

FCC PART 15 SUBPART E TEST REPORT

for

Transmitter

Model No.: MT-58

FCC ID: M5X-MT58

IC: 2978A-MT58

of

Applicant: MIPRO Electronics Co., Ltd.

Address: 814 Pei-kang Road Chia-yi 600 Taiwan, R.O.C

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: TW1477, TW0020, TW1072

Industry Canada filed test laboratory Reg. No. 20037

A2LA Accredited No.: 2732.01



Report No.: W6M21904-18930-C-7

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: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

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	4
1.5	GENERAL INFORMATION OF TEST ITEM	4
1.6	TEST STANDARDS.....	5
2	TECHNICAL TEST	6
2.1	SUMMARY OF TEST RESULTS	6
2.2	TEST ENVIRONMENT	6
2.3	TEST EQUIPMENT LIST	7
2.4	TEST PROCEDURE	10
3	TEST RESULTS (ENCLOSURE)	13
3.1	PEAK TRANSMIT POWER, FCC 15.407 (A)	14
3.2	26dB EMISSION BANDWIDTH, 99% OCCUPIED BANDWIDTH, FCC 15.407 (A)	16
3.3	6dB EMISSION BANDWIDTH, 99% OCCUPIED BANDWIDTH, FCC 15.407 (A)	16
3.4	PEAK POWER SPECTRAL DENSITY, FCC 15.407 (A)	18
3.5	UNDESIRABLE EMISSION LIMITS, FCC 15.407 (B)	20
3.6	AUTOMATIC DISCONTINUATION OF TRANSMISSION, FCC 15.407 (C).....	22
3.7	RESERVED, FCC 15.407 (D).....	22
3.8	INDOOR OPERATION RESTRICTION, FCC 15.407 (E)	22
3.9	EQUIVALENT ISOTROPIC RADIATED POWER, FCC 15.407 (F)	23
3.10	RF EXPOSURE COMPLIANCE REQUIREMENTS	23
3.11	TRANSMIT POWER CONTROL (TPC)	24
3.12	RADIATED EMISSIONS FROM RECEIVER PART	26
3.13	POWER LINE CONDUCTED EMISSION	27



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21904-18930-C-7
FCC ID: M5X-MT58
IC: 2978A-MT58

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.

Specific Conditions:

Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

Tester:

August 02, 2019	Rick Chen	<i>Rick Chen.</i>
-----------------	-----------	-------------------

Date	WTS-Lab.	Name	Signature
------	----------	------	-----------

Technical responsibility for area of testing:

August 02, 2019	Kevin Wang	<i>Kevin Wang</i>
-----------------	------------	-------------------

Date	WTS	Name	Signature
------	-----	------	-----------



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

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

A2LA accredited number: 2732.01

FCC filed test laboratory Reg. No. TW1477, TW0020, TW1072

Industry Canada filed test laboratory Reg. No. 20037

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: MIPRO Electronics Co., Ltd.

Street: 814 Pei-kang Road

Town: Chia-yi 600

Country: Taiwan, R.O.C

Telephone: +886-5-238-0809

Fax: +886-5-238-0803



Registration number: W6M21904-18930-C-7
FCC ID: M5X-MT58
IC: 2978A-MT58

1.4 Application details

Date of receipt of test item: April 17, 2019
Date of test: from April 18, 2019 to August 02, 2019

1.5 General information of Test item

Type of test item: Transmitter
Model Number: MT-58
Brand Name: MIPRO
Multi-listing model number: MT-58GE, MT-58GA, MT-58UC, MT-58SS, MT-58SA, MT-58ST, MT-58SB, MT-58DC, MT-XXXXX (X=0~9,a~z,A~Z or Blank) (For FCC)
Photos: see Appendix

Technical data

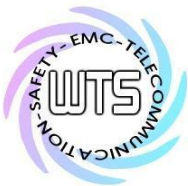
Frequency band: 5.725 GHz-5.850 GHz
Operating modes: Simplex
Type of modulation: GFSK
Fixed point to point operation: Yes / No
Antenna: PIFA Antenna
Antenna gain: 3 dBi
Power supply: Battery: 3.7Vd.c., 1500mAh
Emission designator: 2M60G1D

Classification:

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

Manufacturer: (if applicable)

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



Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

Transmitter

Unom

Mode A

Power (ch A): Conducted: 9.89 dBm

Power (ch B): Conducted: 9.77 dBm

Power (ch C): Conducted: 9.35 dBm

1.6 Test standards

Technical standard : 47 CFR FCC Part 15 Subpart E § 15.407 (2018-10), RSS-247 Issue 2: February 2017



Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

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

Temperature: 23 °C

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Details of power supply: Battery: 3.7Vd.c., 1500mAh

Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission	Expanded Uncertainty : AMN : 1.30 dB Voltage probe : 1.36 dB
Estimation Result of Uncertainty of Radiated Emission(3M)	Expanded Uncertainty : 0.009-30 MHz : 2.02 dB 30-1000 MHz : 3.49 dB 1-18 GHz : 3.01 dB 18-40 GHz : 2.43 dB
Estimation Result of Uncertainty of Bandwidth Measurement 20 dB Bandwidth, Occupied bandwidth, Channel bandwidth, Necessary Bandwidth	Expanded Uncertainty : 0.45 kHz
Estimation Result of Uncertainty of Conducted Output Power Measurement Output power	Expanded Uncertainty : 1.72 dB
Estimation Result of Uncertainty of Power Density Measurement Power density	Expanded Uncertainty : 1.73 dB
Estimation Result of Uncertainty of Band Edge Measurement	Expanded Uncertainty : 0.98 dBc



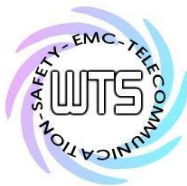
Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

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	2019/6/4	2020/6/3
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	2018/11/1	2019/10/31
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2018/8/21	2019/8/20
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	2019/7/1	2020/6/30
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2018/9/25	2019/9/24
ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2019/7/15	2020/7/14
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2019/6/4	2020/6/3
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2019/5/29	2020/5/28
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	2019/7/1	2020/6/30
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2019/7/1	2020/6/30
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2019/4/2	2020/4/1
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2019/1/29	2020/1/28
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2019/4/23	2020/4/22
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2019/5/13	2020/5/12
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2019/2/27	2020/2/26
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2019/2/27	2020/2/26
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2019/2/27	2020/2/26
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2019/3/5	2020/3/4
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2019/2/27	2020/2/26
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2019/5/16	2020/5/15
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	2018/9/17	2019/9/16
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2018/9/18	2019/9/17
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2019/5/9	2020/5/8
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2019/2/22	2020/2/21



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

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	2019/1/15	2020/1/14
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Function test	
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2019/6/3	2020/6/2
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2018/8/8	2019/8/7
ETSTW-RE 126	5GHz Notch filter	5NSL12-5800/E221.3-O/O	1	K&L Microwave	2018/8/8	2019/8/7
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2019/2/26	2020/2/25
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2018/8/8	2019/8/7
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2018/8/8	2019/8/7
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2019/5/16	2020/5/15
ETSTW-RE 147	Bi-log Hybrid Antenna	MCTD 2786B	BLB16M04005	ETC	2019/4/2	2020/4/1
ETSTW-RE 151	Thermohyrometer	608-h1	45104376	TESTO	2018/8/17	2019/8/16
ETSTW-RF 002	Electromagnetic field probe	LF-30	K-0007	STT	2019/5/27	2020/5/26
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2019/5/16	2020/5/15
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2019/3/5	2020/3/4
ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2019/3/26	2020/3/25
ETSTW-GSM 004	Wideband Radio Communication Tester	CMW500	128092	R&S	2018/10/19	2019/10/18
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40/12+9SS	3	WI	2019/1/14	2020/1/13
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2019/1/14	2020/1/13
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2019/1/14	2020/1/13
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2019/1/14	2020/1/13
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2018/9/12	2019/9/11
ETSTW-GSM 024	Radio Communication Analyzer	MT8821C	None	Anritsu	2019/3/5	2020/3/4
ETSTW-GSM 025	Band Reject Filter	BRM19835	001	Micro-Tronics	2018/8/9	2019/8/8
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	2019/2/21	2020/2/20
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2019/2/21	2020/2/20
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2019/2/21	2020/2/20
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2019/2/21	2020/2/20
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2019/7/1	2020/6/30
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2019/2/25	2020/2/24
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2019/5/10	2020/5/9
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2018/9/18	2019/9/17
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2018/9/18	2019/9/17
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104	279067	HUBER+SUHNER	2019/2/25	2020/2/24



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

		(S_Cable 9)				
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2019/5/16	2020/5/15
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2019/6/6	2020/6/5
ETSTW-Cable 064	Microwave Cable	SUCOFLEX 104	MY28891	HUBER+SUHNER	2019/5/16	2020/5/15
ETSTW-Cable 066	SMA type cable	32022	None	ASTROLAB	2019/3/15	2020/3/14
ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM-NM-25000	170239	EMCI	2019/6/6	2020/6/5
ETSTW-Cable 072	SMA type cable (8m)	SUCOFLEX 104	805800/4	HUBER+SUHNER	2019/5/16	2020/5/15
ETSTW-Cable 074	SMA type cable (2m)	SUCOFLEX 104	802563/4	HUBER+SUHNER	2019/5/16	2020/5/15
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1	
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	



Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

2.4 Test Procedure

The test procedures are performed following the test stands ANSI STANDARD C63.4 and FCC 789033 D02 General UNII Test Procedures New Rules v01.

■ Minimum Emission Bandwidth for the band 5.150-5.250 GHz, 5.725-5.850 GHz

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) 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.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

■ 99 Percent Occupied Bandwidth

The 99-percent occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission. Measurement of the 99-percent occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in section H)3)d). Measurements of 99-percent occupied bandwidth may also optionally be used in lieu of the 6-dB emission bandwidth to define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in section E). However, the 6-dB bandwidth must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

The following procedure shall be used for measuring (99 %) power bandwidth.

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW $\geq 3 \cdot$ RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.



Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

■ Maximum conducted output power

- (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- (ii) Set RBW = 1 MHz.
- (iii) Set VBW \geq 3 MHz.
- (iv) Number of points in sweep \geq 2 Span / RBW. (This ensures that bin-to-bin spacing is \leq RBW/2, so that narrowband signals are not lost between frequency bins.)
- (v) Sweep time = auto.
- (vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- (vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle \geq 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run”.
- (viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- (ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

■ Power Density

The rules requires “maximum power spectral density” measurements where the intent is to measure the maximum value of the time average of the power spectral density measured during a period of continuous transmission.

1. Create an average power spectrum for the EUT operating mode being tested by following the instructions in section II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, “Compute power...”. (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)
2. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
3. Make the following adjustments to the peak value of the spectrum, if applicable:
 - a) If Method SA-2 or SA-2 Alternative was used, add $10 \log(1/x)$, where x is the duty cycle, to the peak of the spectrum.
 - b) If Method SA-3 Alternative was used and the linear mode was used in step II.E.2.g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.
4. The result is the Maximum PSD over 1 MHz reference bandwidth.
5. For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a



Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

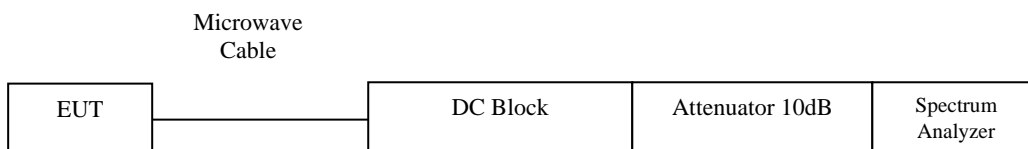
IC: 2978A-MT58

measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set $RBW \geq 1/T$, where T is defined in section II.B.1.a).
- b) Set $VBW \geq 3 RBW$.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas $RBW (< 500 \text{ KHz})$ is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas $RBW (< 1 \text{ MHz})$ is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since $RBW=100 \text{ KHz}$ is available on nearly all spectrum analyzers.

Conducted measurement test setup





Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

3 Test results (enclosure)

Test case	Para. Number	Required	Test passed	Test failed
Peak Transmit Power	FCC 15.407(a) IC RSS-247 6.2.4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6-dB emission bandwidth	FCC 15.407(a) IC RSS-247 6.2.4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
26-dB emission bandwidth	FCC 15.407(a) IC RSS-247 6.2.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99 % Occupied Bandwidth	789033 D02 General U-NII Test Procedures New Rules v02r01	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Peak Power Spectral Density	FCC 15.407(a) IC RSS-247 6.2.4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Undesirable emission limits	FCC 15.407(b)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radio Frequency Exposure	FCC 15.407(f)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiated Emission from Receiver Part	FCC 15.109 IC RSS-247 6.2 IC RSS-Gen Table 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AC Conducted Emissions	FCC 15.207 IC RSS-Gen	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is intentionally left blank.



Registration number: W6M21904-18930-C-7

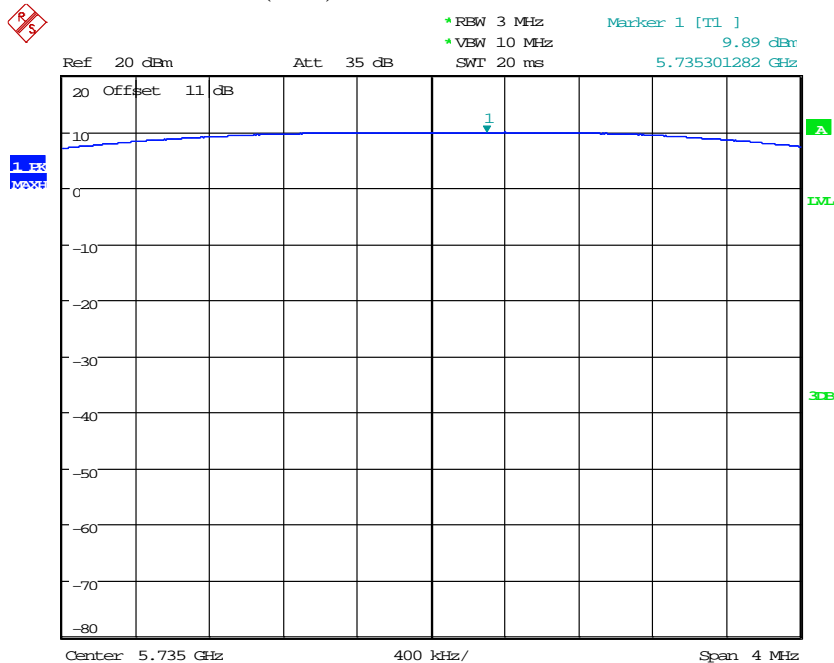
FCC ID: M5X-MT58

IC: 2978A-MT58

3.1 Peak Transmit Power, FCC 15.407 (a)

According to §15.407(a)

1. For the band 5.15-5.25 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 30 dBm (1 W) for master device and 24 dBm (250 mW) for mobile/portable client device.
2. For the band 5.25-5.35 GHz and 5.47-5.725 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 24 dBm (250 mW) or $11\text{dBm} + 10 \log B$, whichever is lower (B= 26-dB emission BW).
3. For the band 5.725-5.850 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 30 dBm (1 W).



MAX OUTPUT POWER 5735MHz
Date: 29.MAY.2019 21:29:24

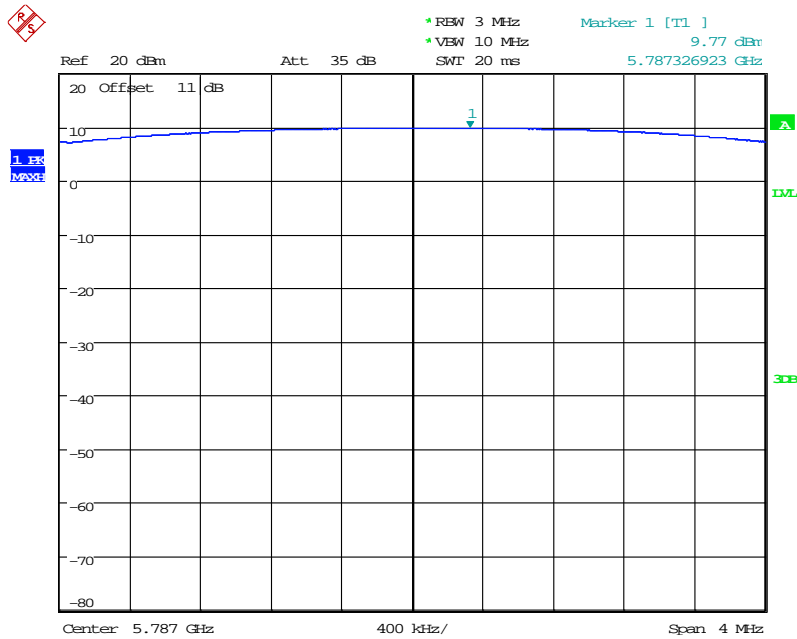


Worldwide Testing Services(Taiwan) Co., Ltd.

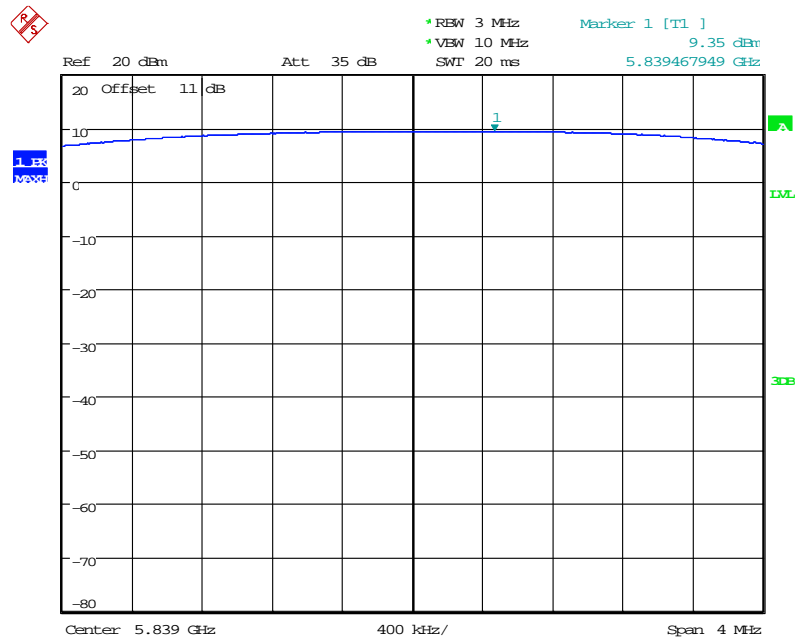
Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58



MAX OUTPUT POWER 5787MHz
Date: 29.MAY.2019 21:30:30



MAX OUTPUT POWER 5839MHz
Date: 29.MAY.2019 21:29:55

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



Registration number: W6M21904-18930-C-7
 FCC ID: M5X-MT58
 IC: 2978A-MT58

3.2 26dB emission bandwidth, 99% Occupied Bandwidth, FCC 15.407 (a)

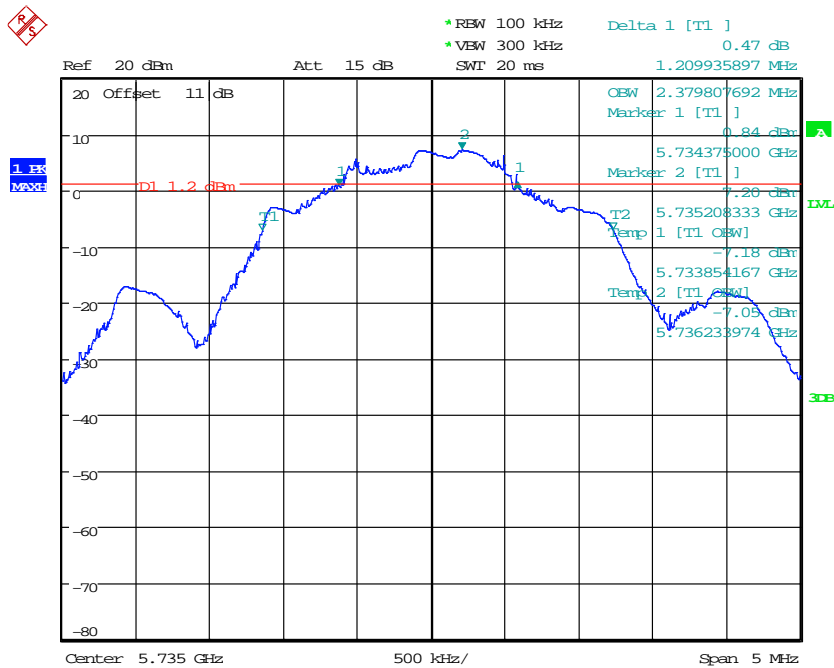
According to §15.407(a). No Limit required.

Result: This test is not required.

3.3 6dB emission bandwidth, 99% Occupied Bandwidth, FCC 15.407 (a)

According to §15.407(a). No Limit required.

Result:

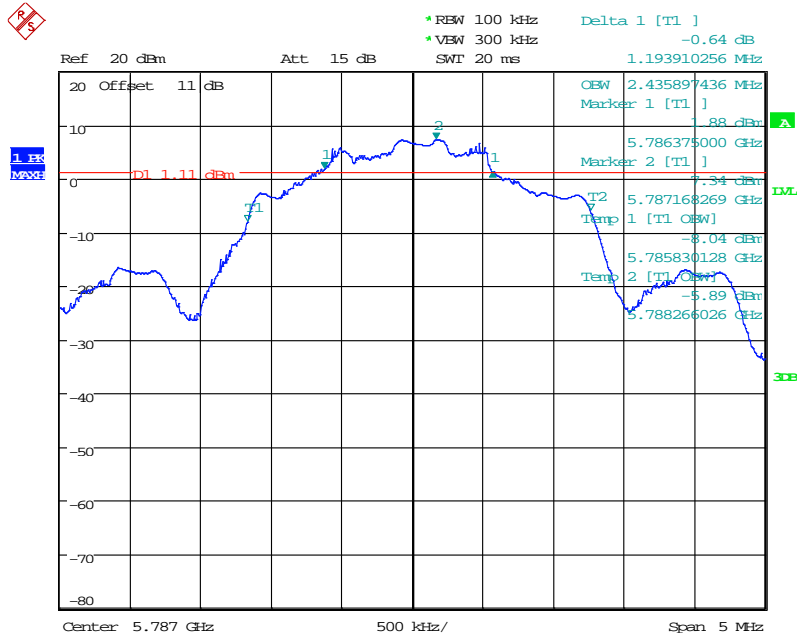


99% OCB & 6DB BANDWIDTH 5735MHz
 Date: 29.MAY.2019 20:52:57

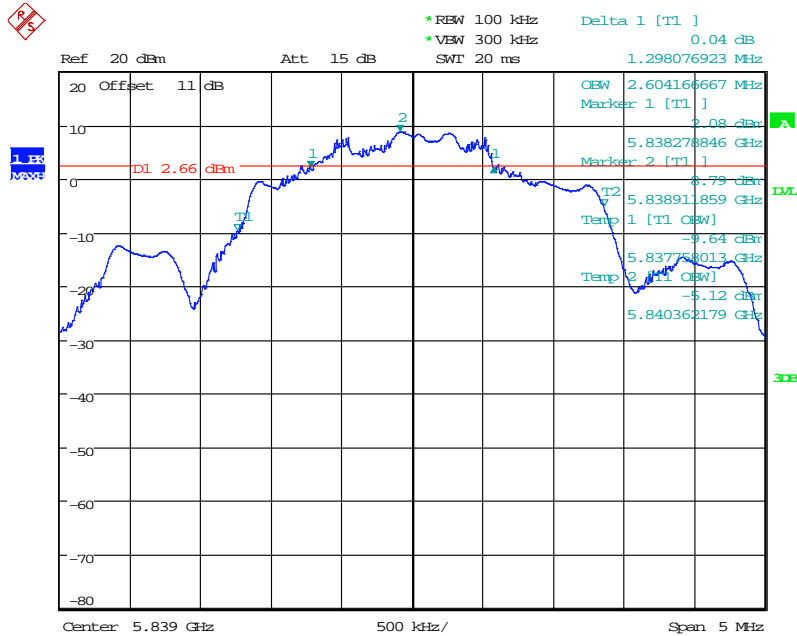


Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21904-18930-C-7
 FCC ID: M5X-MT58
 IC: 2978A-MT58



99% OCW & 6DB BANDWIDTH 5787MHz
 Date: 29.MAY.2019 20:56:53



99% OCW & 6DB BANDWIDTH 5839MHz
 Date: 29.MAY.2019 20:54:00

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



Registration number: W6M21904-18930-C-7

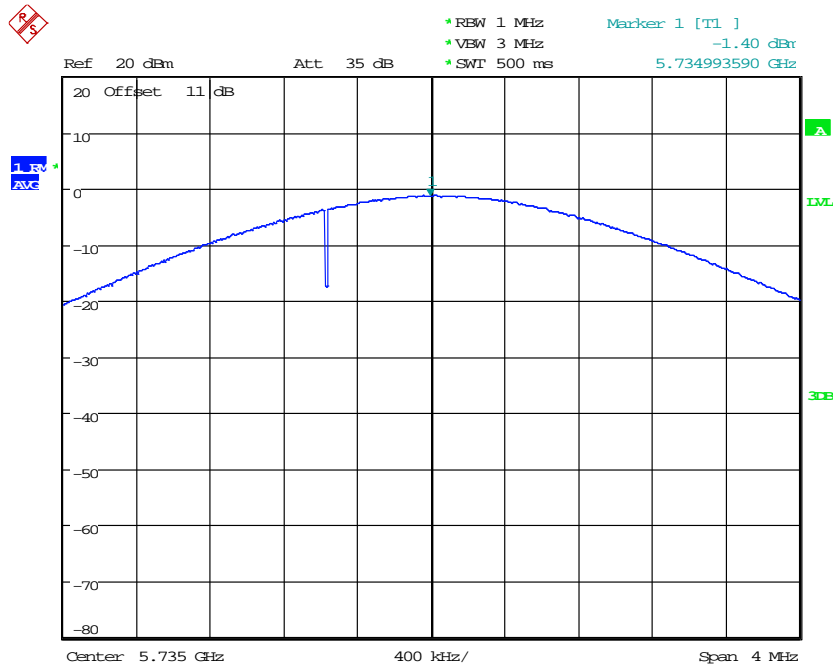
FCC ID: M5X-MT58

IC: 2978A-MT58

3.4 Peak Power Spectral Density, FCC 15.407 (a)

According to §15.407(a)

For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm/500kHz.



POWER DENSITY 5735MHz
Date: 29.MAY.2019 21:02:08

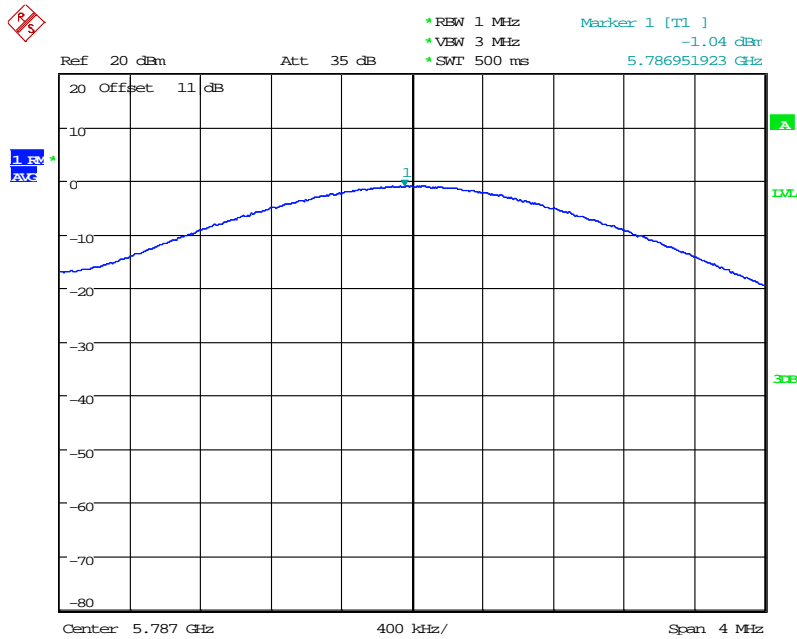


Worldwide Testing Services(Taiwan) Co., Ltd.

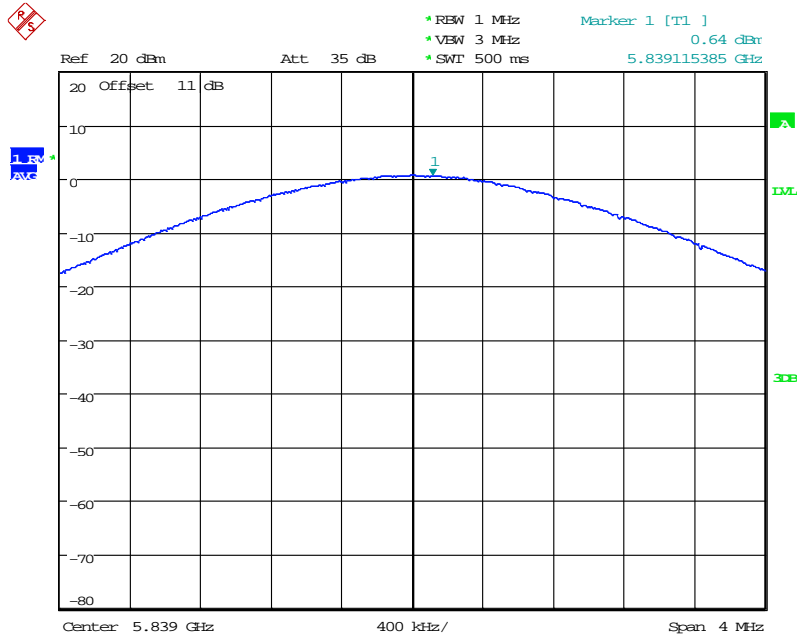
Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58



POWER DENSITY 5787MHz
Date: 29.MAY.2019 21:00:49



POWER DENSITY 5839MHz
Date: 29.MAY.2019 21:01:27

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



Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

3.5 Undesirable emission limits, FCC 15.407 (b)

1. For transmitters operating in the 5.15–5.25 GHz band: all emissions out-side of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz.
2. For transmitters operating in the 5.25–5.35 GHz band: all emissions out-side of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. De-vices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all appli-cable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15–5.25 GHz band.
3. For transmitters operating in the 5.47–5.725 GHz band: all emissions out-side of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
4. For transmitters operating in the 5.725–5.850 GHz band: All emissions shall be limited to a level of –27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
5. The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
6. Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.
7. According to According to KDB 789033 D02 General UNII Test Procedures v01, as specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.
8. If radiated measurements are performed, field strength is then converted to EIRP as follows:
 - (i) $EIRP = ((E*d)^2) / 30$, where: E is the field strength in V/m; d is the measurement distance in meters. EIRP is the equivalent isotropically radiated power in watts.
 - (ii) Working in dB units, the above equation is equivalent to: $EIRP[dBm] = E[dB\mu V/m] + 20 \log(d[meters]) - 104.77$.
 - (iii) Or, if d is 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$.

Applicable to	Limit	
<input checked="" type="checkbox"/>	FIELD STRENGTH at 3m (dB μ V/m)	
	PK	AV
	74	54
<input type="checkbox"/>	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH at 3m (dB μ V/m)
	PK	PK
	-27	68.3



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

Model: MT-58 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.			
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

Polarization: Vertical

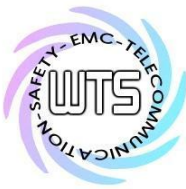
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

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.**

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 111,
 ETSTW-RE 088, ETSTW-RE 018



Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

3.6 Automatic Discontinuation of transmission, FCC 15.407 (c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure.

This function will be declared by manufacturer.

3.7 Reserved, FCC 15.407 (d)

3.8 Indoor Operation Restriction, FCC 15.407 (e)



Registration number: W6M21904-18930-C-7
 FCC ID: M5X-MT58
 IC: 2978A-MT58

3.9 Equivalent isotropic radiated power, FCC 15.407 (f)

FCC Rule: 15.407(b)(3)

For systems using digital modulation in the 5.725 GHz-5.850 GHz bands: 1 Watt.

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EIRP = max. conducted output power

EIRP = 9.89 dBm

Limit: EIRP = +36 dBm for Antenna gain <6dBi

Test equipment used: ETSTW-RE 055

3.10 RF Exposure Compliance Requirements

RESULT:

Test standard : FCC KDB Publication
 447498 D01 General RF Exposure Guidance v06

According to 447498 D01 General RF Exposure Guidance v06:

SAR evaluation, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

The enclosure of the device provides ≥ 2 cm separation from the antenna elements to significant metal parts of the enclosure to minimize potential perturbations.

Frequency Band:5725-5850 MHz

Maximum Power fed to Antenna: 9.7499 mW

Separation distances:

Radiator to user: > 20 mm

Distance prescribed in user manual: > 20 mm

MHz	5	10	15	20	25	mm
5800	6	12	19	25	31	SAR Test Exclusion Threshold (mW)

MHz	30	35	40	45	50	mm
5800	37	44	50	56	62	SAR Test Exclusion Threshold (mW)

MHz	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	mm
5800	62	162	262	362	462	562	662	762	862	962	1062	1162	1262	1362	1462	mW



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

Test exclusion = max. conducted output power + adjusted for tune-up tolerance

Test exclusion = 9.89 dBm + 3 dBi (Claimed by the applicant) = 12.89 dBm

RESULT:

Test standard : RSS-247

According to [Notice 2016-DRS0001](#)

2.5.1 Exemption Limits for Routine Evaluation – SAR Evaluation

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 2 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1.

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
2462	3.98 mW	6.99 mW	15.01 mW	30.02 mW	52.03 mW
2480	3.94 mW	6.97 mW	15.03 mW	30.06 mW	52.09 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5839	1 mW	6 mW	15 mW	27 mW	41 mW

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223 mW	254 mW	284 mW	315 mW	345 mW
450	141 mW	159 mW	177 mW	195 mW	213 mW
835	80 mW	92 mW	105 mW	117 mW	130 mW
1900	99 mW	153 mW	225 mW	316 mW	431 mW
2450	83 mW	123 mW	173 mW	235 mW	309 mW
2462	83.03 mW	123.01 mW	172.97 mW	234.89 mW	308.78 mW
2480	83.09 mW	123.03 mW	172.91 mW	234.71 mW	308.46 mW
3500	86 mW	124 mW	170 mW	225 mW	290 mW
5839	56 mW	71 mW	85 mW	97 mW	106 mW

Frequency Band: 5725-5850 MHz

Maximum Power fed to Antenna: 19.4536 mW

This product does not need to do SAR test because e.i.r.p. is smaller than 27 mW .



Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

3.11 Transmit Power Control (TPC)

Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

Explanation: The EUT operates 5725 MHz-5850 MHz , so this test item is not required.



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21904-18930-C-7

FCC ID: M5X-MT58

IC: 2978A-MT58

3.12 Radiated Emissions from Receiver Part

Model: MT-58

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.			
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

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. Because the EUT is transmitter, RX test is not required.

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 111, ETSTW-RE 088, ETSTW-RE 018



Registration number: W6M21904-18930-C-7

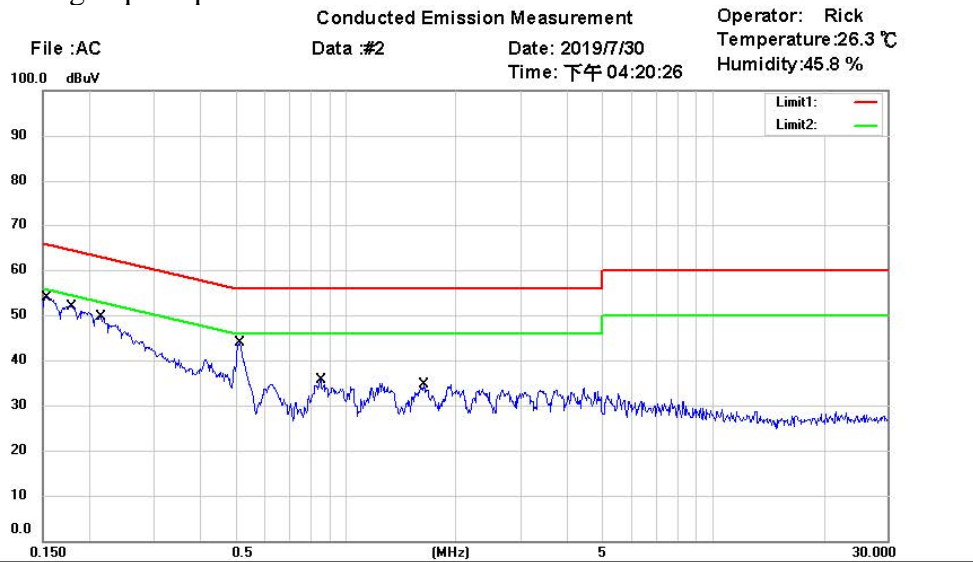
FCC ID: M5X-MT58

IC: 2978A-MT58

3.13 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.



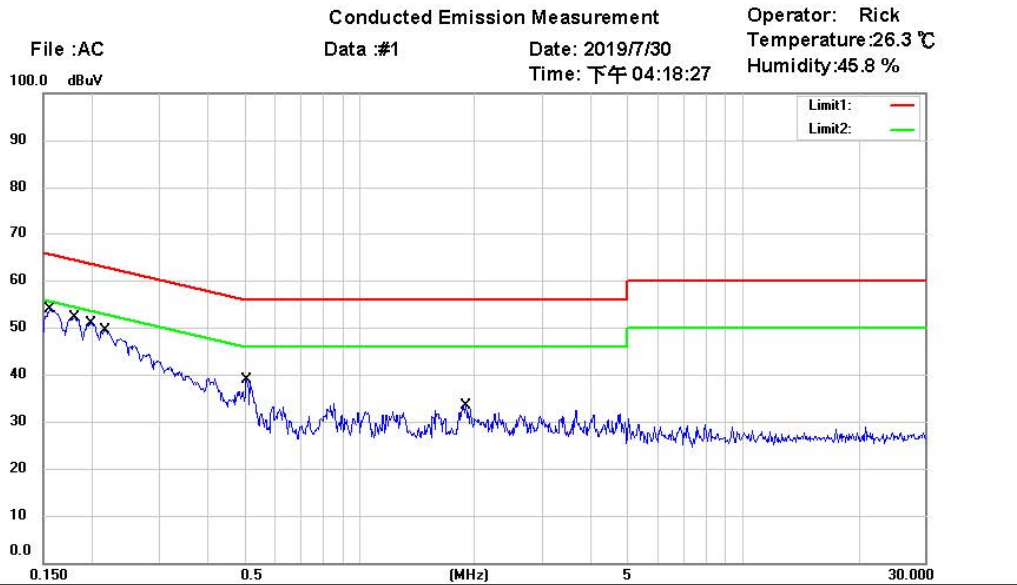
Site : Chamber_03
 Condition : FCC Part 15 Class B Conduction (QP) Phase: N
 EUT : W6M21904-18930 Power : 120Va.c.
 M/N:
 Test Mode : Charge
 Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1533	42.38	QP	9.95	52.33	65.82	-13.49	
	0.1533	26.59	AVG	9.95	36.54	55.82	-19.28	
	0.1791	40.55	QP	9.93	50.48	64.53	-14.05	
	0.1791	22.12	AVG	9.93	32.05	54.53	-22.48	
	0.2160	37.52	QP	9.92	47.44	62.97	-15.53	
	0.2160	21.60	AVG	9.92	31.52	52.97	-21.45	
	0.5135	32.47	QP	9.90	42.37	56.00	-13.63	
*	0.5135	26.93	AVG	9.90	36.83	46.00	-9.17	
	0.8510	21.73	QP	9.92	31.65	56.00	-24.35	
	0.8510	16.17	AVG	9.92	26.09	46.00	-19.91	
	1.6340	20.33	QP	9.93	30.26	56.00	-25.74	
	1.6340	15.23	AVG	9.93	25.16	46.00	-20.84	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21904-18930-C-7
 FCC ID: M5X-MT58
 IC: 2978A-MT58



Site : Chamber_03
 Condition : FCC Part 15 Class B Conduction (QP) Phase: L1
 EUT : W6M21904-18930 Power : 120V.a.c.
 M/N:
 Test Mode : Charge
 Note :

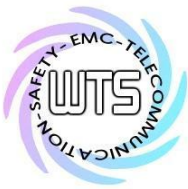
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1556	42.02	QP	9.95	51.97	65.70	-13.73	
	0.1556	27.59	AVG	9.95	37.54	55.70	-18.16	
*	0.1800	41.56	QP	9.93	51.49	64.49	-13.00	
	0.1800	25.09	AVG	9.93	35.02	54.49	-19.47	
	0.1990	40.25	QP	9.92	50.17	63.65	-13.48	
	0.1990	23.67	AVG	9.92	33.59	53.65	-20.06	
	0.2170	38.56	QP	9.92	48.48	62.93	-14.45	
	0.2170	22.30	AVG	9.92	32.22	52.93	-20.71	
	0.5067	24.46	QP	9.90	34.36	56.00	-21.64	
	0.5067	13.29	AVG	9.90	23.19	46.00	-22.81	
	1.8905	18.62	QP	9.93	28.55	56.00	-27.45	
	1.8905	2.25	AVG	9.93	12.18	46.00	-33.82	

- Note:**
- The formula of measured value as: **Test Result = Reading + Correction Factor**
 - The **Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss**
 - Detector function in the form : **PK = Peak, QP = Quasi Peak, AV = Average**
 - All not in the table noted test results are more than 20 dB below the relevant limits.
 - Up Line: QP Limit Line, Down Line: Ave Limit Line.

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

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



Registration number: W6M21904-18930-C-7
FCC ID: M5X-MT58
IC: 2978A-MT58

Appendix

Photos

1. External Photos
2. Internal Photos
3. Set Up Photo of Conducted Emission
4. Set Up Photo of Radiated Emission

Measurement diagrams

Spurious Emissions radiated



Radiated Emission Measurement

Operator: Allen

File :1_TX 5735MHz_below

Data :#1

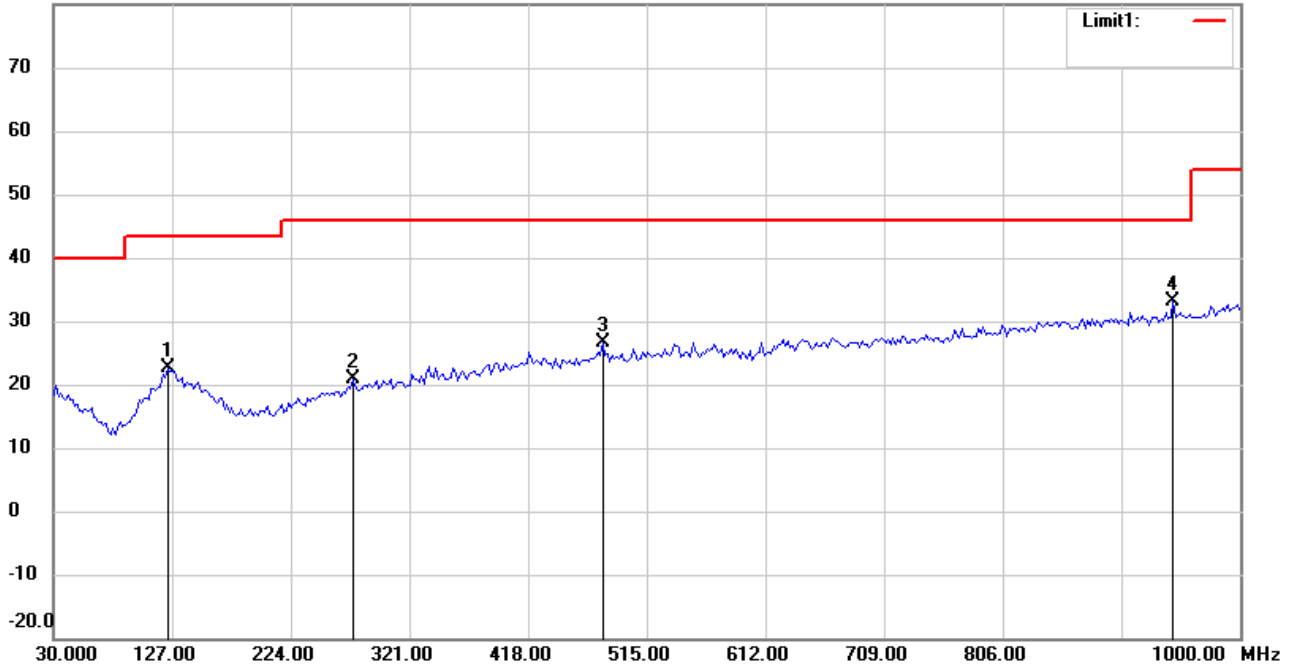
Date: 7/26/2019

Temperature:29.1 °C

80.0 dBuV/m

Time: 5:01:55 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class E_30-1000MHz

EUT : W6M21904-18930

M/N:

Test Mode : TX 5735MHz

Note :

Polarization: *Horizontal*

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
	123.3066	29.19	peak	-6.48	22.71	43.50	100	275	-20.79	
	274.9297	27.39	peak	-6.63	20.76	46.00	100	95	-25.24	
	479.0380	30.05	peak	-3.30	26.75	46.00	100	170	-19.25	
*	945.5711	29.07	peak	4.13	33.20	46.00	100	55	-12.80	



Radiated Emission Measurement

Operator: Allen

File :1_TX 5735MHz_below

Data :#2

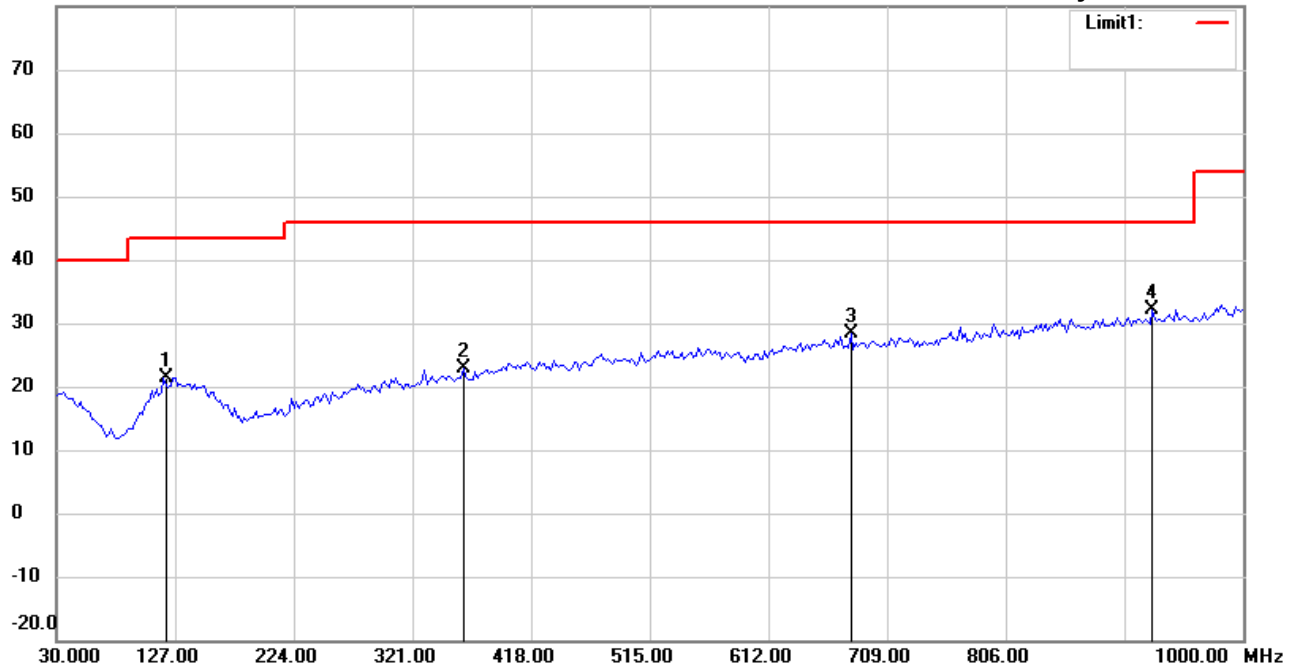
Date: 7/26/2019

Temperature:29.1 °C

80.0 dBuV/m

Time: 5:02:55 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class E_30-1000MHz

Polarization: *Vertical*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5735MHz

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
	117.4750	28.37	peak	-6.88	21.49	43.50	100	0	-22.01	
	362.4048	27.83	peak	-4.91	22.92	46.00	100	45	-23.08	
	679.2585	28.87	peak	-0.61	28.26	46.00	100	190	-17.74	
*	926.1323	28.28	peak	3.74	32.02	46.00	100	60	-13.98	



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#1

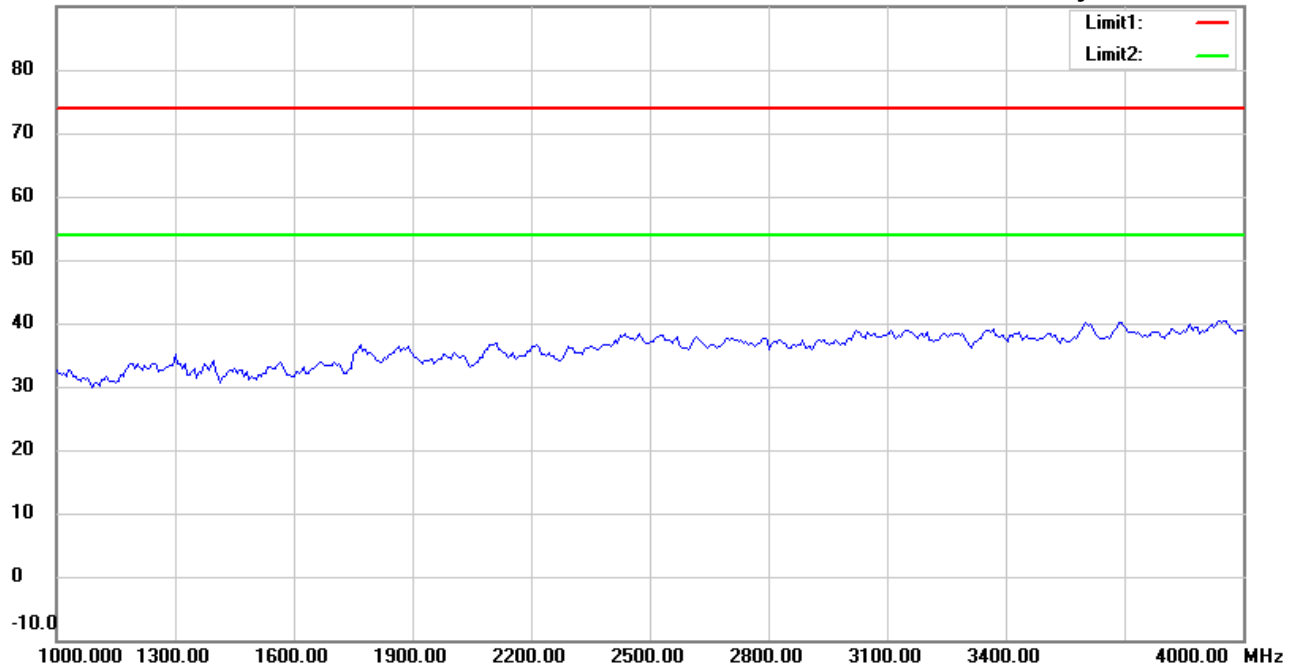
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:32:12 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5735MHz

Note :

Polarization: *Horizontal*

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#7

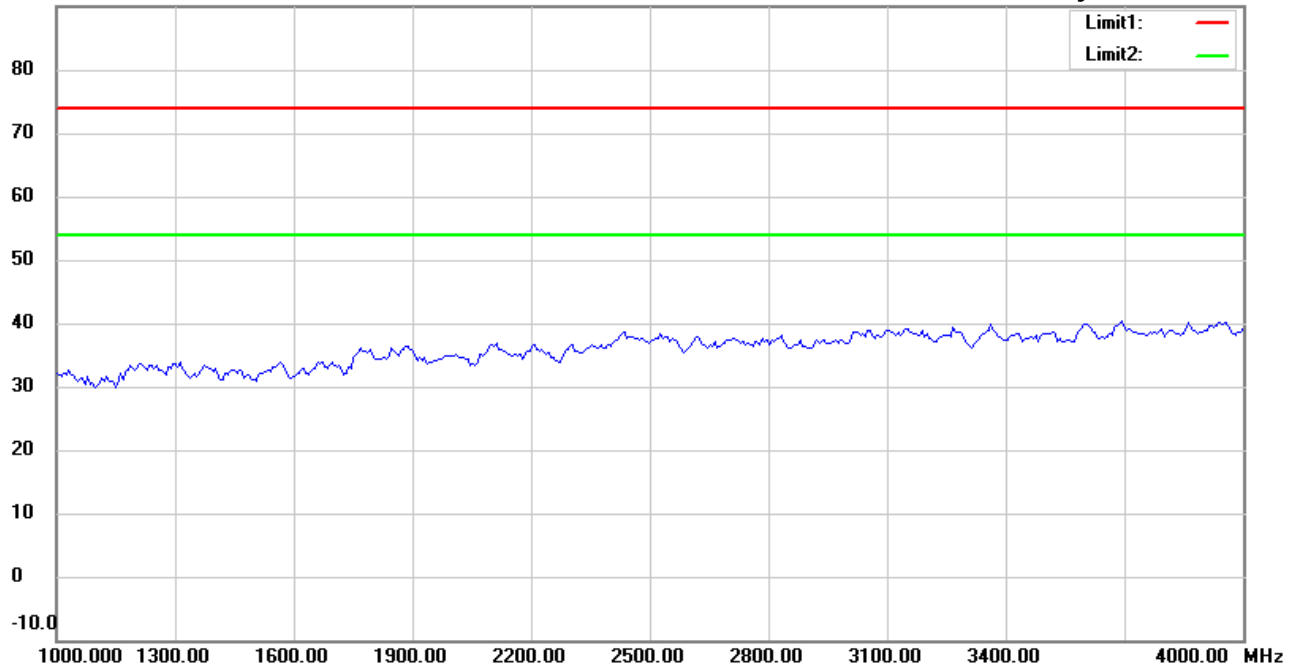
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:39:39 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5735MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#2

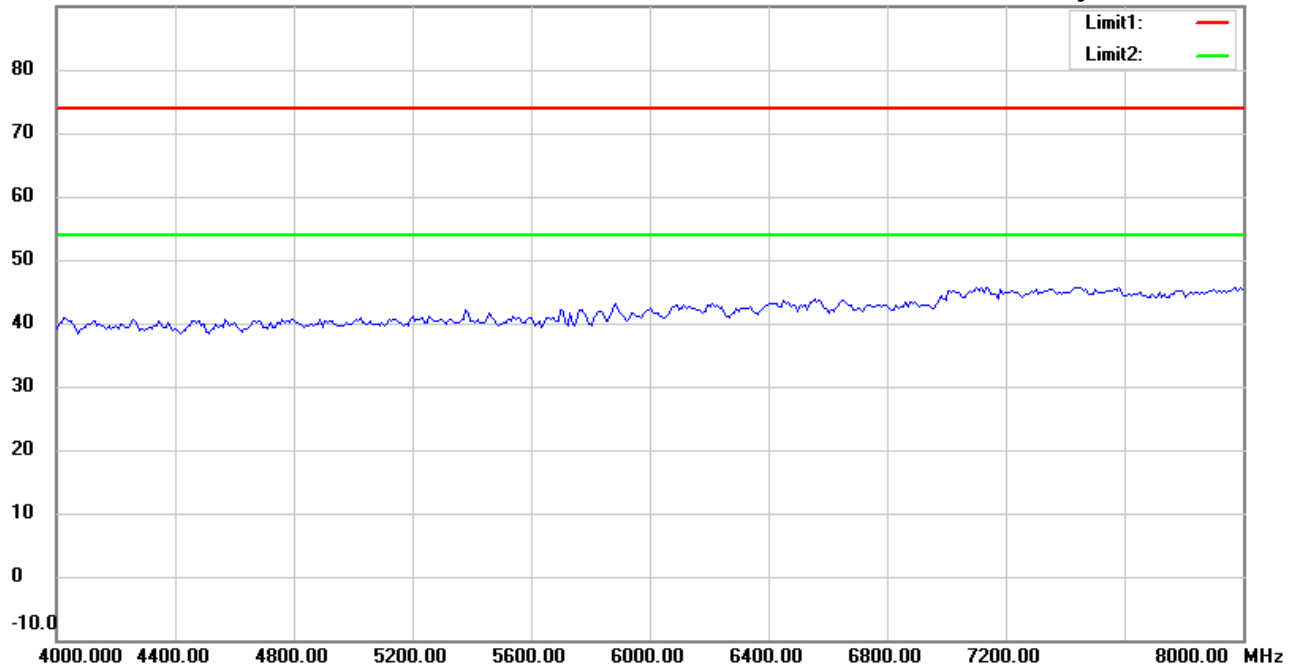
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:33:13 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5735MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#8

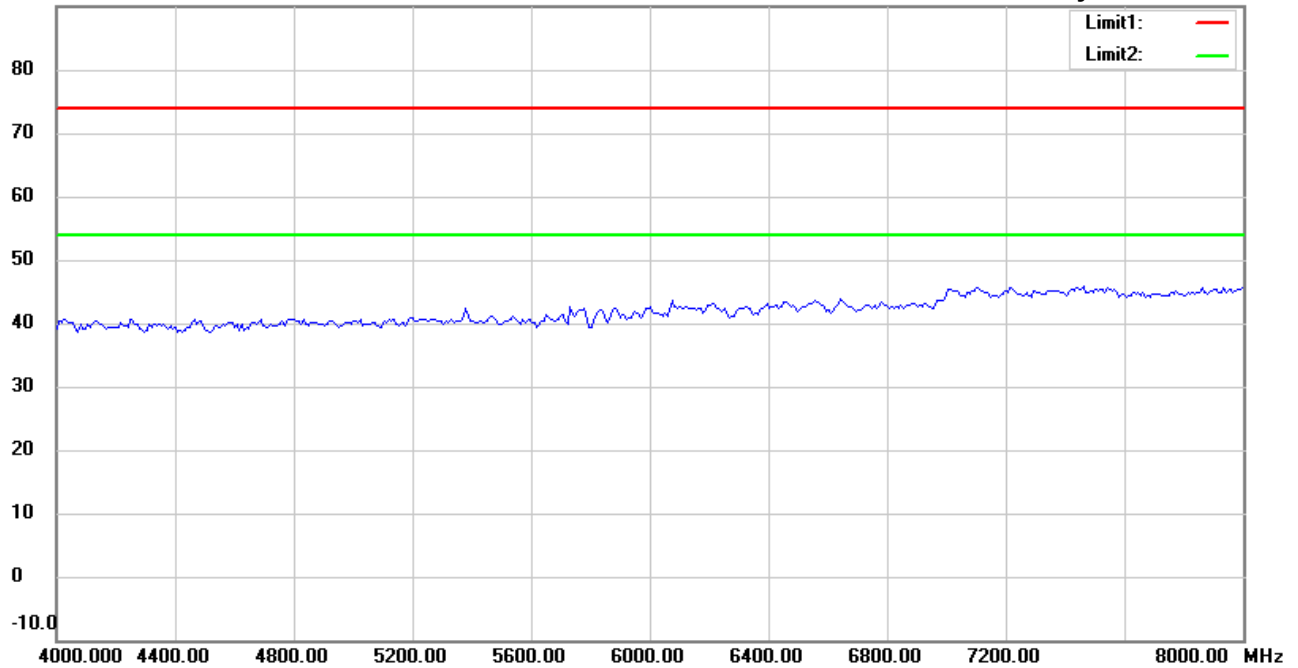
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:40:40 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5735MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#3

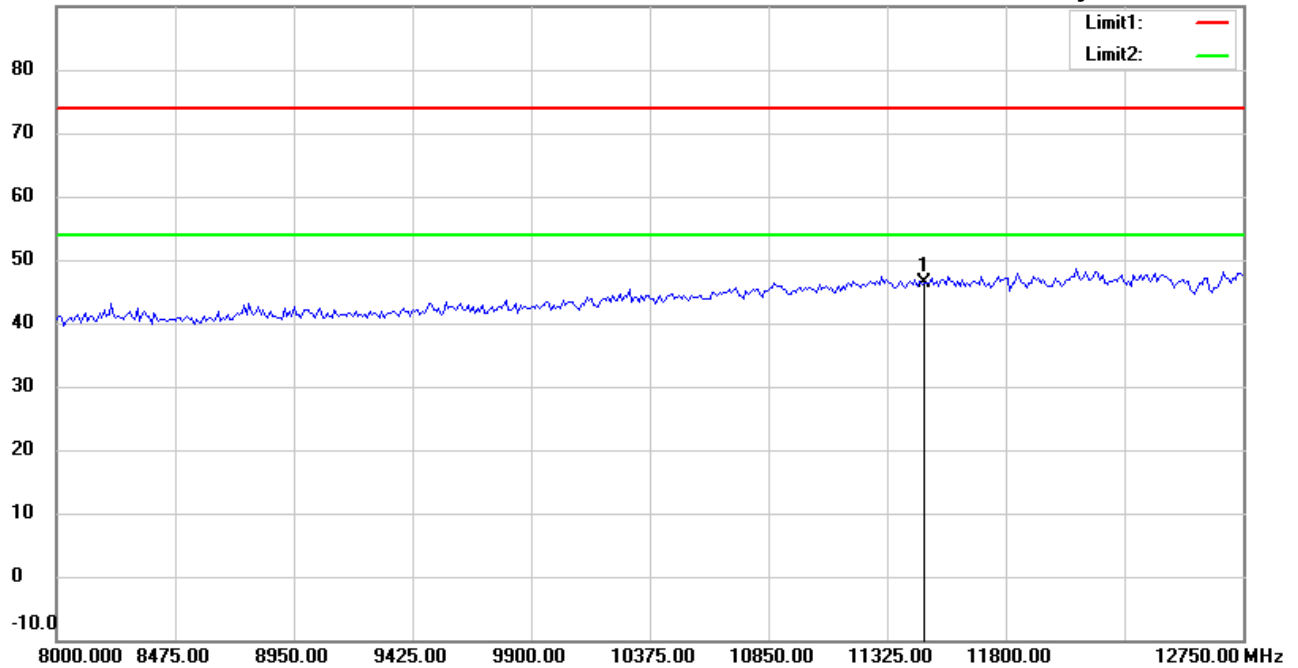
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:34:18 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5735MHz

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
*	11470.000	35.11	peak	11.21	46.32	74.00	150	215	-27.68	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#9

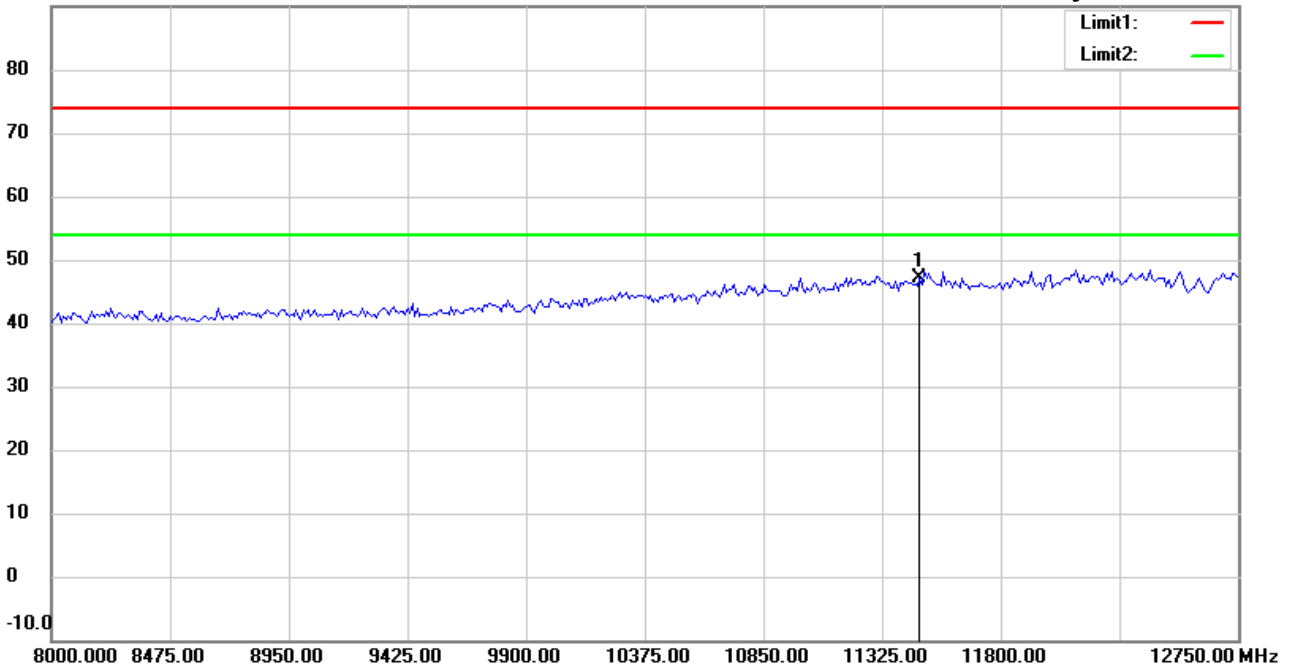
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:41:44 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: **Vertical**

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5735MHz

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
*	11470.000	35.95	peak	11.21	47.16	74.00	150	320	-26.84	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#4

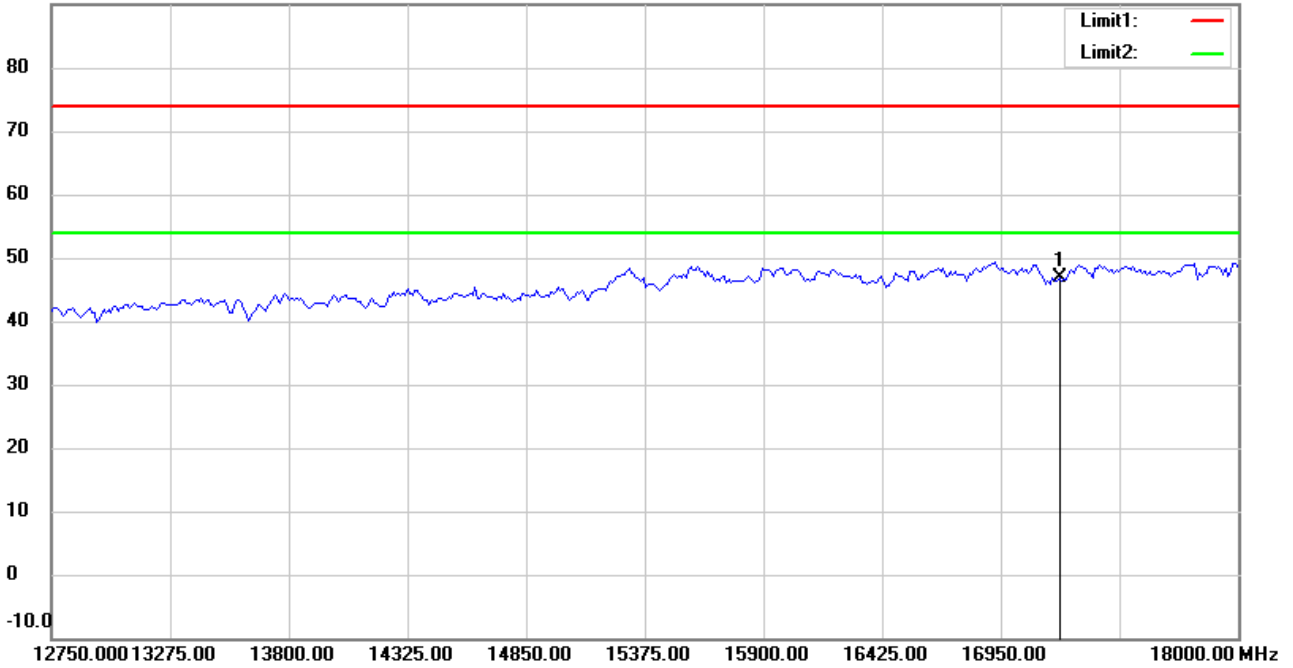
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:35:26 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5735MHz

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
*	17205.000	28.38	peak	18.43	46.81	74.00	150	85	-27.19	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#10

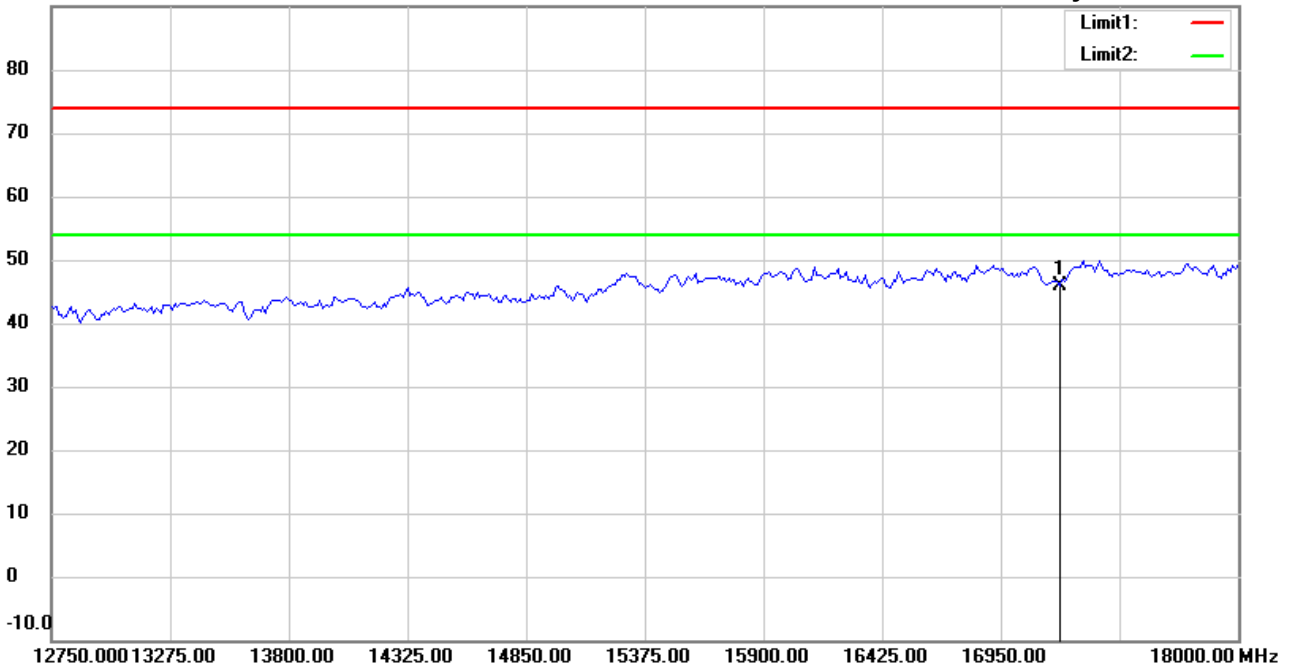
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:42:53 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: **Vertical**

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5735MHz

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
*	17205.000	27.45	peak	18.43	45.88	74.00	150	20	-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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#5

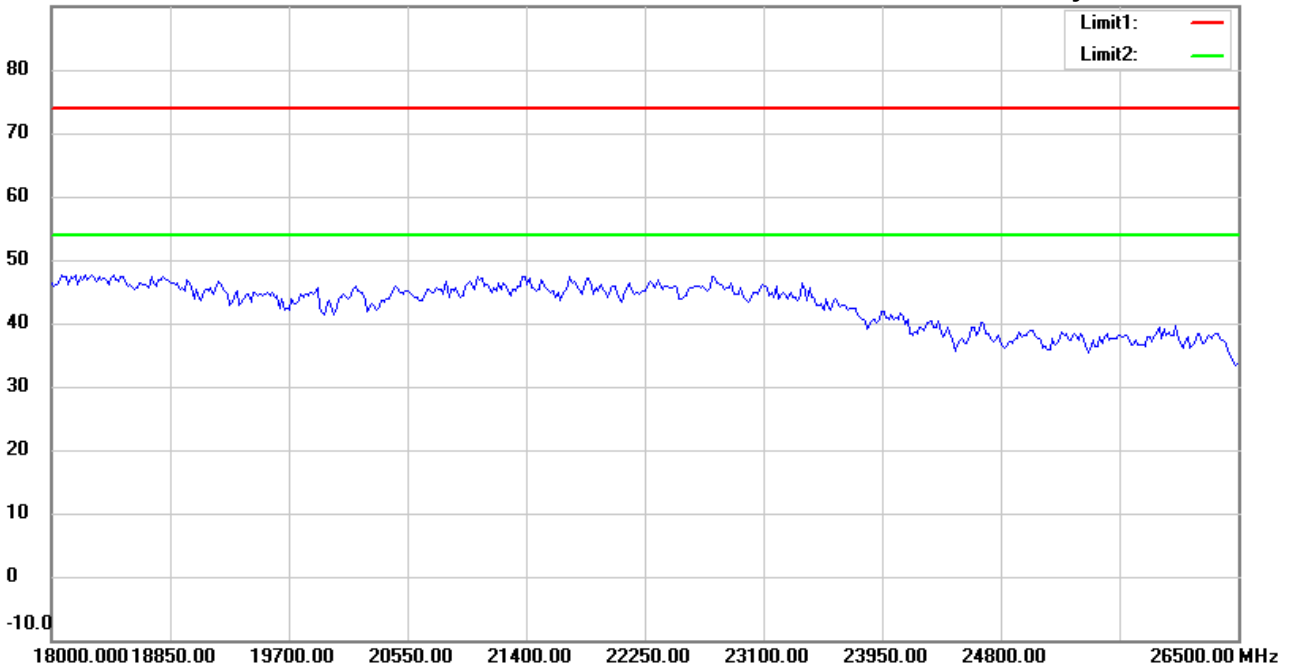
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:35:36 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5735MHz

Note :

Polarization: *Horizontal*

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#11

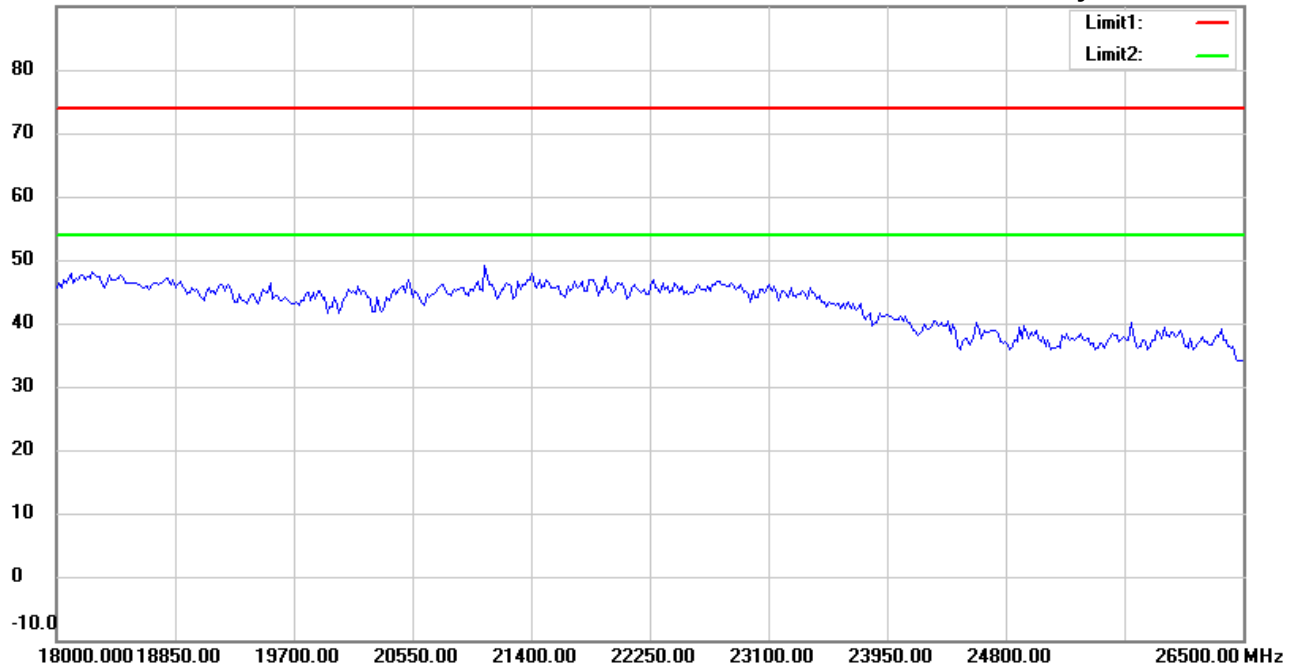
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:43:03 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5735MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#6

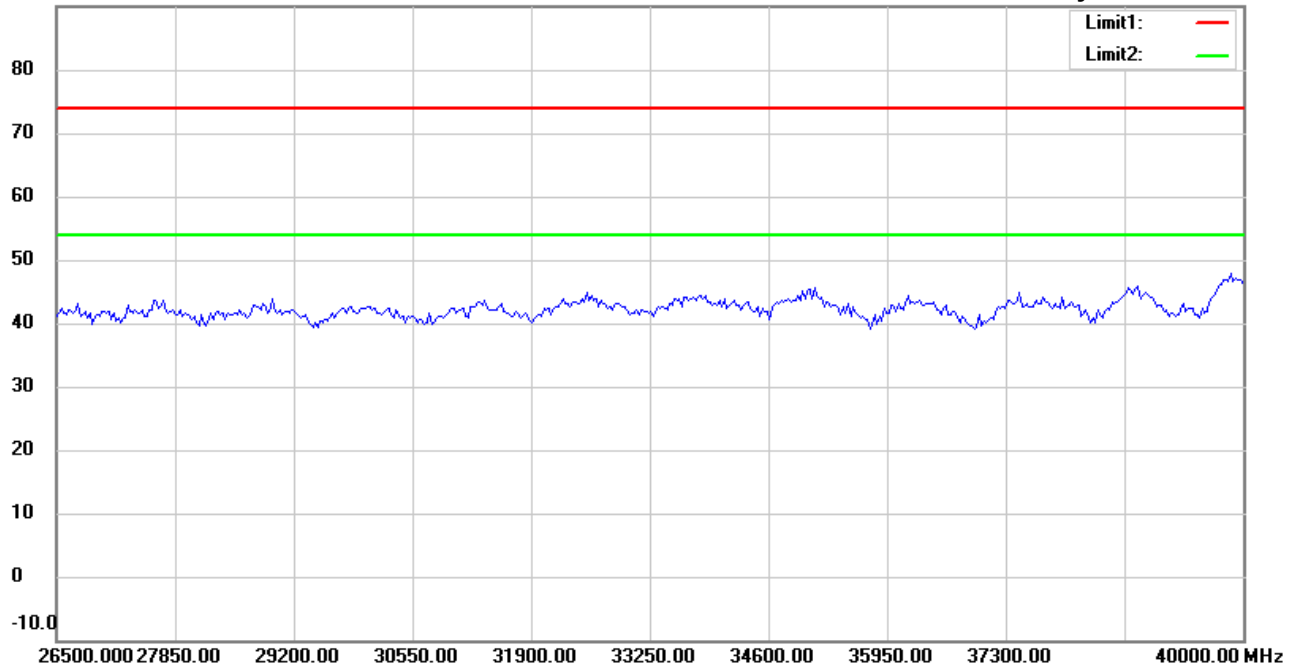
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:35:47 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5735MHz

Note :

Polarization: *Horizontal*

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#12

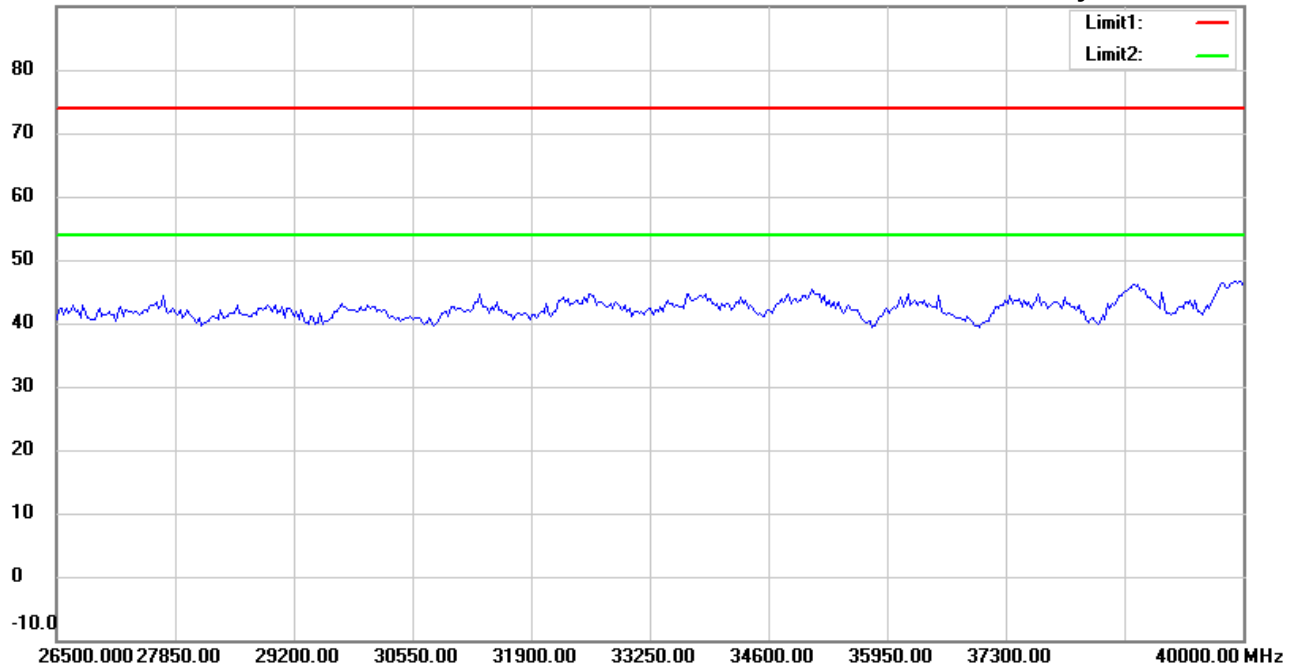
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:43:13 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5735MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#1

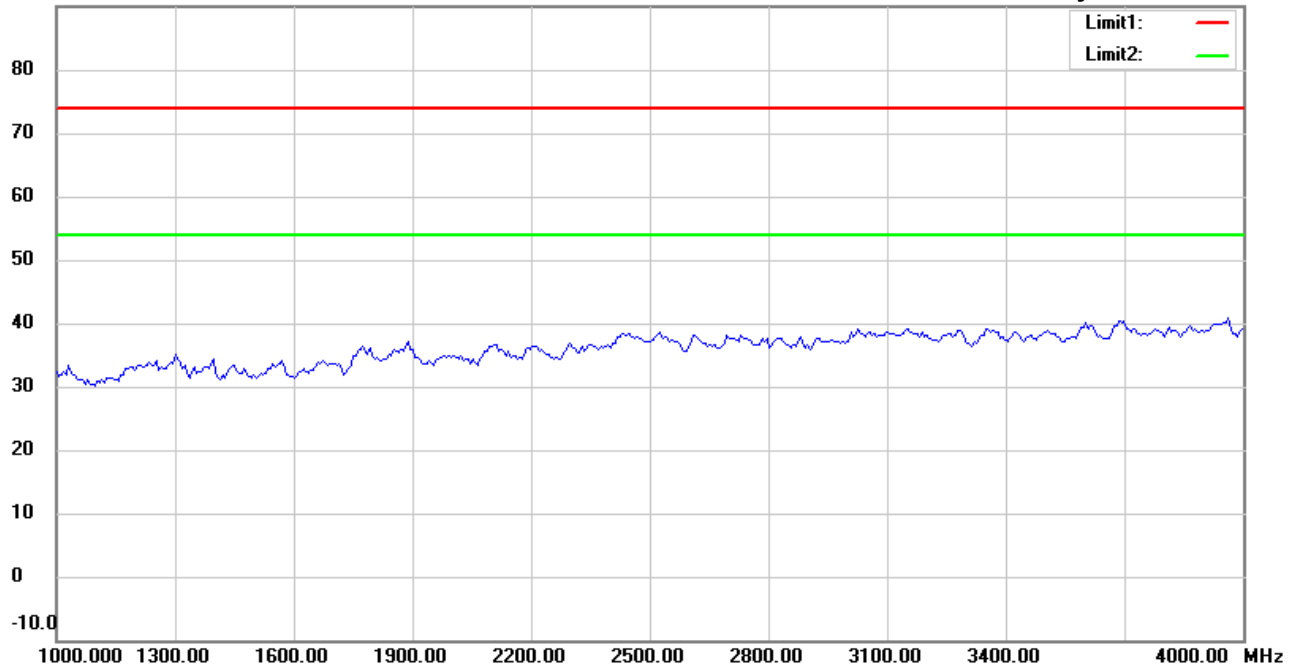
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:50:39 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5787MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#7

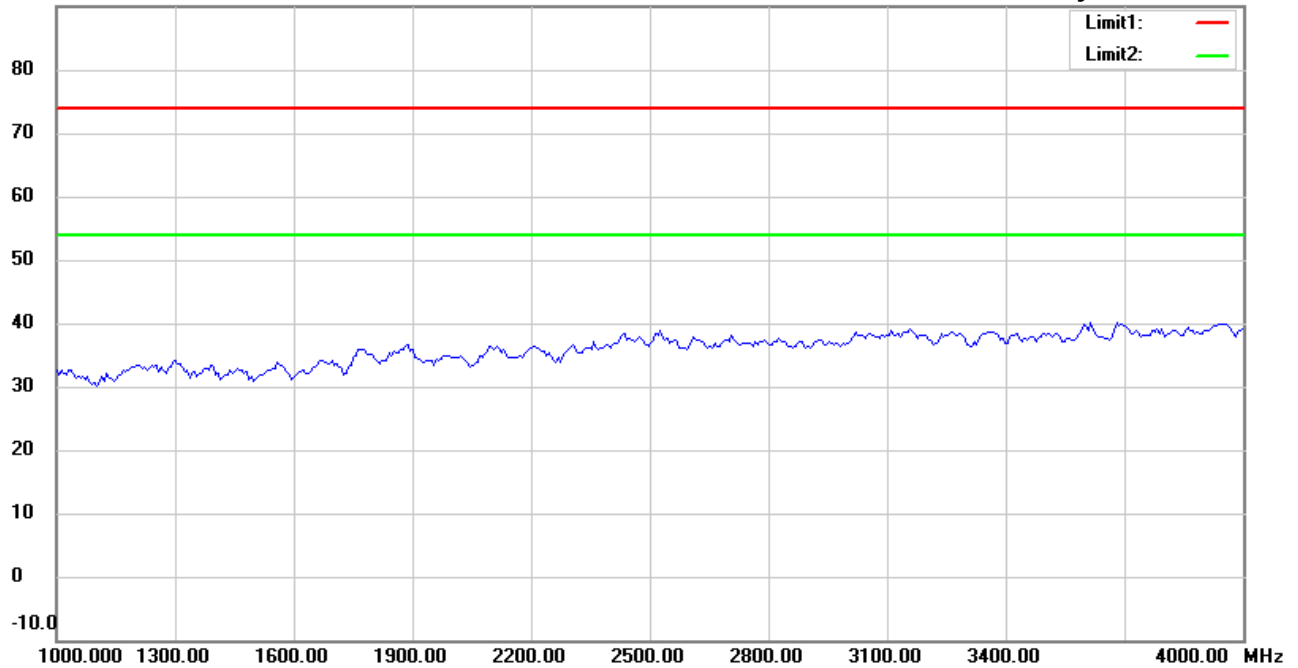
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:55:20 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5787MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#2

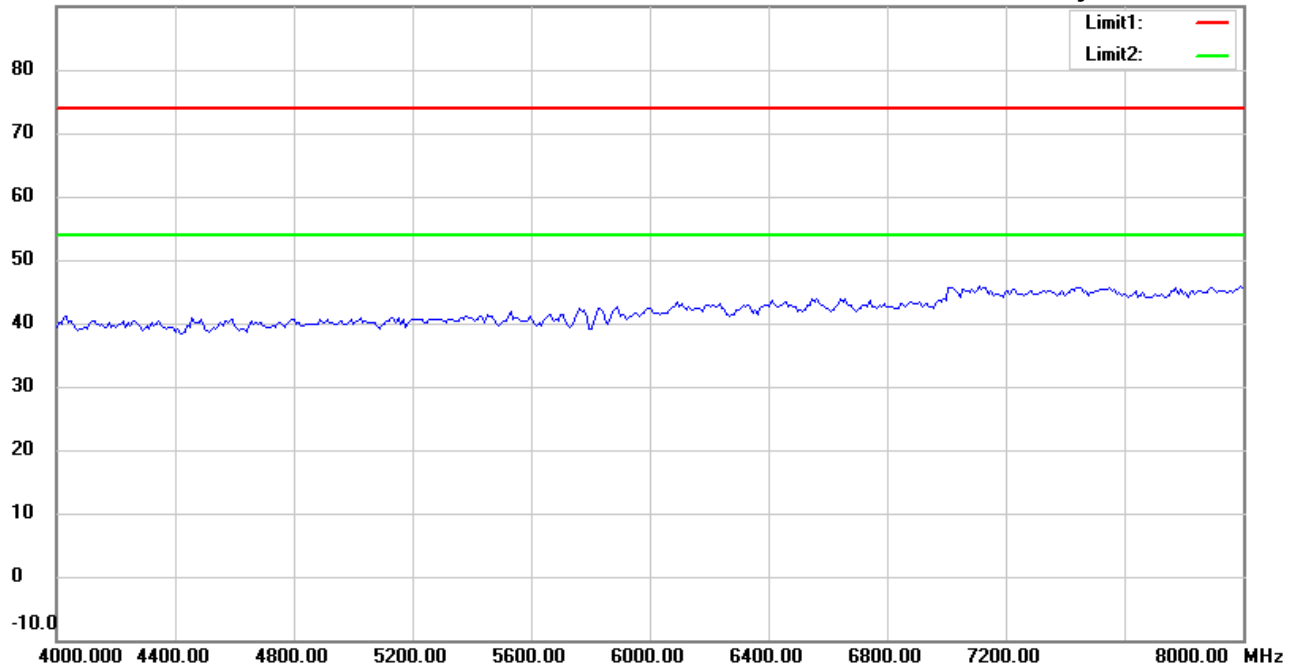
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:51:40 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5787MHz

Note :

Polarization: *Horizontal*

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#8

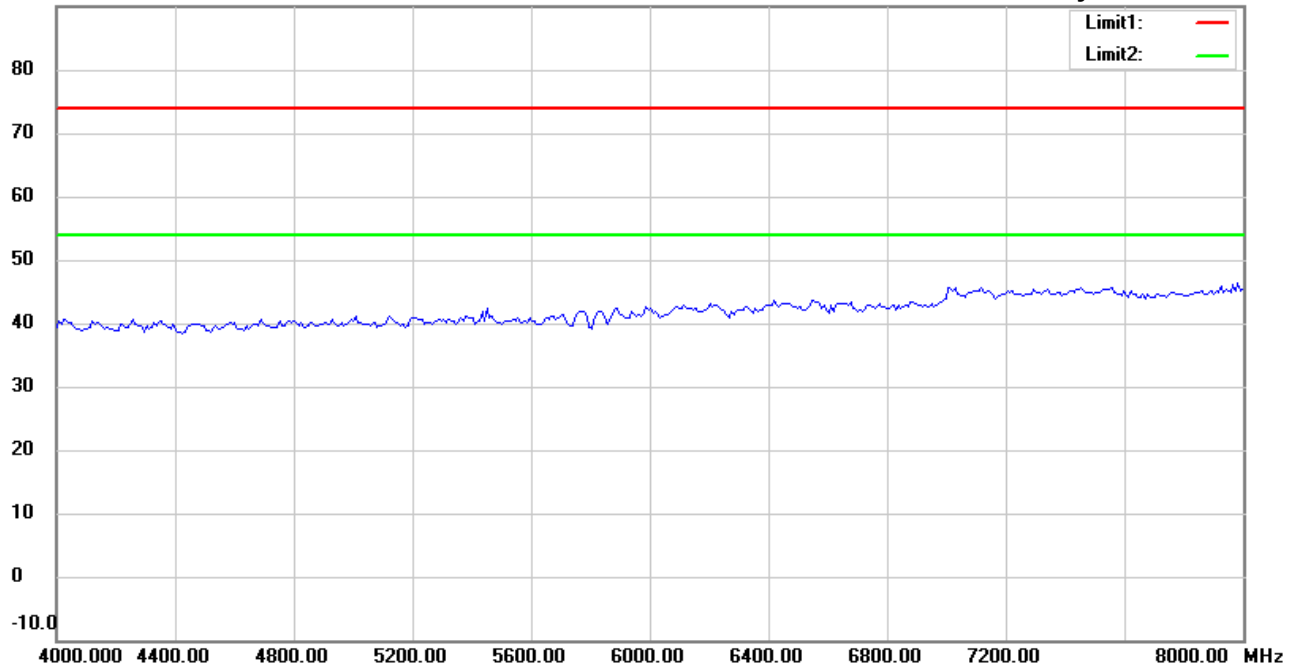
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:56:21 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5787MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#3

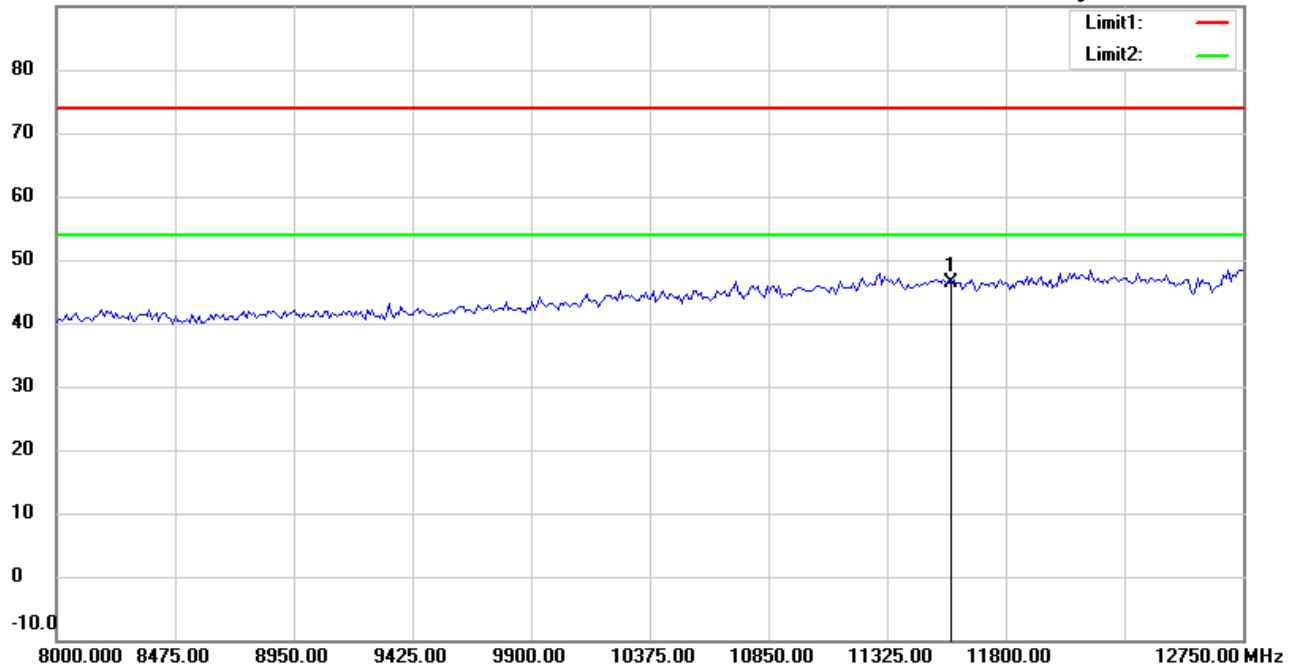
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:52:47 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5787MHz

Note :

Polarization: *Horizontal*

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
*	11574.000	35.28	peak	11.10	46.38	74.00	150	360	-27.62	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#9

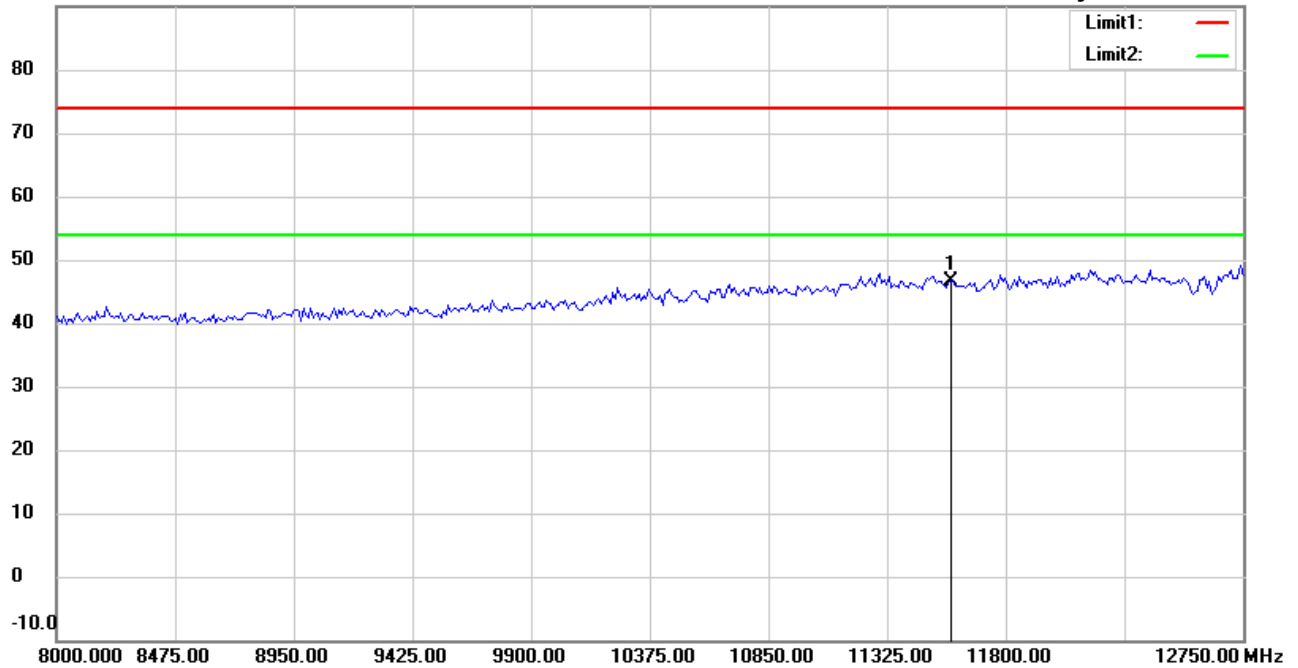
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:57:41 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5787MHz

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
*	11574.000	35.55	peak	11.10	46.65	74.00	150	25	-27.35	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#4

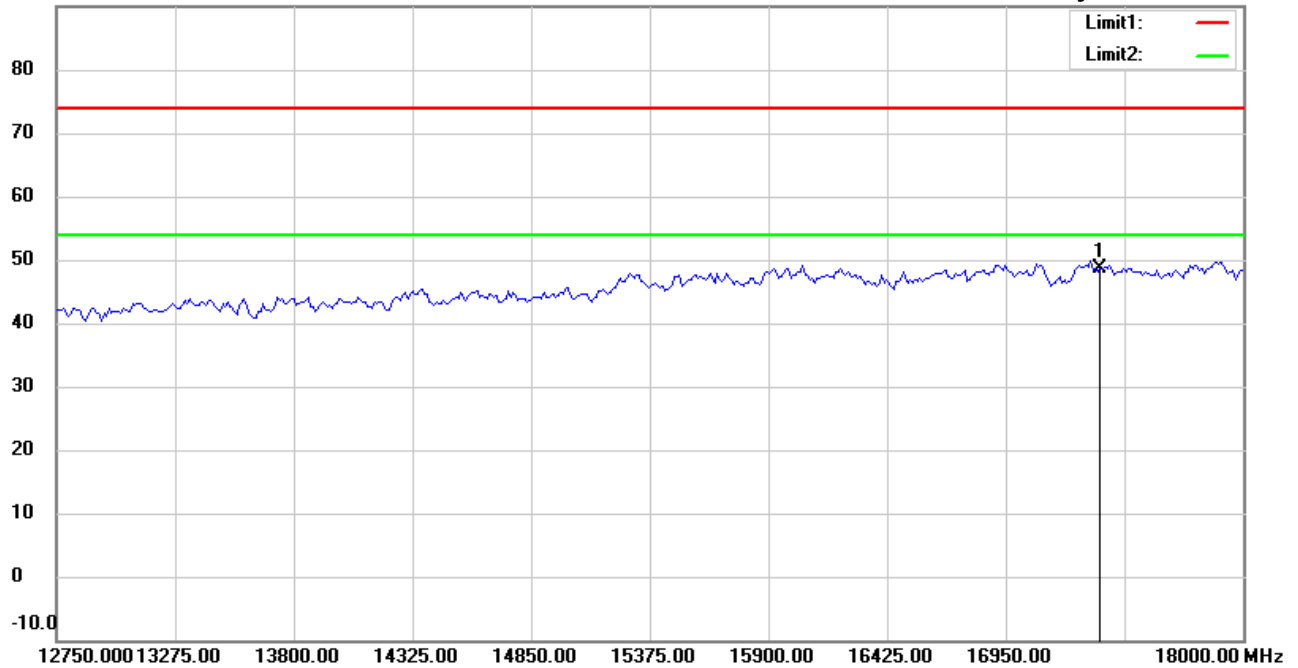
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:53:56 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5787MHz

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
*	17361.000	28.26	peak	20.39	48.65	74.00	150	130	-25.35	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#10

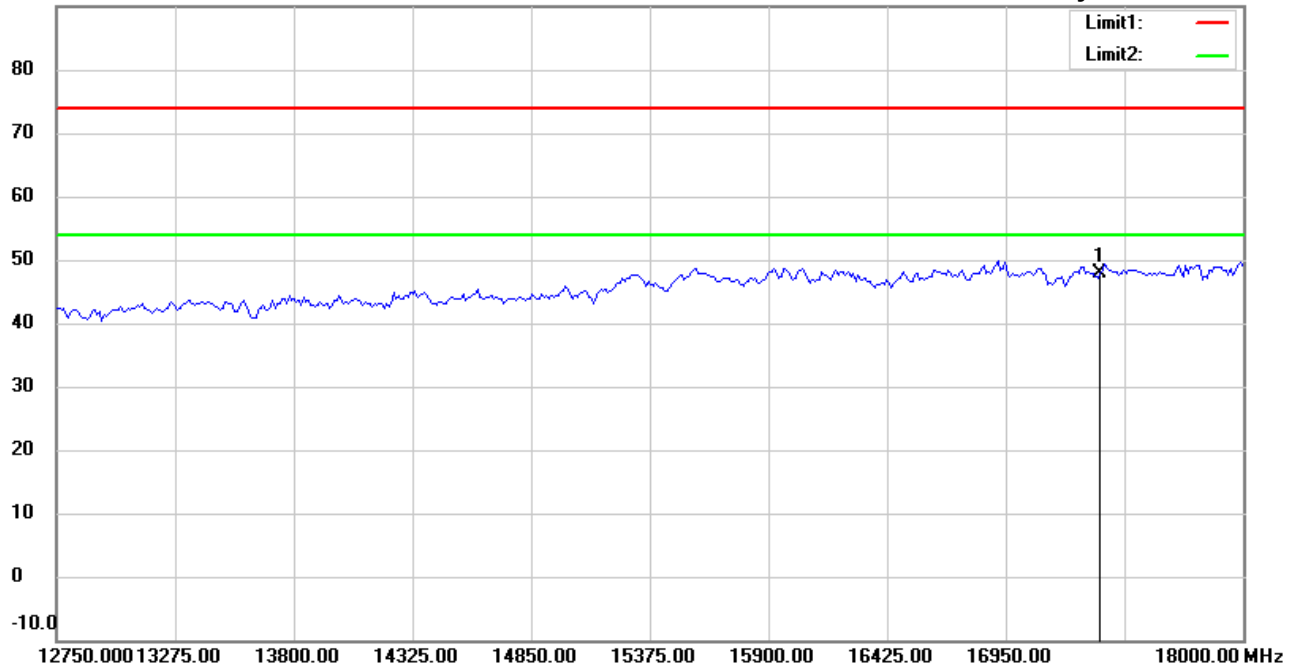
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:58:49 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5787MHz

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
*	17361.000	27.60	peak	20.39	47.99	74.00	150	245	-26.01	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#5

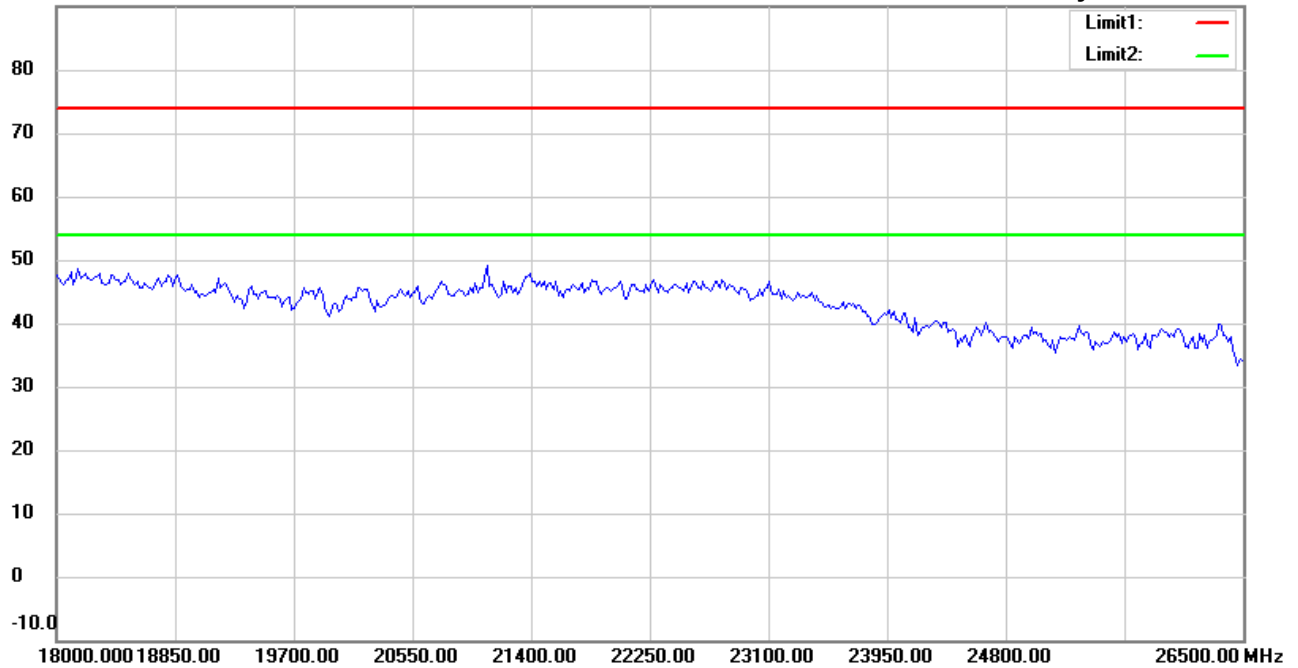
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:54:06 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5787MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#11

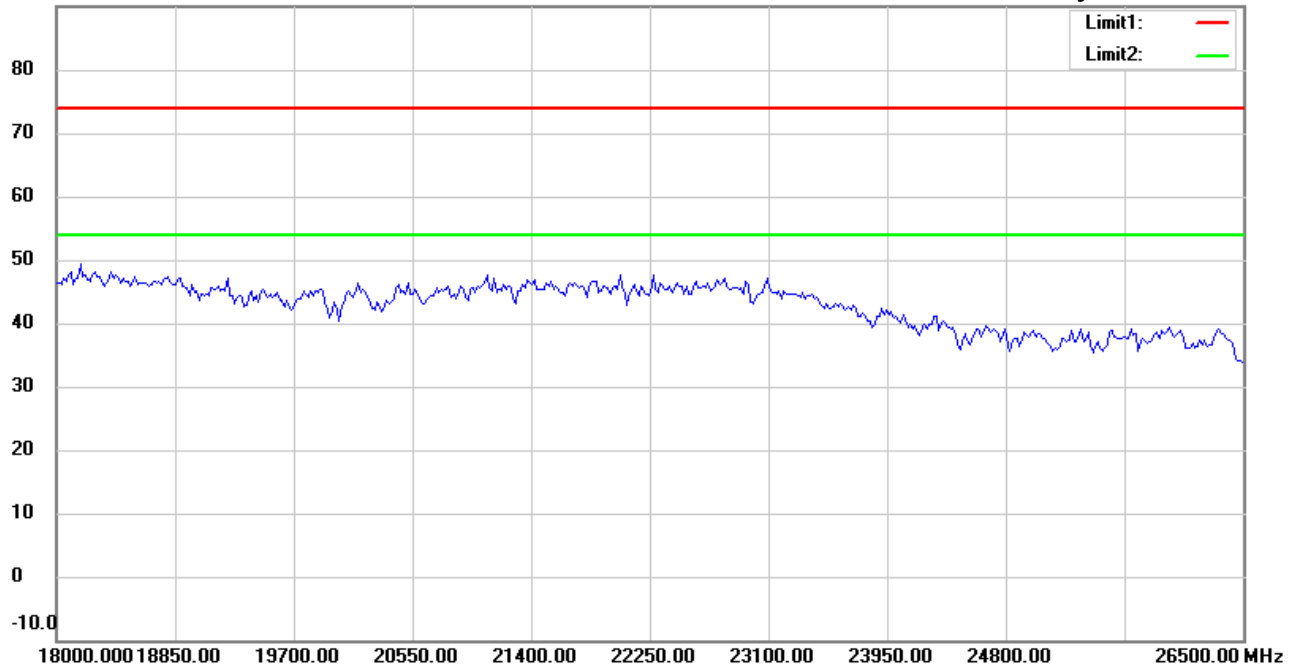
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:58:59 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5787MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#6

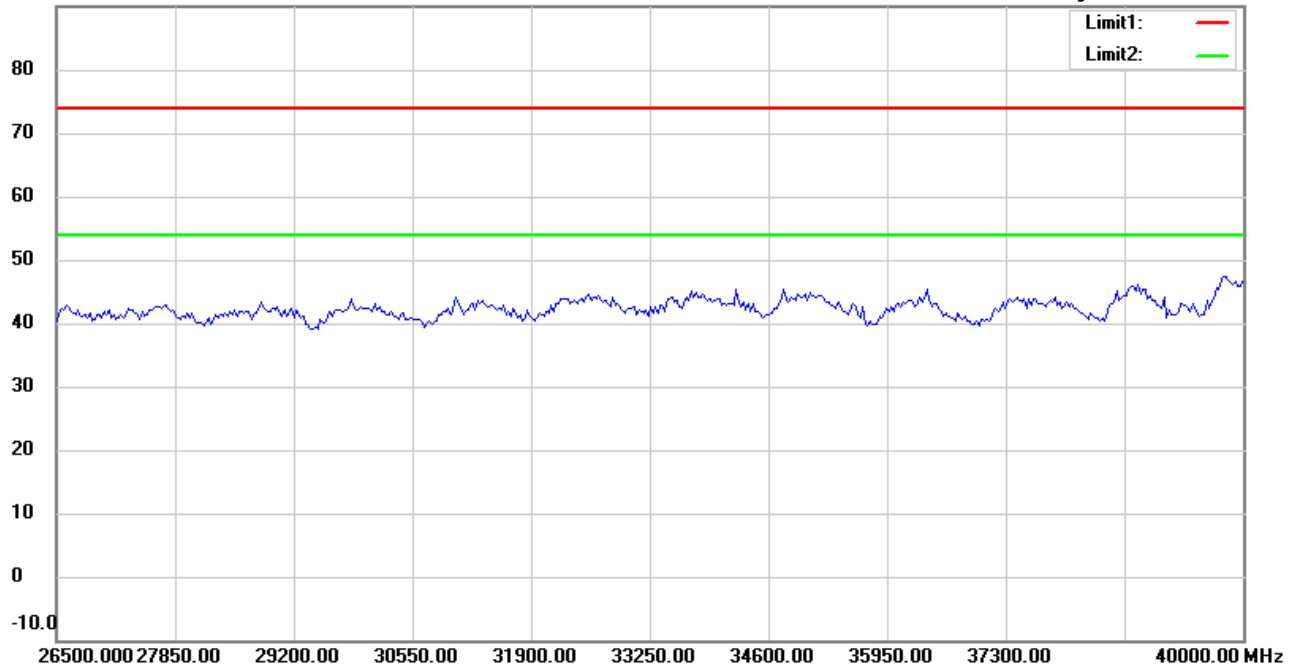
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:54:16 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5787MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#12

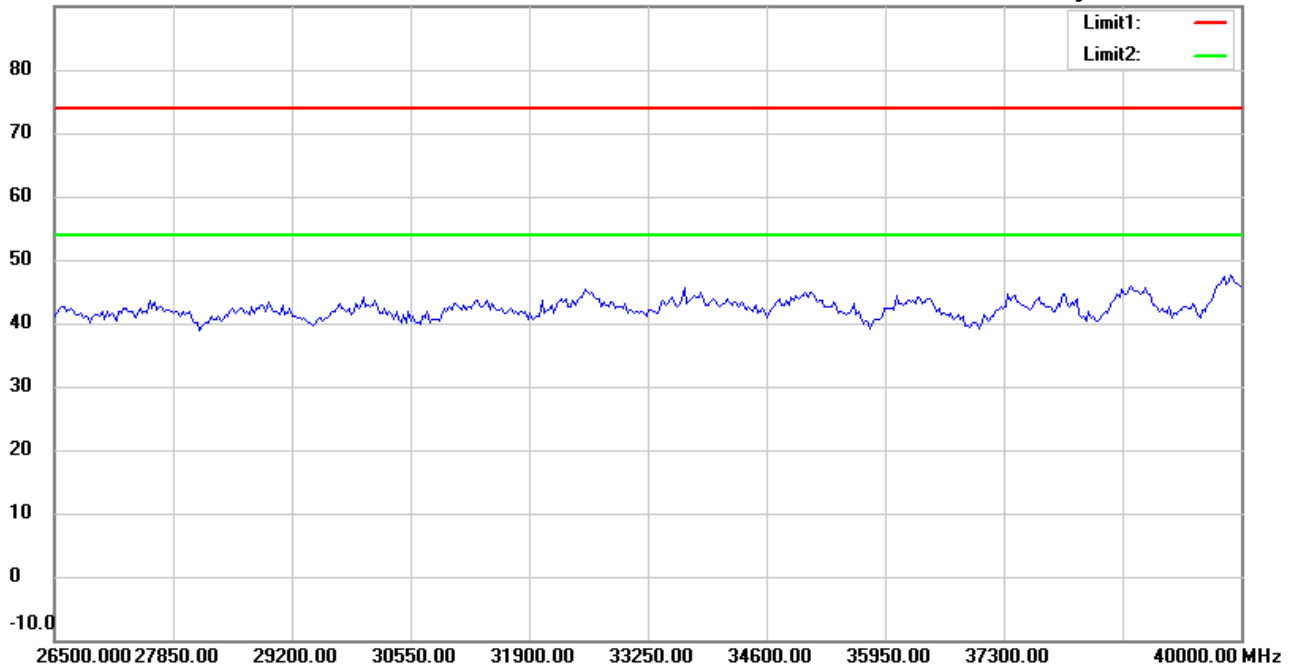
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 2:59:10 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5787MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#1

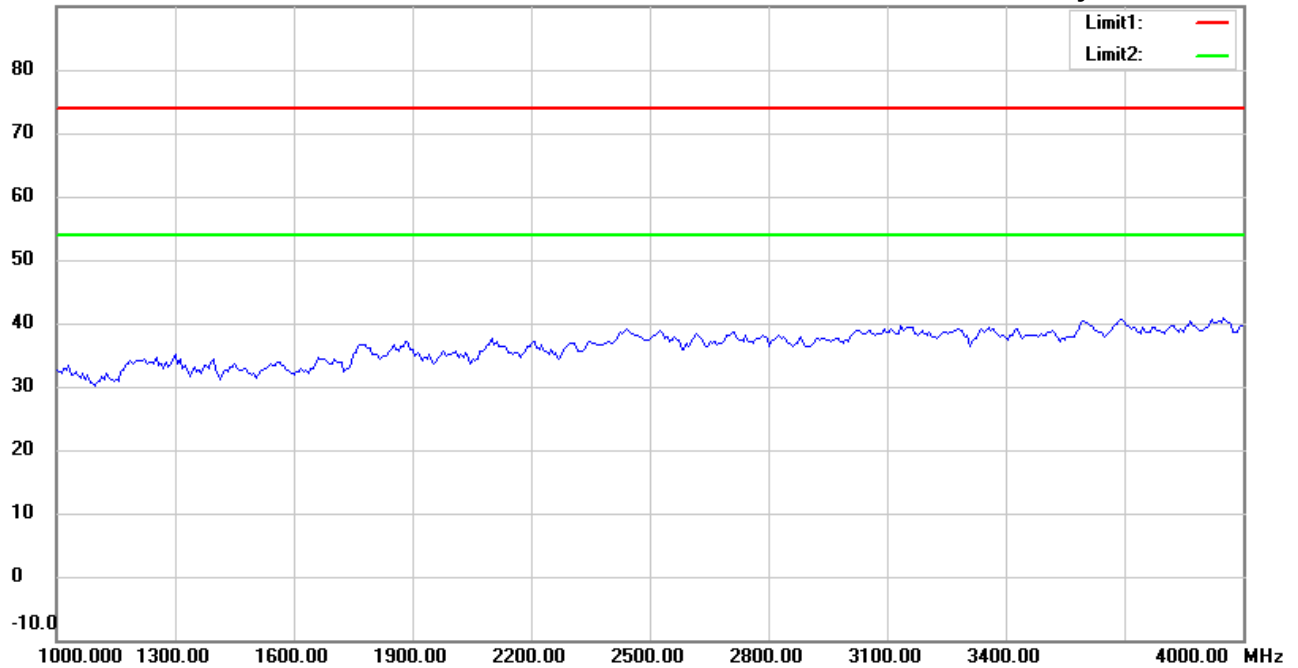
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:14:35 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5839MHz

Note :

Polarization: *Horizontal*

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#7

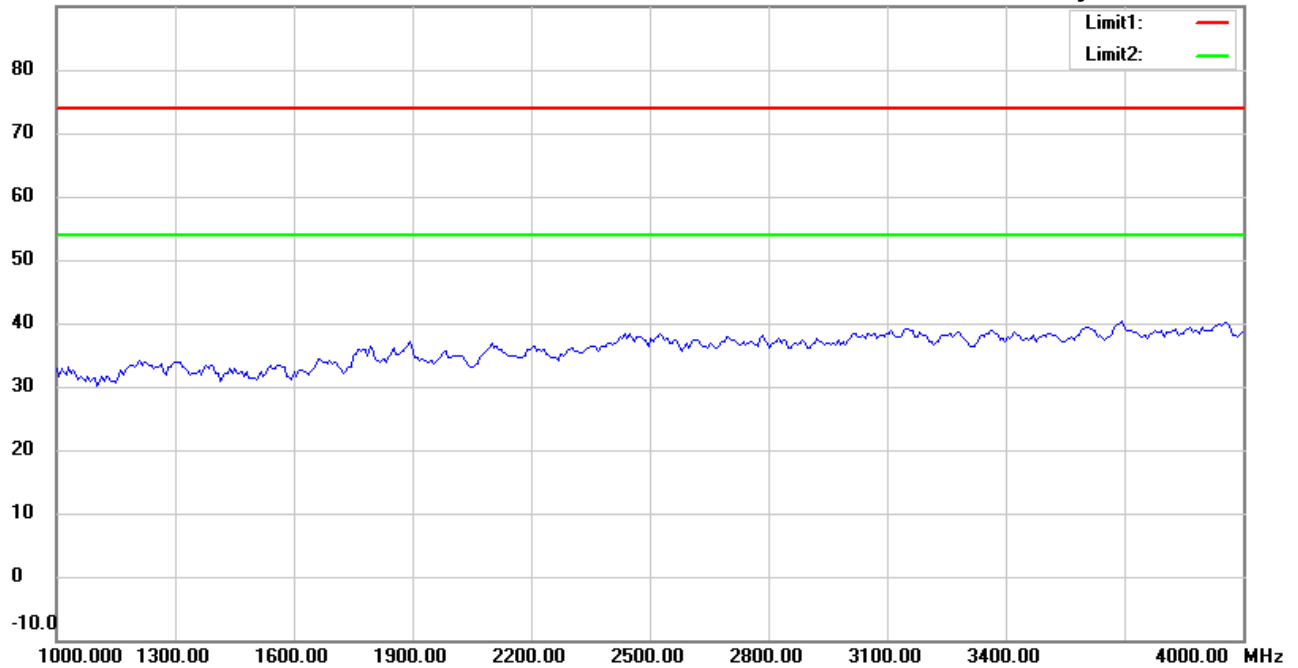
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:19:49 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5839MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#2

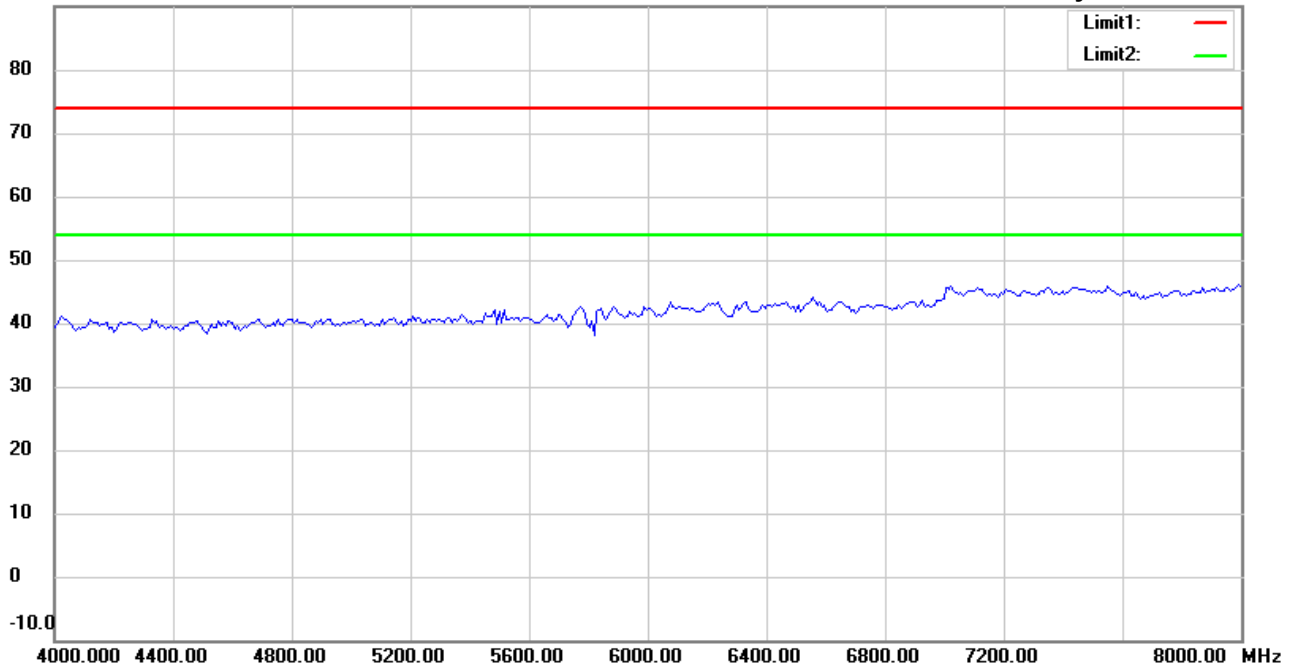
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:15:36 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5839MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#8

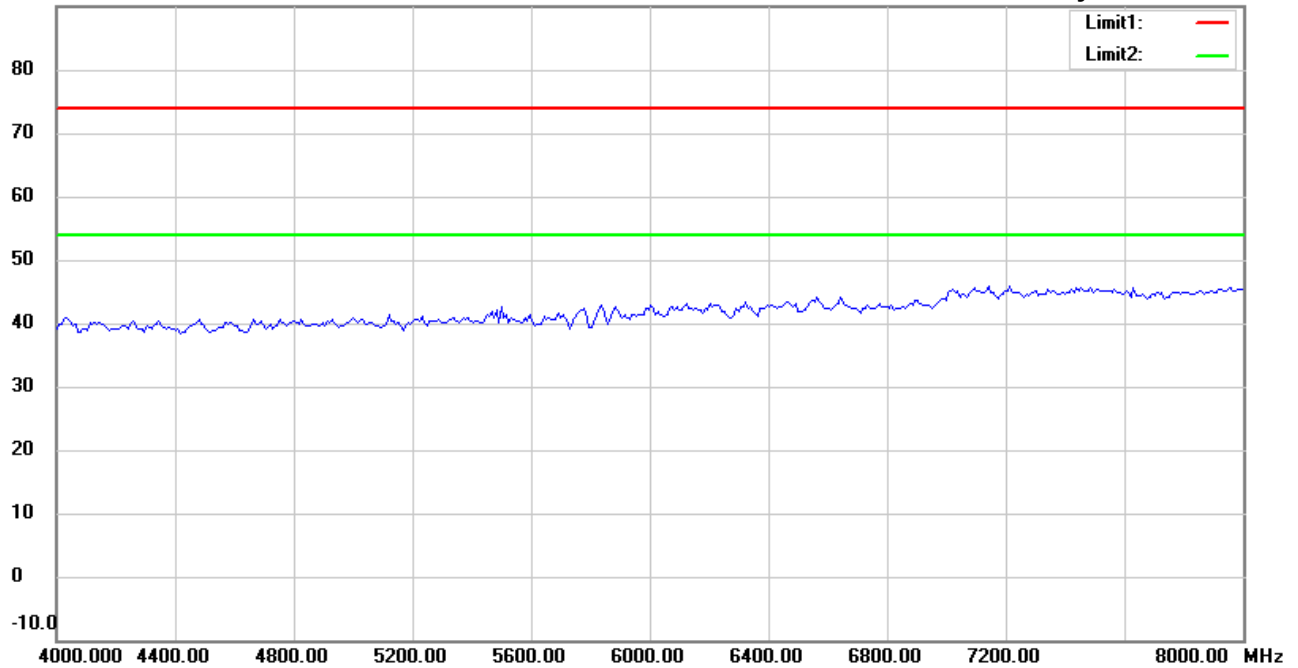
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:20:50 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5839MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#3

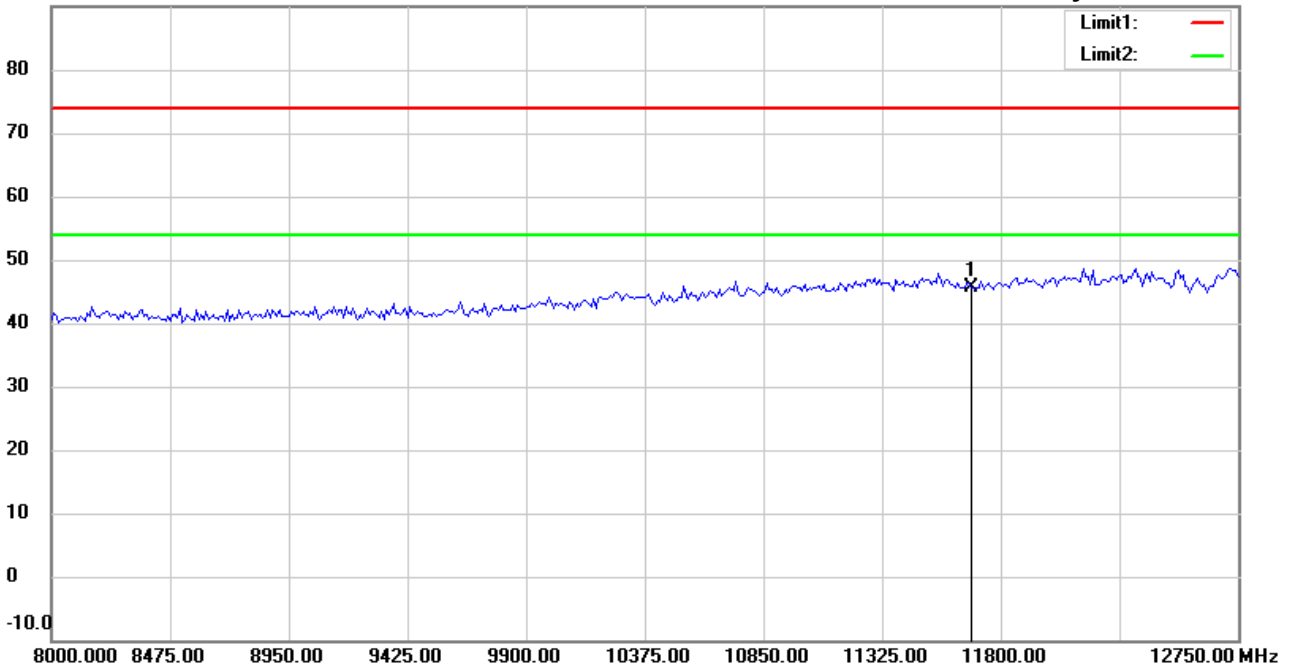
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:17:05 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5839MHz

Note :

Polarization: *Horizontal*

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
*	11678.000	34.61	peak	10.96	45.57	74.00	150	95	-28.43	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#9

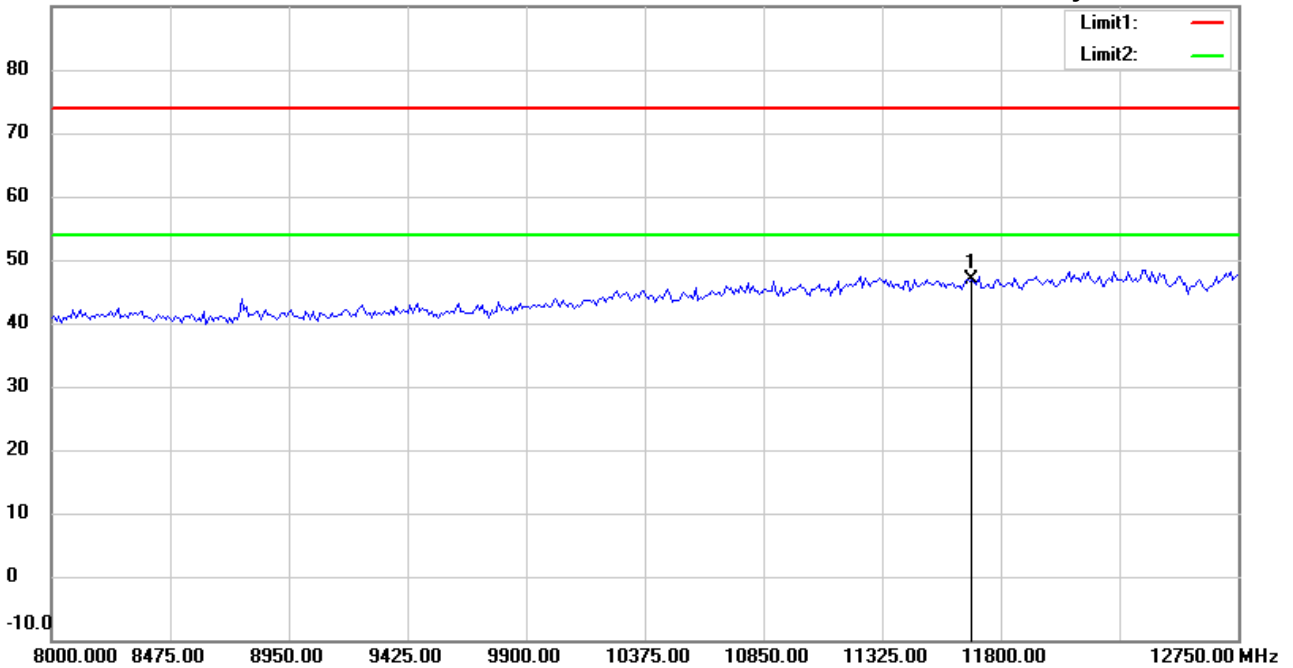
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:23:05 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5839MHz

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
*	11678.000	35.85	peak	10.96	46.81	74.00	150	50	-27.19	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#4

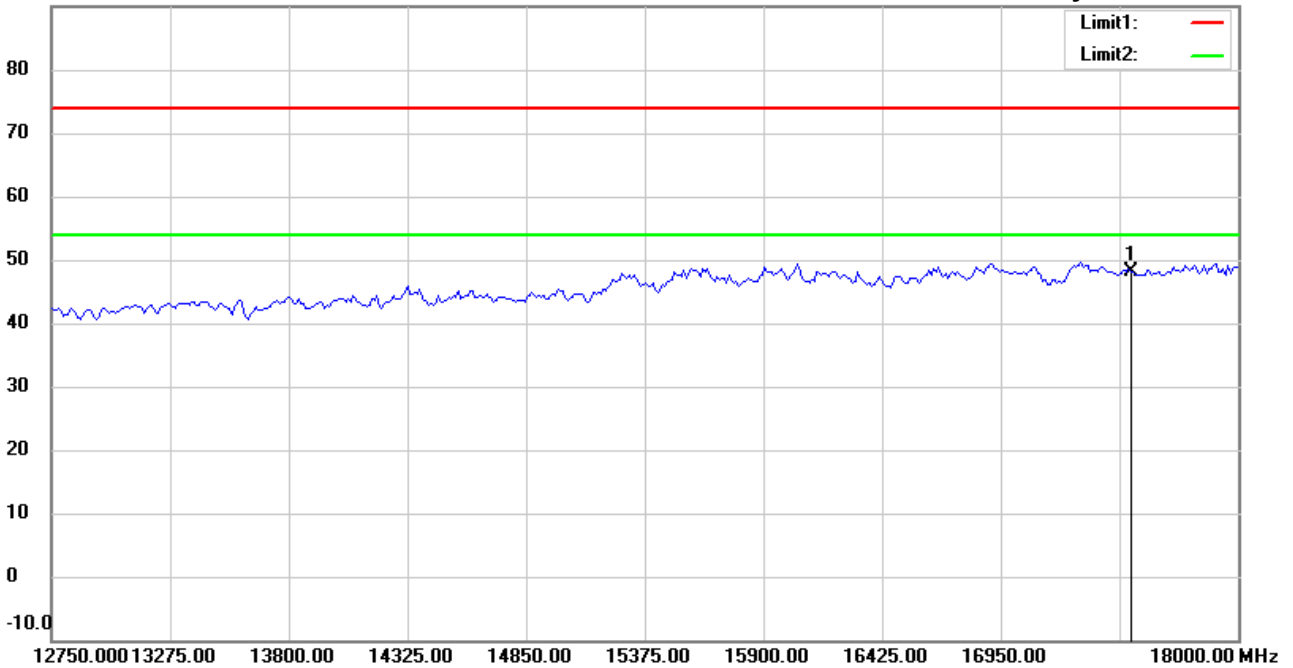
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:18:13 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5839MHz

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
*	17517.000	27.99	peak	20.19	48.18	74.00	150	200	-25.82	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#10

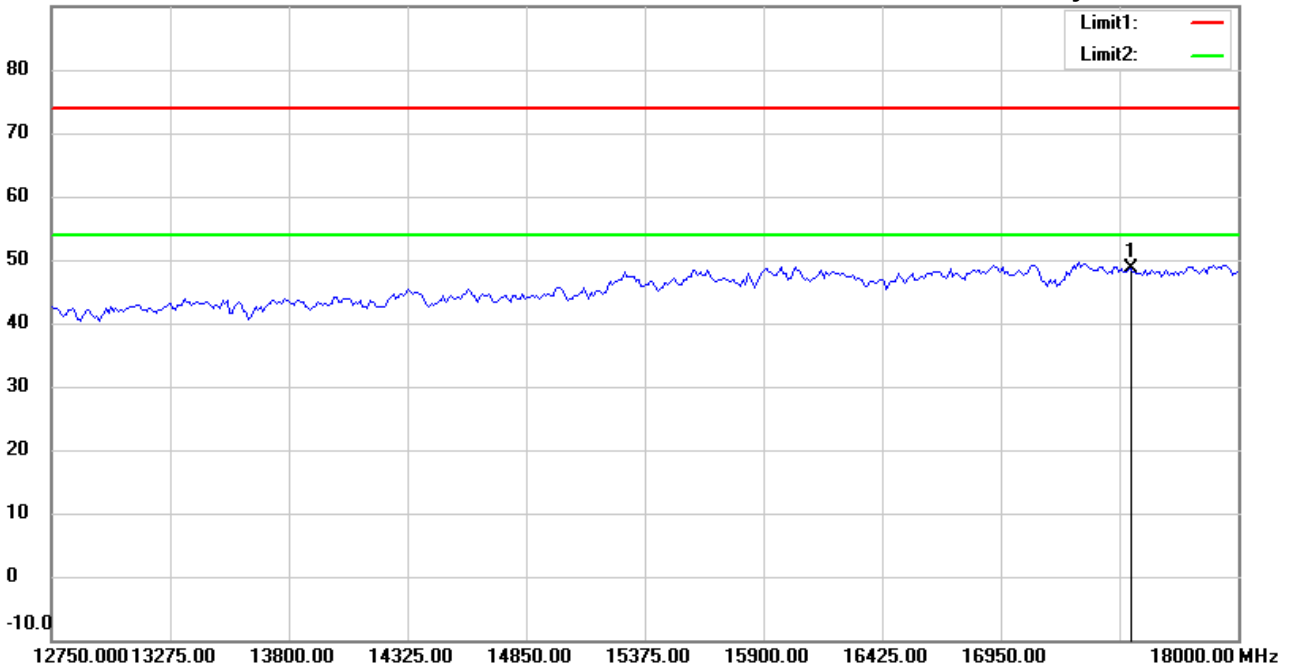
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:24:14 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5839MHz

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
*	17517.000	28.52	peak	20.19	48.71	74.00	150	110	-25.29	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#5

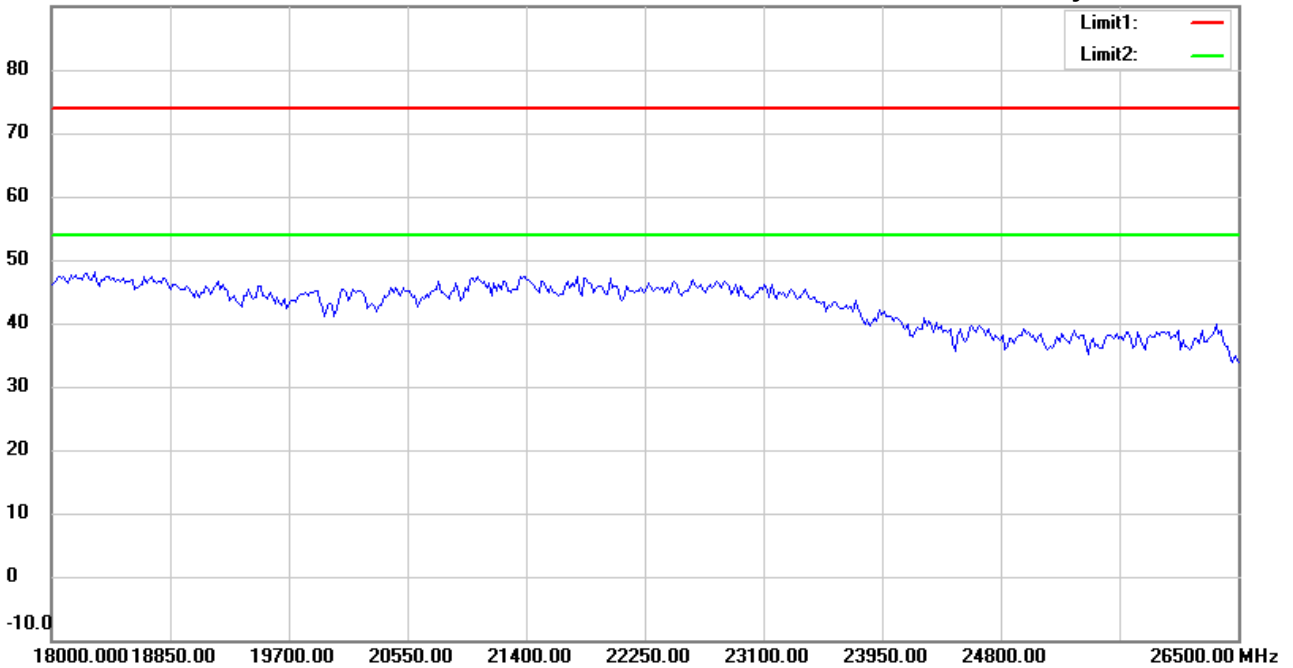
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:18:23 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5839MHz

Note :

Polarization: *Horizontal*

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#11

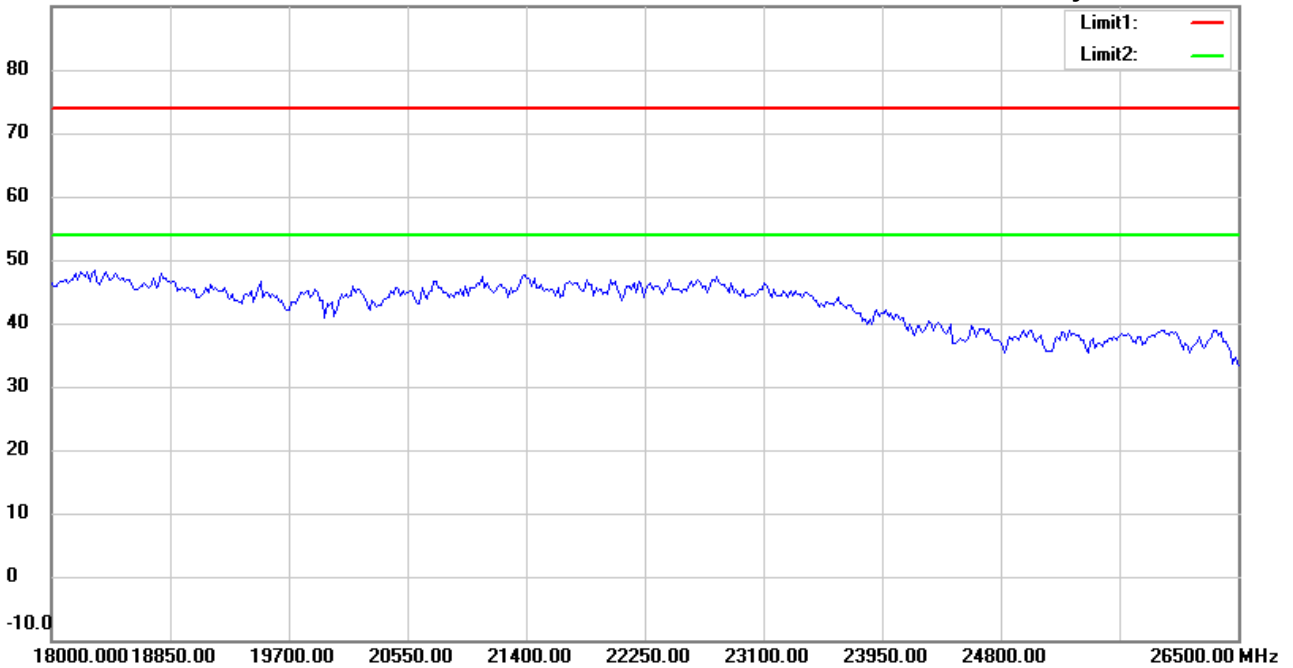
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:24:24 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: **Vertical**

EUT : W6M21904-18930

Power : 3.7 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 5839MHz

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#6

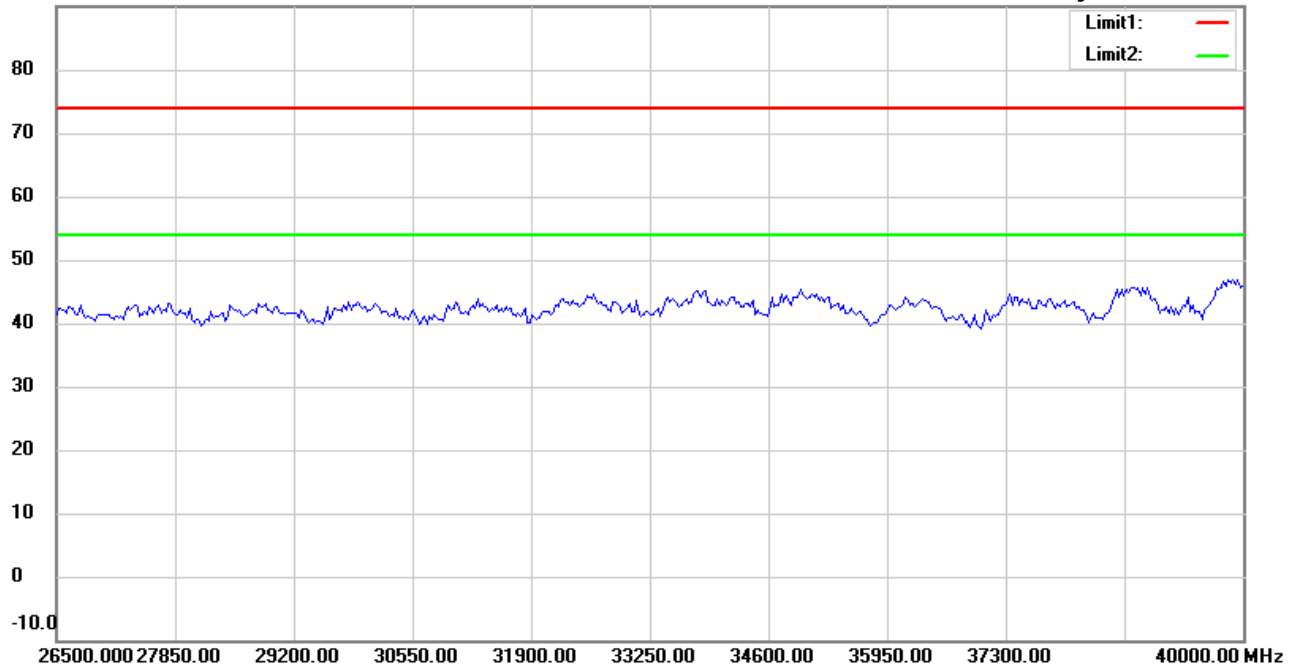
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:18:34 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5839MHz

Note :

Polarization: *Horizontal*

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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Allen

File :3

Data :#12

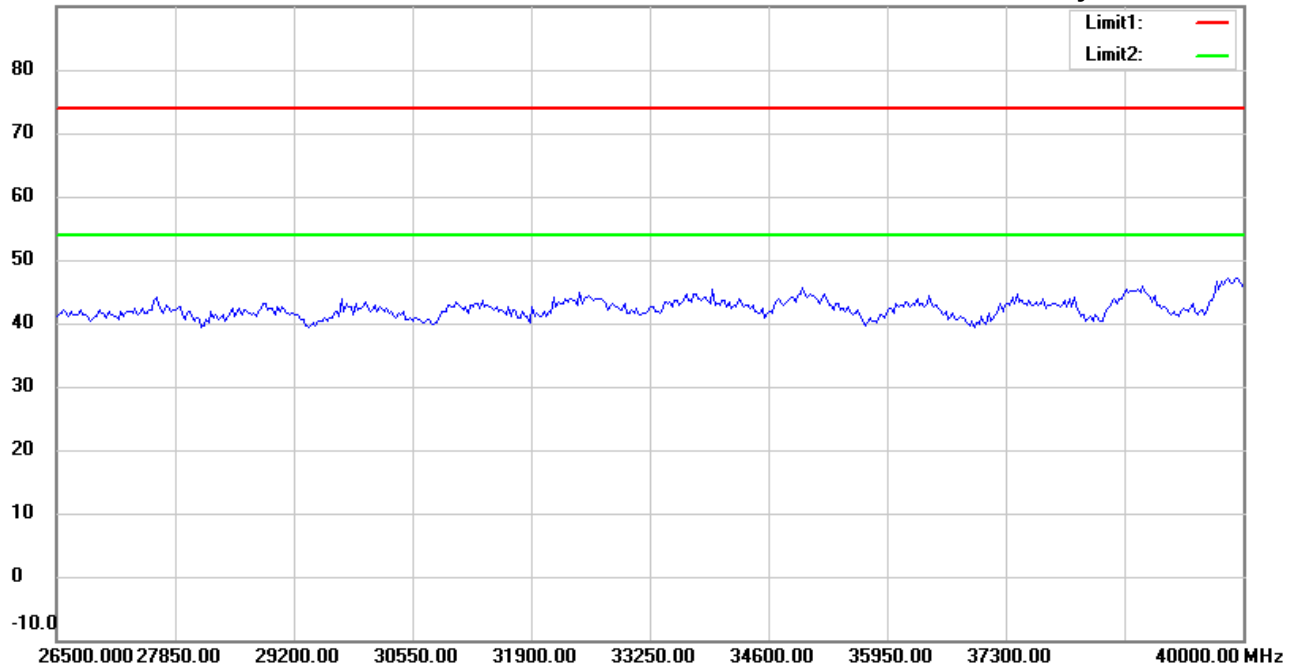
Date: 7/26/2019

Temperature:29.1 °C

90.0 dBuV/m

Time: 3:24:34 AM

Humidity:68.1 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6M21904-18930

M/N:

Test Mode : TX 5839MHz

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



Radiated Emission Measurement

Operator: Rick

File :MASK

Data :#1

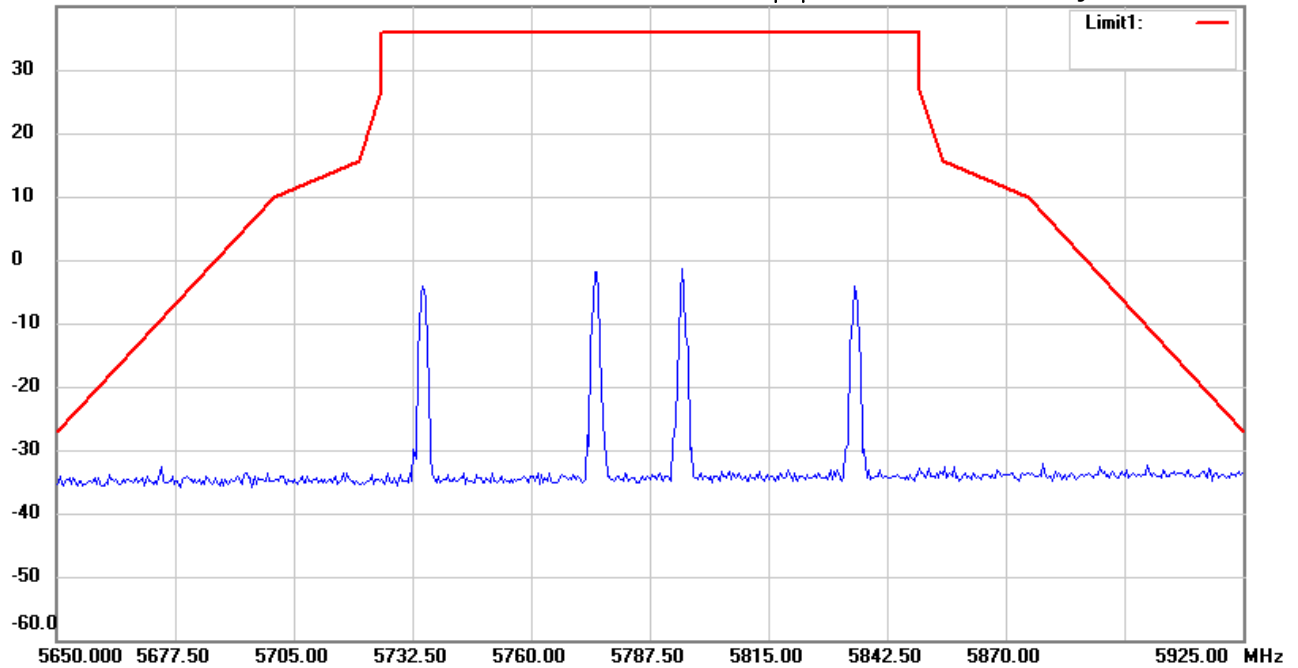
Date: 2019/5/28

Temperature:24 °C

40.0 dBm

Time: 下午 09:05:31

Humidity:60 %



Site : Chamber

Condition : FCC_5G Band4 Mask

EUT : W6M21903-18930

M/N:

Test Mode : TX 5735MHz

Note :

Polarization: *Horizontal*

Power : 3.7 Vd.c.

Distance: 3m

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Rick

File :MASK

Data :#2

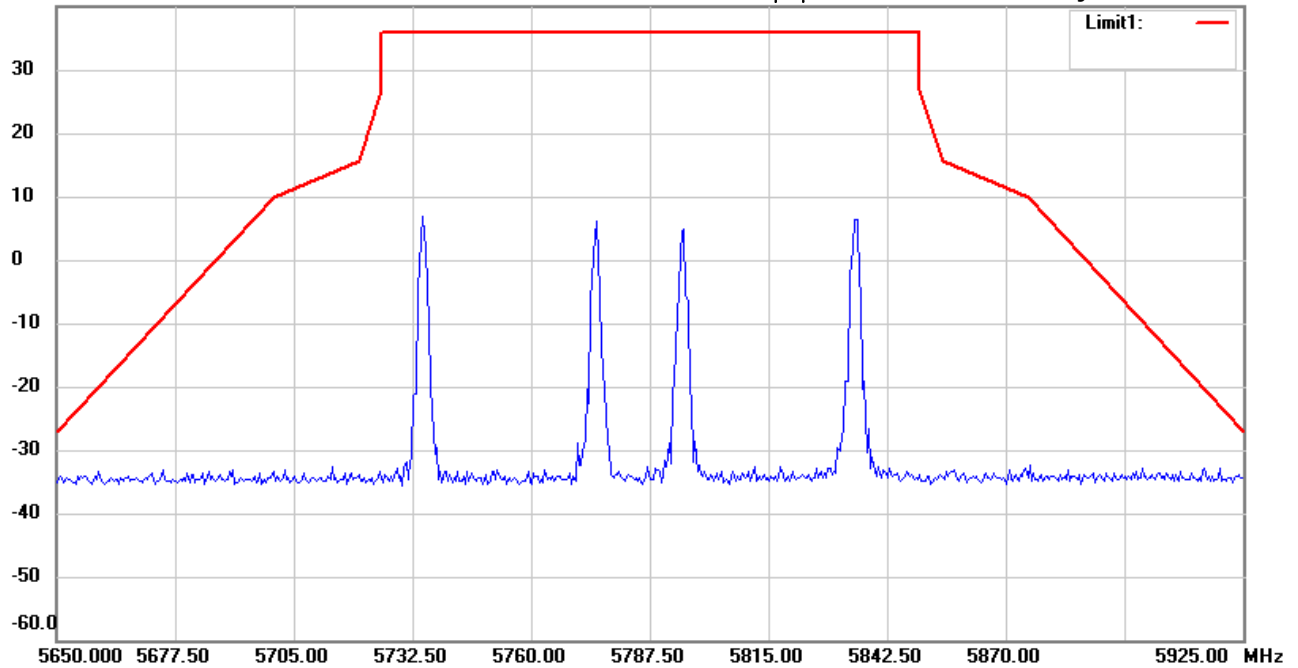
Date: 2019/5/28

Temperature:24 °C

40.0 dBm

Time: 下午 09:07:12

Humidity:60 %



Site : Chamber

Condition : FCC_5G Band4 Mask

EUT : W6M21903-18930

M/N:

Test Mode : TX 5735MHz

Note :

Polarization: *Vertical*

Power : 3.7 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBm)	Detector	Corr. factor (dB)	Result (dBm)	Limit (dBm)	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:+886-2-6606-8875

Radiated Emission Measurement

Operator: Rick

File :MASK

Data :#3

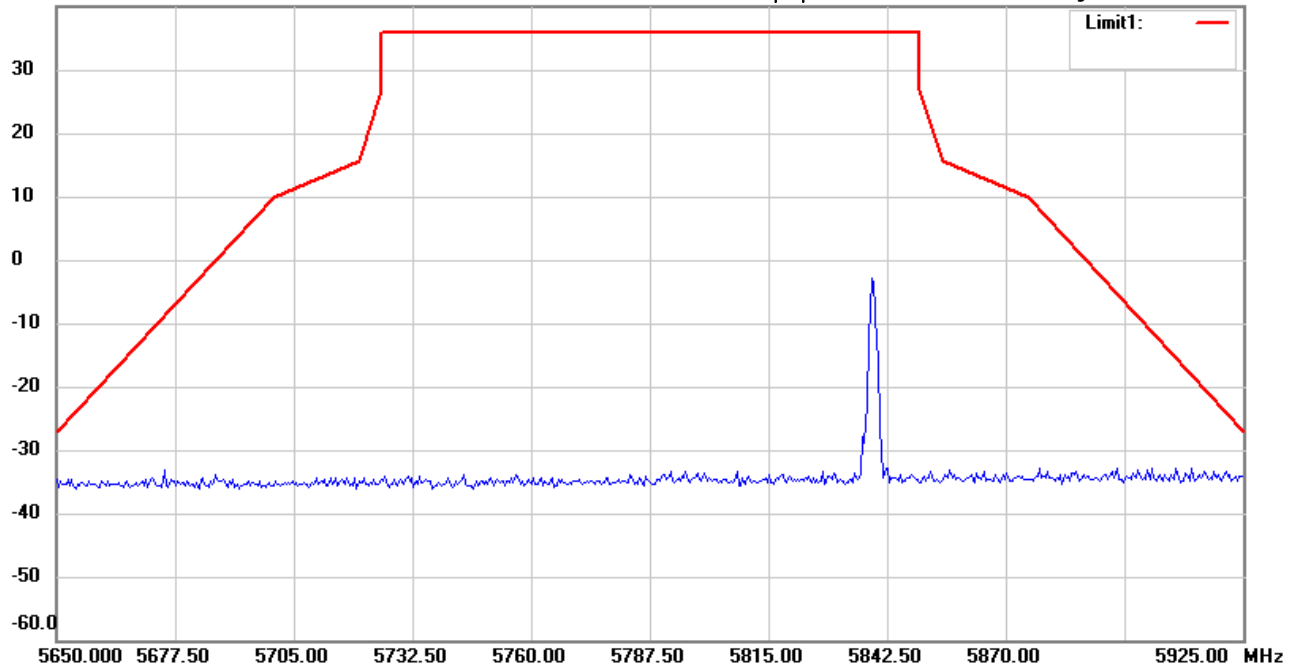
Date: 2019/5/28

Temperature:24 °C

40.0 dBm

Time: 下午 09:11:09

Humidity:60 %



Site : Chamber

Condition : FCC_5G Band4 Mask

EUT : W6M21903-18930

M/N:

Test Mode : TX 5839MHz

Note :

Polarization: *Horizontal*

Power : 3.7 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBm)	Detector	Corr. factor (dB)	Result (dBm)	Limit (dBm)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	5842.50	-5			-5	35			40	

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



Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
 Tel:+886-2-6606-8877
 Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Rick

File :MASK

Data :#4

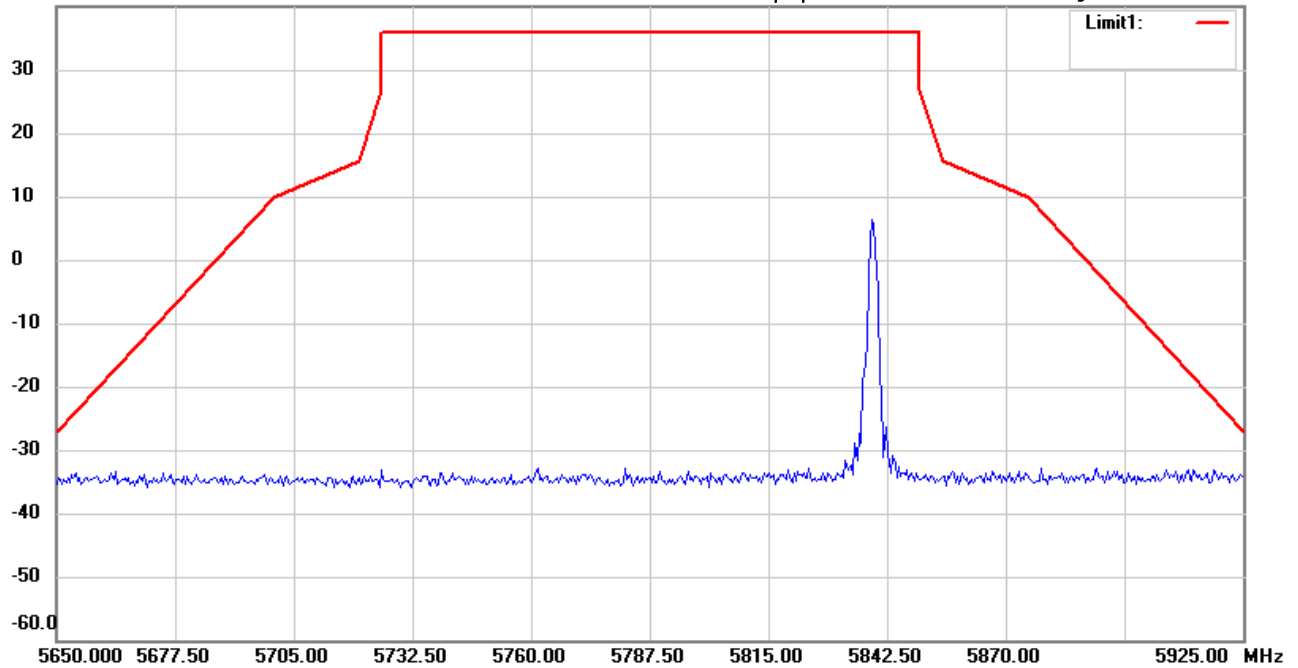
Date: 2019/5/28

Temperature:24 °C

40.0 dBm

Time: 下午 09:12:28

Humidity:60 %



Site : Chamber

Condition : FCC_5G Band4 Mask

EUT : W6M21903-18930

M/N:

Test Mode : TX 5839MHz

Note :

Polarization: *Vertical*

Power : 3.7 Vd.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBm)	Detector	Corr. factor (dB)	Result (dBm)	Limit (dBm)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	5842.5	5			5	35			30	

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