47 CFR PART 15 SUBPART C TEST REPORT

for

Digital Green Reader

Model No.: BreakMaster+

FCC ID: 2BAJB-GRBM02

of

Applicant: Ronald Wilkerson DBA BreakMaster
Address: 6121 Shoup Avenue, Unit #24, Woodland Hills, CA 91367, USA

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.: W6M22303-22492-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

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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 is performance generally conforms to representative cases of communications equipment.

Laboratory disclaimer-
1. The test results of this test report relate exclusively to the item tested as specified in 1.5.
2. The test report may only be reproduced or published in full.
3. Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.
4. Antenna gain is provided by applicant and laboratory issue relevant data and results.

Tester:

Date	WTS-Lab.	Name	Signature
March 24, 2023		Sora Kuo	Sora.

Technical responsibility for area of testing:

Date	WTS	Name	Signature
March 24, 2023		Kevin Wang	Kevin Wang

1.2 Testing laboratory

1.2.1 Location

10m 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

Worldwide Testing Services (Taiwan) Co., Ltd.
6F., No. 58, Ln. 188, Ruiguang Rd., Neihu Dist.,
Taipei City 114 , Taiwan (R.O.C.)
Tel: 886-2-6606-8877

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 no.:	./.
Street:	./.
Town:	./.
Country:	./.

1.3 Application details

Approval holder

Name:	Ronald Wilkerson DBA BreakMaster
Street:	6121 Shoup Avenue, Unit #24, Woodland Hills,
Town:	CA 91367,
Country:	USA

Manufacturer: (if applicable)

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

Date of receipt of test item: March 09, 2023

Date of test: from March 10, 2023 to March 23, 2023

1.4 General information of Test item

Type of test item: Digital Green Reader

Model no.: BreakMaster+

Multi-listing model no.: ./.

Brand name: EXELYN

Power supply: USB 5 Vd.c.
Battery 3.7 Vd.c., 1080 mAh, 3.996 Wh

Type of antenna: Chip Antenna

Antenna gain: 2.71 dBi

Technical data

Mode	Channel	Conducted Power (dBm)
BLE	Ch 0 : 2402 MHz	-5.71
	Ch 19 : 2440 MHz	-5.06
	Ch 39 : 2480 MHz	-4.65

Operation modes: Duplex

Modulation type: GFSK

Sample no.: #02

Special statement: ./.

1.5 Power setting

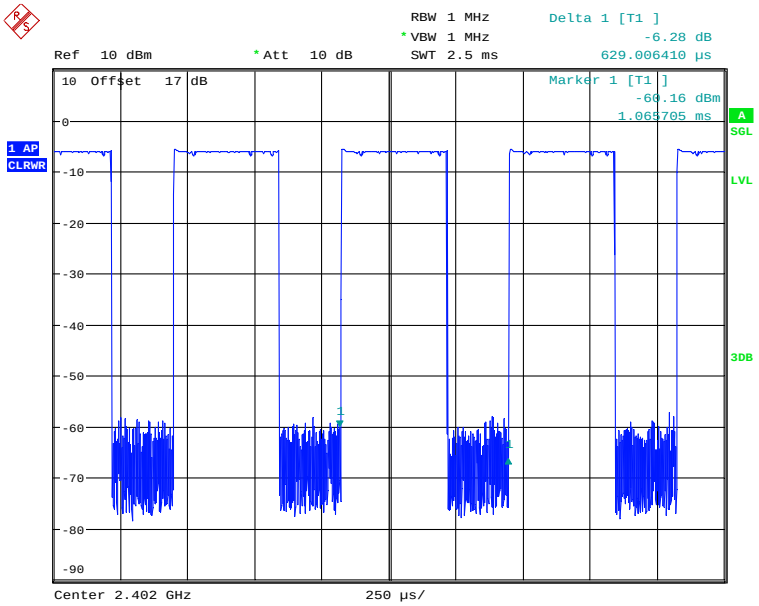
Modulation mode	Channel		
	Ch 0 : 2402 MHz	Ch 19 : 2440 MHz	Ch 39 : 2480 MHz
1Mbps	-4 dBm	-4 dBm	-4 dBm

1.6 Duty cycle and factor

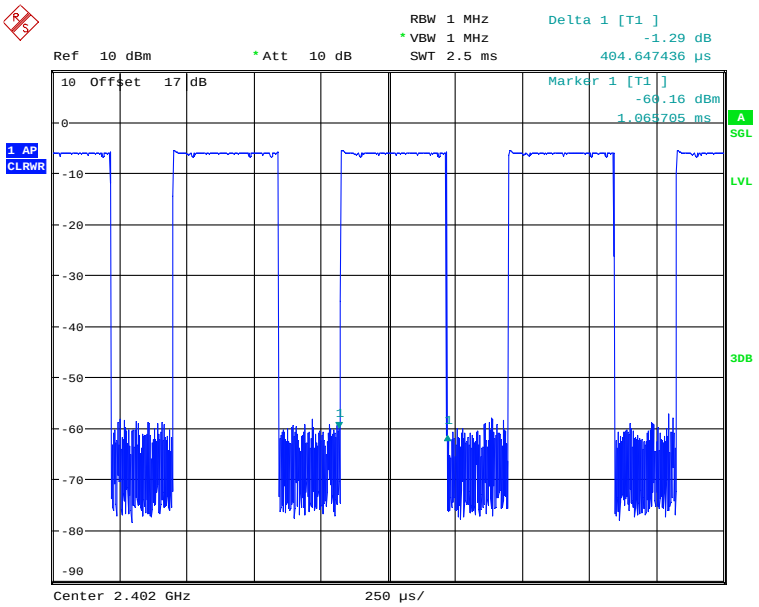
The duty factor is computed as [10 log (1 / D)], where D is the duty cycle.

Mode	T_{on} (ms)	$T_{on}+T_{off}$ (ms)	Duty cycle (%)	1/T - VBW (kHz)
BLE	0.4046	0.629	64.32%	2.47

Duty cycle plot



DUTY BT4.0
Date: 23.MAR.2023 10:03:10



DUTY BT4.0
Date: 23.MAR.2023 10:03:18

1.7 Test standards

47 CFR PART 15 SUBPART C § 15.247 (2021-10)

2 Test configuration

2.1 Test environment

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Extreme conditions parameters: ./.

2.2 Measurement uncertainty

Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission (Power Line Conducted Emission)	Expanded Uncertainty： AMN：0.94 dB Voltage probe：0.96 dB Include Pulse Limiter：1.52 dB
Estimation Result of Uncertainty of Radiated Emission(3M) (Spurious Emissions radiated – Transmitter operating)	Expanded Uncertainty： 0.009-30 MHz：3.48 dB 30-1000 MHz：3.96 dB 1-18 GHz：2.46 dB 18-40 GHz：2.44 dB
Estimation Result of Uncertainty of Bandwidth Measurement (Minimum 6 dB Bandwidth)	Expanded Uncertainty：0.45 kHz
Estimation Result of Uncertainty of Conducted Output Power Measurement (Peak Output Power (transmitter))	Expanded Uncertainty：1.48 dB
Estimation Result of Uncertainty of Power Density Measurement (Peak Power Spectral Density)	Expanded Uncertainty：1.48 dB
Estimation Result of Uncertainty of Band Edge Measurement (Emissions in nonrestricted frequency bands)	Expanded Uncertainty：0.67 dBc

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

2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2022/6/22	2023/6/21
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	2022/10/24	2023/10/23
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2022/10/24	2023/10/23
ETSTW-CE 008	HF-EICHLEITUNG 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	2022/8/3	2023/8/2
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2022/11/9	2023/11/8
ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2022/7/29	2023/7/28
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2022/6/21	2023/6/20
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2022/10/17	2023/10/16
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	2022/8/18	2023/8/17
ETSTW-RE 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2022/6/13	2023/6/12
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2022/6/22	2023/6/21
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2022/5/23	2023/5/22
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2023/3/2	2024/3/1
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2022/6/28	2023/6/27
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2022/8/1	2023/7/31
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2023/2/17	2024/2/16
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2023/2/17	2024/2/16
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2023/2/17	2024/2/16
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2023/3/22	2024/3/21
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2023/2/17	2024/2/16
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2023/2/20	2024/2/19
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	2022/11/5	2023/11/4
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2022/9/16	2023/9/15
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2022/6/9	2023/6/8
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2023/2/17	2024/2/16
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	T-0A023536	T-Power	Function test	
ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2023/1/4	2024/1/3

ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	2022/11/8	2023/11/7
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2022/6/20	2023/6/19
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2022/8/5	2023/8/4
ETSTW-RE 126	5GHz Notch filter	5NSL12-5800/E221.3-O/O	1	K&L Microwave	2022/8/5	2023/8/4
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2023/2/17	2024/2/16
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2022/8/5	2023/8/4
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2022/8/5	2023/8/4
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2023/2/20	2024/2/19
ETSTW-RE 146	Preamplifier	JPA-10M1G	15090004	JPT	2022/5/27	2023/5/26
ETSTW-RE 152	Bi-log Hybrid Antenna	MCTD 2786B	BLB20J04029	ETC	2023/1/31	2024/1/30
ETSTW-RE 153	Signal Analyzer	FSV40	101929	R&S	2022/10/3	2023/10/2
ETSTW-RE 159	Bi-log Hybrid Antenna (30M~1000 MHz)	MCTD 2786B	BLB21N04035	ETC	2022/12/22	2023/12/21
ETSTW-RE 177	Bi-log Hybrid Antenna with 6dB Attenuator	VULB 9168& EMCI-N-6-06	01380& AT-06007	SCHWARZBECK& EMC	2022/9/1	2023/8/31
ETSTW-RF 002	Electromagnetic field probe	LF-30	K-0007	STT	2022/7/14	2023/7/13
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2022/6/10	2023/6/9
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2023/3/22	2024/3/21
ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2022/5/9	2023/5/8
ETSTW-GSM 004	Wideband Radio Communication Tester	CMW500	128092	R&S	2022/10/24	2023/10/23
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40 /12+9SS	3	WI	2023/1/4	2024/1/3
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2023/1/4	2024/1/3
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2023/1/4	2024/1/3
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2023/1/4	2024/1/3
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2022/9/2	2023/9/1
ETSTW-GSM 024	Radio Communication Analyzer	MT8821C	None	Anritsu	2022/5/3	2023/5/2
ETSTW-GSM 025	Band Reject Filter	BRM19835	001	Micro-Tronics	2022/8/5	2023/8/4
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2023/2/4	2024/2/3
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2023/2/4	2024/2/3
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2023/2/4	2024/2/3
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2023/2/4	2024/2/3
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2022/6/29	2023/6/28
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2022/5/6	2023/5/5
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2022/9/16	2023/9/15
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2022/9/16	2023/9/15
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 （S_Cable 9）	279067	HUBER+SUHNER	2023/02/17	2024/2/16
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2022/5/27	2023/5/26

ETSTW-Cable 064	Microwave Cable	SUCOFLEX 104	MY28891	HUBER+SUHNER	2023/2/20	2024/2/19
ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM-NM-25000	170239	EMCI	2022/5/27	2023/5/26
ETSTW-Cable 072	SMA type cable (8m)	SUCOFLEX 104	805800/4	HUBER+SUHNER	2023/2/20	2024/2/19
ETSTW-Cable 074	SMA type cable (2m)	SUCOFLEX 104	802563/4	HUBER+SUHNER	2023/2/20	2024/2/19
ETSTW-Cable 076	SMA type cable (1m)	N/A	812652/4	HUBER+SUHNER	2023/2/20	2024/2/19
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	2022/9/16	2023/9/15
ETSTW-TH 003	Wireless weather station	GAIA	N/A	TFA	2022/10/28	2023/10/27

3 Test results (enclosure)

TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)(3)	☒	☒	☐
Spurious Emissions radiated – Transmitter operating	15.247(d), 15.205, 15.209	☒	☒	☐
Emissions in nonrestricted frequency bands	15.247(d)	☒	☒	☐
Minimum 6 dB Bandwidth	15.247(a)(2)	☒	☒	☐
Peak Power Spectral Density	15.247(e)	☒	☒	☐
Power Line Conducted Emission	15.207(a)	☒	☒	☐

The following is intentionally left blank.

3.1 Peak Output Power (transmitter)

3.1.1 Applicable Standard

FCC Rule: 15.247(b)(3)

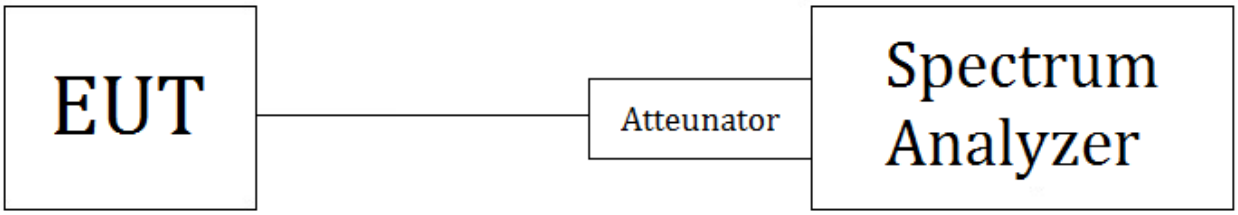
For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as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

3.1.2 Test procedure

Following Subclause 11.9.1.1 of ANSI C63.10

1. Set the RBW ≥ DTS bandwidth , VBW ≥ [3 × RBW] , span ≥ [3 × RBW].
2. Sweep time = auto couple , Detector = peak , Trace mode = max hold.
3. Allow trace to fully stabilize and determine the peak amplitude level.

3.1.3 Test Setup



3.1.4 Limits

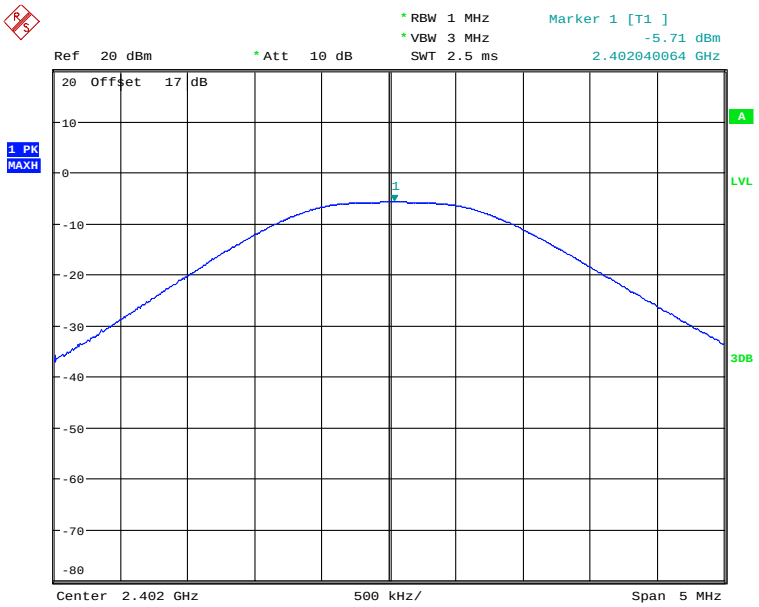
Frequency (MHz)	Power (dBm)
902 - 928	30
2400 – 2483.5	30
5725 – 5850	30

In case of employing transmitter antennas having antenna gain ＞ 6 dBi and using fixed point-to point operation consider §15.247 (b)(4)

3.1.5 Test Environmental Conditions

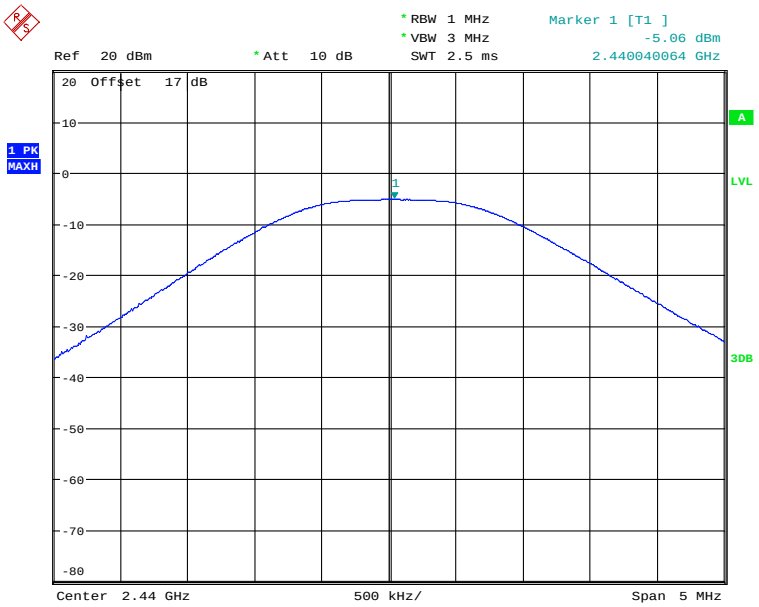
Test date: 2023-03-23 Temperature: 21.4°C Humidity: 58.8% Tester: Sora

3.1.6 Test results

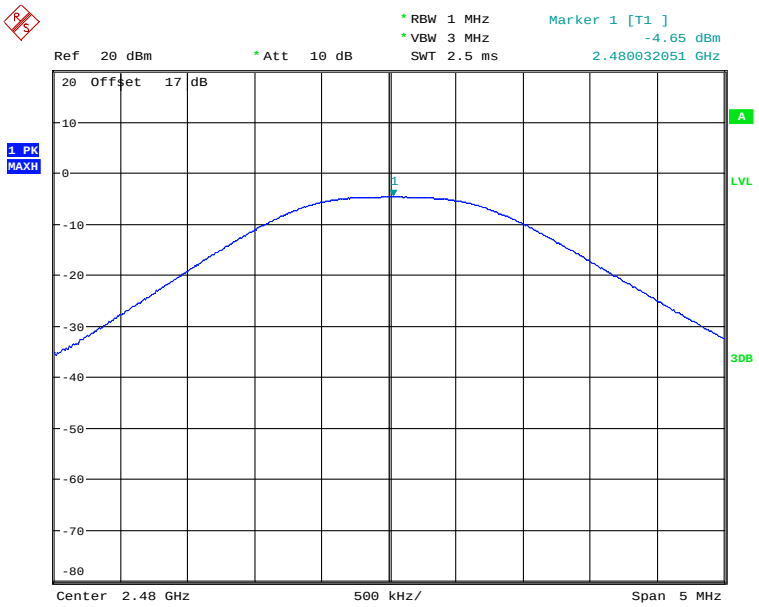


MAX OUTPUT POWER BT4.0 CH00
Date: 23.MAR.2023 09:57:59

Registration number: W6M22303-22492-C-1
FCC ID: 2BAJB-GRBM02



MAX OUTPUT POWER BT4.0 CH19
Date: 23.MAR.2023 09:59:27



MAX OUTPUT POWER BT4.0 CH39
Date: 23.MAR.2023 10:00:23

Test equipment used: Please see test equipment utilized (RF Conducted).

3.2 Spurious Emissions radiated – Transmitter operating

3.2.1 Applicable Standard

FCC Rules: 15.247 (d), 15.205, 15.209

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).

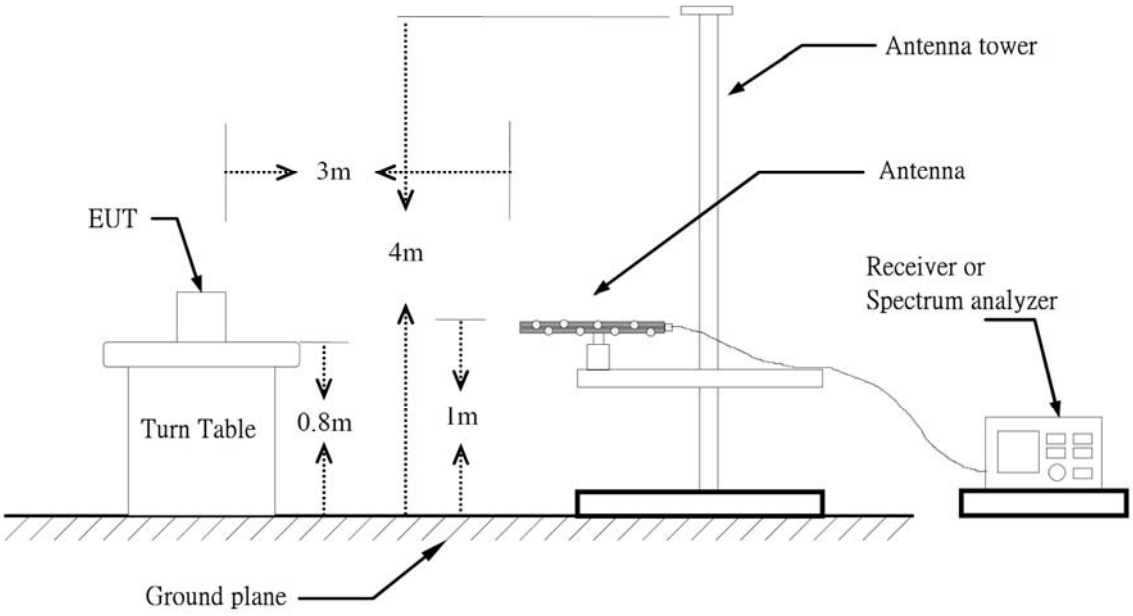
3.2.2 Test procedure

1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
2. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m height to find out the highest emissions.
3. Receiver or Spectrum analyzer configuration
   (a)120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
   (b)RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
   (c)RBW=1MHz, VBW=10Hz(1/T) and Peak detector is for average measured value of radiated emission above 1GHz.

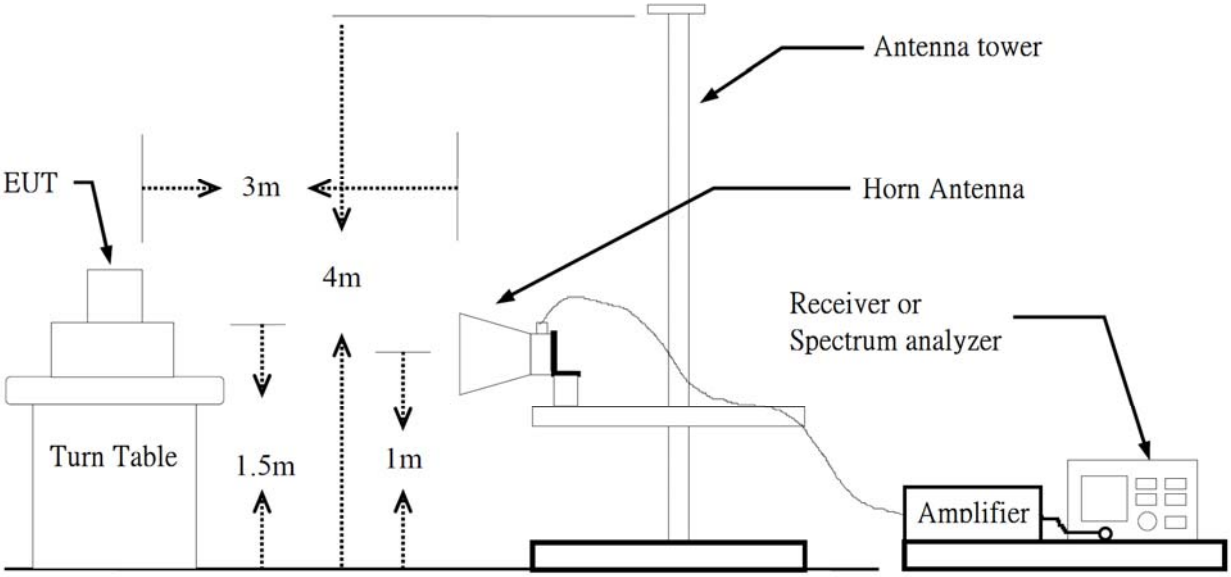
3.2.3 Limits

Frequency (MHz)	Field strength (uV/m)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

3.2.4 Test Setup



Below 1 GHz



Above 1 GHz

3.2.5 Test results (With Environmental Conditions)

Explanation: See attached diagrams in Appendix.

3.3 Emissions in nonrestricted frequency bands

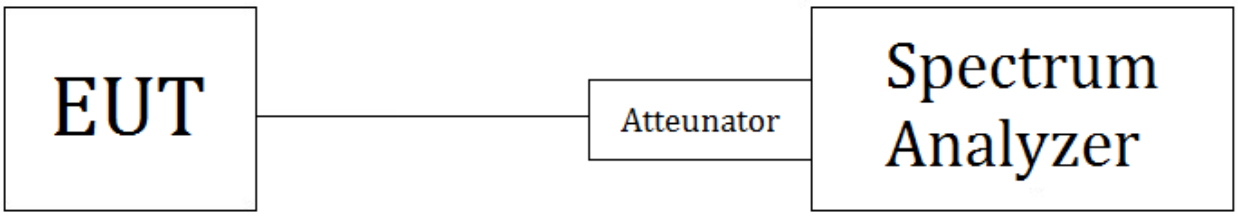
3.3.1 Applicable Standard

FCC Rules: 15.247(d)
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.

3.3.2 Test procedure

1. Set RBW = 100 kHz , VBW ≥ [3 × RBW]
2. Set Detector = peak , Sweep time = auto , Trace mode = max hold, and allow sweep to continue until the trace stabilizes
3. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.

3.3.3 Test setup



3.3.4 Limits

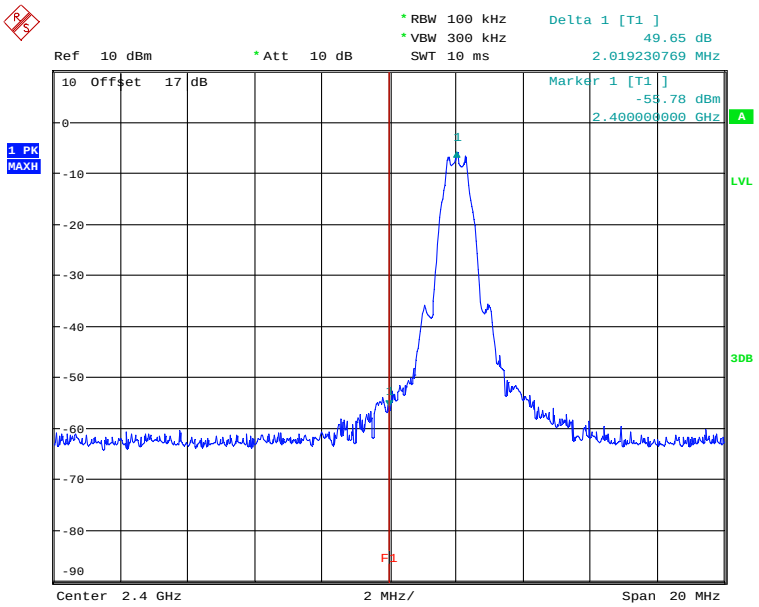
See 3.3.1

3.3.5 Test Environmental Conditions

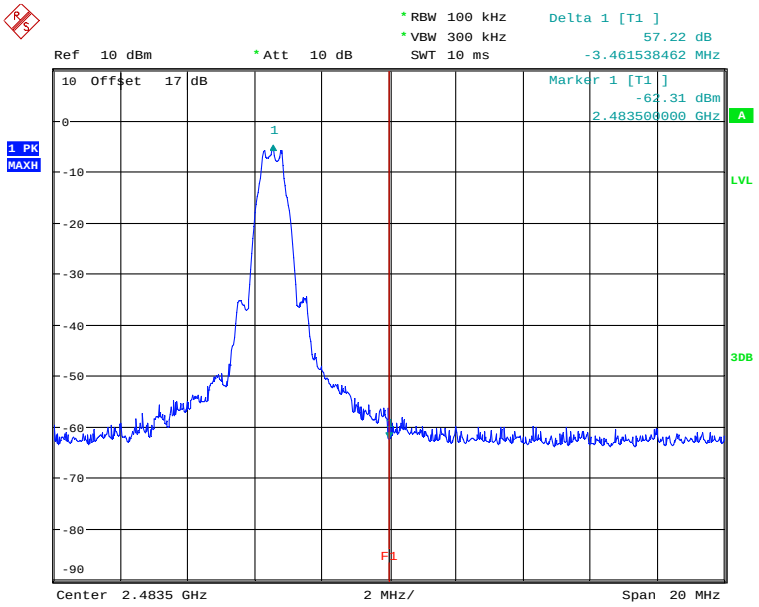
Test date: 2023-03-23 Temperature: 21.4°C Humidity: 58.8% Tester: Sora

Registration number: W6M22303-22492-C-1
FCC ID: 2BAJB-GRBM02

3.3.6 Test results



BANDEDGE BT4.0 CH00
Date: 23.MAR.2023 09:58:27



BANDEDGE BT4.0 CH39
Date: 23.MAR.2023 10:00:51

Test equipment used: Please see test equipment utilized (RF Conducted).

3.4 Minimum 6 dB Bandwidth

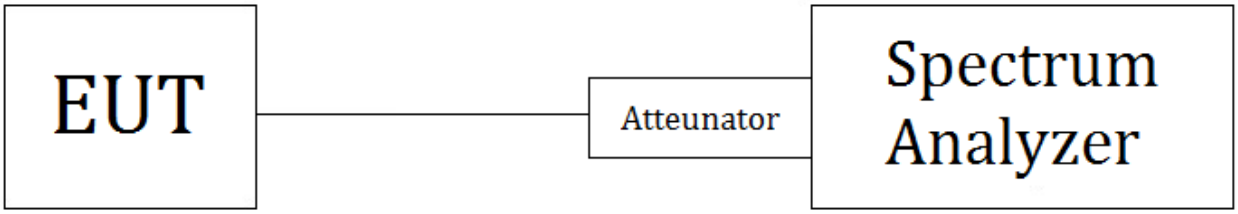
3.4.1 Applicable Standard

FCC Rules: 15.247(a)(2)
Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

3.4.2 Test procedure

1. Set RBW = 100 kHz , Set the VBW ≥ [3 × RBW].
2. Set Detector = peak , Trace mode = max hold , Sweep = auto couple and allow the trace to stabilize.
3. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.4.3 Test setup



3.4.4 Limits

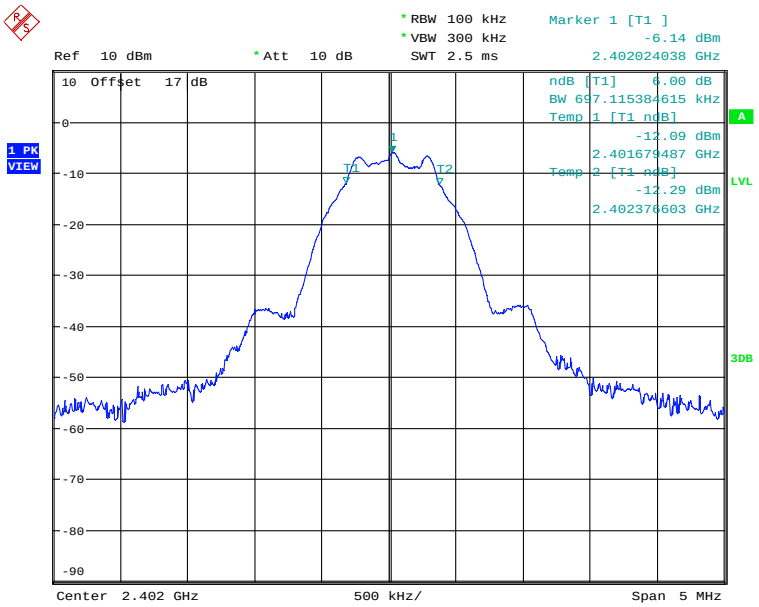
Frequency Range (MHz)	Limits (kHz)
902-928	≧500
2400-2483.5	
5725-5850	

3.4.5 Test Environmental Conditions

Test date: 2023-03-23 Temperature: 21.4°C Humidity: 58.8% Tester: Sora

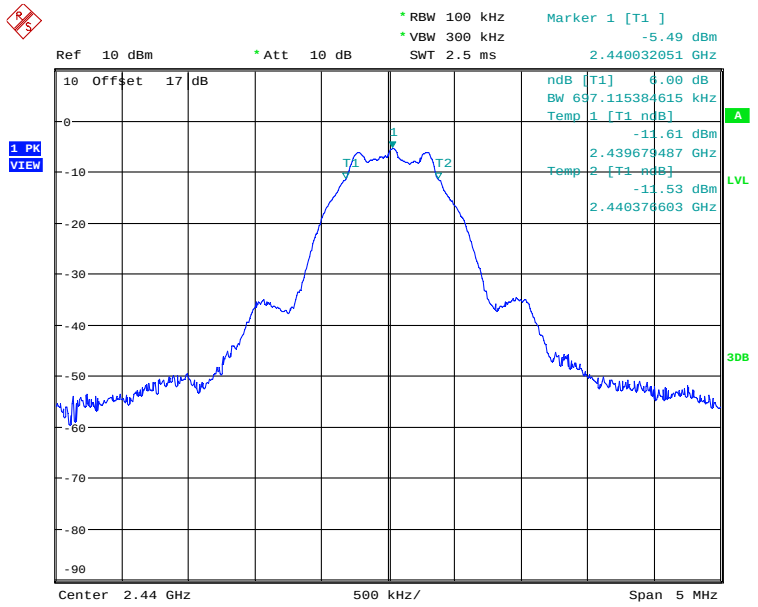
Registration number: W6M22303-22492-C-1
FCC ID: 2BAJB-GRBM02

3.4.6 Test results



6DB BANDWIDTH BT4.0 CH00

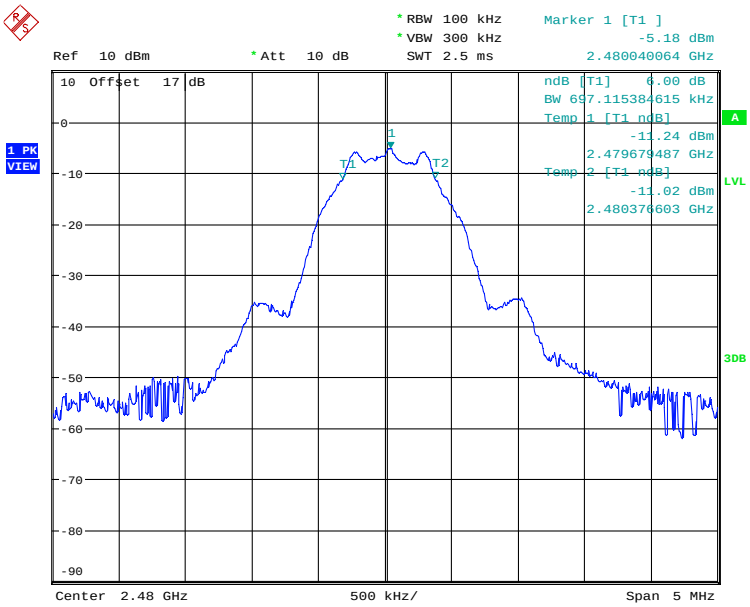
Date: 23.MAR.2023 09:58:09



6DB BANDWIDTH BT4.0 CH19

Date: 23.MAR.2023 09:59:37

Registration number: W6M22303-22492-C-1
FCC ID: 2BAJB-GRBM02



6DB BANDWIDTH BT4.0 CH39
Date: 23.MAR.2023 10:00:33

Test equipment used: Please see test equipment utilized (RF Conducted).

3.5 Peak Power Spectral Density

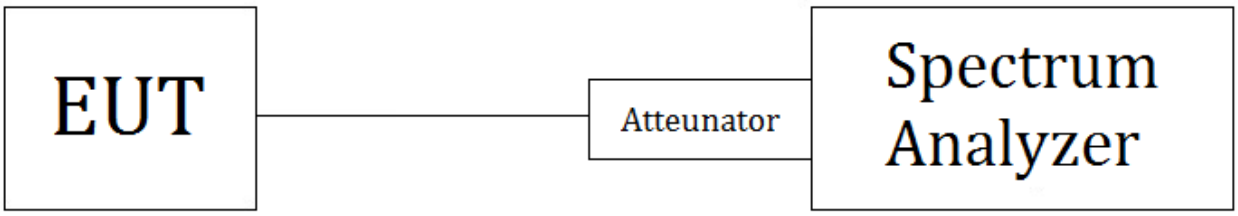
3.5.1 Applicable Standard

FCC Rules: 15.247(e)
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

3.5.2 Test procedure

1. Set the RBW to 3 kHz ≤ RBW ≤ 100 kHz , the VBW ≥ [3 × RBW].
2. Set Detector = peak , Sweep time = auto couple , Trace mode = max hold and allow trace to fully stabilize
3. Use the peak marker function to determine the maximum amplitude level within the RBW.

3.5.3 Test setup



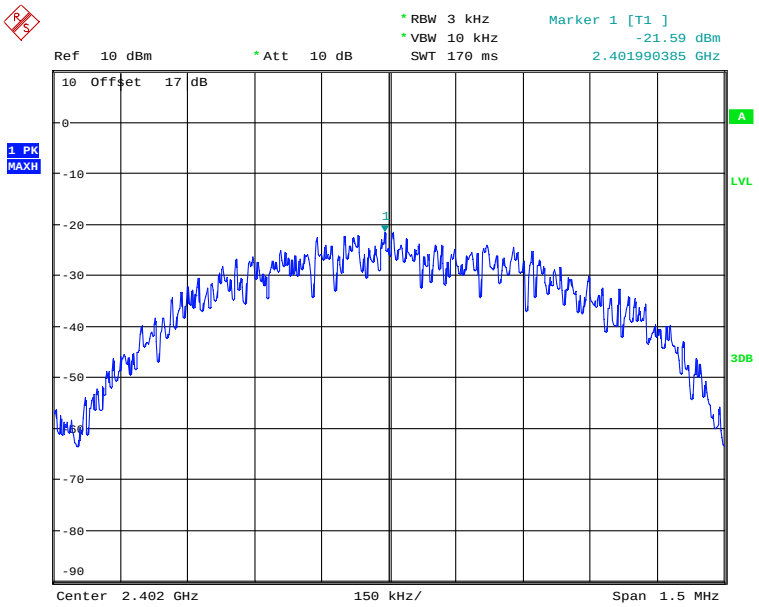
3.5.4 Limits

Frequency Range (MHz)	Limits (dBm/3KHz)
902-928	8
2400-2483.5	
5725-5850	

3.5.5 Test Environmental Conditions

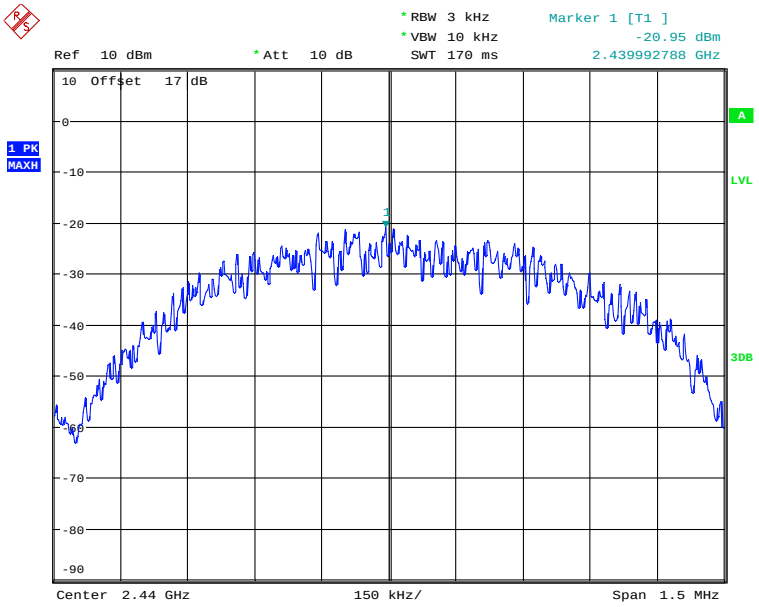
Test date: 2023-03-23 Temperature: 21.4°C Humidity: 58.8% Tester: Sora

3.5.6 Test results



POWER DENSITY BT4.0 CH00

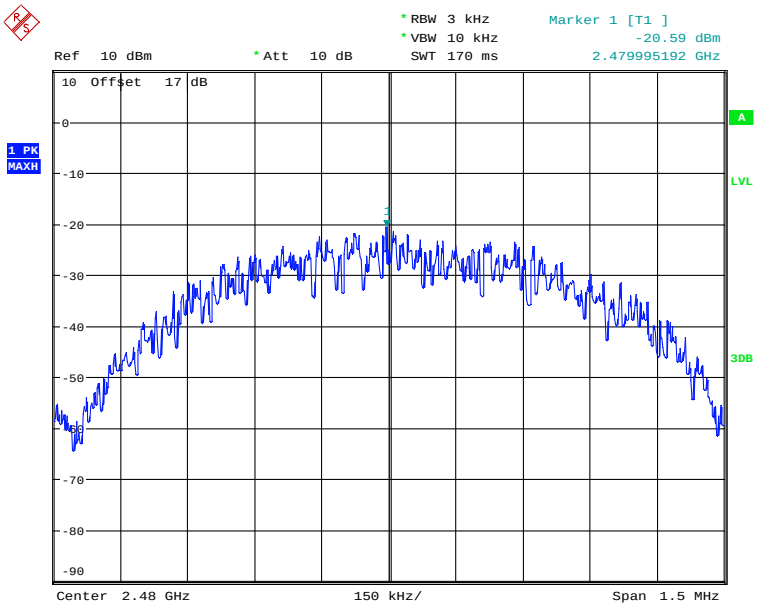
Date: 23.MAR.2023 09:58:19



POWER DENSITY BT4.0 CH19

Date: 23.MAR.2023 09:59:47

Registration number: W6M22303-22492-C-1
FCC ID: 2BAJB-GRBM02



POWER DENSITY BT4.0 CH39
Date: 23.MAR.2023 10:00:43

Test equipment used: Please see test equipment utilized (RF Conducted).

3.6 Power Line Conducted Emission

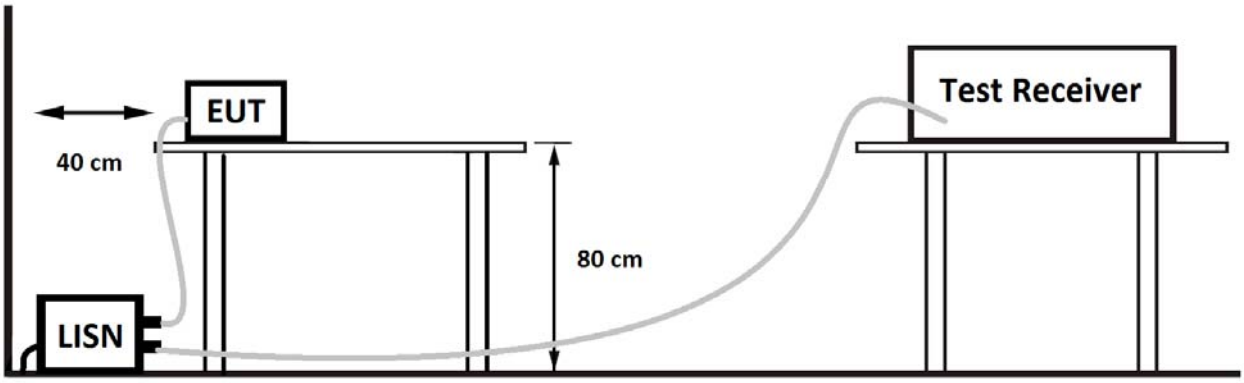
3.6.1 Applicable Standard

FCC Rules:15.207(a)
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.

3.6.2 Test procedure

1. EUT is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. Connect EUT to a 50 μH/50 ohms line impedance stabilization network (LISN). AC input is 120V/60Hz
3. 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.

3.6.3 Test setup



3.6.4 Limits

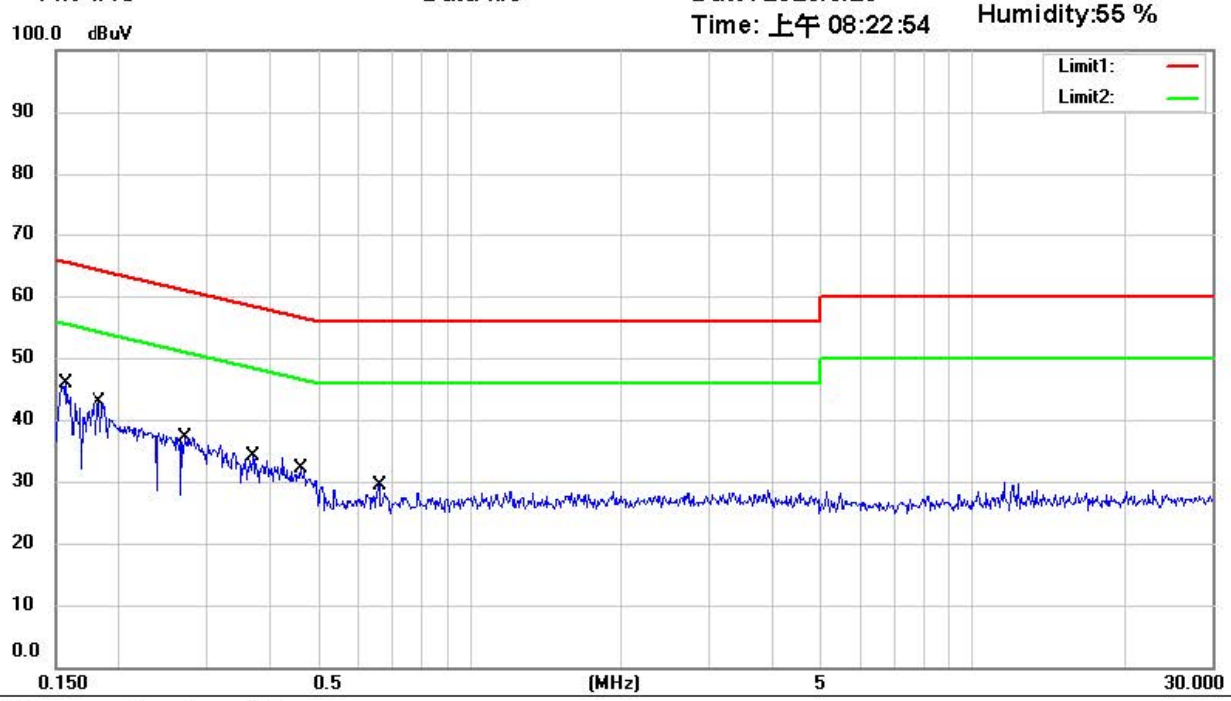
Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

3.6.5 Test results (With Environmental Conditions)

Conducted Emission Measurement

Operator: Sora
Temperature:21.2 ℃
Humidity:55 %

File :AC
Data :#3
Date: 2023/3/23
Time: 上午 08:22:54



Site : Chamber_03
Condition : FCC Part 15 Class B Conduction (QP)
Phase: N
EUT : W6M22303-22492
Power : 120 Va.c.
M/N:
Test Mode : Charge
Note :

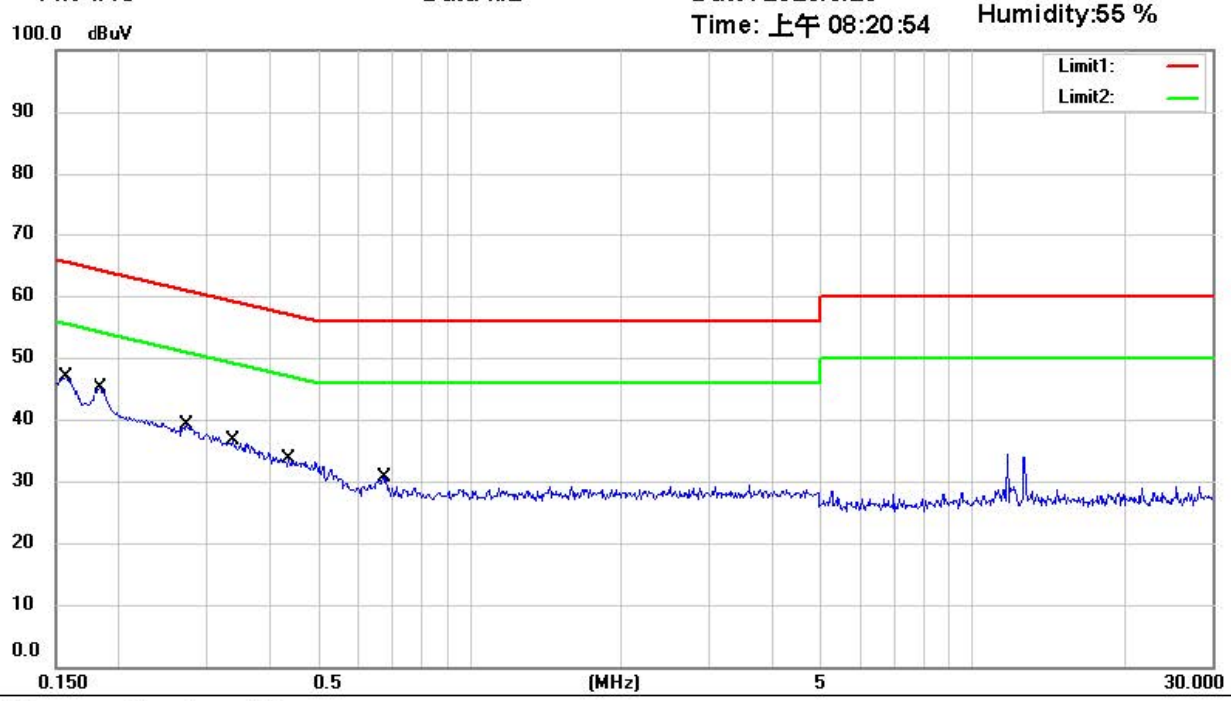
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1572	34.39	QP	9.59	43.98	65.61	-21.63	
*	0.1572	33.36	AVG	9.59	42.95	55.61	-12.66	
	0.1833	31.75	QP	9.59	41.34	64.33	-22.99	
	0.1833	31.00	AVG	9.59	40.59	54.33	-13.74	
	0.2725	16.27	QP	9.61	25.88	61.04	-35.16	
	0.2725	14.08	AVG	9.61	23.69	51.04	-27.35	
	0.3703	14.47	QP	9.63	24.10	58.49	-34.39	
	0.3703	11.37	AVG	9.63	21.00	48.49	-27.49	
	0.4603	9.63	QP	9.64	19.27	56.69	-37.42	
	0.4603	5.91	AVG	9.64	15.55	46.69	-31.14	
	0.6597	0.31	QP	9.65	9.96	56.00	-46.04	
	0.6597	-5.88	AVG	9.65	3.77	46.00	-42.23	

Registration number: W6M22303-22492-C-1
FCC ID: 2BAJB-GRBM02

Conducted Emission Measurement

Operator: Sora
Temperature:21.2 ℃
Humidity:55 %

File :AC
Data :#2
Date: 2023/3/23
Time: 上午 08:20:54



Site : Chamber_03
Condition : FCC Part 15 Class B Conduction (QP)
Phase: L1
EUT : W6M22303-22492
Power : 120 Va.c.
M/N:
Test Mode : Charge
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1570	33.73	QP	9.63	43.36	65.62	-22.26	
*	0.1570	32.73	AVG	9.63	42.36	55.62	-13.26	
	0.1840	31.12	QP	9.63	40.75	64.30	-23.55	
	0.1840	30.37	AVG	9.63	40.00	54.30	-14.30	
	0.2734	17.13	QP	9.64	26.77	61.01	-34.24	
	0.2734	14.92	AVG	9.64	24.56	51.01	-26.45	
	0.3381	8.76	QP	9.66	18.42	59.25	-40.83	
	0.3381	-3.38	AVG	9.66	6.28	49.25	-42.97	
	0.4361	5.49	QP	9.67	15.16	57.14	-41.98	
	0.4361	-2.45	AVG	9.67	7.22	47.14	-39.92	
	0.6732	0.78	QP	9.68	10.46	56.00	-45.54	
	0.6732	-6.49	AVG	9.68	3.19	46.00	-42.81	

Test equipment used: Please see test equipment utilized (AC Conducted).

Appendix

Measurement diagrams

Radiated Emission

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: Eason

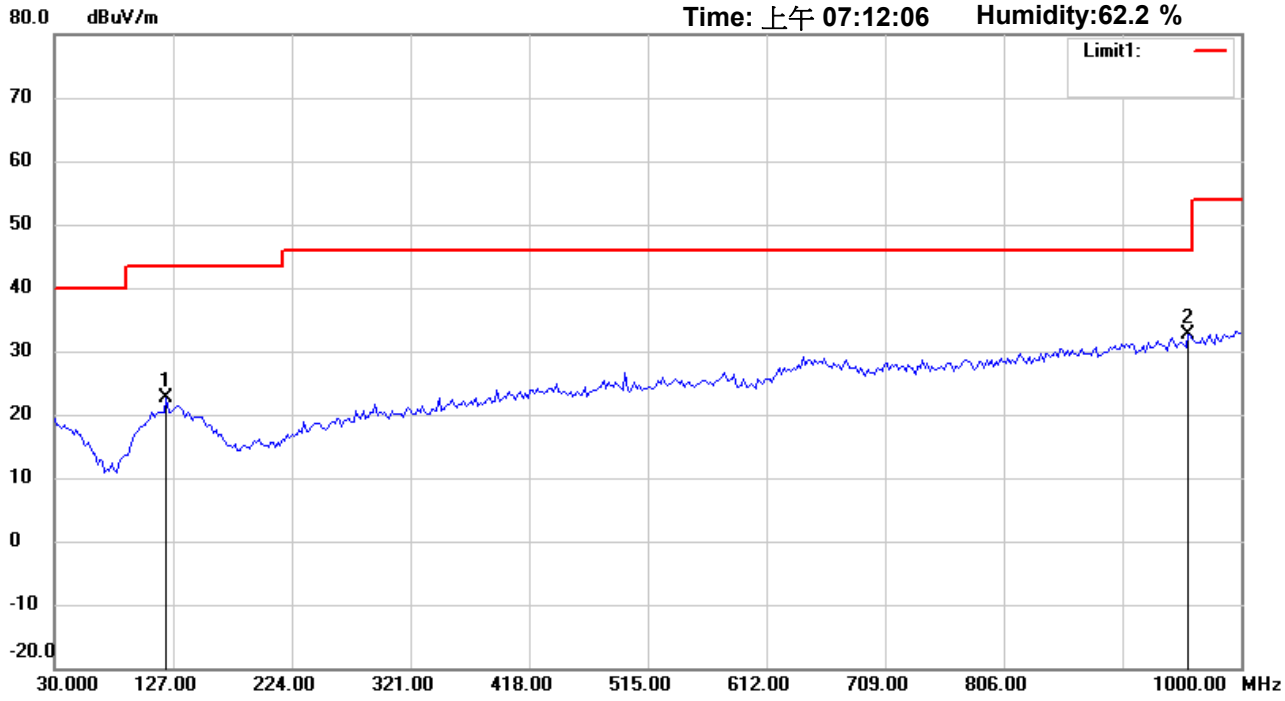
File :1_BLE(1M)_TX 2402MHz Data :#1

Date: 2023/3/17

Time: 上午 07:12:06

Temperature:24.5 ℃

Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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
	121.3627	28.89	peak	-6.18	22.71	43.50	100	318	-20.79	
*	957.2345	27.79	peak	4.79	32.58	46.00	105	175	-13.42	

*: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: Eason

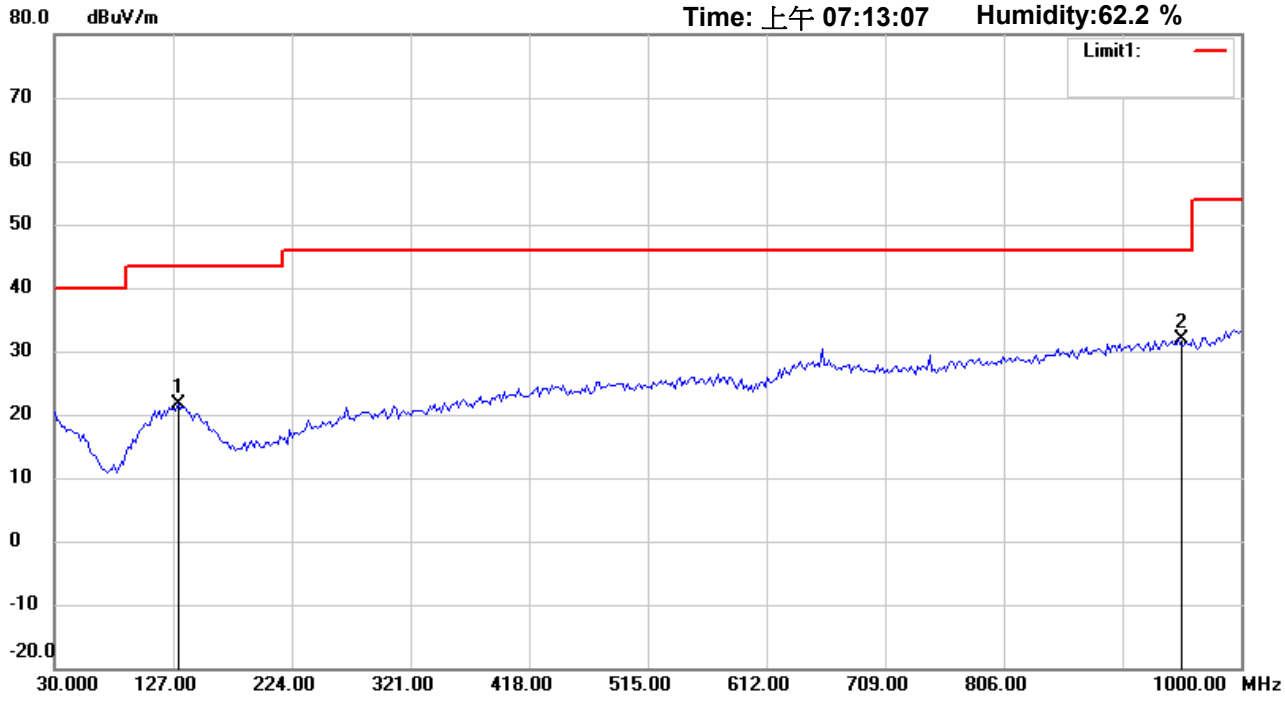
File :1_BLE(1M)_TX 2402MHz Data :#2

Date: 2023/3/17

Time: 上午 07:13:07

Temperature:24.5 ℃

Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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
	131.0822	27.54	peak	-5.97	21.57	43.50	105	247	-21.93	
*	949.4590	27.29	peak	4.53	31.82	46.00	105	172	-14.18	

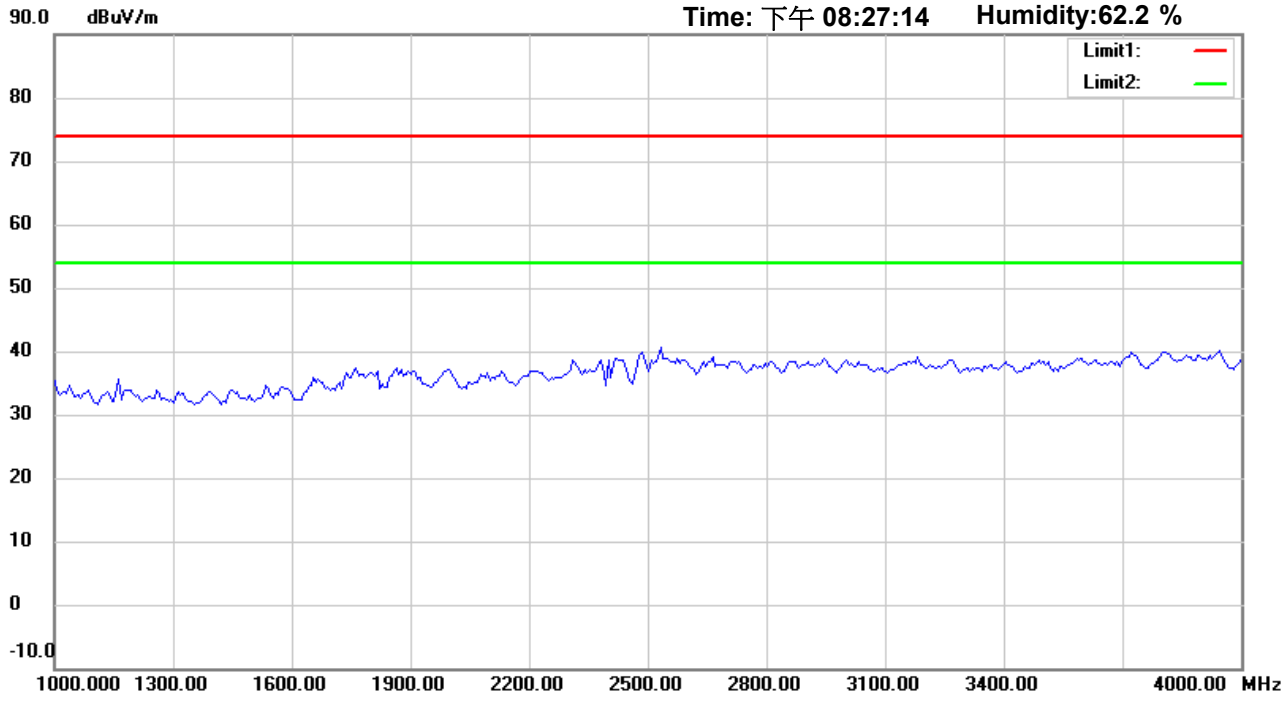
*:Maximum data x:Over limit !:over margin

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: Sky

File :3 | Data :#1 | Date: 2023/3/17 | Time: 下午 08:27:14 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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

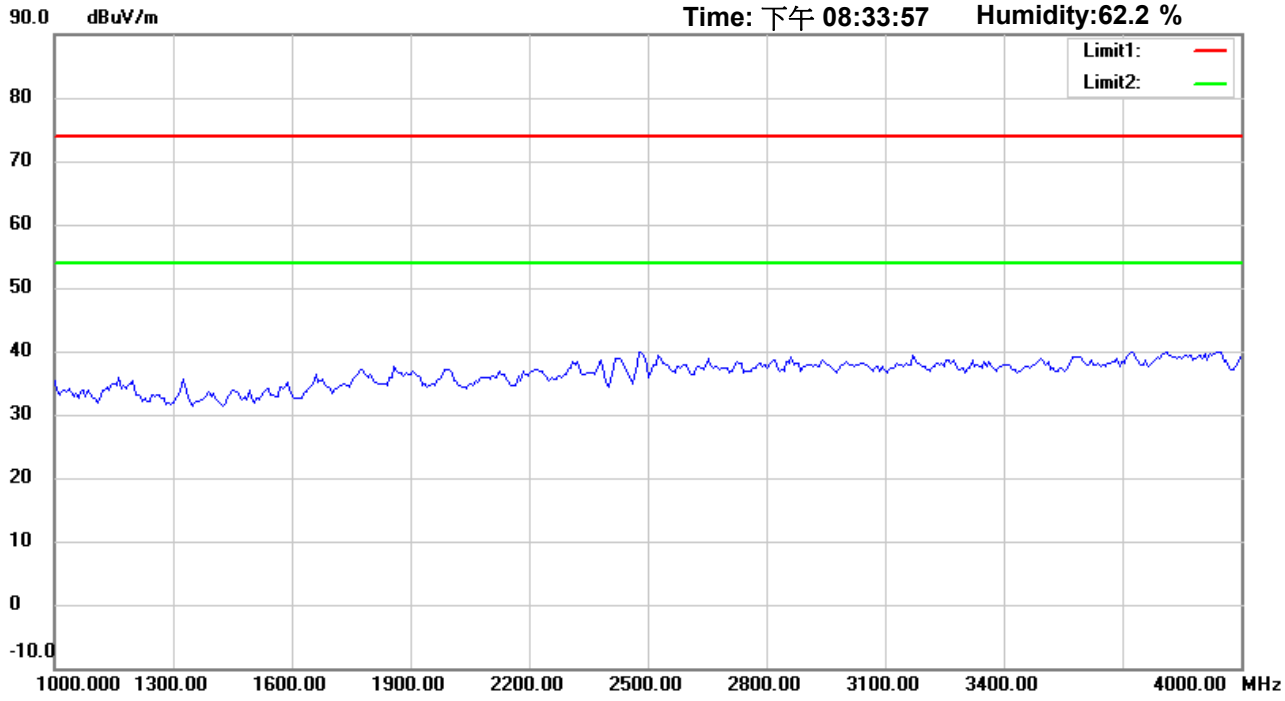
*:Maximum data x:Over limit !:over margin

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: Sky

File :3 | Data :#6 | Date: 2023/3/17 | Time: 下午 08:33:57 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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

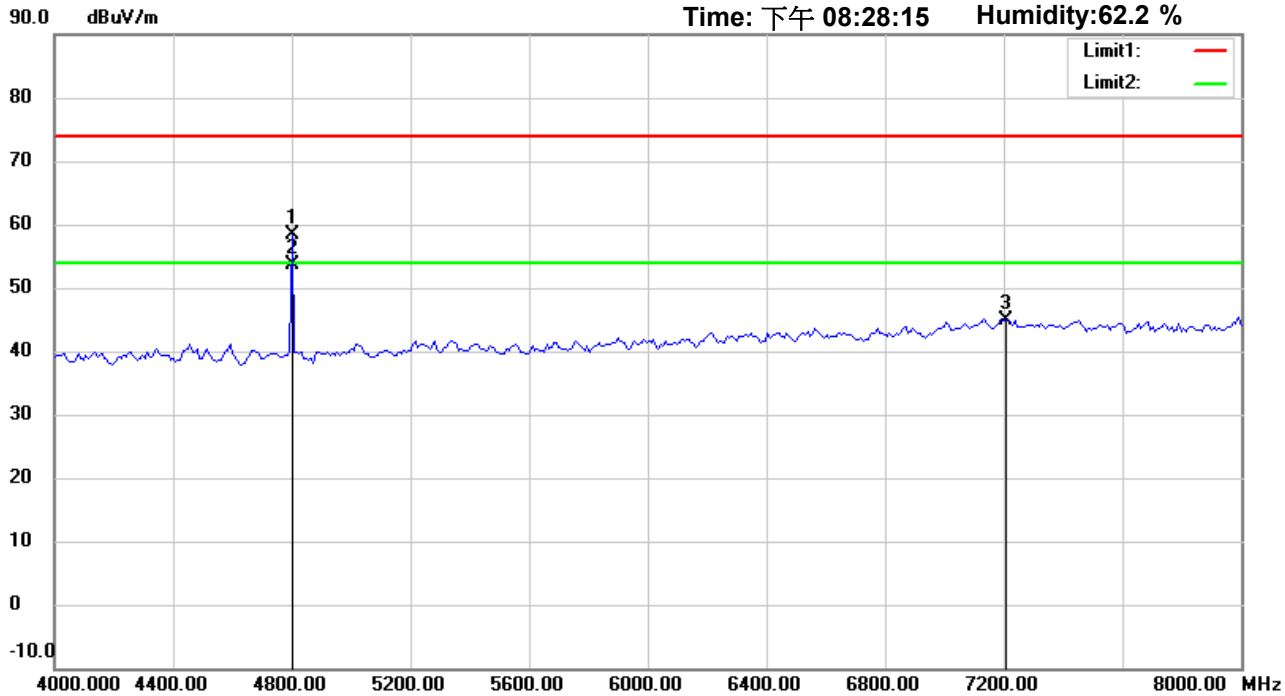
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Sky

File :3 Data :#2 Date: 2023/3/17 Time: 下午 08:28:15

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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
	4801.603	60.23	peak	-1.74	58.49	74.00	150	140	-15.51	
*	4801.603	55.29	AVG	-1.74	53.55	54.00	150	140	-0.45	
	7206.000	40.99	peak	4.01	45.00	74.00	150	110	-29.00	

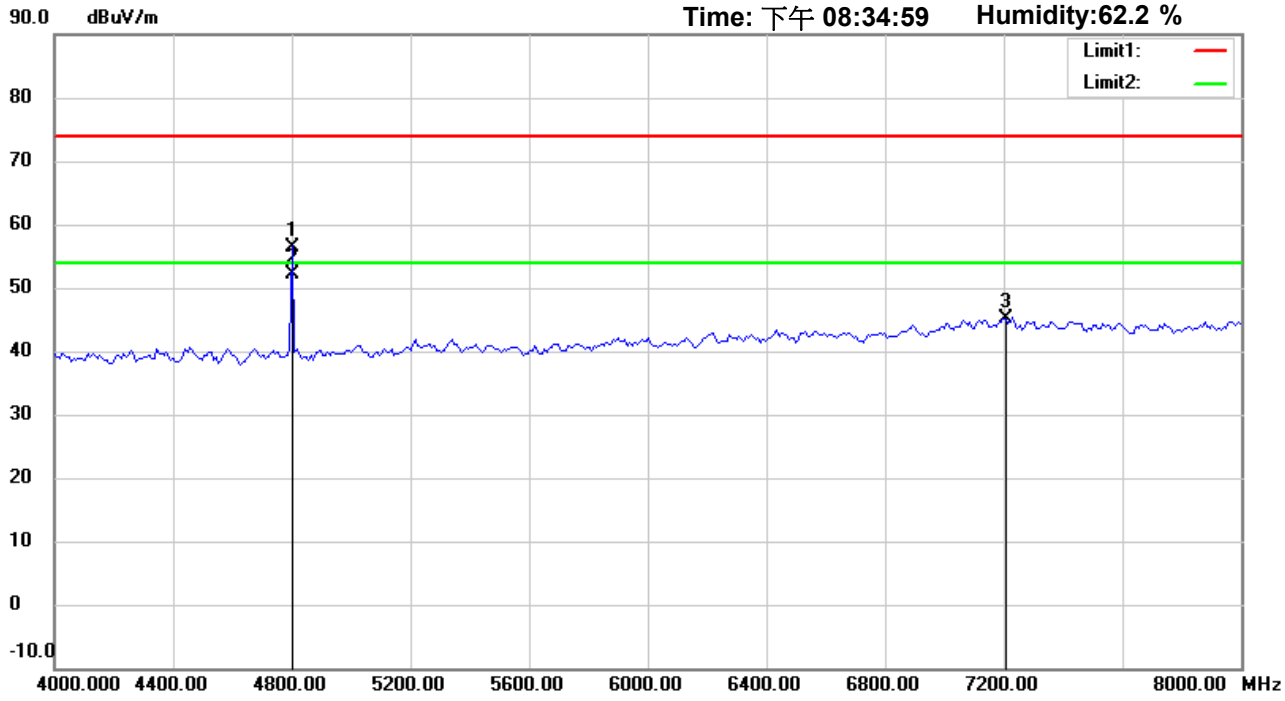
*:Maximum data x:Over limit !:over margin

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: Sky

File :3 | Data :#7 | Date: 2023/3/17 | Time: 下午 08:34:59 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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
	4801.603	58.24	peak	-1.74	56.50	74.00	150	30	-17.50	
*	4801.603	53.96	AVG	-1.74	52.22	54.00	150	30	-1.78	
	7206.000	41.21	peak	4.01	45.22	74.00	150	110	-28.78	

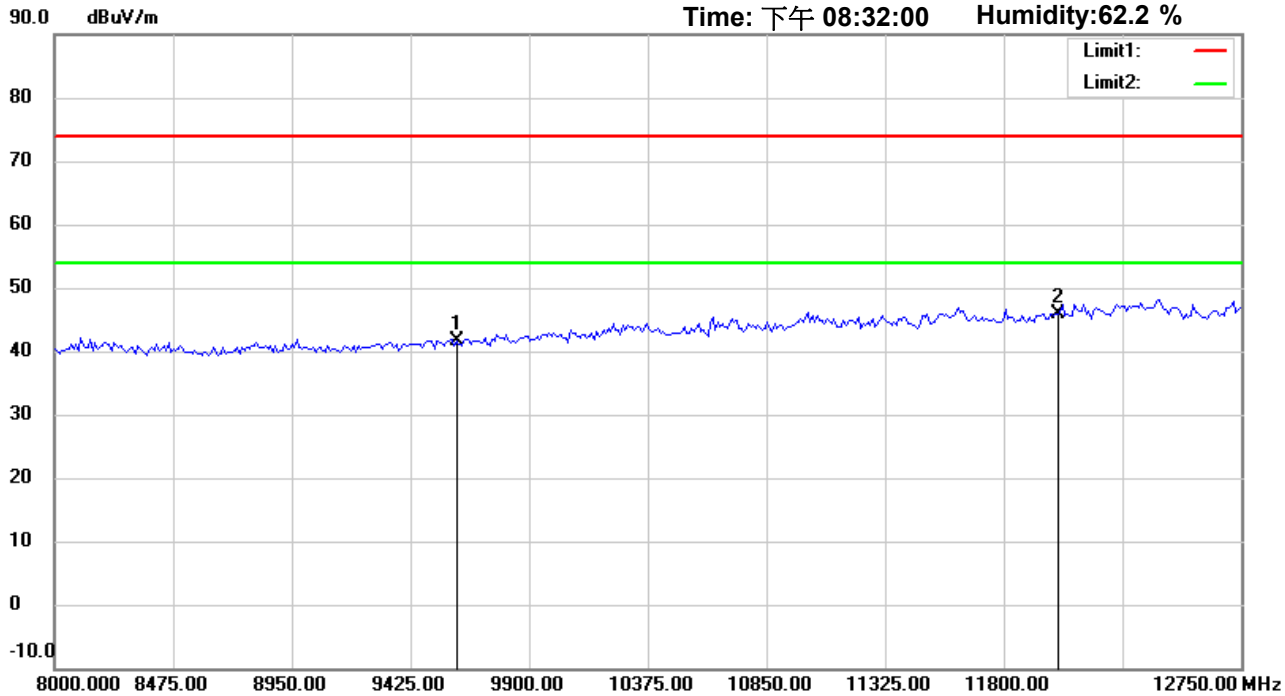
*:Maximum data x:Over limit !:over margin

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: Sky

File :3 | Data :#3 | Date: 2023/3/17 | Time: 下午 08:32:00 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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
	9608.000	34.82	peak	6.80	41.62	74.00	150	26	-32.38	
*	12010.000	33.79	peak	12.09	45.88	74.00	150	101	-28.12	

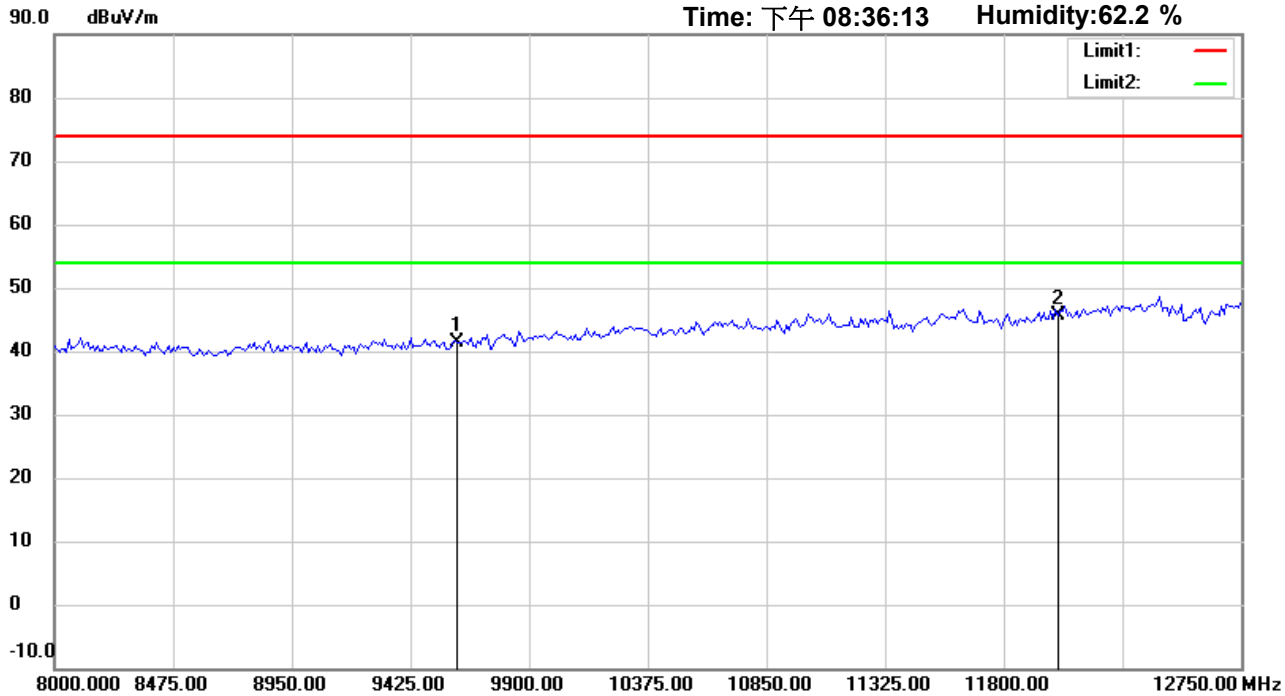
*:Maximum data x:Over limit !:over margin

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: Sky

File :3 | Data :#8 | Date: 2023/3/17 | Time: 下午 08:36:13 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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
	9608.000	34.64	peak	6.80	41.44	74.00	150	24	-32.56	
*	12010.000	33.42	peak	12.09	45.51	74.00	150	71	-28.49	

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

Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
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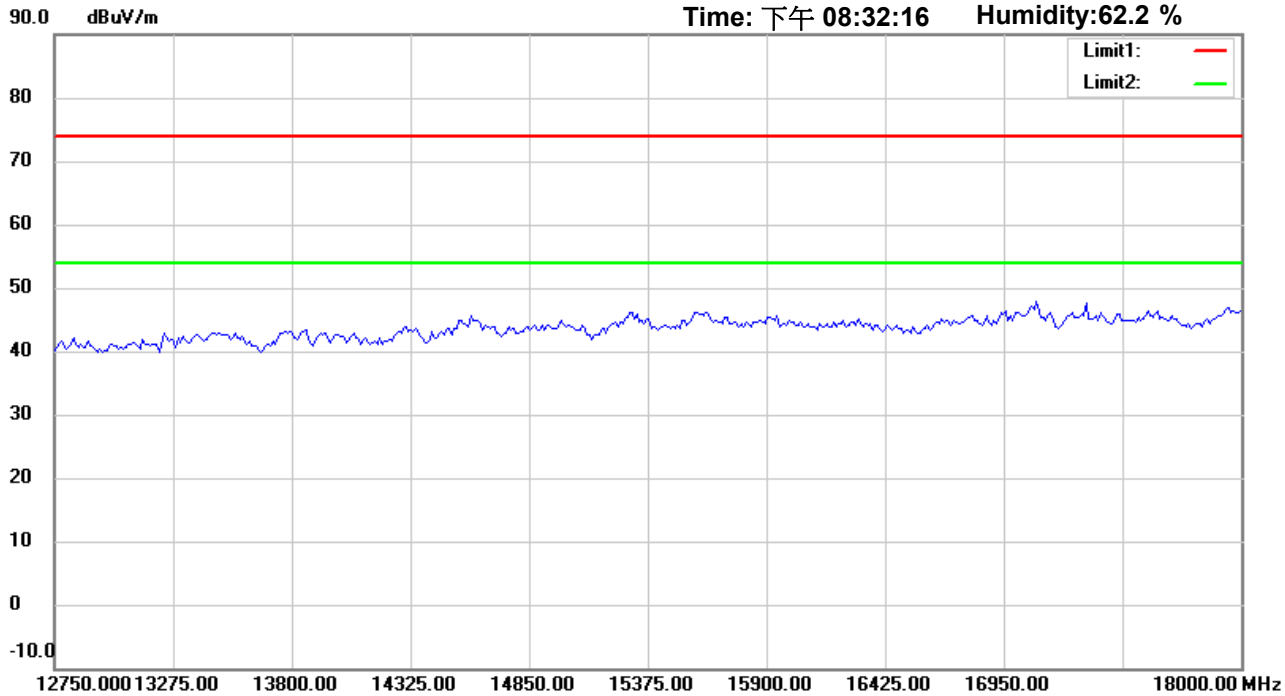
Radiated Emission Measurement

Operator: Sky

File :3 Data :#4 Date: 2023/3/17 Time: 下午 08:32:16

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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
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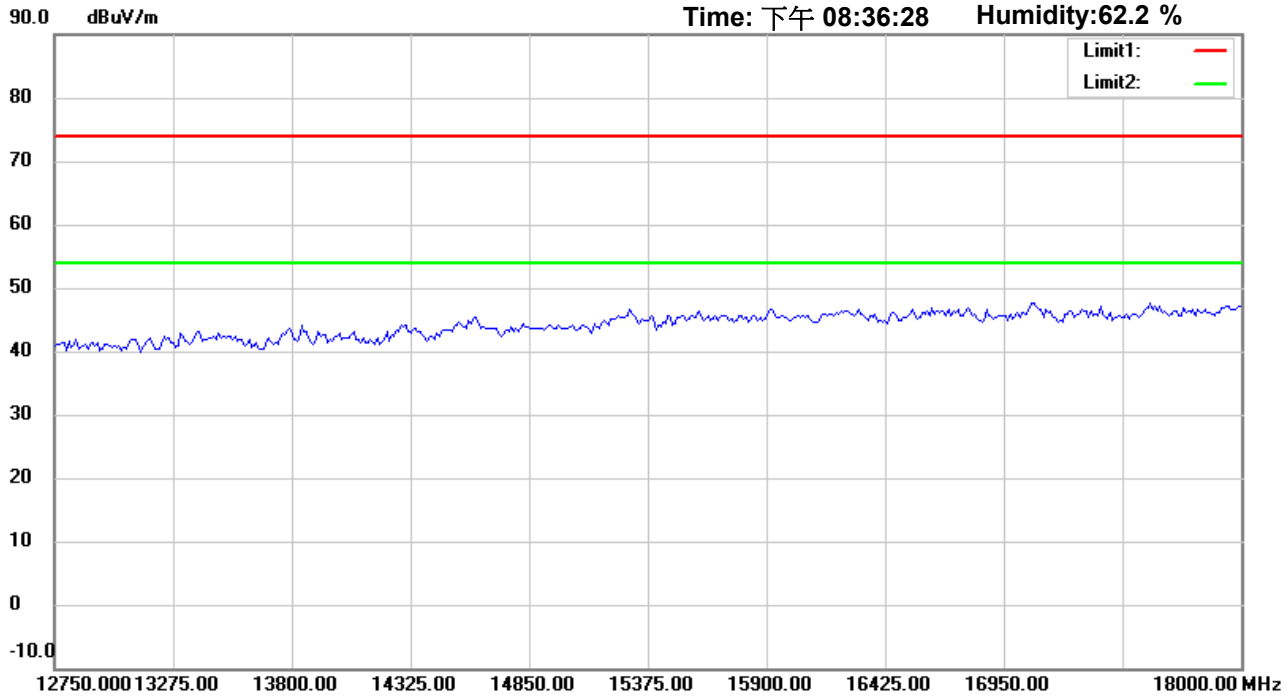
Radiated Emission Measurement

Operator: Sky

File :3 | Data :#9 | Date: 2023/3/17 | Time: 下午 08:36:28 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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
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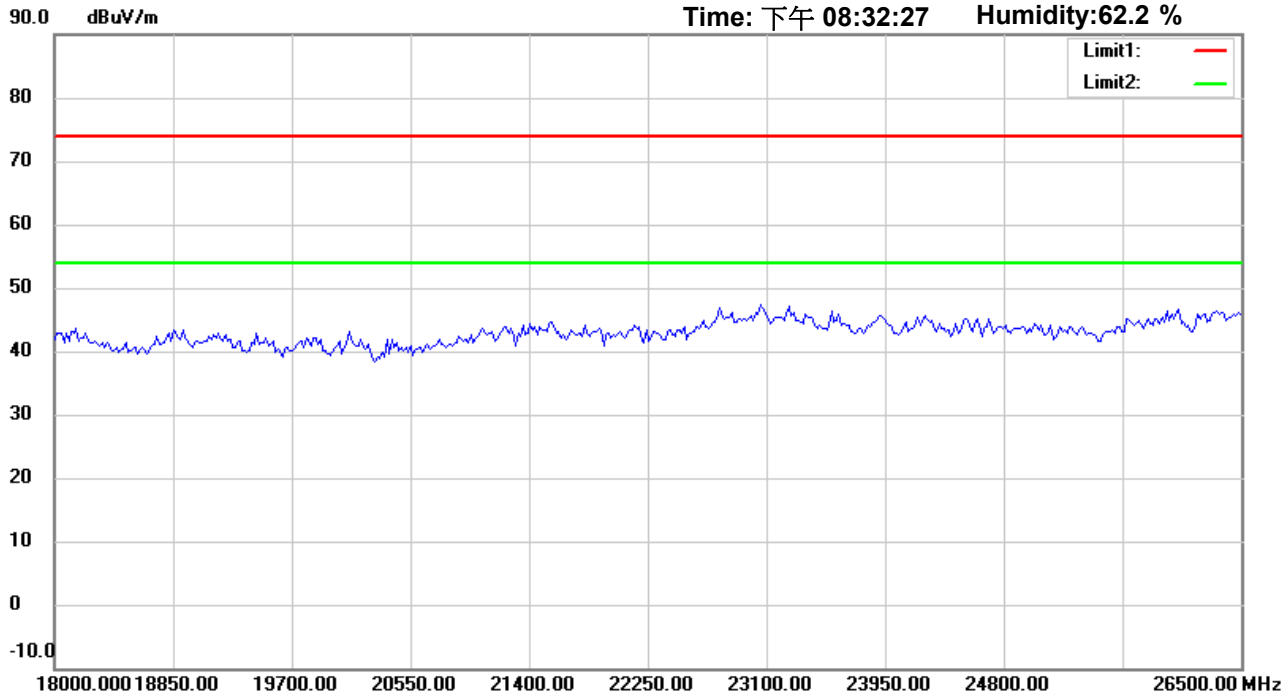
Radiated Emission Measurement

Operator: Sky

File :3 | Data :#5 | Date: 2023/3/17 | Time: 下午 08:32:27 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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
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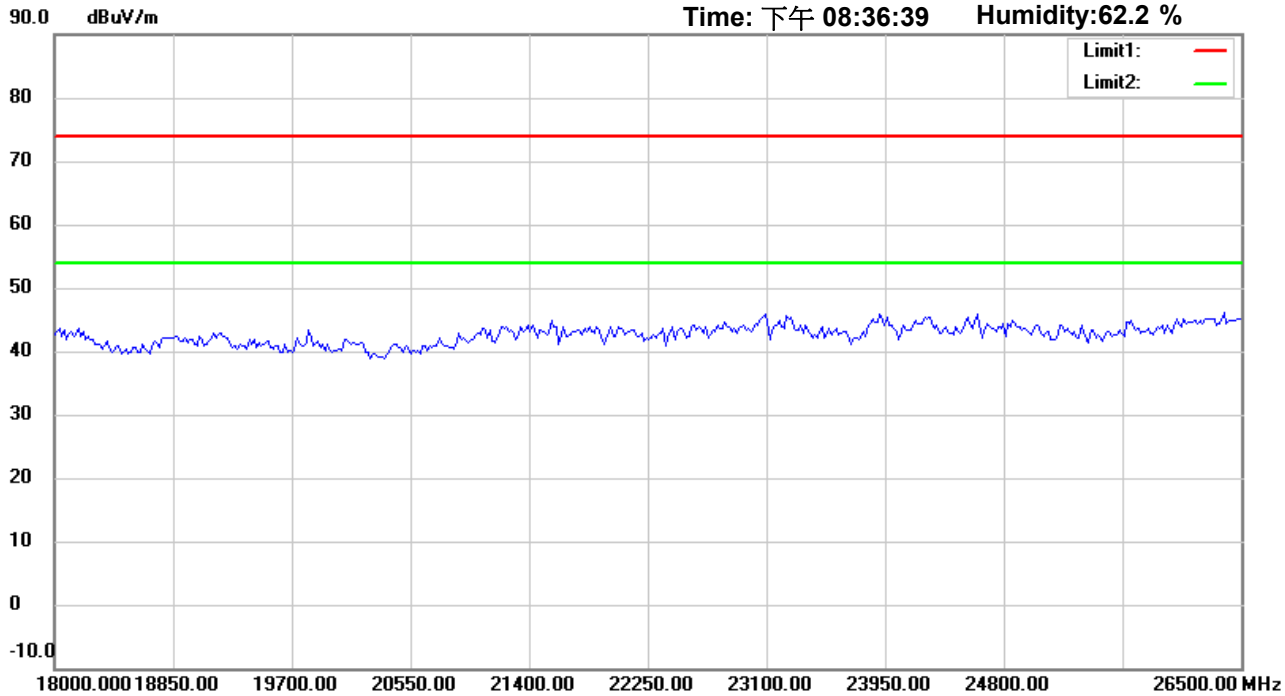
Radiated Emission Measurement

Operator: Sky

File :3 | Data :#10 | Date: 2023/3/17 | Time: 下午 08:36:39 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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

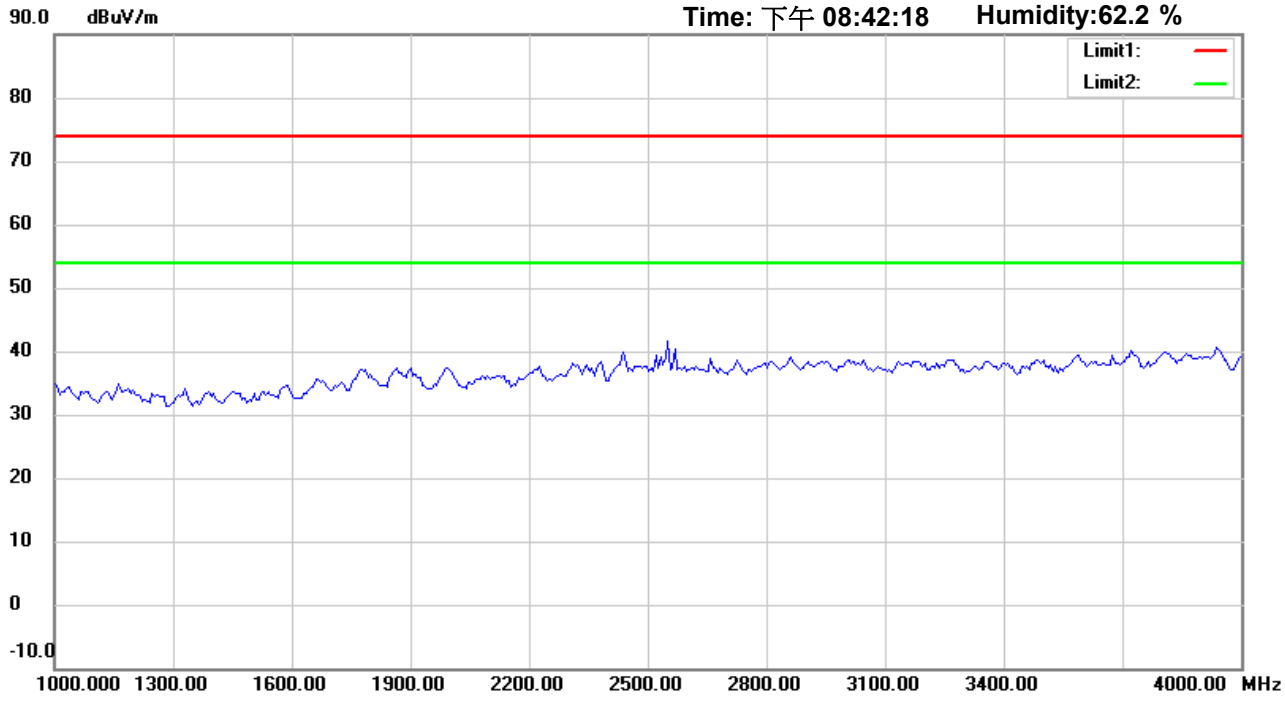
*:Maximum data x:Over limit !:over margin

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: Sky

File :3 | Data :#1 | Date: 2023/3/17 | Time: 下午 08:42:18 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2440 MHz

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
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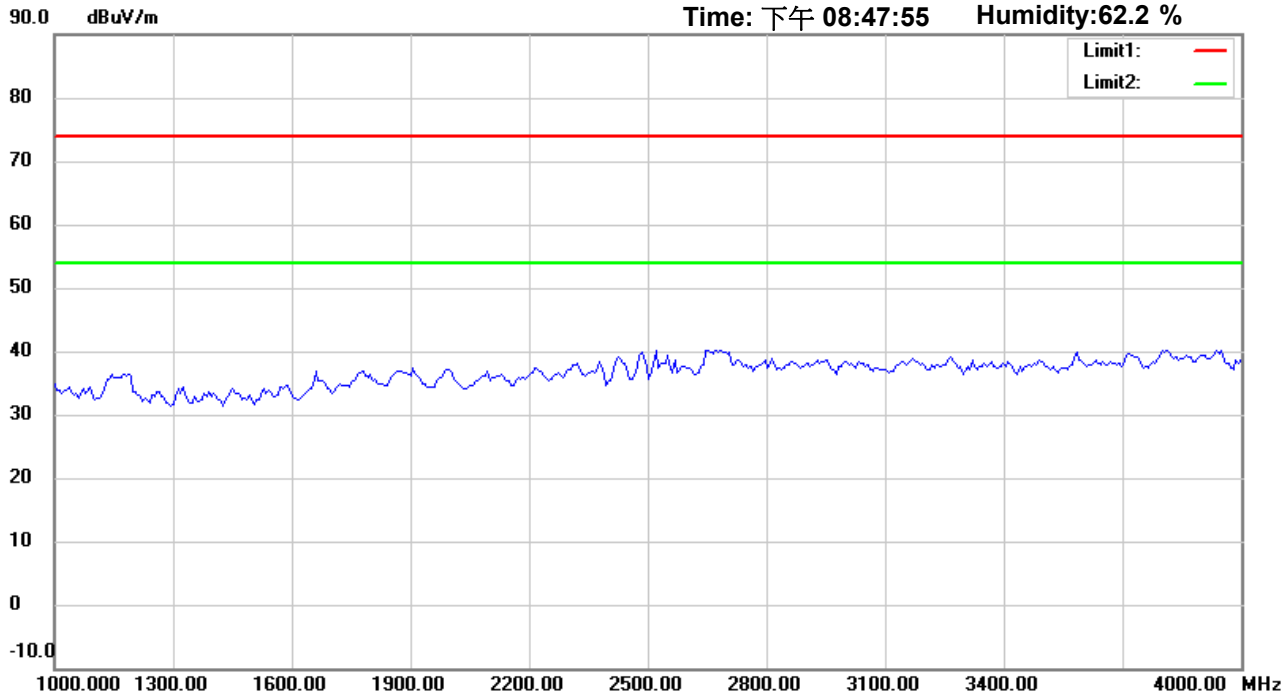
Radiated Emission Measurement

Operator: Sky

File :3 | Data :#6 | Date: 2023/3/17 | Time: 下午 08:47:55 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2440 MHz

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
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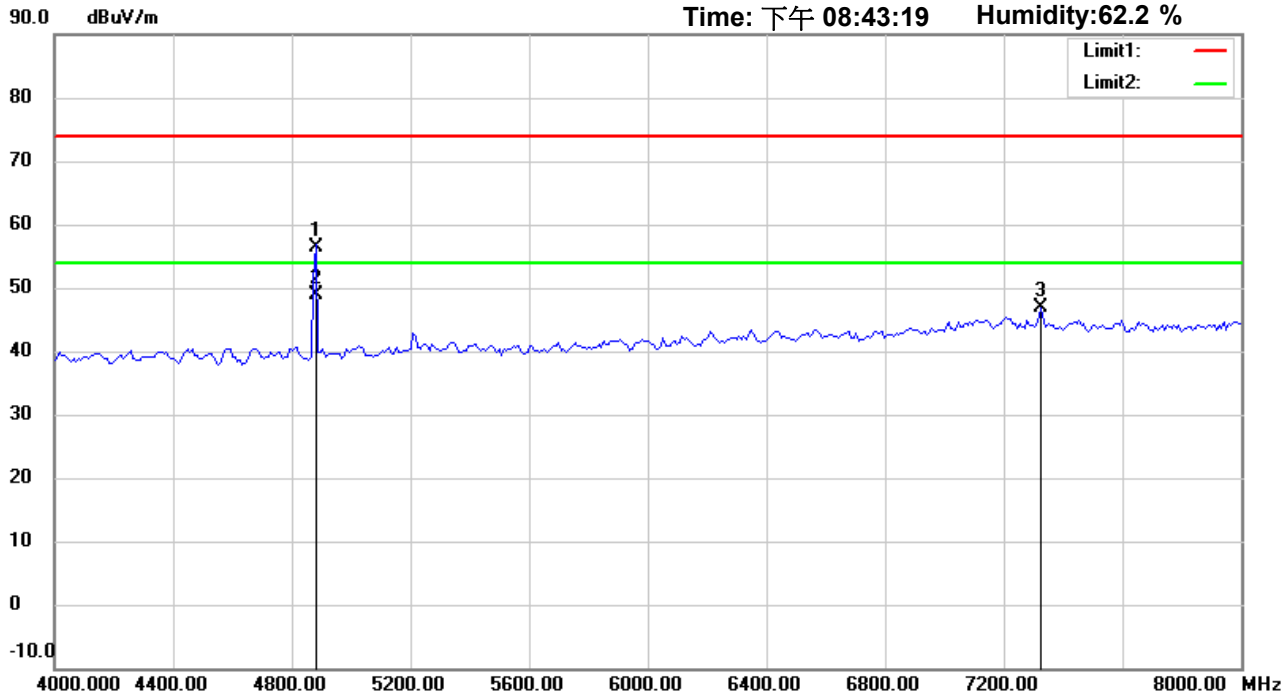
Radiated Emission Measurement

Operator: Sky

File :3 Data :#2 Date: 2023/3/17 Time: 下午 08:43:19

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2440 MHz

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
	4880.446	57.75	peak	-1.40	56.35	74.00	150	199	-17.65	
*	4880.446	50.31	AVG	-1.40	48.91	54.00	150	199	-5.09	
	7320.000	43.04	peak	3.85	46.89	74.00	150	4	-27.11	

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

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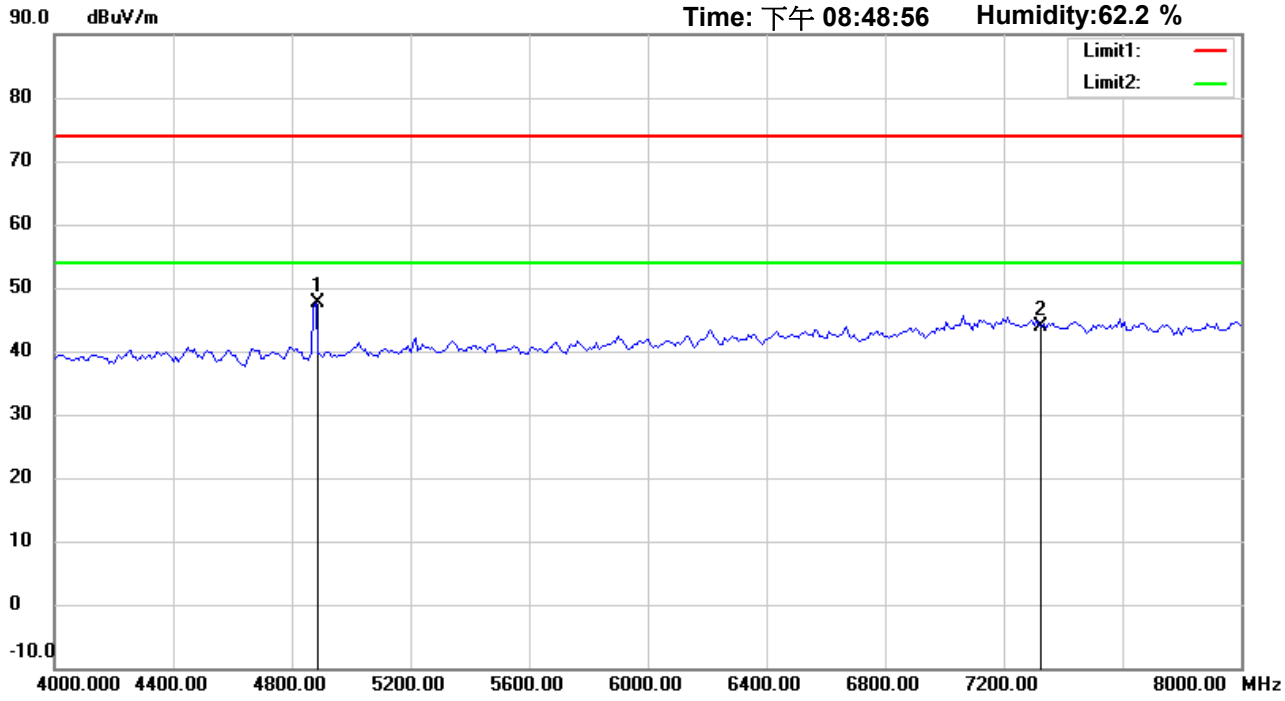
Radiated Emission Measurement

Operator: Sky

File :3 Data :#7 Date: 2023/3/17 Time: 下午 08:48:56

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2440 MHz

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
*	4881.764	49.13	peak	-1.40	47.73	74.00	150	107	-26.27	
	7320.000	40.10	peak	3.85	43.95	74.00	150	28	-30.05	

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

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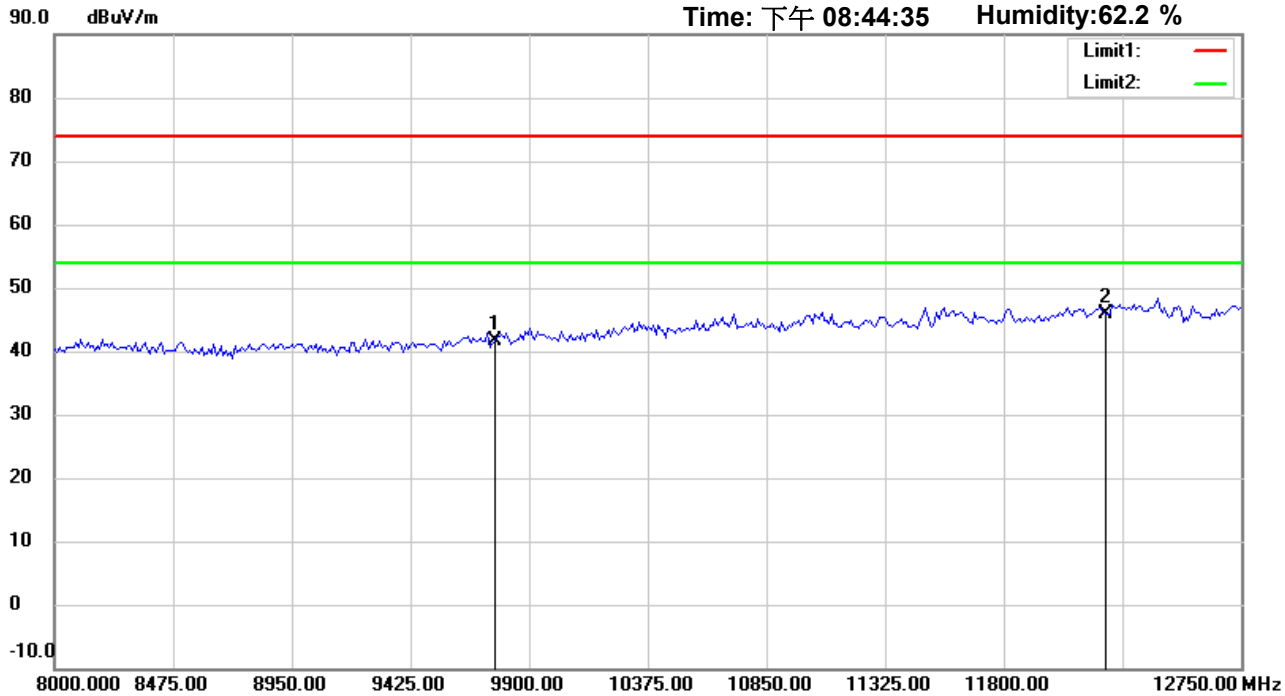
Radiated Emission Measurement

Operator: Sky

File :3 | Data :#3 | Date: 2023/3/17 | Time: 下午 08:44:35 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2440 MHz

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
	9760.000	34.54	peak	7.02	41.56	74.00	150	43	-32.44	
*	12200.000	32.39	peak	13.60	45.99	74.00	150	102	-28.01	

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

Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
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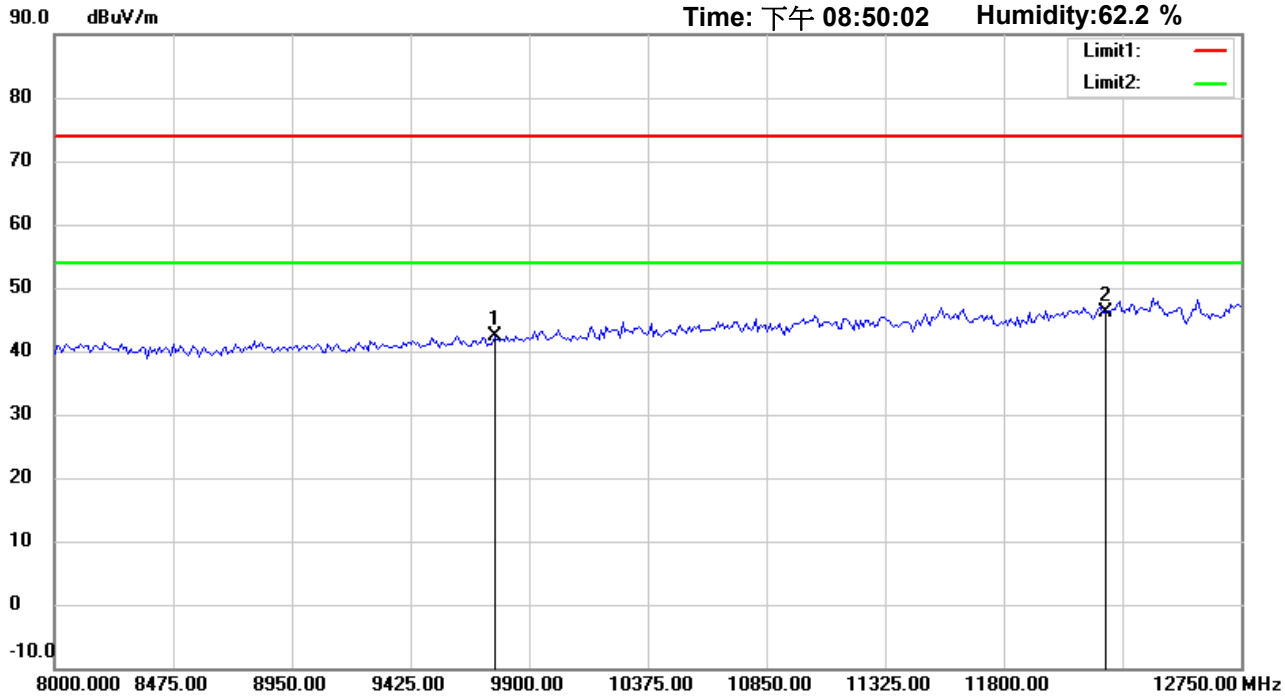
Radiated Emission Measurement

Operator: Sky

File :3 Data :#8 Date: 2023/3/17 Time: 下午 08:50:02

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2440 MHz

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
	9760.000	35.38	peak	7.02	42.40	74.00	150	20	-31.60	
*	12200.000	32.63	peak	13.60	46.23	74.00	150	113	-27.77	

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

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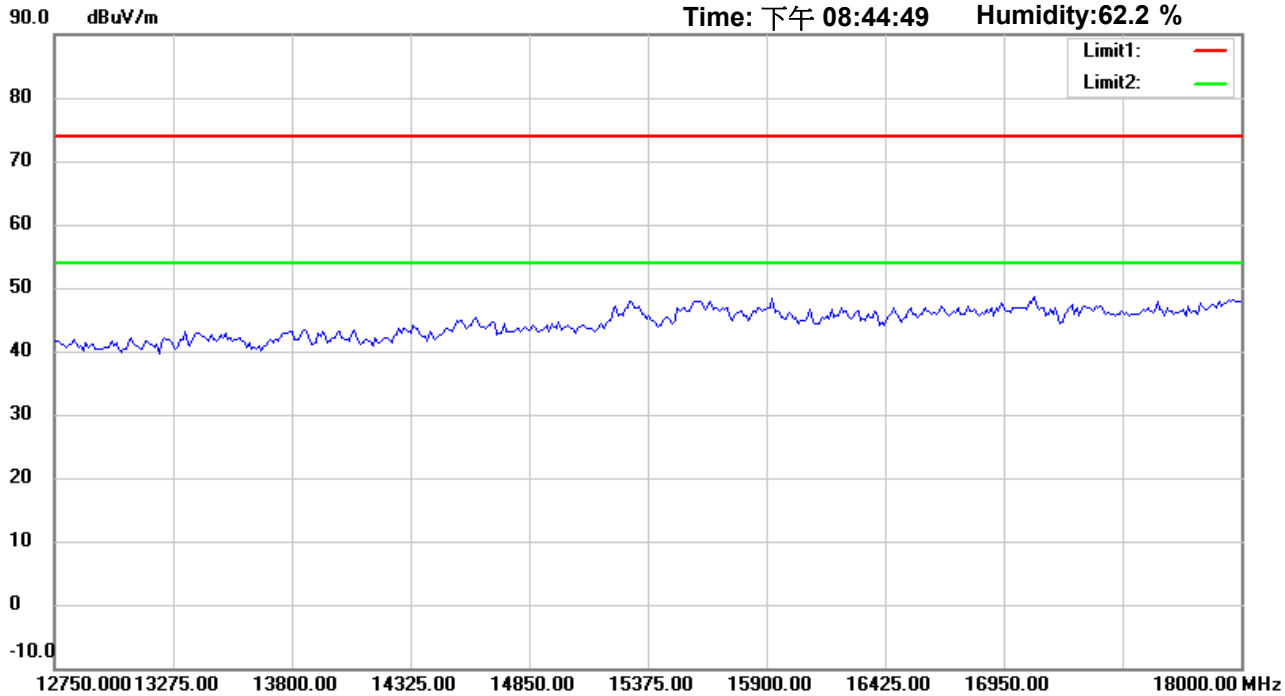
Radiated Emission Measurement

Operator: Sky

File :3 Data :#4 Date: 2023/3/17 Time: 下午 08:44:49

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2440 MHz

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
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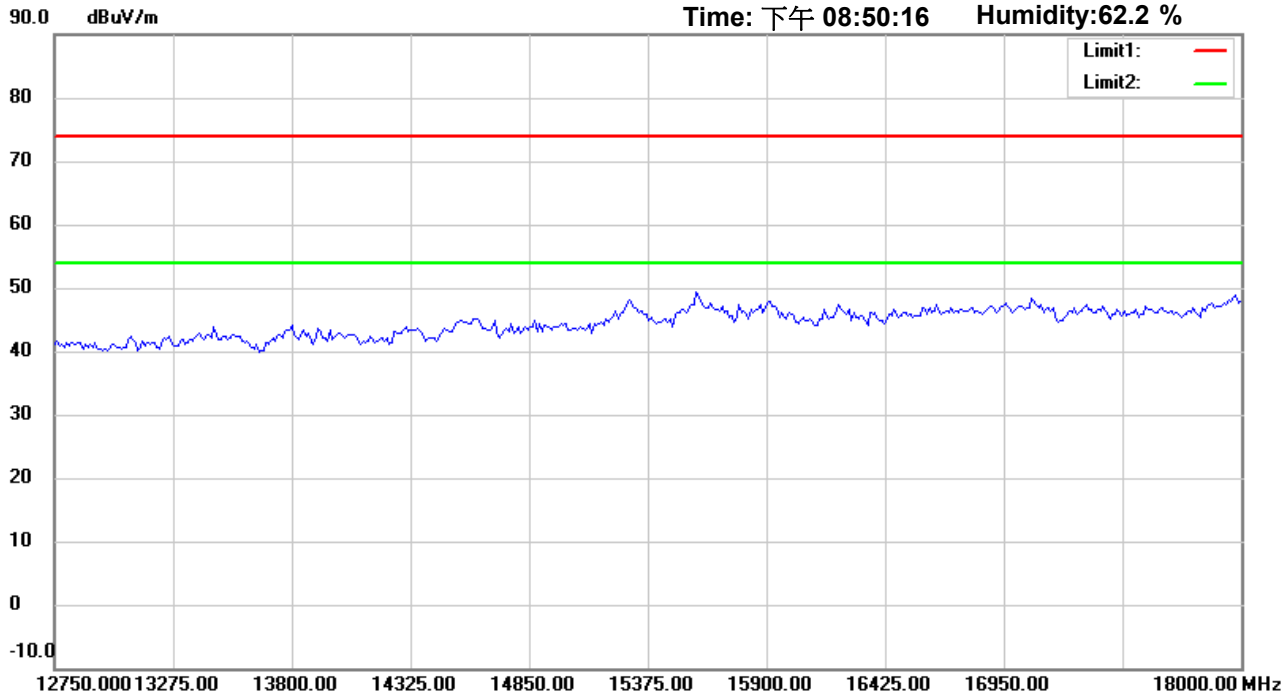
Radiated Emission Measurement

Operator: Sky

File :3 Data :#9 Date: 2023/3/17 Time: 下午 08:50:16

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2440 MHz

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
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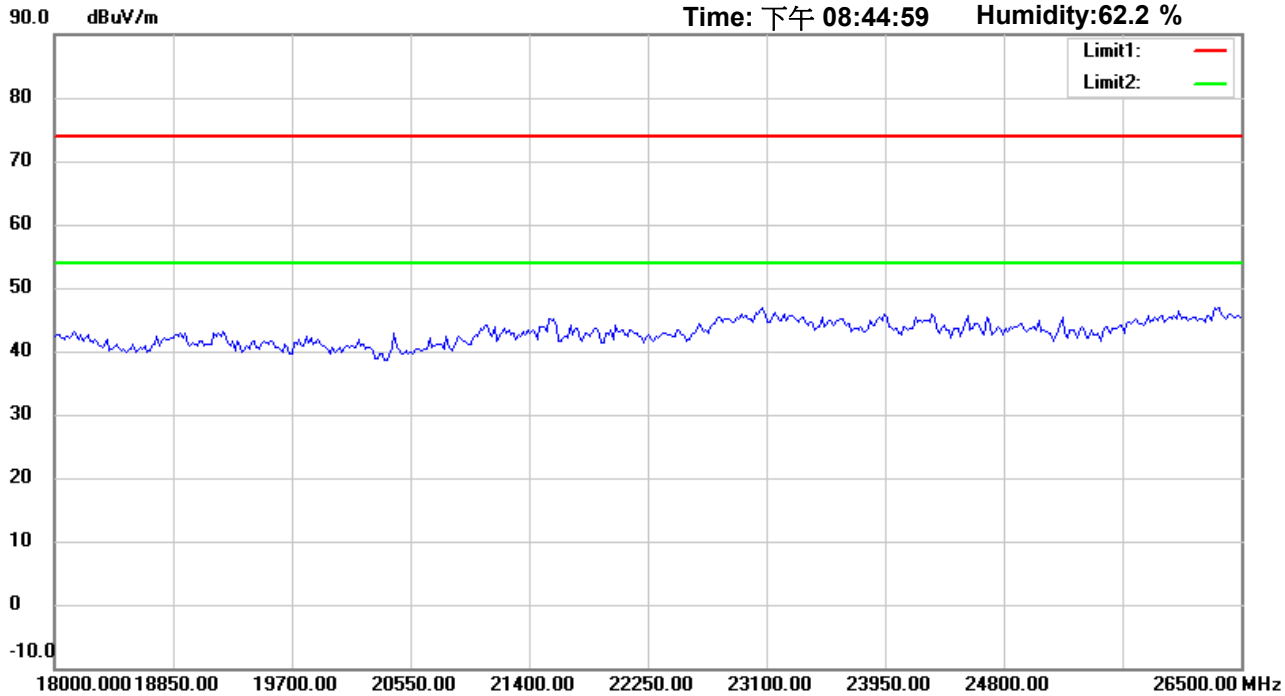
Radiated Emission Measurement

Operator: Sky

File :3 | Data :#5 | Date: 2023/3/17 | Time: 下午 08:44:59 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2440 MHz

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
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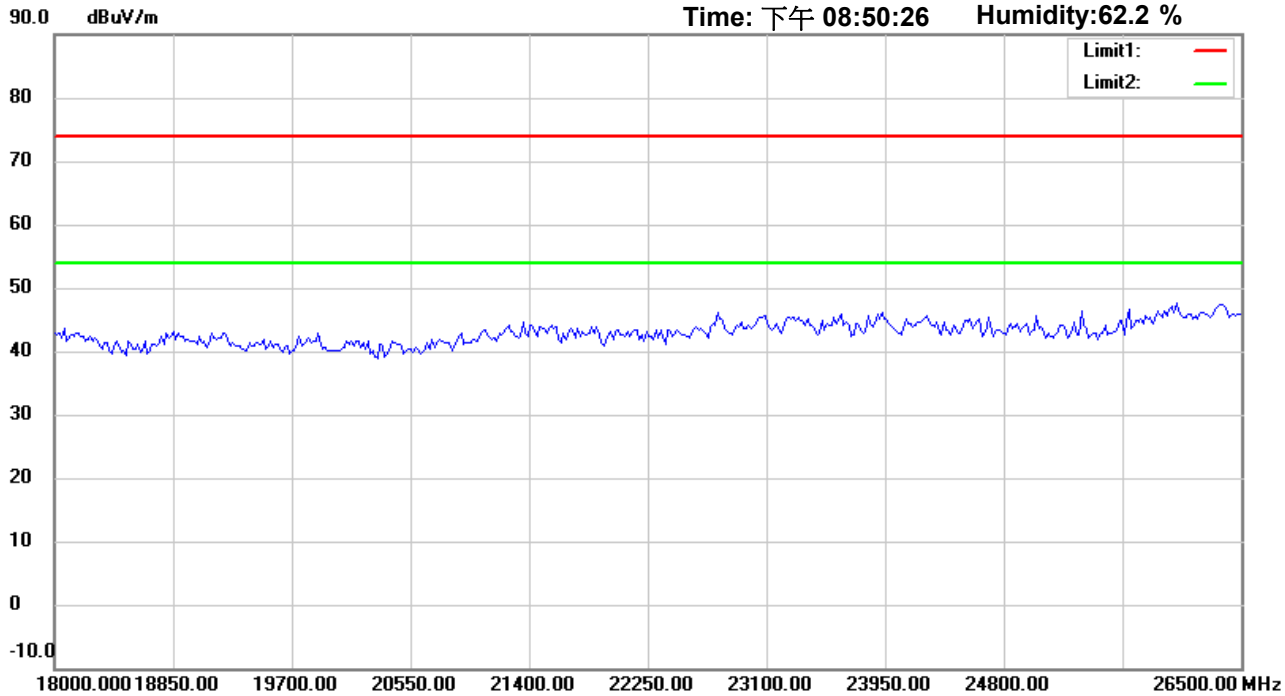
Radiated Emission Measurement

Operator: Sky

File :3 | Data :#10 | Date: 2023/3/17 | Time: 下午 08:50:26 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2440 MHz

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
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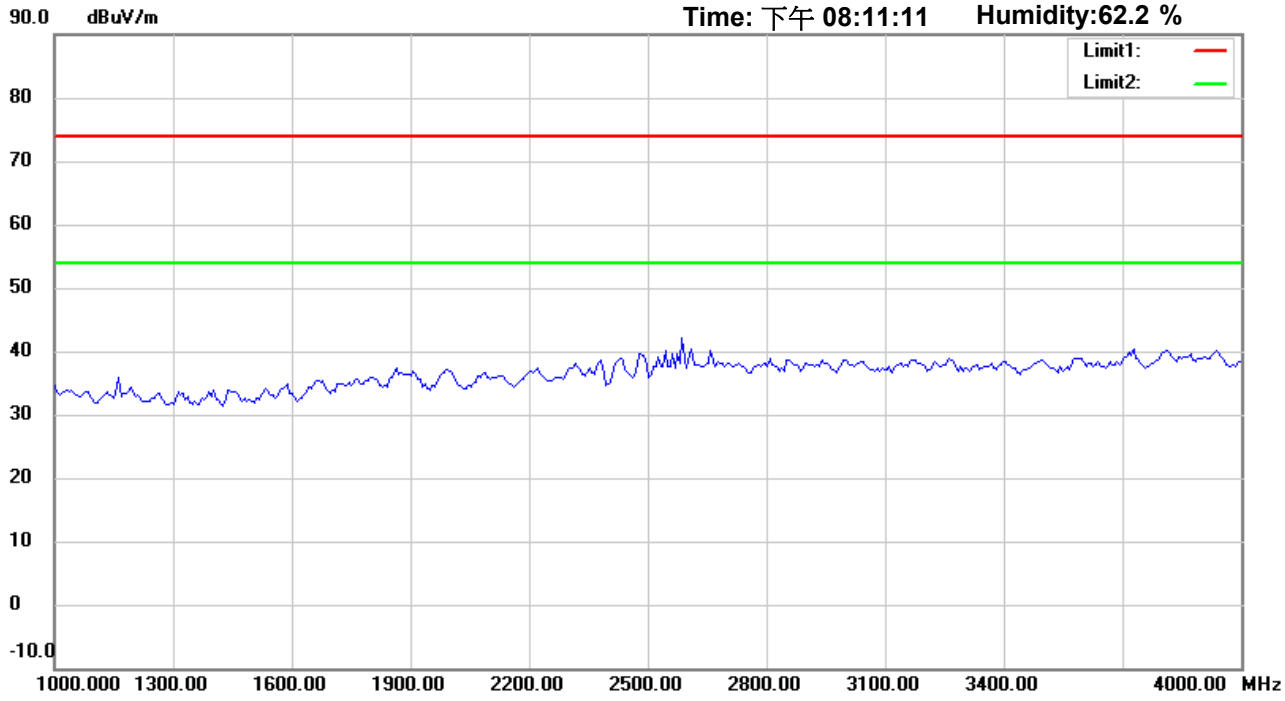
Radiated Emission Measurement

Operator: Sky

File :3 | Data :#1 | Date: 2023/3/17 | Time: 下午 08:11:11 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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
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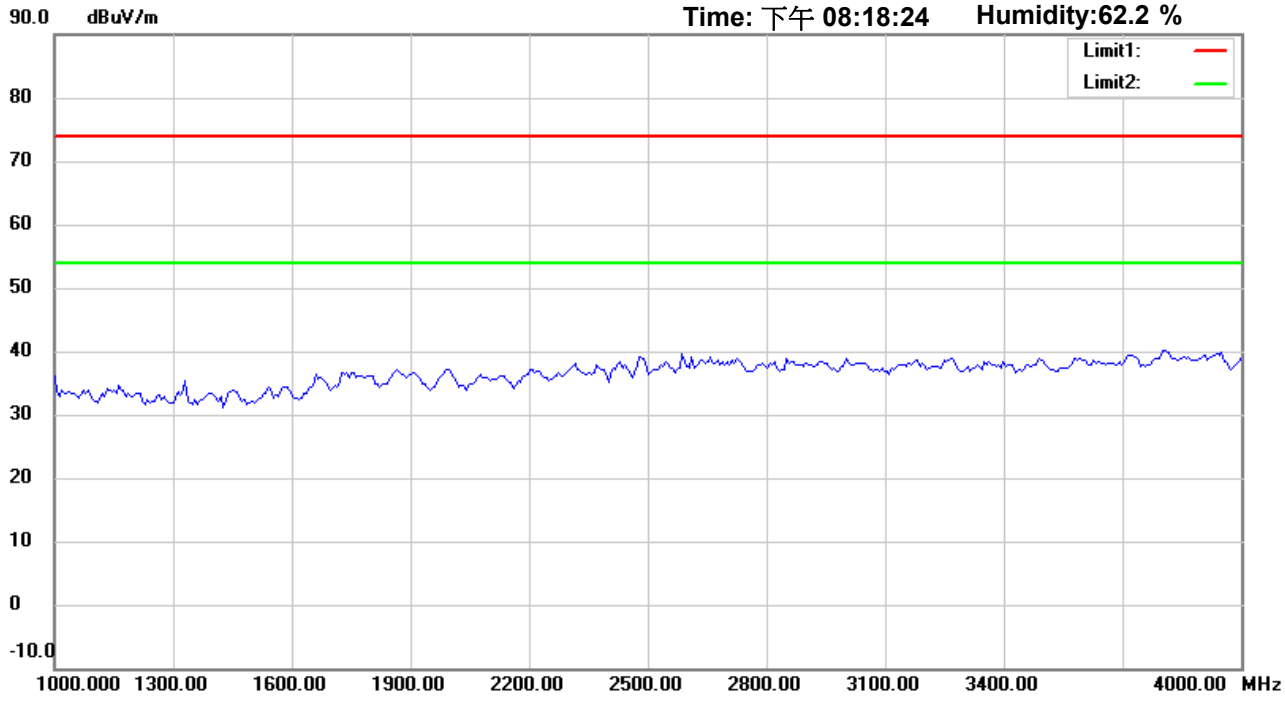
Radiated Emission Measurement

Operator: Sky

File :3 | Data :#6 | Date: 2023/3/17 | Time: 下午 08:18:24 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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

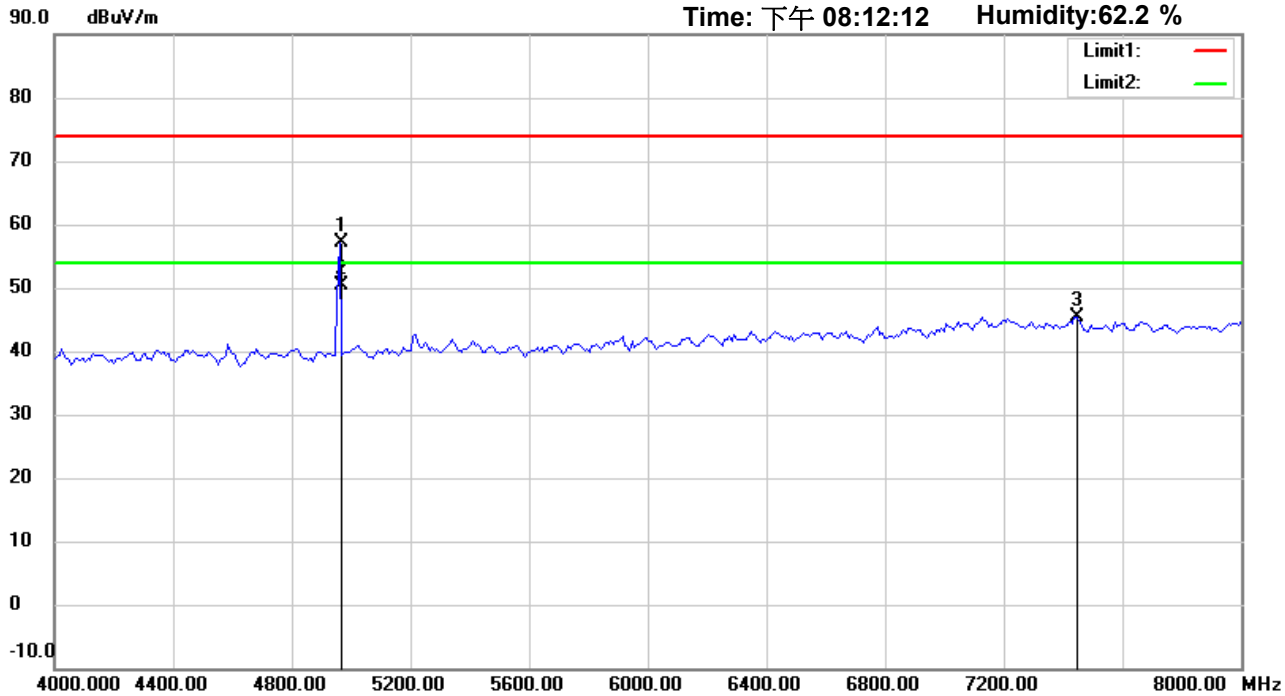
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Sky

File :3 Data :#2 Date: 2023/3/17 Time: 下午 08:12:12

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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
	4961.924	57.80	peak	-0.78	57.02	74.00	150	150	-16.98	
*	4961.924	51.08	AVG	-0.78	50.30	54.00	150	150	-3.70	
	7440.000	41.46	peak	3.83	45.29	74.00	150	320	-28.71	

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

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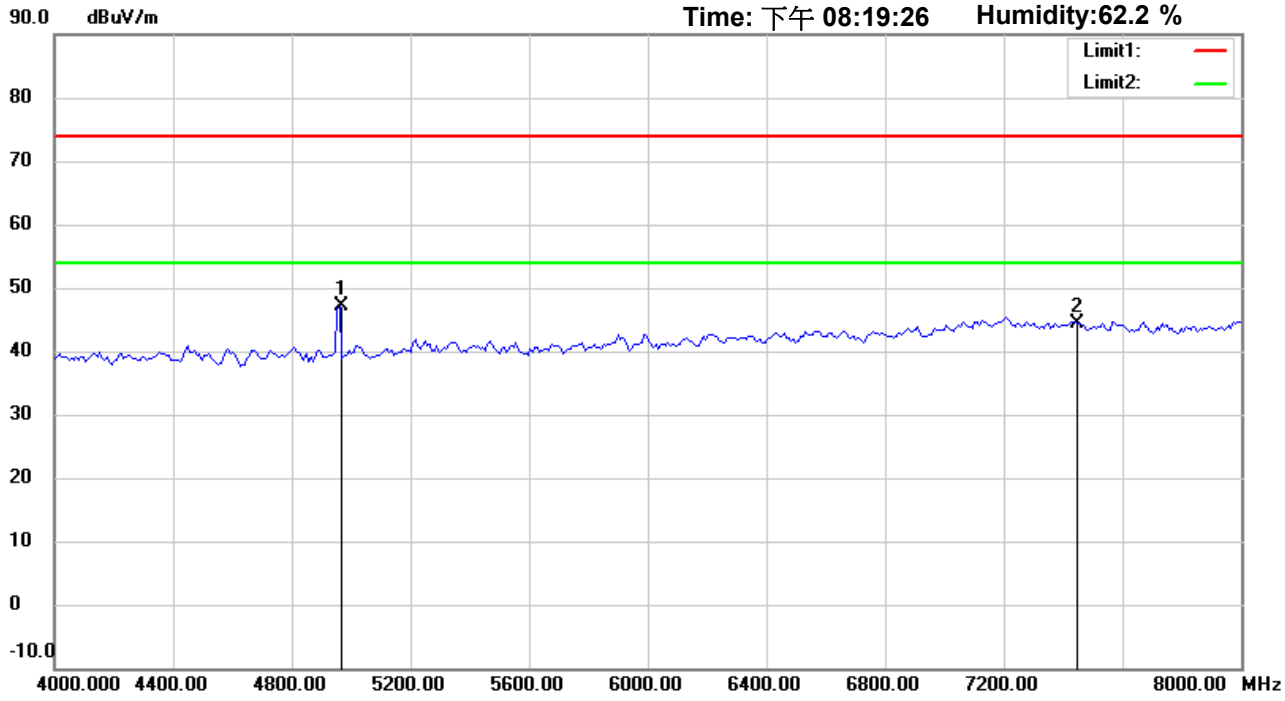
Radiated Emission Measurement

Operator: Sky

File :3 | Data :#7 | Date: 2023/3/17 | Time: 下午 08:19:26 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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
*	4961.924	47.91	peak	-0.78	47.13	74.00	150	227	-26.87	
	7440.000	40.51	peak	3.83	44.34	74.00	150	302	-29.66	

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

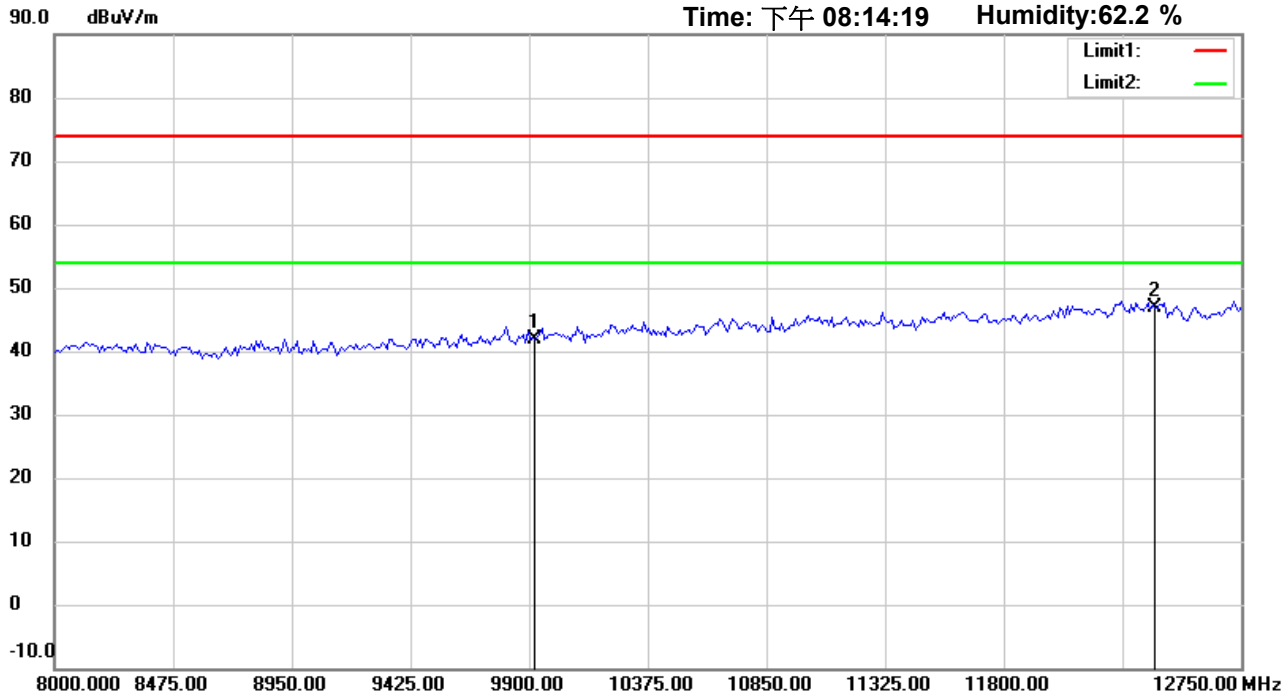
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Sky

File :3 Data :#3 Date: 2023/3/17 Time: 下午 08:14:19

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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
	9920.000	34.33	peak	7.54	41.87	74.00	150	30	-32.13	
*	12400.000	33.14	peak	13.71	46.85	74.00	150	212	-27.15	

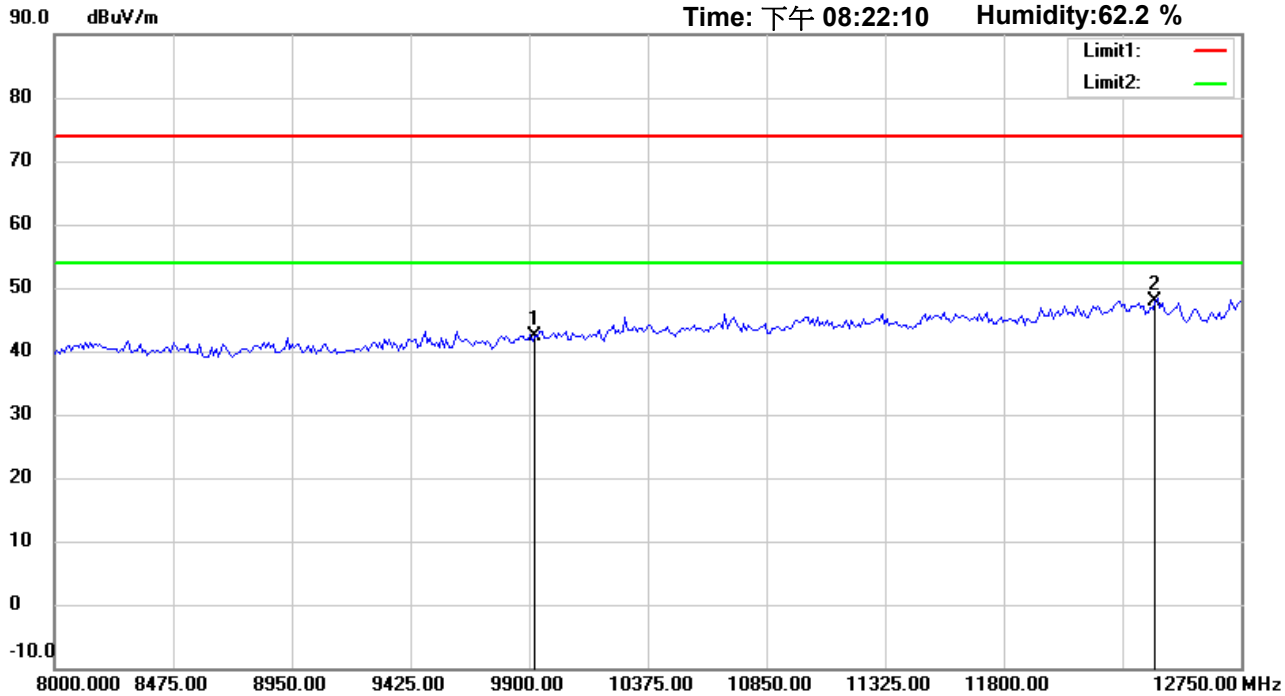
*:Maximum data x:Over limit !:over margin

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: Sky

File :3 | Data :#8 | Date: 2023/3/17 | Time: 下午 08:22:10 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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
	9920.000	34.81	peak	7.54	42.35	74.00	150	47	-31.65	
*	12400.000	34.15	peak	13.71	47.86	74.00	150	2	-26.14	

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

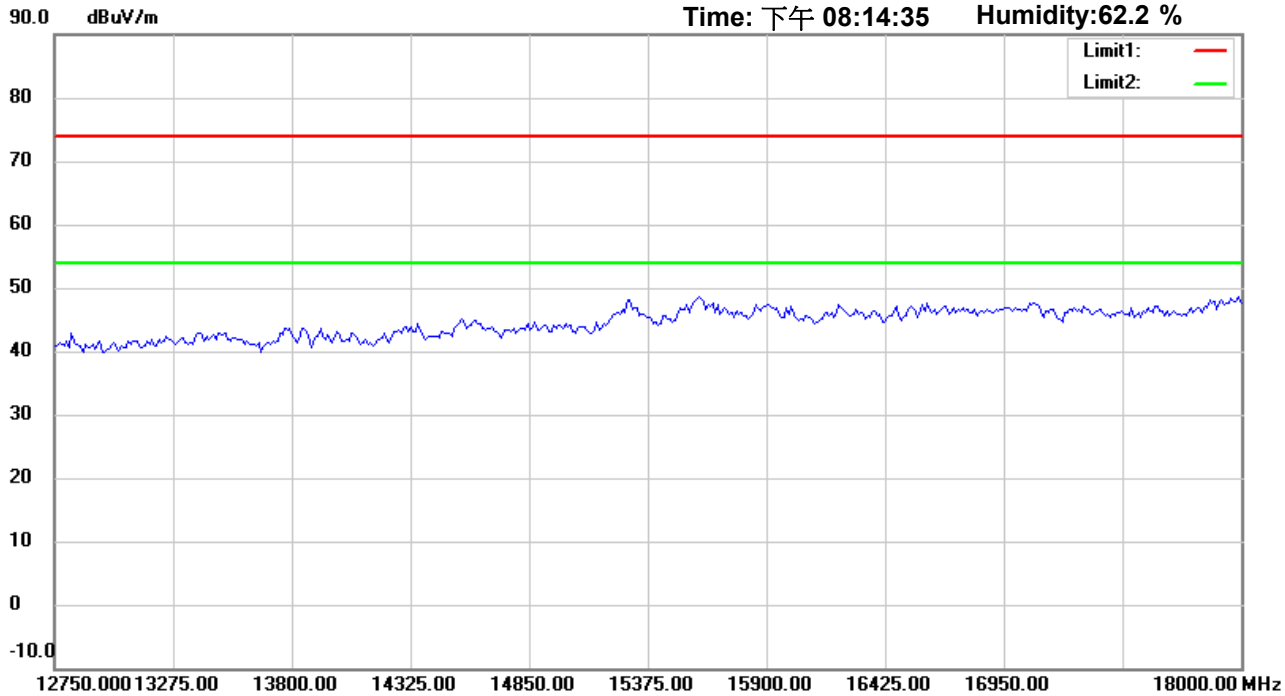
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Sky

File :3 Data :#4 Date: 2023/3/17 Time: 下午 08:14:35

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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

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Tel:+886-2-6606-8877
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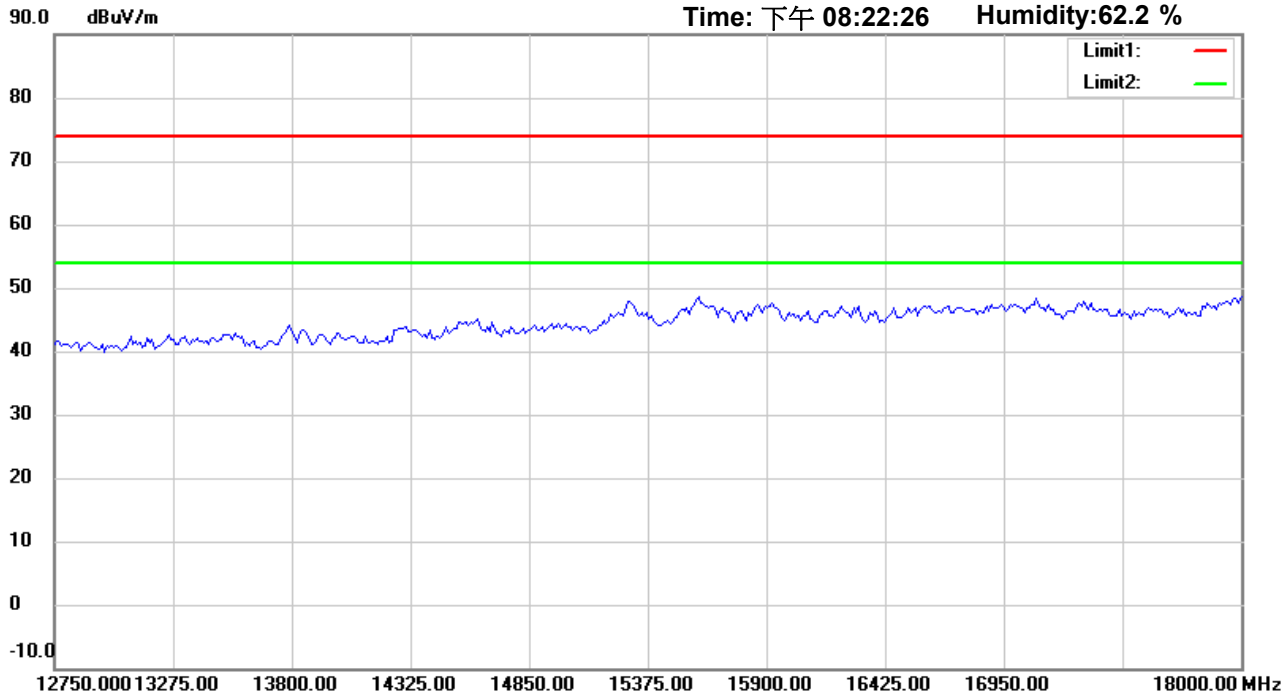
Radiated Emission Measurement

Operator: Sky

File :3 Data :#9 Date: 2023/3/17 Time: 下午 08:22:26

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M22303-22492
M/N:
Test Mode : TX 2480 MHz
Note :

Polarization: *Vertical*
Power : 3.7 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

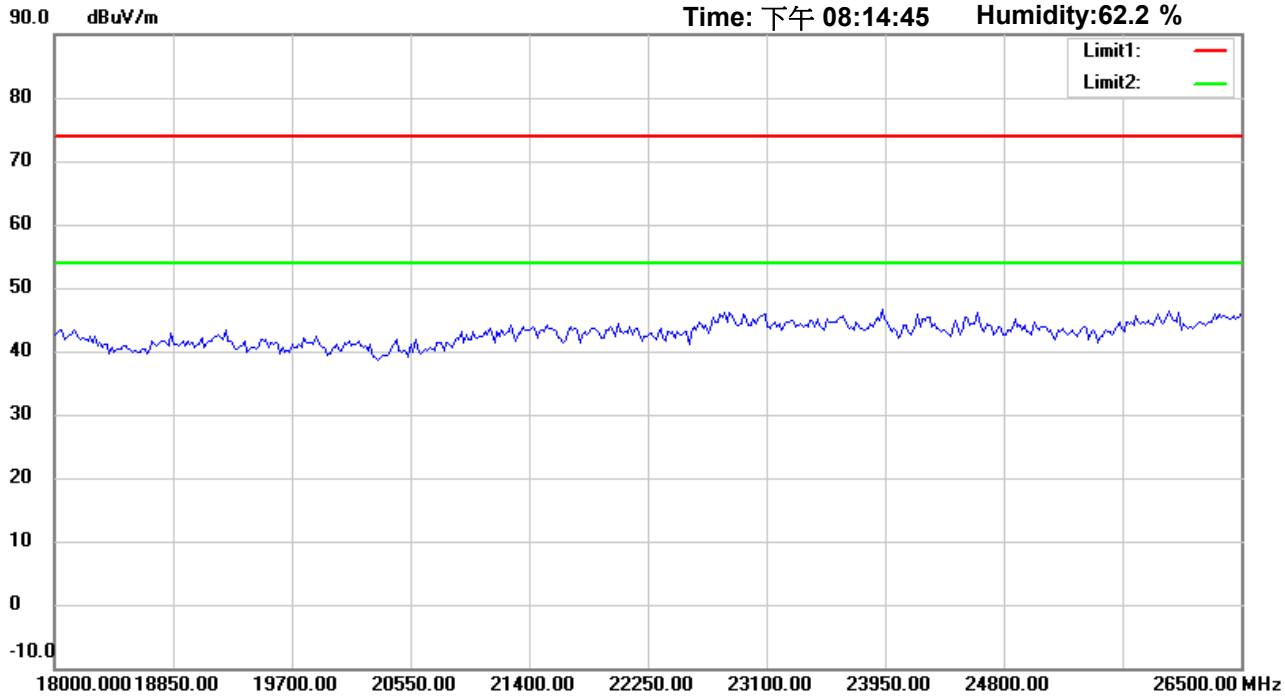
*:Maximum data x:Over limit !:over margin

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: Sky

File :3 | Data :#5 | Date: 2023/3/17 | Time: 下午 08:14:45 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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

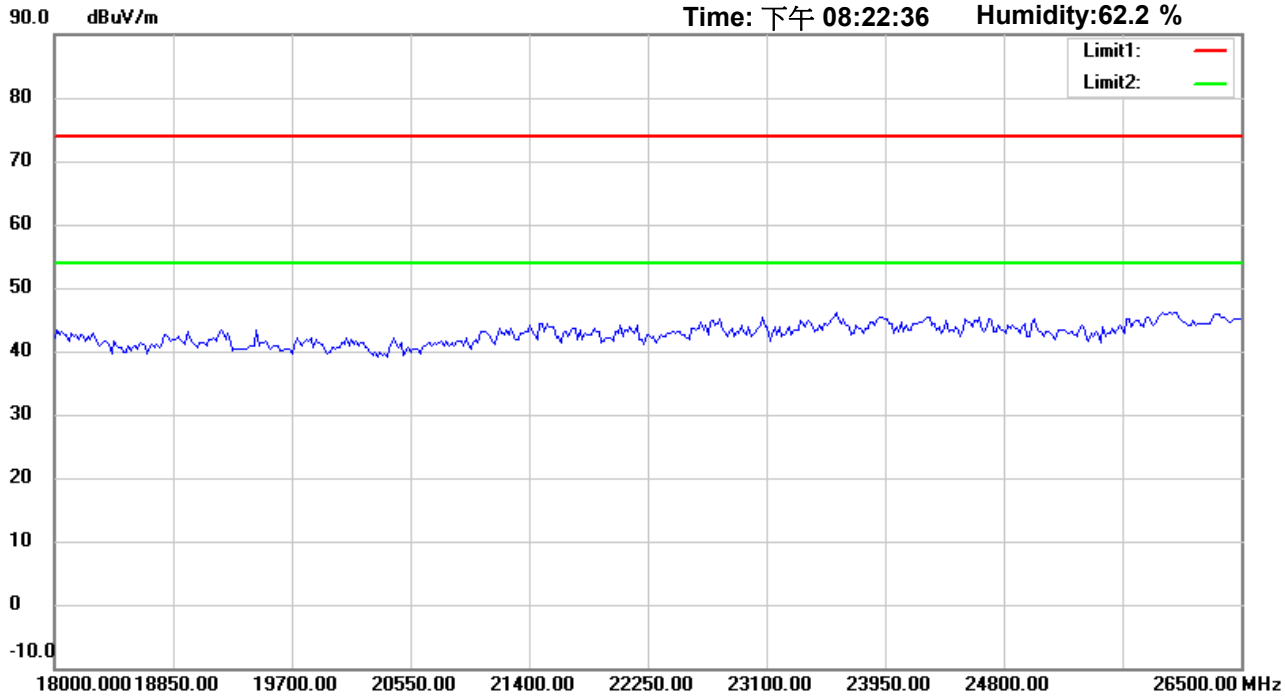
*:Maximum data x:Over limit !:over margin

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: Sky

File :3 | Data :#10 | Date: 2023/3/17 | Time: 下午 08:22:36 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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

Bandedge

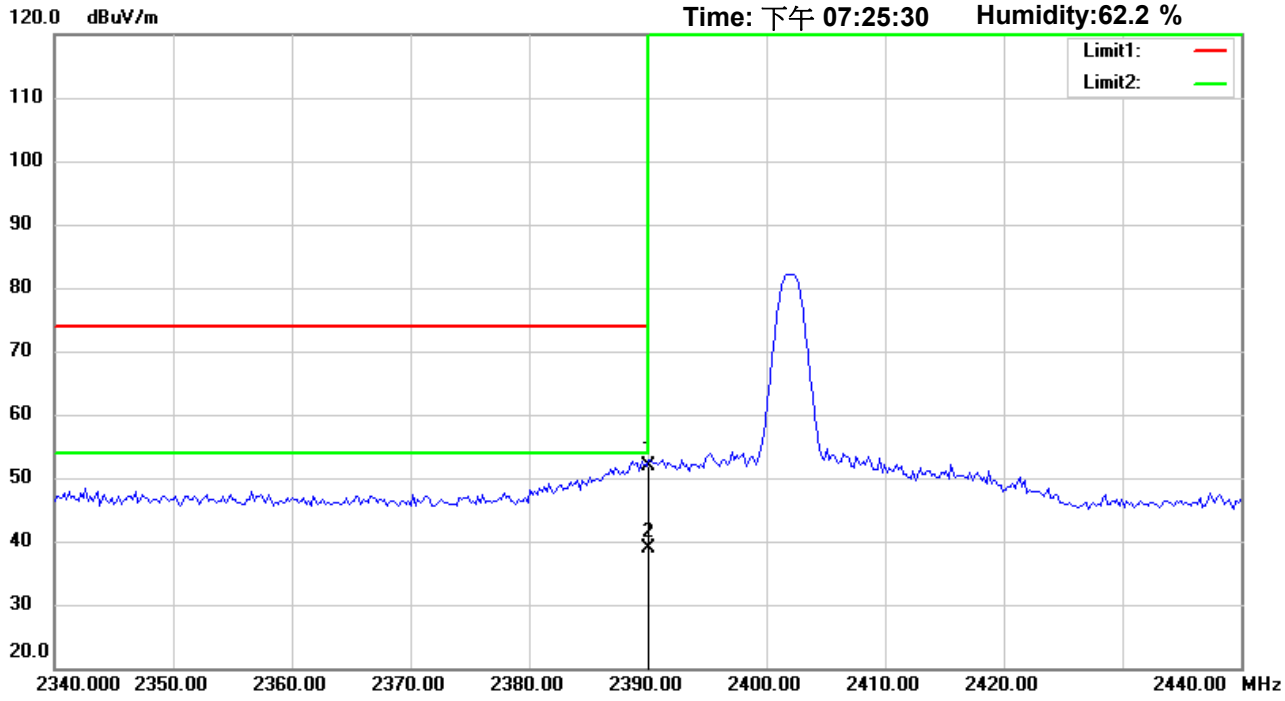
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Sky

File :Bandedge Data :#1 Date: 2023/3/17 Time: 下午 07:25:30

Temperature:24.5 ℃
Humidity:62.2 %



Site : Chamber

Condition : FCC 15.247 PK (Bandedge)

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2402 MHz

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
	2390.000	14.86	peak	37.11	51.97	74.00	150	160	-22.03	
*	2390.000	1.78	AVG	37.11	38.89	54.00	150	160	-15.11	

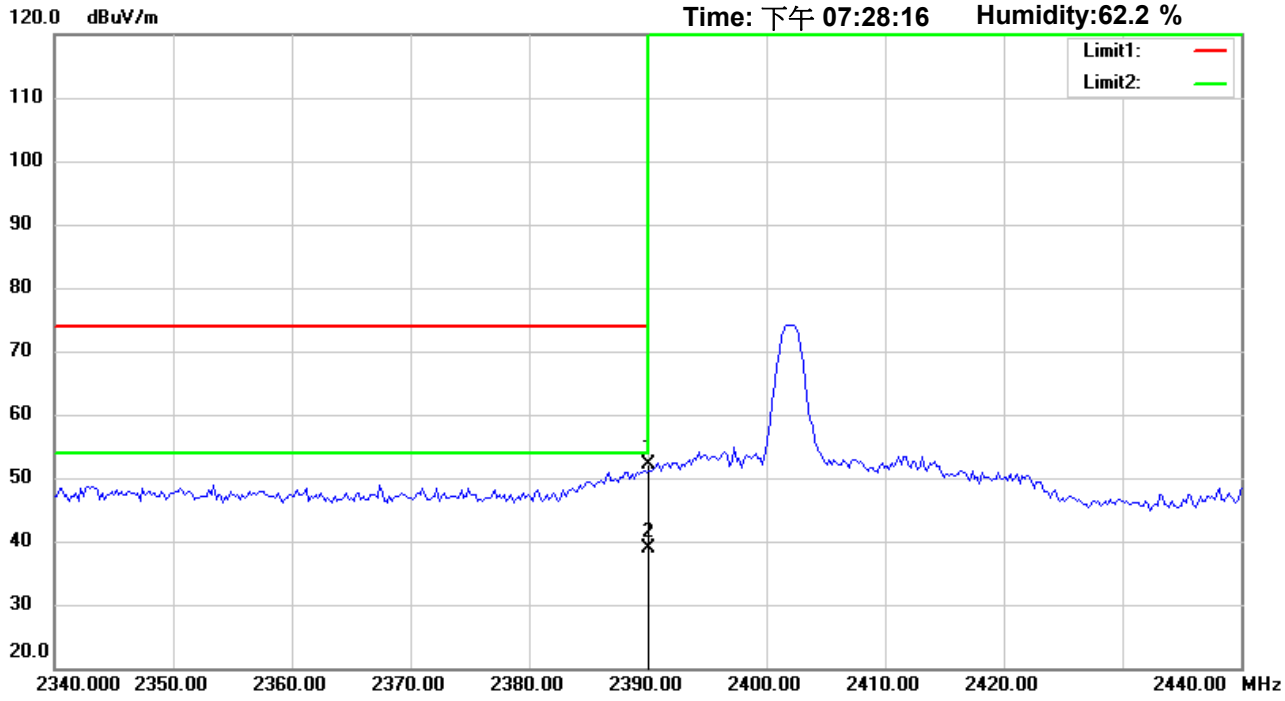
*:Maximum data x:Over limit !:over margin

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: Sky

File :Bandedge | Data :#2 | Date: 2023/3/17 | Time: 下午 07:28:16 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC 15.247 PK (Bandedge)

EUT : W6M22303-22492

M/N:

Test Mode : TX 2402 MHz

Note :

Polarization: *Vertical*

Power : 3.7 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
	2390.000	15.08	peak	37.11	52.19	74.00	150	310	-21.81	
*	2390.000	1.79	AVG	37.11	38.90	54.00	150	310	-15.10	

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

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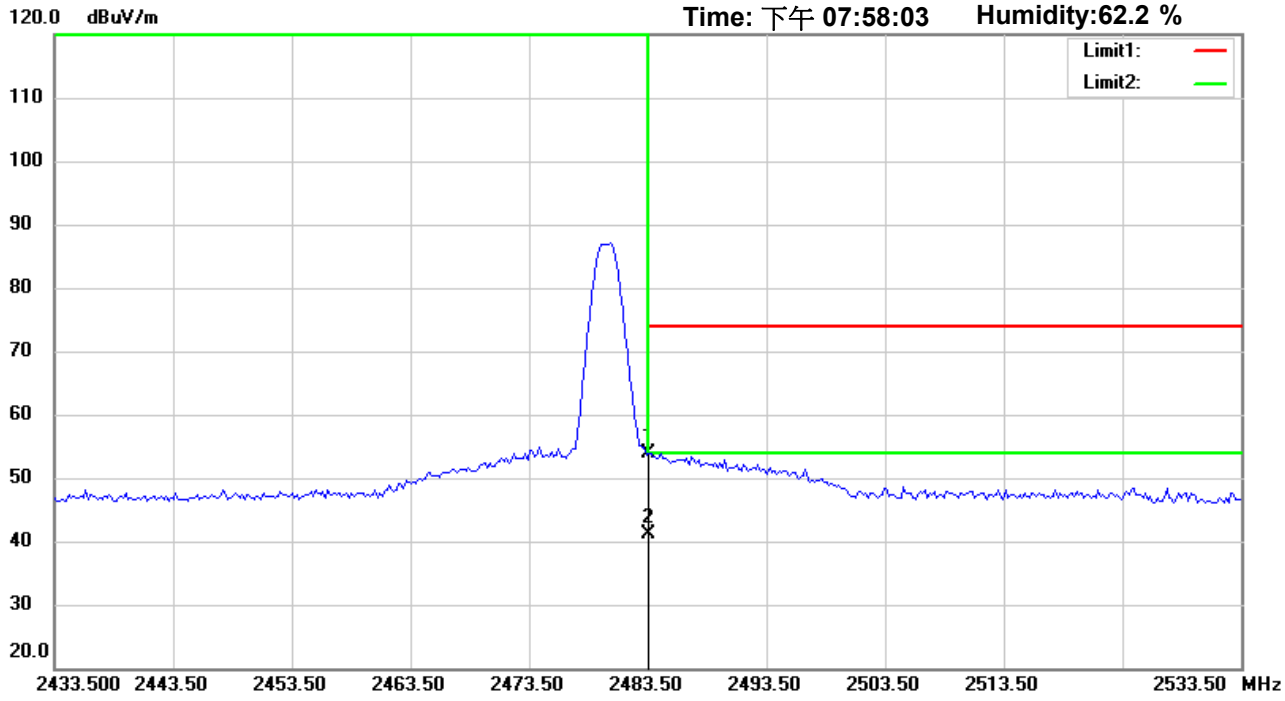
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Sky

File :Bandedge | Data :#1 | Date: 2023/3/17 | Time: 下午 07:58:03 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC 15.247 PK (Bandedge)

Polarization: *Horizontal*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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
	2483.500	15.77	peak	38.14	53.91	74.00	150	160	-20.09	
*	2483.500	2.92	AVG	38.14	41.06	54.00	150	160	-12.94	

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

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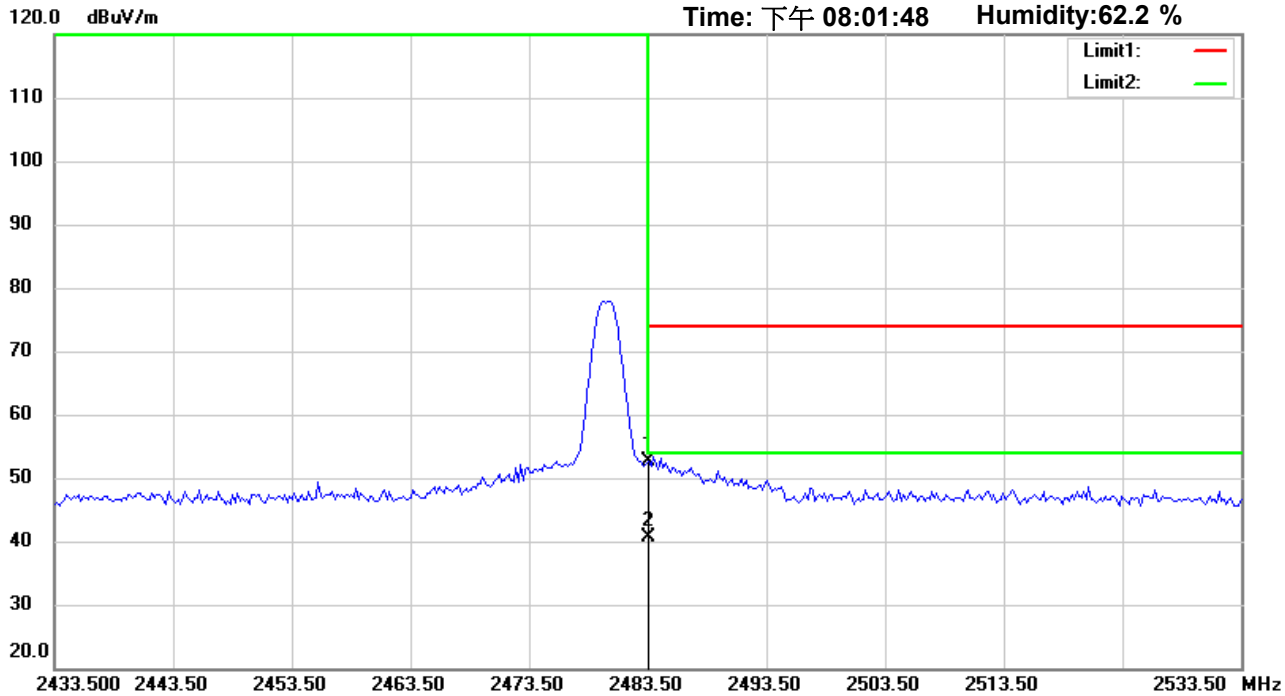
Radiated Emission Measurement

Operator: Sky

File :Bandedge | Data :#2 | Date: 2023/3/17 | Time: 下午 08:01:48 | Temperature:24.5 ℃ | Humidity:62.2 %



Site : Chamber

Condition : FCC 15.247 PK (Bandedge)

Polarization: *Vertical*

EUT : W6M22303-22492

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 2480 MHz

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
	2483.500	14.43	peak	38.14	52.57	74.00	150	120	-21.43	
*	2483.500	2.37	AVG	38.14	40.51	54.00	150	120	-13.49	

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