

Prüfbericht-Nr.: Test report no.:	CN20PI77 001	Auftrags-Nr.: Order no.:	168285979	Seite 1 von 24 Page 1 of 24																							
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2020-10-14																								
Auftraggeber: Client:	Aptiv Electronics (Suzhou) Co., Ltd. No.123, Changyang Street, Suzhou Industrial Park, Suzhou, China																										
Prüfgegenstand: Test item:	Intelligent Connected Infotainment																										
Bezeichnung / Typ-Nr.: Identification / Type no.:	GWMV3-(B01)																										
Auftrags-Inhalt: Order content:	Test Report																										
Prüfgrundlage: Test specification:	CFR47 FCC Part 15.203 CFR47 FCC Part 15.247 CFR47 FCC Part 2.1091																										
Wareneingangsdatum: Date of sample receipt:	2020-10-20	Refer to Photo Documentation																									
Prüfmuster-Nr.: Test sample no.:	A002907010-001 A002907010-002																										
Prüfzeitraum: Testing period:	2020-11-09 to 2020-11-16																										
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:	2020-11-17 Signed by: Hardy Suo		Ausstellungsdatum: Issue date:	2020-11-17 Signed by: Sam Lin																							
Stellung / Position:	Sachverständige(r) / Expert		Stellung / Position:	Sachverständige(r) / Expert																							
Sonstiges / Other:	FCC ID: 2AX7AV3ICCPPLATFORM This report is for DSS operation.																										
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged																										
* Legende:	<table border="0"> <tr> <td>1 = sehr gut</td> <td>2 = gut</td> <td>3 = befriedigend</td> <td>4 = ausreichend</td> <td>5 = mangelhaft</td> </tr> <tr> <td>P(ass) = entspricht o.g. Prüfgrundlage(n)</td> <td>F(ail) = entspricht nicht o.g. Prüfgrundlage(n)</td> <td>N/A = nicht anwendbar</td> <td>N/T = nicht getestet</td> <td></td> </tr> <tr> <td>* Legend:</td> <td>1 = very good</td> <td>2 = good</td> <td>3 = satisfactory</td> <td>4 = sufficient</td> <td>5 = poor</td> </tr> <tr> <td></td> <td>P(ass) = passed a.m. test specification(s)</td> <td>F(ail) = failed a.m. test specification(s)</td> <td>N/A = not applicable</td> <td>N/T = not tested</td> <td></td> </tr> </table>					1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet		* Legend:	1 = very good	2 = good	3 = satisfactory	4 = sufficient	5 = poor		P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested	
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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 a. m. 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>																											

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 PEAK OUTPUT POWER

RESULT: Pass

5.1.3 20dB EMISSION BANDWIDTH AND 99% OCCUPIED CHANNEL BANDWIDTH

RESULT: Pass

5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHZ BANDWIDTH

RESULT: Pass

5.1.5 SPURIOUS EMISSIONS

RESULT: Pass

5.1.6 CARRIER FREQUENCY SEPARATION

RESULT: Pass

5.1.7 HOPPING FREQUENCIES

RESULT: Pass

5.1.8 TIME OF CHANNEL OCCUPANCY

RESULT: Pass

5.1.9 SAFETY HUMAN EXPOSURE

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 operation mode

Appendix B: Photographs of the Test Set-Up

1.2 TEST STANDARD(S)

Applied Rules: CFR47 FCC Part 15.203
CFR47 FCC Part 15.247
CFR47 FCC Part 2.1091

Test Method: KDB 558074 D01
ANSI C63.10:2013

2. TEST SITES

2.1 TEST FACILITIES

TÜV Rheinland (Shenzhen) Co., Ltd.

(FCC Registration No.: 694916 & IC Registration Number: 25069)

Address: No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, P.R. China

2.2 TEST DATE

Date of test: 2020-11-09 to 2020-11-16

2.3 LIST OF TEST AND MEASUREMENT INSTRUMENTS

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (TS8997)					
Equip. No.	Description	Manufacturer	Model	Serial No.	Calibrated until (DD.MM.YYYY)
G1825794	Wireless Connectivity Tester	R&S	CMW270	101375	10.08.2021
G1825795	Signal Analyzer	R&S	FSV 40	101441	10.08.2021
G1825796	Vector Signal Generator	R&S	SMBV100A	263301	10.08.2021
G1825797	Signal Generator	R&S	SMB100A	115186	10.08.2021
G1825798	OSP	R&S	OSP 150	101017	17.12.2020
G1825799	Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
G1825800	Test Software	R&S	WMS32 (V11.00.00)	N/A	N/A
G1825801	Power Meter	R&S	NRP2	107105	17.12.2020
G1825802	Wideband Power Sensor	R&S	NRP-Z81	105350	17.12.2020
G1829620	Power Sensor	R&S	NRP-Z81	105677	10.09.2021
G1826483	Humid & Temp Programmable Tester	BOST	NTH090-60	19040801	10.04.2021
G1826431	Shielding Room 8#	Albatross	SR8	APC1715 1-SR8	23.07.2021
Unwanted Emission Testing (TS9975)					
Equip. No.	Description	Manufacturer	Model	Serial No.	Calibrated until (DD.MM.YYYY)
G1826021	EMI Test Receiver	R&S	ESR 7	102021	11.08.2021

G1826023	Signal Analyzer	R&S	FSV 40	101439	10.08.2021
G1826024	System Controller Interface	R&S	SCI-100	S10010038	N/A
G1826025	Filterbank	R&S	Wlan	100759	10.08.2021
G1826026	OSP	R&S	OSP 120	102040	N/A
G1826028	Pre-amplifier	R&S	SCU08F1	08320031	10.08.2021
G1826029	Amplifier	R&S	SCU-18F	180070	10.08.2021
G1826030	Amplifier	R&S	SCU40A	100475	10.09.2021
G1826031	Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	08.08.2022
G1826032	Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	08.08.2022
G1826033	Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	08.08.2022
G1826034	Active Loop Antenna	Schwarzbeck	FMZB 1513	302	13.09.2022
G1826035	Wideband Ridged Horn Antenna (12-18 GHz)	Steatite	QMS-00208	18313	02.09.2021
G1826036	Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
G1826037	Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
G1826433	3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC1715 1-SAC	06.07.2021

2.4 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.5 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.

2.6 Location of Original Data

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

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. facility located at No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. GENERAL PRODUCT INFORMATION

3.1 GENERAL DESCRIPTION

The EUT is Bluetooth transmitter which used in vehicle.

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

3.2 RATING AND SYSTEM DETAILS

Table 2: Rating of EUT

General Information of EUT	Description
Kind of Equipment:	Intelligent Connected Infotainment
Type Designation:	GWMV3-(B01)
Trade Mark:	N/A
Type of Equipment:	☒ Stand-alone ☐ Combined Equipment ☐ Plug-in radio device ☐ Other <u>N/A</u>
Operating Voltage:	DC 12 V
Operating Temperature Range:	-40°C ~ +85°C

Table 3: Technical Specification of EUT

Characteristic	Description
Operated Modes:	Bluetooth Core V2.1
Operational Frequency Band(s):	2.4G ISM Band
Operating Frequency Range:	2402 – 2480 MHz
Channel Number:	79 channels
Modulation Type:	GFSK, 8DPSK, $\pi/4$ QDPSK
Antenna Type:	Integral Antenna
Antenna Gain:	Max. 3.2 dBi

Table 4: Operating Frequency Channel of EUT

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

Table 5: Frequency Hopping Information

Technical Specification	Description
Hopping Range	Hereby we declare that the maximum frequency of this device is: 2402-2480MHz. This is according the Bluetooth Core Specification for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04-E).
Hopping Sequence	Example of a 79 hopping sequence in data mode: 33,04,21,44,23,42,53,46,55,48,40,59,72,29,76,31,08,73, 07,75,09,45,60,39,58,13,47,11,77,52,35,50,65,54,67,56, 69,62,71,64, 7,25,27,66,57,70,74,61,78,63,10,41,05,43, 15,44,64,68,02,70,06,01,51,03,55,05,03,66,53,49,36,47,
Receiver input bandwidth	The input bandwidth of the receiver is 1MHz. In every connection one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings.

	Repeating of a packet has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.
--	---

3.3 INDEPENDENT OPERATION MODES

The basic operation modes are:

- A. Transmitting
 - 1) Bluetooth function
 - i. Low Channel
 - ii. Mid Channel
 - iii. High Channel
- B. Receiving
- C. Standby
- D. Off

3.4 NOISE GENERATING AND NOISE SUPPRESSING PARTS

Refer to the Circuit Diagram.

3.5 SUBMITTED DOCUMENTS

- | | |
|---|--|
| ☒ User Manual | ☒ Rating Label |
| ☒ Circuit Diagram | ☒ PCB Layout |
| ☒ Block Diagram | ☒ Photo Document |
| ☒ Schematics | ☒ Parts List |
| ☐ Model Difference Letter | |

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.

During testing, test software provided by the applicant was used to control the operating channel as well as output power for Bluetooth operation.

Table 6: List of Frequencies under Test, Bluetooth operation

Channel	Channel number	Frequency (MHz)	Power Level setting in software
Low	0	2402.00	Default
Middle	39	2441.00	Default
High	78	2480.00	Default

Table 7: Test Environments

Environment Parameter	Selected Values During Tests		
	Temperature (°C)	Voltage (V) DC	Relative Humidity
Normal (NTNV)	23	12	50%
HTHV	---	---	---
LTHV	---	---	---
HTLV	---	---	---
LTLV	---	---	---

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4.3 SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT

Table 8: Auxiliary Equipment used during test

Name	Model	Manufacturer	S/N
-	-	-	-

4.4 COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

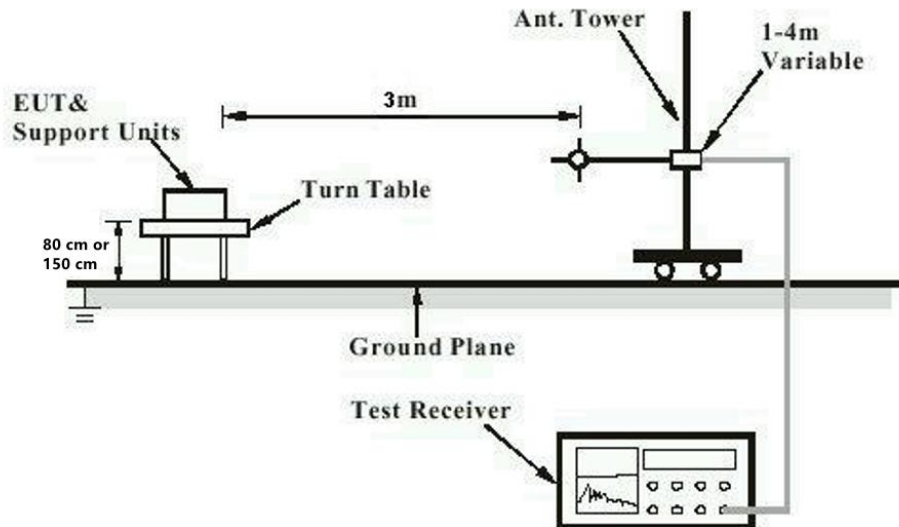


Diagram of Measurement Equipment Configuration for Conduction Measurement

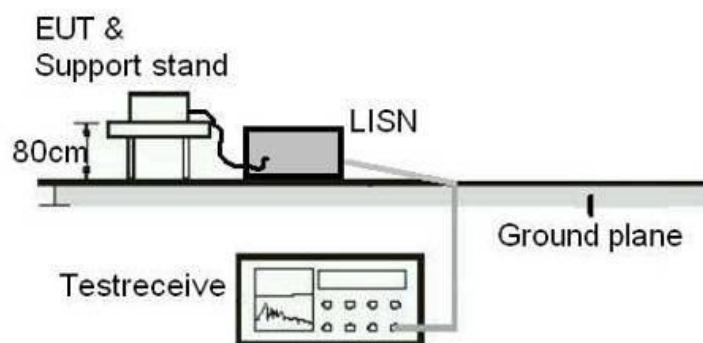
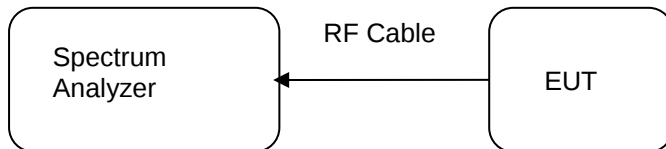


Diagram of Measurement Equipment Configuration for Transmitter Measurement



5. TEST RESULTS

5.1 ESSENTIAL REQUIREMENTS OF STANDARD

5.1.1 ANTENNA REQUIREMENT

RESULT:**Pass**

Test standard	:	CFR47 FCC Part 15.247(b)(4) CFR47 FCC Part 15.203
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi
Kind of test site	:	Shielding Room

Test Setup

Date of testing	:	2020-11-09 to 2020-11-16
Input voltage	:	DC 12V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	23 °C
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 3.2 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to compliance the provision.

Refer to EUT photo for details.

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Page 16 of 24**5.1.2 PEAK OUTPUT POWER****RESULT:****Pass**

Test standard	:	CFR47 FCC Part 15.247(b) (1)
Limits	:	0.125 mW
Test procedure	:	ANSI C63.10:2013
Kind of test site	:	Shielding Room

Test Setup

Date of testing	:	2020-11-09 to 2020-11-16
Input voltage	:	DC 12V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	24 °C
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details of test results.

Prüfbericht - Nr.: CN20PI77 001
Test Report No.**Seite 17 von 24**
Page 17 of 24**5.1.3 20dB EMISSION BANDWIDTH AND 99% OCCUPIED CHANNEL BANDWIDTH****RESULT:****Pass**

Test standard	:	CFR47 FCC Part 15.247(b) (1)
Limits	:	No limit
Test procedure	:	ANSI C63.10:2013
Kind of test site	:	Shielding Room

Test Setup

Date of testing	:	2020-11-09 to 2020-11-16
Input voltage	:	DC 12V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	24 °C
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details of test results.

Prüfbericht - Nr.: CN20PI77 001
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Page 18 of 24**5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 kHz BANDWIDTH****RESULT:****Pass**

Test standard	:	CFR47 FCC Part 15.247 d)
Limit	:	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)
Test procedure	:	ANSI C63.10:2013
Kind of test site	:	Shielding Room

Test Setup

Date of testing	:	2020-11-09 to 2020-11-16
Input voltage	:	DC 12V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	24 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

The measurement is performed hopping and non-hopping mode, only the worst data is recorded in this report.

Refer to attached Appendix A for details of test results.

5.1.5 SPURIOUS EMISSIONS**RESULT:****Pass**

Test standard : CFR47 FCC Part 15.247 (d)
CFR47 FCC Part 15.209
Limits : Refer to 15.209(a)
Test procedure : ANSI C63.10:2013
Kind of test site : 3m Semi Anechoic Room

Test Setup

Date of testing : 2020-11-09 to 2020-11-16
Input voltage : DC 12V
Test environment : ☒ Normal test conditions
☐ Extreme test conditions
Operation mode : A.1
Ambient temperature : 23 °C
Relative humidity : 42%
Atmospheric pressure : 101.0 kPa

Sweep the whole frequency band through the range from 9 kHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in this report. The measurement is performed for all operational modes and both antenna polarization, only the worst data is recorded in this report.

Refer to attached Appendix A for details of test results.

Prüfbericht - Nr.: **CN20PI77 001**
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Page 20 of 24**5.1.6 CARRIER FREQUENCY SEPARATION****RESULT:****Pass**

Test standard	:	CRF47 FCC Part 15.247 (a)(1)
Limit	:	≥ 25kHz or two-thirds of 20dB bandwidth, whichever is greater
Test procedure	:	ANSI C63.10:2013
Kind of test site	:	Shielding Room

Test Setup

Date of testing	:	2020-11-09 to 2020-11-16
Input voltage	:	DC 12V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	23 °C
Relative humidity	:	47%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details of test results.

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5.1.7 HOPPING FREQUENCIES**RESULT:****Pass**

Test standard	:	CRF47 FCC Part 15.247 (a)(1)
Limits	:	≥ 15 non-overlapping channels
Test procedure	:	ANSI C63.10:2013
Kind of test site	:	Shielding Room

Test Setup

Date of testing	:	2020-11-09 to 2020-11-16
Input voltage	:	DC 12V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	24 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details of test results.

Prüfbericht - Nr.: **CN20PI77 001**
Test Report No.Seite 22 von 24
Page 22 of 24**5.1.8 TIME OF CHANNEL OCCUPANCY****RESULT:****Pass**

Test standard	:	CRF47 FCC Part 15.247 (a)(1)(iii)
Limits	:	0.4s
Test procedure	:	ANSI C63.10:2013
Kind of test site	:	Shielding Room

Test Setup

Date of testing	:	2020-11-09 to 2020-11-16
Input voltage	:	DC 12V
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A.1
Ambient temperature	:	24 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details of test results.

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5.1.9 SAFETY HUMAN EXPOSURE

5.1.9.1 Radio Frequency Exposure Compliance

RESULT:

Pass

Test Specification

Test standard : CFR47 FCC Part 2.1091

Limit : FCC KDB Publication 447498 D01 v06

Measurement Record for CFR47 FCC Part 2.1091

The minimum distance for the EUT is less than 5mm.

The maximum specified e.i.r.p.: $-5.42\text{dBm} + 3.2\text{dBi} = -2.22\text{dBm} = 0.6\text{mW}$

Antenna Gain: 3.2dBi max

According to KDB 447498 D01 v06 4.3.1 a)

Exempted Power for this Bluetooth device: 9.5mW, hence the EUT is compliance with the RF exposure.

6. SYSTEM MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

Table 9: System Measurement Uncertainty

Items		Extended Uncertainty
RE	Radiated emission 9 kHz - 30 MHz	±3.97 dB
	Radiated emission 30 MHz - 1 GHz	±4.30 dB
Remark: 95% Confidence Levels, K=2.		

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Appendix A

Test Results of Bluetooth operation mode

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Note: N/A

Appendix A.2: Test Results of Radio Signal Conducted Measurement

GFSK

Summary

Test	Frequency (MHz)	Nominal Power	Nominal Bandwidth (MHz)	Result
Hopping Frequencies	--- (hopping)	0.0	1.000000	PASS
Time of Channel Occupancy	2441.000 (hopping)	0.0	1.000000	PASS
Time of Channel Occupancy(2)	2441.000 (hopping)	0.0	1.000000	PASS
Time of Channel Occupancy(3)	2441.000 (hopping)	0.0	1.000000	PASS
Emission Bandwidth 20 dB	2402.000 (single)	0.0	1.000000	PASS
Peak output power (Sweep)	2402.000 (single)	0.0	1.000000	PASS
RF output power	2402.000 (single)	0.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2402.000 (single)	0.0	1.000000	PASS
Emission Bandwidth 20 dB	2441.000 (single)	0.0	1.000000	PASS
RF output power	2441.000 (single)	0.0	1.000000	PASS
Peak output power (Sweep)	2441.000 (single)	0.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2441.000 (single)	0.0	1.000000	PASS
Emission Bandwidth 20 dB	2480.000 (single)	0.0	1.000000	PASS
Peak output power (Sweep)	2480.000 (single)	0.0	1.000000	PASS
RF output power	2480.000 (single)	0.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2480.000 (single)	0.0	1.000000	PASS

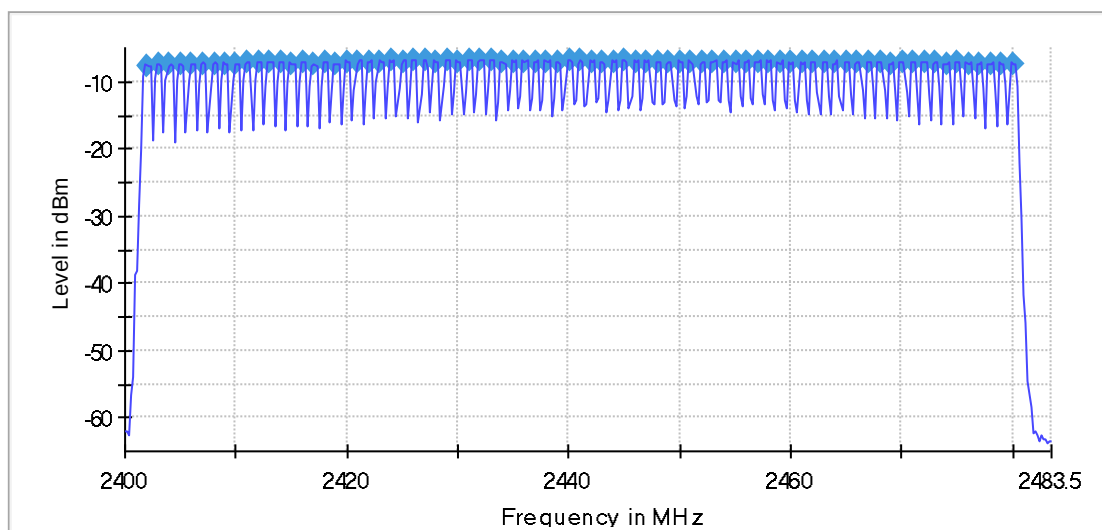
Hopping Frequencies (frequency independent; 0.000 dBm; 1 MHz)

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

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

Sequence



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	-10.000 dBm	-10.000 dBm
Attenuation	10.000 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	83 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.48 dB	0.50 dB

Time of Channel Occupancy (2441 MHz; 0.000 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	Threshold (dBm)
2441.000000	PASS	319	126.030	-20.0

Periode

Min (ms)	Max (ms)	Mean (ms)
8.75	193.75	98.73

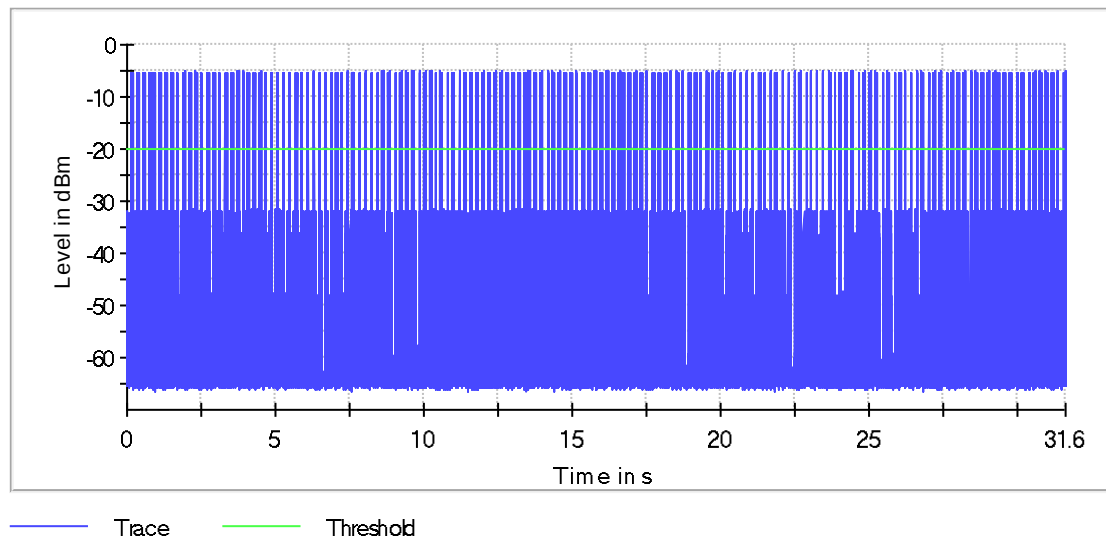
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
0.3	0.4	400.000	0.000	0.39

DwellTime

Min (ms)	Max (ms)	Mean (ms)
0.3	0.4	0.39

Time of Channel Occupancy



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; 0.000 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	Threshold (dBm)
2441.000000	PASS	95	158.400	-20.0

Periode

Min (ms)	Max (ms)	Mean (ms)
11.25	1778.71	329.02

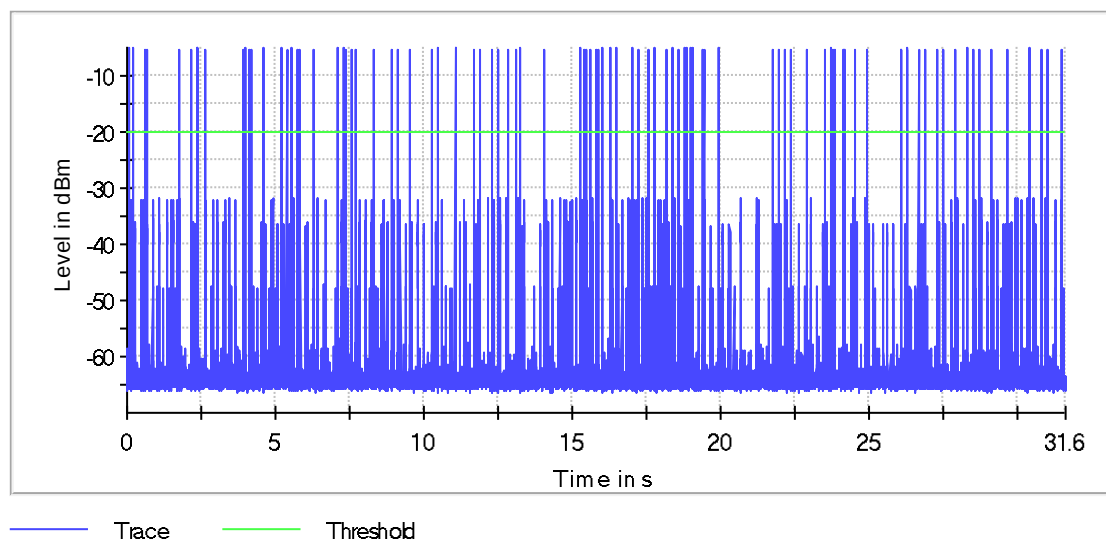
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
1.65	1.65	400.000	0.000	1.65

DwellTime

Min (ms)	Max (ms)	Mean
1.65	1.65	1.65

Time of Channel Occupancy(2)



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; 0.000 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	Threshold (dBm)
2441.000000	PASS	56	165.170	-20.0

Periode

Min (ms)	Max (ms)	Mean (ms)
131.24	2401.19	553.07

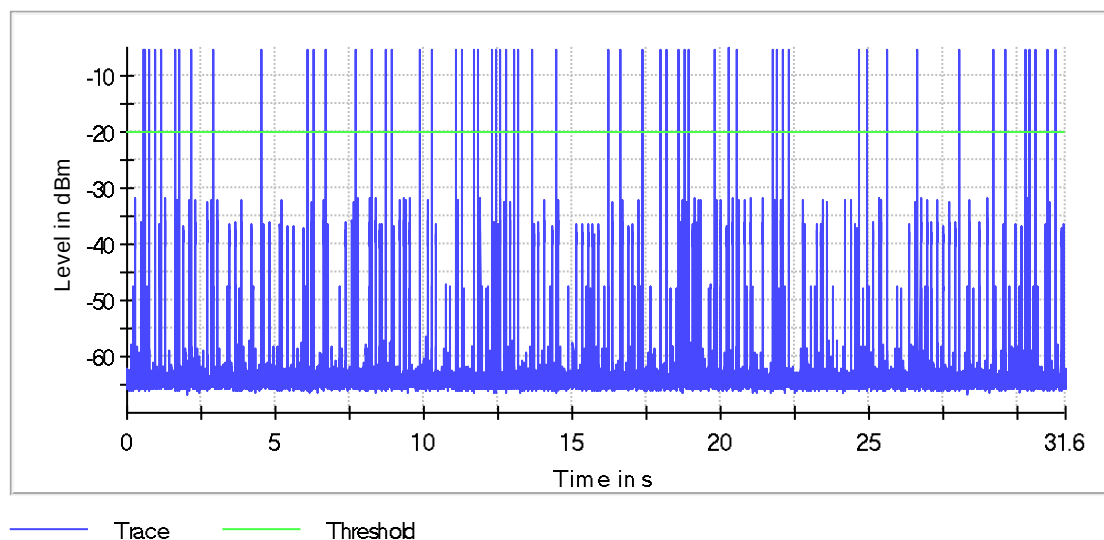
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
2.89	2.90	400.000	0.000	2.89

DwellTime

Min (ms)	Max (ms)	Mean
2.89	2.90	2.89

Time of Channel Occupancy(3)



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

Emission Bandwidth 20 dB (2402 MHz; 0.000 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

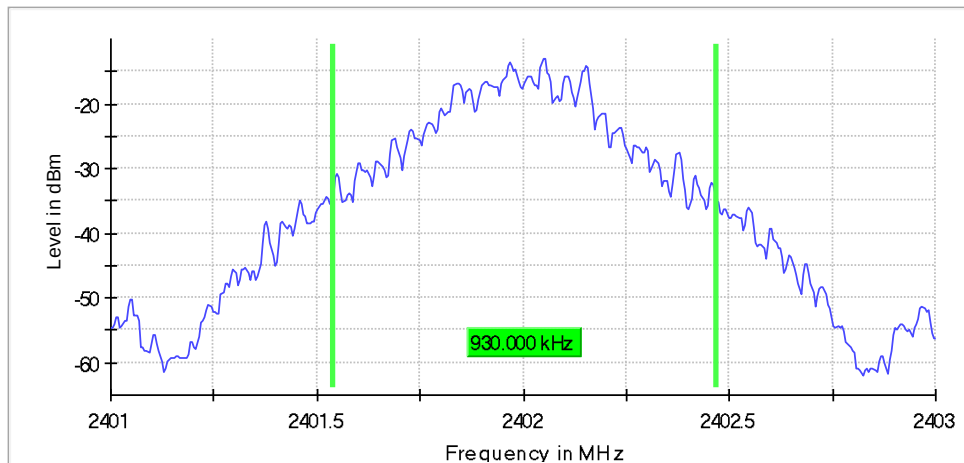
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.930000	---	---	2401.537500	2402.467500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-12.9	PASS

20 dB Bandwidth



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	-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
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.25 dB	0.50 dB

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40050 GHz	2.40050 GHz
Stop Frequency	2.40350 GHz	2.40350 GHz
Span	3.000 MHz	3.000 MHz
RBW	1.000 MHz	>= 930.001 kHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 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	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.08 dB	0.50 dB

Occupied Channel Bandwidth 99% (2402 MHz; 0.000 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

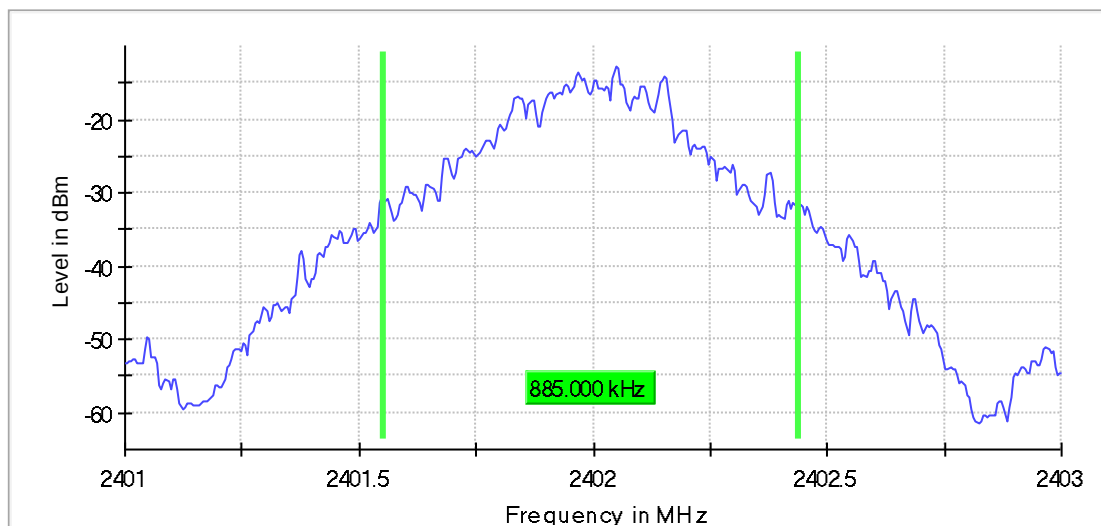
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.885000	---	---	2401.552500	2402.437500

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

DUT Frequency (MHz)	Result
2402.000000	PASS

99%Bandwidth



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	-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	24 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.12 dB	0.30 dB

Emission Bandwidth 20 dB (2441 MHz; 0.000 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

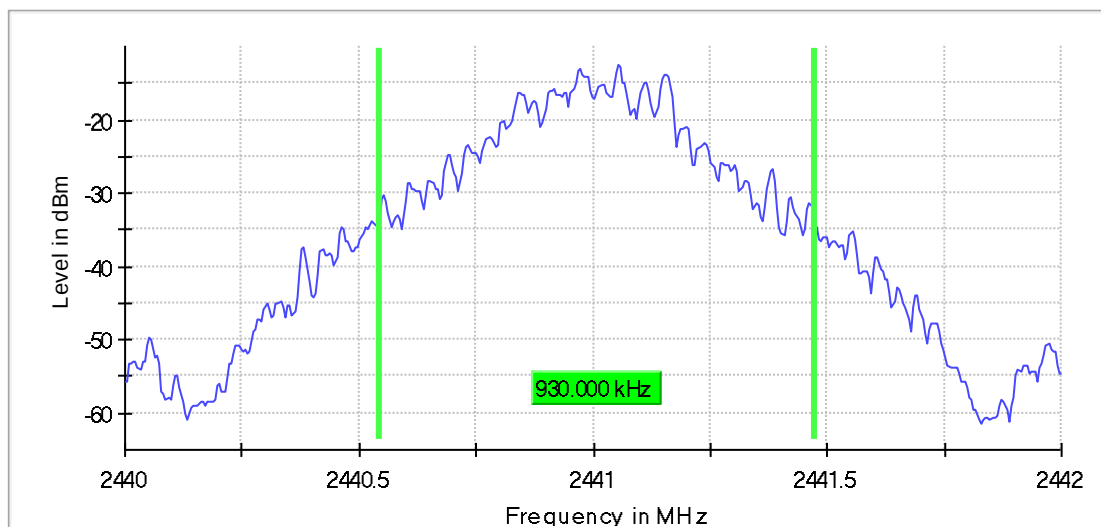
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.930000	---	---	2440.542500	2441.472500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-12.4	PASS

20 dB Bandwidth



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
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.11 dB	0.50 dB

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43950 GHz	2.43950 GHz
Stop Frequency	2.44250 GHz	2.44250 GHz
Span	3.000 MHz	3.000 MHz
RBW	1.000 MHz	>= 930.001 kHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 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	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.09 dB	0.50 dB

Occupied Channel Bandwidth 99% (2441 MHz; 0.000 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

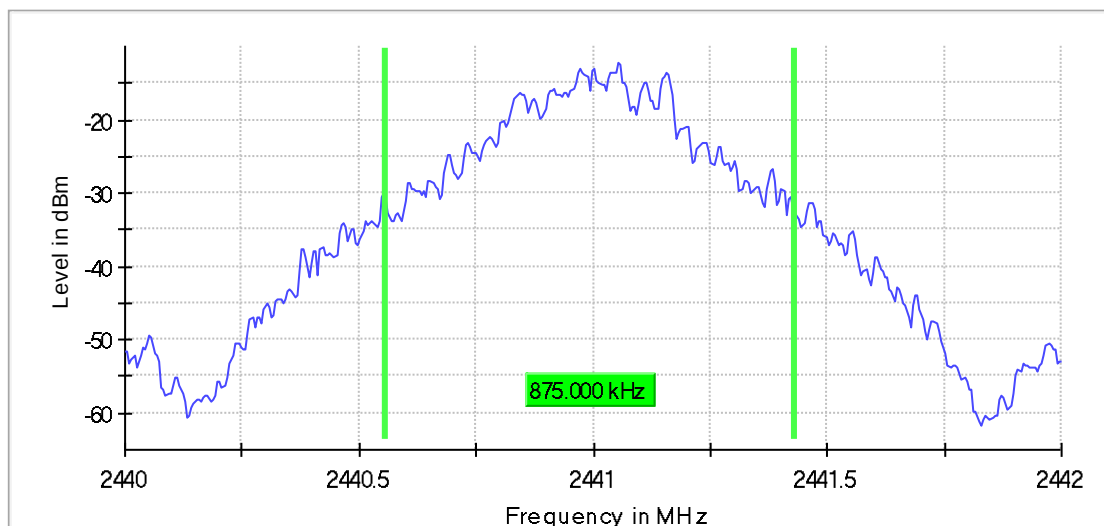
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.875000	---	---	2440.557500	2441.432500

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

DUT Frequency (MHz)	Result
2441.000000	PASS

99%Bandwidth



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
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	16 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.08 dB	0.30 dB

Emission Bandwidth 20 dB (2480 MHz; 0.000 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

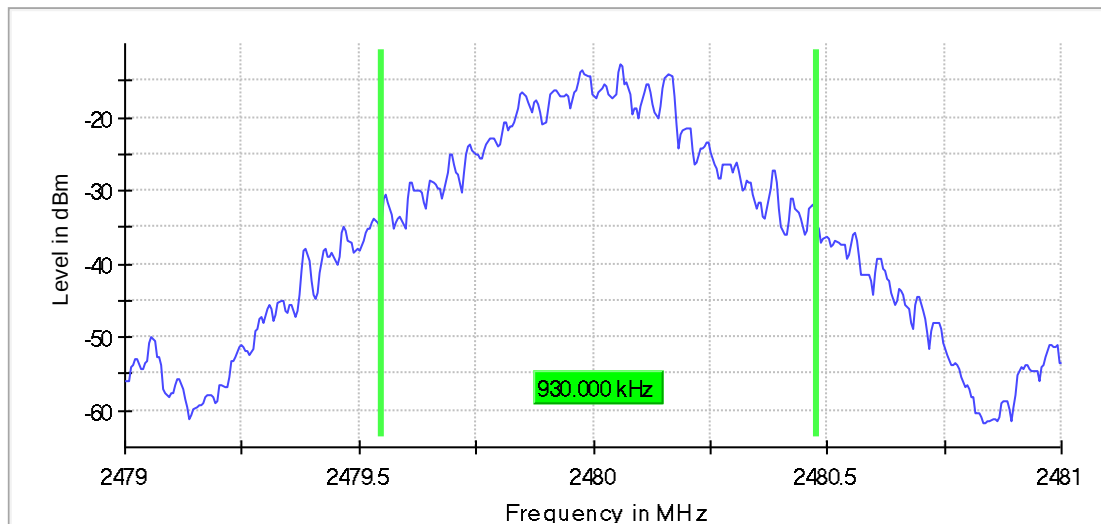
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.930000	---	---	2479.547500	2480.477500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-12.7	PASS

20 dB Bandwidth



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
Preamp	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	0.18 dB	0.50 dB

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47850 GHz	2.47850 GHz
Stop Frequency	2.48150 GHz	2.48150 GHz
Span	3.000 MHz	3.000 MHz
RBW	1.000 MHz	>= 930.001 kHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 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	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.05 dB	0.50 dB

Occupied Channel Bandwidth 99% (2480 MHz; 0.000 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

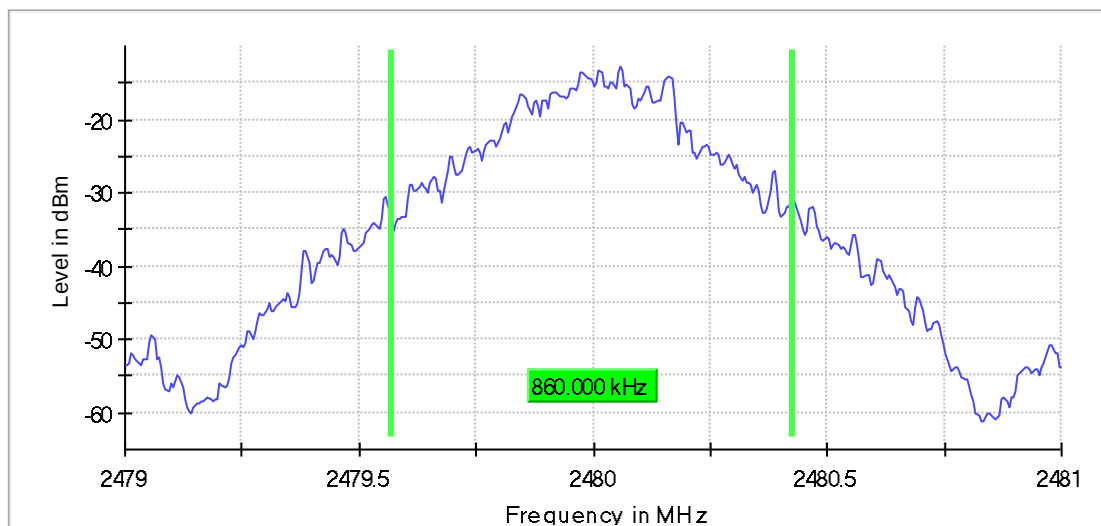
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.860000	---	---	2479.567500	2480.427500

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

DUT Frequency (MHz)	Result
2480.000000	PASS

99%Bandwidth

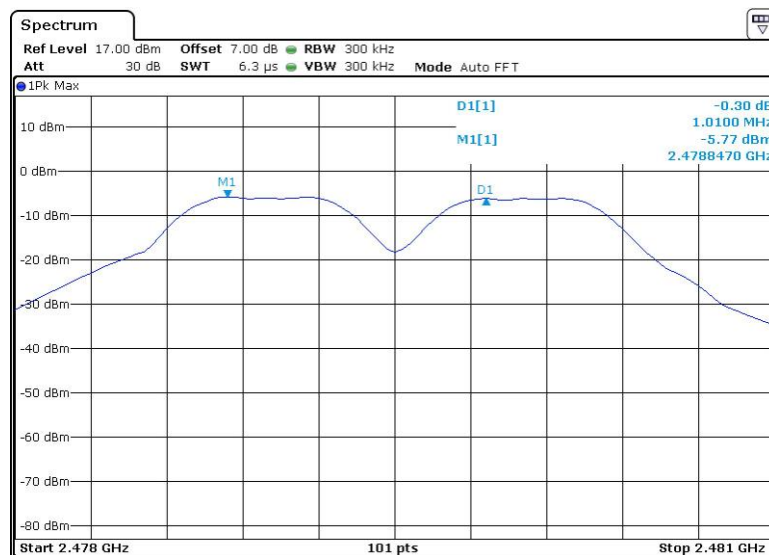
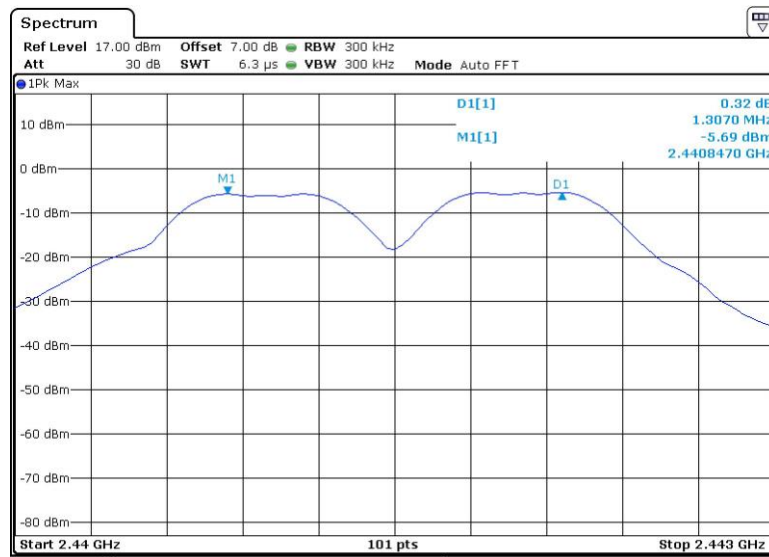
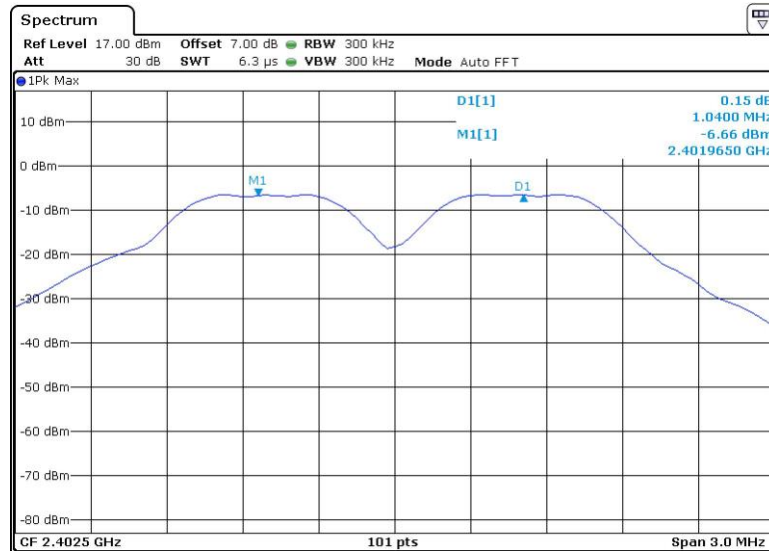


Bandwidth

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	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	22 / max. 150	max. 150
Stable	3 / 3	3

Frequency Separation



8DPSK

Summary

Test	Frequency (MHz)	Nominal Power	Nominal Bandwidth (MHz)	Result
Hopping Frequencies	--- (hopping)	0.0	1.000000	PASS
Time of Channel Occupancy	2441.000 (hopping)	0.0	1.000000	PASS
Time of Channel Occupancy(2)	2441.000 (hopping)	0.0	1.000000	PASS
Time of Channel Occupancy(3)	2441.000 (hopping)	0.0	1.000000	PASS
Emission Bandwidth 20 dB	2402.000 (single)	0.0	1.000000	PASS
Peak output power (Sweep)	2402.000 (single)	0.0	1.000000	PASS
RF output power	2402.000 (single)	0.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2402.000 (single)	0.0	1.000000	PASS
Emission Bandwidth 20 dB	2441.000 (single)	0.0	1.000000	PASS
RF output power	2441.000 (single)	0.0	1.000000	PASS
Peak output power (Sweep)	2441.000 (single)	0.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2441.000 (single)	0.0	1.000000	PASS
Emission Bandwidth 20 dB	2480.000 (single)	0.0	1.000000	PASS
Peak output power (Sweep)	2480.000 (single)	0.0	1.000000	PASS
RF output power	2480.000 (single)	0.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2480.000 (single)	0.0	1.000000	PASS

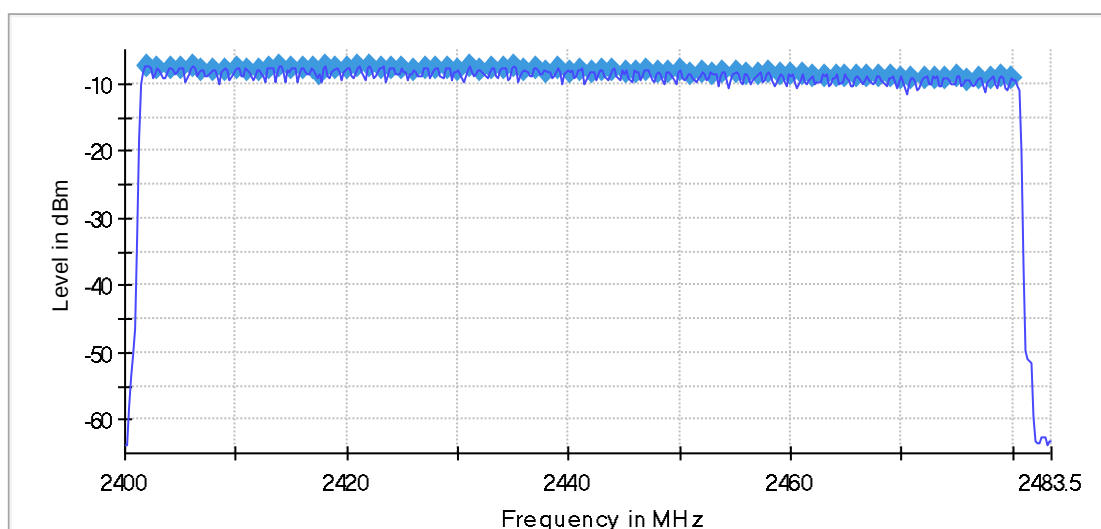
Hopping Frequencies (frequency independent; 0.000 dBm; 1 MHz)

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

Channel	Limit Min	Limit Max	Result
80	15	---	PASS

Sequence



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
Sweptime	1.060 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	Sweep	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	118 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.31 dB	0.50 dB

Time of Channel Occupancy (2441 MHz; 0.000 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	Threshold (dBm)
2441.000000	PASS	319	127.210	-20.0

Periode

Min (ms)	Max (ms)	Mean (ms)
8.75	193.75	98.75

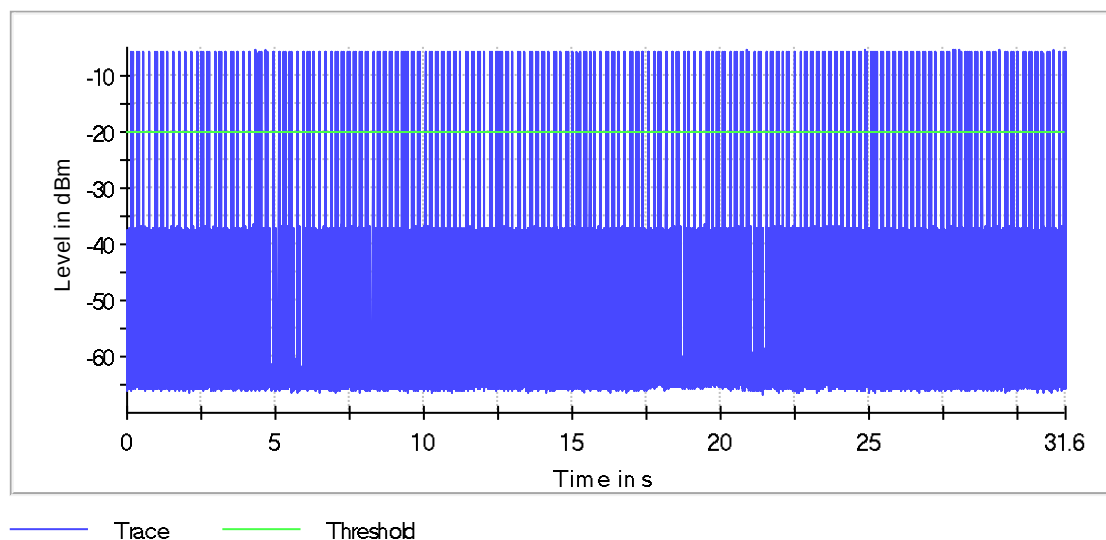
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
0.3	0.4	400.000	0.000	0.39

DwellTime

Min (ms)	Max (ms)	Mean (ms)
0.3	0.4	0.39

Time of Channel Occupancy



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; 0.000 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	Threshold (dBm)
2441.000000	PASS	104	172.750	-20.0

Periode

Min (ms)	Max (ms)	Mean (ms)
26.25	2373.69	299.03

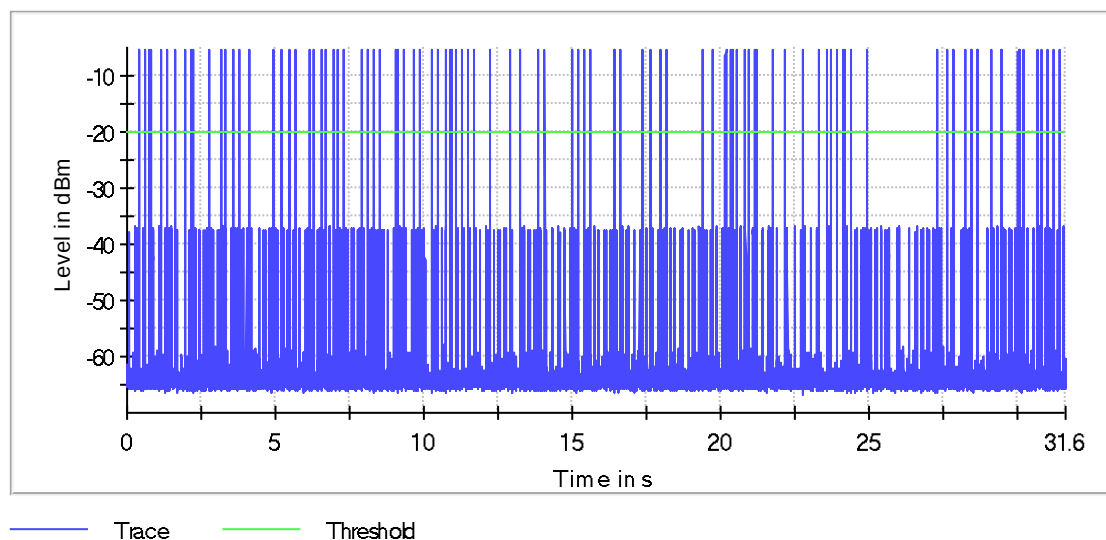
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
1.63	1.66	400.000	0.000	1.64

DwellTime

Min (ms)	Max (ms)	Mean
1.65	1.66	1.65

Time of Channel Occupancy(2)



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; 0.000 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	Threshold (dBm)
2441.000000	PASS	64	190.590	-20.0

Periode

Min (ms)	Max (ms)	Mean (ms)
12.50	2174.95	474.25

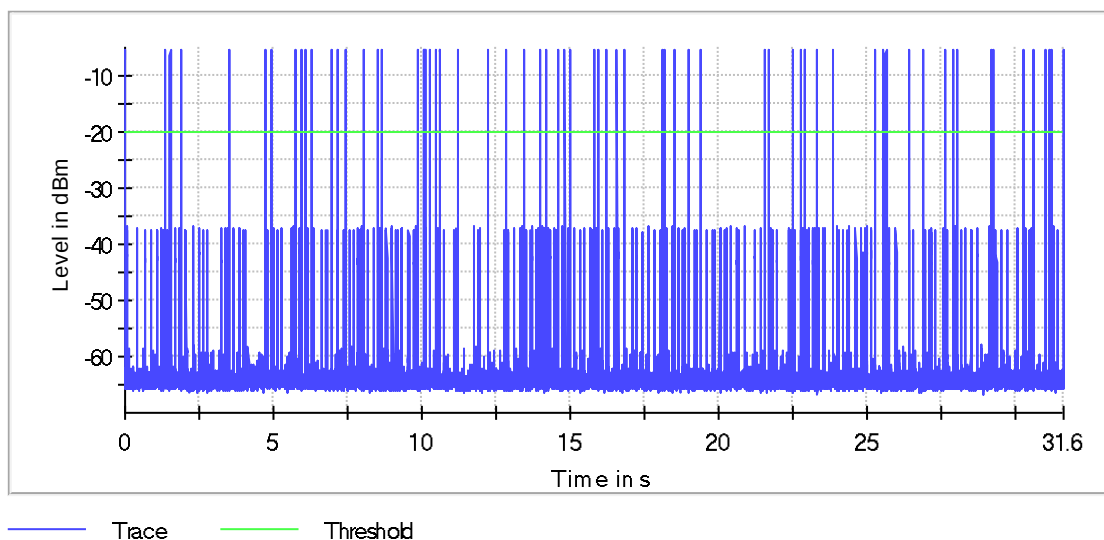
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
2.86	2.91	400.000	0.000	2.88

DwellTime

Min (ms)	Max (ms)	Mean
2.88	2.91	2.89

Time of Channel Occupancy(3)



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

Emission Bandwidth 20 dB (2402 MHz; 0.000 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

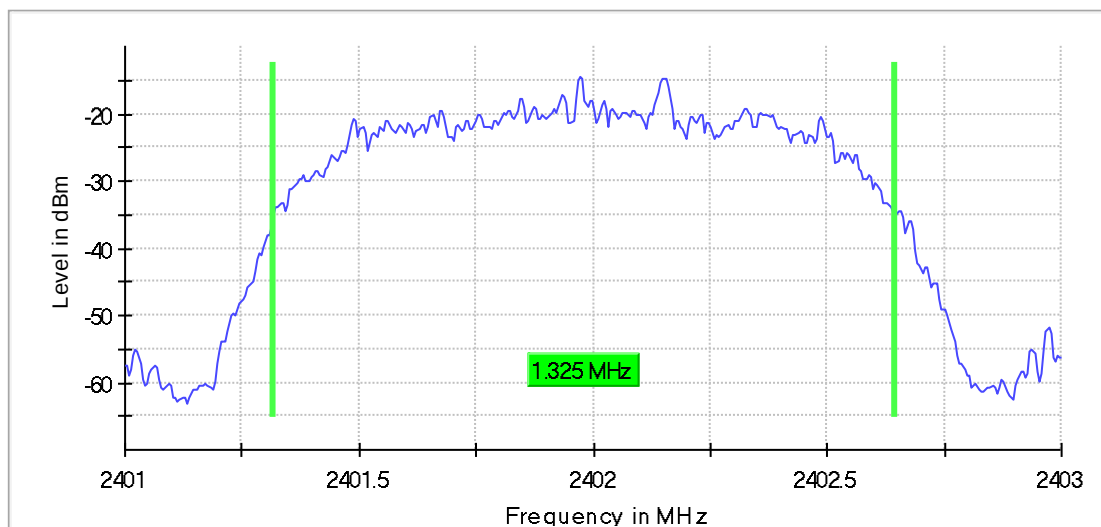
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.325000	---	---	2401.317500	2402.642500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-14.5	PASS

20 dB Bandwidth



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	-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
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.37 dB	0.50 dB

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39900 GHz	2.39900 GHz
Stop Frequency	2.40500 GHz	2.40500 GHz
Span	6.000 MHz	6.000 MHz
RBW	2.000 MHz	>= 1.325 MHz
VBW	10.000 MHz	>= 6.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 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	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.16 dB	0.50 dB

Occupied Channel Bandwidth 99% (2402 MHz; 0.000 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

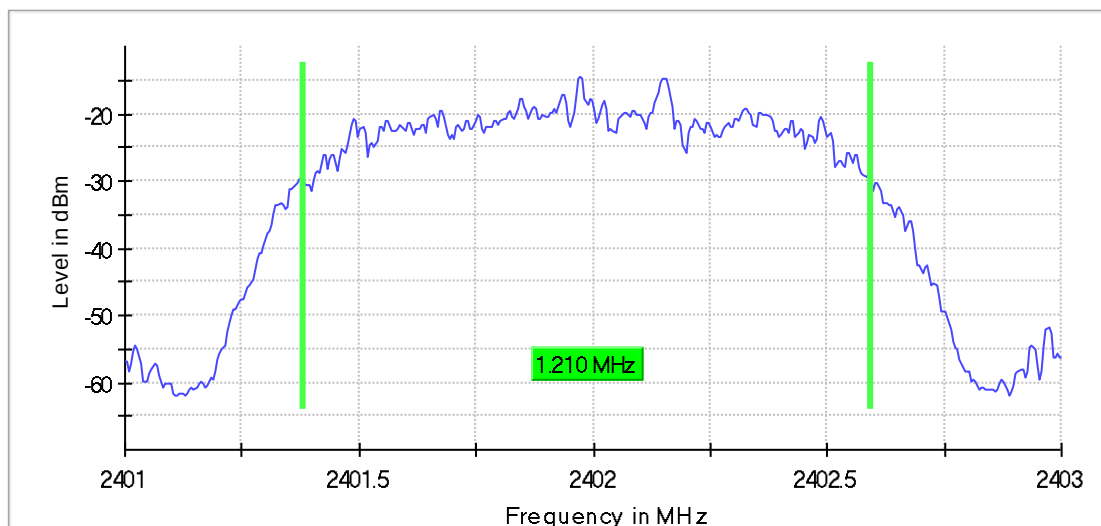
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.210000	---	---	2401.382500	2402.592500

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

DUT Frequency (MHz)	Result
2402.000000	PASS

99%Bandwidth



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	-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	13 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.14 dB	0.30 dB

Emission Bandwidth 20 dB (2441 MHz; 0.000 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

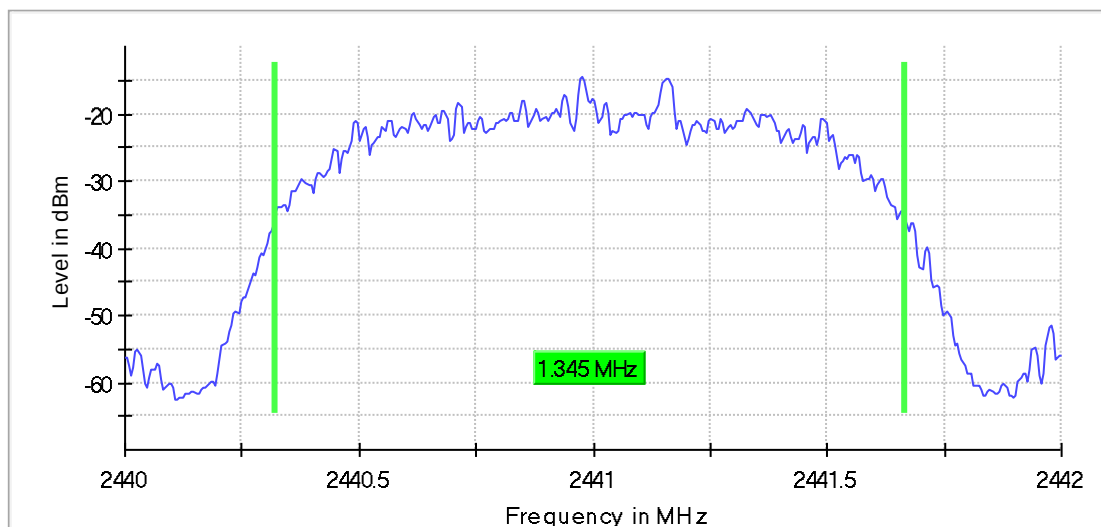
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.345000	---	---	2440.322500	2441.667500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-14.5	PASS

20 dB Bandwidth



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
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	13 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.24 dB	0.50 dB

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43800 GHz	2.43800 GHz
Stop Frequency	2.44400 GHz	2.44400 GHz
Span	6.000 MHz	6.000 MHz
RBW	2.000 MHz	>= 1.345 MHz
VBW	10.000 MHz	>= 6.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 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	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.21 dB	0.50 dB

Occupied Channel Bandwidth 99% (2441 MHz; 0.000 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

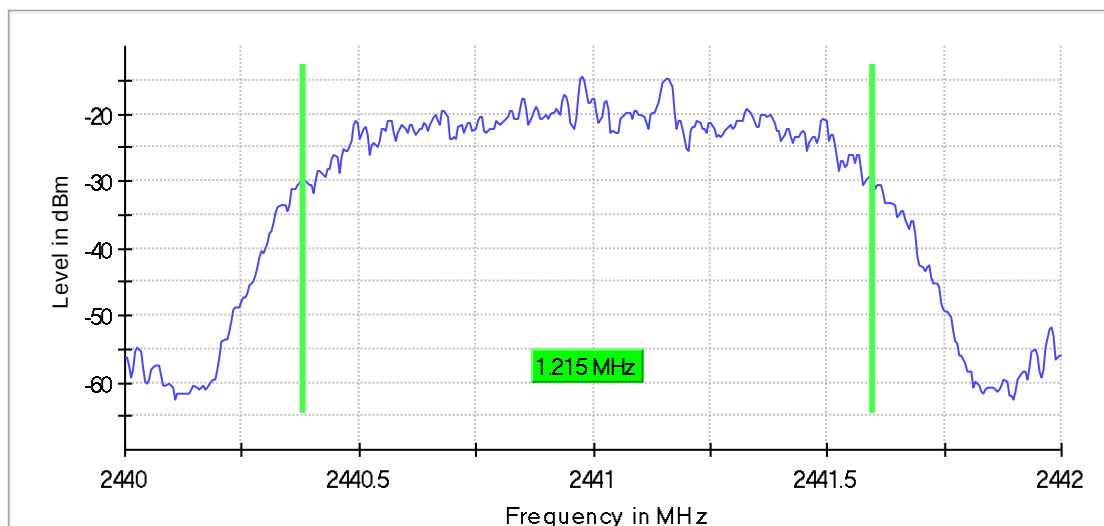
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.215000	---	---	2440.382500	2441.597500

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

DUT Frequency (MHz)	Result
2441.000000	PASS

99 % Bandwidth



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	13 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.09 dB	0.30 dB

Emission Bandwidth 20 dB (2480 MHz; 0.000 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

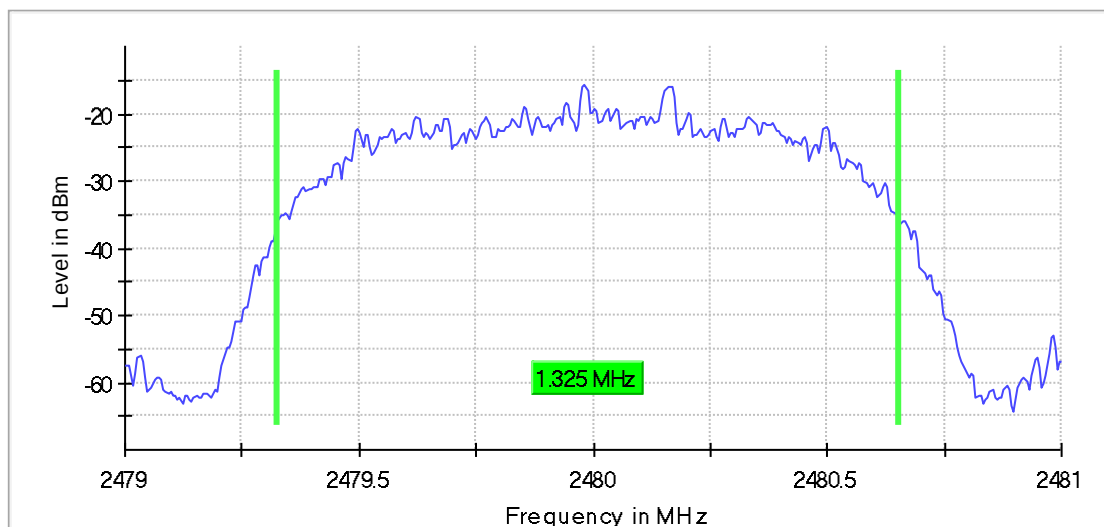
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.325000	---	---	2479.327500	2480.652500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-15.7	PASS

20 dB Bandwidth



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
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	25 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.05 dB	0.50 dB

Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47700 GHz	2.47700 GHz
Stop Frequency	2.48300 GHz	2.48300 GHz
Span	6.000 MHz	6.000 MHz
RBW	2.000 MHz	>= 1.325 MHz
VBW	10.000 MHz	>= 6.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 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	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.25 dB	0.50 dB

Occupied Channel Bandwidth 99% (2480 MHz; 0.000 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

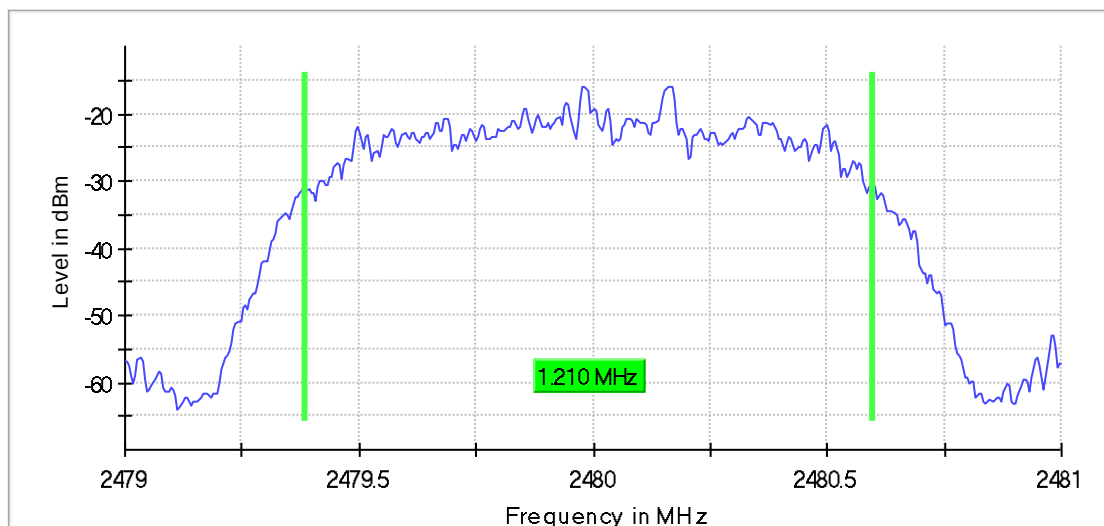
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.210000	---	---	2479.387500	2480.597500

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

DUT Frequency (MHz)	Result
2480.000000	PASS

99%Bandwidth

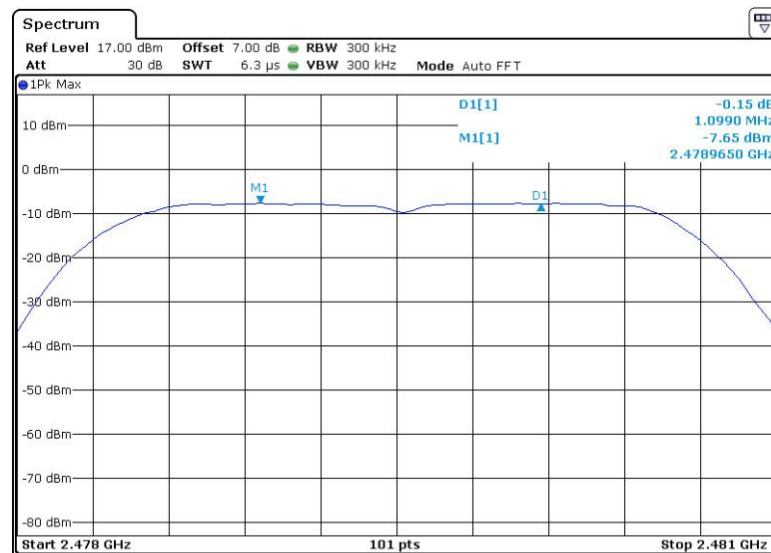
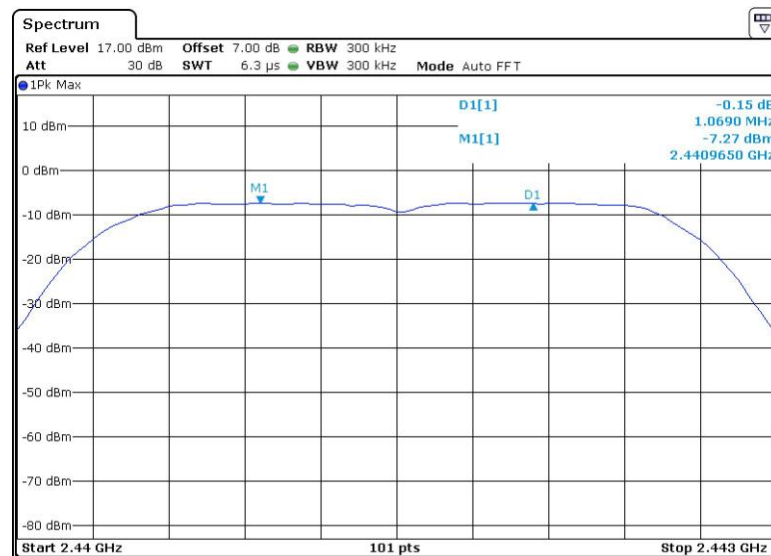
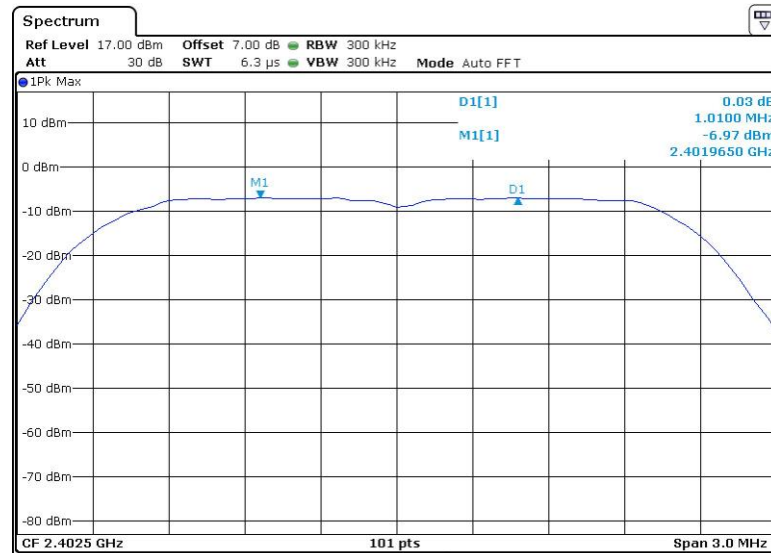


Bandwidth

Measurement

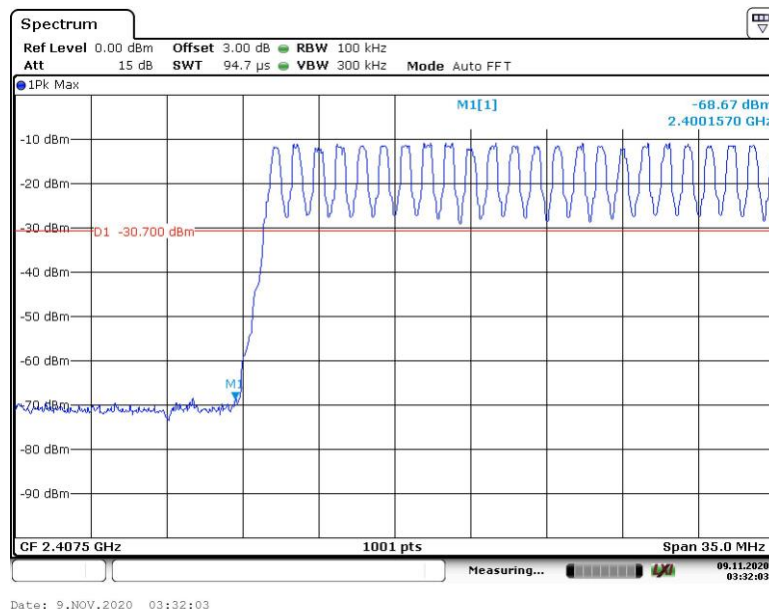
Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
SweepTime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	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	0.22 dB	0.30 dB

Frequency Separation

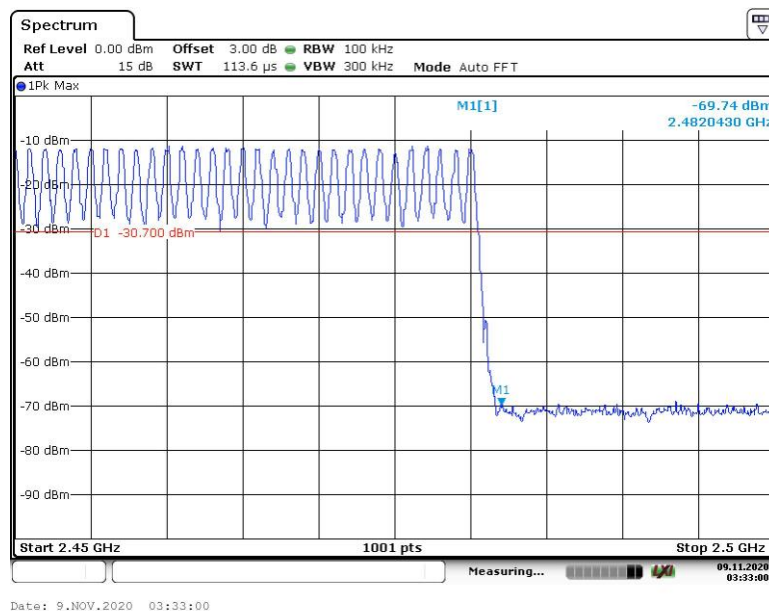


Appendix A.3: Test Results of Conducted Spurious Emissions measured in 100 kHz Bandwidth

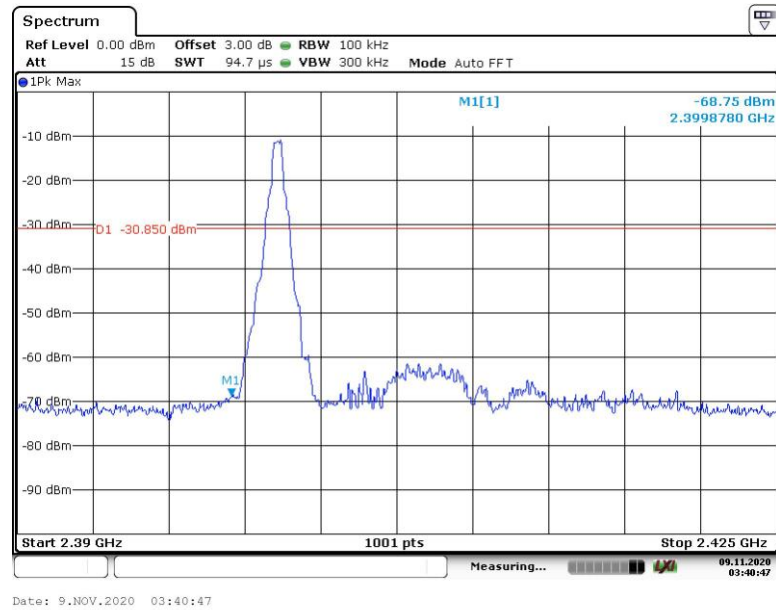
GFSK
Band Edge



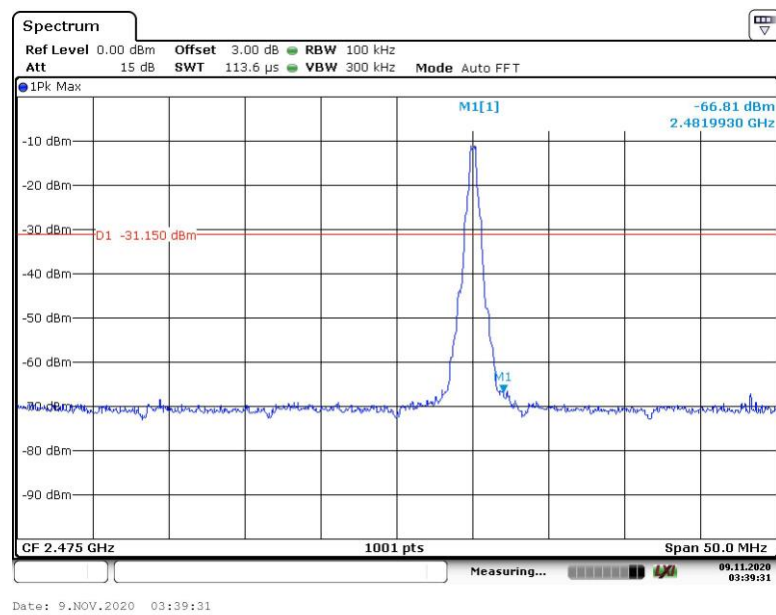
(Hopping mode)



(Hopping mode)



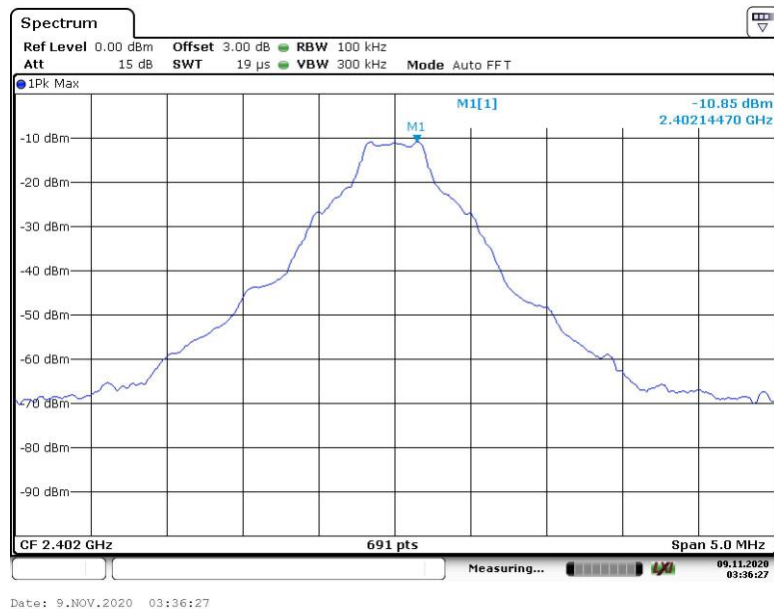
(Low CH)



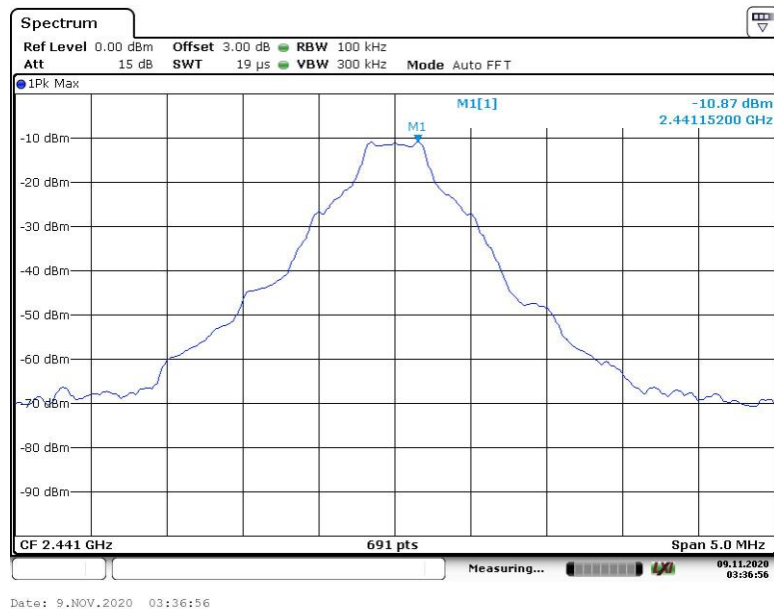
(High CH)

Conducted Spurious Emissions

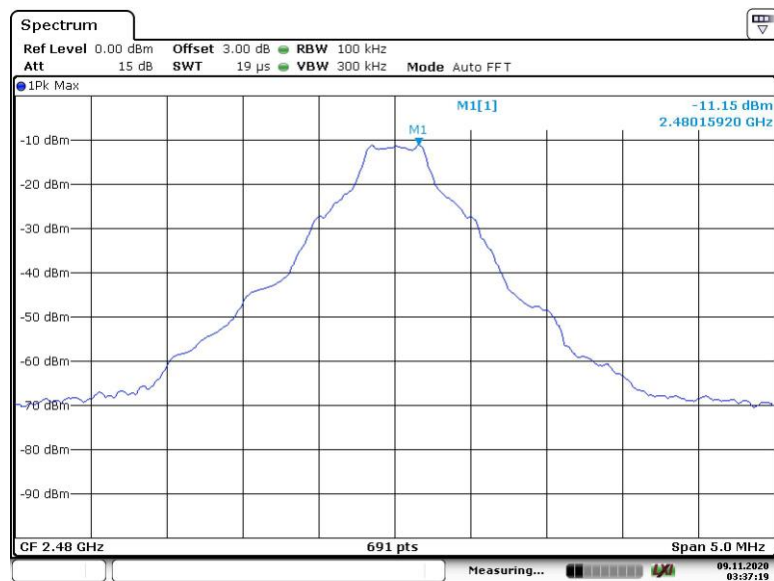
100 kHz Reference Level



(Low CH)



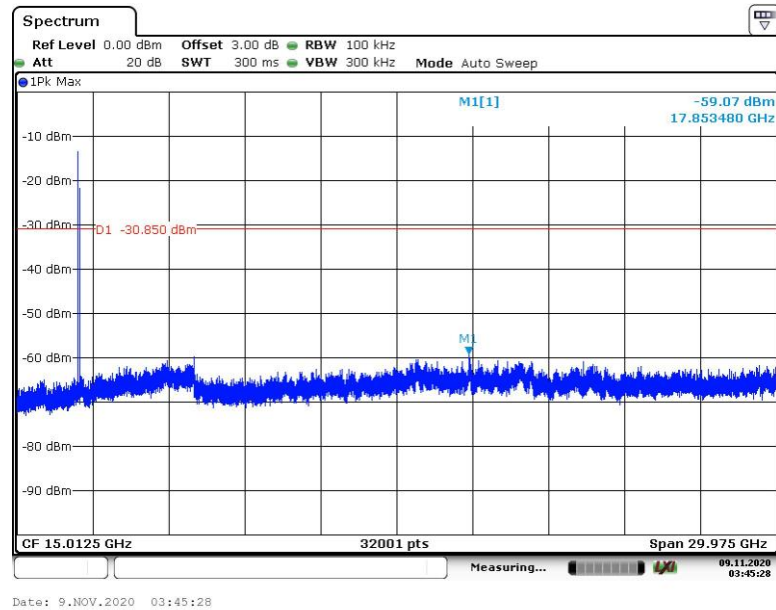
(Mid CH)



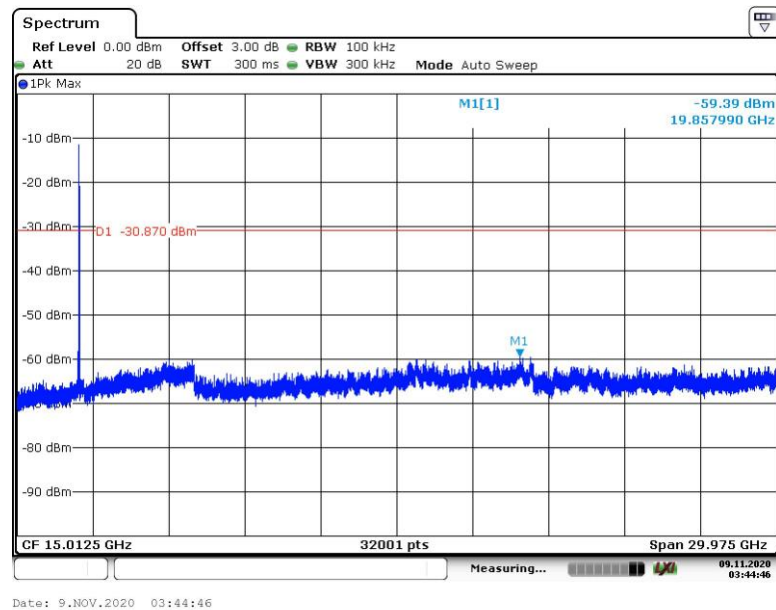
Date: 9.NOV.2020 03:37:19

(High CH)

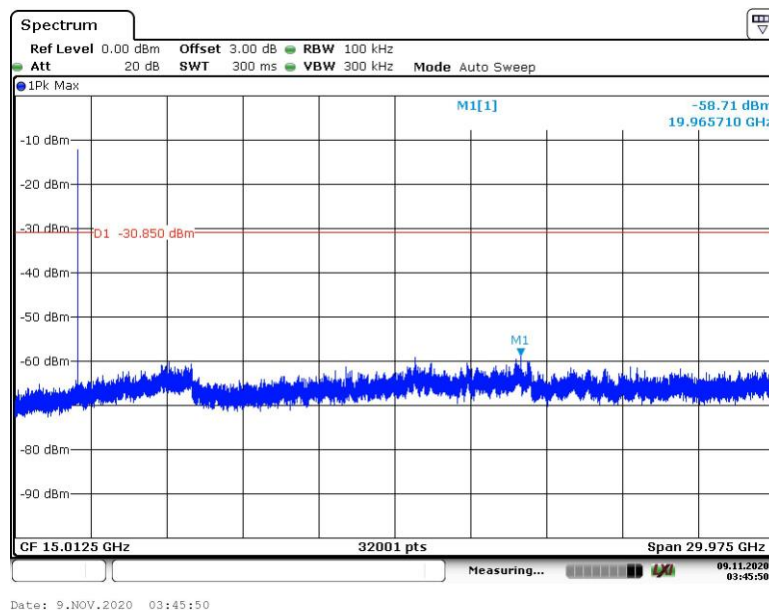
Conducted Spurious Emissions



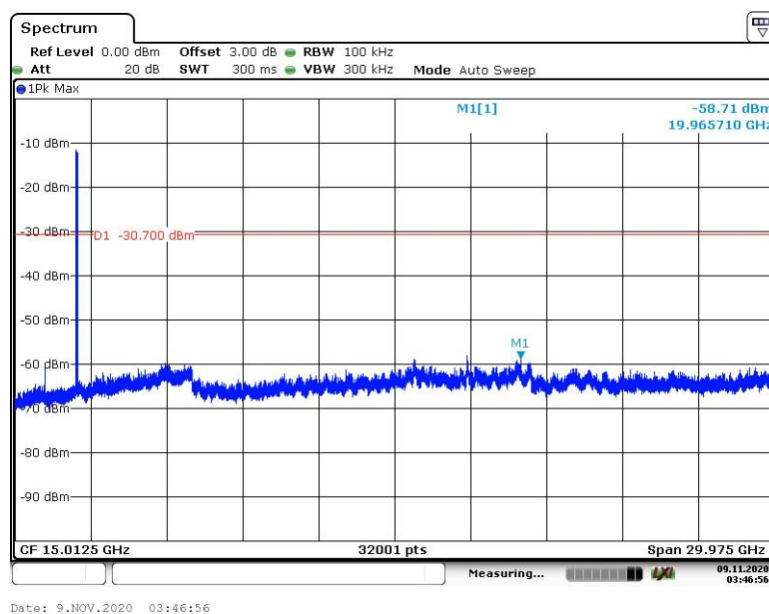
(Low CH)



(Mid CH)

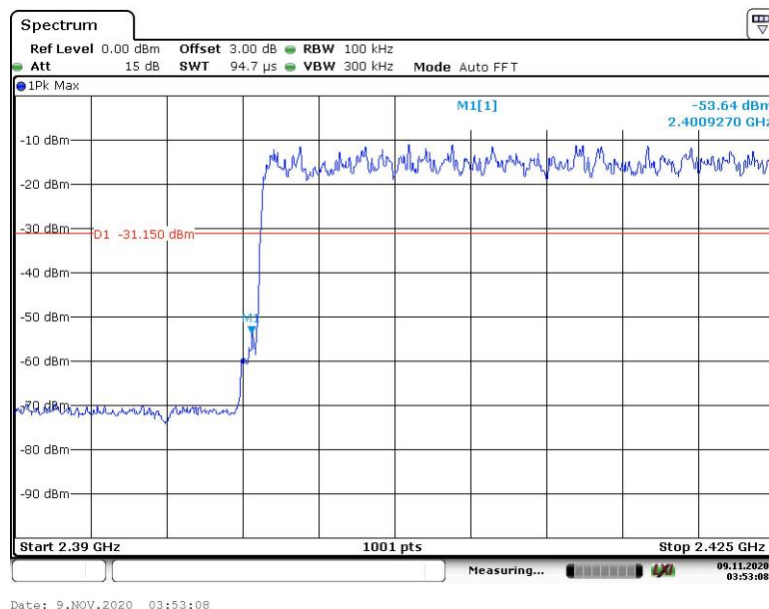


(High CH)

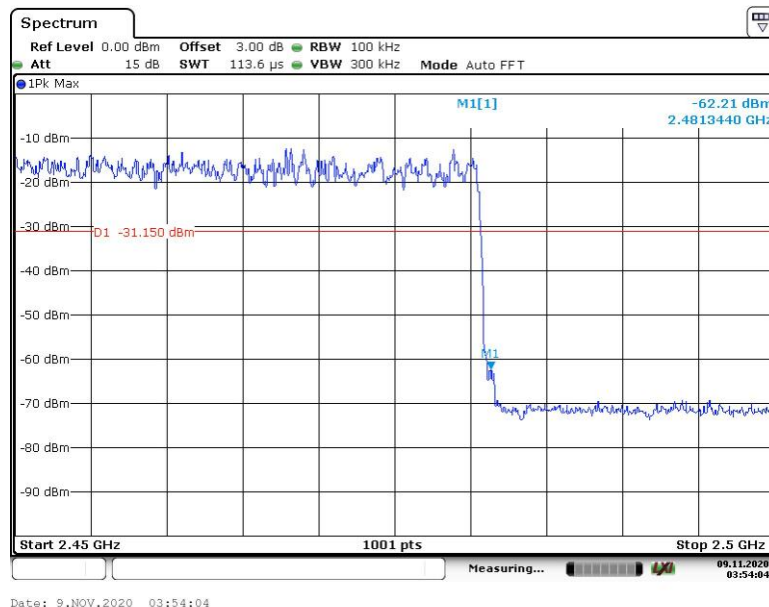


(Hopping Mode)

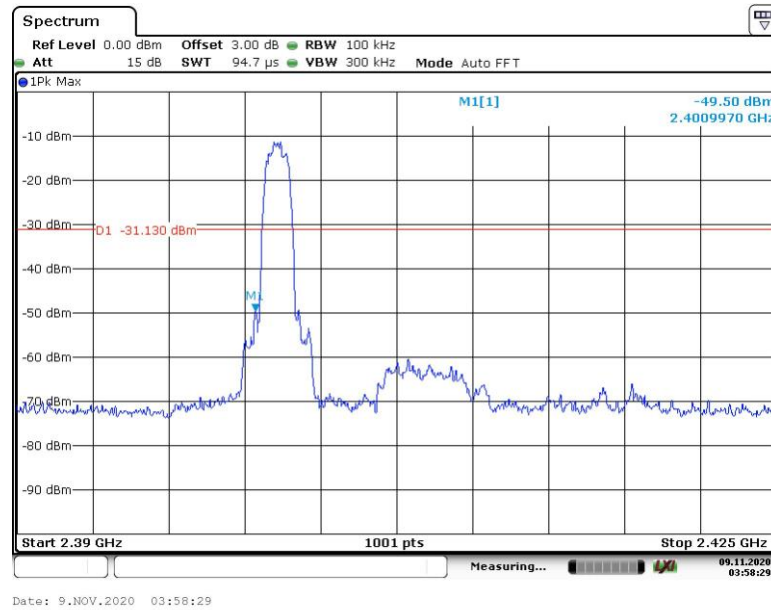
8DPSK
Band Edge



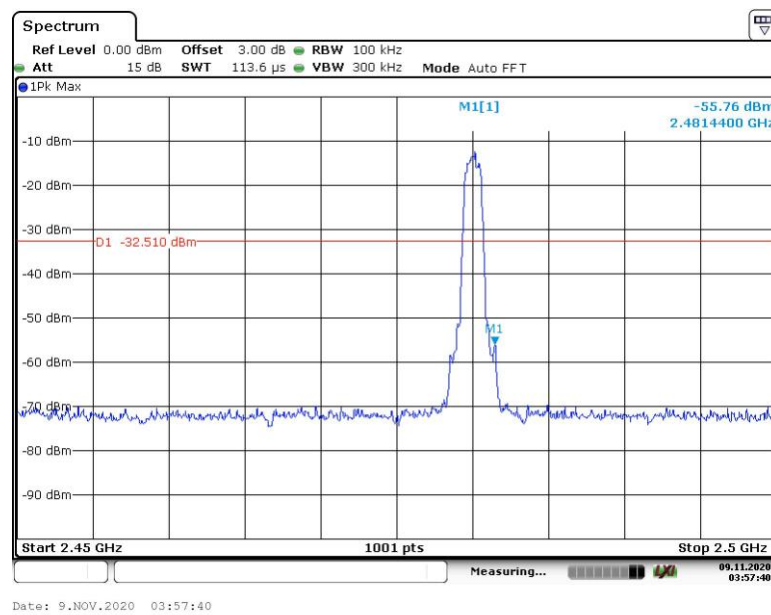
(Hopping mode)



(Hopping mode)



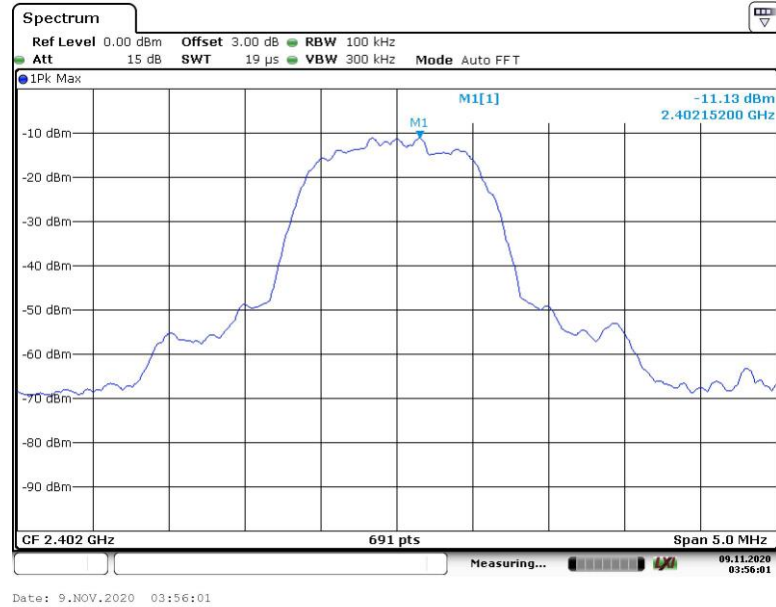
(Low CH)



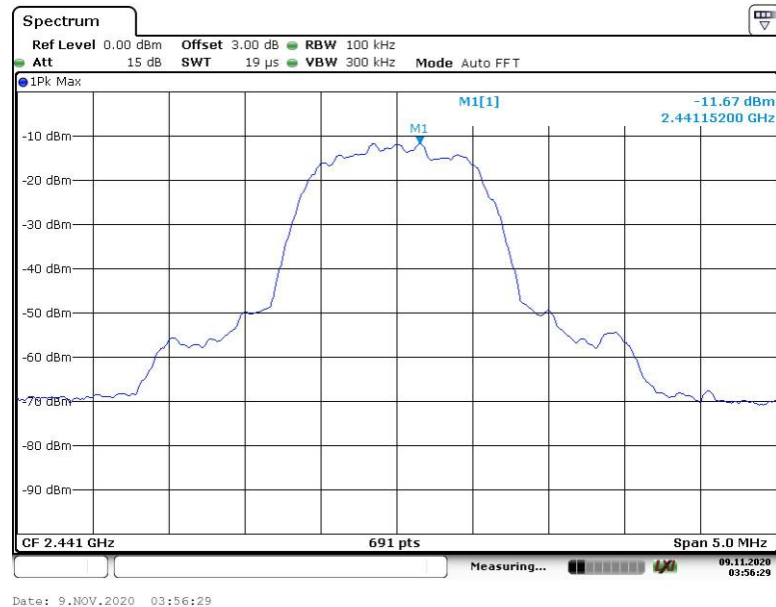
(High CH)

Conducted Spurious Emissions

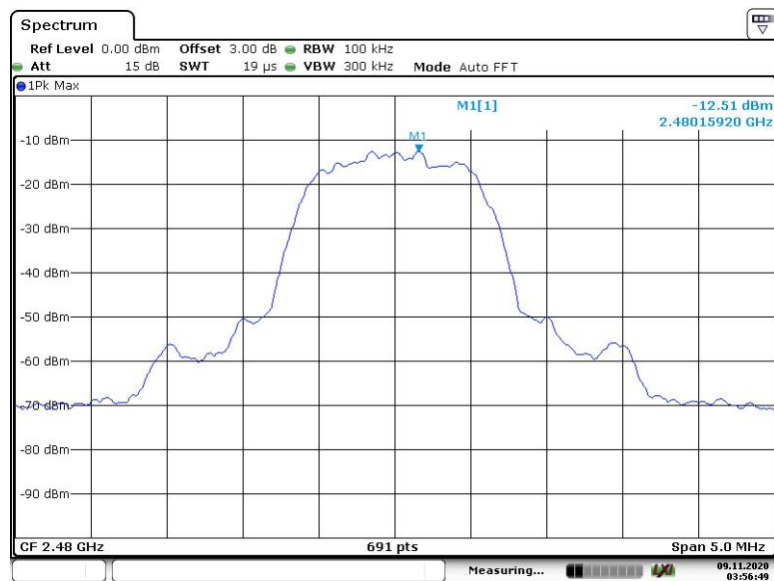
100 kHz Reference Level



(Low CH)



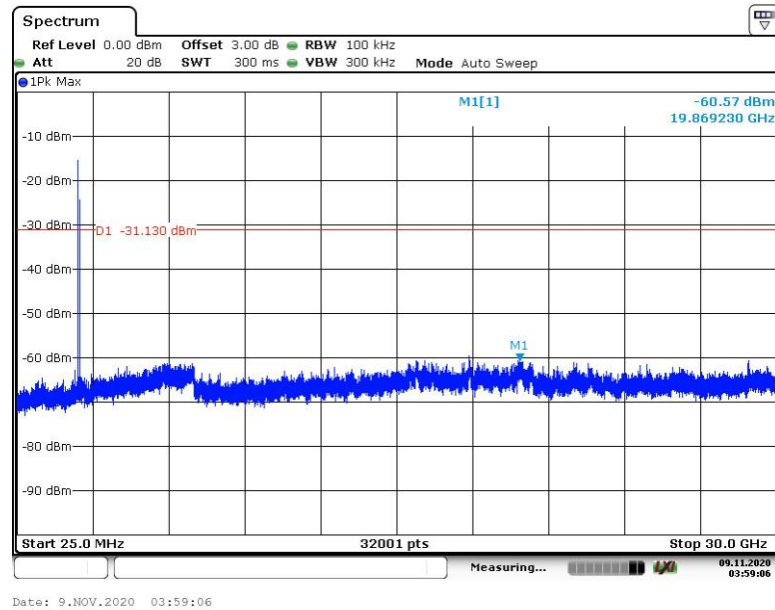
(Mid CH)



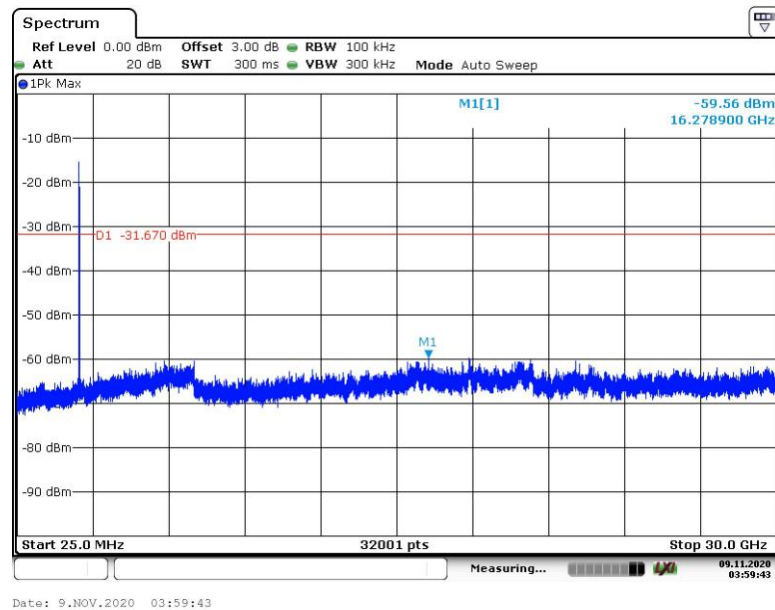
Date: 9.NOV.2020 03:56:49

(High CH)

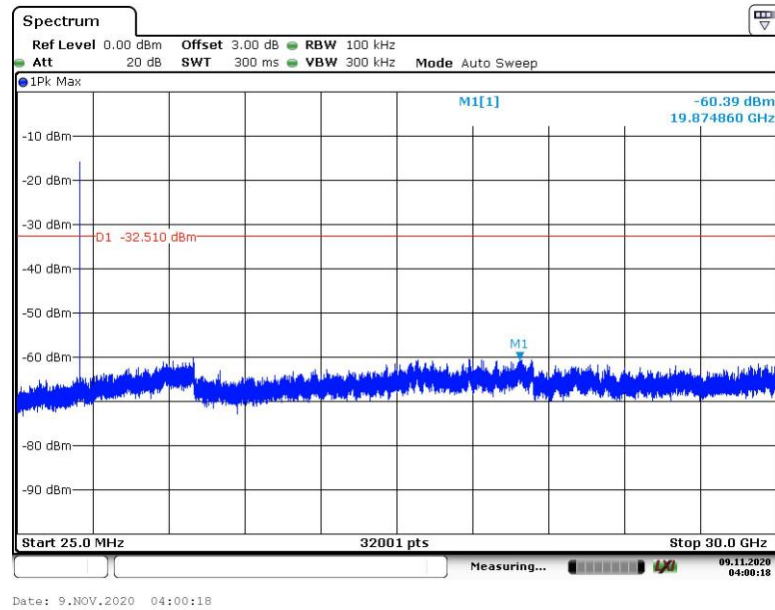
Conducted Spurious Emissions



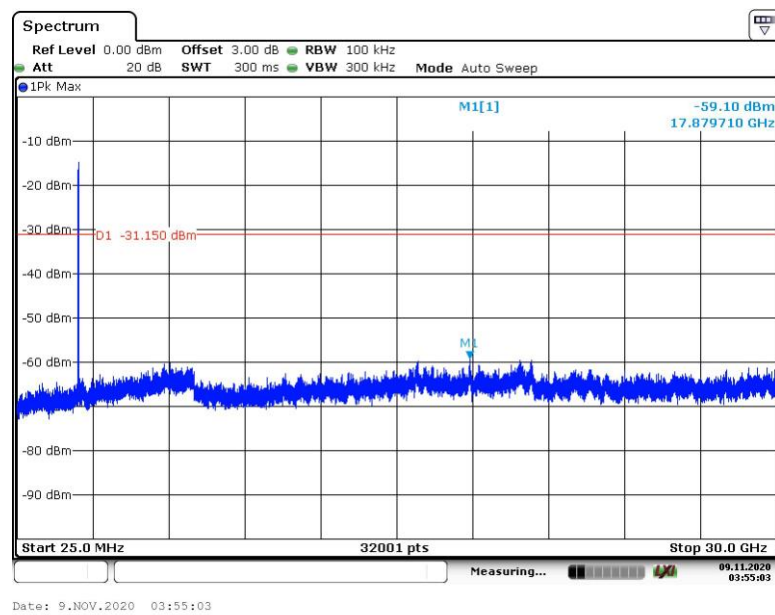
(Low CH)



(Mid CH)



(High CH)



(Hopping Mode)

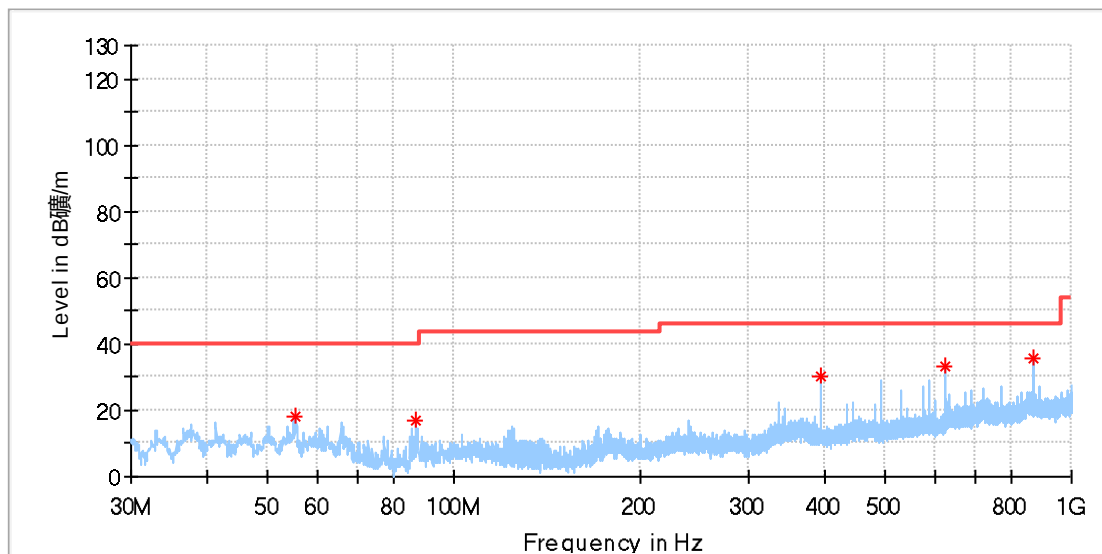
Appendix A.4: Test Results of Radiated Spurious Emissions and Radiated Emissions in Restricted Bands

*Remark: Note: 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.

Radiated Emissions below 1 GHz

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_DH5_Low channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

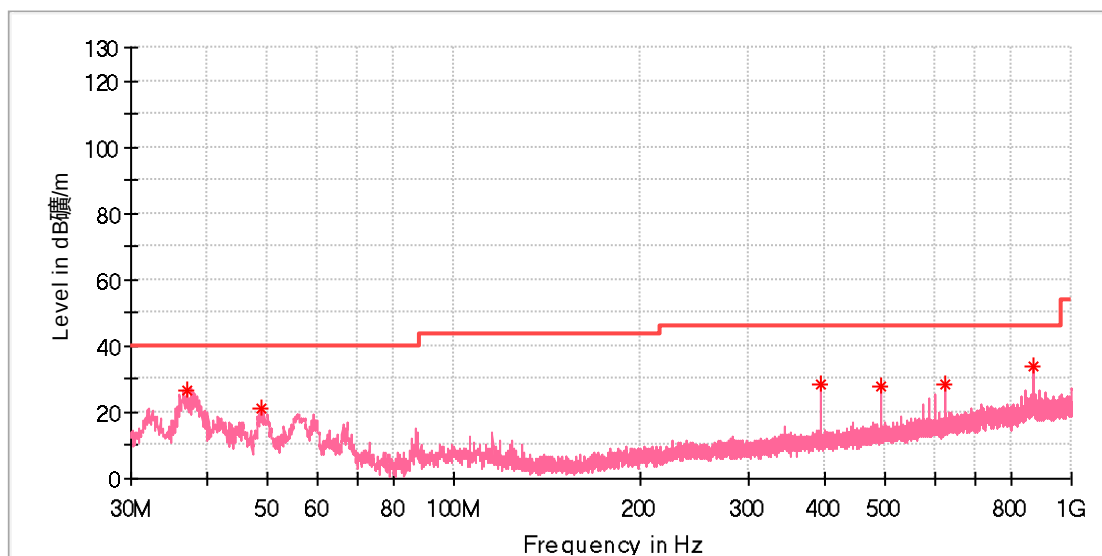


Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
55.414000	17.94	---	40.00	22.06	100.0	H	162.0	-18.5
86.551000	16.81	---	40.00	23.19	100.0	H	173.0	-21.9
393.216500	30.11	---	46.00	15.89	100.0	H	14.0	-13.8
624.998000	33.52	---	46.00	12.48	100.0	H	254.0	-9.5
864.782000	35.49	---	46.00	10.51	100.0	H	326.0	-5.3

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_DH5_Low channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
36.935500	26.41	---	40.00	13.59	100.0	V	160.0	-21.2
48.769500	20.88	---	40.00	19.12	100.0	V	190.0	-18.4
393.168000	28.41	---	46.00	17.59	100.0	V	32.0	-13.8
491.477500	27.56	---	46.00	18.44	100.0	V	288.0	-11.9
624.998000	28.52	---	46.00	17.48	100.0	V	2.0	-9.5
864.782000	33.86	---	46.00	12.14	100.0	V	190.0	-5.3

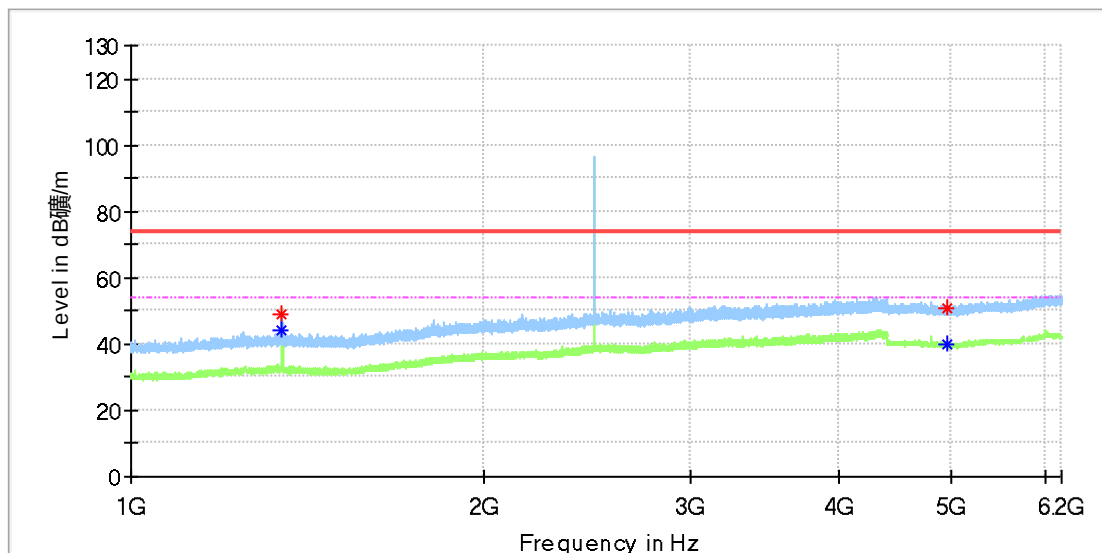
Radiated Emissions above 1 GHz

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

GFSK

EUT Information

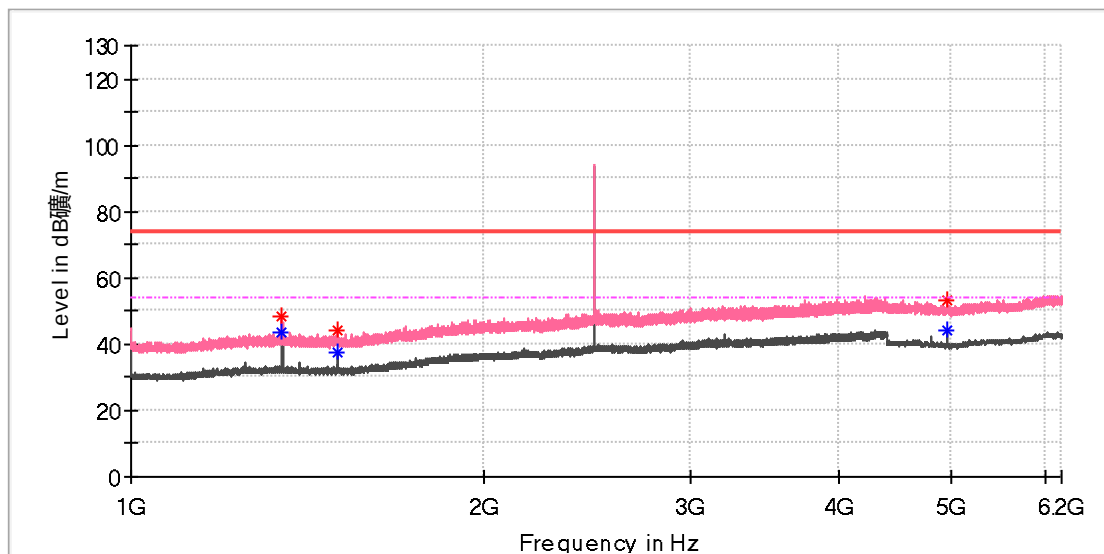
EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

**Critical_Freqs**

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
1345.100000	49.27	---	74.00	24.73	100.0	H	205.0	2.1
1345.100000	---	43.92	54.00	10.08	100.0	H	205.0	2.1
4960.500000	---	40.10	54.00	13.90	100.0	H	114.0	13.2
4961.000000	50.91	---	74.00	23.09	100.0	H	247.0	13.2

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

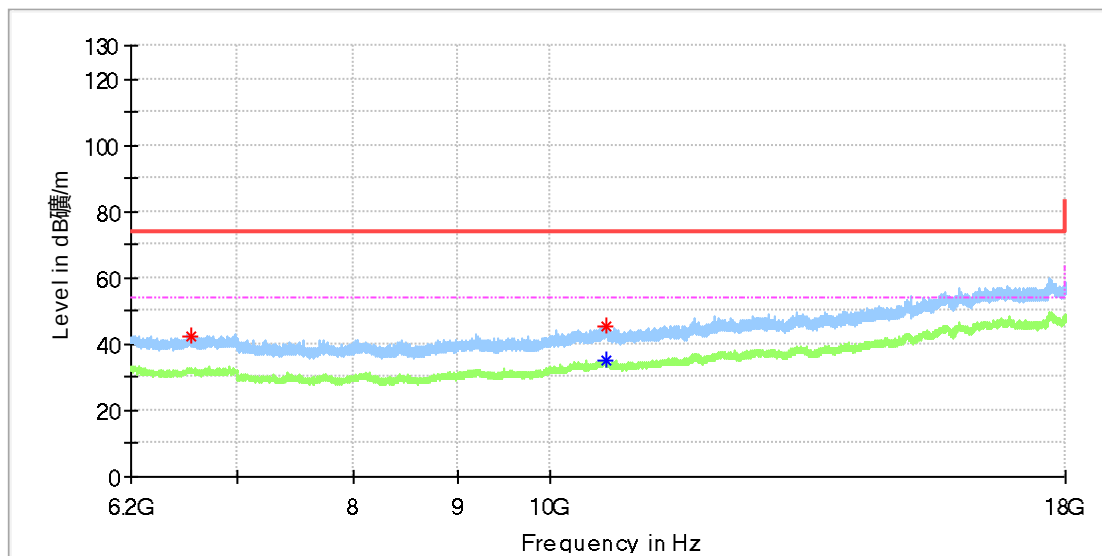
Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
1345.100000	---	43.60	54.00	10.40	100.0	V	291.0	2.1
1345.100000	48.37	---	74.00	25.63	100.0	V	291.0	2.1
1499.587500	43.87	---	74.00	30.13	100.0	V	241.0	1.2
1499.800000	---	37.55	54.00	16.45	100.0	V	212.0	1.2
4960.000000	52.95	---	74.00	21.05	100.0	V	185.0	13.2
4960.000000	---	44.21	54.00	9.79	100.0	V	185.0	13.2

Final_Result

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

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

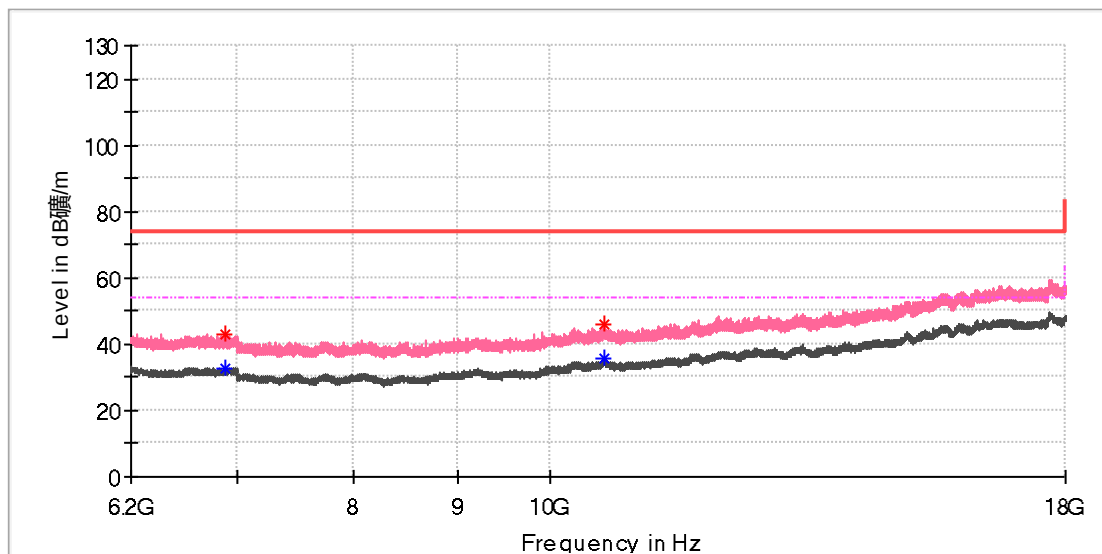


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
6640.041667	42.50	---	74.00	31.50	100.0	H	324.0	8.9
10662.366667	45.49	---	74.00	28.51	100.0	H	324.0	11.9
10664.333333	---	34.90	54.00	19.10	100.0	H	324.0	11.9

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

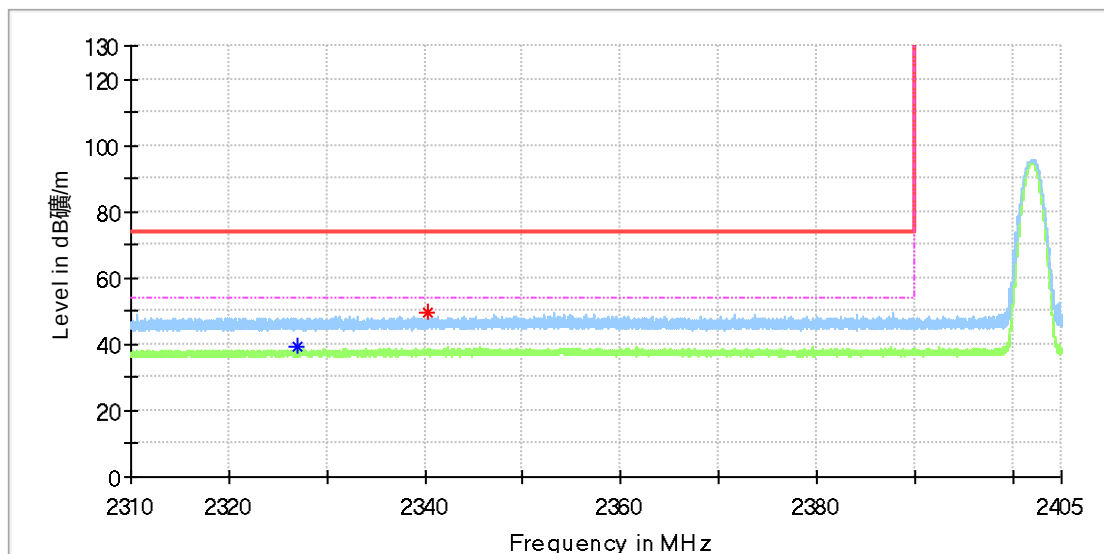


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
6896.200000	---	32.44	54.00	21.56	100.0	V	139.0	8.6
6897.675000	42.63	---	74.00	31.37	100.0	V	0.0	8.6
10638.766667	46.00	---	74.00	28.00	100.0	V	98.0	12.0
10646.141667	---	35.89	54.00	18.11	100.0	V	166.0	12.0

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_DH5_Low channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

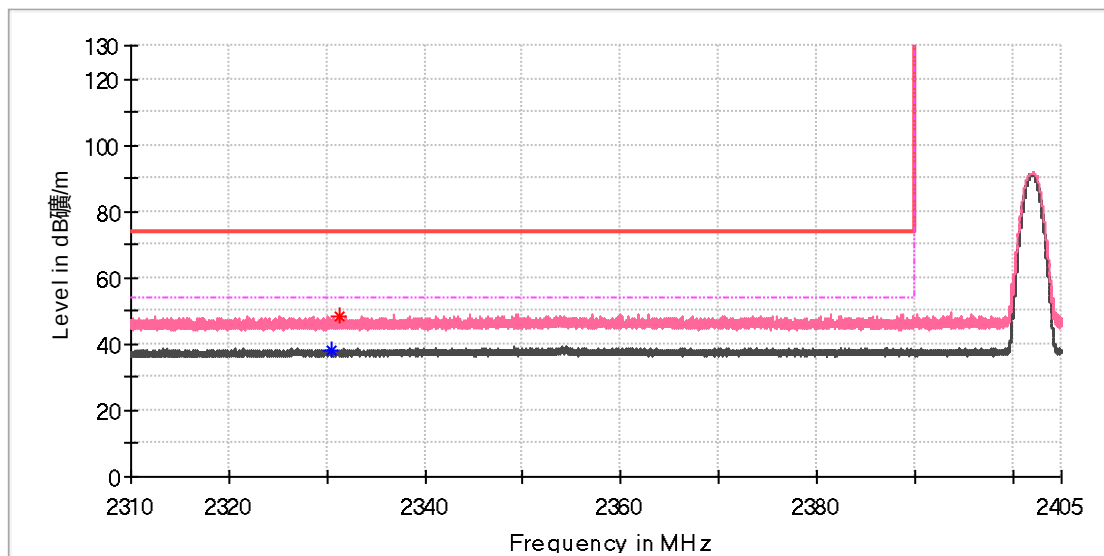


Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2326.945625	---	39.49	54.00	14.51	100.0	H	169.0	6.7
2340.299063	49.73	---	74.00	24.27	100.0	H	76.0	6.8

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_DH5_Low channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

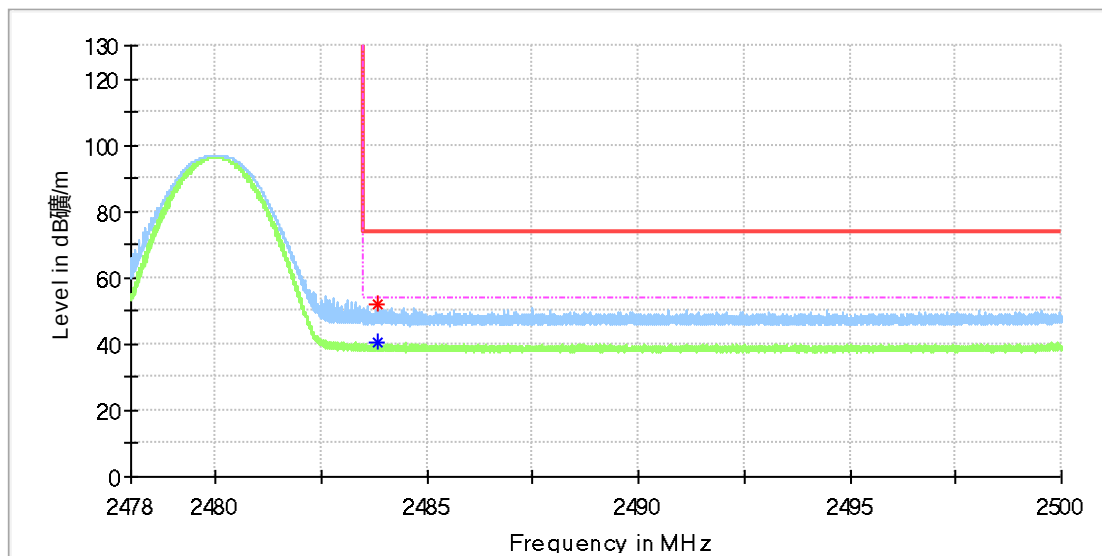


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2330.466563	---	38.10	54.00	15.90	100.0	V	226.0	6.7
2331.196875	48.35	---	74.00	25.65	100.0	V	192.0	6.7

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

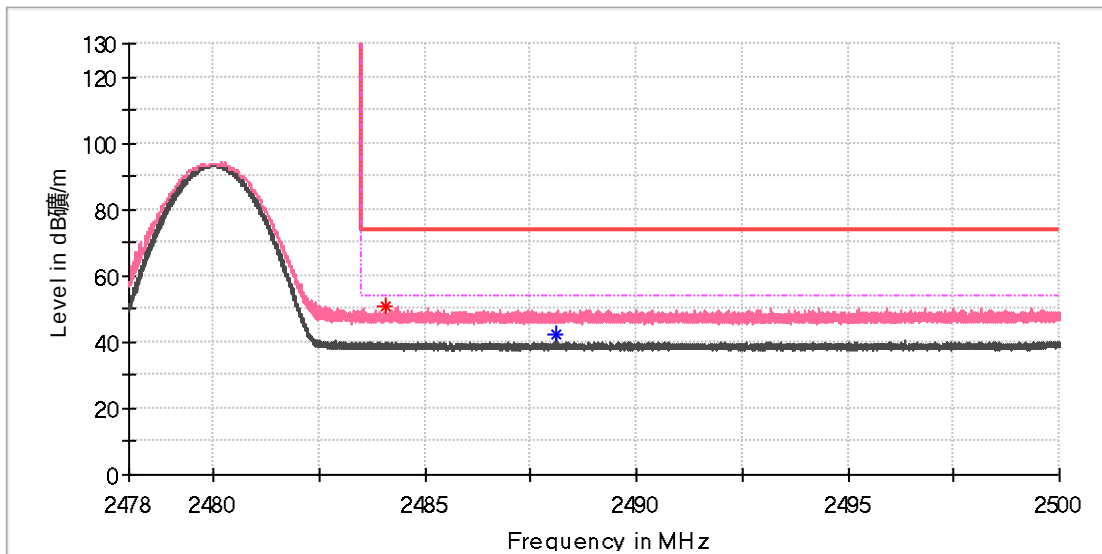


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2483.832750	52.08	---	74.00	21.92	100.0	H	359.0	7.4
2483.853375	---	40.36	54.00	13.64	100.0	H	359.0	7.4

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



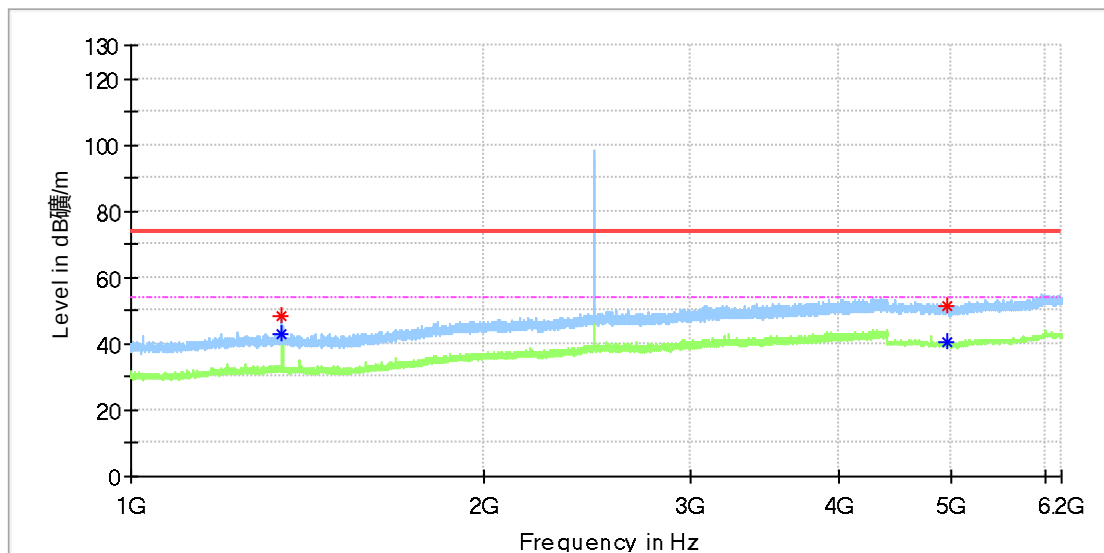
Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2484.072000	50.71	---	74.00	23.29	100.0	V	0.0	7.4
2488.099375	---	42.58	54.00	11.42	100.0	V	0.0	7.4

8DPSK

EUT Information

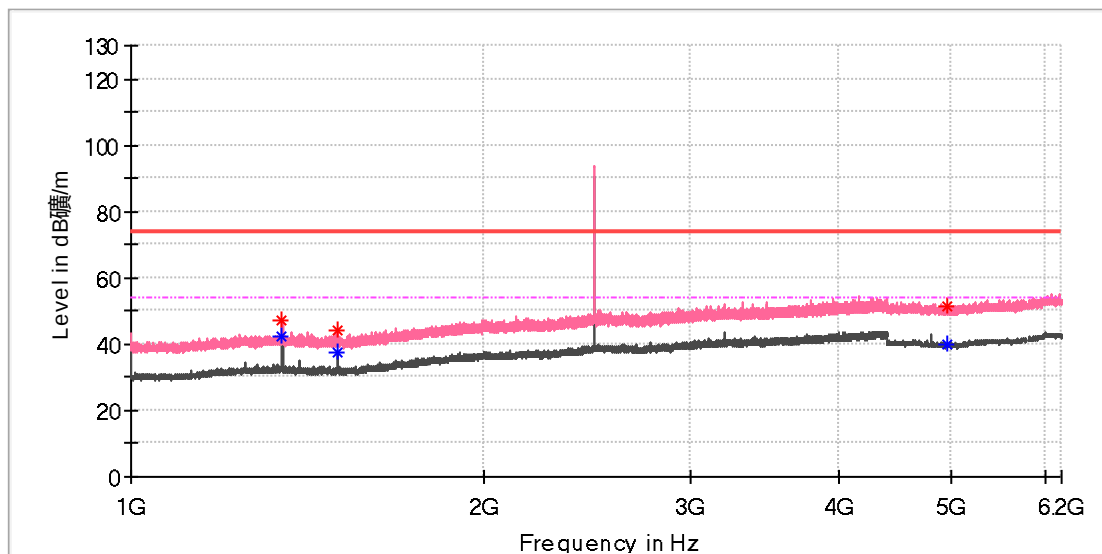
EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_3DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

**Critical_Freqs**

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
1345.100000	48.35	---	74.00	25.65	100.0	H	224.0	2.1
1345.312500	---	42.75	54.00	11.25	100.0	H	173.0	2.1
4959.000000	51.17	---	74.00	22.83	100.0	H	1.0	13.2
4961.500000	---	40.21	54.00	13.79	100.0	H	108.0	13.2

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_3DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

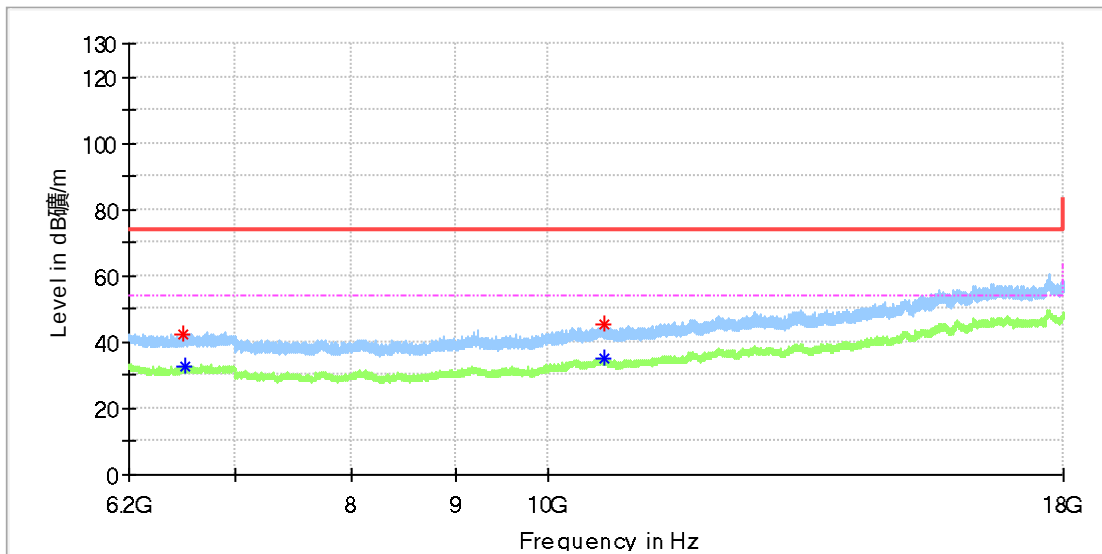


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
1345.100000	---	42.54	54.00	11.46	100.0	V	83.0	2.1
1345.525000	47.32	---	74.00	26.68	100.0	V	83.0	2.1
1499.800000	44.37	---	74.00	29.63	100.0	V	215.0	1.2
1500.012500	---	37.47	54.00	16.53	100.0	V	296.0	1.2
4960.000000	51.49	---	74.00	22.51	100.0	V	128.0	13.2
4961.500000	---	39.90	54.00	14.10	100.0	V	99.0	13.2

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_3DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

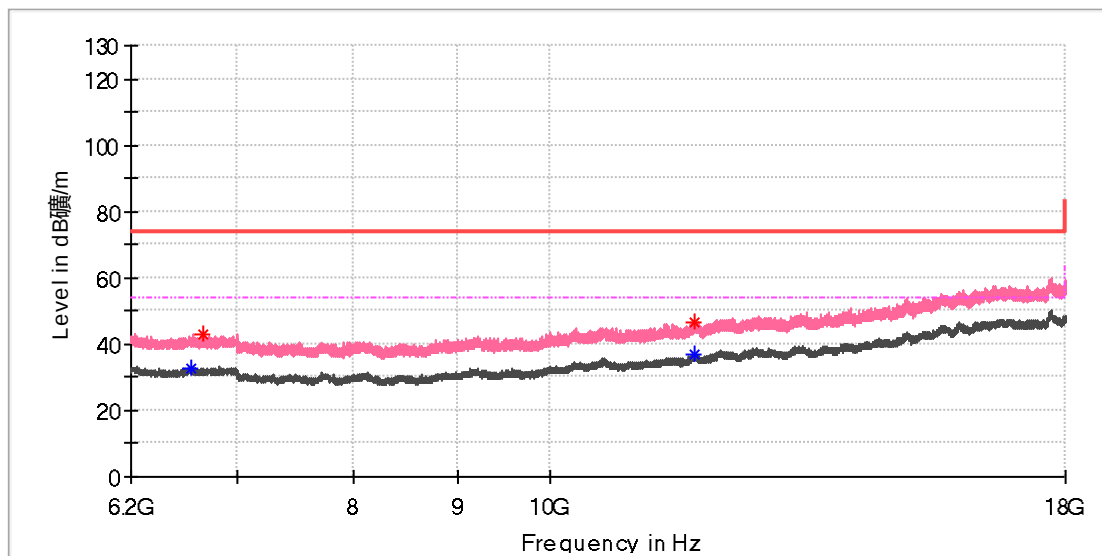


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
6600.216667	42.17	---	74.00	31.83	100.0	H	99.0	8.8
6602.675000	---	32.66	54.00	21.34	100.0	H	0.0	8.8
10650.566667	45.59	---	74.00	28.41	100.0	H	60.0	12.0
10655.975000	---	34.82	54.00	19.18	100.0	H	74.0	12.0

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_3DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 24 Humi:47%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

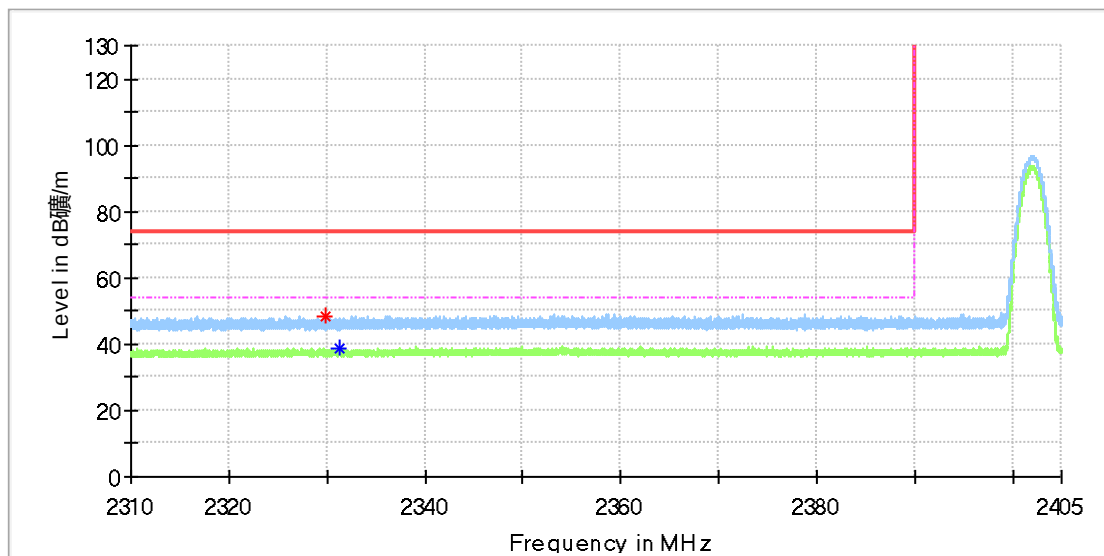


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
6642.008333	---	32.90	54.00	21.10	100.0	V	316.0	8.9
6735.425000	42.64	---	74.00	31.36	100.0	V	66.0	8.6
11791.233333	---	36.97	54.00	17.03	100.0	V	302.0	13.4
11794.183333	46.40	---	74.00	27.60	100.0	V	357.0	13.4

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_3DH5_Low channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

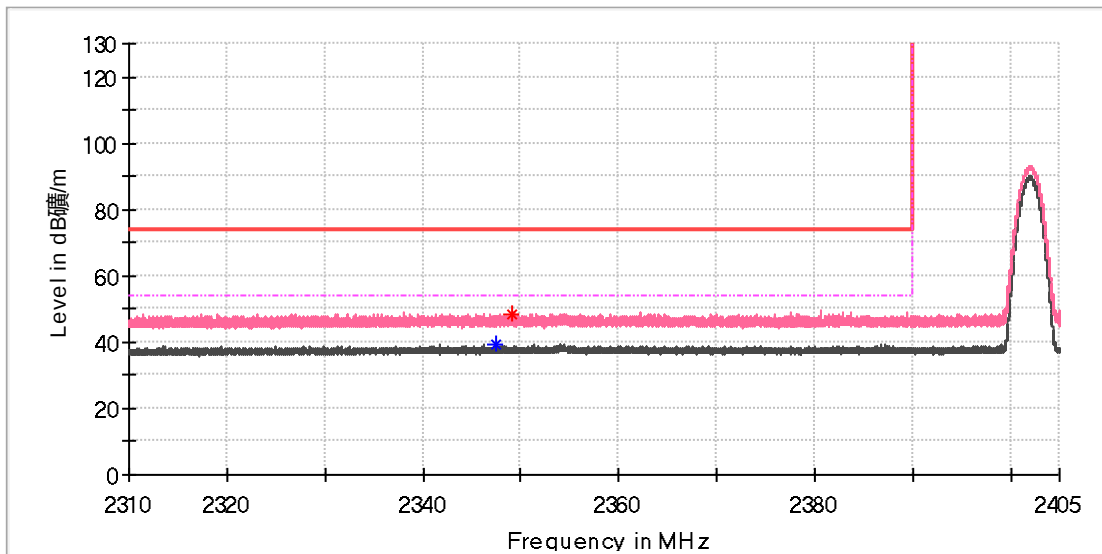


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2329.837188	48.27	---	74.00	25.73	100.0	H	126.0	6.7
2331.369063	---	38.51	54.00	15.49	100.0	H	336.0	6.7

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_3DH5_Low channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

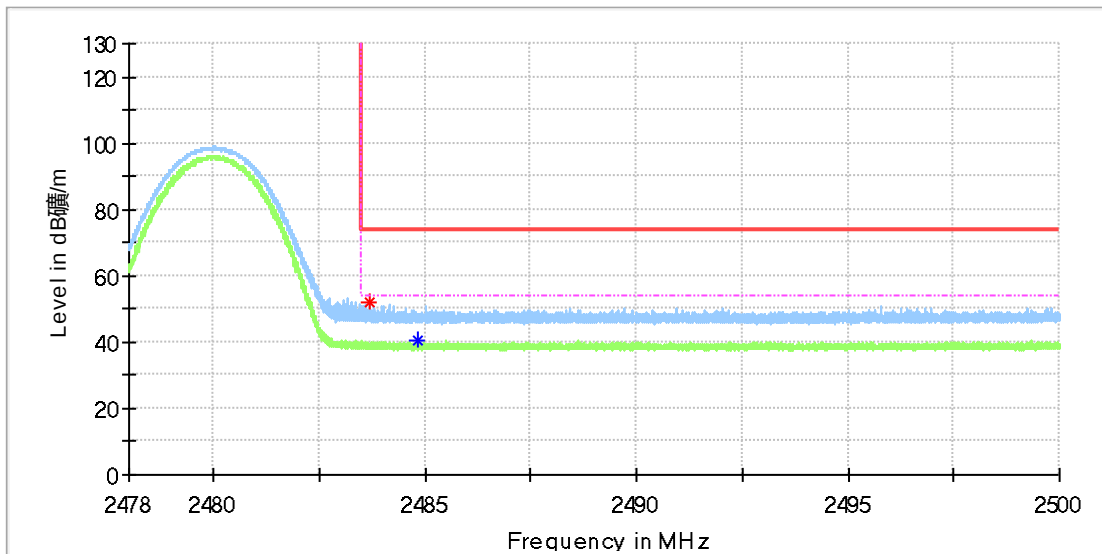


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2347.477500	---	39.28	54.00	14.72	100.0	V	92.0	6.9
2349.003438	48.52	---	74.00	25.48	100.0	V	0.0	6.9

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_3DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

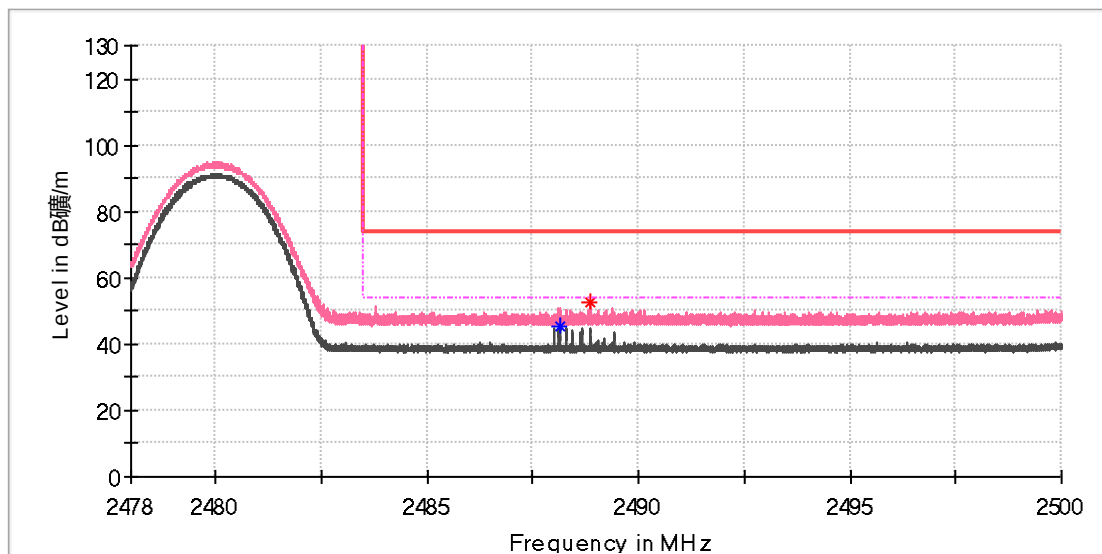


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2483.681500	51.97	---	74.00	22.03	100.0	H	358.0	7.4
2484.817250	---	40.53	54.00	13.47	100.0	H	0.0	7.4

EUT Information

EUT Name:	Intelligent Connected Infotainment
Model:	GWMV3-(B01)
Test Mode:	BT_3DH5_High channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 23 Humi:55%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2488.131000	---	45.37	54.00	8.63	100.0	V	0.0	7.4
2488.874875	52.58	---	74.00	21.42	100.0	V	0.0	7.4