FCC PART 15 SUBPART C TEST REPORT

for

IUV914F9A

Model No.: IUV914F9A

FCC ID: H5OTR67

of

Applicant: **Advance Security Inc.**
Address: **3F, 48, Ta An Street, Hsi Chih, Taipei, Taiwan**

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: 930600

Industry Canada filed test laboratory Reg. No. IC 5679A-1, IC 5107A-1

A2LA Accredited No.: 2732.01

Report No.: W6D21706-17077-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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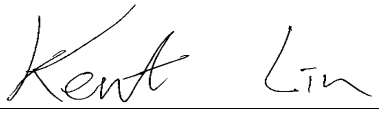
1 General Information

1.1 Notes

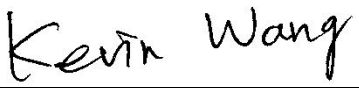
The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.
The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.
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.

The test results of this test report relate exclusively to the item tested as specified in 1.5.
The test report may only be reproduced or published in full.
Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.

Tester:

Date	WTS-Lab.	Name	Signature
July 3, 2017		Kent Lin	

Technical responsibility for area of testing:

Date	WTS	Name	Signature
July 3, 2017		Kevin Wang	

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67

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. 930600
Industry Canada filed test laboratory Reg. No. IC 5679A-1, IC 5107A-1

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	: Advance Security Inc.
Street	: 3F, 48, Ta An Street, Hsi Chih,
Town	: Taipei,
Country	: Taiwan
Telephone	: +886-2-86481688
Fax	: +886-2-86481689

1.4 Application details

Date of receipt of test item : ./.
Date of test : from June 22, 2017 to June 30, 2017

1.5 General information of Test item

Type of test item : IUV914F9A
Model Number : IUV914F9A
Multi-listing model number : ./.
Photos : see Appendix

Technical data

Frequency band : 908.3-923.783 MHz
Frequency (ch A) : 908.3 MHz
Frequency (ch B) : 915.444 MHz
Frequency (ch C) : 923.783 MHz

Transmitter **Unom**

Power (ch A or ch 1) : Conducted: 4.91 dBm
Power (ch B or ch 13) : Conducted: 5.46 dBm
Power (ch C or ch 25) : Conducted: 6.12 dBm

Power supply : 12 Vd.c.

Operation modes : Half-duplex

Modulation Type : FHSS

Antenna Type : Helical antenna

Antenna gain : 0 dBi

Host device : none

Classification :

Fixed Device	☐
Mobile Device (Human Body distance ＞ 20cm)	☐
Portable Device (Human Body distance ＜ 20cm)	☒

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67

Manufacturer:
(if applicable)

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

1.6 Test standards

Technical standard : FCC RULES PART 15 SUBPART C § 15.247 (2016-10)

Special Statement

1. This test report is based on the original report no.: W6M21706-17076-C-1.
2. The relevant Circuitry, PCB Layout, Inner element, Appearance and Function of this model number are exactly the same as the original report no.: W6M21706-17076-C-1.The differences are model number and product name. Therefore the test result is also based on the original test report W6M21706-17076-C-1 without re-testing.

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 as specified in 3 were ascertained in the course of the tests performed. ☐

2.2 Test environment

Temperature : 23 ℃

Relative humidity content : 20 ... 75 %

Air pressure : 86 ... 103 kPa

Details of power supply : 12 Vd.c.

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

Description of Tested System : ./.

Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission	Expanded Uncertainty：0.74 dB
Estimation Result of Uncertainty of Radiated Emission(3M)	Expanded Uncertainty： 0.009-30 MHz：2.17 dB 30-1000 MHz：3.30 dB 1-18 GHz：2.28 dB 18-40 GHz：2.19 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：1.01 dB
Estimation Result of Uncertainty of Band Edge Measurement	Expanded Uncertainty：0.98 dBc
Estimation Result of Uncertainty of Frequency Separation Measurement Hopping channel separation	Expanded Uncertainty：552.91 Hz
Estimation Result of Uncertainty of Duty Cycle Measurement Dwell time	Expanded Uncertainty：0.074 ms

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	2017/5/26	2018/5/25
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
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	2016/7/15	2017/7/14
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2016/9/12	2017/9/11
ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2016/8/26	2017/8/25
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2017/5/26	2018/5/25
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2017/5/17	2018/5/16
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2016/7/4	2017/7/3
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	2017/6/23	2018/6/22
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2017/6/23	2018/6/22
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2017/3/22	2018/3/21
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2017/2/7	2018/2/6
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2017/4/10	2018/4/9
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2017/4/27	2018/4/26
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2017/3/1	2018/2/28
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2017/3/1	2018/2/28
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2017/3/1	2018/2/28
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2017/3/1	2018/2/28
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2017/3/1	2018/2/28
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2017/4/12	2018/4/11
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	2016/9/8	2017/9/7
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2016/9/20	2017/9/19
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2017/4/6	2018/4/5
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2017/3/1	2018/2/28
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	2017/1/12	2018/1/11
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Function test	
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2017/5/26	2018/5/25
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2016/8/10	2017/8/9
ETSTW-RE 126	5GHz Notch filter	5NSL12-5800/E221.3-O/O	1	K&L Microwave	2016/8/10	2017/8/9
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2017/3/1	2018/2/28

ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2016/8/10	2017/8/9
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2016/8/10	2017/8/9
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2017/4/12	2018/4/11
ETSTW-RE 143	Humidity Temperature Meter	TES-1260	110104623	TES	2016/8/19	2017/8/18
ETSTW-RE 147	Bi-log Hybrid Antenna	MCTD 2786B	BLB16M04005	ETC	2017/3/22	2018/3/21
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2017/5/10	2018/5/9
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2017/2/24	2018/2/23
ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2017/2/10	2018/2/9
ETSTW-GSM 004	Wideband Radio Communication Tester	CMW500	128092	R&S	2016/12/15	2017/12/14
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40 /12+9SS	3	WI	2017/1/12	2018/1/11
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2017/1/12	2018/1/11
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2017/1/12	2018/1/11
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2017/1/12	2018/1/11
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2016/9/14	2017/9/13
ETSTW-Cable 010	BNC Cable	RGS-142	None	THERMAX	2016/9/12	2017/9/11
ETSTW-Cable 011	SMA to N type Cable	RGU-400	None	THERMAX	Pre-test Use NCR	
ETSTW-Cable 012	BNC Cable	RGS-400	None	THERMAX	2016/9/12	2017/9/11
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2017/2/23	2018/2/22
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2017/2/23	2018/2/22
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2017/2/23	2018/2/22
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2017/2/23	2018/2/22
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2017/4/21	2018/4/20
ETSTW-Cable 022	N TYPE Cable	5006	0002	JYE BAO CO.,LTD.	2017/4/6	2018/4/5
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2017/3/1	2018/2/28
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2017/5/12	2018/5/11
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2016/9/20	2017/9/19
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2016/9/20	2017/9/19
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104（S_Cable 9）	279067	HUBER+SUHNER	2017/3/1	2018/2/28
ETSTW-Cable 031	Microwave Cable	SUCOFLEX 104（S_Cable 10）	238092	HUBER+SUHNER	2017/4/12	2018/4/11
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2017/4/12	2018/4/11
ETSTW-Cable 048	Microwave Cable	SUCOFLEX 104	325519	HUBER+SUHNER	2017/4/12	2018/4/11
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2017/2/20	2018/2/19
ETSTW-Cable 064	Microwave Cable	SUCOFLEX 104	MY28891	HUBER+SUHNER	2017/4/12	2018/4/11
ETSTW-Cable 066	SMA type cable	32022	None	ASTROLAB	2016/9/12	2017/9/11
ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM-NM-25000	170239	EMCI	2017/2/20	2018/2/19
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	

2.4 General Test Procedure

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

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

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

Example:

Freq (MHz)	METER READING + ACF + CABLE LOSS (to the receiver) = FS
33	20 dBμV + 10.36 dB + 6 dB = 36.36 dBμV/m @3m

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

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

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.
Measurements were made by Worldwide Testing Services(Taiwan) Co., Ltd. at the registered open field test site located No.5-1, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 207, Taiwan (R.O.C.). The Registration Number: **930600**.

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

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

The formula is as follows:
Average = Peak + Duty Factor
Duty Factor = 20 log (dwell time/T)
T = 100ms when the pulse train period is over 100 ms or the period of the pulse train.

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

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

3 Test results (enclosure)

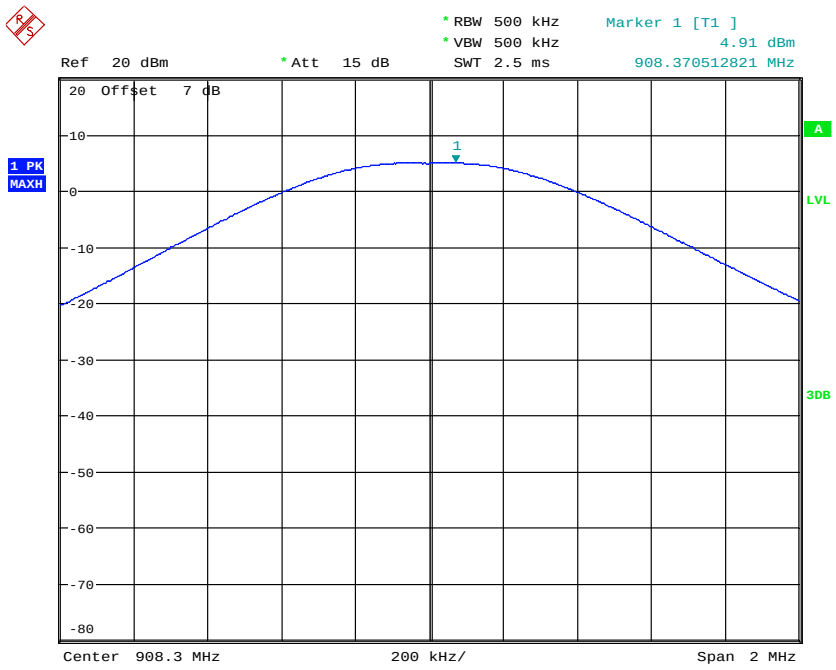
TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)	☒	☒	☐
Equivalent isotropically radiated Power	15.247(b)	☒	☒	☐
Spurious Emissions radiated – Transmitter operating	15.247(c)	☒	☒	☐
Spurious Emissions conducted – Transmitter operating	15.247	☐	☐	☐
Carrier Frequency Separation	15.247(a) (1)	☒	☒	☐
Number of Hopping Frequencies	15.247(a) (1)(i)	☒	☒	☐
Time of Occupancy (Dwell Time)	15.247(a) (1)(i)	☒	☒	☐
20 dB Bandwidth	15.247(a) (1)(i)	☒	☒	☐
Band-edge Compliance of RF Emission	15.247(c)	☒	☒	☐
Radiated Emission from Receiver L.O.	15.109	☒	☒	☐
Power Line Conducted Emission	15.207(a)	☐	☐	☐

3.1 Peak Output Power (transmitter)

FCC Rule: 15.247

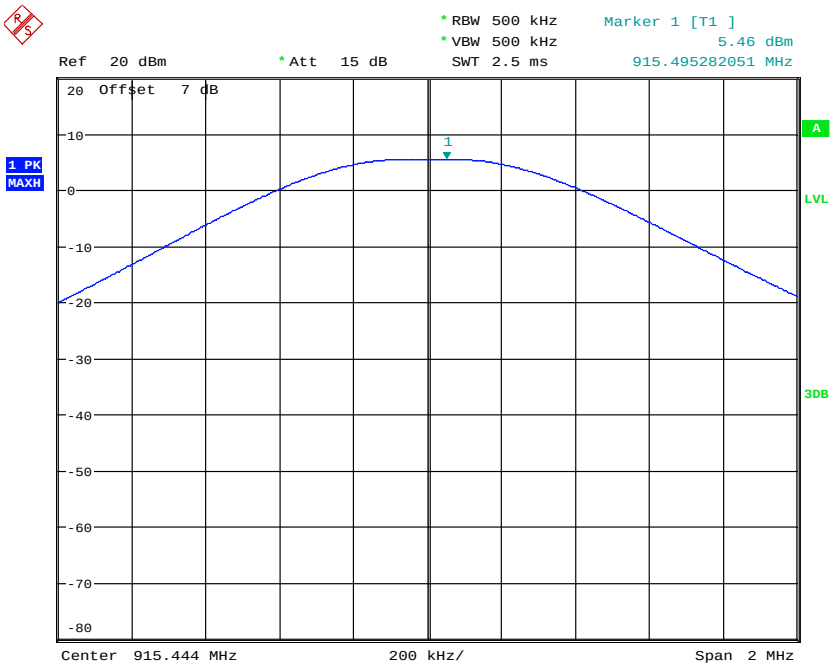
This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.

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

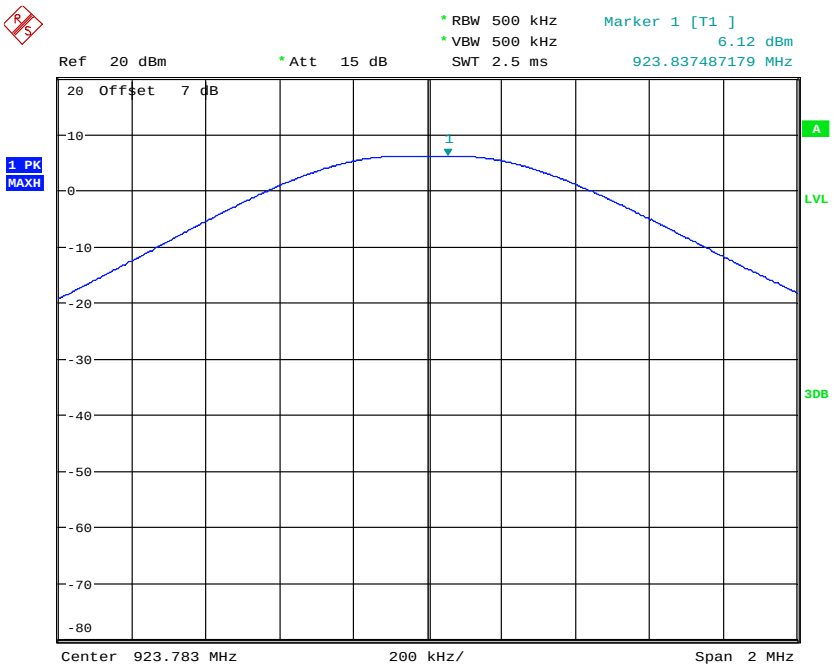


MAX OUTPUT POWER 908.3MHz
Date: 29.JUN.2017 19:54:49

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67



MAX OUTPUT POWER 915.444MHz
Date: 29.JUN.2017 19:54:09



MAX OUTPUT POWER 923.783MHz
Date: 29.JUN.2017 19:53:26

Test conditions T_{nom}= --°C, V_{nom}= -- V Frequency[MHz]	Signal Field strength TX highest power mode dBµV/m
--	--
Measurement uncertainty	<± 2.05 dB

Maximum Peak Output Power

Limits:

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

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

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

3.2 RF Exposure Compliance Requirements

According to Supplement C, Edition 01-01 to OET Bulletin 65, Edition 97-01 this spread spectrum transmitter is categorically excluded from routine environmental evaluation because of the low power level, where there is a high likelihood of compliance with RF exposure standards.

3.3 Out of Band Radiated Emissions

FCC Rule: 15.247(c) , 15.35
For out of band emissions that are close to or that exceed the 20 dB attenuation requirement described in the specification, radiated measurements were performed at a 3 m separation distance to determine whether these emissions complied with the general radiated emission requirement.
Limits:
For frequencies below 1GHz :
Max. reading – 20 dB

Guidance on Measurement of FHSS Systems:
"If the emission is pulsed, modify the unit for continuous operation , use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation." Here the correction was added to the limit instead subtracted from the reading.

Duty Cycle correction = 20 log (dwell time/100ms)
For frequencies above 1GHz (Peak measurements).
Limit = max. aver. reading-20dB +20dB(because Peak detector is used)

For frequencies above 1GHz (Average measurements).
Max. reading – 20 dB - duty cycle correction:

No duty cycle correction was added to the reading

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044, ETSTW-RE 064

3.4 Transmitter Radiated Emissions in restricted Bands

FCC Rules: 15.247 (c), 15.205, 15.209, 15.35
Radiated emission measurements were performed from 30 MHz to 26000 MHz.
For radiated emission tests, the analyzer setting was as followings:
RES BW VID BW
Frequency <1 GHz 100 kHz 100 kHz (Peak measurements)
Frequency >1 GHz 1 MHz 1 MHz (Peak measurements)
1 MHz 1 MHz (Average measurements)
Limits:
For frequencies below 1GHz :

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

For frequencies above 1GHz (Average measurements).
Guidance on Measurement of FHSS Systems:
"If the emission is pulsed, modify the unit for continues operation , use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation." Here the correction was added to the limit instead subtracted from the reading.

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

For frequencies above 1GHz (Average measurements).

Limit – duty cycle correction

No duty cycle correction was added to the reading.

54.0dBµV/m

For frequencies above 1GHz (Peak measurements).

Limit + 20dB

54.0dBµV/m + 20 dB= 74 dBµV/m

Note: See attached diagrams.

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042,
ETSTW-RE 043, ETSTW-RE 044, ETSTW-RE 064

3.5 Spurious emissions (tx)

Spurious emission was measured with modulation (declared by manufacturer).
In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))

SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance to point 2.3.
Calculation of test results:
Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits.
In the Table being listed the critical peak and average value an exhibit the compliance with the above calculated Limits.

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

Model:	IUV914F9A	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)	Result (dBuV/m)		Limit (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.	Corr.	Peak	Ave.	Peak	Ave.			
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67

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

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. **Measurement uncertainty above 1GHz: 30-1000 MHz = ± 3.30 dB, 1-18 GHz = ± 2.28 dB, 18-40 GHz= ± 2.19 dB ; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.**
6. **Up Line: PK Limit Line, Down Line: Ave Limit Line.**

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

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

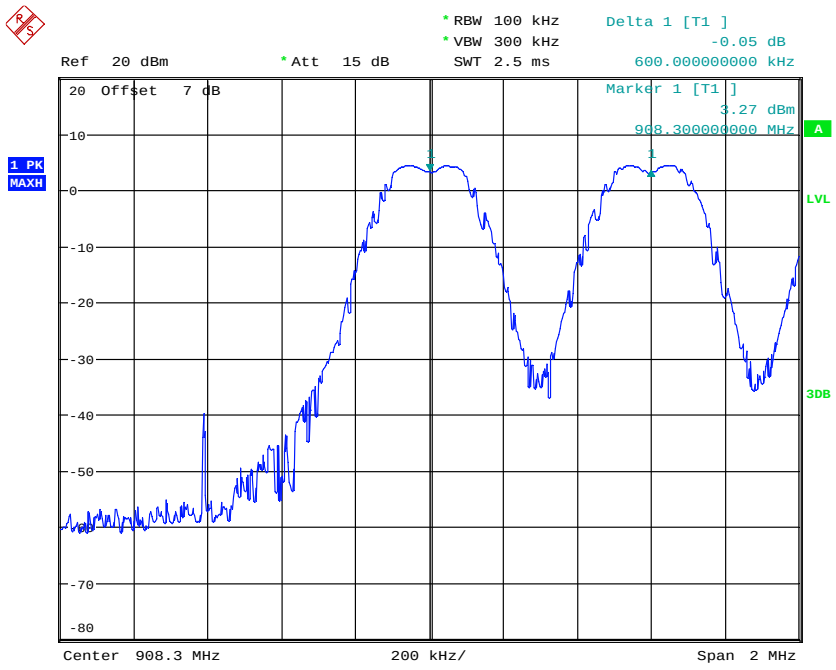
Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 042,
ETSTW-RE 043, ETSTW-RE 044, ETSTW-RE 064

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67

3.6 Carrier Frequency Separation

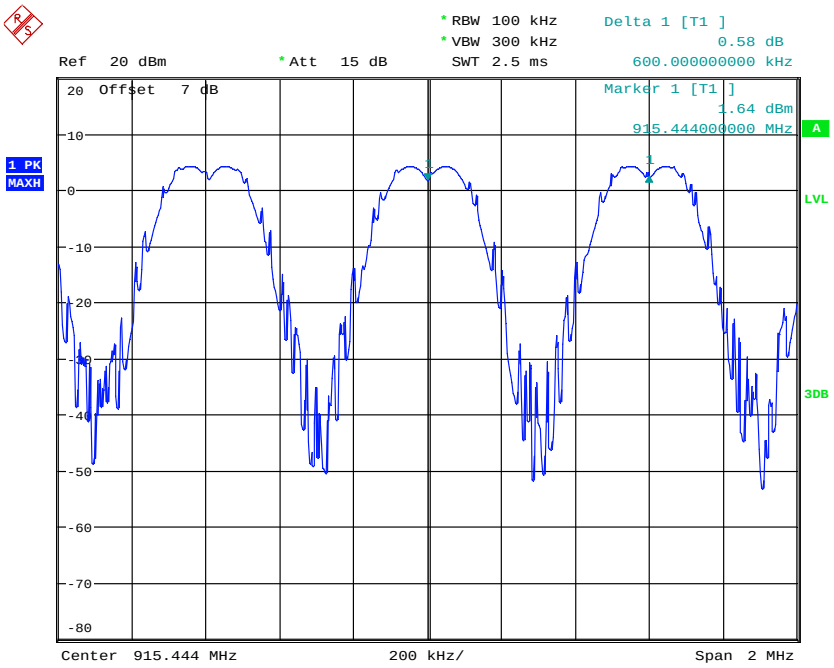
Carrier Frequency Separation was measured with modulation (declared by manufacturer).

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

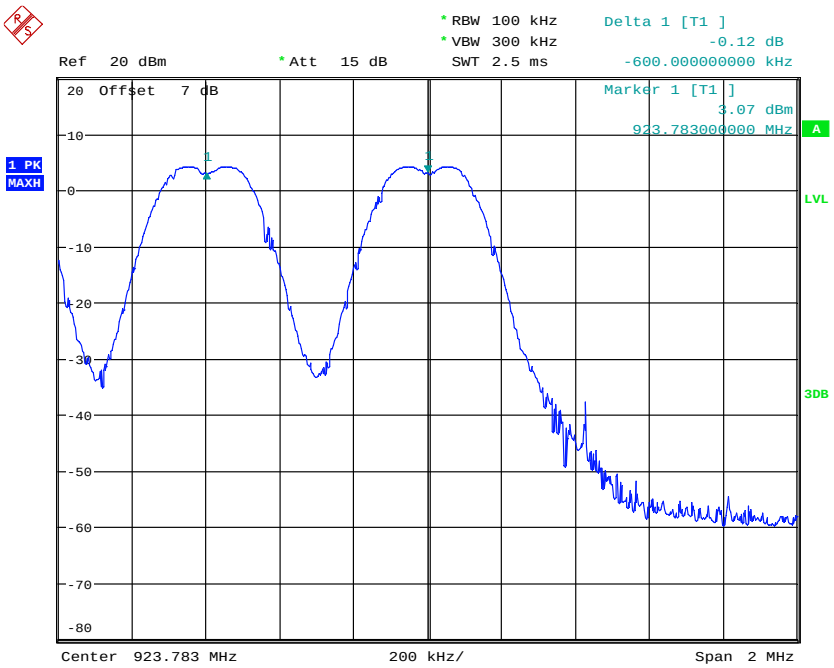


FREQUENCY SEPARATION
Date: 29.JUN.2017 19:22:39

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67



FREQUENCY SEPARATION
Date: 29.JUN.2017 19:23:59



FREQUENCY SEPARATION
Date: 29.JUN.2017 19:27:07

Limits:

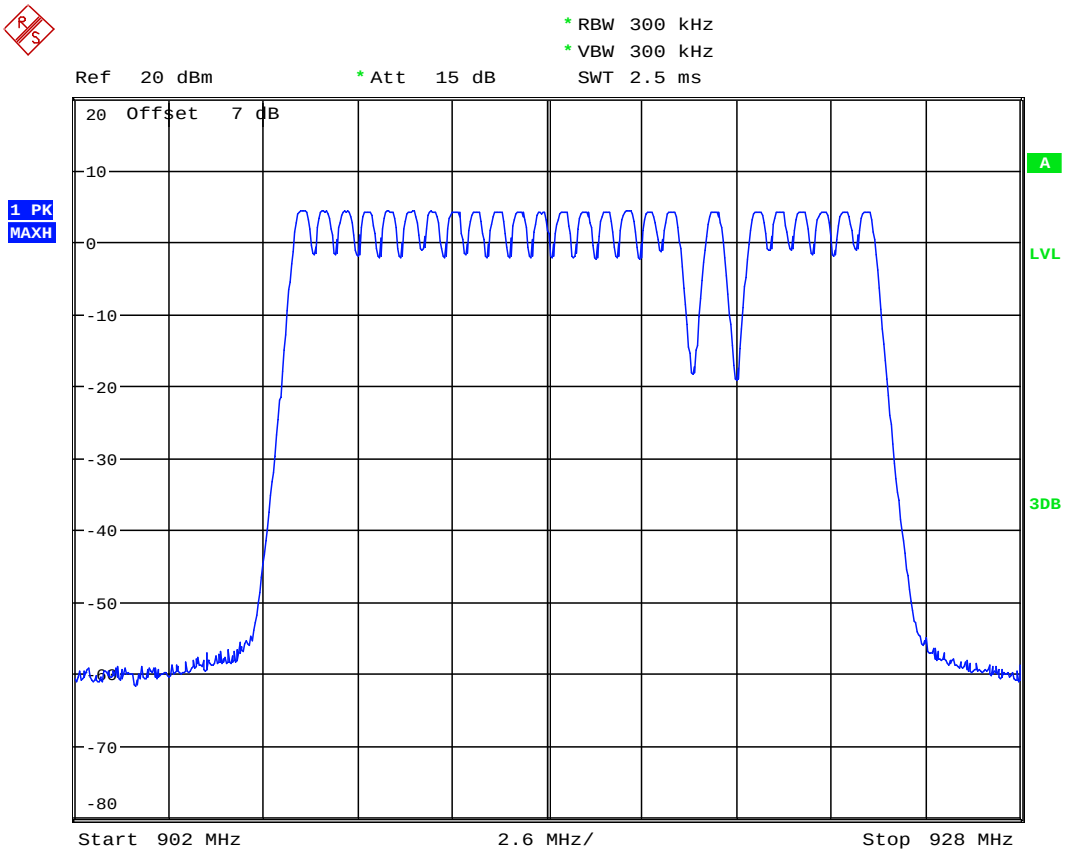
Frequency Range MHz	Limits	
	20 dB bandwidth < 25 kHz	20 dB bandwidth > 25 kHz
902-928	25 kHz	20 dB bandwidth
2400-2483.5 5725-5850.0	25 kHz	20 dB bandwidth

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

3.7 Number of Hopping Frequencies

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

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



NUMBER OF HOPPING

Date: 29.JUN.2017 19:28:22

Limits:

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

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

3.7.1 Pseudorandom Frequency Hopping Sequence

This FHSS transmitter is controlled by a microchip to generate the Pseudorandom Frequency Hopping Sequence. There are three hopping sequences listed below:

908.300, 908.895, 909.490, 910.085, 910.680, 911.277, 911.872, 912.467, 913.063, 913.658, 914.255, 914.850, 915.444, 916.040, 916.635, 917.233, 917.825, 918.422, 919.612, 920.805, 921.400, 921.995, 922.590, 923.188, 923.783MHz

3.7.2 Coordination of hopping sequences to other transmitters

This transmitter does not have the ability of being coordinated with other FHSS system for as soon as the transmitter is in operation, the hopping frequency will follow the selected hopping sequence to transmit independently and no coordination is possible. Especially, this transmitter is used as a duplex car alarm system, so no coordination of hopping frequency is required.

3.7.3 System Receiver Hopping Capability

There are two steps to make the receiver to shift the frequencies in synchronization with the transmitted signals:
First, the Transmitter will emit a preamble signal of 150 ms and the receiver will scan this signal by 2ms sweeping until the preamble signal is caught. Second, the preamble signal is coded with the information of hopping sequence and the next transmitting frequency.

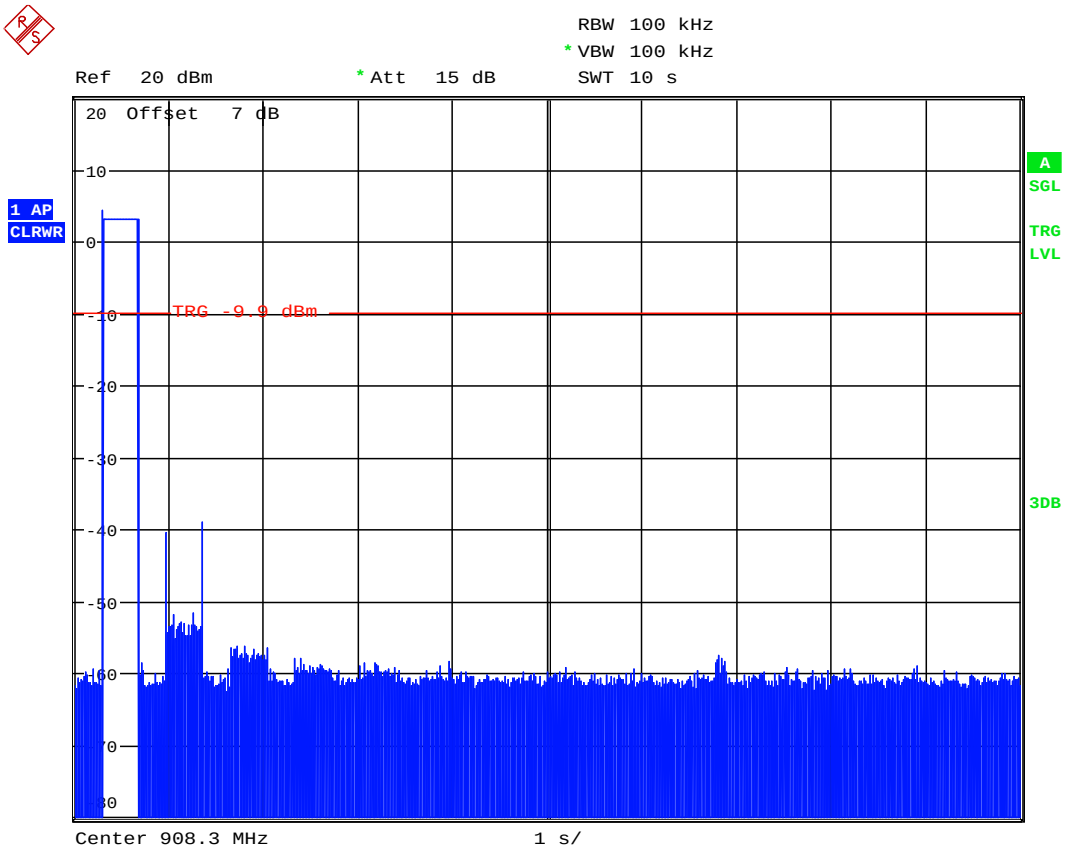
3.7.4 Equal Hopping Frequency Use

Due to each hopping frequency will be transmitted in accordance to the frequency tables described above, there is no any frequency will be able to hop more times than others. Therefore each frequency will be used equally.

3.8 Time of Occupancy (Dwell Time)

Frequency hopping systems operating in the 5725-5850 MHz band shall use an average time of occupancy on any frequency not greater than 0.4 seconds within a 30 second period.
In 2400-2483.5 MHz band the average time of occupancy on any channel shall not be greater than 0.4 seconds multiplied by the number of hopping channels employed.

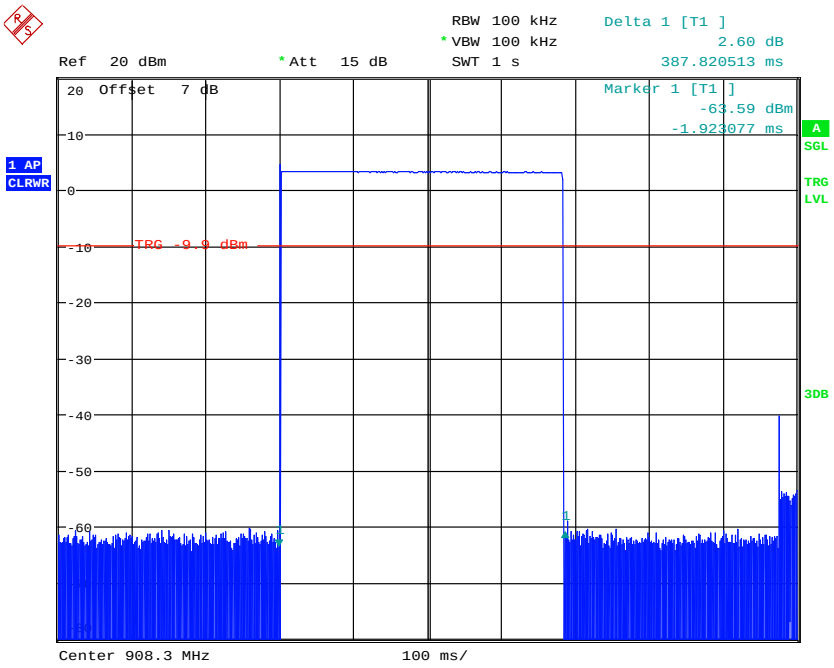
For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not greater than 0.4 seconds within a 20 second period; if the 20dB bandwidth of the hopping channel is 250 kHz or greater,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



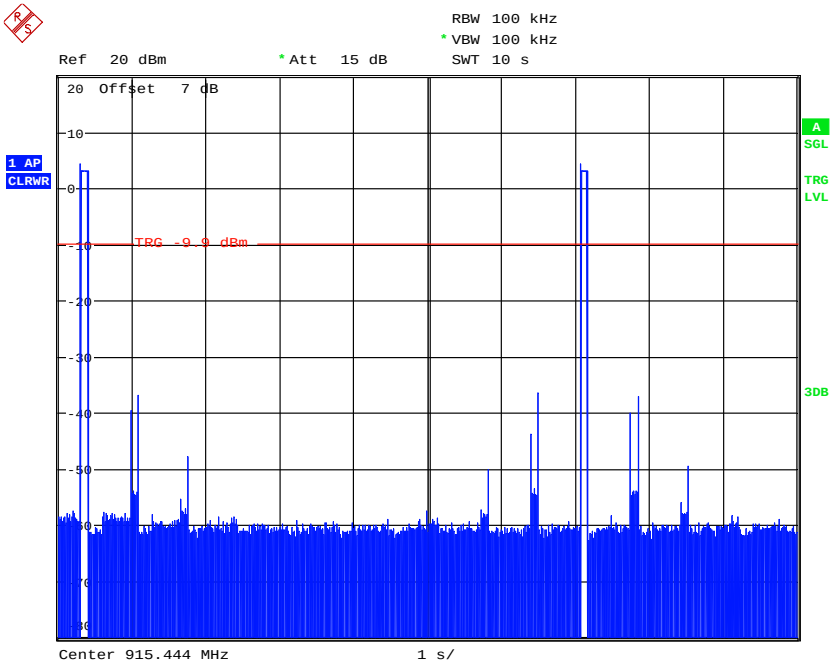
DWELL TIME 908.3MHz

Date: 29.JUN.2017 19:39:03

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67

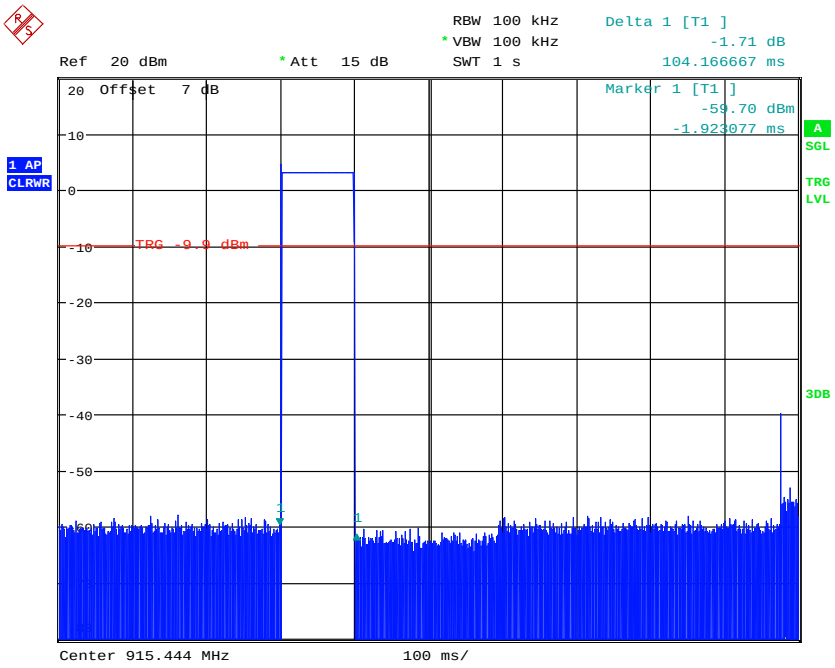


DWELL TIME 908.3MHz (387.82ms * 1 = 387.82ms)
Date: 29.JUN.2017 19:40:05

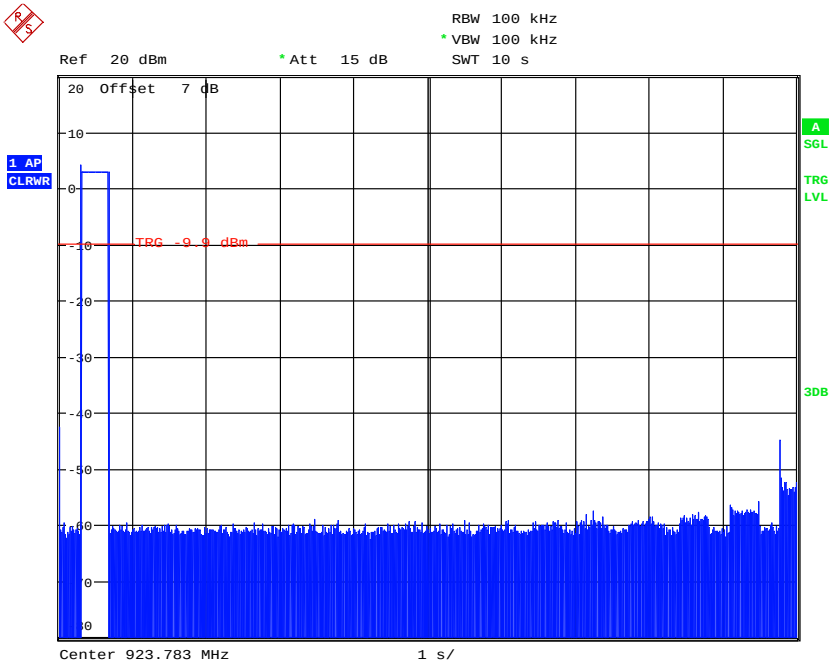


DWELL TIME 915.444MHz
Date: 29.JUN.2017 19:40:57

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67

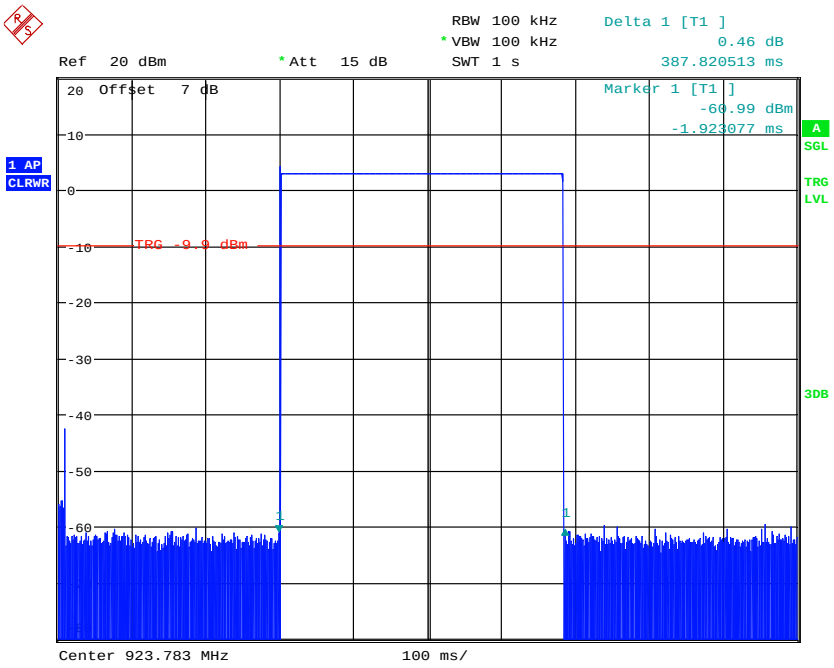


DWELL TIME 915.444MHz (104.166ms * 2 = 208.332ms)
Date: 29.JUN.2017 19:42:31



DWELL TIME 923.783MHz
Date: 29.JUN.2017 19:44:58

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67



DWELL TIME 923.783MHz (387.82ms * 1 = 387.82ms)
Date: 29.JUN.2017 19:46:07

Limits and measurement periods:

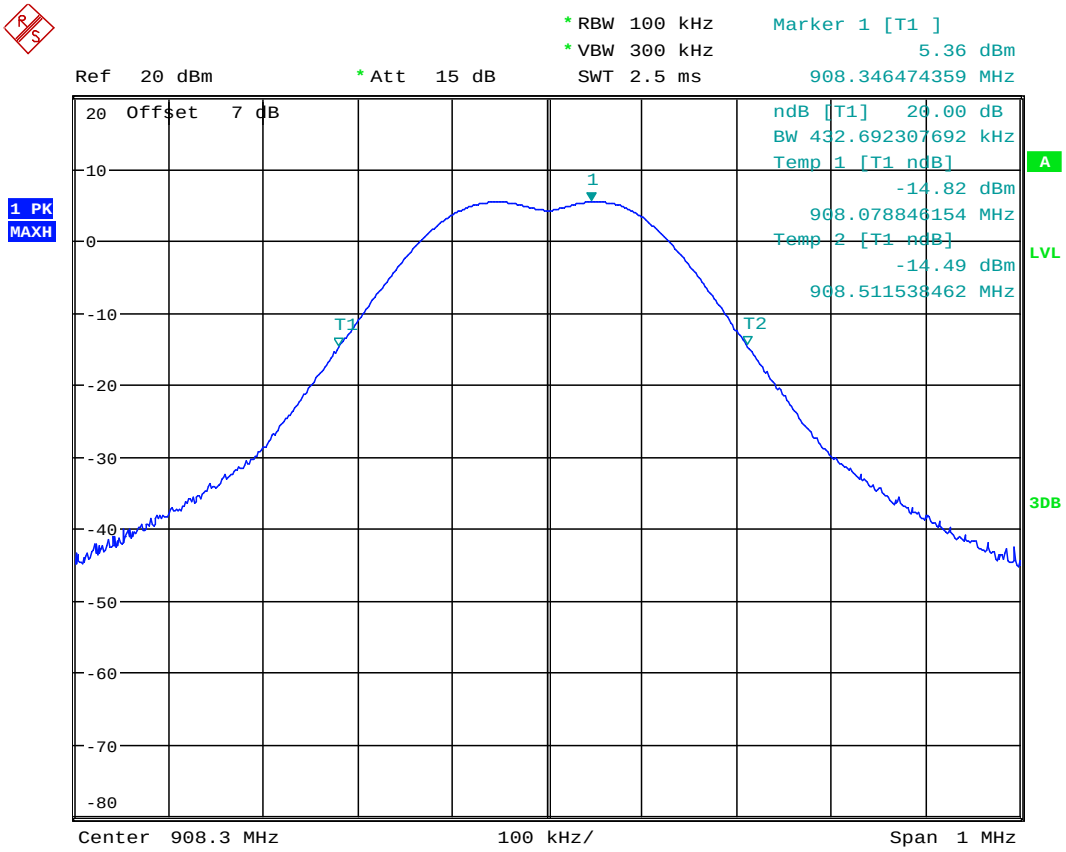
Frequency MHz	Number of channels	Measurement Period	Limit
902 – 928	≥50	20 s	0.4 s
	49 ≥ 25	10 s	0.4 s
2400 – 2483.5	≥ 15	0.4 s * number of used channels	0.4 s
5725- 5850	≥ 75	30 s	0.4s

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

3.9 20dB Bandwidth

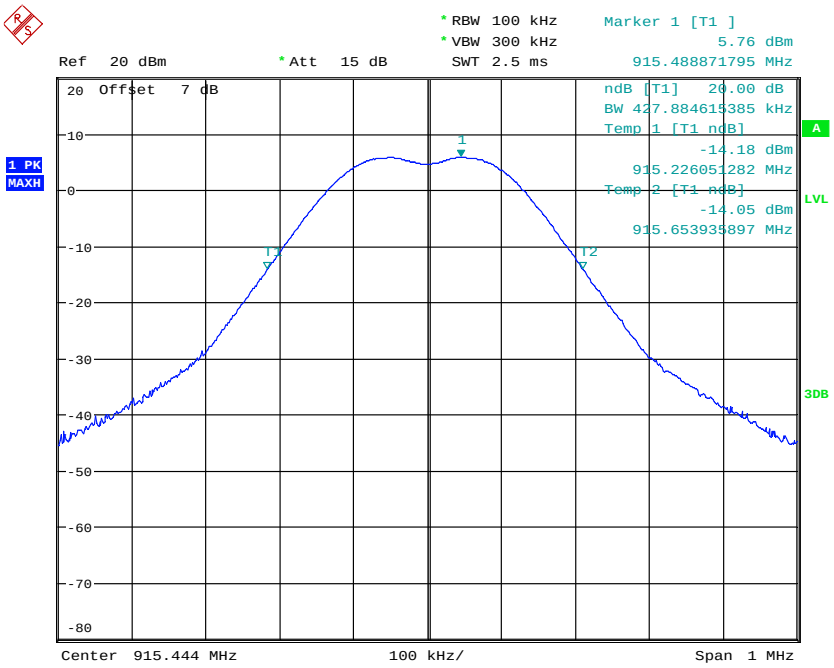
Frequency hopping systems operating in the 5725-5850 MHz bands shall use a maximum 20dB bandwidth of 1 MHz.
The 20dB bandwidth is measured on the lowest, middle and highest hopping channel.

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

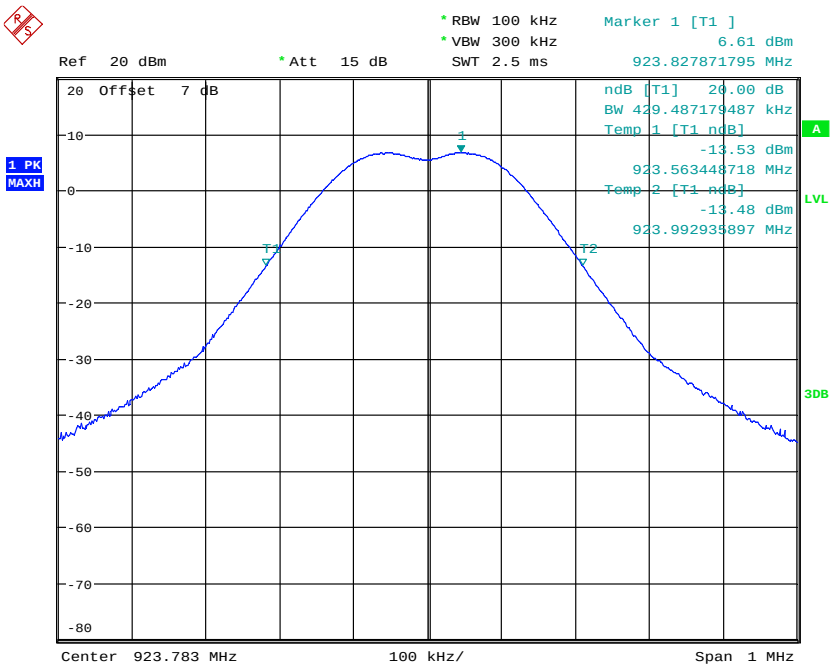


20DB BANDWIDTH 908.3MHz
Date: 29.JUN.2017 19:50:41

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67



20DB BANDWIDTH 915.444MHz
Date: 29.JUN.2017 19:51:25



20DB BANDWIDTH 923.783MHz
Date: 29.JUN.2017 19:52:02

Limits:

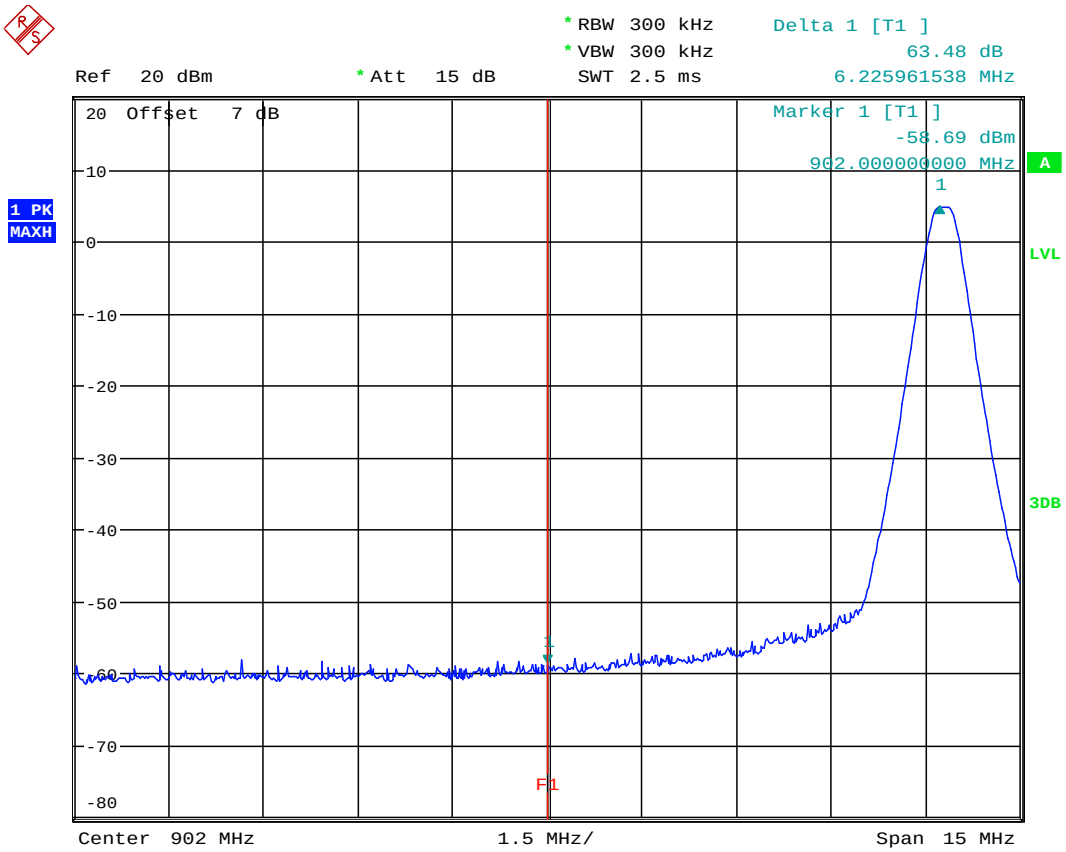
Frequency Range / MHz	Limit
902-928	≤ 500 kHz
2400-2483.5	not defined
5725-5850	≤ 1 MHz

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

3.10 Band-edge Compliance of RF Emissions

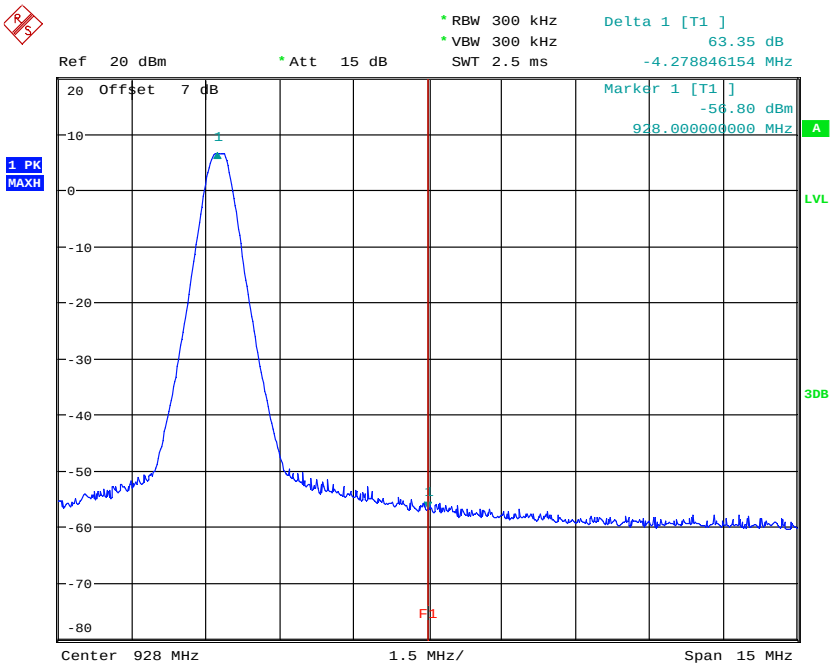
According to FCC rules part 15 subpart C §15.247(c) in any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required.

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



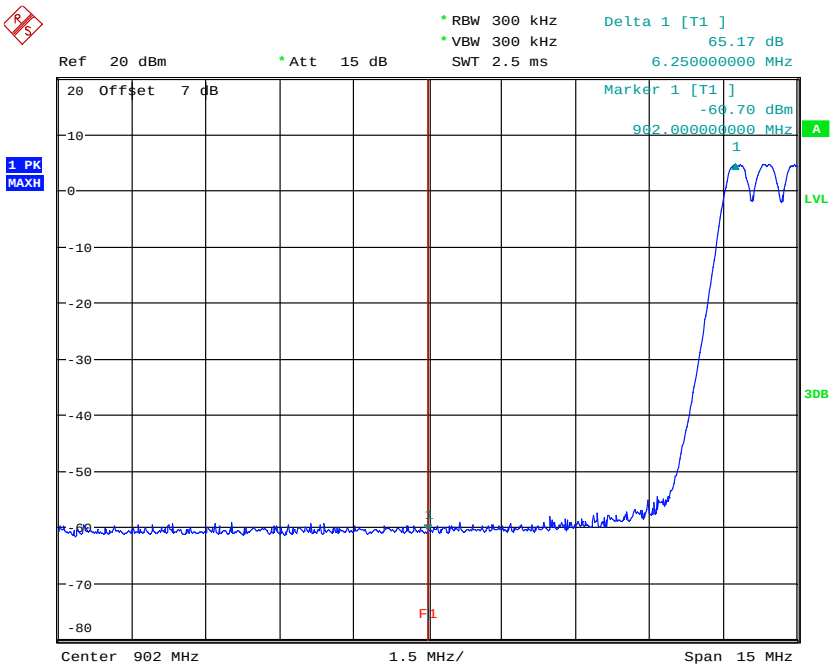
BANDEDGE 908.3MHz

Date: 29.JUN.2017 19:56:03



BANDEDGE 923.783MHz

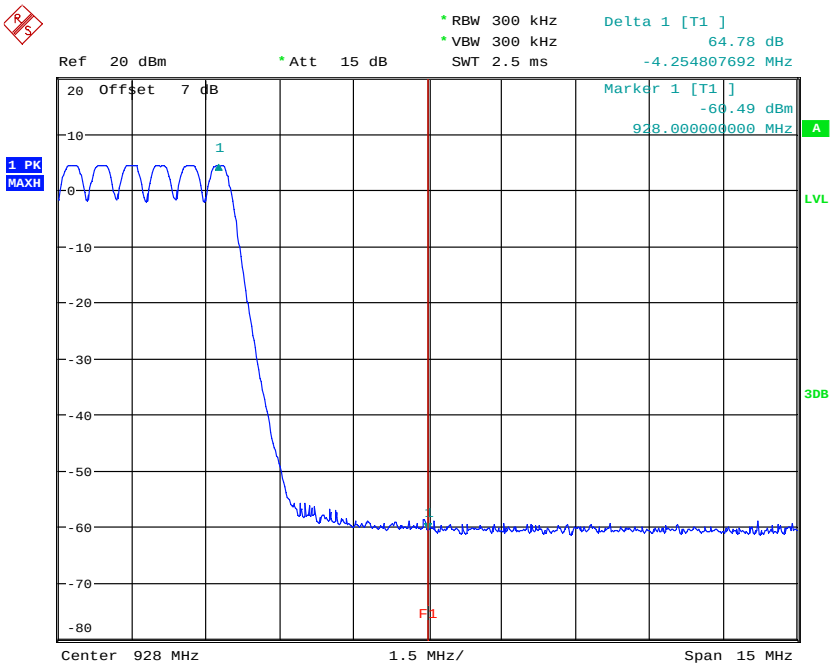
Date: 29.JUN.2017 19:57:07



BANDEDGE HOPPING MODE 908.3MHz

Date: 29.JUN.2017 19:31:43

Registration number: W6D21706-17077-C-1
FCC ID: H5OTR67



BANDEDGE HOPPING MODE 923.783MHz
Date: 29.JUN.2017 19:34:30

Limits:

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

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

3.11 Radiated Emissions from Receiver Section of Transceiver

FCC Rule: 15.109

Summary table with radiated data of the test plots

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

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

Explanation: The test results are listed in the separated test report no.: W6M21706-17076-P-15B.

Test equipment used: ETSTW-RE 055, ETSTW-RE 064, ETSTW-RE 004, ETSTW-RE 030
ETSTW-RE 062, ETSTW-RE 142, ETSTW-RE 147

3.12 Power Line Conducted Emission

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

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

Frequency	Level (dBμV)	
	quasi-peak	average
150 kHz	lower limit line	Lower limit line

Model: IUV914F9A Date: --
Mode: Temperature: -- °C Engineer: --
Polarization: N Humidity: -- %

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

Polarization: L1

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

Note

1. **The formula of measured value as: Test Result = Reading + Correction Factor**
2. **The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss**
3. **Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average**
4. **All not in the table noted test results are more than 20 dB below the relevant limits.**
5. **Measurement uncertainty = ±0.74dB; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.**
6. **Up Line: QP Limit Line, Down Line: Ave Limit Line.**
7. **This test is not required.**

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-CE 028

Appendix

Measurement diagrams

Spurious Emissions radiated_TX

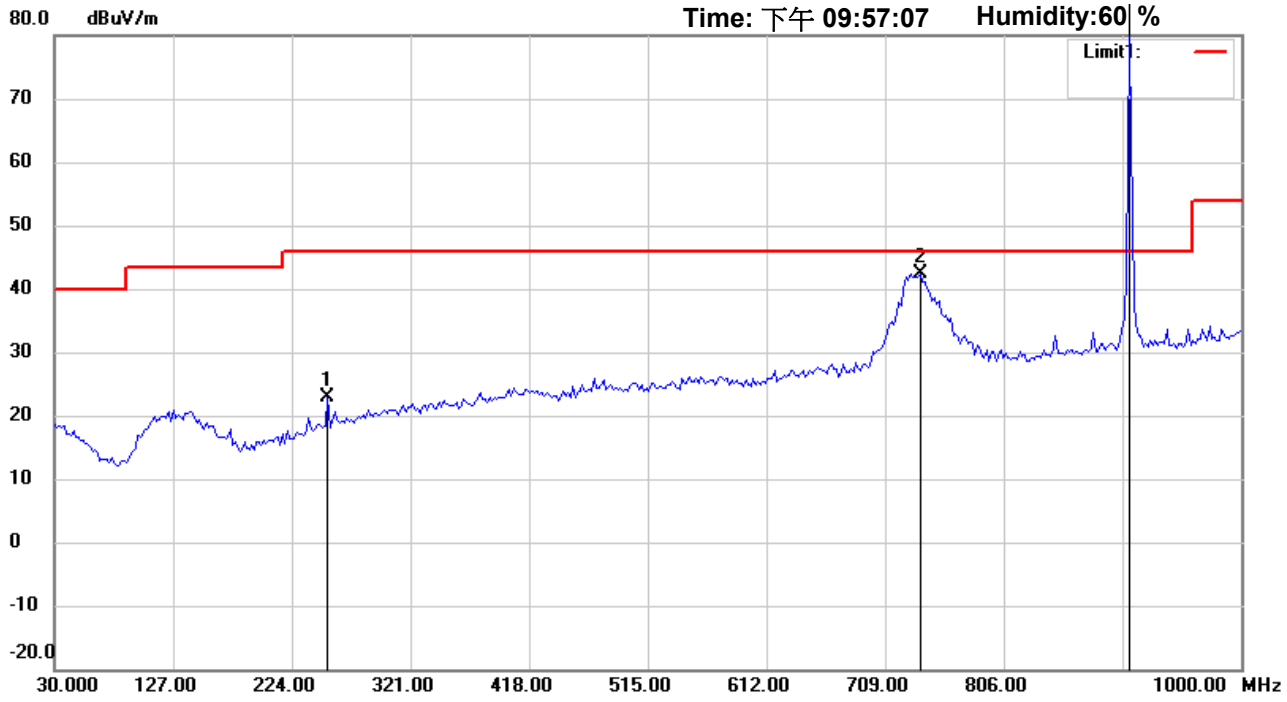
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Leon

File :1 Data :#1 Date: 2017/6/23 Temperature:24 ℃

Time: 下午 09:57:07 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

Polarization: *Horizontal*

EUT : W6M21706-17076

Power : 12 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 908.3MHz

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
	253.5471	30.52	peak	-7.58	22.94	46.00	100	95	-23.06	
	737.5751	42.06	peak	0.31	42.37	46.00	100	60	-3.63	
*	908.6372	86.59	peak	3.46	90.05	46.00			44.05	RF

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

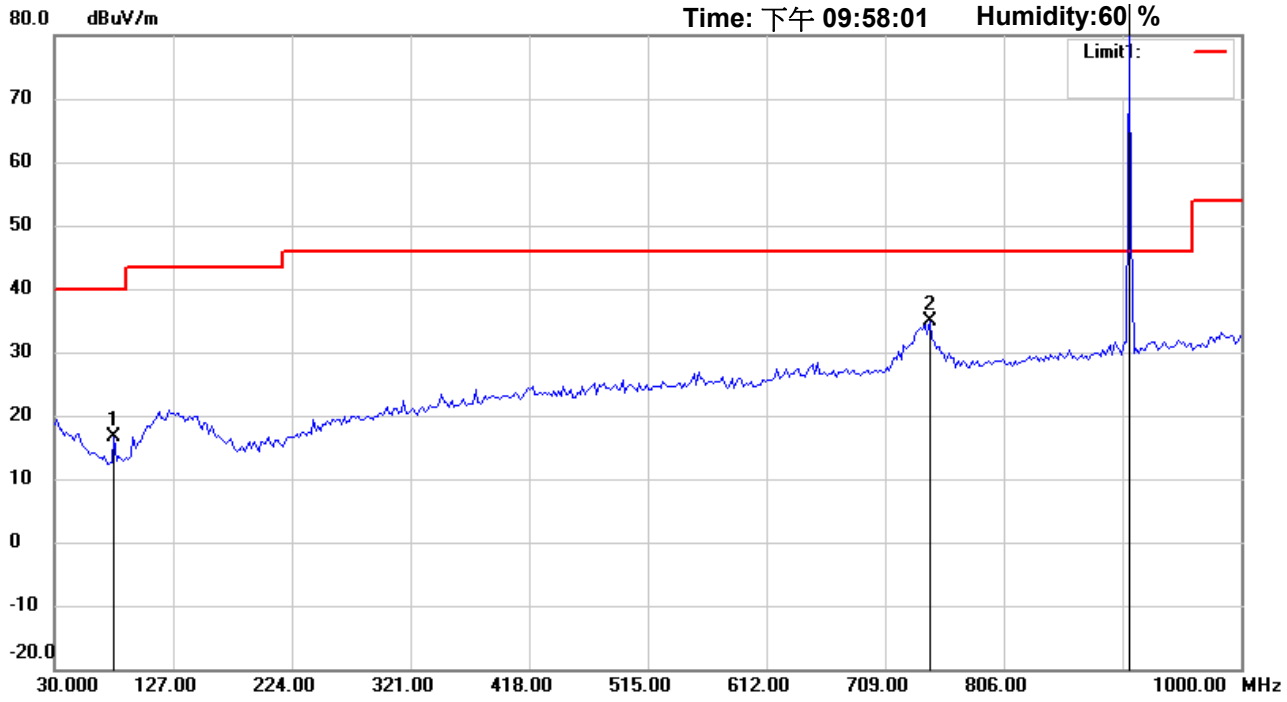
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Leon

File :1 Data :#2 Date: 2017/6/23 Time: 下午 09:58:01

Temperature:24 ℃ Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21706-17076

M/N:

Test Mode : TX 908.3MHz

Note :

Polarization: *Vertical*

Power : 12 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
	78.5972	30.76	peak	-14.15	16.61	40.00	100	175	-23.39	
	745.3506	34.56	peak	0.44	35.00	46.00	100	135	-11.00	
*	908.6372	86.53	peak	3.46	89.99	46.00			43.99	RF

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

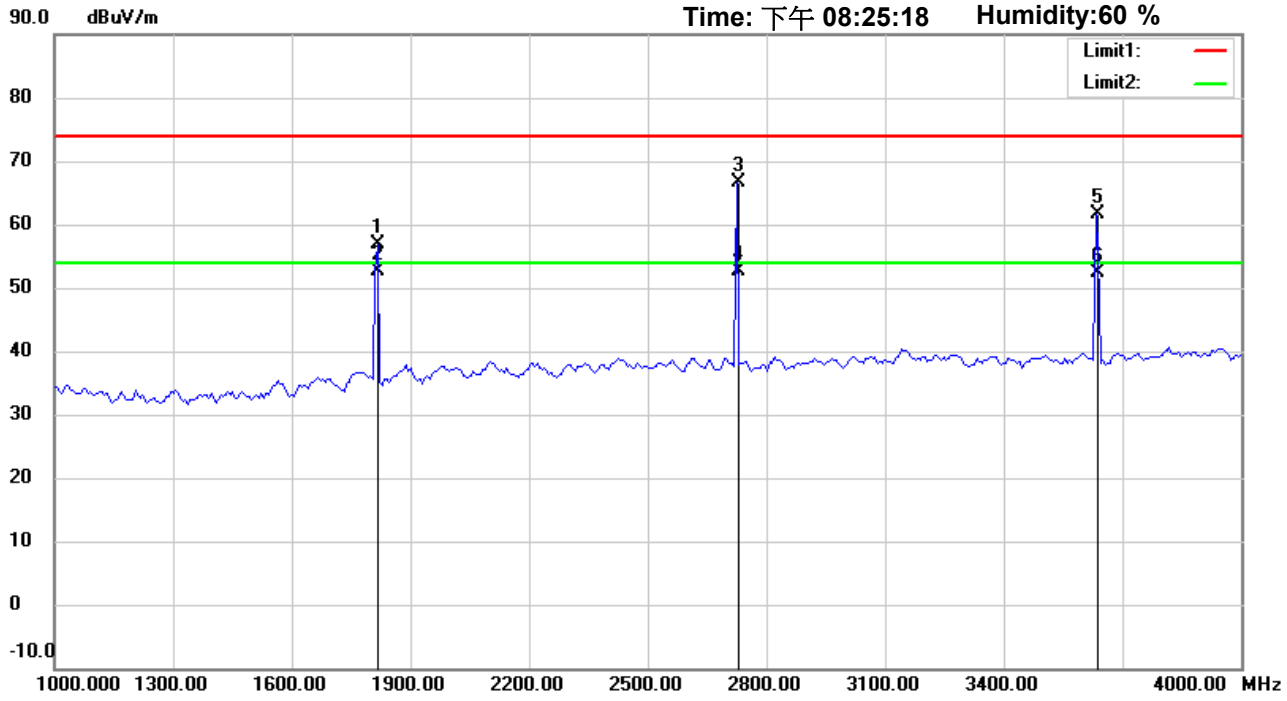
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Leon

File :3 Data :#1 Date: 2017/6/22 Temperature:24 ℃

Time: 下午 08:25:18 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21706-17076

Power : 12 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 908.3MHz

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
	1817.635	63.50	peak	-6.66	56.84	74.00	155	10	-17.16	
*	1817.635	59.36	AVG	-6.66	52.70	54.00	155	100	-1.30	
	2725.451	70.58	peak	-3.94	66.64	74.00	150	235	-7.36	
	2725.451	56.61	AVG	-3.94	52.67	54.00	150	235	-1.33	
	3633.267	63.45	peak	-1.86	61.59	74.00	150	190	-12.41	
	3633.267	54.12	AVG	-1.86	52.26	54.00	150	190	-1.74	

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

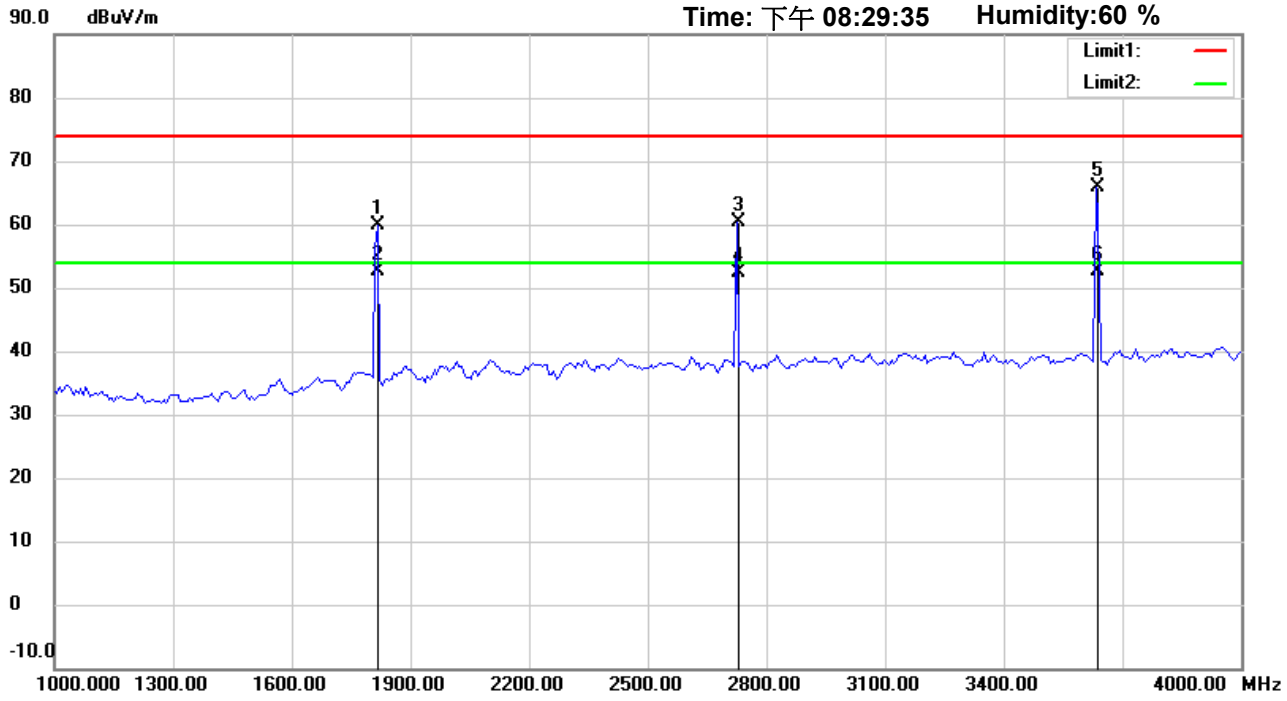
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Leon

File :3 Data :#4 Date: 2017/6/22 Temperature:24 ℃

Time: 下午 08:29:35 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M21706-17076

Power : 12 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 908.3MHz

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
	1817.635	66.57	peak	-6.66	59.91	74.00	150	235	-14.09	
*	1817.635	59.37	AVG	-6.66	52.71	54.00	150	235	-1.29	
	2725.451	64.21	peak	-3.94	60.27	74.00	150	160	-13.73	
	2725.451	56.26	AVG	-3.94	52.32	54.00	150	160	-1.68	
	3633.267	67.66	peak	-1.86	65.80	74.00	150	90	-8.20	
	3633.267	54.53	AVG	-1.86	52.67	54.00	150	90	-1.33	

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

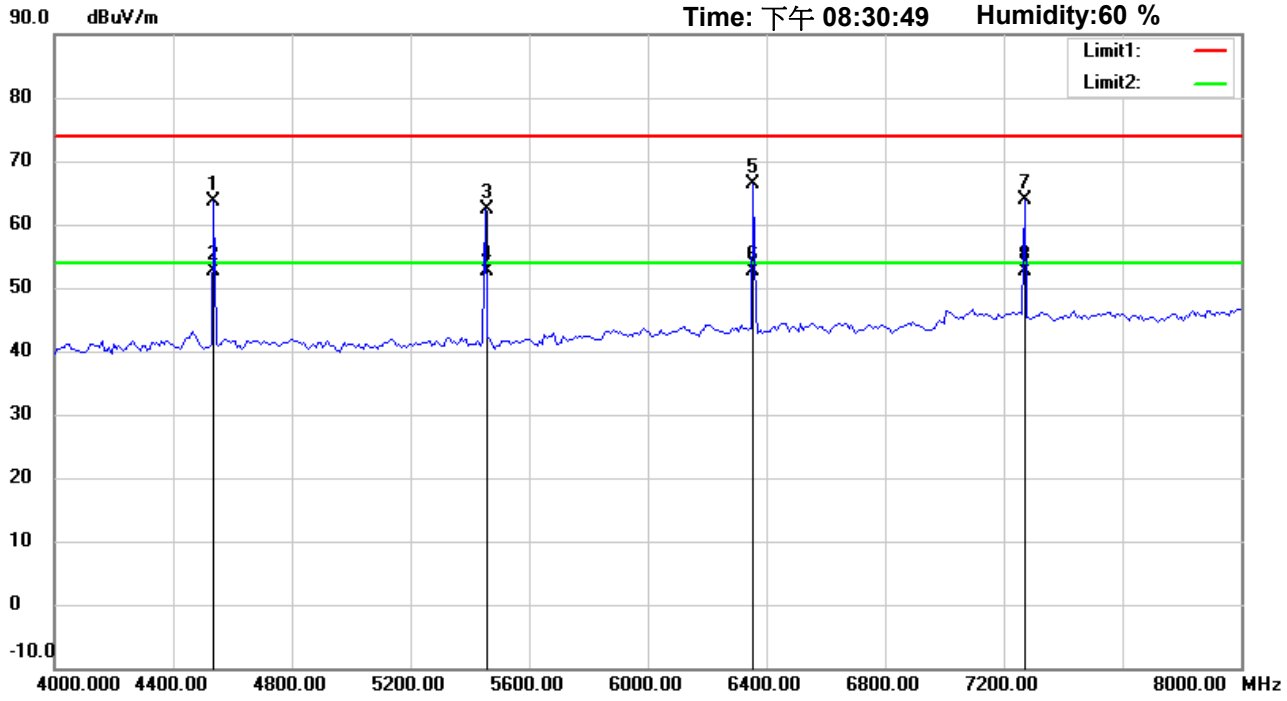
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Leon

File :3 Data :#2 Date: 2017/6/22 Temperature:24 ℃

Time: 下午 08:30:49 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21706-17076

M/N:

Test Mode : TX 908.3MHz

Note :

Polarization: *Horizontal*

Power : 12 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
	4537.074	63.52	peak	0.00	63.52	74.00	150	95	-10.48	
*	4537.074	52.75	AVG	0.00	52.75	54.00	150	95	-1.25	
	5450.902	61.07	peak	1.30	62.37	74.00	150	220	-11.63	
	5450.902	51.33	AVG	1.30	52.63	54.00	150	220	-1.37	
	6356.713	62.74	peak	3.69	66.43	74.00	150	35	-7.57	
	6356.713	49.05	AVG	3.69	52.74	54.00	150	35	-1.26	
	7270.541	58.70	peak	5.07	63.77	74.00	150	150	-10.23	
	7270.541	47.51	AVG	5.07	52.58	54.00	150	150	-1.42	

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

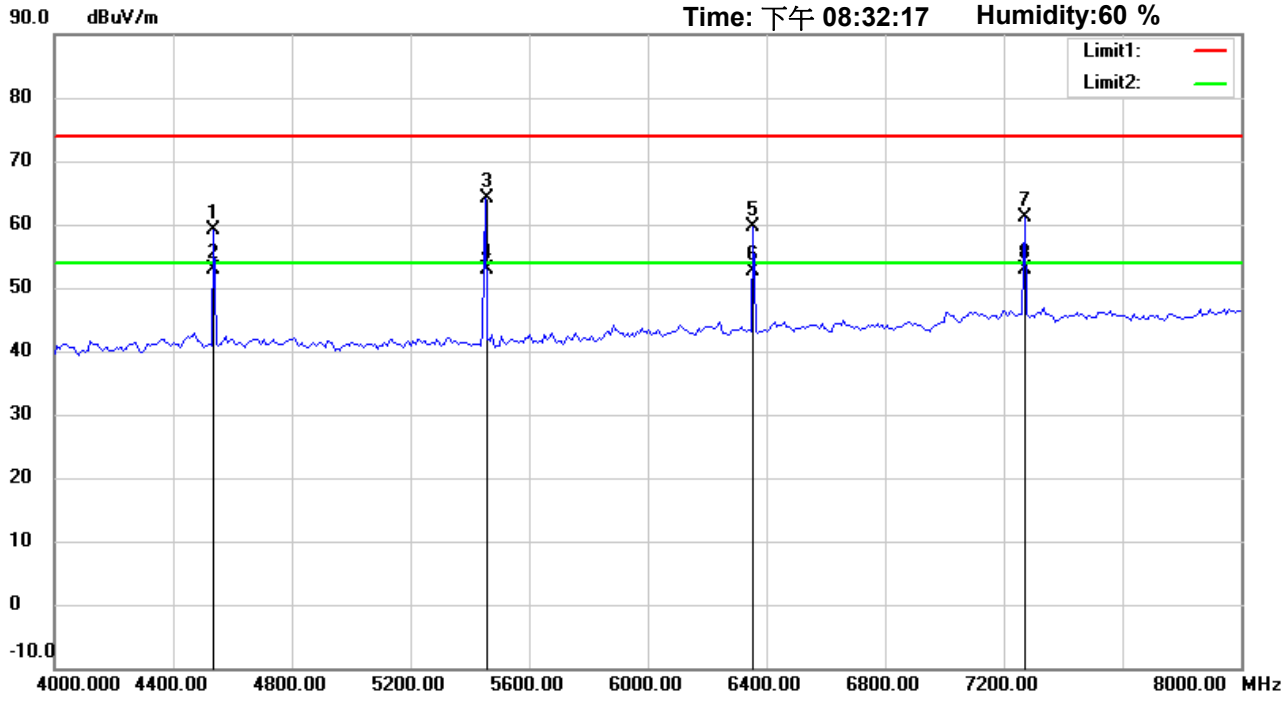
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Leon

File :3 Data :#5 Date: 2017/6/22 Temperature:24 ℃

Time: 下午 08:32:17 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21706-17076

M/N:

Test Mode : TX 908.3MHz

Note :

Polarization: *Vertical*

Power : 12 Vd.c.

Distance: 3m

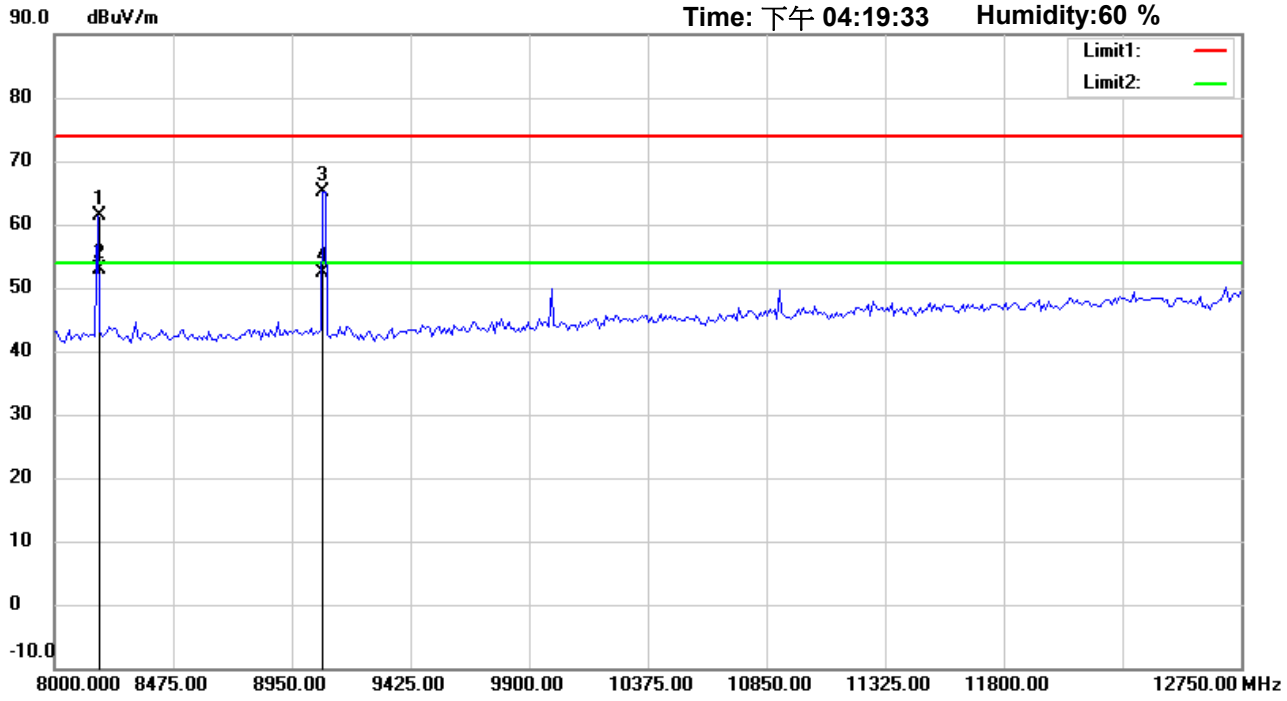
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4537.074	59.20	peak	0.00	59.20	74.00	150	245	-14.80	
	4537.074	52.76	AVG	0.00	52.76	54.00	150	245	-1.24	
	5450.902	62.89	peak	1.30	64.19	74.00	150	80	-9.81	
*	5450.902	51.69	AVG	1.30	52.99	54.00	150	80	-1.01	
	6356.713	55.90	peak	3.69	59.59	74.00	150	30	-14.41	
	6356.713	49.05	AVG	3.69	52.74	54.00	150	30	-1.26	
	7270.541	56.16	peak	5.07	61.23	74.00	150	220	-12.77	
	7270.541	47.69	AVG	5.07	52.76	54.00	150	220	-1.24	

*: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: Leon
File :3 Data :#3 Date: 2017/6/23 Temperature:24 ℃
Time: 下午 04:19:33 Humidity:60 %



Site : Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M21706-17076
M/N:
Test Mode : TX 908.3MHz
Note :

Polarization: *Horizontal*
Power : 12 Vd.c.
Distance: 3m

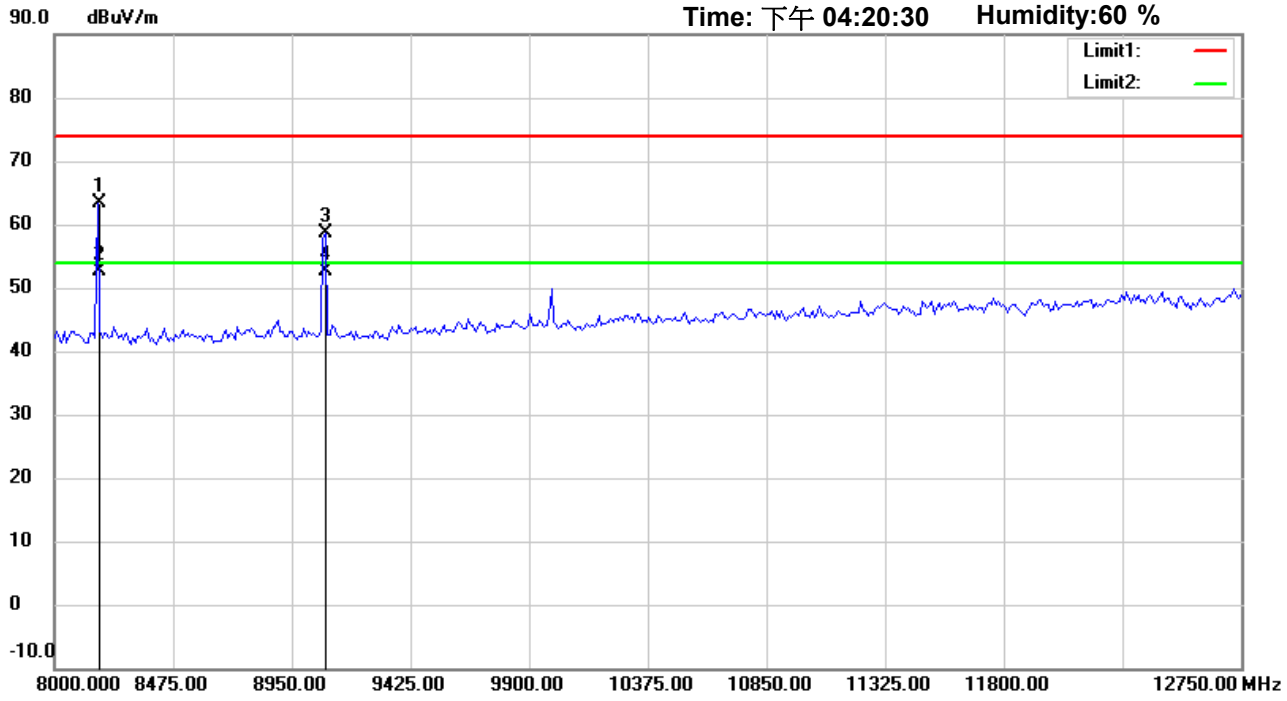
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	8171.343	55.40	peak	6.10	61.50	74.00	150	235	-12.50	
*	8171.343	46.67	AVG	6.10	52.77	54.00	150	235	-1.23	
	9075.651	58.21	peak	6.87	65.08	74.00	150	170	-8.92	
	9075.651	45.51	AVG	6.87	52.38	54.00	105	170	-1.62	

*: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: Leon
File :3 Data :#6 Date: 2017/6/23 Temperature:24 ℃
Time: 下午 04:20:30 Humidity:60 %



Site : Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M21706-17076
M/N:
Test Mode : TX 908.3MHz
Note :

Polarization: *Vertical*
Power : 12 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
	8171.343	57.17	peak	6.10	63.27	74.00	150	245	-10.73	
*	8171.343	46.59	AVG	6.10	52.69	54.00	150	245	-1.31	
	9085.170	51.71	peak	6.90	58.61	74.00	150	120	-15.39	
	9085.170	45.67	AVG	6.90	52.57	54.00	150	120	-1.43	

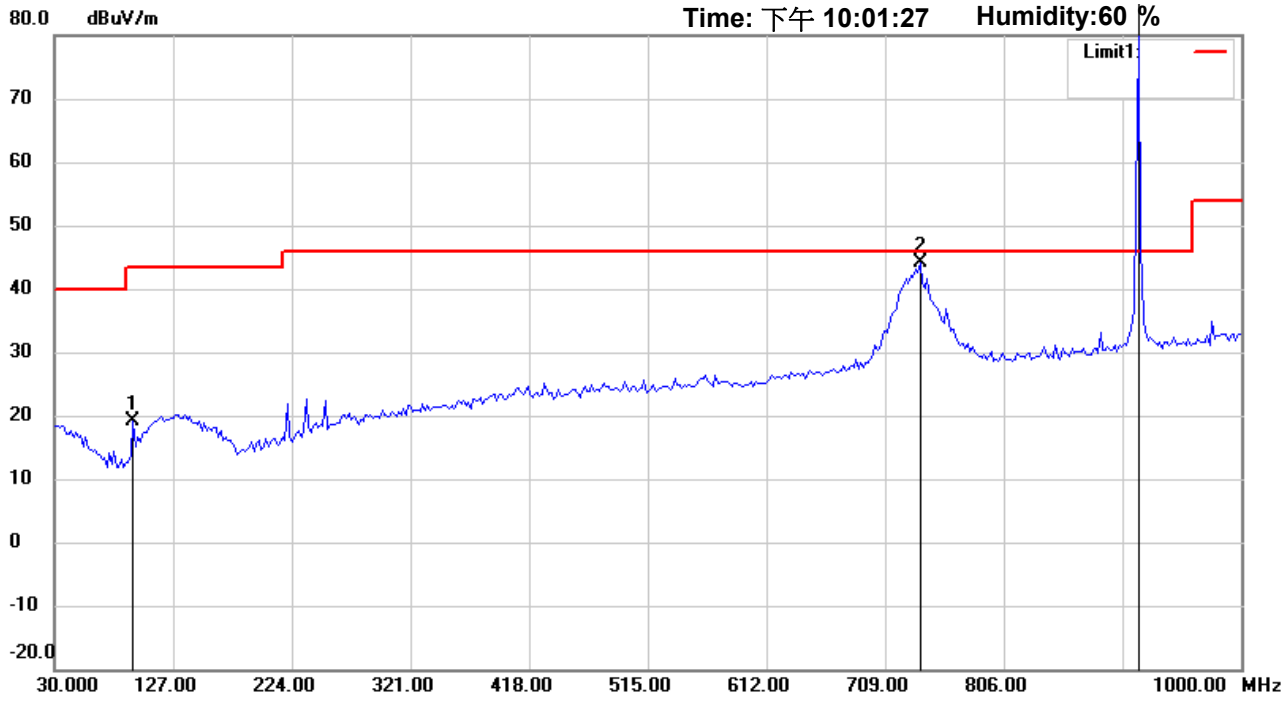
*:Maximum data x:Over limit !:over margin

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: Leon

File :1 Data :#1 Date: 2017/6/23 Time: 下午 10:01:27 Temperature:24 ℃ Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21706-17076

M/N:

Test Mode : TX 915.44MHz

Note :

Polarization: *Horizontal*

Power : 12 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
	94.1483	31.32	peak	-12.26	19.06	43.50	100	240	-24.44	
	737.5751	43.78	peak	0.31	44.09	46.00	100	95	-1.91	
*	916.4127	86.56	peak	3.67	90.23	46.00			44.23	RF

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

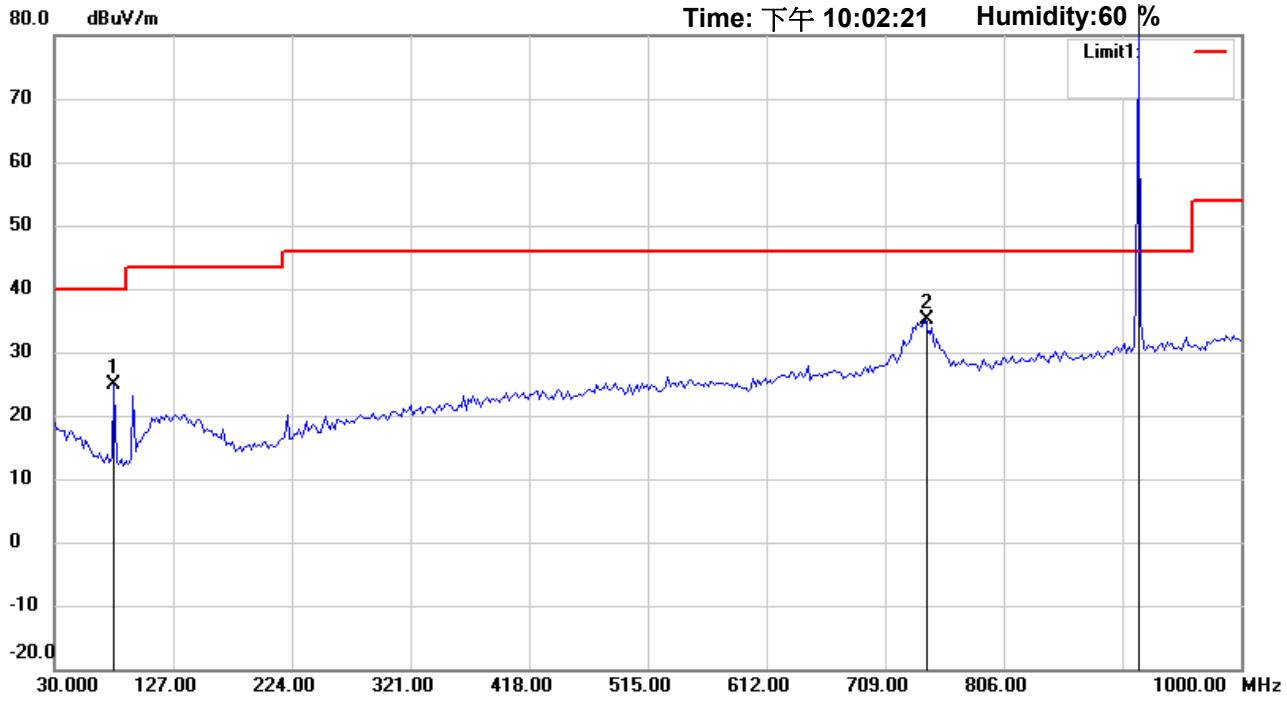
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Leon

File :1 Data :#2 Date: 2017/6/23 Time: 下午 10:02:21

Temperature:24 ℃ Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21706-17076

M/N:

Test Mode : TX 915.44MHz

Note :

Polarization: *Vertical*

Power : 12 Vd.c.

Distance: 3m

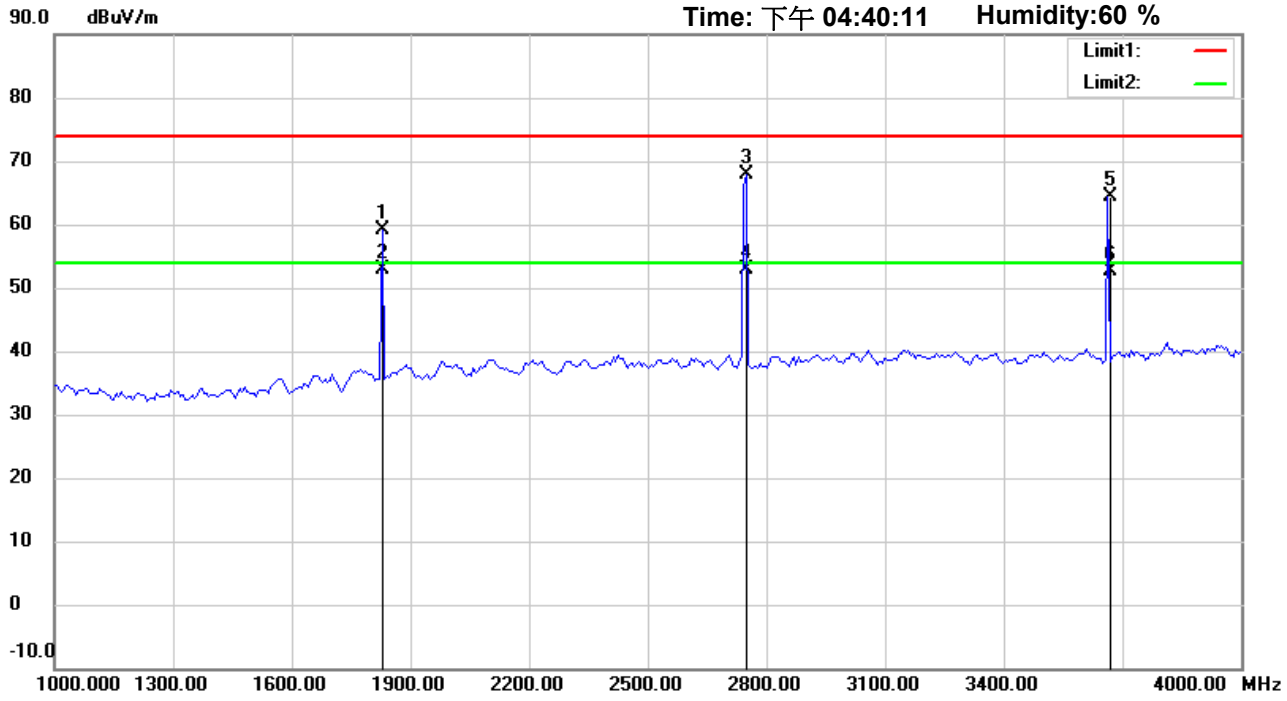
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	78.5972	38.91	peak	-14.15	24.76	40.00	100	35	-15.24	
	741.4630	34.79	peak	0.37	35.16	46.00	100	175	-10.84	
*	916.4128	86.33	peak	3.67	90.00	46.00			44.00	RF

*: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: Leon
File :3 Data :#2 Date: 2017/6/23 Temperature:24 ℃
Time: 下午 04:40:11 Humidity:60 %



Site : Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M21706-17076
M/N:
Test Mode : TX 915.44MHz
Note :

Polarization: *Horizontal*
Power : 12 Vd.c.
Distance: 3m

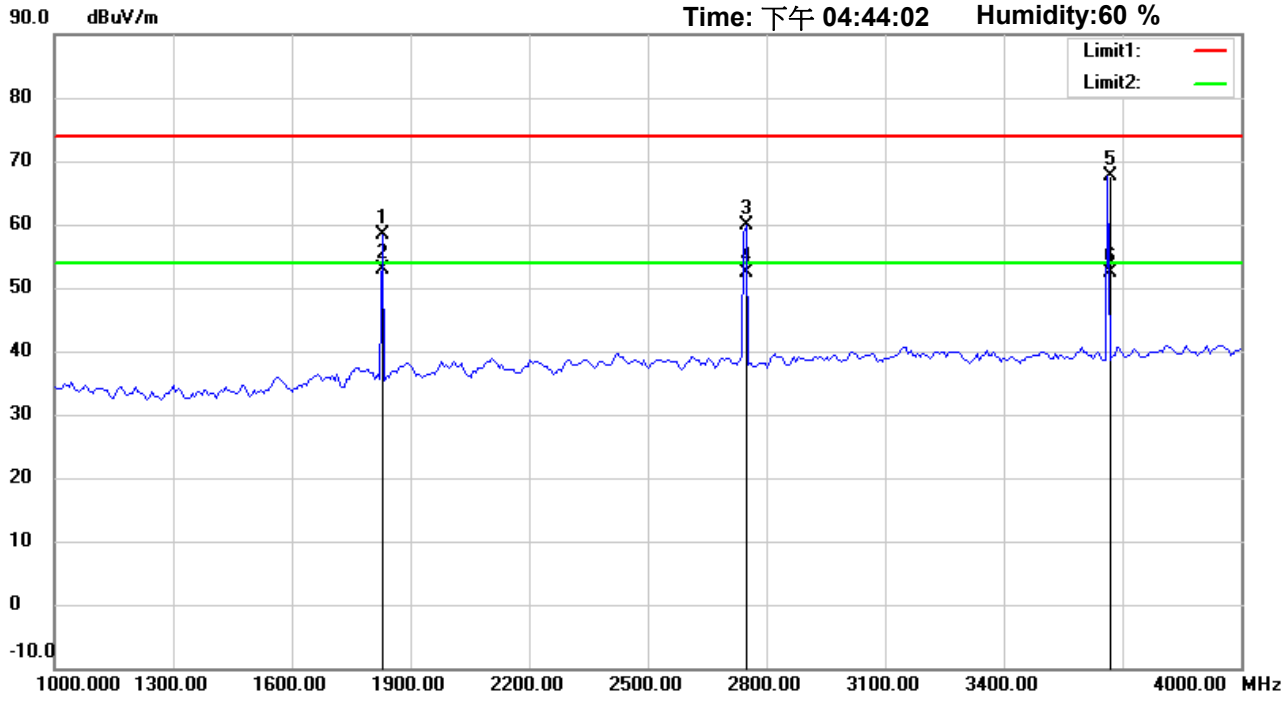
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	1829.659	65.74	peak	-6.60	59.14	74.00	160	265	-14.86	
	1829.659	59.41	AVG	-6.60	52.81	54.00	160	265	-1.19	
	2749.499	71.78	peak	-3.89	67.89	74.00	150	90	-6.11	
*	2749.499	56.73	AVG	-3.89	52.84	54.00	150	90	-1.16	
	3663.327	66.28	peak	-1.88	64.40	74.00	150	35	-9.60	
	3663.327	54.57	AVG	-1.88	52.69	54.00	150	35	-1.31	

*: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: Leon
File :3 Data :#5 Date: 2017/6/23 Temperature:24 ℃
Time: 下午 04:44:02 Humidity:60 %



Site : Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M21706-17076
M/N:
Test Mode : TX 915.44MHz
Note :

Polarization: *Vertical*
Power : 12 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
	1829.659	64.96	peak	-6.60	58.36	74.00	150	45	-15.64	
*	1829.659	59.51	AVG	-6.60	52.91	54.00	150	45	-1.09	
	2749.499	63.76	peak	-3.89	59.87	74.00	150	330	-14.13	
	2749.499	56.39	AVG	-3.89	52.50	54.00	150	330	-1.50	
	3663.327	69.44	peak	-1.88	67.56	74.00	150	120	-6.44	
	3663.327	54.27	AVG	-1.88	52.39	54.00	150	120	-1.61	

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

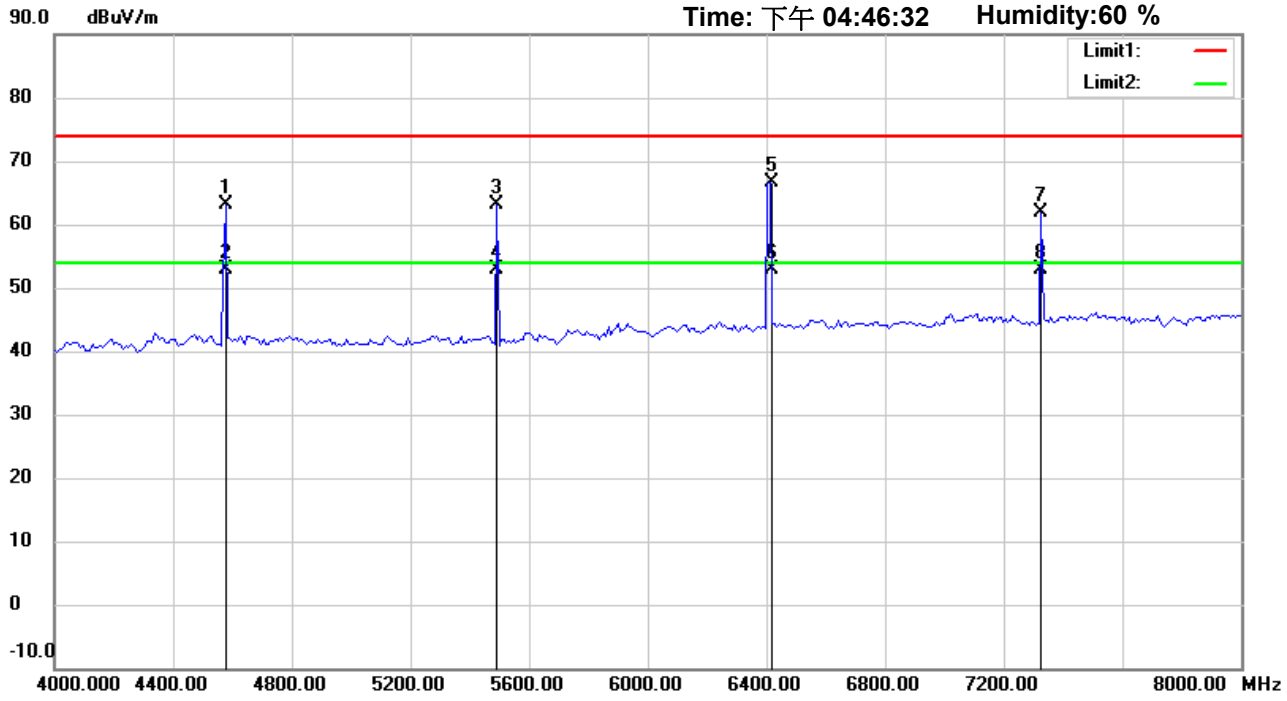
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Leon

File :3 Data :#3 Date: 2017/6/23 Temperature:24 ℃

Time: 下午 04:46:32 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21706-17076

M/N:

Test Mode : TX 915.44MHz

Note :

Polarization: *Horizontal*

Power : 12 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
	4577.154	63.20	peak	-0.05	63.15	74.00	150	75	-10.85	
	4577.154	52.96	AVG	-0.05	52.91	54.00	150	75	-1.09	
	5490.982	61.71	peak	1.41	63.12	74.00	150	40	-10.88	
	5490.982	51.39	AVG	1.41	52.80	54.00	150	40	-1.20	
	6412.826	62.88	peak	3.80	66.68	74.00	150	160	-7.32	
*	6412.826	49.15	AVG	3.80	52.95	54.00	150	160	-1.05	
	7326.653	56.83	peak	5.11	61.94	74.00	150	95	-12.06	
	7326.653	47.66	AVG	5.11	52.77	54.00	150	95	-1.23	

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

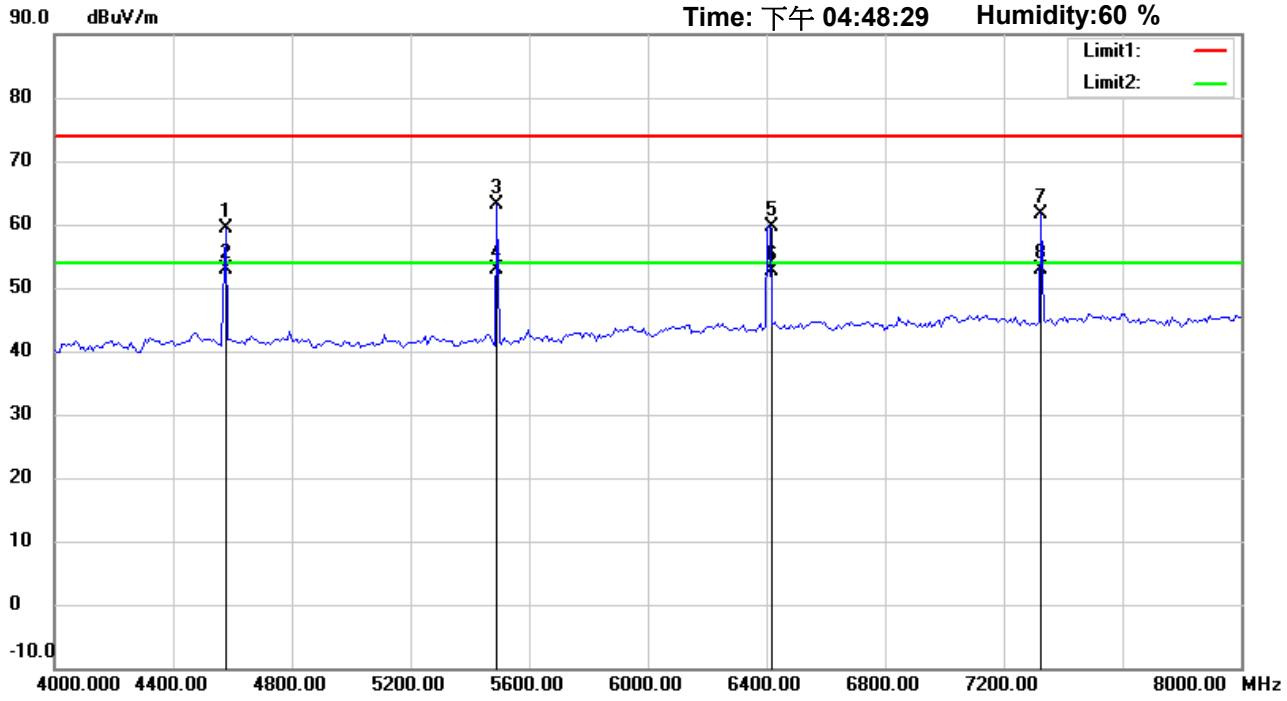
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8875

Radiated Emission Measurement

Operator: Leon

File :3 Data :#6 Date: 2017/6/23 Temperature:24 ℃

Time: 下午 04:48:29 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21706-17076

M/N:

Test Mode : TX 915.44MHz

Note :

Polarization: *Vertical*

Power : 12 Vd.c.

Distance: 3m

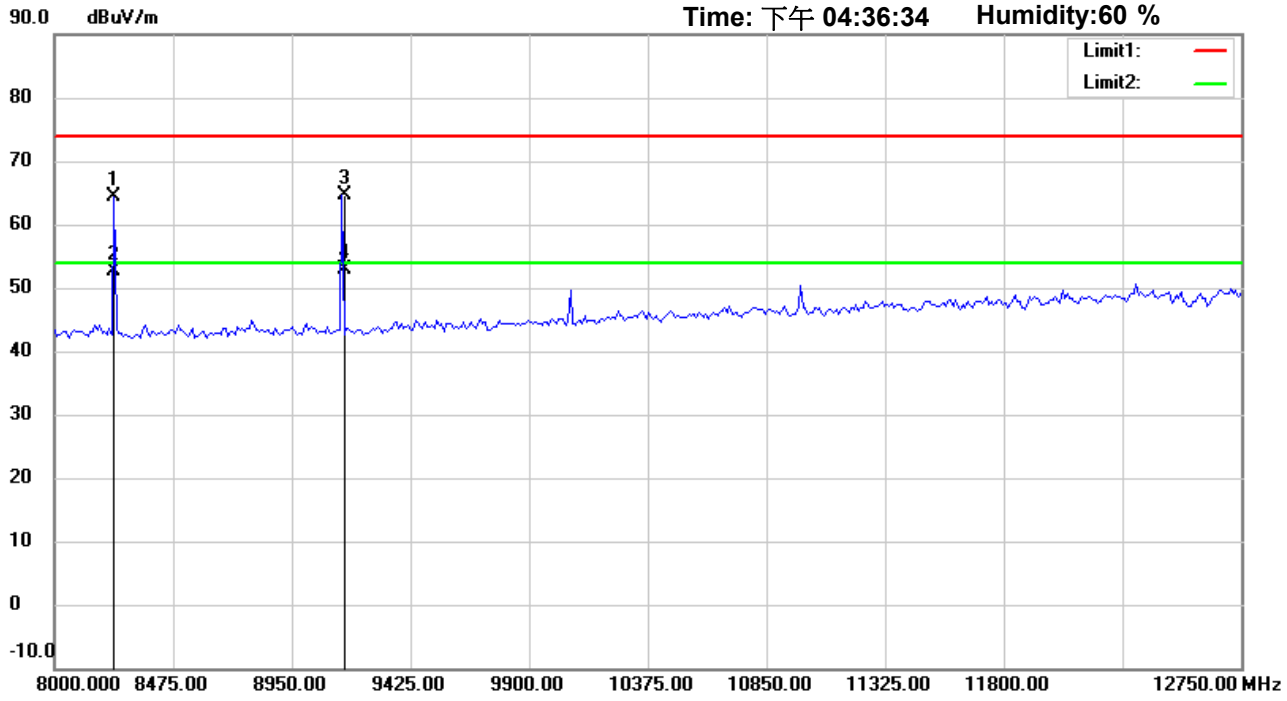
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4577.154	59.52	peak	-0.05	59.47	74.00	150	155	-14.53	
*	4577.154	53.02	AVG	-0.05	52.97	54.00	150	155	-1.03	
	5490.982	61.75	peak	1.41	63.16	74.00	150	60	-10.84	
	5490.982	51.37	AVG	1.41	52.78	54.00	150	60	-1.22	
	6412.826	55.87	peak	3.80	59.67	74.00	150	240	-14.33	
	6412.826	48.79	AVG	3.80	52.59	54.00	150	240	-1.41	
	7326.653	56.45	peak	5.11	61.56	74.00	150	85	-12.44	
	7326.653	47.75	AVG	5.11	52.86	54.00	105	85	-1.14	

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

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

Radiated Emission Measurement

Operator: Leon
File :3 Data :#4 Date: 2017/6/23 Temperature:24 ℃
Time: 下午 04:36:34 Humidity:60 %



Site : Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M21706-17076
M/N:
Test Mode : TX 915.44MHz
Note :

Polarization: *Horizontal*
Power : 12 Vd.c.
Distance: 3m

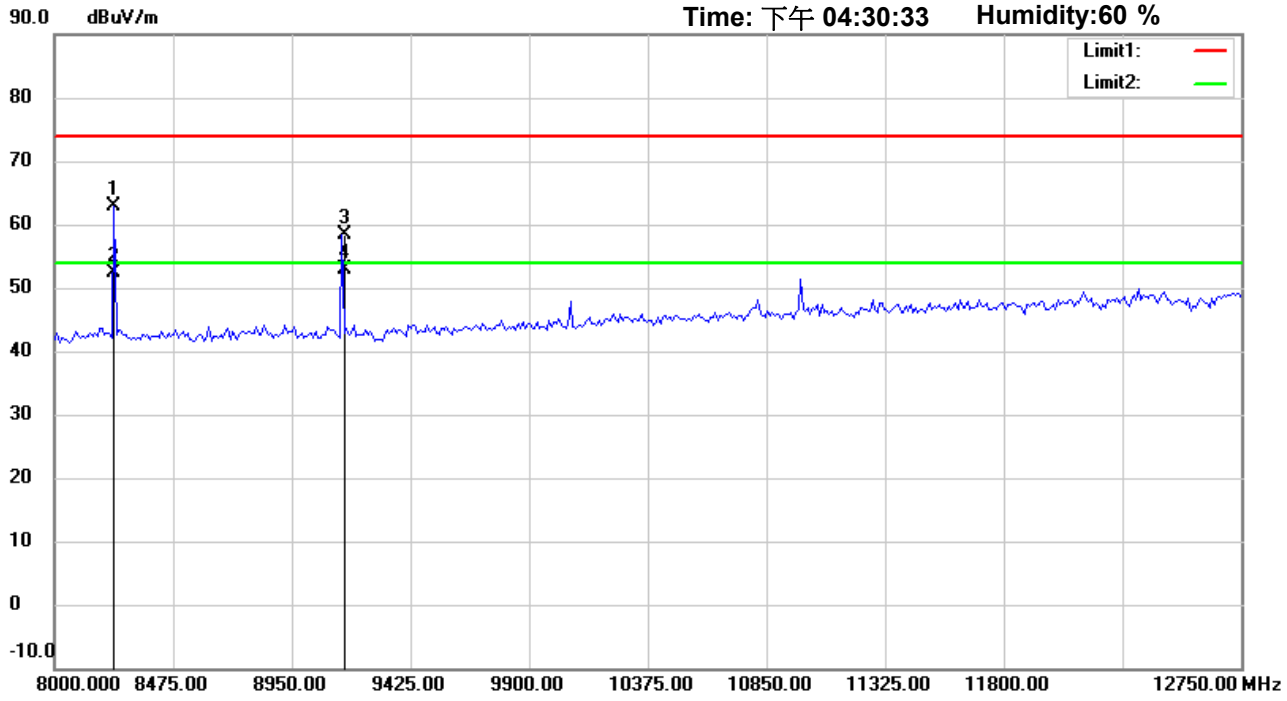
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	8237.976	58.24	peak	6.11	64.35	74.00	150	175	-9.65	
	8237.976	46.53	AVG	6.11	52.64	54.00	150	175	-1.36	
	9151.804	57.70	peak	6.96	64.66	74.00	150	90	-9.34	
*	9151.804	45.92	AVG	6.96	52.88	54.00	105	90	-1.12	

*: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: Leon
File :3 Data :#7 Date: 2017/6/23 Temperature:24 ℃
Time: 下午 04:30:33 Humidity:60 %



Site : Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M21706-17076
M/N:
Test Mode : TX 915.44MHz
Note :

Polarization: *Vertical*
Power : 12 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
	8237.976	56.69	peak	6.11	62.80	74.00	150	175	-11.20	
	8237.976	46.32	AVG	6.11	52.43	54.00	150	175	-1.57	
	9151.804	51.38	peak	6.96	58.34	74.00	150	40	-15.66	
*	9151.804	45.99	AVG	6.96	52.95	54.00	150	40	-1.05	

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

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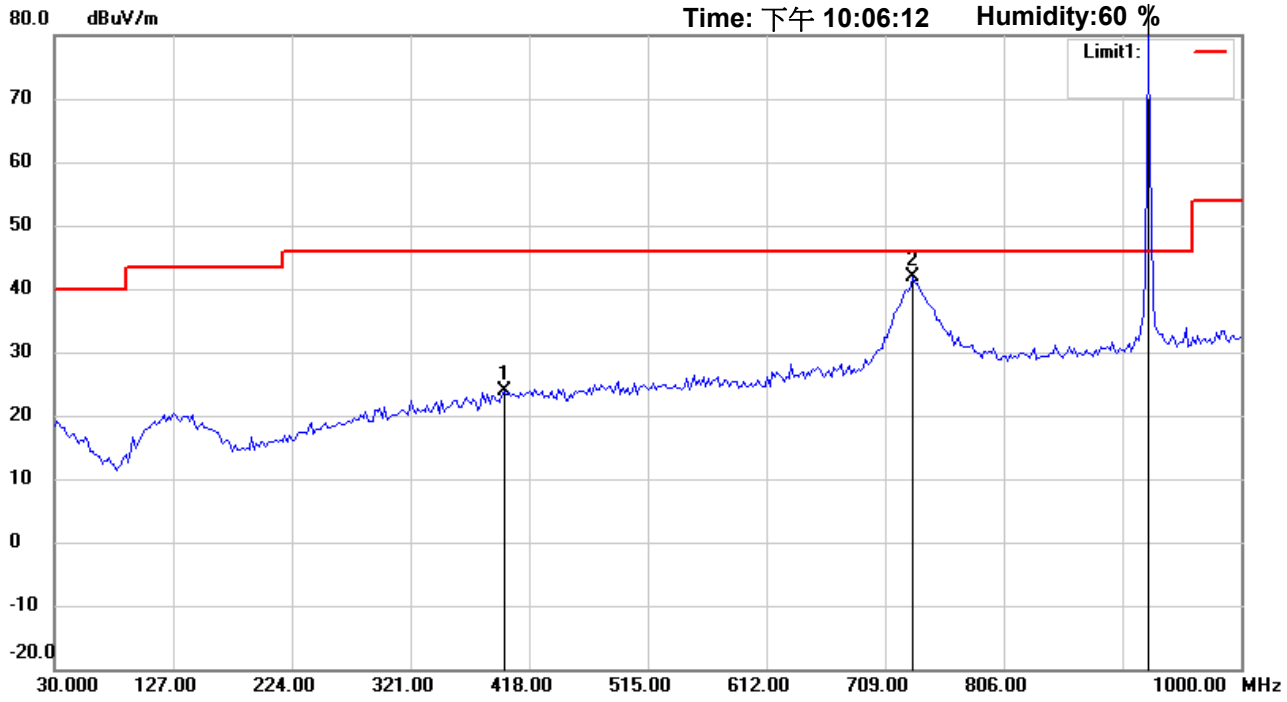
Radiated Emission Measurement

Operator: Leon

File :1 Data :#1 Date: 2017/6/23 Time: 下午 10:06:12

Temperature:24 ℃ Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21706-17076

M/N:

Test Mode : TX 923.783MHz

Note :

Polarization: *Horizontal*

Power : 12 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
	397.3947	27.43	peak	-3.61	23.82	46.00	100	175	-22.18	
	731.7435	41.62	peak	0.21	41.83	46.00	100	40	-4.17	
*	924.1884	86.58	peak	3.88	90.46	46.00			44.46	RF

*: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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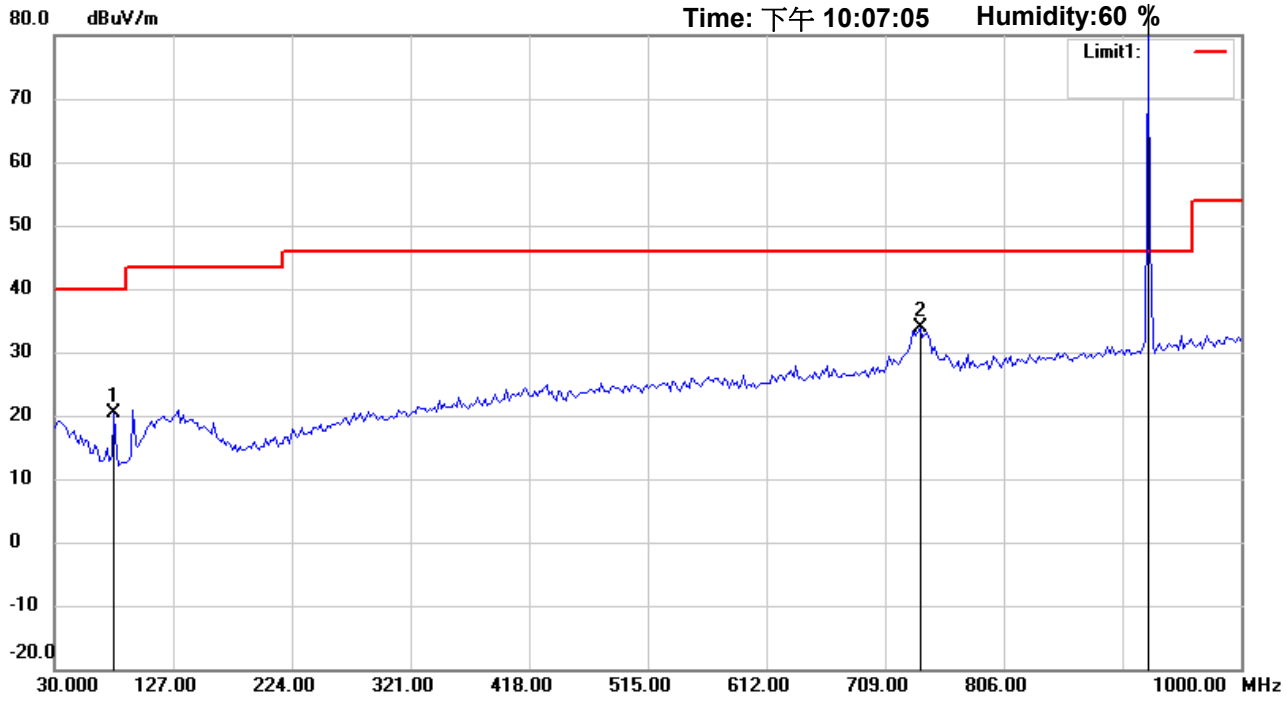
Radiated Emission Measurement

Operator: Leon

File :1 Data :#2 Date: 2017/6/23 Time: 下午 10:07:05 Temperature:24 ℃ Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

Polarization: *Vertical*

EUT : W6M21706-17076

Power : 12 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 923.783MHz

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
	78.5972	34.65	peak	-14.15	20.50	40.00	100	55	-19.50	
	737.5752	33.54	peak	0.31	33.85	46.00	100	210	-12.15	
*	924.1884	86.46	peak	3.88	90.34	46.00			44.34	RF

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

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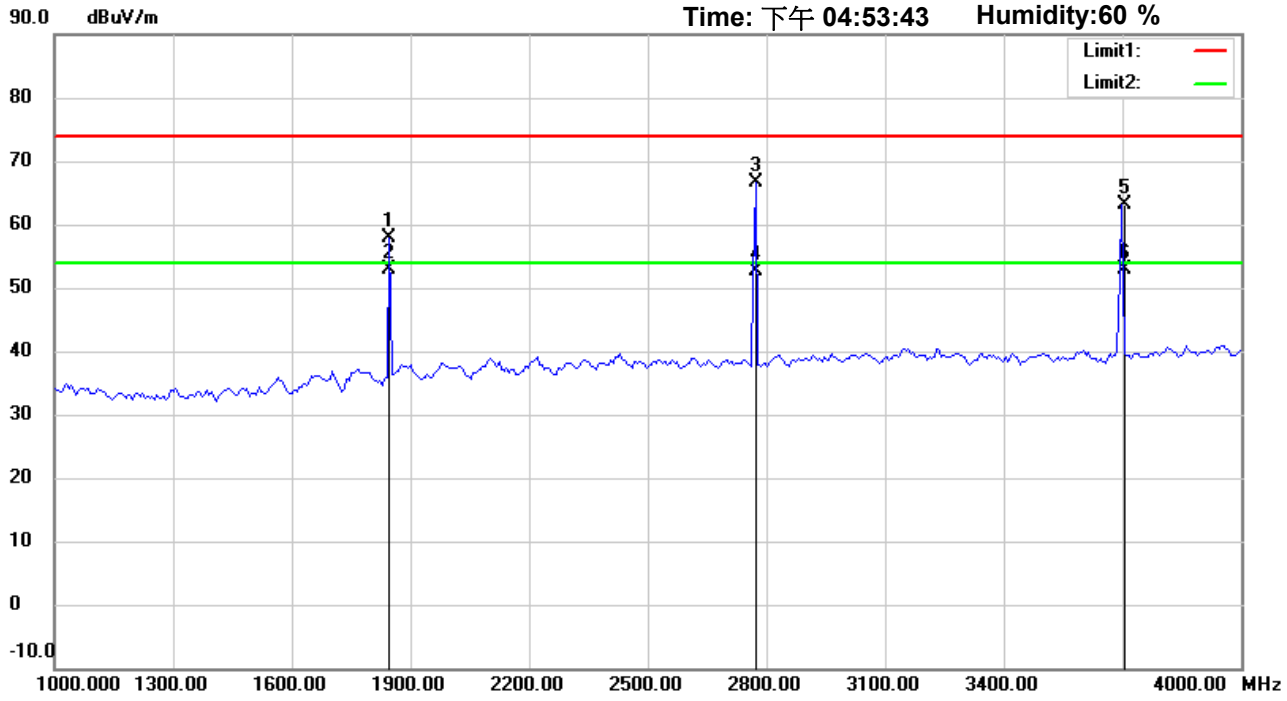
Radiated Emission Measurement

Operator: Leon

File :3 Data :#1 Date: 2017/6/23 Temperature:24 ℃

Time: 下午 04:53:43 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21706-17076

Power : 12 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 923.783MHz

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
	1847.695	64.31	peak	-6.50	57.81	74.00	155	25	-16.19	
*	1847.695	59.37	AVG	-6.50	52.87	54.00	155	25	-1.13	
	2773.547	70.53	peak	-3.84	66.69	74.00	150	160	-7.31	
	2773.547	56.57	AVG	-3.84	52.73	54.00	150	160	-1.27	
	3699.399	64.93	peak	-1.91	63.02	74.00	150	190	-10.98	
	3699.399	54.70	AVG	-1.91	52.79	54.00	150	190	-1.21	

*: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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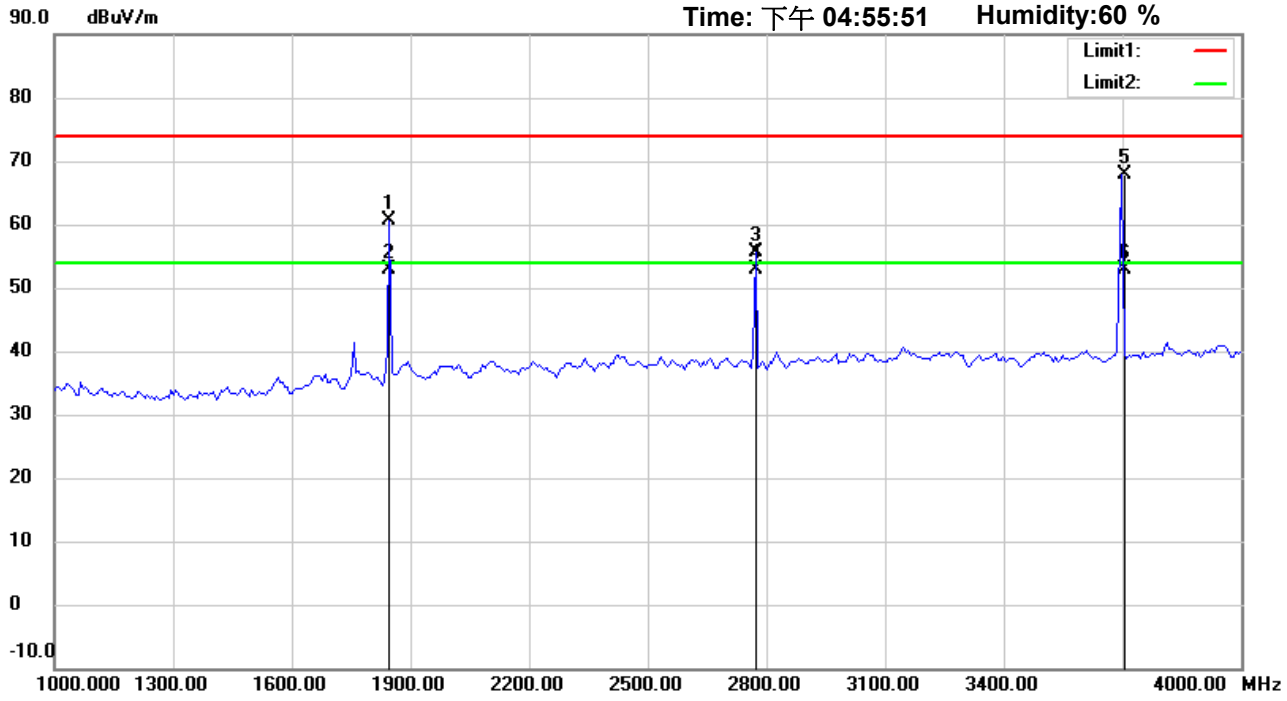
Radiated Emission Measurement

Operator: Leon

File :3 Data :#4 Date: 2017/6/23 Temperature:24 ℃

Time: 下午 04:55:51 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6M21706-17076

Power : 12 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 923.783MHz

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
	1847.695	67.05	peak	-6.50	60.55	74.00	150	95	-13.45	
*	1847.695	59.41	AVG	-6.50	52.91	54.00	150	95	-1.09	
	2773.547	59.59	peak	-3.84	55.75	74.00	150	240	-18.25	
	2773.547	56.63	AVG	-3.84	52.79	54.00	150	240	-1.21	
	3699.399	69.84	peak	-1.91	67.93	74.00	150	130	-6.07	
	3699.399	54.75	AVG	-1.91	52.84	54.00	150	130	-1.16	

*: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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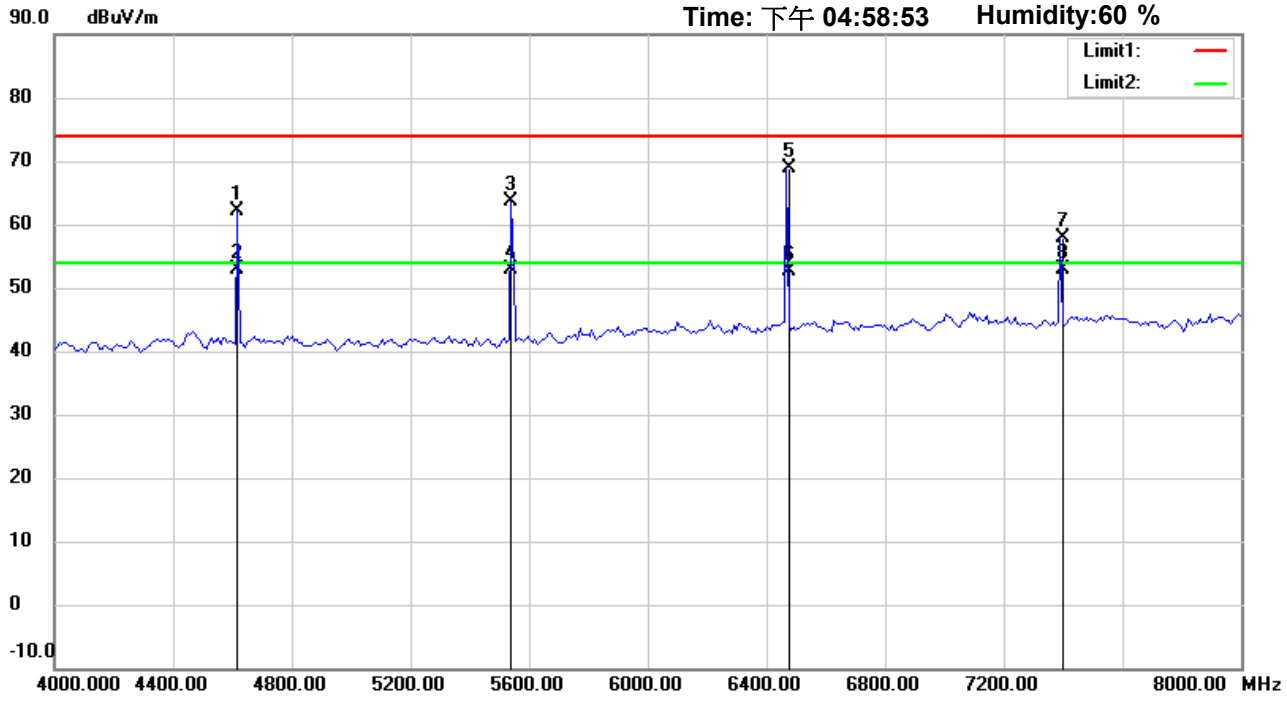
Radiated Emission Measurement

Operator: Leon

File :3 Data :#2 Date: 2017/6/23 Temperature:24 ℃

Time: 下午 04:58:53 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

Polarization: *Horizontal*

EUT : W6M21706-17076

Power : 12 Vd.c.

M/N:

Distance: 3m

Test Mode : TX 923.783MHz

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
	4617.234	62.23	peak	-0.11	62.12	74.00	150	255	-11.88	
	4617.234	52.97	AVG	-0.11	52.86	54.00	150	255	-1.14	
	5539.078	62.17	peak	1.52	63.69	74.00	150	90	-10.31	
*	5539.078	51.36	AVG	1.52	52.88	54.00	150	90	-1.12	
	6468.938	64.91	peak	3.88	68.79	74.00	150	70	-5.21	
	6468.938	48.75	AVG	3.88	52.63	54.00	150	70	-1.37	
	7390.782	52.70	peak	5.18	57.88	74.00	150	20	-16.12	
	7390.782	47.69	AVG	5.18	52.87	54.00	150	20	-1.13	

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

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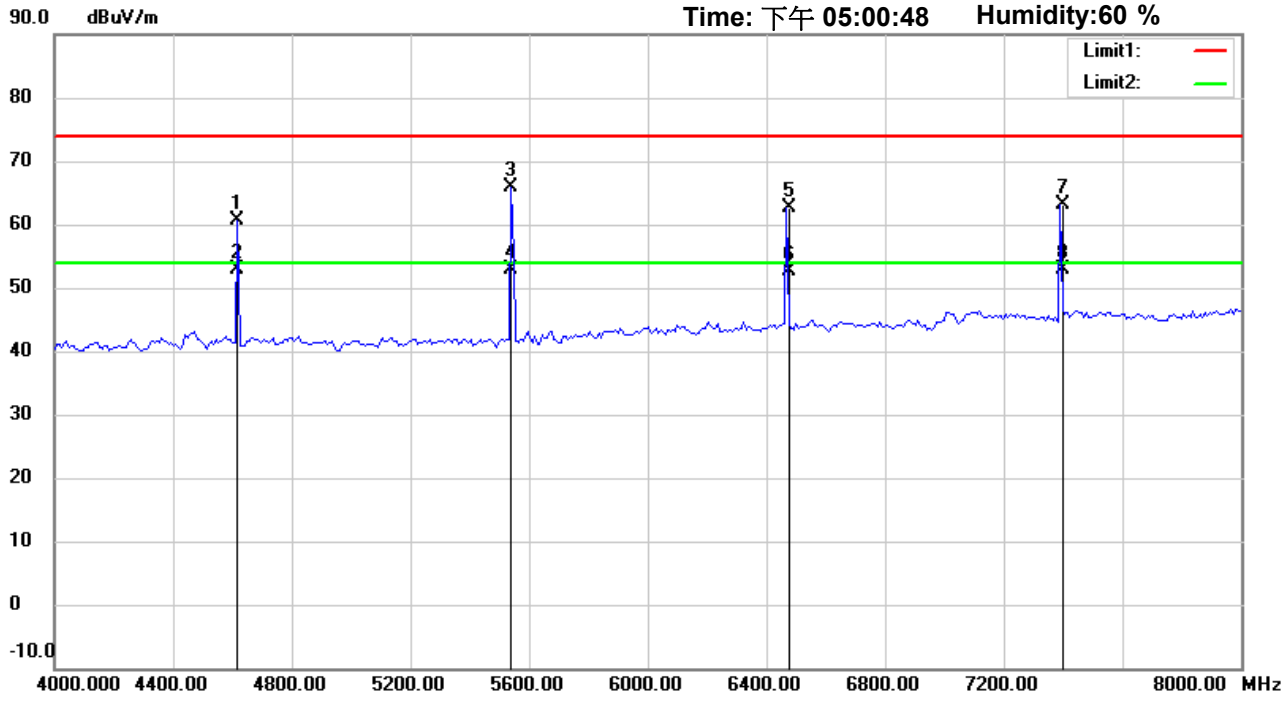
Radiated Emission Measurement

Operator: Leon

File :3 Data :#5 Date: 2017/6/23 Temperature:24 ℃

Time: 下午 05:00:48 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21706-17076

M/N:

Test Mode : TX 923.783MHz

Note :

Polarization: *Vertical*

Power : 12 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
	4617.234	60.81	peak	-0.11	60.70	74.00	150	50	-13.30	
*	4617.234	53.06	AVG	-0.11	52.95	54.00	150	50	-1.05	
	5539.078	64.28	peak	1.52	65.80	74.00	150	160	-8.20	
	5539.078	51.39	AVG	1.52	52.91	54.00	150	160	-1.09	
	6468.938	58.84	peak	3.88	62.72	74.00	150	95	-11.28	
	6468.938	48.75	AVG	3.88	52.63	54.00	150	95	-1.37	
	7390.782	57.88	peak	5.18	63.06	74.00	150	135	-10.94	
	7390.782	47.64	AVG	5.18	52.82	54.00	150	135	-1.18	

*: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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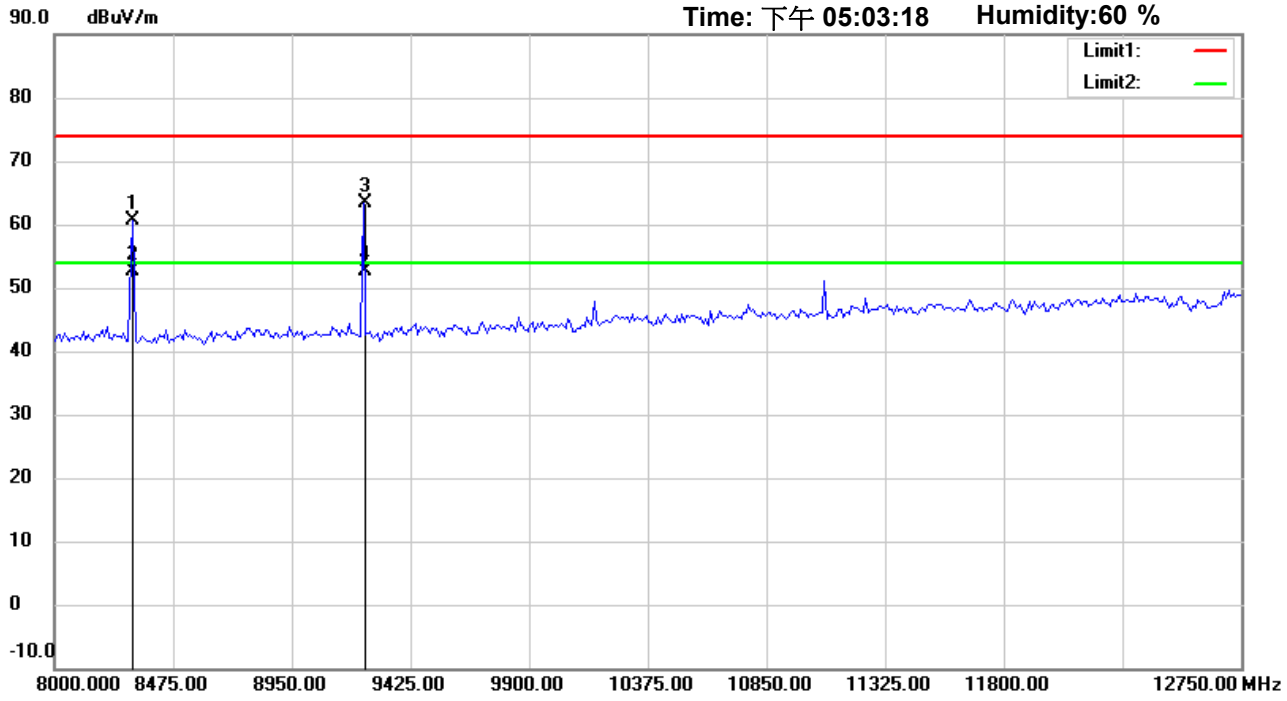
Radiated Emission Measurement

Operator: Leon
File :3 Data :#3 Date: 2017/6/23 Temperature:24 ℃
Time: 下午 05:03:18 Humidity:60 %



Site : Chamber
Condition : FCC_part 15 RE-Class C_Above 1GHz_PK
EUT : W6M21706-17076
M/N:
Test Mode : TX 923.783MHz
Note :

Polarization: *Horizontal*
Power : 12 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
	8314.128	54.79	peak	5.96	60.75	74.00	150	175	-13.25	
	8314.128	46.59	AVG	5.96	52.55	54.00	150	175	-1.45	
	9237.475	56.39	peak	6.97	63.36	74.00	150	90	-10.64	
*	9237.475	45.63	AVG	6.97	52.60	54.00	150	90	-1.40	

*: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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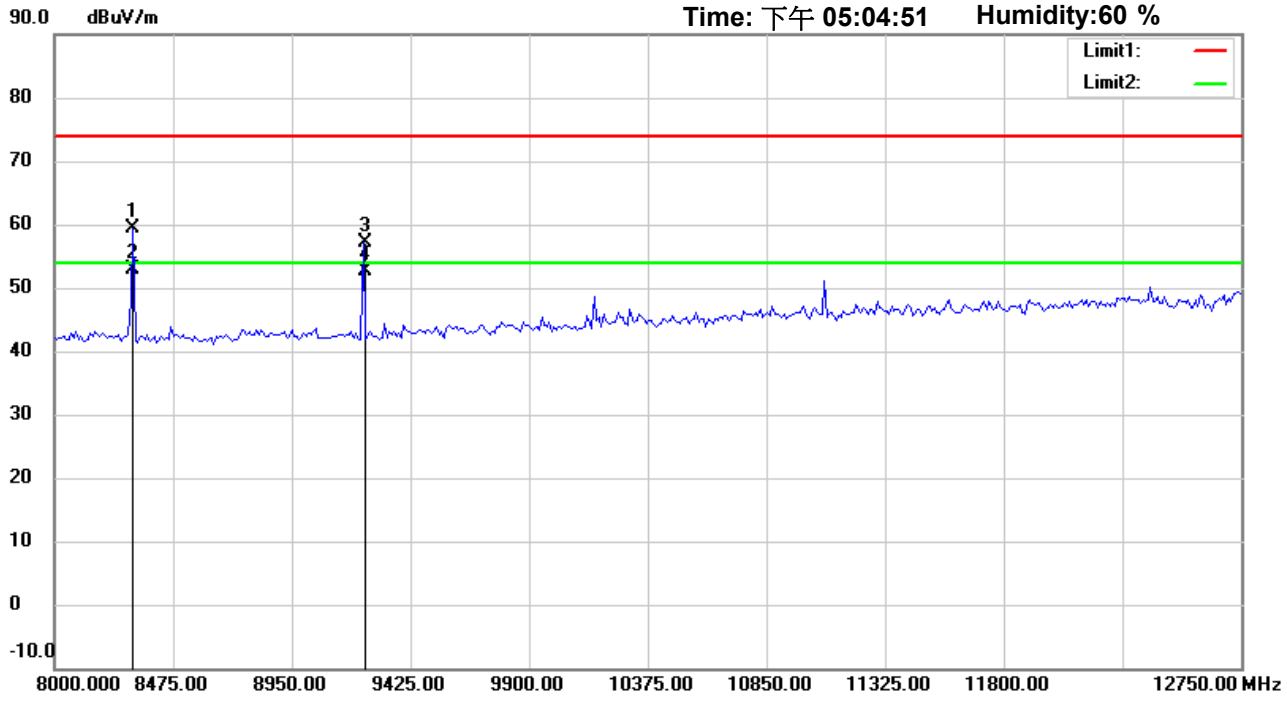
Radiated Emission Measurement

Operator: Leon

File :3 Data :#6 Date: 2017/6/23 Temperature:24 ℃

Time: 下午 05:04:51 Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21706-17076

M/N:

Test Mode : TX 923.783MHz

Note :

Polarization: *Vertical*

Power : 12 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
	8314.128	53.30	peak	5.96	59.26	74.00	150	195	-14.74	
*	8314.128	46.99	AVG	5.96	52.95	54.00	150	195	-1.05	
	9237.475	50.19	peak	6.97	57.16	74.00	150	50	-16.84	
	9237.475	45.76	AVG	6.97	52.73	54.00	150	50	-1.27	

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