

Prüfbericht-Nr.: <i>Test report No.:</i>	50288798 001		Auftrags-Nr.: <i>Order No.:</i>	168124634	Seite 1 von 27 <i>Page 1 of 27</i>	
Kunden-Referenz-Nr.: <i>Client reference No.:</i>	N/A		Auftragsdatum: <i>Order date.:</i>	24.07.2019		
Auftraggeber: <i>Client:</i>	Binatone Electronics International Ltd. Floor 23A, 9 Des Voeux Road West, Sheung Wan, Hong Kong					
Prüfgegenstand: <i>Test item:</i>	2.8" Video Baby Monitor (Parent Unit)					
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	MBP483PU, MBP483APU (Trademark: motorola)					
Auftrags-Inhalt: <i>Order content:</i>	FCC and IC approval					
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.247	RSS-247 Issue 2 February 2017	CFR47 FCC Part 15: Subpart C Section 15.207	RSS-Gen Issue 5 April 2018	CFR47 FCC Part 15: Subpart C Section 15.209	ICES-003 Issue 6 January 2016
	CFR47 FCC Part 15: Subpart B Section 15.107	RSS-102 Issue 5 March 2015	CFR47 FCC Part 15: Subpart B Section 15.109		CFR47 FCC Part 2: Section 2.1091	
Wareneingangsdatum: <i>Date of receipt:</i>	24.07.2019					Please refer to photo documents
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000953646-006 to 008					
Prüfzeitraum: <i>Testing period:</i>	24.07.2019 - 02.09.2019					
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.					
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.					
Prüfergebnis*: <i>Test result*:</i>	Pass					
geprüft von / tested by:	kontrolliert von / reviewed by:					
02.09.2019	Ryan Yang / Assistant Project Manager		02.09.2019	Winnie Hou / Technical Certifier		
Datum Date	Name/Stellung Name/Position	Unterschrift Signature	Datum Date	Name/Stellung Name/Position	Unterschrift Signature	
Sonstiges / Other:						
FCC ID: VLJ-MBP483APU IC: 4522A-MBP483APU			HVIN: MBP483APU			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>			Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged:</i>			
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(pass) = entspricht o.g. Prüfgrundlage(n) F(fail) = 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(pass) = passed a.m. test specifications(s) F(fail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested						
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the 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>						

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Test Summary

5.1.1 ANTENNA REQUIREMENT
RESULT: Pass

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER
RESULT: Pass

5.1.3 99% BANDWIDTH
RESULT: Pass

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

5.1.5 RADIATED SPURIOUS EMISSION
RESULT: Pass

5.1.6 20dB BANDWIDTH
RESULT: Pass

5.1.7 CARRIER FREQUENCY SEPARATION
RESULT: Pass

5.1.8 NUMBER OF HOPPING FREQUENCY
RESULT: Pass

5.1.9 TIME OF OCCUPANCY
RESULT: Pass

5.1.10 CONDUCTED EMISSION ON AC MAINS
RESULT: Pass

5.1.11 RADIATED EMISSION
RESULT: Pass

6.1.1 ELECTROMAGNETIC FIELDS
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: Photographs of the Test Set-up

Appendix B: Test Results of 2.4GHz FHSS

Appendix C: Test Results of Part 15B and ICES 003

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

1F East & 2-4F, Cybio Technology Building No. 1, No. 16 Kejibei 2nd Road, High-Tech Industrial Park North Nanshan District, Shenzhen, 518057

FCC accredited testing laboratory: CN1260

ISED wireless device testing laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

TÜV Rheinland (Shenzhen) Co., Ltd.

Radio Spectrum Testing				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Wireless Connectivity Tester	R&S	CMW270	101375	20.08.2020
Signal Analyzer	R&S	FSV 40	101441	20.08.2020
Vector Signal Generator	R&S	SMBV100A	263301	21.08.2020
Signal Generator	R&S	SMB100A	115186	21.08.2020
OSP	R&S	OSP 150	101017	20.12.2019
Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
Test Software	R&S	WMS32 (V10.40.10)	N/A	N/A
Power Meter	R&S	NRP2	107105	20.12.2019
Wideband Power Sensor	R&S	NRP-Z81	105350	20.12.2019
Spurious Emission				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Signal Generator	R&S	SMB100A	180840	20.08.2020
Wideband Radio Communication Tester	R&S	CMW500	165339	20.08.2020
Signal Analyzer	R&S	FSV 40	101440	20.08.2020
System Controller Interface	R&S	SCI-100	S10010036	N/A
Filterbank	R&S	CDMA	100751	21.08.2020
Filterbank	R&S	GSM	100811	21.08.2020

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OSP	R&S	OSP 120	102041	N/A
OSP	R&S	OSP 150	101385	N/A
Pre-amplifier	R&S	SCU08F1	08320030	20.08.2020
Amplifier	R&S	SCU-18F	180079	20.08.2020
Amplifier	R&S	SCU40A	100450	20.08.2020

Conducted Emission on AC Mains

Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR3	102428	19.08.2020
Artificial Mains Network	R&S	ENV216	102333	19.08.2020

Radiated Emission

Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR7	102022	19.08.2020
Bilog Antenna	TESEQ	CBL6112D	51321	29.08.2020

2.3 Traceability

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

2.4 Calibration

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

2.5 Measurement Uncertainty

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

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$
RF Power (conducted)	± 2.5 dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	± 6 dB
Radiated Emission of Receiver, valid up to 26.5 GHz	± 6 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB
Radiated Emission (3m SAC), 30MHz to 1000MHz	± 4.52 dB
Radiated Emission (3m SAC), above 1000MHz	± 4.37 dB
Temperature	± 1 °C
Humidity	± 5 %
Voltage (DC)	± 1 %
Voltage (AC, <10kHz)	± 2 %

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2.6 Location of Original Data

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

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 1F East & 2-4F, Cybio Technology Building No. 1, No. 16 Kejibei 2nd Road, High-Tech Industrial Park North Nanshan District, Shenzhen, 518057 is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a parent unit (monitor) of one of the 2.8" Video Baby Monitor, which supports 2.4GHz FHSS wireless technology.

According to the declaration of the applicant, the electrical circuit design, PCB layout and components used are identical for all models, only the model number is different. The parent unit is supplied by external adapter and battery, see below table for details:

Test EUT (Model No.)	Parent Unit		Supplier
	Supported	Tested	
Adapter #1 (S003GU0600050)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Tenpao
Battery #1 (GP80AAAHC3BMXZ)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	GPI
Battery #2 (JHAAA800P3H)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	JUSTHIGH

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

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	2.8" Video Baby Monitor (Parent Unit)
Type Designation	MBP483PU, MBP483APU
Trade Mark	motorola
FCC ID	VLJ-MBP483APU
IC	4522A-MBP483APU
HVIN	MBP483APU
Operating Voltage	DC 6.0V @500mA input via power adapter DC 3.6V @800mAh input via internal battery
Testing Voltage	Fully charged battery for Part 15C AC 120V @60Hz for Part 15B
Power Adapter #1	Model: S003GU0600050 (Tenpao) Input: AC 100-240V ~50/60Hz 150mA Output: DC 6.0V @500mA
Battery #1	Model: GP80AAAHC3BMXZ(GPI) DC 3.6V @800mAh Ni-MH battery
Battery #2	Model: JHAAA800P3H(JUSTHIGH) DC 3.6V @800mAh Ni-MH battery

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Technical Specification of 2.4GHz FHSS

Operating Frequency	2405.0 - 2475.0 MHz
Type of Modulation	FSK
Channel Number	32 channels (16 active channels)
Channel Separation	2.0MHz, 2.5MHz, 3.0MHz, 4.5 MHz
Antenna Type	Integral Antenna
Antenna Gain	0 dBi

Table 3: RF Channel and Frequency of 2.4GHz FHSS

RF Channel	Frequency (MHz)						
01	2405.00	09	2422.00	17	2439.00	25	2458.50
02	2407.00	10	2424.00	18	2441.00	26	2460.50
03	2409.00	11	2426.00	19	2444.00	27	2462.50
04	2411.00	12	2428.00	20	2446.00	28	2467.00
05	2413.00	13	2430.00	21	2450.00	29	2469.00
06	2415.00	14	2433.00	22	2452.00	30	2471.00
07	2418.00	15	2435.00	23	2454.00	31	2473.00
08	2420.00	16	2437.00	24	2456.00	32	2475.00

Test frequencies are lowest channel: 2405 MHz, middle channel: 2439 MHz and highest channel: 2475 MHz.

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, 2.4GHz FHSS wireless transmitting mode (Low/Middle/High Channel)
- B. On, Transmitting on hopping channel
- C. On, Normal operation with 2.4GHz FHSS mode
- D. On, Charging mode

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Block Diagram
- Schematics
- FCC/IC Label and Location Info
- User Manual

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10: 2013 and ANSI C63.4: 2014.

According to clause 3.1, all tests were performed on model MBP483APU in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Laptop	Lenovo	T480	PF-16A6N8	N/A
2.8" Video Baby Monitor (Baby Unit)	Vtech	MBP483ABU	N/A	N/A

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

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

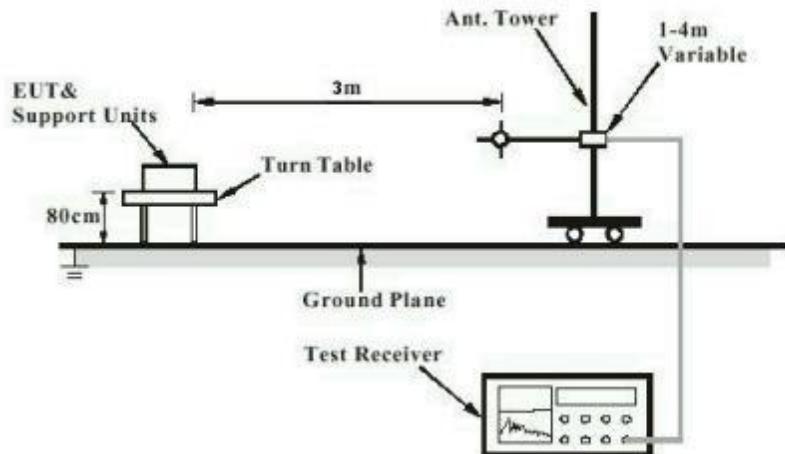
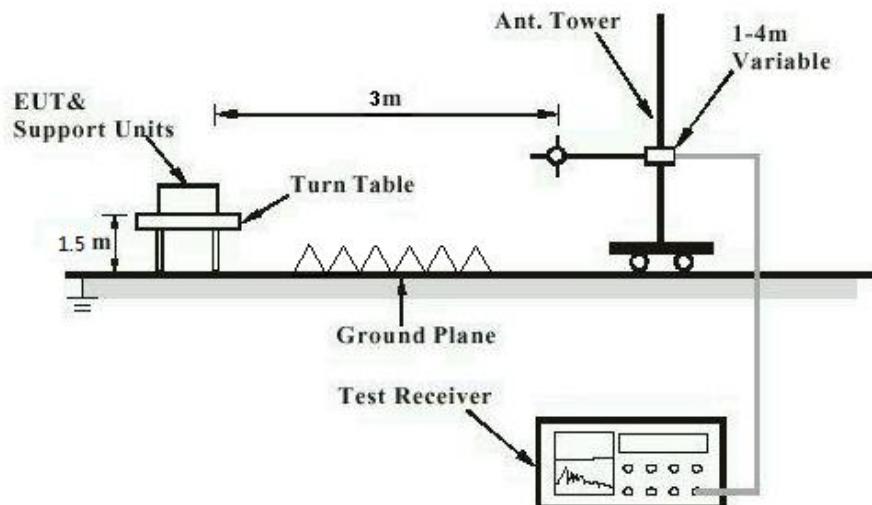
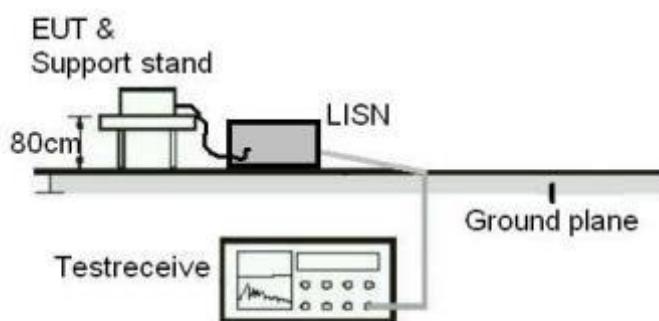
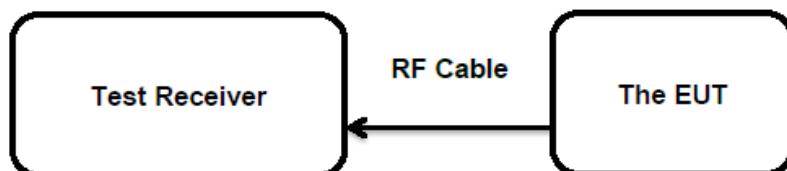


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)



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Page 13 of 27**Diagram of Measurement Configuration for Mains Conduction Measurement****Diagram of Measurement Configuration for Conducted Transmitter Measurement**

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5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: Pass

Test Specification

Test standard : FCC Part 15.247(b)(4) and Part 15.203

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 0 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

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5.1.2 Maximum Peak Conducted Output Power

RESULT:
Pass
Test Specification

Test standard	:	FCC Part 15.247(b)(1)
		RSS-247 Clause 5.4(b)
Basic standard	:	ANSI C63.10: 2013
Limits	:	FHSS < 0.125 Watts
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	01.08.2019
Input voltage	:	Fully charged battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25 °C
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 5: Test Result of Maximum Peak Conducted Output Power, 2.4GHz FHSS

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
FHSS	2405.0	19.11	0.0815	< 0.125
	2439.0	19.98	0.0995	
	2475.0	19.14	0.0820	
Maximum Measured Value		19.98	0.0995	

Note:

- 1) The cable loss is taken into account in results.
- 2) Antenna gain(G) of FHSS: 0 dBi,

The Maximum peak conducted output power (e.i.r.p.) = $P_{(Peak\ power)} + G$, which is far below the 4 W

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Page 16 of 27**5.1.3 99% Bandwidth****RESULT:****Pass****Test Specification**

Test standard	:	RSS-Gen Clause 6.6
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	01.08.2019
Input voltage	:	Fully charged battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25 °C
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 6: Test Result of 99% Bandwidth, 2.4GHz FHSS

Test Mode	Test Channel (MHz)	99% Bandwidth (MHz)	Limit
FHSS	2405.0	2.13	/
	2439.0	2.16	
	2475.0	2.11	
Maximum Measured Value		2.16	

For the measurement records, refer to the appendix B.

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5.1.4 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT:

Pass

Test Specification

Test standard	:	FCC Part 15.247(d) RSS-247 Clause 5.5
Basic standard Limits	:	ANSI C63.10: 2013 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	01.08.2019
Input voltage	:	Fully charged battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25 °C
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

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

For the measurement records, refer to the appendix B.

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Page 18 of 27**5.1.5 Radiated Spurious Emission****RESULT:****Pass****Test Specification**

Test standard	:	FCC Part 15.247(d) & FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	:	ANSI C63.10: 2013
Limits	:	Refer to 15.209(a) of FCC part 15.247(d) RSS-Gen Table 4

Kind of test site : 3m Semi-anechoic Chamber

Test Setup

Date of testing	:	12.08.2019
Input voltage	:	Fully charged battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	22 °C
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

Remark:

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix B.

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Page 19 of 27**5.1.6 20dB Bandwidth****RESULT:****Pass****Test Specification**

Test standard	:	FCC Part 15.247(a)(1) RSS-247 Clause 5.1(a)
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	01.08.2019
Input voltage	:	Fully charged battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25 °C
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 7: Test Result of 20dB Bandwidth, 2.4GHz FHSS

Test Mode	Test Channel (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)
FHSS	2405.0	2110.00	1406.67	/
	2439.0	2110.00	1406.67	
	2475.0	2110.00	1406.67	
Maximum Measured Value		2110.00	1406.67	

For the measurement records, refer to the appendix B.

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5.1.7 Carrier Frequency Separation

RESULT:

Pass

Test Specification

Test standard	:	FCC Part 15.247(a)(1) RSS-247 Clause 5.1(b)
Basic standard	:	ANSI C63.10: 2013
Limits	:	≥ 25kHz or 2/3 of 20dB bandwidth, whichever is greater
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	28.08.2019
Input voltage	:	Fully charged battery
Operation mode	:	B
Test channel	:	Low / Middle / High
Ambient temperature	:	25 °C
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 8: Test Result of Carrier Frequency Separation, 2.4GHz FHSS

Test Mode	Test Channel	Test Channel (MHz)	Measured Channel Separation (KHz)	Limit (kHz)	
FHSS	Low Channel	2405.0	2005.8	≥ 25kHz or 2/3 of 20dB bandwidth	
	Adjacency Channel	2407.0			
	Middle Channel	2439.0			
	Adjacency Channel	2441.0	2005.8		
	High Channel	2475.0			
	Adjacency Channel	2473.0	1996.4		

Note: The limit is maximum 2/3 of the 20 dB bandwidth: 1406.67 KHz.

For the measurement records, refer to the appendix B.

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Page 21 of 27**5.1.8 Number of Hopping Frequency****RESULT:****Pass****Test Specification**

Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	≥ 15 non-overlapping channels
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	29.08.2019
Input voltage	:	Fully charged battery
Operation mode	:	B
Ambient temperature	:	25 °C
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 9: Test Result of Number of Hopping Frequency, 2.4GHz FHSS

Test Mode	Frequency Range	Measured Quantity of Hopping Channel	Limit
FHSS	2405.0 - 2475.0 MHz	16	≥15

For the measurement records, refer to the appendix B.

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Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	< 0.4s
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	01.08.2019
Input voltage	:	Fully charged battery
Operation mode	:	B
Test channel	:	Low / Middle / High
Ambient temperature	:	25 °C
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

Note:

Dwell time = Pulse width x Number of channels in Period

Period = 0.4 (seconds/ channel) x 16 (channel) = 6.4 seconds

For the measurement records, refer to the appendix B.

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Page 23 of 27**5.1.10 Conducted Emission on AC Mains****RESULT:****Pass****Test Specification**

Test standard	:	FCC Part 15.207(a) & FCC Part 15.201(a) RSS-Gen Clause 8.8 & ICES-003
Basic standard	:	ANSI C63.10: 2013 & ANSI C63.4: 2014
Frequency range	:	0.15 – 30MHz
Limits	:	FCC Part 15.207(a) & FCC Part 15.201(a) RSS-Gen Clause 8.8 & ICES-003 Table 2
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	07.08.2019
Input voltage	:	AC 120V@60Hz
Operation mode	:	C, D
Earthing	:	Not connected
Ambient temperature	:	24 °C
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B, C.

Prüfbericht - Nr.: 50288798 001
*Test Report No.*Seite 24 von 27
Page 24 of 27**5.1.11 Radiated Emission****RESULT:****Pass****Test Specification**

Test standard	:	FCC Part 15.109(a) ICES-003
Basic standard	:	ANSI C63.4: 2014
Frequency range	:	30 - 6000MHz
Classification	:	Class B
Limits	:	FCC Part 15.109(a) ICES-003 Table 5 & Table 7
Kind of test site	:	3m Semi-anechoic Chamber

Test Setup

Date of testing	:	09.08.2019
Input voltage	:	AC 120V@60Hz
Operation mode	:	C, D
Earthing	:	Not connected
Ambient temperature	:	24 °C
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix C.

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6 Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:

Pass

Test Specification

Test standard

: CFR47 FCC Part 2: Section 2.1091
CFR47 FCC Part 1: Section 1.1310
FCC KDB Publication 447498 v06
FCC KDB Publication 865664 D01 v01r04
FCC KDB Publication 865664 D02 v01r02
RSS-102 Issue 5 March 2015

➤ FCC requirements

FCC requirement: Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 20cm normally can be maintained between the user and the device.

MPE Calculation Method according to KDB 447498 v06

$$\text{Power Density: } S_{(\text{mW/cm}^2)} = PG/4\pi R^2 \text{ or EIRP}/4\pi R^2$$

Where:

S = power density (mW/cm^2)

P = power input to the antenna (mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (cm)

The nominal maximum conducted output power specified:

2.4GHz FHSS: 20.00 dBm

From the peak RF output power, the minimum mobile separation distance, d=20 cm, as well as the antenna gain (Max. 0.0 dBi for 2.4GHz FHSS), the RF power density can be calculated as below:

$$\text{For 2.4GHz FHSS: } S_{(\text{mW/cm}^2)} = PG/4\pi R^2 = 0.020 \text{ mW/cm}^2$$

Limits for Maximum Permissible Exposure (MPE) according to FCC Part 1.1310:

1.0 mW/cm²

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*Test Report No.*Seite 26 von 27
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- **IC requirements:** The EUT shall comply with the requirement of RSS-102 section 2.5.2.

Exemption from Routine Evaluation Limits – RF Exposure Evaluation

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;

- RF exposure evaluation exempted power for 2.4GHz FHSS: 2.670 W

The nominal maximum conducted output power specified:

2.4GHz FHSS: 20.00 dBm

Antenna Gain: 0.0 dBi for 2.4GHz FHSS

The Max. e.i.r.p. for 2.4GHz FHSS: 20.00 dBm = 0.100 W

The e.i.r.p. for 2.4GHz FHSS is less than the RF exposure evaluation exempted power. So RF exposure evaluation is not required.

“RF Radiation Exposure Statement Caution: This Transmitter must be installed to provide a separation distance of at least 20 cm from all persons.”

7 Photographs of the Test Set-Up

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

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Appendix B.1: Test Results of 99% Bandwidth

Low Channel

FCC Part 47 §15.247 2400-2483.5 MHz 2017

Occupied Channel Bandwidth 99% (2405 MHz; 20.000 dBm; 2 MHz; Test Mode)

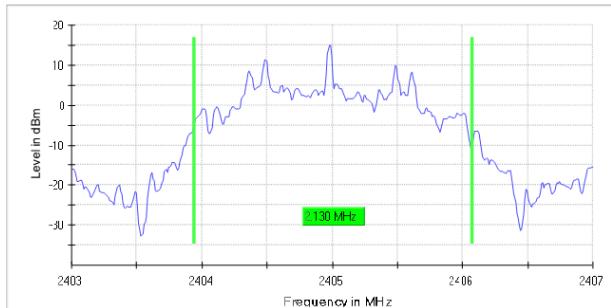
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2405.000000	2.130000	---	---	2403.945000	2406.075000

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

DUT Frequency (MHz)	Result
2405.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40300 GHz	2.40300 GHz
Stop Frequency	2.40700 GHz	2.40700 GHz
Span	4.000 MHz	4.000 MHz
RBW	30.000 kHz	>= 30.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	400	~ 400
Sweptime	94.824 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 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	8 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.23 dB	0.30 dB

Middle Channel

FCC Part 47 §15.247 2400-2483.5 MHz 2017

Occupied Channel Bandwidth 99%(2439 MHz; 20.000 dBm; 2 MHz; Test Mode)

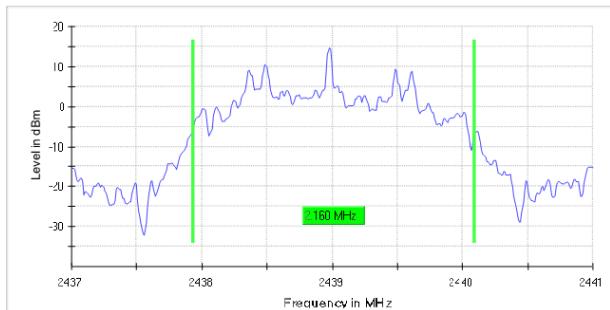
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2439.000000	2.160000	---	---	2437.935000	2440.095000

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

DUT Frequency (MHz)	Result
2439.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43700 GHz	2.43700 GHz
Stop Frequency	2.44100 GHz	2.44100 GHz
Span	4.000 MHz	4.000 MHz
RBW	30.000 kHz	>= 30.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	400	~ 400
Sweptime	94.824 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 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	0.10 dB	0.30 dB

High Channel

FCC Part 47 §15.247 2400-2483.5 MHz 2017

Occupied Channel Bandwidth 99% (2475 MHz; 20.000 dBm; 2 MHz; Test Mode)

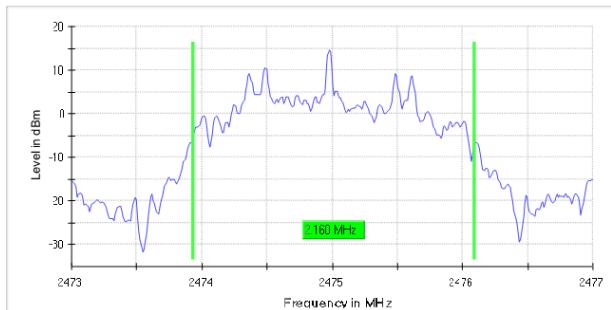
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2475.000000	2.160000	---	---	2473.935000	2476.095000

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

DUT Frequency (MHz)	Result
2475.000000	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47300 GHz	2.47300 GHz
Stop Frequency	2.47700 GHz	2.47700 GHz
Span	4.000 MHz	4.000 MHz
RBW	30.000 kHz	>= 30.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	400	~ 400
Sweptime	94.824 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 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	18 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.30 dB

Appendix B.2: Test Results of 20dB Bandwidth

Low Channel

FCC Part 47 §15.247 2400-2483.5 MHz 2017

Emission Bandwidth 20 dB (2405 MHz; 20.000 dBm; 2 MHz; Test Mode)

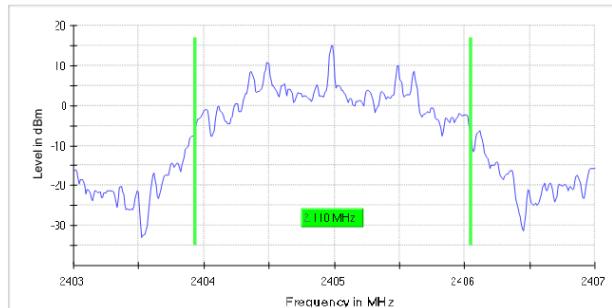
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2405.000000	2.110000	---	---	2403.935000	2406.045000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2405.000000	15.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40300 GHz	2.40300 GHz
Stop Frequency	2.40700 GHz	2.40700 GHz
Span	4.000 MHz	4.000 MHz
RBW	30.000 kHz	>= 30.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	400	~ 400
Sweptime	94.824 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 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
Stable value	0.50 dB	0.50 dB
Run	13 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.16 dB	0.50 dB

Middle Channel

FCC Part 47 §15.247 2400-2483.5 MHz 2017

Emission Bandwidth 20 dB (2439 MHz; 20.000 dBm; 2 MHz; Test Mode)

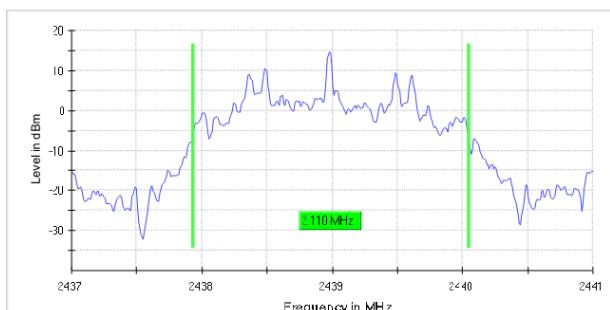
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2439.000000	2.110000	---	---	2437.935000	2440.045000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2439.000000	14.6	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43700 GHz	2.43700 GHz
Stop Frequency	2.44100 GHz	2.44100 GHz
Span	4.000 MHz	4.000 MHz
RBW	30.000 kHz	>= 30.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	400	~ 400
Sweptime	94.824 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 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	0.30 dB	0.50 dB

High Channel

FCC Part 47 §15.247 2400-2483.5 MHz 2017

Emission Bandwidth 20 dB (2475 MHz; 20.000 dBm; 2 MHz; Test Mode)

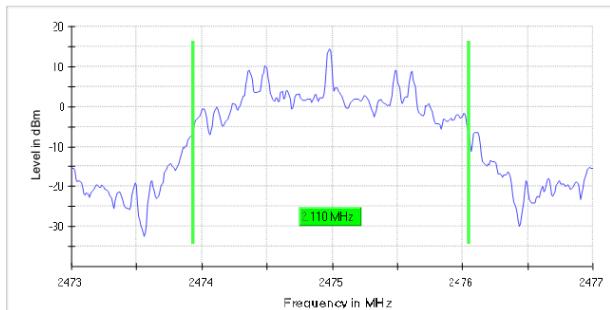
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v04 and ANSI C63.10-2013

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2475.000000	2.110000	---	---	2473.935000	2476.045000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2475.000000	14.5	PASS

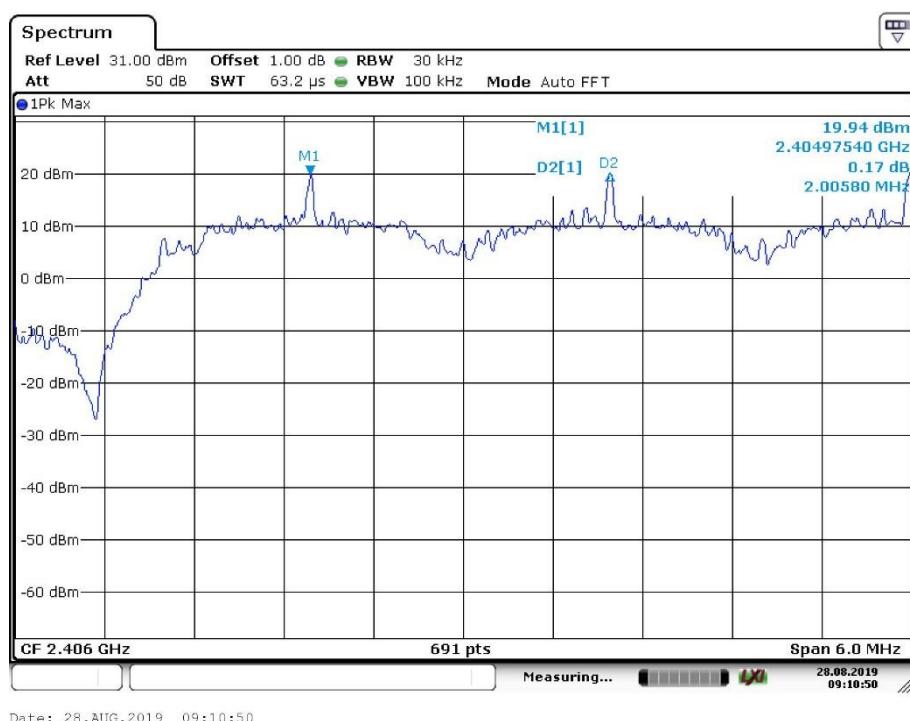


Measurement

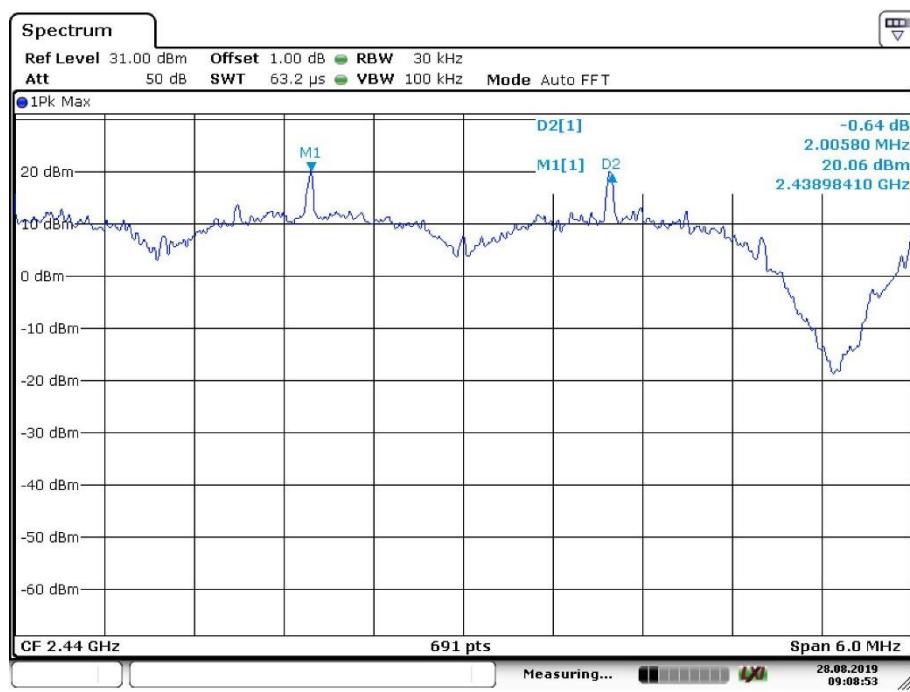
Setting	Instrument Value	Target Value
Start Frequency	2.47300 GHz	2.47300 GHz
Stop Frequency	2.47700 GHz	2.47700 GHz
Span	4.000 MHz	4.000 MHz
RBW	30.000 kHz	>= 30.000 kHz
VBW	100.000 kHz	>= 90.000 kHz
SweepPoints	400	~ 400
Sweptime	94.824 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 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	16 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.00 dB	0.50 dB

Appendix B.3: Test Results of Carrier Frequency Separation

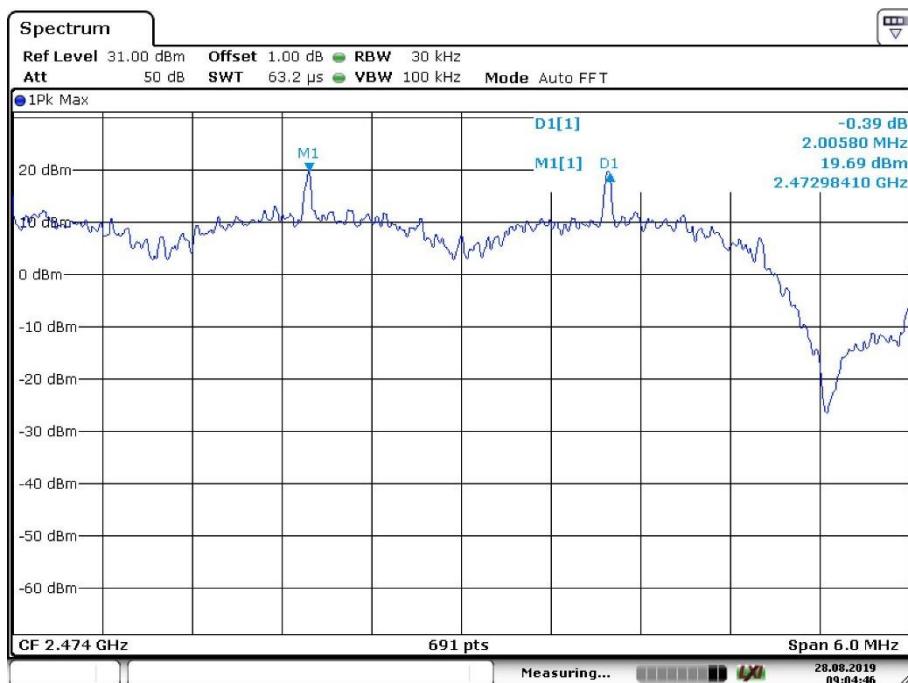
Low Channel



Middle Channel

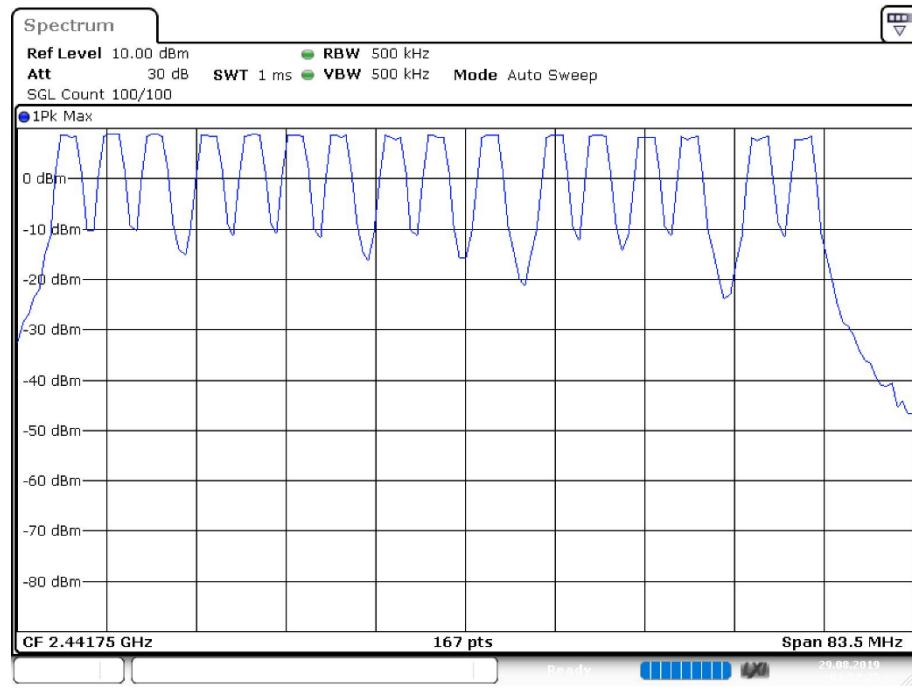


High Channel



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

All hopping channels



Appendix B.5: Test Results of Time of Occupancy

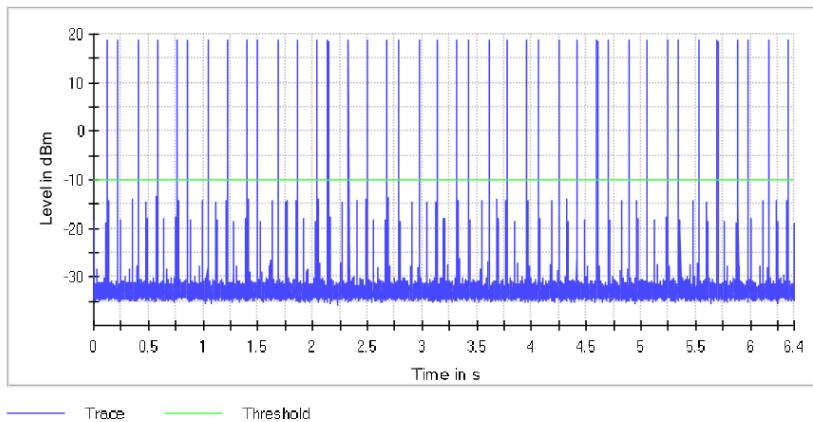
FCC Part 47 §15.247 2400-2483.5 MHz 2017

Time of Channel Occupancy (2439 MHz; 20.000 dBm; 2 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	Time (ms)	Limit Max (ms)	Limit Min (ms)	Threshold (dBm)
2439.000000	PASS	34.615	400.000	--	-10.0



Measurement

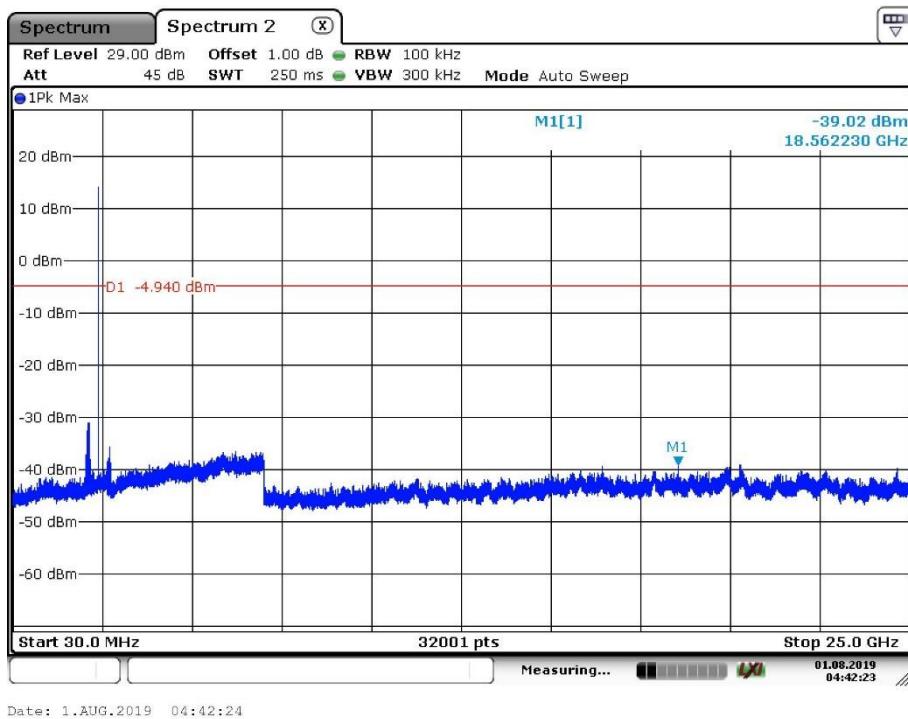
Setting	Instrument Value	Target Value
Center Frequency	2.43900 GHz	2.43900 GHz
Span	ZeroSpan	ZeroSpan
RBW	1.000 MHz	~ 1.000 MHz
VBW	1.000 MHz	>= 1.000 MHz
SweepPoints	30001	~ 30001
Sweptime	6.400 s	6.400 s
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamplifier	off	off
Trigger	External	External
Trigger Offset	0.000 s	0.000 s

OSP

Setting	Instrument Value	Target Value
Measurement Time	6.400 s	6.400 s
Tracepoints	6400000	6400000
Time resolution	1.000 µs	1.000 µs
Detector	RMS	RMS

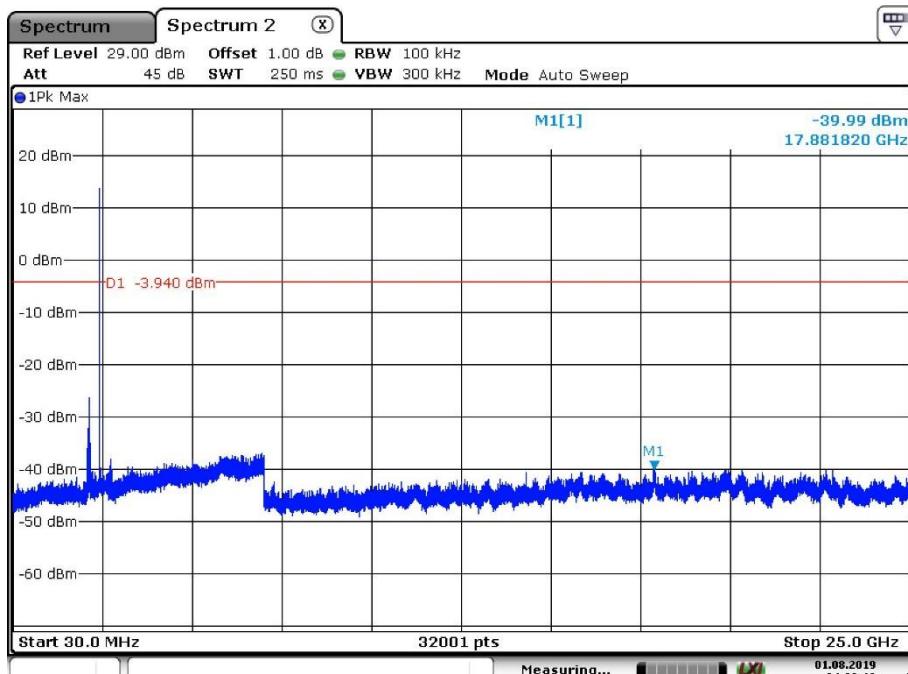
Appendix B.6: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Low Channel



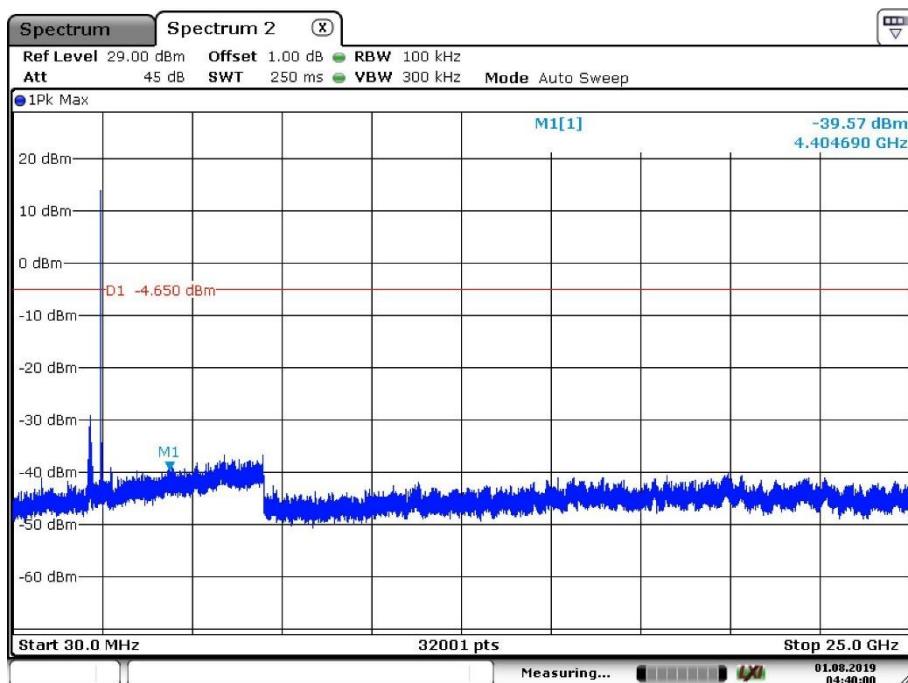
Date: 1.AUG.2019 04:42:24

Middle Channel

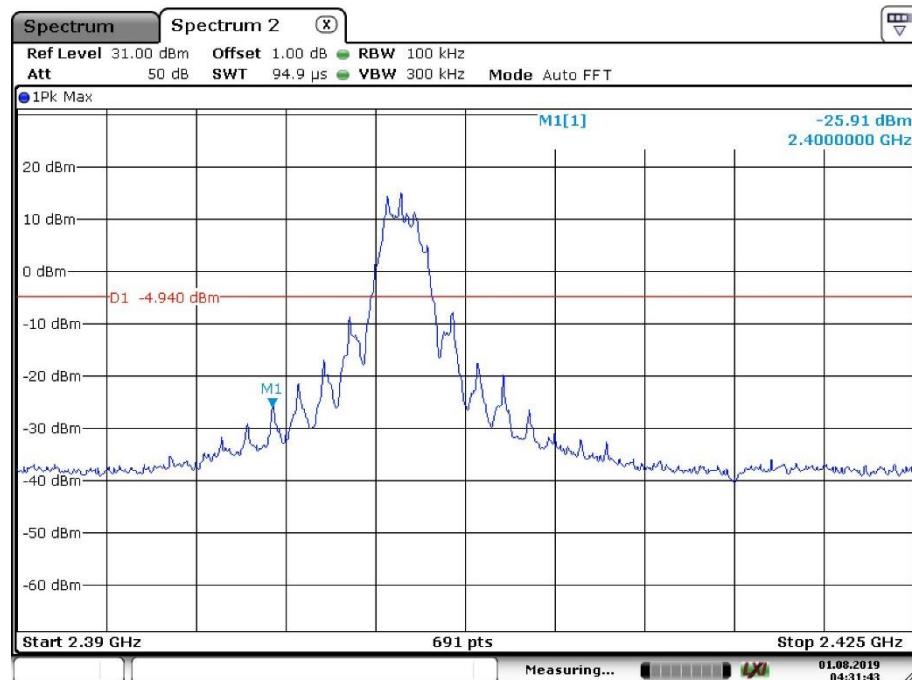


Date: 1.AUG.2019 04:38:18

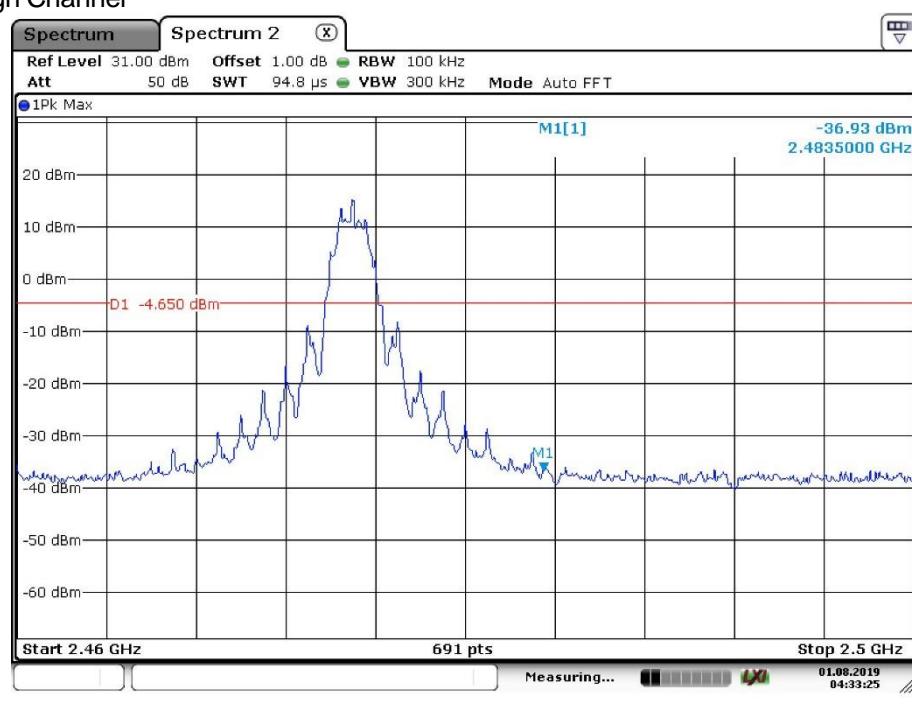
High Channel



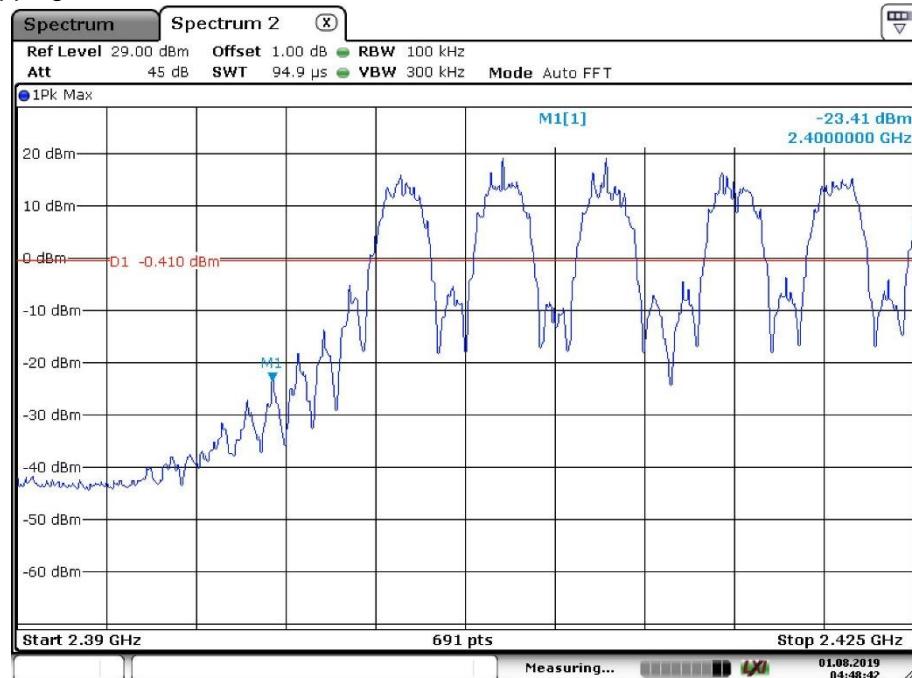
Band Edge, Low Channel



Band Edge, High Channel

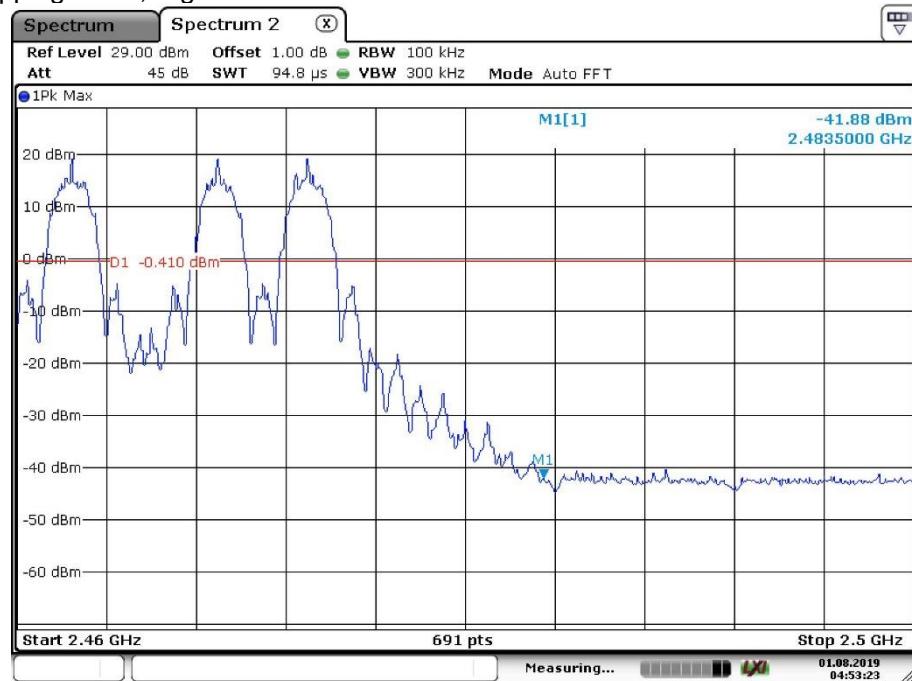


Band Edge, Hopping Mode, Low Channel



Date: 1.AUG.2019 04:48:42

Band Edge, Hopping Mode, High Channle



Date: 1.AUG.2019 04:53:23

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.

Appendix B.7: Test Results of Radiated Spurious Emissions

30MHz - 1GHz (Worst case)

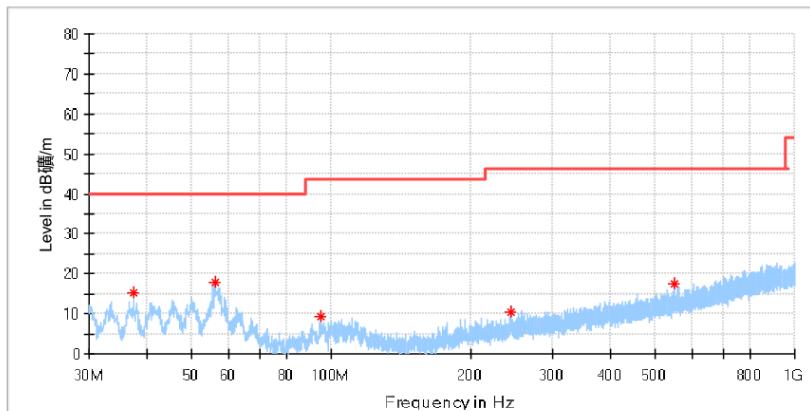
Test

1 / 1

Test Report

EUT Information

EUT Name:	Baby Monitor(Parent Unit)
Model:	MBP483APU
Test Mode:	TX
Test Voltage:	Fully charged battery
Remark:	Temp:23.4; Humi:56%
Standard:	FCC 15.247
Test By:	Kei Zhang
Review by:	Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.469000	15.33	--	40.00	24.67	100.0	H	77.0	-21.3
55.996000	17.91	--	40.00	22.09	100.0	H	189.0	-18.8
94.650500	9.36	--	43.50	34.14	100.0	H	175.0	-20.1
244.806500	10.55	--	46.00	35.45	100.0	H	57.0	-17.9
548.804500	17.54	--	46.00	28.46	100.0	H	0.0	-11.2

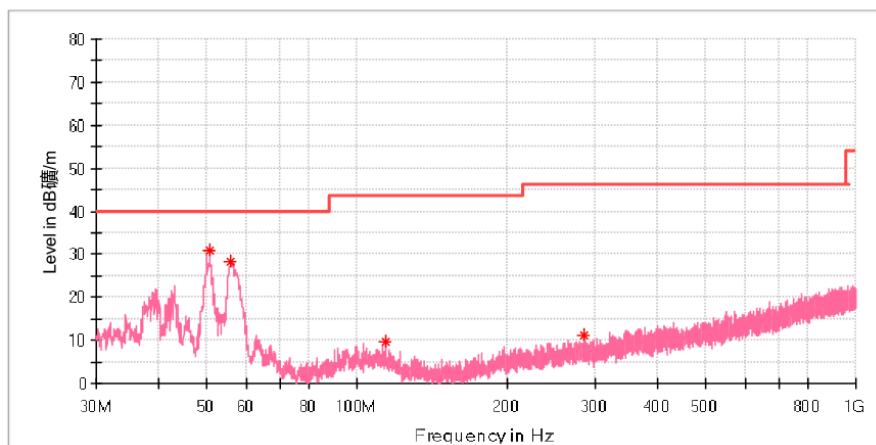
Test

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
Model: MBP483APU
Test Mode: TX
Test Voltage: Fully charged battery
Remark: Temp:23.4; Humi:56%
Standard: FCC 15.247
Test By: Kei Zhang
Review by: Terry Yin

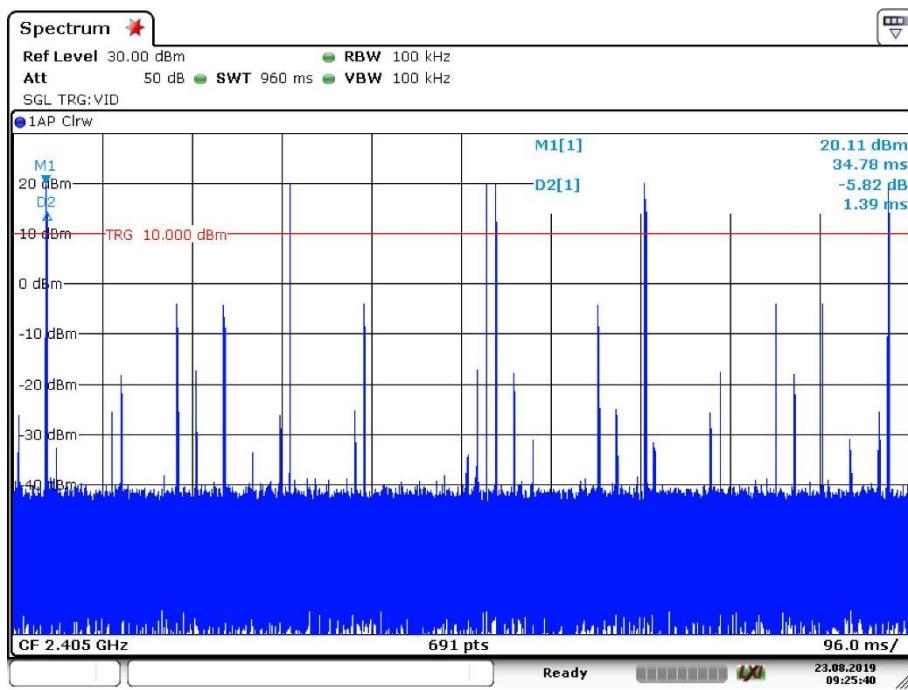


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
50.661000	30.83	--	40.00	9.17	100.0	V	305.0	-18.6
55.850500	28.46	--	40.00	11.54	100.0	V	338.0	-18.8
113.953500	9.82	--	43.50	33.68	100.0	V	89.0	-19.9
284.382500	11.01	--	46.00	34.99	100.0	V	102.0	-17.0

1GHz - 18GHz

Average Correction factor = $20 \cdot \log(X) = 20 \cdot \log(1.39/100) = 37.14 \text{ dB}$, where x is the duty cycle:



Date: 23.AUG.2019 09:25:40

Low Channel

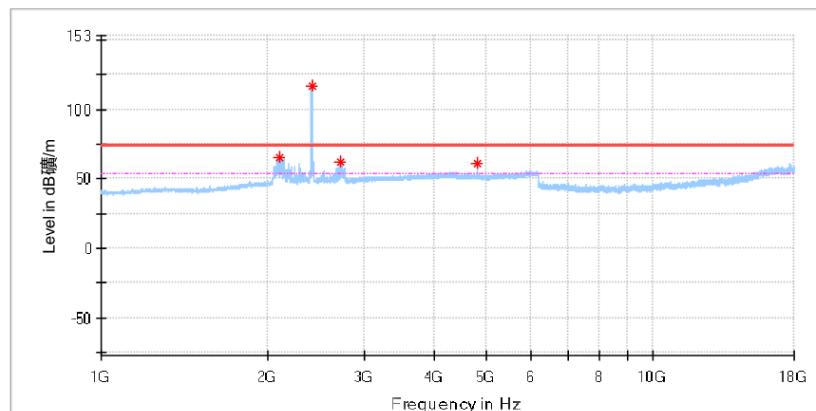
Test

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
Model: MBP483APU
Test Mode: TX Low Channel
Test Voltage: Fully charged battery
Remark: Temp:23.4; Humi:56%
Standard: FCC 15.247
Test By: Kei Zhang
Review by: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2101.000000	65.36	--	74.00	8.64	100.0	H	317.0	6.0
2405.500000	116.63	--	74.00	-42.63	100.0	H	324.0	7.0
2709.500000	62.08	--	74.00	11.92	100.0	H	324.0	7.6
4809.000000	61.17	--	74.00	12.83	100.0	H	231.0	13.6

Average Test Result:

Frequency (MHz)	MaxPeak (dB μ V/m)	Correction Factor(dB)	Average (dB μ V/m)	Average Limit (dB μ V/m)	Margin (dB)
2101.00	65.36	37.14	28.22	54.00	25.78
2709.50	62.08	37.14	24.94	54.00	29.06
4809.00	61.17	37.14	24.03	54.00	29.97

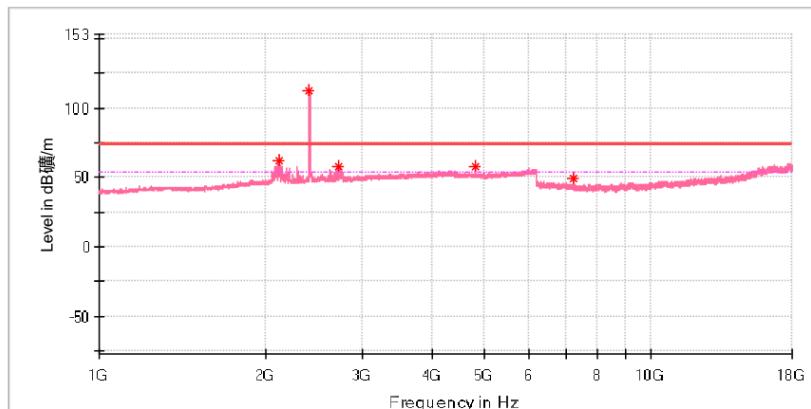
Test

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
Model: MBP483APU
Test Mode: TX Low Channel
Test Voltage: Fully charged battery
Remark: Temp:23.4; Humi:56%
Standard: FCC 15.247
Test By: Kei Zhang
Review by: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2116.500000	61.89	--	74.00	12.11	100.0	V	15.0	6.1
2404.500000	112.43	--	74.00	-38.43	100.0	V	228.0	7.0
2708.500000	58.02	--	74.00	15.98	100.0	V	234.0	7.6
4808.500000	57.58	--	74.00	16.42	100.0	V	200.0	13.6
7216.275000	49.04	--	74.00	24.96	100.0	V	4.0	8.7

Average Test Result:

Frequency (MHz)	MaxPeak (dB μ V/m)	Correction Factor(dB)	Average (dB μ V/m)	Average Limit (dB μ V/m)	Margin (dB)
2116.50	61.89	37.14	24.75	54.00	29.25
2708.50	58.02	37.14	20.88	54.00	33.12
4808.50	57.58	37.14	20.44	54.00	33.56
7216.28	49.04	37.14	11.90	54.00	42.10

Middle Channel

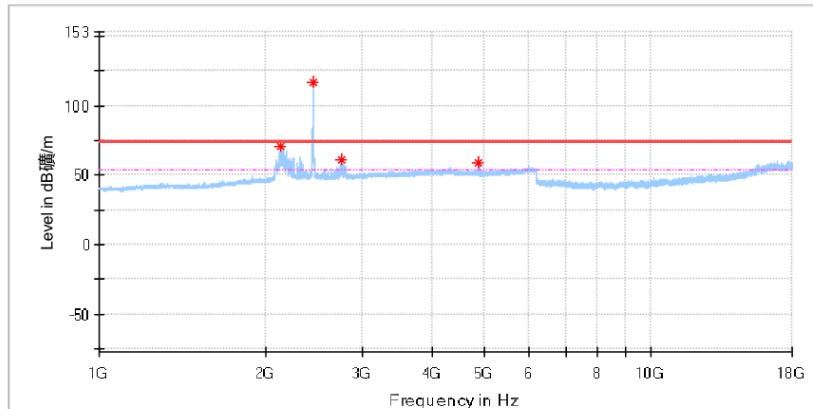
Test

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
Model: MBP483APU
Test Mode: TX Mid Channel
Test Voltage: Fully charged battery
Remark: Temp:23.4; Humi:56%
Standard: FCC 15.247
Test By: Kei Zhang
Review by: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2134.500000	70.41	--	74.00	3.59	100.0	H	320.0	6.1
2438.500000	116.91	--	74.00	-42.91	100.0	H	313.0	7.4
2743.000000	61.08	--	74.00	12.92	100.0	H	306.0	7.8
4876.500000	59.29	--	74.00	14.71	100.0	H	170.0	13.4

Average Test Result:

Frequency (MHz)	MaxPeak (dB μ V/m)	Correction Factor(dB)	Average (dB μ V/m)	Average Limit (dB μ V/m)	Margin (dB)
2134.50	70.41	37.14	33.27	54.00	20.73
2743.00	61.08	37.14	23.94	54.00	30.06
4876.50	59.29	37.14	22.15	54.00	31.85

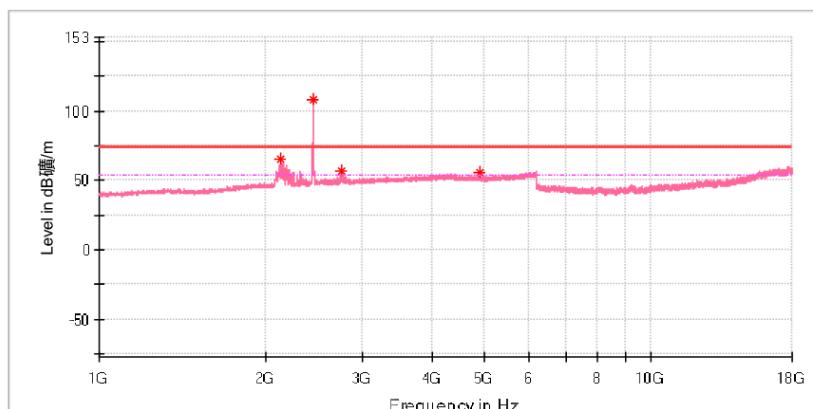
Test

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
Model: MBP483APU
Test Mode: TX Mid Channel
Test Voltage: Fully charged battery
Remark: Temp:23.4; Humi:56%
Standard: FCC 15.247
Test By: Kei Zhang
Review by: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2135.500000	64.81	--	74.00	9.19	100.0	V	125.0	6.1
2439.500000	108.41	--	74.00	-34.41	100.0	V	213.0	7.4
2743.000000	56.50	--	74.00	17.50	100.0	V	241.0	7.8
4879.500000	55.82	--	74.00	18.18	100.0	V	168.0	13.4

Average Test Result:

Frequency (MHz)	MaxPeak (dB μ V/m)	Correction Factor(dB)	Average (dB μ V/m)	Average Limit (dB μ V/m)	Margin (dB)
2135.50	64.81	37.14	27.67	54.00	26.33
2743.50	56.50	37.14	19.36	54.00	34.64
4879.50	55.82	37.14	18.68	54.00	35.32

High Channel

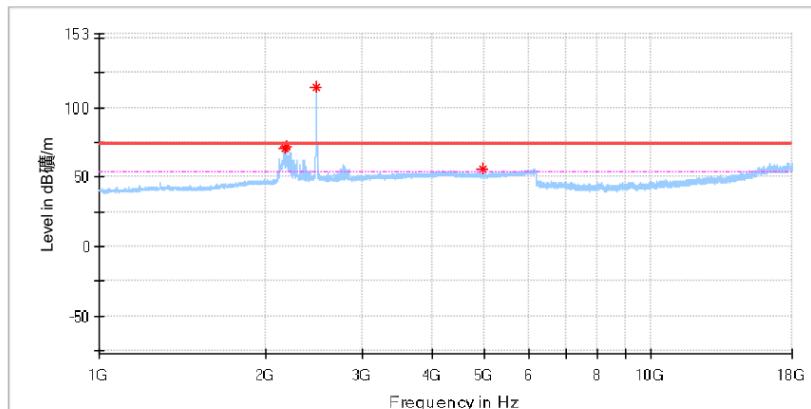
Test

1 / 1

Test Report

EUT Information

EUT Name:	Baby Monitor(Parent Unit)
Model:	MBP483APU
Test Mode:	TX High Channel
Test Voltage:	Fully charged battery
Remark:	Temp:23.4; Humi:56%
Standard:	FCC 15.247
Test By:	Kei Zhang
Review by:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2171.500000	71.14	--	74.00	2.86	100.0	H	4.0	6.2
2187.000000	71.51	--	74.00	2.49	100.0	H	357.0	6.3
2475.000000	114.86	--	74.00	-40.86	100.0	H	353.0	7.4
4951.000000	55.71	--	74.00	18.29	100.0	H	99.0	13.2

Average Test Result:

Frequency (MHz)	MaxPeak (dB μ V/m)	Correction Factor(dB)	Average (dB μ V/m)	Average Limit (dB μ V/m)	Margin (dB)
2171.50	71.14	37.14	34.00	54.00	20.00
2187.00	71.51	37.14	34.37	54.00	19.63
4951.00	55.71	37.14	18.57	54.00	35.43

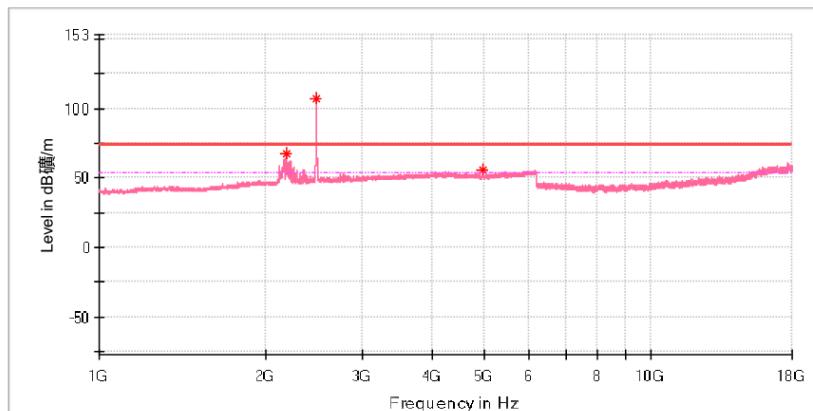
Test

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
Model: MBP483APU
Test Mode: TX High Channel
Test Voltage: Fully charged battery
Remark: Temp:23.4; Humi:56%
Standard: FCC 15.247
Test By: Kei Zhang
Review by: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2187.000000	67.04	--	74.00	6.96	100.0	V	24.0	6.3
2474.500000	107.11	--	74.00	-33.11	100.0	V	248.0	7.4
4951.000000	55.21	--	74.00	18.79	100.0	V	192.0	13.2

Average Test Result:

Frequency (MHz)	MaxPeak (dB μ V/m)	Correction Factor(dB)	Average (dB μ V/m)	Average Limit (dB μ V/m)	Margin (dB)
2187.00	67.04	37.14	29.90	54.00	24.10
4951.00	55.21	37.14	18.07	54.00	35.93

Appendix B.8: Test Results of Radiated Emissions in Restricted Bands

Low channel

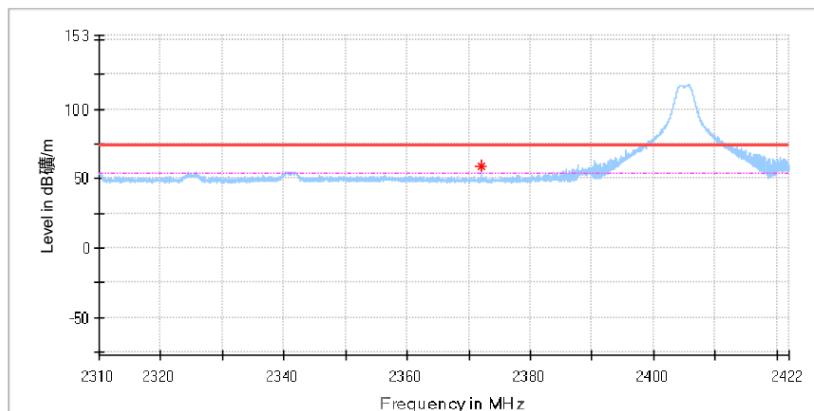
Test

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
Model: MBP483APU
Test Mode: TX Low Channel
Test Voltage: Fully charged battery
Remark: Temp:23.4; Humi:56%
Standard: FCC 15.247
Test By: Kei Zhang
Review by: Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2371.995294	59.34	--	74.00	14.66	100.0	H	22.0	6.9

Average Test Result:

Frequency (MHz)	MaxPeak (dBµV/m)	Correction Factor(dB)	Average (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)
2371.99	59.34	37.14	22.20	54.00	31.80

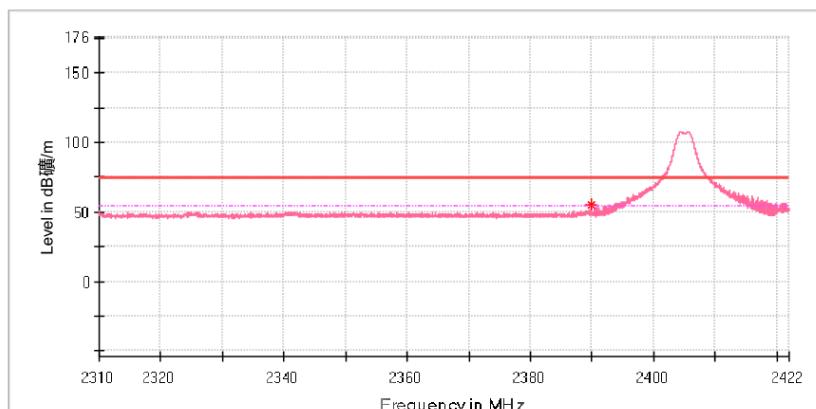
Test

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
Model: MBP483APU
Test Mode: TX Low Channel
Test Voltage: Fully charged battery
Remark: Temp:23.4; Humi:56%
Standard: FCC 15.247
Test By: Kei Zhang
Review by: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.80000	55.65	---	74.00	18.35	100.0	V	268.0	7.0

Average Test Result:

Frequency (MHz)	MaxPeak (dB μ V/m)	Correction Factor(dB)	Average (dB μ V/m)	Average Limit (dB μ V/m)	Margin (dB)
2389.80	55.65	37.14	18.51	54.00	35.49

High channel

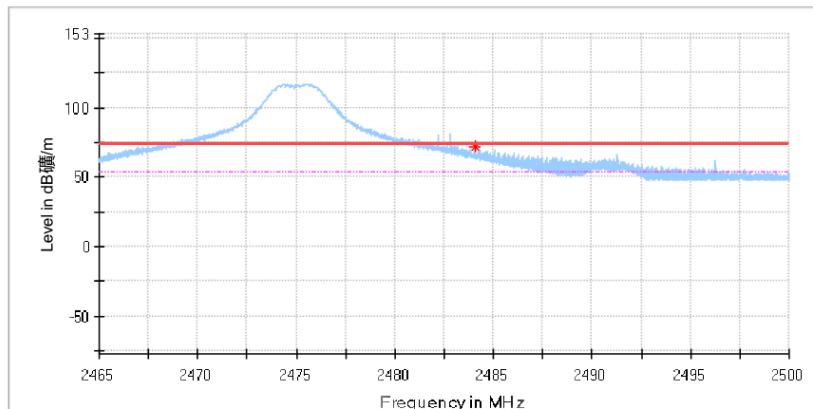
Test

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
Model: MBP483APU
Test Mode: TX High Channel
Test Voltage: Fully charged battery
Remark: Temp:23.4; Humi:56%
Standard: FCC 15.247
Test By: Kei Zhang
Review by: Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.105882	71.38	--	74.00	2.62	100.0	H	154.0	7.4

Average Test Result:

Frequency (MHz)	MaxPeak (dBµV/m)	Correction Factor(dB)	Average (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)
2484.11	71.38	37.14	34.24	54.00	19.76

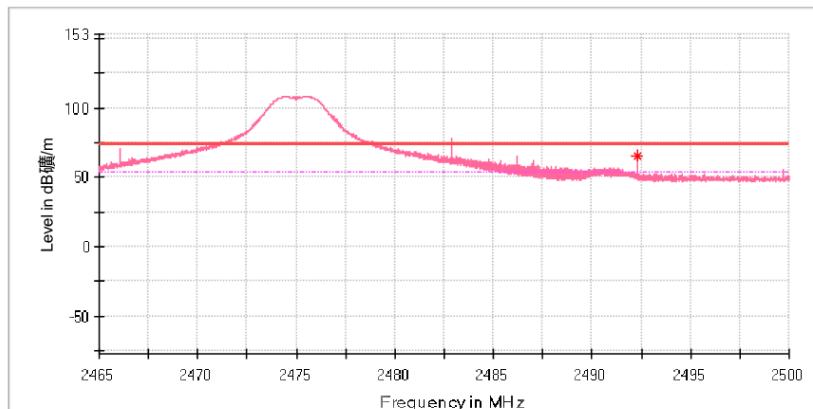
Test

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
Model: MBP483APU
Test Mode: TX High Channel
Test Voltage: Fully charged battery
Remark: Temp:23.4; Humi:56%
Standard: FCC 15.247
Test By: Kei Zhang
Review by: Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2492.305147	65.15	---	74.00	8.85	100.0	V	0.0	7.4

Average Test Result:

Frequency (MHz)	MaxPeak (dB μ V/m)	Correction Factor(dB)	Average (dB μ V/m)	Average Limit (dB μ V/m)	Margin (dB)
2492.31	65.15	37.14	28.01	54.00	25.99

Appendix B.9: Test Results of Conducted Emission on AC Mains Mode C with Battery #1(GPI)

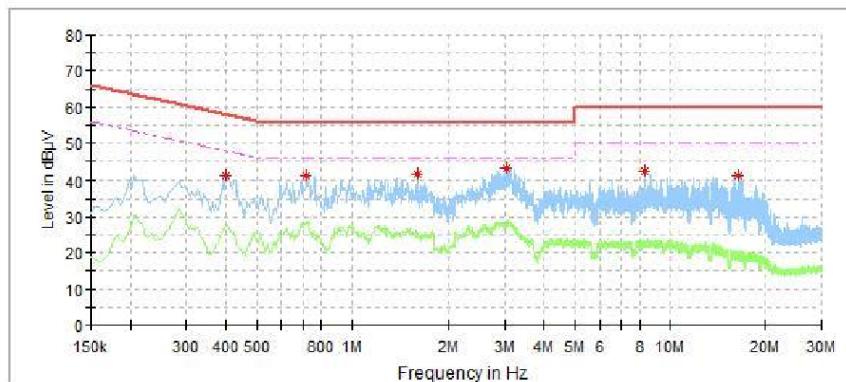
Charging+Connecting-GPI-L

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
EUT Model: MBP483APU
Order No. 168124634 item 100
Test Mode: Wireless connecting mode
Test Voltage: AC 120V/60Hz
Test By: Shower.Dai
Review By: Gary Chen
Remark: GPI Battery



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.402000	40.93	--	57.81	16.89	--	--	L1	9.7
0.720000	41.00	--	56.00	15.00	--	--	L1	9.7
1.588000	41.42	--	56.00	14.58	--	--	L1	9.8
3.056000	43.22	--	56.00	12.78	--	--	L1	9.8
8.328000	42.39	--	60.00	17.61	--	--	L1	10.0
16.480000	41.14	--	60.00	18.86	--	--	L1	10.2

Final_Result

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
--	--	--	--	--	--	--	--	--

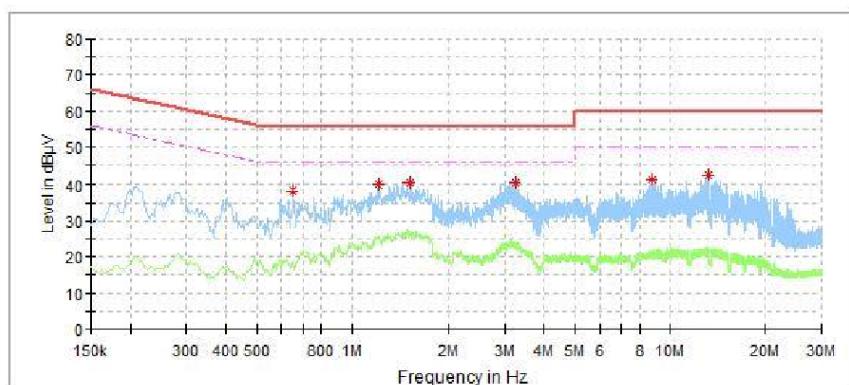
Charging+Connecting-GPI-N

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
EUT Model: MBP483APU
Order No. 168124634 item 100
Test Mode: Wireless connecting mode
Test Voltage: AC 120V/60Hz
Test By: Shower.Dai
Review By: Gary Chen
Remark: GPI Battery



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.652000	38.22	—	56.00	17.78	—	—	N	9.7
1.212000	39.85	—	56.00	16.15	—	—	N	9.8
1.512000	40.02	—	56.00	15.98	—	—	N	9.8
3.252000	40.31	—	56.00	15.69	—	—	N	9.9
8.736000	40.94	—	60.00	19.06	—	—	N	10.1
13.204000	42.28	—	60.00	17.72	—	—	N	10.2

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
—	—	—	—	—	—	—	—	—

8/7/2019

1:29:03 PM

Mode C with Battery #2(Justhgih)

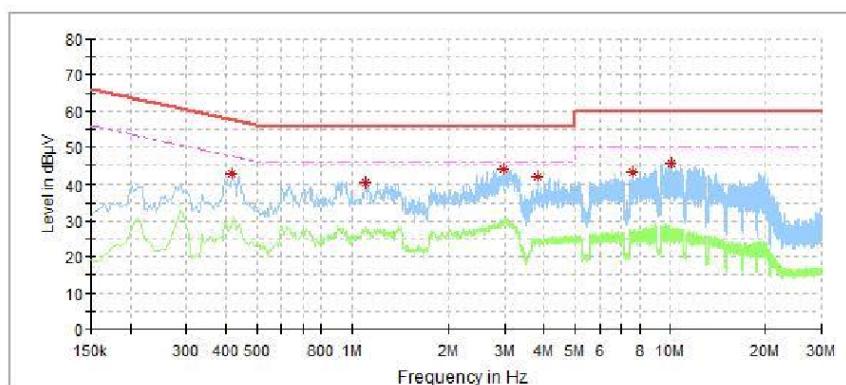
Charging+Connecting-Justhigh-L

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
EUT Model: MBP483APU
Order No. 168124634 item 100
Test Mode: Wireless connecting mode
Test Voltage: AC 120V/60Hz
Test By: Shower.Dai
Review By: Gary Chen
Remark: Justhigh Battery



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.418000	42.57	—	57.49	14.91	—	—	L1	9.7
1.108000	40.24	—	56.00	15.76	—	—	L1	9.7
2.972000	43.89	—	56.00	12.11	—	—	L1	9.8
3.820000	41.86	—	56.00	14.14	—	—	L1	9.9
7.620000	43.25	—	60.00	16.75	—	—	L1	10.0
10.096000	45.42	—	60.00	14.58	—	—	L1	10.1

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
—	—	—	—	—	—	—	—	—

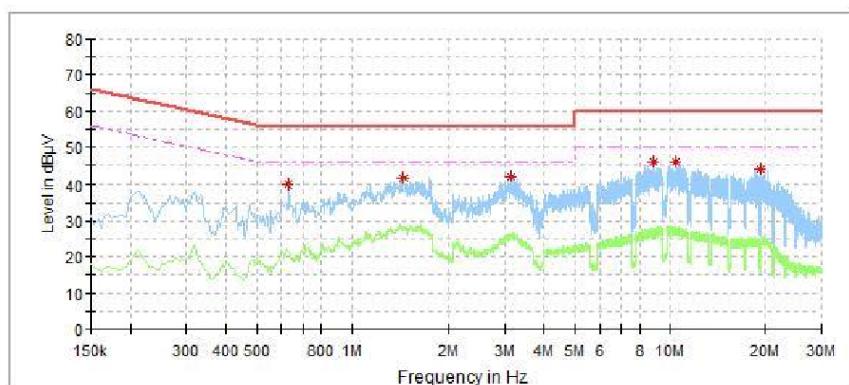
Charging+Connecting-Justhigh-N

1 / 1

Test Report

EUT Information

EUT Name: Baby Monitor(Parent Unit)
EUT Model: MBP483APU
Order No. 168124634 item 100
Test Mode: Wireless connecting mode
Test Voltage: AC 120V/60Hz
Test By: Shower.Dai
Review By: Gary Chen
Remark: Justhigh Battery



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.632000	39.63	—	56.00	16.37	—	—	N	9.7
1.448000	41.61	—	56.00	14.39	—	—	N	9.8
3.144000	41.93	—	56.00	14.07	—	—	N	9.9
8.884000	45.93	—	60.00	14.07	—	—	N	10.1
10.392000	46.13	—	60.00	13.87	—	—	N	10.1
19.372000	43.92	—	60.00	16.08	—	—	N	10.3

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
—	—	—	—	—	—	—	—	—