

Prüfbericht-Nr.: Test report no.:	CN25ERIH 001	Auftrags-Nr.: Order no.:	168542112	Page 1 of 25 Seite 1 von 25
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2025-04-11	
Auftraggeber: Client:	Harman International Industries, Inc 8500 Balboa Blvd, Northridge, California, 91329, United States			
Prüfgegenstand: Test item:	Wireless Soundbar			
Bezeichnung / Typ-Nr.: Identification / Type no.:	CINEMA SB595 (Trademark: JBL)			
Auftrags-Inhalt: Order content:	Type test			
Prüfgrundlage: Test specification:	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 RSS-247 Issue 3 August 2023 RSS-Gen Issue 5 February 2021			
Wareneingangsdatum: Date of sample receipt:	2025-03-20	Refer to photos document		
Prüfmuster-Nr.: Test sample no.:	A003943146			
Prüfzeitraum: Testing period:	2025-05-29 – 2025-06-09			
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: Harry W. C. Wu		genehmigt von: authorized by:	 Signed by: Alex Lan
Datum: Date:	2025-06-25		Ausstellungsdatum: Issue date:	2025-06-25
Stellung / Position:	Project Manager		Stellung / Position:	Authorizer
Sonstiges / Other:	FCC ID: APISB595 IC: 6132A-SB595 HVIN: CINEMA SB595			
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				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Page 2 of 25
Seite 2 von 25

Remarks
Anmerkungen

1	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>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben.</i> <i>Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</i>
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3	Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report. <i>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>
4	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 115:2021, 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>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 115:2021, 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>

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 3 von 25
Page 3 of 25

Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM CONDUCTED OUTPUT POWER

RESULT: Pass

5.1.3 99% BANDWIDTH

RESULT: Pass

5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHz BANDWIDTH

RESULT: Pass

5.1.5 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.6 20dB BANDWIDTH

RESULT: Pass

5.1.7 CARRIER FREQUENCY SEPARATION

RESULT: Pass

5.1.8 FREQUENCY STABILITY

RESULT: Pass

5.1.9 NUMBER OF HOPPING FREQUENCY

RESULT: Pass

5.1.10 TIME OF OCCUPANCY

RESULT: Pass

5.1.11 CONDUCTED EMISSION ON AC MAINS

RESULT: Pass

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 4 von 25
Page 4 of 25

Contents

1	GENERAL REMARKS	5
1.1	COMPLEMENTARY MATERIALS	5
2	TEST SITES	5
2.1	TEST FACILITIES	5
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS.....	6
2.3	TRACEABILITY	7
2.4	CALIBRATION	7
2.5	MEASUREMENT UNCERTAINTY.....	7
2.6	LOCATION OF ORIGINAL DATA.....	7
2.7	STATUS OF FACILITY USED FOR TESTING.....	7
3	GENERAL PRODUCT INFORMATION	8
3.1	PRODUCT FUNCTION AND INTENDED USE.....	8
3.2	RATINGS AND SYSTEM DETAILS	8
3.3	INDEPENDENT OPERATION MODES	10
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS.....	10
3.5	SUBMITTED DOCUMENTS.....	10
4	TEST SET-UP AND OPERATION MODES	11
4.1	PRINCIPLE OF CONFIGURATION SELECTION	11
4.2	TEST OPERATION AND TEST SOFTWARE.....	11
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	11
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE	11
4.5	TEST SETUP DIAGRAM	12
5	TEST RESULTS	14
5.1	TRANSMITTER REQUIREMENT & TEST SUITES	14
5.1.1	<i>Antenna Requirement</i>	<i>14</i>
5.1.2	<i>Maximum Conducted Output Power</i>	<i>15</i>
5.1.3	<i>99% Bandwidth</i>	<i>16</i>
5.1.4	<i>Conducted Spurious Emissions Measured in 100 kHz Bandwidth</i>	<i>17</i>
5.1.5	<i>Radiated Spurious Emission</i>	<i>18</i>
5.1.6	<i>20dB Bandwidth</i>	<i>19</i>
5.1.7	<i>Carrier Frequency Separation.....</i>	<i>20</i>
5.1.8	<i>Frequency stability</i>	<i>21</i>
5.1.9	<i>Number of Hopping Frequency.....</i>	<i>22</i>
5.1.10	<i>Time of Occupancy</i>	<i>23</i>
5.1.11	<i>Conducted Emission on AC Mains</i>	<i>24</i>
6	PHOTOGRAPHS OF THE TEST SET-UP	25
7	LIST OF TABLES.....	25

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 5 von 25
Page 5 of 25

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: Photographs of the Test Set-up

Appendix B: Test Results of Classic Bluetooth

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, People's Republic of China

FCC Registration No.: CN1260

IC Registration No.: 25069 and the CAB identifier is CN0078.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing				
Equipment	Manufacturer	Model	Serial No.	Cal. until
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	25.09.2025
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	25.09.2025
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	25.09.2025
DC Power Supply	Keysight	E3642A	MY61276100	25.09.2025
Wireless Connectivity Tester	R&S	CMW270	102505	25.09.2025
Power Control Unit	Tonscend	JS0806-4ADC	N/A	25.09.2025
Automation Control Unit	Tonscend	JS0806-2	21C8060396	25.09.2025
Humid & Temp Programmable Tester	BOST	NTH090-60	19040801	24.02.2026
Cable 1	Calibration frequency range: 9 kHz~1.0 GHz			20.12.2025
Cable 2	Calibration frequency range: 9 kHz~18 GHz			20.12.2025
Cable 3	Calibration frequency range: 1 GHz~40 GHz			20.12.2025
Test Software	Tonscend	JS1120-3	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A
Unwanted Emission Testing				
Equipment	Manufacturer	Model	Serial No.	Cal. until
EMI Test Receiver	R&S	ESR 7	102021	28.09.2025
Signal Analyzer	R&S	FSV 40	101439	28.09.2025
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	28.09.2025
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	28.09.2025
Amplifier	R&S	SCU-18F	180070	28.09.2025
Amplifier	R&S	SCU40A	100475	28.09.2025
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	27.09.2026
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	27.09.2026
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	27.09.2026
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	27.09.2026
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	13.09.2027
Above 1G cable #1 i	Calibration frequency range: 9 kHz~6 GHz			20.12.2025
Above 1G cable #2	Calibration frequency range: 1 GHz~18 GHz			20.12.2025
Antenna-Preamplifier 40GHz cable	Calibration frequency range: 1 GHz~40 GHz			20.12.2025
Conducted Emission Testing				
Equipment	Manufacturer	Model	Serial No.	Cal. until
EMI Test Receiver	R&S	ESR3	102680	09.02.2026

Prüfbericht-Nr.: CN25ERIH 001

Seite 7 von 25

Test report no.:
Page 7 of 25

Artificial Mains Network	R&S	ENV216	102333	22.07.2025
Artificial Mains Network	R&S	ENV216	101445	09.02.2026
LISN ENV216-Receiver cable in SR3	Calibration frequency range: 9 kHz~30 MHz			20.12.2025
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

Parameter	Uncertainty (k=2)
Occupied Channel Bandwidth	± 2.08 %
RF output power, conducted	± 0.99 dB
RF power density, conducted	± 0.99 dB
Unwanted Emissions, conducted	± 0.89 dB
All emissions, radiated	± 4.17 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) 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, People's Republic of 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 EUT is a 3.1.2 Channel Soundbar with Virtual Dolby Atmos, this soundbar supports Classic Bluetooth and generic 2.4GHz technologies.

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

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	Wireless Soundbar
Type Designation	CINEMA SB595
Trademark	JBL
FCC ID	APISB595
IC	6132A-SB595
HVIN	CINEMA SB595
Extreme Temperature Range	0°C to +45°C
Operating Voltage	Input: AC 100-240V, 50/60Hz, 40W Output: DC 5V, 500mA (USB port)
Technical Specification of Classic Bluetooth	
Operating Frequency band	2402 ~ 2480 MHz
Channel Number	79 channels
Channel separation	1MHz
Modulation	GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna Type	FPC antenna
Antenna Gain	2.06 dBi (Provided by the Client)
Technical Specification of generic 2.4GHz	
Operating Frequency band	2402 – 2480 MHz
Channel Number	40 channels
Channel separation	2MHz
Data rate	1Mbps, 2Mbps
Modulation	GFSK
Antenna Type	FPC antenna
Antenna Gain	4.53 dBi (Provided by the Client)

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 9 von 25
Page 9 of 25

Table 3: RF Channel and Frequency of Classic Bluetooth

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	20	2422.00	40	2442.00	60	2462.00
01	2403.00	21	2423.00	41	2443.00	61	2463.00
02	2404.00	22	2424.00	42	2444.00	62	2464.00
03	2405.00	23	2425.00	43	2445.00	63	2465.00
04	2406.00	24	2426.00	44	2446.00	64	2466.00
05	2407.00	25	2427.00	45	2447.00	65	2467.00
06	2408.00	26	2428.00	46	2448.00	66	2468.00
07	2409.00	27	2429.00	47	2449.00	67	2469.00
08	2410.00	28	2430.00	48	2450.00	68	2470.00
09	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	--	--

Table 4: RF Channel and Frequency of generic 2.4GHz

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	10	2422.00	20	2442.00	30	2462.00
01	2404.00	11	2424.00	21	2444.00	31	2464.00
02	2406.00	12	2426.00	22	2446.00	32	2466.00
03	2408.00	13	2428.00	23	2448.00	33	2468.00
04	2410.00	14	2430.00	24	2450.00	34	2470.00
05	2412.00	15	2432.00	25	2452.00	35	2472.00
06	2414.00	16	2434.00	26	2454.00	36	2474.00
07	2416.00	17	2436.00	27	2456.00	37	2476.00
08	2418.00	18	2438.00	28	2458.00	38	2478.00
09	2420.00	19	2440.00	29	2460.00	39	2480.00

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 10 von 25
Page 10 of 25

3.3 Independent Operation Modes

The basic operation modes are:

- A. On
 - 1. Bluetooth transmitting mode (BR & EDR mode)
 - a) Low Channel
 - b) Middle Channel
 - c) High Channel
- B. On, Transmitting on Hopping channel
- C. On, Simultaneous mode, BT + generic 2.4GHz
- D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- Block Diagram
- Schematics
- Technical Description
- FCC/IC Label and Location Info
- Photo Document
- User Manual

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 11 von 25
Page 11 of 25

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 testing were performed according to the procedures in ANSI C63.10: 2013.

4.3 Special Accessories and Auxiliary Equipment

Table 5: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N or Rating
Laptop	Lenovo	T480	PF-16A6N8

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 30MHz)

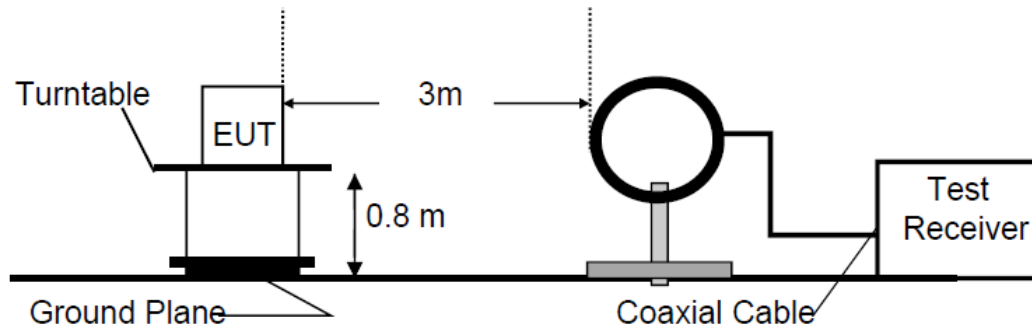


Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

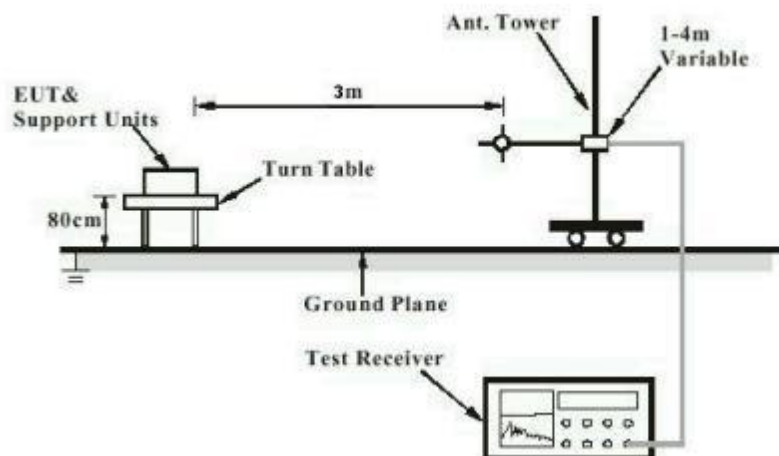


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

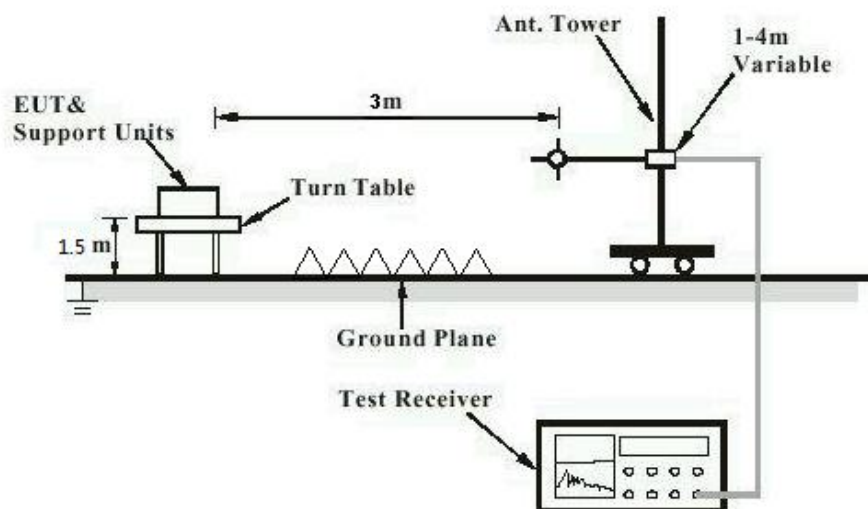


Diagram of Measurement Configuration for Conducted Transmitter Measurement

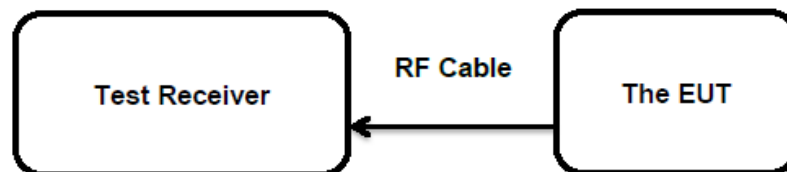
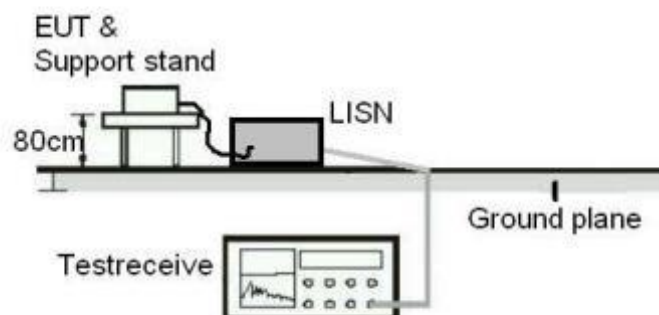


Diagram of Measurement Configuration for Mains Conduction Measurement



Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 14 von 25
Page 14 of 25

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 8.3

According to the manufacturer declared, the EUT has two FPC antenna, the directional gain of antennas is 2.06 dBi for Bluetooth & 4.53 dBi for generic 2.4GHz, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 15 von 25
Page 15 of 25

5.1.2 Maximum Conducted Output Power

RESULT:
Pass
Test Specification

Test standard	FCC Part 15.247(b)(1) RSS-247 Clause 5.4(b)
Basic standard	ANSI C63.10: 2013
Limits	FHSS<0.125W(Maximum peak conducted output power) < 4 W (e.i.r.p.)
Kind of test site	Shielded Room

Test Setup

Date of testing	2025-05-29 to 2025-06-09
Input voltage	AC 120V, 60Hz
Operation mode	A.1
Test channel	Low / Middle / High
Ambient temperature	24.8 °C
Relative humidity	55 %
Atmospheric pressure	101 kPa

Table 6: Test Result of Maximum Conducted Output Power

Test Mode	Channel Frequency (MHz)	Measured Peak Output Power		Limit (W)
		(dBm)	(W)	
BR	2402	-3.36	0.00046	< 0.125
	2441	-3.14	0.00049	
	2480	-3.02	0.00050	
EDR	2402	-2.82	0.00052	
	2441	-2.38	0.00058	
	2480	-2.29	0.00059	
Maximum Measured Value		-2.29	0.00059	

Note: The cable loss is taken into account in results and the maximum e.i.r.p. is -0.23dBm less than 4W(36dBm).

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 16 von 25
Page 16 of 25

5.1.3 99% Bandwidth

RESULT:
Pass
Test Specification

Test standard : RSS-Gen Clause 6.7
Basic standard : ANSI C63.10: 2013
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-05-29 to 2025-06-09
Input voltage : AC 120V, 60Hz
Operation mode : A.1
Test channel : Low / Middle / High
Ambient temperature : 24.8 °C
Relative humidity : 55 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

Table 7: Test Result of 99% Bandwidth

Test Mode	Channel Frequency (MHz)	Measured 99% Bandwidth	Limit
		(MHz)	
BR	2402	0.87301	/
	2441	0.86626	
	2480	0.87264	
EDR	2402	1.2066	/
	2441	1.2090	
	2480	1.2045	

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:Seite 17 von 25
Page 17 of 25

5.1.4 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: 2013

Limits : 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power);

Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-05-29 to 2025-06-09

Input voltage : AC 120V, 60Hz

Operation mode : A.1

Test channel : Low / Middle / High

Ambient temperature : 24.8 °C

Relative humidity : 55 %

Atmospheric pressure : 101 kPa

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

For the measurement records, refer to the appendix B.

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:Seite 18 von 25
Page 18 of 25

5.1.5 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: 2013

Limits : Refer to 15.209(a) of FCC part 15.247(d)
RSS-Gen Table 6 & Table 7

Kind of test site : 3m Semi-anechoic Chamber

Test Setup

Date of testing : 2025-05-29 to 2025-06-09

Input voltage : AC 120V, 60Hz

Operation mode : A.1, CA

Test channel : Low / Middle / High

Ambient temperature : Refer to test result

Relative humidity : Refer to test result

Atmospheric pressure : 101 kPa

Remark:

During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions. After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation shown in the test set-up photos.

Testing was carried out within frequency range 9kHz to the tenth harmonics.

For the measurement records, refer to the appendix B.

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 19 von 25
Page 19 of 25

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: 2013

Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-05-29 to 2025-06-09

Input voltage : AC 120V, 60Hz

Operation mode : A.1

Test channel : Low / Middle / High

Ambient temperature : 24.8 °C

Relative humidity : 55 %

Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

Table 8: Test Result of -20dB Bandwidth, Left earbud

Test Mode	Channel Frequency (MHz)	20dB Bandwidth (MHz)	2/3 of 20dB Bandwidth (MHz)	Limit (MHz)
BR	2402	0.954	0.636	/
	2441	0.936	0.624	
	2480	0.954	0.636	
EDR	2402	1.323	0.882	/
	2441	1.341	0.894	
	2480	1.302	0.868	

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 20 von 25
Page 20 of 25

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: 2013

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 : 2025-05-29 to 2025-06-09

Input voltage : AC 120V, 60Hz

Operation mode : B

Test channel : Low / Middle / High

Ambient temperature : $24.8\text{ }^{\circ}\text{C}$

Relative humidity : 55 %

Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

Table 9: Test Result of Carrier Frequency Separation

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.994	≥ 0.954	PASS
3DH5	Ant1	Hop	1.2	≥ 0.894	PASS

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 21 von 25
Page 21 of 25

5.1.8 Frequency stability

RESULT:

Pass

Test Specification

Test standard : RSS-247 Clause 8.11
Basic standard : ANSI C63.10: 2013
Limits : within at least the central 80% of its permitted operating frequency band (2400-2483.5MHz)
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-05-29 to 2025-06-09
Input voltage : AC 120V, 60Hz
Operation mode : B
Ambient temperature : 24.8 °C
Relative humidity : 55 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 22 von 25
Page 22 of 25

5.1.9 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: 2013

Limits : ≥ 15 non-overlapping channels

Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-05-29 to 2025-06-09

Input voltage : AC 120V, 60Hz

Operation mode : B

Ambient temperature : 24.8 °C

Relative humidity : 55 %

Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

Table 10: Test Result of Number of Hopping Frequency

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

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 23 von 25
Page 23 of 25

5.1.10 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: 2013
Limits : < 0.4s
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-05-29 to 2025-06-09
Input voltage : AC 120V, 60Hz
Operation mode : B
Test channel : Low / Middle / High
Ambient temperature : 24.8 °C
Relative humidity : 55 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:

Seite 24 von 25
Page 24 of 25

5.1.11 Conducted Emission on AC Mains

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.207(a)
RSS-Gen Clause 8.8
Basic standard : ANSI C63.10: 2013
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 : 2025-05-29 to 2025-06-09
Input voltage : AC 120V, 60Hz
Operation mode : B
Earthing : Not connected
Ambient temperature : 25.0 °C
Relative humidity : 51.2 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

Prüfbericht-Nr.: CN25ERIH 001
Test report no.:Seite 25 von 25
Page 25 of 25

6 Photographs of the Test Set-Up

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

7 List of Tables

Table 1: List of Test and Measurement Equipment.....	6
Table 2: Technical Specification of EUT	8
Table 3: RF Channel and Frequency of Classic Bluetooth.....	9
Table 4: RF Channel and Frequency of generic 2.4GHz	9
Table 5: List of Accessories and Auxiliary Equipment.....	11
Table 6: Test Result of Maximum Conducted Output Power.....	15
Table 7: Test Result of 99% Bandwidth	16
Table 8: Test Result of -20dB Bandwidth, Left earbud.....	19
Table 9: Test Result of Carrier Frequency Separation	20
Table 10: Test Result of Number of Hopping Frequency	22

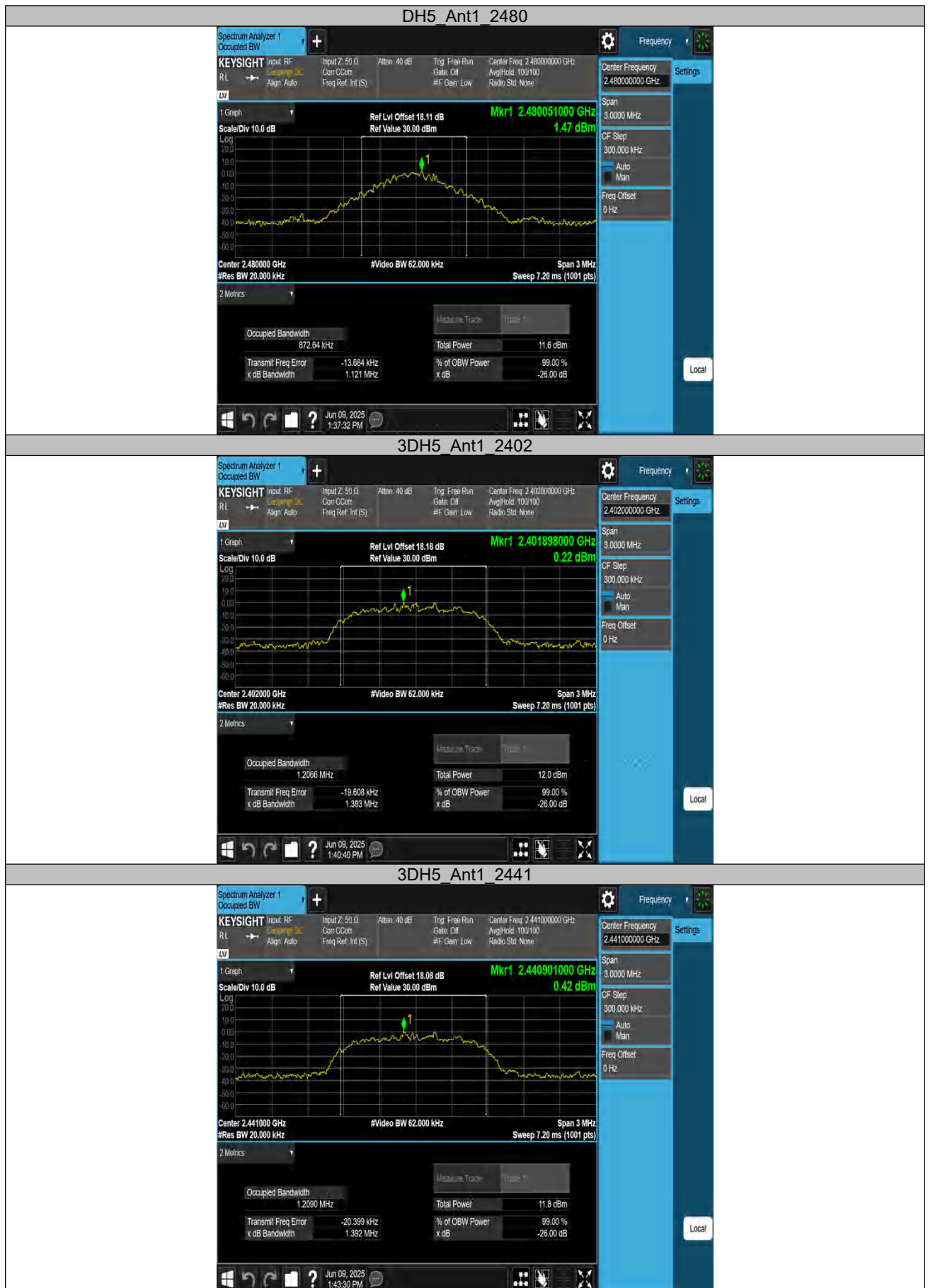
Appendix B: Test Results of Classical Bluetooth

APPENDIX B: TEST RESULTS OF CLASSICAL BLUETOOTH.....	1
APPENDIX B.1: TEST RESULTS OF 99% BANDWIDTH	2
APPENDIX B.2: TEST RESULTS OF 20dB BANDWIDTH	5
APPENDIX B.3: TEST RESULTS OF FREQUENCY STABILITY	8
APPENDIX B.4: TEST RESULTS OF CARRIER FREQUENCY SEPARATION.....	10
APPENDIX B.5: TEST RESULTS OF NUMBER OF HOPPING FREQUENCY	11
APPENDIX B.6: TEST RESULTS OF TIME OF OCCUPANCY	12
APPENDIX B.7: TEST RESULTS OF CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 kHz BANDWIDTH	17
CONDUCTED SPURIOUS EMISSION	17
BAND EDGE MEASUREMENTS.	23
APPENDIX B.8: TEST RESULTS OF RADIATED SPURIOUS EMISSIONS	27
30MHz - 1GHz	27
1GHz - 18GHz	29
APPENDIX B.9: TEST RESULTS OF RADIATED SPURIOUS EMISSIONS SIMULTANEOUS MODE	41
APPENDIX B.10: TEST RESULTS OF RADIATED EMISSIONS IN RESTRICTED BANDS.....	47
APPENDIX B.11: TEST RESULTS OF CONDUCTED EMISSIONS	51

Appendix B.1: Test Results of 99% Bandwidth

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87301	2401.5570	2402.4300	---	---
		2441	0.86626	2440.5543	2441.4206	---	---
		2480	0.87264	2479.5500	2480.4226	---	---
3DH5	Ant1	2402	1.2066	2401.3771	2402.5837	---	---
		2441	1.2090	2440.3751	2441.5841	---	---
		2480	1.2045	2479.3782	2480.5827	---	---







Appendix B.2: Test Results of 20dB Bandwidth

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.954	2401.532	2402.486	---	---
		2441	0.936	2440.529	2441.465	---	---
		2480	0.954	2479.526	2480.480	---	---
3DH5	Ant1	2402	1.323	2401.319	2402.642	---	---
		2441	1.341	2440.316	2441.657	---	---
		2480	1.302	2479.334	2480.636	---	---

DH5 Ant1 2402



DH5 Ant1 2441



Appendix B CN25ERIH 001



Prüfbericht - Produkte
Test Report - Products

Page 6 of 52

DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441





Appendix B.3: Test Results of Frequency stability

Test Channel (MHz)	2402
-----------------------	------

Test result of frequency tolerance of voltage variation

Voltage	Test result (MHz)	Deviation Frequency (KHz)	Test result (ppm)	Limit (ppm)
AC 108V	2401.985	-15	-6.24	10
AC 120V	2401.986	-14	-5.83	
AC 132V	2401.984	-16	-6.66	

Test result of frequency tolerance of temperature variation

Temperature (°C)	Test result (MHz)	Deviation Frequency (KHz)	Test result (ppm)	Limit (ppm)
-30	2401.985	-15	-6.24	10
-20	2401.987	-13	-5.41	
-10	2401.987	-13	-5.41	
0	2401.989	-11	-4.58	
10	2401.990	-10	-4.16	
20	2401.991	-9	-3.75	
30	2401.989	-11	-4.58	
40	2401.988	-12	-5.00	
50	2401.987	-13	-5.41	
55	2401.988	-12	-5.00	

Test Channel (MHz)	2441
-----------------------	------

Test result of frequency tolerance of voltage variation

Voltage	Test result (MHz)	Deviation Frequency (KHz)	Test result (ppm)	Limit (ppm)
AC 108V	2440.990	-10	-4.10	10
AC 120V	2440.989	-11	-4.51	
AC 132V	2440.988	-12	-4.92	

Test result of frequency tolerance of temperature variation

Temperature (°C)	Test result (MHz)	Deviation Frequency (KHz)	Test result (ppm)	Limit (ppm)
-30	2440.993	-7	-2.87	10
-20	2440.994	-6	-2.46	
-10	2440.995	-5	-2.05	
0	2440.993	-7	-2.87	
10	2440.994	-6	-2.46	
20	2440.996	-4	-1.64	
30	2440.995	-5	-2.05	
40	2440.994	-6	-2.46	
50	2440.994	-6	-2.46	
55	2440.995	-5	-2.05	

Test Channel (MHz)	2480
-----------------------	------

Test result of frequency tolerance of voltage variation

Voltage	Test result (MHz)	Deviation Frequency (KHz)	Test result (ppm)	Limit (ppm)
AC 108V	2479.988	-12	-4.84	10
AC 120V	2479.986	-14	-5.65	
AC 132V	2479.987	-13	-5.24	

Test result of frequency tolerance of temperature variation

Temperature (°C)	Test result (MHz)	Deviation Frequency (KHz)	Test result (ppm)	Limit (ppm)
-30	2479.985	-15	-6.05	10
-20	2479.985	-15	-6.05	
-10	2479.983	-17	-6.85	
0	2479.984	-16	-6.45	
10	2479.984	-16	-6.45	
20	2479.985	-15	-6.05	
30	2479.995	-5	-2.02	
40	2479.994	-6	-2.42	
50	2479.993	-7	-2.82	
55	2479.993	-7	-2.82	

Appendix B.4: Test Results of Carrier Frequency Separation

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.994	≥ 0.954	PASS
3DH5	Ant1	Hop	1.2	≥ 0.894	PASS



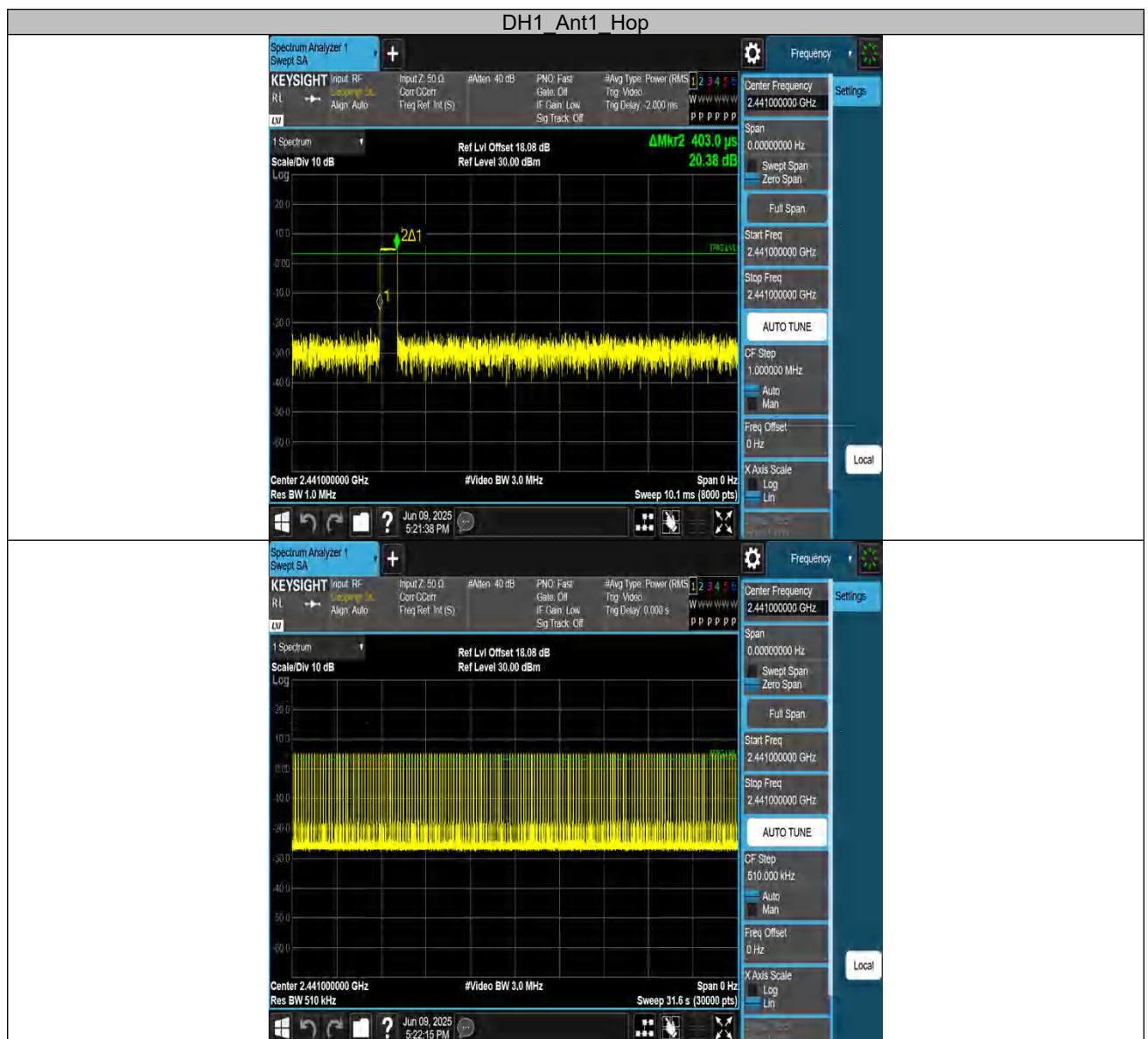
Appendix B.5: Test Results of Number of Hopping Frequency

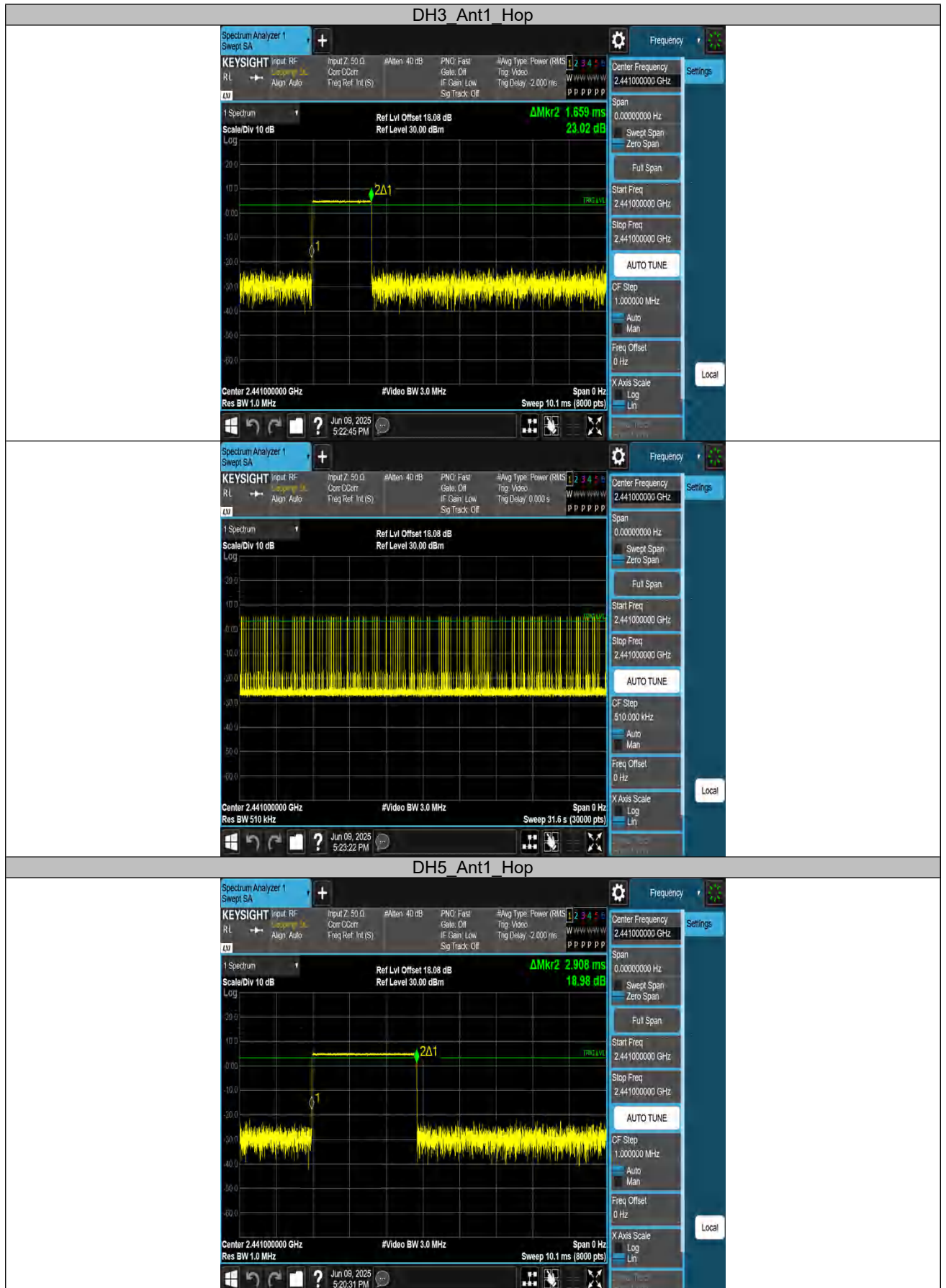
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS



Appendix B.6: Test Results of Time of Occupancy

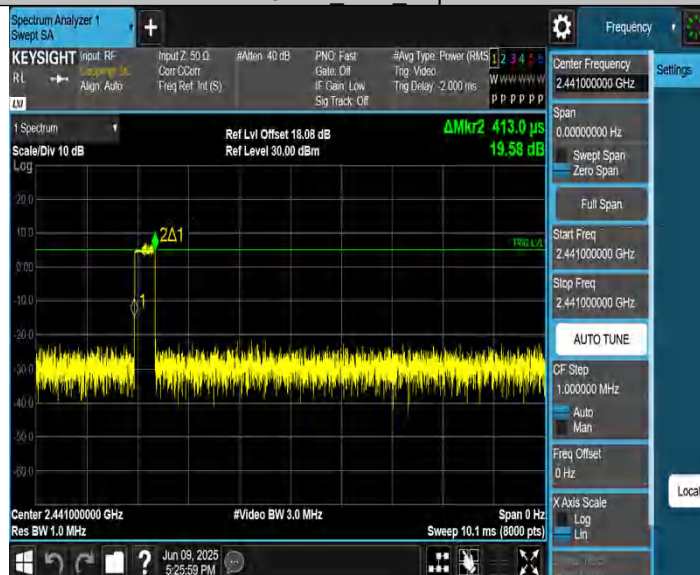
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.403	316	0.127	≤0.4	PASS
DH3	Ant1	Hop	1.659	154	0.255	≤0.4	PASS
DH5	Ant1	Hop	2.908	99	0.288	≤0.4	PASS
3DH1	Ant1	Hop	0.413	316	0.131	≤0.4	PASS
3DH3	Ant1	Hop	1.663	163	0.271	≤0.4	PASS
3DH5	Ant1	Hop	2.913	118	0.344	≤0.4	PASS







3DH1 Ant1 Hop



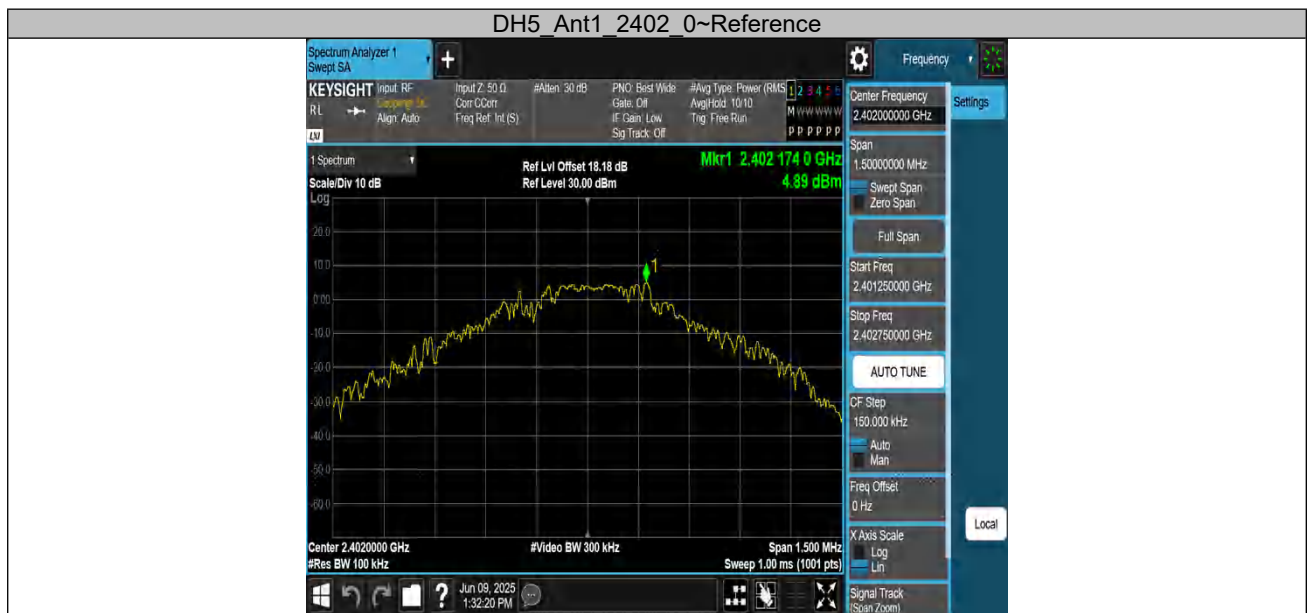


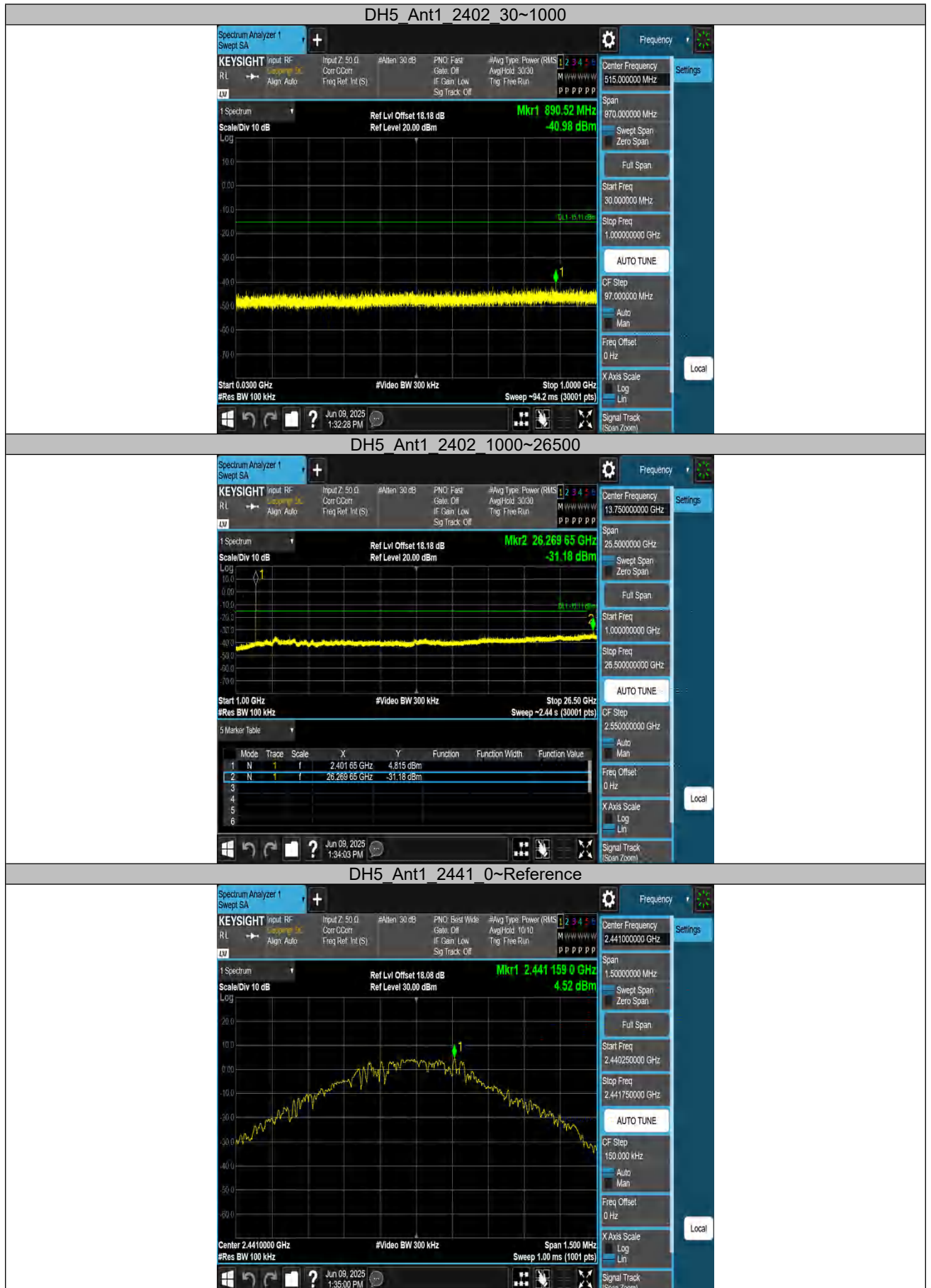


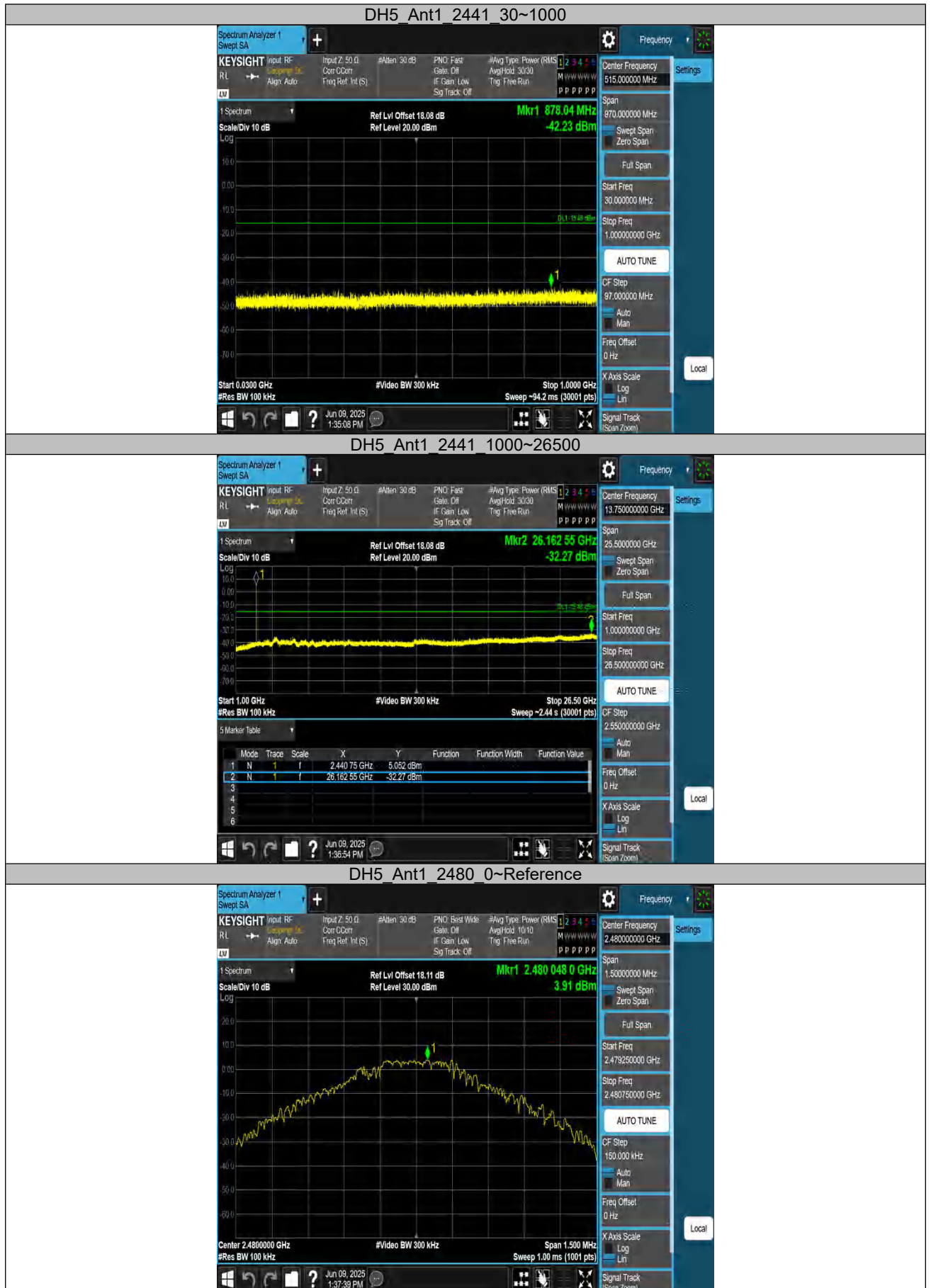
Appendix B.7: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

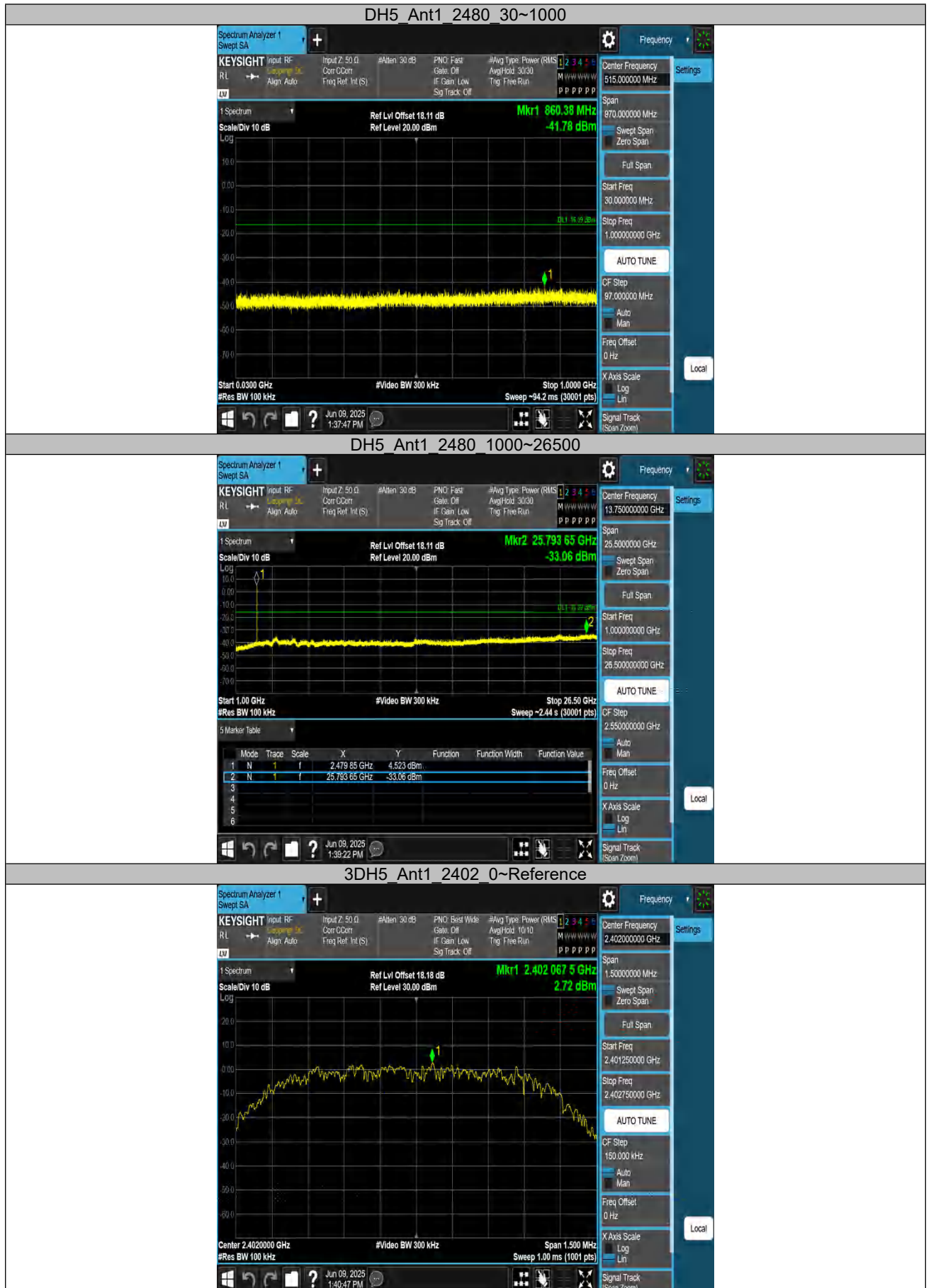
Conducted Spurious Emission

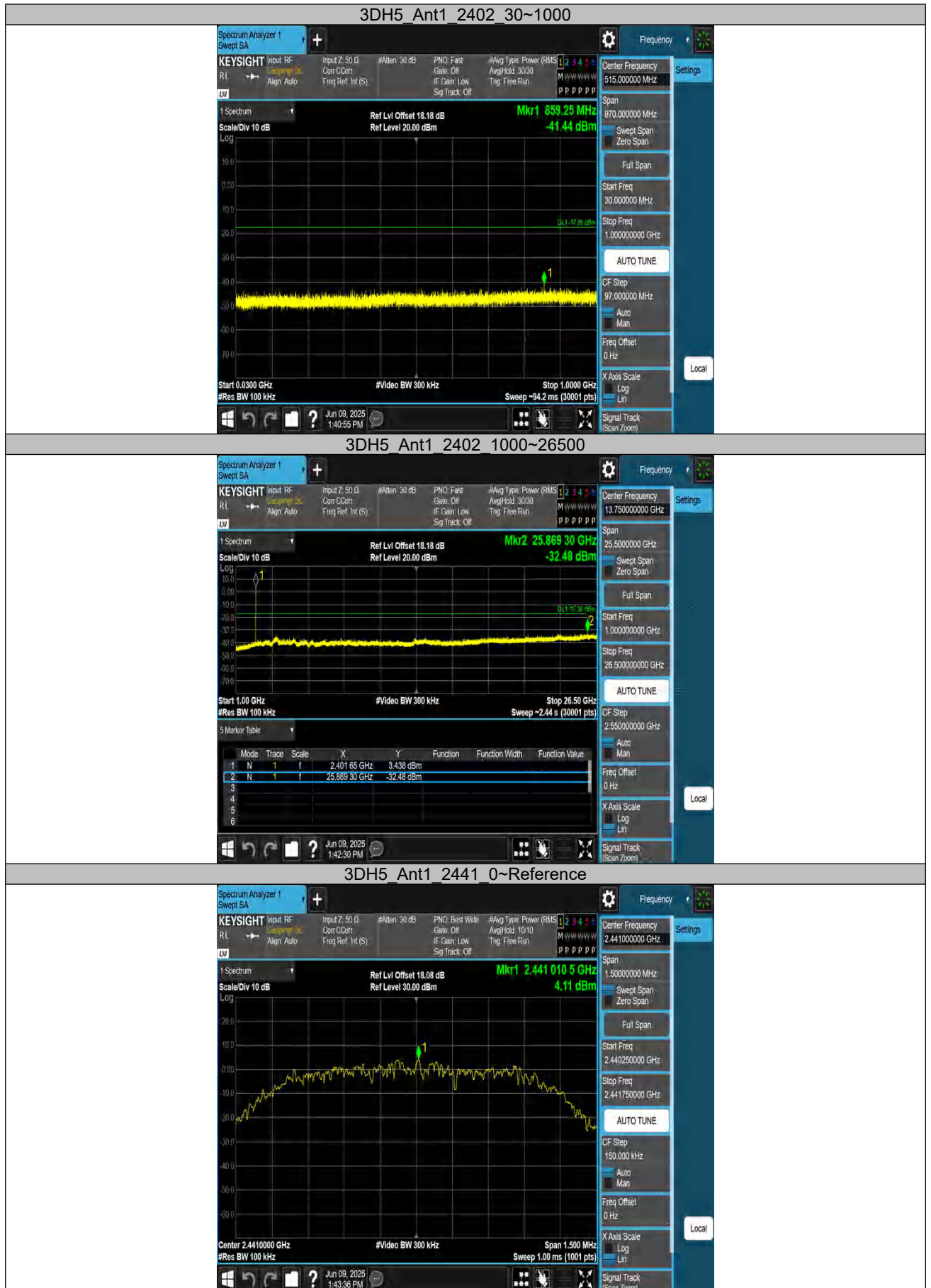
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	4.89	4.89	---	PASS
			30~1000	4.89	-40.98	≤-15.11	PASS
			1000~26500	4.89	-31.18	≤-15.11	PASS
		2441	Reference	4.52	4.52	---	PASS
			30~1000	4.52	-42.24	≤-15.48	PASS
			1000~26500	4.52	-32.27	≤-15.48	PASS
		2480	Reference	3.91	3.91	---	PASS
			30~1000	3.91	-41.78	≤-16.09	PASS
			1000~26500	3.91	-33.06	≤-16.09	PASS
3DH5	Ant1	2402	Reference	2.72	2.72	---	PASS
			30~1000	2.72	-41.44	≤-17.28	PASS
			1000~26500	2.72	-32.48	≤-17.28	PASS
		2441	Reference	4.11	4.11	---	PASS
			30~1000	4.11	-42.63	≤-15.89	PASS
			1000~26500	4.11	-32.56	≤-15.89	PASS
		2480	Reference	2.42	2.42	---	PASS
			30~1000	2.42	-41.81	≤-17.58	PASS
			1000~26500	2.42	-32.41	≤-17.58	PASS

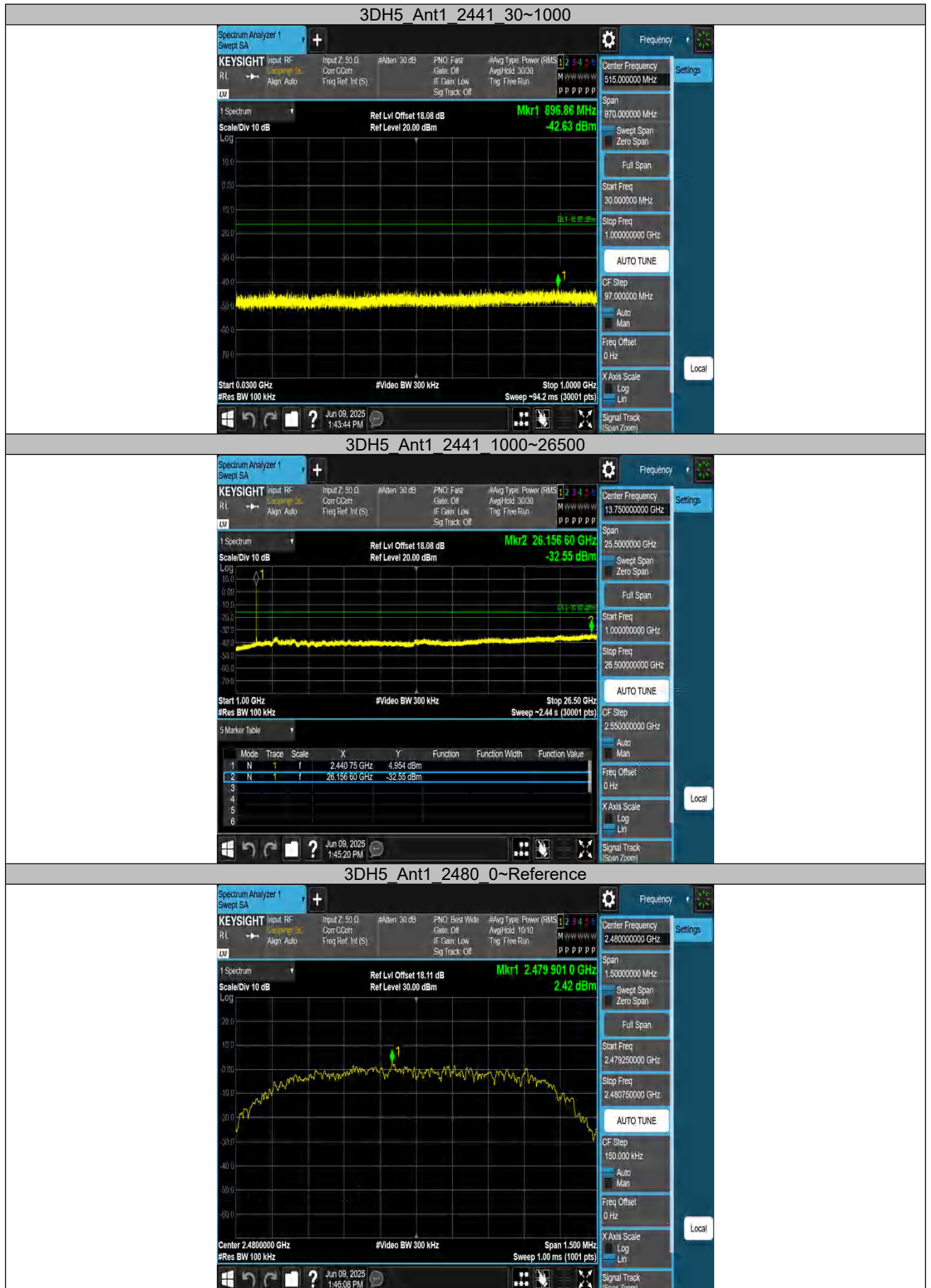














Band edge measurements.

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	5.12	-43.49	≤-14.88	PASS
		High	2480	4.75	-44.82	≤-15.25	PASS
3DH5	Ant1	Low	2402	4.64	-36.67	≤-15.36	PASS
		High	2480	5.08	-43.90	≤-14.92	PASS
DH5	Ant1	Hopping	2402	4.60	-45.01	≤-15.40	PASS
		Hopping	2480	4.10	-43.24	≤-15.90	PASS
3DH5	Ant1	Hopping	2402	5.06	-43.70	≤-14.94	PASS
		Hopping	2480	0.95	-44.31	≤-19.05	PASS

DH5 Ant1 Low 2402



DH5 Ant1 High 2480



3DH5 Ant1 Low 2402



3DH5 Ant1 High 2480



DH5 Ant1 Hopping 2402



DH5 Ant1 Hopping 2480



3DH5_Ant1_Hopping_2402



3DH5_Ant1_Hopping_2480



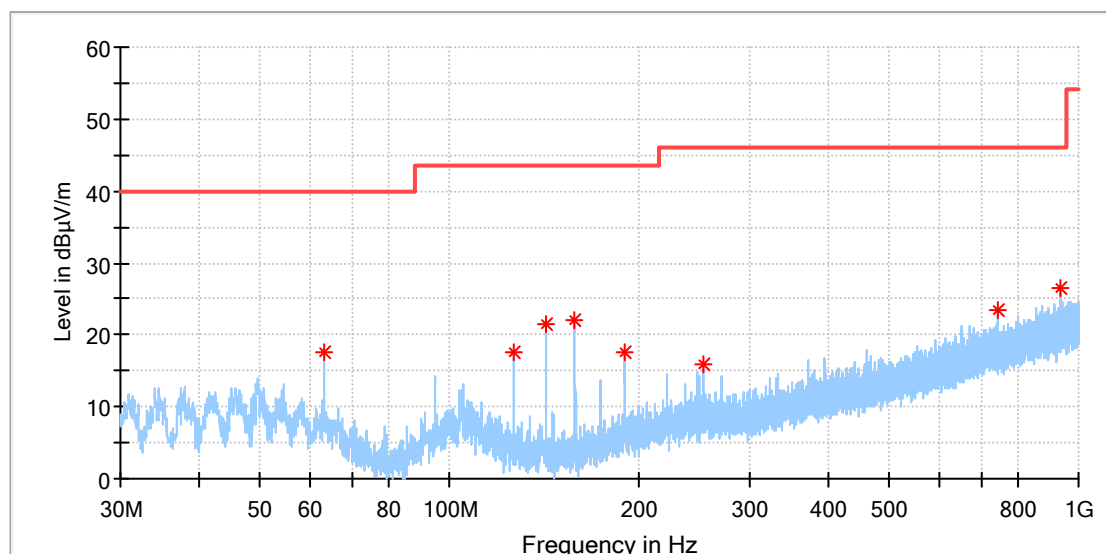
Appendix B.8: Test Results of Radiated Spurious Emissions

Note: 1. 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. 2. This testing was carried out on different modulations, but only the worst case (GFSK) was presented in this report.

30MHz - 1GHz

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

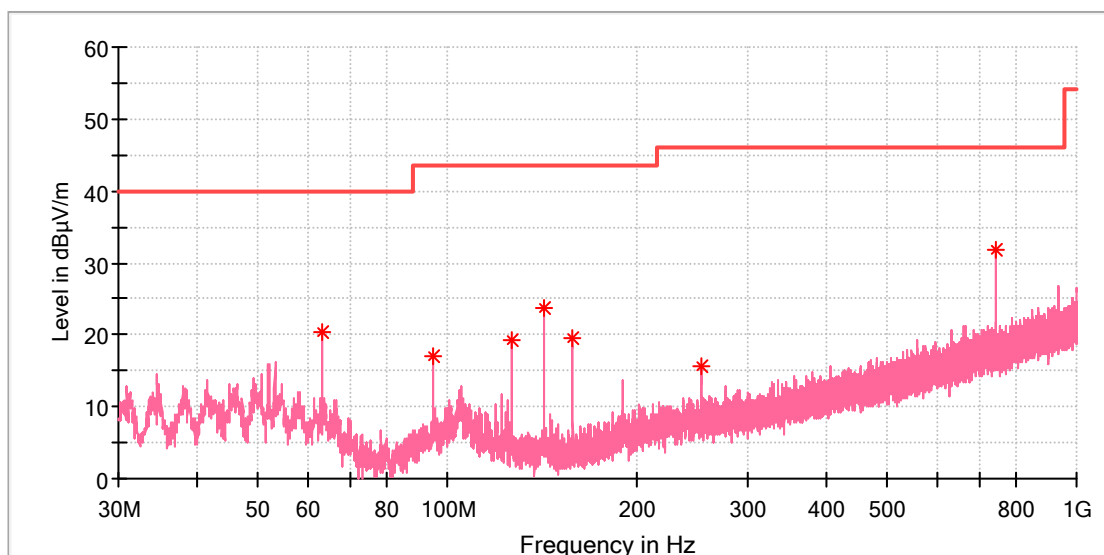


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
63.315769	17.67	40.00	22.33	100.0	H	185.0	-19.9
126.589615	17.65	43.50	25.85	100.0	H	127.0	-21.6
142.408077	21.43	43.50	22.07	100.0	H	127.0	-22.4
158.301154	22.18	43.50	21.32	100.0	H	8.0	-21.9
190.012692	17.55	43.50	25.95	100.0	H	61.0	-19.6
253.174615	16.02	46.00	29.98	100.0	H	203.0	-17.3
742.539615	23.57	46.00	22.43	100.0	H	185.0	-7.2
936.950000	26.53	46.00	19.47	100.0	H	127.0	-4.4

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

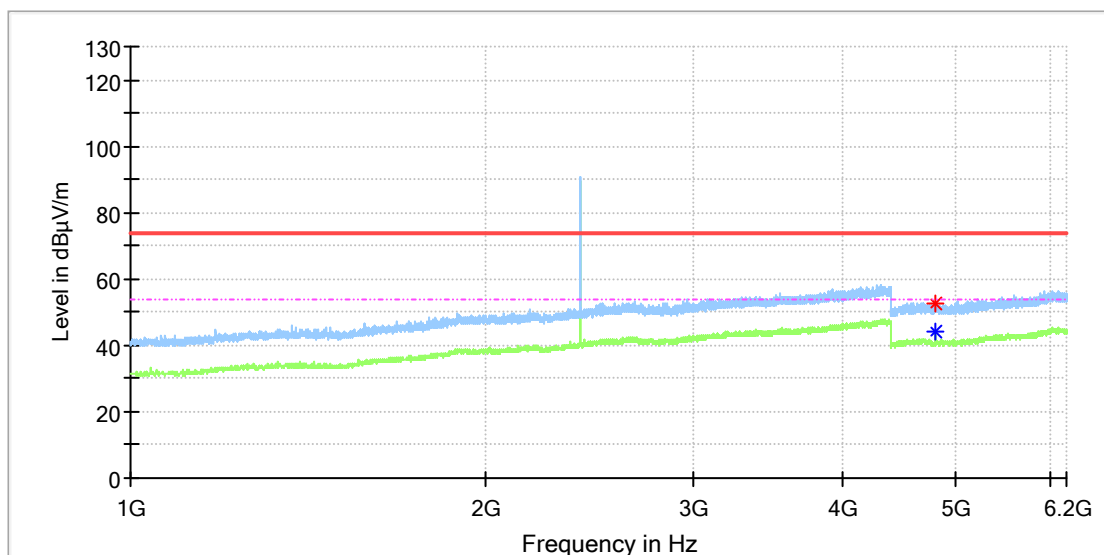
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
63.353077	20.39	40.00	19.61	100.0	V	6.0	-19.9
94.952692	17.05	43.50	26.45	100.0	V	173.0	-19.9
126.701539	19.15	43.50	24.35	100.0	V	223.0	-21.6
142.408077	23.76	43.50	19.74	100.0	V	101.0	-22.4
158.301154	19.61	43.50	23.89	100.0	V	242.0	-21.9
253.323846	15.51	46.00	30.49	100.0	V	121.0	-17.3
742.502308	31.90	46.00	14.10	100.0	V	0.0	-7.2

1GHz - 18GHz

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

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

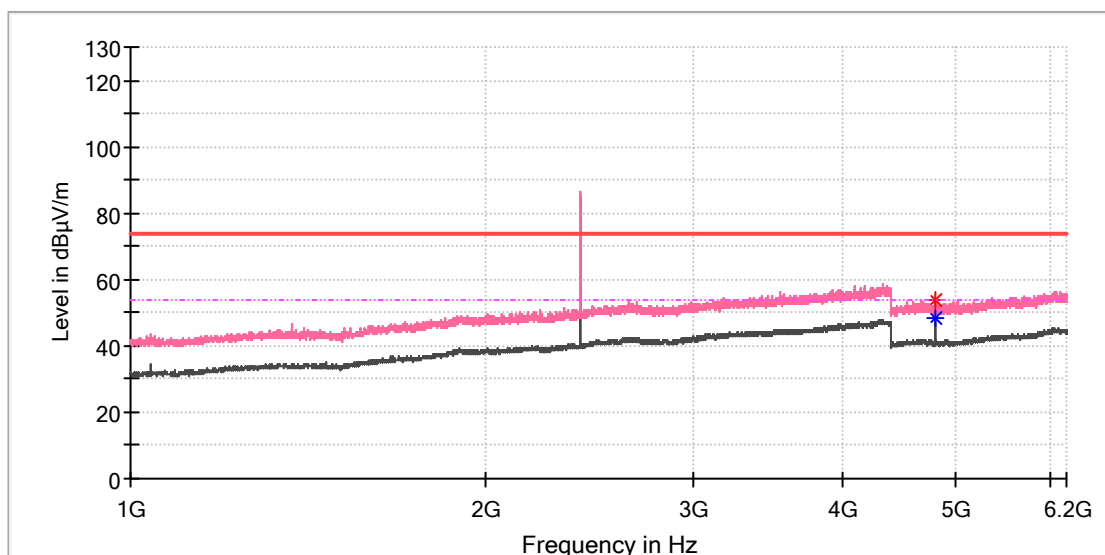


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4804.000000	---	44.23	54.00	9.78	150.0	H	81.0	13.3
4808.000000	52.37	---	74.00	21.63	150.0	H	81.0	13.3

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

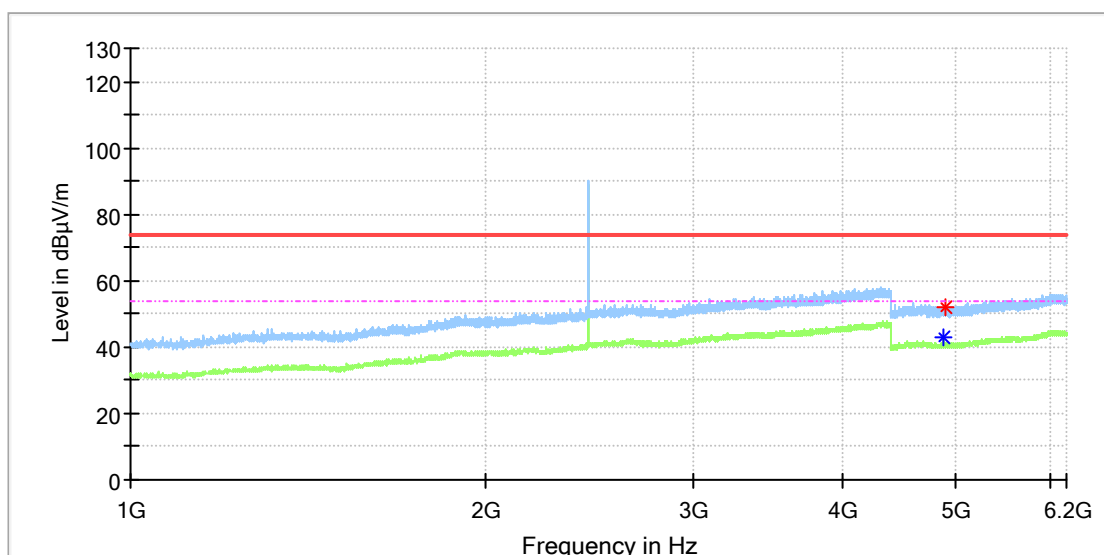


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4804.000000	53.74	---	74.00	20.26	150.0	V	88.0	13.3
4804.000000	---	48.56	54.00	5.44	150.0	V	88.0	13.3

EUT Information

EUT Name: Wireless Soundbar
Model: CINEMA SB595
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168542112/A003941723-002
Test Voltage:: AC 120V/60Hz
Remark: Temp 23 Humi:56%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin

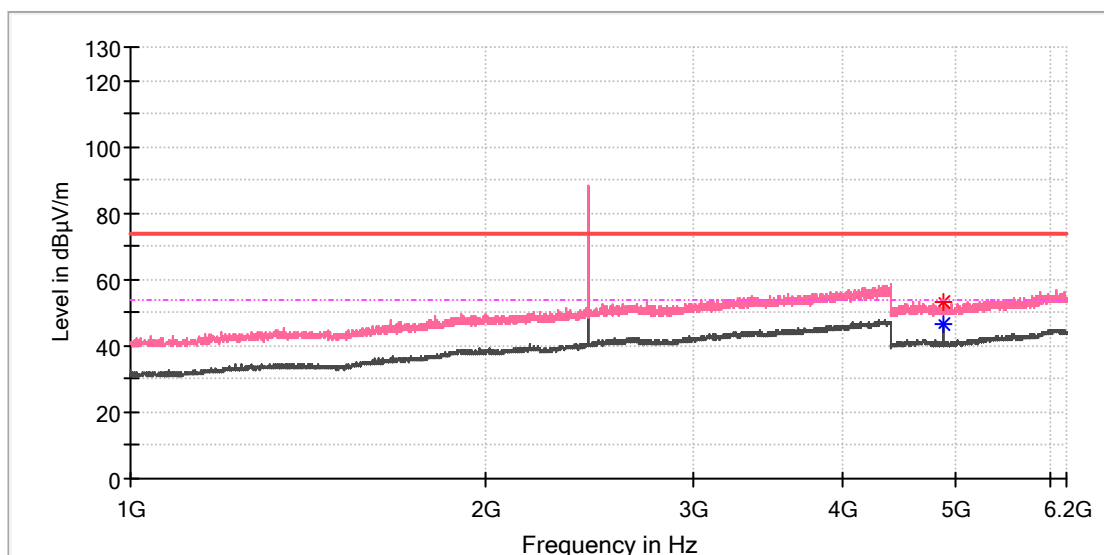


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4882.000000	---	43.02	54.00	10.98	150.0	H	72.0	13.3
4890.500000	52.24	---	74.00	21.76	150.0	H	96.0	13.3

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

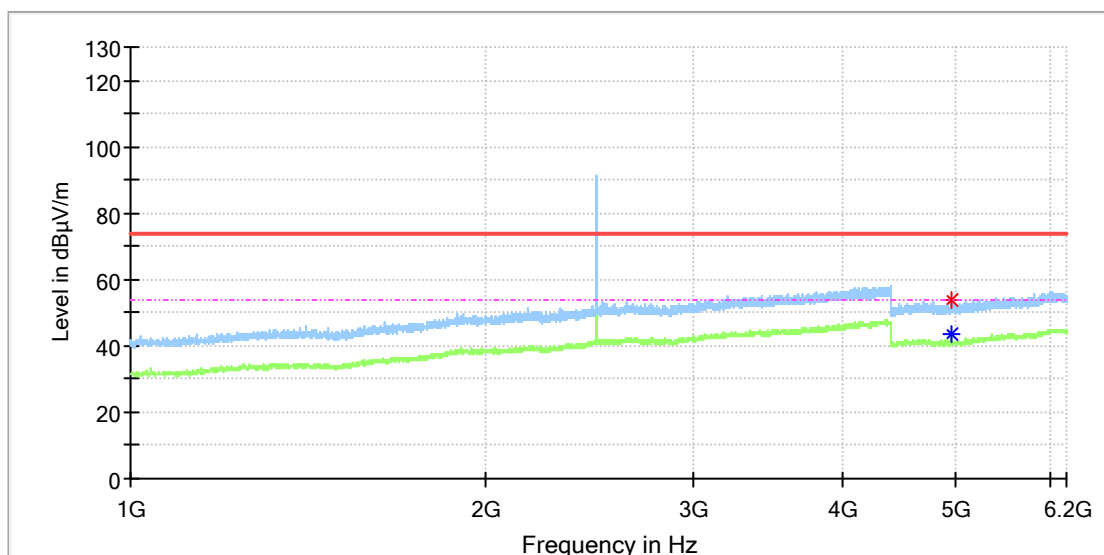


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4882.000000	53.21	---	74.00	20.79	150.0	V	90.0	13.3
4882.000000	---	46.50	54.00	7.50	150.0	V	90.0	13.3

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

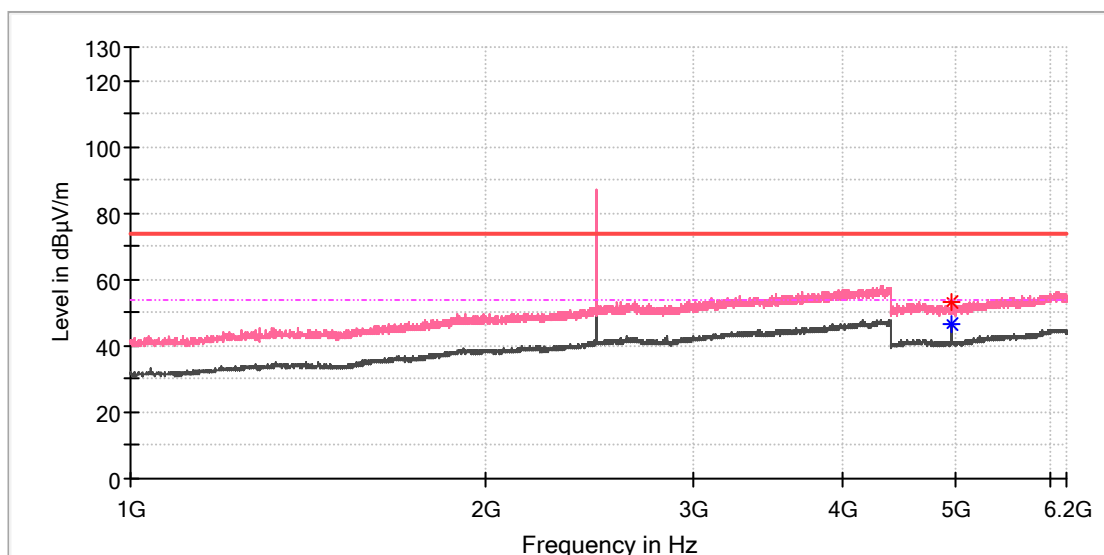


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4950.000000	53.64	---	74.00	20.36	150.0	H	268.0	13.3
4960.000000	---	43.68	54.00	10.32	150.0	H	69.0	13.3

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

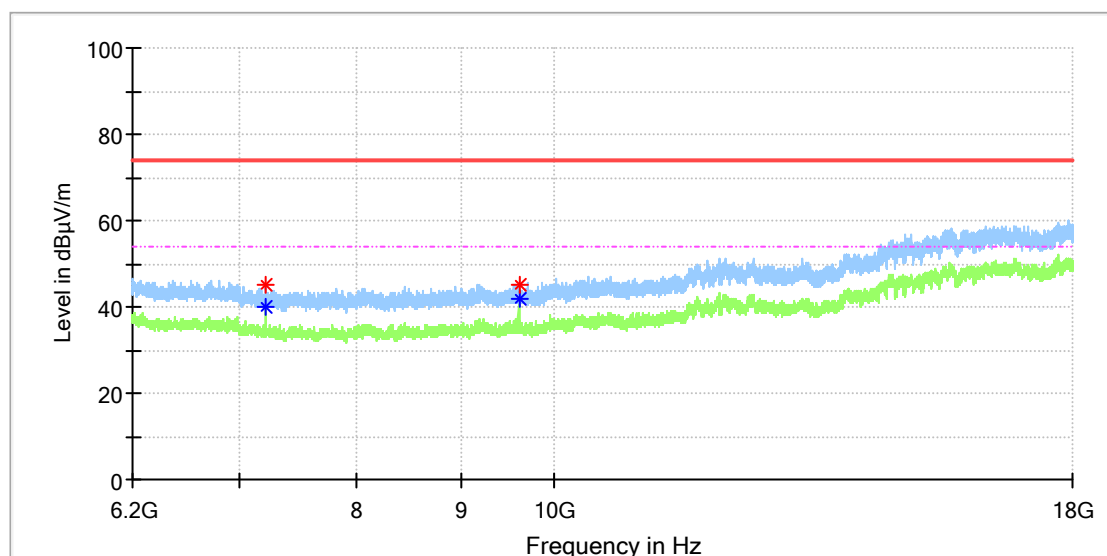


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4960.000000	53.44	---	74.00	20.56	150.0	V	79.0	13.3
4960.000000	---	46.58	54.00	7.42	150.0	V	79.0	13.3

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Low channel
Order No./Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

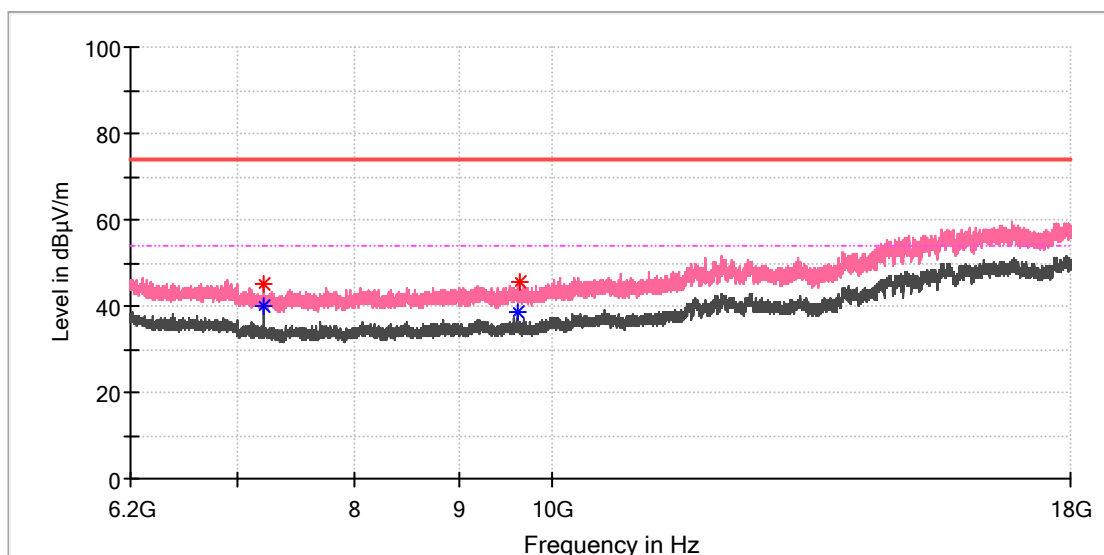


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7205.458333	44.90	---	74.00	29.10	150.0	H	79.0	8.8
7205.458333	---	40.09	54.00	13.92	150.0	H	79.0	8.8
9607.741667	45.30	---	74.00	28.70	150.0	H	317.0	10.4
9607.741667	---	41.83	54.00	12.17	150.0	H	317.0	10.4

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

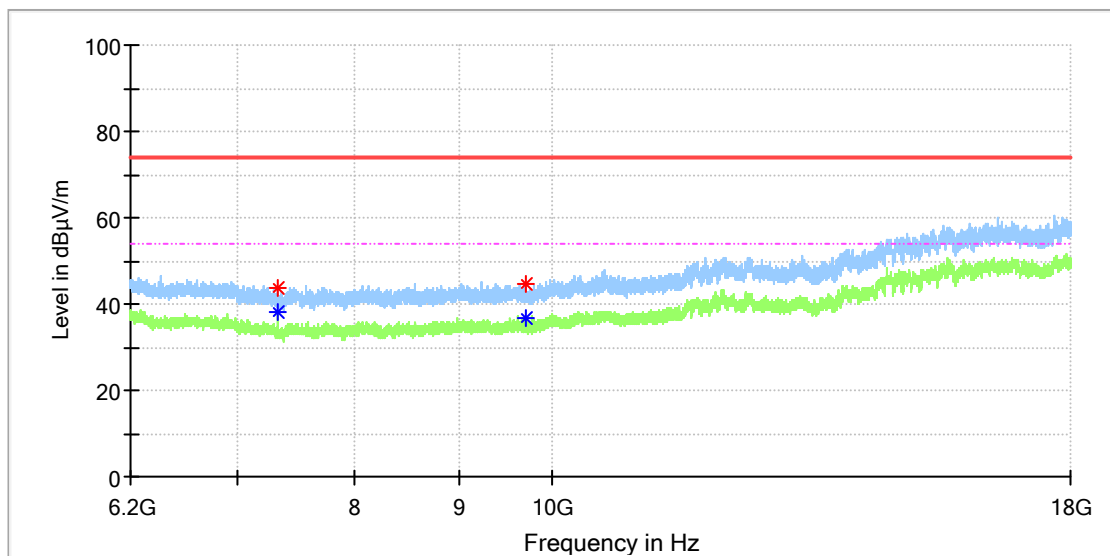


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7205.950000	---	40.11	54.00	13.89	150.0	V	0.0	8.8
7206.441667	45.23	---	74.00	28.77	150.0	V	356.0	8.8
9608.233333	---	38.52	54.00	15.48	150.0	V	53.0	10.4
9632.816667	45.49	---	74.00	28.51	150.0	V	118.0	10.4

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

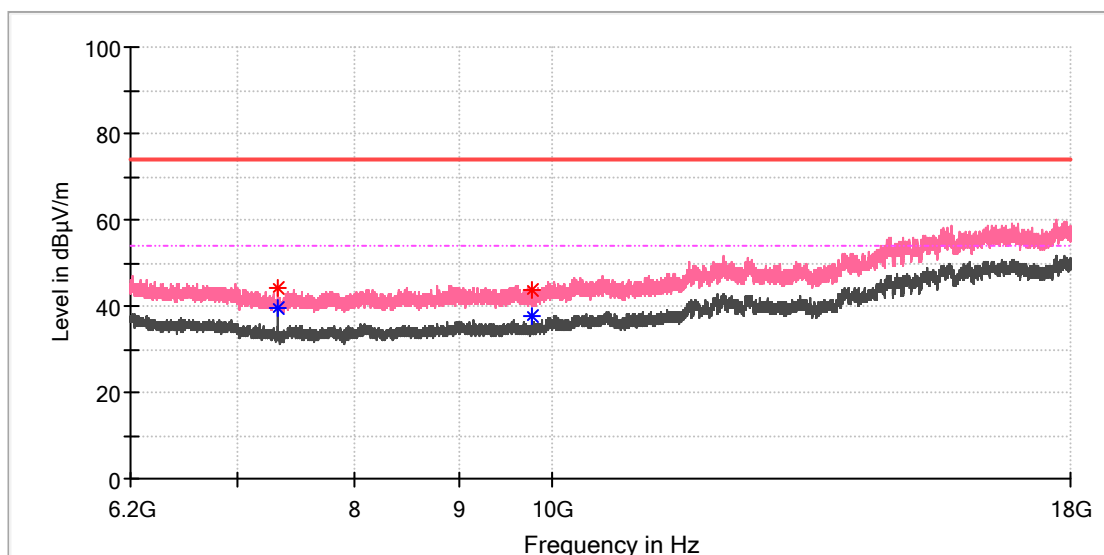


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7322.966667	---	38.31	54.00	15.69	150.0	H	116.0	8.2
7323.458333	43.73	---	74.00	30.27	150.0	H	301.0	8.2
9698.208333	---	36.84	54.00	17.16	150.0	H	226.0	10.4
9706.075000	44.65	---	74.00	29.35	150.0	H	322.0	10.4

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

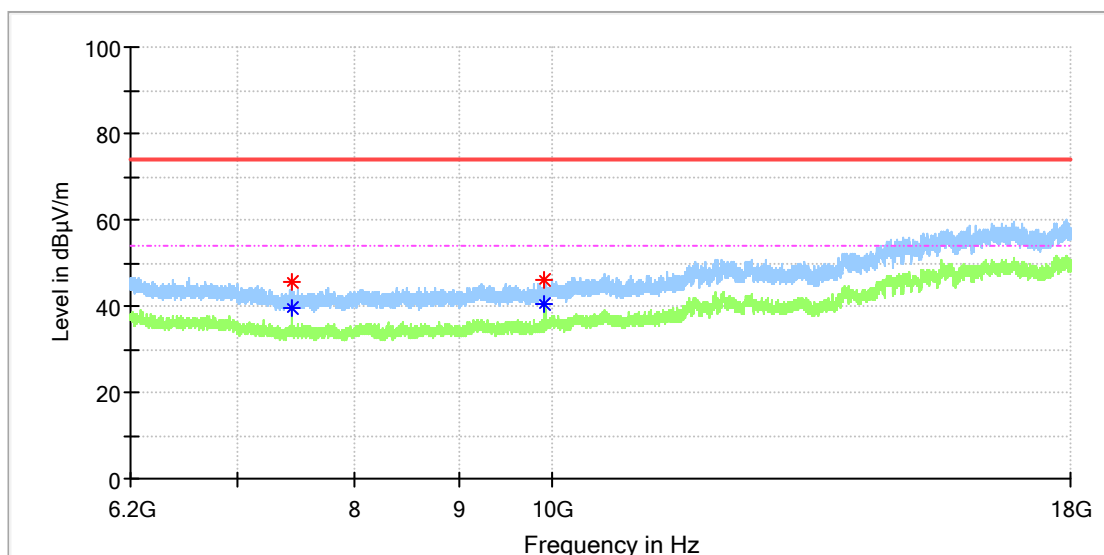


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7322.966667	44.08	---	74.00	29.92	150.0	V	1.0	8.2
7322.966667	---	39.60	54.00	14.40	150.0	V	1.0	8.2
9764.091667	43.80	---	74.00	30.20	150.0	V	291.0	10.4
9764.091667	---	37.54	54.00	16.46	150.0	V	291.0	10.4

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

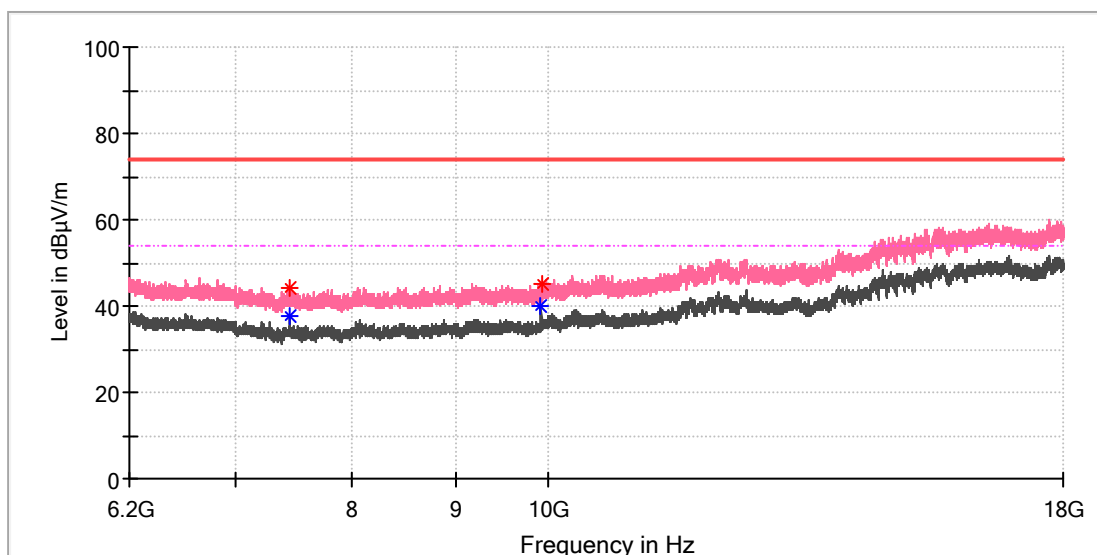


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.491667	---	39.50	54.00	14.50	150.0	H	44.0	8.4
7439.983333	45.68	---	74.00	28.32	150.0	H	280.0	8.4
9919.950000	45.98	---	74.00	28.02	150.0	H	296.0	10.8
9919.950000	---	40.42	54.00	13.58	150.0	H	296.0	10.8

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



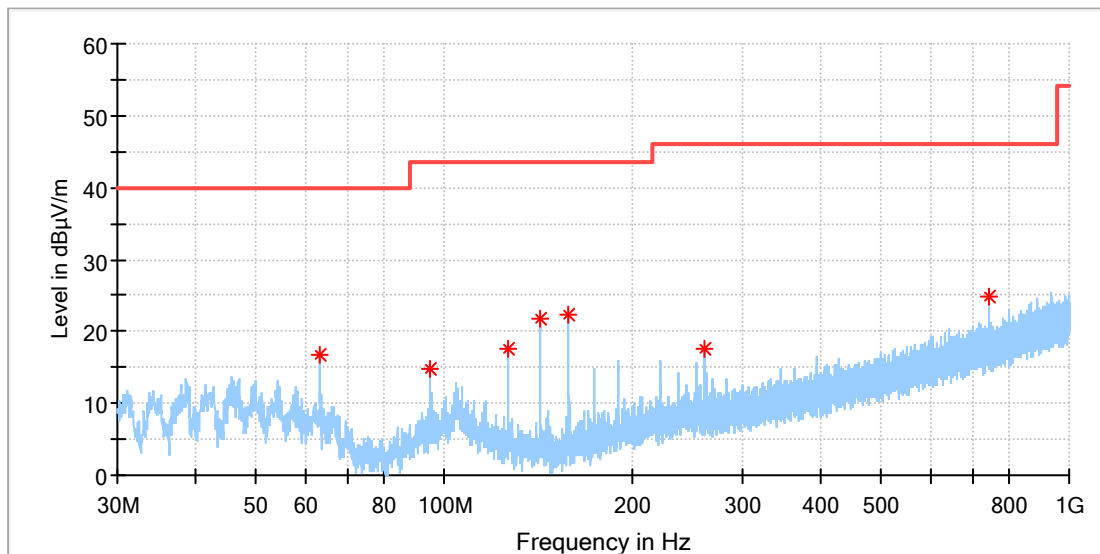
Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.983333	44.29	---	74.00	29.71	150.0	V	4.0	8.4
7439.983333	---	37.80	54.00	16.20	150.0	V	4.0	8.4
9919.950000	---	40.02	54.00	13.98	150.0	V	293.0	10.8
9921.916667	44.99	---	74.00	29.01	150.0	V	159.0	10.8

Appendix B.9: Test Results of Radiated Spurious Emissions Simultaneous mode

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BT+GENERIC 2.4GHZ
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

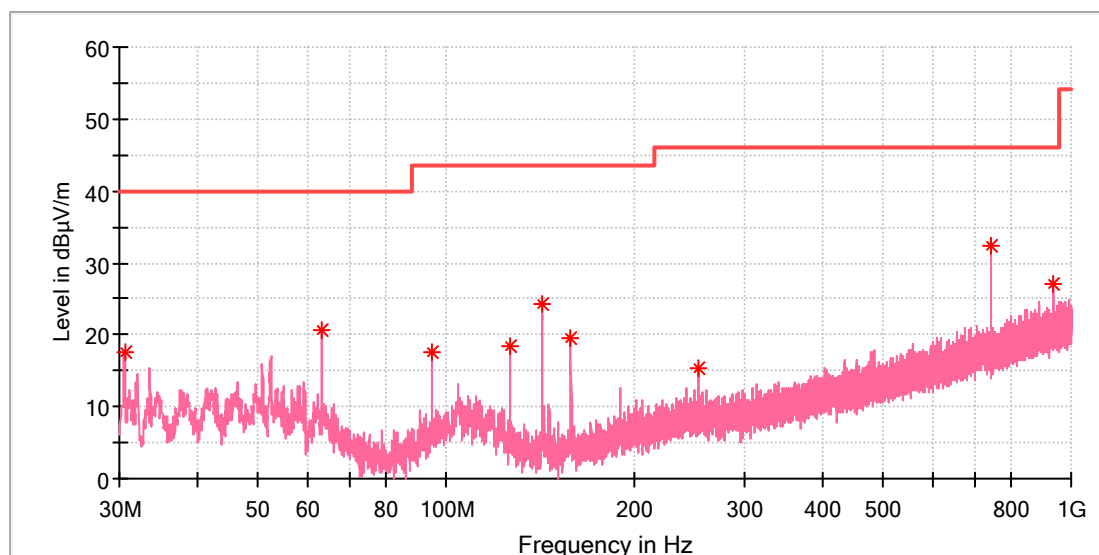


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
63.315769	16.86	40.00	23.14	100.0	H	150.0	-19.9
94.990000	14.84	43.50	28.66	100.0	H	159.0	-19.9
126.589615	17.57	43.50	25.93	100.0	H	140.0	-21.6
142.370769	21.66	43.50	21.84	100.0	H	150.0	-22.4
158.263846	22.43	43.50	21.07	100.0	H	0.0	-21.9
260.971923	17.60	46.00	28.40	100.0	H	38.0	-17.1
742.502308	24.74	46.00	21.26	100.0	H	222.0	-7.2

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BT+GENERIC 2.4GHZ
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

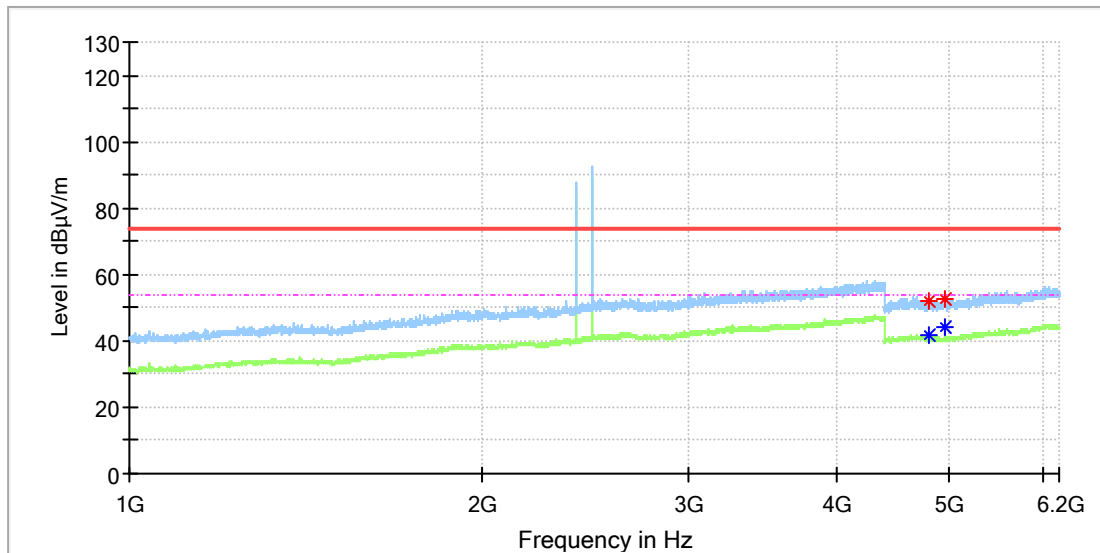


Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.559615	17.72	40.00	22.28	100.0	V	0.0	-22.9
63.353077	20.57	40.00	19.43	100.0	V	332.0	-19.9
95.027308	17.50	43.50	26.00	100.0	V	199.0	-19.8
126.664231	18.30	43.50	25.20	100.0	V	210.0	-21.6
142.520000	24.30	43.50	19.20	100.0	V	263.0	-22.4
158.263846	19.58	43.50	23.92	100.0	V	241.0	-21.9
253.435769	15.29	46.00	30.71	100.0	V	293.0	-17.3
742.502308	32.32	46.00	13.68	100.0	V	231.0	-7.2
937.509615	27.15	46.00	18.85	100.0	V	273.0	-4.4

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BT+GENERIC 2.4GHZ
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

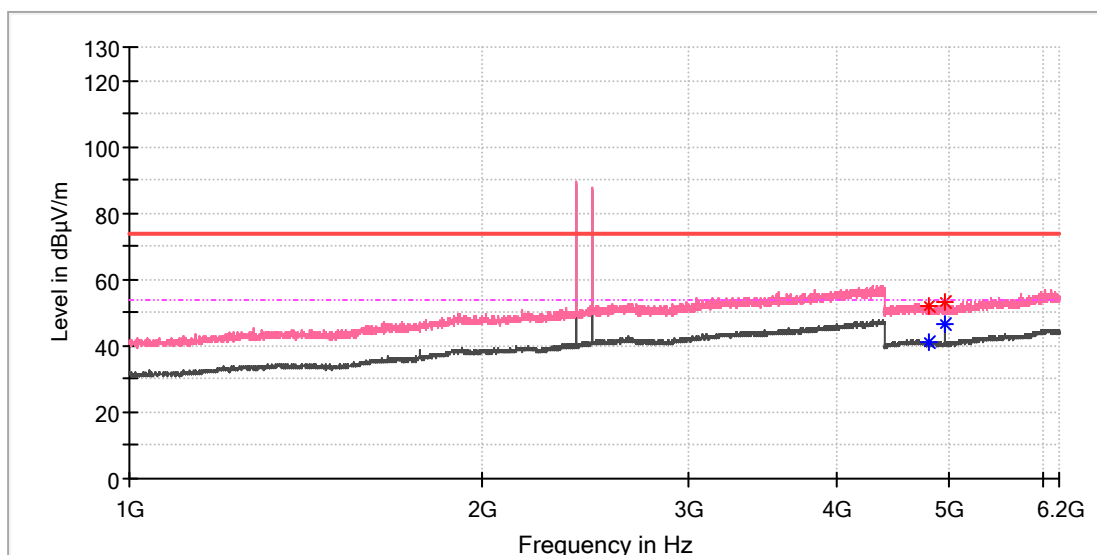


Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4803.500000	---	41.62	54.00	12.38	150.0	H	298.0	13.3
4807.000000	52.25	---	74.00	21.75	150.0	H	114.0	13.3
4960.000000	52.79	---	74.00	21.21	150.0	H	47.0	13.3
4960.000000	---	43.94	54.00	10.06	150.0	H	47.0	13.3

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BT+GENERIC 2.4GHZ
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

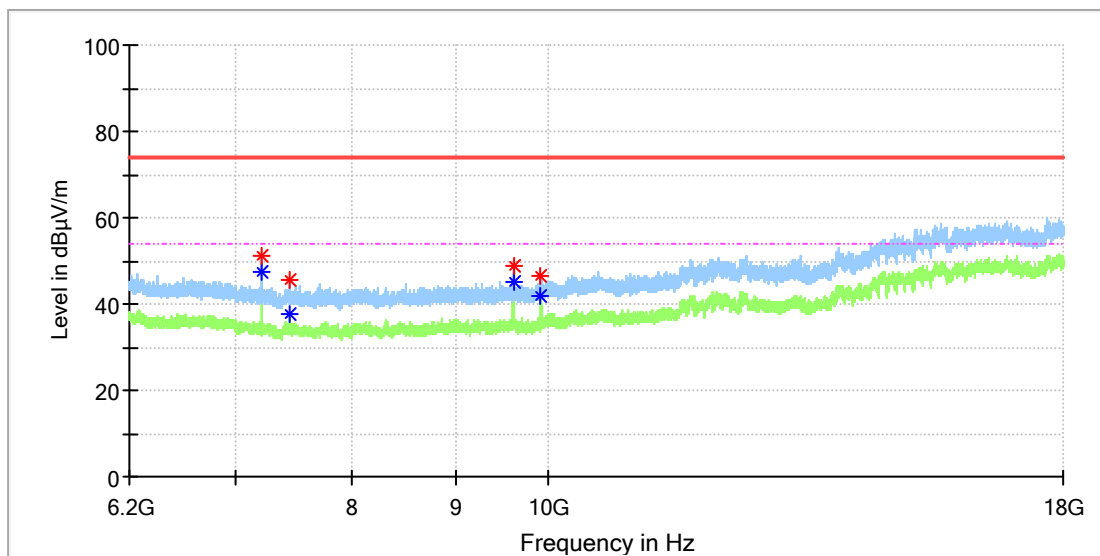


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4805.500000	52.22	---	74.00	21.78	150.0	V	2.0	13.3
4810.500000	---	41.41	54.00	12.59	150.0	V	31.0	13.3
4960.000000	53.47	---	74.00	20.53	150.0	V	49.0	13.3
4960.000000	---	46.32	54.00	7.68	150.0	V	49.0	13.3

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BT+GENERIC 2.4GHZ
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

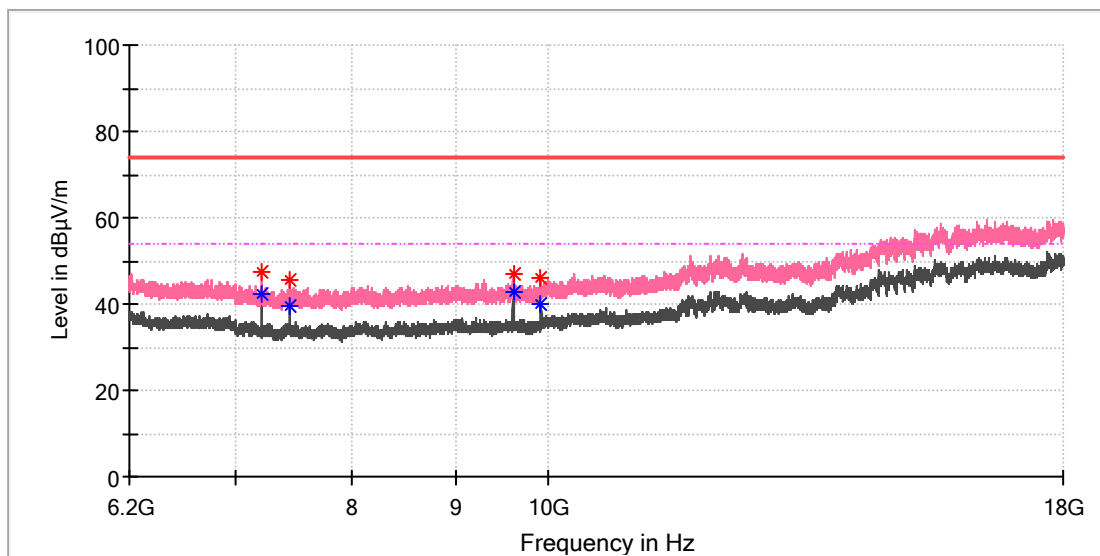


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7205.950000	51.36	---	74.00	22.64	150.0	H	302.0	8.8
7205.950000	---	47.35	54.00	6.65	150.0	H	302.0	8.8
7439.491667	45.51	---	74.00	28.49	150.0	H	314.0	8.4
7439.491667	---	37.78	54.00	16.22	150.0	H	314.0	8.4
9607.741667	48.61	---	74.00	25.39	150.0	H	278.0	10.4
9607.741667	---	45.30	54.00	8.70	150.0	H	278.0	10.4
9919.950000	46.39	---	74.00	27.61	150.0	H	56.0	10.8
9919.950000	---	41.67	54.00	12.33	150.0	H	56.0	10.8

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BT+GENERIC 2.4GHZ
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



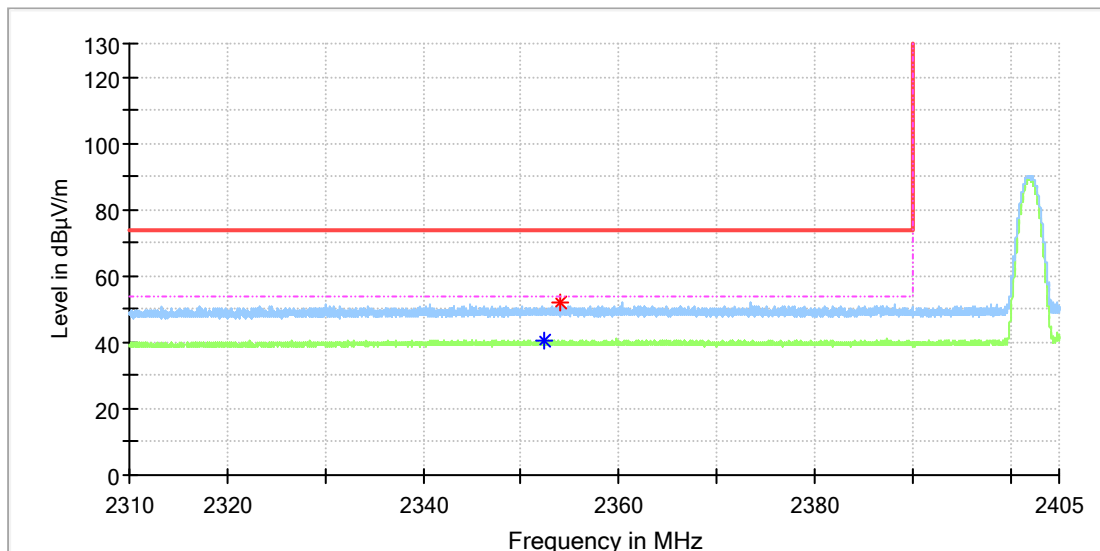
Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7205.458333	47.38	---	74.00	26.62	150.0	V	277.0	8.8
7205.950000	---	42.17	54.00	11.83	150.0	V	230.0	8.8
7439.491667	45.43	---	74.00	28.57	150.0	V	1.0	8.4
7439.983333	---	39.56	54.00	14.44	150.0	V	6.0	8.4
9607.741667	46.88	---	74.00	27.12	150.0	V	0.0	10.4
9607.741667	---	42.63	54.00	11.37	150.0	V	0.0	10.4
9919.950000	45.95	---	74.00	28.05	150.0	V	354.0	10.8
9919.950000	---	39.80	54.00	14.20	150.0	V	354.0	10.8

Appendix B.10: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

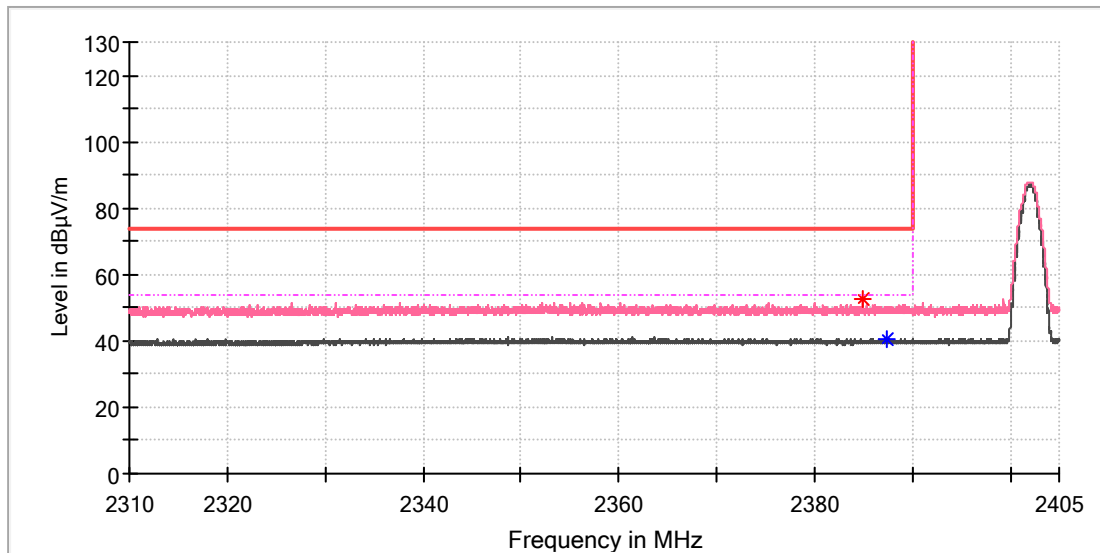


Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2352.288971	---	40.56	54.00	13.44	150.0	H	16.0	8.5
2353.923530	52.20	---	74.00	21.80	150.0	H	49.0	8.5

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

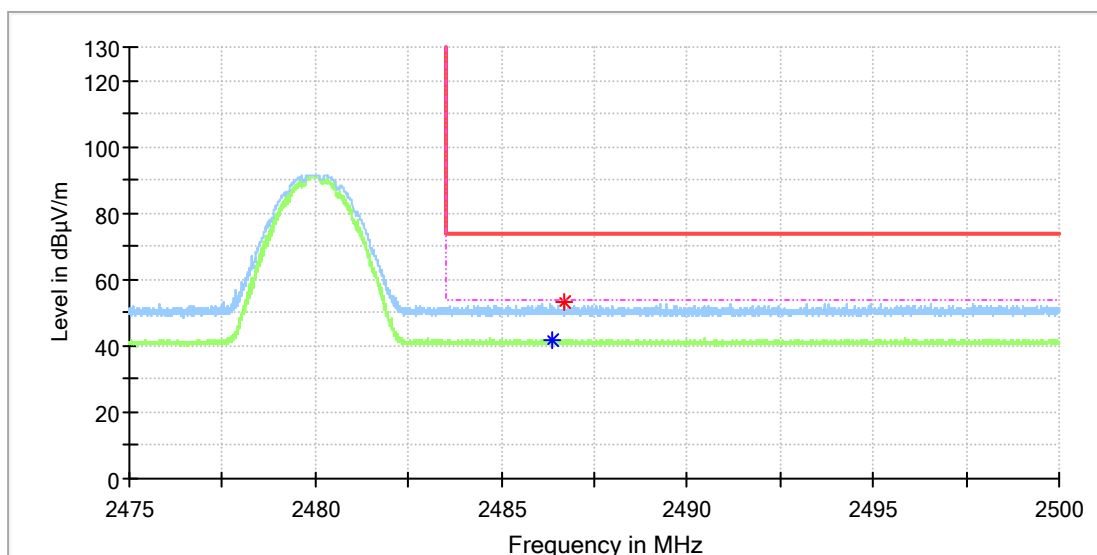


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2385.022059	52.37	---	74.00	21.63	150.0	V	287.0	8.5
2387.383088	---	40.78	54.00	13.22	150.0	V	18.0	8.5

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

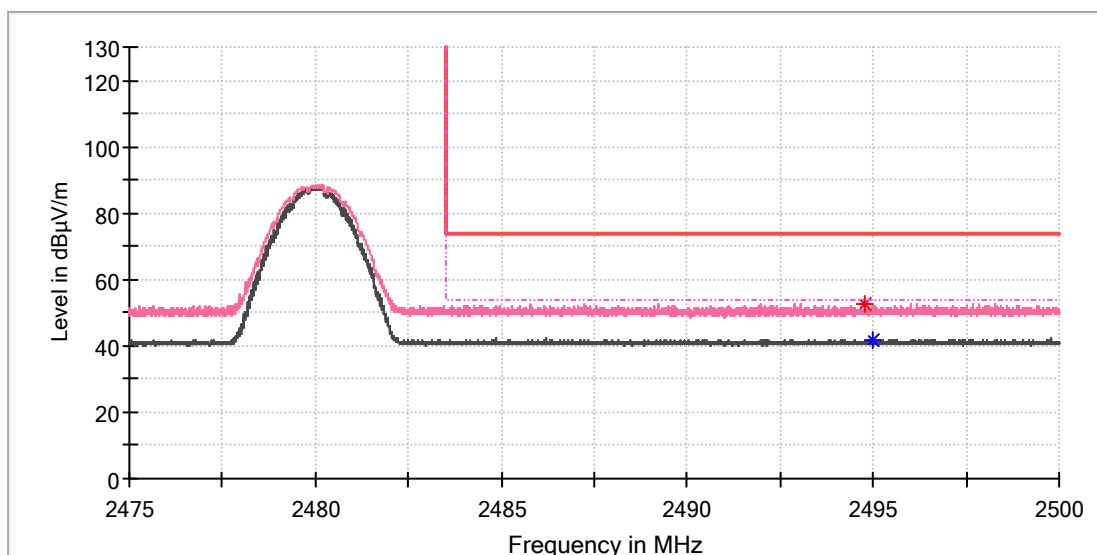


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2486.378677	---	41.64	54.00	12.36	150.0	H	3.0	9.0
2486.709559	53.44	---	74.00	20.56	150.0	H	110.0	9.0

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168542112/A003941723-002
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



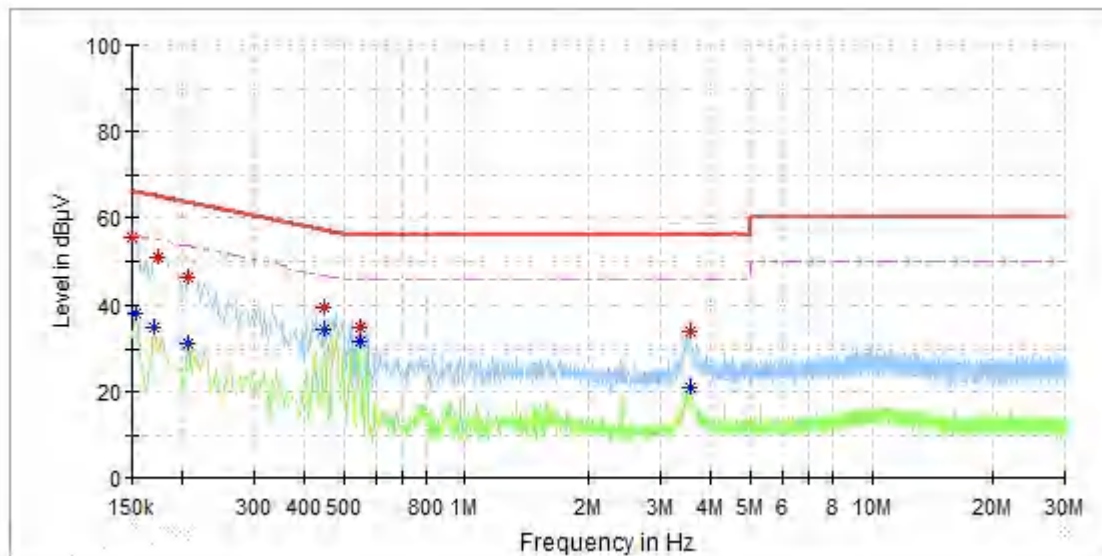
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2494.768382	52.86	---	74.00	21.14	150.0	V	294.0	9.0
2495.000000	---	41.98	54.00	12.02	150.0	V	73.0	9.0

Appendix B.11: Test Results of Conducted Emissions

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BT Playing + connected to subwoofer via generic 2.4GHz
Test Voltage:	AC 120V/60Hz
Test Standard:	FCC Part 15.207
Test By:/Review By:	Soloman Wu/Murphy Chen
Tem./Hum./Pressure:	24.5°C/52.3%/101kPa
Remark:	SR2

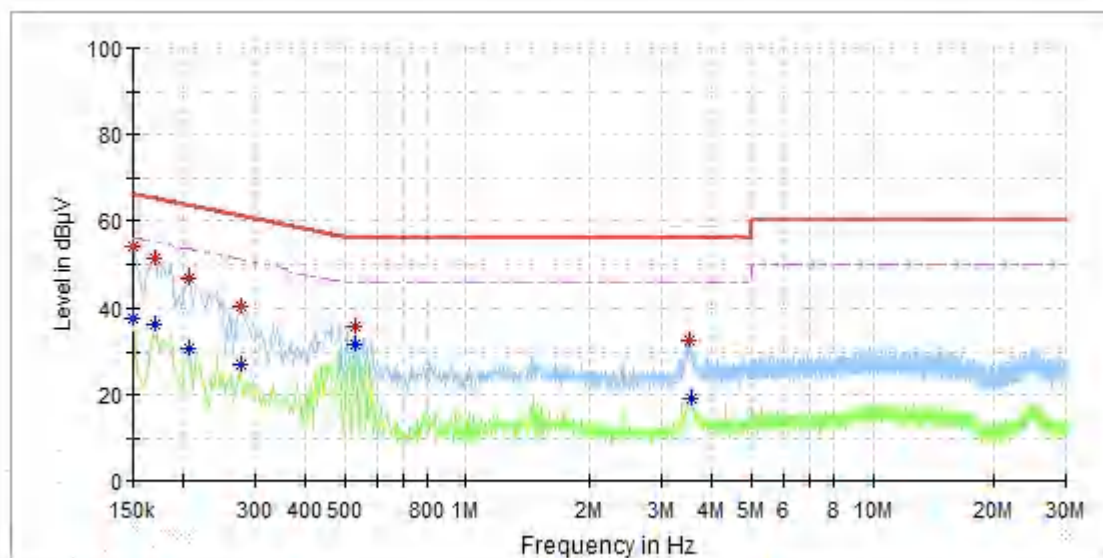


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.150000	55.27	---	66.00	10.73	L1	9.8
0.154000	---	38.17	55.78	17.62	L1	9.8
0.170000	---	34.79	54.96	20.17	L1	9.8
0.174000	50.51	---	64.77	14.26	L1	9.8
0.206000	46.74	---	63.37	16.62	L1	9.8
0.206000	---	31.32	53.37	22.05	L1	9.8
0.446000	39.33	---	56.95	17.62	L1	9.9
0.446000	---	34.48	46.95	12.47	L1	9.9
0.550000	34.96	---	56.00	21.04	L1	9.9
0.550000	---	31.84	46.00	14.16	L1	9.9
3.550000	33.91	---	56.00	22.09	L1	10.1
3.558000	---	20.87	46.00	25.13	L1	10.1

EUT Information

EUT Name:	Wireless Soundbar
Model:	CINEMA SB595
Test Mode:	BT Playing + connected to subwoofer via generic 2.4GHz
Test Voltage:	AC 120V/60Hz
Test Standard:	FCC Part 15.207
Test By:/Review By:	Soloman Wu/Murphy Chen
Tem./Hum./Pressure:	24.5°C/52.3%/101kPa
Remark:	SR2



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.150000	---	37.88	56.00	18.12	N	9.7
0.150000	54.13	---	66.00	11.87	N	9.7
0.170000	---	36.10	54.96	18.86	N	9.7
0.170000	51.35	---	64.96	13.61	N	9.7
0.206000	47.12	---	63.37	16.25	N	9.7
0.206000	---	30.51	53.37	22.86	N	9.7
0.278000	40.67	---	60.88	20.20	N	9.7
0.278000	---	27.19	50.88	23.69	N	9.7
0.534000	---	31.49	46.00	14.51	N	9.7
0.534000	35.71	---	56.00	20.29	N	9.7
3.506000	32.66	---	56.00	23.34	N	9.8
3.546000	---	18.90	46.00	27.10	N	9.8