

Prüfbericht-Nr.: Test report no.:	CN250WUC 002	Auftrags-Nr.: Order no.:	168563688	Seite 1 von 27 Page 1 of 27
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2025-07-10	
Auftraggeber: Client:	Turtlebox Audio LLC 11020 Katy Freeway Suite 202 Houston, TX 77043			
Prüfgegenstand: Test item:	Bluetooth Speaker			
Bezeichnung / Typ-Nr.: Identification / Type no.:	TurtleBox			
Auftrags-Inhalt: Order content:	Test Report			
Prüfgrundlage: Test specification:	CFR Title 47 FCC Part 15: Subpart C Section 15.247 RSS-247 Issue 4 July 2025 RSS-Gen Issue 5 February 2021			
Wareneingangsdatum: Date of sample receipt:	2025-07-15	Please refer to Photo Document		
Prüfmuster-Nr.: Test sample no.:	A004092244-001-003			
Prüfzeitraum: Testing period:	2025-10-09 - 2025-11-10			
Ort der Prüfung: Place of testing:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:	 Signed by: Jonathan Li		genehmigt von: authorized by:	 Signed by: Bell Hu
Datum: Date:	2026-03-05		Ausstellungsdatum: Issue date:	2026-03-05
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / Other:	FCC ID: 2A28W-TBOG31V IC: 27733-TBOG31V HVIN: TBOG31V			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet * Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
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Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüflabors kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2023, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2023, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

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Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER

RESULT: Pass

5.1.3 CONDUCTED POWER SPECTRAL DENSITY

RESULT: Pass

5.1.4 6dB BANDWIDTH

RESULT: Pass

5.1.5 99% BANDWIDTH

RESULT: Pass

5.1.6 20dB BANDWIDTH

RESULT: Pass

5.1.7 CARRIER FREQUENCY SEPARATION

RESULT: Pass

5.1.8 NUMBER OF HOPPING FREQUENCY

RESULT: Pass

5.1.9 TIME OF OCCUPANCY

RESULT: Pass

5.1.10 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHz BANDWIDTH

RESULT: Pass

5.1.11 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.12 CONDUCTED EMISSION ON AC MAINS

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of Bluetooth BR & EDR

Appendix B: Test Results of Bluetooth LE

Appendix C: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, China

A2LA Certificate Number: 5162.01

FCC Registration No.: 694916

ISED Wireless Device Testing Laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (SRD-Tonscend)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	23.09.2025	22.09.2026
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	23.09.2025	22.09.2026
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	23.09.2025	22.09.2026
DC Power Supply	Keysight	E3642A	MY61276100	23.09.2025	22.09.2026
Wireless Connectivity Tester	R&S	CMW270	102505	23.09.2025	22.09.2026
Power Control Unit	Tonscend	JS0806-4ADC	N/A	23.09.2025	22.09.2026
Automation Control Unit	Tonscend	JS0806-2	21C8060396	23.09.2025	22.09.2026
Test Software	Tonscend	JS1120-3	N/A	N/A	N/A
Shielding Room	Albatross	SR1	APC17151-SR1	2024-09-14	2027-09-13
Unwanted Emission Testing (TS9975)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EMI Test Receiver	R&S	ESR 7	102021	22.09.2025	21.09.2026
Signal Analyzer	R&S	FSV 40	101439	22.09.2025	21.09.2026
System Controller Interface	R&S	SCI-100	S10010038	N/A	N/A
Filterbank	R&S	Wlan	100759	22.09.2025	21.09.2026
OSP	R&S	OSP 120	102040	N/A	N/A
Pre-amplifier	R&S	SCU08F1	08320031	22.09.2025	21.09.2026
Amplifier	R&S	SCU-18F	180070	22.09.2025	21.09.2026
Amplifier	R&S	SCU40A	100475	22.09.2025	21.09.2026
Trilog Broadband Antenna	Schwarzbeck	VULB 9162	193	28.09.2024	27.09.2026

(30 MHz - 7 GHz)					
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	28.09.2024	27.09.2026
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	28.09.2024	27.09.2026
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	28.09.2024	27.09.2026
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	14.09.2024	13.09.2027

Conducted Emission				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR3	102680	2026-02-09
Artificial Mains Network	R&S	ENV216	102333	2026-07-18
Artificial Mains Network	R&S	ENV216	101445	2026-02-09
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Table 2: Measurement Uncertainty

Parameter	Uncertainty (k=2)
RF output power, conducted	± 0.99 dB
Occupied Channel Bandwidth	± 2.08 %
RF power density, conducted	± 0.99 dB
Unwanted Emissions, conducted	± 0.89 dB
All emissions, radiated	± 4.17 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B & C of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The product is a Bluetooth Sound Station system which supports Bluetooth dual mode wireless technology.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	Bluetooth Speaker
Type Designation:	TurtleBox
Trademark:	TurtleBox
FCC ID:	2A28W-TBOG31V
IC:	27733-TBOG31V
HVIN:	TBOG31V
Operating Voltage	DC 5V/9V/12V/15V/20V charge by USB type-C port, DC 10.95V by Lithium-ion battery
Testing Voltage	AC 120V, 60Hz for USB input
Technical Specification of Bluetooth (dual mode)	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Channel Number:	BR & EDR mode:79 channels, Low Energy mode:40 channels
Channel Separation:	BR & EDR mode:1MHz, Low Energy mode:2MHz
Data Rate:	BR & EDR mode: (1Mbps, 2Mbps, 3Mbps) Low Energy mode: (1Mbps, 2Mbps)
Antenna Type:	Integral Antenna
Antenna Gain:	2.49 dBi max (Provided by the Client)

Note: The correctness of all data provided by customer in the test report is ensured and responsible of the customer. Any misjudgment of the test results caused by the use of incorrect data provided by customer shall be borne by the customer.

Table 4: RF Channel and Frequency of Bluetooth BR/EDR

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00		

Test frequencies are lowest channel: 2402 MHz, middle channel: 2441 MHz and highest channel: 2480 MHz for Bluetooth BR/EDR

Table 5: RF Channel and Frequency of Bluetooth LE

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

Test frequencies are lowest channel: 2402 MHz, middle channel: 2440 MHz and highest channel: 2480 MHz for Bluetooth LE

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Bluetooth transmitting mode (BR & EDR mode)
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
- B. On, Bluetooth transmitting mode (BLE)
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
- C. On, Transmitting on Hopping channel
- D. On, Normal working
- E. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- | | |
|-------------------------|------------------------------|
| - Application Form | - User Manual |
| - Operation Description | - ID Label and Location Info |

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+ C63.10a:2024.

According to clause 3.1, all tests were performed on model *TurtleBox* in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 6: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N
Laptop	Lenovo	T480	PF-16A6N8
Display	Lenovo	N/A	N/A

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

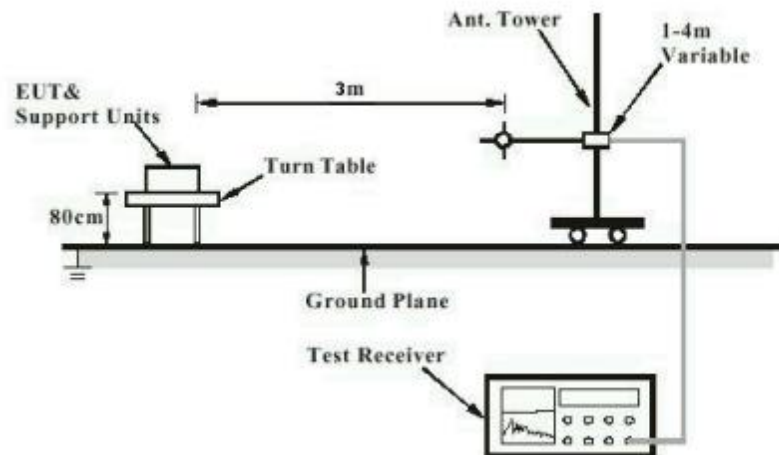


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

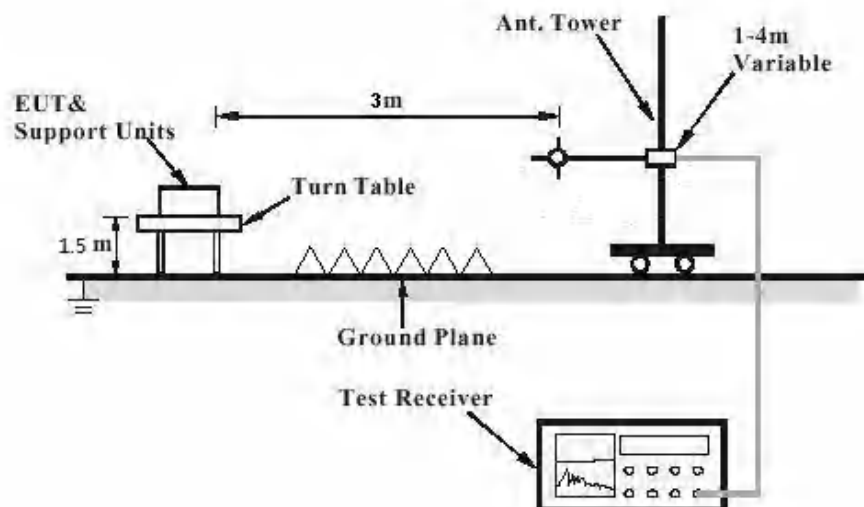


Diagram of Measurement Configuration for Mains Conduction Measurement

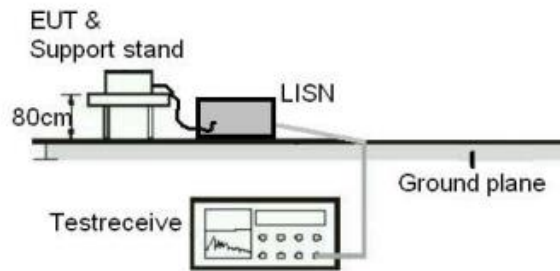
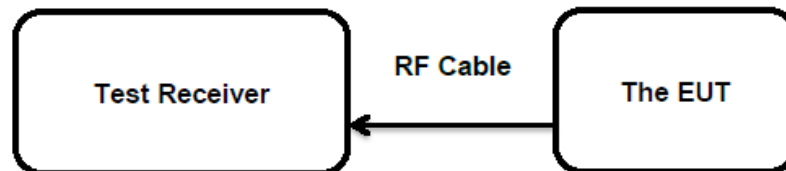


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(b)(4) and Part 15.203
RSS-Gen Clause 6.8

According to the manufacturer declared, the EUT has Integral Antenna, permanent attachment and no consideration of replacement, refer to section 3.2 for details.

Therefore, the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Maximum Peak Conducted Output Power

RESULT:
Pass
Test Specification

Test standard	: FCC Part 15.247(b)(1)&(3) RSS-247 Clause 5.4(b)&(d)
Basic standard	: ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+ C63.10a:2024
Limits	: FHSS < 0.125 Watts, DSSS < 1.0 Watts
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-10-09 - 2025-11-10
Input voltage	: AC 120V, 60Hz
Operation mode	: A, B
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 45 %
Atmospheric pressure	: 101 kPa

For details refer to following test result.

Table 7: Test Result of Maximum Peak Conducted Output Power, BR & EDR

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
GFSK (BR)	2402.0	-3.11	0.0005	< 0.125
	2441.0	-2.21	0.0006	
	2480.0	-4.20	0.0004	
8DPSK (EDR)	2402.0	-2.80	0.0005	
	2441.0	-1.97	0.0006	
	2480.0	-4.15	0.0004	
Maximum Measured Value		-1.97	0.0006	

Table 8: Test Result of Maximum Peak Conducted Output Power, Bluetooth LE

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
Bluetooth LE (1 Mbps)	2402	-4.19	0.0004	< 1.0
	2440	-3.3	0.0005	
	2480	-5.35	0.0003	
Bluetooth LE (2 Mbps)	2402	-4.19	0.0004	
	2440	-3.33	0.0005	
	2480	-5.25	0.0003	
Max. Measured Value		-3.30	0.0005	

Note:

- 1) The cable loss is taken into account in results.
- 2) Antenna gain(G): 2.49 dBi
e.i.r.p.= $P_{(\text{Peak power})} + G$, which is far below the 4 W

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5.1.3 Conducted Power Spectral Density

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(e)
RSS-247 Clause 5.2(b)
Basic standard : ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+
C63.10a:2024
Limits : < 8 dBm / 3kHz
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-10-09 - 2025-11-10
Input voltage : AC 120V, 60Hz
Operation mode : B
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

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5.1.4 6dB Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(2)
RSS-247 Clause 5.2(a)
Basic standard : ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+
C63.10a:2024
Limits : > 500 kHz
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-10-09 - 2025-11-10
Input voltage : AC 120V, 60Hz
Operation mode : B
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

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5.1.5 99% Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)
RSS-Gen Clause 6.7
Basic standard : ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+
C63.10a:2024
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-10-09 - 2025-11-10
Input voltage : AC 120V, 60Hz
Operation mode : A, B
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A, B.

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5.1.6 20dB Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(1)
RSS-247 Clause 5.1(a)
Basic standard : ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+
C63.10a:2024
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-10-09 - 2025-11-10
Input voltage : AC 120V, 60Hz
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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5.1.7 Carrier Frequency Separation

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(1)
RSS-247 Clause 5.1(b)
Basic standard : ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+
C63.10a:2024
Limits : $\geq 25\text{kHz}$ or 2/3 of 20dB bandwidth, whichever is greater
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-10-09 - 2025-11-10
Input voltage : AC 120V, 60Hz
Operation mode : C
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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5.1.8 Number of Hopping Frequency

RESULT:

Pass

Test Specification

Test standard : FCC part 15.247(a)(1)(iii)
RSS-247 Clause 5.1(d)
Basic standard : ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+
C63.10a:2024
Limits : ≥ 15 non-overlapping channels
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-10-09 - 2025-11-10
Input voltage : AC 120V, 60Hz
Operation mode : C
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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5.1.9 Time of Occupancy

RESULT:

Pass

Test Specification

Test standard : FCC part 15.247(a)(1)(iii)
RSS-247 Clause 5.1(d)
Basic standard : ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+
C63.10a:2024
Limits : < 0.4s
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-10-09 - 2025-11-10
Input voltage : AC 120V, 60Hz
Operation mode : C
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

5.1.10 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.247(d) RSS-247 Clause 5.5
Basic standard	: ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+ C63.10a:2024
Limits	: 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-10-09 - 2025-11-10
Input voltage	: AC 120V, 60Hz
Operation mode	: A, B, C
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 45 %
Atmospheric pressure	: 101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to test plots, and compliance is achieved as well.

For the measurement records, refer to the appendix A, B.

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5.1.11 Radiated Spurious Emission

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(d) & FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	: ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+ C63.10a:2024
Limits	: Refer to 15.209(a) of FCC part 15.247(d) RSS-Gen Section 8.9 & 8.10
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 2025-10-09 - 2025-11-10
Input voltage	: AC 120V, 60Hz
Operation mode	: A, B
Test channel	: Low / Middle / High
Ambient temperature	: Refer to test result
Relative humidity	: Refer to test result
Atmospheric pressure	: 101 kPa

Remark:

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix A, B.

Prüfbericht - Nr.: CN250WUC 002
Test Report No.:Seite 26 von 27
Page 26 of 27**5.1.12 Conducted Emission on AC Mains****RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.207(a) RSS-Gen Section 8.8
Basic standard	: ANSI C63.10:2020 and ANSI C63.10:2020+Cor. 1:2023+ C63.10a:2024
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a) RSS-Gen Table 4
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-10-09 - 2025-11-10
Input voltage	: AC 120V, 60Hz
Operation mode	: D
Earthing	: Not connected
Ambient temperature	: 23.7 °C
Relative humidity	: 50.3 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix B.

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix C.

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Appendix A: Test Results of Bluetooth BR & EDR

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Appendix A.1: Test Results of 20dB Bandwidth

Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.930	2401.559	2402.489	---	PASS
		2441	0.933	2440.559	2441.492	---	PASS
		2480	0.942	2479.559	2480.501	---	PASS
3DH5	Ant1	2402	1.320	2401.352	2402.672	---	PASS
		2441	1.341	2440.349	2441.69	---	PASS
		2480	1.296	2479.367	2480.663	---	PASS

The image displays two screenshots of a Spectrum Analyzer interface, likely from a Keysight instrument, showing frequency spectra for two different antennas: DH5 Ant1 2402 and DH5 Ant1 2441.

Top Screenshot: DH5 Ant1 2402

- Center Frequency:** 2.40200000 GHz
- Span:** 3.0000000 MHz
- Start Freq:** 2.400500000 GHz
- Stop Freq:** 2.403500000 GHz
- Marker Table:**

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.401559 GHz	-28.78 dBm		
2	N	1	f	2.402078 GHz	-8.267 dBm		
3	Δ1	1	f	Δ1	930 kHz (Δ)	0.4280 dB	

Bottom Screenshot: DH5 Ant1 2441

- Center Frequency:** 2.44100000 GHz
- Span:** 3.0000000 MHz
- Start Freq:** 2.439500000 GHz
- Stop Freq:** 2.442500000 GHz
- Marker Table:**

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.440559 GHz	-27.74 dBm		
2	N	1	f	2.441021 GHz	-8.956 dBm		
3	Δ1	1	f	Δ1	933 kHz (Δ)	0.7314 dB	



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Appendix A.2: Test Results of 99% Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87338	2401.5744	2402.4478	---	---
		2441	0.87421	2440.5769	2441.4511	---	---
		2480	0.88200	2479.5709	2480.4529	---	---
3DH5	Ant1	2402	1.2750	2401.3638	2402.6388	---	---
		2441	1.2927	2440.3562	2441.6489	---	---
		2480	1.3035	2479.3434	2480.6469	---	---

Test Graphs







Appendix A.3: Test Results of Carrier Frequency Separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.986	≥0.942	PASS
3DH5	Ant1	Hop	1.006	≥0.982	PASS

DH5	Ant1	Hop
-----	------	-----



Appendix A.4: Test Results of Time of Occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.381	315	0.12	≤0.4	PASS
DH3	Ant1	Hop	1.638	157	0.257	≤0.4	PASS
DH5	Ant1	Hop	2.884	119	0.343	≤0.4	PASS
3DH1	Ant1	Hop	0.390	319	0.124	≤0.4	PASS
3DH3	Ant1	Hop	1.640	160	0.262	≤0.4	PASS
3DH5	Ant1	Hop	2.892	105	0.304	≤0.4	PASS

Test Graphs





DH5 Ant1 Hop

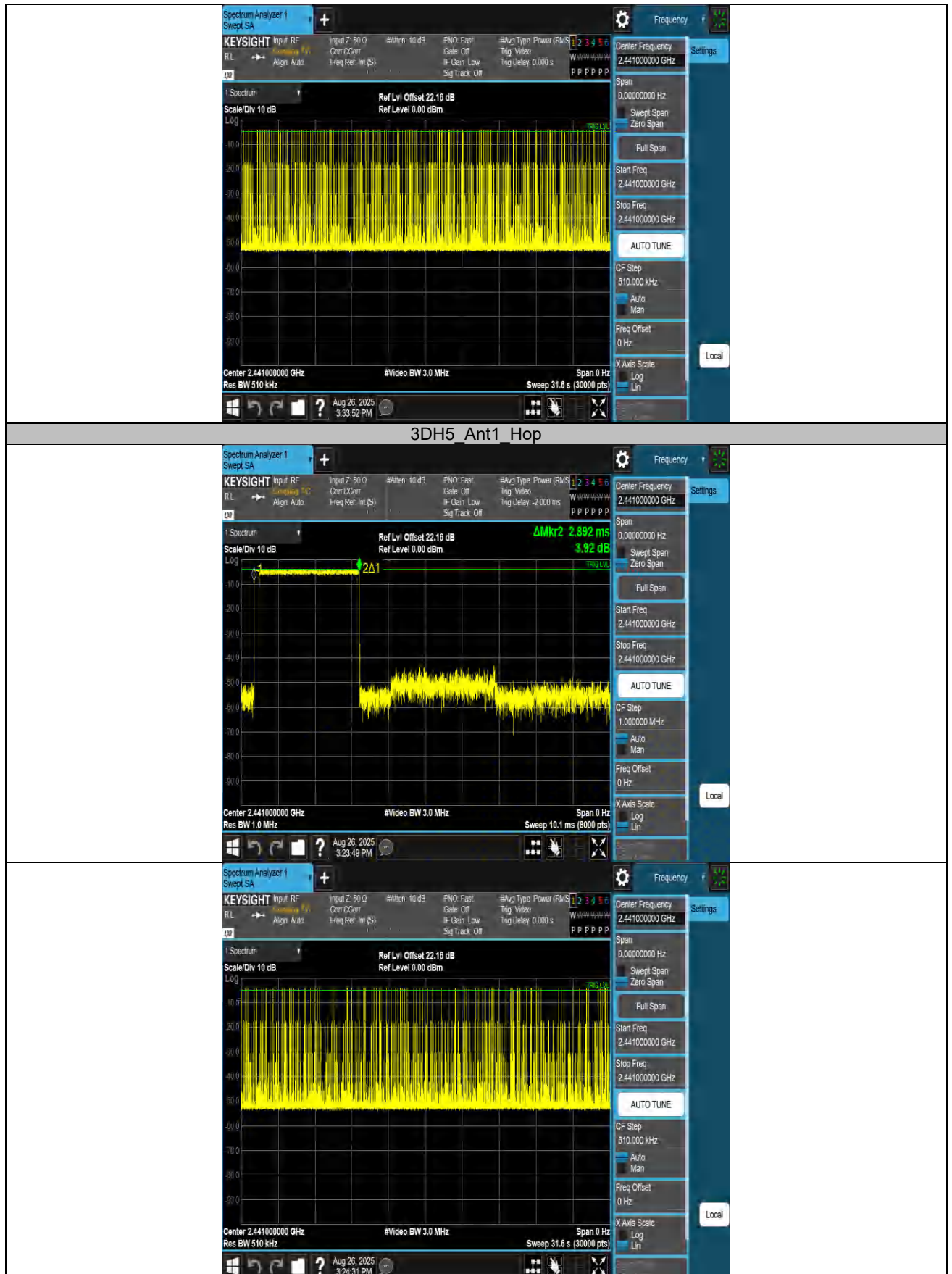


3DH1 Ant1 Hop



3DH3 Ant1 Hop





Appendix A.5: Test Results of Number of Hopping Frequency

Test Result

TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs



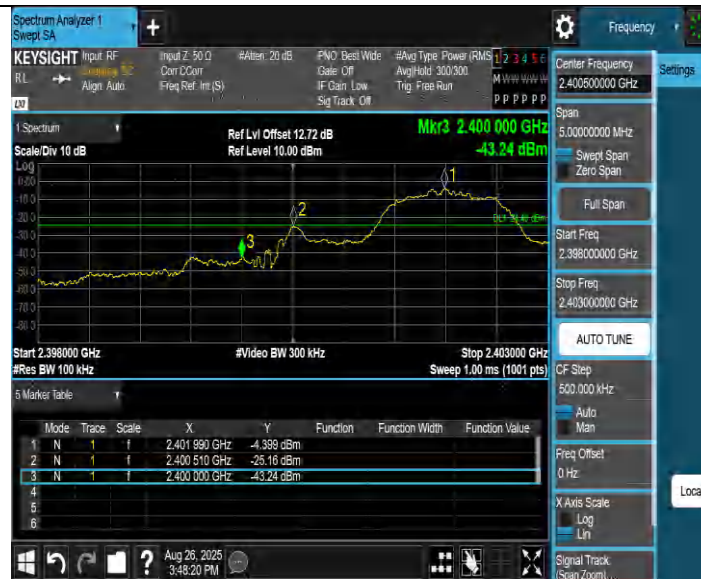
Appendix A.6: Test Results of Band Edge Measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-4.38	-50.99	≤-24.38	PASS
		High	2480	-5.68	-50.05	≤-25.68	PASS
3DH5	Ant1	Low	2402	-4.40	-43.24	≤-24.40	PASS
		High	2480	-6.35	-38.84	≤-26.35	PASS
DH5	Ant1	Hopping	2402	-4.71	-52.62	≤-24.71	PASS
		Hopping	2480	-6.52	-52.37	≤-26.52	PASS
3DH5	Ant1	Hopping	2402	-7.05	-50.54	≤-27.05	PASS
		Hopping	2480	-8.25	-59.74	≤-28.25	PASS

Test Graphs





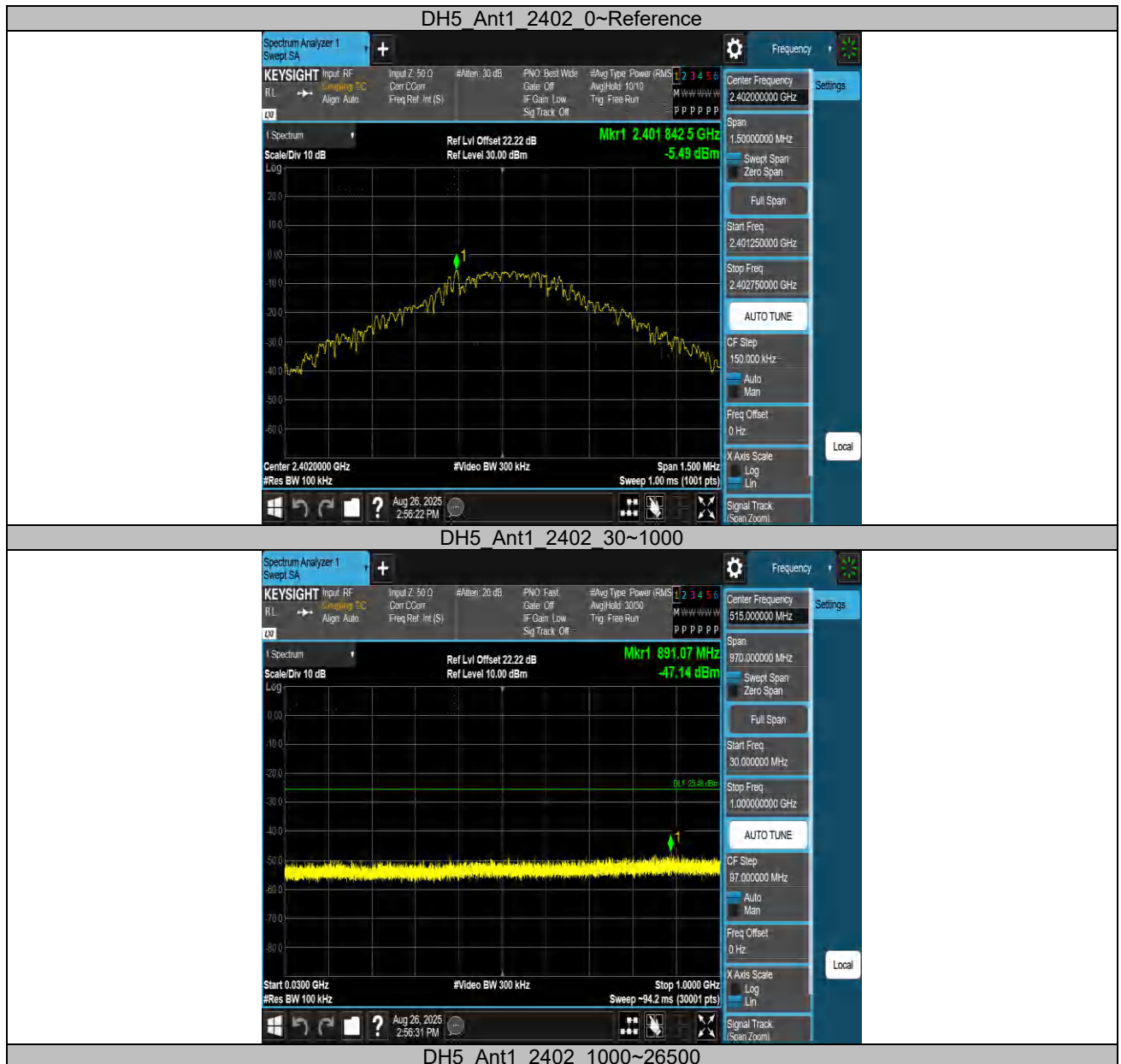


Appendix A.7: Test Results of Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-5.49	-5.49	---	PASS
			30~1000	-5.49	-47.14	≤-25.49	PASS
			1000~26500	-5.49	-38.81	≤-25.49	PASS
		2441	Reference	-4.73	-4.73	---	PASS
			30~1000	-4.73	-47.58	≤-24.73	PASS
			1000~26500	-4.73	-38.06	≤-24.73	PASS
		2480	Reference	-6.53	-6.53	---	PASS
			30~1000	-6.53	-47.54	≤-26.53	PASS
			1000~26500	-6.53	-38.33	≤-26.53	PASS
3DH5	Ant1	2402	Reference	-8.30	-8.30	---	PASS
			30~1000	-8.30	-47.94	≤-28.3	PASS
			1000~26500	-8.30	-38.12	≤-28.3	PASS
		2441	Reference	-4.18	-4.18	---	PASS
			30~1000	-4.18	-47.12	≤-24.18	PASS
			1000~26500	-4.18	-38.83	≤-24.18	PASS
		2480	Reference	-9.10	-9.10	---	PASS
			30~1000	-9.10	-47.53	≤-29.1	PASS
			1000~26500	-9.10	-39.16	≤-29.1	PASS

Test Graphs





DH5 Ant1 2441 0~Reference



DH5 Ant1 2441 30~1000



DH5 Ant1 2441 1000~26500



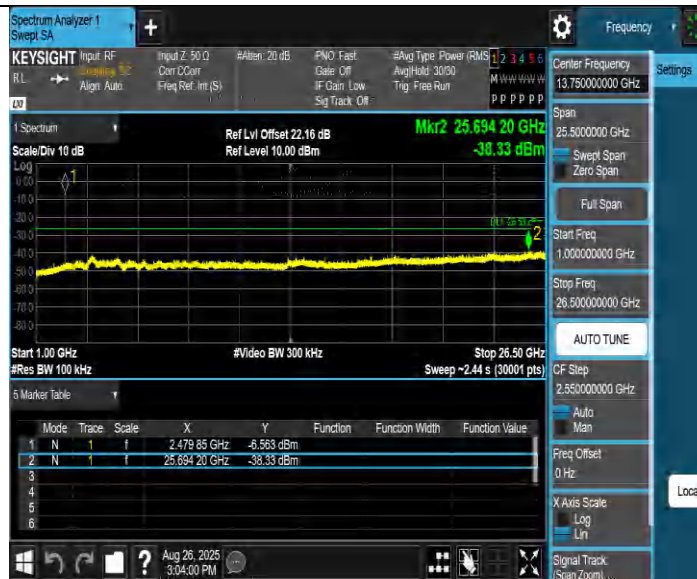
DH5 Ant1 2480 0~Reference



DH5 Ant1 2480 30~1000



DH5 Ant1 2480 1000~26500



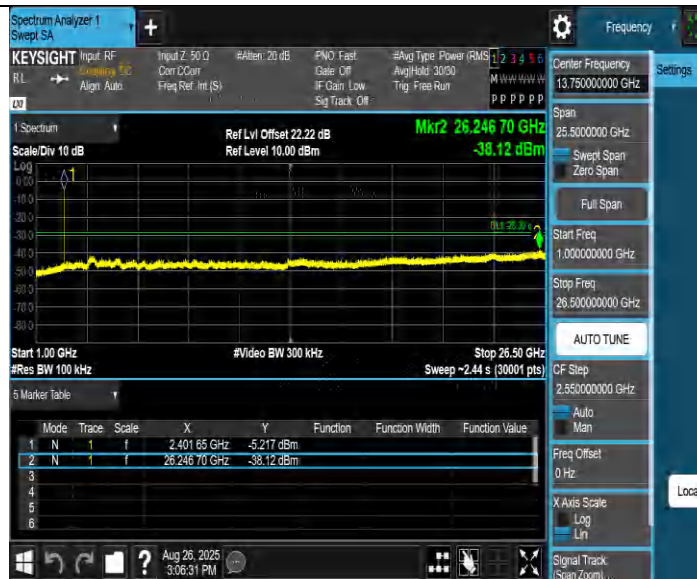
3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000



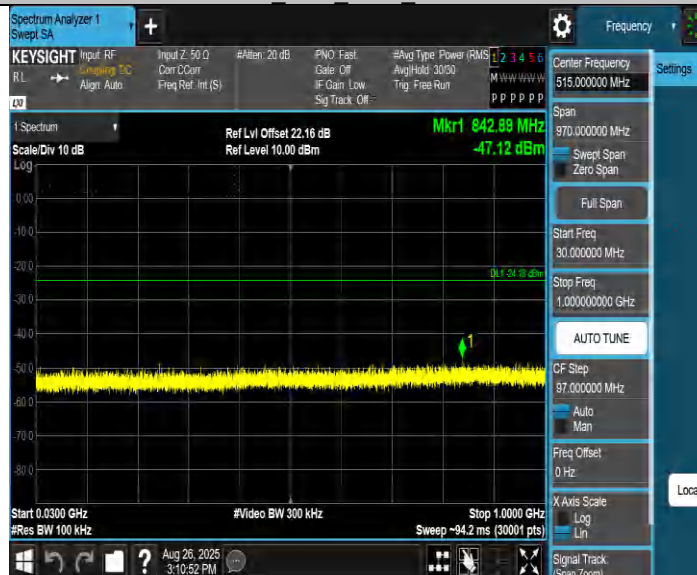
3DH5_Ant1_2402_1000~26500



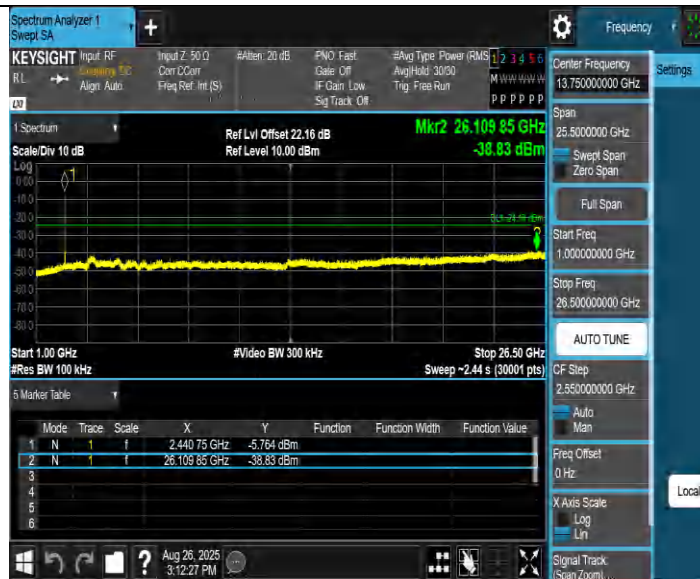
3DH5 Ant1 2441 0~Reference



3DH5 Ant1 2441 30~1000



3DH5 Ant1 2441 1000~26500





Appendix A.8: Test Results of Radiated Spurious Emissions

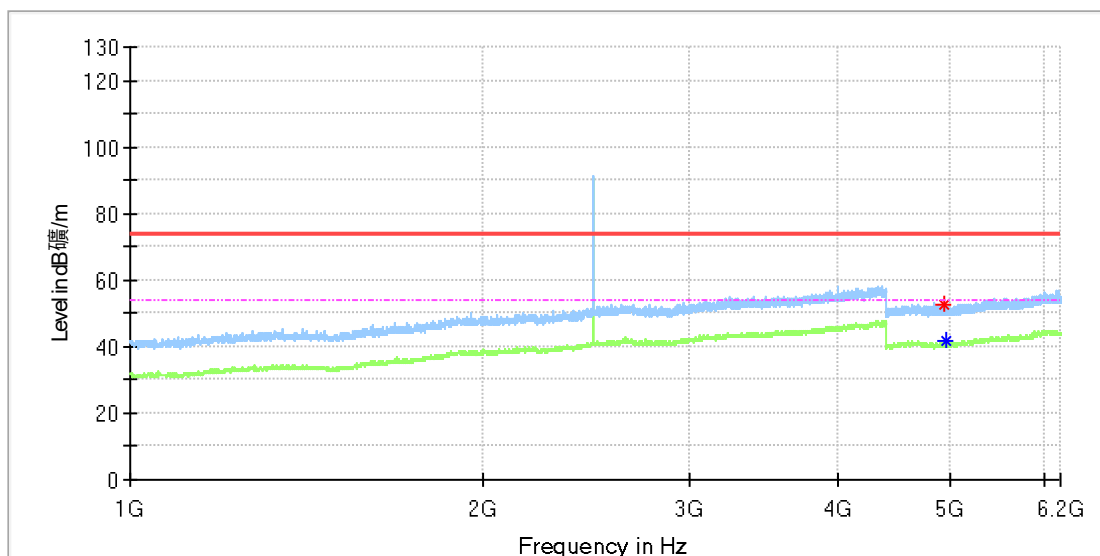
Note:

- 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.

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168563688/A004060471-002
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)
4926.000000	52.74	---	74.00	21.26	150.0	H	231.0	13.3
4960.000000	---	41.58	54.00	12.42	150.0	H	50.0	13.3

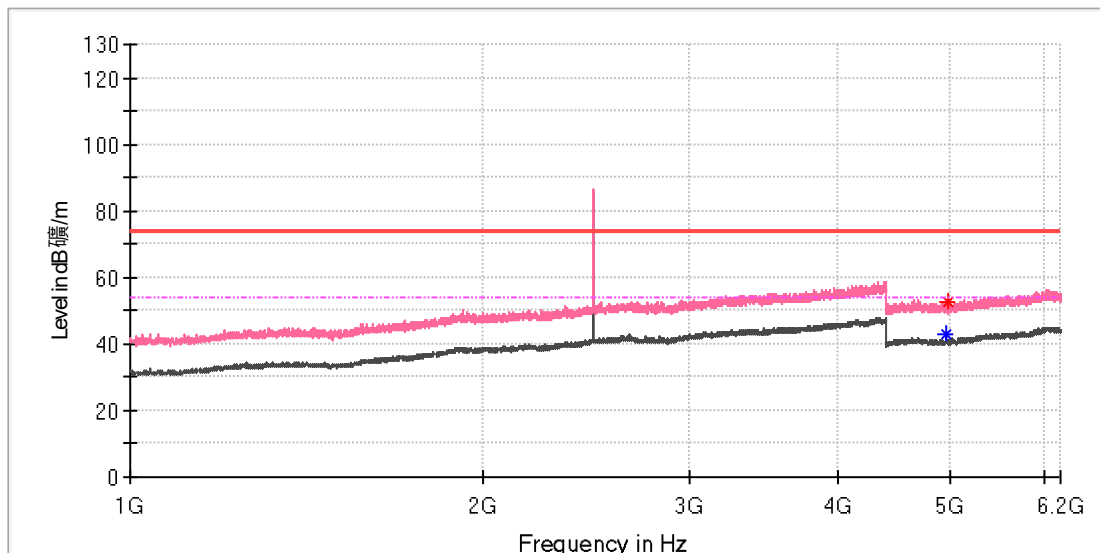
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168563688/A004060471-002
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)
4960.000000	---	43.00	54.00	11.00	150.0	V	267.0	13.3
4975.500000	52.48	---	74.00	21.52	150.0	V	179.0	13.3

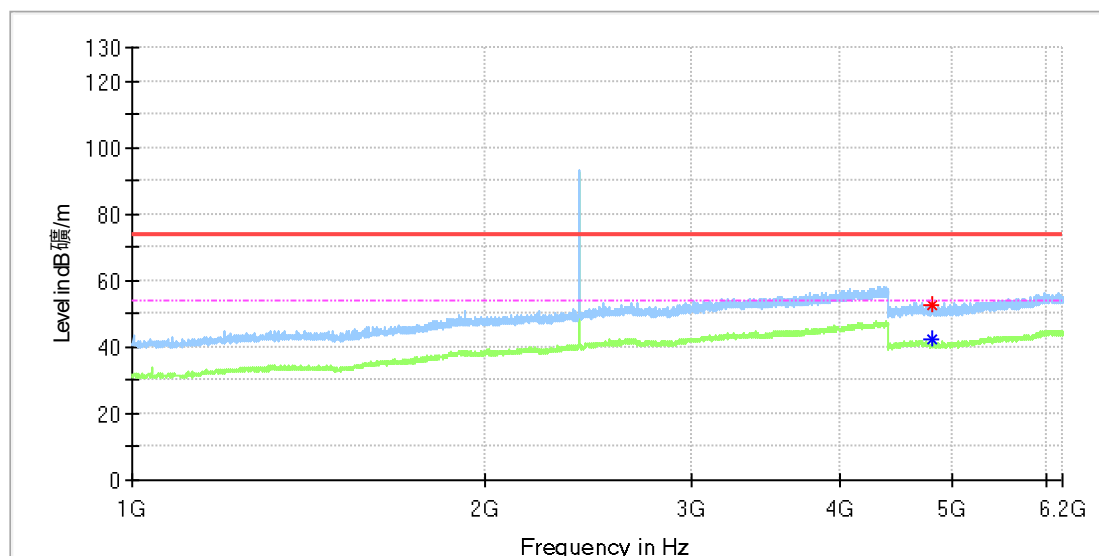
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
4804.000000	---	42.13	54.00	11.87	150.0	H	70.0	13.3
4809.500000	52.46	---	74.00	21.54	150.0	H	90.0	13.3

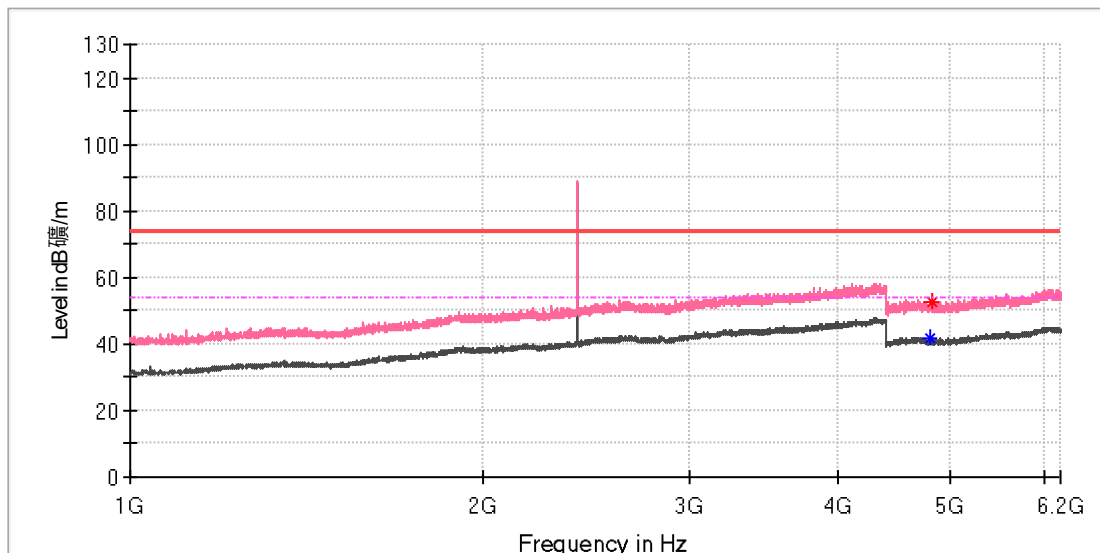
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
4803.500000	---	41.80	54.00	12.20	150.0	V	228.0	13.3
4812.000000	52.49	---	74.00	21.51	150.0	V	193.0	13.3

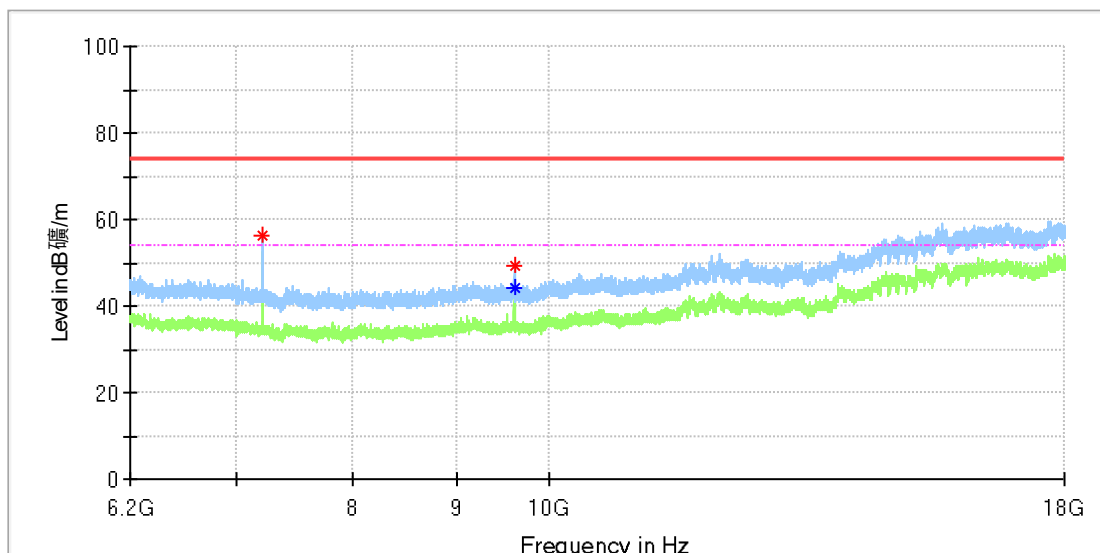
Final_Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
7205.458333	56.15	---	68.20	12.05	150.0	H	44.0	8.8
9608.233333	49.18	---	74.00	24.82	150.0	H	274.0	10.4
9608.233333	---	44.23	54.00	9.77	150.0	H	274.0	10.4

Final_Result

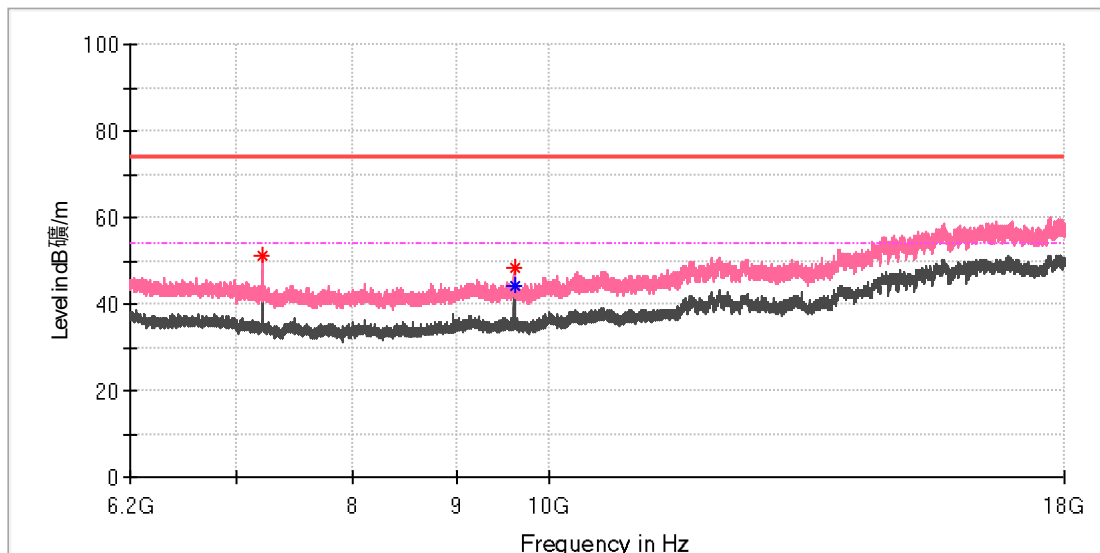
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---	---	---	---

Note: The observed value in frequency 7205.458333MHz is not within the restricted band, just Peak value was recorded.

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168563688/A004060471-002
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)	PoI	Azimuth (deg)	Corr. (dB/m)
7205.458333	51.02	---	68.20	17.18	150.0	V	305.0	8.8
9607.741667	48.45	---	74.00	25.55	150.0	V	271.0	10.4
9607.741667	---	44.30	54.00	9.70	150.0	V	271.0	10.4

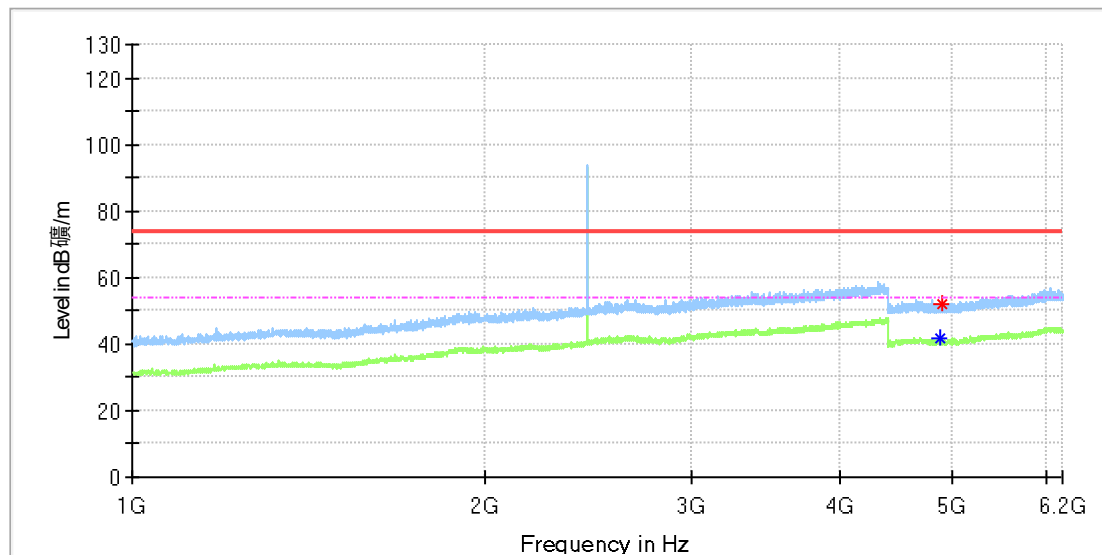
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168563688/A004060471-002
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)
4882.000000	---	41.44	54.00	12.56	150.0	H	84.0	13.3
4902.000000	51.96	---	74.00	22.04	150.0	H	316.0	13.3

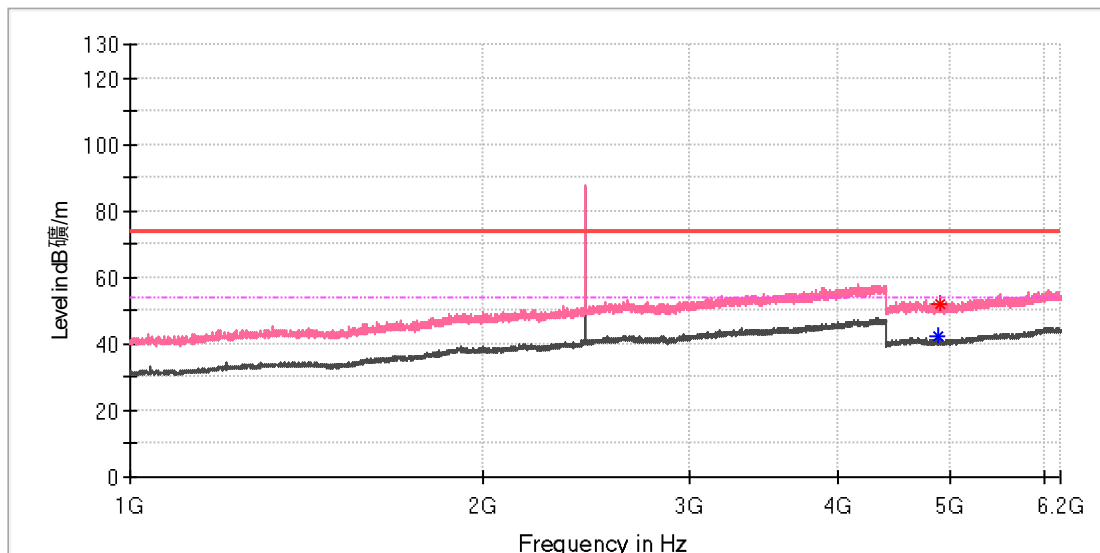
Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
100.000000	100.000000	100.000000	100.000000	100.000000	100.000000		100.000000	

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168563688/A004060471-002
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)
4882.000000	---	42.25	54.00	11.75	150.0	V	286.0	13.3
4894.000000	52.01	---	74.00	21.99	150.0	V	324.0	13.3

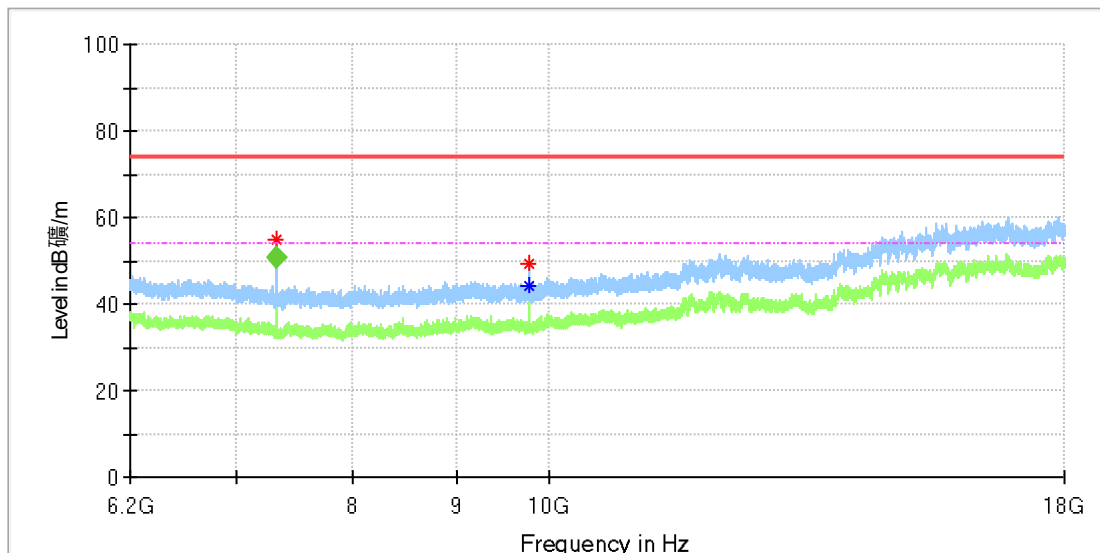
Final_Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168563688/A004060471-002
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)
7322.966667	55.10	---	74.00	18.90	150.0	H	79.0	8.2
9764.091667	49.24	---	74.00	24.76	150.0	H	63.0	10.4
9764.091667	---	44.22	54.00	9.78	150.0	H	63.0	10.4

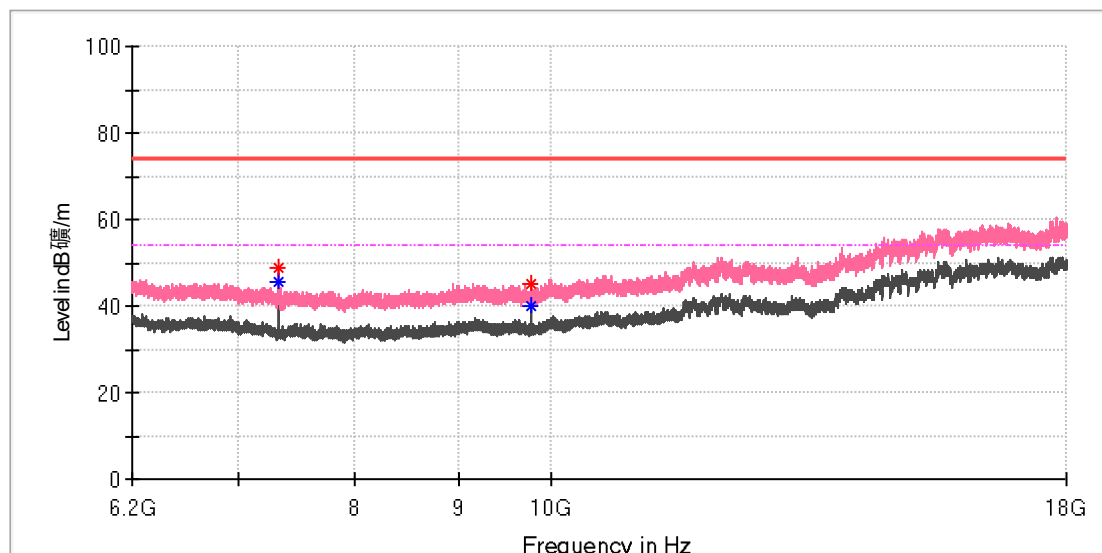
Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7323.082500	---	50.76	54.00	3.24	150.0	H	79.0	8.2

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168563688/A004060471-002
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)	PoI	Azimuth (deg)	Corr. (dB/m)
7322.475000	---	45.77	54.00	8.23	150.0	V	315.0	8.2
7322.966667	48.65	---	74.00	25.35	150.0	V	315.0	8.2
9763.600000	44.99	---	74.00	29.01	150.0	V	300.0	10.4
9764.091667	---	39.95	54.00	14.05	150.0	V	300.0	10.4

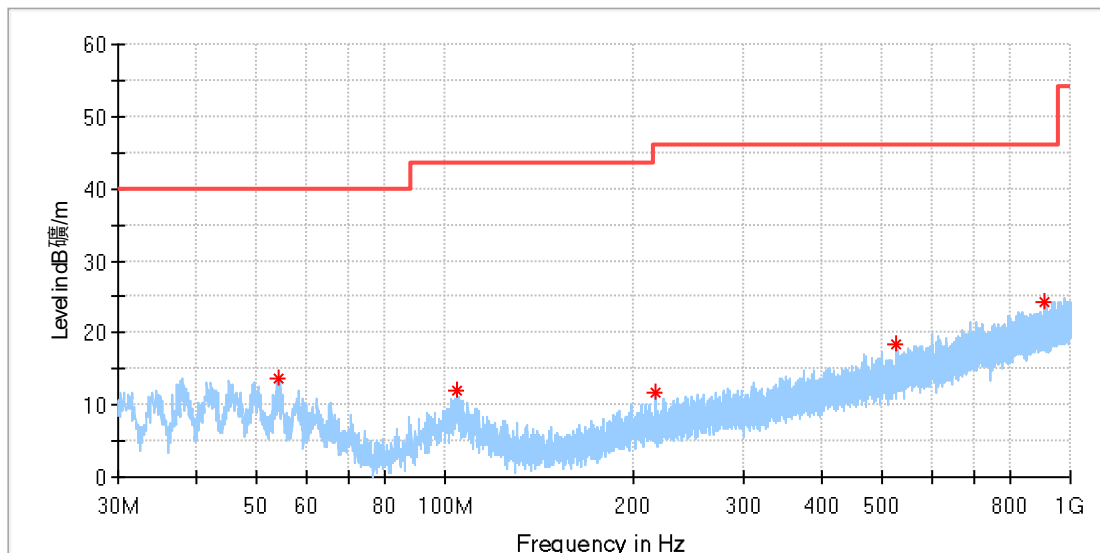
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168563688/A004060471-002
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)
53.951539	13.81	40.00	26.19	100.0	H	165.0	-18.5
104.205000	12.01	43.50	31.49	100.0	H	336.0	-18.9
216.501154	11.80	46.00	34.20	100.0	H	165.0	-18.7
526.192308	18.51	46.00	27.49	100.0	H	328.0	-11.3
910.275000	24.30	46.00	21.70	100.0	H	189.0	-4.7

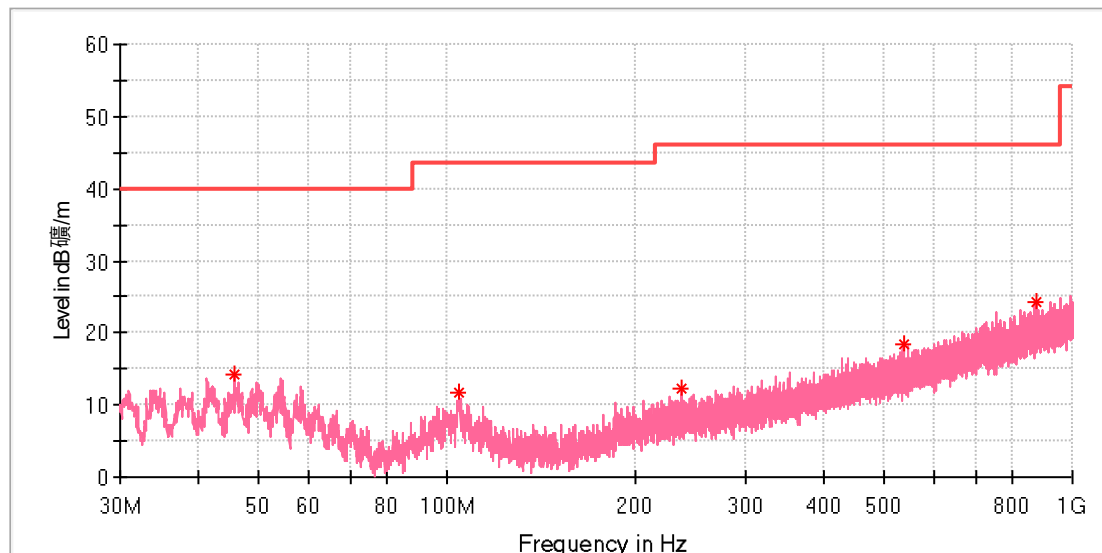
Final_Result

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

Test Report

EUT Information

EUT Name: Bluetooth Speaker
Model: TurtleBox
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168563688/A004060471-002
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)
45.781154	14.18	40.00	25.82	100.0	V	157.0	-18.8
104.764615	11.77	43.50	31.73	100.0	V	62.0	-18.9
237.281539	12.32	46.00	33.68	100.0	V	166.0	-17.8
535.929615	18.36	46.00	27.64	100.0	V	43.0	-11.1
873.974615	24.24	46.00	21.76	100.0	V	95.0	-5.1

Final_Result

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

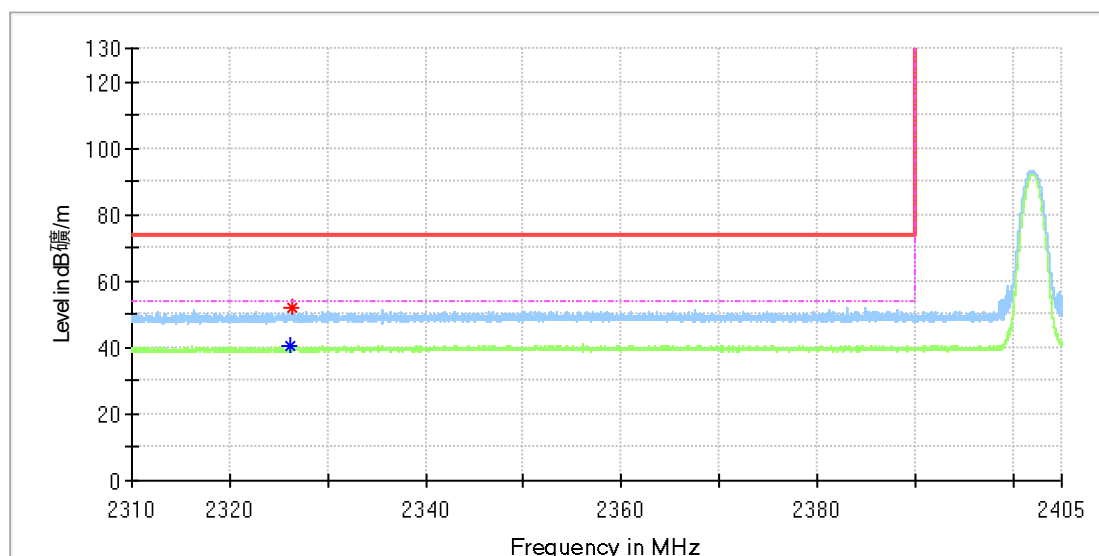
Appendix A.9: Test Results of Radiated Emissions in Restricted Bands

Worst case-DH5

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
2326.219853	---	40.31	54.00	13.69	150.0	H	55.0	8.3
2326.345588	52.06	---	74.00	21.94	150.0	H	0.0	8.3

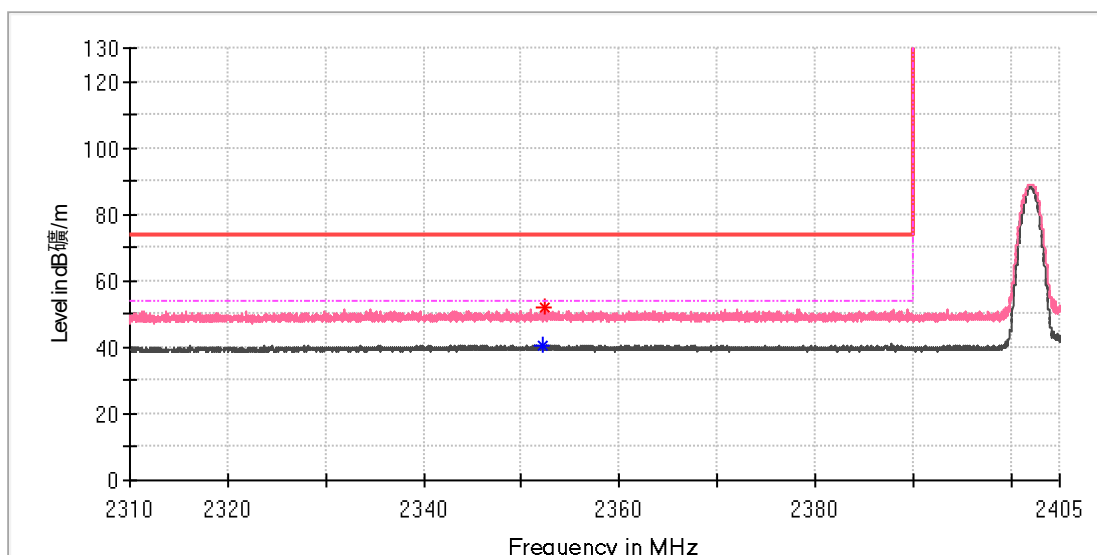
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
2352.247059	---	40.57	54.00	13.43	150.0	V	298.0	8.5
2352.442647	52.14	---	74.00	21.86	150.0	V	293.0	8.5

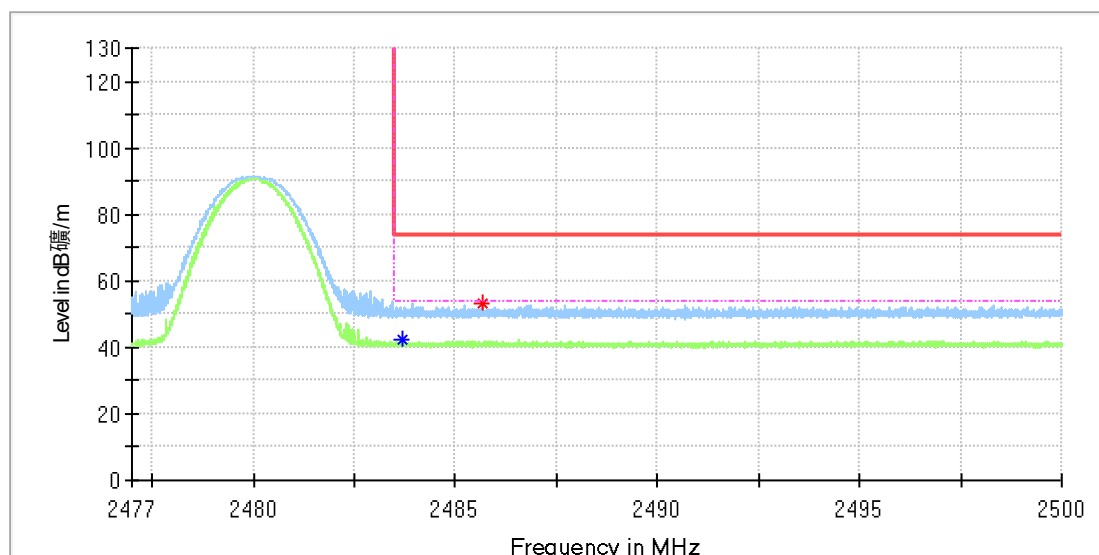
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168563688/A004060471-002
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)
2483.690294	---	42.46	54.00	11.54	150.0	H	147.0	9.0
2485.652059	53.21	---	74.00	20.79	150.0	H	104.0	9.0

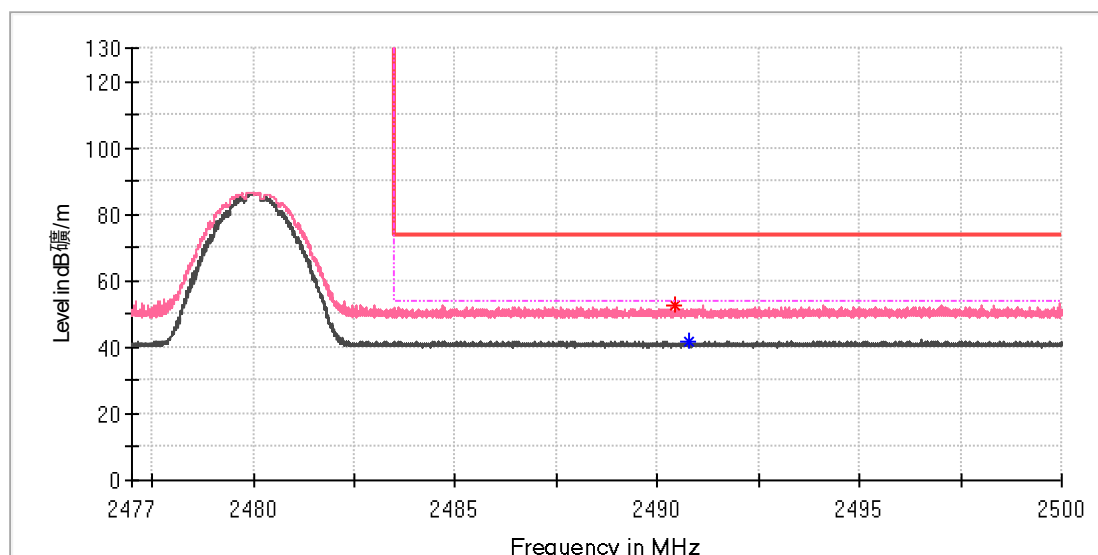
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168563688/A004060471-002
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)
2490.414412	52.45	---	74.00	21.55	150.0	V	144.0	9.0
2490.789853	---	41.91	54.00	12.09	150.0	V	259.0	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)
---	---	---	---	---	---		---	---

Appendix B: Test Results of Bluetooth LE

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Appendix B.1: Test Results of 6dB Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.704	2402.368	0.5	PASS
		2440	0.652	2439.696	2440.348	0.5	PASS
		2480	0.656	2479.692	2480.348	0.5	PASS
BLE_2M	Ant1	2402	1.076	2401.484	2402.560	0.5	PASS
		2440	1.100	2439.480	2440.580	0.5	PASS
		2480	1.108	2479.460	2480.568	0.5	PASS

Test Graphs





BLE 2M Ant1 2440



BLE 2M Ant1 2480

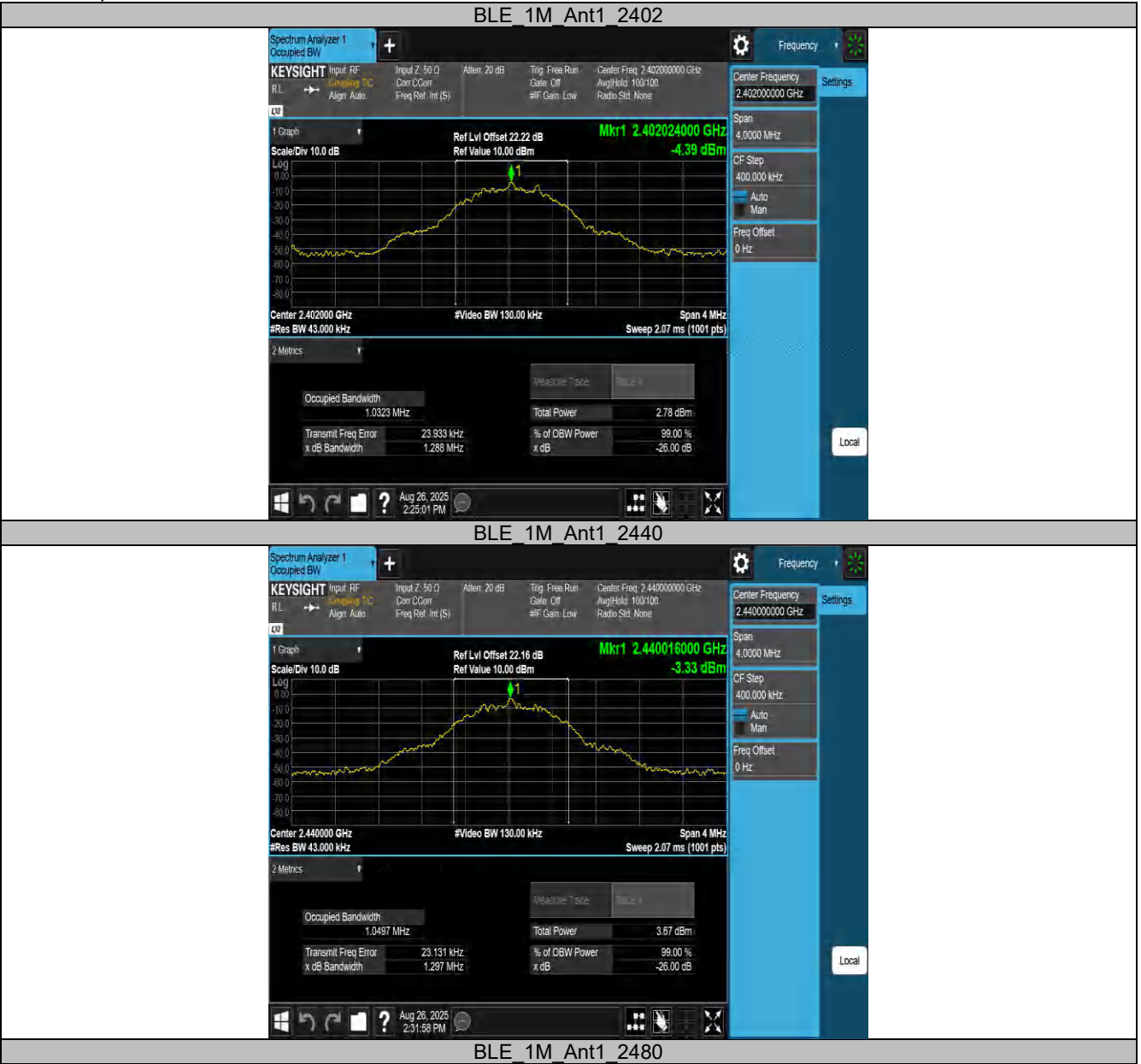


Appendix B.2: Test Results of 99% Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0323	2401.5078	2402.5401	---	PASS
		2440	1.0497	2439.4983	2440.5480	---	PASS
		2480	1.0612	2479.4897	2480.5509	---	PASS
BLE_2M	Ant1	2402	2.0405	2401.0195	2403.0600	---	PASS
		2440	2.0706	2439.0073	2441.0779	---	PASS
		2480	2.0388	2479.0185	2481.0573	---	PASS

Test Graphs





BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480

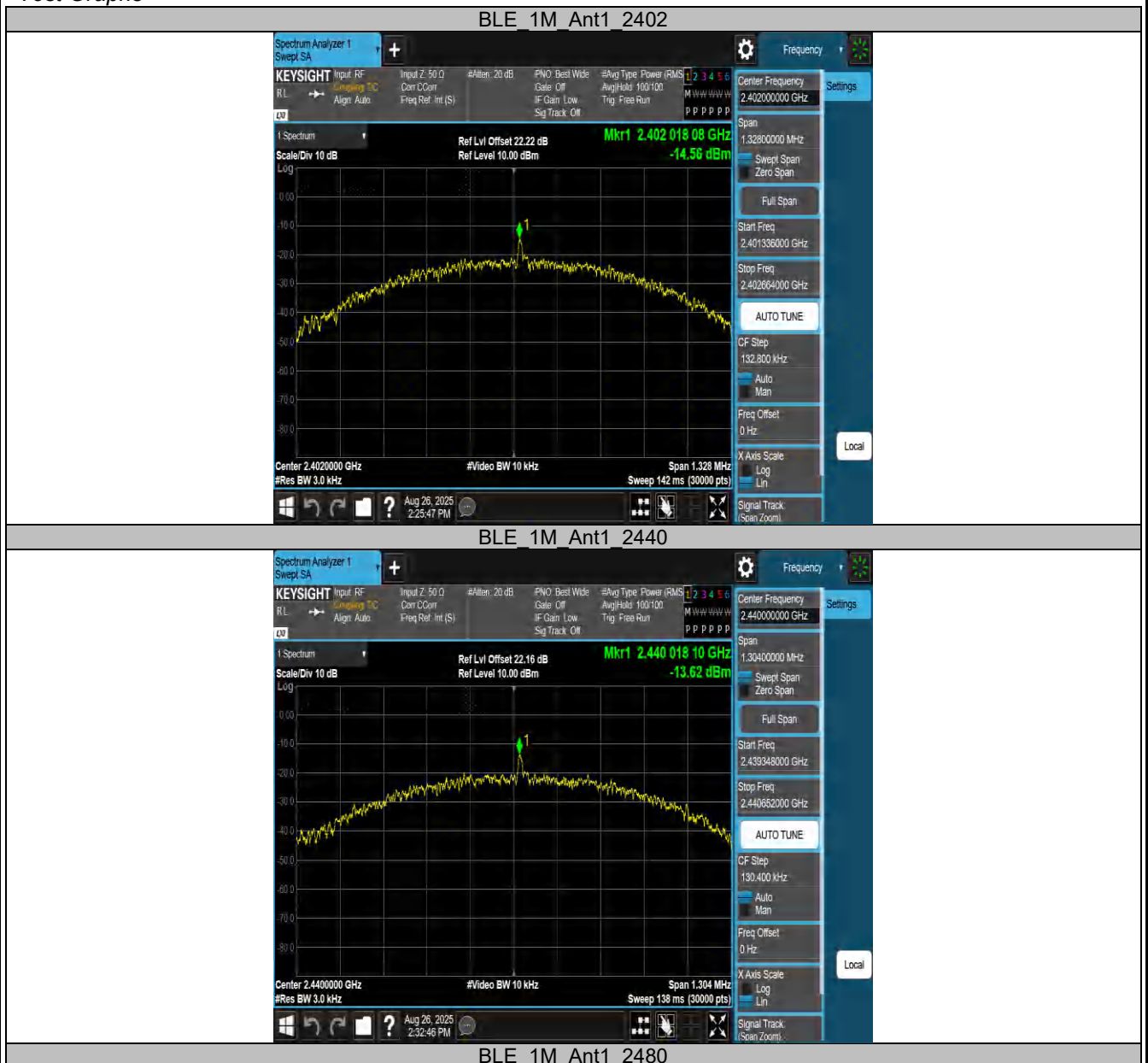


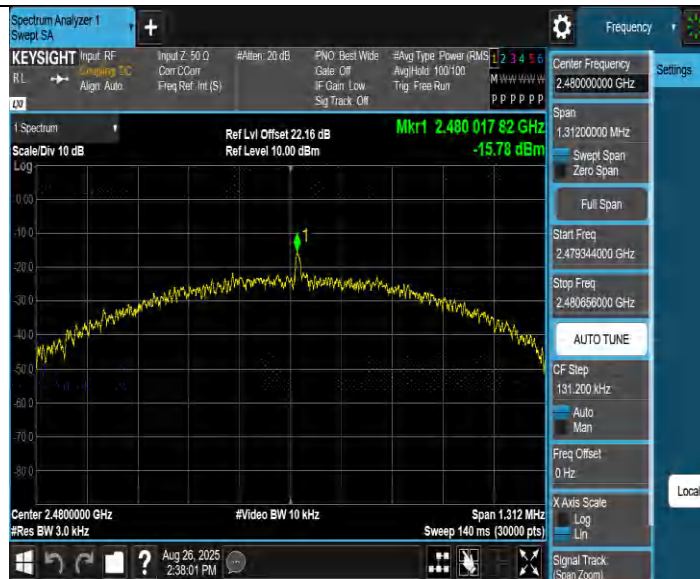
Appendix B.3: Test Results of Conducted Power Spectral Density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.56	≤8.00	PASS
		2440	-13.62	≤8.00	PASS
		2480	-15.78	≤8.00	PASS
BLE_2M	Ant1	2402	-16.18	≤8.00	PASS
		2440	-15.13	≤8.00	PASS
		2480	-17.22	≤8.00	PASS

Test Graphs





BLE 2M Ant1 2402



BLE 2M Ant1 2440



BLE 2M Ant1 2480



Appendix B.4: Test Results of Band Edge Measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-4.78	-39.25	≤-24.78	PASS
		High	2480	-5.42	-41.11	≤-25.42	PASS
BLE_2M	Ant1	Low	2402	-4.79	-37.37	≤-24.79	PASS
		High	2480	-5.95	-39.95	≤-25.95	PASS

Test Graphs





BLE 2M Ant1 High 2480

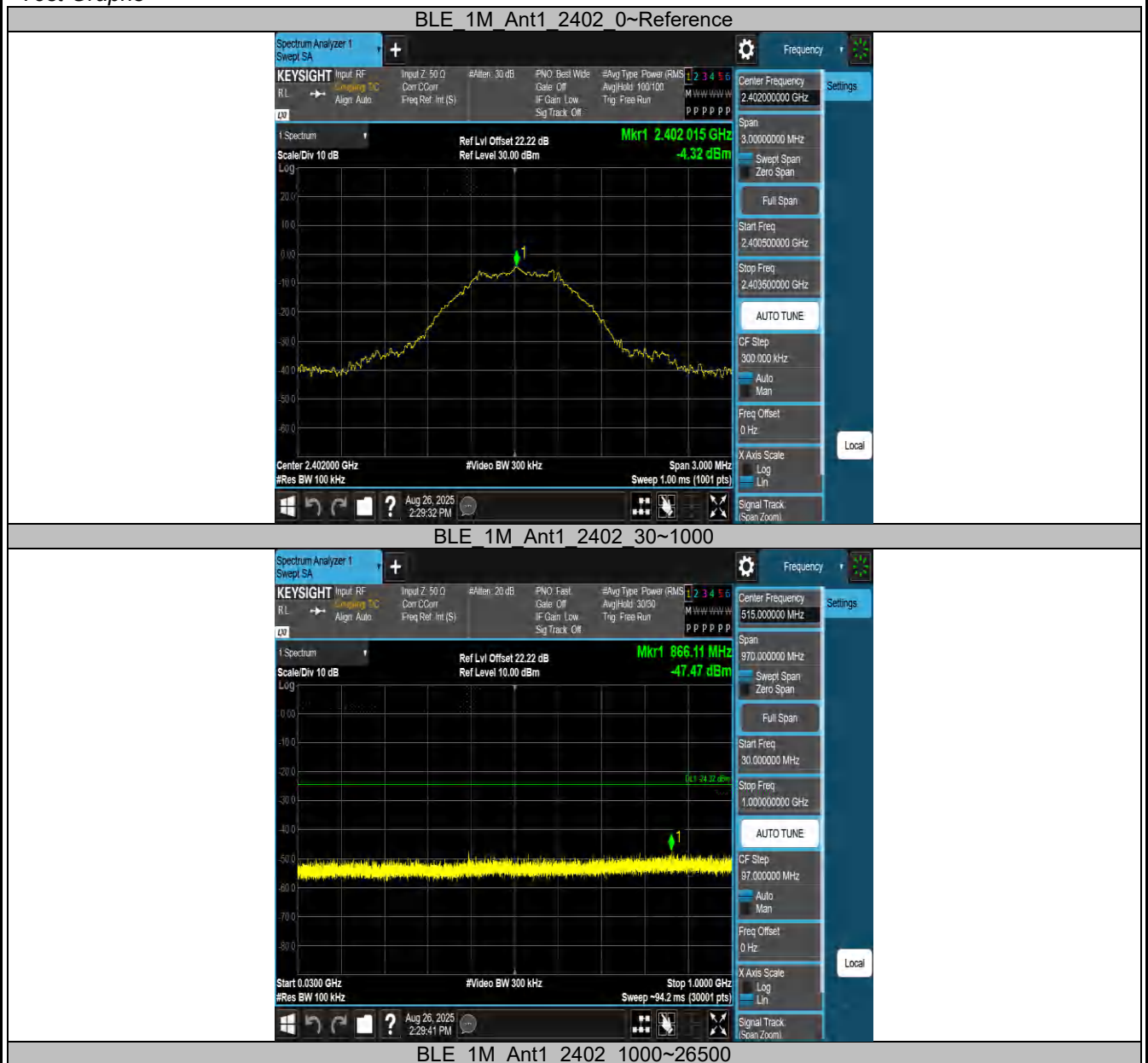


Appendix B.5: Test Results of Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.32	-4.32	---	PASS
			30~1000	-4.32	-47.47	≤-24.32	PASS
			1000~26500	-4.32	-38.25	≤-24.32	PASS
		2440	Reference	-4.86	-4.86	---	PASS
			30~1000	-4.86	-46.14	≤-24.86	PASS
			1000~26500	-4.86	-37.94	≤-24.86	PASS
		2480	Reference	-5.60	-5.60	---	PASS
			30~1000	-5.60	-47.44	≤-25.6	PASS
			1000~26500	-5.60	-38.76	≤-25.6	PASS
BLE_2M	Ant1	2402	Reference	-6.45	-6.45	---	PASS
			30~1000	-6.45	-46.99	≤-26.45	PASS
			1000~26500	-6.45	-39.09	≤-26.45	PASS
		2440	Reference	-4.00	-4.00	---	PASS
			30~1000	-4.00	-47.87	≤-24	PASS
			1000~26500	-4.00	-38.75	≤-24	PASS
		2480	Reference	-6.24	-6.24	---	PASS
			30~1000	-6.24	-47.91	≤-26.24	PASS
			1000~26500	-6.24	-38.43	≤-26.24	PASS

Test Graphs





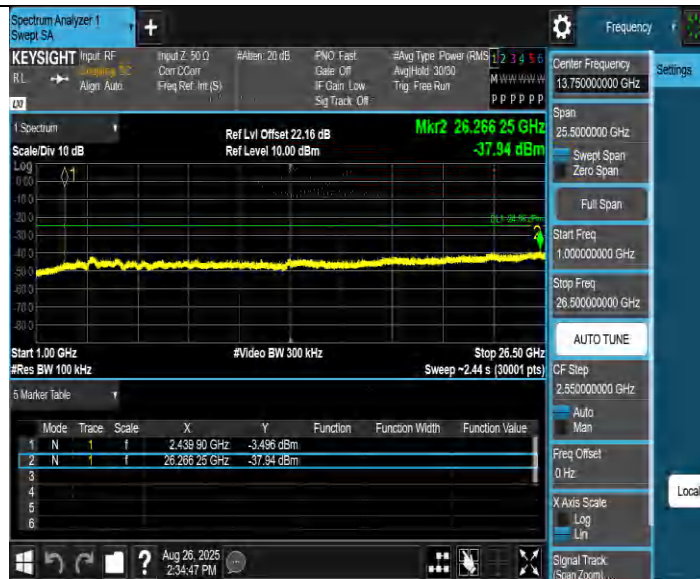
BLE 1M Ant1 2440 0~Reference



BLE 1M Ant1 2440 30~1000



BLE 1M Ant1 2440 1000~26500



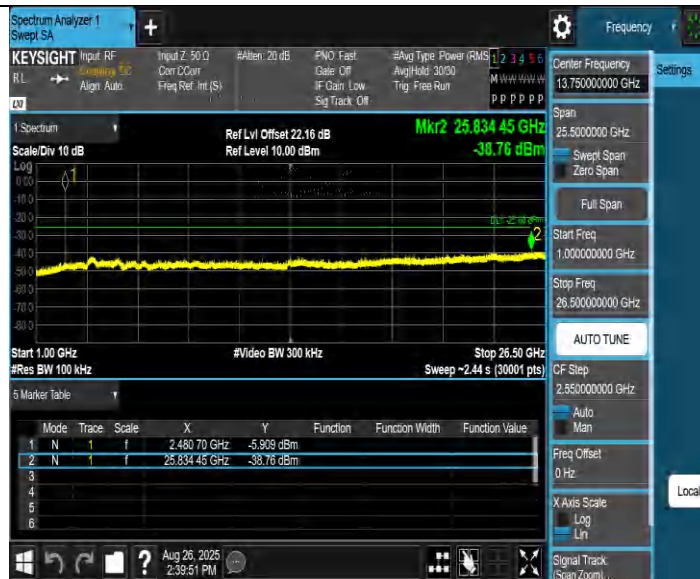
BLE 1M Ant1 2480 0~Reference



BLE 1M Ant1 2480 30~1000



BLE 1M Ant1 2480 1000~26500



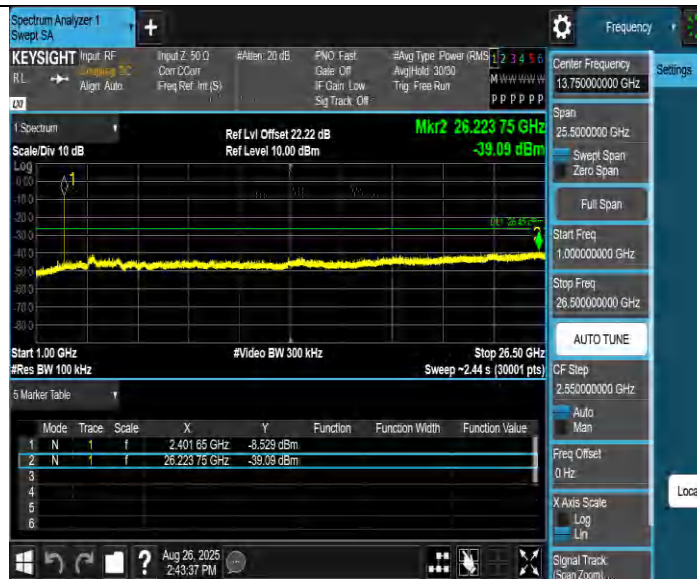
BLE 2M Ant1 2402 0~Reference



BLE 2M Ant1 2402 30~1000



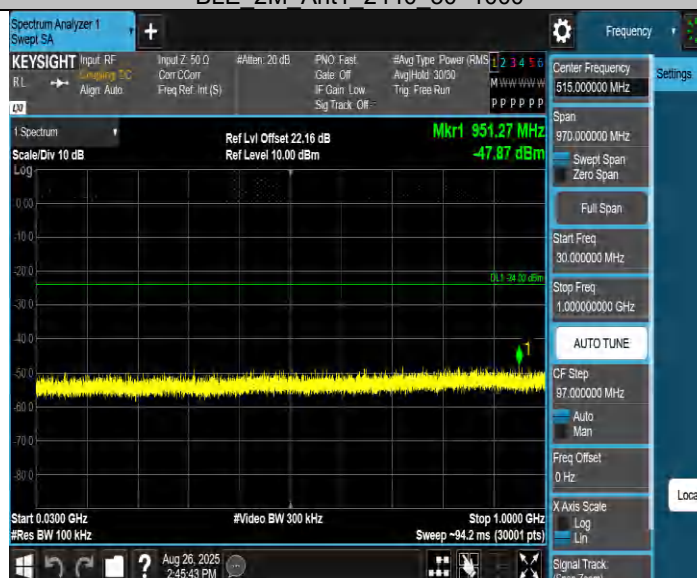
BLE 2M Ant1 2402 1000~26500



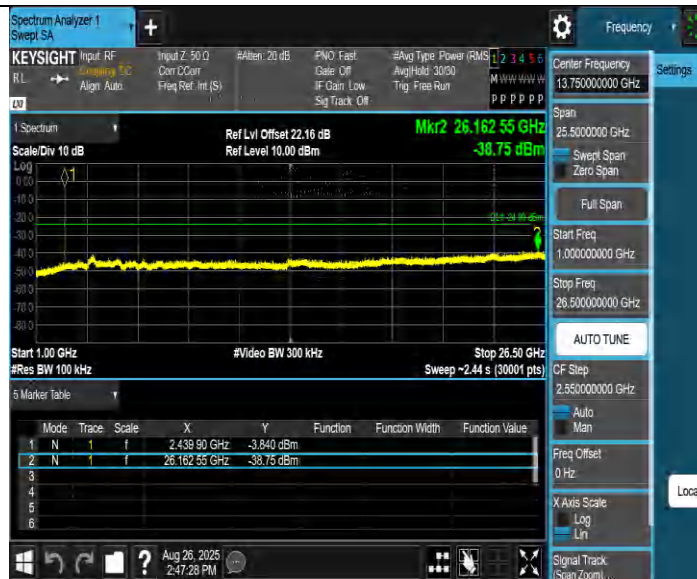
BLE 2M Ant1 2440 0~Reference



BLE 2M Ant1 2440 30~1000



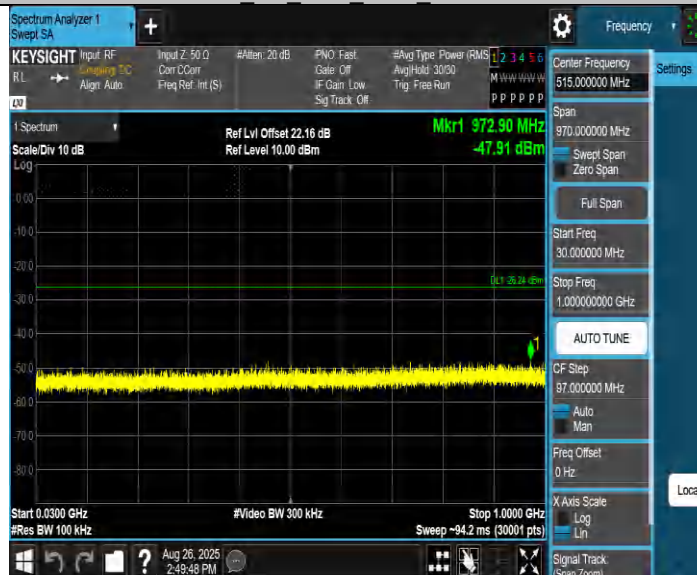
BLE 2M Ant1 2440 1000~26500



BLE 2M Ant1 2480 0~Reference



BLE 2M Ant1 2480 30~1000



BLE 2M Ant1 2480 1000~26500



Appendix B.6: Test Results of Radiated Spurious Emissions

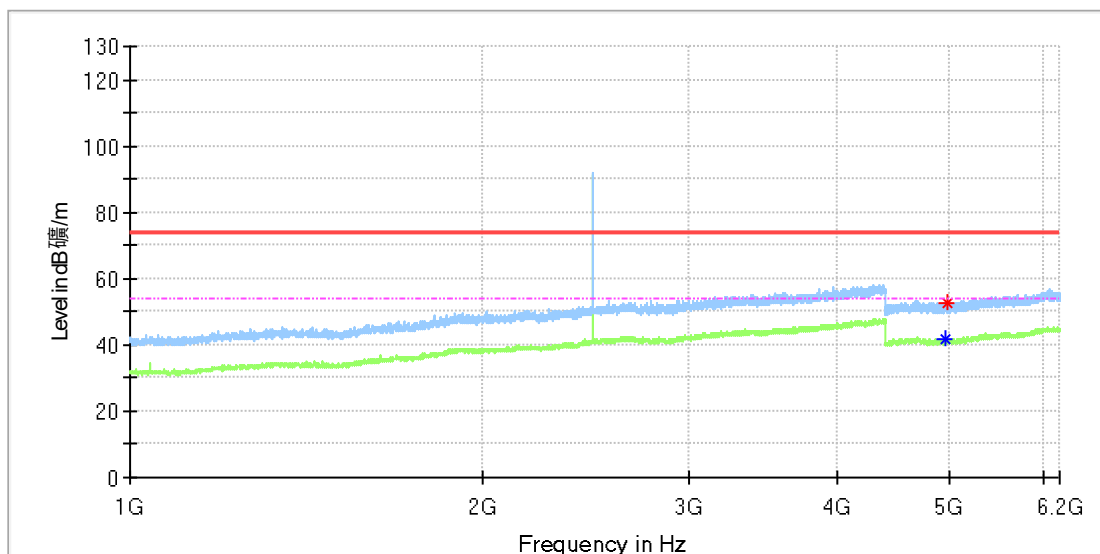
Note:

- 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.

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168563688/A004060471-002
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	---	41.78	54.00	12.22	150.0	H	323.0	13.3
4967.500000	52.51	---	74.00	21.49	150.0	H	265.0	13.3

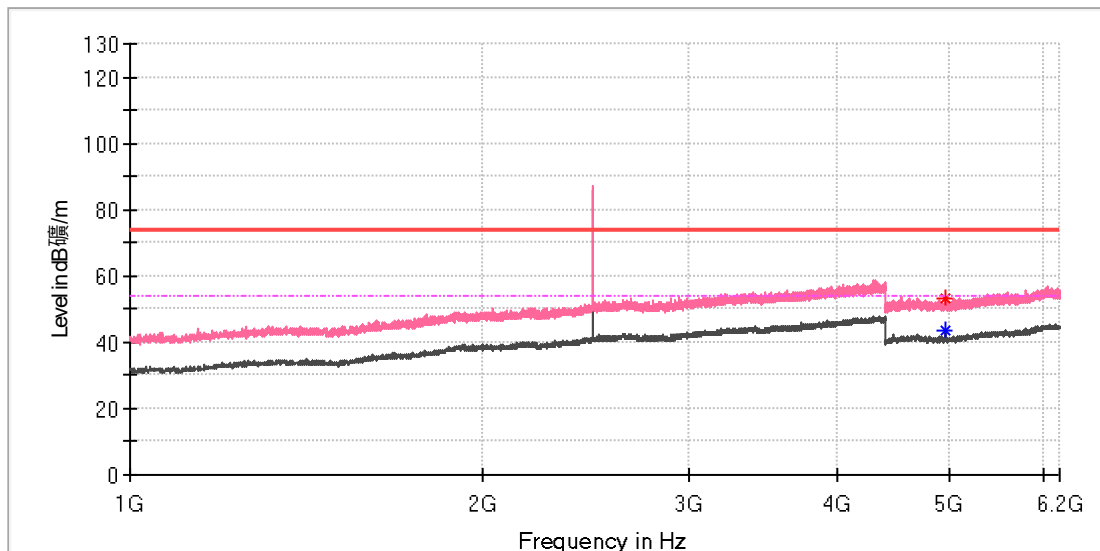
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168563688/A004060471-002
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	52.95	---	74.00	21.05	150.0	V	194.0	13.3
4960.000000	---	43.56	54.00	10.44	150.0	V	168.0	13.3

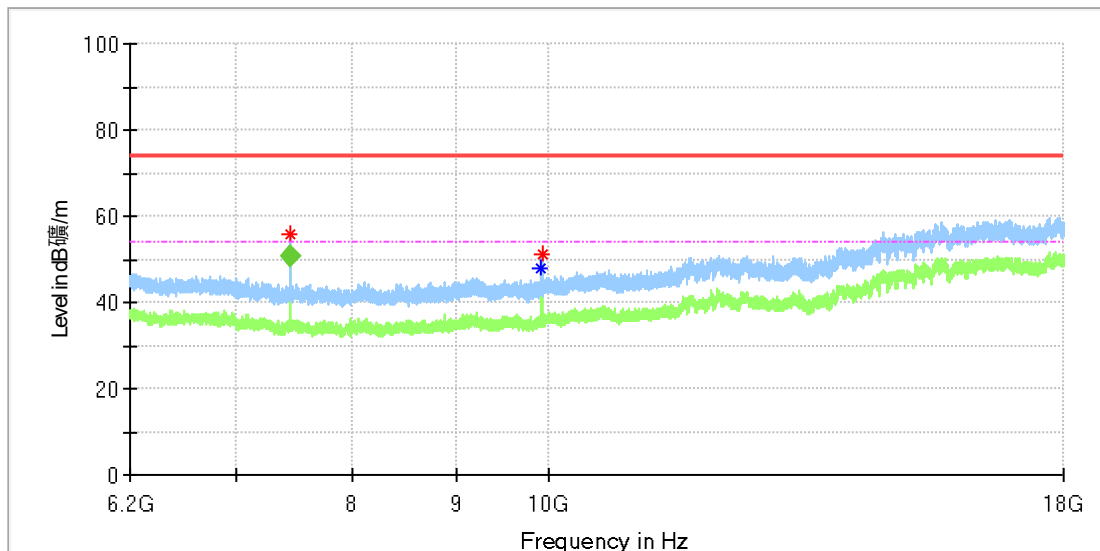
Final Result

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

Test Report

EUT Information

EUT Name: Bluetooth Speaker
Model: TurtleBox
Test Mode: BLE 1M_High channel
Order No/Sample No: 168563688/A004060471-002
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)
7439.983333	55.70	---	74.00	18.30	150.0	H	298.0	8.4
9919.950000	---	47.78	54.00	6.22	150.0	H	298.0	10.8
9920.441667	51.34	---	74.00	22.66	150.0	H	298.0	10.8

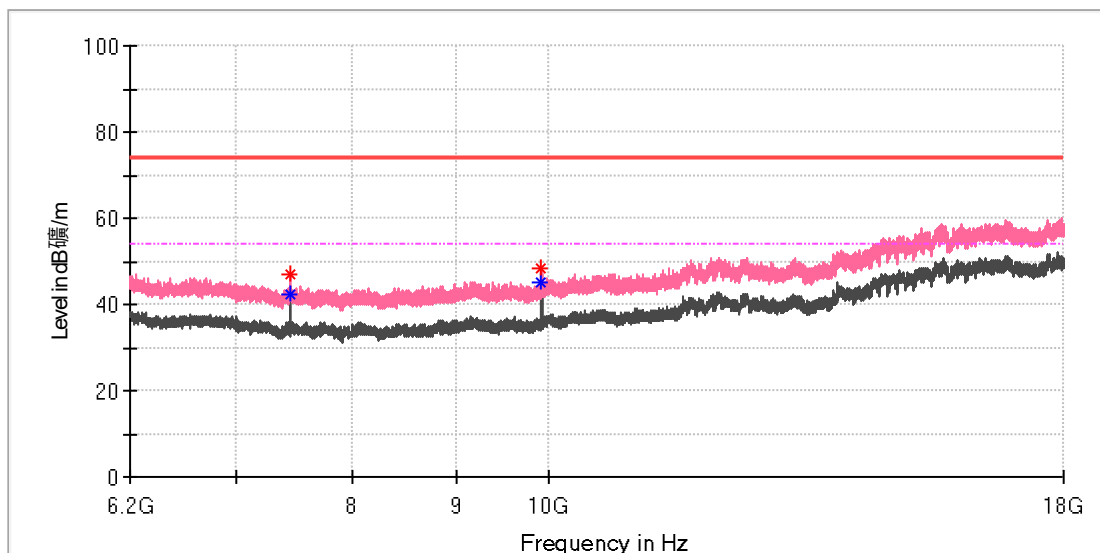
Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7440.181666	---	50.73	54.00	3.27	150.0	H	298.0	8.4

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168563688/A004060471-002
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)
7439.491667	---	42.24	54.00	11.76	150.0	V	185.0	8.4
7440.475000	46.94	---	74.00	27.06	150.0	V	185.0	8.4
9919.950000	48.18	---	74.00	25.82	150.0	V	134.0	10.8
9919.950000	---	45.22	54.00	8.78	150.0	V	134.0	10.8

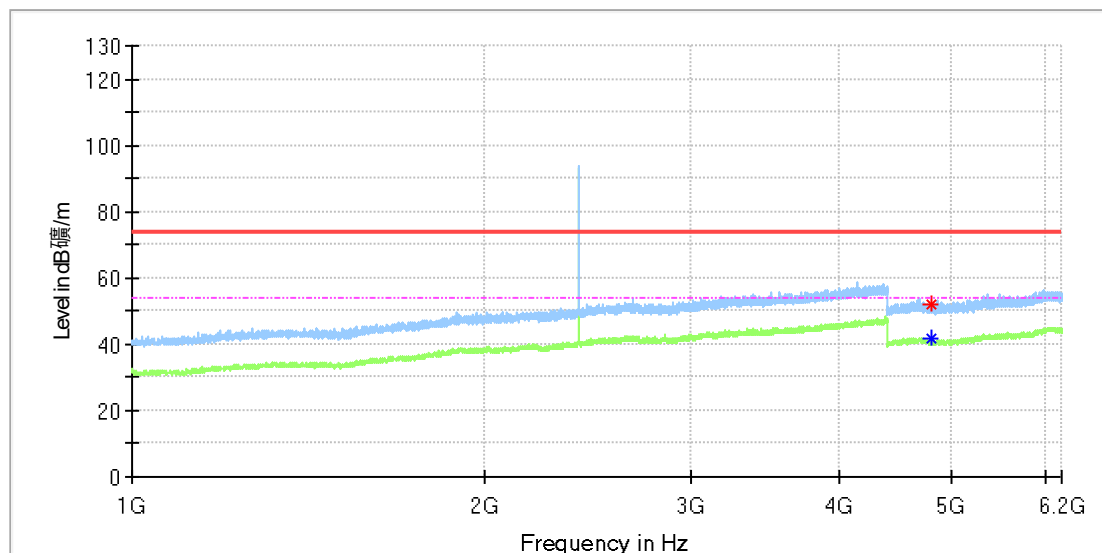
Final_Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
4803.500000	---	41.88	54.00	12.12	150.0	H	170.0	13.3
4804.000000	52.18	---	74.00	21.82	150.0	H	333.0	13.3

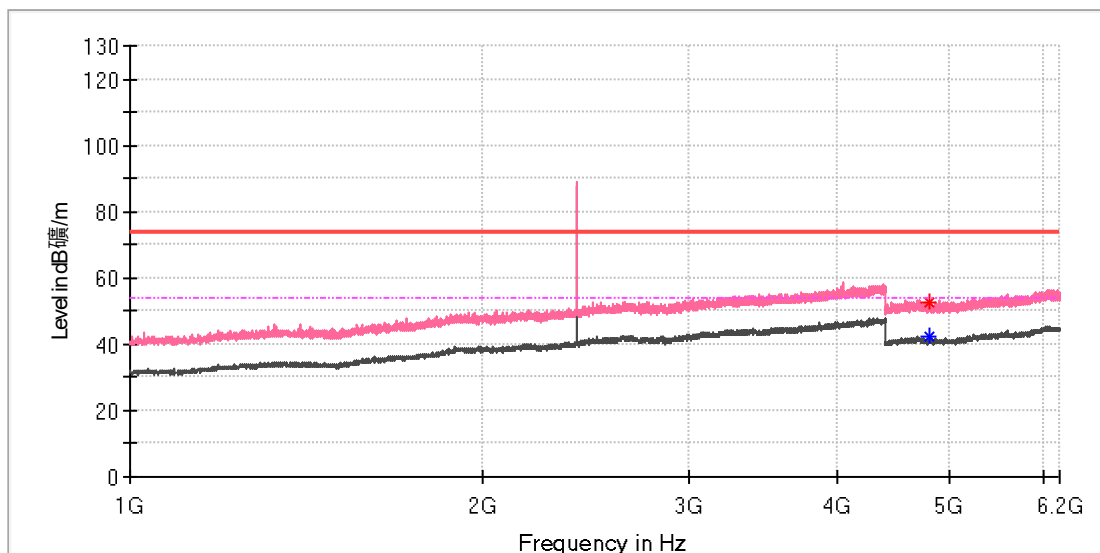
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
4804.000000	52.65	---	74.00	21.35	150.0	V	145.0	13.3
4804.000000	---	42.08	54.00	11.92	150.0	V	145.0	13.3

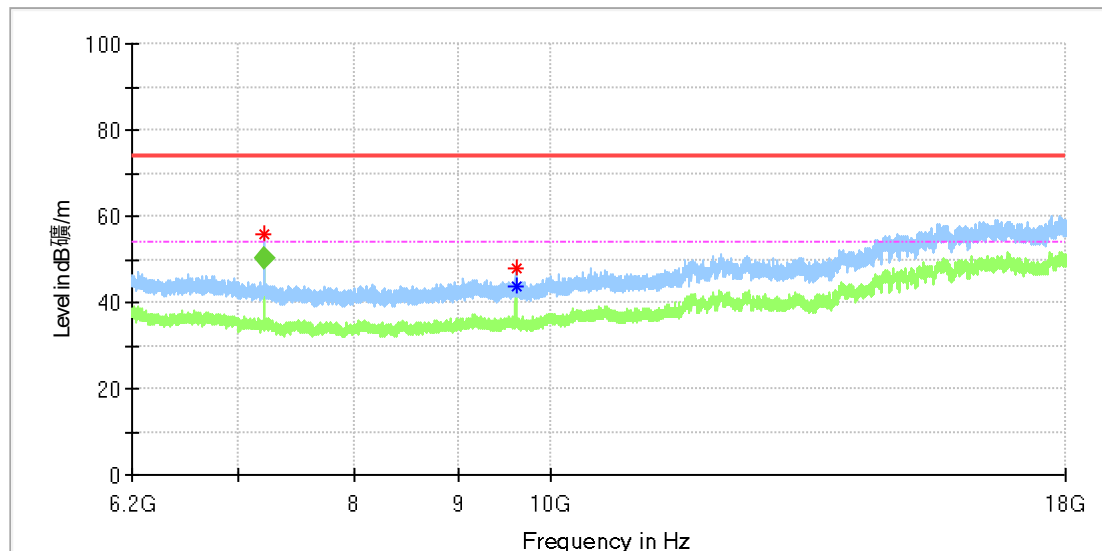
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
7206.441667	55.76	---	74.00	18.24	150.0	H	317.0	8.8
9607.741667	48.08	---	74.00	25.92	150.0	H	309.0	10.4
9607.741667	---	43.88	54.00	10.12	150.0	H	309.0	10.4

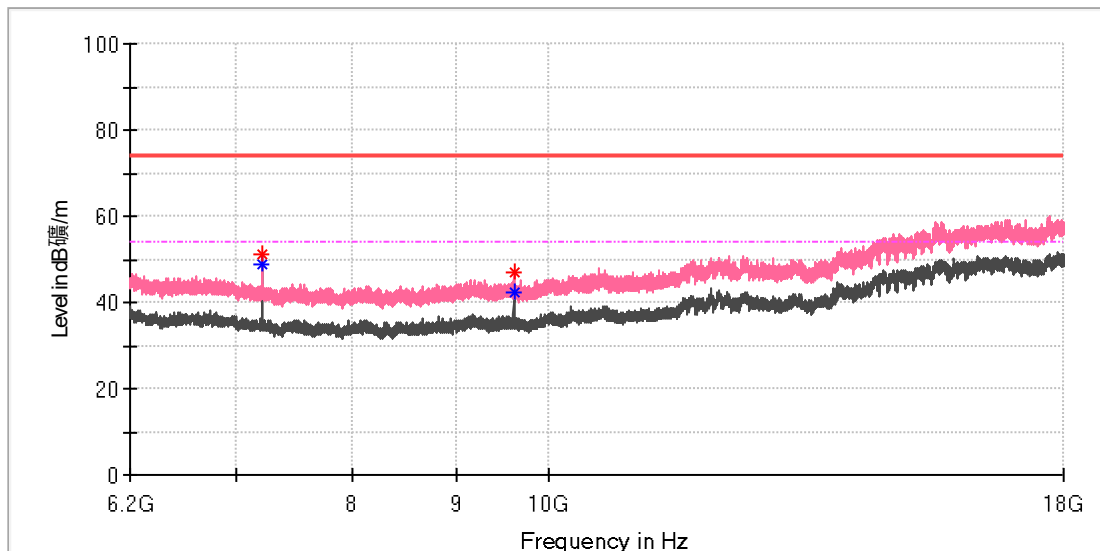
Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7206.217500	---	50.34	54.00	3.66	150.0	H	317.0	8.8

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
7205.458333	51.21	---	74.00	22.79	150.0	V	201.0	8.8
7205.950000	---	49.02	54.00	4.98	150.0	V	172.0	8.8
9608.233333	46.90	---	74.00	27.10	150.0	V	138.0	10.4
9608.233333	---	42.12	54.00	11.88	150.0	V	138.0	10.4

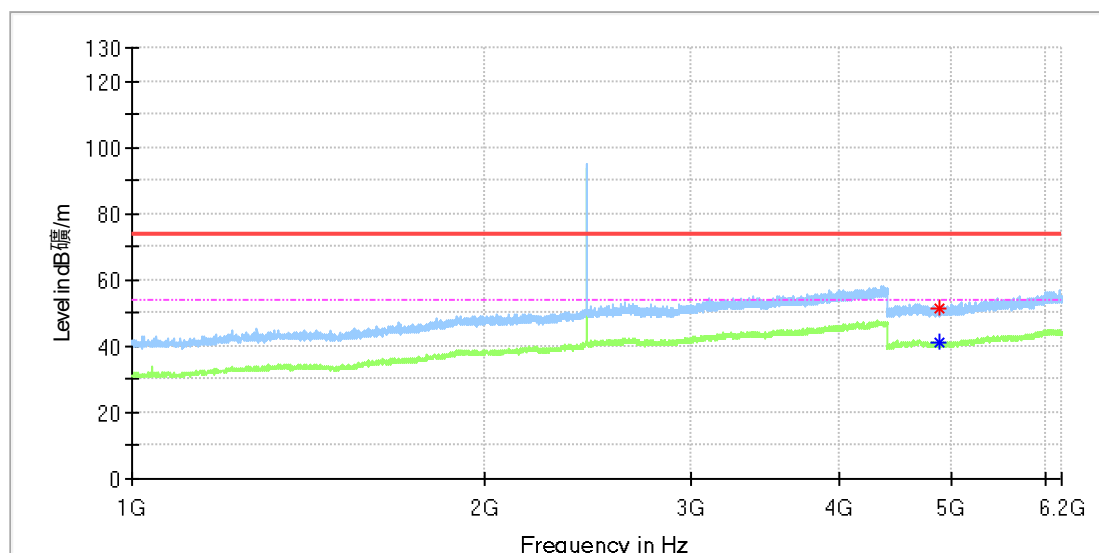
Final_Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168563688/A004060471-002
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)
4880.500000	51.38	---	74.00	22.62	150.0	H	308.0	13.3
4880.500000	---	41.10	54.00	12.90	150.0	H	308.0	13.3

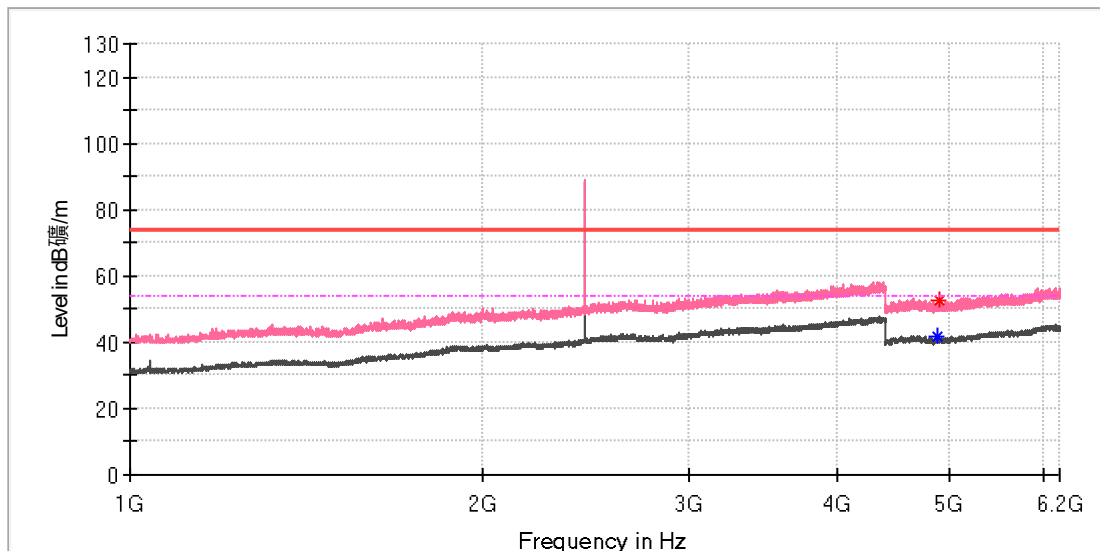
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168563688/A004060471-002
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	---	41.92	54.00	12.08	150.0	V	185.0	13.3
4896.000000	52.46	---	74.00	21.54	150.0	V	230.0	13.3

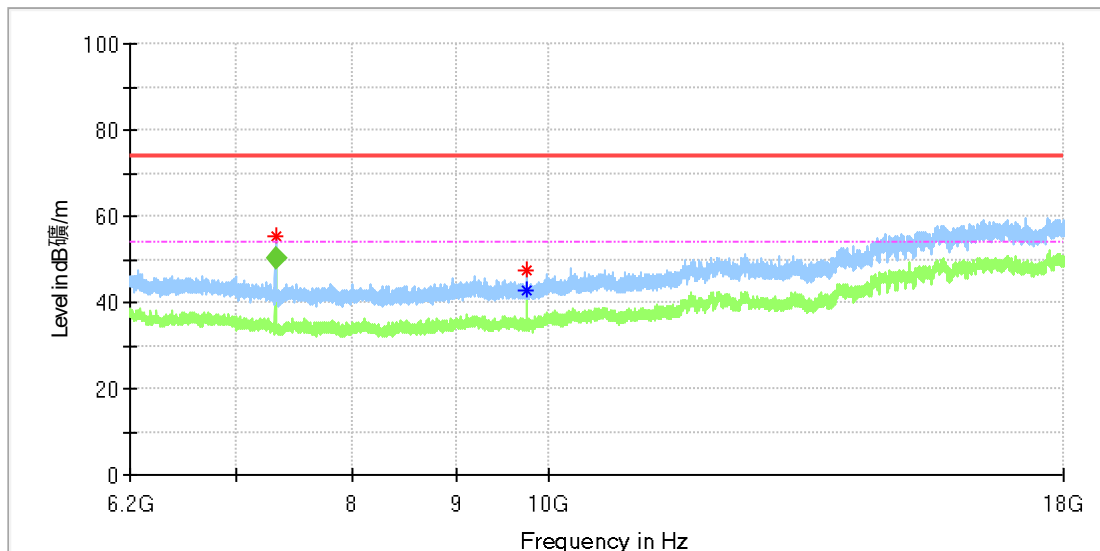
Final Result

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

Test Report

EUT Information

EUT Name: Bluetooth Speaker
Model: TurtleBox
Test Mode: BLE 1M_Mid channel
Order No/Sample No: 168563688/A004060471-002
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)
7319.525000	55.42	---	74.00	18.58	150.0	H	293.0	8.2
9760.158333	47.42	---	74.00	26.58	150.0	H	318.0	10.4
9760.158333	---	42.80	54.00	11.20	150.0	H	318.0	10.4

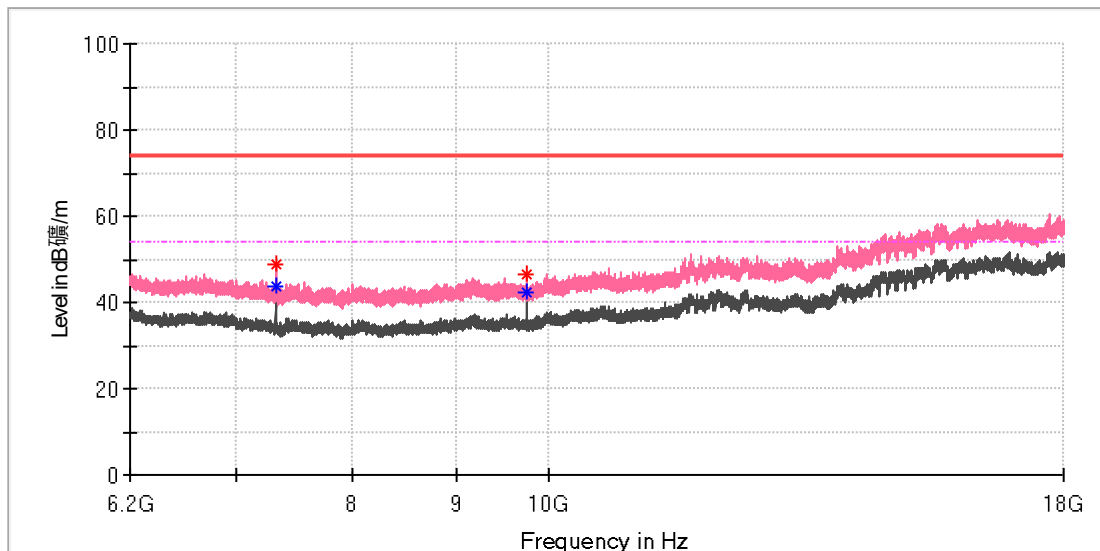
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7319.995000	---	50.30	54.00	3.70	150.0	H	293.0	8.2

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168563688/A004060471-002
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)
7320.016667	---	43.56	54.00	10.44	150.0	V	197.0	8.2
7320.508333	48.96	---	74.00	25.04	150.0	V	189.0	8.2
9759.666667	46.47	---	74.00	27.53	150.0	V	162.0	10.4
9760.158333	---	42.14	54.00	11.86	150.0	V	162.0	10.4

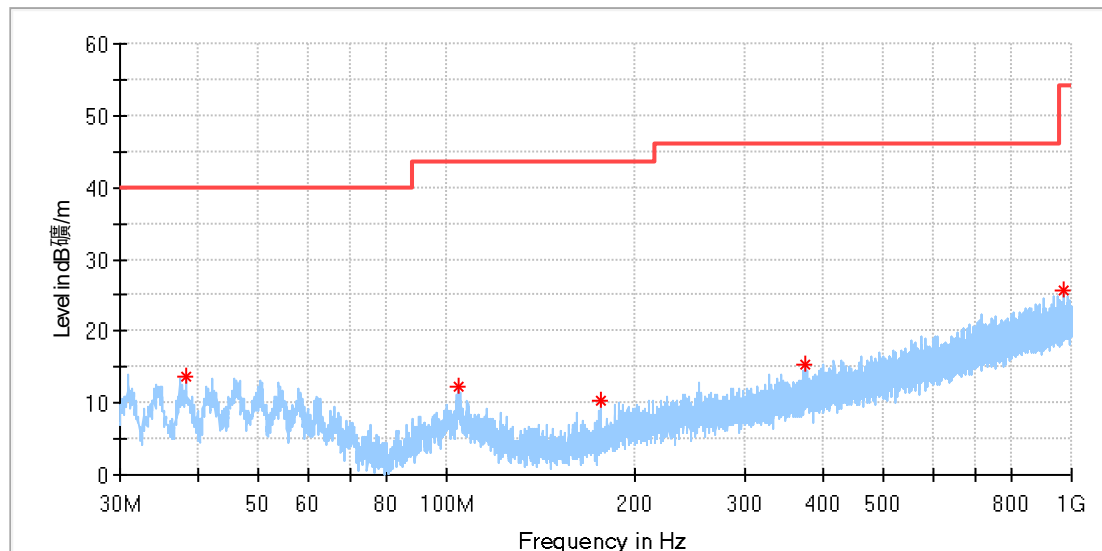
Final_Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168563688/A004060471-002
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)
38.282308	13.78	40.00	26.22	100.0	H	12.0	-20.7
104.690000	12.40	43.50	31.10	100.0	H	206.0	-18.9
176.134231	10.44	43.50	33.06	100.0	H	225.0	-20.9
375.655769	15.25	46.00	30.75	100.0	H	51.0	-14.3
967.840769	25.67	54.00	28.33	100.0	H	165.0	-4.0

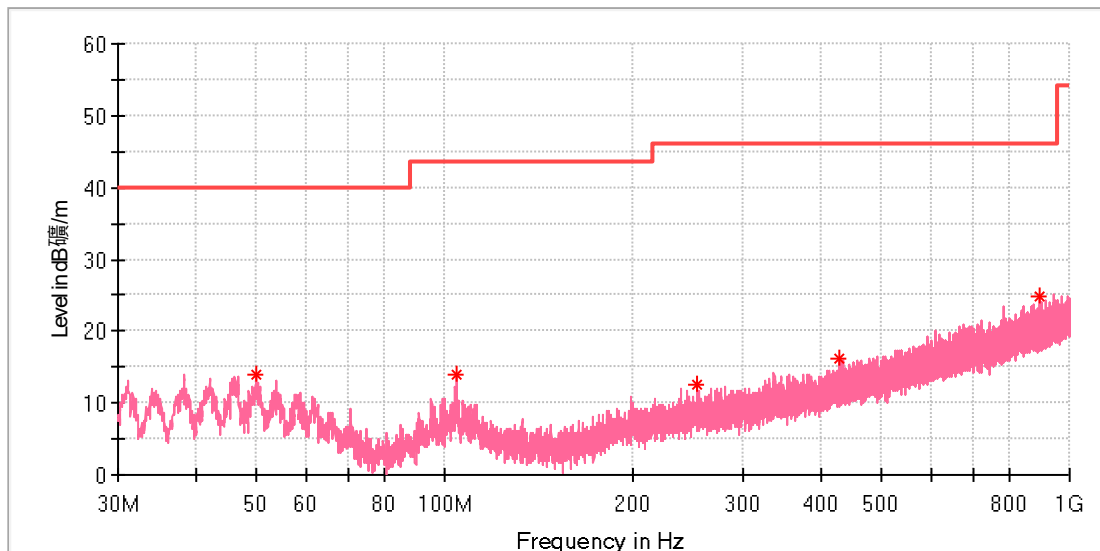
Final_Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Mid channel
Order No/Sample No:	168563688/A004060471-002
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)
49.922308	14.07	40.00	25.93	100.0	V	94.0	-18.4
104.615385	14.03	43.50	29.47	100.0	V	175.0	-18.9
253.398462	12.50	46.00	33.50	100.0	V	348.0	-17.3
426.991154	16.18	46.00	29.82	100.0	V	309.0	-13.1
897.702308	24.96	46.00	21.04	100.0	V	225.0	-4.8

Final Result

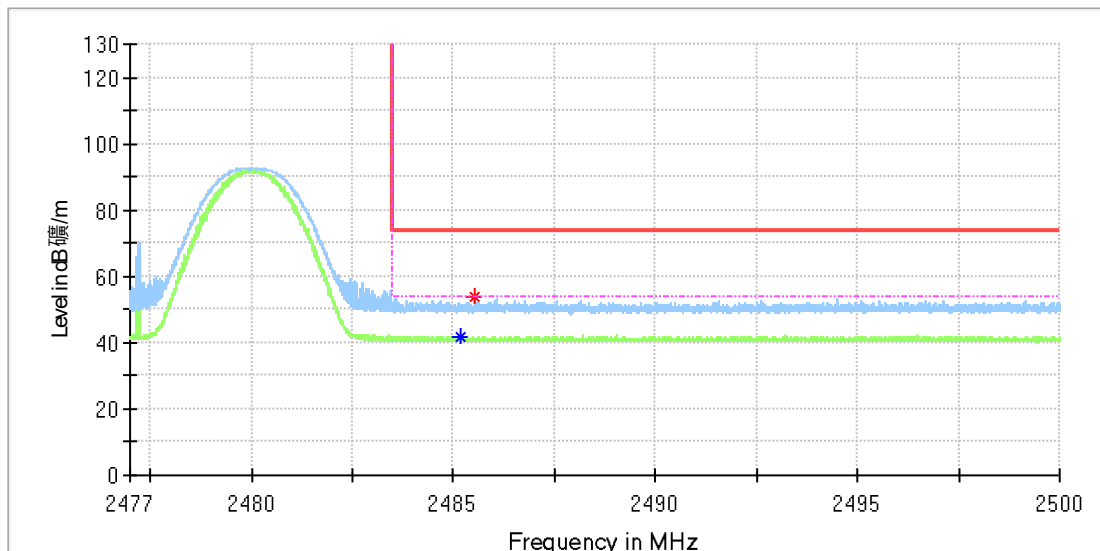
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Appendix B.7: Test Results of Radiated Emissions in Restricted Bands

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168563688/A004060471-002
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)
2485.198824	---	41.83	54.00	12.17	150.0	H	354.0	9.0
2485.516765	53.81	---	74.00	20.19	150.0	H	359.0	9.0

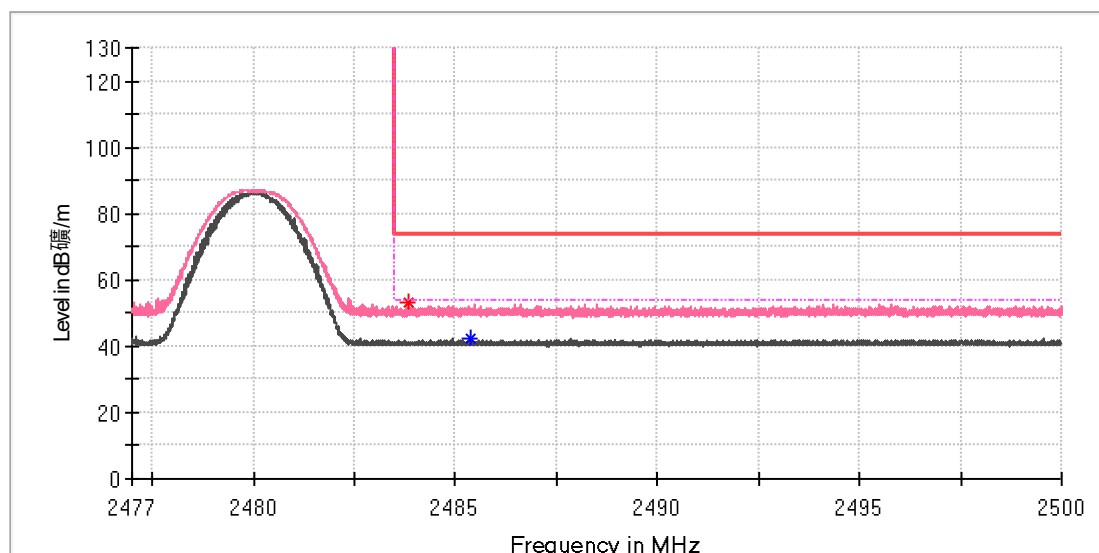
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_High channel
Order No/Sample No:	168563688/A004060471-002
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)
2483.818824	53.15	---	74.00	20.85	150.0	V	9.0	9.0
2485.401765	---	42.23	54.00	11.77	150.0	V	199.0	9.0

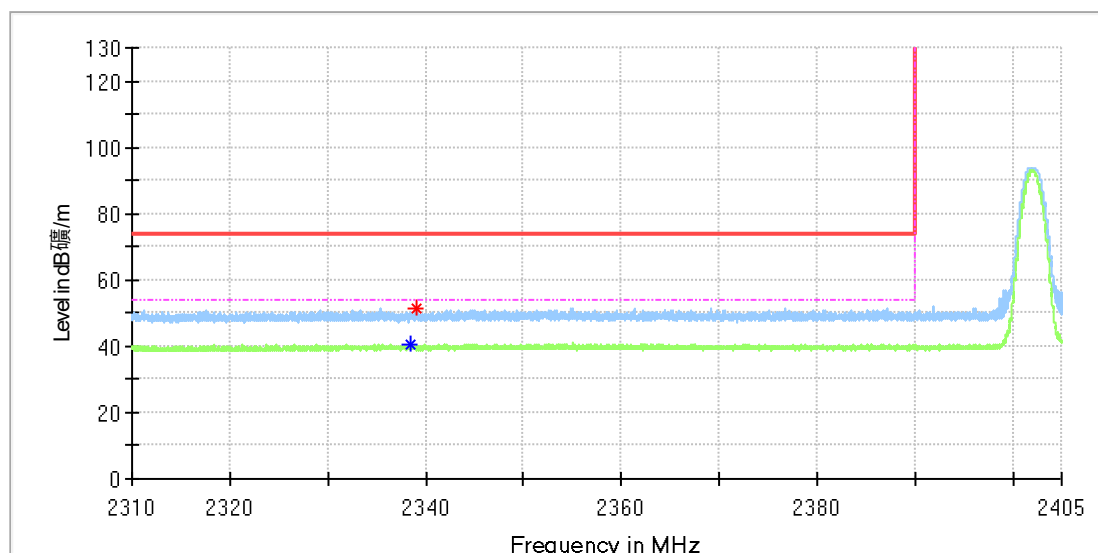
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
2338.500000	---	40.29	54.00	13.71	150.0	H	308.0	8.4
2339.128677	51.50	---	74.00	22.50	150.0	H	209.0	8.4

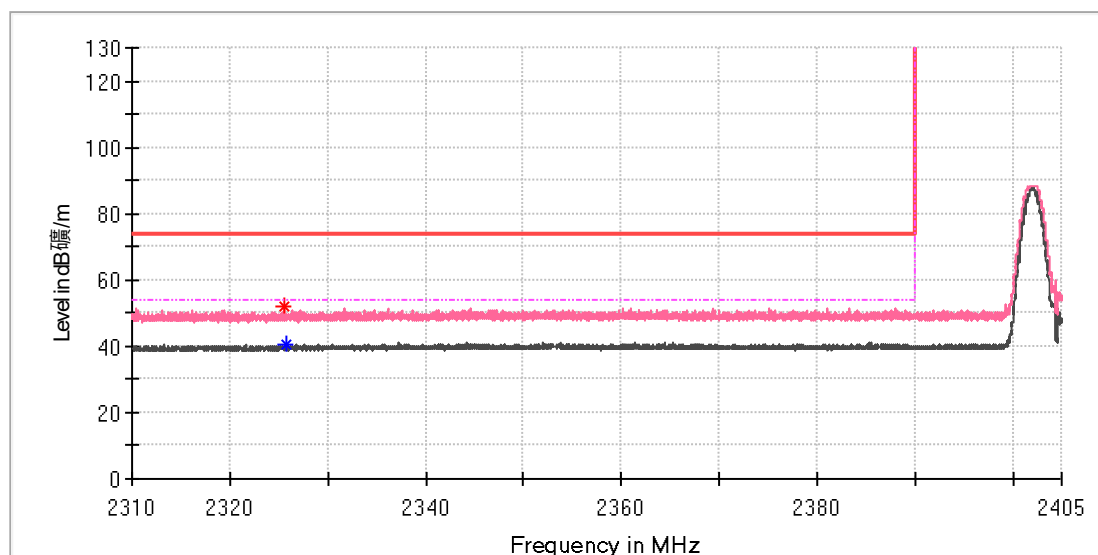
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 1M_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
2325.563235	52.21	---	74.00	21.79	150.0	V	88.0	8.3
2325.758824	---	40.21	54.00	13.79	150.0	V	115.0	8.3

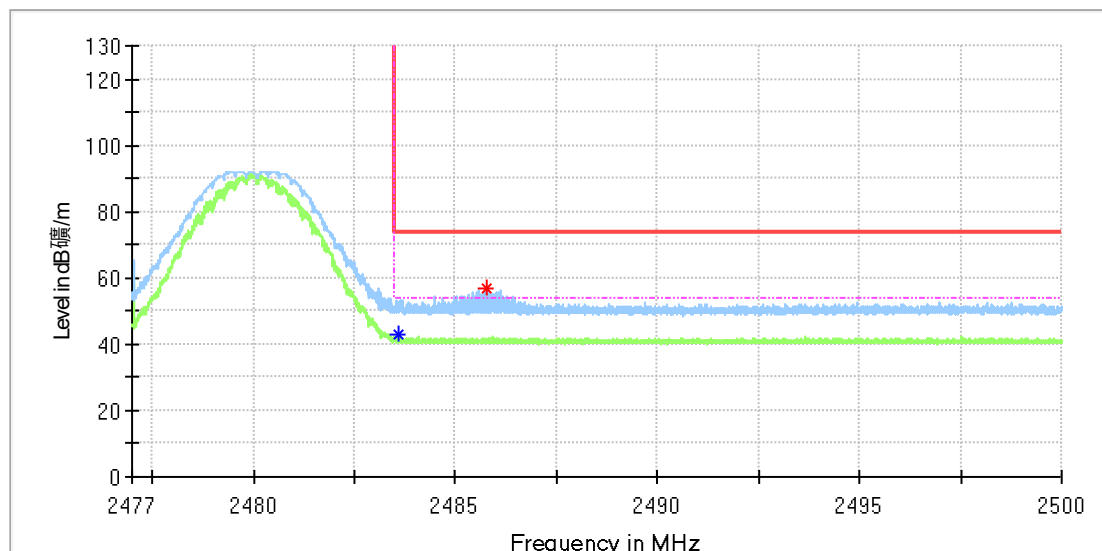
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 2M_High channel
Order No/Sample No:	168563688/A004060471-002
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)
2483.602353	---	42.70	54.00	11.30	150.0	H	147.0	9.0
2485.797500	56.80	---	74.00	17.20	150.0	H	0.0	9.0

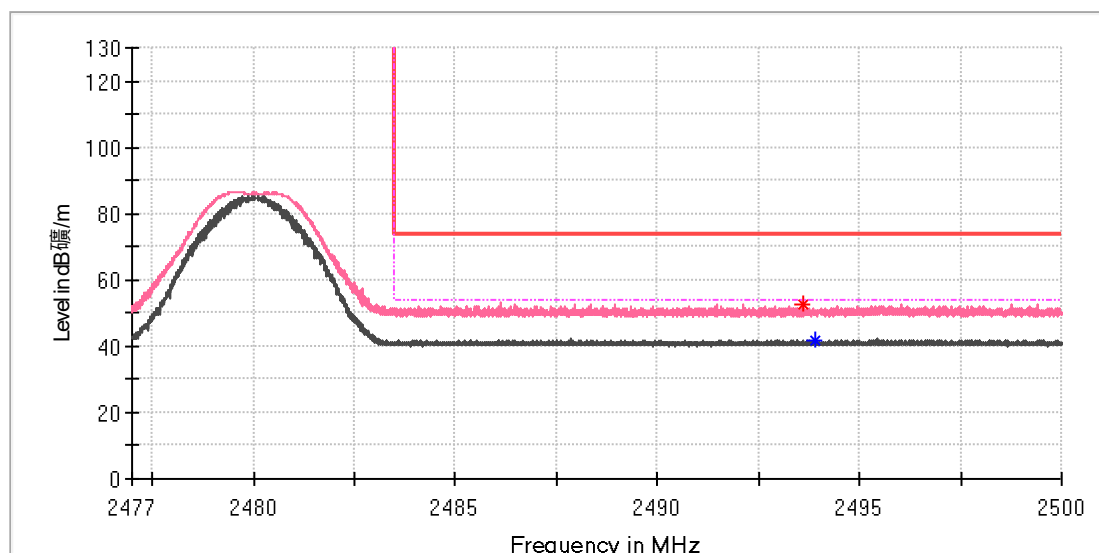
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 2M_High channel
Order No/Sample No:	168563688/A004060471-002
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)
2493.597206	52.82	---	74.00	21.18	150.0	V	28.0	9.0
2493.918529	---	41.67	54.00	12.33	150.0	V	95.0	9.0

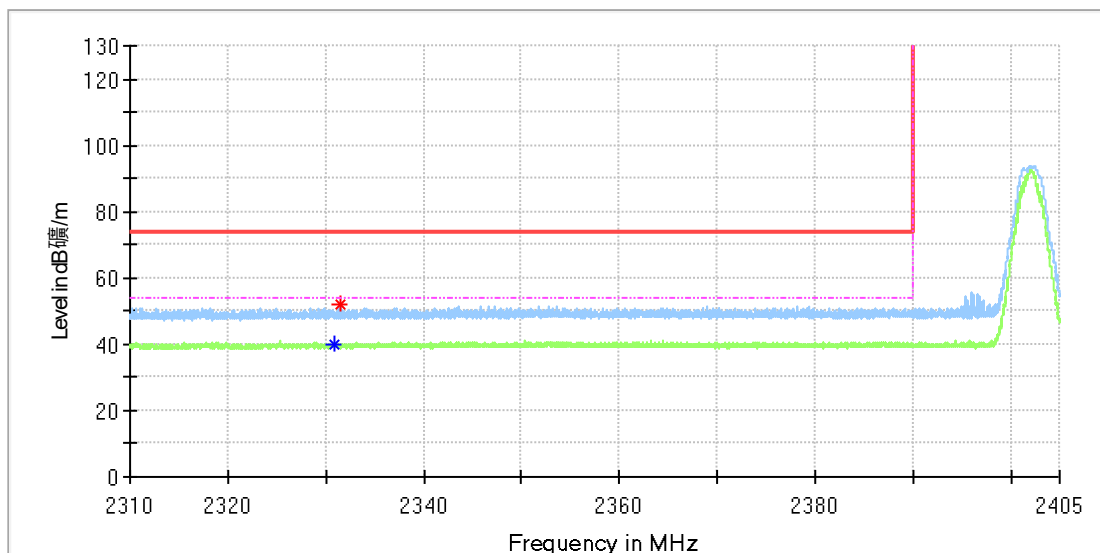
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 2M_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
2330.969853	---	39.97	54.00	14.03	150.0	H	331.0	8.3
2331.556618	51.73	---	74.00	22.27	150.0	H	207.0	8.3

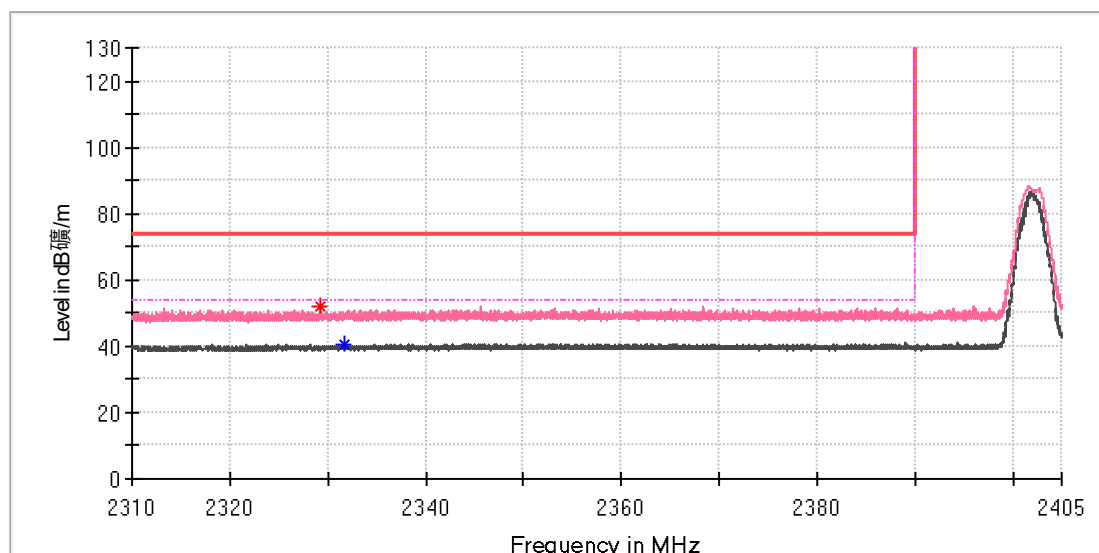
Final Result

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

Test Report

EUT Information

EUT Name:	Bluetooth Speaker
Model:	TurtleBox
Test Mode:	BLE 2M_Low channel
Order No/Sample No:	168563688/A004060471-002
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)
2329.265441	52.19	---	74.00	21.82	150.0	V	0.0	8.3
2331.640441	---	40.64	54.00	13.36	150.0	V	247.0	8.3

Final Result

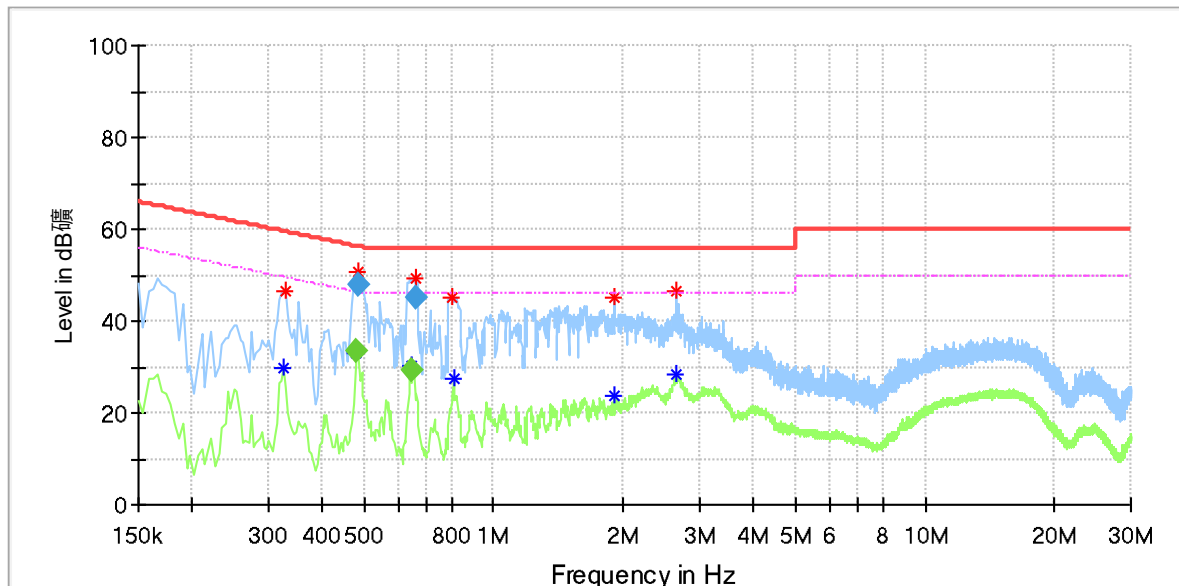
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Appendix B.8: Test Results of Conducted Emission on AC Mains

Test Report

EUT Information

EUT Name: Bluetooth Speaker
Order Number: 168563688 102
Model: TurtleBox
Test Mode: USB charging+BT Playing
Test Voltage: AC 120V/60Hz
Test Standard: FCC Part 15
Test By./Review By: Soloman Wu / Murphy Chen
Tem./Hum./Pressure: 24.3°C/51.0%/101kPa
Remark: SR2



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.33	---	29.93	49.55	19.62	L1	10.25
0.33	46.64	---	59.45	12.82	L1	10.25
0.48	---	33.07	46.31	13.23	L1	10.26
0.48	50.74	---	56.31	5.56	L1	10.26
0.65	---	30.43	46.00	15.57	L1	10.27
0.66	49.27	---	56.00	6.73	L1	10.27
0.80	45.05	---	56.00	10.95	L1	10.28
0.81	---	27.27	46.00	18.73	L1	10.28
1.91	---	23.64	46.00	22.36	L1	10.31
1.91	44.96	---	56.00	11.04	L1	10.31
2.66	---	28.57	46.00	17.43	L1	10.33
2.66	46.28	---	56.00	9.72	L1	10.33

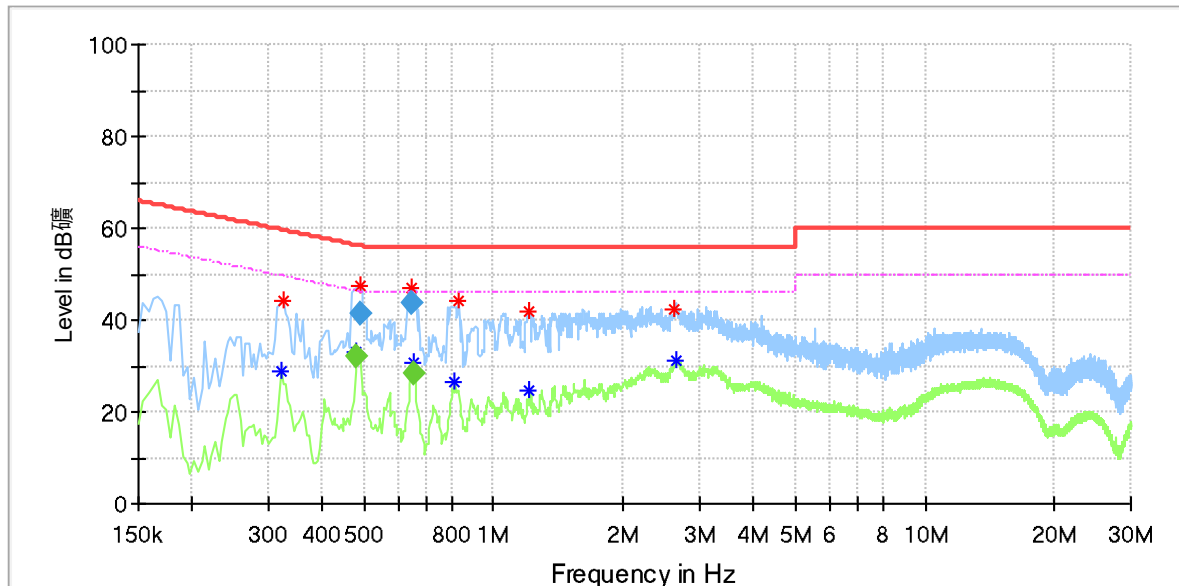
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.48	---	33.54	46.33	12.79	1000.00	9.00	L1	10.26
0.48	48.01	---	56.26	8.26	1000.00	9.00	L1	10.26
0.65	---	29.39	46.00	16.61	1000.00	9.00	L1	10.27
0.66	45.31	---	56.00	10.69	1000.00	9.00	L1	10.27

Test Report

EUT Information

EUT Name: Bluetooth Speaker
Order Number: 168563688 102
Model: TurtleBox
Test Mode: USB charging+BT Playing
Test Voltage: AC 120V/60Hz
Test Standard: FCC Part 15
Test By:/Review By: Soloman Wu / Murphy Chen
Tem./Hum./Pressure: 24.3°C/51.0%/101kPa
Remark: SR2



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.32	---	28.99	49.66	20.67	N	10.26
0.33	44.09	---	59.55	15.47	N	10.26
0.48	---	32.84	46.31	13.47	N	10.27
0.49	47.60	---	56.17	8.57	N	10.27
0.65	46.80	---	56.00	9.20	N	10.28
0.65	---	30.60	46.00	15.40	N	10.28
0.81	---	26.44	46.00	19.56	N	10.29
0.83	44.28	---	56.00	11.72	N	10.29
1.21	41.63	---	56.00	14.37	N	10.29
1.21	---	24.50	46.00	21.50	N	10.29
2.63	42.35	---	56.00	13.65	N	10.32
2.66	---	31.20	46.00	14.80	N	10.33

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.48	---	32.29	46.33	14.04	1000.00	9.00	N	10.27
0.49	41.18	---	56.00	14.82	1000.00	9.00	N	10.27
0.65	43.93	---	56.00	12.07	1000.00	9.00	N	10.28
0.65	---	28.36	46.00	17.64	1000.00	9.00	N	10.28