

FCC PART 22 / 24 TEST REPORT
for
3.5G HSDPA/UMTS/GSM/DCS/PCS PDA Phone
Model No.: Atom V
FCC ID: UJU9QATOMV000

of

Applicant: GIGA-BYTE Communications Inc.

Address: 8F, No 43, Fu-Hsin Road, Hsin-Tien Taipei Hsien, 231
Taiwan, R.O.C.

Tested and Prepared

by

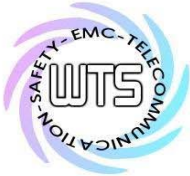
Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: 930600

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

A2LA Accredited No.: 2732.01

Report No.: W6M20803-8930-P-2224



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

Certification of Test Report

Applicant : GIGA-BYTE Communications Inc.
8F, No 43, Fu-Hsin Road, Hsin-Tien Taipei Hsien, 231 Taiwan, R.O.C.

Manufacturer : GIGA-BYTE TECHNOLOGY CO., LTD.
No.215, Nan-Ping Road, Pin-Jen City, Taoyuan 320

Tested Equipment :

Type Description	: 3.5G HSDPA/UMTS/GSM/DCS/PCS PDA Phone
Model Number	: Atom V
Series Number	: N/A
Brand Name	: MWg
Operation Frequency	: 824.2-848.8MHz / 1850.2 - 1909.8 MHz
RF Output Power	1)824.2 - 848.8MHz : 28.51 dBm (ERP) 2)1850.2 - 1909.8 : 27.23 dBm (EIRP)
Power Supply	: Adaptor (I/P: AC 100-240 V / 50-60 Hz / 0.2 A, O/P: 5 Vdc / 1.0 A) Battery (3.7 Vdc / 1300mAh)

Regulation Applied : 47CFR Part 22 (2007-10) and Part 24 (2007-10)

Test Method : 47CFR Part 2 (2007), TIA/EIA-603B (2002) and ANSI
C63.4(2003)

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(2005) and TIA-603-B(2002), and it was found that the device described above is in compliance with the applicable limits specified in 47CFR Part 22 and Part 24.

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:

May 22, 2008

Jay Chaing

Date

WTS-Lab.

Name

Signature

Technical responsibility for area of testing:

May 22, 2008

Steven Chuang

Date

WTS

Name

Signature

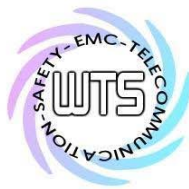
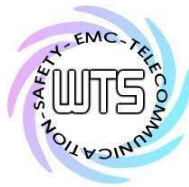


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1. Summary

1.1 Description of tested equipment

The Atom V is a PDA phone with built-in GSM 850/1900 MHz, Bluetooth 2.0, WLAN transceiver, GPS, FM receiver, GPRS Class 12, and supporting HSDPA, WCDMA.

This test report only contains test requirements specified in 47CFR Part 22 and Part 24 for Cellular Phone function, for other functions, such as Bluetooth and WLAN, please refer to separate test report with respect to the relevant test standard and specification.

The operation frequency bands and rated RF output power are listed as follows:

824.2-848.8MHz (Cellular, Part 22), 0.71 W (ERP)

1850.2-1909.8MHz (Cellular, Part 24), 0.53 W (EIRP)

1.2 Date of testing processing

Test sample received: March 06, 2008

Test finished: May 22, 2008

Other Information: None

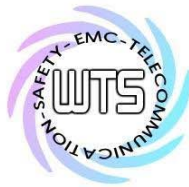
1.3 Modification Information

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

1.4 Test standards

Technical standard: **FCC Part 2(2007), TIA-603-B(2002), ANSI C63.4(2003)**

Deviation from test standard: None



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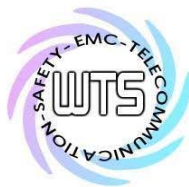
1.5 Summary of test result

Band: 850MHz

Section in this Report	Test Item	Relevant Section	Verdict
3.2	RF power output	2.1046(a), 22.913(a)	Pass
4.2	Modulation characteristics	2.1047	Not Required
5.2	Occupied bandwidth	2.1049(h)	Pass
6.2	Spurious emissions at antenna terminals	22.917(a), 2.1051	Pass
7.2	Field strength of spurious radiation	22.917(a), 2.1053	Pass
8.2	Frequency stability	2.1055(a) 2.1055(d)	Pass

Band: 1900MHz

Section in this Report	Test Item	Relevant Section	Verdict
3.2	RF power output	2.1046(a), 24.232(b)	Pass
4.2	Modulation characteristics	2.1047	Not Required
5.2	Occupied bandwidth	2.1049(h)	Pass
6.2	Spurious emissions at antenna terminals	24.238(a), 2.1051	Pass
7.2	Field strength of spurious radiation	24.238(a), 2.1053	Pass
8.2	Frequency stability	2.1055(a) 2.1055(d)	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: 1983.02

FCC filed test laboratory Reg. No. 930600

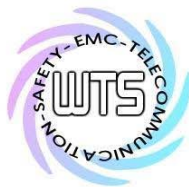
Industry Canada filed test laboratory Reg. No. IC 5679A-1

2.2 Details of approval holder

Name: GIGA-BYTE Communications Inc.
Street: 8F, No 43, Fu-Hsin Road, Hsin-Tien
Town: Taipei Hsien, 231
Country: Taiwan, R.O.C.
Telephone: +886-2-8219-2136
Fax: +886-2-5591-5800

Manufacturer: (if applicable)

Name: GIGA-BYTE TECHNOLOGY CO., LTD.
Street: No.215, Nan-Ping Road, Pin-Jen City,
Town: Taoyuan 320
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
Without Peripherals					

Frequency Range:

Band: 850MHz

Band: 1900MHz

Frequencies Selected to be investigated:

Band: 850MHz

Low Frequency (ch 128) : 824.2 MHz

Mid Frequency (ch 188) : 836.2 MHz

High Frequency (ch 251) : 848.8 MHz

Band: 1900MHz

Low Frequency (ch 512) : 1850.2 MHz

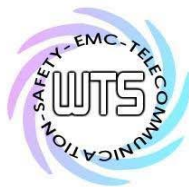
Mid Frequency (ch 661) : 1880.0 MHz

High Frequency (ch 810) : 1909.8 MHz

Antenna Type : PIFA Antenna

Antenna Gain : 0.11 dBi

Power supply : Adaptor (I/P: AC 100-240 V / 50-60 Hz / 0.2 A,
O/P: 5 Vdc / 1.0 A)
Battery (3.7 Vdc / 1300mAh)



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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.

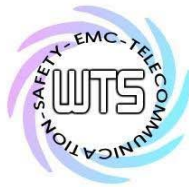
For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

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.



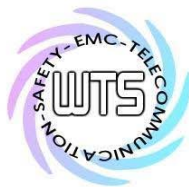
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2.6 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2007/10/15	2008/10/14
ETSTW-CE 002	PREREULATOR MODE DC POWER SUPPLY	None	None		Function Test	
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	2007/10/15	2008/10/14
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2007/10/15	2008/10/14
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2008/5/10	2009/5/09
ETSTW-CE 008	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2007/10/23	2009/10/22
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2007/8/2	2008/8/1
ETSTW-CE 013	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T4-02	20242	FCC	2007/11/2	2009/11/1
ETSTW-CE 014	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T2-02	20241	FCC	2005/12/7	2008/12/6
ETSTW-CE 015	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T8-02	20307	FCC	2006/11/7	2008/11/6
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2007/10/29	2008/10/28
ETSTW-RE 002	Function Generator	33220A	MY43004982	Agilent	2007/10/12	2009/10/11
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2007/12/3	2008/12/2
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2007/10/29	2008/10/28
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2007/10/11	2008/10/12
ETSTW-RE 010	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070181	MOTECH	Function Test	
ETSTW-RE 011	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070165	MOTECH	Function Test	
ETSTW-RE 017	Log-Periodic Antenna	HL025	352886/001	R&S	2008/5/3	2010/5/2
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2007/11/7	2010/11/6
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2007/10/9	2008/10/8
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	EMCO	2007/6/29	2008/6/28
ETSTW-RE 028	Log-Periodic DipoleArray Antenna	3148	34429	EMCO	2008/4/23	2010/4/22
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	2008/4/23	2010/4/22
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2008/3/26	2010/3/25
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2007/10/9	2008/10/8
ETSTW-RE 033	WaveRunner 6000A Serise Oscilloscope	WAVERUNNER 6100A	LCRY0604P14508	LeCroy	2007/7/9	2008/7/8
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2007/10/16	2009/10/15
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2007/1/11	2009/1/10
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2008/5/7	2010/5/6
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2006/5/29	2008/5/28
ETSTW-RE 047	ESA-E SERIES SPECTRUM ANALYZER	E4445A	MY46181369	Agilent	2007/7/19	2008/7/18



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ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2005/3/22	2009/3/21
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2007/5/2	2009/5/1
ETSTW-RE 055	SPECTRUM ANALYZER	FSU-26	200074	R&S	2007/7/16	2008/7/15
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2007/7/2	2009/7/1
ETSTW-GSM 01	SIM Simulator	IT3	B2004-50106	COMPRION	2007/7/23	2008/7/22
ETSTW-GSM 02	Universal Radio Communication Tester	CMU 200	109439	R&S	2007/10/17	2008/10/16
ETSTW-GSM 03	Agilent 8960 Test Set 1	E5515C	GB44052675	Agilent	2006/6/26	2008/6/25
ETSTW-GSM 04	Agilent 8960 Test Set 2	E5515C	GB44052665	Agilent	2006/6/29	2008/6/28
ETSTW-GSM 05	Agilent 8960 Test Set 3	E5515C	GB44052652	Agilent	2006/7/11	2008/7/10
ETSTW-GSM 06	Agilent 8960 Test Set 4	E5515C	GB44052684	Agilent	2006/7/4	2008/6/3
ETSTW-GSM 07	Agilent 8960 Test Set 5	E5515C	GB44052658	Agilent	2006/7/12	2008/7/11
ETSTW-GSM 08	Agilent 8960 Test Set 6	E5515C	GB44052666	Agilent	2006/7/6	2008/7/5
ETSTW-GSM 09	Controller PC	Dell GX 270	700F61J	Dell	Function Test	
ETSTW-GSM 10	Anite Combiner	B4605/100	0053	Wessex / Anite	2006/9/22	2008/9/21
ETSTW-GSM 11	GSM 850,900,1800,1900 Test system	TS8950G	100039	R&S	2008/1/18	2010/1/17
ETSTW-GSM 12	Acoustical Calibrator	4231	2463874	Brüel&Kjær	2007/8/2	2008/8/1
ETSTW-GSM 13	Conditioning Amplifier	2690--0S2	2437856	Brüel&Kjær	2007/8/2	2008/8/1
ETSTW-GSM 14	Telephone Test Head	4602B	2465324	Brüel&Kjær	Function Test	
ETSTW-GSM 15	Mouth Simulator	4227	2462516	Brüel&Kjær	2007/8/2	2008/8/1
ETSTW-GSM 16	TEMP.&HUMIDITY CHAMBER	GTH-120-40-1P-U	MAA0501002	GIANT FORCE	2007/12/28	2008/12/27
ETSTW-GSM 17	ANTENNA COPLER	CMU-Z10	100988	R&S	Function Test	
ETSTW-GSM 18	AUDIO ANALYZER	UPL16	100173	R&S	2007/10/25	2008/10/24
ETSTW-GSM 23	SPLITTER	4901.19.A	None	SUHNER	Function Test	
ETSTW-GSM 24	Vibration Testing System	VS-100V	5494	Vibration	2007/12/11	2008/12/10
ETSTW-GSM 29	Microphone	4185	2463004	Brüel&Kjær	2007/8/2	2008/8/1
ETSTW-GSM 30	Ear Simulator	4195	2457416	Brüel&Kjær	2007/8/2	2008/8/1

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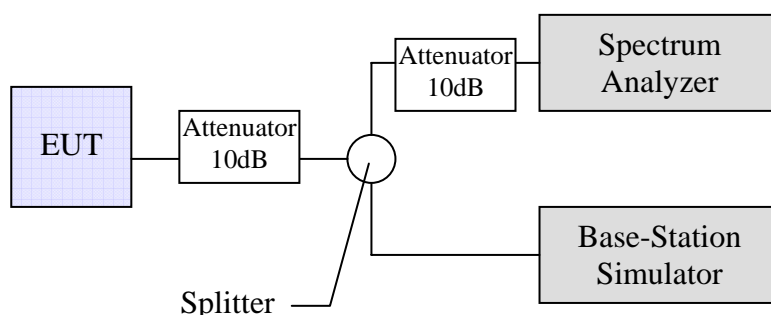
3. RF Power Output

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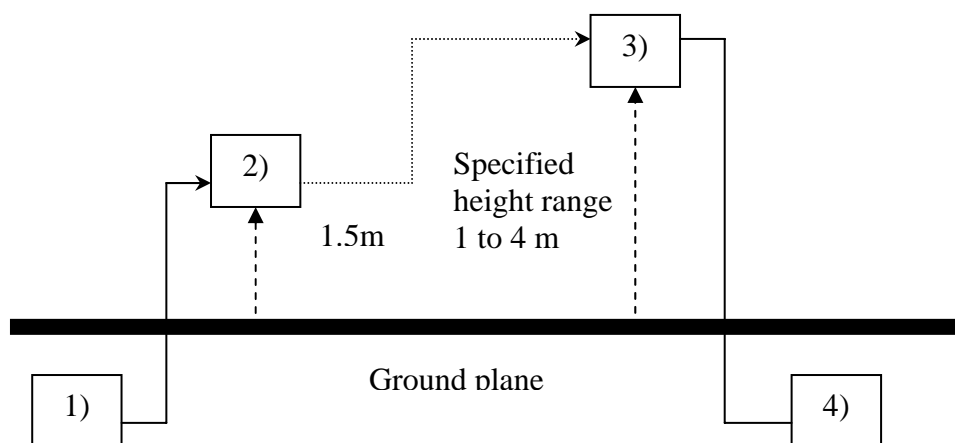
Worst case emission was recorded with the rotation of the turntable and the raising and lowering of the test antenna.

Substitution RF power Measurement at ETS 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



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

DC 3.6 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.124	28.50	30.65	38.45	Pass
836.154	28.04	30.19	38.45	Pass
848.543	27.18	29.33	38.45	Pass
1850.020	25.08	27.23	33	Pass
1880.020	23.56	25.71	33	Pass
1909.699	22.46	24.61	33	Pass

DC 4.0 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.174	28.51	30.66	38.45	Pass
836.108	28.04	30.19	38.45	Pass
848.639	27.25	29.40	38.45	Pass
1850.220	25.08	27.23	33	Pass
1880.100	23.37	25.52	33	Pass
1909.699	22.46	24.61	33	Pass

Test equipment: ETSTW-RE 003, ETSTW-RE 043, ETSTW-GSM 02

Note: Please refer to appendix for plot data.

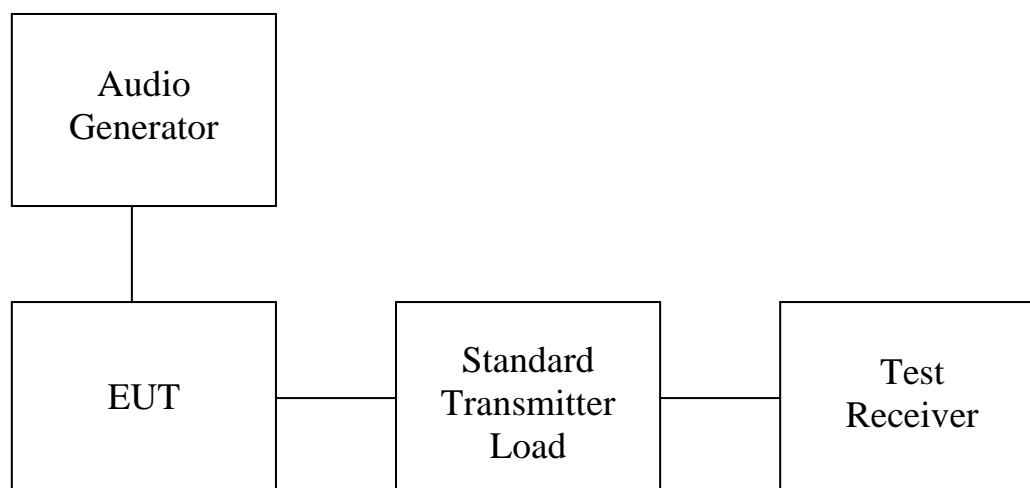
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FCC ID: UJU9QATOMV000

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

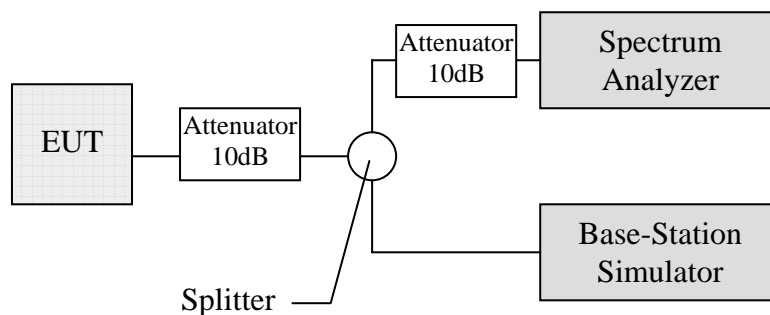
For digital modulation employed, this test item is not applicable.

5. Occupied Bandwidth

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power. Near the carrier an Emission Mask is defined by the standard.

5.1 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.



5.2 Test Results

Occupied Channel Bandwidth (kHz)	
Channel 128	250.50100200 kHz
Channel 188	248.49699399 kHz
Channel 251	250.50100200 kHz
Channel 512	250.50100200 kHz
Channel 661	250.50100200 kHz
Channel 810	250.50100200 kHz
-26dB Channel Bandwidth (kHz)	
Channel 128	336.67334669 kHz
Channel 188	332.66533066 kHz
Channel 251	332.66533066 kHz
Channel 512	332.66533066 kHz
Channel 661	338.67735471 kHz
Channel 810	330.66132265 kHz

Test equipment: ETSTW-RE 003, ETSTW-RE 043, ETSTW-GSM 02

Note: Please refer to appendix for plot data.

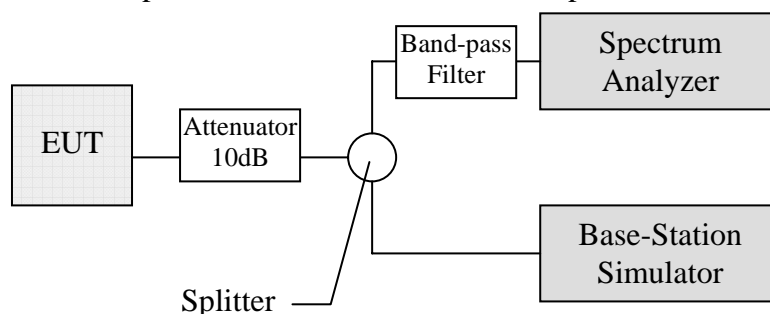
6. Spurious Emissions at Antenna Terminals

6.1 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.

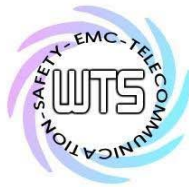
Tests were performed with an unmodulated carrier at three frequencies (low , middle and high channels) and on all power levels , which can be set-up on the transmitters.



6.2 Test Results

CH128_ DC 3.6 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
126.442	-35.70	-13	-22.70
903.846	-36.22	-13	-23.22
1649.038	-18.86	-13	-5.86
2475.962	-30.72	-13	-17.72
3296.800	-37.44	-13	-24.44
4121.000	-39.25	-13	-26.25
4945.200	-39.00	-13	-26.00
5769.400	-39.51	-13	-26.51
6593.600	-38.99	-13	-25.99
8242.000	-38.13	-13	-25.13
9066.200	-38.55	-13	-25.55
9890.400	-37.97	-13	-24.97
10714.600	-38.62	-13	-25.62
13187.200	-38.86	-13	-25.86
14011.400	-38.75	-13	-25.75
14835.600	-39.50	-13	-26.50
15659.800	-37.29	-13	-24.29
18123.400	-37.14	-13	-24.14
18956.600	-37.65	-13	-24.65
19780.800	-36.43	-13	-23.43
20605.000	-37.15	-13	-24.15



Worldwide Testing Services(Taiwan) Co., Ltd.

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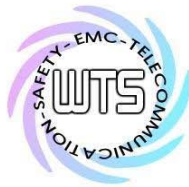
FCC ID: UJU9QATOMV000

CH128_ DC 4.0 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
171.122	-36.28	-13	-23.28
696.154	-35.58	-13	-22.58
1649.038	-18.97	-13	-5.97
2475.962	-31.86	-13	-18.86
3296.800	-37.01	-13	-24.01
4121.000	-37.99	-13	-24.99
4945.200	-39.15	-13	-26.15
5769.400	-38.66	-13	-25.66
6593.600	-38.48	-13	-25.48
8242.000	-37.74	-13	-24.74
9066.200	-38.74	-13	-25.74
9890.400	-38.24	-13	-25.24
10714.600	-39.05	-13	-26.05
13187.200	-37.23	-13	-24.23
14011.400	-38.32	-13	-25.32
14835.600	-38.04	-13	-25.04
15659.800	-37.58	-13	-24.58
18132.400	-37.76	-13	-24.76
18956.600	-37.72	-13	-24.72
19780.800	-38.09	-13	-25.09
20605.000	-37.97	-13	-24.97

CH188_ DC 3.6 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
157.772	-35.83	-13	-22.83
494.872	-36.23	-13	-23.23
1673.077	-19.08	-13	-6.08
2509.615	-31.35	-13	-18.35
3344.800	-38.01	-13	-25.01
4181.000	-38.34	-13	-25.34
5017.200	-38.45	-13	-25.45
5853.400	-38.29	-13	-25.29
6689.600	-38.71	-13	-25.71
8362.000	-38.29	-13	-25.29
9198.200	-38.66	-13	-25.66
10034.400	-38.15	-13	-25.15
10870.600	-38.40	-13	-25.40
13379.200	-38.03	-13	-25.03
14215.400	-38.05	-13	-25.05
15051.600	-37.55	-13	-24.55
15887.800	-37.66	-13	-24.66
18396.400	-37.82	-13	-24.82
19232.600	-37.07	-13	-24.07
20068.800	-36.67	-13	-23.67
20905.000	-37.25	-13	-24.25



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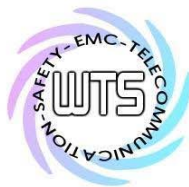
FCC ID: UJU9QATOMV000

CH188_ DC 4.0 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
79.311	-36.37	-13	-23.37
715.385	-36.13	-13	-23.13
1673.077	-19.15	-13	-6.15
2509.615	-31.66	-13	-18.66
3344.800	-37.69	-13	-24.69
4181.000	-39.15	-13	-26.15
5017.200	-39.42	-13	-26.42
5853.400	-39.64	-13	-26.64
6689.600	-39.79	-13	-26.79
8362.000	-36.57	-13	-23.57
9198.200	-37.72	-13	-24.72
10034.400	-38.67	-13	-25.67
10870.600	-37.87	-13	-24.87
13379.200	-38.17	-13	-25.17
14215.400	-37.93	-13	-24.93
15051.600	-38.00	-13	-25.00
15887.800	-37.89	-13	-24.89
18396.400	-36.25	-13	-23.25
19232.600	-37.62	-13	-24.62
20068.800	-37.40	-13	-24.40
20905.000	-36.82	-13	-23.82

CH251_ DC 3.6 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
53.974	-36.32	-13	-23.32
947.436	-35.92	-13	-22.92
1697.115	-20.02	-13	-7.02
2548.077	-32.22	-13	-19.22
3395.200	-37.34	-13	-24.34
4244.000	-39.66	-13	-26.66
5092.800	-38.87	-13	-25.87
5941.600	-39.48	-13	-26.48
6790.400	-39.45	-13	-26.45
8488.000	-37.64	-13	-24.64
9336.800	-38.30	-13	-25.30
10185.600	-38.11	-13	-25.11
11034.400	-36.51	-13	-23.51
13580.800	-38.15	-13	-25.15
14429.600	-38.69	-13	-25.69
15278.400	-38.78	-13	-25.78
16127.200	-38.62	-13	-25.62
18673.600	-37.13	-13	-24.13
19522.400	-36.59	-13	-23.59
20371.200	-36.99	-13	-23.99
21220.000	-37.40	-13	-24.40



Worldwide Testing Services(Taiwan) Co., Ltd.

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CH251_ DC 4.0 V

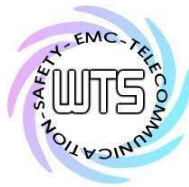
Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
138.974	-35.85	-13	-22.85
512.821	-36.16	-13	-23.16
1697.115	-20.05	-13	-7.05
2548.077	-32.13	-13	-19.13
3395.200	-37.85	-13	-24.85
4244.000	-39.39	-13	-26.39
5092.800	-38.45	-13	-25.45
5941.600	-39.31	-13	-26.31
6790.400	-39.06	-13	-26.06
8488.000	-38.60	-13	-25.60
9336.800	-38.70	-13	-25.70
10185.600	-37.90	-13	-24.90
11034.400	-38.46	-13	-25.46
13580.800	-37.77	-13	-24.77
14429.600	-37.19	-13	-24.19
15278.400	-37.78	-13	-24.78
16127.200	-38.56	-13	-25.56
18673.600	-38.19	-13	-25.19
19522.400	-38.56	-13	-25.56
20371.200	-37.05	-13	-24.05
21220.000	-37.57	-13	-24.57

850 Band Idle Mode_ DC 3.6 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
106.282	-44.07	-13	-31.07
785.897	-43.92	-13	-30.92
1000.000	-43.89	-13	-30.89
4647.436	-44.18	-13	-31.18
10207.532	-44.36	-13	-31.36
13372.596	-43.86	-13	-30.86
25791.667	-43.05	-13	-30.05

850 Band Idle Mode_ DC 4.0 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
114.183	-43.98	-13	-30.98
207.692	-43.93	-13	-30.93
2240.385	-43.81	-13	-30.81
6179.487	-44.41	-13	-31.41
11927.885	-43.91	-13	-30.91
17739.183	-43.75	-13	-30.75
19498.397	-42.90	-13	-29.90



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CH512_DC 3.6 V

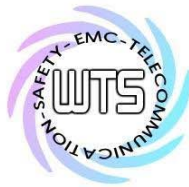
Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
149.055	-36.33	-13	-23.33
983.333	-35.80	-13	-22.80
3700.400	-39.26	-13	-26.26
5550.600	-38.32	-13	-25.32
7400.800	-38.76	-13	-25.76
9251.000	-38.75	-13	-25.75
11101.200	-38.33	-13	-25.33
12951.400	-38.61	-13	-25.61
14801.600	-38.46	-13	-25.46
16651.800	-37.99	-13	-24.99
18502.000	-37.57	-13	-24.57
20352.200	-37.94	-13	-24.94
22202.400	-37.26	-13	-24.26
24052.600	-37.40	-13	-24.40

CH512_DC 4.0 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
35.449	-36.04	-13	-23.04
301.282	-35.50	-13	-22.50
3700.400	-38.33	-13	-25.33
5550.600	-39.04	-13	-26.04
7400.800	-39.32	-13	-26.32
9251.000	-38.82	-13	-25.82
11101.200	-38.31	-13	-25.31
12951.400	-37.22	-13	-24.22
14801.600	-38.78	-13	-25.78
16651.800	-37.97	-13	-24.97
18502.000	-36.72	-13	-23.72
20352.200	-37.17	-13	-24.17
22202.400	-36.95	-13	-23.95
24052.600	-37.22	-13	-24.22

CH661_DC 3.6 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
99.199	-36.15	-13	-23.15
407.692	-35.81	-13	-22.81
3764.808	-36.56	-13	-23.56
5640.000	-38.81	-13	-25.81
7520.000	-39.35	-13	-26.35
9400.000	-38.43	-13	-25.43
11200.000	-38.37	-13	-25.37
13080.000	-38.31	-13	-25.31
14960.000	-38.53	-13	-25.53
16840.000	-38.15	-13	-25.15
18720.000	-37.66	-13	-24.66
20600.000	-37.23	-13	-24.23
22480.000	-36.37	-13	-23.37
24360.000	-35.39	-13	-22.39



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CH661_DC 4.0 V

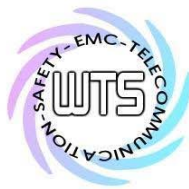
Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
30.272	-35.73	-13	-22.73
791.026	-35.88	-13	-22.88
3760.000	-39.14	-13	-26.14
5640.000	-39.37	-13	-26.37
7520.000	-38.60	-13	-25.60
9400.000	-38.40	-13	-25.40
11200.000	-38.26	-13	-25.26
13080.000	-38.11	-13	-25.11
14960.000	-38.06	-13	-25.06
16840.000	-37.75	-13	-24.75
18720.000	-37.72	-13	-24.72
20600.000	-37.41	-13	-24.41
22480.000	-37.85	-13	-24.85
24360.000	-36.21	-13	-23.21

CH810_DC 3.6 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
110.369	-35.56	-13	-22.56
501.282	-35.96	-13	-22.96
3819.600	-39.62	-13	-26.62
5729.400	-37.99	-13	-24.99
7639.200	-38.16	-13	-25.16
9549.000	-38.86	-13	-25.86
11458.800	-37.89	-13	-24.89
13368.600	-38.29	-13	-25.29
15278.400	-37.96	-13	-24.96
17188.300	-37.94	-13	-24.94
19098.000	-37.58	-13	-24.58
21007.800	-37.15	-13	-24.15
22917.600	-36.72	-13	-23.72
24827.400	-36.75	-13	-23.75

CH810_DC 4.0 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
104.647	-36.47	-13	-23.47
803.846	-36.24	-13	-23.24
3819.600	-38.58	-13	-25.58
5729.400	-39.24	-13	-26.24
7639.200	-39.20	-13	-26.20
9549.000	-38.06	-13	-25.06
11458.800	-38.16	-13	-25.16
13368.600	-38.91	-13	-25.91
15278.400	-38.35	-13	-25.35
17188.300	-38.57	-13	-25.57
19098.000	-37.23	-13	-24.23
21007.800	-37.37	-13	-24.37
22917.600	-36.31	-13	-23.31
24827.400	-35.78	-13	-22.78



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FCC ID: UJU9QATOMV000

1900 Band Idle Mode_ DC 3.6 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
170.577	-43.99	-13	-30.99
707.692	-44.07	-13	-31.07
2158.654	-43.88	-13	-30.88
6403.846	-44.24	-13	-31.24
8928.686	-43.58	-13	-30.58
15888.221	-43.55	-13	-30.55
22059.299	-43.49	-13	-30.49

1900 Band Idle Mode_ DC 4.0 V

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
74.135	-42.74	-13	-29.74
634.615	-43.61	-13	-30.61
3105.769	-43.35	-13	-30.35
4500.000	-44.12	-13	-31.12
9431.090	-43.89	-13	-30.89
14567.308	-44.12	-13	-31.12
19675.481	-43.81	-13	-30.81

Test equipment: ETSTW-RE 003, ETSTW-GSM 02, ETSTW-GSM 23

Note: Please refer to appendix for plot data.

6.3 Explanation of test result

All factors like cable loss and external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

6.4 Calculation of Limit for Spurious at Antenna Terminals

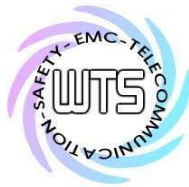
Compliance with § 22.917(a) requires that any emission be attenuated below the transmitter power at least $43 + 10 \log_{10} P$ (P = transmitter power in Watts).

The compliance limit was calculated as an example per the following:

Maximum transmitter output power: $P=0.71$ Watts

Required attenuation: $A=43 + 10 \log_{10} P$

Limit for Spurious Emissions at Antenna Terminals: $L=P-A=-13$ dBm



Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

7. Field Strength of Spurious Radiation

7.1 Test procedure

The test procedure for filed strength measurement is same as radiated power except for a notch filter or band pass filter is used to avoid the influence of fundamental to the pre-amplifier.

The measurements below 1GHz were performed with a measurement bandwidth of 100kHz, above 1GHz with a bandwidth of 1 MHz.

7.2 Test Results

The measurements of the spurious emission at the upper, center and lower channel.

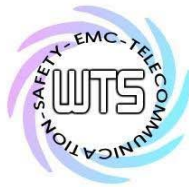
CH128_ DC 3.6 V

Model: Atom V Date: 2008/4/27
Mode: Active ch128 Temperature: 26 °C Engineer: Jay
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
294.589	-71.35	34.12	-37.23	-13.00	-24.23	105	150
666.485	-89.24	34.20	-55.04	-13.00	-42.04	115	150
875.932	-77.52	35.51	-42.01	-13.00	-29.01	130	150
942.505	-86.81	35.85	-50.96	-13.00	-37.96	125	150
1649.299	-51.58	0.69	-50.89	-13.00	-37.89	140	150
2472.946	-52.55	4.59	-47.96	-13.00	-34.96	140	150
5883.767	-57.78	14.99	-42.79	-13.00	-29.79	135	150
12426.353	-62.36	22.35	-40.01	-13.00	-27.01	130	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
297.836	-71.42	37.90	-33.52	-13.00	-20.52	110	150
699.038	-89.69	34.88	-54.81	-13.00	-41.81	120	150
942.505	-87.48	36.59	-50.89	-13.00	-37.89	120	150
2472.946	-49.99	5.06	-44.93	-13.00	-31.93	135	150
7126.252	-58.36	12.74	-45.62	-13.00	-32.62	140	150
8237.976	-49.45	13.63	-35.82	-13.00	-22.82	135	150
9066.132	-55.16	16.40	-38.76	-13.00	-25.76	130	150
10712.926	-57.42	19.24	-38.18	-13.00	-25.18	135	150



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

CH128_ DC 4.0 V

Mode: Active ch128

Polarization: Horizontal

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
299.459	-72.07	35.09	-36.98	-13.00	-23.98	110	150
660.184	-89.18	34.20	-54.98	-13.00	-41.98	125	150
875.932	-78.05	35.51	-42.54	-13.00	-29.54	120	150
942.505	-85.36	35.85	-49.51	-13.00	-36.51	120	150
2472.946	-52.41	4.59	-47.82	-13.00	-34.82	130	150
5875.752	-58.61	14.93	-43.68	-13.00	-30.68	135	150
12350.200	-60.07	22.45	-37.62	-13.00	-24.62	135	150

Polarization: Vertical

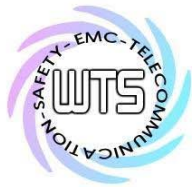
Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
298.918	-71.09	38.30	-32.79	-13.00	-19.79	115	150
724.241	-89.39	34.90	-54.49	-13.00	-41.49	130	150
904.074	-88.27	35.43	-52.84	-13.00	-39.84	120	150
942.505	-87.31	36.59	-50.72	-13.00	-37.72	120	150
2472.946	-49.69	5.06	-44.63	-13.00	-31.63	140	150
7983.968	-58.88	13.86	-45.02	-13.00	-32.02	125	150
8237.976	-49.30	13.63	-35.67	-13.00	-22.67	130	150
9066.132	-54.58	16.40	-38.18	-13.00	-25.18	135	150
10712.926	-55.41	19.24	-36.17	-13.00	-23.17	130	150

CH188_ DC 3.6 V

Mode: Active ch188 Temperature: 26 °C Engineer: Jay

Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
298.918	-71.20	34.98	-36.22	-13.00	-23.22	105	150
813.499	-82.71	35.09	-47.62	-13.00	-34.62	120	150
881.076	-76.96	35.55	-41.41	-13.00	-28.41	115	150
1673.347	-52.49	1.17	-51.32	-13.00	-38.32	130	150
2406.814	-53.10	5.05	-48.05	-13.00	-35.05	140	150
5907.816	-58.10	14.97	-43.13	-13.00	-30.13	140	150
12350.200	-61.47	22.45	-39.02	-13.00	-26.02	140	150



Worldwide Testing Services(Taiwan) Co., Ltd.

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Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
296.754	-70.96	37.50	-33.46	-13.00	-20.46	100	150
694.838	-88.41	34.78	-53.63	-13.00	-40.63	110	150
942.505	-86.67	36.59	-50.08	-13.00	-37.08	120	150
2509.018	-50.37	5.49	-44.88	-13.00	-31.88	135	150
7246.493	-57.97	12.44	-45.53	-13.00	-32.53	130	150
8361.723	-46.81	13.39	-33.42	-13.00	-20.42	130	150
9199.399	-54.63	15.61	-39.02	-13.00	-26.02	135	150

CH188_ DC 4.0 V

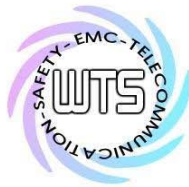
Mode: Active ch188

Polarization: Horizontal

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
298.377	-84.41	34.88	-49.53	-13.00	-36.53	105	150
821.900	-68.77	35.46	-33.31	-13.00	-20.31	120	150
881.076	-77.71	35.55	-42.16	-13.00	-29.16	115	150
2509.018	-52.88	4.46	-48.42	-13.00	-35.42	135	150
5779.559	-57.88	14.36	-43.52	-13.00	-30.52	140	150
10246.493	-60.72	18.93	-41.79	-13.00	-28.79	130	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
295.671	-70.59	37.10	-33.49	-13.00	-20.49	110	150
813.499	-89.28	35.08	-54.20	-13.00	-41.20	120	150
942.505	-86.65	36.59	-50.06	-13.00	-37.06	120	150
2509.018	-50.69	5.49	-45.20	-13.00	-32.20	145	150
7094.188	-58.16	12.93	-45.23	-13.00	-32.23	135	150
8361.723	-45.91	13.39	-32.52	-13.00	-19.52	140	150



Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

CH251_ DC 3.6 V

Mode: Active ch 251

Polarization: Horizontal

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
297.295	-70.21	34.66	-35.55	-13.00	-22.55	105	150
807.198	-68.45	34.82	-33.63	-13.00	-20.63	125	150
893.786	-77.36	35.65	-41.71	-13.00	-28.71	115	150
1871.744	-53.85	2.67	-51.18	-13.00	-38.18	135	150
5763.527	-57.73	14.33	-43.40	-13.00	-30.40	140	150
12293.086	-61.66	22.47	-39.19	-13.00	-26.19	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
299.459	-72.00	38.50	-33.50	-13.00	-20.50	105	150
688.537	-89.05	34.62	-54.43	-13.00	-41.43	120	150
850.513	-82.26	34.90	-47.36	-13.00	-34.36	110	150
1697.395	-52.06	2.22	-49.84	-13.00	-36.84	130	150
2545.090	-53.86	5.06	-48.80	-13.00	-35.80	135	150
7991.984	-58.83	13.93	-44.90	-13.00	-31.90	135	150
8485.471	-52.96	14.61	-38.35	-13.00	-25.35	150	150

CH251_ DC 4.0 V

Mode: Active ch251

Polarization: Horizontal

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
299.459	-70.33	35.09	-35.24	-13.00	-22.24	105	150
818.750	-69.18	35.32	-33.86	-13.00	-20.86	125	150
893.786	-77.04	35.65	-41.39	-13.00	-28.39	115	150
2683.367	-55.80	6.93	-48.87	-13.00	-35.87	140	150
5883.767	-58.50	14.99	-43.51	-13.00	-30.51	130	150
12730.962	-61.28	23.48	-37.80	-13.00	-24.80	135	150



Worldwide Testing Services(Taiwan) Co., Ltd.

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Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
298.918	-71.02	38.30	-32.72	-13.00	-19.72	110	150
813.499	-88.47	35.08	-53.39	-13.00	-40.39	120	150
850.513	-82.80	34.90	-47.90	-13.00	-34.90	120	150
1697.395	-53.16	2.22	-50.94	-13.00	-37.94	145	150
2400.802	-53.10	3.62	-49.48	-13.00	-36.48	140	150
7535.070	-57.94	13.06	-44.88	-13.00	-31.88	135	150
8485.471	-48.64	14.61	-34.03	-13.00	-21.03	130	150

850 Band Idle Mode_ DC 3.6 V

Mode: Idle

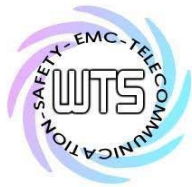
Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
35.411	7.66	peak	13.28	20.94	40.00	-19.06	110	150
297.295	12.44	peak	15.19	27.63	46.00	-18.37	100	150
859.719	5.42	peak	25.65	31.07	46.00	-14.93	130	150
943.888	4.60	peak	27.15	31.75	46.00	-14.25	120	150

Frequency (MHz)	Reading (dBuV) Peak Ave.		Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave.		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
3771.543	42.33	---	0.49	42.82	---	74.00	54.00	-31.18	130	150
7559.118	43.32	---	1.68	45.00	---	74.00	54.00	-29.00	135	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
32.705	7.36	peak	13.06	20.42	40.00	-19.58	105	150
296.753	12.79	peak	15.18	27.97	46.00	-18.03	110	150
632.465	7.49	peak	22.44	29.93	46.00	-16.07	120	150
806.413	6.46	peak	25.24	31.70	46.00	-14.30	125	150



Worldwide Testing Services(Taiwan) Co., Ltd.

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Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
3831.663	42.54	---	0.69	43.23	---	74.00	54.00	-30.77	140	150
7406.814	43.50	---	1.97	45.47	---	74.00	54.00	-28.53	130	150

850 Band Idle Mode_ DC 4.0 V

Mode: Idle

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
30.000	8.18	peak	13.03	21.21		40.00	-18.79	110	150
280.521	13.20	peak	14.85	28.05		46.00	-17.95	105	150
854.108	6.11	peak	25.62	31.73		46.00	-14.27	110	150
877.956	6.62	peak	25.80	32.42		46.00	-13.58	120	150

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
3945.892	42.31	---	1.04	43.35	---	74.00	54.00	-30.65	135	150
6589.178	40.45	---	4.77	45.22	---	74.00	54.00	-28.78	130	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
211.804	11.50	peak	12.37	23.87		43.50	-19.63	105	150
295.130	12.36	peak	15.14	27.50		46.00	-18.50	110	150
715.231	7.95	peak	23.85	31.80		46.00	-14.20	115	150
884.970	7.76	peak	25.93	33.69		46.00	-12.31	110	150

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
3759.519	43.76	---	0.44	44.20	---	74.00	54.00	-29.80	140	150
7406.814	43.88	---	1.97	45.85	---	74.00	54.00	-28.15	130	150



Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

CH512_ DC 3.6 V

Mode: Active ch 512

Polarization: Horizontal

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
299.459	-70.03	35.09	-34.94	-13.00	-21.94	100	150
855.511	-93.32	35.79	-57.53	-13.00	-44.53	125	150
1679.659	-62.61	5.36	-57.25	-13.00	-44.25	135	150
3962.305	-61.21	13.17	-48.04	-13.00	-35.04	130	150
6869.739	-57.06	15.74	-41.32	-13.00	-28.32	140	150
9246.994	-69.19	31.12	-38.07	-13.00	-25.07	130	150
11103.206	-64.13	34.60	-29.53	-13.00	-16.53	135	150

Polarization: Vertical

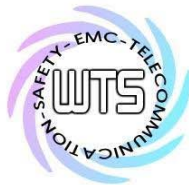
Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
297.836	-71.72	37.90	-33.82	-13.00	-20.82	115	150
936.874	-91.50	35.41	-56.09	-13.00	-43.09	120	150
1715.431	-63.60	4.83	-58.77	-13.00	-45.77	135	150
3916.233	-61.42	11.21	-50.21	-13.00	-37.21	140	150
7791.583	-53.27	10.42	-42.85	-13.00	-29.85	130	150
9246.994	-67.14	30.21	-36.93	-13.00	-23.93	135	150
11103.206	-63.31	33.48	-29.83	-13.00	-16.83	130	150

CH512_ DC 4.0 V

Mode: Active ch 512

Polarization: Horizontal

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
298.377	-71.91	34.88	-37.03	-13.00	-24.03	110	150
840.080	-91.45	35.45	-56.00	-13.00	-43.00	120	150
1694.990	-60.58	6.02	-54.56	-13.00	-41.56	130	150
3953.928	-61.31	13.11	-48.20	-13.00	-35.20	135	150
6893.788	-56.72	16.09	-40.63	-13.00	-27.63	140	150
9246.994	-67.76	31.12	-36.64	-13.00	-23.64	135	150
11103.206	-62.28	34.60	-27.68	-13.00	-14.68	140	150



Worldwide Testing Services(Taiwan) Co., Ltd.

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Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
296.212	-71.03	37.30	-33.73	-13.00	-20.73	100	150
925.651	-93.07	35.50	-57.57	-13.00	-44.57	115	150
1749.499	-62.47	4.11	-58.36	-13.00	-45.36	135	150
3953.928	-62.00	11.19	-50.81	-13.00	-37.81	135	150
7438.878	-54.93	11.09	-43.84	-13.00	-30.84	140	150
9246.994	-66.96	30.21	-36.75	-13.00	-23.75	140	150
11103.206	-69.81	33.48	-36.33	-13.00	-23.33	135	150

CH661_ DC 3.6 V

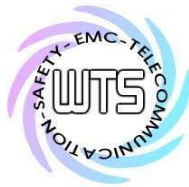
Mode: Active ch 661

Polarization: Horizontal

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
297.836	-70.58	34.77	-35.81	-13.00	-22.81	100	150
852.705	-93.09	35.83	-57.26	-13.00	-44.26	125	150
1751.202	-58.83	4.92	-53.91	-13.00	-40.91	135	150
3916.233	-62.49	12.81	-49.68	-13.00	-36.68	140	150
6877.756	-56.97	15.86	-41.11	-13.00	-28.11	135	150
9399.299	-65.4	30.08	-35.32	-13.00	-22.32	140	150
11284.068	-60.73	34.52	-26.21	-13.00	-13.21	130	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
298.918	-71.49	38.30	-33.19	-13.00	-20.19	105	150
920.040	-92.78	35.55	-57.23	-13.00	-44.23	120	150
1752.906	-58.90	4.04	-54.86	-13.00	-41.86	130	150
3958.116	-62.29	11.19	-51.10	-13.00	-38.10	135	150
6901.804	-56.40	13.48	-42.92	-13.00	-29.92	140	150
9399.299	-67.18	29.88	-37.3	-13.00	-24.30	130	150
11284.068	-62.47	32.91	-29.56	-13.00	-16.56	140	150



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CH661_ DC 4.0 V

Mode: Active ch 661

Polarization: Horizontal

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
297.836	-70.74	34.77	-35.97	-13.00	-22.97	105	150
880.761	-92.62	35.44	-57.18	-13.00	-44.18	110	150
1686.473	-62.00	5.66	-56.34	-13.00	-43.34	130	150
3828.277	-61.69	12.25	-49.44	-13.00	-36.44	135	150
6837.675	-56.62	15.28	-41.34	-13.00	-28.34	140	150
11284.068	-60.62	34.52	-26.1	-13.00	-13.10	140	150

Polarization: Vertical

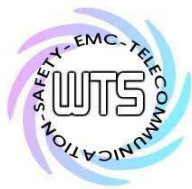
Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
299.459	-70.96	38.50	-32.46	-13.00	-19.46	110	150
945.291	-93.22	35.33	-57.89	-13.00	-44.89	115	150
1747.795	-61.95	4.15	-57.80	-13.00	-44.80	135	150
3891.102	-61.92	11.06	-50.86	-13.00	-37.86	140	150
7494.990	-55.01	11.31	-43.70	-13.00	-30.70	135	150
9399.299	-66.74	29.88	-36.86	-13.00	-23.86	140	150
11284.068	-61.83	32.91	-28.92	-13.00	-15.92	135	150

CH810_ DC 3.6 V

Mode: Active ch 810

Polarization: Horizontal

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
297.836	-70.58	34.77	-35.81	-13.00	-22.81	114	150
7639.279	-52.05	11.58	-40.47	-13.00	-27.47	124	150
9551.603	-68.77	31.71	-37.06	-13.00	-24.06	133	150
11464.93	-61.91	34.80	-27.11	-13.00	-14.11	127	150
18272.545	-72.86	8.50	-64.36	-13.00	-51.36	240	140
25665.331	-77.11	15.57	-61.54	-13.00	-48.54	190	133



Worldwide Testing Services(Taiwan) Co., Ltd.

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Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
297.836	-69.27	37.90	-31.37	-13.00	-18.37	108	150
7639.279	-54.26	11.58	-42.68	-13.00	-29.68	220	150
9551.603	-70.7	31.71	-38.99	-13.00	-25.99	112	150
11464.93	-64.23	34.80	-29.43	-13.00	-16.43	104	150
18323.647	-73.08	8.71	-64.37	-13.00	-51.37	177	150
25205.411	-76.46	15.68	-60.78	-13.00	-47.78	120	150

CH810_ DC 4.0 V

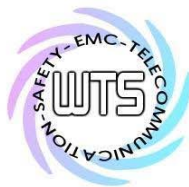
Mode: Active ch 810 Temperature: 26 °C Engineer: Jay

Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
299.459	-71.87	35.09	-36.78	-13.00	-23.78	100	150
859.719	-92.83	35.73	-57.10	-13.00	-44.10	110	150
1751.202	-59.47	4.92	-54.55	-13.00	-41.55	135	150
3949.740	-62.69	13.07	-49.62	-13.00	-36.62	140	150
7639.279	-52.06	11.58	-40.48	-13.00	-27.48	135	150
9551.603	-68.91	31.71	-37.2	-13.00	-24.20	140	150
11464.93	-61.95	34.80	-27.15	-13.00	-14.15	130	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
298.918	-71.54	38.30	-33.24	-13.00	-20.24	105	150
927.054	-92.35	35.49	-56.86	-13.00	-43.86	120	150
1694.990	-63.57	5.00	-58.57	-13.00	-45.57	135	150
3509.960	-62.09	10.37	-51.72	-13.00	-38.72	130	150
7639.279	-53.83	11.07	-42.76	-13.00	-29.76	140	150
9551.603	-69.27	29.21	-40.06	-13.00	-27.06	130	150
11464.93	-62.21	33.12	-29.09	-13.00	-16.09	135	150



Worldwide Testing Services(Taiwan) Co., Ltd.

Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

1900 Band Idle Mode_ DC 3.6 V

Mode: Idle

Polarization: Horizontal

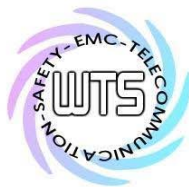
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
33.788	6.86	peak	13.15	20.01	40.00	-19.99	100	150
281.603	12.97	peak	14.87	27.84	46.00	-18.16	105	150
813.427	4.97	peak	25.35	30.32	46.00	-15.68	125	150
879.359	5.36	peak	25.82	31.18	46.00	-14.82	120	150

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
3789.579	43.04	---	0.56	43.60	---	74.00	54.00	-30.40	135	150
7591.182	43.90	---	1.77	45.67	---	74.00	54.00	-28.33	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
31.623	7.48	peak	13.04	20.52	40.00	-19.48	105	150
285.391	13.69	peak	14.95	28.64	46.00	-17.36	110	150
687.174	7.96	peak	23.18	31.14	46.00	-14.86	110	150
879.359	7.72	peak	25.82	33.54	46.00	-12.46	115	150

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
3903.808	42.21	---	0.91	43.12	---	74.00	54.00	-30.88	140	150
7054.108	42.60	---	2.75	45.35	---	74.00	54.00	-28.65	130	150



Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

1900 Band Idle Mode_ DC 4.0 V

Mode: Idle

Polarization: Horizontal

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
32.705	6.66	peak	13.06	19.72	40.00	-20.28	105	150
199.359	13.34	peak	12.18	25.52	43.50	-17.98	100	150
647.896	7.24	peak	22.74	29.98	46.00	-16.02	120	150
887.776	6.37	peak	25.99	32.36	46.00	-13.64	115	150

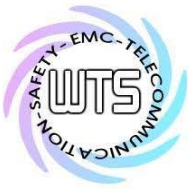
Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
3993.988	42.74	---	1.18	43.92	---	74.00	54.00	-30.08	130	150
7350.701	43.92	---	1.90	45.82	---	74.00	54.00	-28.18	135	150

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
31.623	7.64	peak	13.04	20.68	40.00	-19.32	110	150
298.377	11.88	peak	15.21	27.09	46.00	-18.91	105	150
615.631	7.49	peak	22.25	29.74	46.00	-16.26	110	150
887.776	7.38	peak	25.99	33.37	46.00	-12.63	120	150

Frequency (MHz)	Reading (dBuV)		Factor (dB) Corr.	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
	Peak	Ave.		Peak	Ave.	Peak	Ave.			
3939.880	42.47	---	1.02	43.49	---	74.00	54.00	-30.51	135	150
6669.339	40.76	---	4.38	45.14	---	74.00	54.00	-28.86	140	150

Note: Please refer to appendix for plot data.



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7.3 Explanation of test result

Result Level = Reading Level + Corrected Factor

Corrected Factor = SG level – Received level-Cable loss + substitution antenna gain

7.4 Calculation of Limit for Field Strength of Spurious

Compliance with § 22.917(a) requires that any emission be attenuated below the transmitter power at least $43 + 10 \log_{10} P$ (P = transmitter power in Watts).

The compliance limit was calculated as an example per the following:

Maximum transmitter radiated power: $P=0.71$ watt

Required attenuation: $A=43 + 10 \log_{10} P$

Limit for Spurious Emissions at Antenna Terminals: $L=P-A=-13\text{dBm}$

Test equipment: ETSTW-RE 003, ETSTW-RE 017, ETSTW-RE 042, ETSTW-RE 043,
ETSTW-RE 044, ETSTW-GSM 02

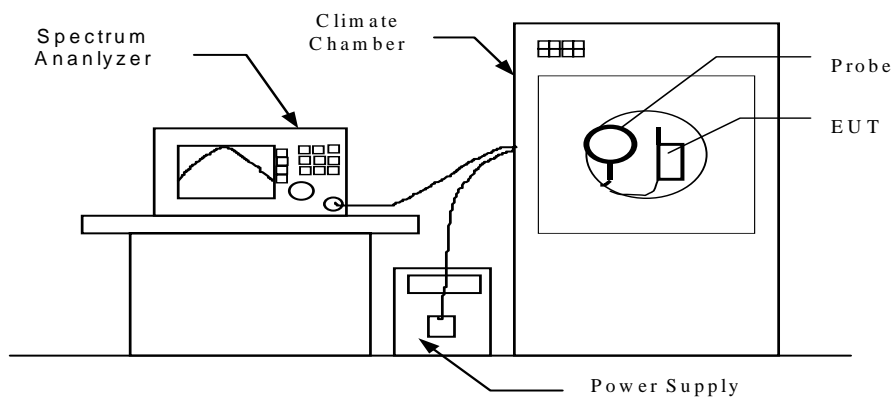
Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

8. Frequency Stability

8.1 Test procedure

- ☒ The equipment under test was supplied with rated power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable, exited the chamber through an opening made for that purpose.
After the temperature stabilized the frequency output was recorded from the counter.
- ☐ An external variable power supply was used to supply nominal voltage and 85% to 115% of nominal voltage to the EUT under room temperature. Record the frequencies measured from the counter.
- ☒ End point voltage: For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer. Then record the frequencies measured from the counter.





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FCC ID: UJU9QATOMV000

8.2 Test Results

8.2.1 Frequency Stability vs. Temperature

CH128 824.2 MHz

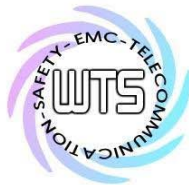
Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 4.0 V	-30	-0.3	-0.36	±2.5
	-20	-0.2	-0.24	
	-10	-0.1	-0.12	
	0	-0.2	-0.24	
	10	-0.1	-0.12	
	20	0	0.00	
	30	0.1	0.12	
	40	0.2	0.24	
	50	0.3	0.36	

CH188 836.2 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 4.0 V	-30	-0.4	-0.48	±2.5
	-20	-0.3	-0.36	
	-10	-0.3	-0.36	
	0	-0.2	-0.24	
	10	-0.1	-0.12	
	20	0	0.00	
	30	0.1	0.12	
	40	0.2	0.24	
	50	0.2	0.24	

CH251 848.8 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 4.0 V	-30	-0.5	-0.59	±2.5
	-20	-0.4	-0.47	
	-10	-0.4	-0.47	
	0	-0.2	-0.24	
	10	-0.2	-0.24	
	20	0	0.00	
	30	0.2	0.24	
	40	0.3	0.35	
	50	0.5	0.59	



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CH512 1850.2 MHz

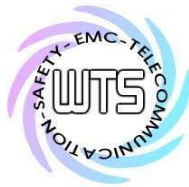
Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 4.0 V	-30	-0.5	-0.27	±2.5
	-20	-0.5	-0.27	
	-10	-0.3	-0.16	
	0	-0.2	-0.11	
	10	-0.2	-0.11	
	20	0	0.00	
	30	0.2	0.11	
	40	0.3	0.16	
	50	0.3	0.16	

CH661 1880.0 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 4.0 V	-30	-0.4	-0.21	±2.5
	-20	-0.2	-0.11	
	-10	-0.2	-0.11	
	0	-0.1	-0.05	
	10	-0.1	-0.05	
	20	0	0.00	
	30	0.1	0.05	
	40	0.3	0.16	
	50	0.4	0.21	

CH810 1909.8 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 4.0 V	-30	-0.5	-0.26	±2.5
	-20	-0.5	-0.26	
	-10	-0.4	-0.21	
	0	-0.3	-0.16	
	10	-0.3	-0.16	
	20	0	0.00	
	30	0.2	0.10	
	40	0.3	0.16	
	50	0.4	0.21	



Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

8.2.2 Frequency Stability vs. Voltage

CH128

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.3	0.36	±2.5

CH188

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.3	0.36	±2.5

CH251

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.5	0.59	±2.5

CH512

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.6	0.32	±2.5

CH661

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.5	0.27	±2.5



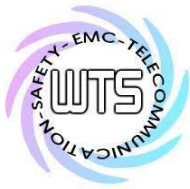
Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

CH810

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.6	0.31	±2.5

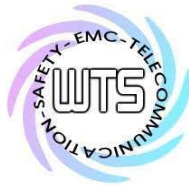
Test equipment: ETSTW-CE009, ETSTW-RE 003, ETSTW-RE055, ETSTW-GSM 02



Report Number: W6M20803-8930-P-2224
FCC ID: UJU9QATOMV000

Appendix

- A RF Power Output
- B Occupied Bandwidth / Emission Mask
- C Spurious Emissions at Antenna Terminals
- D Filed Strength of Spurious Emission



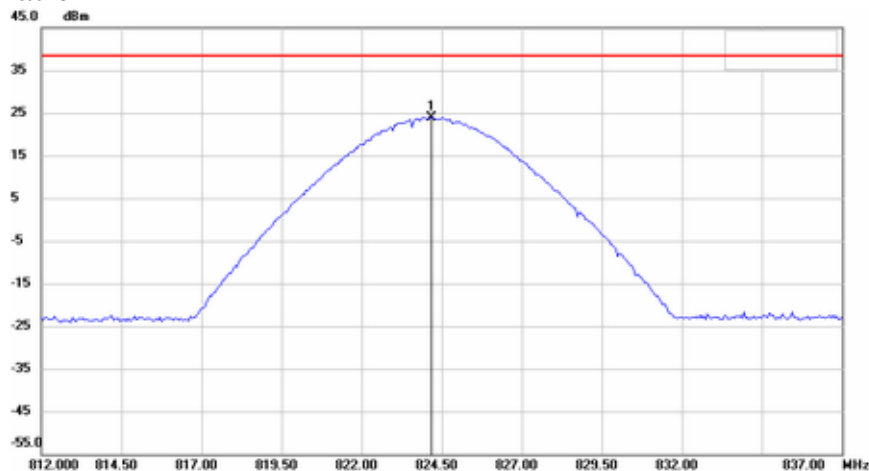
Report Number: W6M20803-8930-P-2224

FCC ID: UJU9QATOMV000

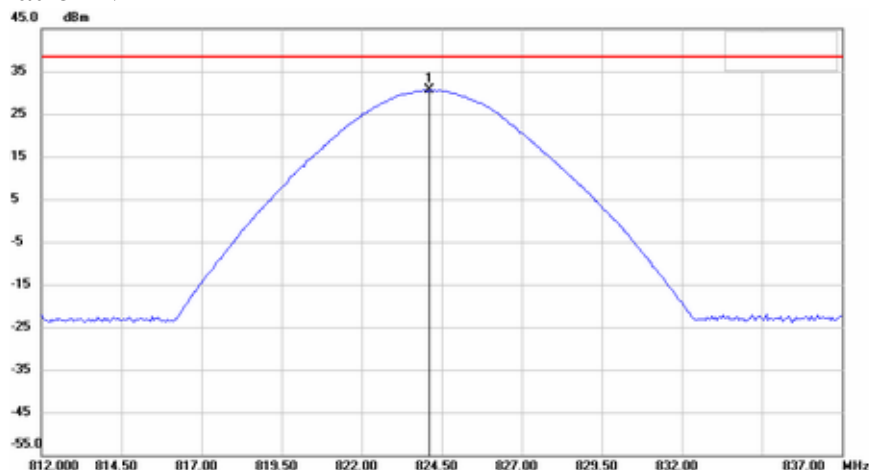
RF Power Output

850 band_ CH 128_3.6 V

Antenna Polarization H

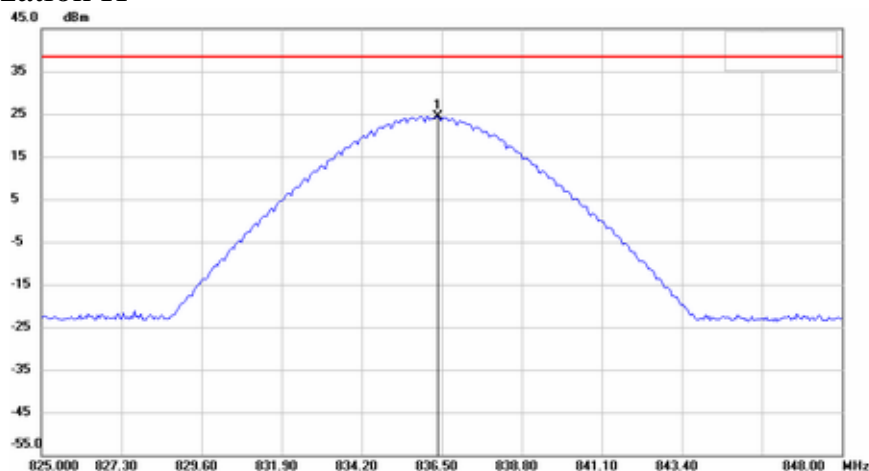


Antenna Polarization V



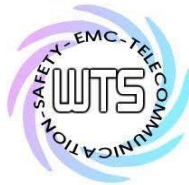
850 band_ CH 188_3.6 V

Antenna Polarization H



Note:

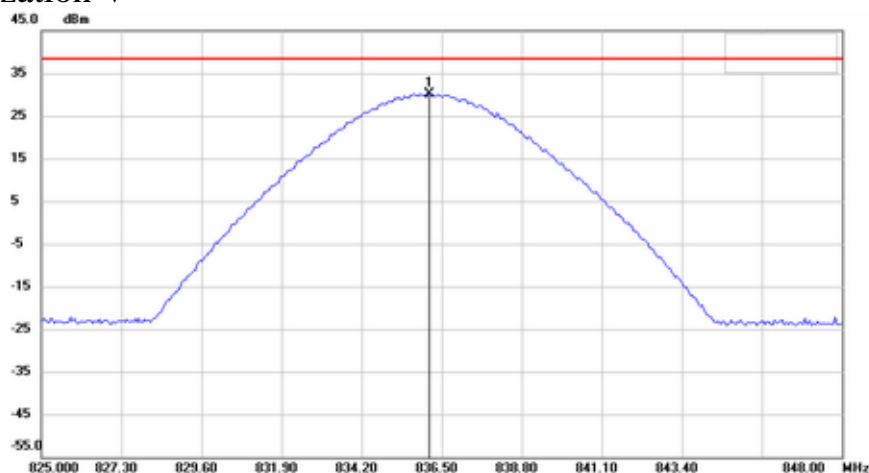
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Report Number: W6M20803-8930-P-2224

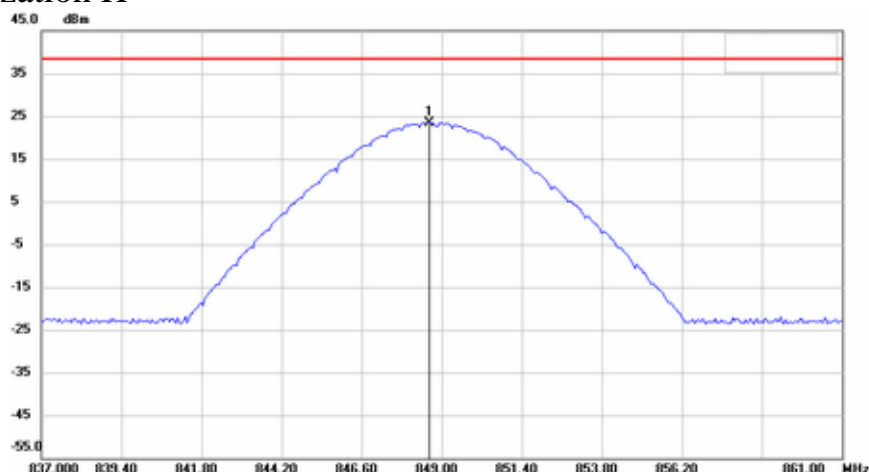
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Antenna Polarization V

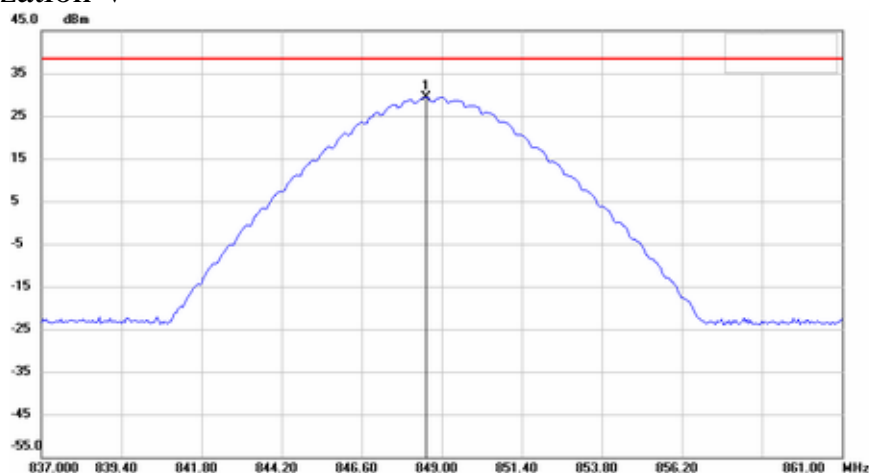


850 band_ CH 251_3.6 V

Antenna Polarization H

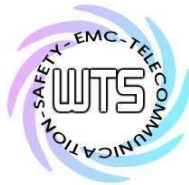


Antenna Polarization V



Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

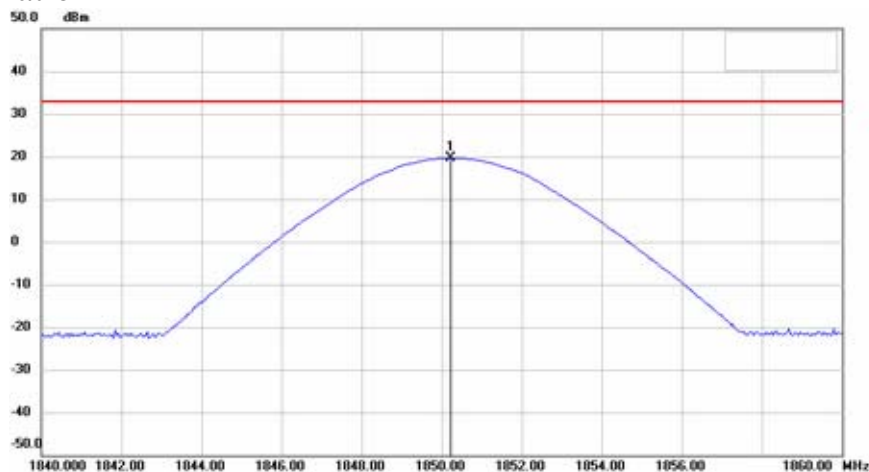


Report Number: W6M20803-8930-P-2224

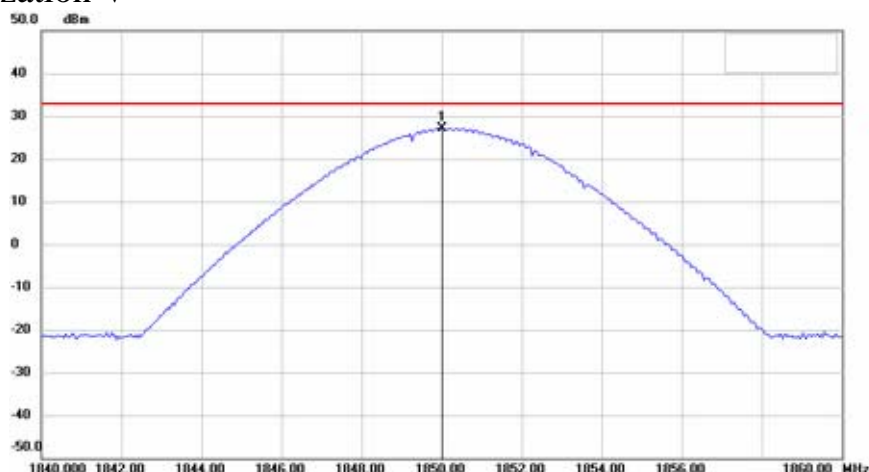
FCC ID: UJU9QATOMV000

1900 band_ CH 512_3.6 V

Antenna Polarization H

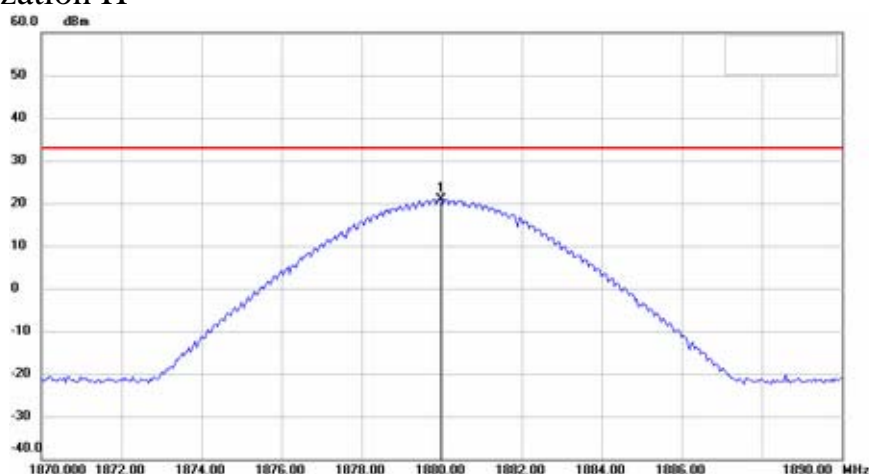


Antenna Polarization V



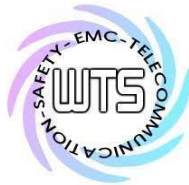
1900 band_ CH 661_3.6 V

Antenna Polarization H



Note:

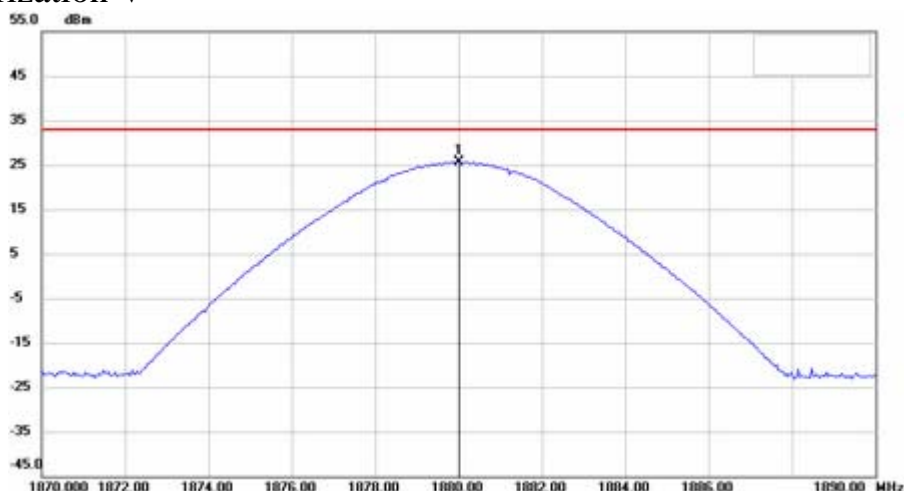
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Report Number: W6M20803-8930-P-2224

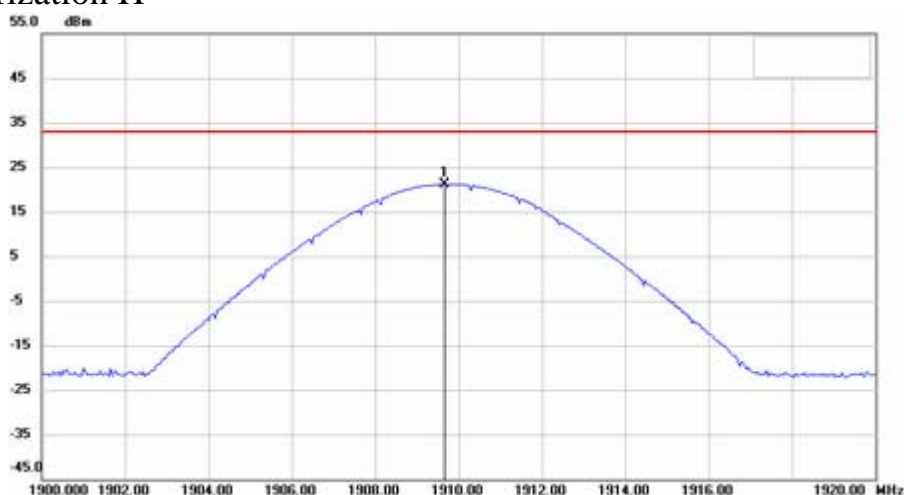
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Antenna Polarization V

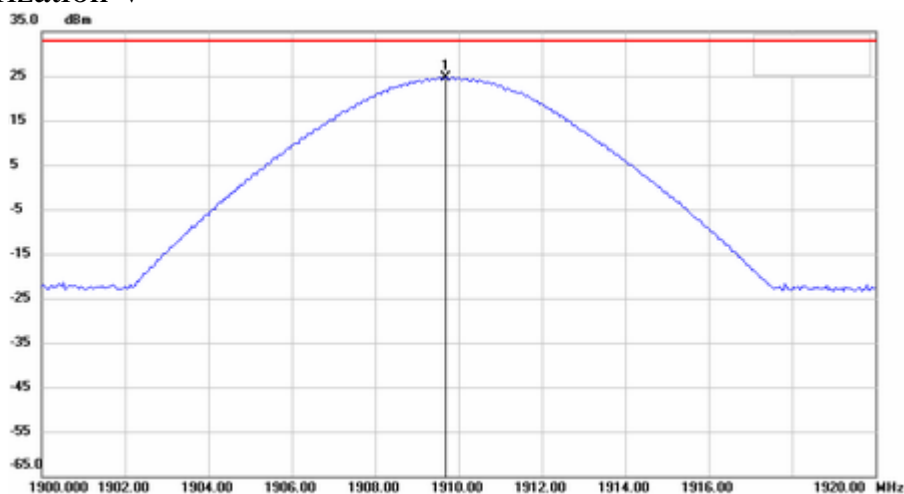


1900 band_ CH 810_3.6 V

Antenna Polarization H

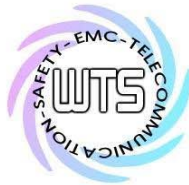


Antenna Polarization V



Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

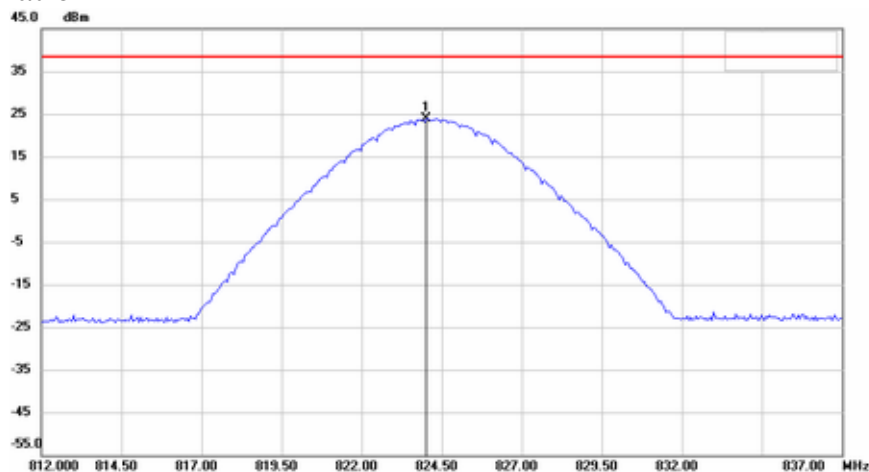


Report Number: W6M20803-8930-P-2224

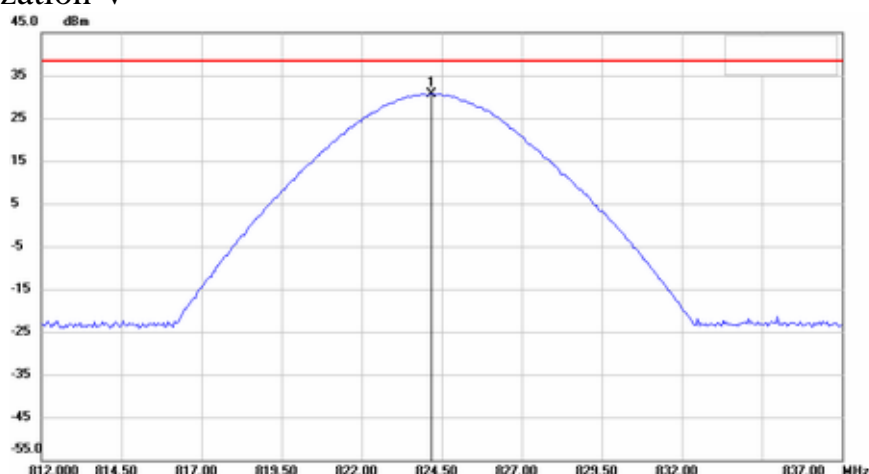
FCC ID: UJU9QATOMV000

850 band_ CH 128_4.0 V

Antenna Polarization H

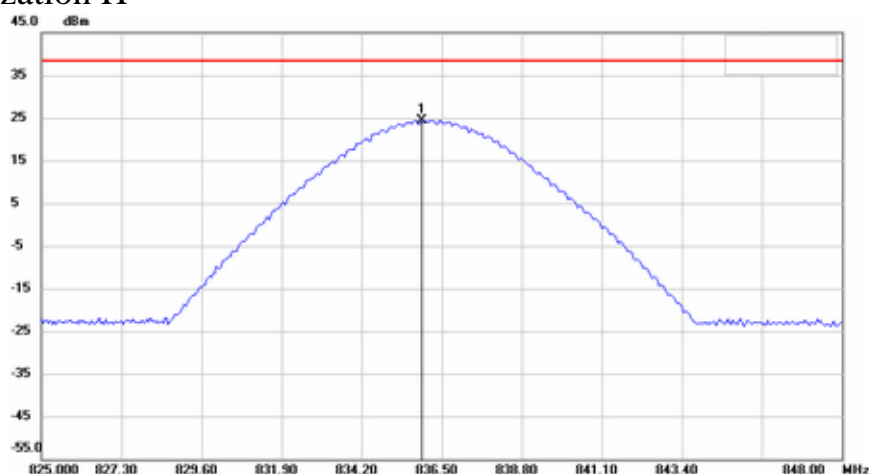


Antenna Polarization V



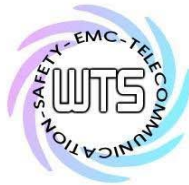
850 band_ CH 188_4.0 V

Antenna Polarization H



Note:

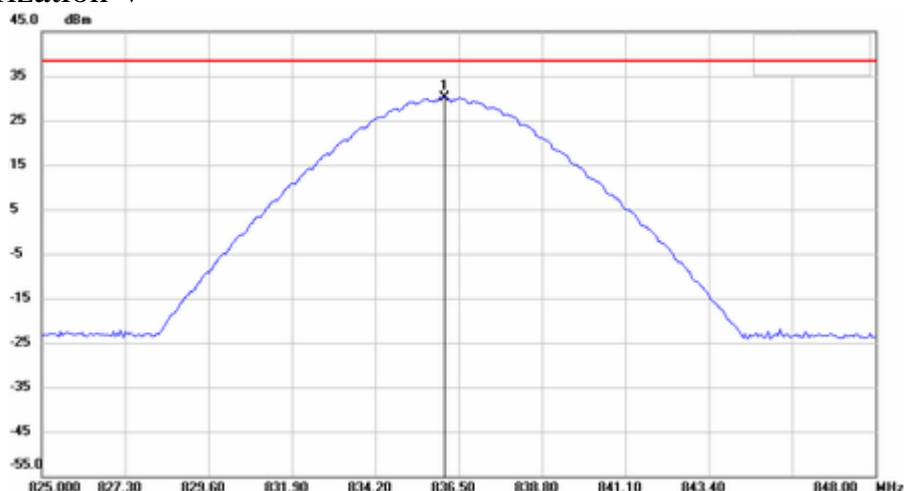
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



Report Number: W6M20803-8930-P-2224

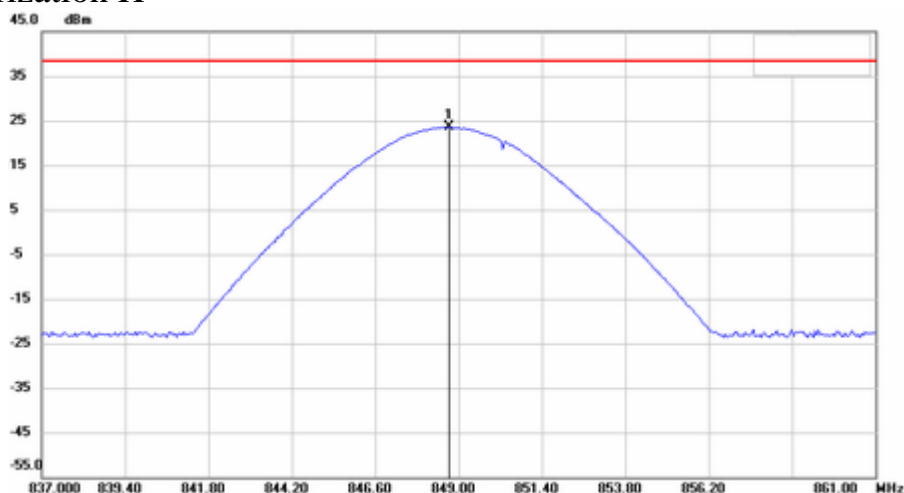
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Antenna Polarization V

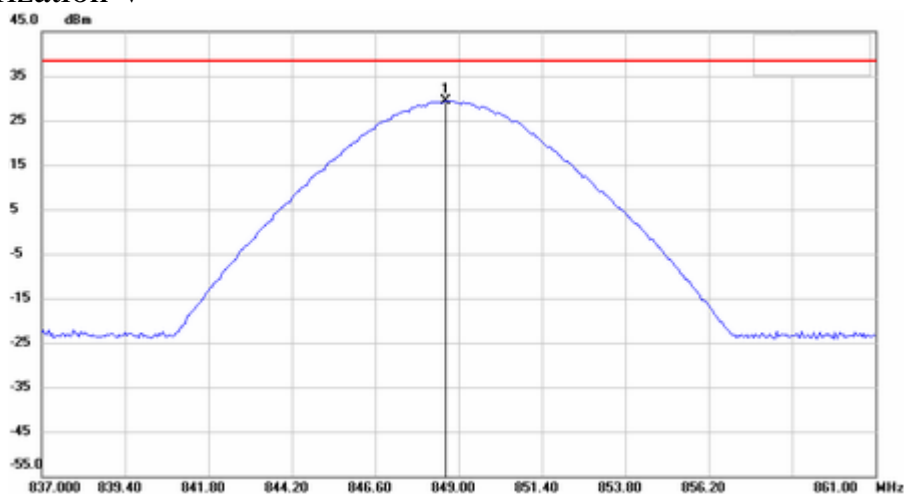


850 band_ CH 251_4.0 V

Antenna Polarization H

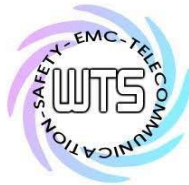


Antenna Polarization V



Note:

1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.

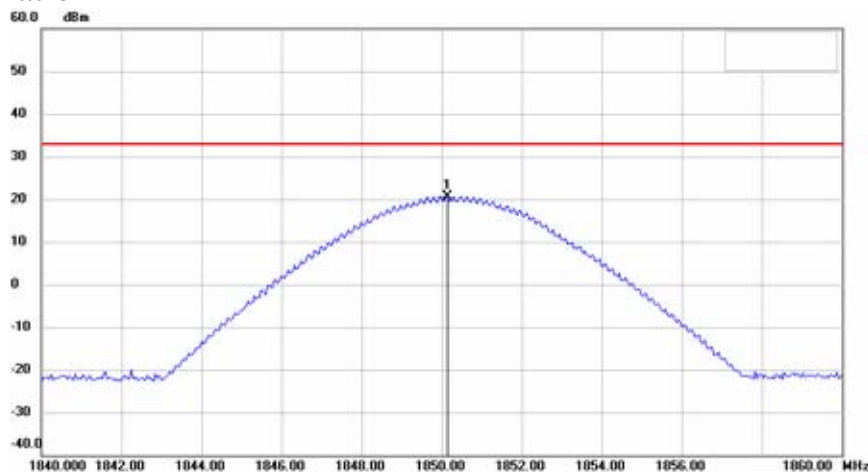


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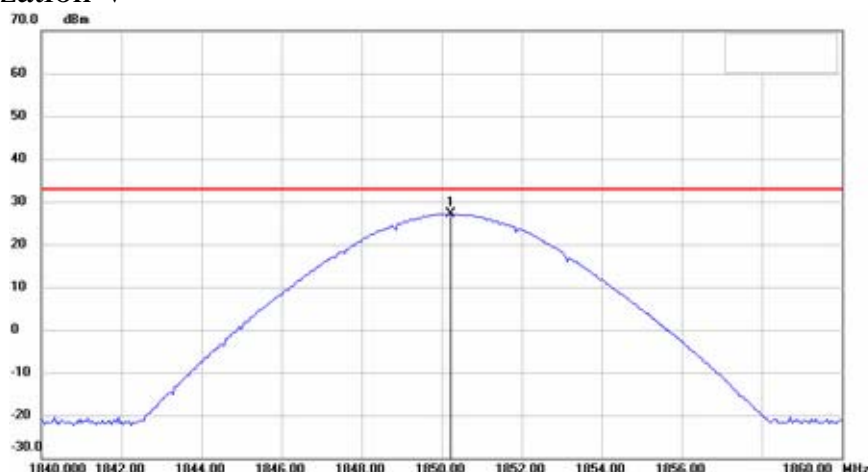
FCC ID: UJU9QATOMV000

1900 band_ CH 512_4.0 V

Antenna Polarization H

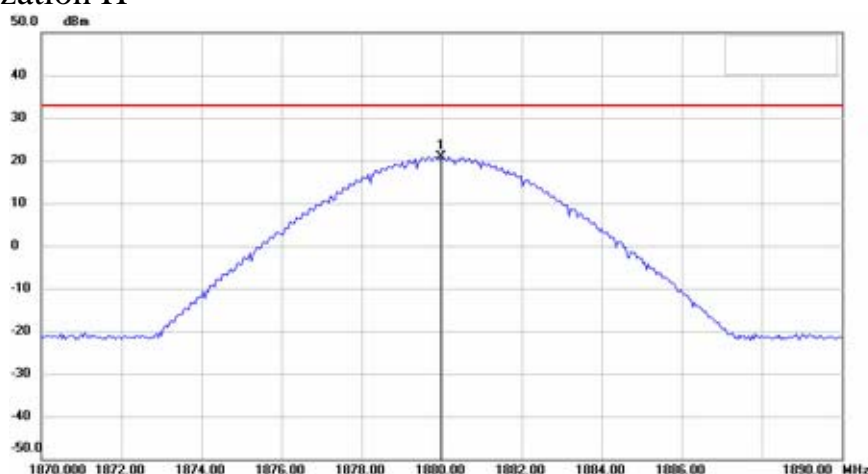


Antenna Polarization V



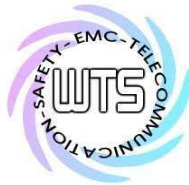
1900 band_ CH 661_4.0 V

Antenna Polarization H



Note:

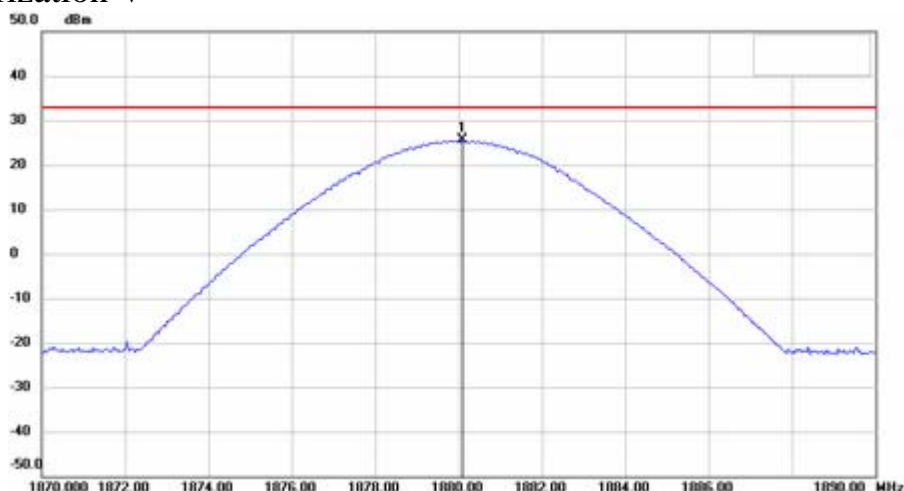
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



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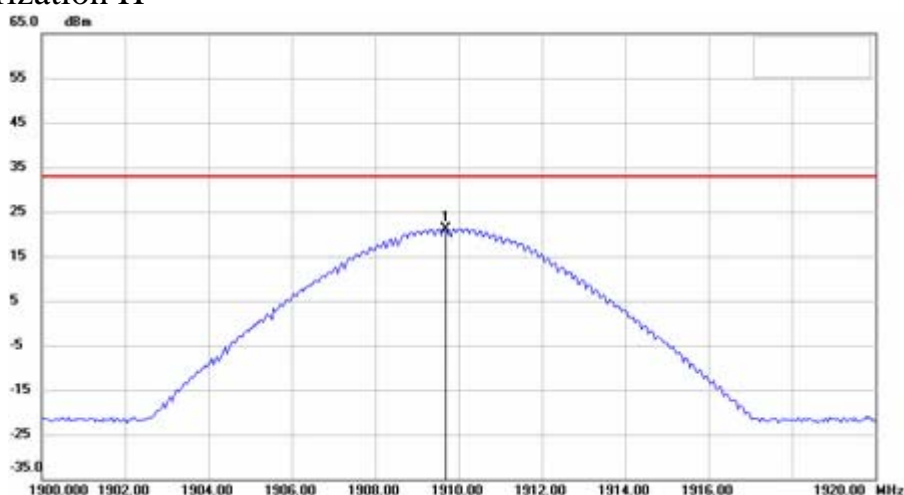
FCC ID: UJU9QATOMV000

Antenna Polarization V

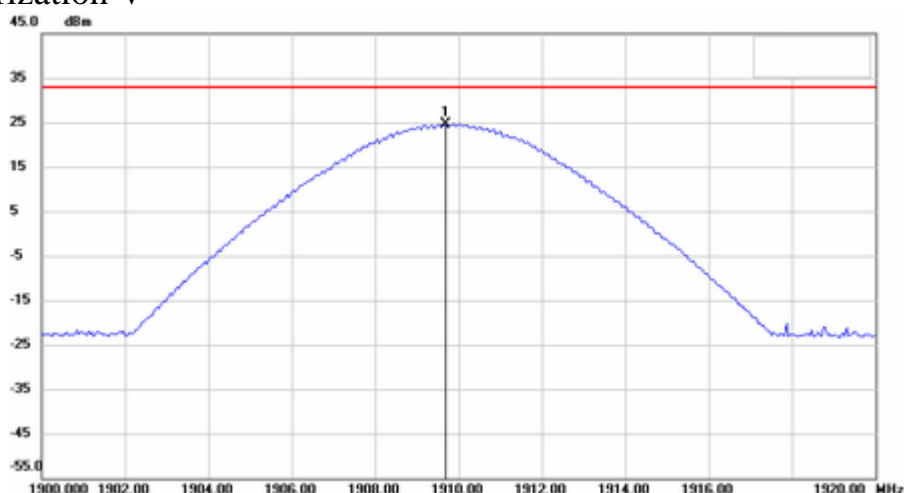


1900 band_ CH 810_4.0 V

Antenna Polarization H

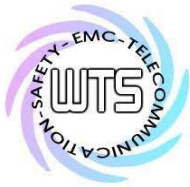


Antenna Polarization V



Note:

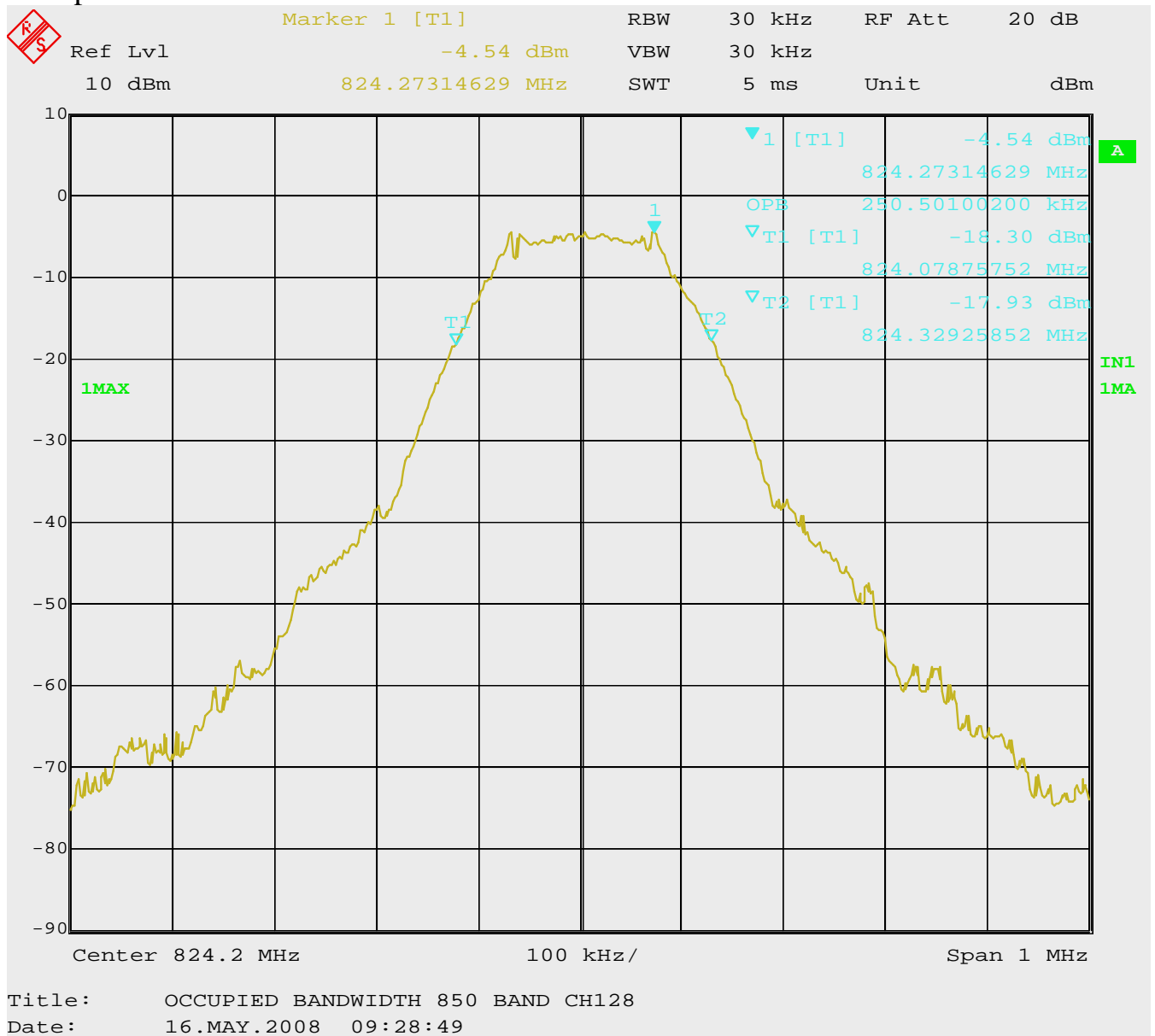
1. The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.
2. The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.
3. For corrected test results are listed in the relevant table of radiated test data of this test report.



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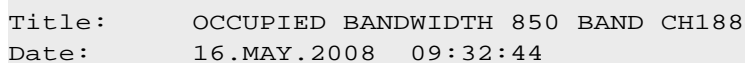
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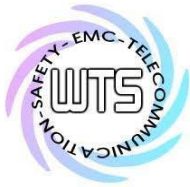
Occupied Bandwidth / Emission Mask





FCC ID: UJU9QATOMV000

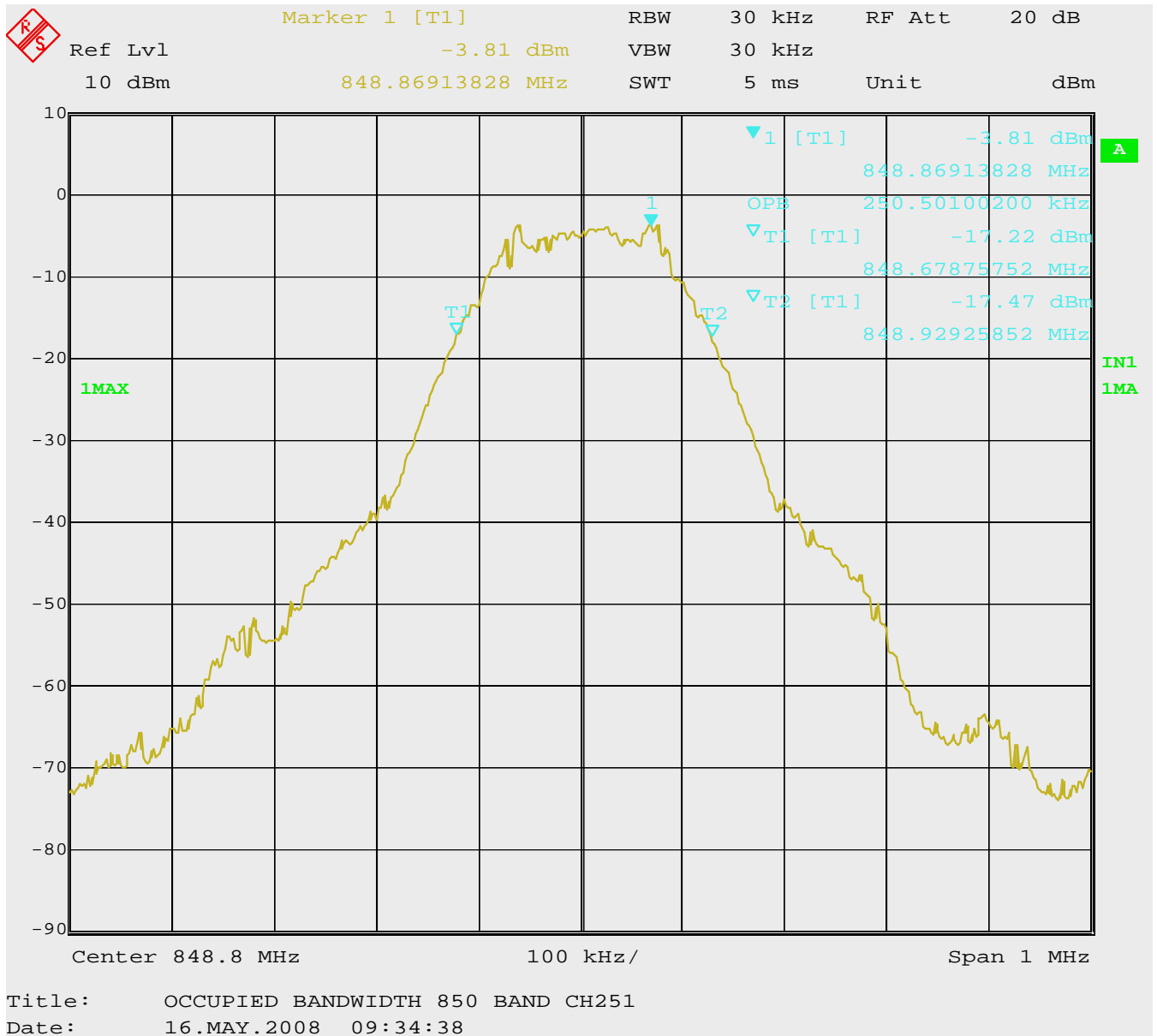


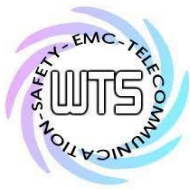


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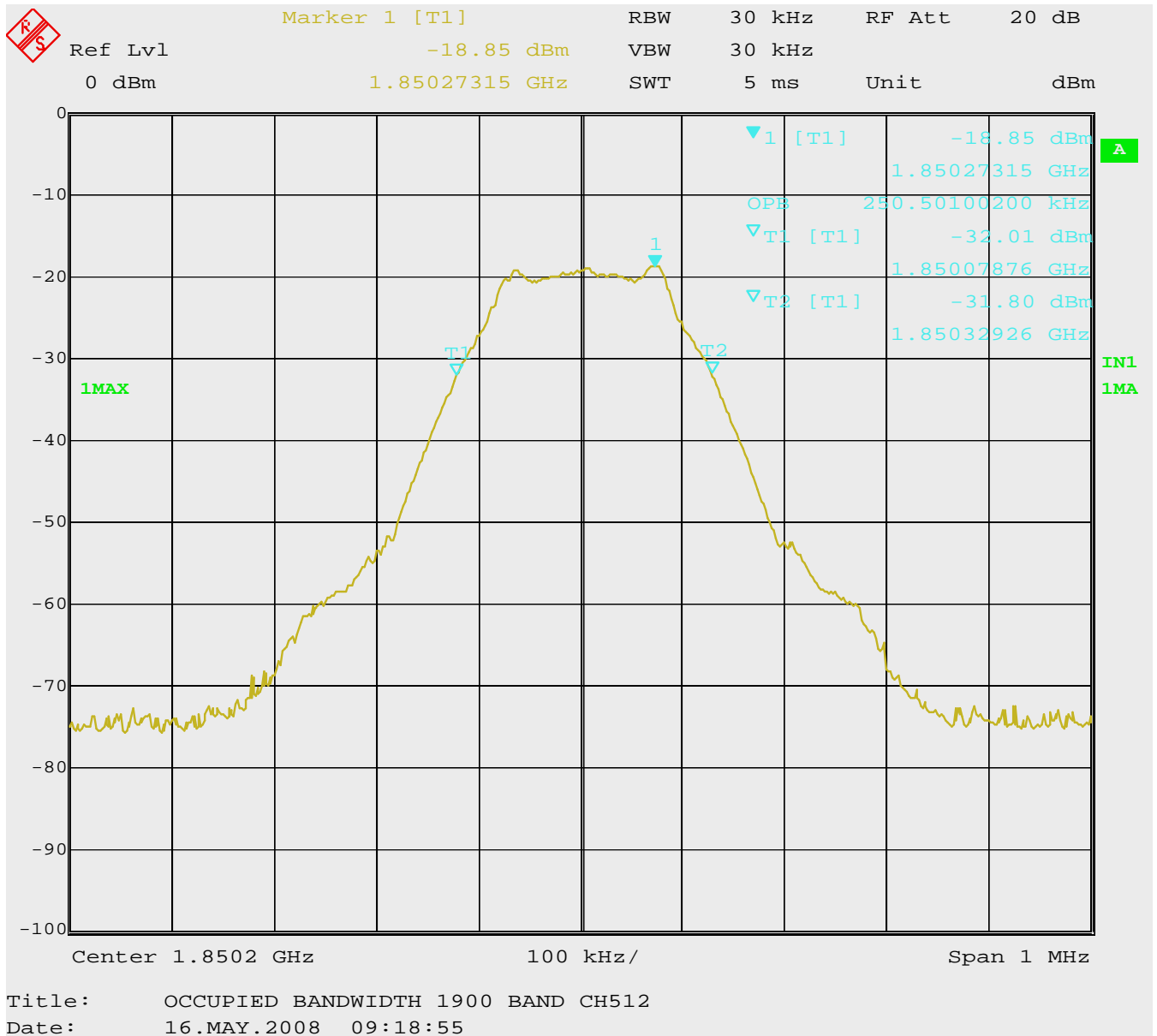
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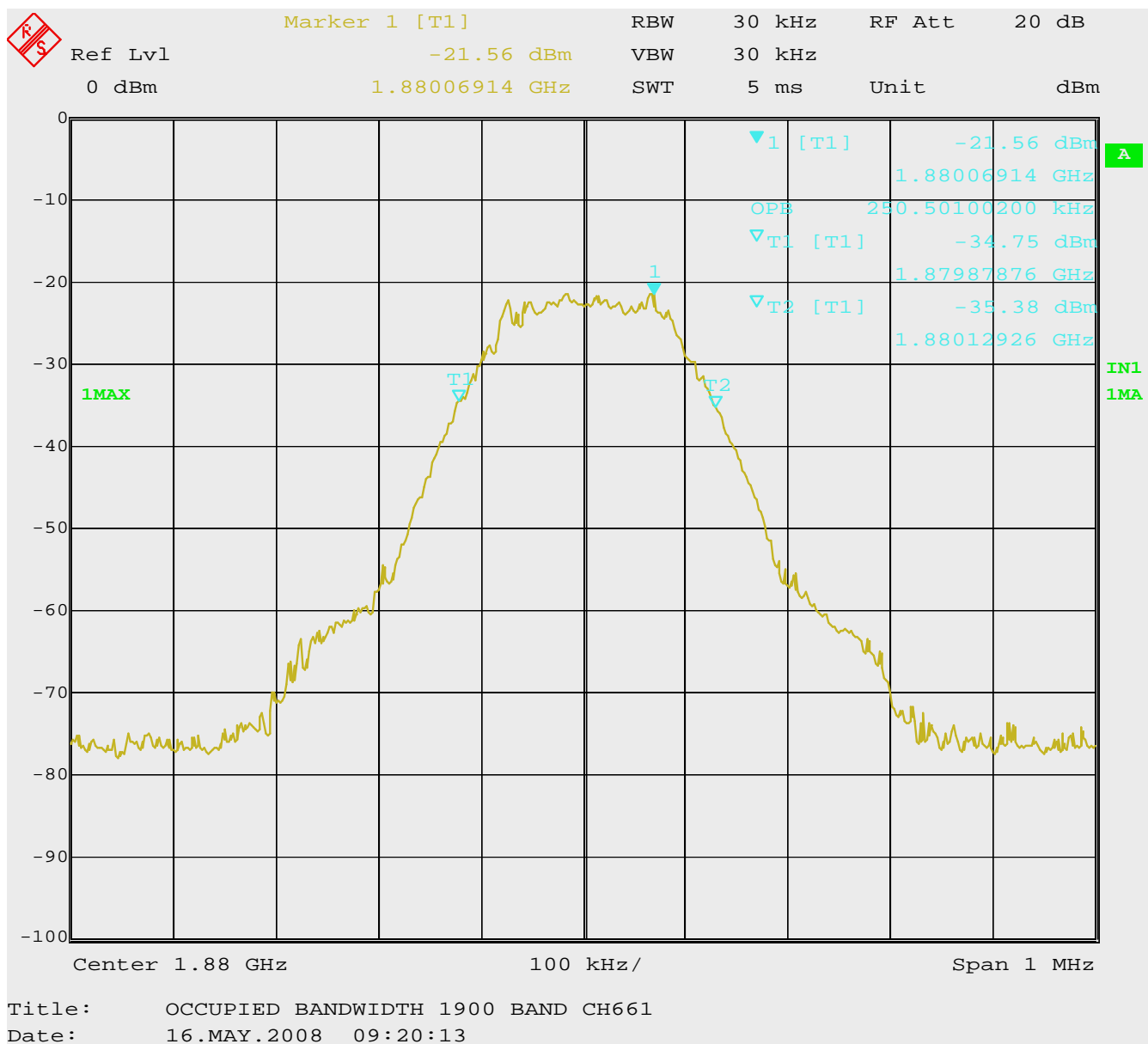
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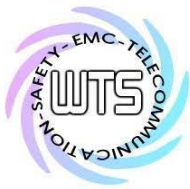
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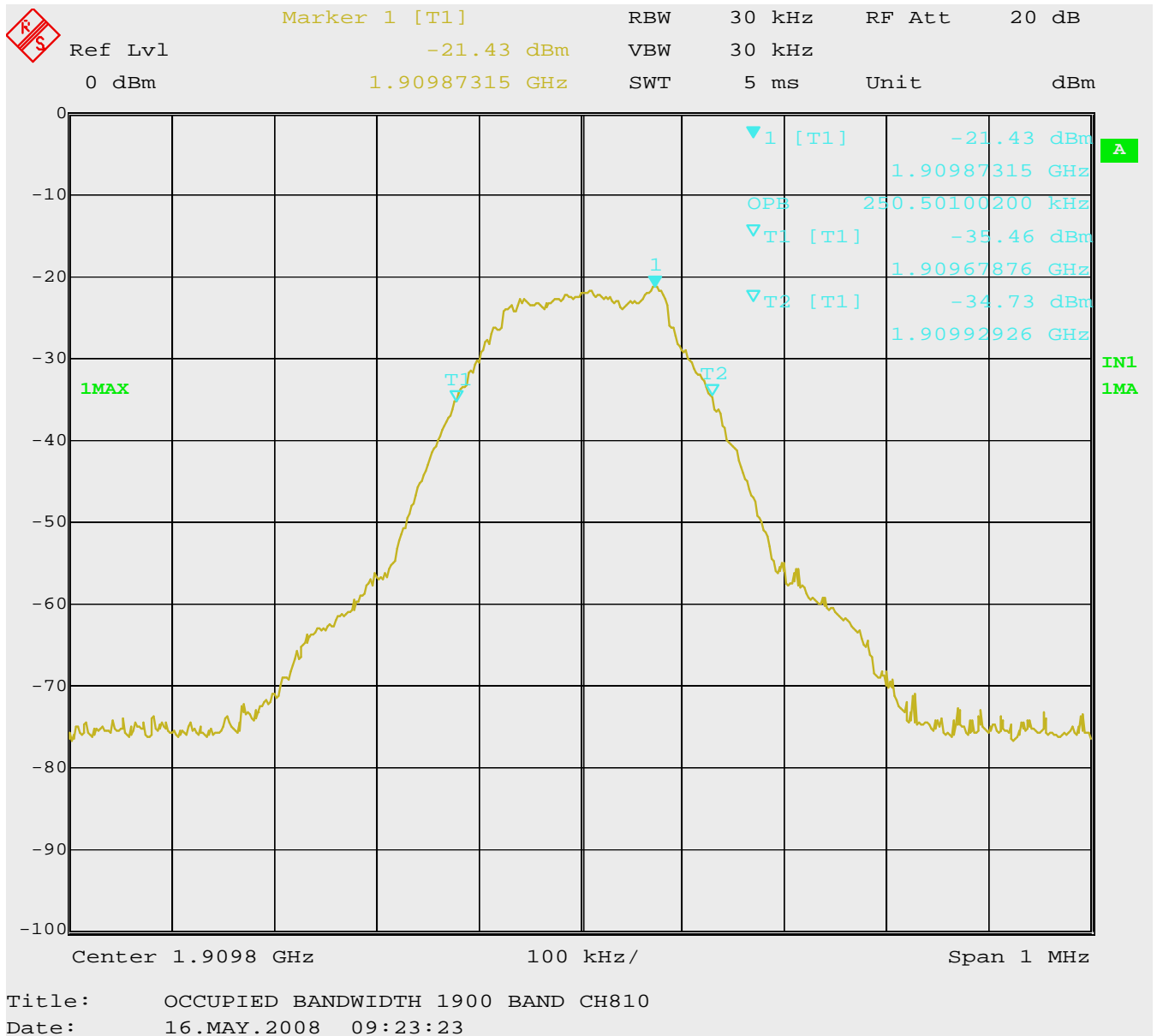
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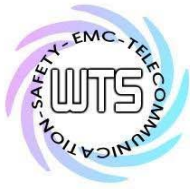




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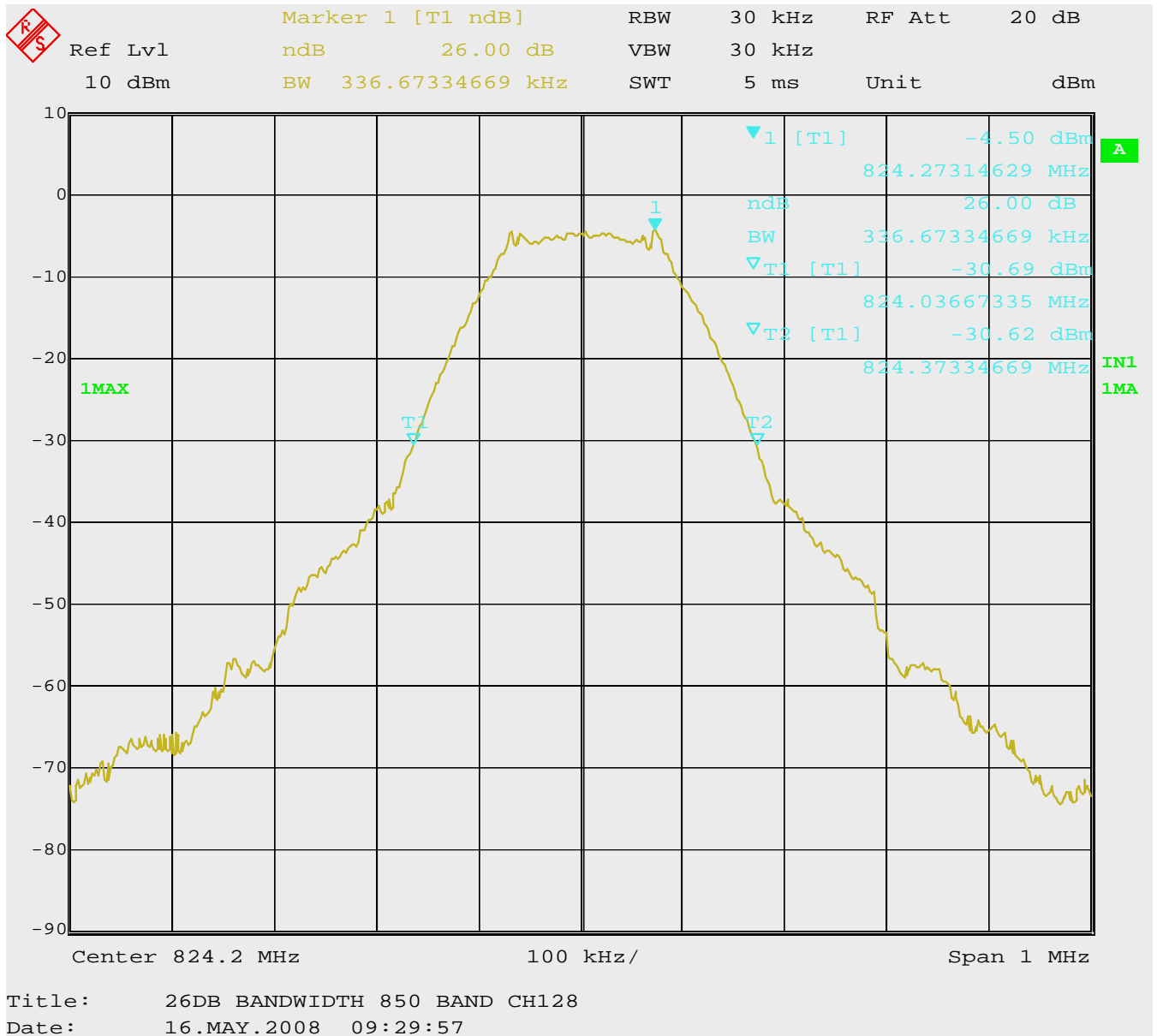


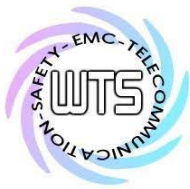


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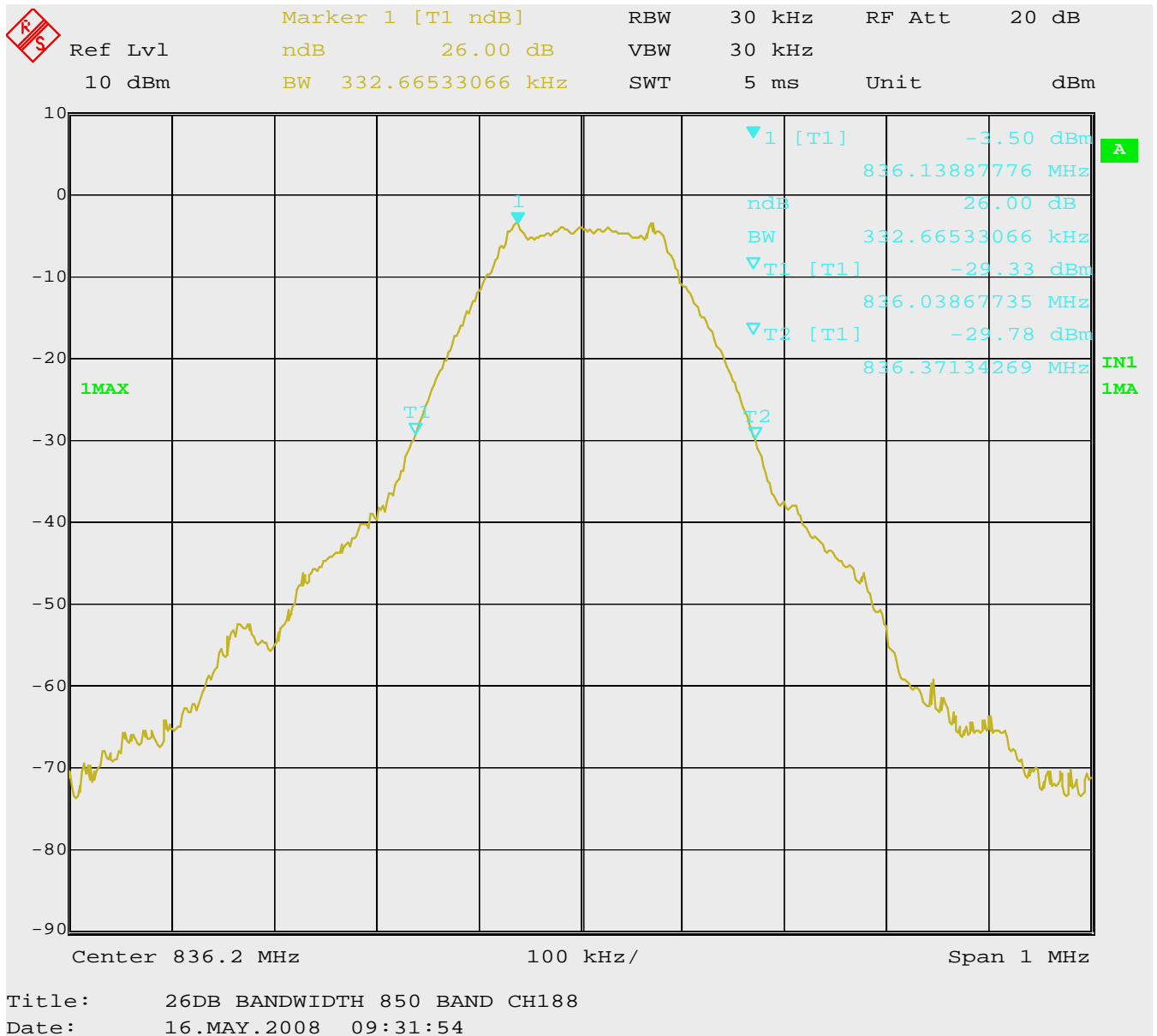


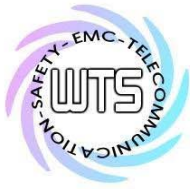


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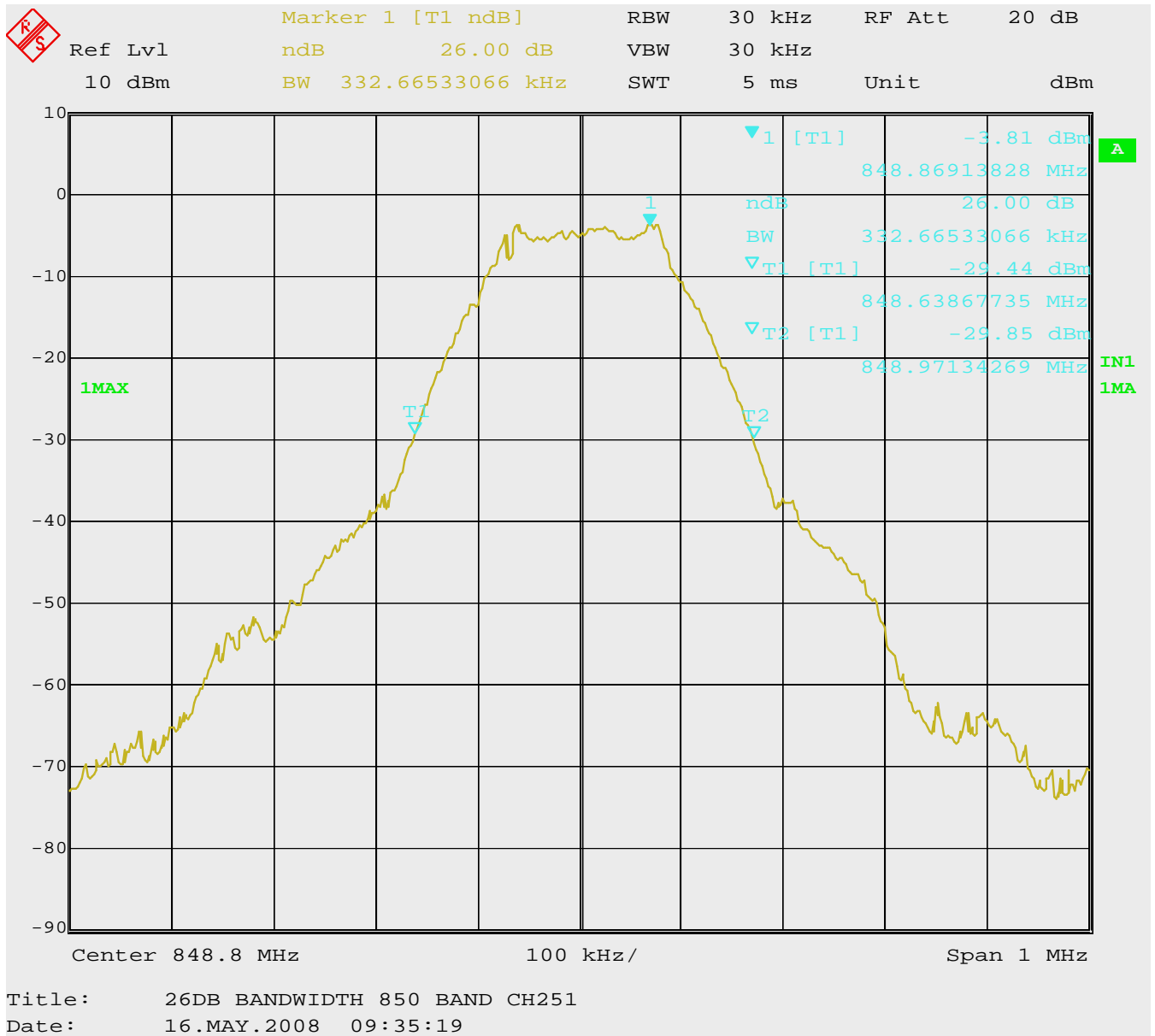


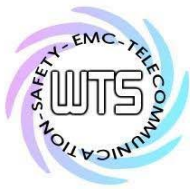


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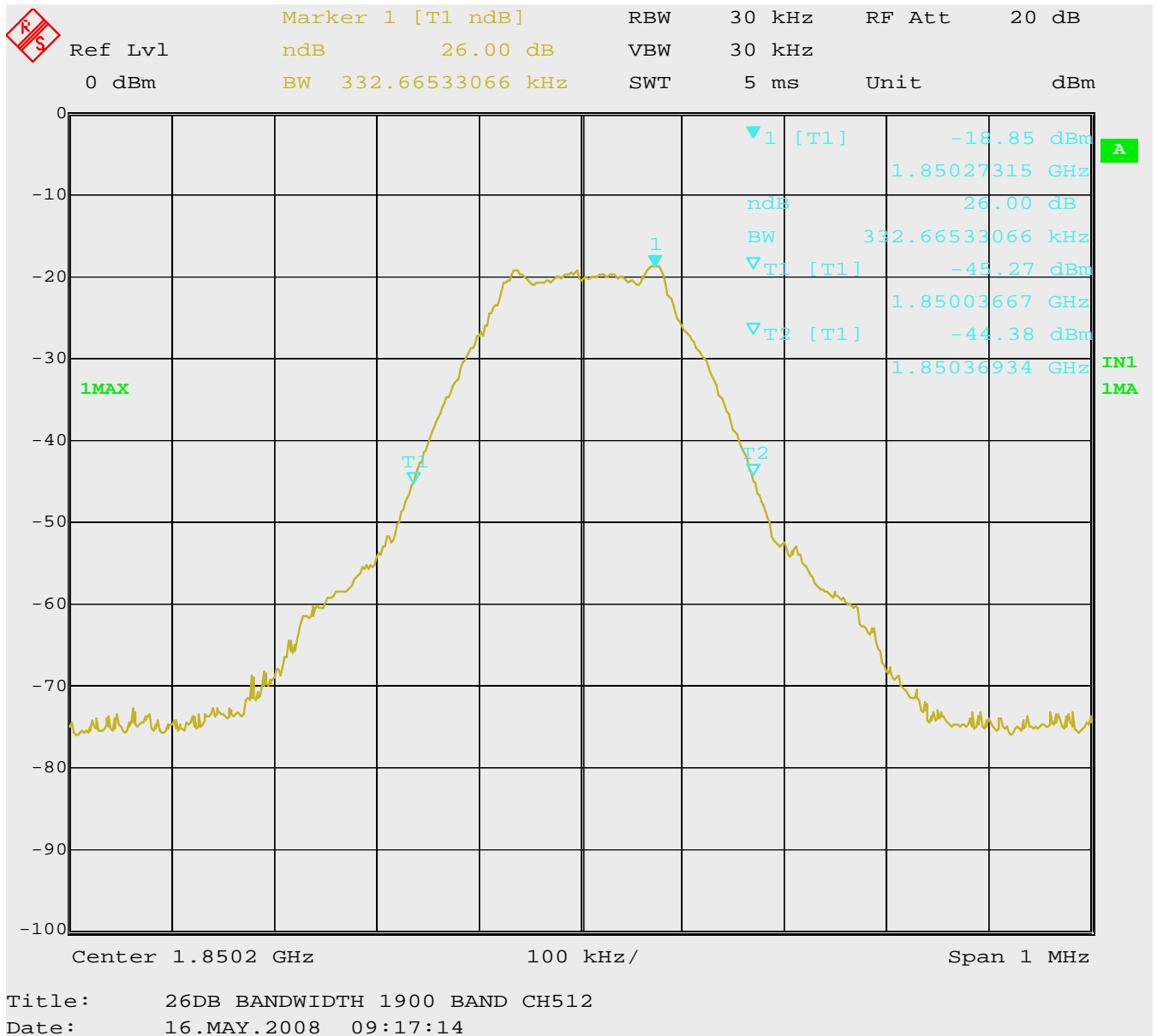


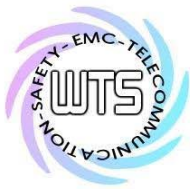


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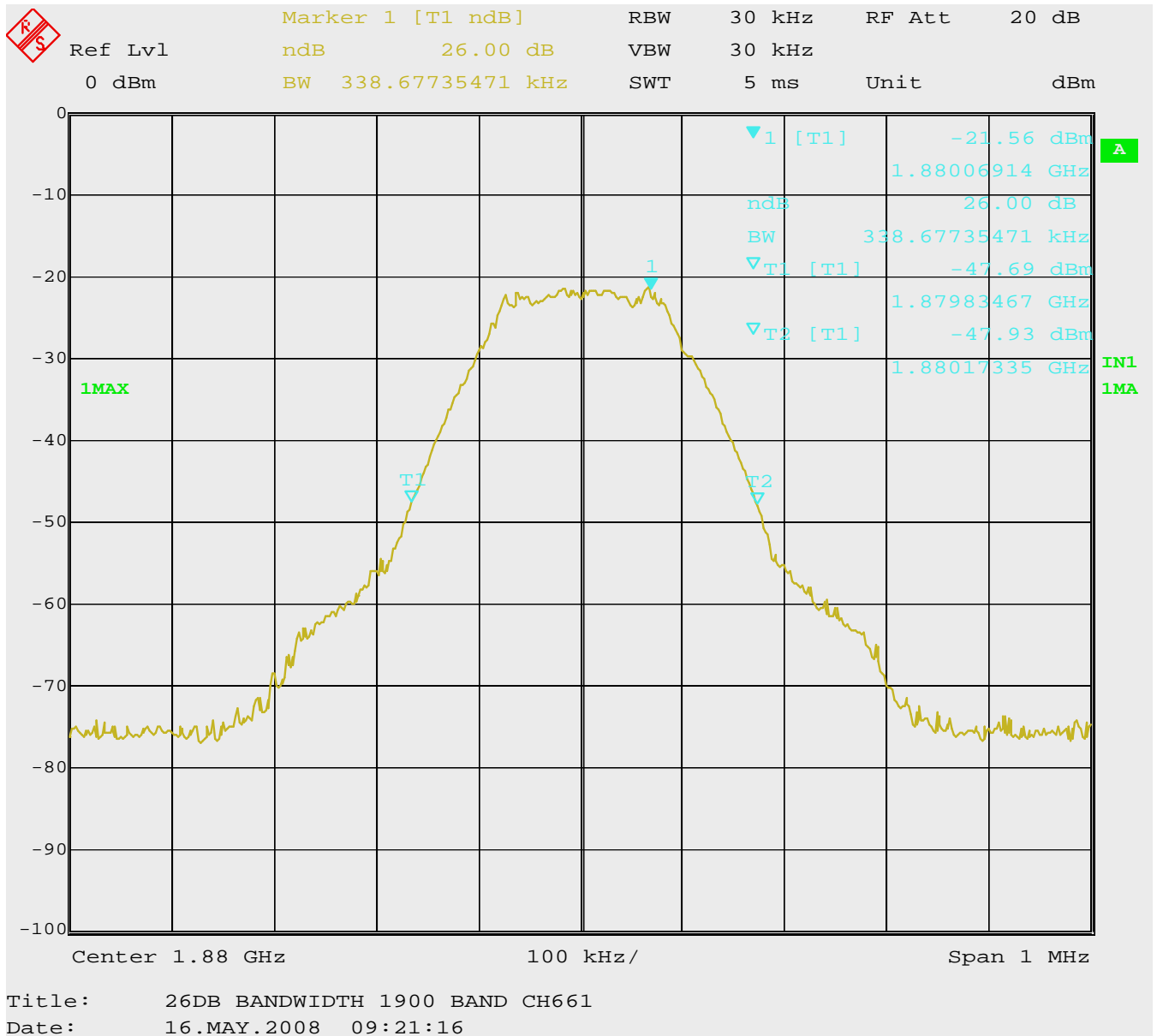


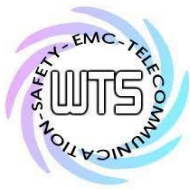


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