

Appendix A: Test Results of Bluetooth LE

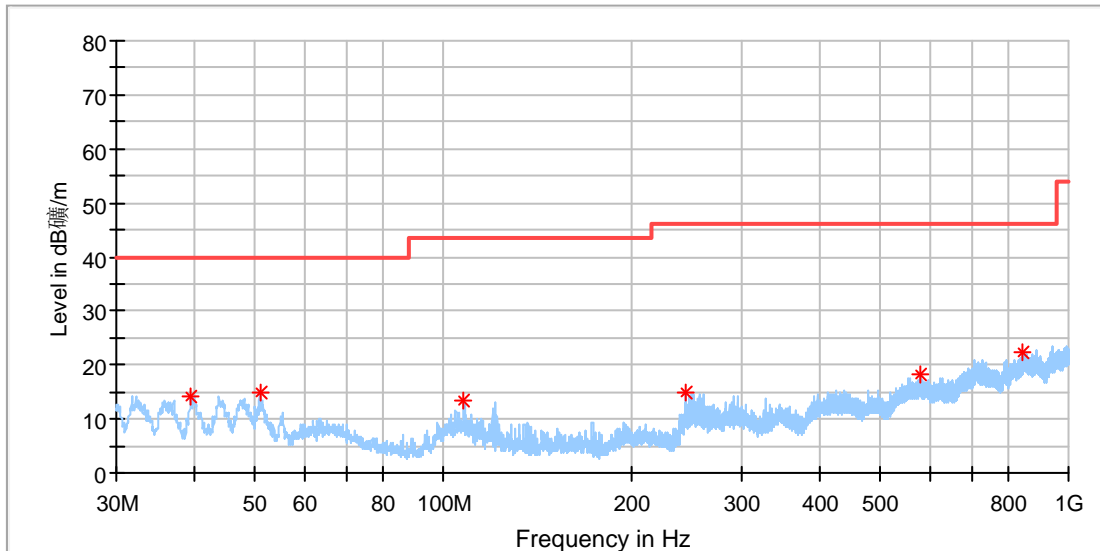
APPENDIX A: TEST RESULTS OF BLUETOOTH LE.....	1
APPENDIX A.1: TEST RESULTS OF RADIATED SPURIOUS EMISSIONS	2
30 MHz to 1GHz.....	2
Above 1GHz.....	6
APPENDIX A.2: TEST RESULTS OF RADIATED EMISSIONS IN RESTRICTED BANDS	18

Appendix A.1: Test Results of Radiated Spurious Emissions

30 MHz to 1GHz

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_Low channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

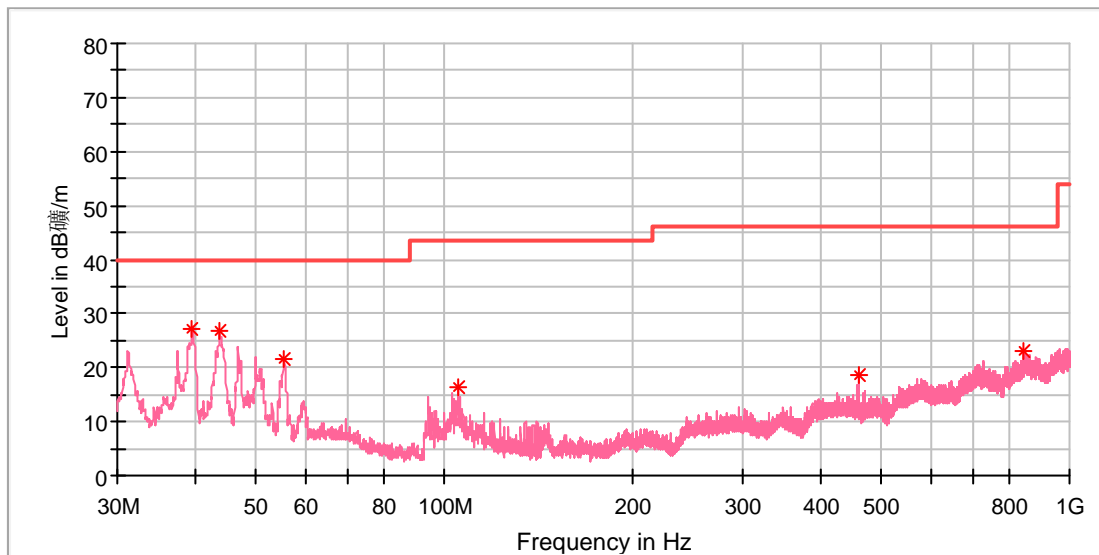


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.506000	14.27	40.00	25.73	100.0	H	112.0	-20.6
50.903500	14.89	40.00	25.11	100.0	H	0.0	-18.6
107.891000	13.21	43.50	30.29	100.0	H	53.0	-19.3
244.273000	14.78	46.00	31.22	100.0	H	0.0	-17.9
580.426500	18.10	46.00	27.90	100.0	H	143.0	-10.6
846.837000	22.35	46.00	23.65	100.0	H	13.0	-6.0

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_Low channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

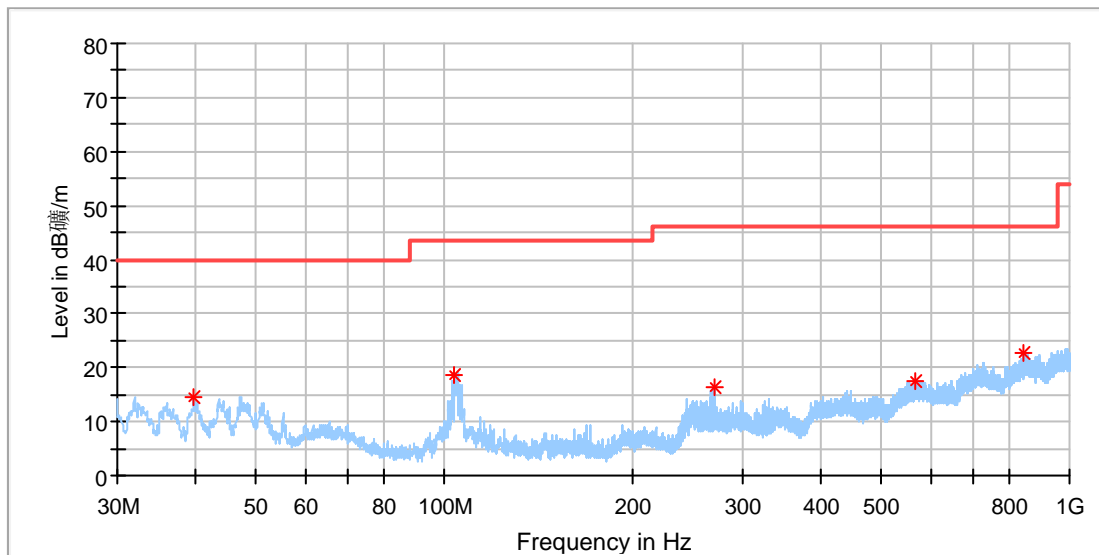


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.506000	27.08	40.00	12.92	100.0	V	12.0	-20.6
43.725500	26.69	40.00	13.31	100.0	V	91.0	-19.4
55.462500	21.74	40.00	18.26	100.0	V	315.0	-18.8
105.223500	16.33	43.50	27.17	100.0	V	338.0	-19.1
459.952500	18.68	46.00	27.32	100.0	V	83.0	-13.1
845.042500	23.03	46.00	22.97	100.0	V	181.0	-6.0

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_High channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

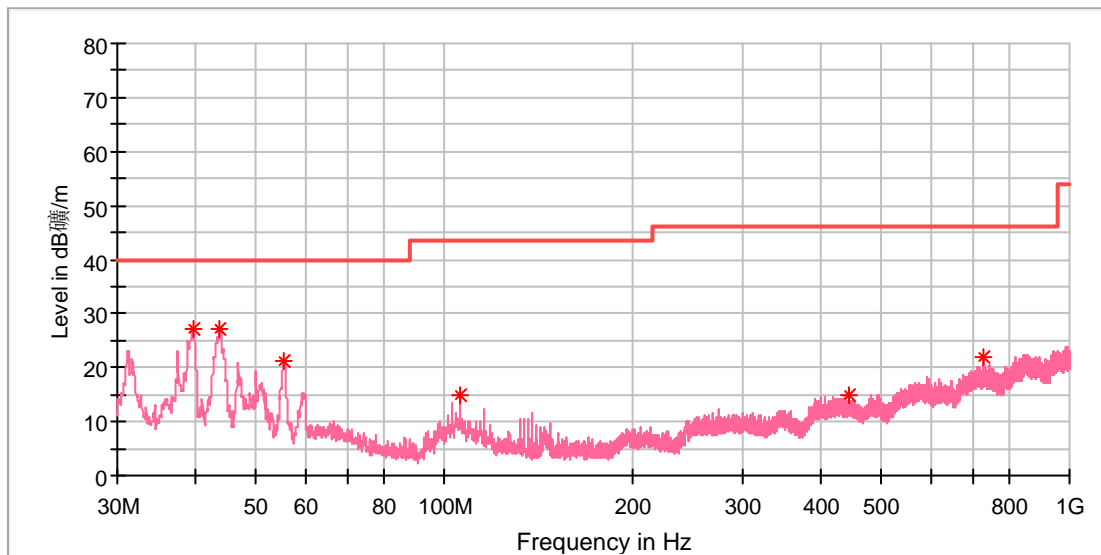


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.748500	14.56	40.00	25.44	100.0	H	0.0	-20.5
104.011000	18.79	43.50	24.71	100.0	H	1.0	-19.1
271.093500	16.22	46.00	29.78	100.0	H	269.0	-17.2
567.719500	17.60	46.00	28.40	100.0	H	122.0	-10.8
845.479000	22.53	46.00	23.47	100.0	H	103.0	-6.0

EUT Information

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BLE_High channel
 Test Voltage:: DC 6V From DC Source
 Remark: Temp 23 Humi:45%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



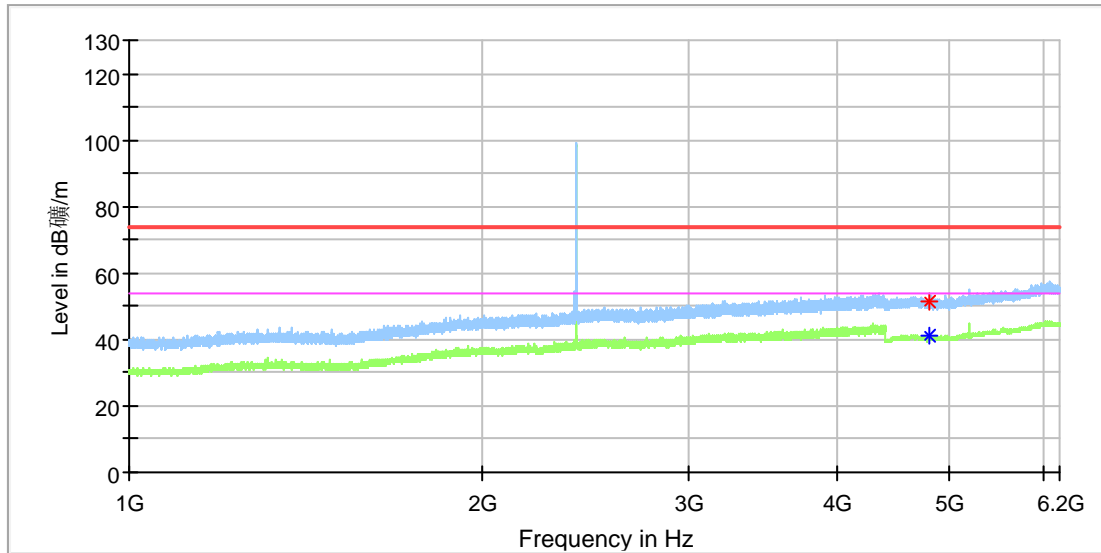
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.603000	27.18	40.00	12.82	100.0	V	261.0	-20.5
43.677000	27.07	40.00	12.93	100.0	V	38.0	-19.4
55.268500	21.11	40.00	18.89	100.0	V	288.0	-18.8
106.242000	14.77	43.50	28.73	100.0	V	57.0	-19.2
442.977500	14.92	46.00	31.08	100.0	V	147.0	-13.4
728.933500	21.95	46.00	24.05	100.0	V	350.0	-7.9

Above 1GHz

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_Low channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

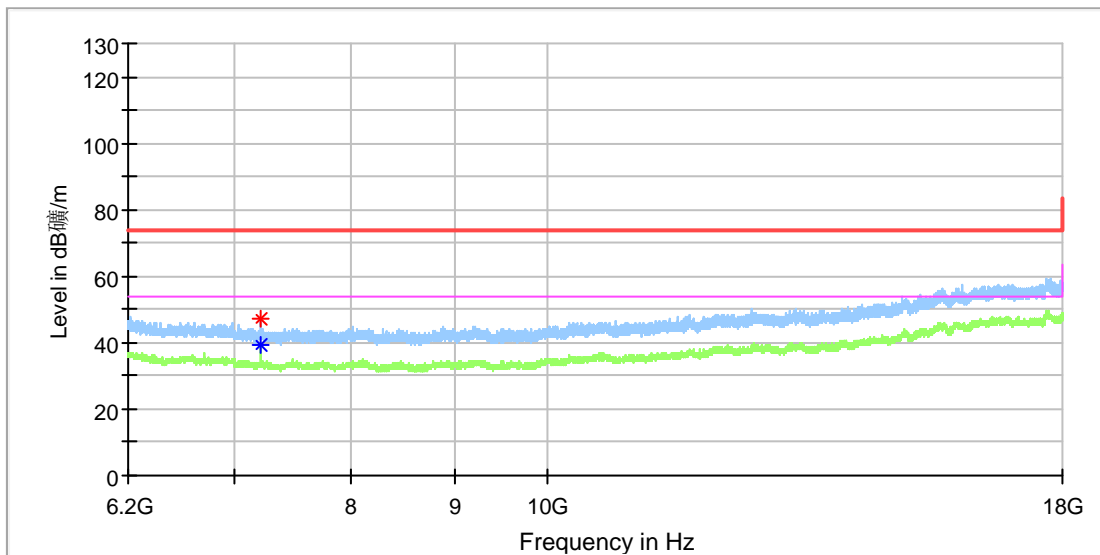


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4803.000000	---	41.27	54.00	12.73	100.0	H	350.0	11.8
4806.000000	51.17	---	74.00	22.83	100.0	H	161.0	11.8

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_Low channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

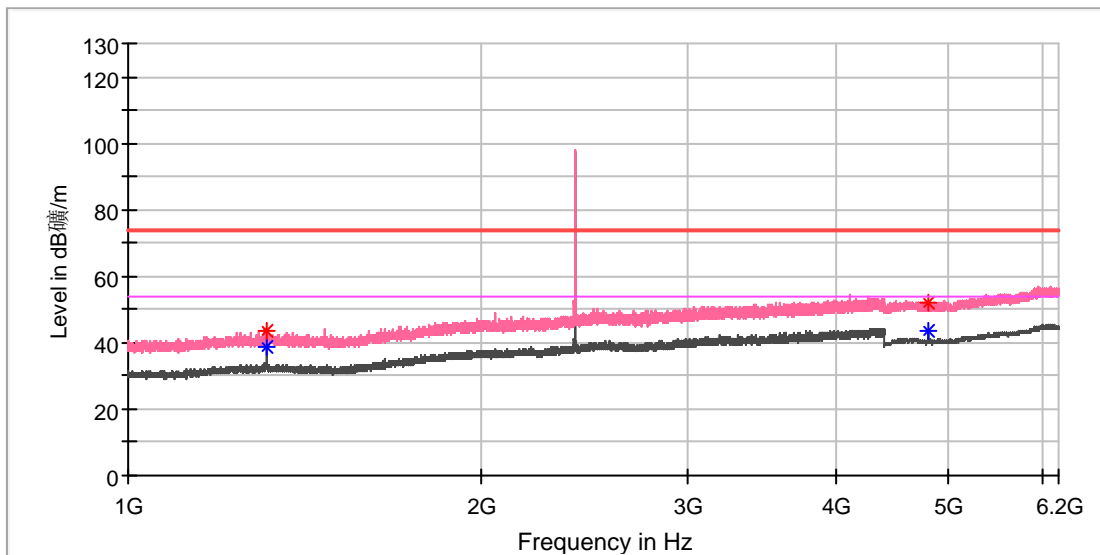


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7204.966667	47.40	---	74.00	26.60	100.0	H	67.0	8.8
7204.966667	---	39.48	54.00	14.52	100.0	H	67.0	8.8

EUT Information

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BLE_Low channel
 Test Voltage:: DC 6V From DC Source
 Remark: Temp 23 Humi:45%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

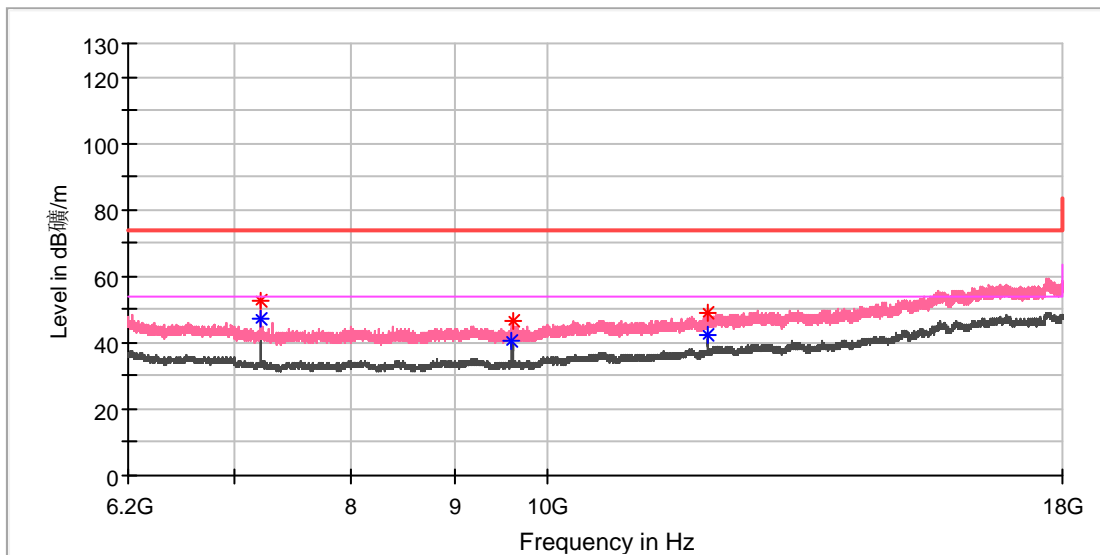


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1312.460000	43.73	---	74.00	30.27	100.0	V	307.0	2.0
1312.460000	---	38.52	54.00	15.48	100.0	V	307.0	2.0
4803.500000	52.26	---	74.00	21.74	100.0	V	105.0	11.8
4804.000000	---	43.32	54.00	10.68	100.0	V	97.0	11.8

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_Low channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

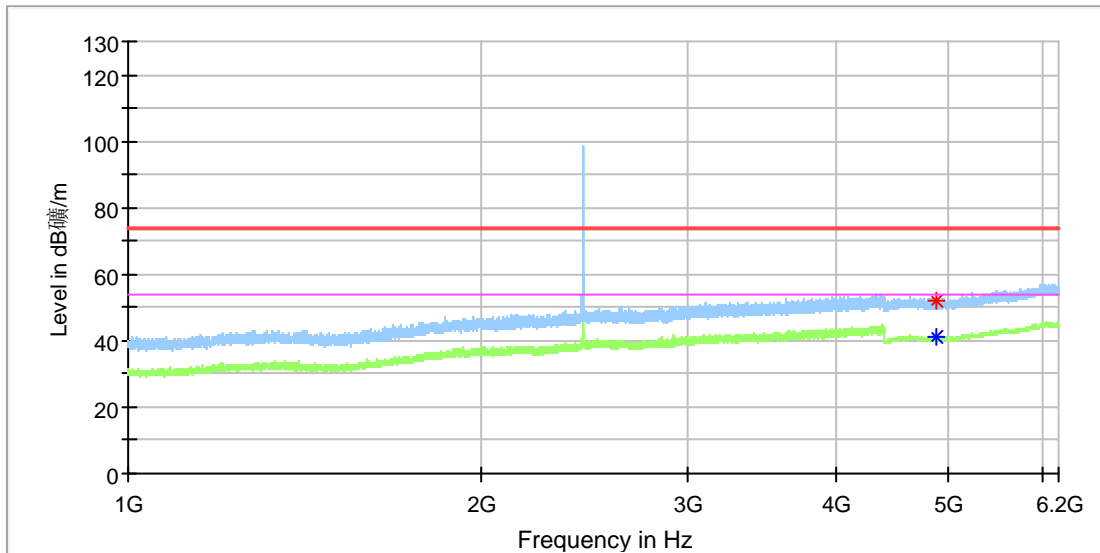


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7205.458333	---	47.25	54.00	6.75	100.0	V	2.0	8.8
7205.950000	52.86	---	74.00	21.14	100.0	V	170.0	8.8
9606.758333	---	40.57	54.00	13.43	100.0	V	184.0	10.4
9608.233333	46.78	---	74.00	27.22	100.0	V	198.0	10.4
12010.025000	49.04	---	74.00	24.96	100.0	V	341.0	14.0
12011.008333	---	42.52	54.00	11.48	100.0	V	341.0	14.0

EUT Information

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BLE_Mid channel
 Test Voltage:: DC 6V From DC Source
 Remark: Temp 23 Humi:45%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

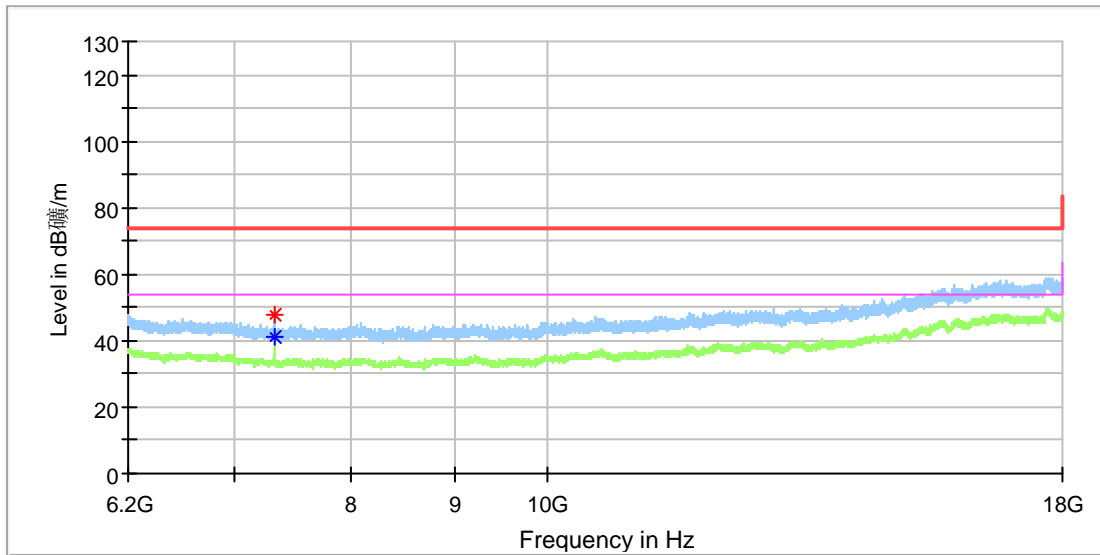


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4880.000000	51.74	---	74.00	22.26	100.0	H	318.0	11.8
4880.000000	---	40.85	54.00	13.15	100.0	H	318.0	11.8

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_Mid channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

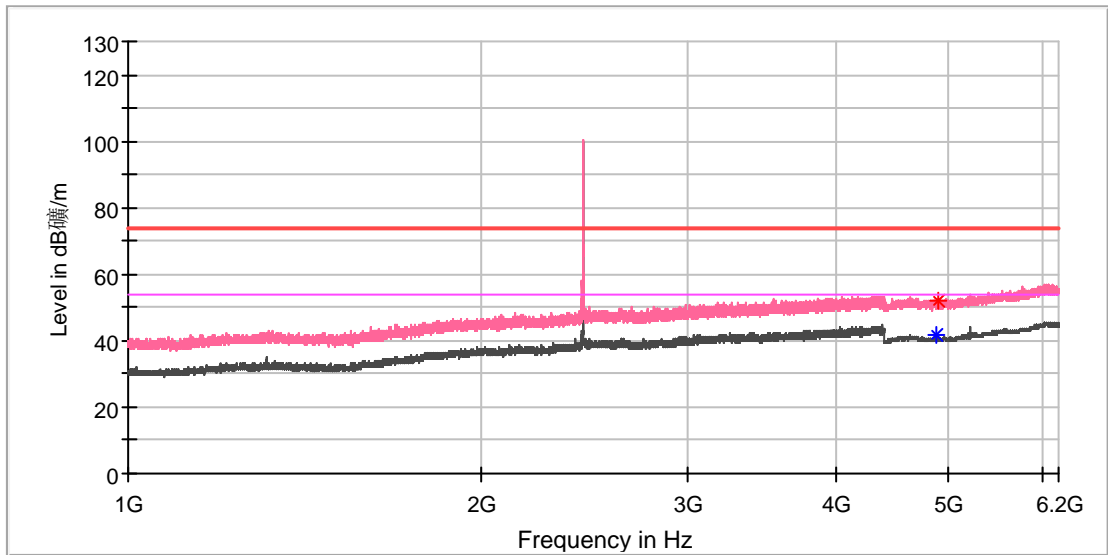


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7319.033333	---	41.40	54.00	12.60	100.0	H	48.0	8.2
7320.508333	47.62	---	74.00	26.38	100.0	H	48.0	8.2

EUT Information

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BLE_Mid channel
 Test Voltage:: DC 6V From DC Source
 Remark: Temp 23 Humi:45%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

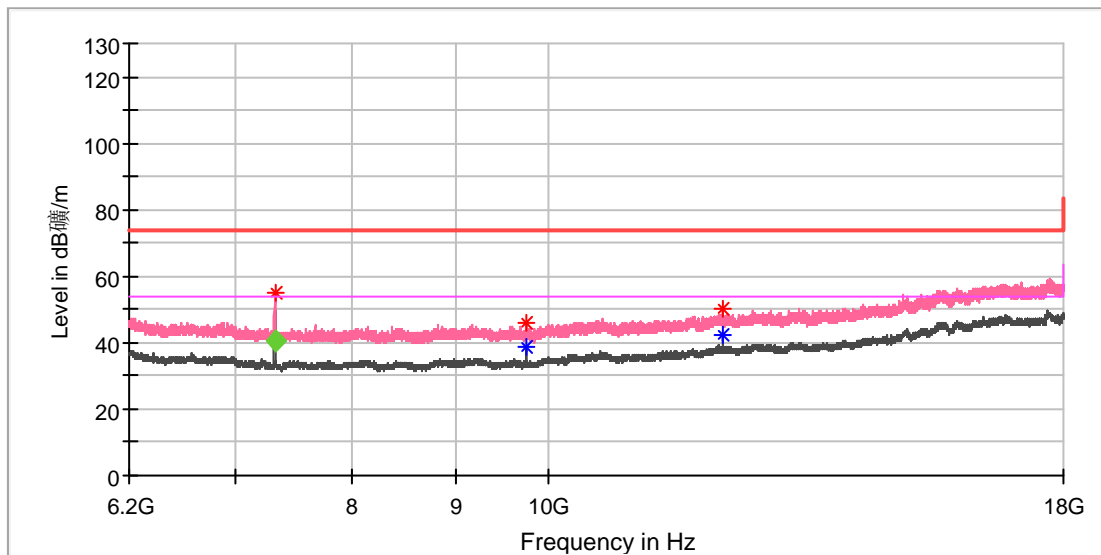


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4879.500000	---	41.52	54.00	12.48	100.0	V	121.0	11.8
4889.500000	52.15	---	74.00	21.85	100.0	V	159.0	11.8

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_Mid channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

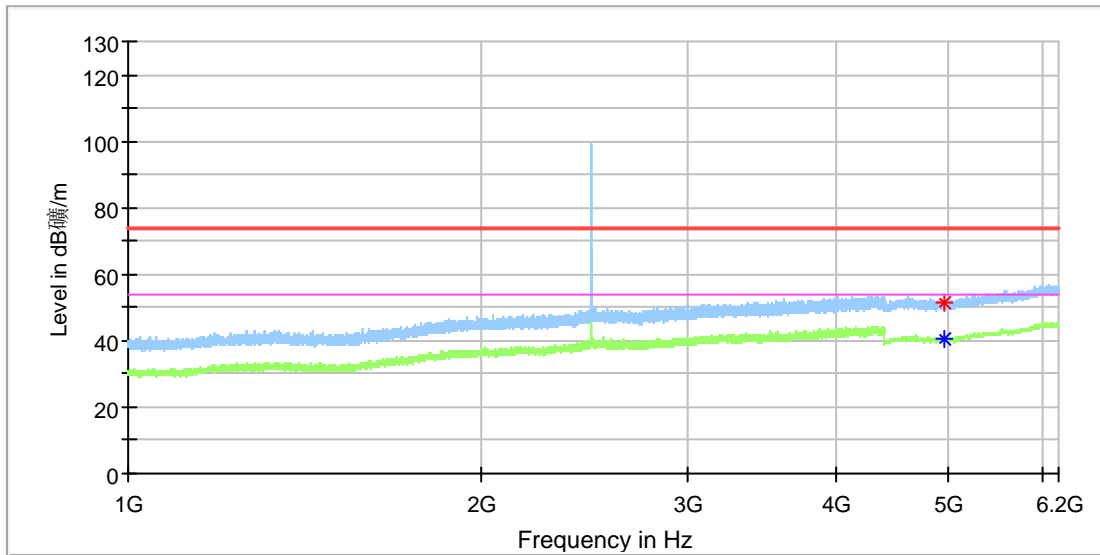


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7319.033333	54.73	---	74.00	19.27	100.0	V	333.0	8.2
9759.175000	46.23	---	74.00	27.77	100.0	V	205.0	10.4
9759.175000	---	38.44	54.00	15.56	100.0	V	205.0	10.4
12200.791667	50.15	---	74.00	23.85	100.0	V	178.0	14.7
12201.283333	---	42.58	54.00	11.42	100.0	V	178.0	14.7

EUT Information

EUT Name: AMAZON LOCKER
 Model: ZL-ODIN-V1
 Test Mode: BLE_High channel
 Test Voltage:: DC 6V From DC Source
 Remark: Temp 23 Humi:45%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

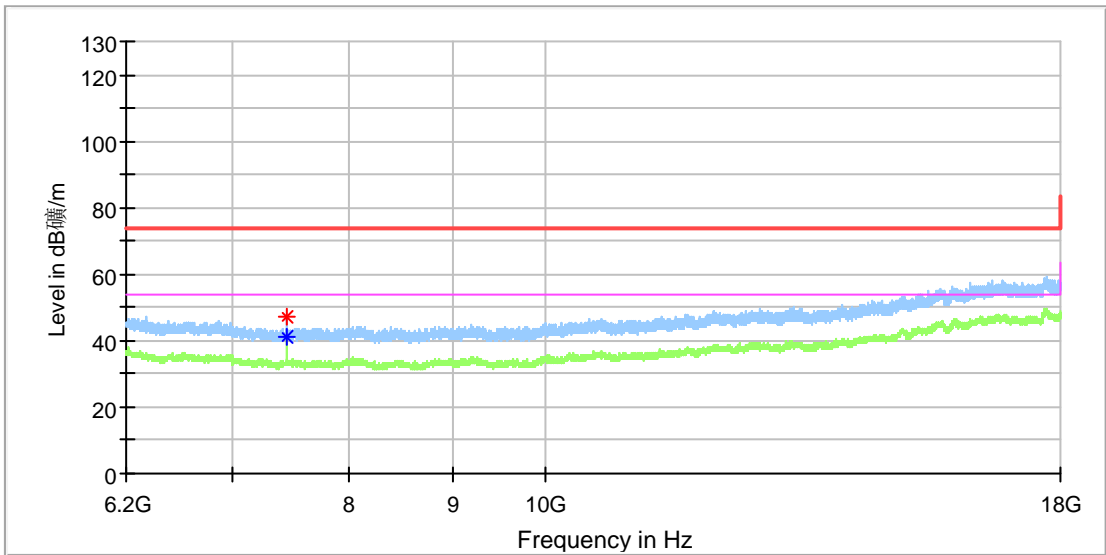


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4957.500000	---	40.66	54.00	13.34	100.0	H	0.0	11.8
4959.500000	51.24	---	74.00	22.76	100.0	H	347.0	11.8

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_High channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

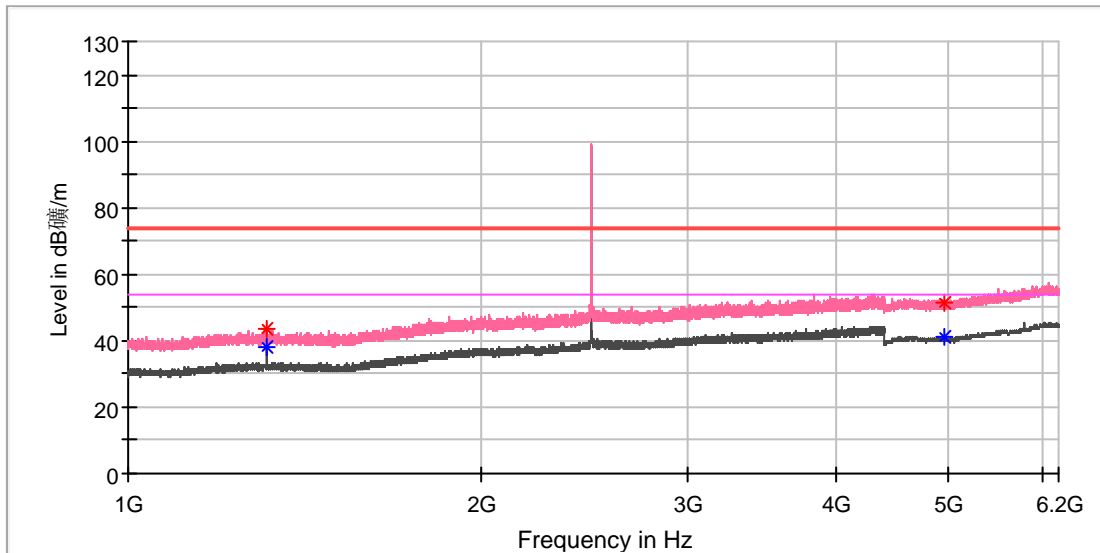


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7440.475000	---	40.85	54.00	13.15	100.0	H	311.0	8.4
7440.475000	46.98	---	74.00	27.02	100.0	H	311.0	8.4

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_High channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

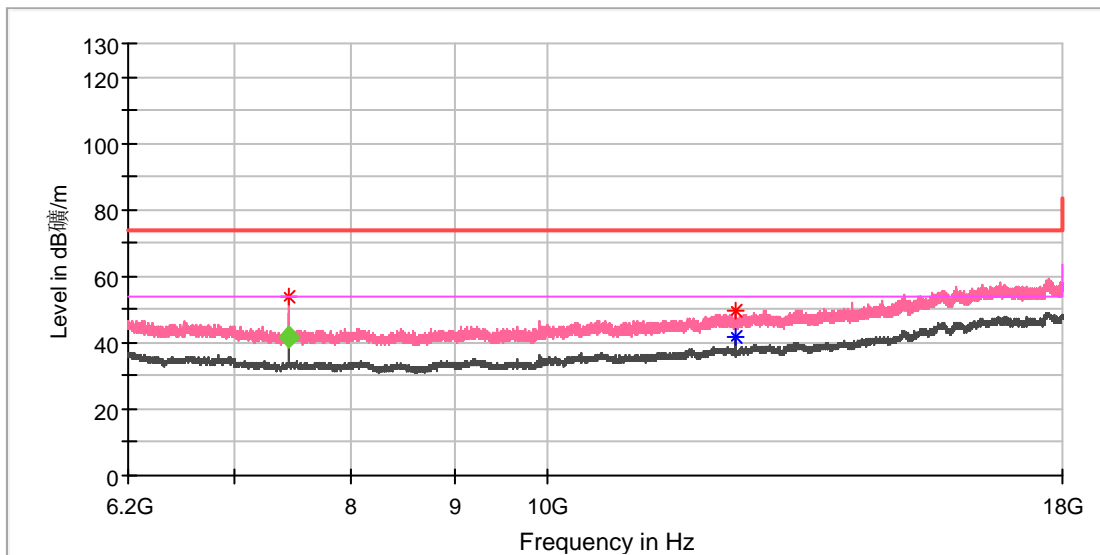


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1312.460000	43.52	---	74.00	30.48	100.0	V	310.0	2.0
1312.630000	---	38.32	54.00	15.68	100.0	V	310.0	2.0
4959.000000	51.43	---	74.00	22.57	100.0	V	357.0	11.8
4960.000000	---	41.10	54.00	12.90	100.0	V	344.0	11.8

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_High channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



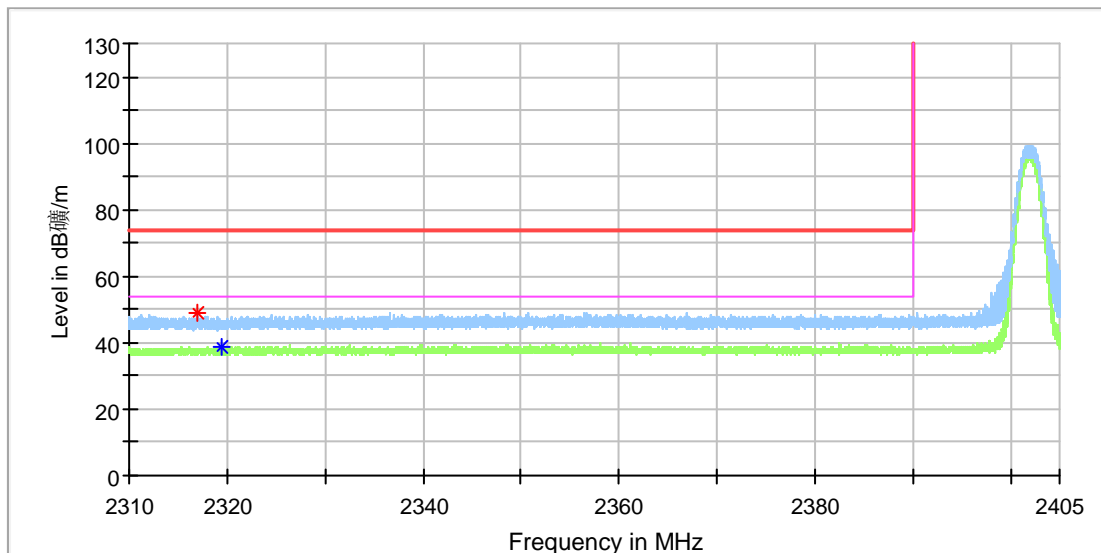
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.000000	53.67	---	74.00	20.33	100.0	V	185.0	8.4
12400.900000	---	41.65	54.00	12.35	100.0	V	185.0	14.7
12401.883333	49.69	---	74.00	24.31	100.0	V	185.0	14.7

Appendix A.2: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_Low channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

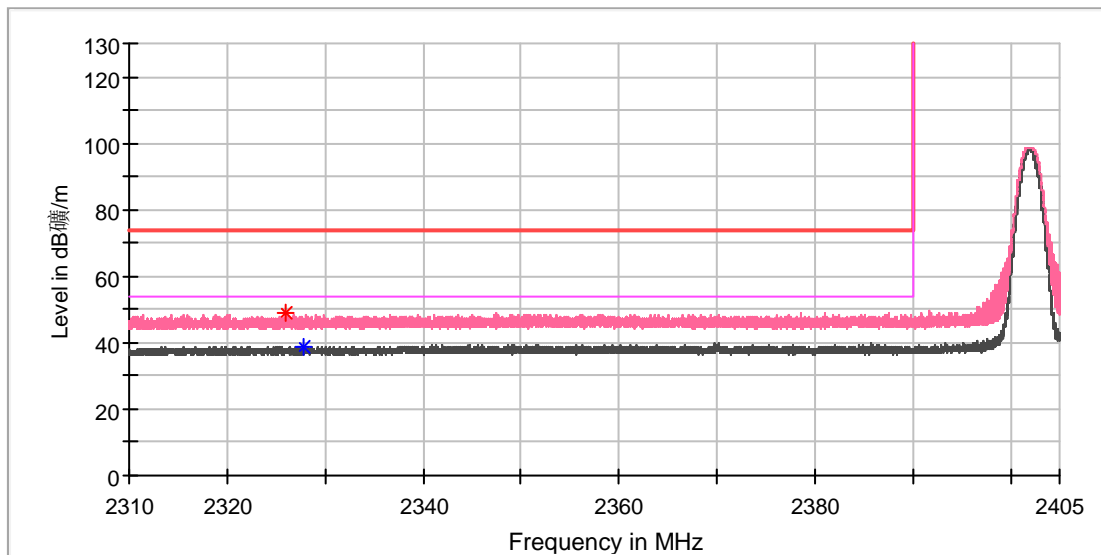


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2316.868500	48.69	---	74.00	25.31	100.0	H	177.0	6.6
2319.457250	---	38.63	54.00	15.37	100.0	H	52.0	6.6

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_Low channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

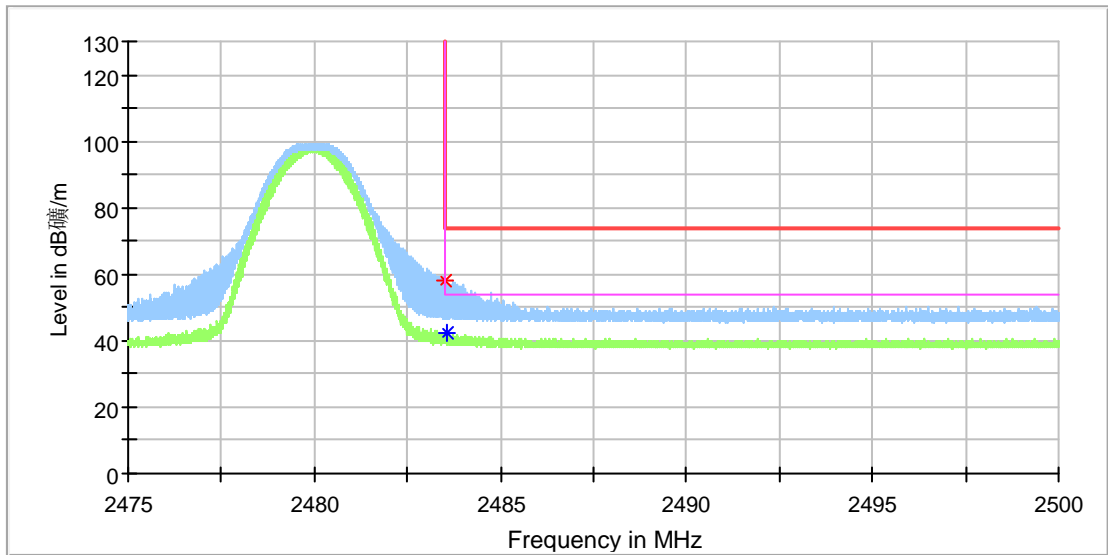


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2326.026500	48.74	---	74.00	25.26	100.0	V	191.0	6.7
2327.912250	---	38.88	54.00	15.12	100.0	V	336.0	6.7

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_High channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

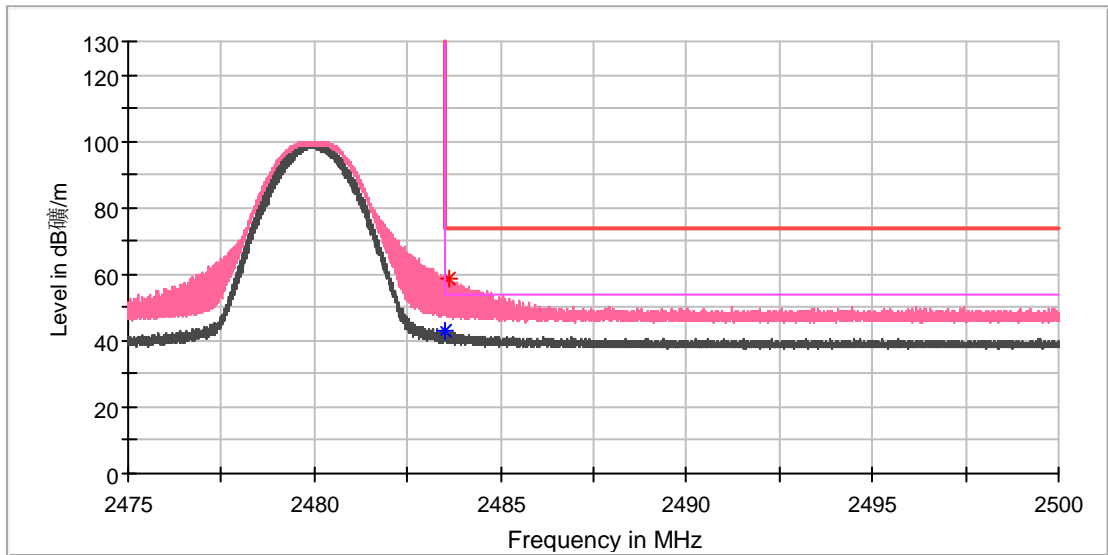


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.535000	58.07	---	74.00	15.93	100.0	H	323.0	7.4
2483.566250	---	42.15	54.00	11.85	100.0	H	294.0	7.4

EUT Information

EUT Name:	AMAZON LOCKER
Model:	ZL-ODIN-V1
Test Mode:	BLE_High channel
Test Voltage::	DC 6V From DC Source
Remark:	Temp 23 Humi:45%
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)
2483.506250	---	42.70	54.00	11.30	100.0	V	349.0	7.4
2483.607500	58.60	---	74.00	15.40	100.0	V	324.0	7.4