FCC PART 22 TEST REPORT

for

Equipment: CDMA Cellular Phone
FCC ID: US7-IT80X
Model No.: iT80X

of

Applicant: **Cal-Comp Electronics &Communications Company Limited**
Address: **3F., No.99, NAN-KING E.RD.,SEC.5, Taipei 105, Taiwan, R.O.C.**

Tested and Prepared

by

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Report Number: W6M20611-7576-P-22
FCC ID: US7-IT80X

Certification of Test Report

Applicant : Cal-Comp Electronics & Communications Company Limited

Manufacturer : Cal-Comp Electronics (SUZHOU) CO. Ltd

Tested Equipment :

Type Description	: CDMA Cellular Phone
Model Number	: iT80x
Series Number	: N/A
Brand Name	: Cal-Comp
Operation Frequency	: 824.7-848.31MHz
RF Output Power	: 24dBm
Power Supply	: input 100-240 VAC, 50-60Hz 0.15A output 5.2VDC 600mA 3.7 VDC (battery)

Regulation Applied : 47CFR Part 22 (2005-10)

Test Method : 47CFR Part 2 (2005), 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.

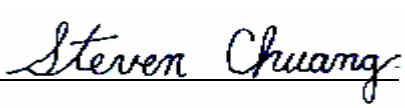
Note:

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

Test Engineer:

Date	ETS-Lab.	Name	Signature
November 28, 2006		Jay Chaing	

Technical responsibility for area of testing:

Date	ETS	Name	Signature
November 28, 2006		Steven Chuang	

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1. Summary

1.1 Description of tested equipment

This equipment under test is a single-band cellular phone. This advanced and compact phone, is designed to operate with the latest digital mobile communication technology, Code Division Multiple Access (CDMA). The operation frequency band and rated RF output power are listed as follows:

824.7-848.31MHz (Cellular, Part 22), 0.25118864Watts

This test report only contains test requirements specified in 47CFR Part 22 for Cellular Phone function.

1.2 Date of testing processing

Test sample received: November 21, 2006

Test finished: November 28, 2006

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(2005), TIA-603-B(2002), ANSI C63.4(2003)

Deviation from test standard: None

Additional information : None

1.5 Summary of test result

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	N/A
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

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
ETS DR. GENZ TAIWAN PS 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: 2300.01
FCC filed test laboratory Reg. No. 930600
Industry Canada filed test laboratory Reg. No. IC 5679
PTCRB Accredited Type Certification Test House

2.2 Details of approval holder

Name	: Cal-Comp Electronics &Communications Company Limited
Street	: 3F., No.99, NAN-KING E.RD.,SEC.5
Town	: Taipei 105
Country	: Taiwan, R.O.C.
Telephone	: 02-2662-2660#7532
Fax	: 02-8913-2001#7573

Manufacturer:
(if applicable)

Name	: Cal-Comp Electronics (SUZHOU) CO. Ltd
Street	: No.2288, Jiangxing Road, Wujiang Economic Development Zone
Town	: Tiansu
Country	: People's Republic of China

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
N/A					
N/A					
N/A					
N/A					
N/A					
N/A					

Frequency Range:
Band: 824.70 MHz ~ 848.31 MHz

Frequencies Selected to be investigated:

Low Frequency (channel 1033) : 824.70MHz
Middle Frequency (channel 384) : 836.52MHz
High Frequency (channel 777) : 848.31MHz

Antenna Type : PIFA antenna

Antenna Gain :

Band	Freq MHz	Azimuth Cut Peak Gain (dBi)
		Free Space
CDMA	824	-1.34
	849	-0.27
	869	0.13
	896	-1.03

Power supply : input 100-240 VAC, 50-60Hz 0.15A
output 5.2VDC 600mA
3.7 VDC(battery)

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 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

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.

2.6 Test Equipment List

No.	Test equipment	Model/SN	Manufacturer	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10 842121/013	R&S	2007/10/15
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5 840731/011	R&S	2007/10/15
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D 137	Schwarzbeck	2007/10/15
ETSTW-CE 006	IMPULS-BEGRENZER PULSE LIMITER	ESH3-Z2 100226	R&S	In House Certificate
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U MAA0305-009	GIANT FORCE	2007/8/16
ETSTW-CE 012	Dual-Phase-V-Network	NNB-2/16Z 03/10201	Telemeter	2007/6/12
ETSTW-RE 002	Function Generator	33220A MY43004982	Agilent	2007/10/13
ETSTW-RE 003	EMI TEST RECEIVER	ESI 831438/001	R&S	2007/10/19
ETSTW-RE 004	EMI TEST RECEIVER	ESI 831459/012	R&S	2007/10/29
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10 843207/020	R&S	2007/10/11
ETSTW-RE 017	ANTENNA	HL025 352886/001	R&S	2008/5/3
ETSTW-RE 021	SWEEP GENERATOR	SWM05 835130/010	R&S	2007/10/10
ETSTW-RE 027	Passive Loop Antenna	6512 34563	EMCO	2007/6/29
ETSTW-RE 028	Log-Periodic DipoleArray Antenna	3148 34429	EMCO	2008/5/25
ETSTW-RE 029	Biconical Antenna	3109 33524	EMCO	2008/5/25
ETSTW-RE 030	Double-Ridged Waveguide Horm Antenna	3117 35224	EMCO	2008/5/2
ETSTW-RE 032	Millivoltmeter	URV 55 849086/013	R&S	2007/10/10
ETSTW-RE 034	Power Sensor	URV5-Z4 839313/006	R&S	2007/10/10
ETSTW-RE 042	ANTENNA	HK116 100172	R&S	2007/1/13
ETSTW-RE 043	ANTENNA	HL223 100166	R&S	2008/5/7
ETSTW-RE 044	ANTENNA	HL050 100094	R&S	2008/5/28
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160 9160-3185	Schwarzbeck	2007/5/18
ETSTW-RE 055	SPECTRUM ANALYZER	FSU-26 200074	R&S	2007/7/27
ETSTW-GSM 02	Universal Radio Communication Tester	CMU 200 103489	R&S	2007/10/17
ETSTW-GSM 11	GSM 850,900,1800,1900 Test system	TS8950G	R&S	2007/4/30
ETSTW-GSM 16	TEMP.&HUMIDITY CHAMBER	GTH-120-40-1P-U MAA0501002	GIANT FORCE	2006/12/28
ETSTW-GSM 18	AUDIO ANALYZER	UPL16 100173	R&S	2007/10/27
ETSTW-GSM 23	SPLITTER	4901.19.A None	SUHNER	Function Test

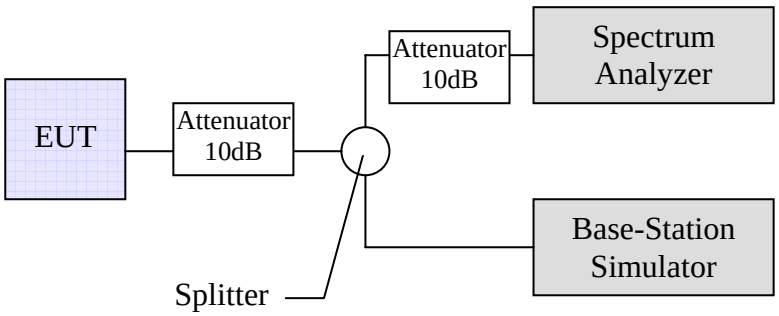
3. RF Power Output

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

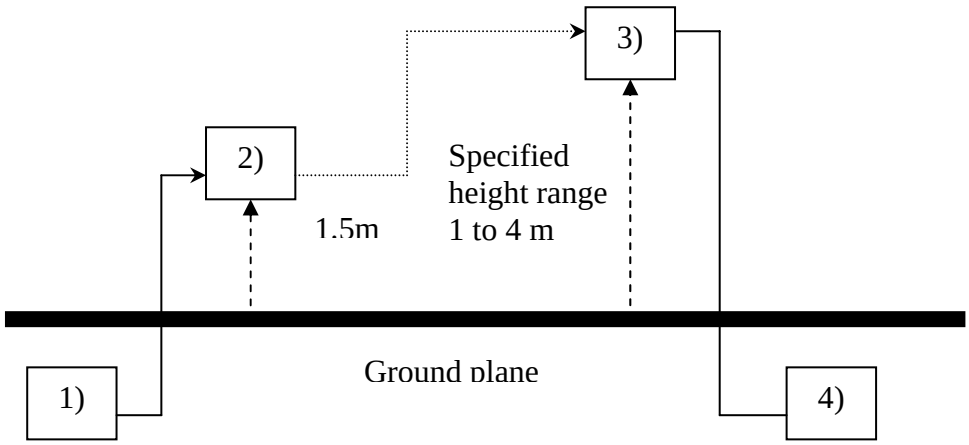
If the conducted measurement is not practical due to the integral antenna, the radiated measurement will be performed in accordance the following procedure:

The EUT was positioned on a non-conductive turntable, 0.8mabove 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.

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

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.70	21.44	23.59	38.45	Pass
836.52	21.89	24.04	38.45	Pass
848.31	20.95	23.10	38.45	Pass

Note: Please refer to appendix A for plot data.

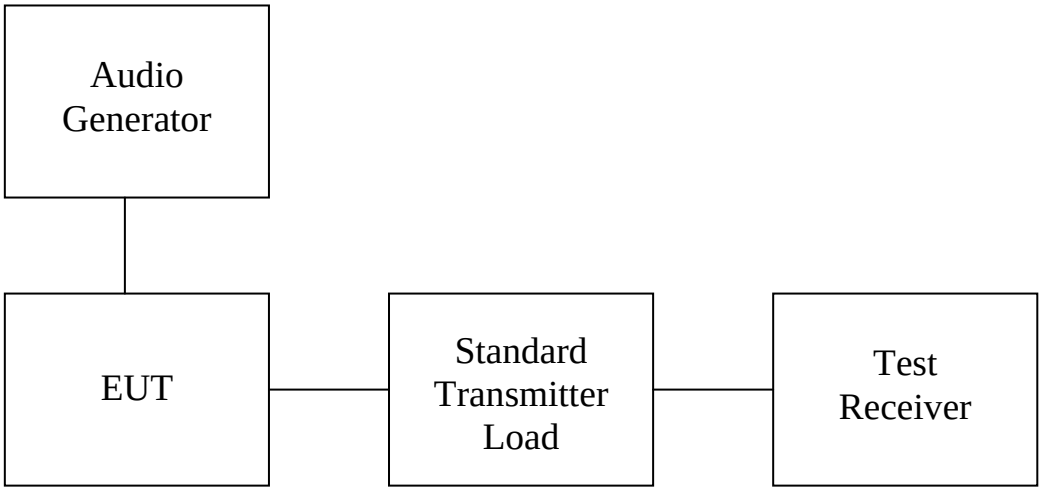
Test equipment: ETSTW-RE 003, ETSTW-RE 043, ETSTW-GSM 02

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

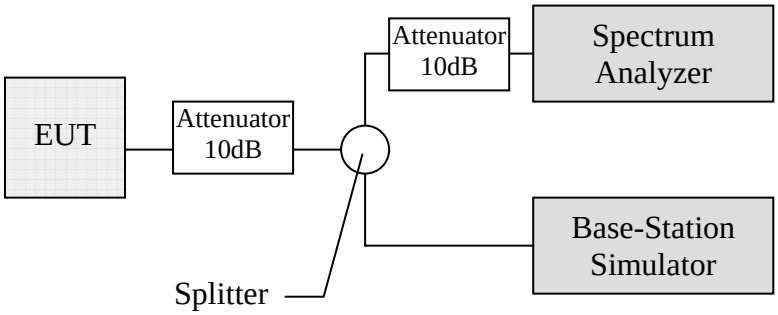
For digital modulation employed, this test item is not applicable.

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 1013	1270.54108
Channel 384	1274.54910
Channel 777	1274.54910
-26dB Channel Bandwidth (kHz)	
Channel 1013	1418.83768
Channel 384	1422.84569
Channel 777	1414.82966

Note: Please refer to appendix B for plot data.

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

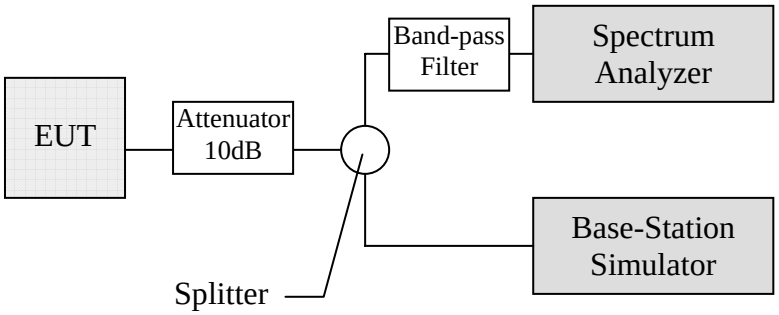
6. Spurious Emissions at Antenna Terminals

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

CH1013

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
136.794	-41.07	-13	28.07
732.051	-40.38	-13	27.38
1649.0384	-27.20	-13	14.2
6044.8717	-39.37	-13	26.37
10057.6923	-38.37	-13	25.37
25012.8205	-36.37	-13	23.37

CH384

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
148.509	-40.24	-13	27.24
476.923	-39.64	-13	26.64
1673.0769	-28.96	-13	15.96
7288.4615	-39.37	-13	26.37
11583.3333	-39.25	-13	26.25
26197.9166	-35.36	-13	22.36

CH777

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
130.528	-40.53	-13	27.53
707.692	-22.67	-13	9.67
1697.1153	-30.20	-13	17.2
5814.1025	-39.70	-13	26.7
10403.8461	-39.29	-13	26.29
24873.3974	-35.72	-13	22.36

Note: Please refer to appendix C for plot data.
Test equipment: ETSTW-RE 003, ETSTW-GSM 02, ETSTW-GSM 23

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 log10 P (P = transmitter power in Watts).

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

Maximum transmitter output power: P=0.25118864 Watts
Required attenuation: A=43 + 10 log10 P
Limit for Spurious Emissions at Antenna Terminals: L=P-A=-13dBm

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.

CH 1013

Frequency (MHz)	Polarization (H/V)	Reading Level (dBm)	Corrected Factor (dB)	Result Level (dBm)	Limit (dBm)	Margin
1649.4395	H	-45.24	5.55	-39.69	-13	26.69
2473.5330	H	-47.64	5.33	-42.31	-13	29.31
3298.6887	H	-61.33	9.00	-52.33	-13	39.33
1649.4395	V	-44.89	3.63	-41.26	-13	28.26
2473.5330	V	-47.79	5.33	-42.46	-13	29.46
3298.6887	V	-59.83	8.57	-51.26	-13	38.26

CH384

Frequency (MHz)	Polarization (H/V)	Reading Level (dBm)	Corrected Factor (dB)	Result Level (dBm)	Limit (dBm)	Margin
697.8320	H	-61.20	31.56	-29.64	-13	16.64
1696.0921	H	-49.45	5.99	-43.46	-13	30.46
2545.4784	H	-44.78	6.62	-38.16	-13	25.16
3393.6546	H	-64.27	9.95	-54.32	-13	41.32
697.8320	V	-60.45	30.39	-30.06	-13	17.06
1696.0921	V	-48.03	4.52	-43.51	-13	30.51
2545.4784	V	-41.87	5.94	-35.93	-13	22.93
3393.6546	V	-60.52	8.64	-51.88	-13	38.88

CH777

Frequency (MHz)	Polarization (H/V)	Reading Level (dBm)	Corrected Factor (dB)	Result Level (dBm)	Limit (dBm)	Margin
1672.2945	H	-47.4	6.51	-40.89	-13	27.89
2509.1119	H	-50.3	6.37	-43.93	-13	30.93
3346.0279	H	-56.7	9.33	-47.37	-13	34.37
1672.2945	V	-45.98	5.14	-40.84	-13	27.84
2509.1119	V	-47.87	5.39	-42.48	-13	29.48
3346.0279	V	-56.09	8.72	-47.37	-13	34.37

Note: Please refer to appendix D for plot data.

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 log10 P (P = transmitter power in Watts).

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

Maximum transmitter radiated power: P=0.25118864 watt

Required attenuation: A=43 + 10 log10 P

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

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

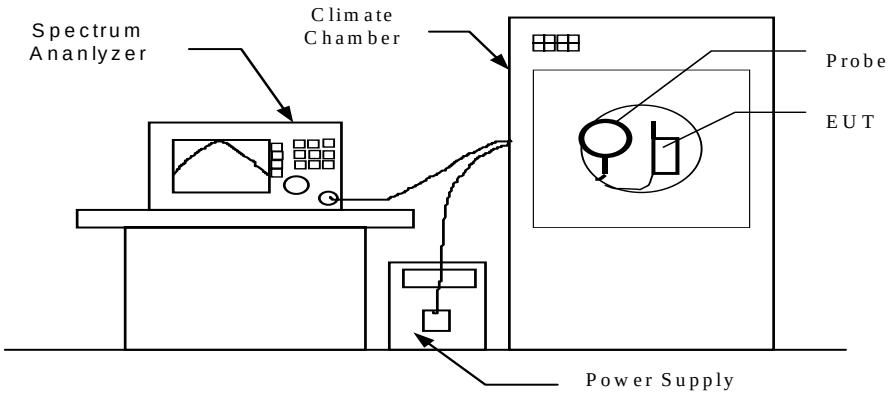
8. Frequency Stability

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.



8.2 Test Results

8.2.1 Frequency Stability vs. Temperature

CH1013 824.7MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
3.7VDC	-30	0.14	0.170	±2.5
	-20	0.14	0.170	
	-10	0.13	0.157	
	0	0.14	0.170	
	10	0.15	0.182	
	20	0.15	0.182	
	30	0.15	0.182	
	40	0.16	0.194	
	50	0.16	0.194	

CH384 836.52MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
3.7VDC	-30	0.14	0.167	±2.5
	-20	0.14	0.167	
	-10	0.14	0.167	
	0	0.15	0.179	
	10	0.16	0.191	
	20	0.15	0.179	
	30	0.16	0.191	
	40	0.16	0.191	
	50	0.17	0.203	

CH777 848.31MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
3.7VDC	-30	0.15	0.177	±2.5
	-20	0.15	0.177	
	-10	0.16	0.189	
	0	0.16	0.189	
	10	0.16	0.189	
	20	0.16	0.189	
	30	0.16	0.189	
	40	0.17	0.200	
	50	0.18	0.212	

8.2.2 Frequency Stability vs. Voltage

CH1013

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage 3.4VDC	25	0.19	0.230	±2.5

CH384

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage 3.4VDC	25	0.18	0.215	±2.5

CH777

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage 3.4VDC	25	0.18	0.212	±2.5

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

Appendix

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

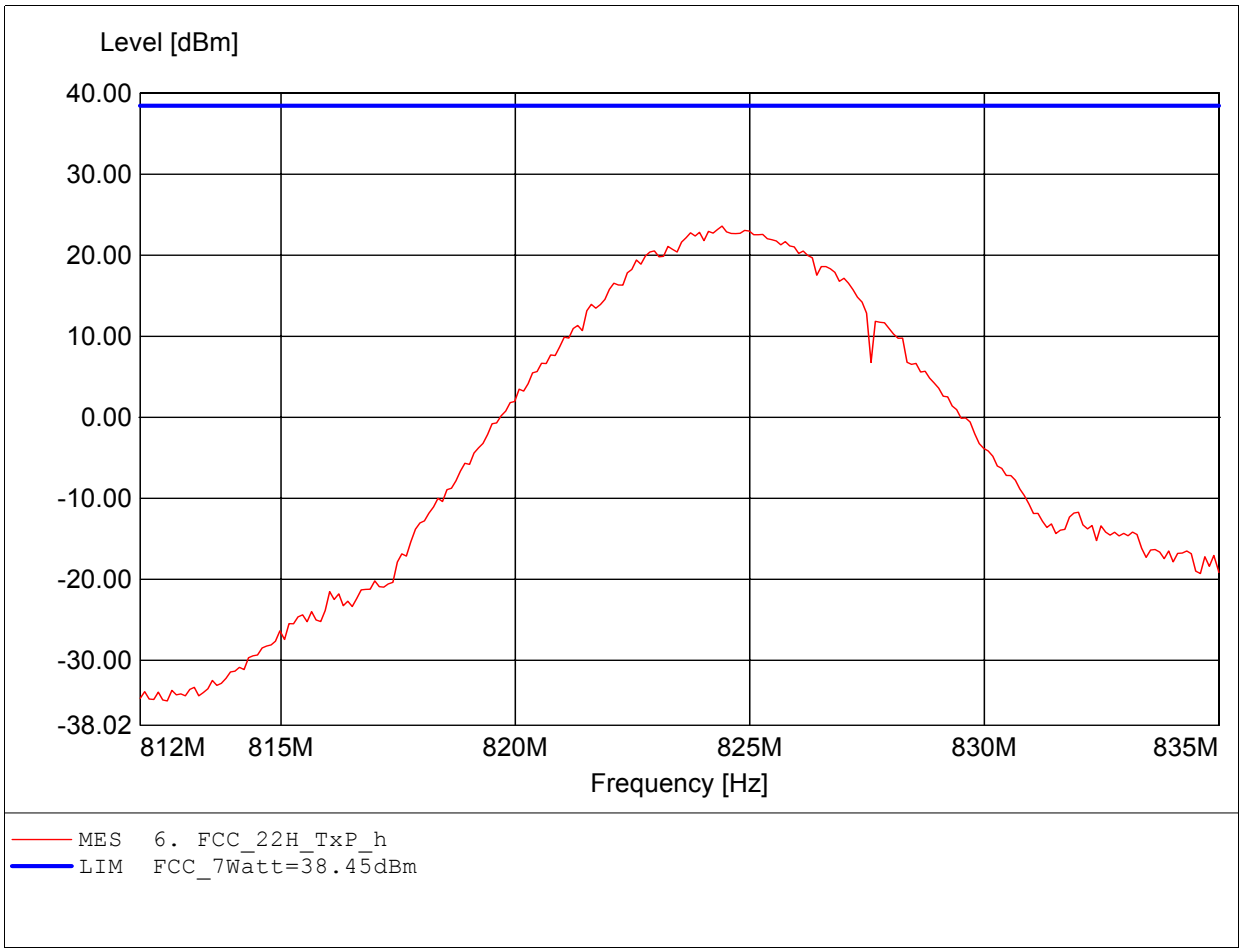
Appendix A

RF Power Output

Effective Radiated Power

FCC RULES PART 22 SUBPART H

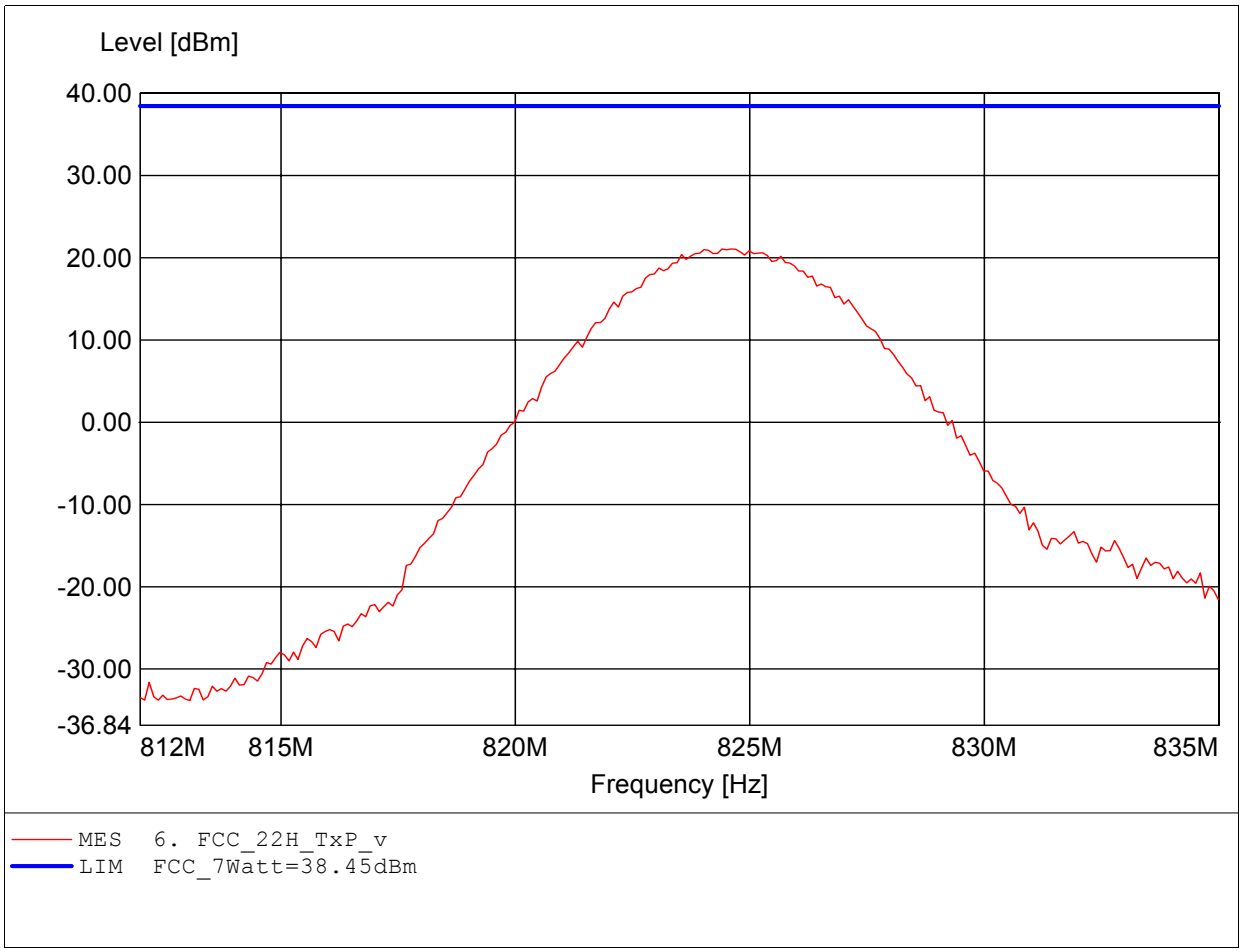
Order Number :	W6M20611-7576 CH1013
Test Site / Operator:	ETS / Michael
Temperature:	Temp.: 23.9°C
	according to §22.913
Comment 1:	Dist.: 3m, Ant.: HL223
	Freq: 824.409MHz, Pmax: 23.59dBm, RBW: 100kHz



Effective Radiated Power

FCC RULES PART 22 SUBPART H

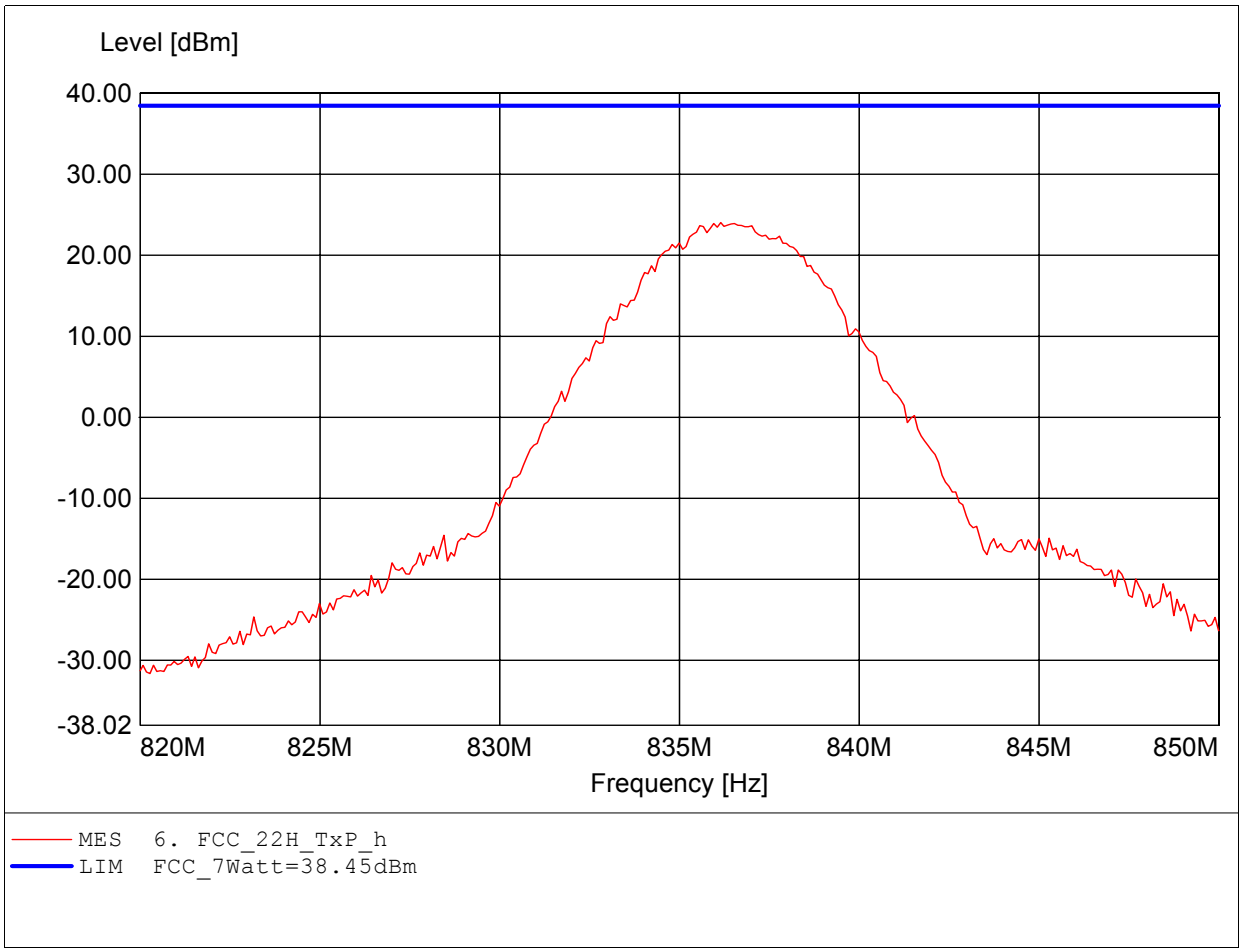
```
Order Number :          W6M20611-7576     CH1013
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.913
Comment 1:              Dist.: 3m, Ant.: HL223
                        Freq: 824.601MHz, Pmax: 21.07dBm, RBW: 100kHz
```



Effective Radiated Power

FCC RULES PART 22 SUBPART H

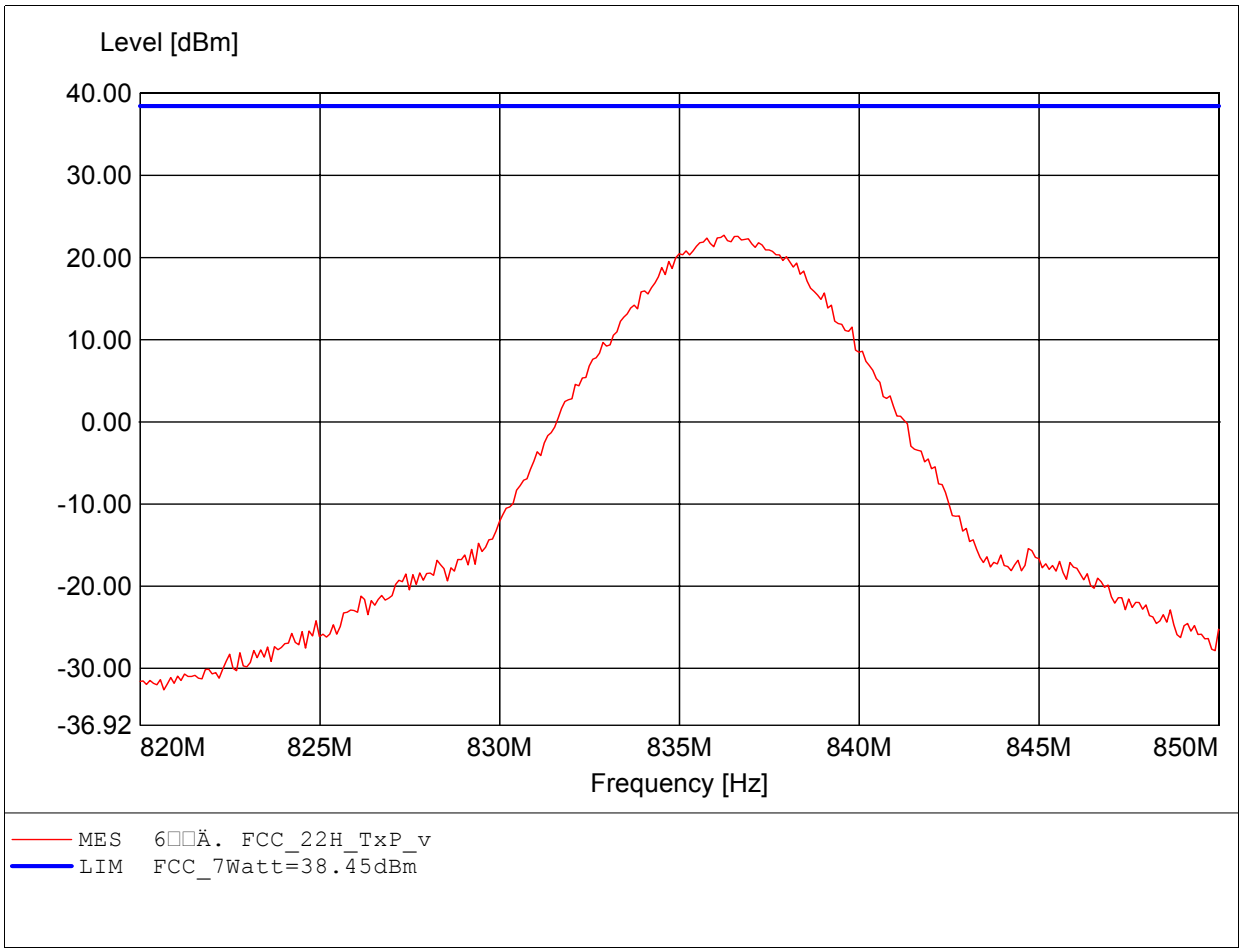
Order Number :	W6M20611-7576	CH384
Test Site / Operator:	ETS / Michael	
Temperature:	Temp.: 23.9°C	
	according to §22.913	
Comment 1:	Dist.: 3m, Ant.: HL223	
	Freq: 836.144MHz, Pmax: 24.04dBm, RBW: 100kHz	



Effective Radiated Power

FCC RULES PART 22 SUBPART H

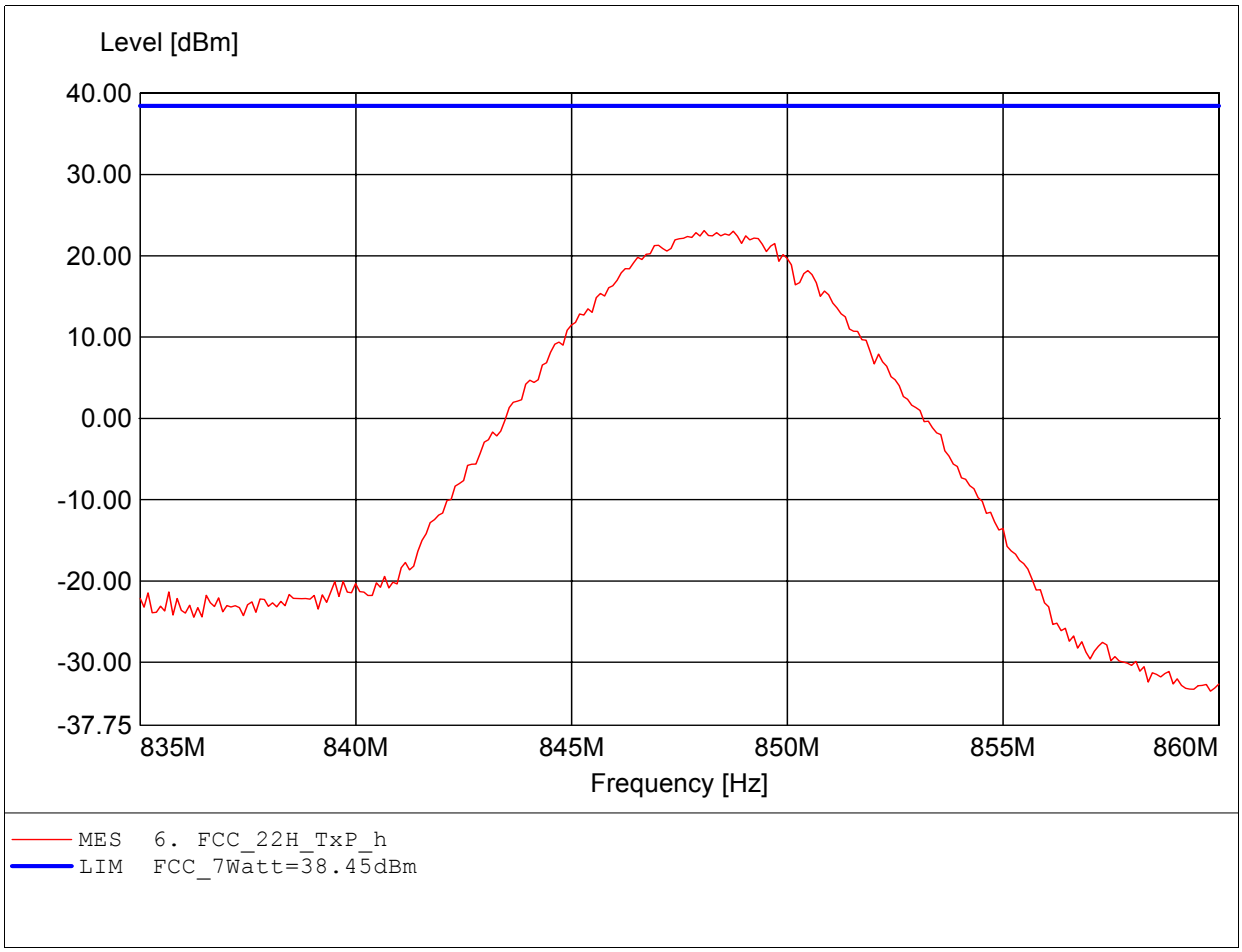
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.913
Comment 1:              Dist.: 3m, Ant.: HL223
                        Freq: 836.240MHz, Pmax: 22.71dBm, RBW: 100kHz
```



Effective Radiated Power

FCC RULES PART 22 SUBPART H

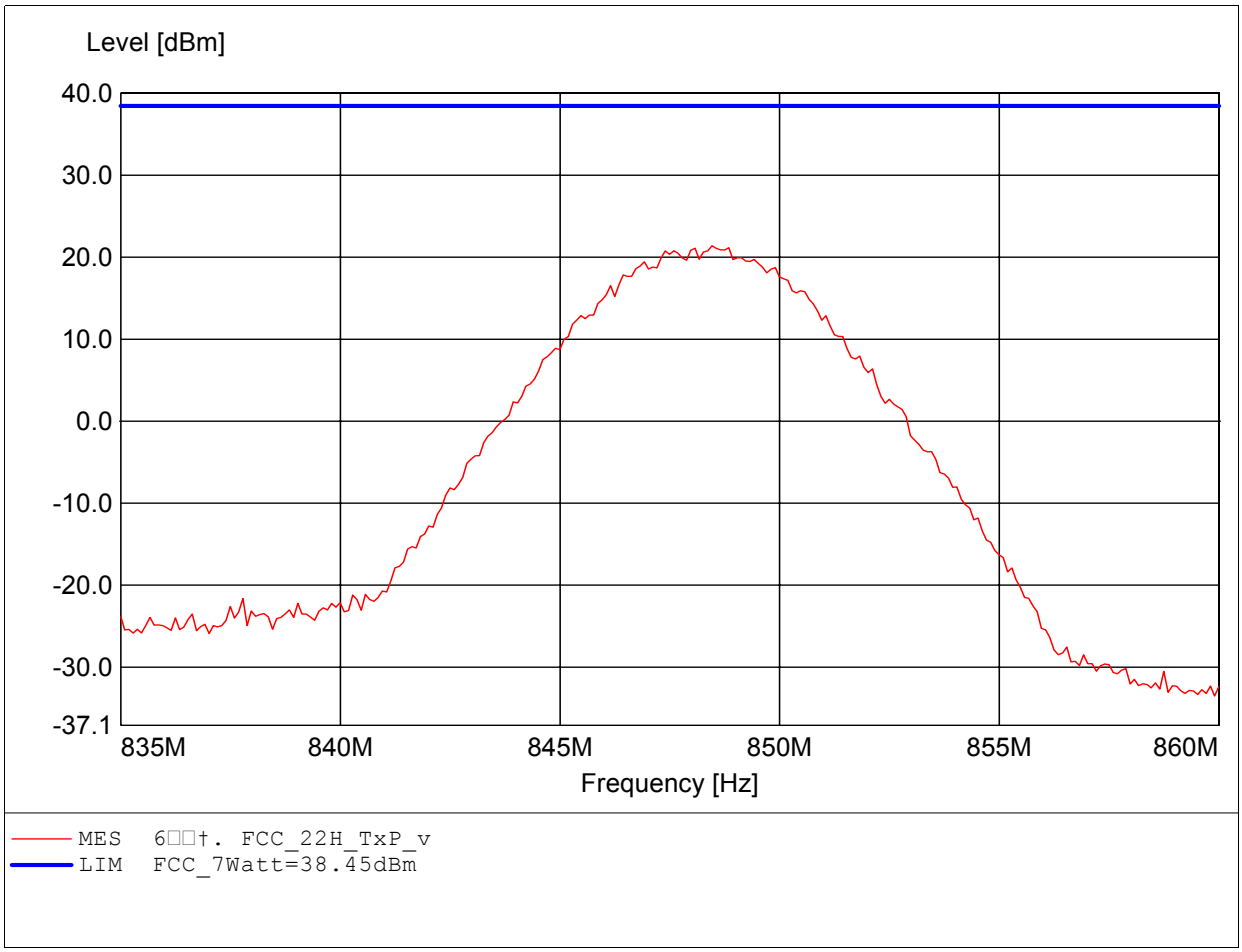
Order Number :	W6M20611-7576	CH777
Test Site / Operator:	ETS / Michael	
Temperature:	Temp.: 23.9°C	
	according to §22.913	
Comment 1:	Dist.: 3m, Ant.: HL223	
	Freq: 848.072MHz, Pmax: 23.10dBm, RBW: 100kHz	



Effective Radiated Power

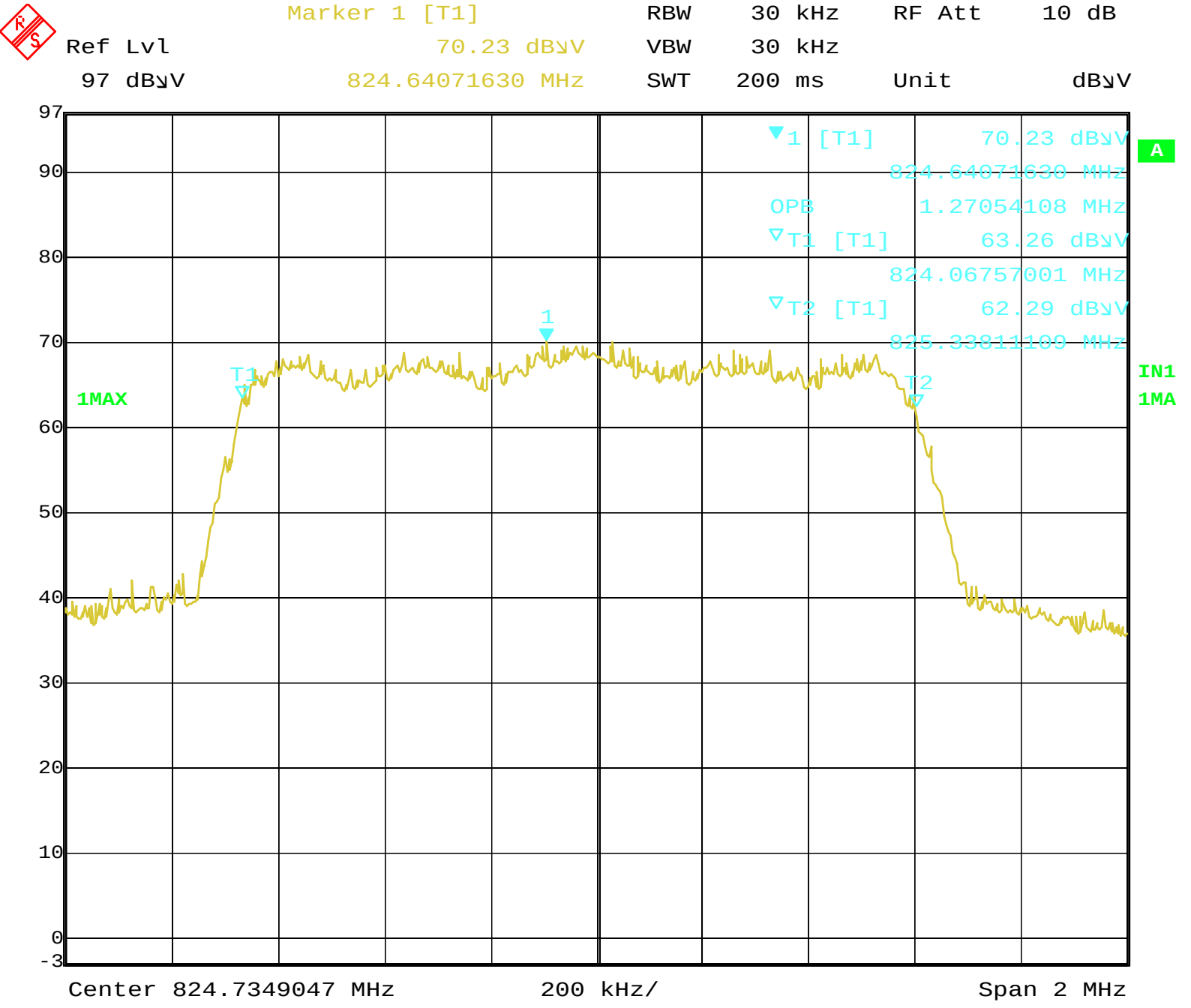
FCC RULES PART 22 SUBPART H

Order Number :	W6M20611-7576	CH777
Test Site / Operator:	ETS / Michael	
Temperature:	Temp.: 23.9°C	
	according to §22.913	
Comment 1:	Dist.: 3m, Ant.: HL223	
	Freq: 848.457MHz, Pmax: 21.40dBm, RBW: 100kHz	

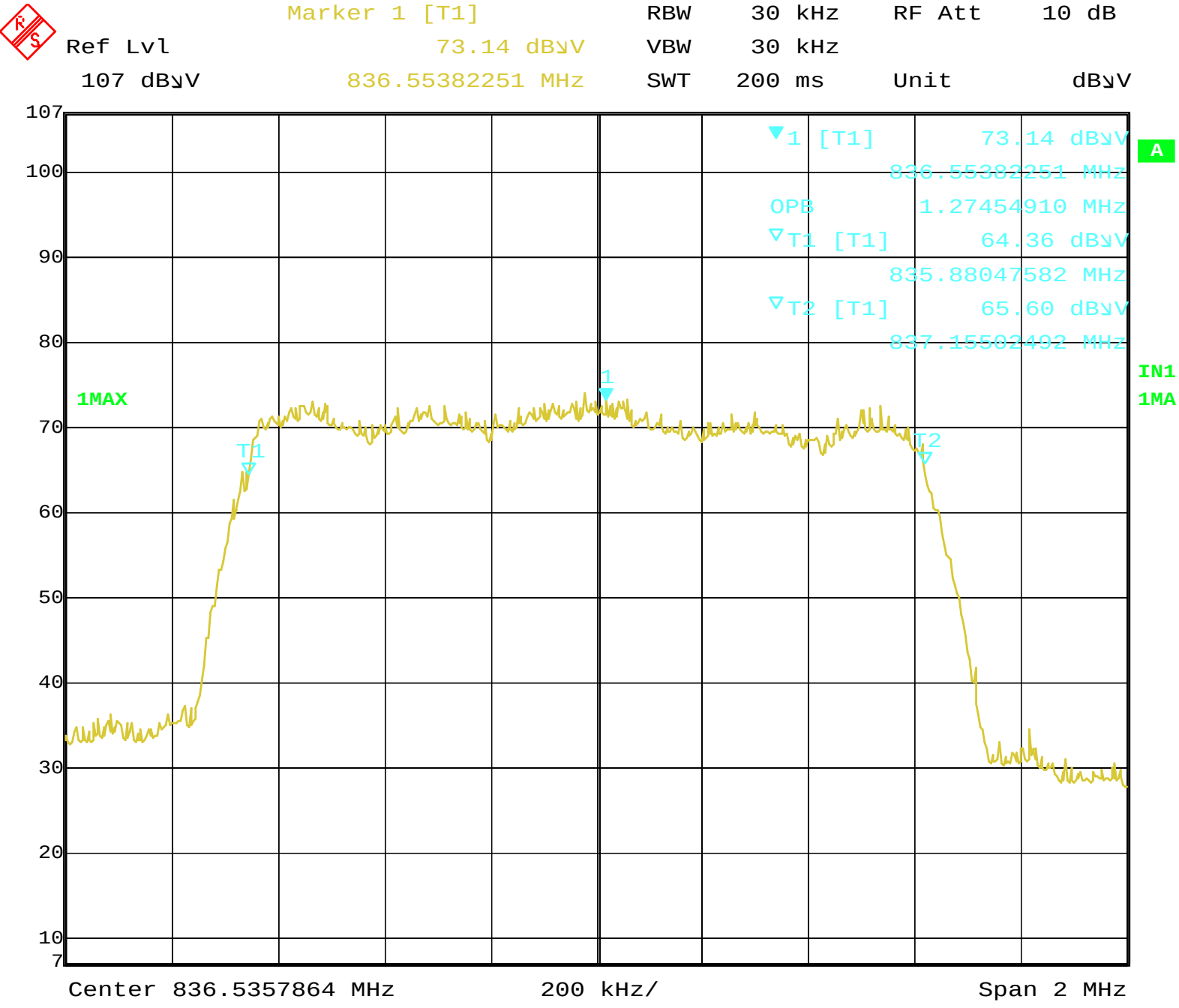


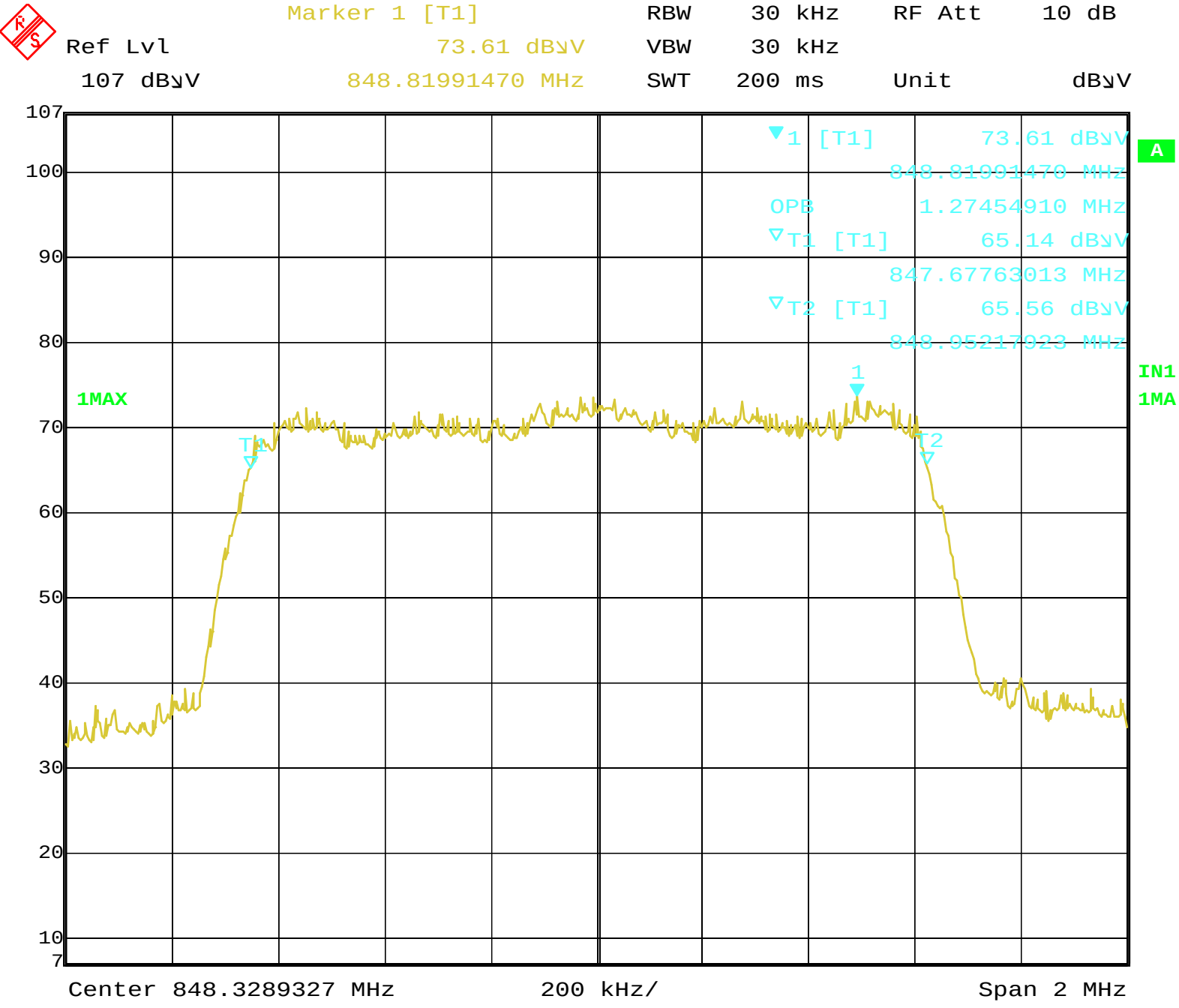
Appendix B

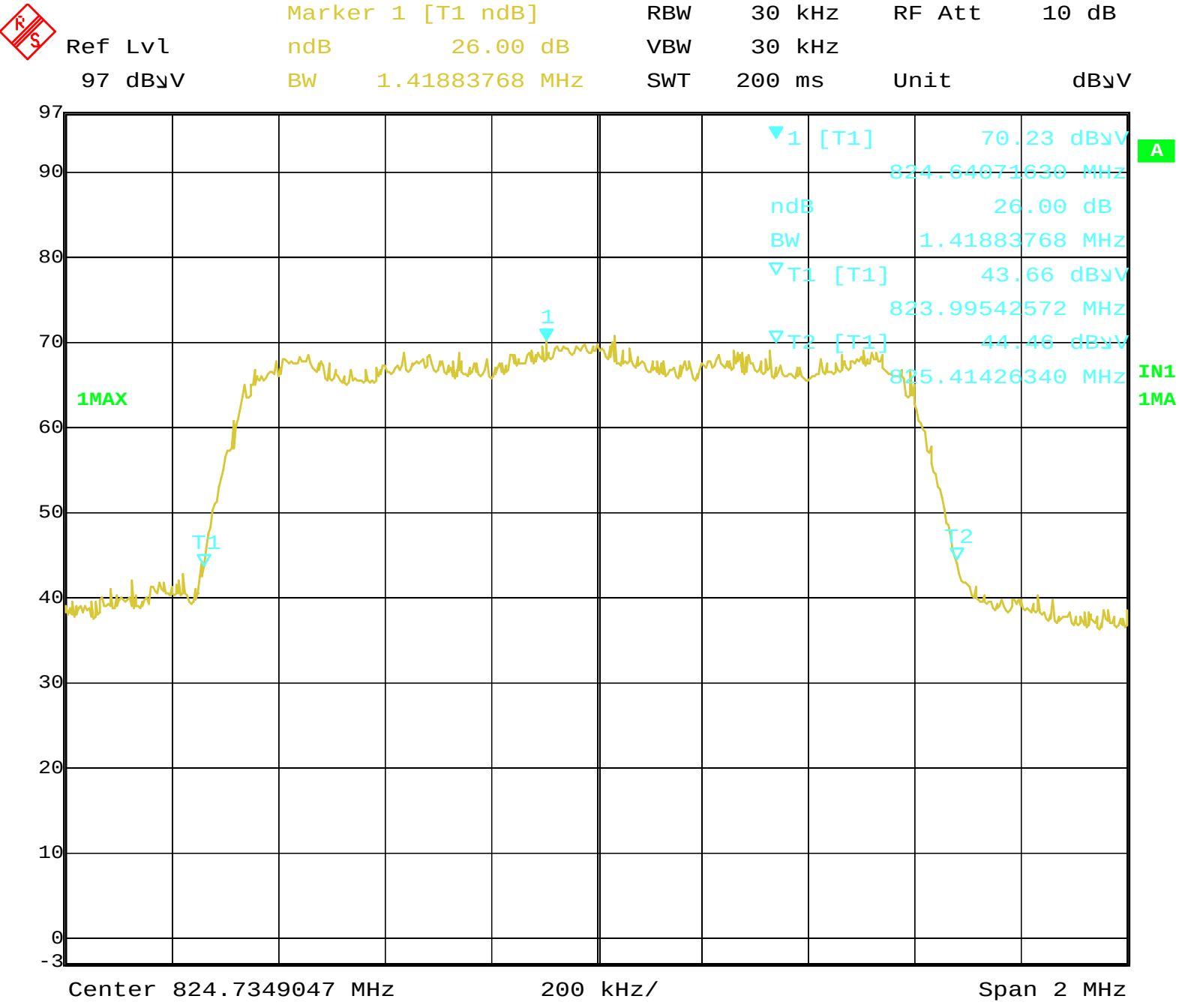
Occupied Bandwidth / Emission Mask



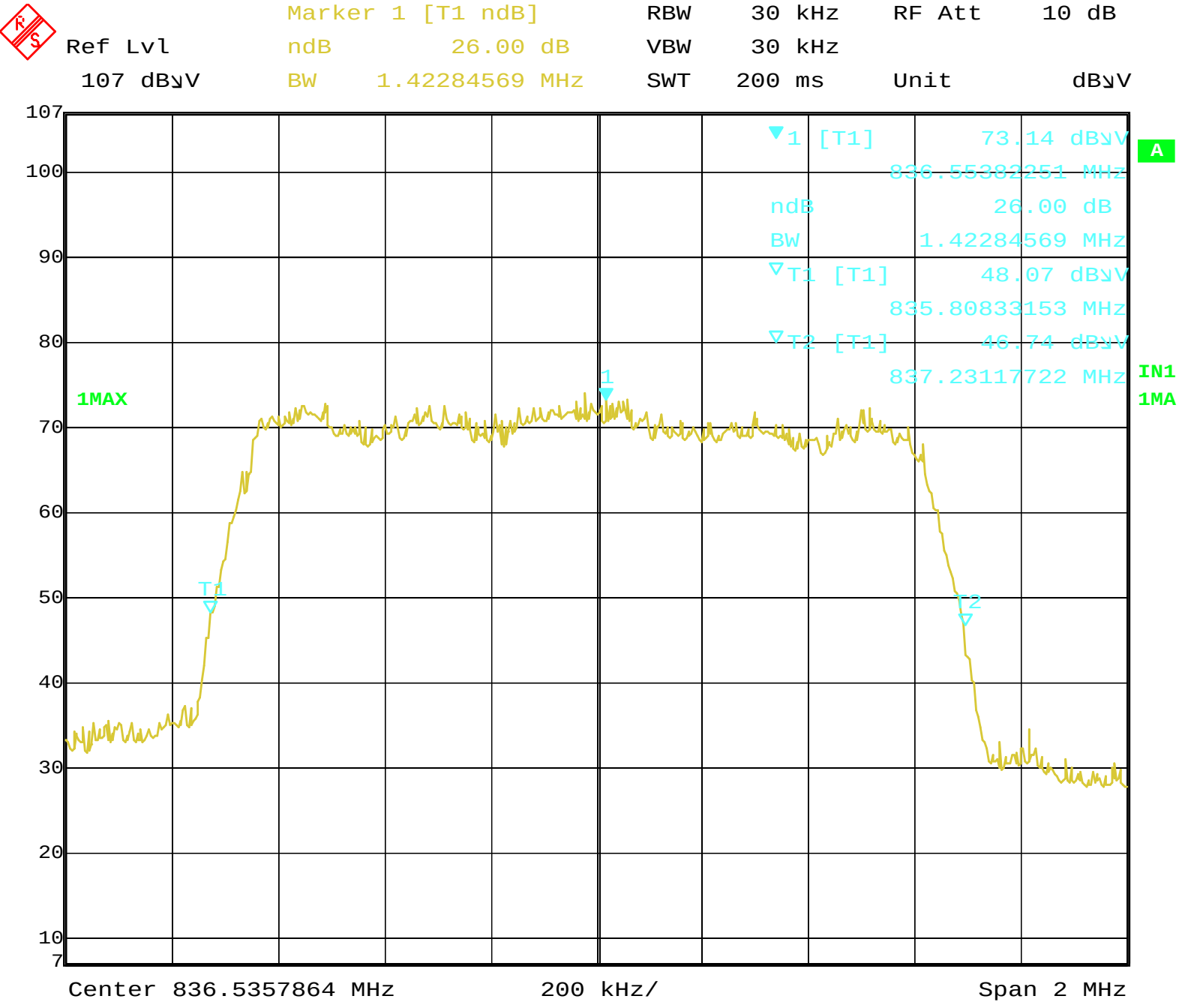
Date: 25.NOV.2006 15:35:09


Marker 1 [T1]
RBW 30 kHz
RF Att 10 dB
Ref Lvl
73.14 dBµV
VBW 30 kHz
107 dBµV
836.55382251 MHz
SWT 200 ms
Unit dBµV
1 [T1] 73.14 dBµV
836.55382251 MHz
OPB 1.27454910 MHz
T1 [T1] 64.36 dBµV
835.88047582 MHz
T2 [T1] 65.60 dBµV
837.15502492 MHz
A
IN1
1MA
1MAX
T1
T2
107
100
90
80
70
60
50
40
30
20
10
7
Center 836.5357864 MHz
200 kHz/
Span 2 MHz
Date: 25.NOV.2006 15:37:29

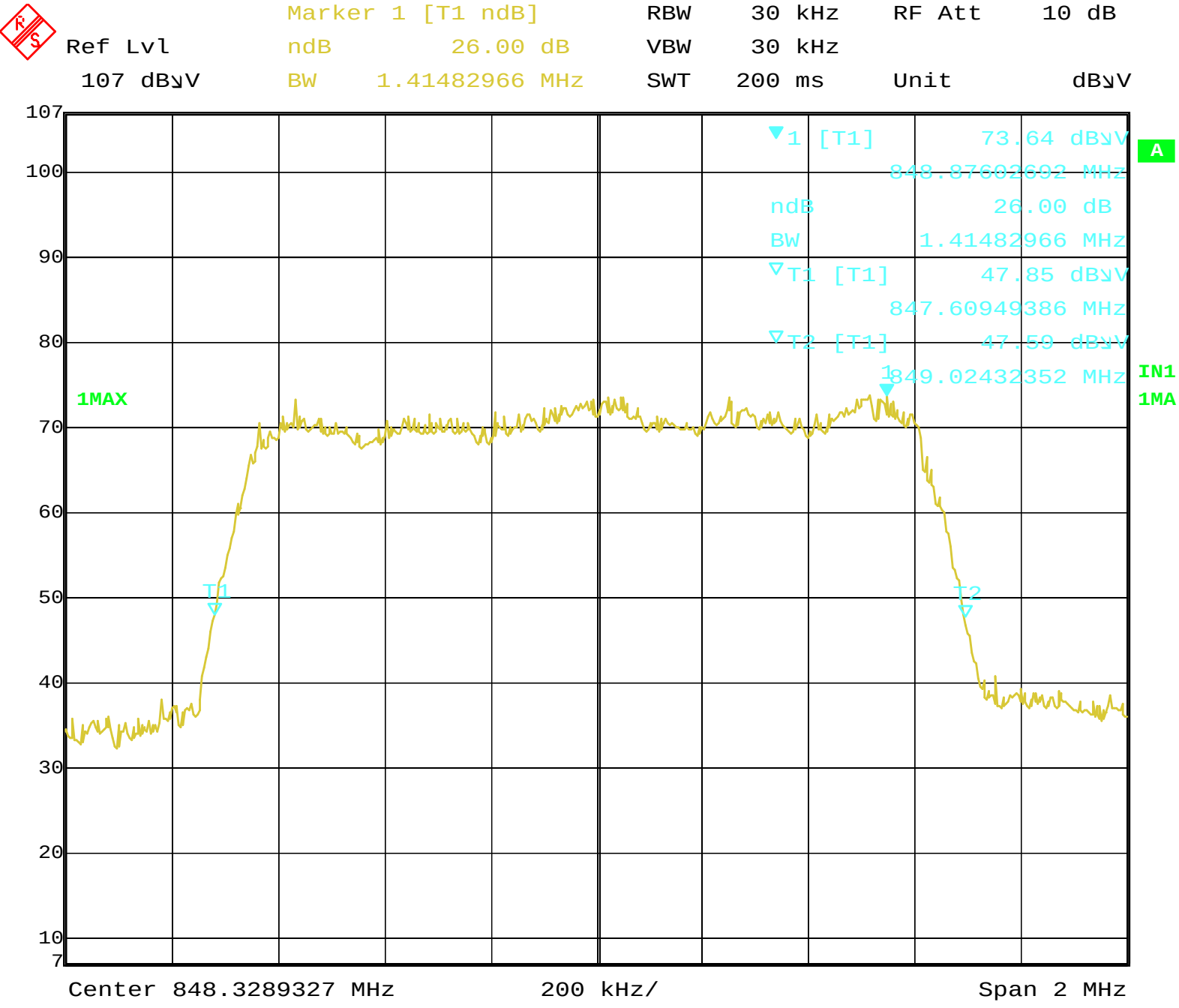

Marker 1 [T1]
RBW 30 kHz
RF Att 10 dB
Ref Lvl
73.61 dBµV
VBW 30 kHz
107 dBµV
848.81991470 MHz
SWT 200 ms
Unit dBµV
1 [T1] 73.61 dBµV
848.81991470 MHz
OPB 1.27454910 MHz
T1 [T1] 65.14 dBµV
847.67763013 MHz
T2 [T1] 65.56 dBµV
848.05217023 MHz
A
IN1
1MA
1MAX
107
100
90
80
70
60
50
40
30
20
10
7
Center 848.3289327 MHz
200 kHz/
Span 2 MHz
Date: 25.NOV.2006 15:38:42



Date: 25.NOV.2006 15:35:52



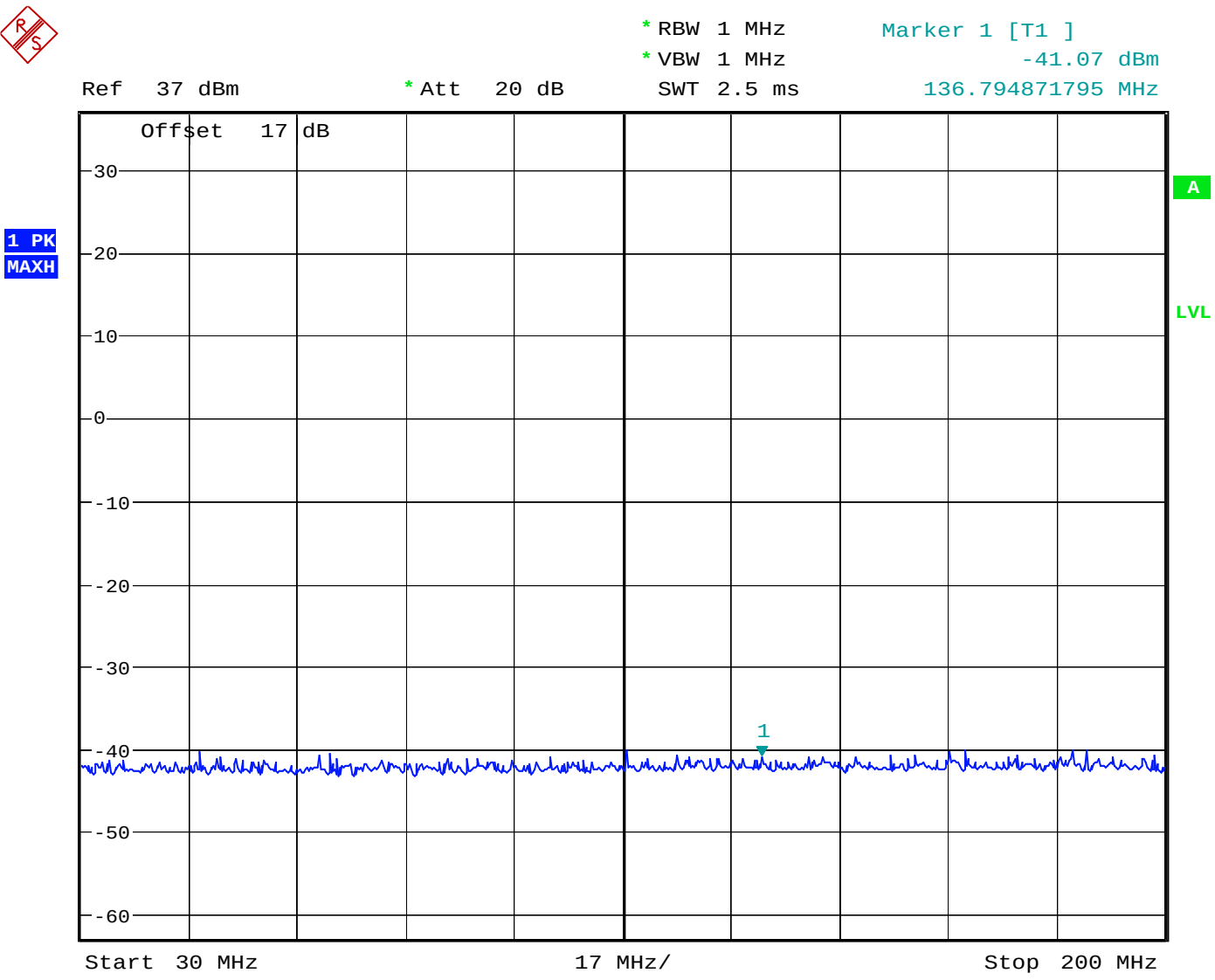
Date: 25.NOV.2006 15:37:06



Date: 25.NOV.2006 15:52:52

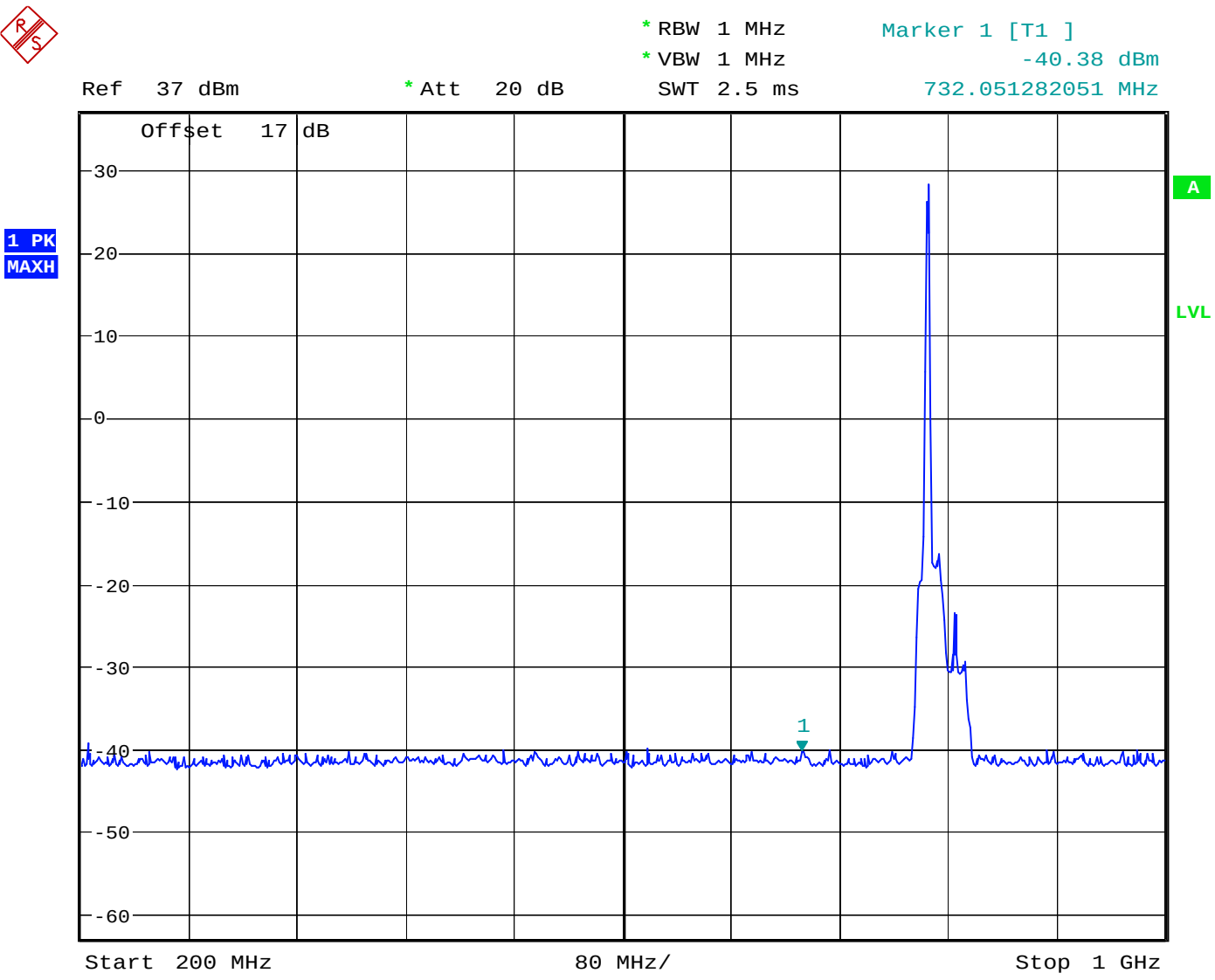
Appendix C

Spurious Emissions at Antenna Terminals



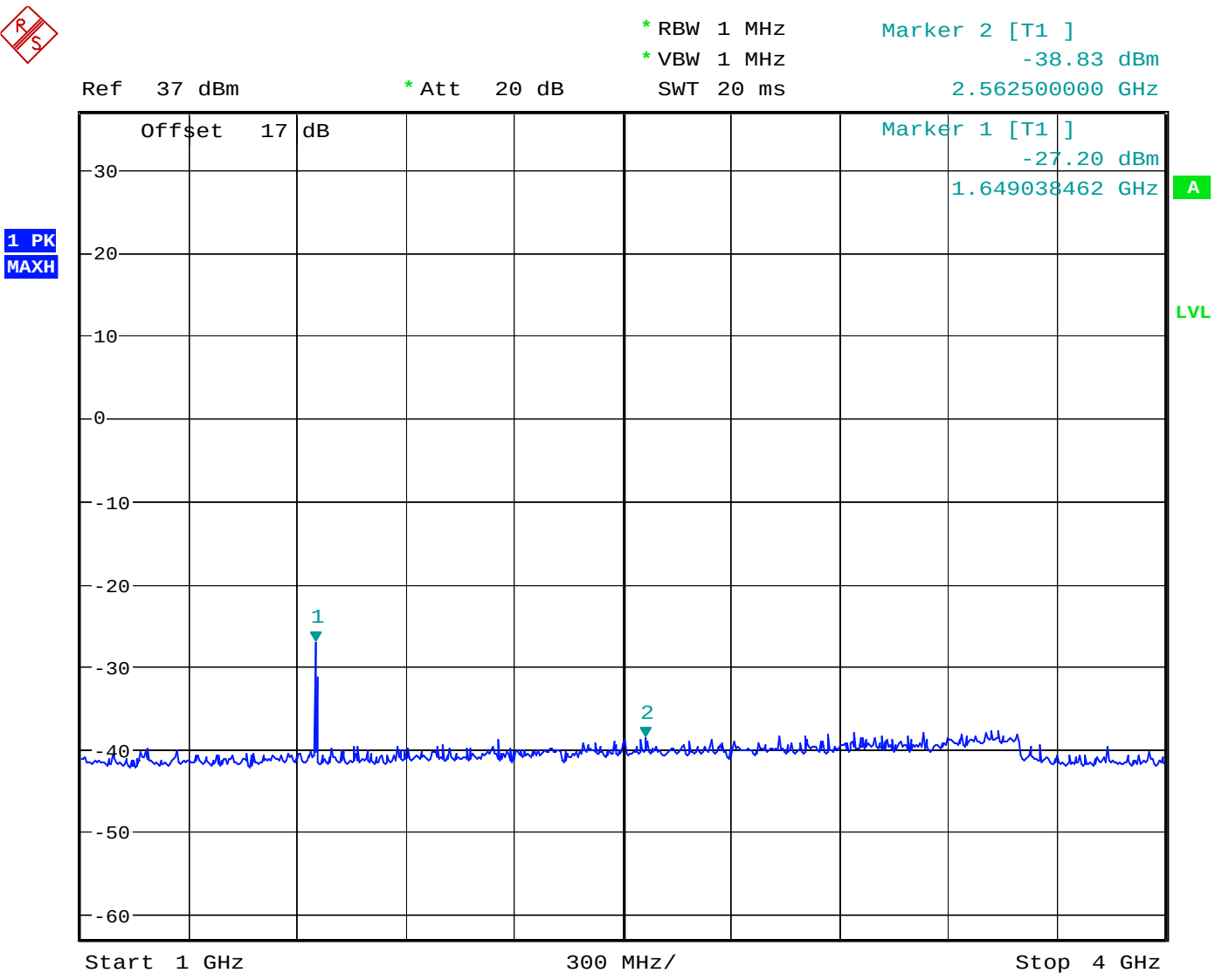
Conducted Spurious Emission ch1013

Date: 25.NOV.2006 15:14:27



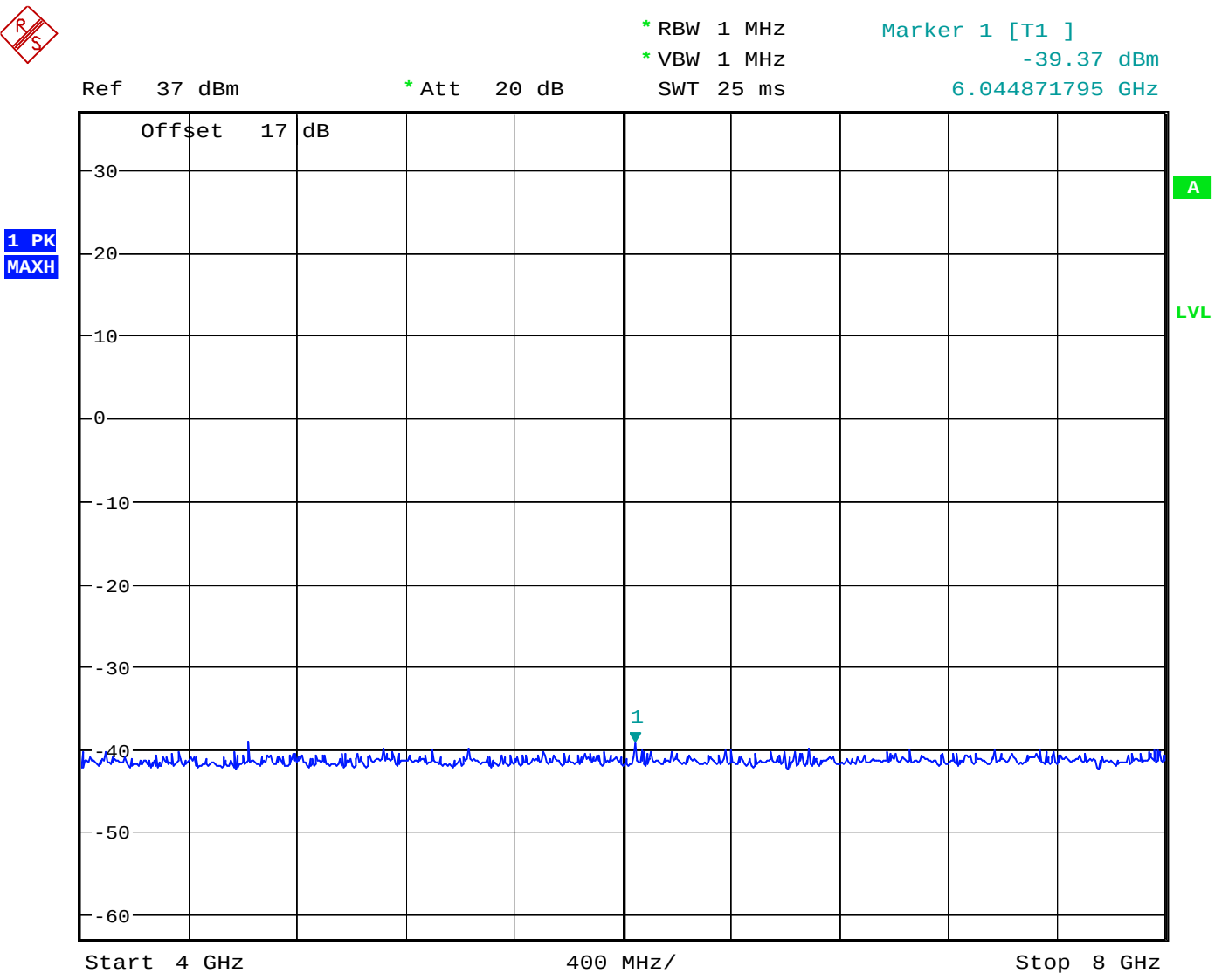
Conducted Spurious Emission ch1013

Date: 25.NOV.2006 15:15:03



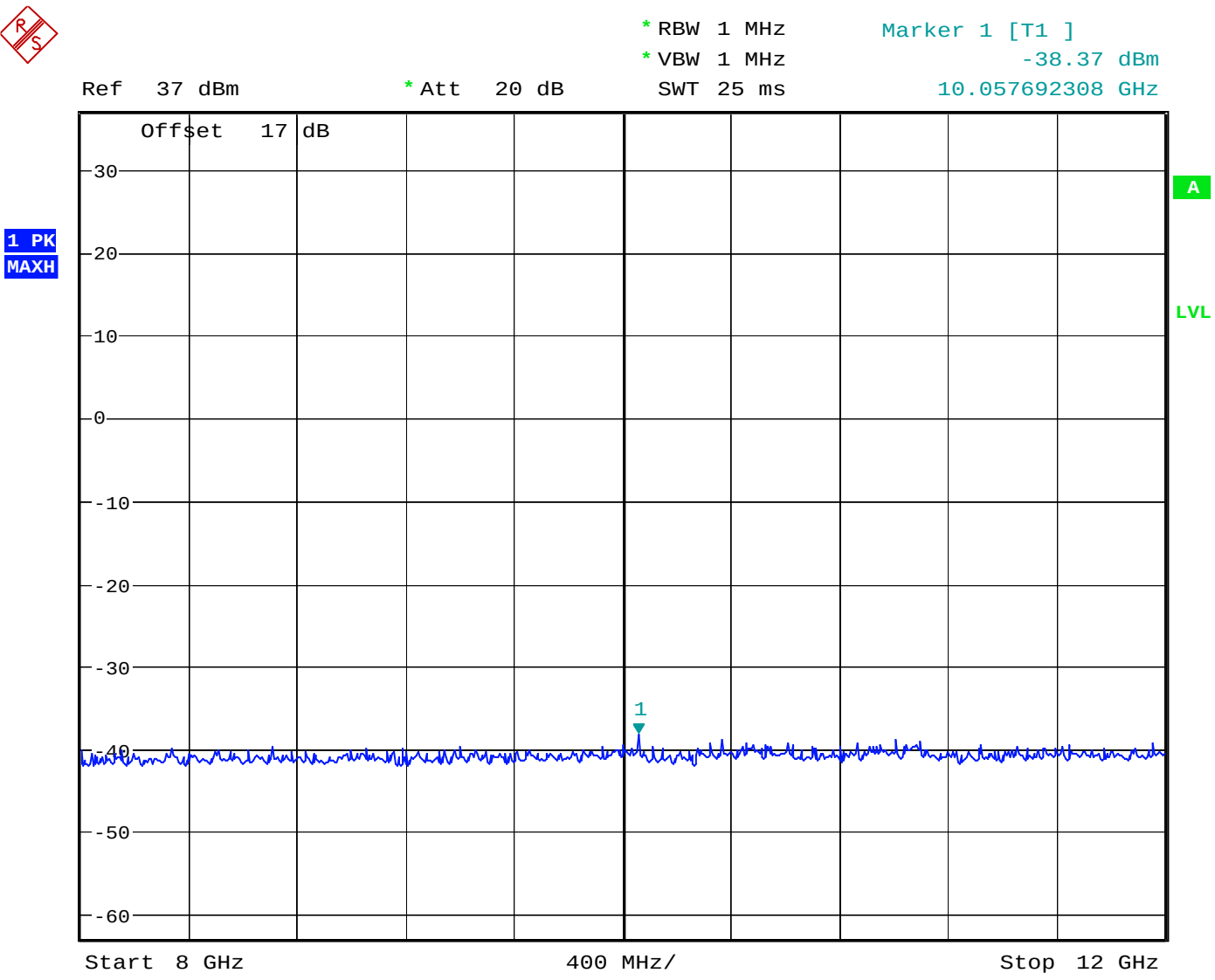
Conducted Spurious Emission ch1013

Date: 25.NOV.2006 15:15:36



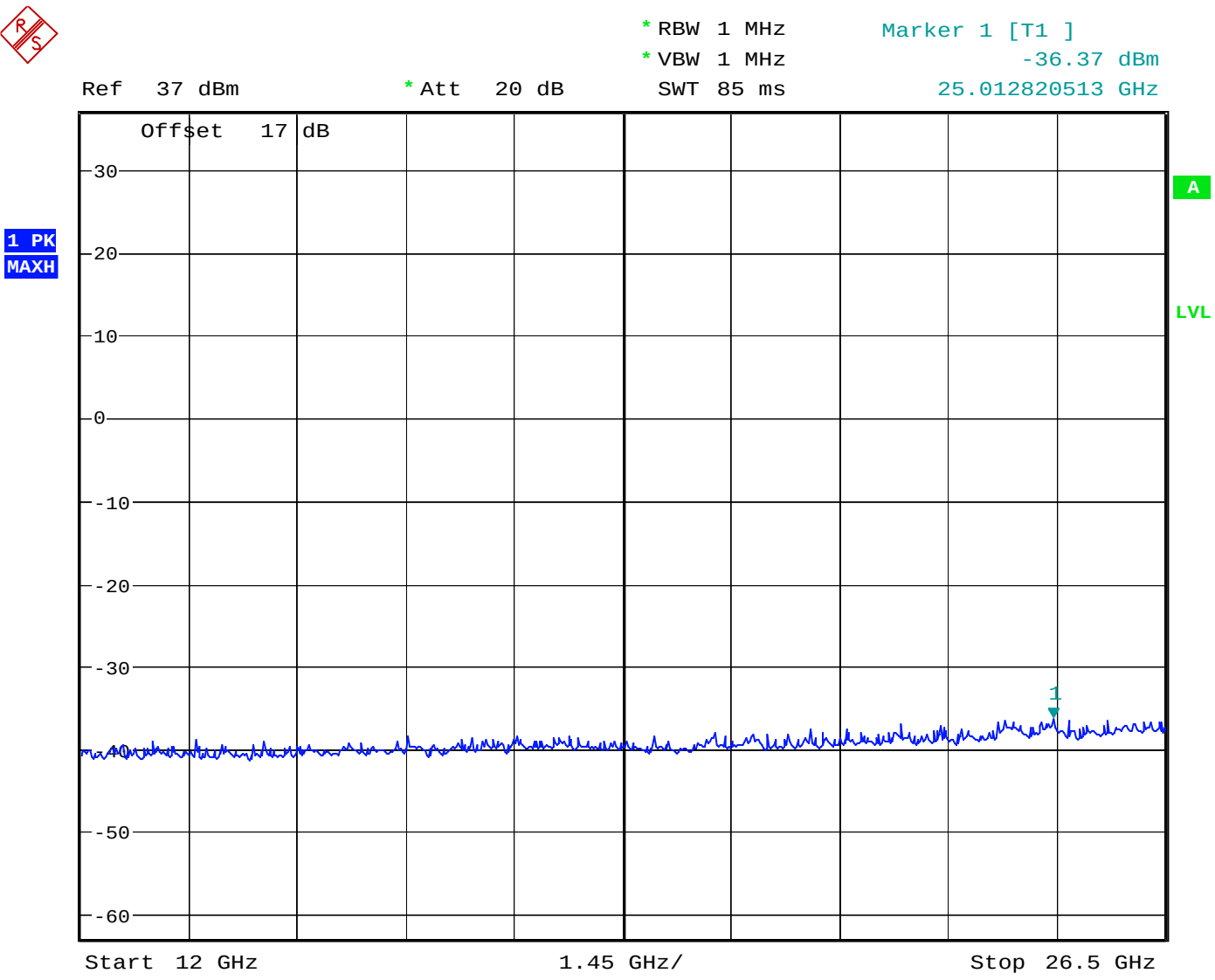
Conducted Spurious Emission ch1013

Date: 25.NOV.2006 15:16:00



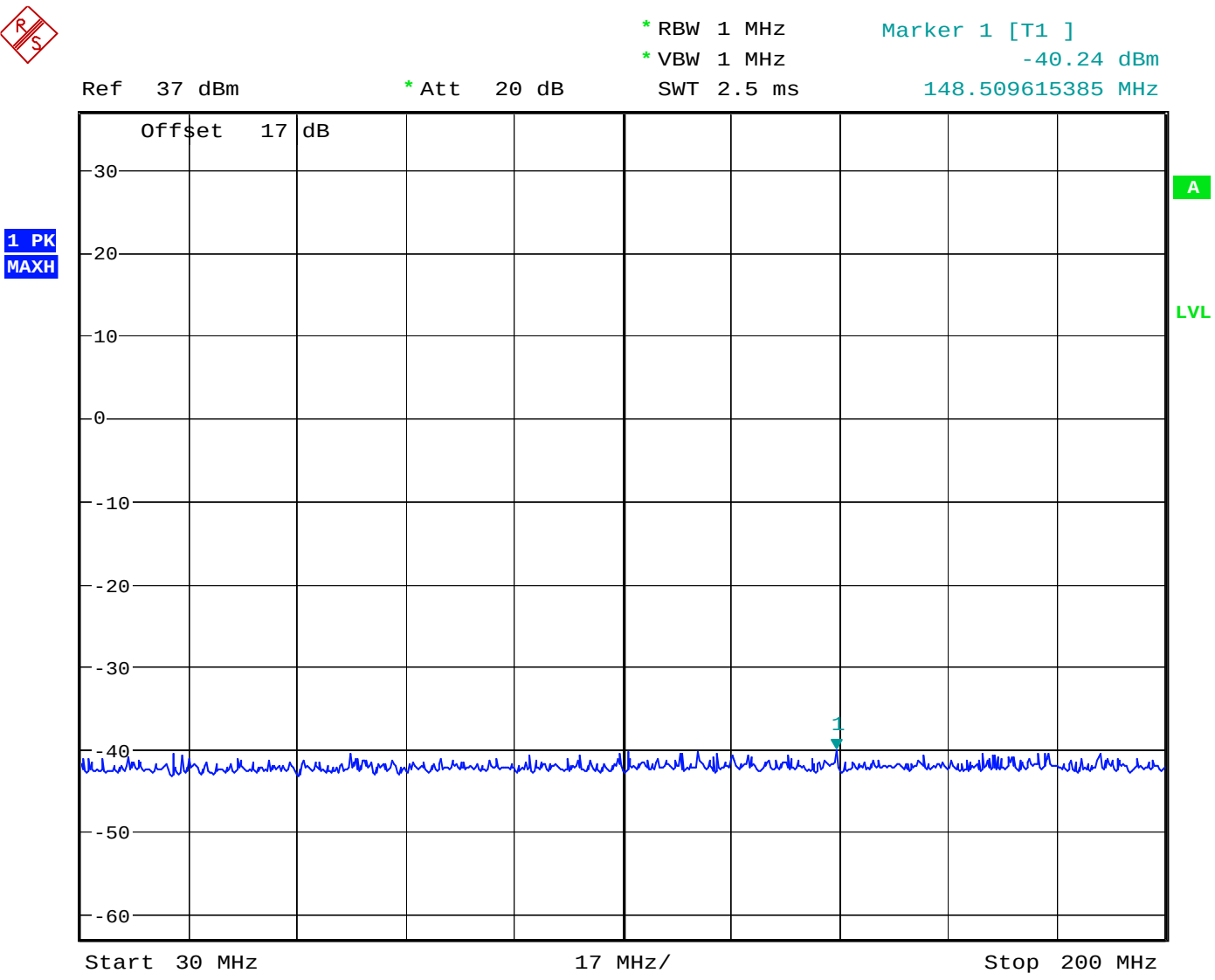
Conducted Spurious Emission ch1013

Date: 25.NOV.2006 15:16:25



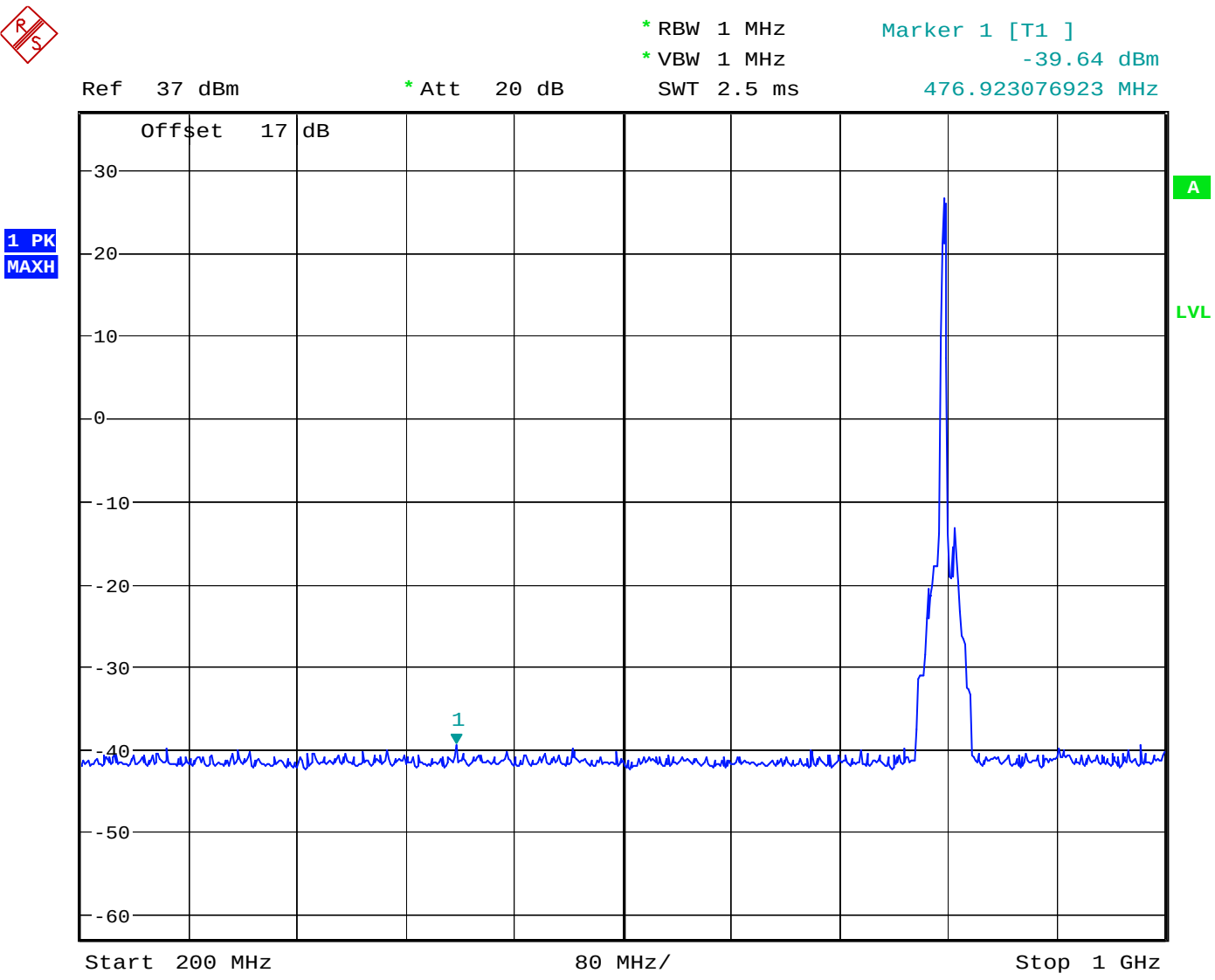
Conducted Spurious Emission ch1013

Date: 25.NOV.2006 15:16:51



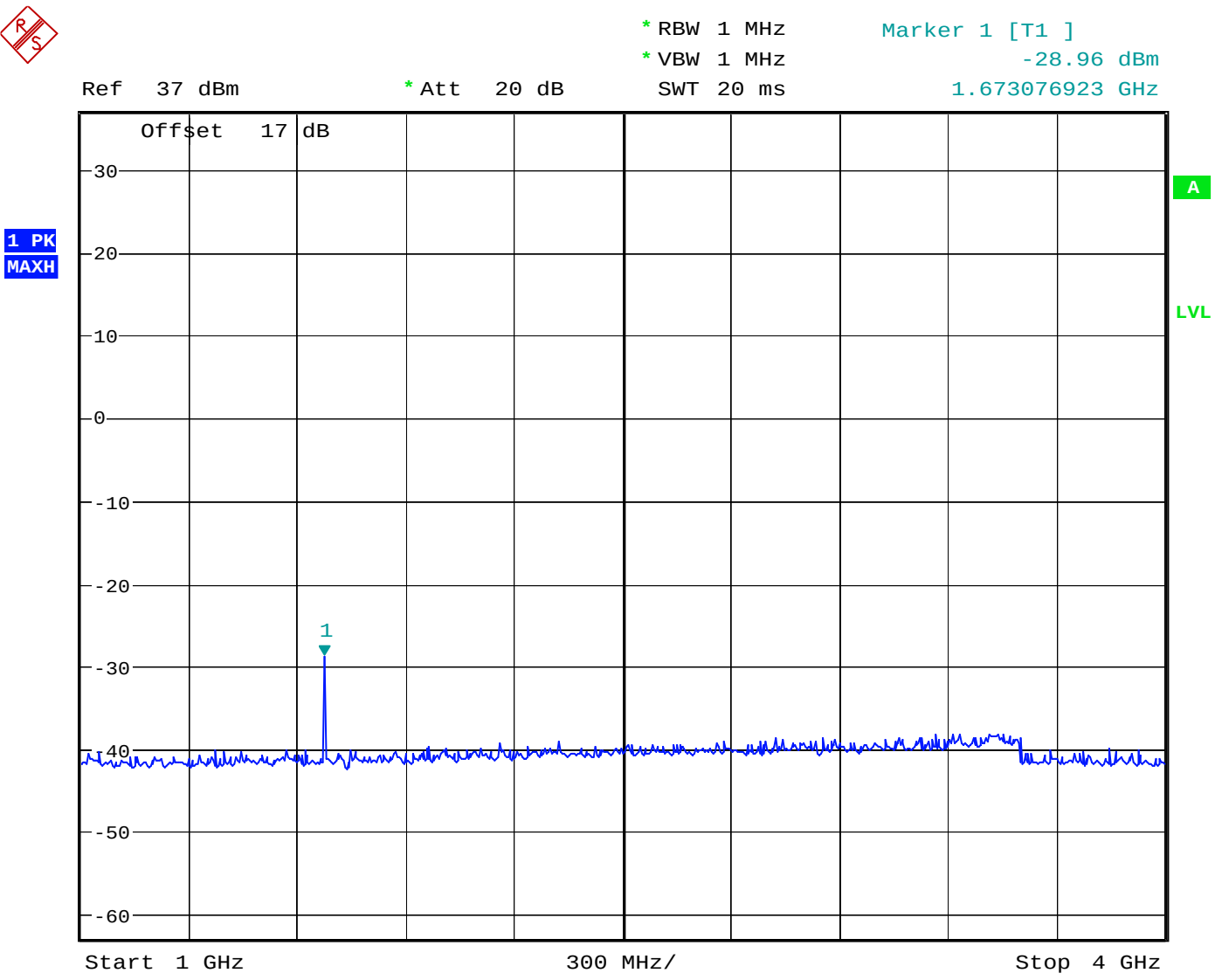
Conducted Spurious Emission ch384

Date: 25.NOV.2006 15:10:30



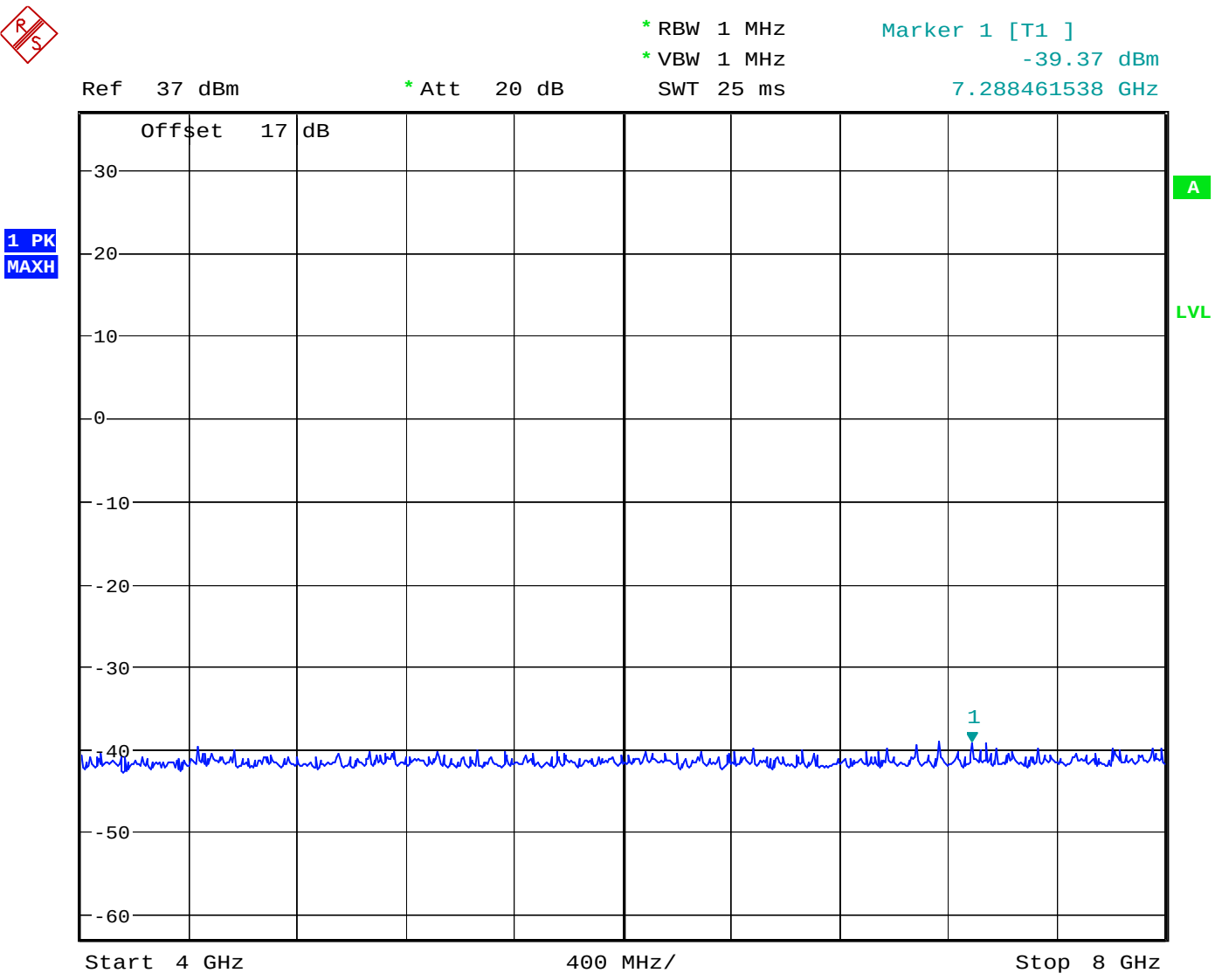
Conducted Spurious Emission ch384

Date: 25.NOV.2006 15:10:04



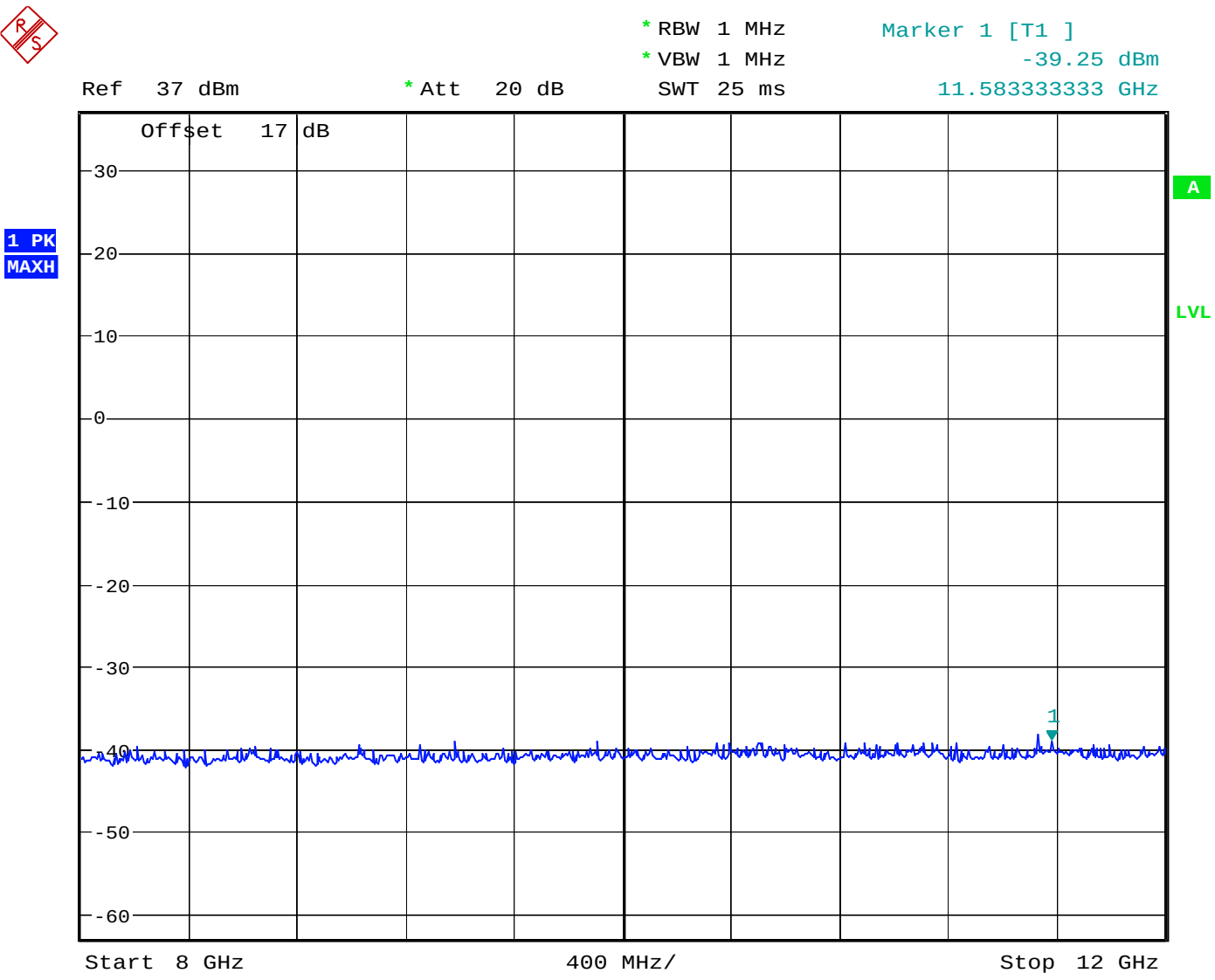
Conducted Spurious Emission ch384

Date: 25.NOV.2006 15:09:31



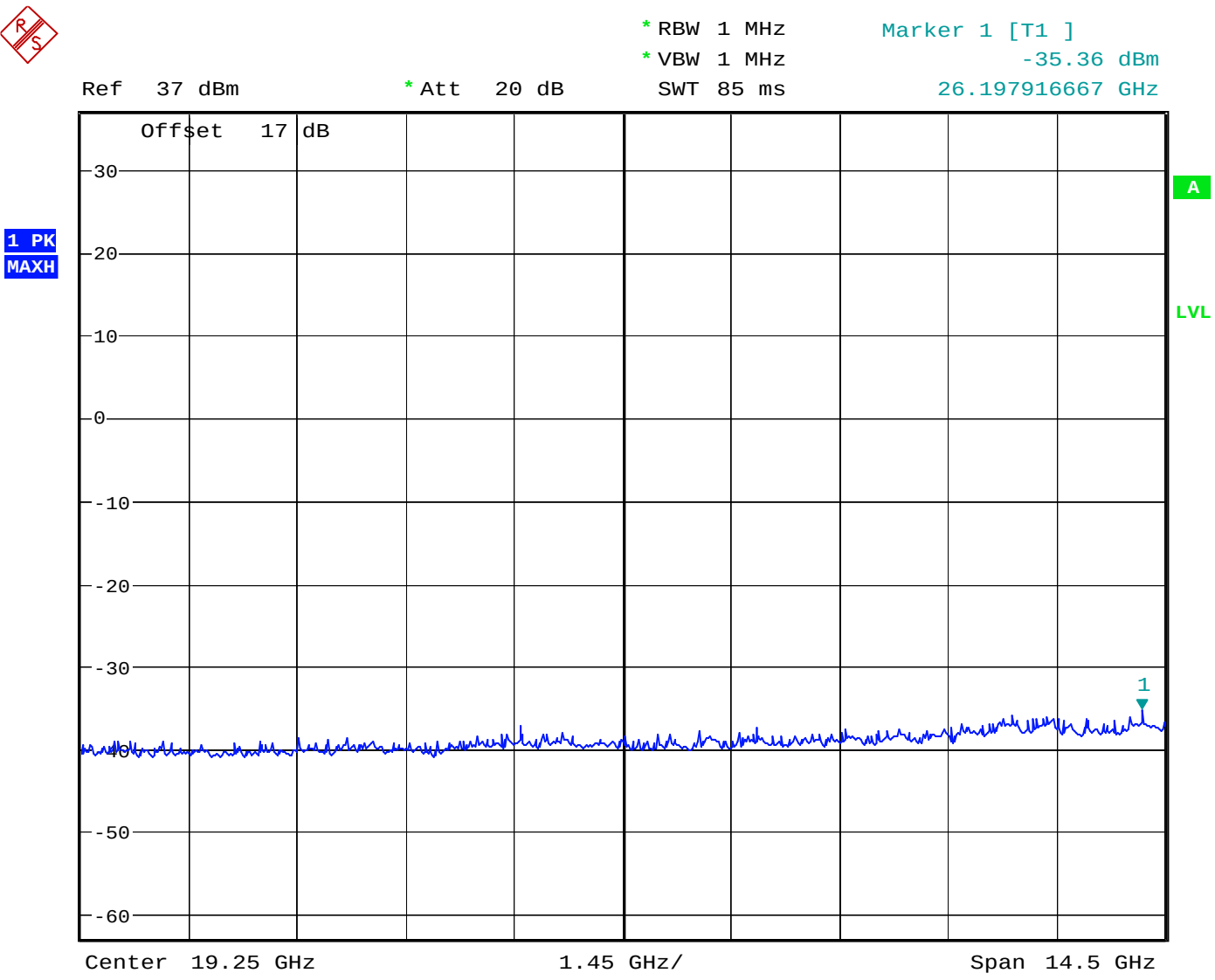
Conducted Spurious Emission ch384

Date: 25.NOV.2006 15:09:01



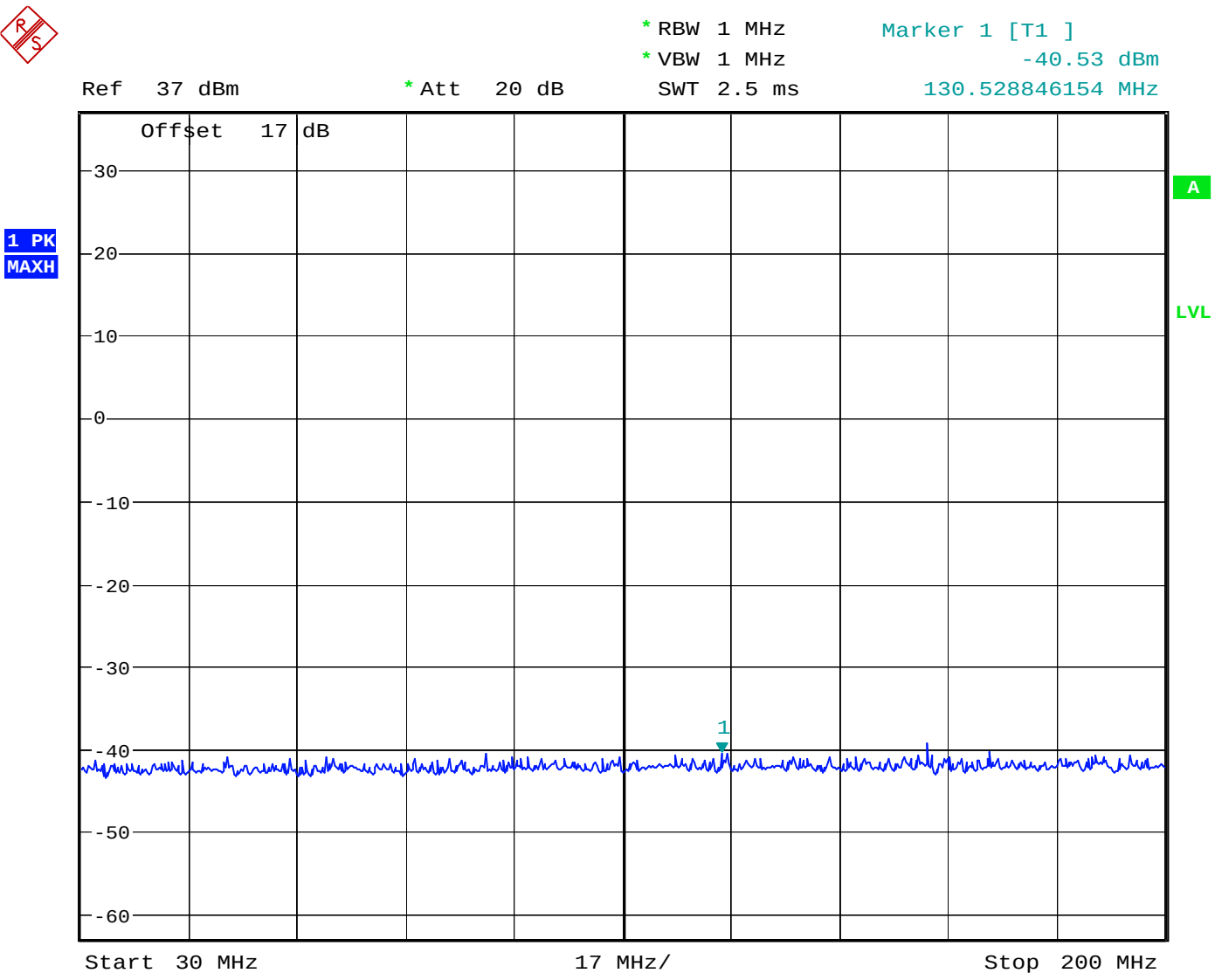
Conducted Spurious Emission ch384

Date: 25.NOV.2006 15:08:40



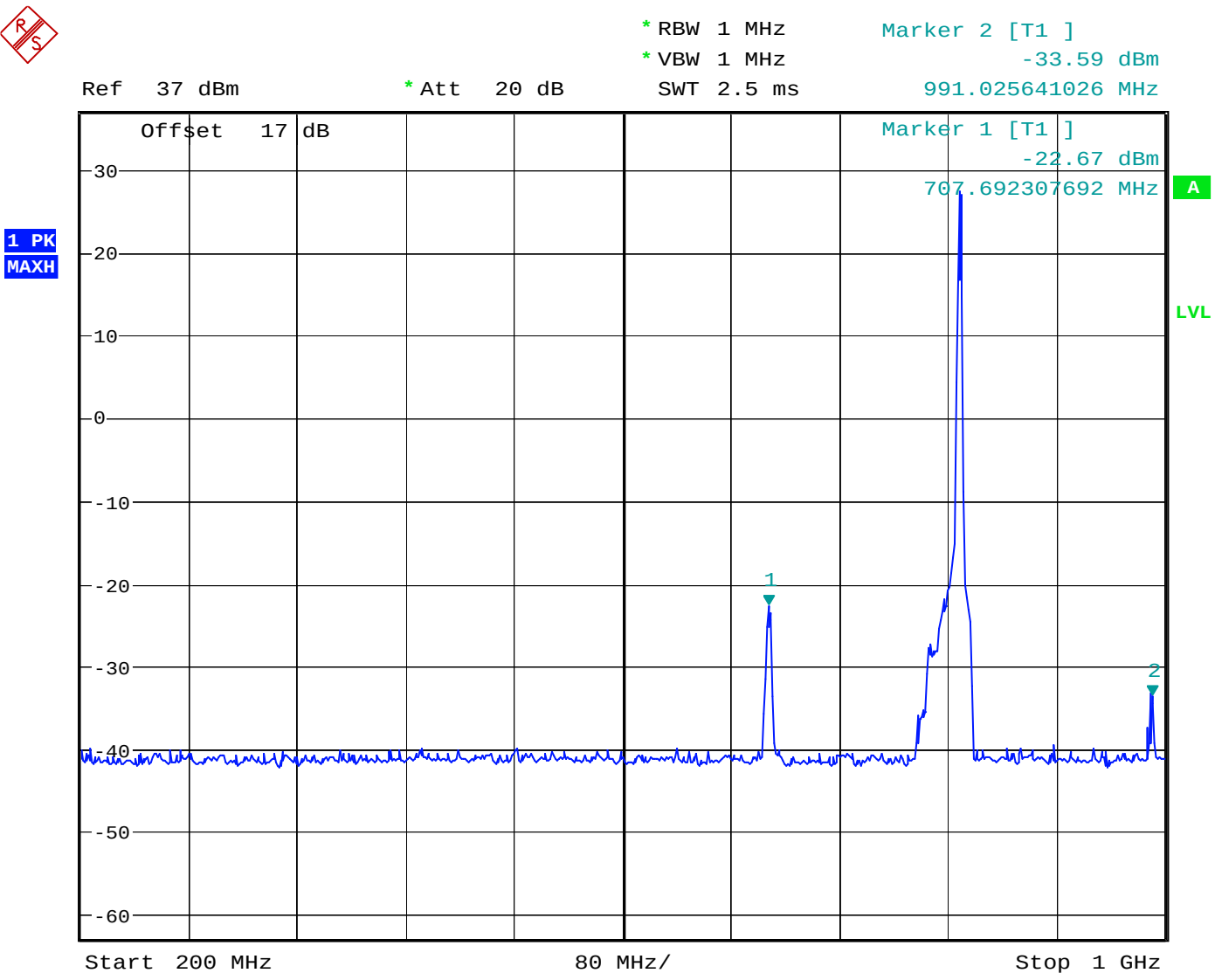
Conducted Spurious Emission ch384

Date: 25.NOV.2006 15:08:06



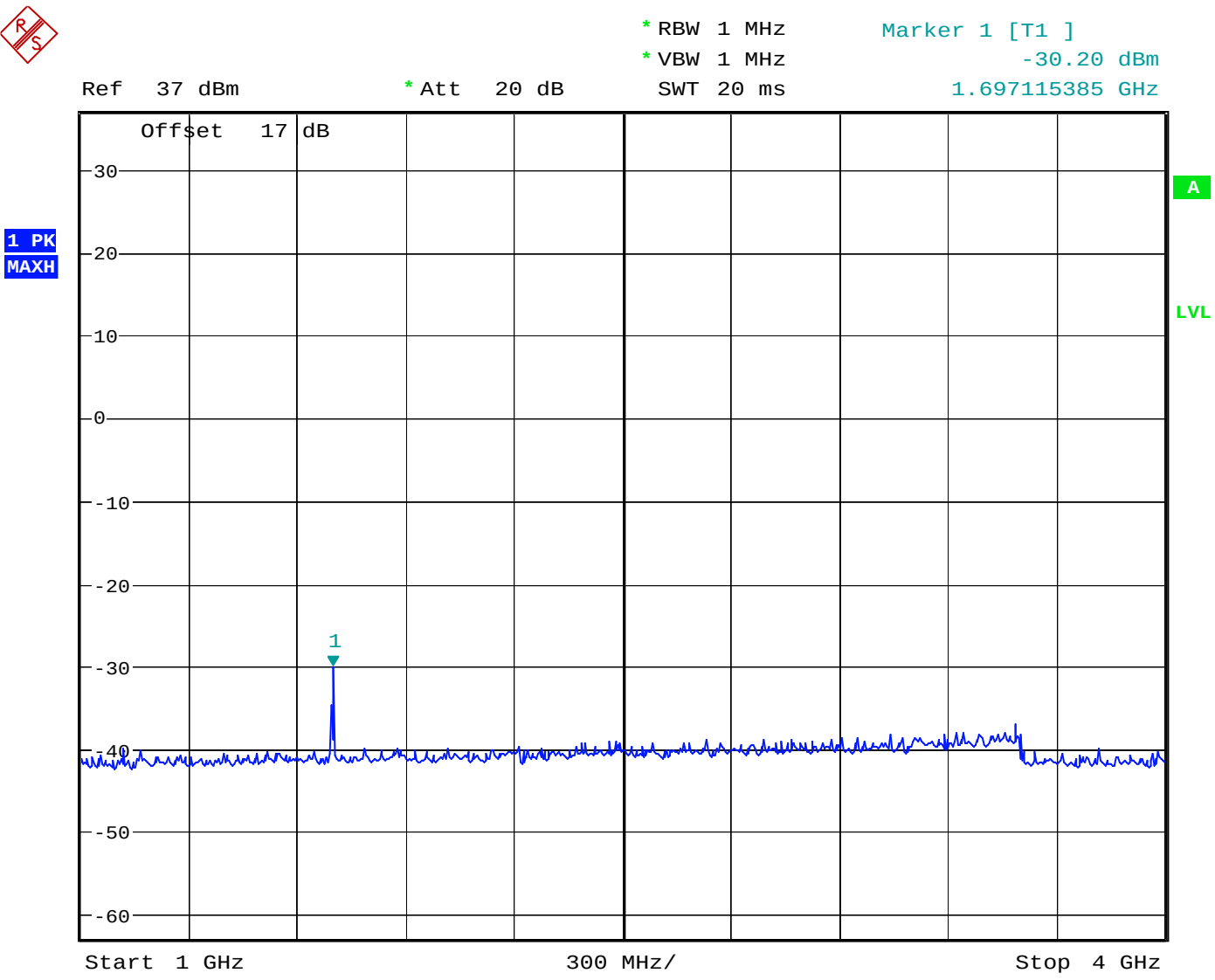
Conducted Spurious Emission ch777

Date: 25.NOV.2006 15:11:06



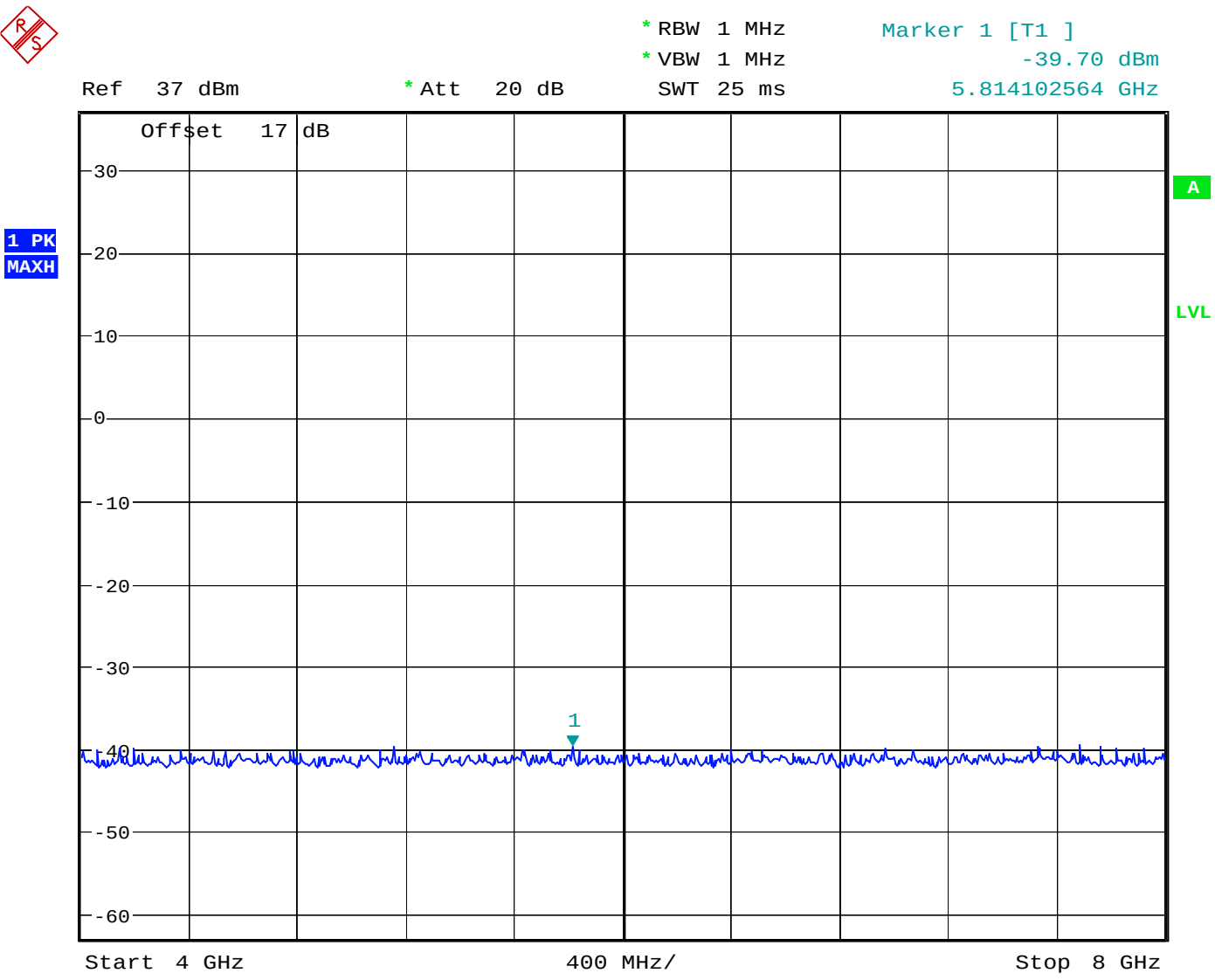
Conducted Spurious Emission ch777

Date: 25.NOV.2006 15:12:03



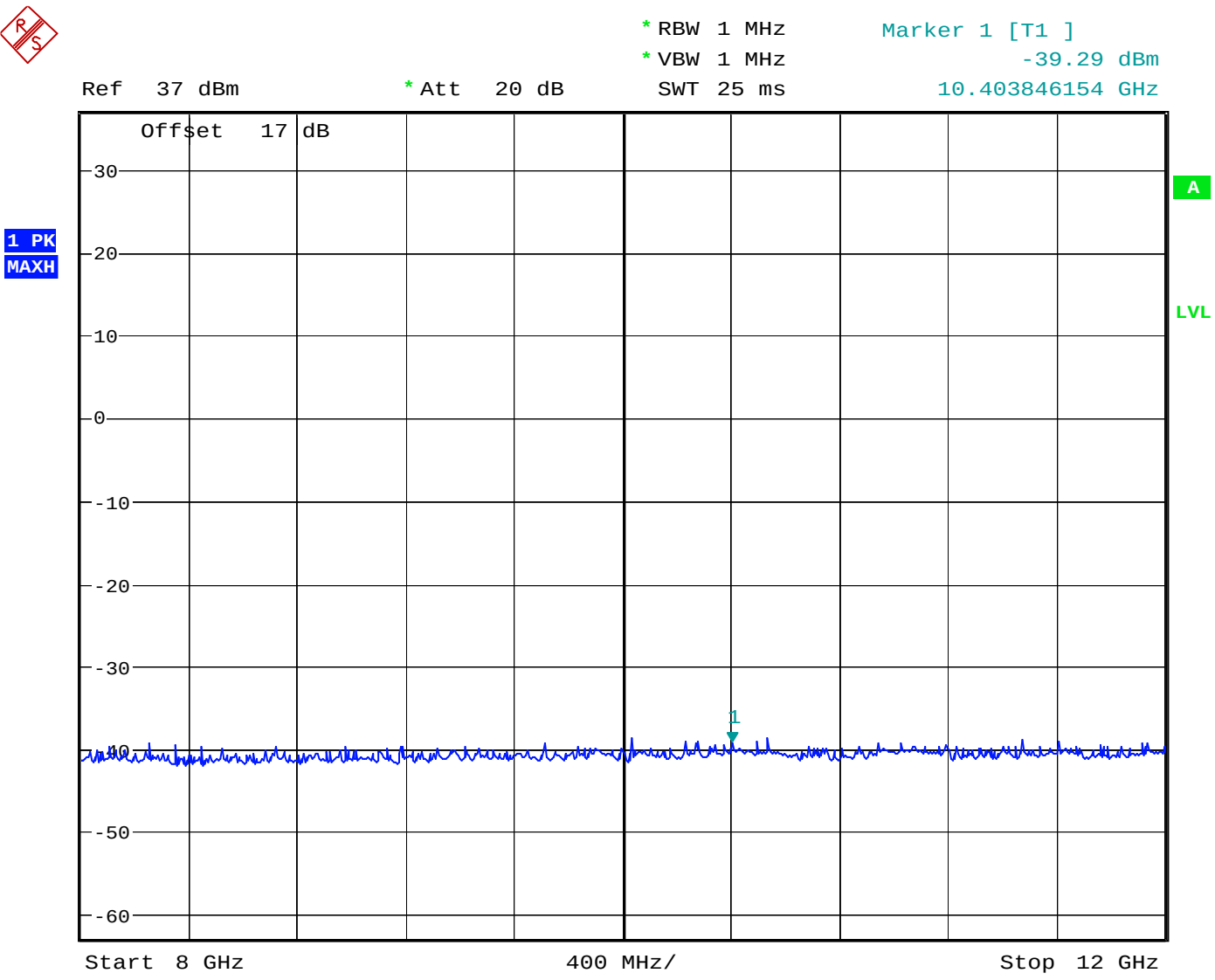
Conducted Spurious Emission ch777

Date: 25.NOV.2006 15:12:33



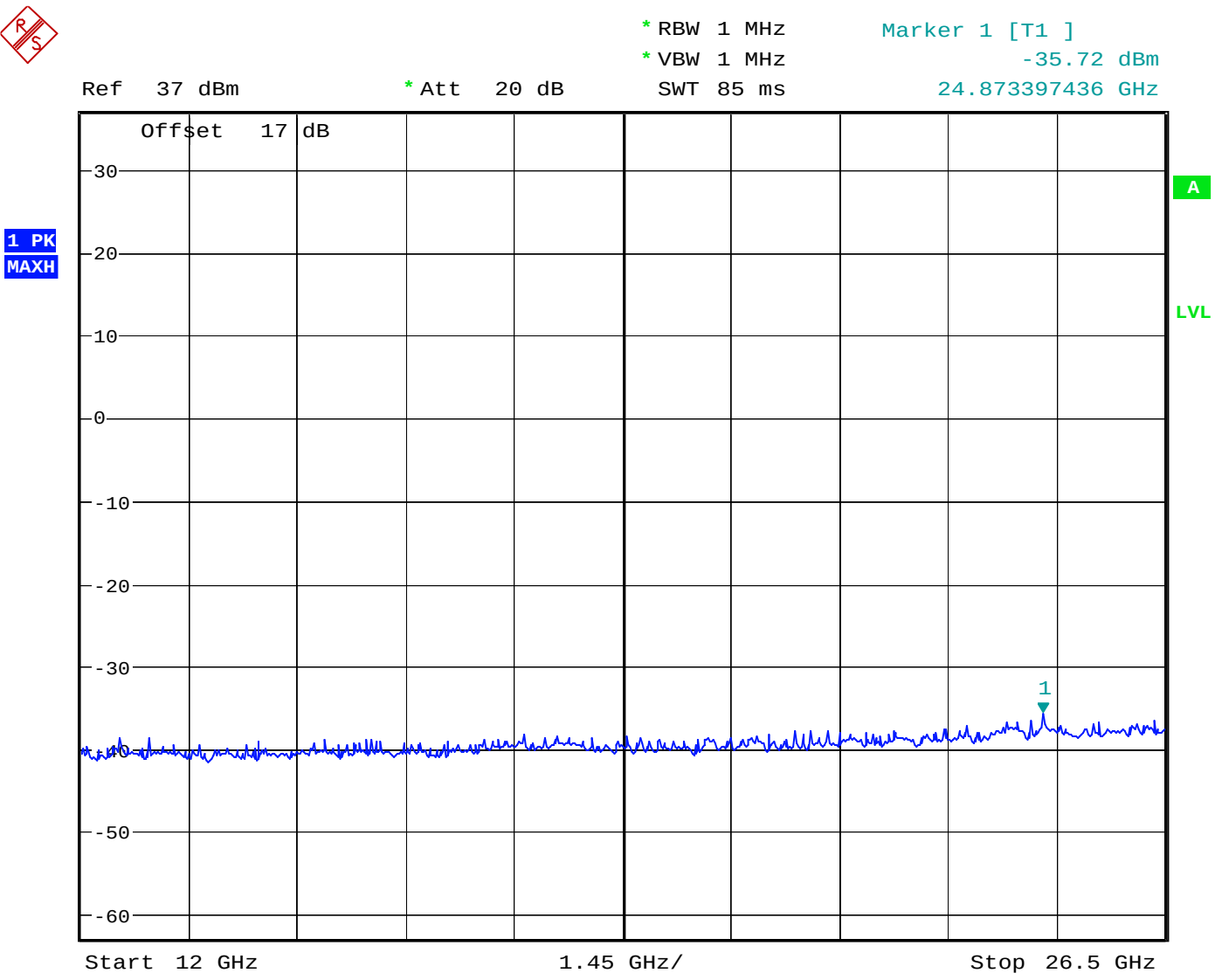
Conducted Spurious Emission ch777

Date: 25.NOV.2006 15:12:58



Conducted Spurious Emission ch777

Date: 25.NOV.2006 15:13:35



Conducted Spurious Emission ch777

Date: 25.NOV.2006 15:13:55

Appendix D

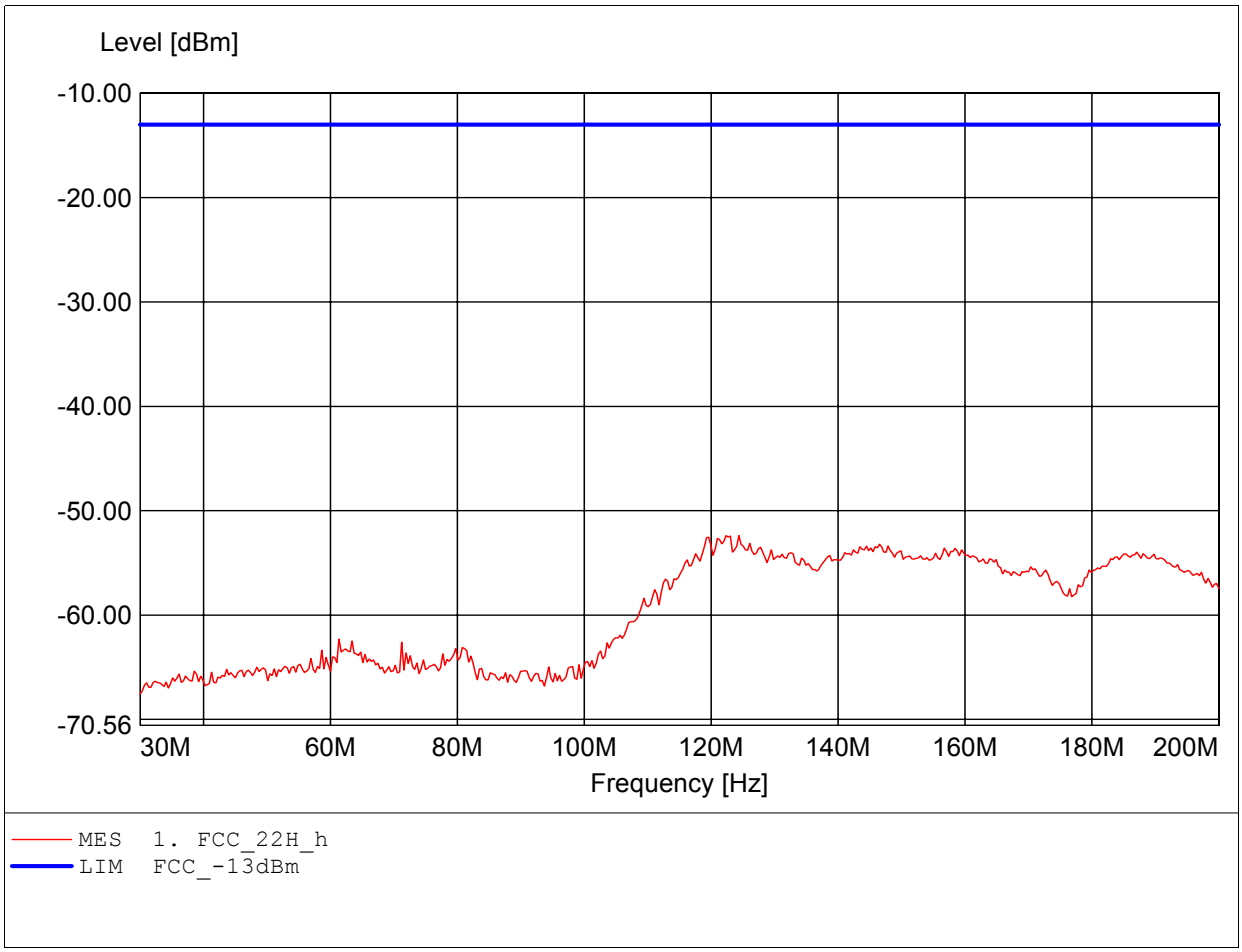
Filed Strength of Spurious Emission

The measurement diagram are wideband pre-scan results; only for reference.

Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

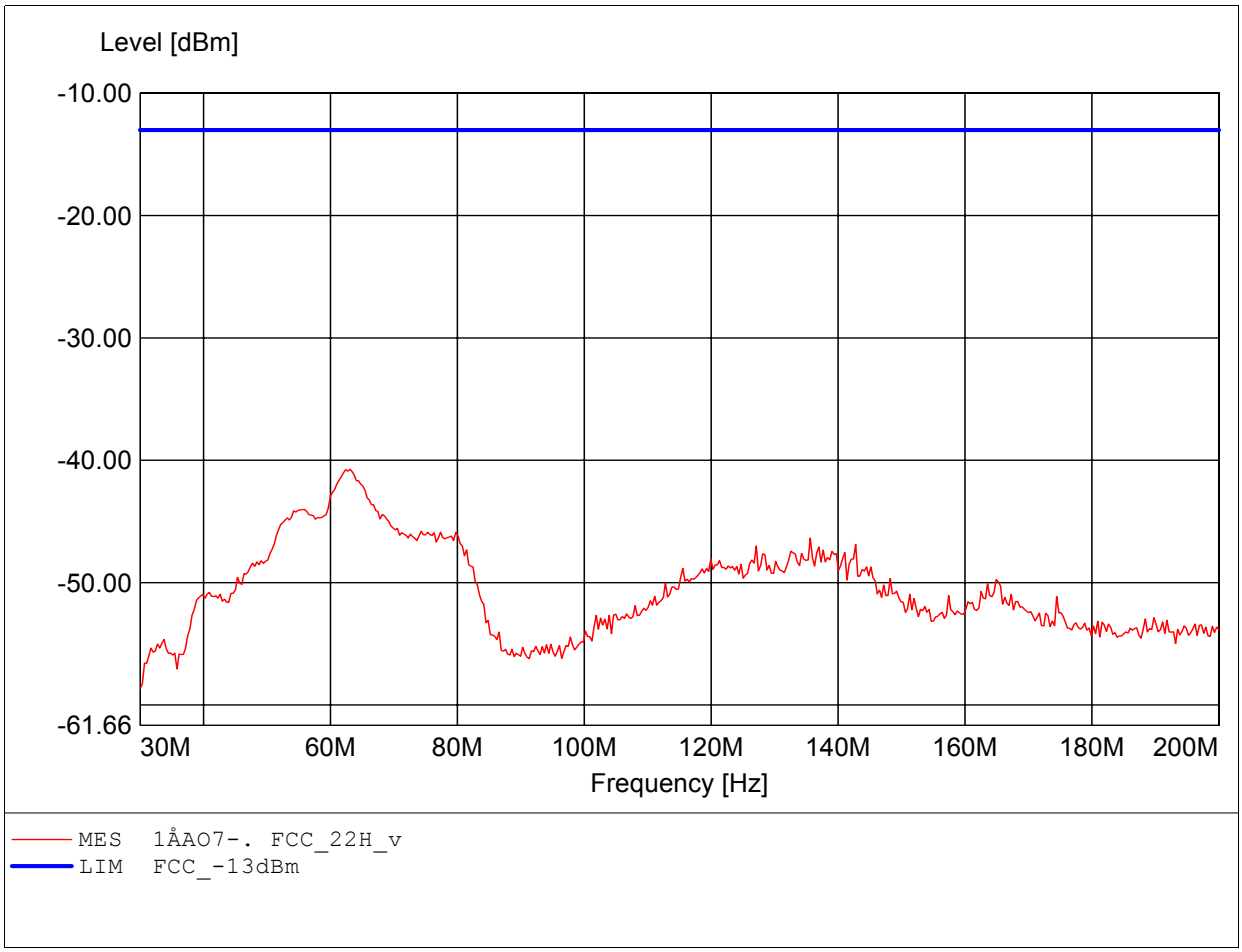
```
Order Number :          W6M20611-7576     CH1013
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HK 116
                        Freq: 122.325MHz, Pmax: -52.38dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

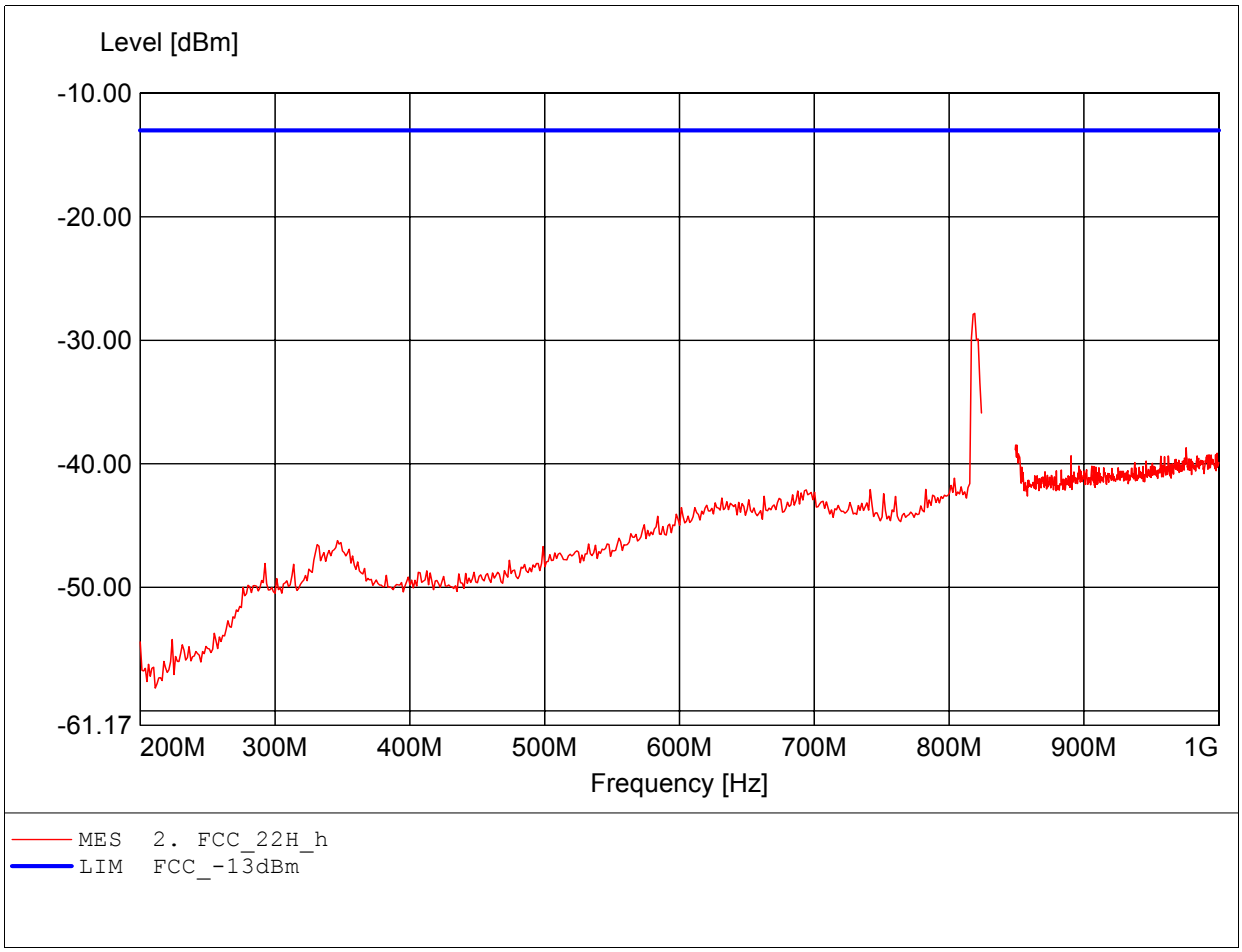
Order Number :	W6M20611-7576 CH1013
Test Site / Operator:	ETS / Michael
Temperature:	Temp.: 23.9°C
	according to §22.917
Comment 1:	Dist.: 3m, Ant.: HK 116
	Freq: 63.046MHz, Pmax: -40.73dBm, RBW: 30kHz



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

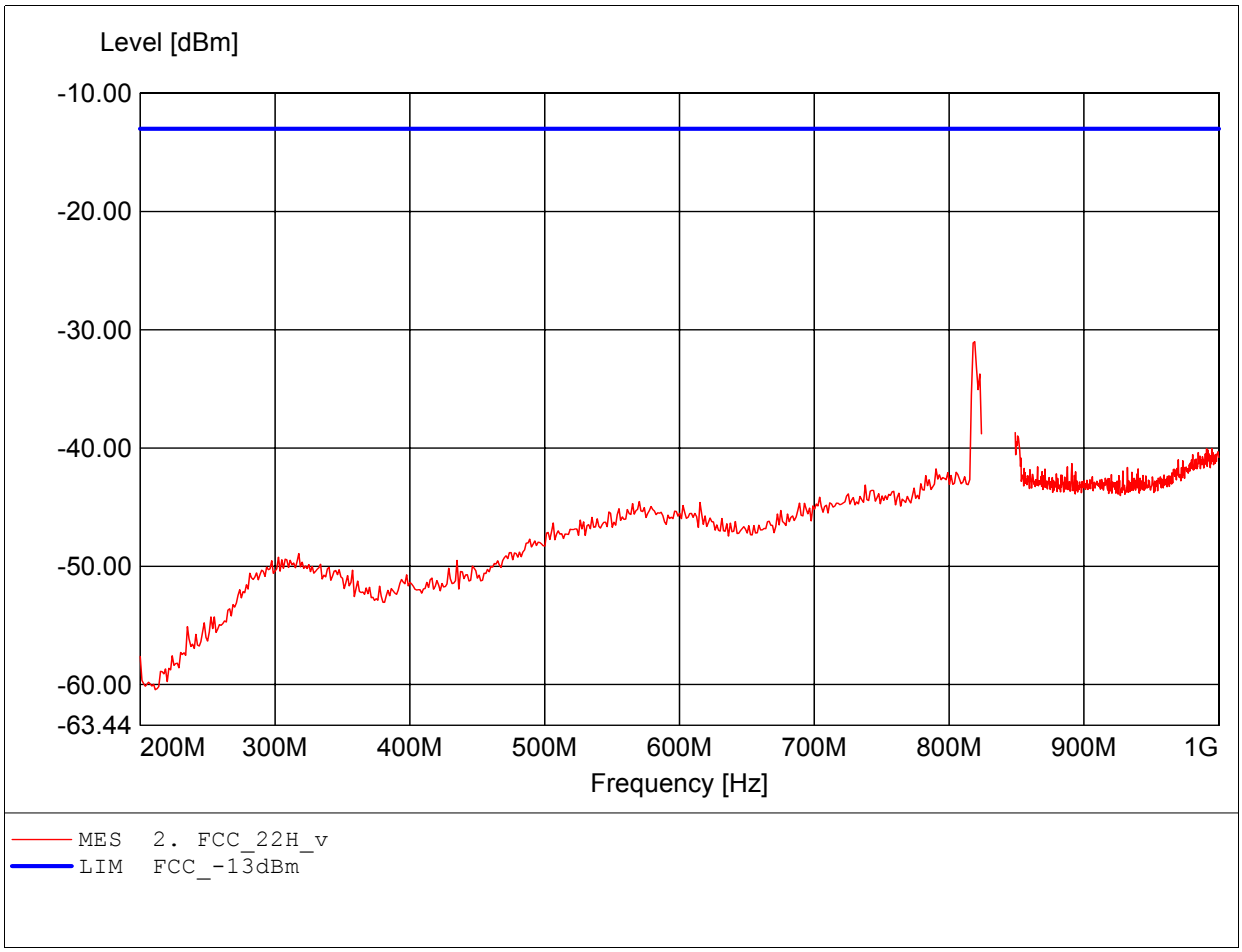
```
Order Number :          W6M20611-7576     CH1013
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL 223
                        Freq: 818.998MHz, Pmax: -27.82dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

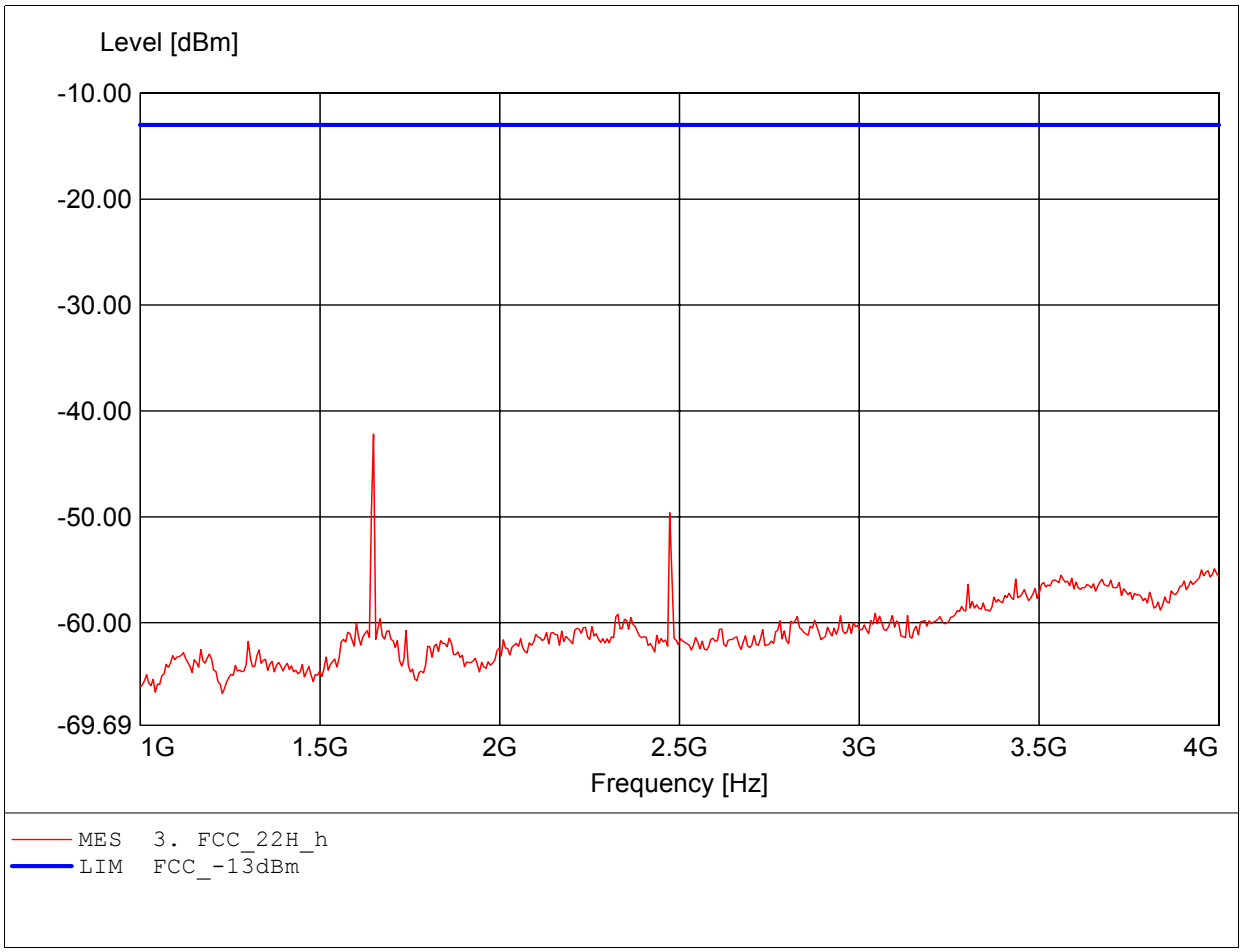
```
Order Number :          W6M20611-7576     CH1013
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL 223
                        Freq: 818.998MHz, Pmax: -31.00dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

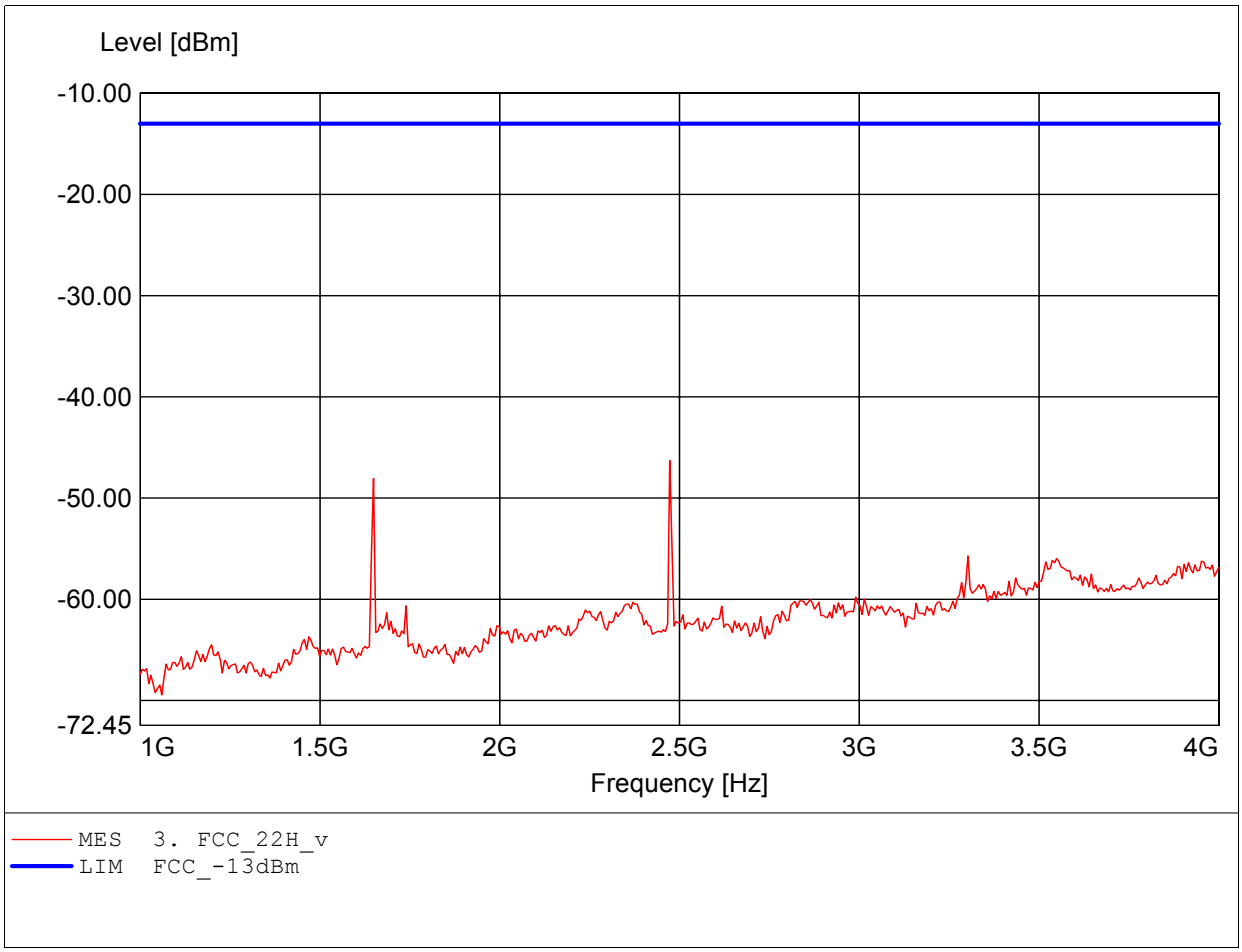
Order Number :	W6M20611-7576 CH1013
Test Site / Operator:	ETS / Michael
Temperature:	Temp.: 23.9°C
	according to §22.917
Comment 1:	Dist.: 3m, Ant.: HL025
	Freq: 1.649GHz, Pmax: -42.20dBm, RBW: 30kHz



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

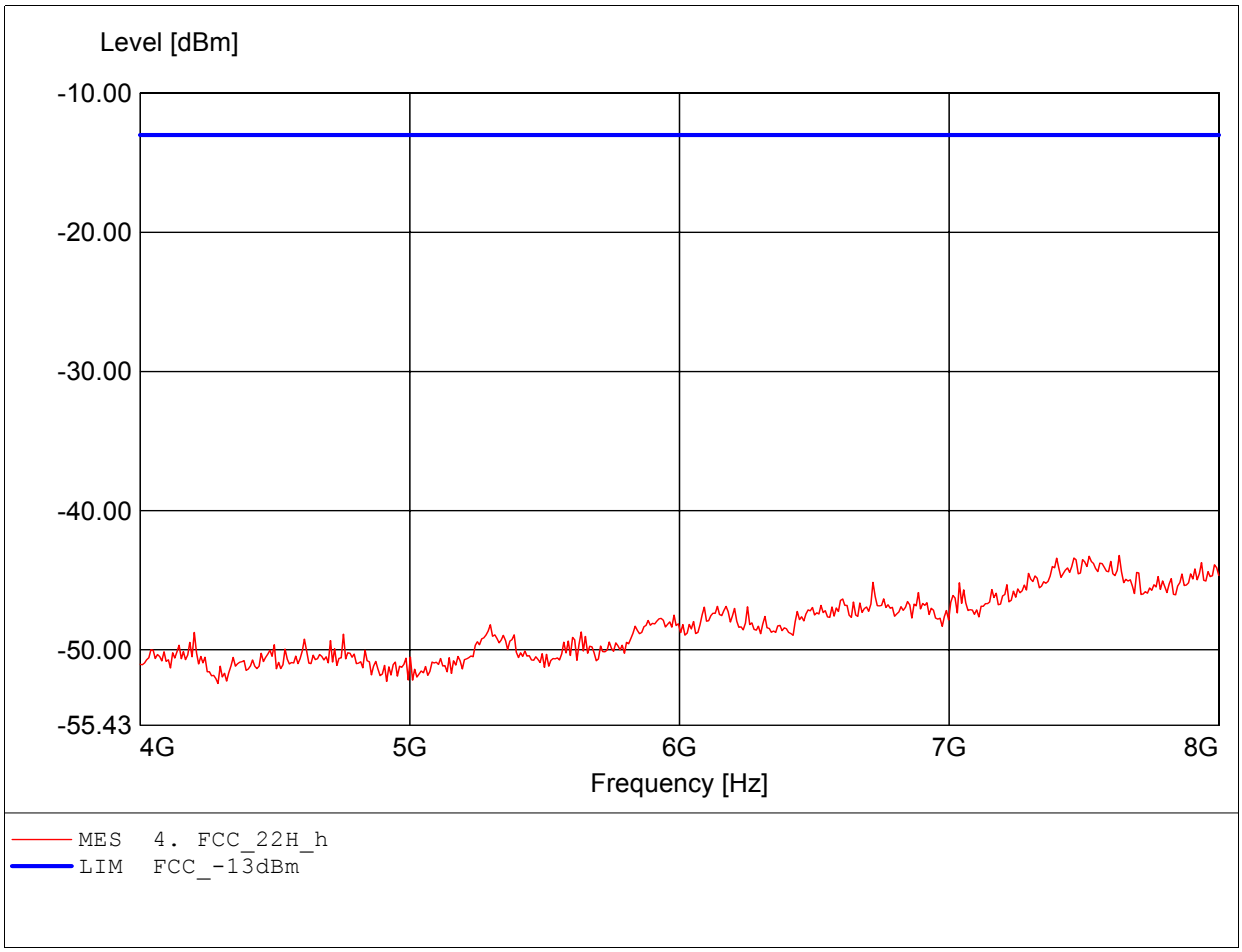
```
Order Number :          W6M20611-7576     CH1013
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025
                        Freq: 2.473GHz, Pmax: -46.29dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

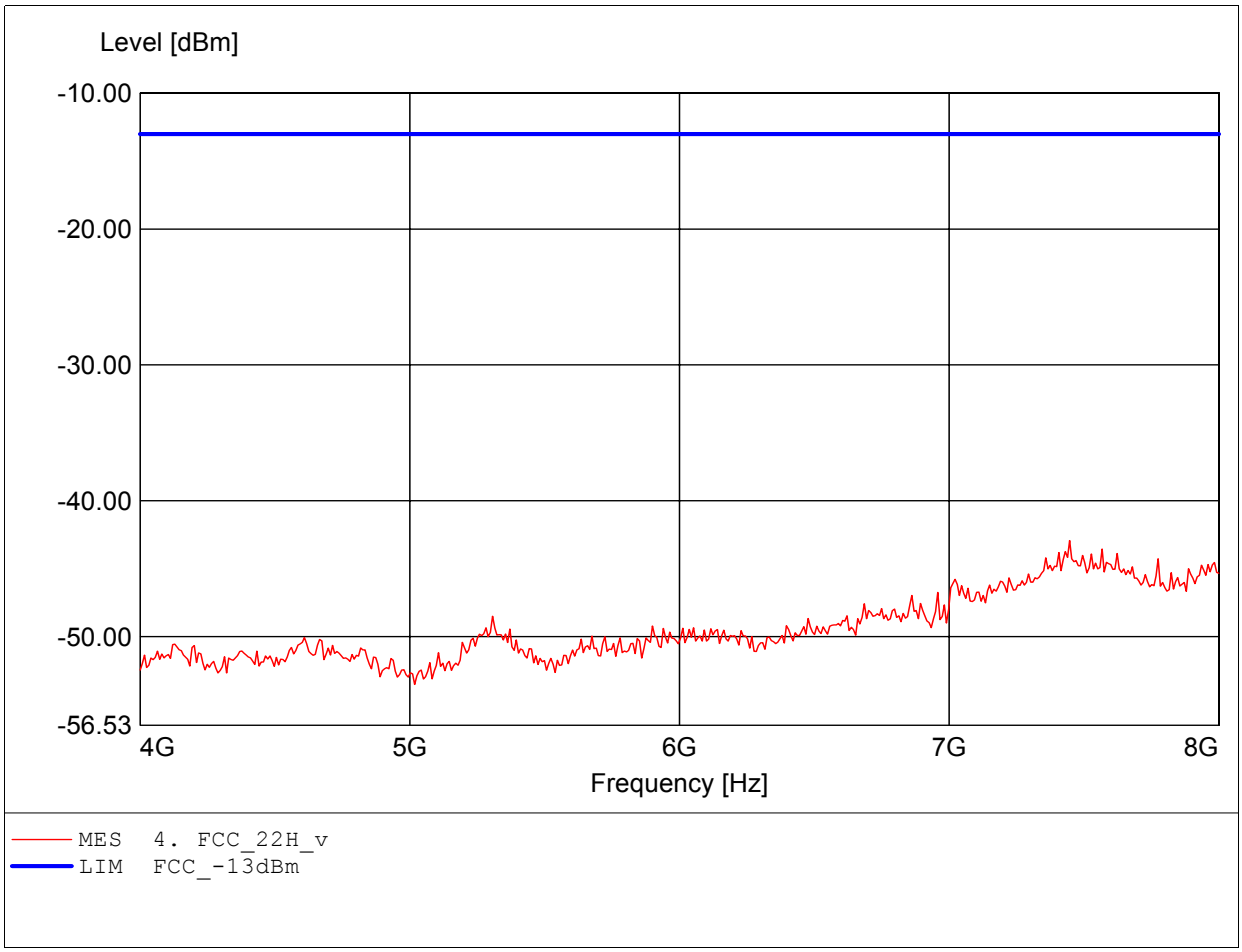
```
Order Number :          W6M20611-7576     CH1013
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 7.631GHz, Pmax: -43.22dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

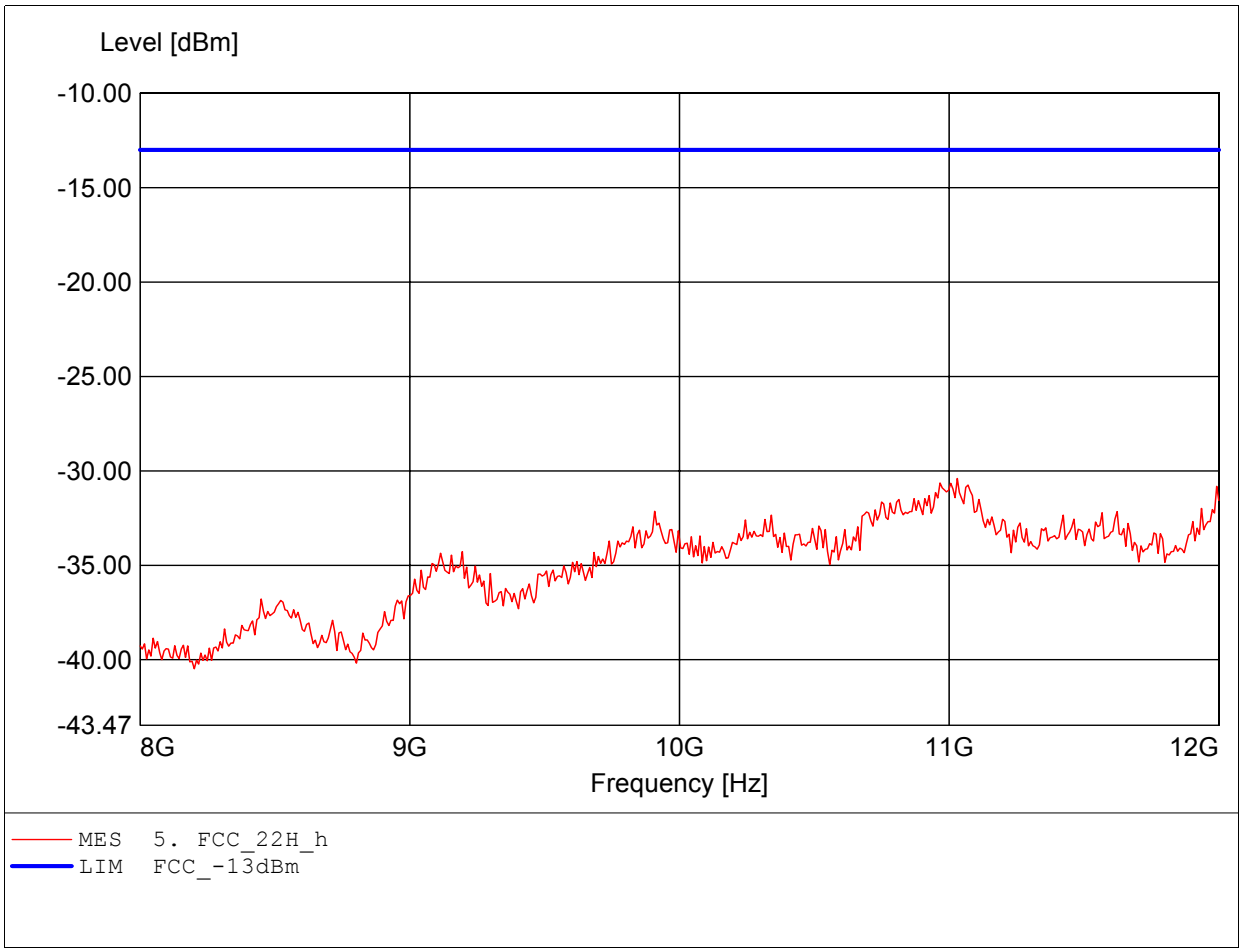
```
Order Number :          W6M20611-7576     CH1013
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 7.447GHz, Pmax: -42.94dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

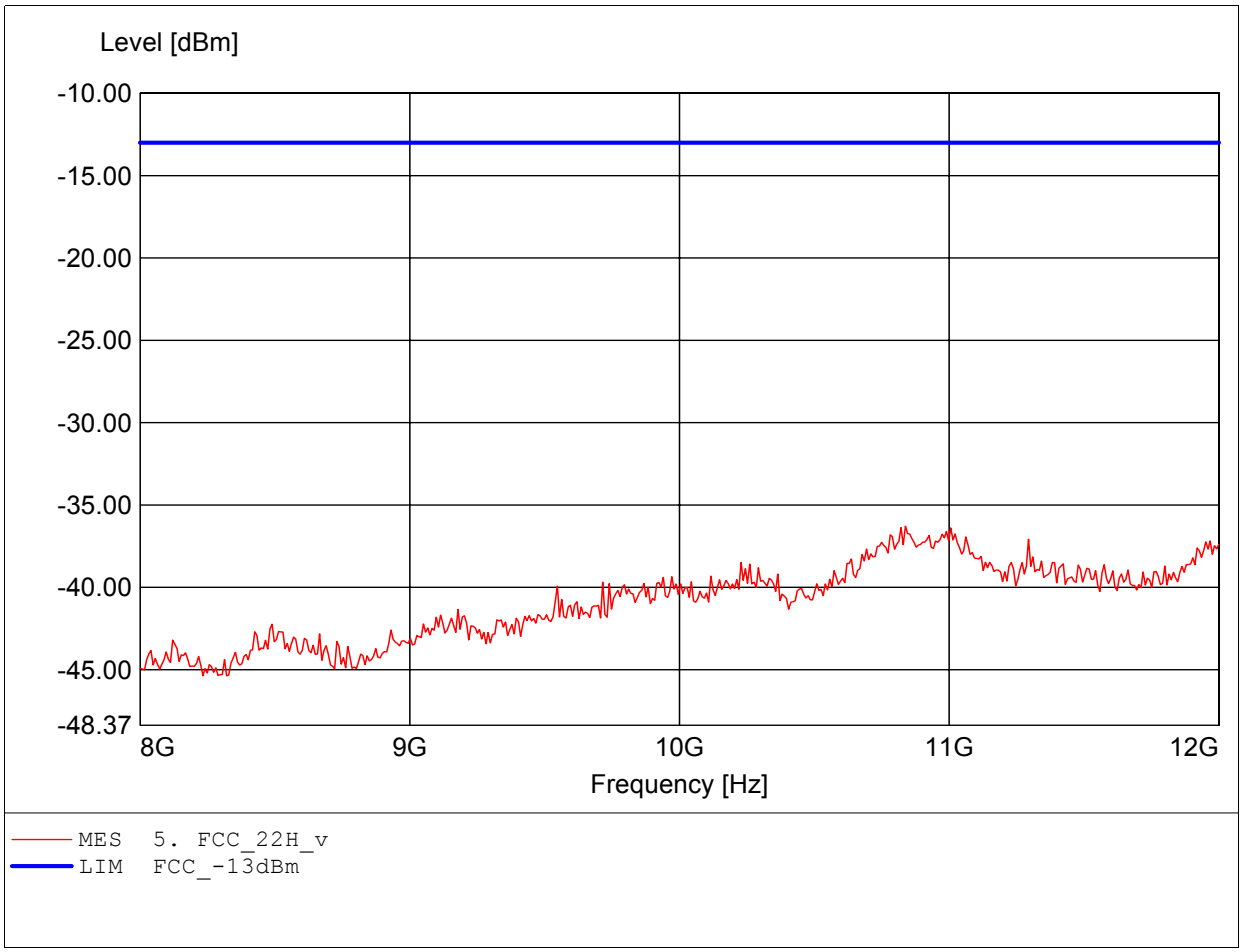
```
Order Number :          W6M20611-7576     CH1013
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 11.030GHz, Pmax: -30.40dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

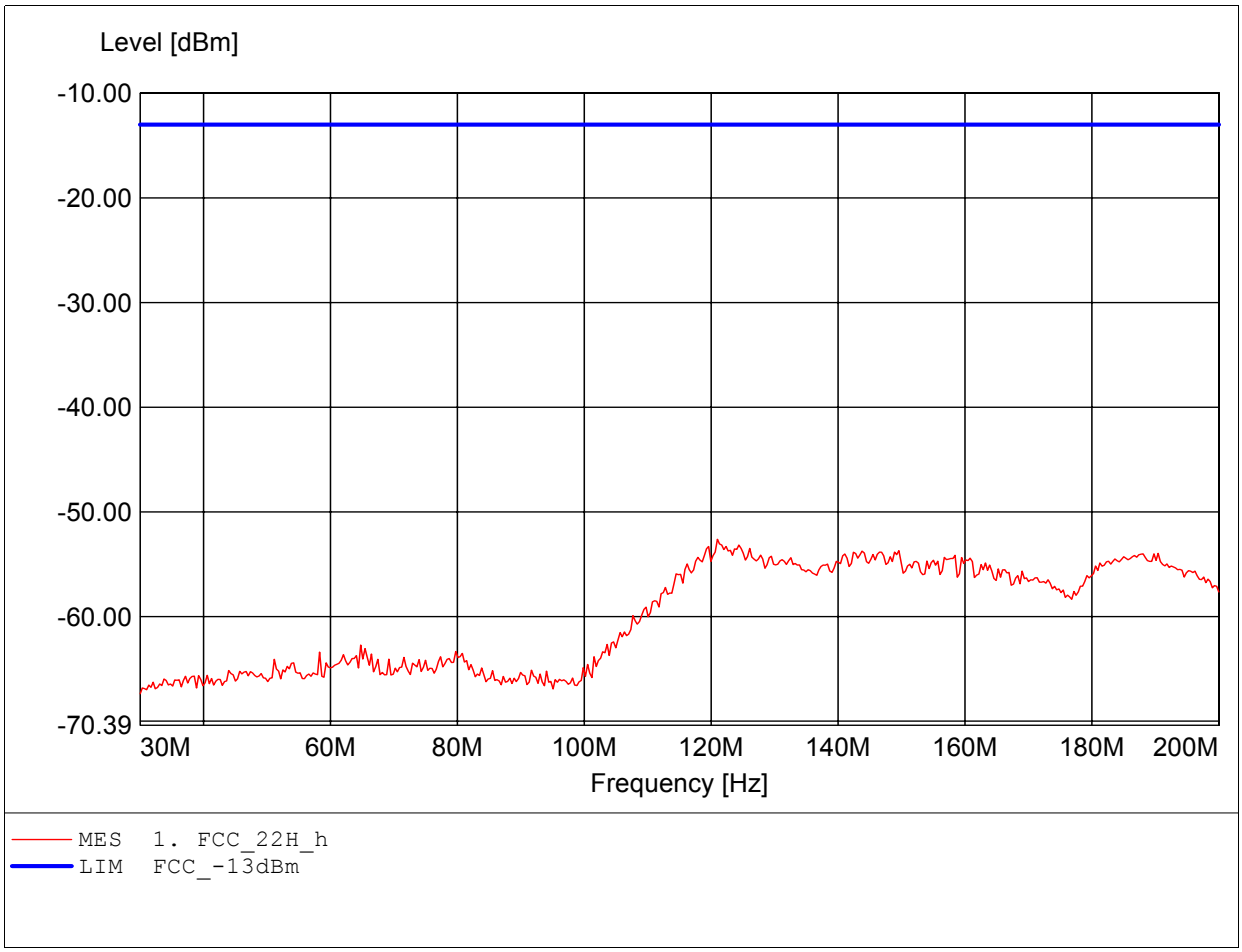
```
Order Number :          W6M20611-7576     CH1013
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 10.838GHz, Pmax: -36.28dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

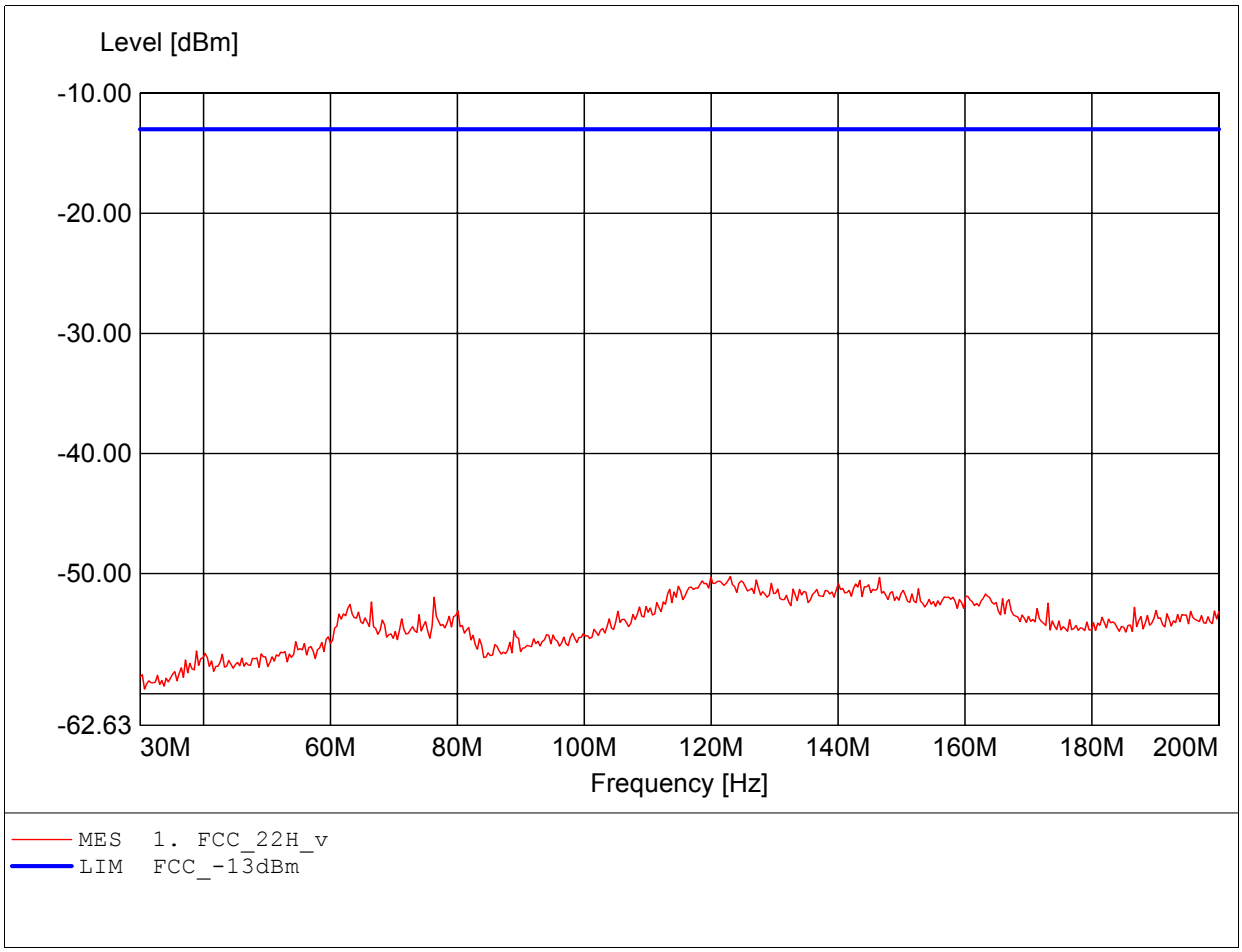
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HK 116
                        Freq: 120.962MHz, Pmax: -52.62dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

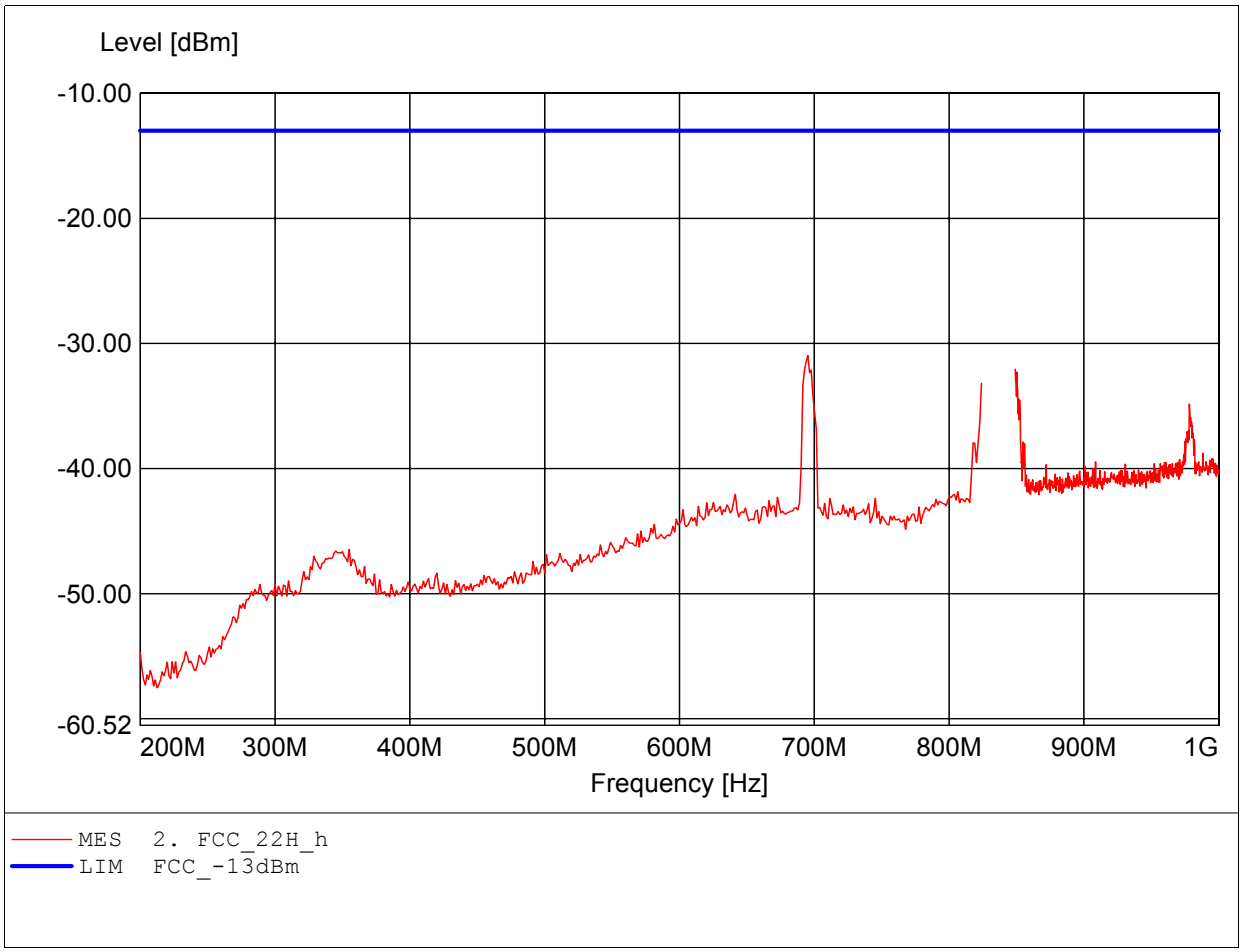
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HK 116
                        Freq: 123.006MHz, Pmax: -50.24dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

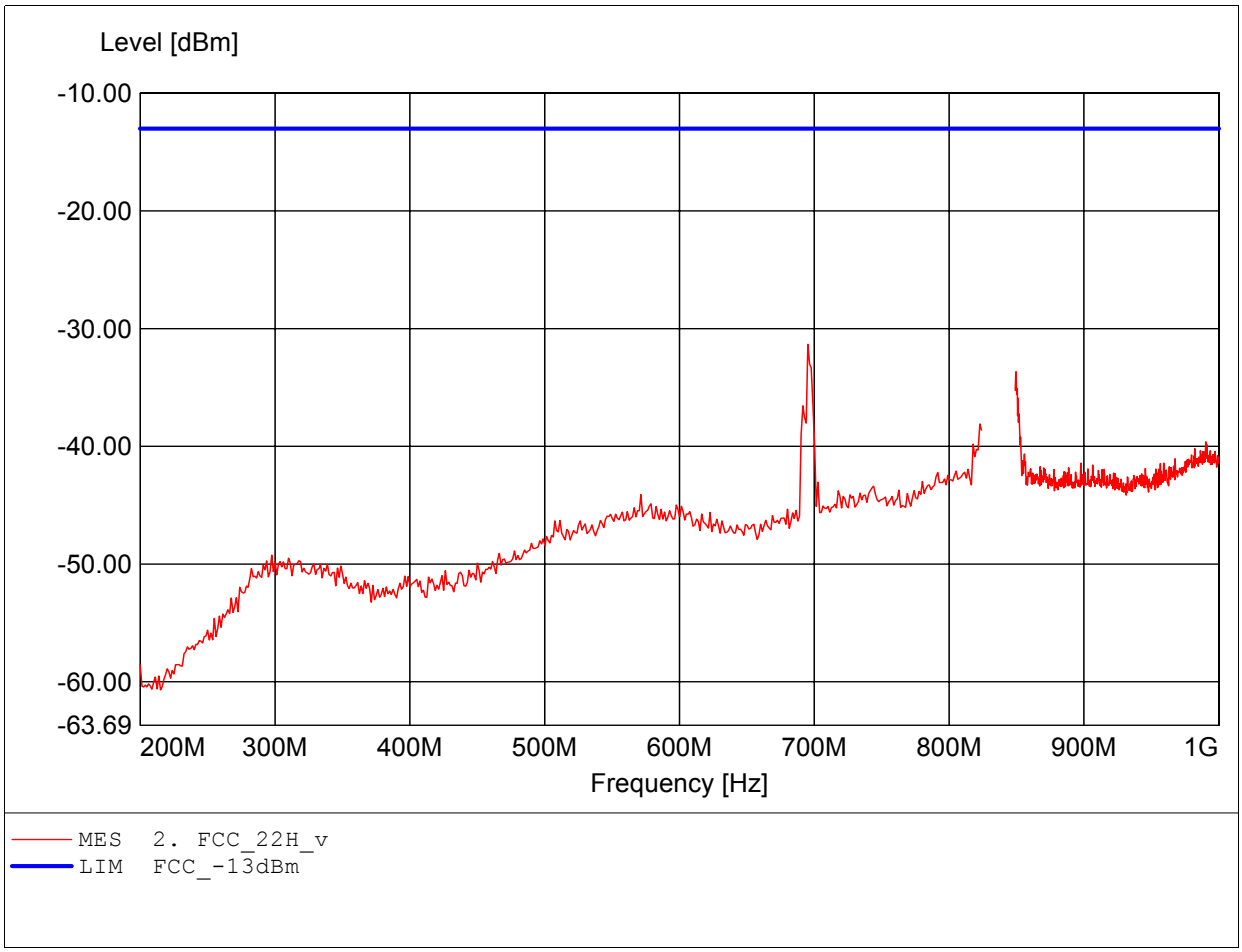
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL 223
                        Freq: 695.198MHz, Pmax: -30.97dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

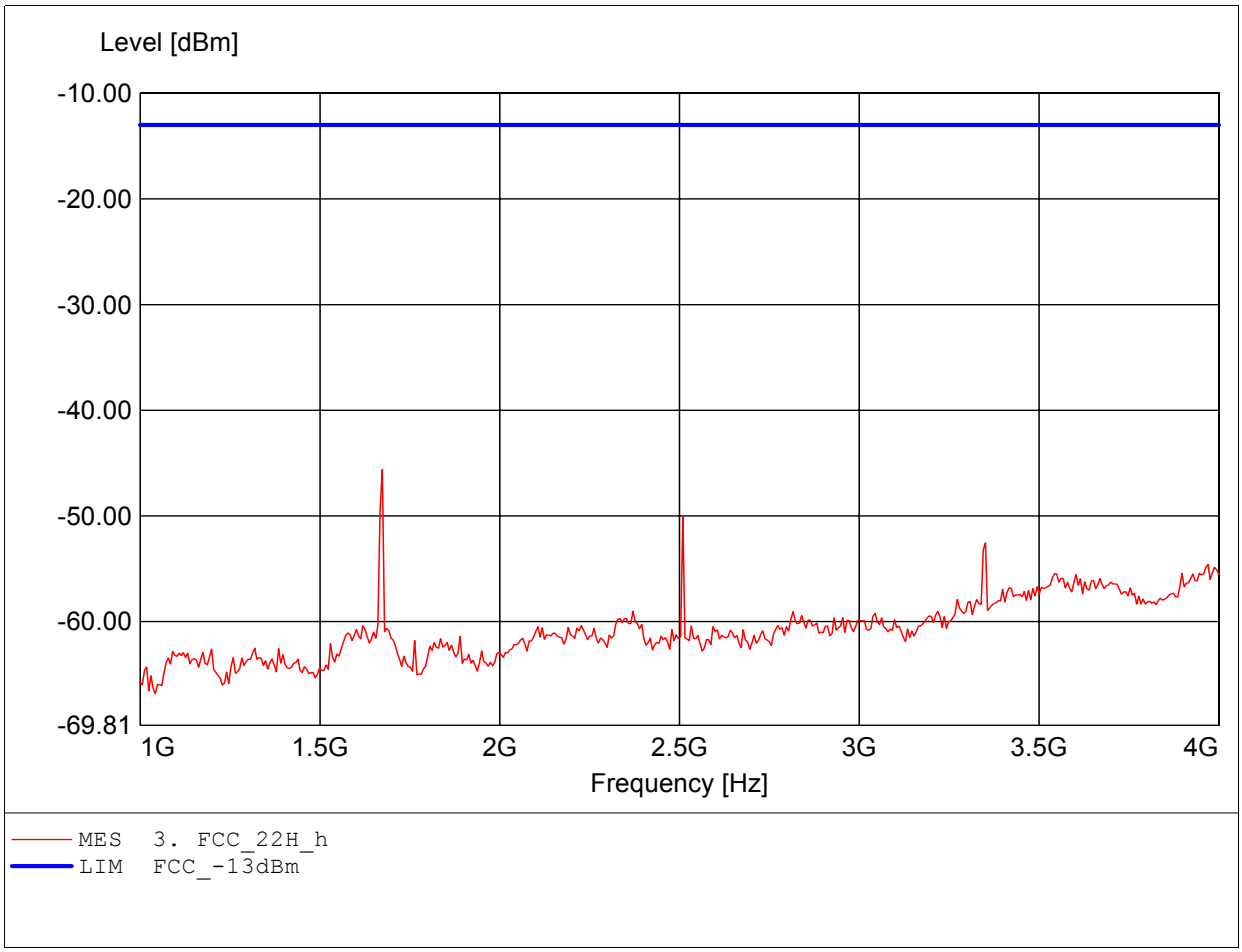
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL 223
                        Freq: 695.198MHz, Pmax: -31.33dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

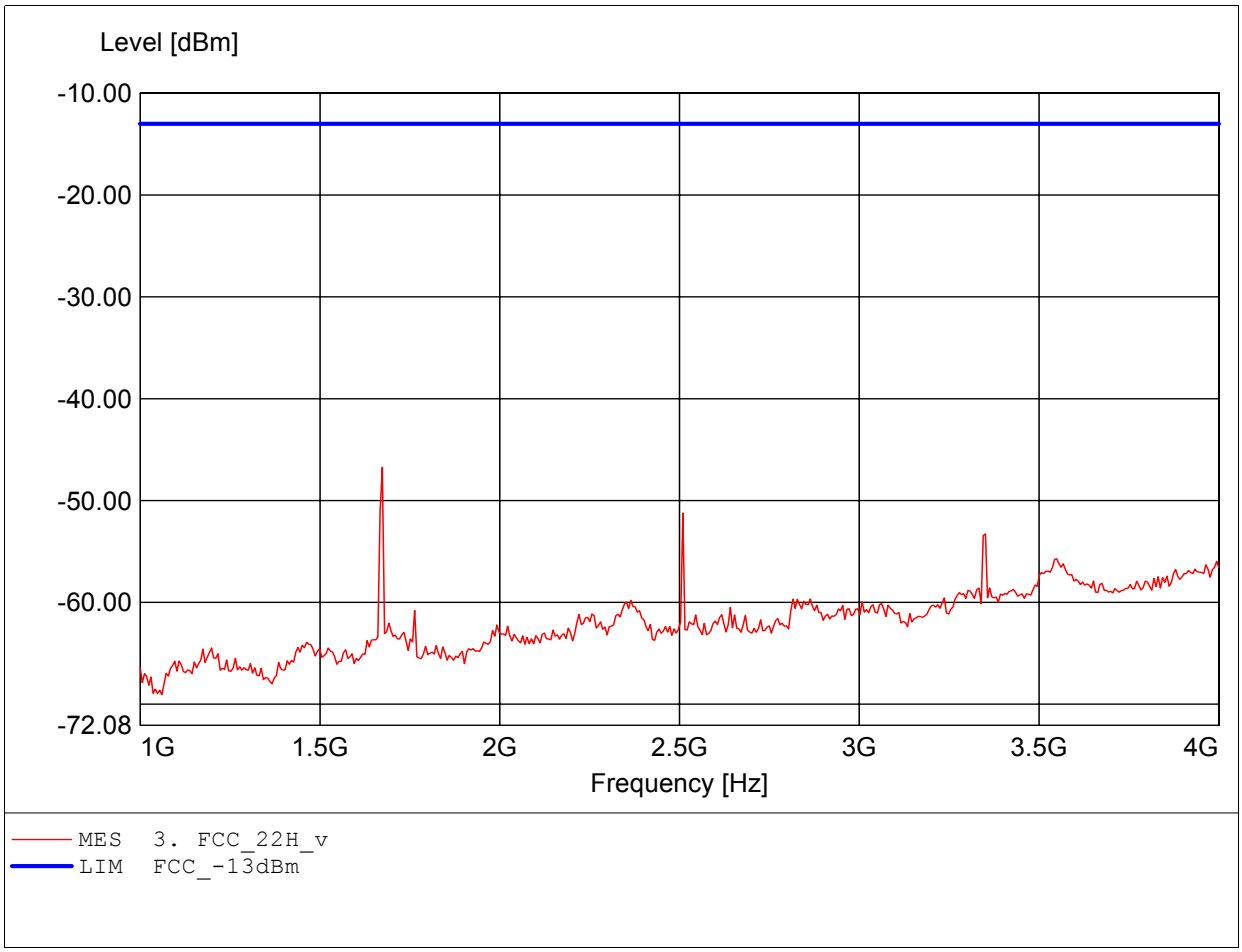
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025
                        Freq: 1.673GHz, Pmax: -45.61dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

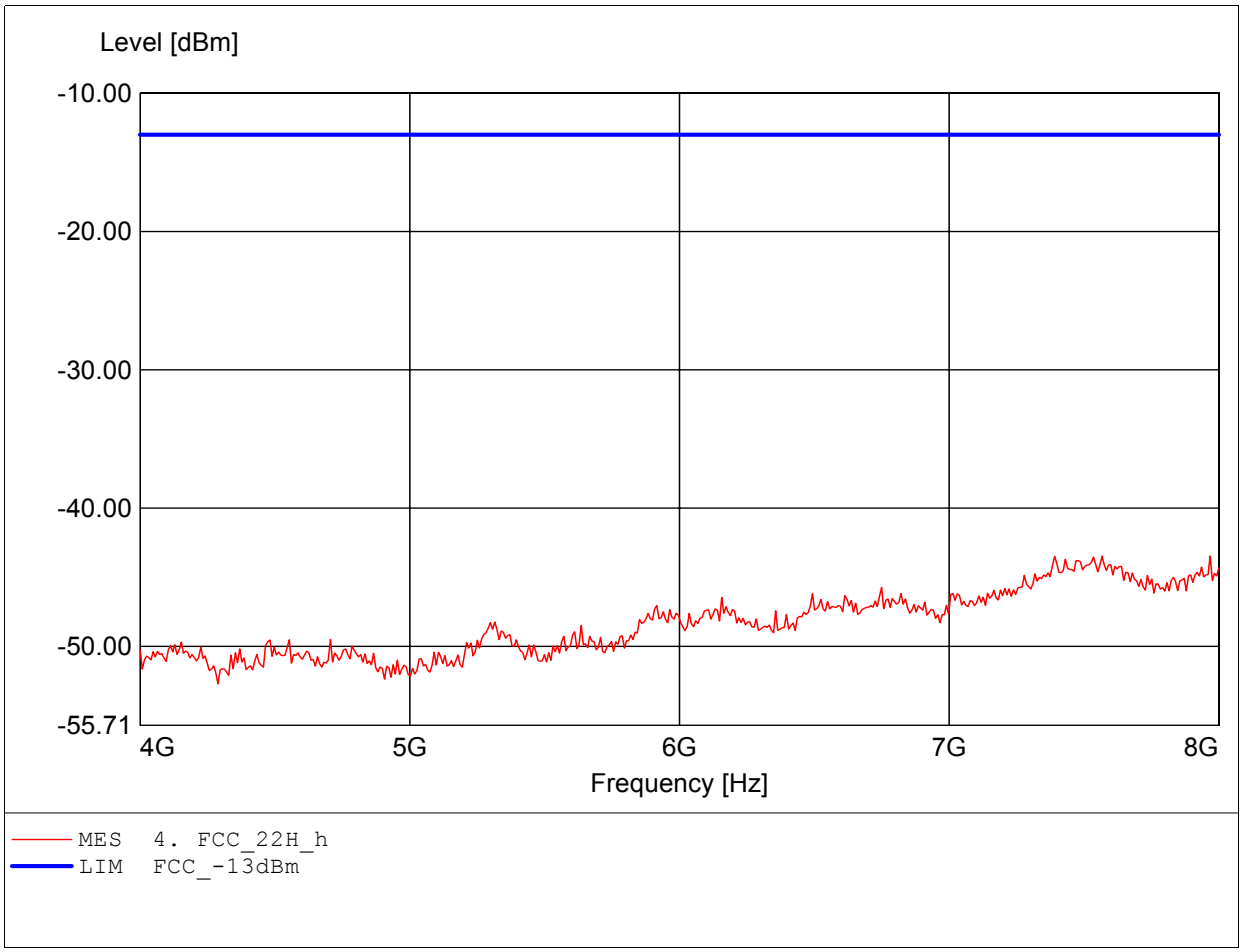
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025
                        Freq: 1.673GHz, Pmax: -46.74dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

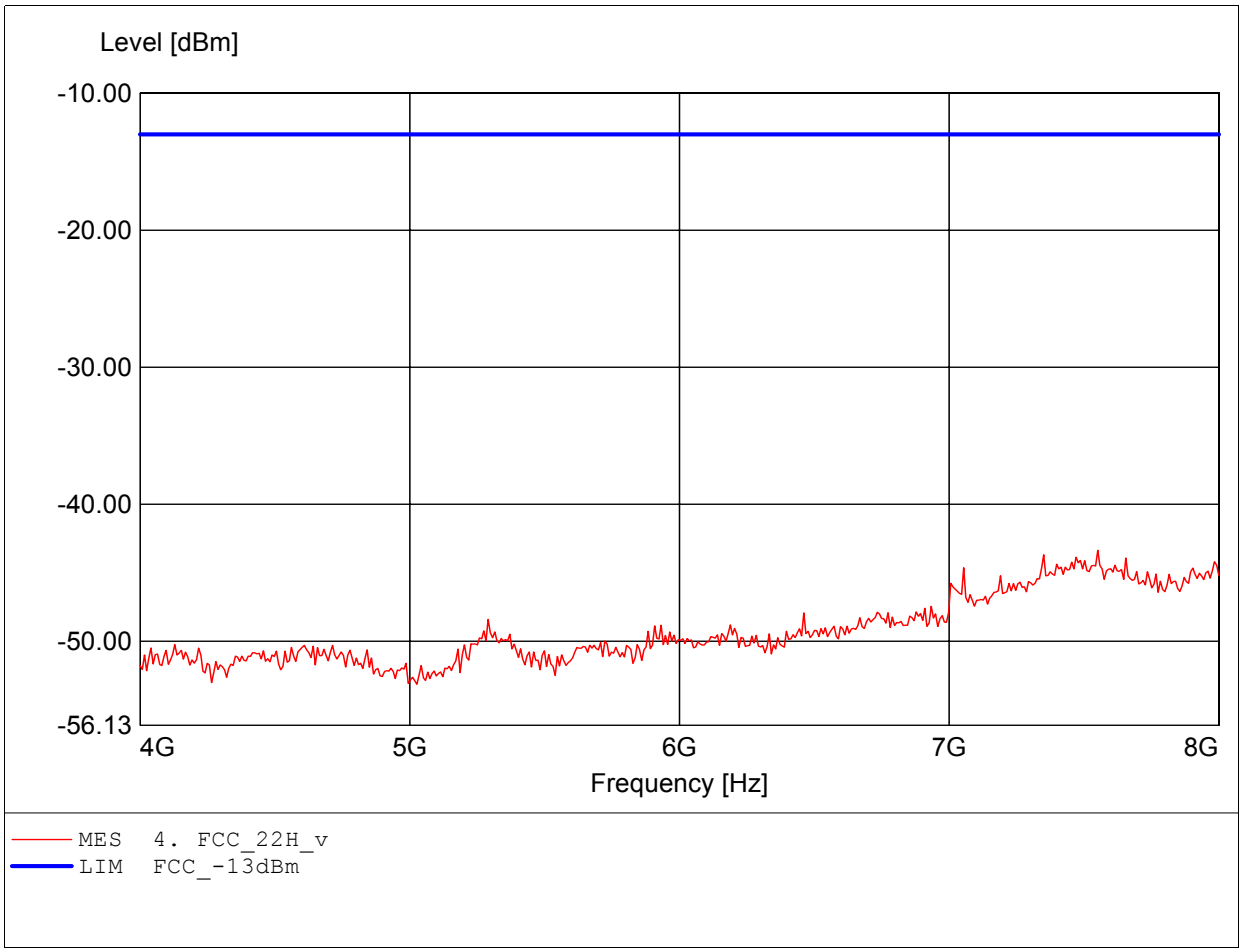
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 7.567GHz, Pmax: -43.48dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

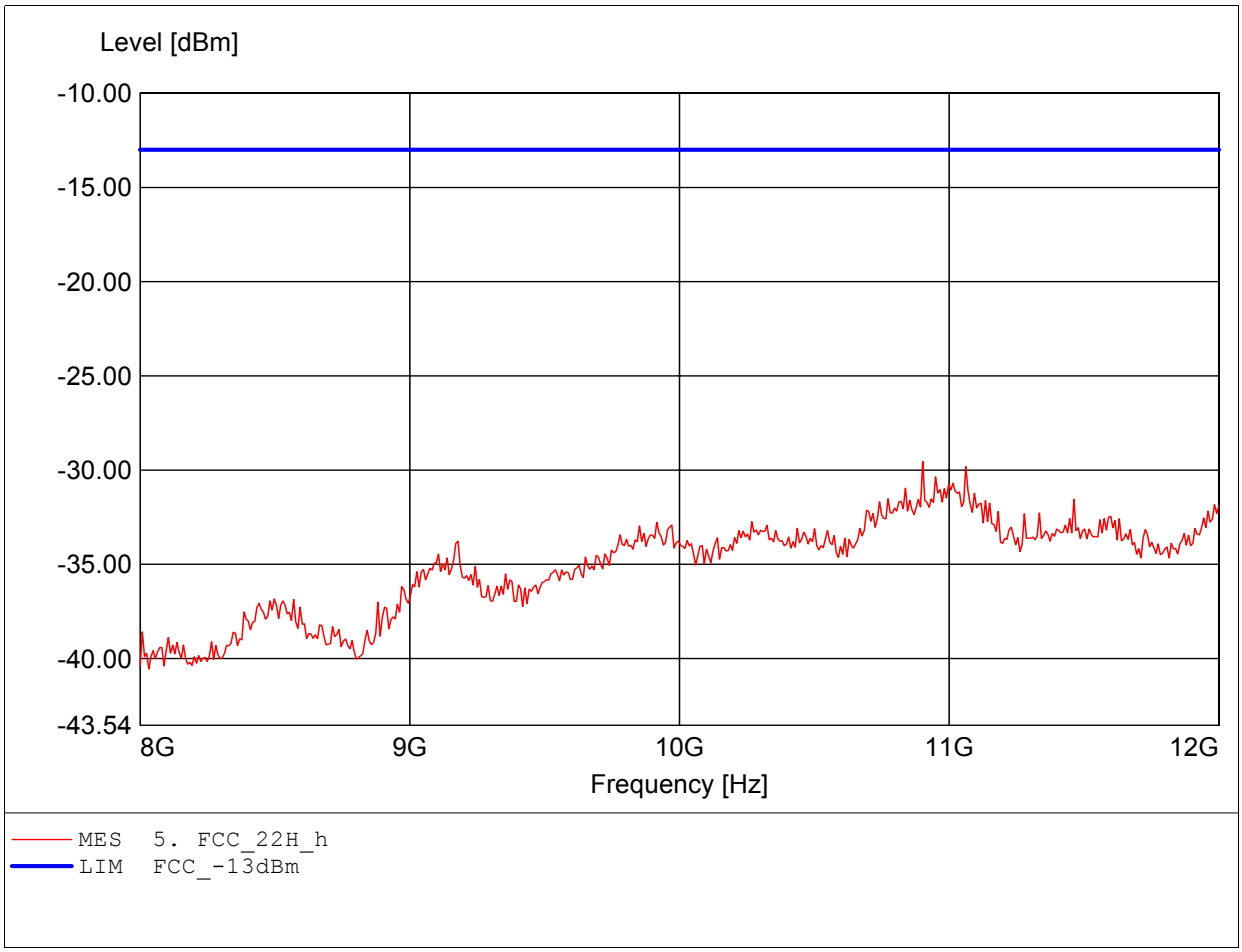
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 7.551GHz, Pmax: -43.36dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

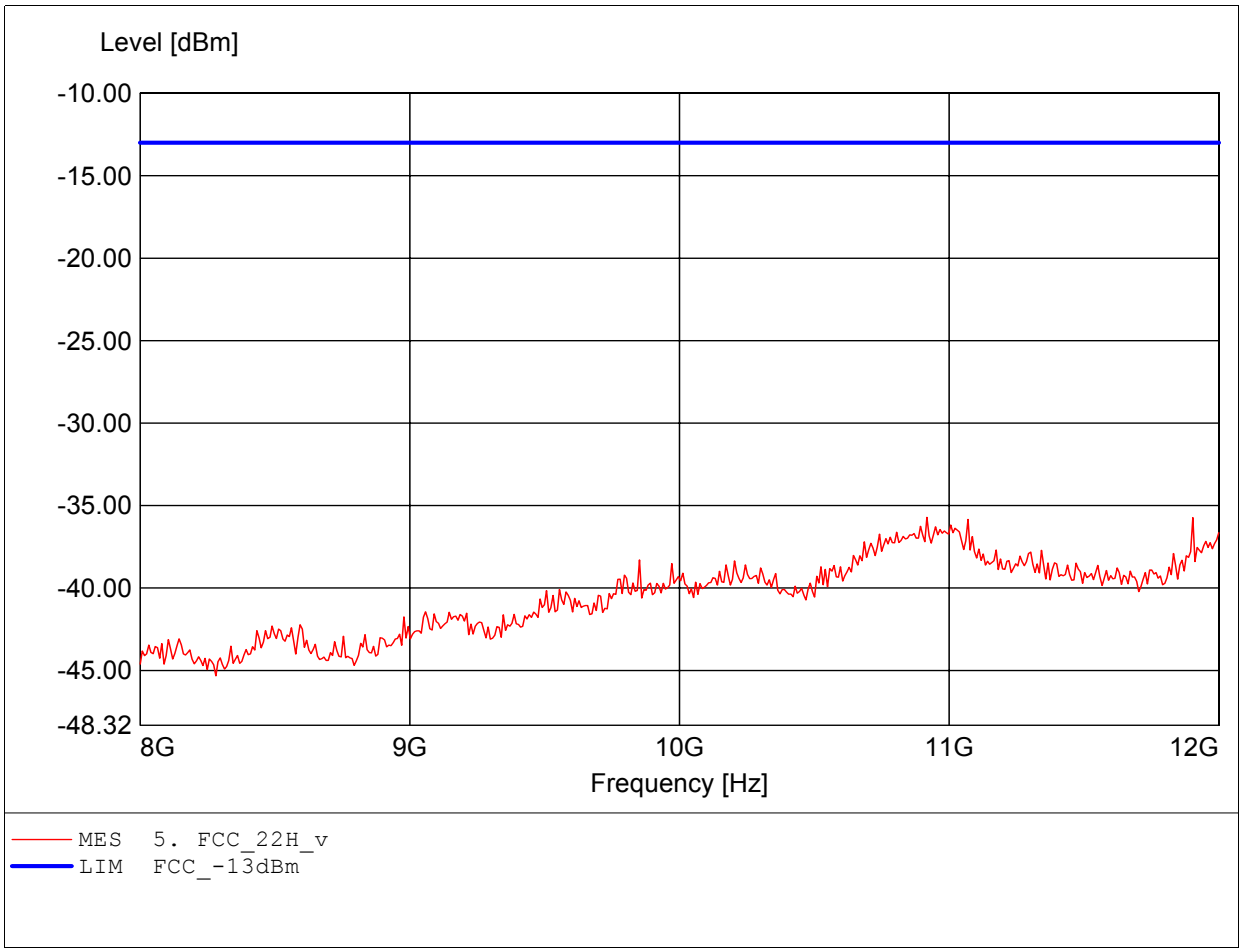
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 10.902GHz, Pmax: -29.54dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

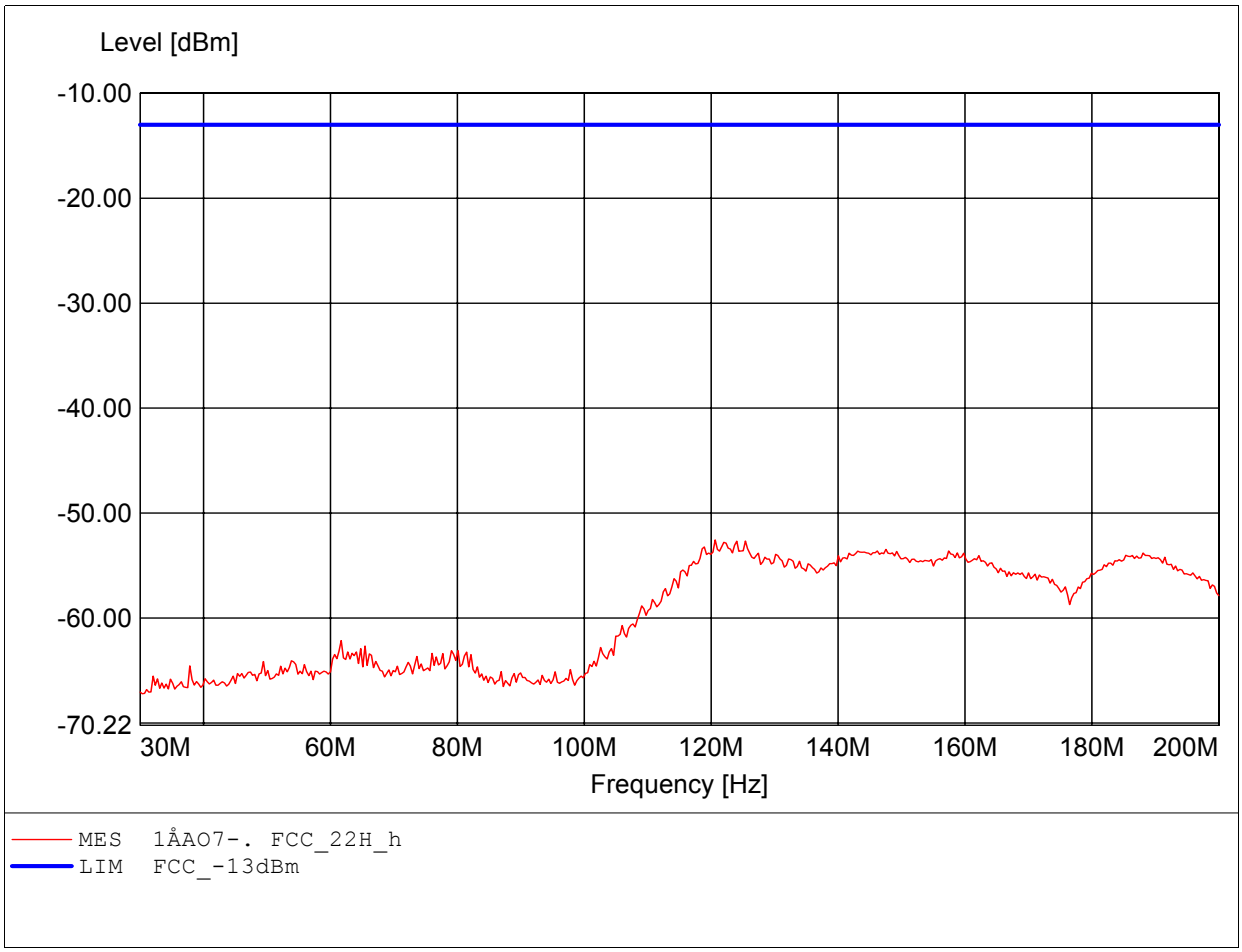
```
Order Number :          W6M20611-7576     CH384
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 10.918GHz, Pmax: -35.71dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

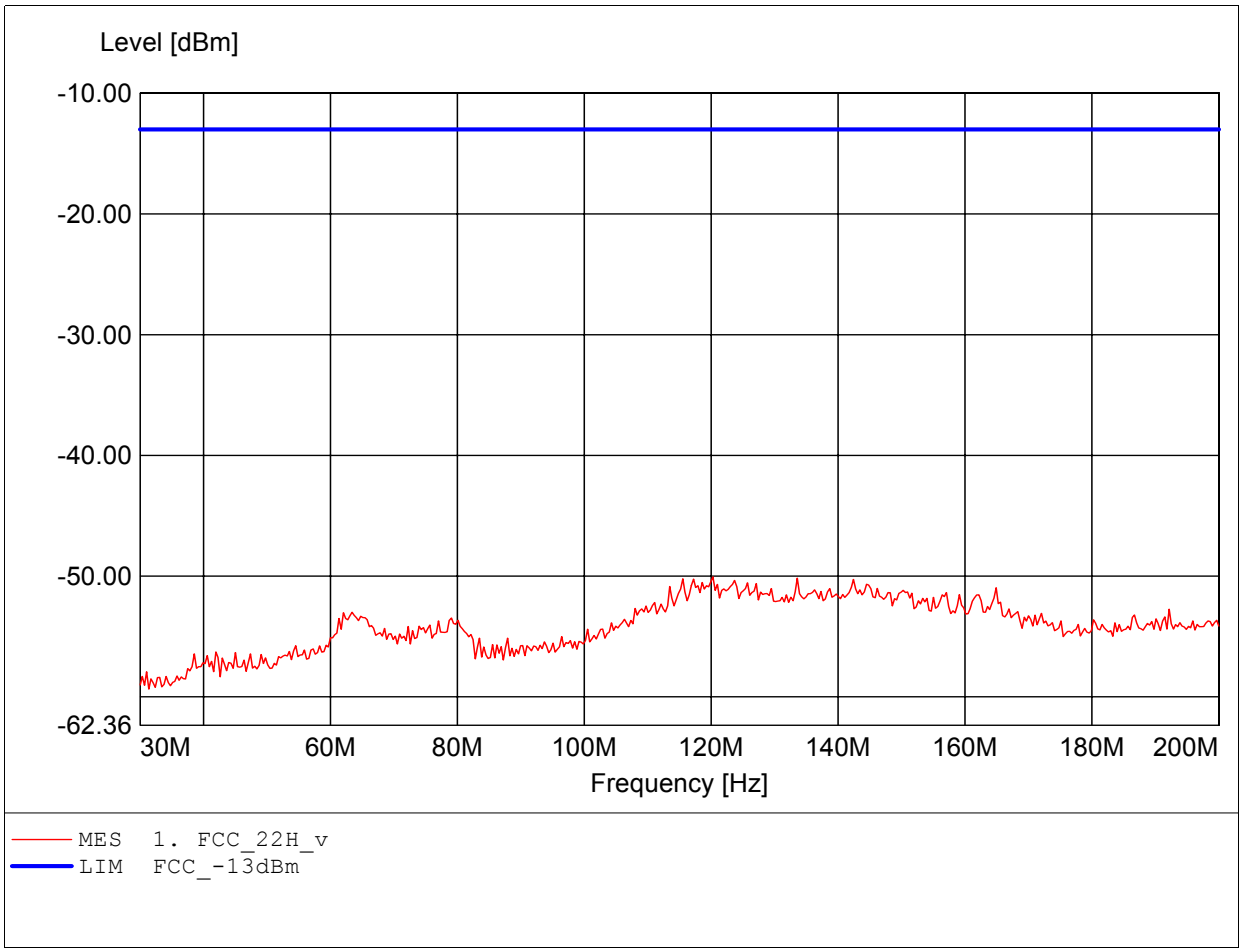
```
Order Number :          W6M20611-7576     CH777
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HK 116
                        Freq: 120.621MHz, Pmax: -52.56dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

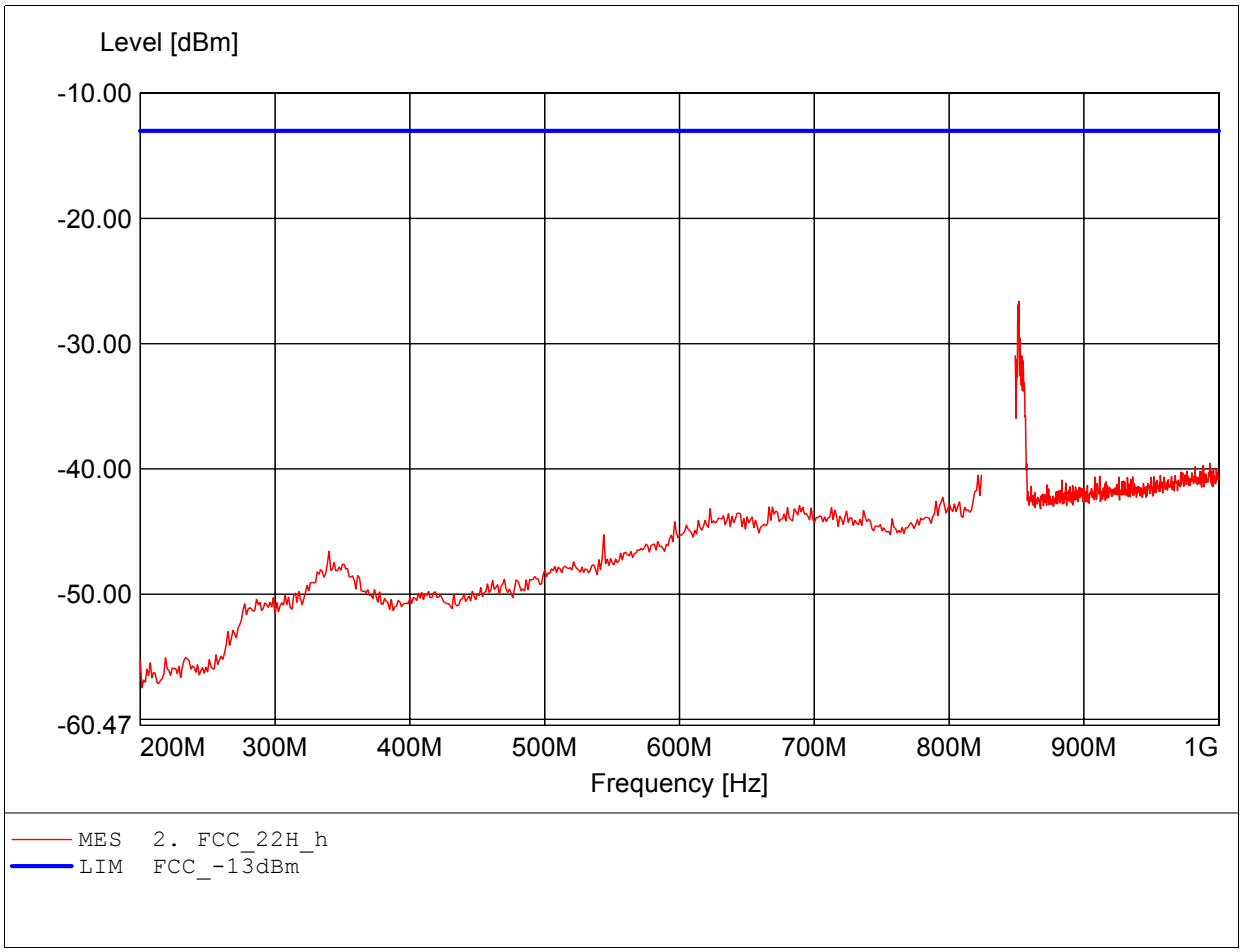
```
Order Number :          W6M20611-7576     CH777
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HK 116
                        Freq: 120.281MHz, Pmax: -50.08dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

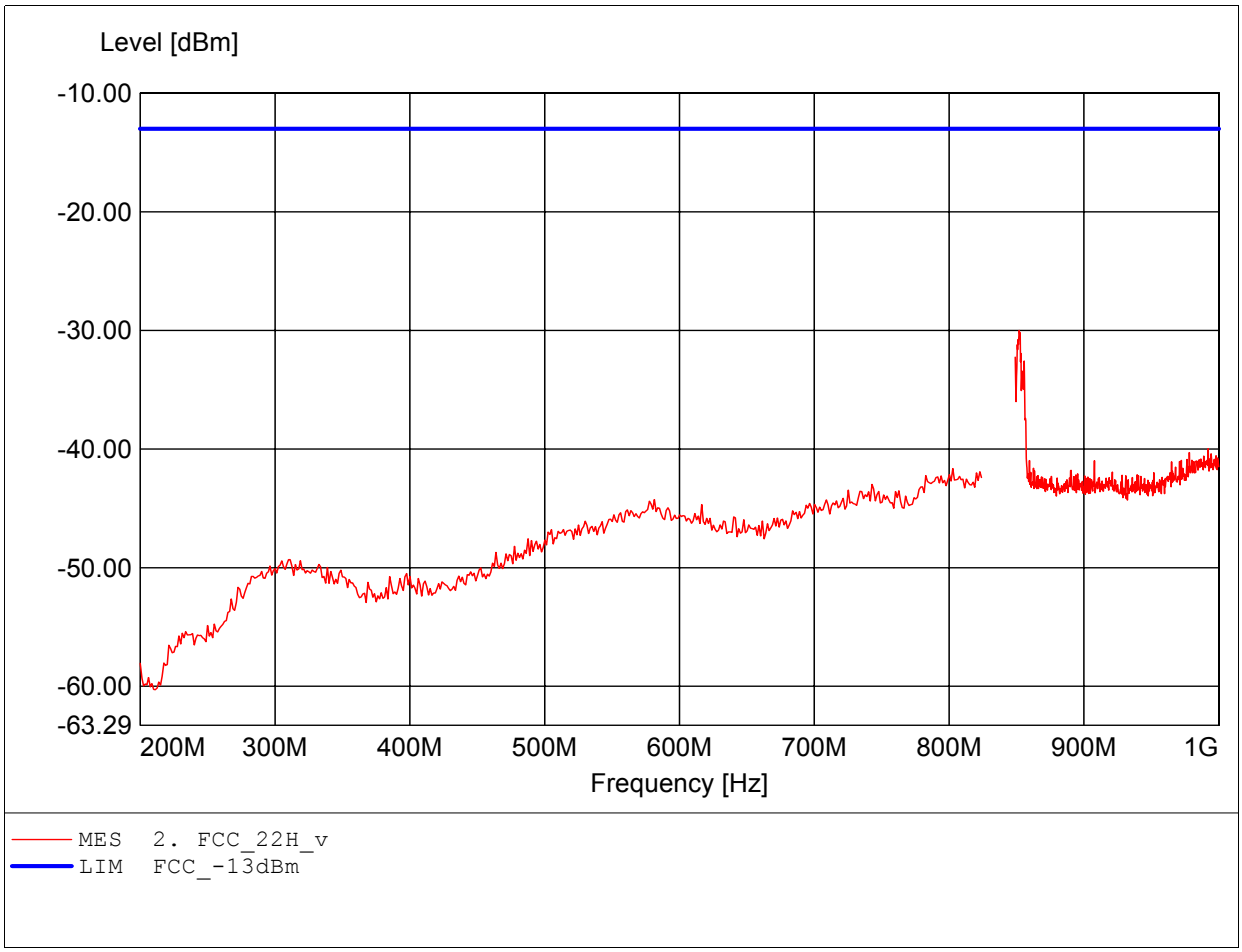
Order Number : W6M20611-7576 CH777
Test Site / Operator: ETS / Michael
Temperature: Temp.: 23.9°C
according to §22.917
Comment 1: Dist.: 3m, Ant.: HL 223
Freq: 851.723MHz, Pmax: -26.63dBm, RBW: 30kHz



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

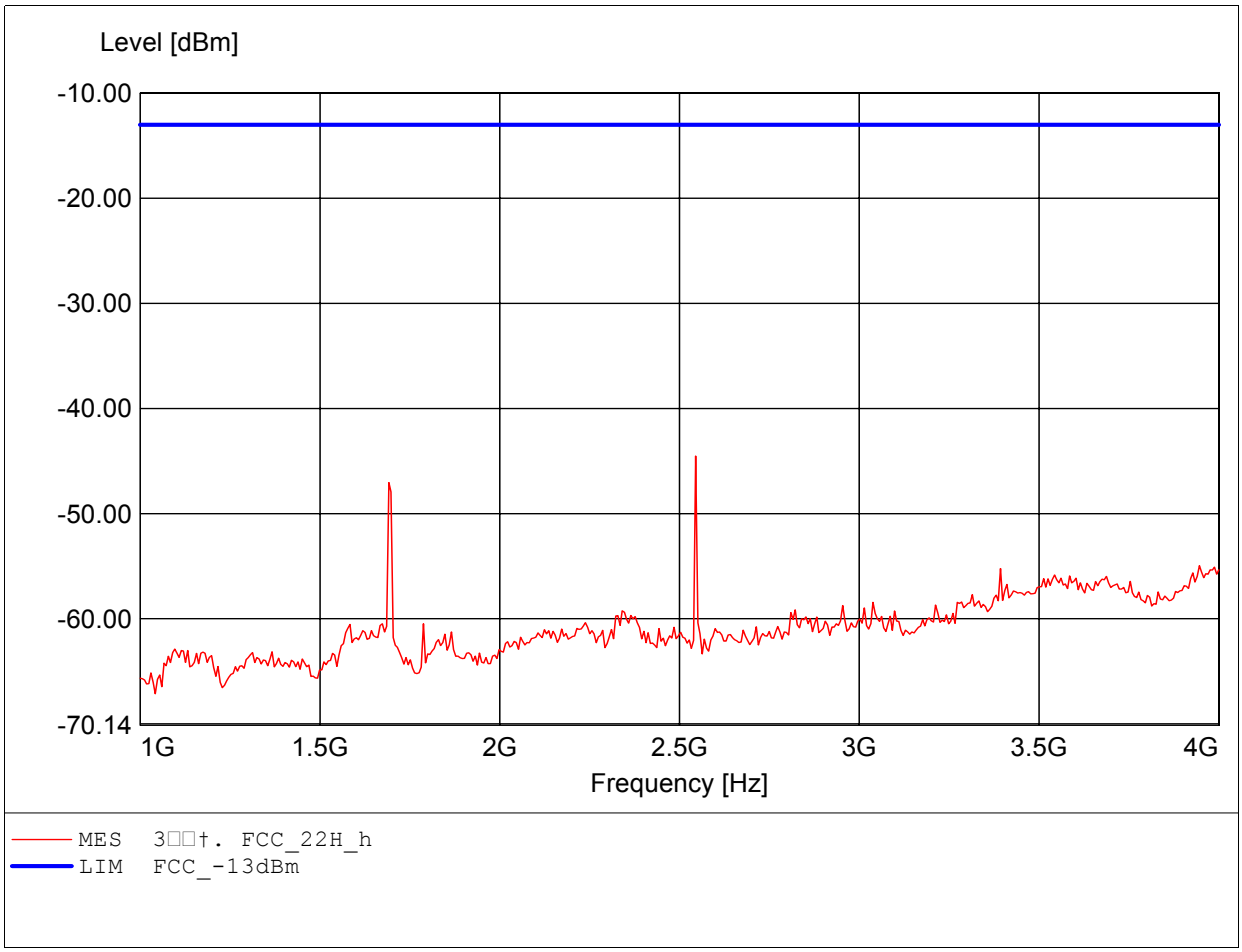
```
Order Number :          W6M20611-7576     CH777
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL 223
                        Freq: 852.026MHz, Pmax: -29.99dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

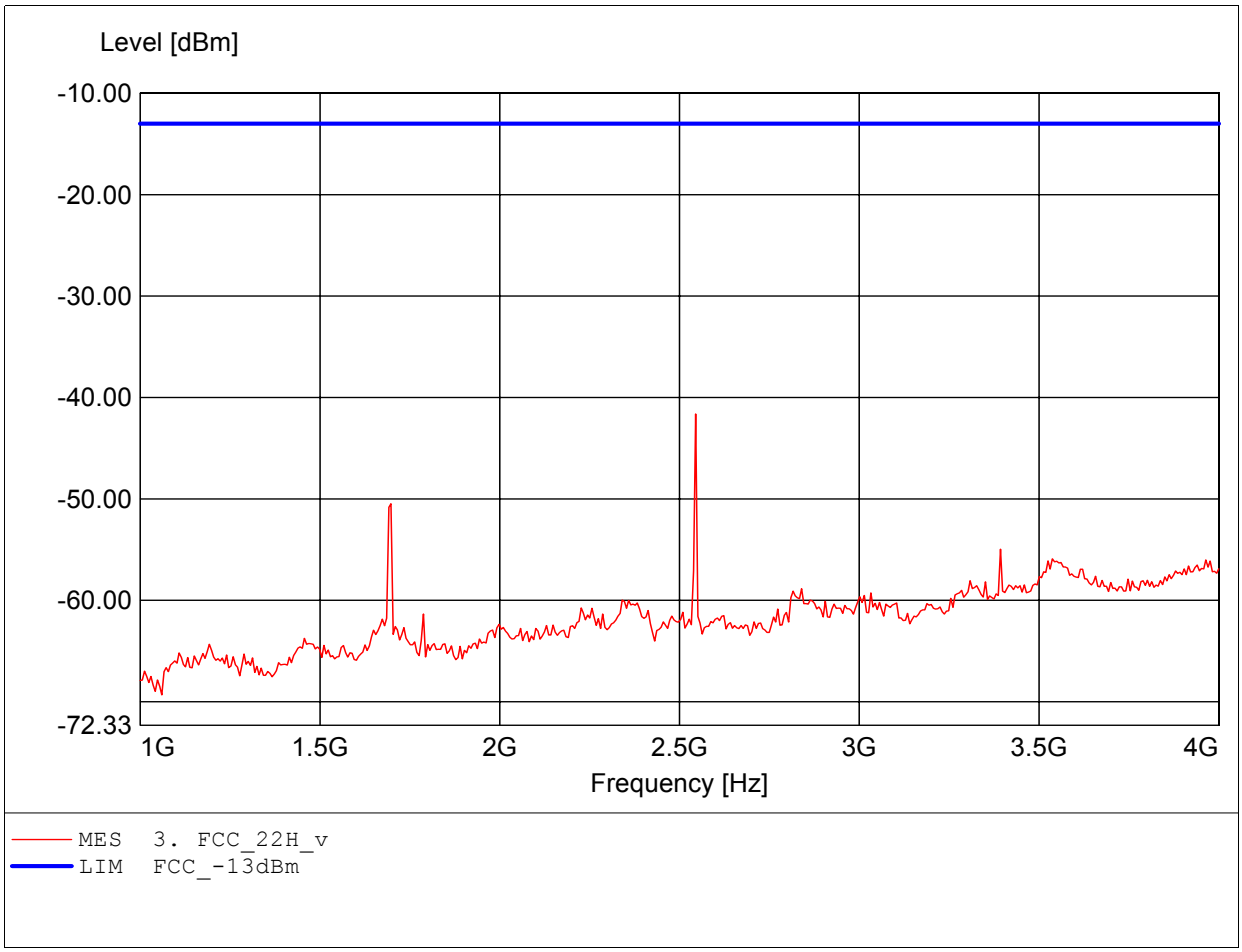
```
Order Number :          W6M20611-7576     CH777
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025
                        Freq: 2.545GHz, Pmax: -44.52dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

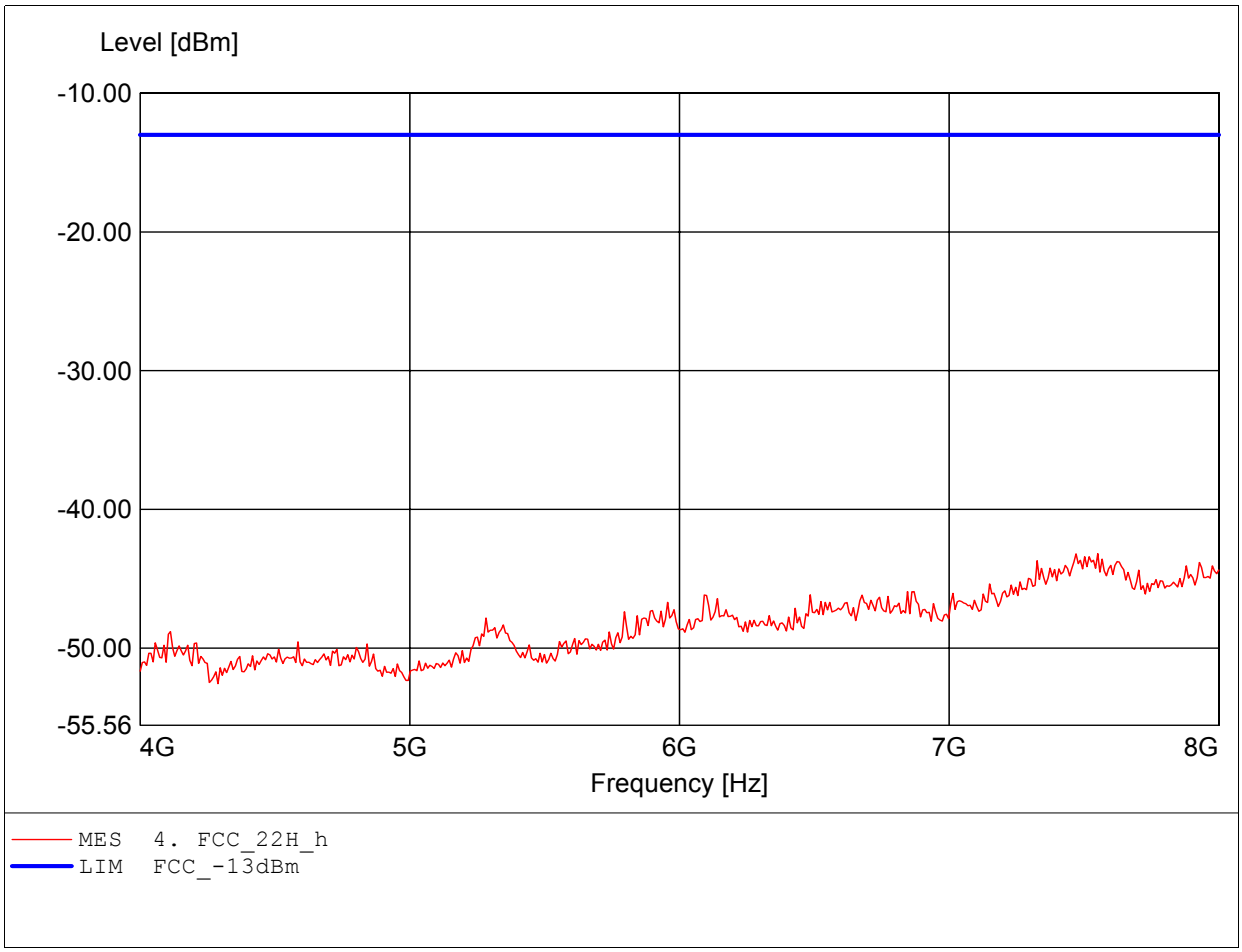
```
Order Number :          W6M20611-7576     CH777
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025
                        Freq: 2.545GHz, Pmax: -41.62dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

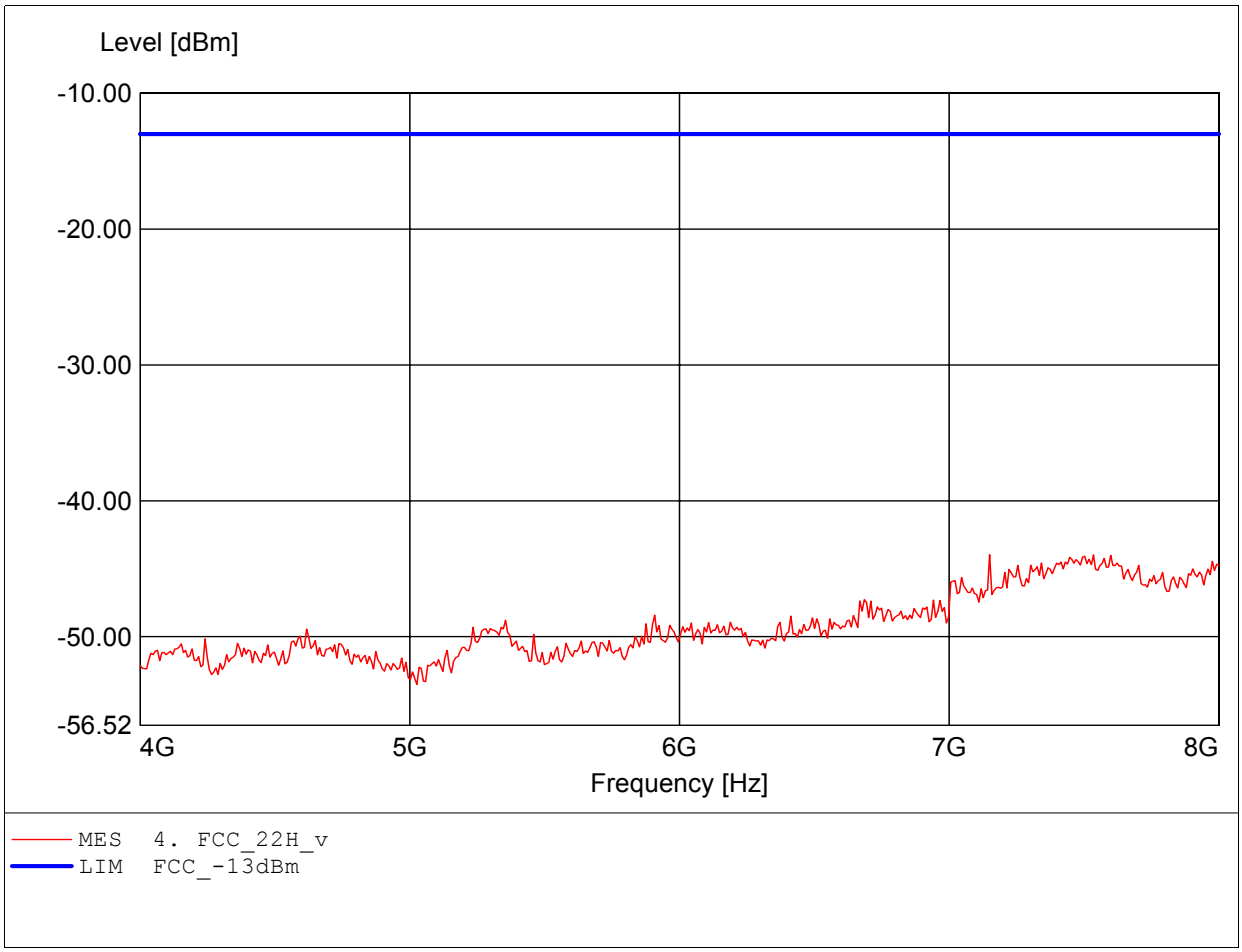
```
Order Number :          W6M20611-7576     CH777
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 7.551GHz, Pmax: -43.19dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

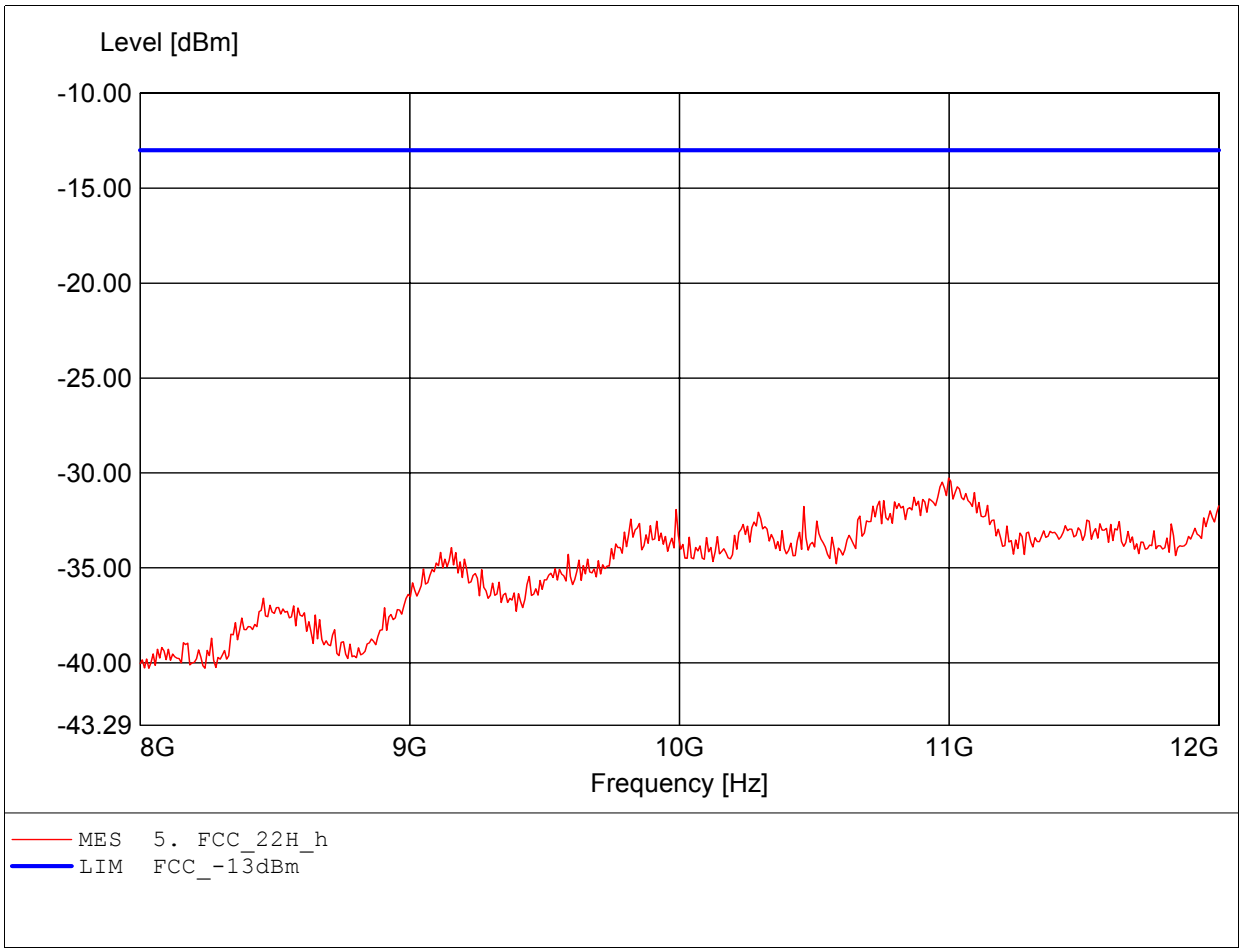
```
Order Number :          W6M20611-7576     CH777
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 7.150GHz, Pmax: -43.96dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

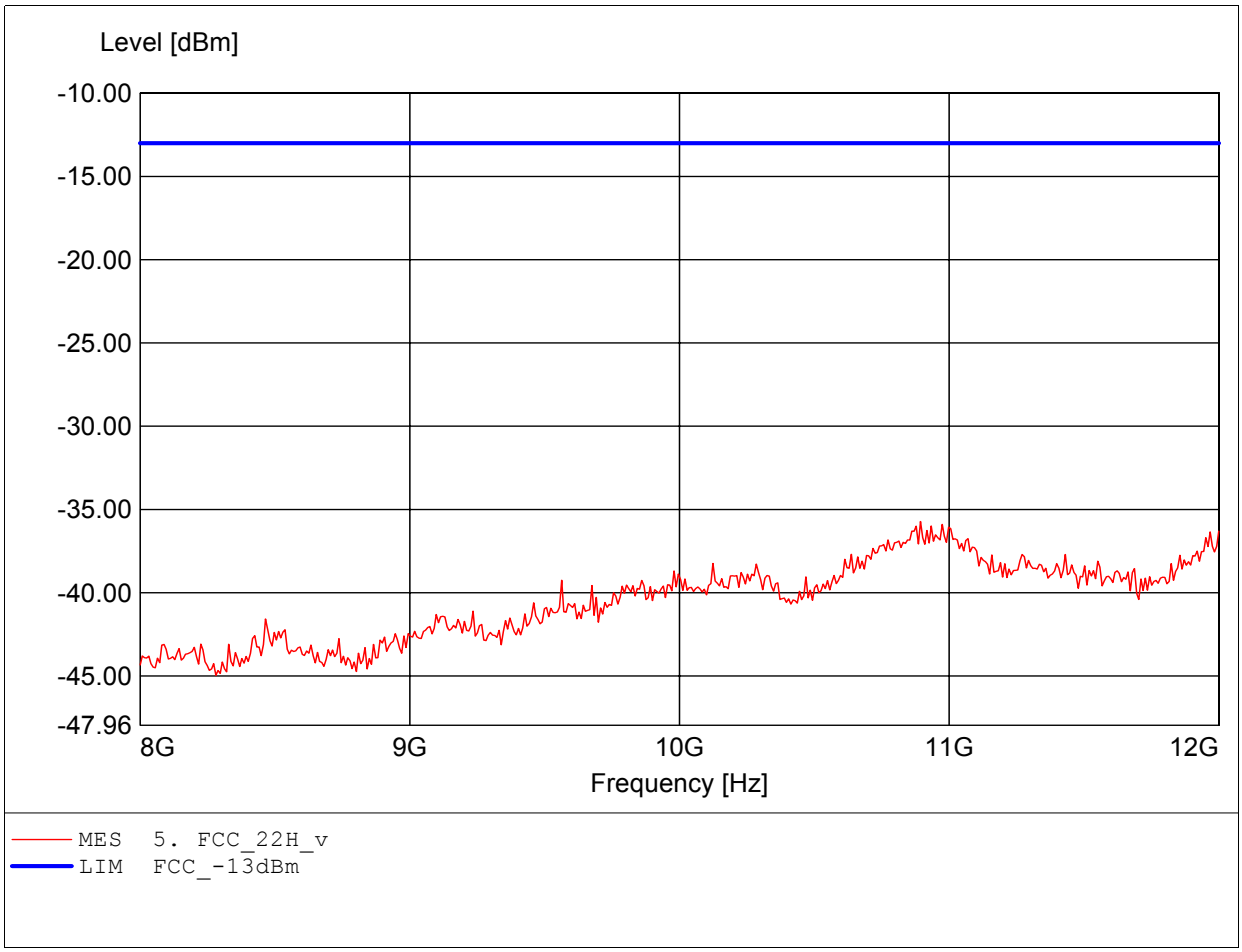
```
Order Number :          W6M20611-7576     CH777
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 10.998GHz, Pmax: -30.26dBm, RBW: 30kHz
```



Radiated Emissions Tx

FCC RULES PART 22 SUBPART H

```
Order Number :          W6M20611-7576     CH777
Test Site / Operator:   ETS / Michael
Temperature:            Temp.: 23.9°C
                        according to §22.917
Comment 1:              Dist.: 3m, Ant.: HL025, ampl.+HP.
                        Freq: 10.894GHz, Pmax: -35.73dBm, RBW: 30kHz
```



Appendix E

EUT Photos