

Prüfbericht-Nr.: Test report no.:	CN24W5HS 001	Auftrags-Nr.: Order no.:	168482524	Seite 1 von 25 Page 1 of 25
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2024-05-06	
Auftraggeber: Client:	Klein Tools Inc. 450 Bond Street, Lincolnshire, IL 60069, United States			
Prüfgegenstand: Test item:	Bluetooth Behind-the-Head Earmuffs			
Bezeichnung / Typ-Nr.: Identification / Type no.:	AESBH1			
Auftrags-Inhalt: Order content:	Test Report			
Prüfgrundlage: Test specification:	CFR47 FCC Part 15: Subpart C Section 15.247 RSS-247 Issue 3 August 2023 RSS-Gen Issue 5 February 2021			
Wareneingangsdatum: Date of sample receipt:	2024-05-08	Please refer to Photo Document		
Prüfmuster-Nr.: Test sample no:	A003709521-001~002, A003708897-011			
Prüfzeitraum: Testing period:	2024-05-12 - 2024-05-17			
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:			genehmigt von: authorized by:	
Datum: Date:	2024-05-21	Ausstellungsdatum: Issue date:		2024-05-21
Signed by: Bell Hu		Signed by: Jonathan Li		
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / Other:	FCC ID: 2AI28-AESBH1 IC: 21655-AESBH1 HVIN: AESBH1 PMN: AESBH1			
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>				

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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. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, 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>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>

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: N/A

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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	15.03.2024
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	2024-07-25
Signal Analyzer	R&S	FSV 40	101439	2024-07-25
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	2024-07-25
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2024-07-25
Amplifier	R&S	SCU-18F	180070	2024-07-25
Amplifier	R&S	SCU40A	100475	2024-07-25
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2024-08-06
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2024-08-06
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2024-08-27
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2024-08-06

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	2024-06-22

2.3 Traceability

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

2.4 Calibration

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

2.5 Measurement Uncertainty

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

Table 2: Measurement Uncertainty

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

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B 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 Bluetooth Behind-the-Head Earmuffs, which supports Bluetooth wireless technology.

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

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	Bluetooth Behind-the-Head Earmuffs
Type Designation:	AESBH1
FCC ID:	2AI28-AESBH1
IC:	21655-AESBH1
HVIN:	AESBH1
Operating Voltage:	Internal battery operated (3.7Vdc)
Operating Temperature Range:	-20 °C ~ +60 °C
Technical Specification of Bluetooth (dual mode)	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Channel Number:	79 channels
Channel Separation:	1MHz
Data Rate:	1Mbps, 2Mbps, 3Mbps
Antenna Type:	Integral Antenna
Antenna Gain:	3.78 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 | - Operation Description |
| - ID Label and Location Info | - Block Diagram |
| - Schematics | - 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 *AESBH1* in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 5: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N
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 1GHz)

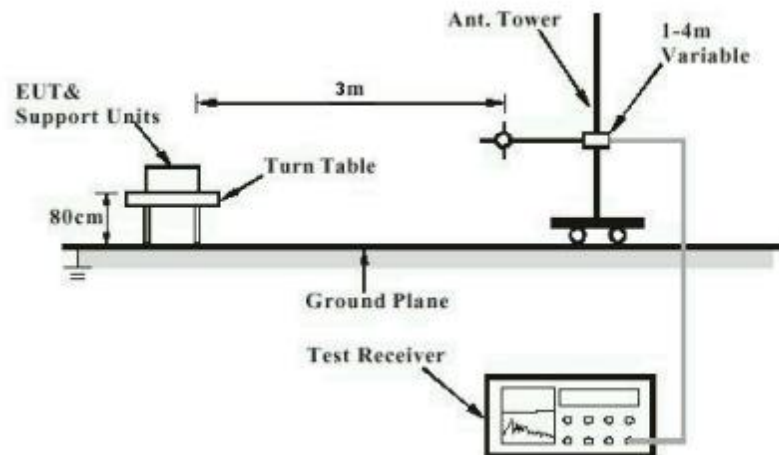


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

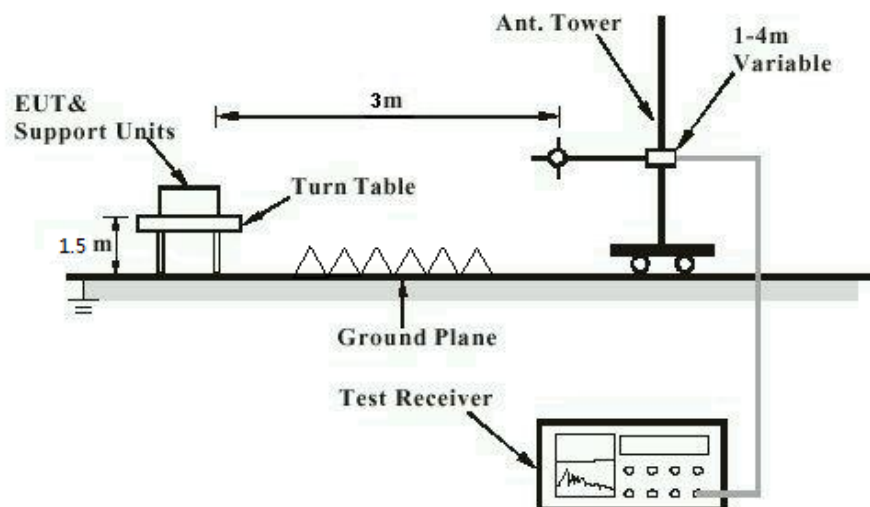


Diagram of Measurement Configuration for Mains Conduction Measurement

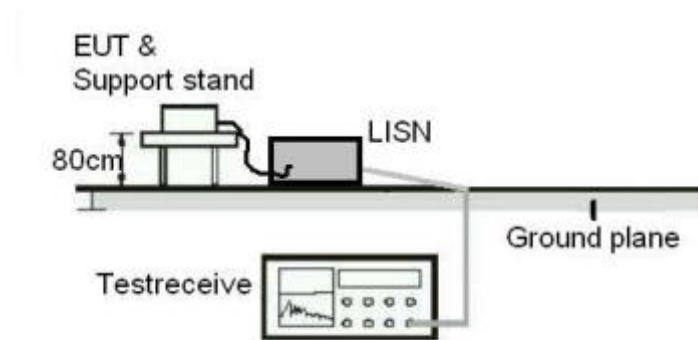
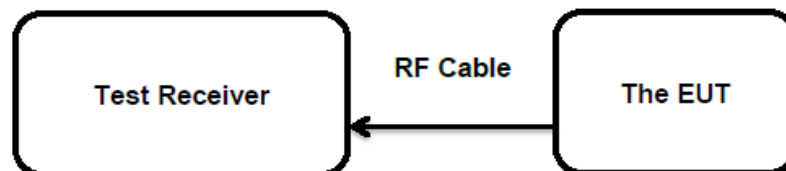


Diagram of Measurement Configuration for Conducted Transmitter Measurement



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 3.78 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.

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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	: 2024-05-13 to 2024-05-16
Input voltage	: Internal battery operated (3.7V DC)
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 22.8 °C
Relative humidity	: 35 %
Atmospheric pressure	: 101 kPa

For details refer to following test result.

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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	-0.5	0.0009	-0.6	0.0009	< 0.125
	2441.0	-0.4	0.0009	-0.5	0.0009	
	2480.0	0.2	0.0010	0.1	0.0010	
8DPSK (EDR)	2402.0	2.4	0.0017	-0.7	0.0009	< 0.125
	2441.0	2.4	0.0017	-0.7	0.0009	
	2480.0	3.0	0.0020	0.0	0.0010	

1) Max. Peak e.i.r.p=3.0dBm+3.78dBi=6.78dBm, which is less than 36dBm=4W.

Note:

- 2) The cable loss is taken into account in results.
- 3) Antenna gain(G): 3.78 dBi

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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 : 2024-05-13 to 2024-05-16
Input voltage : Internal battery operated (3.7V DC)
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 22.8 °C
Relative humidity : 35 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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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 : 2024-05-13 to 2024-05-16
Input voltage : Internal battery operated (3.7V DC)
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 22.8 °C
Relative humidity : 35 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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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	: $\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth, whichever is greater
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2024-05-13 to 2024-05-16
Input voltage	: Internal battery operated (3.7V DC)
Operation mode	: B
Test channel	: Low / Middle / High
Ambient temperature	: $22.8\text{ }^{\circ}\text{C}$
Relative humidity	: 35 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

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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	: 2024-05-13 to 2024-05-16
Input voltage	: Internal battery operated (3.7V DC)
Operation mode	: B
Ambient temperature	: 22.8 °C
Relative humidity	: 35 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

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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 : 2024-05-13 to 2024-05-16
Input voltage : Internal battery operated (3.7V DC)
Operation mode : B
Test channel : Low / Middle / High
Ambient temperature : 22.8 °C
Relative humidity : 35 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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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	: 2024-05-13 to 2024-05-16
Input voltage	: Internal battery operated (3.7V DC)
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 22.8 °C
Relative humidity	: 35 %
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.

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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	: 2024-05-13 to 2024-05-16
Input voltage	: Internal battery operated (3.7V DC)
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.

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5.1.10 Conducted Emission on AC Mains

RESULT:

N/A

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

Note: Bluetooth function will be disabled when product is in charging.

6 Photographs of the Test Set-Up

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

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Appendix A: Test Results of Bluetooth BR & EDR mode

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Appendix A.1: Test Results of 99% Bandwidth

DH5:

Occupied Channel Bandwidth 99% (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)

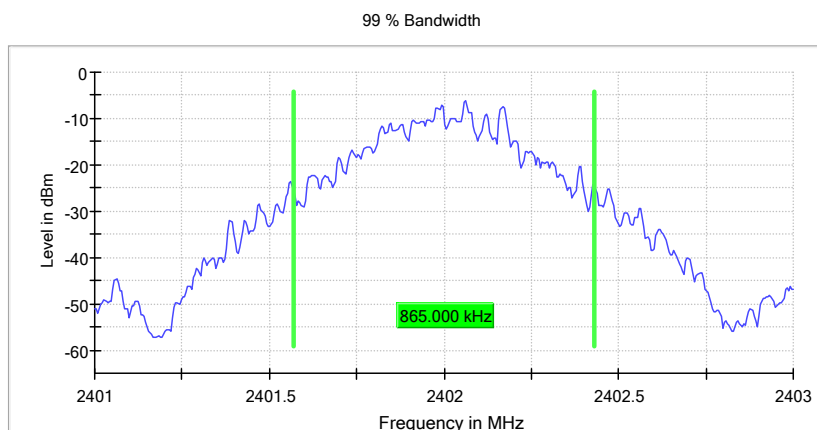
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.865000	---	---	2401.567500	2402.432500

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

DUT Frequency (MHz)	Result
2402.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.13 dB	0.30 dB

Occupied Channel Bandwidth 99% (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

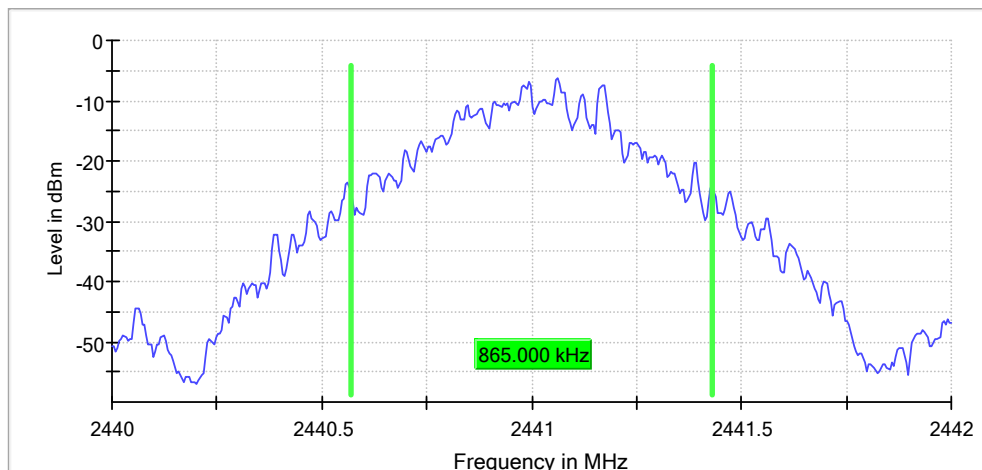
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.865000	---	---	2440.567500	2441.432500

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

DUT Frequency (MHz)	Result
2441.000000	PASS

99 % Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
SweepTime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.13 dB	0.30 dB

Occupied Channel Bandwidth 99% (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)

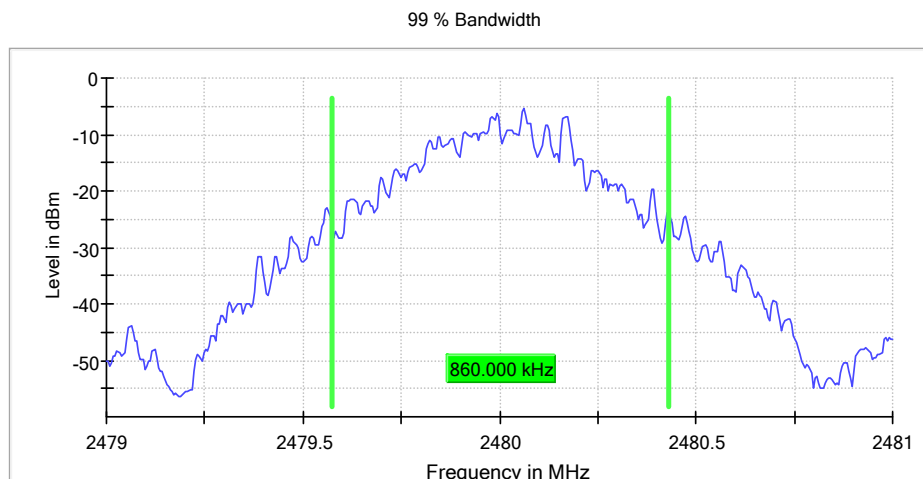
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.860000	---	---	2479.572500	2480.432500

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

DUT Frequency (MHz)	Result
2480.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.11 dB	0.30 dB

3DH5: Occupied Channel Bandwidth 99% (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)

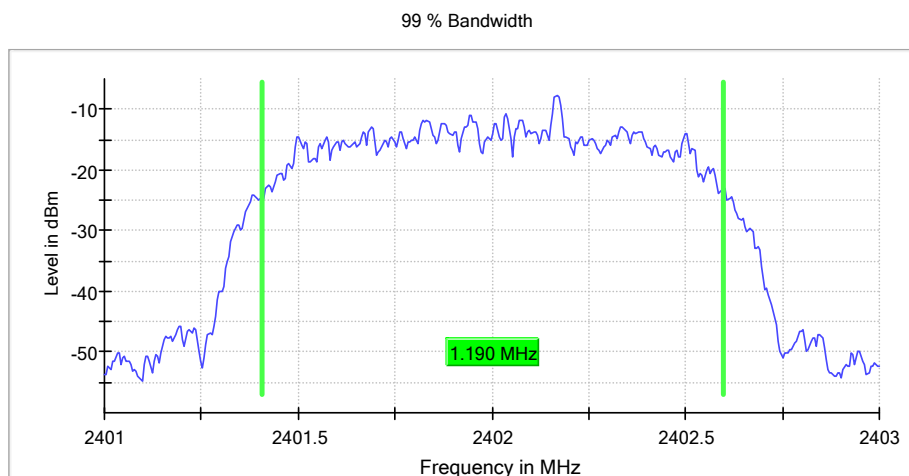
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.190000	---	---	2401.407500	2402.597500

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

DUT Frequency (MHz)	Result
2402.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
SweepTime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.11 dB	0.30 dB

Occupied Channel Bandwidth 99% (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)

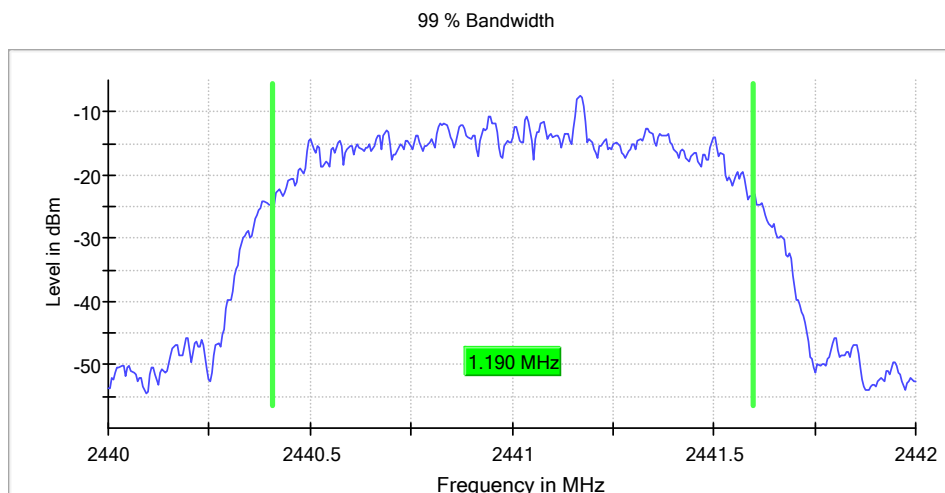
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.190000	---	---	2440.407500	2441.597500

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

DUT Frequency (MHz)	Result
2441.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.18 dB	0.30 dB

Occupied Channel Bandwidth 99% (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)

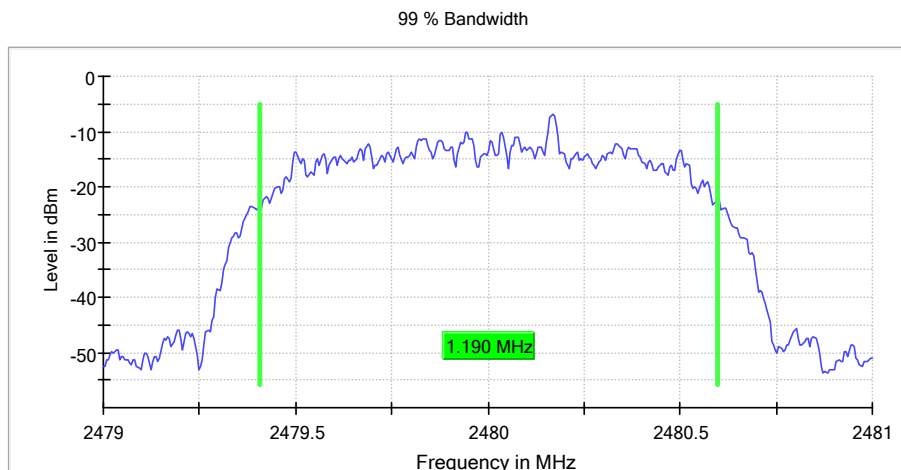
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.190000	---	---	2479.407500	2480.597500

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

DUT Frequency (MHz)	Result
2480.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
SweepTime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.14 dB	0.30 dB

Appendix A.2: Test Results of 20dB Bandwidth

DH5:

Emission Bandwidth 20 dB (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)

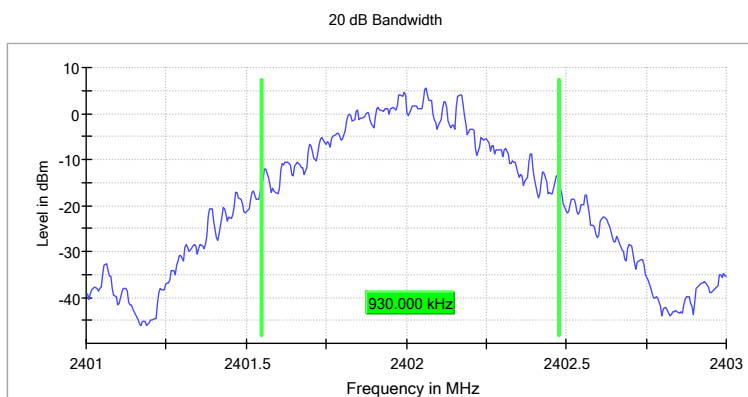
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.930000	---	---	2401.547500	2402.477500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	5.4	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
SweepTime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.08 dB	0.50 dB

Emission Bandwidth 20 dB (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

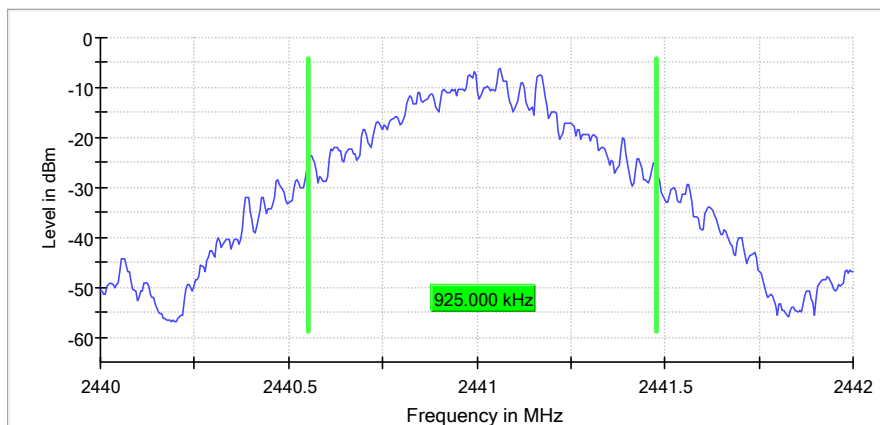
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.925000	---	---	2440.552500	2441.477500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-6.2	PASS

20 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
SweepTime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.08 dB	0.50 dB

Emission Bandwidth 20 dB (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

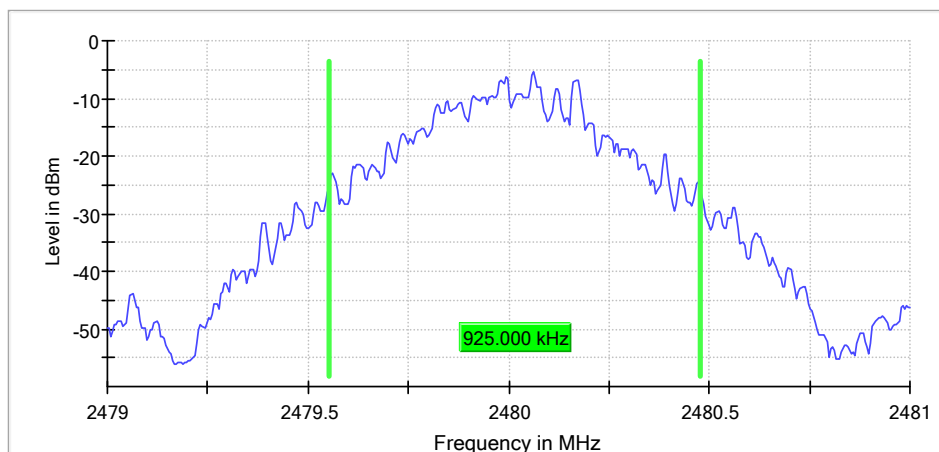
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.925000	---	---	2479.552500	2480.477500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-5.5	PASS

20 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
SweepTime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	9 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.09 dB	0.50 dB

3DH5:

Emission Bandwidth 20 dB (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

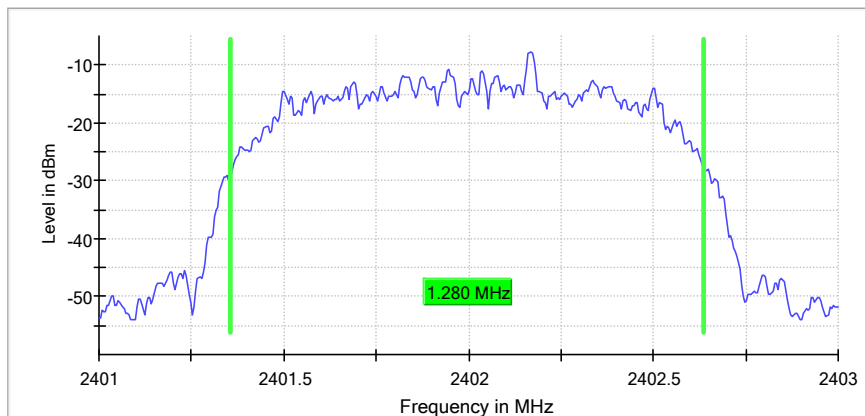
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.280000	---	---	2401.357500	2402.637500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-7.7	PASS

20 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
SweepTime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.09 dB	0.50 dB

Emission Bandwidth 20 dB (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

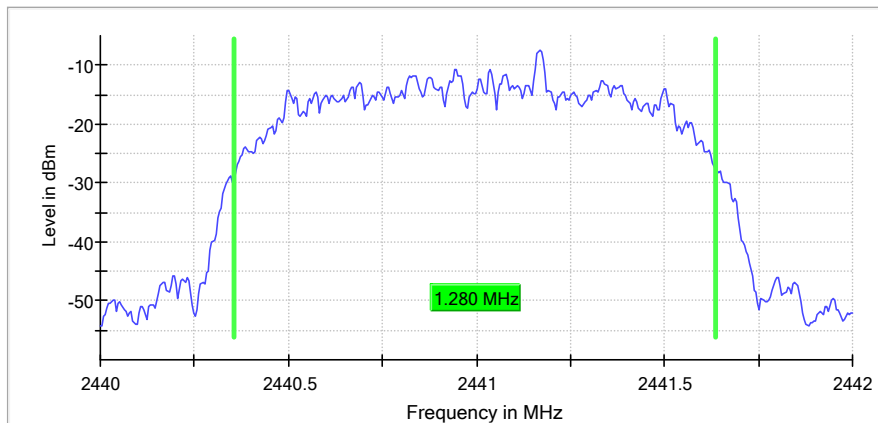
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.280000	---	---	2440.357500	2441.637500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-7.6	PASS

20 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	9 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.09 dB	0.50 dB

Emission Bandwidth 20 dB (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

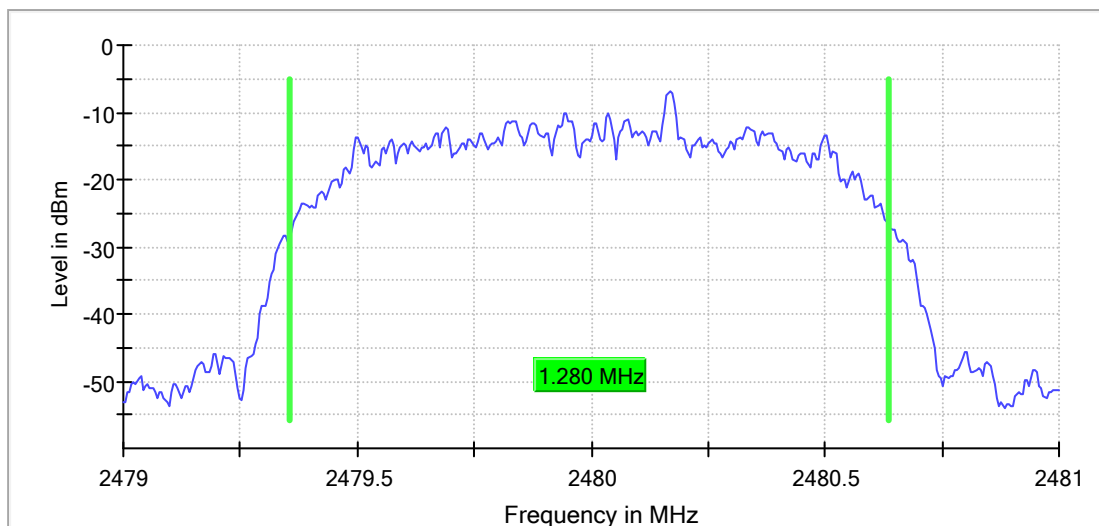
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.280000	---	---	2479.357500	2480.637500

(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



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.06 dB	0.50 dB

Appendix A.3: Test Results of Carrier Frequency Separation

DH5:

Carrier Frequency Separation (2402 MHz; 10.000 dBm; 1 MHz)

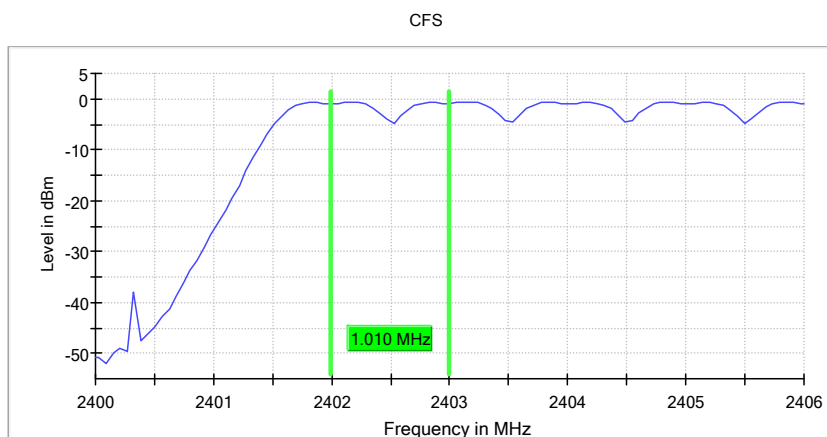
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2402.000000	1.009901	0.620000	---	2401.990099	2403.000000

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.40600 GHz	2.40600 GHz
Span	6.000 MHz	6.000 MHz
RBW	500.000 kHz	<= 600.000 kHz
VBW	500.000 kHz	>= 500.000 kHz
SweepPoints	101	~ 12
SweepTime	1.000 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	18 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.06 dB	0.50 dB

3DH5:

Carrier Frequency Separation (2402 MHz; 10.000 dBm; 1 MHz)

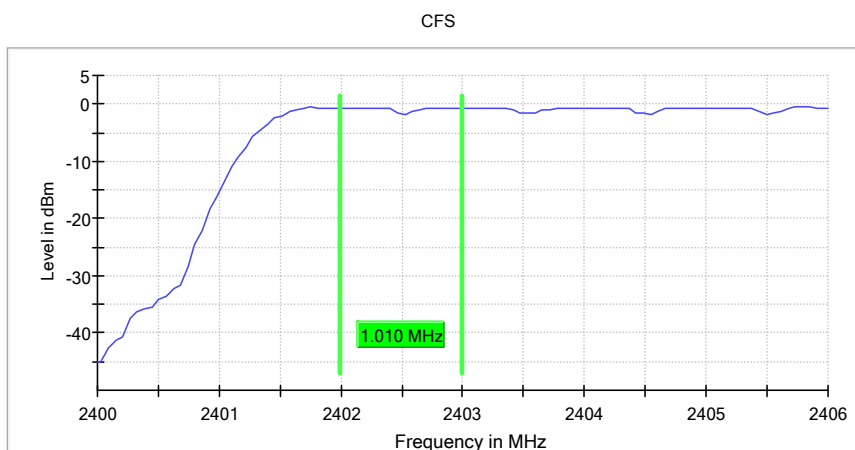
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2402.000000	1.009901	0.853333	---	2401.990099	2403.000000

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.40600 GHz	2.40600 GHz
Span	6.000 MHz	6.000 MHz
RBW	500.000 kHz	<= 600.000 kHz
VBW	500.000 kHz	>= 500.000 kHz
SweepPoints	101	~ 12
Sweptime	1.000 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	22 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.05 dB	0.50 dB

Appendix A.4: Test Results of Number of Hopping Frequency

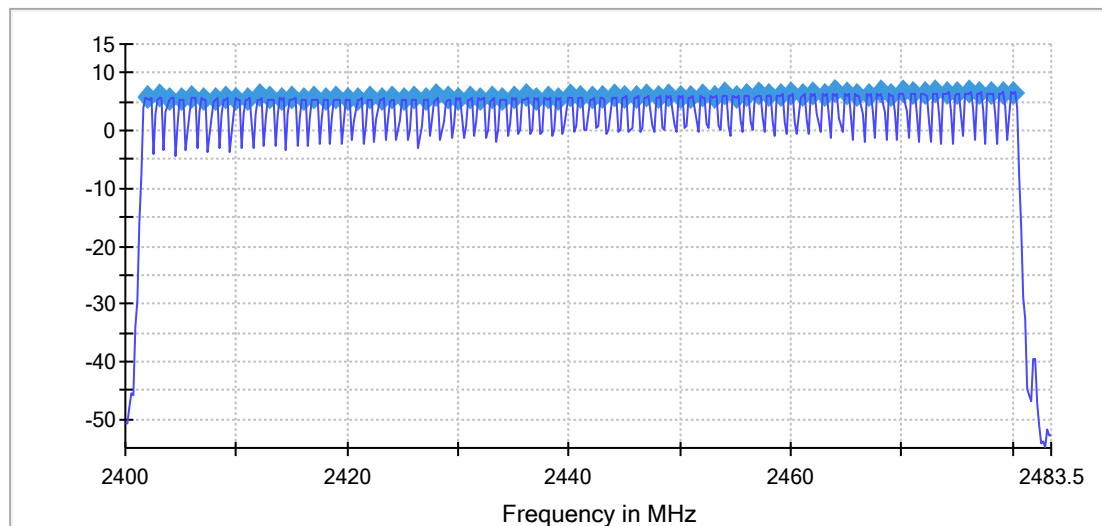
DH5: Hopping Frequencies (frequency independent; 10.000 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(a),(g), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

Channels

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

Sequence



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	200.000 kHz	<= 299.000 kHz
VBW	200.000 kHz	>= 200.000 kHz
SweepPoints	418	~ 418
SweepTime	1.060 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	61 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.48 dB	0.50 dB

3DH5:

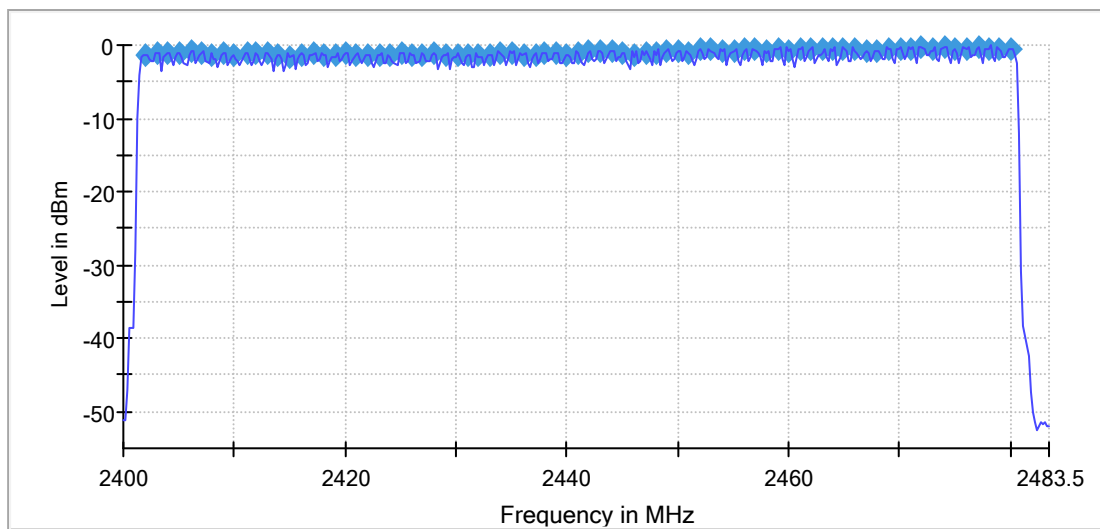
Hopping Frequencies (frequency independent; 10.000 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(a),(g), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

Channels

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

Sequence



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	200.000 kHz	<= 299.000 kHz
VBW	200.000 kHz	>= 200.000 kHz
SweepPoints	418	~ 418
Sweeptime	1.060 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	93 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.46 dB	0.50 dB

Appendix A.5: Test Results of Time of Occupancy

BDR:

Time of Channel Occupancy (2441 MHz; 10.000 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	319	126.860	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
6.250	192.490	98.645

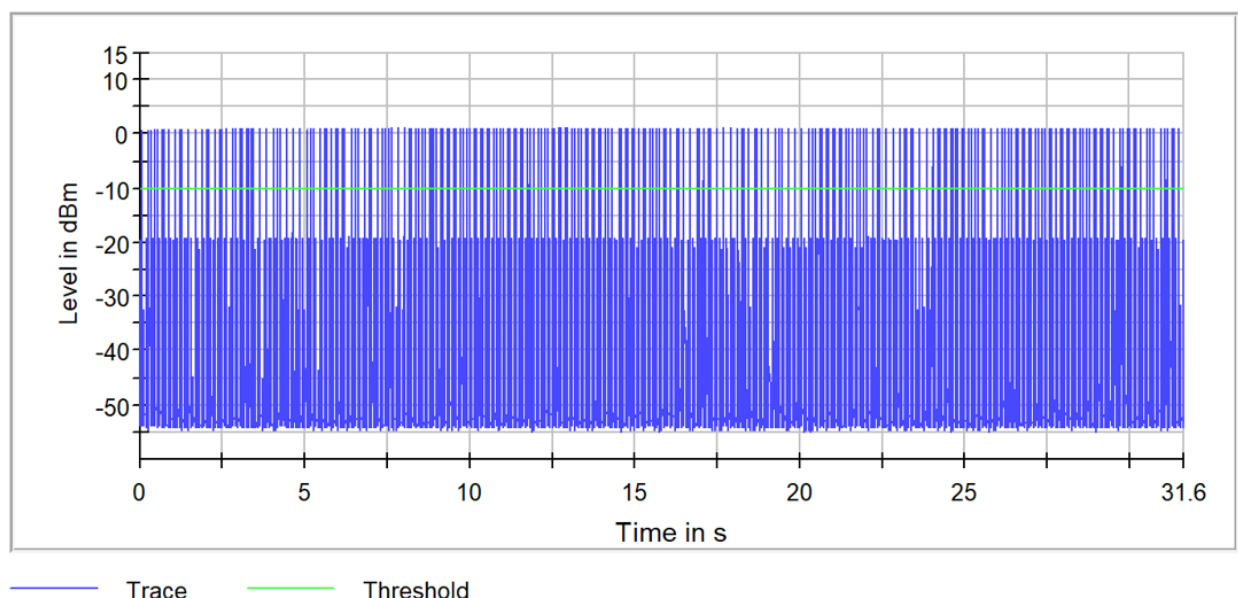
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
0.39	0.40	400.000	0.000	0.396

DwellTime

Min (ms)	Max (ms)	Mean (ms)
0.39	0.40	0.396

Time of Channel Occupancy



Measurement

Setting	Instrument Value	Target Value
Center Frequency	2.44100 GHz	2.44100 GHz
Span	ZeroSpan	ZeroSpan
RBW	500.000 kHz	~ 500.000 kHz
VBW	1.000 MHz	~ 1.500 MHz
SweepPoints	30001	~ 30001
SweepTime	31.600 s	31.600 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Clear Write	Clear Write
SweepType	Sweep	AUTO
Preamp	off	off
Trigger	External	External
Trigger Offset	0.000 s	0.000 s

OSP

Setting	Instrument Value	Target Value
Measurement Time	31.600 s	31.600 s
Tracepoints	31600000	31600000
Time resolution	1.000 µs	1.000 µs
Detector	RMS	RMS

Time of Channel Occupancy(2) (2441 MHz; 10.000 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	153	254.460	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
17.500	779.980	205.323

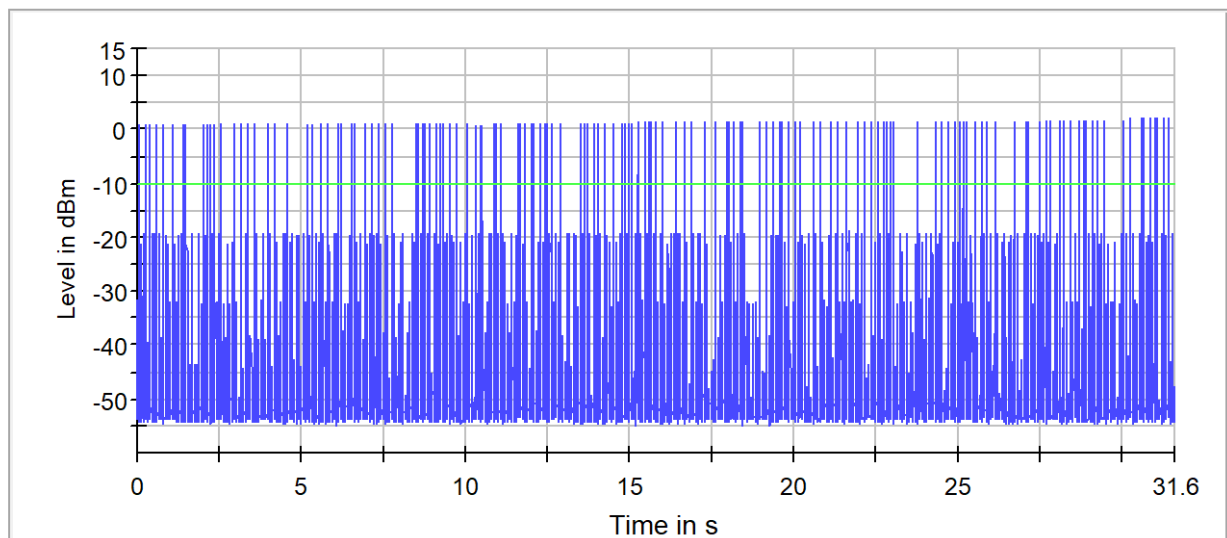
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
1.650	1.660	400.000	0.000	1.652

DwellTime

Min (ms)	Max (ms)	Mean (ms)
1.650	1.660	1.652

Time of Channel Occupancy(2)



— Trace — Threshold

Measurement

Setting	Instrument Value	Target Value
Center Frequency	2.44100 GHz	2.44100 GHz
Span	ZeroSpan	ZeroSpan
RBW	500.000 kHz	~ 500.000 kHz
VBW	1.000 MHz	~ 1.500 MHz
SweepPoints	30001	~ 30001
SweepTime	31.600 s	31.600 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Clear Write	Clear Write
SweepType	Sweep	AUTO
Preamp	off	off
Trigger	External	External
Trigger Offset	0.000 s	0.000 s

OSP

Setting	Instrument Value	Target Value
Measurement Time	31.600 s	31.600 s
Tracepoints	31600000	31600000
Time resolution	1.000 µs	1.000 µs
Detector	RMS	RMS

Time of Channel Occupancy(3) (2441 MHz; 10.000 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	112	330.600	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
18.750	1106.220	280.735

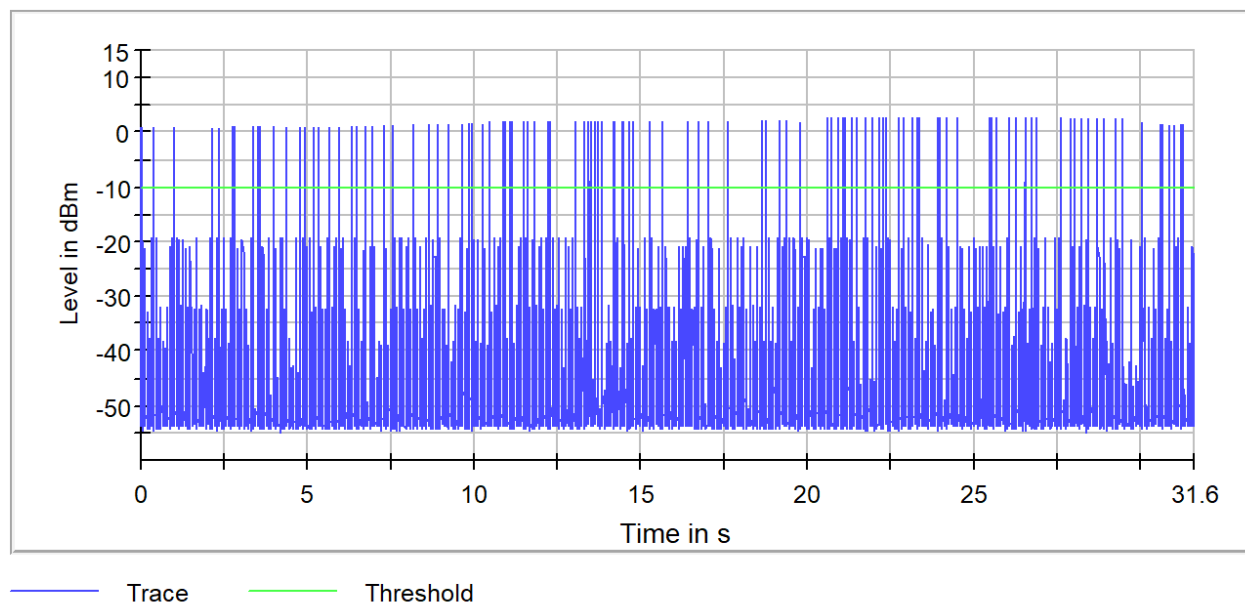
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
2.900	5.800	400.000	0.000	2.926

DwellTime

Min (ms)	Max (ms)	Mean (ms)
2.900	6.650	2.933

Time of Channel Occupancy(3)



Measurement

Setting	Instrument Value	Target Value
Center Frequency	2.44100 GHz	2.44100 GHz
Span	ZeroSpan	ZeroSpan
RBW	500.000 kHz	~ 500.000 kHz
VBW	1.000 MHz	~ 1.500 MHz
SweepPoints	30001	~ 30001
SweepTime	31.600 s	31.600 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Clear Write	Clear Write
SweepType	Sweep	AUTO
Preamp	off	off
Trigger	External	External
Trigger Offset	0.000 s	0.000 s

OSP

Setting	Instrument Value	Target Value
Measurement Time	31.600 s	31.600 s
Tracepoints	31600000	31600000
Time resolution	1.000 µs	1.000 µs
Detector	RMS	RMS

EDR:

Time of Channel Occupancy (2441 MHz; 10.000 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	319	123.240	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
6.250	196.240	98.814

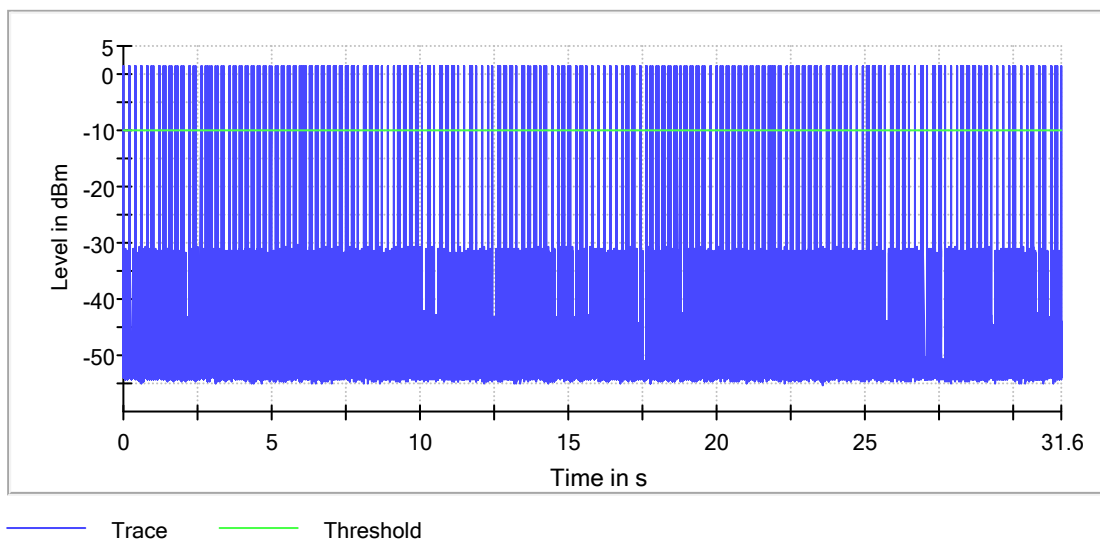
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
0.35	0.40	400.000	0.000	0.385

DwellTime

Min (ms)	Max (ms)	Mean (ms)
0.38	0.40	0.394

Time of Channel Occupancy



Measurement

Setting	Instrument Value	Target Value
Center Frequency	2.44100 GHz	2.44100 GHz
Span	ZeroSpan	ZeroSpan
RBW	500.000 kHz	~ 500.000 kHz
VBW	1.000 MHz	~ 1.500 MHz
SweepPoints	30001	~ 30001
SweepTime	31.600 s	31.600 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Clear Write	Clear Write
SweepType	Sweep	AUTO
Preamp	off	off
Trigger	External	External
Trigger Offset	0.000 s	0.000 s

OSP

Setting	Instrument Value	Target Value
Measurement Time	31.600 s	31.600 s
Tracepoints	31600000	31600000
Time resolution	1.000 µs	1.000 µs
Detector	RMS	RMS

Time of Channel Occupancy(2) (2441 MHz; 10.000 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	163	263.350	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
7.500	667.480	193.991

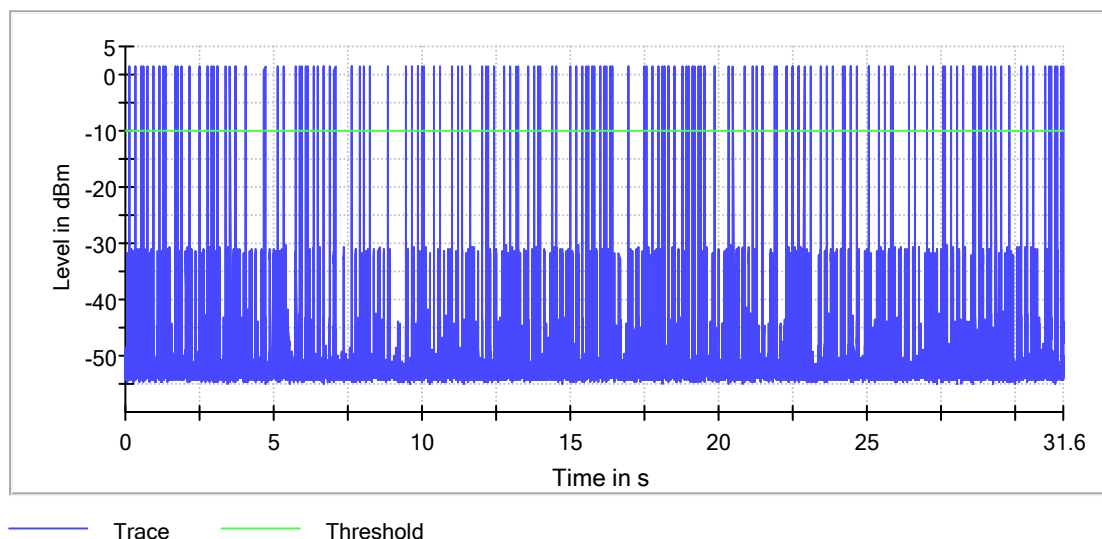
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
1.540	1.640	400.000	0.000	1.606

DwellTime

Min (ms)	Max (ms)	Mean (ms)
1.640	1.650	1.647

Time of Channel Occupancy(2)



Measurement

Setting	Instrument Value	Target Value
Center Frequency	2.44100 GHz	2.44100 GHz
Span	ZeroSpan	ZeroSpan
RBW	500.000 kHz	~ 500.000 kHz
VBW	1.000 MHz	~ 1.500 MHz
SweepPoints	30001	~ 30001
SweepTime	31.600 s	31.600 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Clear Write	Clear Write
SweepType	Sweep	AUTO
Preamp	off	off
Trigger	External	External
Trigger Offset	0.000 s	0.000 s

OSP

Setting	Instrument Value	Target Value
Measurement Time	31.600 s	31.600 s
Tracepoints	31600000	31600000
Time resolution	1.000 µs	1.000 µs
Detector	RMS	RMS

Time of Channel Occupancy(3) (2441 MHz; 10.000 dBm; 1 MHz)

Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

Result

DUT Frequency (MHz)	Result	Number of Hops	Average time of occupancy (ms)	Threshold (dBm)
2441.000000	PASS	103	292.290	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
22.500	1364.960	297.565

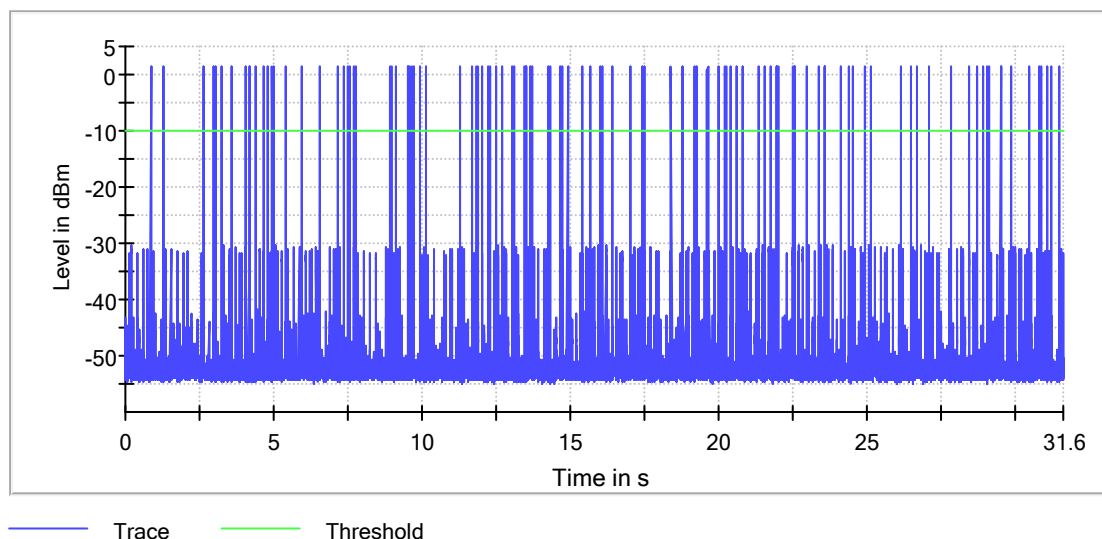
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
2.760	2.860	400.000	0.000	2.810

DwellTime

Min (ms)	Max (ms)	Mean (ms)
2.880	2.900	2.896

Time of Channel Occupancy(3)



Measurement

Setting	Instrument Value	Target Value
Center Frequency	2.44100 GHz	2.44100 GHz
Span	ZeroSpan	ZeroSpan
RBW	500.000 kHz	~ 500.000 kHz
VBW	1.000 MHz	~ 1.500 MHz
SweepPoints	30001	~ 30001
SweepTime	31.600 s	31.600 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Clear Write	Clear Write
SweepType	Sweep	AUTO
Preamp	off	off
Trigger	External	External
Trigger Offset	0.000 s	0.000 s

OSP

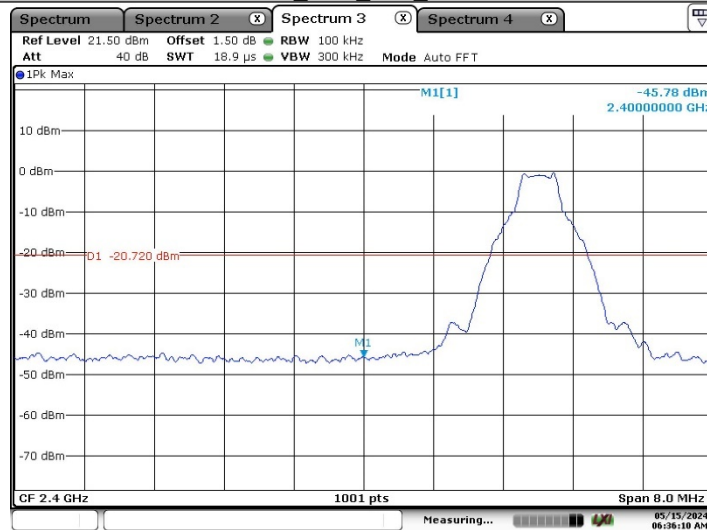
Setting	Instrument Value	Target Value
Measurement Time	31.600 s	31.600 s
Tracepoints	31600000	31600000
Time resolution	1.000 µs	1.000 µs
Detector	RMS	RMS

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

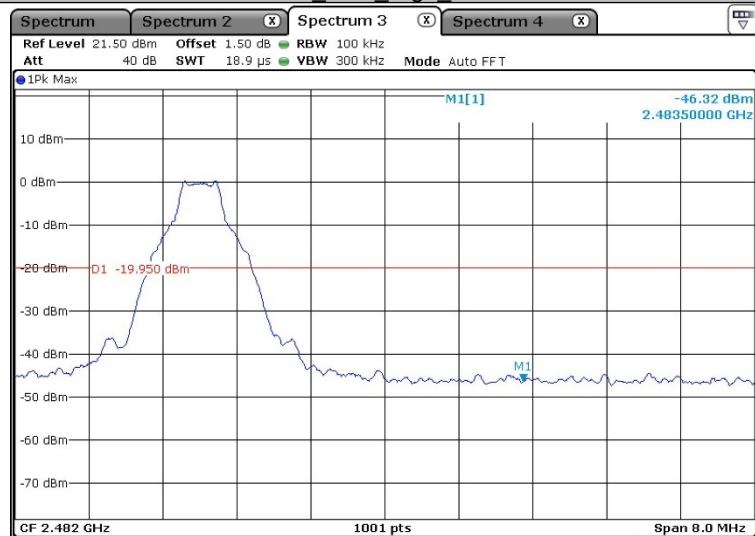
Band Edge

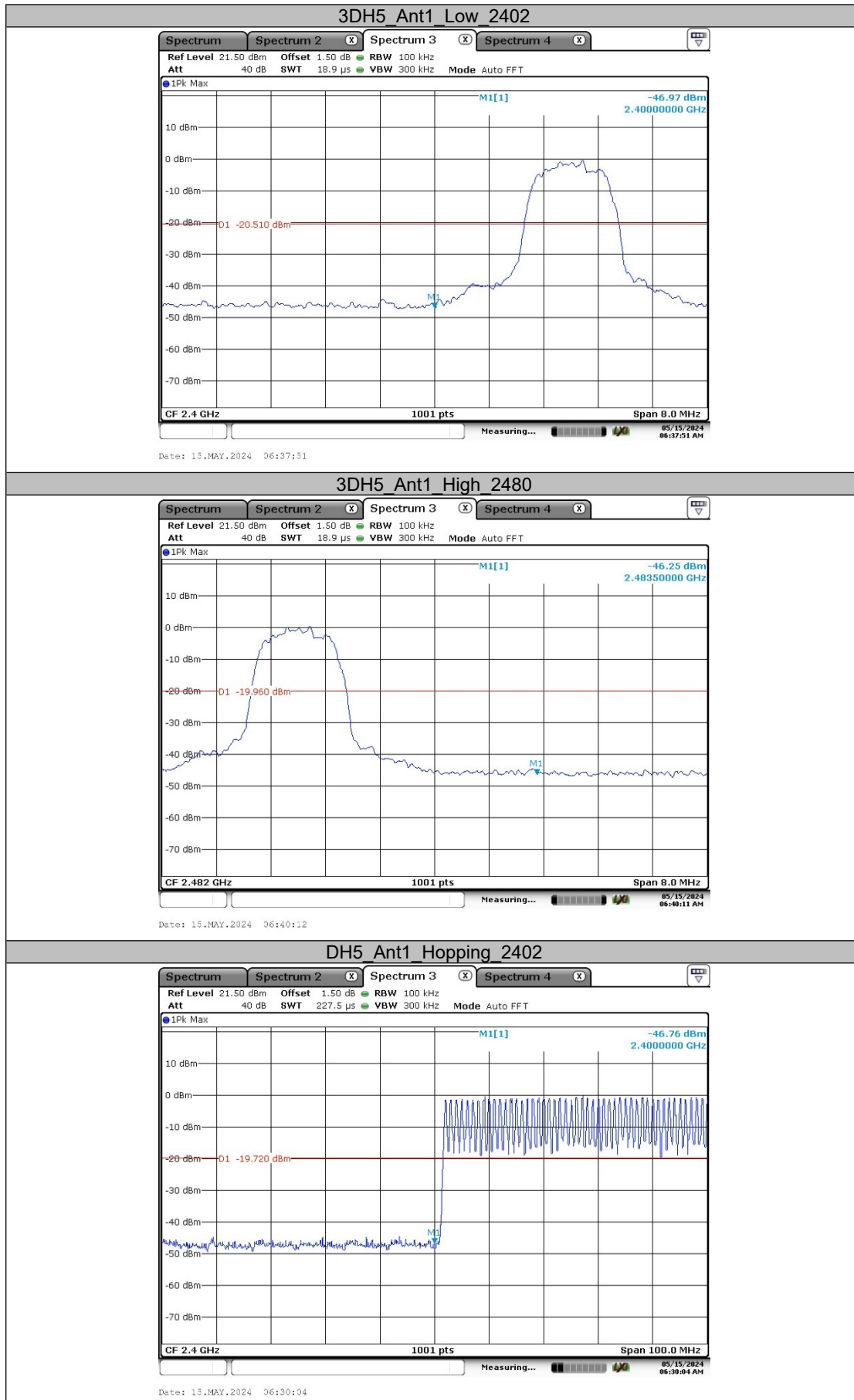
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.72	-45.78	≤-20.72	PASS
		High	2480	0.05	-46.32	≤-19.95	PASS
3DH5	Ant1	Low	2402	-0.51	-46.97	≤-20.51	PASS
		High	2480	0.04	-46.25	≤-19.96	PASS
DH5	Ant1	Hopping	2402	0.28	-46.76	≤-19.72	PASS
		Hopping	2480	0.28	-47.22	≤-19.72	PASS
3DH5	Ant1	Hopping	2402	0.18	-48.92	≤-19.82	PASS
		Hopping	2480	0.18	-47.79	≤-19.82	PASS

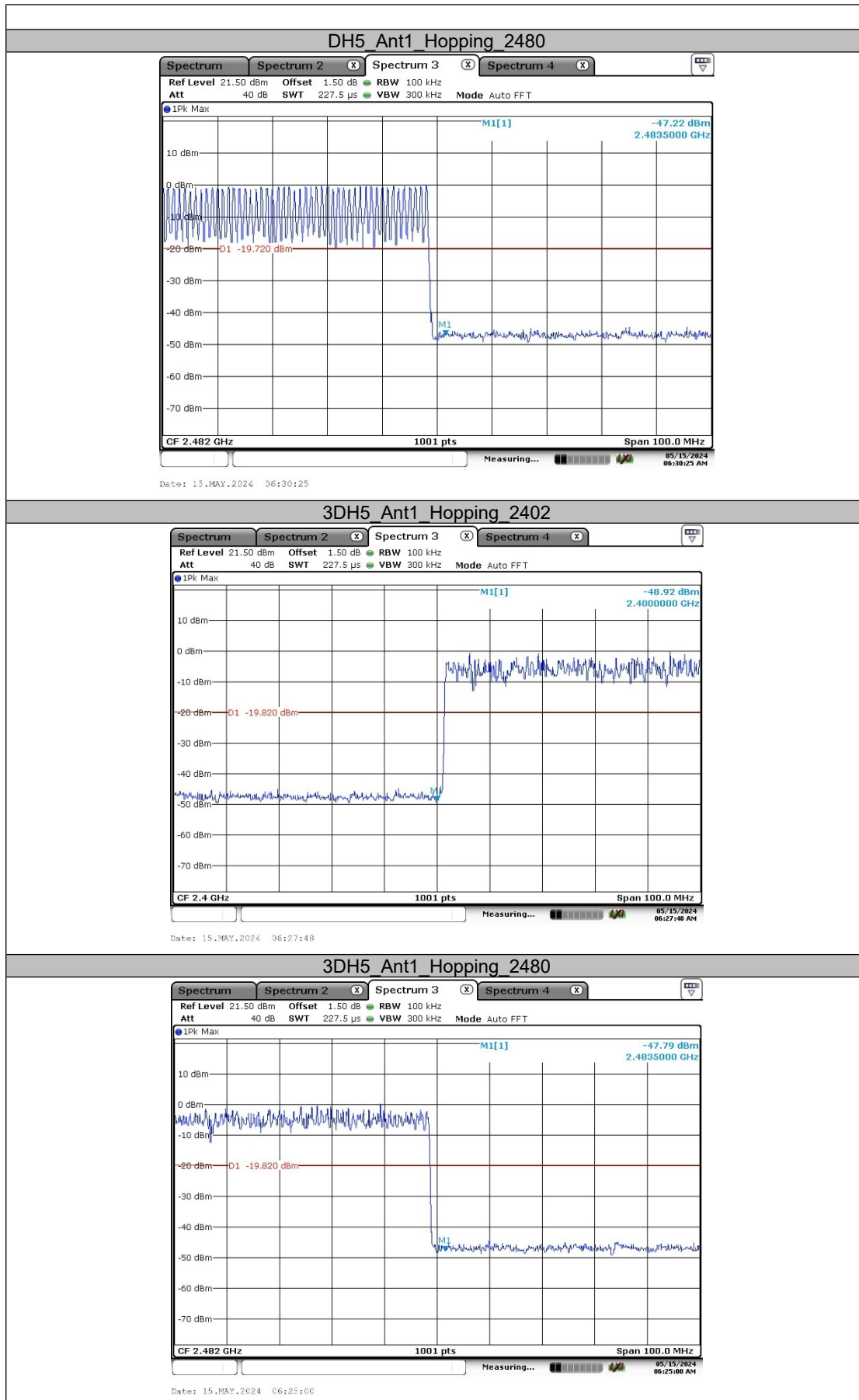
DH5 Ant1 Low 2402



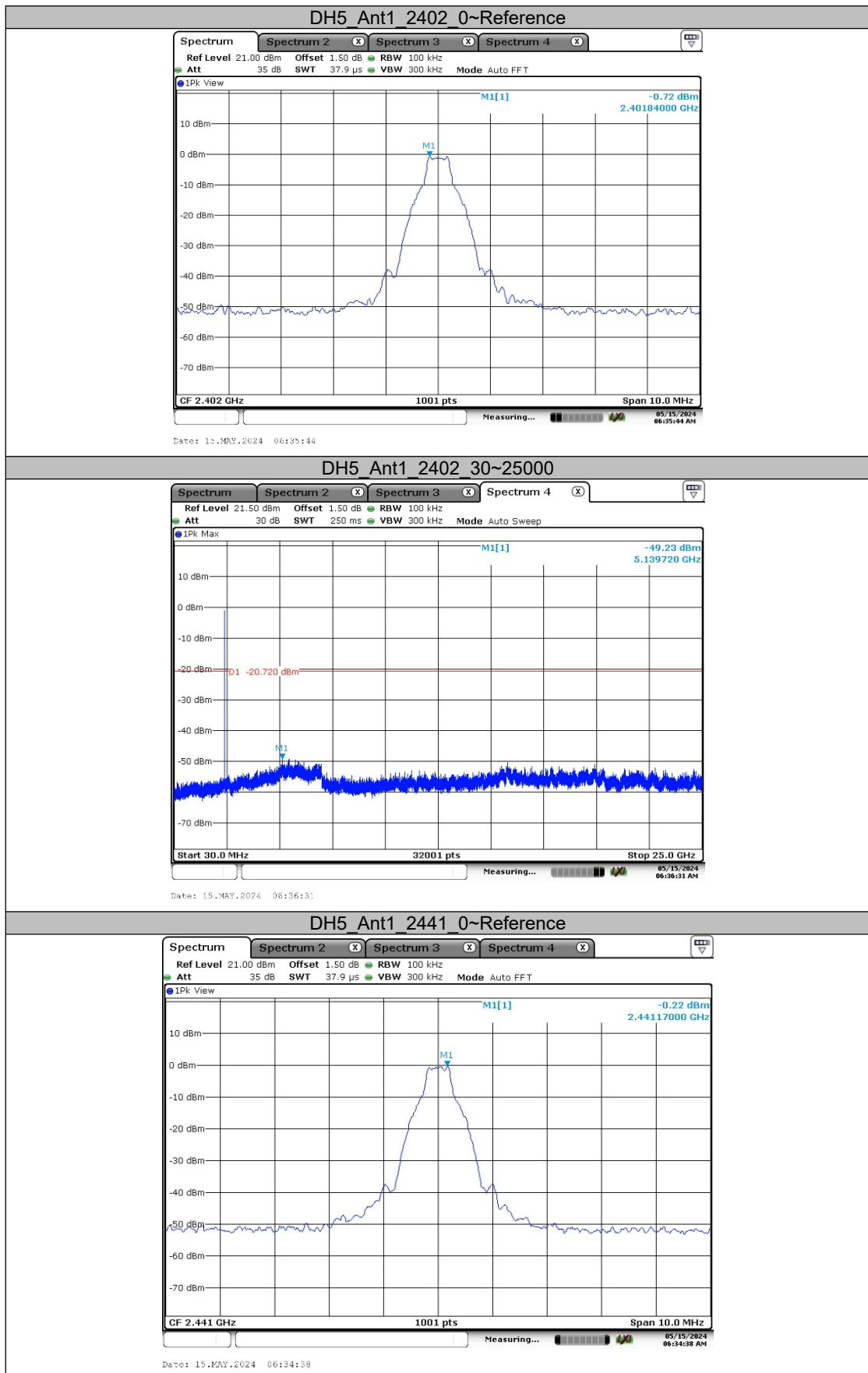
DH5 Ant1 High 2480

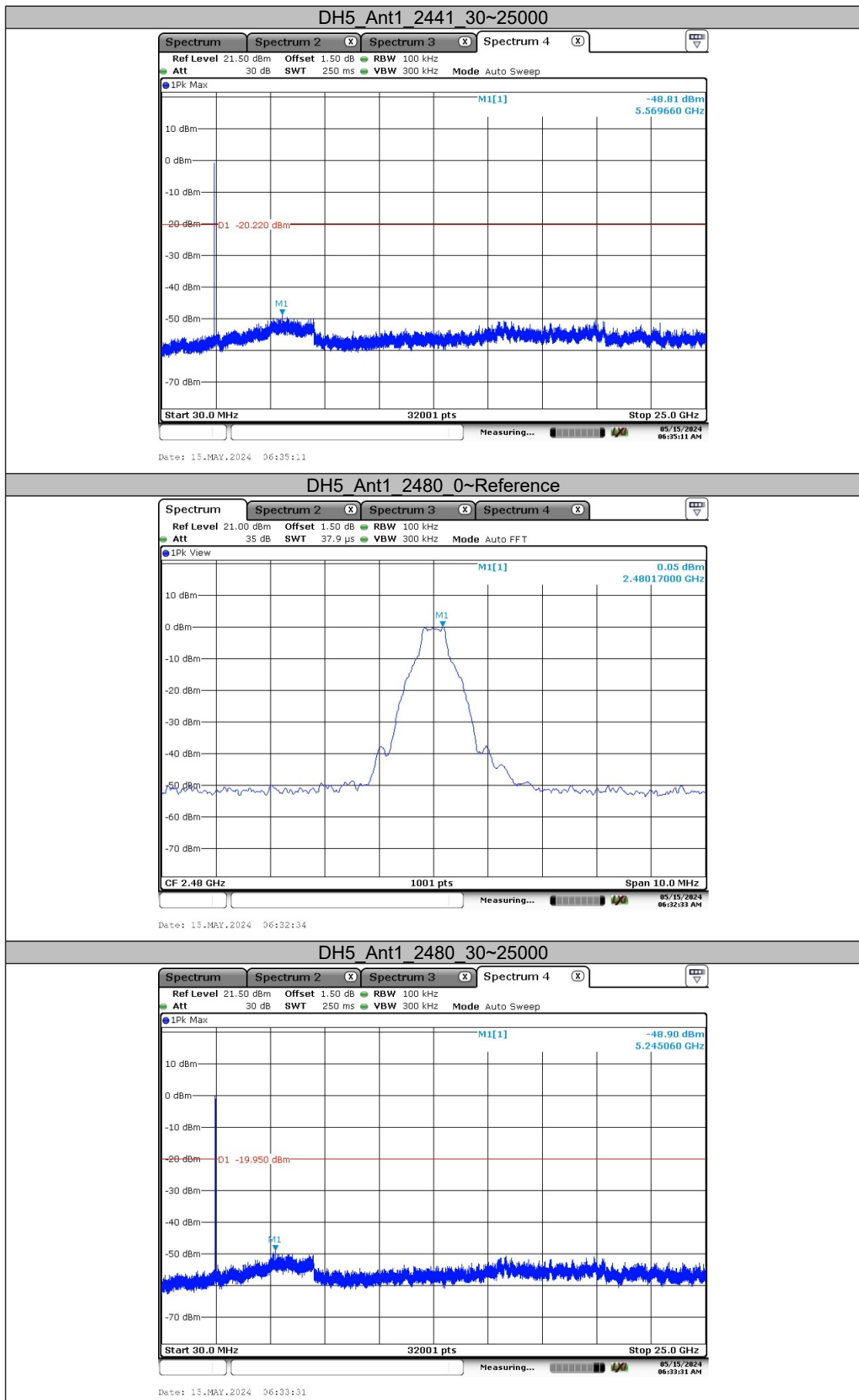


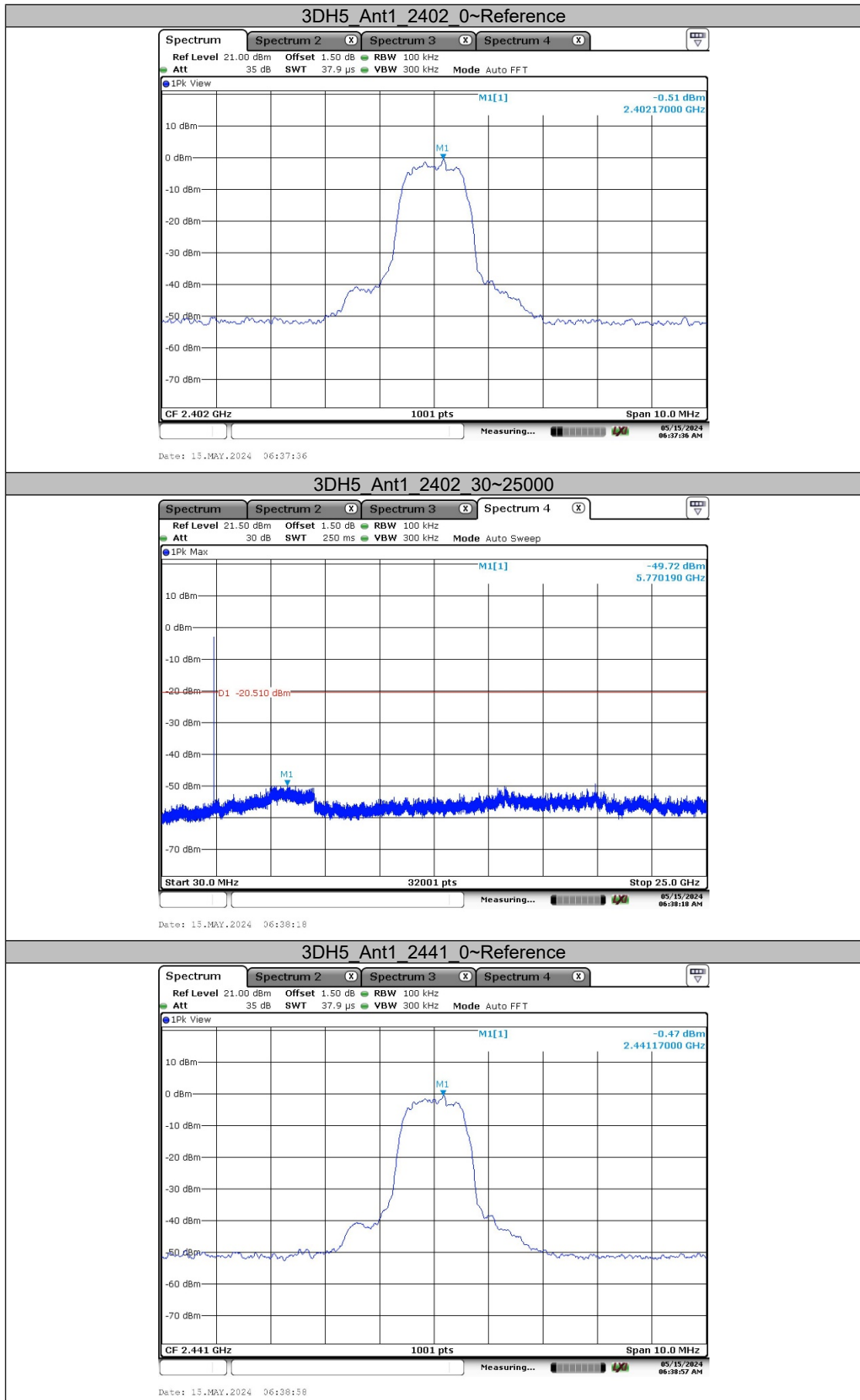


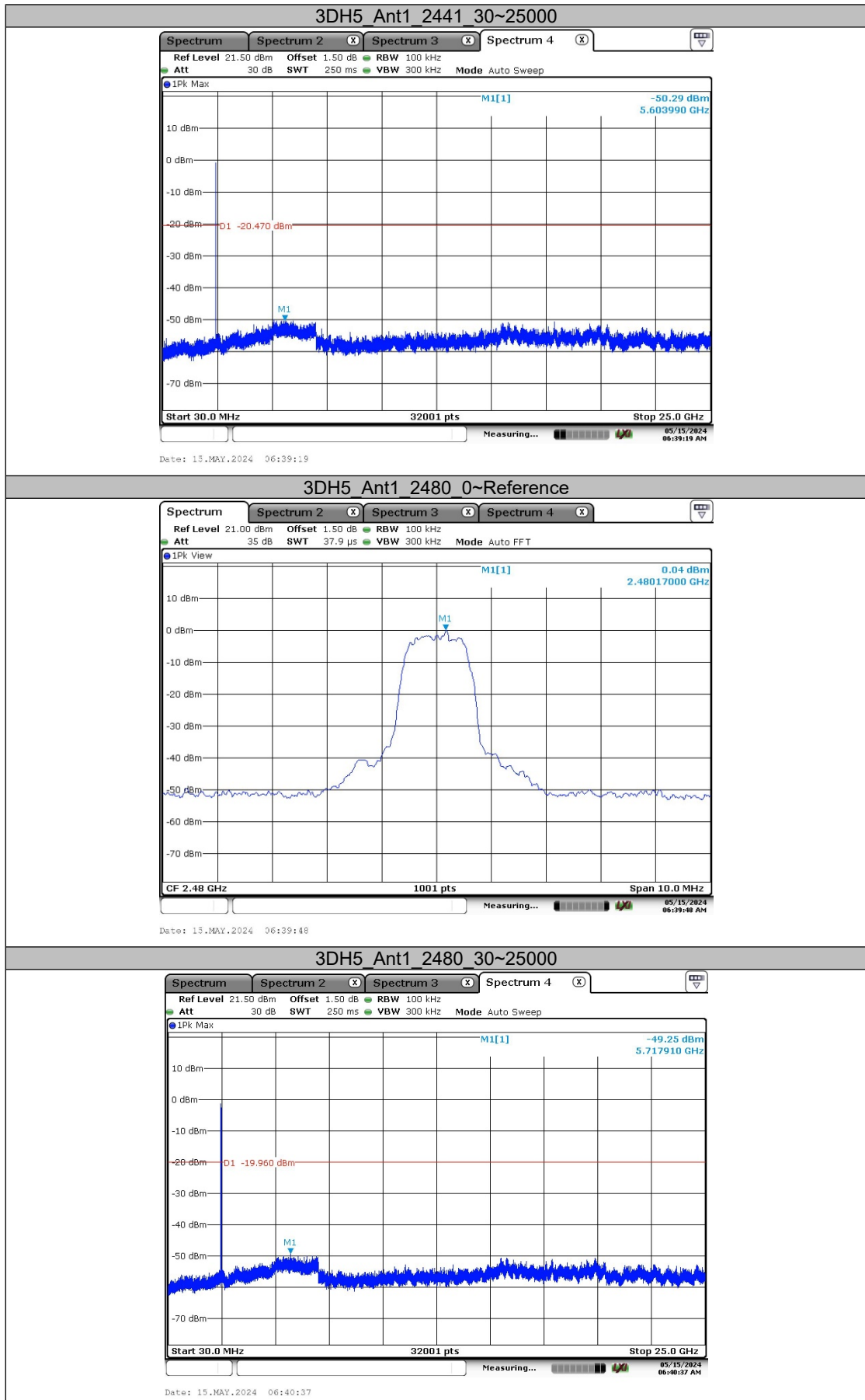


Conducted Spurious Emission









Appendix A.7: Test Results of Radiated Spurious Emissions

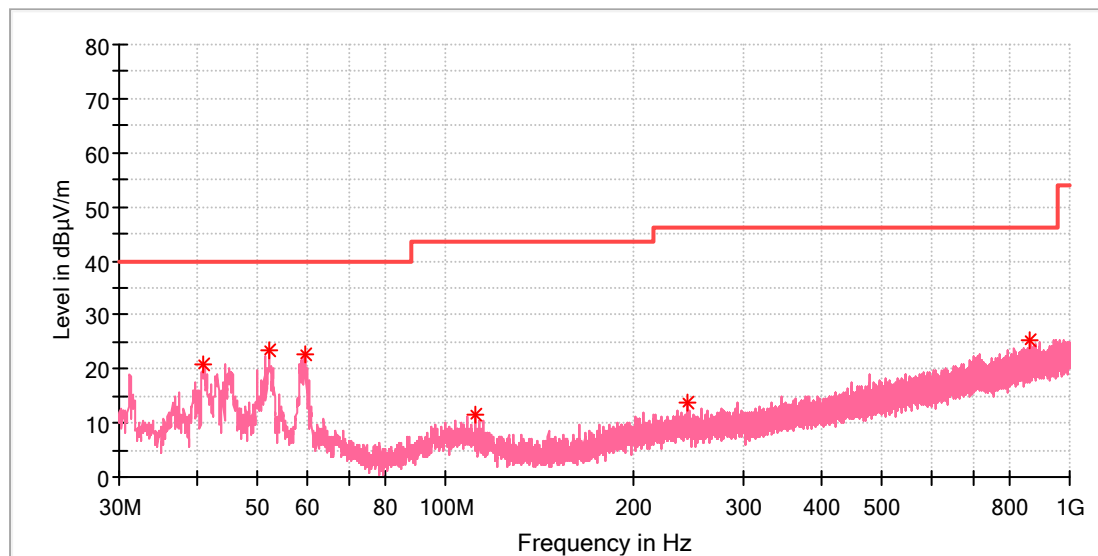
Note:

- 1) This testing was carried out on different modulations, but only the worst case was presented in this report.
- 2) Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

30 MHz - 1GHz

EUT Information

EUT Name:	Bluetooth Behind-the-Head Earmuffs
Model:	AESBH1
Test Mode:	BR_DH5_Mid channel
Order No/Sample No:	168482524/A003709521-001
Test Voltage::	Battery 3.7V DC
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

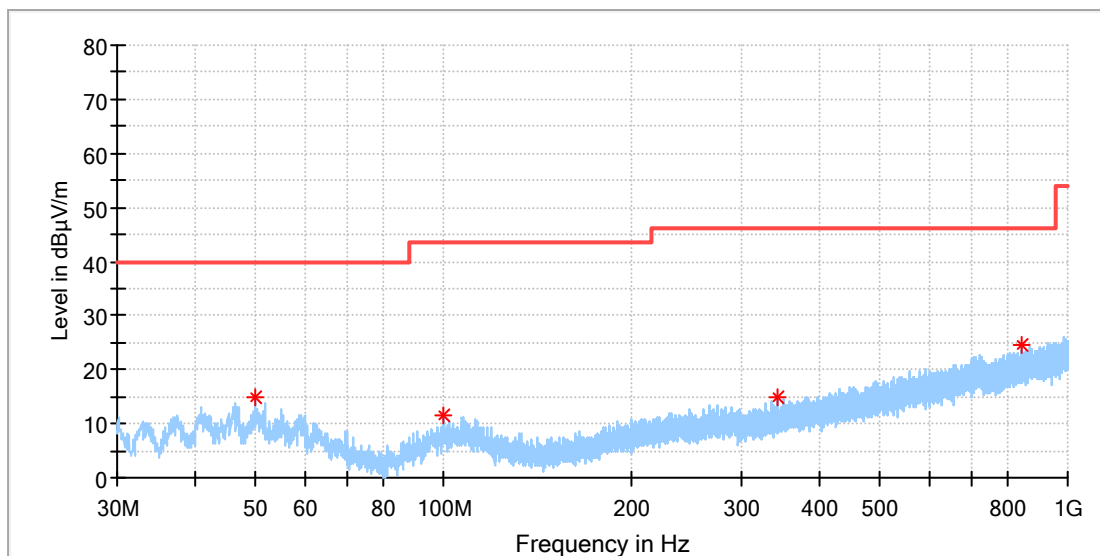
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
41.043077	20.89	40.00	19.11	100.0	V	354.0	-20.1
52.198077	23.58	40.00	16.42	100.0	V	354.0	-18.6
59.547692	22.57	40.00	17.43	100.0	V	142.0	-19.2
111.890385	11.37	43.50	32.13	100.0	V	223.0	-19.7
243.922308	13.82	46.00	32.18	100.0	V	149.0	-17.9
865.916154	25.35	46.00	20.65	100.0	V	308.0	-5.7

Final_Result

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

EUT Information

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
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)
50.034231	14.97	40.00	25.03	100.0	H	30.0	-18.6
100.250385	11.67	43.50	31.83	100.0	H	95.0	-19.3
342.899615	14.84	46.00	31.16	100.0	H	30.0	-15.3
842.636154	24.71	46.00	21.29	100.0	H	71.0	-6.0

Final_Result

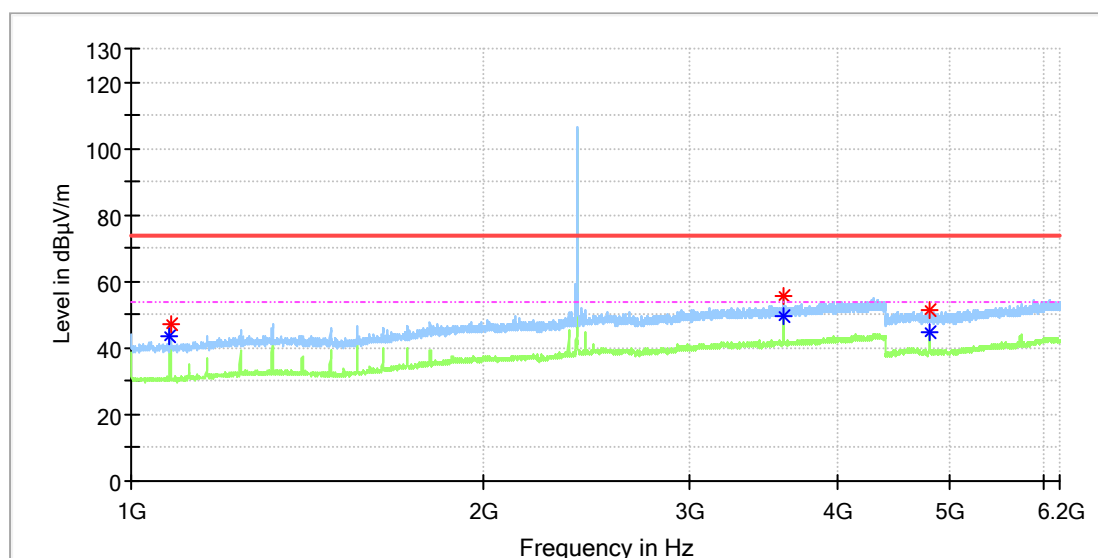
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

1GHz - 18GHz

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

EUT Information

EUT Name:	Bluetooth Behind-the-Head Earmuffs
Model:	AESBH1
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168482524/A003709521-001
Test Voltage::	Battery 3.7V DC
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

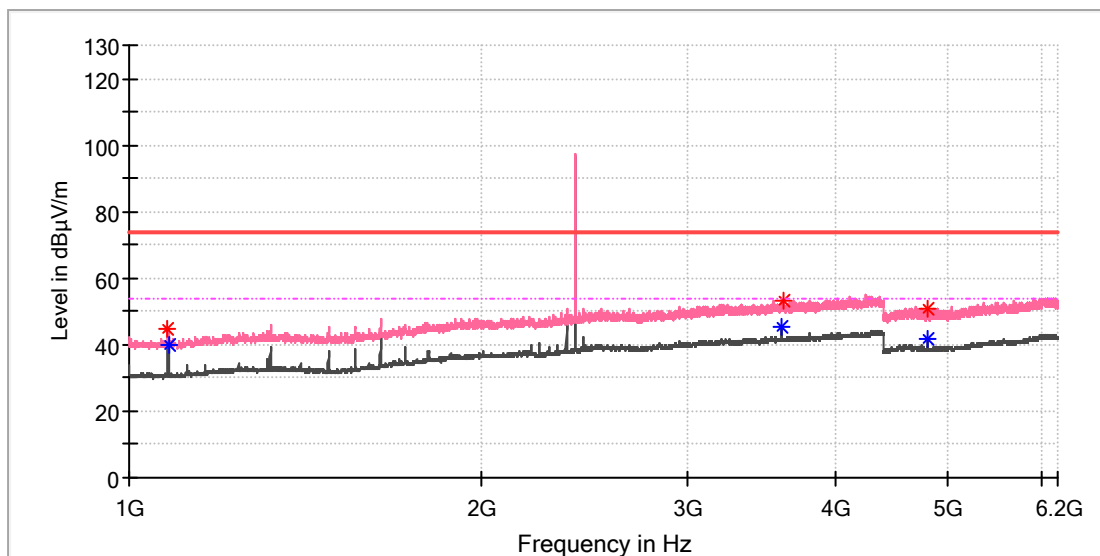
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1079.500000	---	43.79	54.00	10.21	150.0	H	20.0	-0.2
1080.000000	47.36	---	74.00	26.64	150.0	H	340.0	-0.2
3603.000000	55.85	---	74.00	18.15	150.0	H	327.0	9.3
3603.000000	---	49.61	54.00	4.39	150.0	H	327.0	9.3
4804.000000	51.19	---	74.00	22.81	150.0	H	267.0	11.8
4804.000000	---	44.87	54.00	9.13	150.0	H	267.0	11.8

Final_Result

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

EUT Information

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_Low channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
Remark: Temp 23 Humi:58%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

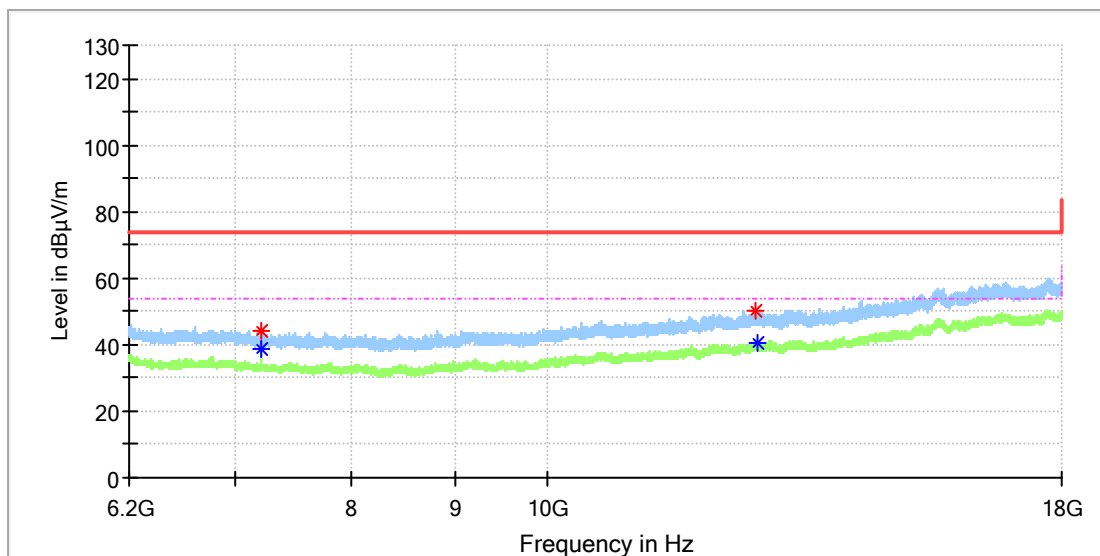
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1079.500000	44.98	---	74.00	29.02	150.0	V	0.0	-0.2
1080.000000	---	39.79	54.00	14.21	150.0	V	0.0	-0.2
3603.000000	---	45.49	54.00	8.51	150.0	V	181.0	9.3
3620.500000	53.25	---	74.00	20.75	150.0	V	140.0	9.4
4804.000000	51.07	---	74.00	22.93	150.0	V	96.0	11.8
4804.000000	---	41.70	54.00	12.30	150.0	V	96.0	11.8

Final_Result

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

EUT Information

EUT Name:	Bluetooth Behind-the-Head Earmuffs
Model:	AESBH1
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168482524/A003709521-001
Test Voltage::	Battery 3.7V DC
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

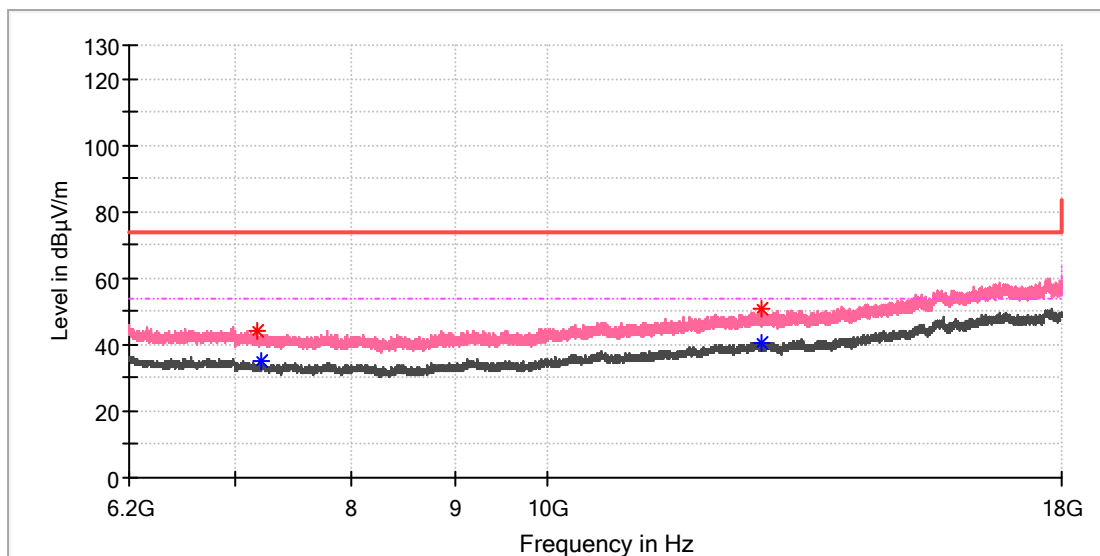
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7205.950000	44.30	---	74.00	29.70	150.0	H	46.0	8.8
7205.950000	---	38.80	54.00	15.20	150.0	H	46.0	8.8
12685.083333	50.20	---	74.00	23.80	150.0	H	222.0	15.1
12705.733333	---	40.63	54.00	13.37	150.0	H	209.0	15.1

Final_Result

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

EUT Information

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_Low channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
Remark: Temp 23 Humi:58%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

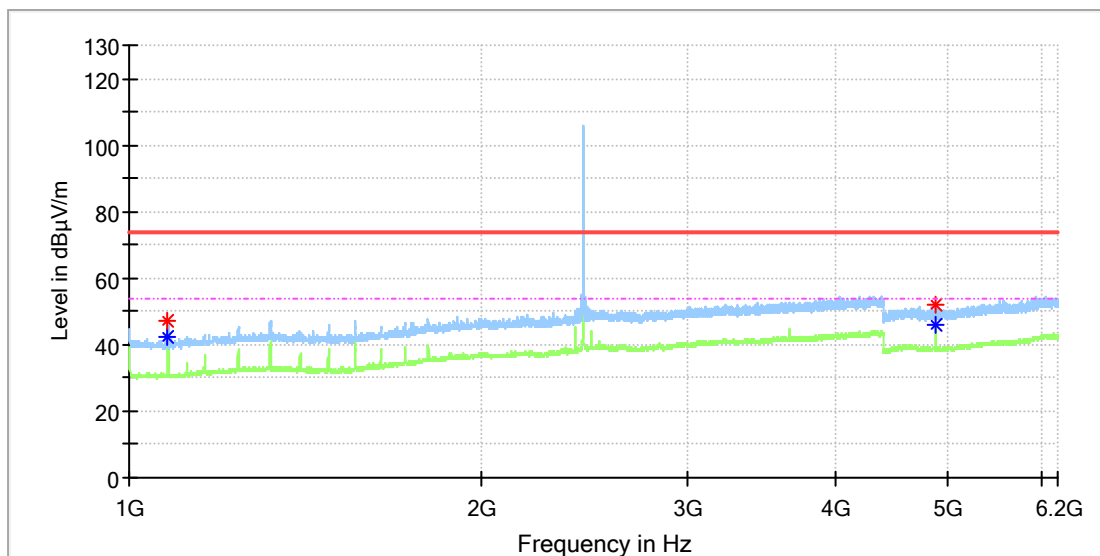
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7179.400000	44.17	---	74.00	29.83	150.0	V	157.0	8.8
7205.458333	---	35.11	54.00	18.89	150.0	V	324.0	8.8
12768.175000	50.78	---	74.00	23.22	150.0	V	289.0	15.2
12780.466667	---	40.66	54.00	13.34	150.0	V	252.0	15.2

Final_Result

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

EUT Information

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
Remark: Temp 23 Humi:58%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

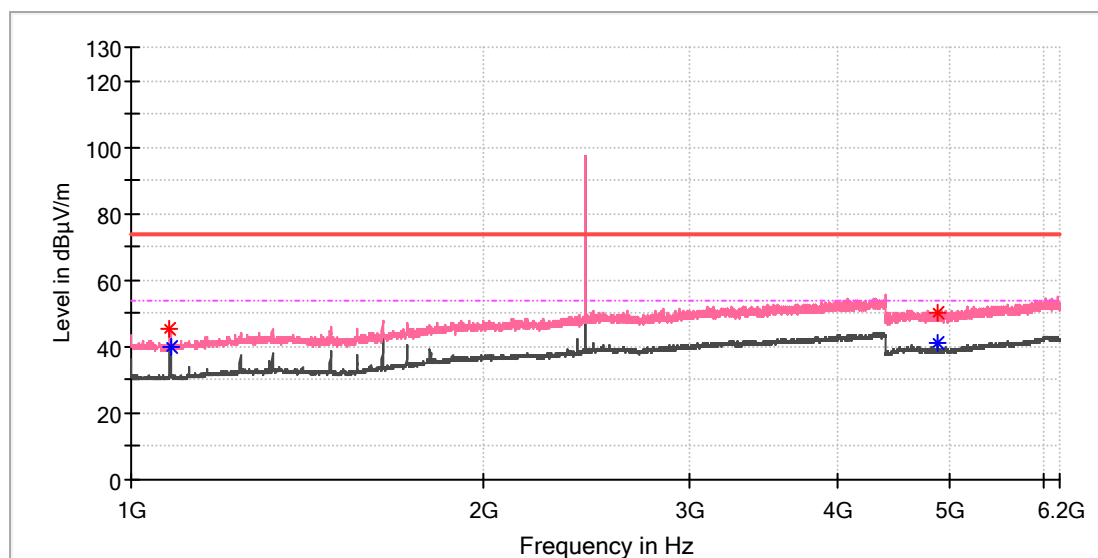
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1079.500000	47.46	---	74.00	26.54	150.0	H	17.0	-0.2
1079.500000	---	42.30	54.00	11.70	150.0	H	17.0	-0.2
4881.500000	51.81	---	74.00	22.19	150.0	H	322.0	11.8
4882.000000	---	46.05	54.00	7.95	150.0	H	322.0	11.8

Final_Result

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

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
Remark: Temp 23 Humi:58%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

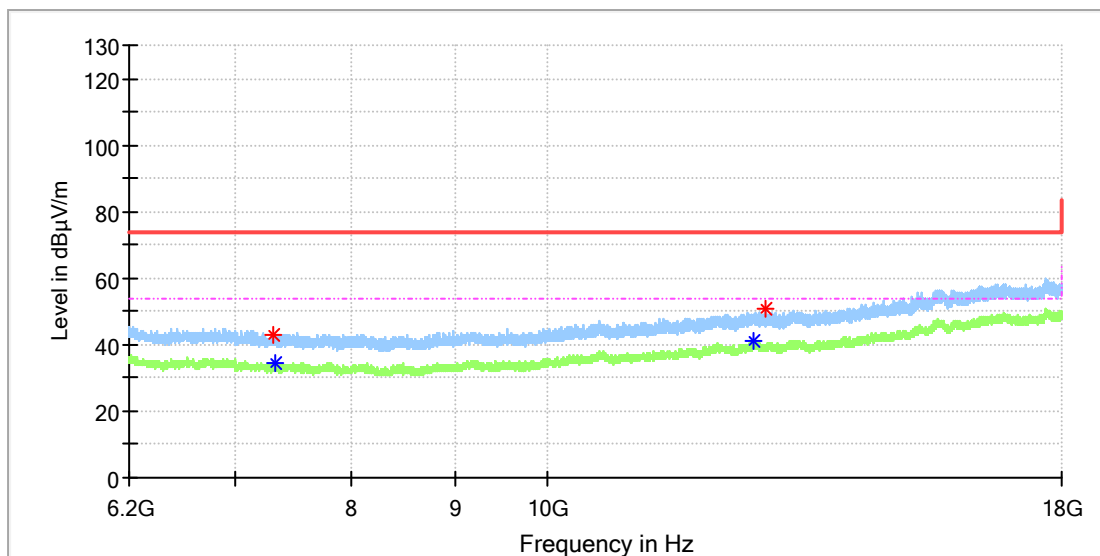
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1079.500000	45.26	---	74.00	28.74	150.0	V	283.0	-0.2
1080.000000	---	39.87	54.00	14.13	150.0	V	283.0	-0.2
4882.000000	50.48	---	74.00	23.52	150.0	V	98.0	11.8
4882.000000	---	41.28	54.00	12.72	150.0	V	98.0	11.8

Final_Result

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

EUT Information

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
Remark: Temp 23 Humi:58%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

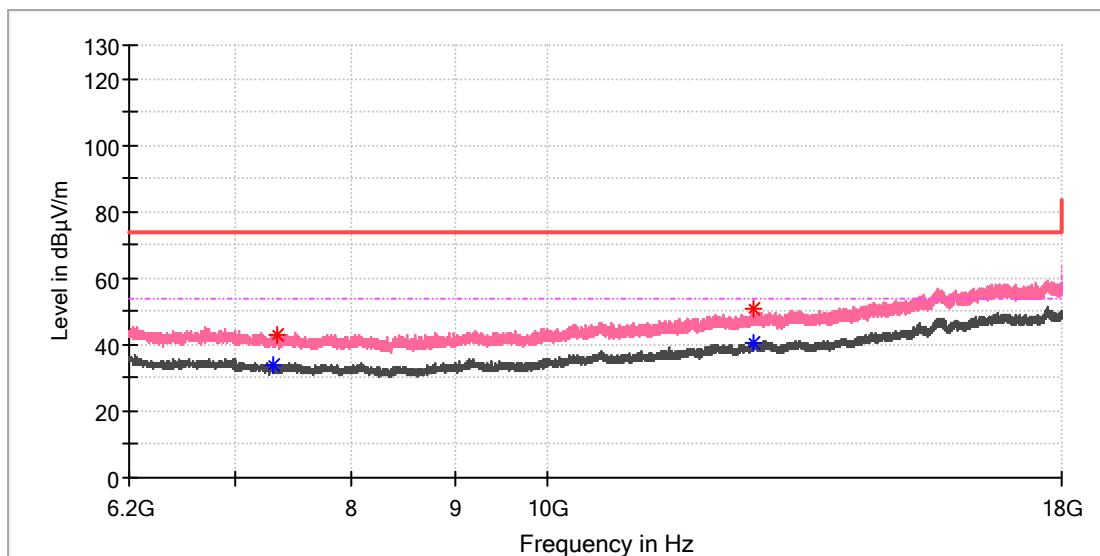
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7305.758333	43.08	---	74.00	30.92	150.0	H	142.0	8.3
7333.783333	---	34.44	54.00	19.56	150.0	H	308.0	8.1
12664.433333	---	41.14	54.00	12.86	150.0	H	131.0	15.0
12828.158333	51.06	---	74.00	22.94	150.0	H	200.0	15.3

Final_Result

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

EUT Information

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_Mid channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
Remark: Temp 23 Humi:58%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

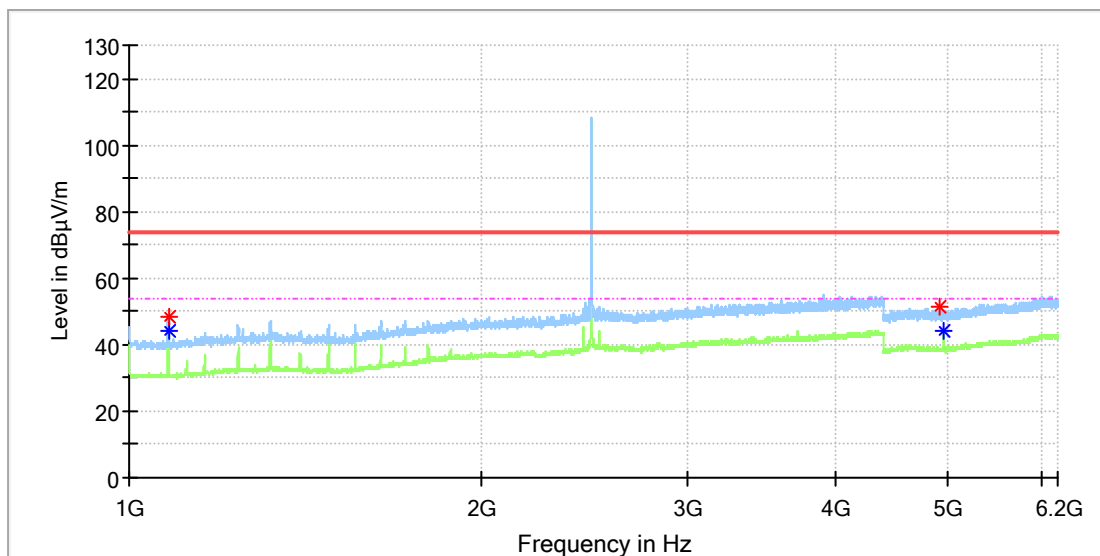
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7301.825000	---	33.87	54.00	20.13	150.0	V	88.0	8.3
7336.733333	43.11	---	74.00	30.89	150.0	V	4.0	8.1
12652.141667	50.55	---	74.00	23.45	150.0	V	182.0	15.0
12668.858333	---	40.71	54.00	13.29	150.0	V	218.0	15.1

Final_Result

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

EUT Information

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_High channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
Remark: Temp 23 Humi:58%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

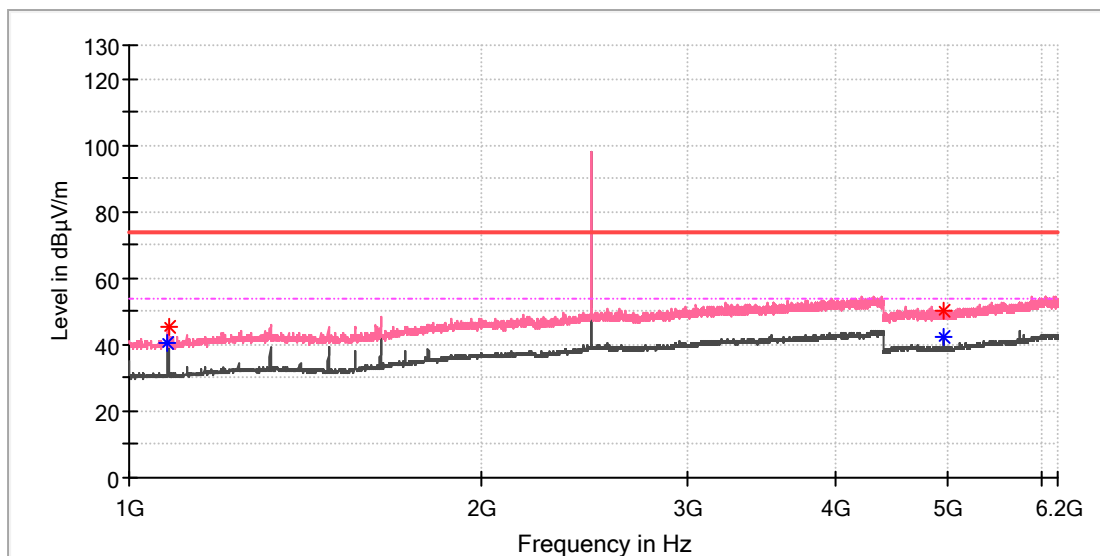
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1080.000000	48.59	---	74.00	25.41	150.0	H	338.0	-0.2
1080.000000	---	44.21	54.00	9.79	150.0	H	338.0	-0.2
4917.500000	51.54	---	74.00	22.46	150.0	H	184.0	11.8
4960.000000	---	44.34	54.00	9.66	150.0	H	323.0	11.8

Final_Result

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

EUT Information

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_High channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
Remark: Temp 23 Humi:58%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

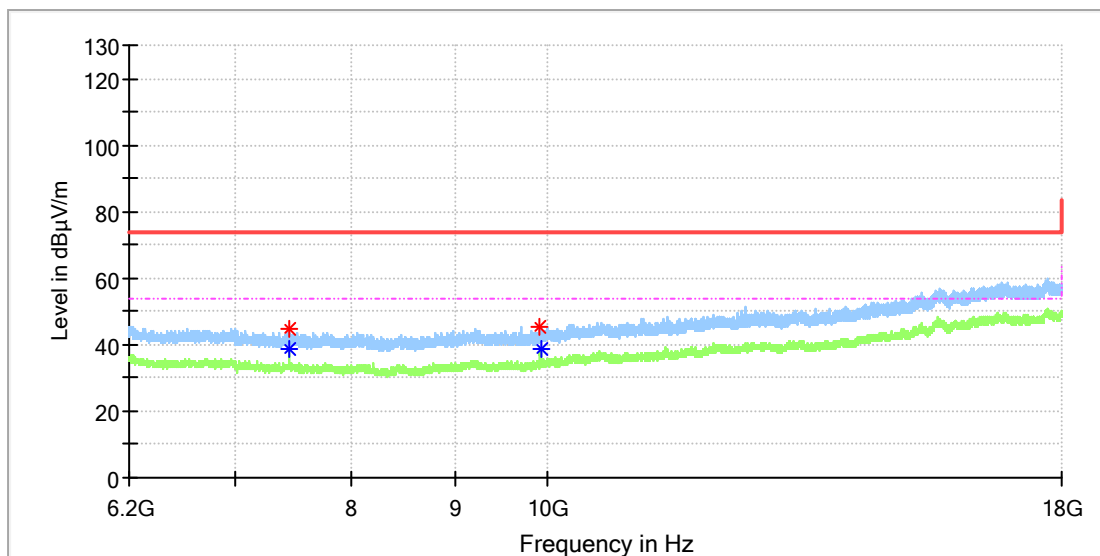
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1079.500000	---	40.27	54.00	13.73	150.0	V	0.0	-0.2
1080.000000	45.11	---	74.00	28.89	150.0	V	0.0	-0.2
4947.500000	50.20	---	74.00	23.80	150.0	V	97.0	11.8
4960.000000	---	42.45	54.00	11.55	150.0	V	90.0	11.8

Final_Result

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

EUT Information

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_High channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
Remark: Temp 23 Humi:58%
Test Standard: FCC 15.247
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical_Freqs

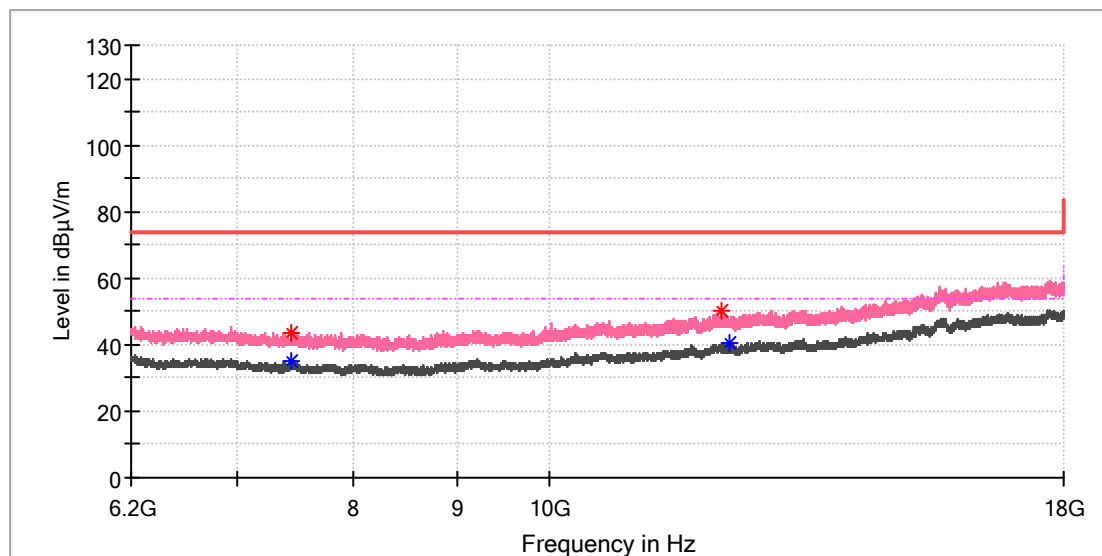
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.983333	44.46	---	74.00	29.54	150.0	H	231.0	8.4
7439.983333	---	38.98	54.00	15.02	150.0	H	231.0	8.4
9905.200000	45.21	---	74.00	28.79	150.0	H	148.0	10.8
9920.441667	---	38.74	54.00	15.26	150.0	H	0.0	10.8

Final_Result

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

EUT Information

EUT Name: Bluetooth Behind-the-Head Earmuffs
Model: AESBH1
Test Mode: BR_DH5_High channel
Order No/Sample No: 168482524/A003709521-001
Test Voltage:: Battery 3.7V DC
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)
7439.491667	43.51	---	74.00	30.49	150.0	V	250.0	8.4
7439.983333	---	35.00	54.00	19.00	150.0	V	239.0	8.4
12162.441667	50.21	---	74.00	23.79	150.0	V	329.0	14.5
12288.800000	---	40.33	54.00	13.67	150.0	V	14.0	14.8

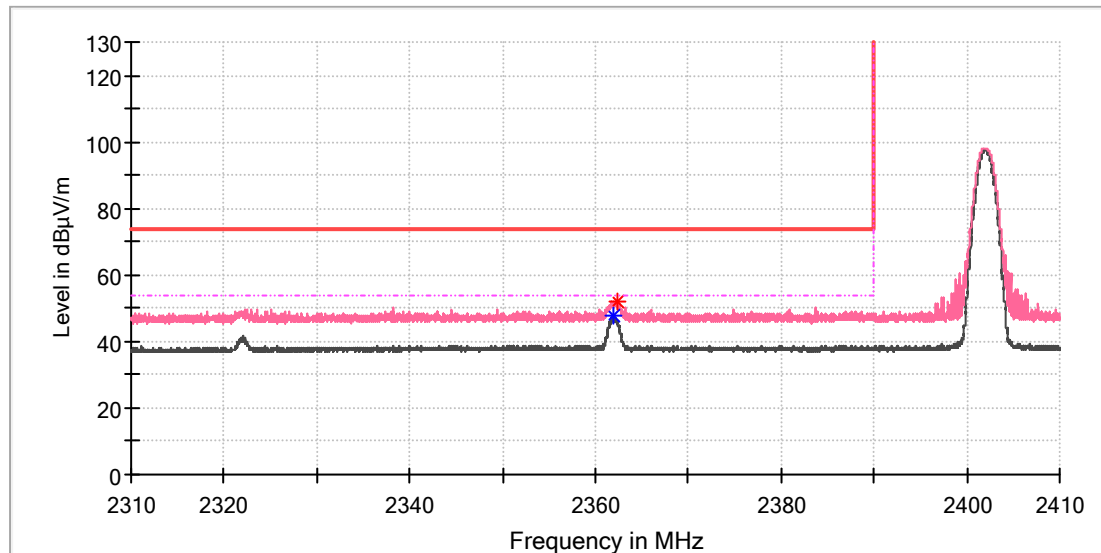
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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Appendix A.8: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	Bluetooth Behind-the-Head Earmuffs
Model:	AESBH1
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168482524/A003709521-001
Test Voltage::	Battery 3.7V DC
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

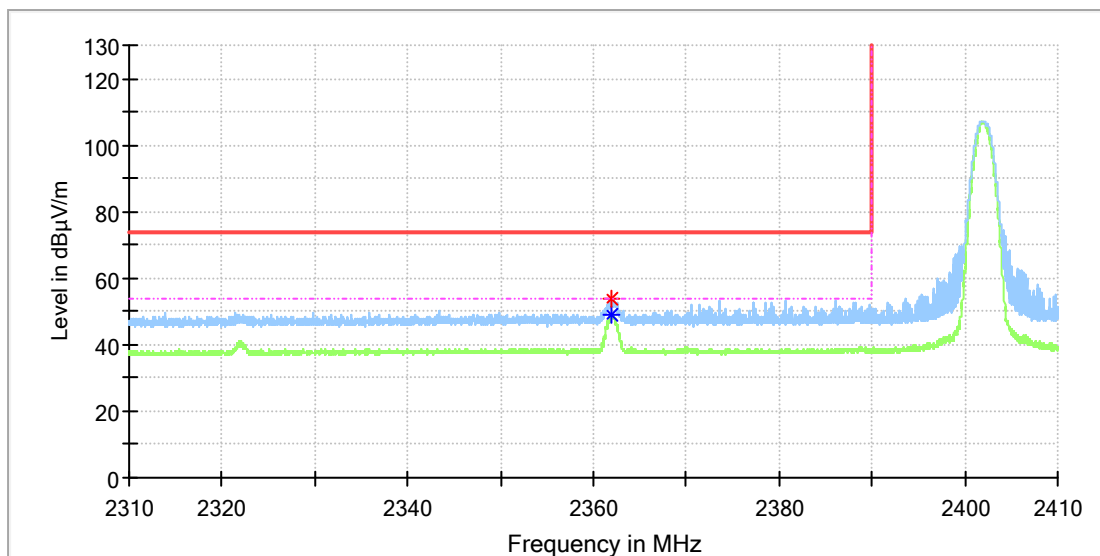
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2361.911765	---	47.69	54.00	6.31	150.0	V	219.0	6.9
2362.455882	52.21	---	74.00	21.79	150.0	V	33.0	6.9

Final_Result

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

EUT Information

EUT Name:	Bluetooth Behind-the-Head Earmuffs
Model:	AESBH1
Test Mode:	BR_DH5_Low channel
Order No/Sample No:	168482524/A003709521-001
Test Voltage::	Battery 3.7V DC
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

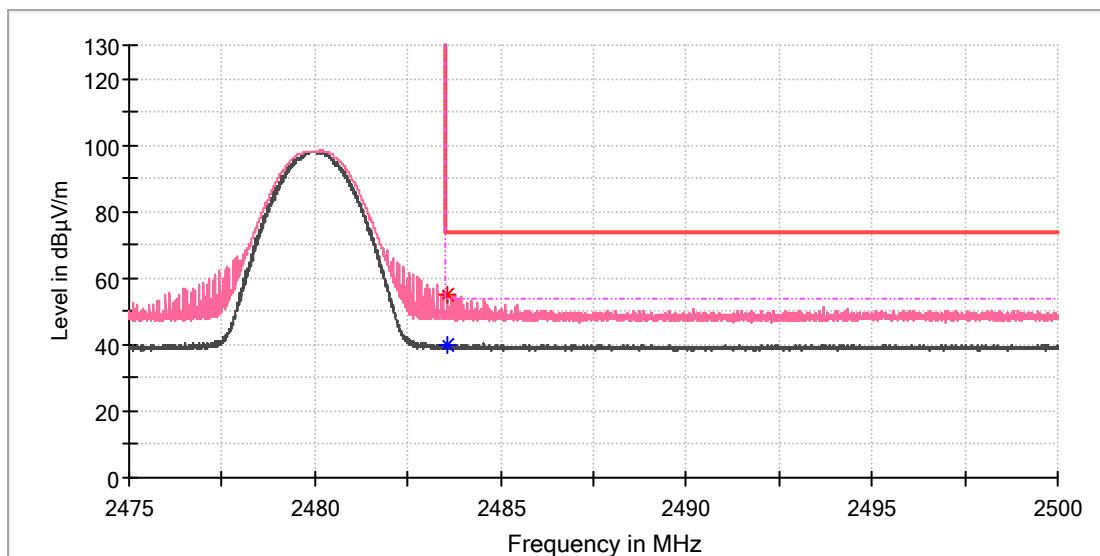
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2361.941177	---	48.99	54.00	5.01	150.0	H	77.0	6.9
2361.985294	53.58	---	74.00	20.42	150.0	H	84.0	6.9

Final_Result

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

EUT Information

EUT Name:	Bluetooth Behind-the-Head Earmuffs
Model:	AESBH1
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168482524/A003709521-001
Test Voltage::	Battery 3.7V DC
Remark:	Temp 23 Humi:58%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

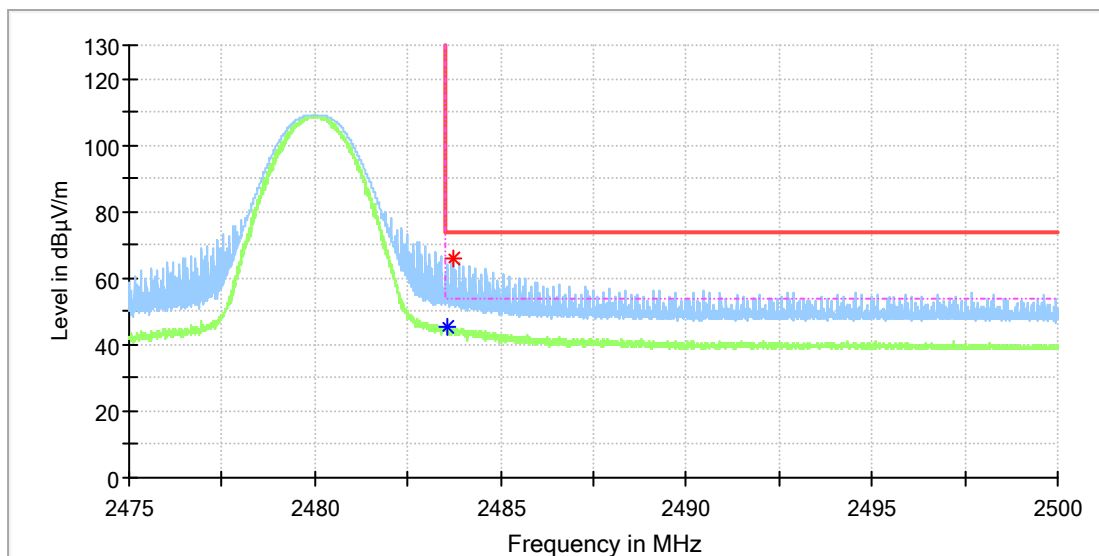
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.558824	---	40.20	54.00	13.81	150.0	V	89.0	7.4
2483.562500	55.15	---	74.00	18.85	150.0	V	89.0	7.4

Final_Result

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

EUT Information

EUT Name:	Bluetooth Behind-the-Head Earmuffs
Model:	AESBH1
Test Mode:	BR_DH5_High channel
Order No/Sample No:	168482524/A003709521-001
Test Voltage::	Battery 3.7V DC
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)
2483.591912	---	45.22	54.00	8.78	150.0	H	88.0	7.4
2483.705882	65.88	---	74.00	8.12	150.0	H	81.0	7.4

Final_Result

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