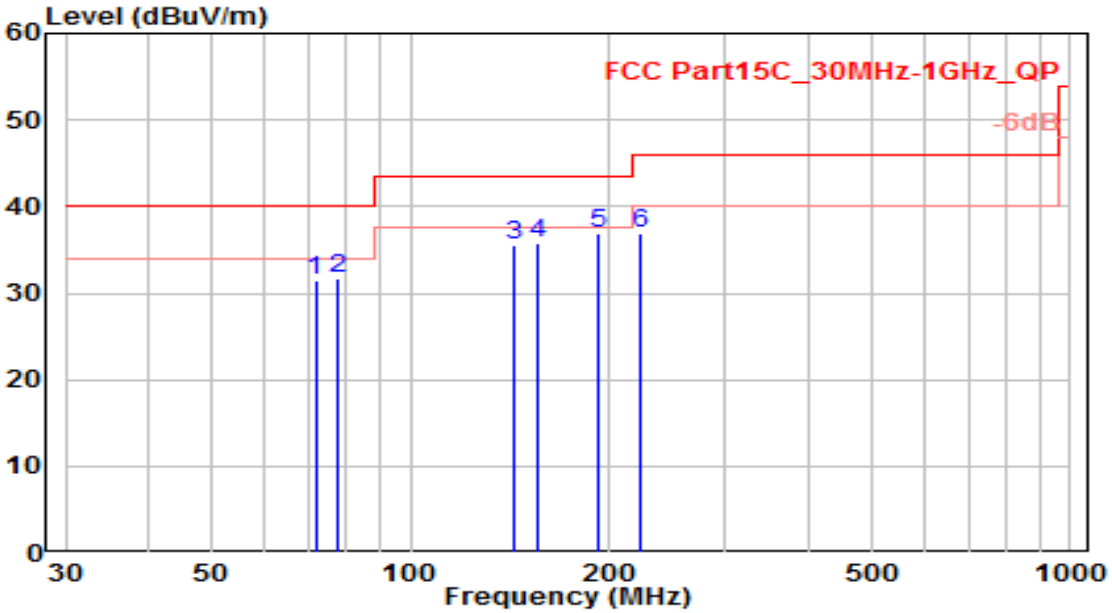


18GHz ~40GHz Test Setup:



7.8.5. Test Result

EUT	BT Transponder	Date of Test	2020-12-03
Factor	VULB 9162	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 39	Test Voltage	By Notebook PC

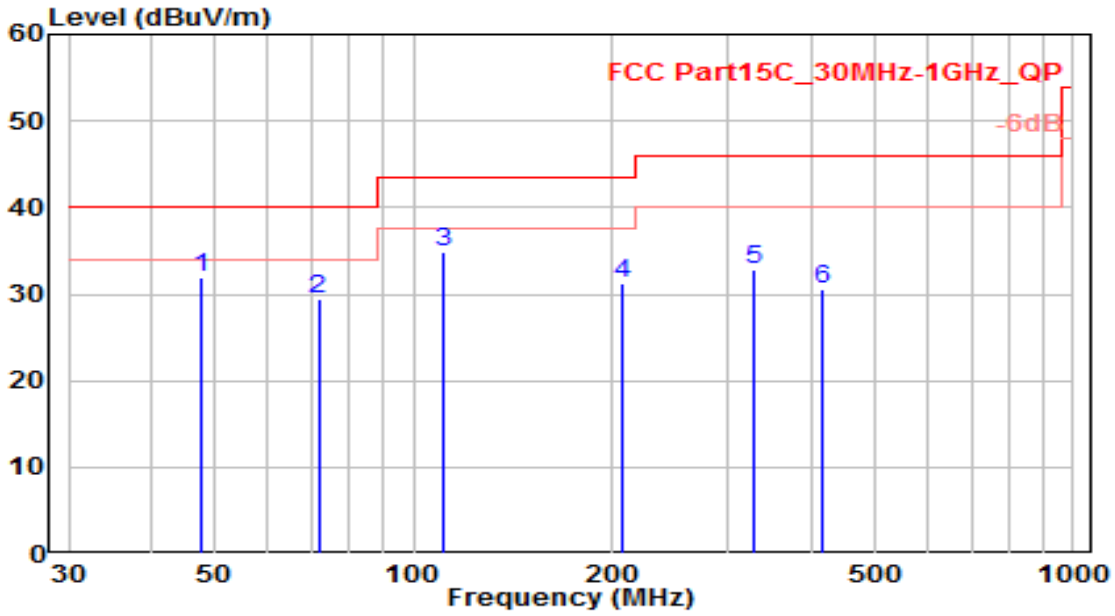


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		71.710	14.98	16.52	31.50	-8.50	40.00	100	100	QP
2		77.530	16.71	15.00	31.71	-8.29	40.00	100	0	QP
3		143.490	19.60	16.01	35.61	-7.89	43.50	100	200	QP
4		156.100	19.50	16.19	35.68	-7.82	43.50	100	30	QP
5	*	191.990	17.83	18.98	36.81	-6.69	43.50	100	150	QP
6		224.000	17.54	19.40	36.94	-9.06	46.00	100	220	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-03
Factor	VULB 9162	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 39	Test Voltage	By Notebook PC

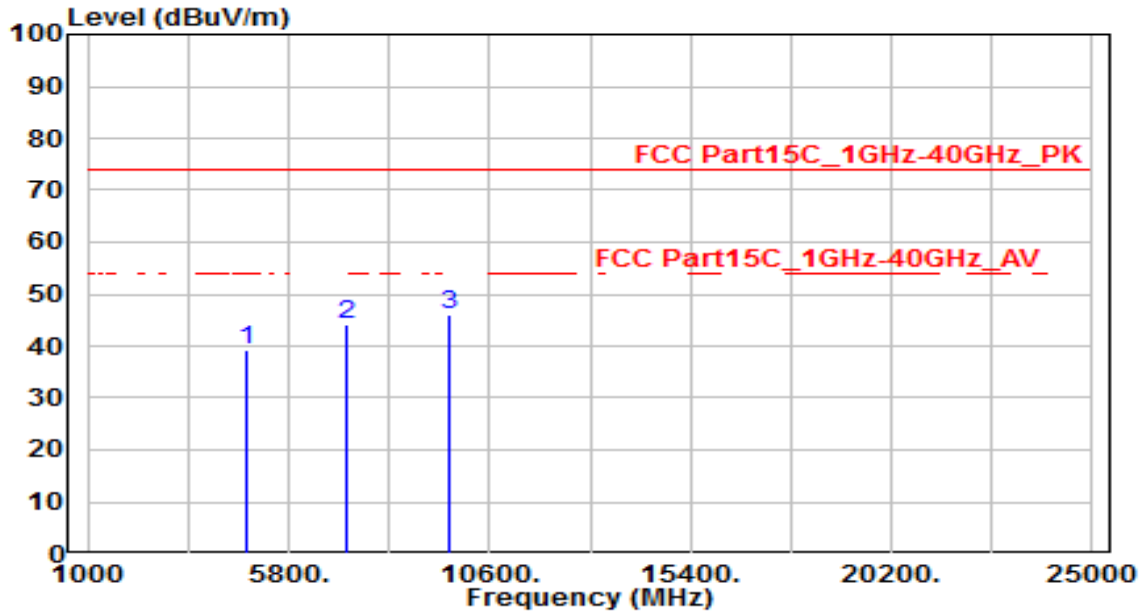


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	47.460	9.97	21.93	31.90	-8.10	40.00	100	0	QP
2		71.710	12.81	16.52	29.34	-10.66	40.00	100	220	QP
3		110.510	16.16	18.64	34.80	-8.70	43.50	100	150	QP
4		206.540	12.23	18.95	31.18	-12.32	43.50	100	10	QP
5		327.790	10.44	22.46	32.90	-13.10	46.00	100	35	QP
6		415.090	6.33	24.31	30.64	-15.36	46.00	100	75	QP

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 0	Test Voltage	By Notebook PC

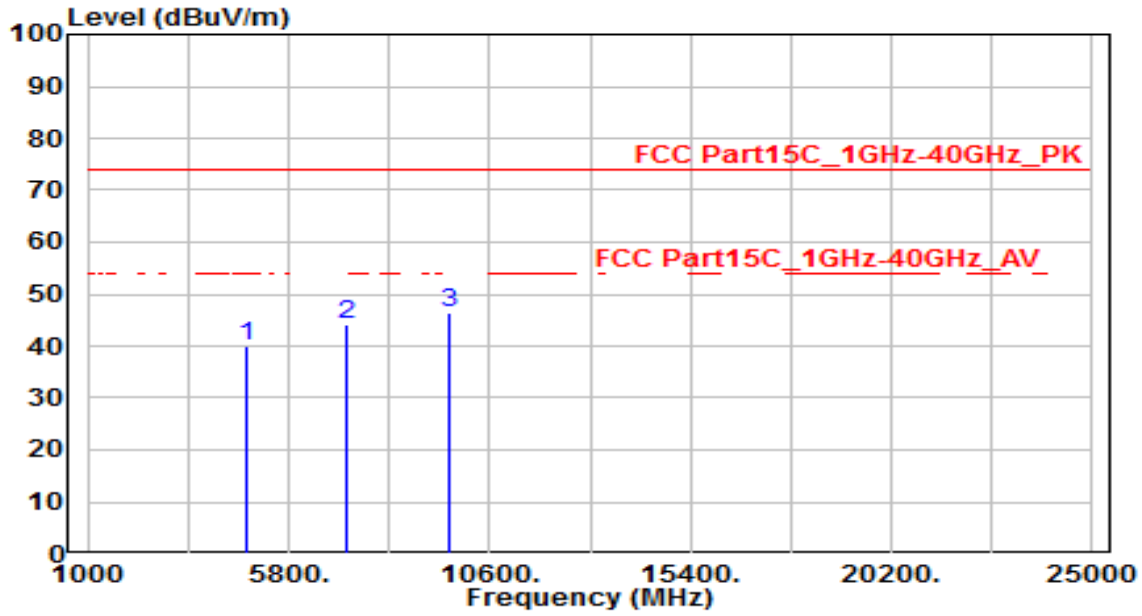


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4804.000	35.80	3.28	39.08	-34.92	74.00	150	0	Peak
2		7206.000	33.24	10.88	44.12	-29.88	74.00	150	0	Peak
3	*	9608.000	31.25	14.62	45.87	-28.13	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 0	Test Voltage	By Notebook PC

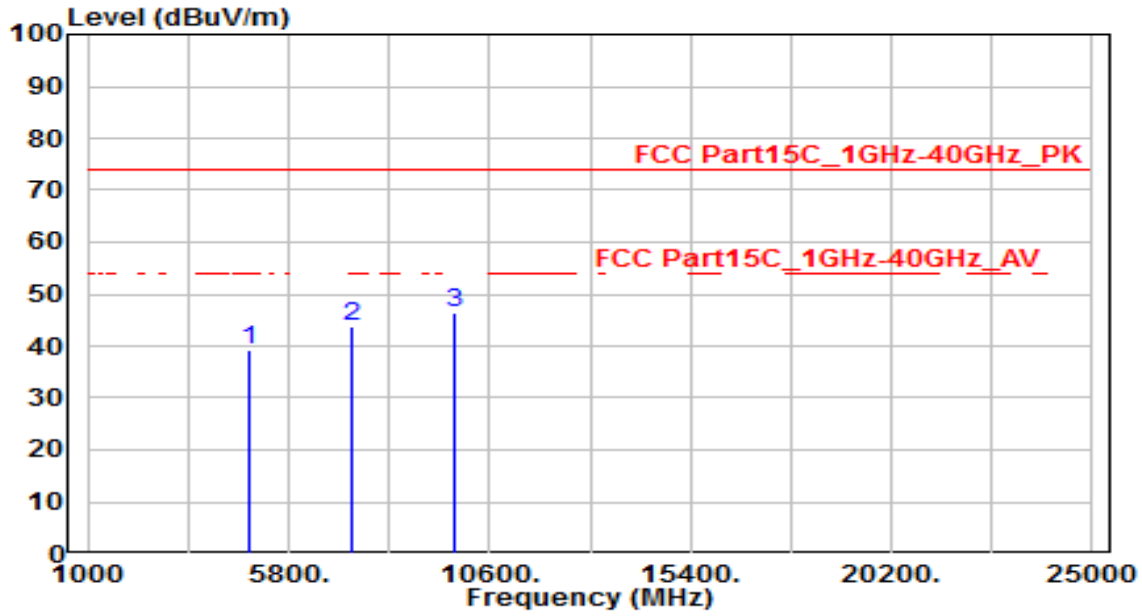


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4804.000	36.82	3.28	40.10	-33.90	74.00	150	0	Peak
2		7206.000	33.44	10.88	44.32	-29.68	74.00	150	0	Peak
3	*	9608.000	31.61	14.62	46.23	-27.77	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 39	Test Voltage	By Notebook PC

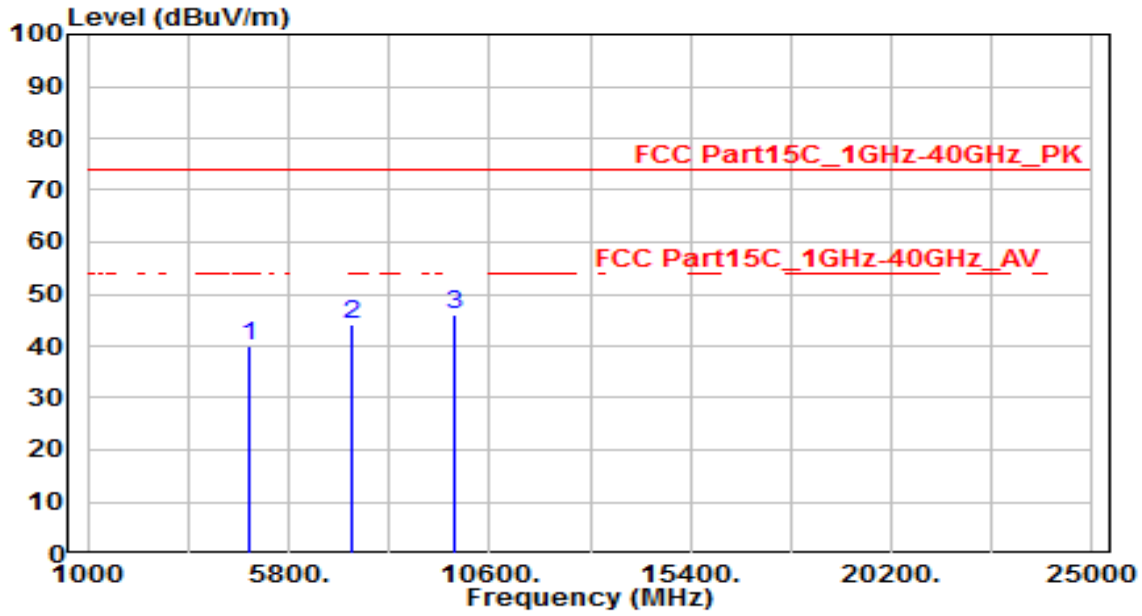


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4882.000	35.71	3.47	39.18	-34.82	74.00	150	0	Peak
2		7323.000	32.42	11.21	43.64	-30.36	74.00	150	0	Peak
3	*	9764.000	31.43	14.92	46.34	-27.66	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 39	Test Voltage	By Notebook PC

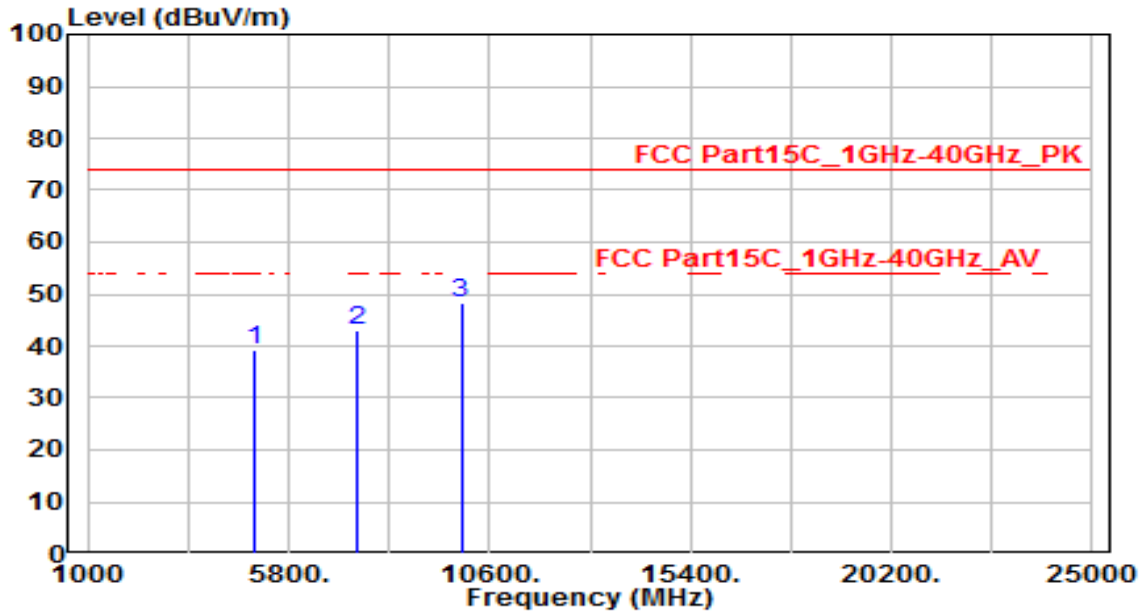


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4882.000	36.48	3.47	39.95	-34.05	74.00	150	0	Peak
2		7323.000	32.84	11.21	44.06	-29.94	74.00	150	0	Peak
3	*	9764.000	31.30	14.92	46.22	-27.78	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 78	Test Voltage	By Notebook PC

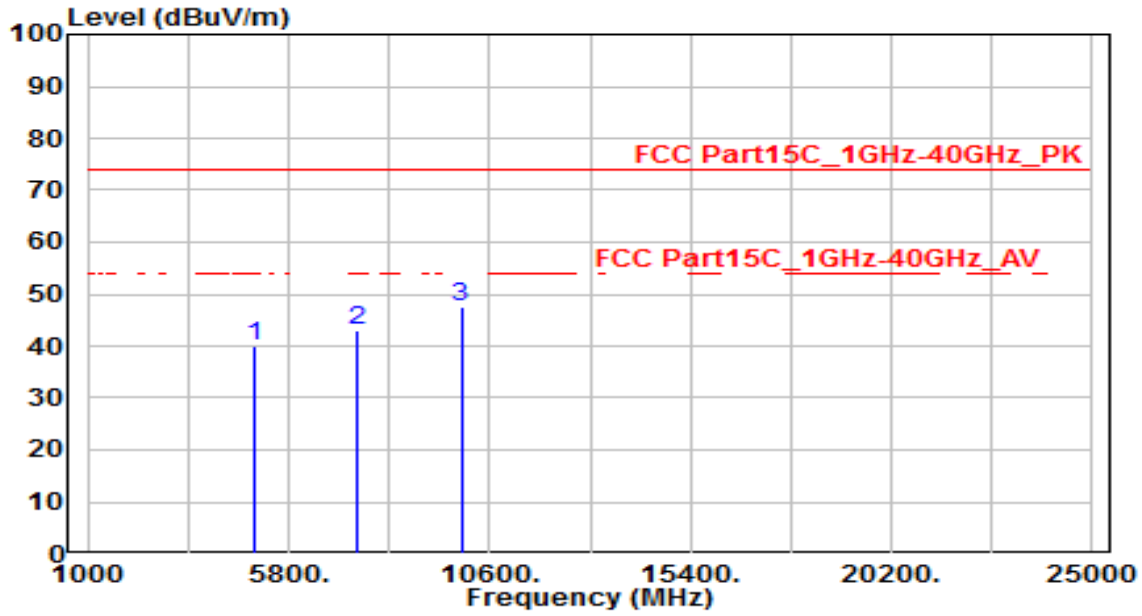


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4960.000	35.46	3.65	39.11	-34.89	74.00	150	0	Peak
2		7440.000	31.39	11.55	42.94	-31.06	74.00	150	0	Peak
3	*	9920.000	33.06	15.21	48.27	-25.73	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 78	Test Voltage	By Notebook PC

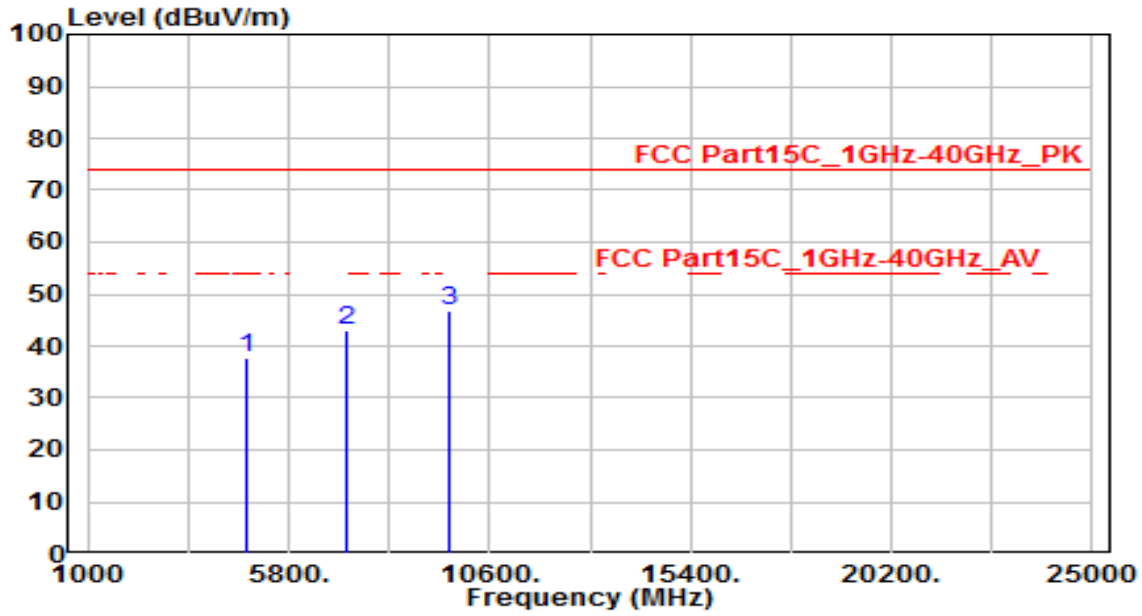


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4960.000	36.20	3.65	39.86	-34.14	74.00	150	0	Peak
2		7440.000	31.36	11.55	42.91	-31.09	74.00	150	0	Peak
3	*	9920.000	32.51	15.21	47.72	-26.28	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 0	Test Voltage	By Notebook PC

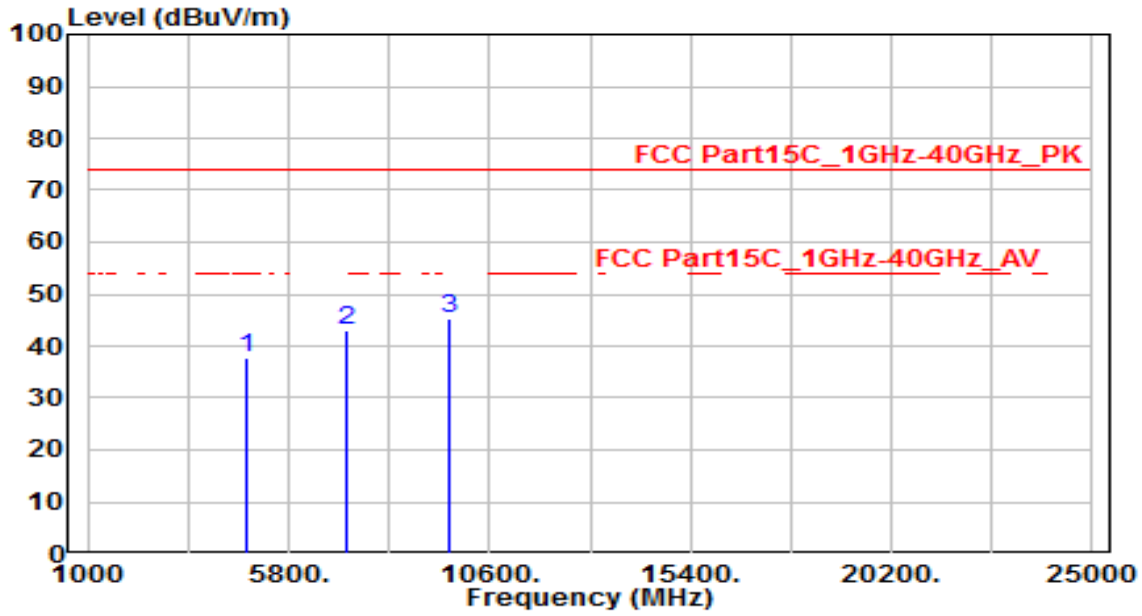


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4804.000	34.37	3.28	37.65	-36.35	74.00	150	0	Peak
2		7206.000	32.01	10.88	42.89	-31.11	74.00	150	0	Peak
3	*	9608.000	32.02	14.62	46.64	-27.36	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 0	Test Voltage	By Notebook PC

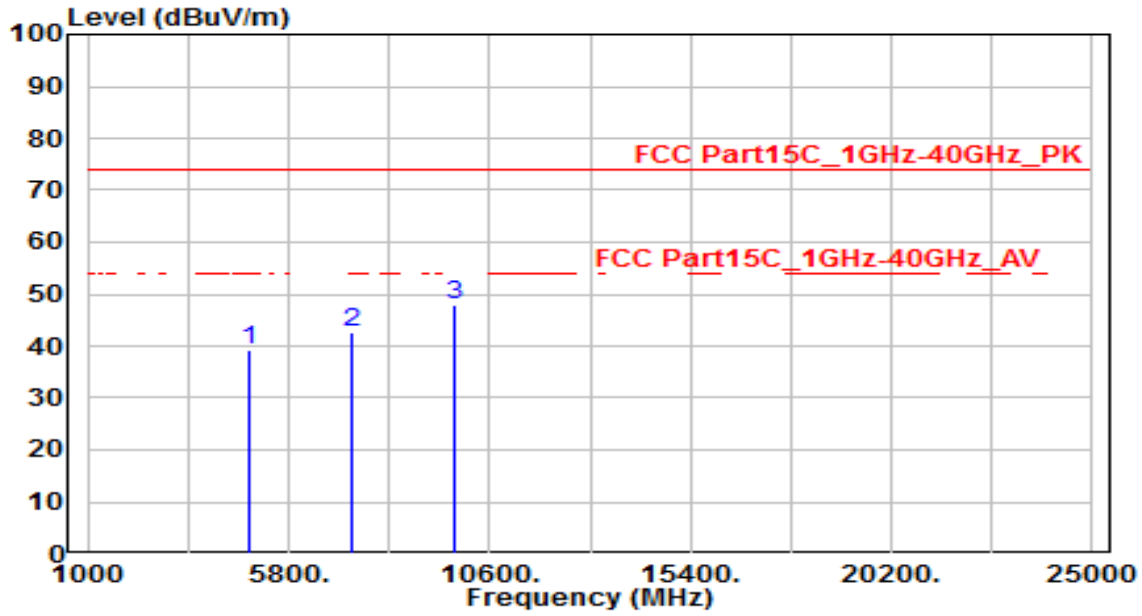


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4804.000	34.49	3.28	37.77	-36.23	74.00	150	0	Peak
2		7206.000	32.28	10.88	43.16	-30.84	74.00	150	0	Peak
3	*	9608.000	30.78	14.62	45.40	-28.60	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 39	Test Voltage	By Notebook PC

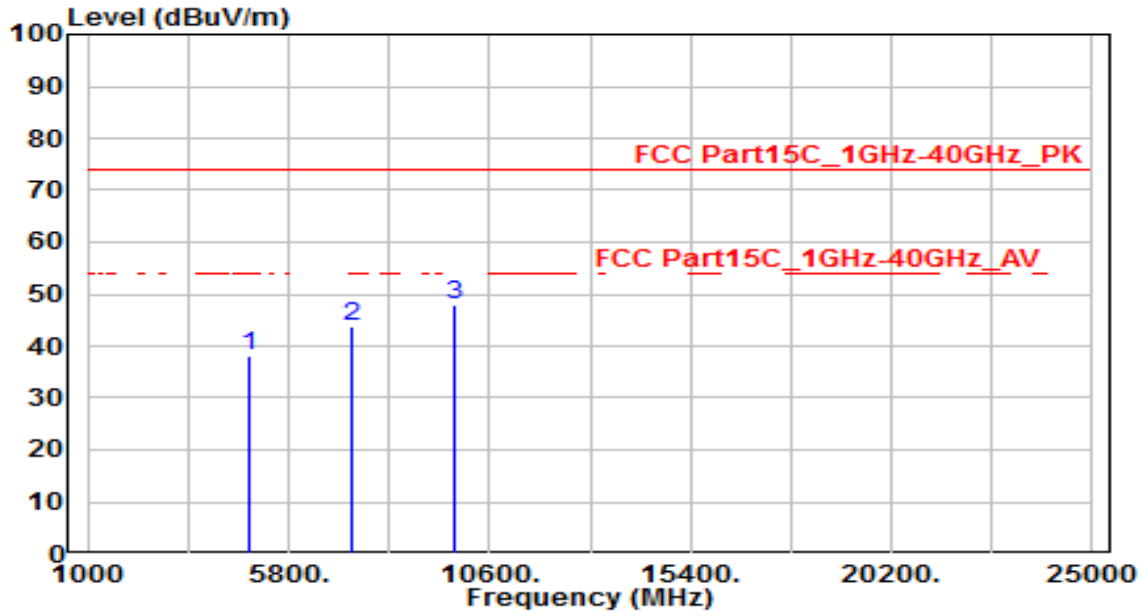


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4882.000	35.63	3.47	39.10	-34.90	74.00	150	0	Peak
2		7323.000	31.28	11.21	42.49	-31.51	74.00	150	0	Peak
3	*	9764.000	33.06	14.92	47.98	-26.02	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 39	Test Voltage	By Notebook PC

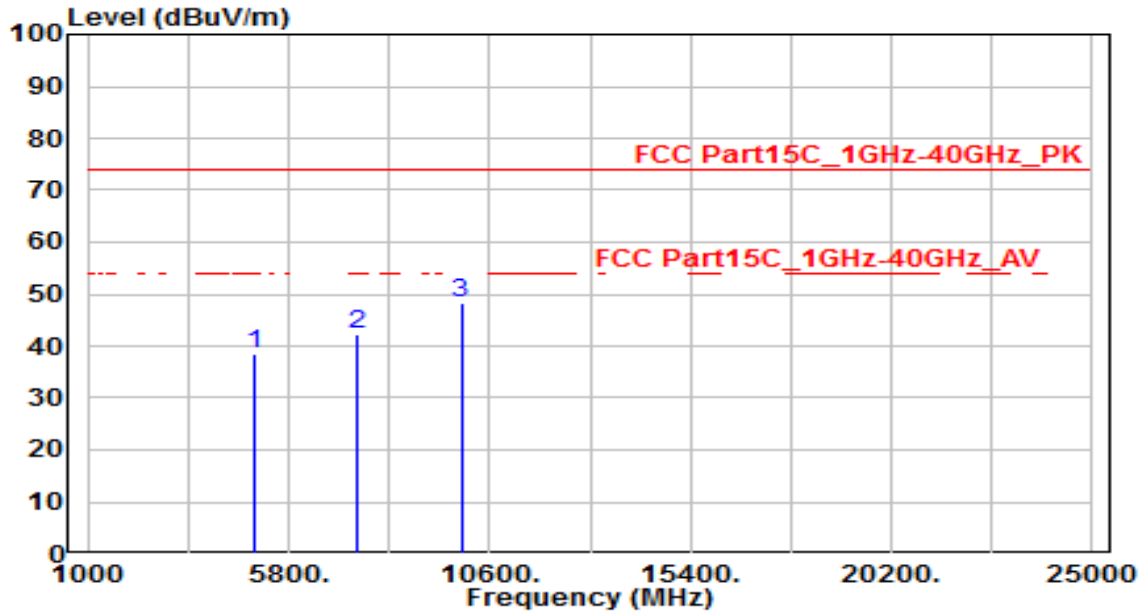


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4882.000	34.69	3.47	38.15	-35.85	74.00	150	0	Peak
2		7323.000	32.48	11.21	43.70	-30.30	74.00	150	0	Peak
3	*	9764.000	33.00	14.92	47.92	-26.08	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 78	Test Voltage	By Notebook PC

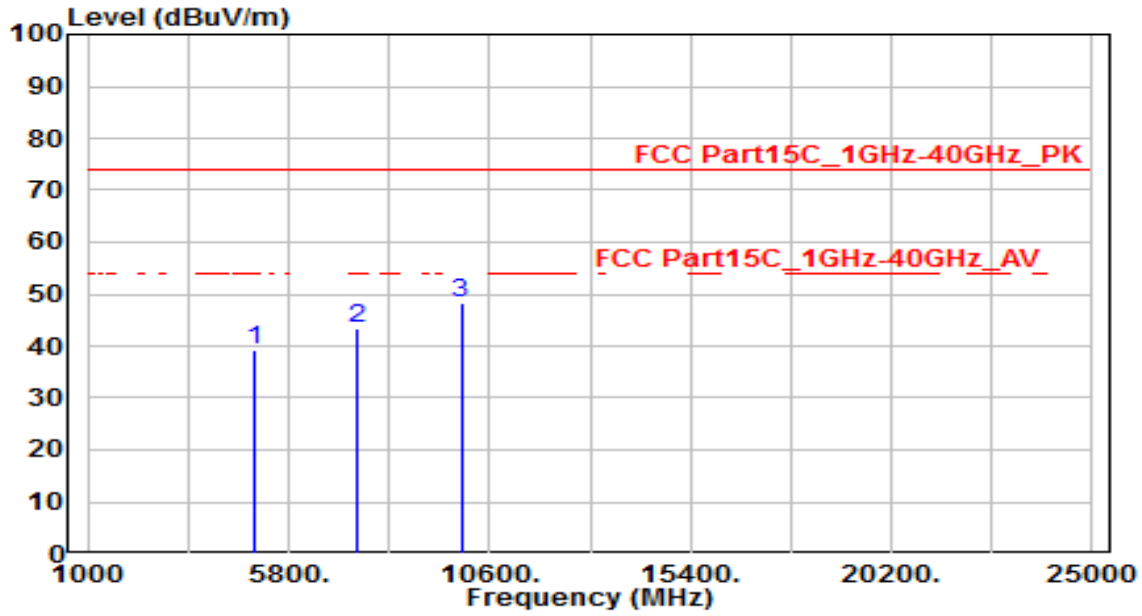


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		4960.000	34.66	3.65	38.31	-35.69	74.00	150	0	Peak
2		7440.000	30.78	11.55	42.33	-31.67	74.00	150	0	Peak
3	*	9920.000	33.23	15.21	48.44	-25.56	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D & BBHA 9170	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 78	Test Voltage	By Notebook PC



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	35.52	3.65	39.17	-34.83	74.00	150	0	Peak
2		7440.000	31.80	11.55	43.34	-30.66	74.00	150	0	Peak
3	*	9920.000	32.98	15.21	48.19	-25.81	74.00	150	0	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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.

7.9. Radiated Restricted Band Edge Measurement

7.9.1. Test Limit

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 [V/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

7.9.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.12.1

7.9.3. Test Setting

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3 * RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold

7. Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

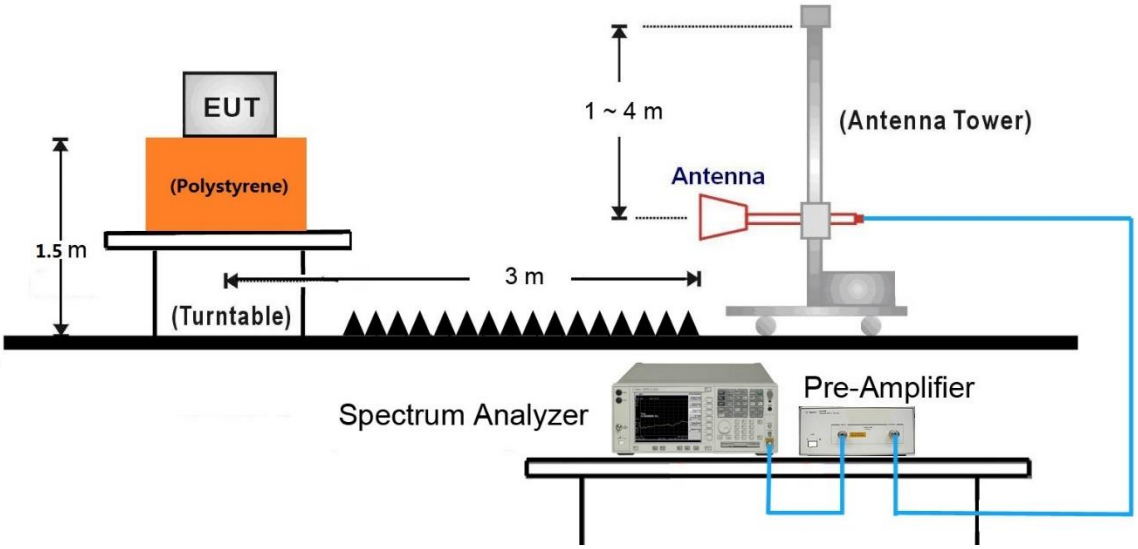
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

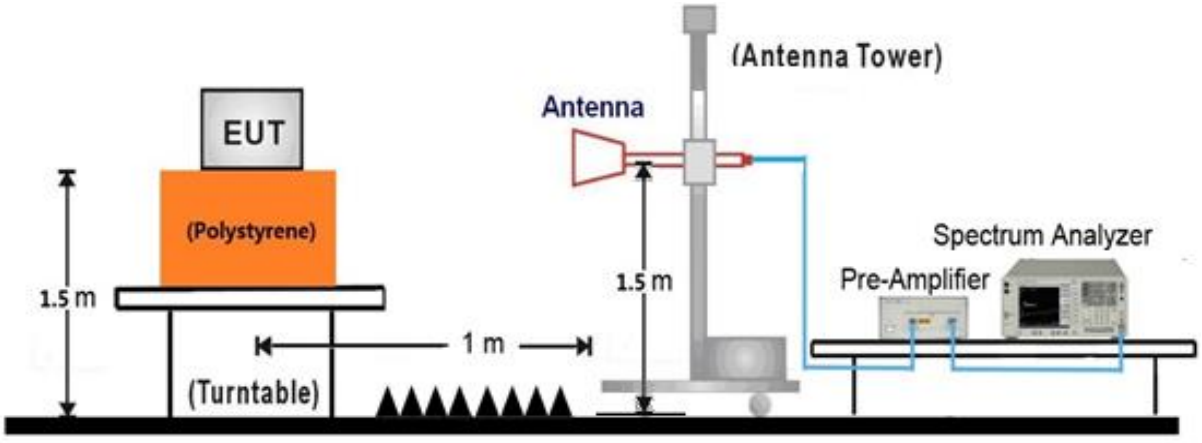
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW ≥ 1/T
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). 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

7.9.4. Test Setup

1GHz ~ 18GHz Test Setup:

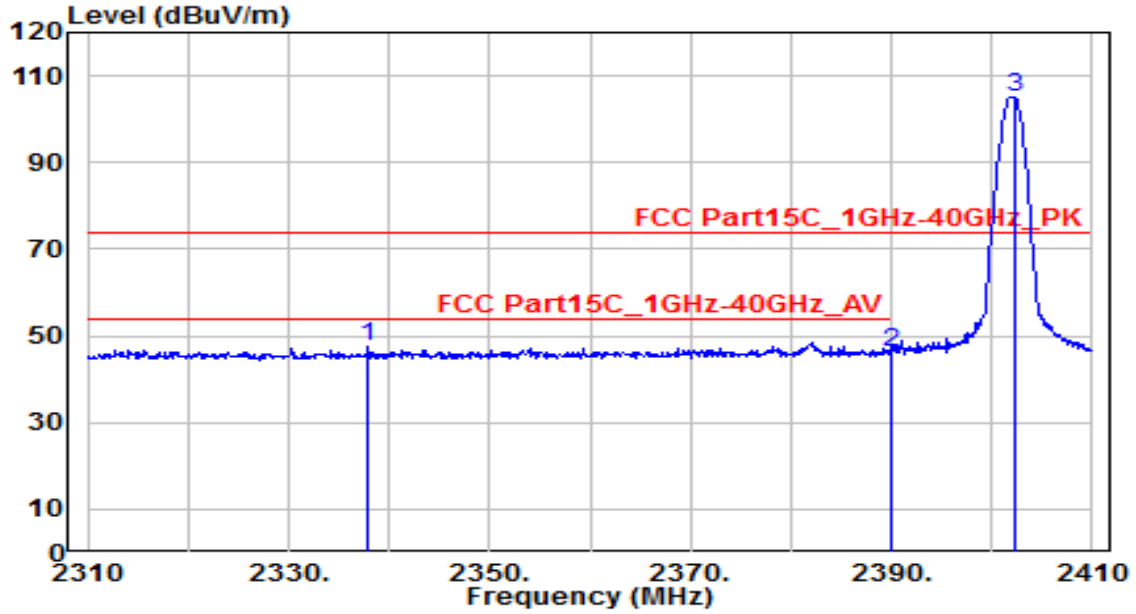


18GHz ~40GHz Test Setup:



7.9.5. Test Result

EUT	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 0	Test Voltage	By Notebook PC

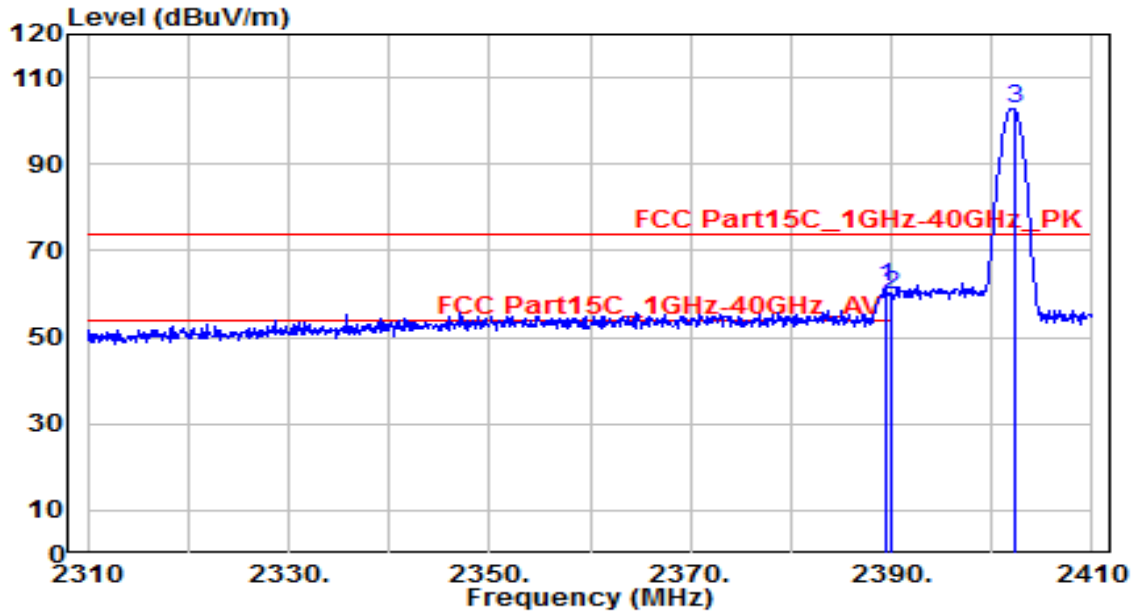


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	2337.900	50.44	-2.93	47.51	-26.49	74.00	150	200	Peak
2		2390.000	48.74	-2.70	46.04	-27.96	74.00	150	200	Peak
3		2402.200	107.91	-2.65	105.26	N/A	N/A	150	200	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 0	Test Voltage	By Notebook PC

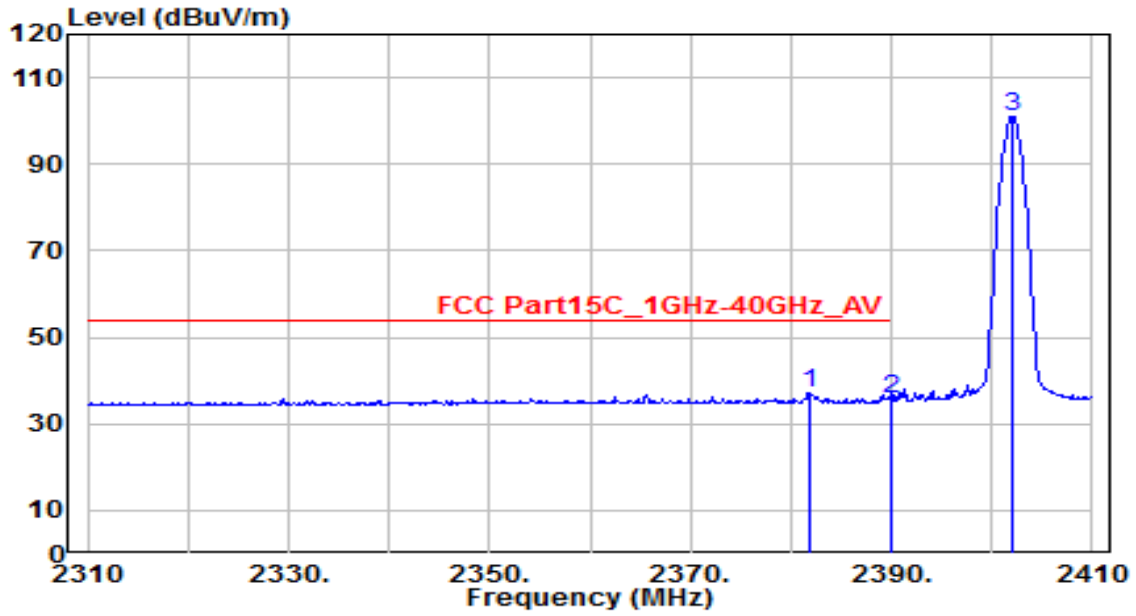


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	2389.500	64.13	-2.71	61.43	-12.57	74.00	150	215	Peak
2		2390.000	62.57	-2.70	59.87	-14.13	74.00	150	215	Peak
3		2402.200	105.25	-2.65	102.60	N/A	N/A	150	215	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 0	Test Voltage	By Notebook PC

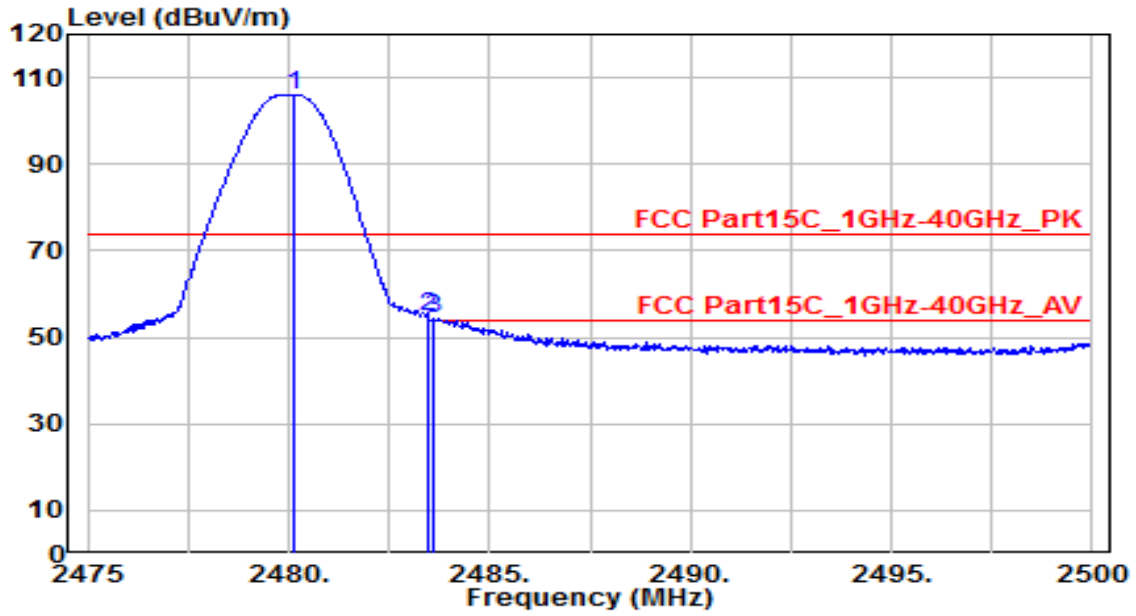


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	2382.000	39.86	-2.74	37.12	-16.88	54.00	150	215	Average
2		2390.000	38.43	-2.70	35.72	-18.28	54.00	150	215	Average
3		2402.100	103.82	-2.65	101.17	N/A	N/A	150	215	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 78	Test Voltage	By Notebook PC

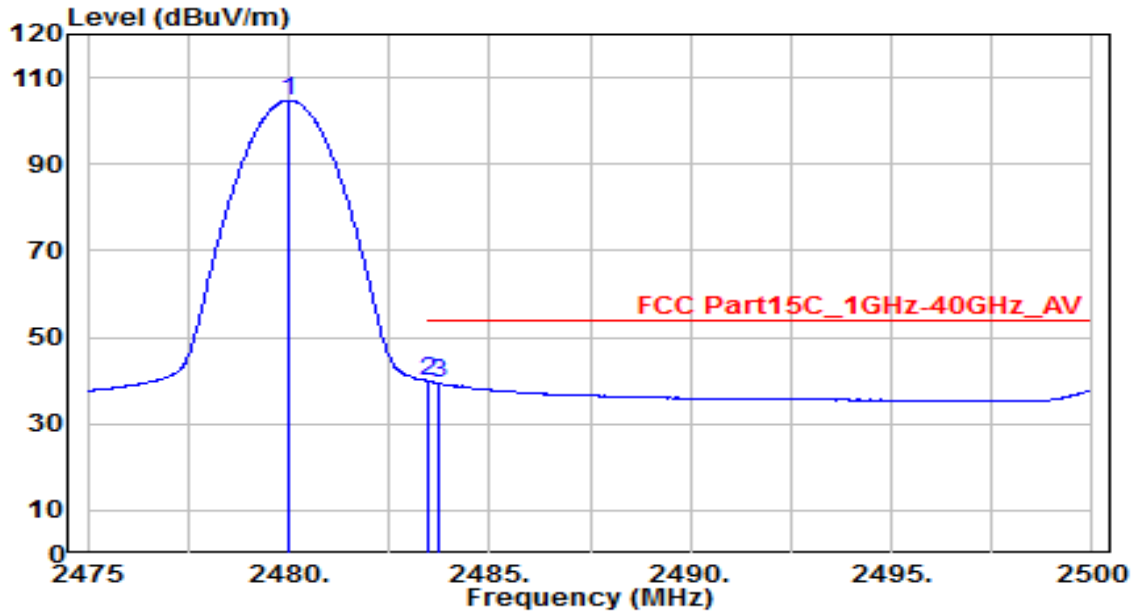


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		2480.150	108.42	-2.31	106.11	N/A	N/A	150	230	Peak
2	*	2483.500	57.24	-2.29	54.94	-19.06	74.00	150	230	Peak
3		2483.575	56.73	-2.29	54.44	-19.56	74.00	150	230	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 78	Test Voltage	By Notebook PC

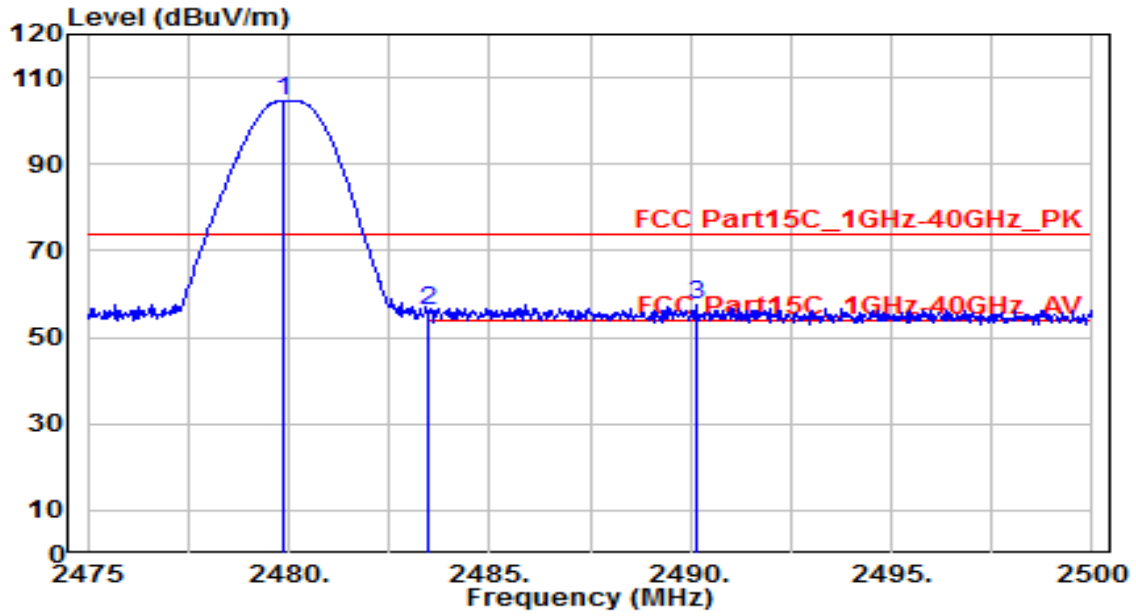


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		2479.975	107.09	-2.31	104.78	N/A	N/A	150	230	Average
2	*	2483.500	42.06	-2.29	39.76	-14.24	54.00	150	230	Average
3		2483.725	41.69	-2.29	39.40	-14.60	54.00	150	230	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 78	Test Voltage	By Notebook PC

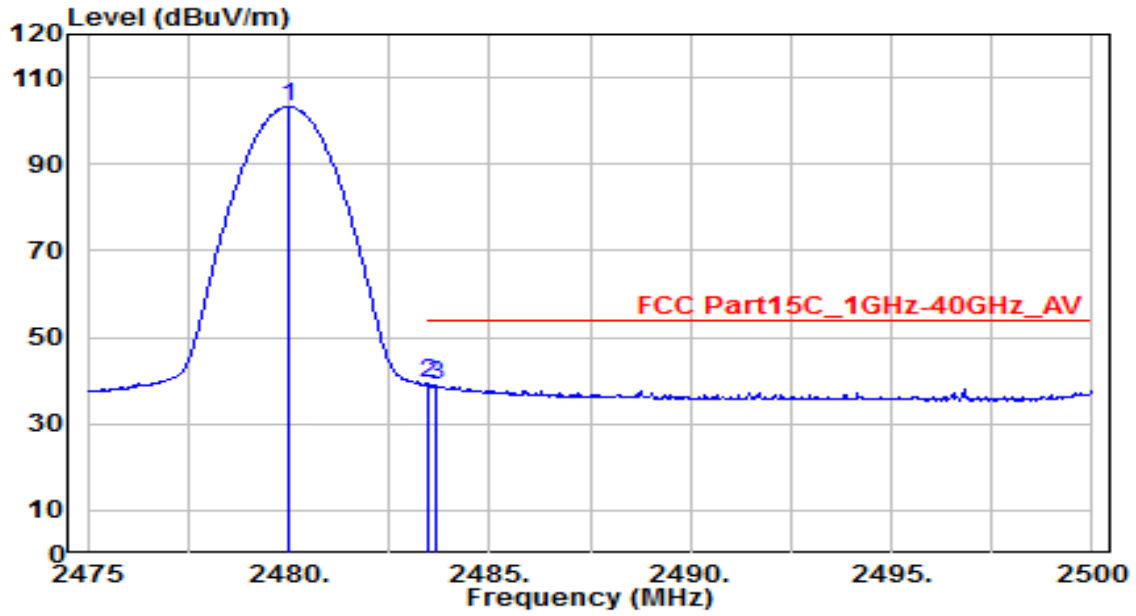


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		2479.850	107.05	-2.31	104.74	N/A	N/A	150	220	Peak
2		2483.500	58.39	-2.29	56.09	-17.91	74.00	150	220	Peak
3	*	2490.125	59.99	-2.26	57.72	-16.28	74.00	150	220	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_DH5_CH 78	Test Voltage	By Notebook PC

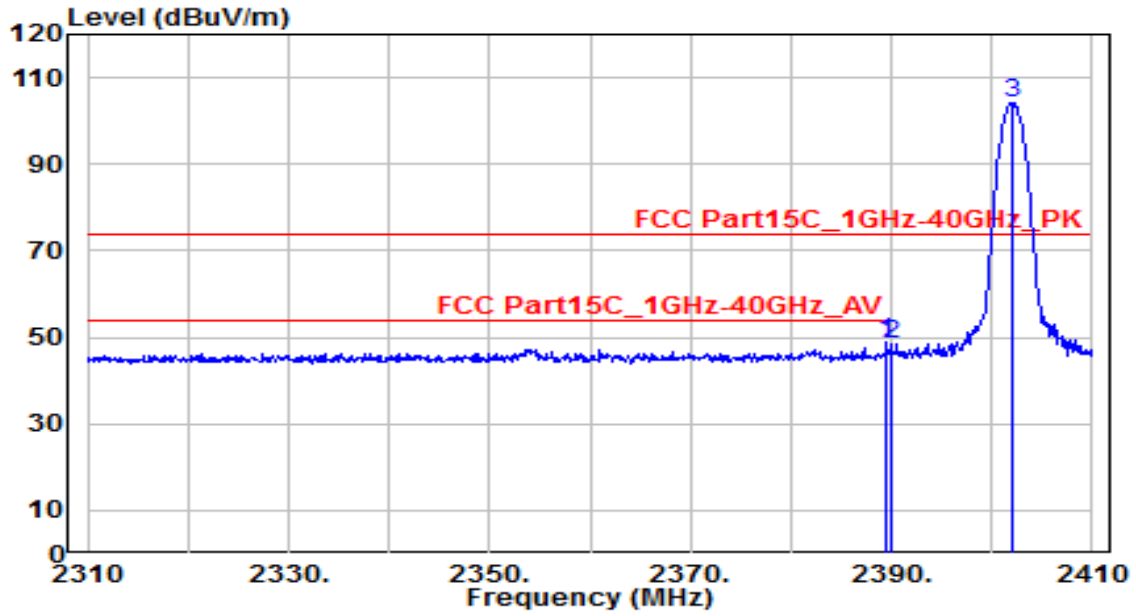


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		2480.000	105.66	-2.31	103.35	N/A	N/A	150	220	Average
2	*	2483.500	41.81	-2.29	39.52	-14.48	54.00	150	220	Average
3		2483.650	41.38	-2.29	39.09	-14.91	54.00	150	220	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 0	Test Voltage	By Notebook PC

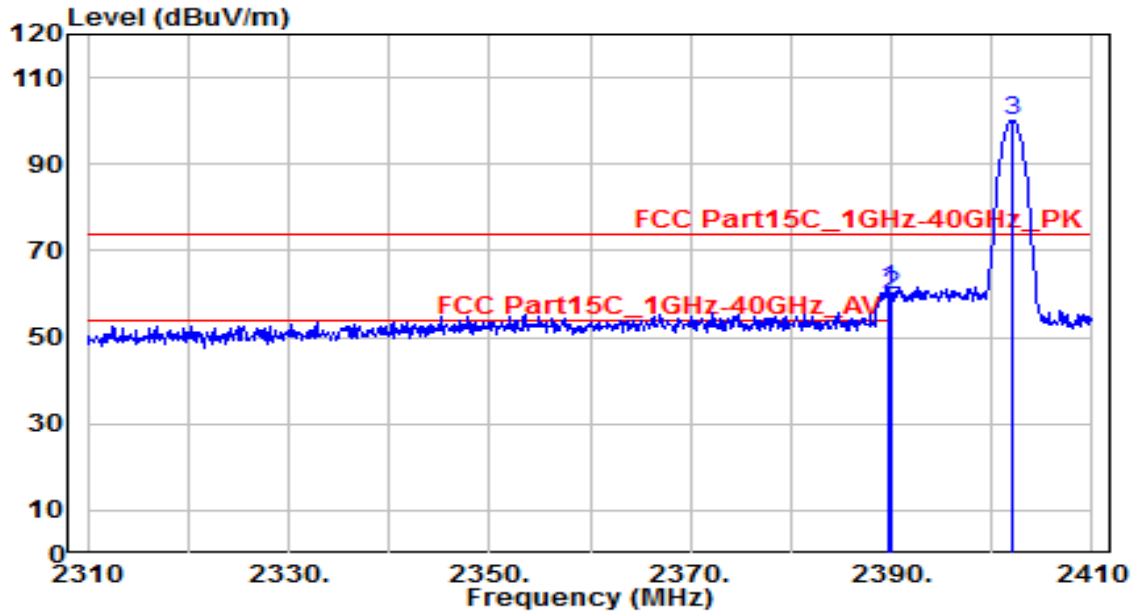


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	2389.600	51.51	-2.71	48.80	-25.20	74.00	150	200	Peak
2		2390.000	50.98	-2.70	48.28	-25.72	74.00	150	200	Peak
3		2402.000	106.78	-2.65	104.13	N/A	N/A	150	200	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 0	Test Voltage	By Notebook PC

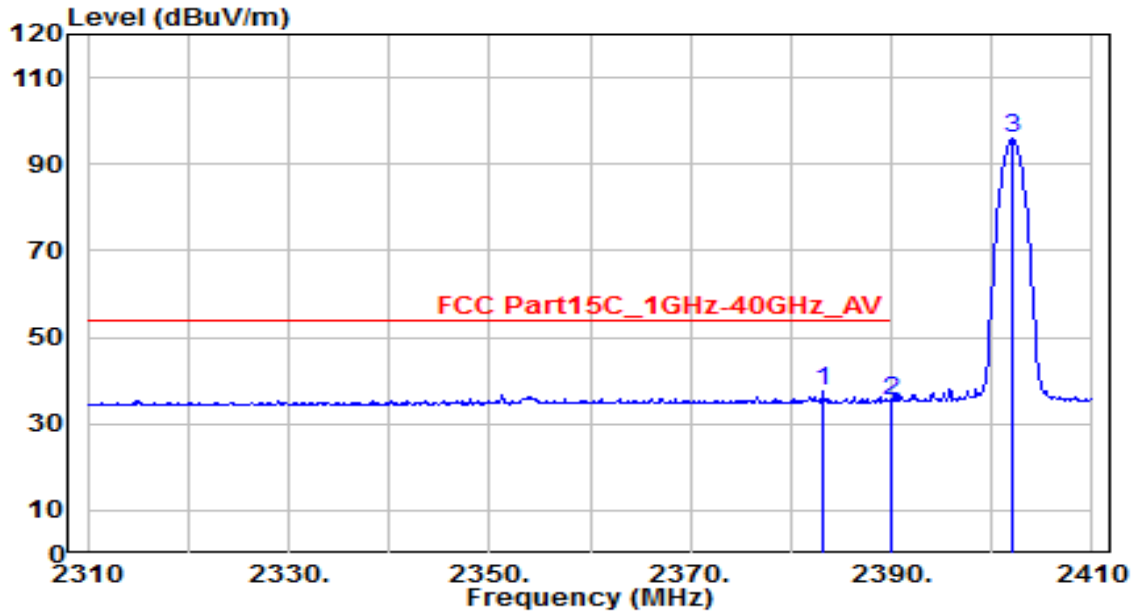


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	2389.700	63.92	-2.71	61.21	-12.79	74.00	150	215	Peak
2		2390.000	62.67	-2.70	59.97	-14.03	74.00	150	215	Peak
3		2402.000	102.82	-2.65	100.16	N/A	N/A	150	215	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 0	Test Voltage	By Notebook PC

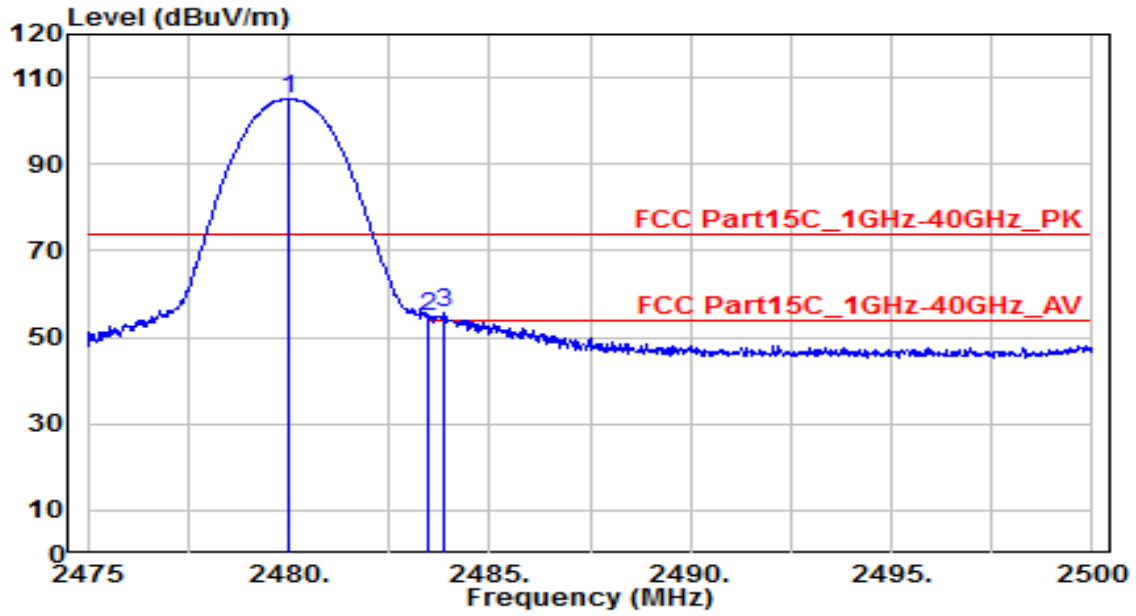


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1	*	2383.200	40.41	-2.73	37.68	-16.32	54.00	150	215	Average
2		2390.000	37.90	-2.70	35.20	-18.80	54.00	150	215	Average
3		2402.100	98.44	-2.65	95.79	N/A	N/A	150	215	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 78	Test Voltage	By Notebook PC

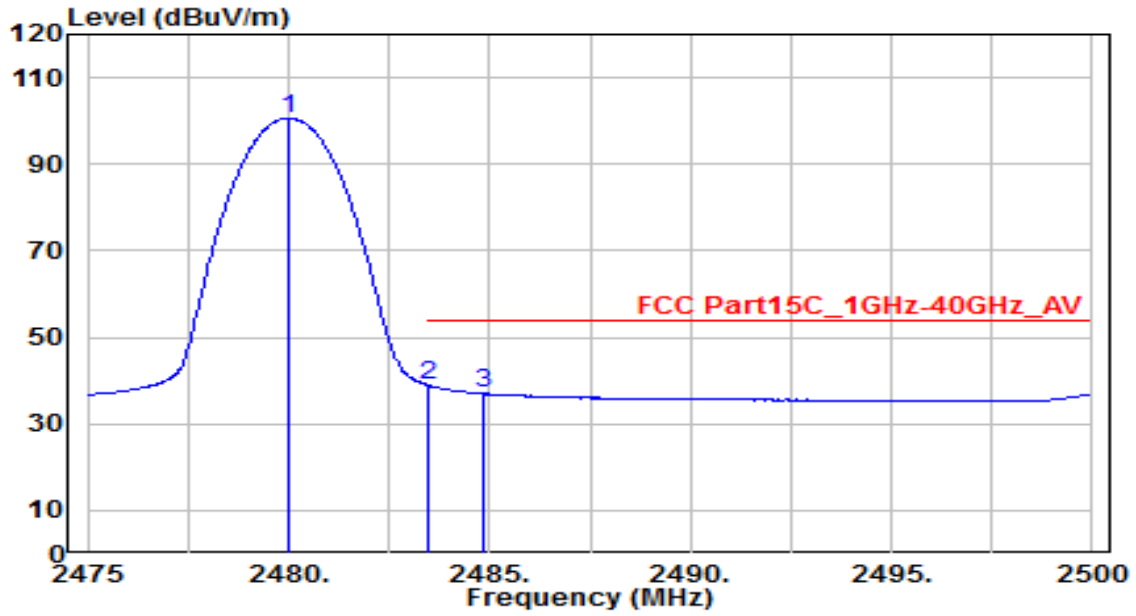


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		2480.000	107.54	-2.31	105.23	N/A	N/A	150	230	Peak
2		2483.500	57.18	-2.29	54.88	-19.12	74.00	150	230	Peak
3	*	2483.850	58.04	-2.29	55.74	-18.26	74.00	150	230	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Horizontal	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 78	Test Voltage	By Notebook PC

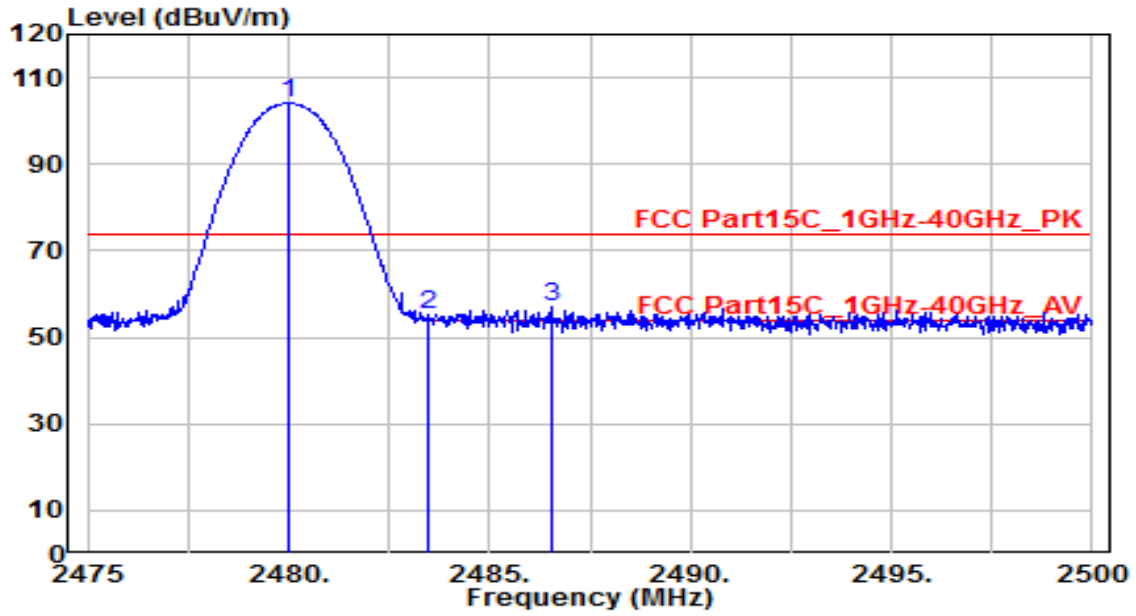


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		2480.000	103.04	-2.31	100.73	N/A	N/A	150	230	Average
2	*	2483.500	41.18	-2.29	38.89	-15.11	54.00	150	230	Average
3		2484.850	39.31	-2.29	37.03	-16.97	54.00	150	230	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 78	Test Voltage	By Notebook PC

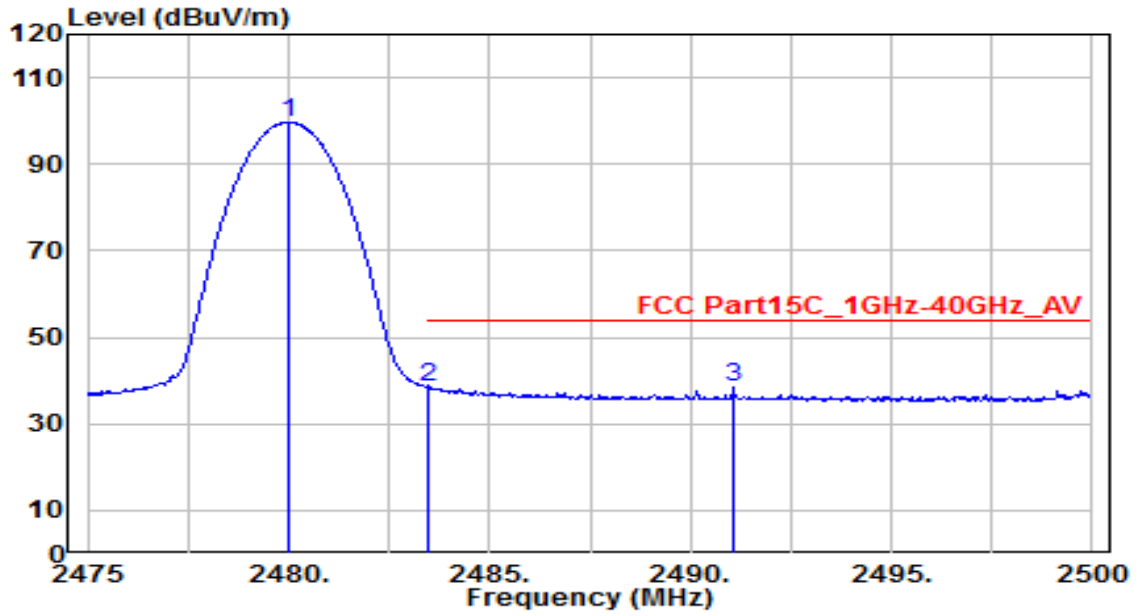


No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Height (cm)	Angle (deg)	Remark (QP/PK/AV)
1		2479.975	106.45	-2.31	104.15	N/A	N/A	150	220	Peak
2		2483.500	57.63	-2.29	55.34	-18.66	74.00	150	220	Peak
3	*	2486.525	59.13	-2.28	56.85	-17.15	74.00	150	220	Peak

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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	BT Transponder	Date of Test	2020-12-04
Factor	BBHA 9120D	Temp. / Humidity	25°C /55%
Polarity	Vertical	Site / Test Engineer	AC1 / Jay
Test Mode	BT_TX_3-DH5_CH 78	Test Voltage	By Notebook PC



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		2480.025	102.08	-2.31	99.77	N/A	N/A	150	220	Average
2		2483.500	40.70	-2.29	38.40	-15.60	54.00	150	220	Average
3	*	2491.075	40.94	-2.26	38.68	-15.32	54.00	150	220	Average

Note:

1. " *", means this data is the worst emission level.
2. C.F (Correction Factor) = Antenna Factor (dB)+ 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.

7.10. AC Conducted Emissions Measurement

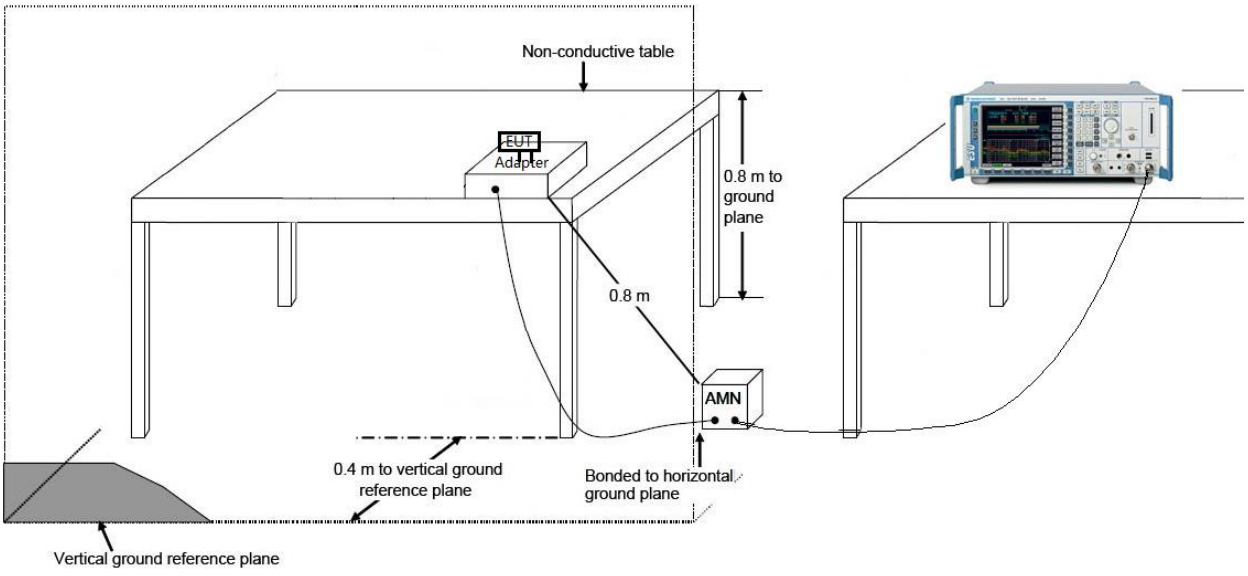
7.10.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 / RSS-Gen Limits		
Frequency (MHz)	QP (dBμV)	Average (dBμV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

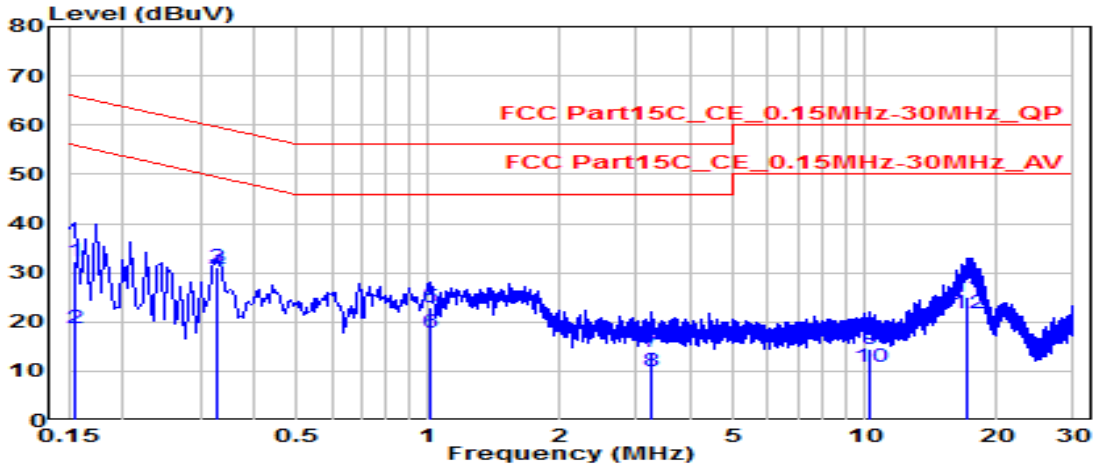
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.10.2. Test Setup



7.10.3. Test Result

EUT	BT Transponder	Date of Test	2020-12-03
Factor	CE_ENV216-L1 (Filter ON)	Temp. / Humidity	23.9°C /57%
Polarity	Line1	Site / Test Engineer	SR2 / Eric
Test Mode	BT_TX_DH5_CH39	Test Voltage	AC 120V/60Hz



No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1		0.154	22.71	9.61	32.32	-33.44	65.75	QP
2		0.154	9.20	9.61	18.81	-36.95	55.75	Average
3	*	0.330	21.47	9.62	31.09	-28.36	59.45	QP
4	*	0.330	20.64	9.62	30.26	-19.19	49.45	Average
5		1.014	13.42	9.66	23.08	-32.92	56.00	QP
6		1.014	8.06	9.66	17.73	-28.27	46.00	Average
7		3.259	4.05	9.71	13.75	-42.25	56.00	QP
8		3.259	0.17	9.71	9.88	-36.12	46.00	Average
9		10.301	4.52	9.88	14.40	-45.60	60.00	QP
10		10.301	0.92	9.88	10.80	-39.20	50.00	Average
11		17.068	14.99	9.95	24.95	-35.05	60.00	QP
12		17.068	11.92	9.95	21.87	-28.13	50.00	Average

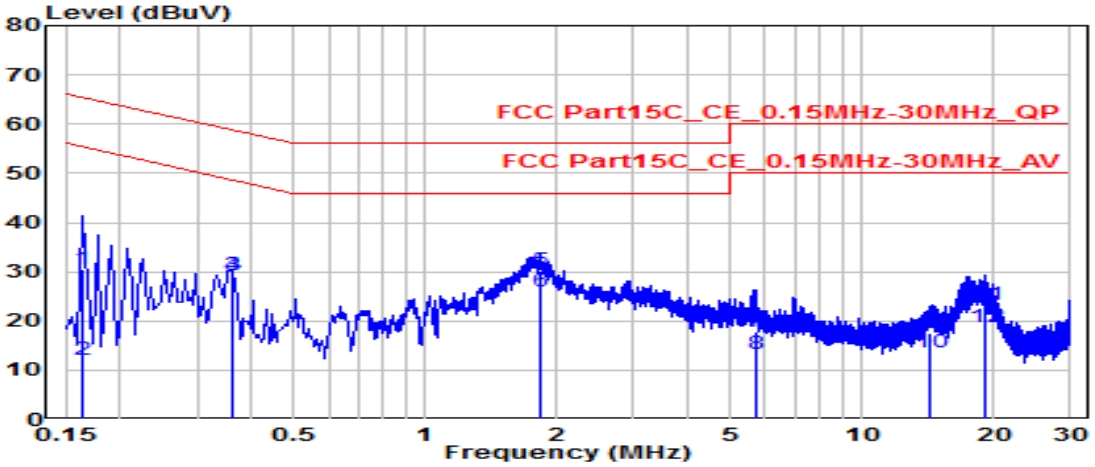
Note: The EUT Power by Notebook PC

1. " *", means this data is the worst emission level.

2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).

3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).

EUT	BT Transponder	Date of Test	2020-12-03
Factor	CE_ENV216-N (Filter ON)	Temp. / Humidity	23.9°C /57%
Polarity	Neutral	Site / Test Engineer	SR2 / Eric
Test Mode	BT_TX_DH5_CH39	Test Voltage	AC 120V/60Hz



No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1		0.163	20.96	9.62	30.58	-34.70	65.28	QP
2		0.163	2.48	9.62	12.10	-43.18	55.28	Average
3	*	0.361	19.50	9.63	29.13	-29.56	58.69	QP
4	*	0.361	19.58	9.63	29.21	-19.48	48.69	Average
5		1.846	20.55	9.69	30.24	-25.76	56.00	QP
6		1.846	16.39	9.69	26.08	-19.92	46.00	Average
7		5.720	8.18	9.77	17.95	-42.05	60.00	QP
8		5.720	3.44	9.77	13.21	-36.79	50.00	Average
9		14.301	7.57	9.96	17.54	-42.46	60.00	QP
10		14.301	3.52	9.96	13.48	-36.52	50.00	Average
11		19.273	13.13	10.06	23.19	-36.81	60.00	QP
12		19.273	8.79	10.06	18.85	-31.15	50.00	Average

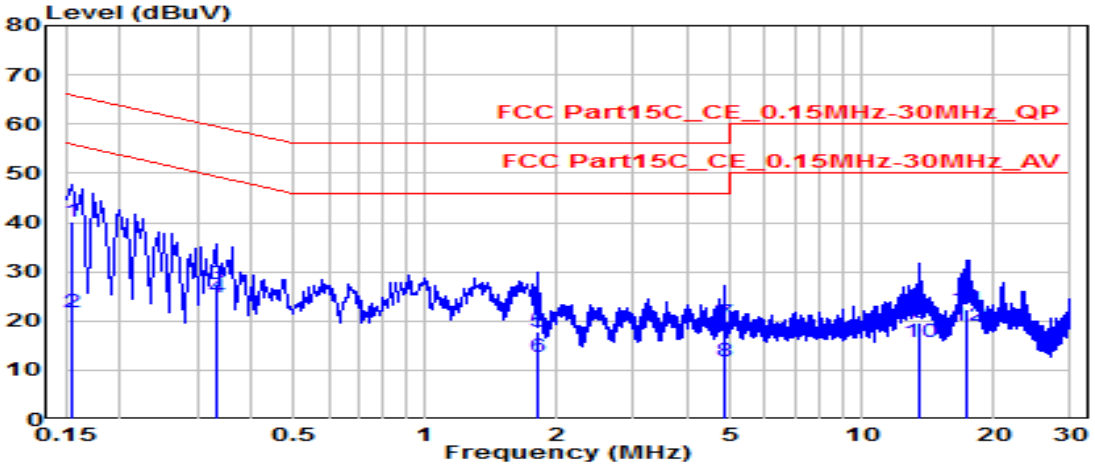
Note: The EUT Power by Notebook PC

1. " *", means this data is the worst emission level.

2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).

3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).

EUT	BT Transponder	Date of Test	2020-12-03
Factor	CE_ENV216-L1 (Filter ON)	Temp. / Humidity	23.9°C /57%
Polarity	Line1	Site / Test Engineer	SR2 / Eric
Test Mode	BT_TX_DH5_CH39	Test Voltage	AC 240V/60Hz



No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1		0.154	30.47	9.61	40.08	-25.68	65.75	QP
2		0.154	12.23	9.61	21.84	-33.92	55.75	Average
3	*	0.334	17.95	9.62	27.57	-31.77	59.34	QP
4	*	0.334	15.09	9.62	24.71	-24.63	49.34	Average
5		1.801	8.12	9.68	17.80	-38.20	56.00	QP
6		1.801	2.90	9.68	12.59	-33.41	46.00	Average
7		4.816	9.90	9.74	19.64	-36.36	56.00	QP
8		4.816	2.09	9.74	11.83	-34.17	46.00	Average
9		13.568	9.70	9.92	19.61	-40.39	60.00	QP
10		13.568	5.87	9.92	15.79	-34.21	50.00	Average
11		17.293	12.50	9.96	22.45	-37.55	60.00	QP
12		17.293	8.92	9.96	18.88	-31.12	50.00	Average

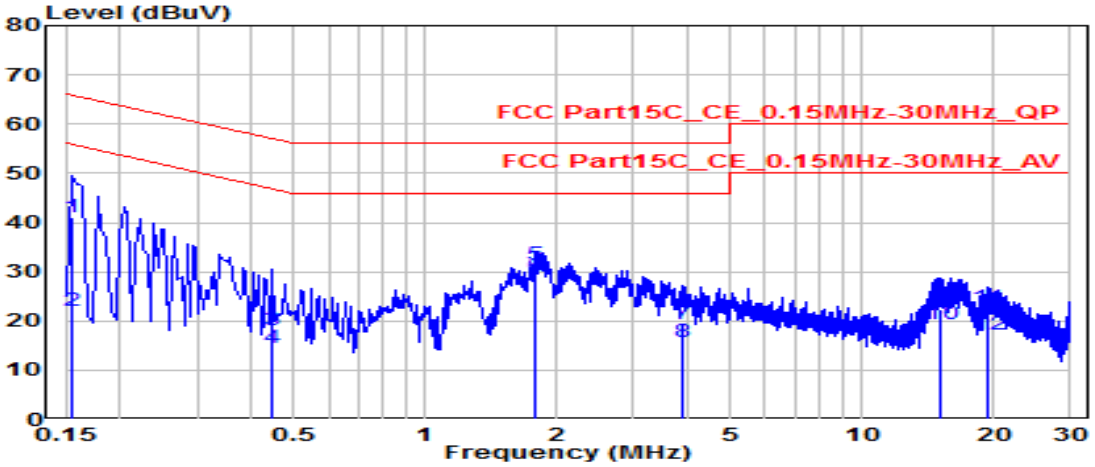
Note: The EUT Power by Notebook PC

1. " *", means this data is the worst emission level.

2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).

3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).

EUT	BT Transponder	Date of Test	2020-12-03
Factor	CE_ENV216-N (Filter ON)	Temp. / Humidity	23.9°C /57%
Polarity	Neutral	Site / Test Engineer	SR2 / Eric
Test Mode	BT_TX_DH5_CH39	Test Voltage	AC 240V/60Hz



No		Frequency (MHz)	Reading (dBuV)	C.F (dB)	Measurement (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Remark (QP/PK/AV)
1		0.154	31.44	9.62	41.06	-24.70	65.75	QP
2		0.154	12.32	9.62	21.94	-33.82	55.75	Average
3		0.447	8.42	9.64	18.06	-38.87	56.93	QP
4		0.447	4.92	9.64	14.56	-32.37	46.93	Average
5	*	1.788	21.85	9.69	31.53	-24.47	56.00	QP
6	*	1.788	19.21	9.69	28.89	-17.11	46.00	Average
7		3.867	9.66	9.73	19.38	-36.62	56.00	QP
8		3.867	6.11	9.73	15.83	-30.17	46.00	Average
9		15.035	12.29	9.98	22.27	-37.73	60.00	QP
10		15.035	9.47	9.98	19.45	-30.55	50.00	Average
11		19.359	12.43	10.06	22.49	-37.51	60.00	QP
12		19.359	7.22	10.06	17.28	-32.72	50.00	Average

Note: The EUT Power by Notebook PC

1. " *", means this data is the worst emission level.

2. C.F (Correction Factor) = Antenna Factor (dB)+ Cable Loss (dB).

3. Measurement (dBuV/m) = Reading(dBuV) + C.F (Correction Factor).

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **BT Transponder,** is in compliance with Part 15C & IC RSS-247 of the FCC Rules & IC Rules..

The End