

Prüfbericht-Nr.: Test report no.:	CN22ZZ0N 003	Auftrags-Nr.: Order no.:	168352501	Seite 1 von 16 Page 1 of 16	
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2022-01-18		
Auftraggeber: Client:	Beijing Yueme Technology Co., LTD. Room C608, Building No. B-2, Zhongguancun Dongsheng Science and Technology Park Phase I, No. 66, Xixiaokou Road, Haidian District, Beijing, China				
Prüfgegenstand: Test item:	Nano Receiver				
Bezeichnung / Typ-Nr.: Identification / Type no.:	DXMWXSB01YM (Xiaomi)				
Auftrags-Inhalt: Order content:	Test Report				
Prüfgrundlage: Test specification:	FCC CFR Title 47, Part 15, Subpart C, Section 15.249 RSS-210 Issue 10 April 2020 RSS-Gen Issue 5 February 2021				
Wareneingangsdatum: Date of sample receipt:	2022-02-10	Please refer to Photo Document			
Prüfmuster-Nr.: Test sample no.:	A003192705-001~003 A003192705-006~008				
Prüfzeitraum: Testing period:	2022-02-17 – 2022-02-18				
Ort der Prüfung: Place of testing:	TÜV Rheinland (Shenzhen) Co., Ltd.				
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.				
Prüfergebnis*: Test result*:	Pass				
geprüft von: tested by:			genehmigt von: authorized by:		
Datum: Date:	2022-03-31 Signed by: Bell Hu		Ausstellungsdatum: Issue date:	2022-03-31 Signed by: Lin Lin	
Stellung / Position:	Project Manager		Stellung / Position:	Reviewer	
Sonstiges / Other:	FCC ID: 2AJ7P-DXMWXS01YM IC: 28281-DXMWXS01YM HVIN: DXMWXS01YM PMN: DXMWXS01YM				
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 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet * Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>					

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Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 FIELD STRENGTH OF FUNDAMENTAL AND HARMONICS

RESULT: Pass

5.1.3 20dB AND 99% BANDWIDTH

RESULT: Pass

5.1.4 BAND EDGE

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

Appendix B: Test Results

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China

FCC Accreditation Designation No.: CN1260

ISED wireless device testing laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (TS8997)				
Equipment	Manufacturer	Model	Serial No.	Cal. until
Signal Analyzer	R&S	FSV 40	101441	2022-08-09
OSP	R&S	OSP 150	101017	2022-12-02
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	2022-12-02
Wideband Power Sensor	R&S	NRP-Z81	105677	2022-08-09
Shielding Room 8#	Albatross	SR8	APC17151-SR8	2024-06-22
Unwanted Emission Testing (TS9975)				
Equipment	Manufacturer	Model	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

EMI Test Receiver	R&S	ESR 7	102021	2022-08-10
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2.3 Traceability

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

2.4 Calibration

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

2.5 Measurement Uncertainty

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

Table 2: Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$
RF Power (conducted)	± 2.5 dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	± 6 dB
Radiated Emission of Receiver, valid up to 26.5 GHz	± 6 dB
Temperature	± 1 °C
Humidity	± 5 %
Voltage (DC)	± 1 %
Voltage (AC, <10kHz)	± 2 %

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) Co., Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 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 products is a Nano Receiver, which supports 2.4GHz transmitter wireless technology.

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

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	Nano Receiver
Type Designation:	DXMWXSB01YM
FCC ID:	2AJ7P-DXMWXSB01YM
IC:	28281-DXMWXSB01YM
HVIN:	DXMWXSB01YM
PMN:	DXMWXSB01YM
Operating Voltage:	USB operated (DC 5V via PC USB port)
Operating Temperature Range:	0 °C ~ 45 °C
Technical Specification of 2.4GHz	
Frequency Range:	2408 MHz to 2474 MHz
Type of Modulation:	GFSK
Channel Number:	34 channels
Channel Spacing:	2MHz
Antenna Type:	Internal antenna
Antenna Gain:	2.15 dBi

3.3 Independent Operation Modes

The basic operation modes are:

A. 2.4GHz transmitting mode

1. Low channel
2. Middle channel
3. High channel

B. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form

- User Manual

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

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

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

4.2 Test Operation and Test Software

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

According to clause 3.1, all tests were performed on model DXMWXSB01YM in this report.

Table 4: Test environments

Environment Parameter	Values During Tests		
	Temperature	Voltage (USB operated)	Relative Humidity
NTNV	25°C±2°C	5Vdc	Ambient

Table 5: Test channel and frequency

Mode	Test Channels (MHz)	Remark
Transmitting	L/M/H: 2402MHz, 2440MHz, 2474MHz	--

4.3 Special Accessories and Auxiliary Equipment

Table 6: Auxiliary Equipment Used during Test

Description	Manufacturer	Model	S/N
Laptop	Lenovo	T480	PF-16A6N8

4.4 Countermeasures to Achieve EMC Compliance

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

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

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

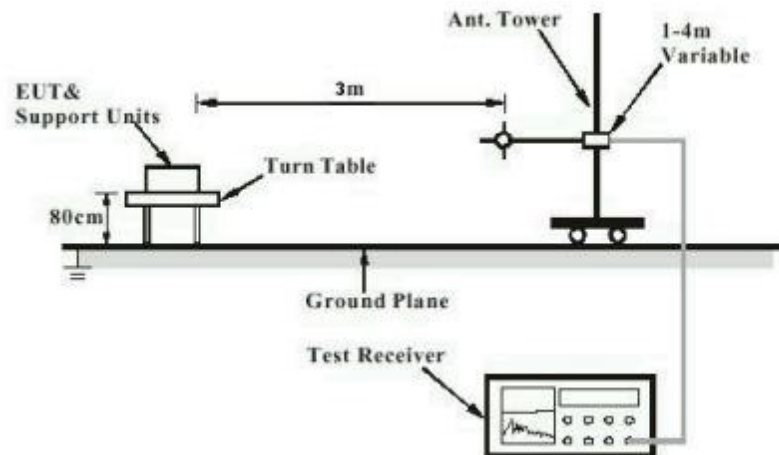
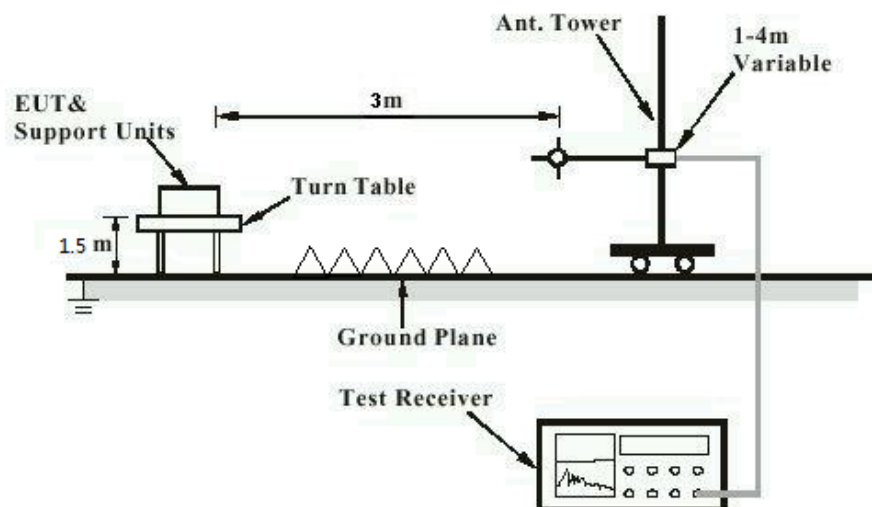


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.203
RSS-Gen Section 6.8

According to the manufacturer declared, the EUT has an Internal antenna, the gain of antenna is 2.15 dBi, which that 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.

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5.1.2 Field strength of fundamental and harmonics

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.249(a) (d) (e) RSS-210 Section B.10
Basic standard	: ANSI C63.10: 2013
Limits	: FCC Part 15.249(a) (d) (e) & 15.209(a) RSS-210 Section B.10 (a) & (b) RSS-Gen Section 8.9
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 2022-02-18
Input voltage	: USB operated (DC 5V via PC USB port)
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: Refer to test result
Relative humidity	: Refer to test result
Atmospheric pressure	: 101 kPa

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

For the measurement records, refer to the appendix B.

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5.1.3 20dB and 99% Bandwidth**RESULT:****Pass****Test Specification**

Test standard	:	FCC Part 15.215 RSS-Gen Section 6.7
Basic standard	:	ANSI C63.10: 2013
Limits	:	Within assigned band
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2022-02-17
Input voltage	:	USB operated (DC 5V via PC USB port)
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	22 °C
Relative humidity	:	50 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

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5.1.4 Band Edge

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.249(a) (d) (e) & 15.209 & 15.205 RSS-210 Section B.10 (a) & (b) RSS-Gen Section 8.9 & 8.10
Basic standard	: ANSI C63.10: 2013
Limits	: FCC Part 15.249(a) (d) (e) & 15.209 & 15.205 RSS-Gen Table 5 & 7
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 2022-02-18
Input voltage	: USB operated (DC 5V via PC USB port)
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: Refer to test result
Relative humidity	: Refer to test result
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix B.

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5.1.5 Conducted Emission on AC Mains

RESULT:**Pass****Test Specification**

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

Test Setup

Date of testing	: 2022-02-11
Input voltage	: DC 5V by PC USB port for Dongle
Operation mode	: A
Earthing	: Not connected
Ambient temperature	: 24.1 °C
Relative humidity	: 49 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the following test plots.

6 Photographs of the Test Set-Up

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

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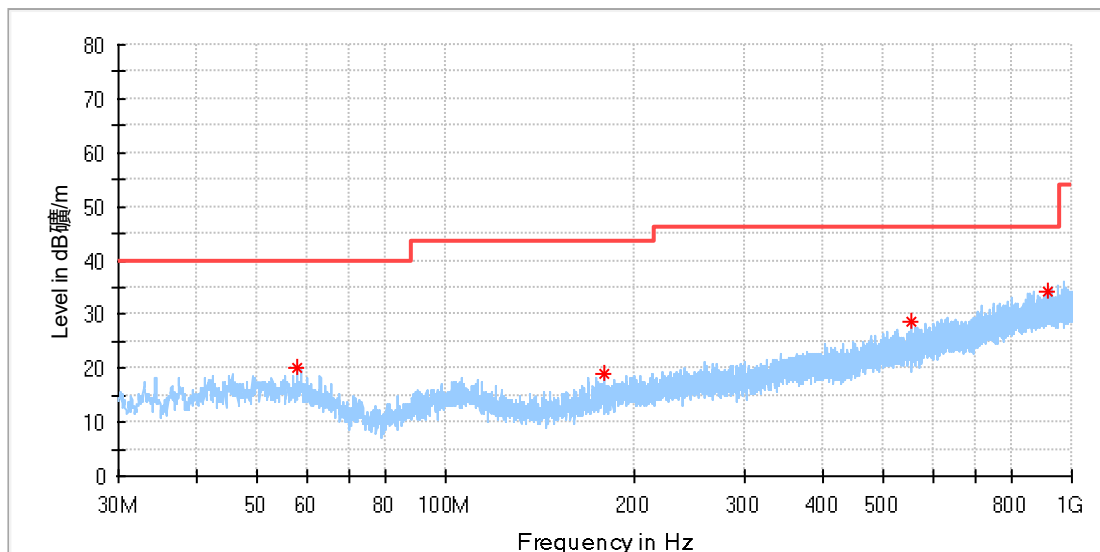
Note: The testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz to 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

Appendix B.1: Test Results of Field strength of fundamental & harmonics

30MHz - 1GHz

EUT Information

EUT Name:	Nano Receiver
Model:	DXMWXSB01YM
Test Mode:	Low channel
Order No/Sample No:	168352501/A003192705-001
Test Voltage:	DC 5V via PC USB port
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

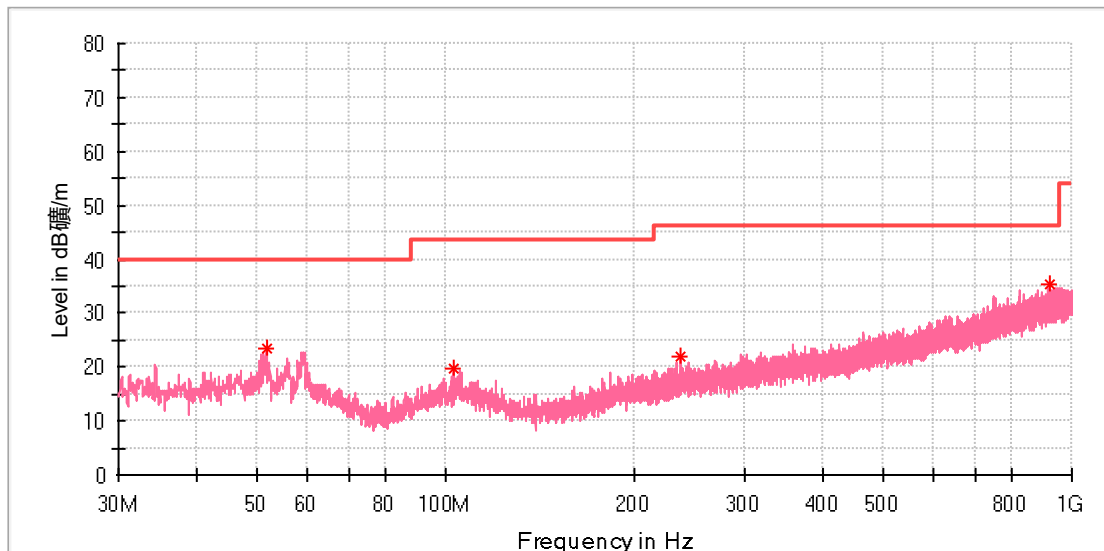
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
57.887500	20.09	40.00	19.91	100.0	H	160.0	-18.8
179.574000	19.07	43.50	24.43	100.0	H	42.0	-20.6
553.606000	28.55	46.00	17.45	100.0	H	82.0	-10.9
915.561500	34.39	46.00	11.61	100.0	H	92.0	-4.9

Final Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Test Mode: Low channel
Order No/Sample No: 168352501/A003192705-001
Test Voltage: DC 5V via PC USB port
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.249
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

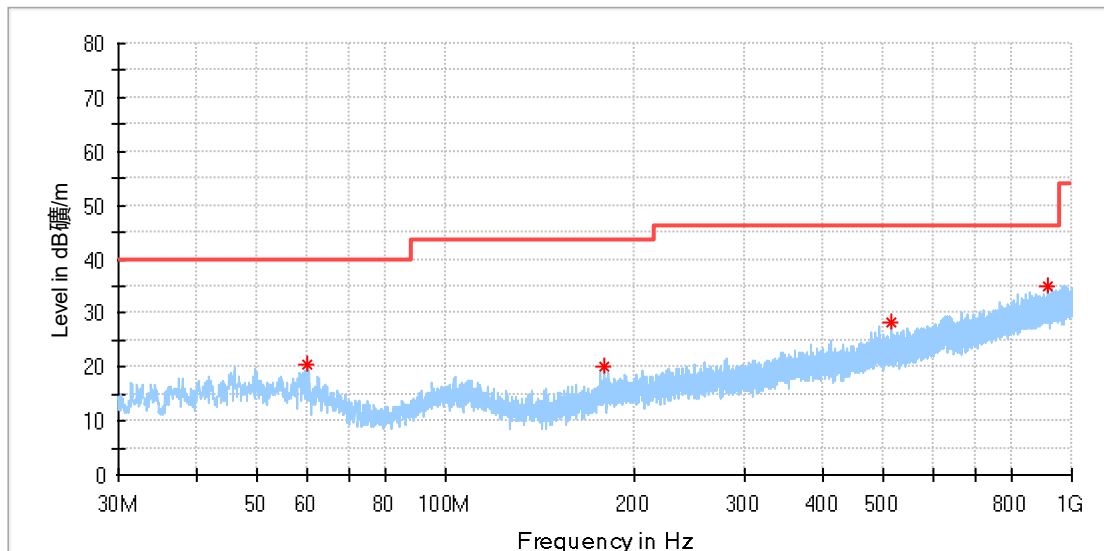
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
51.631000	23.27	40.00	16.73	100.0	V	45.0	-18.4
102.847000	19.55	43.50	23.95	100.0	V	84.0	-18.9
236.901000	21.94	46.00	24.06	100.0	V	336.0	-17.8
922.497000	35.45	46.00	10.55	100.0	V	156.0	-4.8

Final Result

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

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Test Mode: High channel
Order No/Sample No: 168352501/A003192705-001
Test Voltage: DC 5V via PC USB port
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.249
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

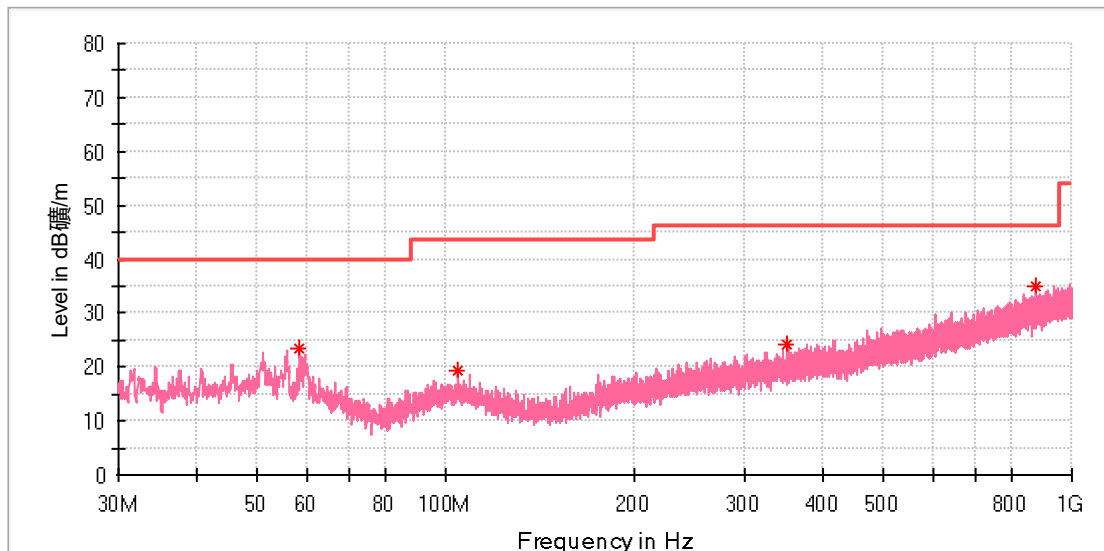
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
60.264000	20.38	40.00	19.62	100.0	H	223.0	-19.0
178.992000	20.18	43.50	23.32	100.0	H	29.0	-20.6
515.339500	28.19	46.00	17.81	100.0	H	355.0	-11.6
915.998000	35.07	46.00	10.93	100.0	H	0.0	-4.9

Final Result

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

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Test Mode: High channel
Order No/Sample No: 168352501/A003192705-001
Test Voltage: DC 5V via PC USB port
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.249
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)
58.421000	23.46	40.00	16.54	100.0	V	0.0	-18.8
104.787000	19.53	43.50	23.97	100.0	V	351.0	-18.8
351.797500	24.05	46.00	21.95	100.0	V	281.0	-14.7
873.609000	34.96	46.00	11.04	100.0	V	19.0	-5.2

Final Result

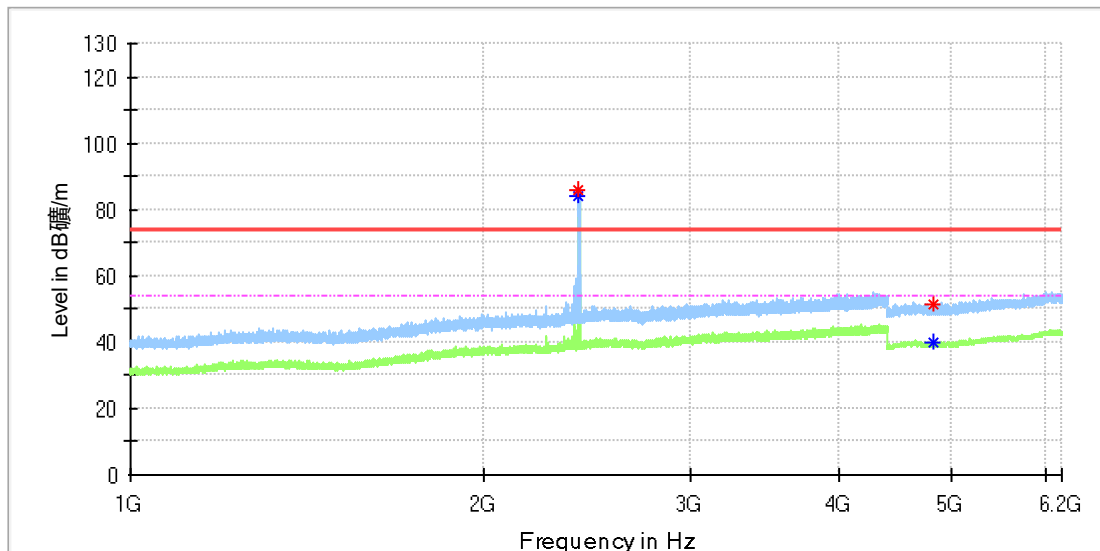
Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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1GHz - 18GHz

Note: The highest waveform in the figure is 2.4GHz Fundamental.

EUT Information

EUT Name:	Nano Receiver
Model:	DXMWXSB01YM
Test Mode:	Low channel
Order No/Sample No:	168352501/A003192705-001
Test Voltage:	DC 5V via PC USB port
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

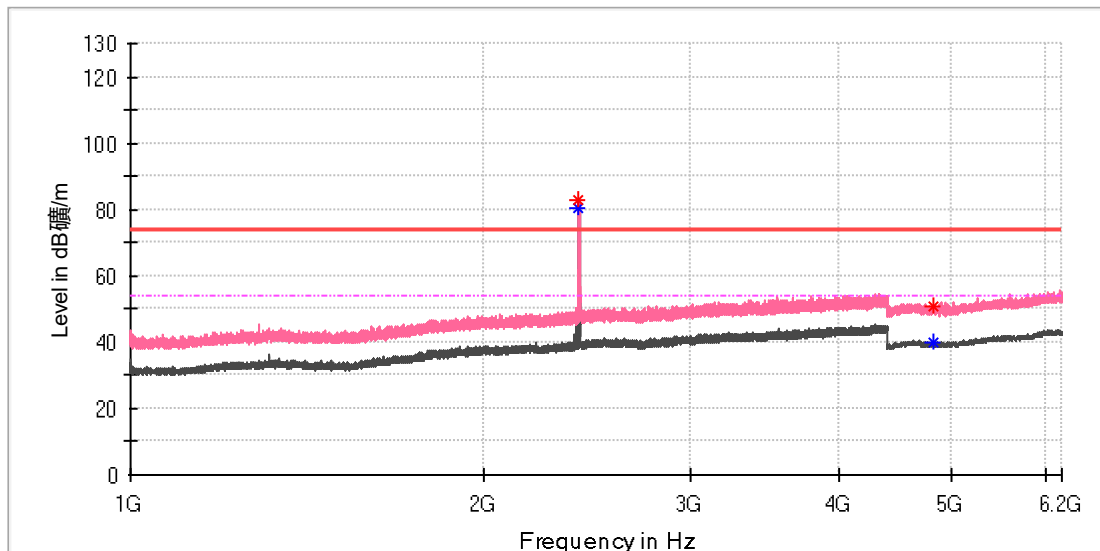
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2407.430000	85.80	---	114.00	28.20	100.0	H	141.0	7.1
2408.110000	---	83.75	94.00	10.25	100.0	H	141.0	7.1
4812.500000	51.30	---	74.00	22.70	100.0	H	352.0	11.8
4817.500000	---	40.01	54.00	13.99	100.0	H	346.0	11.8

Final Result

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

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Test Mode: Low channel
Order No/Sample No: 168352501/A003192705-001
Test Voltage: DC 5V via PC USB port
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.249
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

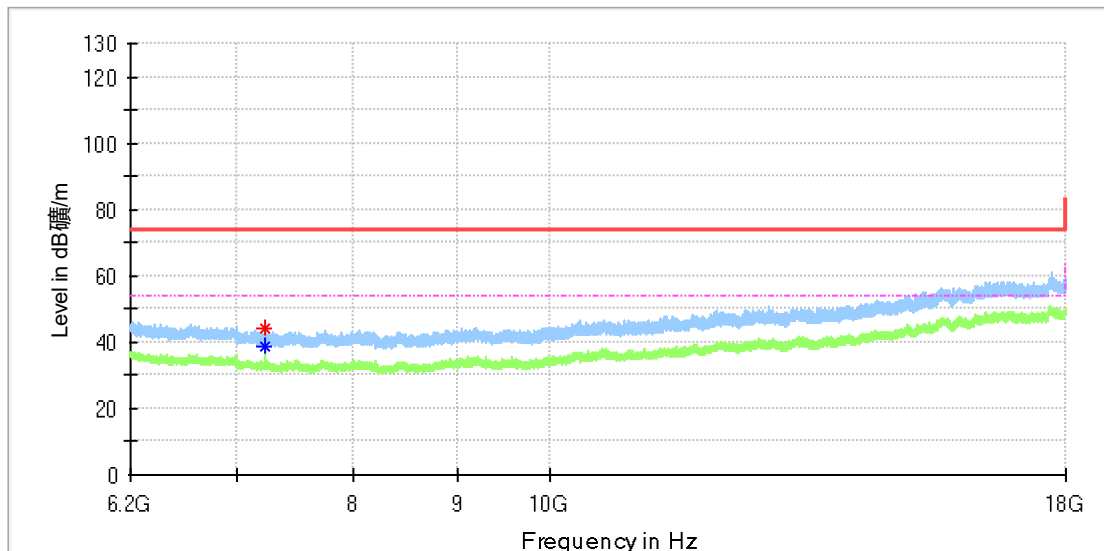
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2407.430000	82.70	---	114.00	31.30	100.0	V	339.0	7.1
2407.770000	---	80.51	94.00	13.49	100.0	V	339.0	7.1
4816.000000	50.67	---	74.00	23.33	100.0	V	251.0	11.8
4817.000000	---	39.74	54.00	14.26	100.0	V	336.0	11.8

Final Result

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

EUT Information

EUT Name:	Nano Receiver
Model:	DXMWXSB01YM
Test Mode:	Low channel
Order No/Sample No:	168352501/A003192705-001
Test Voltage:	DC 5V via PC USB port
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

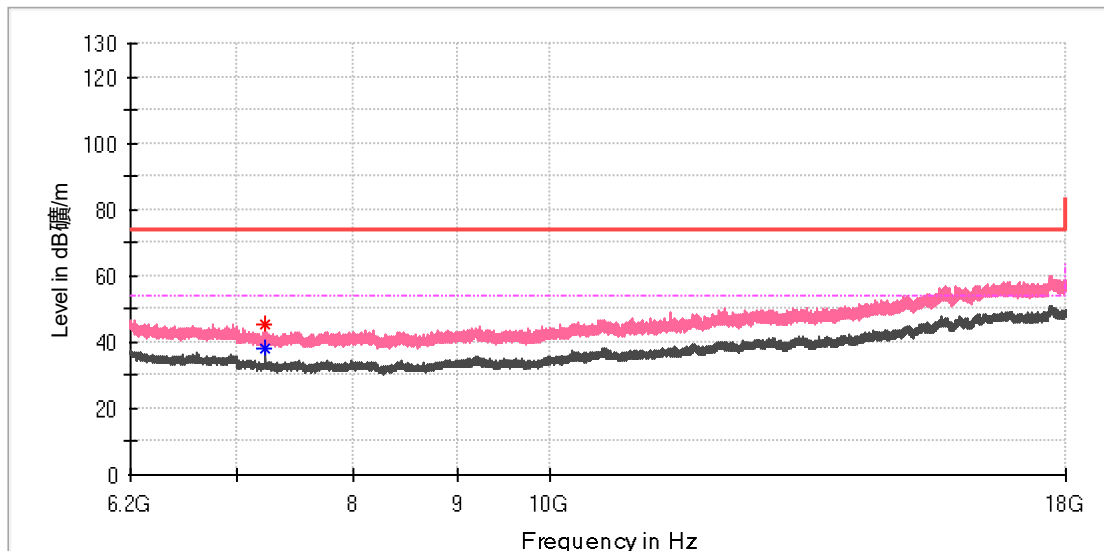
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7222.175000	44.44	---	74.00	29.56	100.0	H	286.0	8.7
7225.616667	---	38.72	54.00	15.28	100.0	H	286.0	8.7

Final Result

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

EUT Information

EUT Name:	Nano Receiver
Model:	DXMWXSB01YM
Test Mode:	Low channel
Order No/Sample No:	168352501/A003192705-001
Test Voltage:	DC 5V via PC USB port
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

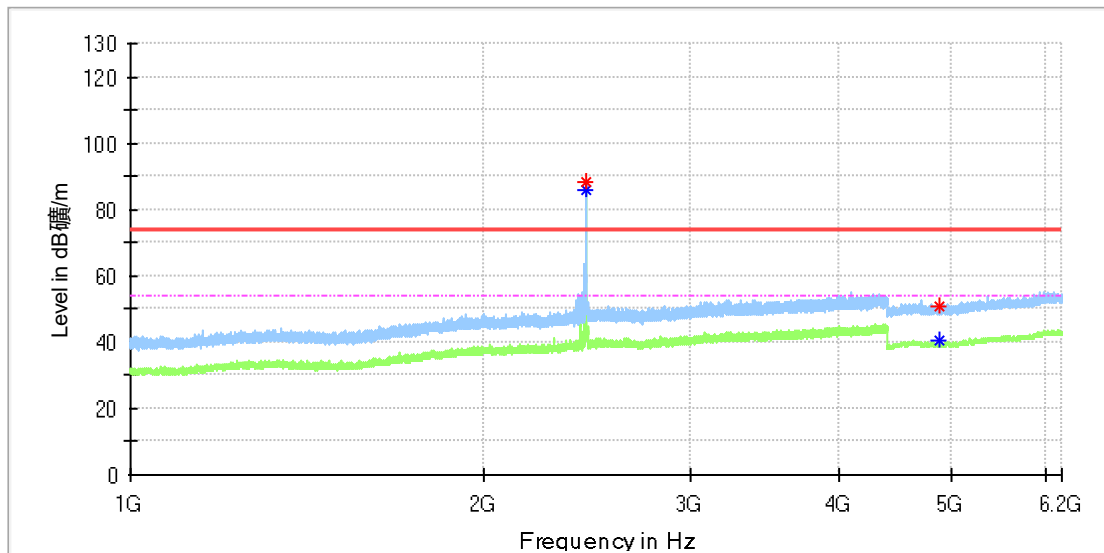
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7222.175000	45.24	---	74.00	28.76	100.0	V	77.0	8.7
7222.175000	---	37.82	54.00	16.18	100.0	V	77.0	8.7

Final Result

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

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Test Mode: Mid channel
Order No/Sample No: 168352501/A003192705-001
Test Voltage: DC 5V via PC USB port
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.249
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

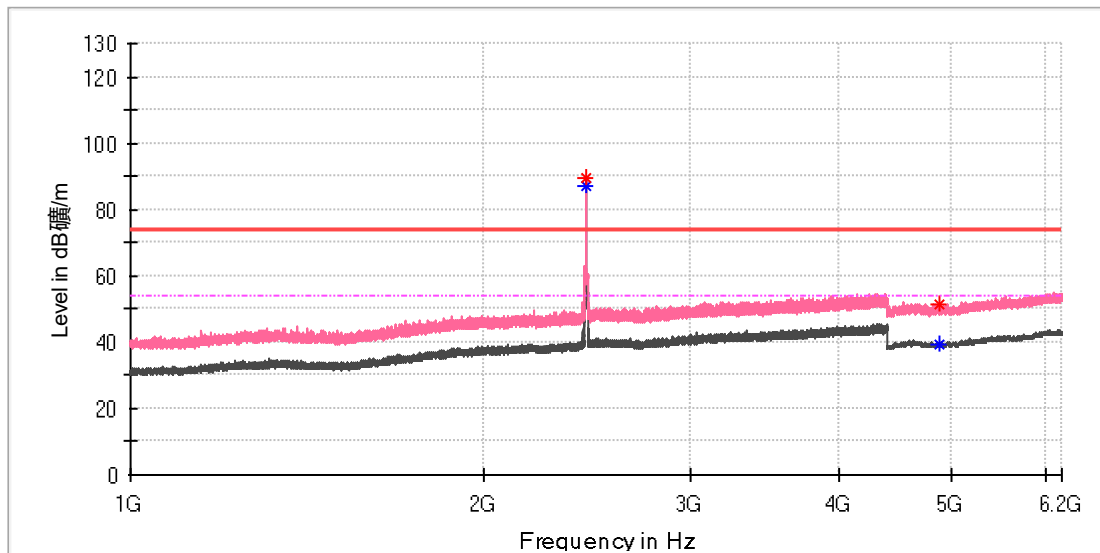
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2439.560000	88.11	---	114.00	25.89	100.0	H	142.0	7.4
2440.240000	---	86.11	94.00	7.89	100.0	H	142.0	7.4
4877.500000	51.03	---	74.00	22.97	100.0	H	337.0	11.8
4881.000000	---	40.74	54.00	13.26	100.0	H	357.0	11.8

Final Result

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

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Test Mode: Mid channel
Order No/Sample No: 168352501/A003192705-001
Test Voltage: DC 5V via PC USB port
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.249
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

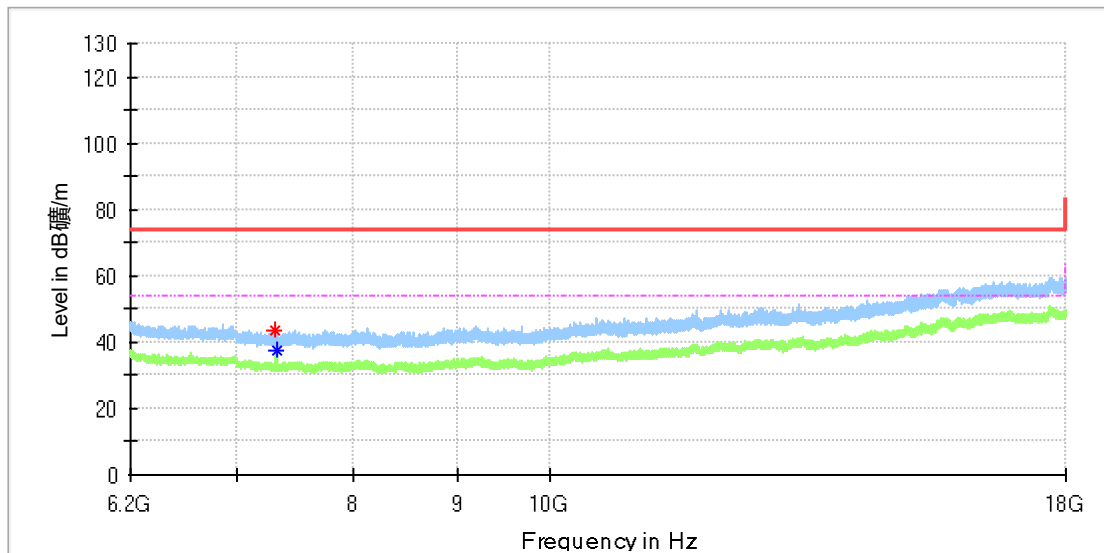
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2439.900000	---	87.30	94.00	6.70	100.0	V	91.0	7.4
2440.410000	89.25	---	114.00	24.75	100.0	V	91.0	7.4
4875.000000	---	39.50	54.00	14.50	100.0	V	166.0	11.8
4878.500000	51.18	---	74.00	22.82	100.0	V	340.0	11.8

Final Result

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

EUT Information

EUT Name:	Nano Receiver
Model:	DXMWXSB01YM
Test Mode:	Mid channel
Order No/Sample No:	168352501/A003192705-001
Test Voltage:	DC 5V via PC USB port
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

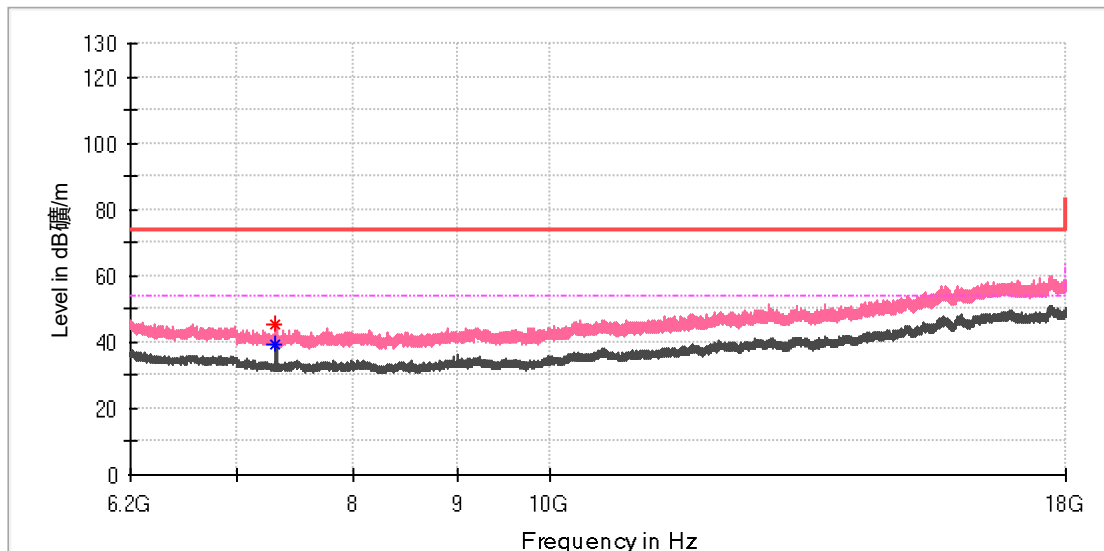
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7318.050000	43.26	---	74.00	30.74	100.0	H	283.0	8.2
7318.541667	---	37.62	54.00	16.38	100.0	H	283.0	8.2

Final Result

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

EUT Information

EUT Name:	Nano Receiver
Model:	DXMWXSB01YM
Test Mode:	Mid channel
Order No/Sample No:	168352501/A003192705-001
Test Voltage:	DC 5V via PC USB port
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

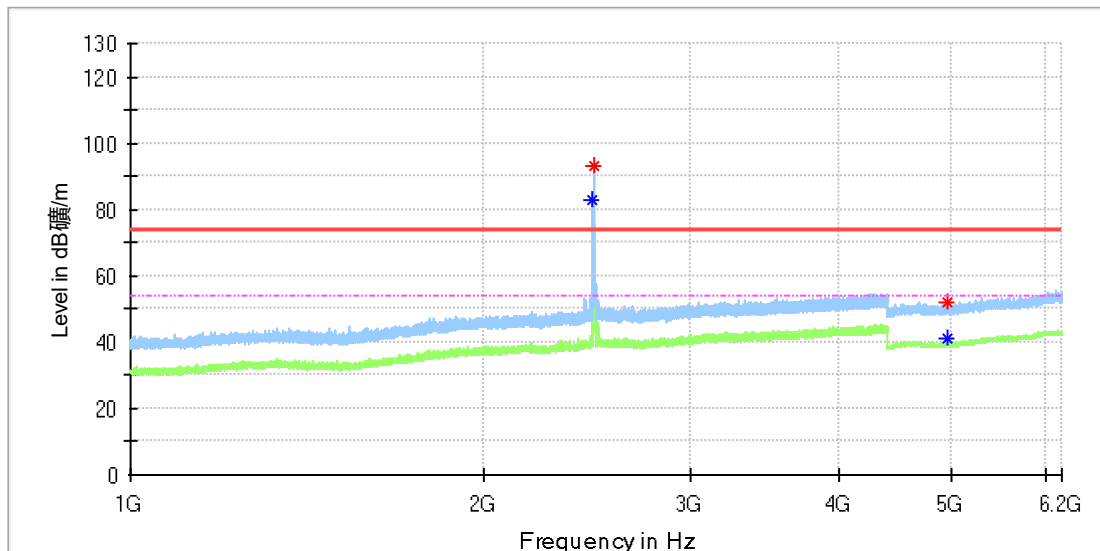
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7318.050000	45.35	---	74.00	28.65	100.0	V	0.0	8.2
7318.050000	---	39.45	54.00	14.55	100.0	V	0.0	8.2

Final Result

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

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Test Mode: High channel
Order No/Sample No: 168352501/A003192705-001
Test Voltage: DC 5V via PC USB port
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.249
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

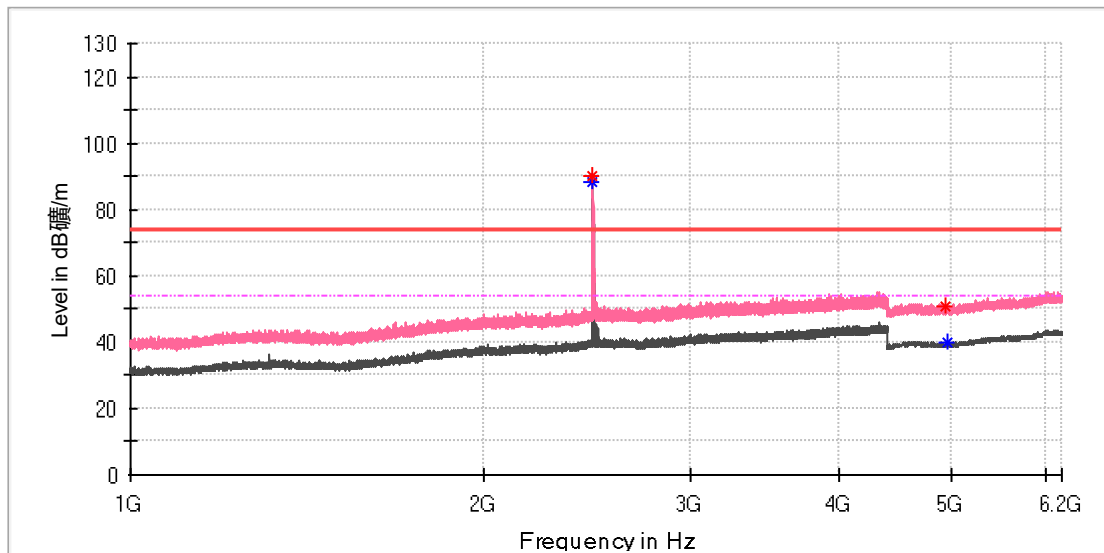
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2474.240000	---	83.09	94.00	10.91	100.0	H	269.0	7.4
2475.940000	93.14	---	114.00	20.86	100.0	H	0.0	7.4
4948.500000	---	40.93	54.00	13.07	100.0	H	212.0	11.8
4960.000000	51.82	---	74.00	22.18	100.0	H	141.0	11.8

Final Result

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

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Test Mode: High channel
Order No/Sample No: 168352501/A003192705-001
Test Voltage: DC 5V via PC USB port
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.249
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

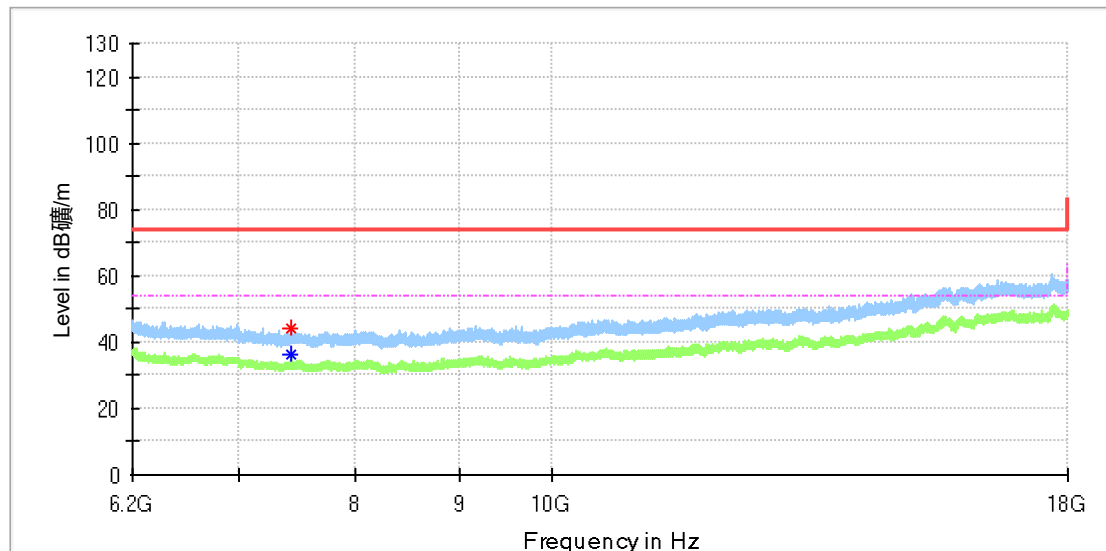
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2473.730000	89.98	---	114.00	24.02	100.0	V	90.0	7.4
2473.900000	---	88.27	94.00	5.73	100.0	V	90.0	7.4
4940.500000	50.84	---	74.00	23.16	100.0	V	353.0	11.8
4952.000000	---	39.88	54.00	14.12	100.0	V	345.0	11.8

Final Result

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

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Test Mode: High channel
Order No/Sample No: 168352501/A003192705-001
Test Voltage: DC 5V via PC USB port
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.249
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

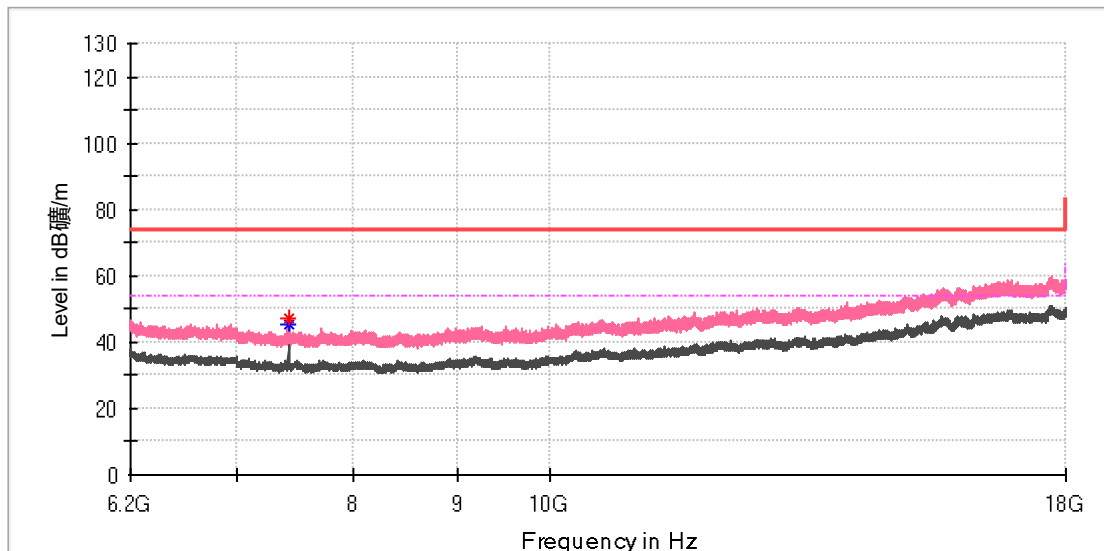
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7422.775000	---	36.34	54.00	17.66	100.0	H	324.0	8.4
7423.266667	44.13	---	74.00	29.87	100.0	H	324.0	8.4

Final Result

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

EUT Information

EUT Name:	Nano Receiver
Model:	DXMWXSB01YM
Test Mode:	High channel
Order No/Sample No:	168352501/A003192705-001
Test Voltage:	DC 5V via PC USB port
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



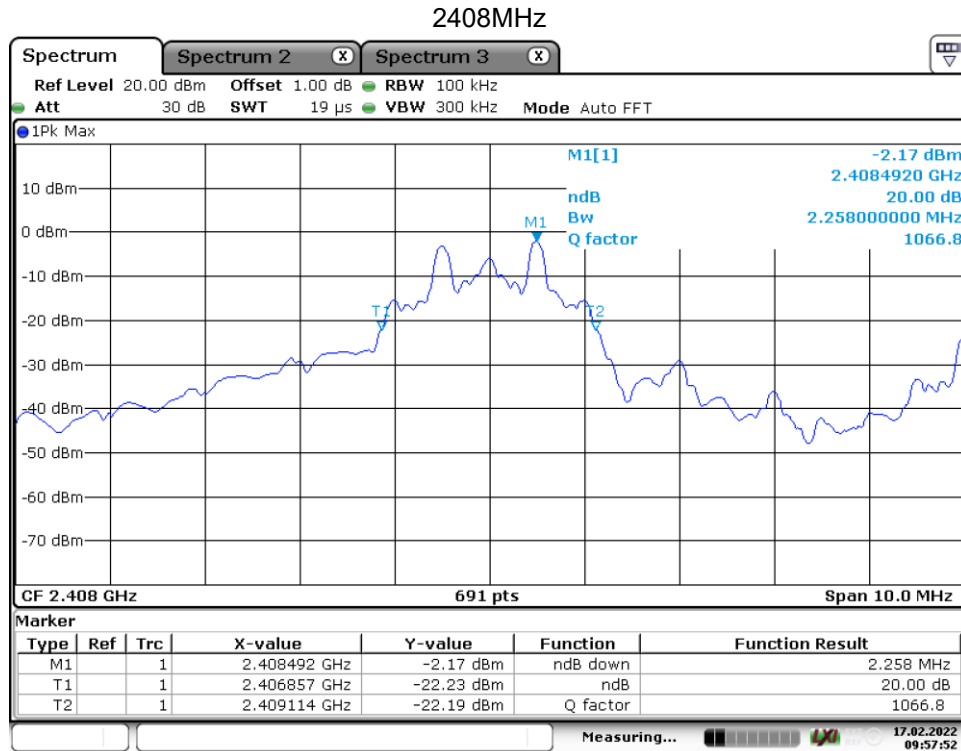
Critical Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7423.266667	47.12	---	74.00	26.88	100.0	V	128.0	8.4
7423.266667	---	45.08	54.00	8.92	100.0	V	128.0	8.4

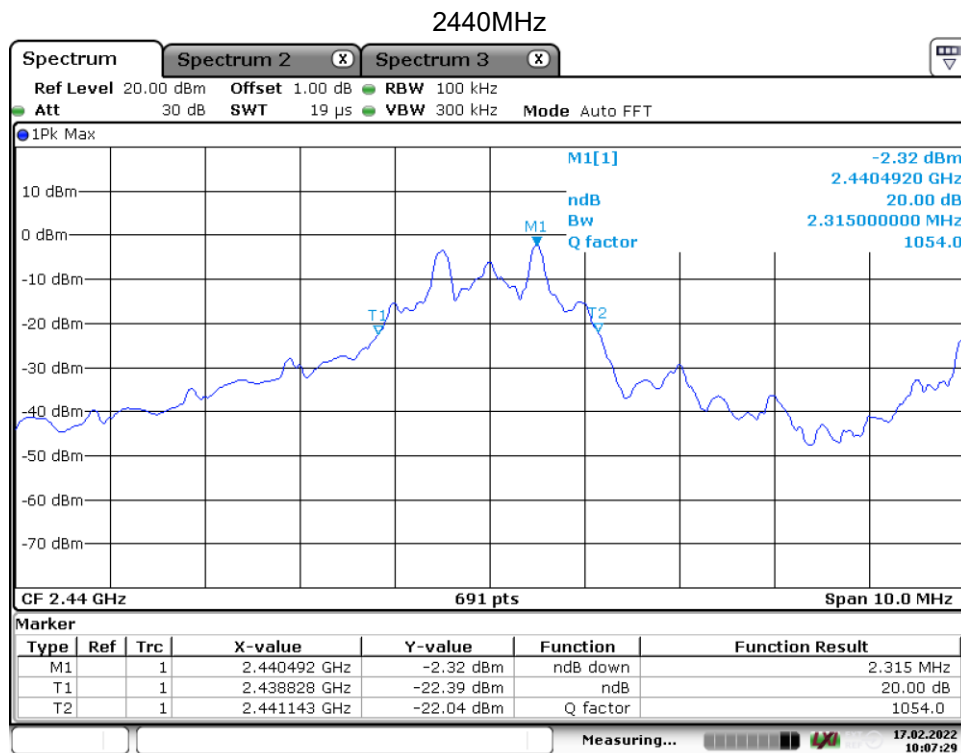
Final Result

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

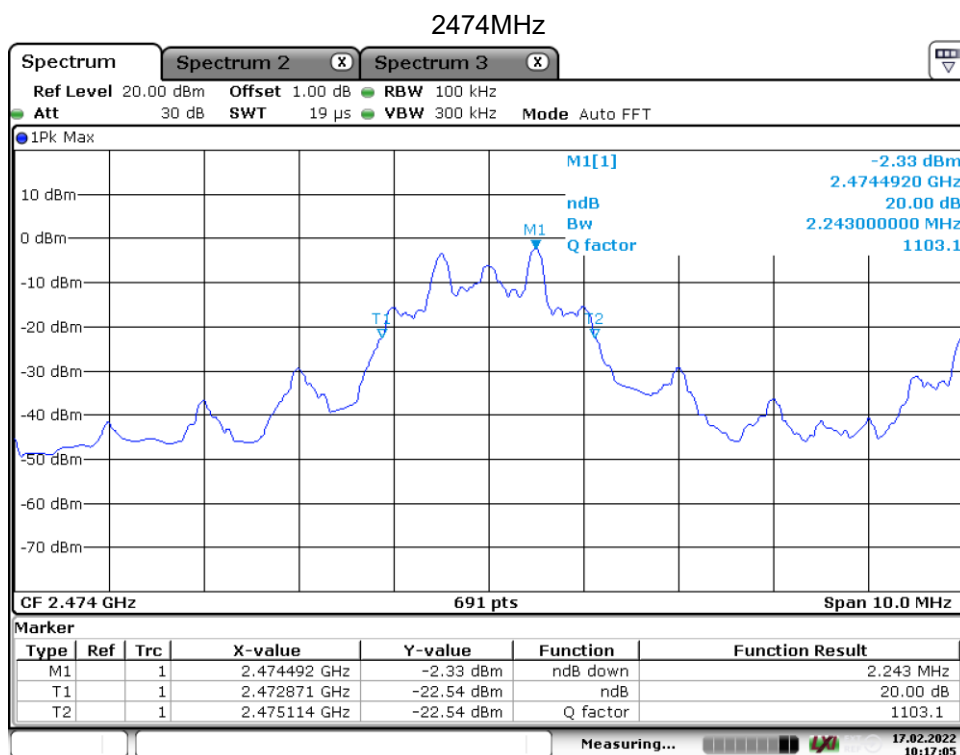
Appendix B.2: Test Results of 20dB Bandwidth



Date: 17.FEB.2022 09:57:52

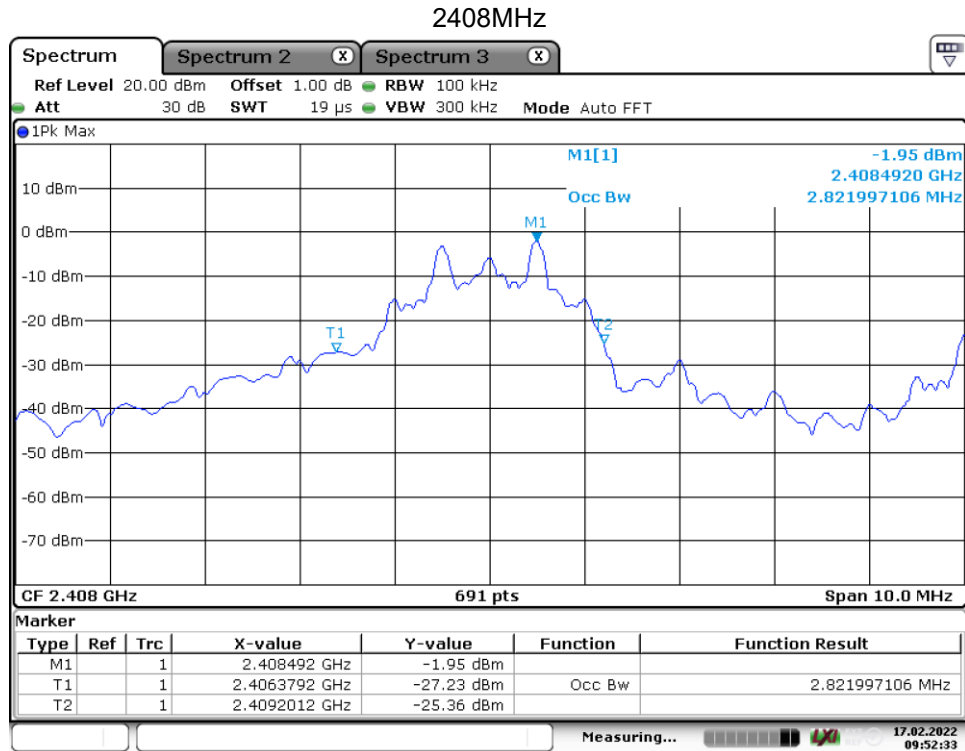


Date: 17.FEB.2022 10:07:30

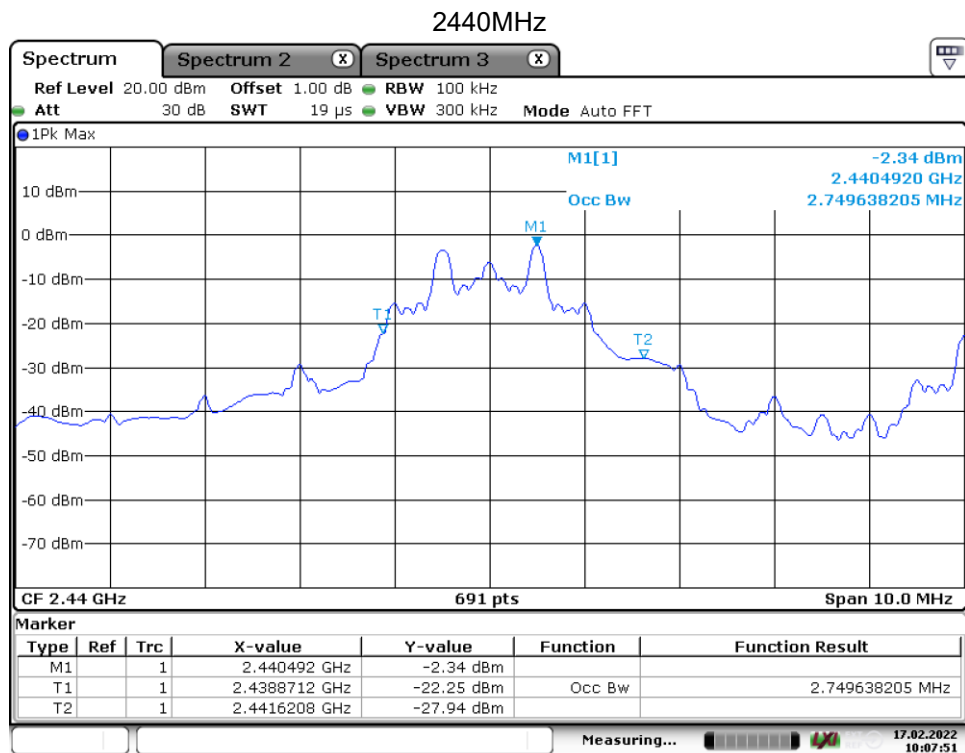


Date: 17.FEB.2022 10:17:05

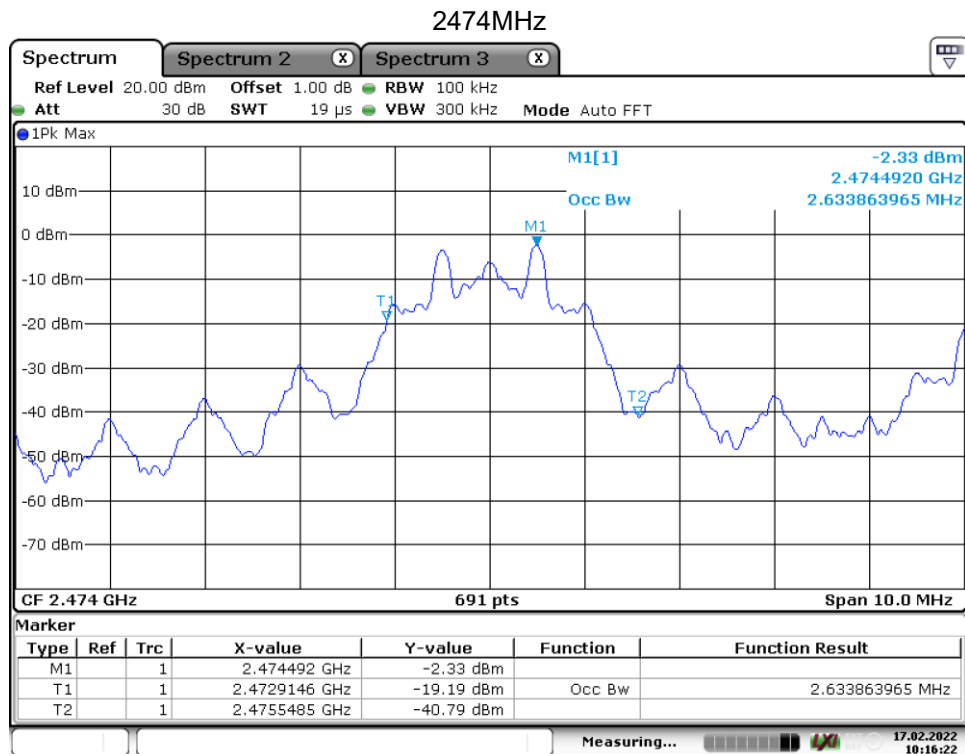
Appendix B.3: Test Results of 99% Bandwidth



Date: 17.FEB.2022 09:52:33



Date: 17.FEB.2022 10:07:50

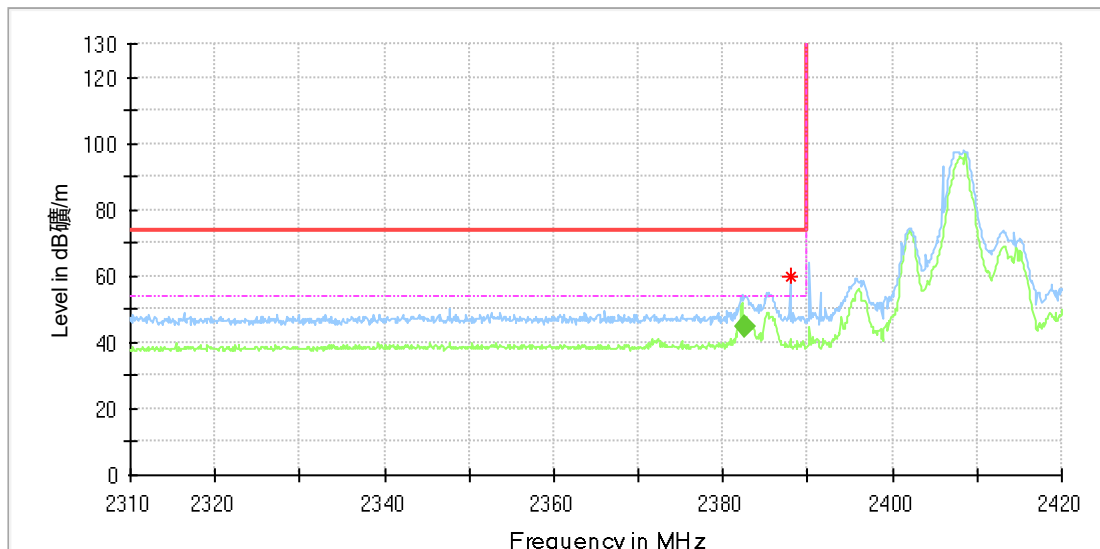


Date: 17.FEB.2022 10:16:22

Appendix B.4: Test Results of Band Edge

EUT Information

EUT Name:	Nano Receiver
Model:	DXMWXSB01YM
Test Mode:	Low channel
Order No/Sample No:	168352501/A003192705-001
Test Voltage:	DC 5V via PC USB port
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

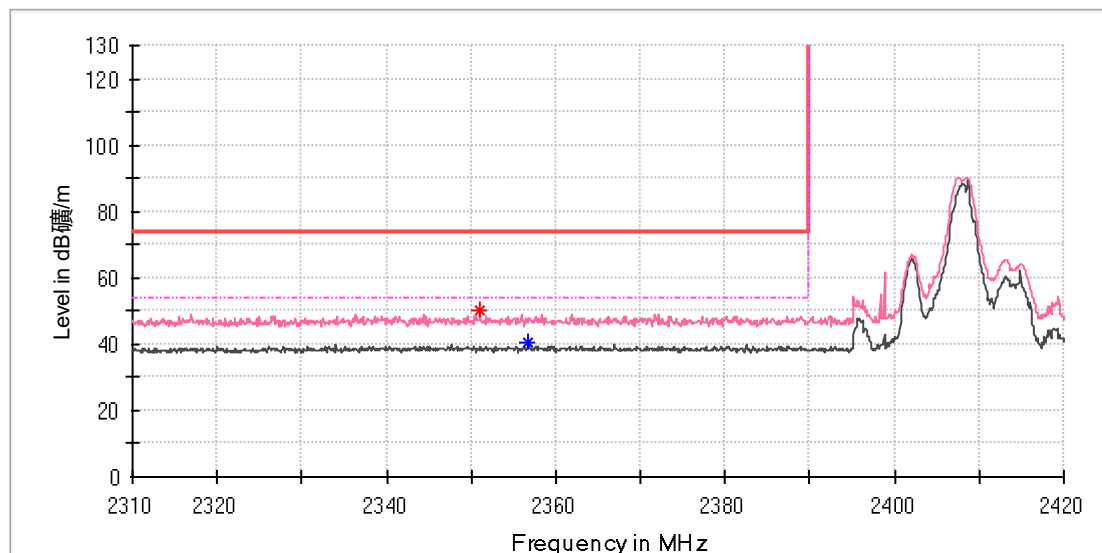
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2387.900000	59.66	---	74.00	14.34	100.0	H	0.0	7.0

Final Result

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2382.630400	44.50	54.00	9.50	100.0	H	-5.0	7.0

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Test Mode: Low channel
Order No/Sample No: 168352501/A003192705-001
Test Voltage: DC 5V via PC USB port
Remark: Temp 22 Humi:55%
Test Standard: FCC 15.249
Tested By: Kei Zhang
Reviewed By: Terry Yin



Critical Freqs

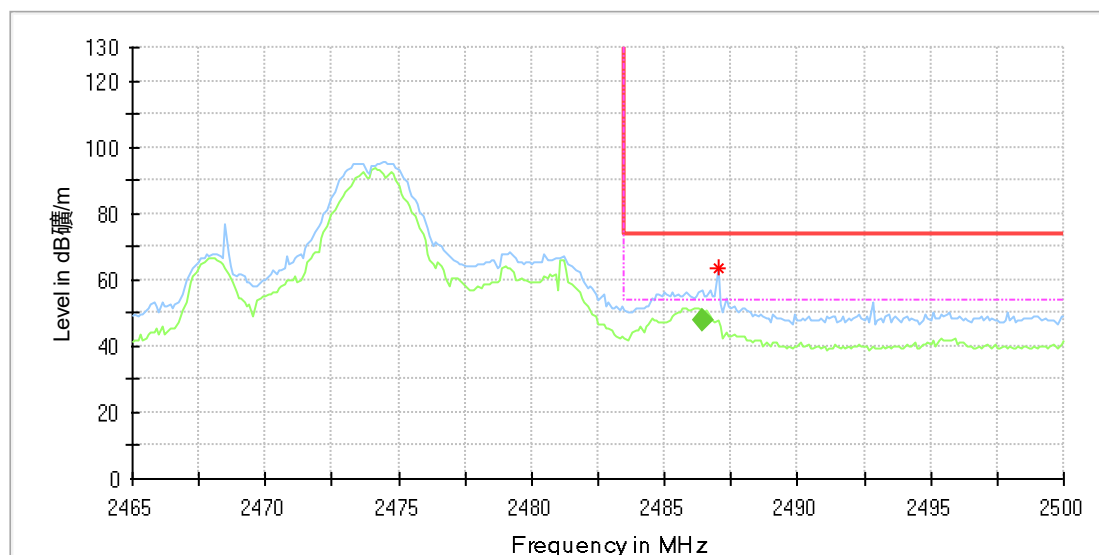
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2351.000000	49.89	---	74.00	24.11	100.0	V	315.0	6.9
2356.800000	---	40.38	54.00	13.62	100.0	V	74.0	6.9

Final Result

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

EUT Information

EUT Name:	Nano Receiver
Model:	DXMWXSB01YM
Test Mode:	High channel
Order No/Sample No:	168352501/A003192705-001
Test Voltage:	DC 5V via PC USB port
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.249
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

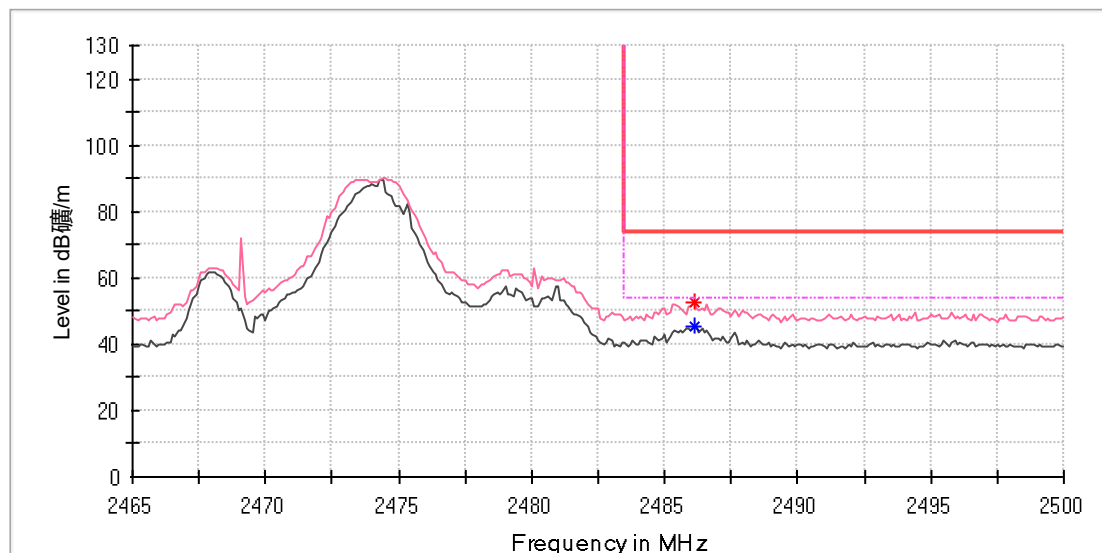
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2487.000000	63.48	---	74.00	10.52	100.0	H	307.0	7.4

Final Result

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2486.402500	47.80	54.00	6.20	100.0	H	-5.0	7.4

EUT Information

EUT Name:	Nano Receiver
Model:	DXMWXSB01YM
Test Mode:	High channel
Order No/Sample No:	168352501/A003192705-001
Test Voltage:	DC 5V via PC USB port
Remark:	Temp 22 Humi:55%
Test Standard:	FCC 15.249
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)
2486.100000	52.49	---	74.00	21.51	100.0	V	41.0	7.4
2486.100000	---	45.53	54.00	8.47	100.0	V	41.0	7.4

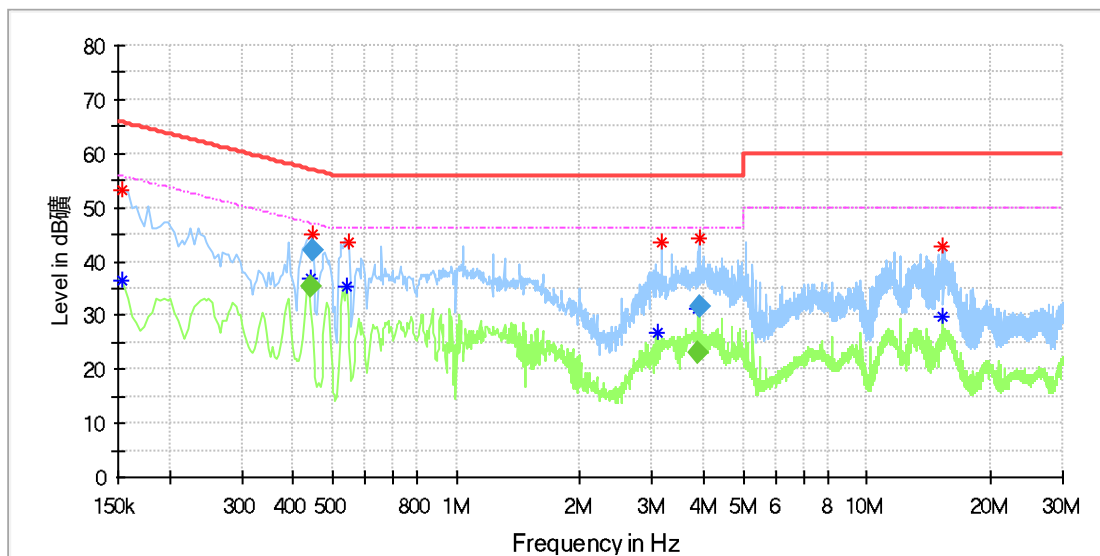
Final Result

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

Appendix B.5: Conducted Emission on AC Mains

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Order No: 168352501
Test Mode: Normal operating with 2.4GHz band connected
Test Voltage: DC 5V from PC
Test By: Jianhua Lu
Review By: Gary Chen
Remark: SR1



Critical_Freqs

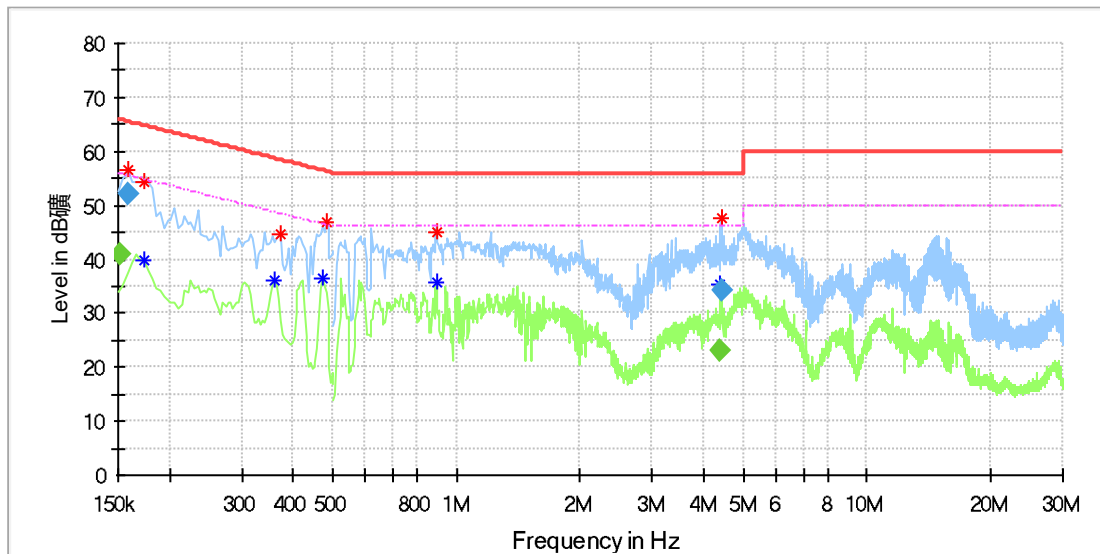
Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.154000	---	36.38	55.78	19.41	L1	9.6
0.154000	53.35	---	65.78	12.43	L1	9.6
0.440500	---	36.70	47.18	10.48	L1	9.7
0.444500	45.02	---	57.02	12.01	L1	9.7
0.540000	---	35.34	46.00	10.66	L1	9.7
0.548000	43.46	---	56.00	12.54	L1	9.7
3.096000	---	26.76	46.00	19.24	L1	9.9
3.156000	43.68	---	56.00	12.32	L1	9.9
3.882500	---	31.17	46.00	14.83	L1	9.9
3.898500	44.36	---	56.00	11.64	L1	9.9
15.300000	42.94	---	60.00	17.06	L1	10.2
15.308000	---	29.89	50.00	20.11	L1	10.2

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.440500	---	35.41	47.05	11.64	1000.0	9.000	L1	9.7
0.444500	41.99	---	56.98	14.98	1000.0	9.000	L1	9.7
3.882500	---	22.99	46.00	23.01	1000.0	9.000	L1	9.9
3.898500	31.76	---	56.00	24.24	1000.0	9.000	L1	9.9

EUT Information

EUT Name: Nano Receiver
Model: DXMWXSB01YM
Order No: 168352501
Test Mode: Normal operating with 2.4GHz band connected
Test Voltage: DC 5V from PC
Test By: Jianhua Lu
Review By: Gary Chen
Remark: SR1



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.152500	---	40.86	55.16	14.30	N	9.6
0.158000	56.40	---	65.57	9.16	N	9.6
0.174000	---	39.95	54.77	14.82	N	9.6
0.174000	54.35	---	64.77	10.41	N	9.6
0.362000	---	36.04	48.68	12.65	N	9.7
0.374000	44.68	---	58.41	13.73	N	9.7
0.474000	---	36.61	46.44	9.83	N	9.7
0.482000	46.79	---	56.31	9.51	N	9.7
0.896000	---	35.84	46.00	10.16	N	9.7
0.896000	45.05	---	56.00	10.95	N	9.7
4.402500	---	35.45	46.00	10.55	N	9.9
4.421500	47.62	---	56.00	8.38	N	9.9

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.152500	---	40.85	55.86	15.01	1000.0	9.000	N	9.6
0.158000	51.98	---	65.57	13.59	1000.0	9.000	N	9.6
4.402500	---	22.89	46.00	23.11	1000.0	9.000	N	9.9
4.421500	34.20	---	56.00	21.80	1000.0	9.000	N	9.9