

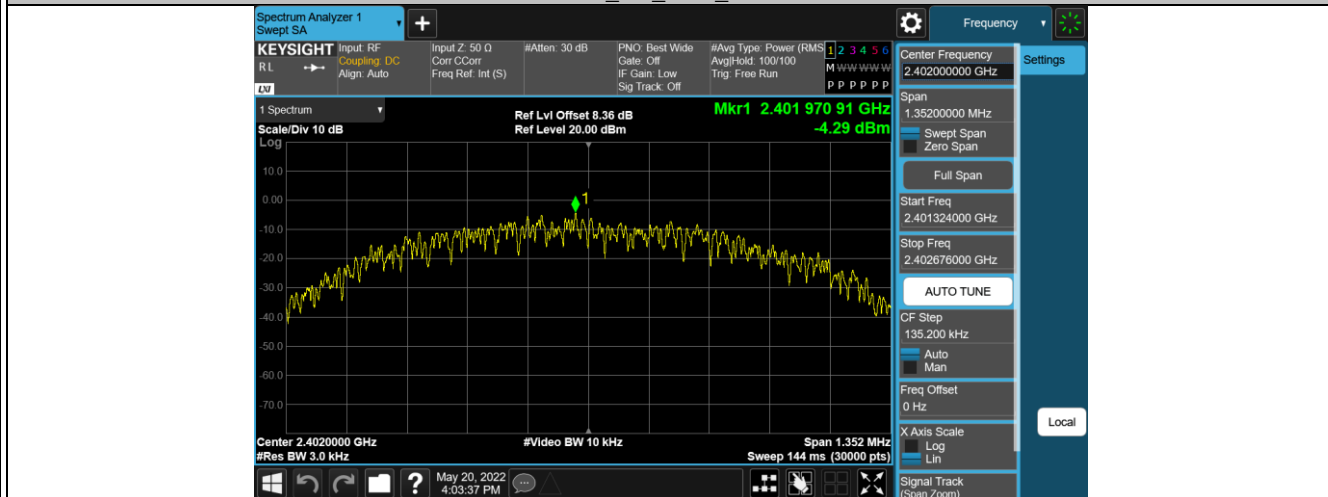
Appendix C: Test Results of Bluetooth Low Energy

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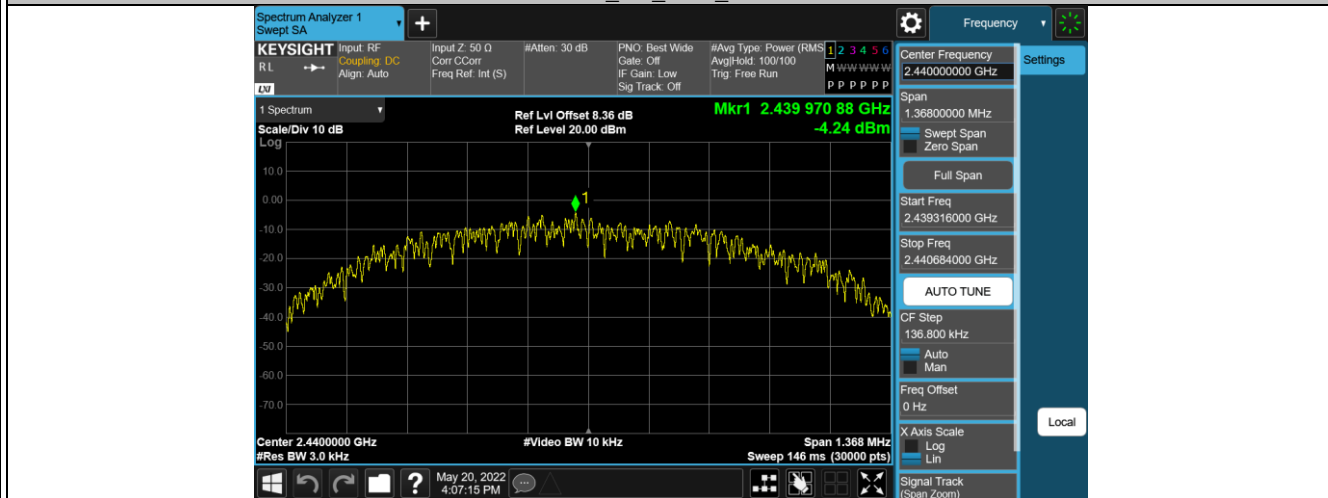
Appendix C.1: Test Results of Conducted Power Spectral Density

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-4.29	≤8	PASS
		2440	-4.24	≤8	PASS
		2480	-4.16	≤8	PASS

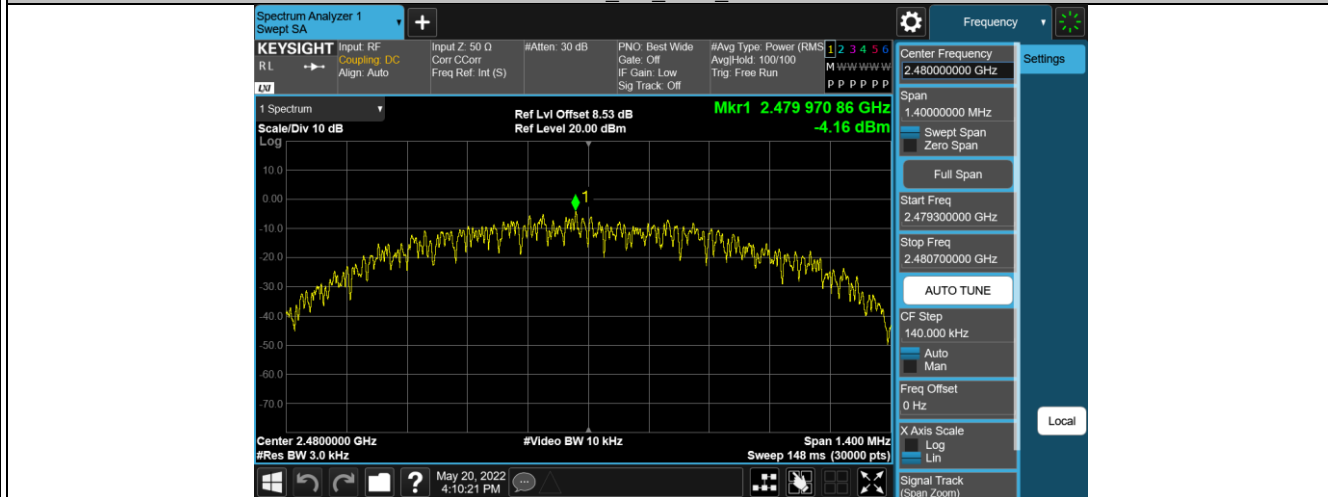
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

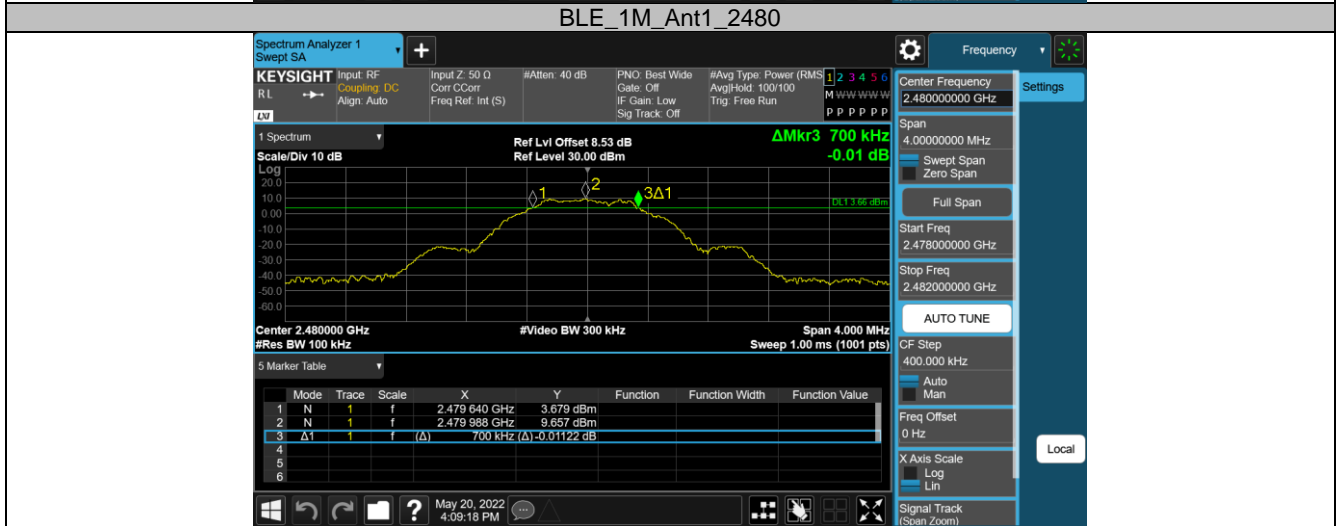


BLE_1M_Ant1_2480



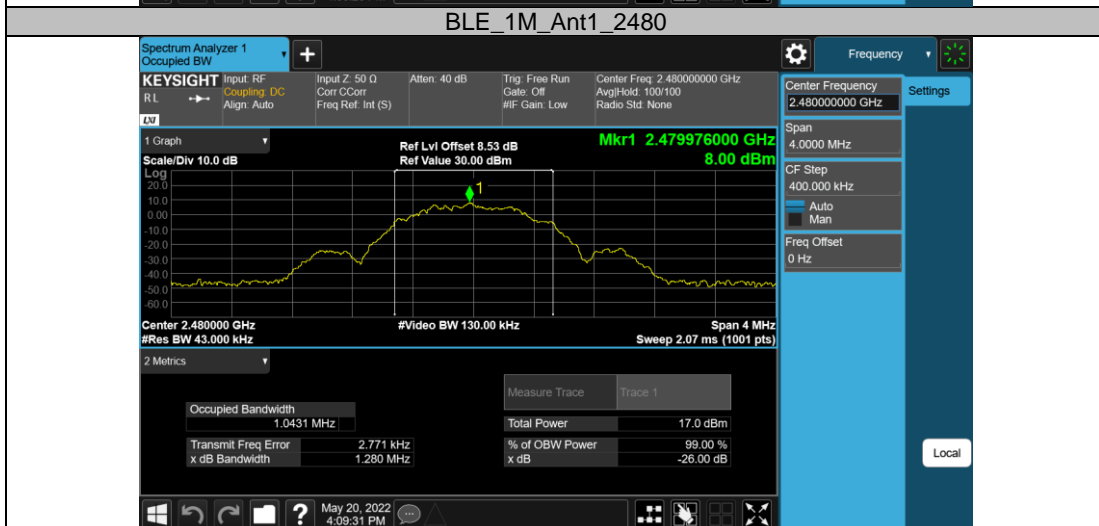
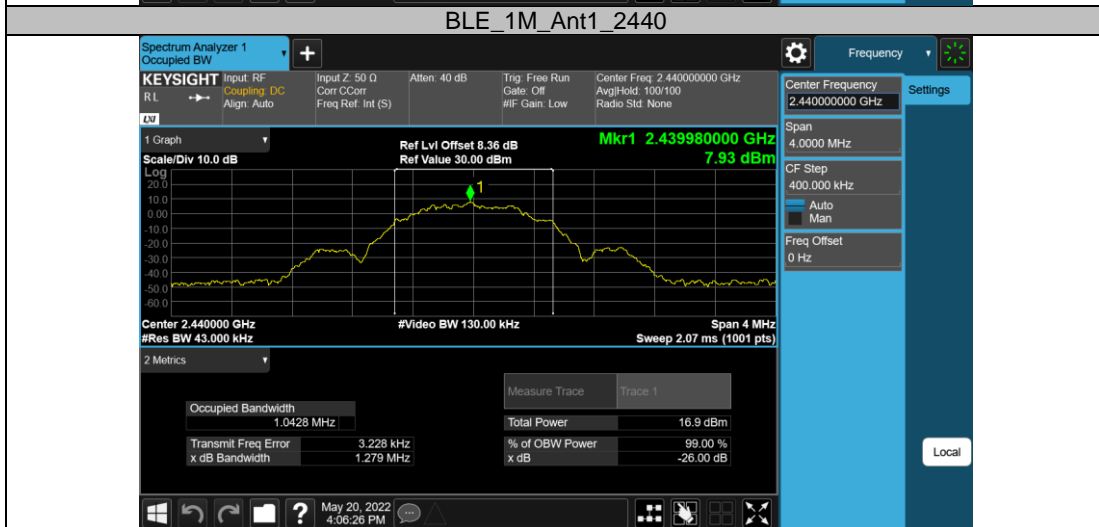
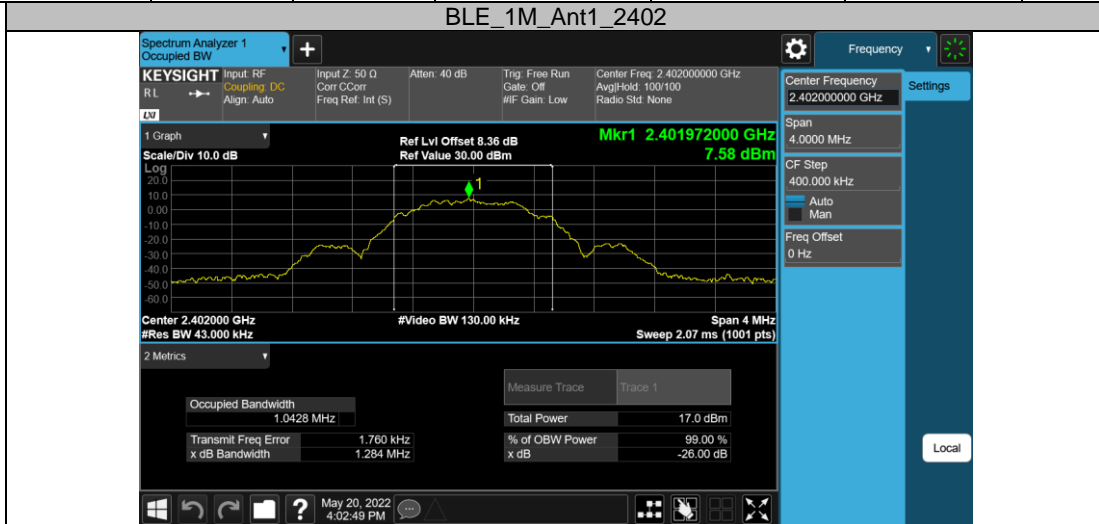
Appendix C.2: Test Results of 6dB Bandwidth

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.676	2401.652	2402.328	0.5	PASS
		2440	0.684	2439.652	2440.336	0.5	PASS
		2480	0.700	2479.640	2480.340	0.5	PASS



Appendix C.3: Test Results of 99% Bandwidth

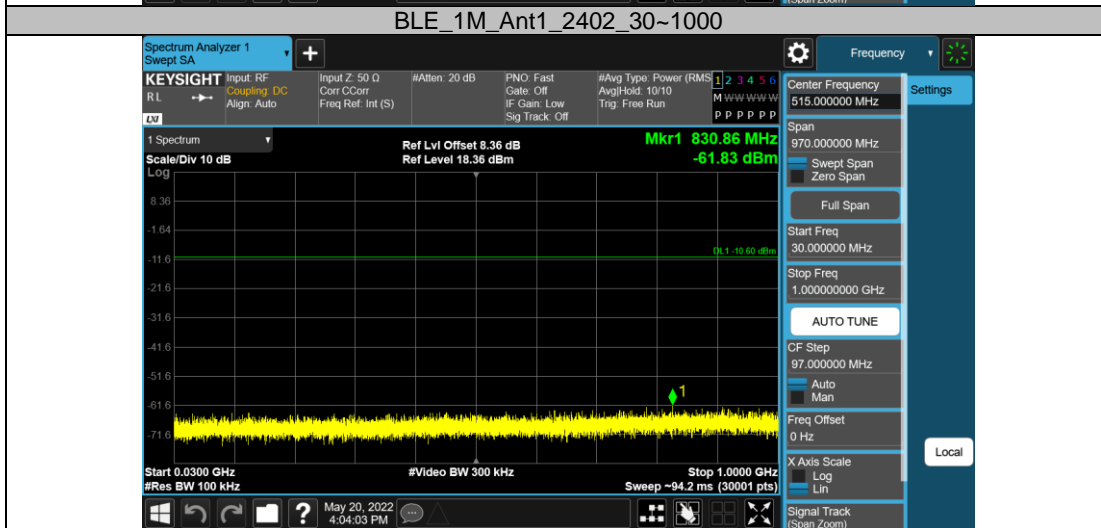
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0428	2401.480	2402.523	---	PASS
		2440	1.0428	2439.482	2440.525	---	PASS
		2480	1.0431	2479.481	2480.524	---	PASS

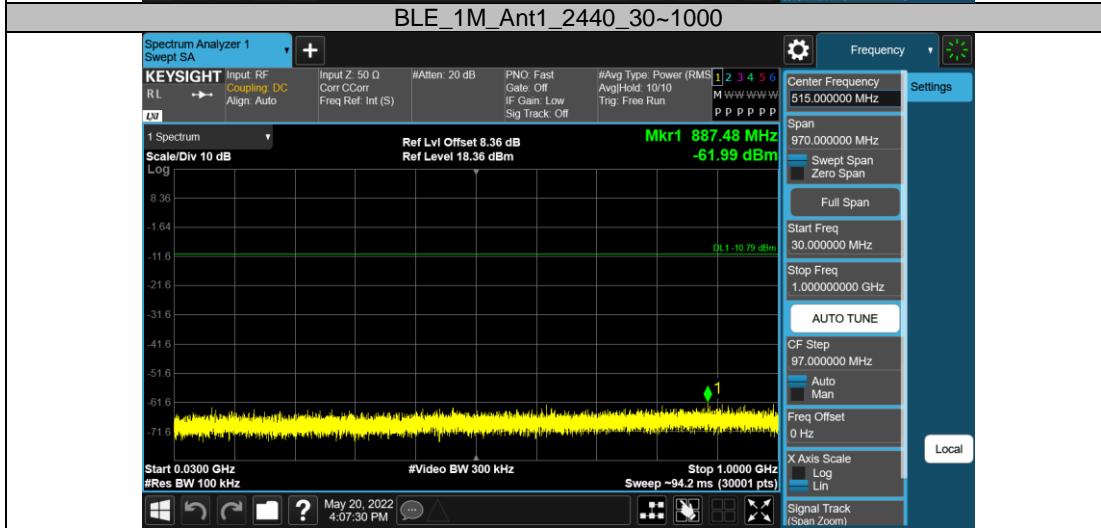
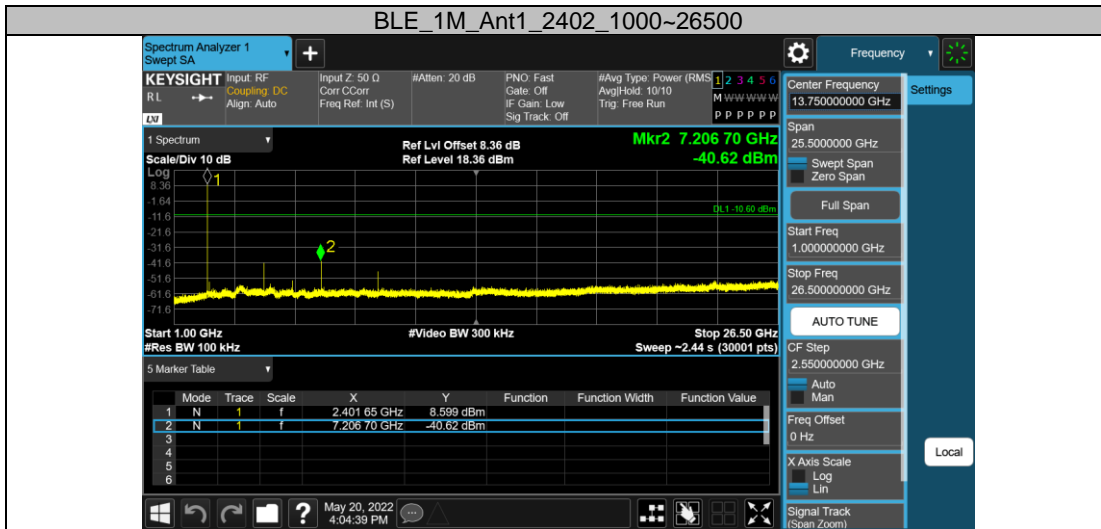


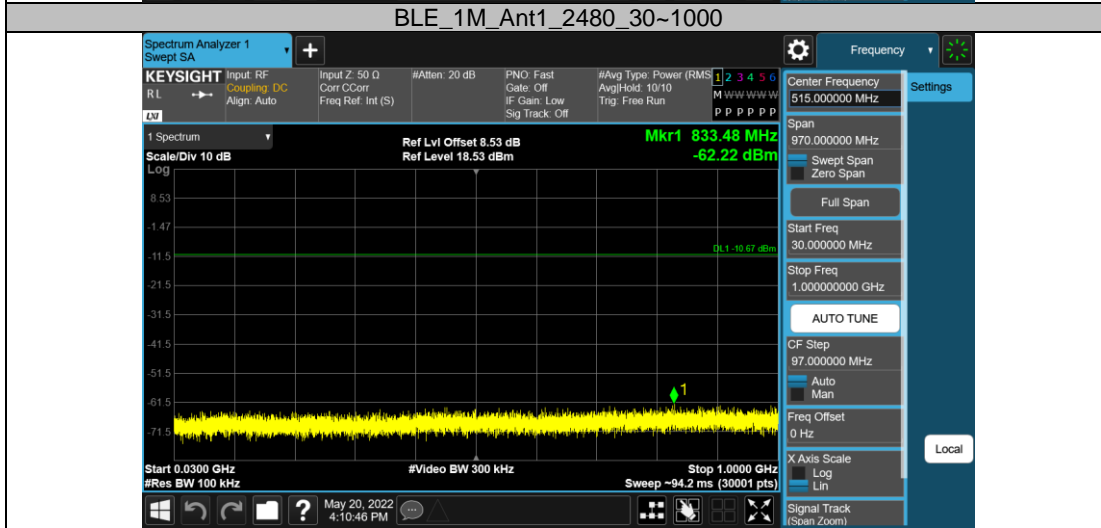
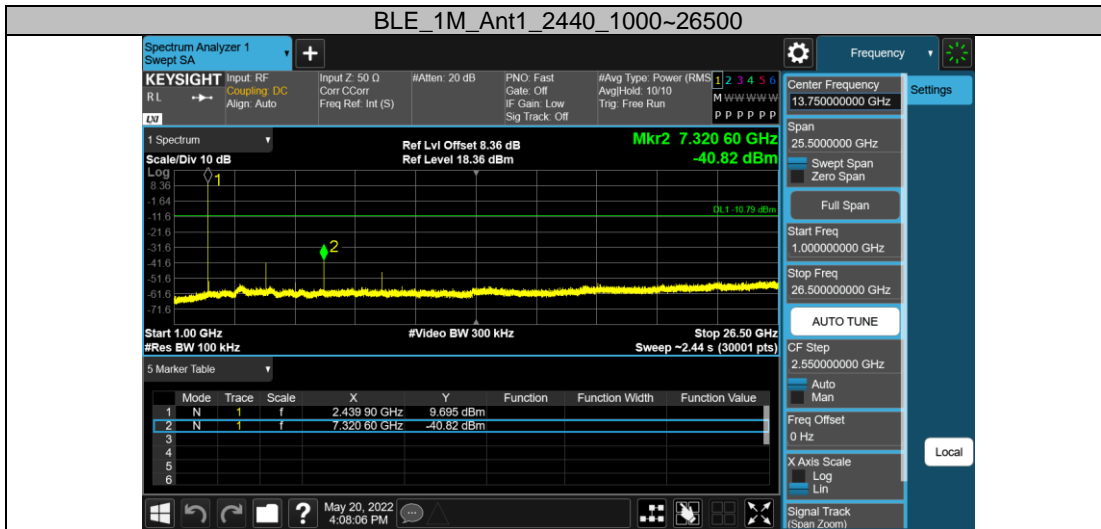
Appendix C.4: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Conducted Spurious Emission

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	9.40	9.40	---	PASS
			30~1000	9.40	-61.83	≤-10.6	PASS
			1000~26500	9.40	-40.62	≤-10.6	PASS
		2440	Reference	9.21	9.21	---	PASS
			30~1000	9.21	-62	≤-10.79	PASS
			1000~26500	9.21	-40.82	≤-10.79	PASS
		2480	Reference	9.33	9.33	---	PASS
			30~1000	9.33	-62.22	≤-10.67	PASS
			1000~26500	9.33	-43.61	≤-10.67	PASS



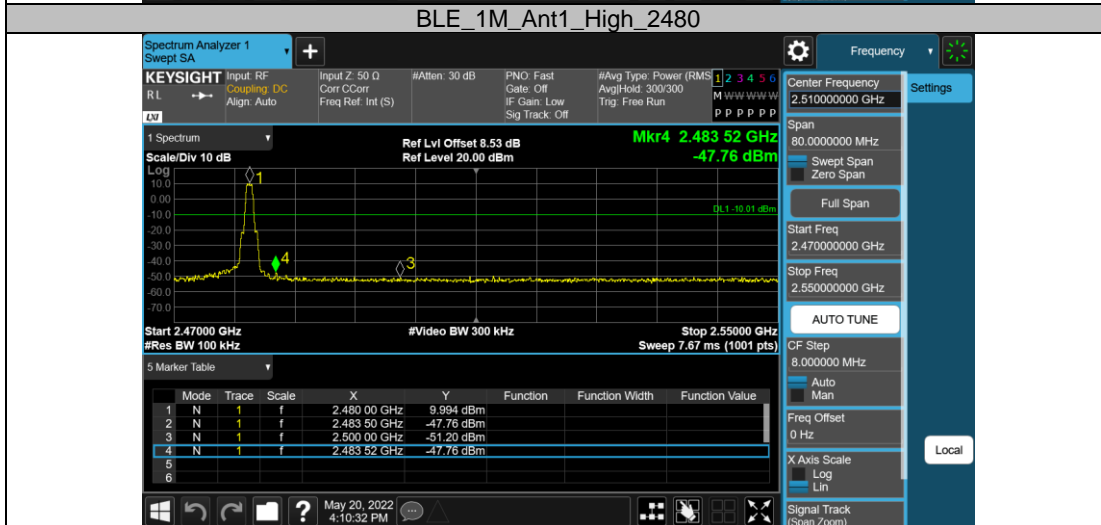
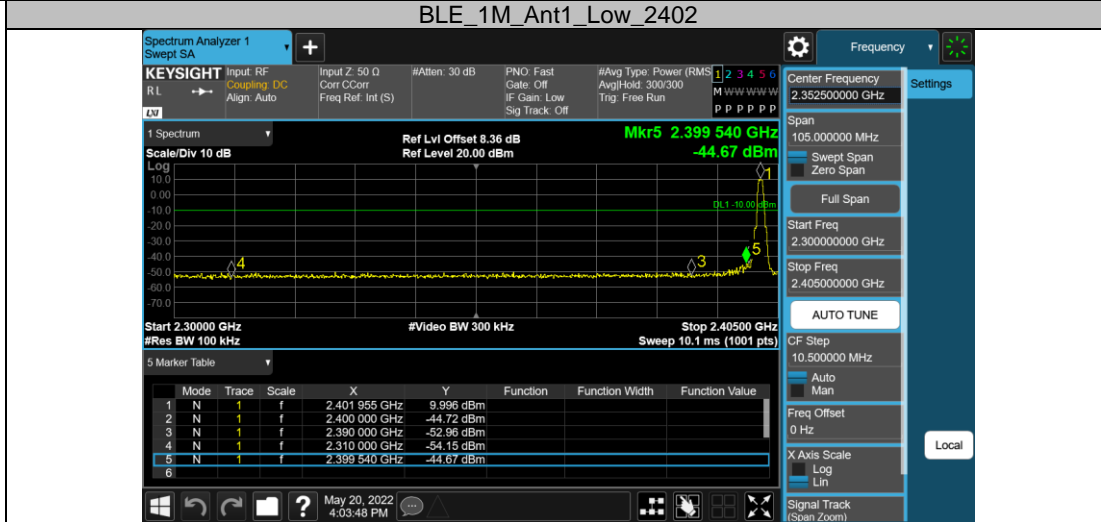






Band Edge

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	10.00	-44.67	≤-10.00	PASS
		High	2480	9.99	-47.76	≤-10.01	PASS



Appendix C.5: Test Results of Radiated Spurious Emissions

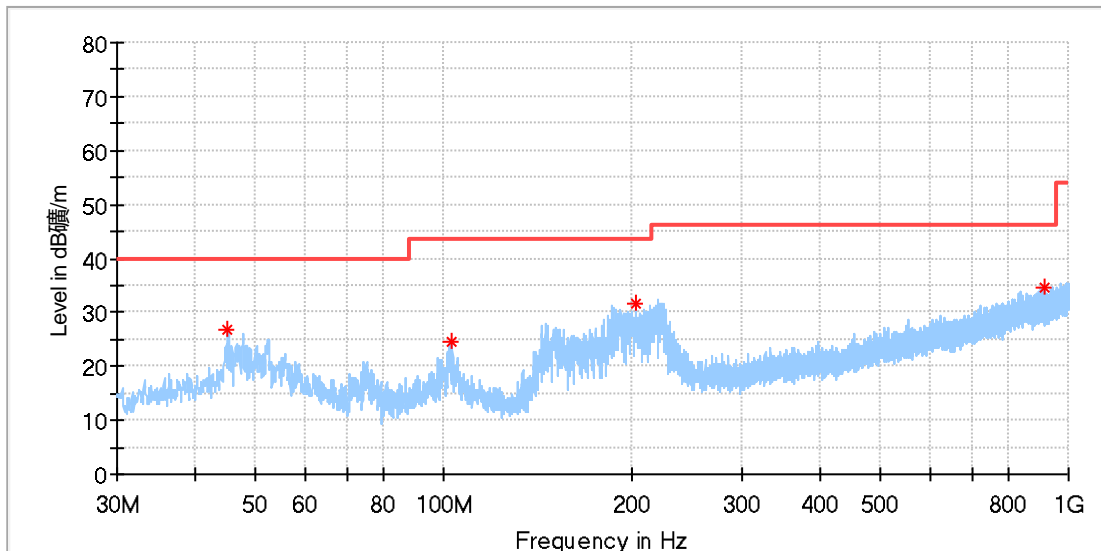
Note:

- 1) This testing was carried out on different modulations, but only the worst case was presented in this report.
- 2) Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

30 MHz to 1GHz

EUT Information

EUT Name:	ZBox 1
Model:	ZXV10 B866V2K
Test Mode:	BLE_Mid channel
Order No/Sample No:	168372225/A003258254-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

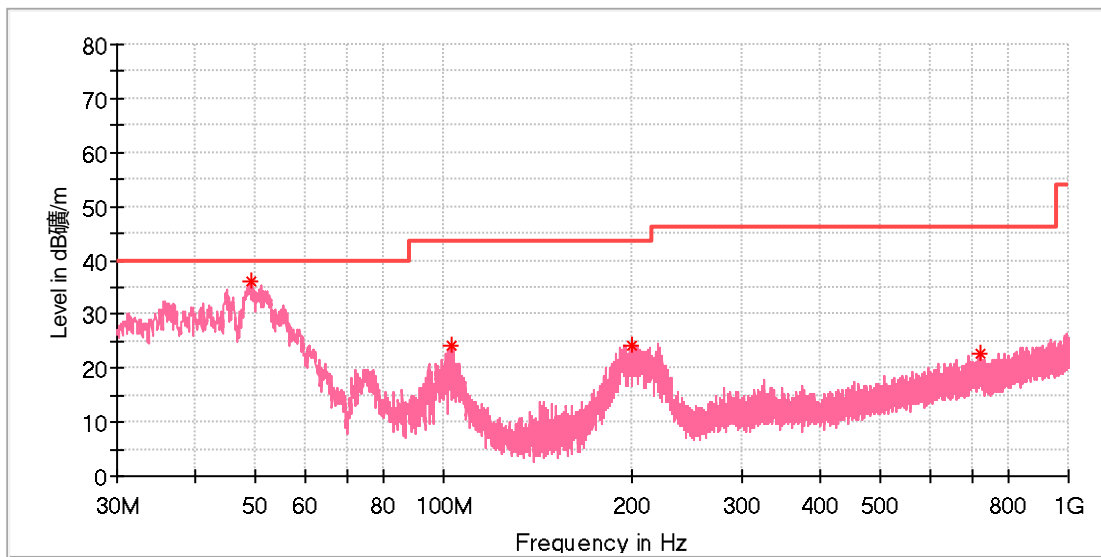
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
45.180500	26.62	40.00	13.38	100.0	H	229.0	-18.8
103.041000	24.70	43.50	18.80	100.0	H	268.0	-18.8
202.999500	31.57	43.50	11.93	100.0	H	204.0	-18.9
917.016500	34.77	46.00	11.23	100.0	H	275.0	-4.9

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_Mid channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.325385	36.15	40.00	3.85	100.0	V	144.0	-18.6
103.011154	24.27	43.50	19.23	100.0	V	300.0	-19.2
199.936539	24.25	43.50	19.25	100.0	V	334.0	-19.3
724.743846	22.59	46.00	23.41	100.0	V	87.0	-8.0

Final_Result

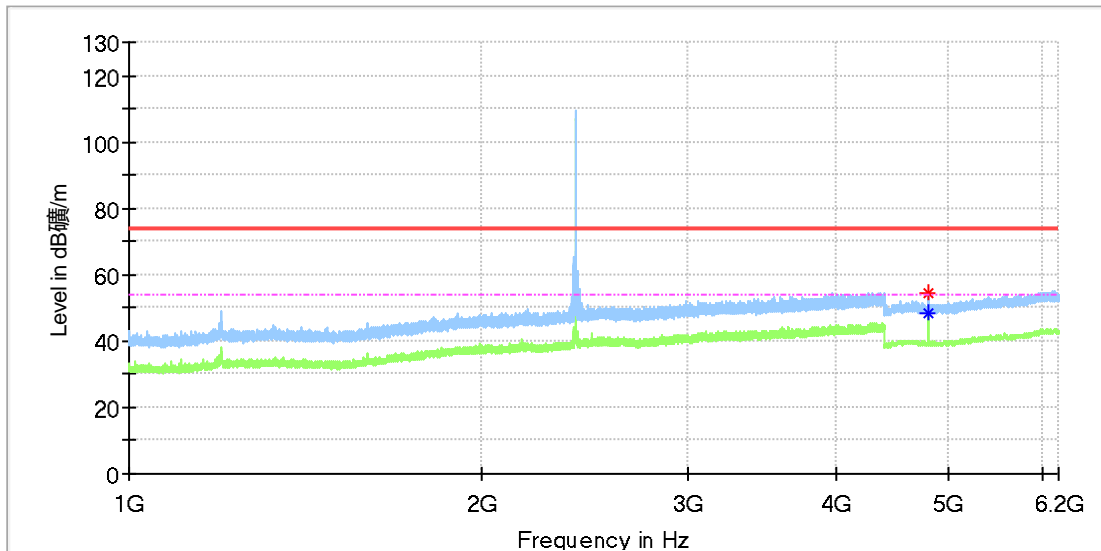
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

1GHz-18GHz

Note: The highest waveform in the figure is Bluetooth Fundamental.

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_Low channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical Freqs

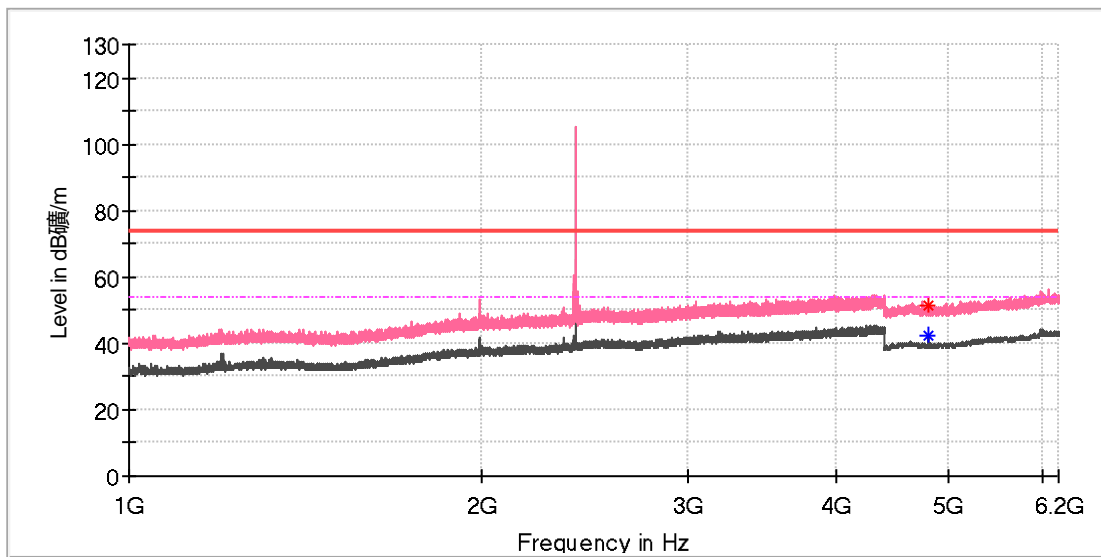
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4803.500000	54.66	---	74.00	19.34	100.0	H	216.0	11.8
4804.000000	---	48.44	54.00	5.56	100.0	H	216.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_Low channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

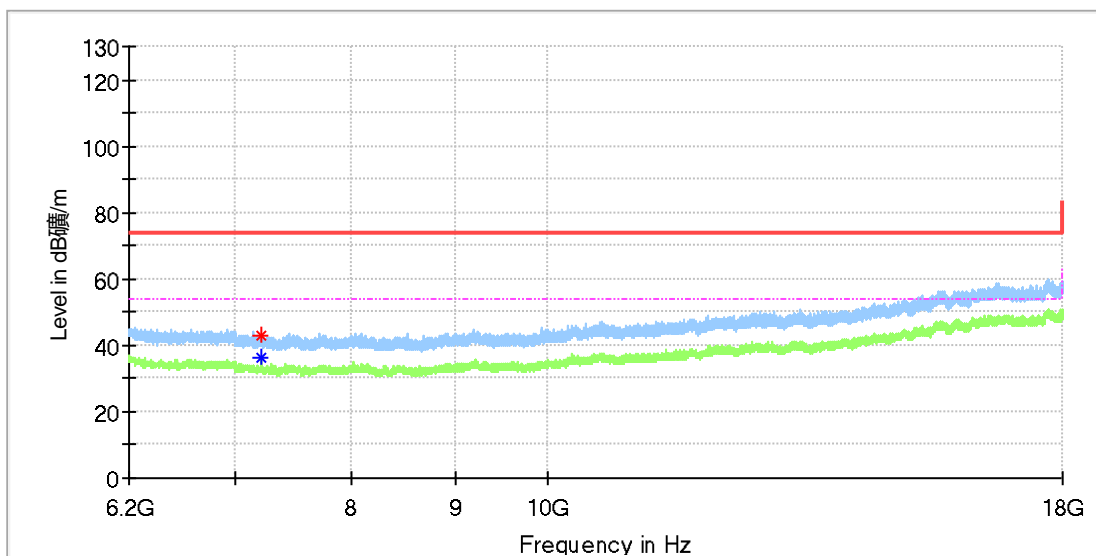
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4803.500000	51.43	---	74.00	22.57	100.0	V	11.0	11.8
4803.500000	---	42.31	54.00	11.69	100.0	V	11.0	11.8

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_Low channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

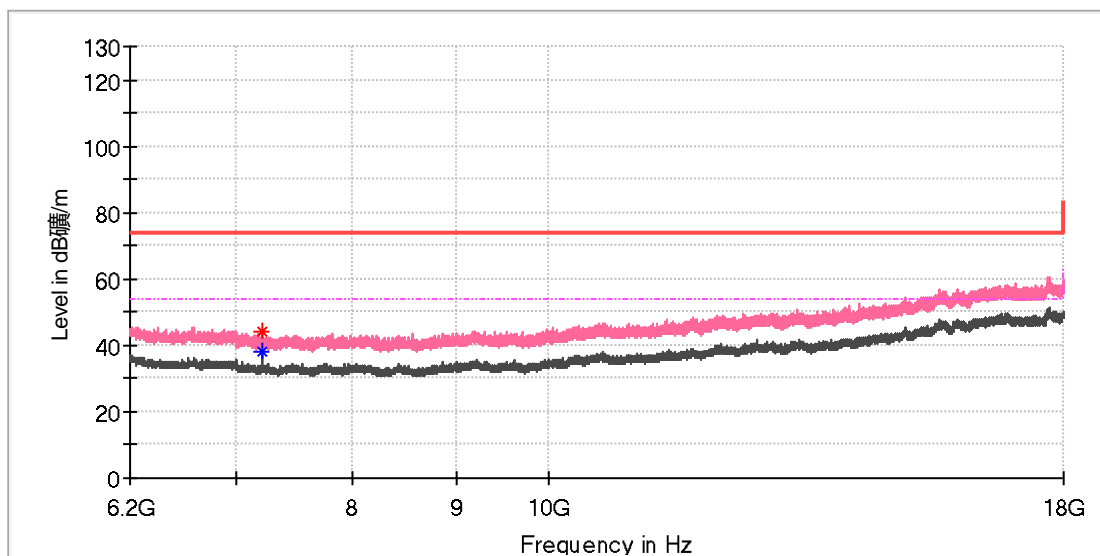
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7204.966667	42.68	---	74.00	31.32	100.0	H	228.0	8.8
7205.950000	---	36.07	54.00	17.93	100.0	H	228.0	8.8

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_Low channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

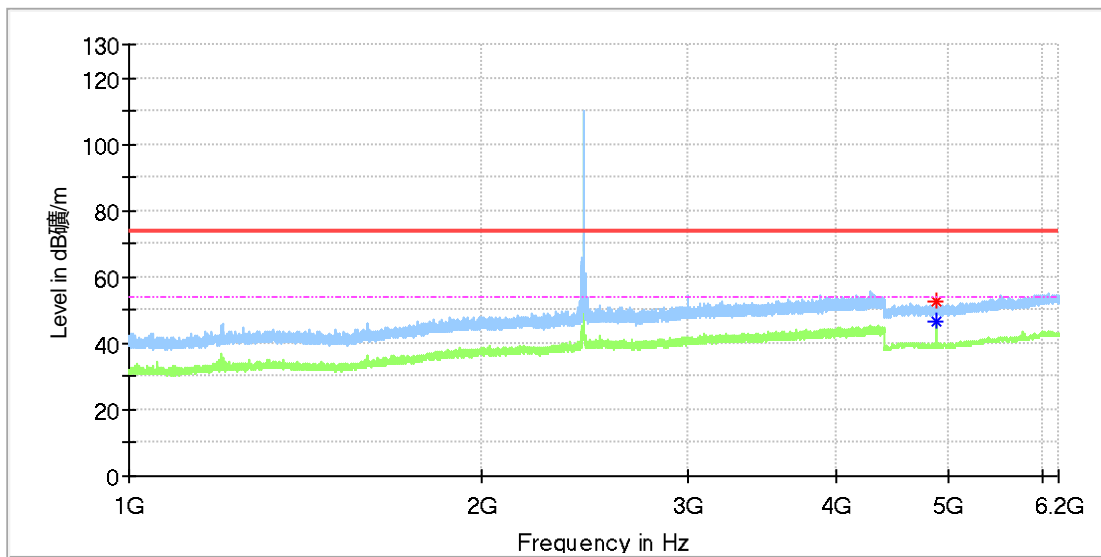
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7205.458333	---	38.10	54.00	15.90	100.0	V	0.0	8.8
7206.441667	44.32	---	74.00	29.68	100.0	V	0.0	8.8

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_Mid channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

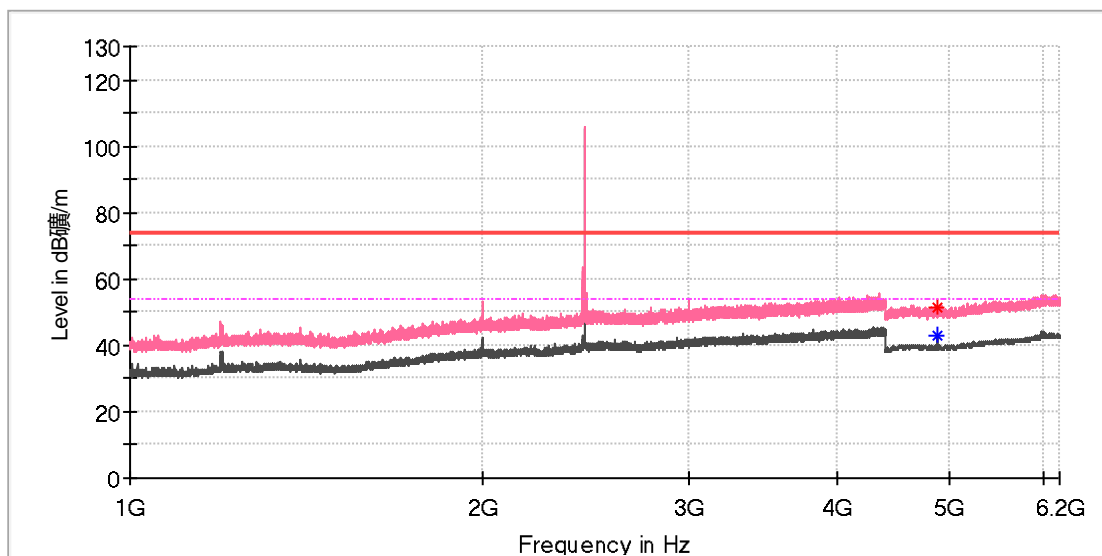
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4879.500000	52.86	---	74.00	21.14	100.0	H	199.0	11.8
4880.000000	---	46.55	54.00	7.45	100.0	H	177.0	11.8

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_Mid channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

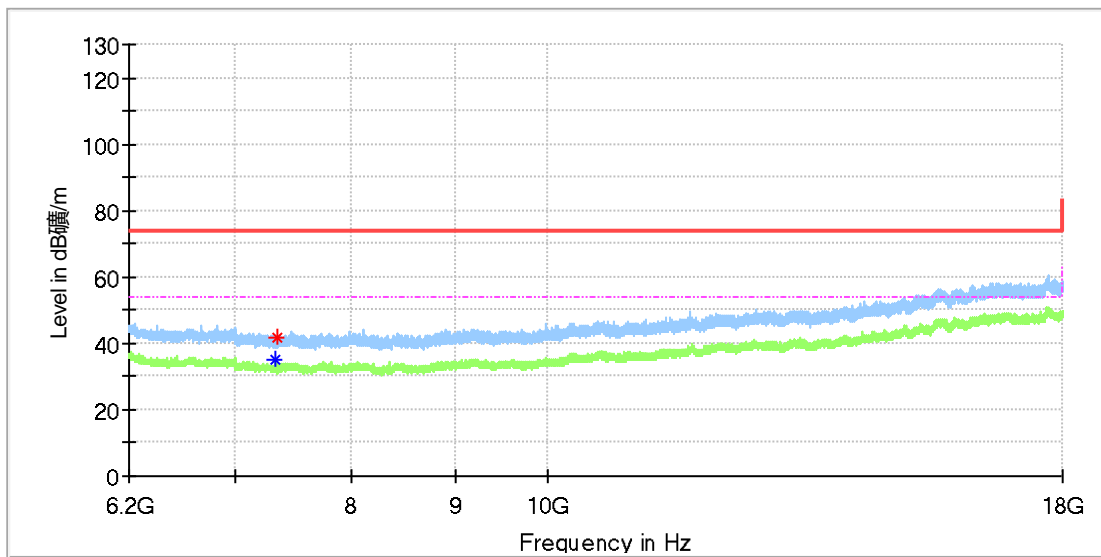
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4879.500000	---	42.78	54.00	11.22	100.0	V	18.0	11.8
4880.000000	51.27	---	74.00	22.73	100.0	V	11.0	11.8

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_Mid channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

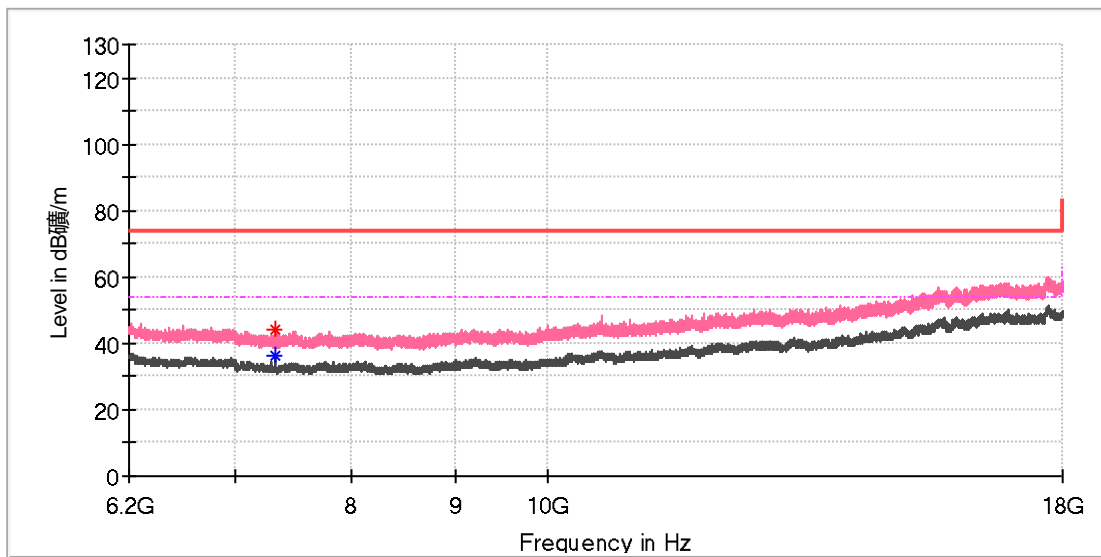
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7320.016667	---	35.08	54.00	18.92	100.0	H	241.0	8.2
7339.683333	41.91	---	74.00	32.09	100.0	H	331.0	8.1

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_Mid channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

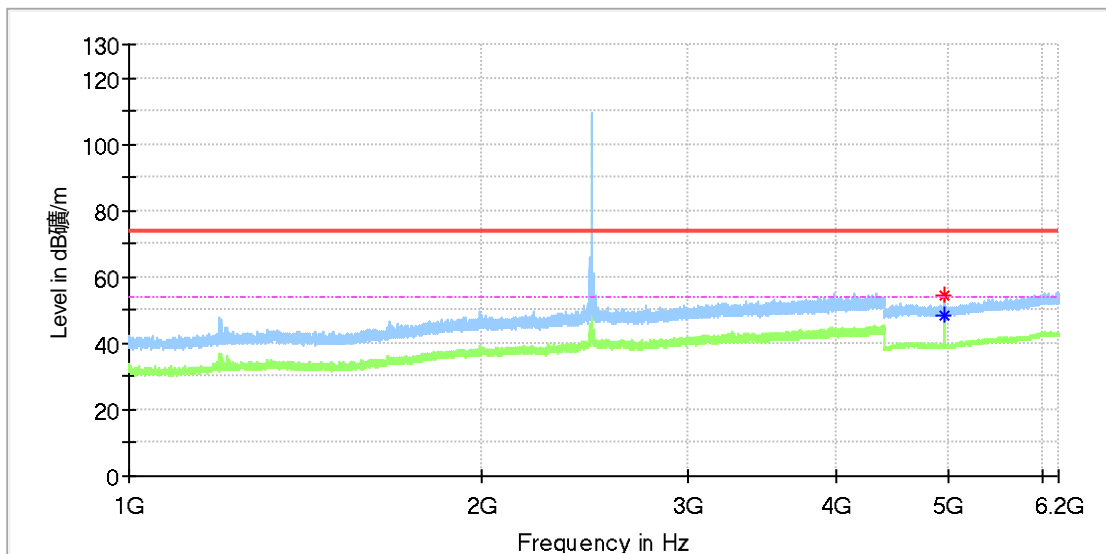
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7320.016667	44.13	---	74.00	29.87	100.0	V	9.0	8.2
7320.016667	---	36.17	54.00	17.83	100.0	V	9.0	8.2

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_High channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

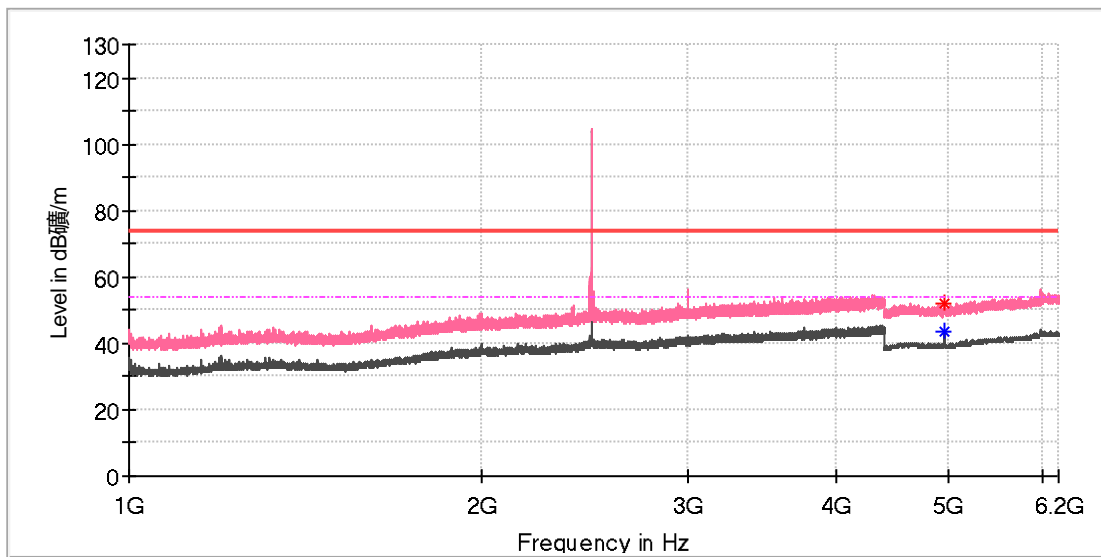
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4960.000000	---	48.26	54.00	5.74	100.0	H	192.0	11.8
4960.000000	54.21	---	74.00	19.79	100.0	H	192.0	11.8

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_High channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

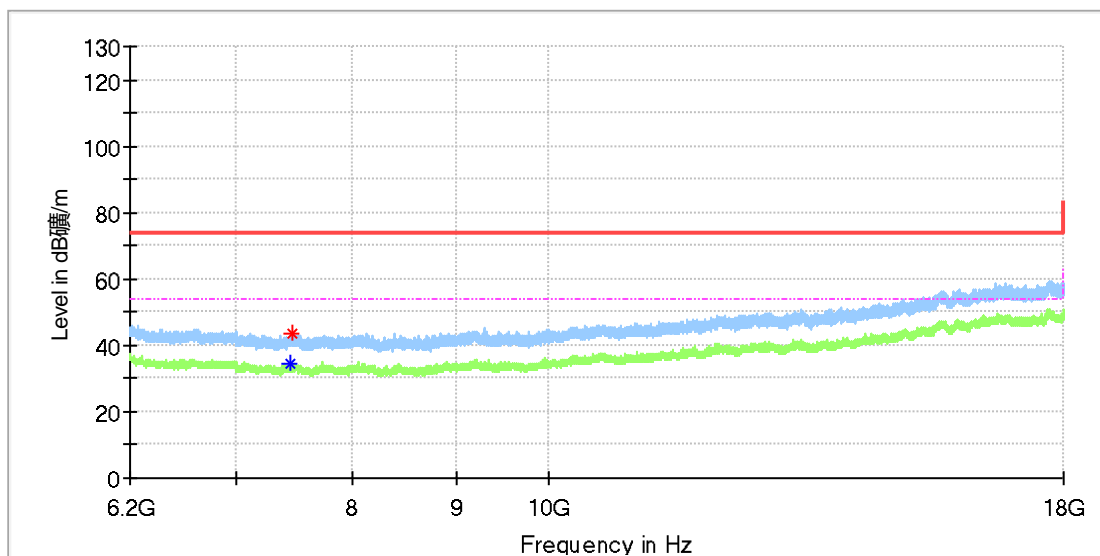
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4959.500000	51.99	---	74.00	22.01	100.0	V	26.0	11.8
4960.000000	---	43.67	54.00	10.33	100.0	V	18.0	11.8

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_High channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

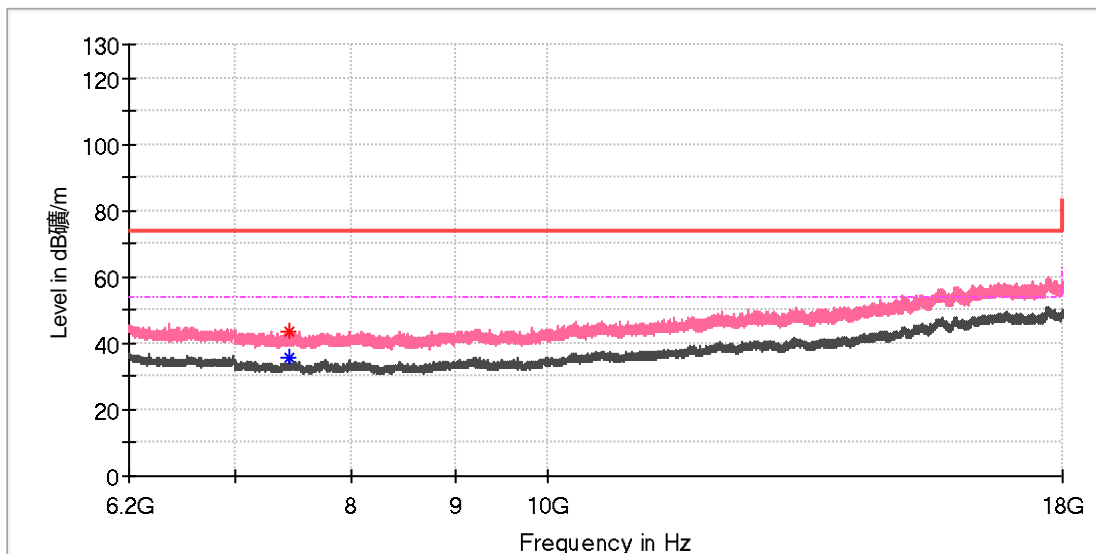
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.491667	---	34.35	54.00	19.65	100.0	H	235.0	8.4
7468.500000	43.68	---	74.00	30.32	100.0	H	250.0	8.6

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_High channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

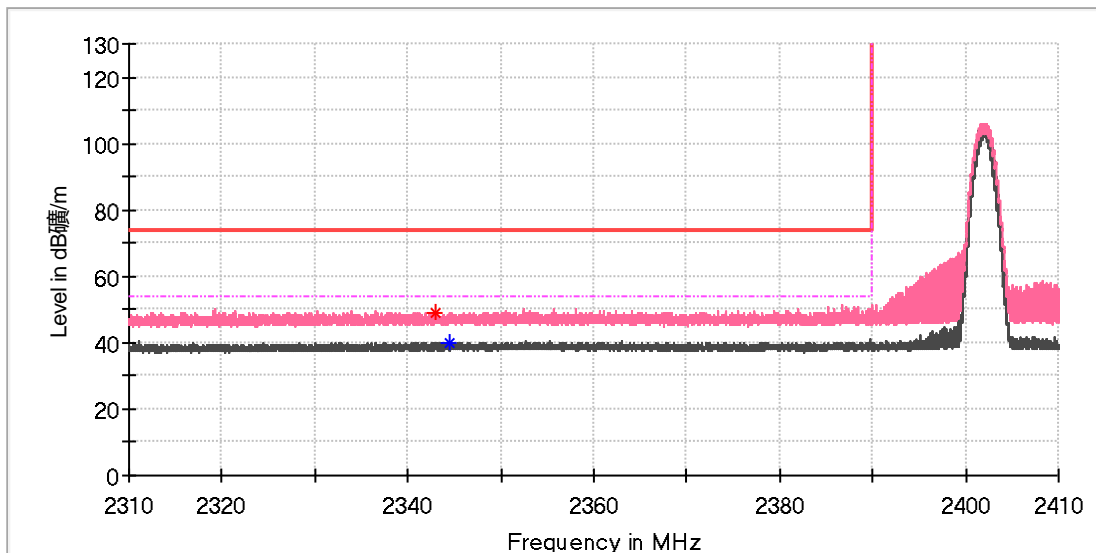
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.983333	43.74	---	74.00	30.26	100.0	V	355.0	8.4
7439.983333	---	35.63	54.00	18.37	100.0	V	355.0	8.4

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Appendix C.6: Test Results of Radiated Emissions in Restricted Bands

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_Low channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

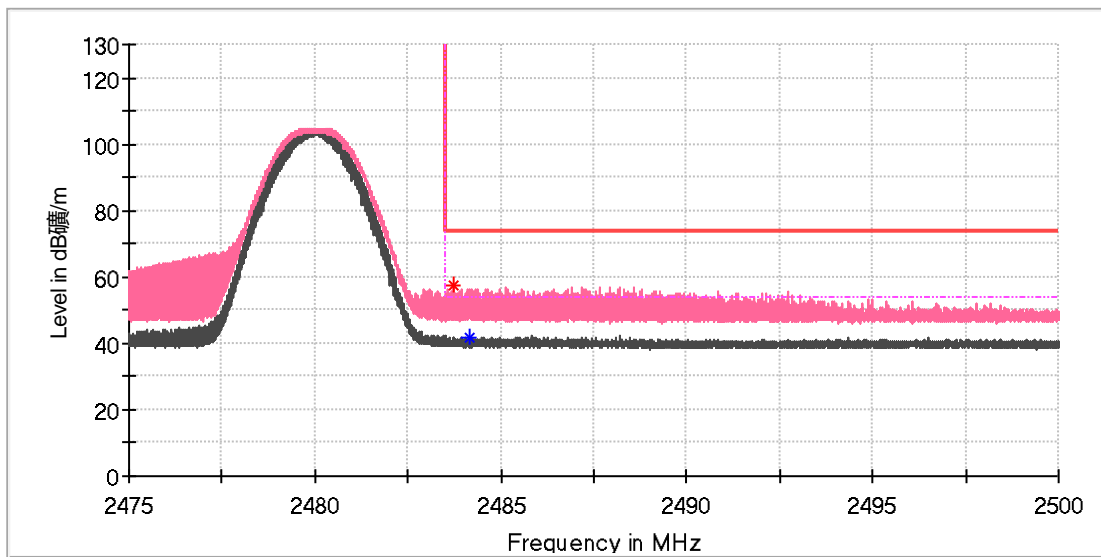
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2343.080000	49.21	---	74.00	24.79	100.0	V	75.0	6.8
2344.580000	---	40.14	54.00	13.86	100.0	V	65.0	6.9

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_High channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

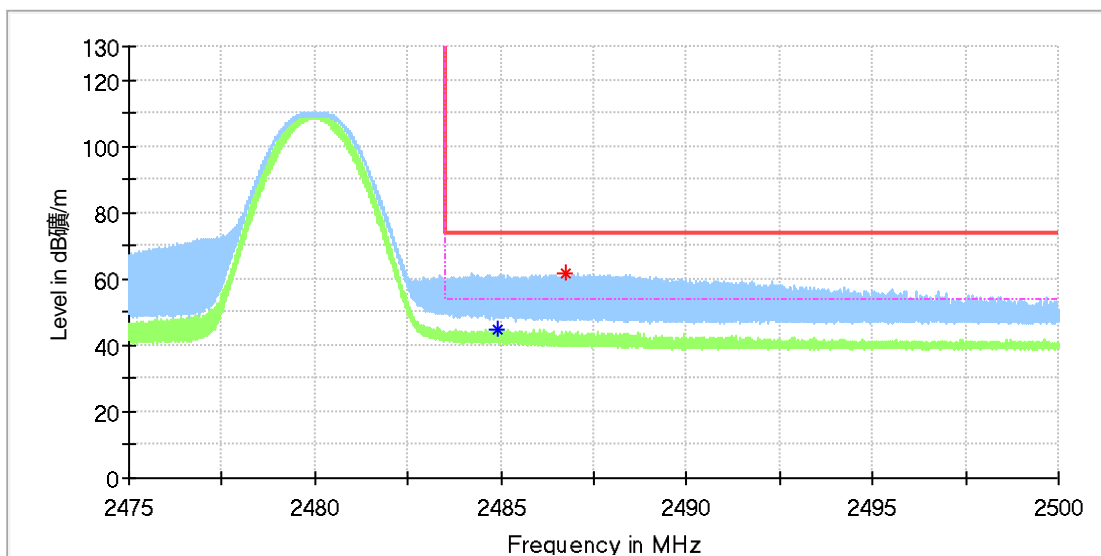
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.726250	57.19	---	74.00	16.81	100.0	V	263.0	7.4
2484.158750	---	41.83	54.00	12.17	100.0	V	122.0	7.4

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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EUT Information

EUT Name: ZBox 1
 Model: ZXV10 B866V2K
 Test Mode: BLE_High channel
 Order No/Sample No: 168372225/A003258254-002
 Test Voltage:: 120V/60Hz
 Remark: Temp 23 Humi:58%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



Critical_Freqs

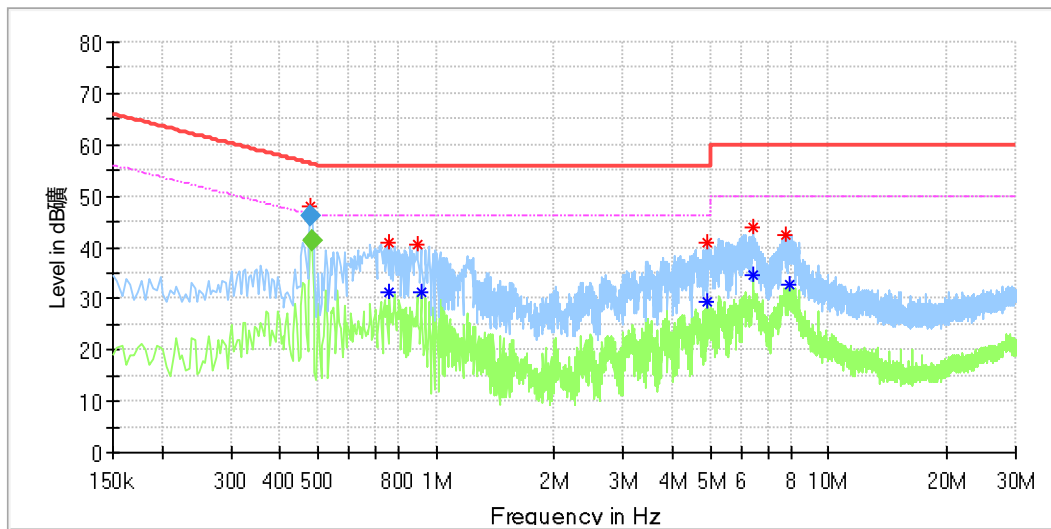
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.933750	---	44.72	54.00	9.28	100.0	H	190.0	7.4
2486.736250	61.55	---	74.00	12.45	100.0	H	190.0	7.4

Final_Result

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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EUT Information

EUT Name: ZBox 1
 Order No: 168372225
 Model: ZXV10 B866V2K
 Test mode: BT operation+HDMI(4K)
 Test Voltage: AC 120V/60Hz
 Test Standard: FCC Part 15
 Test By:/Review By: Shower Dai/Gary Chen
 Tem./Hum./Pressure: 24.2°C/51%/101kPa
 Remark: Adapter model:KL-WA120100-E



Critical Freqs

Frequency (MHz)	MaxPeak (dBuV)	Average (dBuV)	Limit (dBuV)	Margin (dB)	Line	Corr. (dB)
0.477500	47.99	---	56.37	8.38	N	9.8
0.481500	---	41.59	46.37	4.78	N	9.8
0.762000	---	31.08	46.00	14.92	N	9.8
0.762000	40.99	---	56.00	15.01	N	9.8
0.894000	40.41	---	56.00	15.59	N	9.8
0.918000	---	31.20	46.00	14.80	N	9.8
4.878000	---	29.55	46.00	16.45	N	9.9
4.922000	40.94	---	56.00	15.06	N	9.9
6.418000	43.75	---	60.00	16.25	N	9.9
6.418000	---	34.47	50.00	15.53	N	9.9
7.758000	42.43	---	60.00	17.57	N	10.0
7.954000	---	32.61	50.00	17.39	N	10.0

Final Result

Frequency (MHz)	QuasiPeak (dBuV)	Average (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.477500	45.99	---	56.38	10.39	3000.0	9.000	N	9.8
0.481500	---	41.19	46.31	5.12	3000.0	9.000	N	9.8