

Test Graphs





BLE 2M Ant1 High 2480

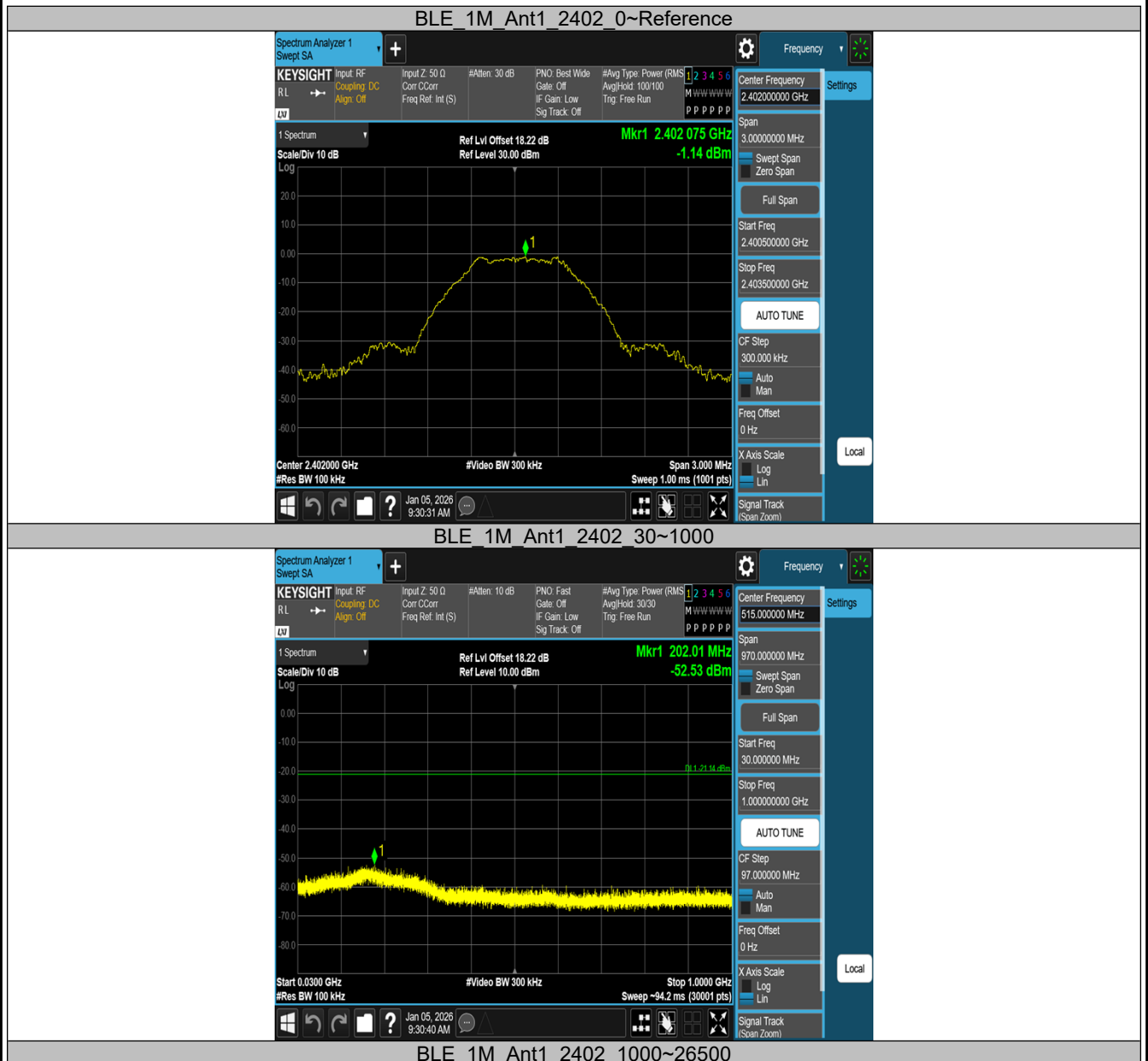


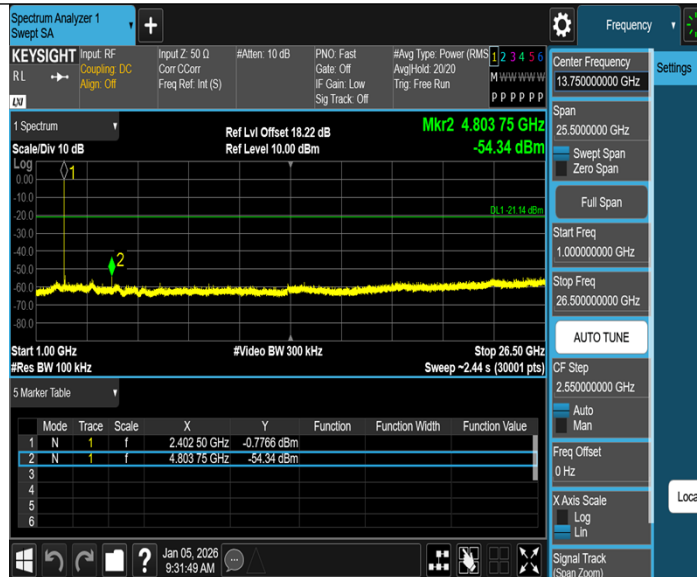
Appendix A.5: Test Results of Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.14	-1.14	---	PASS
			30~1000	-1.14	-52.53	≤-21.14	PASS
			1000~26500	-1.14	-54.34	≤-21.14	PASS
		2440	Reference	-1.57	-1.57	---	PASS
			30~1000	-1.57	-52.08	≤-21.57	PASS
			1000~26500	-1.57	-54.67	≤-21.57	PASS
		2480	Reference	-1.34	-1.34	---	PASS
			30~1000	-1.34	-52.08	≤-21.34	PASS
			1000~26500	-1.34	-54.17	≤-21.34	PASS
BLE_2M	Ant1	2402	Reference	-3.36	-3.36	---	PASS
			30~1000	-3.36	-51.58	≤-23.36	PASS
			1000~26500	-3.36	-54.66	≤-23.36	PASS
		2440	Reference	-3.84	-3.84	---	PASS
			30~1000	-3.84	-52.4	≤-23.84	PASS
			1000~26500	-3.84	-54.74	≤-23.84	PASS
		2480	Reference	-3.79	-3.79	---	PASS
			30~1000	-3.79	-51.46	≤-23.79	PASS
			1000~26500	-3.79	-54.6	≤-23.79	PASS

Test Graphs

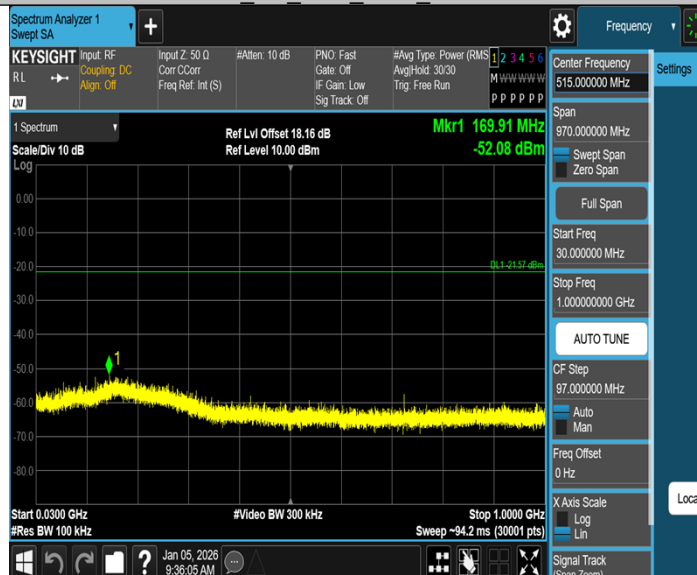




BLE 1M Ant1 2440 0~Reference



BLE 1M Ant1 2440 30~1000



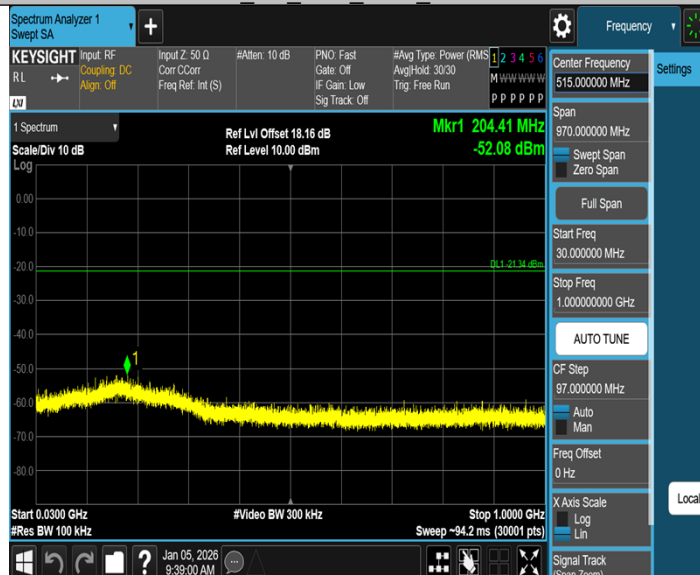
BLE 1M Ant1 2440 1000~26500



BLE 1M Ant1 2480 0~Reference



BLE 1M Ant1 2480 30~1000



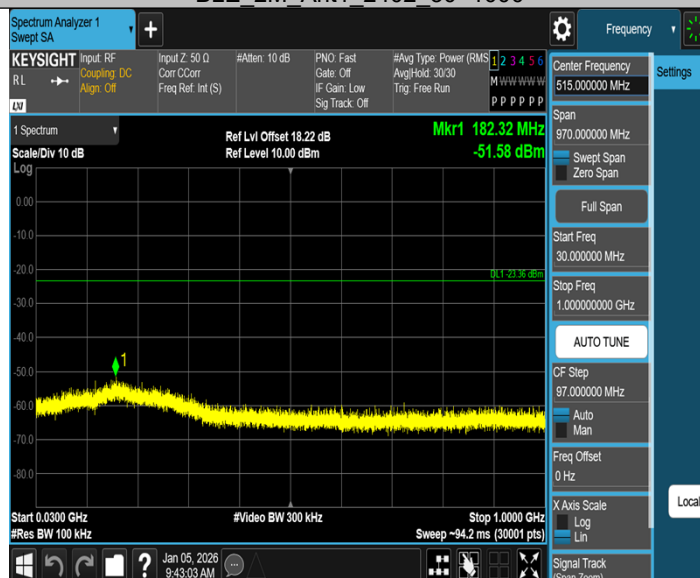
BLE 1M Ant1 2480 1000~26500



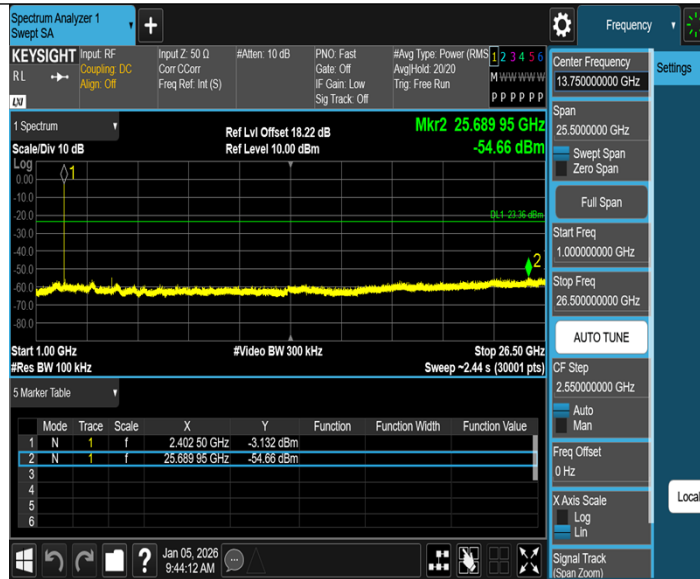
BLE 2M Ant1 2402 0~Reference



BLE 2M Ant1 2402 30~1000



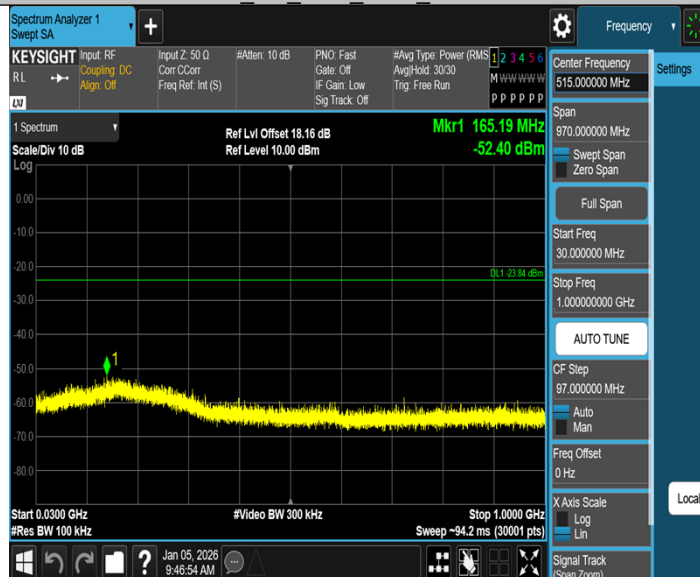
BLE 2M Ant1 2402 1000~26500



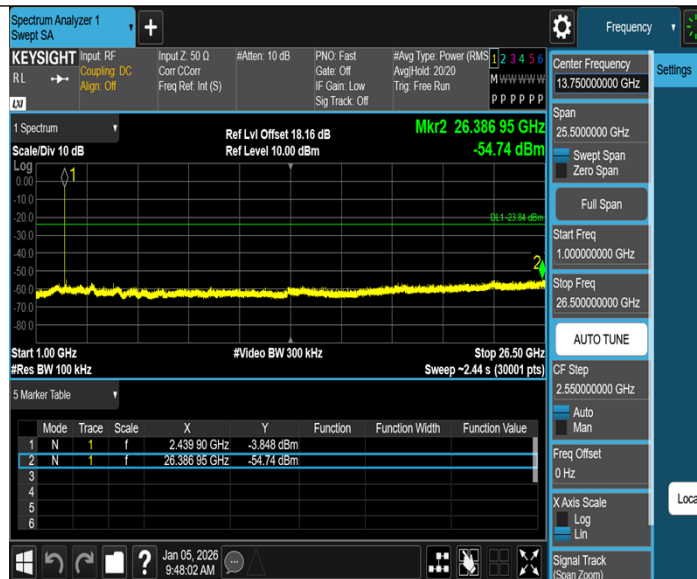
BLE 2M Ant1 2440 0~Reference



BLE 2M Ant1 2440 30~1000



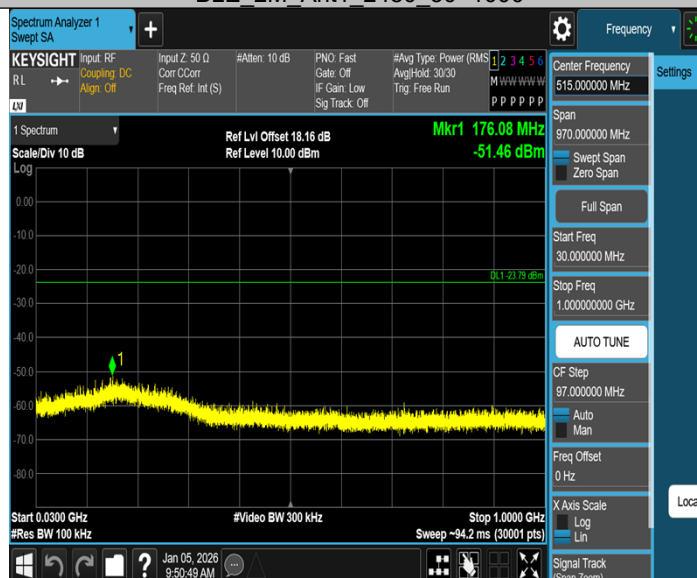
BLE 2M Ant1 2440 1000~26500



BLE 2M Ant1 2480 0~Reference



BLE 2M Ant1 2480 30~1000



BLE 2M Ant1 2480 1000~26500



Appendix A.6: Test Results of Radiated Spurious Emissions

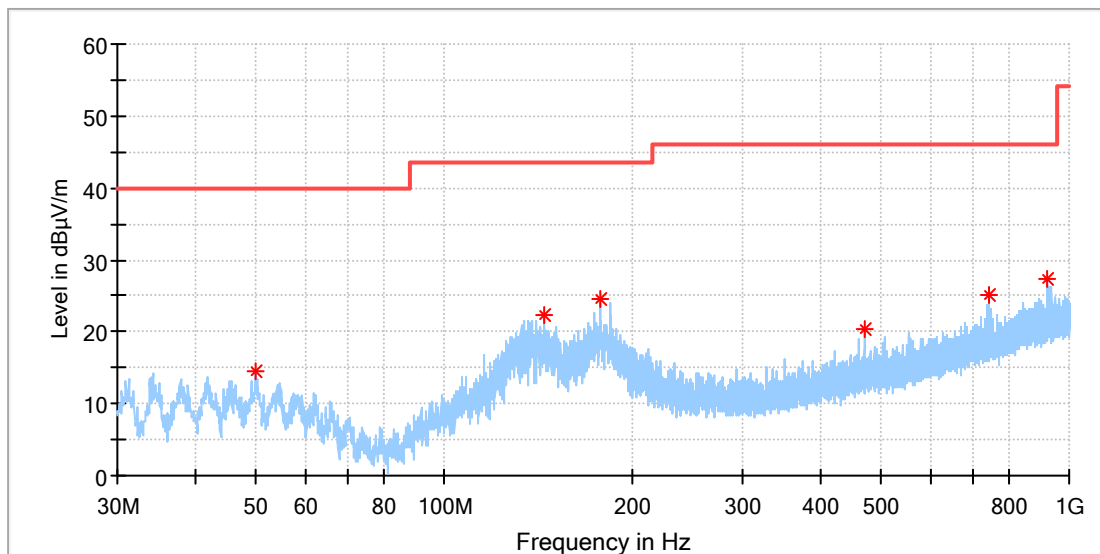
Note:

- 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 - 1GHz

EUT Information

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

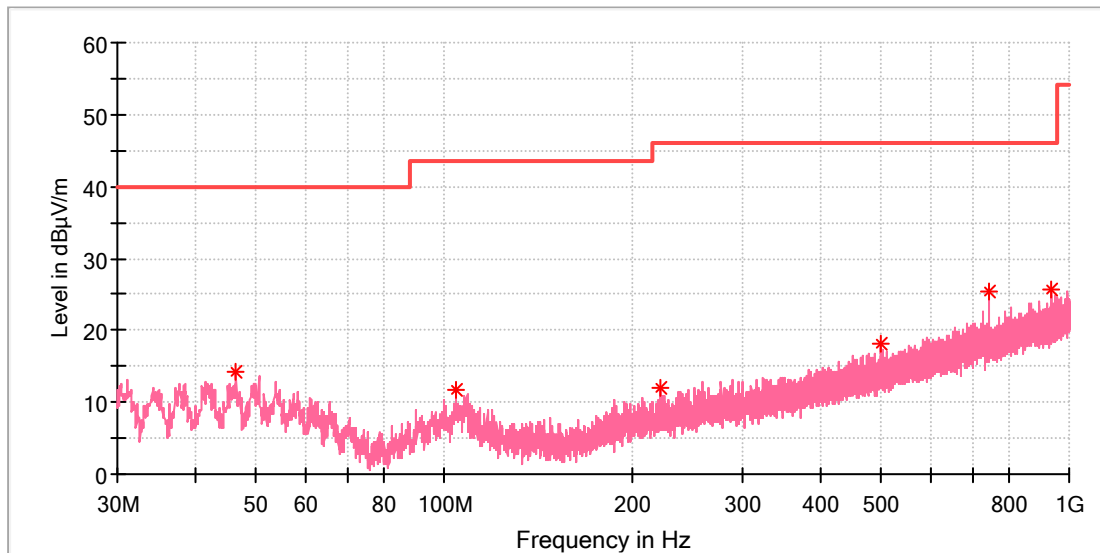
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.831111	14.65	40.00	25.35	100.0	H	237.0	-18.4
144.460000	22.26	43.50	21.24	100.0	H	171.0	-22.4
177.709444	24.44	43.50	19.06	100.0	H	179.0	-20.8
469.356111	20.24	46.00	25.76	100.0	H	244.0	-12.4
742.518889	25.04	46.00	20.96	100.0	H	336.0	-7.2
920.891111	27.42	46.00	18.58	100.0	H	230.0	-4.6

Final Result

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

EUT Name: Electric toothbrush
Model: LFTB02
Test Mode: BLE 1M_Mid channel
Order No/Sample No: 168580336/A004159959-001
Test Voltage: Battery
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

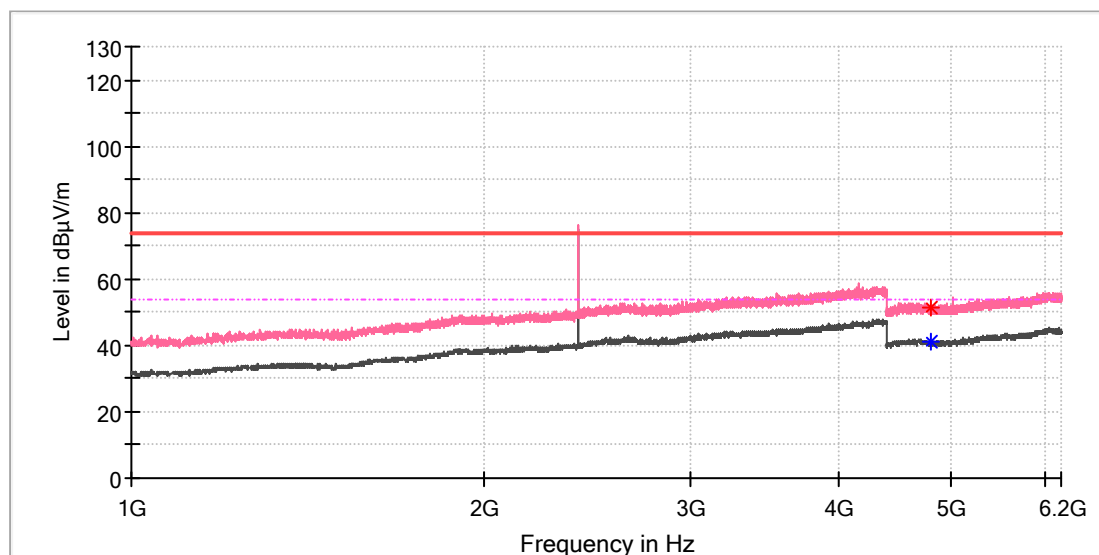
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
46.490000	14.11	40.00	25.89	100.0	V	246.0	-18.7
104.690000	11.66	43.50	31.84	100.0	V	306.0	-18.9
221.898333	11.97	46.00	34.03	100.0	V	11.0	-18.6
499.965000	18.01	46.00	27.99	100.0	V	201.0	-11.9
742.518889	25.29	46.00	20.71	100.0	V	237.0	-7.2
937.435000	25.80	46.00	20.20	100.0	V	279.0	-4.4

Final Result

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

EUT Information

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

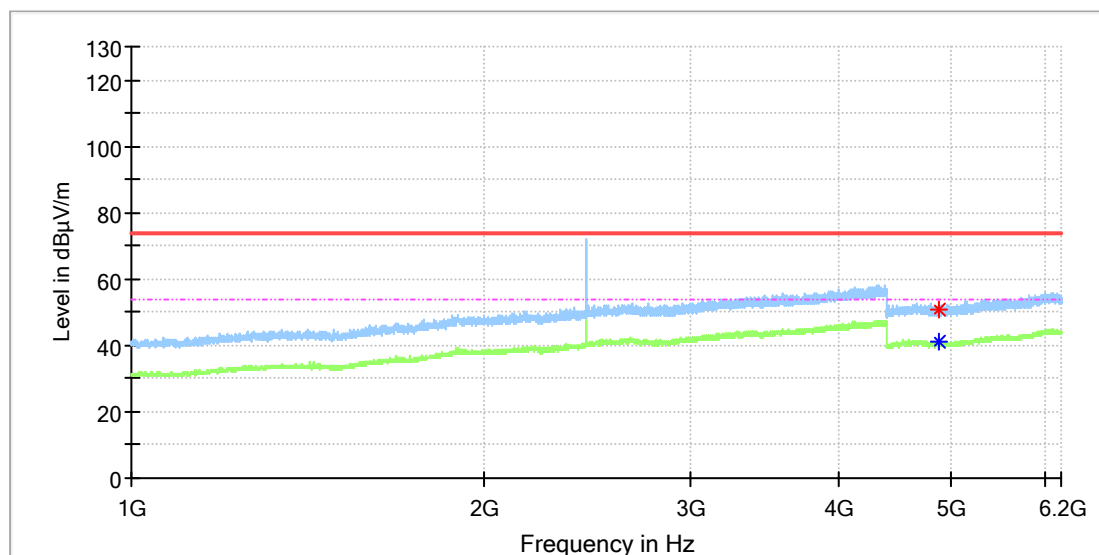
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4804.500000	---	41.28	54.00	12.72	150.0	V	284.0	13.3
4804.500000	51.64	---	74.00	22.36	150.0	V	284.0	13.3

Final Result

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

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

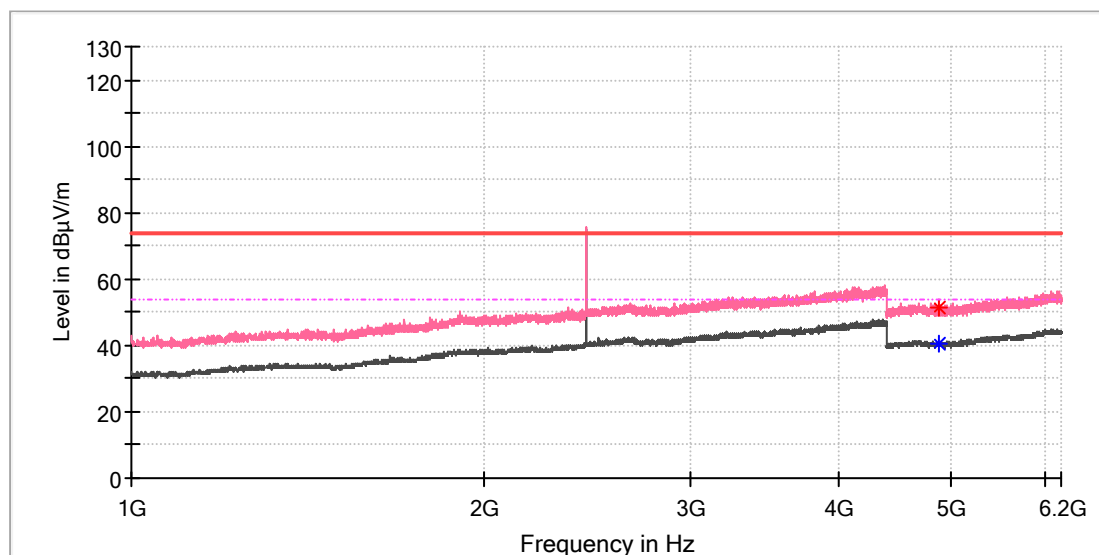
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4880.000000	51.00	---	74.00	23.00	150.0	H	155.0	13.3
4880.000000	---	41.00	54.00	13.00	150.0	H	155.0	13.3

Final Result

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

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

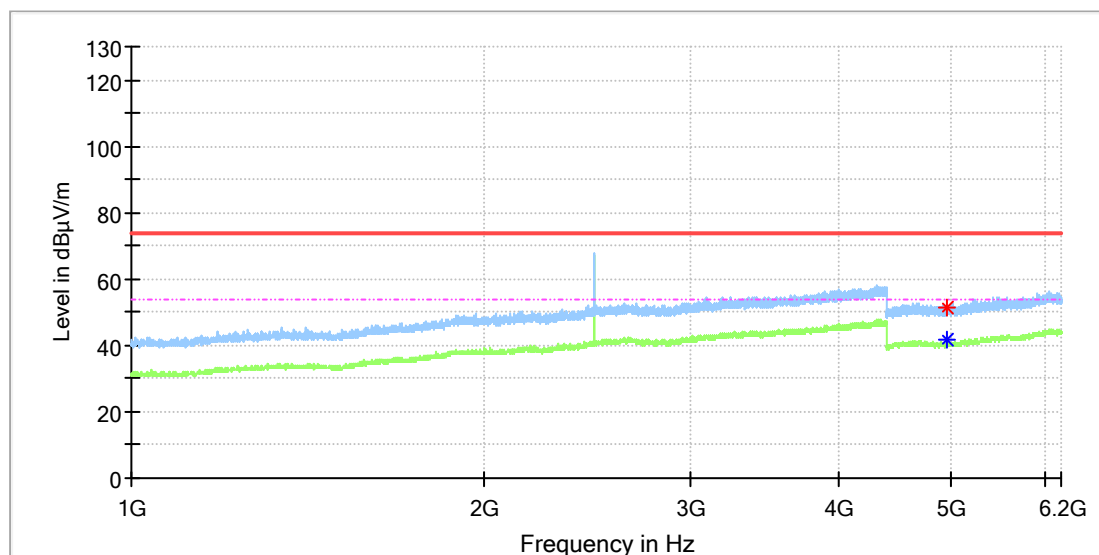
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4879.500000	---	40.47	54.00	13.53	150.0	V	2.0	13.3
4880.500000	51.45	---	74.00	22.55	150.0	V	0.0	13.3

Final Result

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

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

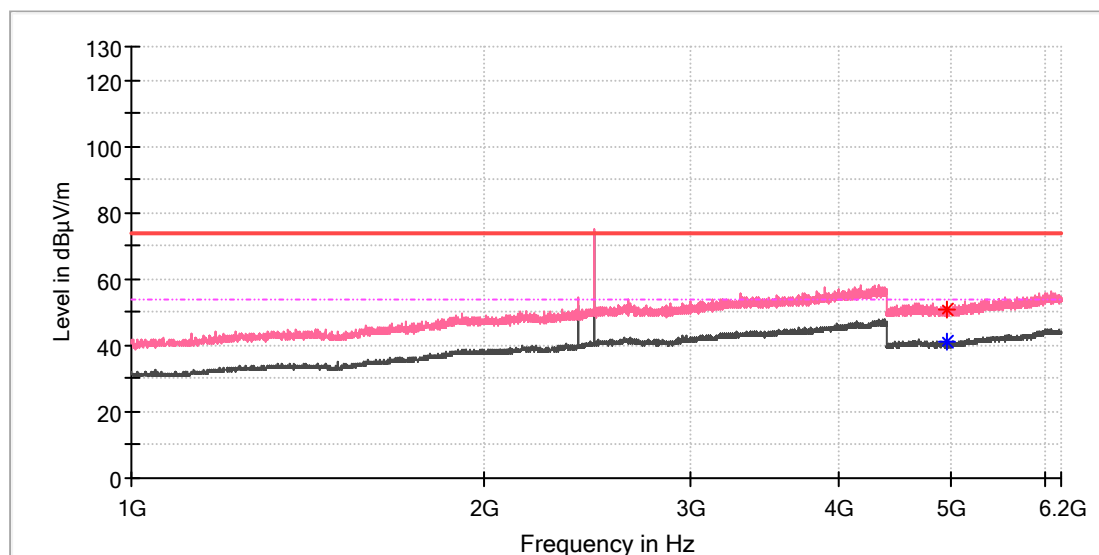
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4959.500000	---	41.49	54.00	12.51	150.0	H	185.0	13.3
4961.000000	51.61	---	74.00	22.39	150.0	H	359.0	13.3

Final Result

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

EUT Information

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4959.000000	50.89	---	74.00	23.11	150.0	V	352.0	13.3
4959.000000	---	40.97	54.00	13.03	150.0	V	352.0	13.3

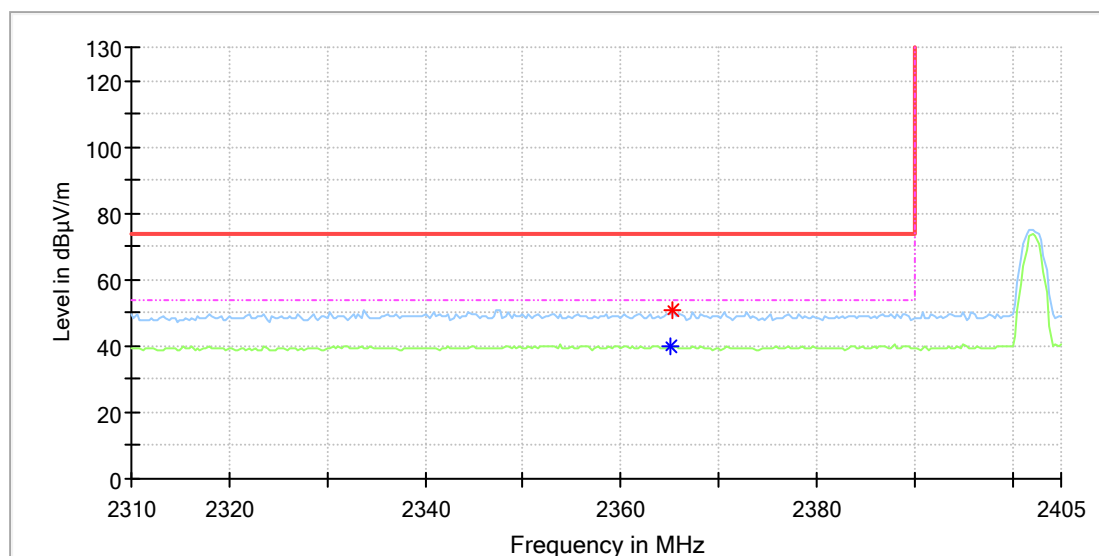
Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Appendix A.7: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

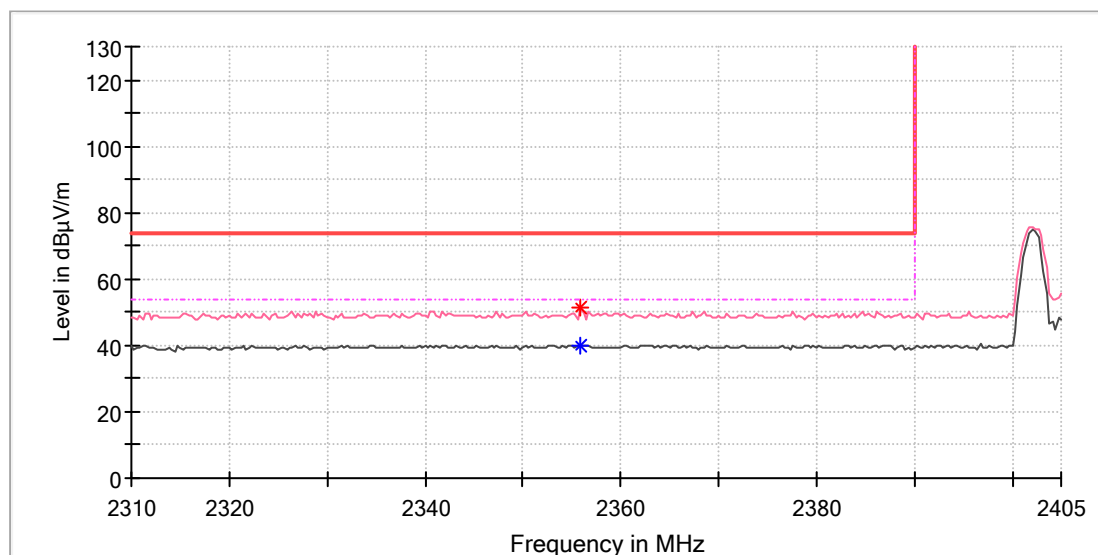
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2365.000000	---	39.89	54.00	14.11	150.0	H	356.0	8.5
2365.294118	50.95	---	74.00	23.05	150.0	H	135.0	8.5

Final Result

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

EUT Information

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

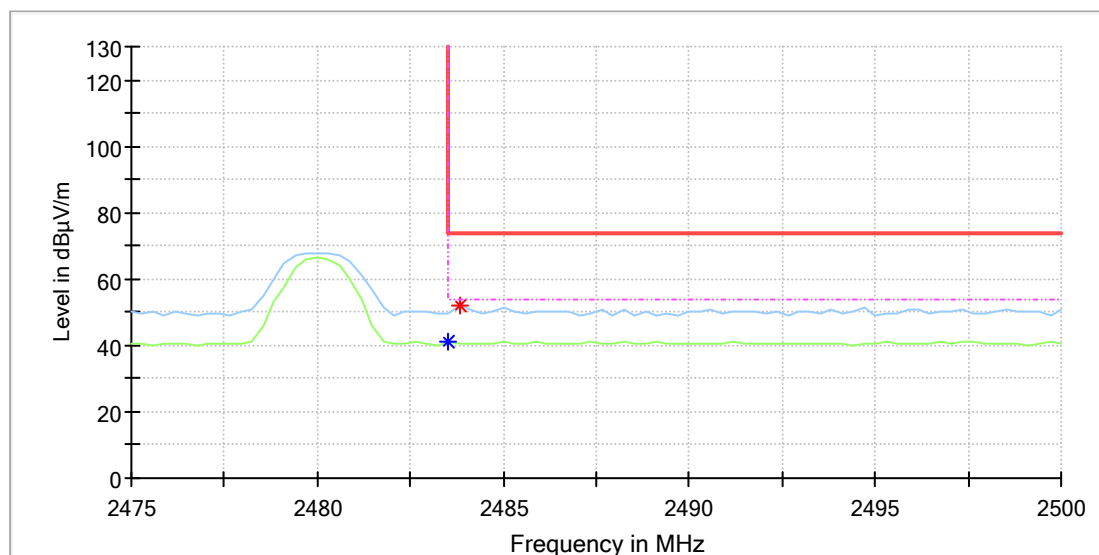
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2355.882353	---	39.74	54.00	14.26	150.0	V	84.0	8.5
2355.882353	51.22	---	74.00	22.78	150.0	V	84.0	8.5

Final Result

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

EUT Information

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

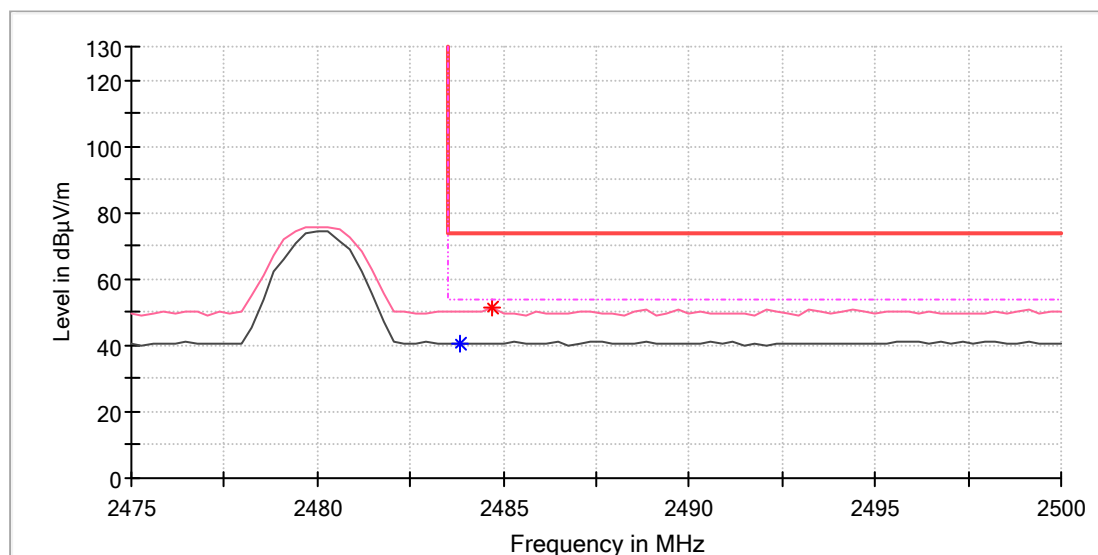
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.529412	---	41.01	54.00	12.99	150.0	H	199.0	9.0
2483.823529	51.75	---	74.00	22.25	150.0	H	0.0	9.0

Final Result

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

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

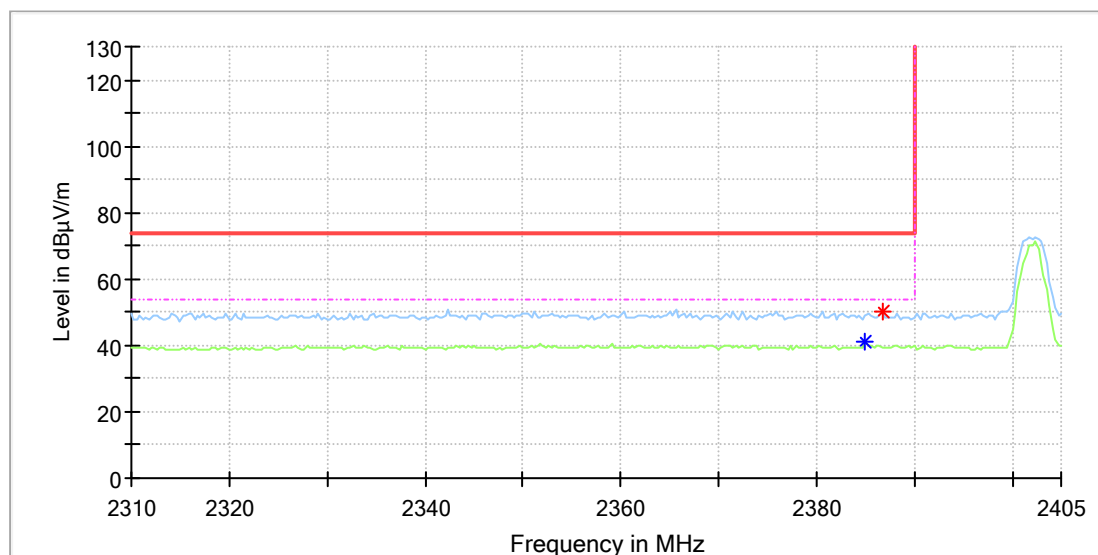
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.823529	---	40.80	54.00	13.20	150.0	V	287.0	9.0
2484.705882	51.25	---	74.00	22.75	150.0	V	36.0	9.0

Final Result

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

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 2M_Low channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

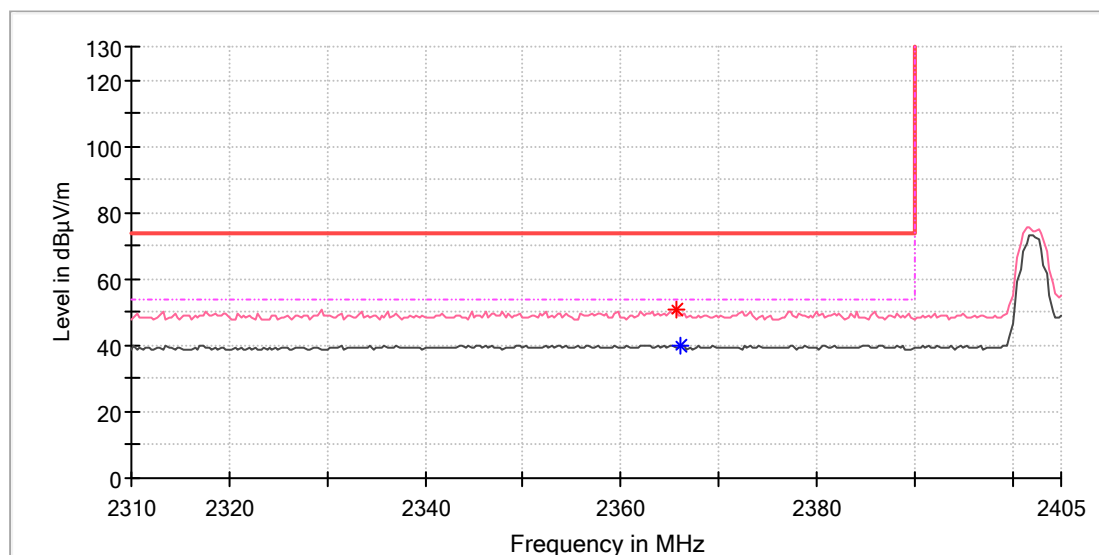
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2385.000000	---	40.82	54.00	13.18	150.0	H	208.0	8.5
2386.764706	50.29	---	74.00	23.71	150.0	H	223.0	8.5

Final Result

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

EUT Information

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 2M_Low channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

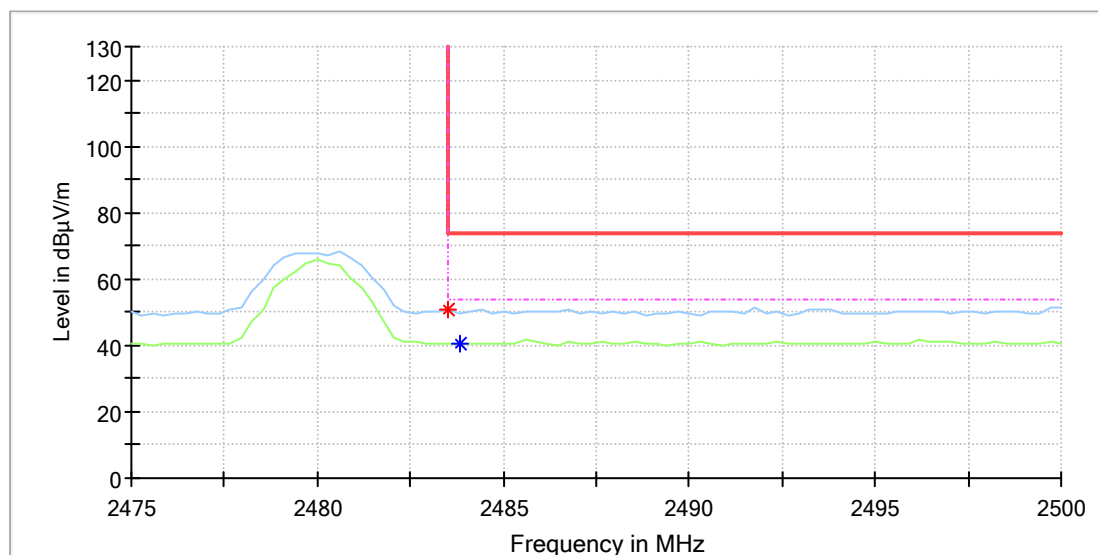
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2365.588235	50.65	---	74.00	23.35	150.0	V	222.0	8.5
2366.176471	---	39.97	54.00	14.03	150.0	V	70.0	8.5

Final Result

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

EUT Information

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 2M_High channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

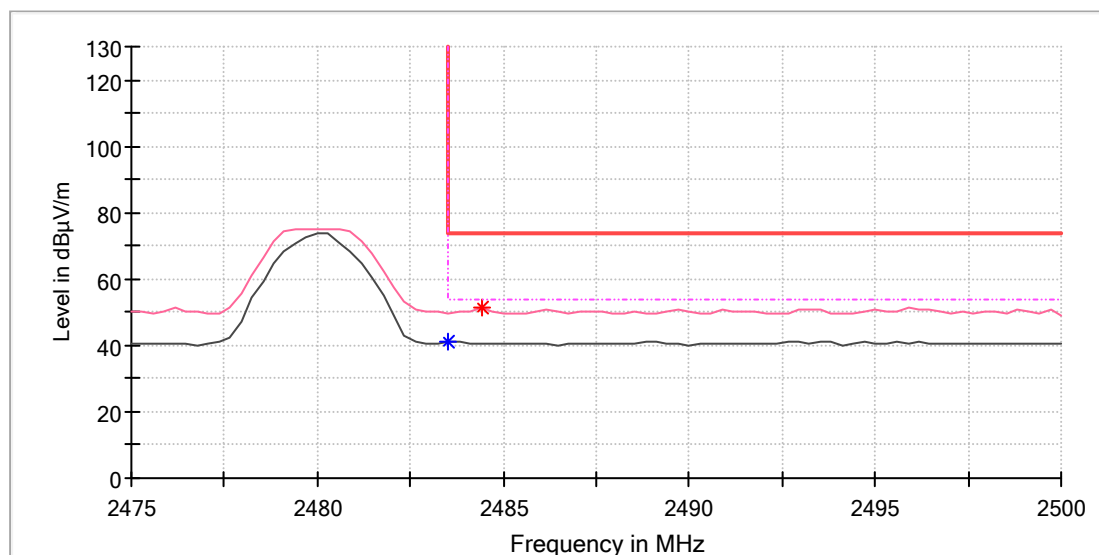
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.529412	50.94	---	74.00	23.06	150.0	H	0.0	9.0
2483.823529	---	40.79	54.00	13.21	150.0	H	257.0	9.0

Final Result

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

EUT Information

EUT Name:	Electric toothbrush
Model:	LFTB02
Test Mode:	BLE 2M_High channel
Order No/Sample No:	168580336/A004159959-001
Test Voltage:	Battery
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.529412	---	41.02	54.00	12.98	150.0	V	22.0	9.0
2484.411765	51.25	---	74.00	22.75	150.0	V	49.0	9.0

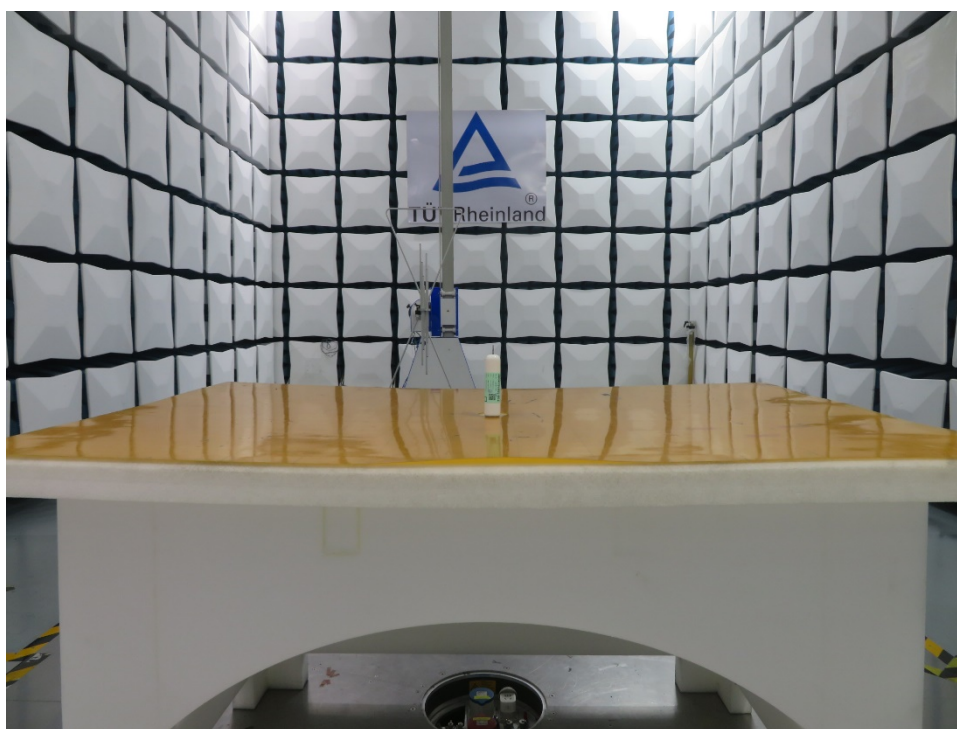
Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Appendix B: Photographs of the Test Set-Up

APPENDIX B: PHOTOGRAPHS OF THE TEST SET-UP	1
PHOTOGRAPH 1: SET-UP PHOTO FOR RADIATED SPURIOUS EMISSION, BELOW 1GHZ.....	2
PHOTOGRAPH 2: SET-UP PHOTO FOR RADIATED SPURIOUS EMISSION, ABOVE 1GHZ	2

Photograph 1: Set-up photo for Radiated Spurious Emission, Below 1GHz



Photograph 2: Set-up photo for Radiated Spurious Emission, Above 1GHz

