

Prüfbericht-Nr.: Test Report No.:	60374673 001	Auftrags-Nr.: Order No.:	168138246	Seite 1 von 24 Page 1 of 24
Kunden-Referenz-Nr.: Client Reference No.:	N/A	Auftragsdatum: Order date:	24.02.2020	
Auftraggeber: Client:	Chongqing Changan Automobile Co., Ltd. No. 260 Jianxin Dong Road, Jiangbei District, 400023 Chongqing, P.R. China			
Prüfgegenstand: Test item:	Terminal Assy			
Bezeichnung / Typ-Nr.: Identification / Type No.:	7900030-BU52-AA, 7900030-BU53-AA			
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 receipt:	01.03.2020	Refer to Photo Documentation		
Prüfmuster-Nr.: Test sample No.:	A001025775-001			
Prüfzeitraum: Testing period:	01.03.2020 - 30.04.2020			
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:		kontrolliert von / reviewed by:		
19.05.2020	Hardy Suo / Assistant Project Manager	19.05.2020	Sam Lin / Technical Certifier	
Datum Date	Name / Stellung Name / Position	Unterschrift Signature	Datum Date	Name / Stellung Name / Position
Sonstiges / Other: FCC ID: 2AVTF790003053 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:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend 3 = satisfactory	4 = ausreichend N/A = nicht anwendbar
Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient 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. 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.				

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 RADIO FREQUENCY EXPOSURE COMPLIANCE

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: 01.03.2020 - 30.04.2020

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)
1825794	Wireless Connectivity Tester	R&S	CMW270	101375	20.08.2020
1825795	Signal Analyzer	R&S	FSV 40	101441	20.08.2020
1825796	Vector Signal Generator	R&S	SMBV100A	263301	21.08.2020
1825797	Signal Generator	R&S	SMB100A	115186	21.08.2020
1825798	OSP	R&S	OSP 150	101017	17.12.2020
1825799	Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
1825800	Test Software	R&S	WMS32 (V10.40.10)	N/A	N/A
1825801	Power Meter	R&S	NRP2	107105	17.12.2020
1825802	Wideband Power Sensor	R&S	NRP-Z81	105350	17.12.2020
1829620	Power Sensor	R&S	NRP-Z81	105677	11.10.2020
1826483	Humid & Temp Programmable Tester	BOST	NTH090-60	19040801	16.04.2020
1826431	Shielding Room 8#	Albatross	SR8	APC17151-SR8	23.07.2020

☒ **Unwanted Emission Testing (TS9975)**

Equip. No.	Description	Manufacturer	Model	Serial No.	Calibrated until (DD.MM.YYYY)
1826021	EMI Test Receiver	R&S	ESR 7	102021	19.08.2020
1826023	Signal Analyzer	R&S	FSV 40	101439	21.08.2020
1826024	System Controller Interface	R&S	SCI-100	S10010038	N/A
1826025	Filterbank	R&S	Wlan	100759	21.08.2020
1826026	OSP	R&S	OSP 120	102040	N/A
1826028	Pre-amplifier	R&S	SCU08F1	08320031	20.08.2020
1826029	Amplifier	R&S	SCU-18F	180070	20.08.2020
1826030	Amplifier	R&S	SCU40A	100475	20.09.2020
1826031	Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	02.09.2020
1826032	Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	02.09.2020
1826033	Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	02.09.2020
1826034	Active Loop Antenna	Schwarzbeck	FMZB 1513	302	01.09.2020
1826035	Wideband Ridged Horn Antenna (12-18 GHz)	Steatite	QMS-00208	18313	02.09.2020
1826036	Test software	R&S	V10.40.10-EMC32	N/A	N/A
1826037	Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
1826433	3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	06.07.2020

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:	Terminal Assy
Type Designation:	7900030-BU52-AA, 7900030-BU53-AA
FCC ID:	2AVTF790003053
Type of Equipment:	Mobile device
Operating Voltage:	DC 12V
Operating Temperature Range:	-40°C ~ +85°C
Remark: Models 7900030-BU52-AA and 7900030-BU53-AA are identical for PCBA, electricity and electronics, the difference is that 7900030-BU52-AA supports reverse image, 7900030-BU53-AA supports AVM (Around View Monitor). Based on it, we choose model 7900030-BU53-AA under testing.	

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, $\pi/4$ QDPSK, 8DPSK
Antenna Type:	PIFA Antenna, Integral
Antenna Gain:	Max. 2dBi

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	0 dBm
Middle	39	2441.00	0 dBm
High	78	2480.00	0 dBm

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	---	---	---

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

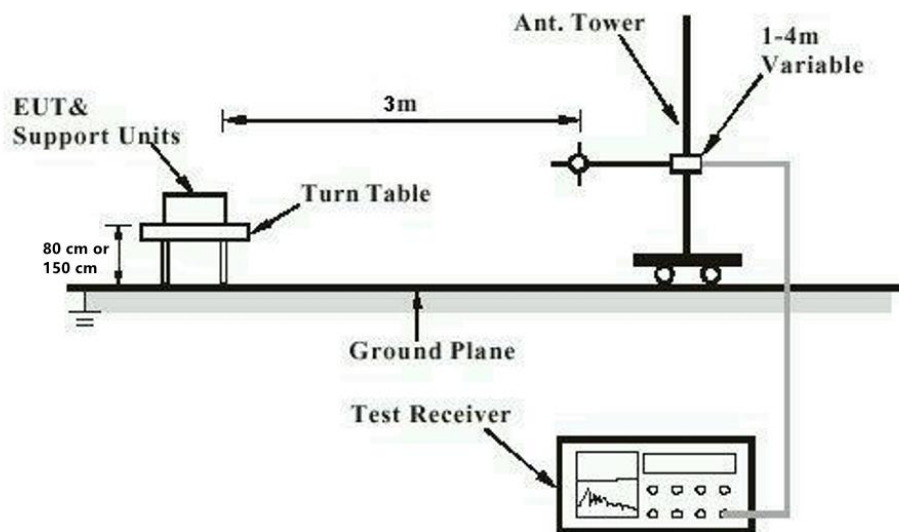


Diagram of Measurement Equipment Configuration for Conduction Measurement

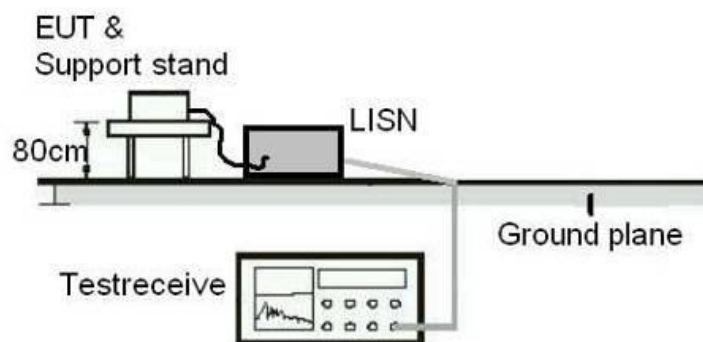
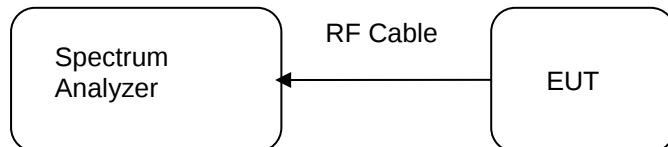


Diagram of Measurement Equipment Configuration for Transmitter Measurement



5. TEST RESULTS

5.1 ESSENTIAL REQUIREMENTS OF STANDARD

5.1.1 ANTENNA REQUIREMENT

RESULT:**Pass**

Test standard	:	CFR47 FCC Part 15.247b)(4) 47 CFR 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	:	01.03.2020 - 30.04.2020
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 integral antenna, the directional gain of antenna is 2dBi, 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.

5.1.2 PEAK OUTPUT POWER

RESULT:**Pass**

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

Test Setup

Date of testing	:	01.03.2020 - 30.04.2020
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.

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Page 17 of 24**5.1.3 20dB EMISSION BANDWIDTH AND 99% OCCUPIED CHANNEL BANDWIDTH****RESULT:****Pass**

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

Test Setup

Date of testing	:	01.03.2020 - 30.04.2020
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.

5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 kHz BANDWIDTH**RESULT:****Pass**

Test standard	:	CFR47 FCC Part 15.247d)
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	:	01.03.2020 - 30.04.2020
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) 47 CFR 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	:	01.03.2020 - 30.04.2020
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.

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5.1.6 CARRIER FREQUENCY SEPARATION

RESULT:**Pass**

Test standard	:	CFR47 FCC Part 15.247(a)(1)
Limit	:	$\geq 25\text{kHz}$ 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	:	01.03.2020 - 30.04.2020
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	:	CFR47 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	:	01.03.2020 - 30.04.2020
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.

5.1.8 TIME OF CHANNEL OCCUPANCY**RESULT:****Pass**

Test standard	:	CFR47 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	:	01.03.2020 - 30.04.2020
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.

5.1.9 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.: $4.30\text{dBm} + 2\text{dBi} = 6.30\text{dBm} = 4.27\text{mW}$

Antenna Gain: 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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APPENDIX A.2: TEST RESULTS OF RADIO SIGNAL CONDUCTED MEASUREMENT	3
GFSK	3
Hopping Frequencies (frequency independent; 10.000 dBm; 1 MHz).....	4
Time of Channel Occupancy (2441 MHz; 10.000 dBm; 1 MHz)	5
Time of Channel Occupancy(2) (2441 MHz; 10.000 dBm; 1 MHz).....	7
Time of Channel Occupancy(3) (2441 MHz; 10.000 dBm; 1 MHz).....	9
Emission Bandwidth 20 dB (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)	11
Peak output power (Sweep) (2402 MHz; 10.000 dBm; 1 MHz; Test Mode).....	13
RF output power (2402 MHz; 10.000 dBm; 1 MHz; Test Mode).....	14
Carrier Frequency Separation (2402 MHz; 10.000 dBm; 1 MHz; Test Mode).....	15
Occupied Channel Bandwidth 99% (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)	17
Emission Bandwidth 20 dB (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)	19
Peak output power (Sweep) (2441 MHz; 10.000 dBm; 1 MHz; Test Mode).....	21
RF output power (2441 MHz; 10.000 dBm; 1 MHz; Test Mode).....	22
Carrier Frequency Separation (2441 MHz; 10.000 dBm; 1 MHz; Test Mode).....	23
Occupied Channel Bandwidth 99% (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)	25
Emission Bandwidth 20 dB (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)	27
Peak output power (Sweep) (2480 MHz; 10.000 dBm; 1 MHz; Test Mode).....	29
RF output power (2480 MHz; 10.000 dBm; 1 MHz; Test Mode).....	30
Carrier Frequency Separation (2480 MHz; 10.000 dBm; 1 MHz; Test Mode).....	31
Occupied Channel Bandwidth 99% (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)	33
8DPSK	35
Hopping Frequencies (frequency independent; 10.000 dBm; 1 MHz).....	36
Time of Channel Occupancy(2) (2441 MHz; 10.000 dBm; 1 MHz).....	39
Time of Channel Occupancy(3) (2441 MHz; 10.000 dBm; 1 MHz).....	41
Emission Bandwidth 20 dB (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)	43
Peak output power (Sweep) (2402 MHz; 10.000 dBm; 1 MHz; Test Mode).....	45
RF output power (2402 MHz; 10.000 dBm; 1 MHz; Test Mode).....	46
Carrier Frequency Separation (2402 MHz; 10.000 dBm; 1 MHz; Test Mode).....	47
Occupied Channel Bandwidth 99% (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)	49
Emission Bandwidth 20 dB (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)	51
Peak output power (Sweep) (2441 MHz; 10.000 dBm; 1 MHz; Test Mode).....	52
RF output power (2441 MHz; 10.000 dBm; 1 MHz; Test Mode).....	53
Carrier Frequency Separation (2441 MHz; 10.000 dBm; 1 MHz; Test Mode).....	54
Occupied Channel Bandwidth 99% (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)	56
Emission Bandwidth 20 dB (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)	58
Peak output power (Sweep) (2480 MHz; 10.000 dBm; 1 MHz; Test Mode).....	60
RF output power (2480 MHz; 10.000 dBm; 1 MHz; Test Mode).....	61
Carrier Frequency Separation (2480 MHz; 10.000 dBm; 1 MHz; Test Mode).....	62
Occupied Channel Bandwidth 99% (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)	64

APPENDIX A.3: TEST RESULTS OF CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHz

BANDWIDTH	66
GFSK	66
<i>Band Edge</i>	66
<i>Conducted Spurious Emissions</i>	68
8DPSK	72
<i>Band Edge</i>	72
<i>Conducted Spurious Emissions</i>	74

APPENDIX A.4: TEST RESULTS OF RADIATED EMISSIONS..... **78****RADIATED EMISSIONS BELOW 1 GHz** **78****RADIATED EMISSIONS ABOVE 1 GHz**..... **82**

<i>GFSK</i>	82
<i>8DPSK</i>	92

Appendix A.1: Test Results of Peak Output Power

Test Results

Operation Mode	Channel	Frequency	Test Results				Limit	Conclusion
			Peak Power		Avg. Power			
		MHz	(dBm)	(W)	(dBm)	(W)	(W)	
BDR mode (GFSK)	0	2402	2.0	0.0016	1.6	0.0014	0.125	PASS
	39	2441	4.3	0.0027	3.9	0.0025	0.125	PASS
	78	2480	3.8	0.0024	3.3	0.0021	0.125	PASS
EDR mode (8DPSK)	0	2402	0.4	0.0011	-2.6	0.0005	0.125	PASS
	39	2441	2.7	0.0019	-0.1	0.0010	0.125	PASS
	78	2480	2.3	0.0017	-0.6	0.0009	0.125	PASS
Note: N/A								

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

GFSK

Test	Frequency (MHz)	Nomin al Power	Nominal Bandwidth (MHz)	Result
Hopping Frequencies	--- (hopping)	10.0	1.000000	PASS
Time of Channel Occupancy	2441.000 (hopping)	10.0	1.000000	PASS
Time of Channel Occupancy(2)	2441.000 (hopping)	10.0	1.000000	PASS
Time of Channel Occupancy(3)	2441.000 (hopping)	10.0	1.000000	PASS
Emission Bandwidth 20 dB	2402.000 (single)	10.0	1.000000	PASS
Peak output power (Sweep)	2402.000 (single)	10.0	1.000000	PASS
RF output power	2402.000 (single)	10.0	1.000000	PASS
Carrier Frequency Separation	2402.000 (single)	10.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2402.000 (single)	10.0	1.000000	PASS
Emission Bandwidth 20 dB	2441.000 (single)	10.0	1.000000	PASS
Peak output power (Sweep)	2441.000 (single)	10.0	1.000000	PASS
RF output power	2441.000 (single)	10.0	1.000000	PASS
Carrier Frequency Separation	2441.000 (single)	10.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2441.000 (single)	10.0	1.000000	PASS
Emission Bandwidth 20 dB	2480.000 (single)	10.0	1.000000	PASS
Peak output power (Sweep)	2480.000 (single)	10.0	1.000000	PASS
RF output power	2480.000 (single)	10.0	1.000000	PASS
Carrier Frequency Separation	2480.000 (single)	10.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2480.000 (single)	10.0	1.000000	PASS

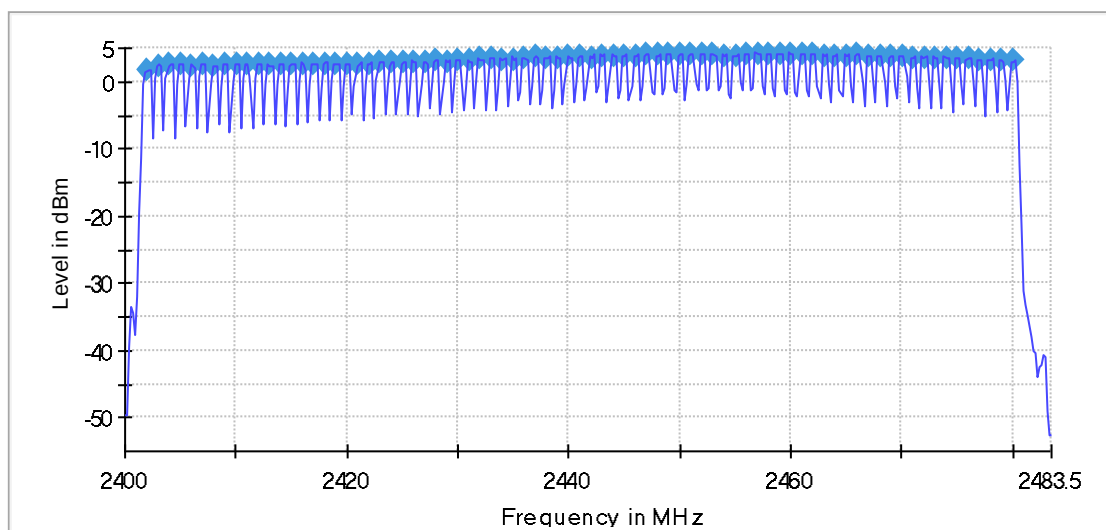
Hopping Frequencies (frequency independent; 10.000 dBm; 1 MHz)

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

Channel	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	53 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.24 dB	0.50 dB

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	Threshold (dBm)
2441.000000	PASS	319	128.910	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
98.74	98.75	98.74

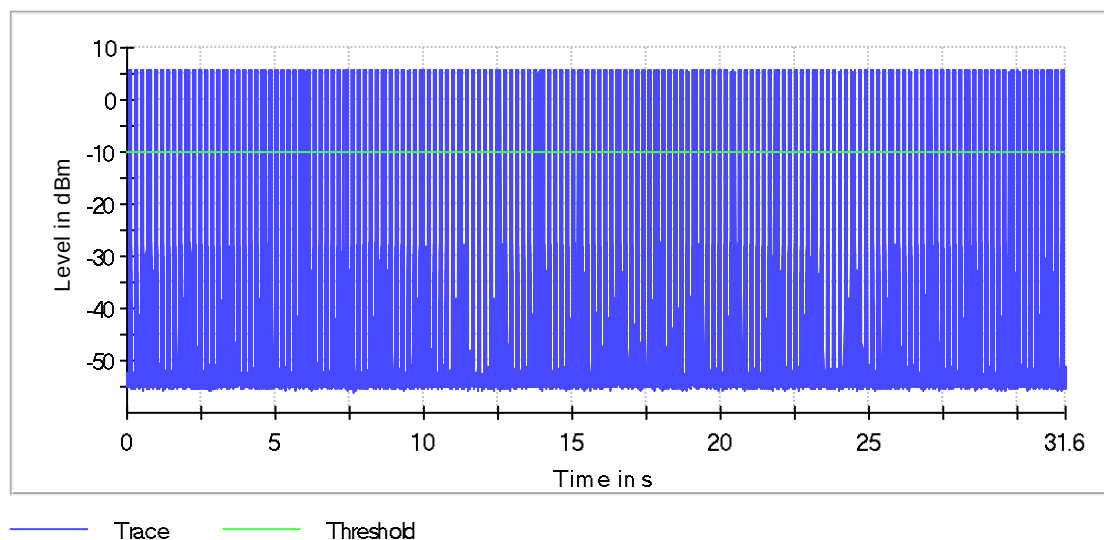
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
0.4	0.4	400.000	0.000	0.40

DwellTime

Min (ms)	Max (ms)	Mean (ms)
0.4	0.4	0.40

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 μ s	1.000 μ s
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	Threshold (dBm)
2441.000000	PASS	159	265.400	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
197.49	197.50	197.49

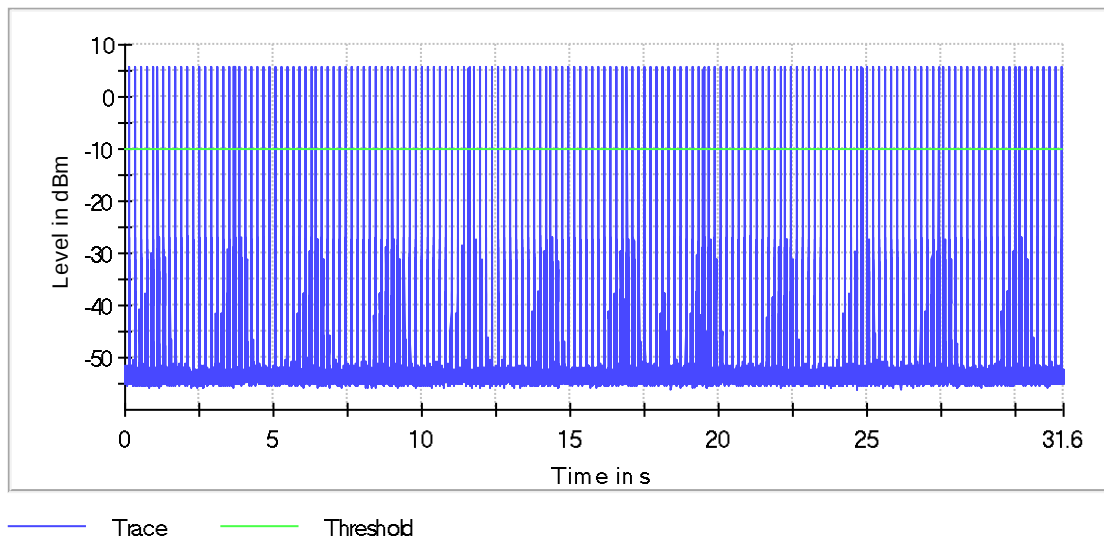
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
1.65	1.66	400.000	0.000	1.65

DwellTime

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

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 μ s	1.000 μ s
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	Threshold (dBm)
2441.000000	PASS	106	311.040	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
296.24	296.25	296.24

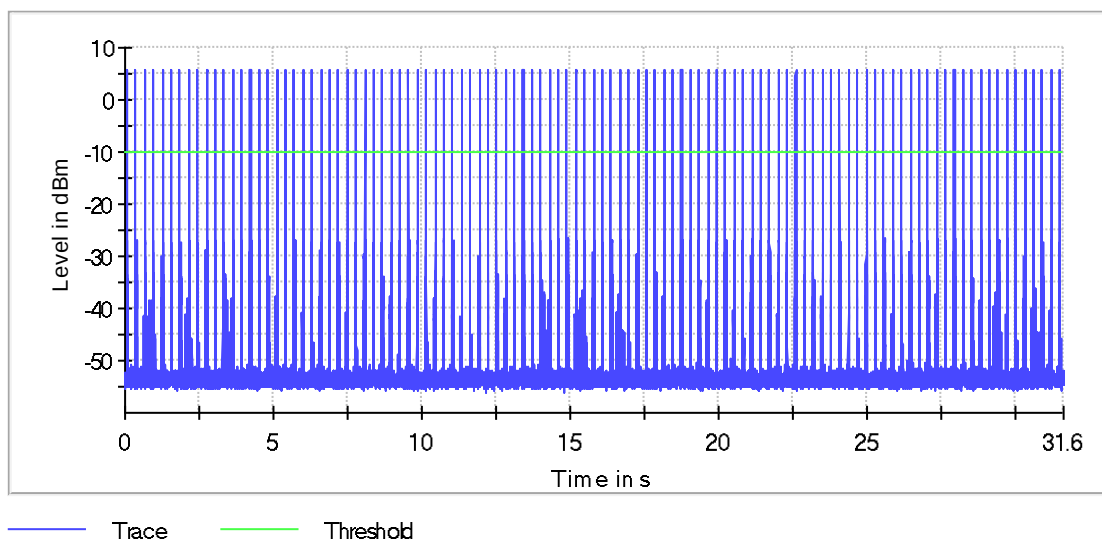
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
2.90	2.91	400.000	0.000	2.90

DwellTime

Min (ms)	Max (ms)	Mean
2.90	2.91	2.90

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; 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

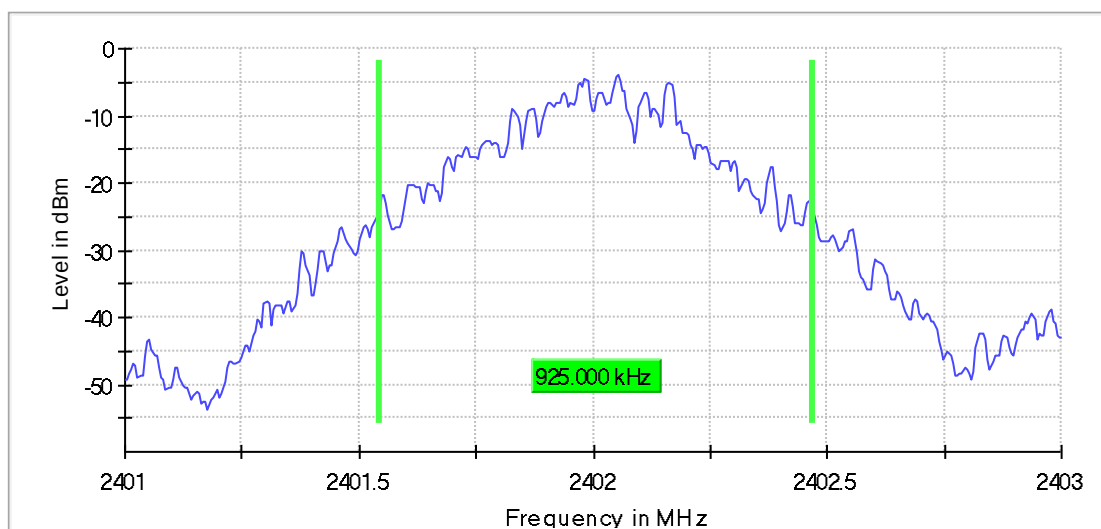
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.925000	---	---	2401.542500	2402.467500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-3.7	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	8 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.07 dB	0.50 dB

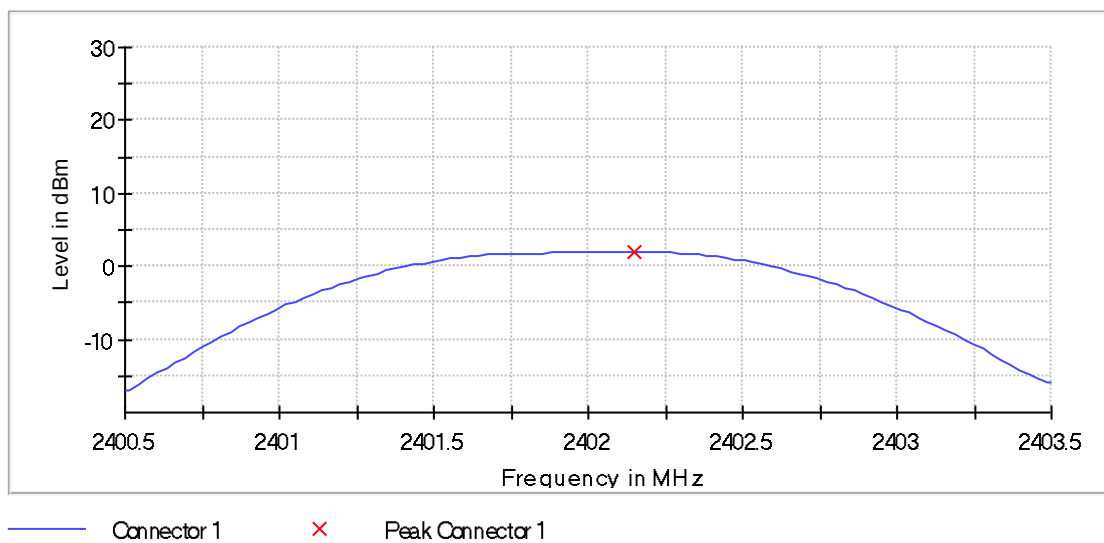
Peak output power (Sweep) (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2402.000000	2.0	21.0	PASS

Peak Power



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	>= 925.001 kHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 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	0.03 dB	0.50 dB

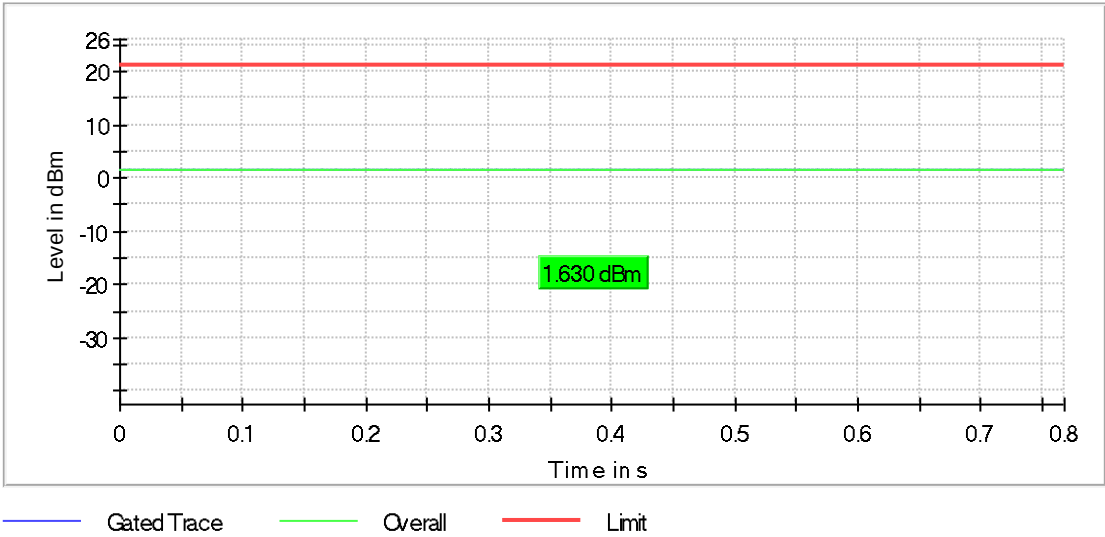
RF output power (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Gated RMS	Limit Max (dBm)	Gated EIRP	DutyCycle	Result
2402.000000	1.6	21.0	1.6	77.324	PASS

Gated Trace



OSP PowerMeter settings

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 µs	1.000 µs

Carrier Frequency Separation (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

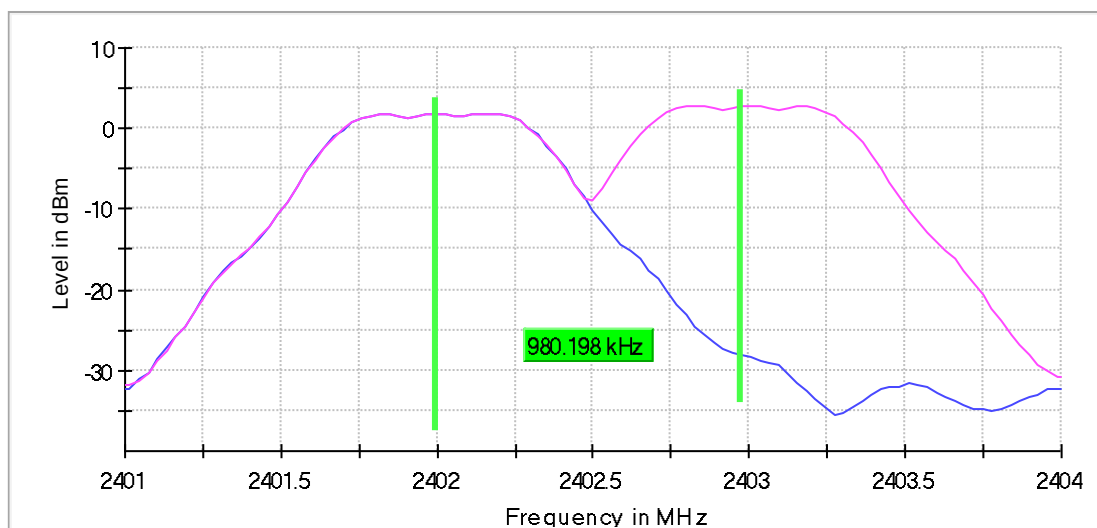
Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2402.000000	0.980198	0.616667	---	2401.995050	2402.975248

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

DUT Frequency (MHz)	Result
2402.000000	PASS

CFS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
SweepTime	1.000 ms	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	Sweep	Sweep
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.00 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
SweepTime	1.000 ms	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	Sweep	Sweep
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	19 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.04 dB	0.50 dB

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

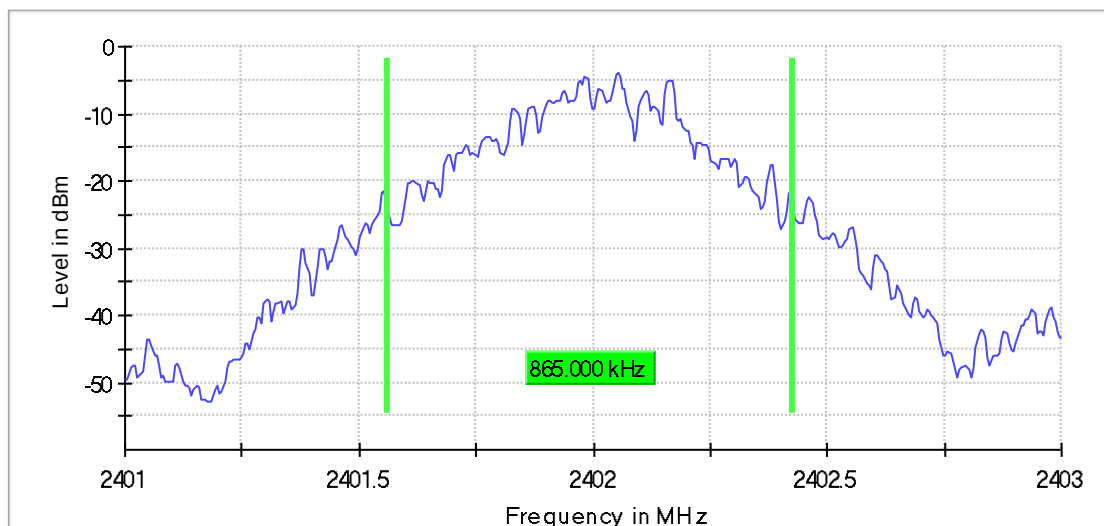
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.865000	---	---	2401.562500	2402.427500

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

DUT Frequency (MHz)	Result
2402.000000	PASS

99%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	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	0.14 dB	0.30 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

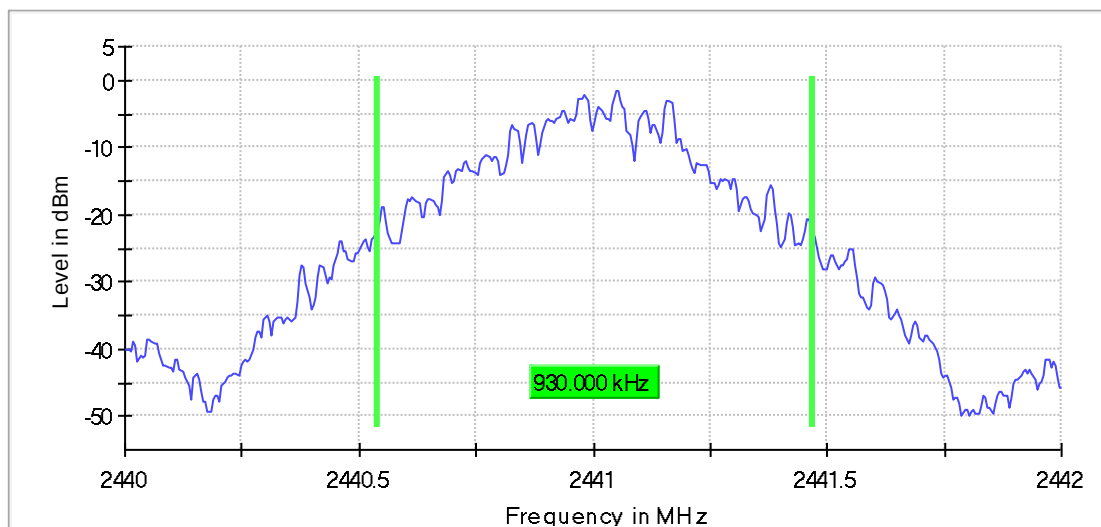
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.930000	---	---	2440.537500	2441.467500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-1.5	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	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	0.15 dB	0.50 dB

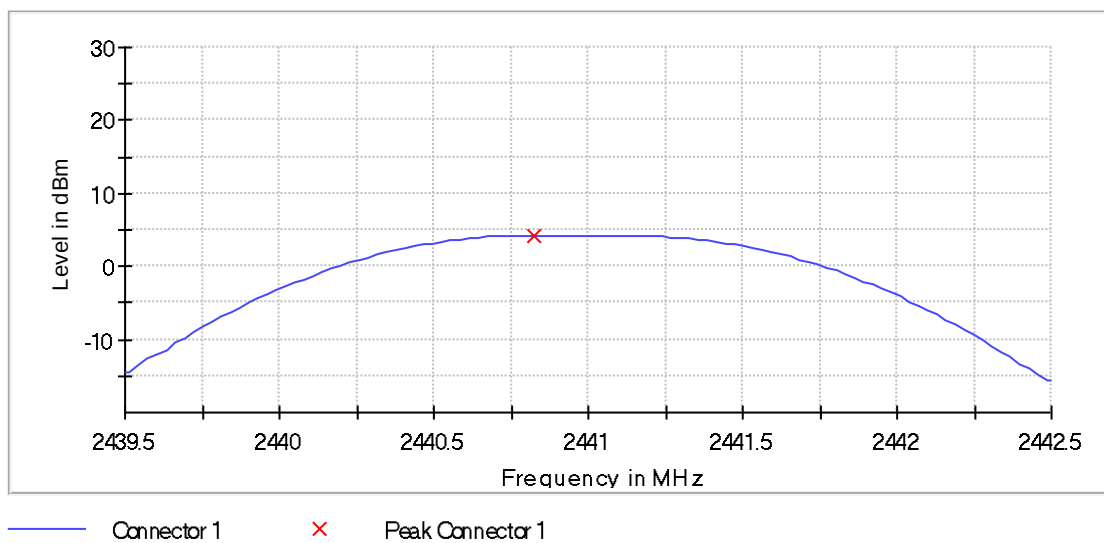
Peak output power (Sweep) (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2441.000000	4.3	21.0	PASS

Peak Power



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	10.000 dBm	10.000 dBm
Attenuation	30.000 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	0.07 dB	0.50 dB

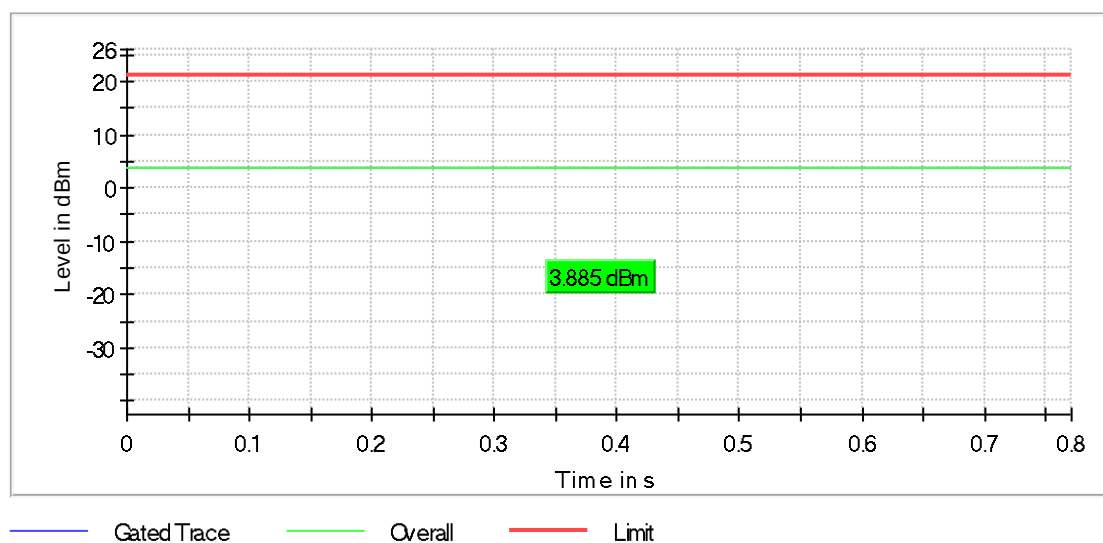
RF output power (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Gated RMS	Limit Max (dBm)	Gated EIRP	DutyCycle	Result
2441.000000	3.9	21.0	3.9	77.329	PASS

Gated Trace



OSP PowerMeter settings

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 µs	1.000 µs

Carrier Frequency Separation (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

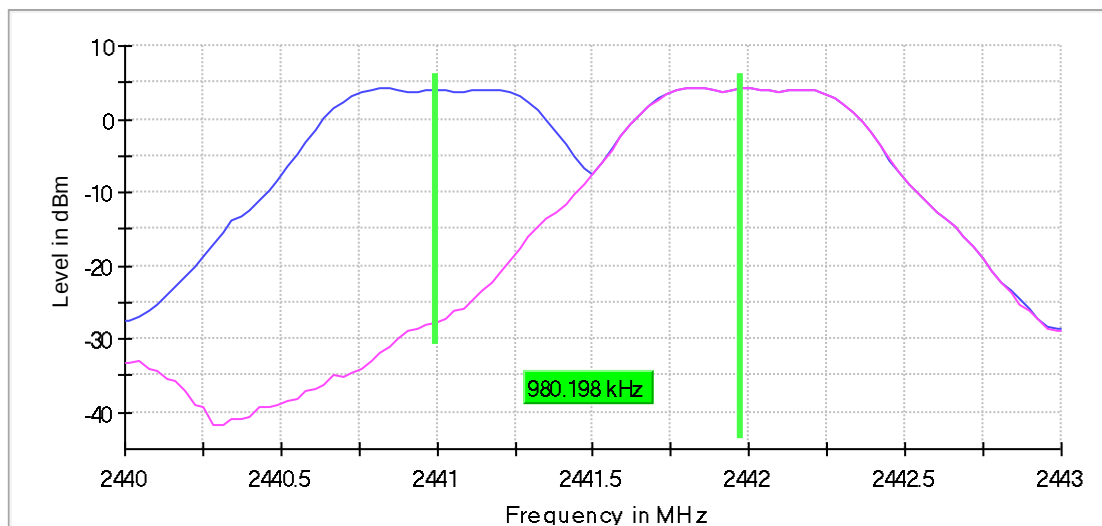
Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2441.000000	0.980198	0.620000	---	2440.995050	2441.975248

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

DUT Frequency (MHz)	Result
2441.000000	PASS

CFS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44300 GHz	2.44300 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
SweepTime	1.000 ms	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	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	12 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.03 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44300 GHz	2.44300 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
SweepTime	1.000 ms	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	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.07 dB	0.50 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

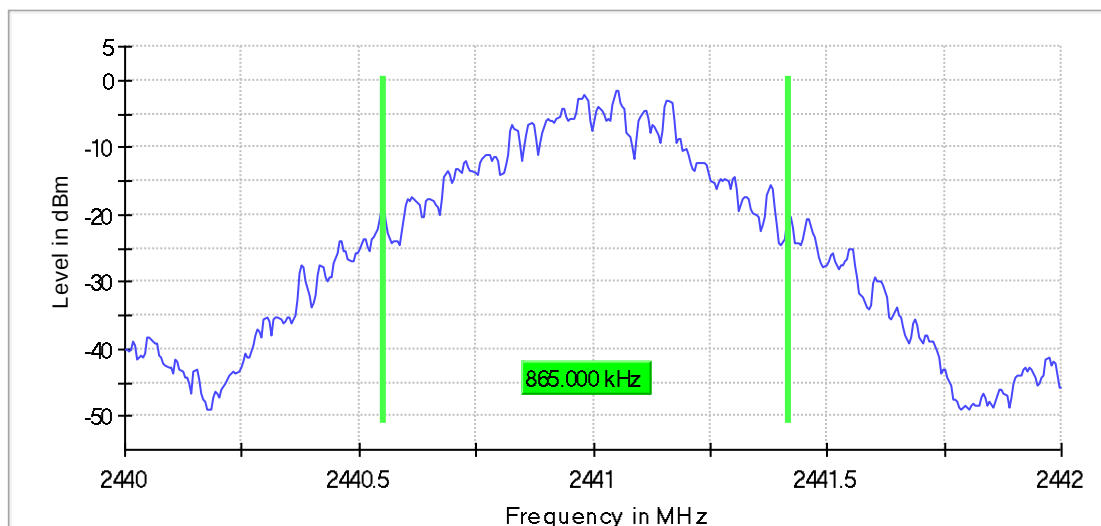
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.865000	---	---	2440.552500	2441.417500

(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	0.000 dBm	0.000 dBm
Attenuation	20.000 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	0.10 dB	0.30 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

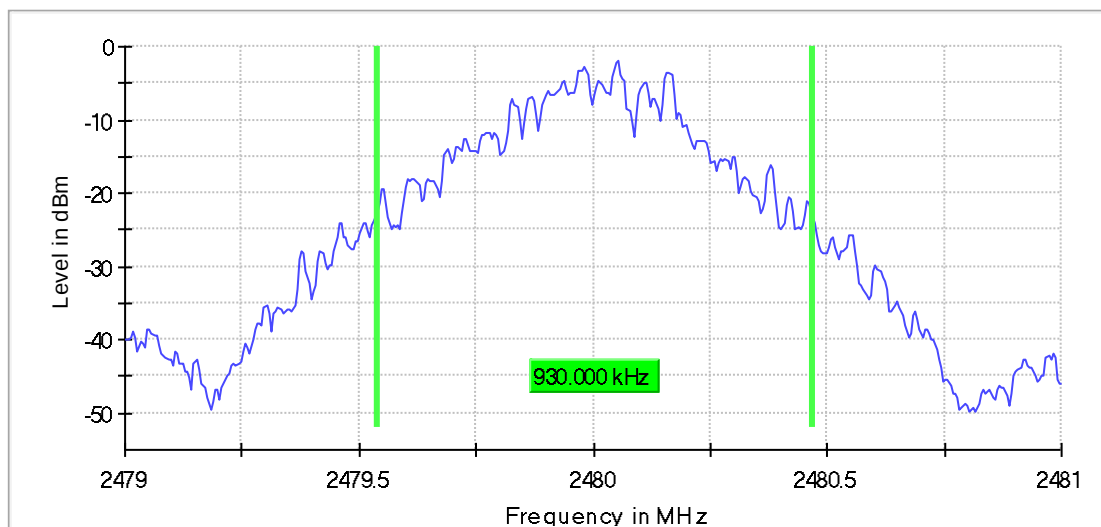
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.930000	---	---	2479.537500	2480.467500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-2.0	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	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	0.15 dB	0.50 dB

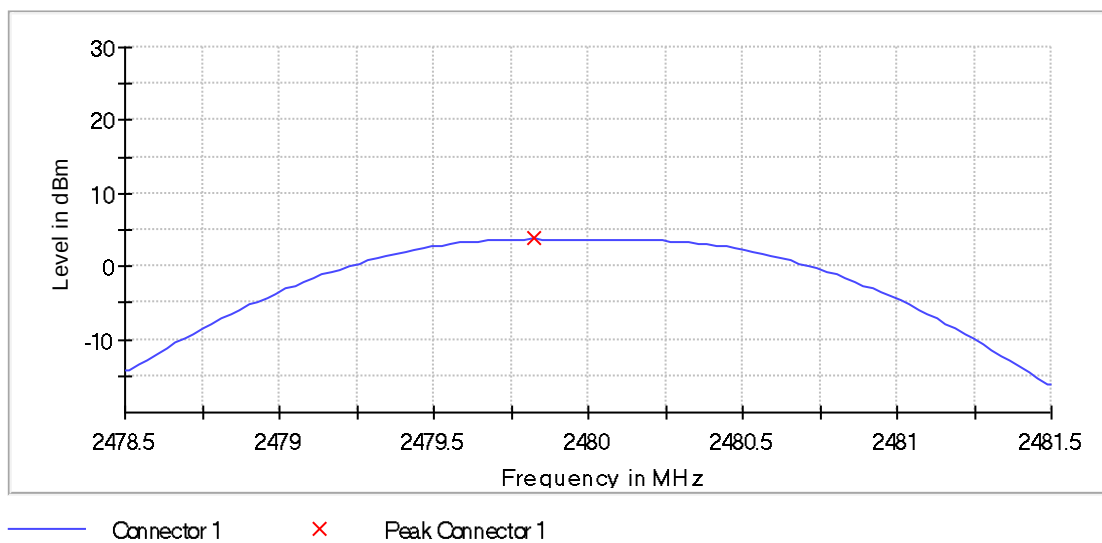
Peak output power (Sweep) (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2480.000000	3.8	21.0	PASS

Peak Power



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	10.000 dBm	10.000 dBm
Attenuation	30.000 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	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.09 dB	0.50 dB

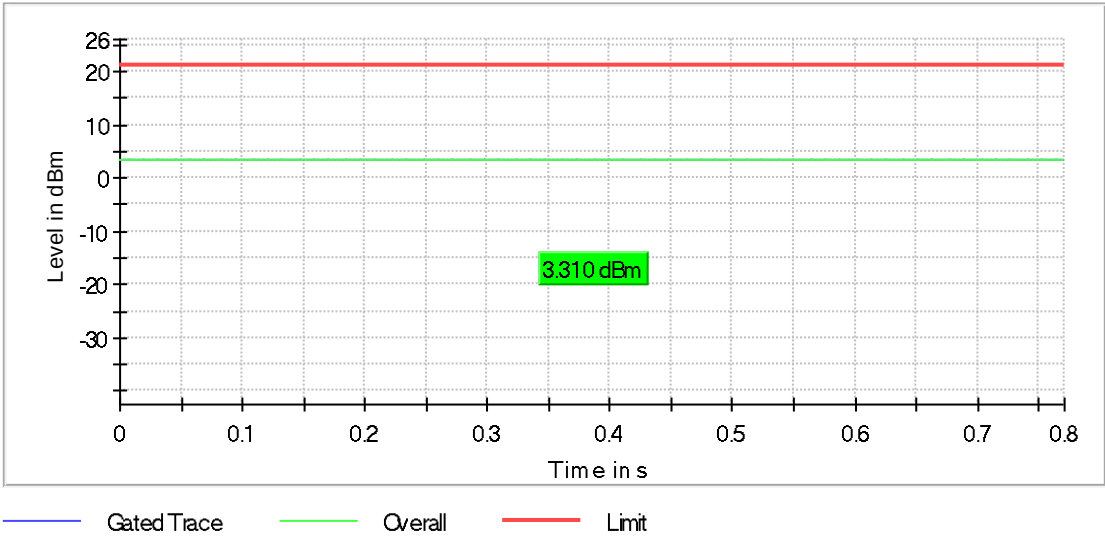
RF output power (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Gated RMS	Limit Max (dBm)	Gated EIRP	DutyCycle	Result
2480.000000	3.3	21.0	3.3	77.328	PASS

Gated Trace



OSP PowerMeter settings

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 µs	1.000 µs

Carrier Frequency Separation (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

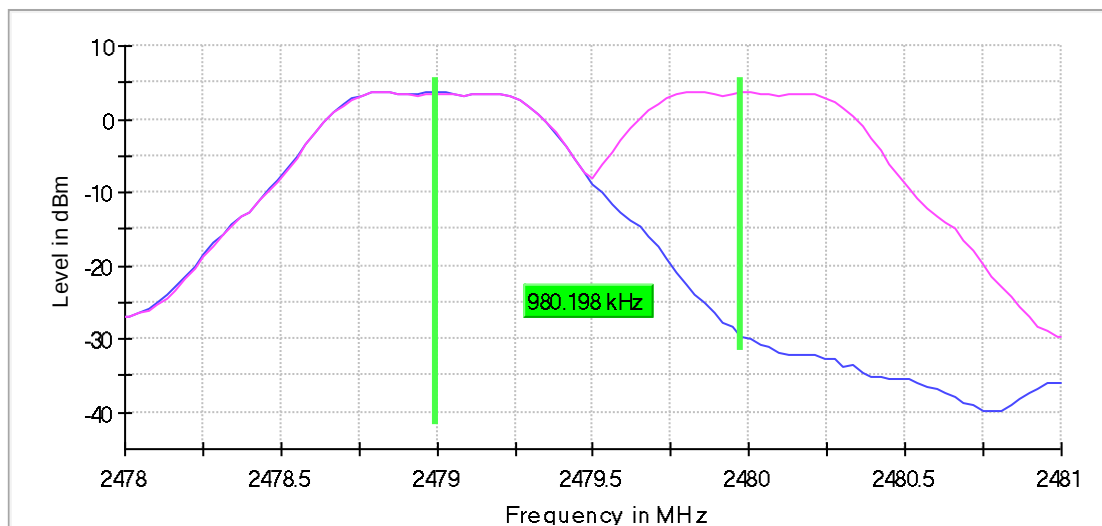
Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2480.000000	0.980198	0.620000	---	2478.995050	2479.975248

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

DUT Frequency (MHz)	Result
2480.000000	PASS

CFS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
SweepTime	1.000 ms	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	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.04 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
SweepTime	1.000 ms	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	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	12 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.00 dB	0.50 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

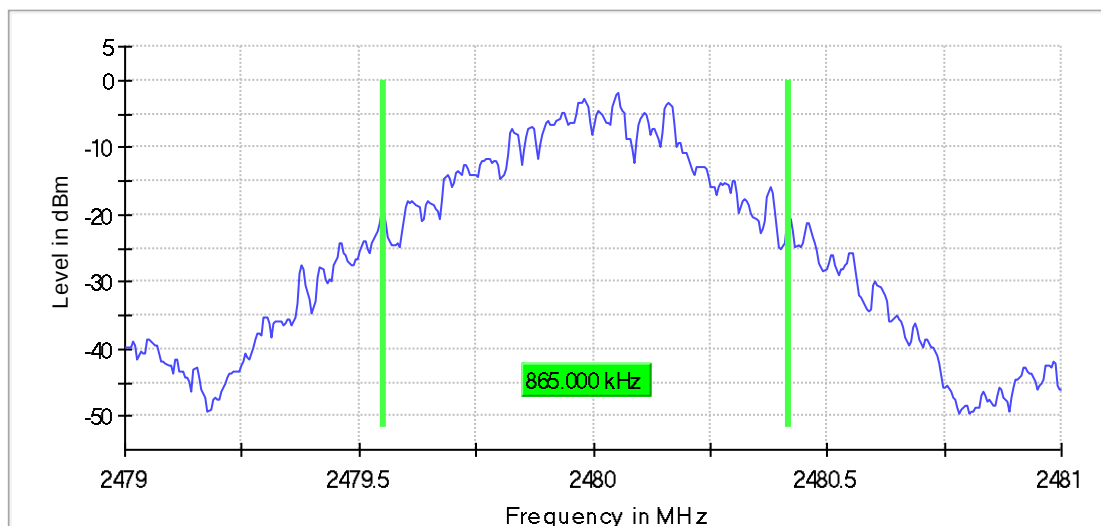
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.865000	---	---	2479.552500	2480.417500

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

DUT Frequency (MHz)	Result
2480.000000	PASS

99%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	0.000 dBm	0.000 dBm
Attenuation	20.000 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	0.11 dB	0.30 dB

8DPSK

Test	Frequency (MHz)	Nominal Power	Nominal Bandwidth (MHz)	Result
Hopping Frequencies	--- (hopping)	10.0	1.000000	PASS
Time of Channel Occupancy	2441.000 (hopping)	10.0	1.000000	PASS
Time of Channel Occupancy(2)	2441.000 (hopping)	10.0	1.000000	PASS
Time of Channel Occupancy(3)	2441.000 (hopping)	10.0	1.000000	PASS
Emission Bandwidth 20 dB	2402.000 (single)	10.0	1.000000	PASS
Peak output power (Sweep)	2402.000 (single)	10.0	1.000000	PASS
RF output power	2402.000 (single)	10.0	1.000000	PASS
Carrier Frequency Separation	2402.000 (single)	10.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2402.000 (single)	10.0	1.000000	PASS
Emission Bandwidth 20 dB	2441.000 (single)	10.0	1.000000	PASS
Peak output power (Sweep)	2441.000 (single)	10.0	1.000000	PASS
RF output power	2441.000 (single)	10.0	1.000000	PASS
Carrier Frequency Separation	2441.000 (single)	10.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2441.000 (single)	10.0	1.000000	PASS
Emission Bandwidth 20 dB	2480.000 (single)	10.0	1.000000	PASS
Peak output power (Sweep)	2480.000 (single)	10.0	1.000000	PASS
RF output power	2480.000 (single)	10.0	1.000000	PASS
Carrier Frequency Separation	2480.000 (single)	10.0	1.000000	PASS
Occupied Channel Bandwidth 99%	2480.000 (single)	10.0	1.000000	PASS

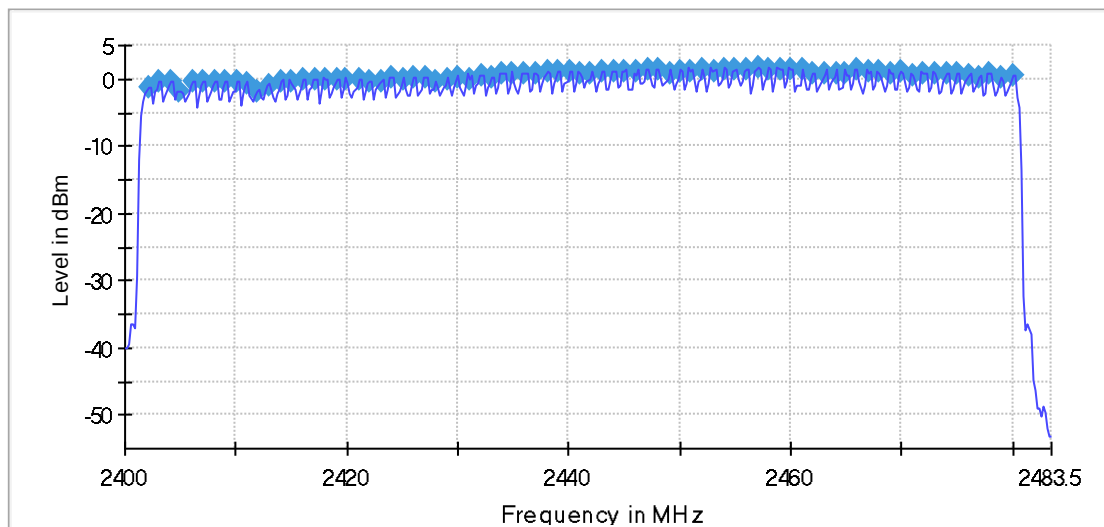
Hopping Frequencies (frequency independent; 10.000 dBm; 1 MHz)

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

Channel	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	123 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.18 dB	0.50 dB

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	Threshold (dBm)
2441.000000	PASS	319	130.900	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
98.74	98.75	98.74

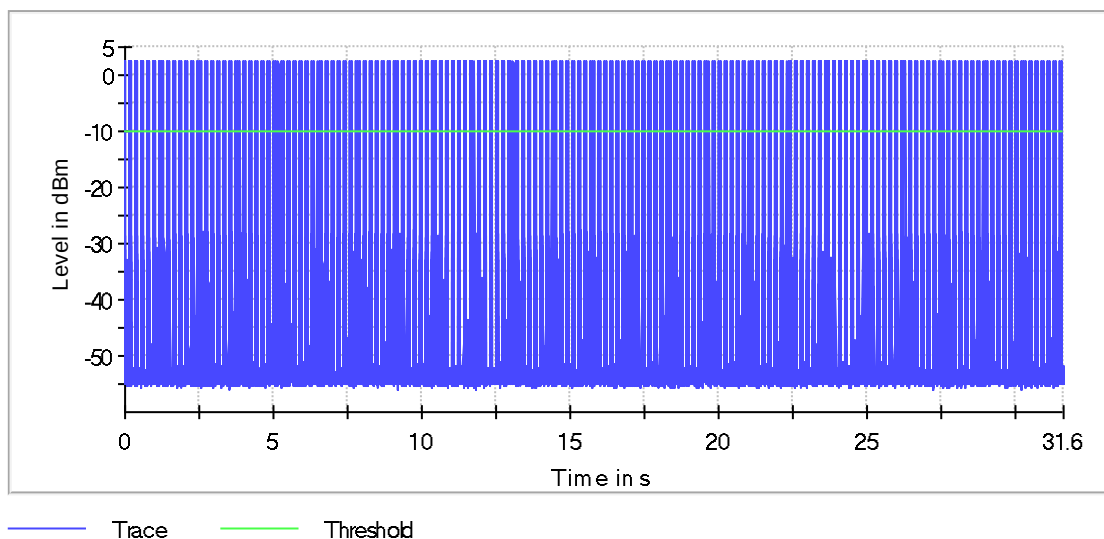
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
0.3	0.4	400.000	0.000	0.40

DwellTime

Min (ms)	Max (ms)	Mean (ms)
0.4	0.4	0.41

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	Threshold (dBm)
2441.000000	PASS	159	262.090	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
197.49	197.50	197.49

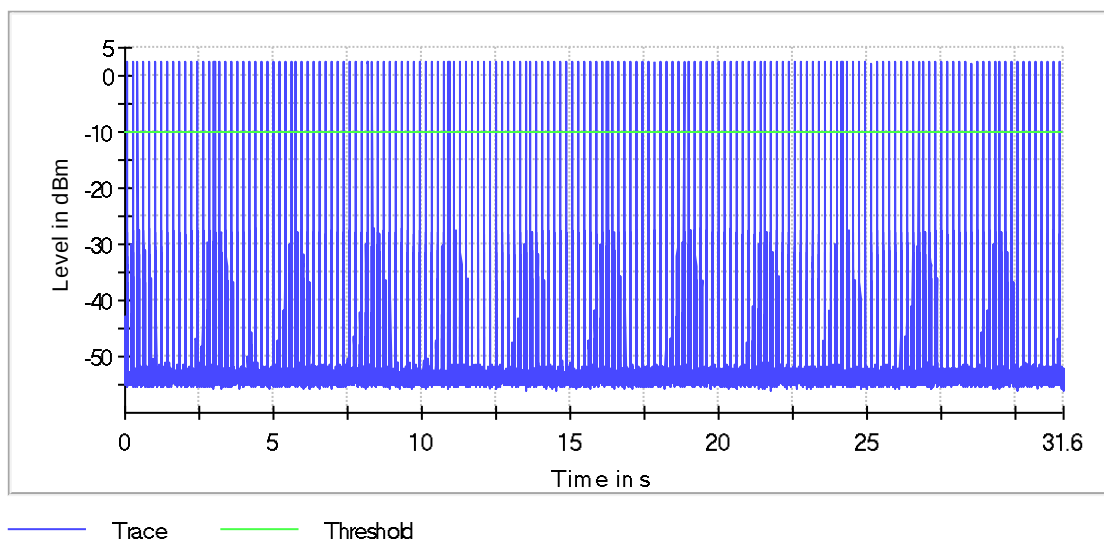
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
1.62	1.66	400.000	0.000	1.63

DwellTime

Min (ms)	Max (ms)	Mean
1.66	1.67	1.66

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	Threshold (dBm)
2441.000000	PASS	106	307.220	-10.0

Periode

Min (ms)	Max (ms)	Mean (ms)
296.24	296.25	296.24

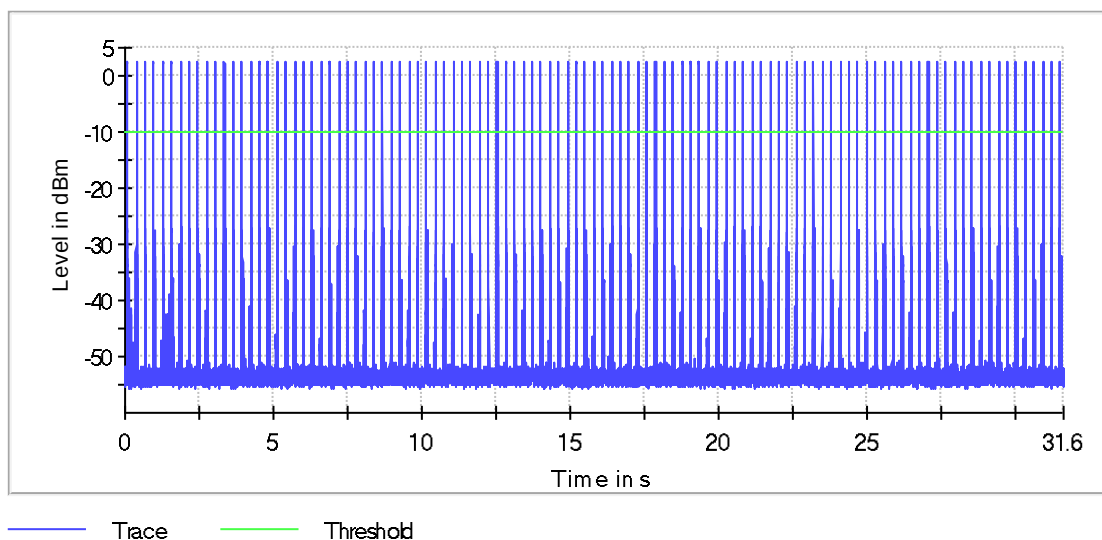
Transmit Time per Hop

Min (ms)	Max (ms)	Limit Max for Max (ms)	Limit Min for Max (ms)	Mean (ms)
2.84	2.90	400.000	0.000	2.87

DwellTime

Min (ms)	Max (ms)	Mean
2.91	2.92	2.91

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; 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

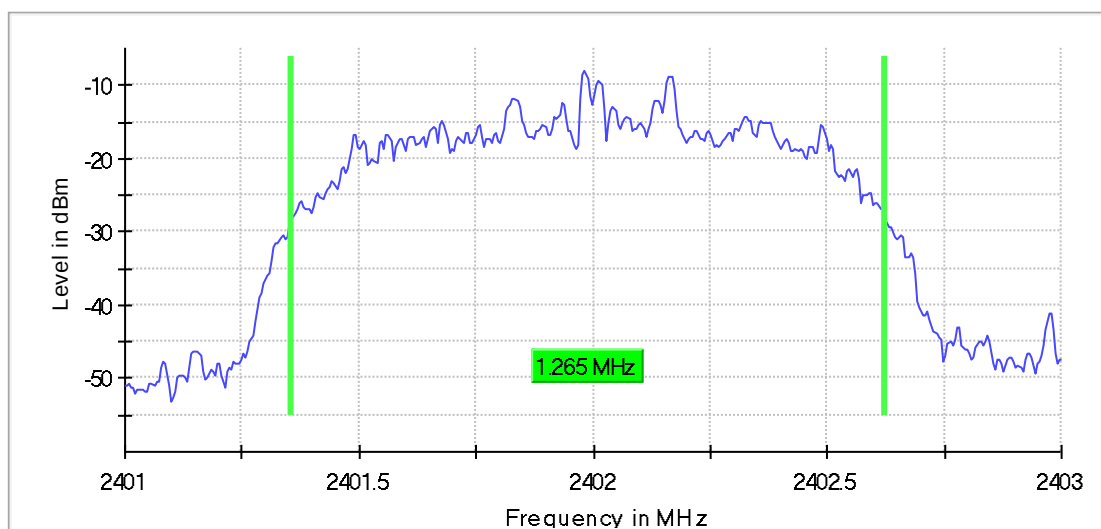
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.265000	---	---	2401.357500	2402.622500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-8.1	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	9 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.08 dB	0.50 dB

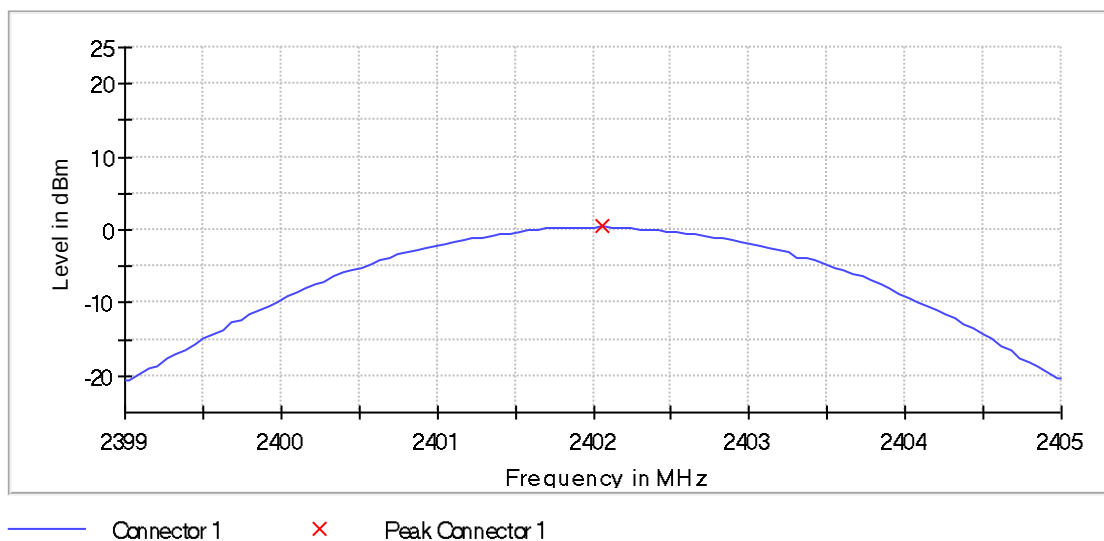
Peak output power (Sweep) (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2402.000000	0.4	21.0	PASS

Peak Power



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	>= 1.265 MHz
VBW	10.000 MHz	>= 6.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 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	0.17 dB	0.50 dB

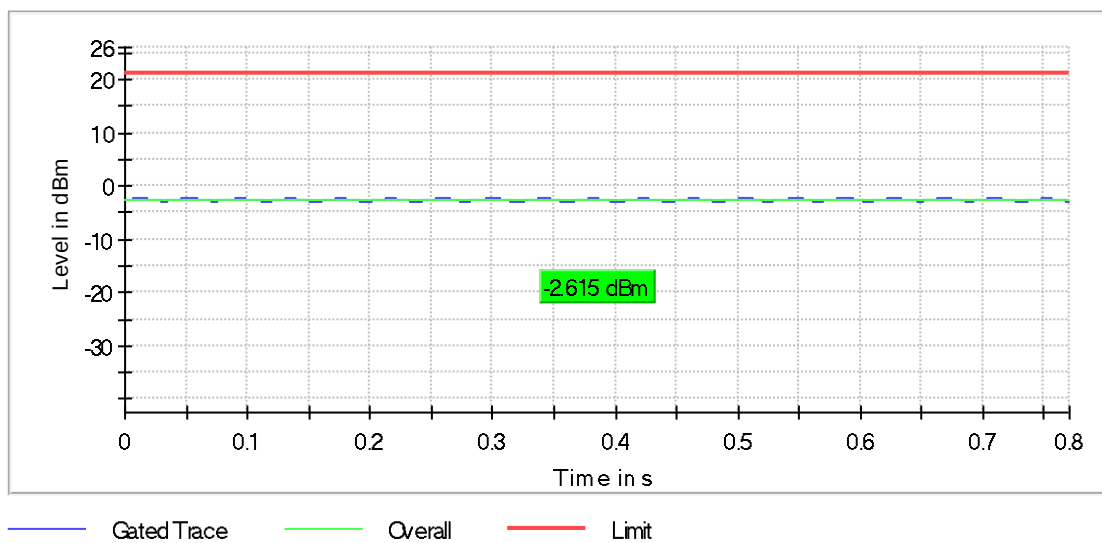
RF output power (2402 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Gated RMS	Limit Max (dBm)	Gated EIRP	DutyCycle	Result
2402.000000	-2.6	21.0	-2.6	77.561	PASS

Gated Trace



OSP PowerMeter settings

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 µs	1.000 µs

Carrier Frequency Separation (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

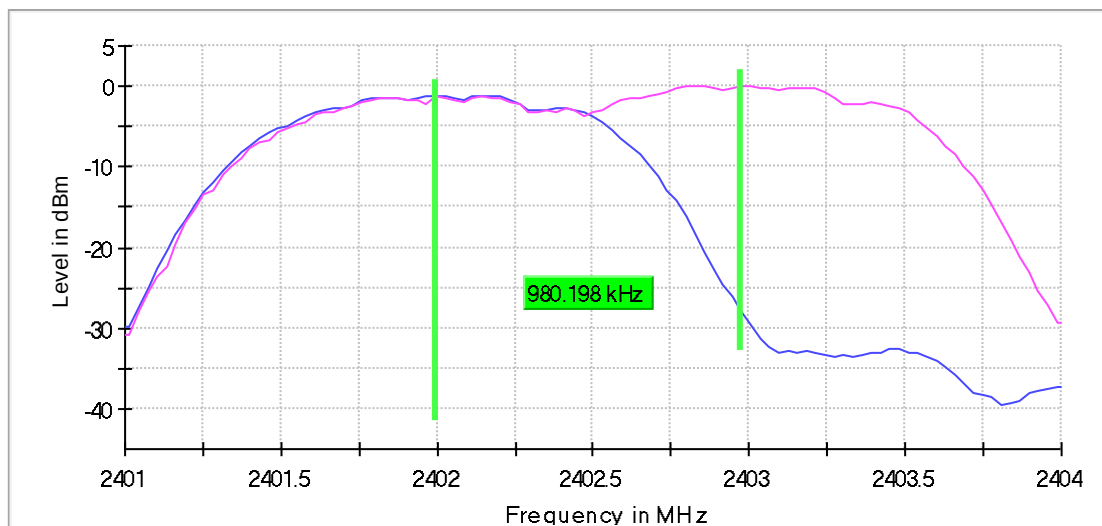
Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2402.000000	0.980198	0.843333	---	2401.995050	2402.975248

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

DUT Frequency (MHz)	Result
2402.000000	PASS

CFS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
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	12 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.03 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
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	12 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.07 dB	0.50 dB

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

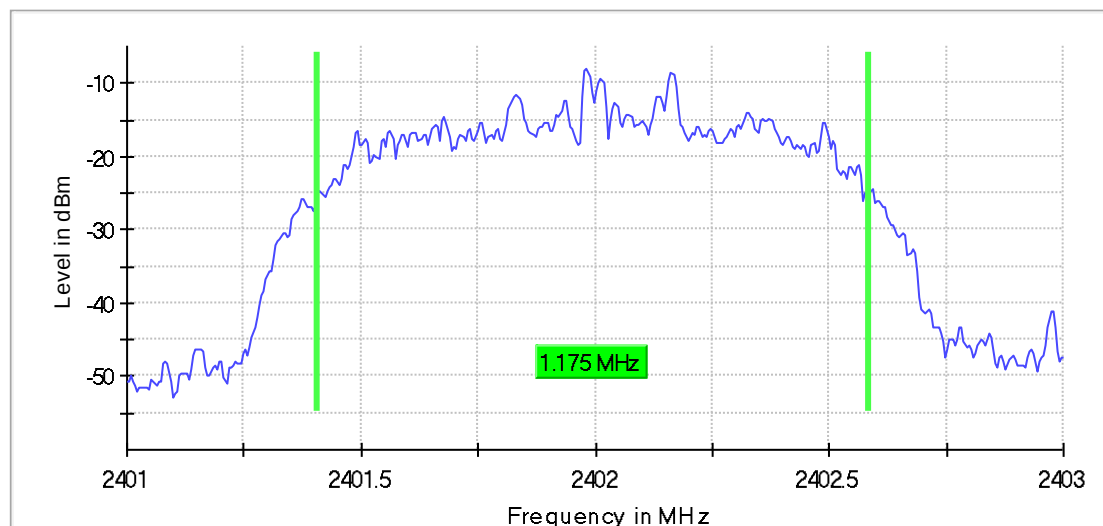
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.175000	---	---	2401.407500	2402.582500

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

DUT Frequency (MHz)	Result
2402.000000	PASS

99%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	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.18 dB	0.30 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

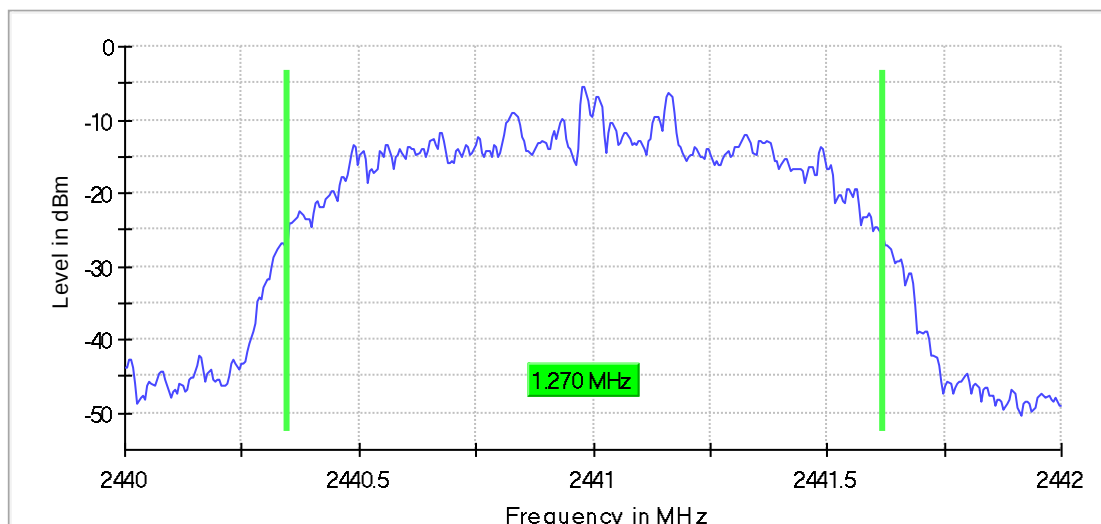
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.270000	---	---	2440.347500	2441.617500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-5.4	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
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	0.12 dB	0.50 dB

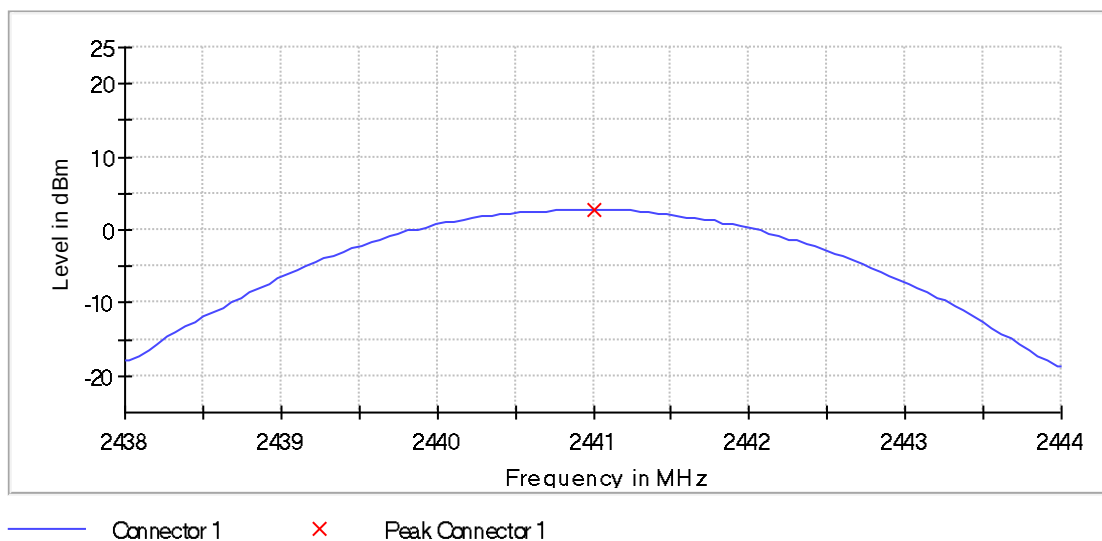
Peak output power (Sweep) (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2441.000000	2.7	21.0	PASS

Peak Power



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	>= 1.270 MHz
VBW	10.000 MHz	>= 6.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 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	0.13 dB	0.50 dB

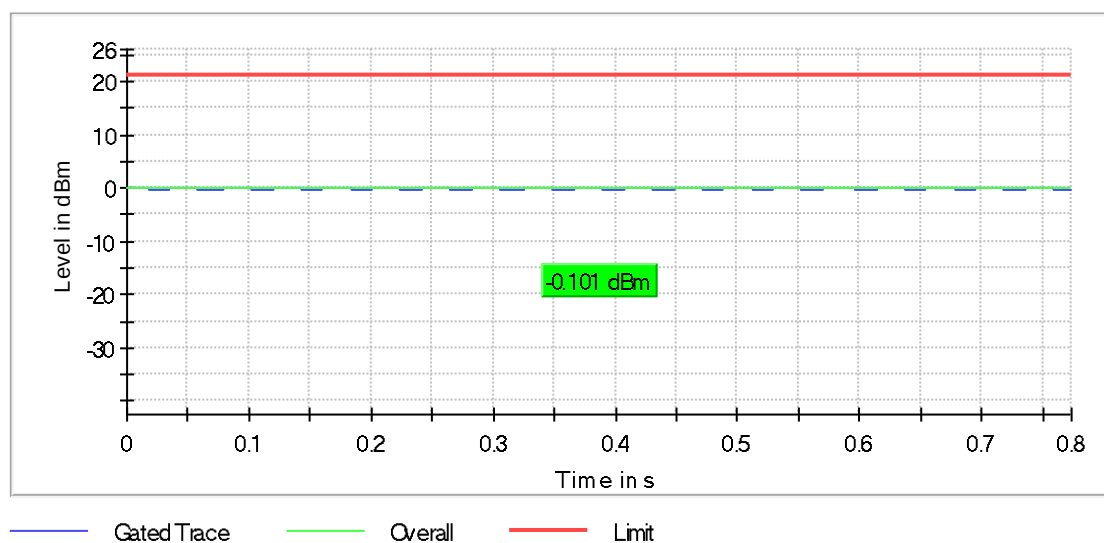
RF output power (2441 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Gated RMS	Limit Max (dBm)	Gated EIRP	DutyCycle	Result
2441.000000	-0.1	21.0	-0.1	77.563	PASS

Gated Trace



OSP PowerMeter settings

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 µs	1.000 µs

Carrier Frequency Separation (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

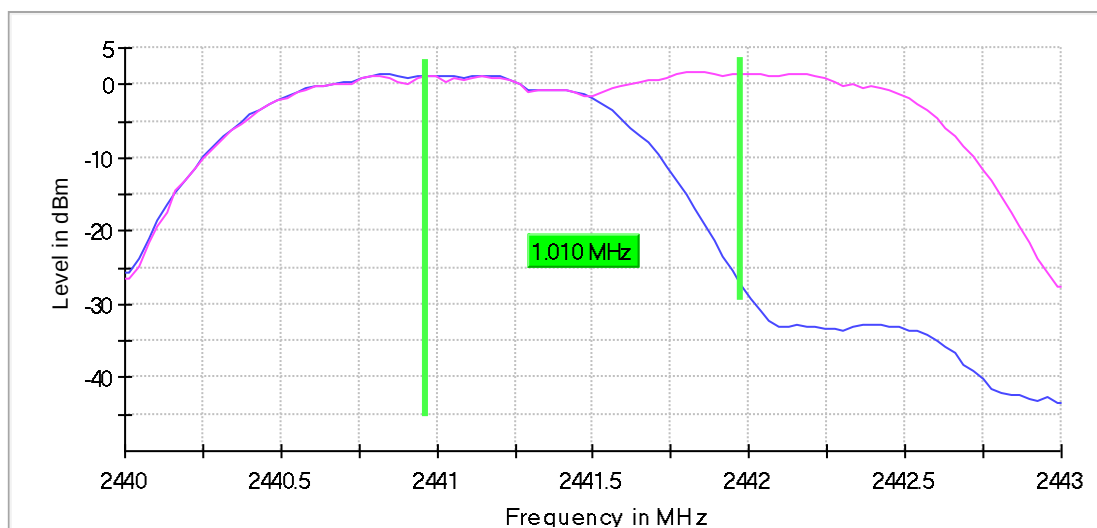
Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2441.000000	1.009901	0.846667	---	2440.965347	2441.975248

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

DUT Frequency (MHz)	Result
2441.000000	PASS

CFS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44300 GHz	2.44300 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
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
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.01 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44300 GHz	2.44300 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
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
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	19 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.00 dB	0.50 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

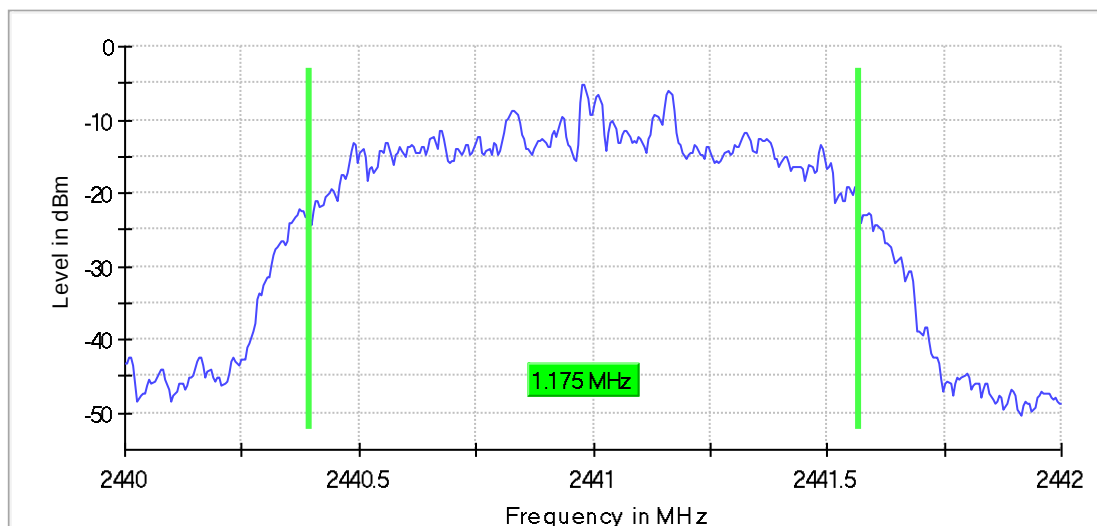
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.175000	---	---	2440.392500	2441.567500

(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	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.12 dB	0.30 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

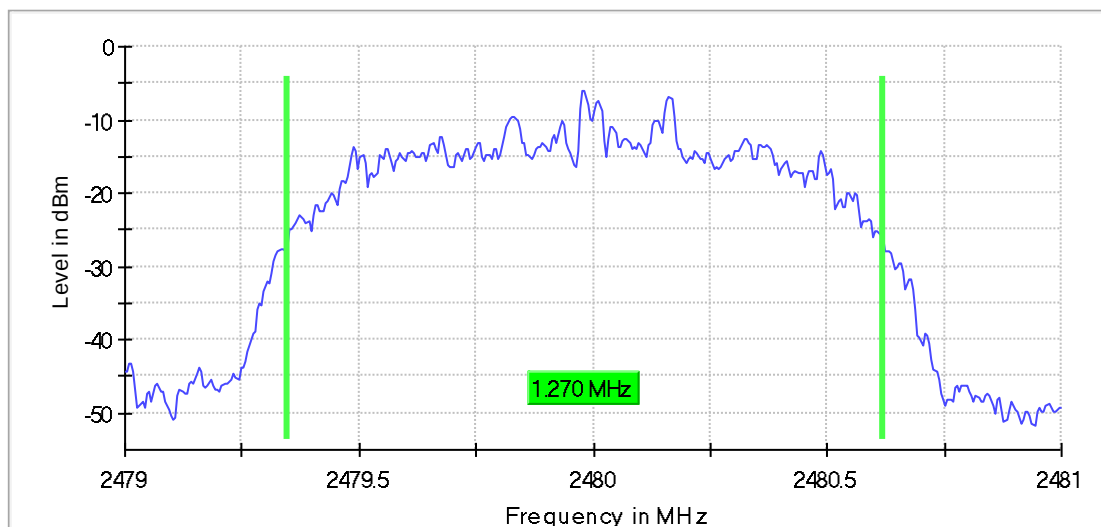
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.270000	---	---	2479.347500	2480.617500

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-6.0	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
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	0.14 dB	0.50 dB

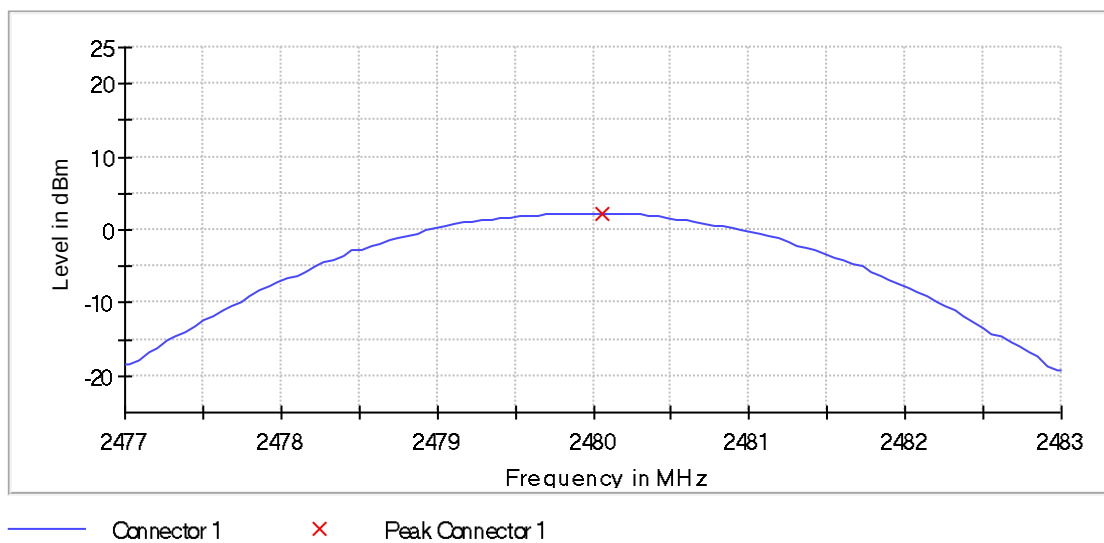
Peak output power (Sweep) (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2480.000000	2.3	21.0	PASS

Peak Power



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	≥ 1.270 MHz
VBW	10.000 MHz	≥ 6.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 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	0.13 dB	0.50 dB

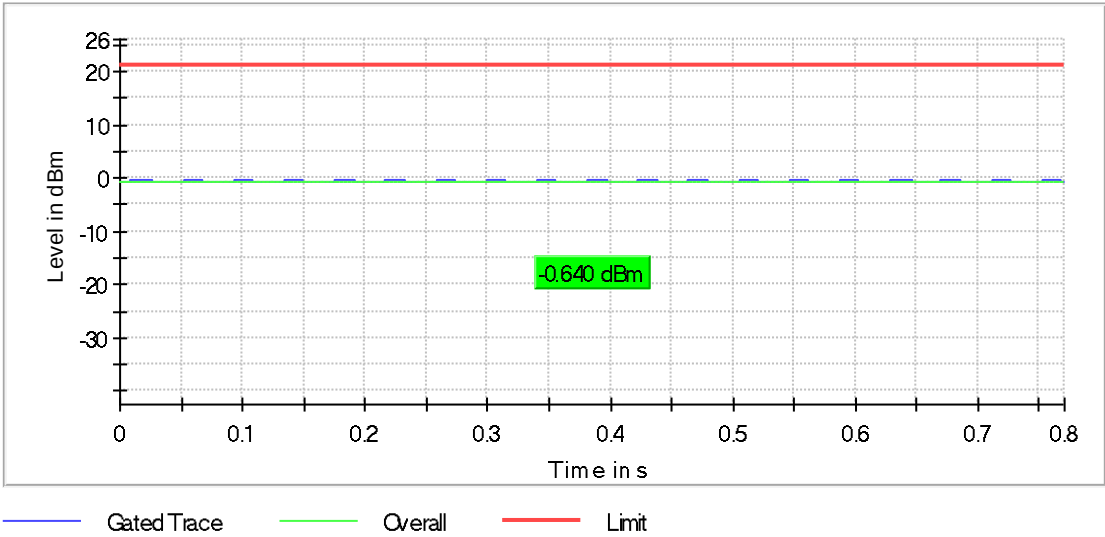
RF output power (2480 MHz; 10.000 dBm; 1 MHz; Test Mode)

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

Result

DUT Frequency (MHz)	Gated RMS	Limit Max (dBm)	Gated EIRP	DutyCycle	Result
2480.000000	-0.6	21.0	-0.6	77.562	PASS

Gated Trace



OSP PowerMeter settings

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 µs	1.000 µs

Carrier Frequency Separation (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

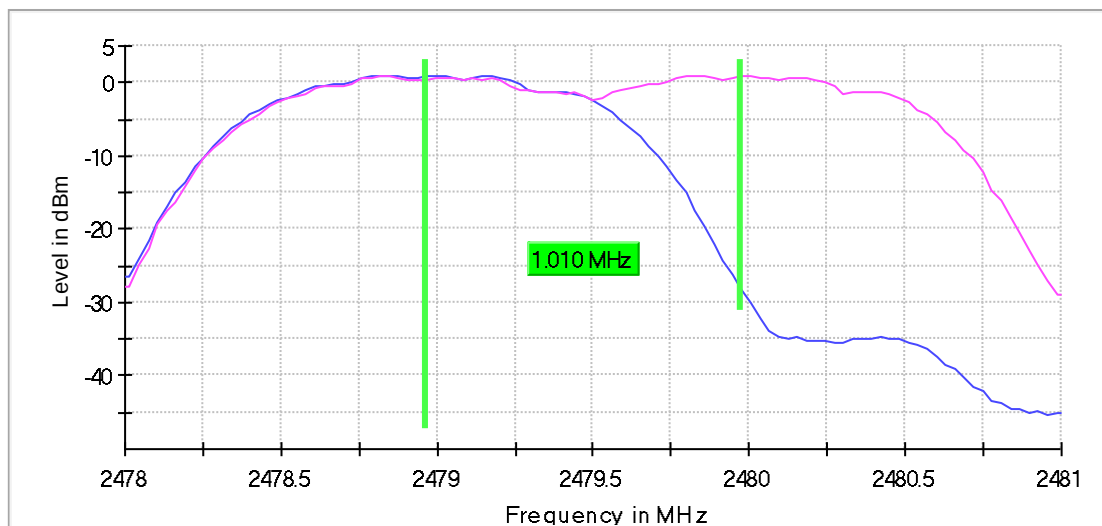
Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2480.000000	1.009901	0.846667	---	2478.965347	2479.975248

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

DUT Frequency (MHz)	Result
2480.000000	PASS

CFS



Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
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	12 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.04 dB	0.50 dB

Measurement 2

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
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	12 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.01 dB	0.50 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

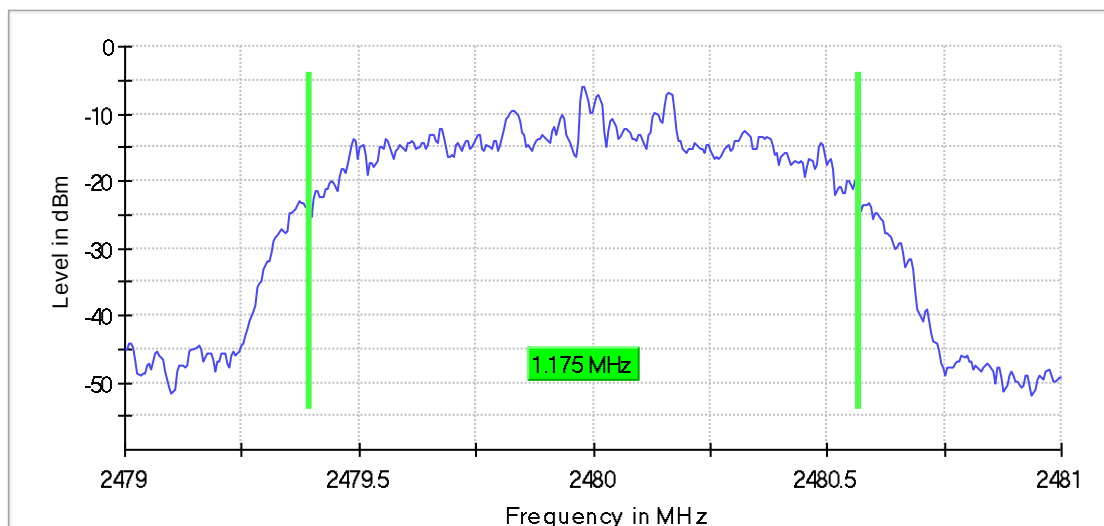
99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.175000	---	---	2479.392500	2480.567500

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

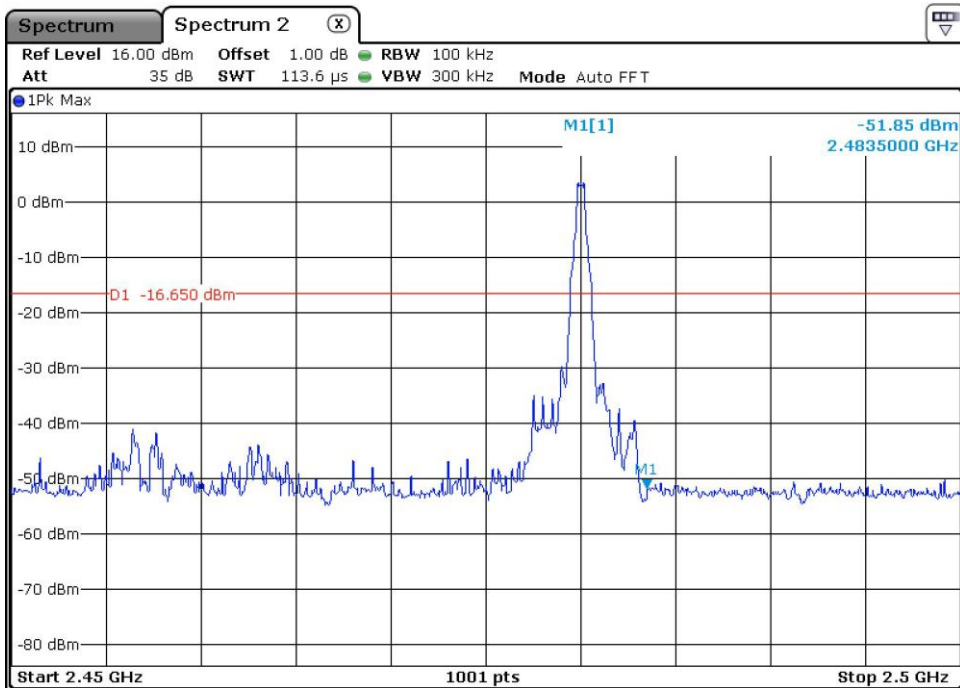
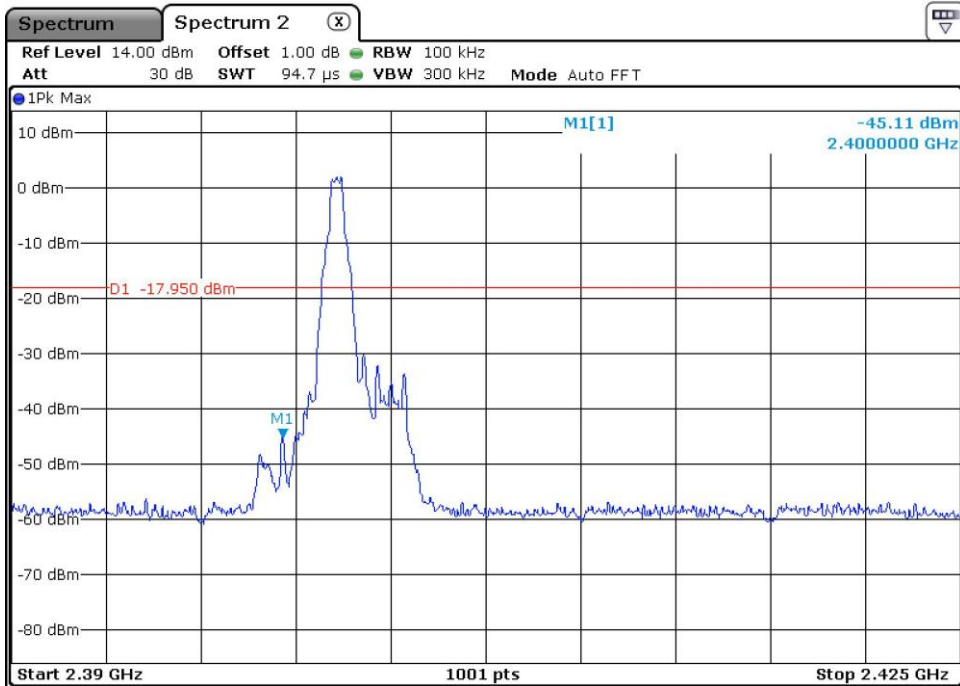
DUT Frequency (MHz)	Result
2480.000000	PASS

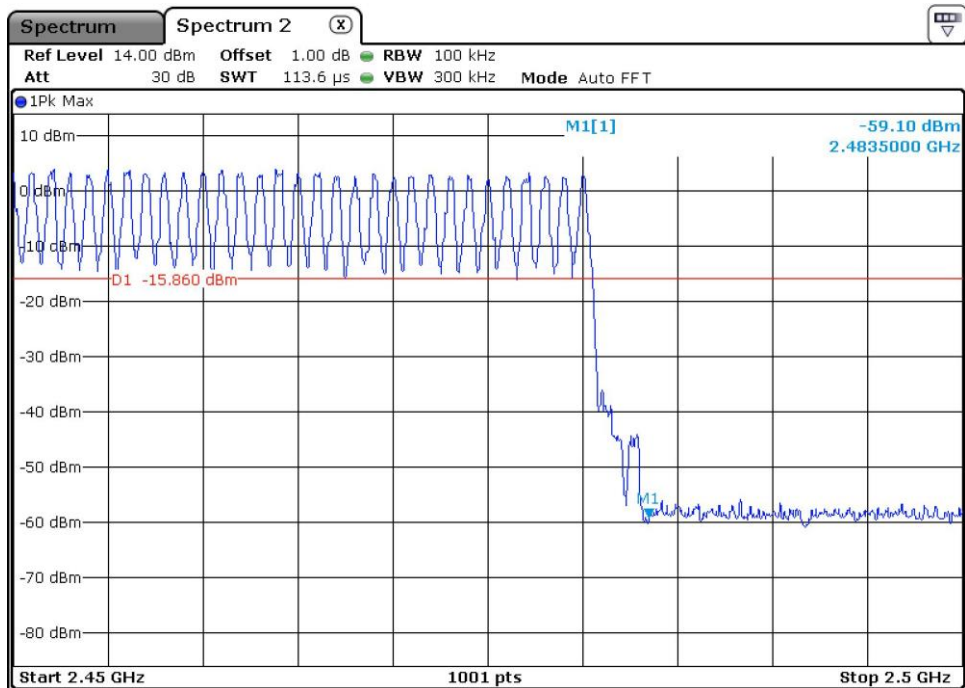
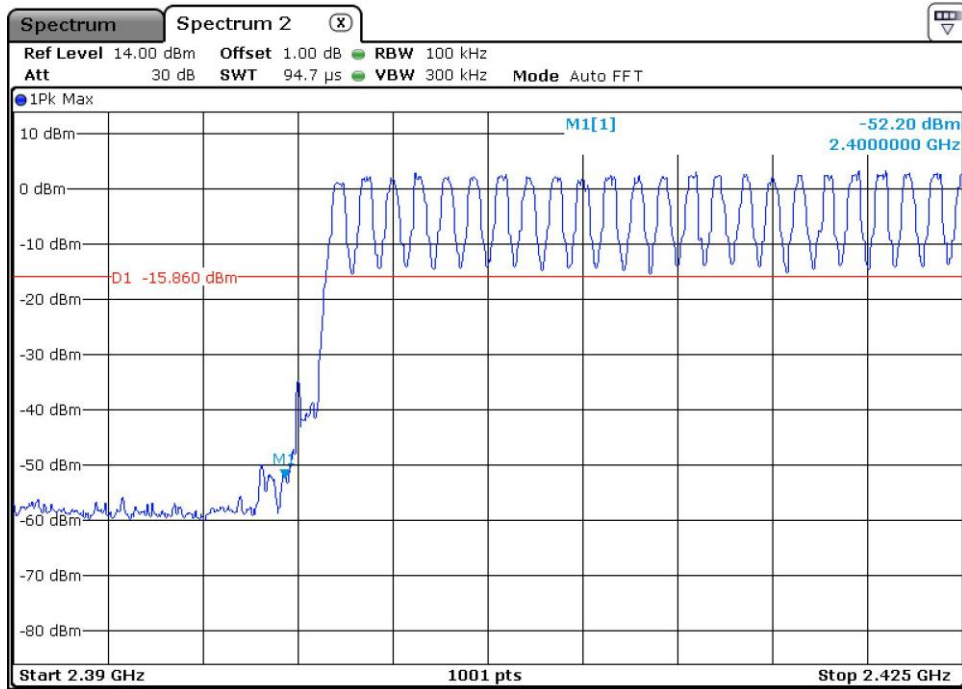
99 %Bandwidth



Measurement

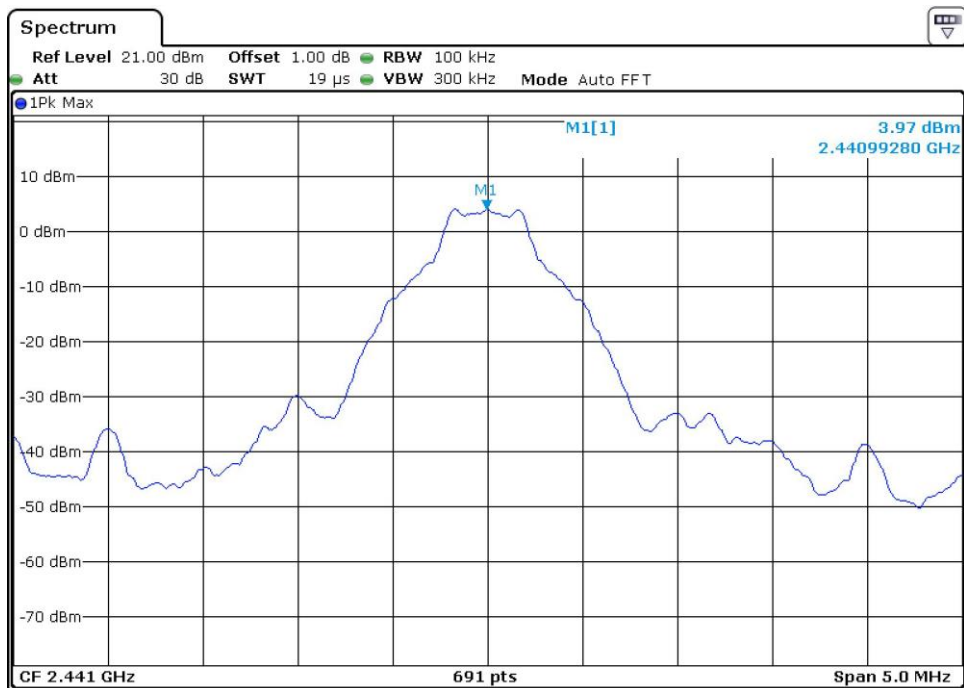
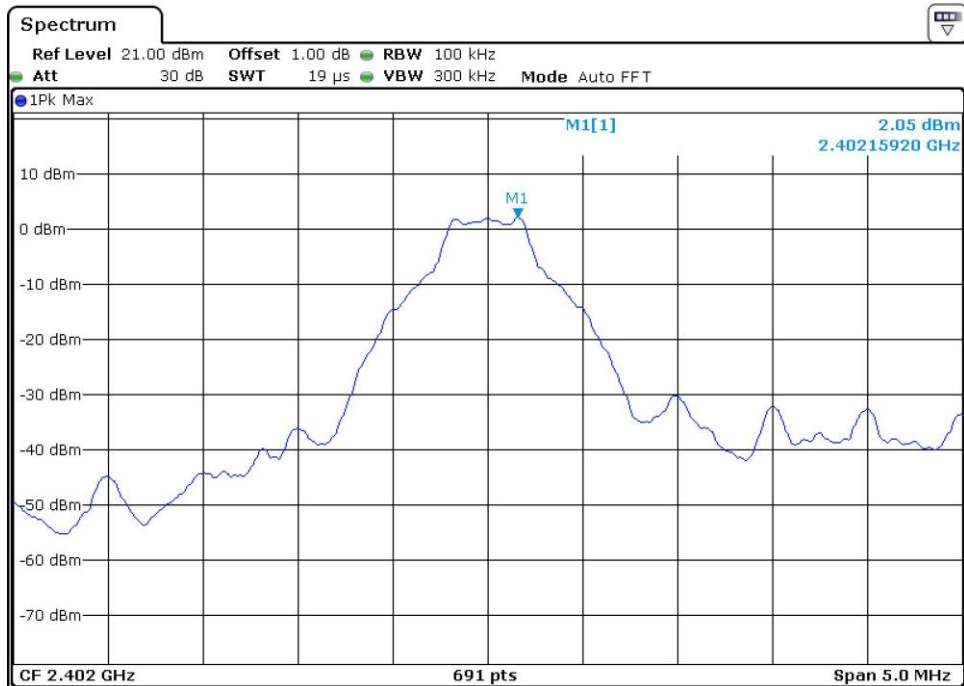
Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
SweepTime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 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	7 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.11 dB	0.30 dB

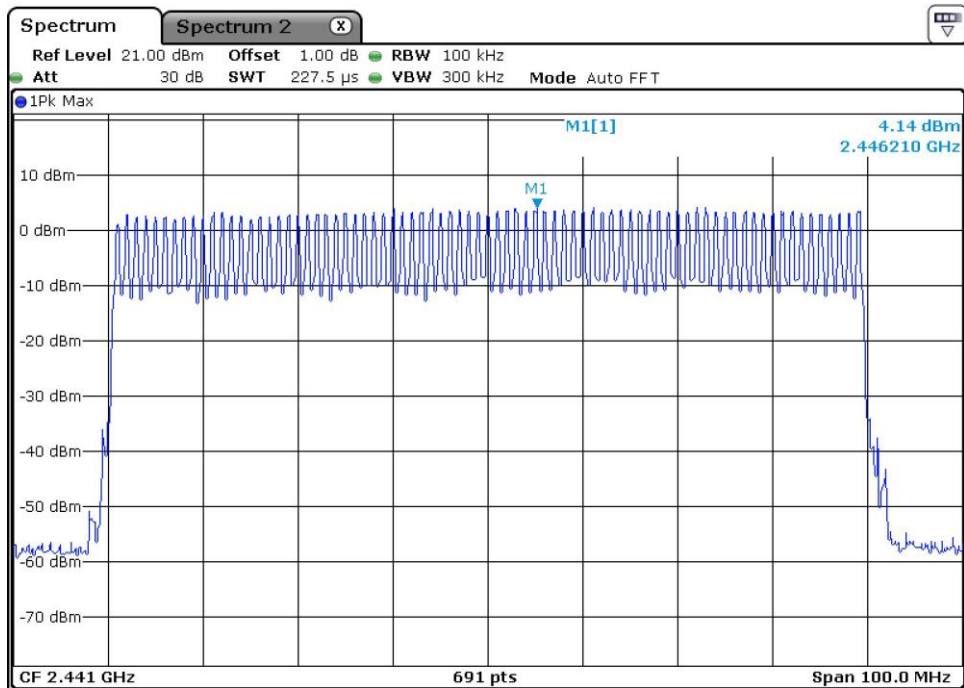
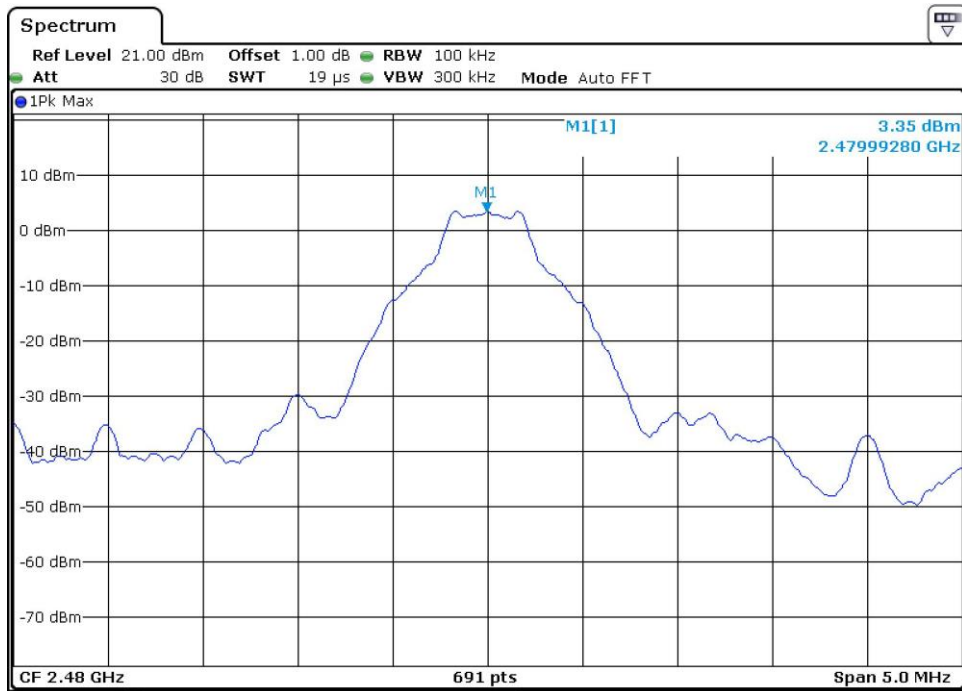
Appendix A.3: Test Results of Conducted Spurious Emissions measured in 100 kHz Bandwidth**GFSK
Band Edge**



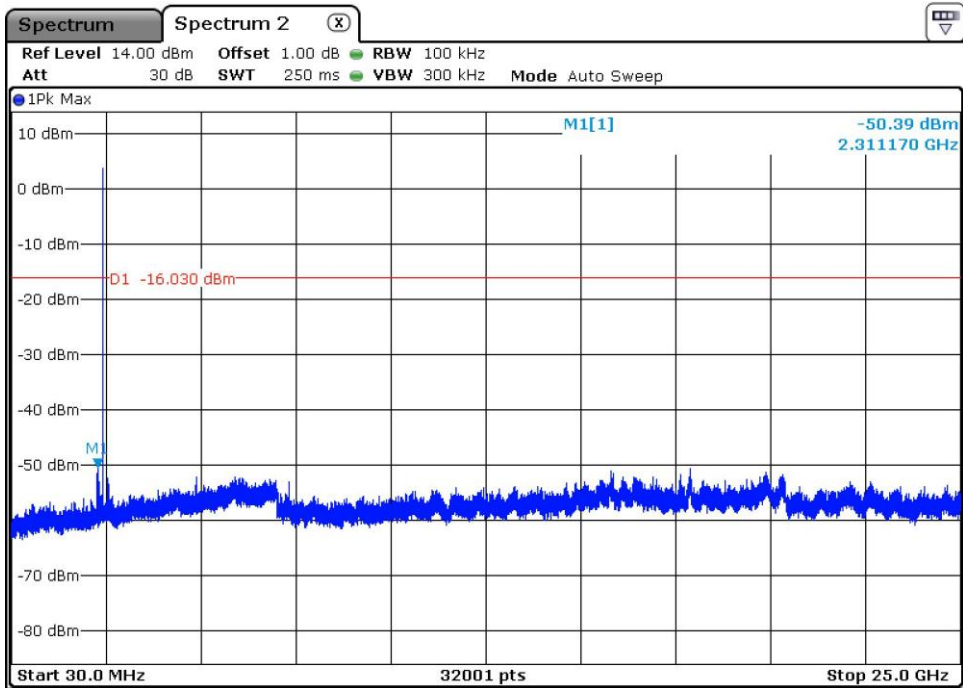
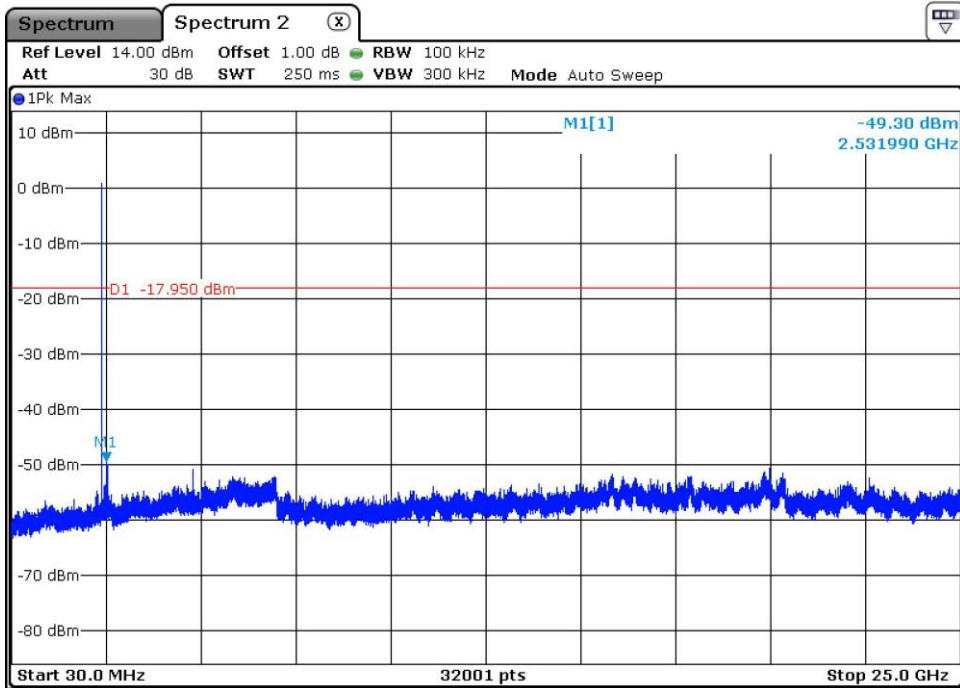
Conducted Spurious Emissions

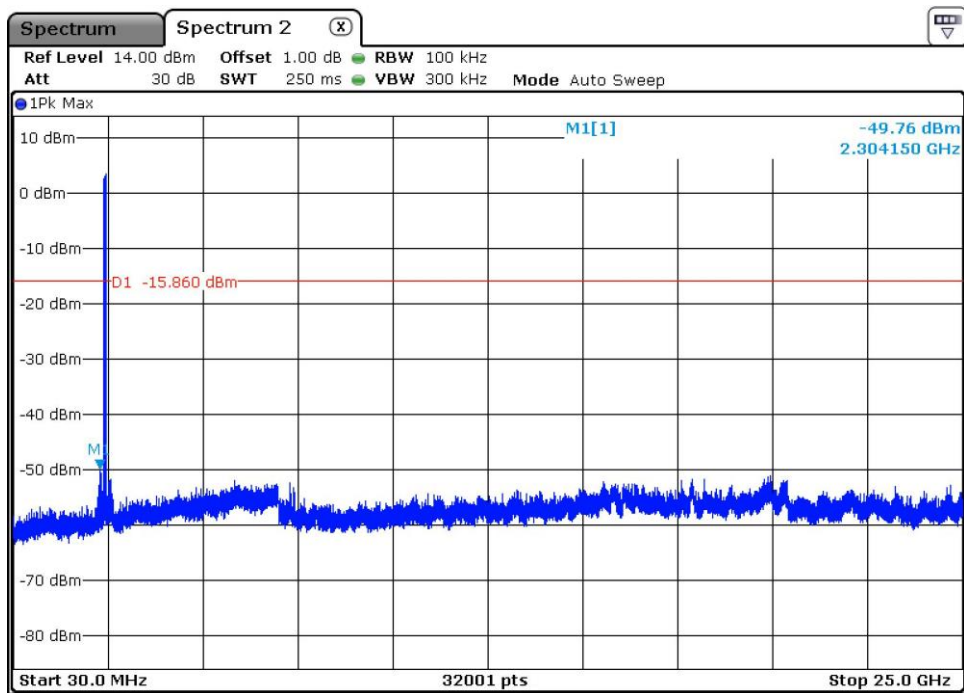
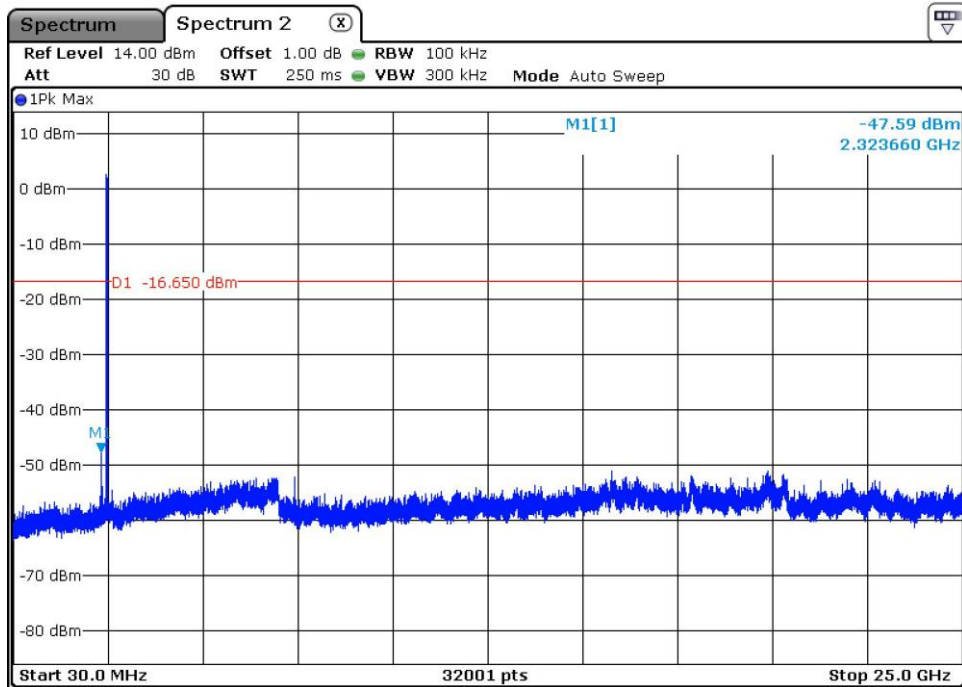
100 kHz Reference Level

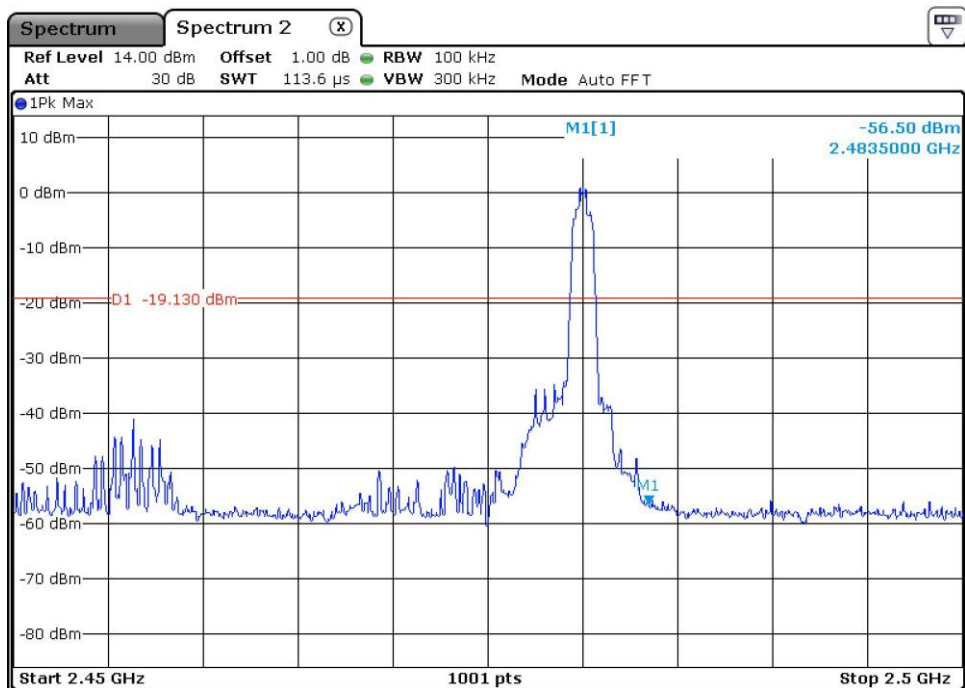
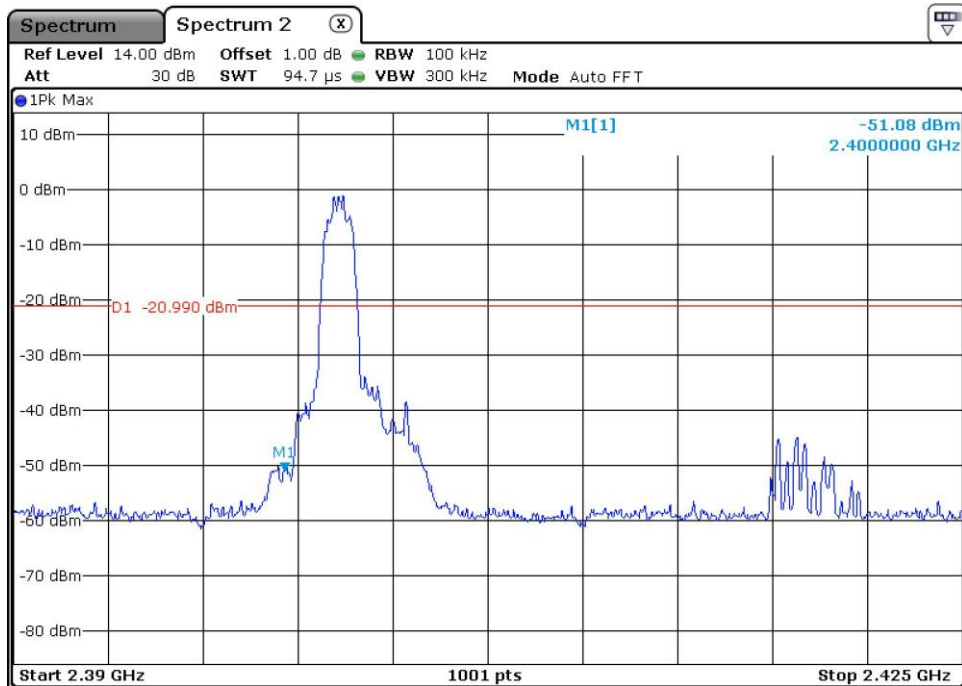


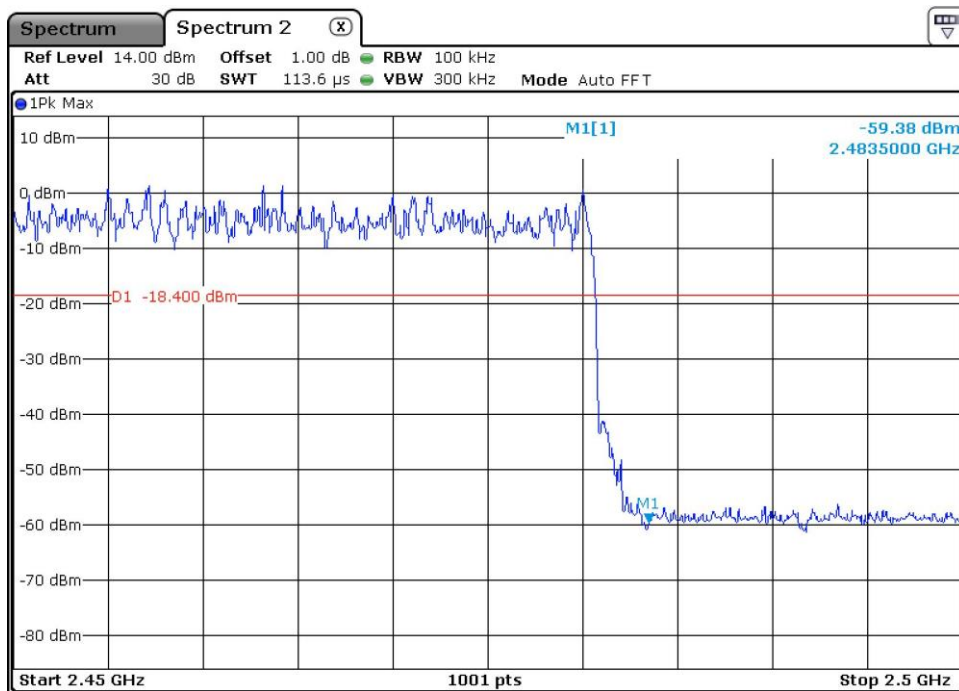
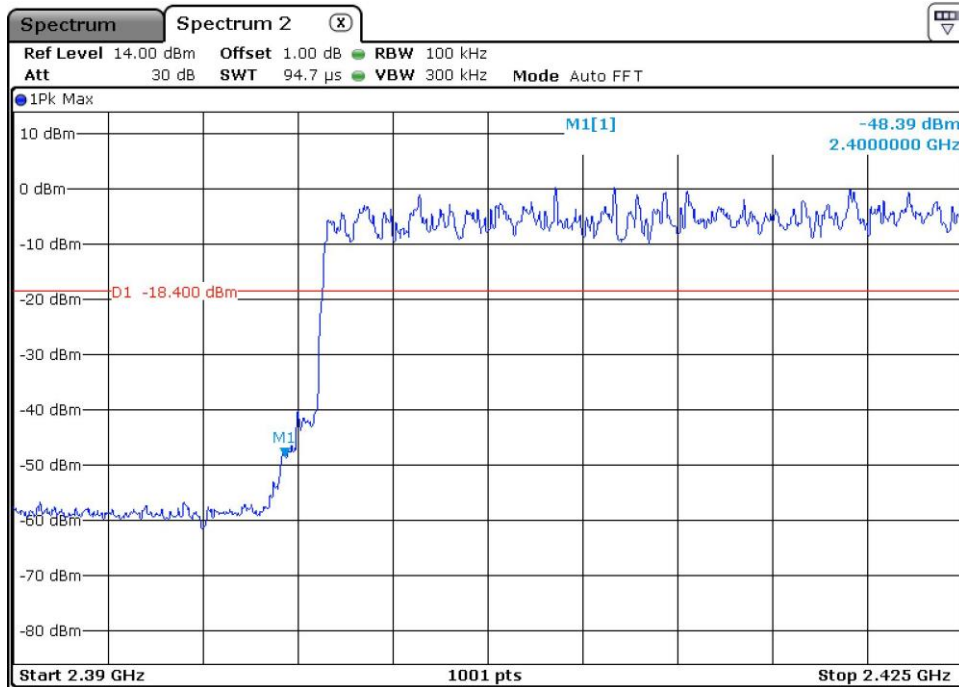


Conducted Spurious Emissions



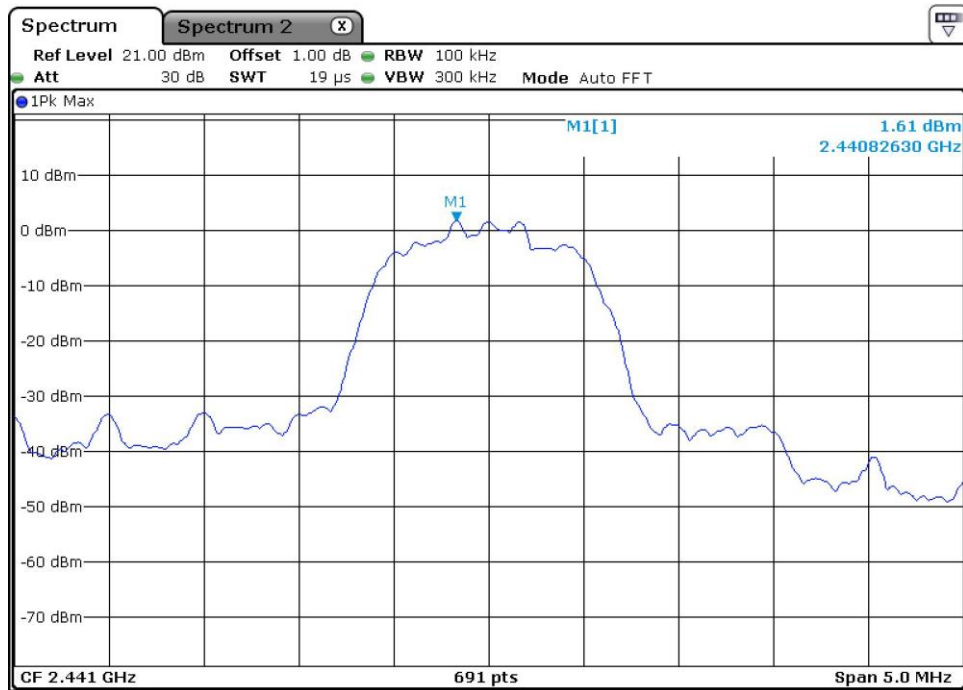
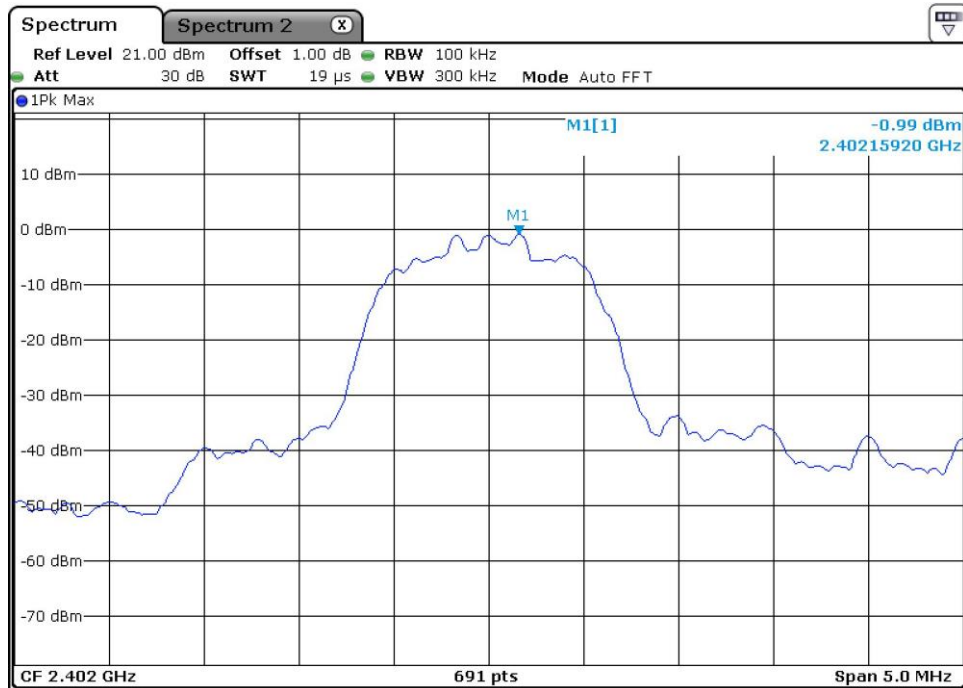


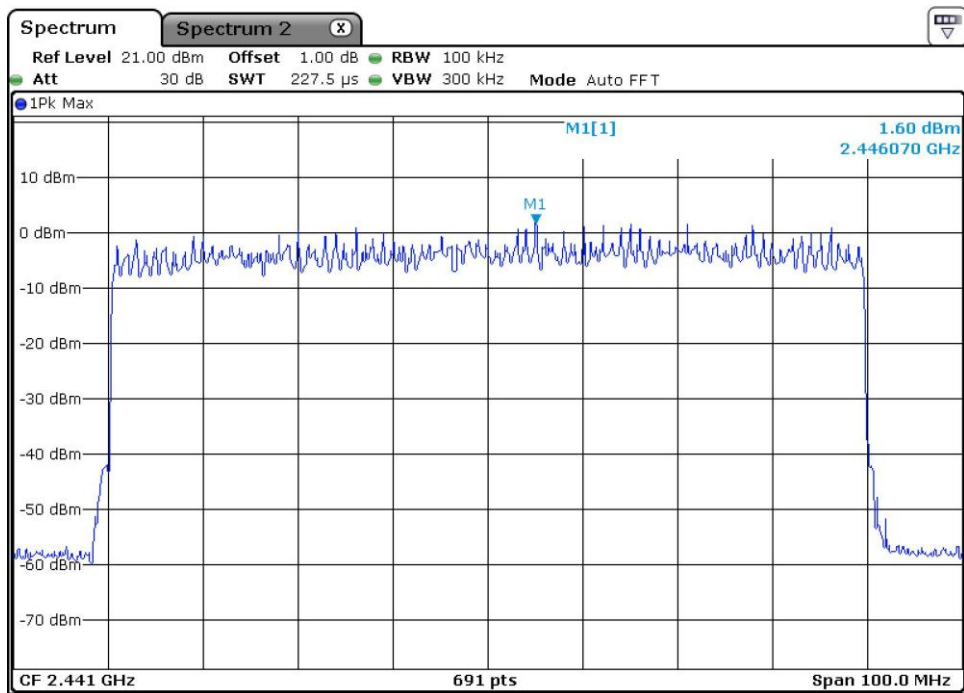
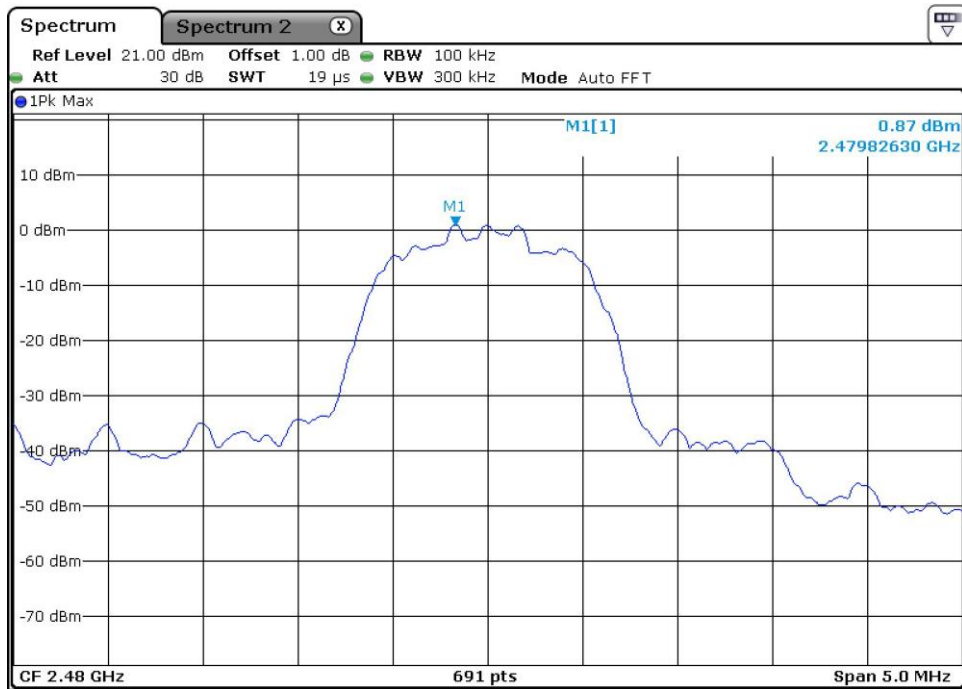
8DPSK
Band Edge



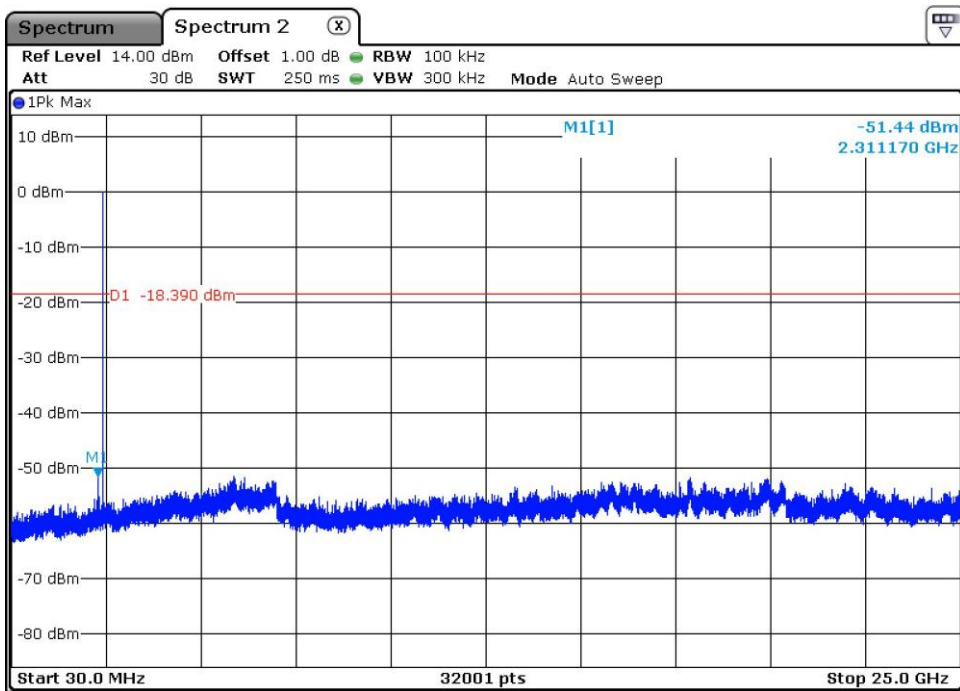
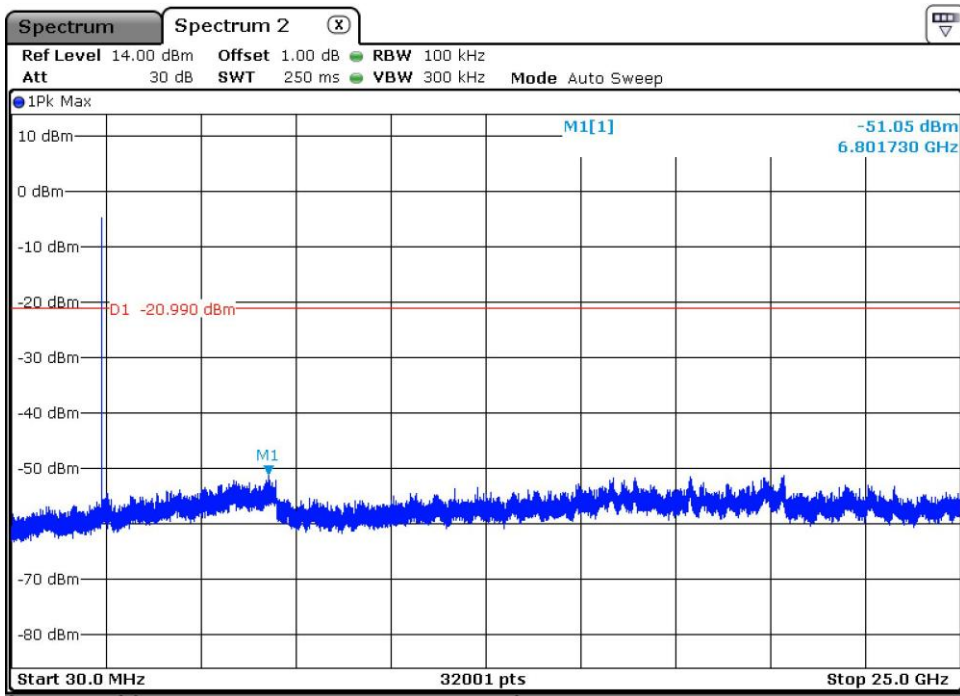
Conducted Spurious Emissions

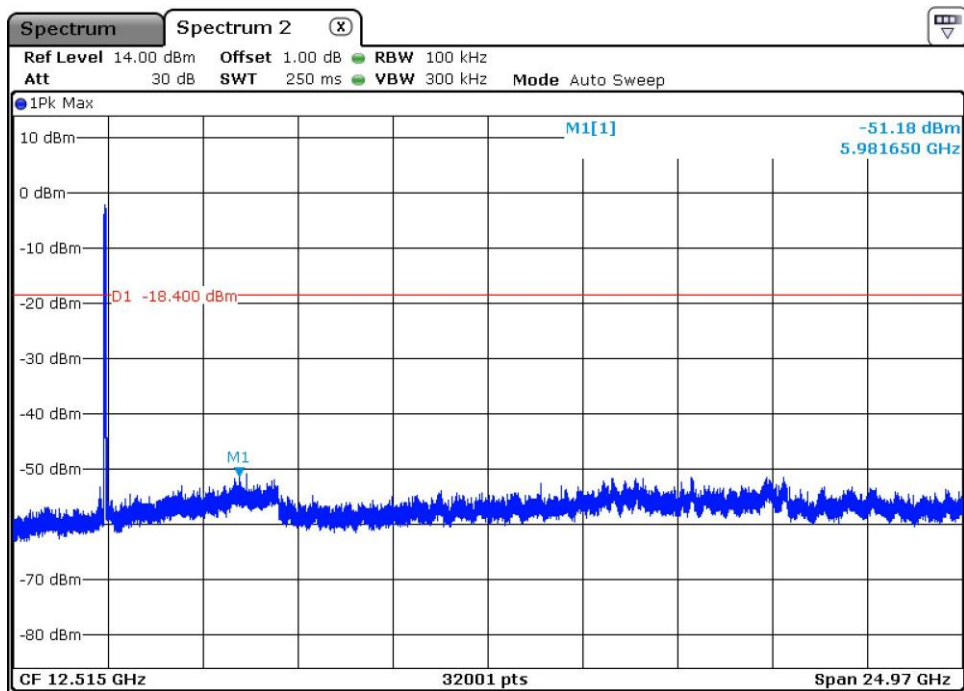
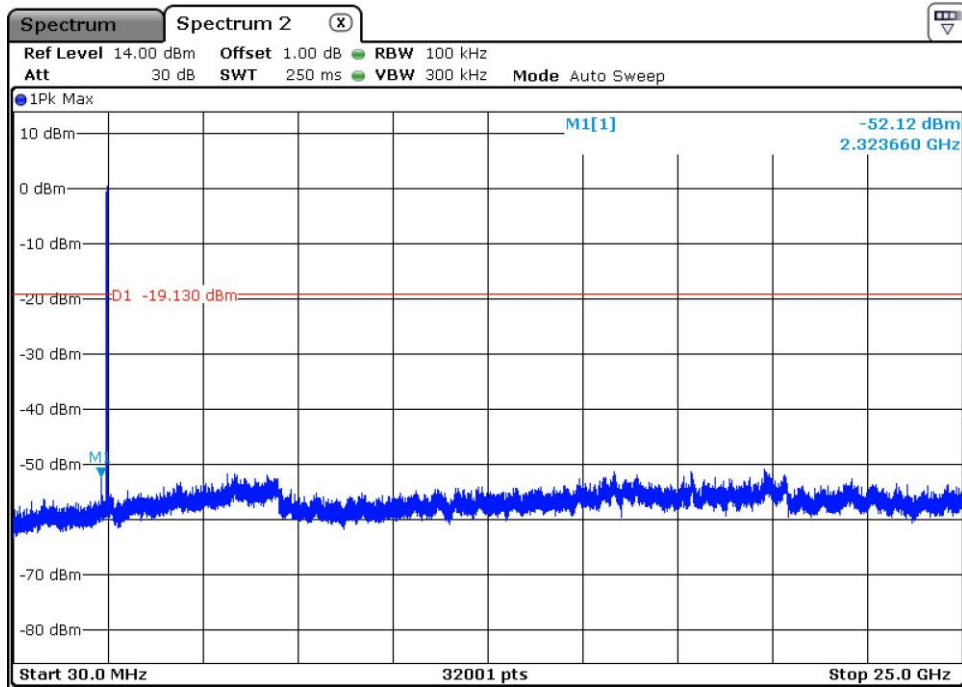
100 kHz Reference Level





Conducted Spurious Emissions



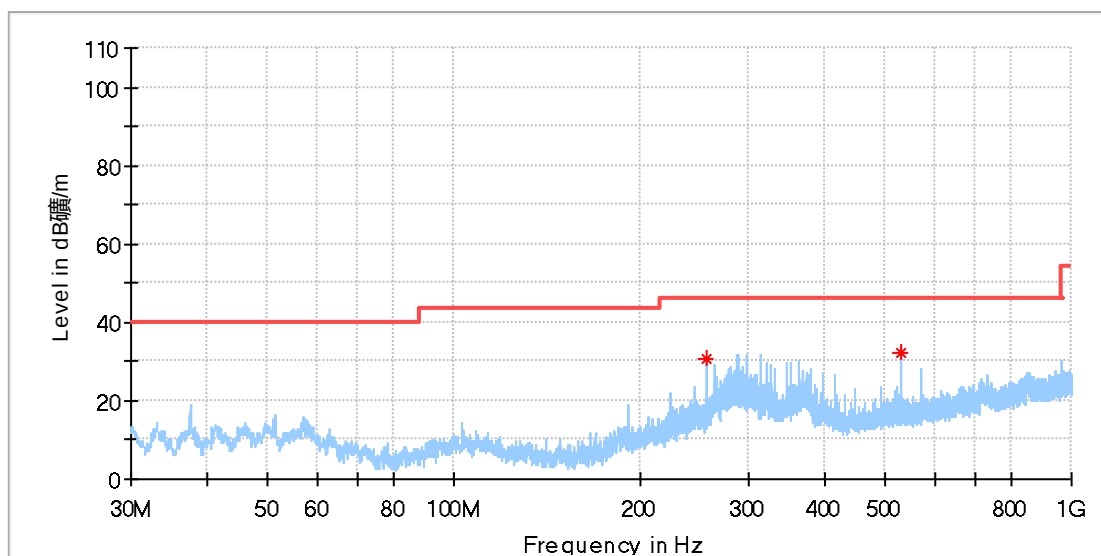


Appendix A.4: Test Results of Radiated Emissions

Radiated Emissions below 1 GHz

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_Low Channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

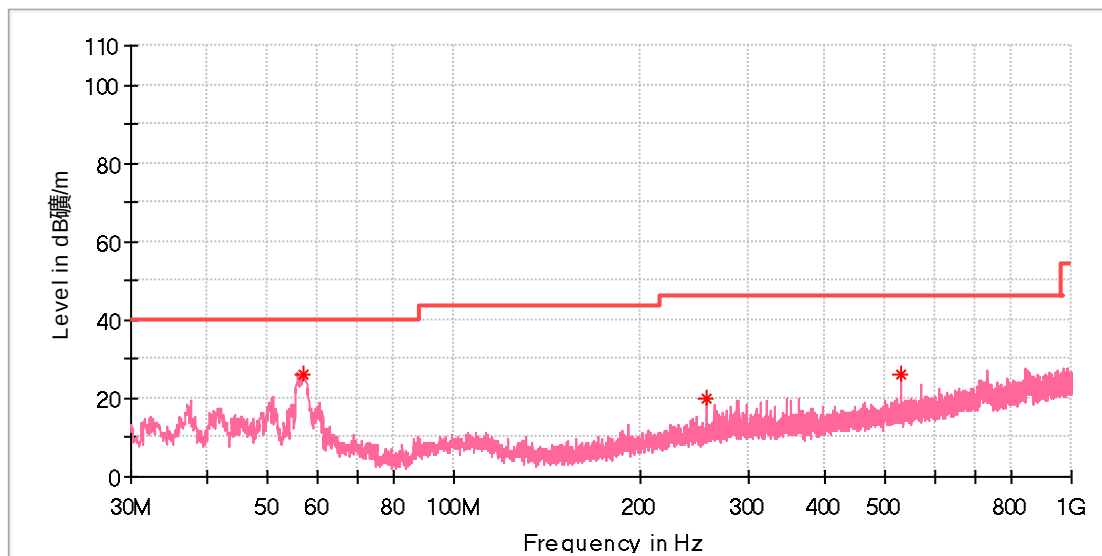


Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
255.961500	30.91	---	46.00	15.09	100.0	H	41.0	-17.6
527.949500	32.49	---	46.00	13.51	100.0	H	204.0	-11.7

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_Low Channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

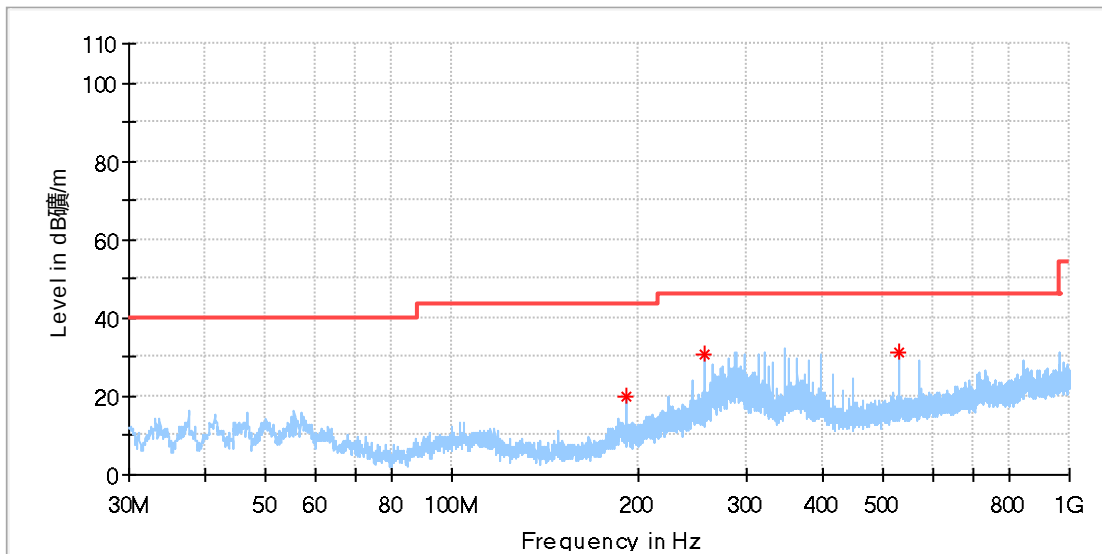


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
57.160000	26.15	---	40.00	13.85	100.0	V	97.0	-19.0
255.961500	19.79	---	46.00	26.21	100.0	V	165.0	-17.6
527.949500	25.99	---	46.00	20.01	100.0	V	114.0	-11.7

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_High Channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

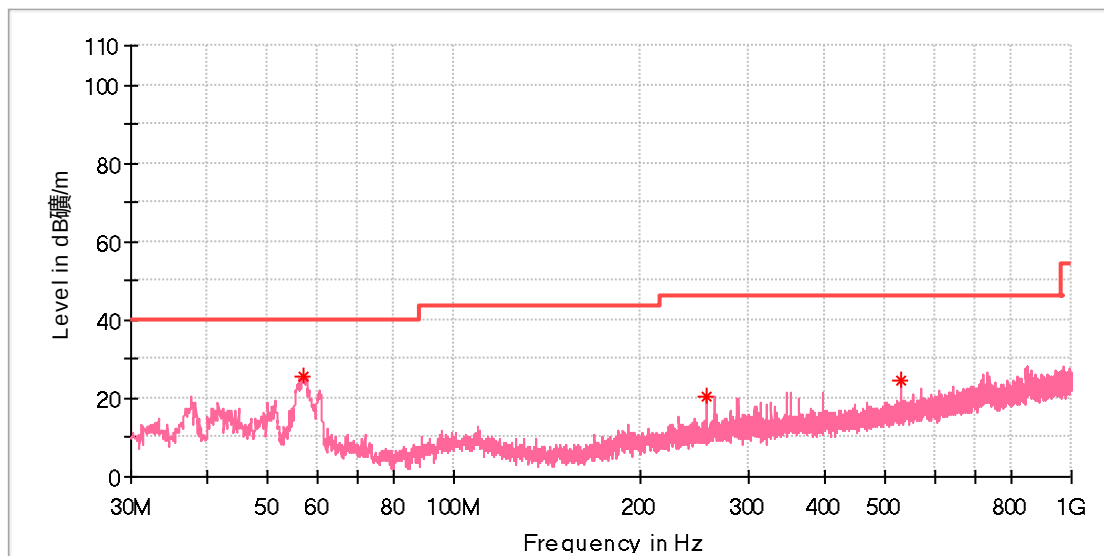


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
191.990000	19.84	---	43.50	23.66	100.0	H	76.0	-19.7
255.961500	30.61	---	46.00	15.39	100.0	H	235.0	-17.6
527.949500	31.45	---	46.00	14.55	100.0	H	206.0	-11.7

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_High Channel
Test Voltage::	DC 12V From DC Source
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



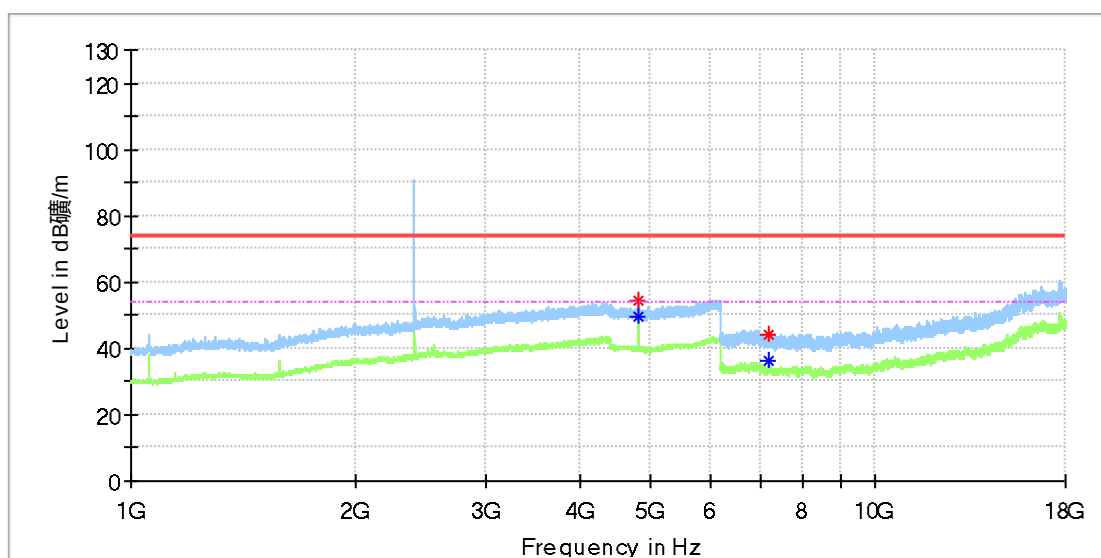
Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
57.208500	25.82	---	40.00	14.18	100.0	V	281.0	-19.0
255.961500	20.70	---	46.00	25.30	100.0	V	184.0	-17.6
527.949500	24.49	---	46.00	21.51	100.0	V	273.0	-11.7

Radiated Emissions above 1 GHz GFSK

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_GFSK_Low Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

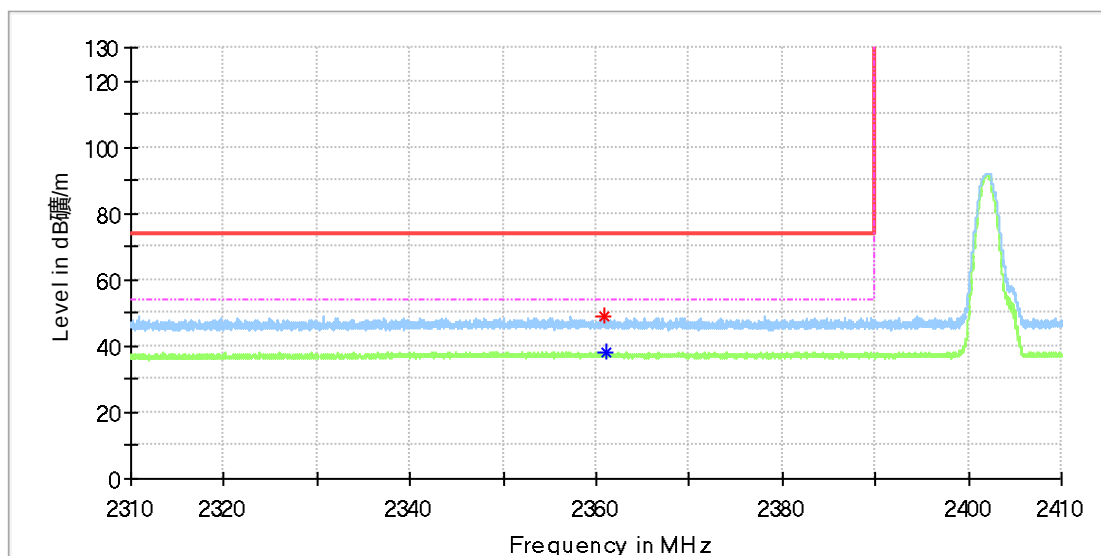


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4803.500000	54.67	---	74.00	19.33	100.0	H	61.0	13.6
4803.500000	---	49.46	54.00	4.54	100.0	H	61.0	13.6
7205.458333	44.06	---	74.00	29.94	100.0	H	171.0	8.8
7205.458333	---	36.39	54.00	17.61	100.0	H	171.0	8.8

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_GFSK_Low Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

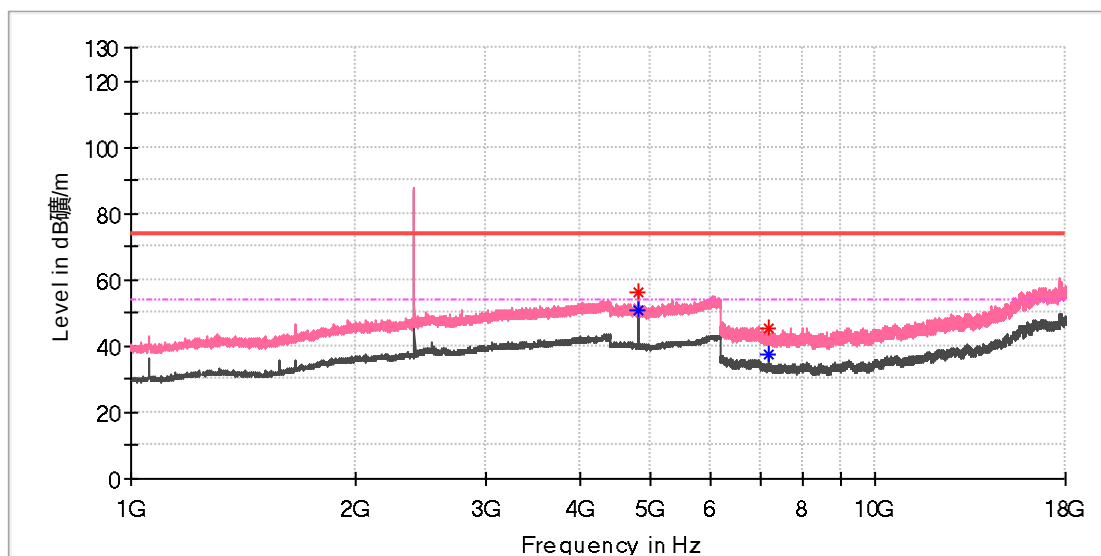


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2360.882353	49.02	---	74.00	24.98	100.0	H	168.0	6.9
2361.147059	---	38.11	54.00	15.89	100.0	H	202.0	6.9

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_GFSK_Low Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

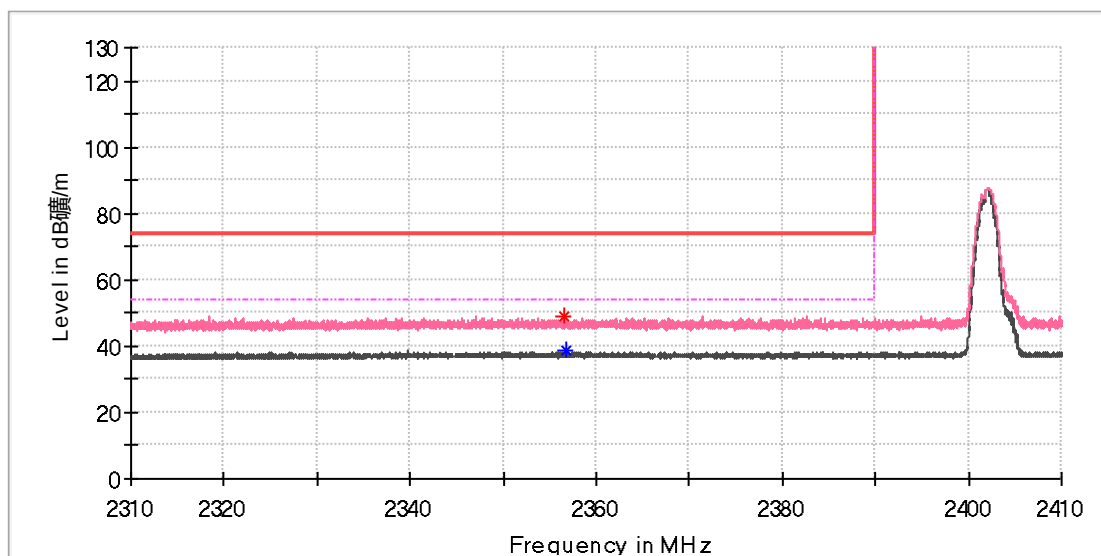


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4803.500000	56.43	---	74.00	17.57	100.0	V	64.0	13.6
4804.000000	---	50.63	54.00	3.37	100.0	V	64.0	13.6
7205.458333	45.37	---	74.00	28.63	100.0	V	160.0	8.8
7205.950000	---	37.68	54.00	16.32	100.0	V	160.0	8.8

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_GFSK_Low Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

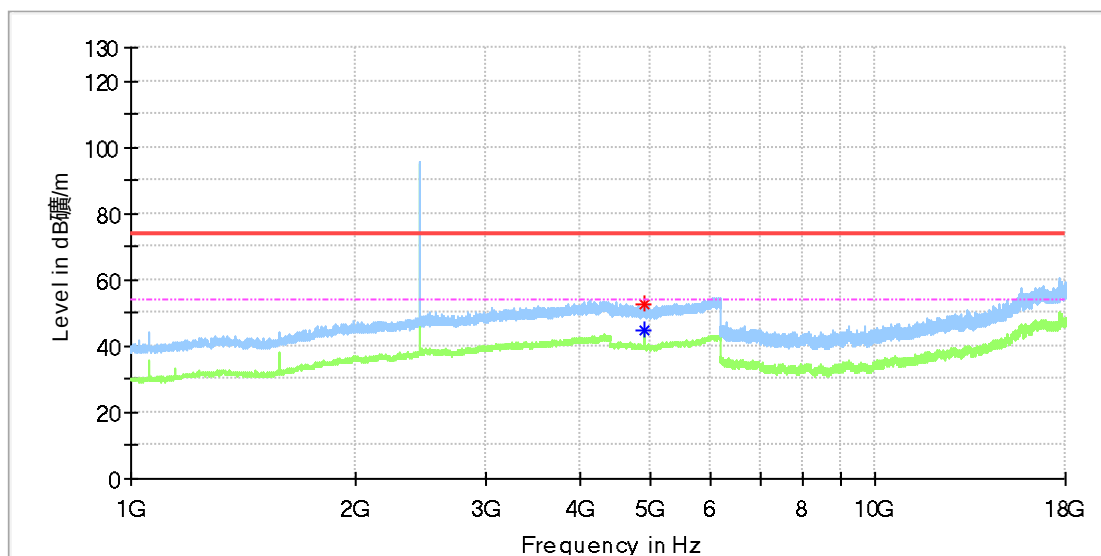


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2356.632353	48.69	---	74.00	25.31	100.0	V	231.0	6.9
2356.779412	---	38.64	54.00	15.36	100.0	V	352.0	6.9

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_GFSK_Mid Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

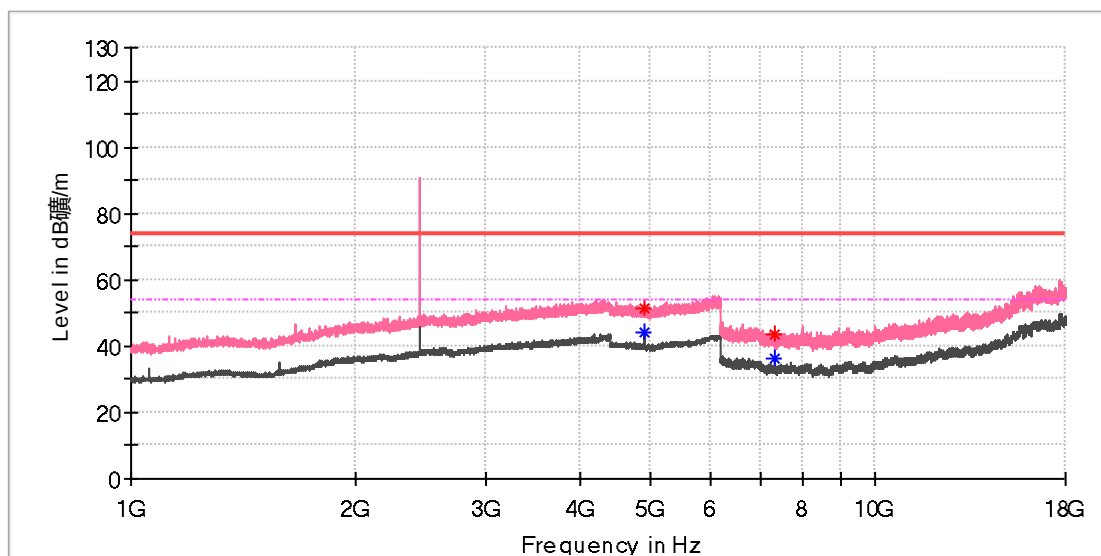


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4882.000000	---	44.59	54.00	9.41	100.0	H	39.0	13.4
4882.000000	52.65	---	74.00	21.35	100.0	H	39.0	13.4

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_GFSK_Mid Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

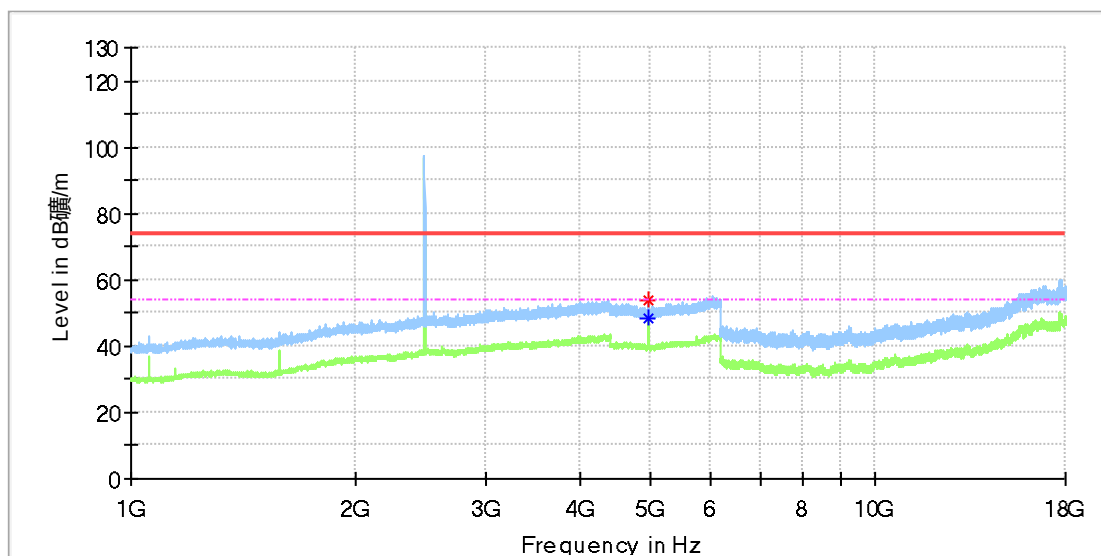


Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4881.500000	51.34	---	74.00	22.66	100.0	V	117.0	13.4
4882.000000	---	43.96	54.00	10.04	100.0	V	117.0	13.4
7322.475000	43.27	---	74.00	30.73	100.0	V	150.0	8.2
7322.966667	---	36.37	54.00	17.63	100.0	V	1.0	8.2

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_GFSK_High Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

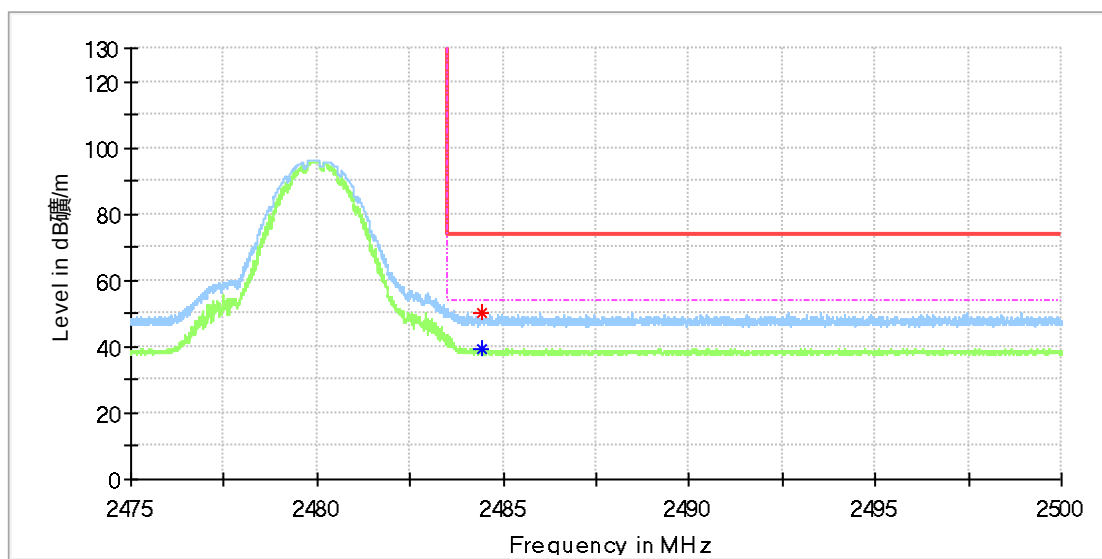


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4960.000000	---	48.20	54.00	5.80	100.0	H	41.0	13.2
4960.000000	53.94	---	74.00	20.06	100.0	H	41.0	13.2

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_GFSK_High Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

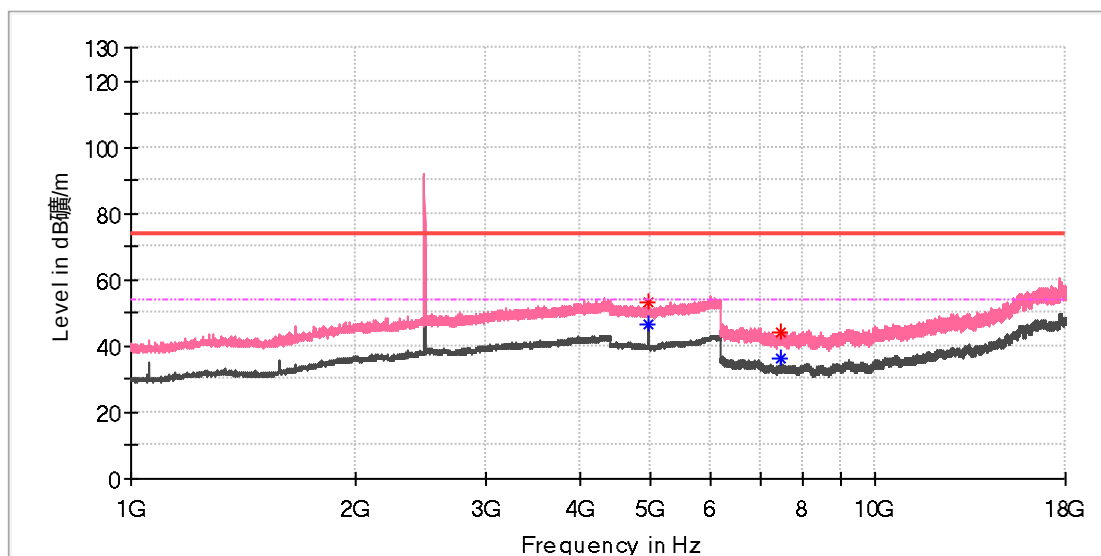


Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2484.415441	---	39.06	54.00	14.94	100.0	H	49.0	7.4
2484.444853	50.20	---	74.00	23.80	100.0	H	122.0	7.4

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_GFSK_High Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

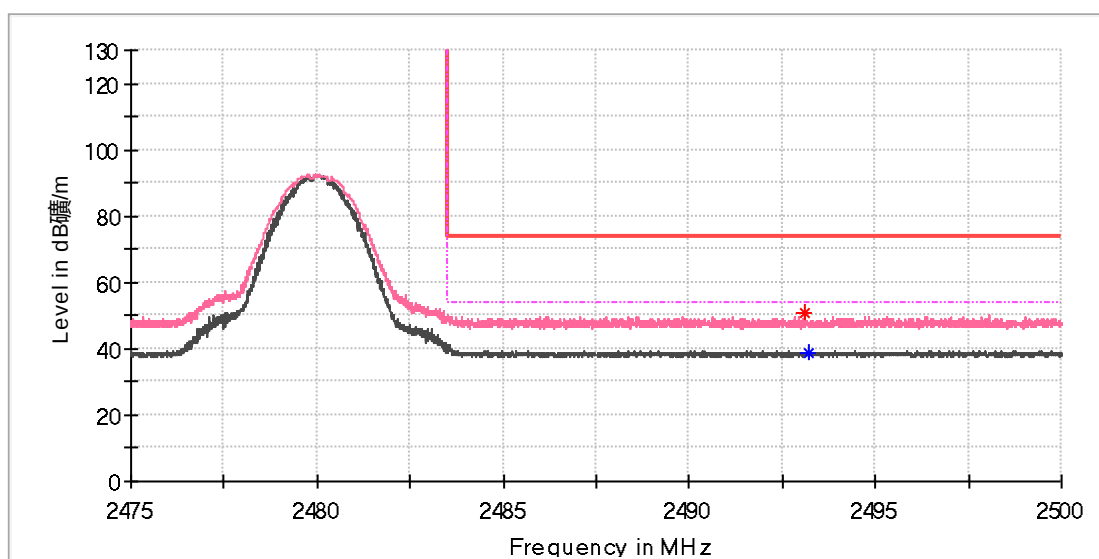


Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4960.000000	---	46.53	54.00	7.47	100.0	V	123.0	13.2
4960.500000	53.31	---	74.00	20.69	100.0	V	123.0	13.2
7439.491667	44.30	---	74.00	29.70	100.0	V	138.0	8.4
7439.983333	---	36.45	54.00	17.55	100.0	V	138.0	8.4

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_GFSK_High Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



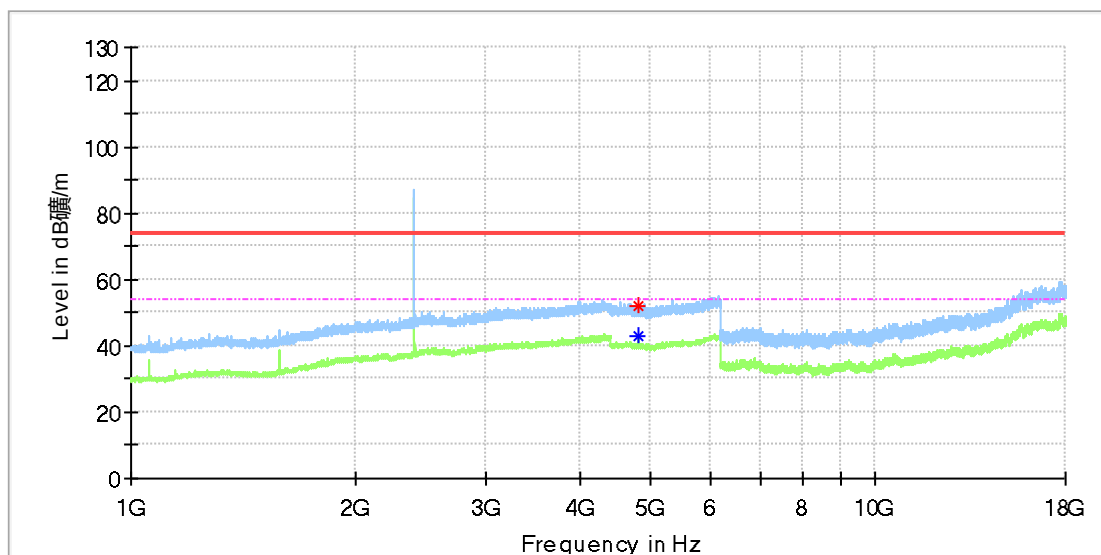
Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2493.091912	51.01	---	74.00	22.99	100.0	V	357.0	7.4
2493.191177	---	38.81	54.00	15.19	100.0	V	315.0	7.4

8DPSK

EUT Information

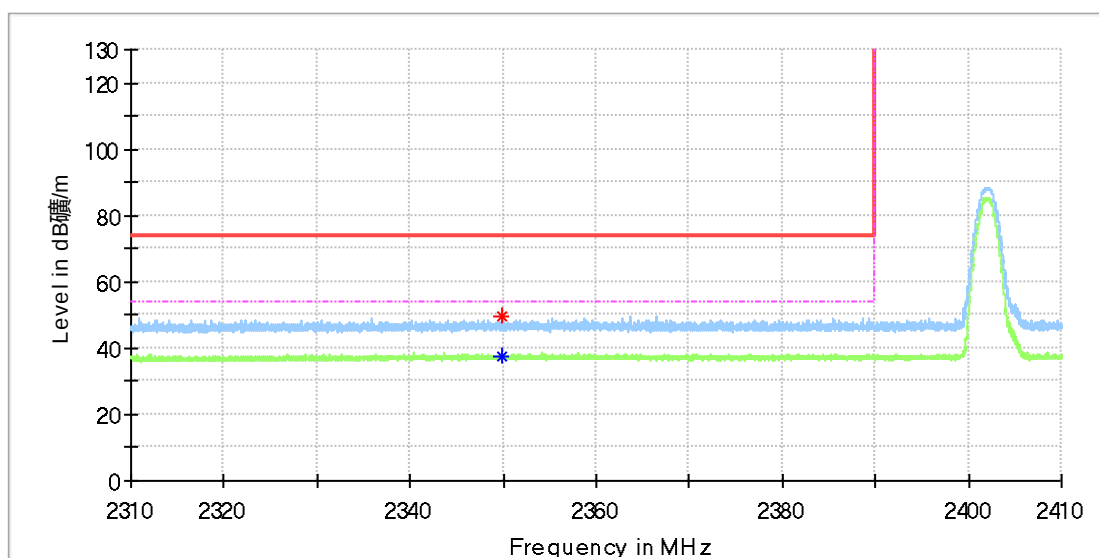
EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_8DPSK_Low Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

**Critical Freqs**

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4804.000000	52.20	---	74.00	21.80	100.0	H	41.0	13.6
4804.000000	---	42.71	54.00	11.29	100.0	H	41.0	13.6

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_8DPSK_Low Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

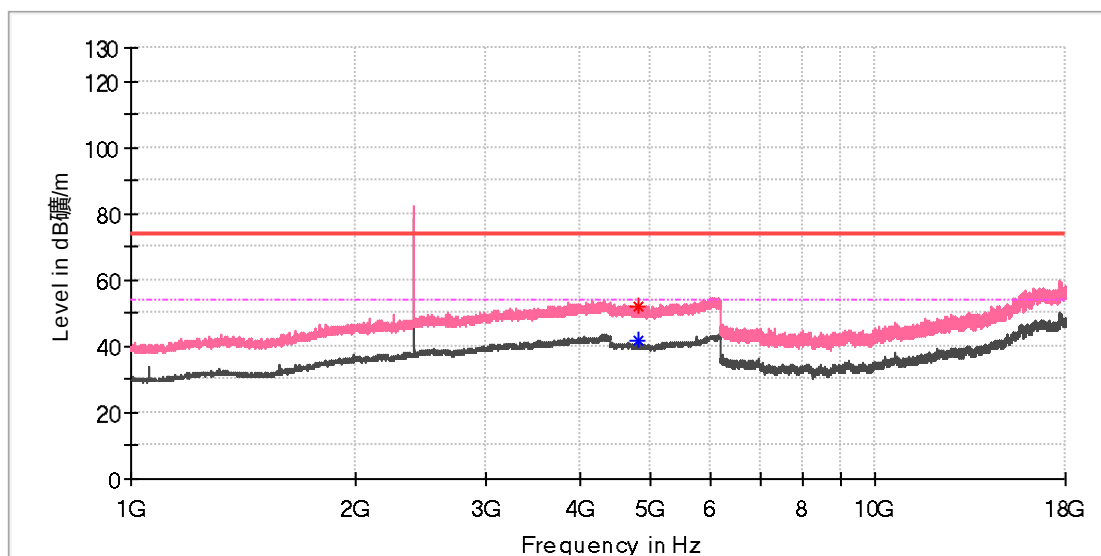


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2349.970588	---	37.78	54.00	16.22	100.0	H	213.0	6.9
2349.970588	49.38	---	74.00	24.62	100.0	H	213.0	6.9

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_8DPSK_Low Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

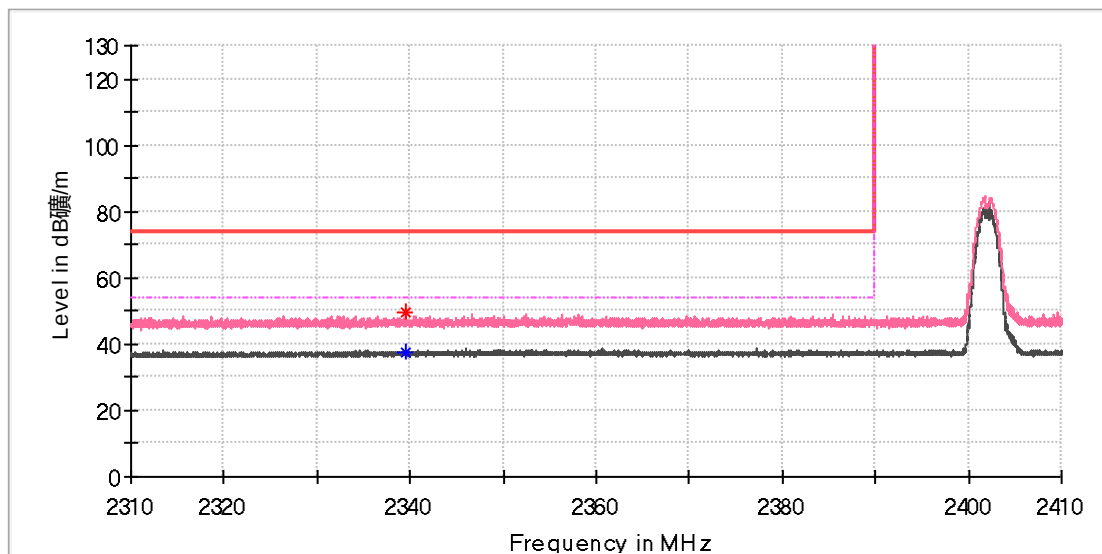


Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4804.000000	52.05	---	74.00	21.95	100.0	V	189.0	13.6
4804.000000	---	41.80	54.00	12.20	100.0	V	189.0	13.6

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_8DPSK_Low Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

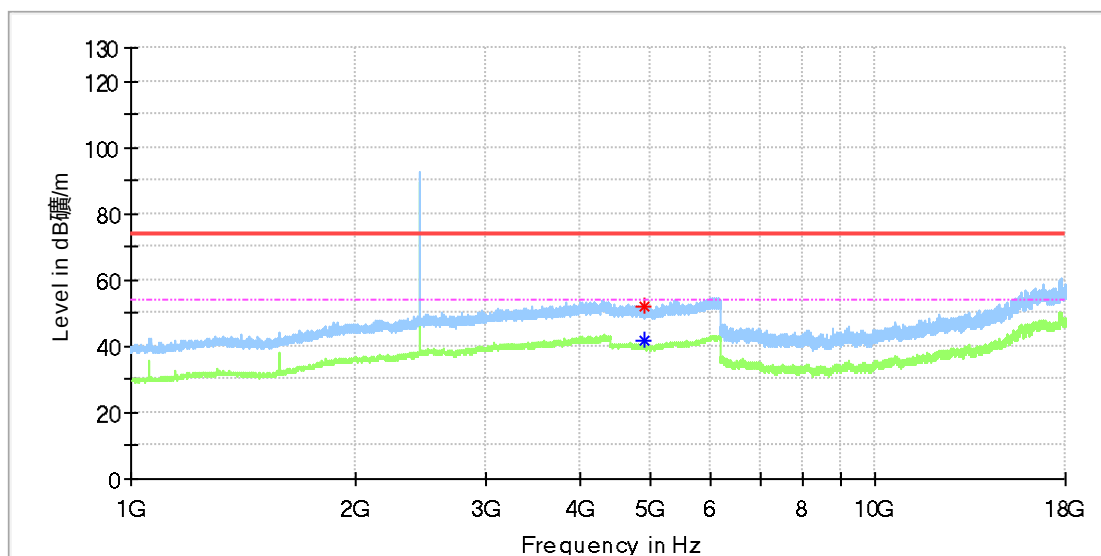


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2339.455882	49.31	---	74.00	24.69	100.0	V	289.0	6.8
2339.500000	---	37.71	54.00	16.29	100.0	V	289.0	6.8

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_8DPSK_Mid Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

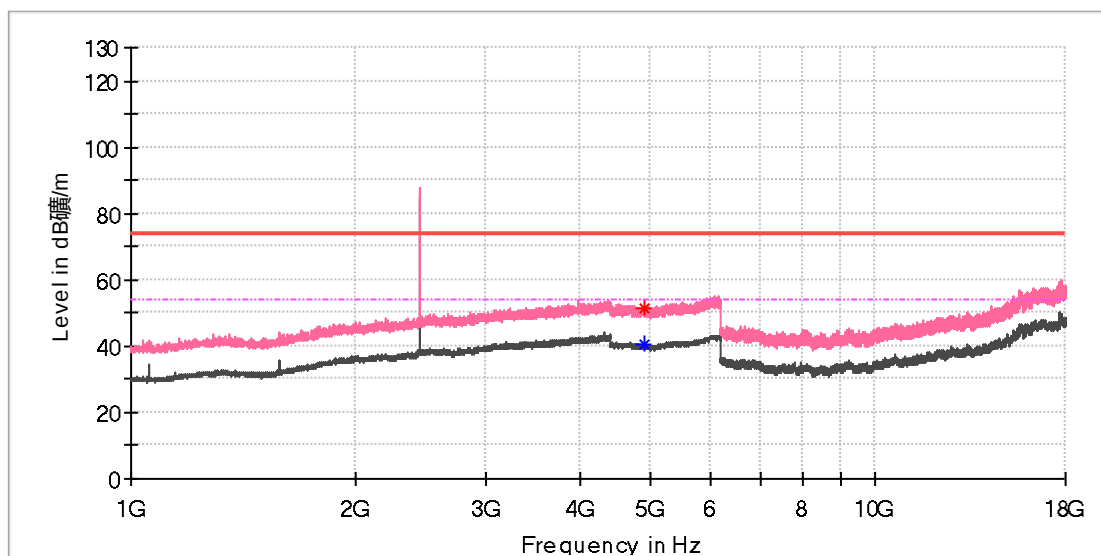


Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4881.500000	---	41.68	54.00	12.32	100.0	H	207.0	13.4
4889.500000	51.97	---	74.00	22.03	100.0	H	330.0	13.3

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_8DPSK_Mid Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

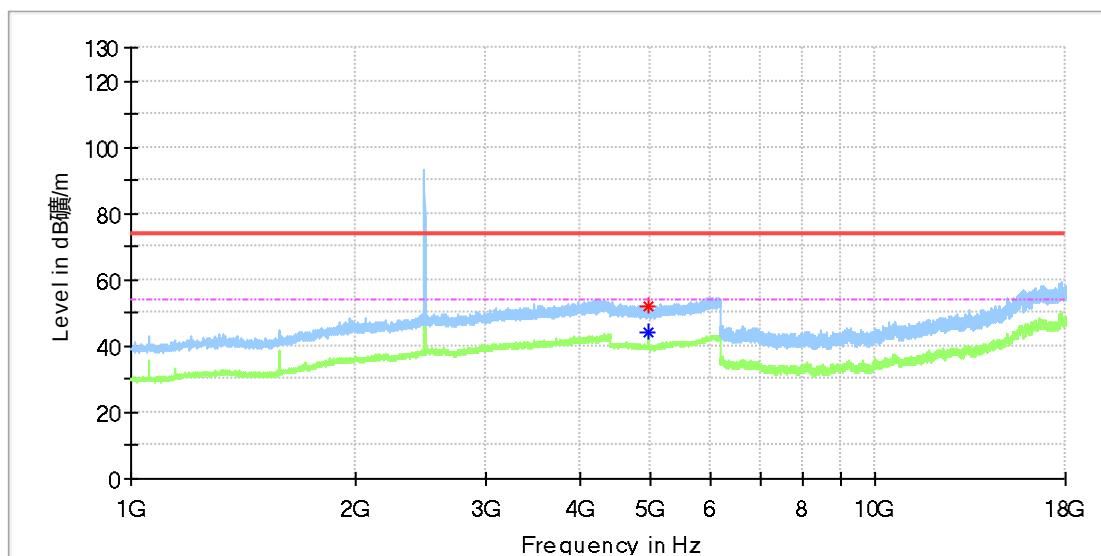


Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4881.500000	---	40.55	54.00	13.45	100.0	V	27.0	13.4
4882.500000	51.40	---	74.00	22.60	100.0	V	127.0	13.4

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_8DPSK_High Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

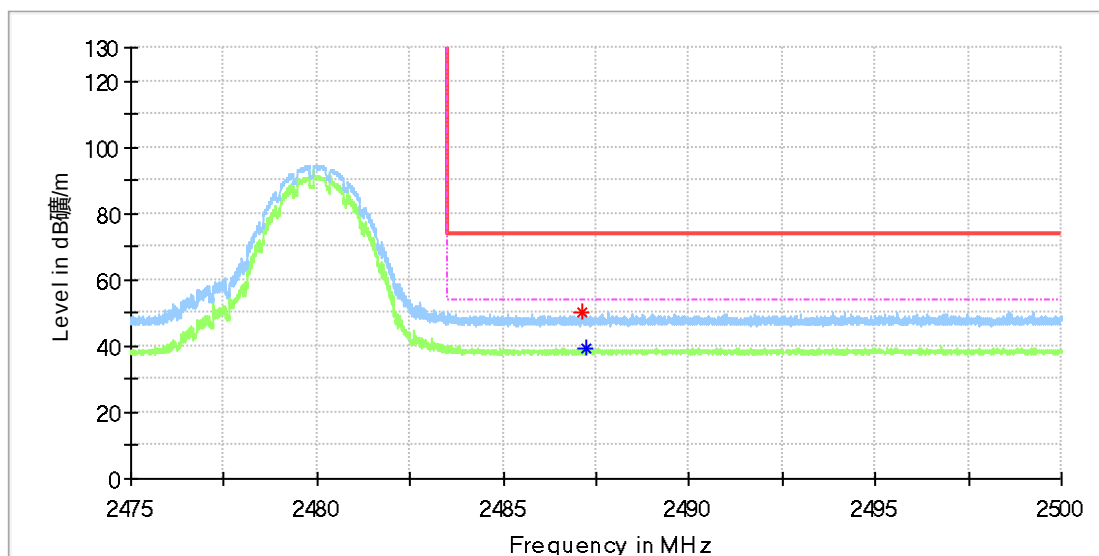


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4959.500000	52.18	---	74.00	21.82	100.0	H	42.0	13.2
4960.000000	---	44.31	54.00	9.69	100.0	H	125.0	13.2

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_8DPSK_High Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

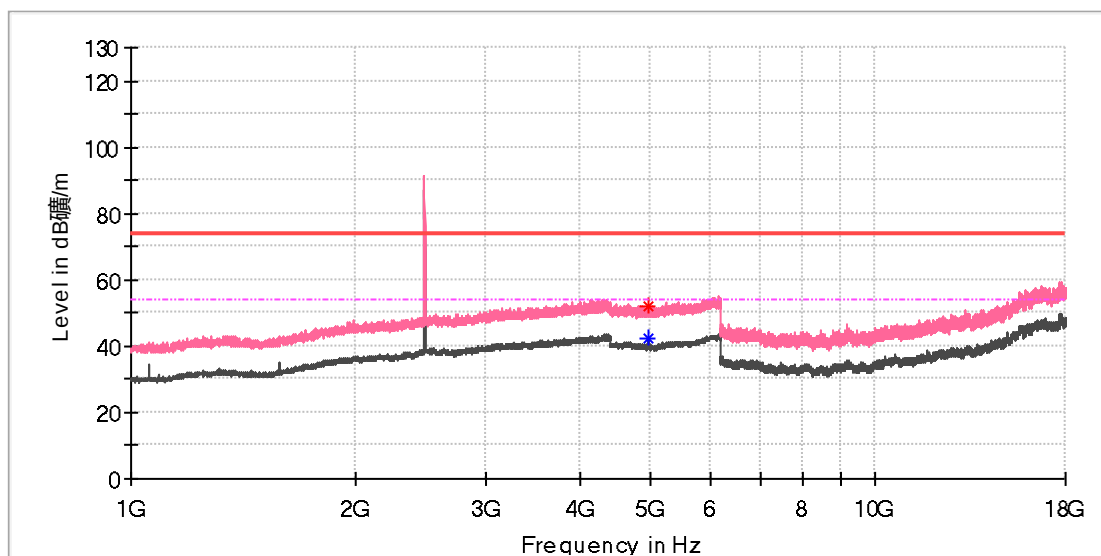


Critical Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
2487.143382	49.97	---	74.00	24.03	100.0	H	26.0	7.4
2487.224265	---	39.31	54.00	14.69	100.0	H	164.0	7.4

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_8DPSK_High Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

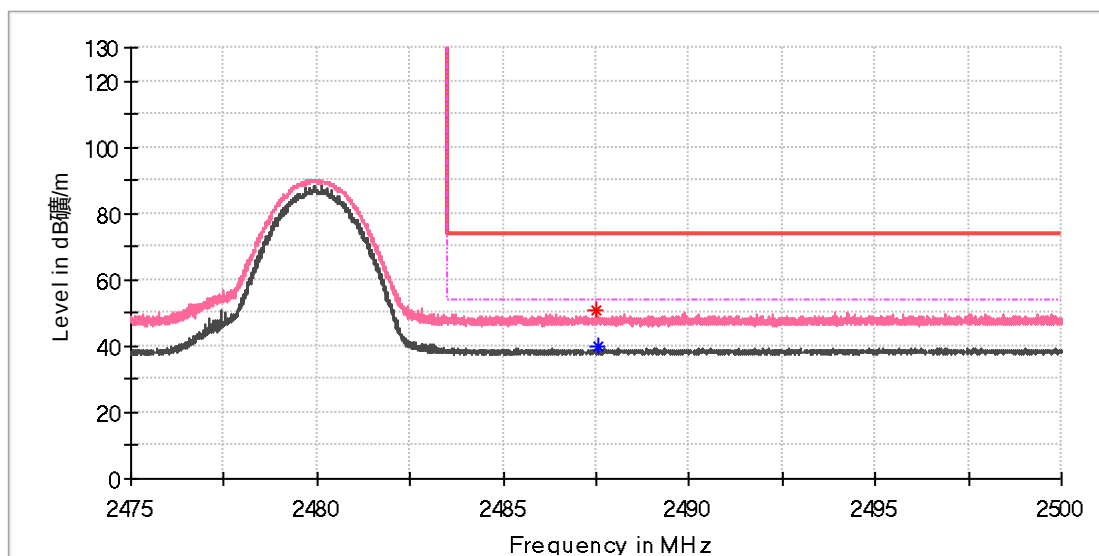


Critical_Freqs

Frequency (MHz)	MaxPeak	Average (dBμV/m)	Limit (dBμV/m)	Margin	Height	Pol	Azimuth	Corr. (dB/m)
4959.500000	51.74	---	74.00	22.26	100.0	V	194.0	13.2
4960.000000	---	42.57	54.00	11.43	100.0	V	194.0	13.2

EUT Information

EUT Name:	DVD
Model:	7900030-BU53-AA
Test Mode:	TX_BT_8DPSK_High Channel
Test Voltage::	DC 12V
Remark:	Temp 24 Humi:45%
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)
2487.503677	50.89	---	74.00	23.11	100.0	V	0.0	7.4
2487.533088	---	39.76	54.00	14.24	100.0	V	234.0	7.4