

FCC PART 15 SUBPART C TEST REPORT

for

Handheld UHF Two-way radio with GPS

Model No.: A02963

FCC ID: IPH-02963

of

Applicant: Garmin International Inc

Address: 1200 E. 151st. Street Olathe Kansas 66062 United States

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.: W6M21604-15784-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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Appendix



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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 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:

July 13, 2016

Mark Cheng

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

July 13, 2016

Kevin Wang

Date

WTS

Name

Signature



Worldwide Testing Services(Taiwan) Co., Ltd.

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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: Garmin International Inc

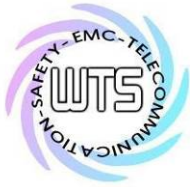
Street: 1200 E. 151st. Street

Town: Olathe Kansas 66062

Country: United States

Telephone: (913) 397-8448

Fax: (913) 397-8282



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1.4 Application details

Date of receipt of test item: April 27, 2016
Date of test: from April 27, 2016 to July 13, 2016

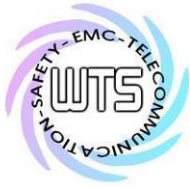
1.5 General information of Test item

Type of test item: Handheld UHF Two-way radio with GPS
Model Number: A02963
Brand Name: Garmin
Multi-listing model number: B02963
Photos: see Appendix

Technical data

Frequency band: 2.4 GHz – 2.4835 GHz
Number of Channels: Bluetooth Normal and EDR: 79 channels
Bluetooth Low Energy: 40 channels
Operation modes: Duplex
Modulation Type: GFSK 、 $\pi/4$ DQPSK 、 8DPSK
Fixed point-to-point operation: ☐ Yes / ☒ No
Type of Antenna: Chip antenna
Antenna gain: -0.48457 dBi
Power supply: Adapter (I/P: 100-240V~0.3A, 50-60Hz, 21-29VA ;
O/P: 5V, 2.0A MAX.)
Battery 7.4V, 2400mAh, 17.8Wh
Emission designator: Bluetooth Normal and EDR: 1M29F1D
Bluetooth Low Energy: 1M25G1D
Host device: none
Classification :

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



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Transmitter

Unom

Mode A (Bluetooth 2.0 Normal mode)

Power (ch 0 or A):	Conducted: 0.28 dBm
Power (ch 39 or B):	Conducted: 0.74 dBm
Power (ch 78 or C):	Conducted: 1.30 dBm

Mode B (Bluetooth 2.0 EDR mode)

Power (ch 0 or A):	Conducted: 3.15 dBm
Power (ch 39 or B):	Conducted: 3.52 dBm
Power (ch 78 or C):	Conducted: 4.05 dBm

Mode C (Bluetooth 4.0)

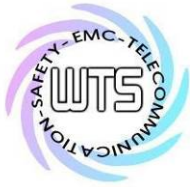
Power (ch 0):	Conducted: 0.44 dBm
Power (ch 19):	Conducted: 1.06 dBm
Power (ch 39):	Conducted: 1.59 dBm

Manufacturer: (if applicable)

Name:	Garmin Corporation
Street:	No.68, Zhangshu 2nd Rd., Xizhi Dist.,
Town:	New Taipei City 221,
Country:	Taiwan (R.O.C.)

1.6 Test standards

Technical standard : FCC RULES PART 15 SUBPART C § 15.247 (2015-10)



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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 2.5 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

Power supply: Adapter (I/P: 100-240V~0.3A, 50-60Hz, 21-29VA ;
O/P: 5V, 2.0A MAX.)
Battery 7.4V, 2400mAh, 17.8Wh

Extreme conditions parameters: ./.



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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	2016/5/20	2017/5/19
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
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	2016/7/12	2017/7/11
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2015/9/7	2016/9/6
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2016/5/20	2017/5/19
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2016/5/25	2017/5/24
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	2016/6/24	2017/6/23
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2016/6/29	2017/6/28
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2016/3/23	2017/3/22
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2016/1/25	2017/1/24
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2016/3/28	2017/3/27
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2016/4/14	2017/4/13
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2016/2/25	2017/2/24
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2016/2/25	2017/2/24
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2016/2/25	2017/2/24
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2016/2/27	2017/2/26
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2016/2/25	2017/2/24
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2016/4/13	2017/4/12
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	2015/9/6	2016/9/5
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2015/9/21	2016/9/20
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2016/2/25	2017/2/24
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	2016/1/13	2017/1/12
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Function test	
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2016/5/23	2017/5/22
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2015/8/11	2016/8/10

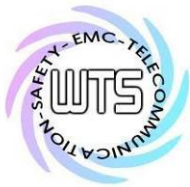


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ETSTW-RE 126	5GHz Notch filter	5NSL11-5800/E221.3-O/O	1	K&L Microwave	2015/8/11	2016/8/10
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2016/2/25	2017/2/24
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2015/8/11	2016/8/10
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2015/8/11	2016/8/10
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2016/4/13	2017/4/12
ETSTW-RE 143	Humidity Temperature Meter	TES-1260	110104623	TES	2015/9/9	2016/9/8
ETSTW-RE 147	Bi-log Hybrid Antenna	MCTD 2786B	BLB16M04005	ETC	2016/3/31	2017/3/30
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2016/5/4	2017/5/3
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2016/3/4	2017/3/3
ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2016/2/3	2017/2/2
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40 /12+9SS	3	WI	2016/1/13	2017/1/12
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2016/1/13	2017/1/12
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2016/1/13	2017/1/12
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2016/1/13	2017/1/12
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2015/9/16	2016/9/15
ETSTW-Cable 010	BNC Cable	5 M BNC Cable	None	JYE BAO CO.,LTD.	2015/9/11	2016/9/10
ETSTW-Cable 011	BNC Cable	BNC Cable 1	None	JYE BAO CO.,LTD.	Pre-test Use NCR	
ETSTW-Cable 012	N TYPE To SMA Cable	Cable 012	None	JYE BAO CO.,LTD.	2015/9/11	2016/9/10
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2016/2/24	2017/2/23
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2016/2/24	2017/2/23
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2016/2/24	2017/2/23
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2016/2/24	2017/2/23
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2016/4/22	2017/4/21
ETSTW-Cable 022	N TYPE Cable	5006	0002	JYE BAO CO.,LTD.	2016/4/7	2017/4/6
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2016/2/25	2017/2/24
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2016/5/13	2017/5/12
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2015/9/21	2016/9/20
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2015/9/21	2016/9/20
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	HUBER+SUHNER	2016/2/25	2017/2/24
ETSTW-Cable 031	Microwave Cable	SUCOFLEX 104 (S_Cable 10)	238092	HUBER+SUHNER	2016/4/13	2017/4/12
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2016/4/13	2017/4/12
ETSTW-Cable 048	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2016/4/13	2017/4/12
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2016/4/7	2017/4/6
ETSTW-Cable 064	Microwave Cable	SUCOFLEX 104	MY28891	HUBER+SUHNER	2016/4/13	2017/4/12
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1	



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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.

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

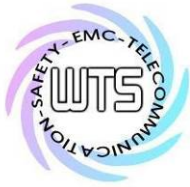
The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.10-2013 6.2.2. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (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 at 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.



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

The formula is as follows:

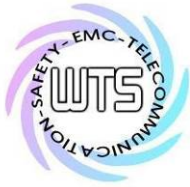
Average = Peak + Duty Factor

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

T = 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.

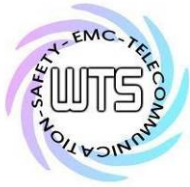


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3 Test results (enclosure)

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)	☒	☒	☐
Minimum 6 dB Bandwidth	15.247(a)(2)	☒	☒	☐
Band-edge Compliance of RF Emission	15.247(d)	☒	☒	☐
Peak Power Spectral Density	15.247(e)	☒	☒	☐
Radiated Emission from Digital Part	15.109	☐	☐	☐
Power Line Conducted Emission	15.207(a)	☒	☒	☐



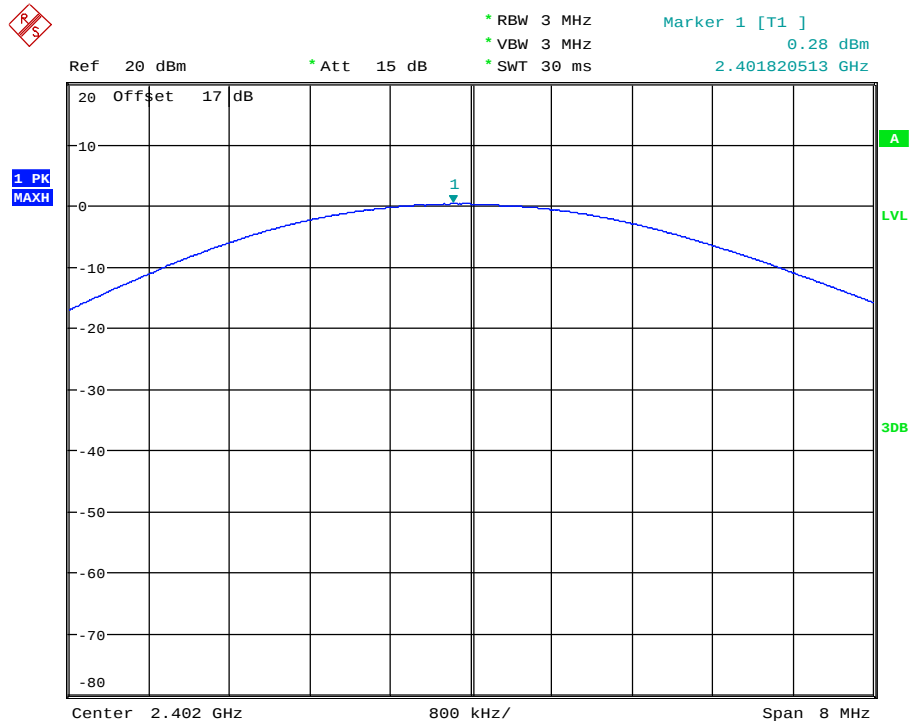
Registration number: W6M21604-15784-C-1
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3.1 Peak Output Power (transmitter)

FCC Rule: 15.247(b)(3)

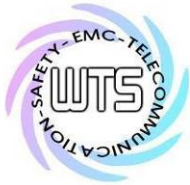
This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.
The power was measured with modulation (declared by the applicant).

Bluetooth Normal mode

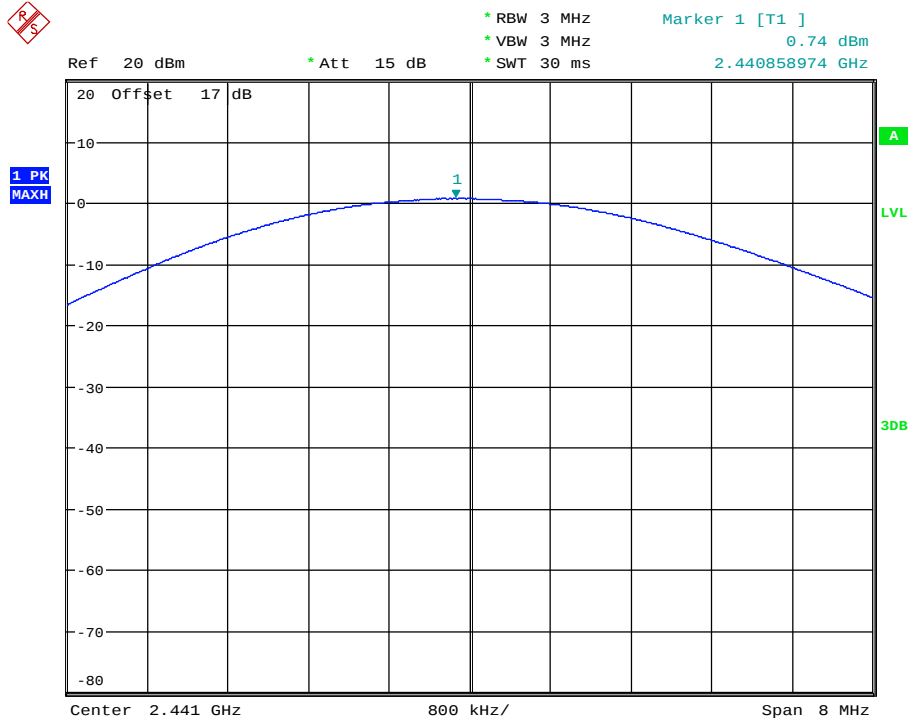


MAX OUTPUT POWER CH0

Date: 27.APR.2016 11:19:06

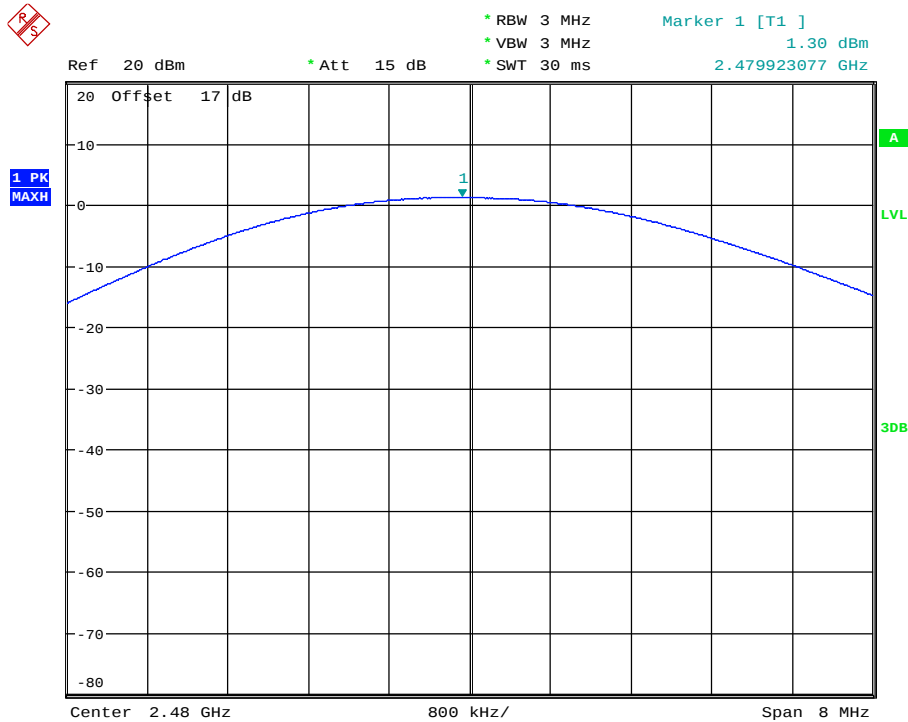


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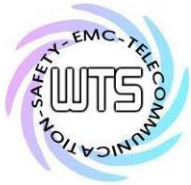
MAX OUTPUT POWER CH39

Date: 27.APR.2016 11:19:37



MAX OUTPUT POWER CH78

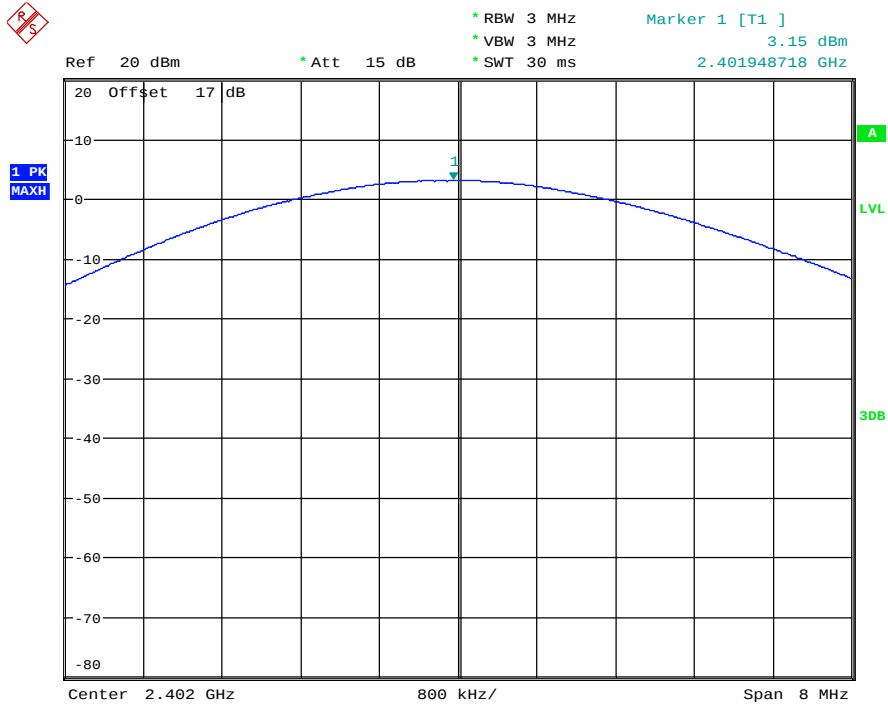
Date: 27.APR.2016 11:19:57



Registration number: W6M21604-15784-C-1

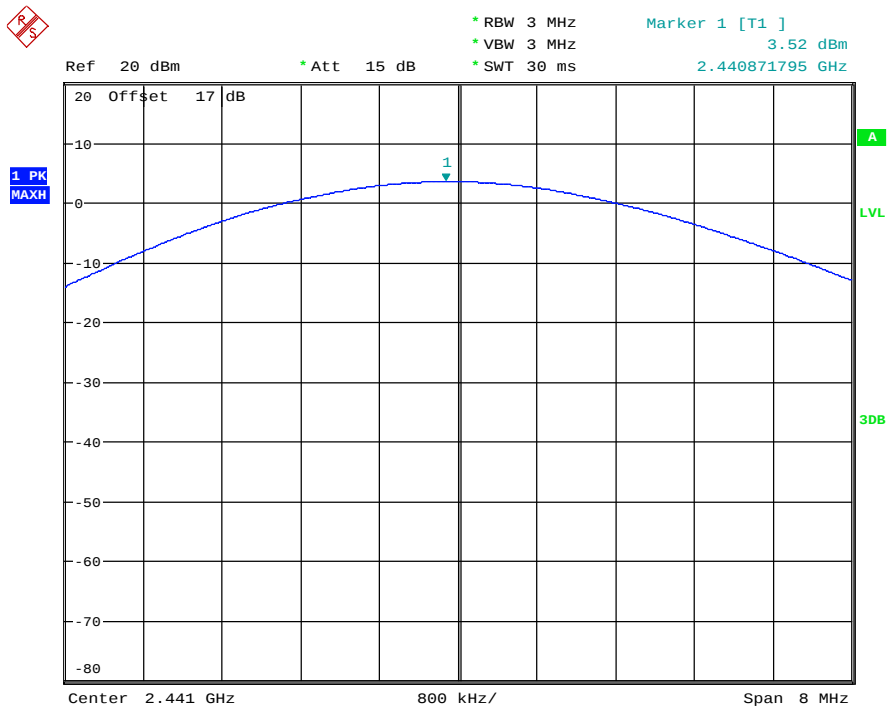
FCC ID: IPH-02963

Bluetooth EDR mode



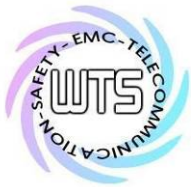
MAX OUTPUT POWER CH0 EDR MODE

Date: 27.APR.2016 11:25:17

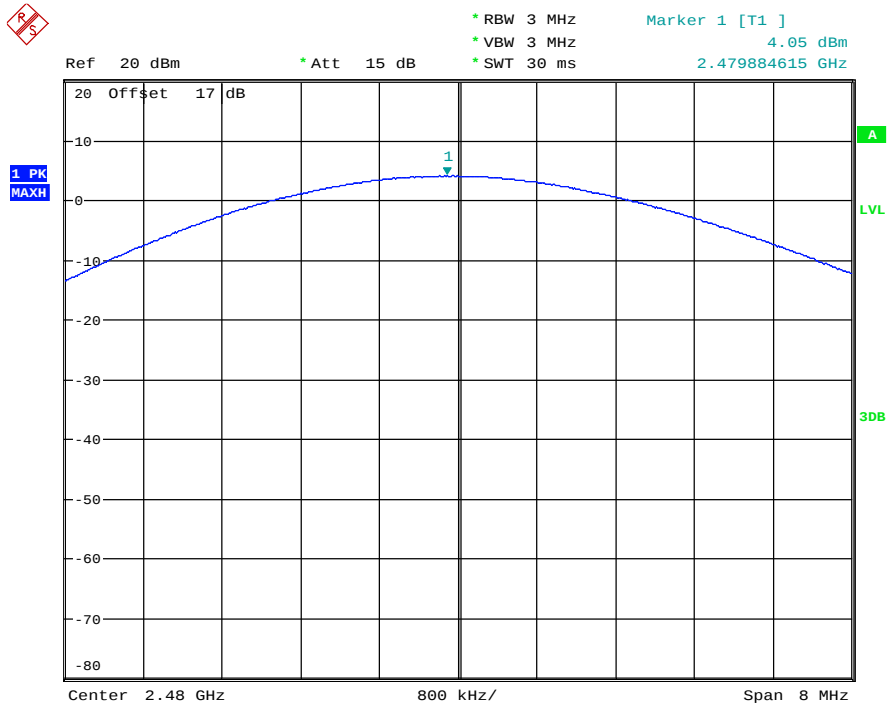


MAX OUTPUT POWER CH39 EDR MODE

Date: 27.APR.2016 11:25:49



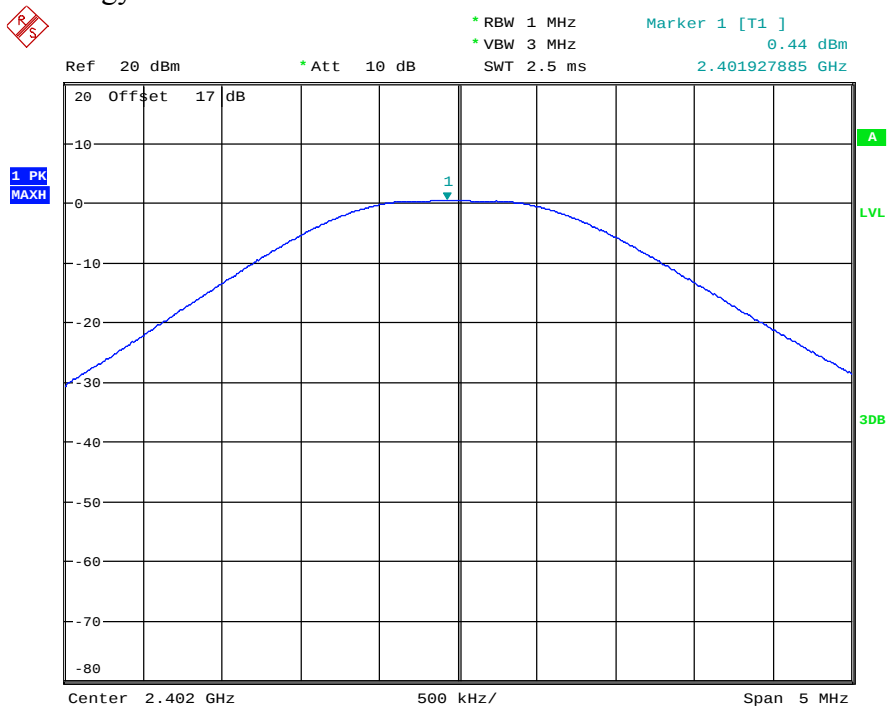
Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



MAX OUTPUT POWER CH78 EDR MODE

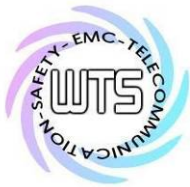
Date: 27.APR.2016 11:26:09

Bluetooth Low Energy mode

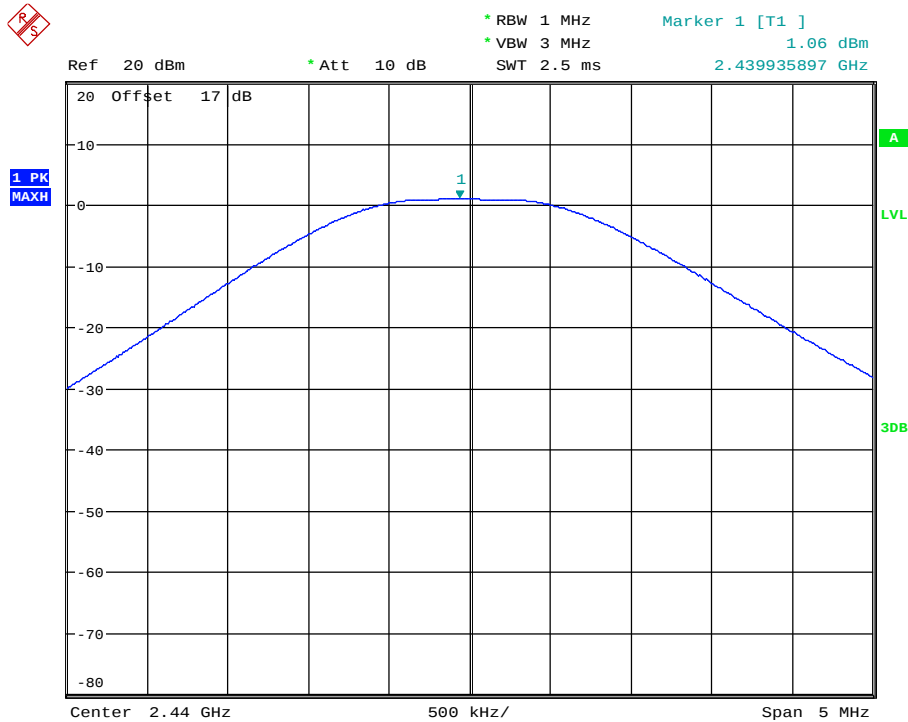


MAX OUTPUT POWER BT4.0 CH00

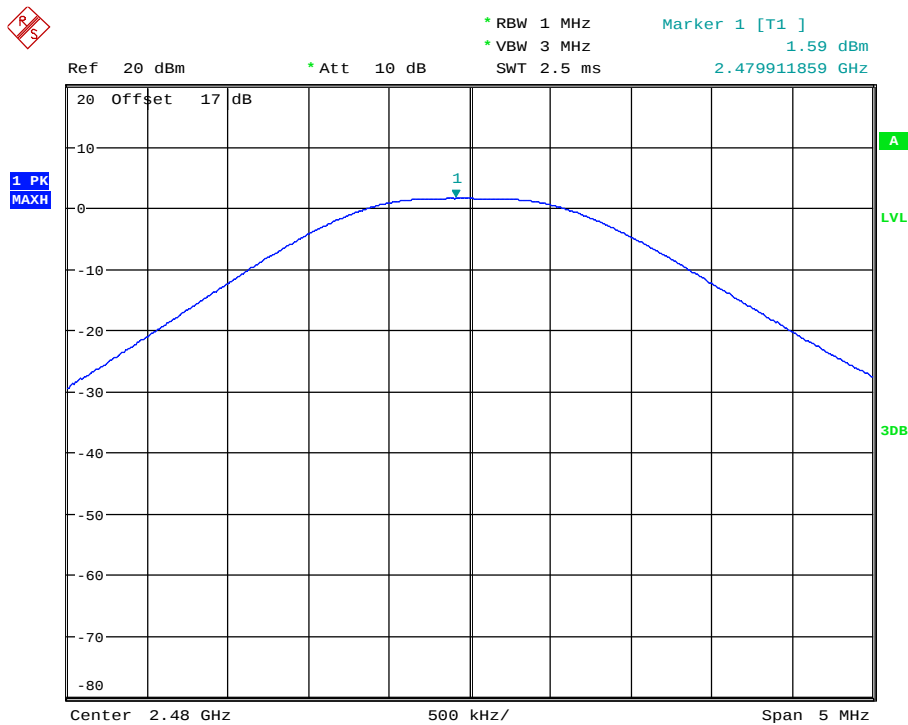
Date: 27.APR.2016 13:36:55



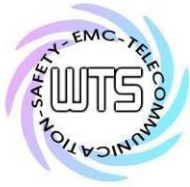
Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



MAX OUTPUT POWER BT4.0 CH19
Date: 27.APR.2016 13:38:11



MAX OUTPUT POWER BT4.0 CH39
Date: 27.APR.2016 13:40:01



Worldwide Testing Services(Taiwan) Co., Ltd.

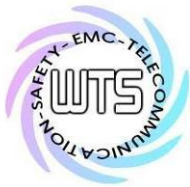
Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

Limits:

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

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

Test equipment used: ETSTW-RE 055



Registration number: W6M21604-15784-C-1

FCC ID: IPH-02963

3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

Test exclusion = max. conducted output power

Test exclusion = - -

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

Test equipment used: ETSTW-RE 055

3.3 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 $\geq$ - - cm separation from the antenna elements to significant metal parts of the enclosure to minimize potential perturbations.

Frequency Band: - - MHz

Maximum Power fed to Antenna (BT2.0): - - mW

Maximum Power fed to Antenna (BT4.0): - - mW

Separation distances:

Radiator to user: > 5 mm

Distance prescribed in user manual: > 5 mm

MHz	5	10	15	20	25	mm
2450	10	19	29	38	48	SAR Test Exclusion Threshold (mW)

MHz	30	35	40	45	50	mm
2450	57	67	77	86	96	SAR Test Exclusion Threshold (mW)

MHz	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	mm
2450	96	196	296	396	496	596	696	796	896	996	1096	1196	1296	1396	1496	mW

Explanation: Please refer to SAR test report.



Registration number: W6M21604-15784-C-1

FCC ID: IPH-02963

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 26500 MHz.

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

Frequency $\leq$ 1 GHz, RBW:100 kHz, VBW: 100 kHz (Peak measurements)

Frequency $>$ 1 GHz, RBW: 1 MHz, VBW: 1 MHz (Peak measurements)

Frequency $>$ 1 GHz , RBW:1 MHz , VBW: 10 Hz (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	500	54.0

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of Digit Transmission Systems:

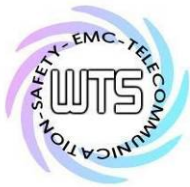
“If the emission is pulsed, modify the unit for continuous operation, use the setting shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.”

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty cycle correction = $20 \log (\text{dwell time} / 100\text{ms})$

Note: No duty cycle correction was added to the reading of this EUT.

Explanation: See attached diagrams in Appendix.



Registration number: W6M21604-15784-C-1

FCC ID: IPH-02963

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))

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 above 1GHz (Peak measurements).

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

For frequencies above 1GHz (Average measurements).

Max. reading – 20dB

Max. reading – 20 dB

Guidance on Measurement of Digit Transmission 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.”

The correction factor, based on the total channel dwell time in a 100 ms period, may be mathematically applied to a measurement made with an average detector, to further reduce the value.

Duty Cycle correction = $20 \log (\text{dwell time}/100\text{ms})$

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

Note: No duty cycle correction was added to the reading of EUT.



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Registration number: W6M21604-15784-C-1

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SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance with 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 and 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 "Correction Factor".

Summary table with radiated data of the test plots

Model:	A02963	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)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	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 for 3m measurement: 30-1000 MHz = ± 4.69 dB, 1-18 GHz = ± 4.78 dB, 18-40 GHz= ± 2.44 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.**
7. **See attached diagrams in appendix.**

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

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

Registration number: W6M21604-15784-C-1

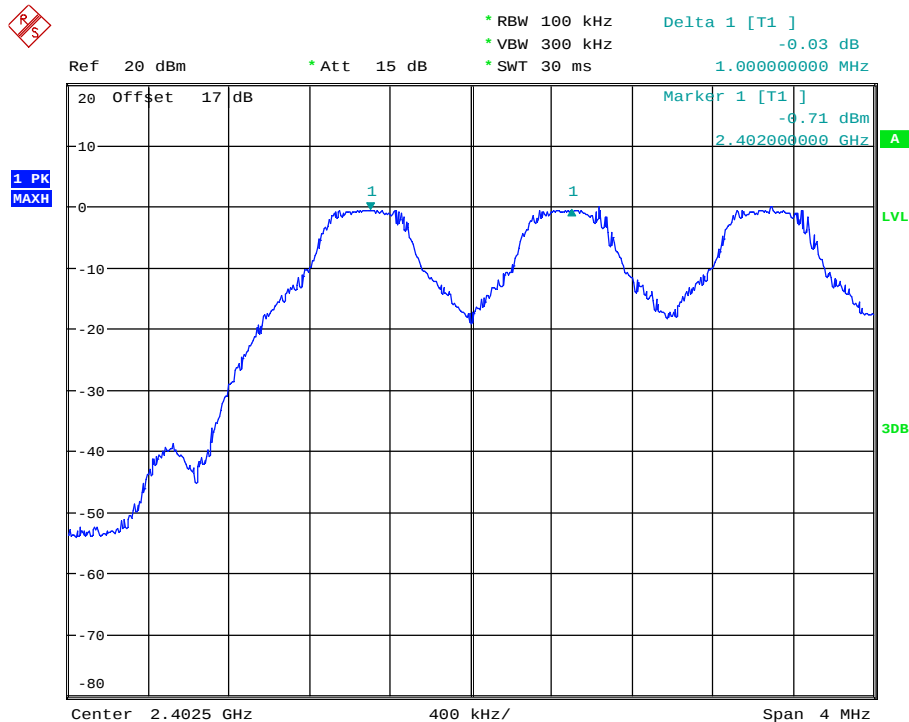
FCC ID: IPH-02963

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.

Bluetooth Normal and EDR mode

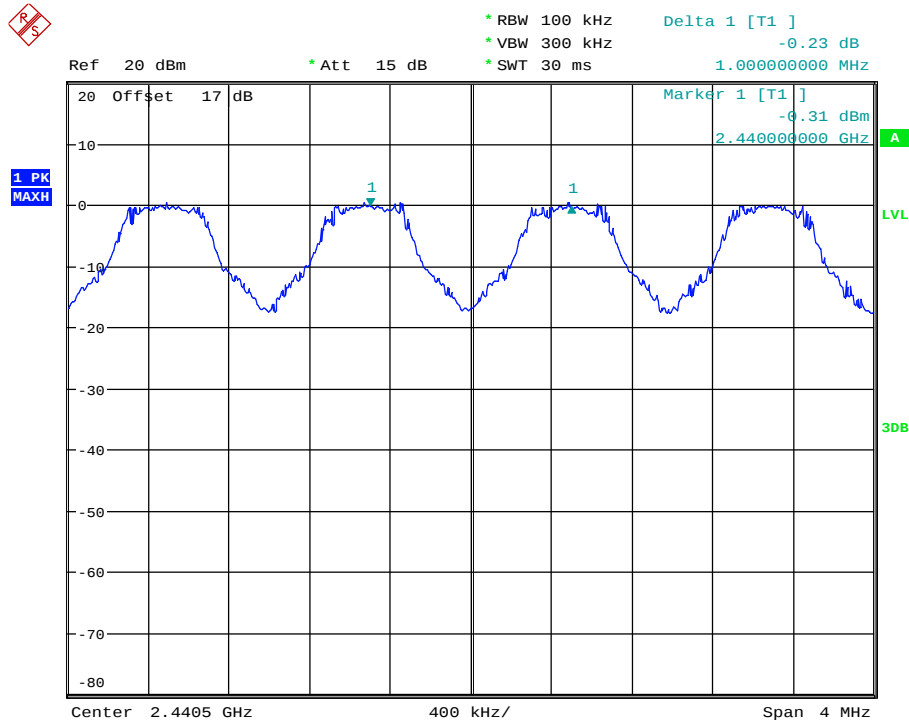


FREQUENCY SEPARATION CH0

Date: 27.APR.2016 11:23:33

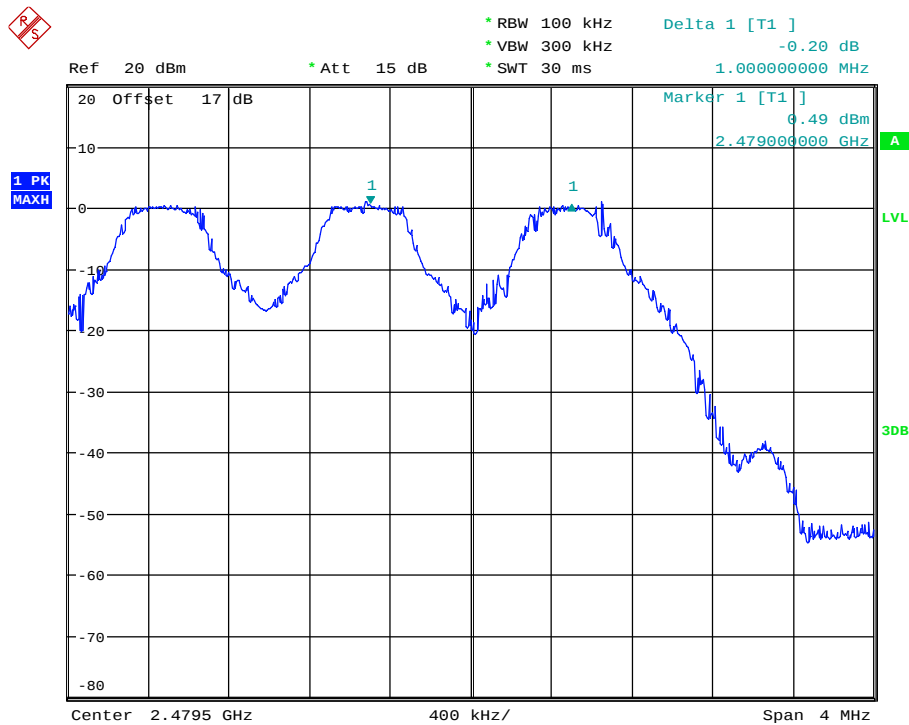


Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



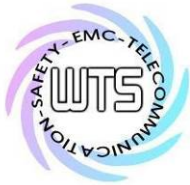
FREQUENCY SEPARATION CH39

Date: 27.APR.2016 11:24:17



FREQUENCY SEPARATION CH78

Date: 27.APR.2016 11:25:05



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

Limits:

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

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

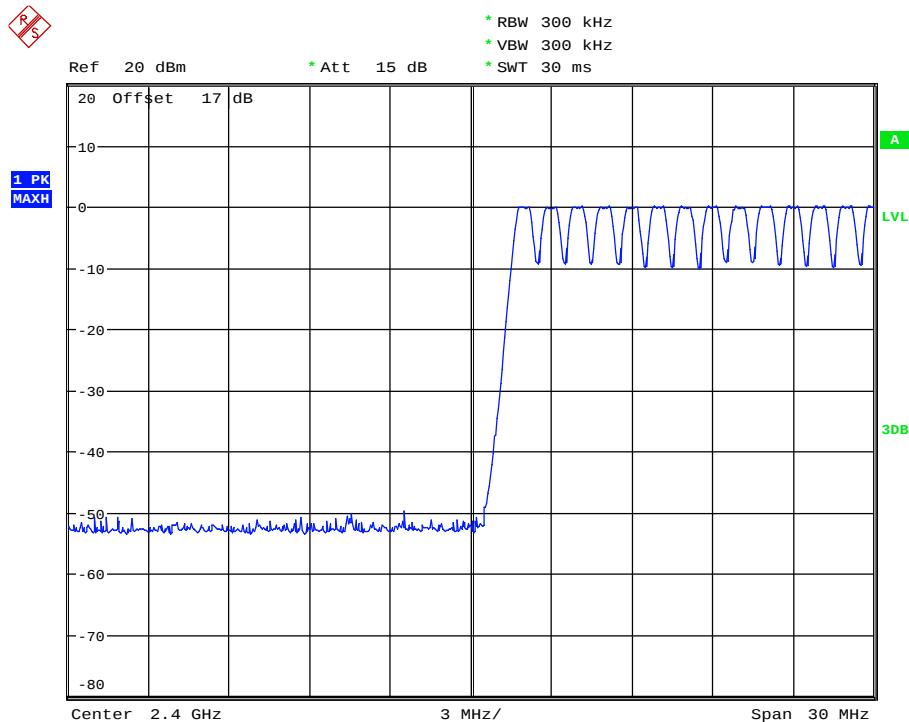
Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

3.7 Number of Hopping Frequencies

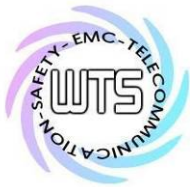
According to FCC rules part 15 subpart C §15.247 frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies. Frequency hopping systems in 5725-5850 MHz bands shall use least 75 hopping frequencies.

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.

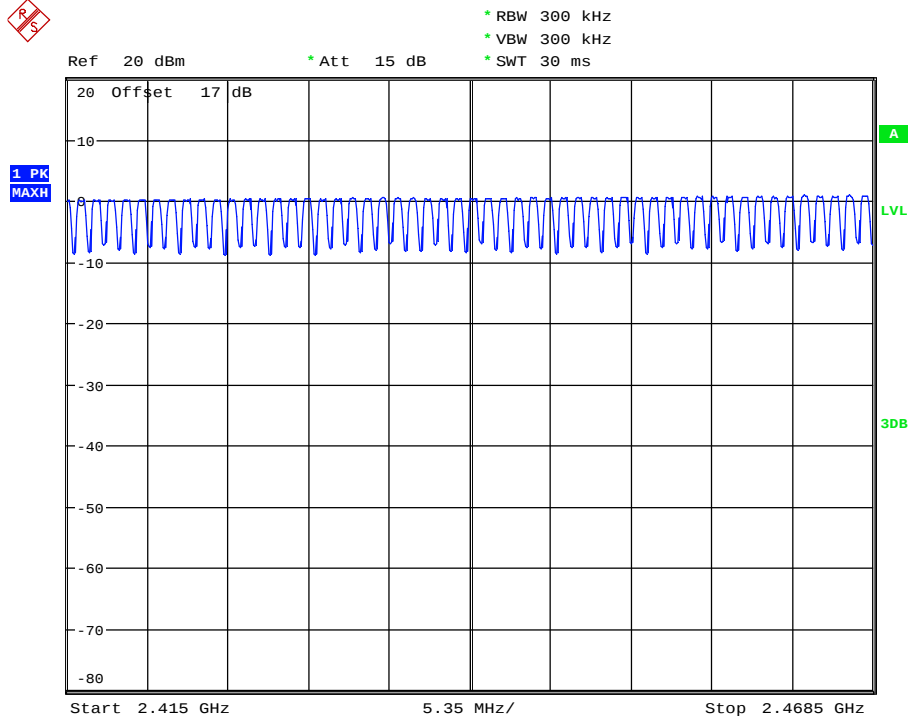
Bluetooth Normal and EDR mode



NUMBER OF HOPPING CH0-13
Date: 27.APR.2016 11:20:53

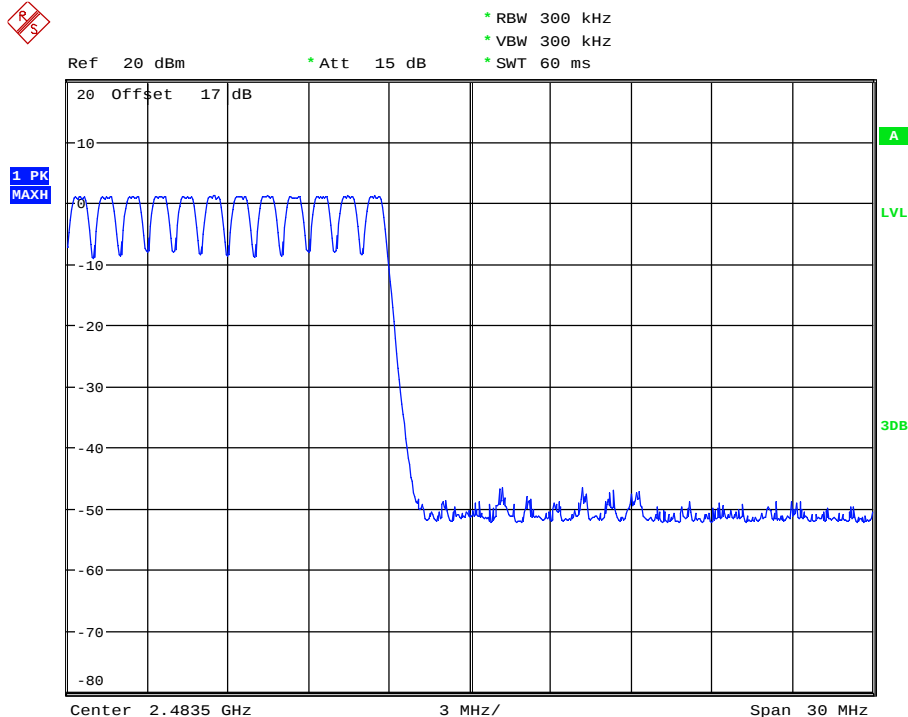


Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



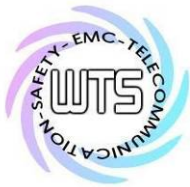
NUMBER OF HOPPING CH14-66

Date: 27.APR.2016 11:22:41



NUMBER OF HOPPING CH67-78

Date: 27.APR.2016 11:43:09



Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

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

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

3.7.2 Coordination of hopping sequences to other transmitters

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

3.7.3 System Receiver Hopping Capability

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

Registration number: W6M21604-15784-C-1

FCC ID: IPH-02963

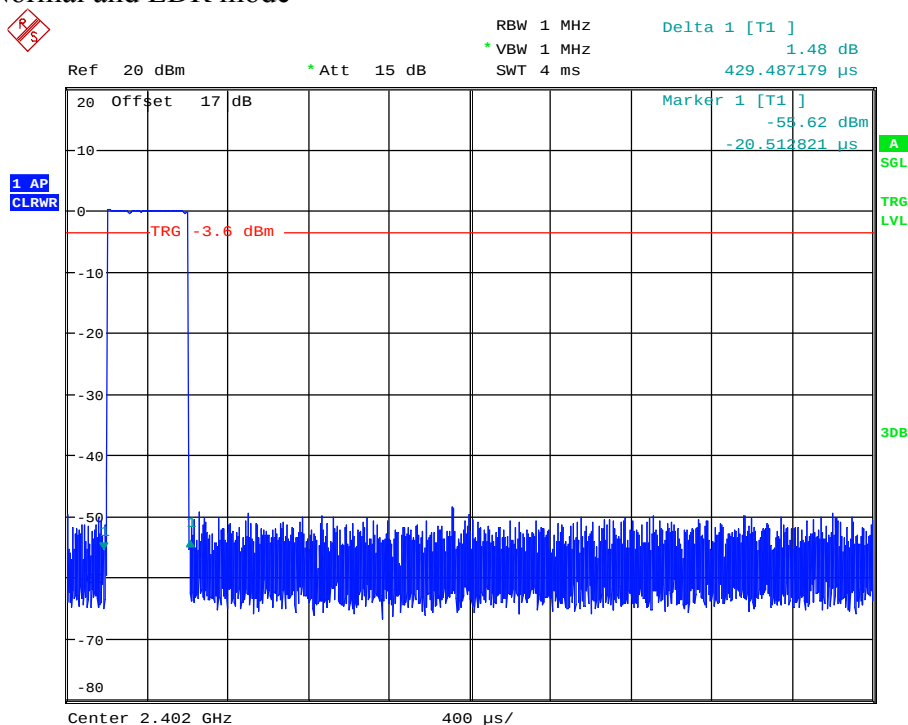
3.8 Time of Occupancy (Dwell Time)

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.

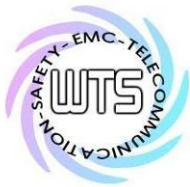
For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not greater than 0.4 seconds within a 20 second period; if the 20dB bandwidth of the hopping channel is 250 kHz or greater,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

Bluetooth Normal and EDR mode

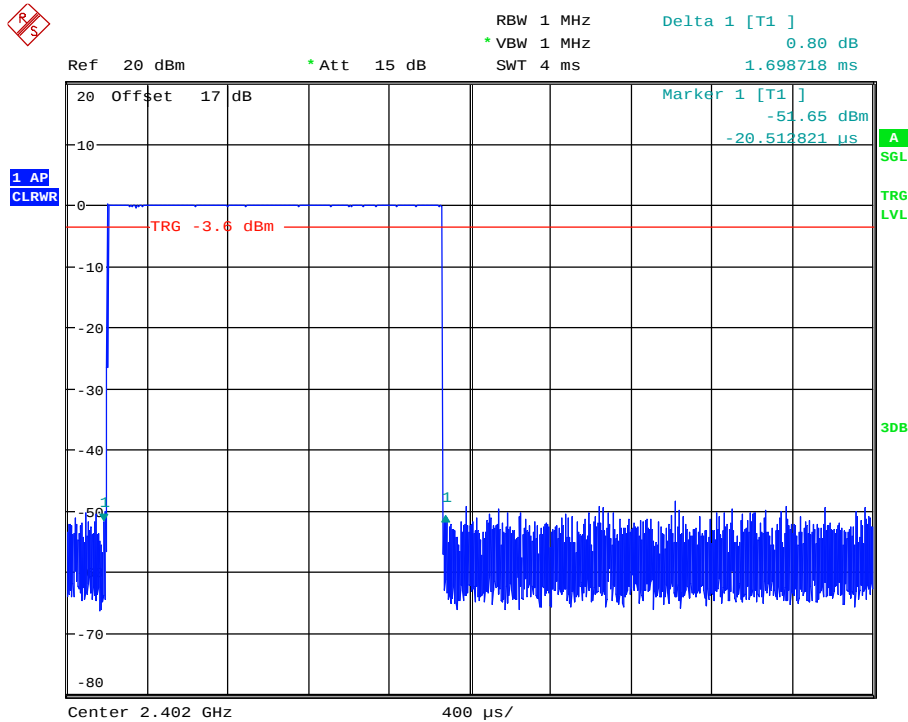


DWELL TIME CH0 DH1 (0.429ms * 320events = 137.28ms)

Date: 27.APR.2016 13:22:15

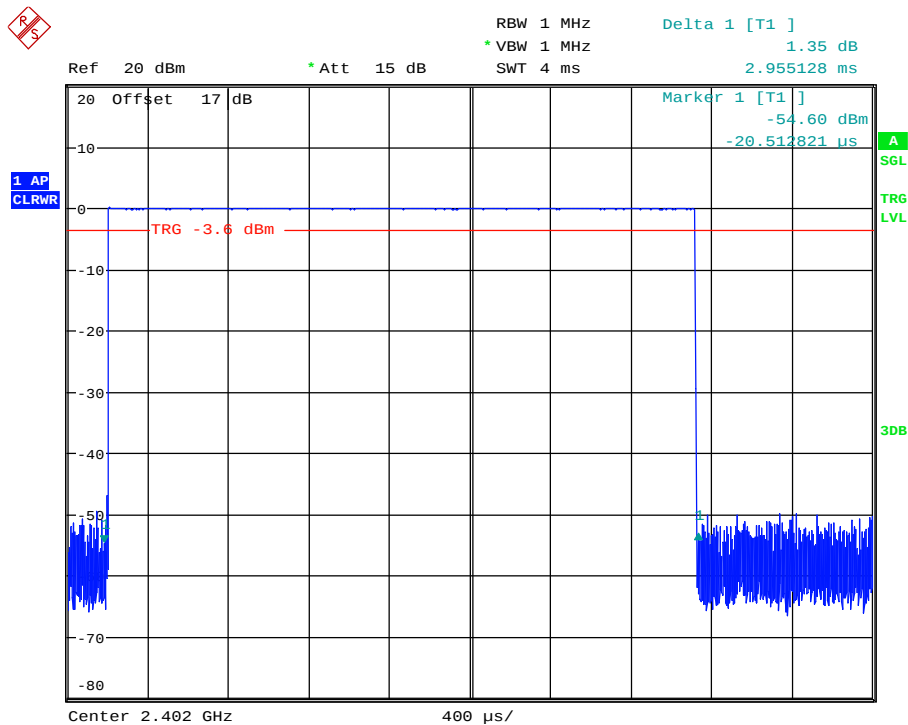


Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



DWELL TIME CH0 DH3 (0.429ms * 160events = 271.68ms)

Date: 27.APR.2016 13:25:07

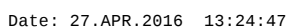
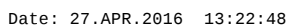


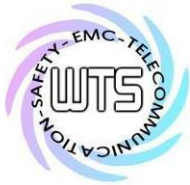
DWELL TIME CH0 DH5 (2.955ms * 106events = 313.23ms)

Date: 27.APR.2016 13:26:13

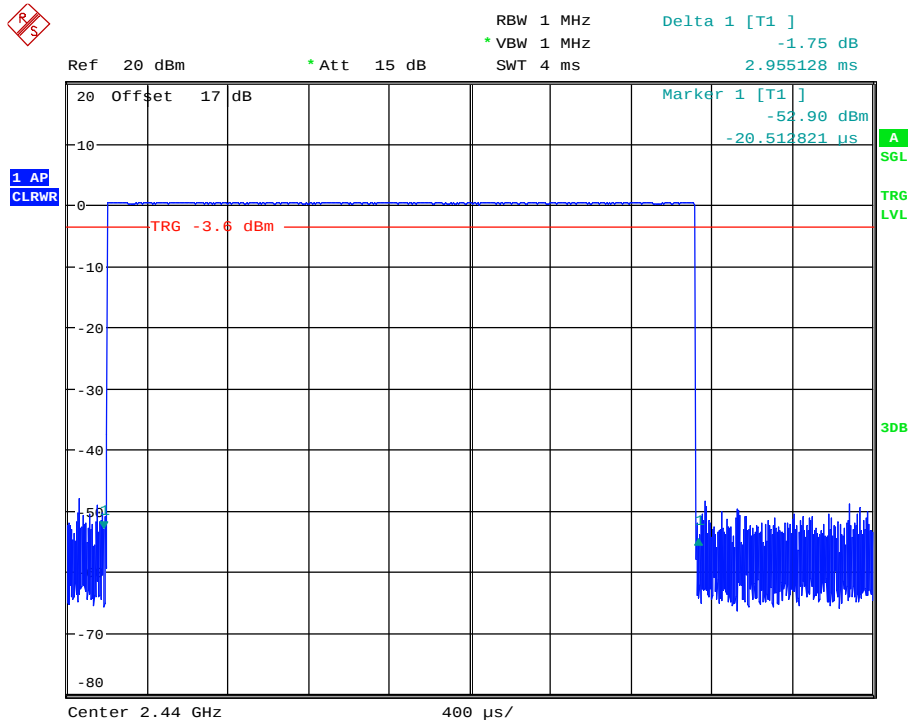


FCC ID: IPH-02963



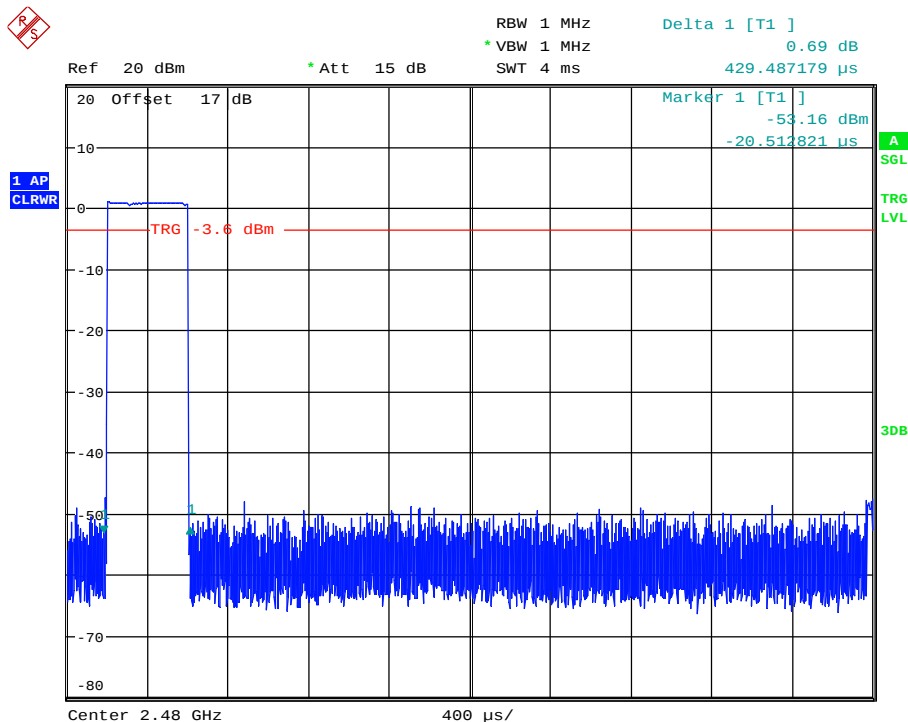


Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



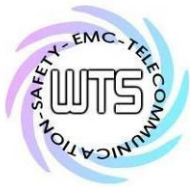
DWELL TIME CH39 DH5 (2.955ms * 106events = 313.23ms)

Date: 27.APR.2016 13:26:35

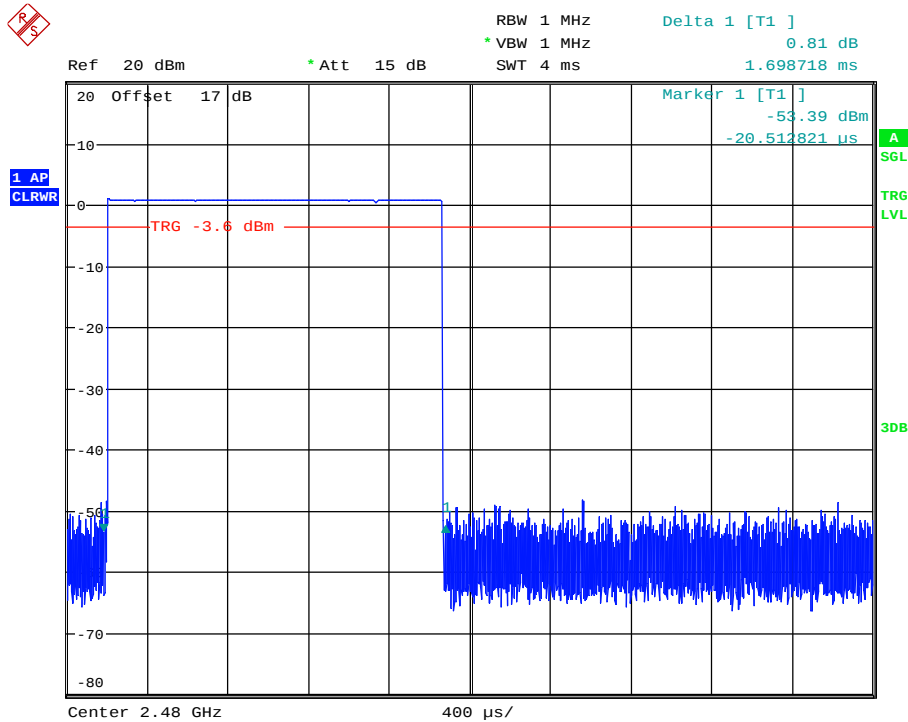


DWELL TIME CH78 DH1 (0.429ms * 320events = 137.28ms)

Date: 27.APR.2016 13:23:22

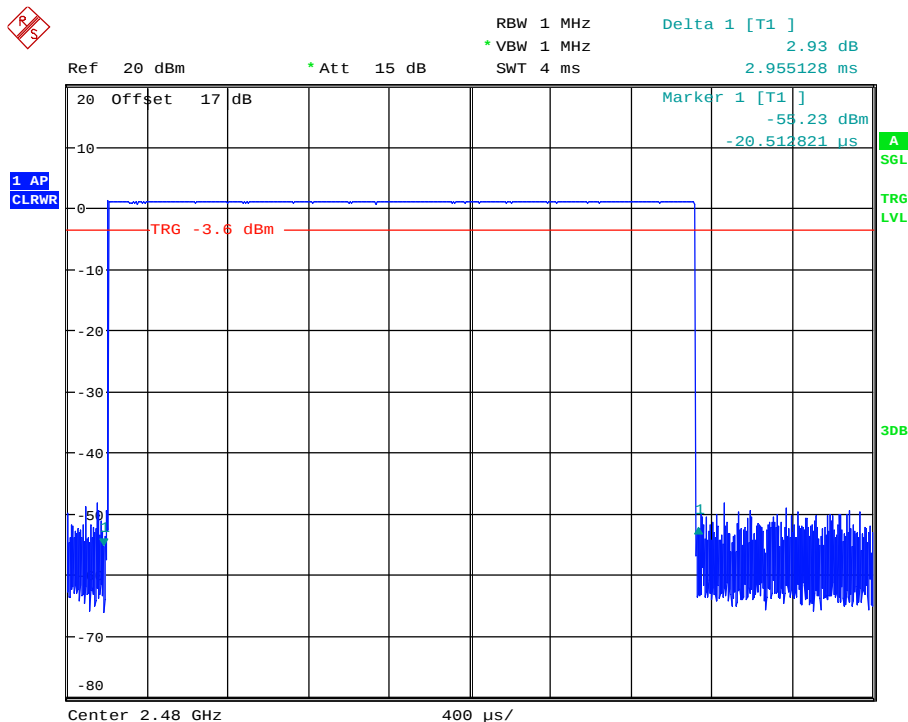


Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



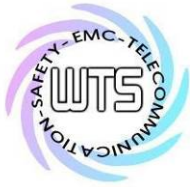
DWELL TIME CH78 DH3 (0.429ms * 160events = 271.68ms)

Date: 27.APR.2016 13:24:19



DWELL TIME CH78 DH5 (2.955ms * 106events = 313.23ms)

Date: 27.APR.2016 13:26:54



Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

Limits and measurement periods:

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

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

Registration number: W6M21604-15784-C-1

FCC ID: IPH-02963

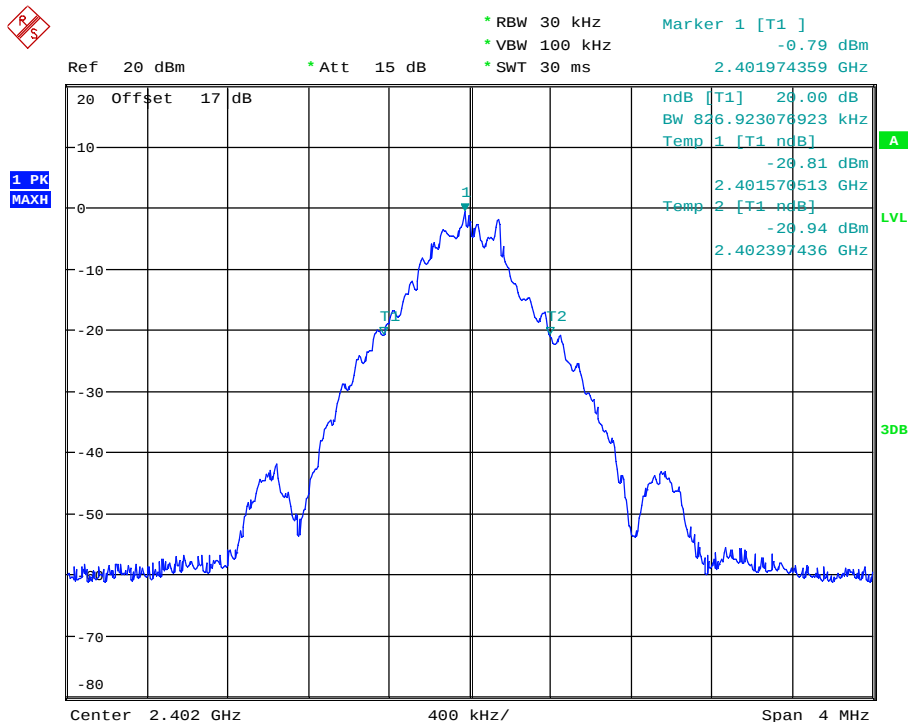
3.9 20dB Bandwidth

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.

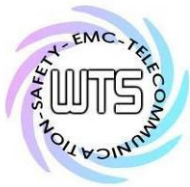
For frequency hopping systems operating in the 902-928 MHz band the maximum 20dB bandwidth of the hopping channel is 500 kHz.

Bluetooth Normal mode

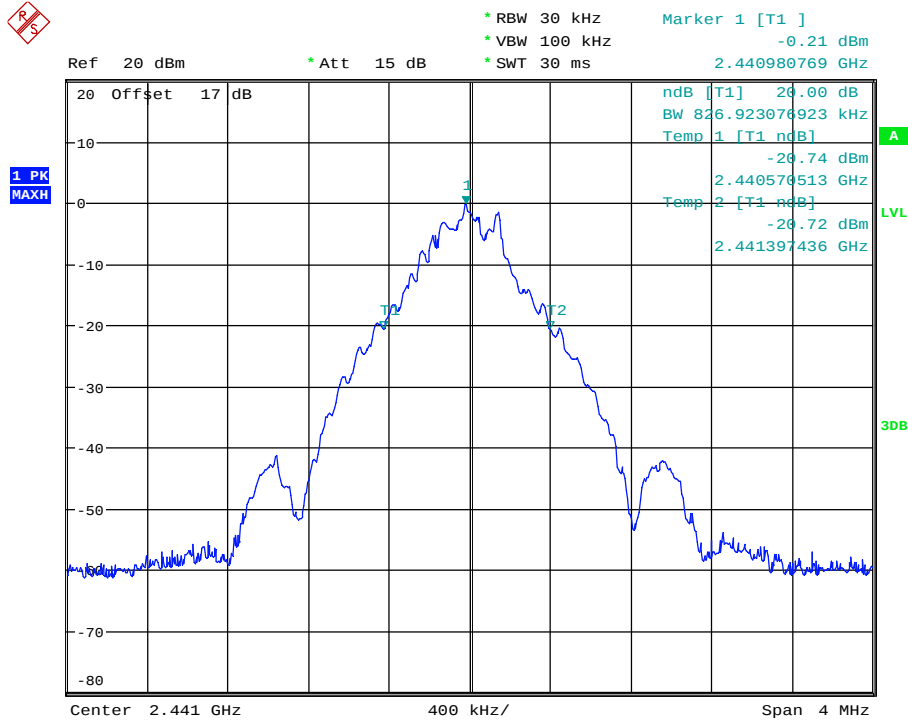


20DB BANDWIDTH CH0

Date: 27.APR.2016 11:19:13

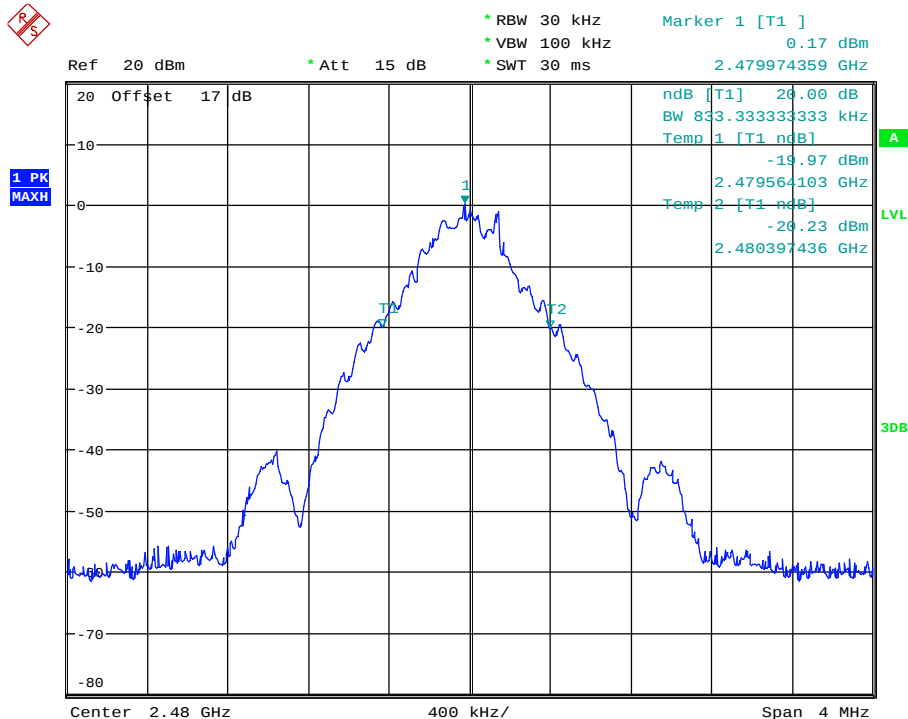


Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



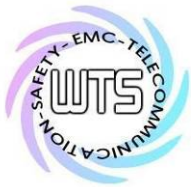
20DB BANDWIDTH CH39

Date: 27.APR.2016 11:19:45



20DB BANDWIDTH CH78

Date: 27.APR.2016 11:20:05

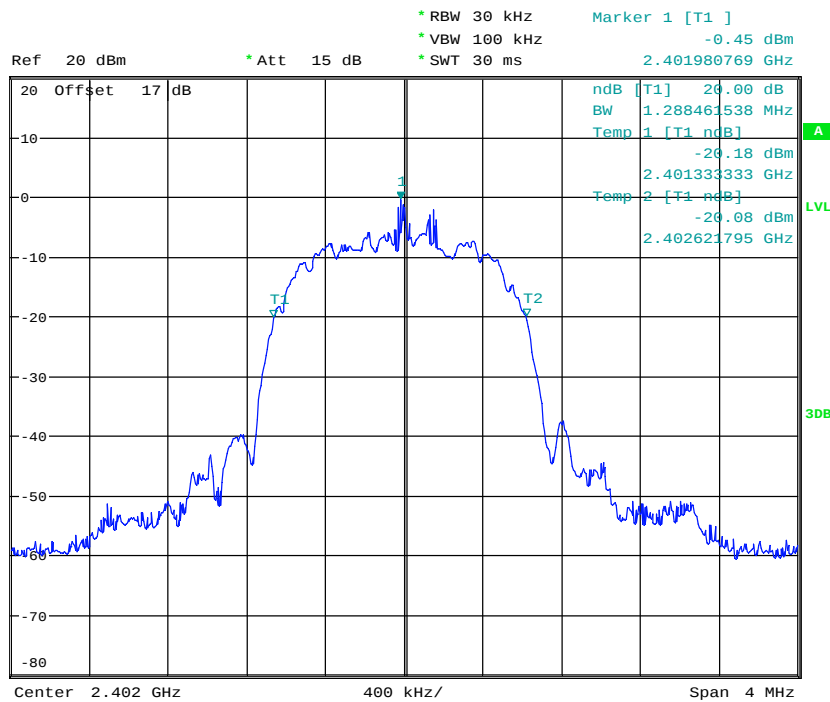


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Registration number: W6M21604-15784-C-1

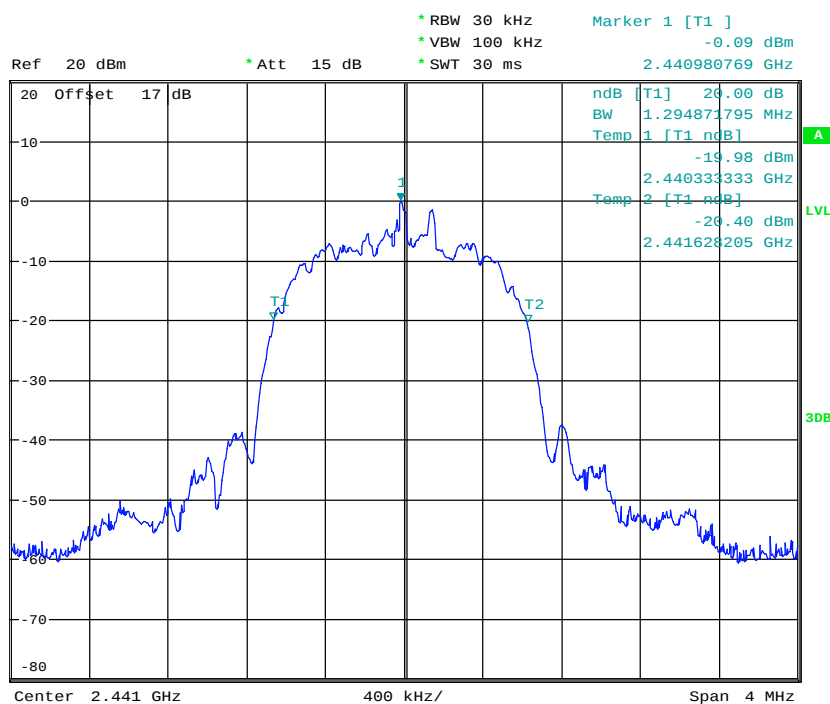
FCC ID: IPH-02963

Bluetooth EDR mode



20DB BANDWIDTH CH0 EDR MODE

Date: 27.APR.2016 11:25:25

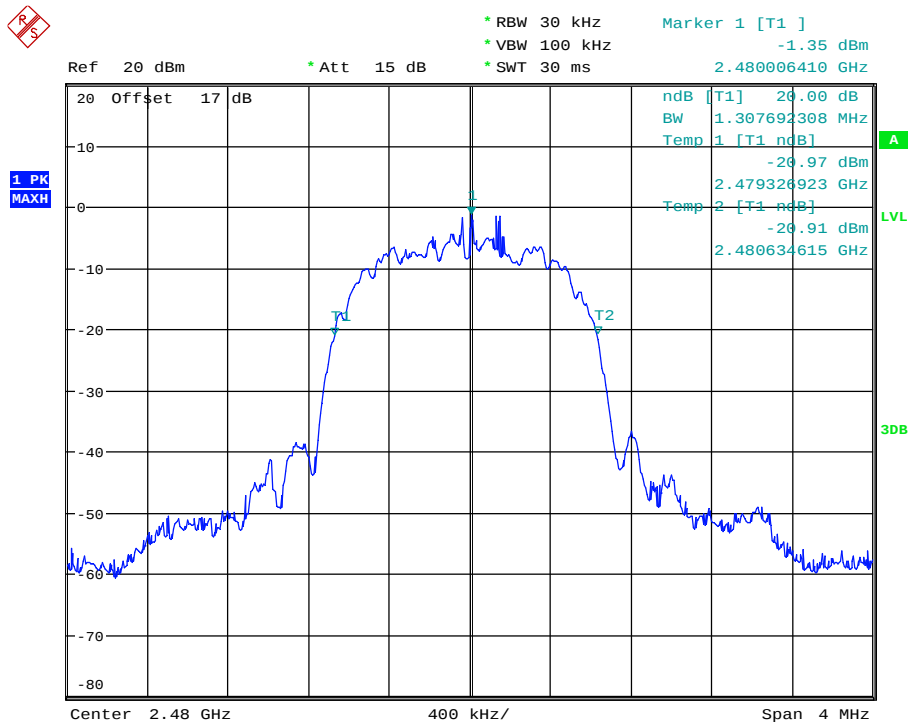


20DB BANDWIDTH CH39 EDR MODE

Date: 27.APR.2016 11:25:57

Registration number: W6M21604-15784-C-1

FCC ID: IPH-02963



20DB BANDWIDTH CH78 EDR MODE

Date: 27.APR.2016 11:26:17

Limits:

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

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

3.9.1 System Receiver Input Bandwidth

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

Registration number: W6M21604-15784-C-1

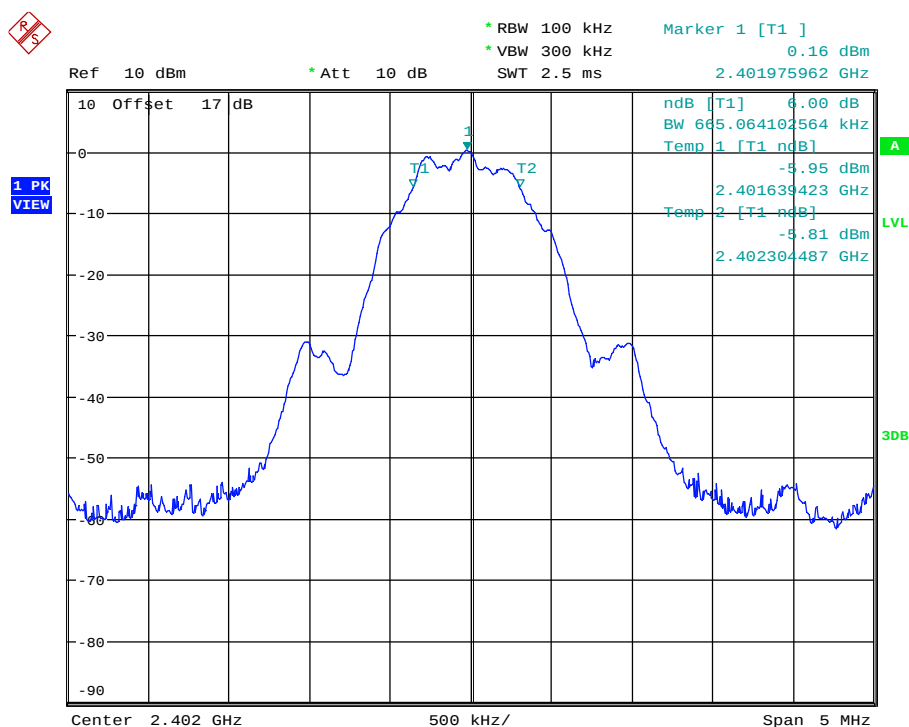
FCC ID: IPH-02963

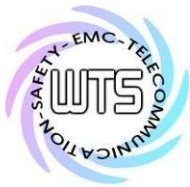
3.10 Minimum 6 dB Bandwidth

The analyzer ResBW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK reading was taken, two markers were set 6 dB below the maximum level on the right and the left side of the emission.

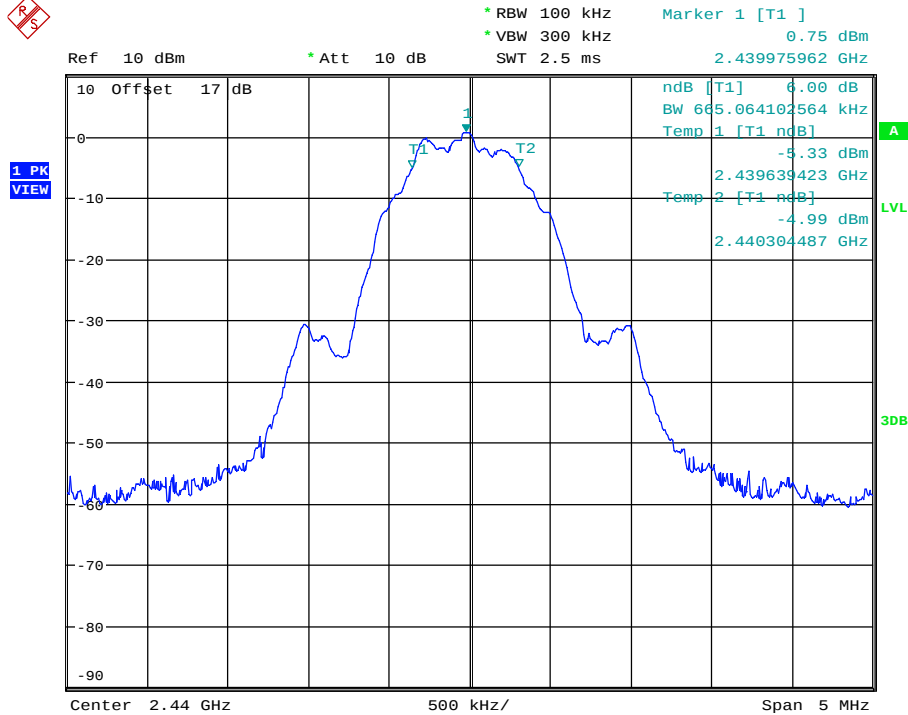
The 6 dB bandwidth is the frequency difference between the two markers.

Bluetooth Low Energy mode

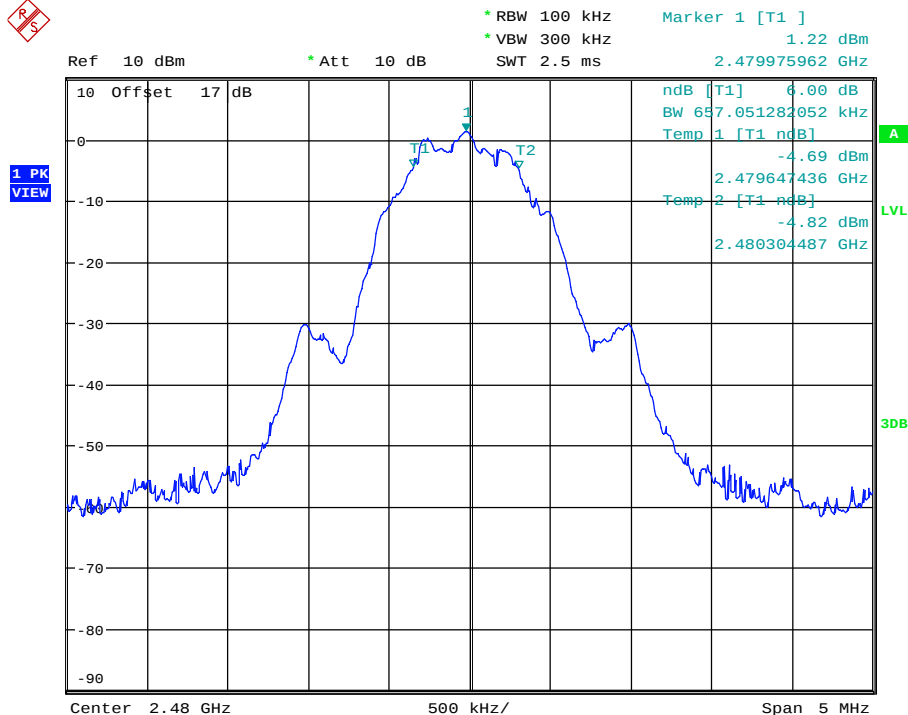




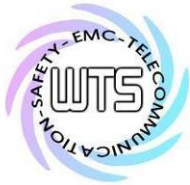
Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



6DB BANDWIDTH BT4.0 CH19
Date: 27.APR.2016 13:38:23



6DB BANDWIDTH BT4.0 CH39
Date: 27.APR.2016 13:40:11

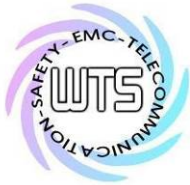


Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

Limits:

Frequency Range MHz	Limits
902-928	min 500 kHz
2400-2483.5	min 500 kHz
5725-5850	min 500 kHz

Test equipment used: ETSTW-RE 055



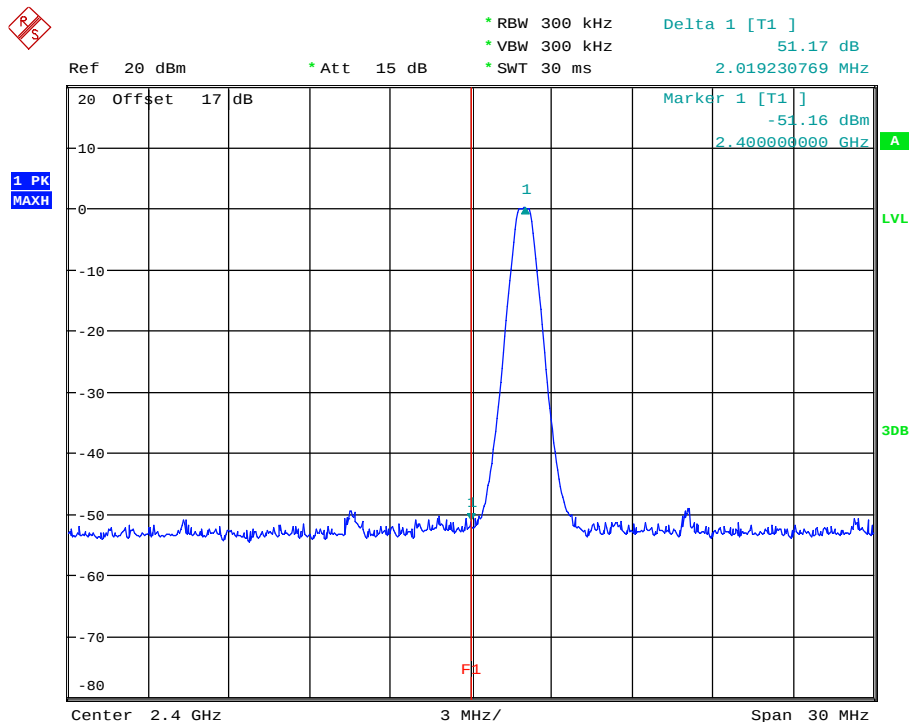
Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

3.11 Radiated Emission on the band edge

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.

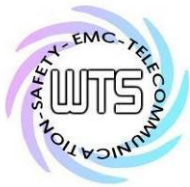
In addition radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also with the radiated emission limits.

Bluetooth Normal mode

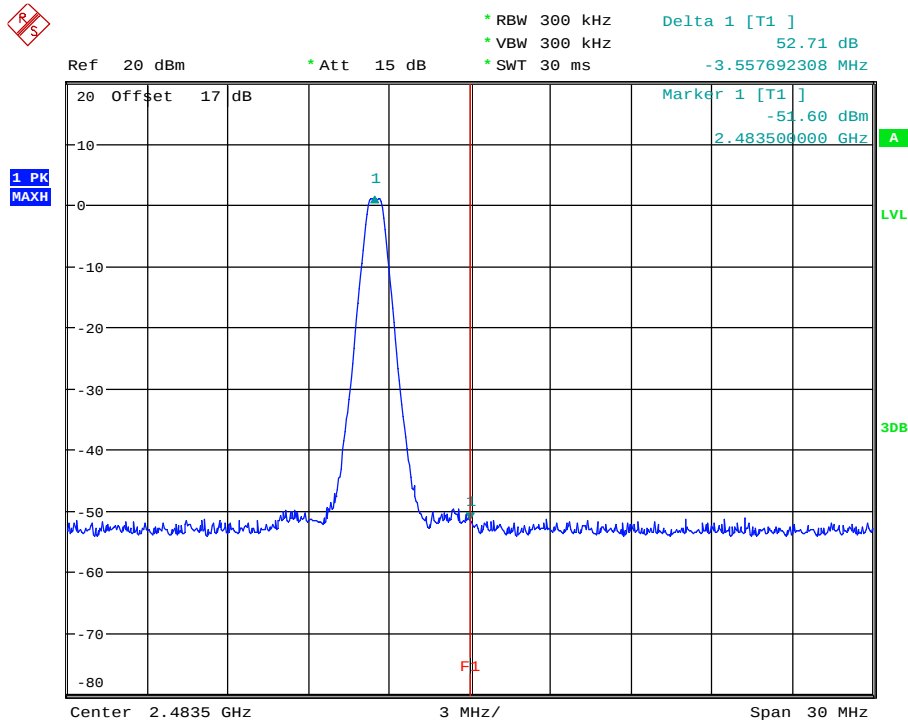


BANDEDGE CH0

Date: 27.APR.2016 11:19:25

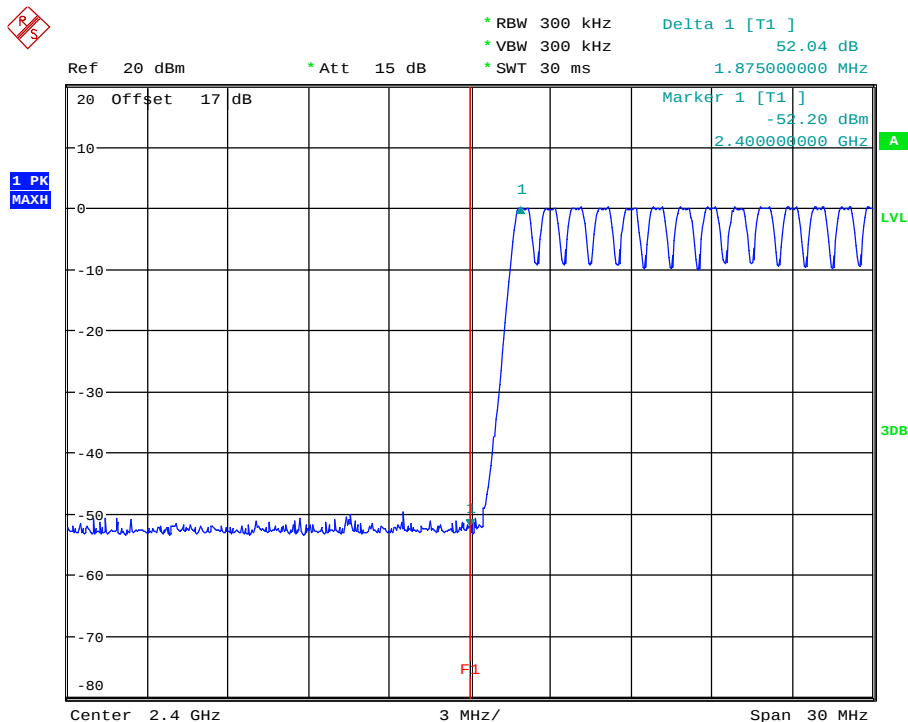


Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



BANDEDGE CH78

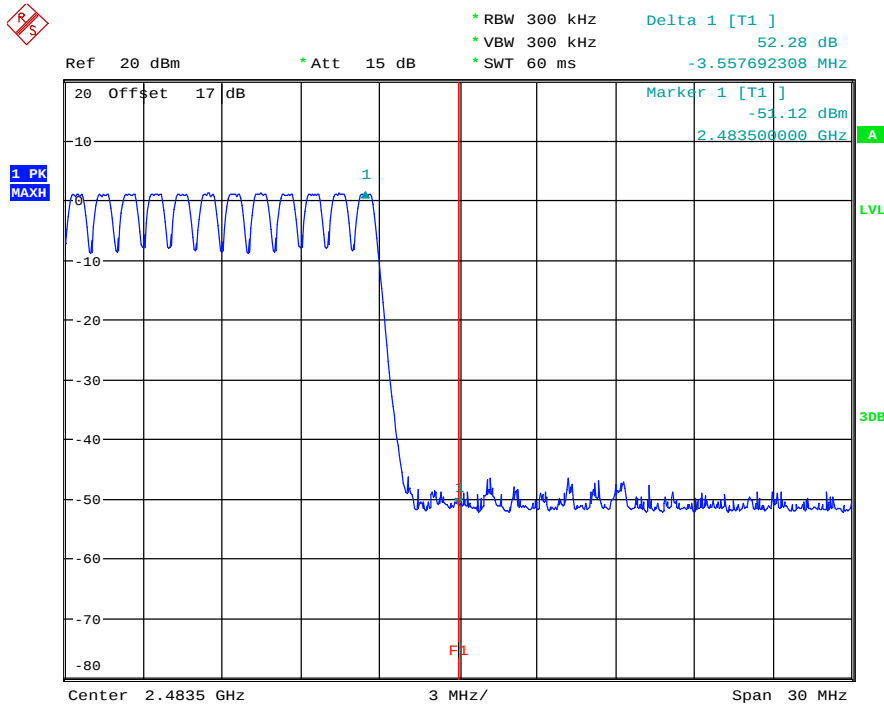
Date: 27.APR.2016 11:20:13



BANDEDGE CH0 HOPPING MODE

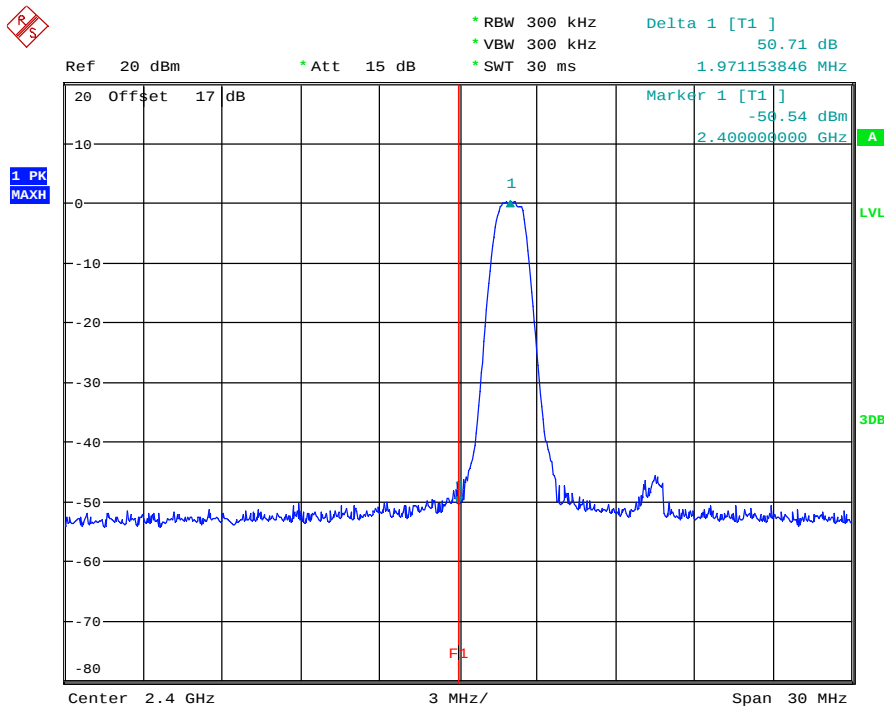
Date: 27.APR.2016 11:20:54

Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

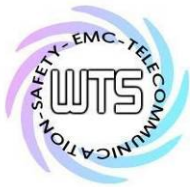


BANDEDGE CH78 HOPPING MODE
Date: 27.APR.2016 11:43:58

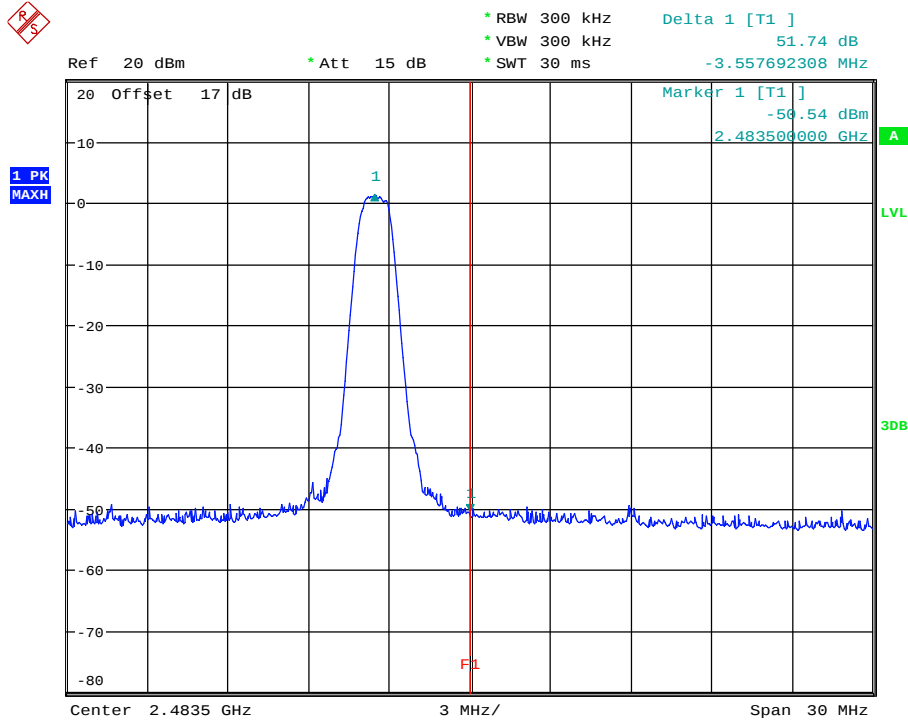
Bluetooth EDR mode



BANDEDGE CH0 EDR MODE
Date: 27.APR.2016 11:25:33

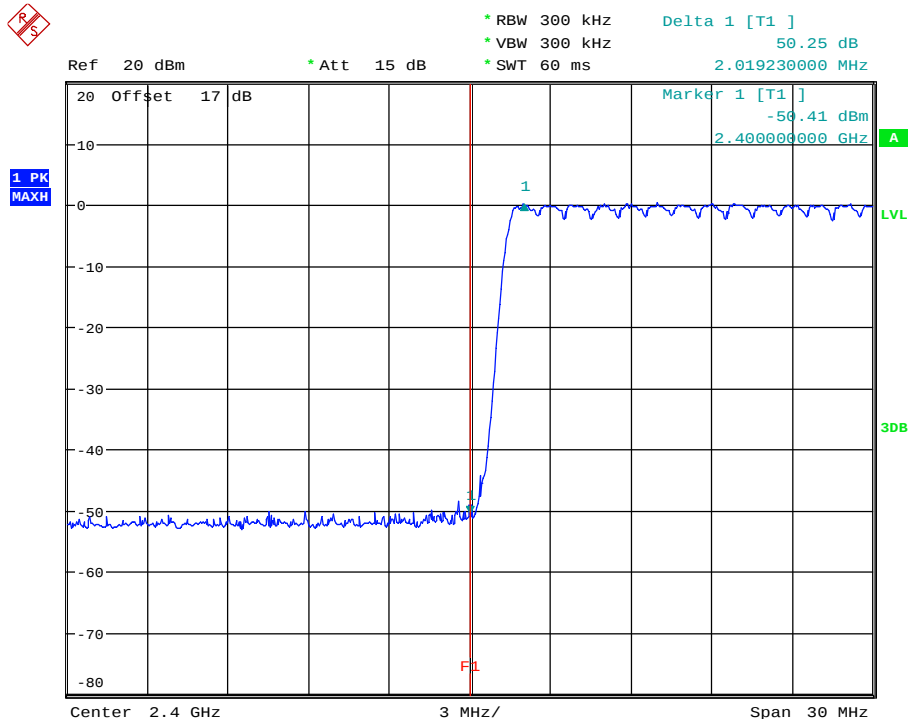


Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



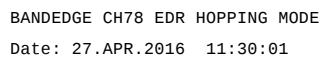
BANDEDGE CH78 EDR MODE

Date: 27.APR.2016 11:26:29



BANDEDGE CH0 EDR HOPPING MODE

Date: 27.APR.2016 11:28:17



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

Page 45 of 52

Registration number: W6M21604-15784-C-1

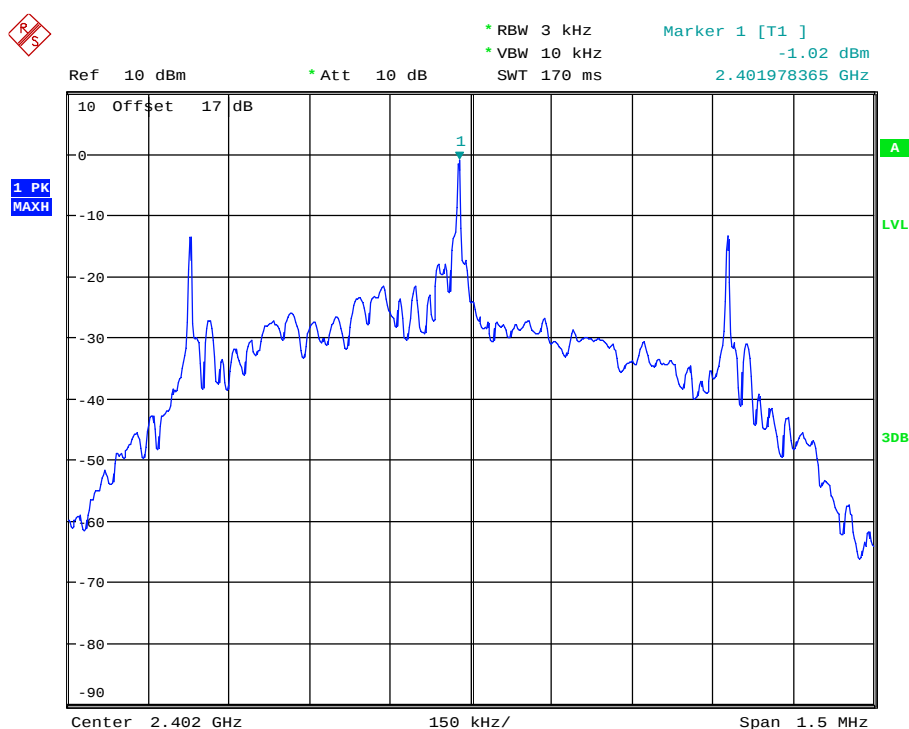
FCC ID: IPH-02963

3.12 Peak Power Spectral Density

Peak Power Spectral density is a measured at low, middle and high channel.

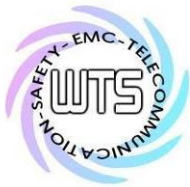
The peak output power is measured with a measurement bandwidth of 10 MHz and displayed on diagram together with Peak Power Spectral Density result which was measured with a bandwidth of 3 kHz, appreciate frequency span and sweep time.

Bluetooth Low Energy mode

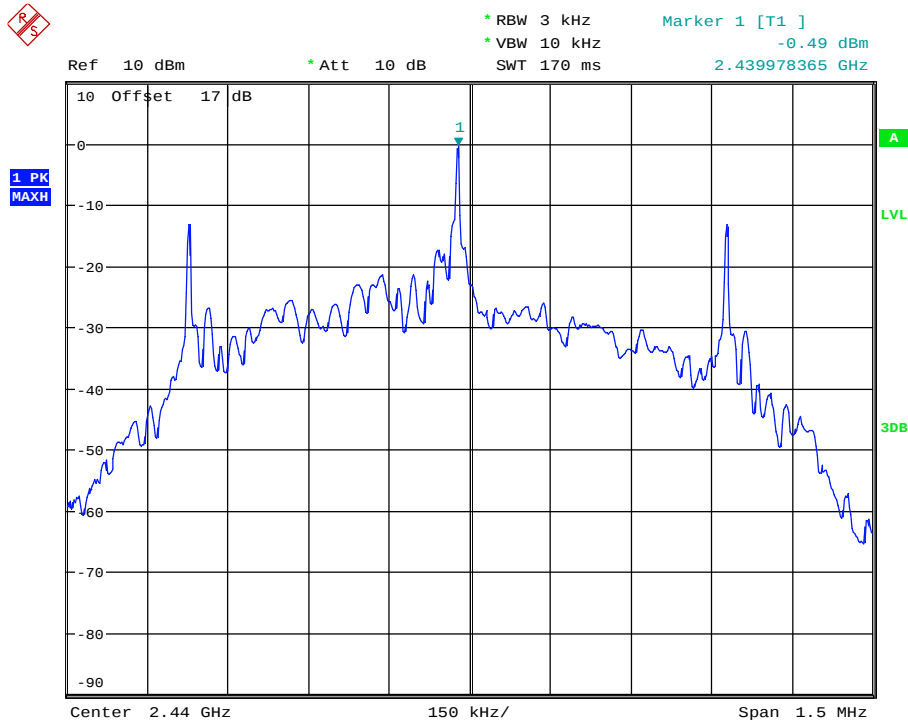


POWER DENSITY BT4.0 CH00

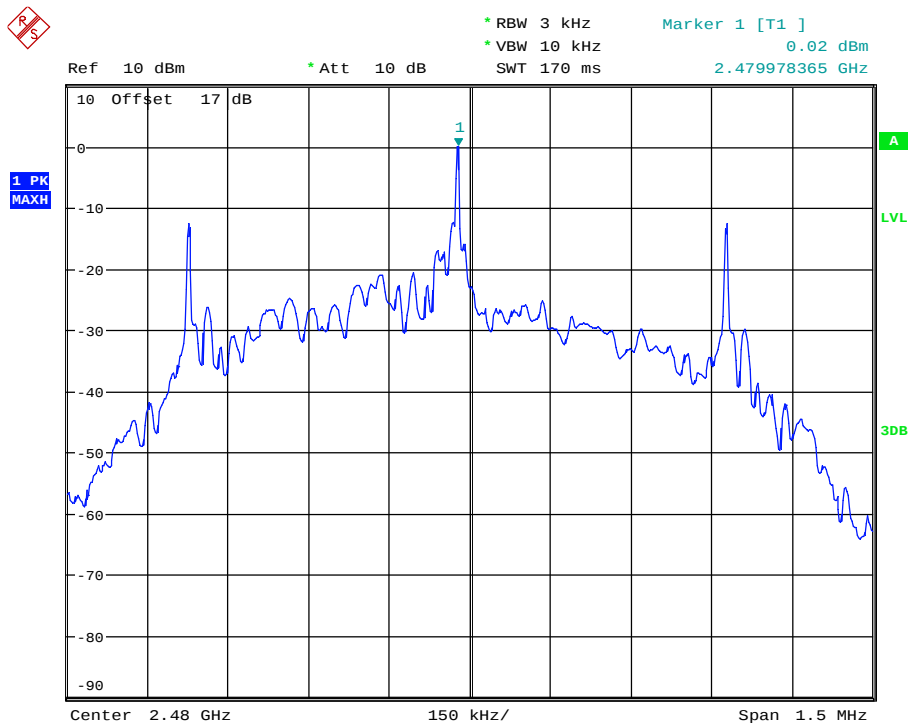
Date: 27.APR.2016 13:37:19



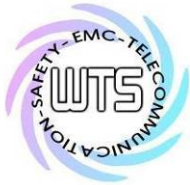
Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



POWER DENSITY BT4.0 CH19
Date: 27.APR.2016 13:38:35



POWER DENSITY BT4.0 CH39
Date: 27.APR.2016 13:40:23



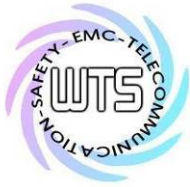
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

Limits:

Frequency Range MHz	dBm
902-928	8
2400-2483.5	8
5725-5850	8

Test equipment used: ETSTW-RE 055



Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

3.13 Radiated Emission from Digital Part

FCC Rule: 15.109

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

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

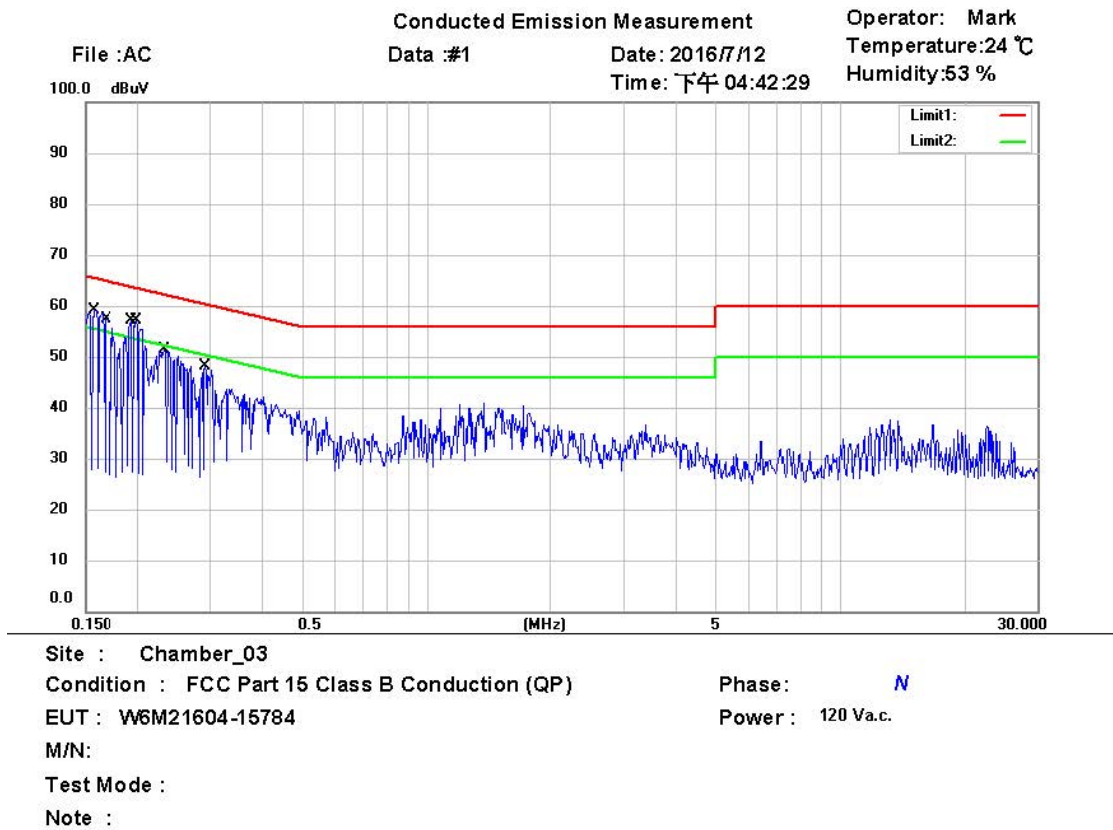
Explanation: Please refer to separated test report no.: W6M21604-15784-P-15B.

Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

3.14 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.

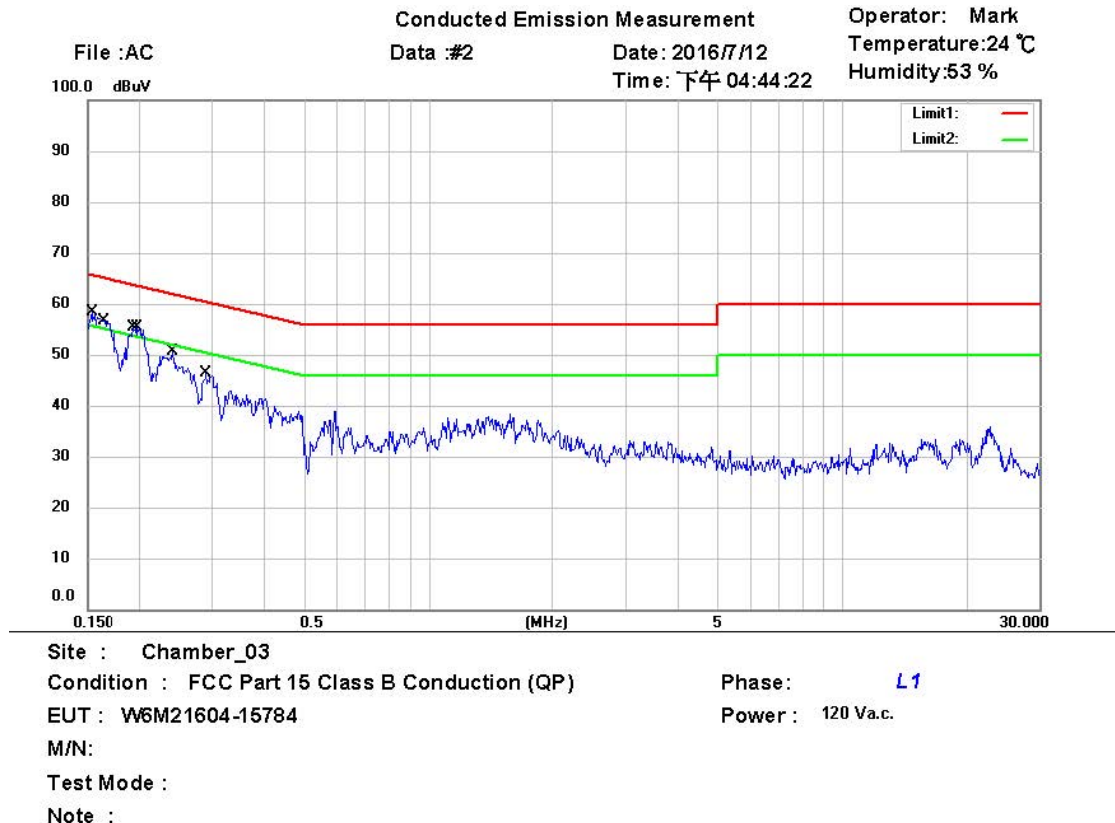


Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
*	0.1573	45.86	QP	9.74	55.60	65.61	-10.01	
	0.1573	27.78	AVG	9.74	37.52	55.61	-18.09	
	0.1680	43.00	QP	9.74	52.74	65.06	-12.32	
	0.1680	23.23	AVG	9.74	32.97	55.06	-22.09	
	0.1938	44.09	QP	9.73	53.82	63.87	-10.05	
	0.1938	24.59	AVG	9.73	34.32	53.87	-19.55	
	0.1988	43.73	QP	9.73	53.46	63.66	-10.20	
	0.1988	26.47	AVG	9.73	36.20	53.66	-17.46	
	0.2320	38.12	QP	9.73	47.85	62.38	-14.53	
	0.2320	20.39	AVG	9.73	30.12	52.38	-22.26	
	0.2915	33.90	QP	9.72	43.62	60.48	-16.86	
	0.2915	14.44	AVG	9.72	24.16	50.48	-26.32	



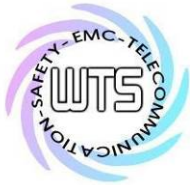
Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963



Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1532	41.79	QP	9.74	51.53	65.82	-14.29	
	0.1532	22.89	AVG	9.74	32.63	55.82	-23.19	
*	0.1638	43.53	QP	9.74	53.27	65.27	-12.00	
	0.1638	25.19	AVG	9.74	34.93	55.27	-20.34	
	0.1931	41.91	QP	9.73	51.64	63.90	-12.26	
	0.1931	22.32	AVG	9.73	32.05	53.90	-21.85	
	0.1985	41.77	QP	9.73	51.50	63.67	-12.17	
	0.1985	24.79	AVG	9.73	34.52	53.67	-19.15	
	0.2408	34.63	QP	9.73	44.36	62.07	-17.71	
	0.2408	16.41	AVG	9.73	26.14	52.07	-25.93	
	0.2895	31.68	QP	9.72	41.40	60.54	-19.14	
	0.2895	11.91	AVG	9.72	21.63	50.54	-28.91	

- 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 = ± 1.14 dB; 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.

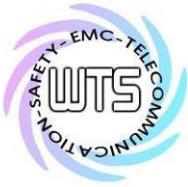


Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

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



Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

Appendix

Measurement diagrams

Spurious Emissions radiated_Bluetooth Normal and EDR mode



Radiated Emission Measurement

Operator: Leon

File :1

Data :#1

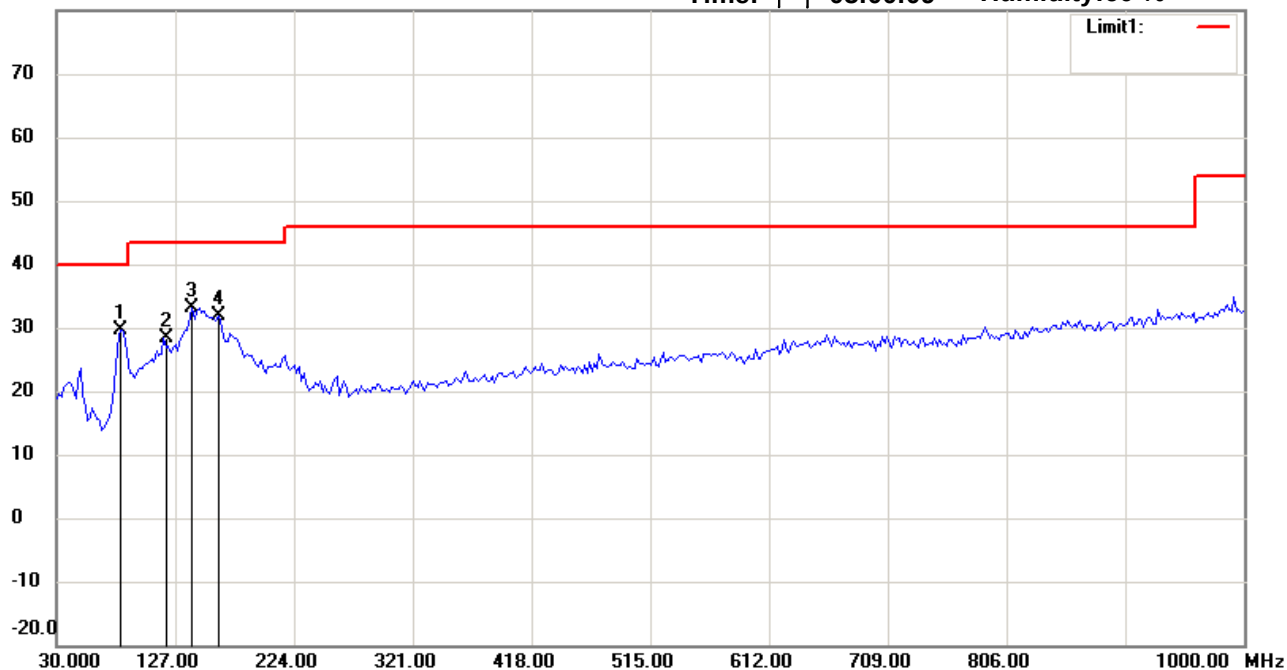
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 05:00:09

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 Va.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
	82.4850	42.70	peak	-13.07	29.63	40.00	100	160	-10.37	
	117.4750	34.89	peak	-6.45	28.44	43.50	100	250	-15.06	
*	140.8015	39.97	peak	-6.78	33.19	43.50	100	180	-10.31	
	162.1844	40.90	peak	-9.08	31.82	43.50	100	30	-11.68	



Radiated Emission Measurement

Operator: Leon

File :1

Data :#2

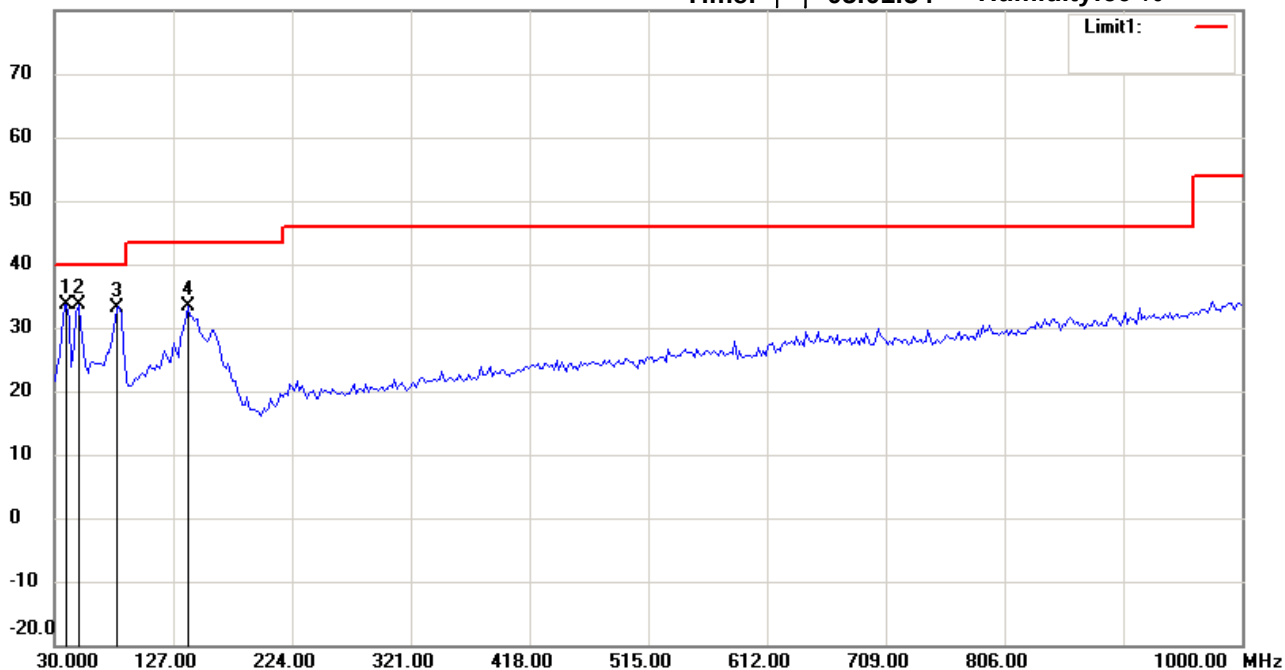
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 05:01:54

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
*	39.7194	41.88	peak	-8.15	33.73	40.00	100	60	-6.27	
	49.4388	43.48	peak	-9.78	33.70	40.00	100	50	-6.30	
	80.5411	46.16	peak	-13.07	33.09	40.00	100	180	-6.91	
	138.8577	40.03	peak	-6.65	33.38	43.50	100	155	-10.12	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#1

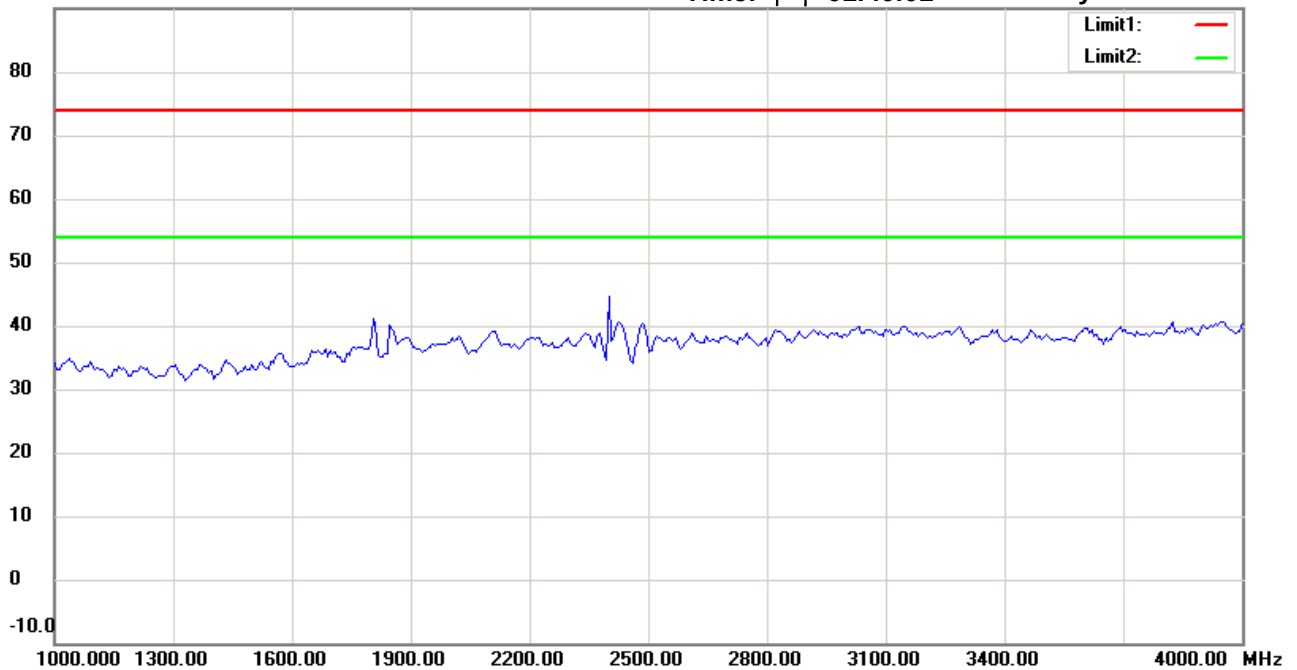
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:40:01

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#6

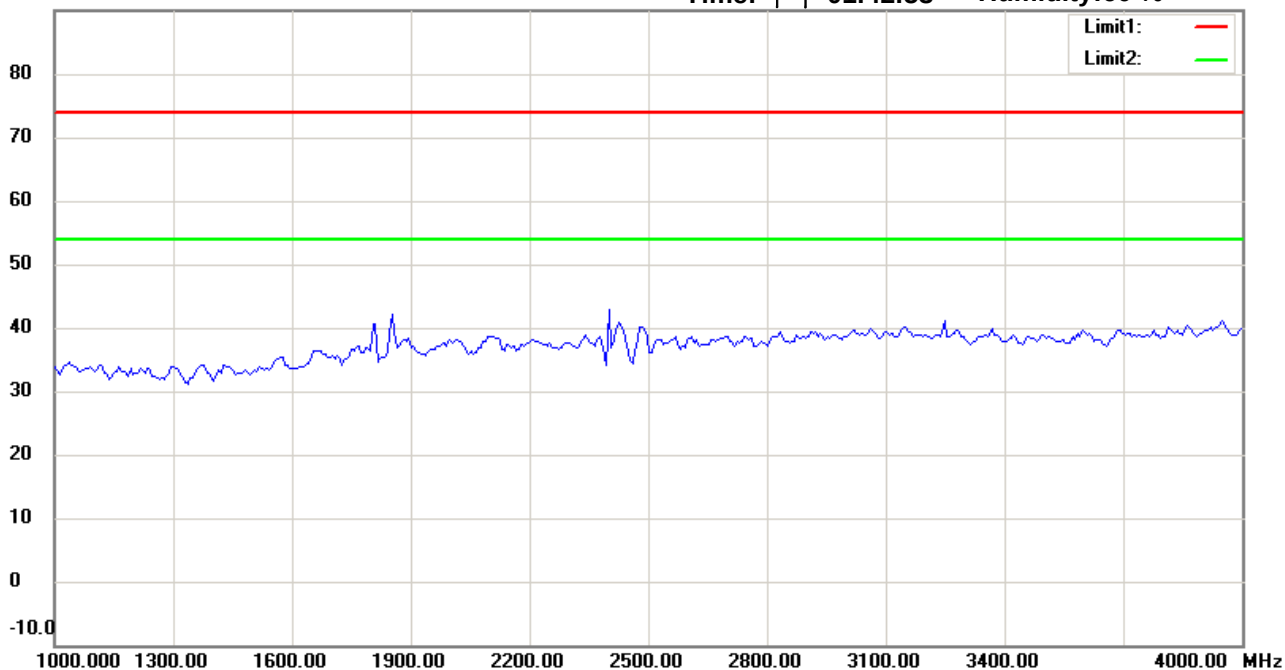
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:42:53

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#2

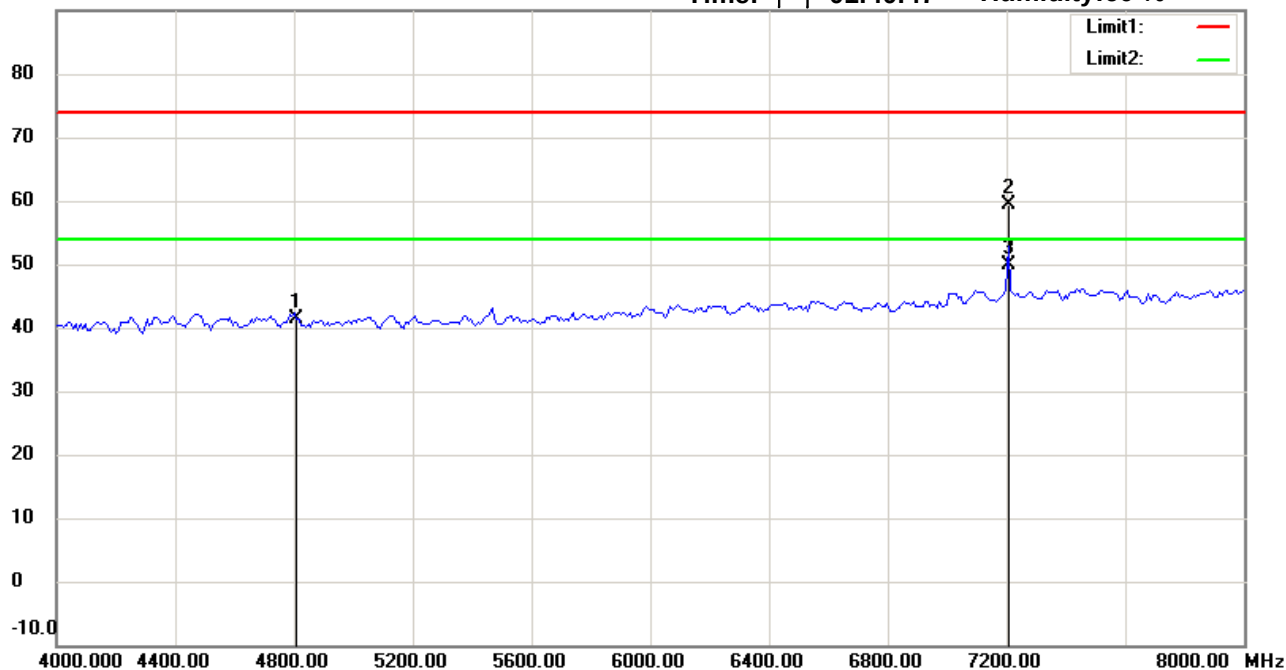
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:40:47

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
	4804.000	41.91	peak	-0.59	41.32	74.00	100	245	-32.68	
	7205.942	55.21	peak	4.26	59.47	74.00	100	190	-14.53	
*	7205.942	45.69	AVG	4.26	49.95	54.00	100	190	-4.05	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#7

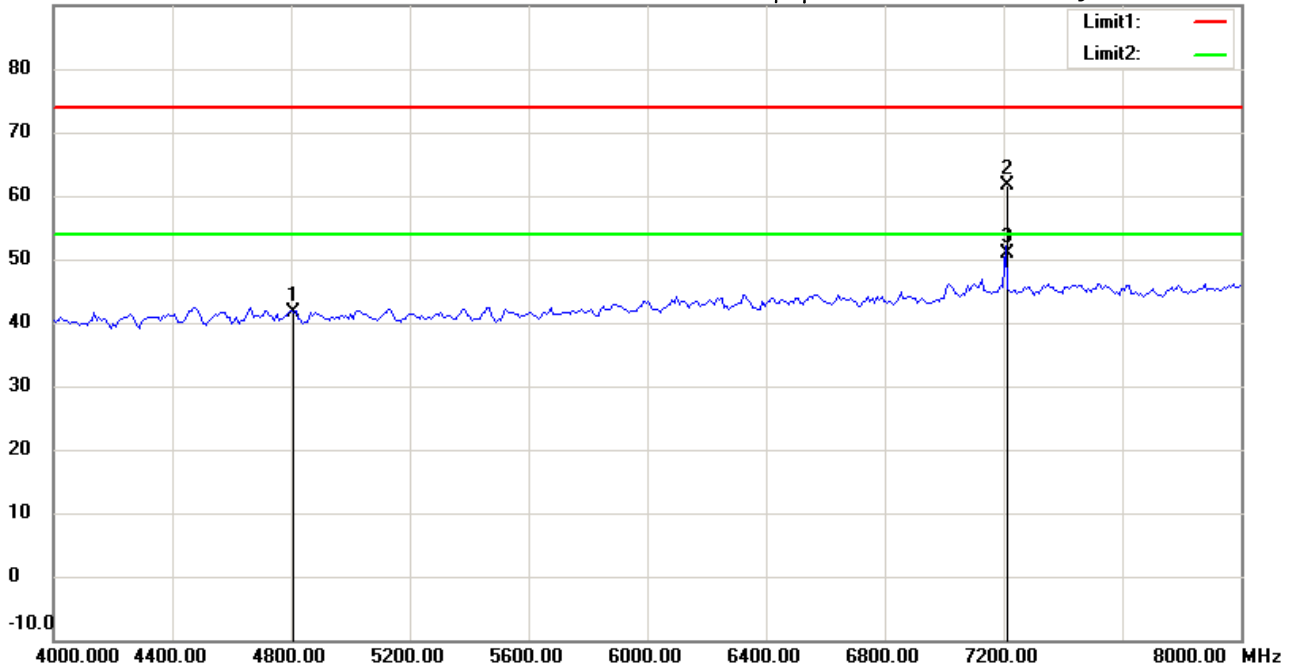
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:43:38

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 Va.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
	4804.000	42.17	peak	-0.59	41.58	74.00	100	245	-32.42	
	7206.413	57.26	peak	4.26	61.52	74.00	150	237	-12.48	
*	7206.413	46.57	AVG	4.26	50.83	54.00	150	237	-3.17	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#3

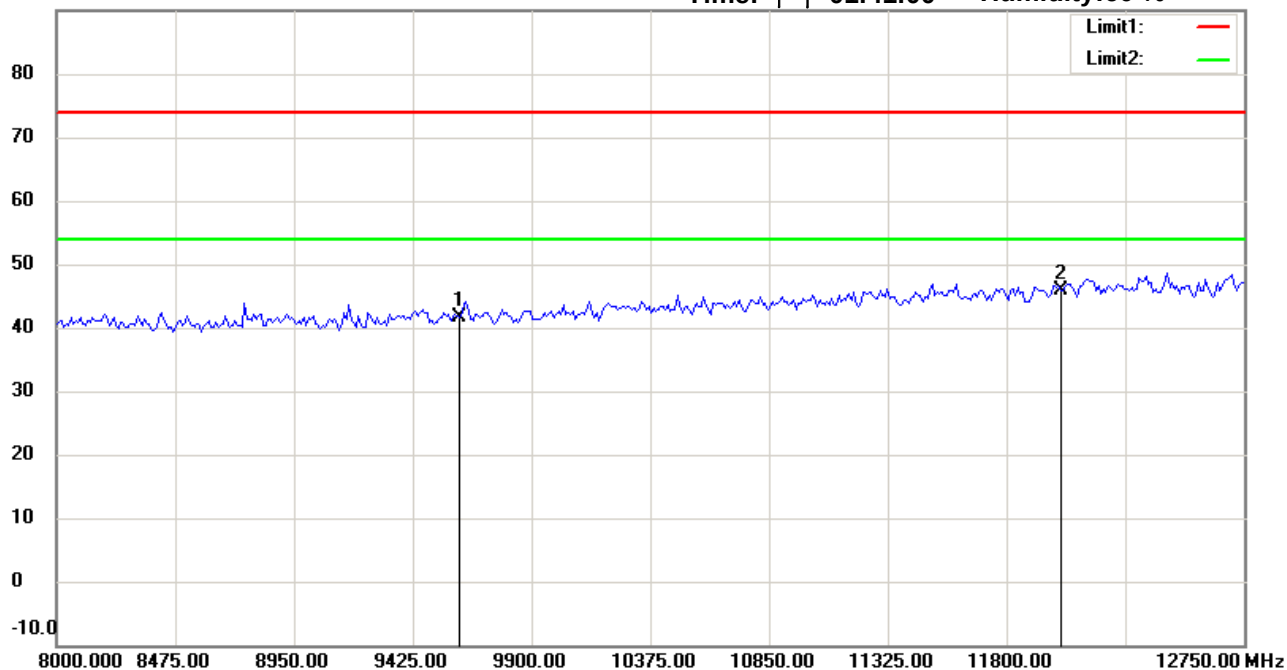
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:41:00

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Horizontal**

Power : 120 V.a.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
	9608.000	34.09	peak	7.59	41.68	74.00	100	75	-32.32	
*	12010.000	33.53	peak	12.47	46.00	74.00	100	110	-28.00	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#8

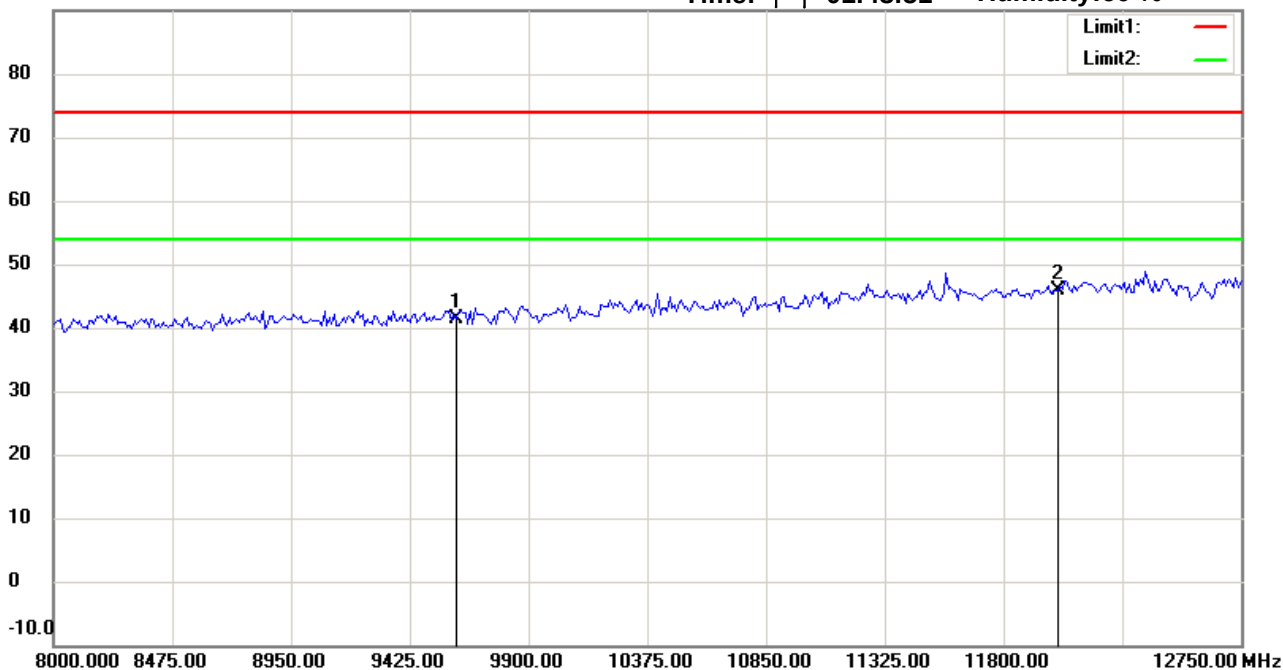
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:43:51

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	9608.000	33.87	peak	7.59	41.46	74.00	100	125	-32.54	
*	12010.000	33.32	peak	12.47	45.79	74.00	100	230	-28.21	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#4

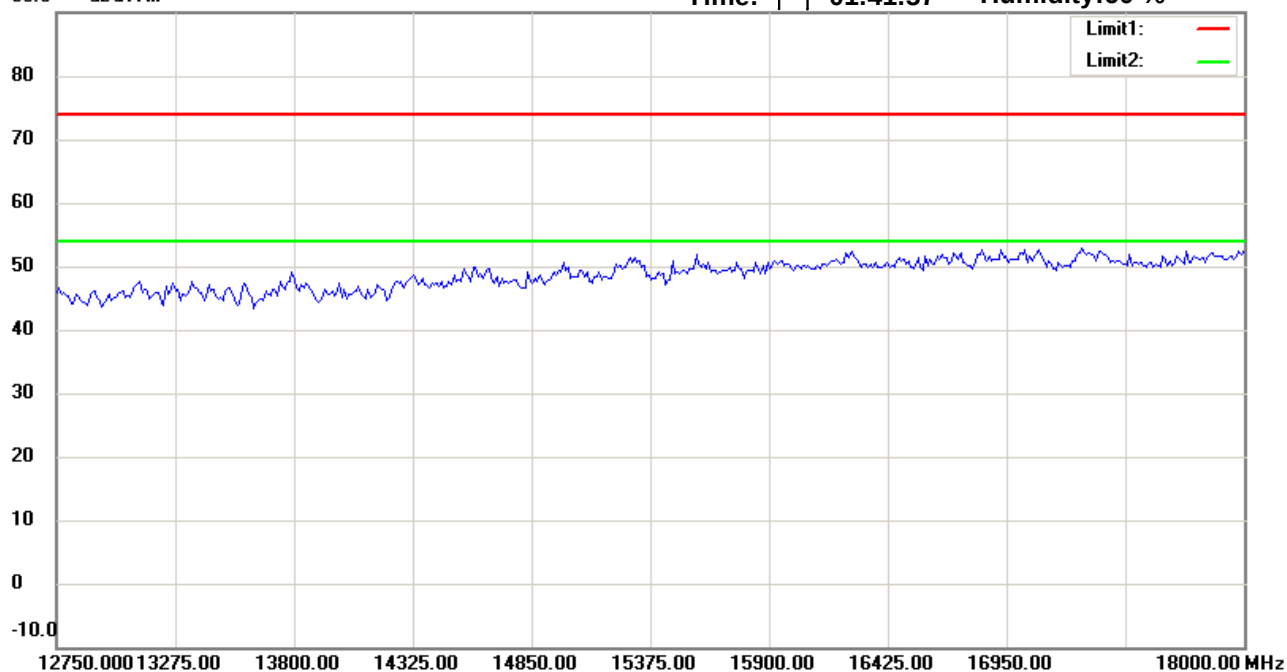
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:41:57

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#9

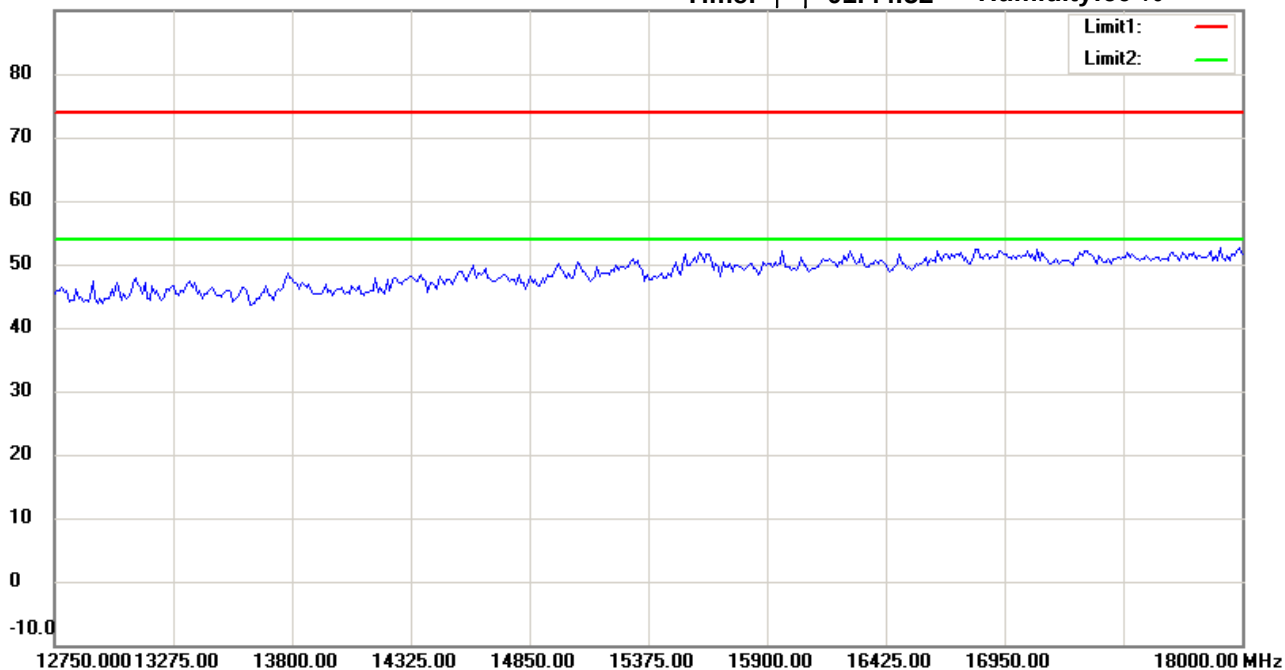
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:44:52

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#5

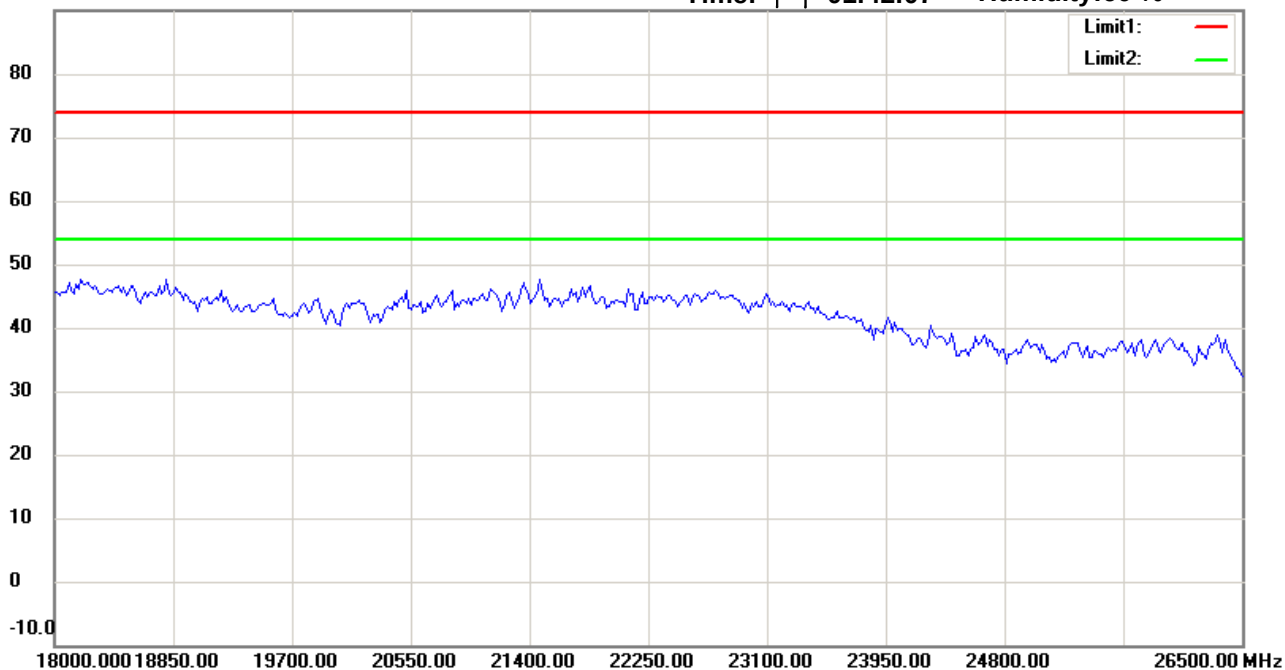
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:42:07

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#10

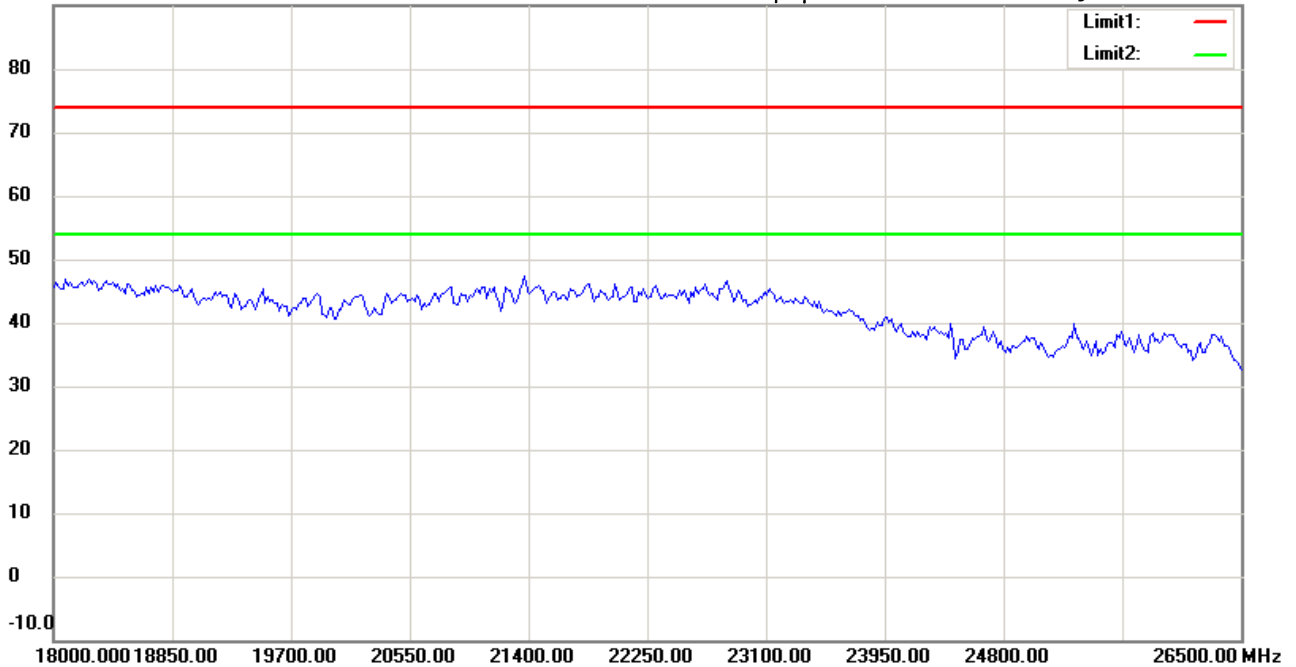
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:45:02

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Leon

File :1

Data :#1

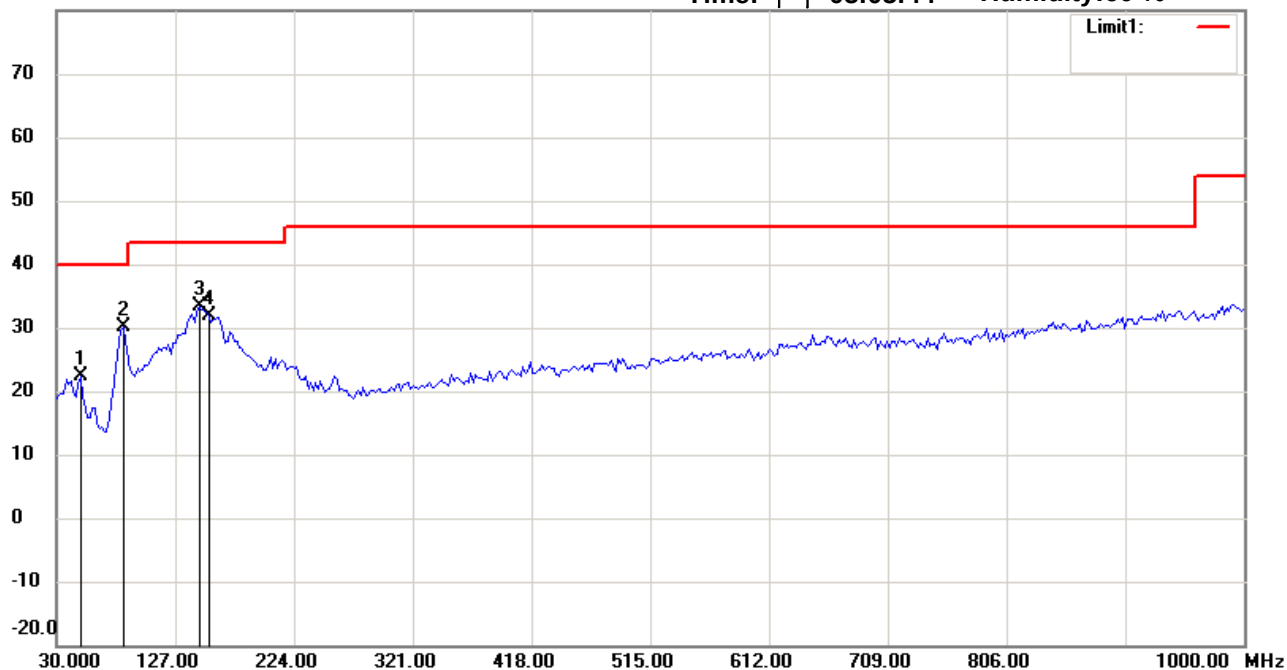
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 05:05:44

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
	49.4388	32.08	peak	-9.78	22.30	40.00	100	65	-17.70	
*	84.4288	43.23	peak	-13.07	30.16	40.00	100	250	-9.84	
	146.6332	40.80	peak	-7.33	33.47	43.50	100	190	-10.03	
	154.4088	40.05	peak	-8.16	31.89	43.50	100	35	-11.61	



Radiated Emission Measurement

Operator: Leon

File :1

Data :#2

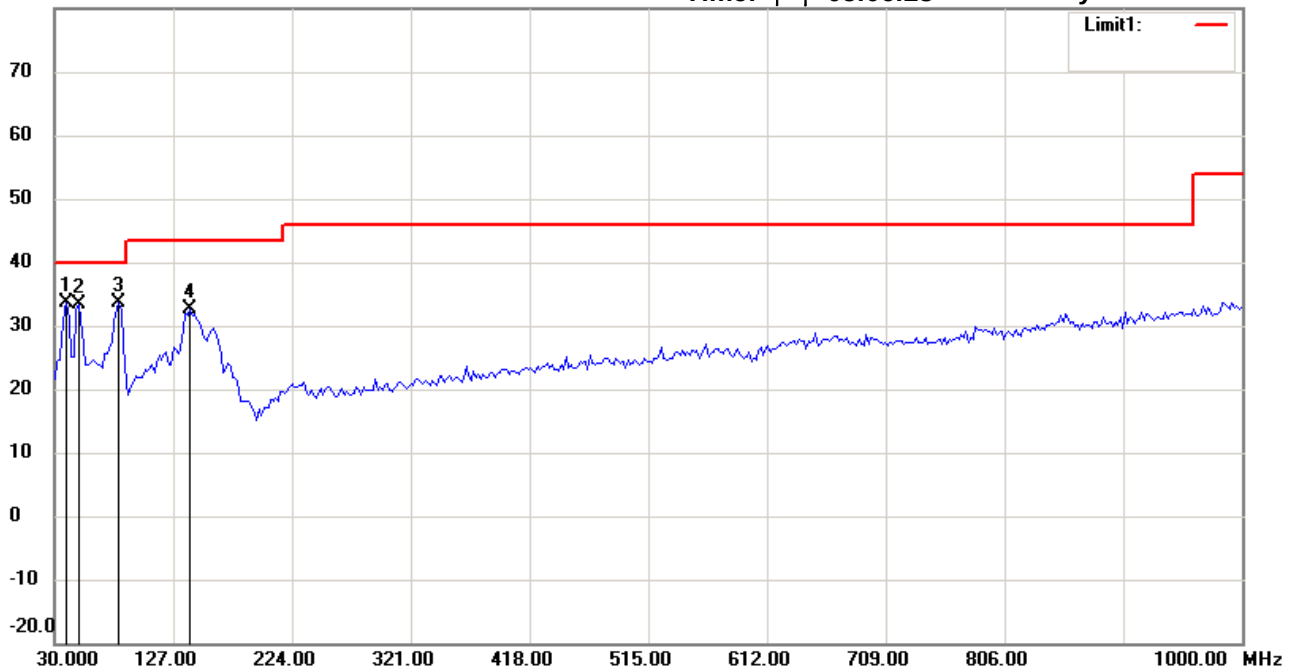
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 05:06:28

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: Vertical

Power : 120 V.a.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
	39.7194	41.80	peak	-8.15	33.65	40.00	100	150	-6.35	
	49.4388	43.22	peak	-9.78	33.44	40.00	100	200	-6.56	
*	82.4850	46.74	peak	-13.07	33.67	40.00	100	35	-6.33	
	140.8015	39.32	peak	-6.78	32.54	43.50	100	160	-10.96	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#1

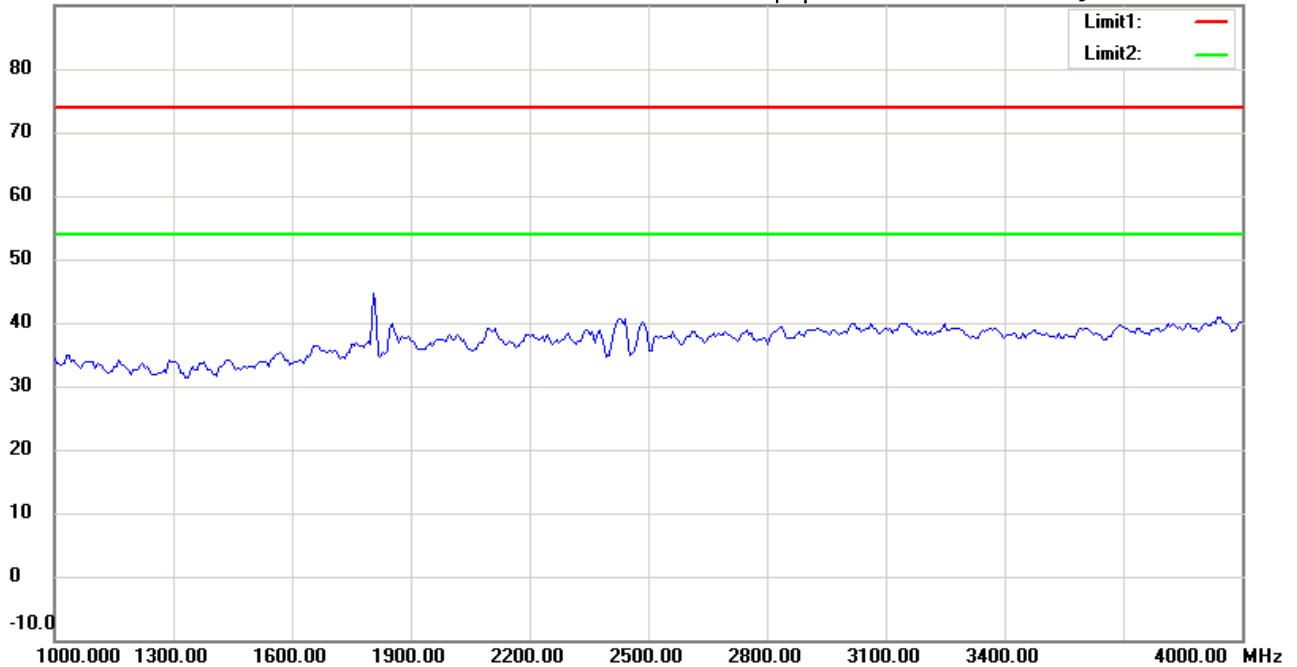
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:05:12

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#6

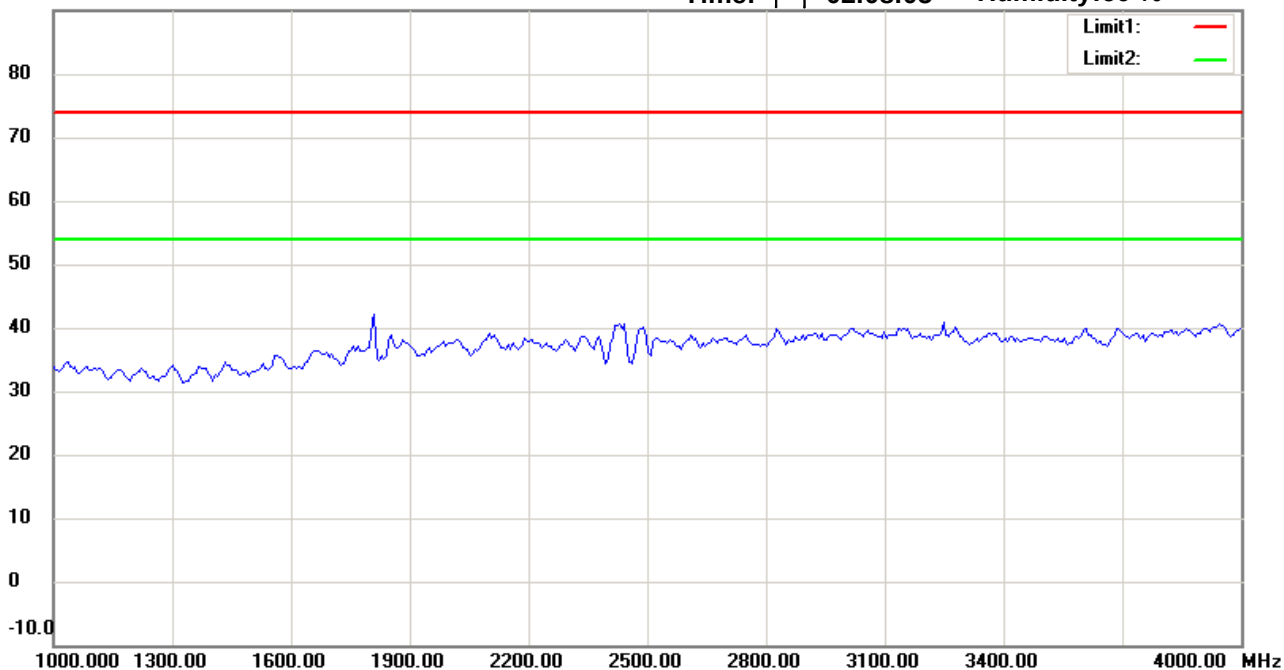
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:08:05

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File : 3

Data : #2

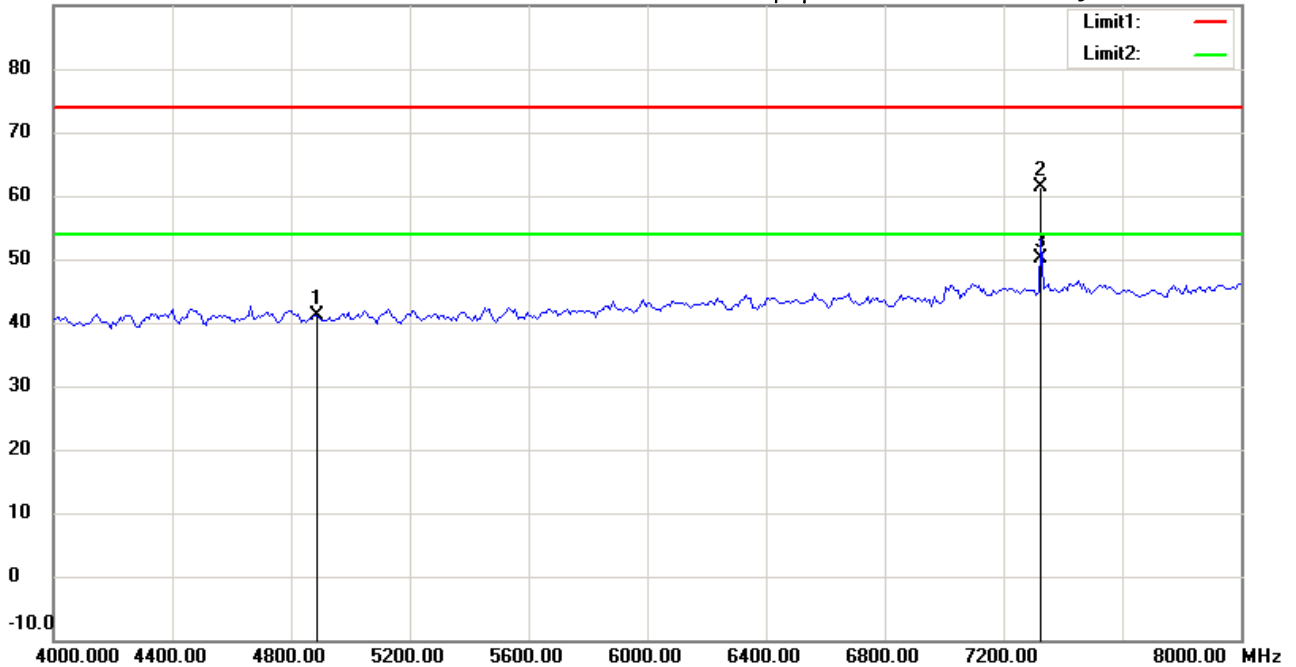
Date: 2016/5/11

Temperature: 24 °C

90.0 dBuV/m

Time: 下午 02:05:58

Humidity: 60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: **Horizontal**

Power : 120 V.a.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
	4882.000	41.68	peak	-0.49	41.19	74.00	100	175	-32.81	
	7326.653	56.77	peak	4.54	61.31	74.00	230	217	-12.69	
*	7326.653	45.63	AVG	4.54	50.17	54.00	230	217	-3.83	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#7

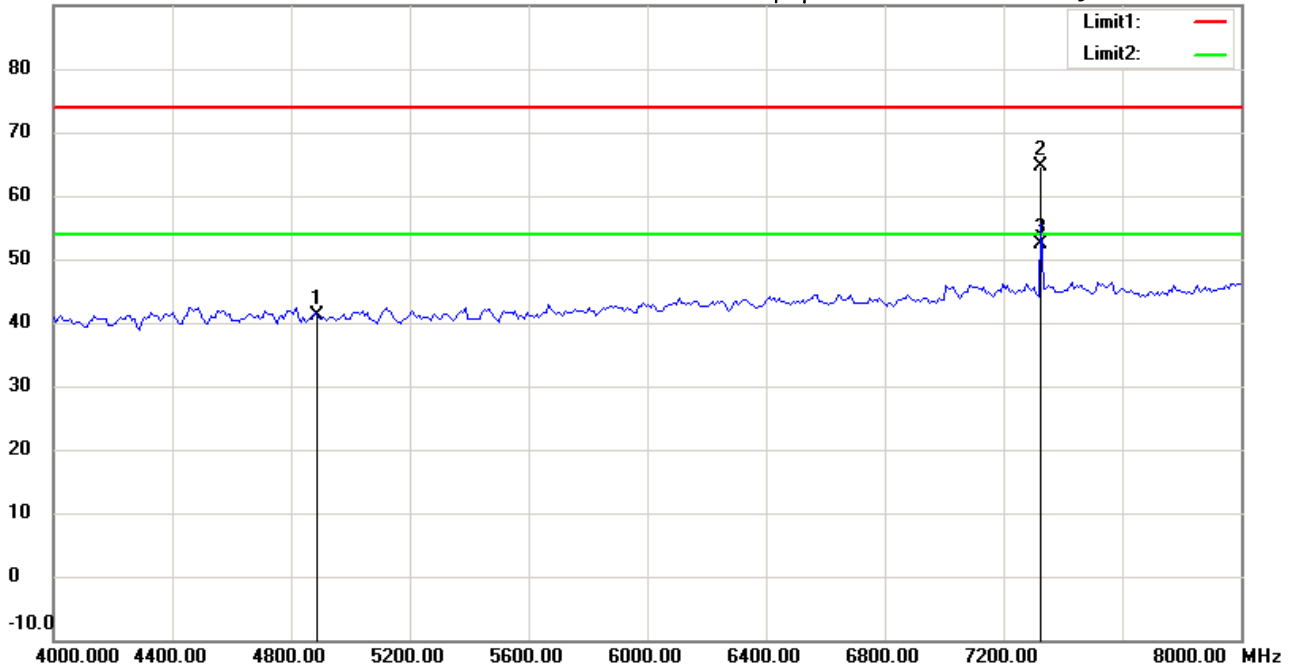
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:08:50

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	4882.000	41.54	peak	-0.49	41.05	74.00	100	275	-32.95	
	7322.936	60.23	peak	4.51	64.74	74.00	180	113	-9.26	
*	7322.936	47.98	AVG	4.51	52.49	54.00	180	113	-1.51	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#3

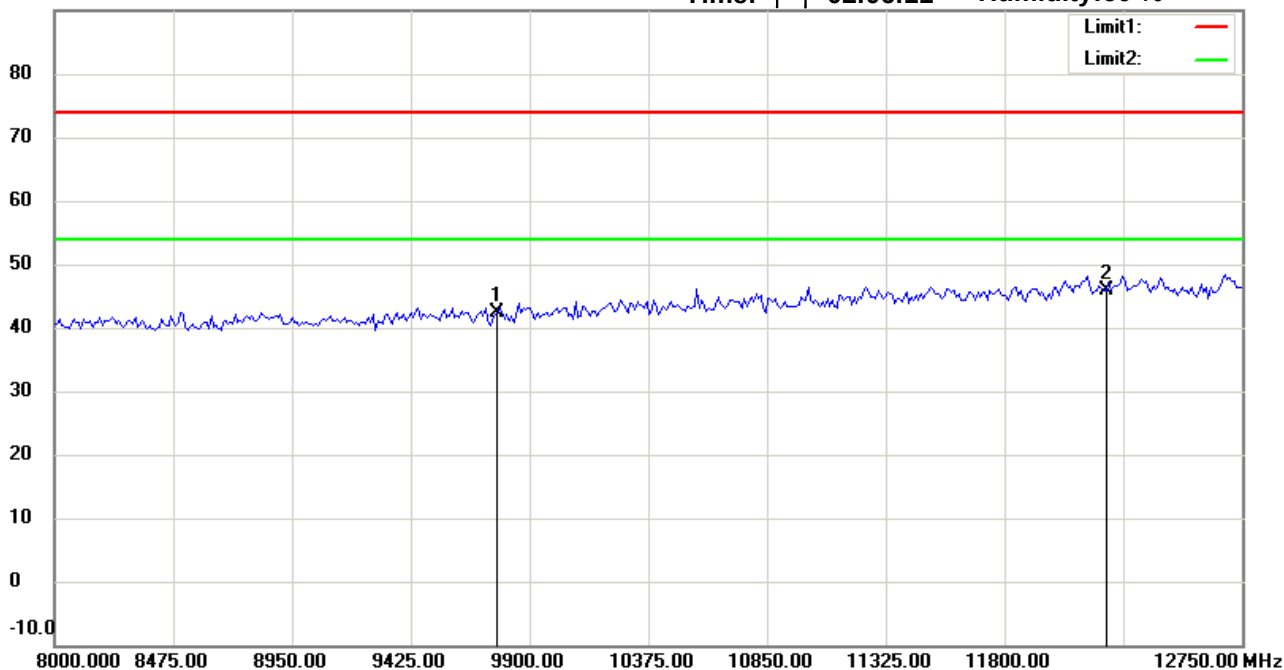
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:06:11

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: **Horizontal**

Power : 120 V.a.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
	9764.000	34.93	peak	7.51	42.44	74.00	100	75	-31.56	
*	12205.000	32.02	peak	13.80	45.82	74.00	100	120	-28.18	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#8

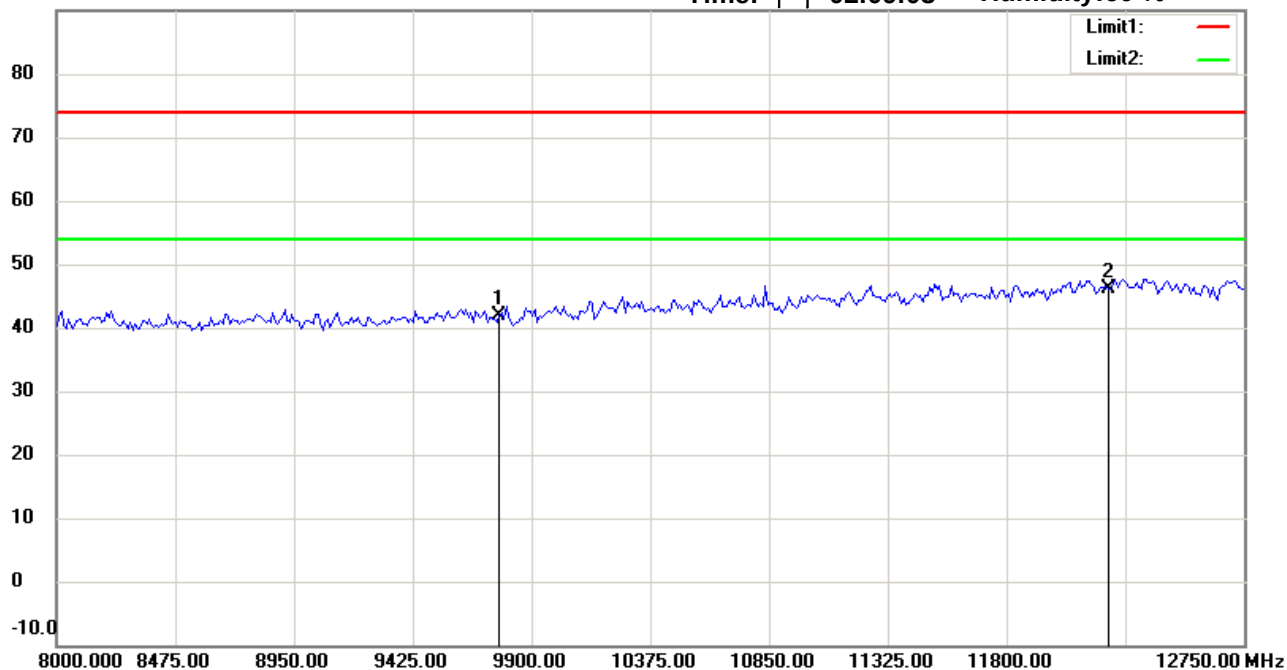
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:09:03

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	9764.000	34.40	peak	7.51	41.91	74.00	100	85	-32.09	
*	12205.000	32.34	peak	13.80	46.14	74.00	100	160	-27.86	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#4

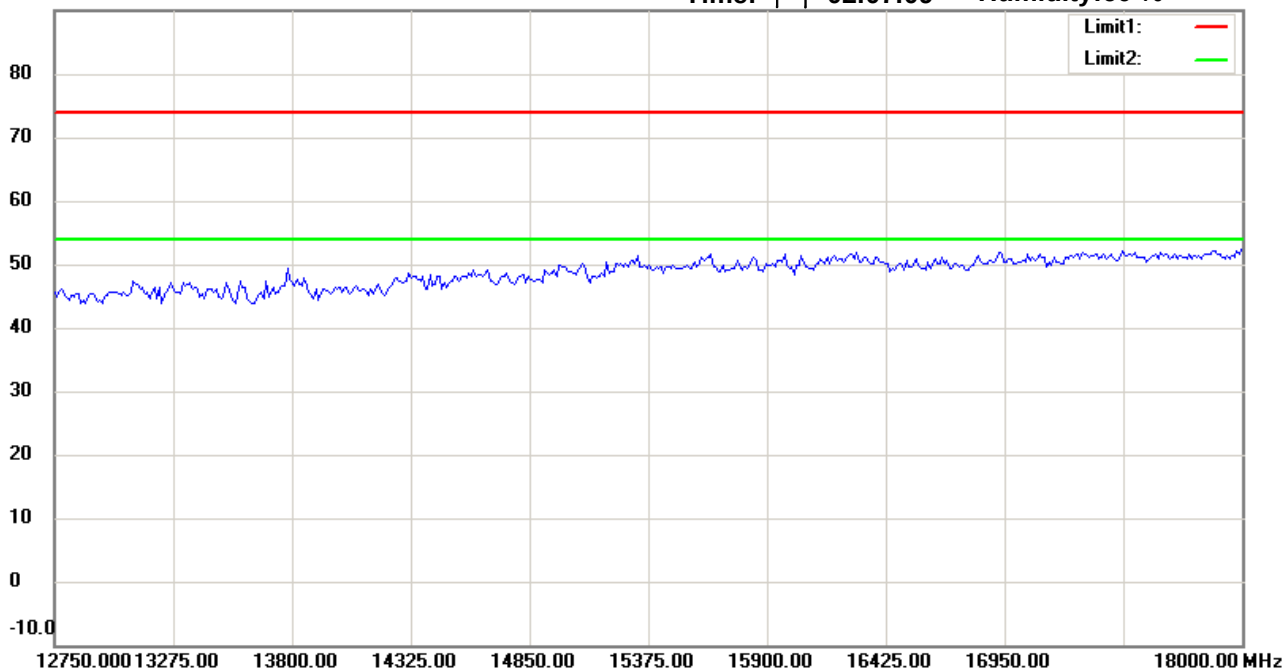
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:07:09

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#9

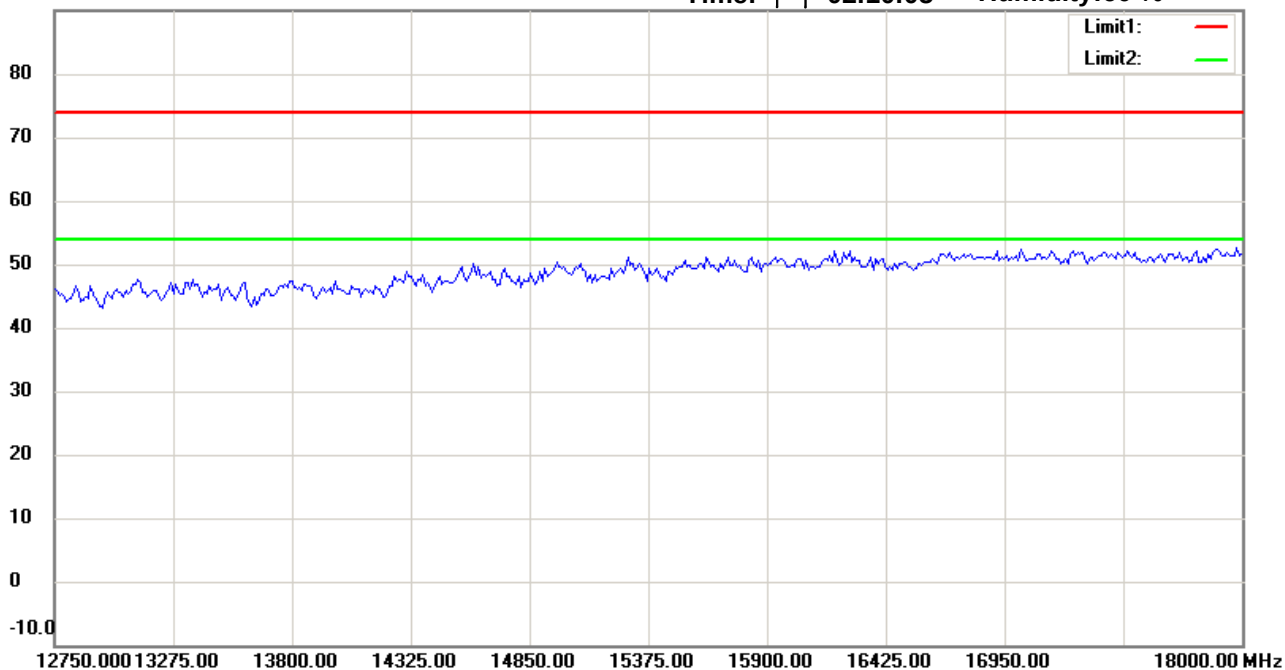
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:10:05

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#5

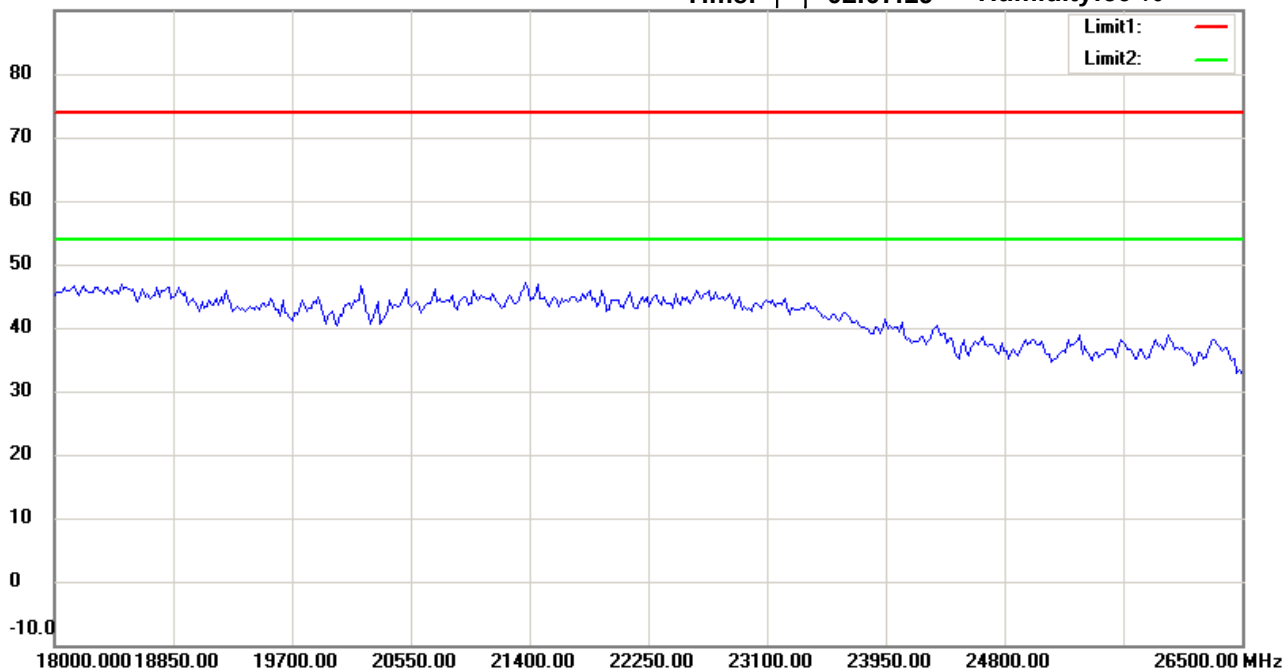
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:07:19

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: *Horizontal*

Power : 120 Va.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#10

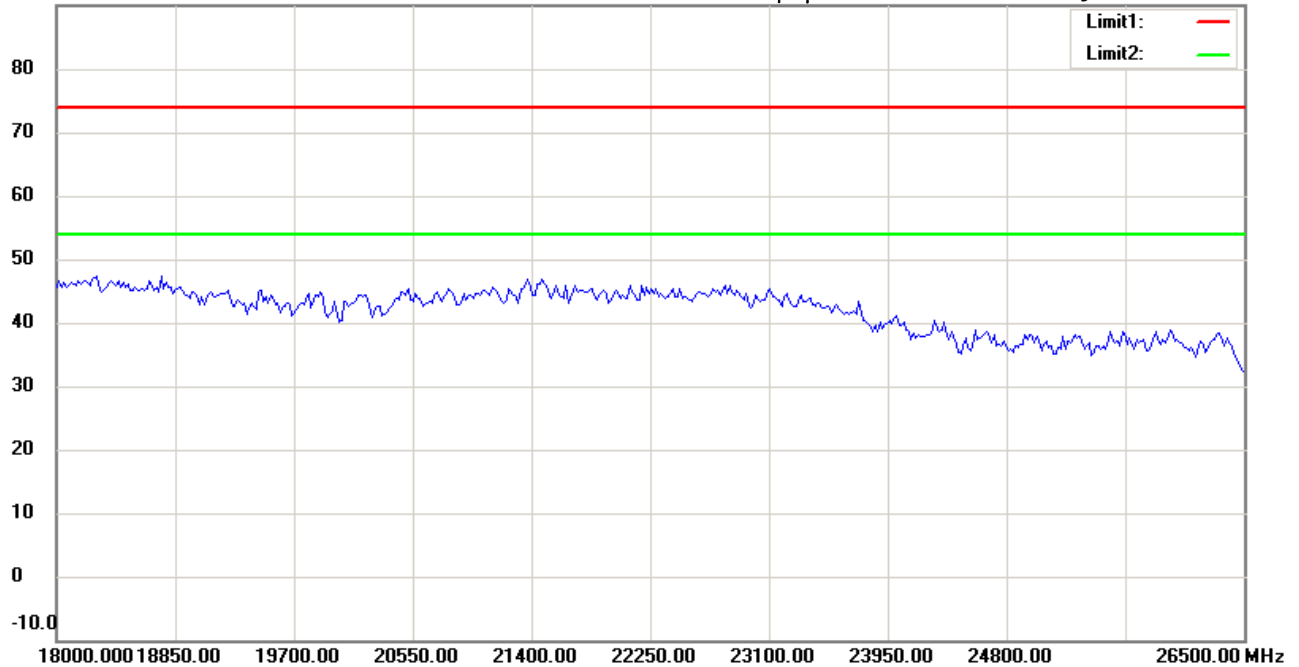
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:10:15

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2441MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Leon

File :1

Data :#1

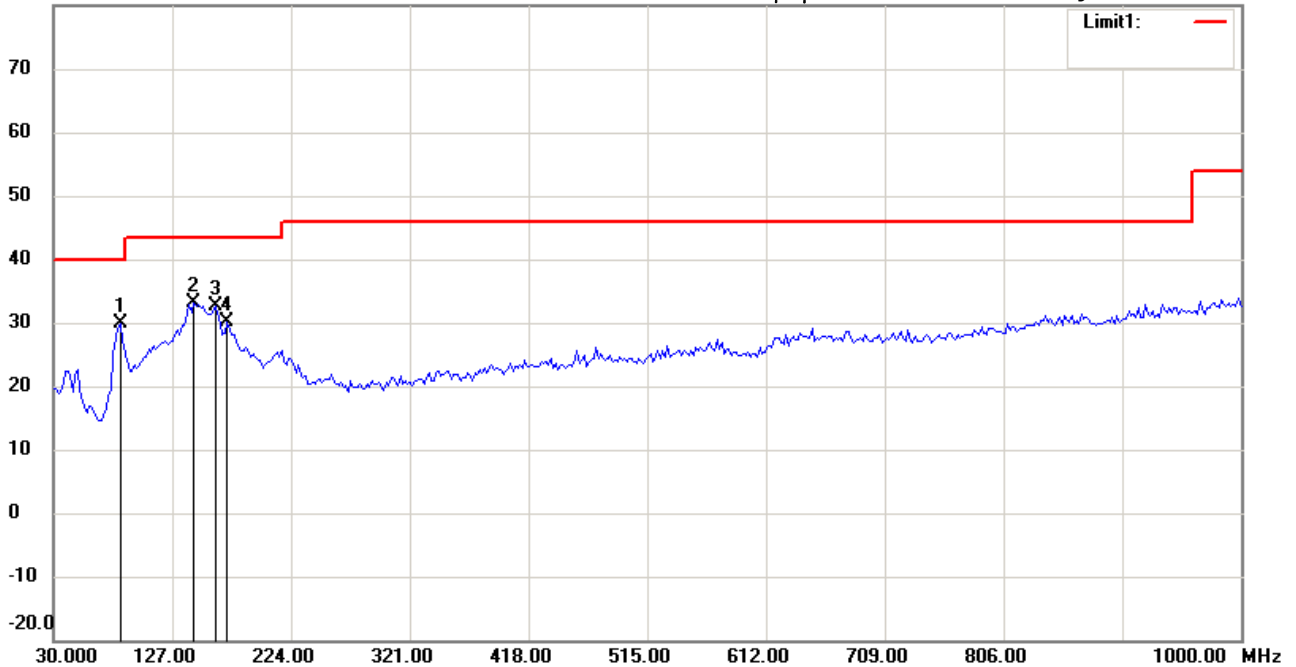
Date: 2016/5/11

Temperature: 24 °C

80.0 dBuV/m

Time: 下午 05:09:33

Humidity: 60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
*	84.4288	42.89	peak	-13.07	29.82	40.00	100	185	-10.18	
	144.6894	40.30	peak	-7.15	33.15	43.50	100	215	-10.35	
	162.1844	41.71	peak	-9.08	32.63	43.50	100	165	-10.87	
	171.9037	40.21	peak	-10.15	30.06	43.50	100	200	-13.44	



Radiated Emission Measurement

Operator: Leon

File :1

Data :#2

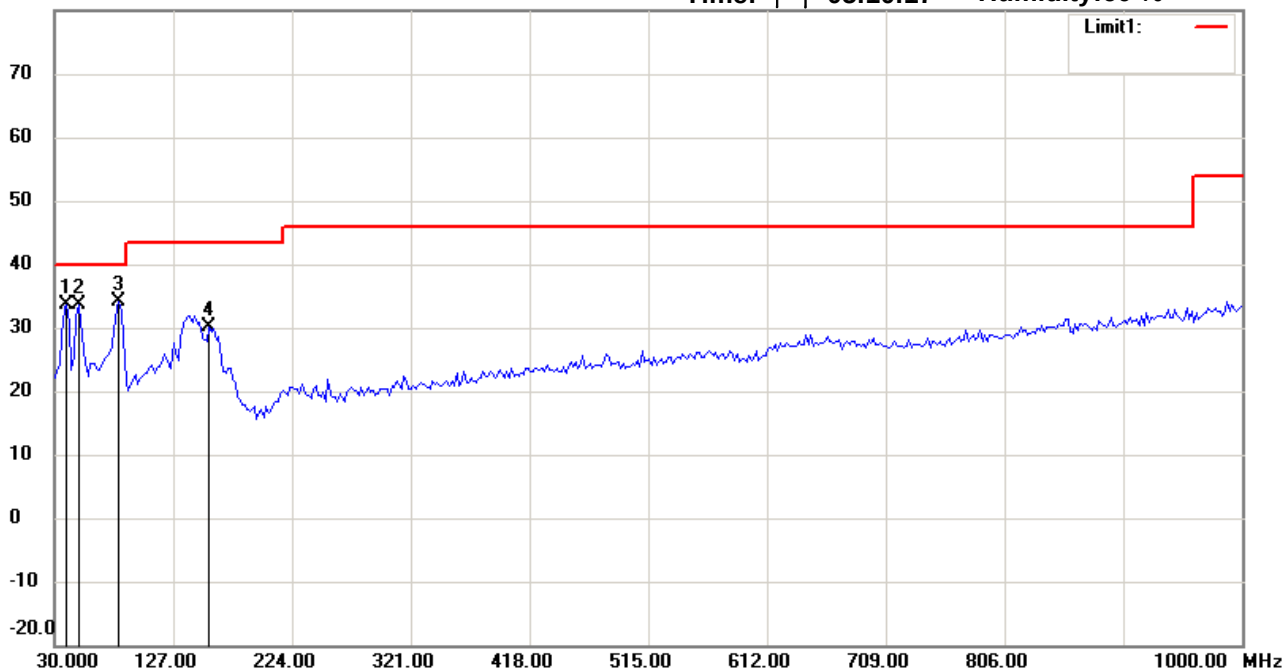
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 05:10:17

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	39.7194	41.87	peak	-8.15	33.72	40.00	100	150	-6.28	
	49.4388	43.41	peak	-9.78	33.63	40.00	100	250	-6.37	
*	82.4850	47.20	peak	-13.07	34.13	40.00	100	190	-5.87	
	156.3527	38.45	peak	-8.40	30.05	43.50	100	255	-13.45	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#1

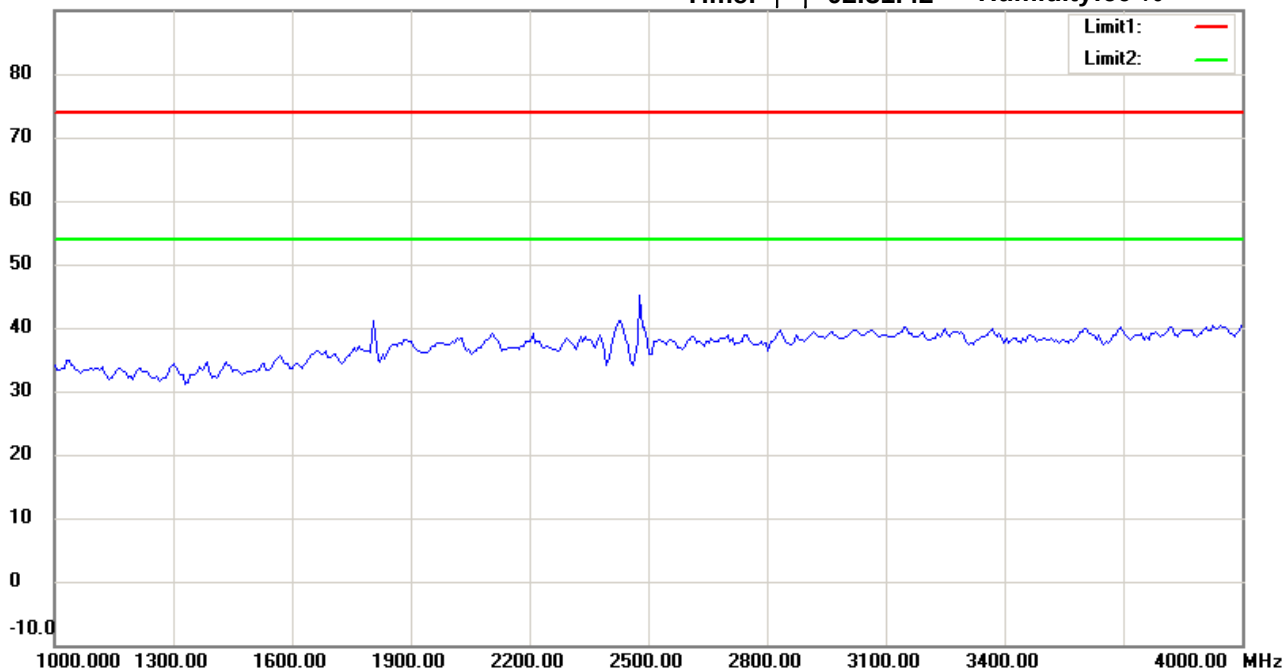
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:31:42

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#6

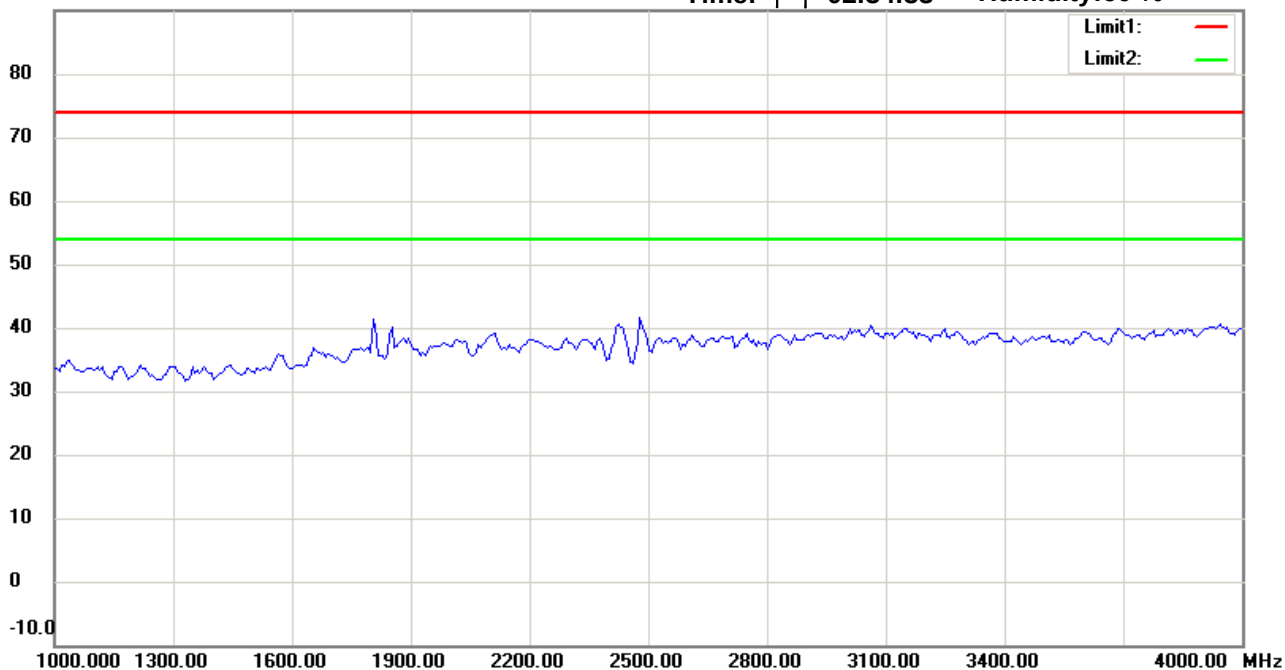
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:34:33

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#2

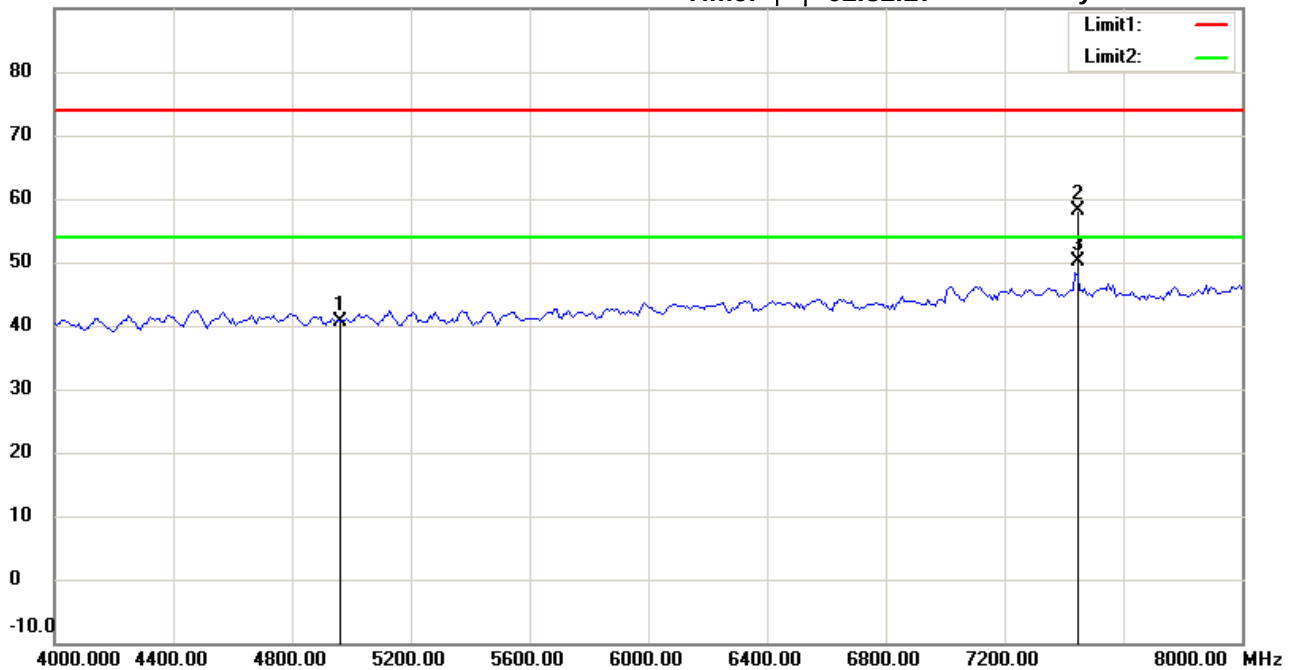
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:32:27

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
	4960.000	40.80	peak	-0.14	40.66	74.00	100	190	-33.34	
	7438.878	53.25	peak	4.89	58.14	74.00	170	235	-15.86	
*	7438.878	45.21	AVG	4.89	50.10	54.00	170	235	-3.90	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#7

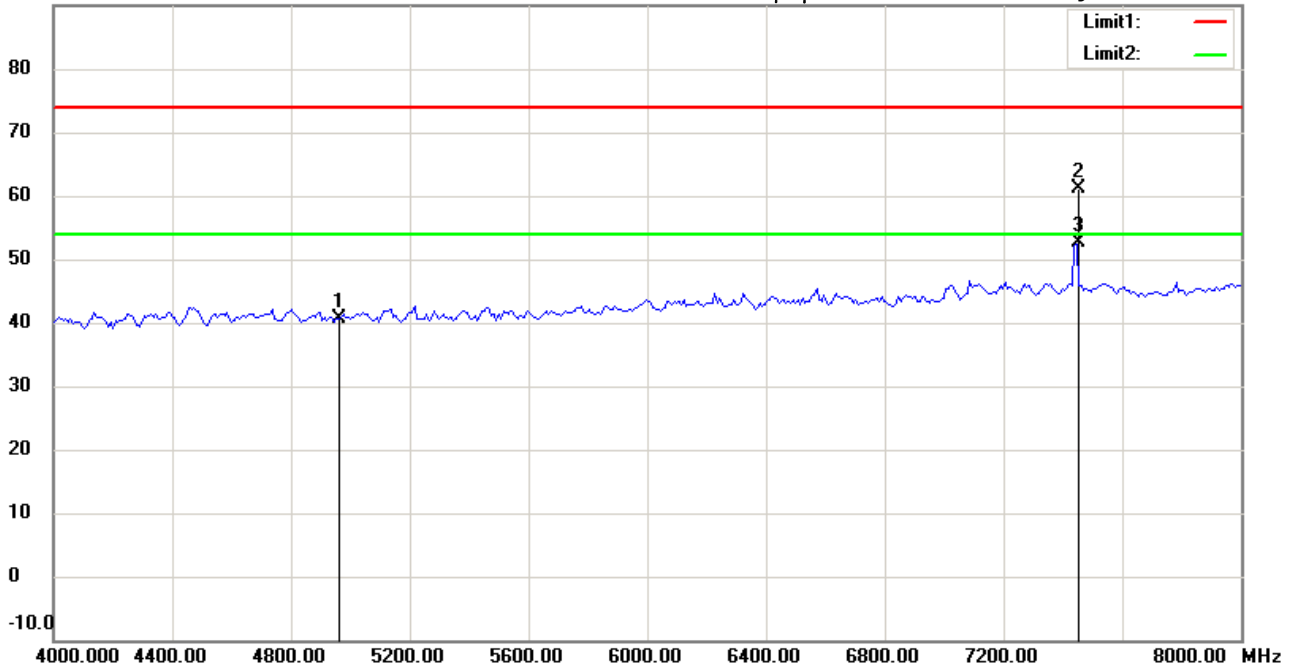
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:35:19

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	4960.000	40.79	peak	-0.14	40.65	74.00	100	90	-33.35	
	7446.894	56.27	peak	4.87	61.14	74.00	170	225	-12.86	
*	7446.894	47.73	AVG	4.87	52.60	54.00	170	225	-1.40	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#3

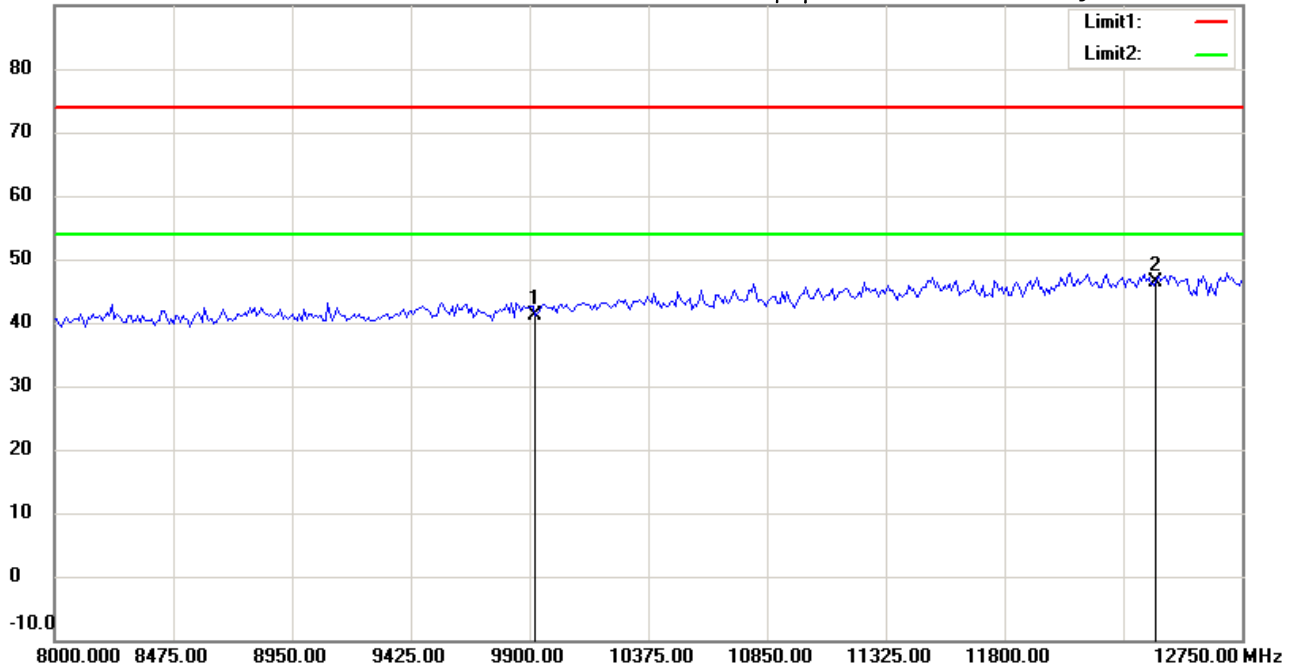
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:32:40

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
	9920.000	33.21	peak	7.83	41.04	74.00	100	175	-32.96	
*	12400.000	32.44	peak	13.99	46.43	74.00	100	260	-27.57	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#8

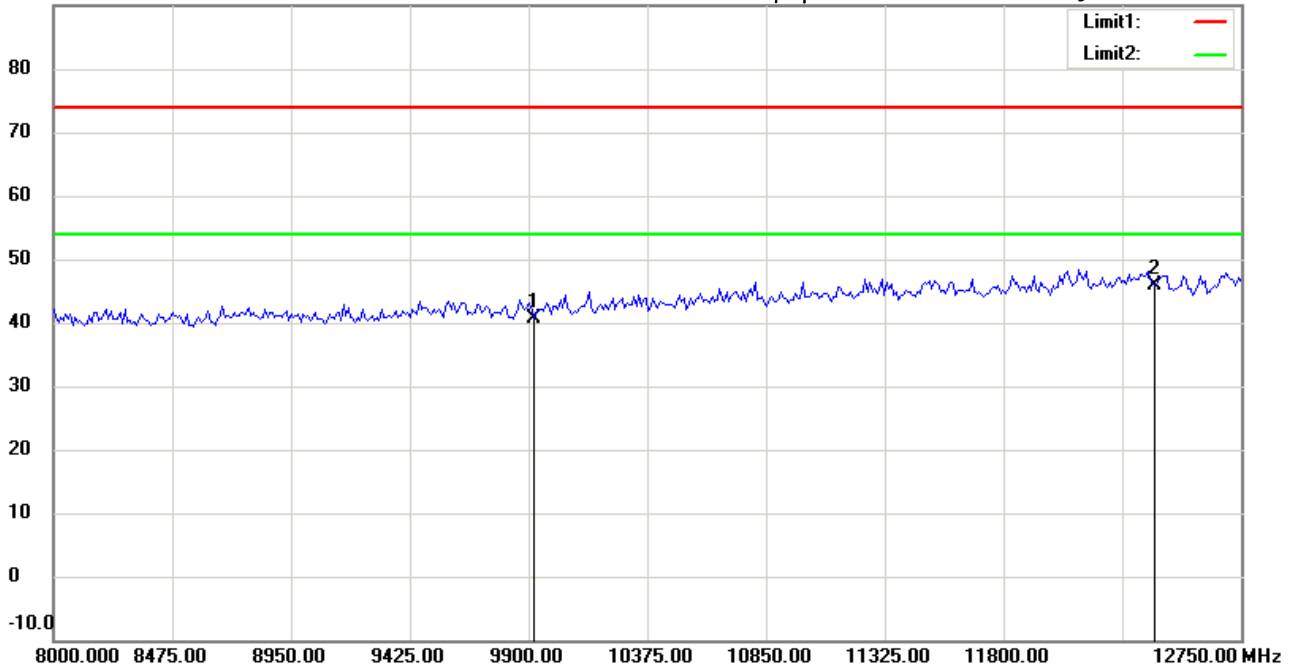
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:35:31

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	9920.000	32.89	peak	7.83	40.72	74.00	100	220	-33.28	
*	12400.000	31.82	peak	13.99	45.81	74.00	100	235	-28.19	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#4

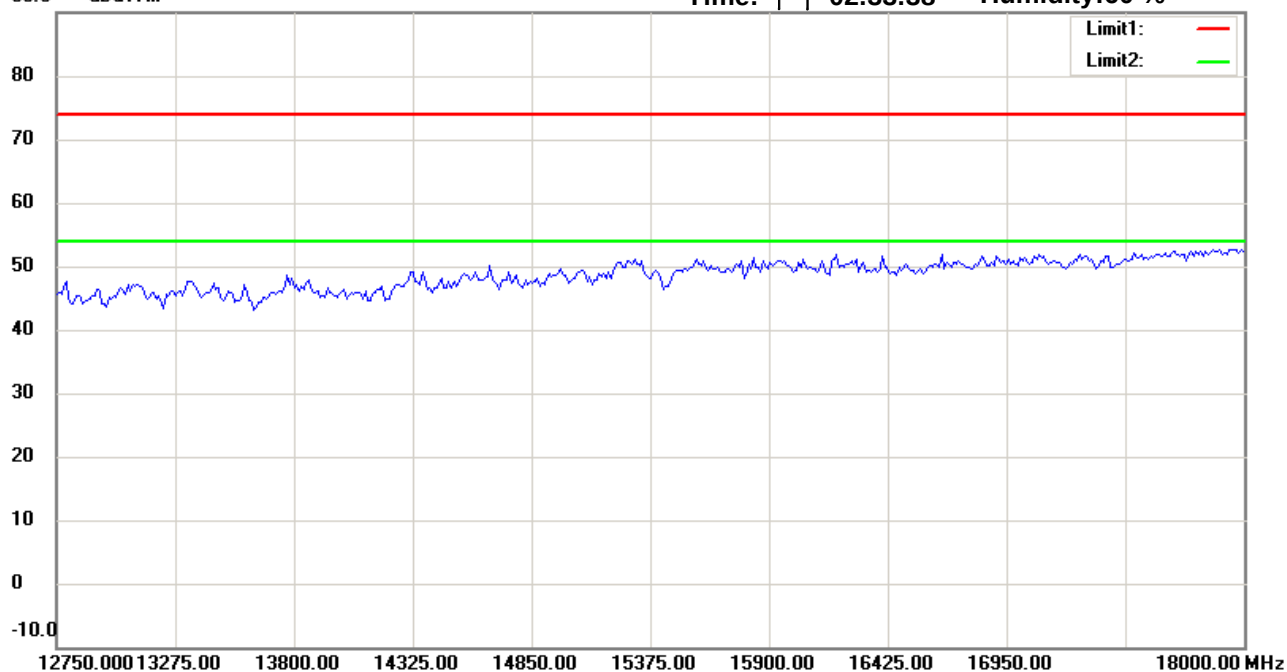
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:33:38

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#9

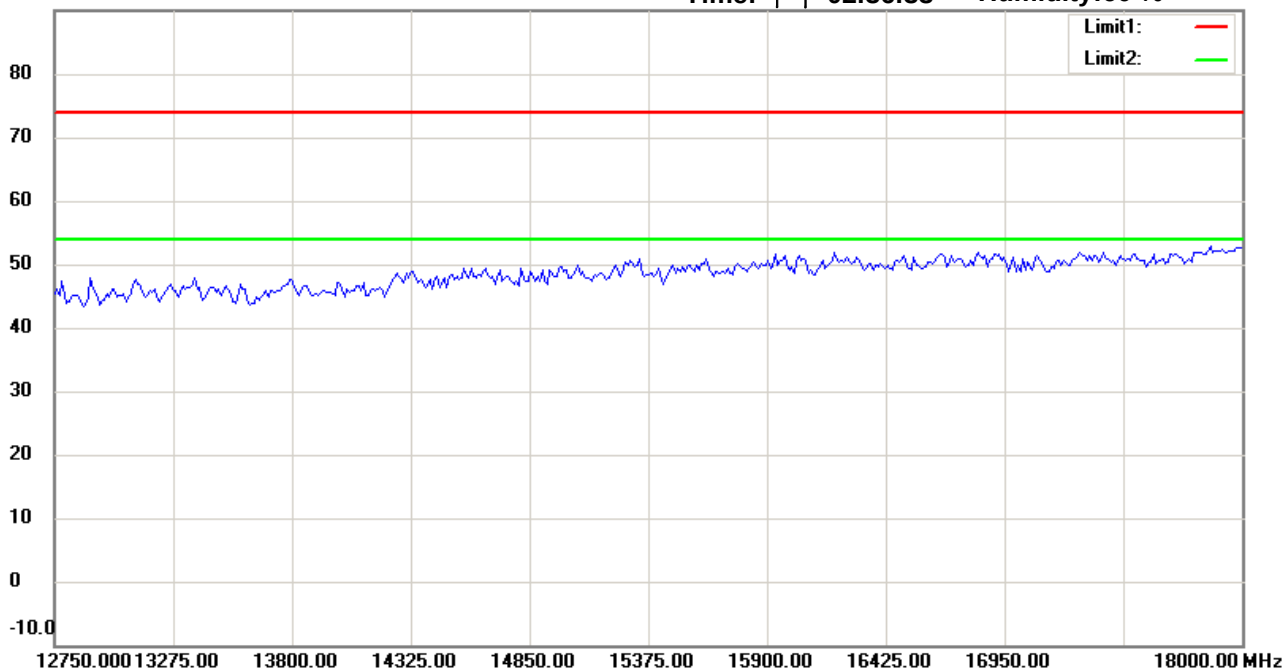
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:36:33

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: Vertical

Power : 120 V.a.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
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------



Radiated Emission Measurement

Operator: Leon

File :3

Data :#5

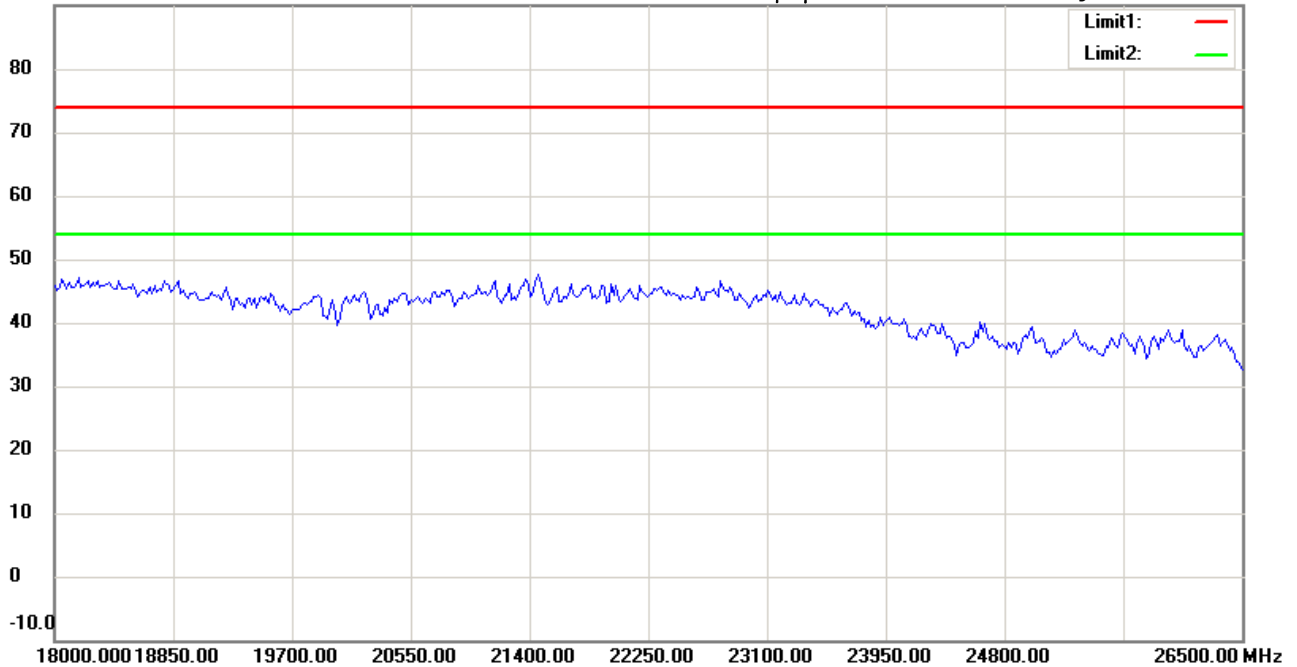
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:33:47

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#10

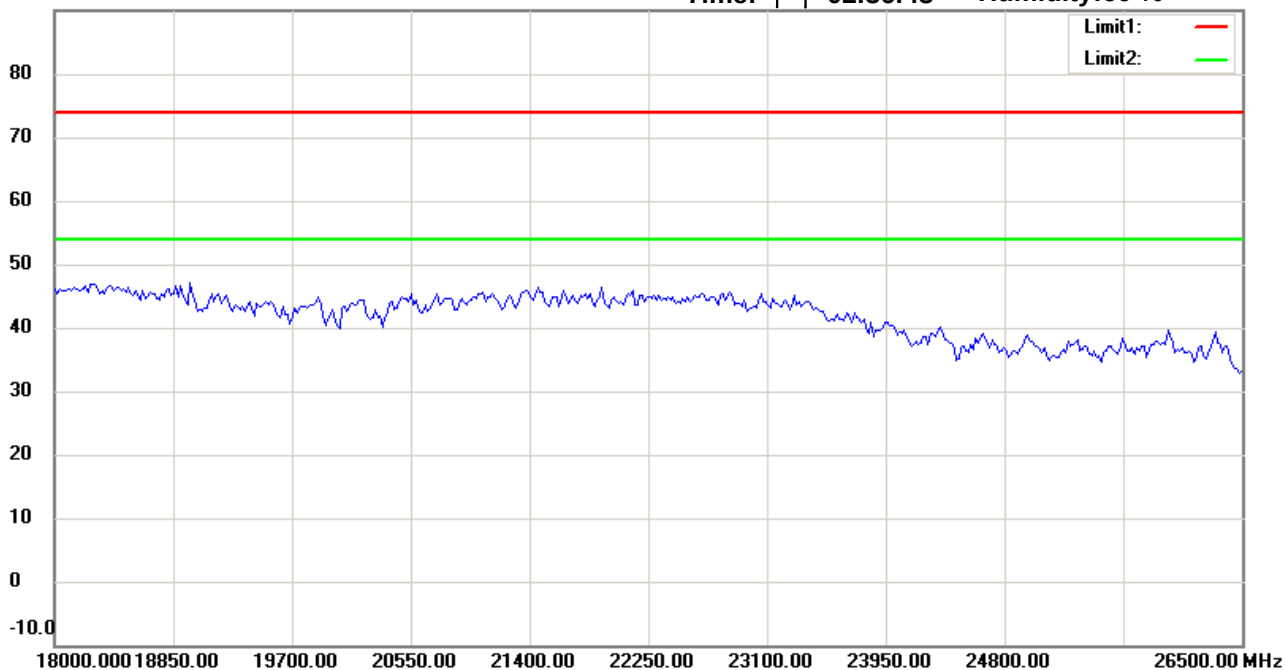
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 02:36:43

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

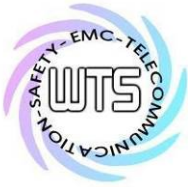
Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Registration number: W6M21604-15784-C-1
FCC ID: IPH-02963

Appendix

Measurement diagrams

Spurious Emissions radiated_Bluetooth Low Energy mode



Radiated Emission Measurement

Operator: Leon

File :1

Data :#1

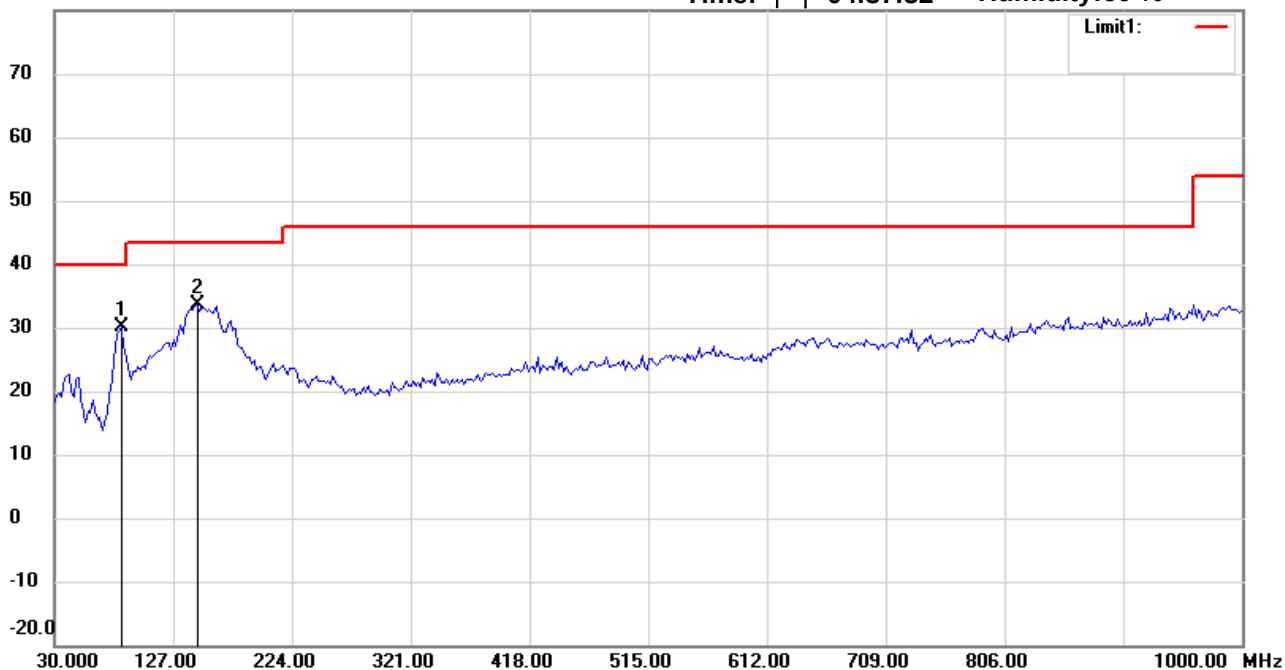
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 04:37:32

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
*	84.4288	43.24	peak	-13.07	30.17	40.00	100	150	-9.83	
	146.6332	40.95	peak	-7.33	33.62	43.50	100	230	-9.88	



Radiated Emission Measurement

Operator: Leon

File :1

Data :#2

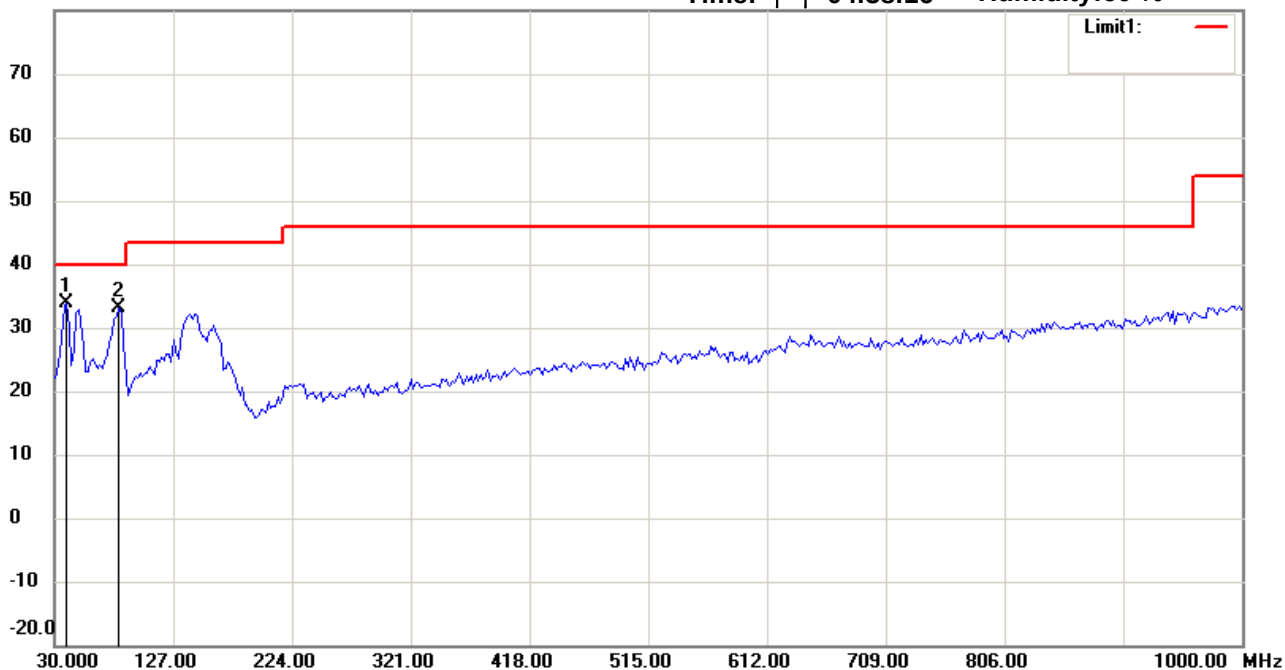
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 04:38:16

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
*	39.7194	42.09	peak	-8.15	33.94	40.00	100	90	-6.06	
	82.4850	46.25	peak	-13.07	33.18	40.00	100	150	-6.82	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#1

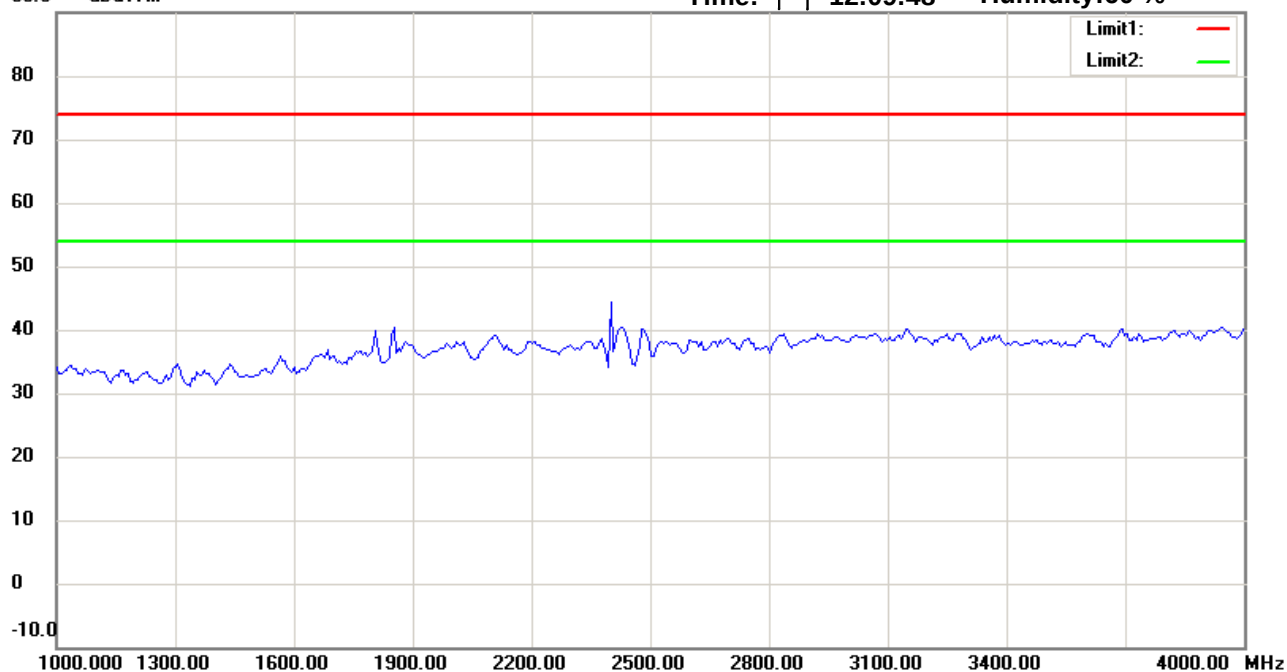
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:09:48

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#6

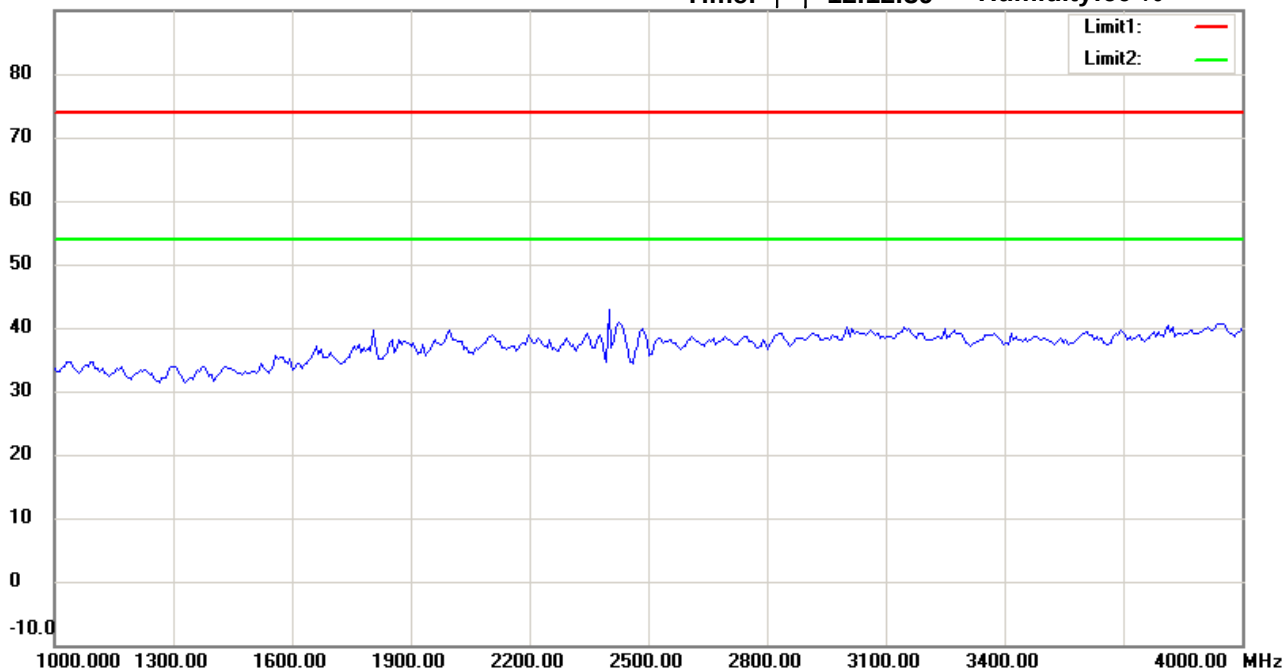
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:12:39

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Vertical*

Power : 120 V.a.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
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------



Radiated Emission Measurement

Operator: Leon

File :3

Data :#2

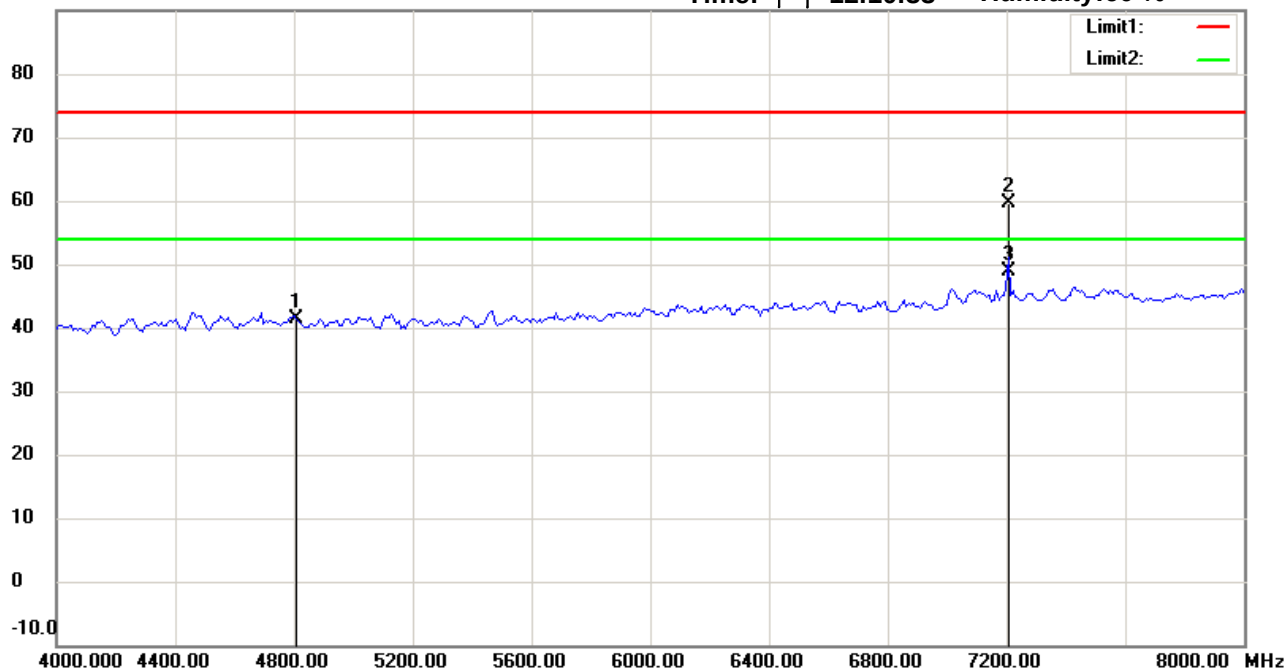
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:10:33

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 Va.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
	4804.000	41.93	peak	-0.59	41.34	74.00	100	245	-32.66	
	7205.926	55.46	peak	4.26	59.72	74.00	165	225	-14.28	
*	7205.926	44.66	AVG	4.26	48.92	54.00	165	225	-5.08	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#7

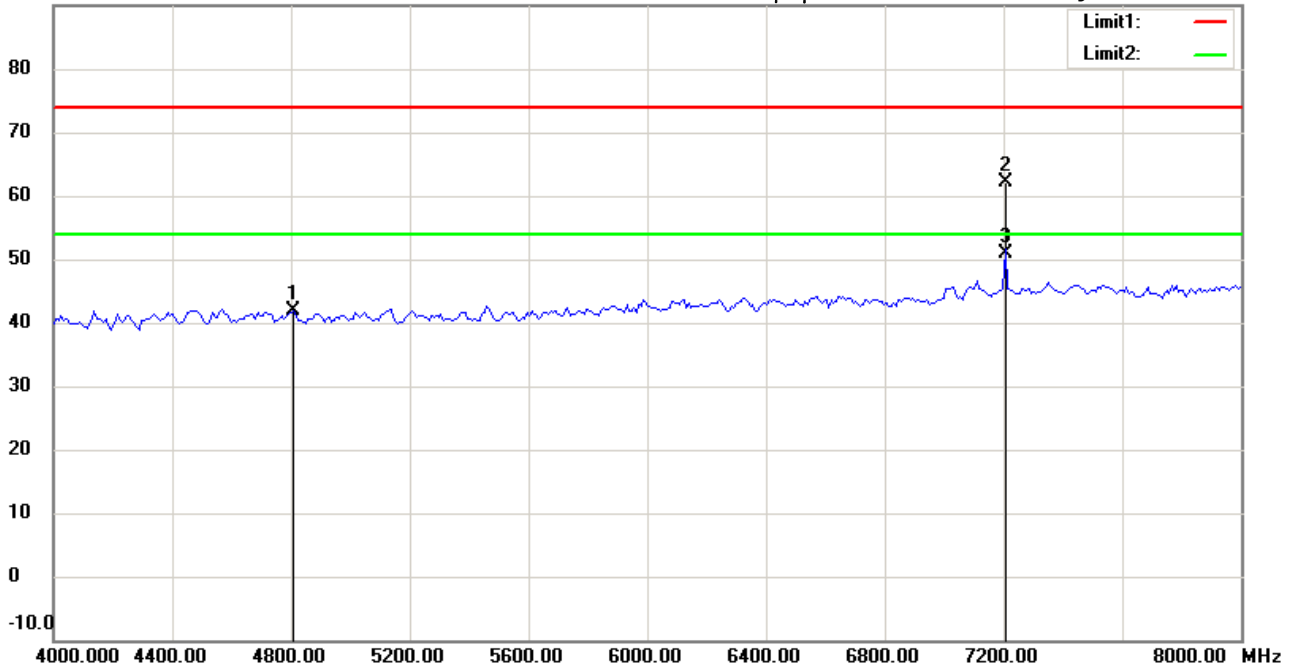
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:13:24

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	4804.000	42.59	peak	-0.59	42.00	74.00	100	260	-32.00	
	7205.918	57.93	peak	4.26	62.19	74.00	126	185	-11.81	
*	7205.918	46.52	AVG	4.26	50.78	54.00	126	185	-3.22	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#3

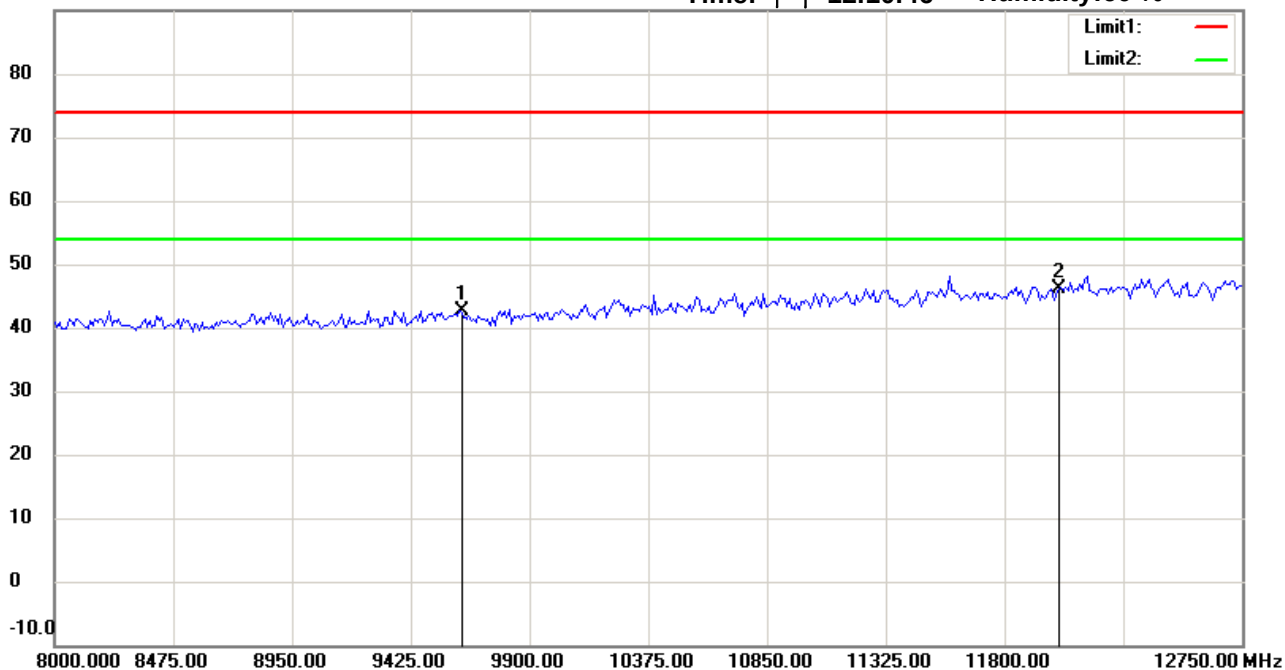
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:10:46

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
	9618.237	35.03	peak	7.57	42.60	74.00	100	90	-31.40	
*	12010.000	33.73	peak	12.47	46.20	74.00	100	235	-27.80	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#8

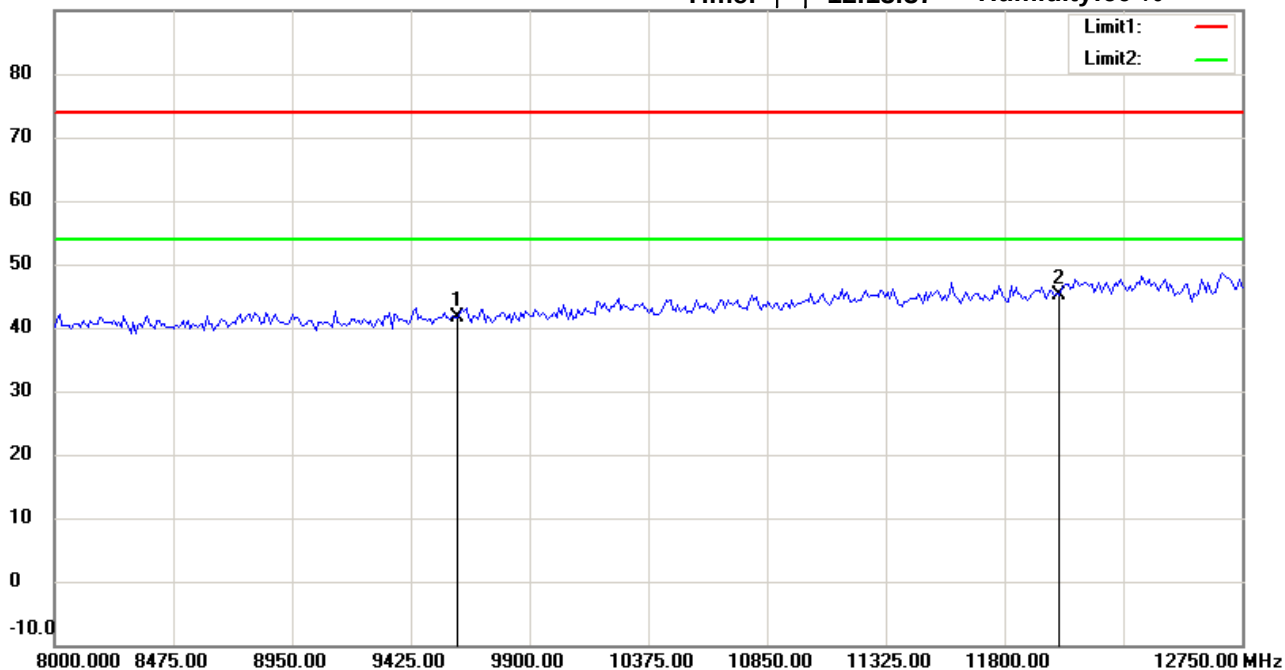
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:13:37

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	9608.000	34.16	peak	7.59	41.75	74.00	100	175	-32.25	
*	12010.000	32.70	peak	12.47	45.17	74.00	100	240	-28.83	



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

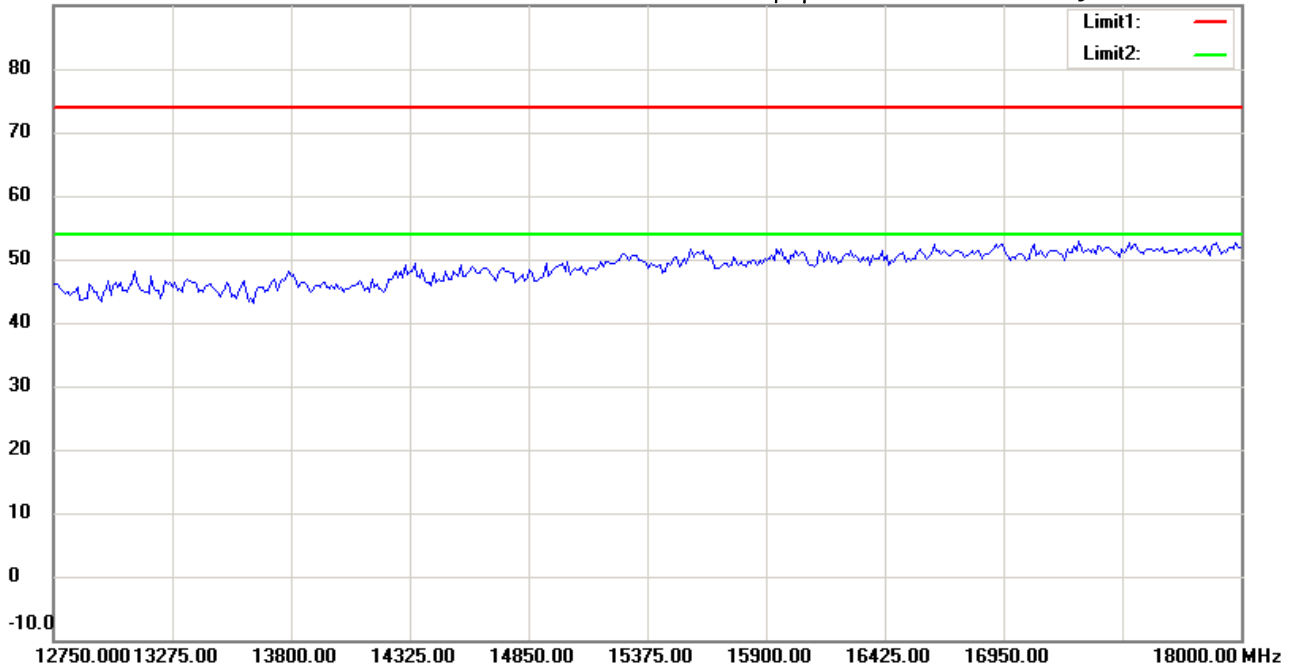
Date: 2016/5/11

Temperature: 24 °C

90.0 dBuV/m

Time: 下午 12:11:43

Humidity: 60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Leon

File :3

Data :#9

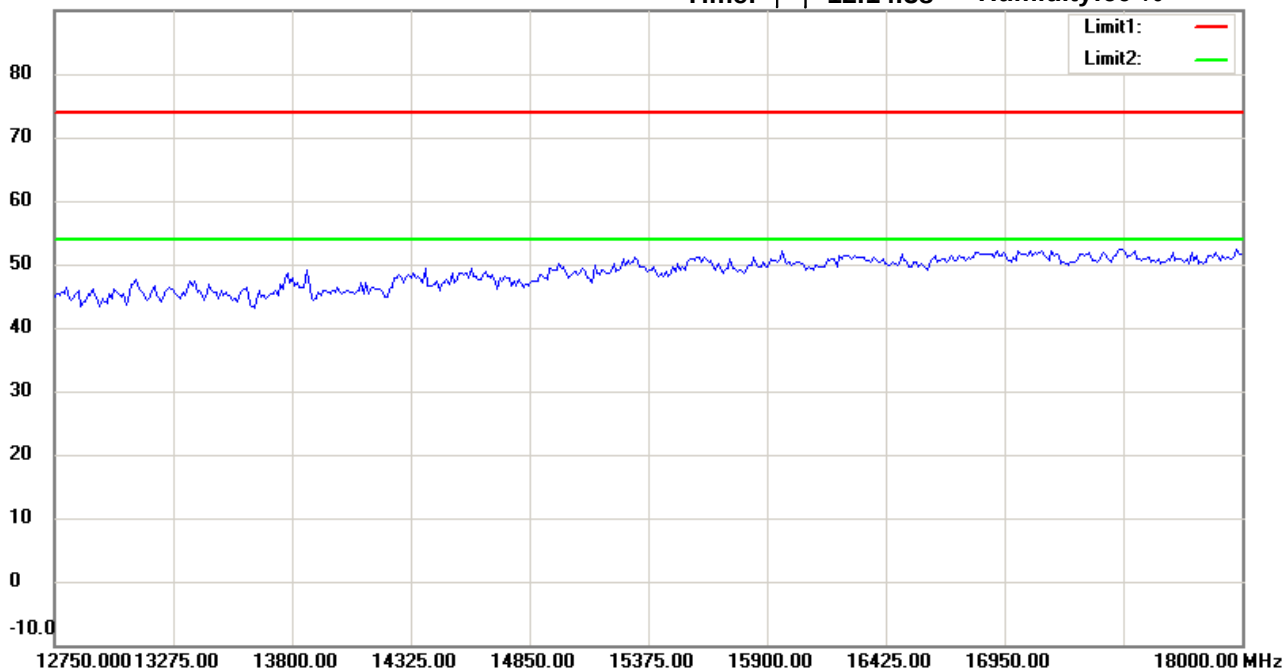
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:14:38

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#5

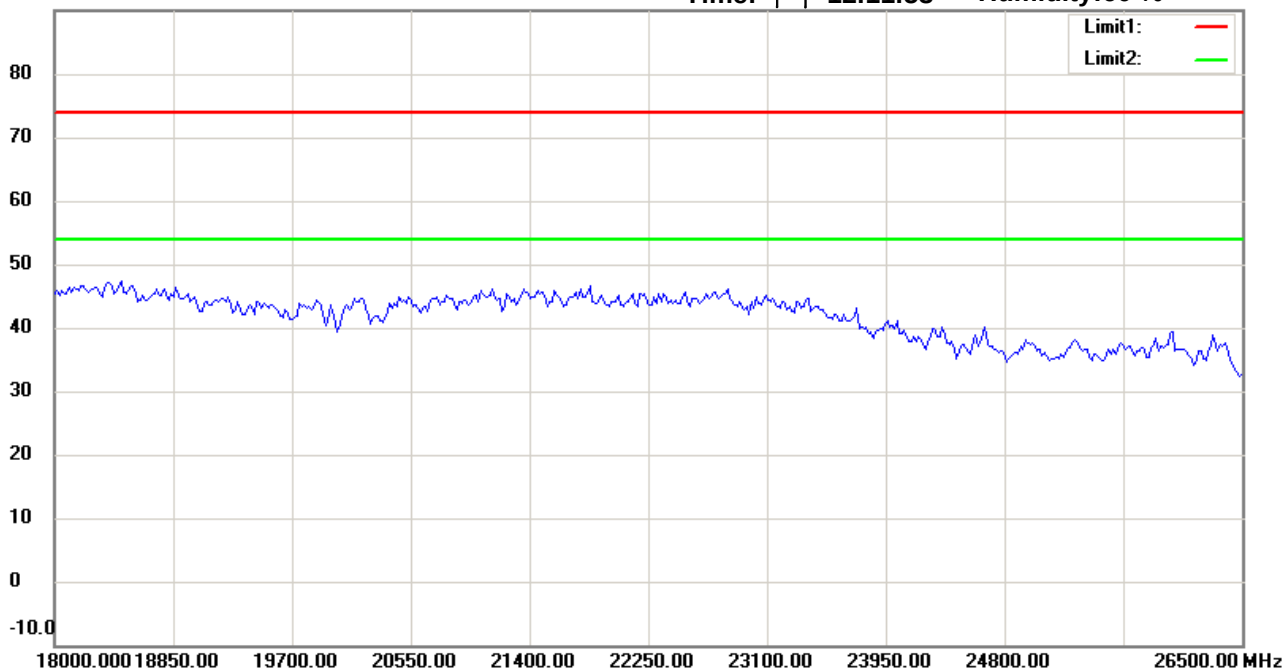
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:11:53

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------



Radiated Emission Measurement

Operator: Leon

File :3

Data :#10

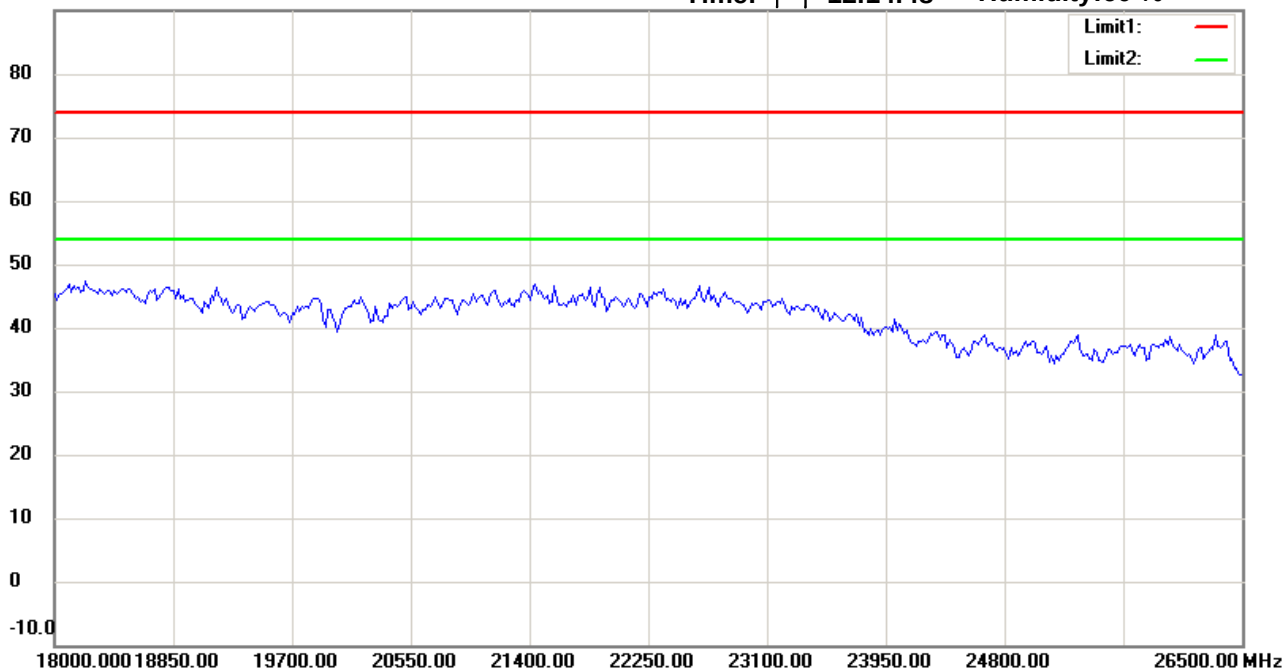
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:14:48

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2402MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :1

Data :#1

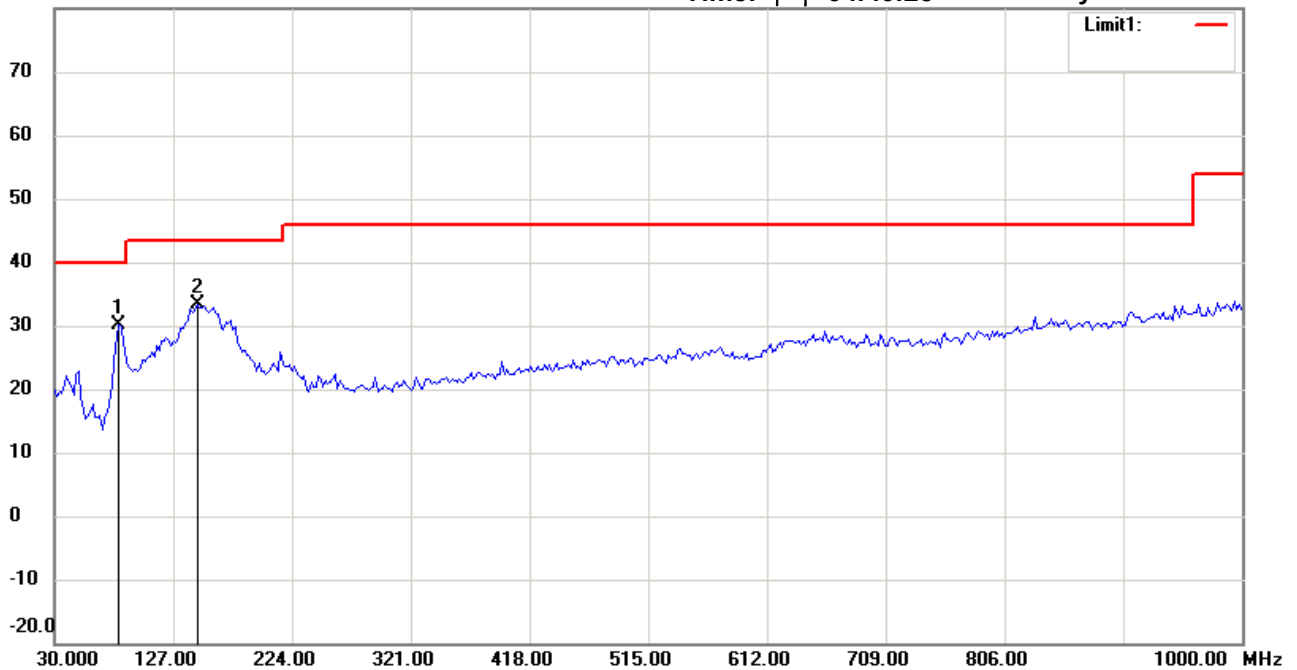
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 04:40:26

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
*	82.4850	43.11	peak	-13.07	30.04	40.00	100	115	-9.96	
	146.6332	40.64	peak	-7.33	33.31	43.50	100	140	-10.19	



Radiated Emission Measurement

Operator: Leon

File :1

Data :#2

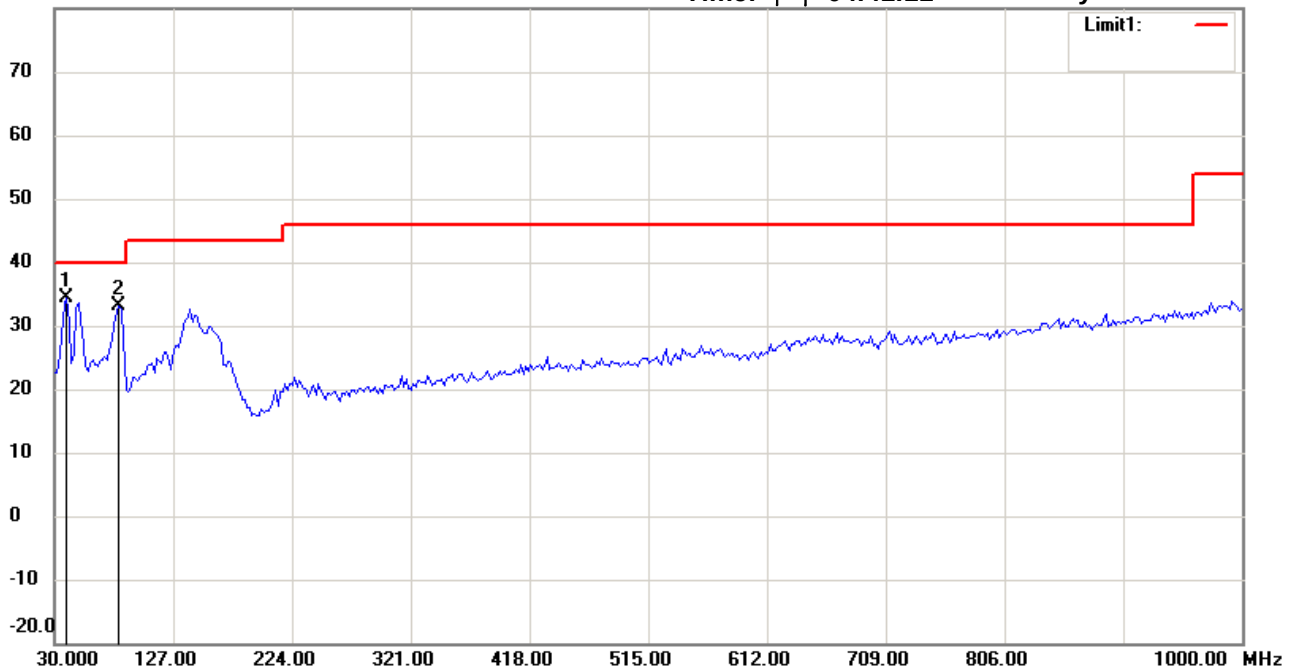
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 04:41:11

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
*	39.7194	42.49	peak	-8.15	34.34	40.00	100	60	-5.66	
	82.4850	46.11	peak	-13.07	33.04	40.00	100	45	-6.96	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#1

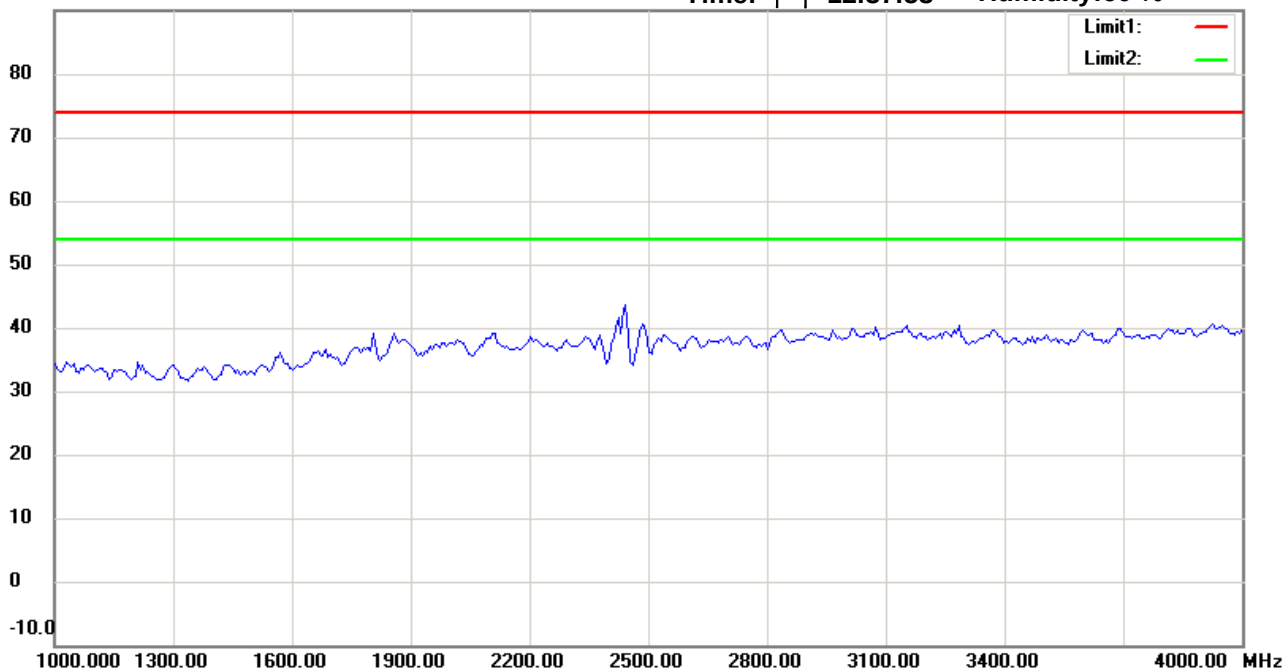
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:37:53

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#6

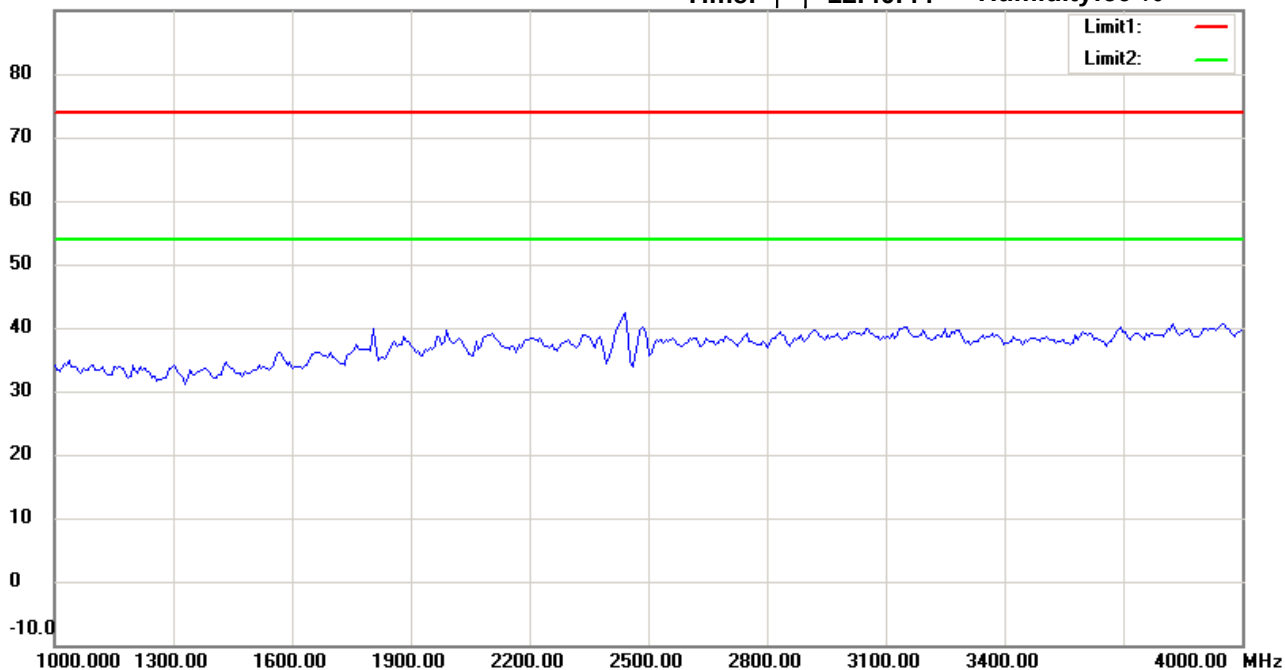
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:40:44

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#2

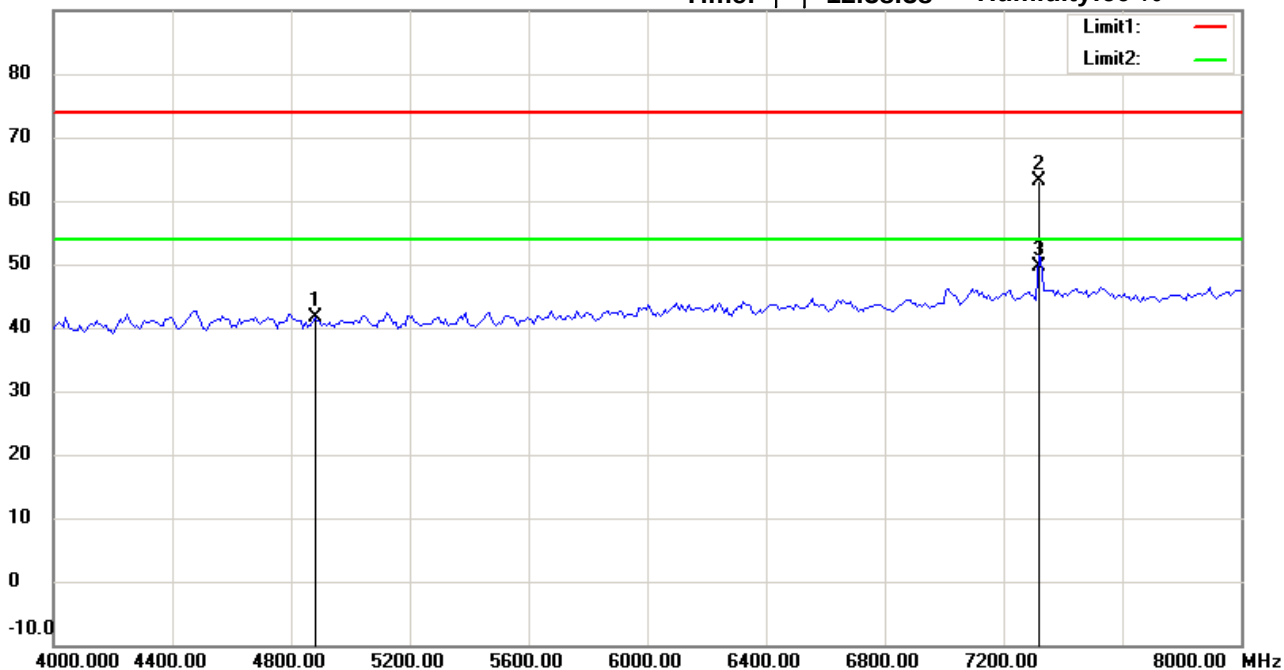
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:38:38

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: *Horizontal*

Power : 120 Va.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
	4880.000	42.21	peak	-0.49	41.72	74.00	100	155	-32.28	
	7318.637	58.69	peak	4.48	63.17	74.00	210	233	-10.83	
*	7318.637	45.23	AVG	4.48	49.71	54.00	210	233	-4.29	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#7

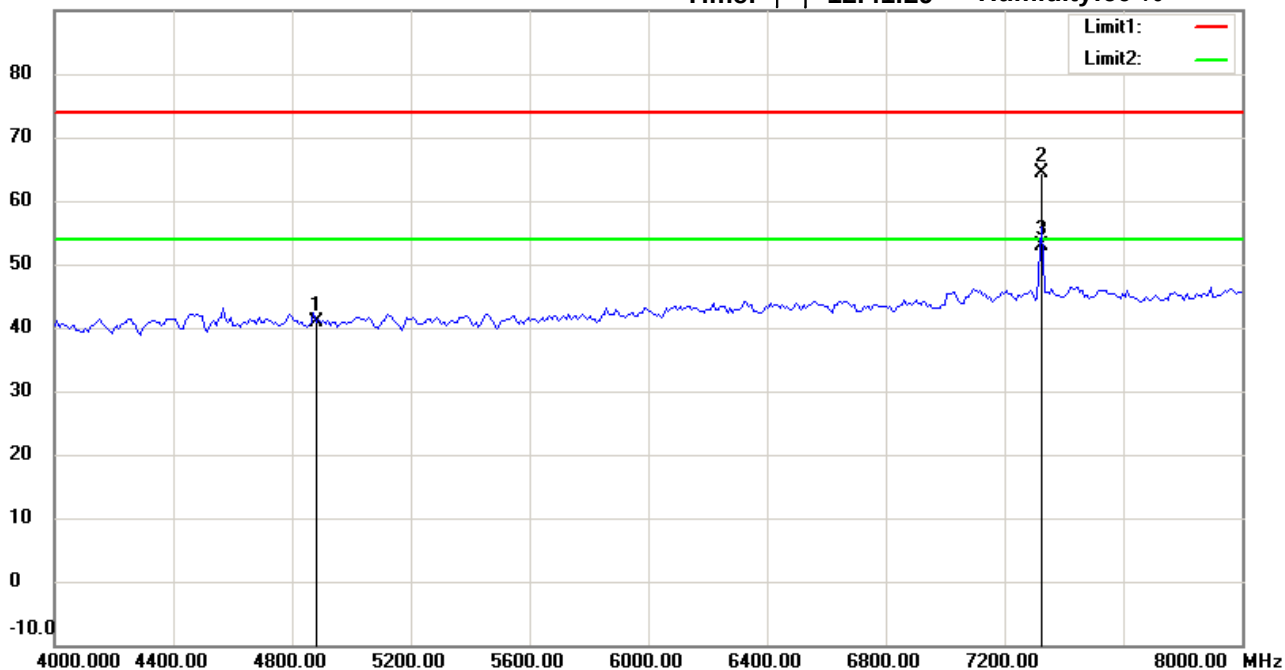
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:41:29

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	4880.000	41.39	peak	-0.49	40.90	74.00	100	270	-33.10	
	7319.889	60.00	peak	4.49	64.49	74.00	190	116	-9.51	
*	7319.889	48.51	AVG	4.49	53.00	54.00	190	116	-1.00	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#3

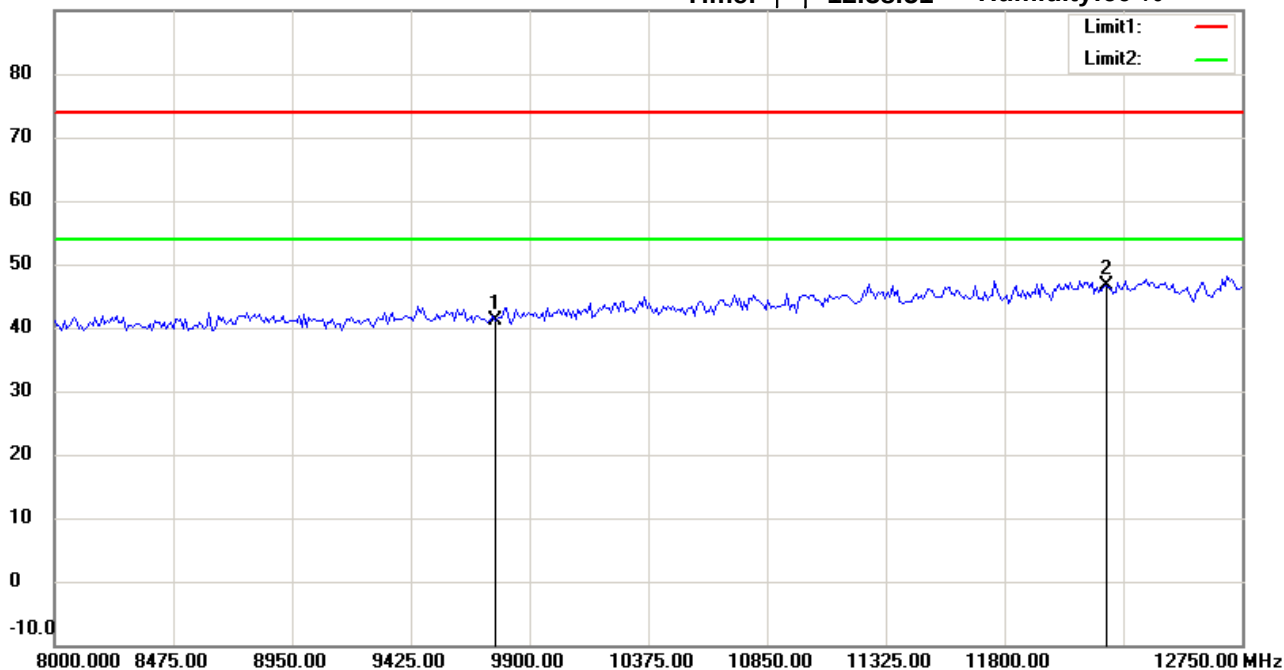
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:38:51

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: **Horizontal**

Power : 120 V.a.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
	9760.000	33.66	peak	7.50	41.16	74.00	100	95	-32.84	
*	12200.000	32.82	peak	13.83	46.65	74.00	100	170	-27.35	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#8

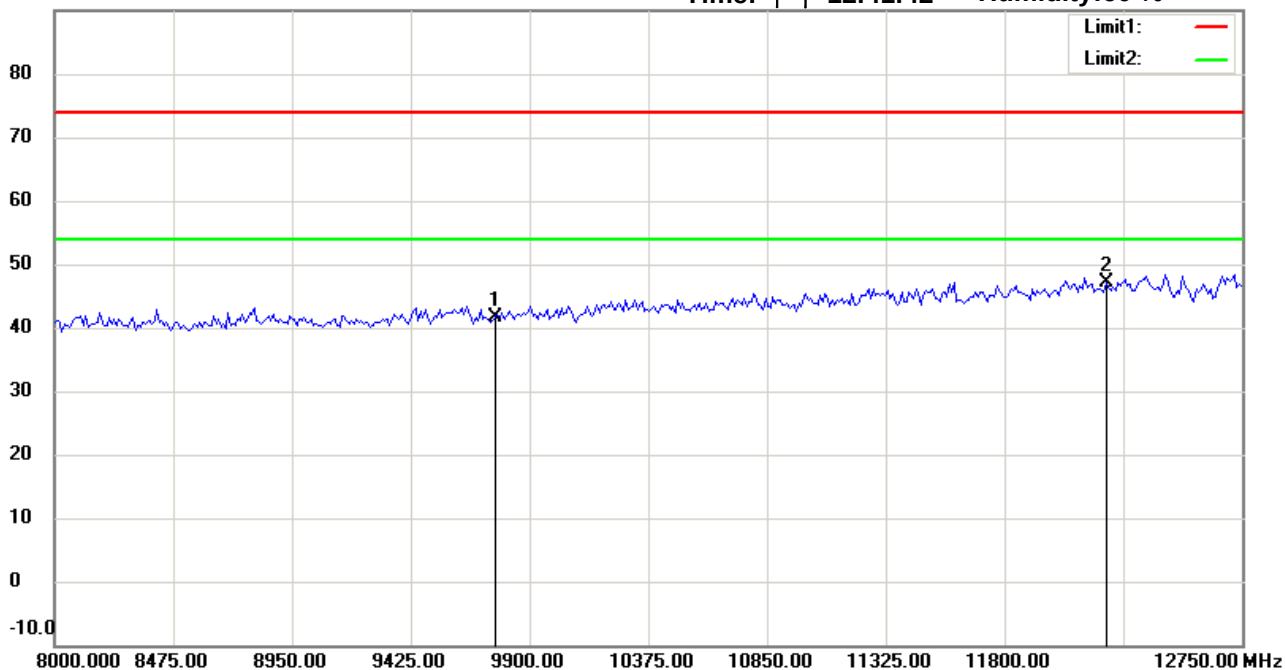
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:41:42

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	9760.000	34.19	peak	7.50	41.69	74.00	100	85	-32.31	
*	12200.000	33.22	peak	13.83	47.05	74.00	100	210	-26.95	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#4

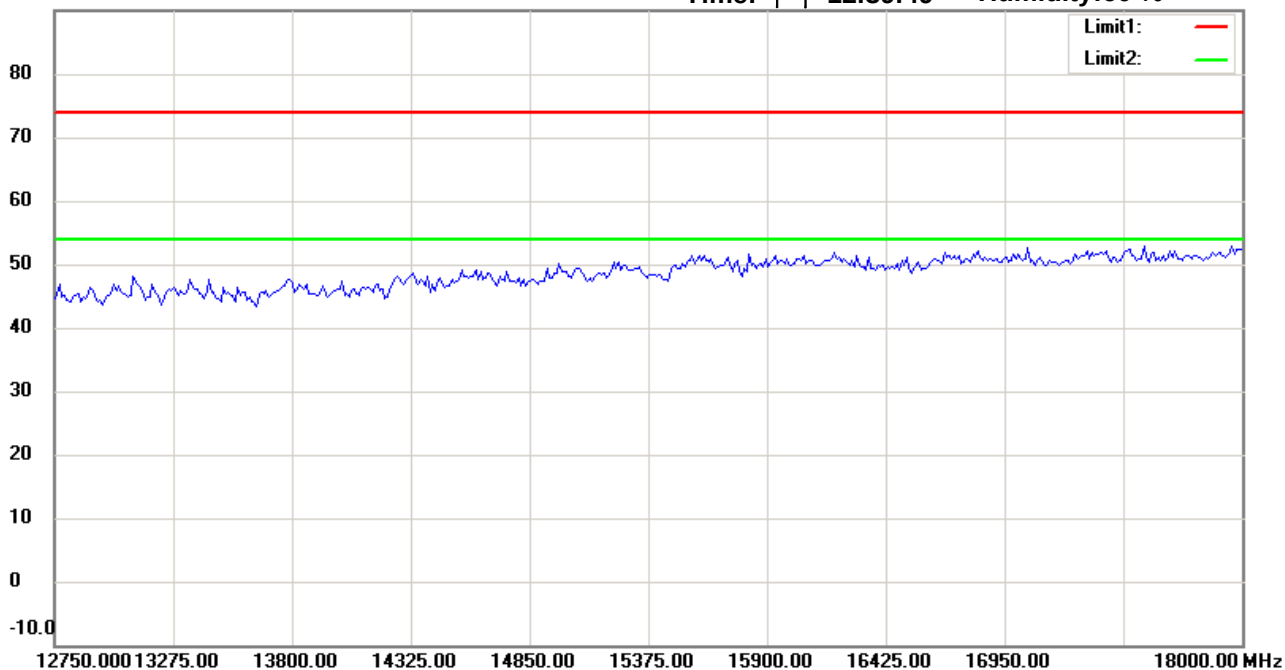
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:39:49

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: Horizontal

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#9

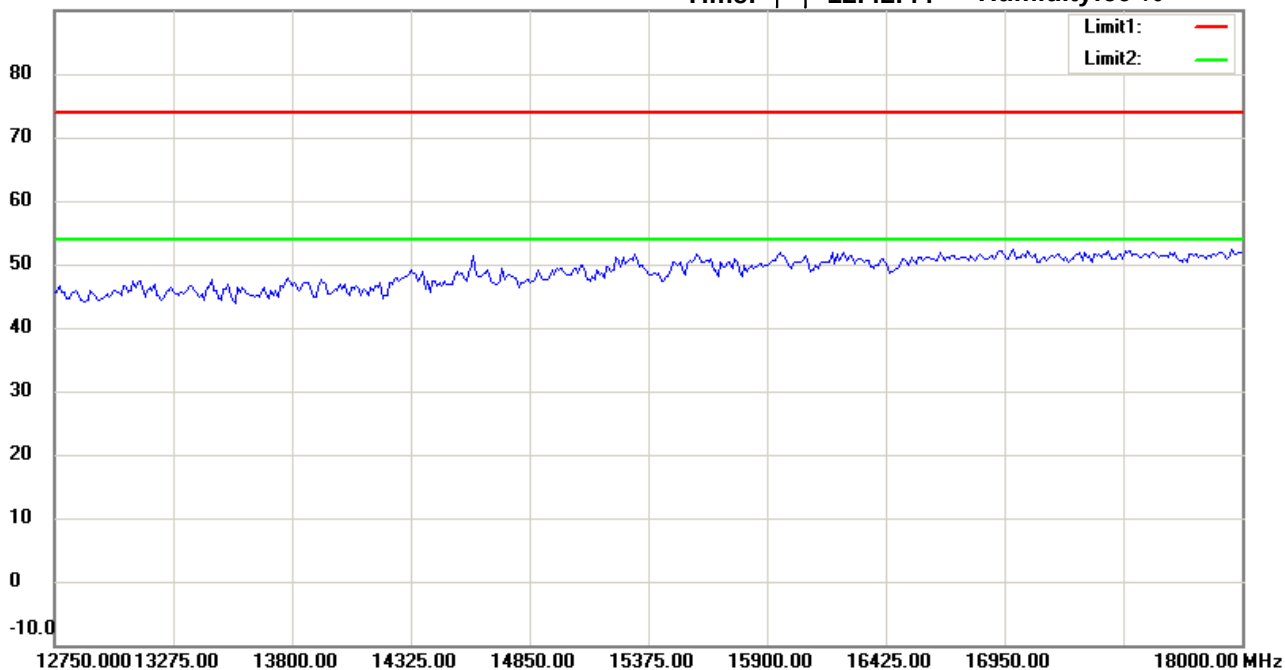
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:42:44

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#5

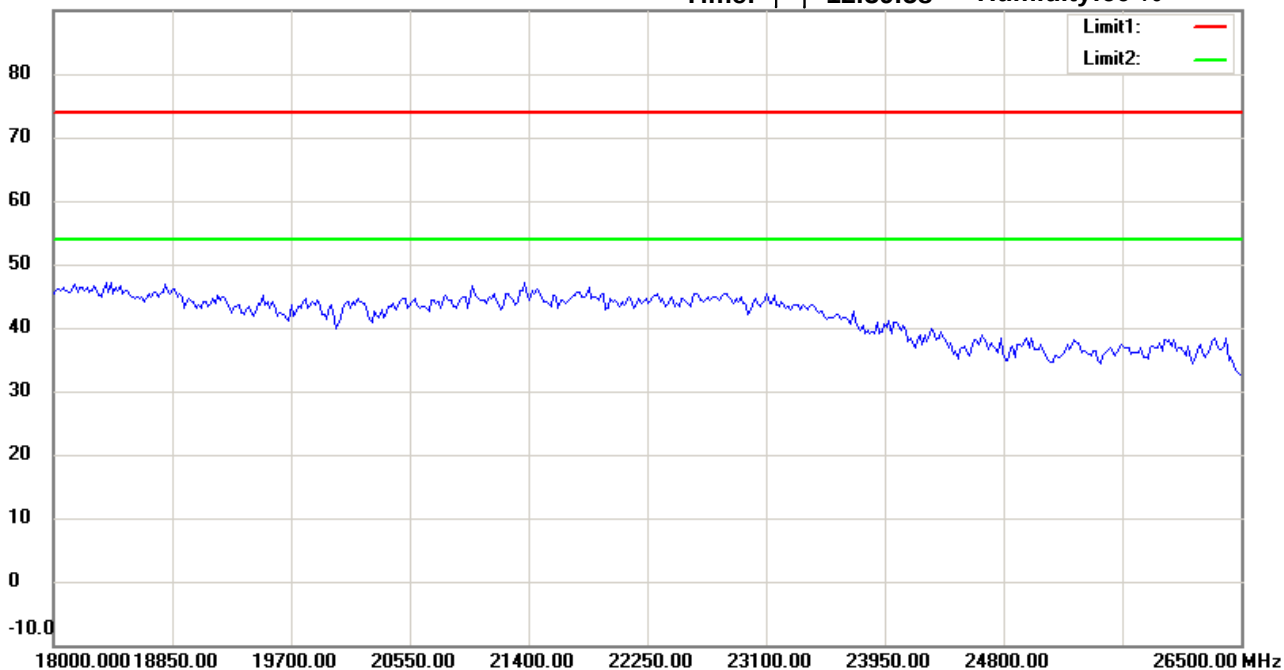
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:39:58

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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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 :#10

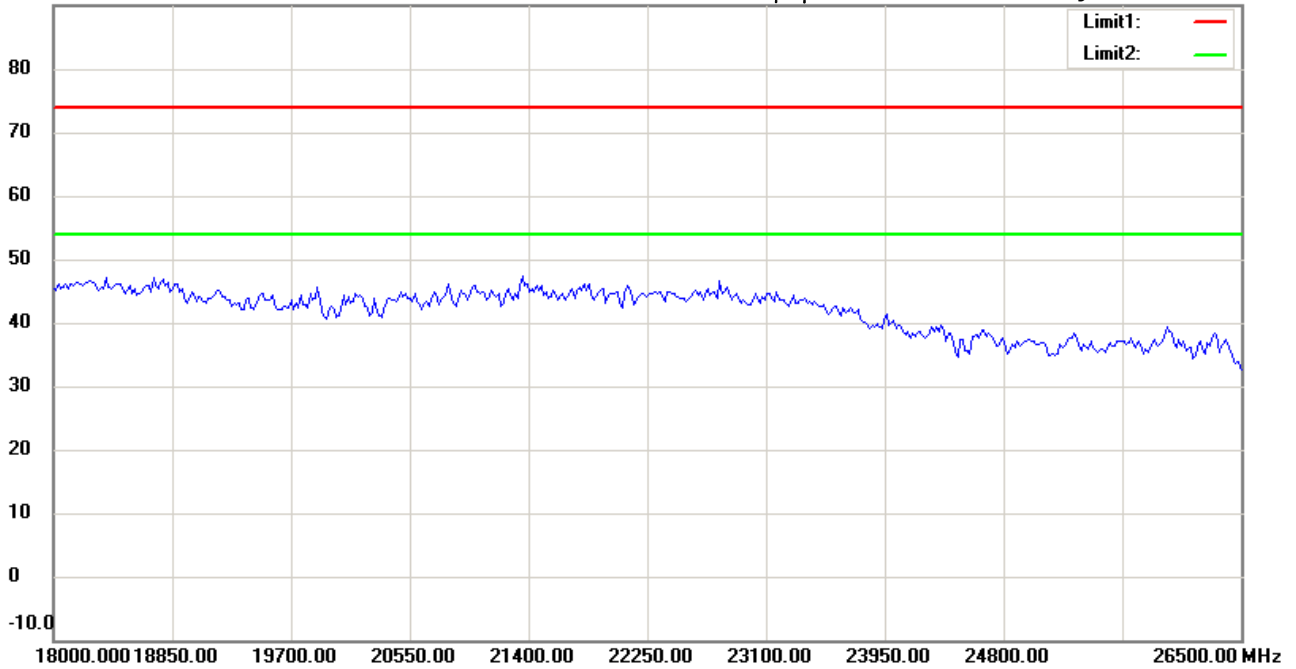
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 12:42:53

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2440MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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*:Maximum data x:Over limit !:over margin



Radiated Emission Measurement

Operator: Leon

File :1

Data :#1

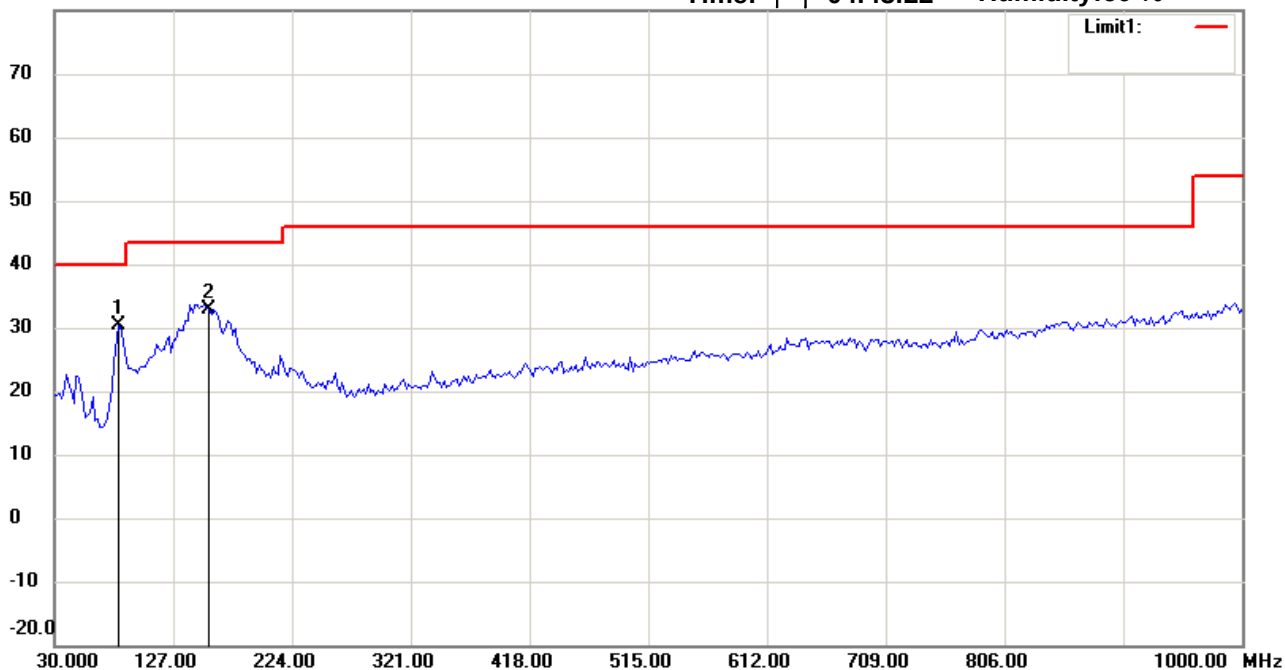
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 04:43:22

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
*	82.4850	43.37	peak	-13.07	30.30	40.00	100	190	-9.70	
	156.3526	41.40	peak	-8.40	33.00	43.50	100	210	-10.50	



Radiated Emission Measurement

Operator: Leon

File :1

Data :#2

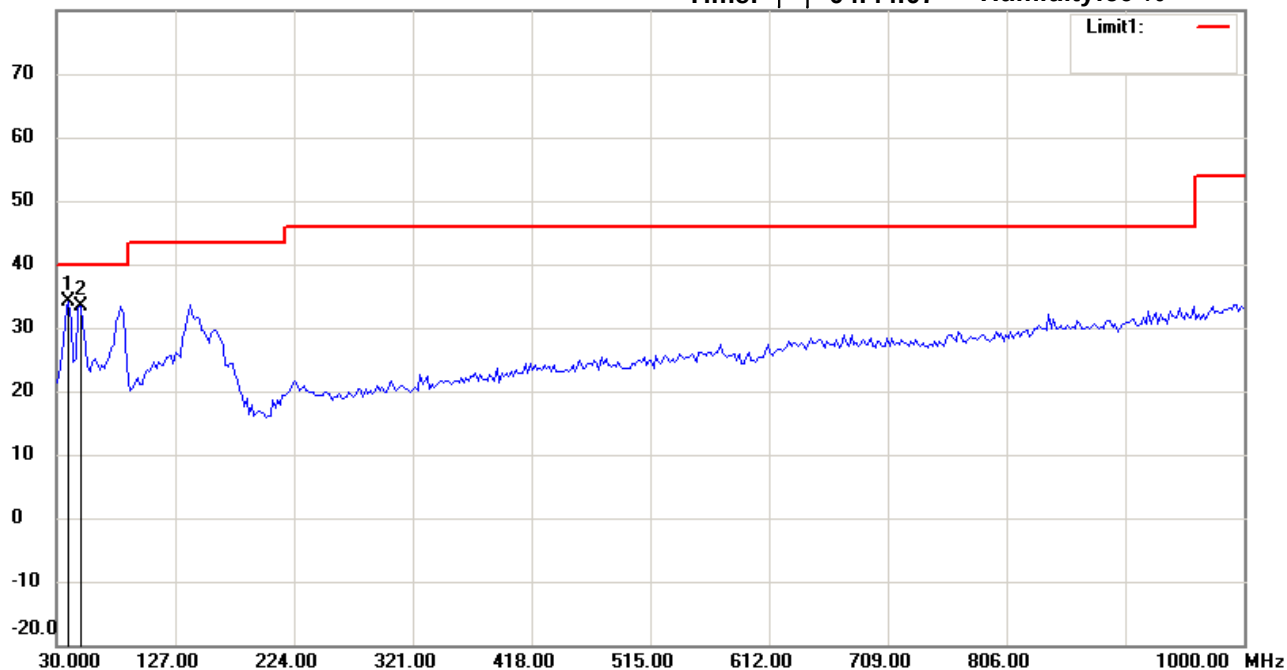
Date: 2016/5/11

Temperature:24 °C

80.0 dBuV/m

Time: 下午 04:44:07

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
*	39.7194	42.34	peak	-8.15	34.19	40.00	100	155	-5.81	
	49.4388	43.25	peak	-9.78	33.47	40.00	100	60	-6.53	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#1

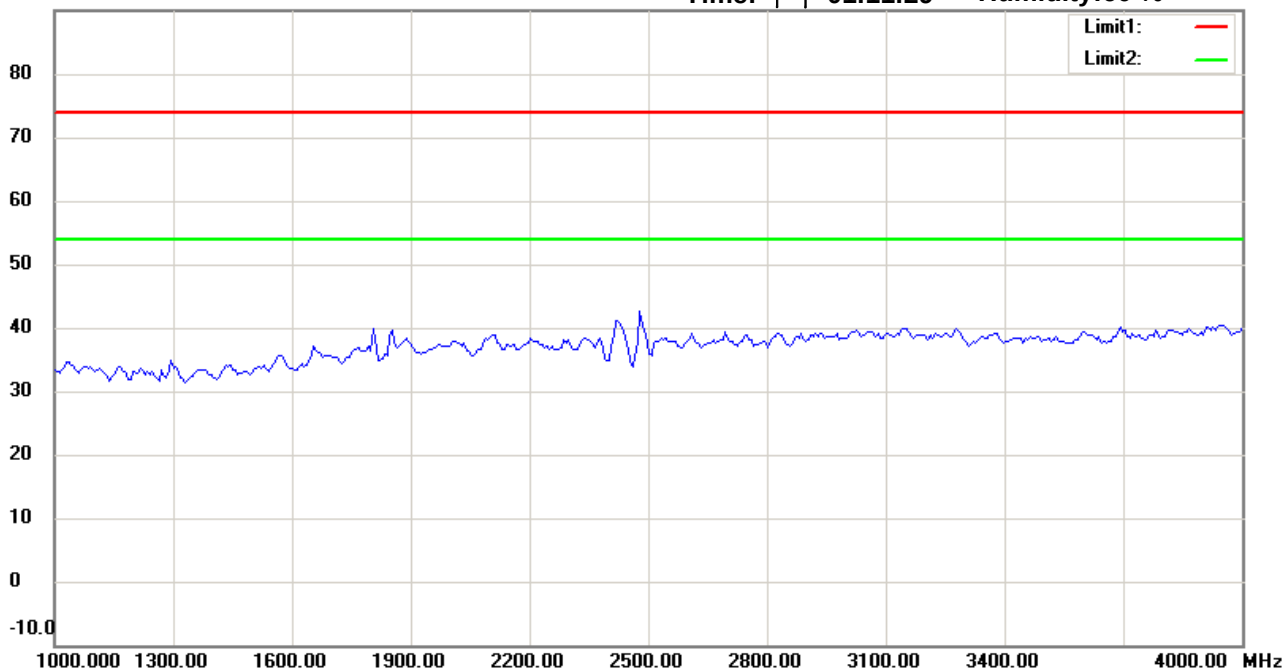
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:11:29

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#6

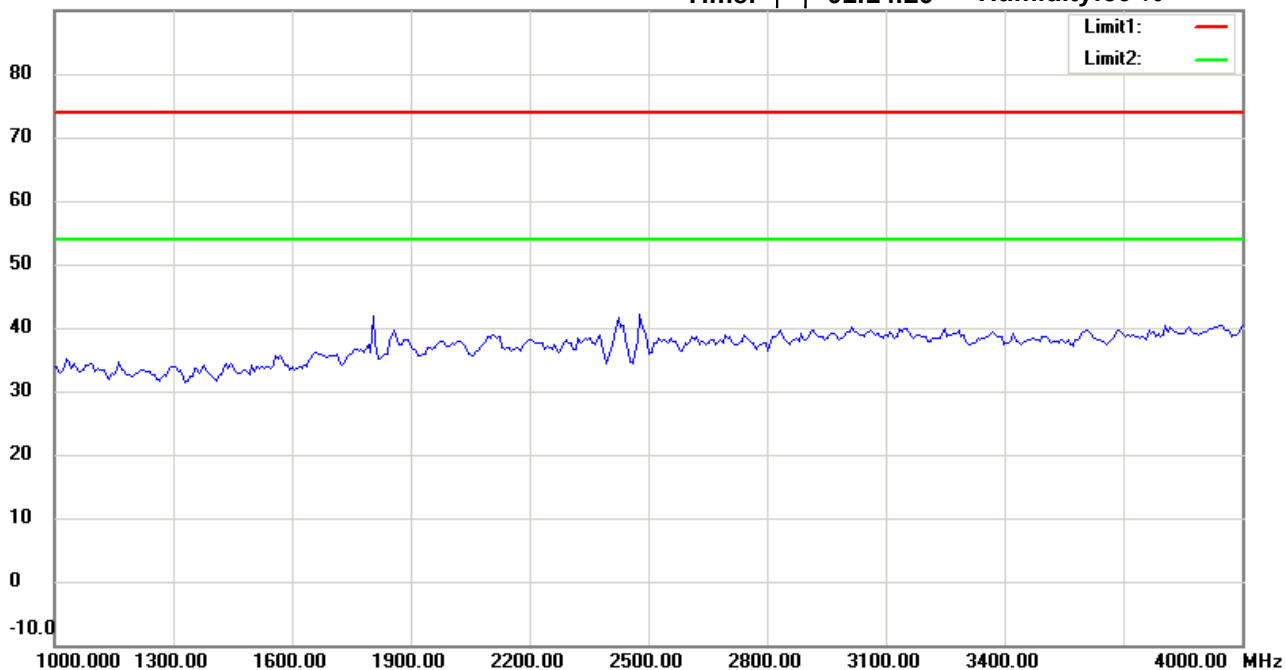
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:14:20

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#2

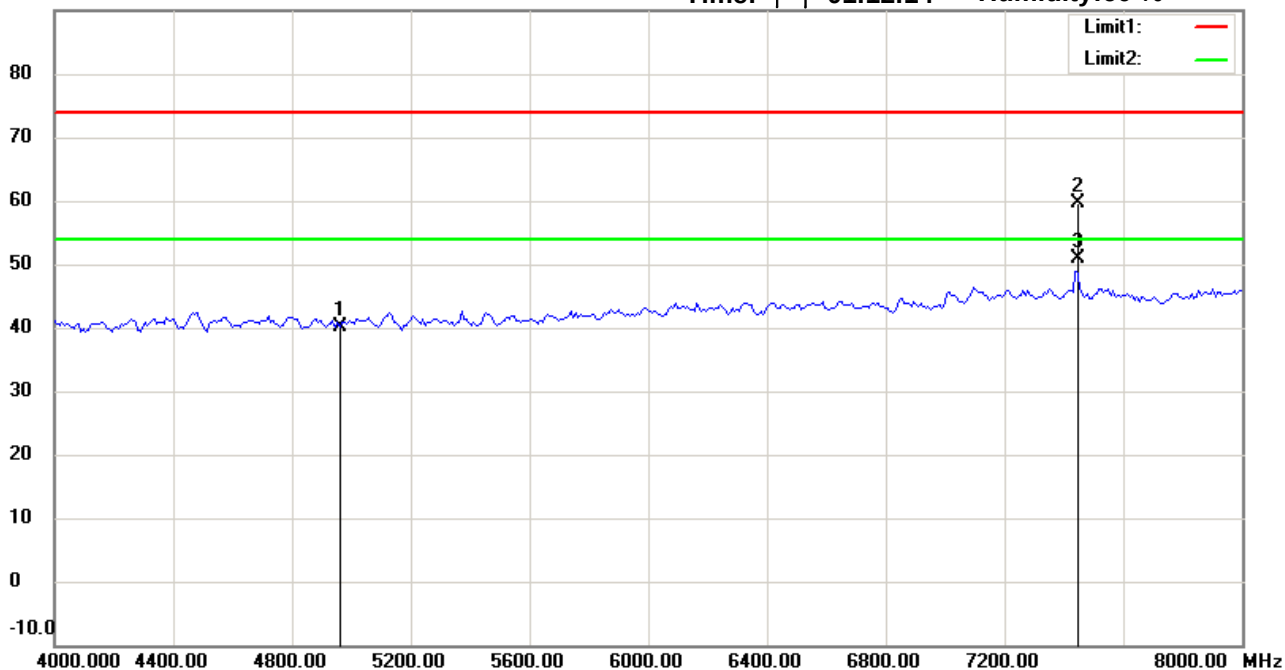
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:12:14

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Horizontal**

Power : 120 V.a.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
	4960.000	40.33	peak	-0.14	40.19	74.00	100	155	-33.81	
	7438.878	54.76	peak	4.89	59.65	74.00	230	240	-14.35	
*	7438.878	45.93	AVG	4.89	50.82	54.00	230	240	-3.18	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#7

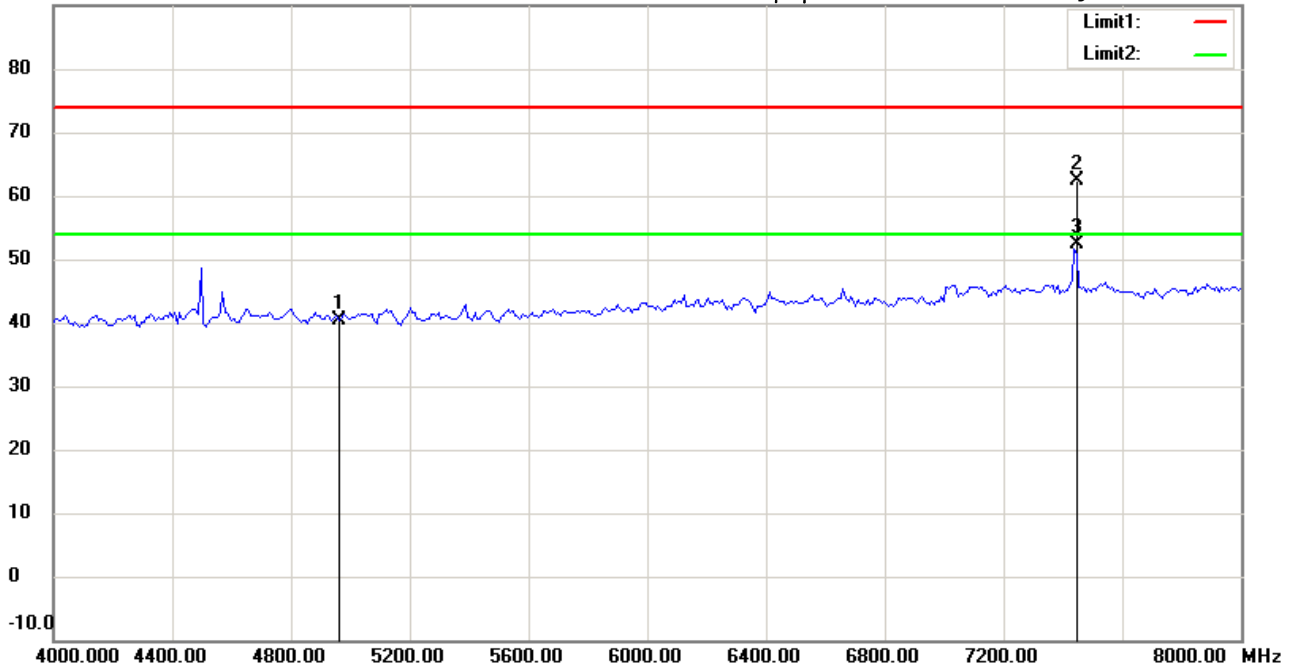
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:15:05

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	4960.000	40.58	peak	-0.14	40.44	74.00	100	235	-33.56	
	7438.878	57.51	peak	4.89	62.40	74.00	207	227	-11.60	
*	7438.878	47.59	AVG	4.89	52.48	54.00	207	227	-1.52	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#3

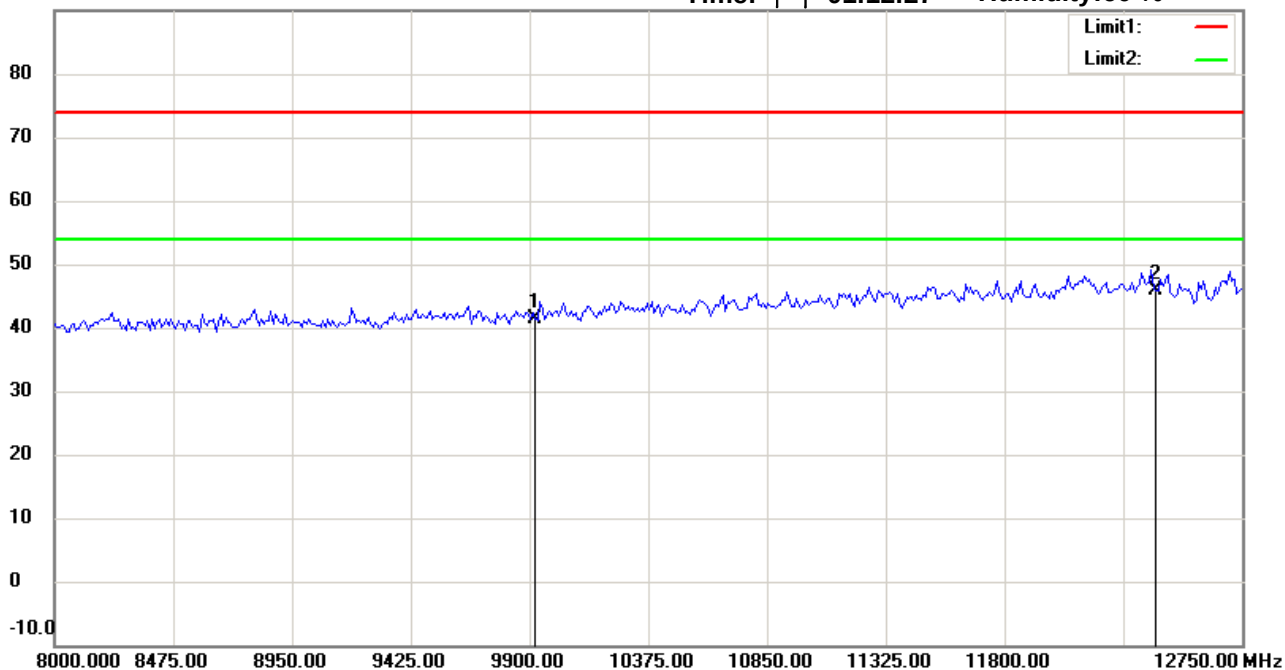
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:12:27

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Horizontal**

Power : 120 V.a.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
	9920.000	33.55	peak	7.83	41.38	74.00	100	95	-32.62	
*	12400.000	31.87	peak	13.99	45.86	74.00	100	160	-28.14	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#8

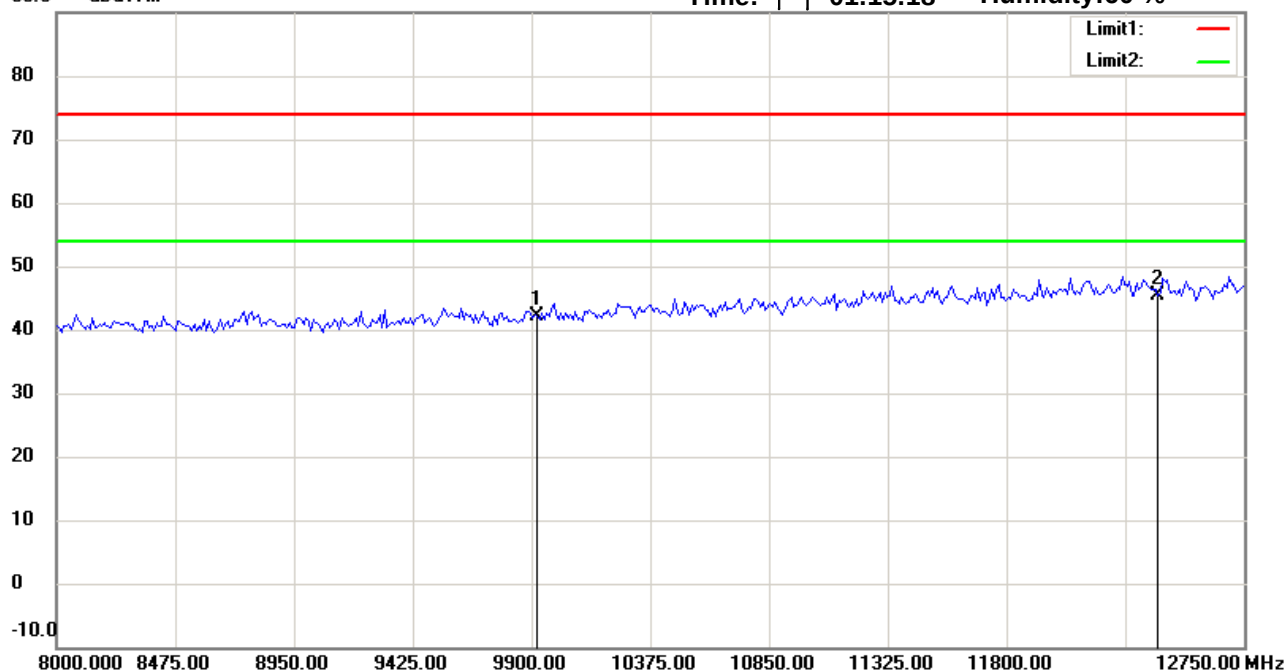
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:15:18

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
	9920.000	34.23	peak	7.83	42.06	74.00	100	245	-31.94	
*	12400.000	31.44	peak	13.99	45.43	74.00	100	245	-28.57	



Radiated Emission Measurement

Operator: Leon

File :3

Data :#4

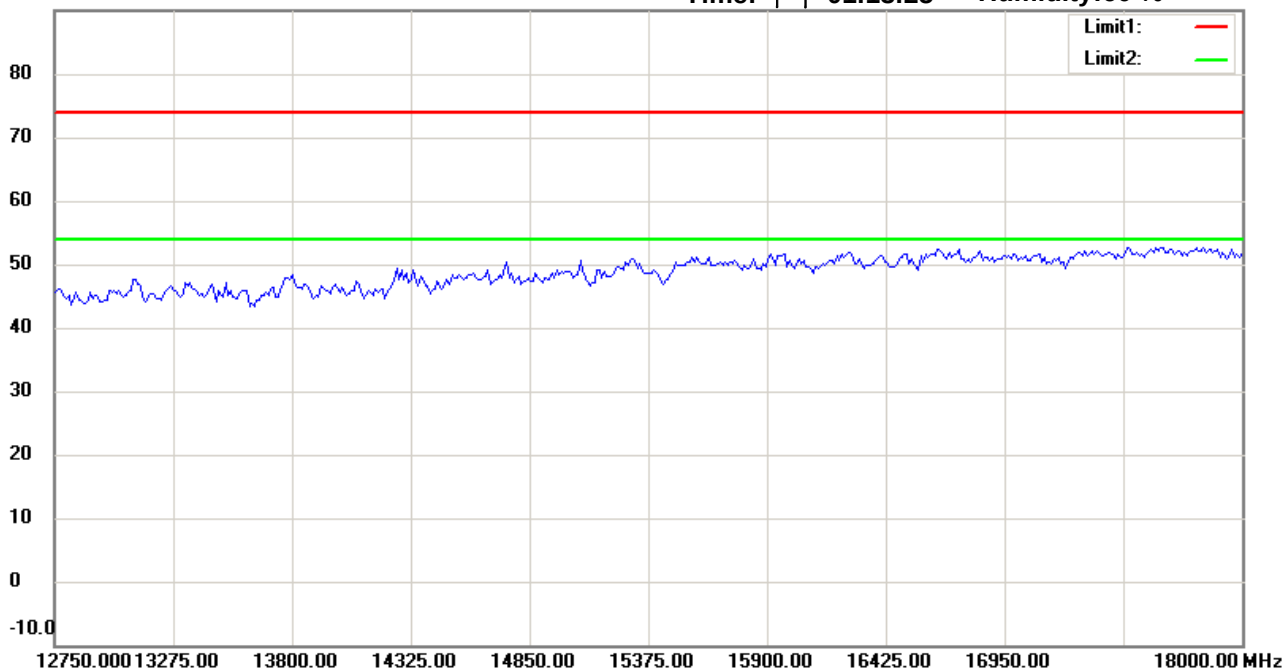
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:13:25

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#9

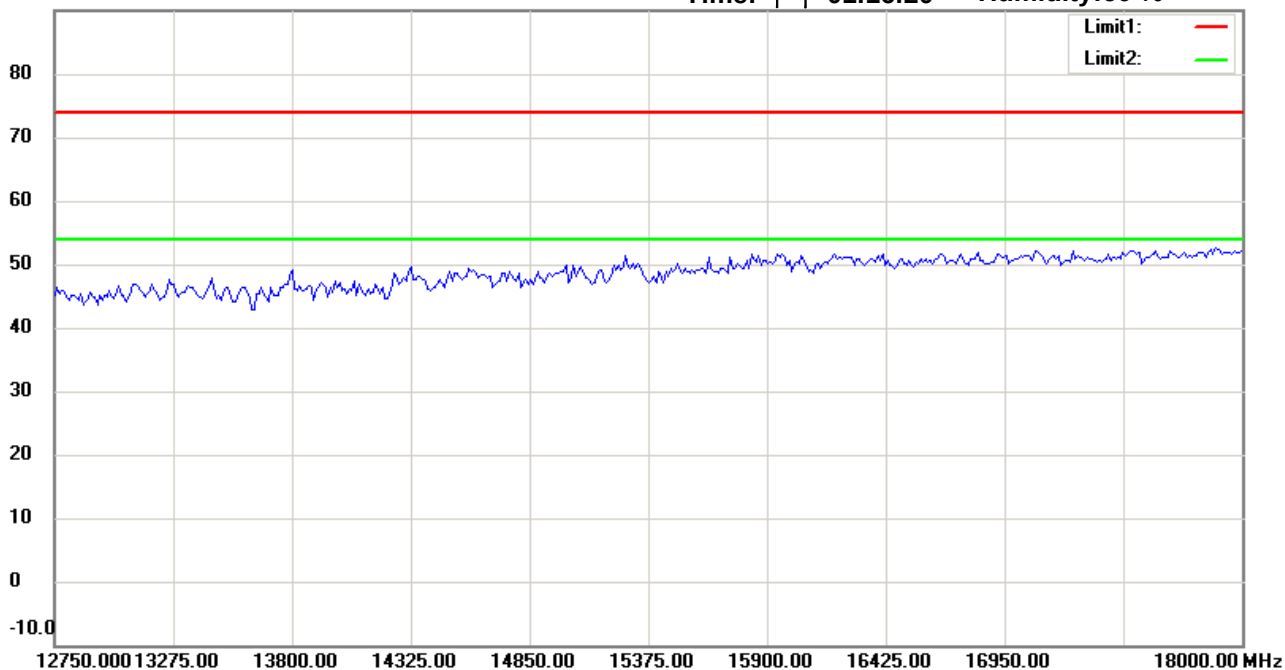
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:16:20

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#5

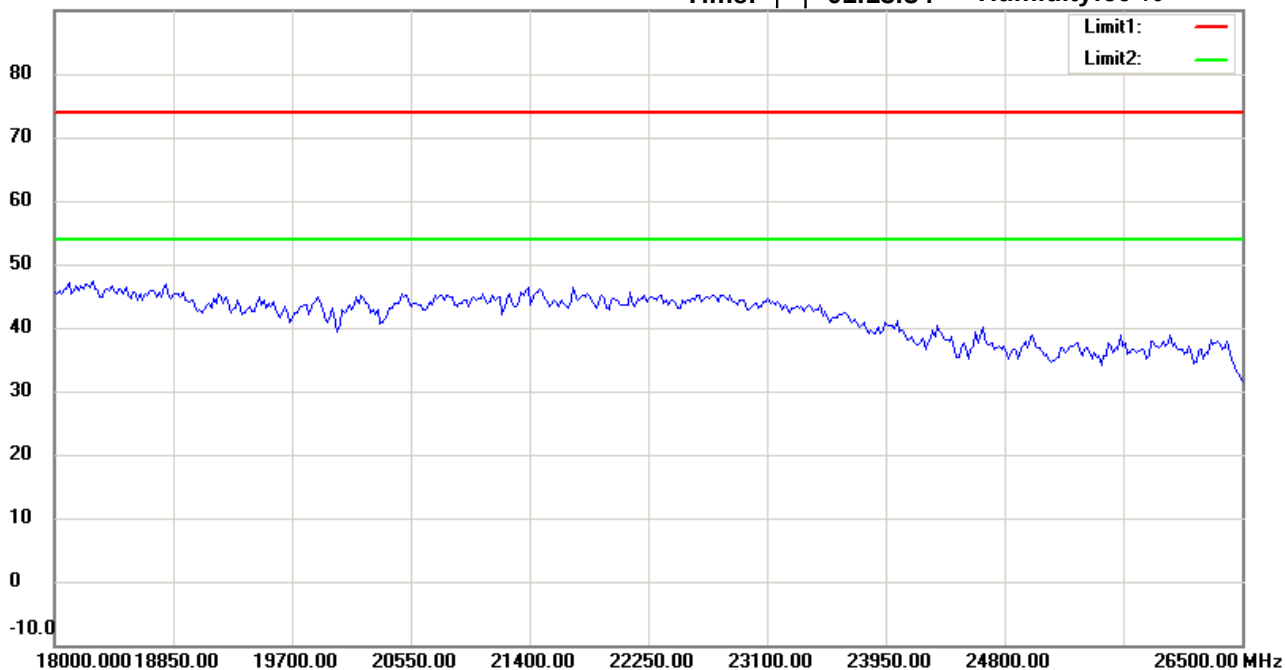
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:13:34

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: *Horizontal*

Power : 120 V.a.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
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Radiated Emission Measurement

Operator: Leon

File :3

Data :#10

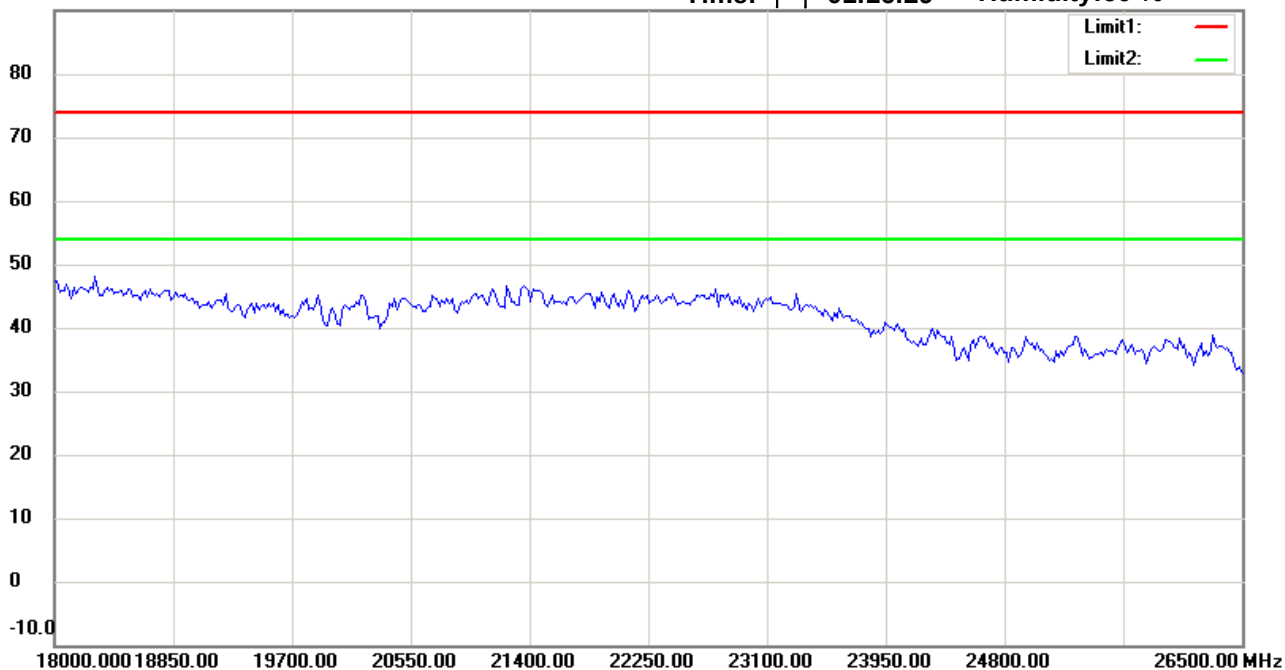
Date: 2016/5/11

Temperature:24 °C

90.0 dBuV/m

Time: 下午 01:16:29

Humidity:60 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M21604-15784

M/N:

Test Mode : TX 2480MHz

Note :

Polarization: **Vertical**

Power : 120 V.a.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
-----	-----------------	----------------	----------	---------------------	-----------------	----------------	--------------	----------------	-------------	---------