

FCC PART 15.247

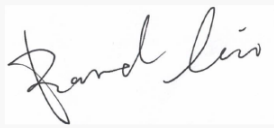
TEST REPORT

For

Miura Systems Ltd

Unit 3, Cliveden Office Village, Lancaster Road, Cressex Industrial Estate, High Wycombe, United Kingdom

FCC ID: 2AO4FMASP01

Report Type: Original Report	Product Name: MASP01
Report Number: <u>RKSA231206001-00B</u>	
Report Date: <u>2024-05-10</u>	
Reviewed By: <u>Bard Liu</u>	
Approved By: <u>Kyle Xu</u>	
Prepared By: Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu Province, China Tel: +86-512-86175000 Fax: +86-512-88934268 www.baclcorp.com.cn	

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Kunshan). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S.Government.

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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RKSA231206001-00B	R1V1	2024-05-10	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant	Miura Systems Ltd
Tested Model	MASP01
Product Name	MASP01
HVIN:	MASP01-1, MASP01-2
Power Supply	DC 5V charging (USB-C or POGO Pins port) or DC 7.4V battery
RF Function:	2.4G Wi-Fi; BLE
Maximum Peak Output Power:	2.4G Wi-Fi: 802.11b: 17.12dBm 802.11g: 21.75dBm 802.11n20: 21.32dBm 802.11n40: 19.35dBm BLE(1Mbps): 5.81dBm
Operating Band/Frequency:	2.4G Wi-Fi: 2412~2462 MHz(802.11b/g/n20), 2422~2452 MHz(802.11n40) BLE(1Mbps): 2402-2480 MHz
Channel Number:	2.4G Wi-Fi: 11(802.11b/g/n20), 7(802.11n40) BLE: 40
Channel Separation:	2.4G Wi-Fi: 5 MHz BLE: 2 MHz
Modulation Type:	2.4G Wi-Fi: DSSS, OFDM BLE: GFSK
Antenna Type:	2.4G Wi-Fi /BLE: FPC Antenna
★Maximum Antenna Gain:	2.4G Wi-Fi /BLE: 1.3dBi

Adapter Information:

Model: ASSA107w-050200

Input: AC100-240V 50/60Hz 0.45A

Output: 5V, 2.0A, 10.0W

Note: The Maximum Antenna Gain was declared by the manufacturer.

All measurement and test data in this report was gathered from production sample serial number:

RKSA231206001-1(HVIN: MASP01-1)(Assigned by the BACL (Kunshan). The EUT supplied by the applicant was received on 2023-12-06.)

Objective

This report is prepared for *Miura Systems Ltd* in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commissions' rules.

The tests were performed in order to determine Compliant with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliant Testing of Unlicensed Wireless Devices and FCC 558074 D01 15.247 Meas Guidance v05r02.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19dB
RF conducted test with spectrum		0.9dB
RF Output Power with Power meter		0.5dB
Radiated emission	9 kHz~150 kHz	3.8dB
	150 kHz~30 MHz	3.4dB
	30MHz~1GHz	6.11dB
	1GHz~6GHz	4.45dB
	6GHz~18GHz	5.23dB
	18GHz~40GHz	5.65dB
Occupied Bandwidth		0.5kHz
Temperature		1.0°C
Humidity		6%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu Province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) is accredited in accordance with ISO/IEC 17025:2017 by NVLAP (Lab code: 600338-0), and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN5055.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

Channel List for BLE mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	14	2430	28	2458
1	2404	15	2432	29	2460
2	2406	16	2434	30	2462
3	2408	17	2436	31	2464
4	2410	18	2438	32	2466
5	2412	19	2440	33	2468
6	2414	20	2442	34	2470
7	2416	21	2444	35	2472
8	2418	22	2446	36	2474
9	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	2480
12	2426	26	2454	/	/
13	2428	27	2456	/	/

EUT was tested with channel 0, 19 and 39.

Channel List for Wi-Fi Mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437	/	/

For 802.11b, 802.11g and 802.11n-HT20 mode, EUT was tested with Channel 1, 6 and 11.
For 802.11n-HT40 mode, EUT was tested with Channel 3, 6 and 9.

Equipment Modifications

No modification was made to the EUT tested.

EUT Exercise Software

RF test software: QSPR

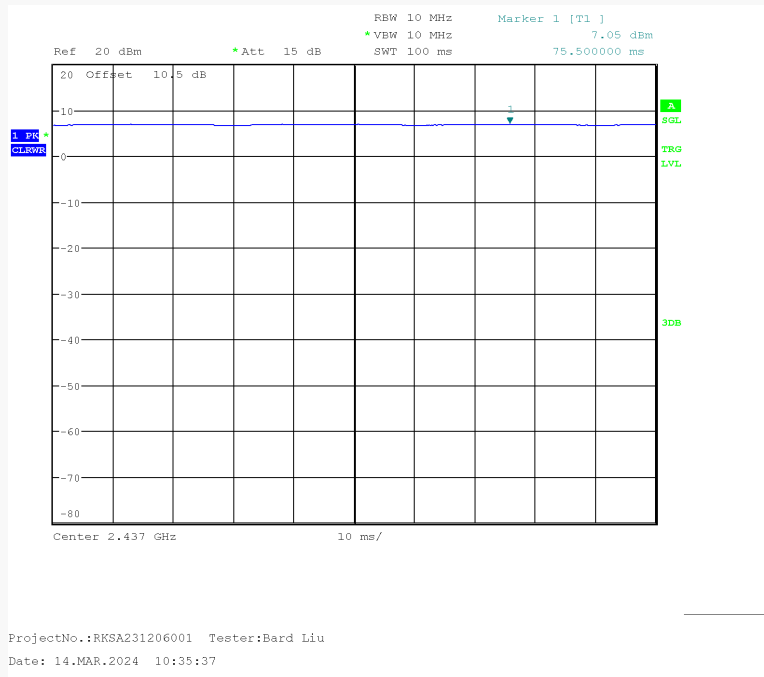
Pre-scan with all the data rates, and the worst case was performed as below:

Mode	Data Rate	★Power Level
802.11b	1 Mbps	15
802.11g	6 Mbps	8
802.11n-HT20	MCS0	8
802.11n-HT40	MCS0	7
BLE(1Mbps)	1Mbps	Default

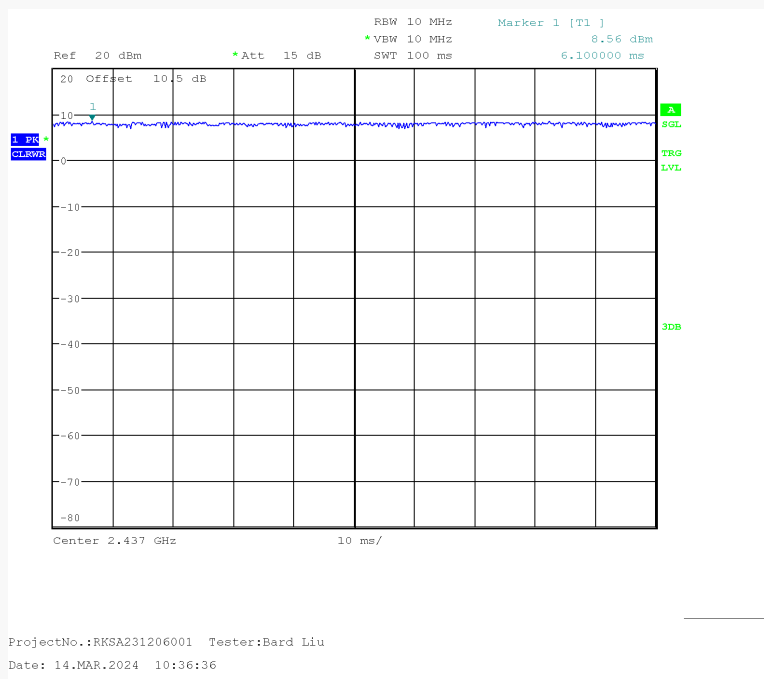
Note: The power level was declared by the applicant.

Duty Cycle:

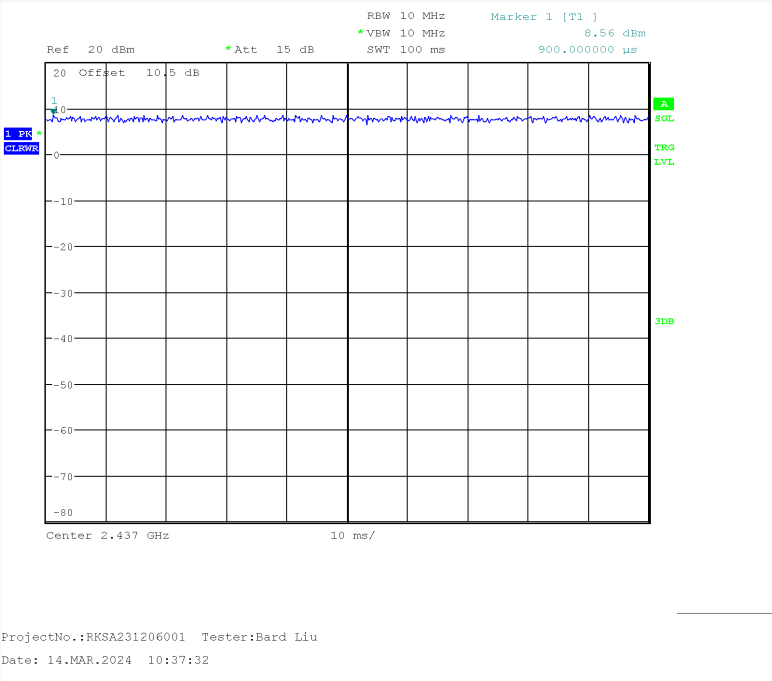
802.11b Mode Middle Channel



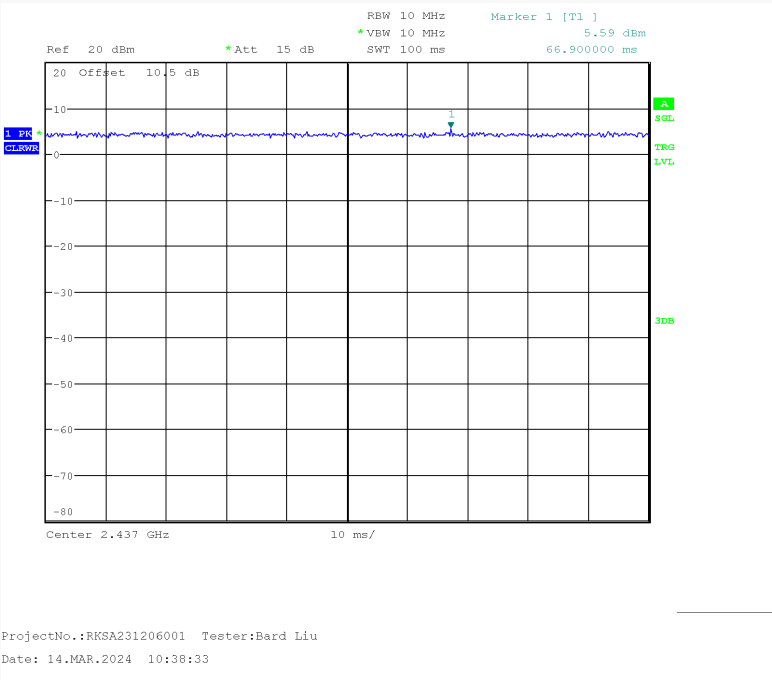
802.11g Mode Middle Channel



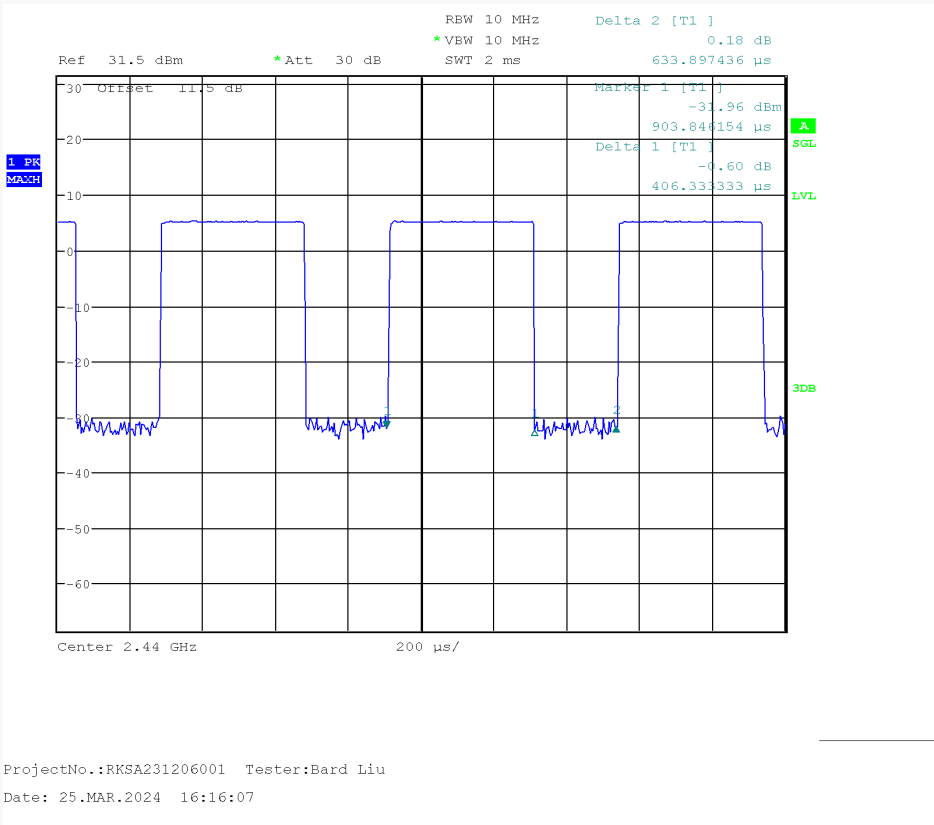
802.11n-HT20 Mode Middle Channel



802.11n-HT40 Mode Middle Channel



BLE(1Mbps) Mode Middle Channel



Mode	Duty Cycle (%)	Ton(ms)	Ton+off(ms)	10log(1/x)
802.11b	100	100	100	0
802.11g	100	100	100	0
802.11n-HT20	100	100	100	0
802.11n-HT40	100	100	100	0
BLE(1Mbps)	64.1	0.406	0.634	1.93

Note: “x” means the Duty Cycle.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
/	/	/	/

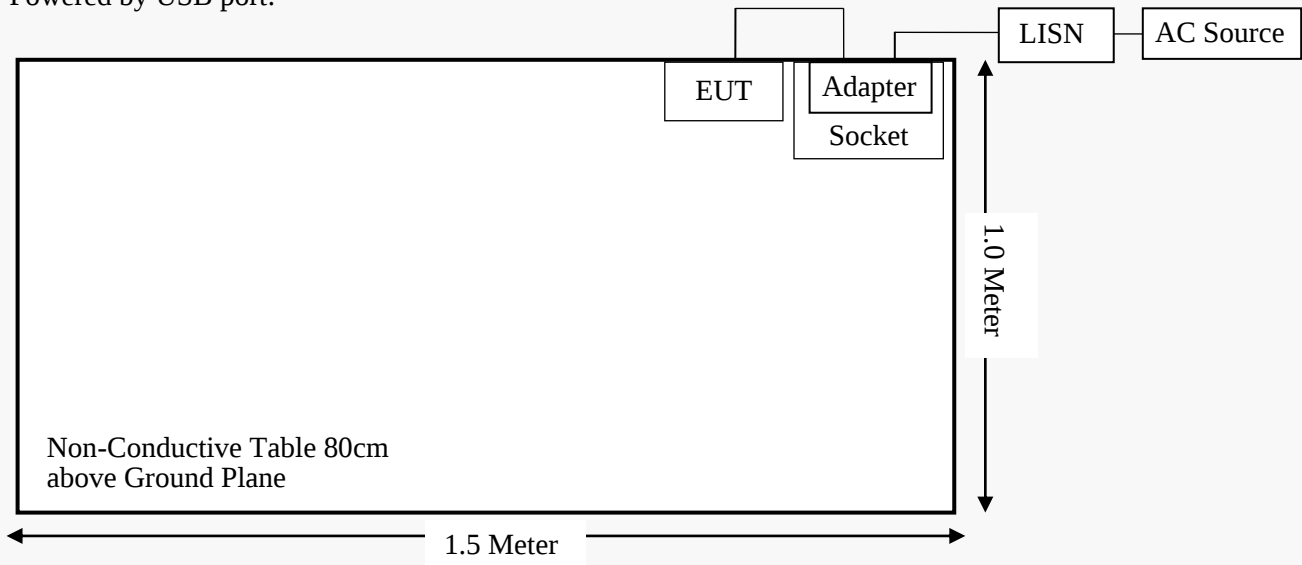
External I/O Cable

Cable Description	Length (m)	From Port	To
USB Cable	1.0	EUT/Base	Adapter
Power Cable	1.0	Adapter	LISN/AC Source

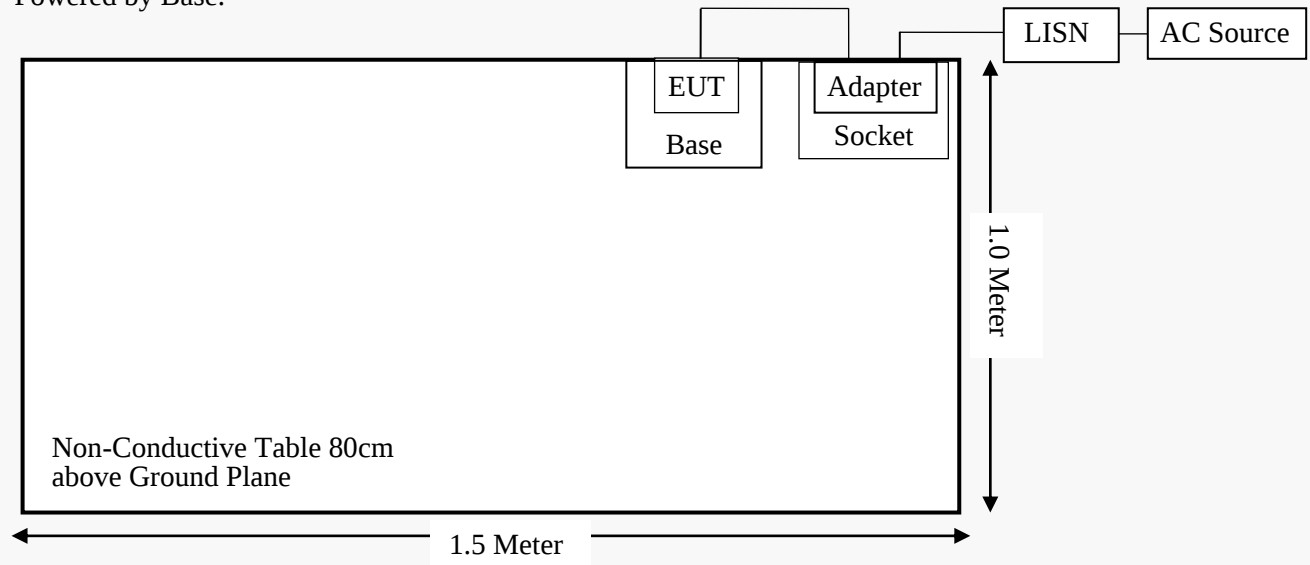
Block Diagram of Test Setup

For Conducted Emissions:

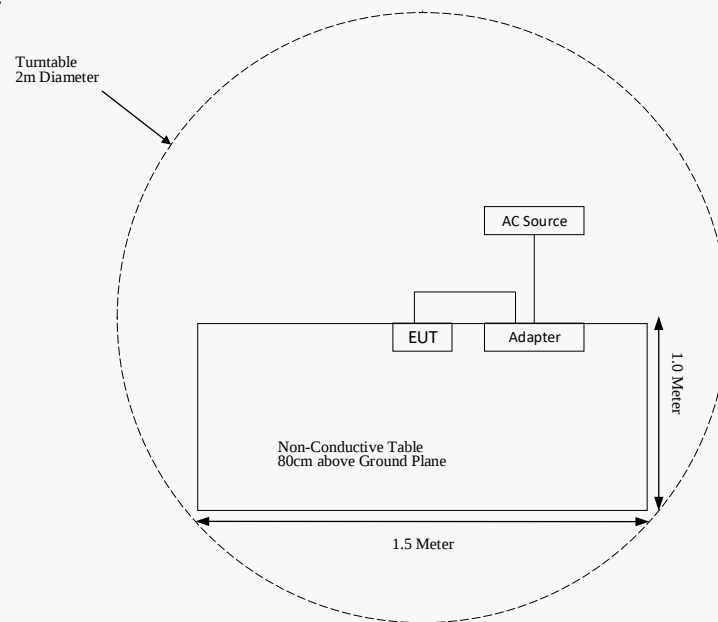
Powered by USB port:



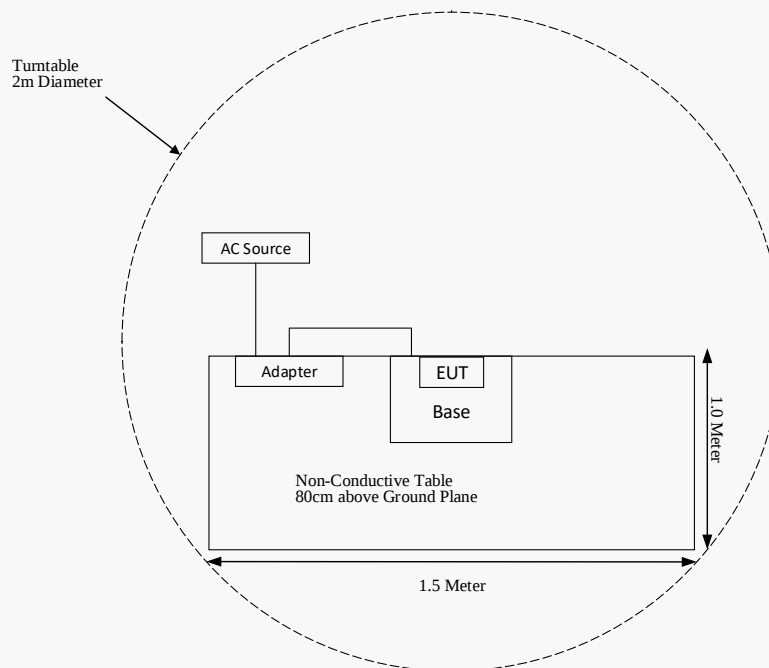
Powered by Base:



For Radiated Emissions (Below 1GHz):
Powered by USB port:

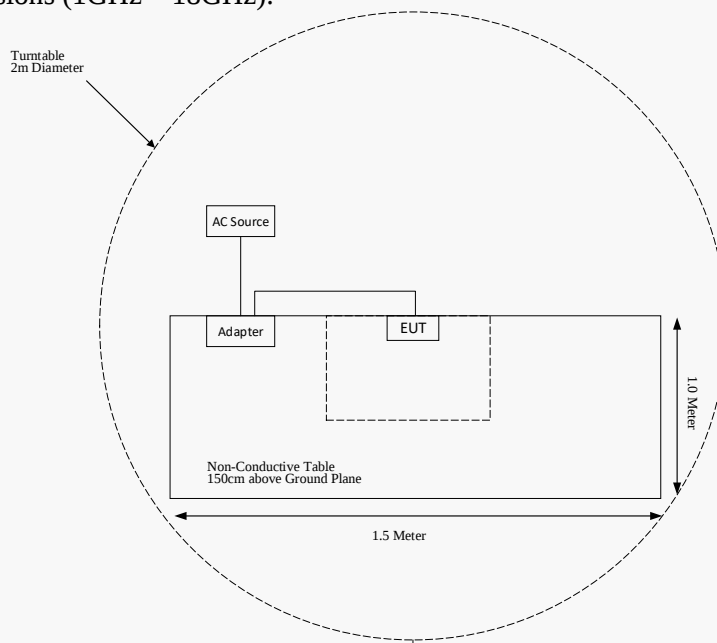


Powered by Base:

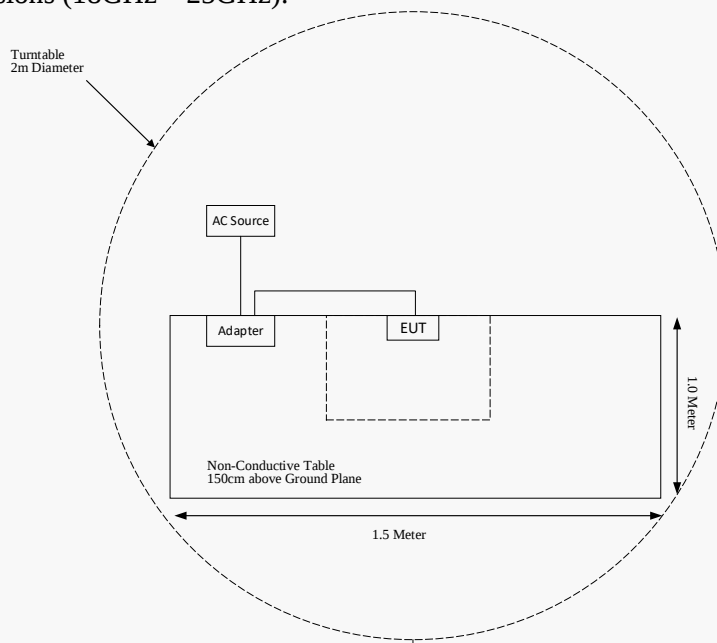


Powered by USB port:

For Radiated Emissions (1GHz – 18GHz):



For Radiated Emissions (18GHz – 25GHz):



Note: The product can be charged via two different ports, USB-C or POGO Pins. Both configurations be evaluated AC Power Line Conducted Emissions and Undesirable Emission for below 1GHz. Two configurations are basically the same. Therefore, only Powered by USB port mode to be assessed for above 1GHz.

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207 (a)	AC Line Conducted Emissions	Compliant
§15.205, §15.209, §15.247(d)	Spurious Emissions	Compliant
§15.247 (a)(2)	6 dB Emission Bandwidth	Compliant
§15.247(b)(3)	Maximum Conducted Output Power	Compliant
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliant
§15.247(e)	Power Spectral Density	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test (Chamber #1)					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2023-05-23	2024-05-22
Sunol Sciences	Broadband Antenna	JB3	A090314-1	2023-11-11	2024-11-10
Narda	6dB Attenuator	773-6	10690812-2-1	2023-11-11	2024-11-10
ETS-LINDGREN	Loop Antenna	6512	108100	2023-11-09	2024-11-08
Sonoma Instrument	Pre-amplifier	310N	171205	2023-05-23	2024-05-22
Rohde & Schwarz	Auto Test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-8	008	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-9	009	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-10	010	2023-05-23	2024-05-22
Radiated Emission Test (Chamber #2)					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2023-05-19	2024-05-18
ETS-LINDGREN	Horn Antenna	3115	9311-4159	2023-12-02	2024-12-01
ETS-LINDGREN	Horn Antenna	3116	2516	2023-12-08	2024-12-07
A.H.Systems, inc	Amplifier	PAM-0118P	512	2023-05-23	2024-05-22
SELECTOR	Amplifier	EM18G40G	060726	2023-05-23	2024-05-22
MICRO-TRONICS	Band Reject Filter	BRM50702	G024	2023-08-05	2024-08-04
Narda	Attenuator	10dB	010	2023-08-15	2024-08-14
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-6	006	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-11	011	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-12	012	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-13	013	2023-05-23	2024-05-22
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSU26	200103	2023-05-23	2024-05-22
Rohde & Schwarz	Signal Analyzer	FSV40	101116	2023-05-23	2024-05-22
Narda	Attenuator	10dB	010	2023-05-23	2024-05-22
Anritsu	Power Sensor	MA24418A	12621	2023-09-27	2024-09-26
Unknown	RF Cable	RF Cable C01	C01	Each Time	N/A
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03-101746-zn	2023-07-28	2024-07-27
Rohde & Schwarz	LISN	ENV216	101115	2023-05-23	2024-05-22
Audix	Test Software	e3	V9	N/A	N/A
Rohde & Schwarz	Pulse limiter	ESH3-Z2	100552	2023-05-23	2024-05-22
MICRO-COAX	Coaxial Cable	Cable-15	015	2023-05-23	2024-05-22

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine Compliant with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has an FPC for 2.4G Wi-Fi & BLE, and the antenna gain is 1.3 dBi, which permanently attached to the unit, fulfill the requirement of this section. Please refer to the EUT photos.

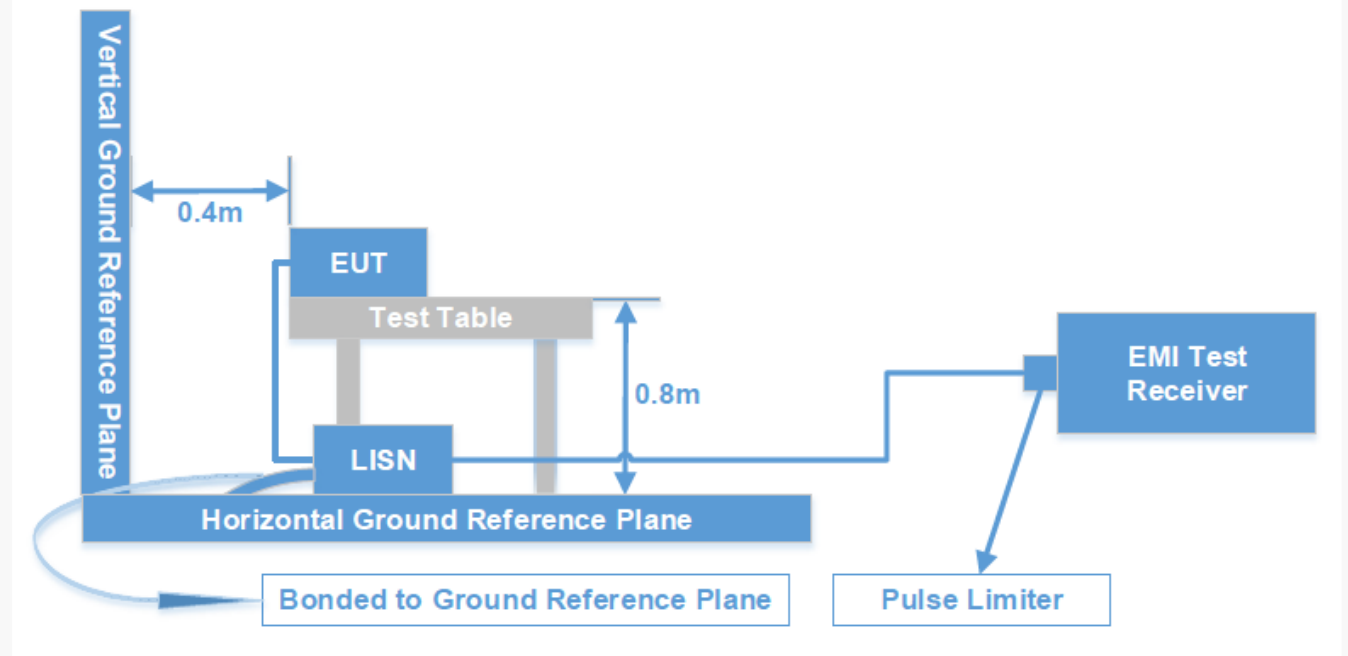
Result: Compliant.

FCC §15.207 (a) - AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a)

Test System Setup



The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	VBW
150 kHz - 30 MHz	9 kHz	30 kHz

Test Procedure

ANSI C63.10-2013 clause 6.2

During the conducted emission test, the EUT was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

If the maximum peak value of the emissions is below the average limit, the QP value and average value measurement will not need to be performed and only record the maximum peak measured value to meet the requirements.

Level & Over Limit Calculation

The Level is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

Level (dBμV) = Read level (dBμV) + Factor (dB)

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7 dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

Over Limit (dB) = Level (dBμV) - Limit (dBμV)

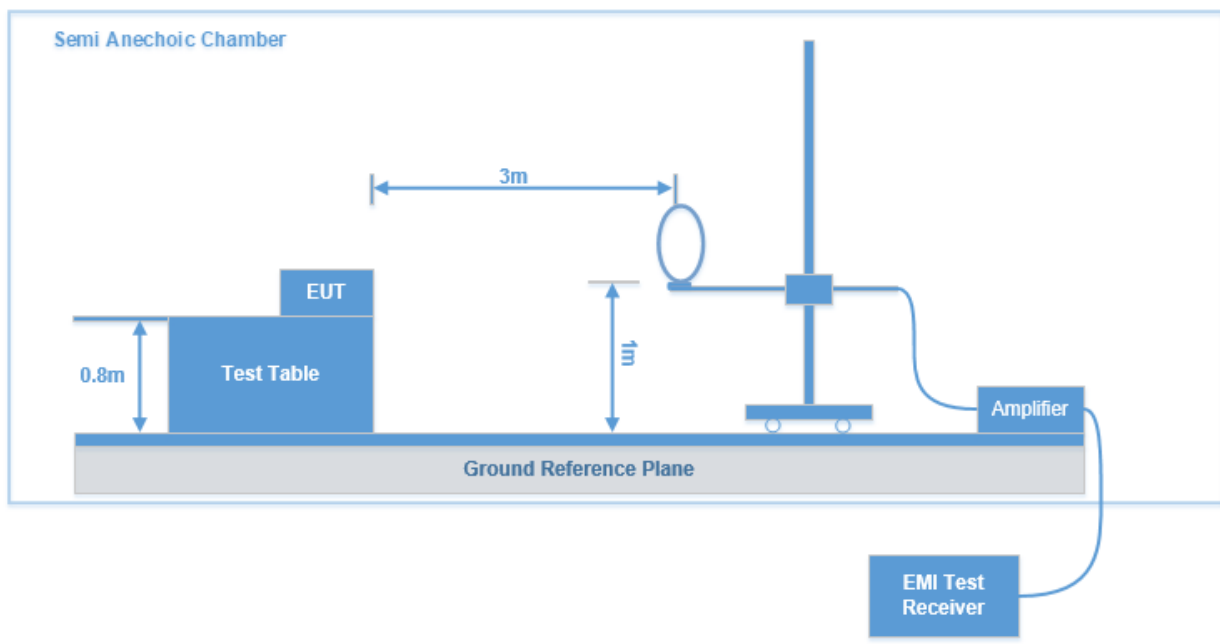
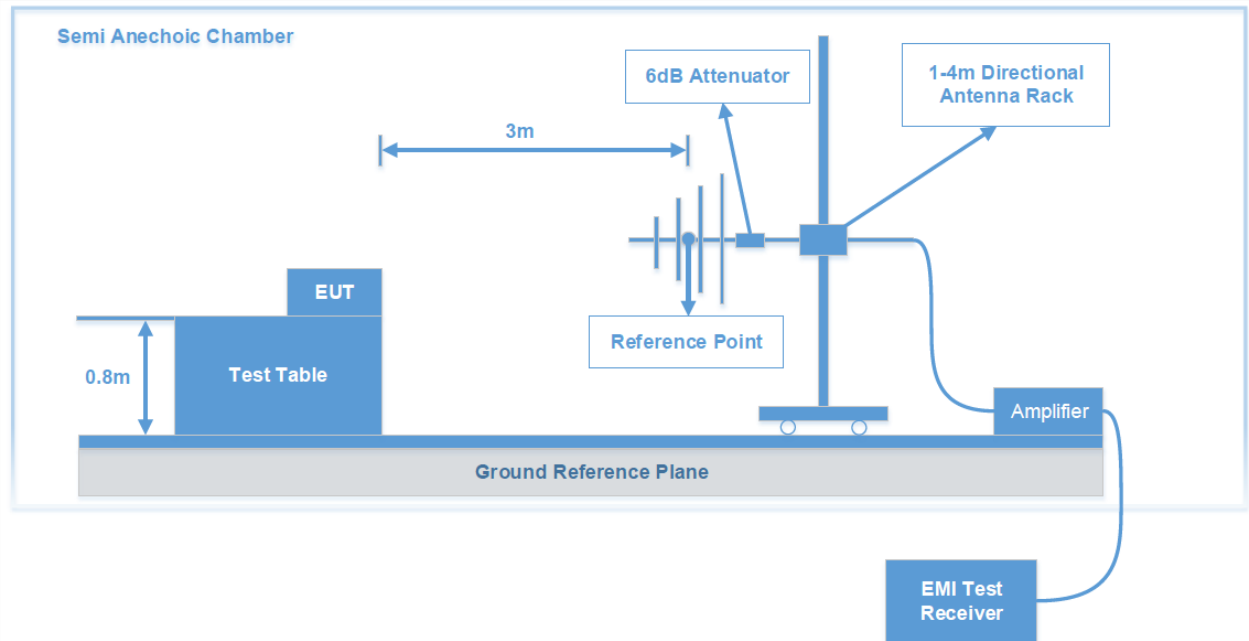
Test Results Summary

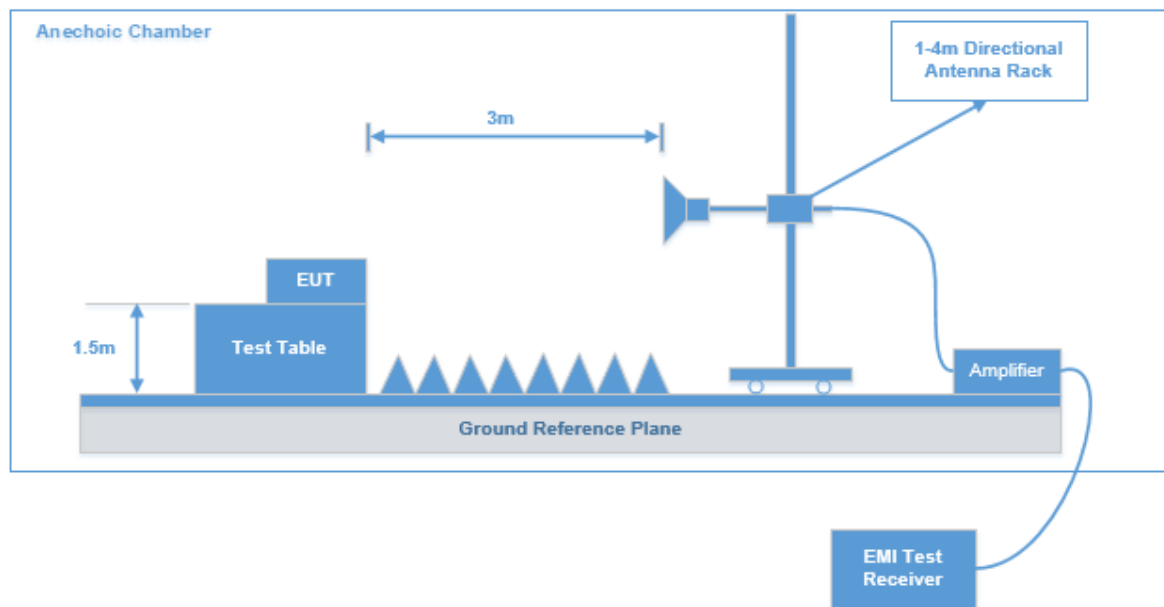
According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

Test Data: See Appendix

FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS**Applicable Standard**

FCC §15.247 (d); §15.209; §15.205;

Test System Setup**9 kHz-30MHz:****30MHz-1GHz:**

Above 1GHz:

The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 limits.

EMI Test Receiver Setup

The system was investigated from 9 kHz to 25 GHz.

During the radiated emission test, the EMI test receiver setup was set with the following configurations:

Frequency Range	RBW	VBW	IF B/W	Measurement
9 kHz - 150 kHz	200 Hz	1 kHz	200 Hz	QP/Average
150 kHz - 30 MHz	9 kHz	30 kHz	9 kHz	QP/ Average
30 MHz - 1000 MHz	100 kHz	300 kHz	/	Peak
	/	/	120 kHz	QP
Above 1GHz	1MHz	3 MHz	/	Peak
	1MHz	3 MHz	/	Average

Test Procedure

According to ANSI C63.10-2013 clause 6.5, 6.6 and 6.7.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 6 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

For 9 kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude (dBμV/m) = Meter Reading (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dBμV/m) – Corrected Amplitude (dBμV/m)

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.247.

Test Data: See Appendix

FCC §15.247(A) (2) - 6 DB EMISSION BANDWIDTH

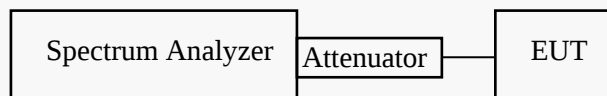
Applicable Standard

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Test Procedure

According to ANSI C63.10-2013 sub-clause 11.8.1

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 * \text{RBW}$.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.



Test Data: See Appendix

FCC §15.247(B) (3) - MAXIMUM CONDUCTED OUTPUT POWER

Applicable Standard

According to FCC §15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, Compliant with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Test Procedure

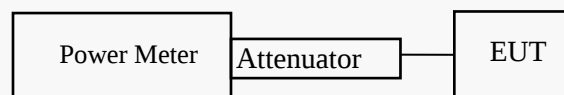
For 2.4G Wi-Fi:

According to ANSI C63.10-2013 sub-clause 11.9.1.3

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

11.9.2.3.2 Method AVGPM-G

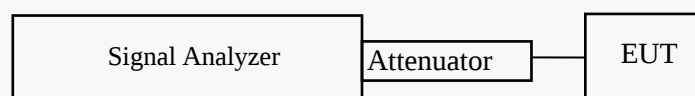
Method AVGPM-G is a measurement using a gated RF average power meter. Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.



For BLE:

According to ANSI C63.10-2013 sub-clause 11.9.1.1

1. Set the RBW $\geq$ DTS bandwidth.
2. Set VBW $\geq 3 \times$ RBW.
3. Set span $\geq 3 \times$ RBW
4. Sweep time = auto couple.
5. Detector = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use peak marker function to determine the peak amplitude level.



Test Data: See Appendix

FCC §15.247(D) – 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

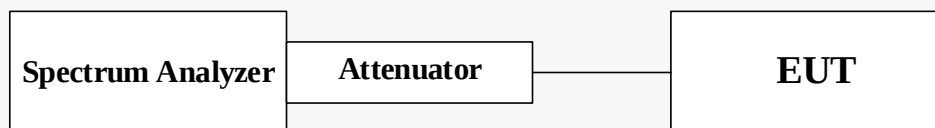
Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates Compliant with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Procedure

According to ANSI C63.10-2013 sub-clause 6.10.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.



Test Data: See Appendix

FCC §15.247(E) - POWER SPECTRAL DENSITY

Applicable Standard

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Test Procedure

According to ANSI C63.10-2013 sub-clause 11.10.2

The following procedure shall be used if maximum peak conducted output power was used to determine Compliant, and it is optional if the maximum conducted (average) output power was used to determine Compliant:

1. Set the RBW to: $3\text{kHz} \leq \text{RBW} \leq 100\text{ kHz}$.
2. Set the VBW $\geq 3 * \text{RBW}$.
3. Set the span to 1.5 times the DTS bandwidth.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum amplitude level within the RBW.
9. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.



Test Data: See Appendix

Appendix - TEST DATA

Environmental Conditions & Test Information

Test Item:	AC LINE CONDUCTED EMISSIONS	RADIATED EMISSIONS
		9kHz -25GHz
Test Date:	2024-03-04~2024-04-01	2024-02-23~2024-05-09
Temperature:	15.9 °C~18.8 °C	16.8°C~24.6 °C
Relative Humidity:	43 %~57 %	43 %~61 %
ATM Pressure:	101.5kPa~102.8kPa	101.1kPa~102.8 kPa
Test Result:	Pass	Pass
Test Engineer:	Joe Zhang&Frank Liu	Leah Li& Peter Wang

Test Item:	6 DB EMISSION BANDWIDTH			OCCUPIED BANDWIDTH		POWER SPECTRAL DENSITY		
	Test Date:	2024-02-27	2024-02-26	2024-03-04	2024-02-27	2024-02-26	2024-02-27	2024-02-26
	Temperature:	21.3 °C	21.7 °C	21.3 °C	21.3 °C	21.7 °C	21.3 °C	21.7 °C
	Relative Humidity:	45 %	43 %	45 %	45 %	43 %	45 %	43 %
	ATM Pressure:	102.3kPa	101.6kPa	102.3kPa	102.3kPa	101.6kPa	102.3kPa	101.6kPa
Test Result:	Pass			/		Pass		
Test Engineer:	Bard Liu			Bard Liu		Bard Liu		

Test Item:	TRANSMITTER OUTPUT POWER MEASUREMENT	OUT OF BAND EMISSIONS		DUTY CYCLE
		Test Date:	2024-02-27	
Temperature:	21.3 °C	21.3 °C	21.7 °C	21.5 °C
Relative Humidity:	45 %	45 %	43 %	47 %
ATM Pressure:	102.3kPa	102.3kPa	101.6kPa	102.2kPa
Test Result:	Pass	Pass	Pass	/
Test Engineer:	Bard Liu	Bard Liu	Bard Liu	Bard Liu

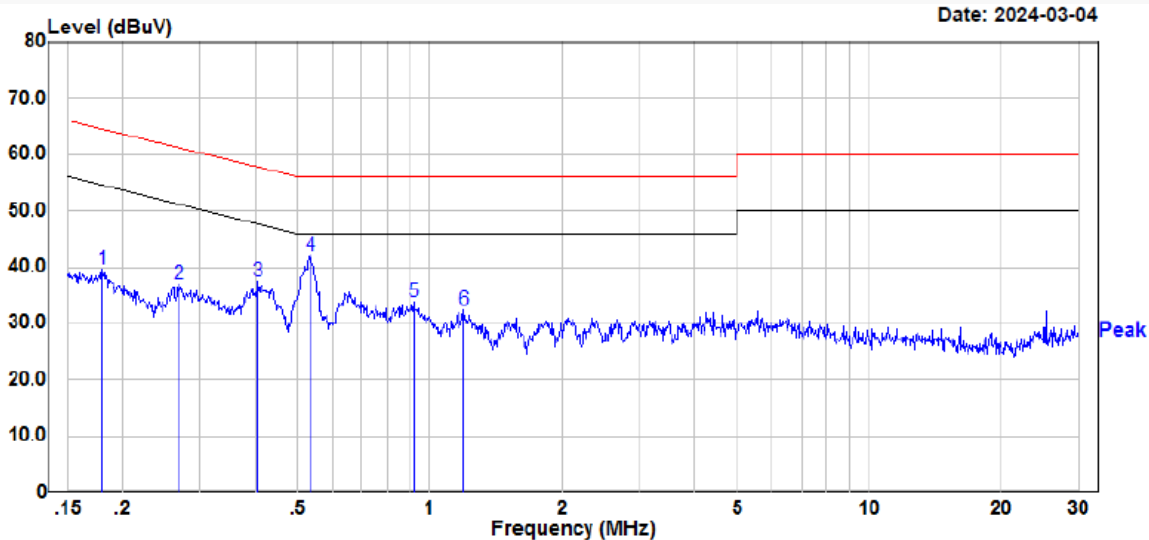
AC LINE CONDUCTED EMISSIONS

Powered by USB port:

For Wi-Fi Mode:

EUT operation mode: Transmitting in maximum output power mode and channel

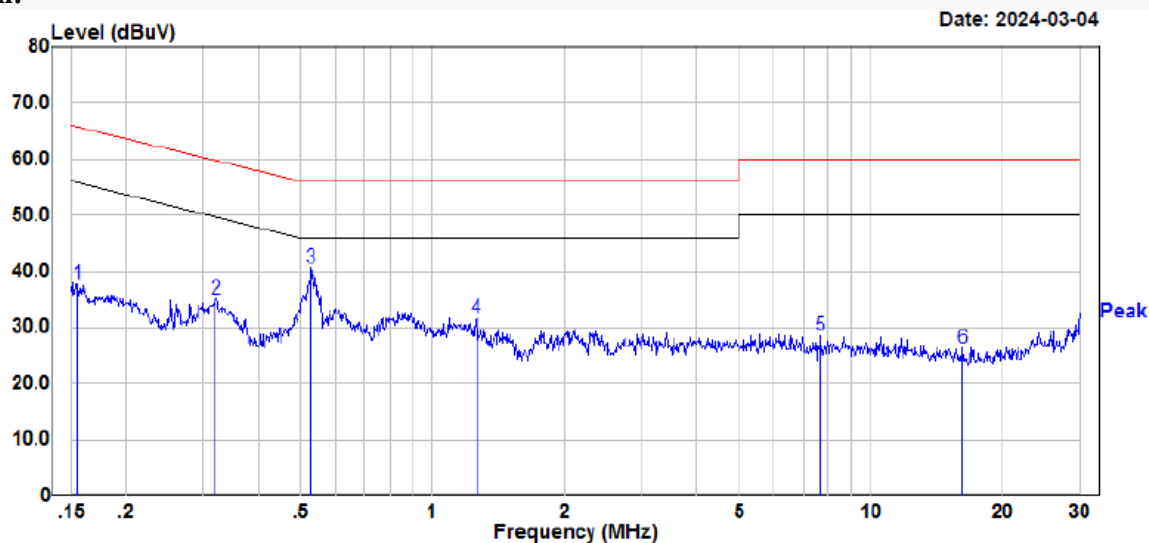
Line:



Site : CE
 Condition : FCC Part 15.207
 : DET:Peak
 Project No. : RKSA231206001
 Model : MASP01
 Phase : L
 Voltage : 120V/60Hz
 Mode : 2.4G WIFI
 Test Equipment : ENV216,ESR
 Temperature : 15.9℃
 Humidity : 45%
 Atmospheric pressure: 101.6kPa
 Test Engineer : Joe Zhang

		Read		Limit	Over	
	Freq	Level	Factor	Level	Line	Limit Remark
	MHz	dBuV	dB	dBuV	dBuV	dB
1	0.179	19.75	19.93	39.68	64.51	-24.83 Peak
2	0.269	17.10	19.99	37.09	61.16	-24.07 Peak
3	0.404	17.30	20.07	37.37	57.76	-20.39 Peak
4	0.535	21.85	20.10	41.95	56.00	-14.05 Peak
5	0.921	13.93	19.82	33.75	56.00	-22.25 Peak
6	1.193	12.54	19.87	32.41	56.00	-23.59 Peak

Neutral:

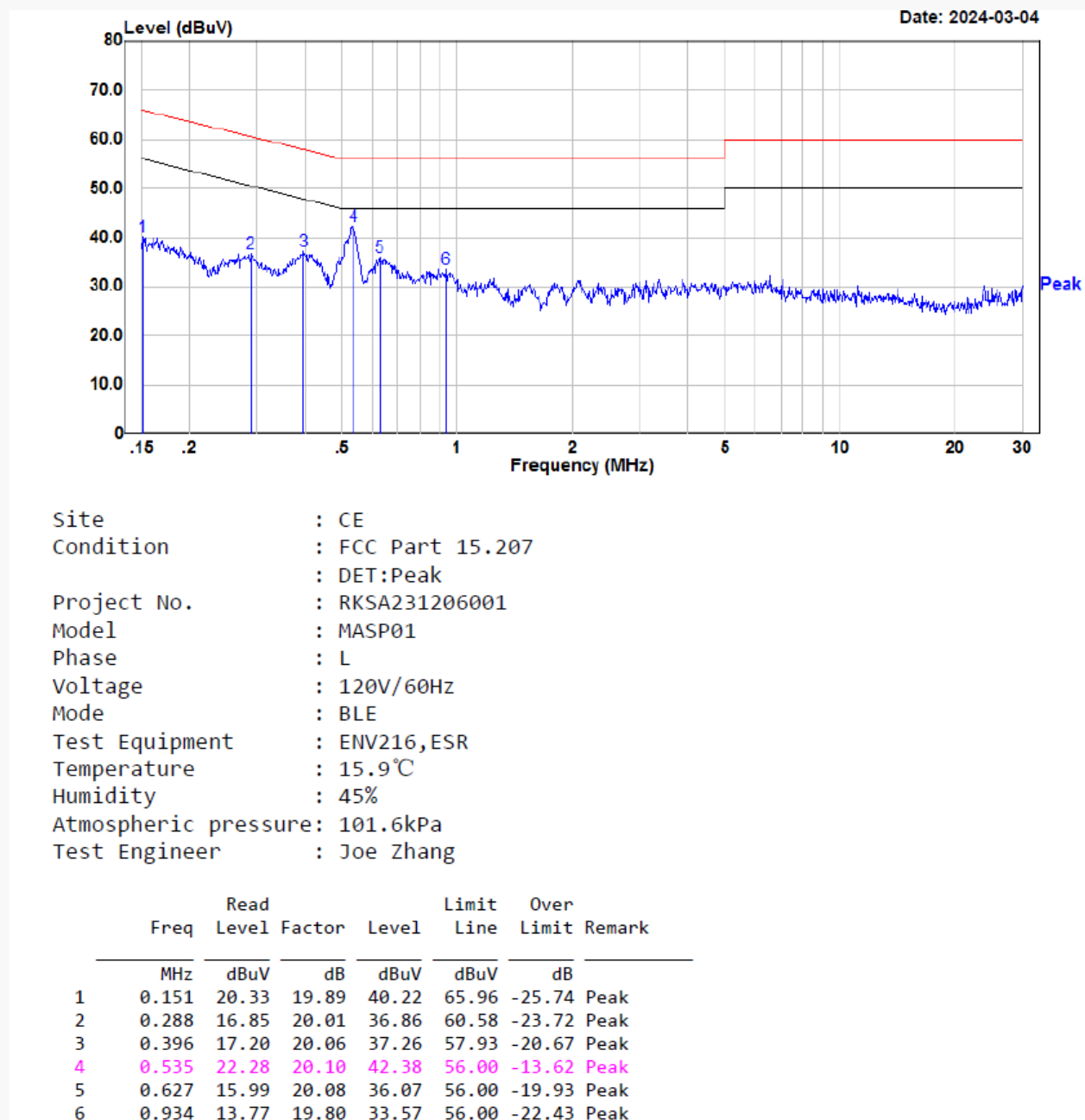


Site : CE
Condition : FCC Part 15.207
: DET:Peak
Project No. : RKSA231206001
Model : MASP01
Phase : N
Voltage : 120V/60Hz
Mode : 2.4G WIFI
Test Equipment : ENV216, ESR
Temperature : 15.9°C
Humidity : 45%
Atmospheric pressure: 101.6kPa
Test Engineer : Joe Zhang

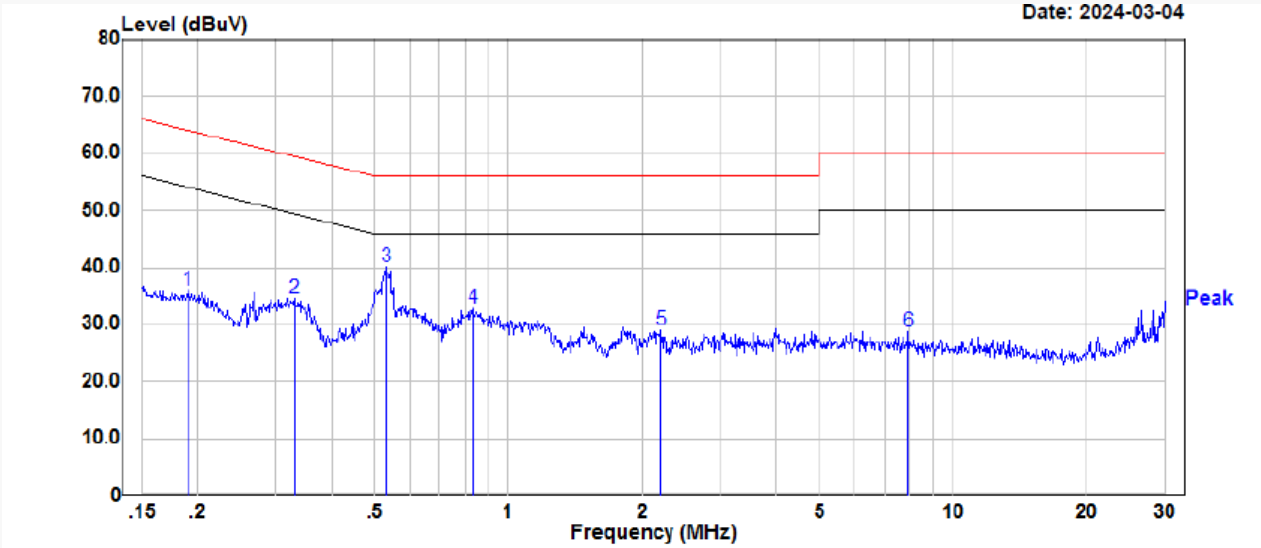
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.155	17.92	19.90	37.82	65.75	-27.93	Peak
2	0.320	15.11	20.02	35.13	59.71	-24.58	Peak
3	0.527	20.46	20.10	40.56	56.00	-15.44	Peak
4	1.260	11.72	19.90	31.62	56.00	-24.38	Peak
5	7.656	8.36	20.19	28.55	60.00	-31.45	Peak
6	16.170	6.47	19.81	26.28	60.00	-33.72	Peak

For BLE Mode: (Transmitting in maximum output power mode middle channel)

Line



Neutral



Site : CE
 Condition : FCC Part 15.207
 : DET:Peak
 Project No. : RKSA231206001
 Model : MASP01
 Phase : N
 Voltage : 120V/60Hz
 Mode : BLE
 Test Equipment : ENV216,ESR
 Temperature : 15.9°C
 Humidity : 45%
 Atmospheric pressure: 101.6kPa
 Test Engineer : Joe Zhang

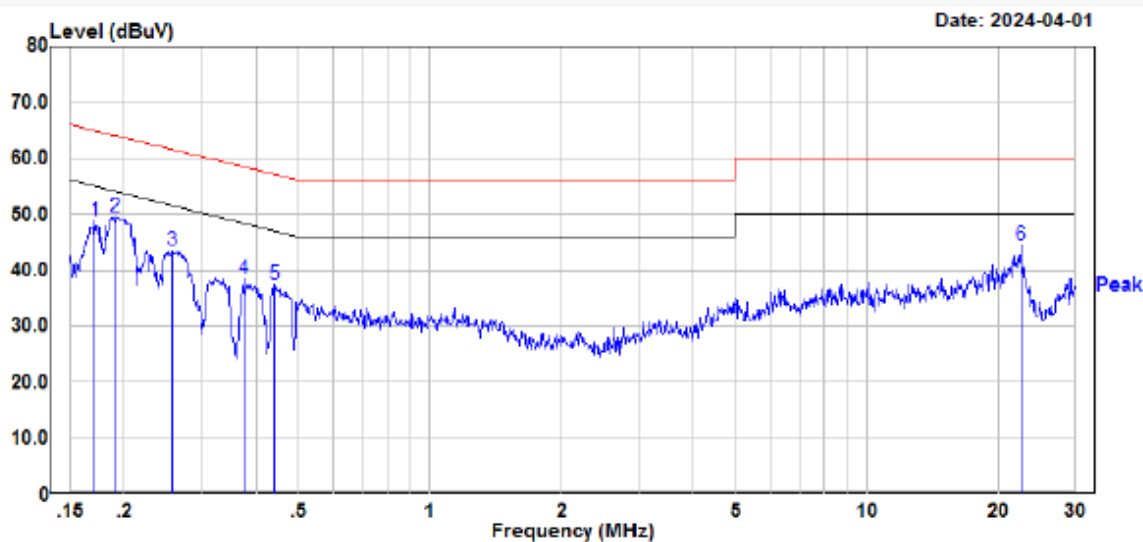
	Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit Remark
	MHz	dBuV	dB	dBuV	dBuV	dB
1	0.190	16.00	19.94	35.94	64.05	-28.11 Peak
2	0.330	14.63	20.03	34.66	59.46	-24.80 Peak
3	0.529	19.97	20.10	40.07	56.00	-15.93 Peak
4	0.833	13.08	19.91	32.99	56.00	-23.01 Peak
5	2.202	8.82	20.22	29.04	56.00	-26.96 Peak
6	7.928	8.66	20.17	28.83	60.00	-31.17 Peak

Powered by Base:

For Wi-Fi Mode:

EUT operation mode: Transmitting in maximum output power mode and Low channel

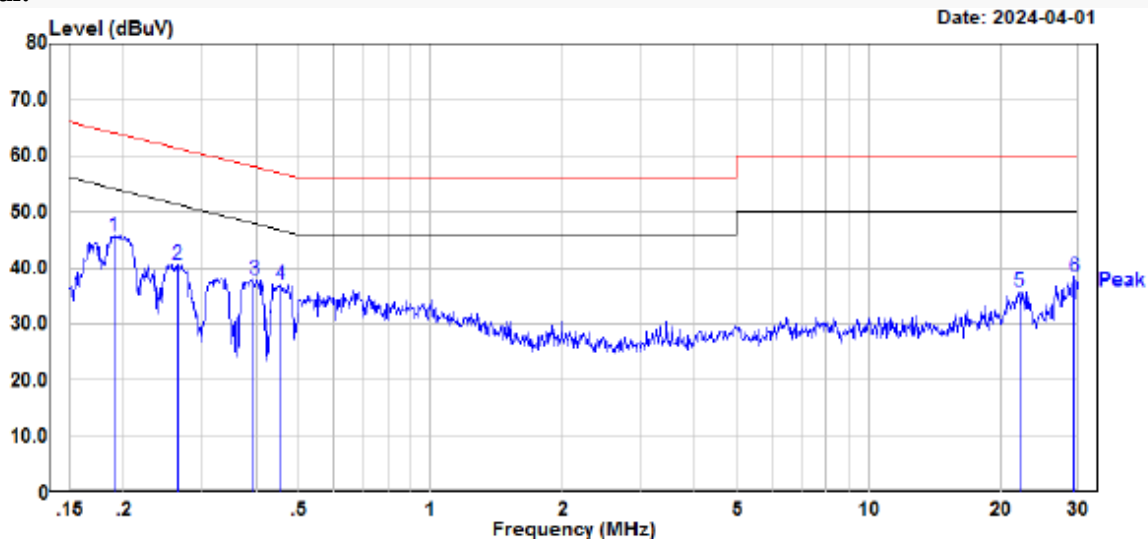
Line:



Site : CE
Condition : FCC Part 15.207
: DET:Peak
Project No. : RKSA231206001
Model : MASP01
Phase : L
Voltage : 120V/60Hz
Mode : 2.4G WIFI
Test Equipment : ENV216,ESR
Temperature : 18.8℃
Humidity : 57%
Atmospheric pressure: 101.5kPa
Test Engineer : Frank Liu

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.171	29.00	19.91	48.91	64.92	-16.01	Peak
2	0.191	29.58	19.94	49.52	64.01	-14.49	Peak
3	0.257	23.53	19.99	43.52	61.53	-18.01	Peak
4	0.375	18.28	20.06	38.34	58.38	-20.04	Peak
5	0.440	17.40	20.09	37.49	57.06	-19.57	Peak
6	22.468	24.65	19.89	44.54	60.00	-15.46	Peak

Neutral:

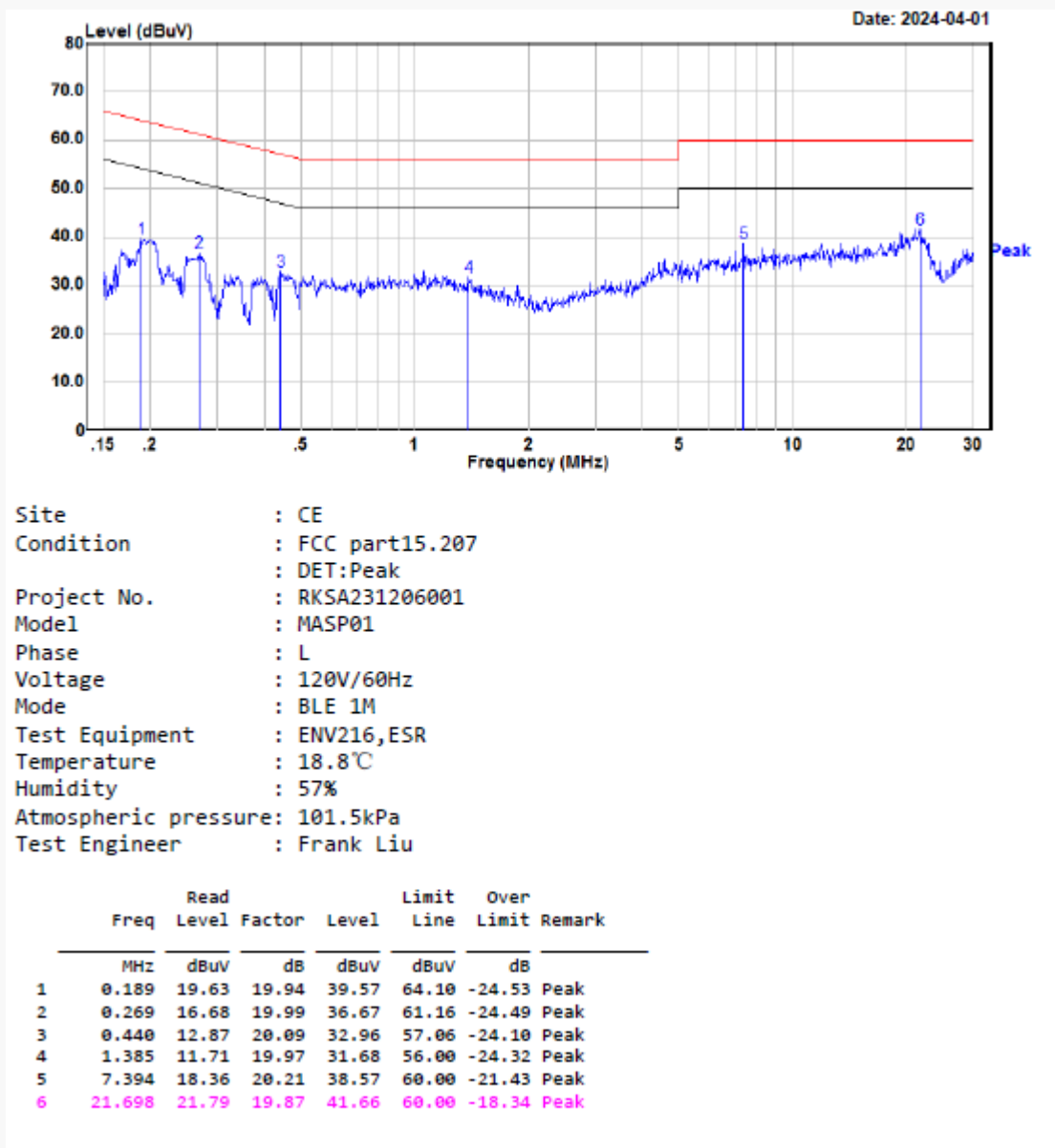


Site : CE
Condition : FCC Part 15.207
: DET:Peak
Project No. : RKSA231206001
Model : MASP01
Phase : N
Voltage : 120V/60Hz
Mode : 2.4G WIFI
Test Equipment : ENV216,ESR
Temperature : 18.8℃
Humidity : 57%
Atmospheric pressure: 101.5kPa
Test Engineer : Frank Liu

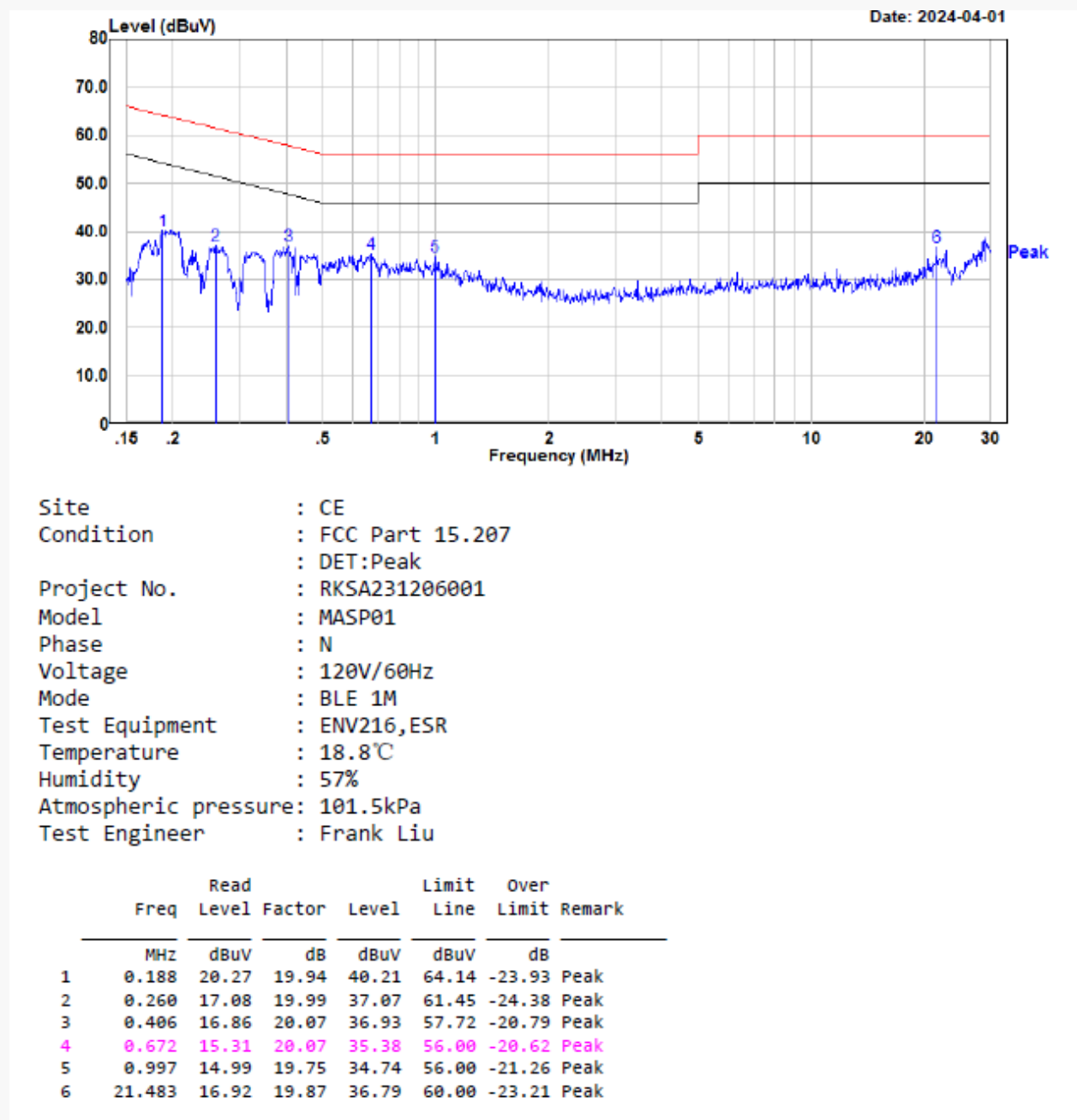
		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.190	25.83	19.94	45.77	64.05	-18.28	Peak
2	0.265	20.67	19.99	40.66	61.28	-20.62	Peak
3	0.396	17.79	20.06	37.85	57.93	-20.08	Peak
4	0.454	16.90	20.09	36.99	56.81	-19.82	Peak
5	22.025	15.99	19.88	35.87	60.00	-24.13	Peak
6	29.408	18.41	20.01	38.42	60.00	-21.58	Peak

For BLE Mode: (Transmitting in maximum output power mode middle channel)

Line



Neutral

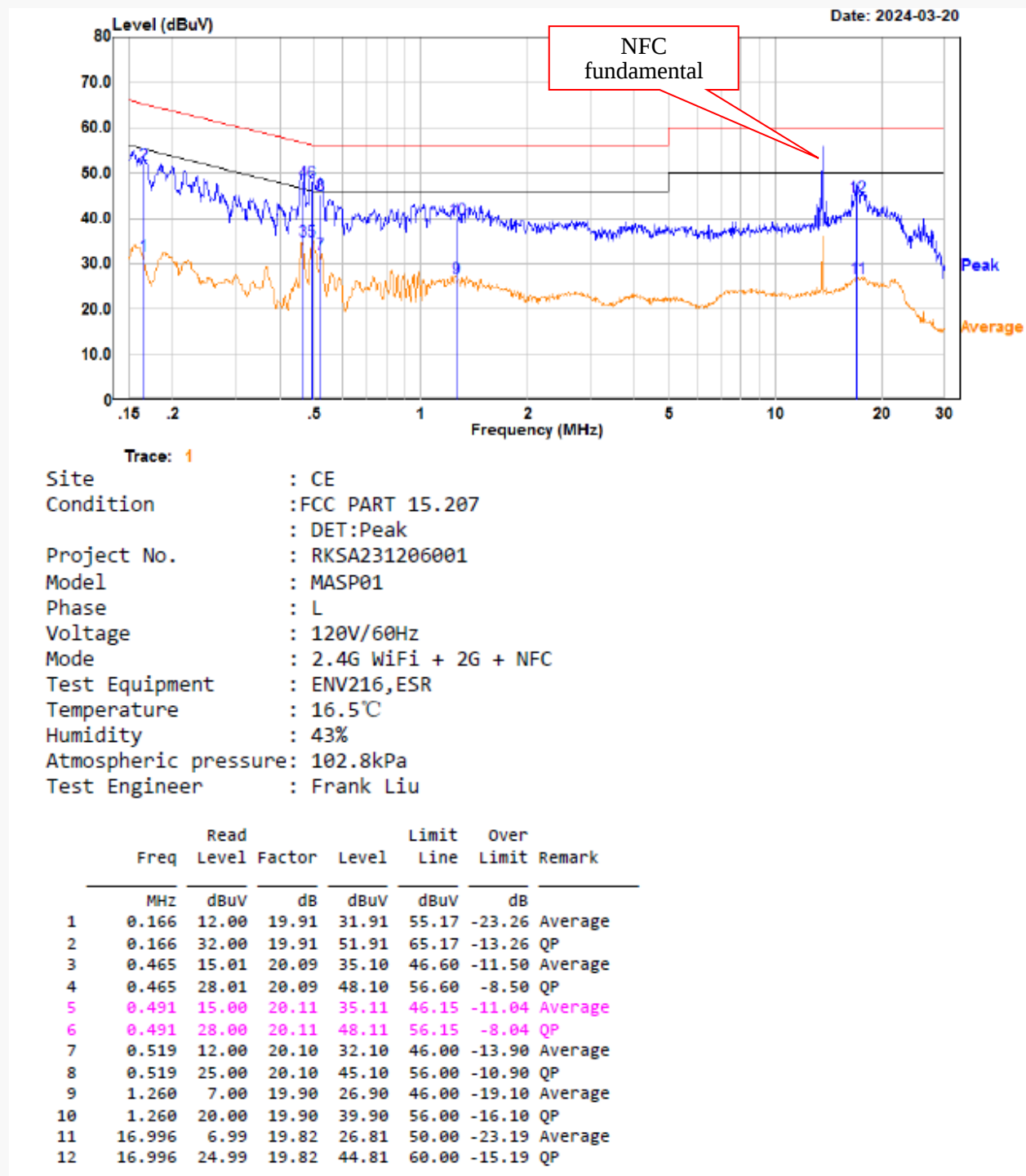


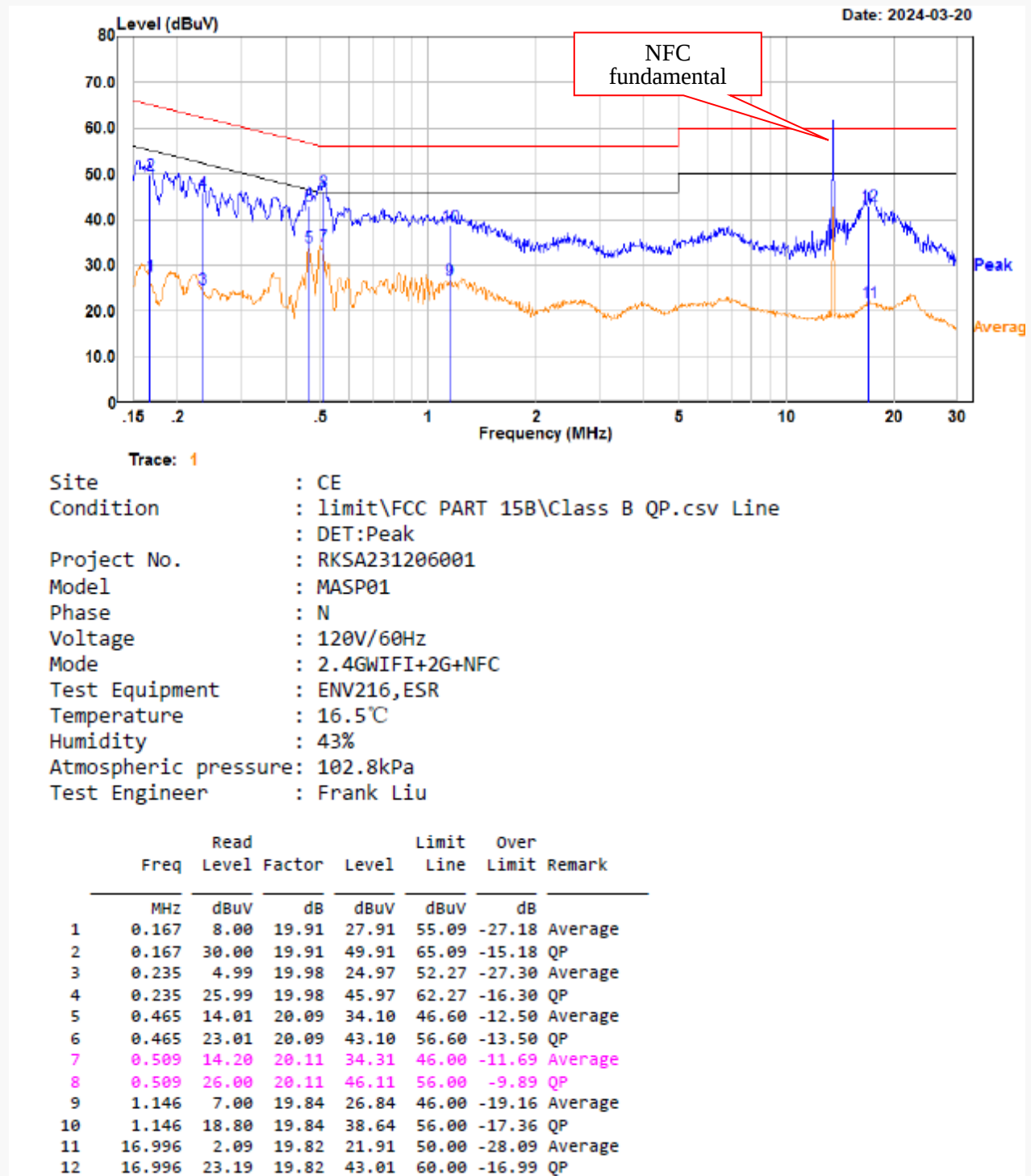
Transmitting simultaneously test:

Powered by USB port (worst case):

Pre-scan all the possible co-located transmitter configurations were evaluated and the worst case GSM850 middle channel, 802.11b mode of 2.4G Wi-Fi and NFC mode transmitting at maximum power simultaneously was recorded.

Line



Neutral:

SPURIOUS EMISSIONS

Test Result: Compliant

EUT operation mode: Transmitting

After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

9 kHz-30MHz:(Transmitting in maximum output power mode and channel)

The amplitude of spurious emissions attenuated more than 20 dB below the limit was not be recorded.

For Wi-Fi Mode:

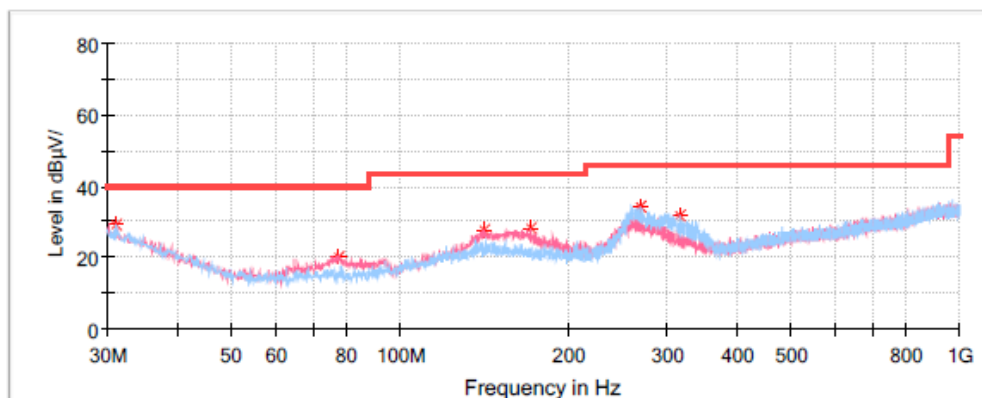
30MHz-1GHz (802.11b mode is worst case) :

Powered by USB port:

Low channel: 2412MHz

Common Information

Project No:	RKSA231206001
EUT Model:	MASP01
Test Mode:	2.4G WIFI
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESCI, JB3, 310N
Temperature:	19.2°C
Humidity:	57%
Barometric Pressure:	101.1kPa
Test Engineer:	Leah Li
Test Date:	2024/4/19



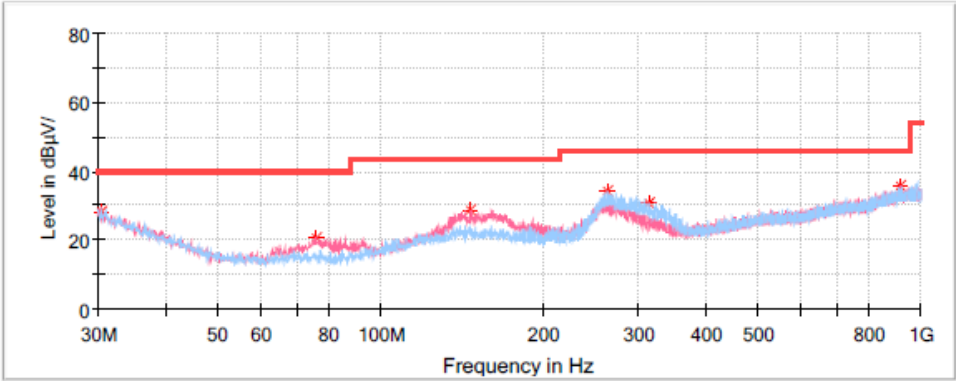
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµ V/m)	Limit (dBµ V/m)	Margin (dB)	Pol	Corr. (dB/m)
31.212500	29.00	40.00	11.00	H	-5.3
77.530000	20.27	40.00	19.73	V	-17.4
141.550000	27.69	43.50	15.81	V	-11.6
171.620000	28.01	43.50	15.49	V	-13.0
268.135000	34.28	46.00	11.72	H	-11.8
316.028750	31.66	46.00	14.34	H	-10.6

Middle channel: 2437MHz

Common Information

Project No:	RKSA231206001
EUT Model:	MASP01
Test Mode:	2.4G WIFI
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESCI, JB3, 310N
Temperature:	19.2°C
Humidity:	57%
Barometric Pressure:	101.1kPa
Test Engineer:	Leah Li
Test Date:	2024/4/19



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµ V/m)	Limit (dBµ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.485000	28.31	40.00	11.69	H	-4.8
75.832500	20.55	40.00	19.45	V	-17.2
146.885000	28.59	43.50	14.91	V	-11.9
263.285000	34.13	46.00	11.87	H	-12.1
312.997500	30.78	46.00	15.22	H	-10.7
913.548750	35.63	46.00	10.37	V	1.4

High Channel: 2462MHz

Common Information

Project No:

EUT Model:

Test Mode:

Standard:

Test Equipment:

Temperature:

Humidity:

Barometric Pressure:

Test Engineer:

Test Date:

RKSA231206001

MASP01

2.4G WIFI

FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209

ESCI, JB3, 310N

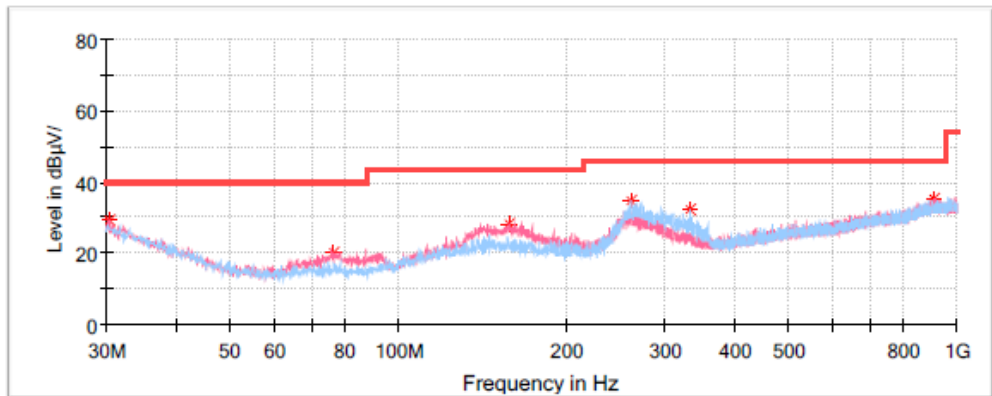
19.2℃

57%

101.1kPa

Leah Li

2024/4/19



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµ V/m)	Limit (dBµ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.485000	29.24	40.00	10.76	V	-4.8
76.681250	20.36	40.00	19.64	V	-17.3
157.555000	28.08	43.50	15.42	V	-12.4
260.981250	34.56	46.00	11.44	H	-12.3
332.033750	32.00	46.00	14.00	H	-10.2
905.910000	35.41	46.00	10.59	V	1.3

Powered by Base:

Low channel: 2412MHz

Common Information

Project No:RKSA231206001

EUT Model:MASP01

Test Mode:2.4G WIFI

Standard:FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209

Test Equipment:ESCI、JB3、310N

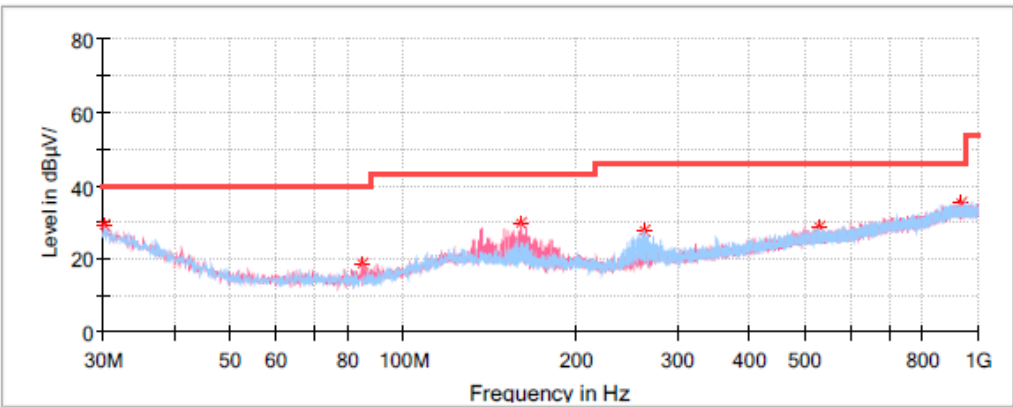
Temperature:21.5℃

Humidity:52%

Barometric Pressure:100.7kPa

Test Engineer:Leah Li

Test Date:2024/4/26



Critical Freqs

Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.121250	29.04	40.00	10.96	V	-4.5
84.683750	18.75	40.00	21.25	V	-17.4
160.828750	29.83	43.50	13.67	V	-12.6
263.527500	27.87	46.00	18.13	H	-12.1
530.520000	28.54	46.00	17.46	V	-5.5
938.041250	35.11	46.00	10.89	V	1.4

Middle channel: 2437MHz

Common Information

Project No:

EUT Model:

Test Mode:

Standard:

Test Equipment:

Temperature:

Humidity:

Barometric Pressure:

Test Engineer:

Test Date:

RKSA231206001

MASP01

2.4G WIFI

FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209

ESCI、JB3、310N

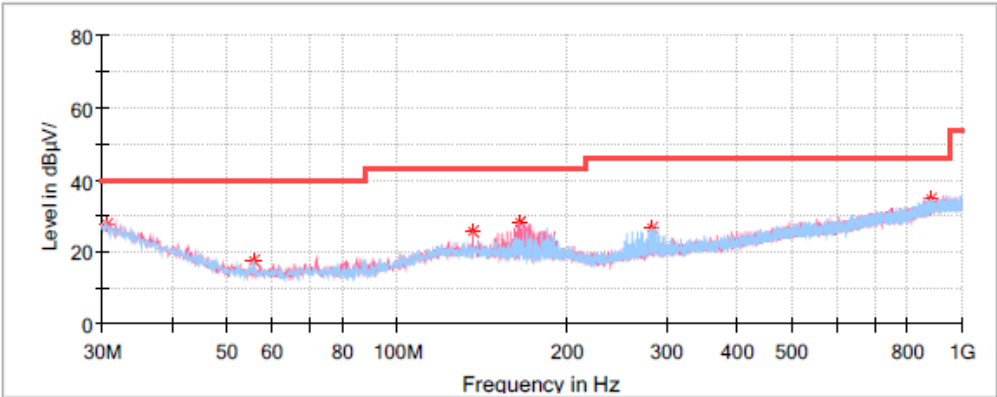
21.5℃

52%

100.7kPa

Leah Li

2024/4/26



Critical Freqs

Frequency (MHz)	MaxPeak (dBµ V/m)	Limit (dBµ V/m)	Margin (dB)	Pol	Corr. (dB /m)
30.727500	27.88	40.00	12.12	H	-4.9
55.583750	17.62	40.00	22.38	H	-17.1
136.093750	25.79	43.50	17.71	V	-11.5
165.193750	28.15	43.50	15.35	V	-12.7
283.533750	26.75	46.00	19.25	H	-11.1
878.871250	34.60	46.00	11.40	H	0.8

High Channel: 2462MHz

Common Information

Project No:

EUT Model:

Test Mode:

Standard:

Test Equipment:

Temperature:

Humidity:

Barometric Pressure:

Test Engineer:

Test Date:

RKSA231206001

MASP01

2.4G WIFI

FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209

ESCI、JB3、310N

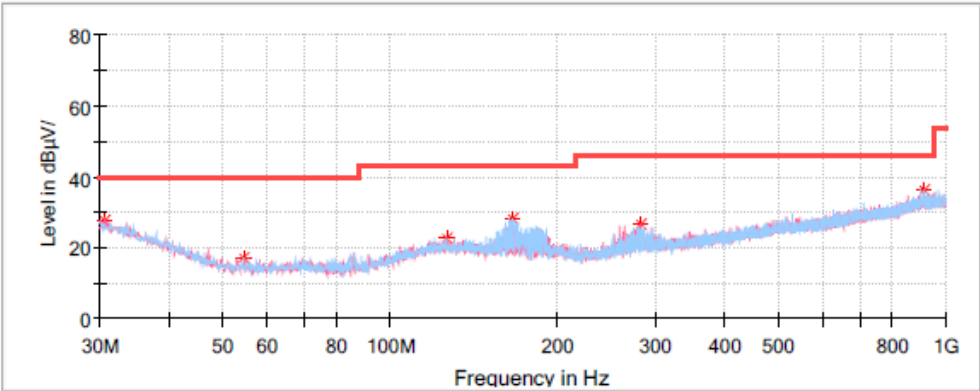
21.5℃

52%

100.7kPa

Leah Li

2024/4/26



Critical Freqs

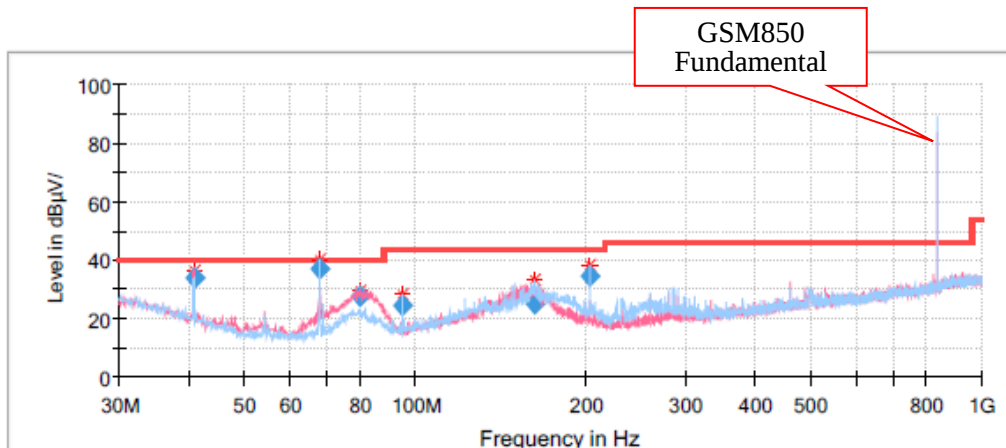
Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.727500	27.67	40.00	12.33	V	-4.9
54.613750	16.91	40.00	23.09	H	-17.1
126.151250	22.59	43.50	20.91	H	-11.3
166.527500	28.24	43.50	15.26	H	-12.8
283.048750	26.76	46.00	19.24	V	-11.1
918.277500	36.28	46.00	9.72	H	1.4

Powered by USB port (worst case):

Pre-scan all the possible co-located transmitter configurations were evaluated and the worst case GSM850 middle channel, 802.11b mode of 2.4G Wi-Fi and NFC mode transmitting at maximum power simultaneously was recorded.

Common Information

Project No:	RKSA231206001
EUT Model:	MASP01
Test Mode:	2.4G WIFI + 2G + NFC
Standard:	FCC Part 15.247 & FCC Part 15.205 & Part 15.209
Test Equipment:	ESCI, JB3, 310N
Temperature:	21.9°C
Humidity:	61%
Barometric Pressure:	101.8kPa
Test Engineer:	Leah Li
Test Date:	2024/5/8



Final Result

Frequency (MHz)	QuasiPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
40.670000	34.20	40.00	5.80	V	-12.0
67.830000	36.94	40.00	3.06	H	-16.9
79.830000	27.58	40.00	12.42	V	-17.6
94.860000	24.51	43.50	18.99	H	-15.9
162.160000	25.20	43.50	18.30	H	-12.6
203.380000	34.69	43.50	8.81	H	-12.8

Powered by USB port

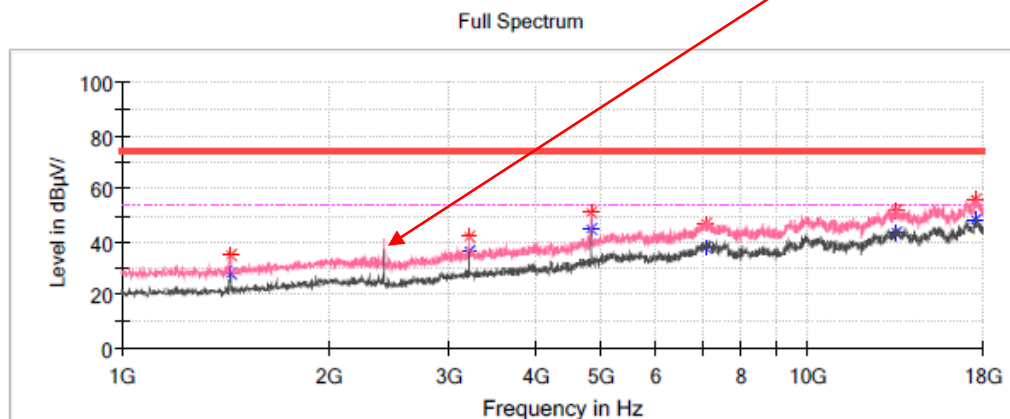
1GHz-18GHz:
802.11b Mode:

Low Channel: 2412MHz

Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date:	2024/2/23

Fundamental Test
with notch filter



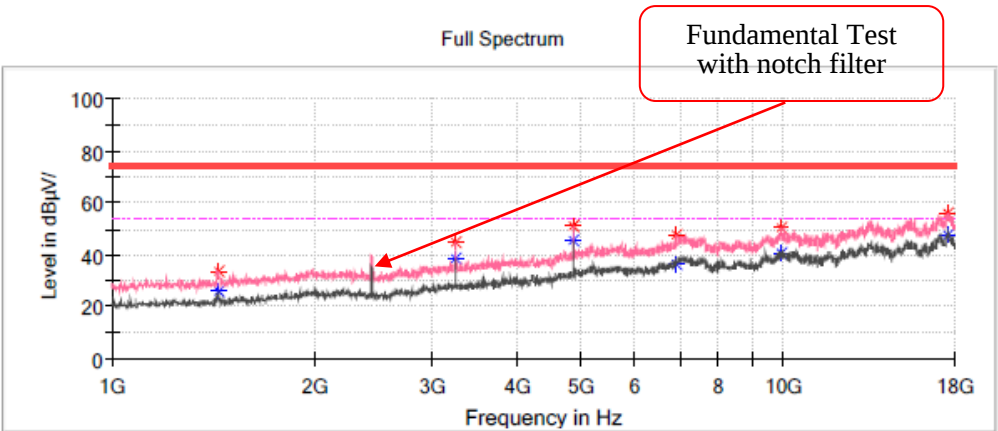
Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1440.300000	34.70	---	74.00	39.30	V	-14.1
1440.300000	---	27.65	54.00	26.35	V	-14.1
3215.100000	---	36.01	54.00	17.99	V	-7.2
3215.100000	42.12	---	74.00	31.88	V	-7.2
4823.300000	---	44.52	54.00	9.48	V	-2.1
4823.300000	50.84	---	74.00	23.16	V	-2.1
7077.500000	---	37.94	54.00	16.06	V	3.9
7077.500000	47.19	---	74.00	26.81	V	3.9
13488.200000	---	43.53	54.00	10.47	H	11.0
13488.200000	52.08	---	74.00	21.92	H	11.0
17524.000000	---	48.48	54.00	5.52	V	13.5
17524.000000	56.16	---	74.00	17.84	V	13.5

Middle Channel: 2437MHz

Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date	2024/2/23

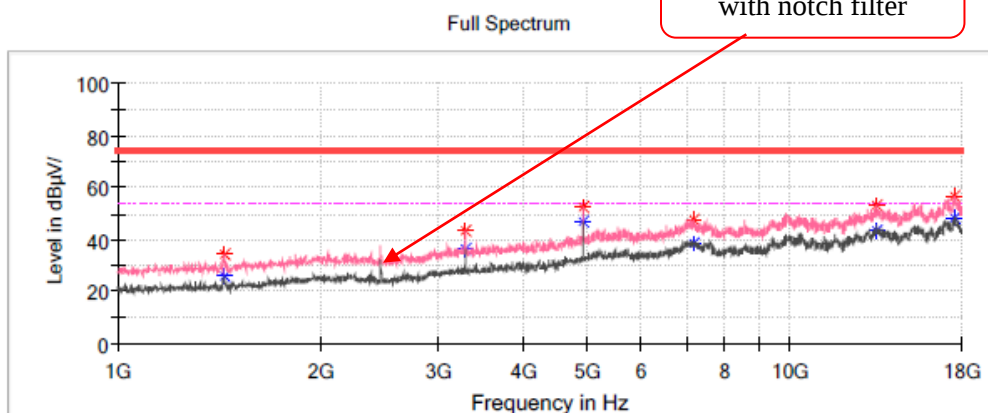


Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1440.300000	33.85	---	74.00	40.15	V	-14.1
1440.300000	---	25.80	54.00	28.20	V	-14.1
3249.100000	---	38.38	54.00	15.62	H	-7.1
3249.100000	44.56	---	74.00	29.44	H	-7.1
4874.300000	---	45.38	54.00	8.62	V	-1.9
4874.300000	50.93	---	74.00	23.07	V	-1.9
6929.600000	---	36.68	54.00	17.32	V	3.4
6929.600000	47.31	---	74.00	26.69	V	3.4
9923.300000	---	40.50	54.00	13.50	V	7.6
9923.300000	50.55	---	74.00	23.45	V	7.6
17590.300000	---	47.43	54.00	6.57	V	13.2
17590.300000	56.11	---	74.00	17.89	V	13.2

High Channel: 2462MHz**Common Information**

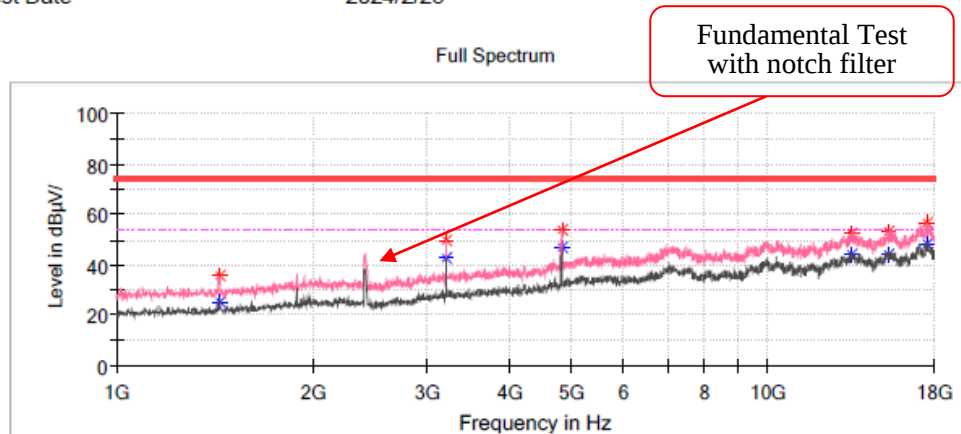
Project No.: RKSA231206001
EUT Model: MAPSP01
Test Mode: 2.4G Wi-Fi
Standard: FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Temperature: 20.3℃
Humidity: 52%
Atmospheric pressure: 102.8kPa
Test Engineer: Peter Wang
Test Date: 2024/2/23

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1440.300000	---	25.62	54.00	28.38	V	-14.1
1440.300000	34.40	---	74.00	39.60	V	-14.1
3283.100000	---	36.15	54.00	17.85	H	-6.9
3283.100000	43.42	---	74.00	30.58	H	-6.9
4923.600000	52.14	---	74.00	21.86	V	-1.6
4923.600000	---	46.65	54.00	7.35	V	-1.6
7188.000000	---	38.16	54.00	15.84	V	3.9
7188.000000	47.60	---	74.00	26.40	V	3.9
13464.400000	---	43.53	54.00	10.47	V	10.9
13464.400000	53.02	---	74.00	20.98	V	10.9
17602.200000	56.44	---	74.00	17.56	V	13.2
17602.200000	---	48.25	54.00	5.75	V	13.2

802.11g Mode:**Low Channel: 2412MHz****Common Information**

Project No.: RKSA231206001
EUT Model: MAPSP01
Test Mode: 2.4G Wi-Fi
Standard: FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Temperature: 20.3℃
Humidity: 52%
Atmospheric pressure: 102.8kPa
Test Engineer: Peter Wang
Test Date: 2024/2/23

**Critical Freqs**

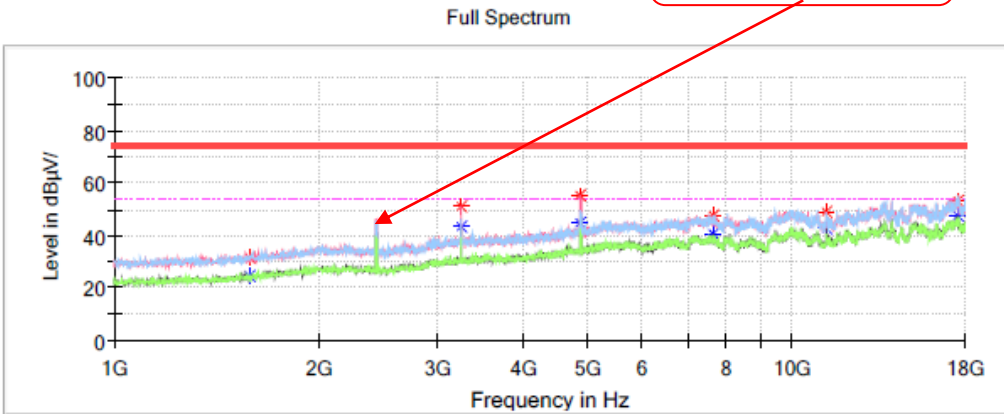
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1440.300000	---	25.50	54.00	28.50	V	-14.1
1440.300000	35.73	---	74.00	38.27	V	-14.1
3215.100000	---	43.00	54.00	11.00	V	-7.2
3215.100000	49.67	---	74.00	24.33	V	-7.2
4826.700000	53.69	---	74.00	20.31	H	-2.1
4826.700000	---	46.68	54.00	7.32	H	-2.1
13408.300000	---	43.81	54.00	10.19	V	10.6
13408.300000	52.71	---	74.00	21.29	V	10.6
15317.400000	---	44.02	54.00	9.98	V	11.2
15317.400000	53.00	---	74.00	21.00	V	11.2
17578.400000	---	48.45	54.00	5.55	V	13.3
17578.400000	56.99	---	74.00	17.01	V	13.3

Middle Channel: 2437MHz

Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	101.1kPa
Test Engineer:	Peter Wang
Test Date	2024/4/2

Fundamental Test
with notch filter

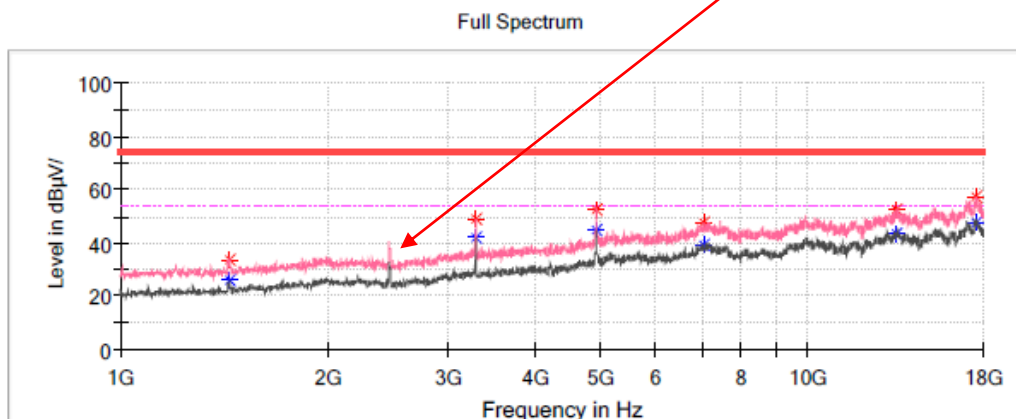


Critical Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1586.500000	31.72	---	74.00	42.28	H	-13.3
1586.500000	---	24.81	54.00	29.19	H	-13.3
3249.100000	50.77	---	74.00	23.23	V	-7.1
3249.100000	---	43.54	54.00	10.46	V	-7.1
4872.600000	55.29	---	74.00	18.71	V	-1.9
4872.600000	---	44.78	54.00	9.22	V	-1.9
7645.300000	47.65	---	74.00	26.35	V	4.1
7645.300000	---	40.36	54.00	13.64	V	4.1
11201.700000	49.26	---	74.00	24.74	V	6.7
11201.700000	---	42.90	54.00	11.10	V	6.7
17568.200000	53.12	---	74.00	20.88	V	13.3
17568.200000	---	47.67	54.00	6.33	V	13.3

High Channel: 2462MHz**Common Information**

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3°C
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date:	2024/2/23

Fundamental Test
with notch filter**Critical Freqs**

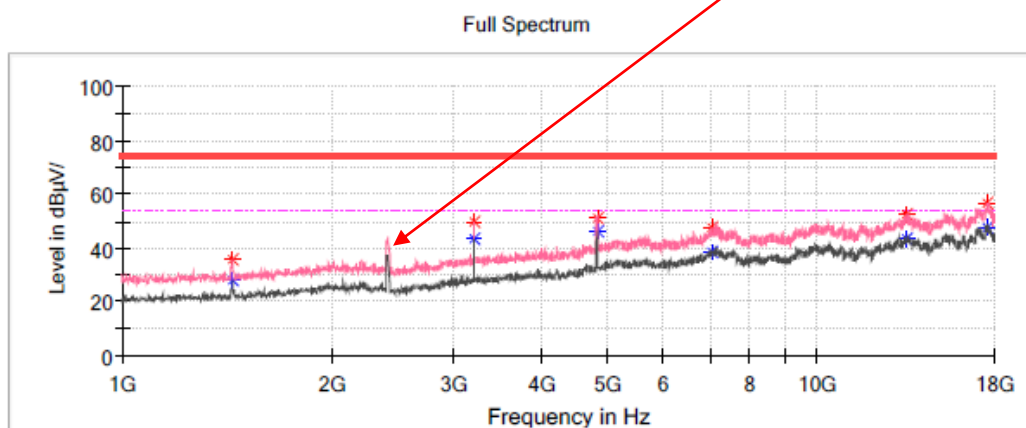
Frequency (MHz)	MaxPeak (dB µV/m)	Average (dB µV/m)	Limit (dB µV/m)	Margin (dB)	Pol	Corr. (dB/m)
1442.000000	33.80	---	74.00	40.20	V	-14.1
1442.000000	---	26.01	54.00	27.99	V	-14.1
3283.100000	---	41.71	54.00	12.29	H	-6.9
3283.100000	48.95	---	74.00	25.05	H	-6.9
4925.300000	52.57	---	74.00	21.43	V	-1.6
4925.300000	---	44.92	54.00	9.08	V	-1.6
7060.500000	---	39.34	54.00	14.66	V	3.8
7060.500000	47.22	---	74.00	26.78	V	3.8
13476.300000	---	43.31	54.00	10.69	V	10.9
13476.300000	52.17	---	74.00	21.83	V	10.9
17598.800000	57.22	---	74.00	16.78	V	13.2
17598.800000	---	47.41	54.00	6.59	V	13.2

802.11n-HT20 Mode :

Low Channel: 2412MHz

Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date:	2024/2/23

Fundamental Test
with notch filter**Critical Freqs**

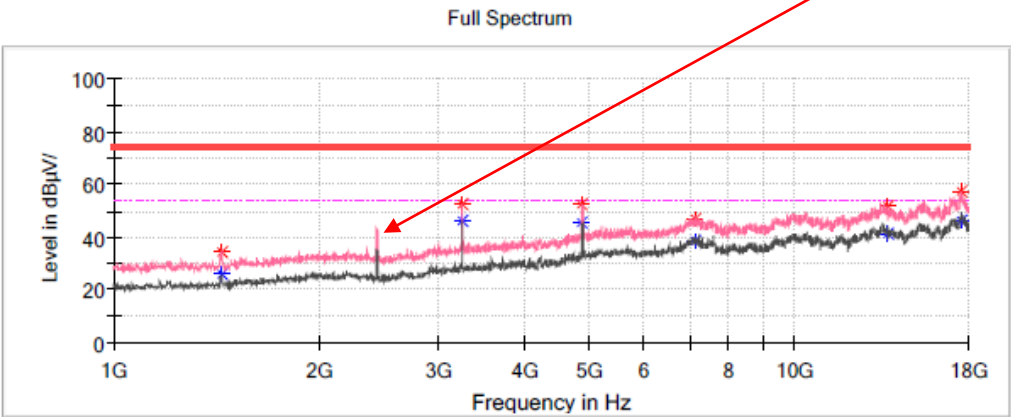
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1440.300000	35.66	---	74.00	38.34	V	-14.1
1440.300000	---	27.85	54.00	26.15	V	-14.1
3215.100000	49.40	---	74.00	24.60	H	-7.2
3215.100000	---	43.20	54.00	10.80	H	-7.2
4821.600000	51.23	---	74.00	22.77	V	-2.1
4821.600000	---	46.09	54.00	7.91	V	-2.1
7067.300000	---	38.37	54.00	15.63	V	3.8
7067.300000	47.33	---	74.00	26.67	V	3.8
13444.000000	---	43.04	54.00	10.96	V	10.8
13444.000000	52.53	---	74.00	21.47	V	10.8
17563.100000	---	47.60	54.00	6.40	V	13.4
17563.100000	56.45	---	74.00	17.55	V	13.4

Middle Channel: 2437MHz

Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date	2024/2/23

Fundamental Test
with notch filter



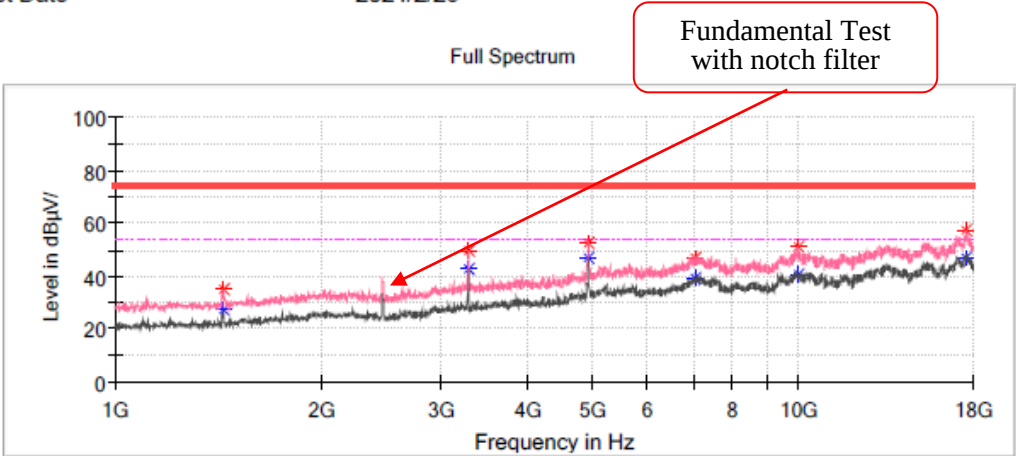
Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1440.300000	34.58	---	74.00	39.42	V	-14.1
1440.300000	---	26.15	54.00	27.85	V	-14.1
3249.100000	---	45.99	54.00	8.01	V	-7.1
3249.100000	52.10	---	74.00	21.90	V	-7.1
4870.900000	---	45.22	54.00	8.78	H	-1.9
4870.900000	52.20	---	74.00	21.80	H	-1.9
7131.900000	---	38.26	54.00	15.74	V	3.9
7131.900000	46.83	---	74.00	27.17	V	3.9
13741.500000	---	41.22	54.00	12.78	V	10.8
13741.500000	51.53	---	74.00	22.47	V	10.8
17513.800000	57.64	---	74.00	16.36	V	13.6
17513.800000	---	46.05	54.00	7.95	V	13.6

High Channel: 2462MHz

Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date	2024/2/23



Critical Freqs

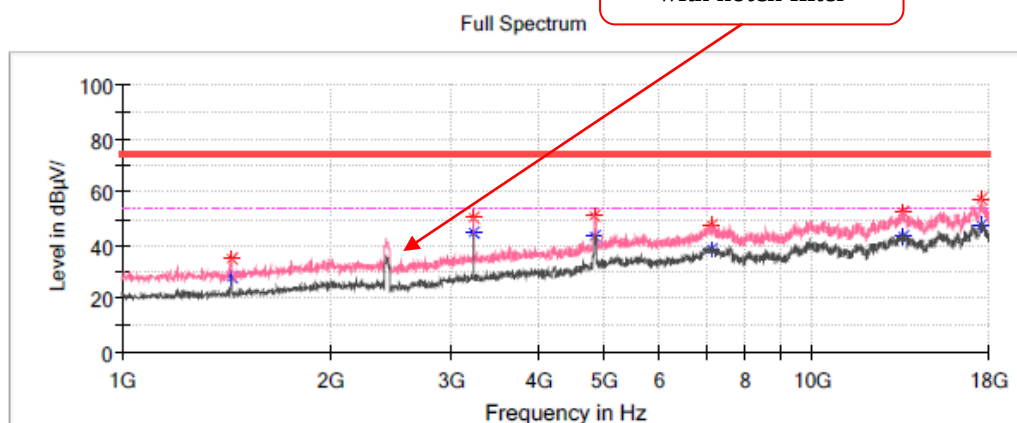
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1440.300000	---	27.53	54.00	26.47	V	-14.1
1440.300000	35.07	---	74.00	38.93	V	-14.1
3283.100000	---	42.37	54.00	11.63	H	-6.9
3283.100000	49.88	---	74.00	24.12	H	-6.9
4923.600000	52.25	---	74.00	21.75	V	-1.6
4923.600000	---	47.09	54.00	6.91	V	-1.6
7057.100000	---	39.17	54.00	14.83	V	3.8
7057.100000	46.90	---	74.00	27.10	V	3.8
10004.900000	---	40.70	54.00	13.30	V	7.8
10004.900000	51.19	---	74.00	22.81	V	7.8
17595.400000	---	47.04	54.00	6.96	V	13.2
17595.400000	57.24	---	74.00	16.76	V	13.2

802.11n-HT40 Mode :

Low Channel: 2422MHz

Common Information

Project No.: RKSA231206001
EUT Model: MAPSP01
Test Mode: 2.4G Wi-Fi
Standard: FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Temperature: 20.3°C
Humidity: 52%
Atmospheric pressure: 102.8kPa
Test Engineer: Peter Wang
Test Date: 2024/2/23

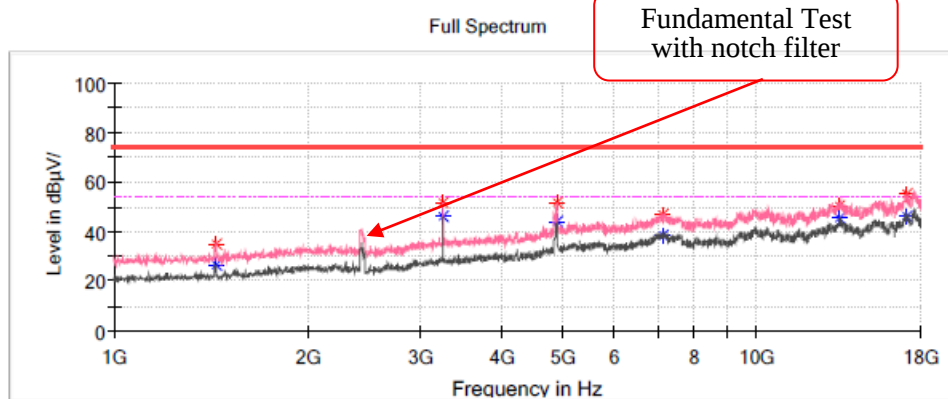
Fundamental Test
with notch filter

Critical Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1440.300000	34.82	---	74.00	39.18	V	-14.1
1440.300000	---	27.72	54.00	26.28	V	-14.1
3228.700000	50.36	---	74.00	23.64	H	-7.1
3228.700000	---	44.74	54.00	9.26	H	-7.1
4843.700000	51.26	---	74.00	22.74	V	-2.0
4843.700000	---	43.59	54.00	10.41	V	-2.0
7162.500000	---	38.19	54.00	15.81	V	3.9
7162.500000	47.30	---	74.00	26.70	V	3.9
13518.800000	---	43.57	54.00	10.43	V	11.0
13518.800000	52.10	---	74.00	21.90	V	11.0
17578.400000	---	47.32	54.00	6.68	V	13.3
17578.400000	57.10	---	74.00	16.90	V	13.3

Middle Channel: 2437MHz**Common Information**

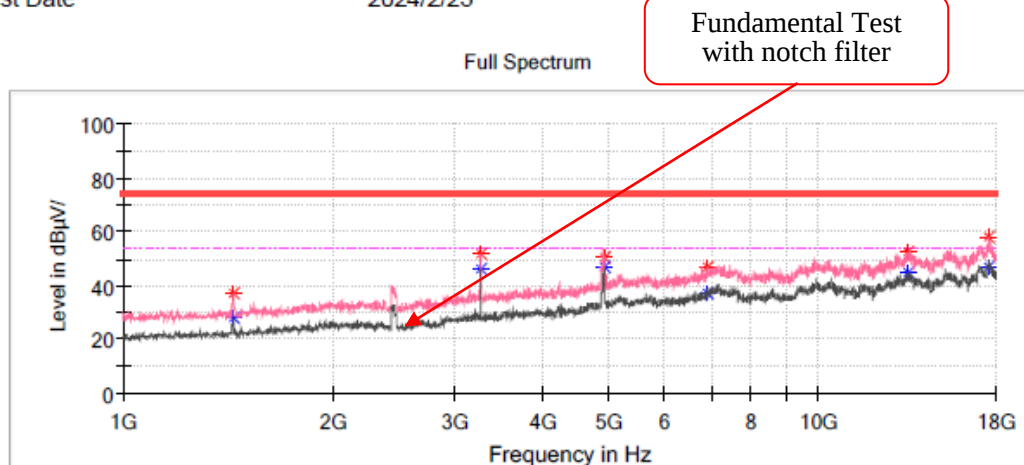
Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3°C
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date:	2024/2/23

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1440.300000	---	26.48	54.00	27.52	V	-14.1
1440.300000	35.26	---	74.00	38.74	V	-14.1
3249.100000	---	46.16	54.00	7.84	V	-7.1
3249.100000	51.65	---	74.00	22.35	V	-7.1
4884.500000	51.89	---	74.00	22.11	V	-1.8
4886.200000	---	43.82	54.00	10.18	V	-1.8
7154.000000	---	38.28	54.00	15.72	V	3.9
7154.000000	47.18	---	74.00	26.82	V	3.9
13486.500000	50.47	---	74.00	23.53	H	10.9
13486.500000	---	45.47	54.00	8.53	H	10.9
17097.300000	---	46.17	54.00	7.83	V	12.6
17097.300000	55.56	---	74.00	18.44	V	12.6

High Channel: 2452MHz**Common Information**

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date	2024/2/23

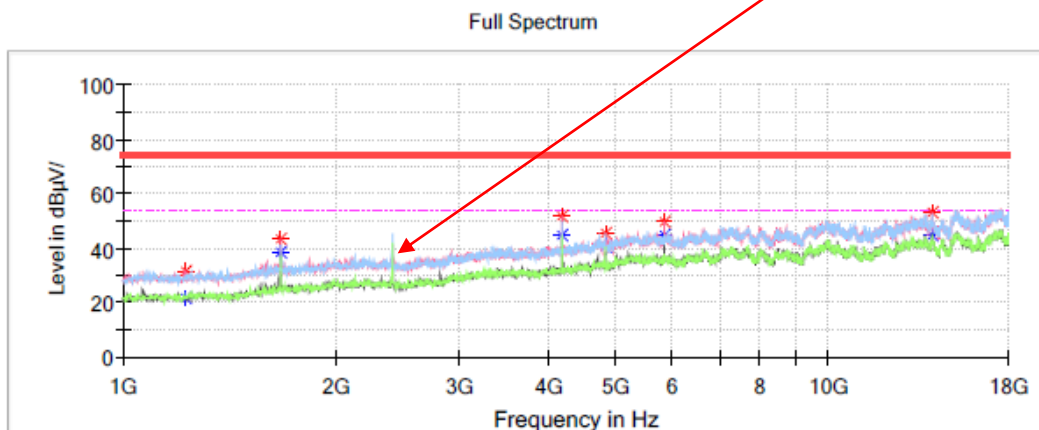
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1440.300000	36.92	---	74.00	37.08	V	-14.1
1440.300000	---	27.93	54.00	26.07	V	-14.1
3269.500000	51.82	---	74.00	22.18	H	-7.0
3269.500000	---	46.41	54.00	7.59	H	-7.0
4916.800000	50.37	---	74.00	23.63	V	-1.6
4916.800000	---	47.07	54.00	6.93	V	-1.6
6938.100000	---	37.04	54.00	16.96	V	3.4
6938.100000	47.12	---	74.00	26.88	V	3.4
13474.600000	---	44.60	54.00	9.40	V	10.9
13474.600000	52.17	---	74.00	21.83	V	10.9
17539.300000	---	47.20	54.00	6.80	V	13.5
17539.300000	57.87	---	74.00	16.13	V	13.5

Pre-scan all the possible co-located transmitter configurations were evaluated and the worst case GSM850 middle channel, 802.11b mode of 2.4G Wi-Fi and NFC mode transmitting at maximum power simultaneously was recorded.

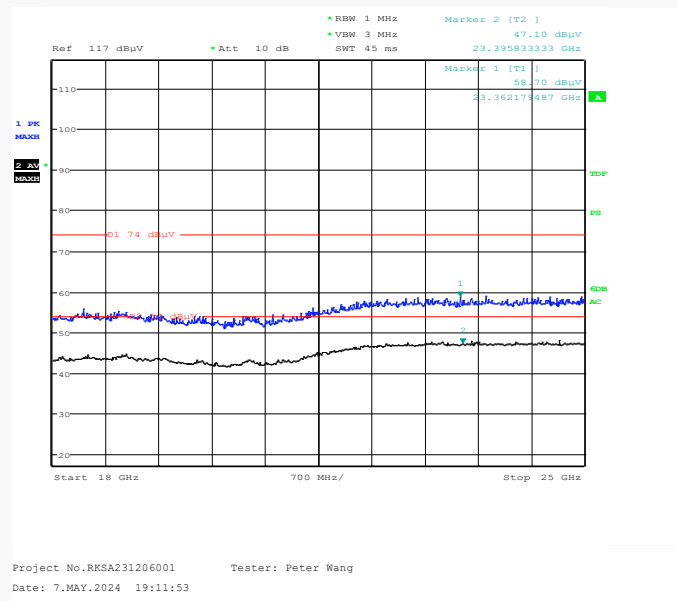
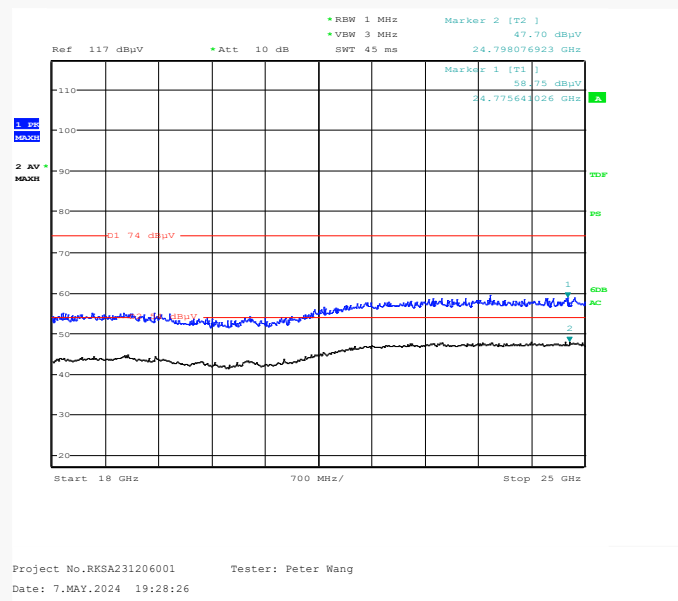
Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4GWIFI + 2G + NFC
Standard:	FCC Part 15.247 & FCC Part 15.205 & Part 15.209
Temperature:	21.9°C
Humidity:	61%
Atmospheric pressure:	101.8kPa
Test Engineer:	Peter Wang
Test Date	2024/05/08



Critical Freqs

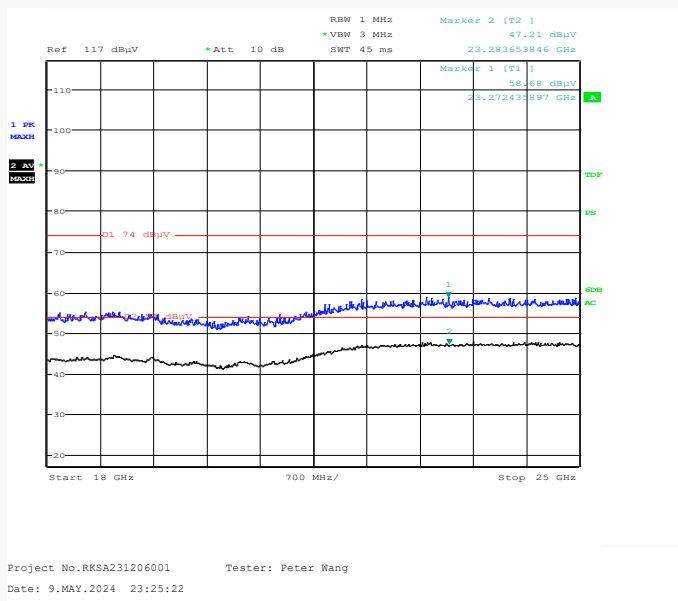
Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1224.400000	---	21.96	54.00	32.04	V	-14.8
1224.400000	31.29	---	74.00	42.71	V	-14.8
1673.200000	---	38.14	54.00	15.86	V	-12.8
1673.200000	43.54	---	74.00	30.46	V	-12.8
4184.100000	---	44.43	54.00	9.57	V	-4.6
4184.100000	51.49	---	74.00	22.51	V	-4.6
4823.300000	---	40.33	54.00	13.67	H	-2.1
4823.300000	45.70	---	74.00	28.30	H	-2.1
5858.600000	---	44.85	54.00	9.15	V	0.4
5858.600000	49.43	---	74.00	24.57	V	0.4
14005.000000	---	45.02	54.00	8.98	H	10.5
14005.000000	53.28	---	74.00	20.72	H	10.5

18GHz-25GHz: Transmitting in maximum output power mode and channel**Horizontal****Vertical**

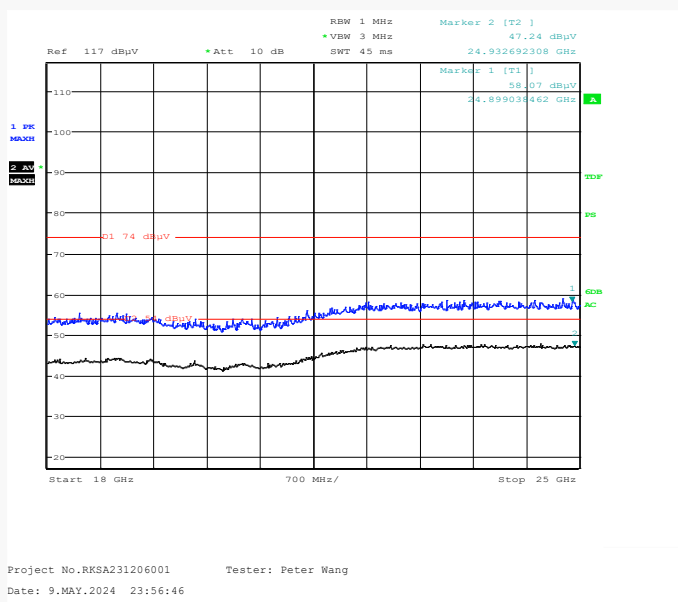
Note: The test distance is 3m. The limit is 74dBuV/m(Peak) and 54dBuV/m(Average).

Pre-scan all the possible co-located transmitter configurations were evaluated and the worst case GSM850 middle channel, 802.11b mode of 2.4G Wi-Fi and NFC mode transmitting at maximum power simultaneously was recorded.

Horizontal



Vertical



Note: The test distance is 3m. The limit is 74dBμV/m(Peak) and 54dBμV/m(Average).

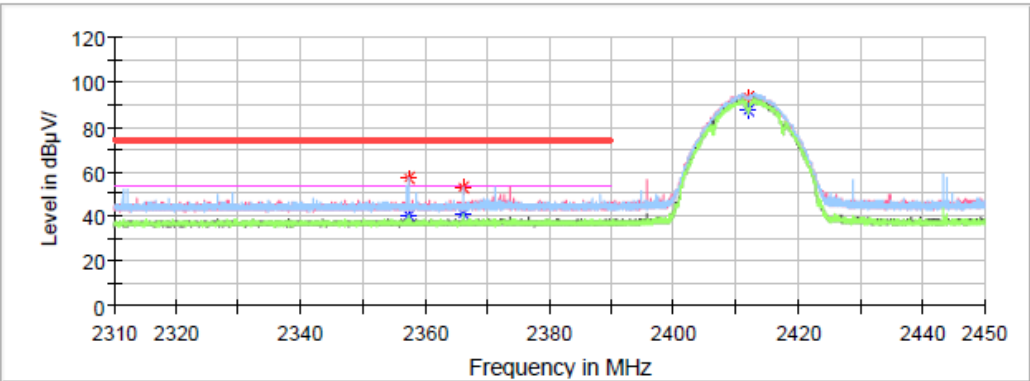
Band Edge:
802.11b Mode:

Low Channel

Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi 802.11b low channel
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date	2024/2/27

Full Spectrum



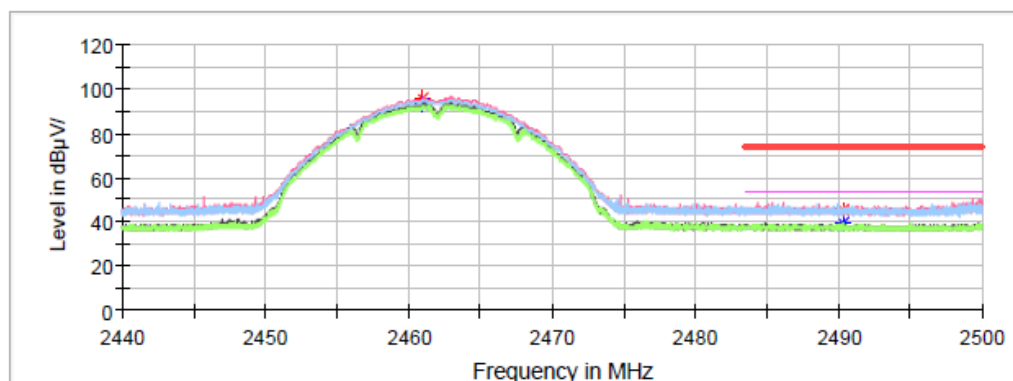
Critical_Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2357.390000	---	40.24	54.00	13.76	H	0.0
2357.390000	57.42	---	74.00	16.58	H	0.0
2366.070000	---	41.03	54.00	12.97	H	0.0
2366.070000	52.93	---	74.00	21.07	H	0.0

High Channel**Common Information**

Project No.: RKSA231206001
EUT Model: MAPSP01
Test Mode: 2.4G Wi-Fi 802.11b high channel
Test Equipment: ESU40,3115,PAM-0118P
Temperature: 20.3℃
Humidity: 52%
Atmospheric pressure: 102.8kPa
Test Engineer: Peter Wang
Test Date: 2024/2/27

Full Spectrum

**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2490.346000	44.91	---	74.00	29.09	H	0.2
2490.346000	---	39.76	54.00	14.24	H	0.2

802.11g Mode :

Low Channel

Common Information

Project No.:

EUT Model:

Test Mode:

Test Equipment:

Temperature:

Humidity:

Atmospheric pressure:

Test Engineer:

Test Date

RKSA231206001

MAPSP01

2.4G Wi-Fi 802.11g low channel

ESU40,3115,PAM-0118P

20.3℃

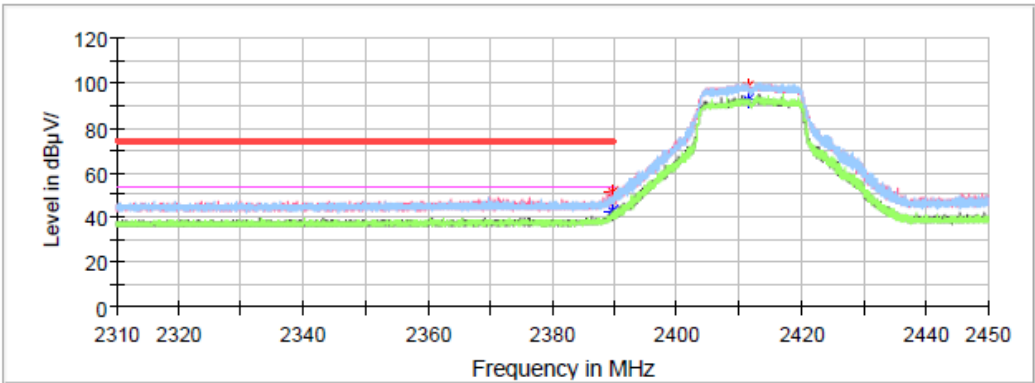
52%

102.8kPa

Peter Wang

2024/2/27

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2389.604000	50.81	---	74.00	23.19	V	0.1
2389.604000	---	42.88	54.00	11.12	V	0.1

High Channel

Common Information

Project No.:

EUT Model:

Test Mode:

Test Equipment:

Temperature:

Humidity:

Atmospheric pressure:

Test Engineer:

Test Date

RKSA231206001

MAPSP01

2.4G Wi-Fi 802.11g high channel

ESU40,3115,PAM-0118P

20.3℃

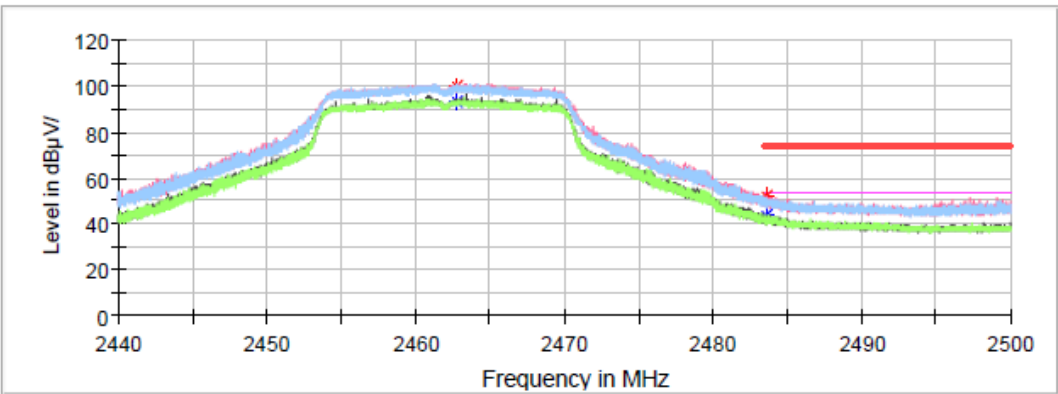
52%

102.8kPa

Peter Wang

2024/2/27

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2483.638000	---	43.49	54.00	10.51	V	0.2
2483.638000	51.94	---	74.00	23.06	V	0.2

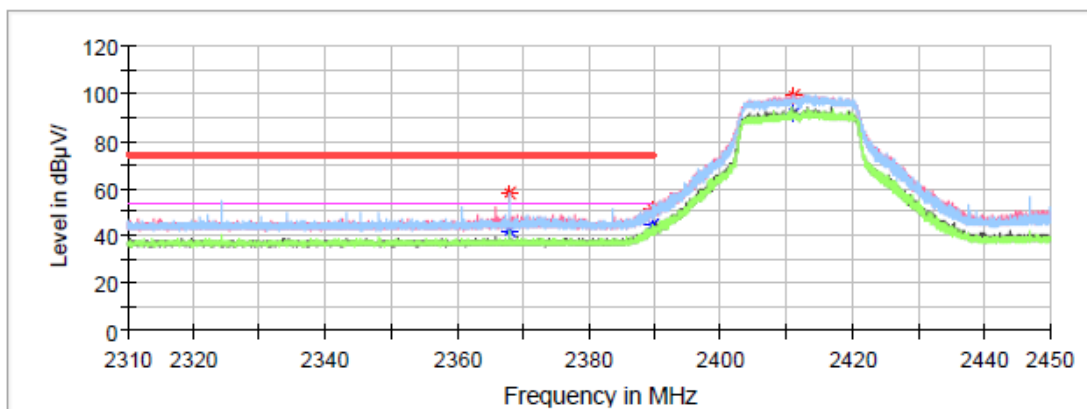
802.11n-HT20 Mode:

Low Channel

Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	2.4G Wi-Fi 802.11n20 low channel
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date	2024/2/27

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2367.974000	57.70	---	74.00	16.30	H	0.0
2367.974000	---	42.36	54.00	11.64	H	0.0
2389.548000	51.16	---	74.00	22.84	H	0.1
2389.548000	---	44.36	54.00	9.64	H	0.1

High Channel

Common Information

Project No.:

EUT Model:

Test Mode:

Test Equipment:

Temperature:

Humidity:

Atmospheric pressure:

Test Engineer:

Test Date

RKSA231206001

MAPSP01

2.4G Wi-Fi 802.11n20 high channel

ESU40,3115,PAM-0118P

20.3℃

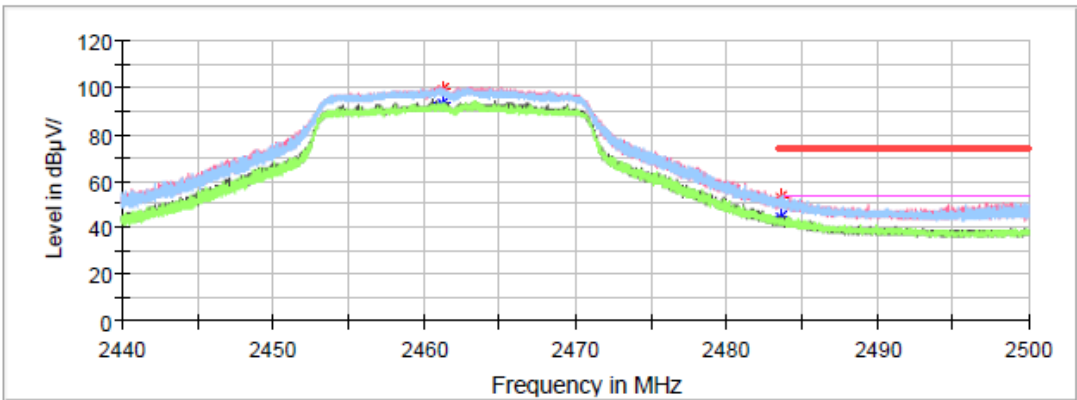
52%

102.8kPa

Peter Wang

2024/2/27

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2483.554000	52.68	---	74.00	21.32	V	0.2
2483.554000	---	44.37	54.00	9.63	V	0.2

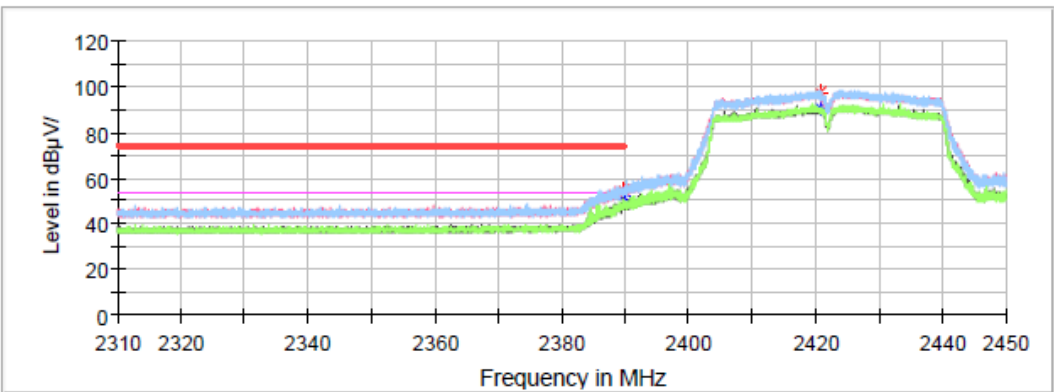
802.11n-HT40 Mode:

Low Channel

Common Information

Project No.: RKSA231206001
EUT Model: MAPSP01
Test Mode: 2.4G Wi-Fi 802.11n40 low channel
Test Equipment: ESU40,3115,PAM-0118P
Temperature: 20.3℃
Humidity: 52%
Atmospheric pressure: 102.8kPa
Test Engineer: Peter Wang
Test Date: 2024/2/27

Full Spectrum



Critical Freqs

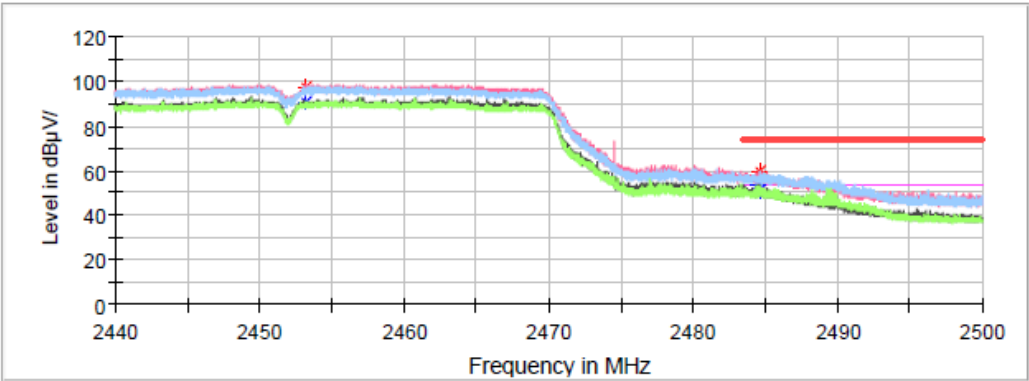
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2389.604000	54.83	---	74.00	19.17	V	0.1
2389.604000	---	52.40	54.00	1.60	V	0.1

High Channel

Common Information

Project No.: RKSA231206001
EUT Model: MAPSP01
Test Mode: 2.4G Wi-Fi 802.11n40 high channel
Test Equipment: ESU40,3115,PAM-0118P
Temperature: 20.3℃
Humidity: 52%
Atmospheric pressure: 102.8kPa
Test Engineer: Peter Wang
Test Date: 2024/2/27

Full Spectrum



Critical_Freqs

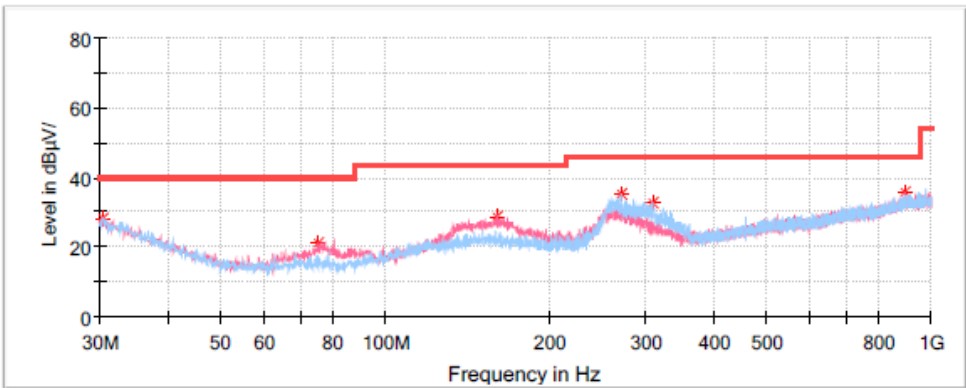
Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2484.454000	56.61	---	74.00	17.39	V	0.2
2484.454000	---	53.76	54.00	0.24	V	0.2
2484.664000	59.19	---	74.00	14.81	H	0.2
2484.664000	---	50.94	54.00	3.06	H	0.2

For BLE Mode:
Powered by USB port:
30MHz-1GHz

Low Channel: 2402MHz

Common Information

Project No:	RKSA231206001
EUT Model:	MASP01
Test Mode:	BLE 1M
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESCI, JB3, 310N
Temperature:	19.2°C
Humidity:	57%
Barometric Pressure:	101.1kPa
Test Engineer:	Leah Li
Test Date:	2024/4/19



Critical Freqs

Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.485000	28.38	40.00	11.62	H	-4.8
75.590000	21.34	40.00	18.66	V	-17.2
160.101250	28.48	43.50	15.02	V	-12.6
271.530000	34.97	46.00	11.03	H	-11.6
308.632500	32.56	46.00	13.44	H	-10.8
892.815000	35.84	46.00	10.16	V	1.1

Middle Channel: 2440MHz

Common Information

Project No:RKSA231206001

EUT Model:MASP01

Test Mode:BLE 1M

Standard:FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209

Test Equipment:ESCI, JB3, 310N

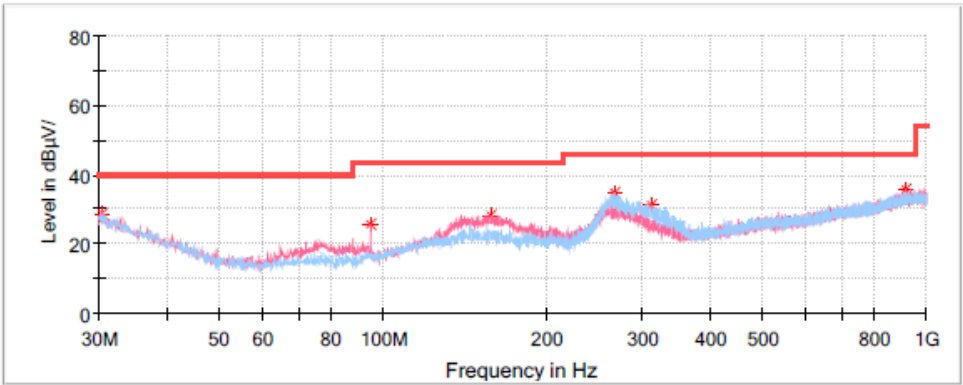
Temperature:19.2°C

Humidity:57%

Barometric Pressure:101.1kPa

Test Engineer:Leah Li

Test Date:2024/4/19



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµ V/m)	Limit (dBµ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.485000	28.59	40.00	11.41	V	-4.8
94.868750	25.83	43.50	17.67	V	-16.0
157.797500	28.40	43.50	15.10	V	-12.5
266.922500	34.74	46.00	11.26	H	-11.9
311.906250	30.97	46.00	15.03	H	-10.7
913.791250	35.77	46.00	10.23	V	1.4

High Channel: 2480MHz

Common Information

Project No:

EUT Model:

Test Mode:

Standard:

Test Equipment:

Temperature:

Humidity:

Barometric Pressure:

Test Engineer:

Test Date:

RKSA231206001

MASP01

BLE 1M

FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209

ESCI, JB3, 310N

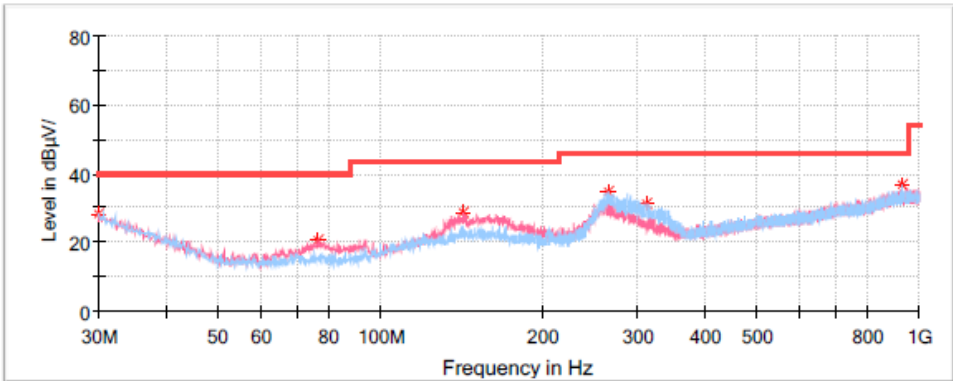
19.2°C

57%

101.1kPa

Leah Li

2024/4/19



Critical_Freqs

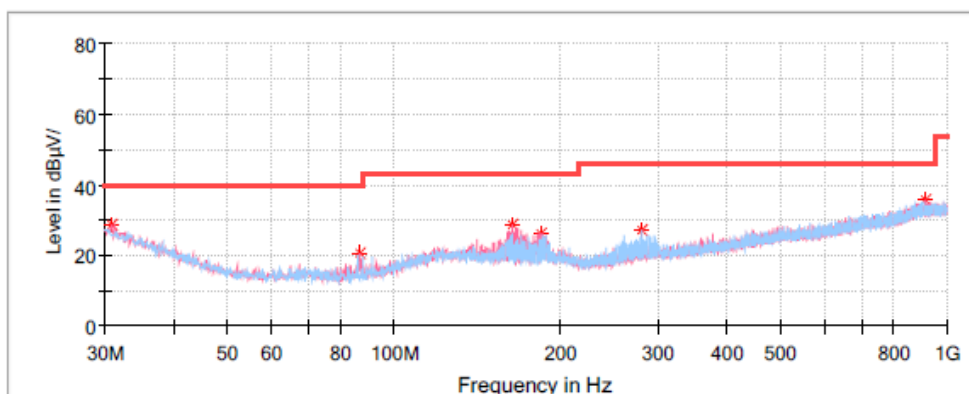
Frequency (MHz)	MaxPeak (dBµ V/m)	Limit (dBµ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.000000	28.25	40.00	11.75	H	-4.4
76.681250	20.49	40.00	19.51	V	-17.3
142.277500	28.45	43.50	15.05	V	-11.6
264.861250	34.65	46.00	11.35	H	-12.0
312.148750	31.35	46.00	14.65	H	-10.7
927.613750	36.56	46.00	9.44	H	1.4

Powered by Base:
30MHz-1GHz

Low Channel: 2402MHz

Common Information

Project No:	RKSA231206001
EUT Model:	MASP01
Test Mode:	BLE 1M
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESCI, JB3, 310N
Temperature:	21.5°C
Humidity:	52%
Barometric Pressure:	100.7kPa
Test Engineer:	Leah Li
Test Date:	2024/4/26



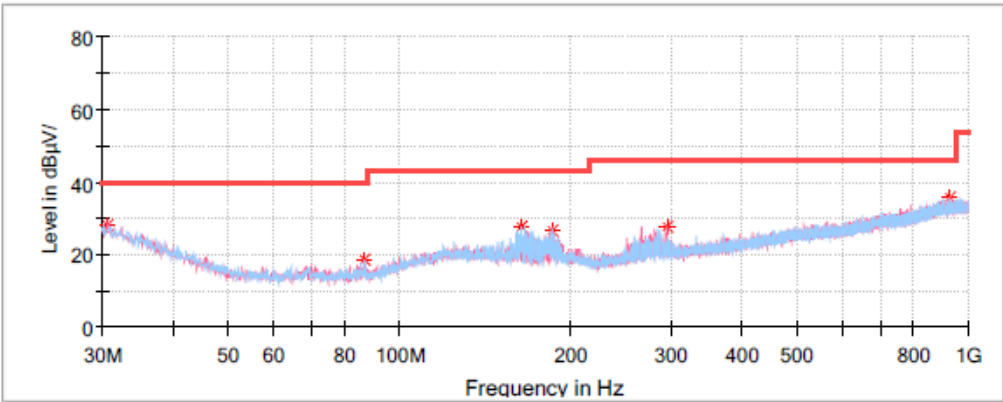
Critical Freqs

Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.970000	28.77	40.00	11.23	V	-5.1
86.745000	20.43	40.00	19.57	V	-17.3
163.981250	28.59	43.50	14.91	V	-12.7
184.230000	26.38	43.50	17.12	V	-13.1
281.351250	27.10	46.00	18.90	H	-11.1
917.913750	35.55	46.00	10.45	V	1.4

Middle Channel: 2440MHz

Common Information

Project No: RKSA231206001
 EUT Model: MASP01
 Test Mode: BLE 1M
 Standard: FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
 Test Equipment: ESCI, JB3, 310N
 Temperature: 21.5°C
 Humidity: 52%
 Barometric Pressure: 100.7kPa
 Test Engineer: Leah Li
 Test Date: 2024/4/26



Critical Freqs

Frequency (MHz)	MaxPeak (dBµ V/m)	Limit (dBµ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.606250	28.36	40.00	11.64	V	-4.9
87.108750	18.48	40.00	21.52	H	-17.3
163.496250	27.70	43.50	15.80	H	-12.7
186.048750	26.80	43.50	16.70	H	-13.0
295.537500	27.56	46.00	18.44	V	-11.0
930.645000	35.49	46.00	10.51	H	1.4

High Channel: 2480MHz

Common Information

Project No:RKSA231206001

EUT Model:MASP01

Test Mode:BLE 1M

Standard:FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209

Test Equipment:ESCI, JB3, 310N

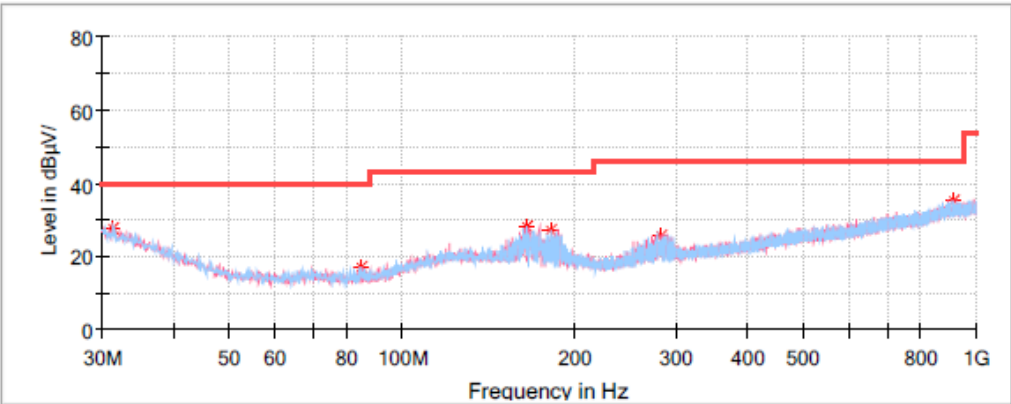
Temperature:21.5℃

Humidity:52%

Barometric Pressure:100.7kPa

Test Engineer:Leah Li

Test Date:2024/4/26



Critical_Freqs

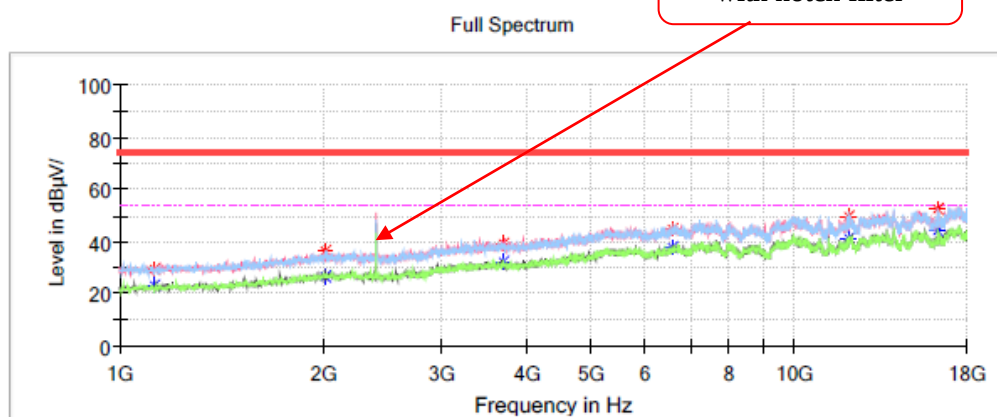
Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
31.455000	27.53	40.00	12.47	H	-5.4
84.805000	17.33	40.00	22.67	H	-17.4
165.193750	28.01	43.50	15.49	H	-12.7
182.047500	26.95	43.50	16.55	H	-13.2
283.170000	25.88	46.00	20.12	V	-11.1
915.246250	35.40	46.00	10.60	V	1.4

Powered by USB port:
1GHz-18GHz:

Low Channel: 2402MHz

Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	BLE 1M
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3°C
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date:	2024/3/21



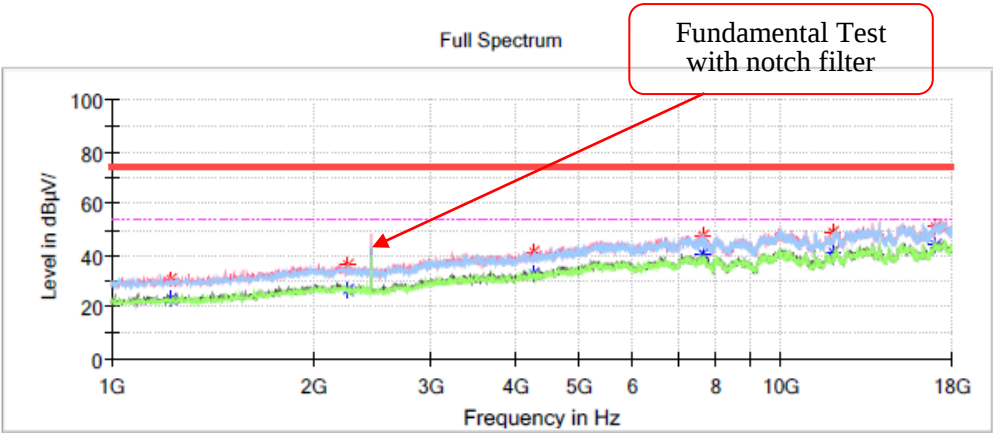
Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1124.100000	29.71	---	74.00	44.29	H	-15.1
1124.100000	---	23.36	54.00	30.64	H	-15.1
2011.500000	---	26.90	54.00	27.10	V	-10.6
2011.500000	36.71	---	74.00	37.29	V	-10.6
3711.500000	---	31.90	54.00	22.10	H	-5.7
3711.500000	39.51	---	74.00	34.49	H	-5.7
6586.200000	---	37.64	54.00	16.36	H	1.3
6586.200000	44.42	---	74.00	29.58	H	1.3
12060.200000	---	41.27	54.00	12.73	V	7.0
12060.200000	49.52	---	74.00	24.48	V	7.0
16305.100000	---	44.27	54.00	9.73	H	9.7
16305.100000	52.62	---	74.00	21.38	H	9.7

Middle Channel: 2440MHz

Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	BLE 1M
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date	2024/3/21



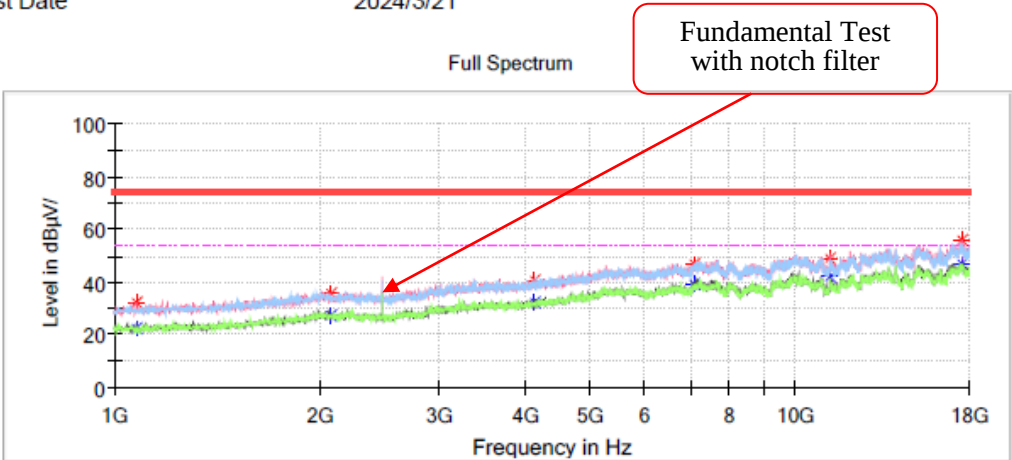
Critical Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1227.800000	31.03	---	74.00	42.97	V	-14.8
1227.800000	---	23.26	54.00	30.74	V	-14.8
2251.200000	---	26.76	54.00	27.24	V	-10.2
2251.200000	36.02	---	74.00	37.98	V	-10.2
4269.100000	---	32.81	54.00	21.19	V	-4.4
4269.100000	41.05	---	74.00	32.95	V	-4.4
7638.500000	---	40.34	54.00	13.66	V	4.1
7638.500000	47.83	---	74.00	26.17	V	4.1
11937.800000	---	41.49	54.00	12.51	V	6.9
11937.800000	48.85	---	74.00	25.15	V	6.9
17059.900000	---	44.35	54.00	9.65	H	12.5
17059.900000	50.98	---	74.00	23.02	H	12.5

High Channel: 2480MHz

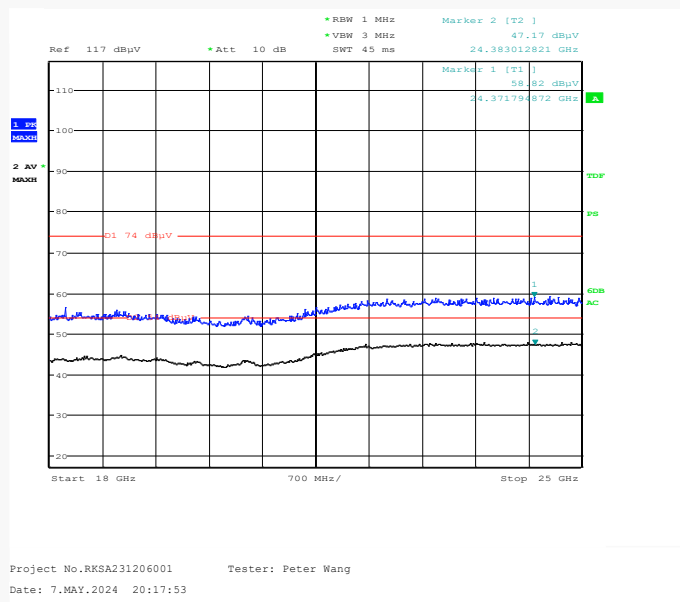
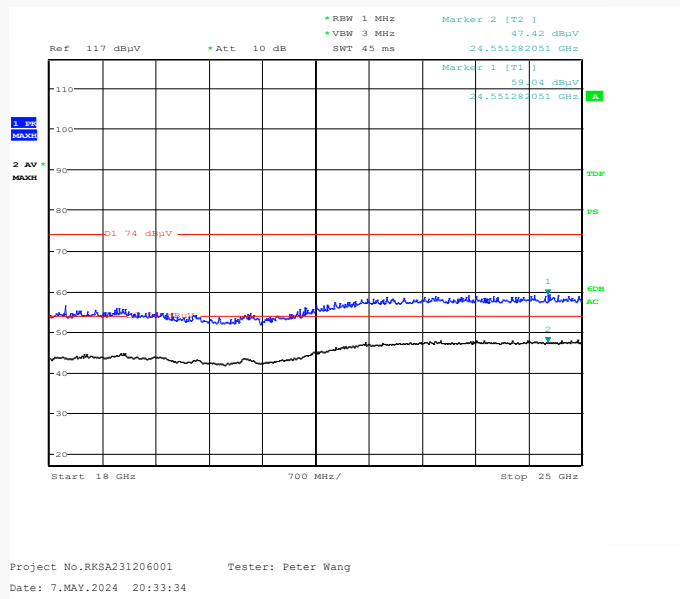
Common Information

Project No.:	RKSA231206001
EUT Model:	MAPSP01
Test Mode:	BLE 1M
Standard:	FCC Part 15.247 & FCC Part 15.205 & FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Temperature:	20.3℃
Humidity:	52%
Atmospheric pressure:	102.8kPa
Test Engineer:	Peter Wang
Test Date	2024/3/21



Critical Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1076.500000	---	22.57	54.00	31.43	V	-15.3
1076.500000	32.16	---	74.00	41.84	V	-15.3
2079.500000	---	27.44	54.00	26.56	H	-10.4
2079.500000	35.50	---	74.00	38.50	H	-10.4
4148.400000	---	32.40	54.00	21.60	H	-4.7
4148.400000	40.42	---	74.00	33.58	H	-4.7
7084.300000	---	39.36	54.00	14.64	H	3.9
7084.300000	46.59	---	74.00	27.41	H	3.9
11208.500000	---	42.15	54.00	11.85	V	6.7
11208.500000	48.77	---	74.00	25.23	V	6.7
17595.400000	---	46.64	54.00	7.36	V	13.2
17595.400000	56.15	---	74.00	17.85	V	13.2

**18GHz-25GHz: Transmitting in maximum output power mode and channel
Horizontal:****Vertical:**

Note: The test distance is 3m. The limit is 74dBμ V/m(Peak) and 54dBμ V/m(Average).

Band Edge:

Low Channel

Common Information

Project No.:

EUT Model:

Test Mode:

Standard:

Test Equipment:

Temperature:

Humidity:

Atmospheric pressure:

Test Engineer:

Test Date

RKSA231206001

MAPSP01

BLE 1M low channel

FCC Part 15.247 & FCC Part 15.205 & Part 15.209

ESU40,3115,PAM-0118P

20.3℃

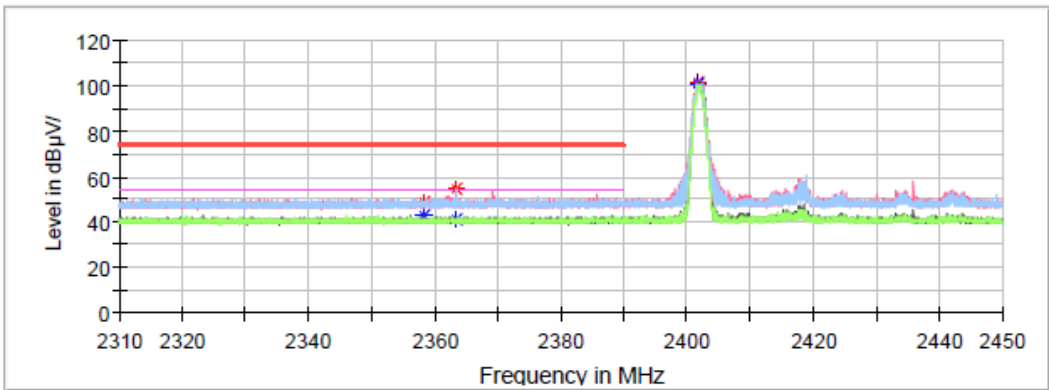
52%

102.8kPa

Peter Wang

2024/3/21

Full Spectrum



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2358.174000	---	43.14	54.00	10.86	V	0.0
2358.174000	48.40	---	74.00	25.60	V	0.0

High Channel

Common Information

Project No.:RKSA231206001

EUT Model:MAPSP01

Test Mode:BLE 1M high

Test Equipment:ESU40,3115,PAM-0118P

Temperature:20.3℃

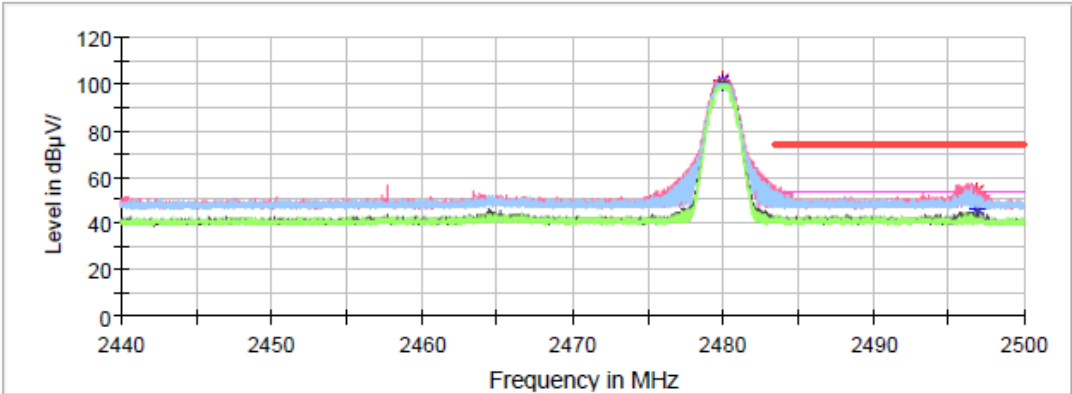
Humidity:52%

Atmospheric pressure:102.8kPa

Test Engineer:Peter Wang

Test Date:2024/3/21

Full Spectrum



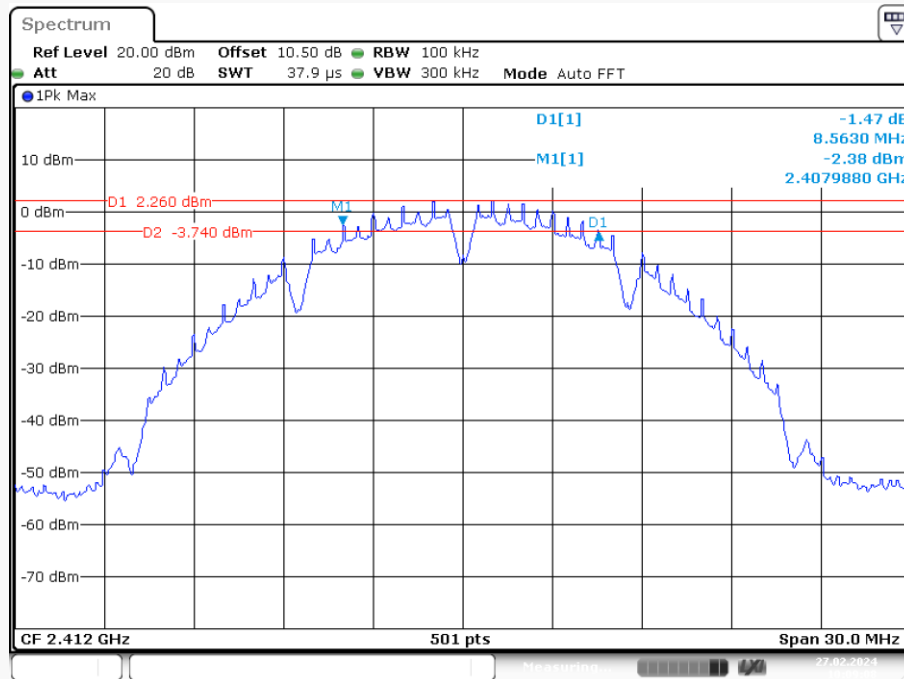
Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2496.958000	53.98	---	74.00	20.02	V	0.2
2496.958000	---	45.99	54.00	8.01	V	0.2

6 dB EMISSION BANDWIDTH**Test Result:** Compliant.*EUT operation mode: Transmitting***For Wi-Fi Mode:**

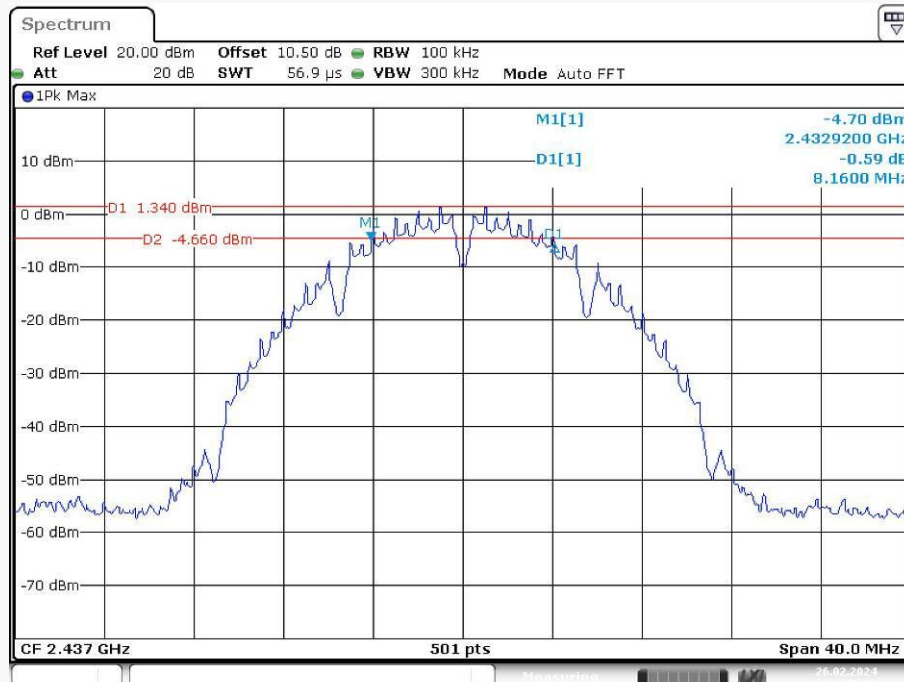
Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	Limit (MHz)
802.11b Mode			
Low	2412	8.56	≥ 0.5
Middle	2437	8.16	≥ 0.5
High	2462	8.16	≥ 0.5
802.11g Mode			
Low	2412	15.68	≥ 0.5
Middle	2437	15.44	≥ 0.5
High	2462	15.52	≥ 0.5
802.11n-HT20 Mode			
Low	2412	16.00	≥ 0.5
Middle	2437	16.16	≥ 0.5
High	2462	16.00	≥ 0.5
802.11n-HT40 Mode			
Low	2422	35.52	≥ 0.5
Middle	2437	35.52	≥ 0.5
High	2452	35.52	≥ 0.5

802.11b Mode Low Channel



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802.11b Mode Middle Channel



ProjectNo.:RSHA231206001 Tester: Bard Liu
Date: 26.FEB.2024 16:50:37

Spectrum

Ref Level 20.00 dBm Offset 10.50 dB RBW 100 kHz
Att 20 dB SWT 56.9 μ s VBW 300 kHz Mode Auto FFT

1Pk Max

10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm

D1 1.940 dBm
D2 -4.060 dBm

M1[1] -4.19 dBm
2.4579200 GHz
-0.76 dB
8.1600 MHz

D1
D2

CF 2.462 GHz 501 pts Span 40.0 MHz

26.02.2024

Spectrum

Ref Level 20.00 dBm Offset 10.50 dB RBW 100 kHz
 Att 20 dB SWT 56.9 μs VBW 300 kHz Mode Auto FFT

1Pk Max

M1[1] -3.08 dBm
 D1[1] 2.4042400 GHz
 0.54 dB
 15.6800 MHz

D1 3.300 dBm
 D2 -2.700 dBm

CF 2.412 GHz 501 pts Span 40.0 MHz

26.02.2024

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