Appendix for Test report

Appendix A: DTS Bandwidth

Refer to No. SYBH(Z-RF)20181115007001-2004

Appendix B: Occupied Channel Bandwidth

Refer to No. SYBH(Z-RF)20181115007001-2004

Appendix C: Duty Cycle

Refer to No. SYBH(Z-RF)20181115007001-2004

Appendix D: Maximum conducted output power

Refer to No. SYBH(Z-RF)20181115007001-2004

Appendix E: Maximum power spectral density

Refer to No. SYBH(Z-RF)20181115007001-2004

Appendix F: Band edge measurements

Refer to No. SYBH(Z-RF)20181115007001-2004

Appendix G: Conducted Spurious Emission

Refer to No. SYBH(Z-RF)20181115007001-2004

Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

Note 1: For adding Wireless charging protective case we only tested the RSE of the worst case, other data refer to No. SYBH(Z-RF)20181115007001-2004
Note 2: We tested in two modes, mode 1 is adaptor + Wireless Charging Case and mode 2 is adaptor + Wireless charging charger+ Wireless Charging Case, and the data presented below is the worst case (mode 1).

Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

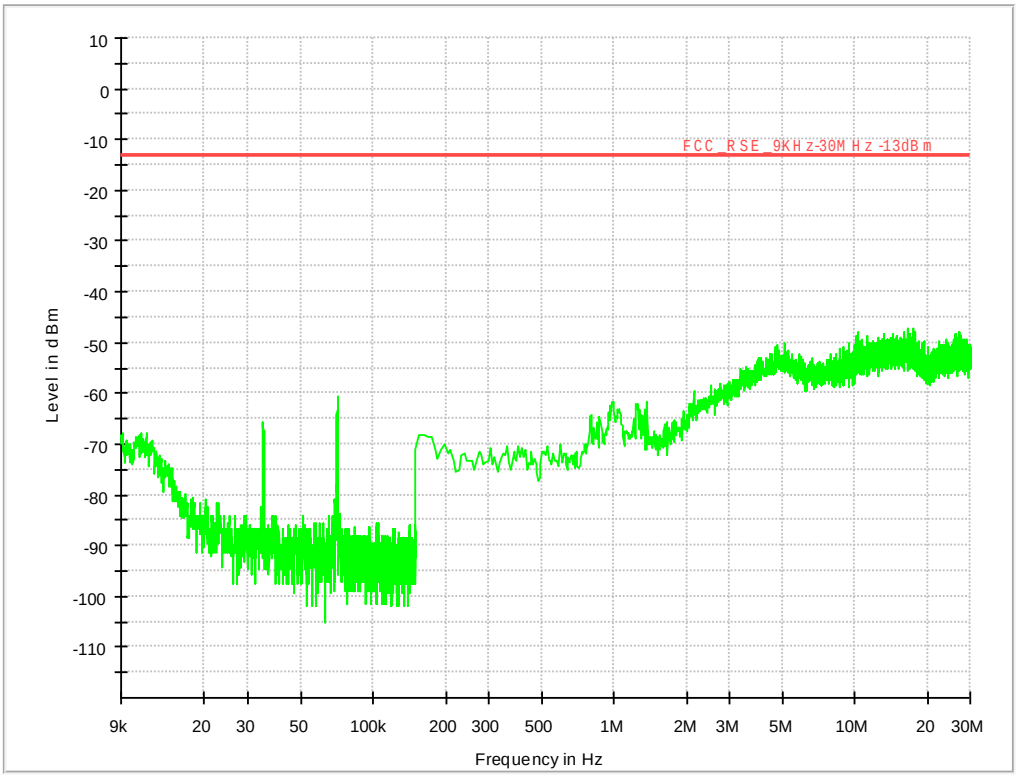
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

1 BLE_BT4.2

1.1 Part 1: Testing Range of “9 kHz to 30MHz”

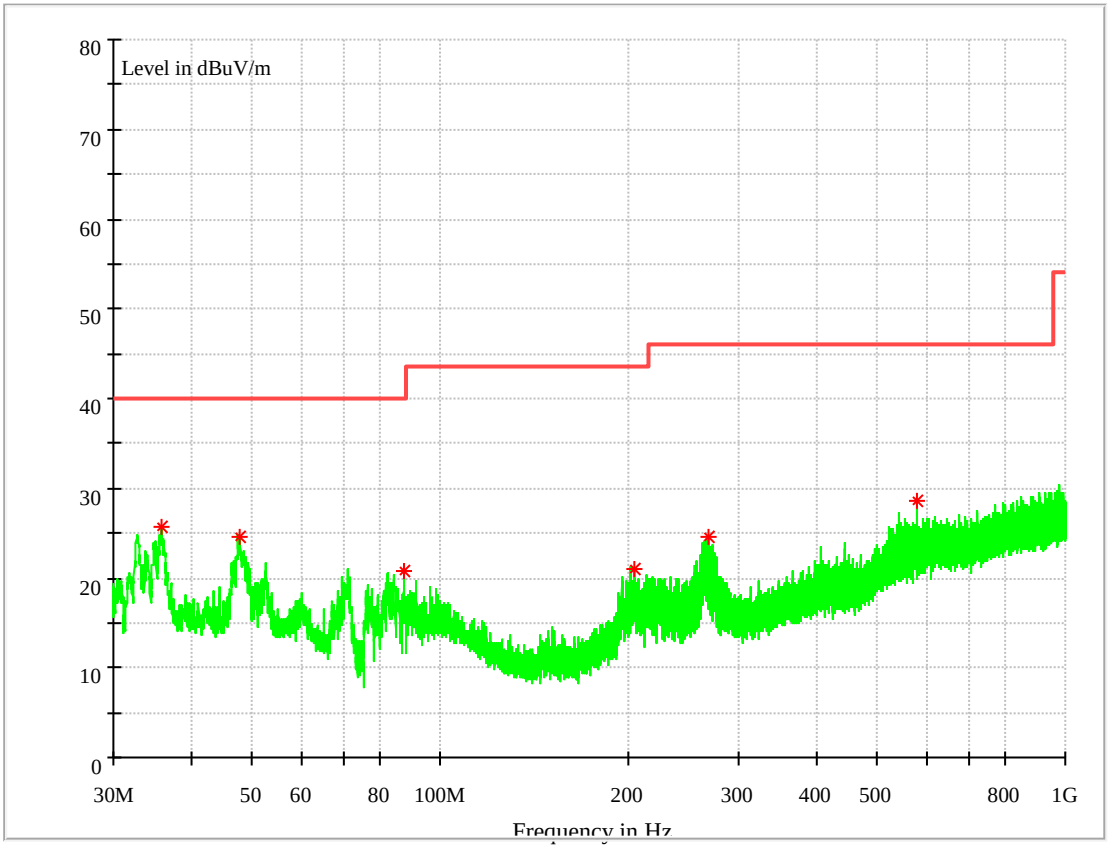
Note 1: The test results and plot for testing range of “9 kHz to 30 MHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.



1.2 Part 2: Testing Range of “30 MHz to 1 GHz”

Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Transd. (dB)
35.787667	25.68	40.00	14.32	100.0	V	0.0	13.2
47.783333	24.56	40.00	15.44	100.0	V	220.0	14.2
87.424000	20.82	40.00	19.18	100.0	V	134.0	12.2
203.985667	20.89	43.50	22.61	100.0	V	311.0	12.3
267.876333	24.52	46.00	21.48	100.0	V	97.0	14.1
577.015333	28.52	46.00	17.48	100.0	H	19.0	20.4

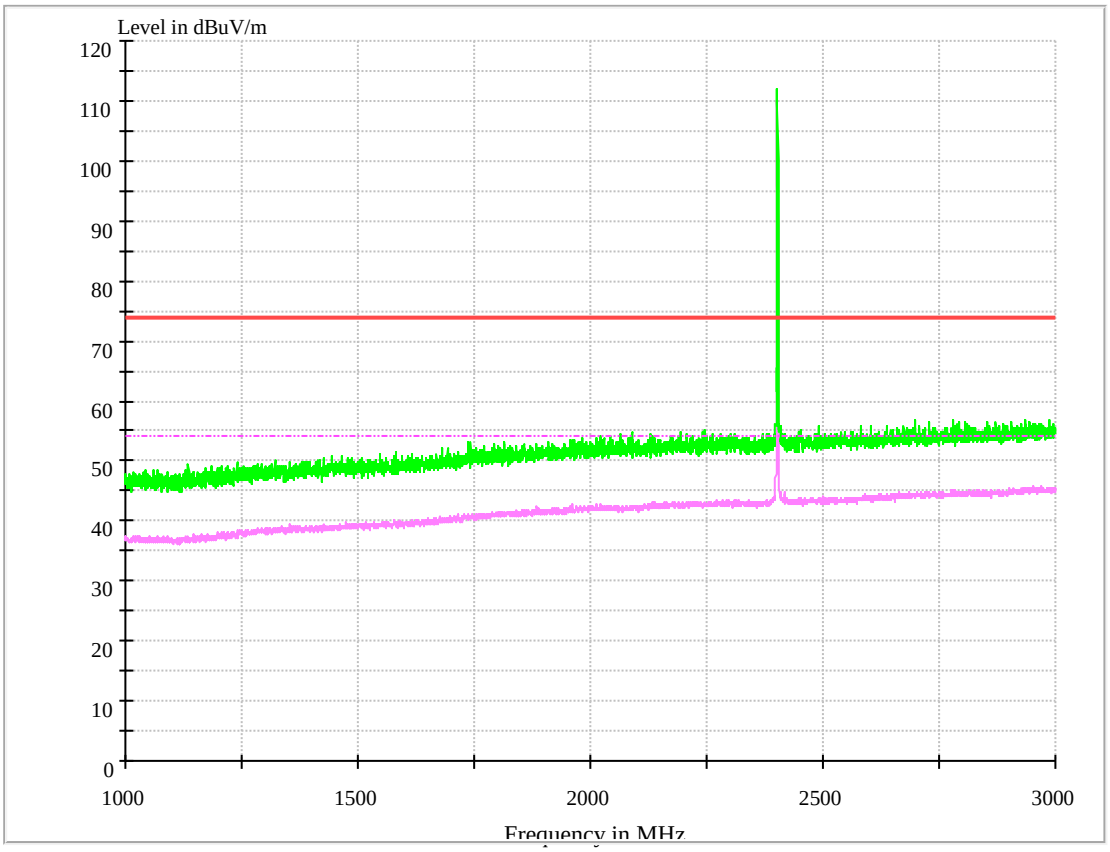
1.3 Part 3: Testing Range of “1GHz to 3GHz”

Note 1: The testing range of “1GHz to 3 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.

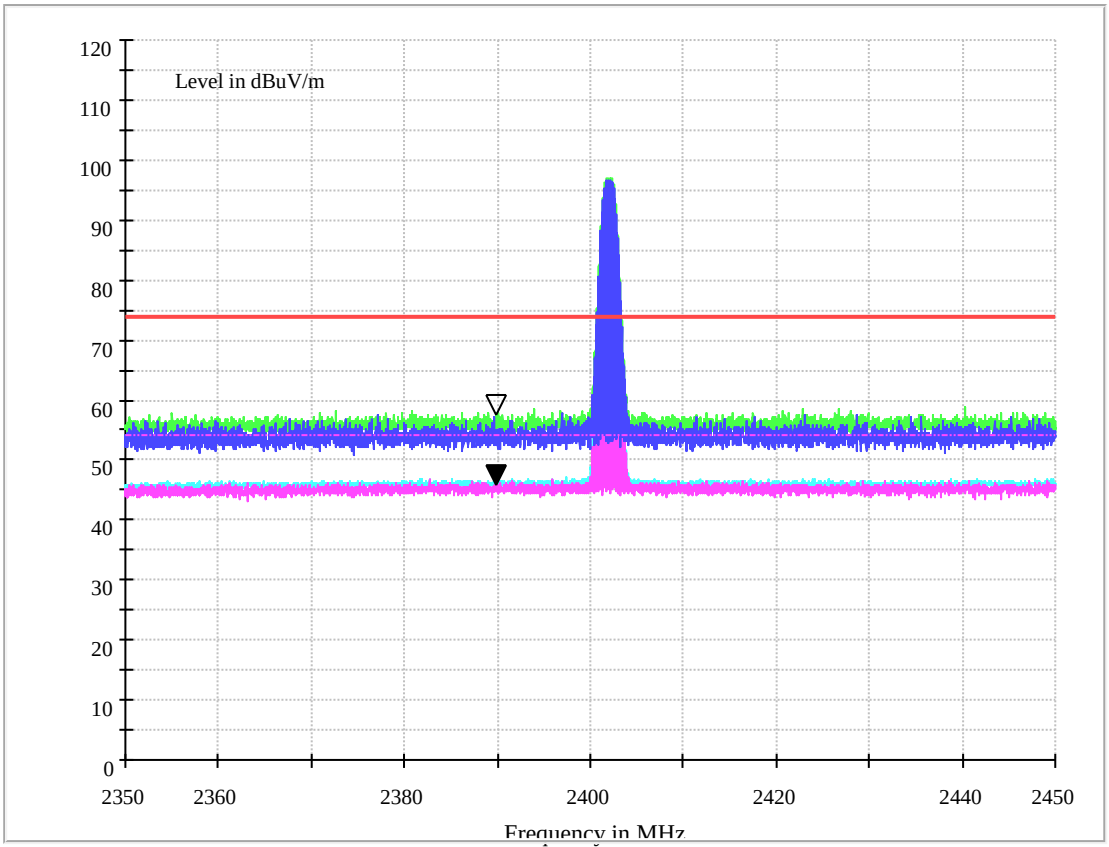
Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).

Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

1.3.1Test Mode: BT4.2



1.3.1.1 Channel 0



MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2390	46.294	54.00	7.706	150.0	H	57.0	-6.8

MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2390	57.960	74.00	16.04	150.0	H	46.0	-6.8

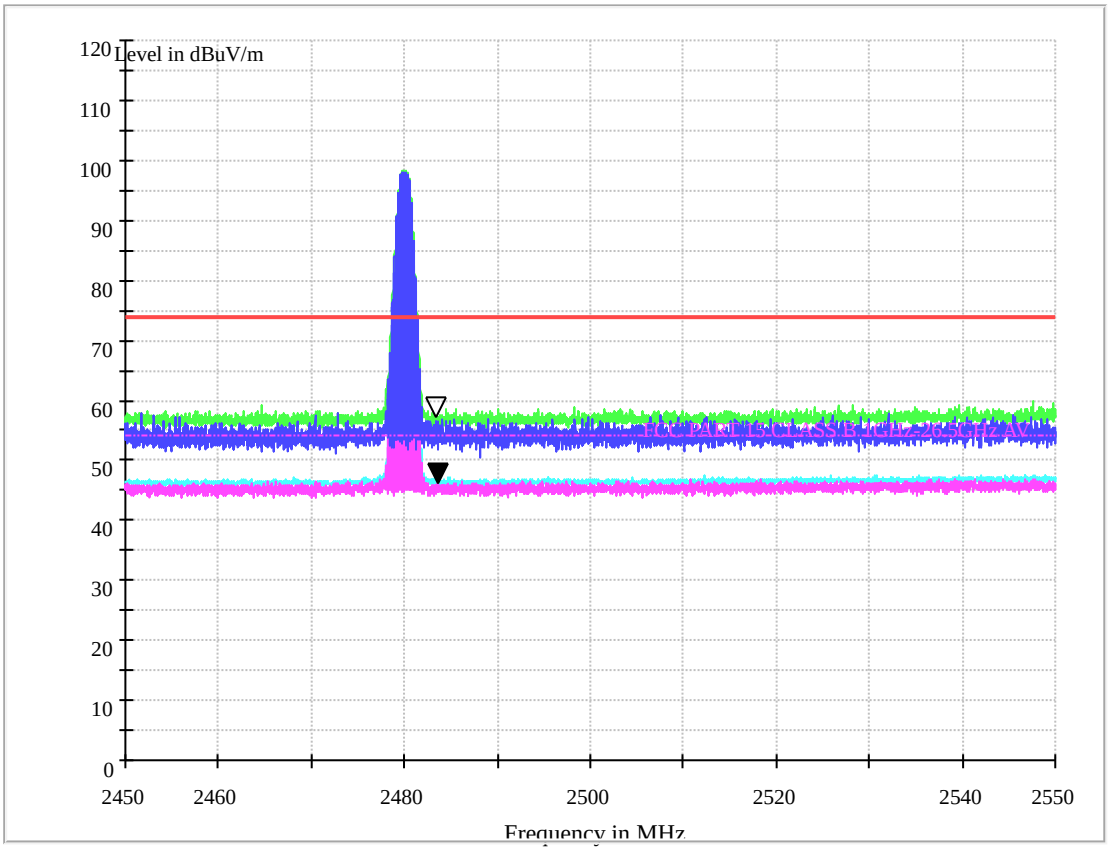
Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit – Level

1.3.1.2 Channel 39



MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2483.5	46.519	54.00	7.481	150.0	H	57.0	-10.2

MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2483.5	57.424	74.00	16.576	150.0	H	46.0	-10.2

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

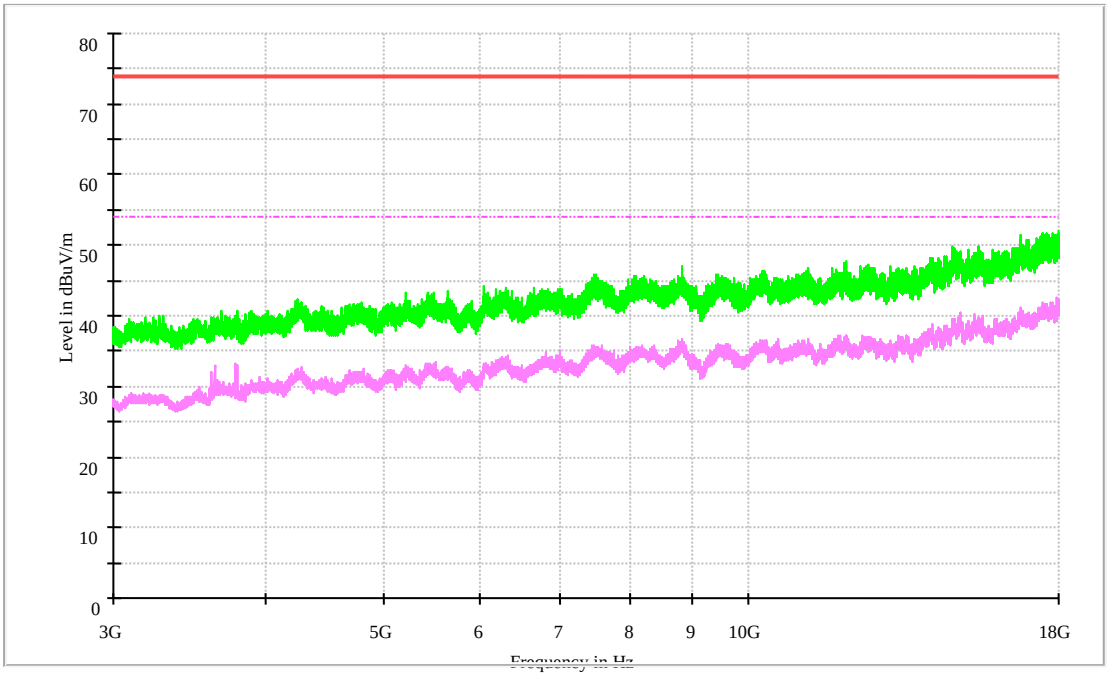
2, Margin=Limit – Leve

1.4 Part 4: Testing Range of “3 GHz to 18 GHz”

Note 1: The test results and plot for testing range of “3 GHz to 18 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The testing range of “3 GHz to 18 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).

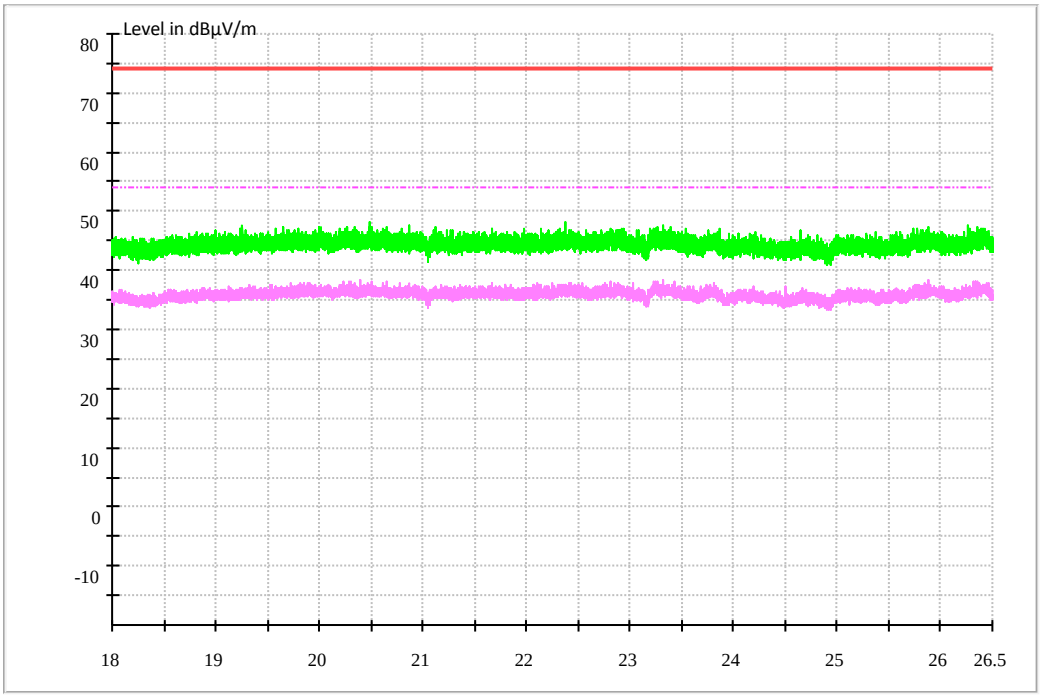


1.5 Part 5: Testing Range of “18 GHz to 26.5 GHz”

Note 1: The test results and plot for testing range of “18 GHz to 26.5 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The testing range of “18 GHz to 26.5 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

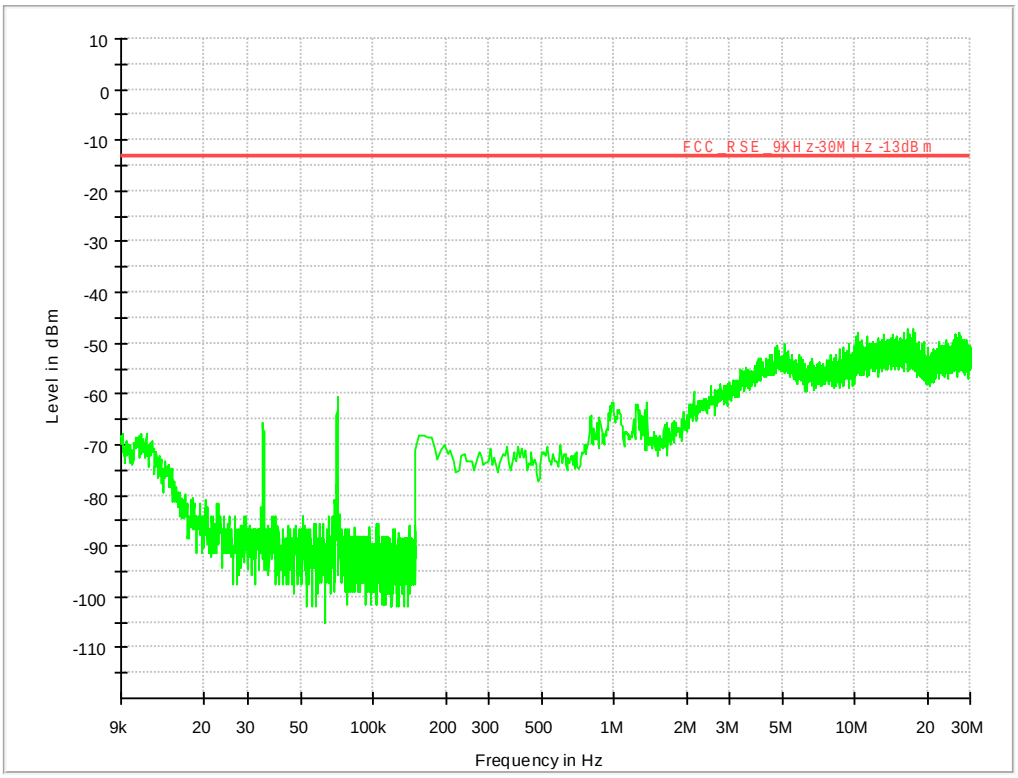
Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).



2 BLE_BT5.0

2.1 Part 1: Testing Range of “9 kHz to 30MHz”

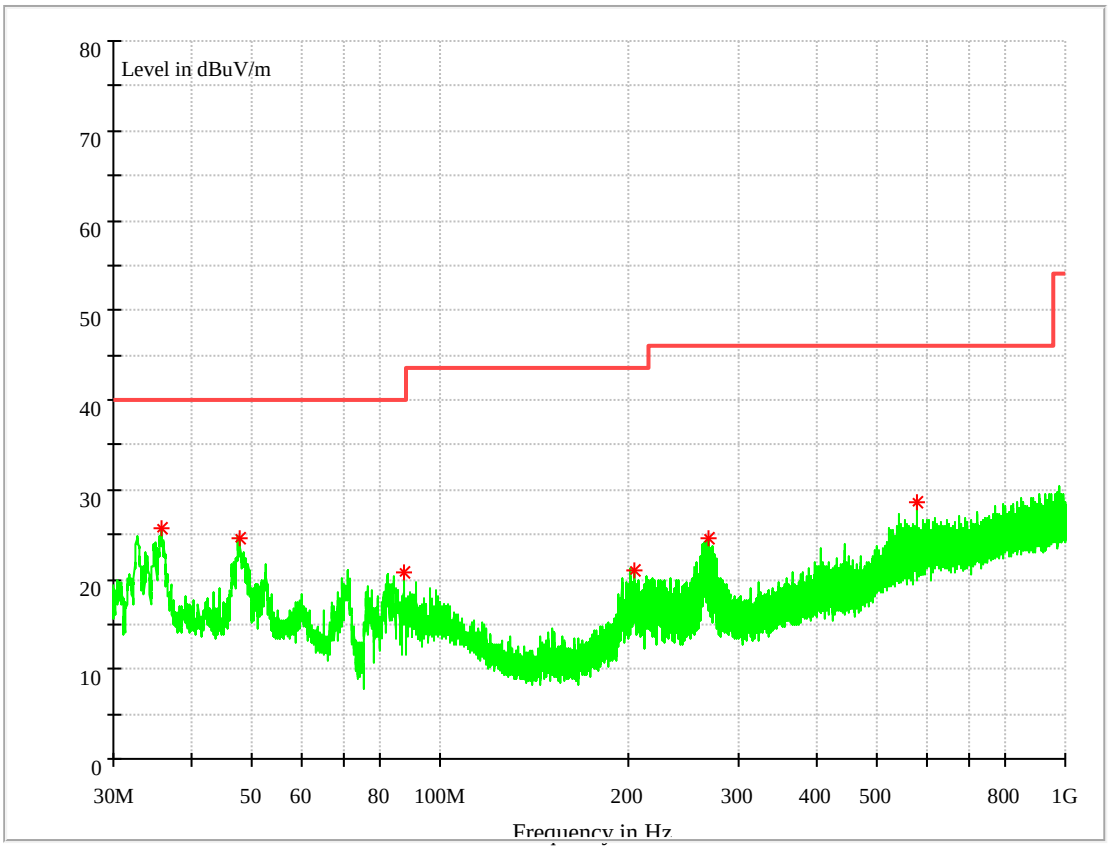
Note 1: The test results and plot for testing range of “9 kHz to 30 MHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.



2.2 Part 2: Testing Range of “30 MHz to 1 GHz”

Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).



Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Transd. (dB)
35.787667	25.68	40.00	14.32	100.0	V	0.0	13.2
47.783333	24.56	40.00	15.44	100.0	V	220.0	14.2
87.424000	20.82	40.00	19.18	100.0	V	134.0	12.2
203.985667	20.89	43.50	22.61	100.0	V	311.0	12.3
267.876333	24.52	46.00	21.48	100.0	V	97.0	14.1
577.015333	28.52	46.00	17.48	100.0	H	19.0	20.4

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

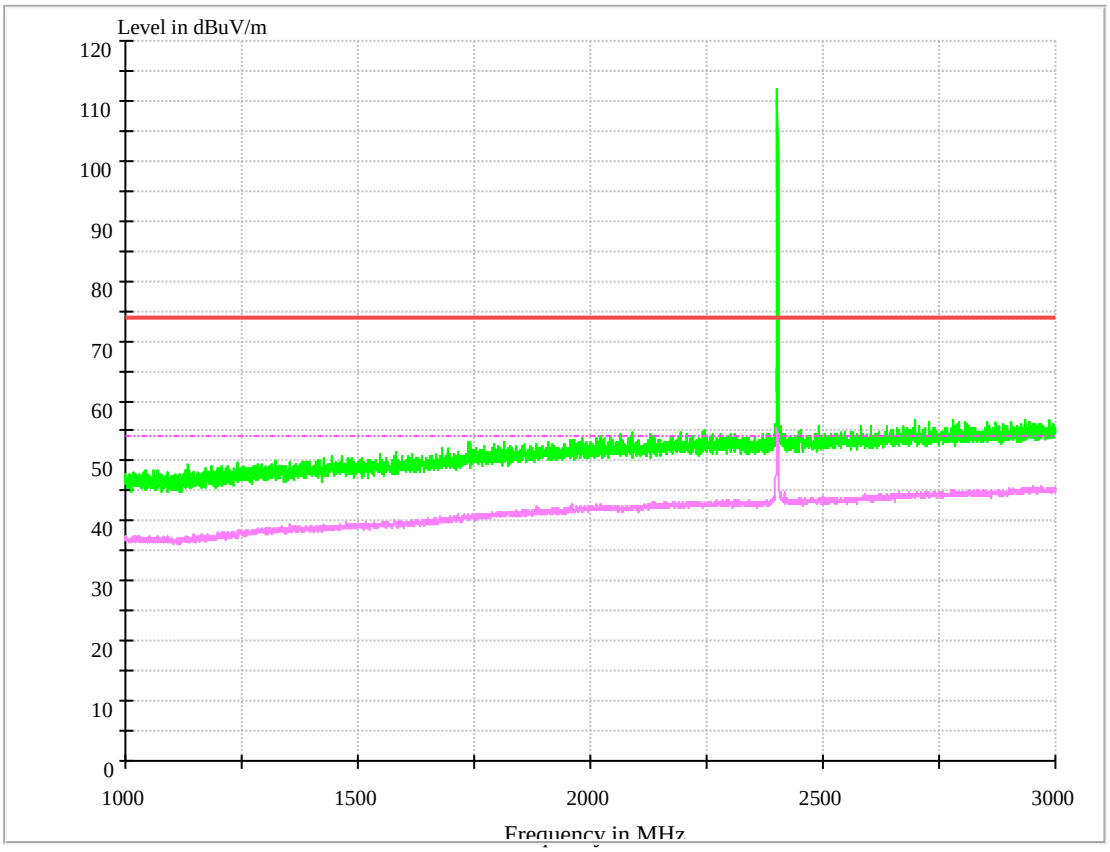
2.3 Part 3: Testing Range of “1GHz to 3GHz”

Note 1: The testing range of “1GHz to 3 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.

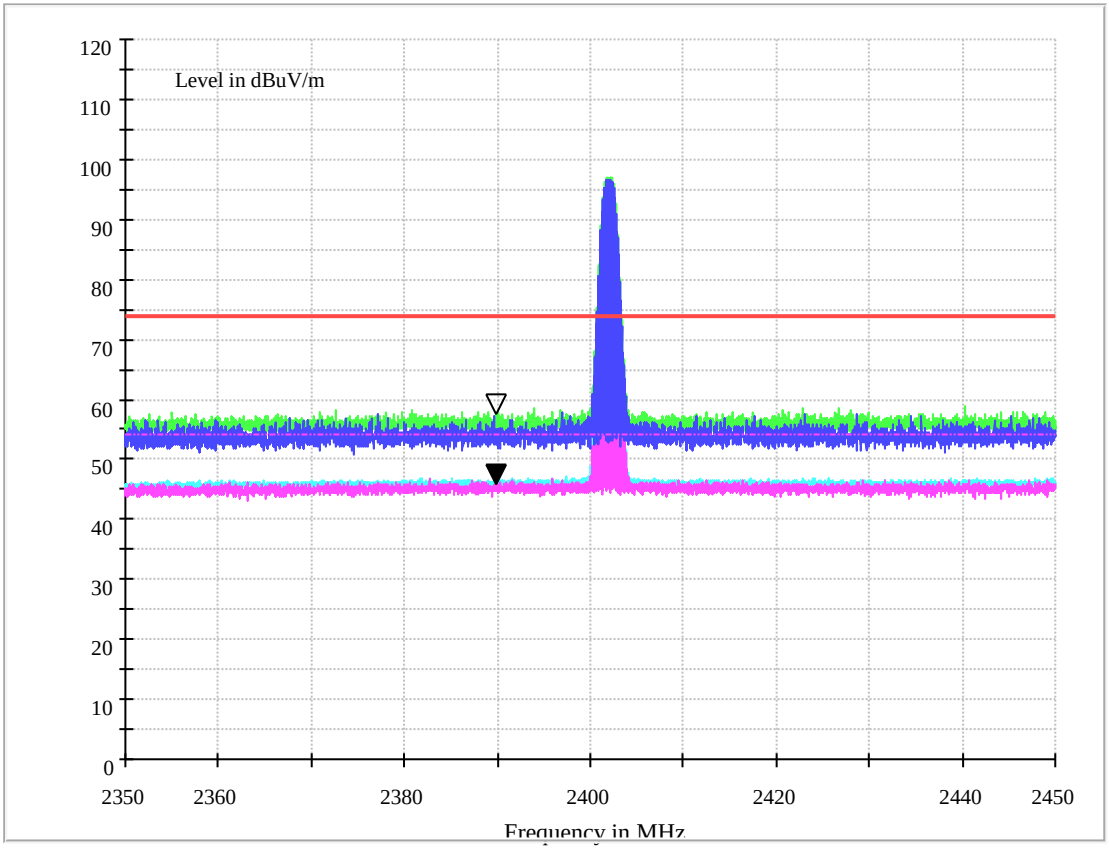
Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).

Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

2.3.1Test Mode: BT5.0



2.3.1.1 Channel 0



MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2390	46.496	54.00	7.504	150.0	H	57.0	-6.8

MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2390	58.060	74.00	15.94	150.0	H	46.0	-6.8

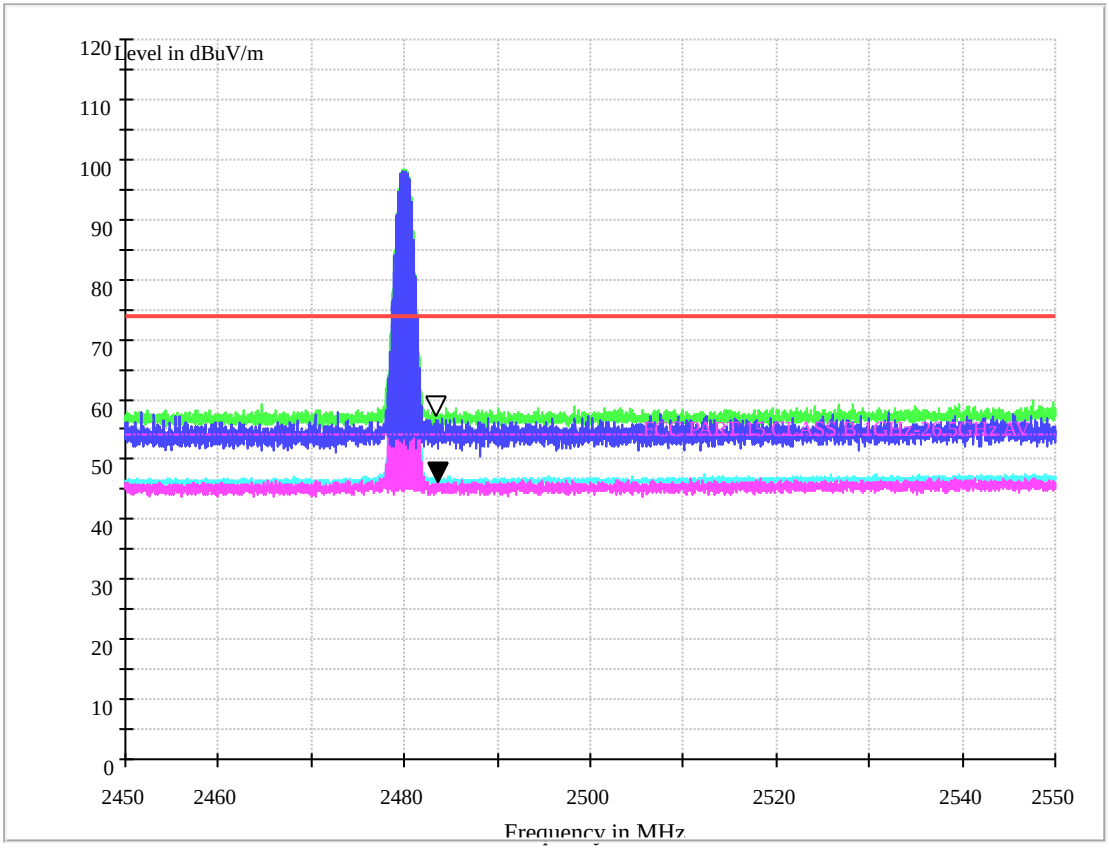
Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit – Level

2.3.1.2 Channel 39



MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2483.5	46.503	54.00	7.497	150.0	H	57.0	-10.2

MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth	Transd. (dB)
2483.5	57.365	74.00	16.635	150.0	H	46.0	-10.2

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

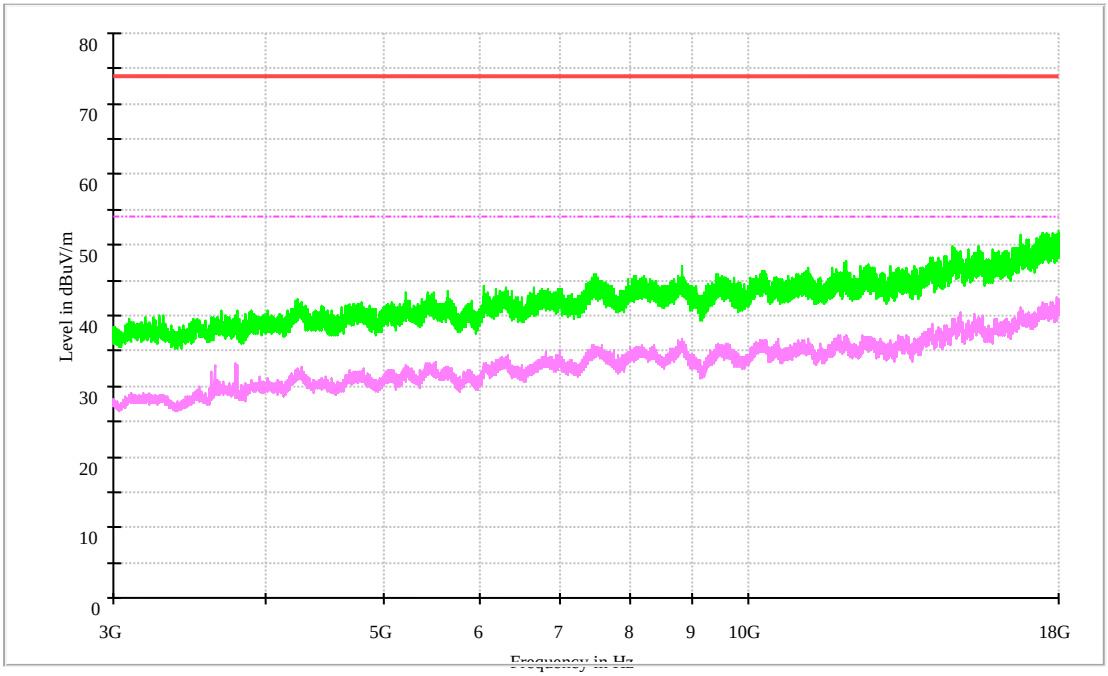
2, Margin=Limit – Level

2.4 Part 4: Testing Range of “3 GHz to 18 GHz”

Note 1: The test results and plot for testing range of “3 GHz to 18 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The testing range of “3 GHz to 18 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).

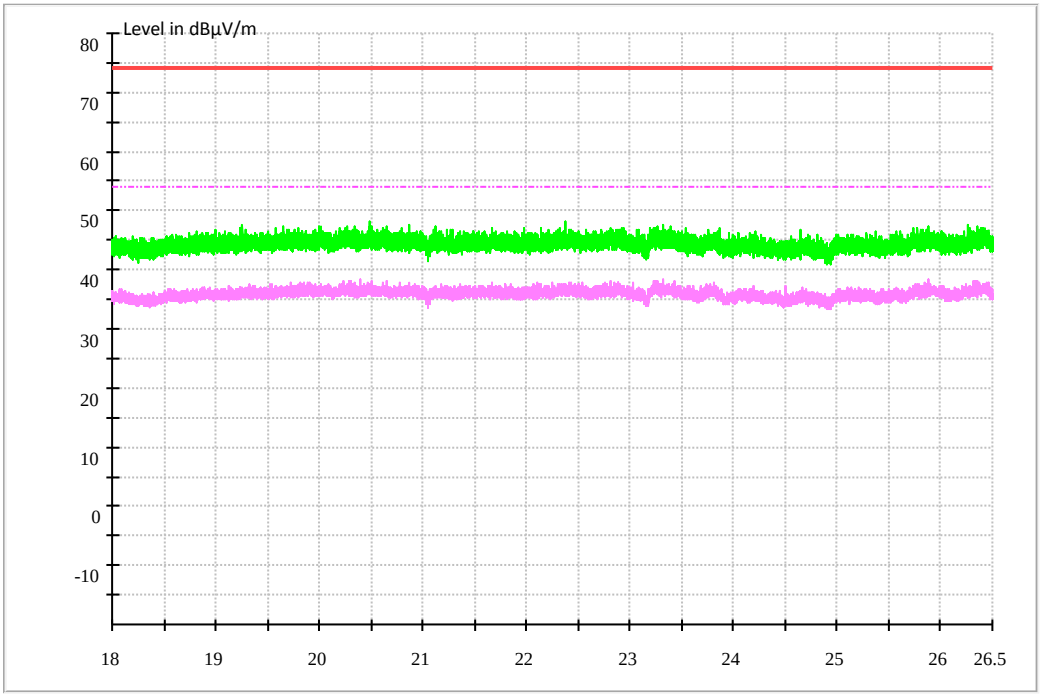


2.5 Part 5: Testing Range of “18 GHz to 26.5 GHz”

Note 1: The test results and plot for testing range of “18 GHz to 26.5 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The testing range of “18 GHz to 26.5 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).



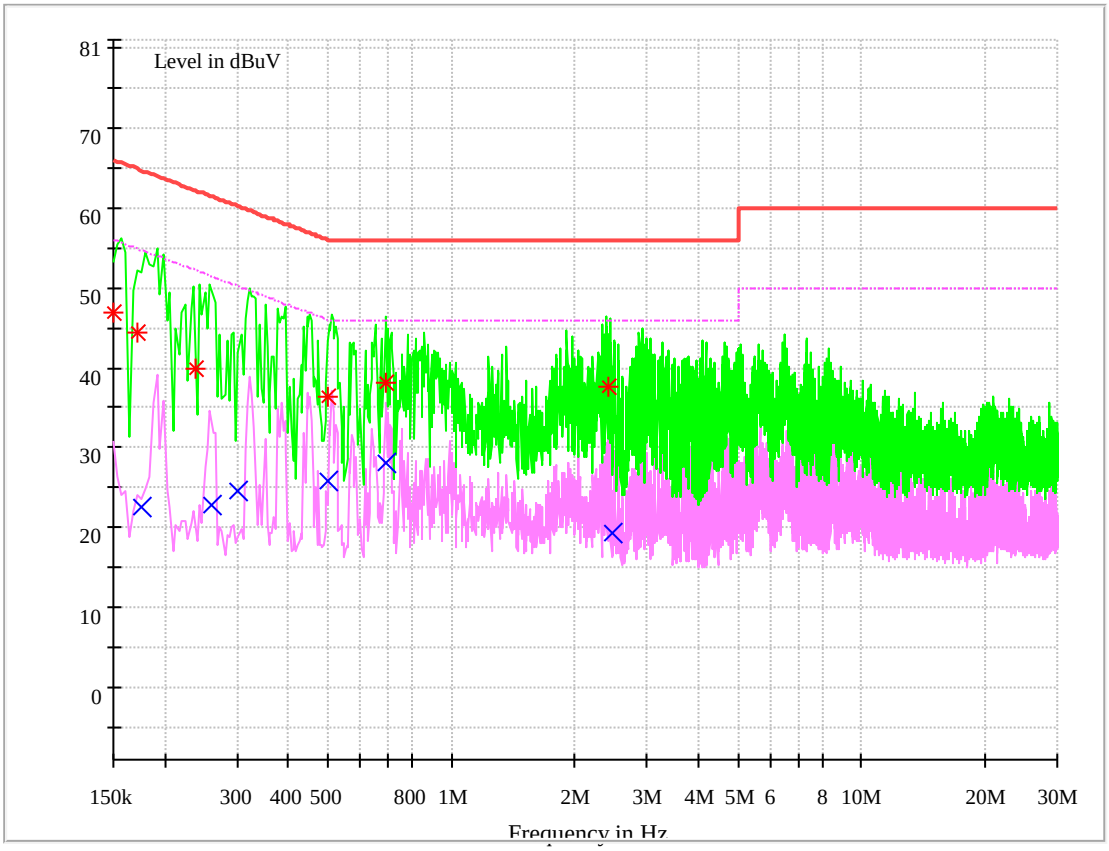
Appendix I: Conducted Emission at Power Port

Note: We tested in two modes, mode 1 is adaptor + Wireless Charging Case and mode 2 is adaptor + Wireless charging charger+ Wireless Charging Case, and the data presented below is the worst case (mode 1).

1 BLE_BT4.2

Note: RBW =9 kHz, VBW = 30 kHz

Channel 39



MEASUREMENT RESULT: QK Detector

Frequency (MHz)	Level (dBµV)	Limit (dBµV)	Transd. (dB)	Margin (dB)	Line	PE
0.150489	46.84	65.97	9.7	19.13	N	FLO
0.171776	44.36	64.87	9.7	20.51	N	FLO
0.237204	39.91	62.20	9.7	22.29	N	FLO
0.499236	36.25	56.01	9.7	19.76	L1	FLO
0.692569	38.07	56.00	9.7	17.93	N	FLO
2.413692	37.52	56.00	10.4	18.48	L1	FLO

MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dBµV)	Limit (dBµV)	Transd. (dB)	Margin (dB)	Line	PE
0.175489	22.51	54.70	9.7	32.19	N	FLO
0.261470	22.78	51.39	9.7	28.61	N	FLO
0.301628	24.54	50.20	9.7	25.66	L1	FLO
0.500402	25.78	46.00	9.7	20.22	N	FLO
0.689536	28.22	46.00	9.7	17.78	N	FLO
2.463432	19.23	46.00	10.5	26.77	N	FLO

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

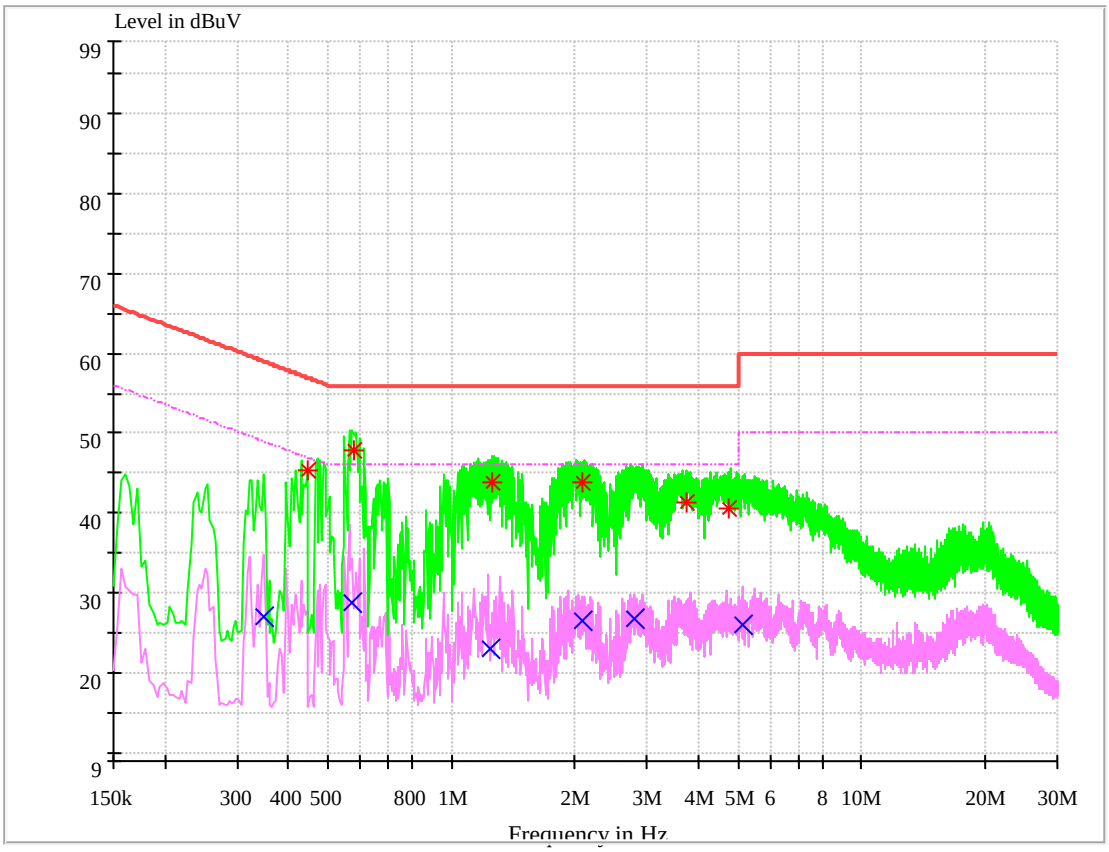
The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

2 BLE_BT5.0

Note: RBW =9 kHz, VBW = 30 kHz

Channel 39



MEASUREMENT RESULT: QP Detector

Frequency (MHz)	Level (dBµV)	Limit (dBµV)	Transd. (dB)	Margin (dB)	Line	PE
0.444659	45.41	56.98	9.7	11.57	N	FLO
0.579352	47.74	56.00	9.7	8.26	N	FLO
1.253791	43.77	56.00	9.7	12.23	N	FLO
2.092880	43.91	56.00	9.7	12.09	N	FLO
3.736998	41.38	56.00	9.7	14.62	N	FLO
4.758150	40.58	56.00	9.7	15.42	N	FLO

MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dBµV)	Limit (dBµV)	Transd. (dB)	Margin (dB)	Line	PE
0.349384	27.09	48.98	9.7	21.89	L1	FLO
0.573105	28.88	46.00	9.7	17.12	L1	FLO
1.248653	23.09	46.00	9.7	22.91	N	FLO
2.093066	26.44	46.00	9.7	19.56	N	FLO
2.798256	26.77	46.00	9.7	19.23	L1	FLO
5.134373	26.13	50.00	9.7	23.87	L1	FLO

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

END