

FCC PART 22/24/27 TEST REPORT

for

abode iota

Model No.: 104035/A

FCC ID: 2ARGFIOTA

of

Applicant: **abode systems, inc**

Address: **2625 Middlefield Rd. #900 Palo Alto California 94306
United States**

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.: W6M21808-18353-P-247

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
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Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21808-18353-P-247
FCC ID: 2ARGFIOTA

Certification of Test Report

Applicant : abode systems, inc
2625 Middlefield Rd. #900 Palo Alto California 94306
United States

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

Tested Equipment :
Type Description : abode iota
Model Number : 104035/A
Brand Name : abode iota
Operation Frequency : Please see chapter 2.3.
RF Output Power: : WCDMA Band 2: 22.20 dBm (EIRP)
Band 4: 17.51 dBm (EIRP)
Band 5: 21.73 dBm (ERP)
LTE Band 2: 26.09 dBm (EIRP)
Band 4 23.82 dBm (EIRP)
Band 5: 22.41 dBm (ERP)
Band 12: 21.1 dBm (ERP)
Power Supply : Adapter (I/P: 100-240Va.c., 50/60Hz, 0.6A;
O/P: 12Vd.c., 2A)
Battery: 7.2Vd.c.(1.2Vd.c.*6), 5100mAh

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

Test Method : 47CFR Part 2 (2017), TIA/EIA-603E(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-603E(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:

November 8, 2018

Robert Ren

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

November 8, 2018

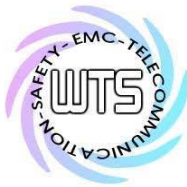
Kevin Wang

Date

WTS

Name

Signature



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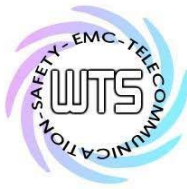
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1. Summary

1.1 Description of tested equipment

This equipment under tested, 104035/A, is a abode iota.

This test report only contains test requirements specified in 47CFR Part 22, Part 24 and Part27 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: August 30, 2018

Date of test: from August 31, 2018 to November 8, 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-603E (2016), ANSI C63.4 (2014)
47CFR Part 22 (2017-10), Part 24 (2017-10) and Part 27 (2017-10)**

Deviation from test standard: None



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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.

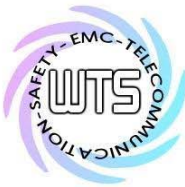
Name: ./.
Accredited number: ./.
Street: ./.
Town: ./.
Country: ./.
Telephone: ./.
Fax: ./.

2.2 Details of approval holder

Name: abode systems, inc
Street: 2625 Middlefield Rd. #900
Town: Palo Alto California 94306
Country: United States
Telephone: 650-229-2060
Fax: ./.

Manufacturer: (if different from applicant)

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



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2.3 Description of Tested System

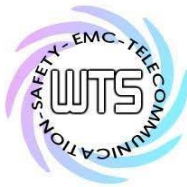
The EUT was tested alone without the Accessories or Peripherals.

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

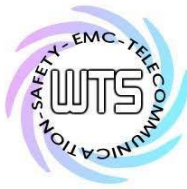
LTE							
Operating Band	Channel Bandwidth	Bottom Channel		Middle Channel		Top Channel	
		Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
5	1.4MHz	20407	824.7	20525	836.5	20643	848.3
5	3MHz	20415	825.5	20525	836.5	20635	847.5
5	5MHz	20425	826.5	20525	836.5	20625	846.5
5	10MHz	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: 2.56 dBi, Band 4: 3.94 dBi, Band 5: 1.75 dBi)
 LTE (Band 2: 2.56 dBi, Band 4: 3.94 dBi, Band 5: 1.75 dBi, Band 12: 1.34 dBi)

Power supply: Adapter (I/P: 100-240Va.c., 50/60Hz, 0.6A;
 O/P: 12Vd.c., 2A)
 Battery: 7.2Vd.c.(1.2Vd.c.*6), 5100mAh



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2.4 Test environment

Temperature: 27 °C
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.

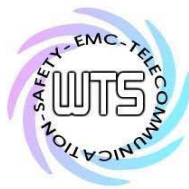
For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

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.



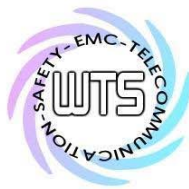
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2.6 Test Equipment List

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	2018/11/1	2019/10/31
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2018/8/21	2019/8/20
ETSTW-CE 008	HF-EICHLITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2018/7/13	2019/7/12
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2018/9/25	2019/9/24
ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2018/7/16	2019/7/15
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 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	2018/7/13	2019/7/12
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2018/7/12	2019/7/11
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	2018/9/17	2019/9/16
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2018/9/18	2019/9/17
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2018/4/16	2019/4/15
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2018/2/23	2019/2/22
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



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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	2018/8/8	2019/8/7
ETSTW-RE 126	5GHz Notch filter	5NSL12-5800/E221.3-O/O	1	K&L Microwave	2018/8/8	2019/8/7
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2018/2/27	2019/2/26
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2018/8/8	2019/8/7
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2018/8/8	2019/8/7
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	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	Thermohyrometer	608-h1	45104376	TESTO	2018/8/17	2019/8/16
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2018/5/10	2019/5/9
ETSTW-EMS 008	Exposure Level Tester	ELT-400	G-0009	Narda	2018/7/17	2019/7/16
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	2018/10/19	2019/10/18
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	2018/9/12	2019/9/11
ETSTW-GSM 024	Radio Communication Analyzer	MT8821C	None	Anritsu	2018/3/7	2019/3/6
ETSTW-GSM 025	Band Reject Filter	BRM19835	001	Micro-Tronics	2018/8/9	2019/8/8
ETSTW-Cable 011	SMA to N type Cable	RGU-400	None	THERMAX	Pre-test Use NCR	
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	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.	2018/7/2	2019/7/1
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	2018/5/14	2019/5/13
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2018/9/18	2019/9/17
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2018/9/18	2019/9/17
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (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



Worldwide Testing Services(Taiwan) Co., Ltd.

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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	2018/6/9	2019/6/8
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	2018/8/30	2019/8/29
ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM- NM-25000	170239	EMCI	2018/6/9	2019/6/8
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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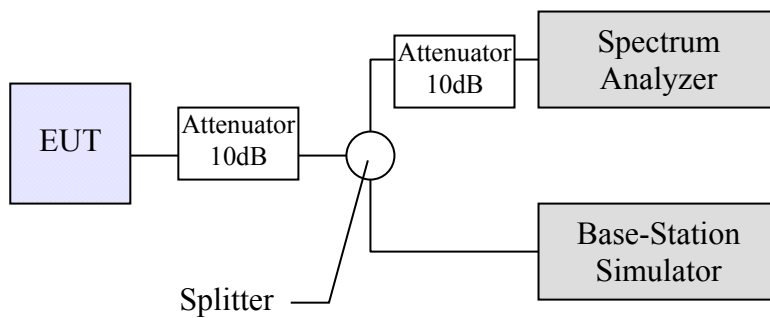
3. RF Power Output

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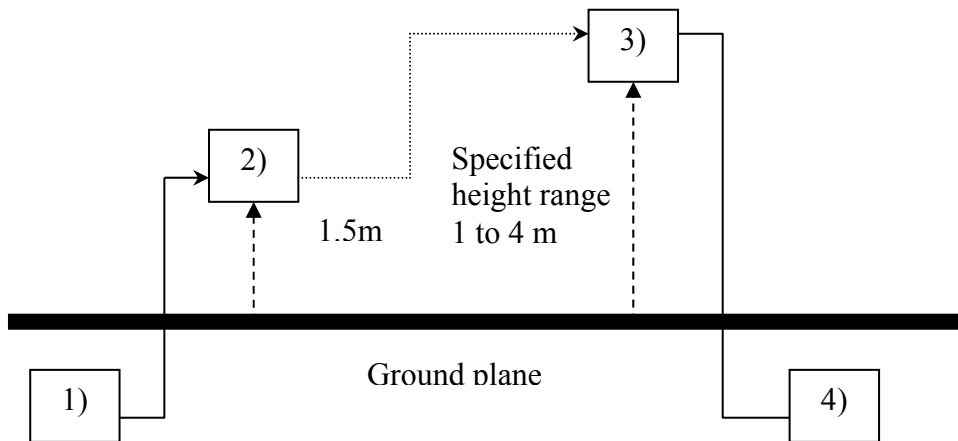
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Worst case emission was recorded with the rotation of the turntable and the raising and lowering of the test antenna.

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.

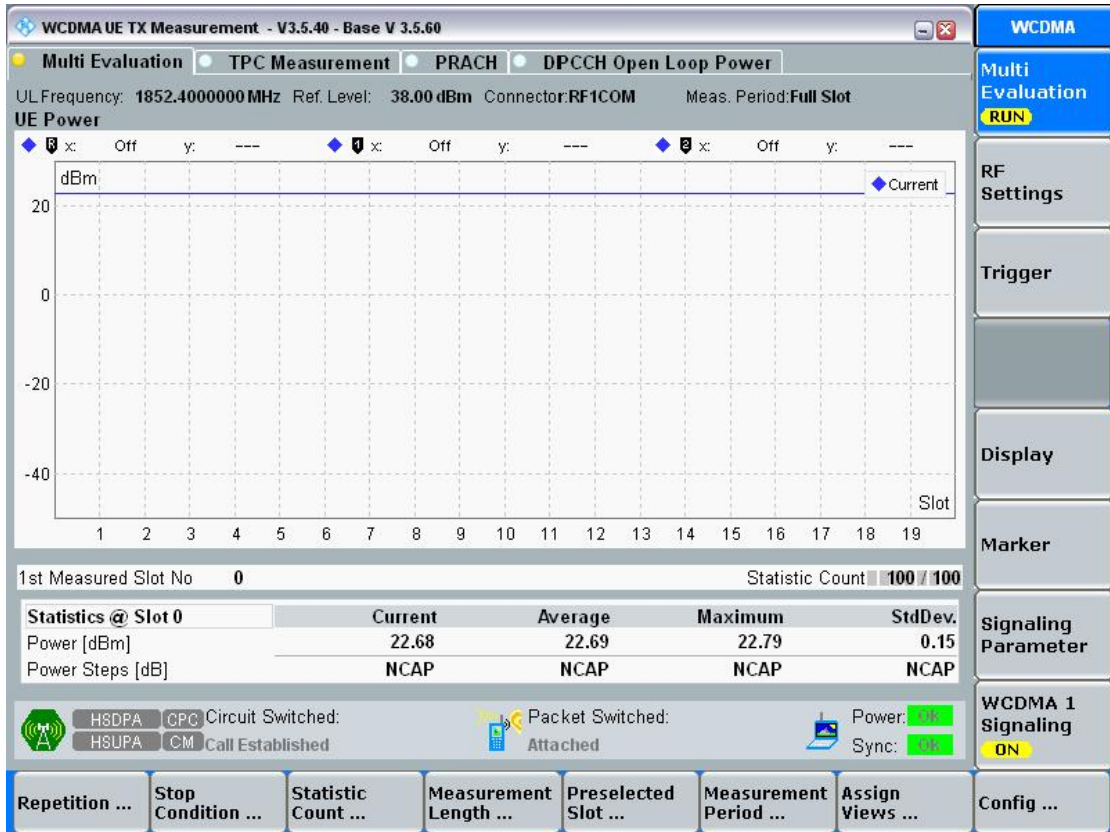
On test sites with ground plane the measurement antenna will be lowered and raised to maximum values at significant frequencies.

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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WCDMA UE TX Measurement - V3.5.40 - Base V 3.5.60
WCDMA

Multi Evaluation
TPC Measurement
PRACH
DPCCH Open Loop Power

UL Frequency: 1880.000000 MHz Ref. Level: 38.00 dBm Connector: RF1COM Meas. Period: Full Slot

UE Power

x: Off y: ---
 x: Off y: ---
 x: Off y: ---

1st Measured Slot No 0 Statistic Count 100 / 100

Statistics @ Slot 0	Current	Average	Maximum	StdDev.
Power [dBm]	22.09	22.12	22.24	0.04
Power Steps [dB]	NCAP	NCAP	NCAP	NCAP

HSDPA CPC Circuit Switched:
 HSUPA CM Call Established

Packet Switched:
 Attached

Power: ON
 Sync: ON

Repetition ...
Stop Condition ...
Statistic Count ...
Measurement Length ...
Preselected Slot ...
Measurement Period ...
Assign Views ...
Config ...

WCDMA UE TX Measurement - V3.5.40 - Base V 3.5.60
WCDMA

Multi Evaluation
TPC Measurement
PRACH
DPCCH Open Loop Power

UL Frequency: 1907.600000 MHz Ref. Level: 38.00 dBm Connector: RF1COM Meas. Period: Full Slot

UE Power

x: Off y: ---
 x: Off y: ---
 x: Off y: ---

1st Measured Slot No 0 Statistic Count 100 / 100

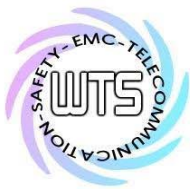
Statistics @ Slot 0	Current	Average	Maximum	StdDev.
Power [dBm]	22.30	21.95	22.32	0.99
Power Steps [dB]	NCAP	NCAP	NCAP	NCAP

HSDPA CPC Circuit Switched:
 HSUPA CM Call Established

Packet Switched:
 Attached

Power: ON
 Sync: ON

Repetition ...
Stop Condition ...
Statistic Count ...
Measurement Length ...
Preselected Slot ...
Measurement Period ...
Assign Views ...
Config ...



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 Band 4



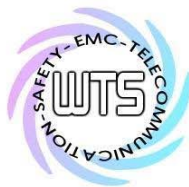


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Band 5





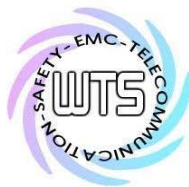
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LTE

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

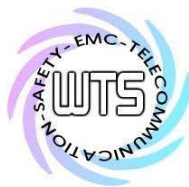


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2	QPSK	5MHz	PRB#0	18625	22.02	PASS
2	QPSK	5MHz	FRB#0	18625	20.97	PASS
2	16QAM	5MHz	1RB#0	18625	21.16	PASS
2	16QAM	5MHz	PRB#0	18625	21.03	PASS
2	16QAM	5MHz	FRB#0	18625	19.91	PASS
2	QPSK	5MHz	1RB#0	18900	22.27	PASS
2	QPSK	5MHz	1RB#MAX	18900	22.18	PASS
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

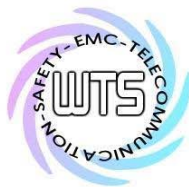


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FCC ID: 2ARGFIOTA

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

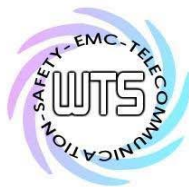


Worldwide Testing Services(Taiwan) Co., Ltd.

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FCC ID: 2ARGFIOTA

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

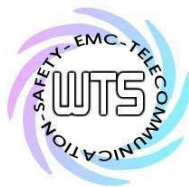


Worldwide Testing Services(Taiwan) Co., Ltd.

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FCC ID: 2ARGFIOTA

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

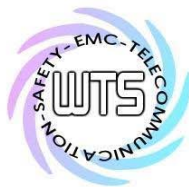


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4	QPSK	20MHz	1RB#MAX	20050	21.12	PASS
4	QPSK	20MHz	PRB#0	20050	21.12	PASS
4	QPSK	20MHz	FRB#0	20050	20.52	PASS
4	16QAM	20MHz	1RB#0	20050	21.08	PASS
4	16QAM	20MHz	PRB#0	20050	20.25	PASS
4	16QAM	20MHz	FRB#0	20050	20.61	PASS
4	QPSK	20MHz	1RB#0	20050	21.77	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



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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

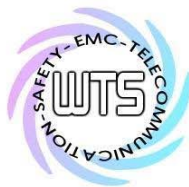


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5	16QAM	10MHz	1RB#0	20525	20.34	PASS
5	16QAM	10MHz	PRB#0	20525	20.71	PASS
5	16QAM	10MHz	FRB#0	20525	20.48	PASS
5	QPSK	10MHz	1RB#0	20600	20.74	PASS
5	QPSK	10MHz	1RB#MAX	20600	20.01	PASS
5	QPSK	10MHz	PRB#0	20600	20.01	PASS
5	QPSK	10MHz	FRB#0	20600	20.89	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

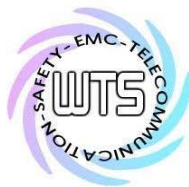


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12	QPSK	3MHz	PRB#0	23165	20.30	PASS
12	QPSK	3MHz	FRB#0	23165	20.37	PASS
12	16QAM	3MHz	1RB#0	23165	20.72	PASS
12	16QAM	3MHz	PRB#0	23165	20.45	PASS
12	16QAM	3MHz	FRB#0	23165	20.29	PASS
12	QPSK	5MHz	1RB#0	23035	20.34	PASS
12	QPSK	5MHz	1RB#MAX	23035	20.87	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



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- Conducted Measurement
- Radiated Measurement

WCDMA

Band 2

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1853.502	18.57	20.72	33	Pass
1881.102	19.5	21.65	33	Pass
1906.738	20.05	22.20	33	Pass

Band 4

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1713.342	12.85	15.00	33	Pass
1731.618	13.7	15.85	33	Pass
1753.702	15.36	17.51	33	Pass

Band 5

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
827.1014	20.03	22.18	38.45	Pass
837.7824	20.5	22.65	38.45	Pass
845.4978	21.73	23.88	38.45	Pass

LTE

Band 2

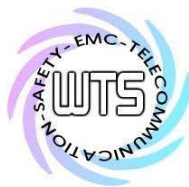
1.4 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1850.235	23.05	25.20	33	Pass
1879.551	21.82	23.97	33	Pass
1908.723	23.07	25.22	33	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1850.107	23.9	26.05	33	Pass
1879.583	22.89	25.04	33	Pass
1908.819	23.94	26.09	33	Pass



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20 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1851.859	22.11	24.26	33	Pass
1872.051	19.36	21.51	33	Pass
1892.051	23.25	25.40	33	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1851.923	22.59	24.74	33	Pass
1870.513	20.02	22.17	33	Pass
1893.013	22.84	24.99	33	Pass

Band 4

1.4 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1710.315	20.98	23.13	30	Pass
1731.971	20.07	22.22	30	Pass
1753.851	18.84	20.99	30	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1710.139	21.67	23.82	30	Pass
1732.115	20.92	23.07	30	Pass
1753.803	19.03	21.18	30	Pass

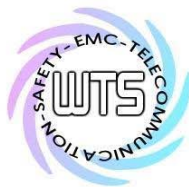
20 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1710.641	19.97	22.12	30	Pass
1723.654	15.38	17.53	30	Pass
1734.808	16.17	18.32	30	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
1708.974	20.34	22.49	30	Pass
1722.628	18.88	21.03	30	Pass
1736.026	19	21.15	30	Pass



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Band 5

1.4 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.2833	21.55	23.70	38.45	Pass
836.0192	21.2	23.35	38.45	Pass
847.8513	21.84	23.99	38.45	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.1872	22.02	24.17	38.45	Pass
836.0673	21.25	23.40	38.45	Pass
847.6270	22.09	24.24	38.45	Pass

10 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
828.3718	18.7	20.85	38.45	Pass
833.2308	18.56	20.71	38.45	Pass
841.1474	22.02	24.17	38.45	Pass

16QAM

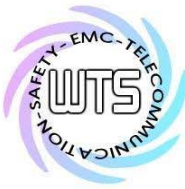
Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
828.0513	18.85	21.00	38.45	Pass
834.1923	18.94	21.09	38.45	Pass
840.1538	22.41	24.56	38.45	Pass

Band 12

1.4 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
699.3635	19.38	21.53	34.77	Pass
707.0513	18.2	20.35	34.77	Pass
714.7071	18.08	20.23	34.77	Pass



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16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
699.1872	21.1	23.25	34.77	Pass
707.0032	18.93	21.08	34.77	Pass
714.7391	19.13	21.28	34.77	Pass

10 MHz

QPSK

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
700.5705	18.65	20.80	34.77	Pass
704.3270	18.6	20.75	34.77	Pass
708.0192	16.57	18.72	34.77	Pass

16QAM

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
700.7308	21.01	23.16	34.77	Pass
704.4230	18.48	20.63	34.77	Pass
707.9551	16.09	18.24	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.

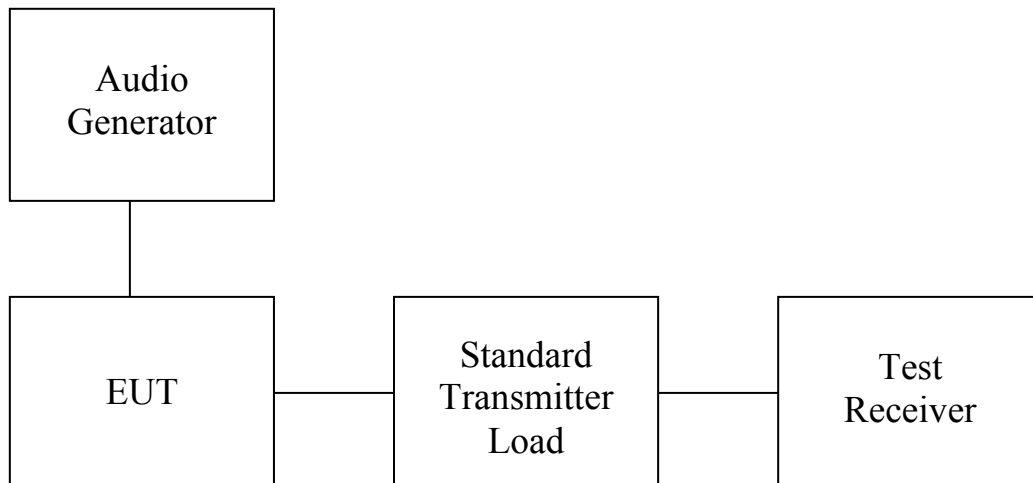
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4. Modulation Characteristics

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: W6M21808-18353-P-247

FCC ID: 2ARGFIOTA

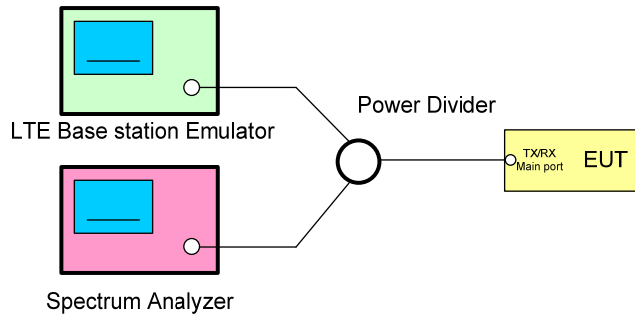
5. Peak-to-Average Ratio

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.

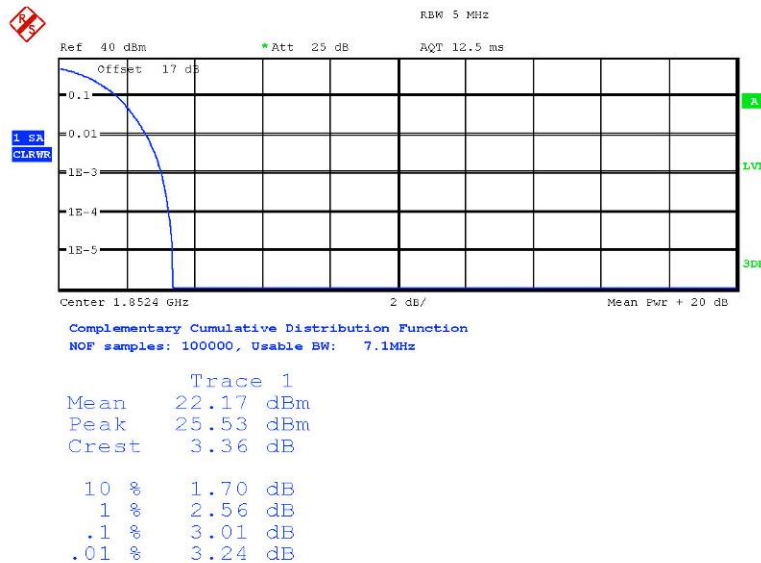
5.2 Test Set up



5.3 Test Results

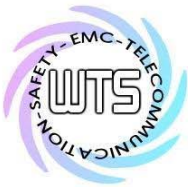
WCDMA

Band 2

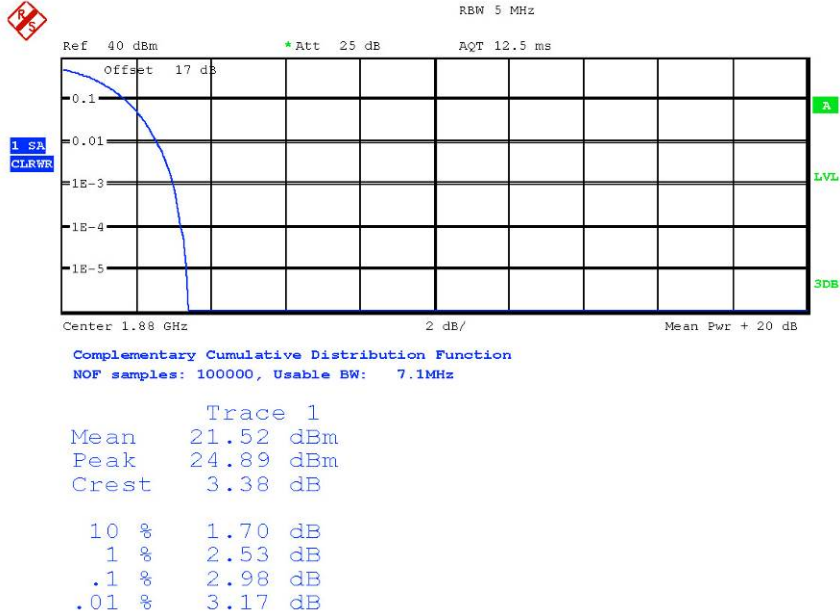


PEAK to AVERAGE RATIO BAND2_CH9262

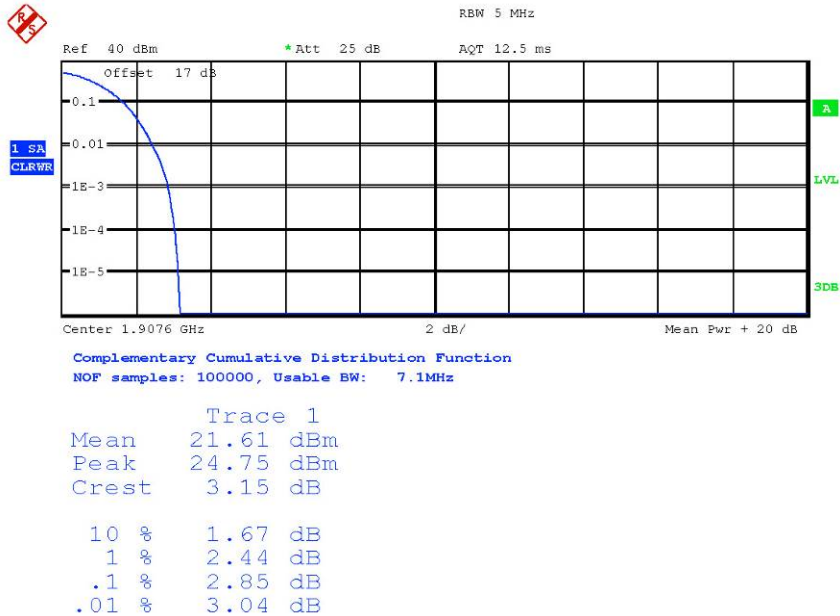
Date: 17.SEP.2018 18:58:35



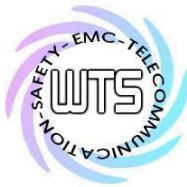
Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



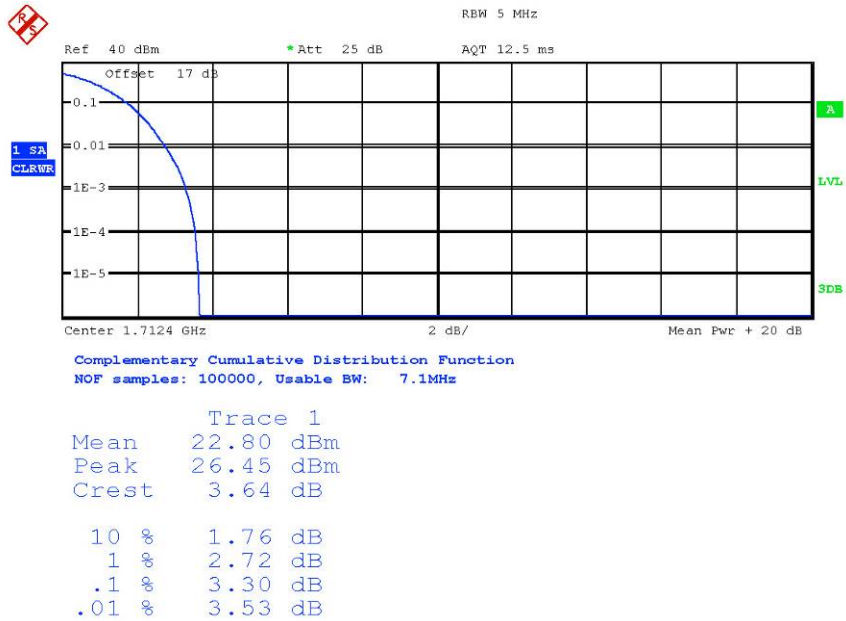
PEAK to AVERAGE RATIO BAND2_CH9400
 Date: 17.SEP.2018 18:59:04



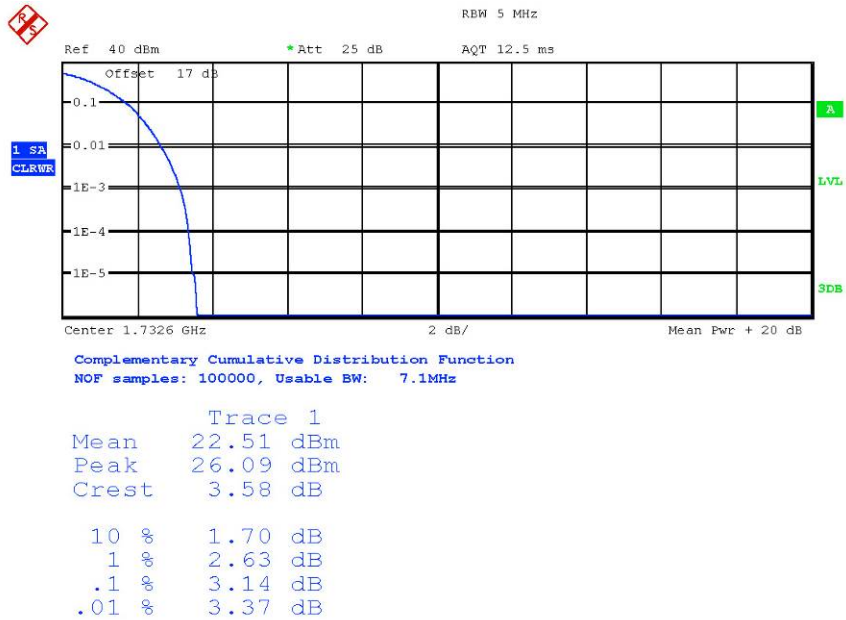
PEAK to AVERAGE RATIO BAND2_CH9538
 Date: 17.SEP.2018 18:59:43



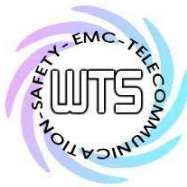
Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 Band 4



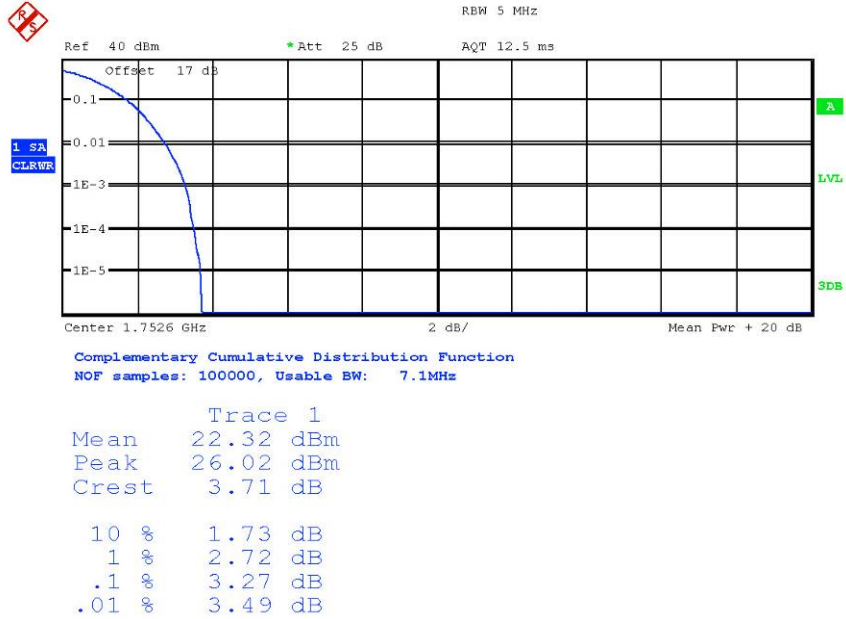
PEAK to AVERAGE RATIO BAND4_CH1312
 Date: 17.SEP.2018 18:57:48



PEAK to AVERAGE RATIO BAND4_CH1413
 Date: 17.SEP.2018 18:55:52

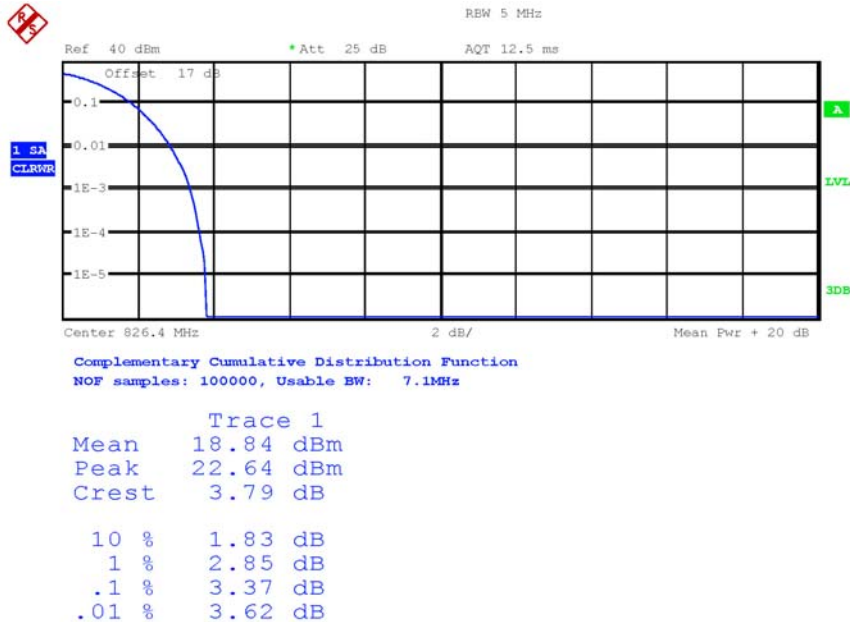


Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA

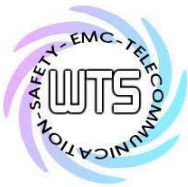


PEAK to AVERAGE RATIO BAND4_CH1513
 Date: 17.SEP.2018 18:54:54

Band 5

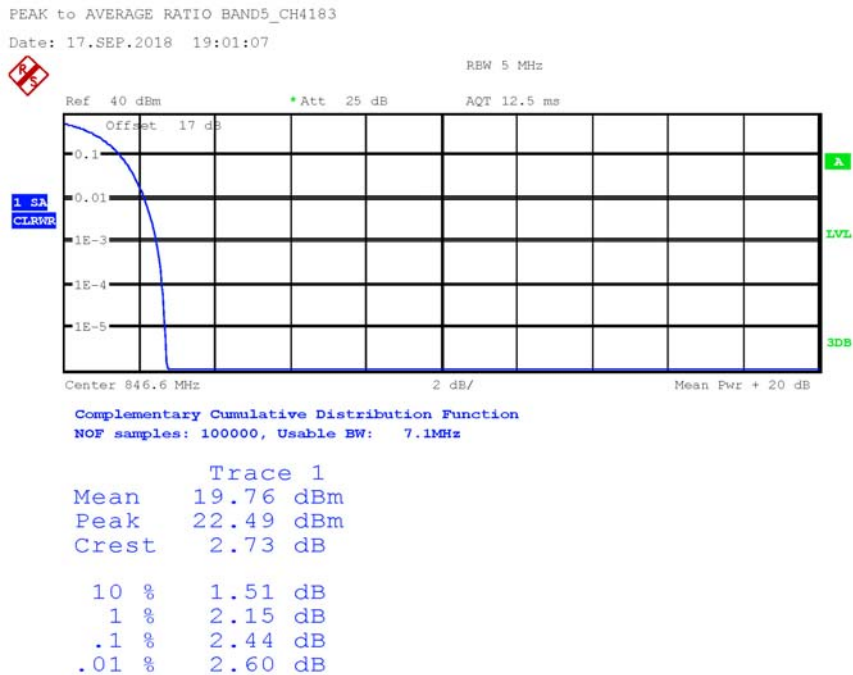
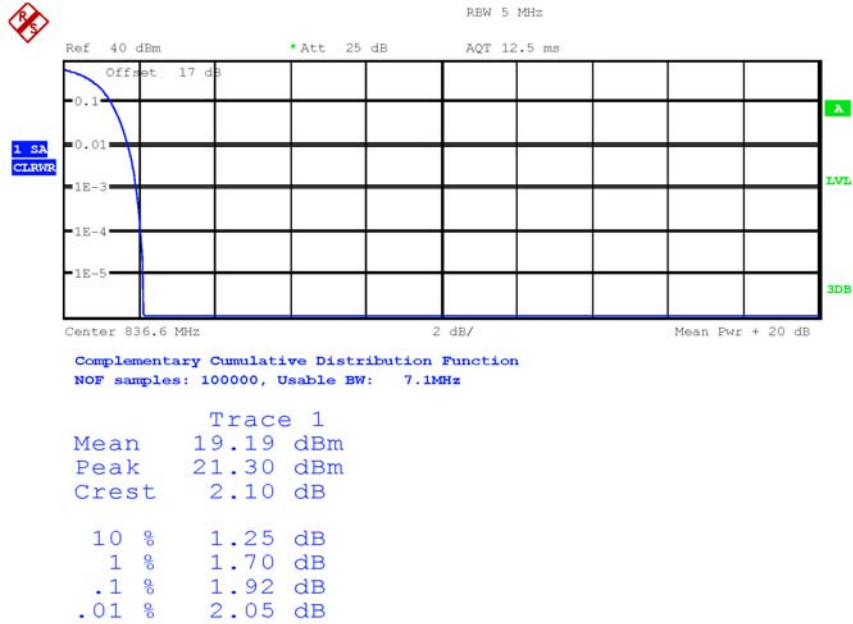


PEAK to AVERAGE RATIO BAND5_CH4132
 Date: 17.SEP.2018 19:00:26

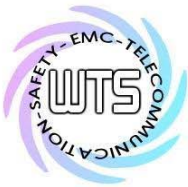


Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



PEAK to AVERAGE RATIO BAND5_CH4233
 Date: 17.SEP.2018 19:01:37



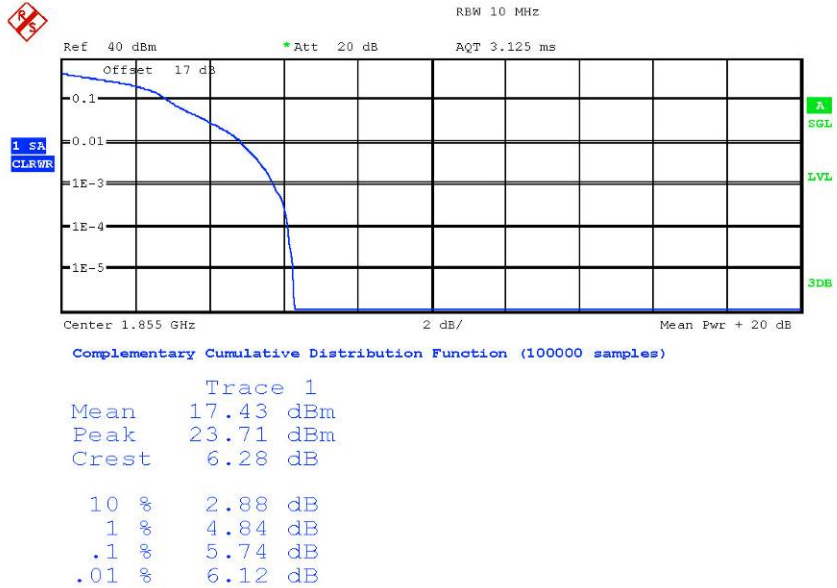
Report Number: W6M21808-18353-P-247

FCC ID: 2ARGFIOTA

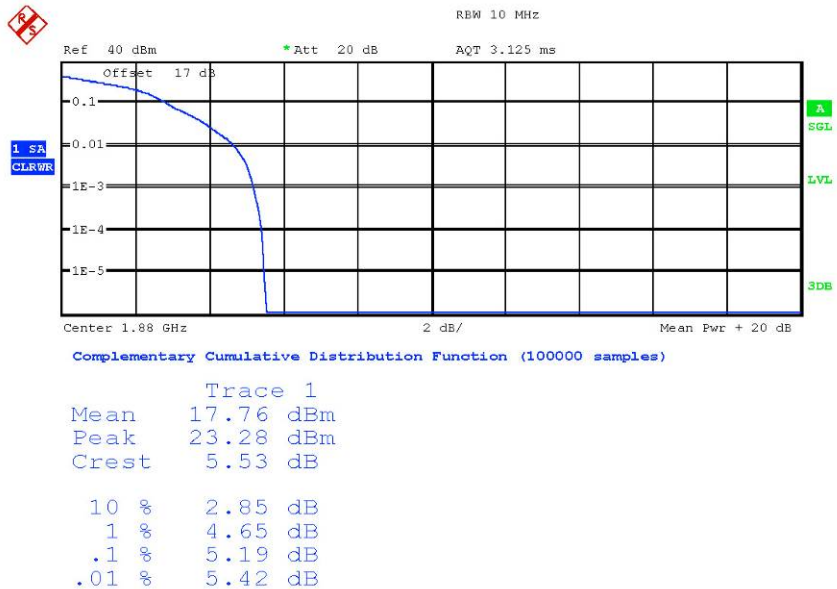
LTE

Band 2

16QAM



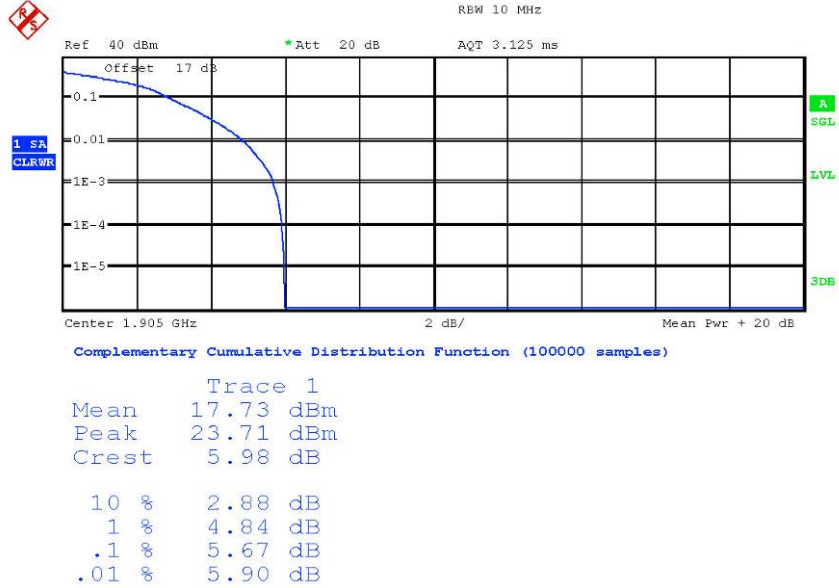
Peak to Average Ratio Band2 16QAM 1RB CH18650
Date: 17.SEP.2018 11:01:12



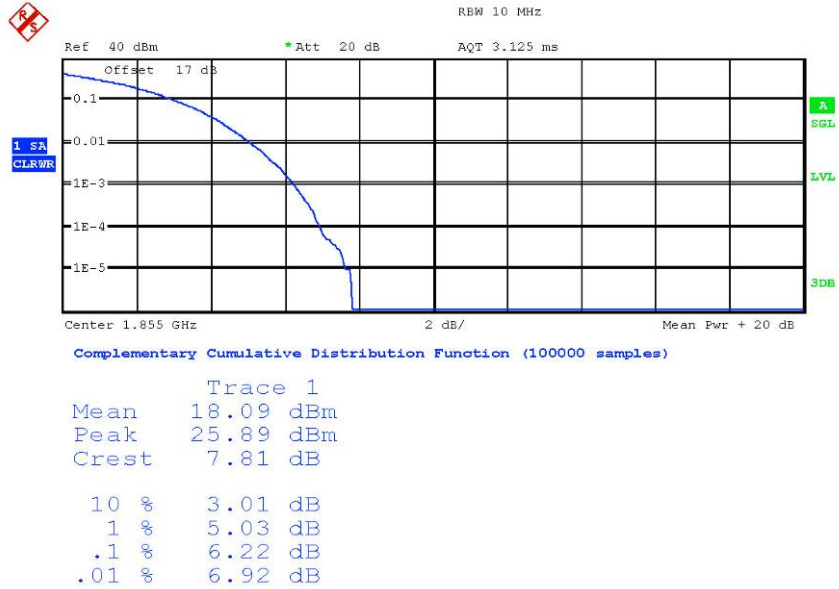
Peak to Average Ratio Band2 16QAM 1RB CH18900
Date: 17.SEP.2018 11:17:57



Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



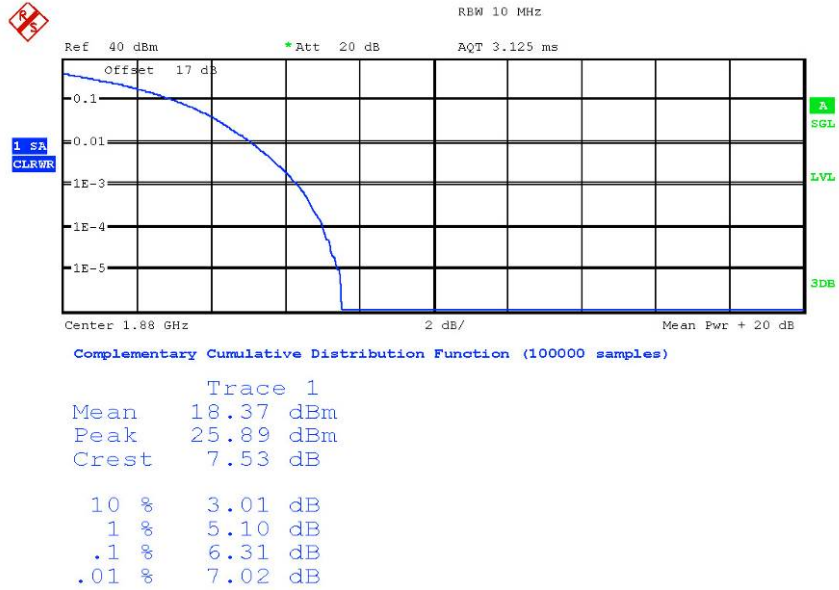
Peak to Average Ratio Band2 16QAM 1RB CH19150
 Date: 17.SEP.2018 11:18:56



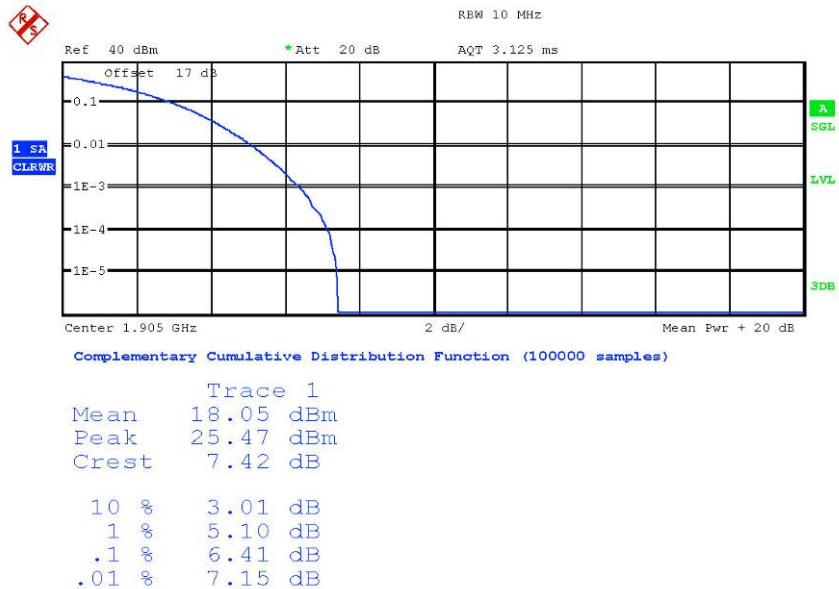
Peak to Average Ratio Band2 16QAM FRB CH18650
 Date: 17.SEP.2018 11:08:26



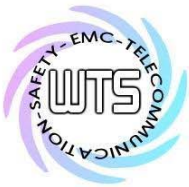
Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



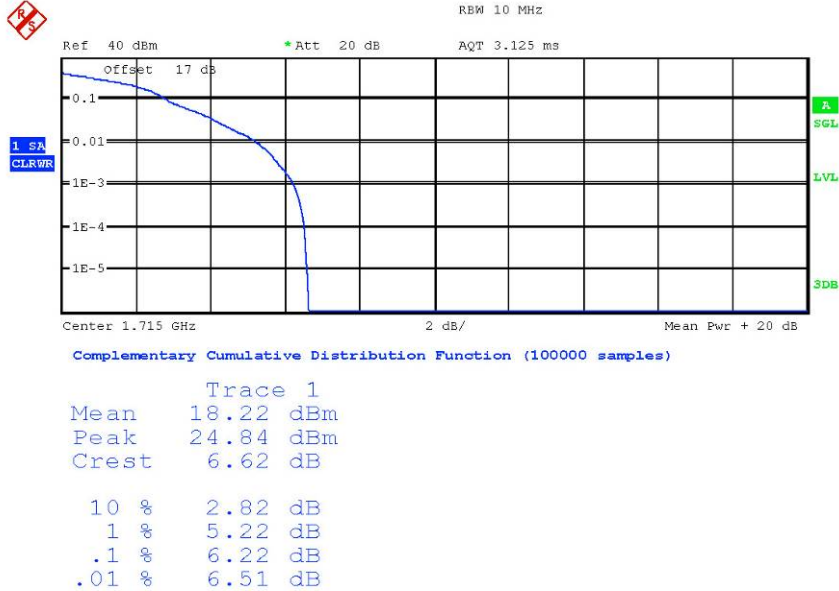
Peak to Average Ratio Band2 16QAM FRB CH18900
 Date: 17.SEP.2018 11:17:31



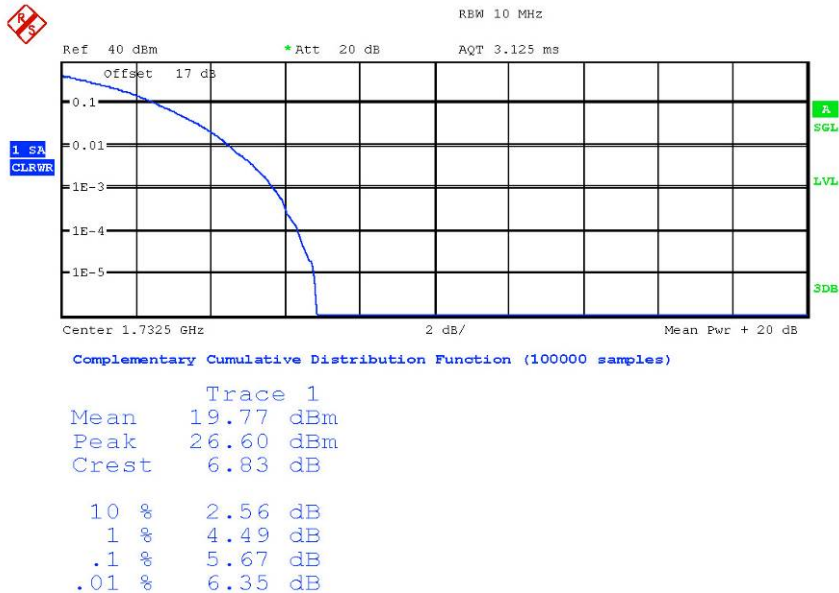
Peak to Average Ratio Band2 16QAM FRB CH19150
 Date: 17.SEP.2018 11:19:27



Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 Band 4
 16QAM



Peak to Average Ratio Band4 16QAM 1RB CH20000
 Date: 17.SEP.2018 11:43:22

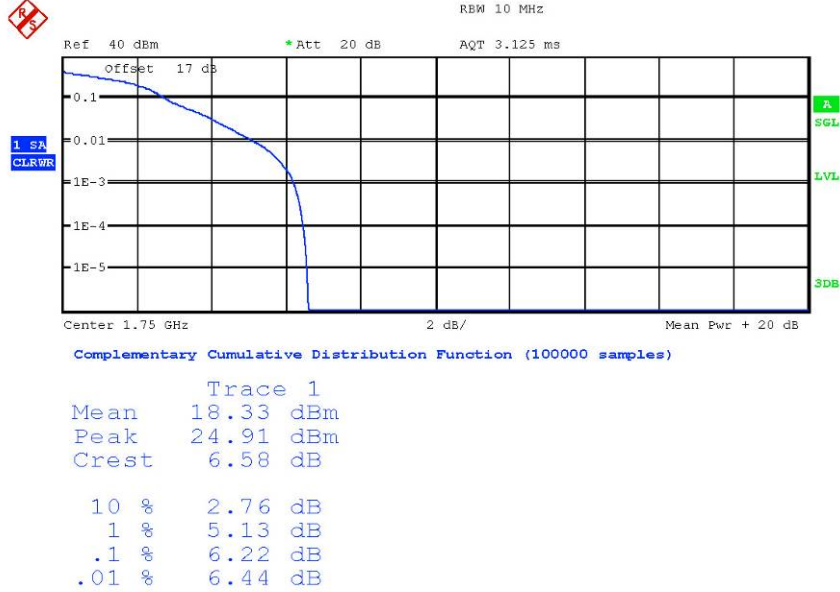


Peak to Average Ratio Band4 16QAM 1RB CH20175
 Date: 17.SEP.2018 13:30:12

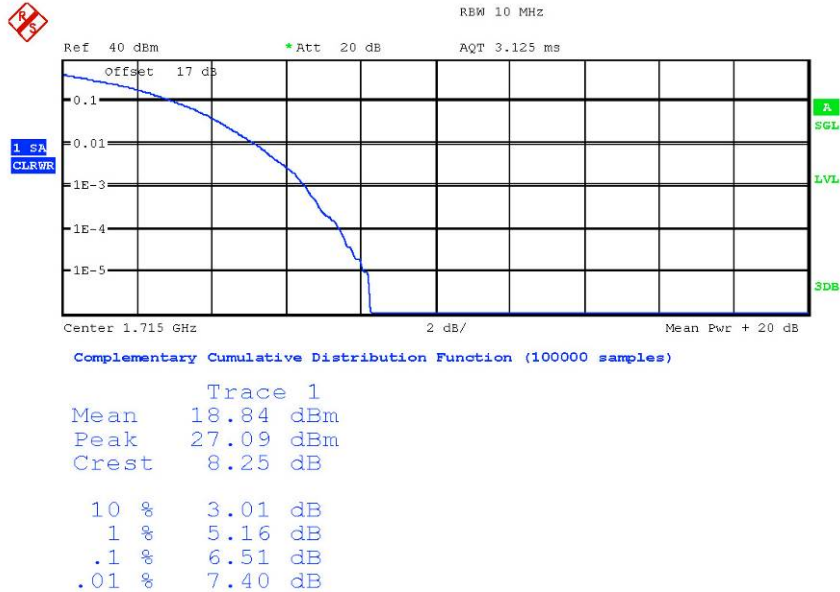


Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



Peak to Average Ratio Band4 16QAM 1RB CH20350
 Date: 17.SEP.2018 13:20:17

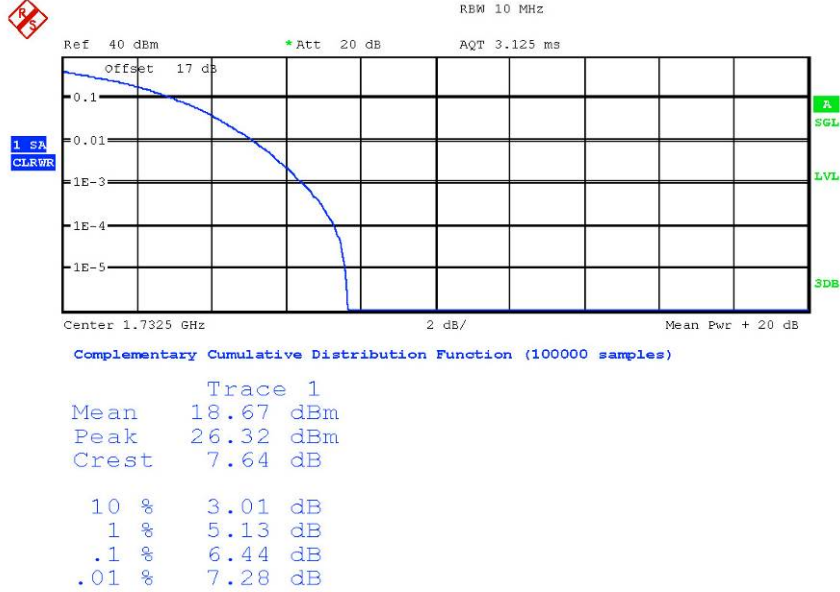


Peak to Average Ratio Band4 16QAM FRB CH20000
 Date: 17.SEP.2018 11:43:54

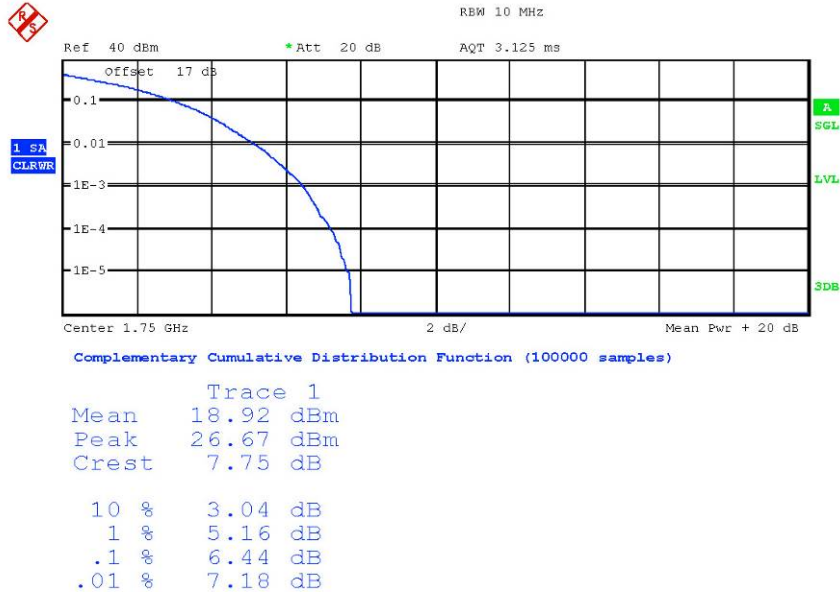


Worldwide Testing Services(Taiwan) Co., Ltd.

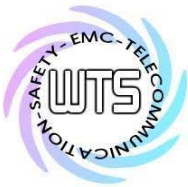
Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



Peak to Average Ratio Band4 16QAM FRB CH20175
 Date: 17.SEP.2018 11:44:27

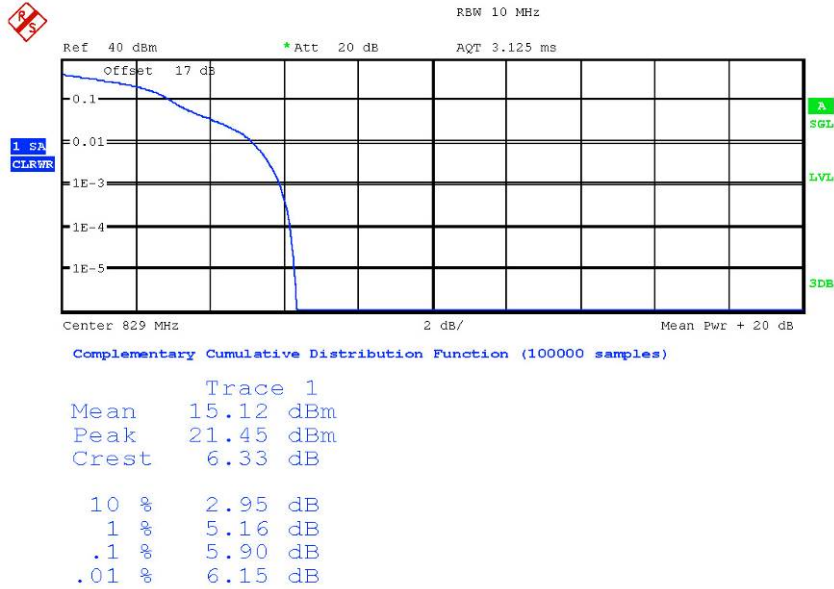


Peak to Average Ratio Band4 16QAM FRB CH20350
 Date: 17.SEP.2018 13:19:24

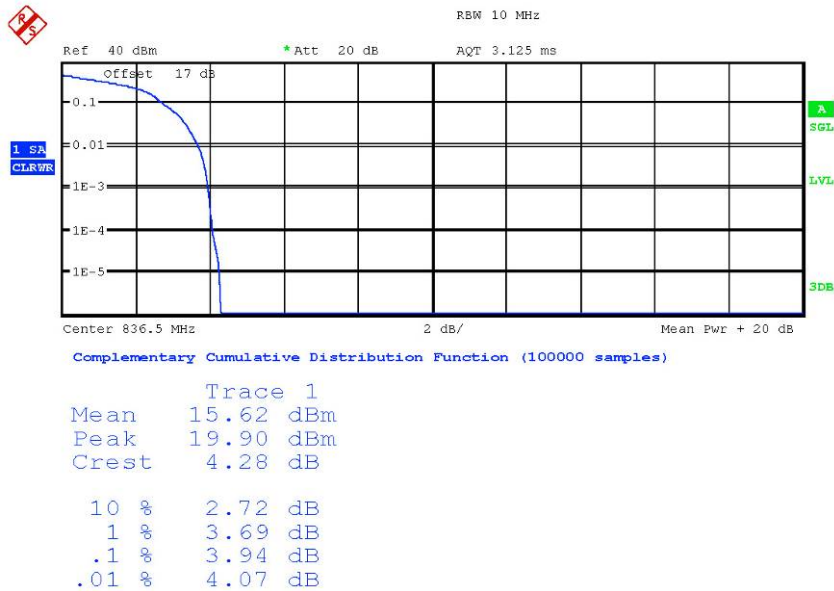


Worldwide Testing Services(Taiwan) Co., Ltd.

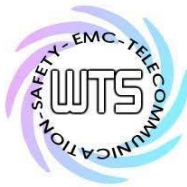
Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 Band 5
 16QAM



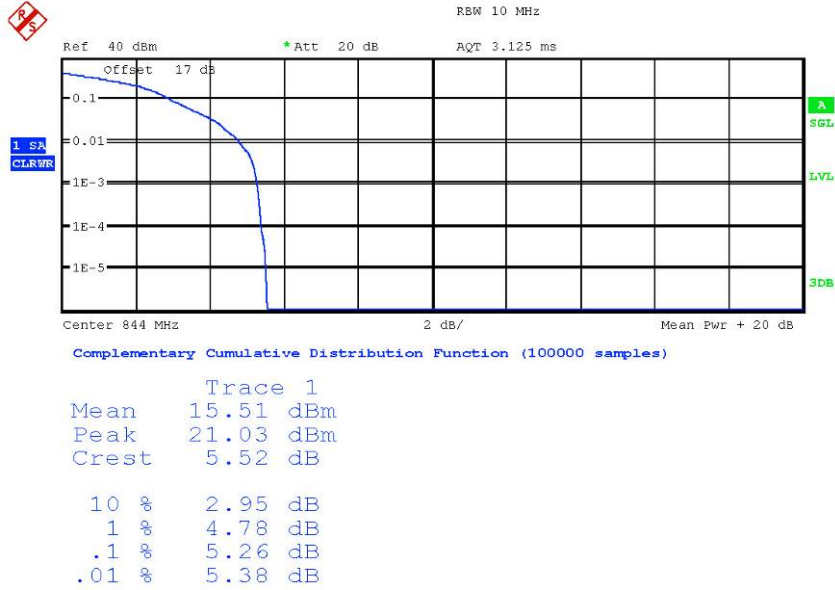
Peak to Average Ratio Band5 16QAM 1RB CH20450
 Date: 17.SEP.2018 11:34:30



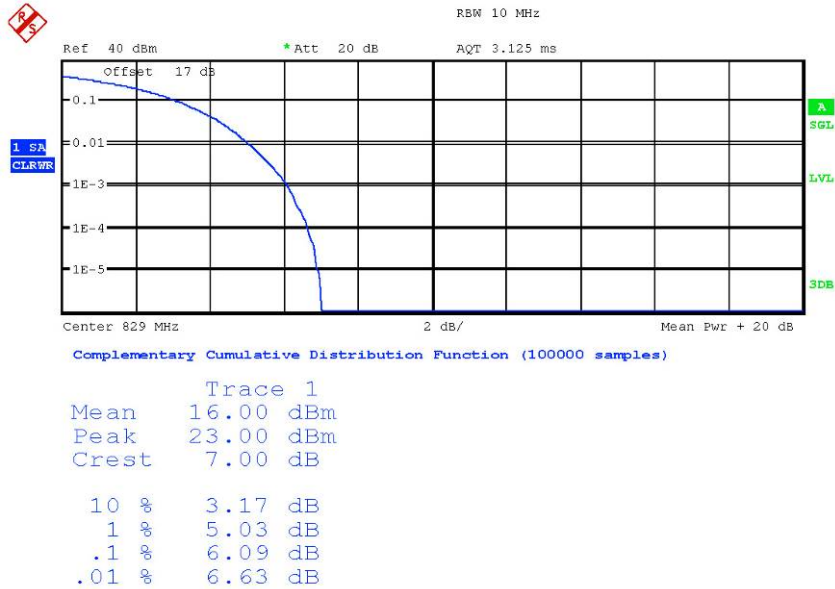
Peak to Average Ratio Band5 16QAM 1RB CH20525
 Date: 17.SEP.2018 13:33:43



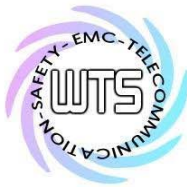
Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



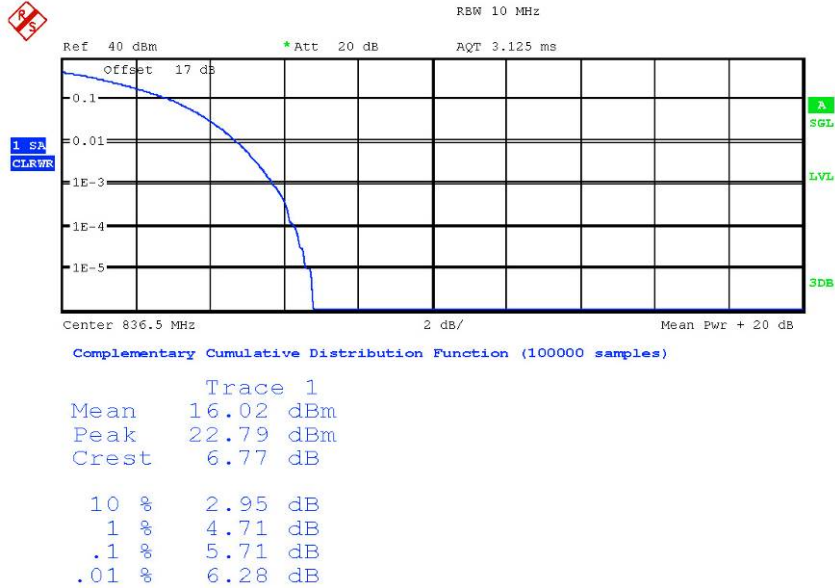
Peak to Average Ratio Band5 16QAM 1RB CH20600
 Date: 17.SEP.2018 11:41:36



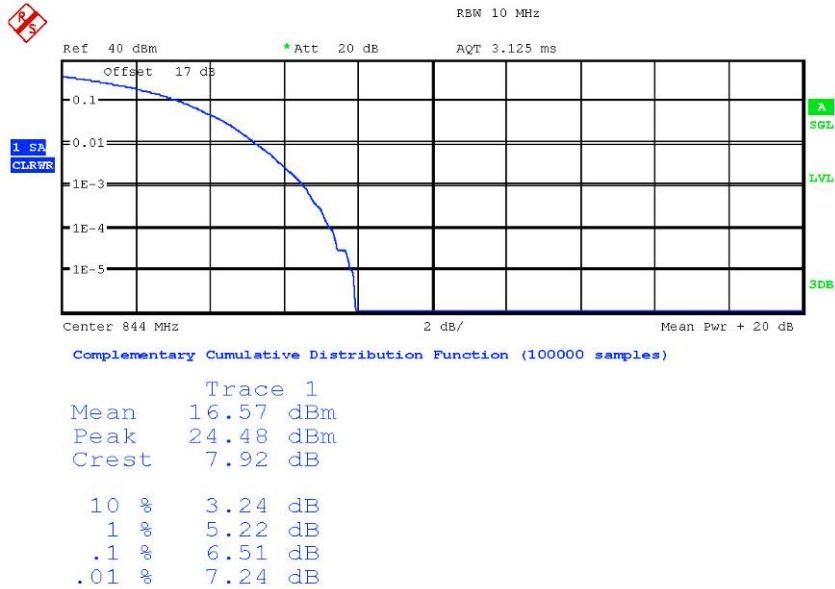
Peak to Average Ratio Band5 16QAM FRB CH20450
 Date: 17.SEP.2018 11:33:50



Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



Peak to Average Ratio Band5 16QAM FRB CH20525
 Date: 17.SEP.2018 11:35:45

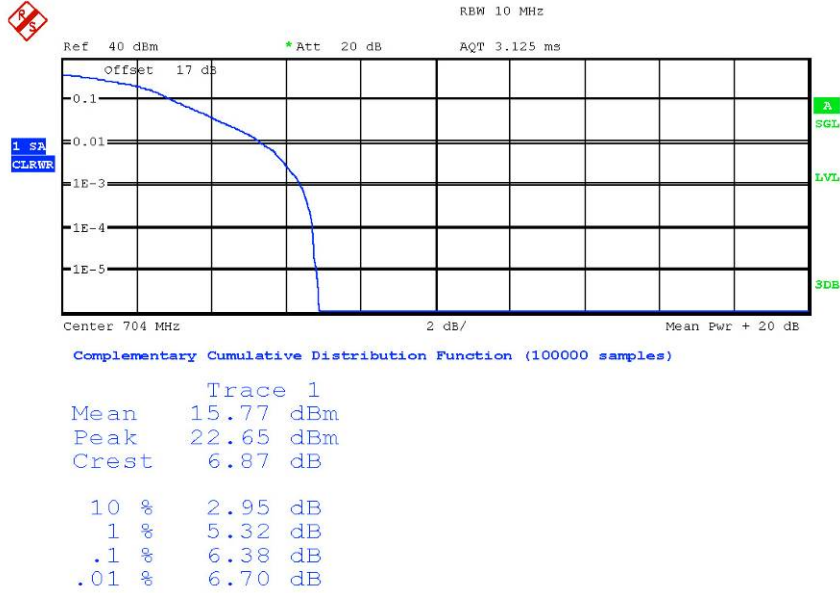


Peak to Average Ratio Band5 16QAM FRB CH20600
 Date: 17.SEP.2018 11:41:06

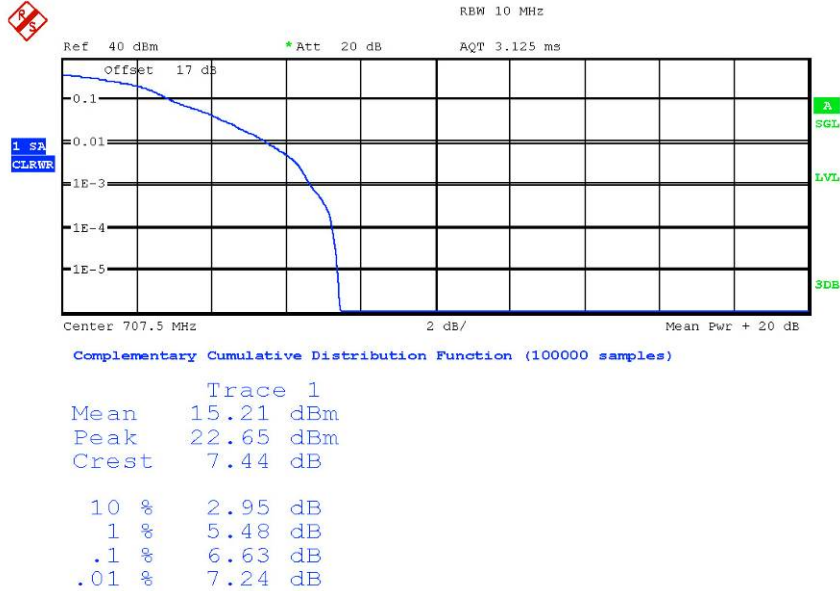


Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 Band 12
 16QAM



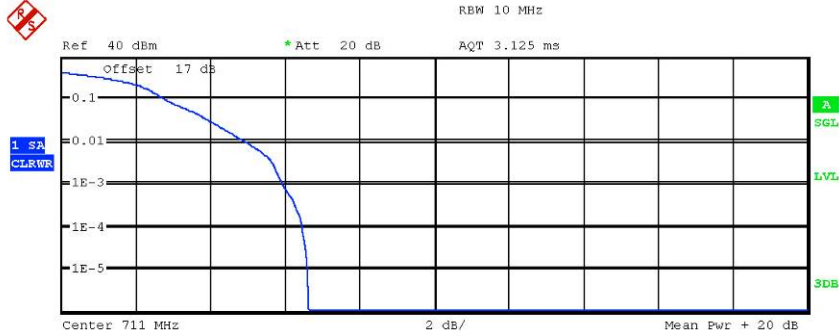
Peak to Average Ratio Band12 16QAM 1RB CH23060
 Date: 17.SEP.2018 13:21:48



Peak to Average Ratio Band12 16QAM 1RB CH23095
 Date: 17.SEP.2018 13:29:13



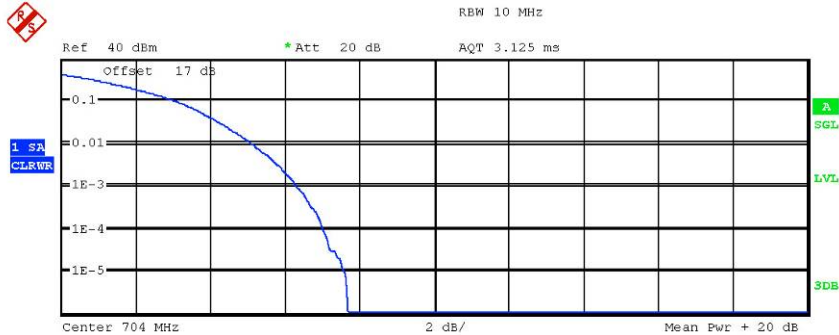
Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



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

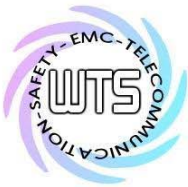
Peak to Average Ratio Band12 16QAM 1RB CH23130
 Date: 17.SEP.2018 13:23:56



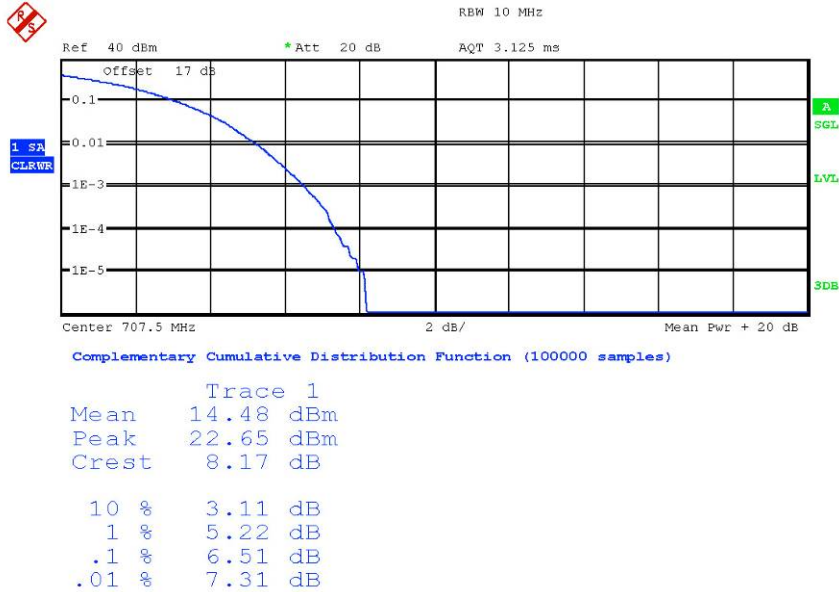
Complementary Cumulative Distribution Function (100000 samples)

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

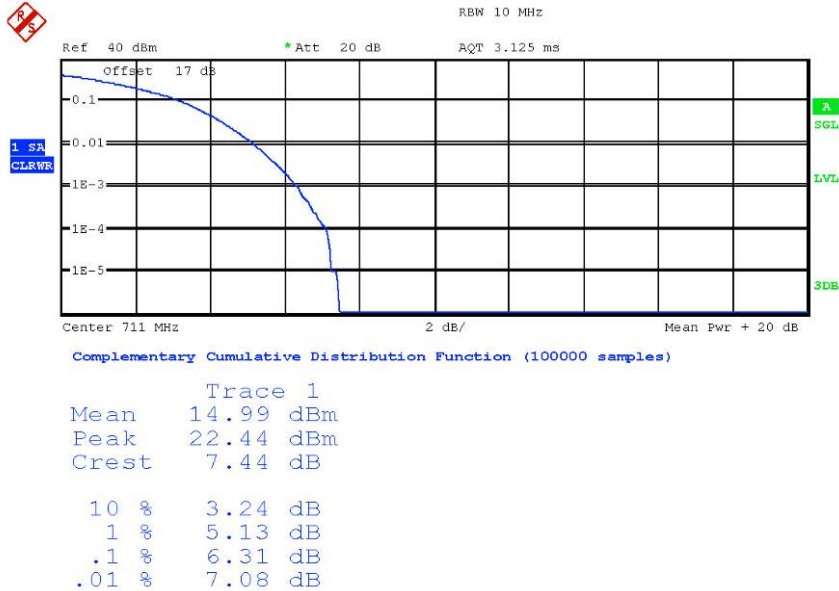
Peak to Average Ratio Band12 16QAM FRB CH23060
 Date: 17.SEP.2018 13:22:19



Report Number: W6M21808-18353-P-247
FCC ID: 2ARGFIOTA



Peak to Average Ratio Band12 16QAM FRB CH23095
Date: 17.SEP.2018 13:22:59



Peak to Average Ratio Band12 16QAM FRB CH23130
Date: 17.SEP.2018 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: W6M21808-18353-P-247

FCC ID: 2ARGFIOTA

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.

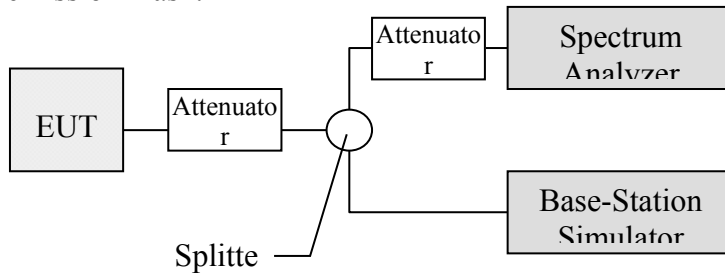
The 26 dB occupied bandwidth is the width of a frequency band such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal 26 dB.

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.



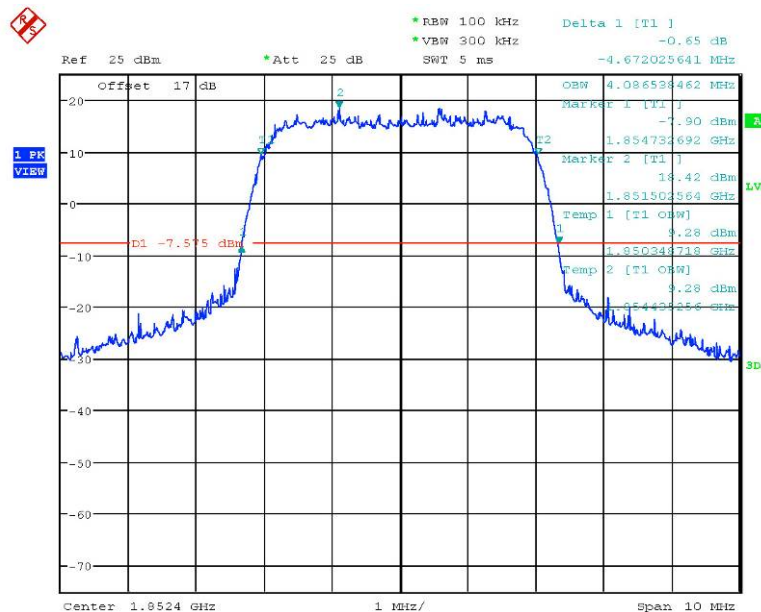
6.2 Test Results

Occupied Channel Bandwidth

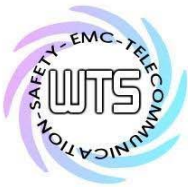
WCDMA

Band 2

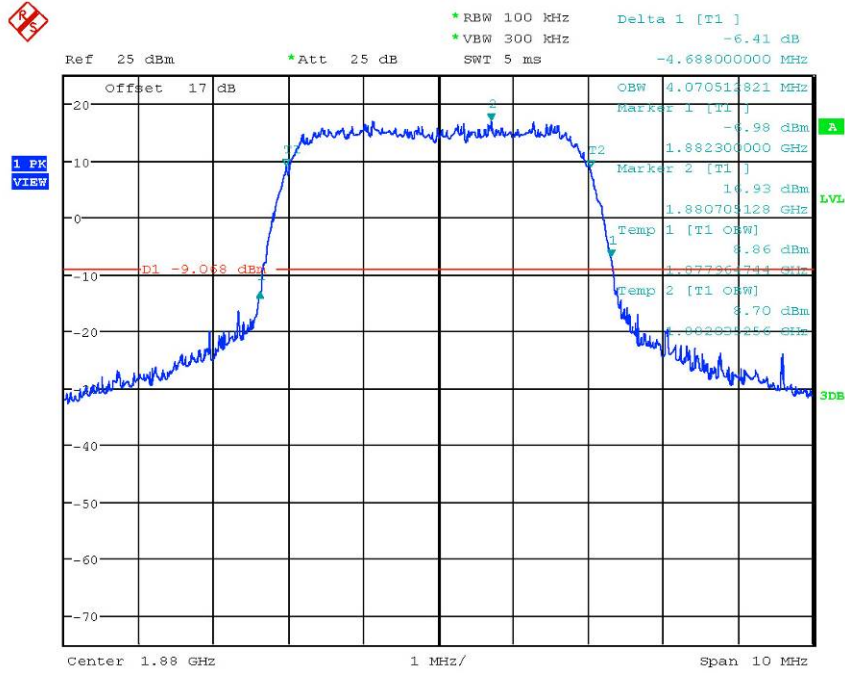
5 MHz



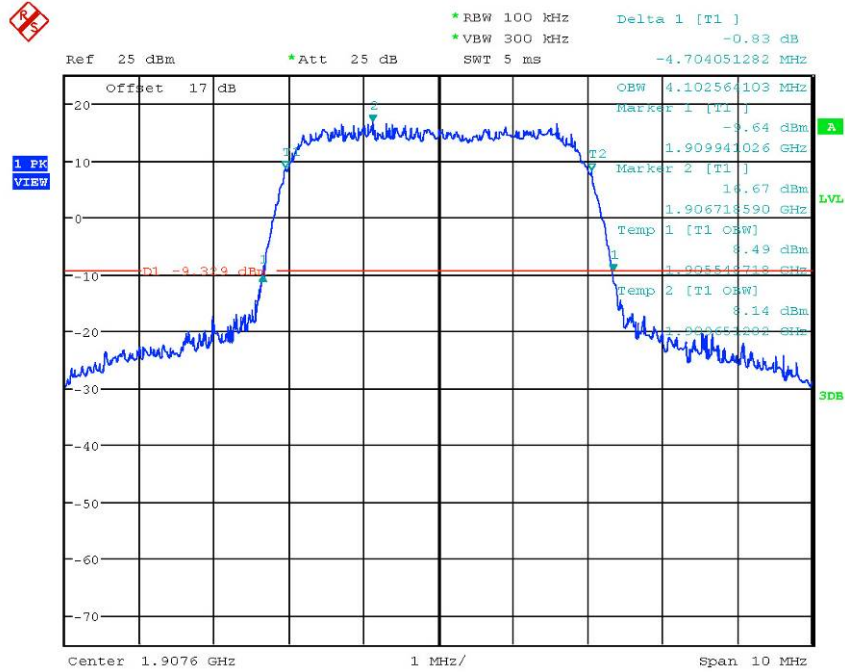
99% OBW & 26DB BW BAND2_5MHz_CH9262
Date: 17.SEP.2018 18:31:43



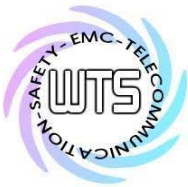
Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



99% OBW &26DB BW BAND2_5MHz_CH9400
 Date: 17.SEP.2018 18:32:21

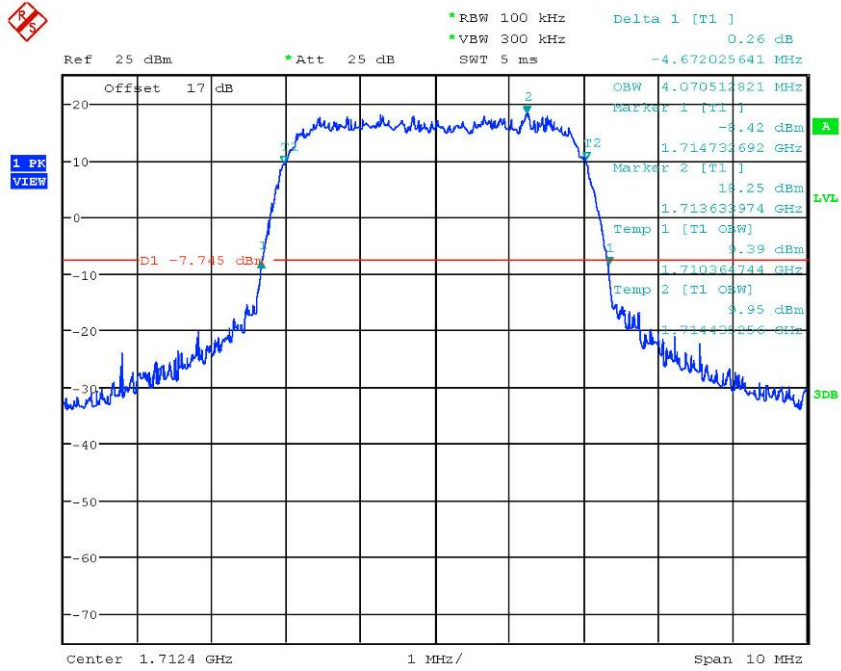


99% OBW &26DB BW BAND2_5MHz_CH9538
 Date: 17.SEP.2018 18:33:19

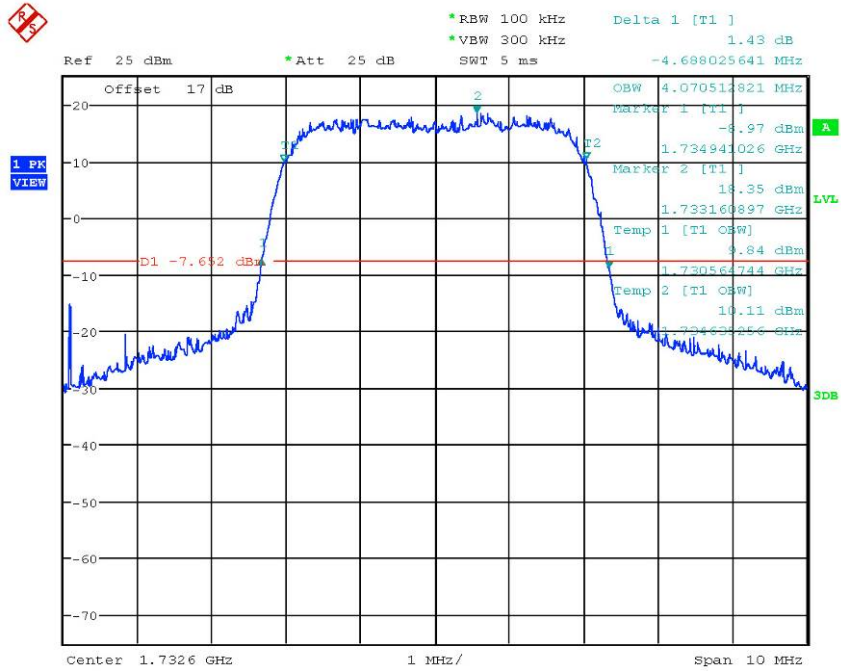


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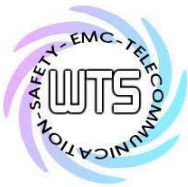
Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 Band 4
 5 MHz



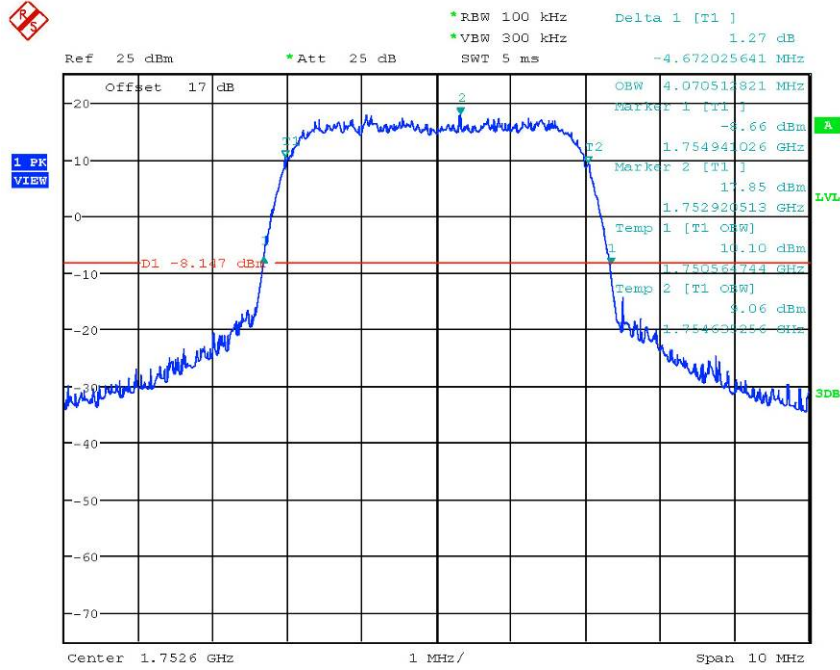
99% OBW & 26DB BW BAND4 _5MHz_CH1312
 Date: 17.SEP.2018 18:41:28



99% OBW & 26DB BW BAND4 _5MHz_CH1413
 Date: 17.SEP.2018 18:47:32

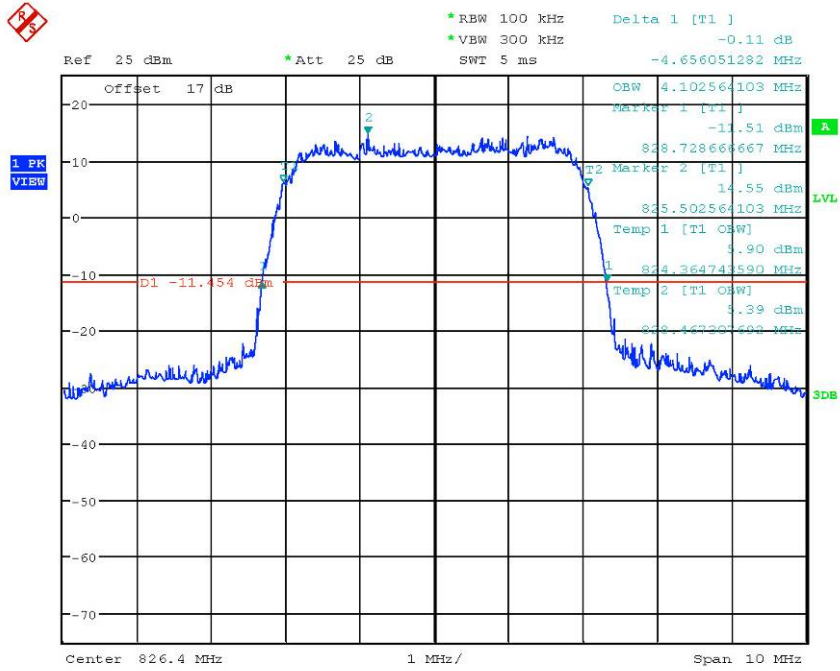


Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA

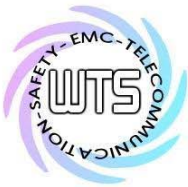


99% OBW & 26DB BW BAND4_5MHz_CH1513
 Date: 17.SEP.2018 18:48:37

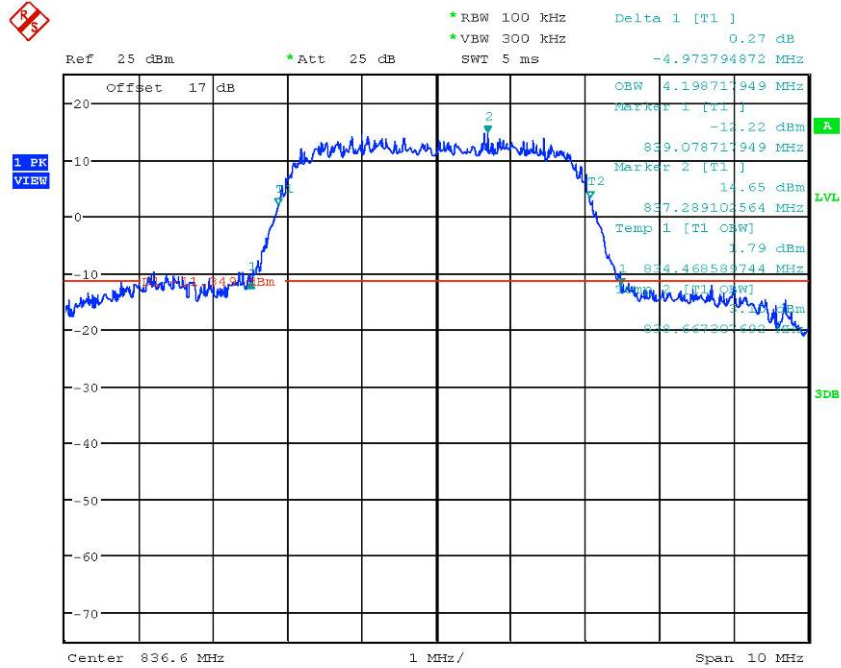
Band 5
 5 MHz



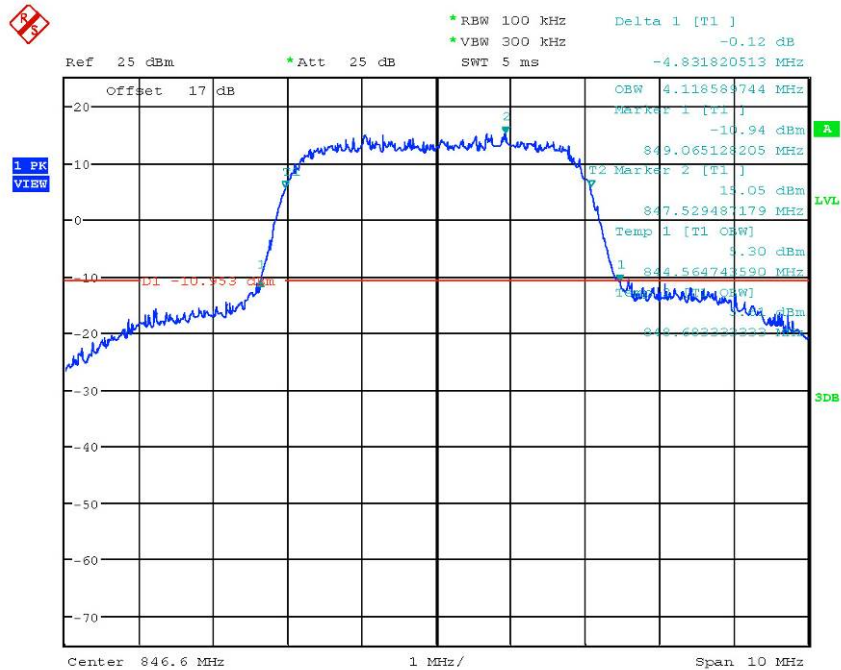
99% OBW & 26DB BW BAND5_5MHz_CH4132
 Date: 17.SEP.2018 18:36:43



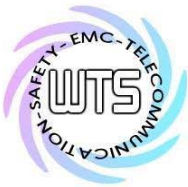
Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA



99% OBW &26DB BW BAND5 _5MHz_CH4183
 Date: 17.SEP.2018 18:38:46



99% OBW &26DB BW BAND5 _5MHz_CH4233
 Date: 17.SEP.2018 18:39:40



Report Number: W6M21808-18353-P-247

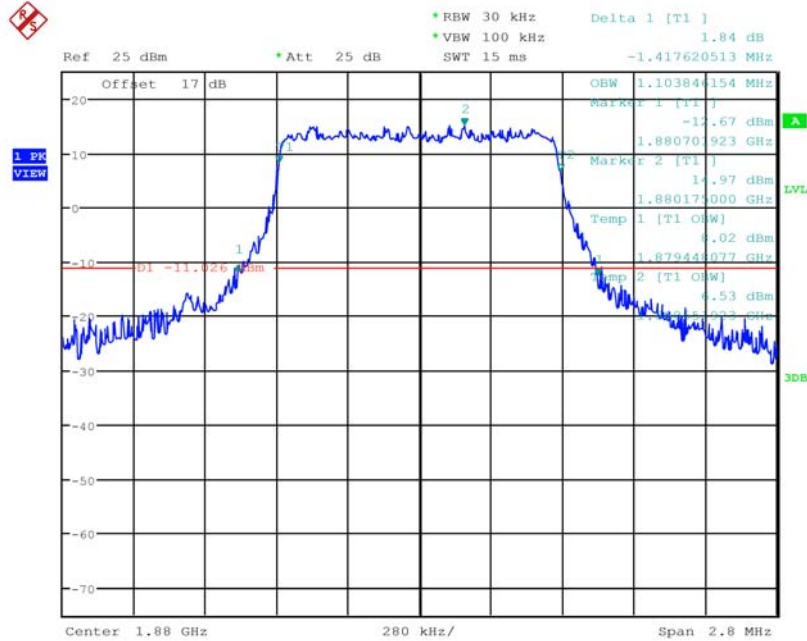
FCC ID: 2ARGFIOTA

26dB Channel Bandwidth

LTE

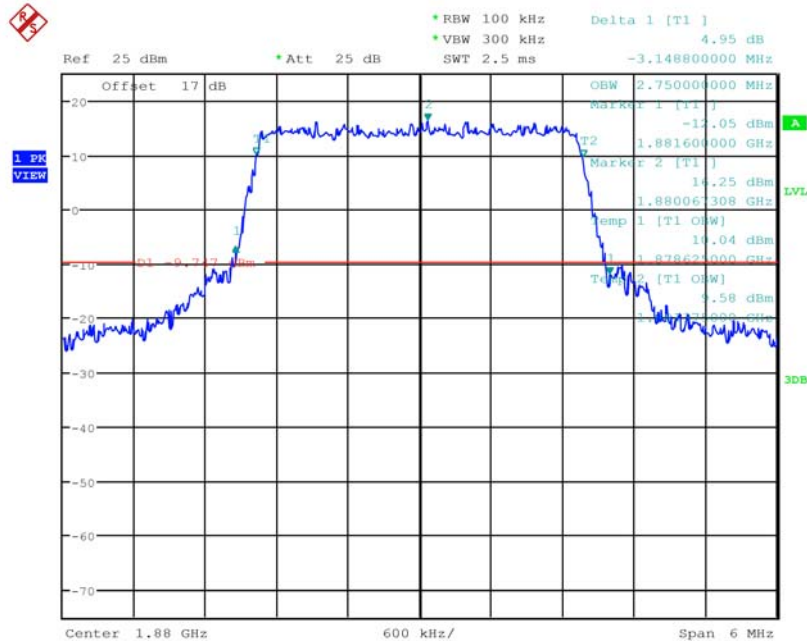
Band 2

1.4 MHz QPSK

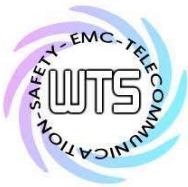


99% OBW &26DB BW BAND2_QPSK_1 4MHz_CH18900
Date: 17.SEP.2018 16:56:48

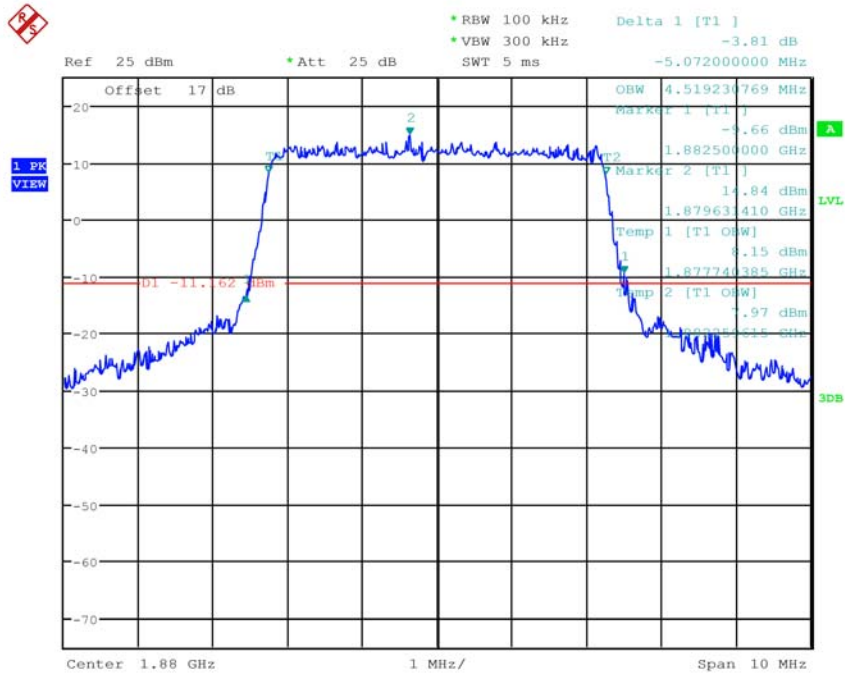
3 MHz QPSK



99% OBW &26DB BW BAND2_QPSK_3MHz_CH18900
Date: 17.SEP.2018 16:20:15

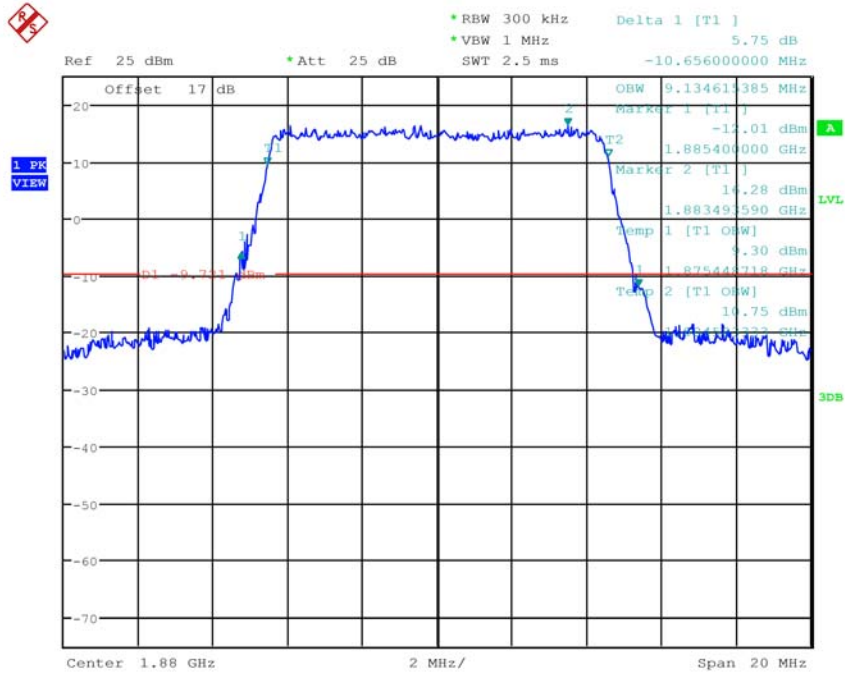


Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 5 MHz QPSK

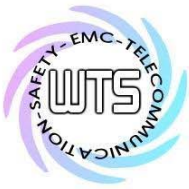


99% OBW &26DB BW BAND2_QPSK_5MHz_CH18900
 Date: 17.SEP.2018 16:33:38

10 MHz QPSK

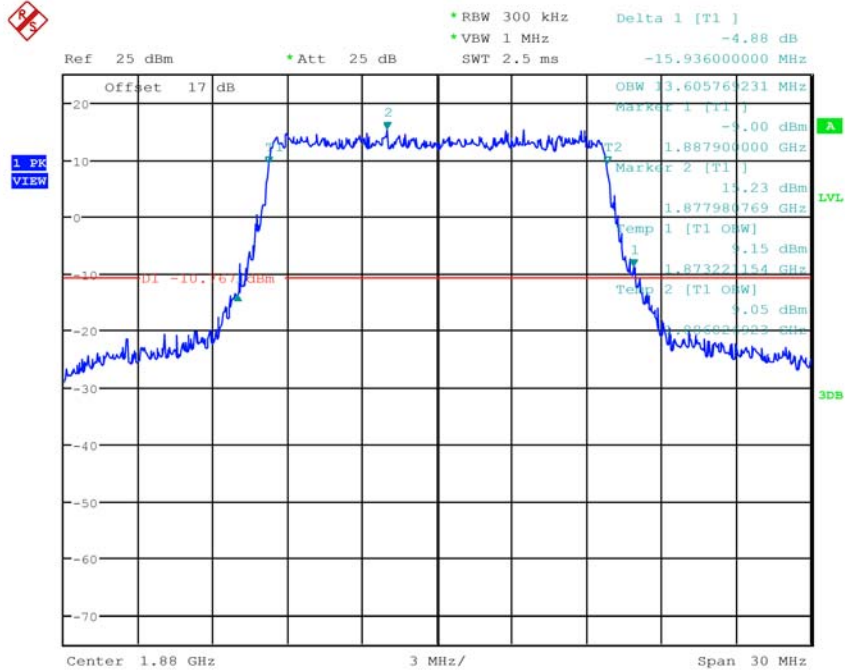


99% OBW &26DB BW BAND2_QPSK_10MHz_CH18900
 Date: 17.SEP.2018 16:34:11



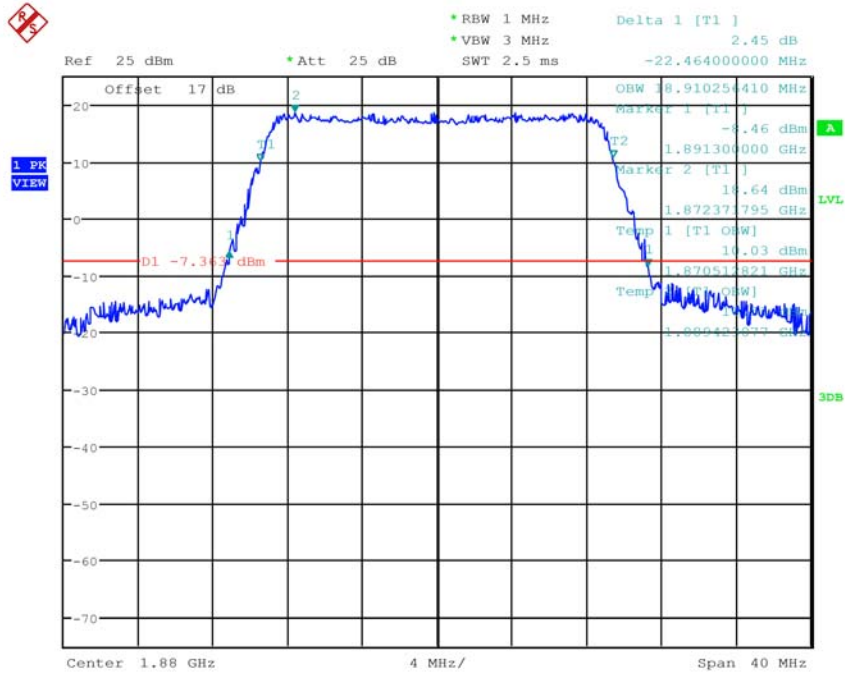
Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 15 MHz QPSK

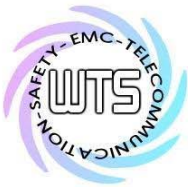


99% OBW &26DB BW BAND2_QPSK_15MHz_CH18900
 Date: 17.SEP.2018 16:36:28

20 MHz QPSK



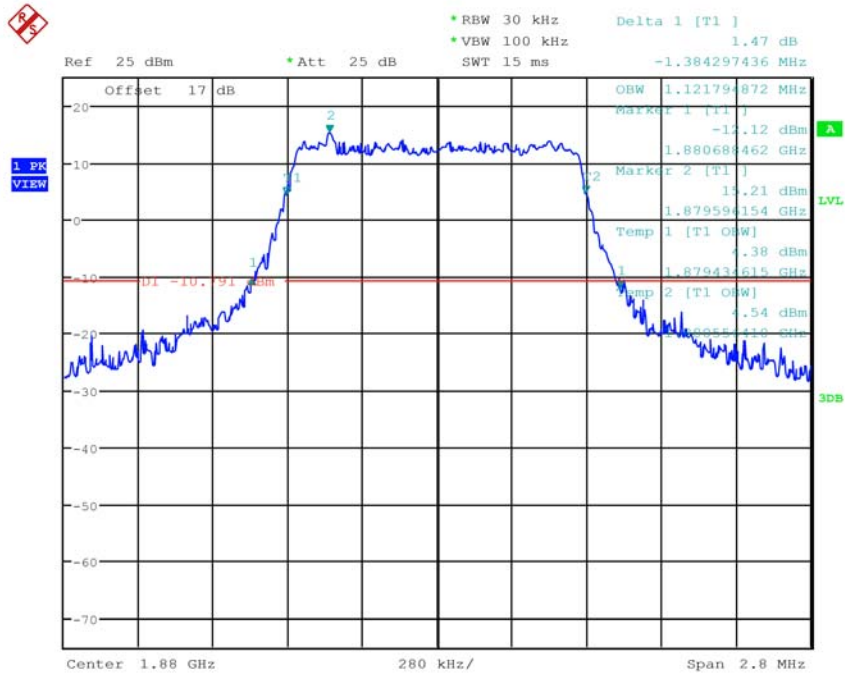
99% OBW &26DB BW BAND2_QPSK_20MHz_CH18900
 Date: 17.SEP.2018 16:37:34



Report Number: W6M21808-18353-P-247

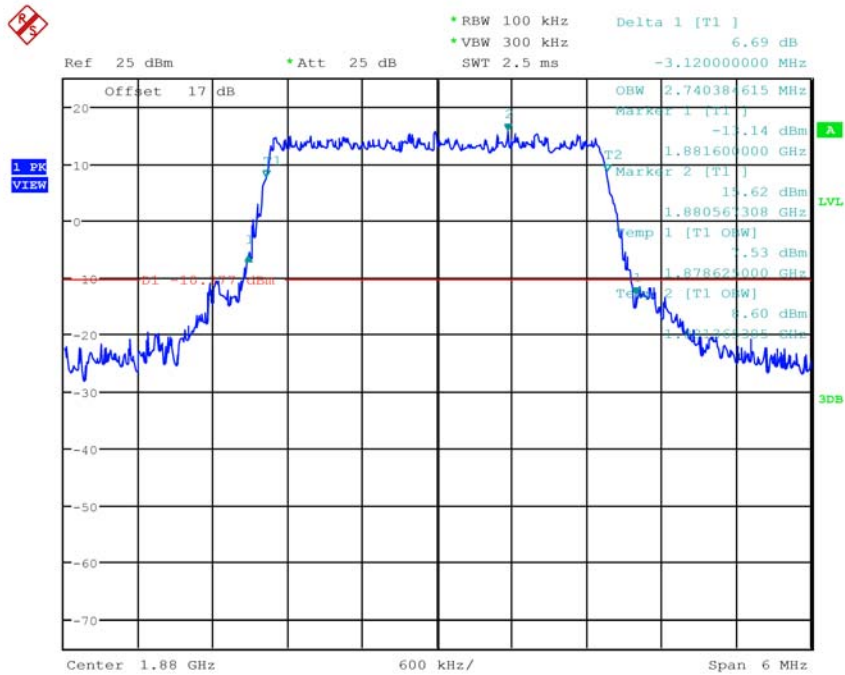
FCC ID: 2ARGFIOTA

1.4 MHz 16QAM

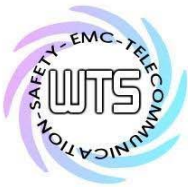


99% OBW &26DB BW BAND2_16QAM_1 4MHz_CH18900
Date: 17.SEP.2018 16:31:32

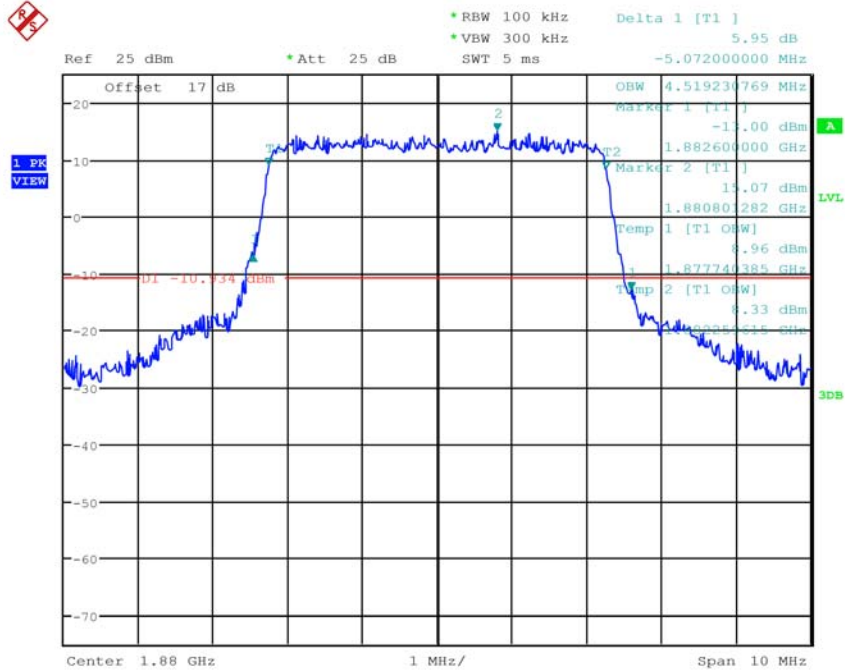
3 MHz 16QAM



99% OBW &26DB BW BAND2_16QAM_3MHz_CH18900
Date: 17.SEP.2018 16:35:39

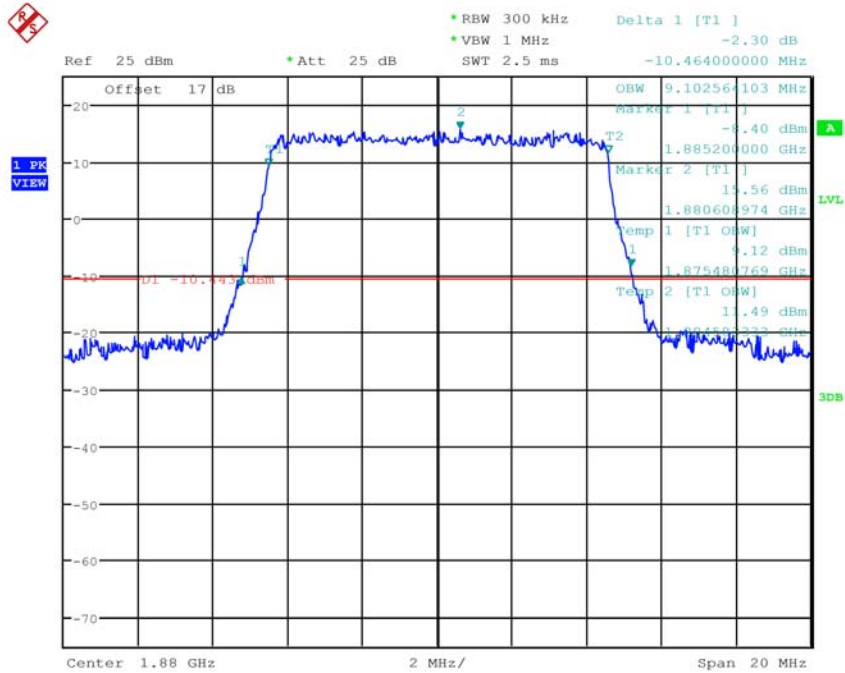


Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 5 MHz 16QAM

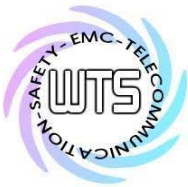


99% OBW &26DB BW BAND2_16QAM_5MHz_CH18900
 Date: 17.SEP.2018 16:33:11

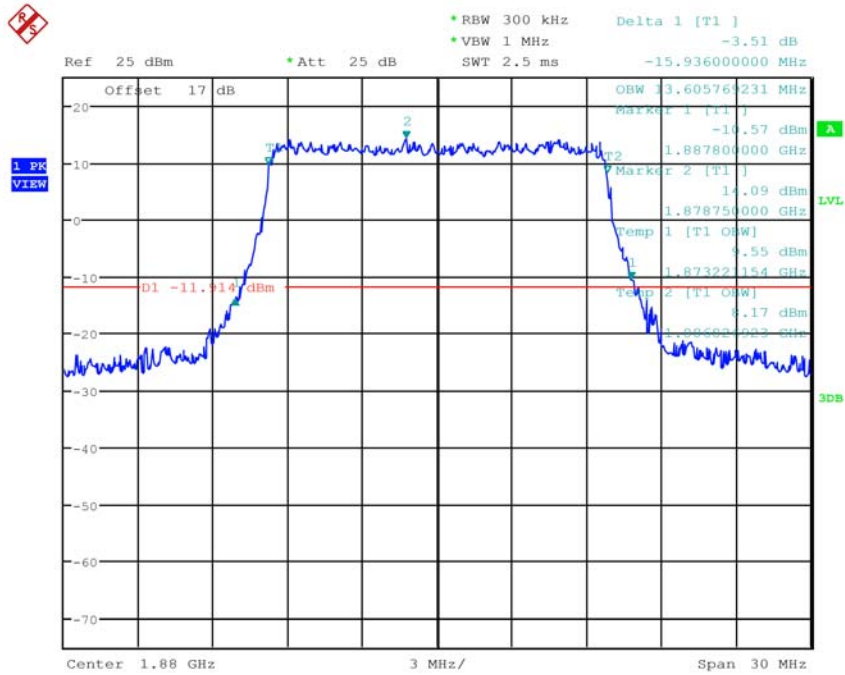
10 MHz 16QAM



99% OBW &26DB BW BAND2_16QAM_10MHz_CH18900
 Date: 17.SEP.2018 16:34:39

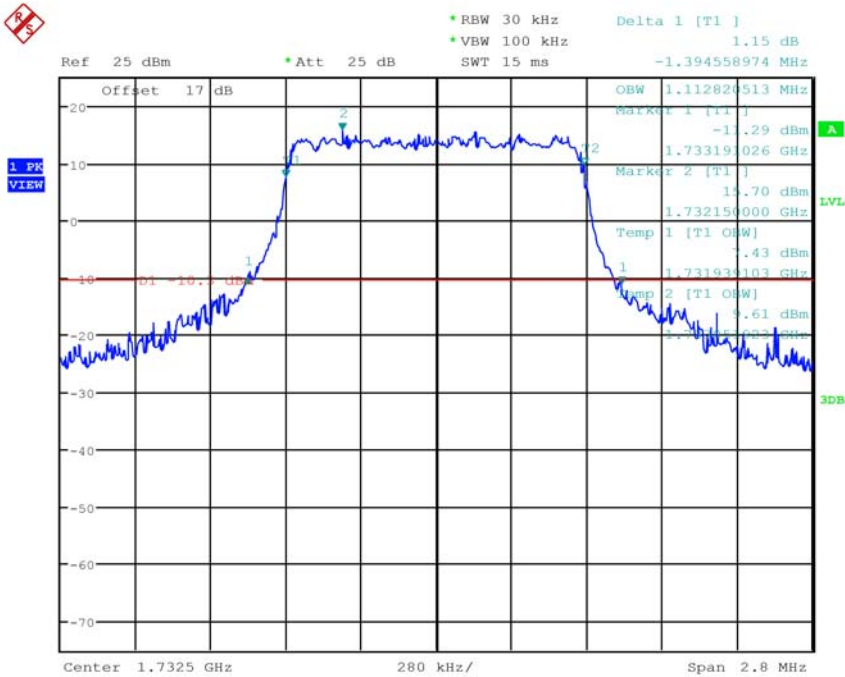


Report Number: W6M21808-18353-P-247
FCC ID: 2ARGFIOTA
15 MHz 16QAM

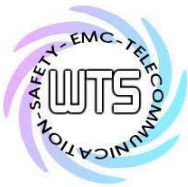


99% OBW &26DB BW BAND2_16QAM_15MHz_CH18900
Date: 17.SEP.2018 16:36:56

Band 4
1.4 MHz QPSK

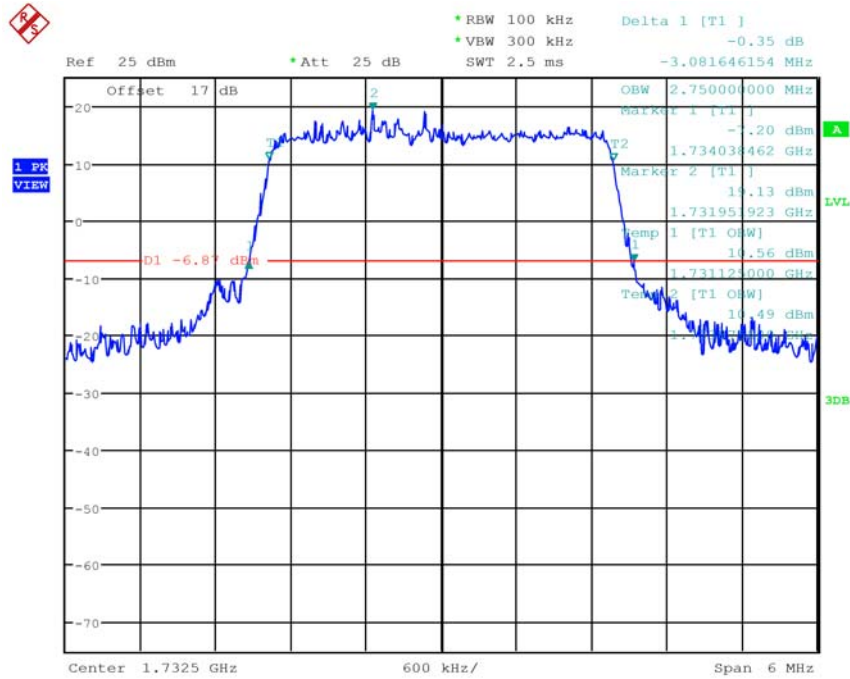


99% OBW &26DB BW BAND4_QPSK_1 4MHz_CH20175
Date: 17.SEP.2018 16:39:55



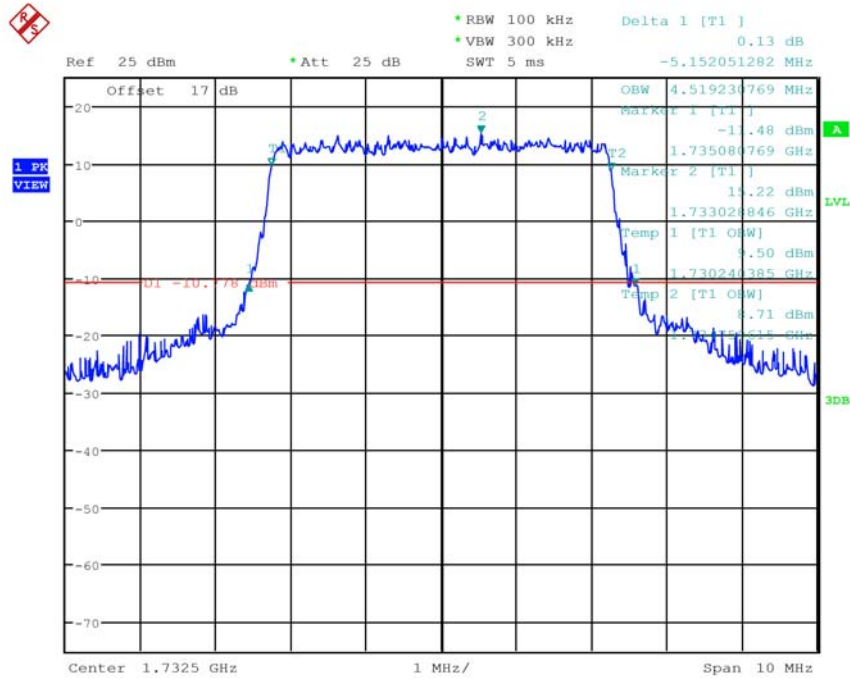
Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 3 MHz QPSK

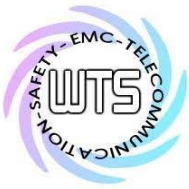


99% OBW &26DB BW BAND4_QPSK_3MHz_CH20175
 Date: 17.SEP.2018 16:41:56

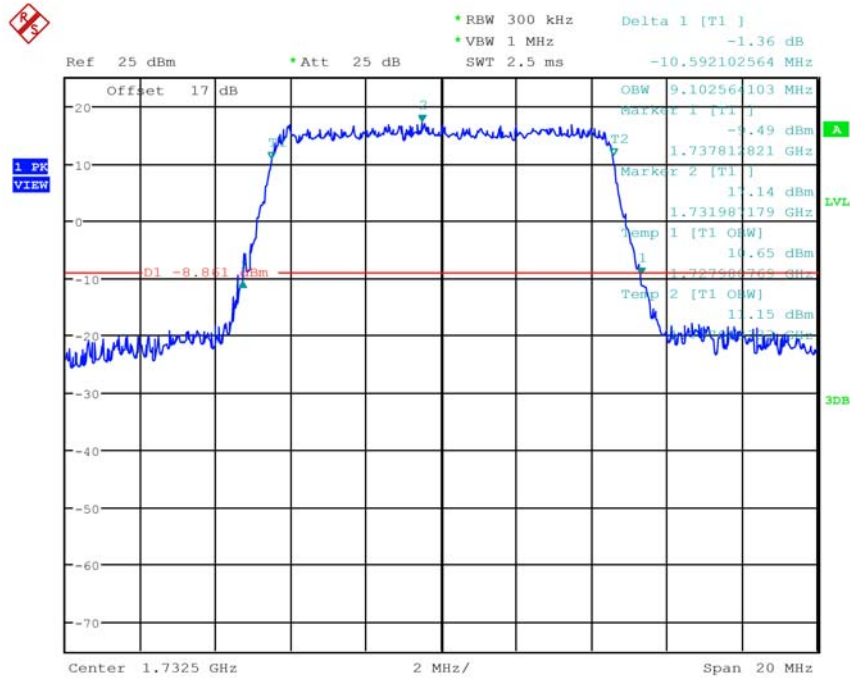
5 MHz QPSK



99% OBW &26DB BW BAND4_QPSK_5MHz_CH20175
 Date: 17.SEP.2018 16:44:13

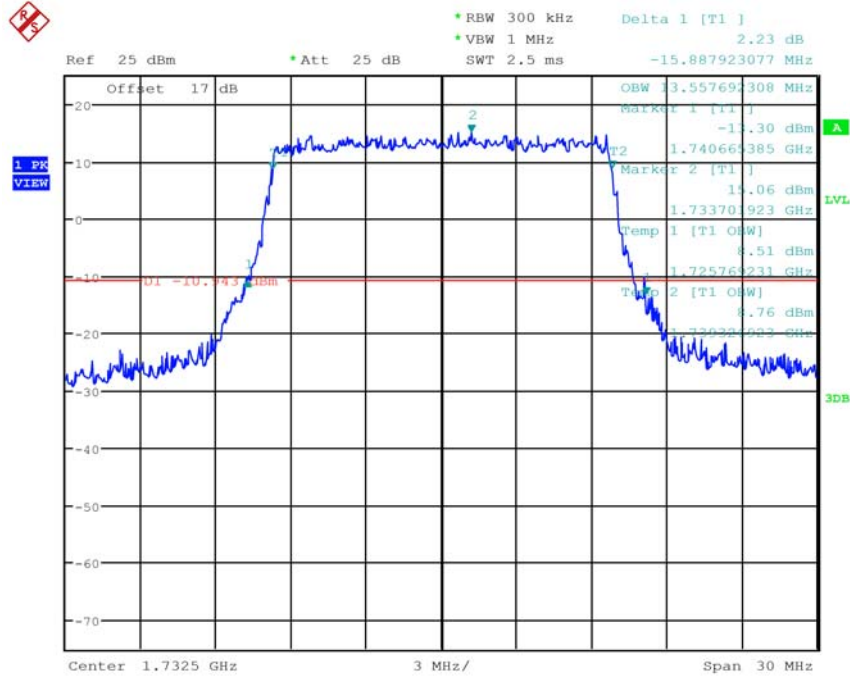


Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 10 MHz QPSK

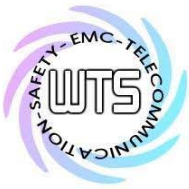


99% OBW &26DB BW BAND4_QPSK_10MHz_CH20175
 Date: 17.SEP.2018 16:46:39

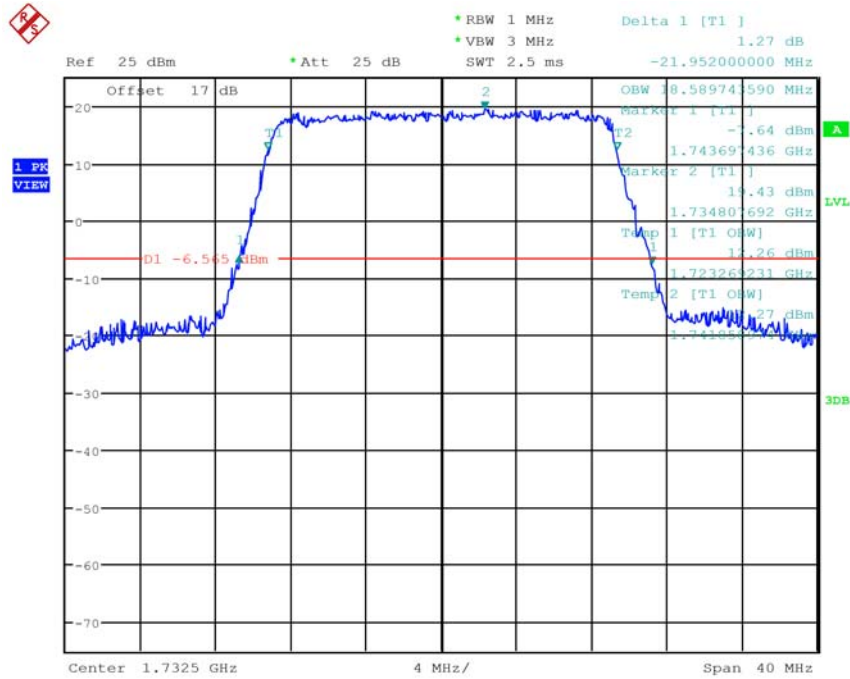
15 MHz QPSK



99% OBW &26DB BW BAND4_QPSK_15MHz_CH20175
 Date: 17.SEP.2018 16:48:45

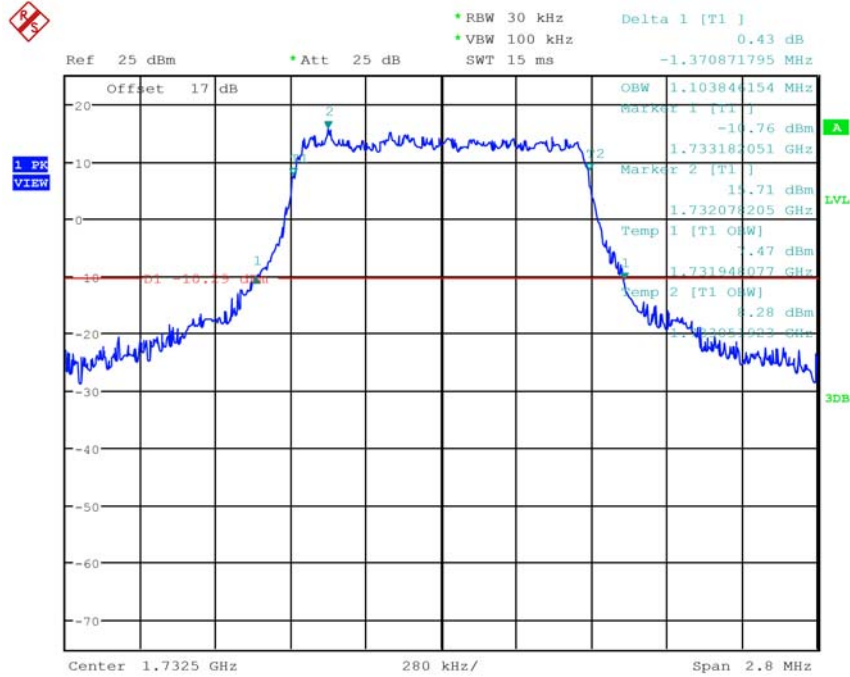


Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 20 MHz QPSK

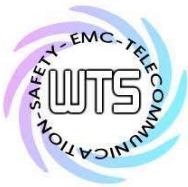


99% OBW &26DB BW BAND4_QPSK_20MHz_CH20175
 Date: 17.SEP.2018 16:50:54

1.4 MHz 16QAM

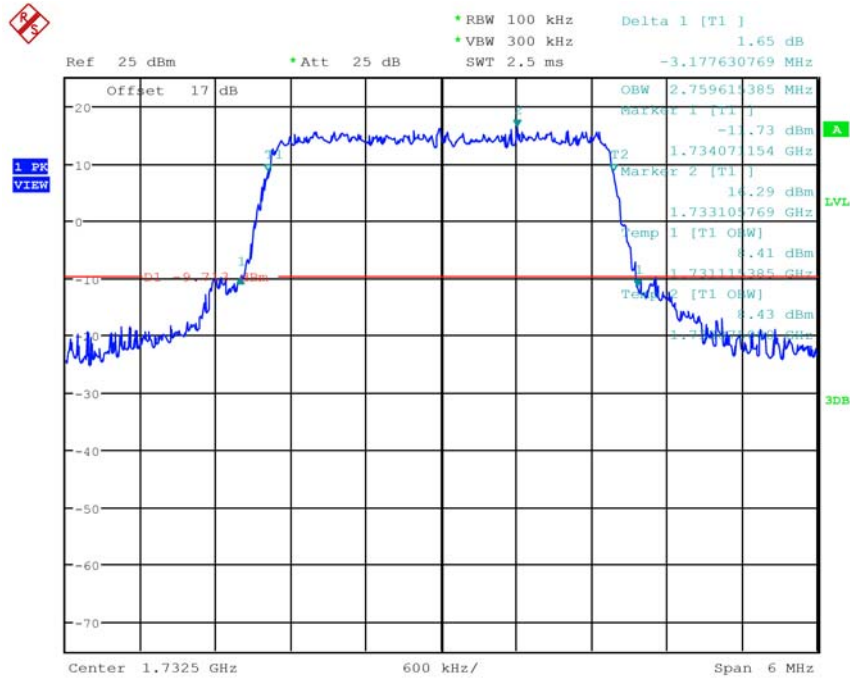


99% OBW &26DB BW BAND4_16QAM_1 4MHz_CH20175
 Date: 17.SEP.2018 16:40:44



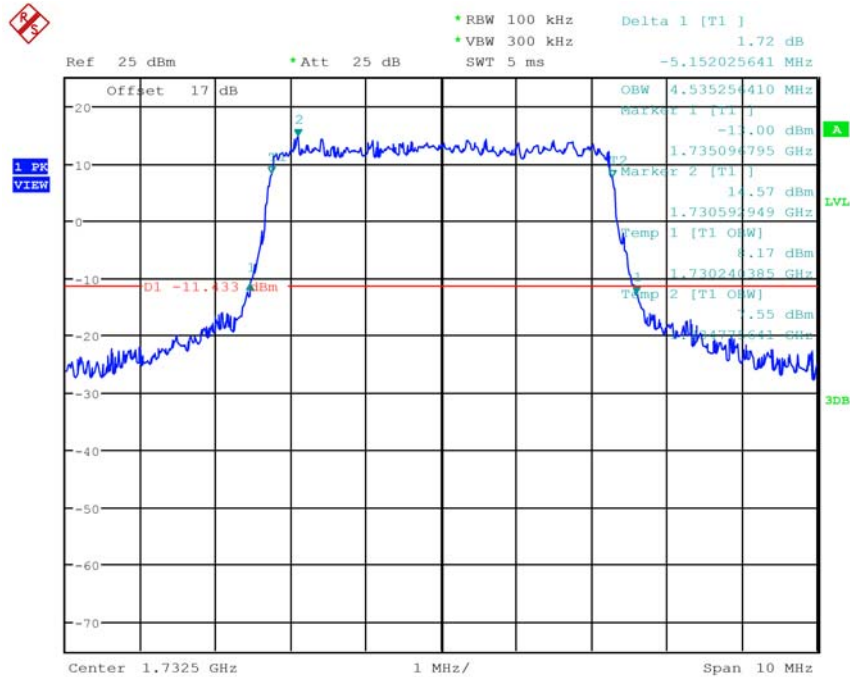
Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 3 MHz 16QAM



99% OBW &26DB BW BAND4_16QAM_3MHz_CH20175
 Date: 17.SEP.2018 16:43:10

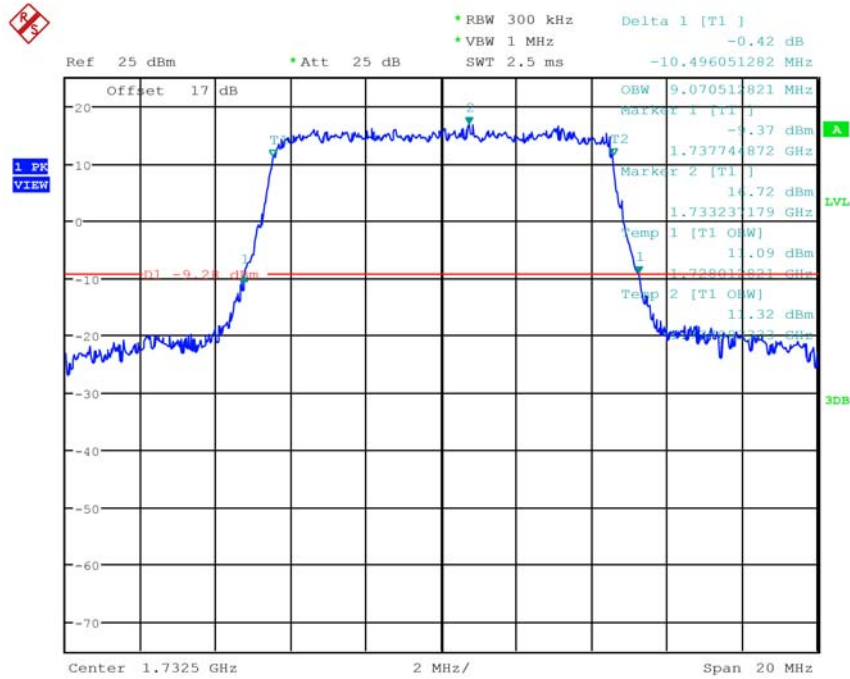
5 MHz 16QAM



99% OBW &26DB BW BAND4_16QAM_5MHz_CH20175
 Date: 17.SEP.2018 16:45:02

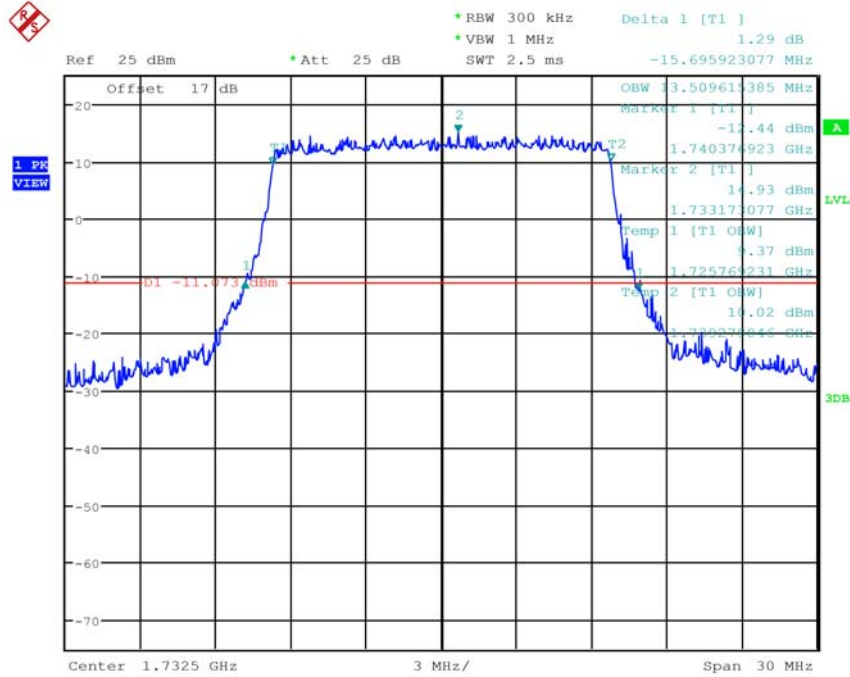


Report Number: W6M21808-18353-P-247
 FCC ID: 2ARGFIOTA
 10 MHz 16QAM



99% OBW &26DB BW BAND4_16QAM_10MHz_CH20175
 Date: 17.SEP.2018 16:47:33

15 MHz 16QAM



99% OBW &26DB BW BAND4_16QAM_15MHz_CH20175
 Date: 17.SEP.2018 16:49:46