Prüfbericht-Nr.: *Test report no.*:	**CN24IRQQ 001**	**Auftrags-Nr.:** *Order no.*:	168479317	Seite 1 von 26 *Page 1 of* 26
Kunden-Referenz-Nr.: *Client reference no.*:	N/A	**Auftragsdatum:** *Order date:*	2024-04-15	
Auftraggeber: *Client*:	Xiaomi Communications Co., Ltd. #019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, 100085, China			
Prüfgegenstand: *Test item*:	Multimedia Speaker			
Bezeichnung / Typ-Nr.: *Identification / Type no.*:	ASB02G			
Auftrags-Inhalt: *Order content*:	Test Report			
Prüfgrundlage: *Test specification*:	CFR47 FCC Part 15: Subpart C Section 15.247			

Wareneingangsdatum: *Date of sample receipt*:	2024-04-19	Please refer to Photo Document
Prüfmuster-Nr.: *Test sample no:*	A003701545-008,016, A003716191-003	
Prüfzeitraum: *Testing period*:	2024-04-24 - 2024-05-06	
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:	X Breeze Jiang Signed by: Breeze Jiang	**genehmigt von:** *authorized by*:	X Bell Hu Signed by: Bell Hu
Datum: *Date:* 2024-06-24		**Ausstellungsdatum:** *Issue date:* 2024-06-24	
Stellung / Position:	Sachverständige(r)/Expert	**Stellung** / Position:	Sachverständige(r)/Expert

Sonstiges / *Other*: FCC ID: 2AFZZASB02G

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*

Anmerkungen
Remarks

1	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. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. *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.*
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4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen 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 bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. *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.*

Test Summary

5.1.1 ANTENNA REQUIREMENT
RESULT: Pass

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER
RESULT: Pass

5.1.3 99% BANDWIDTH
RESULT: Pass

5.1.4 20DB BANDWIDTH
RESULT: Pass

5.1.5 CARRIER FREQUENCY SEPARATION
RESULT: Pass

5.1.6 NUMBER OF HOPPING FREQUENCY
RESULT: Pass

5.1.7 TIME OF OCCUPANCY
RESULT: Pass

5.1.8 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHZ BANDWIDTH
RESULT: Pass

5.1.9 RADIATED SPURIOUS EMISSION
RESULT: Pass

5.1.10 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 mode

Appendix B: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.
No. 362 Huanguan Road Middle, Longhua District, 518110, Shenzhen, P. R. China.

A2LA Cert. No.: 5162.01
FCC Accreditation Designation 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 (TS8997-R&S)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. until**
Wireless Connectivity Tester	R&S	CMW270	101375	25.07.2024
Signal Analyzer	R&S	FSV 40	101441	25.07.2024
Vector Signal Generator	R&S	SMBV100A	263301	25.07.2024
Signal Generator	R&S	SMB100A	115186	25.07.2024
OSP	R&S	OSP 150	101017	13.11.2024
Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
Test Software	R&S	WMS32 (V11.00.00)	N/A	N/A
Power Meter	R&S	NRP2	107105	13.11.2024
Power Sensor	R&S	NRP-Z81	105677	25.07.2024
Humid & Temp Programmable Tester	BOST	NTH090-60	19040801	28.02.2025
Shielding Room 8#	Albatross	SR8	APC17151-SR8	22.06.2024
Unwanted Emission Testing (TS9975)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. until**
EMI Test Receiver	R&S	ESR 7	102021	25.07.2024
Signal Analyzer	R&S	FSV 40	101439	25.07.2024
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	25.07.2024
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	25.07.2024
Amplifier	R&S	SCU-18F	180070	25.07.2024
Amplifier	R&S	SCU40A	100475	25.07.2024
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	06.08.2024
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	06.08.2024

Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	27.08.2024
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	06.08.2024
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	22.06.2024

Conducted Emission				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
EMI Test Receiver	R&S	ESR3	102428	30.07.2024
Artificial Mains Network	R&S	ENV216	102333	31.07.2024
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 basics 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 No. 362 Huanguan Road Middle, Longhua District, 518110, Shenzhen, P. R. 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 multimedia speaker, which supports three audio playback modes: USB channel, Bluetooth channel and AUX IN channel.

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:	Multimedia Speaker
Type Designation:	ASB02G
Trade Mark:	Xiaomi
FCC ID:	2AFZZASB02G
Operating Voltage:	DC 5V
Operating Temperature Range:	0 °C ~ 40 °C
Technical Specification of Bluetooth	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, π/4-DQPSK, 8DPSK
Channel Number:	BR & EDR mode:79 channels
Channel Separation:	BR & EDR mode:1MHz
Data Rate:	BR & EDR mode: 1Mbps, 2Mbps, 3Mbps
Antenna Type:	Integral Antenna
Antenna Gain:	1.07 dBi (Provided by the Client)

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

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, Transmitting on Hopping channel

C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- ID Label and Location Info
- Schematics
- Operation Description
- Block Diagram
- PCB Layout

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: 2013.

According to clause 3.1, all tests were performed on model ASB02G in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 5: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	Remark
Laptop	Lenovo	T480	PF-16A6N8
Adapter	HUAWEI	HW-110600C02	Input: 100-240V~50-60Hz, 1.8A Output: 5V/2A or 10V/4A or 11V/6A MAX
Phone	HUAWEI	/	/
Laptop	Lenovo	T14	/

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)

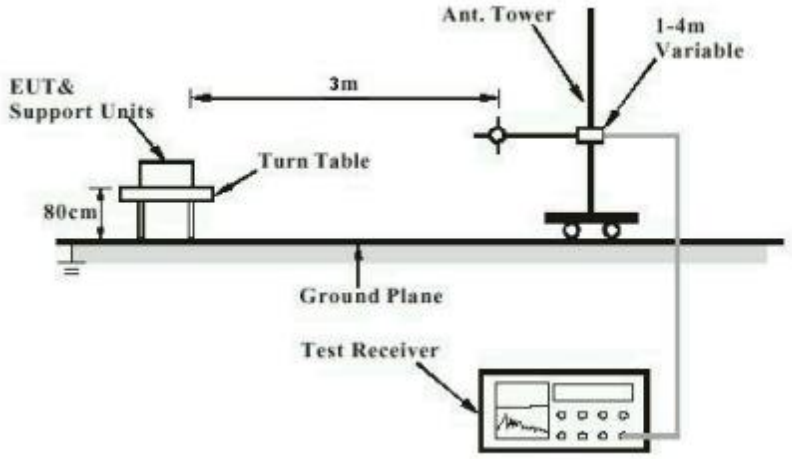


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

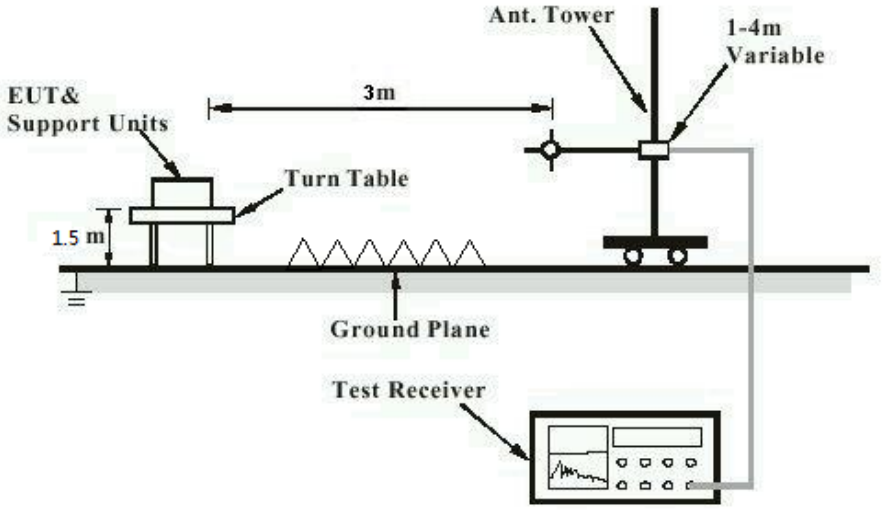


Diagram of Measurement Configuration for Mains Conduction Measurement

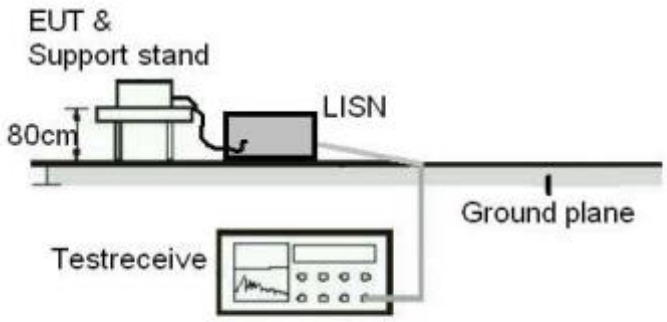
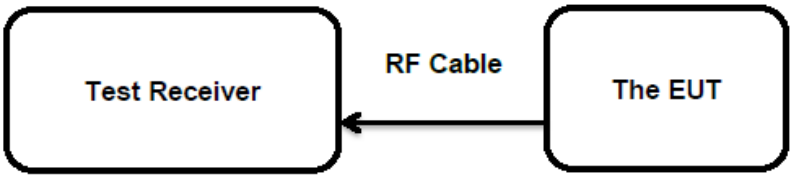


Diagram of Measurement Configuration for Conducted Transmitter Measurement



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

The EUT has an Integral Antenna, the directional gain of antenna is 1.07 dBi, 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.

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: 2013
Limits	:	FHSS < 0.125 Watts, DSSS < 1.0 Watts
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2024-04-24 to 2024-05-06
Input voltage	:	DC 5V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	23.8 ℃
Relative humidity	:	51.2 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 6: Test Result of Maximum Peak Conducted Output Power, Bluetooth BR & EDR

Test Mode	Test Channel (MHz)	Measured Peak Power		Conducted Average Power		Limit (W)
		(dBm)	(W)	(dBm)	(W)	
GFSK (BR)	2402.0	5.3	0.0034	5.1	0.0032	< 1.0
	2441.0	3.9	0.0025	3.8	0.0024	
	2480.0	1.0	0.0013	0.9	0.0012	
8DPSK (EDR)	2402.0	3.9	0.0025	2.3	0.0017	< 0.125
	2441.0	2.7	0.0019	1.1	0.0013	
	2480.0	-0.1	0.0010	-1.8	0.0007	

Max. e.i.r.p=5.3dBm+1.07dBi=6.37dBm, which is less than 36dBm=4W.
Note:
1) The cable loss is taken into account in results.
2) Antenna gain(G): 1.07 dBi

5.1.3 99% Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a) RSS-Gen Clause 6.7
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2024-04-24 to 2024-05-06
Input voltage	:	DC 5V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	23.8 ℃
Relative humidity	:	51.2 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.4 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	:	2024-04-24 to 2024-05-06
Input voltage	:	DC 5V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	23.8 ℃
Relative humidity	:	51.2 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.5 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	:	≥ 25kHz or 2/3 of 20dB bandwidth, whichever is greater
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2024-04-24 to 2024-05-06
Input voltage	:	DC 5V
Operation mode	:	B
Test channel	:	Low / Middle / High
Ambient temperature	:	23.8 ℃
Relative humidity	:	51.2 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.6 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	:	2024-04-24 to 2024-05-06
Input voltage	:	DC 5V
Operation mode	:	B
Ambient temperature	:	23.8 ℃
Relative humidity	:	51.2 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.7 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	:	2024-04-24 to 2024-05-06
Input voltage	:	DC 5V
Operation mode	:	B
Test channel	:	Low / Middle / High
Ambient temperature	:	23.8 ℃
Relative humidity	:	51.2 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.8 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); 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	:	2024-04-24 to 2024-05-06
Input voltage	:	DC 5V
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	23.8 ℃
Relative humidity	:	51.2 %
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.

5.1.9 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 Section 8.9 & 8.10
Kind of test site	:	3m Semi-anechoic Chamber

Test Setup

Date of testing	:	2024-04-24 to 2024-05-06
Input voltage	:	DC 5V
Operation mode	:	A
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.

5.1.10 Conducted Emission on AC Mains

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.207(a) RSS-Gen Clause 8.8
Basic standard	:	ANSI C63.4:2014
Frequency range	:	0.15 – 30MHz
Classification	:	Class B
Limits	:	FCC Part 15.207(a) RSS-Gen Table 4
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2024-04-24 to 2024-05-06
Input voltage	:	120V AC via Adapter
Ambient temperature	:	24.3ºC
Relative humidity	:	52.2%
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

6 Photographs of the Test Set-Up

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

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Appendix A: Test Results of Bluetooth BR & EDR mode

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Appendix A.1: 99% Bandwidth

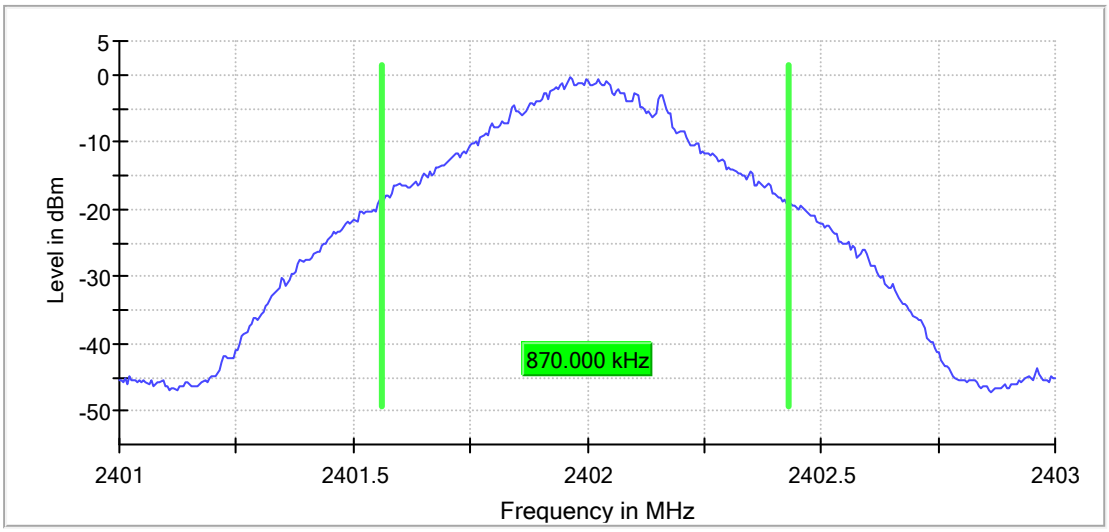
DH5:

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.870000	---	---	2401.562500	2402.432500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

99 % Bandwidth

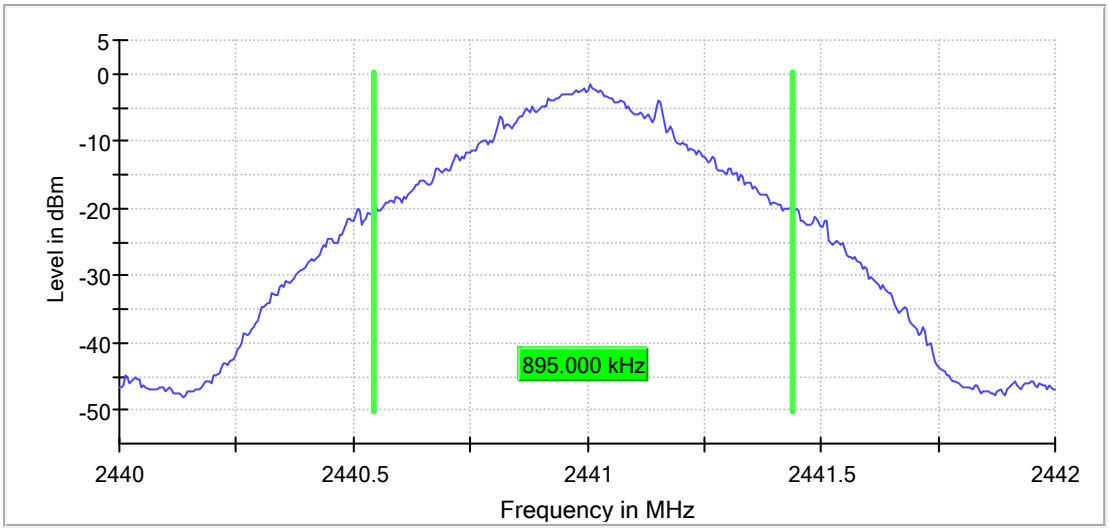


DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.895000	---	---	2440.542500	2441.437500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS

99 % Bandwidth

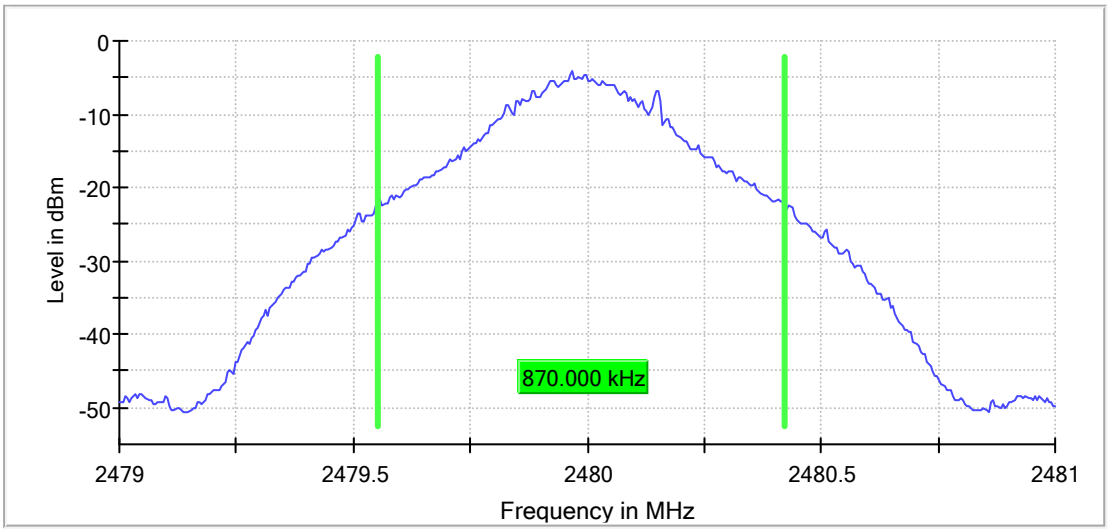


DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.870000	---	---	2479.552500	2480.422500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

99 % Bandwidth



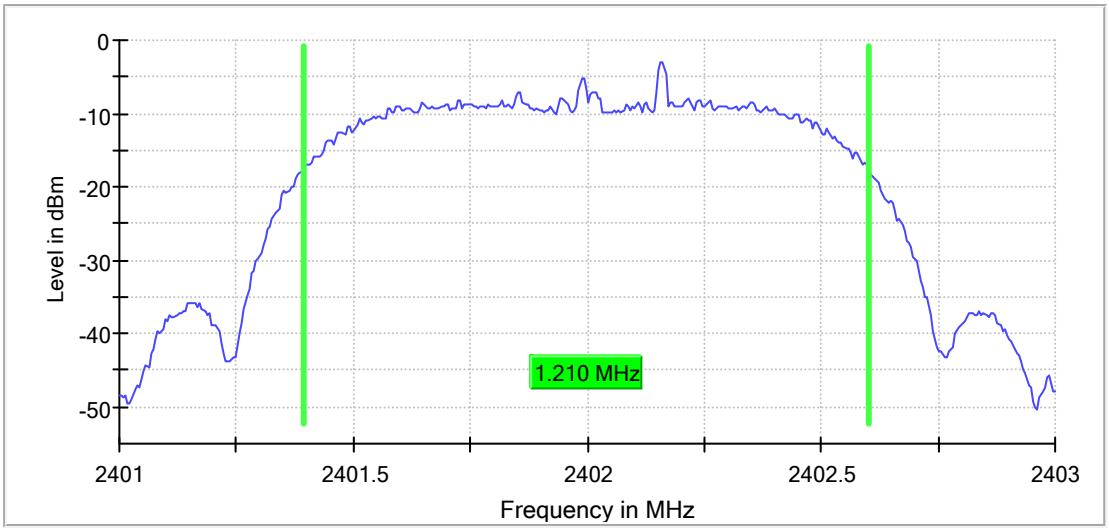
3DH5:

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.210000	---	---	2401.392500	2402.602500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

99 % Bandwidth

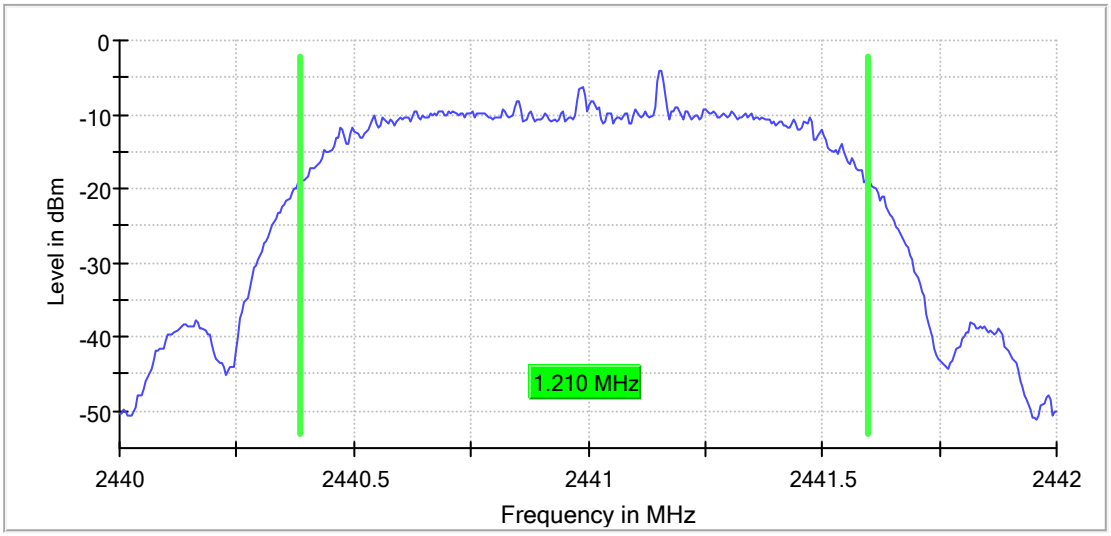


DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.210000	---	---	2440.387500	2441.597500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS

99 % Bandwidth

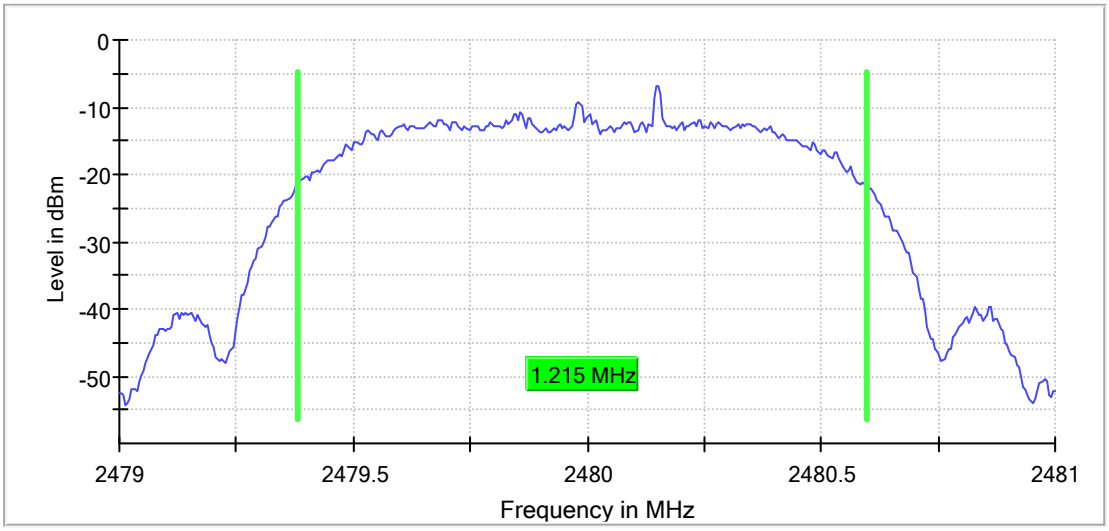


DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.215000	---	---	2479.382500	2480.597500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

99 % Bandwidth



Appendix A.2: 20dB Bandwidth

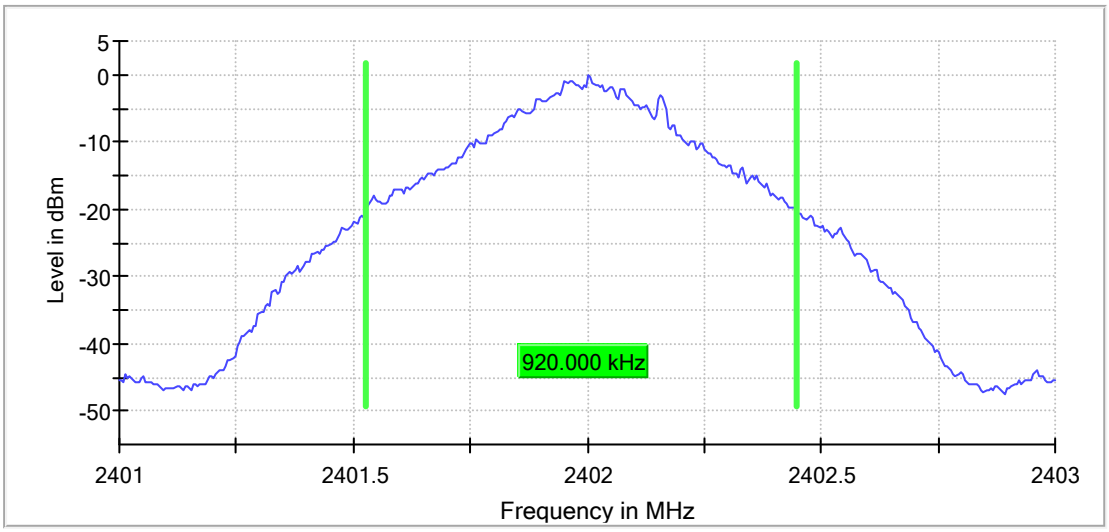
DH5:

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.920000	---	---	2401.527500	2402.447500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-0.2	PASS

20 dB Bandwidth

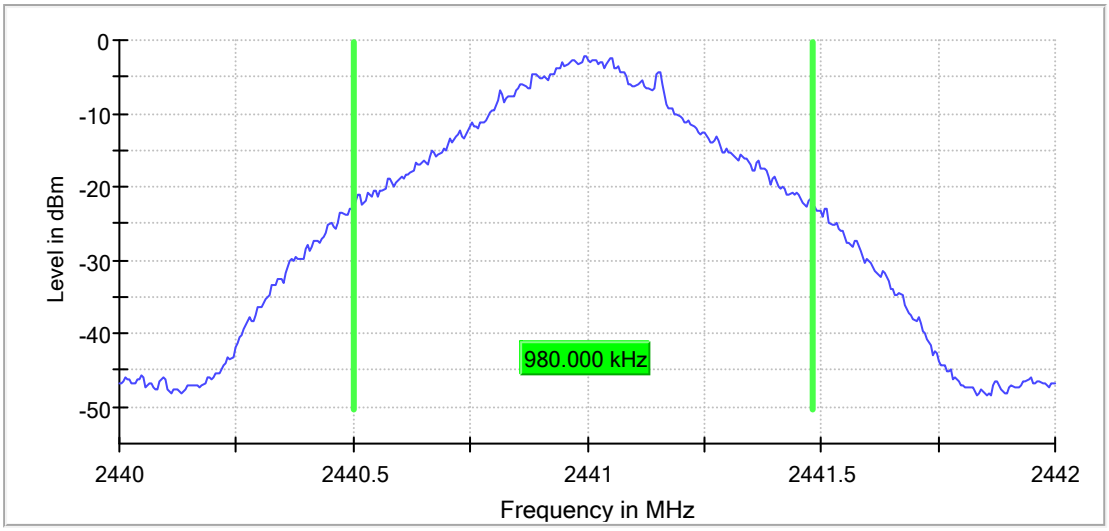


DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.980000	---	---	2440.502500	2441.482500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-2.1	PASS

20 dB Bandwidth

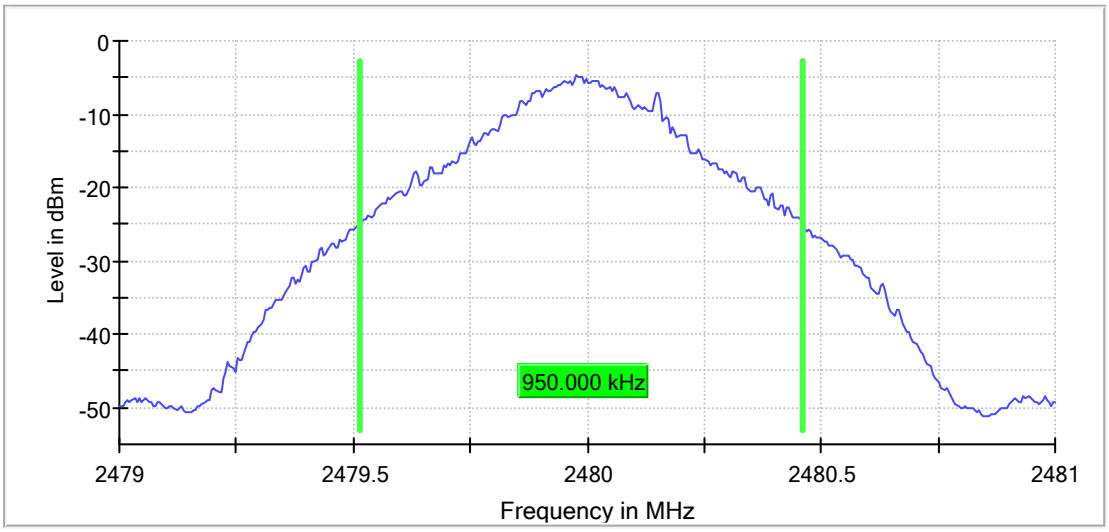


DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.950000	---	---	2479.512500	2480.462500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-4.7	PASS

20 dB Bandwidth



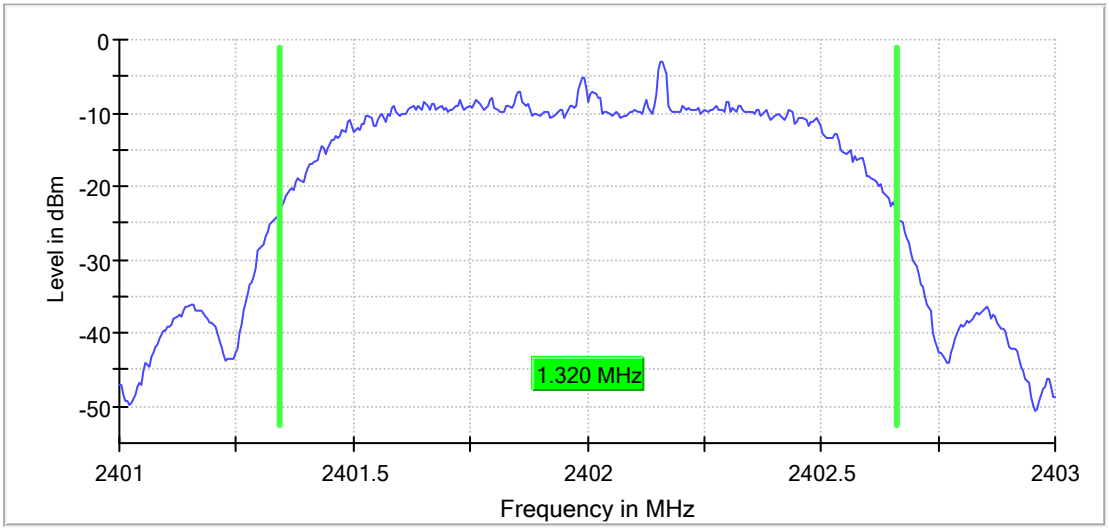
3DH5:

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.320000	---	---	2401.342500	2402.662500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-3.0	PASS

20 dB Bandwidth

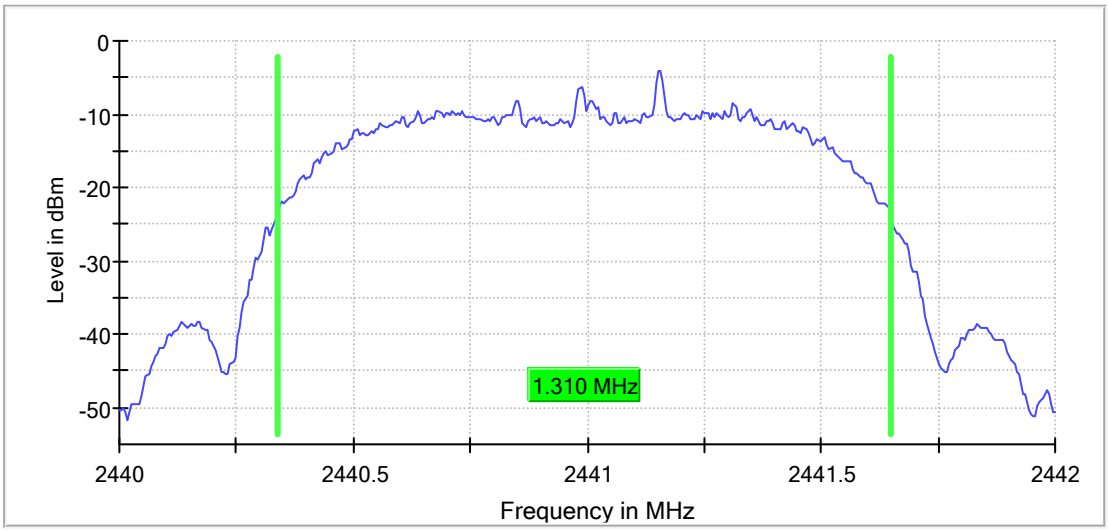


DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.310000	---	---	2440.337500	2441.647500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-4.1	PASS

20 dB Bandwidth

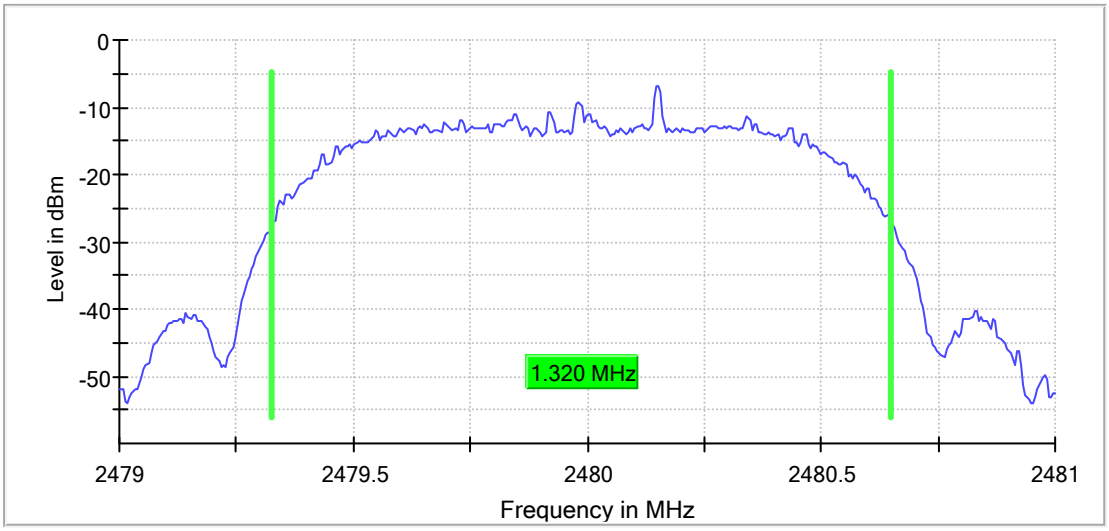


DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.320000	---	---	2479.327500	2480.647500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

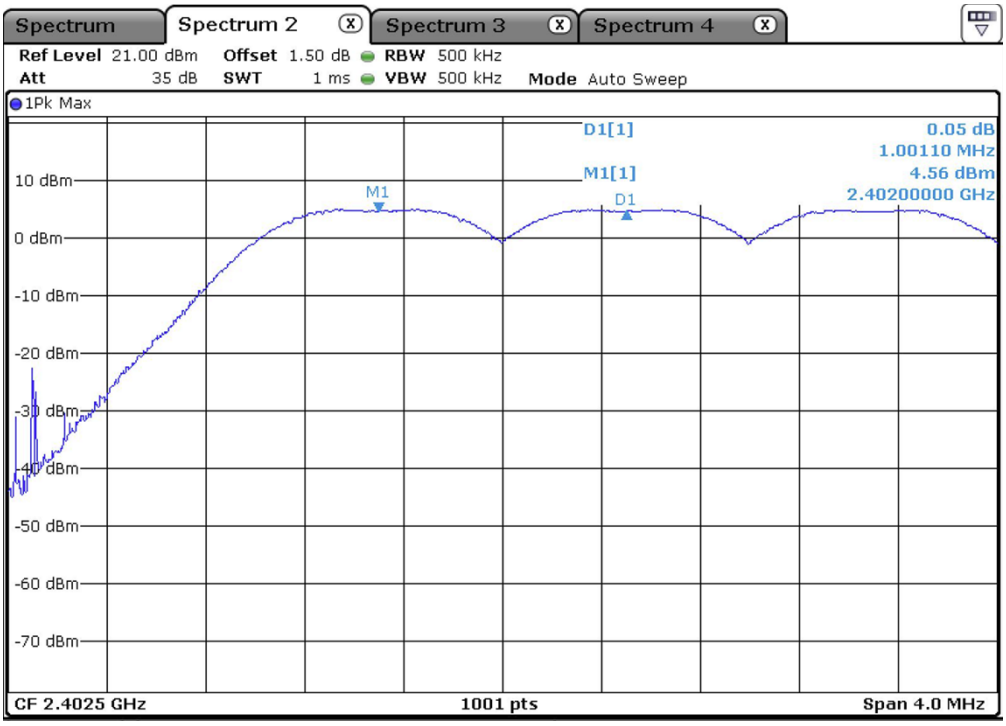
DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-6.9	PASS

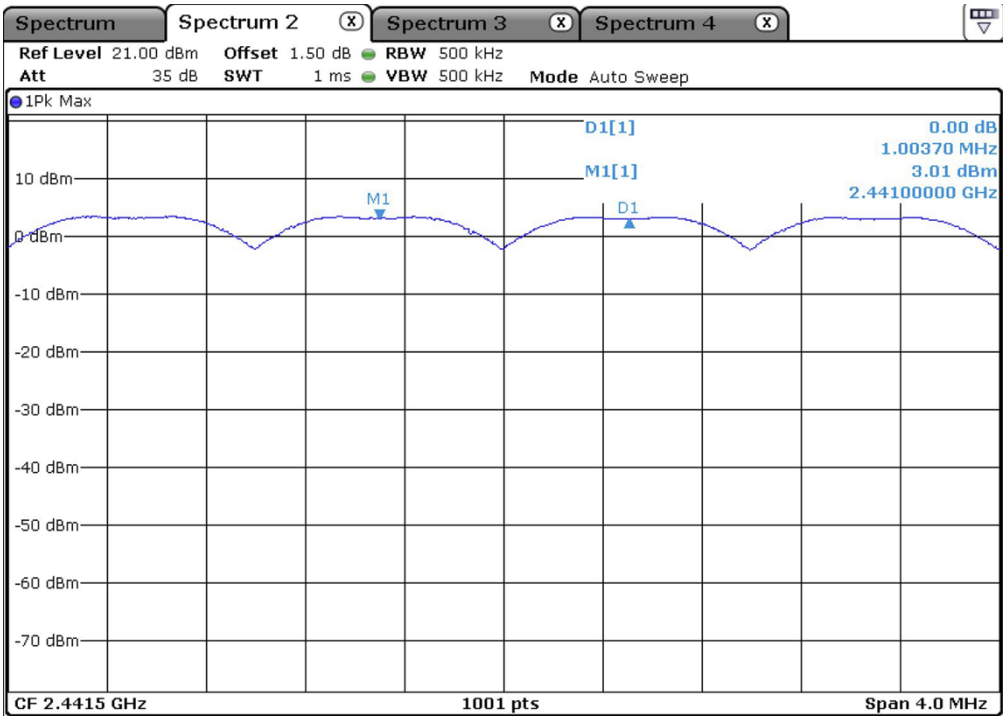
20 dB Bandwidth

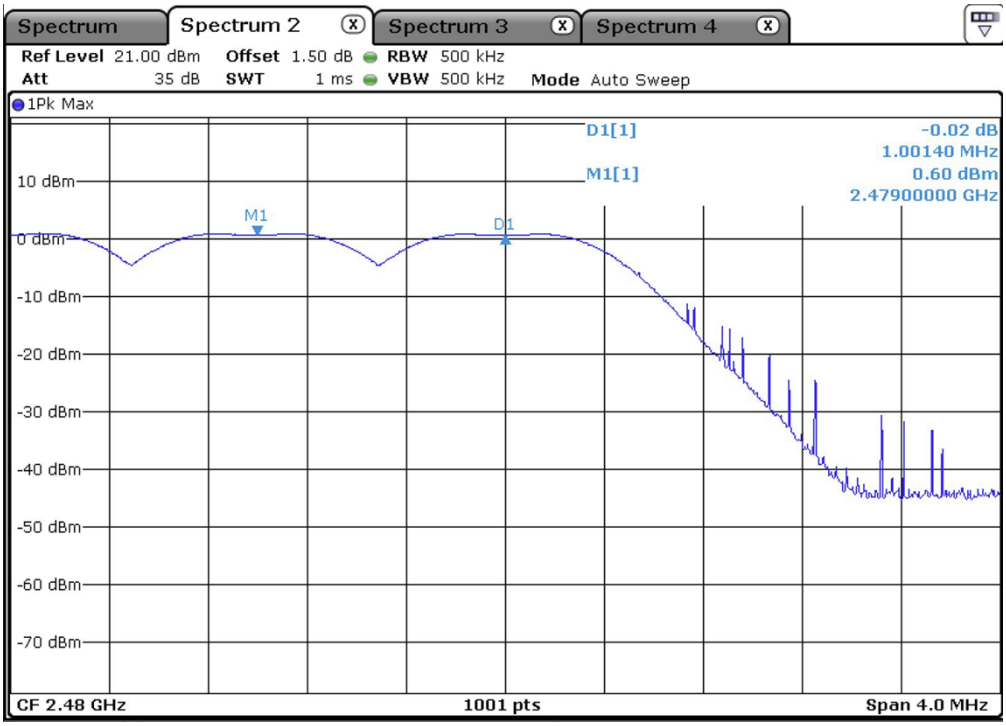


Appendix A.3: Carrier Frequency Separation

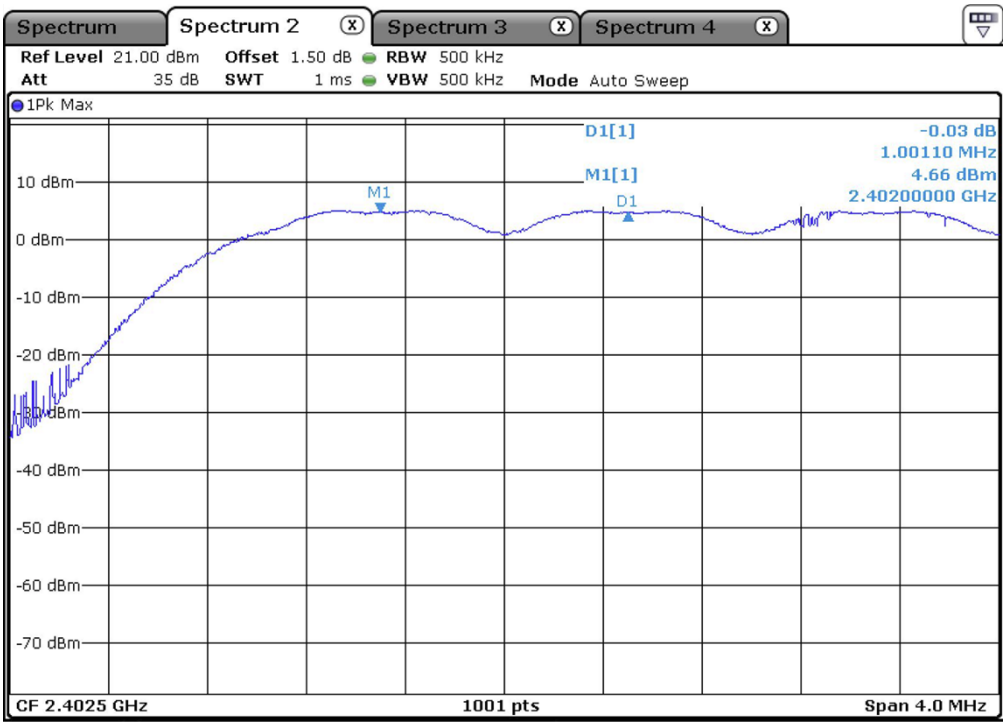
DH5:

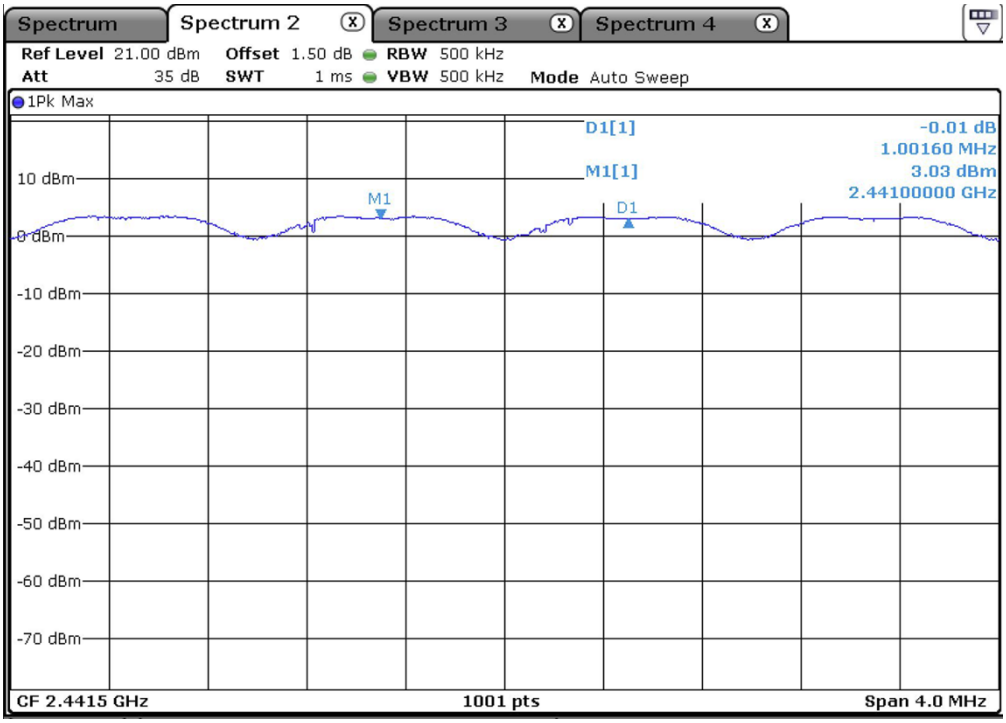


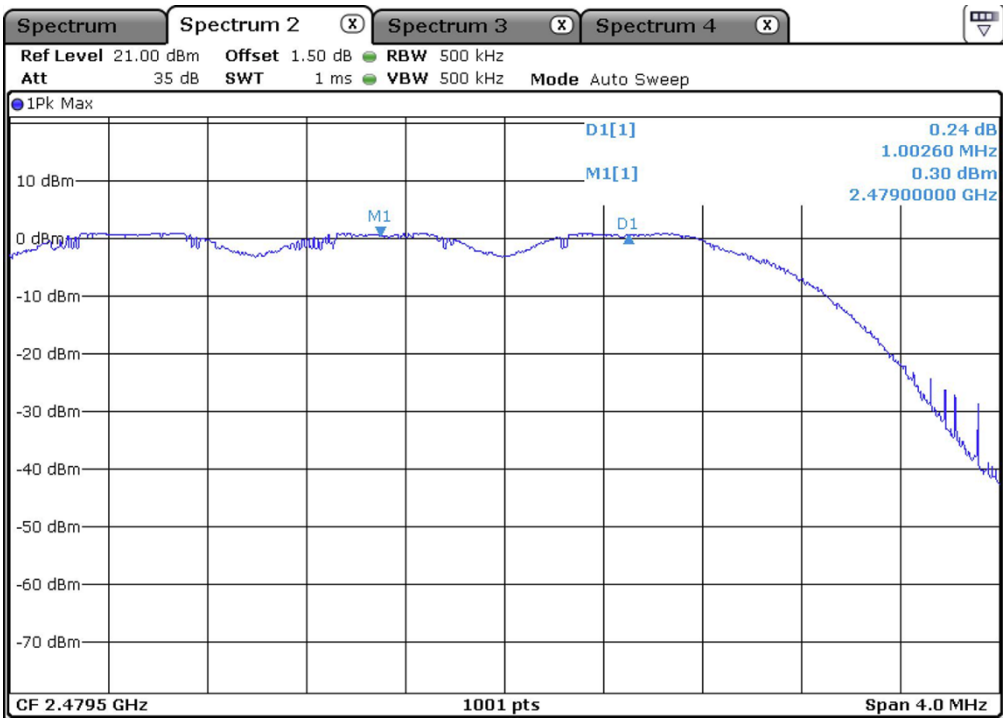



Spectrum
Spectrum 2
Spectrum 3
Spectrum 4
Ref Level 21.00 dBm Offset 1.50 dB RBW 500 kHz
Att 35 dB SWT 1 ms VBW 500 kHz Mode Auto Sweep
1Pk Max
D1[1] -0.02 dB
1.00140 MHz
M1[1] 0.60 dBm
2.47900000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
D1
CF 2.48 GHz
1001 pts
Span 4.0 MHz

3DH5:


Spectrum
Spectrum 2
Spectrum 3
Spectrum 4
Ref Level 21.00 dBm Offset 1.50 dB RBW 500 kHz
Att 35 dB SWT 1 ms VBW 500 kHz Mode Auto Sweep
1Pk Max
D1[1] -0.03 dB
1.00110 MHz
M1[1] 4.66 dBm
2.40200000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
D1
CF 2.4025 GHz
1001 pts
Span 4.0 MHz


Spectrum
Spectrum 2
Spectrum 3
Spectrum 4
Ref Level 21.00 dBm Offset 1.50 dB RBW 500 kHz
Att 35 dB SWT 1 ms VBW 500 kHz Mode Auto Sweep
1Pk Max
D1[1] -0.01 dB
1.00160 MHz
M1[1] 3.03 dBm
2.44100000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
D1
CF 2.4415 GHz
1001 pts
Span 4.0 MHz

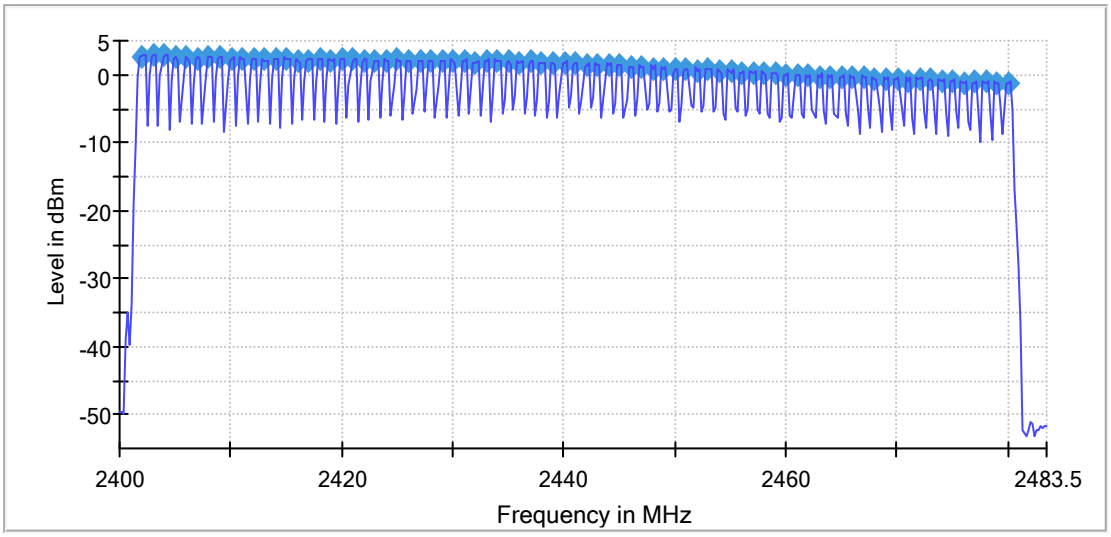

Spectrum
Spectrum 2
Spectrum 3
Spectrum 4
Ref Level 21.00 dBm Offset 1.50 dB RBW 500 kHz
Att 35 dB SWT 1 ms VBW 500 kHz Mode Auto Sweep
1Pk Max
D1[1] 0.24 dB
1.00260 MHz
M1[1] 0.30 dBm
2.47900000 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
D1
CF 2.4795 GHz
1001 pts
Span 4.0 MHz

Appendix A.4: Number of Hopping Frequency

DH5:

Channels	Limit Min	Limit Max	Result
79	15	---	PASS

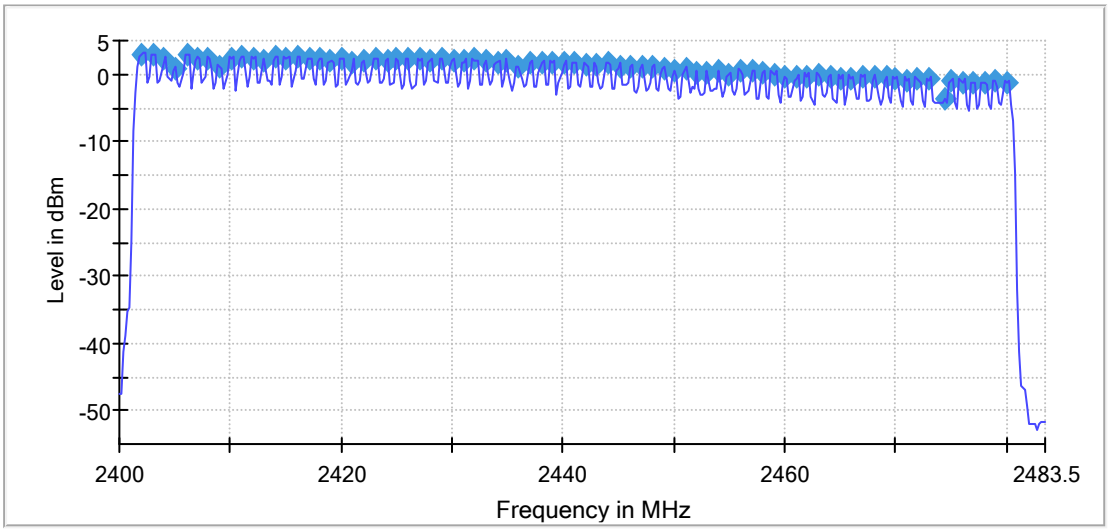
Sequence



3DH5:

Channels	Limit Min	Limit Max	Result
79	15	---	PASS

Sequence



Appendix A.5: Time of Occupancy

DH1:

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	316	125.240	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
5.000	198.740	99.751

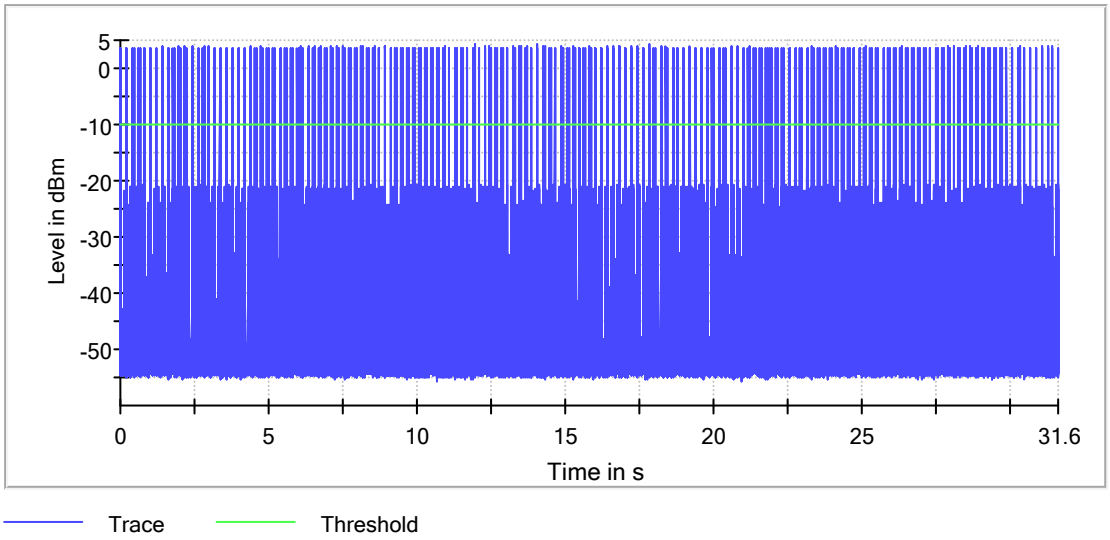
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
0.39	0.78	400.000	0.000	0.395

DwellTime

Min (ms)	Max (ms)	Mean (ms)
0.39	1.640	0.406

Time of Channel Occupancy



DH3:

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	175	291.050	-10.0

Periode

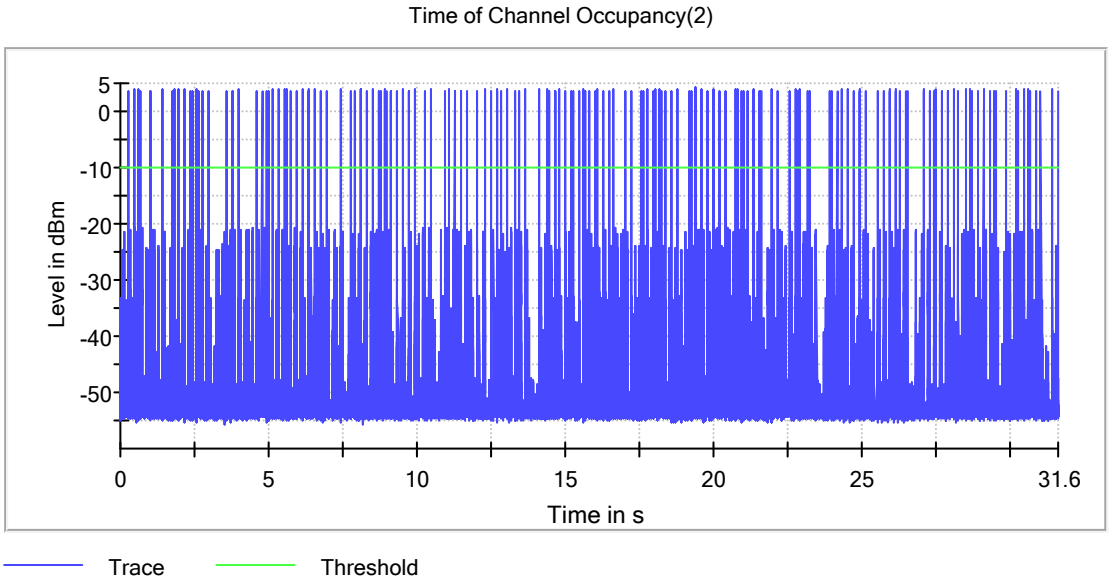
Min (ms)	Max (ms)	Mean (ms)
10.000	687.480	179.162

Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
1.650	1.660	400.000	0.000	1.654

DwellTime

Min (ms)	Max (ms)	Mean (ms)
1.650	1.660	1.654



DH5:

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	106	310.480	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
33.750	1188.720	293.064

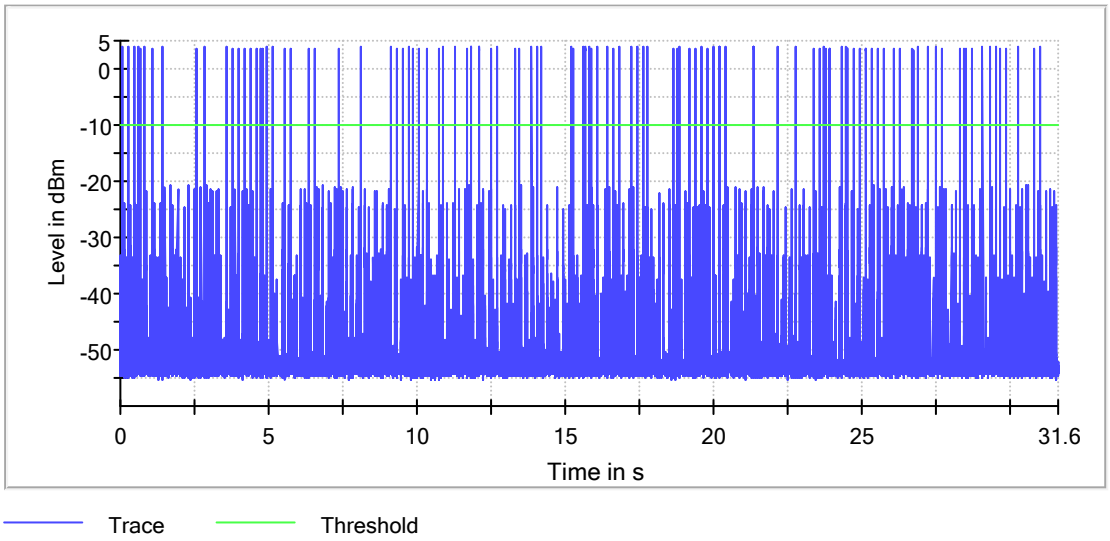
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
2.900	2.910	400.000	0.000	2.902

DwellTime

Min (ms)	Max (ms)	Mean (ms)
2.900	2.910	2.902

Time of Channel Occupancy(3)



3DH1:

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	314	122.990	-10.0

Periode

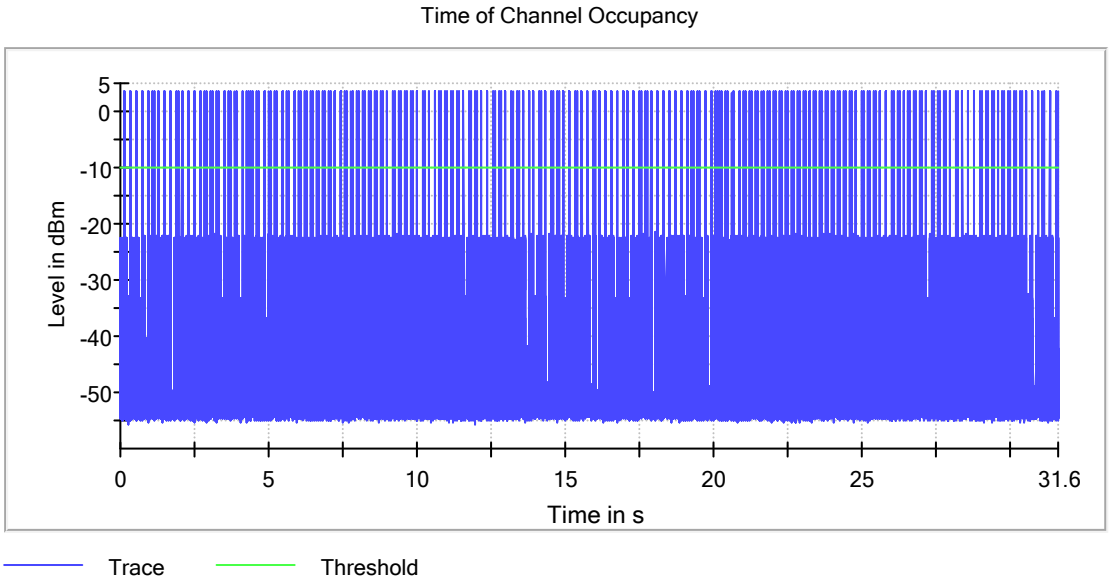
Min (ms)	Max (ms)	Mean (ms)
5.000	198.750	100.249

Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
0.33	0.80	400.000	0.000	0.390

DwellTime

Min (ms)	Max (ms)	Mean (ms)
0.37	1.650	0.415



3DH3:

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	173	277.760	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
10.000	687.480	179.690

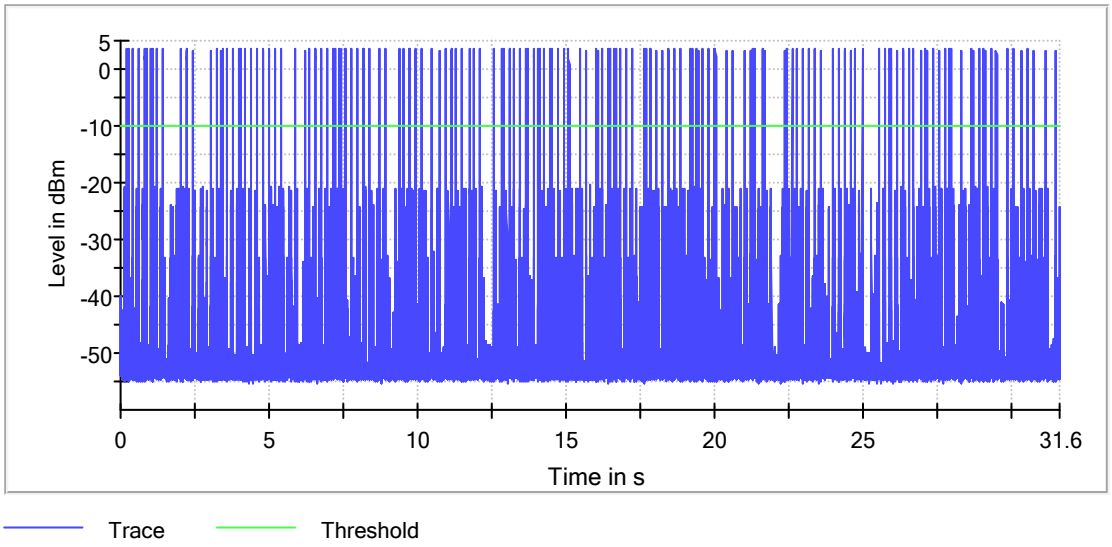
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
1.520	1.650	400.000	0.000	1.596

DwellTime

Min (ms)	Max (ms)	Mean (ms)
1.620	1.650	1.645

Time of Channel Occupancy(2)



3DH5:

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	102	288.590	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
33.750	1188.720	305.710

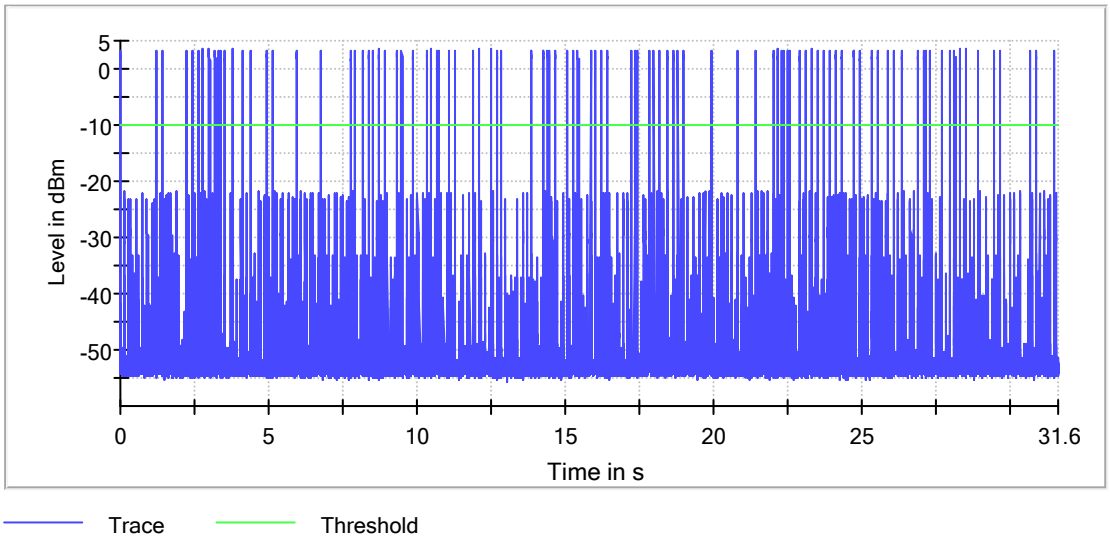
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
2.700	2.900	400.000	0.000	2.802

DwellTime

Min (ms)	Max (ms)	Mean (ms)
2.870	2.900	2.895

Time of Channel Occupancy(3)

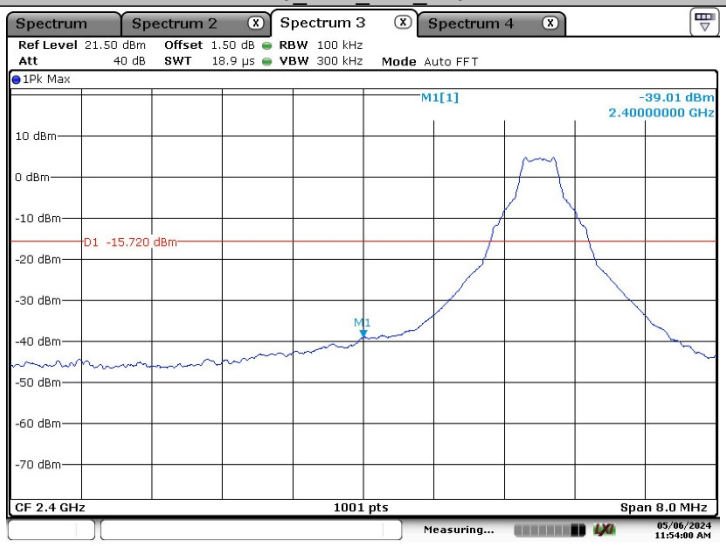


Appendix A.6: Conducted Spurious Emissions Measured in 100 kHz Bandwidth

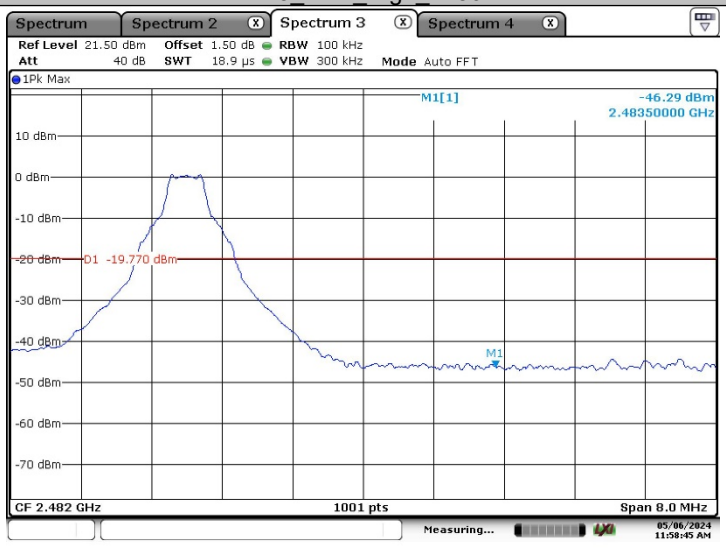
Band Edge

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	4.28	-39.01	≤-15.72	PASS
		High	2480	0.23	-46.29	≤-19.77	PASS
3DH5	Ant1	Low	2402	4.16	-39.05	≤-15.84	PASS
		High	2480	0.29	-46.98	≤-19.71	PASS
DH5	Ant1	Hopping	2402	4.56	-47.89	≤-15.44	PASS
		Hopping	2480	4.56	-47.44	≤-15.44	PASS
3DH5	Ant1	Hopping	2402	4.4	-48.64	≤-15.6	PASS
		Hopping	2480	4.4	-46.16	≤-15.6	PASS

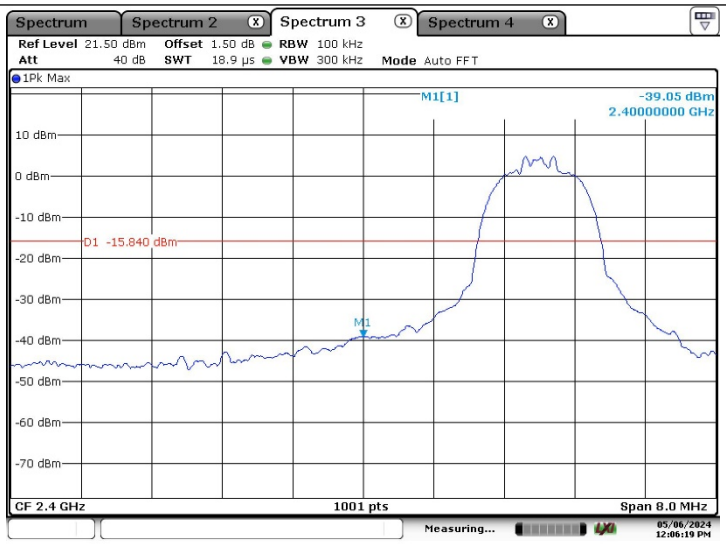
DH5_Ant1_Low_2402



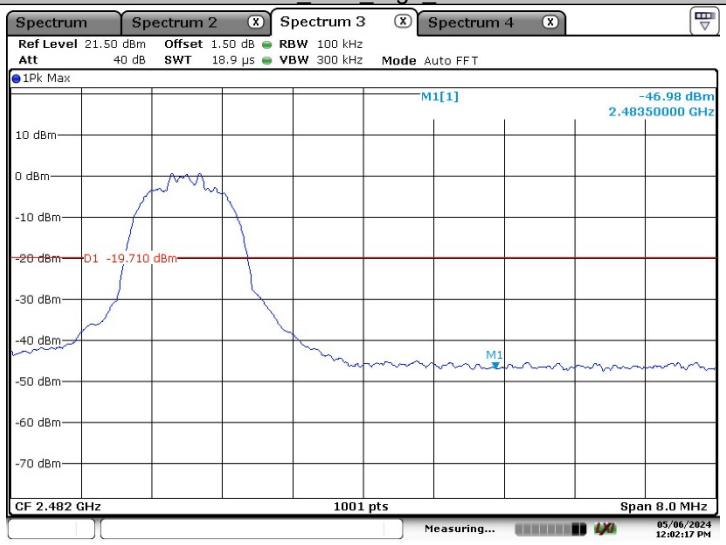
DH5_Ant1_High_2480



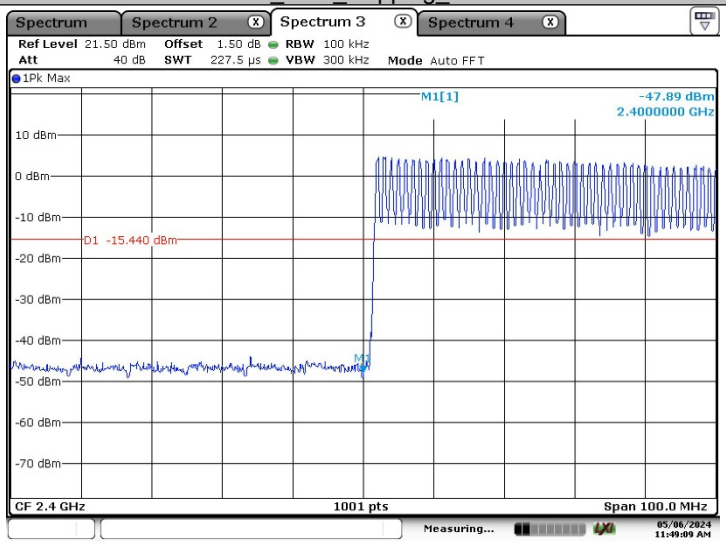
3DH5_Ant1_Low_2402



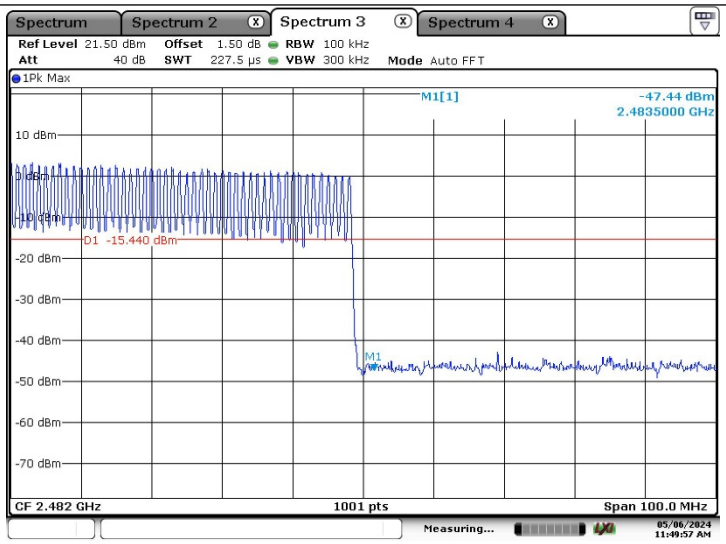
3DH5_Ant1_High_2480



DH5_Ant1_Hopping_2402

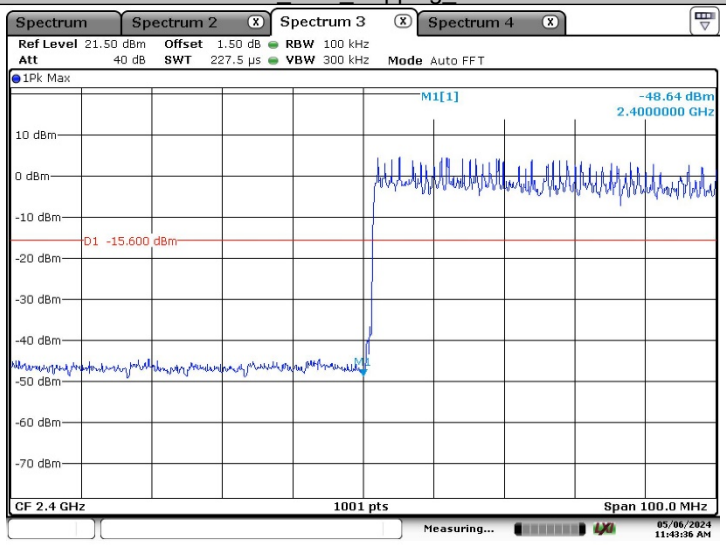


DH5_Ant1_Hopping_2480



Date: 6.MAY.2024 11:49:58

3DH5_Ant1_Hopping_2402



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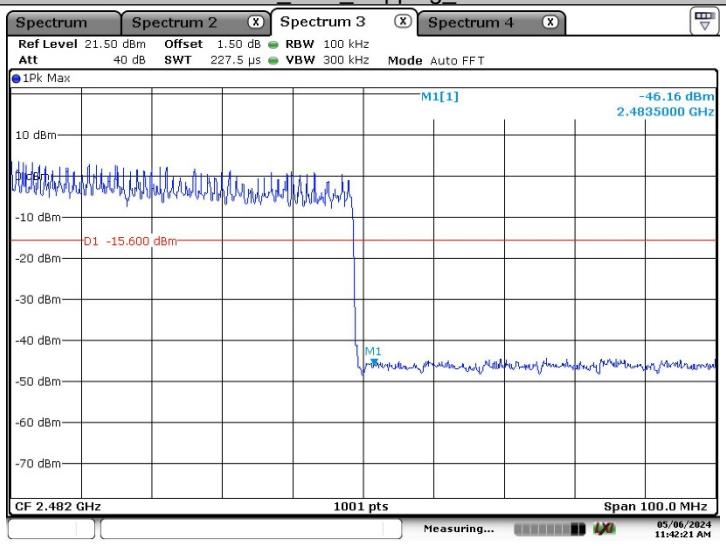
3DH5_Ant1_Hopping_2480

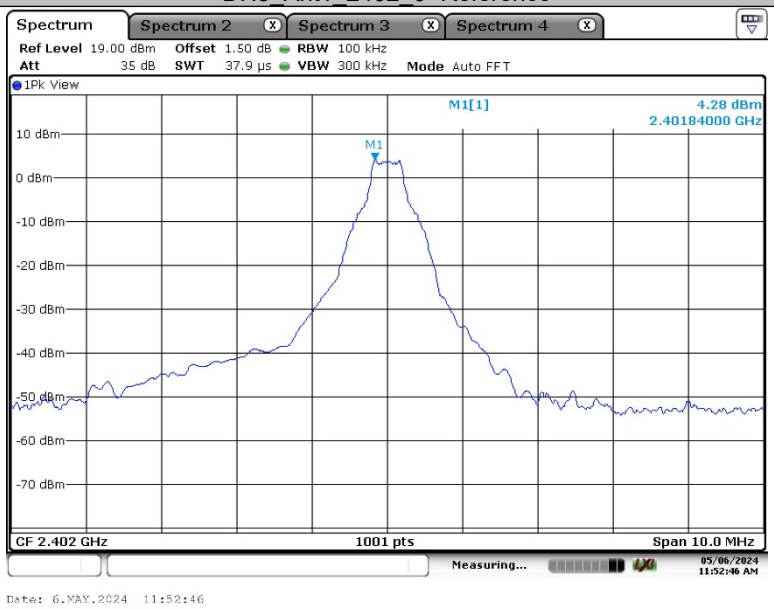


Date: 6.MAY.2024 11:42:21

Conducted Spurious Emission

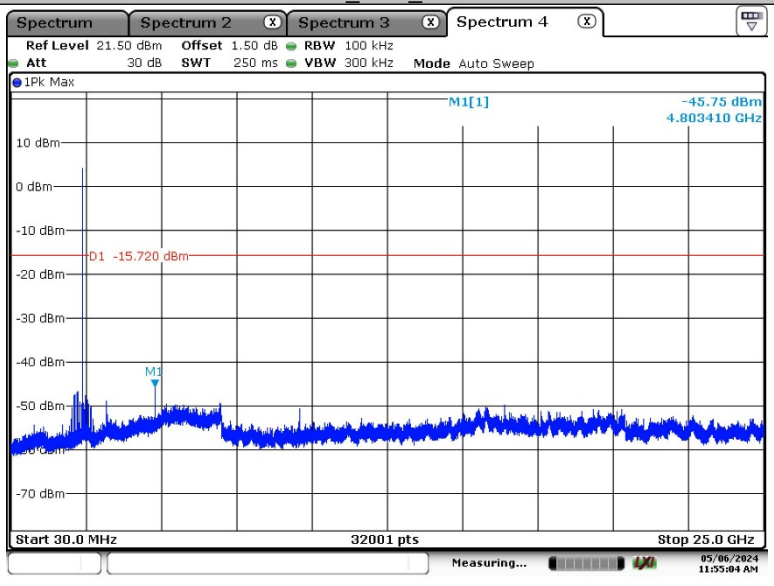
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	4.28	4.28	---	PASS
			30~25000	4.28	-45.75	≤-15.72	PASS
		2441	Reference	2.95	2.95	---	PASS
			30~25000	2.95	-46.57	≤-17.05	PASS
		2480	Reference	0.23	0.23	---	PASS
			30~25000	0.23	-47.35	≤-19.77	PASS
3DH5	Ant1	2402	Reference	4.16	4.16	---	PASS
			30~25000	4.16	-46.47	≤-15.84	PASS
		2441	Reference	2.75	2.75	---	PASS
			30~25000	2.75	-48.13	≤-17.25	PASS
		2480	Reference	0.29	0.29	---	PASS
			30~25000	0.29	-49.71	≤-19.71	PASS

DH5_Ant1_2402_0~Reference



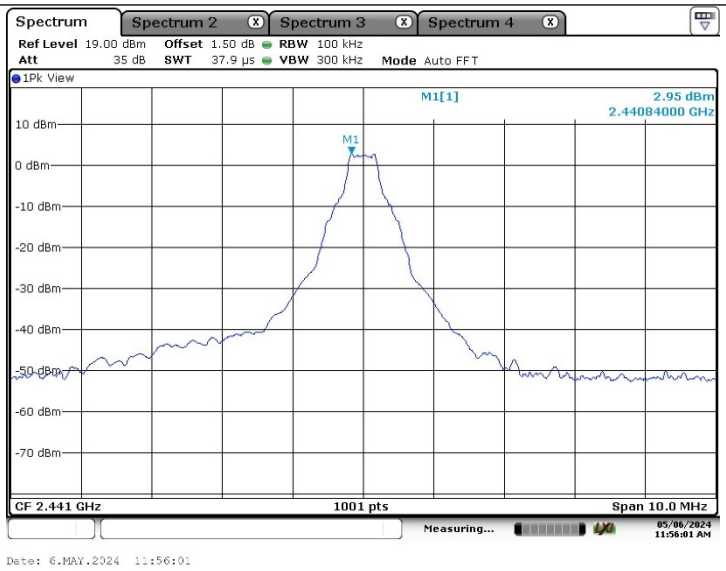
Date: 6.MAY.2024 11:52:46

DH5_Ant1_2402



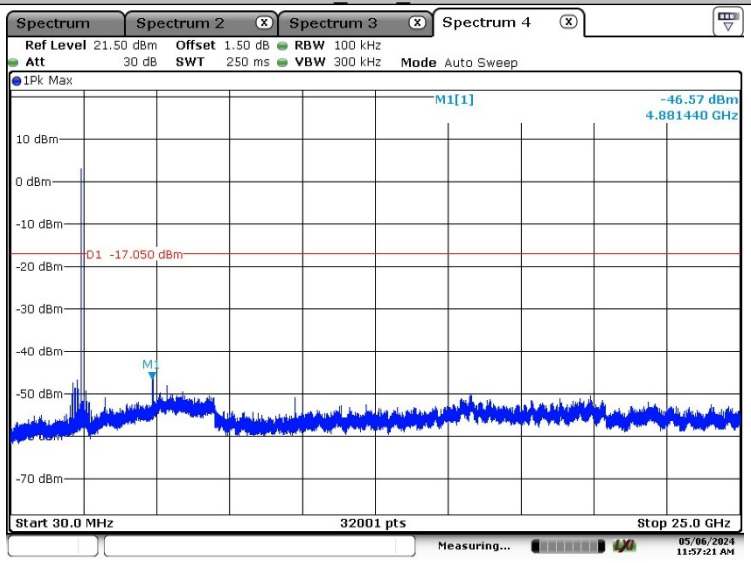
Date: 6.MAY.2024 11:55:04

DH5_Ant1_2441_0~Reference



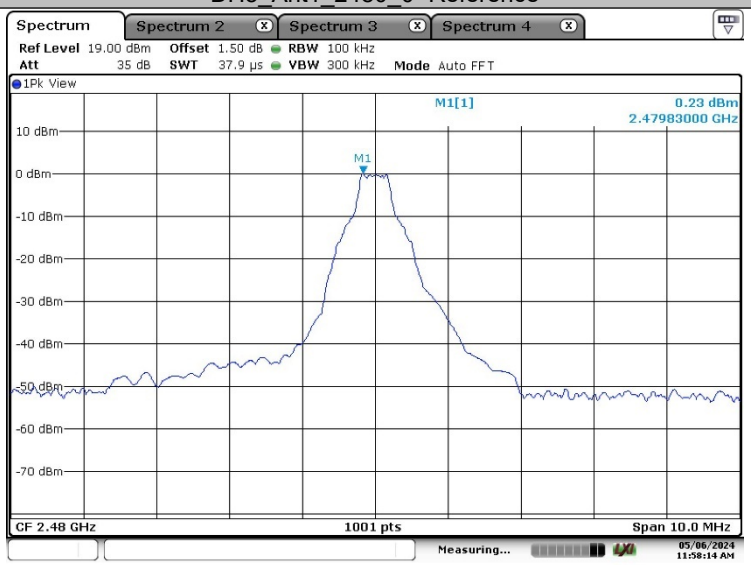
Date: 6.MAY.2024 11:56:01

DH5_Ant1_2441



Date: 6.MAY.2024 11:57:21

DH5_Ant1_2480_0~Reference



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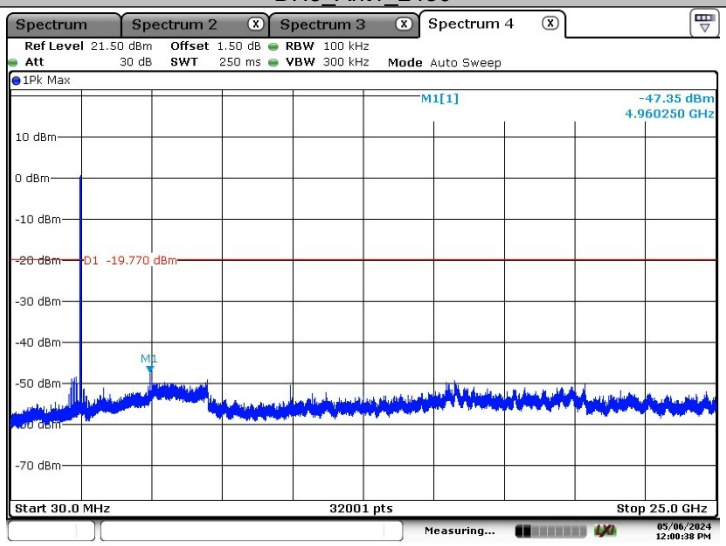
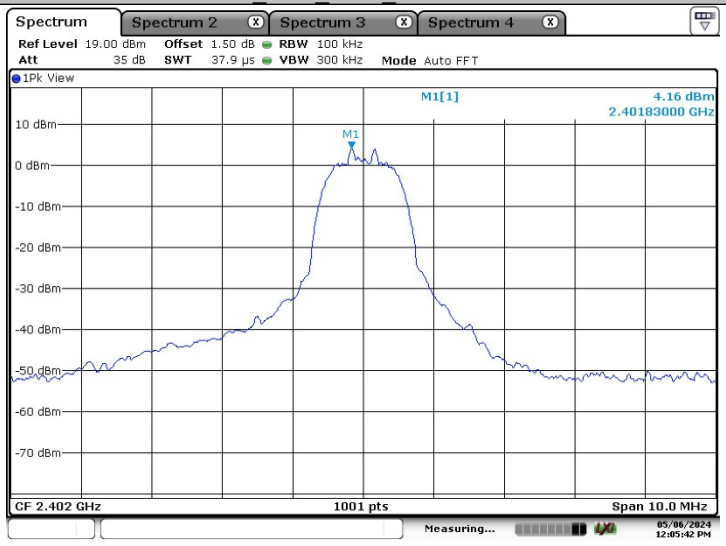
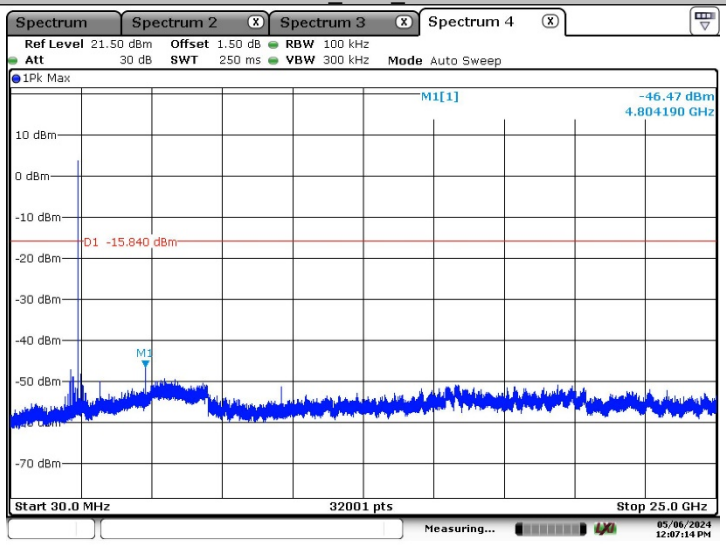
DH5_Ant1_2480



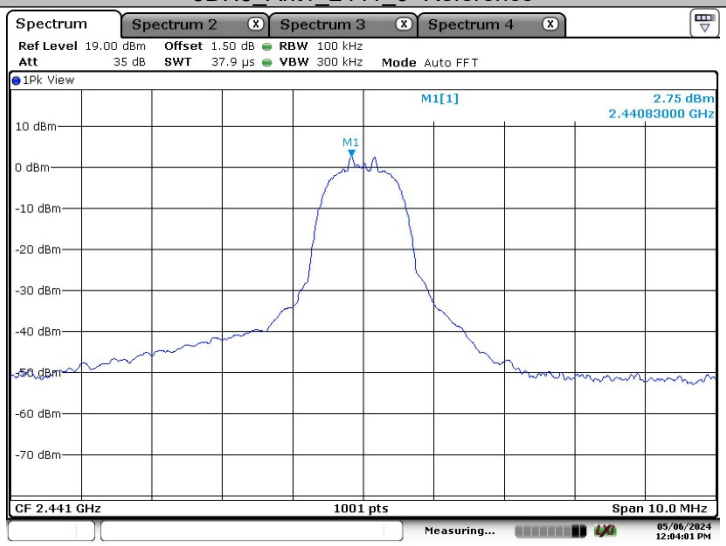
3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402

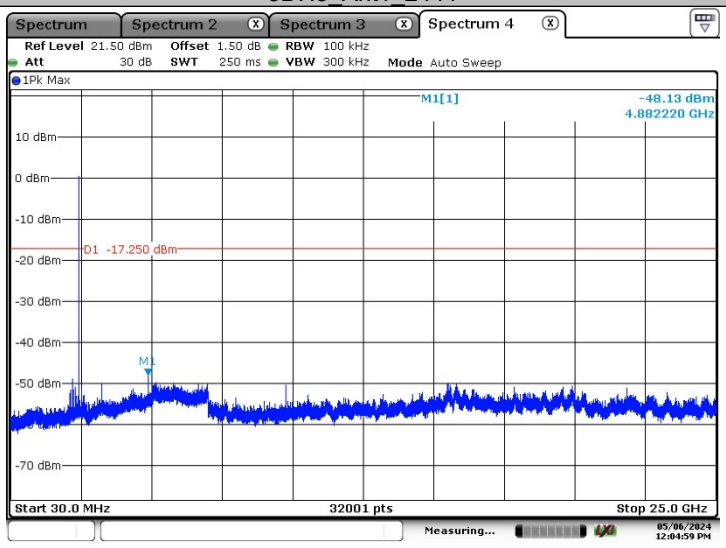


3DH5_Ant1_2441_0~Reference



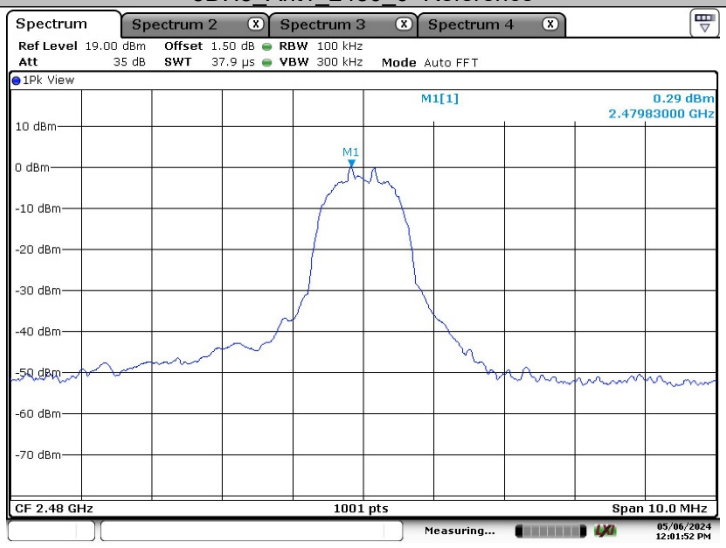
Date: 6.MAY.2024 12:04:01

3DH5_Ant1_2441



Date: 6.MAY.2024 12:04:59

3DH5_Ant1_2480_0~Reference



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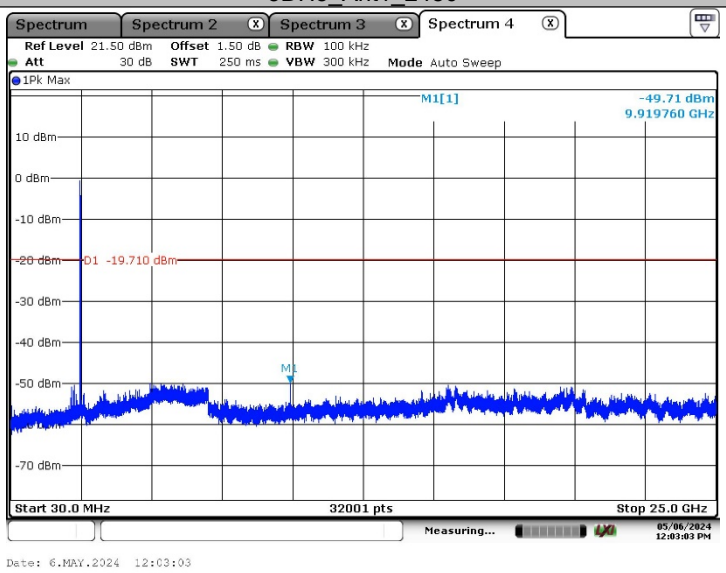
3DH5_Ant1_2480

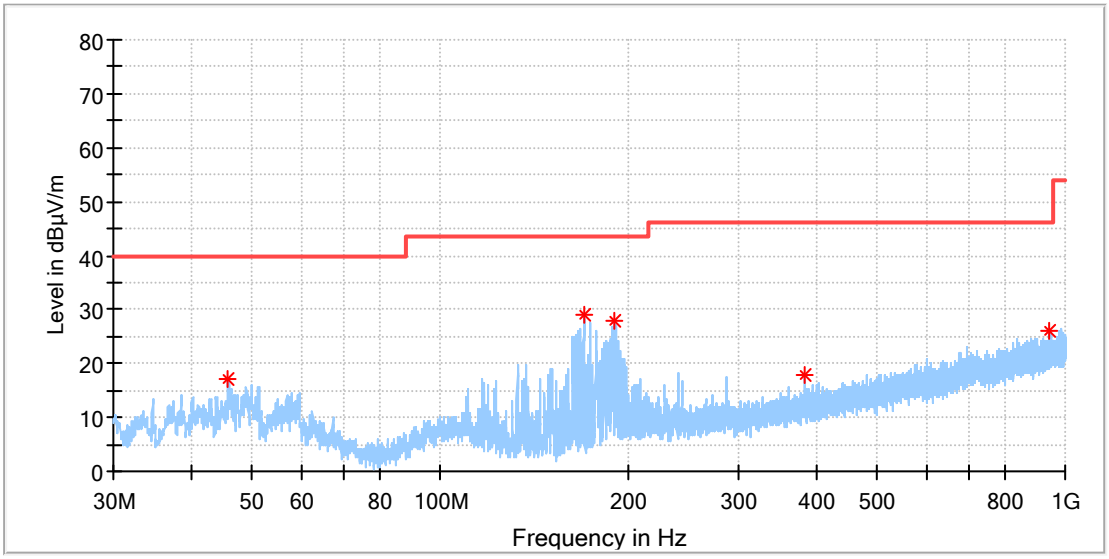


Appendix A.7: Radiated Spurious Emissions

Note:
1) This testing was carried out on different modulations, but only the worst case was presented in this report.
2) The highest emission is the fundamental signal of Bluetooth.
3) 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.

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

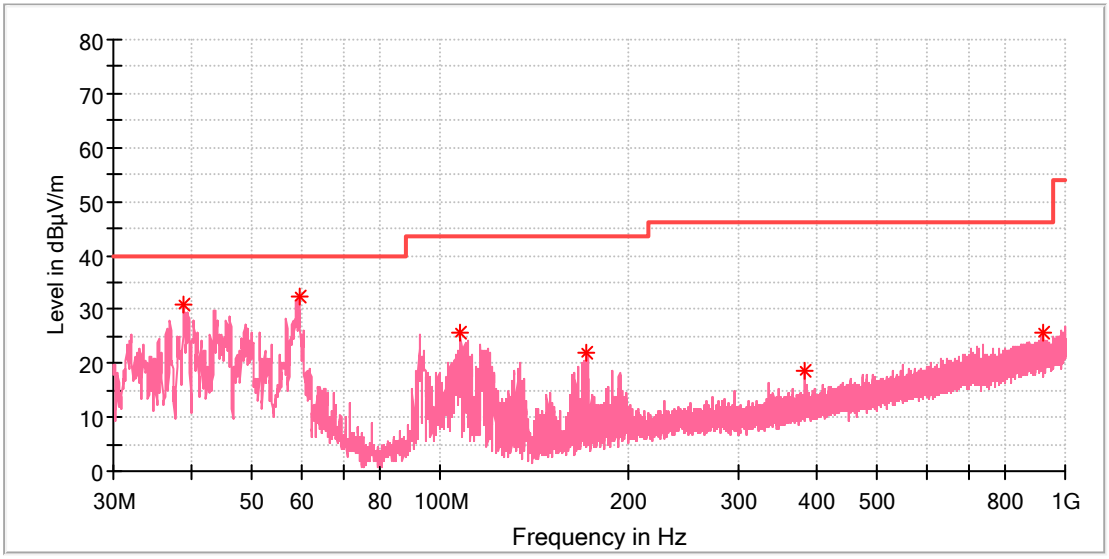


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
45.855769	17.30	40.00	22.70	100.0	H	143.0	-19.0
169.829231	28.97	43.50	14.53	100.0	H	266.0	-21.6
190.609615	28.04	43.50	15.46	100.0	H	283.0	-19.8
384.012692	17.84	46.00	28.16	100.0	H	103.0	-14.5
942.844615	26.22	46.00	19.78	100.0	H	328.0	-5.0

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

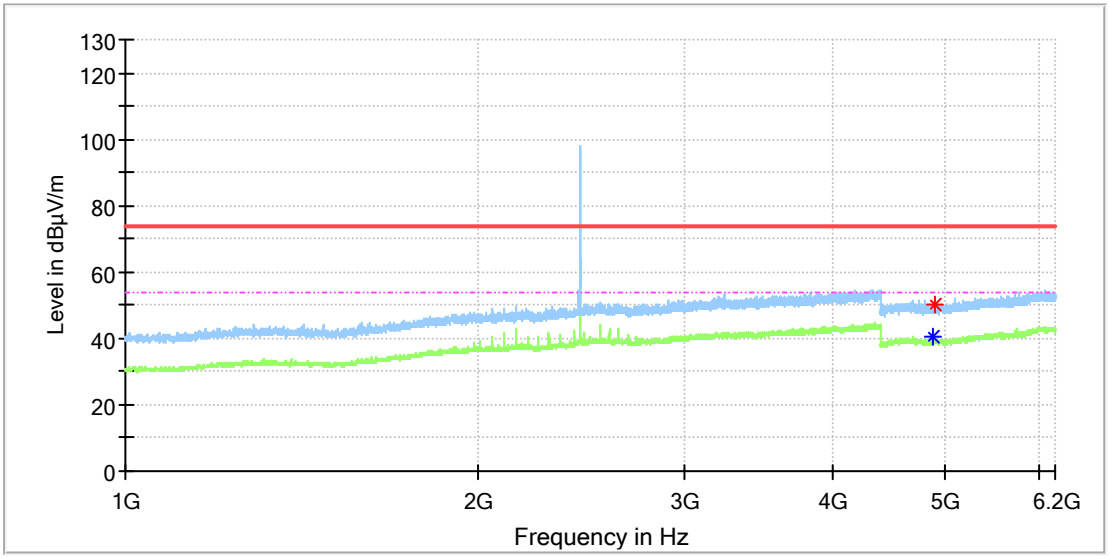


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
38.879231	30.98	40.00	9.02	100.0	V	85.0	-20.8
59.398462	32.47	40.00	7.53	100.0	V	355.0	-19.2
107.898462	25.58	43.50	17.92	100.0	V	188.0	-19.3
171.881154	21.80	43.50	21.70	100.0	V	93.0	-21.5
384.012692	18.68	46.00	27.32	100.0	V	12.0	-14.5
924.116154	25.71	46.00	20.29	100.0	V	61.0	-5.2

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

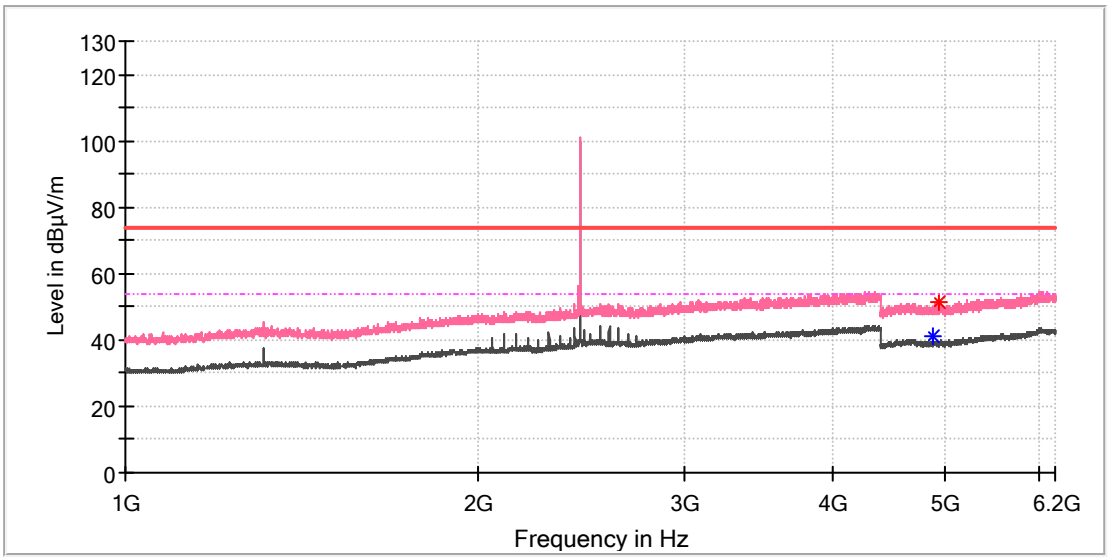


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4882.000000	---	40.27	54.00	13.73	150.0	H	356.0	11.8
4891.000000	50.19	---	74.00	23.81	150.0	H	38.0	11.8

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

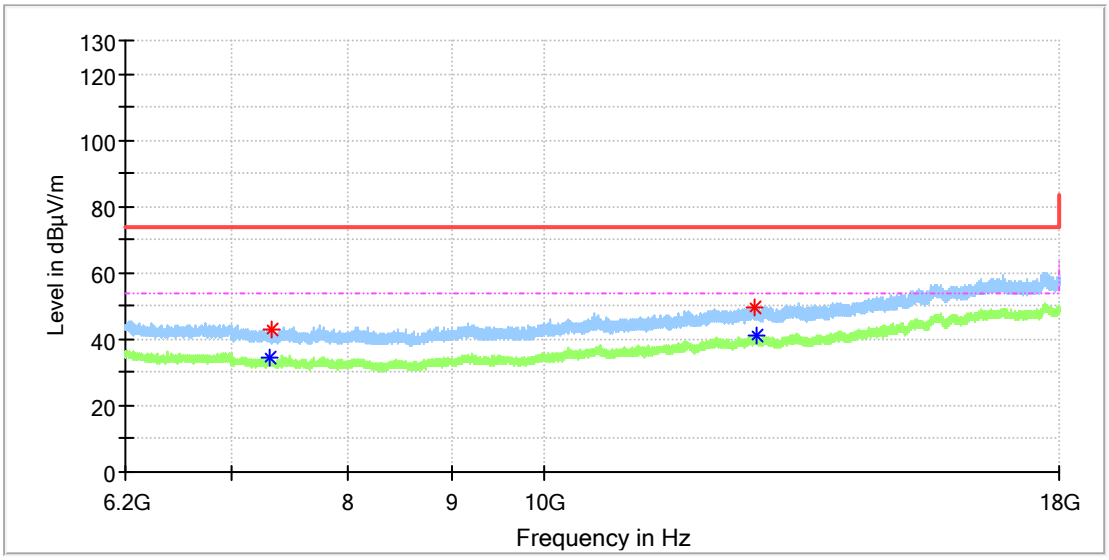


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4882.000000	---	41.09	54.00	12.91	150.0	V	358.0	11.8
4937.000000	51.68	---	74.00	22.32	150.0	V	110.0	11.8

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

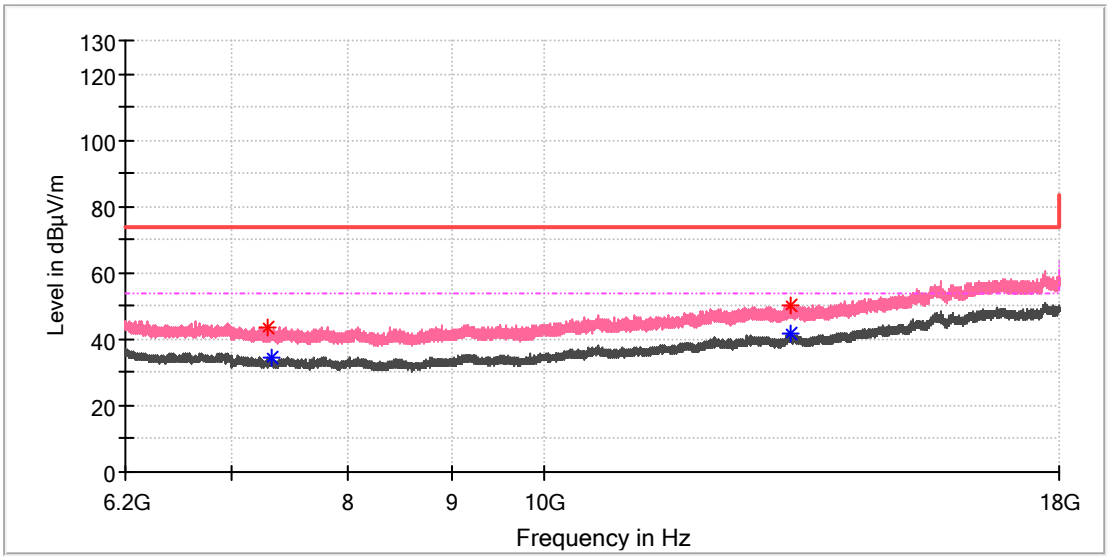


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7315.591667	---	34.20	54.00	19.80	150.0	H	137.0	8.2
7328.375000	43.00	---	74.00	31.00	150.0	H	137.0	8.1
12726.383333	49.71	---	74.00	24.29	150.0	H	353.0	15.2
12728.841667	---	41.13	54.00	12.87	150.0	H	200.0	15.2

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

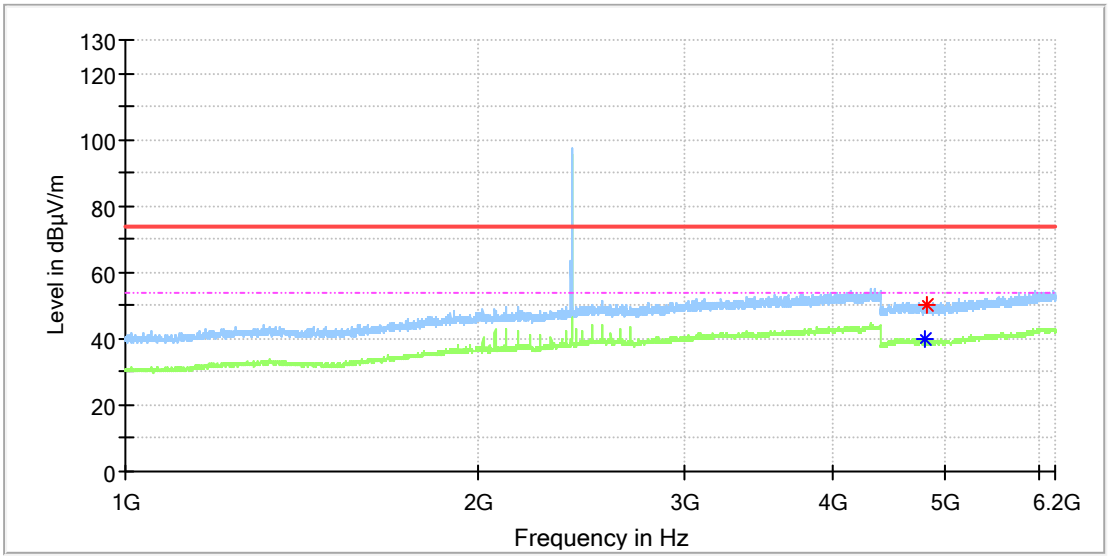


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7289.041667	43.27	---	74.00	30.74	150.0	V	19.0	8.4
7332.308333	---	34.20	54.00	19.80	150.0	V	312.0	8.1
13240.175000	50.42	---	74.00	23.58	150.0	V	33.0	15.5
13240.175000	---	41.74	54.00	12.26	150.0	V	33.0	15.5

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

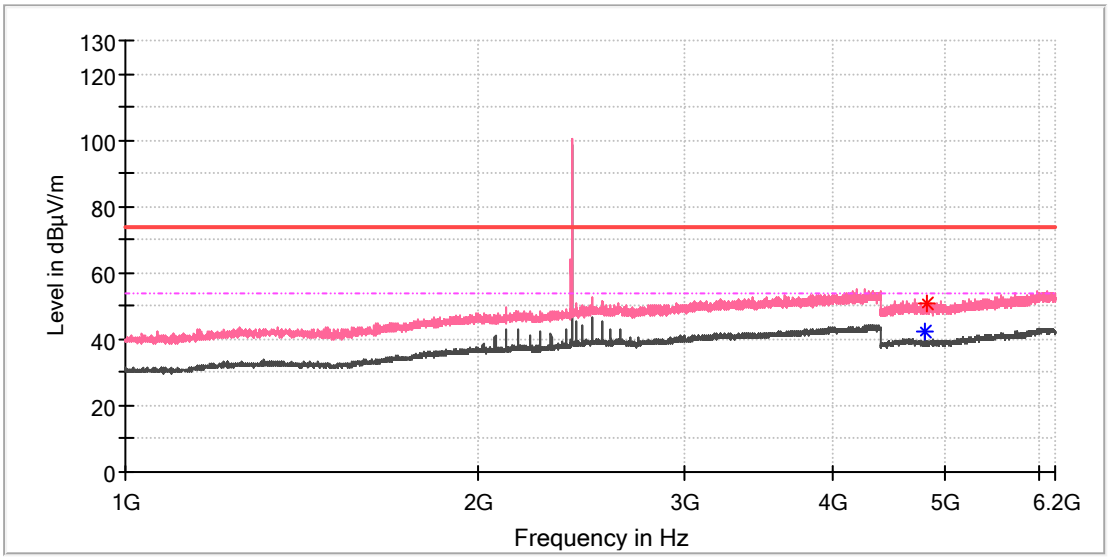


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4801.000000	---	39.76	54.00	14.24	150.0	H	113.0	11.8
4813.500000	50.13	---	74.00	23.87	150.0	H	202.0	11.8

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

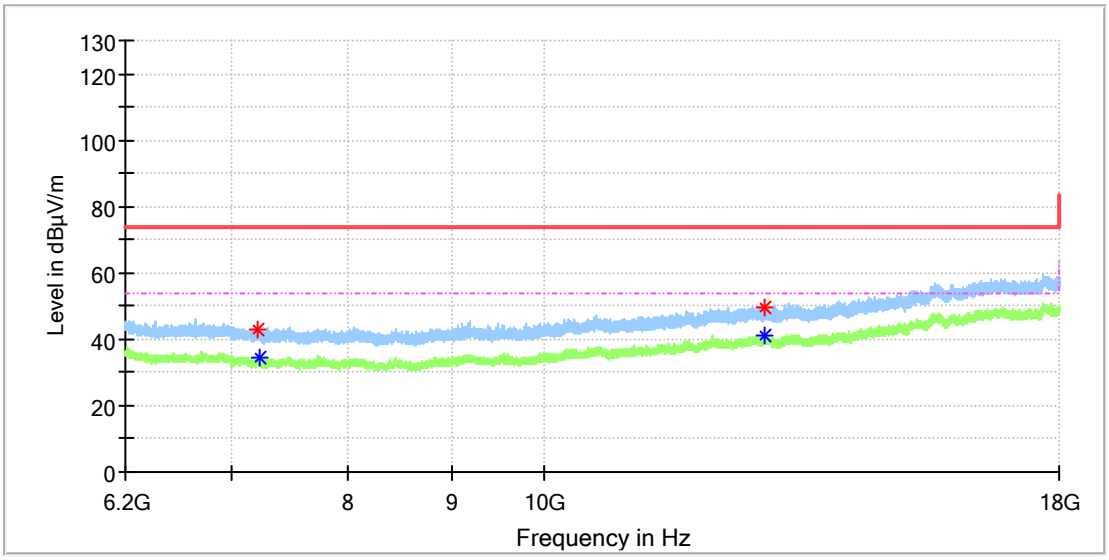


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4804.000000	---	42.04	54.00	11.96	150.0	V	0.0	11.8
4813.500000	50.67	---	74.00	23.33	150.0	V	334.0	11.8

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

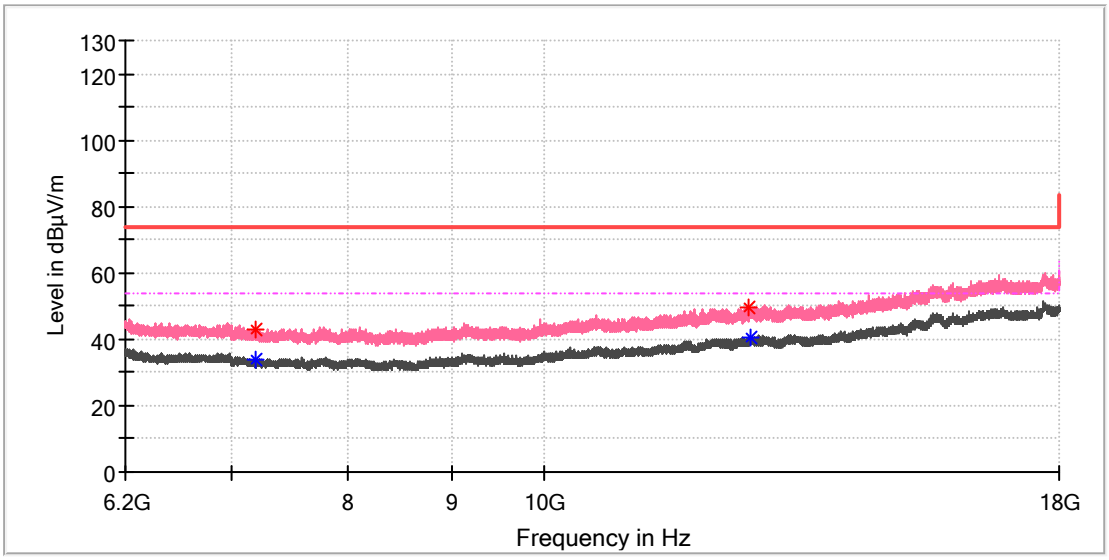


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7206.933333	42.84	---	74.00	31.16	150.0	H	312.0	8.8
7225.616667	---	34.19	54.00	19.81	150.0	H	252.0	8.7
12871.916667	49.81	---	74.00	24.19	150.0	H	0.0	15.4
12871.916667	---	40.99	54.00	13.01	150.0	H	0.0	15.4

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

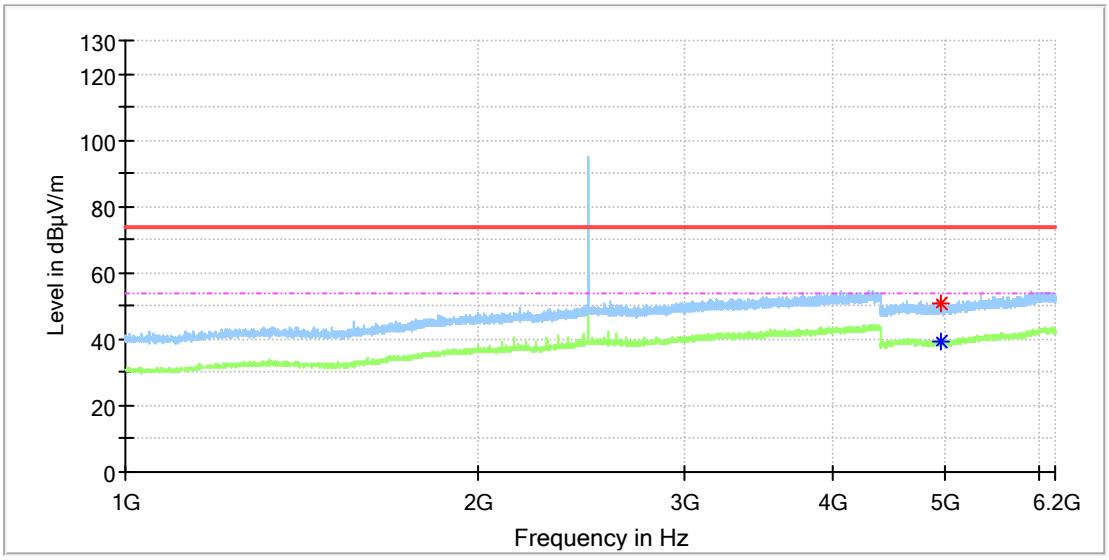


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7197.591667	---	34.01	54.00	19.99	150.0	V	101.0	8.8
7200.541667	43.06	---	74.00	30.94	150.0	V	52.0	8.8
12641.325000	49.77	---	74.00	24.24	150.0	V	89.0	15.0
12648.700000	---	40.74	54.00	13.26	150.0	V	76.0	15.0

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_High channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

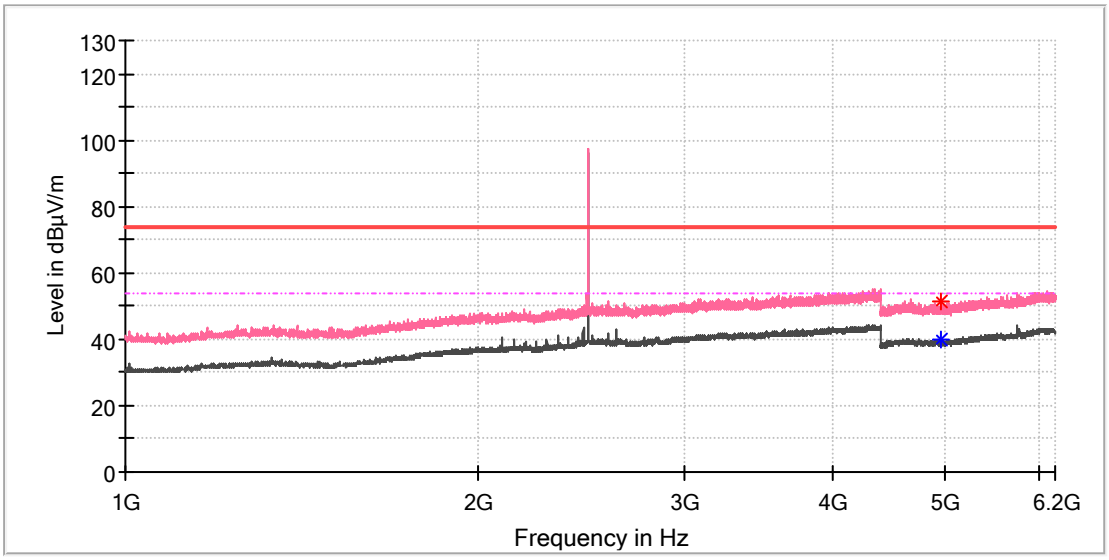


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4948.000000	50.95	---	74.00	23.05	150.0	H	269.0	11.8
4953.000000	---	39.55	54.00	14.45	150.0	H	291.0	11.8

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_High channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

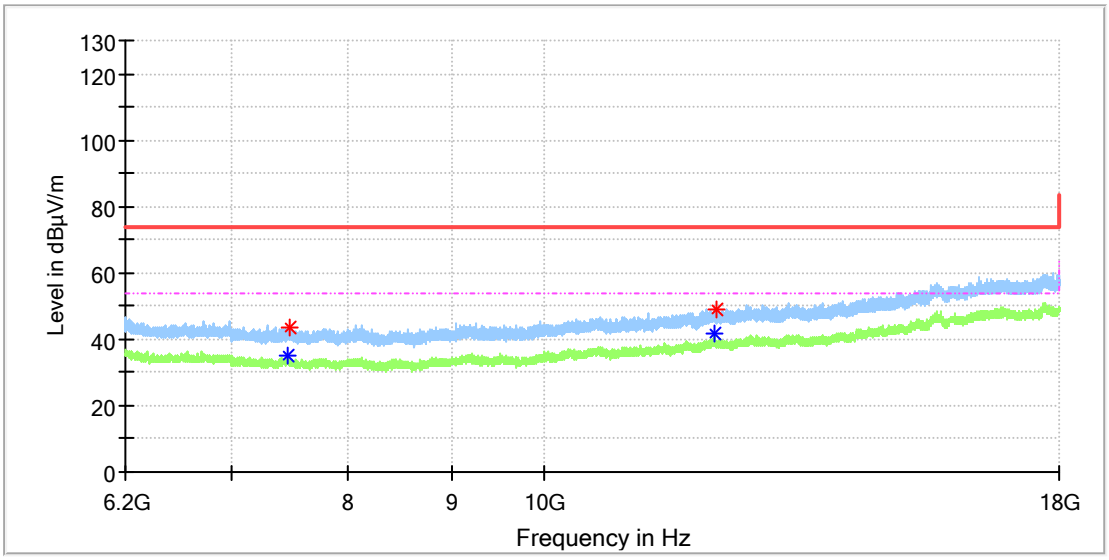


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4959.500000	51.26	---	74.00	22.74	150.0	V	262.0	11.8
4960.000000	---	39.78	54.00	14.22	150.0	V	274.0	11.8

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_High channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

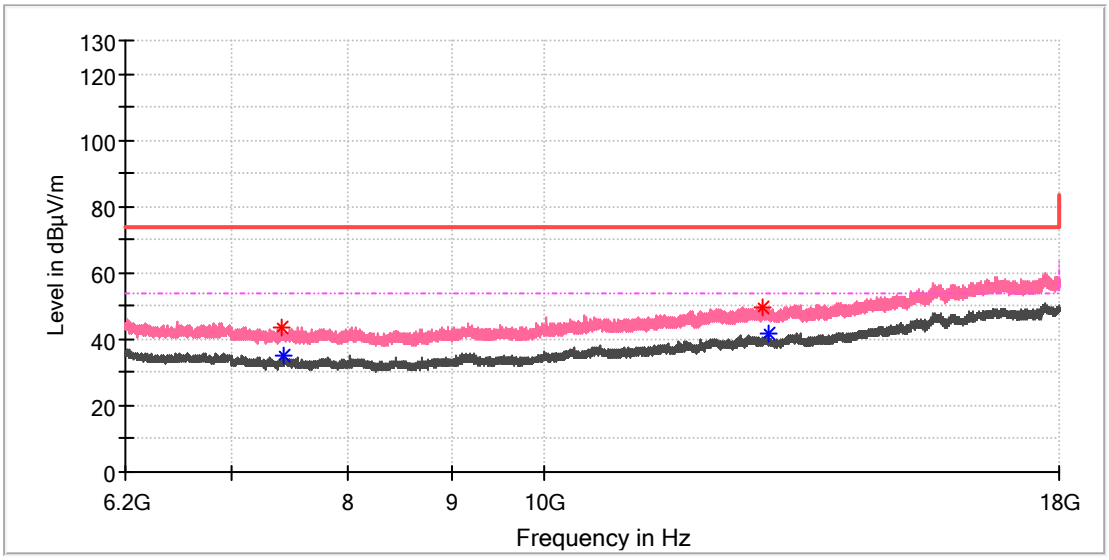


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7460.141667	---	34.95	54.00	19.05	150.0	H	159.0	8.5
7485.708333	43.48	---	74.00	30.52	150.0	H	242.0	8.7
12147.200000	---	41.99	54.00	12.01	150.0	H	328.0	14.4
12167.850000	49.17	---	74.00	24.83	150.0	H	315.0	14.5

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_High channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



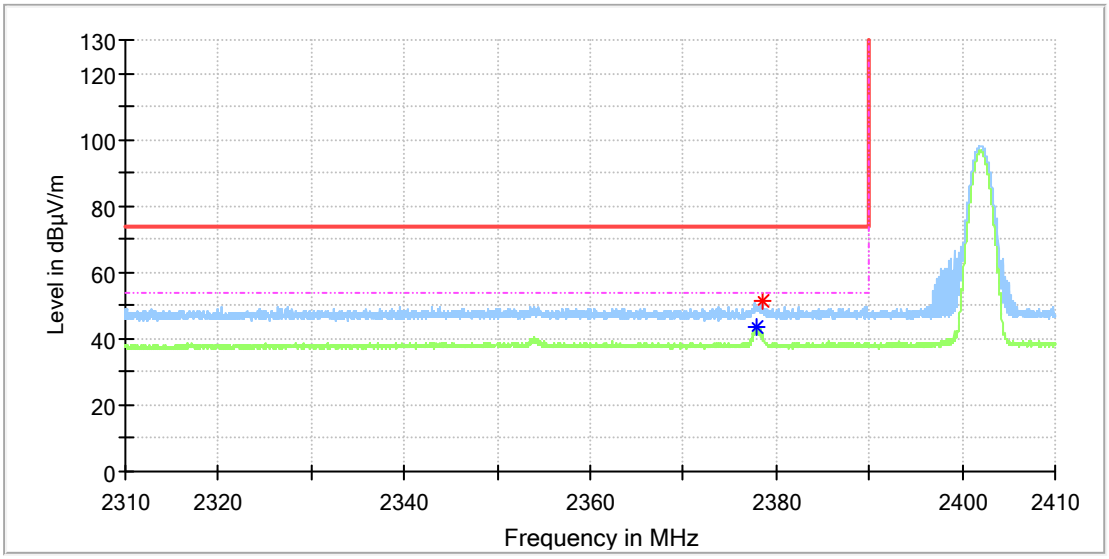
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7419.333333	43.44	---	74.00	30.56	150.0	V	0.0	8.4
7433.100000	---	34.90	54.00	19.10	150.0	V	150.0	8.4
12841.433333	49.82	---	74.00	24.18	150.0	V	355.0	15.3
12911.741667	---	41.44	54.00	12.56	150.0	V	113.0	15.5

Appendix A.8: Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

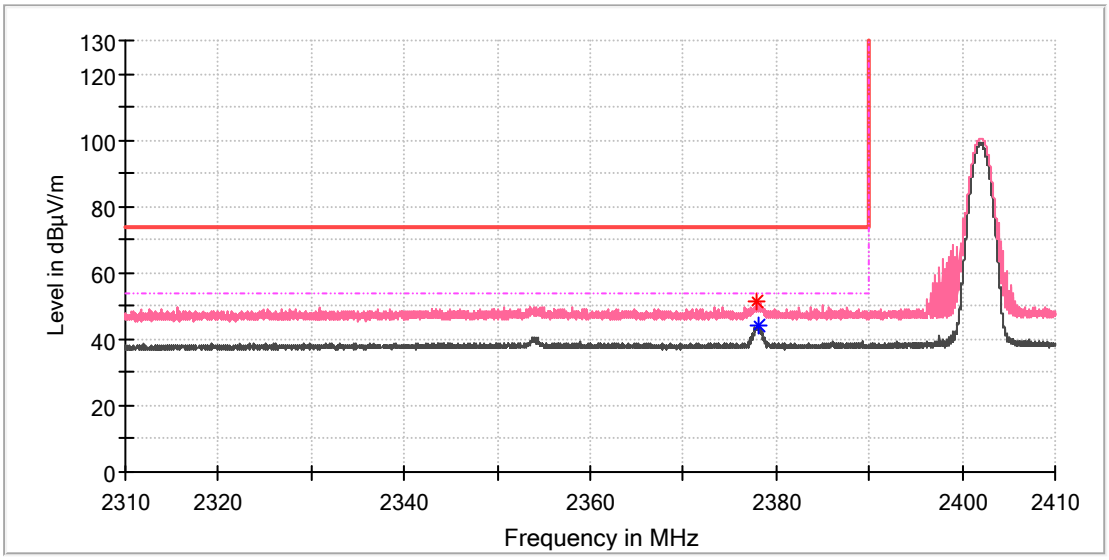


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2377.985294	---	43.55	54.00	10.45	150.0	H	288.0	6.9
2378.470588	51.34	---	74.00	22.66	150.0	H	275.0	6.9

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

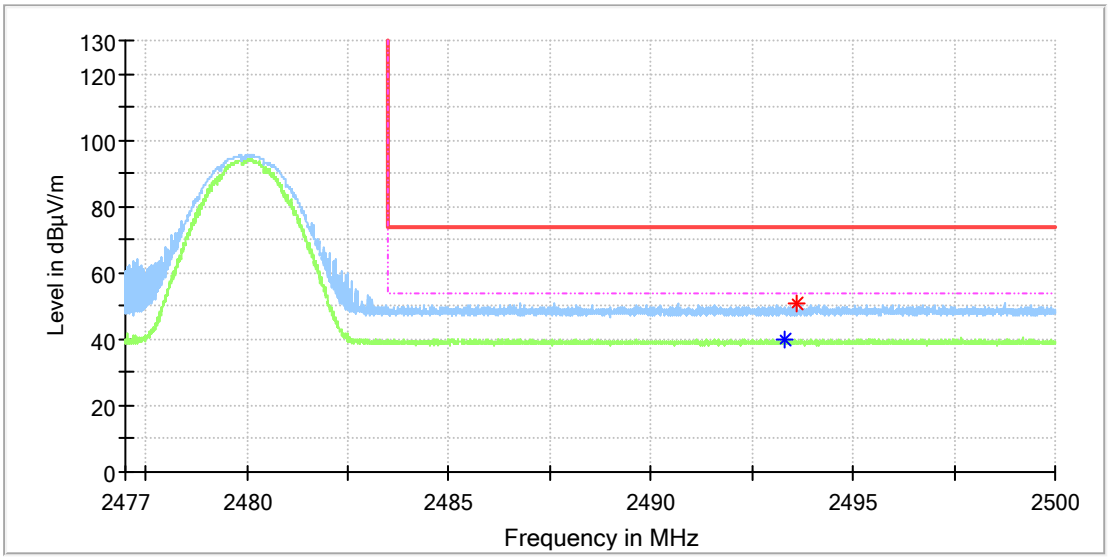


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2377.955882	51.31	---	74.00	22.69	150.0	V	201.0	6.9
2378.161765	---	44.30	54.00	9.70	150.0	V	180.0	6.9

EUT Information

EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168476662/A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

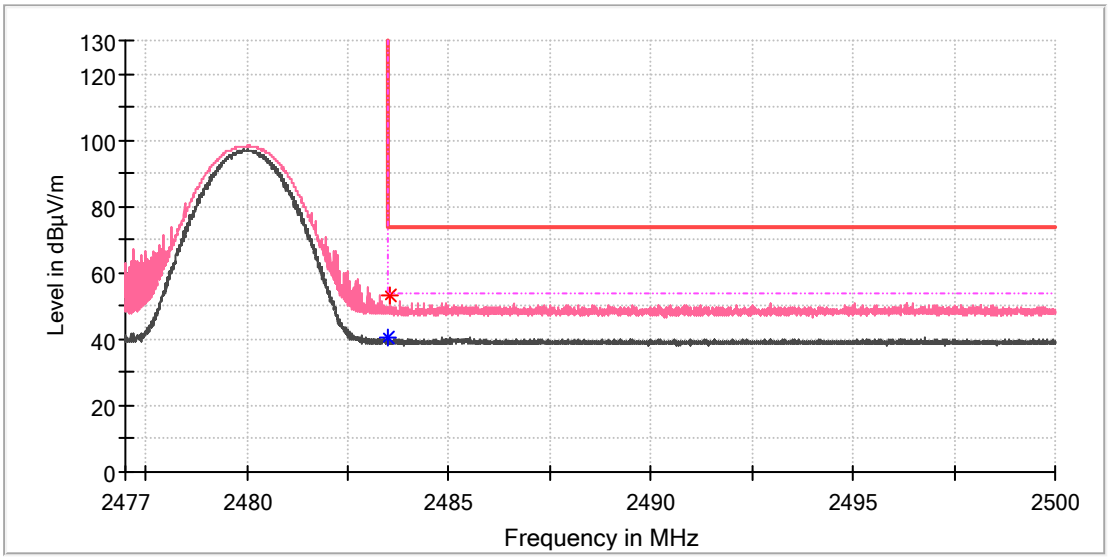


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2493.311765	---	39.88	54.00	14.12	150.0	H	330.0	7.4
2493.594118	50.80	---	74.00	23.20	150.0	H	352.0	7.4

EUT Information

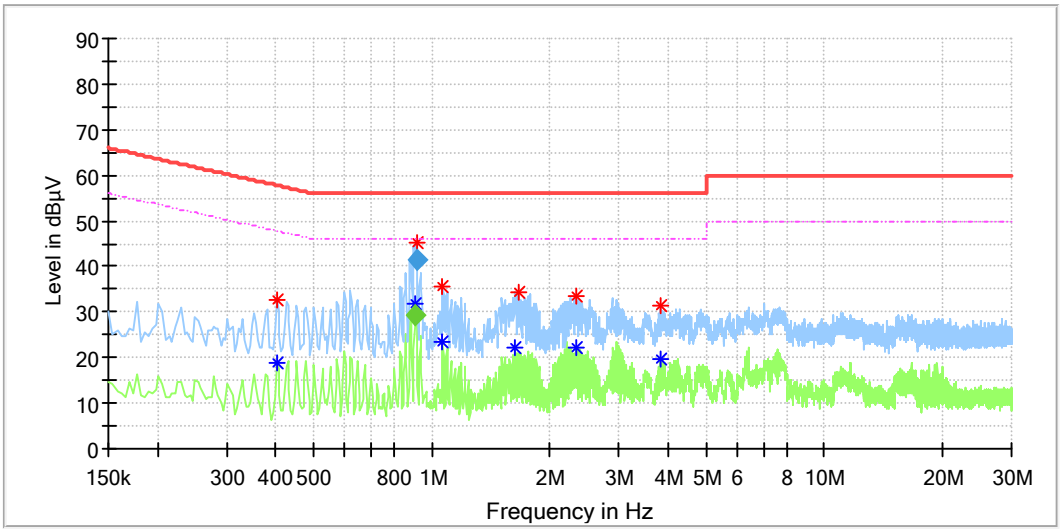
EUT Name:	Multimedia Speaker
Model:	ASB02G
Test Mode:	BR_DH5_High channel
Order No/Sample No:	A003701545-008
Test Voltage::	DC 5V From USB
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.513235	---	40.29	54.00	13.71	150.0	V	186.0	7.4
2483.557353	53.39	---	74.00	20.61	150.0	V	179.0	7.4

Appendix A.9: Conducted Emission on AC Mains

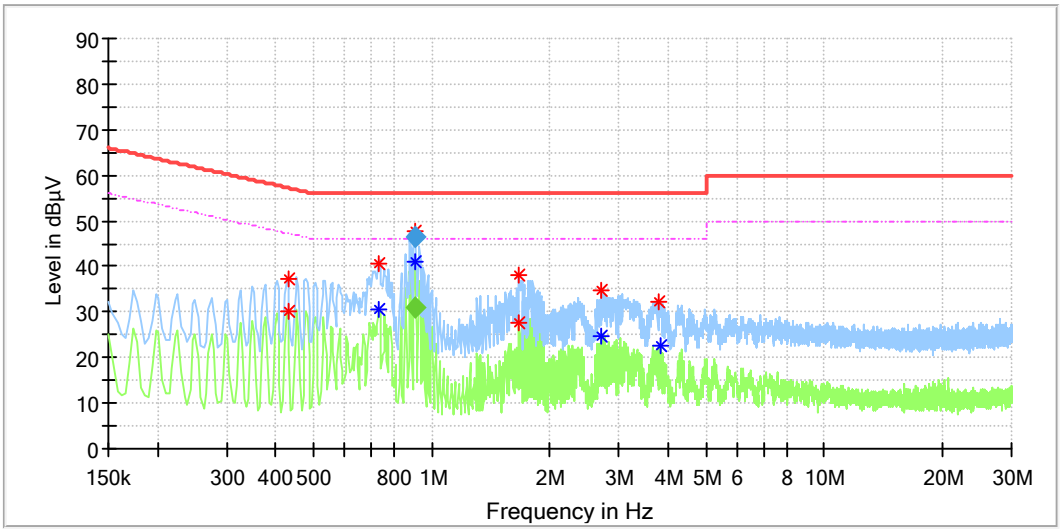


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.402000	---	18.74	47.81	29.08	L1	9.9
0.402000	32.86	---	57.81	24.95	L1	9.9
0.909500	---	31.67	46.00	14.33	L1	10.0
0.917500	45.37	---	56.00	10.63	L1	10.0
1.066000	35.40	---	56.00	20.60	L1	10.0
1.066000	---	23.26	46.00	22.74	L1	10.0
1.630000	---	22.16	46.00	23.84	L1	10.1
1.658000	34.24	---	56.00	21.76	L1	10.1
2.322000	33.29	---	56.00	22.71	L1	10.2
2.342000	---	22.07	46.00	23.93	L1	10.2
3.818000	---	19.61	46.00	26.39	L1	10.2
3.830000	31.38	---	56.00	24.62	L1	10.2

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.909500	---	29.32	46.00	16.68	1000.0	9.000	L1	10.0
0.917500	41.52	---	56.00	14.48	1000.0	9.000	L1	10.0



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.430000	37.28	---	57.25	19.97	N	9.8
0.434000	30.26	---	57.18	26.91	N	9.8
0.730000	40.79	---	56.00	15.21	N	9.8
0.734000	---	30.37	46.00	15.63	N	9.8
0.909500	---	40.93	46.00	5.07	N	9.8
0.910500	47.57	---	56.00	8.43	N	9.8
1.658000	27.64	---	56.00	28.36	N	9.8
1.666000	37.92	---	56.00	18.08	N	9.8
2.702000	34.83	---	56.00	21.17	N	9.9
2.706000	---	24.73	46.00	21.27	N	9.9
3.790000	32.43	---	56.00	23.57	N	9.9
3.810000	---	22.42	46.00	23.58	N	9.9

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.909500	---	30.82	46.00	15.18	1000.0	9.000	N	9.8
0.910500	46.48	---	56.00	9.52	1000.0	9.000	N	9.8