

47 CFR PART 15 SUBPART C TEST REPORT

for

Home Security Gateway

Model No.: HSGWxx-xxxxx-xxxxx Series

(x=0~9, A~Z or blank)

FCC ID: GX9HSGW3GDT32

of

Applicant: CLIMAX TECHNOLOGY CO., LTD.

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

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: TW1477, TW0020, TW1072

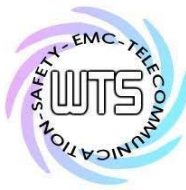
Industry Canada filed test laboratory Reg. No. 20037

A2LA Accredited No.: 2732.01



Report No.: W6M22003-19782-C-9

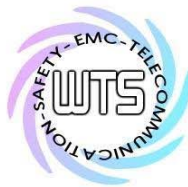
6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
TEL: 886-2-66068877 FAX: 886-2-66068879 E-mail: wtst@wtst-lab.com



Registration number: W6M22003-19782-C-9
FCC ID: GX9HSGW3GDT32

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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.

Tester:

July 7, 2020

Spencer Yang

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

July 7, 2020

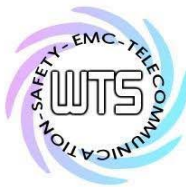
Kevin Wang

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: 2730.01

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

Industry Canada filed test laboratory Reg. No. 20037

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

Name: ./.

Accredited number: ./.

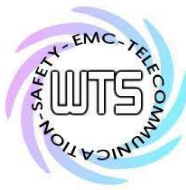
Street: ./.

Town: ./.

Country: ./.

Telephone: ./.

Fax: ./.



Worldwide Testing Services(Taiwan) Co., Ltd.

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1.3 Details of approval holder

Name: CLIMAX TECHNOLOGY CO., LTD.
Street: No. 258, Sinhu 2nd Rd., Neihu District
City: Taipei City 114
Country: Taiwan (R.O.C.)
Telephone: +886-2-2794-0001
Fax: +886-2-2792-6618

1.4 Application details

Date of receipt of test item: May 13, 2020
Date of test: from May 14, 2020 to July 3, 2020

1.5 General information of Test item

Type of test item: Home Security Gateway
Model Number: HSGWxx-xxxxxx-xxxxxx Series (x=0~9, A~Z or blank)
Multi-listing model number: ./.
Photos: see Annex

Technical data

Frequency band: 902-928 MHz
Operation Frequency: (1)908.41 MHz (2)916 MHz
Operation modes: Duplex
Modulation Type: FSK
Antenna type: PCB Antenna
Power supply: Adaptor (I/P: 100-240V~ 50/60Hz, 0.4A; O/P: 12V, 1A)
Battery 7.2V, 600mAh*6 AAA

Manufacturer: (if different from applicant)

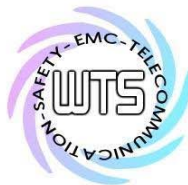
Name: ./.
Street: ./.
Town: ./.
Country: ./.
Additional information: ./.

1.6 Test standards

Technical standard : 47 CFR PART 15 SUBPART C § 15.249 (2019-10)

Special Statement

1. This test report is valid in connection to the model has been tested, any modification to the product which is different from the test model will avoid the certification of the test report.
2. This test report shall always be duplicated in full pages unless the written approval of the testing laboratory is obtained.
3. The x in model number is representing different case shape, case colors, led mask color, and control ID.
4. The model number of EUT is HSGW-G8-DT32. This model does not contain logo.



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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 were ascertained in the course of the tests performed. ☐

2.2 Test environment

Relative humidity content: 20 ... 75 %

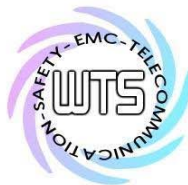
Air pressure: 86 ... 103 kPa

Details Power supply: Adaptor (I/P: 100-240V~ 50/60Hz, 0.4A; O/P: 12V, 1A)
Battery 7.2V, 600mAh*6 AAA

Extreme conditions parameters: Not required

Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission	Expanded Uncertainty : AMN : 1.06 dB Voltage probe : 1.12 dB
Estimation Result of Uncertainty of Radiated Emission(3M)	Expanded Uncertainty : 0.009-30 MHz : 1.88 dB 30-1000 MHz : 2.79 dB 1-18 GHz : 2.36 dB 18-40 GHz : 1.55 dB
Estimation Result of Uncertainty of Conducted Output Power Measurement Output power	Expanded Uncertainty : 1.14 dB
Estimation Result of Uncertainty of Band Edge Measurement	Expanded Uncertainty : 1.01 dBc

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



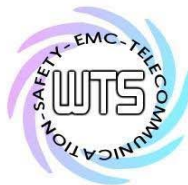
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2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2020/6/11	2021/6/10
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2019/11/1	2020/10/31
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2019/9/24	2020/9/23
ETSTW-CE 008	HF-EICHLITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2019/7/23	2020/7/22
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2019/10/3	2020/10/2
ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2019/7/18	2020/7/17
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2020/6/12	2021/6/11
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2020/5/26	2021/5/25
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function Test	
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function Test	
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2019/7/25	2020/7/24
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2019/7/22	2020/7/21
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2020/4/22	2021/4/21
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2020/2/18	2021/2/17
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2020/5/8	2021/5/7
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2020/5/8	2021/5/7
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2020/2/20	2021/2/19
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2020/2/20	2021/2/19
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2020/2/20	2021/2/19
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2020/3/6	2021/3/5
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2020/2/20	2021/2/19
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2020/5/8	2021/5/7
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	2019/9/23	2020/9/22
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2019/9/18	2020/9/17
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2020/5/22	2021/5/21
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2020/2/20	2021/2/19

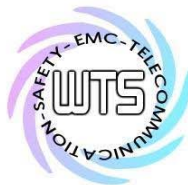


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ETSTW-RE 112	AC POWER SOURCE	TFC-1005	T-0A023536	T-Power	Function test	
ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2020/1/13	2021/1/12
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Function test	
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2020/6/11	2021/6/10
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2019/8/8	2020/8/7
ETSTW-RE 126	5GHz Notch filter	5NSL12-5800/E221.3-O/O	1	K&L Microwave	2019/8/8	2020/8/7
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2020/2/20	2021/2/19
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2019/8/8	2020/8/7
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2019/8/8	2020/8/7
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2020/5/8	2021/5/7
ETSTW-RE 147	Bi-log Hybrid Antenna	MCTD 2786B	BLB16M04005	ETC	2020/4/9	2021/4/8
ETSTW-RF 002	Electromagnetic field probe	LF-30	K-0007	STT	2020/6/9	2021/6/8
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2020/5/21	2021/5/20
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2020/3/9	2021/3/8
ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2020/4/20	2021/4/19
ETSTW-GSM 004	Wideband Radio Communication Tester	CMW500	128092	R&S	2019/10/25	2020/10/24
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40 /12+9SS	3	WI	2020/1/13	2021/1/12
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2020/1/13	2021/1/12
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2020/1/13	2021/1/12
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2020/1/13	2021/1/12
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2019/9/12	2020/9/11
ETSTW-GSM 024	Radio Communication Analyzer	MT8821C	None	Anritsu	2020/3/27	2021/3/26
ETSTW-GSM 025	Band Reject Filter	BRM19835	001	Micro-Tronics	2019/8/9	2020/8/8
ETSTW-Cable 011	SMA to N type Cable	RGU-400	None	THERMAX	Pre-test Use NCR	
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2020/2/20	2021/2/19
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2020/2/20	2021/2/19
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2020/2/20	2021/2/19
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2020/2/20	2021/2/19
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2020/7/1	2021/6/30
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2020/5/8	2021/5/7
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2019/9/18	2020/9/17
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2019/9/18	2020/9/17
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S Cable 9)	279067	HUBER+SUHNER	2020/2/20	2021/2/19
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2020/5/8	2021/5/7
ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2020/7/3	2021/7/2

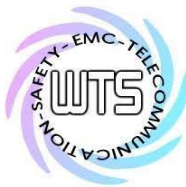


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ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2020/6/5	2021/6/4
ETSTW-Cable 064	Microwave Cable	SUCOFLEX 104	MY28891	HUBER+SUHNER	2020/5/8	2021/5/7
ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM-NM-25000	170239	EMCI	2020/6/5	2021/6/4
ETSTW-Cable 072	SMA type cable (8m)	SUCOFLEX 104	805800/4	HUBER+SUHNER	2020/5/8	2021/5/7
ETSTW-Cable 074	SMA type cable (2m)	SUCOFLEX 104	802563/4	HUBER+SUHNER	2020/5/8	2021/5/7
WTSTW-SW 002	EMI TEST SOFTWARE	EZ EMC	None	Farad	Version ETS-03A1	
WTSTW-SW 006	EMI TEST SOFTWARE	e3	None	AUDIX	Version 9.161014	
WTSTW-SW 008	Signal studio	Agilent	None	AUDIX	Version 2.0.0.1	
ETSTW-TH 001	Thermohygrometer	608-H1	45204316	Testo	2019/9/9	2020/9/8
ETSTW-TH 002	Thermohygrometer	608-H1	45204317	Testo	2019/9/9	2020/9/8



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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:

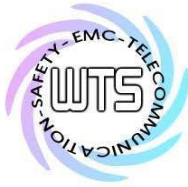
Freq (MHz)	METER READING + ACF + CABLE LOSS (to the receiver) = FS
33	20 dBμV + 10.36 dB + 6 dB = 36.36 dBμV/m @3m

ANSI STANDARD C63.10-2013 6.2.2 MEASUREMENT PROCEDURES: The EUT was placed on a table 80 cm height and with dimensions of 1m by 1.5m (non metallic table). The EUT was placed in the centre of the table. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to 10th harmonic of the fundamental.

Peak readings were taken in three (3) orthogonal planes and the highest readings.

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.

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.

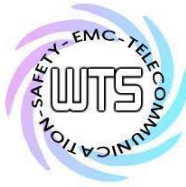


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3 Test results (enclosure)

Test case	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.249 (a)	☒	☒	☐
Spurious Emissions radiated – Transmitter operating	15.249 (e)	☒	☒	☐
Spurious Emissions conducted – Transmitter operating	15.249 (e)	☐	☐	☐
Radiated Emission from Digital Part	15.109	☐	☐	☐
Out of Band Spurious Emission, Band edge-Transmitter operating	15.249 (e)	☒	☒	☐
Occupied Bandwidth	15.249 (e)	☒	☒	☐
Power Line Conducted Emission	15.207	☒	☒	☐

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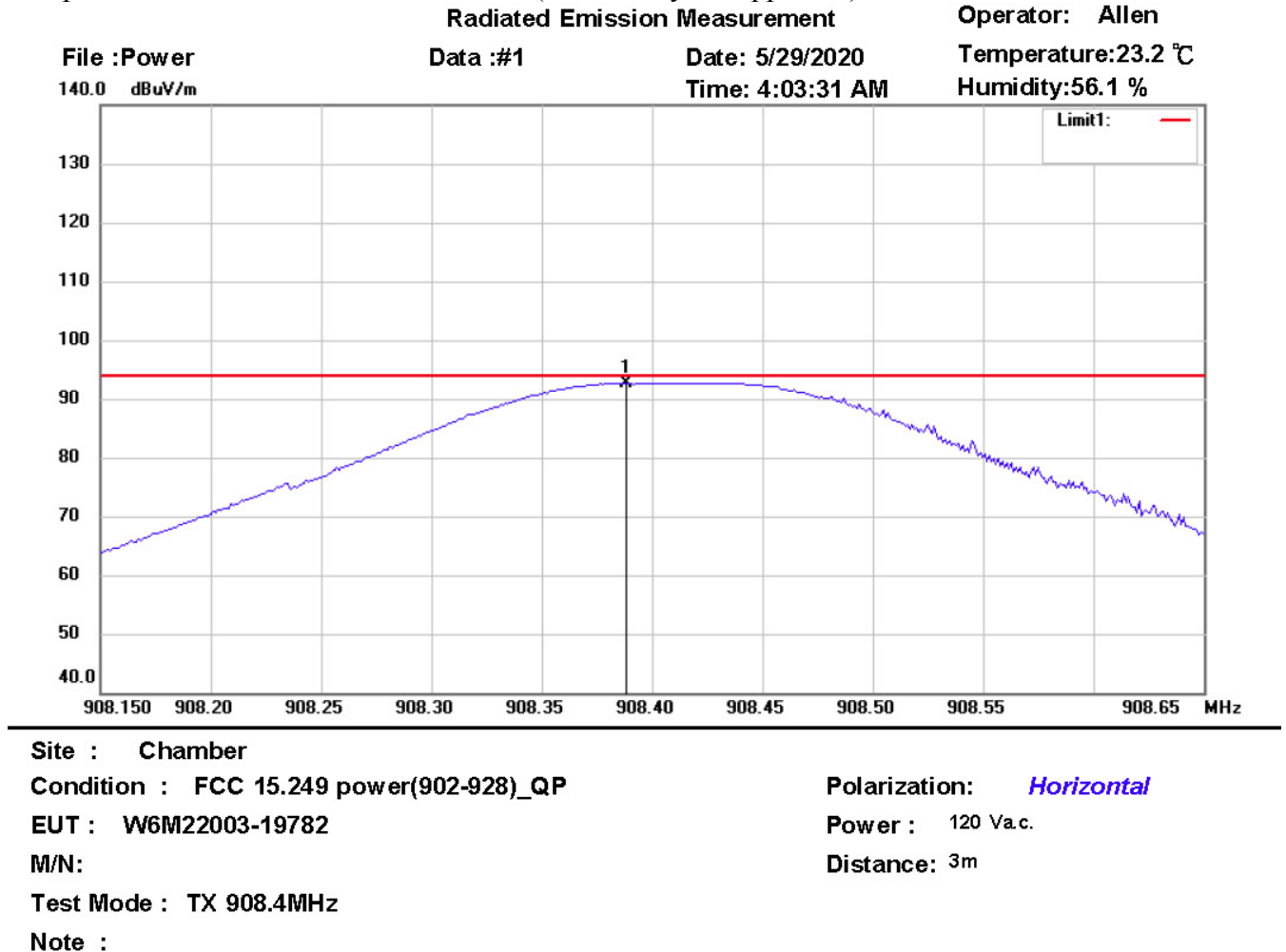
FCC ID: GX9HSGW3GDT32

3.1 Peak Output Power (transmitter)

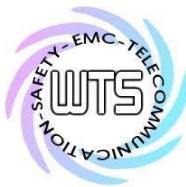
FCC Rule: 15.249 (b)

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).



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
*	908.3885	61.61	QP	31.14	92.75	94.00	100	85	-1.25	



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Radiated Emission Measurement

Operator: Allen

File :Power

Data :#2

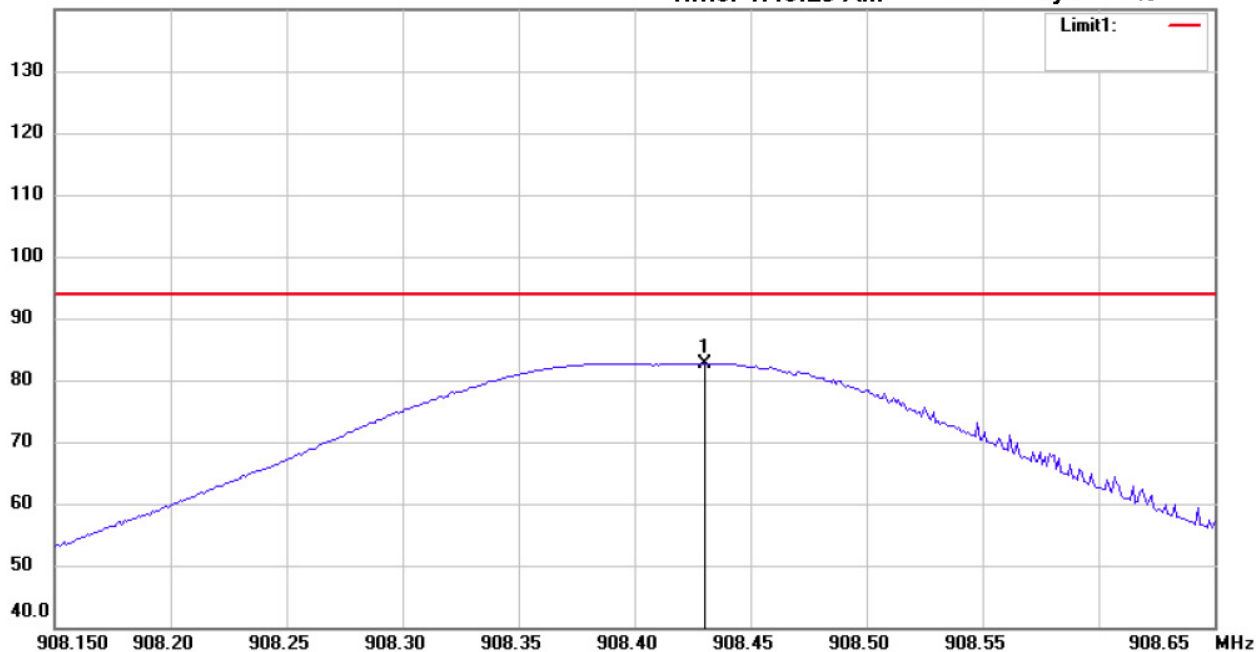
Date: 5/29/2020

Temperature:23.2 °C

140.0 dBuV/m

Time: 4:10:25 AM

Humidity:56.1 %



Site : Chamber

Condition : FCC 15.249 power(902-928)_QP

Polarization: *Vertical*

EUT : W6M22003-19782

Power : 120 V.a.c.

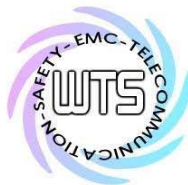
M/N:

Distance: 3m

Test Mode : TX 908.4MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	908.4306	51.50	QP	31.14	82.64	94.00	100	185	-11.36	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22003-19782-C-9

FCC ID: GX9HSGW3GDT32

Radiated Emission Measurement

Operator: Allen

File :power

Data :#1

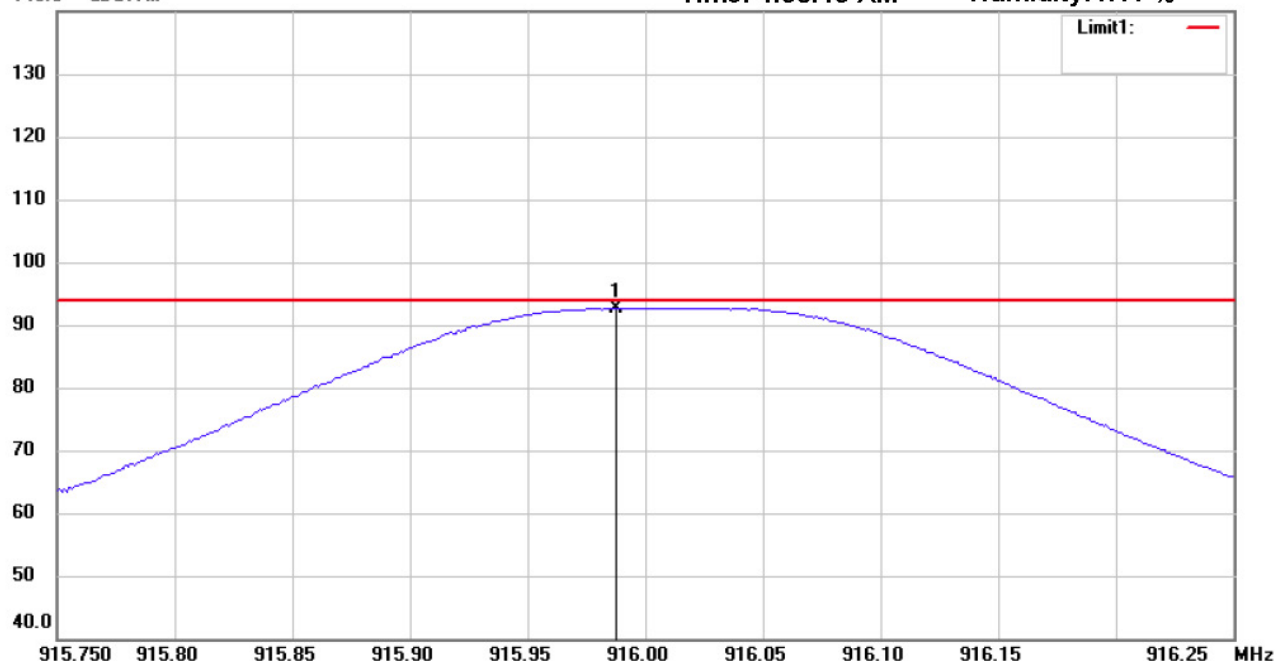
Date: 6/13/2020

Temperature:26.2 °C

140.0 dBuV/m

Time: 1:38:43 AM

Humidity:47.4 %



Site : Chamber

Condition : FCC 15.249 power(902-928)_QP

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

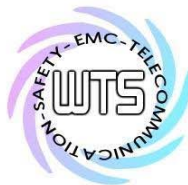
Note :

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
*	915.9873	61.32	QP	31.28	92.60	94.00	100	65	-1.40	



Registration number: W6M22003-19782-C-9

FCC ID: GX9HSGW3GDT32

Radiated Emission Measurement

Operator: Allen

File :power

Data :#2

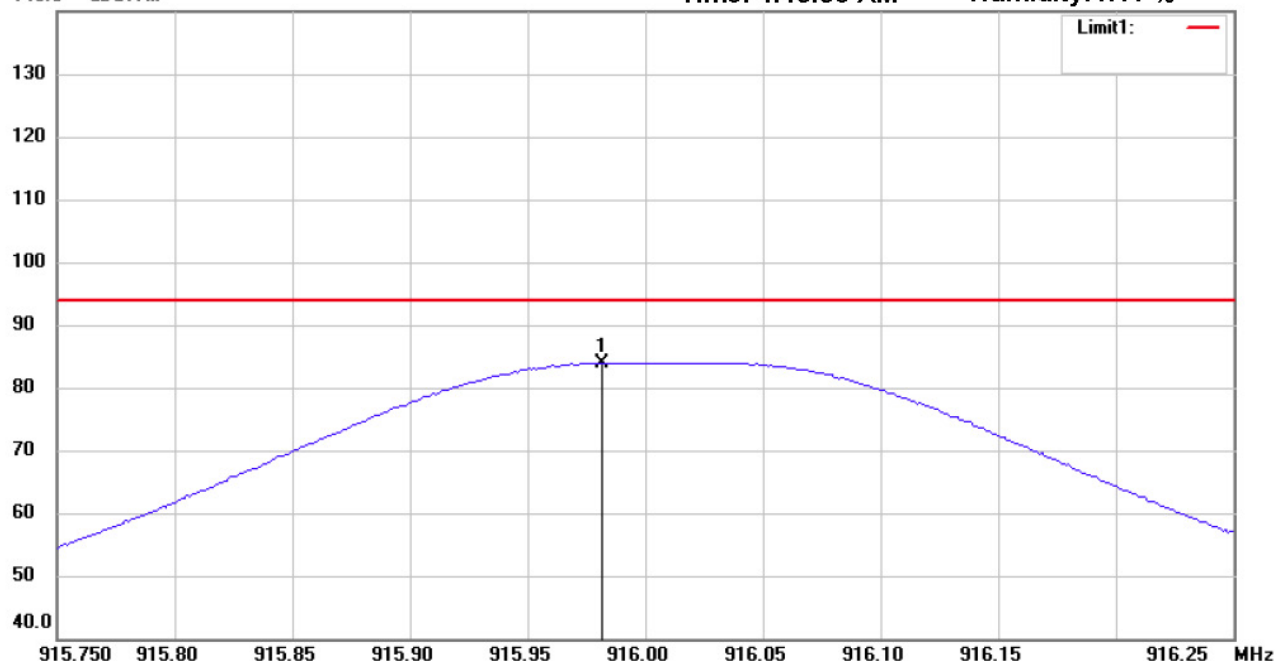
Date: 6/13/2020

Temperature:26.2 °C

140.0 dBuV/m

Time: 1:45:30 AM

Humidity:47.4 %



Site : Chamber

Condition : FCC 15.249 power(902-928)_QP

Polarization: *Vertical*

EUT : W6M22003-19782

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 916MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	915.9814	52.68	QP	31.28	83.96	94.00	110	170	-10.04	

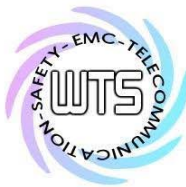
Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 062, ETSTW-RE 142, ETSTW-RE 147

3.2 Equivalent isotropic radiated power

Because using an permanent antenna there are no deviations from the radiated test results according 3.1.

3.3 RF Exposure Compliance Requirements

Not applicable for this EUT for the low power level.



Registration number: W6M22003-19782-C-9

FCC ID: GX9HSGW3GDT32

3.4 Out of Band Radiated Emissions

FCC Rule: 15.249 (d)(e), 15.35(b)

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

For frequency above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.

Limits:

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	46.5
Above 960	500	54.0

For frequencies above 1 GHz (Peak measurements).

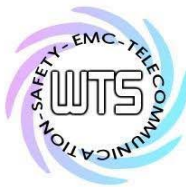
Limit + 20 dB $54.0 \text{ dB}\mu\text{V/m} + 20 \text{ dB} = 74 \text{ dB}\mu\text{V/m}$

Or

Must be attenuated at least 50dB below the level of fundament

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

Explanation: Please see attached diagram as appendix.



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22003-19782-C-9

FCC ID: GX9HSGW3GDT32

3.5 Spurious emission (tx)

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

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

For frequencies above 1000 MHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.

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

The peak and average spurious emission plots was measured with the average limits.
The critical peak value listed in the table agree with the above calculated limits.

Summary table with radiated data of the test plots

HSGWxx-xxxxx-xxxxx Series

Model: (x=0~9, A~Z or blank)

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

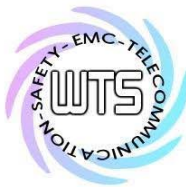
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

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. Up Line: PK Limit Line, Down Line: Ave Limit Line.**
- 6. See attached diagrams in appendix.**

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

Test equipment used: ETSTW-RE 004, ETSTW-RE 062, ETSTW-RE 142, ETSTW-RE 147, ETSTW-RE 030, ETSTW-RE 088, ETSTW-RE 018



Registration number: W6M22003-19782-C-9

FCC ID: GX9HSGW3GDT32

3.6 Radiated Emissions from Receiver Part

Summary table with radiated data of the test plots

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

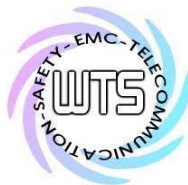
Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Field Strength (dBmicrovolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

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.**

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

Explanation: The test results are listed in the separated test report no.: W6M22003-19782-P-15B.

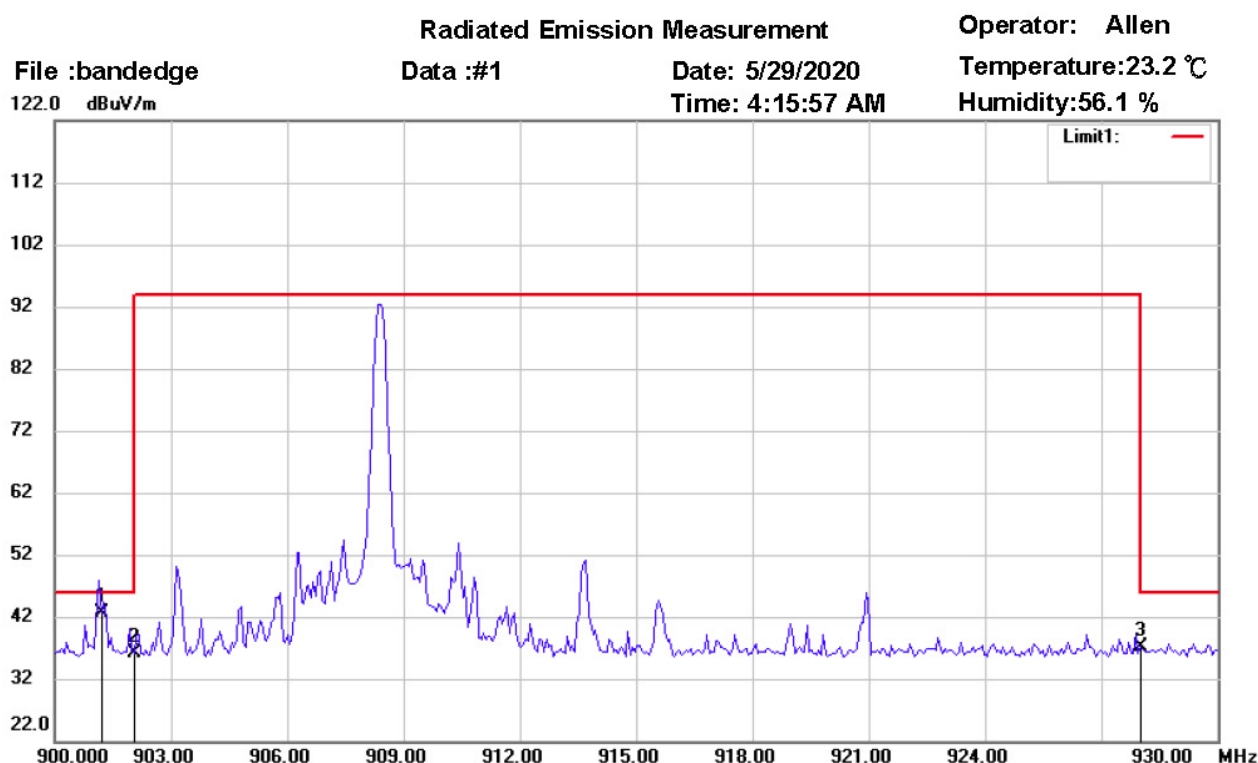


Registration number: W6M22003-19782-C-9

FCC ID: GX9HSGW3GDT32

3.7 Radiated Emission on the band edge

From the following plots, they show that the fundamental emissions are confined in the specified band and they are at least 50 dB below the carrier level at band edge (2400 and 2483.5 MHz). It meets the requirement of section 15.249(d).



Site : Chamber

Condition : FCC 15.249 Bandedge(902-928)_QP

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

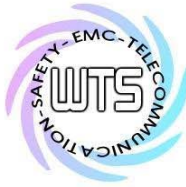
Note :

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
*	901.1774	11.63	QP	31.01	42.64	46.00	100	85	-3.36	
	902.0000	5.22	QP	31.03	36.25	46.00	100	85	-9.75	
	928.0000	5.74	QP	31.49	37.23	46.00	100	85	-8.77	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22003-19782-C-9
FCC ID: GX9HSGW3GDT32

Radiated Emission Measurement

Operator: Allen

File :bandedge

Data :#2

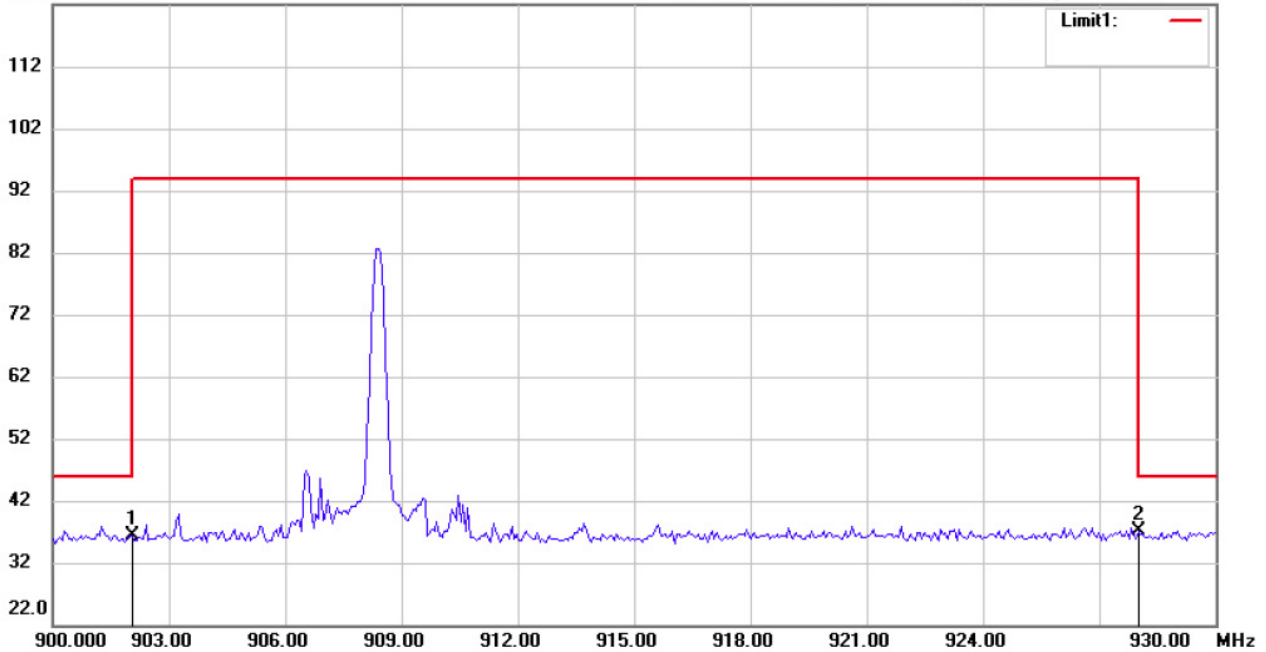
Date: 5/29/2020

Temperature:23.2 °C

122.0 dBuV/m

Time: 4:23:00 AM

Humidity:56.1 %



Site : Chamber

Condition : FCC 15.249 Bandedge(902-928)_QP

Polarization: *Vertical*

EUT : W6M22003-19782

Power : 120 Va.c.

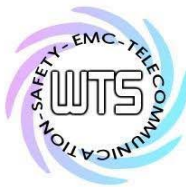
M/N:

Distance: 3m

Test Mode : TX 908.4MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	902.0000	5.29	QP	31.03	36.32	46.00	100	185	-9.68	
*	928.0000	5.69	QP	31.49	37.18	46.00	100	185	-8.82	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22003-19782-C-9

FCC ID: GX9HSGW3GDT32

Radiated Emission Measurement

Operator: Allen

File :bandedge

Data :#1

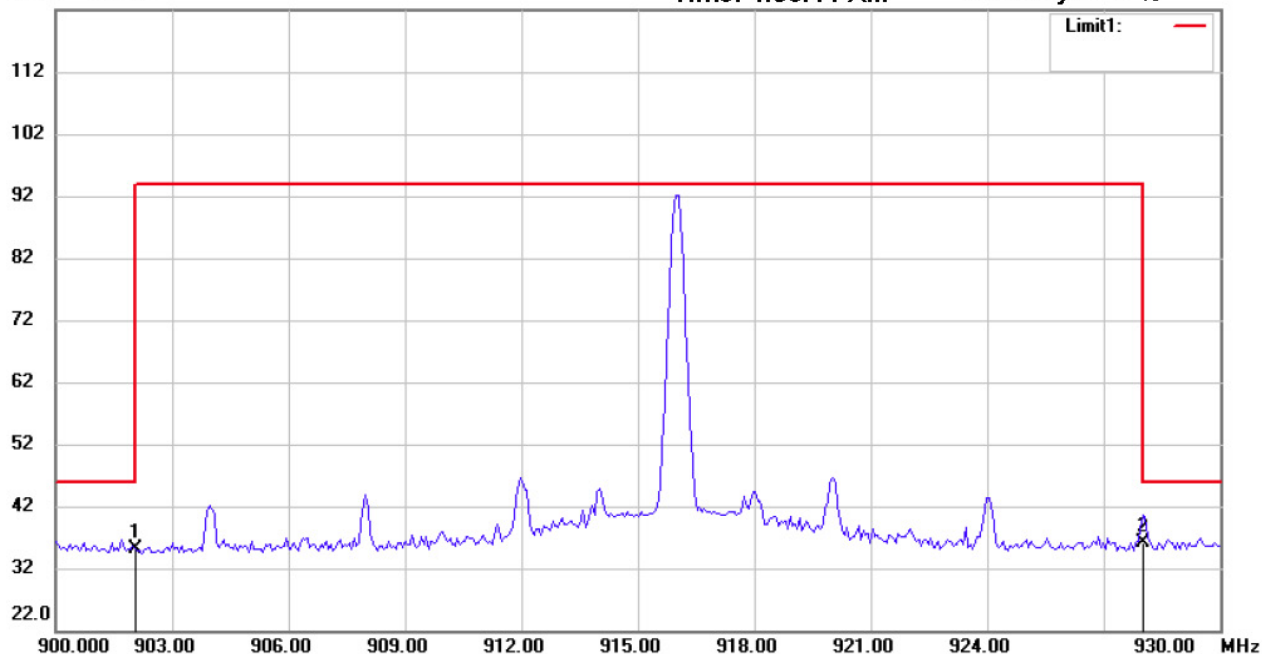
Date: 6/13/2020

Temperature:26.2 °C

122.0 dBuV/m

Time: 1:50:41 AM

Humidity:47.4 %



Site : Chamber

Condition : FCC 15.249 Bandedge(902-928)_QP

Polarization: *Horizontal*

EUT : W6M22003-19782

Power : 120 Va.c.

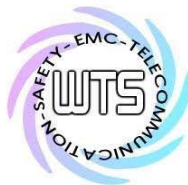
M/N:

Distance: 3m

Test Mode : TX 916MHz

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	902.0000	4.06	QP	31.03	35.09	46.00	100	65	-10.91	
*	928.0000	4.72	QP	31.49	36.21	46.00	100	65	-9.79	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22003-19782-C-9

FCC ID: GX9HSGW3GDT32

Radiated Emission Measurement

Operator: Allen

File :bandedge

Data :#2

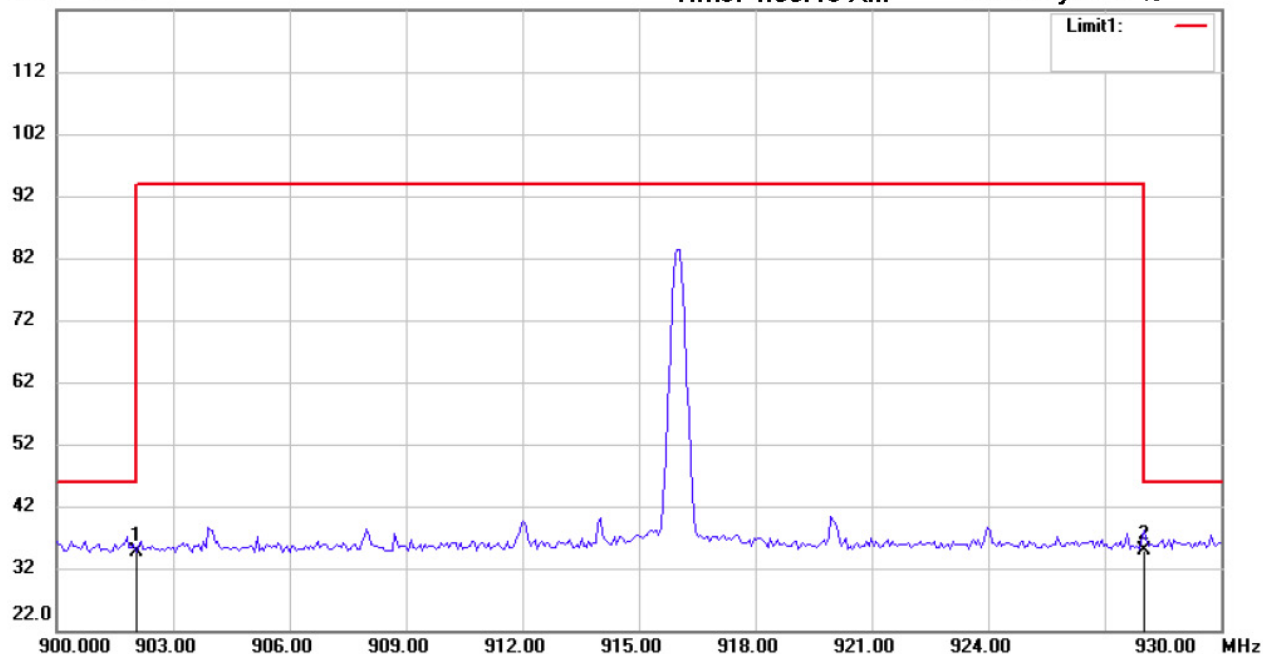
Date: 6/13/2020

Temperature:26.2 °C

122.0 dBuV/m

Time: 1:55:46 AM

Humidity:47.4 %



Site : Chamber

Condition : FCC 15.249 Bandedge(902-928)_QP

Polarization: **Vertical**

EUT : W6M22003-19782

Power : 120 Va.c.

M/N:

Distance: 3m

Test Mode : TX 916MHz

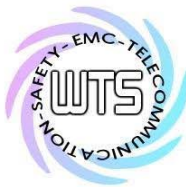
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	902.0000	3.70	QP	31.03	34.73	46.00	110	170	-11.27	
*	928.0000	3.48	QP	31.49	34.97	46.00	110	170	-11.03	

Limit:

Frequency Range (MHz)	Limit (dBuV/m)	
	Peak	Average
902 – 928	114	94
2400 – 2483.5	74	54
5725 – 5875	74	54

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



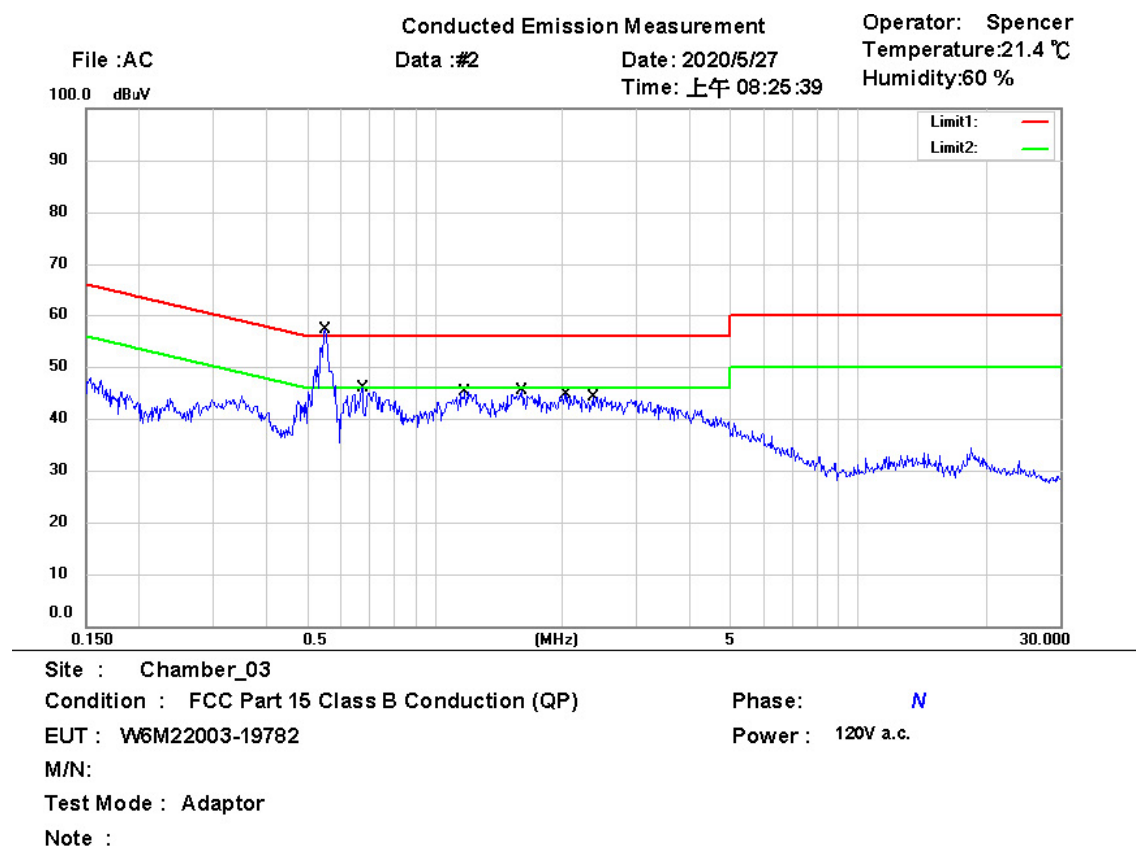
Registration number: W6M22003-19782-C-9

FCC ID: GX9HSGW3GDT32

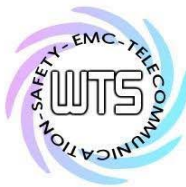
3.8 Power Line Conducted Emission

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
*	0.5517	40.39	QP	9.91	50.30	56.00	-5.70	
	0.5517	17.89	AVG	9.91	27.80	46.00	-18.20	
	0.6732	28.26	QP	9.91	38.17	56.00	-17.83	
	0.6732	13.59	AVG	9.91	23.50	46.00	-22.50	
	1.1750	27.17	QP	9.92	37.09	56.00	-18.91	
	1.1750	11.92	AVG	9.92	21.84	46.00	-24.16	
	1.6003	26.37	QP	9.93	36.30	56.00	-19.70	
	1.6003	13.77	AVG	9.93	23.70	46.00	-22.30	
	2.0233	27.19	QP	9.93	37.12	56.00	-18.88	
	2.0233	13.98	AVG	9.93	23.91	46.00	-22.09	
	2.3518	25.35	QP	9.93	35.28	56.00	-20.72	
	2.3518	11.76	AVG	9.93	21.69	46.00	-24.31	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M22003-19782-C-9

FCC ID: GX9HSGW3GDT32

Conducted Emission Measurement

Data :#1

Date: 2020/5/27

Time: 上午 08:19:25

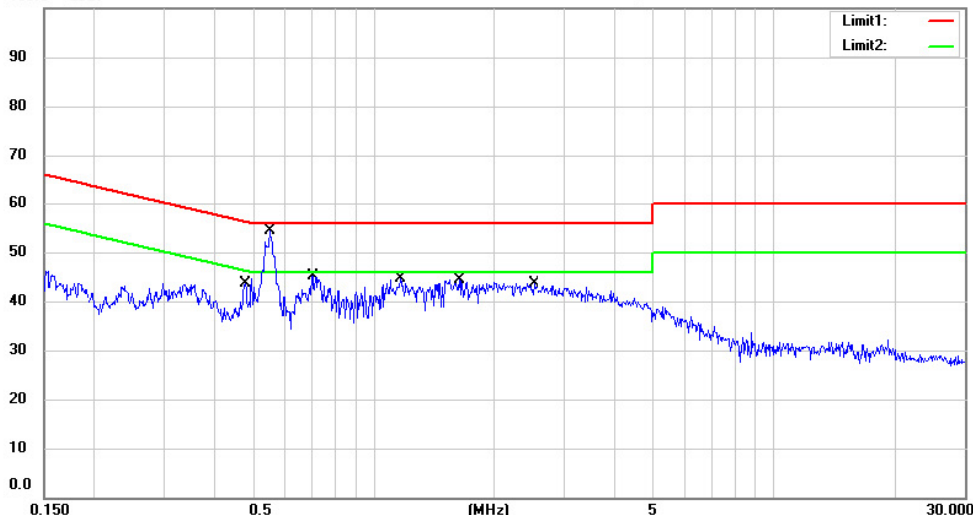
Operator: Spencer

Temperature: 21.4 °C

Humidity: 60 %

File : AC

100.0 dBuV



Site : Chamber_03

Condition : FCC Part 15 Class B Conduction (QP)

Phase: L1

EUT : W6M22003-19782

Power : 120V a.c.

M/N:

Test Mode : Adaptor

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.4780	25.73	QP	9.90	35.63	56.37	-20.74	
	0.4780	20.63	AVG	9.90	30.53	46.37	-15.84	
	0.5517	40.65	QP	9.90	50.55	56.00	-5.45	
*	0.5517	31.43	AVG	9.90	41.33	46.00	-4.67	
	0.7025	27.45	QP	9.91	37.36	56.00	-18.64	
	0.7025	16.48	AVG	9.91	26.39	46.00	-19.61	
	1.1638	26.78	QP	9.91	36.69	56.00	-19.31	
	1.1638	14.85	AVG	9.91	24.76	46.00	-21.24	
	1.6317	26.03	QP	9.92	35.95	56.00	-20.05	
	1.6317	15.30	AVG	9.92	25.22	46.00	-20.78	
	2.5138	26.68	QP	9.94	36.62	56.00	-19.38	
	2.5138	15.84	AVG	9.94	25.78	46.00	-20.22	

Note:

1. The formula of measured value as: Test Result = Reading + Correction Factor
2. The Correction Factor = Cable Loss + LISN Insertion 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. Up Line: QP Limit Line, Down Line: Ave Limit Line.

Limits:

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

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



Registration number: W6M22003-19782-C-9
FCC ID: GX9HSGW3GDT32

Appendix

Spurious Emissions radiated



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

Radiated Emission Measurement

Operator: Allen

File :1

Data :#1

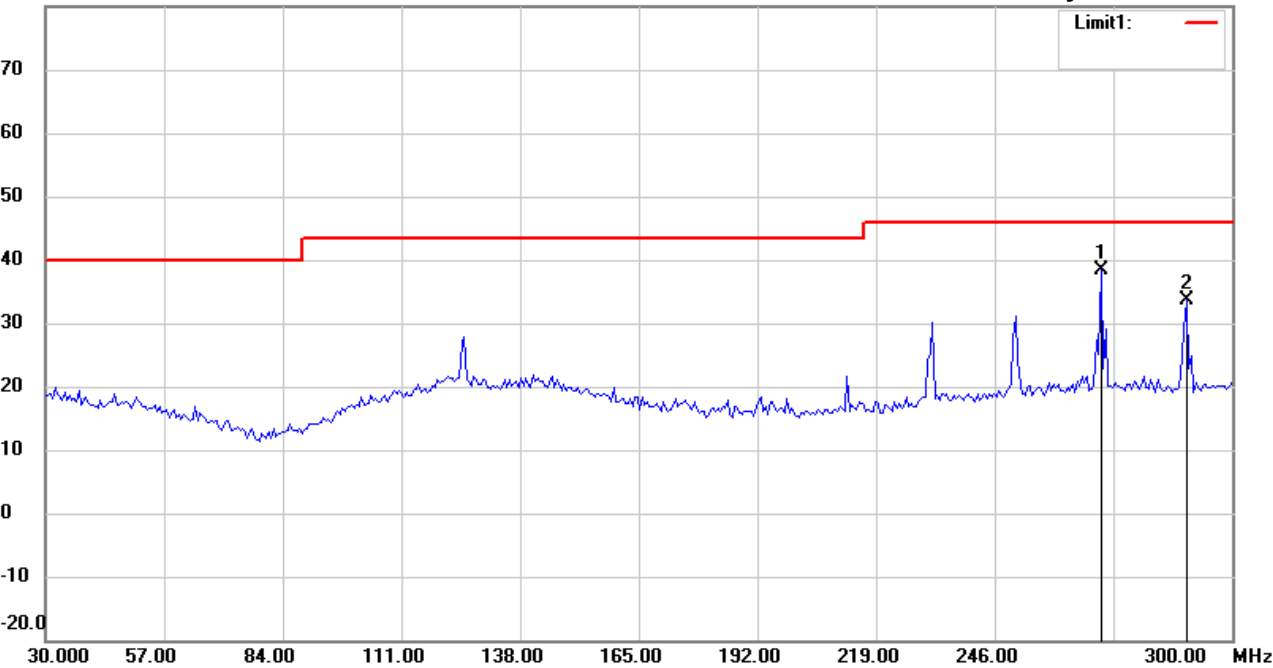
Date: 5/29/2020

Temperature:23.2 °C

80.0 dBuV/m

Time: 4:26:47 AM

Humidity:56.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

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
*	270.2405	44.90	peak	-6.62	38.28	46.00	100	40	-7.72	
	289.7194	39.95	peak	-6.32	33.63	46.00	100	305	-12.37	



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

Radiated Emission Measurement

Operator: Allen

File :1

Data :#2

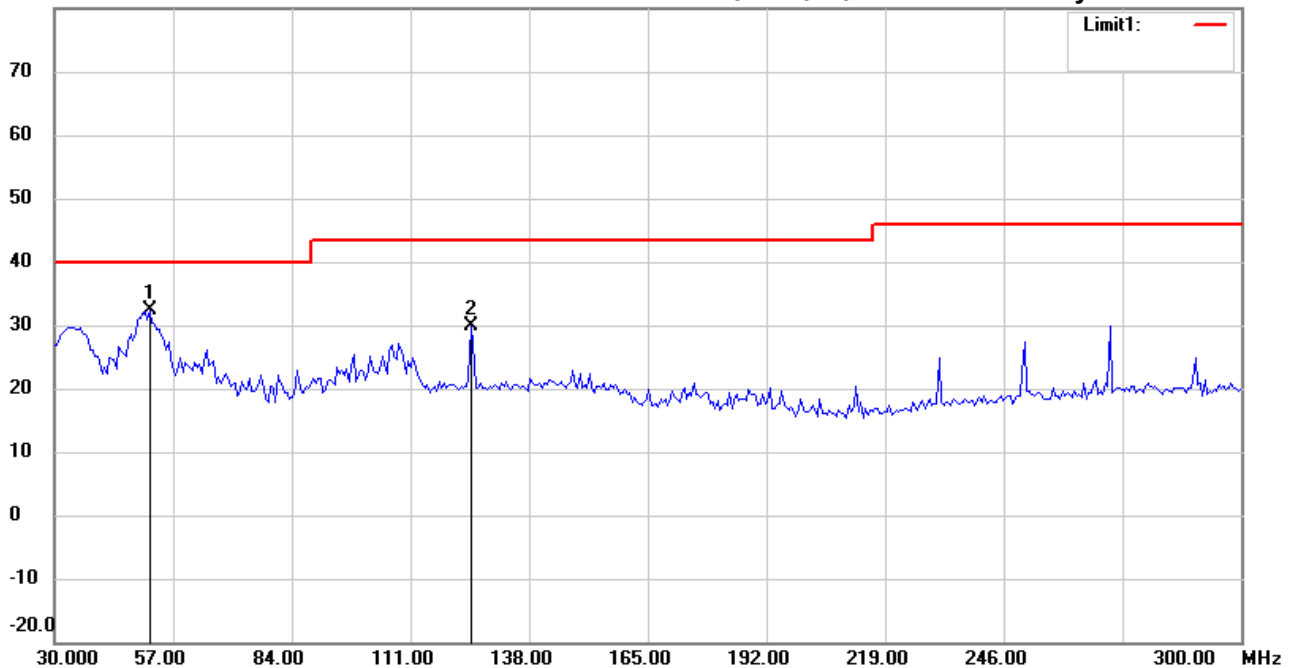
Date: 5/29/2020

Temperature: 23.2 °C

80.0 dBuV/m

Time: 4:29:26 AM

Humidity: 56.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

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
*	51.6433	42.92	peak	-10.53	32.39	40.00	100	185	-7.61	
	124.6894	37.04	peak	-7.15	29.89	43.50	100	70	-13.61	

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



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

Radiated Emission Measurement

Operator: Allen

File : 2

Data : #1

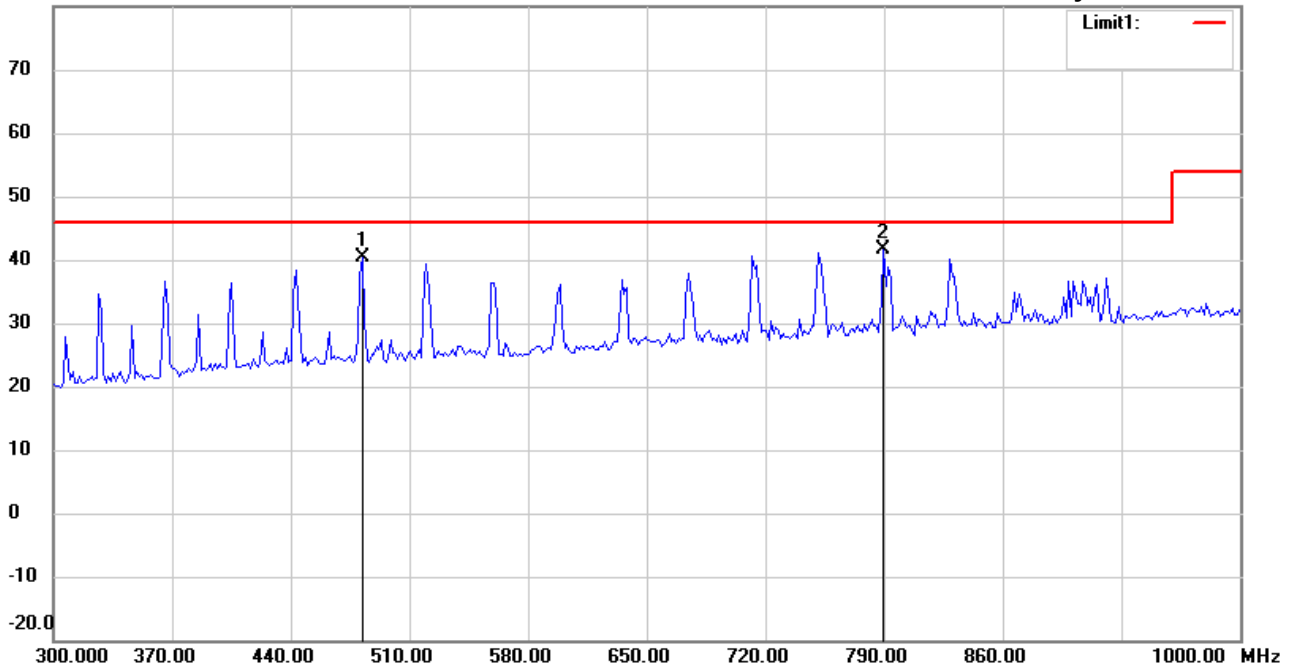
Date: 5/29/2020

Temperature: 23.2 °C

80.0 dBuV/m

Time: 4:32:24 AM

Humidity: 56.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

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
	482.3647	43.42	peak	-3.06	40.36	46.00	100	210	-5.64	
*	789.5792	40.20	peak	1.40	41.60	46.00	100	90	-4.40	

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



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

Radiated Emission Measurement

Operator: Allen

File : 2

Data : #2

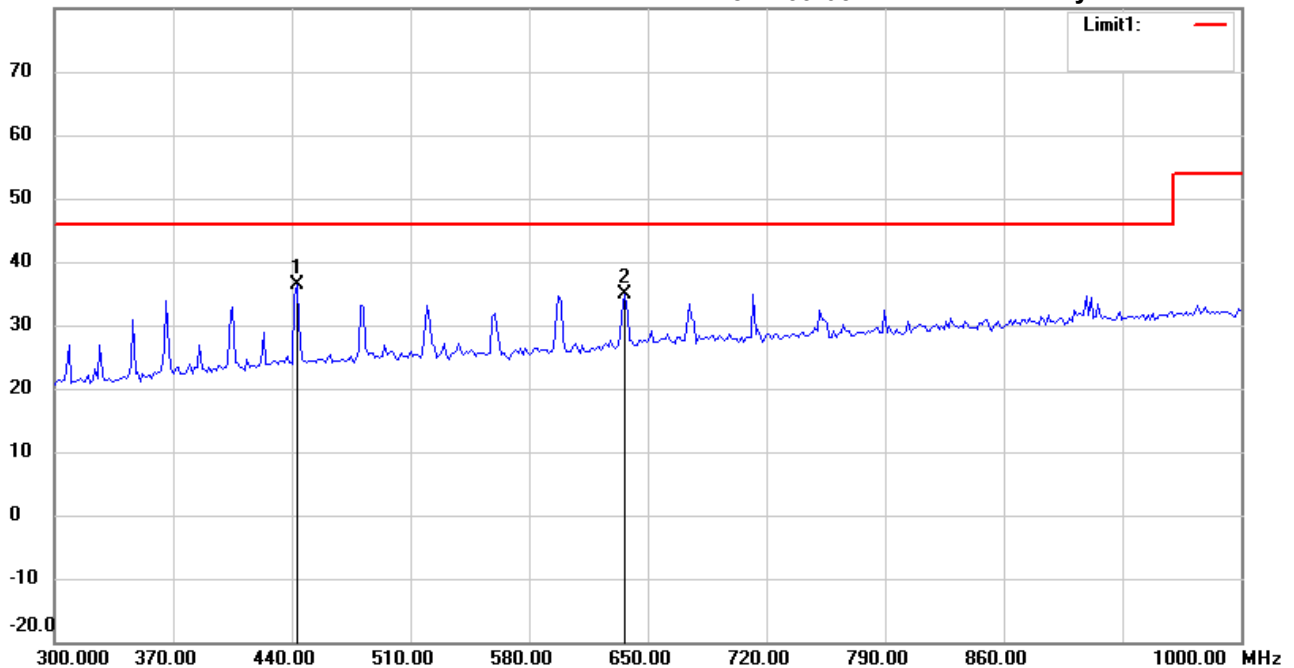
Date: 5/29/2020

Temperature: 23.2 °C

80.0 dBuV/m

Time: 4:39:05 AM

Humidity: 56.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

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
*	443.0862	39.65	peak	-3.30	36.35	46.00	100	145	-9.65	
	636.6733	35.77	peak	-0.81	34.96	46.00	100	220	-11.04	

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



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Radiated Emission Measurement

Operator: Allen

File :3

Data :#1

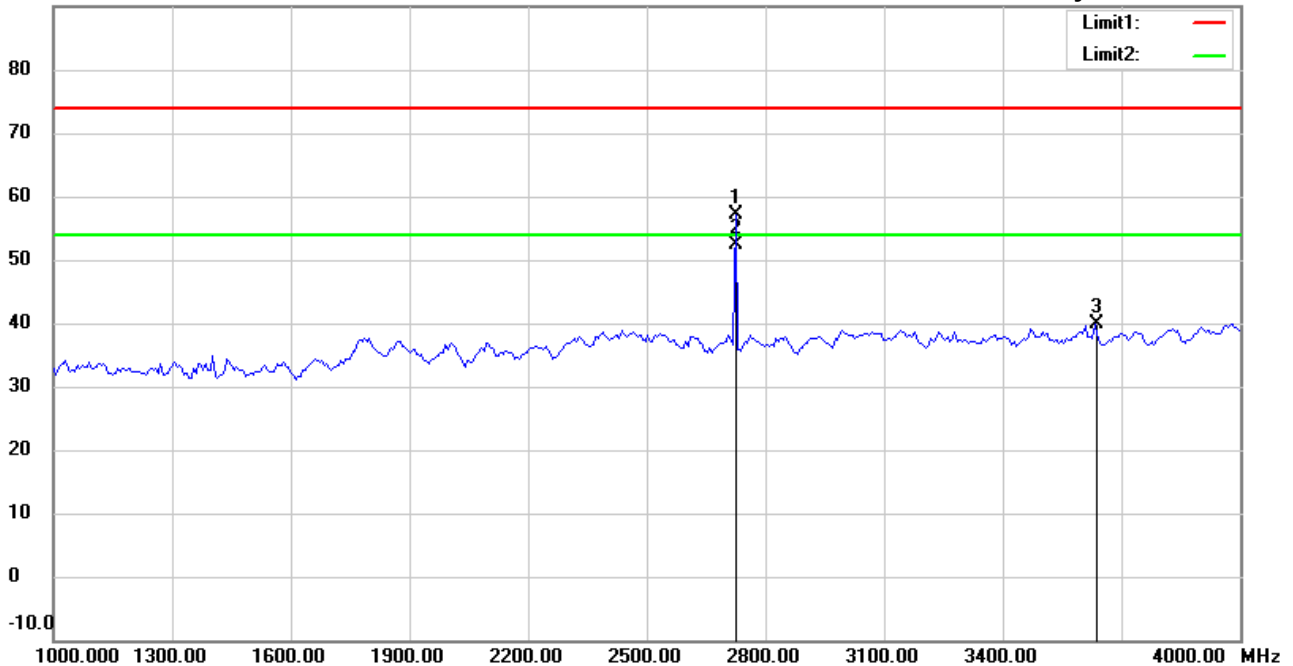
Date: 5/29/2020

Temperature: 23.2 °C

90.0 dBuV/m

Time: 3:11:27 AM

Humidity: 56.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

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
	2725.311	62.76	peak	-5.52	57.24	74.00	150	210	-16.76	
*	2725.311	57.81	AVG	-5.52	52.29	54.00	150	210	-1.71	
	3633.267	42.84	peak	-2.86	39.98	74.00	150	300	-34.02	

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



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Radiated Emission Measurement

Operator: Allen

File :3

Data :#4

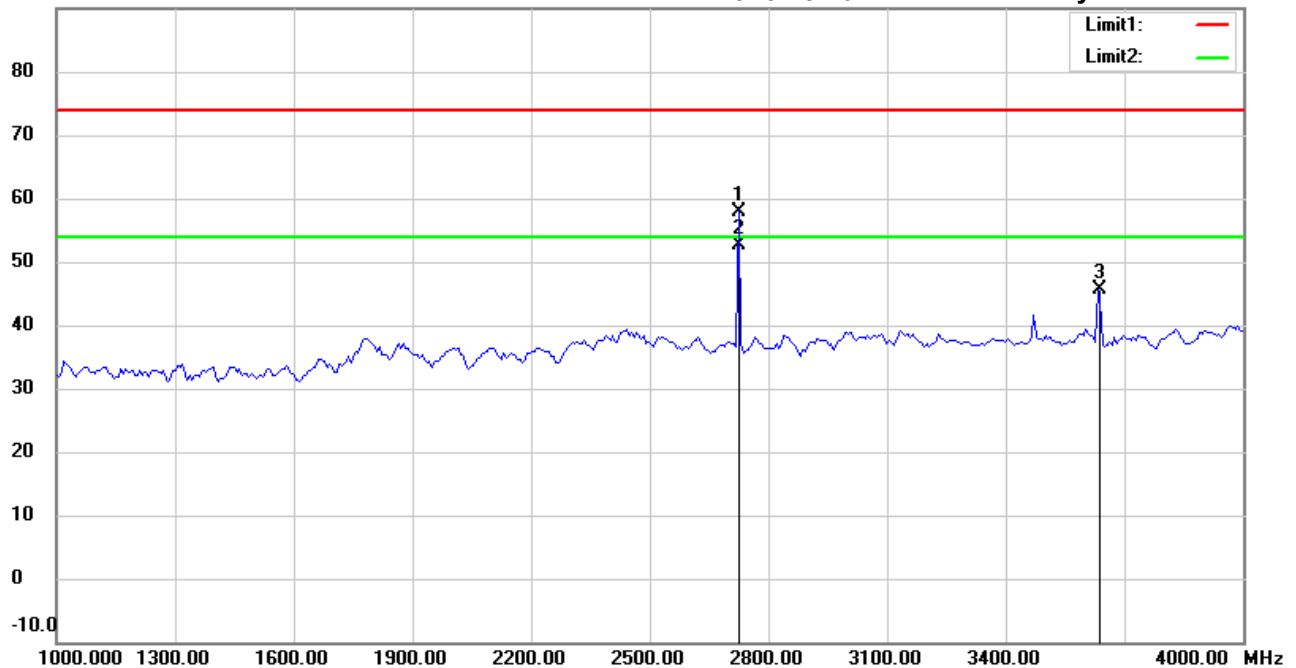
Date: 5/29/2020

Temperature: 23.2 °C

90.0 dBuV/m

Time: 3:18:20 AM

Humidity: 56.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

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
	2725.155	63.49	peak	-5.52	57.97	74.00	170	170	-16.03	
*	2725.155	58.12	AVG	-5.52	52.60	54.00	170	170	-1.40	
	3633.267	48.59	peak	-2.86	45.73	74.00	150	220	-28.27	

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



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Radiated Emission Measurement

Operator: Allen

File :3

Data :#2

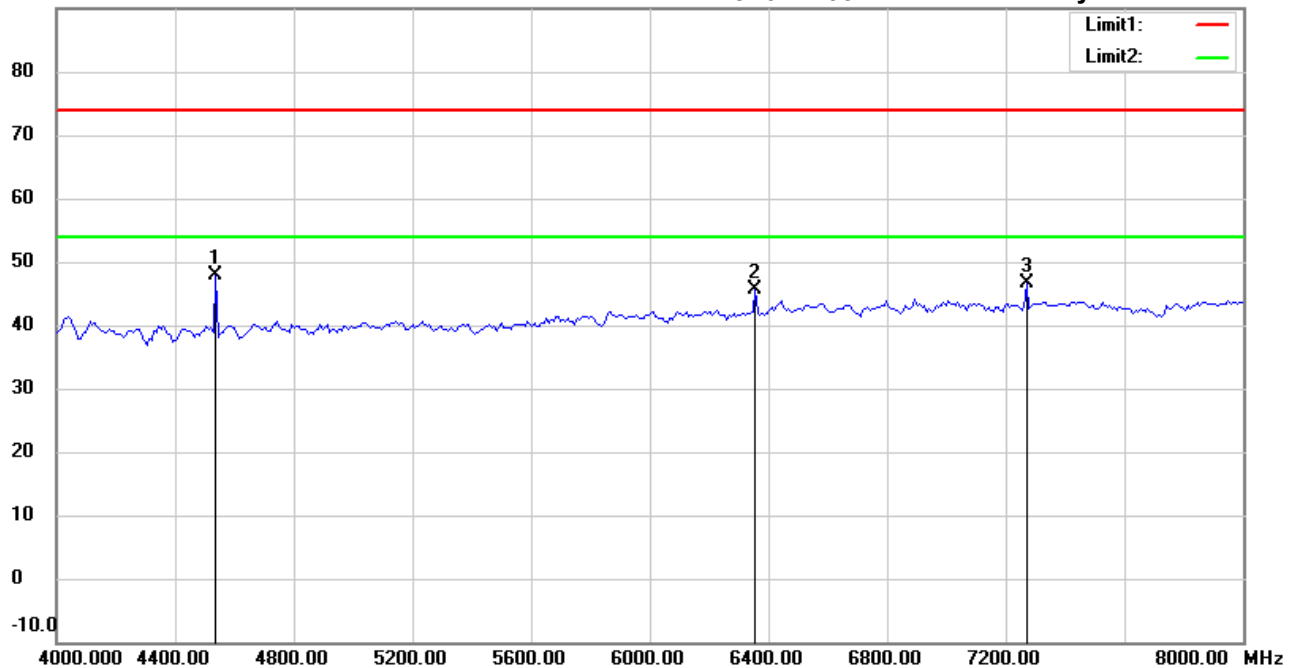
Date: 5/29/2020

Temperature: 23.2 °C

90.0 dBuV/m

Time: 3:21:38 AM

Humidity: 56.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

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
*	4537.074	50.26	peak	-2.38	47.88	74.00	150	105	-26.12	
	6356.713	43.99	peak	1.74	45.73	74.00	150	260	-28.27	
	7270.541	43.35	peak	3.33	46.68	74.00	150	130	-27.32	

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



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Radiated Emission Measurement

Operator: Allen

File : 3

Data : #5

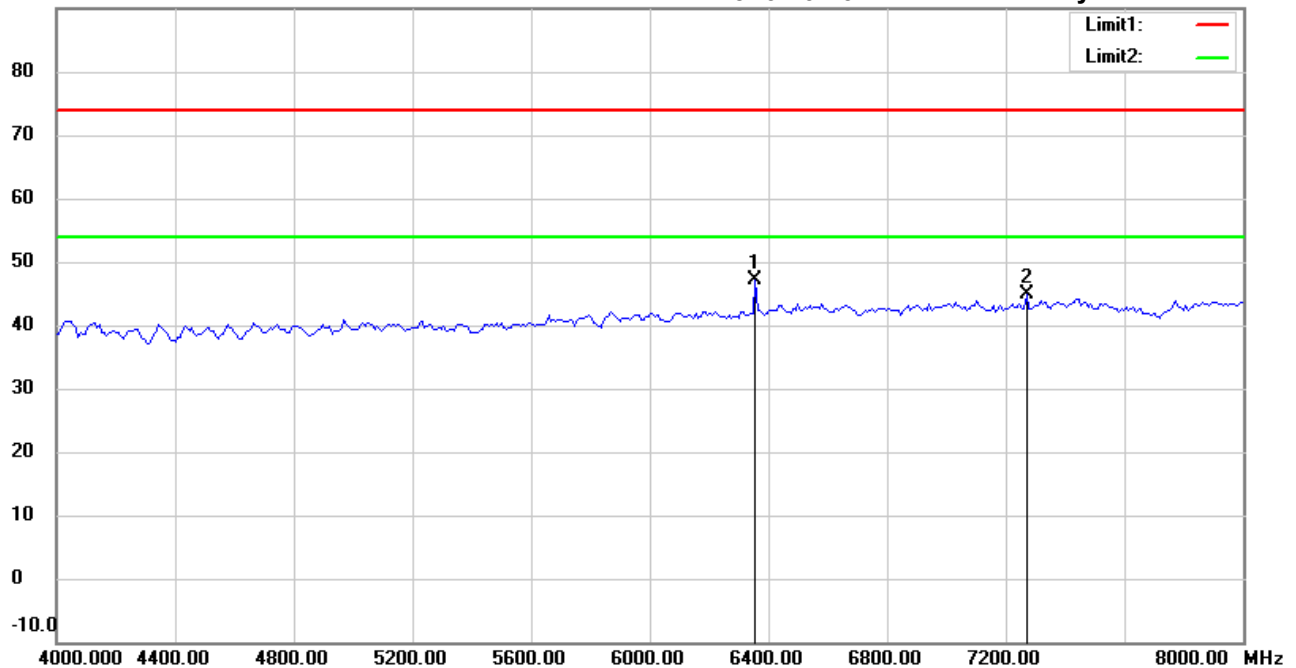
Date: 5/29/2020

Temperature: 23.2 °C

90.0 dBuV/m

Time: 3:23:45 AM

Humidity: 56.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

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
*	6356.713	45.36	peak	1.74	47.10	74.00	150	40	-26.90	
	7270.541	41.63	peak	3.33	44.96	74.00	150	75	-29.04	

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



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Radiated Emission Measurement

Operator: Allen

File : 3

Data : #3

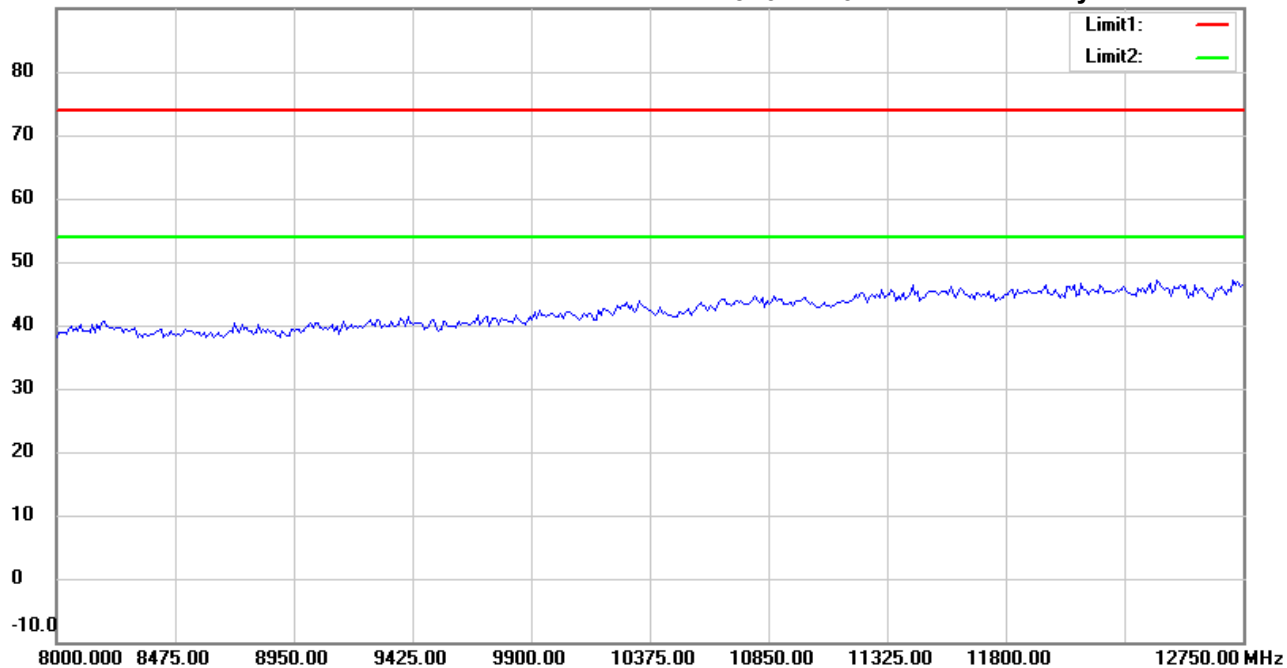
Date: 5/29/2020

Temperature: 23.2 °C

90.0 dBuV/m

Time: 3:27:43 AM

Humidity: 56.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

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



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Radiated Emission Measurement

Operator: Allen

File : 3

Data : #6

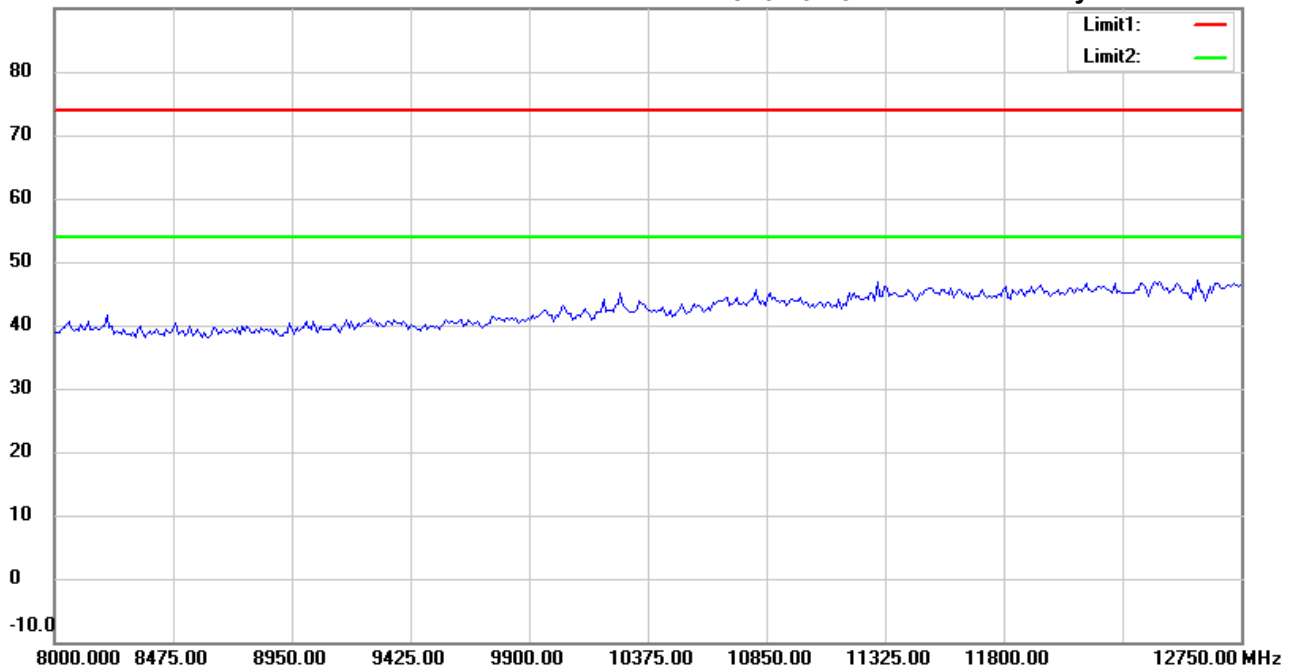
Date: 5/29/2020

Temperature: 23.2 °C

90.0 dBuV/m

Time: 3:29:45 AM

Humidity: 56.1 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 908.4MHz

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



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Radiated Emission Measurement

Operator: Allen

File :1

Data :#1

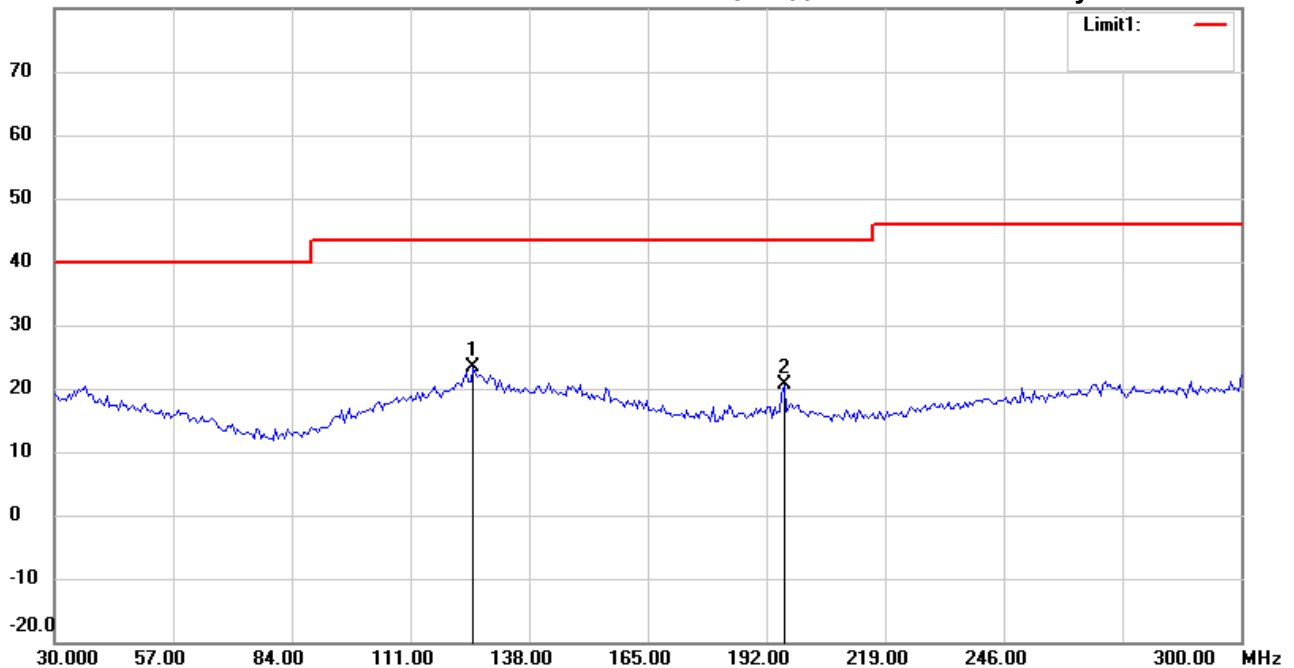
Date: 6/13/2020

Temperature: 26.2 °C

80.0 dBuV/m

Time: 2:00:47 AM

Humidity: 47.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

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
*	125.2305	30.56	peak	-7.12	23.44	43.50	100	133	-20.06	
	196.1121	31.43	peak	-10.90	20.53	43.50	100	276	-22.97	

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



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Radiated Emission Measurement

Operator: Allen

File :1

Data :#2

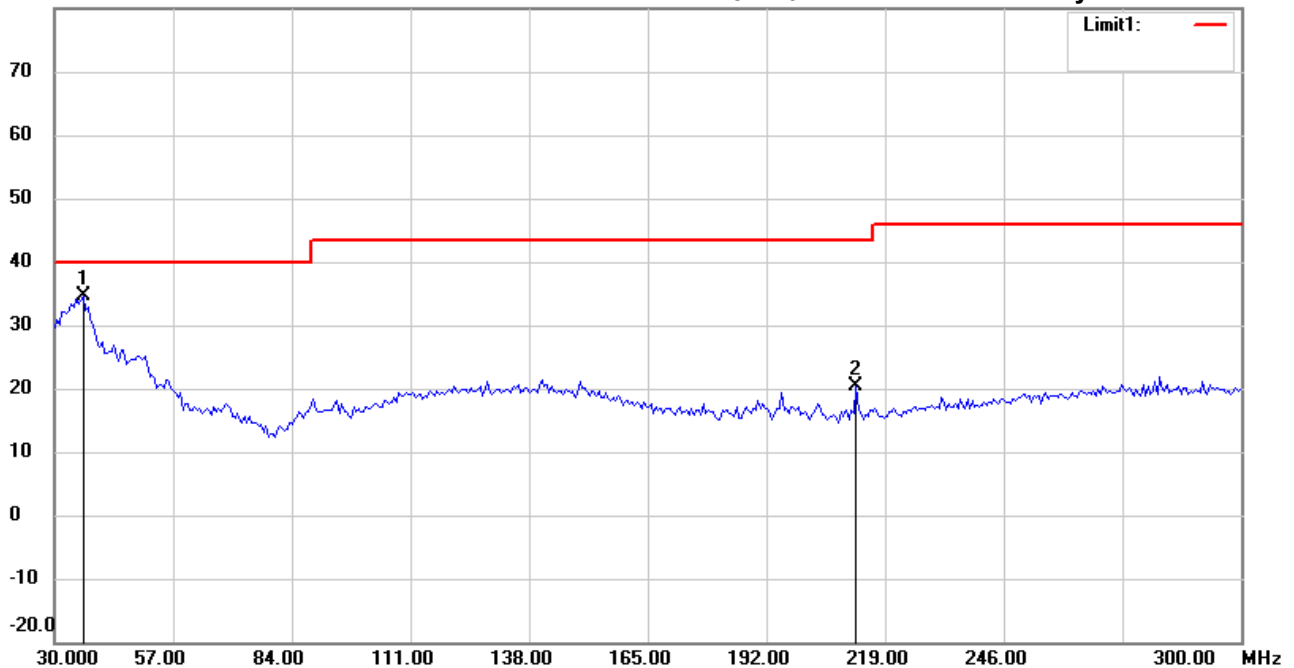
Date: 6/13/2020

Temperature: 26.2 °C

80.0 dBuV/m

Time: 2:02:17 AM

Humidity: 47.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

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
*	36.4930	43.73	peak	-9.07	34.66	40.00	100	318	-5.34	
	212.3447	30.84	peak	-10.58	20.26	43.50	100	94	-23.24	

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



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Radiated Emission Measurement

Operator: Allen

File : 2

Data : #1

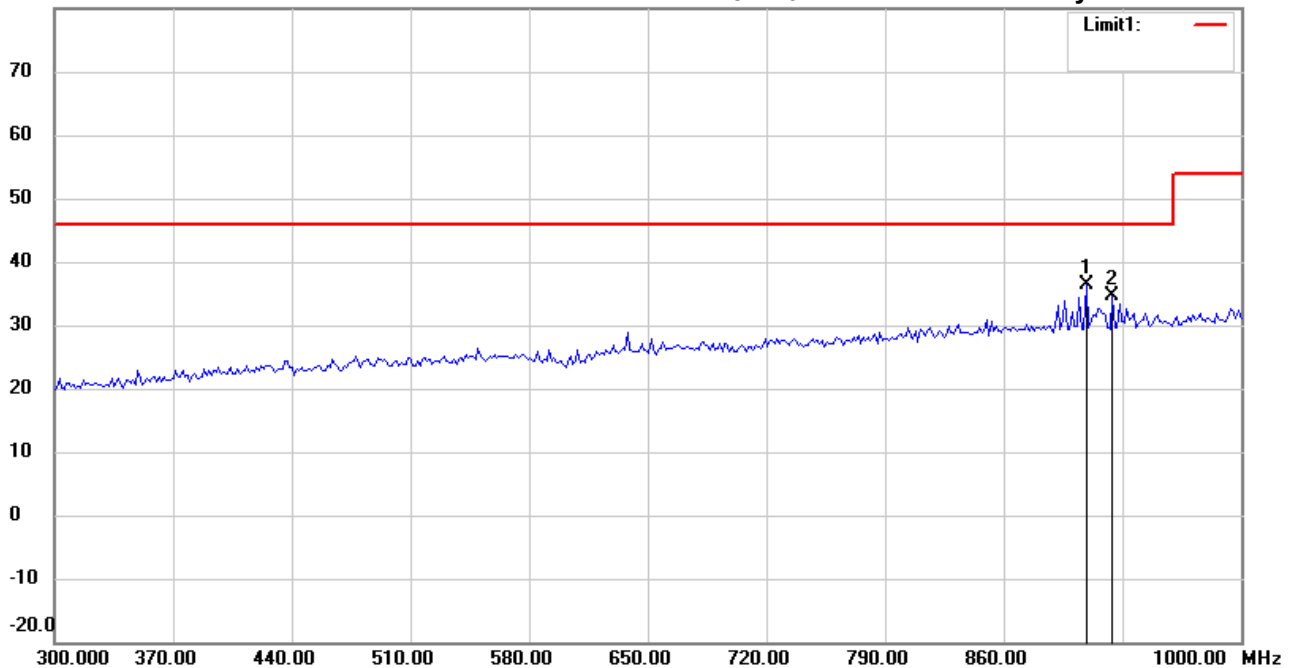
Date: 6/13/2020

Temperature: 26.2 °C

80.0 dBuV/m

Time: 2:04:17 AM

Humidity: 47.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

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
*	908.8175	32.80	peak	3.67	36.47	46.00	100	43	-9.53	
	924.2485	30.79	peak	3.95	34.74	46.00	100	175	-11.26	

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



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Radiated Emission Measurement

Operator: Allen

File : 2

Data : #2

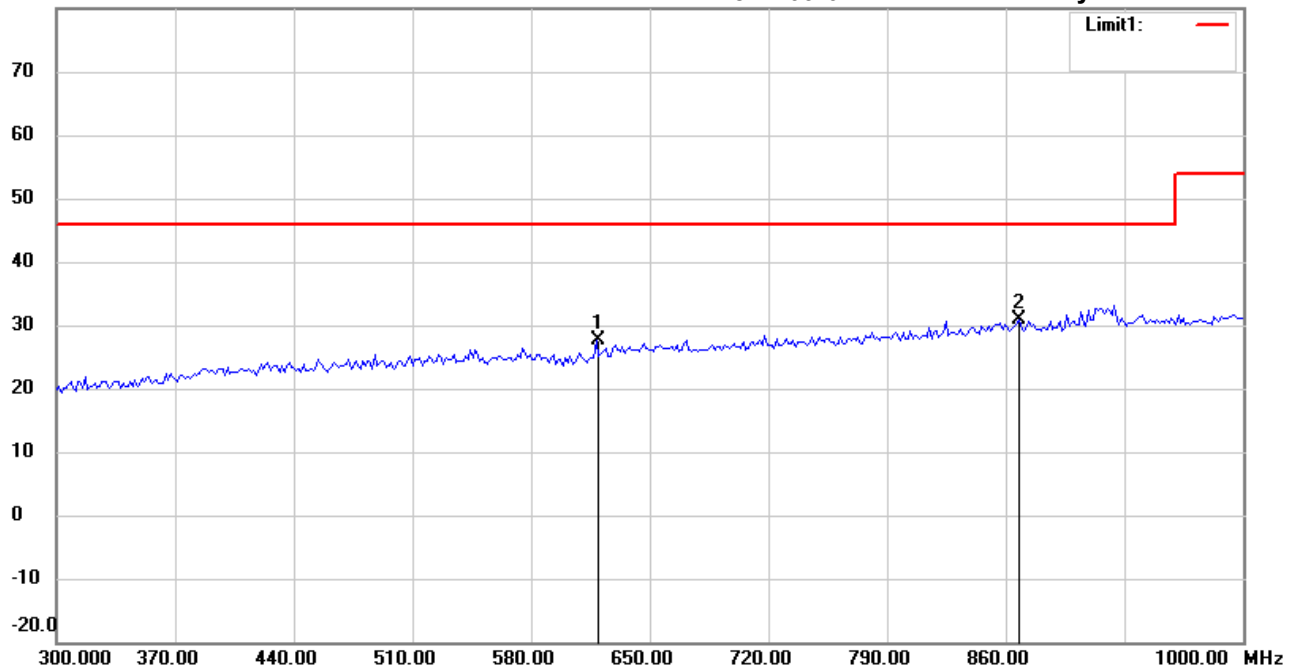
Date: 6/13/2020

Temperature: 26.2 °C

80.0 dBuV/m

Time: 2:09:01 AM

Humidity: 47.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

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
	618.4370	29.21	peak	-1.50	27.71	46.00	100	69	-18.29	
*	868.1363	27.92	peak	3.02	30.94	46.00	100	332	-15.06	

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



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Radiated Emission Measurement

Operator: Allen

File : 3

Data : #1

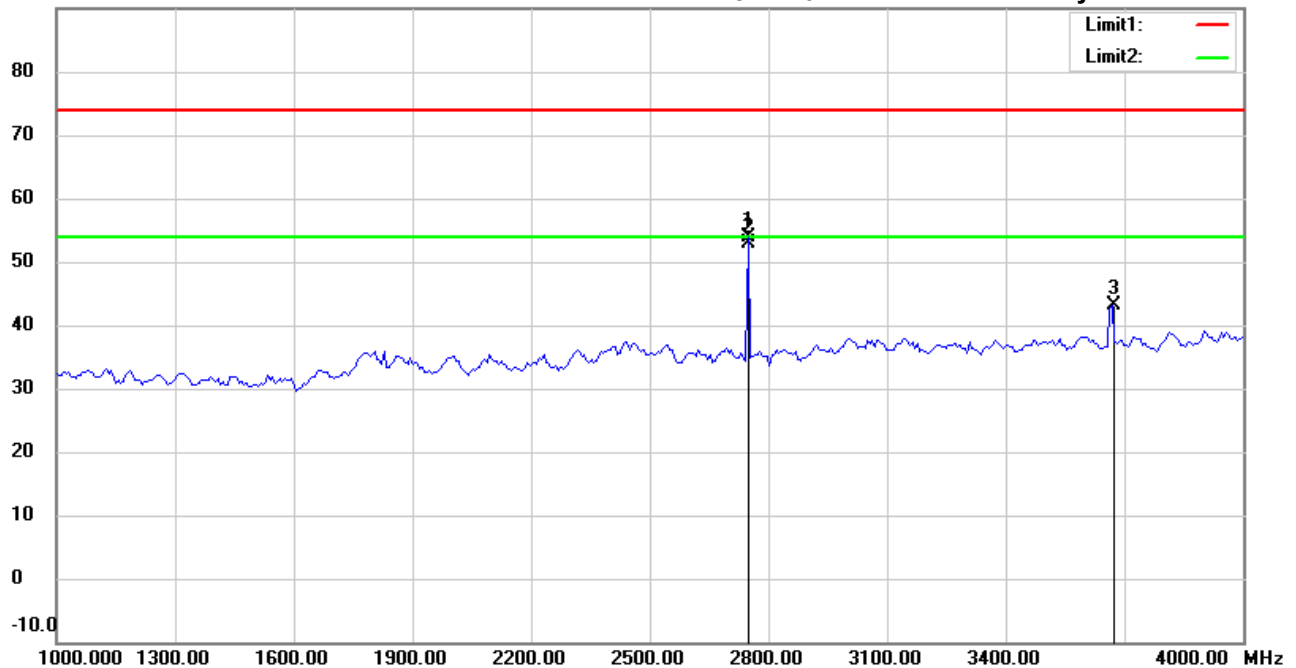
Date: 6/13/2020

Temperature: 26.2 °C

90.0 dBuV/m

Time: 2:20:21 AM

Humidity: 47.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

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
	2749.499	59.41	peak	-5.44	53.97	74.00	150	255	-20.03	
*	2749.499	58.32	AVG	-5.44	52.88	54.00	150	255	-1.12	
	3669.339	46.15	peak	-2.97	43.18	74.00	150	177	-30.82	

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



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Radiated Emission Measurement

Operator: Allen

File : 3

Data : #4

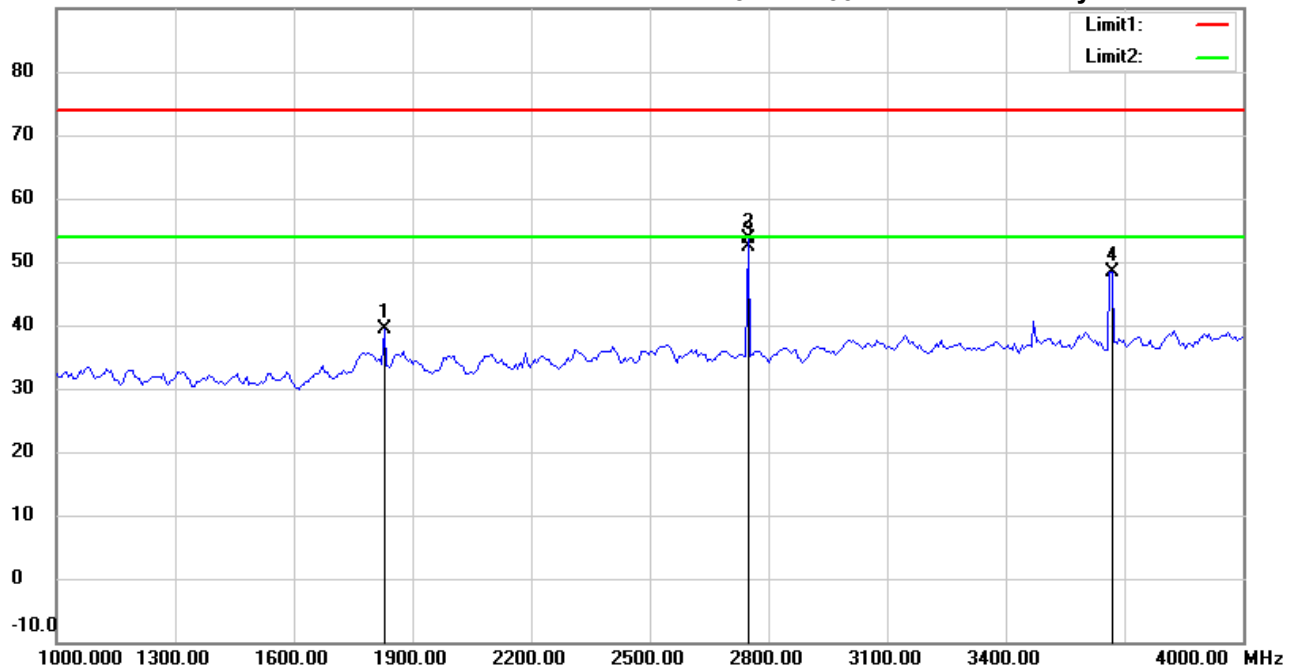
Date: 6/13/2020

Temperature: 26.2 °C

90.0 dBuV/m

Time: 2:24:55 AM

Humidity: 47.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

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
	1829.659	45.97	peak	-6.71	39.26	74.00	150	149	-34.74	
	2749.499	58.99	peak	-5.44	53.55	74.00	150	30	-20.45	
*	2749.499	57.87	AVG	-5.44	52.43	54.00	150	30	-1.57	
	3663.327	51.40	peak	-2.95	48.45	74.00	150	359	-25.55	

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



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Radiated Emission Measurement

Operator: Allen

File :3

Data :#2

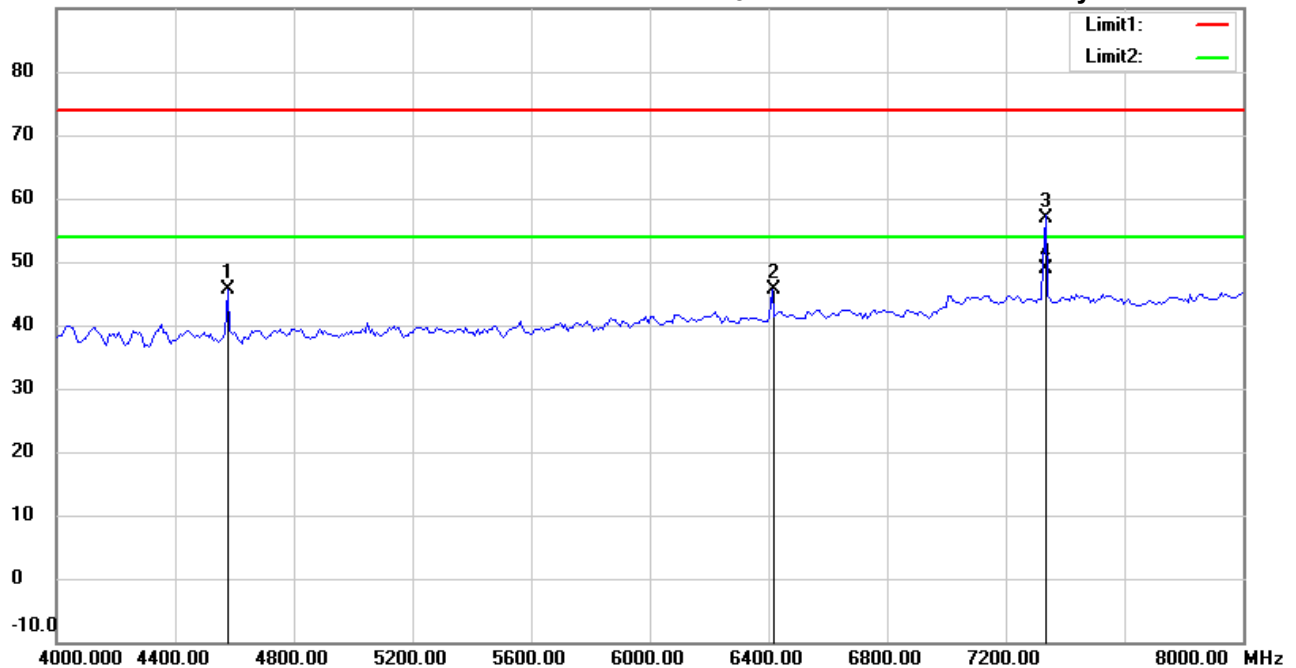
Date: 6/13/2020

Temperature: 26.2 °C

90.0 dBuV/m

Time: 2:21:22 AM

Humidity: 47.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

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
	4577.154	47.95	peak	-2.39	45.56	74.00	150	74	-28.44	
	6412.826	43.73	peak	1.99	45.72	74.00	150	191	-28.28	
	7328.171	53.30	peak	3.49	56.79	74.00	165	0	-17.21	
*	7328.171	45.33	AVG	3.49	48.82	54.00	165	0	-5.18	

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



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Radiated Emission Measurement

Operator: Allen

File :3

Data :#5

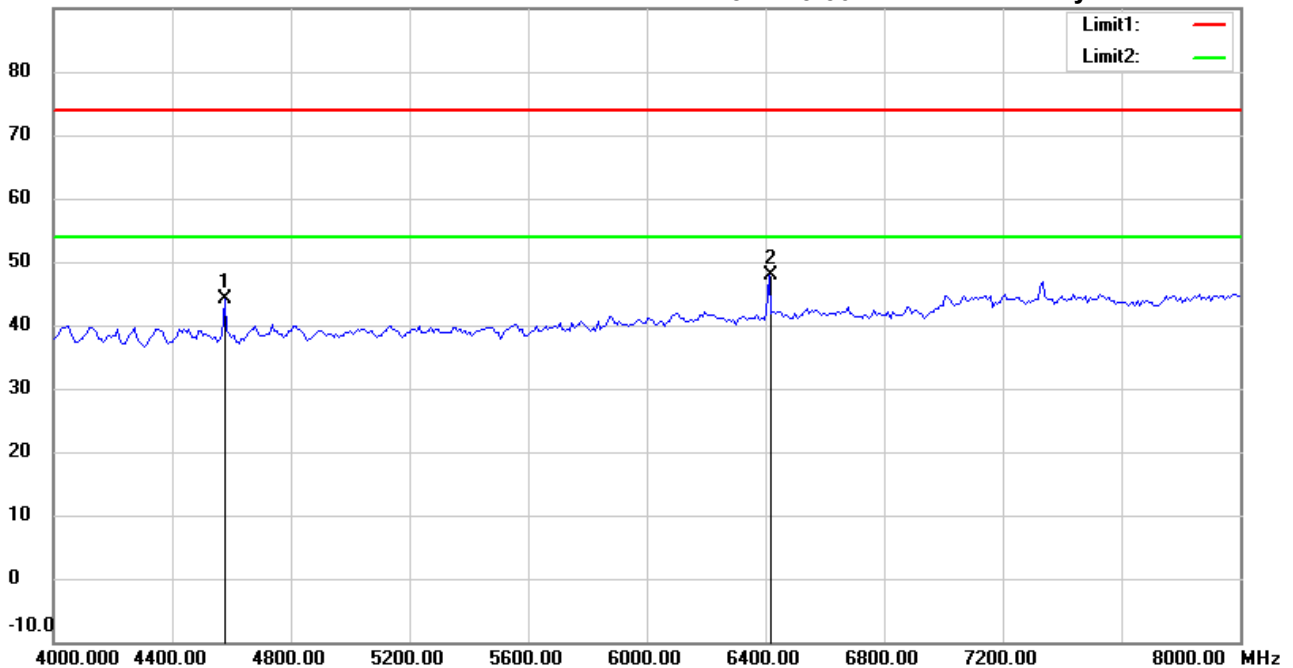
Date: 6/13/2020

Temperature: 26.2 °C

90.0 dBuV/m

Time: 2:25:56 AM

Humidity: 47.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

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
	4577.154	46.43	peak	-2.39	44.04	74.00	150	216	-29.96	
*	6412.826	45.85	peak	1.99	47.84	74.00	150	93	-26.16	

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



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Radiated Emission Measurement

Operator: Allen

File : 3

Data : #3

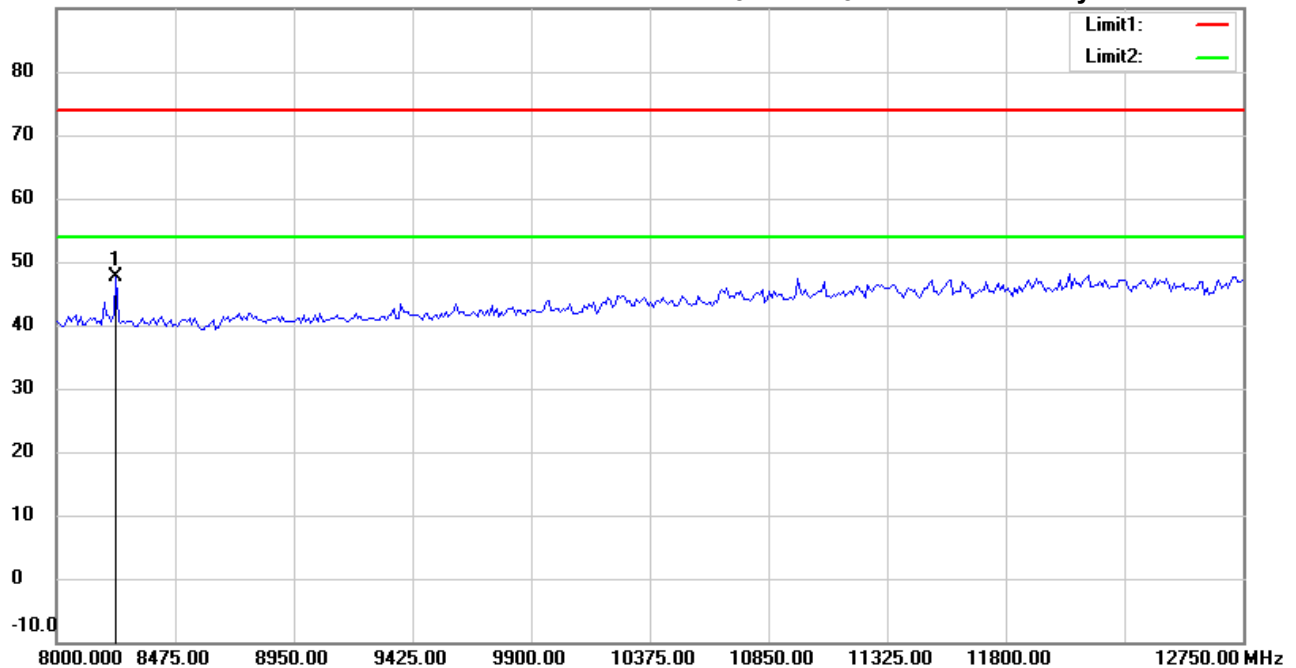
Date: 6/13/2020

Temperature: 26.2 °C

90.0 dBuV/m

Time: 2:22:28 AM

Humidity: 47.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

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
*	8237.976	42.83	peak	4.76	47.59	74.00	150	255	-26.41	

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



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Radiated Emission Measurement

Operator: Allen

File :3

Data :#6

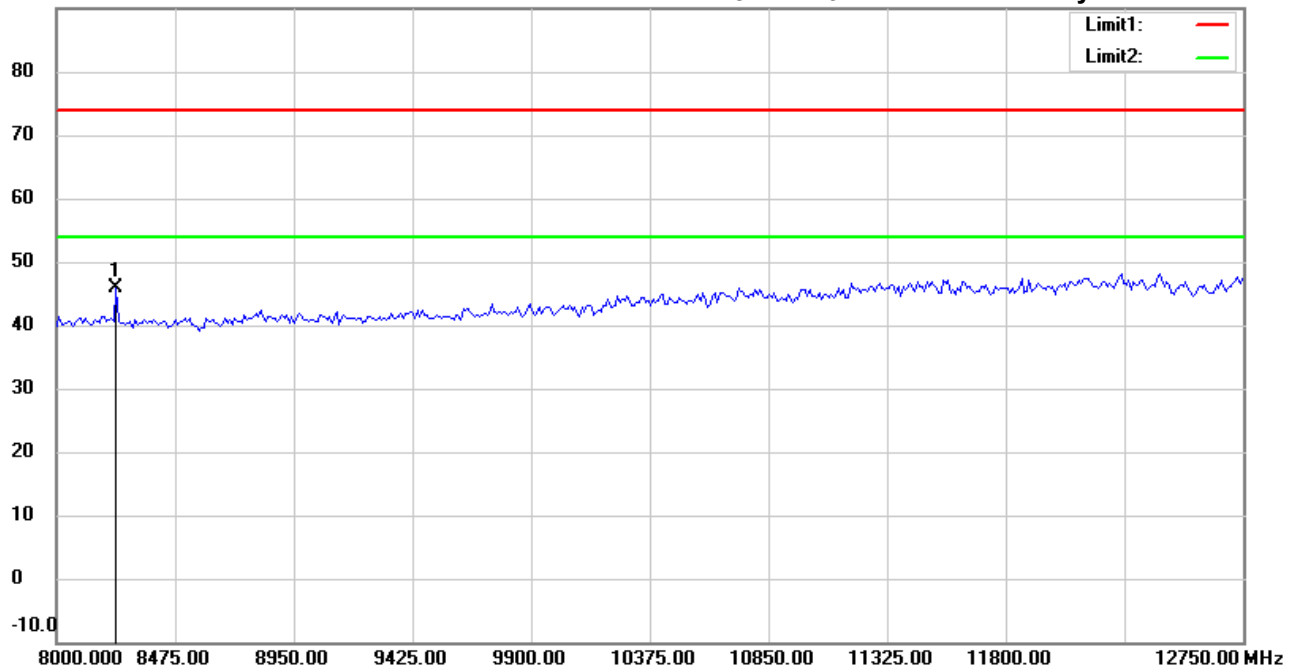
Date: 6/13/2020

Temperature: 26.2 °C

90.0 dBuV/m

Time: 2:27:37 AM

Humidity: 47.4 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_Above 1GHz_PK

EUT : W6M22003-19782

M/N:

Test Mode : TX 916MHz

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
*	8237.976	41.01	peak	4.76	45.77	74.00	150	100	-28.23	

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