

47 CFR PART 15 SUBPART C TEST REPORT

for

Smoke Detector

Model No.: SD-32

FCC ID: GX9SD32F1919

of

Applicant: CLIMAX TECHNOLOGY CO., LTD.

Address: No. 258, Sinhu 2nd Rd., Neihu District, Taipei City 114,
Taiwan (R.O.C.)

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: TW1477, TW1072

Industry Canada filed test laboratory Reg. No.: 20037, 5107A



Report No.: W6M22203-21686-C-1

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
TEL: 886-2-66068877 FAX: 886-2-66068879 E-mail: wts@wts-lab.com



Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

TABLE OF CONTENTS

1	GENERAL INFORMATION.....	2
1.1	NOTES	2
1.2	TESTING LABORATORY	3
1.2.1	Location	3
1.2.2	Details of accreditation status	3
1.3	DETAILS OF APPROVAL HOLDER	3
1.4	APPLICATION DETAILS.....	3
1.5	GENERAL INFORMATION OF TEST ITEM.....	4
1.6	TEST STANDARDS	4
2	TECHNICAL TEST.....	5
2.1	SUMMARY OF TEST RESULTS.....	5
2.2	TEST ENVIRONMENT	5
2.3	TEST EQUIPMENT LIST.....	6
2.4	GENERAL TEST PROCEDURE.....	9
3	TEST RESULTS (ENCLOSURE).....	11
3.1	PEAK OUTPUT POWER (TRANSMITTER).....	12
3.2	EQUIVALENT ISOTROPIC RADIATED POWER (EIRP).....	15
3.3	EXEMPTION LIMITS FOR ROUTINE EVALUATION ACCORDING TO 1547 CFR FCC PART 2 SUBPART J, SECTION 2.109115	
3.4	TRANSMITTER RADIATED EMISSIONS IN RESTRICTED BANDS.....	16
3.5	SPURIOUS EMISSIONS (TX)	17
3.6	CARRIER FREQUENCY SEPARATION.....	19
3.7	NUMBER OF HOPPING FREQUENCIES	22
3.8	TIME OF OCCUPANCY (DWELL TIME)	24
3.9	20dB BANDWIDTH	28
3.10	BAND-EDGE COMPLIANCE OF RF EMISSIONS	31
3.11	RADIATED EMISSIONS FROM RECEIVER PART	34
3.12	POWER LINE CONDUCTED EMISSION	35



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

1 General Information

1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems. The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

The test report may only be reproduced or published in full.

Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.

Tester:

April 07, 2022	Rick Chen	<i>Rick Chen.</i>
Date	WTS-Lab. Name	Signature

Technical responsibility for area of testing:

April 07, 2022	Kevin Wang	<i>Kevin Wang</i>
Date	WTS Name	Signature



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1

FCC ID: GX9SD32F1919

1.2 Testing laboratory

1.2.1 Location

OATS

No.5-1, Lishui, Shuang Sing Village,
Wanli Dist., New Taipei City 207,
Taiwan (R.O.C.)

3 meter semi-anechoic chamber

No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

TEL:886-2-6613-0228

FAX:886-2-2791-5046

Company

Worldwide Testing Services(Taiwan) Co., Ltd.

6F, NO. 58, LANE 188, RUEY-KUANG RD.

NEIHU, TAIPEI 114, TAIWAN R.O.C.

Tel : 886-2-66068877

Fax : 886-2-66068879

1.2.2 Details of accreditation status

Accredited testing laboratory

FCC filed test laboratory Reg. No. TW1477, TW1072

Industry Canada filed test laboratory Reg. No. 20037, 5107A

Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd. :

Name: ./.

Accredited number: ./.

Street: ./.

Town: ./.

Country: ./.

Telephone: ./.

Fax: ./.

1.3 Details of approval holder

Name: CLIMAX TECHNOLOGY CO., LTD.

Street: No. 258, Sinhu 2nd Rd., Neihu District,

Town: Taipei City 114,

Country: Taiwan (R.O.C.)

1.4 Application details

Date of receipt of test item: March 21, 2022

Date of test: from March 22, 2022 to April 06, 2022



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

1.5 General information of Test item

Type of test item: Smoke Detector
Model Number: SD-32
Multi-listing model number: ./.
Photos: ./.
Sample No.: #01

Technical data

Frequency band: 918.0375-924.48 MHz
Frequency (Ch 1): 918.0375 MHz
Frequency (Ch 25): 921.98 MHz
Frequency (Ch 50): 924.48 MHz

Transmitter

Power (Ch 1): Conducted: 4.76 dBm
Power (Ch 25): Conducted: 4.26 dBm
Power (Ch 50): Conducted: 4.26 dBm

Unom

Power supply: Battery 3Vd.c.

Operation modes: Half-duplex

Modulation Type: FSK

Antenna Type: PCB Antenna

Antenna gain: -0.38 dBi
(Testing laboratory assumes no responsibility for affecting any validity of the result while the information which is provided by clients.)

Host device: none

Classification:

Fixed Device	<input checked="" type="checkbox"/>
Mobile Device (Human Body distance > 20cm)	<input type="checkbox"/>
Portable Device (Human Body distance < 20cm)	<input type="checkbox"/>
Modular Radio Device	<input type="checkbox"/>

Manufacturer: (if applicable)

Name: ./.
Street: ./.
Town: ./.
Country: ./.

1.6 Test standards

Technical standard : 47 CFR PART 15 SUBPART C § 15.247 (2020-10)



Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

or

The deviations were ascertained in the course of the tests performed.

2.2 Test environment

Relative humidity content: 20 ... 75 %

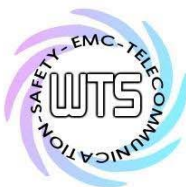
Air pressure: 86 ... 103 kPa

Details of power supply: Battery 3Vd.c.

Extreme conditions parameters: test voltage : -- extreme
min : -- V
max : -- V

Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission (Power Line Conducted Emission)	Expanded Uncertainty : AMN : 1.03 dB Voltage probe : 1.05 dB
Estimation Result of Uncertainty of Radiated Emission(3M) (Transmitter Radiated Emissions in restricted Bands, Spurious emissions (tx))	Expanded Uncertainty : 0.009-30 MHz : 3.48 dB 30-1000 MHz : 4.48 dB 1-18 GHz : 4.15 dB 18-40 GHz : 3.78 dB
Estimation Result of Uncertainty of Bandwidth Measurement (20 dB Bandwidth)	Expanded Uncertainty : 0.45 kHz
Estimation Result of Uncertainty of Conducted Output Power Measurement (Peak Output Power (transmitter))	Expanded Uncertainty : 3.07 dB
Estimation Result of Uncertainty of Band Edge Measurement (Band-edge Compliance of RF Emissions)	Expanded Uncertainty : 0.67 dBc
Estimation Result of Uncertainty of Frequency Separation Measurement (Carrier Frequency Separation, Number of Hopping Frequencies)	Expanded Uncertainty : 554.14 Hz
Estimation Result of Uncertainty of Duty Cycle Measurement (Time of Occupancy (Dwell Time))	Expanded Uncertainty : 0.1 ms

The decision rule is: Measurement uncertainty is not included in the calculation of test results.

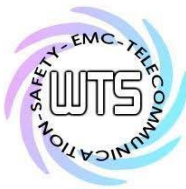


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

2.3 Test Equipment List

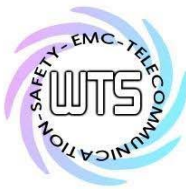
3	No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
	ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2021/6/17	2022/6/16
	ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
	ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2021/11/9	2022/11/8
	ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2021/9/22	2022/9/21
	ETSTW-CE 008	HF-EICHLITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
	ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2021/7/29	2022/7/28
	ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2021/11/8	2022/11/7
	ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2021/7/28	2022/7/27
	ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2021/6/17	2022/6/16
	ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2021/9/28	2022/9/27
	ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function Test	
	ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function Test	
	ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2021/8/4	2022/8/3
	ETSTW-RE 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2021/5/31	2022/5/30
	ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2021/6/16	2022/6/15
	ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2021/5/5	2022/5/4
	ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2022/3/4	2023/3/3
	ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2021/5/21	2022/5/20
	ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2021/7/14	2022/7/13
	ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
	ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2022/2/18	2023/2/17
	ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2022/2/18	2023/2/17
	ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2022/2/18	2023/2/17
	ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2022/3/4	2023/3/3
	ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2022/2/18	2023/2/17
	ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2021/5/14	2022/5/13
	ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
	ETSTW-RE 069	Double-Ridged Guide Horn Antenna	3117	00069377	ETS-Lindgren	Function Test	
	ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2021/10/27	2022/10/26
	ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2021/9/17	2022/9/16
	ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2021/5/27	2022/5/26
	ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2022/2/18	2023/2/17
	ETSTW-RE 112	AC POWER SOURCE	TFC-1005	T-0A023536	T-Power	Function test	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2022/1/5	2023/1/4
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	2021/10/29	2022/10/28
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2021/6/8	2022/6/7
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2021/8/6	2022/8/5
ETSTW-RE 126	5GHz Notch filter	5NSL12-5800/E221.3-O/O	1	K&L Microwave	2021/8/6	2022/8/5
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2022/2/18	2023/2/17
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2021/8/6	2022/8/5
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2021/8/6	2022/8/5
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2021/5/14	2022/5/13
ETSTW-RE 146	Preamplifier	JPA-10M1G	15090004	JPT	2021/6/4	2022/6/3
ETSTW-RE 152	Bi-log Hybrid Antenna	MCTD 2786B	BLB20J04029	ETC	2021/10/5	2022/10/4
ETSTW-RE 153	Signal Analyzer	FSV40	101929	R&S	2021/10/6	2022/10/5
ETSTW-RE 159	Bi-log Hybrid Antenna (30M~1000 MHz)	MCTD 2786B	BLB21N04035	ETC	2021/12/06	2022/12/05
ETSTW-RF 002	Electromagnetic field probe	LF-30	K-0007	STT	2021/7/19	2022/7/18
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2021/6/2	2022/6/1
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2022/3/4	2023/3/3
ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2021/4/27	2022/4/26
ETSTW-GSM 004	Wideband Radio Communication Tester	CMW500	128092	R&S	2021/10/29	2022/10/28
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40 /12+9SS	3	WI	2022/1/5	2023/1/4
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2022/1/5	2023/1/4
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2022/1/5	2023/1/4
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2022/1/5	2023/1/4
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2021/9/7	2022/9/6
ETSTW-GSM 024	Radio Communication Analyzer	MT8821C	None	Anritsu	2022/3/23	2023/3/22
ETSTW-GSM 025	Band Reject Filter	BRM19835	001	Micro-Tronics	2021/8/6	2022/8/5
ETSTW-Cable 011	SMA to N type Cable	RGU-400	None	THERMAX	Pre-test Use NCR	
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2022/2/18	2023/2/17
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2022/2/18	2023/2/17
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2022/2/18	2023/2/17
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2022/2/18	2023/2/17
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2021/7/1	2022/6/30
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2021/5/7	2022/5/6
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2021/9/17	2022/9/16
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2021/9/17	2022/9/16
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S Cable 9)	279067	HUBER+SUHNER	2022/2/18	2023/2/17



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1

FCC ID: GX9SD32F1919

ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2021/5/14	2022/5/13
ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2021/7/2	2022/7/1
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2021/6/4	2022/6/3
ETSTW-Cable 064	Microwave Cable	SUCOFLEX 104	MY28891	HUBER+SUHNER	2021/5/14	2022/5/13
ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM-NM-25000	170239	EMCI	2021/6/4	2022/6/3
ETSTW-Cable 072	SMA type cable (8m)	SUCOFLEX 104	805800/4	HUBER+SUHNER	2021/5/14	2022/5/13
ETSTW-Cable 074	SMA type cable (2m)	SUCOFLEX 104	802563/4	HUBER+SUHNER	2021/5/14	2022/5/13
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	
WTSTW-SW 006	EMI TEST SOFTWARE	e3	None	AUDIX	Version 9.161014	
WTSTW-SW 008	Signal studio	Agilent	None	AUDIX	Version 2.0.0.1	
ETSTW-TH 002	Thermohygrometer	608-H1	45204317	Testo	2021/10/18	2022/10/17
ETSTW-TH 003	Wireless weather station	GAIA	N/A	TFA	2021/10/18	2022/10/17



Registration number: W6M22203-21686-C-1

FCC ID: GX9SD32F1919

3.3 General Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.10-2013 6.2 using a LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

RADIATION INTERFERENCE: The test procedure used was according to ANSI STANDARD C63.10-2013 6.3 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 23°C with a humidity of 40 %.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBμV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

Freq (MHz) METER READING + ACF + CABLE LOSS (to the receiver) = FS

33 20 dBμV + 10.36 dB + 6 dB = 36.36 dBμV/m @3m

The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.10-2013 6.2.2. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
- (2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
- (3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.
- (4) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a)(1)-(a)(3) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this Section, whichever is the higher frequency range of investigation.

For hand-held devices, an exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1

FCC ID: GX9SD32F1919

When the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

The formula is as follows:

Average = Peak + Duty Factor

Duty Factor = $20 \log(\text{dwell time}/T)$

$T = 100\text{ms}$ when the pulse train period is over 100 ms or the period of the pulse train.

Modified Limits for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

ANSI STANDARD C63.10-2013 B.2.7: Any measurements that utilize special test software shall be indicated and referenced in the test report. During testing, test software 'EZ EMC' was used for setting up different operation modes.



Worldwide Testing Services(Taiwan) Co., Ltd.

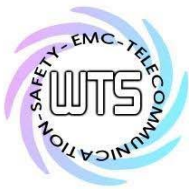
Registration number: W6M22203-21686-C-1

FCC ID: GX9SD32F1919

3 Test results (enclosure)

Test case	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Equivalent radiated Power	15.247(b)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Emissions radiated – Transmitter operating	15.247(d)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Emissions conducted – Transmitter operating	15.247	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carrier Frequency Separation	15.247(a) (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Number of Hopping Frequencies	15.247(a) (1)(i)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Time of Occupancy (Dwell Time)	15.247(a) (1)(i)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20 dB Bandwidth	15.247(a) (1)(i)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Band-edge Compliance of RF Emission	15.247(d)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiated Emission from Receiver Part	15.109	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power Line Conducted Emission	15.207(a)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The follows is intended to leave blank.



Registration number: W6M22203-21686-C-1

FCC ID: GX9SD32F1919

3.1 Peak Output Power (transmitter)

FCC Rule: 15.247

This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.

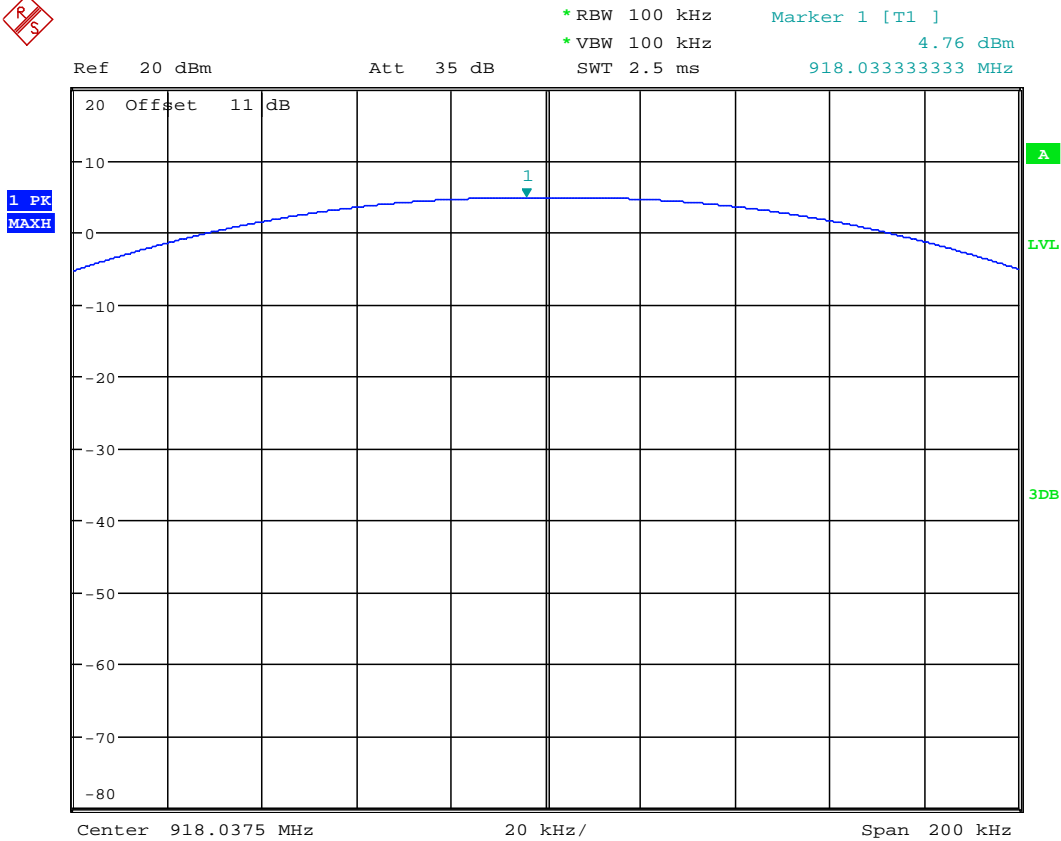
The power was measured with modulation (declared by the applicant).

Test date: March 30, 2022

Temperature: 23.3 °C

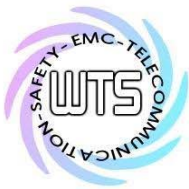
Humidity: 55.4 %

Tester: Rick



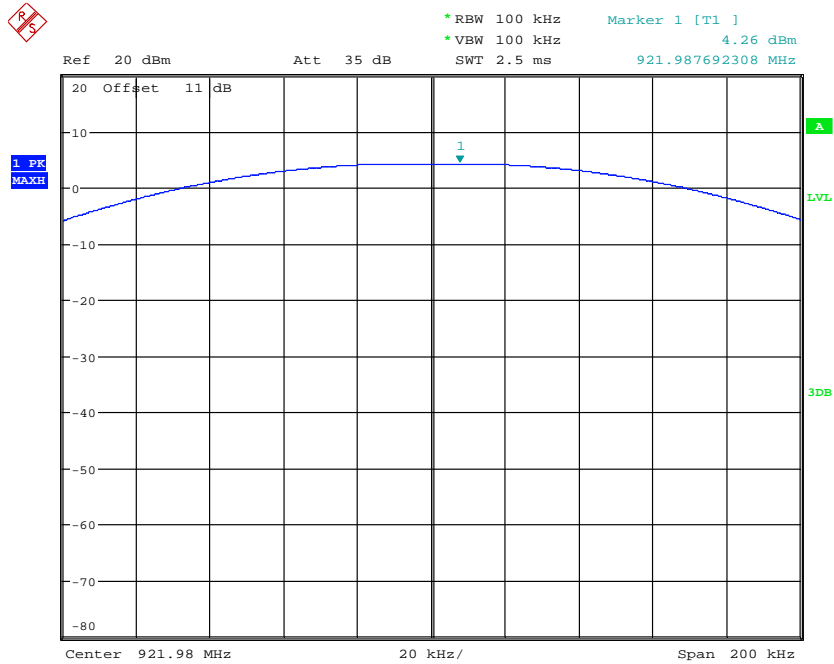
MAX OUTPUT POWER 918.0375MHz

Date: 30.MAR.2022 21:05:32

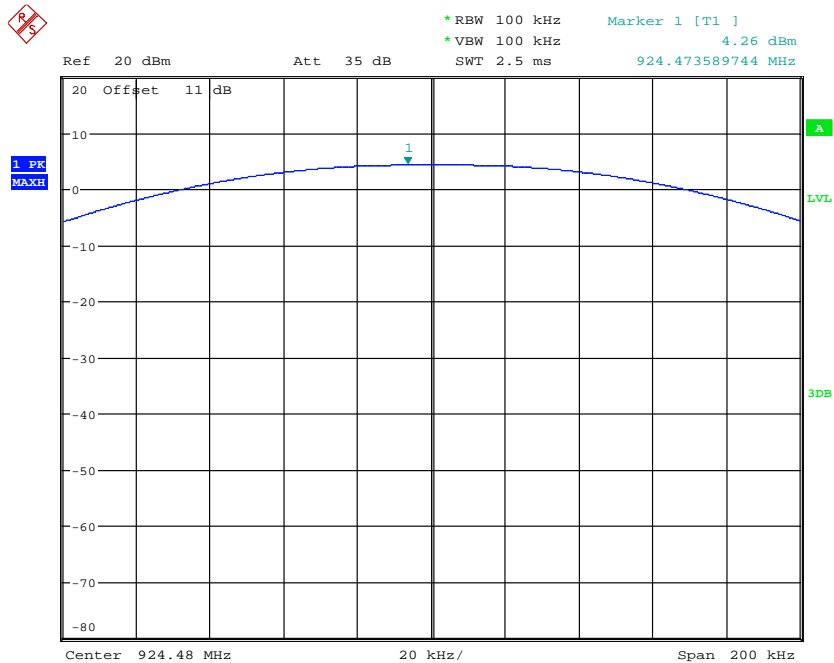


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919



MAX OUTPUT POWER 921.98MHz
Date: 30.MAR.2022 21:07:35



MAX OUTPUT POWER 924.48MHz
Date: 30.MAR.2022 21:08:23



Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

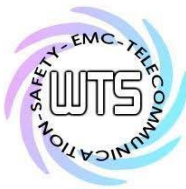
Maximum Peak Output Power

Limits:

Frequency MHz	Number of hopping channels			
	≥ 75	≥ 50	$49 \geq 25$	$74 \geq 15$
902-928	--	30 dBm	24 dBm	--
2400-2483.5 MHz	30 dBm	--	--	21 dBm
5725-5850 MHz	30 dBm	--	--	--

In case of employing transmitter antennas having antenna gain >dBi and using fixed point-to point operation consider §15.247 (b)(4).

Test equipment used: ETSTW-RE 055, ETSTW-RE 050, ETSTW-RE 064



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1

FCC ID: GX9SD32F1919

3.2 Equivalent Isotropic Radiated Power (EIRP)

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain

EIRP = 4.76 dBm + (-0.38 dBi [antenna gain claimed by manufacturer]) = 4.38 dBm = 2.74 mW

Test equipment used: ETSTW-RE 055

3.3 Exemption Limits for Routine Evaluation according to 47 CFR FCC Part 2 Subpart J, section 2.1091

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

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

MPE Calculation Method

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

*Plane-wave equivalent power density

E = Electric field (V/m) P = output power (W) G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

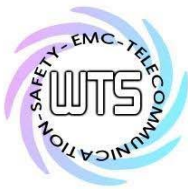
The formula can be changed to $Pd \cdot \frac{30 \times P \times G}{377 \times d^2}$ mW/cm².

Established separation distance is 20 cm.

Operating frequency band : 918.0375-924.48 MHz

The product meets RF exposure requirement.

Because the power density of 0.0005 mW/cm² at 918.0375 MHz is below the power density limit of 0.6120 mW/cm².



Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

3.4 Transmitter Radiated Emissions in restricted Bands

FCC Rules: 15.247 (d), 15.205, 15.209, 15.35

Radiated emission measurements were performed from 30 MHz to 26000 MHz.

For radiated emission tests, the analyzer setting was as followings:

RES BW VID BW

Frequency <1 GHz 100 kHz 100 kHz (Peak measurements)

Frequency >1 GHz 1 MHz 1 MHz (Peak measurements)

1 MHz 1 MHz (Average measurements)

Limits:

For frequencies below 1GHz :

Frequency of Emission (MHz)	Field strength (microvolts/meter)	Field Strength (dB microvolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of FHSS Systems:

“If the emission is pulsed, modify the unit for continues operation , use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.” Here the correction was added to the limit instead subtracted from the reading.

Duty cycle correction = 20 log (dwell time/100ms)

For frequencies above 1GHz (Average measurements).

Limit – duty cycle correction

No duty cycle correction was added to the reading.

54.0dBμV/m

For frequencies above 1GHz (Peak measurements).

Limit + 20dB

54.0dBμV/m + 20 dB= 74 dBμV/m

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 062, ETSTW-RE 142, ETSTW-RE 147, ETSTW-RE 064

Explanation: See attached diagrams in appendix.



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
 FCC ID: GX9SD32F1919

3.5 Spurious emissions (tx)

Spurious emission was measured with modulation (declared by manufacturer).

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB 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. 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))

SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance to point 2.3.

Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits.

In the Table being listed the critical peak and average value an exhibit the compliance with the above calculated Limits.

If in the column's correction factor states a value then the max. Field strength in the same row is corrected by a value gained from the "Marker-Delta-Method" or the „Duty-Cycle Correction Factor“.

Summary table with radiated data of the test plots

Model: SD-32 Date: --
 Mode: -- Temperature: -- °C Engineer: --
 Polarization: Horizontal Humidity: -- %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
 FCC ID: GX9SD32F1919

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

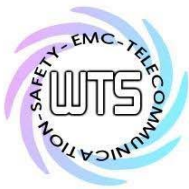
Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

- Note**
1. Correction Factor = Antenna factor + Cable loss - Preamplifier
 2. The formula of measured value as: Test Result = Reading + Correction Factor
 3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
 4. All not in the table noted test results are more than 20 dB below the relevant limits.
 5. After evaluated, the test result in this report adopt the worst case to measure, please see attached diagrams in appendix.

All other not noted test plots do not contain significant test results in relation to the limits.

TEST RESULT (Transmitter): The unit DOES meet the FCC requirements.

Test equipment used: ETSTW-RE 030, ETSTW-RE 111, ETSTW-RE 088, ETSTW-RE 018, ETSTW-RE 064



Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

3.6 Carrier Frequency Separation

Carrier Frequency Separation was measured with modulation (declared by manufacturer).

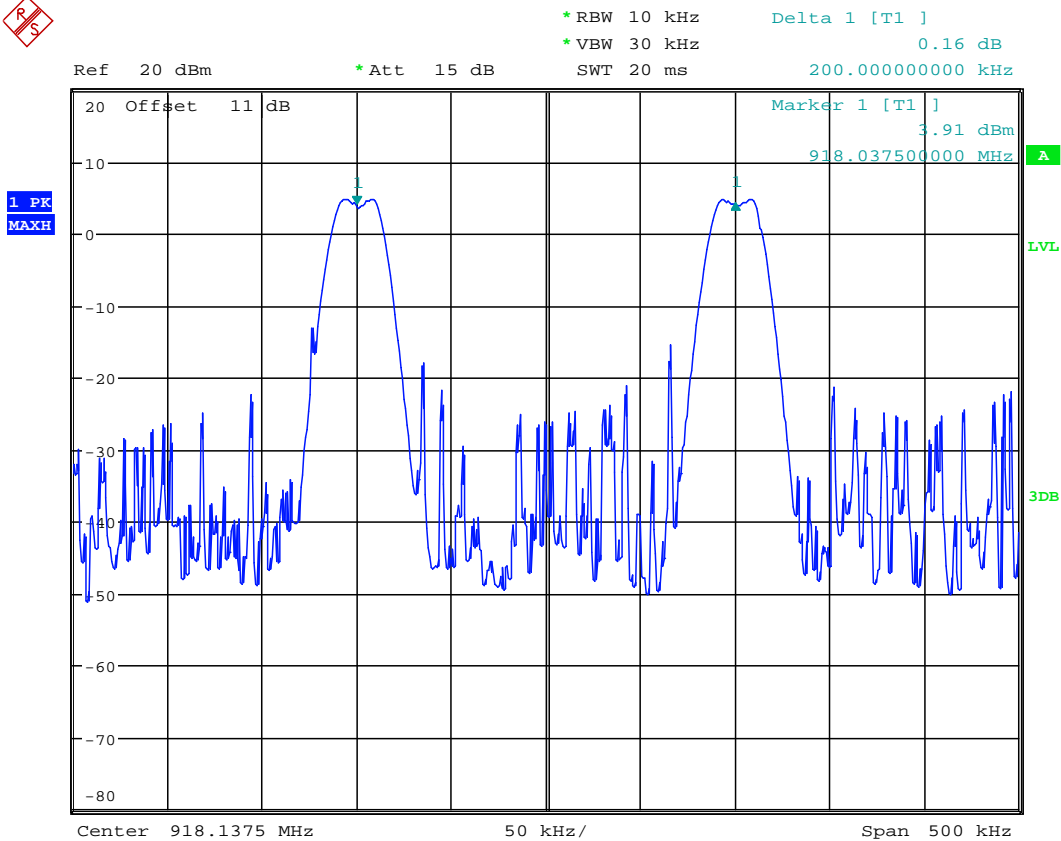
According to FCC rules part 15 subpart C §15.247 frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or 20 dB bandwidth of the hopping channel, whichever is greater.

Test date: March 30, 2022

Temperature: 23.3 °C

Humidity: 55.4 %

Tester: Rick



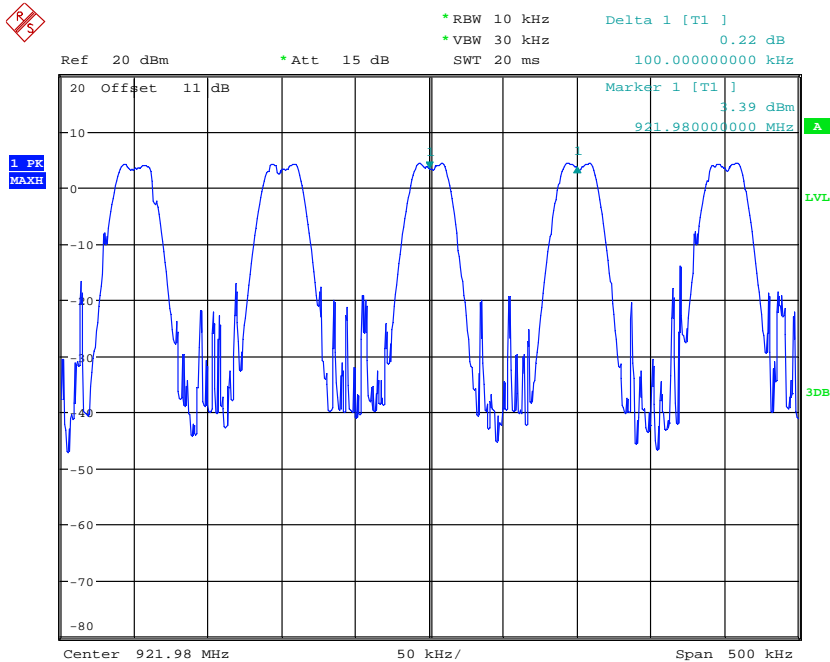
FREQUENCY SEPARATION 918.0375MHz

Date: 30.MAR.2022 21:26:31



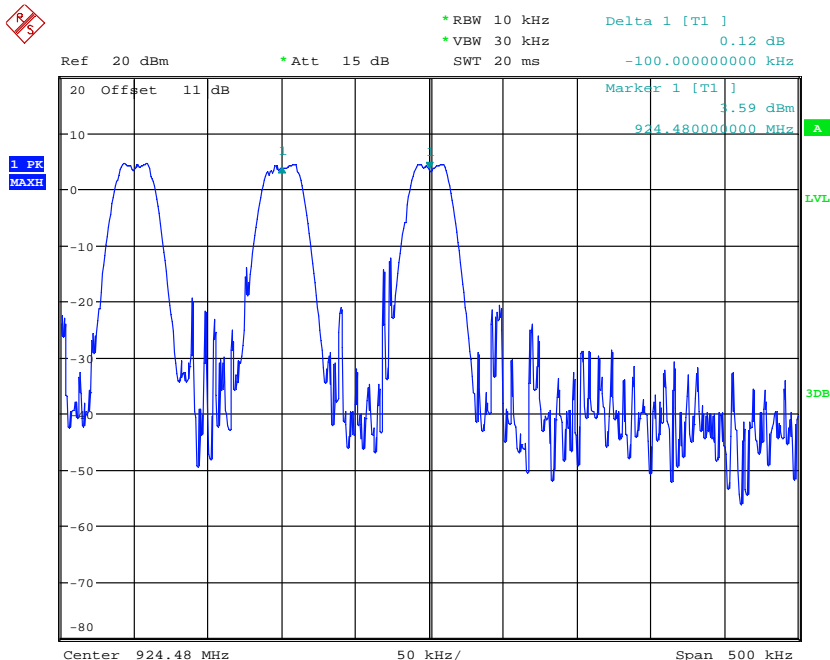
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919



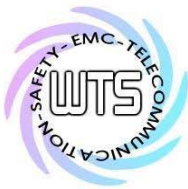
FREQUENCY SEPARATION 921.98MHz

Date: 30.MAR.2022 21:29:07



FREQUENCY SEPARATION 924.48MHz

Date: 30.MAR.2022 21:30:44



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

Limits:

Frequency Range MHz	Limits	
	20 dB bandwidth < 25 kHz	20 dB bandwidth > 25 kHz
902-928	25 kHz	20 dB bandwidth
2400-2483.5 5725-5850.0	25 kHz	20 dB bandwidth

Test equipment used: ETSTW-RE 055, ETSTW-RE 064



Registration number: W6M22203-21686-C-1
 FCC ID: GX9SD32F1919

3.7 Number of Hopping Frequencies

According to FCC rules part 15 subpart C §15.247 frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies. Frequency hopping systems in 5725-5850 MHz bands shall use least 75 hopping frequencies.

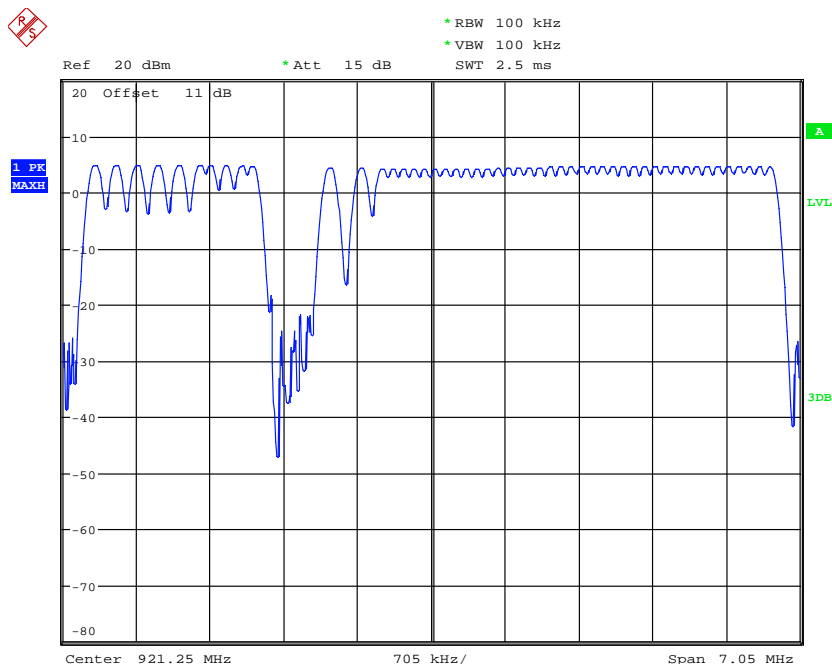
For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies; if the 20dB bandwidth of the hopping channel 250 kHz or greater, the system shall use at least 25 hopping frequencies.

Test date: March 30, 2022

Temperature: 23.3 °C

Humidity: 55.4 %

Tester: Rick



NUMBER OF HOPPING
 Date: 30.MAR.2022 21:34:40

Limits:

Frequency Range MHz	Limit	
	20dB Bandwidth	Number of Channels
902-928 MHz	Bandwidth < 250 kHz	≥ 50
	Bandwidth ≥ 250 kHz	≥ 25
2400-2483.5	not defined	15
5725-5850.0 MHz	1 MHz	75

Test equipment used: ETSTW-RE 055, ETSTW-RE 064



Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

3.7.1 Pseudorandom Frequency Hopping Sequence

The generation of the hopping sequence is determined by the Bluetooth core specification and complies with the FCC requirements.

3.7.2 Coordination of hopping sequences to other transmitters

According to the Bluetooth core specification such a coordination is not possible. During scatternet function only one of the two hopping sequences will be used at a definite moment.

3.7.3 System Receiver Hopping Capability

According to the Bluetooth core specification. The system receivers shift frequencies in synchronization with the transmitted signals.



Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

3.8 Time of Occupancy (Dwell Time)

Frequency hopping systems operating in the 5725-5850 MHz band shall use an average time of occupancy on any frequency not greater than 0.4 seconds within a 30 second period.

In 2400-2483.5 MHz band the average time of occupancy on any channel shall not be greater than 0.4 seconds multiplied by the number of hopping channels employed.

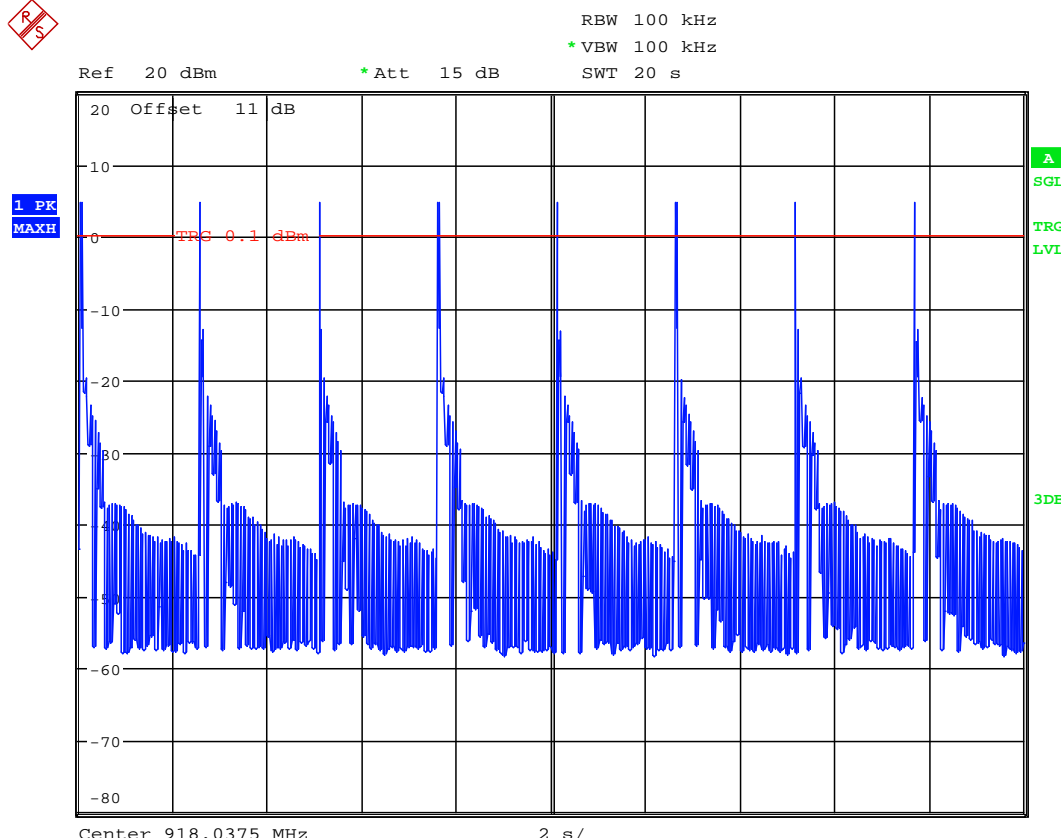
For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20dB bandwidth of the hopping channel is 250 kHz or greater, the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period.

Test date: March 30, 2022

Temperature: 23.3 °C

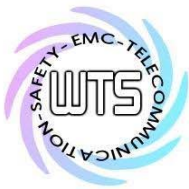
Humidity: 55.4 %

Tester: Rick



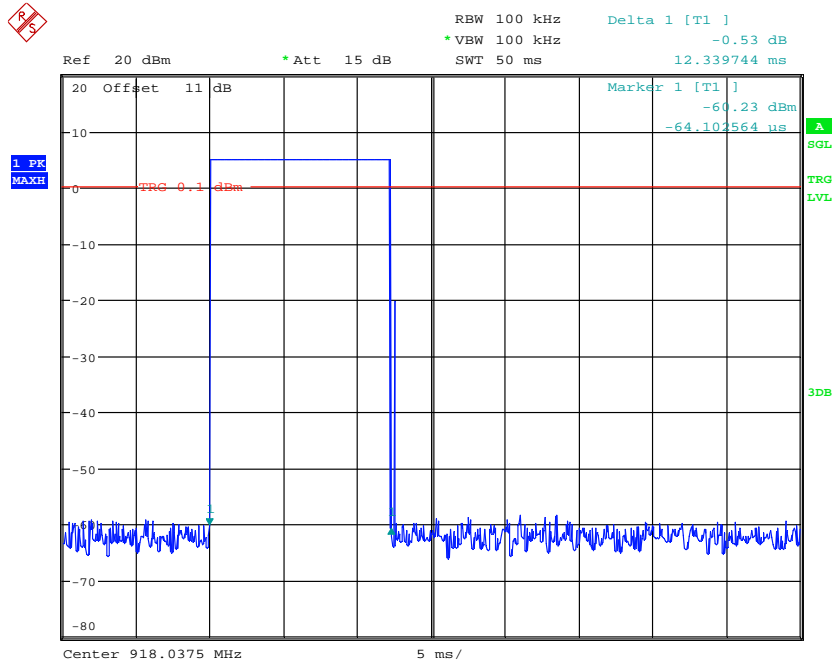
DWELL TIME 918.0375MHz

Date: 30.MAR.2022 21:38:58

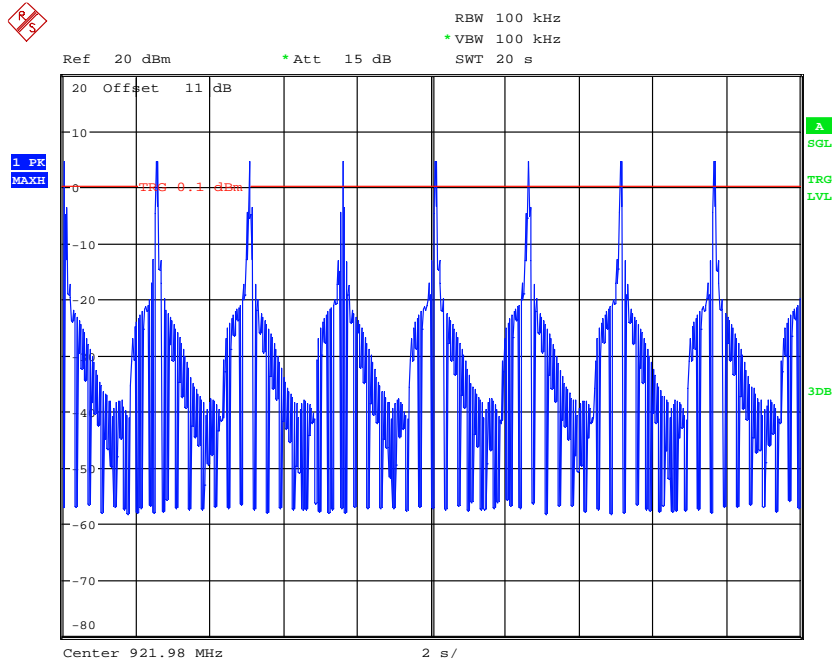


Worldwide Testing Services(Taiwan) Co., Ltd.

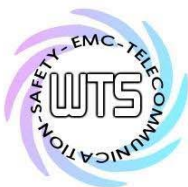
Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919



DWELL TIME 918.0375MHz (12.34ms * 8 events =98.72ms)
Date: 30.MAR.2022 21:44:54

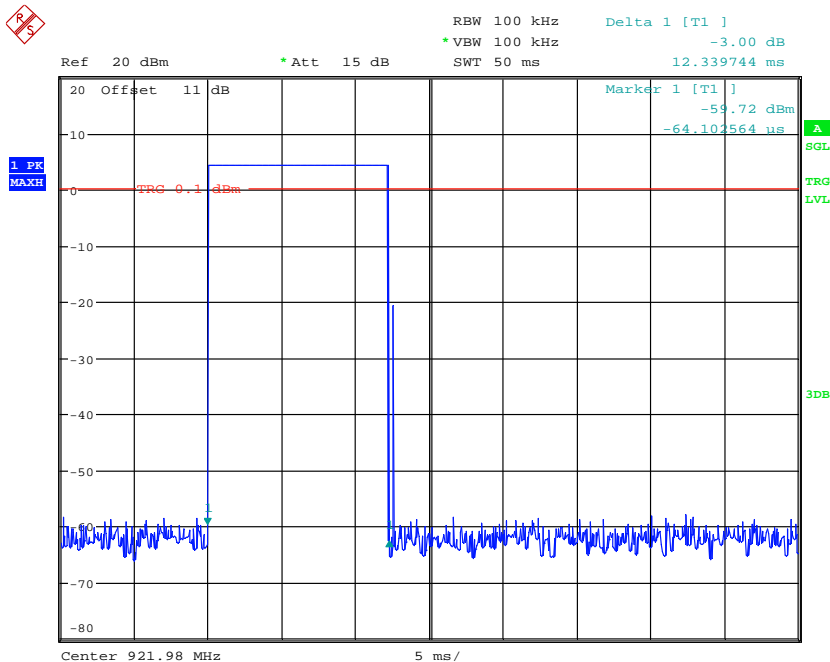


DWELL TIME 921.98MHz
Date: 30.MAR.2022 21:40:06



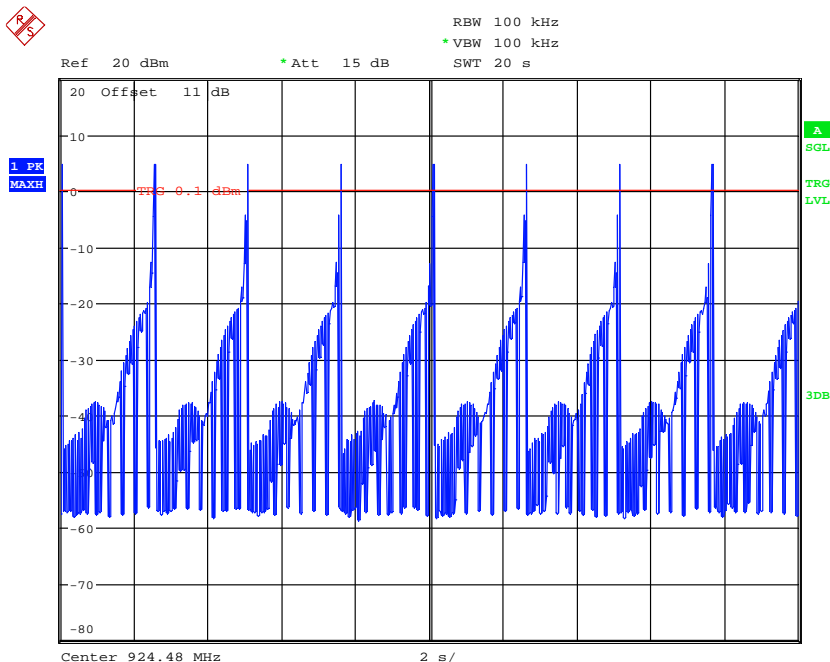
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919



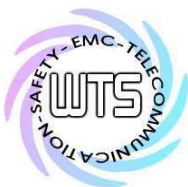
DWELL TIME 921.98MHz (12.34ms * 8 events =98.72ms)

Date: 30.MAR.2022 21:44:17

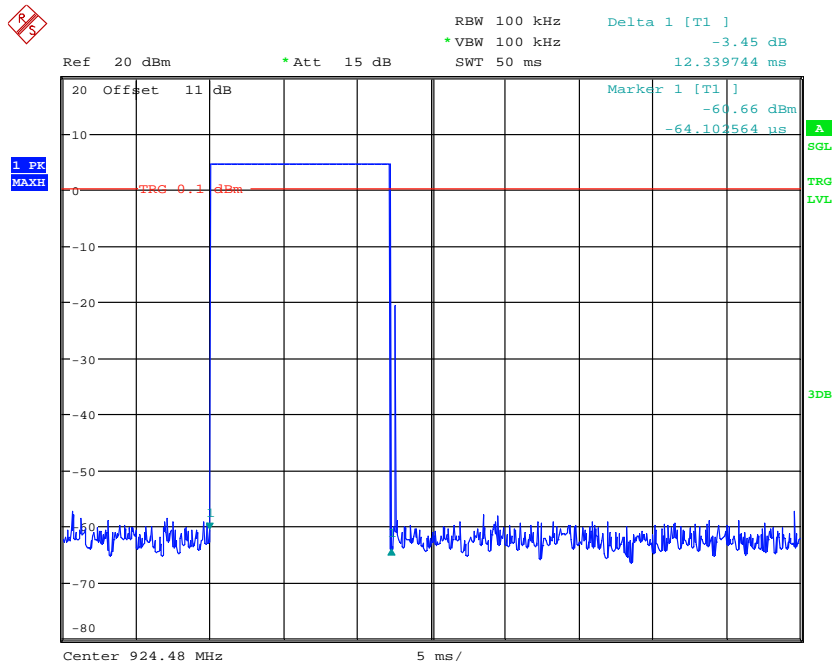


DWELL TIME 924.48MHz

Date: 30.MAR.2022 21:40:59



Registration number: W6M22203-21686-C-1
 FCC ID: GX9SD32F1919

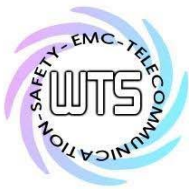


DWELL TIME 924.48MHz (12.34ms * 8 events =98.72ms)
 Date: 30.MAR.2022 21:43:25

Limits and measurement periods:

Frequency MHz	Number of channels	Measurement Periode	Limit
902 – 928	≥50	20 s	0.4 s
	49 ≥ 25	10 s	0.4 s
2400 – 2483.5	≥ 15	0.4 s * number of used channels	0.4 s
5725- 5850	≥ 75	30 s	0.4s

Test equipment used: ETSTW-RE 055, ETSTW-RE 064



Registration number: W6M22203-21686-C-1

FCC ID: GX9SD32F1919

3.9 20dB Bandwidth

Frequency hopping systems operating in the 5725-5850 MHz bands shall use a maximum 20dB bandwidth of 1 MHz.

The 20dB bandwidth is measured on the lowest, middle and highest hopping channel.

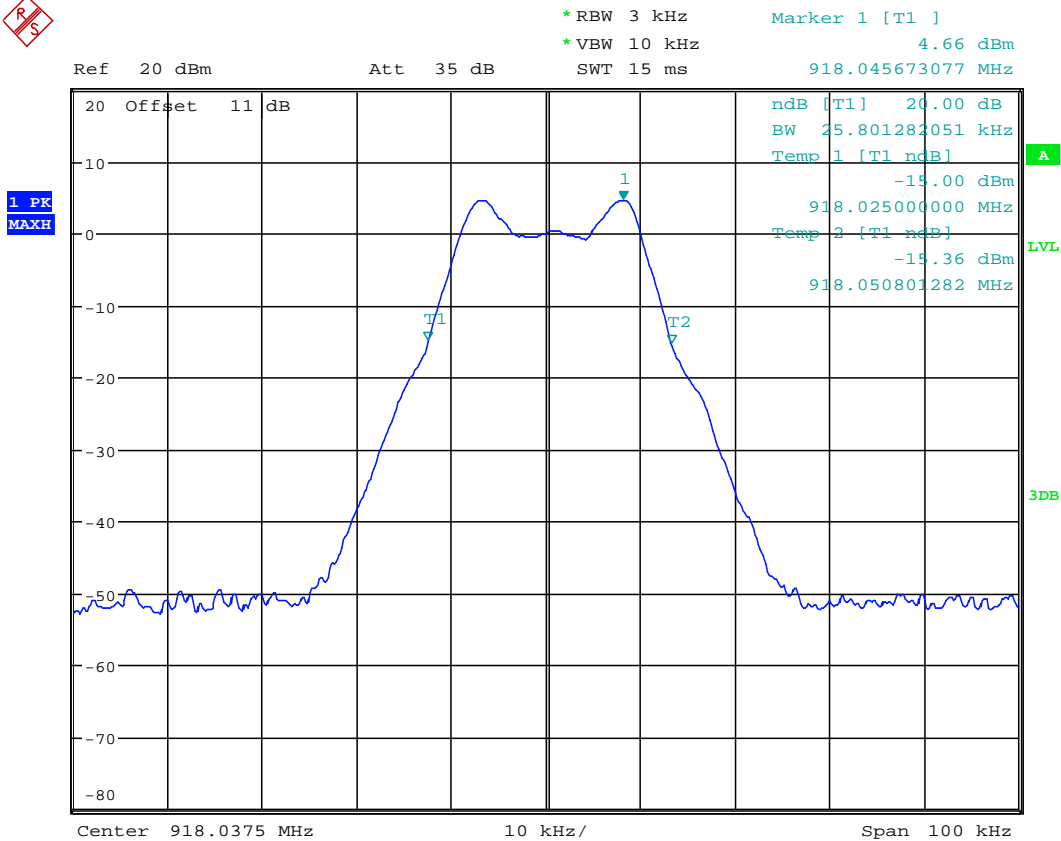
For frequency hopping systems operating in the 902-928 MHz band the maximum 20dB bandwidth of the hopping channel is 500 kHz.

Test date: March 30, 2022

Temperature: 23.3 °C

Humidity: 55.4 %

Tester: Rick



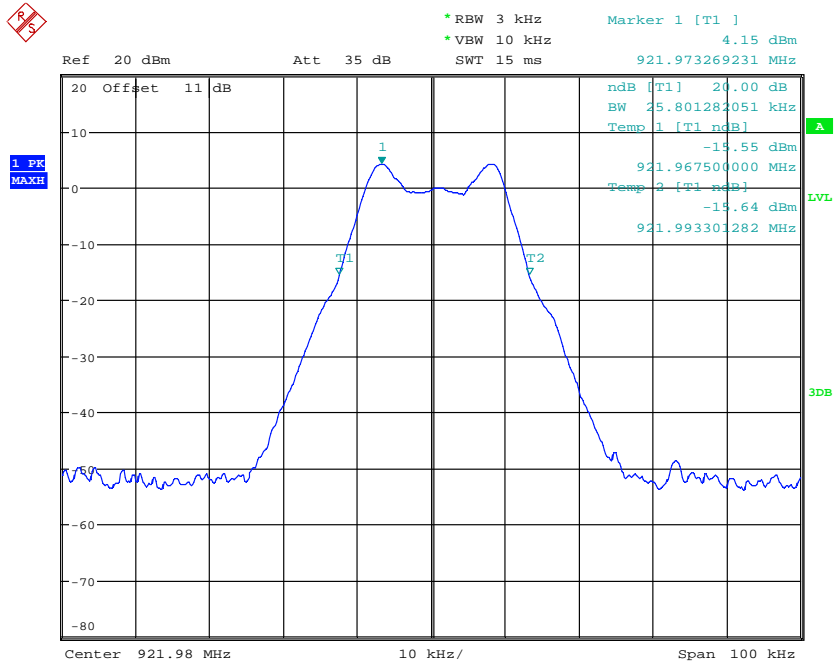
20DB BANDWIDTH 918.0375MHz

Date: 30.MAR.2022 21:13:29

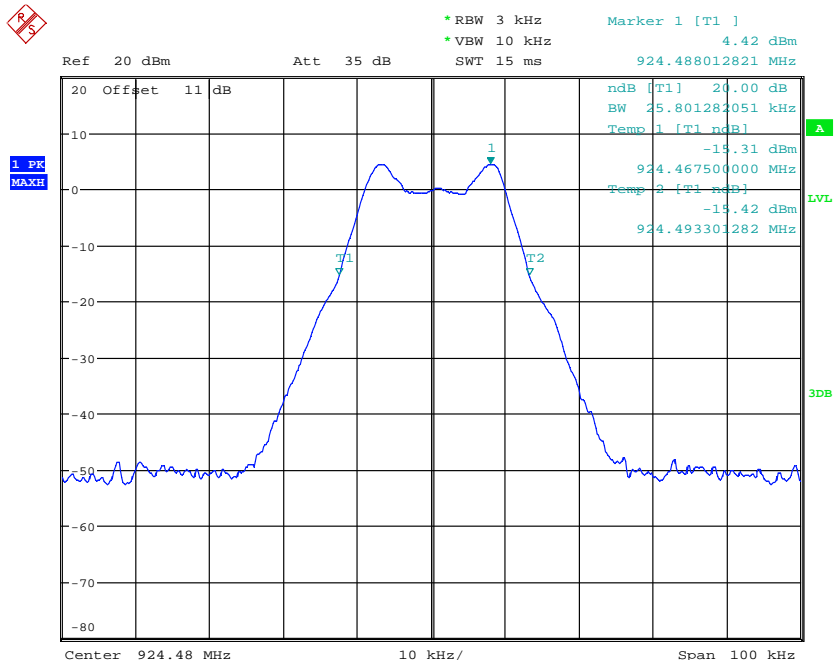


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919



20DB BANDWIDTH 921.98MHz
Date: 30.MAR.2022 21:14:14



20DB BANDWIDTH 924.48MHz
Date: 30.MAR.2022 21:14:47



Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

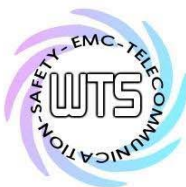
Limits:

Frequency Range / MHz	Limit
902-928	≤ 500 kHz
2400-2483.5	not defined
5725-5850	≤ 1 MHz

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

3.9.1 System Receiver Input Bandwidth

It is determined in the Bluetooth core specification. The value matches to the bandwidth of transmitter signal.



Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

3.10 Band-edge Compliance of RF Emissions

According to FCC rules part 15 subpart C §15.247(c) in any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB 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. Attenuation below the general limits specified in § 15.209(a) is not required.

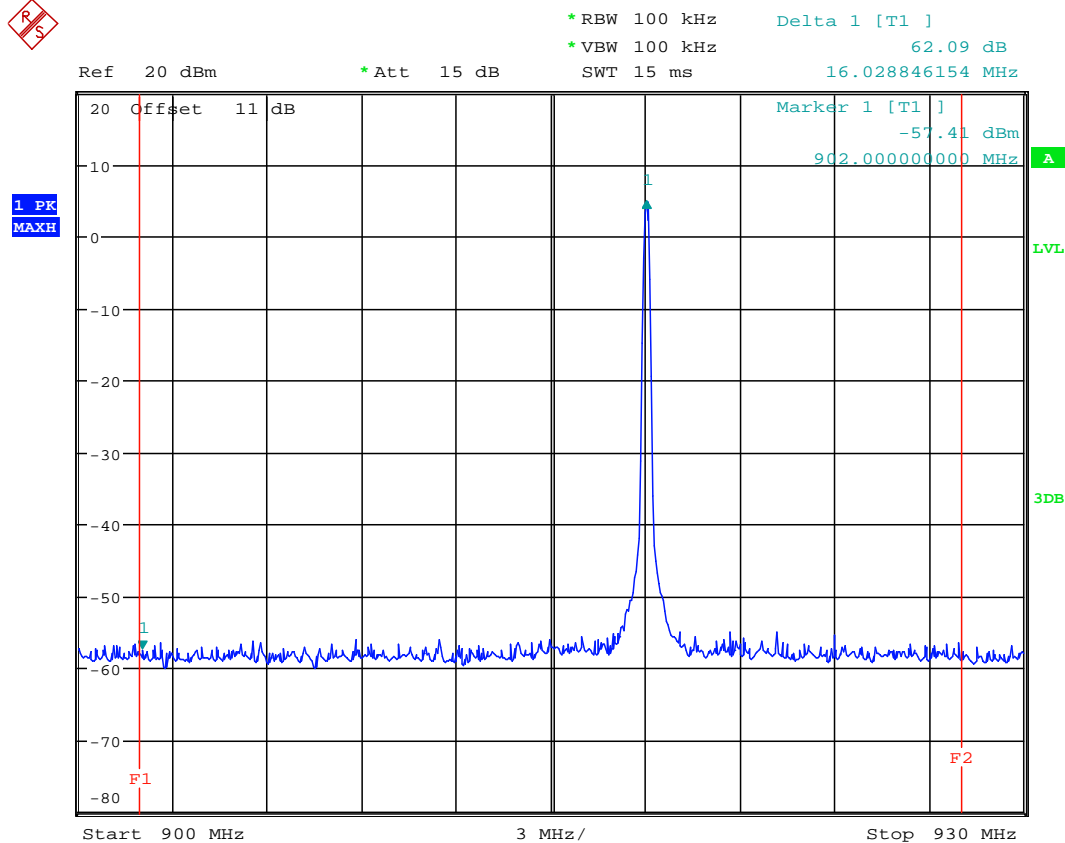
In addition radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also with the radiated emission limits.

Test date: March 30, 2022

Temperature: 23.3 °C

Humidity: 55.4 %

Tester: Rick



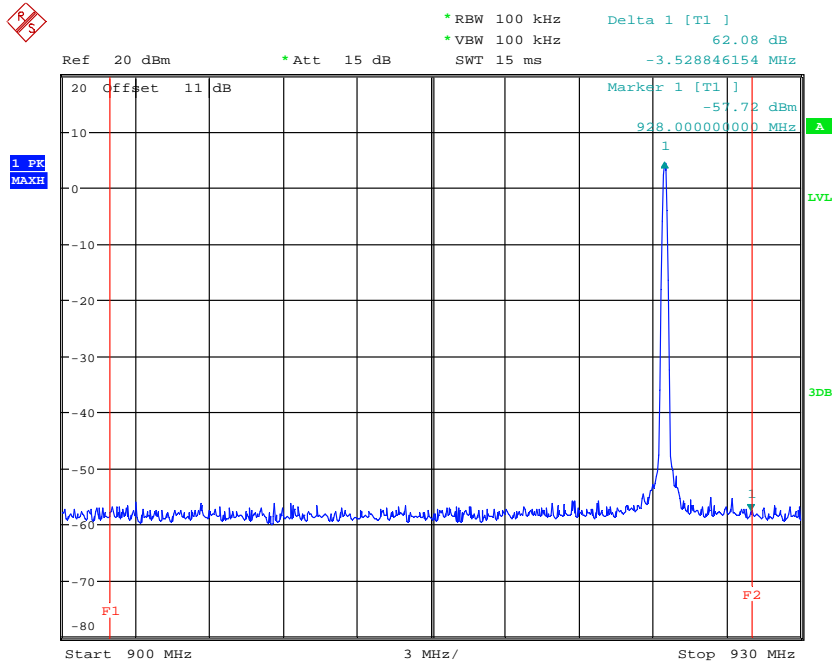
BANDEGE 918.0375MHz

Date: 30.MAR.2022 21:19:18

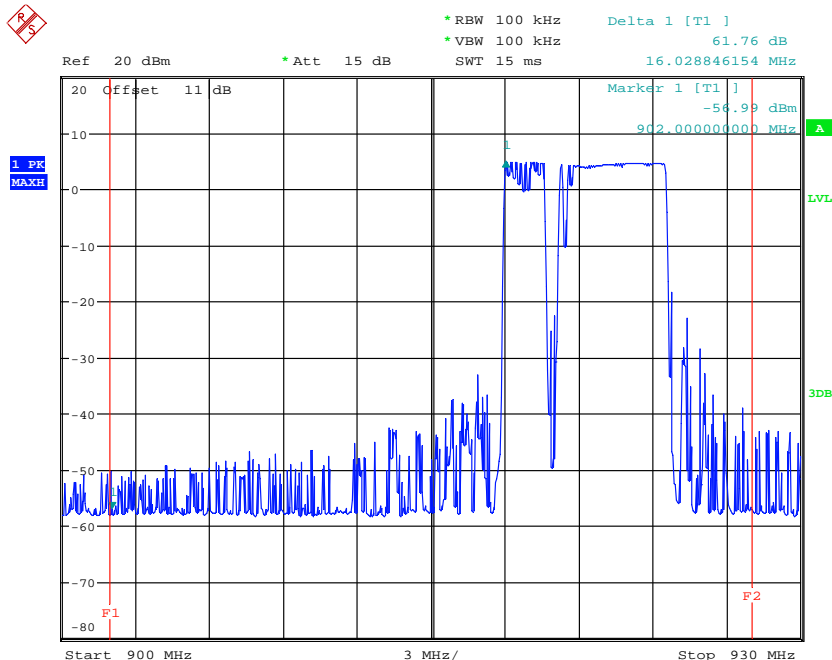


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919



BANDEDGE 924.48MHz
Date: 30.MAR.2022 21:17:55

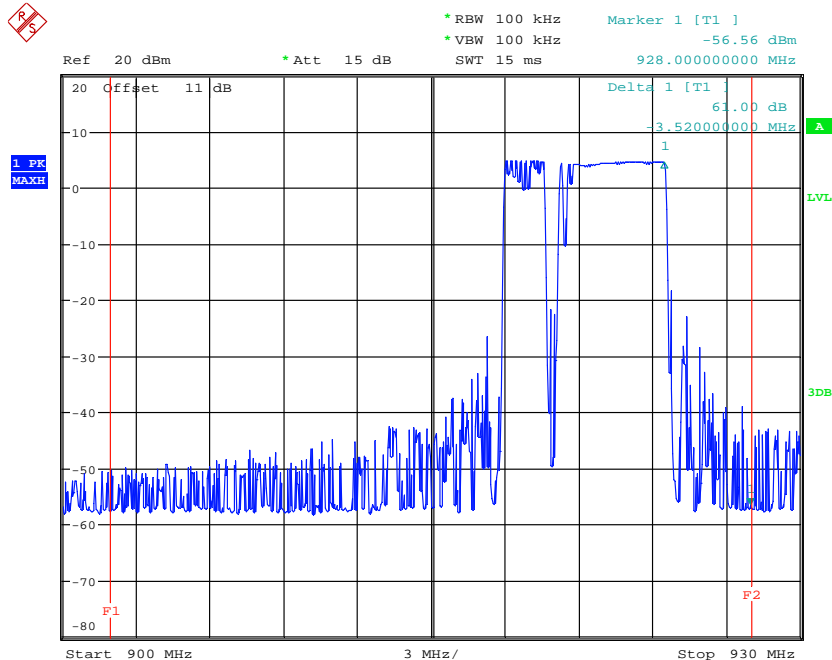


BANDEDGE 918.0375MHz HOPPING MODE
Date: 30.MAR.2022 21:22:35



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1
 FCC ID: GX9SD32F1919



BANDEDGE 924.48MHz HOPPING MODE
 Date: 30.MAR.2022 21:24:01

Limits:

Frequency Range / MHz	Limit
902 – 928	- 20 dB
2400 – 2483.5	
5725 - 5850	

Test equipment used: ETSTW-RE 055, ETSTW-RE 050, ETSTW-RE 064



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22203-21686-C-1

FCC ID: GX9SD32F1919

3.11 Radiated Emissions from Receiver Part

Summary table with radiated data of the test plots

Model: SD-32 Date: --
 Mode: -- Temperature: -- °C Engineer: --
 Polarization: Horizontal Humidity: -- %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.					
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV/m)		Limit (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.					
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

- Note**
1. Correction Factor = Antenna factor + Cable loss - Pre-amplifier
 2. The formula of measured value as: Test Result = Reading + Correction Factor
 3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
 4. All not in the table noted test results are more than 20 dB below the relevant limits.
 5. The test results are listed in the separated test report no.: W6M22203-21686-P-15B.



Registration number: W6M22203-21686-C-1
 FCC ID: GX9SD32F1919

3.12 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.

Model: SD-32 Date: --
 Mode: -- Temperature: -- °C Engineer: --
 Polarization: N Humidity: -- %

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Polarization: L1

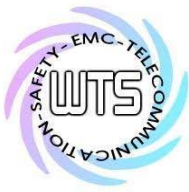
Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result (dBuV)		Limit (dBuV)		Margin (dB)
	QP	Ave.		QP	Ave.	QP	Ave.	
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Limits:

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

- Note:**
1. The formula of measured value as: Test Result = Reading + Correction Factor
 2. The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss
 3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
 4. All not in the table noted test results are more than 20 dB below the relevant limits.
 5. The test is not required because the EUT was powered by battery.

Test equipment used: ETSTW-CE 001, ETSTW-CE 016, ETSTW-RE 045.



Registration number: W6M22203-21686-C-1
FCC ID: GX9SD32F1919

Appendix

Measurement diagrams

Spurious Emissions radiated



Radiated Emission Measurement

Operator: Allen

File :1

Data :#1

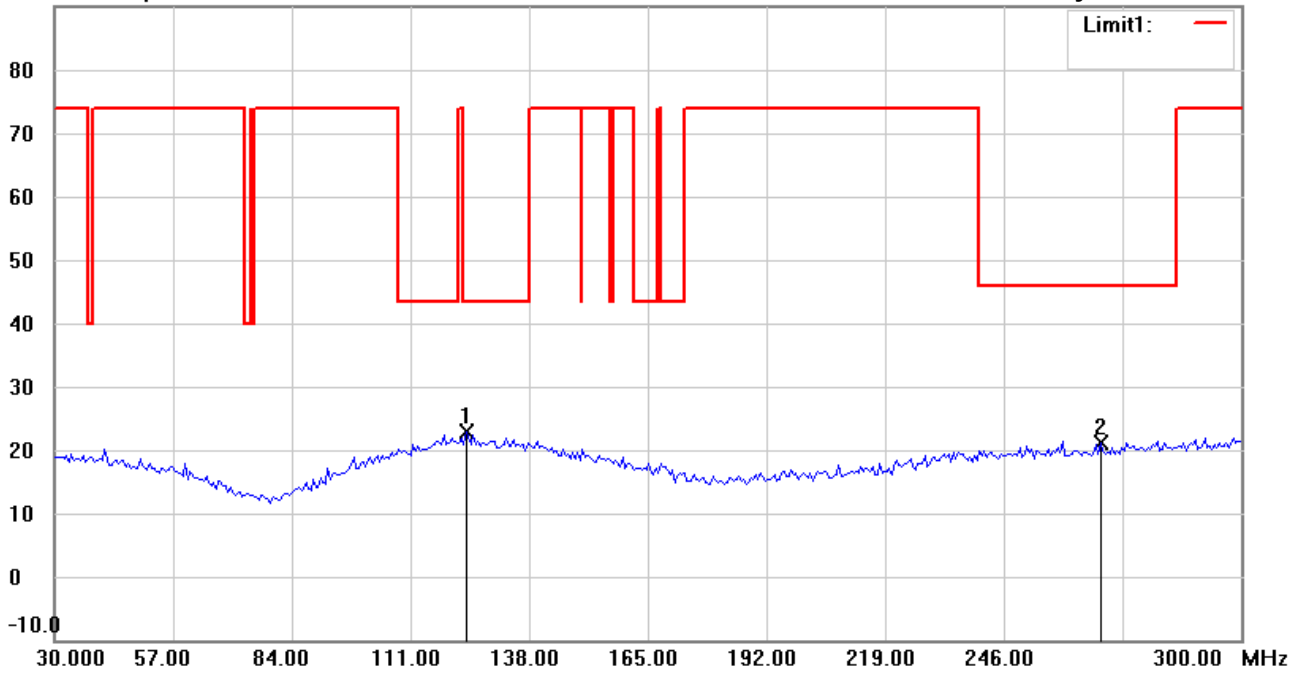
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:05:35 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 30-300

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	123.6072	29.06	peak	-6.15	22.91	43.50	100	75	-20.59	
	268.0762	27.50	peak	-6.39	21.11	46.00	132	220	-24.89	



Radiated Emission Measurement

Operator: Allen

File :1

Data :#2

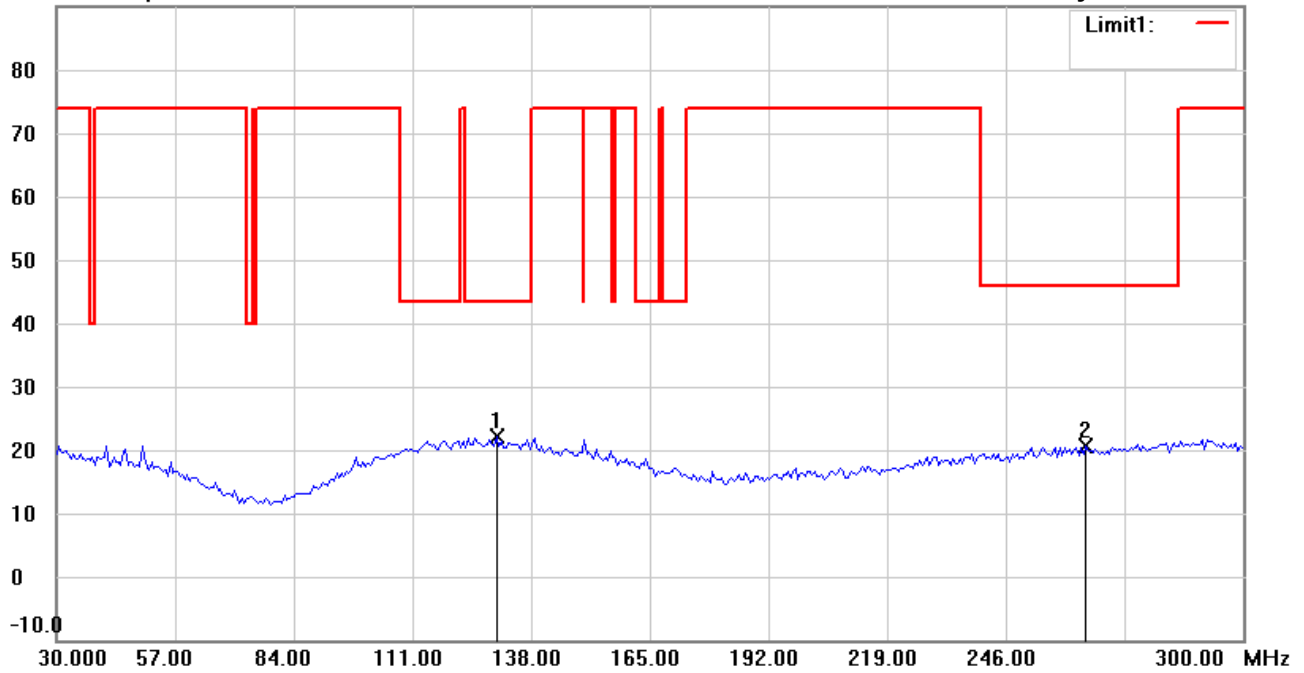
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:07:41 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 30-300

EUT : W6M22203-21686

M/N:

Test Mode : TX 918.0375MHz

Note :

Polarization: **Vertical**

Power : 3 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	130.1002	28.14	peak	-5.98	22.16	43.50	110	217	-21.34	
	264.2886	27.03	peak	-6.51	20.52	46.00	134	165	-25.48	



Radiated Emission Measurement

Operator: Allen

File :2

Data :#1

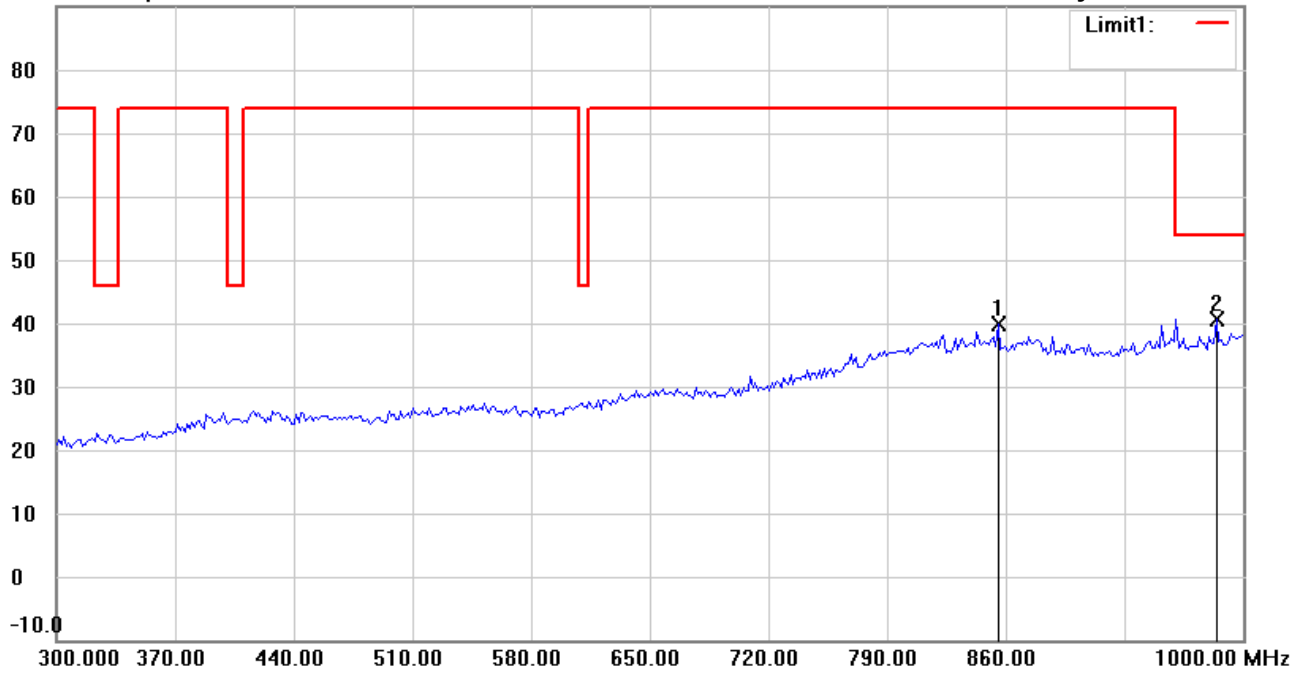
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:10:54 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 300-1000

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	855.5110	36.04	peak	3.78	39.82	74.00	145	197	-34.18	
*	984.5691	34.17	peak	6.56	40.73	54.00	100	50	-13.27	



Radiated Emission Measurement

Operator: Allen

File :2

Data :#2

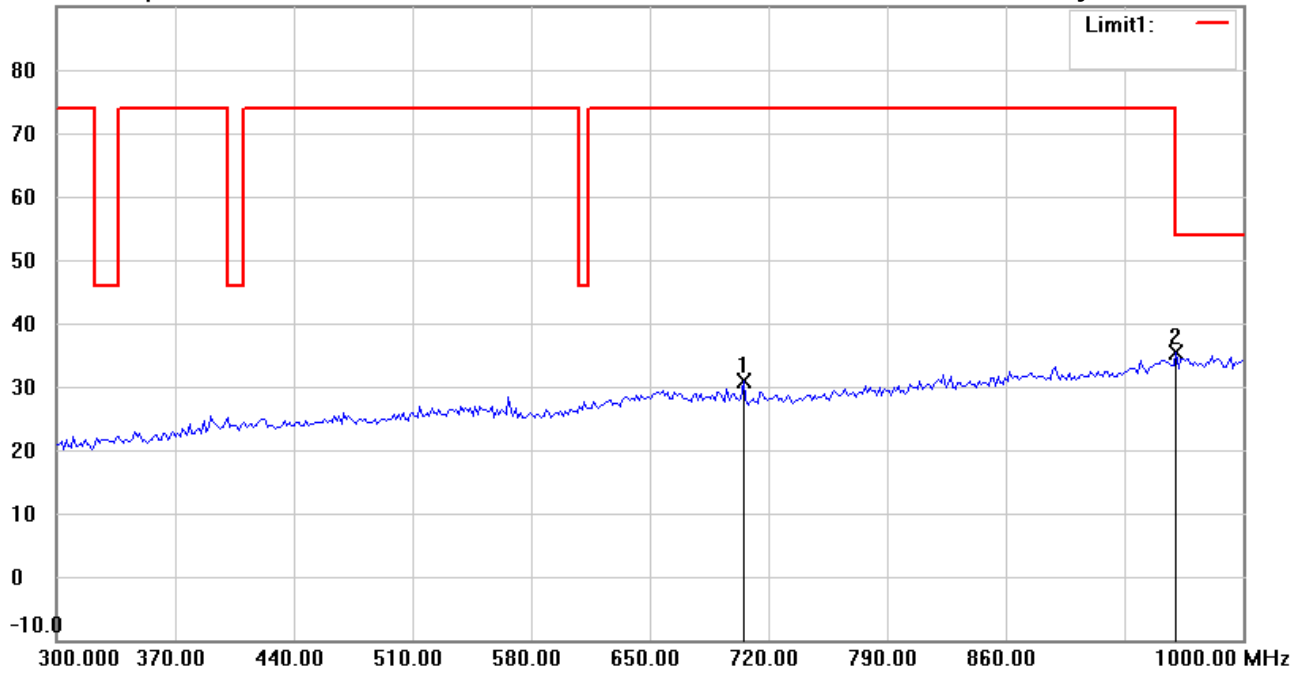
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:12:48 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 300-1000

Polarization: **Vertical**

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	705.4108	29.96	peak	0.87	30.83	74.00	116	40	-43.17	
*	960.7214	29.34	peak	6.06	35.40	54.00	132	215	-18.60	



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#1

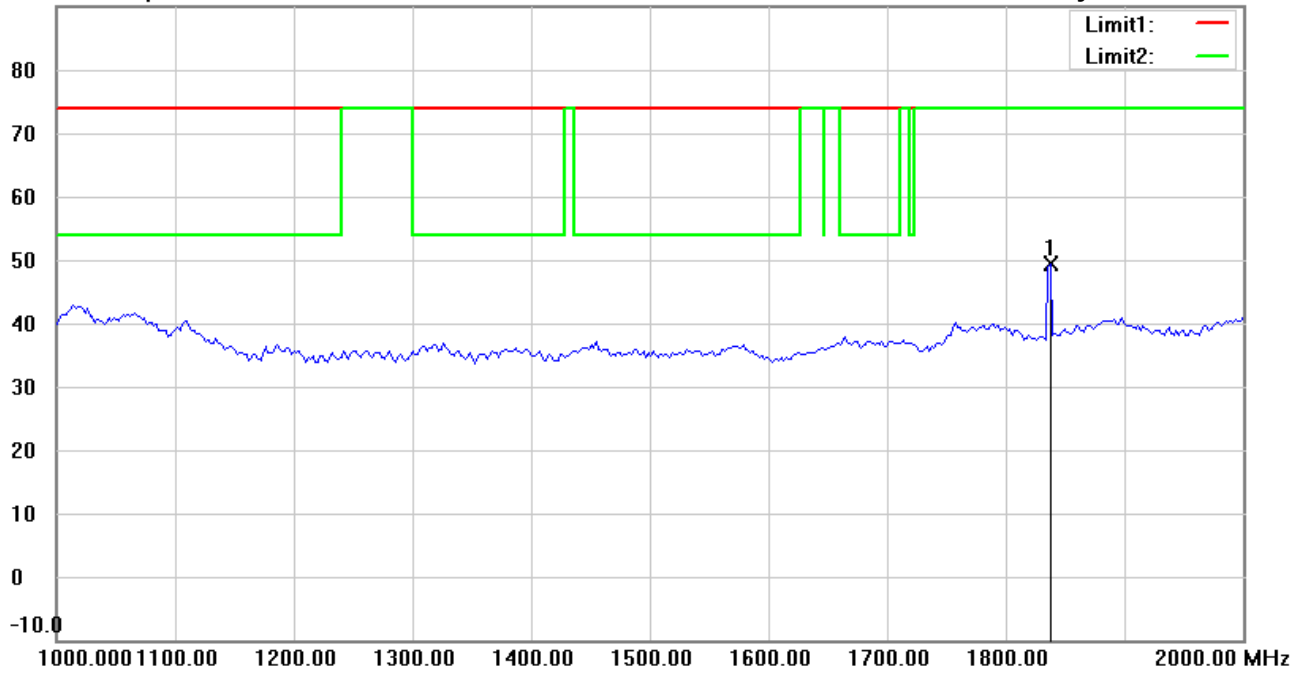
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 4:52:25 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	1836.675	52.32	peak	-3.06	49.26	74.00	150	270	-24.74	

*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Allen

File :3

Data :#5

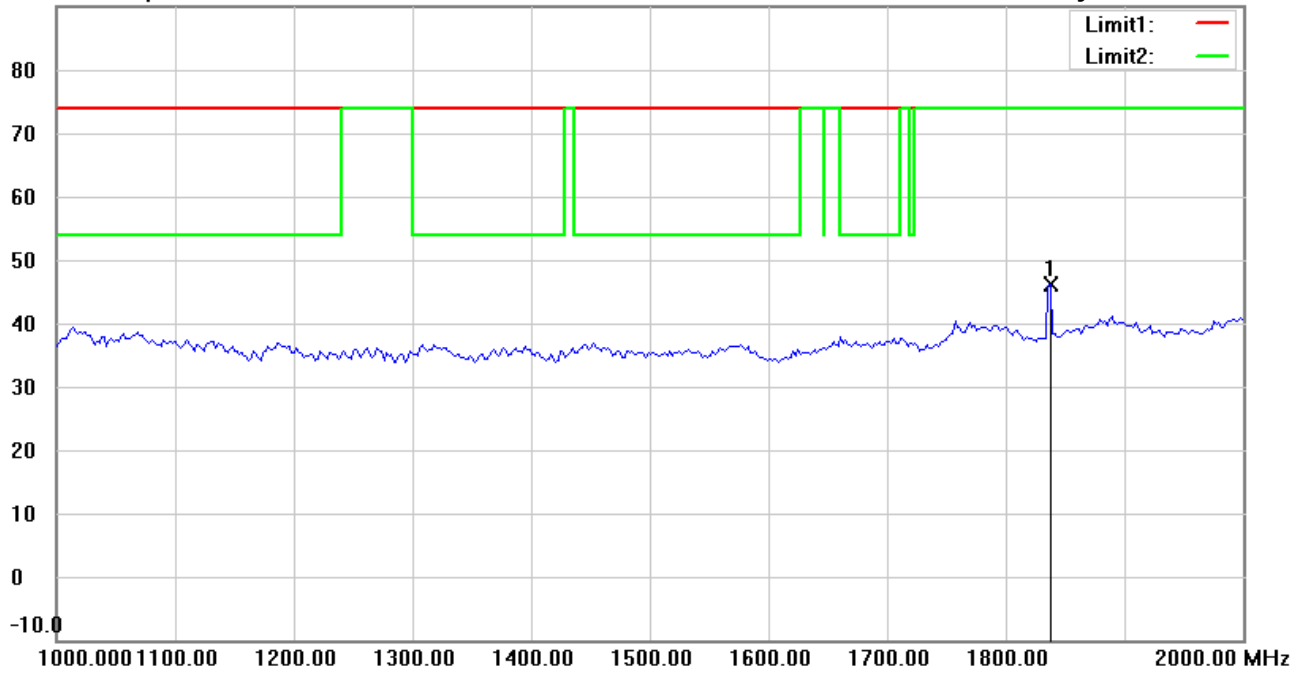
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 4:57:17 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	1836.675	49.27	peak	-3.06	46.21	74.00	150	315	-27.79	



Radiated Emission Measurement

Operator: Allen

File :3

Data :#2

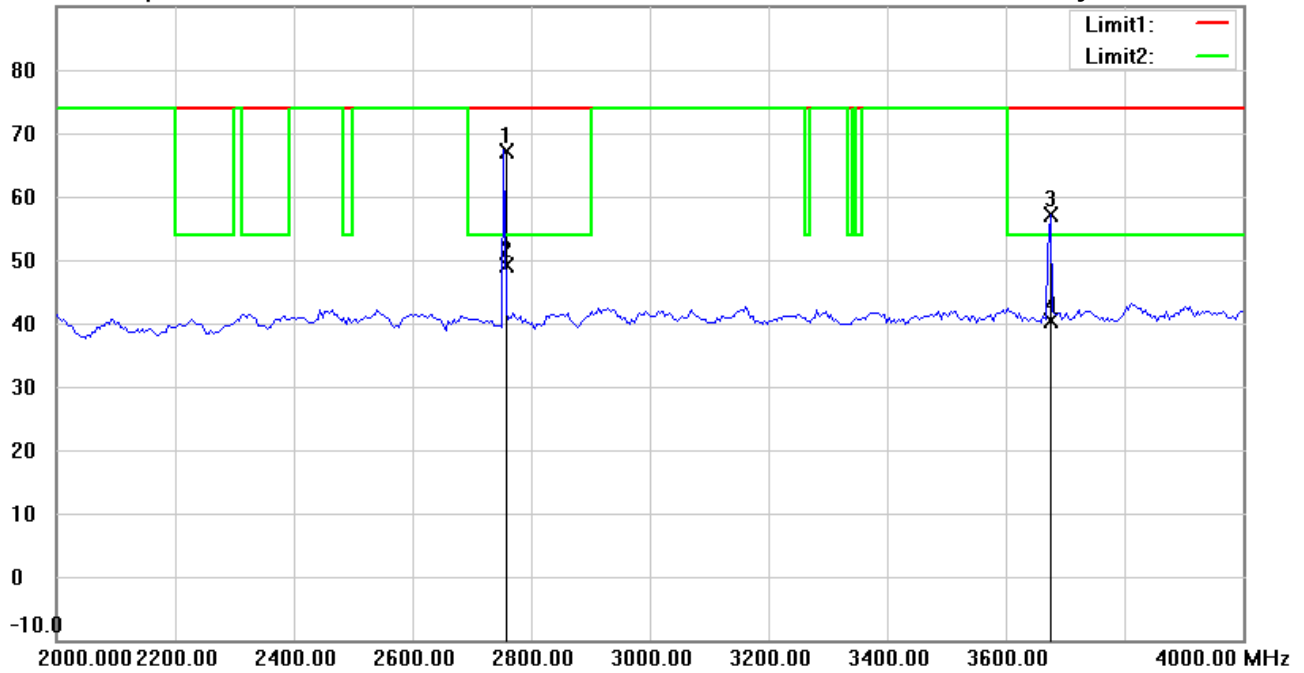
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 4:53:27 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2754.163	67.93	peak	-0.91	67.02	74.00	150	180	-6.98	
*	2754.163	50.09	AVG	-0.91	49.18	54.00	150	180	-4.82	
	3672.059	56.13	peak	0.98	57.11	74.00	150	150	-16.89	
	3672.059	39.29	AVG	0.98	40.27	54.00	150	150	-13.73	



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#6

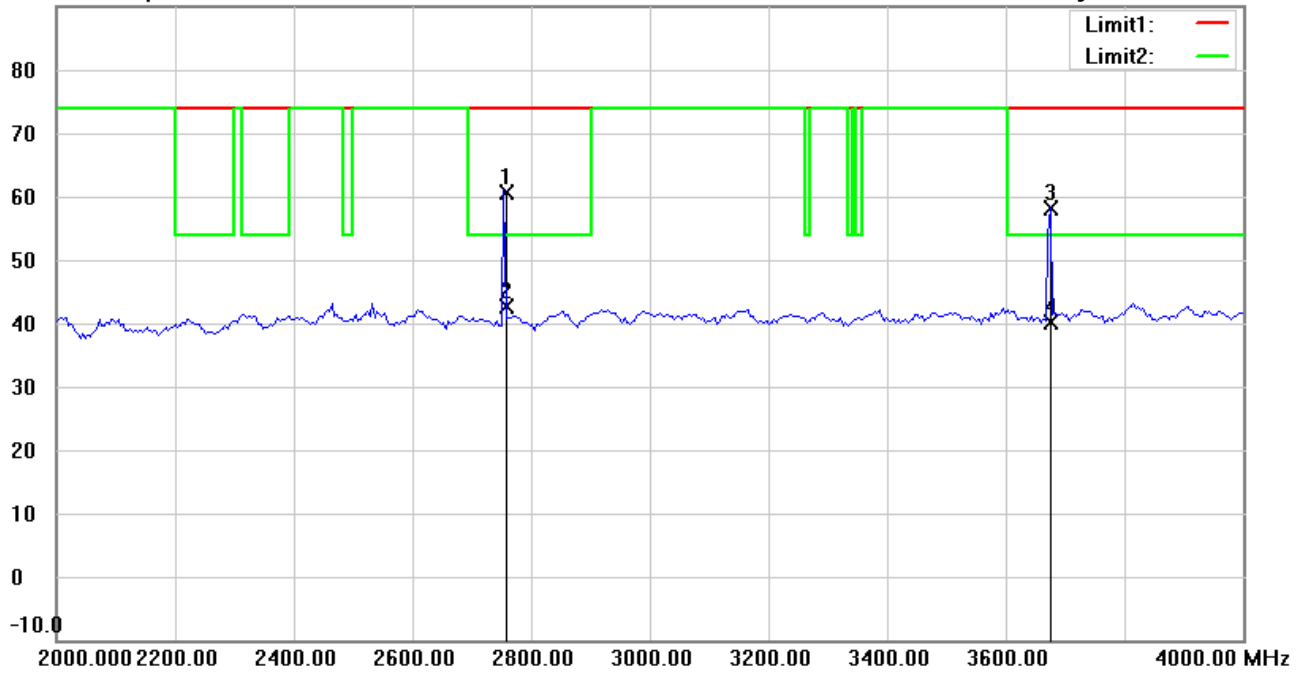
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 4:58:18 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2754.163	61.42	peak	-0.91	60.51	74.00	190	120	-13.49	
*	2754.163	43.58	AVG	-0.91	42.67	54.00	190	120	-11.33	
	3672.200	57.05	peak	0.98	58.03	74.00	150	320	-15.97	
	3672.200	39.21	AVG	0.98	40.19	54.00	150	320	-13.81	

*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Allen

File :3

Data :#3

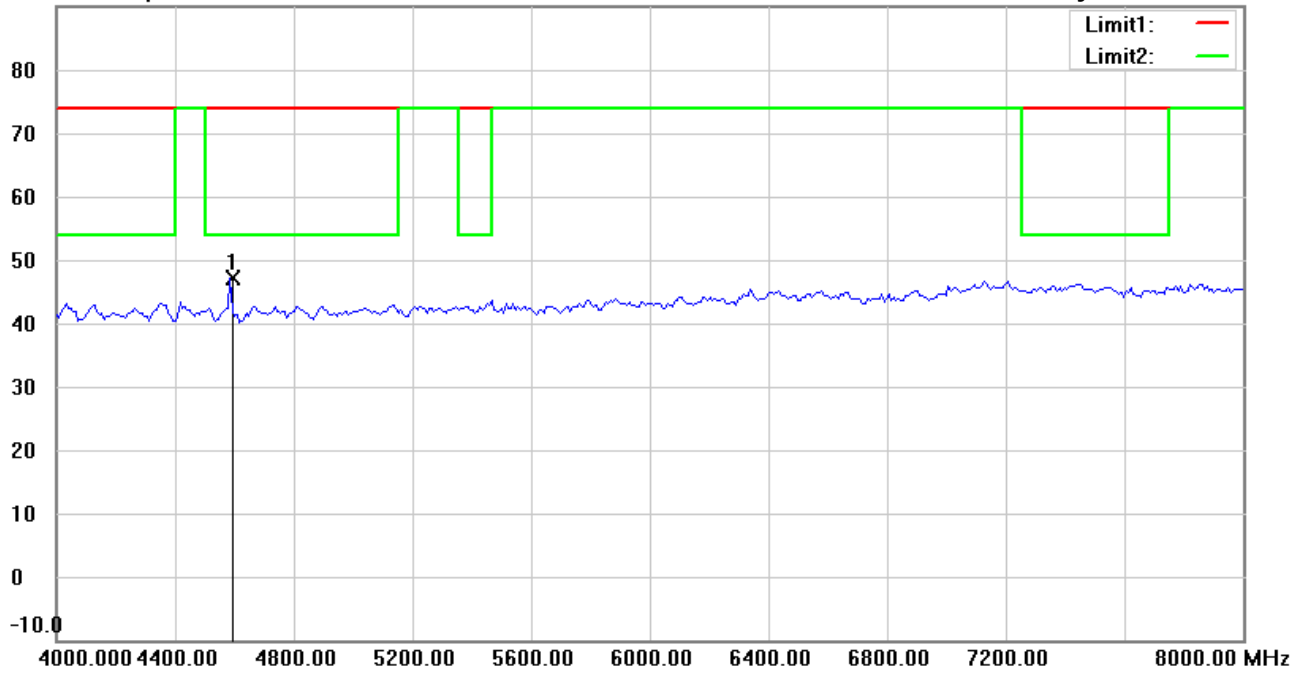
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 4:54:29 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4590.170	45.90	peak	1.22	47.12	74.00	150	74	-26.88	



Radiated Emission Measurement

Operator: Allen

File :3

Data :#7

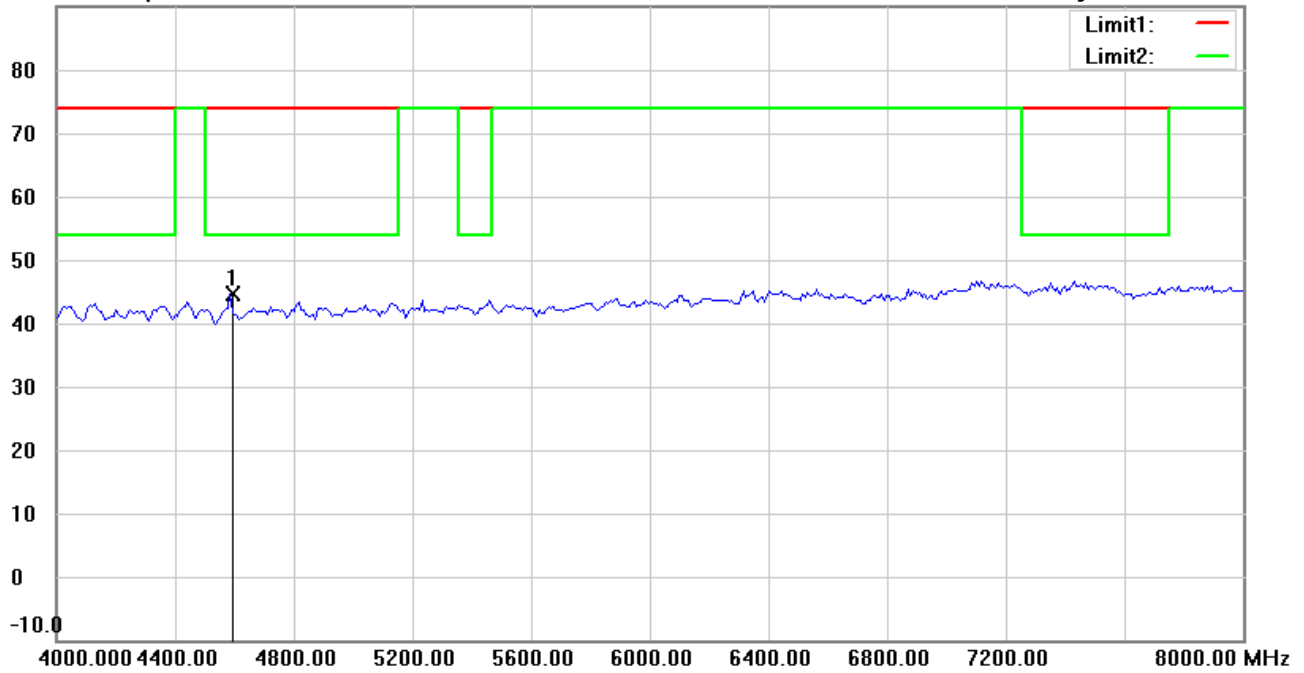
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 4:59:20 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4590.170	43.40	peak	1.22	44.62	74.00	150	86	-29.38	



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#4

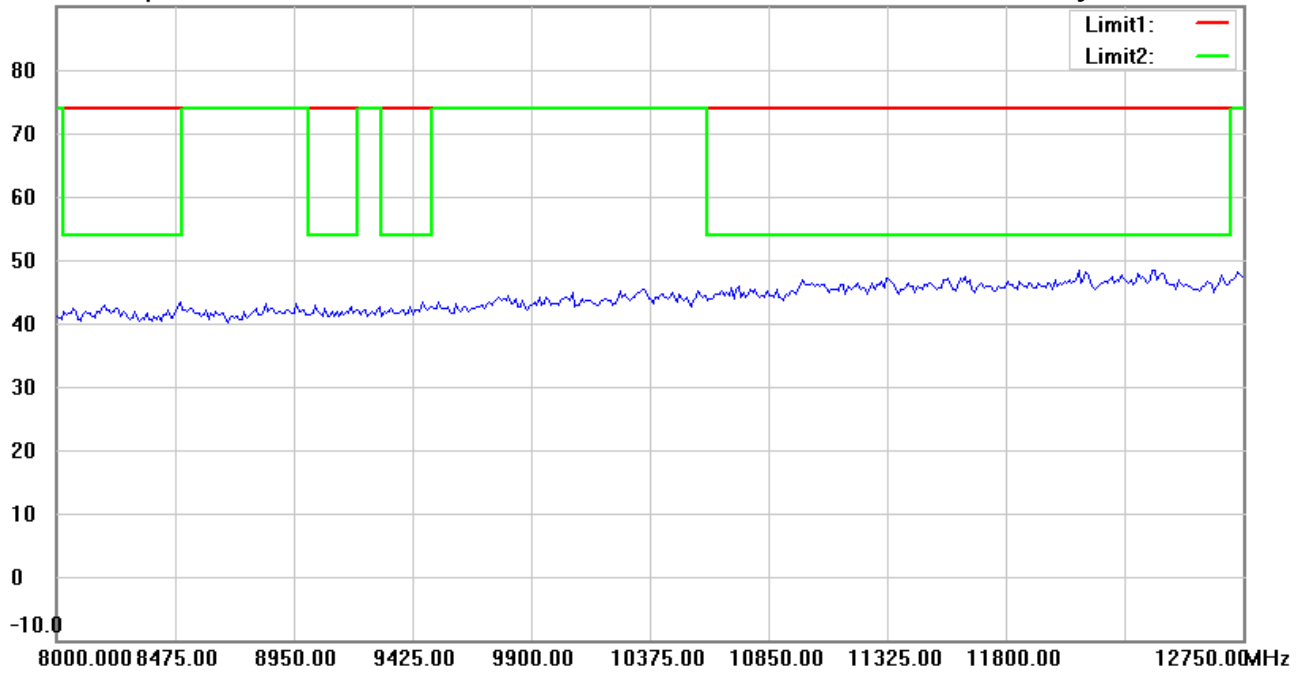
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 4:55:32 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#8

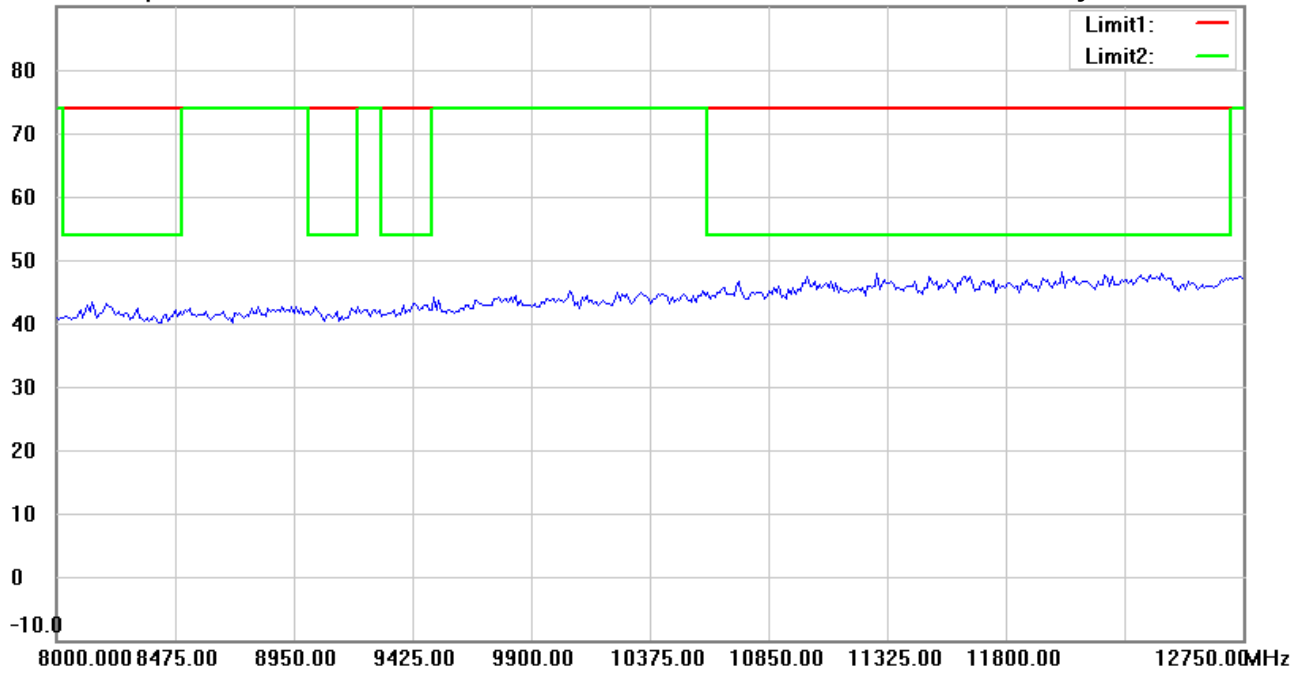
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:00:23 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 918.0375MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Allen

File :1

Data :#1

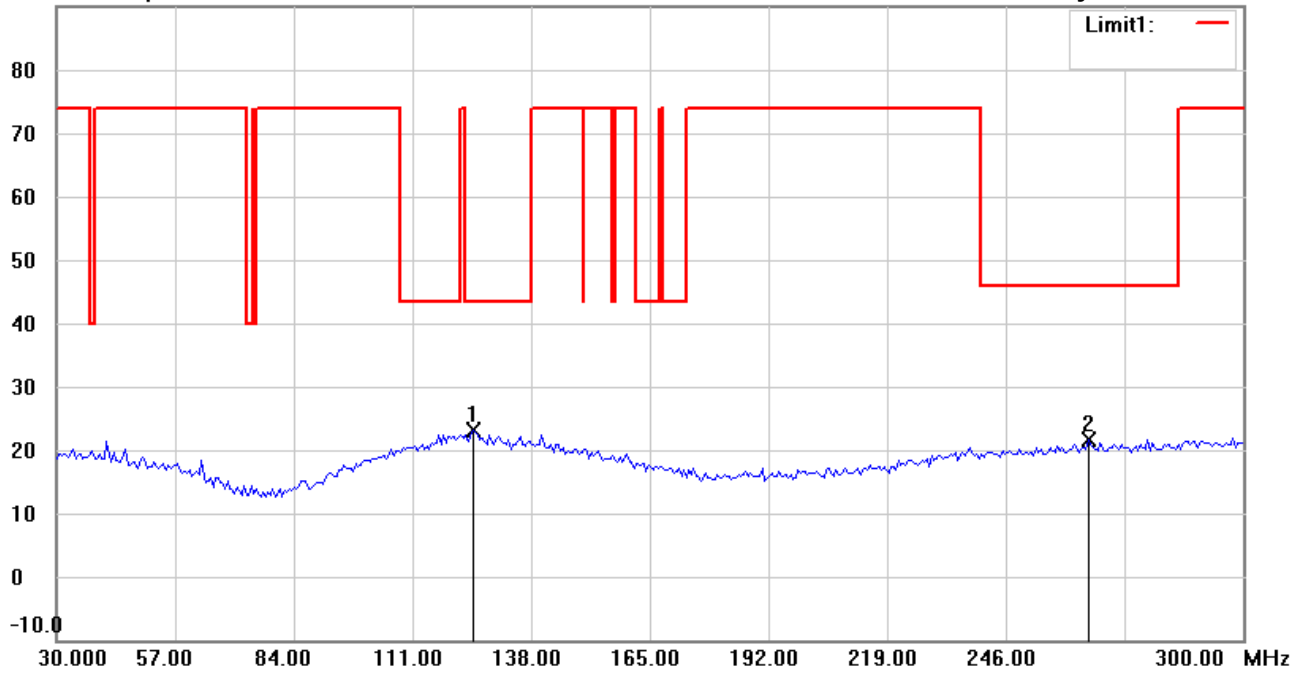
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:18:37 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 30-300

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	124.6894	29.21	peak	-6.12	23.09	43.50	115	155	-20.41	
	264.8297	28.04	peak	-6.50	21.54	46.00	134	290	-24.46	



Radiated Emission Measurement

Operator: Allen

File :1

Data :#2

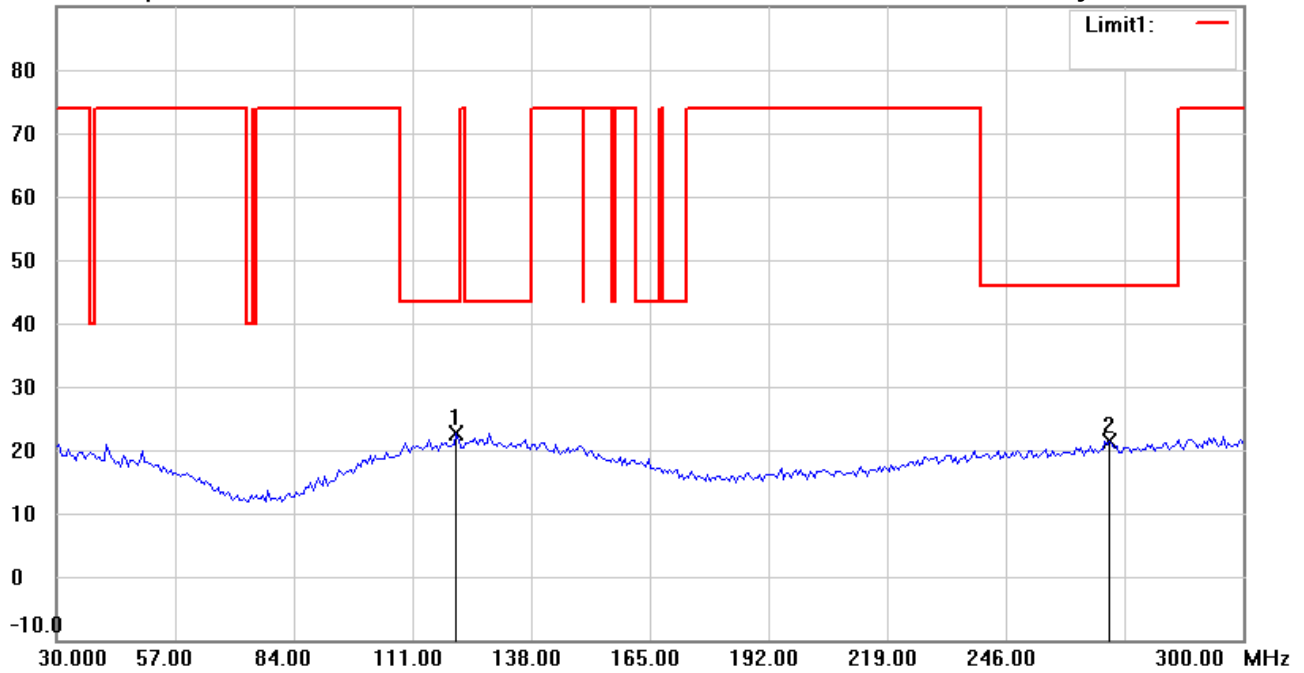
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:21:28 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 30-300

Polarization: **Vertical**

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	120.9018	28.84	peak	-6.22	22.62	43.50	100	240	-20.88	
	269.6994	27.71	peak	-6.33	21.38	46.00	116	312	-24.62	



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :2

Data :#1

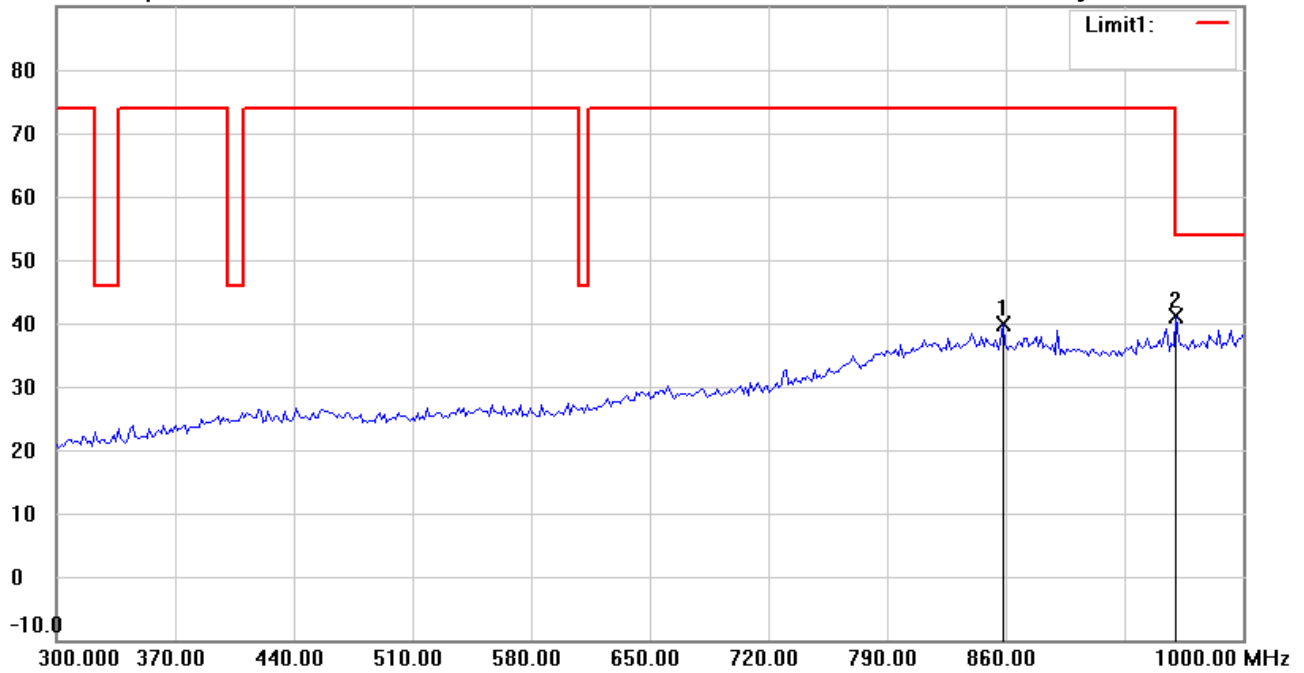
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:33:55 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 300-1000

Polarization: **Horizontal**

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	858.3166	36.09	peak	3.83	39.92	74.00	100	162	-34.08	
*	960.7214	35.17	peak	6.06	41.23	54.00	118	340	-12.77	

*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Allen

File :2

Data :#2

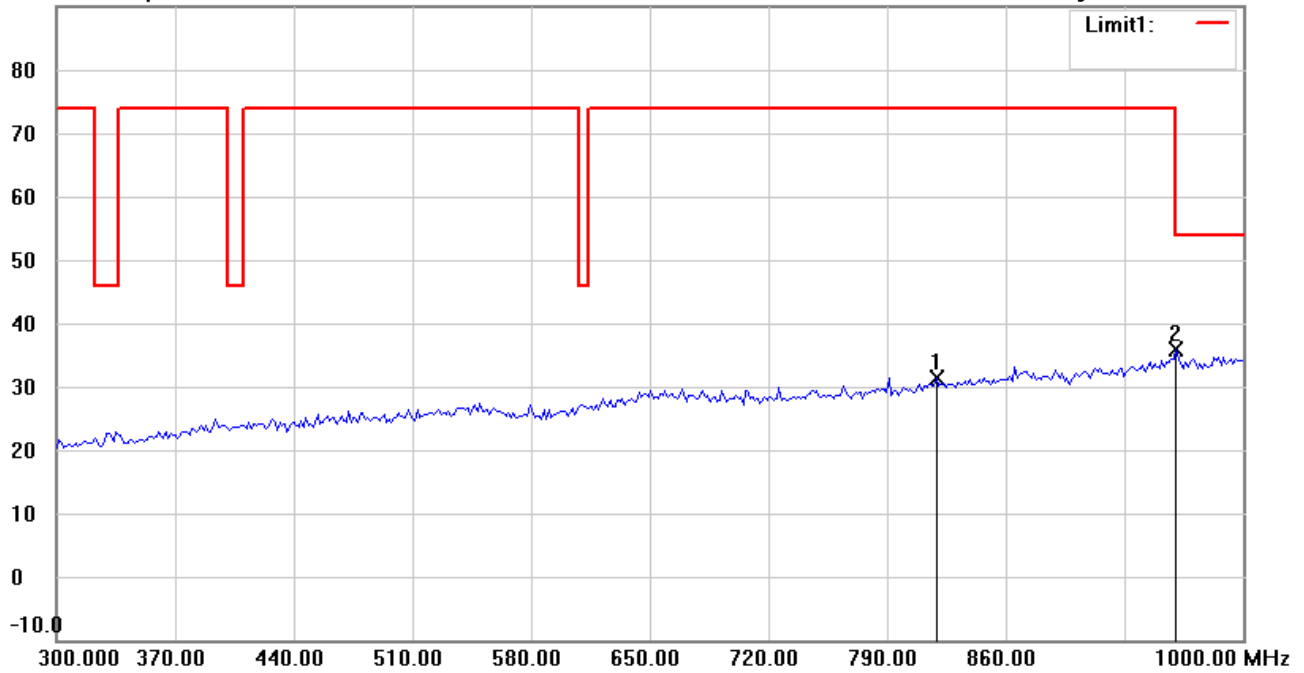
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:35:17 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 300-1000

Polarization: **Vertical**

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	819.0381	28.64	peak	2.69	31.33	74.00	120	99	-42.67	
*	960.7214	29.79	peak	6.06	35.85	54.00	145	280	-18.15	



Radiated Emission Measurement

Operator: Allen

File :3

Data :#1

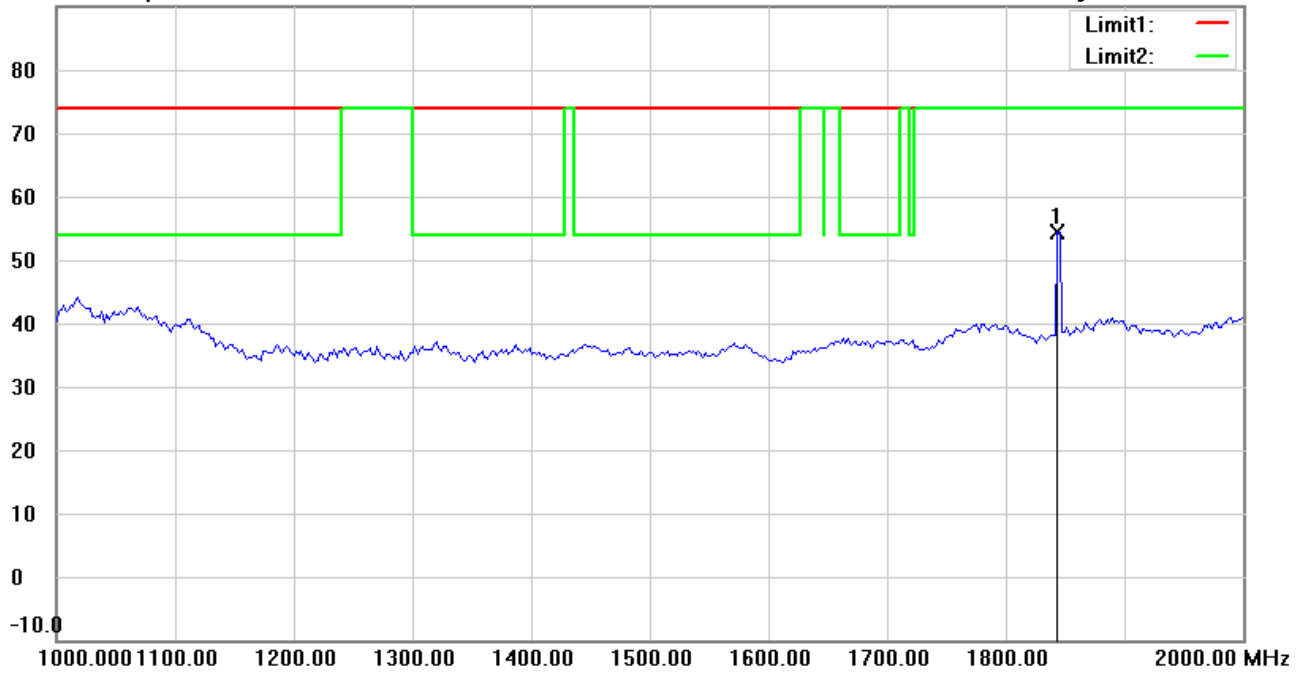
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:30:07 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	1843.687	57.30	peak	-3.02	54.28	74.00	150	230	-19.72	



Radiated Emission Measurement

Operator: Allen

File :3

Data :#5

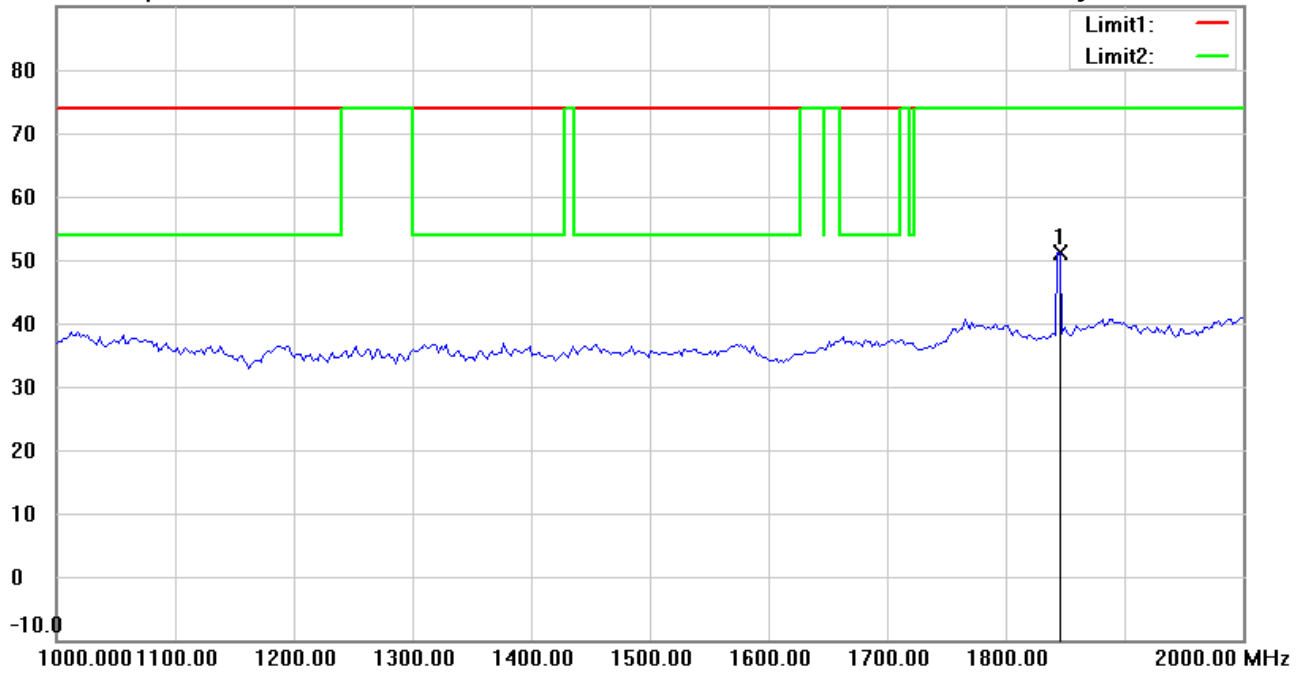
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:35:05 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	1843.691	54.22	peak	-3.02	51.20	74.00	150	192	-22.80	



Radiated Emission Measurement

Operator: Allen

File :3

Data :#2

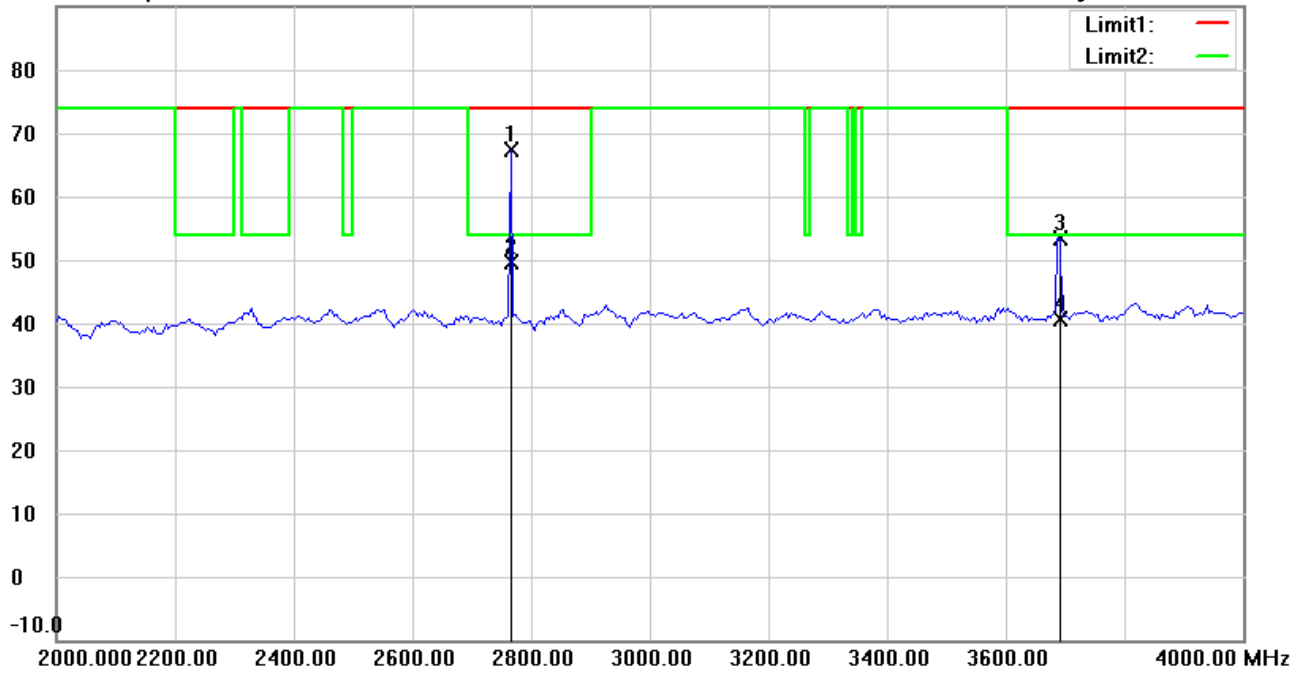
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:31:08 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2765.531	68.33	peak	-0.90	67.43	74.00	150	275	-6.57	
*	2765.531	50.49	AVG	-0.90	49.59	54.00	150	275	-4.41	
	3687.375	52.37	peak	0.98	53.35	74.00	150	30	-20.65	
	3687.375	39.68	AVG	0.98	40.66	54.00	150	30	-13.34	



Radiated Emission Measurement

Operator: Allen

File :3

Data :#6

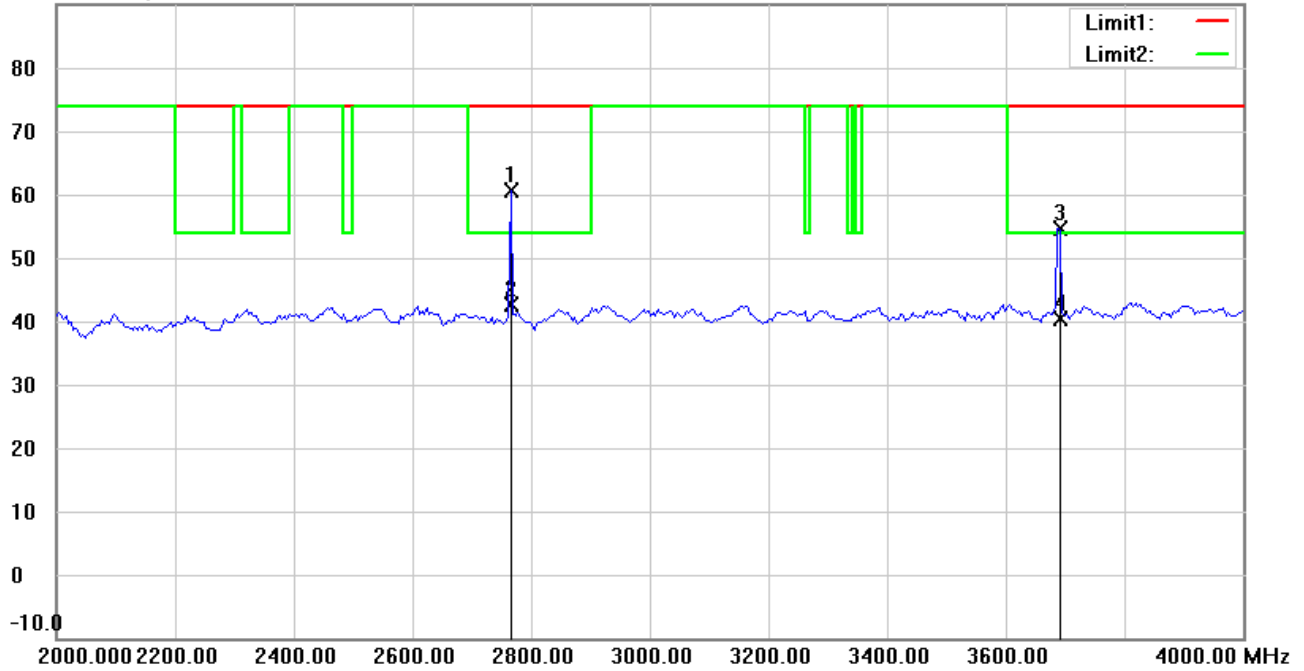
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:36:07 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2765.531	61.44	peak	-0.90	60.54	74.00	150	110	-13.46	
*	2765.531	43.60	AVG	-0.90	42.70	54.00	150	110	-11.30	
	3687.375	53.54	peak	0.98	54.52	74.00	150	245	-19.48	
	3687.375	39.38	AVG	0.98	40.36	54.00	150	245	-13.64	



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#3

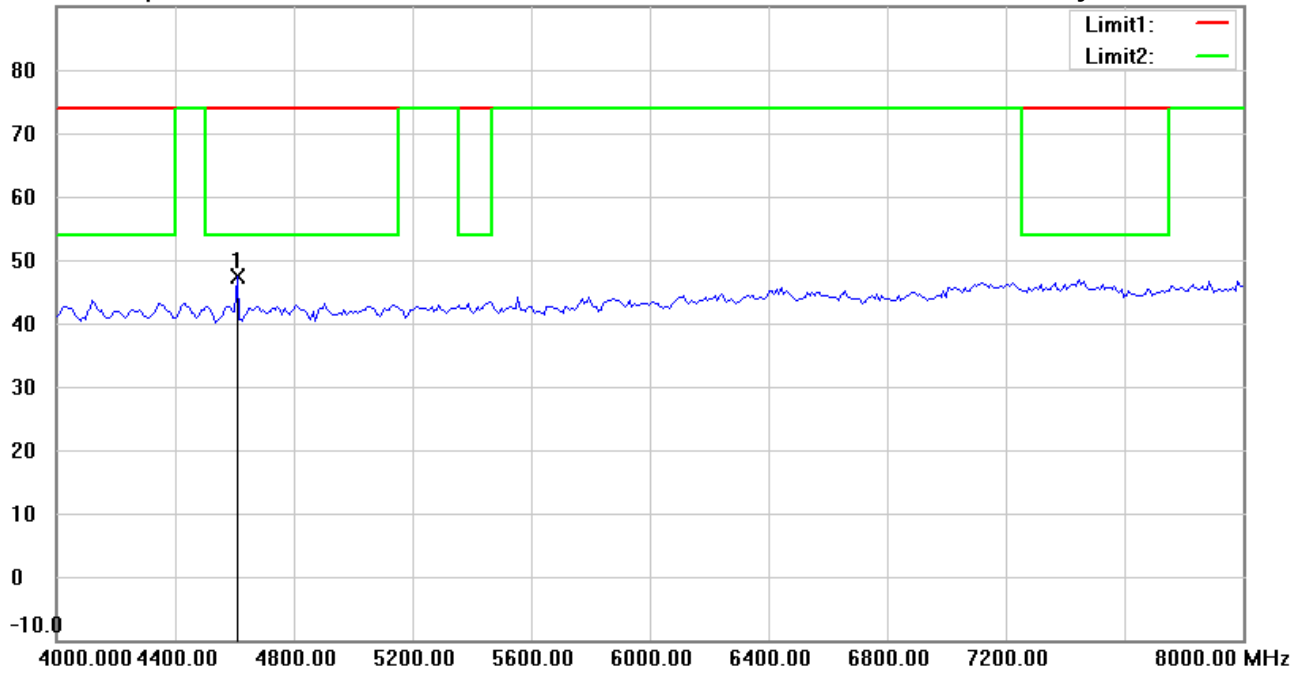
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:32:10 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4609.218	46.06	peak	1.22	47.28	74.00	150	116	-26.72	

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#7

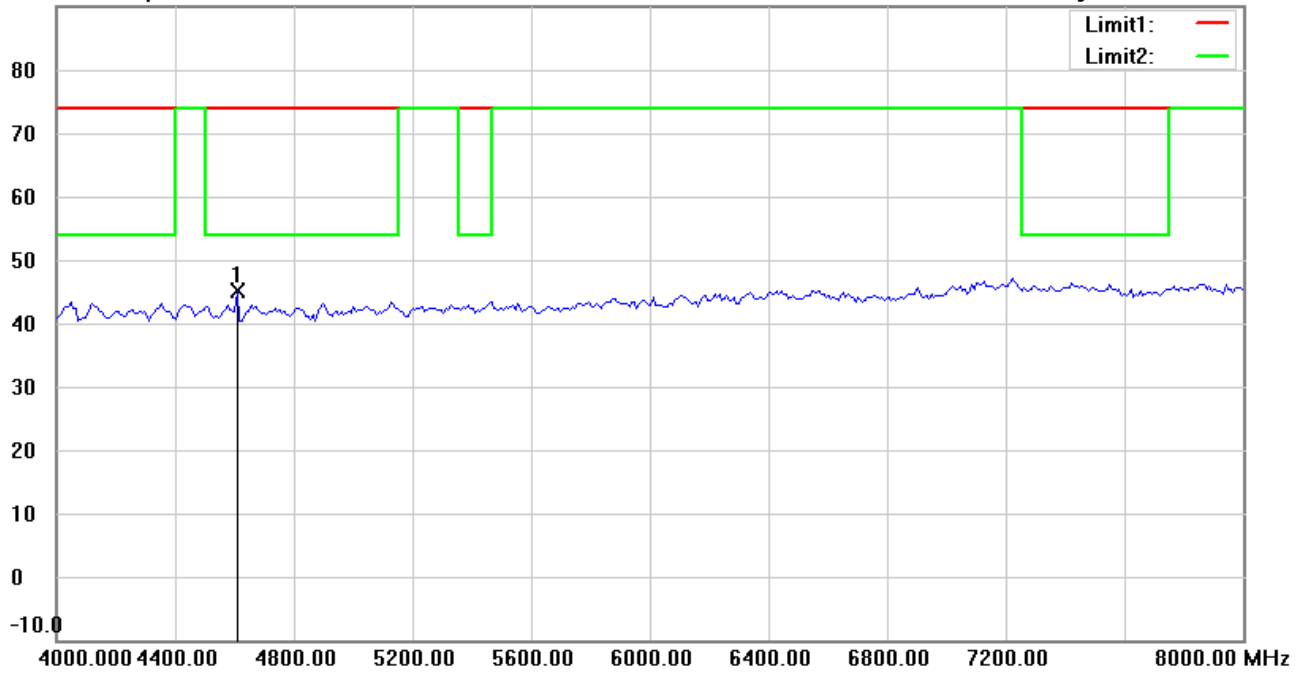
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:37:09 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4609.218	43.93	peak	1.22	45.15	74.00	150	318	-28.85	

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#4

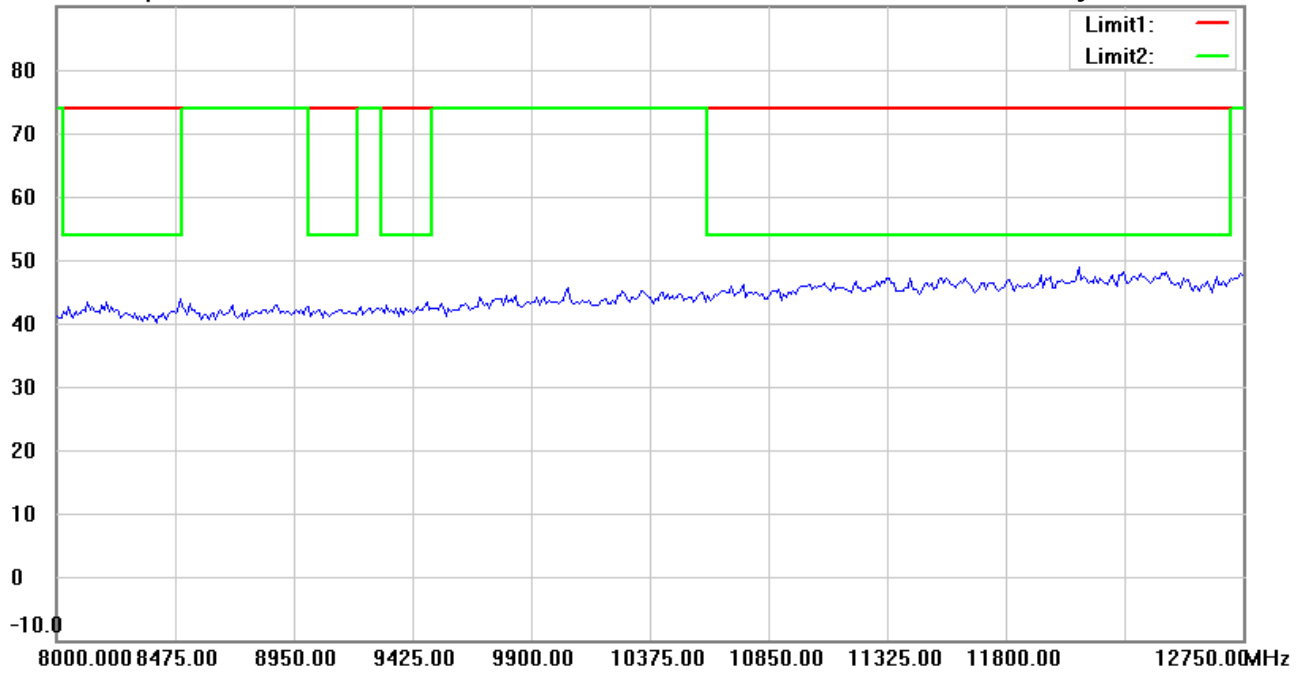
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:33:17 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#8

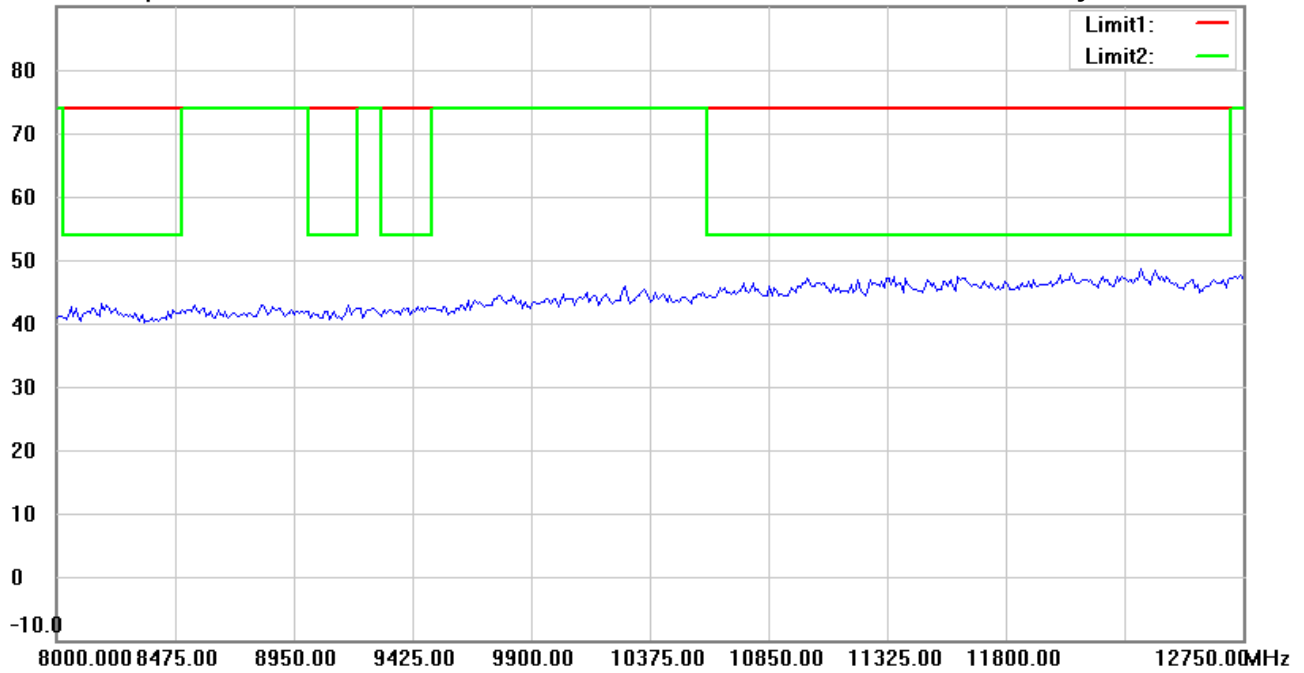
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:38:12 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 921.98MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Allen

File :1

Data :#1

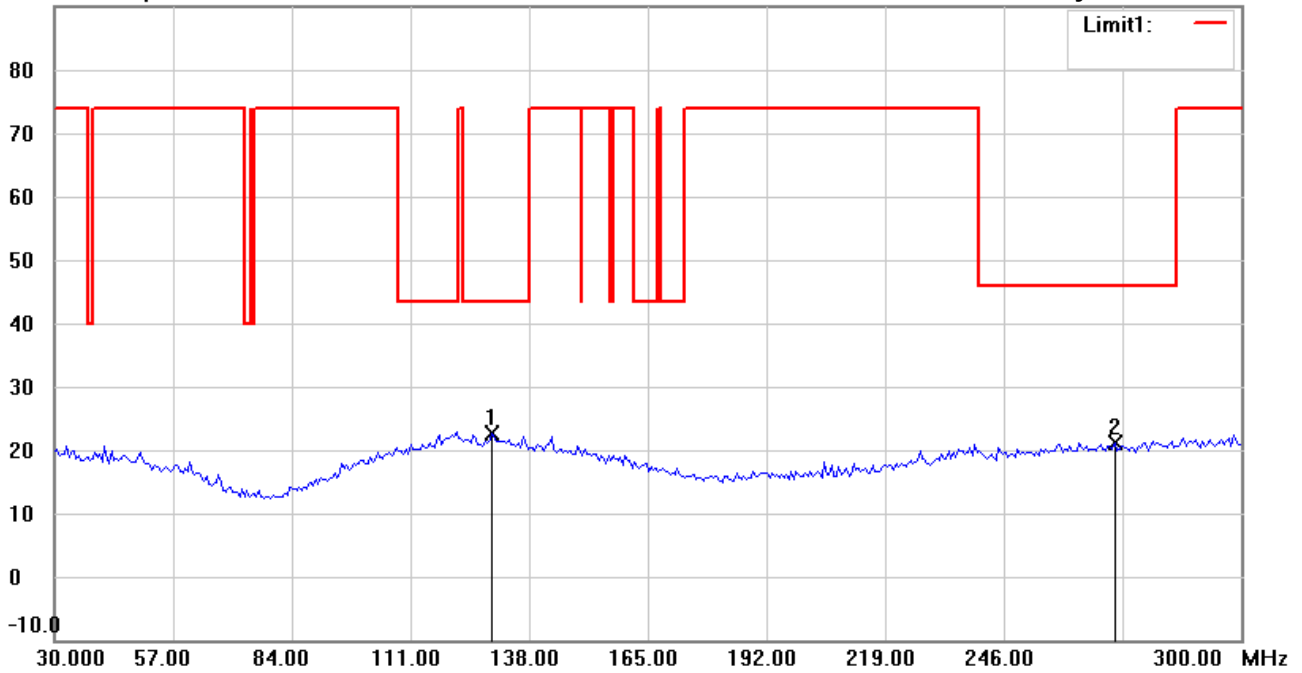
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:24:08 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 30-300

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	129.5591	28.57	peak	-5.98	22.59	43.50	124	165	-20.91	
	271.3226	27.52	peak	-6.28	21.24	46.00	107	210	-24.76	



Radiated Emission Measurement

Operator: Allen

File :1

Data :#2

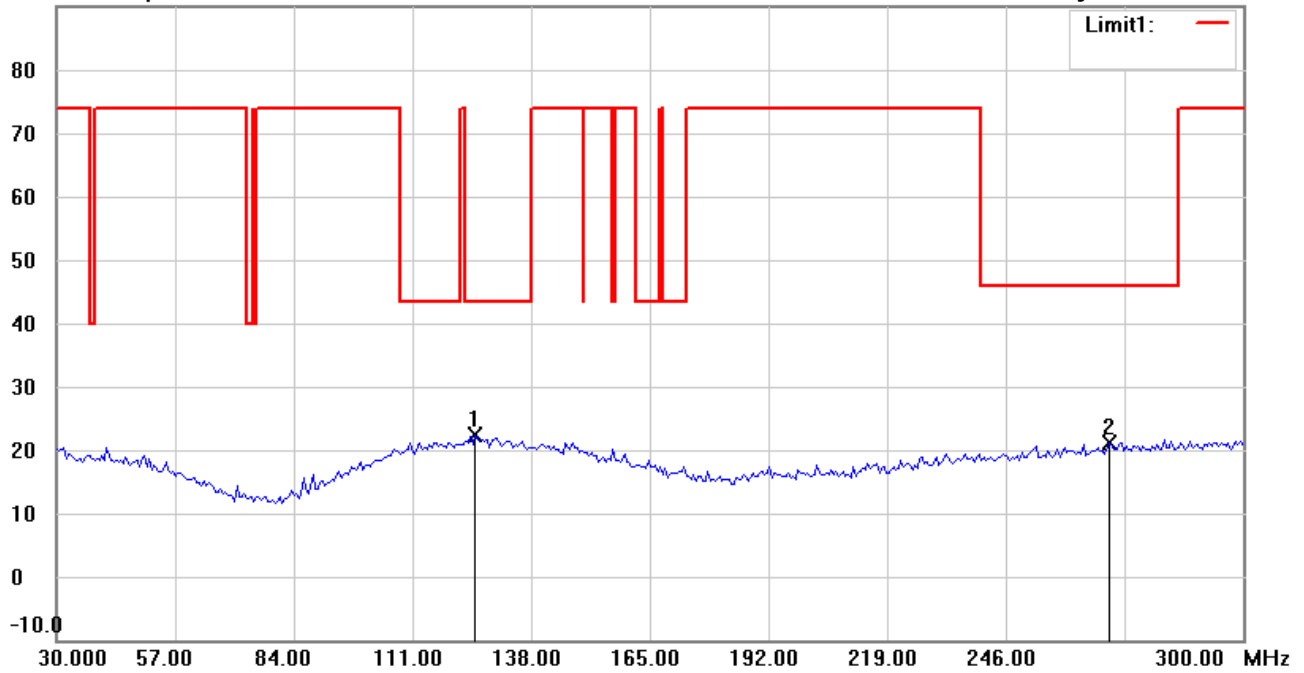
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:29:51 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 30-300

Polarization: **Vertical**

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	125.2305	28.39	peak	-6.10	22.29	43.50	112	67	-21.21	
	269.6994	27.55	peak	-6.33	21.22	46.00	100	321	-24.78	



Radiated Emission Measurement

Operator: Allen

File :2

Data :#1

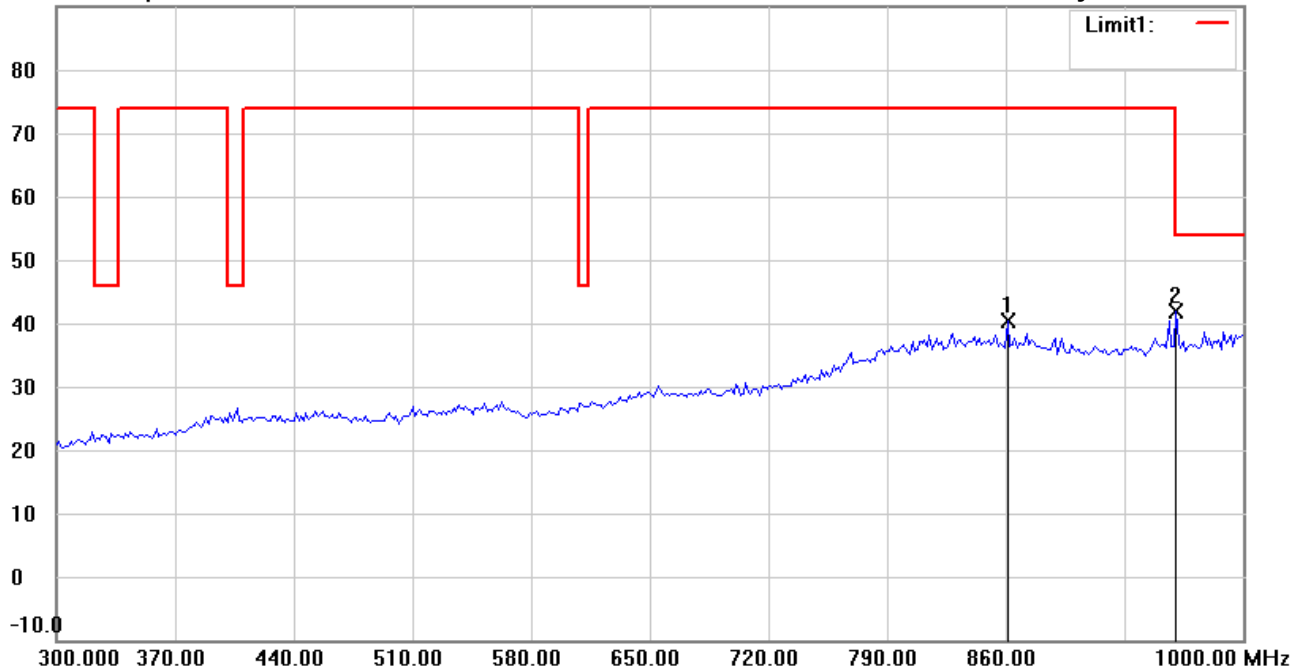
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:41:37 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 300-1000

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	861.1222	36.55	peak	3.88	40.43	74.00	100	221	-33.57	
*	960.7214	35.83	peak	6.06	41.89	54.00	133	275	-12.11	



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :2

Data :#2

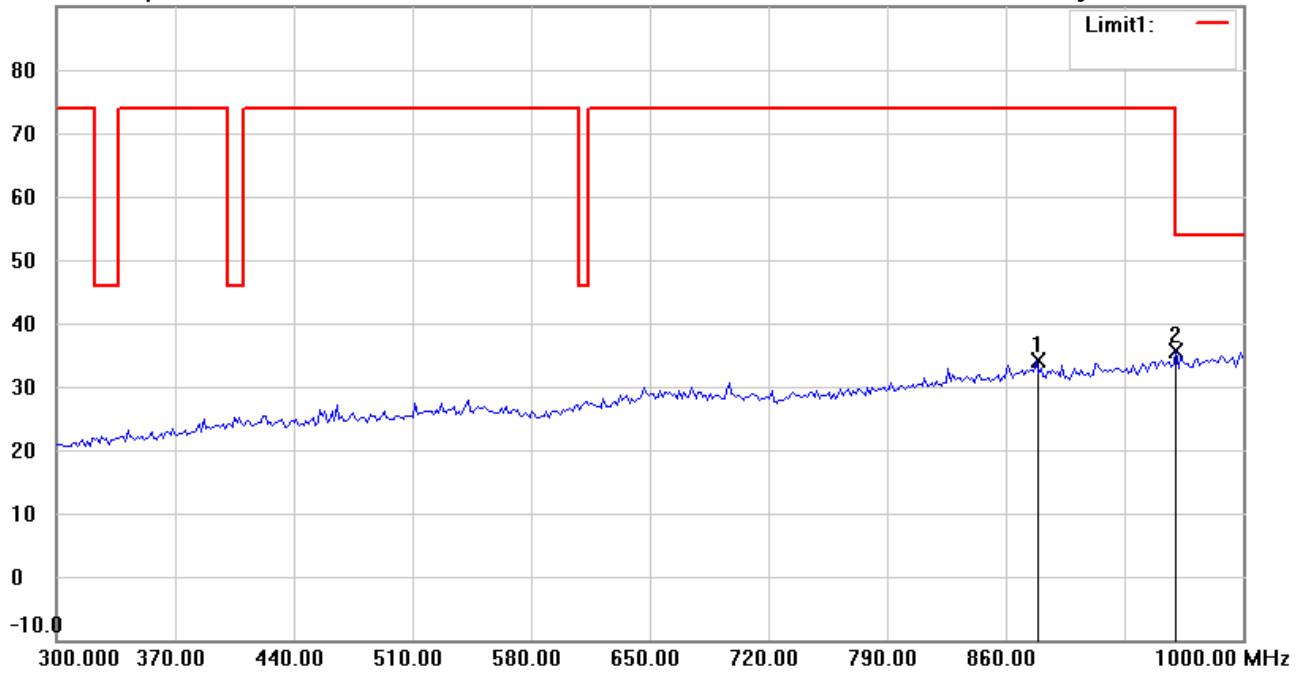
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 2:43:50 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC Restriction Band 300-1000

Polarization: **Vertical**

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	877.9560	29.85	peak	4.16	34.01	74.00	126	142	-39.99	
*	960.7214	29.47	peak	6.06	35.53	54.00	110	320	-18.47	

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#1

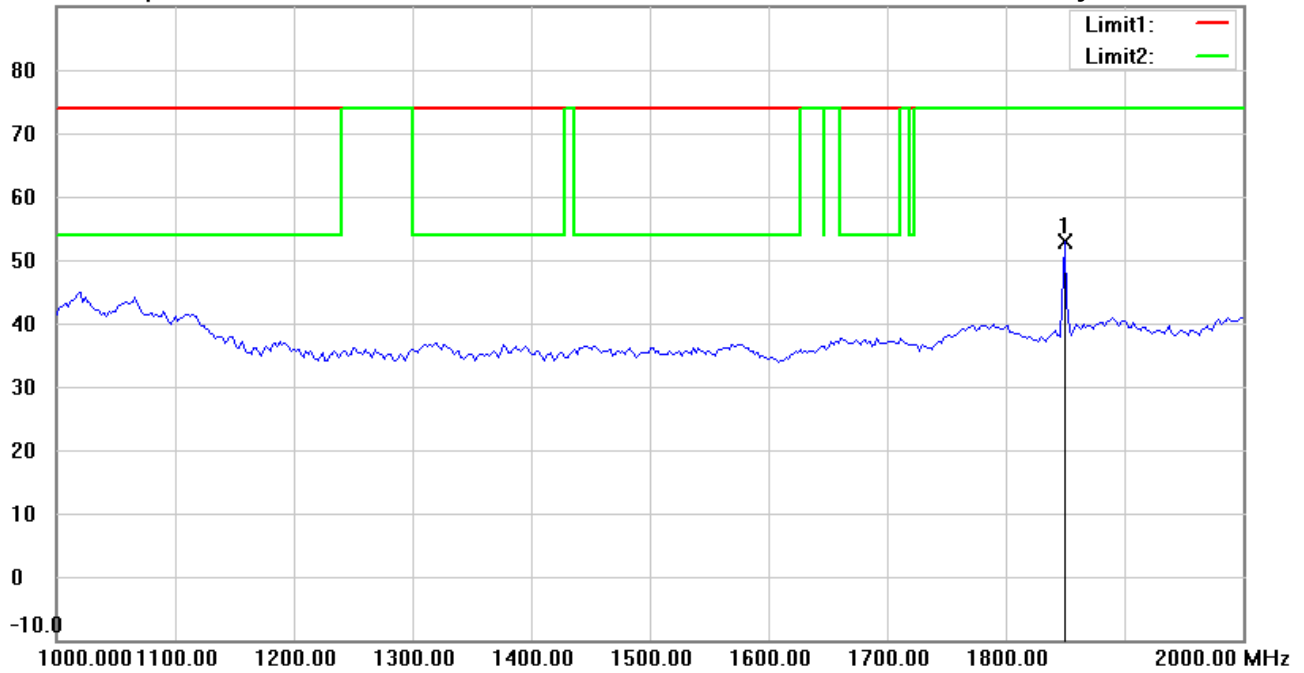
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:44:29 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	1848.699	55.98	peak	-2.99	52.99	74.00	150	104	-21.01	

*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Allen

File :3

Data :#5

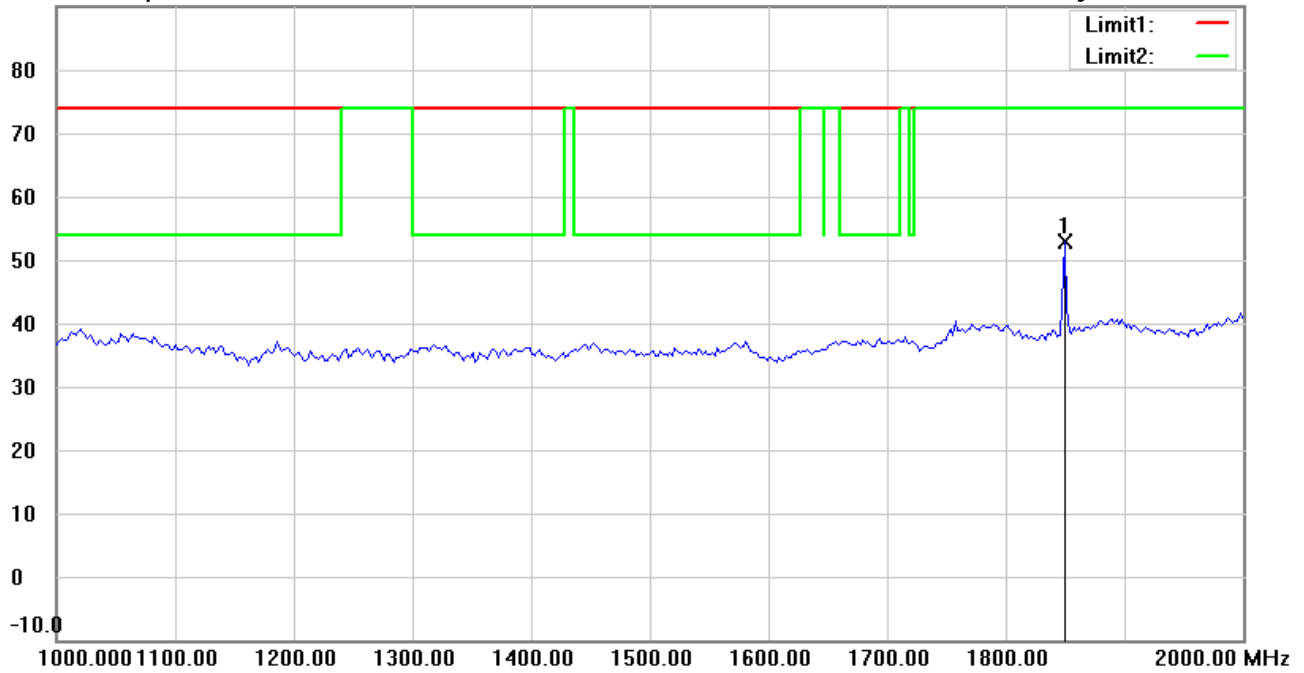
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:51:42 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	1848.699	55.85	peak	-2.99	52.86	74.00	150	214	-21.14	



Radiated Emission Measurement

Operator: Allen

File :3

Data :#2

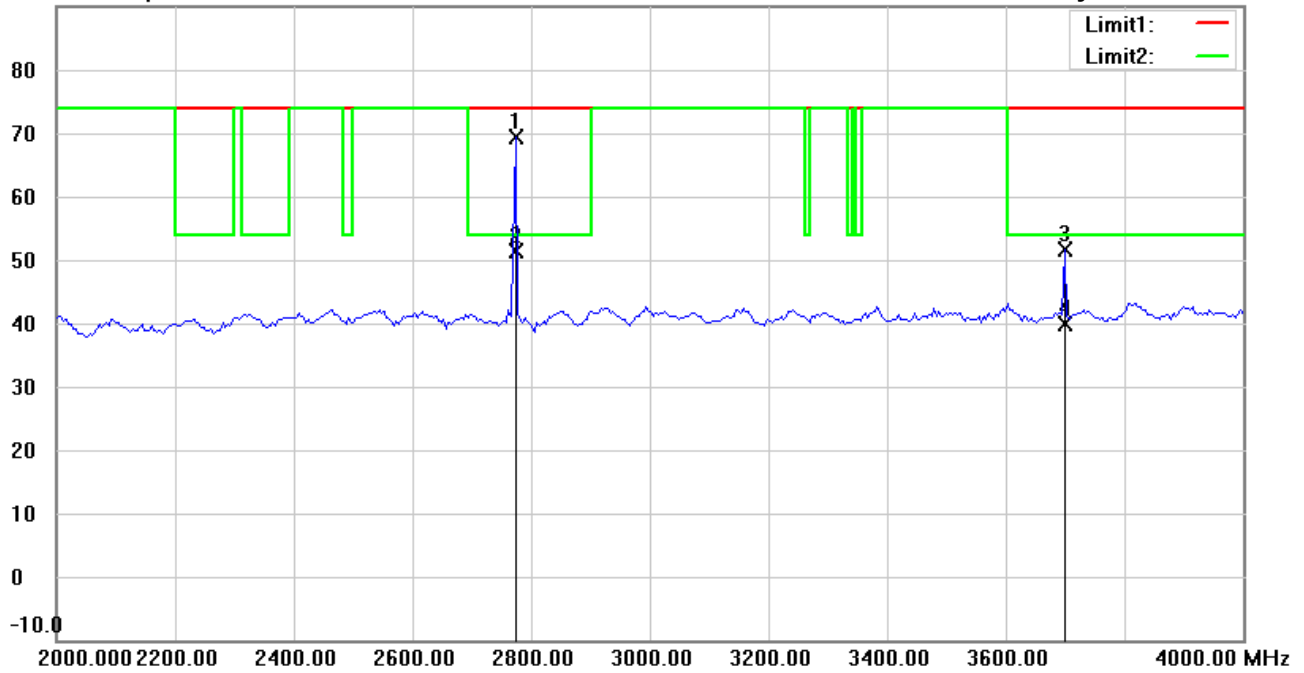
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:45:31 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2773.547	70.22	peak	-0.90	69.32	74.00	150	70	-4.68	
*	2773.547	52.38	AVG	-0.90	51.48	54.00	150	70	-2.52	
	3697.399	50.65	peak	0.99	51.64	74.00	150	136	-22.36	
	3697.399	38.81	AVG	0.99	39.80	54.00	150	136	-14.20	



Radiated Emission Measurement

Operator: Allen

File :3

Data :#6

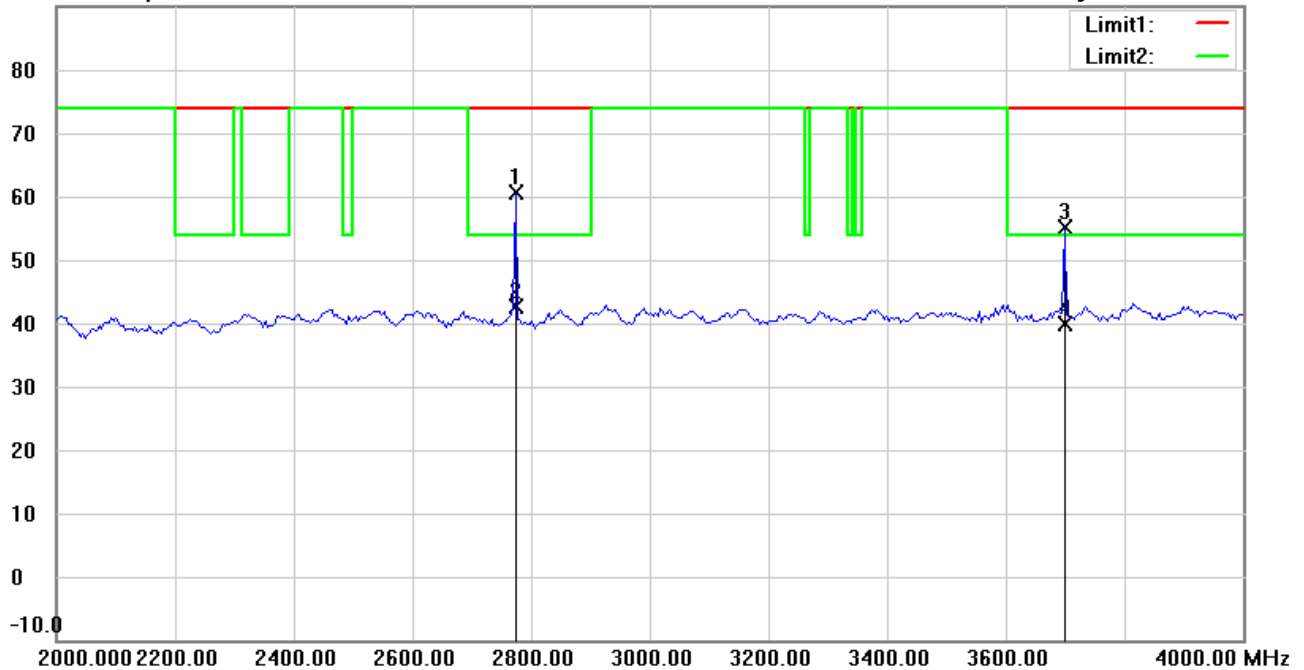
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:52:43 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: **Vertical**

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2773.547	61.46	peak	-0.90	60.56	74.00	150	220	-13.44	
*	2773.547	43.62	AVG	-0.90	42.72	54.00	150	220	-11.28	
	3697.399	54.20	peak	0.99	55.19	74.00	150	315	-18.81	
	3697.399	38.91	AVG	0.99	39.90	54.00	150	315	-14.10	



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#3

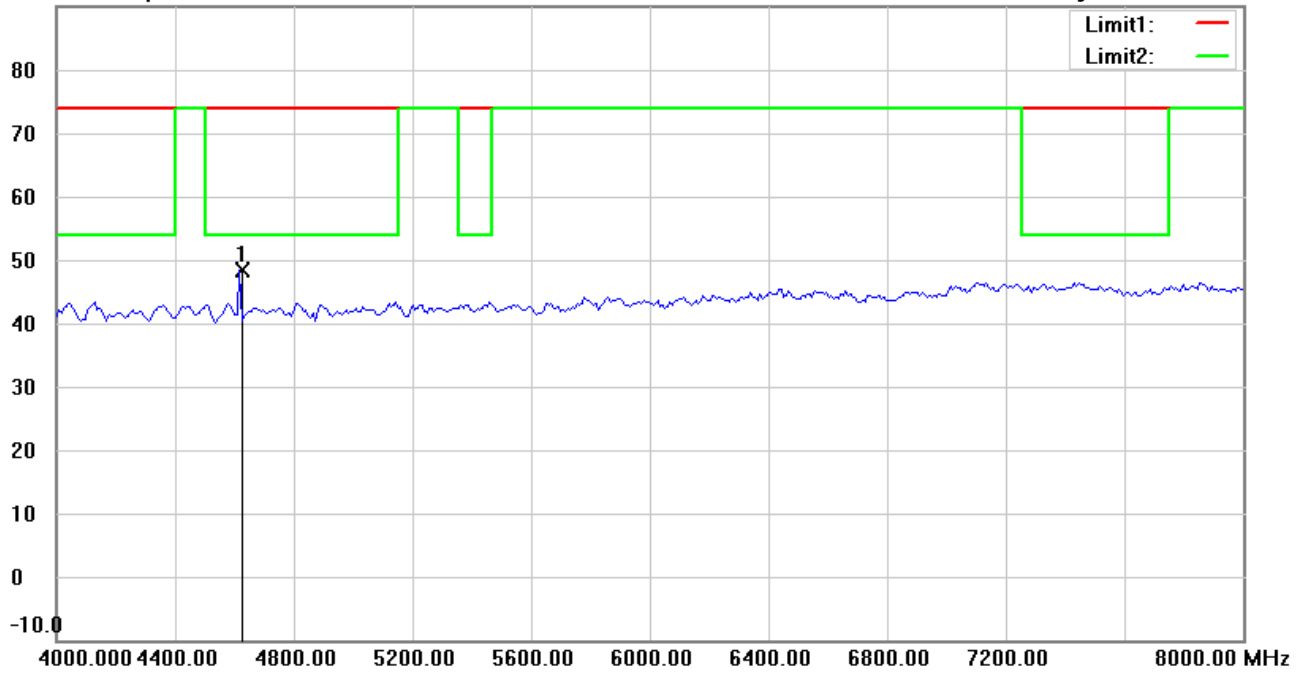
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:46:33 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4622.234	47.13	peak	1.20	48.33	74.00	150	35	-25.67	

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#7

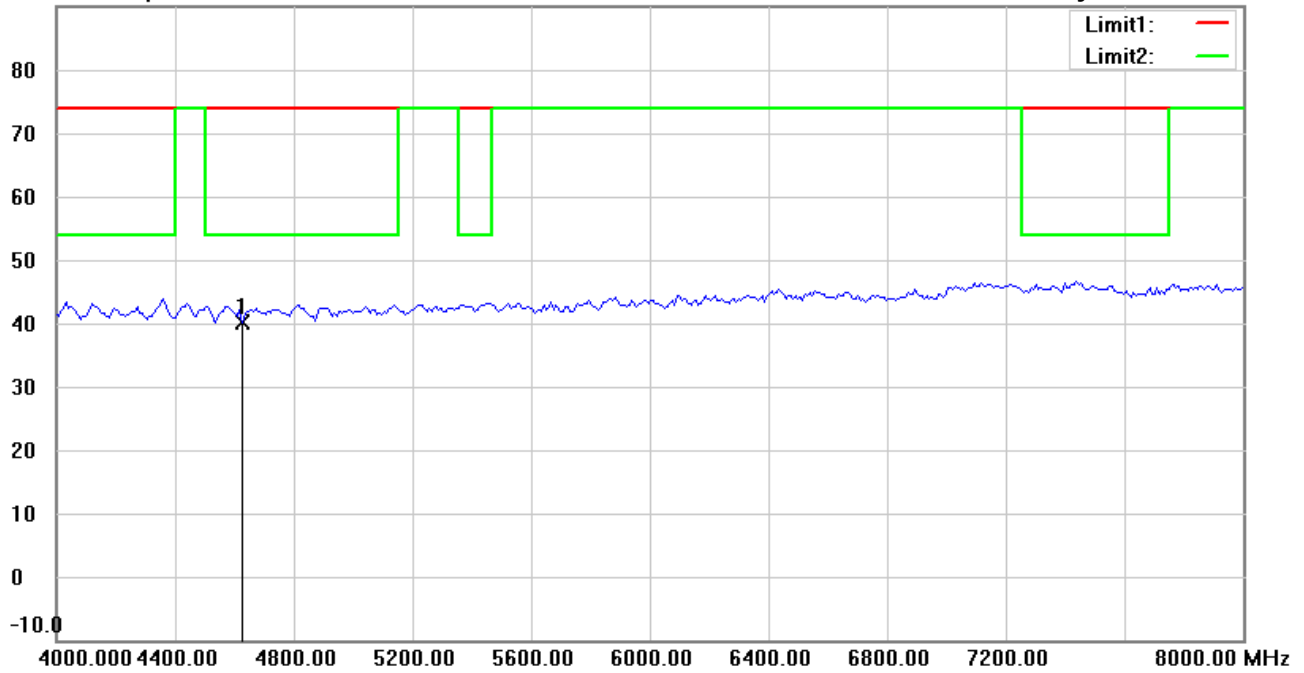
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:53:45 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4622.438	39.02	peak	1.20	40.22	74.00	150	355	-33.78	

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#4

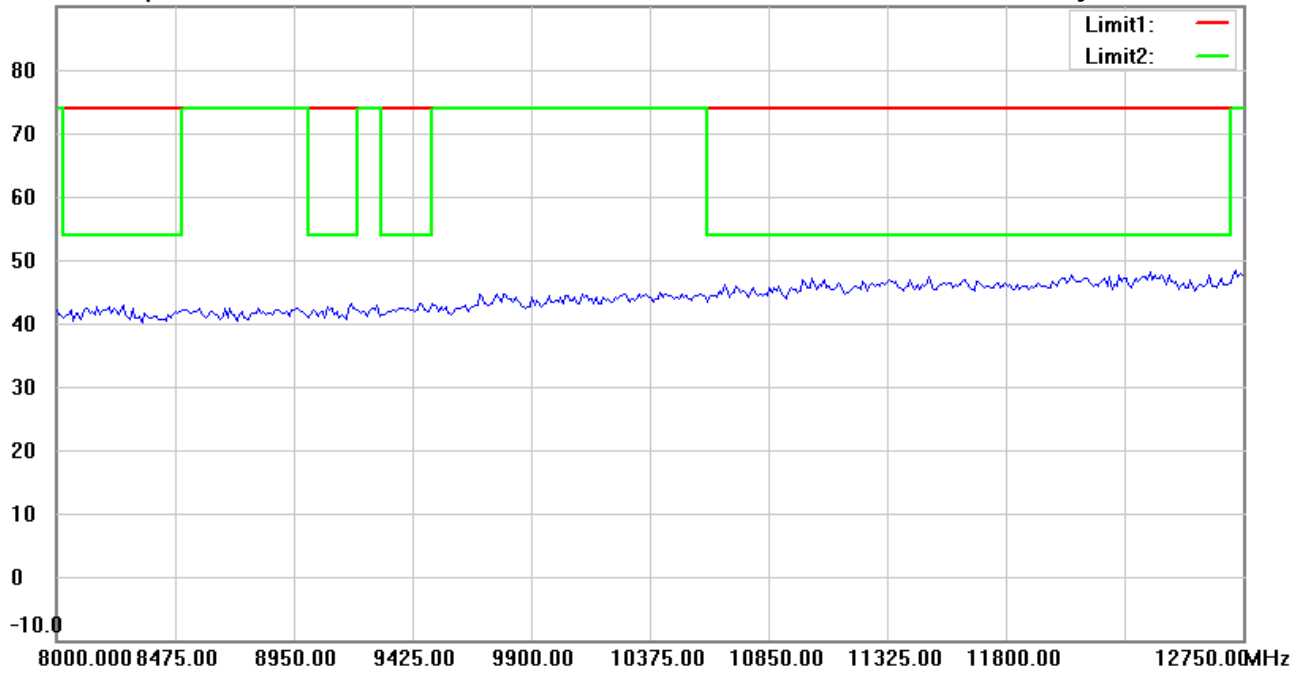
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:49:26 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Allen

File :3

Data :#8

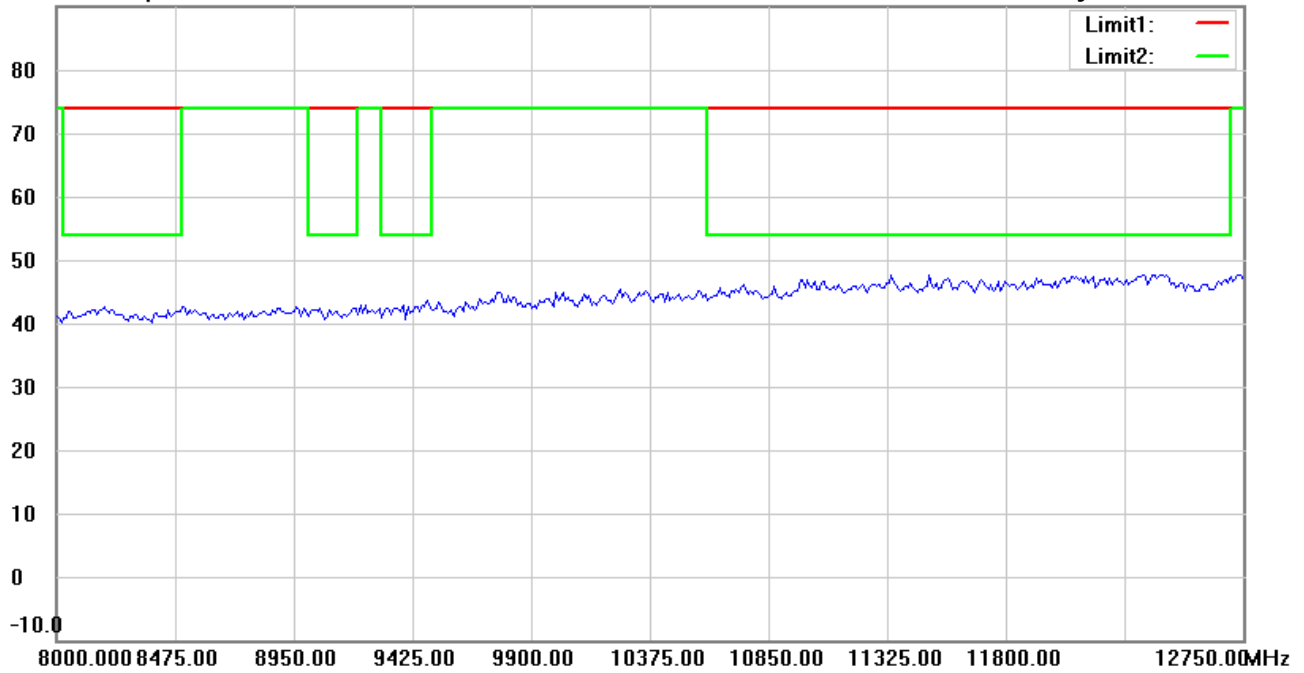
Date: 4/1/2022

Temperature:24.2 °C

90.0 dBuV/m

Time: 5:55:34 AM

Humidity:62.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22203-21686

Power : 3 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 924.48MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------

*:Maximum data x:Over limit !:over margin