Prüfbericht - Produkte
Test Report - Products

TÜVRheinland®

Prüfbericht-Nr.: *Test report no.:*	**CN21F5L3 001**	**Auftrags-Nr.:** *Order no.:*	168330389	Seite 1 von 22 *Page 1 of 22*
Kunden-Referenz-Nr.: *Client reference no.:*	N/A	**Auftragsdatum:** *Order date:*	2021-07-28	
Auftraggeber: *Client:*	**ebuynow ecommerce Ltd** 1321 Blanshard Street (The Atrium) Suite 301, Victoria, BC V8W0B6, Victoria, Canada			
Prüfgegenstand: *Test item:*	Moto Watch 100			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	MOSWZ100 (Trademark: motorola)			
Auftrags-Inhalt: *Order content:*	FCC and IC approval			
Prüfgrundlage: *Test specification:*	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 2.1093		RSS-247 Issue 2 February 2017 RSS-Gen Issue 5 February 2021 RSS-102 Issue 5 February 2021	

Wareneingangsdatum: *Date of sample receipt:*	2021-08-10
Prüfmuster-Nr.: *Test sample no.:*	A003106741-015
Prüfzeitraum: *Testing period:*	2021-08-11 – 2021-08-30
Ort der Prüfung: *Place of testing:*	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüfergebnis*: *Test result*:*	Pass

Please refer to photo documents

geprüft von: *tested by:*	X Alex Lan	**genehmigt von:** *authorized by:*	X Winnie Hou
Datum: *Date:* 2021-09-26	Signed by: Alex Lan	**Ausstellungsdatum:** *Issue date:* 2021-09-27	Signed by: Winnie Hou
Stellung / Position	Senior Project Engineer	**Stellung** / Position	Department Manager

Sonstiges / *Other:*

FCC ID: 2AT76-MOSWZ100
IC: 22297-MOSWZ100 HVIN: MOSWZ100

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	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhalt
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specifications(s)		*F(ail) = failed a.m. test specifications(s)*	*N/A = not applicable*	*N/T = not tested*

TÜV Rheinland (Shenzhen) Co., Ltd. 1601 R&D Room, 1602-1604, 17-18F, Building 7 Site C, Vanke Cloud City Phase I, Xingke First Street, Xili Street, Xili Community, Nanshan District, Shenzhen 518052, P.R. China
Mail: service@de.tuv.com · Web: www.tuv.com

Test Summary

5.1.1 ANTENNA REQUIREMENT
RESULT: Pass

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER
RESULT: Pass

5.1.3 CONDUCTED POWER SPECTRAL DENSITY
RESULT: Pass

5.1.4 99%DB BANDWIDTH
RESULT: Pass

5.1.5 6DB BANDWIDTH
RESULT: Pass

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

5.1.7 RADIATED SPURIOUS EMISSION
RESULT: Pass

5.1.8 CONDUCTED EMISSION ON AC MAINS
RESULT: Pass

6.1.1 ELECTROMAGNETIC FIELDS
RESULT: Pass

Contents

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 Conducted & Radiated Testing

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, People's Republic of China

FCC Registration No.: 694916

IC Registration No.: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
Wireless Connectivity Tester	R&S	CMW270	101375	2022-08-09
Signal Analyzer	R&S	FSV 40	101441	2022-08-09
Vector Signal Generator	R&S	SMBV100A	263301	2022-08-09
Signal Generator	R&S	SMB100A	115186	2022-08-09
OSP	R&S	OSP 150	101017	2021-12-10
Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
Test Software	R&S	WMS32 (V11.00.00)	N/A	N/A
Power Meter	R&S	NRP2	107105	2021-12-10
Power Sensor	R&S	NRP-Z81	105677	2022-08-09
Humid & Temp Programmable Tester	BOST	NTH090-60	19040801	2022-04-02
Shielding Room 8#	Albatross	SR8	APC17151-SR8	2024-06-22
Unwanted Emission Testing				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
EMI Test Receiver	R&S	ESR 7	102021	2022-08-10
Signal Analyzer	R&S	FSV 40	101439	2022-08-09
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	2022-08-09
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2022-08-09
Amplifier	R&S	SCU-18F	180070	2022-08-09
Amplifier	R&S	SCU40A	100475	2022-08-09
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2022-08-08
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2022-08-08
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2022-08-08
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2022-09-13
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A

3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-06-22
Conducted Emissions testing				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
EMI Test Receiver	R&S	ESR3	102428	2021-08-16
Artificial Mains Network	R&S	ENV216	102333	2021-08-16
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

2.3 Traceability

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

2.4 Calibration

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

2.5 Measurement Uncertainty

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

Item		Extended Uncertainty
Conducted Emission		± 2.74 dB
Radiated Emission (30-1000MHz)	Field strength (dBμV/m)	4.27dB
Radiated Emission (above 1000MHz)	Field strength (dBμV/m)	4.46dB
Radio Spectrum		± 1.5 dB

2.6 Location of Original Data

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

2.7 Status of Facility Used for Testing

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

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a smart watch which supports Bluetooth Low Energy and GPS technologies.

For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	Moto Watch 100
Type Designation	MOSWZ100
Trade Mark	motorola
FCC ID	2AT76-MOSWZ100
IC	22297-MOSWZ100
HVIN	MOSWZ100
Operating Voltage	DC 3.85V, 355mAh via built-in Lithium Battery or DC 5V for charging
Technical Specification of Bluetooth Low Energy	
Operating Frequency	2402 – 2480 MHz
Bluetooth Core Version	Bluetooth 5.2, single mode
Data rate	1Mbps
Channel Number	40 channels
Channel separation	2MHz
Modulation	GFSK
Antenna Type	Ceramic antenna
Number of Antenna	1
Antenna Gain	0 dBi

Table 3: RF Channel and Frequency of Bluetooth Low Energy

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	**2402.00**	10	2422.00	20	2442.00	30	2462.00
01	2404.00	11	2424.00	21	2444.00	31	2464.00
02	2406.00	12	2426.00	22	2446.00	32	2466.00
03	2408.00	13	2428.00	23	2448.00	33	2468.00
04	2410.00	14	2430.00	24	2450.00	34	2470.00
05	2412.00	15	2432.00	25	2452.00	35	2472.00
06	2414.00	16	2434.00	26	2454.00	36	2474.00
07	2416.00	17	2436.00	27	2456.00	37	2476.00
08	2418.00	18	2438.00	28	2458.00	38	2478.00
09	2420.00	**19**	**2440.00**	29	2460.00	**39**	**2480.00**

3.3 Independent Operation Modes

The basic operation modes are:

A. On, transmitting mode
    1. Low channel
    2. Middle channel
    3. High channel

B. On, Operating

C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- Block Diagram
- FCC/IC Label and Location Info
- Operation Description
- Photo Document
- Schematics
- 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 testing were performed according to the procedures in ANSI C63.10: 2013.

4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	Rating
Notebook	Lenovo	ThinkPad X260	N/A
Adapter	Lab	LX050100	Input: AC 100-240V, 50/60Hz, 0.35A Output: DC 5V, 2A

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 30MHz)

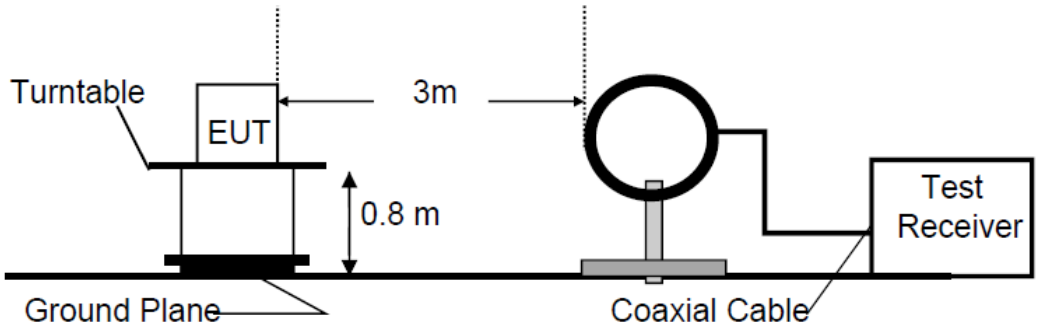


Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

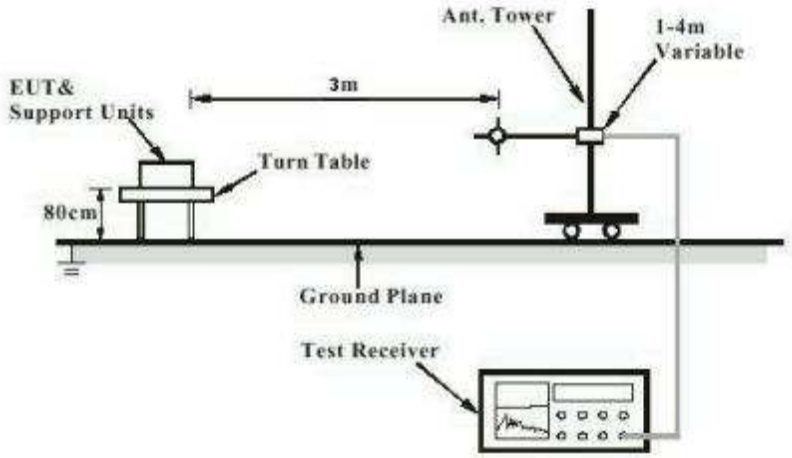


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

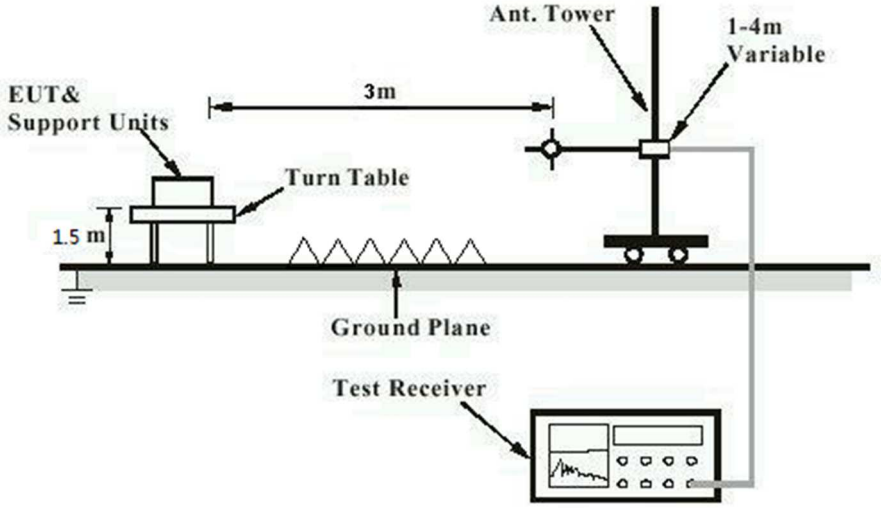


Diagram of Measurement Configuration for Mains Conduction Measurement

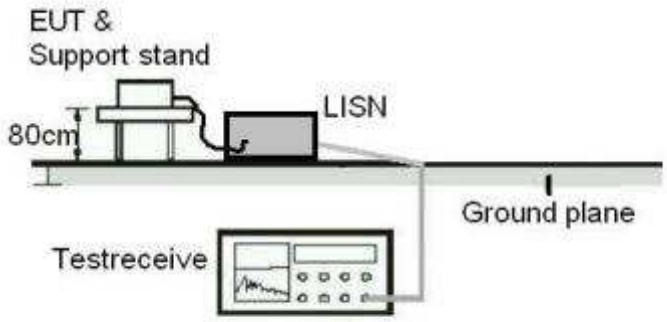
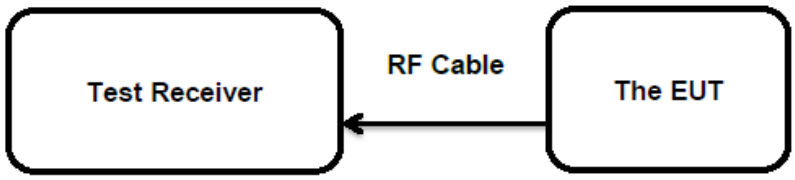


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(b)(4) and Part 15.203 RSS-Gen Clause 6.7
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an Integral 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.

Refer to EUT Photo for further details.

5.1.2 Maximum Peak Conducted Output Power

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(b)(3) RSS-247 Clause 5.4(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	< 1 Watt (Maximum Conducted Peak Power) e.i.r.p. <4W
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2021-08-16
Input voltage	:	Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 5: Test Result of Maximum Peak Conducted Output Power, 1Mbps

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	0.6	0.00115	1
Middle Channel	2440	0.7	0.00117	1
High Channel	2480	0.2	0.00105	1

Note: The cable loss is taken into account in results and the e.i.r.p. is 0.7 dBm less than 4W (36 dBm).

5.1.3 Conducted Power Spectral Density

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(e) RSS-247 Clause 5.2(b)
Basic standard	:	ANSI C63.10: 2013
Limits	:	8 dBm / 3kHz
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2021-08-16
Input voltage	:	Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 6: Test Result of Power Spectral Density, 1Mbps

Channel	Channel Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)
Low Channel	2402	-15.11	8
Middle Channel	2440	-15.27	8
High Channel	2480	-15.52	8

Note: The cable loss is taken into account in results.

For the measurement records, refer to the appendix B.

5.1.4 99%dB Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	RSS-Gen clause 6.7
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2021-08-16
Input voltage	:	Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

Table 7: Test Result of 99% Bandwidth, 1Mbps

Channel	Channel Frequency (MHz)	99% Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	1.050	/	Pass
Mid Channel	2440	1.050	/	Pass
High Channel	2480	1.050	/	Pass

For the measurement records, refer to the appendix B.

5.1.5 6dB Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(2) RSS-247 Clause 5.2(a)
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2021-08-16
Input voltage	:	Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

Table 8: Test Result of 6dB Bandwidth, 1Mbps

Channel	Channel Frequency (MHz)	-6dB Bandwidth (kHz)	Limit (kHz)	Result
Low Channel	2402	752.476	500	Pass
Mid Channel	2440	752.476	500	Pass
High Channel	2480	752.476	500	Pass

For the measurement records, refer to the appendix B.

5.1.6 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT: **Pass**

Test Specification

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

Test Setup

Date of testing	:	2021-08-16
Input voltage	:	Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	53 %
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.

5.1.7 Radiated Spurious Emission

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(d) & FCC Part 15.205 RSS-247 Clause 3.3 & 5.5
Basic standard	:	ANSI C63.10: 2013
Limits	:	Refer to 15.209(a) of FCC part 15.247(d) RSS-Gen Table 4 & Table 5
Kind of test site	:	3m Semi-anechoic Chamber

Test Setup

Date of testing	:	2021-08-16
Input voltage	:	Battery
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24 ℃
Relative humidity	:	47 %
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.

5.1.8 Conducted Emission on AC Mains

RESULT: **Pass**

Test Specification

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

Test Setup

Date of testing	:	2021-08-30
Input voltage	:	AC 120V/60Hz
Operation mode	:	B
Earthing	:	Not connected
Ambient temperature	:	24.8 ℃
Relative humidity	:	53 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

6 Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT: **Pass**

Test Specification

Test standard : FCC KDB Publication 447498 v06
CFR47 FCC Part 2: Section 2.1093
CFR47 FCC Part 1: Section 1.1310
RSS-102 Issue 5 March 2015

Measurement Record:

The measured maximum conducted output power of the EUT is 0.7dBm ≈ 1.17mW, which is far below the SAR exclusion threshold level 10mW (SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm), hence the EUT is excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure. Guidance v06.

The measured maximum specified e.i.r.p of the EUT is 0.7dBm ≈ 1.17mW, which is far below the SAR exclusion threshold level 4mW, hence the EUT is excluded from SAR evaluation according to RSS-102 Issue 5 section 2.5.1.

7 Photographs of the Test Set-Up

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

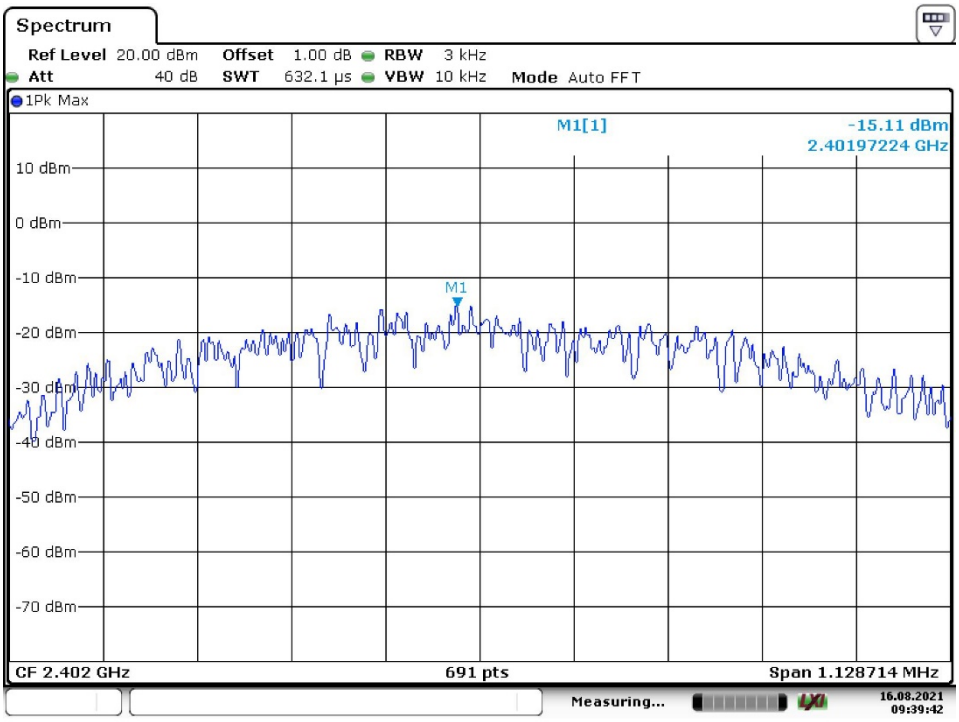
8 List of Tables

Appendix B: Test Results

Appendix B.1: Conducted Power Spectral Density

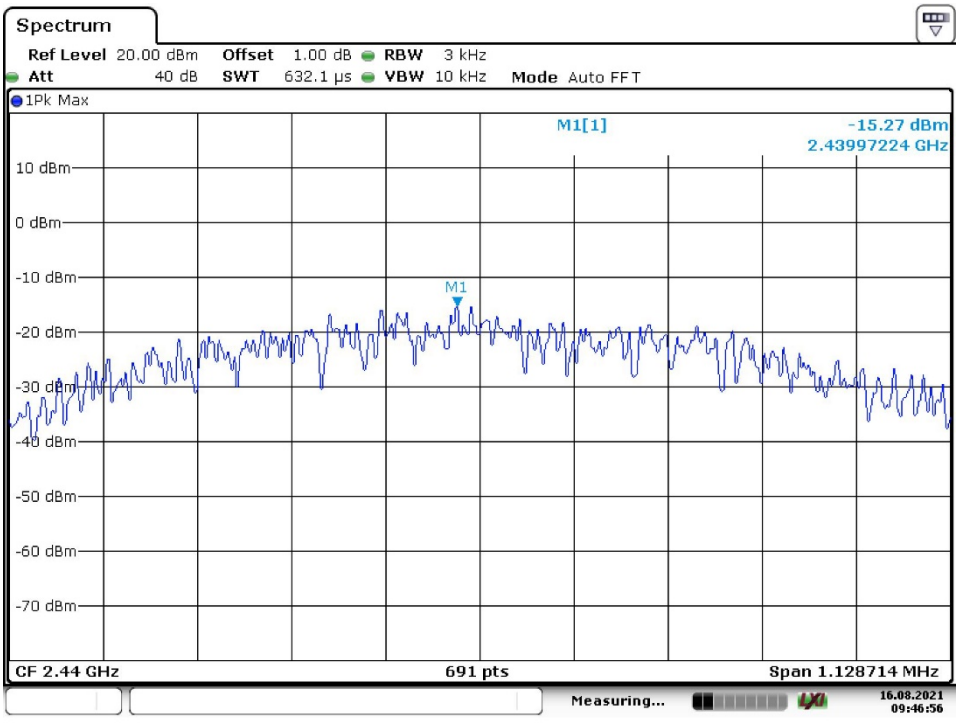
BLE, 1Mbps

Low Channel



Date: 16.AUG.2021 09:39:42

Middle Channel



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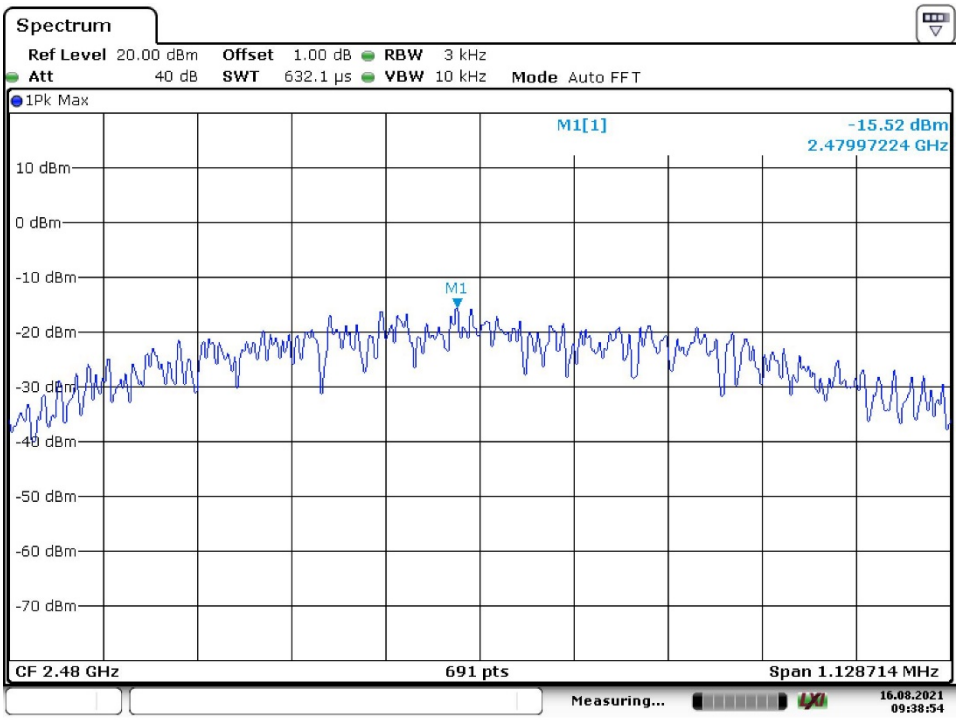
High Channel



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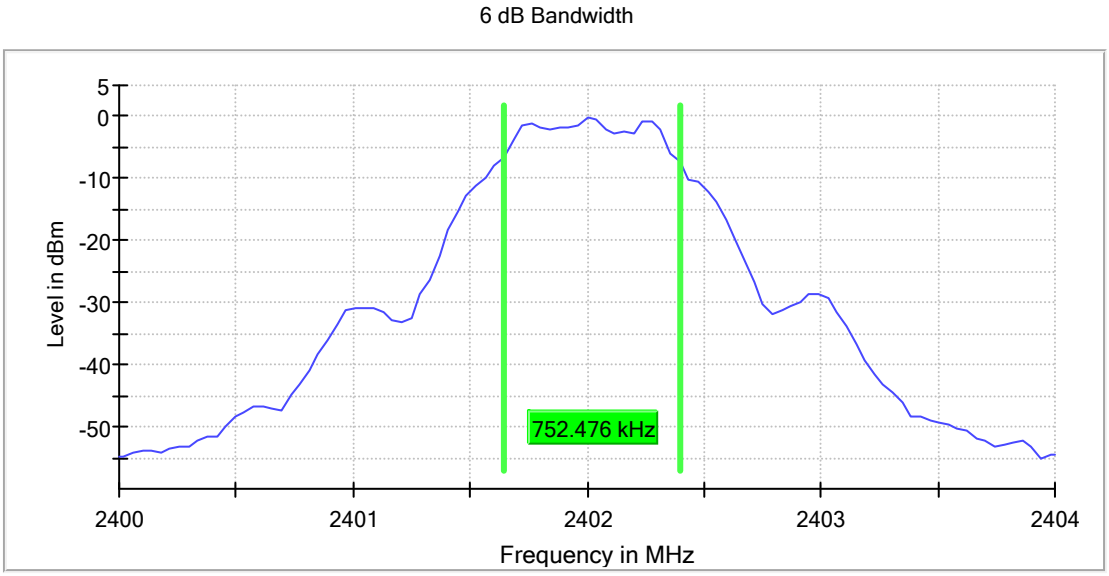
Appendix B.2: 6dB Bandwidth

BLE, 1Mbps

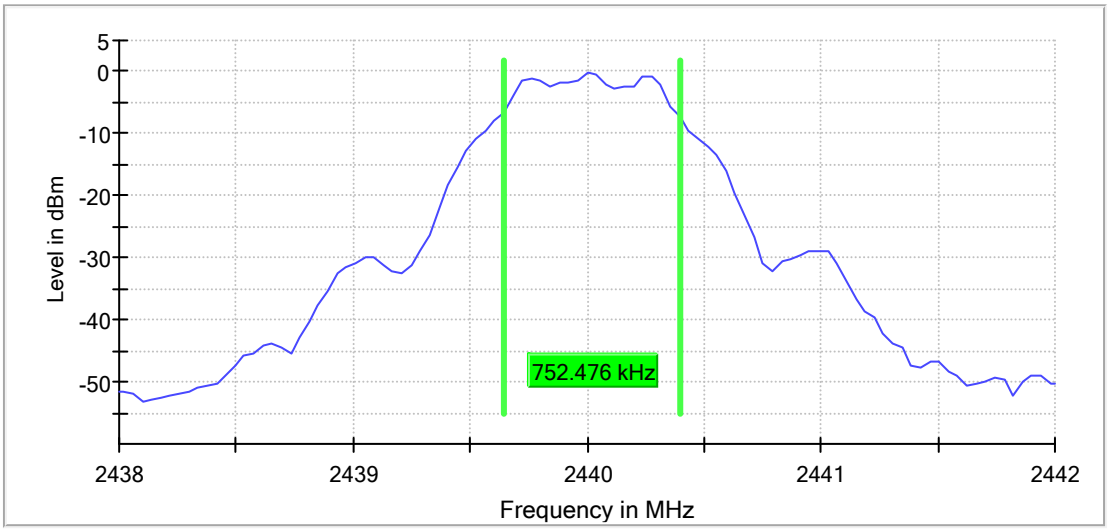
Low Channel

RBW=100kHz, VBW=300kHz



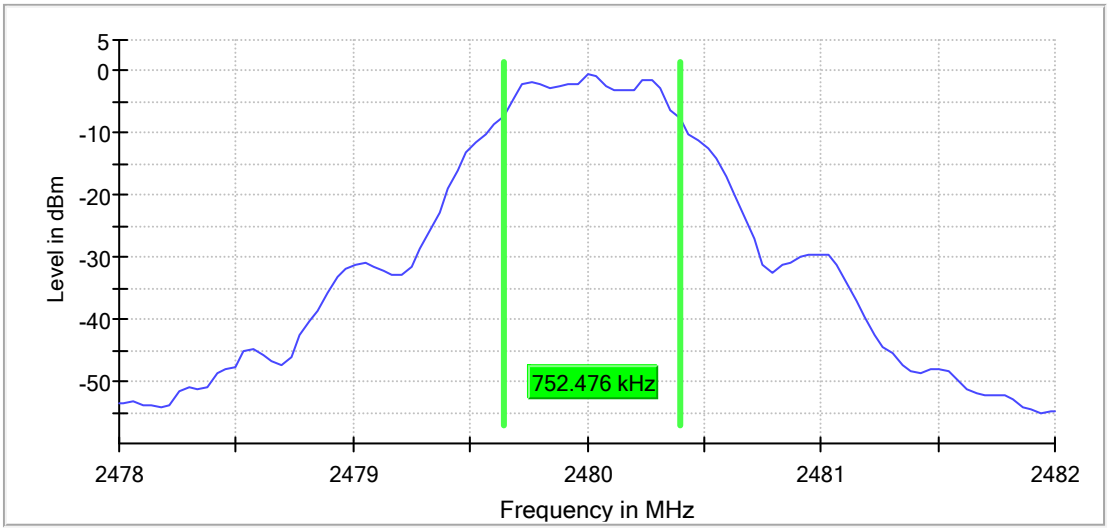
Middle Channel

RBW=100kHz, VBW=300kHz



High Channel

RBW=100kHz, VBW=300kHz

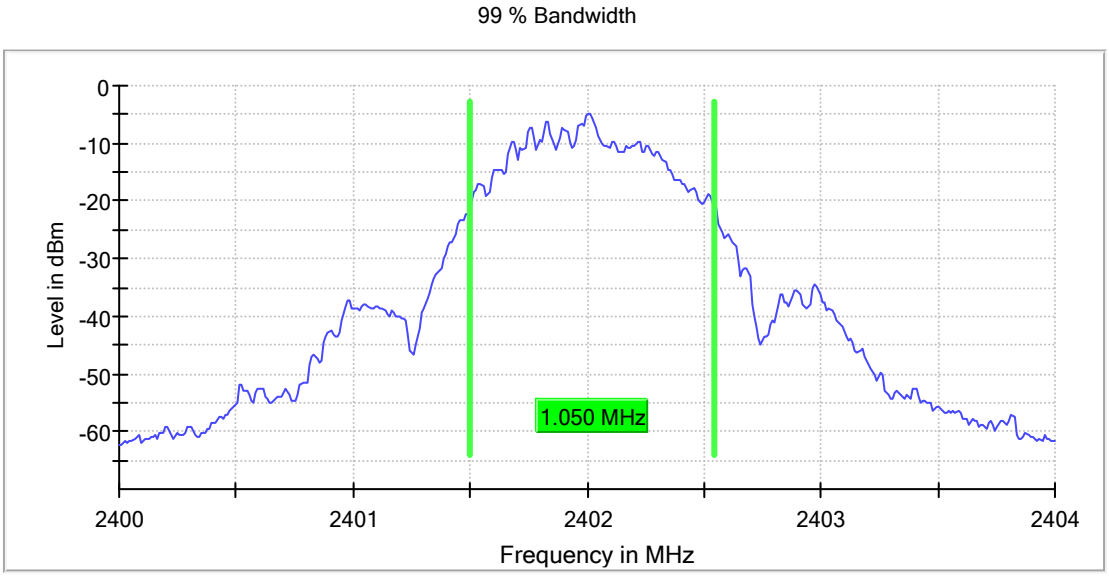


Appendix B.3: 99% Bandwidth

BLE, 1Mbps

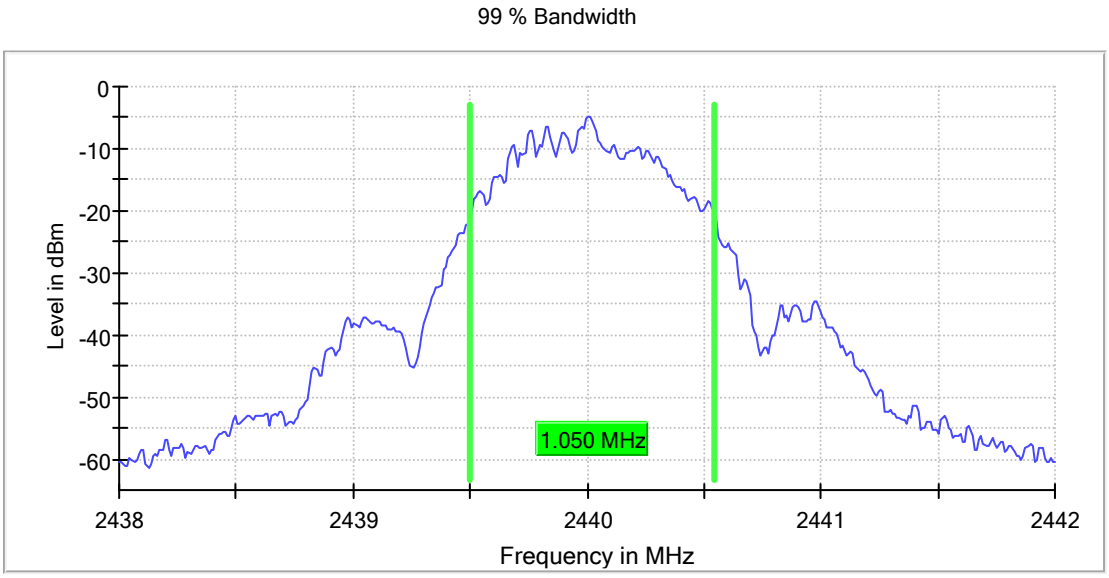
Low Channel

RBW=20kHz, VBW=100kHz



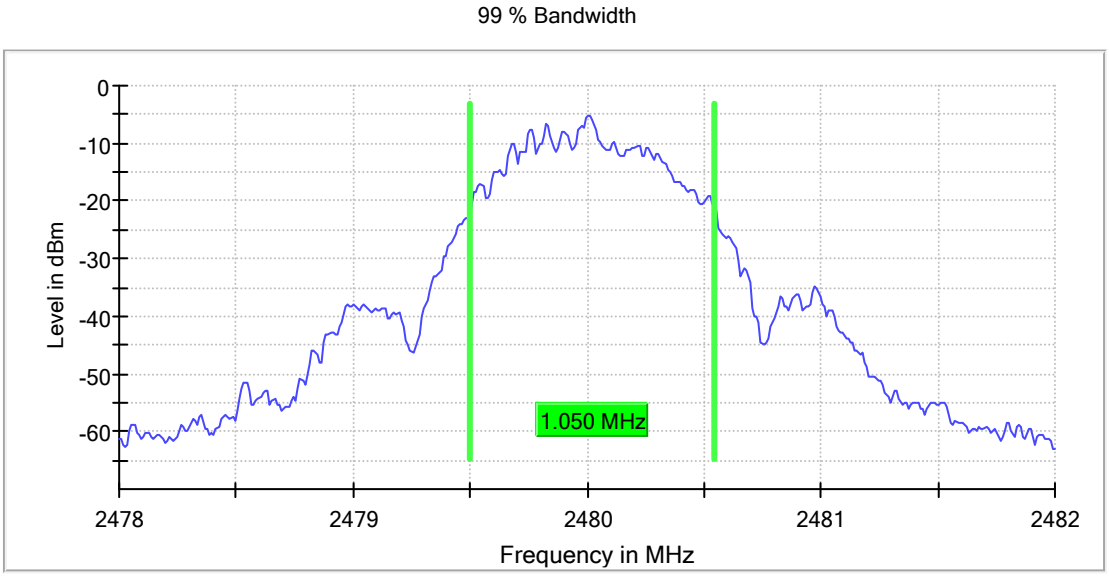
Middle Channel

RBW=20kHz, VBW=100kHz



High Channel

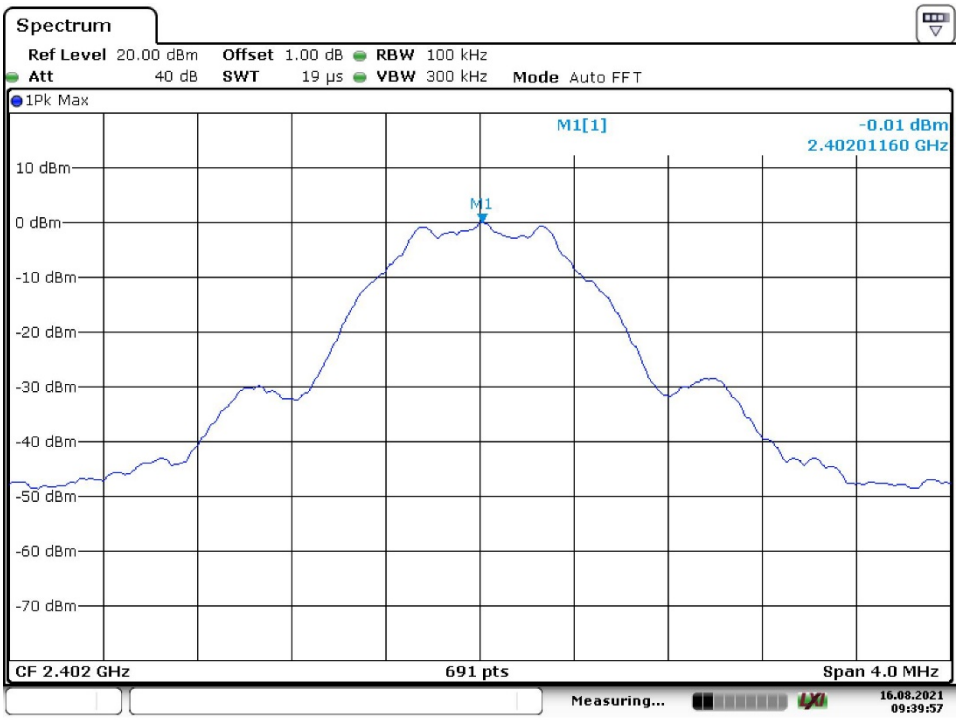
RBW=20kHz, VBW=100kHz



Appendix B.4: Conducted Spurious Emissions Measured in 100 kHz Bandwidth

BLE, 1Mbps

Low Channel



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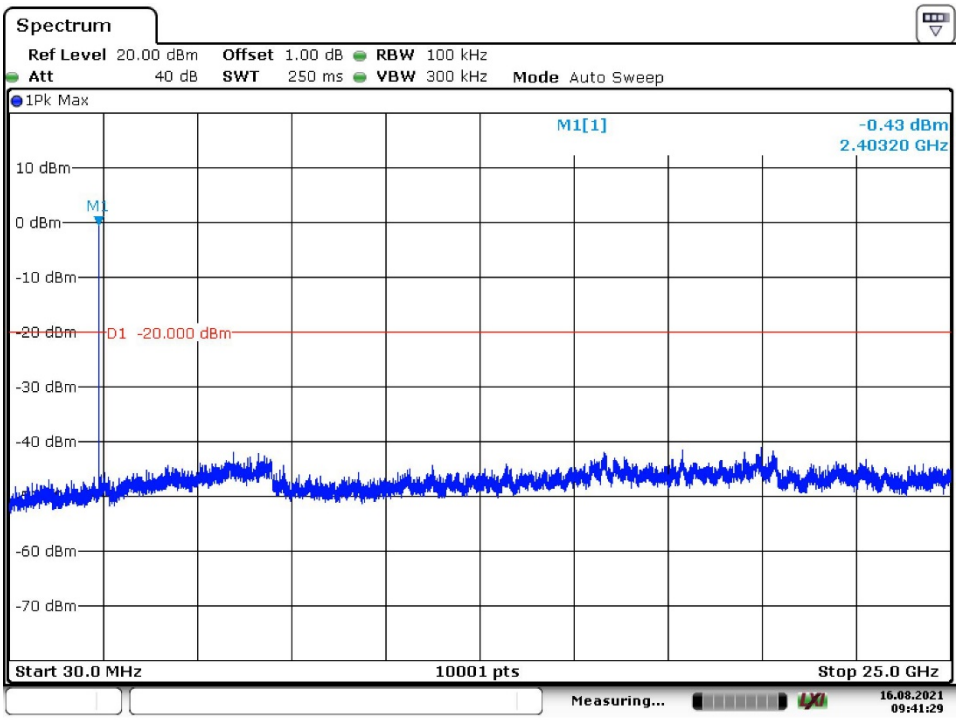

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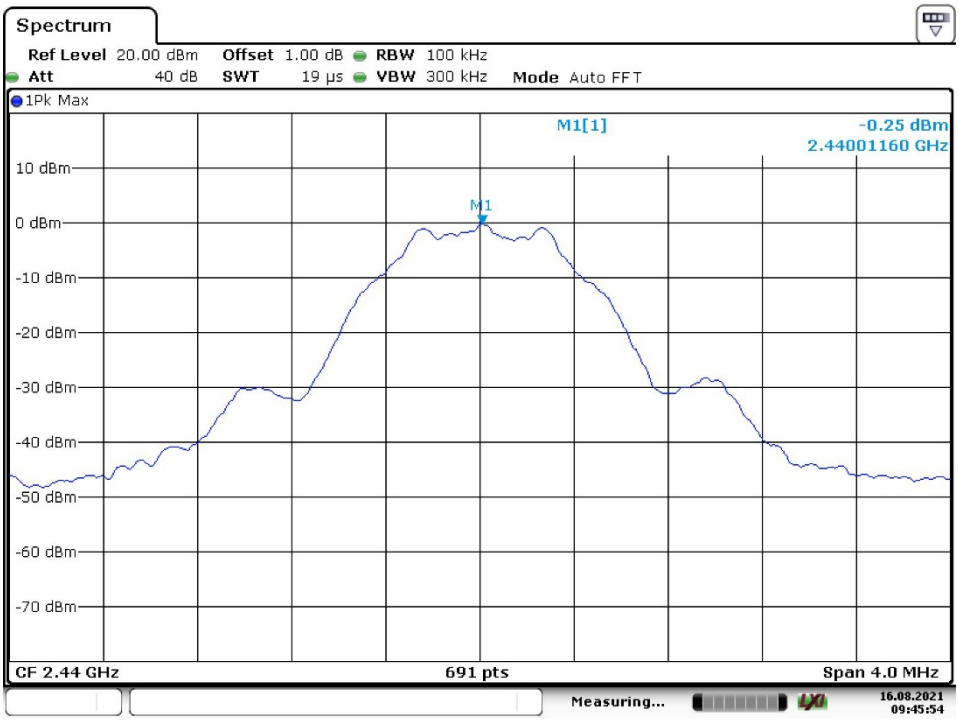
Middle Channel



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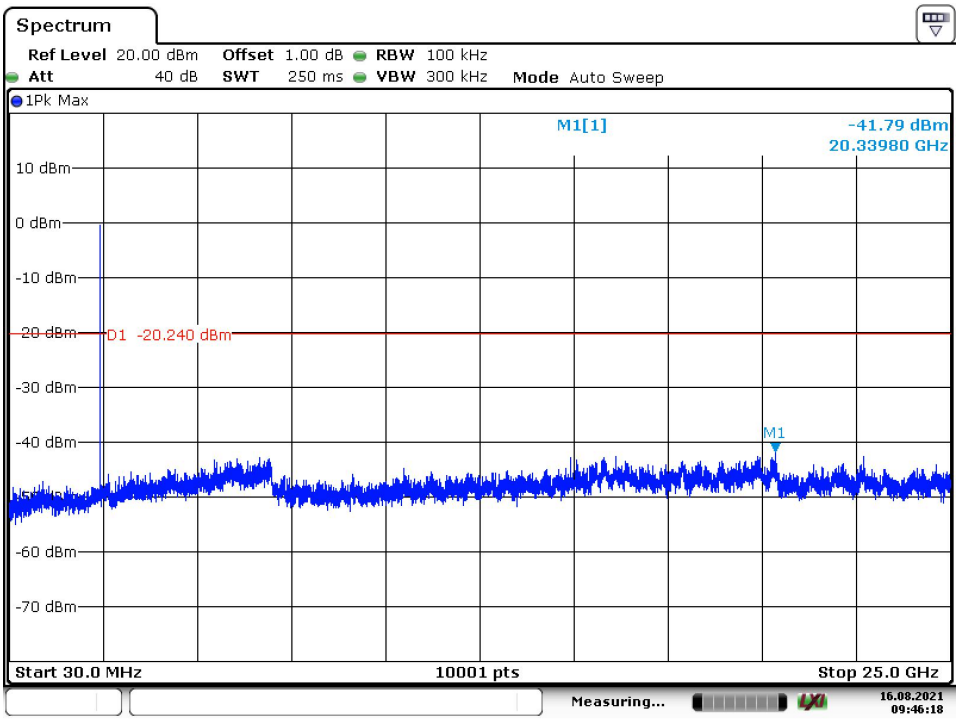

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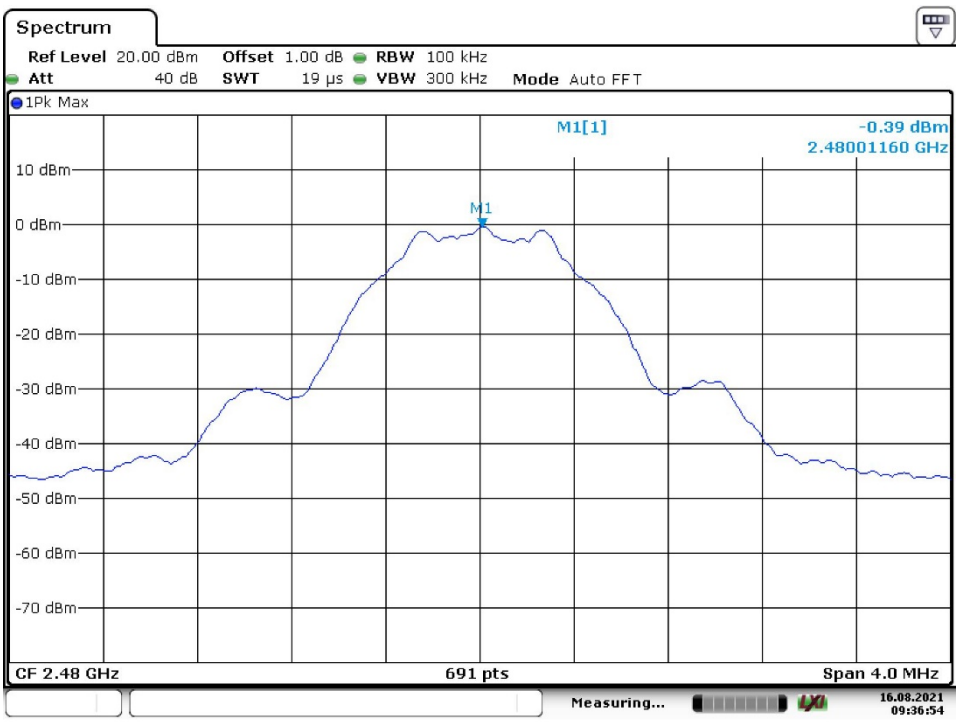
High Channel



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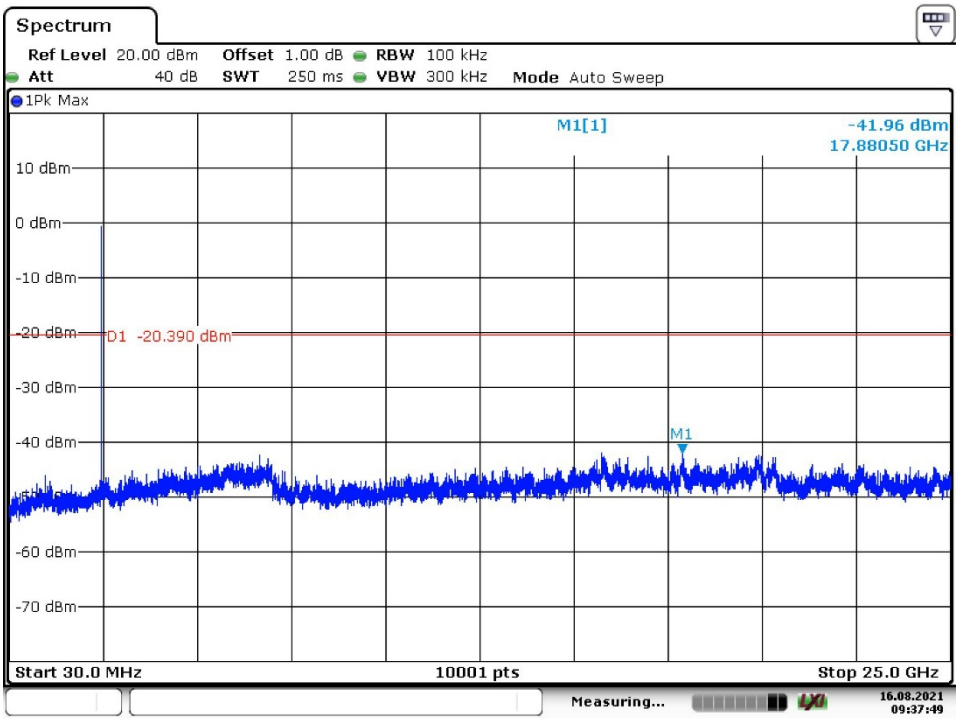

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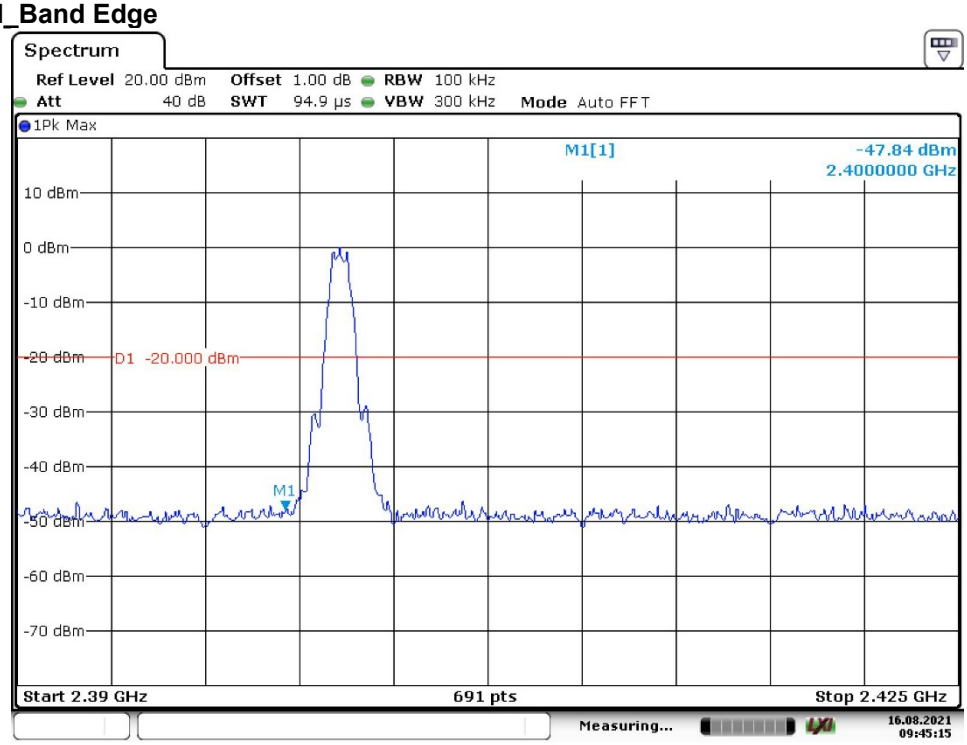
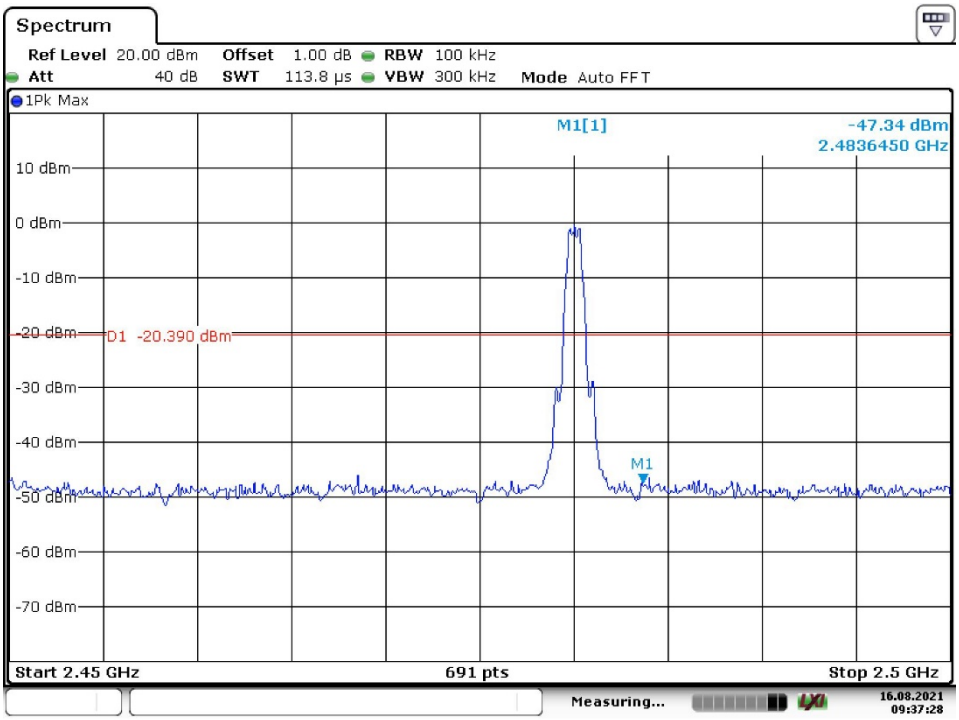
Low Channel_Band Edge



Date: 16.AUG.2021 09:45:15

High Channel_Band Edge



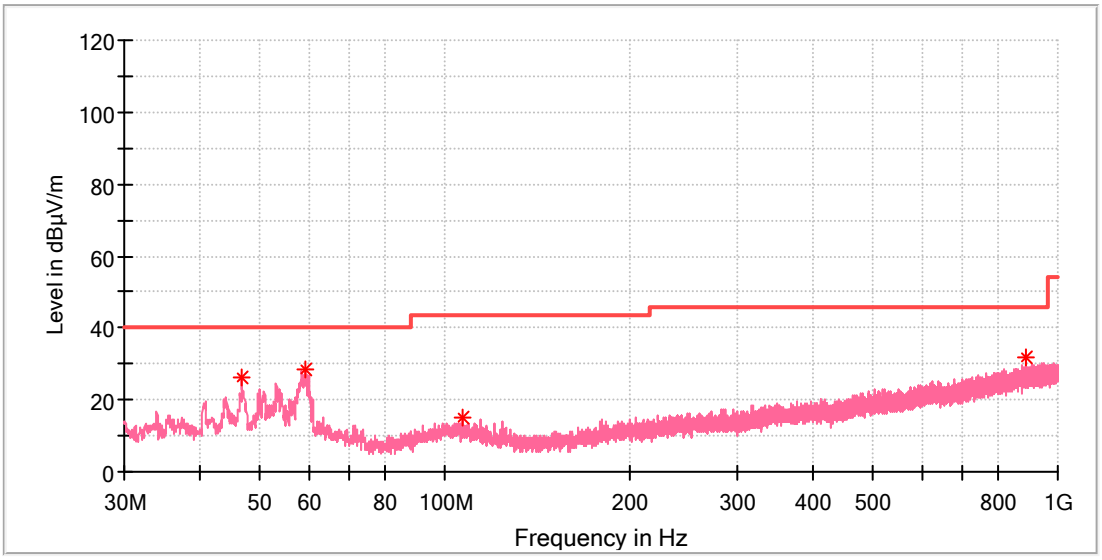
Date: 16.AUG.2021 09:37:28

Appendix B.5: Test Results of Radiated Spurious Emissions

Note 1: Testing was carried out within frequency range 9 kHz to the tenth harmonics. The measurement results below 30MHz and above 18GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Low channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

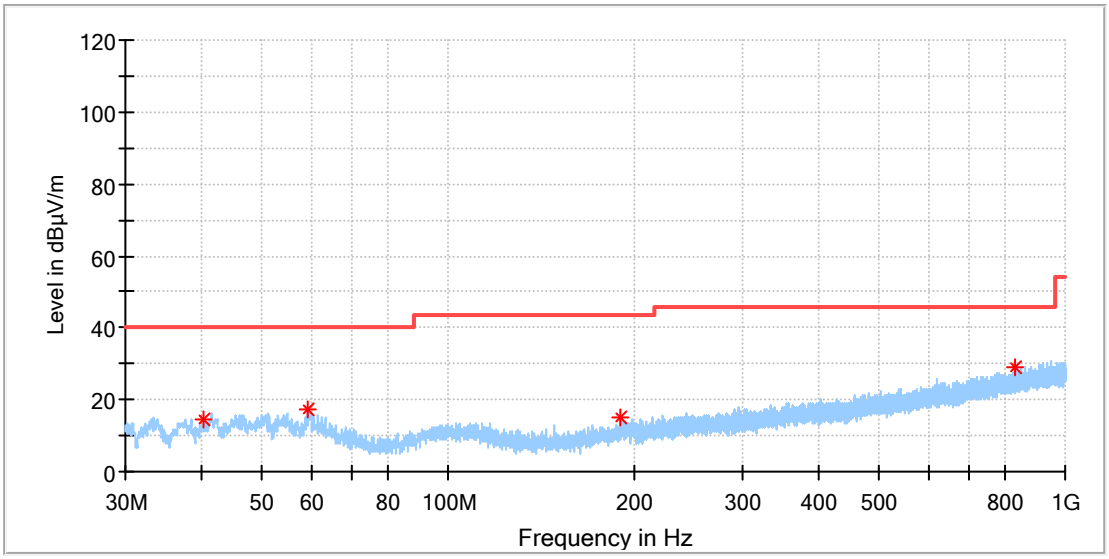


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
46.684000	26.45	40.00	13.55	100.0	V	255.0	-18.6
59.342500	28.35	40.00	11.65	100.0	V	6.0	-18.9
106.678500	14.89	43.50	28.61	100.0	V	117.0	-18.8
887.092000	31.87	46.00	14.13	100.0	V	117.0	-5.1

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Low channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

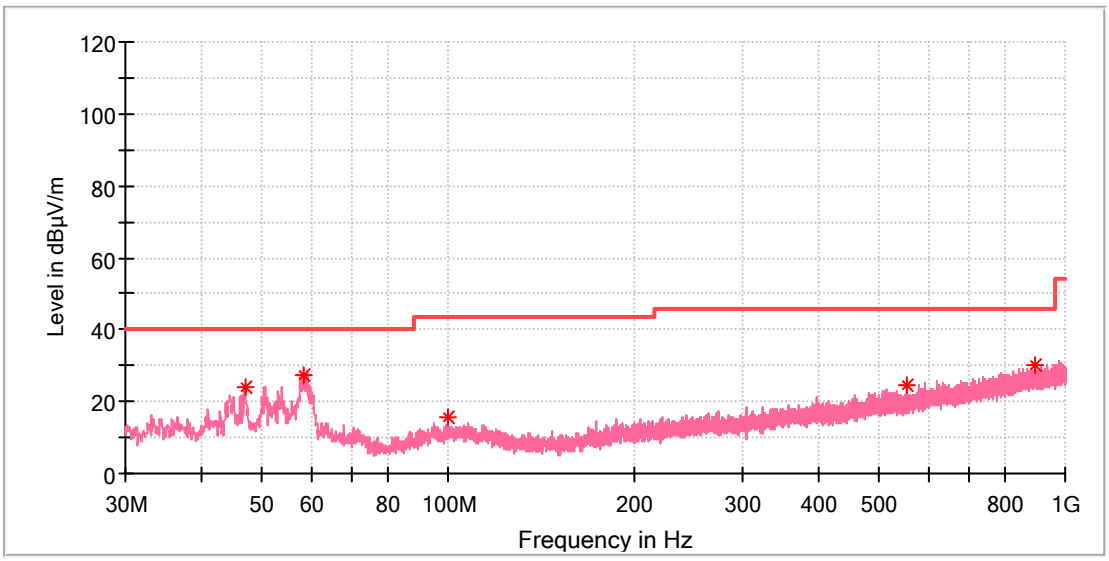


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.233500	14.60	40.00	25.40	100.0	H	141.0	-20.1
59.148500	17.50	40.00	22.50	100.0	H	197.0	-18.9
189.565000	15.15	43.50	28.35	100.0	H	316.0	-19.6
832.141500	29.25	46.00	16.75	100.0	H	1.0	-5.8

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_High channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

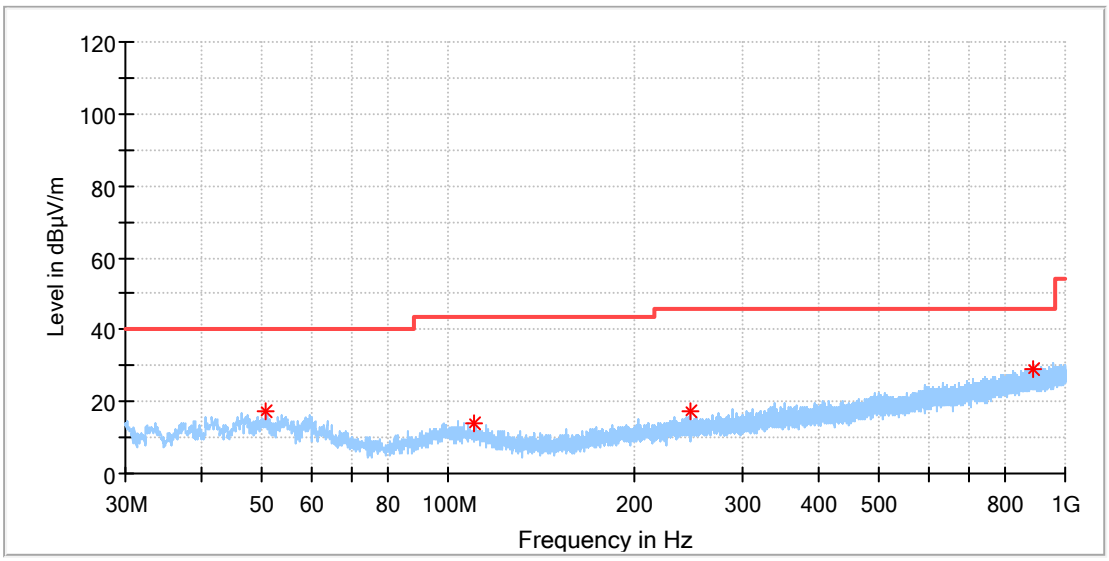


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
47.023500	24.01	40.00	15.99	100.0	V	97.0	-18.5
58.566500	27.53	40.00	12.48	100.0	V	0.0	-18.8
100.131000	15.55	43.50	27.95	100.0	V	355.0	-19.0
553.654500	24.83	46.00	21.17	100.0	V	182.0	-10.9
896.404000	29.95	46.00	16.05	100.0	V	168.0	-5.0

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_High channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

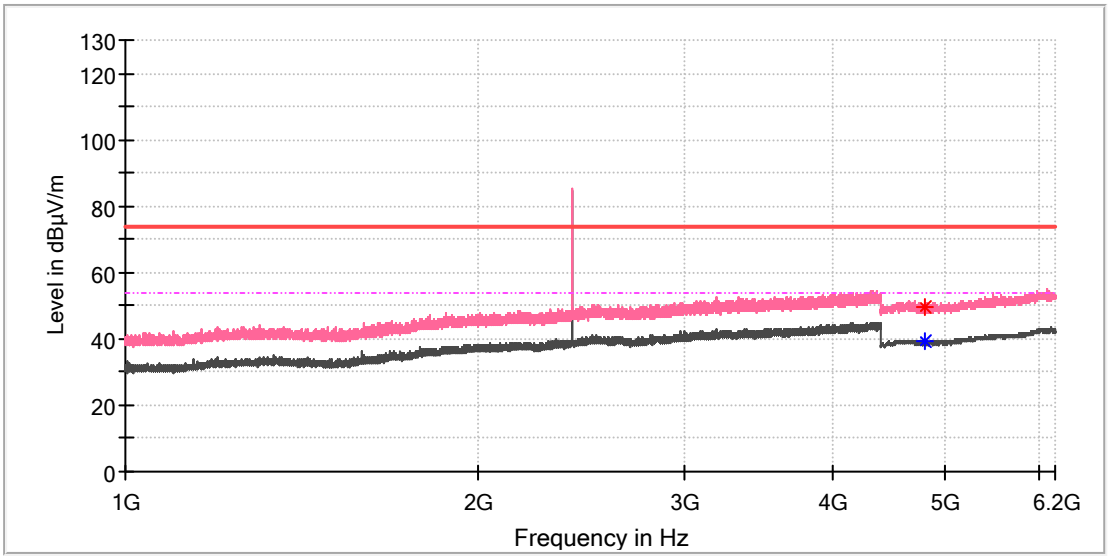


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
50.806500	17.44	40.00	22.56	100.0	H	36.0	-18.3
110.510000	14.09	43.50	29.41	100.0	H	131.0	-19.1
247.328500	17.42	46.00	28.58	100.0	H	100.0	-17.5
885.734000	29.24	46.00	16.76	100.0	H	80.0	-5.1

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Low channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

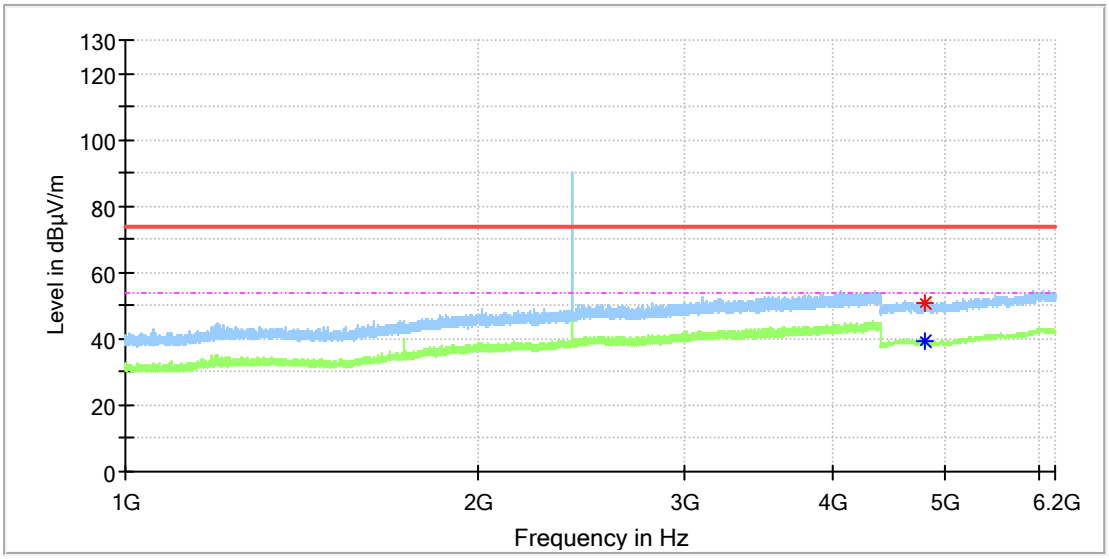


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4803.500000	---	39.57	54.00	14.43	100.0	V	73.0	11.8
4805.000000	49.76	---	74.00	24.24	100.0	V	51.0	11.8

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Low channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

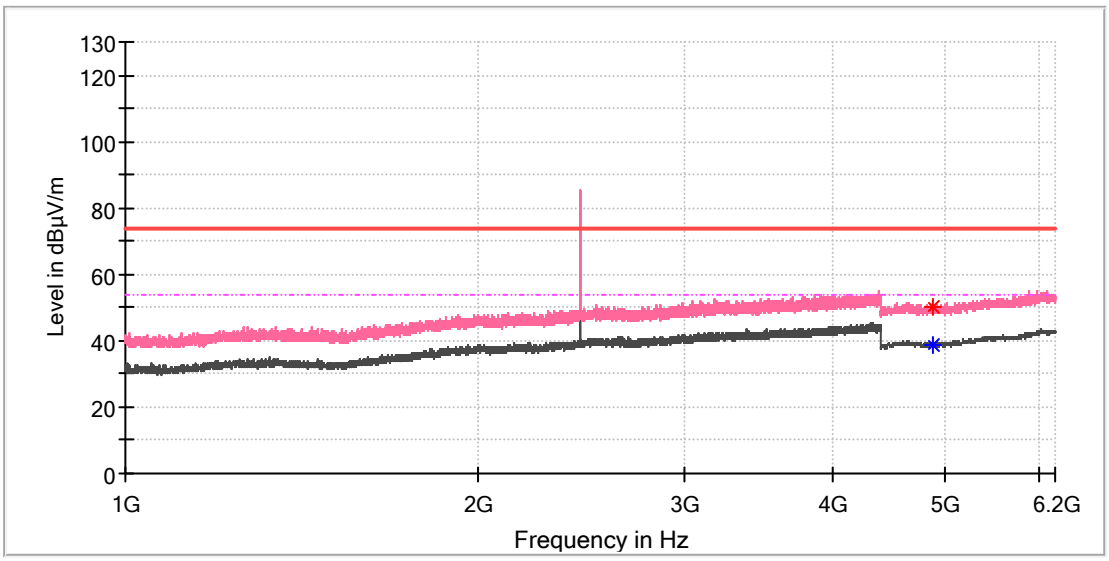


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4804.000000	50.84	---	74.00	23.16	100.0	H	181.0	11.8
4804.000000	---	39.38	54.00	14.62	100.0	H	181.0	11.8

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Mid channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

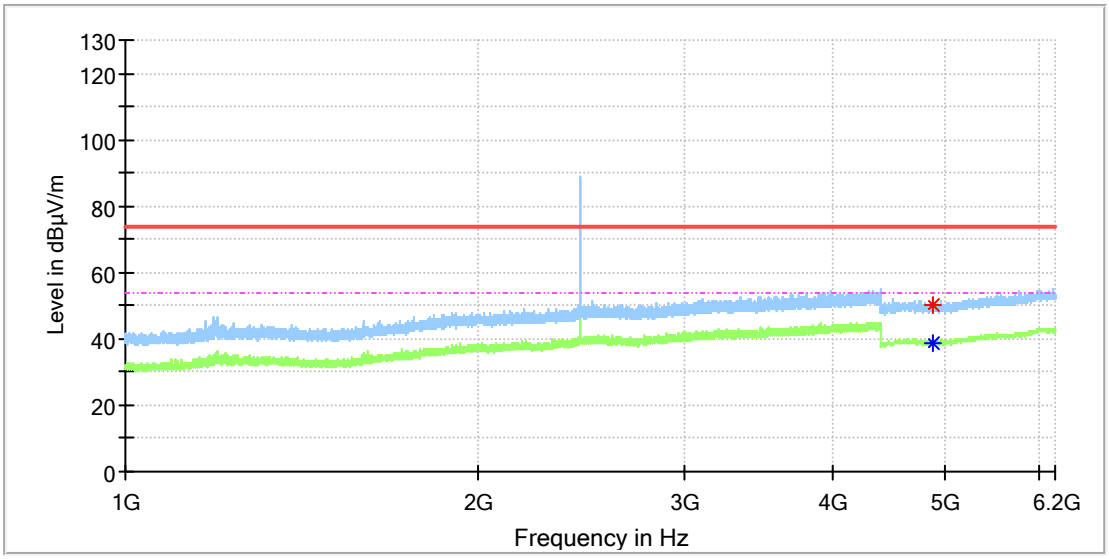


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4878.500000	---	38.86	54.00	15.14	100.0	V	79.0	11.8
4882.000000	50.32	---	74.00	23.68	100.0	V	112.0	11.8

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Mid channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

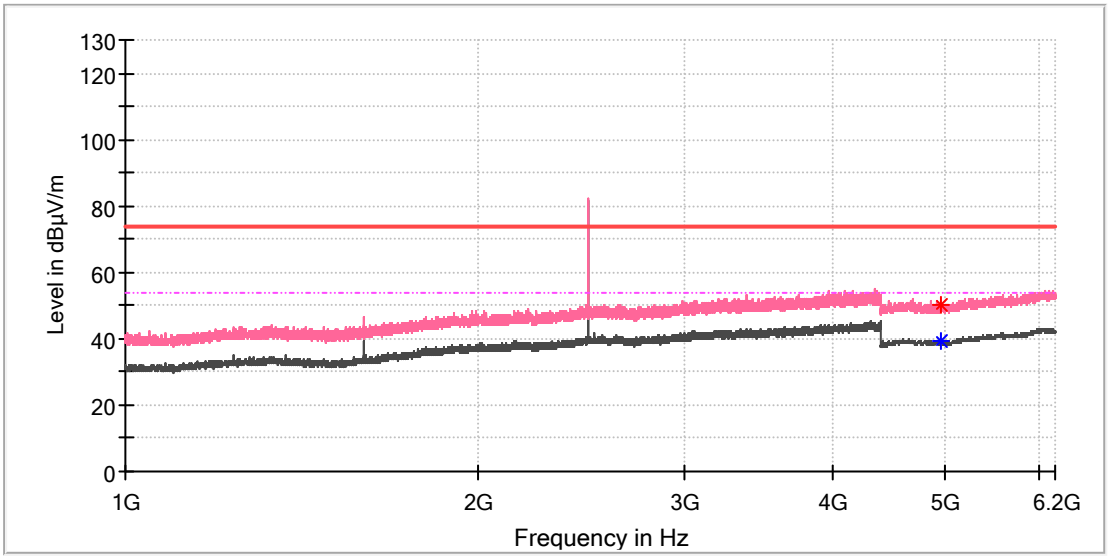


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4880.000000	49.93	---	74.00	24.07	100.0	H	158.0	11.8
4883.500000	---	38.97	54.00	15.03	100.0	H	279.0	11.8

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_High channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

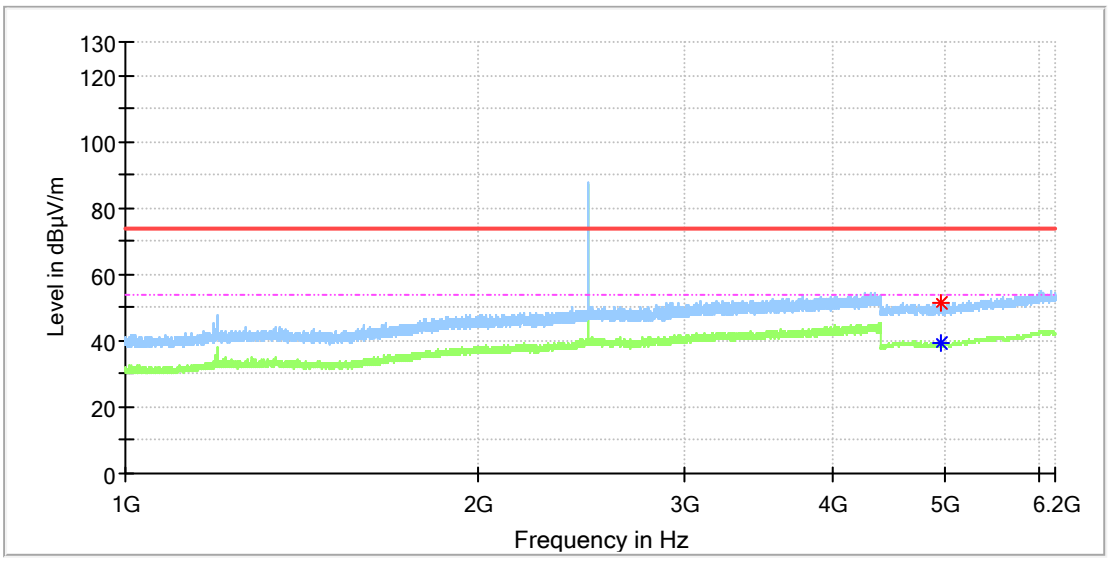


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4958.000000	---	39.20	54.00	14.80	100.0	V	39.0	11.8
4960.500000	50.35	---	74.00	23.65	100.0	V	0.0	11.8

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_High channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

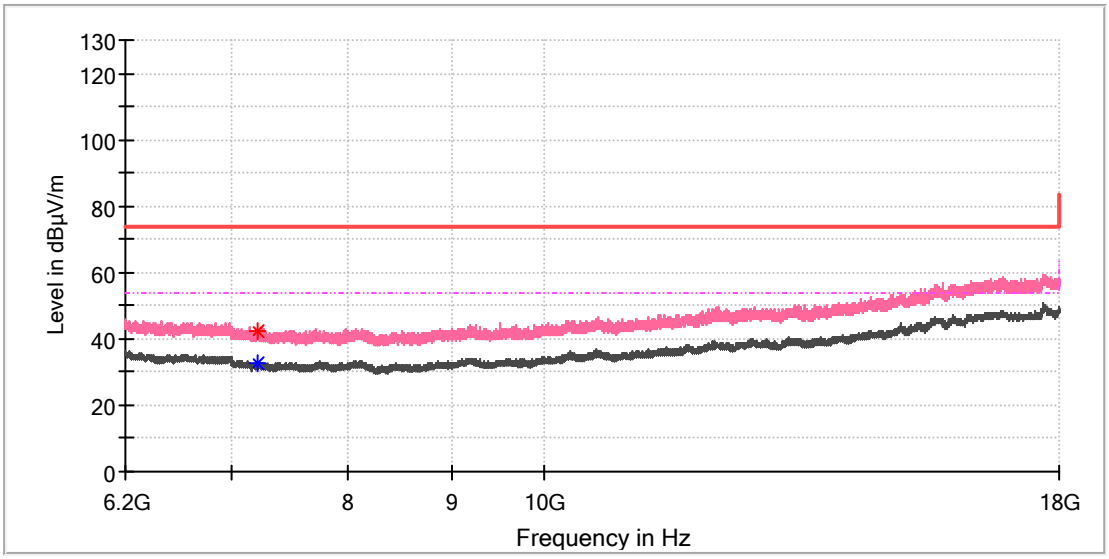


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4957.500000	---	39.12	54.00	14.88	100.0	H	91.0	11.8
4959.000000	51.21	---	74.00	22.79	100.0	H	91.0	11.8

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Low channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

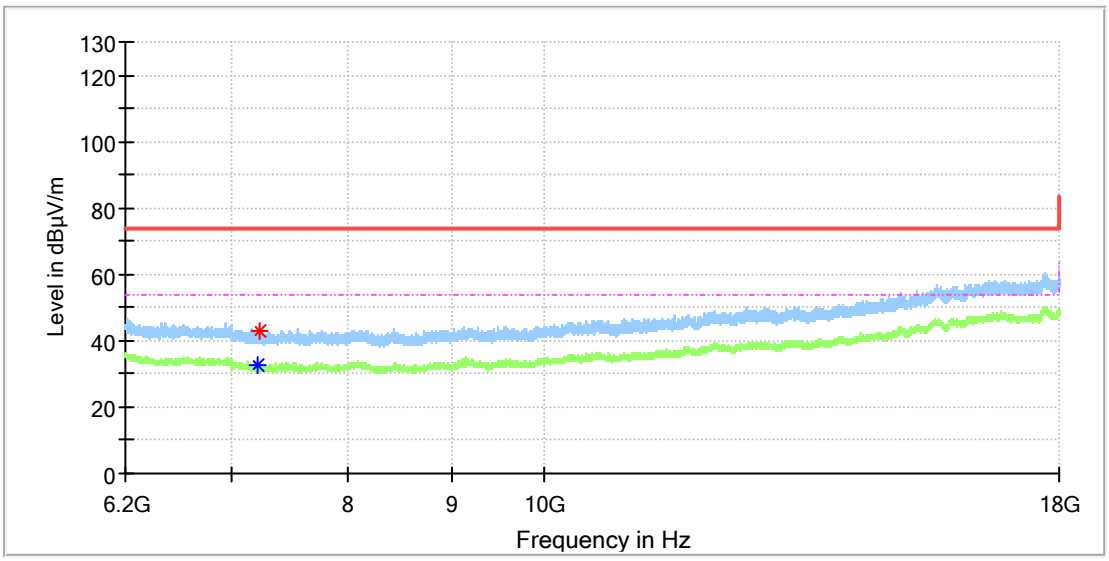


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7204.966667	---	32.91	54.00	21.09	100.0	V	358.0	8.8
7212.833333	42.13	---	74.00	31.87	100.0	V	183.0	8.7

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Low channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

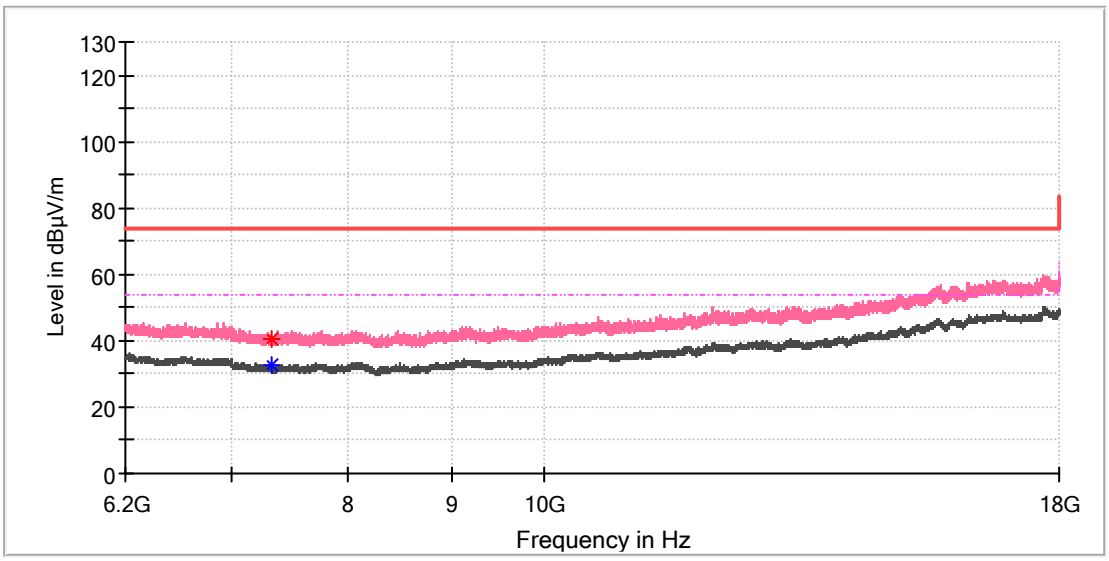


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7211.358333	---	32.66	54.00	21.34	100.0	H	87.0	8.7
7222.175000	42.69	---	74.00	31.31	100.0	H	141.0	8.7

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Mid channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

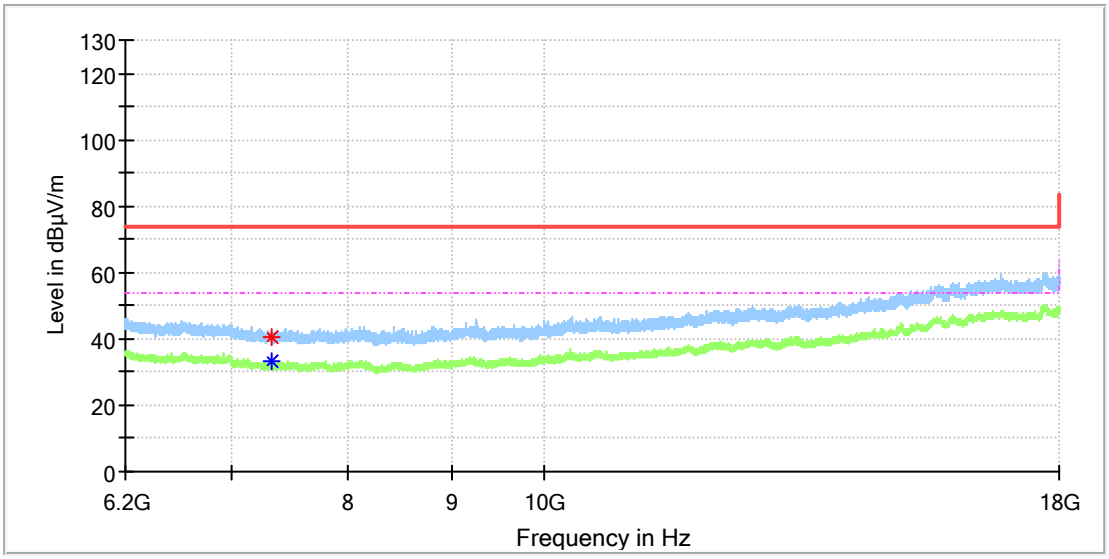


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7319.033333	40.57	---	74.00	33.43	100.0	V	247.0	8.2
7319.525000	---	32.49	54.00	21.51	100.0	V	0.0	8.2

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Mid channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

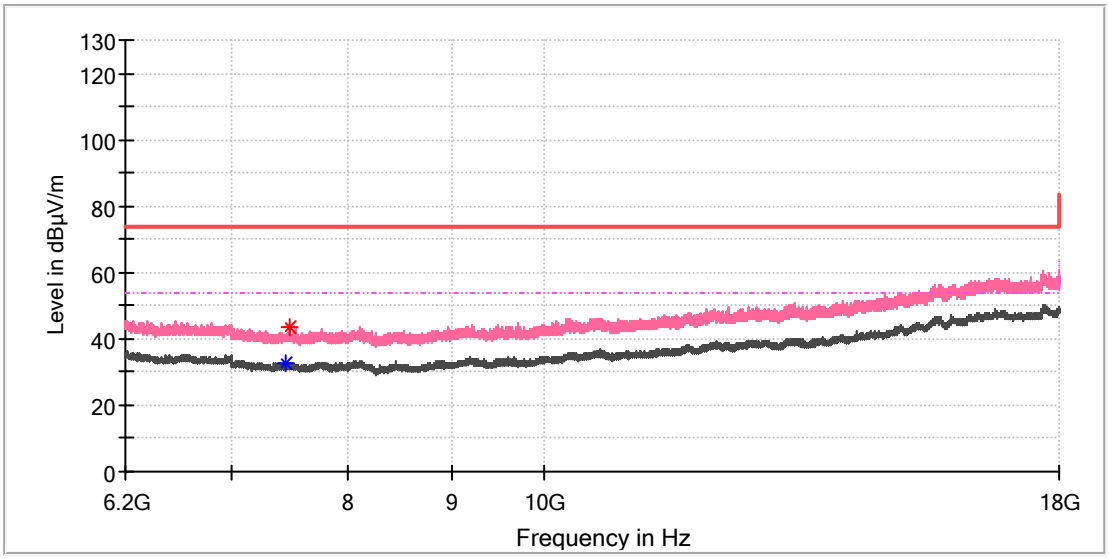


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7320.016667	40.76	---	74.00	33.24	100.0	H	252.0	8.2
7320.508333	---	33.40	54.00	20.60	100.0	H	252.0	8.2

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_High channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

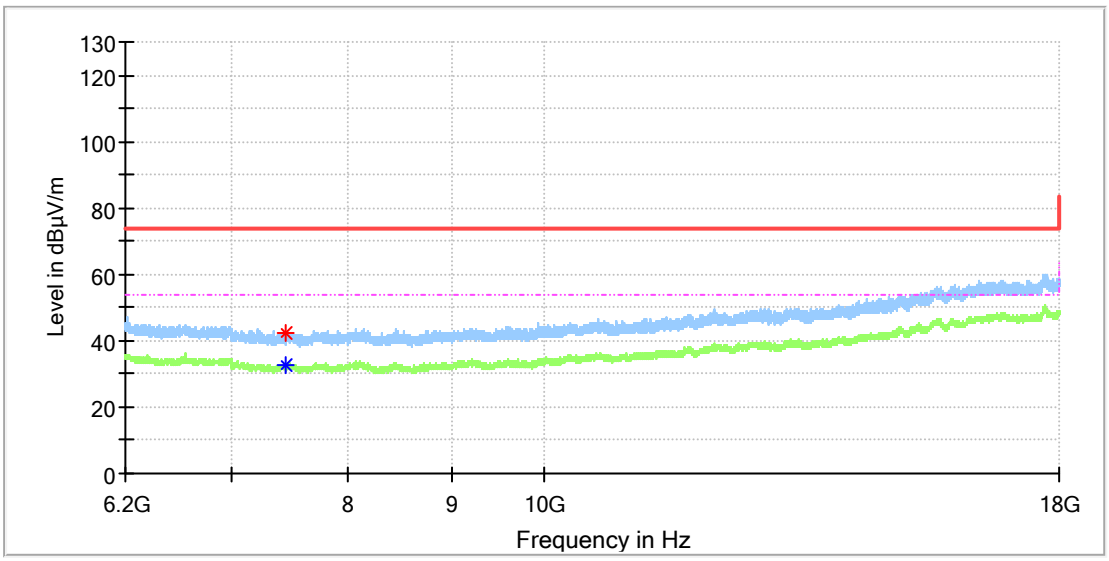


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7447.850000	---	32.78	54.00	21.22	100.0	V	249.0	8.5
7474.400000	43.25	---	74.00	30.75	100.0	V	138.0	8.6

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_High channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



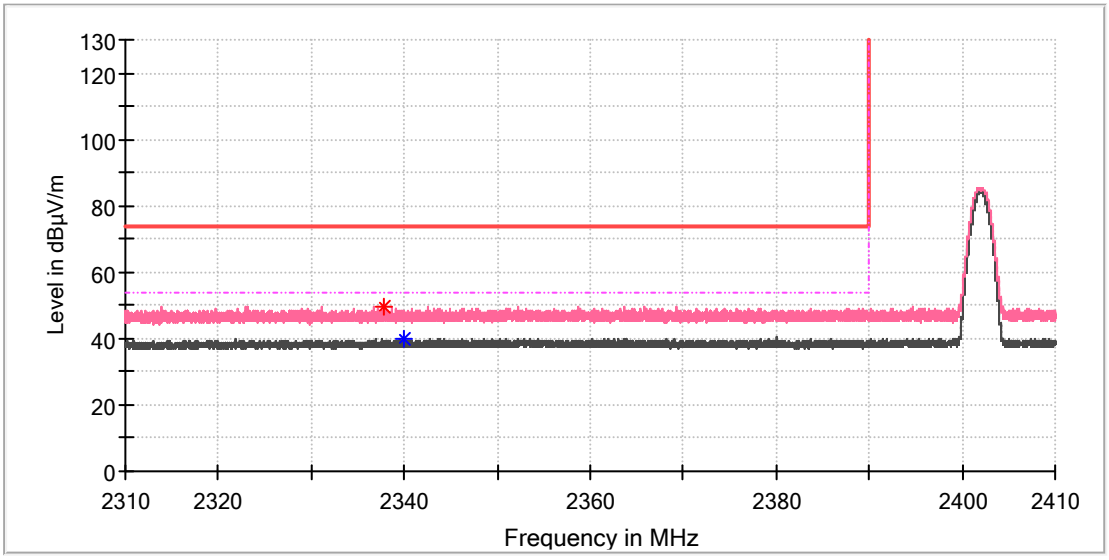
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7437.525000	42.08	---	74.00	31.92	100.0	H	263.0	8.4
7439.491667	---	32.89	54.00	21.11	100.0	H	138.0	8.4

Appendix B.6: Test Results of Radiated Emissions in Restricted Bands

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Low channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

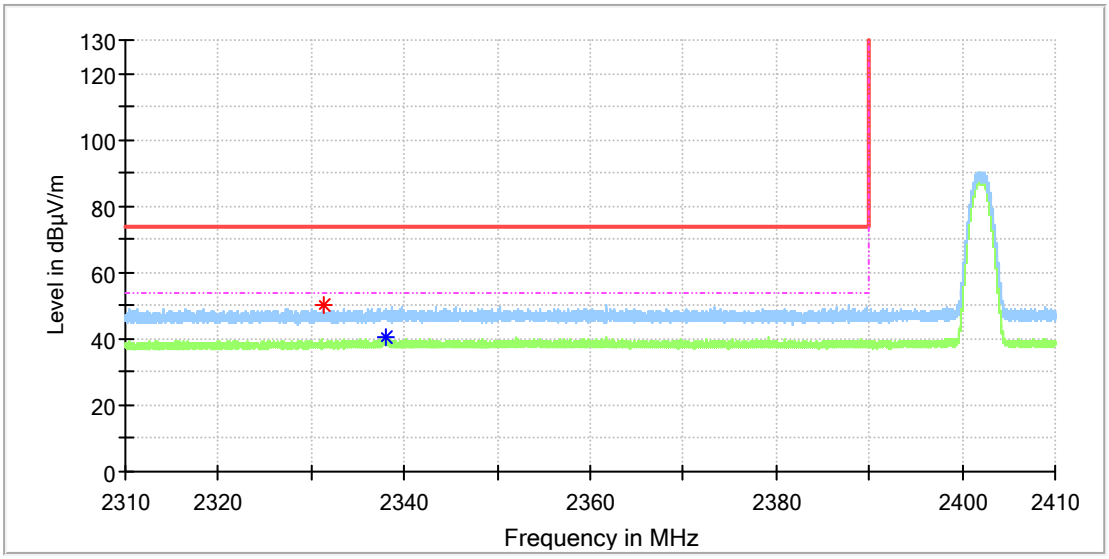


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2337.900000	49.76	---	74.00	24.24	100.0	V	29.0	6.8
2340.040000	---	40.14	54.00	13.86	100.0	V	97.0	6.8

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_Low channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

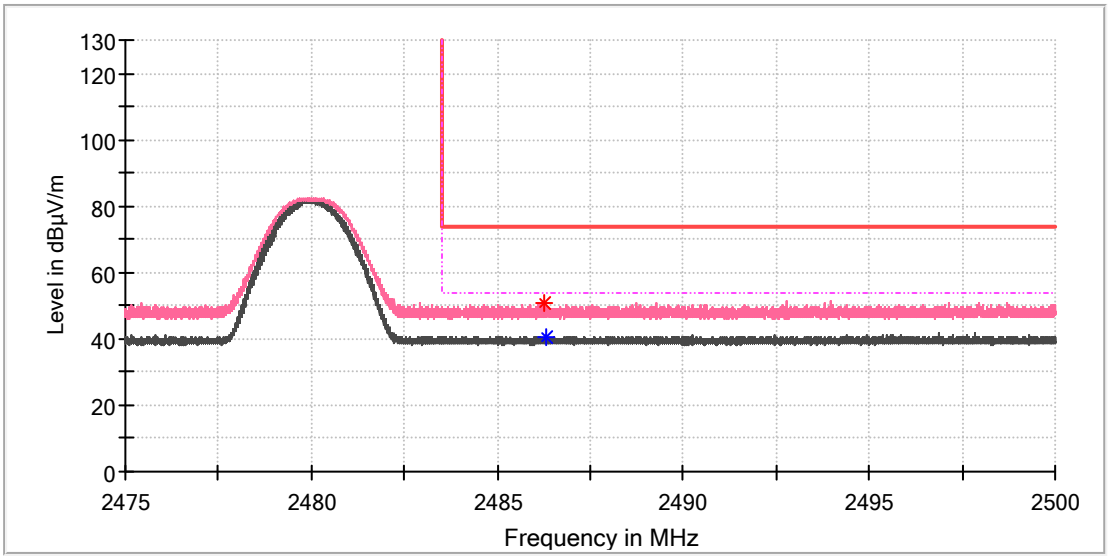


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2331.230000	50.01	---	74.00	23.99	100.0	H	268.0	6.7
2337.985000	---	40.69	54.00	13.31	100.0	H	355.0	6.8

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_High channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

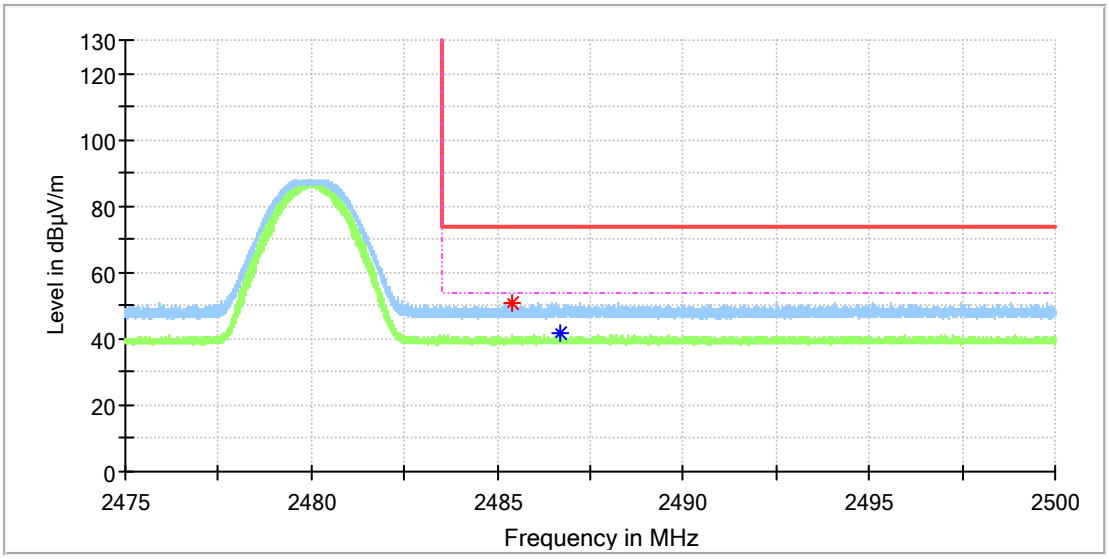


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2486.280000	50.61	---	74.00	23.39	100.0	V	77.0	7.4
2486.341250	---	40.47	54.00	13.53	100.0	V	191.0	7.4

EUT Information

EUT Name:	Smart Watch
Model:	MOSWZ200
Test Mode:	BLE 1M_High channel
Test Voltage::	Battery
Remark:	Temp 23 Humi:45%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



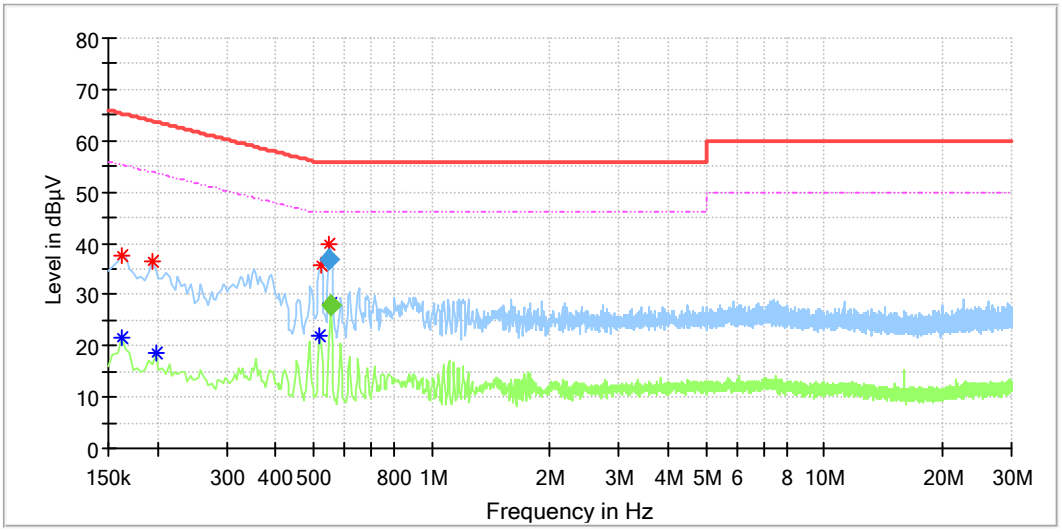
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2485.383750	50.79	---	74.00	23.21	100.0	H	241.0	7.4
2486.713750	---	41.47	54.00	12.53	100.0	H	304.0	7.4

Appendix B.7: Test Results of Conducted Emissions on AC Mains

EUT Information

EUT Name:	Smart Watch
Order No:	168330389_P00372858_
Model:	MOSWZ200
Test mode:	Charging
Test Voltage:	AC 120V/60Hz
Test By:	Jianhua Lu
Review By:	Gary Chen
Remark:	SR2



Critical_Freqs

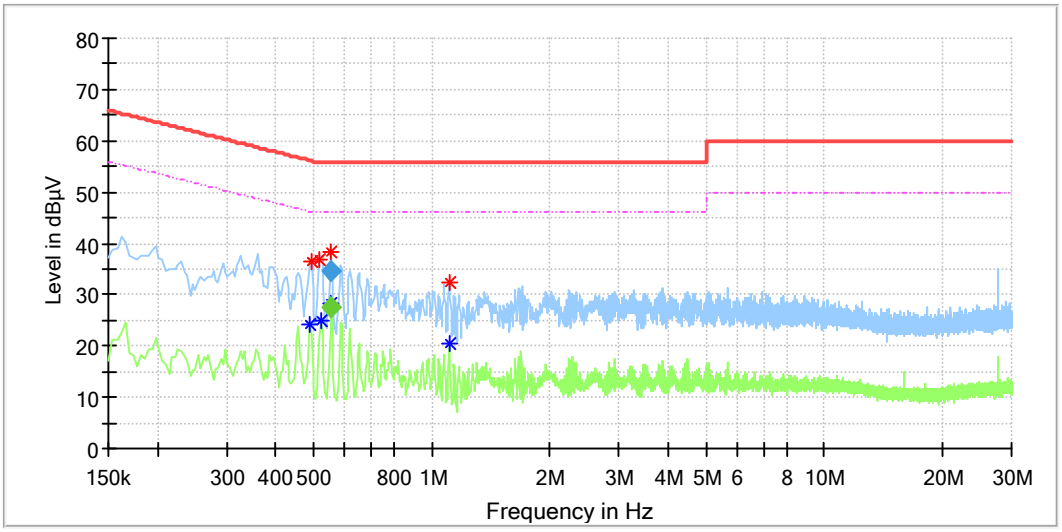
Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.162000	---	21.75	55.36	33.61	L1	9.9
0.162000	37.75	---	65.36	27.61	L1	9.9
0.194000	36.50	---	63.86	27.36	L1	9.9
0.198000	---	18.58	53.69	35.12	L1	9.9
0.518000	---	21.83	46.00	24.17	L1	10.0
0.522000	35.77	---	56.00	20.23	L1	10.0
0.549500	39.93	---	56.00	16.07	L1	10.0
0.553500	---	28.31	46.00	17.69	L1	10.0

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.549500	36.95	---	56.00	19.05	1000.0	9.000	L1	10.0
0.553500	---	27.73	46.00	18.27	1000.0	9.000	L1	10.0

EUT Information

EUT Name:	Smart Watch
Order No:	168330389_P00372858_
Model:	MOSWZ200
Test mode:	Charging
Test Voltage:	AC 120V/60Hz
Test By:	Jianhua Lu
Review By:	Gary Chen
Remark:	SR2



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.490000	---	24.20	46.17	21.97	N	9.8
0.494000	36.50	---	56.10	19.60	N	9.8
0.518000	36.94	---	56.00	19.06	N	9.8
0.522000	---	25.05	46.00	20.95	N	9.8
0.553500	---	28.27	46.00	17.73	N	9.8
0.553500	38.38	---	56.00	17.62	N	9.8
1.106000	---	20.46	46.00	25.54	N	9.8
1.106000	32.31	---	56.00	23.69	N	9.8

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.553500	---	27.56	46.00	18.44	1000.0	9.000	N	9.8
0.553500	34.62	---	56.00	21.38	1000.0	9.000	N	9.8