

FCC PART 22/24/27 TEST REPORT

for

Frontpoint Hub

Model No.: FPHUB1

FCC ID: GX9FPHUB1

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. IC 5679A-1, IC 5107A-1

A2LA Accredited No.: 2732.01



Report No.: W6R21805-18133-P-247

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Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247
FCC ID: GX9FPHUB1

Certification of Test Report

Applicant : CLIMAX TECHNOLOGY CO., LTD.
No. 258, Sinhu 2nd Rd., Neihu District
Taipei City 114 Taiwan (R.O.C.)

Manufacturer : CLIMAX TECHNOLOGY CO., LTD.
No. 258, Sinhu 2nd Rd., Neihu District
Taipei City 114 Taiwan (R.O.C.)

Tested Equipment :

Type Description	: Frontpoint Hub
Model Number	: FPHUB1
Brand Name	: ./.
Operation Frequency	: Please see chapter 2.3.
RF Output Power:	: WCDMA Band 2: 25.69 dBm (EIRP) Band 4: 22.49 dBm (EIRP) Band 5: 16.97 dBm (ERP) LTE Band 2: 24.94 dBm (EIRP) Band 4 24.25 dBm (EIRP) Band 5: 24.61 dBm (ERP) Band 12: 26.25 dBm (ERP)
Power Supply	: Adaptor (I/P: 100-240V~ 50/60Hz, 0.5A; O/P: 12V, 1.5A) Battery 7.2V, 2300mAh

Regulation Applied : 47CFR Part 22 (2017-10), Part 24 (2017-10),
Part 27 (2017-10)

Test Method : 47CFR Part 2 (2017), TIA/EIA-603D(2016) and
ANSI C63.4 (2014)

I HEREBY CERTIFY THAT: The test results written in this report were derived conscientiously in accordance with the requirements and procedures of 47CFR Part 2(2017), TIA/EIA-603D(2016), and it was found that the device described above is in compliance with the applicable limits specified in 47CFR Part 22/24/27.

Note:

1. The result of this test report is valid only in connection to the sample has been tested at the laboratory of Worldwide Testing Services (Taiwan) Co. Ltd.
2. This test report shall always be duplicated in full pages unless the written approval of the testing laboratory is obtained.

Test Engineer:

June 13, 2018

Spencer Yang

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

June 13, 2018

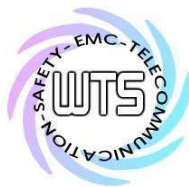
Kevin Wang

Date

WTS

Name

Signature

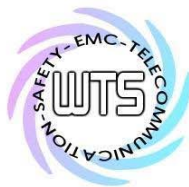


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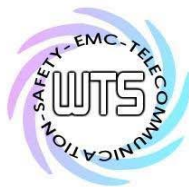


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1. Summary

1.1 Description of tested equipment

This equipment under tested, FPHUB1, is a Frontpoint Hub.

This test report only contains test requirements specified in 47CFR Part 22, Part 24 and Part 27 for WCDMA and LTE function. For other functions; please refer to separate test report with respect to the relevant test standard and specification.

1.2 Date of testing processing

Date of receipt of test item (1st): May 19, 2017

Date of test (1st): from May 19, 2017 to August 23, 2017

Date of receipt of test item (2nd): May 29, 2018

Date of test (2nd): from May 29, 2018 to June 07, 2018

Other Information: None

1.3 Modification Information

No modification was made during the all test items been performed.

1.4 Test standards

Technical standard: **FCC Part 2(2017), TIA/EIA-603D(2016), ANSI C63.4 (2014)
47CFR Part 22 (2017-10), Part 24 (2017-10) and Part 27 (2017-10)**

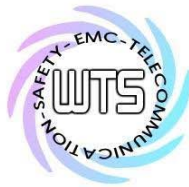
Deviation from test standard: None

Special statement:

1. This test report is based on the original test report no.: W6M21706-17098-P-247.

2. The differences are change antenna and update version of standard.

Except for Bandedge, Radiated max output power and Radiated Emission test items were re-tested, the other test result is also based on the original test report no. W6M21706-17098-P-247 without re-testing.



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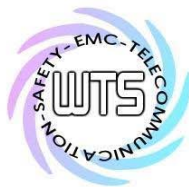
1.5 Summary of test result

WCDMA

Section in this Report	Test Item	FCC Relevant Section	Verdict
3.2	Effective Radiated Power and Equivalent Isotropic Radiated Power Measurement	2.1046(a), 24.232	Pass
4.2	Modulation characteristics	2.1047	Not Required
5.3	Peak-to-Average Ratio	24.232	Pass
6.2	Occupied bandwidth	2.1049(h) 24.238(b)	Pass
7.2	Conducted Spurious Emission Measurement	24.238(a), 2.1051	Pass
8.2	Radiated Spurious Emission Measurement	24.238(a), 2.1053	Pass
8.5	Conducted Band Edge Measurement	24.238(b)	Pass
9.2	Frequency stability / Temperature variation Measurement	2.1055 24.235	Pass

LTE

Harmonized Standard Requirements and Conformance Test Specifications				
Item	Clause	Test Content	Limit	Test Result
3.2	§22.913 §24.232 §27.50	Effective Radiated Power and Equivalent Isotropic Radiated Power Measurement	ERP < 7 Watts (Band 5) EIRP < 2 Watts (Band 2) ERP < 3 Watts (Band 12) EIRP < 1 Watts (Band 4)	Pass
5.3	§24.232 §27.50	Peak-to-Average Ratio	< 13 dB	Pass
6.2	§2.1049	Occupied Bandwidth	OBW : No Limit	Pass
7.2	§22.917 §24.238 §27.53	Conducted Spurious Emission Measurement	< 43+10log10(P[Watts])	Pass
8.2	§22.917 §24.238 §27.53	Radiated Spurious Emission Measurement	< 43+10log10(P[Watts])	Pass
8.5	§22.917 §24.238 §27.53	Conducted Band Edge Measurement	< 43+10log10(P[Watts])	Pass
9.2	§2.1055 §22.355 §24.235 §27.54	Frequency stability / Temperature variation Measurement	< 2.5 ppm	Pass



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2. General Information

2.1 Testing laboratory

2.1.1 Location

OATS
No.5-1, Shuang Sing Village,
LiShuei Rd., Wanli Township,
Taipei County 207, Taiwan (R.O.C.)
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

2.1.2 Details of accreditation status

Accredited testing laboratory
A2LA-registration number: 2732.01
FCC filed test laboratory Reg. No. TW1477, TW0020, TW1072
Industry Canada filed test laboratory Reg. No. IC 5679A-1, IC 5107A-1

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

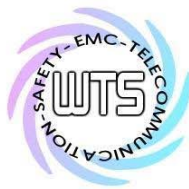
Name: ./.
Accredited number: ./.
Street: ./.
Town: ./.
Country: ./.
Telephone: ./.
Fax: ./.

2.2 Details of approval holder

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

Manufacturer: (if different from applicant)

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



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2.3 Description of Tested System

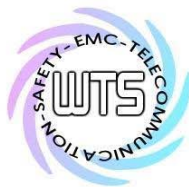
The EUT was tested alone without the Accessories or Peripherals.

Equipment	Model No.	Series No.	Software	Cable information	Note
No accessories were used with this EUT.					

Frequencies Selected to be investigated:

WCDMA		
Band	Tx	Rx
WCDMA Band 2	MHz	MHz
CH 9262	1852.4	1932.4
CH 9400	1880	1960
CH 9538	1907.6	1987.6
WCDMA Band 4	MHz	MHz
CH 1312	1712.4	2112.4
CH 1413	1732.6	2132.6
CH 1513	1752.6	2152.6
WCDMA Band 5	MHz	MHz
CH 4132	826.4	871.4
CH 4183	836.6	881.6
CH 4233	846.6	891.6

LTE							
Operating Band	Channel Bandwidth	Bottom Channel		Middle Channel		Top Channel	
		Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
2	1.4MHz	18607	1850.7	18900	1880	19193	1909.3
2	3MHz	18615	1851.5	18900	1880	19185	1908.5
2	5MHz	18625	1852.5	18900	1880	19175	1907.5
2	10MHz	18650	1855	18900	1880	19150	1905
2	15MHz	18675	1857.5	18900	1880	19125	1902.5
2	20MHz	18700	1860	18900	1880	19100	1900



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LTE							
Operating Band	Channel Bandwidth	Bottom Channel		Middle Channel		Top Channel	
		Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
4	1.4MHz	19957	1710.7	20175	1732.5	20393	1754.3
4	3MHz	19965	1711.5	20175	1732.5	20385	1753.5
4	5MHz	19975	1712.5	20175	1732.5	20375	1752.5
4	10MHz	20000	1715	20175	1732.5	20350	1750
4	15MHz	20025	1717.5	20175	1732.5	20325	1747.5
4	20MHz	20050	1720	20175	1732.5	20300	1745

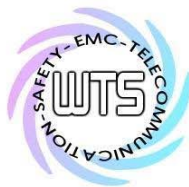
LTE							
Operating Band	Channel Bandwidth	Bottom Channel		Middle Channel		Top Channel	
		Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
5	1.4MHz	20407	824.7	20525	836.5	20643	848.3
5	3MHz	20415	825.5	20525	836.5	20635	847.5
5	5MHz	20425	826.5	20525	836.5	20625	846.5
5	10MHz	20450	829	20525	836.5	20600	844

LTE							
Operating Band	Channel Bandwidth	Bottom Channel		Middle Channel		Top Channel	
		Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
12	1.4MHz	23017	699.7	23095	707.5	23173	715.3
12	3MHz	23025	700.5	23095	707.5	23165	714.5
12	5MHz	23035	701.5	23095	707.5	23155	713.5
12	10MHz	23060	704	23095	707.5	23130	711

Antenna Type: PCB antenna

Antenna Gain: WCDMA (Band 2: 4.91 dBi, Band 4: 2.72 dBi, Band 5: -2.27 dBi)
LTE (Band 2: 4.91 dBi, Band 4: 2.72 dBi, Band 5: -2.27 dBi, Band 12: 1.05 dBi)

Power supply: Adaptor (I/P: 100-240V~ 50/60Hz, 0.5A; O/P: 12V, 1.5A)
Battery 7.2V, 2300mAh



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2.4 Test environment

Relative humidity content: 54 %
Air pressure: 86-103 Kpa

2.5 General Test Requirement

Radiated Emission: For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100 kHz respectively with an appropriate sweep speed.

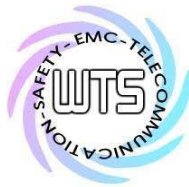
For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

The 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.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

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.



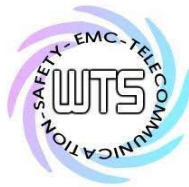
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2.6 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2018/5/30	2019/5/29
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	2017/10/26	2018/10/25
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2017/8/22	2018/8/21
ETSTW-CE 008	HF-EICHLLEITUNG 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	2017/7/14	2018/7/13
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2017/8/31	2018/8/30
ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2017/7/11	2018/7/10
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2018/5/30	2019/5/29
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2018/5/21	2019/5/20
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2017/8/25	2018/8/24
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function Test	
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function Test	
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2017/7/4	2018/7/3
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2017/7/3	2018/7/2
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2018/3/26	2019/3/25
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2018/1/23	2019/1/22
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2018/4/13	2019/4/12
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2018/4/26	2019/4/25
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2018/3/1	2019/2/28
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2018/3/1	2019/2/28
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2018/3/1	2019/2/28
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2018/3/6	2019/3/5
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2018/3/1	2019/2/28
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2018/3/30	2019/3/29
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	2017/9/11	2018/9/10
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2017/9/19	2018/9/18
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2018/4/16	2019/4/15
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2018/2/23	2019/2/22

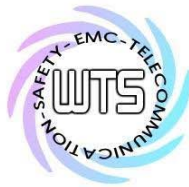


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ETSTW-RE 112	AC POWER SOURCE	TFC-1005	T-0A023536	T-Power	Function test	
ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2018/1/15	2019/1/14
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Function test	
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2018/5/29	2019/5/28
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2017/8/9	2018/8/8
ETSTW-RE 126	5GHz Notch filter	5NSL12-5800/E221.3-O/O	1	K&L Microwave	2017/8/9	2018/8/8
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2018/2/27	2019/2/26
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2017/8/9	2018/8/8
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2017/8/9	2018/8/8
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2018/3/30	2019/3/29
ETSTW-RE 147	Bi-log Hybrid Antenna	MCTD 2786B	BLB16M04005	ETC	2018/3/23	2019/3/22
ETSTW-RE 151	Thermohygrometer	608-h1	45104376	TESTO	2017/8/30	2018/8/29
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2018/5/10	2019/5/9
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2018/2/27	2019/2/26
ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2018/3/2	2019/3/1
ETSTW-GSM 004	Wideband Radio Communication Tester	CMW500	128092	R&S	2017/10/16	2018/10/15
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40/12+9SS	3	WI	2018/1/11	2019/1/10
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2018/1/11	2019/1/10
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2018/1/11	2019/1/10
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2018/1/11	2019/1/10
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2017/9/13	2018/9/12
ETSTW-GSM 024	Radio Communication Analyzer	MT8821C	None	Anritsu	2018/3/7	2019/3/6
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	2018/2/22	2019/2/21
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2018/2/22	2019/2/21
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2018/2/22	2019/2/21
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2018/2/22	2019/2/21
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2017/7/3	2018/7/2
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2018/2/27	2019/2/26
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2018/5/9	2019/5/8
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2017/9/7	2018/9/6
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2017/9/7	2018/9/6
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S Cable 9)	279067	HUBER+SUHNER	2018/2/27	2019/2/26
ETSTW-Cable 031	Microwave Cable	SUCOFLEX 104 (S Cable 10)	238092	HUBER+SUHNER	2018/3/30	2019/3/29
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2018/3/30	2019/3/29



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ETSTW-Cable 048	Microwave Cable	SUCOFLEX 104	325519	HUBER+SUHNER	2018/3/30	2019/3/29
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2018/2/21	2019/2/20
ETSTW-Cable 064	Microwave Cable	SUCOFLEX 104	MY28891	HUBER+SUHNER	2018/3/30	2019/3/29
ETSTW-Cable 066	SMA type cable	32022	None	ASTROLAB	2017/8/31	2018/8/30
ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM- NM-25000	170239	EMCI	2018/2/21	2019/2/20
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	

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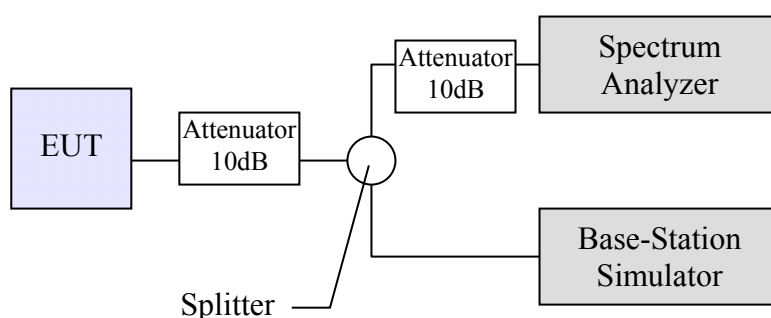
3. RF Power Output

3.1 Test procedure

3.1.1 Conducted Method

Per 47CFR Part 2.1046, the RF power output shall be measured at the RF output terminals and following procedure is employed:

The transmitter output was connected as the following figure:



The whole connection system is calibrated with a standard signal generator. Power on and make a link from simulator to EUT and then set the EUT to maximum output power.

Measure the RF power with the spectrum analyzer in accordance the following settings:

RBW: 300 kHz for Frequency below 1GHz and 1MHz for Frequency equal to and above 1GHz.

VBW: 300 kHz for Frequency below 1GHz and 1MHz for Frequency equal to and above 1GHz.

Span: 2MHz

Sweep: 3s

The power output at the transmitter antenna terminal is then determined by assign the value of the corrected factor to the spectrum analyzer reading.

Tests were performed at three frequencies (low, middle and high channels) and operation mode selected.

3.1.2 Radiated Method

If the conducted measurement is not practical due to the integral antenna, the radiated measurement will be performed in accordance the following procedure:

The EUT was positioned on a non-conductive turntable, 0.8m above the ground on an open test site.

The radiated emission at the fundamental frequency was measured at 3m distance with a test antenna and spectrum analyzer.

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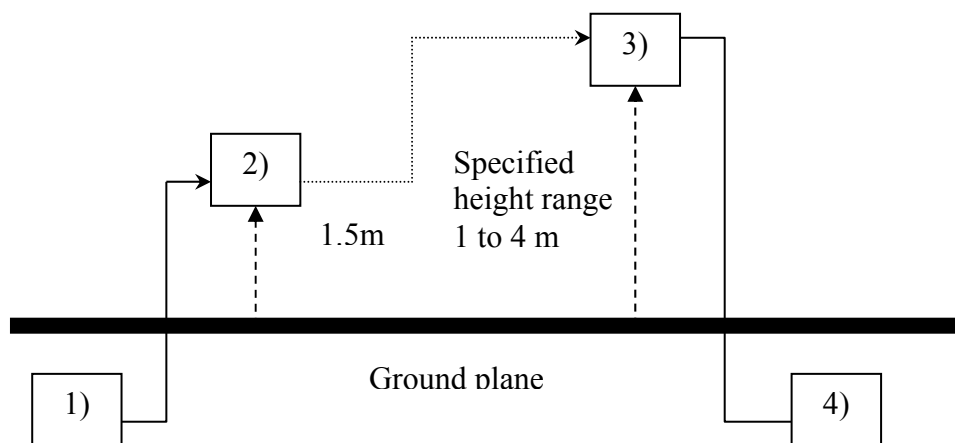
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Worst case emission was recorded with the rotation of the turntable and the raising and lowering of the test antenna.

Substitution RF power Measurement at WTS Taiwan
General:

The applied substitution method follows ANSI/TIA/EIA-603, ANSI/TIA/EIA-102.CAAA or the appropriate ETSI rules respectively.

The actual signal generated by the EUT can be determined by means of a substitution measurement in which a known signal source replaces the device to be measured.



- 1) Signal generator;
- 2) Substitution antenna;
- 3) Test antenna;
- 4) Spectrum analyzer or selective voltmeter.

The substitution antenna replaces the transmitter antenna at the same position and in vertical polarization. The frequency of the signal generator shall be adjusted to the measurement frequency.

The test antenna shall be raised or lowered, if necessary, to ensure that the maximum signal is still received. The input signal to the substitution antenna shall be adjusted in level until an equal or a known related level to that detected from the transmitter is obtained in the measurement receiver.

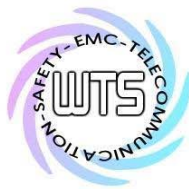
If a fully anechoic chamber is used as test site in order to provide free space conditions there is no need to change the height of the antenna.

The measurement will be repeated in horizontal position.

Calibration:

In order to make this kind of measurement more effective and to avoid subjective measurement faults ETS has installed automatic computer controlled measurement procedures.

With the above described substitution method a test site is calibrated over the full frequency range which is used in suitable frequency steps. For a certain power level on the substitution antenna the received power over the whole frequency range is documented. All necessary antenna gains, cable losses, filter losses and amplifications of preamplifiers are taken in



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consideration. The summary of this calibration measurement performs a transducer factor that is related to the considered test site and a certain measurement distance. Differences of the radiated power levels of different test samples are determined by internal attenuation of measurement receiver. The proper function of such test site will be maintained by short term plausibility checks and periodical re-calibration.

Testing:

The test sample will be putted on the table at the defined position and the radiated power will be receiver and documented by the measurement receiver.

On test sites with ground plane the measurement antenna will be lowered and raised to maximum values at significant frequencies.

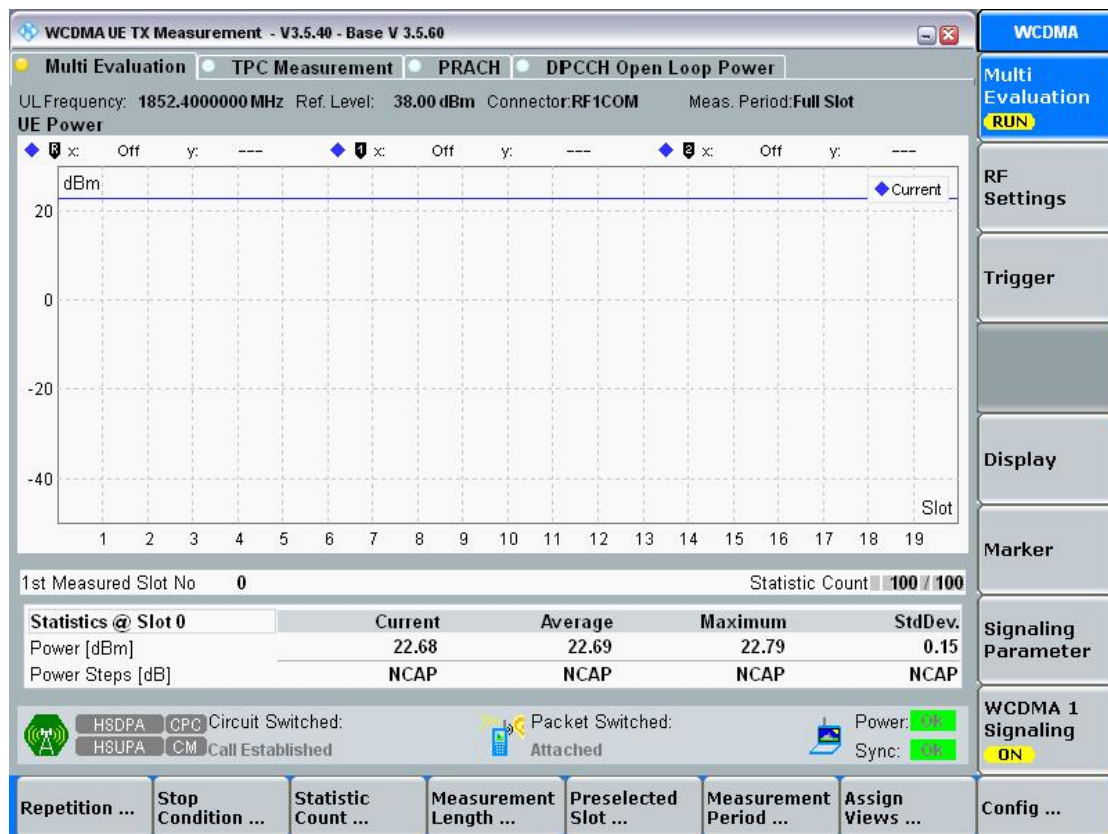
For peak power measurements the sample is turned by the turntable over 360 degree in order to find the direction with the maximum radiation or to document the max reading with the MAXHOLD function during the rotation.

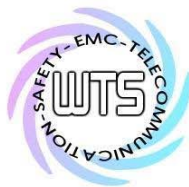
3.2 Test Results

- ☒ Conducted Measurement
- ☐ Radiated Measurement

WCDMA

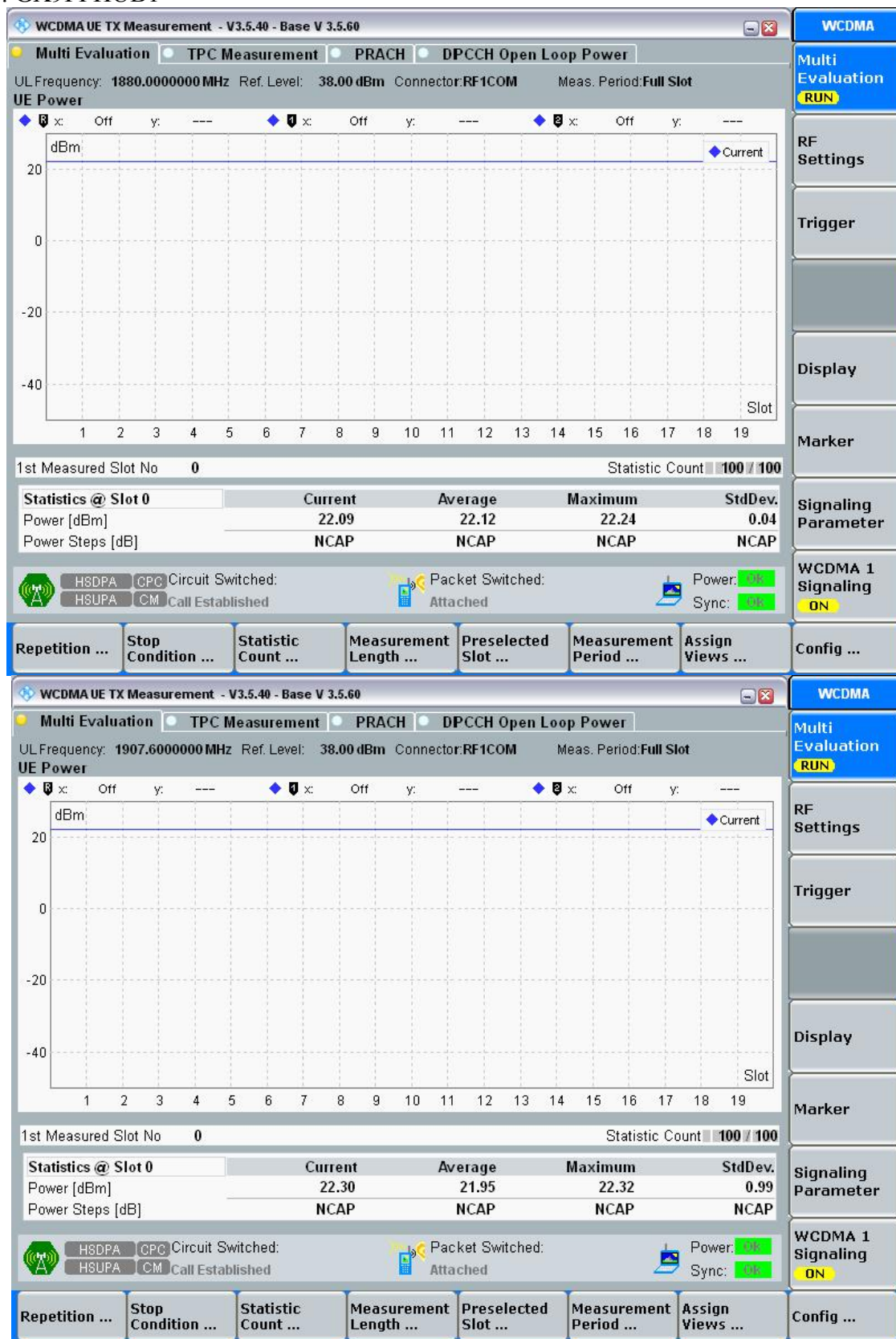
Band 2

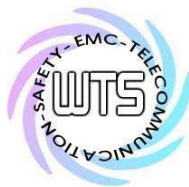




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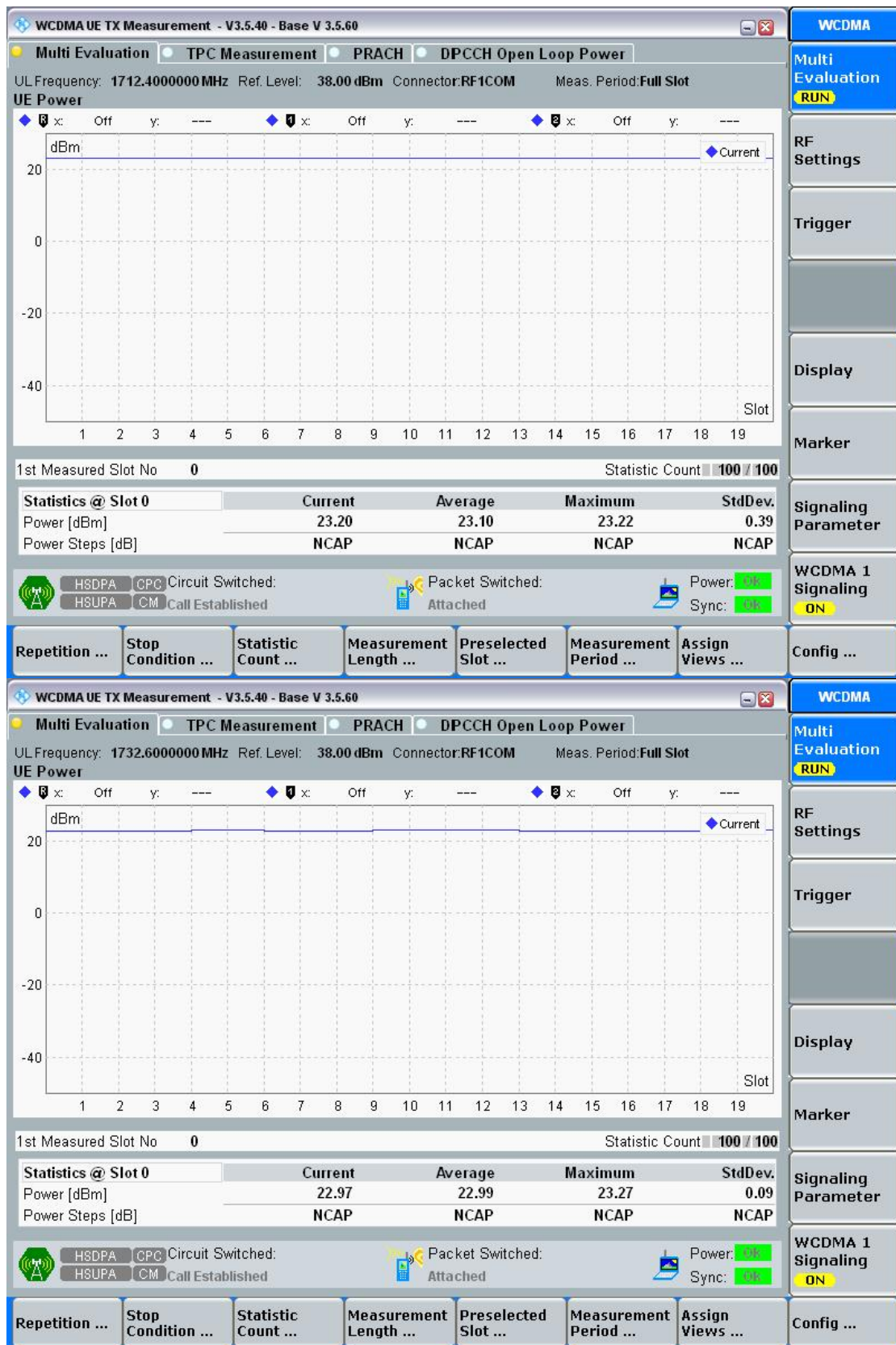




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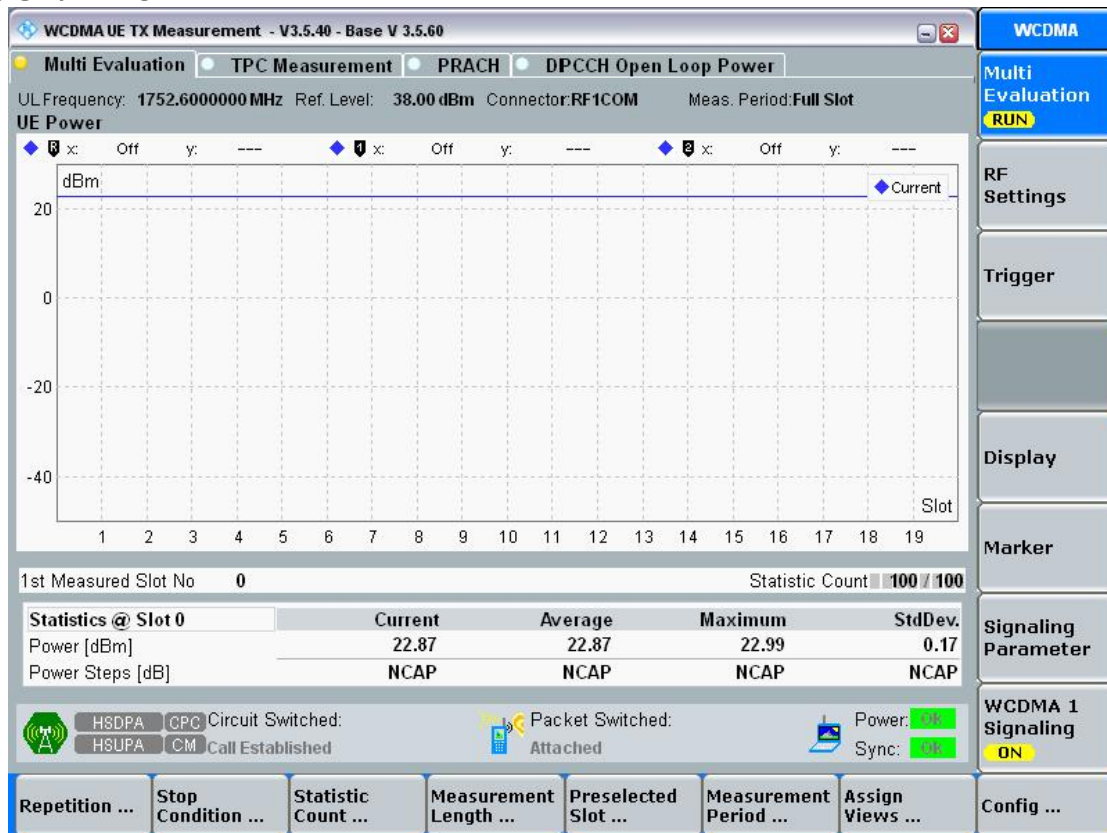
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Band 4

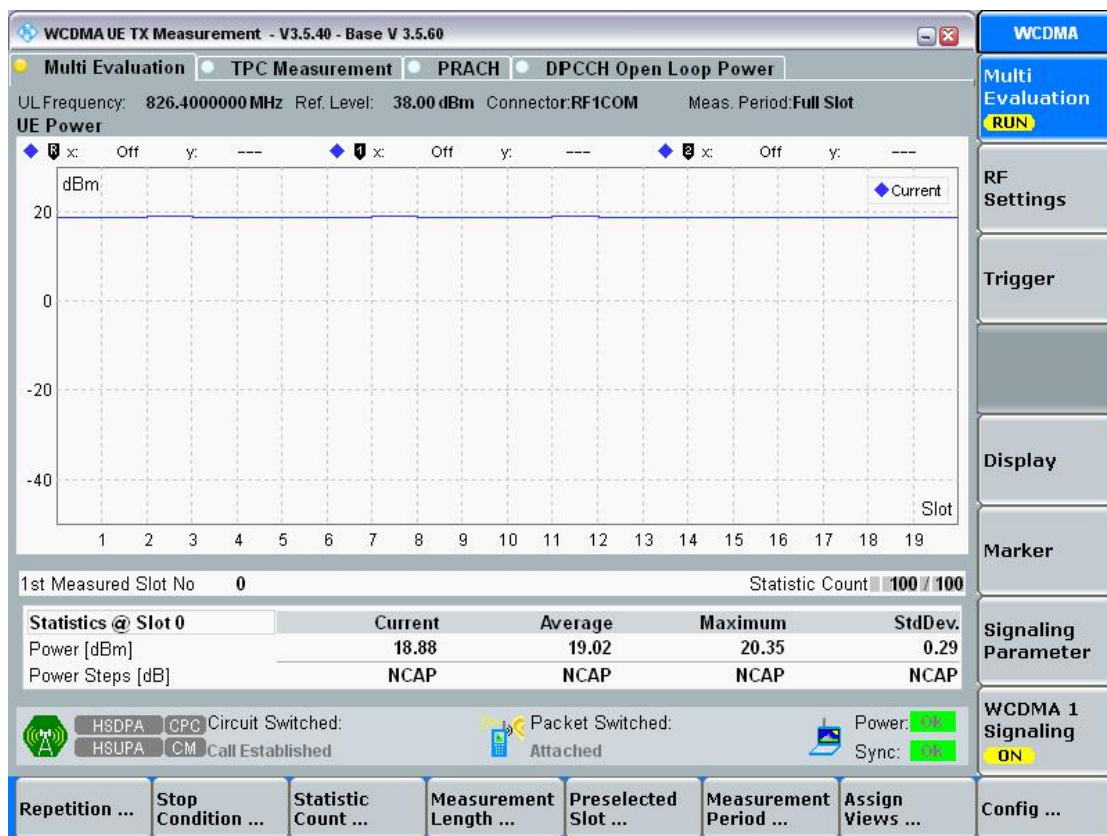


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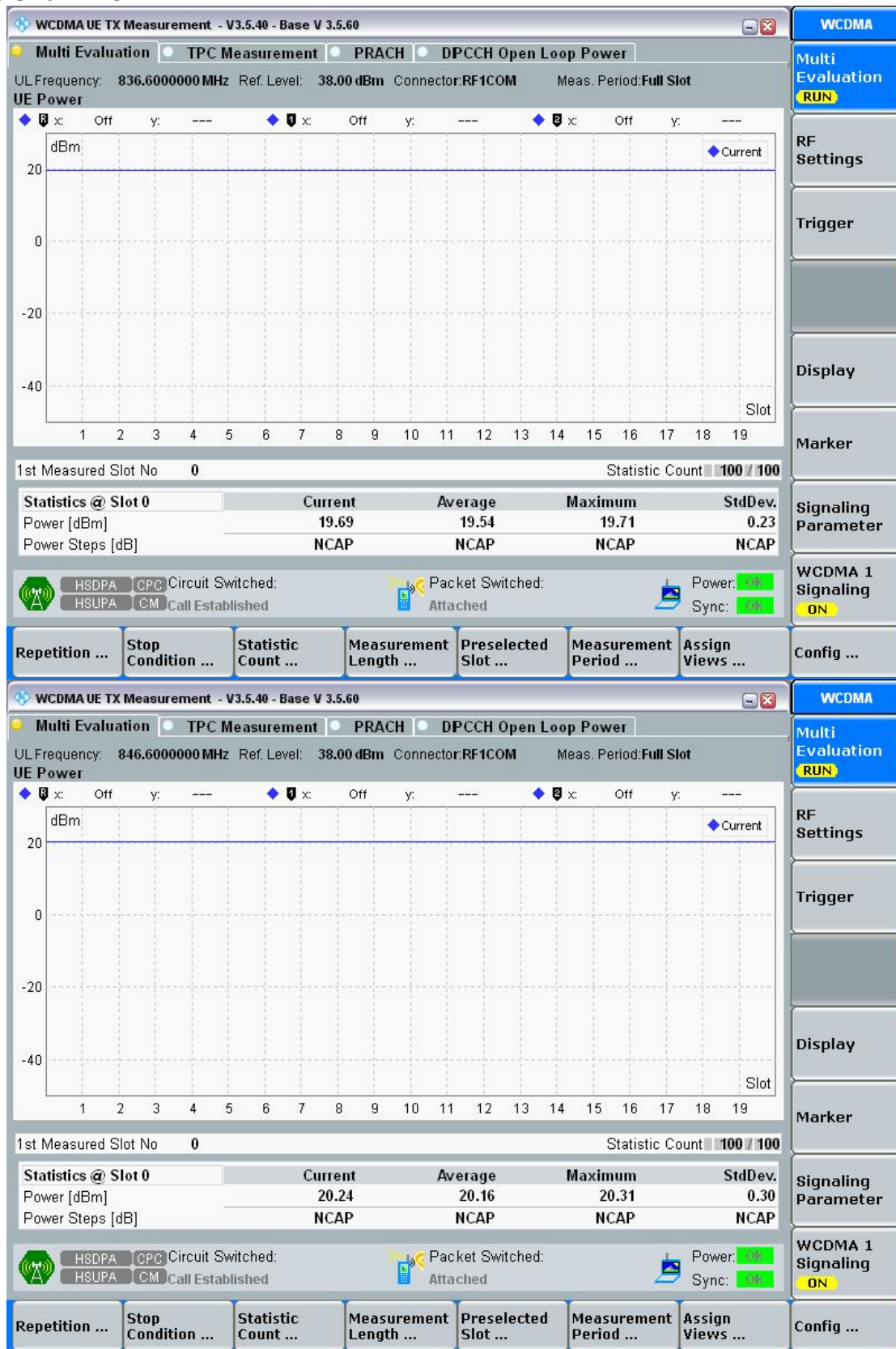


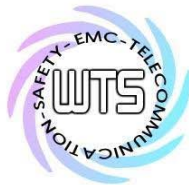
Band 5



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FCC ID: GX9FPHUB1





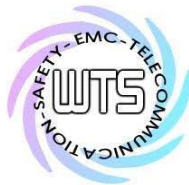
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LTE

Band	Modulation	Bandwidth	RB#Offset	Channel	Power (dBm)	Result
2	QPSK	1.4MHz	1RB#0	18607	22.02	PASS
2	QPSK	1.4MHz	1RB#MAX	18607	21.95	PASS
2	QPSK	1.4MHz	PRB#0	18607	21.95	PASS
2	QPSK	1.4MHz	FRB#0	18607	21.01	PASS
2	16QAM	1.4MHz	1RB#0	18607	20.88	PASS
2	16QAM	1.4MHz	PRB#0	18607	20.84	PASS
2	16QAM	1.4MHz	FRB#0	18607	20.99	PASS
2	QPSK	1.4MHz	1RB#0	18900	22.17	PASS
2	QPSK	1.4MHz	1RB#MAX	18900	22.19	PASS
2	QPSK	1.4MHz	PRB#0	18900	22.19	PASS
2	QPSK	1.4MHz	FRB#0	18900	21.15	PASS
2	16QAM	1.4MHz	1RB#0	18900	21.04	PASS
2	16QAM	1.4MHz	PRB#0	18900	21.07	PASS
2	16QAM	1.4MHz	FRB#0	18900	20.09	PASS
2	QPSK	1.4MHz	1RB#0	19193	21.79	PASS
2	QPSK	1.4MHz	1RB#MAX	19193	21.74	PASS
2	QPSK	1.4MHz	PRB#0	19193	21.74	PASS
2	QPSK	1.4MHz	FRB#0	19193	20.72	PASS
2	16QAM	1.4MHz	1RB#0	19193	20.60	PASS
2	16QAM	1.4MHz	PRB#0	19193	20.67	PASS
2	16QAM	1.4MHz	FRB#0	19193	20.77	PASS
2	QPSK	3MHz	1RB#0	18615	22.17	PASS
2	QPSK	3MHz	1RB#MAX	18615	22.05	PASS
2	QPSK	3MHz	PRB#0	18615	22.05	PASS
2	QPSK	3MHz	FRB#0	18615	21.00	PASS
2	16QAM	3MHz	1RB#0	18615	21.06	PASS
2	16QAM	3MHz	PRB#0	18615	20.97	PASS
2	16QAM	3MHz	FRB#0	18615	20.04	PASS
2	QPSK	3MHz	1RB#0	18900	22.24	PASS
2	QPSK	3MHz	1RB#MAX	18900	22.15	PASS
2	QPSK	3MHz	PRB#0	18900	22.15	PASS
2	QPSK	3MHz	FRB#0	18900	21.15	PASS
2	16QAM	3MHz	1RB#0	18900	21.21	PASS
2	16QAM	3MHz	PRB#0	18900	21.19	PASS
2	16QAM	3MHz	FRB#0	18900	20.17	PASS
2	QPSK	3MHz	1RB#0	19185	21.85	PASS
2	QPSK	3MHz	1RB#MAX	19185	21.68	PASS
2	QPSK	3MHz	PRB#0	19185	21.68	PASS
2	QPSK	3MHz	FRB#0	19185	20.74	PASS
2	16QAM	3MHz	1RB#0	19185	20.83	PASS
2	16QAM	3MHz	PRB#0	19185	20.72	PASS
2	16QAM	3MHz	FRB#0	19185	20.76	PASS
2	QPSK	5MHz	1RB#0	18625	22.20	PASS
2	QPSK	5MHz	1RB#MAX	18625	22.02	PASS

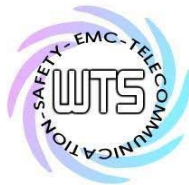


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FCC ID: GX9FPHUB1

2	QPSK	5MHz	PRB#0	18625	22.02	PASS
2	QPSK	5MHz	FRB#0	18625	20.97	PASS
2	16QAM	5MHz	1RB#0	18625	21.16	PASS
2	16QAM	5MHz	PRB#0	18625	21.03	PASS
2	16QAM	5MHz	FRB#0	18625	19.91	PASS
2	QPSK	5MHz	1RB#0	18900	22.27	PASS
2	QPSK	5MHz	1RB#MAX	18900	22.18	PASS
2	QPSK	5MHz	PRB#0	18900	22.18	PASS
2	QPSK	5MHz	FRB#0	18900	21.12	PASS
2	16QAM	5MHz	1RB#0	18900	21.22	PASS
2	16QAM	5MHz	PRB#0	18900	21.13	PASS
2	16QAM	5MHz	FRB#0	18900	20.07	PASS
2	QPSK	5MHz	1RB#0	19175	21.93	PASS
2	QPSK	5MHz	1RB#MAX	19175	21.77	PASS
2	QPSK	5MHz	PRB#0	19175	21.77	PASS
2	QPSK	5MHz	FRB#0	19175	20.71	PASS
2	16QAM	5MHz	1RB#0	19175	20.92	PASS
2	16QAM	5MHz	PRB#0	19175	20.80	PASS
2	16QAM	5MHz	FRB#0	19175	20.74	PASS
2	QPSK	10MHz	1RB#0	18650	22.35	PASS
2	QPSK	10MHz	1RB#MAX	18650	22.06	PASS
2	QPSK	10MHz	PRB#0	18650	22.06	PASS
2	QPSK	10MHz	FRB#0	18650	20.98	PASS
2	16QAM	10MHz	1RB#0	18650	21.27	PASS
2	16QAM	10MHz	PRB#0	18650	20.97	PASS
2	16QAM	10MHz	FRB#0	18650	20.05	PASS
2	QPSK	10MHz	1RB#0	18900	22.38	PASS
2	QPSK	10MHz	1RB#MAX	18900	22.15	PASS
2	QPSK	10MHz	PRB#0	18900	22.15	PASS
2	QPSK	10MHz	FRB#0	18900	21.14	PASS
2	16QAM	10MHz	1RB#0	18900	21.34	PASS
2	16QAM	10MHz	PRB#0	18900	21.06	PASS
2	16QAM	10MHz	FRB#0	18900	20.10	PASS
2	QPSK	10MHz	1RB#0	19150	22.08	PASS
2	QPSK	10MHz	1RB#MAX	19150	21.75	PASS
2	QPSK	10MHz	PRB#0	19150	21.75	PASS
2	QPSK	10MHz	FRB#0	19150	20.88	PASS
2	16QAM	10MHz	1RB#0	19150	21.16	PASS
2	16QAM	10MHz	PRB#0	19150	20.68	PASS
2	16QAM	10MHz	FRB#0	19150	20.83	PASS
2	QPSK	15MHz	1RB#0	18675	22.59	PASS
2	QPSK	15MHz	1RB#MAX	18675	22.06	PASS
2	QPSK	15MHz	PRB#0	18675	22.06	PASS
2	QPSK	15MHz	FRB#0	18675	21.15	PASS
2	16QAM	15MHz	1RB#0	18675	21.46	PASS
2	16QAM	15MHz	PRB#0	18675	20.98	PASS
2	16QAM	15MHz	FRB#0	18675	20.09	PASS

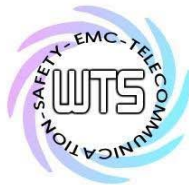


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FCC ID: GX9FPHUB1

2	QPSK	15MHz	1RB#0	18900	22.47	PASS
2	QPSK	15MHz	1RB#MAX	18900	22.16	PASS
2	QPSK	15MHz	PRB#0	18900	22.16	PASS
2	QPSK	15MHz	FRB#0	18900	21.22	PASS
2	16QAM	15MHz	1RB#0	18900	21.41	PASS
2	16QAM	15MHz	PRB#0	18900	21.12	PASS
2	16QAM	15MHz	FRB#0	18900	20.21	PASS
2	QPSK	15MHz	1RB#0	19125	22.48	PASS
2	QPSK	15MHz	1RB#MAX	19125	21.80	PASS
2	QPSK	15MHz	PRB#0	19125	21.80	PASS
2	QPSK	15MHz	FRB#0	19125	21.01	PASS
2	16QAM	15MHz	1RB#0	19125	21.43	PASS
2	16QAM	15MHz	PRB#0	19125	20.74	PASS
2	16QAM	15MHz	FRB#0	19125	20.00	PASS
2	QPSK	20MHz	1RB#0	18700	22.57	PASS
2	QPSK	20MHz	1RB#MAX	18700	21.98	PASS
2	QPSK	20MHz	PRB#0	18700	21.98	PASS
2	QPSK	20MHz	FRB#0	18700	21.01	PASS
2	16QAM	20MHz	1RB#0	18700	21.56	PASS
2	16QAM	20MHz	PRB#0	18700	20.89	PASS
2	16QAM	20MHz	FRB#0	18700	20.04	PASS
2	QPSK	20MHz	1RB#0	18900	22.50	PASS
2	QPSK	20MHz	1RB#MAX	18900	22.00	PASS
2	QPSK	20MHz	PRB#0	18900	22.00	PASS
2	QPSK	20MHz	FRB#0	18900	21.20	PASS
2	16QAM	20MHz	1RB#0	18900	21.49	PASS
2	16QAM	20MHz	PRB#0	18900	20.97	PASS
2	16QAM	20MHz	FRB#0	18900	20.15	PASS
2	QPSK	20MHz	1RB#0	19100	22.51	PASS
2	QPSK	20MHz	1RB#MAX	19100	21.64	PASS
2	QPSK	20MHz	PRB#0	19100	21.64	PASS
2	QPSK	20MHz	FRB#0	19100	20.98	PASS
2	16QAM	20MHz	1RB#0	19100	21.55	PASS
2	16QAM	20MHz	PRB#0	19100	20.57	PASS
2	16QAM	20MHz	FRB#0	19100	19.99	PASS
4	QPSK	1.4MHz	1RB#0	18607	21.81	PASS
4	QPSK	1.4MHz	1RB#MAX	19957	21.74	PASS
4	QPSK	1.4MHz	PRB#0	19957	21.74	PASS
4	QPSK	1.4MHz	FRB#0	19957	20.83	PASS
4	16QAM	1.4MHz	1RB#0	19957	20.82	PASS
4	16QAM	1.4MHz	PRB#0	19957	20.79	PASS
4	16QAM	1.4MHz	FRB#0	19957	20.94	PASS
4	QPSK	1.4MHz	1RB#0	19957	21.52	PASS
4	QPSK	1.4MHz	1RB#MAX	20175	21.50	PASS
4	QPSK	1.4MHz	PRB#0	20175	21.50	PASS
4	QPSK	1.4MHz	FRB#0	20175	20.78	PASS
4	16QAM	1.4MHz	1RB#0	20175	20.52	PASS

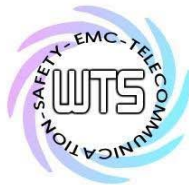


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FCC ID: GX9FPHUB1

4	16QAM	1.4MHz	PRB#0	20175	20.90	PASS
4	16QAM	1.4MHz	FRB#0	20175	20.61	PASS
4	QPSK	1.4MHz	1RB#0	20175	21.50	PASS
4	QPSK	1.4MHz	1RB#MAX	20393	21.54	PASS
4	QPSK	1.4MHz	PRB#0	20393	21.54	PASS
4	QPSK	1.4MHz	FRB#0	20393	20.53	PASS
4	16QAM	1.4MHz	1RB#0	20393	20.65	PASS
4	16QAM	1.4MHz	PRB#0	20393	20.66	PASS
4	16QAM	1.4MHz	FRB#0	20393	20.68	PASS
4	QPSK	3MHz	1RB#0	20393	21.74	PASS
4	QPSK	3MHz	1RB#MAX	19965	21.62	PASS
4	QPSK	3MHz	PRB#0	19965	21.62	PASS
4	QPSK	3MHz	FRB#0	19965	20.71	PASS
4	16QAM	3MHz	1RB#0	19965	20.91	PASS
4	16QAM	3MHz	PRB#0	19965	20.76	PASS
4	16QAM	3MHz	FRB#0	19965	20.72	PASS
4	QPSK	3MHz	1RB#0	19965	21.52	PASS
4	QPSK	3MHz	1RB#MAX	20175	21.44	PASS
4	QPSK	3MHz	PRB#0	20175	21.44	PASS
4	QPSK	3MHz	FRB#0	20175	20.4	PASS
4	16QAM	3MHz	1RB#0	20175	20.68	PASS
4	16QAM	3MHz	PRB#0	20175	20.59	PASS
4	16QAM	3MHz	FRB#0	20175	20.49	PASS
4	QPSK	3MHz	1RB#0	20175	21.57	PASS
4	QPSK	3MHz	1RB#MAX	20385	21.48	PASS
4	QPSK	3MHz	PRB#0	20385	21.48	PASS
4	QPSK	3MHz	FRB#0	20385	20.57	PASS
4	16QAM	3MHz	1RB#0	20385	20.68	PASS
4	16QAM	3MHz	PRB#0	20385	20.72	PASS
4	16QAM	3MHz	FRB#0	20385	20.56	PASS
4	QPSK	5MHz	1RB#0	20385	21.76	PASS
4	QPSK	5MHz	1RB#MAX	19975	21.61	PASS
4	QPSK	5MHz	PRB#0	19975	21.61	PASS
4	QPSK	5MHz	FRB#0	19975	20.63	PASS
4	16QAM	5MHz	1RB#0	19975	20.88	PASS
4	16QAM	5MHz	PRB#0	19975	20.71	PASS
4	16QAM	5MHz	FRB#0	19975	20.78	PASS
4	QPSK	5MHz	1RB#0	19975	21.49	PASS
4	QPSK	5MHz	1RB#MAX	20175	21.31	PASS
4	QPSK	5MHz	PRB#0	20175	21.31	PASS
4	QPSK	5MHz	FRB#0	20175	20.44	PASS
4	16QAM	5MHz	1RB#0	20175	20.62	PASS
4	16QAM	5MHz	PRB#0	20175	20.50	PASS
4	16QAM	5MHz	FRB#0	20175	20.50	PASS
4	QPSK	5MHz	1RB#0	20175	21.48	PASS
4	QPSK	5MHz	1RB#MAX	20375	21.41	PASS
4	QPSK	5MHz	PRB#0	20375	21.41	PASS

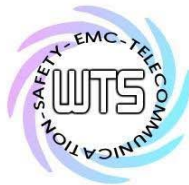


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4	QPSK	5MHz	FRB#0	20375	20.46	PASS
4	16QAM	5MHz	1RB#0	20375	20.68	PASS
4	16QAM	5MHz	PRB#0	20375	20.43	PASS
4	16QAM	5MHz	FRB#0	20375	20.59	PASS
4	QPSK	10MHz	1RB#0	20375	21.89	PASS
4	QPSK	10MHz	1RB#MAX	20000	21.42	PASS
4	QPSK	10MHz	PRB#0	20000	21.42	PASS
4	QPSK	10MHz	FRB#0	20000	20.64	PASS
4	16QAM	10MHz	1RB#0	20000	20.85	PASS
4	16QAM	10MHz	PRB#0	20000	20.51	PASS
4	16QAM	10MHz	FRB#0	20000	20.72	PASS
4	QPSK	10MHz	1RB#0	20000	21.60	PASS
4	QPSK	10MHz	1RB#MAX	20175	21.32	PASS
4	QPSK	10MHz	PRB#0	20175	21.32	PASS
4	QPSK	10MHz	FRB#0	20175	20.42	PASS
4	16QAM	10MHz	1RB#0	20175	20.67	PASS
4	16QAM	10MHz	PRB#0	20175	20.35	PASS
4	16QAM	10MHz	FRB#0	20175	20.48	PASS
4	QPSK	10MHz	1RB#0	20175	21.58	PASS
4	QPSK	10MHz	1RB#MAX	20350	21.38	PASS
4	QPSK	10MHz	PRB#0	20350	21.38	PASS
4	QPSK	10MHz	FRB#0	20350	20.48	PASS
4	16QAM	10MHz	1RB#0	20350	20.68	PASS
4	16QAM	10MHz	PRB#0	20350	20.51	PASS
4	16QAM	10MHz	FRB#0	20350	20.55	PASS
4	QPSK	15MHz	1RB#0	20350	22.00	PASS
4	QPSK	15MHz	1RB#MAX	20025	21.37	PASS
4	QPSK	15MHz	PRB#0	20025	21.37	PASS
4	QPSK	15MHz	FRB#0	20025	20.68	PASS
4	16QAM	15MHz	1RB#0	20025	21.02	PASS
4	16QAM	15MHz	PRB#0	20025	20.46	PASS
4	16QAM	15MHz	FRB#0	20025	20.81	PASS
4	QPSK	15MHz	1RB#0	20025	21.84	PASS
4	QPSK	15MHz	1RB#MAX	20175	21.26	PASS
4	QPSK	15MHz	PRB#0	20175	21.26	PASS
4	QPSK	15MHz	FRB#0	20175	20.49	PASS
4	16QAM	15MHz	1RB#0	20175	20.78	PASS
4	16QAM	15MHz	PRB#0	20175	20.29	PASS
4	16QAM	15MHz	FRB#0	20175	20.48	PASS
4	QPSK	15MHz	1RB#0	20175	21.67	PASS
4	QPSK	15MHz	1RB#MAX	20325	21.30	PASS
4	QPSK	15MHz	PRB#0	20325	21.30	PASS
4	QPSK	15MHz	FRB#0	20325	20.47	PASS
4	16QAM	15MHz	1RB#0	20325	20.72	PASS
4	16QAM	15MHz	PRB#0	20325	20.41	PASS
4	16QAM	15MHz	FRB#0	20325	20.49	PASS
4	QPSK	20MHz	1RB#0	20325	21.98	PASS

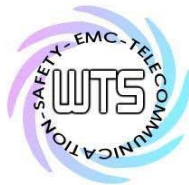


Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

4	QPSK	20MHz	1RB#MAX	20050	21.12	PASS
4	QPSK	20MHz	PRB#0	20050	21.12	PASS
4	QPSK	20MHz	FRB#0	20050	20.52	PASS
4	16QAM	20MHz	1RB#0	20050	21.08	PASS
4	16QAM	20MHz	PRB#0	20050	20.25	PASS
4	16QAM	20MHz	FRB#0	20050	20.61	PASS
4	QPSK	20MHz	1RB#0	20050	21.77	PASS
4	QPSK	20MHz	1RB#MAX	20175	21.09	PASS
4	QPSK	20MHz	PRB#0	20175	21.09	PASS
4	QPSK	20MHz	FRB#0	20175	20.41	PASS
4	16QAM	20MHz	1RB#0	20175	20.88	PASS
4	16QAM	20MHz	PRB#0	20175	20.16	PASS
4	16QAM	20MHz	FRB#0	20175	20.48	PASS
4	QPSK	20MHz	1RB#0	20175	21.71	PASS
4	QPSK	20MHz	1RB#MAX	20300	21.19	PASS
4	QPSK	20MHz	PRB#0	20300	21.19	PASS
4	QPSK	20MHz	FRB#0	20300	20.41	PASS
4	16QAM	20MHz	1RB#0	20300	20.80	PASS
4	16QAM	20MHz	PRB#0	20300	20.25	PASS
4	16QAM	20MHz	FRB#0	20300	20.49	PASS
5	QPSK	1.4MHz	1RB#0	20407	20.20	PASS
5	QPSK	1.4MHz	1RB#MAX	20407	20.20	PASS
5	QPSK	1.4MHz	PRB#0	20407	20.20	PASS
5	QPSK	1.4MHz	FRB#0	20407	20.17	PASS
5	16QAM	1.4MHz	1RB#0	20407	20.98	PASS
5	16QAM	1.4MHz	PRB#0	20407	20.07	PASS
5	16QAM	1.4MHz	FRB#0	20407	20.14	PASS
5	QPSK	1.4MHz	1RB#0	20525	20.44	PASS
5	QPSK	1.4MHz	1RB#MAX	20525	20.51	PASS
5	QPSK	1.4MHz	PRB#0	20525	20.51	PASS
5	QPSK	1.4MHz	FRB#0	20525	20.53	PASS
5	16QAM	1.4MHz	1RB#0	20525	20.38	PASS
5	16QAM	1.4MHz	PRB#0	20525	20.39	PASS
5	16QAM	1.4MHz	FRB#0	20525	20.54	PASS
5	QPSK	1.4MHz	1RB#0	20643	20.24	PASS
5	QPSK	1.4MHz	1RB#MAX	20643	20.22	PASS
5	QPSK	1.4MHz	PRB#0	20643	20.22	PASS
5	QPSK	1.4MHz	FRB#0	20643	20.22	PASS
5	16QAM	1.4MHz	1RB#0	20643	20.16	PASS
5	16QAM	1.4MHz	PRB#0	20643	20.21	PASS
5	16QAM	1.4MHz	FRB#0	20643	20.31	PASS
5	QPSK	3MHz	1RB#0	20415	20.22	PASS
5	QPSK	3MHz	1RB#MAX	20415	20.28	PASS
5	QPSK	3MHz	PRB#0	20415	20.28	PASS
5	QPSK	3MHz	FRB#0	20415	20.15	PASS
5	16QAM	3MHz	1RB#0	20415	20.26	PASS
5	16QAM	3MHz	PRB#0	20415	20.35	PASS

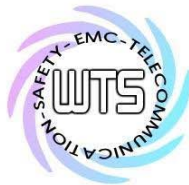


Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

5	16QAM	3MHz	FRB#0	20415	20.08	PASS
5	QPSK	3MHz	1RB#0	20525	20.45	PASS
5	QPSK	3MHz	1RB#MAX	20525	20.59	PASS
5	QPSK	3MHz	PRB#0	20525	20.59	PASS
5	QPSK	3MHz	FRB#0	20525	20.50	PASS
5	16QAM	3MHz	1RB#0	20525	20.41	PASS
5	16QAM	3MHz	PRB#0	20525	20.66	PASS
5	16QAM	3MHz	FRB#0	20525	20.40	PASS
5	QPSK	3MHz	1RB#0	20635	20.14	PASS
5	QPSK	3MHz	1RB#MAX	20635	20.21	PASS
5	QPSK	3MHz	PRB#0	20635	20.21	PASS
5	QPSK	3MHz	FRB#0	20635	20.11	PASS
5	16QAM	3MHz	1RB#0	20635	20.23	PASS
5	16QAM	3MHz	PRB#0	20635	20.33	PASS
5	16QAM	3MHz	FRB#0	20635	20.15	PASS
5	QPSK	5MHz	1RB#0	20425	20.32	PASS
5	QPSK	5MHz	1RB#MAX	20425	20.35	PASS
5	QPSK	5MHz	PRB#0	20425	20.35	PASS
5	QPSK	5MHz	FRB#0	20425	20.30	PASS
5	16QAM	5MHz	1RB#0	20425	20.28	PASS
5	16QAM	5MHz	PRB#0	20425	20.30	PASS
5	16QAM	5MHz	FRB#0	20425	20.24	PASS
5	QPSK	5MHz	1RB#0	20525	20.50	PASS
5	QPSK	5MHz	1RB#MAX	20525	20.64	PASS
5	QPSK	5MHz	PRB#0	20525	20.64	PASS
5	QPSK	5MHz	FRB#0	20525	20.42	PASS
5	16QAM	5MHz	1RB#0	20525	20.43	PASS
5	16QAM	5MHz	PRB#0	20525	20.67	PASS
5	16QAM	5MHz	FRB#0	20525	20.44	PASS
5	QPSK	5MHz	1RB#0	20625	20.10	PASS
5	QPSK	5MHz	1RB#MAX	20625	20.25	PASS
5	QPSK	5MHz	PRB#0	20625	20.25	PASS
5	QPSK	5MHz	FRB#0	20625	20.06	PASS
5	16QAM	5MHz	1RB#0	20625	20.08	PASS
5	16QAM	5MHz	PRB#0	20625	20.18	PASS
5	16QAM	5MHz	FRB#0	20625	20.14	PASS
5	QPSK	10MHz	1RB#0	20450	20.21	PASS
5	QPSK	10MHz	1RB#MAX	20450	20.33	PASS
5	QPSK	10MHz	PRB#0	20450	20.33	PASS
5	QPSK	10MHz	FRB#0	20450	20.24	PASS
5	16QAM	10MHz	1RB#0	20450	20.27	PASS
5	16QAM	10MHz	PRB#0	20450	20.27	PASS
5	16QAM	10MHz	FRB#0	20450	20.25	PASS
5	QPSK	10MHz	1RB#0	20525	20.44	PASS
5	QPSK	10MHz	1RB#MAX	20525	20.71	PASS
5	QPSK	10MHz	PRB#0	20525	20.71	PASS
5	QPSK	10MHz	FRB#0	20525	20.48	PASS

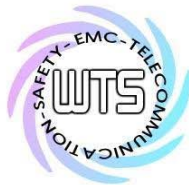


Worldwide Testing Services(Taiwan) Co., Ltd.

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FCC ID: GX9FPHUB1

5	16QAM	10MHz	1RB#0	20525	20.34	PASS
5	16QAM	10MHz	PRB#0	20525	20.71	PASS
5	16QAM	10MHz	FRB#0	20525	20.48	PASS
5	QPSK	10MHz	1RB#0	20600	20.74	PASS
5	QPSK	10MHz	1RB#MAX	20600	20.01	PASS
5	QPSK	10MHz	PRB#0	20600	20.01	PASS
5	QPSK	10MHz	FRB#0	20600	20.89	PASS
5	16QAM	10MHz	1RB#0	20600	20.82	PASS
5	16QAM	10MHz	PRB#0	20600	20.04	PASS
5	16QAM	10MHz	FRB#0	20600	20.97	PASS
12	QPSK	1.4MHz	1RB#0	23017	20.50	PASS
12	QPSK	1.4MHz	1RB#MAX	23017	20.50	PASS
12	QPSK	1.4MHz	PRB#0	23017	20.50	PASS
12	QPSK	1.4MHz	FRB#0	23017	20.64	PASS
12	16QAM	1.4MHz	1RB#0	23017	20.63	PASS
12	16QAM	1.4MHz	PRB#0	23017	20.54	PASS
12	16QAM	1.4MHz	FRB#0	23017	20.72	PASS
12	QPSK	1.4MHz	1RB#0	23095	20.51	PASS
12	QPSK	1.4MHz	1RB#MAX	23095	20.54	PASS
12	QPSK	1.4MHz	PRB#0	23095	20.54	PASS
12	QPSK	1.4MHz	FRB#0	23095	20.75	PASS
12	16QAM	1.4MHz	1RB#0	23095	20.78	PASS
12	16QAM	1.4MHz	PRB#0	23095	20.77	PASS
12	16QAM	1.4MHz	FRB#0	23095	20.09	PASS
12	QPSK	1.4MHz	1RB#0	23173	20.36	PASS
12	QPSK	1.4MHz	1RB#MAX	23173	20.36	PASS
12	QPSK	1.4MHz	PRB#0	23173	20.36	PASS
12	QPSK	1.4MHz	FRB#0	23173	20.46	PASS
12	16QAM	1.4MHz	1RB#0	23173	20.24	PASS
12	16QAM	1.4MHz	PRB#0	23173	20.29	PASS
12	16QAM	1.4MHz	FRB#0	23173	20.08	PASS
12	QPSK	3MHz	1RB#0	23025	20.53	PASS
12	QPSK	3MHz	1RB#MAX	23025	20.40	PASS
12	QPSK	3MHz	PRB#0	23025	20.40	PASS
12	QPSK	3MHz	FRB#0	23025	20.49	PASS
12	16QAM	3MHz	1RB#0	23025	20.81	PASS
12	16QAM	3MHz	PRB#0	23025	20.52	PASS
12	16QAM	3MHz	FRB#0	23025	20.56	PASS
12	QPSK	3MHz	1RB#0	23095	20.51	PASS
12	QPSK	3MHz	1RB#MAX	23095	20.44	PASS
12	QPSK	3MHz	PRB#0	23095	20.44	PASS
12	QPSK	3MHz	FRB#0	23095	20.56	PASS
12	16QAM	3MHz	1RB#0	23095	20.58	PASS
12	16QAM	3MHz	PRB#0	23095	20.03	PASS
12	16QAM	3MHz	FRB#0	23095	20.62	PASS
12	QPSK	3MHz	1RB#0	23165	20.41	PASS
12	QPSK	3MHz	1RB#MAX	23165	20.30	PASS

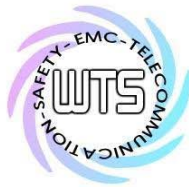


Worldwide Testing Services(Taiwan) Co., Ltd.

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FCC ID: GX9FPHUB1

12	QPSK	3MHz	PRB#0	23165	20.30	PASS
12	QPSK	3MHz	FRB#0	23165	20.37	PASS
12	16QAM	3MHz	1RB#0	23165	20.72	PASS
12	16QAM	3MHz	PRB#0	23165	20.45	PASS
12	16QAM	3MHz	FRB#0	23165	20.29	PASS
12	QPSK	5MHz	1RB#0	23035	20.34	PASS
12	QPSK	5MHz	1RB#MAX	23035	20.87	PASS
12	QPSK	5MHz	PRB#0	23035	20.87	PASS
12	QPSK	5MHz	FRB#0	23035	20.12	PASS
12	16QAM	5MHz	1RB#0	23035	20.55	PASS
12	16QAM	5MHz	PRB#0	23035	20.29	PASS
12	16QAM	5MHz	FRB#0	23035	20.44	PASS
12	QPSK	5MHz	1RB#0	23095	20.90	PASS
12	QPSK	5MHz	1RB#MAX	23095	20.58	PASS
12	QPSK	5MHz	PRB#0	23095	20.58	PASS
12	QPSK	5MHz	FRB#0	23095	20.71	PASS
12	16QAM	5MHz	1RB#0	23095	20.99	PASS
12	16QAM	5MHz	PRB#0	23095	20.66	PASS
12	16QAM	5MHz	FRB#0	23095	20.92	PASS
12	QPSK	5MHz	1RB#0	23155	20.45	PASS
12	QPSK	5MHz	1RB#MAX	23155	20.42	PASS
12	QPSK	5MHz	PRB#0	23155	20.42	PASS
12	QPSK	5MHz	FRB#0	23155	20.44	PASS
12	16QAM	5MHz	1RB#0	23155	20.52	PASS
12	16QAM	5MHz	PRB#0	23155	20.52	PASS
12	16QAM	5MHz	FRB#0	23155	20.55	PASS
12	QPSK	10MHz	1RB#0	23060	20.51	PASS
12	QPSK	10MHz	1RB#MAX	23060	20.71	PASS
12	QPSK	10MHz	PRB#0	23060	20.71	PASS
12	QPSK	10MHz	FRB#0	23060	20.20	PASS
12	16QAM	10MHz	1RB#0	23060	20.62	PASS
12	16QAM	10MHz	PRB#0	23060	20.81	PASS
12	16QAM	10MHz	FRB#0	23060	20.21	PASS
12	QPSK	10MHz	1RB#0	23095	20.14	PASS
12	QPSK	10MHz	1RB#MAX	23095	20.57	PASS
12	QPSK	10MHz	PRB#0	23095	20.57	PASS
12	QPSK	10MHz	FRB#0	23095	20.83	PASS
12	16QAM	10MHz	1RB#0	23095	20.29	PASS
12	16QAM	10MHz	PRB#0	23095	20.53	PASS
12	16QAM	10MHz	FRB#0	23095	20.88	PASS
12	QPSK	10MHz	1RB#0	23130	20.44	PASS
12	QPSK	10MHz	1RB#MAX	23130	20.10	PASS
12	QPSK	10MHz	PRB#0	23130	20.10	PASS
12	QPSK	10MHz	FRB#0	23130	20.51	PASS
12	16QAM	10MHz	1RB#0	23130	20.86	PASS
12	16QAM	10MHz	PRB#0	23130	20.58	PASS
12	16QAM	10MHz	FRB#0	23130	20.61	PASS



Worldwide Testing Services(Taiwan) Co., Ltd.

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- ☐ Conducted Measurement
☒ Radiated Measurement

WCDMA

Band 2

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1850.990	21.47	23.62	33	Pass
1880.801	22.35	24.50	33	Pass
1907.055	23.54	25.69	33	Pass

Band 4

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1712.432	20.34	22.49	30	Pass
1732.055	18.72	20.87	30	Pass
1751.414	16.93	19.08	30	Pass

Band 5

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
827.4256	12.19	14.34	38.45	Pass
834.8051	16.97	19.12	38.45	Pass
847.6897	10.35	12.50	38.45	Pass

LTE

Band 2

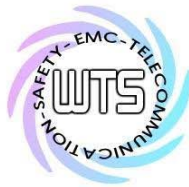
1.4 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1850.636	21.62	23.77	33	Pass
1879.904	20.85	23.00	33	Pass
1909.172	18.48	20.63	33	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1850.572	22.22	24.37	33	Pass
1879.904	21.95	24.10	33	Pass
1909.108	21.53	23.68	33	Pass



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20 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1853.974	22	24.15	33	Pass
1873.590	22.67	24.82	33	Pass
1892.564	21.06	23.21	33	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1853.974	20.77	22.92	33	Pass
1872.949	22.79	24.94	33	Pass
1892.821	21.14	23.29	33	Pass

Band 4

1.4 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1710.956	21.05	23.20	30	Pass
1731.891	19.1	21.25	30	Pass
1753.819	17.27	19.42	30	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1710.315	21.51	23.66	30	Pass
1732.083	19.44	21.59	30	Pass
1753.819	17.73	19.88	30	Pass

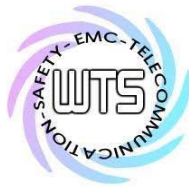
20 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1713.077	22.1	24.25	30	Pass
1725.192	20.27	22.42	30	Pass
1737.692	18.42	20.57	30	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1710.385	19.81	21.96	30	Pass
1724.551	20.12	22.27	30	Pass
1735.513	19.16	21.31	30	Pass



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Band 5

1.4 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.2513	14.61	16.76	38.45	Pass
836.0192	15.29	17.44	38.45	Pass
847.7551	15.95	18.10	38.45	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.0590	14.81	16.96	38.45	Pass
835.7950	16.23	18.38	38.45	Pass
848.3321	24.06	26.21	38.45	Pass

10 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
827.9872	22.66	24.81	38.45	Pass
833.8076	22.74	24.89	38.45	Pass
840.5385	24.28	26.43	38.45	Pass

16QAM

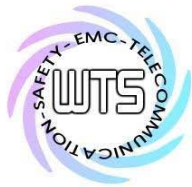
Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
827.9230	22.91	25.06	38.45	Pass
834.1923	23.21	25.36	38.45	Pass
841.5000	24.61	26.76	38.45	Pass

Band 12

1.4 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
699.6360	22.73	24.88	34.77	Pass
707.4680	24.59	26.74	34.77	Pass
714.8192	24.05	26.20	34.77	Pass



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16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
699.6038	23.01	25.16	34.77	Pass
707.5641	24.64	26.79	34.77	Pass
714.8192	24.68	26.83	34.77	Pass

10 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
700.5385	23.25	25.40	34.77	Pass
701.6667	25	27.15	34.77	Pass
704.8462	24.91	27.06	34.77	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
700.6667	23.65	25.80	34.77	Pass
703.5256	25.47	27.62	34.77	Pass
705.4230	26.25	28.40	34.77	Pass

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

Note: Please refer to appendix for plot data.

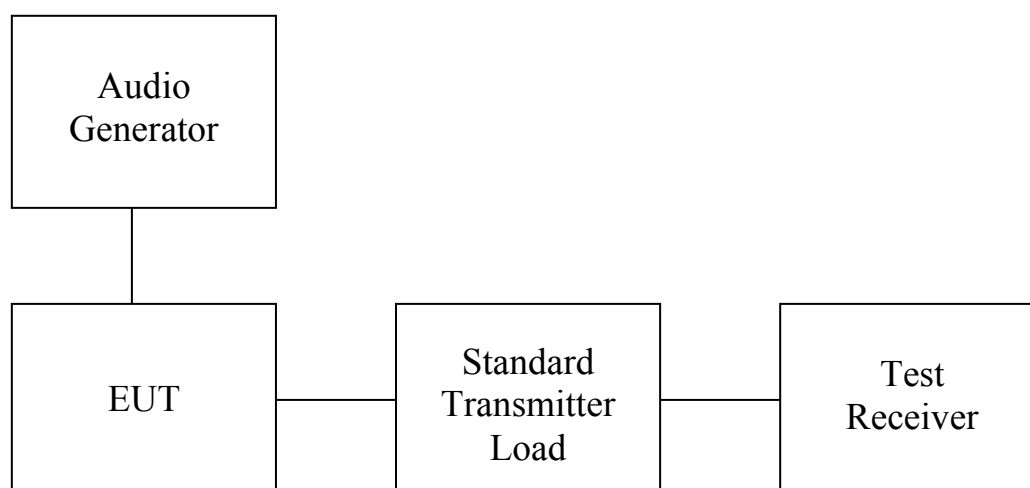
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

4. Modulation Characteristics

4.1 Test procedure

- ☐ A curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted.
The audio signal generator is connected to the audio input of the EUT with its full rating. The modulation response is measured at certain modulation frequencies, related to 1000Hz reference signal. Tests are performed for positive and negative modulation.
- ☐ Equipment which employs modulation Limiting: A curve or family of curves showing the percentage of modulation versus the modulation input voltage shall be supplied. The audio signal generator is connected to the audio input of the EUT with its full rating. The modulation limiting is measured at certain modulation frequencies from 100Hz to 15kHz.



4.2 Test Results

For digital modulation employed, this test item is not applicable.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

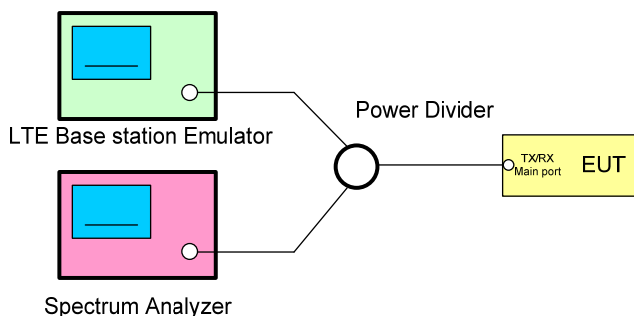
5. Peak-to-Average Ratio

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

5.1 Test procedure

1. The EUT main port was connected to the LTE emulator and spectrum analyzer via power divider
2. For Spectrum Analyzer setting :
3. Set the CCDF function in spectrum analyzer.
4. Set RBW $\geq$ signal's occupied bandwidth.
5. Set the number of counts to a value that stabilizes the measured CCDF curve.
6. Set the measurement interval (sweep time) to 1ms.
7. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1%
8. Record the deviation as Peak to Average Ratio.

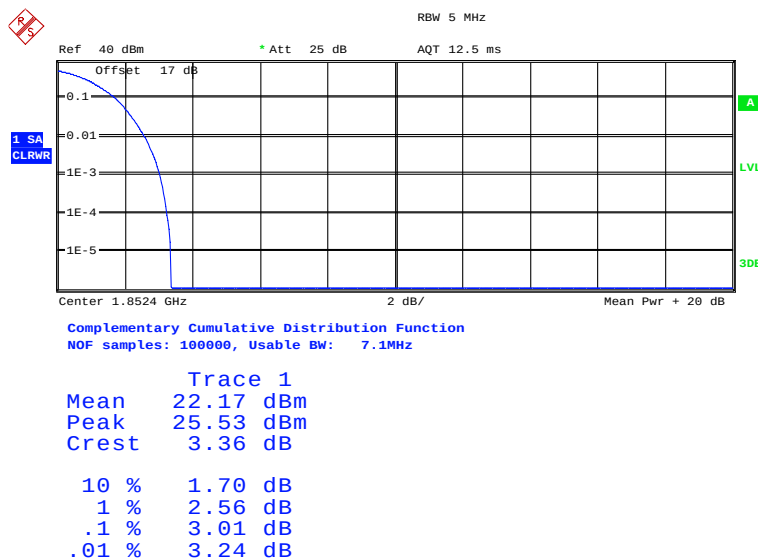
5.2 Test Set up



5.3 Test Results

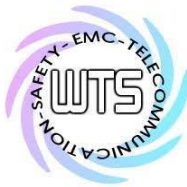
WCDMA

Band 2



PEAK to AVERAGE RATIO BAND2_CH9262

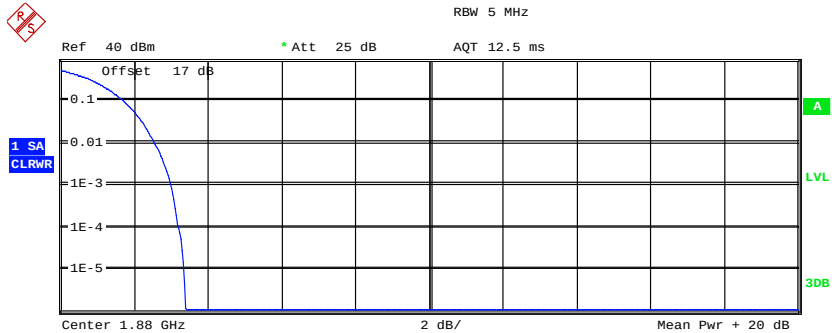
Date: 9.AUG.2017 18:58:35



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

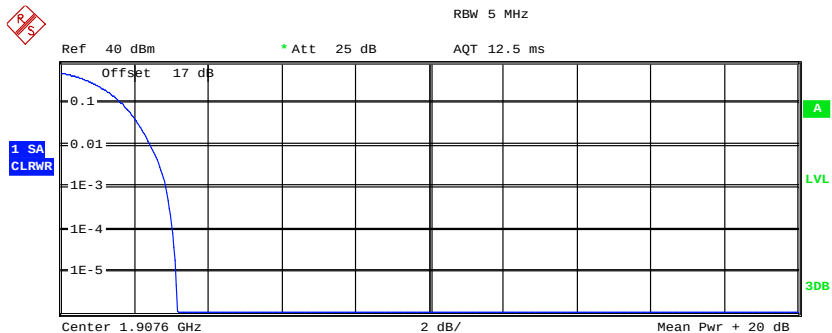


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

Trace 1	
Mean	21.52 dBm
Peak	24.89 dBm
Crest	3.38 dB
10 %	1.70 dB
1 %	2.53 dB
.1 %	2.98 dB
.01 %	3.17 dB

PEAK to AVERAGE RATIO BAND2_CH9400

Date: 9.AUG.2017 18:59:04

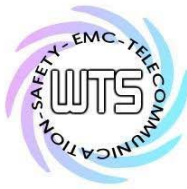


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

Trace 1	
Mean	21.61 dBm
Peak	24.75 dBm
Crest	3.15 dB
10 %	1.67 dB
1 %	2.44 dB
.1 %	2.85 dB
.01 %	3.04 dB

PEAK to AVERAGE RATIO BAND2_CH9538

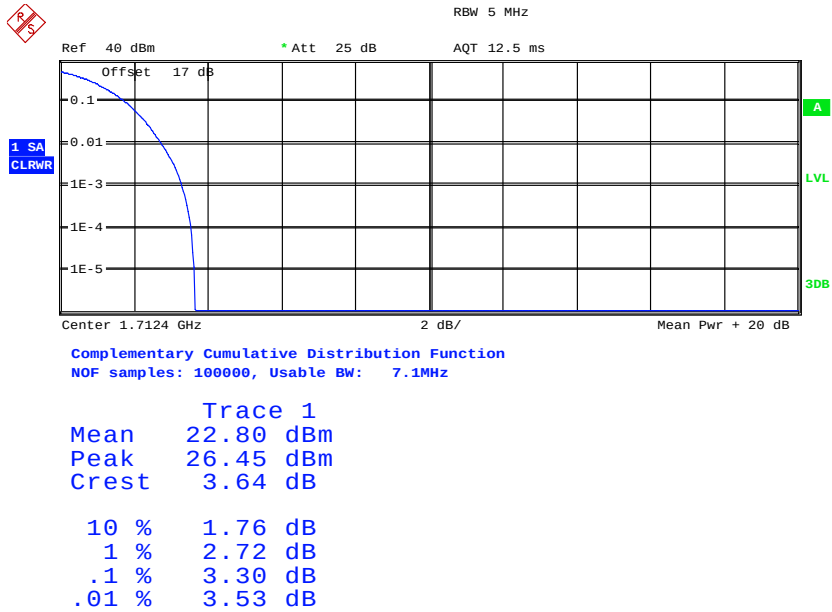
Date: 9.AUG.2017 18:59:43



Report Number: W6R21805-18133-P-247

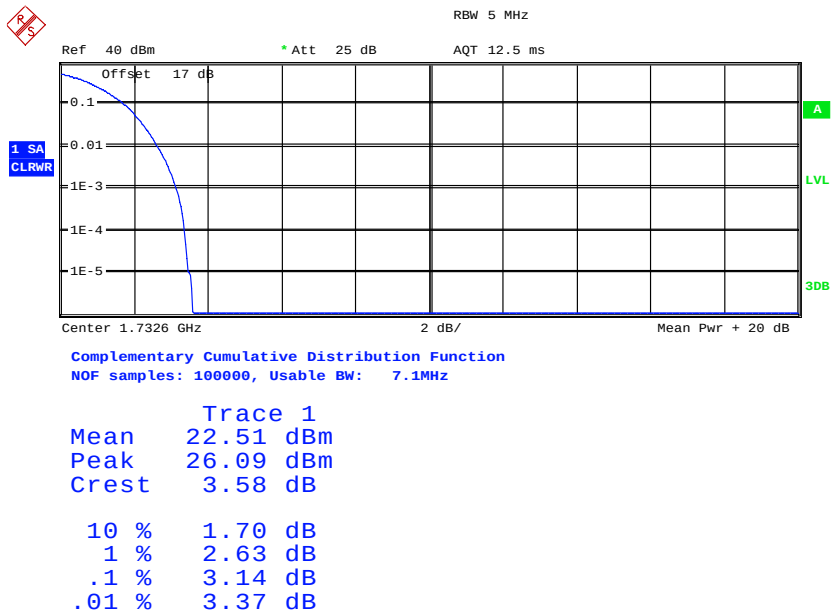
FCC ID: GX9FPHUB1

Band 4



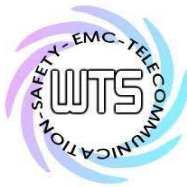
PEAK to AVERAGE RATIO BAND4_CH1312

Date: 9.AUG.2017 18:57:48



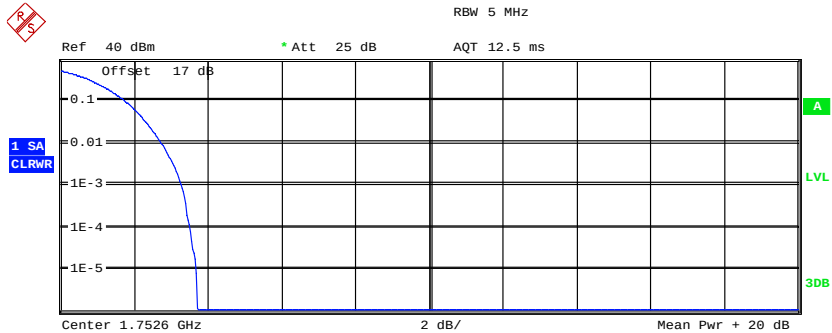
PEAK to AVERAGE RATIO BAND4_CH1413

Date: 9.AUG.2017 18:55:52



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



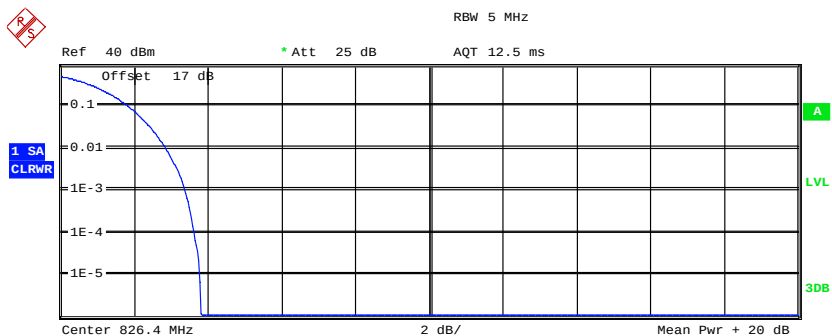
Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

Trace 1	
Mean	22.32 dBm
Peak	26.02 dBm
Crest	3.71 dB
10 %	1.73 dB
1 %	2.72 dB
.1 %	3.27 dB
.01 %	3.49 dB

PEAK to AVERAGE RATIO BAND4_CH1513

Date: 9.AUG.2017 18:54:54

Band 5

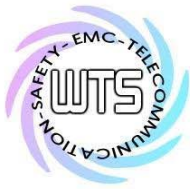


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

Trace 1	
Mean	18.84 dBm
Peak	22.64 dBm
Crest	3.79 dB
10 %	1.83 dB
1 %	2.85 dB
.1 %	3.37 dB
.01 %	3.62 dB

PEAK to AVERAGE RATIO BAND4_CH4132

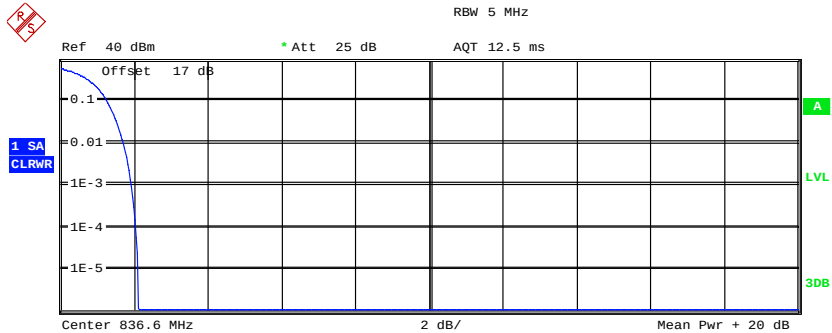
Date: 9.AUG.2017 19:00:26



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

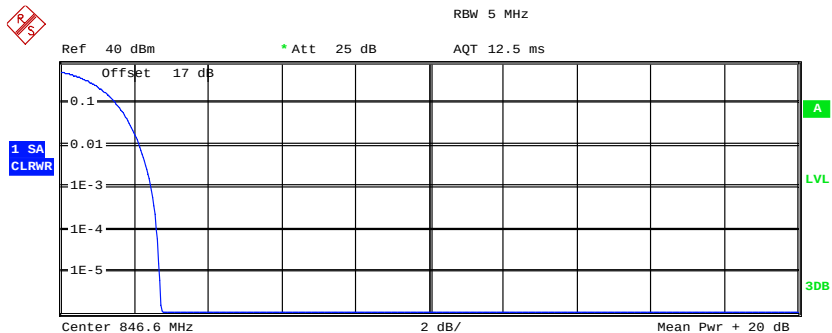


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

Trace 1	
Mean	19.19 dBm
Peak	21.30 dBm
Crest	2.10 dB
10 %	1.25 dB
1 %	1.70 dB
.1 %	1.92 dB
.01 %	2.05 dB

PEAK to AVERAGE RATIO BAND4_CH4183

Date: 9.AUG.2017 19:01:07

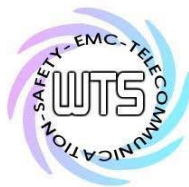


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

Trace 1	
Mean	19.76 dBm
Peak	22.49 dBm
Crest	2.73 dB
10 %	1.51 dB
1 %	2.15 dB
.1 %	2.44 dB
.01 %	2.60 dB

PEAK to AVERAGE RATIO BAND4_CH4233

Date: 9.AUG.2017 19:01:37



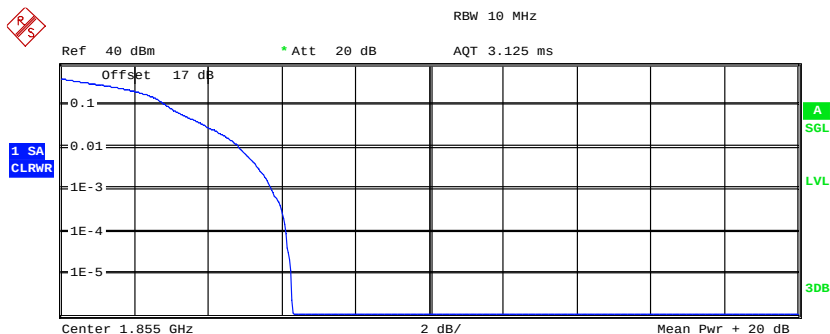
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

LTE

Band 2

16QAM

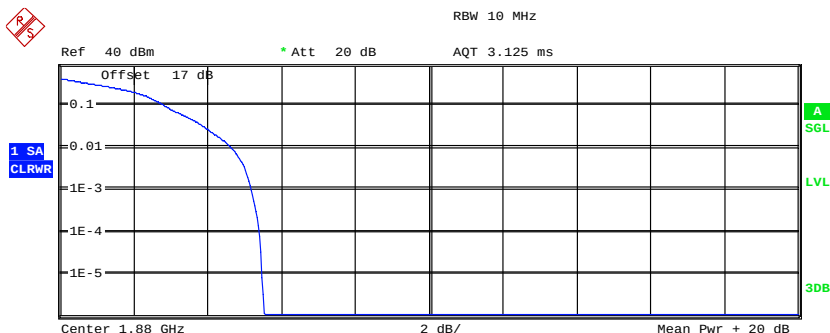


Complementary Cumulative Distribution Function (100000 samples)

Trace 1	
Mean	17.43 dBm
Peak	23.71 dBm
Crest	6.28 dB
10 %	2.88 dB
1 %	4.84 dB
.1 %	5.74 dB
.01 %	6.12 dB

Peak to Average Ratio Band2 16QAM 1RB CH18650

Date: 10.AUG.2017 11:01:12

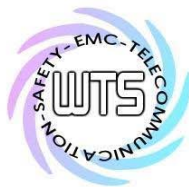


Complementary Cumulative Distribution Function (100000 samples)

Trace 1	
Mean	17.76 dBm
Peak	23.28 dBm
Crest	5.53 dB
10 %	2.85 dB
1 %	4.65 dB
.1 %	5.19 dB
.01 %	5.42 dB

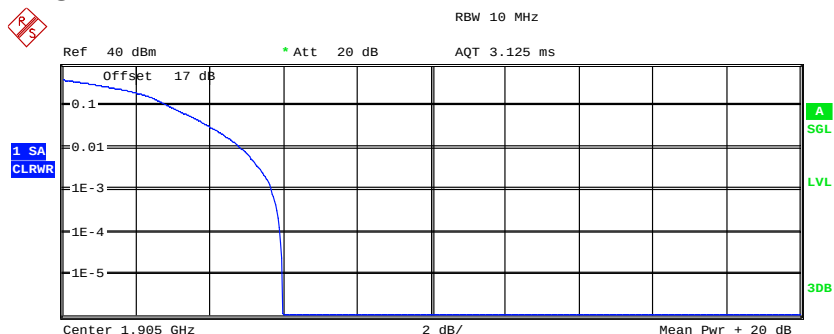
Peak to Average Ratio Band2 16QAM 1RB CH18900

Date: 10.AUG.2017 11:17:57



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



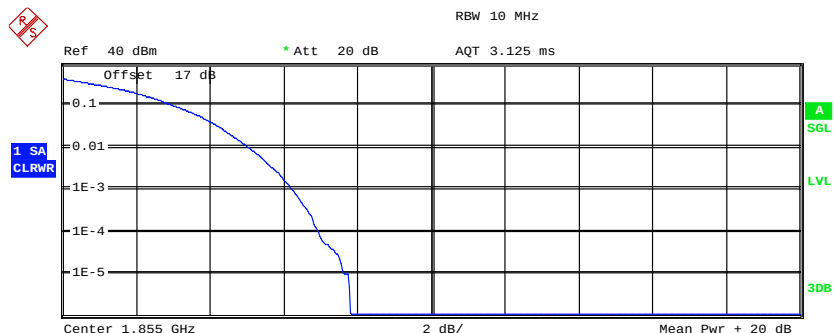
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 17.73 dBm
Peak 23.71 dBm
Crest 5.98 dB

10 % 2.88 dB
1 % 4.84 dB
.1 % 5.67 dB
.01 % 5.90 dB

Peak to Average Ratio Band2 16QAM 1RB CH19150

Date: 10.AUG.2017 11:18:56



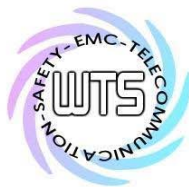
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 18.09 dBm
Peak 25.89 dBm
Crest 7.81 dB

10 % 3.01 dB
1 % 5.03 dB
.1 % 6.22 dB
.01 % 6.92 dB

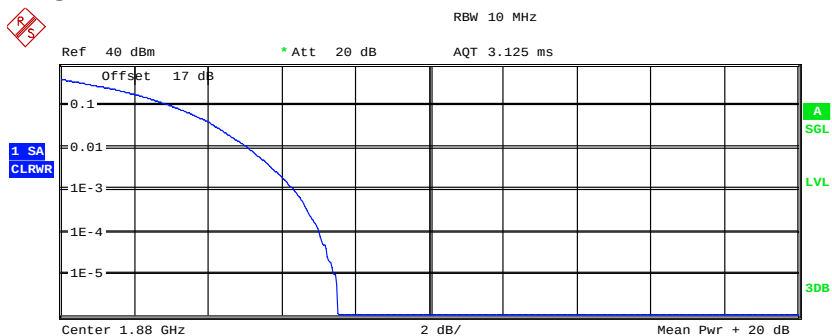
Peak to Average Ratio Band2 16QAM FRB CH18650

Date: 10.AUG.2017 11:08:26



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



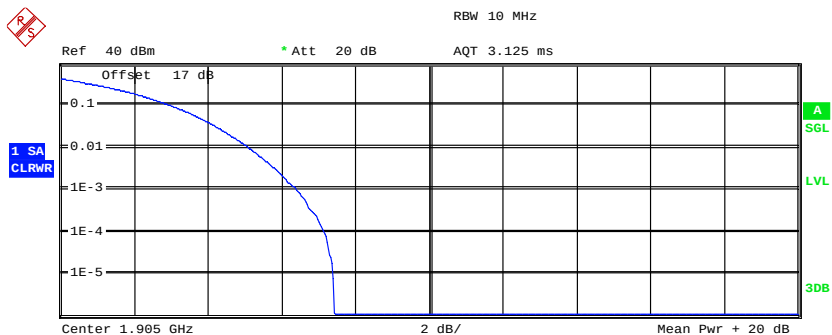
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 18.37 dBm
Peak 25.89 dBm
Crest 7.53 dB

10 % 3.01 dB
1 % 5.10 dB
.1 % 6.31 dB
.01 % 7.02 dB

Peak to Average Ratio Band2 16QAM FRB CH18900

Date: 10.AUG.2017 11:17:31



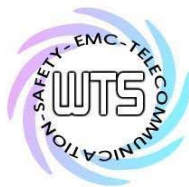
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 18.05 dBm
Peak 25.47 dBm
Crest 7.42 dB

10 % 3.01 dB
1 % 5.10 dB
.1 % 6.41 dB
.01 % 7.15 dB

Peak to Average Ratio Band2 16QAM FRB CH19150

Date: 10.AUG.2017 11:19:27



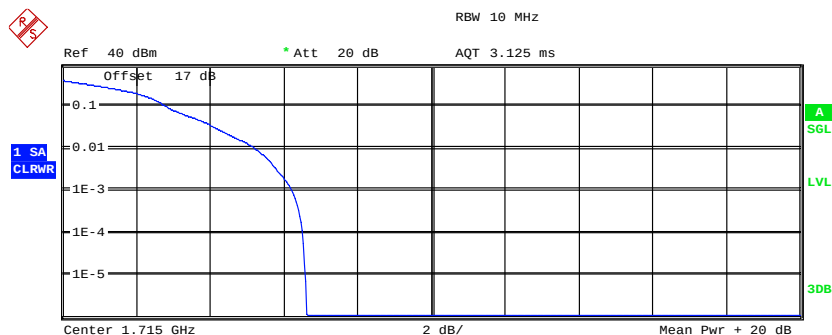
Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

Band 4

16QAM



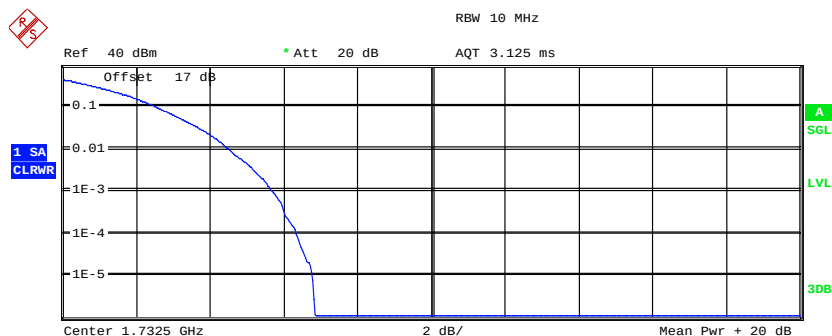
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 18.22 dBm
Peak 24.84 dBm
Crest 6.62 dB

10 % 2.82 dB
1 % 5.22 dB
.1 % 6.22 dB
.01 % 6.51 dB

Peak to Average Ratio Band4 16QAM 1RB CH20000

Date: 10.AUG.2017 11:43:22



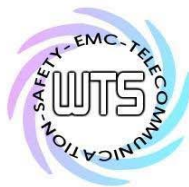
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 19.77 dBm
Peak 26.60 dBm
Crest 6.83 dB

10 % 2.56 dB
1 % 4.49 dB
.1 % 5.67 dB
.01 % 6.35 dB

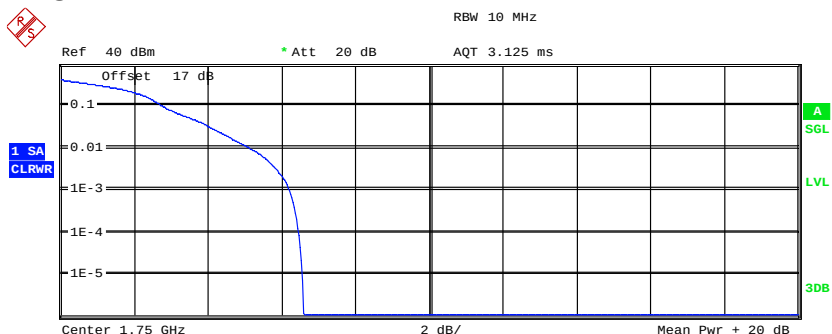
Peak to Average Ratio Band4 16QAM 1RB CH20175

Date: 10.AUG.2017 13:30:12



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



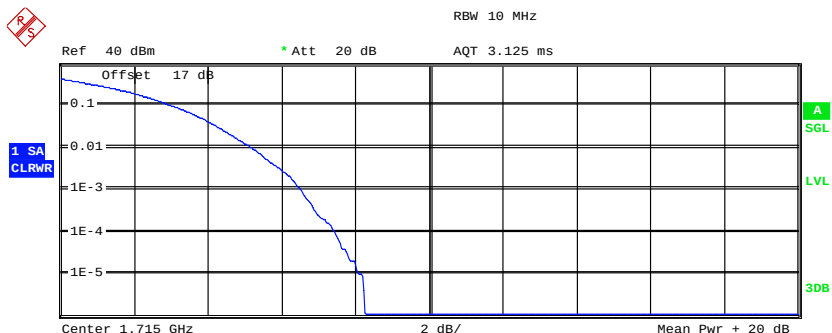
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 18.33 dBm
Peak 24.91 dBm
Crest 6.58 dB

10 % 2.76 dB
1 % 5.13 dB
.1 % 6.22 dB
.01 % 6.44 dB

Peak to Average Ratio Band4 16QAM 1RB CH20350

Date: 10.AUG.2017 13:20:17



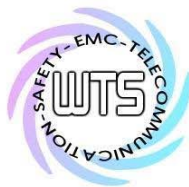
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 18.84 dBm
Peak 27.09 dBm
Crest 8.25 dB

10 % 3.01 dB
1 % 5.16 dB
.1 % 6.51 dB
.01 % 7.40 dB

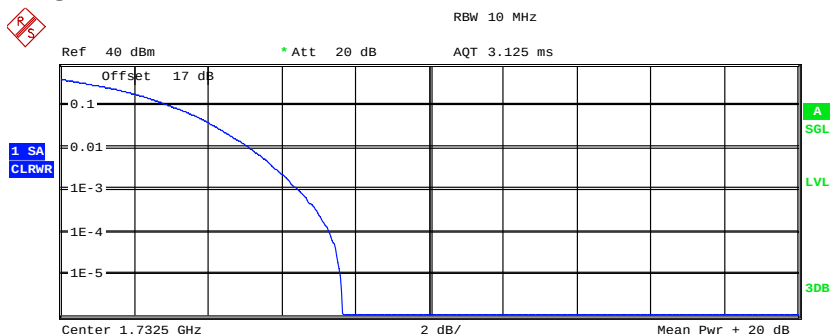
Peak to Average Ratio Band4 16QAM FRB CH20000

Date: 10.AUG.2017 11:43:54



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



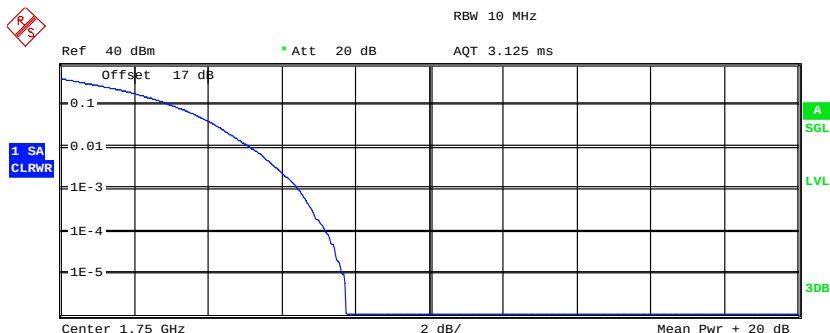
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 18.67 dBm
Peak 26.32 dBm
Crest 7.64 dB

10 % 3.01 dB
1 % 5.13 dB
.1 % 6.44 dB
.01 % 7.28 dB

Peak to Average Ratio Band4 16QAM FRB CH20175

Date: 10.AUG.2017 11:44:27



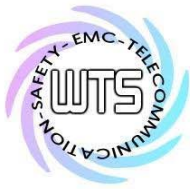
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 18.92 dBm
Peak 26.67 dBm
Crest 7.75 dB

10 % 3.04 dB
1 % 5.16 dB
.1 % 6.44 dB
.01 % 7.18 dB

Peak to Average Ratio Band4 16QAM FRB CH20350

Date: 10.AUG.2017 13:19:24

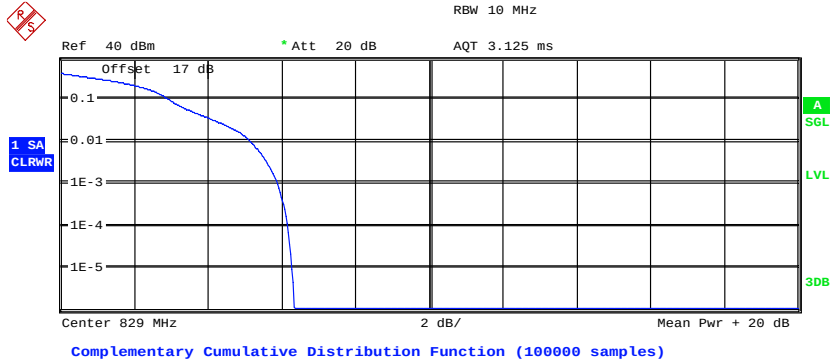


Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

Band 5

16QAM

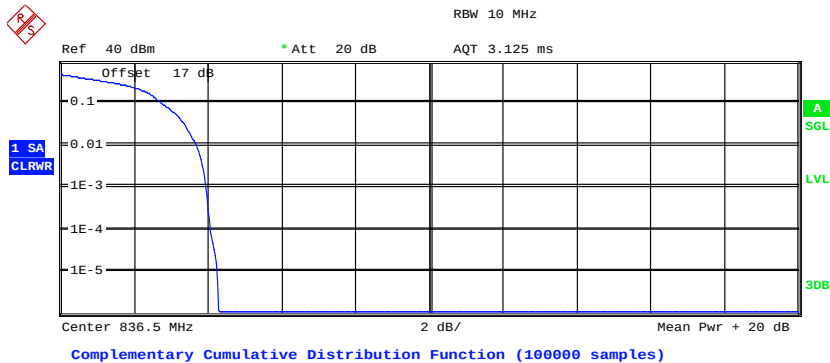


Trace 1
Mean 15.12 dBm
Peak 21.45 dBm
Crest 6.33 dB

10 % 2.95 dB
1 % 5.16 dB
.1 % 5.90 dB
.01 % 6.15 dB

Peak to Average Ratio Band5 16QAM 1RB CH20450

Date: 10.AUG.2017 11:34:30

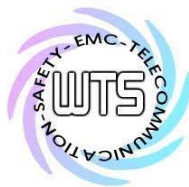


Trace 1
Mean 15.62 dBm
Peak 19.90 dBm
Crest 4.28 dB

10 % 2.72 dB
1 % 3.69 dB
.1 % 3.94 dB
.01 % 4.07 dB

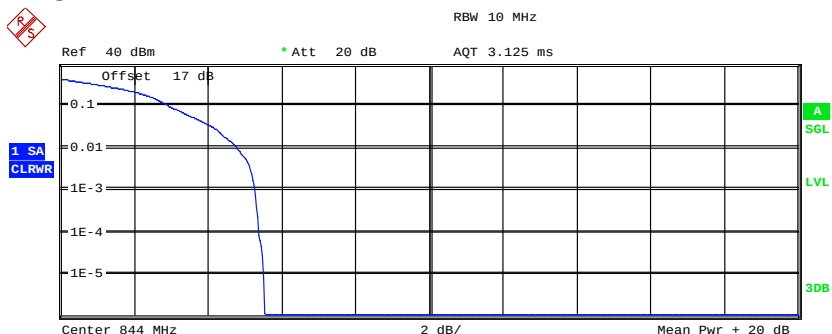
Peak to Average Ratio Band5 16QAM 1RB CH20525

Date: 10.AUG.2017 13:33:43



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



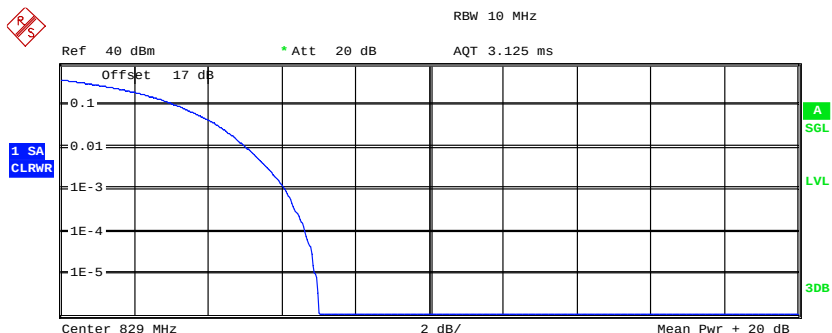
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 15.51 dBm
Peak 21.03 dBm
Crest 5.52 dB

10 % 2.95 dB
1 % 4.78 dB
.1 % 5.26 dB
.01 % 5.38 dB

Peak to Average Ratio Band5 16QAM 1RB CH20600

Date: 10.AUG.2017 11:41:36



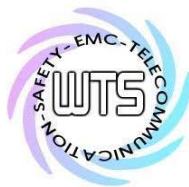
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 16.00 dBm
Peak 23.00 dBm
Crest 7.00 dB

10 % 3.17 dB
1 % 5.03 dB
.1 % 6.09 dB
.01 % 6.63 dB

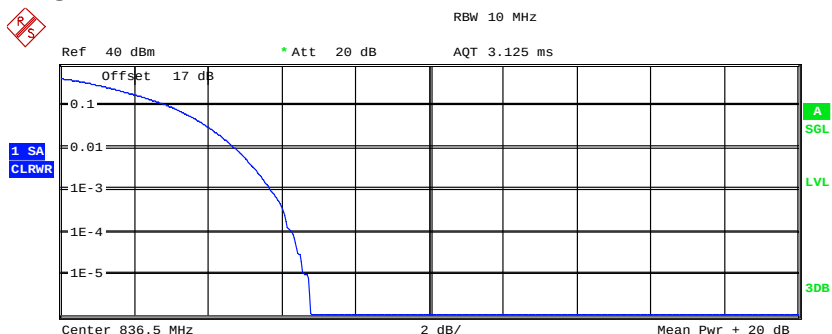
Peak to Average Ratio Band5 16QAM FRB CH20450

Date: 10.AUG.2017 11:33:50



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



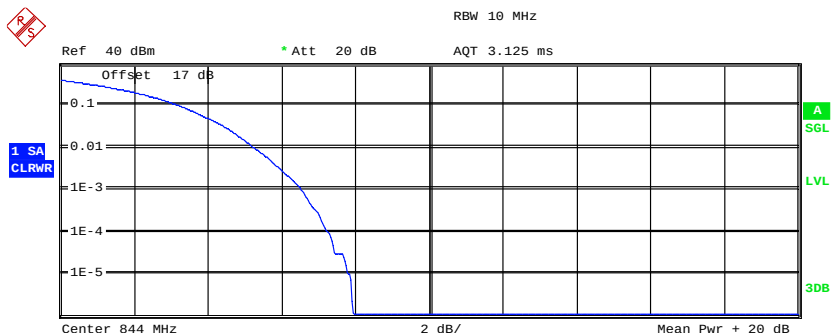
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 16.02 dBm
Peak 22.79 dBm
Crest 6.77 dB

10 % 2.95 dB
1 % 4.71 dB
.1 % 5.71 dB
.01 % 6.28 dB

Peak to Average Ratio Band5 16QAM FRB CH20525

Date: 10.AUG.2017 11:35:45



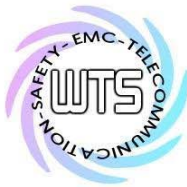
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 16.57 dBm
Peak 24.48 dBm
Crest 7.92 dB

10 % 3.24 dB
1 % 5.22 dB
.1 % 6.51 dB
.01 % 7.24 dB

Peak to Average Ratio Band5 16QAM FRB CH20600

Date: 10.AUG.2017 11:41:06

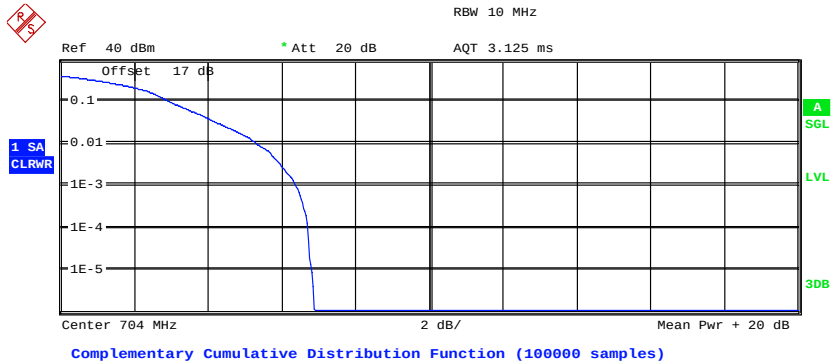


Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

Band 12

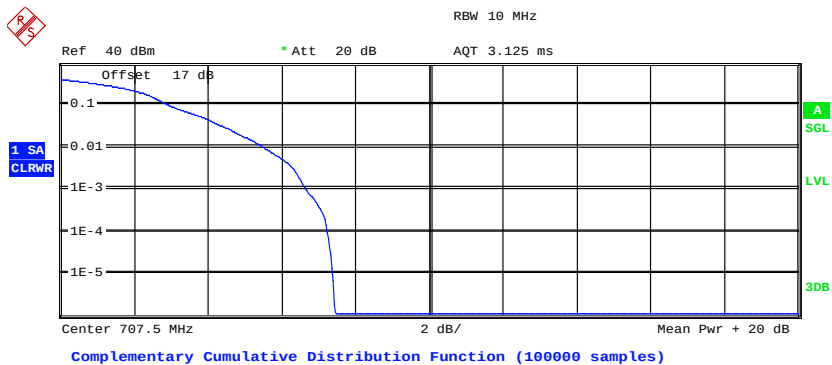
16QAM



Trace 1

Mean	15.77 dBm
Peak	22.65 dBm
Crest	6.87 dB
10 %	2.95 dB
1 %	5.32 dB
.1 %	6.38 dB
.01 %	6.70 dB

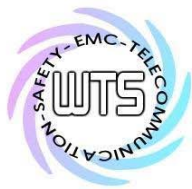
Peak to Average Ratio Band12 16QAM 1RB CH23060
Date: 10.AUG.2017 13:21:48



Trace 1

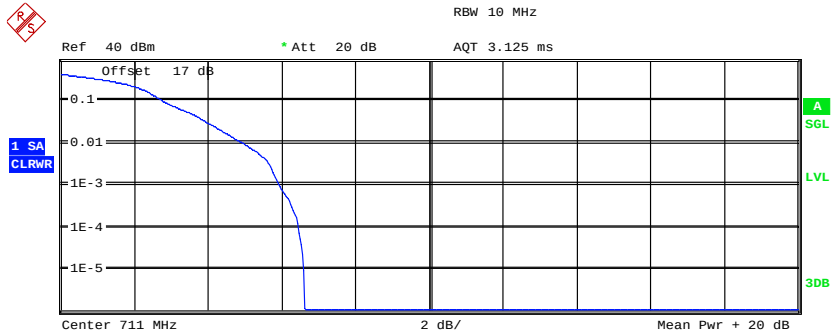
Mean	15.21 dBm
Peak	22.65 dBm
Crest	7.44 dB
10 %	2.95 dB
1 %	5.48 dB
.1 %	6.63 dB
.01 %	7.24 dB

Peak to Average Ratio Band12 16QAM 1RB CH23095
Date: 10.AUG.2017 13:29:13



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



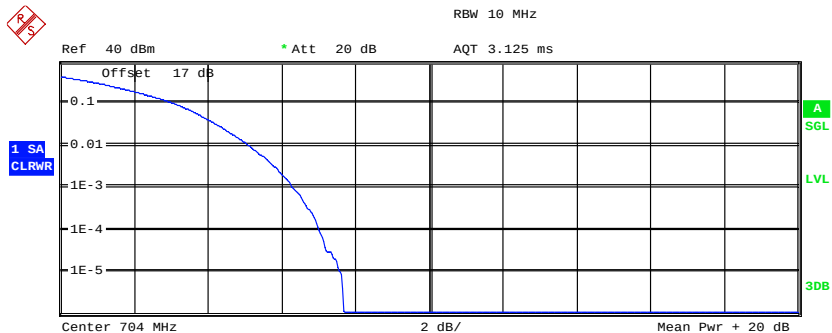
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 15.05 dBm
Peak 21.66 dBm
Crest 6.61 dB

10 % 2.79 dB
1 % 4.94 dB
.1 % 5.93 dB
.01 % 6.44 dB

Peak to Average Ratio Band12 16QAM 1RB CH23130

Date: 10.AUG.2017 13:23:56



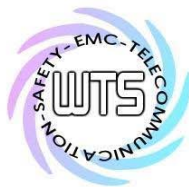
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 15.96 dBm
Peak 23.64 dBm
Crest 7.67 dB

10 % 3.08 dB
1 % 5.10 dB
.1 % 6.28 dB
.01 % 7.02 dB

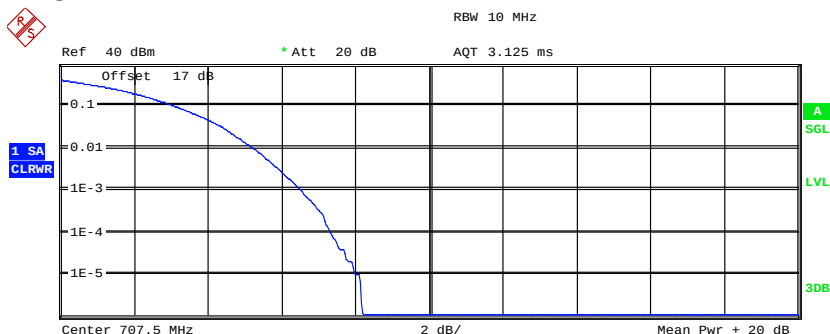
Peak to Average Ratio Band12 16QAM FRB CH23060

Date: 10.AUG.2017 13:22:19



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



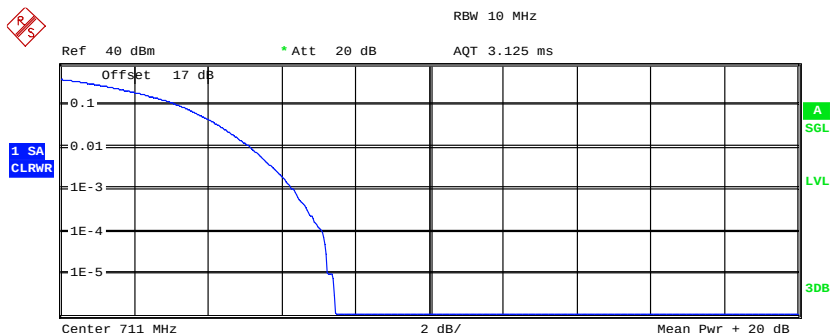
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 14.48 dBm
Peak 22.65 dBm
Crest 8.17 dB

10 % 3.11 dB
1 % 5.22 dB
.1 % 6.51 dB
.01 % 7.31 dB

Peak to Average Ratio Band12 16QAM FRB CH23095

Date: 10.AUG.2017 13:22:59



Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 14.99 dBm
Peak 22.44 dBm
Crest 7.44 dB

10 % 3.24 dB
1 % 5.13 dB
.1 % 6.31 dB
.01 % 7.08 dB

Peak to Average Ratio Band12 16QAM FRB CH23130

Date: 10.AUG.2017 13:24:23

Limit according to FCC §24.232 and §27.50, The peak-to-average ratio(PAR) of the transmission may not exceed 13dB.

Test equipment: ETSTW-RE 055, ETSTW-GSM 004, ETSTW-GSM 023

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

6. Occupied Bandwidth

The occupied bandwidth (OBW) is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to a specified percentage 0.5% of the total mean transmitted power.

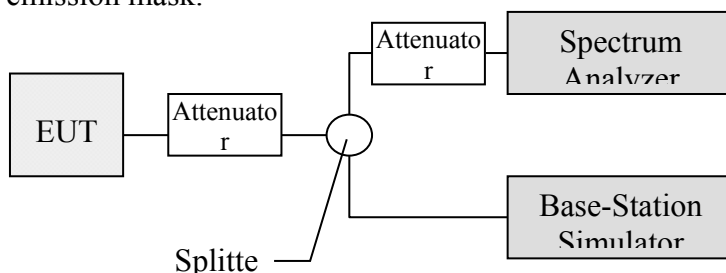
The 26 dB occupied bandwidth is the width of a frequency band such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal 26 dB.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

6.1 Test procedure

The RF output of the transceiver was connected as the following figure.

Occupied Bandwidth was measured with a occupied bandwidth function of the analyzer at 99% power was occupied. Then set the spectrum analyzer to cover the upper and lower band edges to measure emission mask.



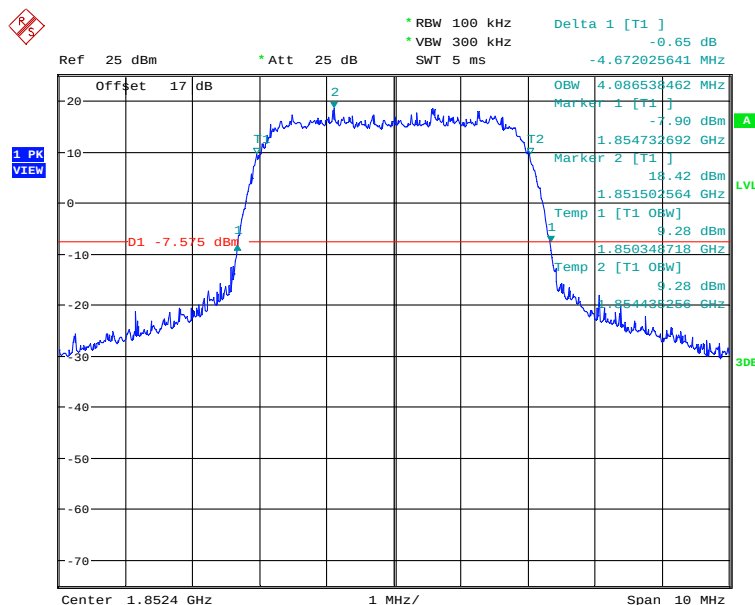
6.2 Test Results

Occupied Channel Bandwidth

WCDMA

Band 2

5 MHz



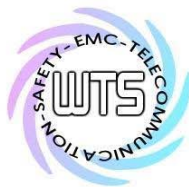
99% OBW & 26dB BW BAND2 _5MHz_CH9262

Date: 9.AUG.2017 18:31:43



FCC ID: GX9FPHUB1

Date: 9.AUG.2017 18:33:19



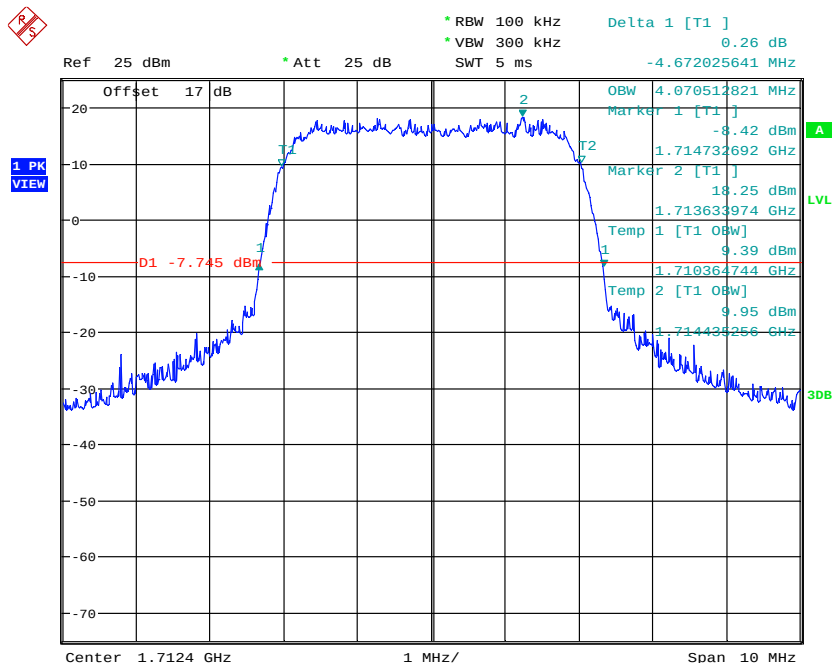
Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

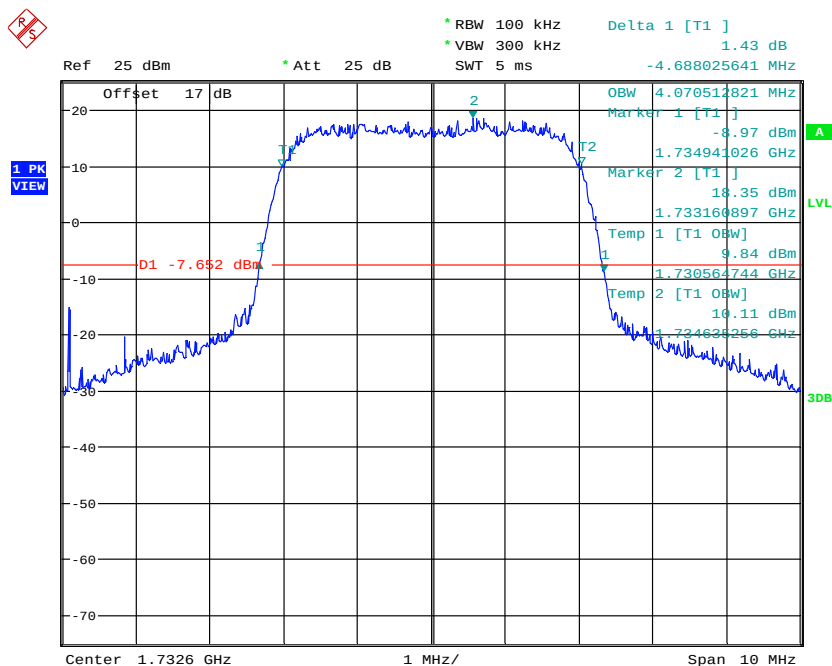
Band 4

5 MHz



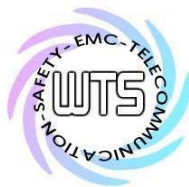
99% OBW &26DB BW BAND4 _5MHz_CH1312

Date: 9.AUG.2017 18:41:28



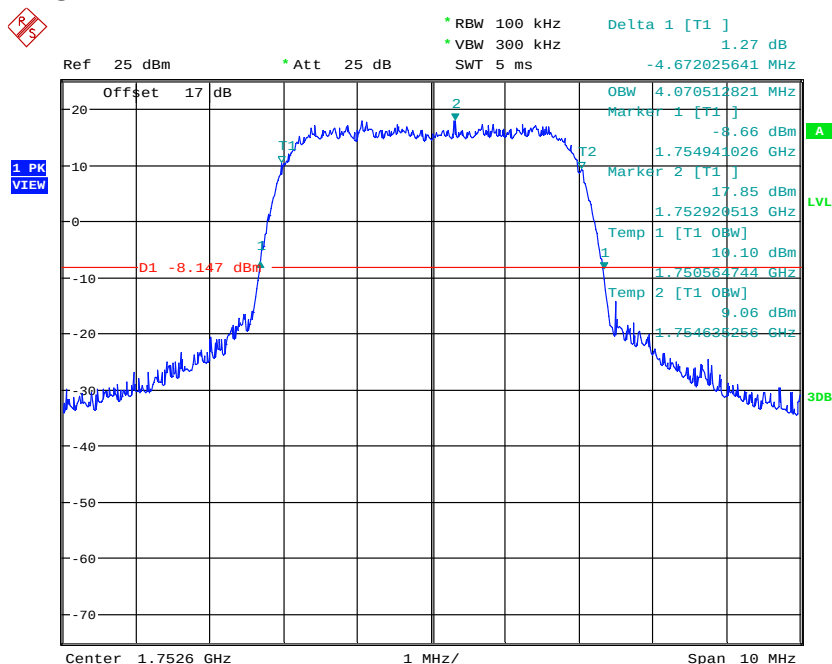
99% OBW &26DB BW BAND4 _5MHz_CH1413

Date: 9.AUG.2017 18:47:32



Report Number: W6R21805-18133-P-247

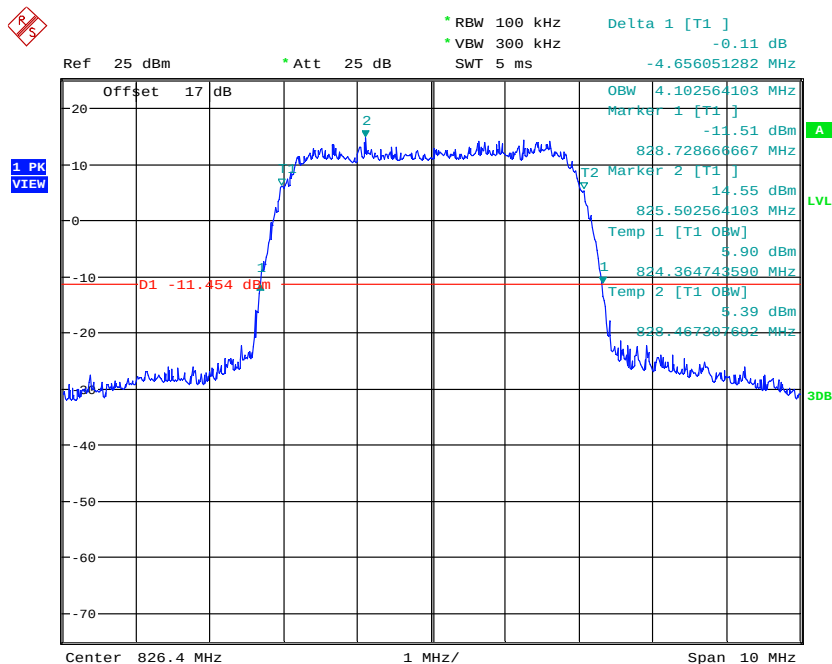
FCC ID: GX9FPHUB1



99% OBW &26DB BW BAND4 _5MHZ_CH1513

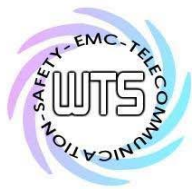
Date: 9.AUG.2017 18:48:37

Band 5
5 MHz



99% OBW &26DB BW BAND5 _5MHZ_CH4132

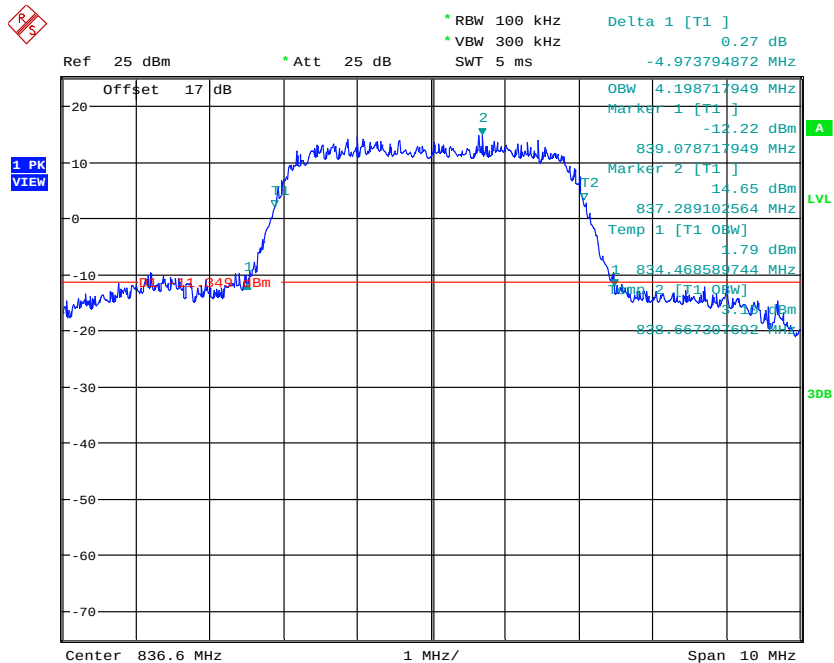
Date: 9.AUG.2017 18:36:43



Worldwide Testing Services(Taiwan) Co., Ltd.

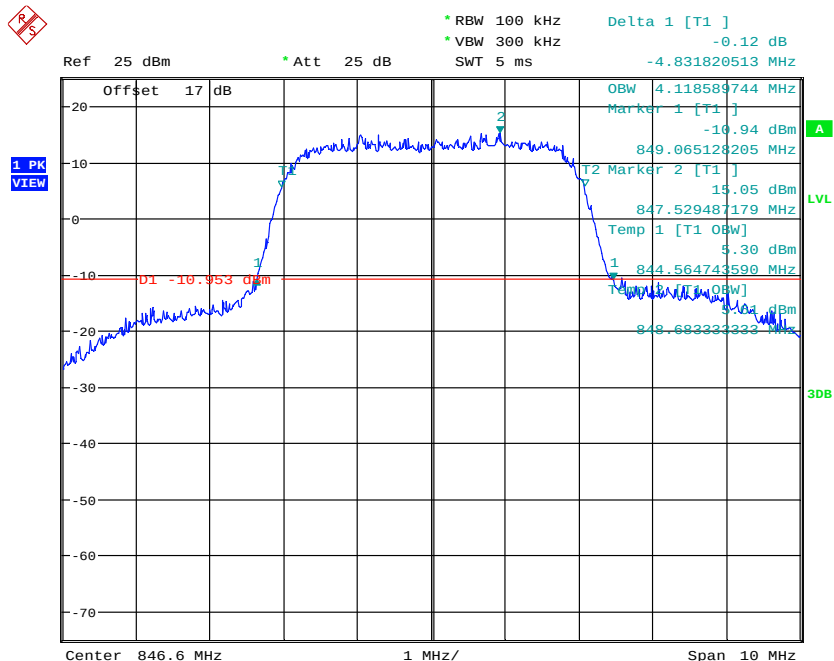
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



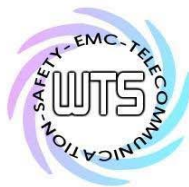
99% OBW &26DB BW BAND5 _5MHz_CH4183

Date: 9.AUG.2017 18:38:46



99% OBW &26DB BW BAND5 _5MHz_CH4233

Date: 9.AUG.2017 18:39:40



Report Number: W6R21805-18133-P-247

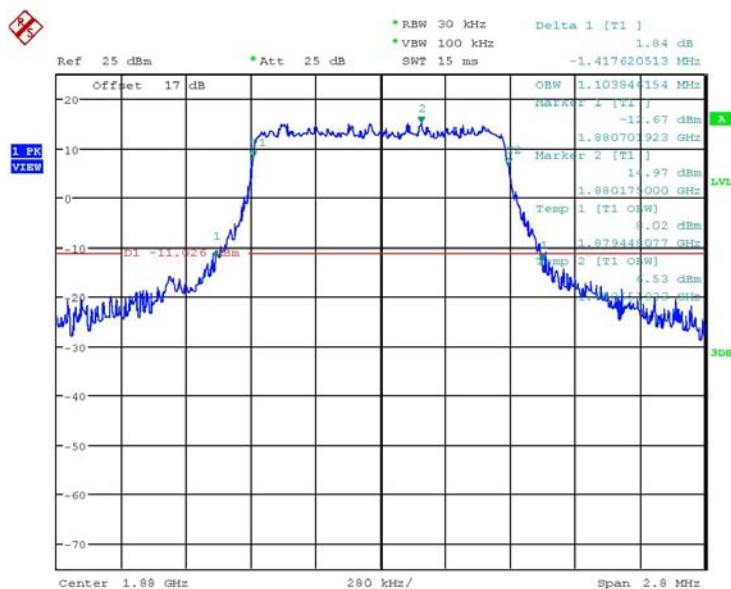
FCC ID: GX9FPHUB1

26dB Channel Bandwidth

LTE

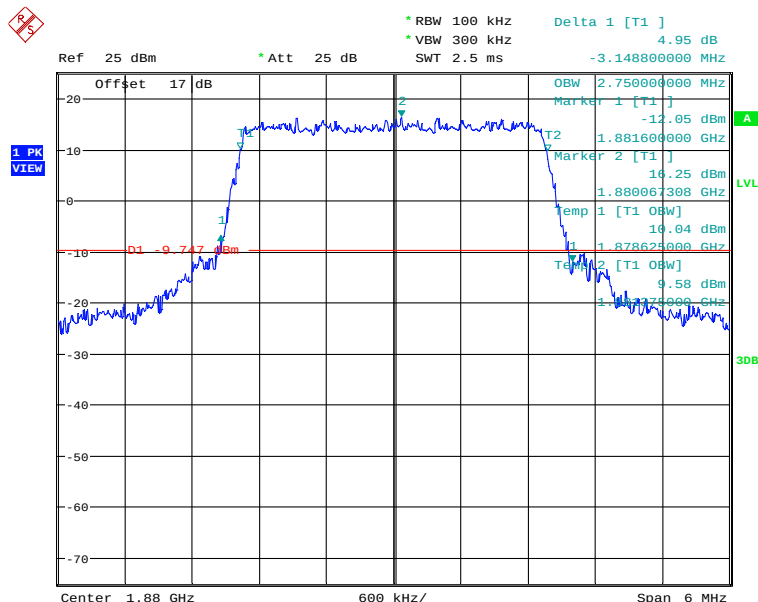
Band 2

1.4 MHz QPSK

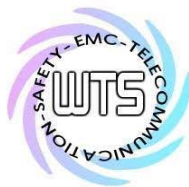


99% OBW &26DB BW BAND2_QPSK_1.4MHz_CH18900
Date: 9.AUG.2017 16:56:48

3 MHz QPSK



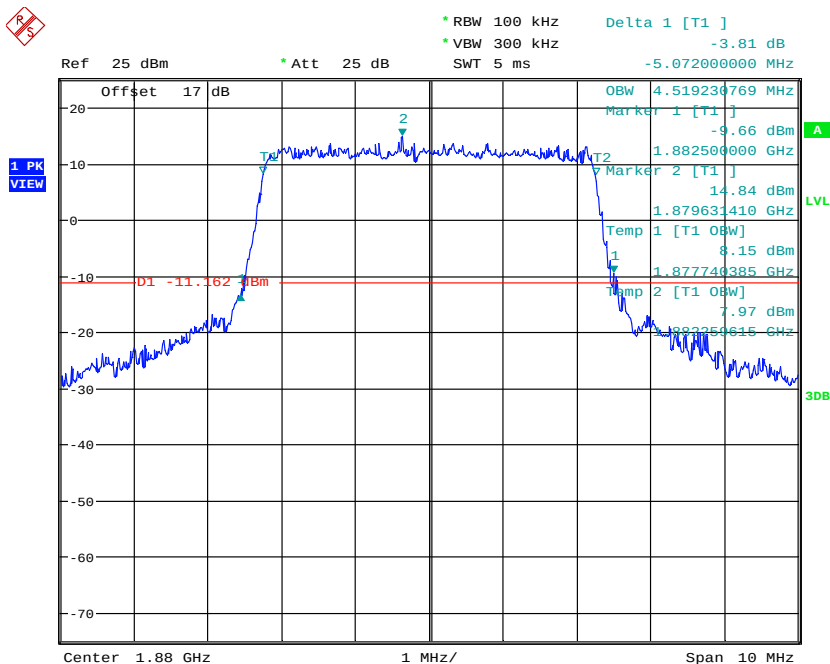
99% OBW &26DB BW BAND2_QPSK_3MHz_CH18900
Date: 9.AUG.2017 16:20:15



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

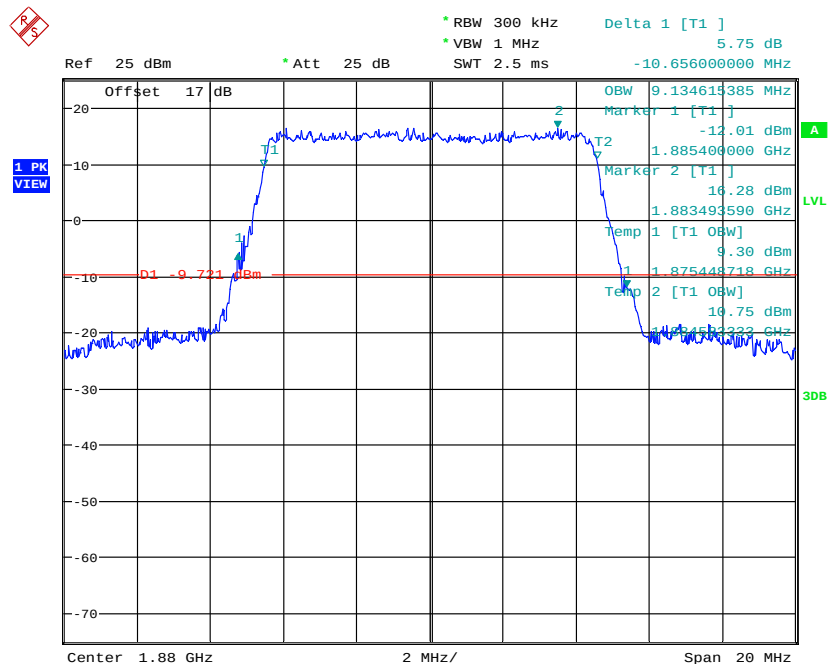
5 MHz QPSK



99% OBW &26DB BW BAND2_QPSK_5MHz_CH18900

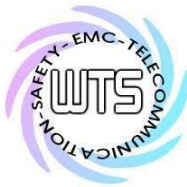
Date: 9.AUG.2017 16:33:38

10 MHz QPSK



99% OBW &26DB BW BAND2_QPSK_10MHz_CH18900

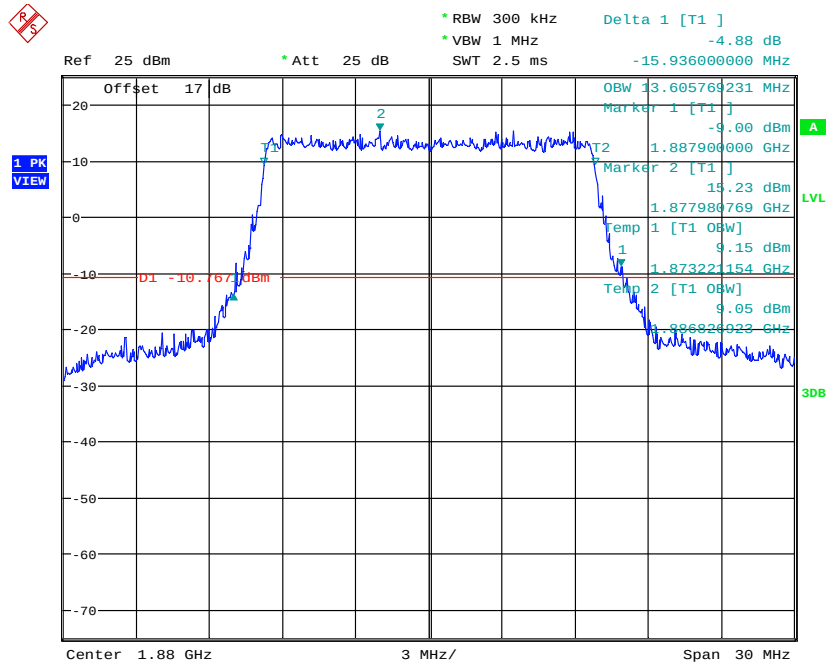
Date: 9.AUG.2017 16:34:11



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

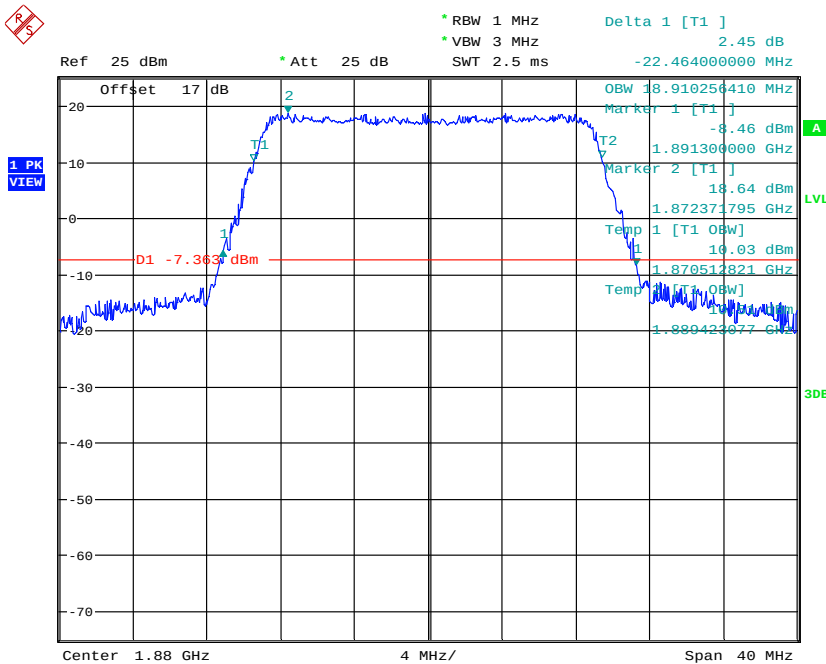
15 MHz QPSK



99% OBW &26DB BW BAND2_QPSK_15MHz_CH18900

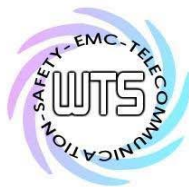
Date: 9.AUG.2017 16:36:28

20 MHz QPSK



99% OBW &26DB BW BAND2_QPSK_20MHz_CH18900

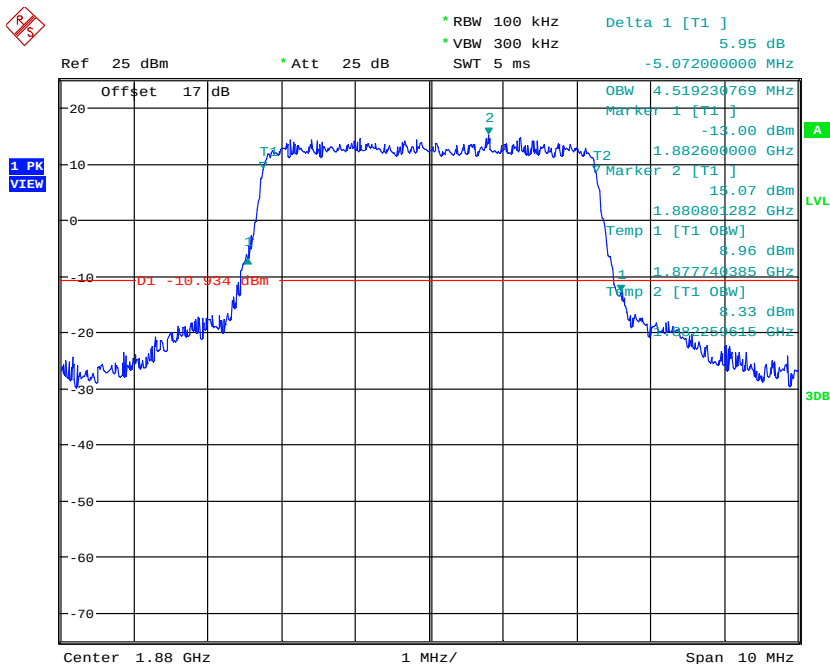
Date: 9.AUG.2017 16:37:34



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

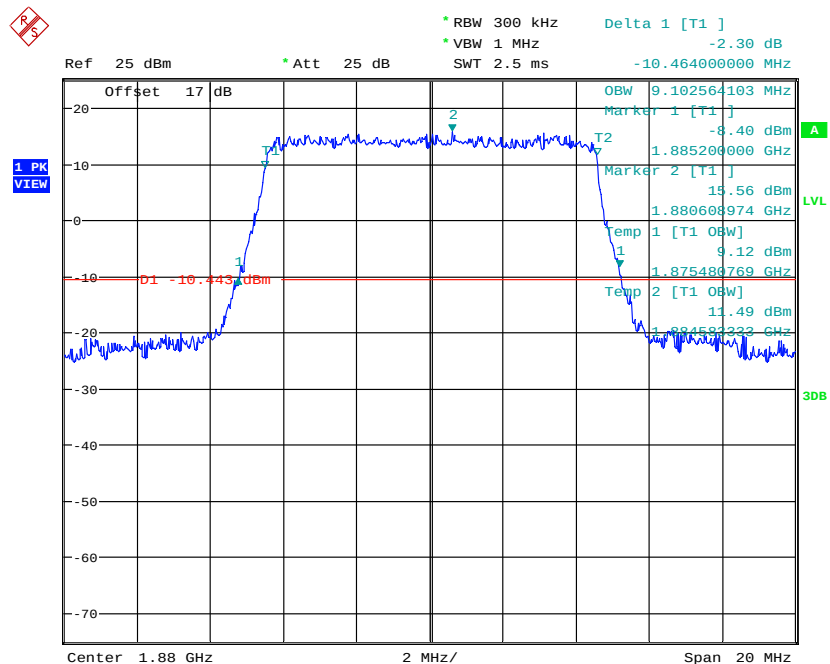
5 MHz 16QAM



99% OBW & 26DB BW BAND2_16QAM_5MHz_CH18900

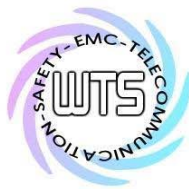
Date: 9.AUG.2017 16:33:11

10 MHz 16QAM



99% OBW & 26DB BW BAND2_16QAM_10MHz_CH18900

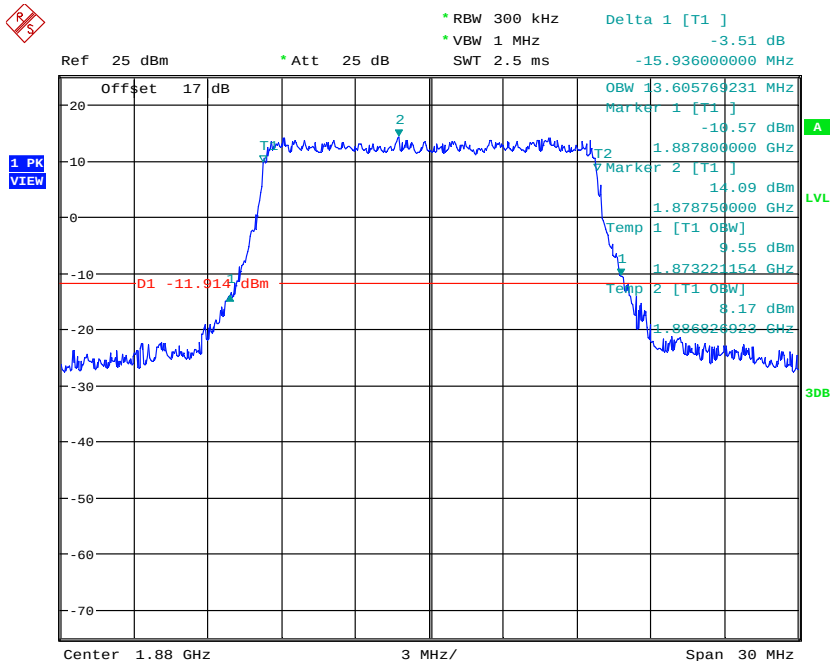
Date: 9.AUG.2017 16:34:39



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

15 MHz 16QAM

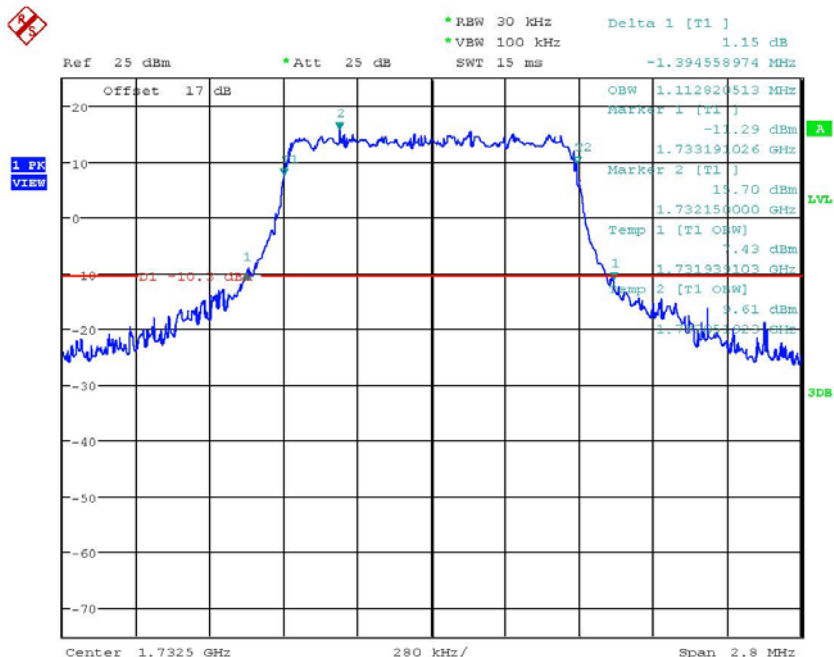


99% OBW &26DB BW BAND2_16QAM_15MHz_CH18900

Date: 9.AUG.2017 16:36:56

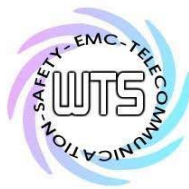
Band 4

1.4 MHz QPSK



99% OBW &26DB BW BAND4_QPSK_1.4MHz_CH20175

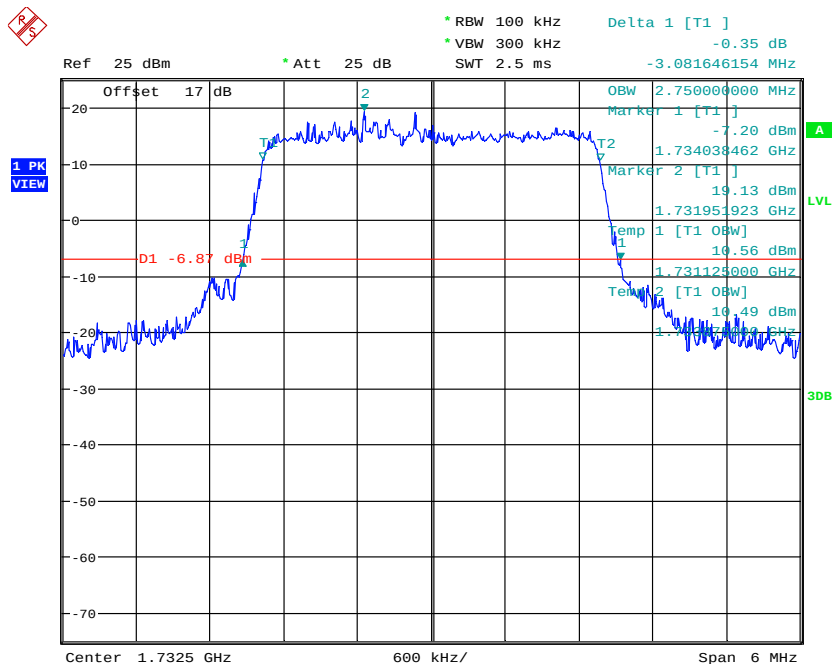
Date: 9.AUG.2017 16:39:55



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

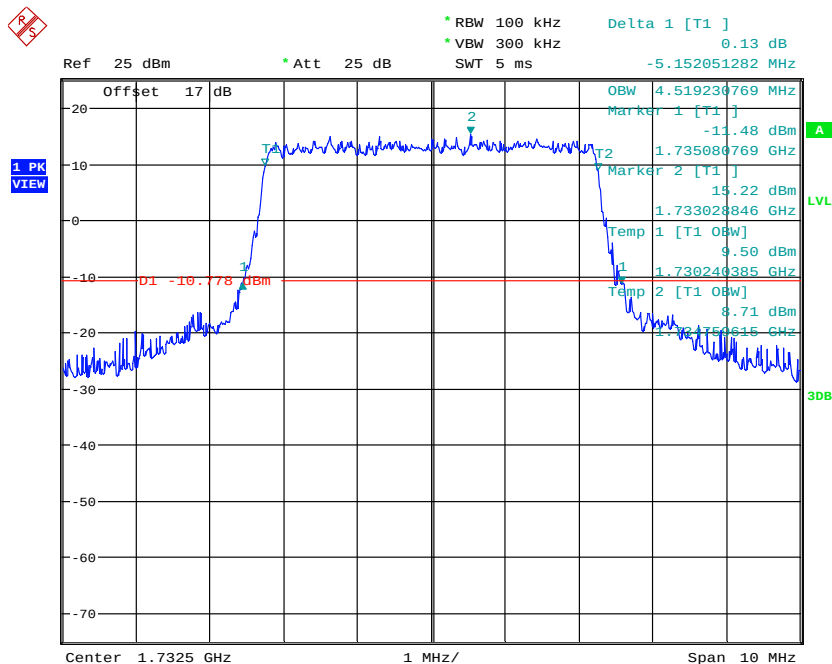
3 MHz QPSK



99% OBW &26DB BW BAND4_QPSK_3MHz_CH20175

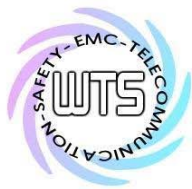
Date: 9.AUG.2017 16:41:56

5 MHz QPSK



99% OBW &26DB BW BAND4_QPSK_5MHz_CH20175

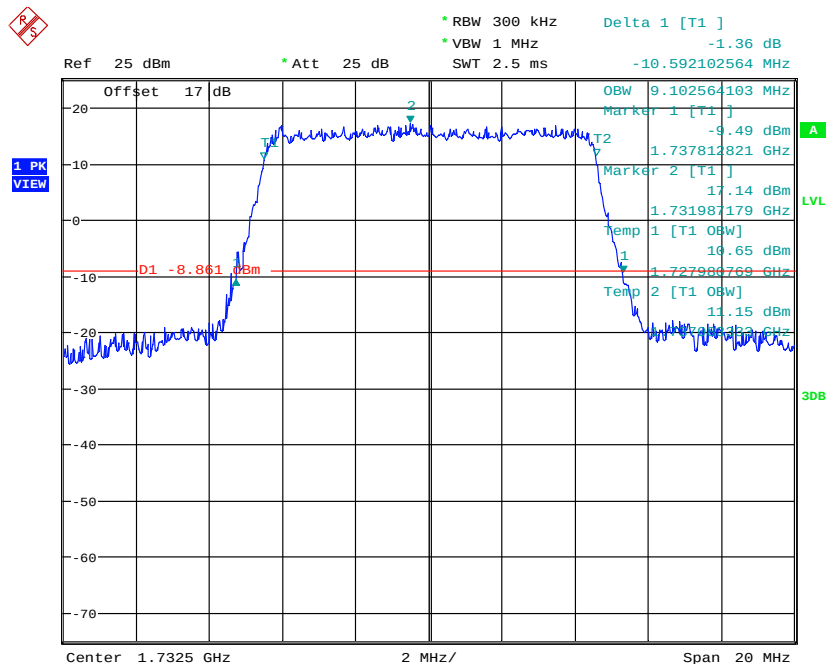
Date: 9.AUG.2017 16:44:13



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

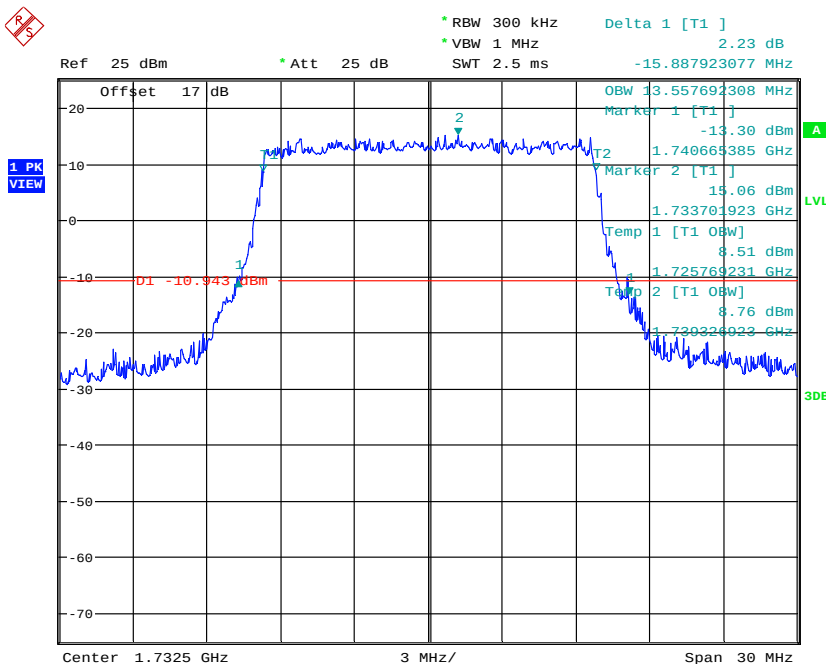
10 MHz QPSK



99% OBW &26DB BW BAND4_QPSK_10MHz_CH20175

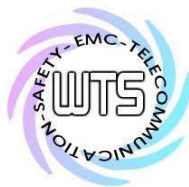
Date: 9.AUG.2017 16:46:39

15 MHz QPSK



99% OBW &26DB BW BAND4_QPSK_15MHz_CH20175

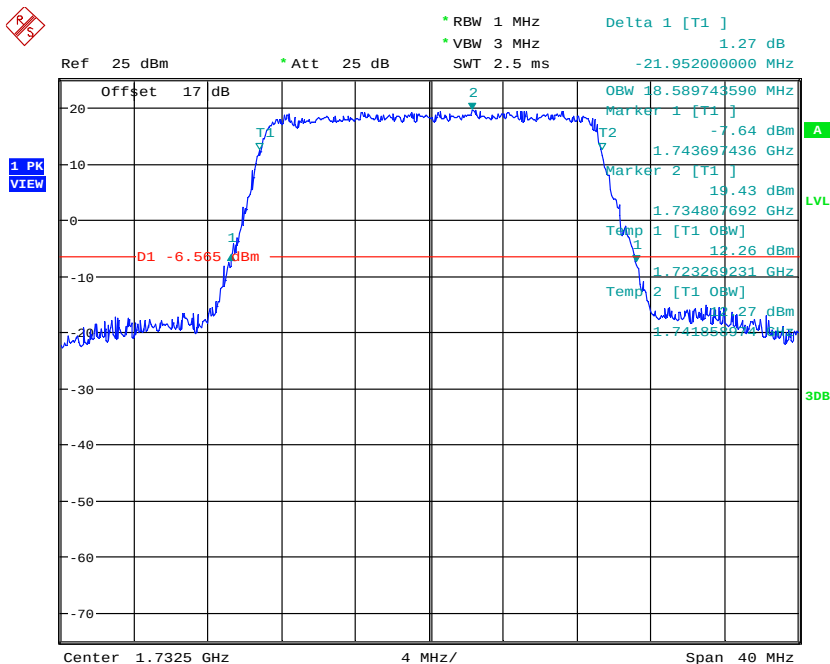
Date: 9.AUG.2017 16:48:45



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

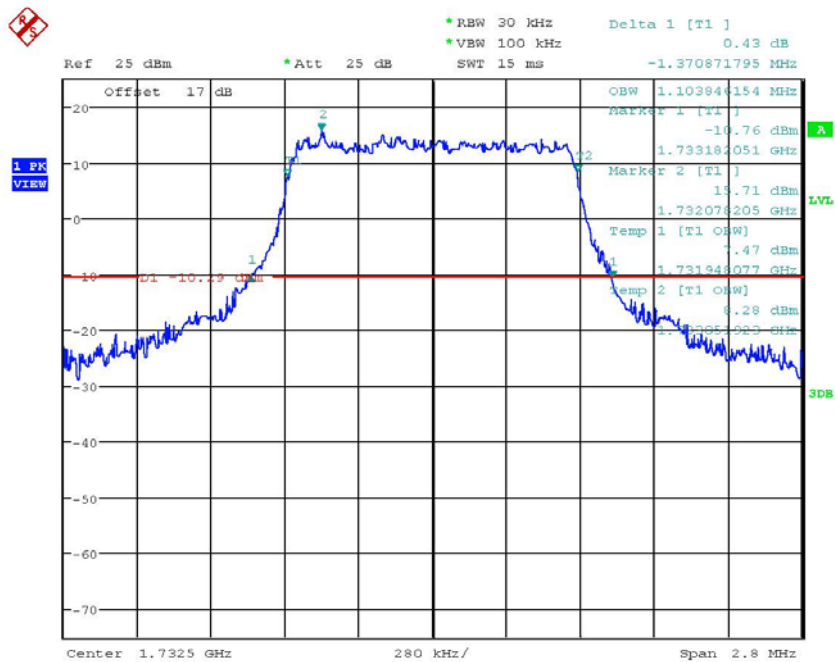
20 MHz QPSK



99% OBW &26DB BW BAND4_QPSK_20MHz_CH20175

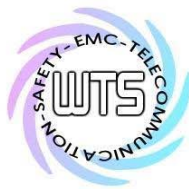
Date: 9.AUG.2017 16:50:54

1.4 MHz 16QAM



99% OBW &26DB BW BAND4_16QAM_1.4MHz_CH20175

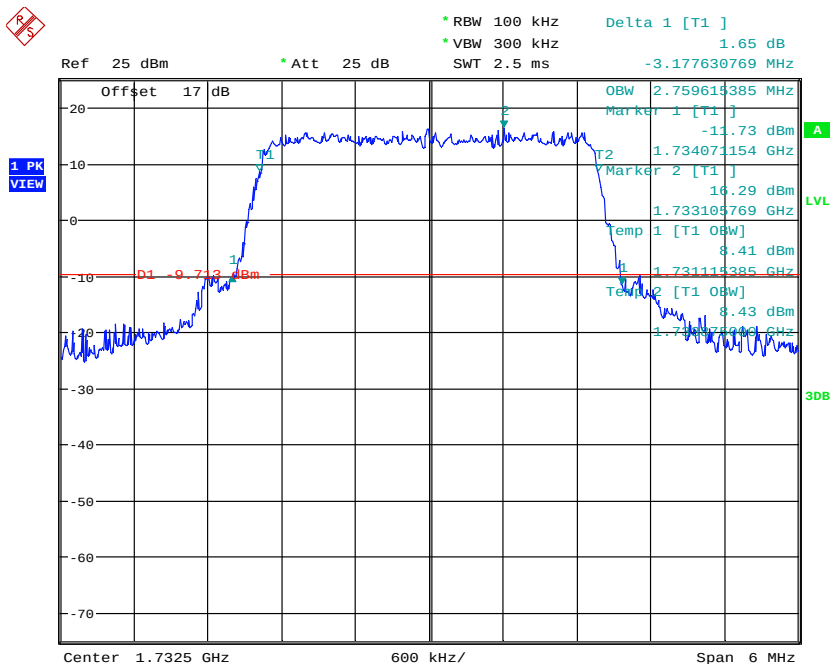
Date: 9.AUG.2017 16:40:44



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

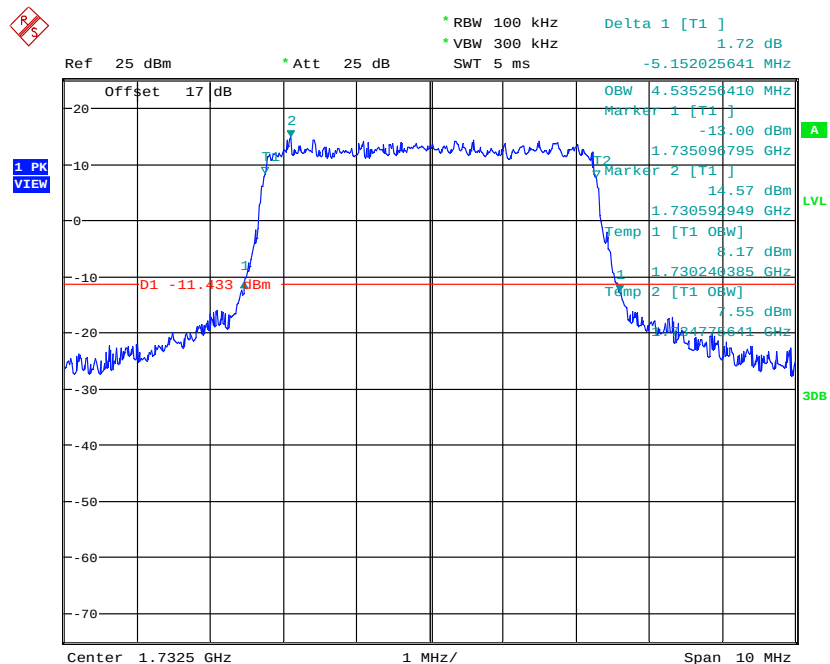
3 MHz 16QAM



99% OBW &26DB BW BAND4_16QAM_3MHz_CH20175

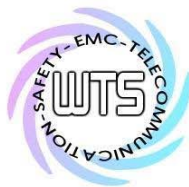
Date: 9.AUG.2017 16:43:10

5 MHz 16QAM



99% OBW &26DB BW BAND4_16QAM_5MHz_CH20175

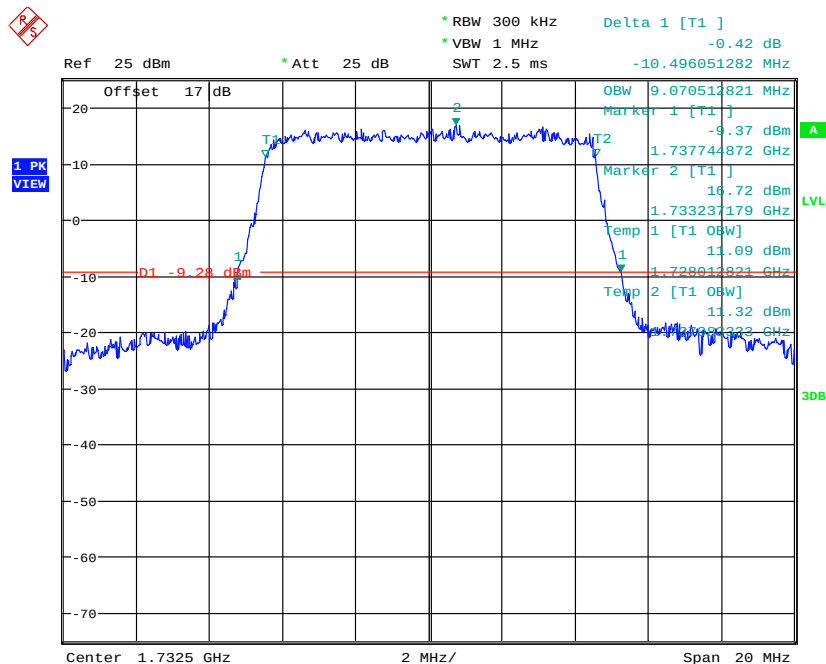
Date: 9.AUG.2017 16:45:02



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

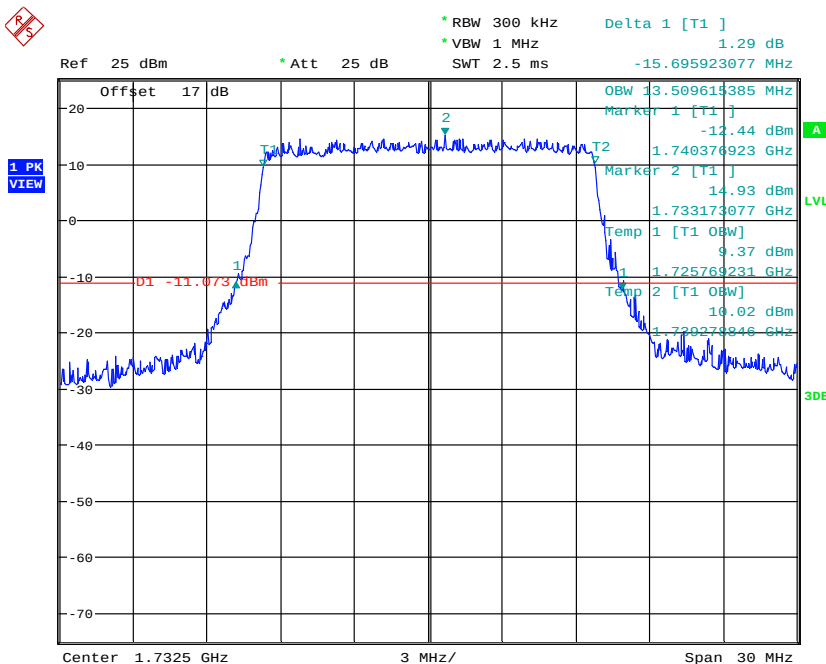
10 MHz 16QAM



99% OBW &26DB BW BAND4_16QAM_10MHz_CH20175

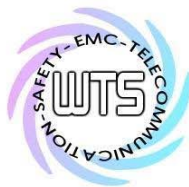
Date: 9.AUG.2017 16:47:33

15 MHz 16QAM



99% OBW &26DB BW BAND4_16QAM_15MHz_CH20175

Date: 9.AUG.2017 16:49:46

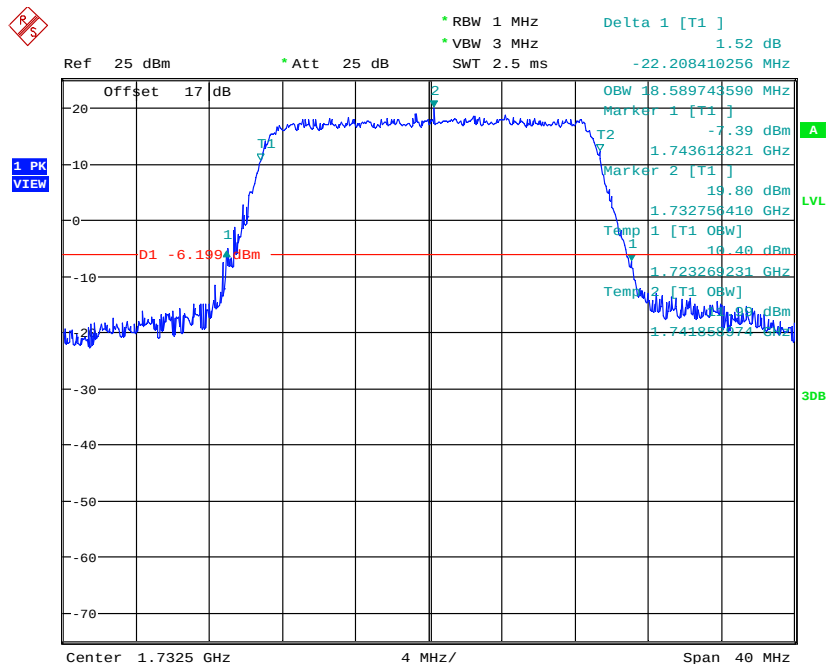


Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

20 MHz 16QAM

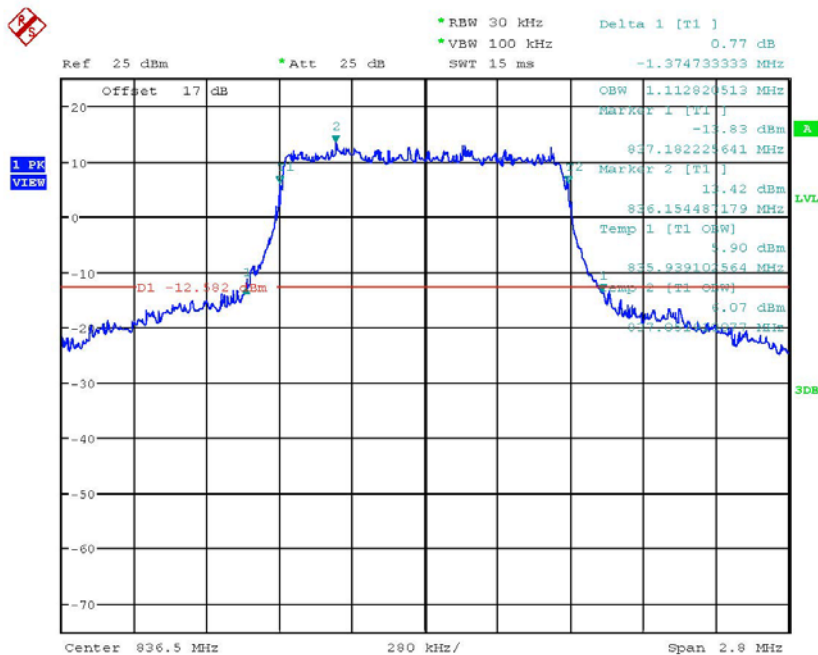


99% OBW &26DB BW BAND4_16QAM_20MHz_CH20175

Date: 9.AUG.2017 16:51:43

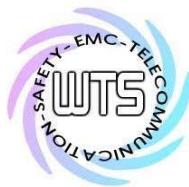
Band 5

1.4 MHz QPSK



99% OBW &26DB BW BAND5_QPSK_1.4MHz_CH20643

Date: 9.AUG.2017 17:01:19

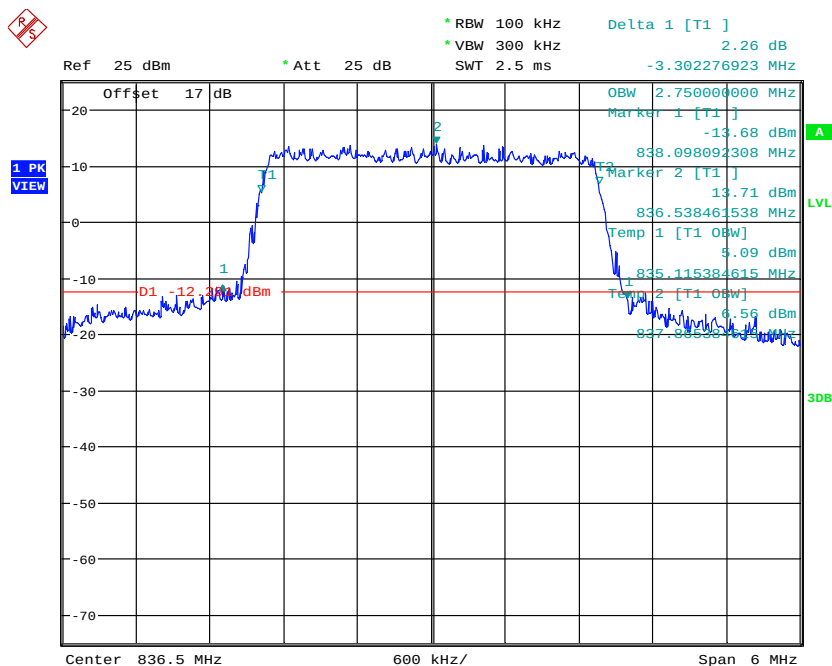


Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

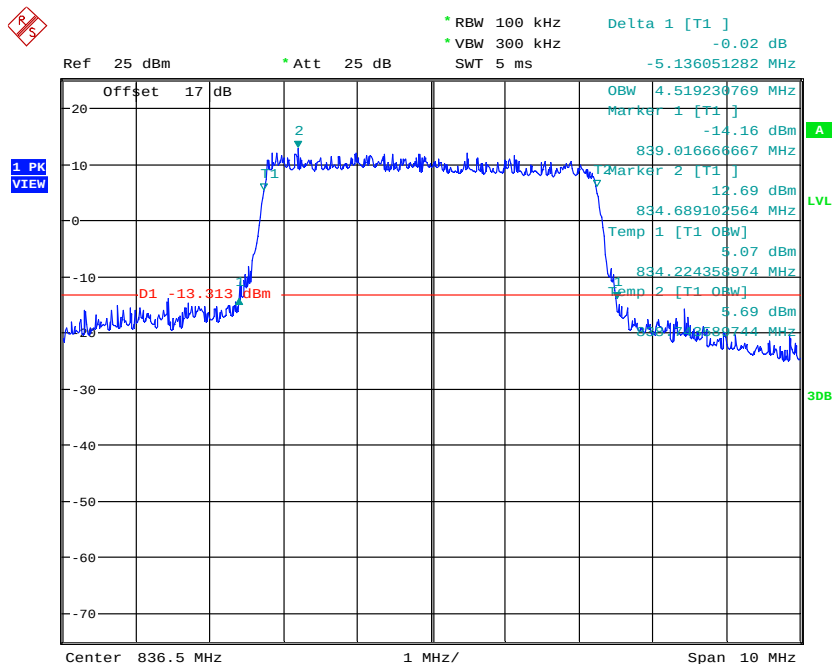
3 MHz QPSK



99% OBW &26DB BW BAND5_QPSK_3MHz_CH20643

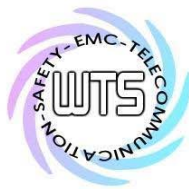
Date: 9.AUG.2017 17:03:11

5 MHz QPSK



99% OBW &26DB BW BAND5_QPSK_5MHz_CH20643

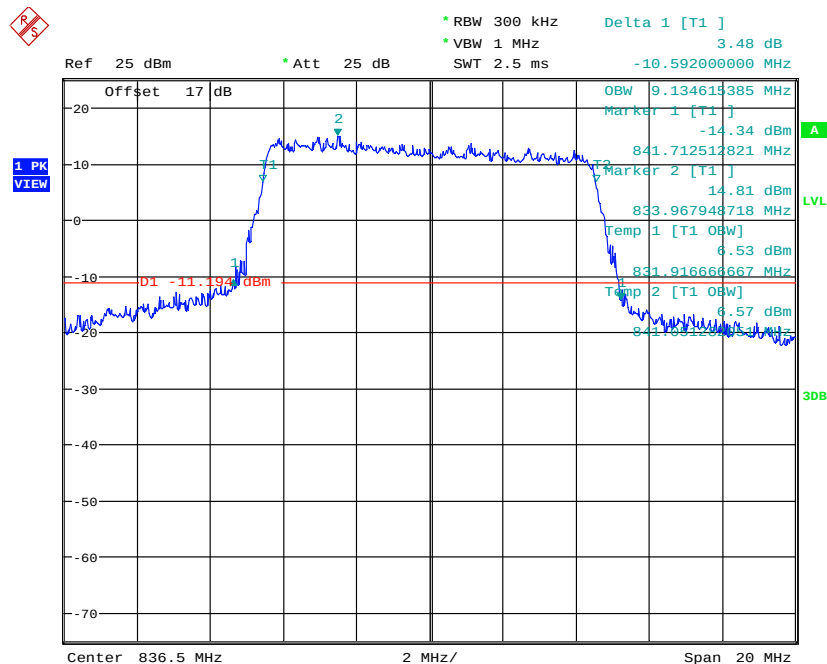
Date: 9.AUG.2017 17:05:11



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

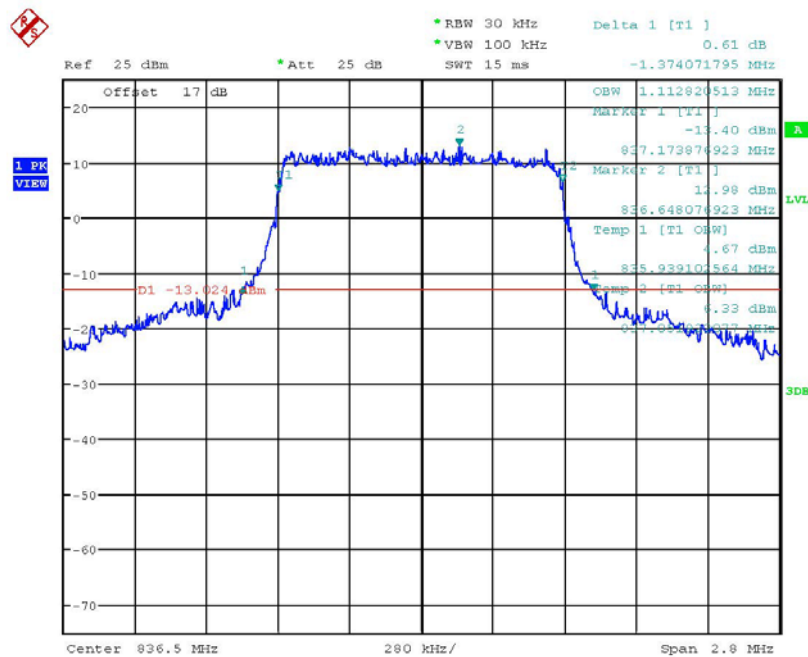
10 MHz QPSK



99% OBW &26DB BW BAND5_QPSK_10MHz_CH20643

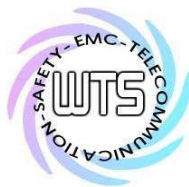
Date: 9.AUG.2017 17:07:13

1.4 MHz 16QAM



99% OBW &26DB BW BAND5_16QAM_1.4MHz_CH20643

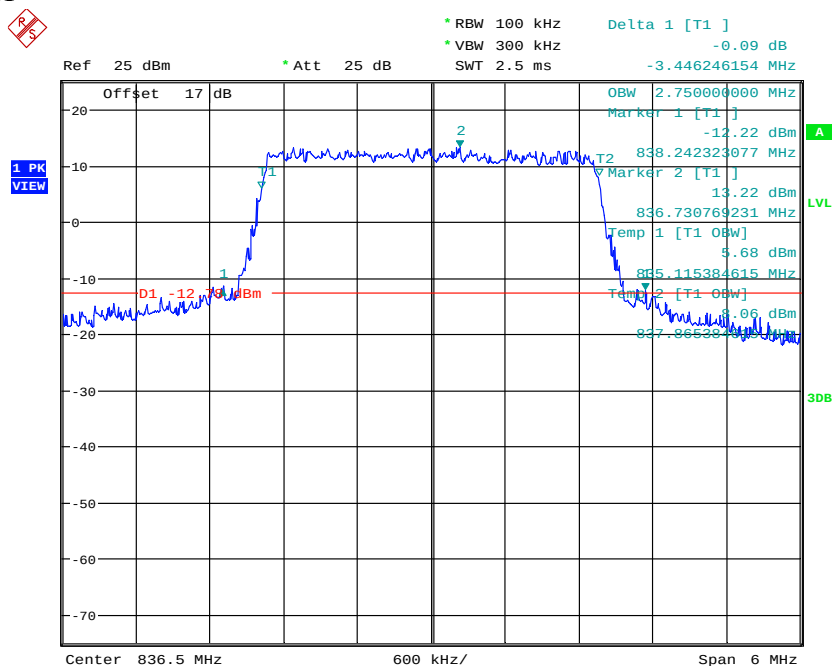
Date: 9.AUG.2017 17:01:58



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

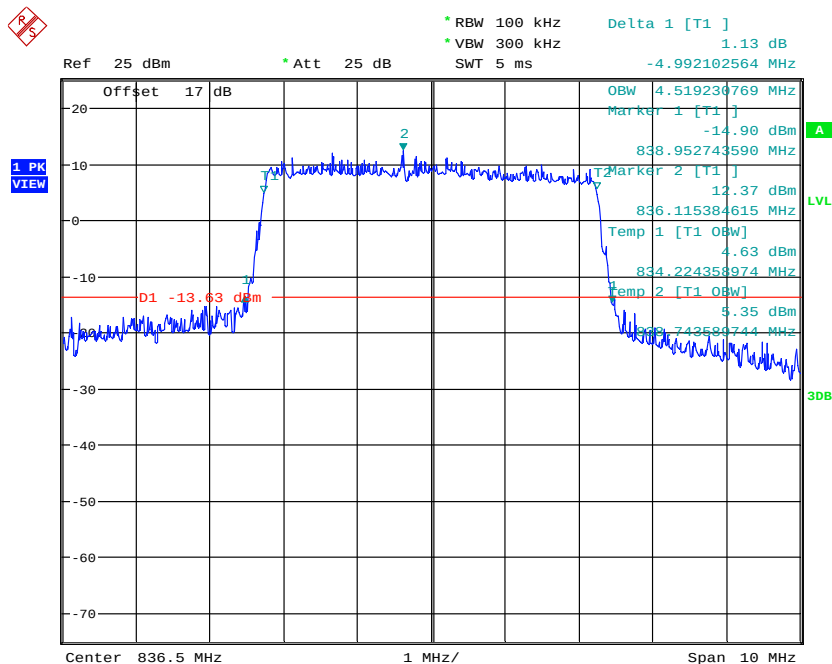
3 MHz 16QAM



99% OBW &26DB BW BAND5_16QAM_3MHz_CH20643

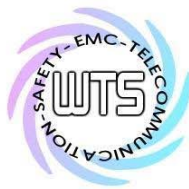
Date: 9.AUG.2017 17:04:05

5 MHz 16QAM



99% OBW &26DB BW BAND5_16QAM_5MHz_CH20643

Date: 9.AUG.2017 17:05:55

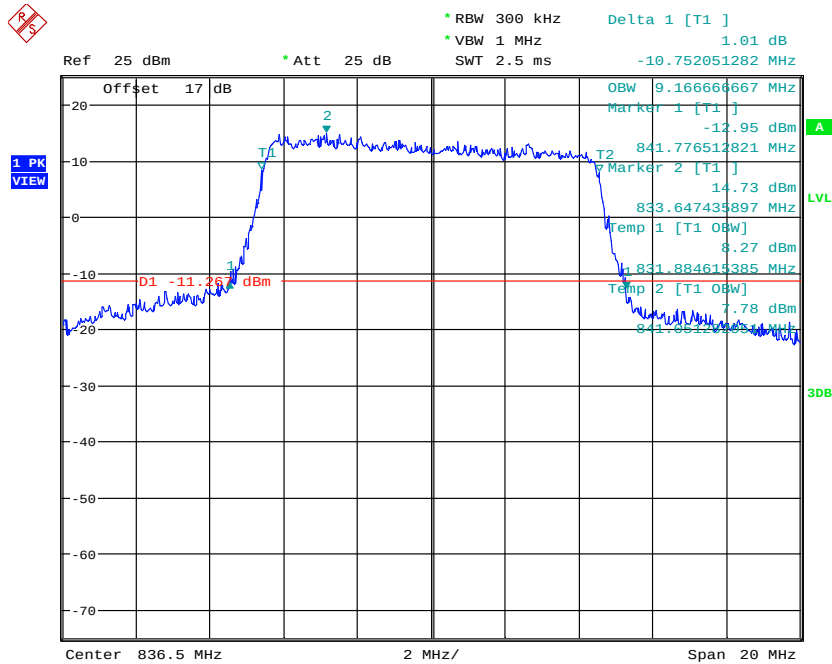


Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

10 MHz 16QAM

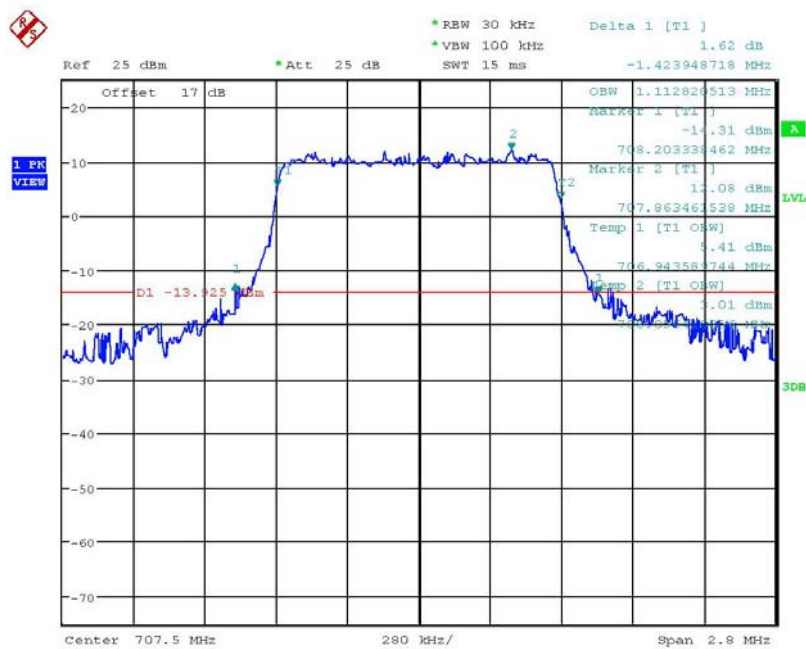


99% OBW & 26DB BW BAND5_16QAM_10MHZ_CH20643

Date: 9.AUG.2017 17:08:02

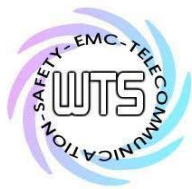
Band 12

1.4 MHz QPSK



99% OBW & 26DB BW BAND12_QPSK_1.4MHz_CH23095

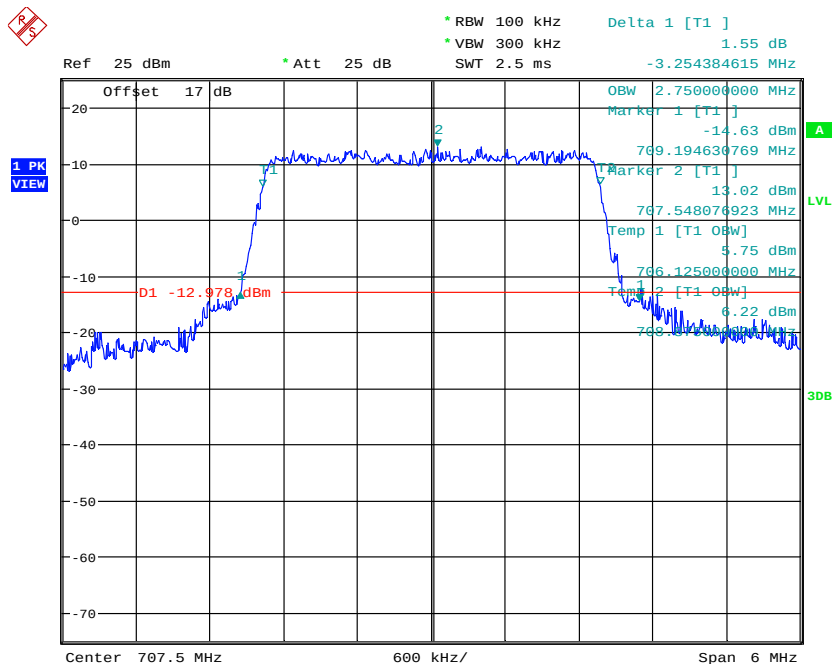
Date: 9.AUG.2017 17:10:10



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

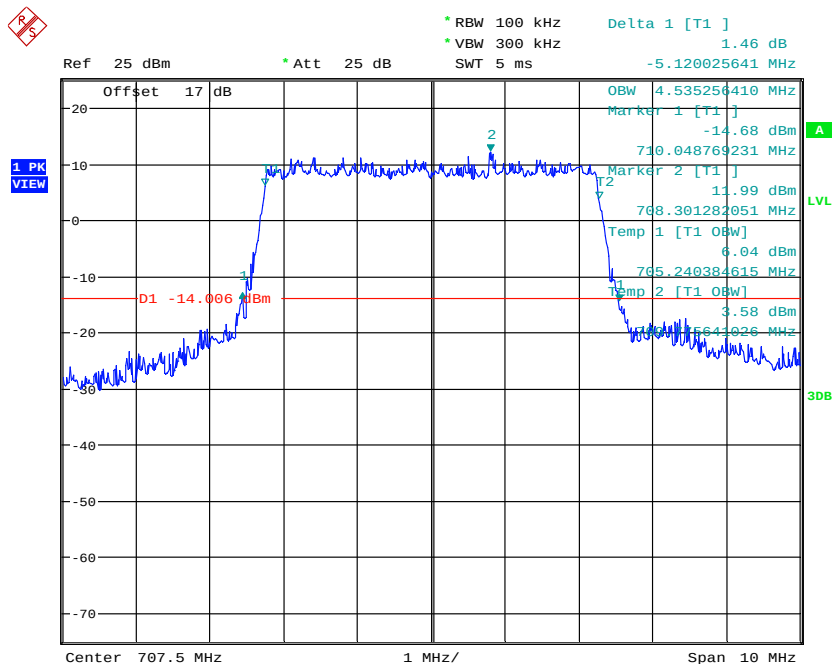
3 MHz QPSK



99% OBW & 26DB BW BAND12_QPSK_3MHz_CH23095

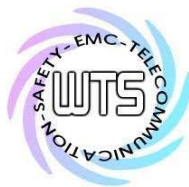
Date: 9.AUG.2017 17:16:34

5 MHz QPSK



99% OBW & 26DB BW BAND12_QPSK_5MHz_CH23095

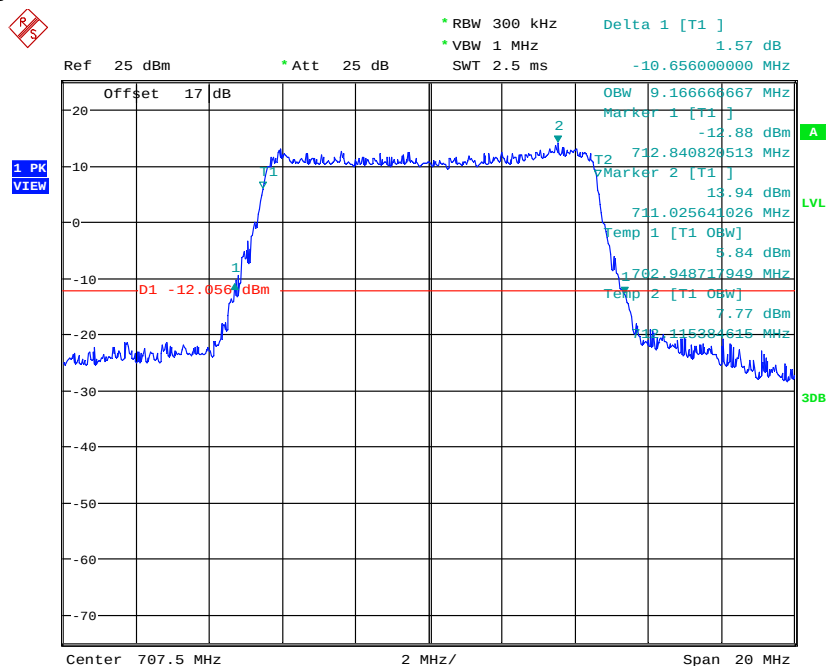
Date: 9.AUG.2017 17:18:01



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

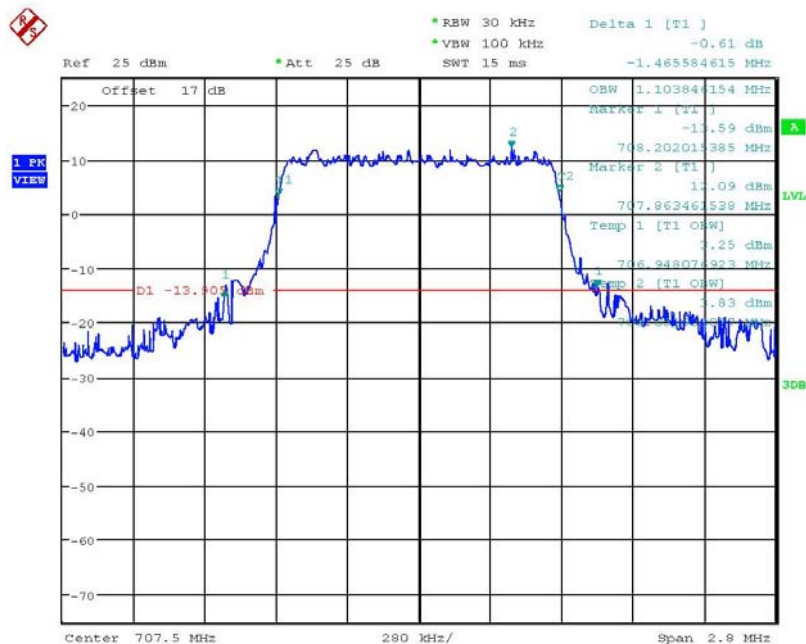
10 MHz QPSK



99% OBW &26DB BW BAND12_QPSK_10MHz_CH23095

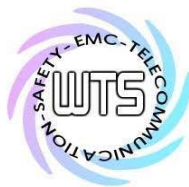
Date: 9.AUG.2017 17:19:45

1.4 MHz 16QAM



99% OBW &26DB BW BAND12_16QAM_1.4MHz_CH23095

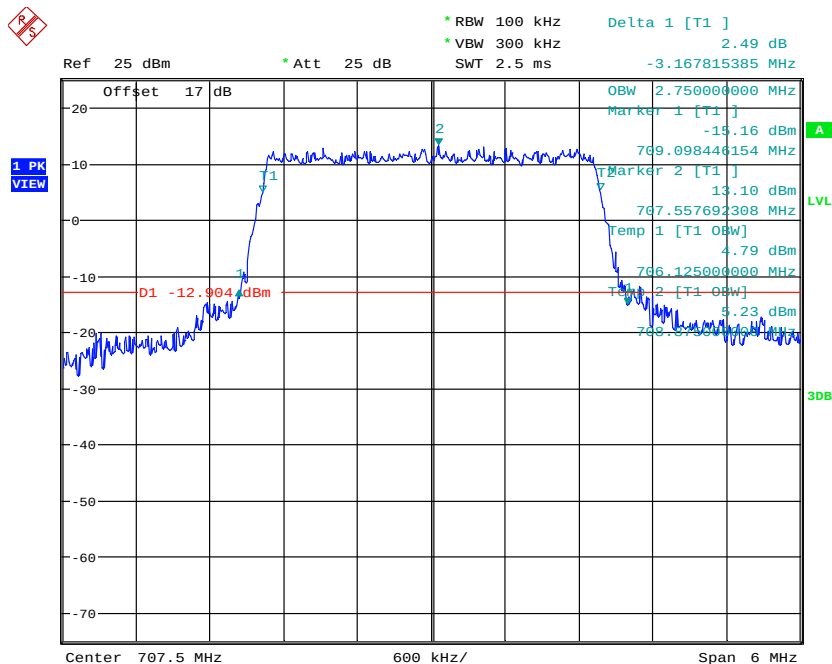
Date: 9.AUG.2017 17:15:37



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

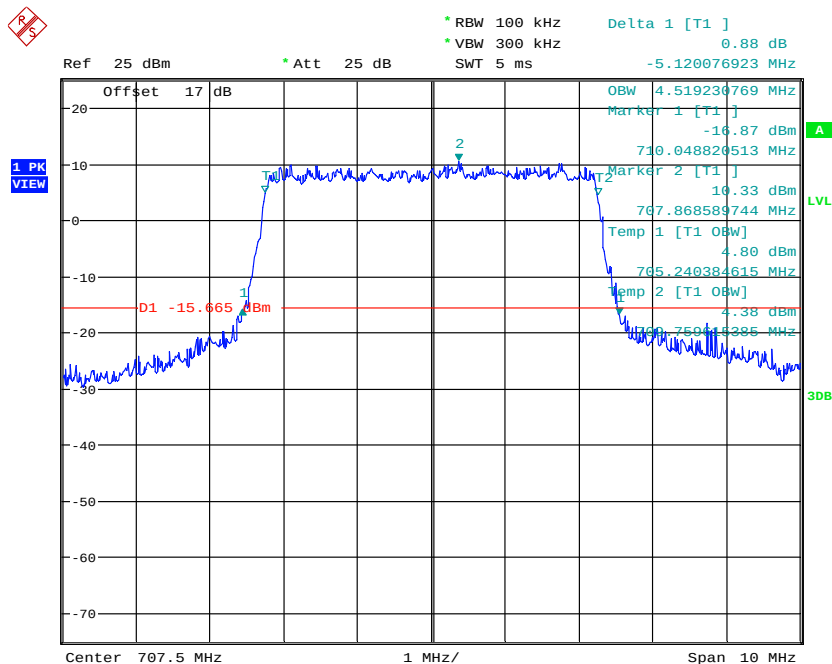
3 MHz 16QAM



99% OBW &26DB BW BAND12_16QAM_3MHz_CH23095

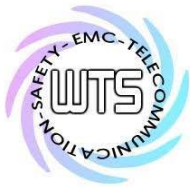
Date: 9.AUG.2017 17:17:13

5 MHz 16QAM



99% OBW &26DB BW BAND12_16QAM_5MHz_CH23095

Date: 9.AUG.2017 17:18:48

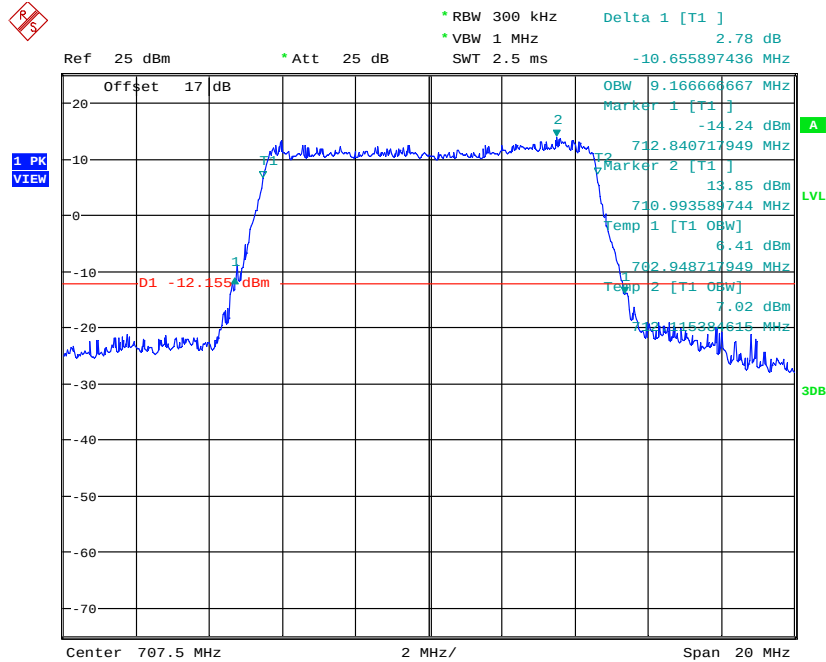


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Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

10 MHz 16QAM



99% OBW & 26DB BW BAND12_16QAM_10MHz_CH23095

Date: 9.AUG.2017 17:20:25

Test equipment: ETSTW-RE 055, ETSTW-GSM 004, ETSTW-GSM 023

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

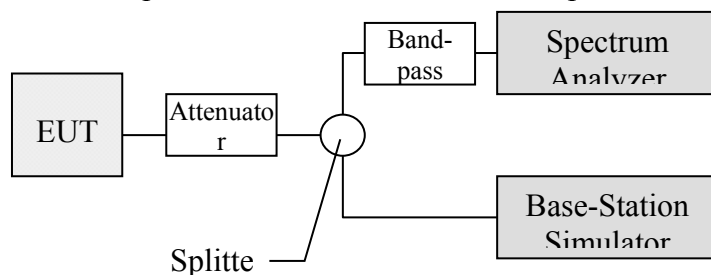
7. Spurious Emissions at Antenna Terminals

7.1 Test procedure

This transmitter output was connected to a calibrated coaxial attenuator, the other end of which was connected to a spectrum analyzer via a three-port splitter. Please refer to the following figure. Transmitter output was derived with the spectrum analyzer in dBm.

The Spurious Emissions at Antenna Terminals was measured by the spectrum analyzer with a suitable notch filter and/or Band-pass filter.

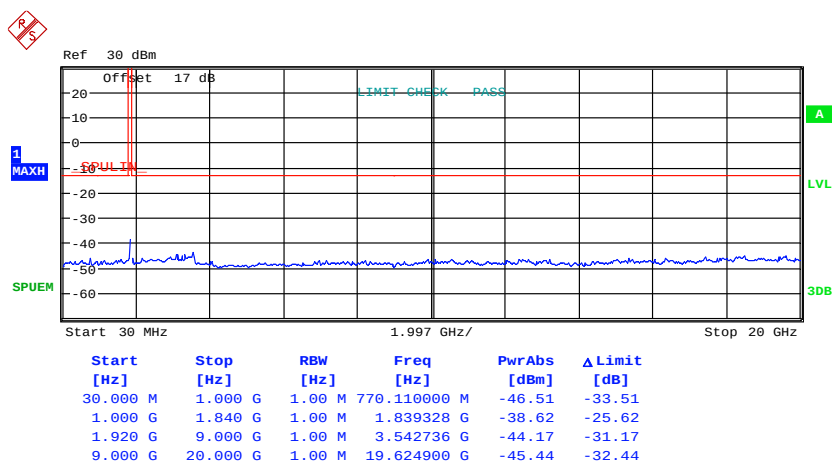
Tests were performed with an unmodulated carrier at three frequencies (low, middle and high channels) and on all power levels , which can be set-up on the transmitters.



7.2 Test Results

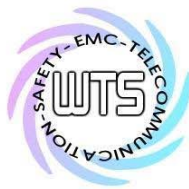
WCDMA

Band 2



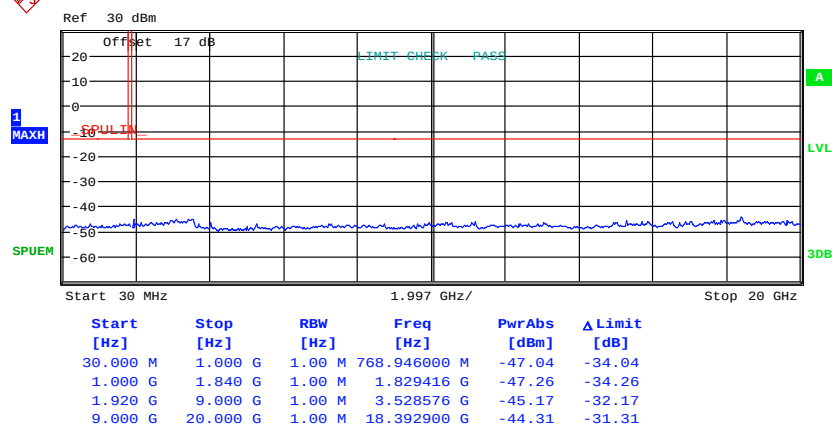
CONDUCTED SPURIOUS EMISSION WCDMA BAND2 CH9262

Date: 17.AUG.2017 17:39:17



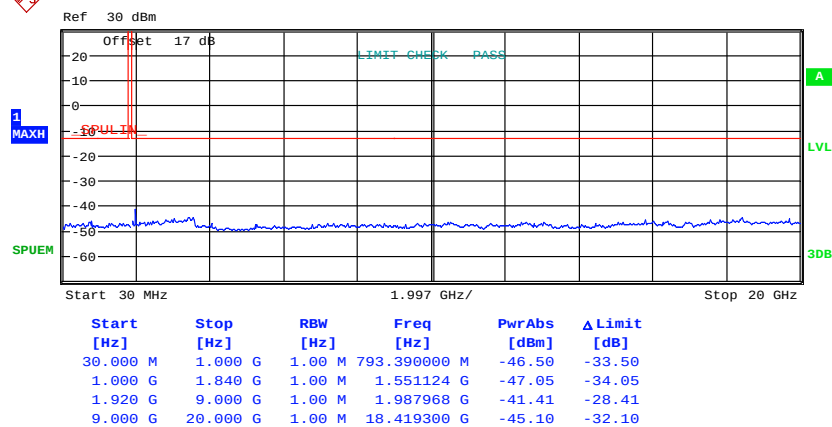
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPUB1



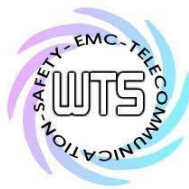
CONDUCTED SPURIOUS EMISSION WCDMA BAND2 CH9400

Date: 17.AUG.2017 17:39:41



CONDUCTED SPURIOUS EMISSION WCDMA BAND2 CH9538

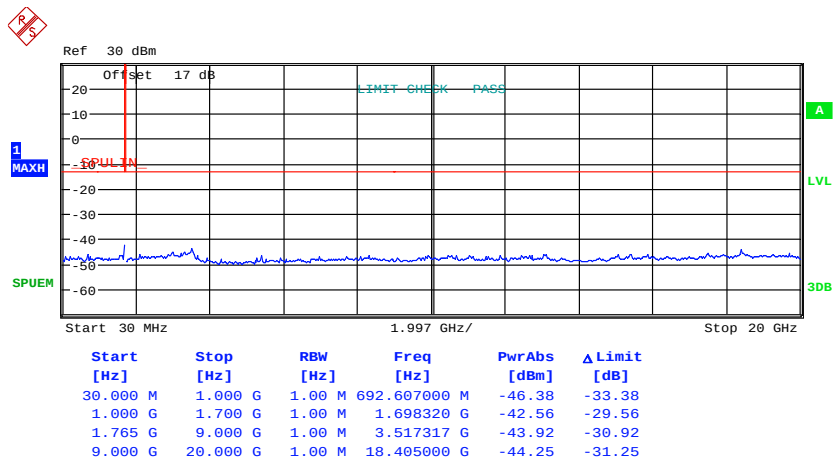
Date: 17.AUG.2017 17:40:12



Report Number: W6R21805-18133-P-247

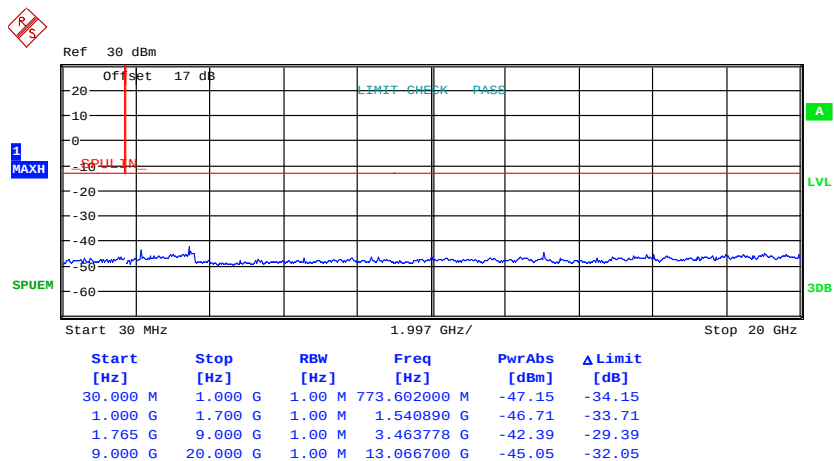
FCC ID: GX9FPHUB1

Band 4



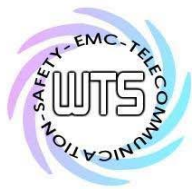
CONDUCTED SPURIOUS EMISSION WCDMA BAND4 CH1312

Date: 17.AUG.2017 17:41:26



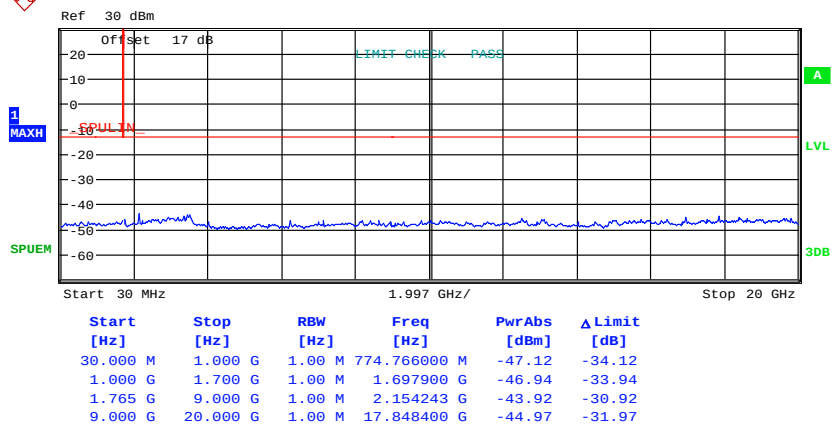
CONDUCTED SPURIOUS EMISSION WCDMA BAND4 CH1413

Date: 17.AUG.2017 17:41:52



Report Number: W6R21805-18133-P-247

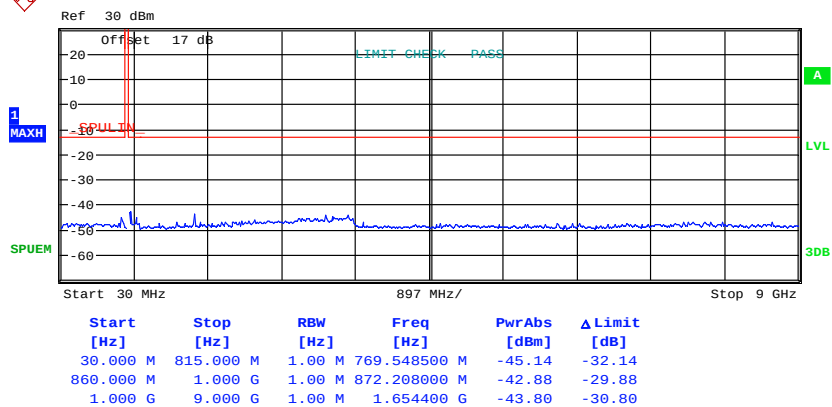
FCC ID: GX9FPHUB1



CONDUCTED SPURIOUS EMISSION WCDMA BAND4 CH1513

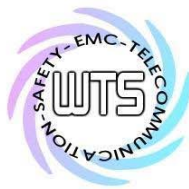
Date: 17.AUG.2017 17:42:19

Band 5



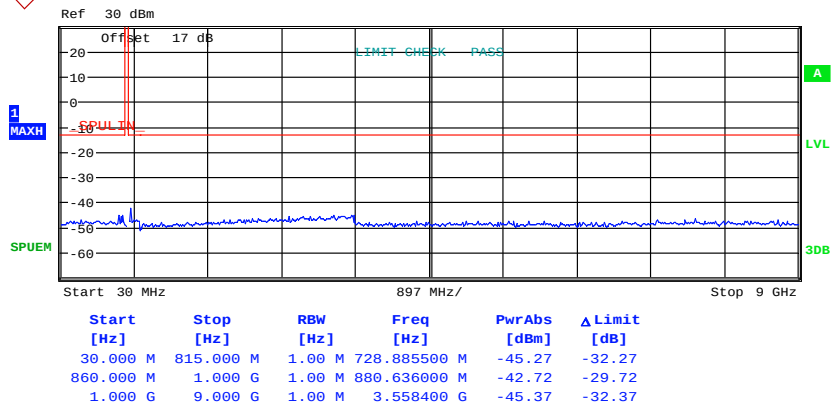
CONDUCTED SPURIOUS EMISSION WCDMA BAND5 CH4132

Date: 17.AUG.2017 17:36:36



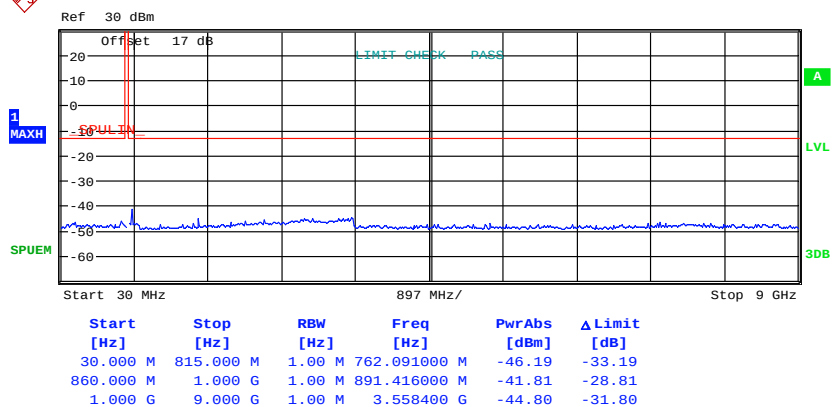
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPUB1



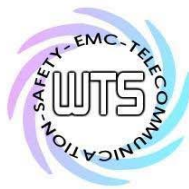
CONDUCTED SPURIOUS EMISSION WCDMA BAND5 CH4183

Date: 17.AUG.2017 17:36:10



CONDUCTED SPURIOUS EMISSION WCDMA BAND5 CH4233

Date: 17.AUG.2017 17:34:47



Worldwide Testing Services(Taiwan) Co., Ltd.

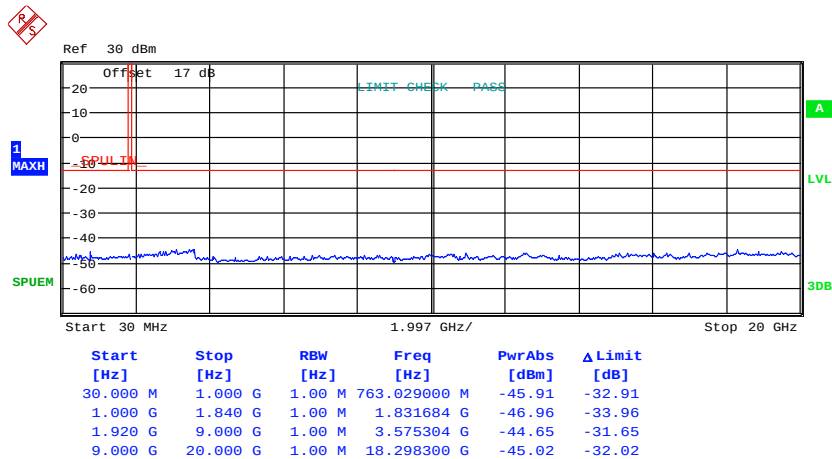
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

LTE

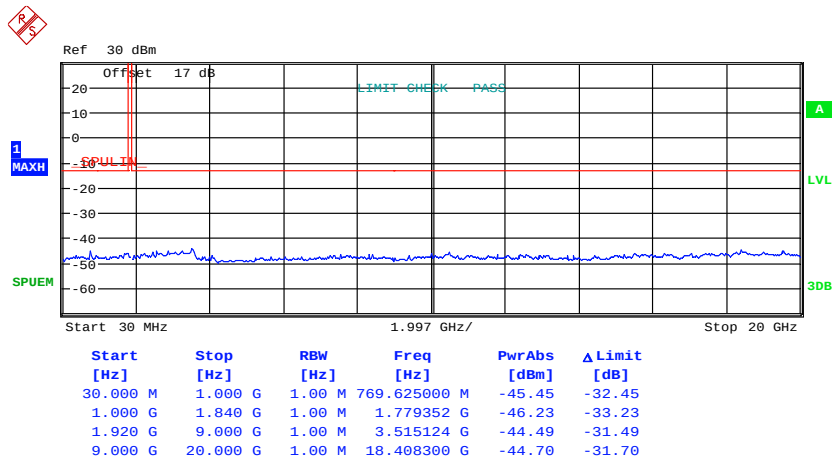
Band 2

1.4 MHz QPSK



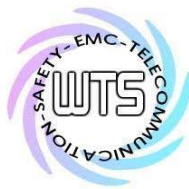
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Date: 17.AUG.2017 11:39:08



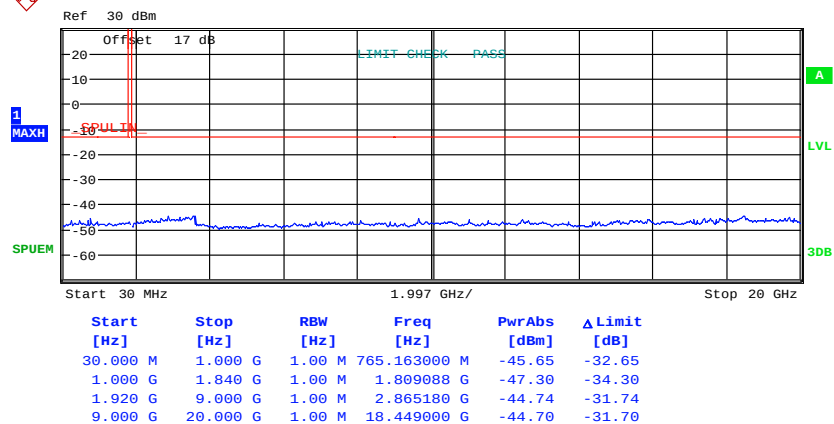
CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 1.4MHZ CH18900

Date: 17.AUG.2017 11:40:55



Report Number: W6R21805-18133-P-247

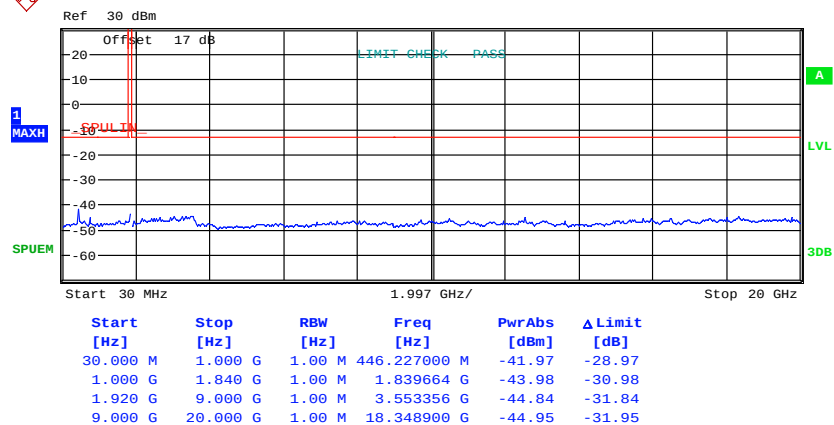
FCC ID: GX9FPHUB1



CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 1.4MHZ CH19193

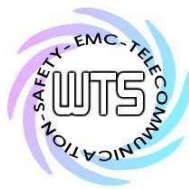
Date: 17.AUG.2017 11:41:31

3 MHz QPSK



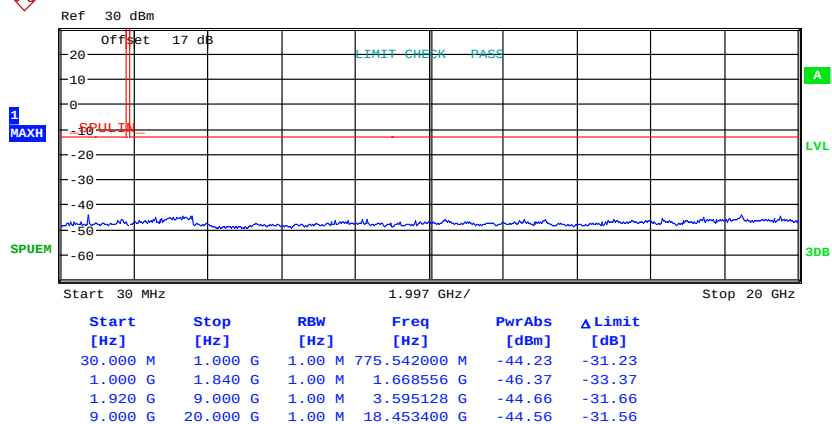
CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 3MHZ CH18615

Date: 17.AUG.2017 11:58:05



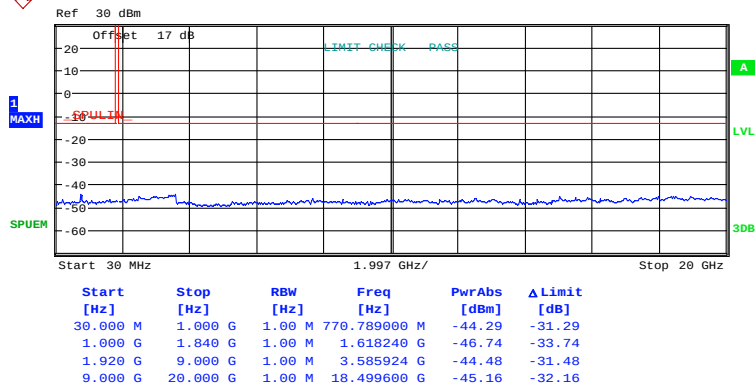
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



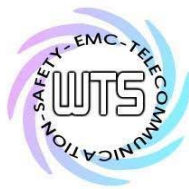
CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 3MHZ CH18900

Date: 17.AUG.2017 11:57:19



CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 3MHZ CH19185

Date: 17.AUG.2017 11:56:40

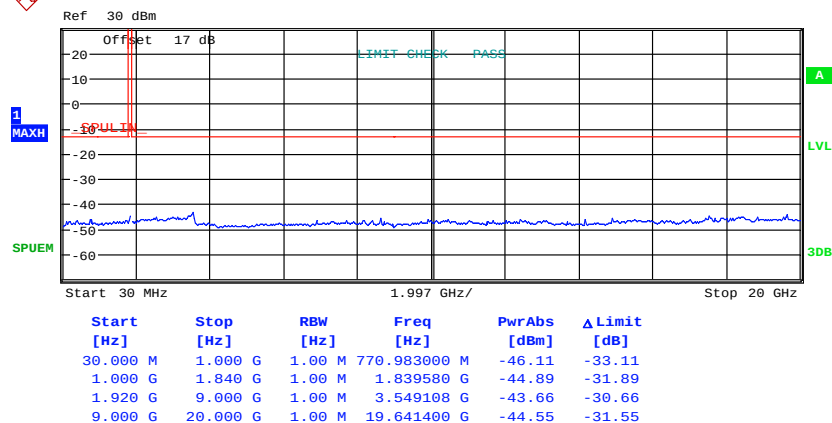


Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

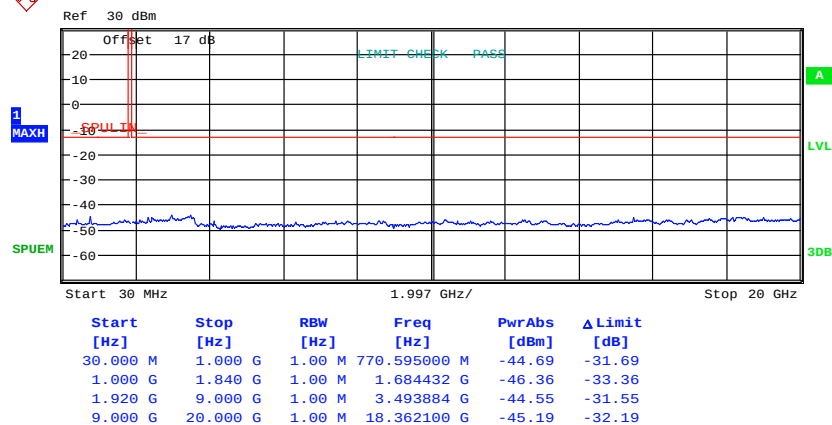
FCC ID: GX9FPHUB1

5 MHz QPSK



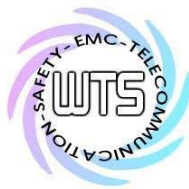
CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 5MHZ CH18625

Date: 17.AUG.2017 11:59:21



CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 5MHZ CH18900

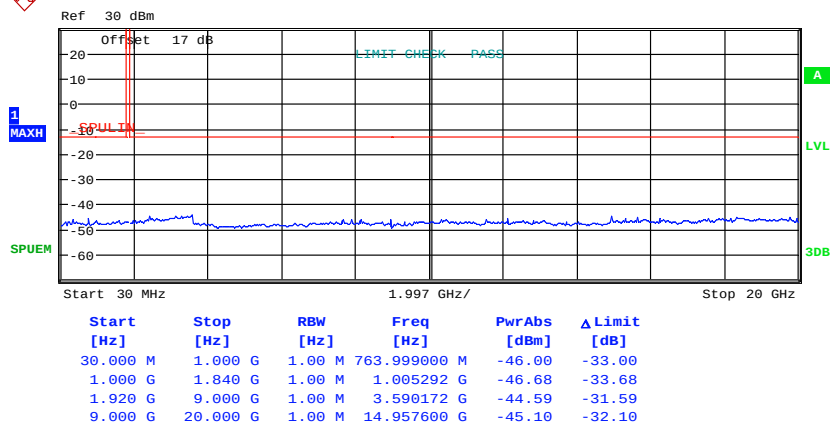
Date: 17.AUG.2017 12:00:21



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

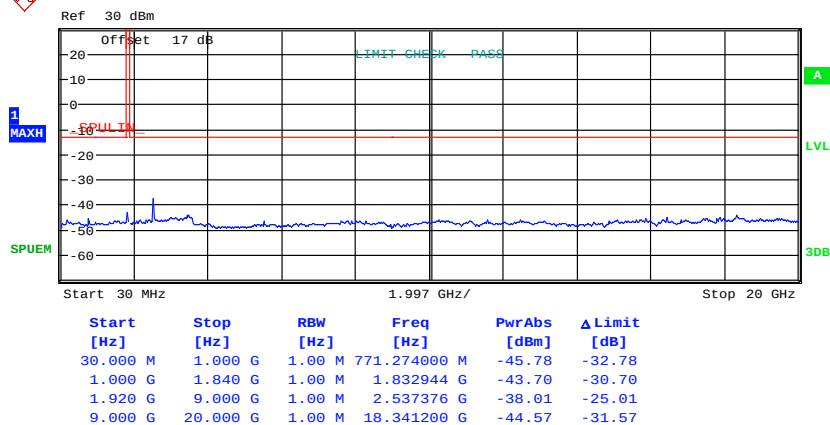
FCC ID: GX9FPHUB1



CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 5MHZ CH19175

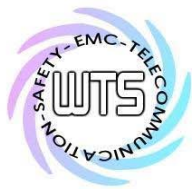
Date: 17.AUG.2017 12:01:06

10 MHz QPSK



CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 10MHZ CH18650

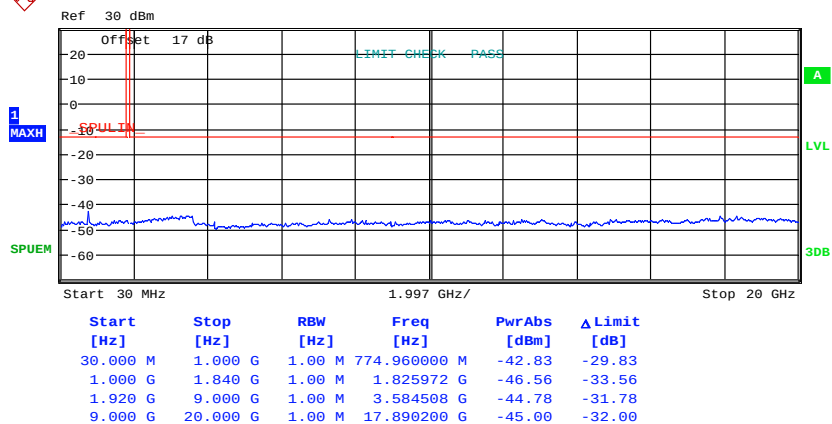
Date: 17.AUG.2017 13:32:12



Worldwide Testing Services(Taiwan) Co., Ltd.

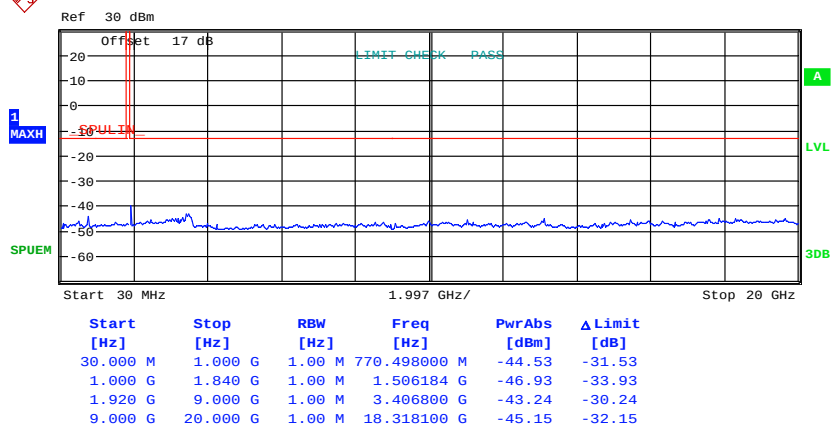
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPUB1



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Date: 17.AUG.2017 13:33:00

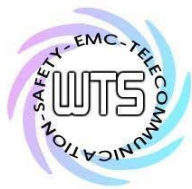


CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 10MHZ CH19150

Date: 17.AUG.2017 13:33:48

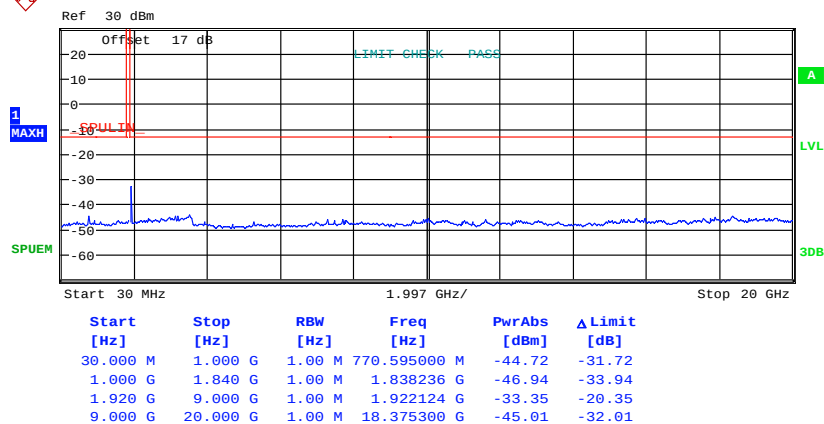


15 MHz QPSK



Report Number: W6R21805-18133-P-247

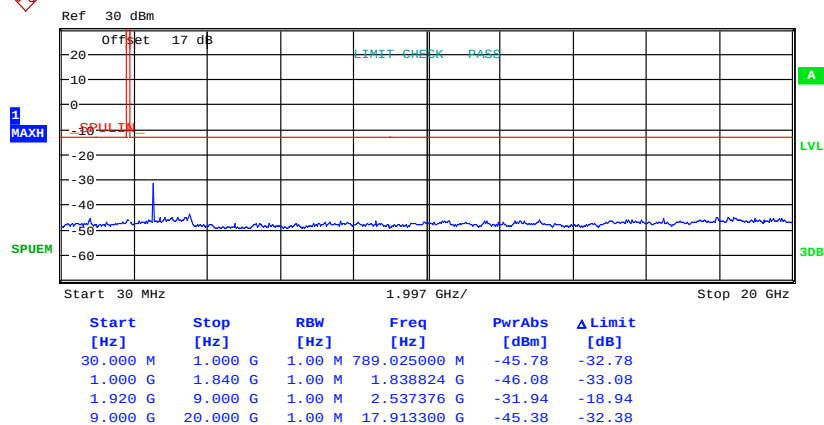
FCC ID: GX9FPHUB1



CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 15MHZ CH19125

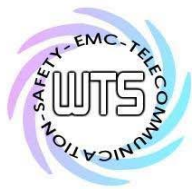
Date: 17.AUG.2017 13:42:56

20 MHz QPSK



CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 20MHZ CH18700

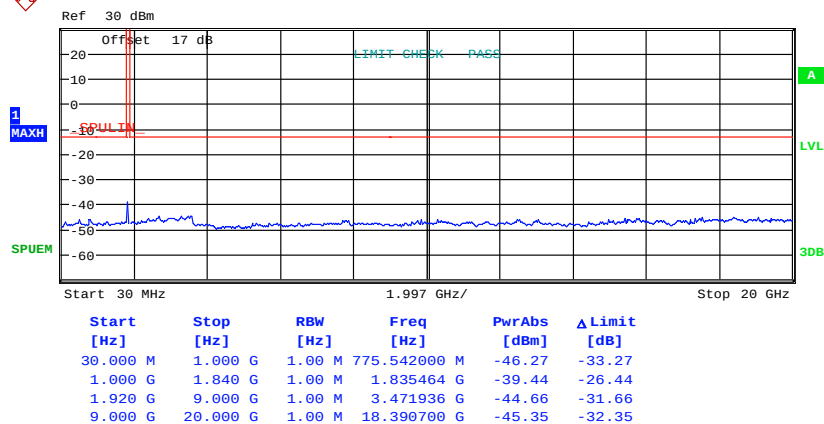
Date: 17.AUG.2017 13:45:27



Worldwide Testing Services(Taiwan) Co., Ltd.

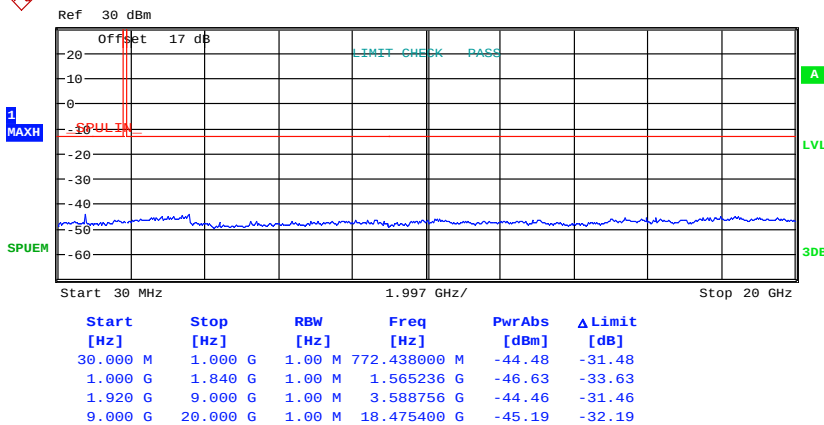
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPUB1



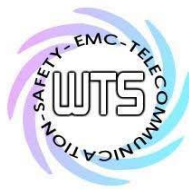
CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 20MHZ CH18900

Date: 17.AUG.2017 13:46:06



CONDUCTED SPURIOUS EMISSION BAND2 QPSK 1RB#0 20MHZ CH19100

Date: 17.AUG.2017 13:46:49

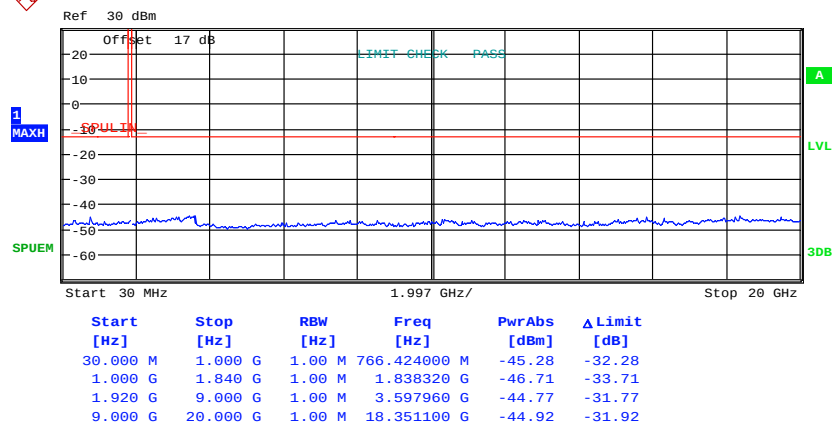


Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

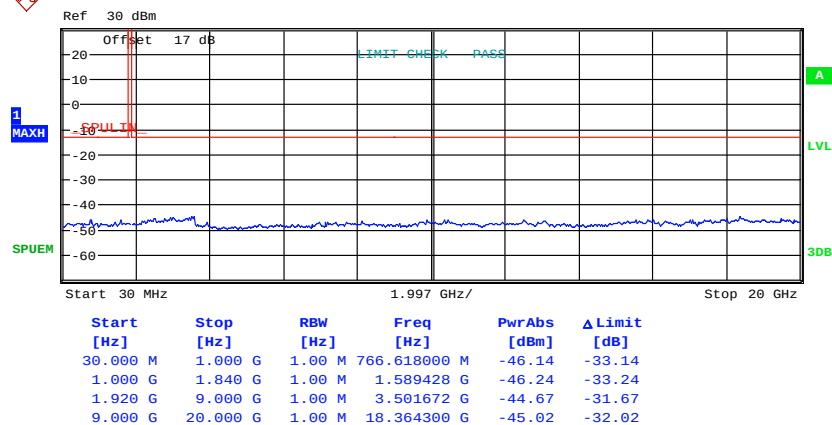
FCC ID: GX9FPHUB1

1.4 MHz 16QAM



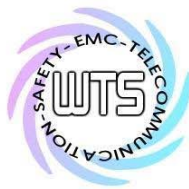
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Date: 17.AUG.2017 11:43:13



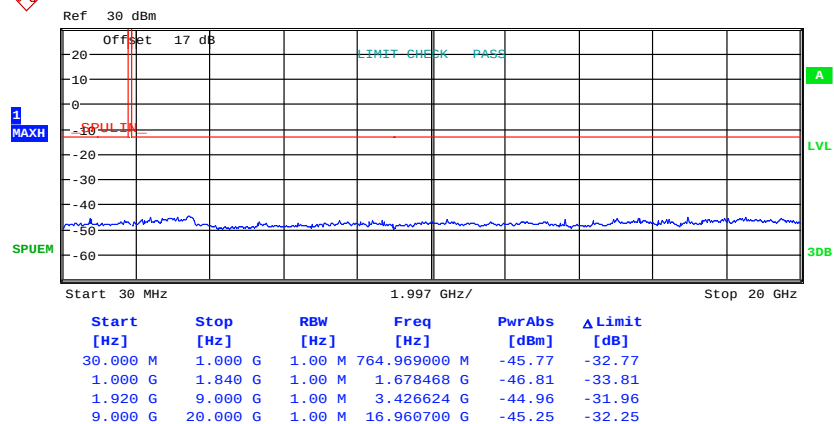
CONDUCTED SPURIOUS EMISSION BAND2 16QAM 1RB#0 1.4MHZ CH18900

Date: 17.AUG.2017 11:42:39



Report Number: W6R21805-18133-P-247

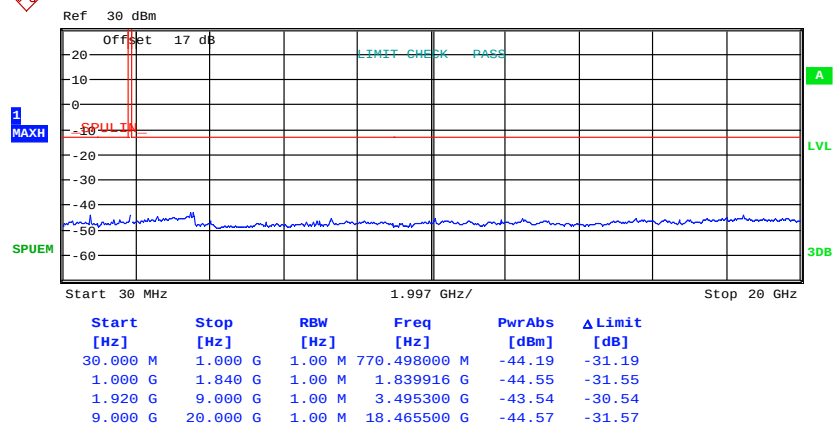
FCC ID: GX9FPHUB1



CONDUCTED SPURIOUS EMISSION BAND2 16QAM 1RB#0 1.4MHZ CH19193

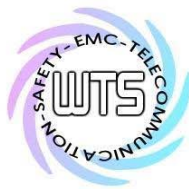
Date: 17.AUG.2017 11:42:16

3 MHz 16QAM



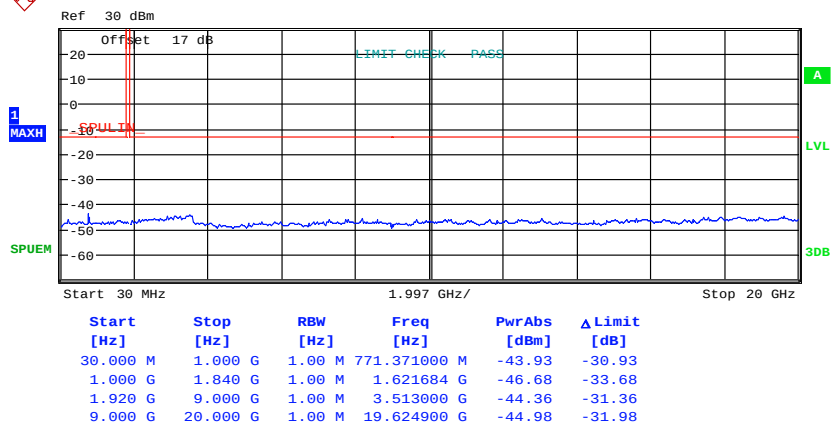
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Date: 17.AUG.2017 11:52:50



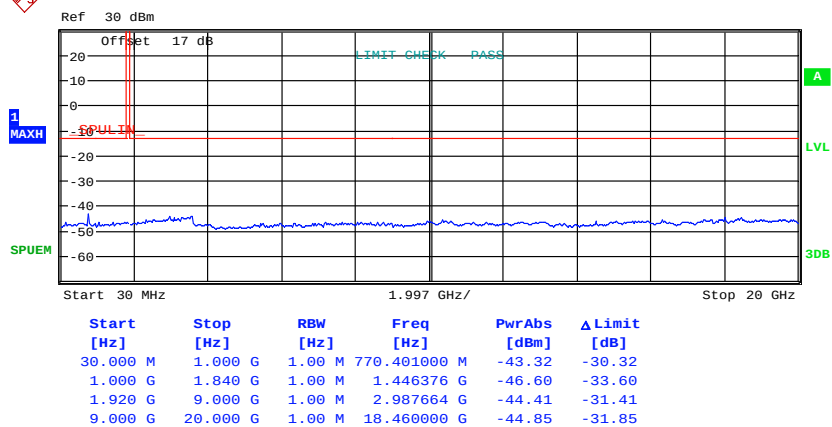
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPUB1



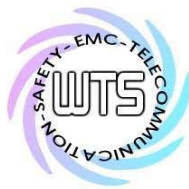
CONDUCTED SPURIOUS EMISSION BAND2 16QAM 1RB#0 3MHZ CH18900

Date: 17.AUG.2017 11:54:38



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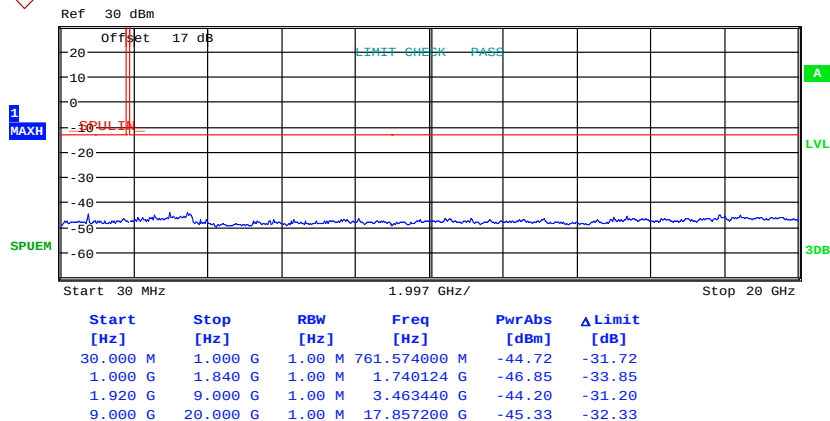
Date: 17.AUG.2017 11:55:40



Report Number: W6R21805-18133-P-247

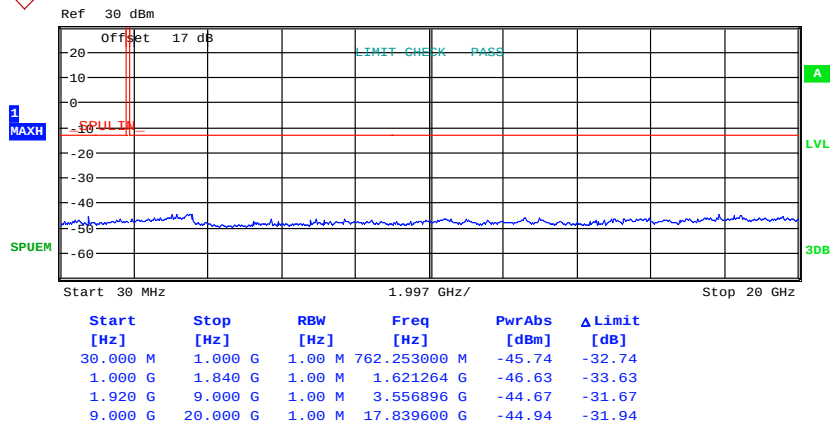
FCC ID: GX9FPHUB1

5 MHz 16QAM



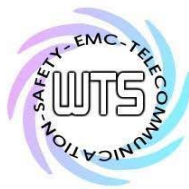
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Date: 17.AUG.2017 12:02:42



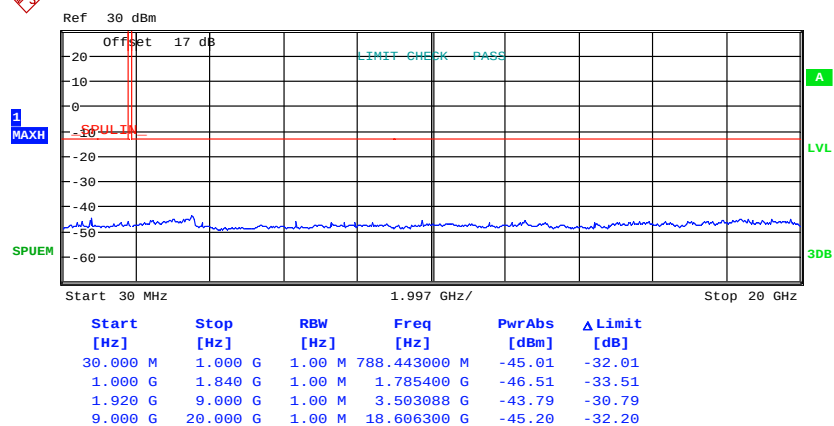
CONDUCTED SPURIOUS EMISSION BAND2 16QAM 1RB#0 5MHZ CH18900

Date: 17.AUG.2017 12:02:14



Report Number: W6R21805-18133-P-247

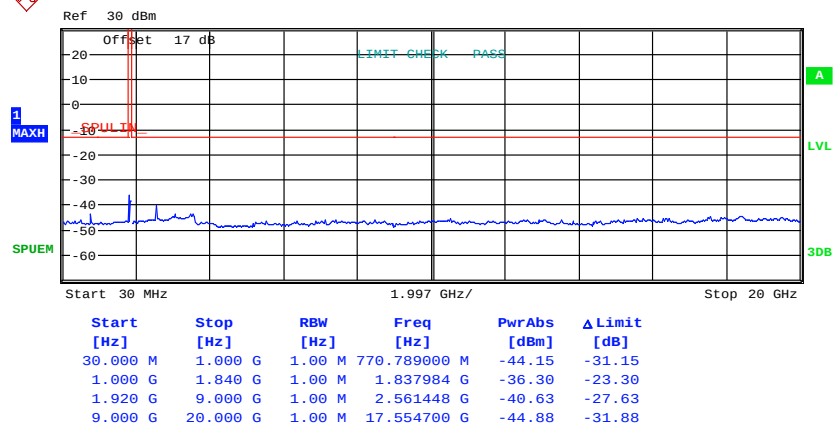
FCC ID: GX9FPHUB1



CONDUCTED SPURIOUS EMISSION BAND2 16QAM 1RB#0 5MHZ CH19175

Date: 17.AUG.2017 12:01:51

10 MHz 16QAM

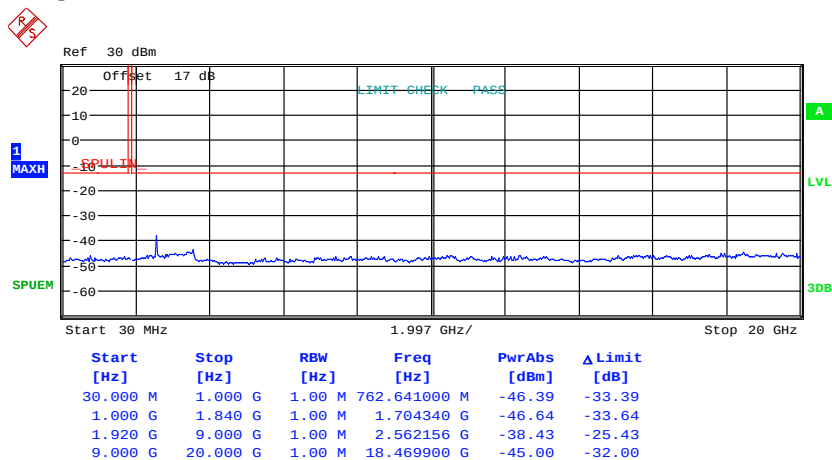


CONDUCTED SPURIOUS EMISSION BAND2 16QAM 1RB#0 10MHZ CH18650

Date: 17.AUG.2017 13:37:00

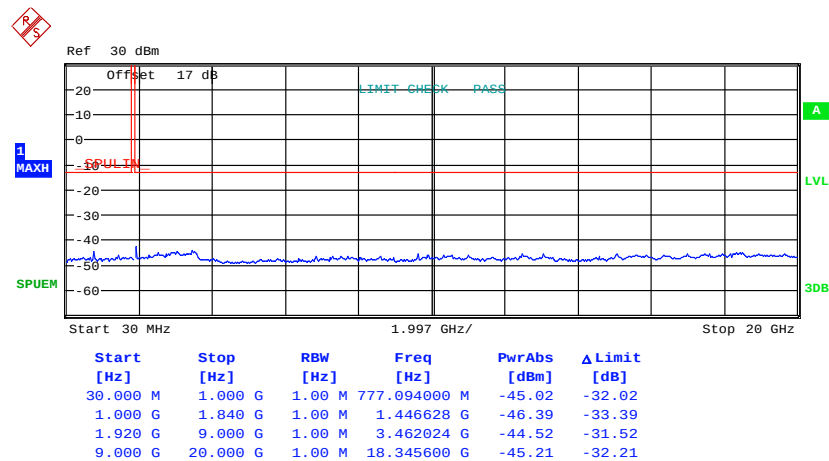


FCC ID: GX9FPHUB1



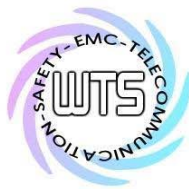
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Date: 17.AUG.2017 13:35:26



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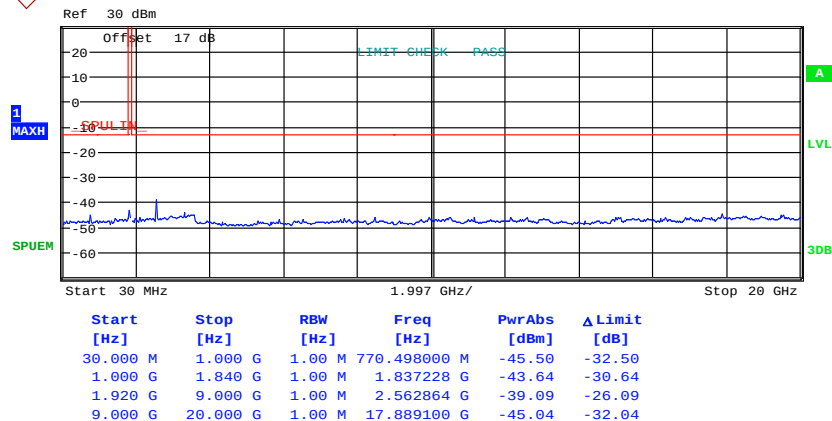
Date: 17.AUG.2017 13:34:50



Report Number: W6R21805-18133-P-247

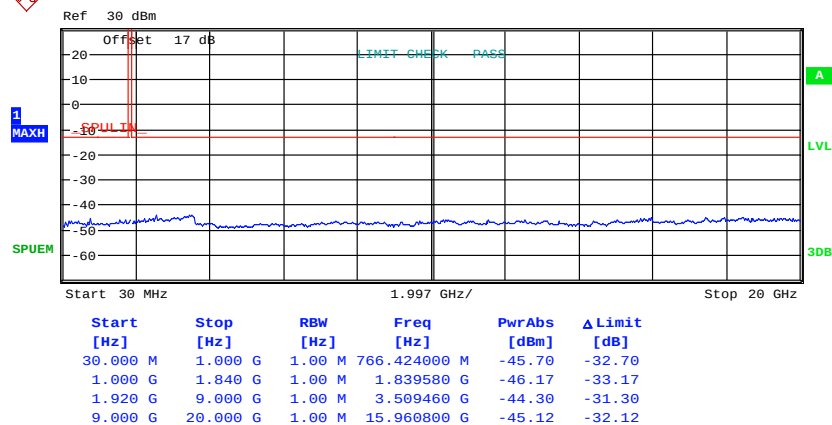
FCC ID: GX9FPHUB1

15 MHz 16QAM



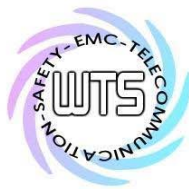
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Date: 17.AUG.2017 13:39:23



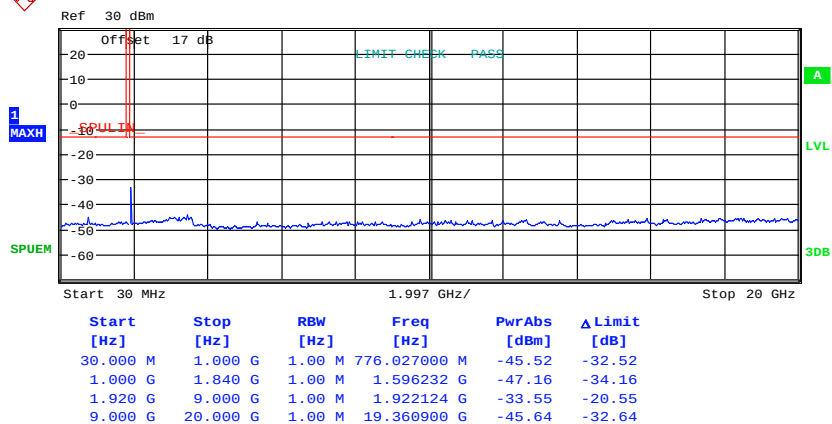
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Date: 17.AUG.2017 13:40:51



Report Number: W6R21805-18133-P-247

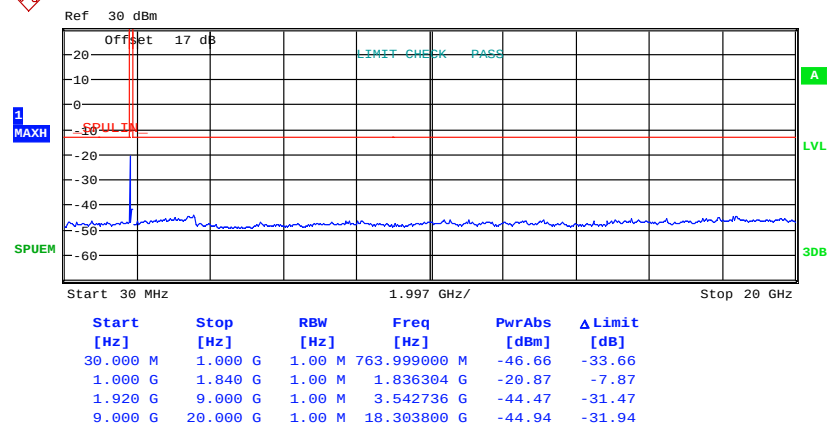
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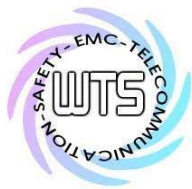
Date: 17.AUG.2017 13:41:26

20 MHz 16QAM



CONDUCTED SPURIOUS EMISSION BAND2 16QAM 1RB#0 20MHZ CH18700

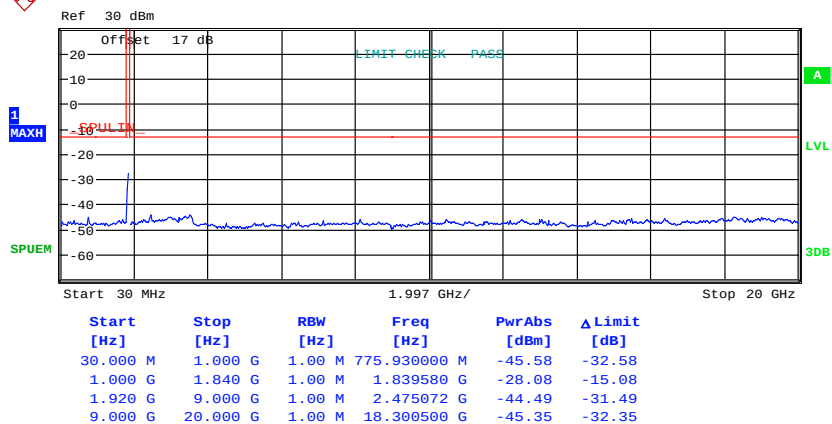
Date: 17.AUG.2017 13:49:37



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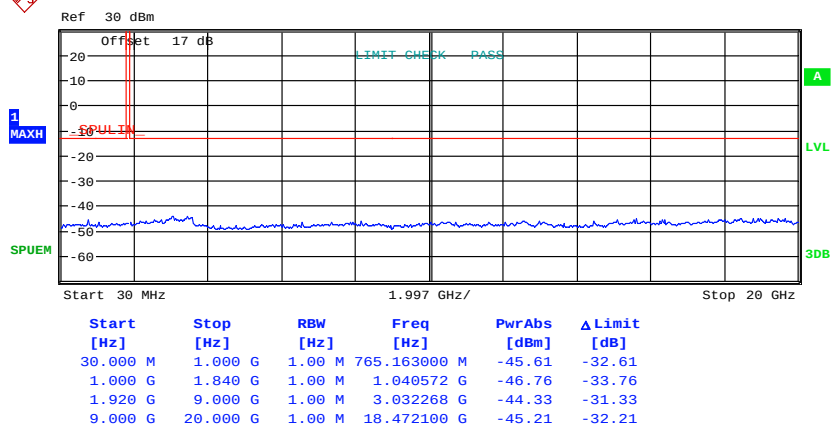
Report Number: W6R21805-18133-P-247

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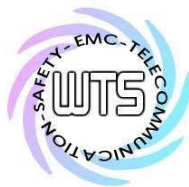
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Date: 17.AUG.2017 13:48:49



CONDUCTED SPURIOUS EMISSION BAND2 16QAM 1RB#0 20MHZ CH19100

Date: 17.AUG.2017 13:48:15



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

Band 4

1.4 MHz QPSK



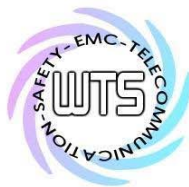
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Date: 17.AUG.2017 14:01:06



CONDUCTED SPURIOUS EMISSION BAND4 QPSK 1RB#0 1.4MHZ CH20175

Date: 17.AUG.2017 14:00:22



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

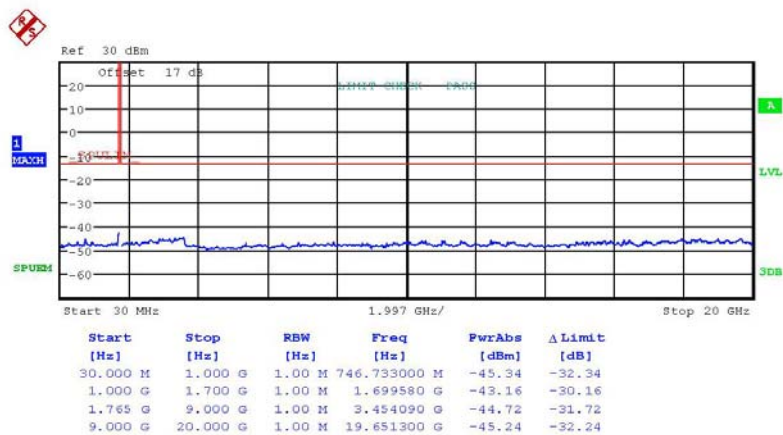
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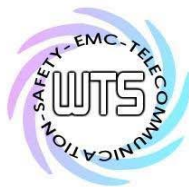
Date: 17.AUG.2017 13:59:46

3 MHz QPSK



CONDUCTED SPURIOUS EMISSION BAND4 QPSK 1RB#0 3MHz CH19965

Date: 17.AUG.2017 14:03:27



Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



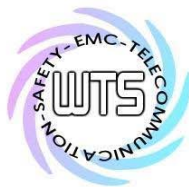
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Date: 17.AUG.2017 14:04:04



CONDUCTED SPURIOUS EMISSION BAND4 QPSK 1RB#0 3MHZ CH20385

Date: 17.AUG.2017 14:04:37



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

5 MHz QPSK



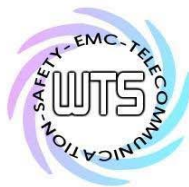
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Date: 17.AUG.2017 14:12:51



CONDUCTED SPURIOUS EMISSION BAND4 QPSK 1RB#0 5MHZ CH20175

Date: 17.AUG.2017 14:12:13



Report Number: W6R21805-18133-P-247

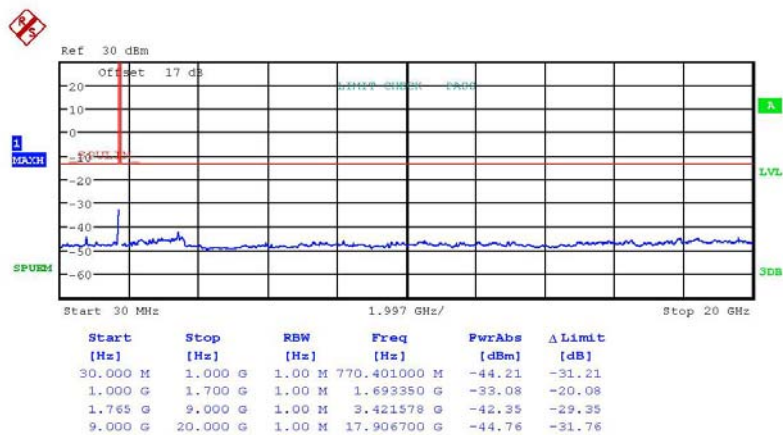
FCC ID: GX9FPHUB1



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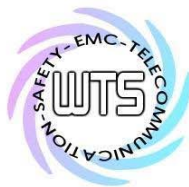
Date: 17.AUG.2017 14:11:29

10 MHz QPSK



CONDUCTED SPURIOUS EMISSION BAND4 QPSK 1RB#0 10MHZ CH20000

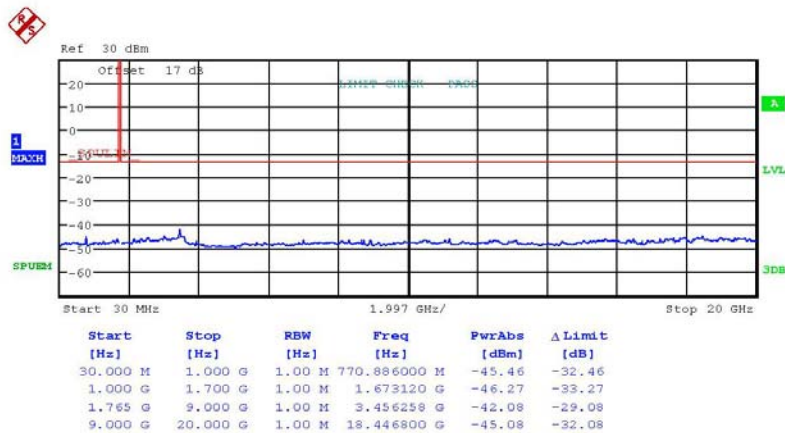
Date: 17.AUG.2017 14:13:55



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



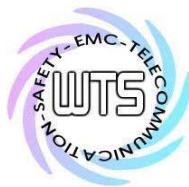
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Date: 17.AUG.2017 14:14:38



CONDUCTED SPURIOUS EMISSION BAND4 QPSK 1RB#0 10MHZ CH20350

Date: 17.AUG.2017 14:15:23



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

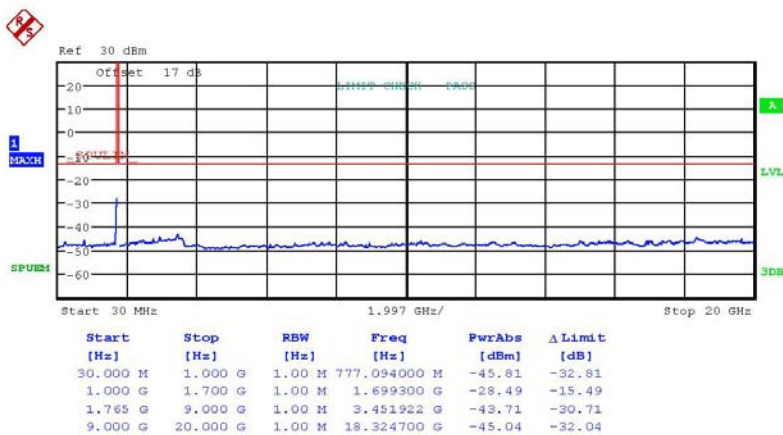
FCC ID: GX9FPHUB1

15 MHz QPSK



CONDUCTED SPURIOUS EMISSION BAND4 QPSK 1RB#0 15MHZ CH20025

Date: 17.AUG.2017 14:30:49

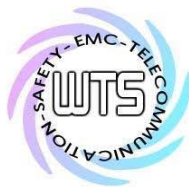


CONDUCTED SPURIOUS EMISSION BAND4 QPSK 1RB#0 15MHZ CH20175

Date: 17.AUG.2017 14:30:19



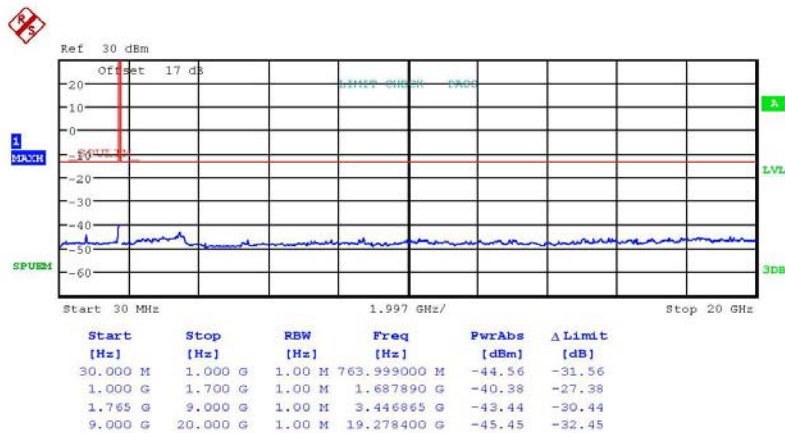
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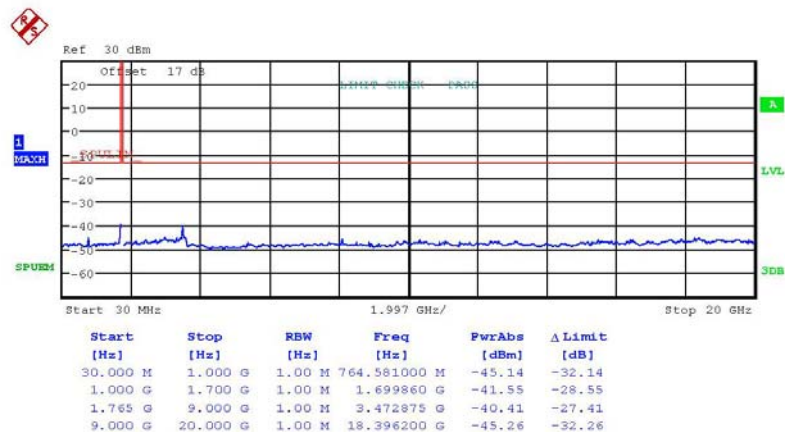
Report Number: W6R21805-18133-P-247

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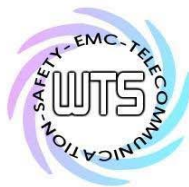
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Date: 17.AUG.2017 14:34:54



CONDUCTED SPURIOUS EMISSION BAND4 QPSK 1RB#0 20MHZ CH20300

Date: 17.AUG.2017 14:35:29



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

1.4 MHz 16QAM



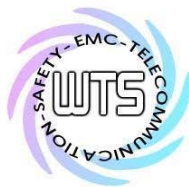
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Date: 17.AUG.2017 13:55:31



CONDUCTED SPURIOUS EMISSION BAND4 16QAM 1RB#0 1.4MHZ CH20175

Date: 17.AUG.2017 13:56:17



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

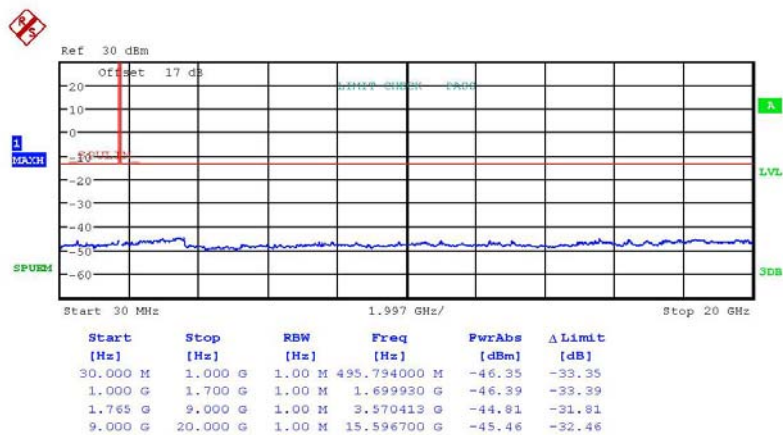
FCC ID: GX9FPHUB1



CONDUCTED SPURIOUS EMISSION BAND4 16QAM 1RB#0 1.4MHZ CH20393

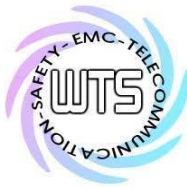
Date: 17.AUG.2017 13:56:57

3 MHz 16QAM



CONDUCTED SPURIOUS EMISSION BAND4 16QAM 1RB#0 3MHZ CH19965

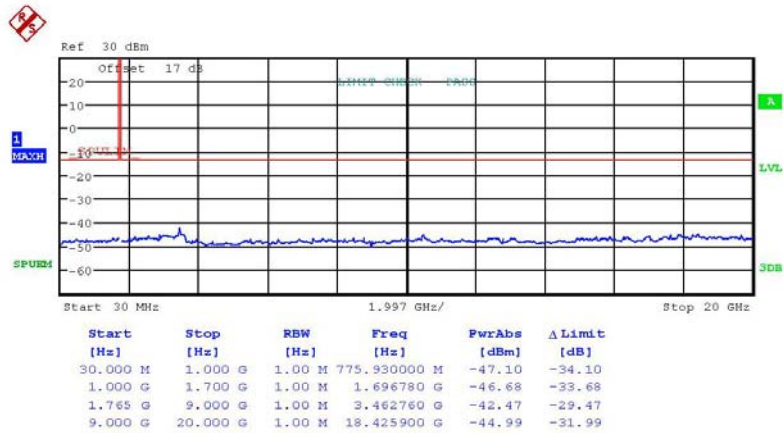
Date: 17.AUG.2017 14:07:25



Worldwide Testing Services(Taiwan) Co., Ltd.

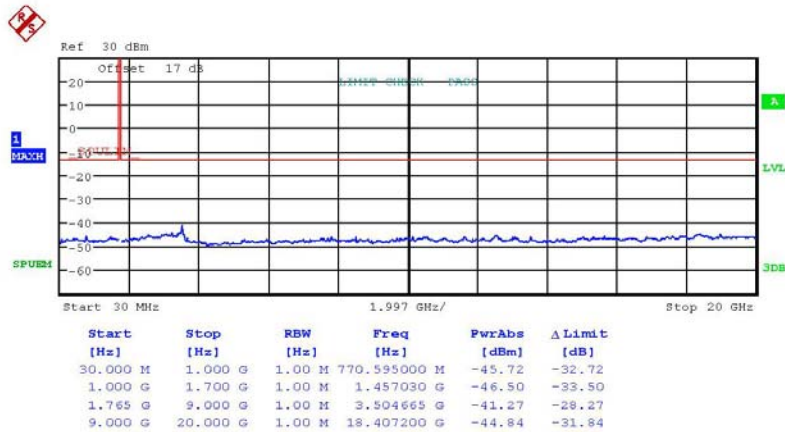
Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1



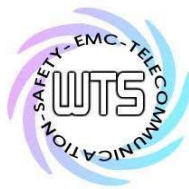
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Date: 17.AUG.2017 14:06:42



CONDUCTED SPURIOUS EMISSION BAND4 16QAM 1RB#0 3MHZ CH20385

Date: 17.AUG.2017 14:05:46



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6R21805-18133-P-247

FCC ID: GX9FPHUB1

5 MHz 16QAM



CONDUCTED SPURIOUS EMISSION BAND4 16QAM 1RB#0 5MHZ CH19975

Date: 17.AUG.2017 14:09:16



CONDUCTED SPURIOUS EMISSION BAND4 16QAM 1RB#0 5MHZ CH20175

Date: 17.AUG.2017 14:10:00