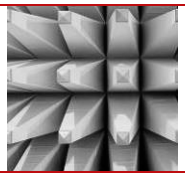




CETECOM™
CETECOM ICT Services
consulting - testing - certification

TEST REPORT

Deutscher Akkreditierungs Rat DAR

Test Report No.: 1-2213-01-13/10-A

Testing Laboratory

CETECOM ICT Services GmbH
Untertürkheimer Straße 6 – 10
66117 Saarbrücken/Germany
Phone: + 49 681 5 98 - 0
Fax: + 49 681 5 98 - 9075
Internet: http://www.cetecom-ict.de
e-mail: info@ict.cetecom.de

Accredited Test Laboratory:
The test laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025
DAR registration number: DGA-PL-176/94-D1

Area of Testing: Radio Satellite Communications

Applicant

beyerdynamic GmbH & Co. KG
Theresienstraße 8
74072 Heilbronn / Germany
Phone: +49 (0) 7131 61 71-0
Fax: +49 (0) 7131 61 72-15
Contact: Ulrich Roth
e-mail: roth@beyerdynamic.de
Phone: +49 (0) 7131 617 155

Manufacturer

beyerdynamic GmbH & Co. KG
Theresienstraße 8
74072 Heilbronn / Germany

Test Standard/s

47 CFR Part 74	Title 47 of the Code of Federal Regulations; Chapter I-Federal Communications Commission Experimental radio, auxiliary, special broadcast and other program distribution services
RSS - 123 Issue 1 Rev. 2	Spectrum Management and Telecommunications Policy - Radio Standards Specification Low Power Licensed Radiocommunication Devices

For further applied test standards please refer to section 2 of this test report.

Test Item

Kind of test item:	Wireless Microphone System
Model name:	S910C
FCC ID:	OSDS910C
IC:	3628A-S910C
Frequency [MHz]:	482 MHz to 518 MHz; 518 MHz to 554 MHz 554 MHz to 590 MHz; 590 MHz to 626 MHz 626 MHz to 662 MHz; 662 MHz to 698 MHz
Power supply:	3V DC by power supply / 2 * 1.5 V AA batteries
Temperature range:	+60 °C to -10 °C

Test performed:

cn=Marco Bertolino, o=CETECOM ICT Services GmbH, ou=BTL-100826, email=marco.bertolino@cetecom.com, c=DE
2010.11.16 16:04:29 +01'00'

2010-11-16 Marco Bertolino

Test Report authorised:

cn=Jakob Reschke, o=CETECOM ICT Services GmbH, ou=RES-101109, email=Jakob.Reschke@cetecom.com, c=DE
2010.11.17 07:07:08 +01'00'

2010-11-16 Jakob Reschke

1 Table of contents

1.1 General information

1.2 Notes

The test results of this test report relate exclusively to the test item specified in this test report. CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of CETECOM ICT Services GmbH.
This test report is electronically signed and valid without handwriting signature. For verification of the electronical signatures, the public keys can be requested at the testing laboratory.

1.3 Application details

Date of receipt of order:	2010-06-15
Date of receipt of test item:	2010-07-05
Start of test:	2010-07-05
End of test:	2010-07-13
Person(s) present during the test:	Mr. Frank Ernst

2 Test standard/s

Test Standard	Version	Test Standard Description
47 CFR Part 2	2008-10	Title 47 of the Code of Federal Regulations; Chapter I-Federal Communications Commission Frequency allocations and radio treaty matters; general rules and regulations
47 CFR Part 74	2006-10	Title 47 of the Code of Federal Regulations; Chapter I-Federal Communications Commission Experimental radio, auxiliary, special broadcast and other program distribution services
RSS - Gen Issue 2	2007-06	General Requirements and Information for the Certification of Radiocommunication Equipment
RSS - 123 Issue 1 Rev. 2	2000-03	Spectrum Management and Telecommunications Policy - Radio Standards Specification Low Power Licensed Radiocommunication Devices

3 Test Environment

Temperature:	T_{nom}	+20 °C	during room temperature tests
	T_{max}	-10 °C	during high temperature test
	T_{min}	+60 °C	during low temperature test
Relative humidity content:		51 %	
Air pressure:		not relevant for this kind of testing	
Power supply:	V_{nom}	3.0 V	DC by power supply / 2 * 1.5 V AA batteries
	V_{max}	3.1 V	
	V_{min}	2.2 V	

4 Test item

Kind of test item	:	Wireless Microphone System
Type identification	:	S 910 C wireless microphone (handheld transmitter)
S/N serial number	:	S 910 C Unit 1: 898201733A 5M2A band 1 low Unit 2: 898201734A 5M2B band 1 high Unit 3: 898201735A 5M9A band 2 low Unit 4: 898201736A 5M9B band 2 high Unit 5: 898201737A 6M6A band 3 low Unit 6: 898201738A 6M6B band 3 high
HW hardware status	:	1.0
SW software status	:	1.0
Frequency Band [MHz]	:	Band 1: 482 MHz to 518 MHz; 518 MHz to 554 MHz Band 2: 554 MHz to 590 MHz; 590 MHz to 626 MHz Band 3: 626 MHz to 662 MHz; 662 MHz to 698 MHz
Type of Modulation	:	FM
Number of channels	:	1440
Antenna	:	Internal rod aerial antenna → for more information, please take a look at C – internal photos of the EUT
Power Supply	:	3 V DC by power supply / 2 * 1.5 V AA batteries
Temperature Range	:	+60°C to -10 °C

5 Test laboratories sub-contracted

None

6 Technical tests

6.1 Details of manufacturer

Name:	beyerdynamic GmbH & Co. KG
Street:	Theresienstraße 8
Town:	74072 Heilbronn
Country:	Germany

6.2 Test item and additional EUT information for IC Canada (appendix 2)

Kind of test item:	Wireless microphone
Type identification:	S 910 C handheld transmitter
Open Area Test Site Industry Canada Number:	IC 3462C-1
S/N serial number:	S 910 C Unit 1: 898201733A 5M2A band 1 low Unit 2: 898201734A 5M2B band 1 high Unit 3: 898201735A 5M9A band 2 low Unit 4: 898201736A 5M9B band 2 high Unit 5: 898201737A 6M6A band 3 low Unit 6: 898201738A 6M6B band 3 high
HW hardware status:	1.0
SW software status:	1.0
Frequency Band [MHz]:	Band 1: 482 MHz to 518 MHz; 518 MHz to 554 MHz Band 2: 554 MHz to 590 MHz; 590 MHz to 626 MHz Band 3: 626 MHz to 662 MHz; 662 MHz to 698 MHz
Number of Channels:	1440
Measured Channels	482.000 MHz; 500.000 MHz; 536.000 MHz; 572.000 MHz; 607.925 MHz; 614.075 MHz; 644.000 MHz; 680.000 MHz; 697.925 MHz
Channel 1:	482.000 MHz
Channel 2:	500.000 MHz
Channel 3:	536.000 MHz
Channel 4:	572.000 MHz
Channel 5:	607.925 MHz
Channel 6:	614.075 MHz
Channel 7:	644.000 MHz
Channel 8:	680.000 MHz
Channel 9:	697.925 MHz
RF: Power (max):	S 910 C radiated: 11.73 dBm / 14.89 mW
Type of Modulation:	FM
Antenna type:	Internal rod aerial antenna → for more information, please take a look at C – internal photos of the EUT
Power Supply:	3 V DC by power supply / 2 * 1.5 V AA batteries
Temperature Range:	+60°C to -10 °C

Occupied Bandwidth (99% BW) [kHz]:	482.000 MHz 150KF3E (2x max. Audio Frequency + 2x max. FM Deviation) 94K02F3E (measured Bandwidth) 500.000 MHz 150KF3E (2x max. Audio Frequency + 2x max. FM Deviation) 94K02F3E (measured Bandwidth) 536.000 MHz 150KF3E (2x max. Audio Frequency + 2x max. FM Deviation) 151K2F3E (measured Bandwidth) 572.000 MHz 150KF3E (2x max. Audio Frequency + 2x max. FM Deviation) 93K02F3E (measured Bandwidth) 607.925 MHz 150KF3E (2x max. Audio Frequency + 2x max. FM Deviation) 91K02F3E (measured Bandwidth) 614.075 MHz 150KF3E (2x max. Audio Frequency + 2x max. FM Deviation) 91K02F3E (measured Bandwidth) 644.000 MHz 150KF3E (2x max. Audio Frequency + 2x max. FM Deviation) 151K2F3E (measured Bandwidth) 680.000 MHz 150KF3E (2x max. Audio Frequency + 2x max. FM Deviation) 151K2F3E (measured Bandwidth) 697.925 MHz 150KF3E (2x max. Audio Frequency + 2x max. FM Deviation) 124K2F3E (measured Bandwidth)

Transmitter Spurious (worst case) [dBm]:	-30.29
Receiver Spurious (worst case) [dBµV/m @ 3m]:	No receiver mode integrated!
IC Registration Number:	3628A-S910C
FCC ID:	OSDS910C
IC Standards:	RSS-123 Issue 1, Rev. 2 November 6, 1999

ATTESTATION:

I attest that the testing was performed or supervised by me; that the test measurements were made in accordance with the above-mentioned departmental standard(s), and that the radio equipment identified in this application has been subject to all applicable test conditions specified in the departmental standards and all of the requirements of the standards have been met.

Signature:

Test engineer: Marco Bertolino Date: 2010-11-15

Signature:

Test engineer: Jakob Reschke Date: 2010-11-15

7 Summary of measurement results and list of all performed test cases

☒ **No deviations from the technical specifications were ascertained**

☐ There were deviations from the technical specifications ascertained

Section in this Report	Test Name	Verdict
3.1.1	RF Power Output	passed
3.1.2	Frequency Stability	passed
3.1.3	Radiated Emissions	passed
3.1.4	Receiver Radiated Emissions	passed
3.1.5	Conducted Spurious Emissions	passed
3.1.6	Block Edge Compliance	passed
3.1.7	Occupied Bandwidth	passed

8 Measurements and results

8.1 Output power (radiated) FCC rule Part 74.861 (e)(1)(ii)

Method of measurement:

Measuring the EIRP of Spurious/Harmonic Emissions using Substitution Method

(a) The measurements was performed with full rf output power and modulation.

(b) Test was performed at listed 3m test site (listed with FCC, IC).

(c) The transmitter under test was placed at the specified height on a non-conducting turntable (80 cm height)

(d) The BICONILOG antenna (20 MHz to 1 GHz) or HORN antenna (1 GHz to 18 GHz) was used for measuring.

(e) Load an appropriate correction factors file in EMI Receiver for correcting the field strength reading level
Total Correction Factor recorded in the EMI Receiver = Cable Loss + Antenna Factor
E (dBuV/m) = Reading (dBuV) + Total Correction Factor (dB/m)

(f) Set the EMI Receiver and #2 as follows:
Centre Frequency: test frequency
Resolution BW: 100 kHz
Video BW: same
Detector Mode: positive
Average: off
Span: 3 x the signal bandwidth

(g) The test antenna was lowered or raised from 1 to 4 meters until the maximum signal level was detected.

(h) The transmitter was rotated through 360 o about a vertical axis until a higher maximum signal was received.

(i) The test antenna was lowered or raised again from 1 to 4 meters until a maximum was obtained. This level was recorded.

(j) The recorded reading was corrected to the true field strength level by adding the antenna factor, cable loss and subtracting the pre-amplifier gain.

(k) The above steps were repeated with both transmitters' antenna and test receiving antenna placed in vertical and horizontal polarization. Both readings with the antennas placed in vertical and horizontal polarization shall be recorded.

(l) Repeat for all different test signal frequencies

Measuring the EIRP of Spurious/Harmonic Emissions using Substitution Method

(a) Set the EMI Receiver (for measuring E-Field) and Receiver #2 (for measuring EIRP) as follows:

Centre Frequency	: equal to the signal source
Resolution BW	: 10 kHz
Video BW	: same
Detector Mode	: positive
Average	: off
Span	: 3 x the signal bandwidth

(b) Load an appropriate correction factors file in EMI Receiver for correcting the field strength reading level
Total Correction Factor recorded in the EMI Receiver = Cable Loss + Antenna Factor
E (dBuV/m) = Reading (dBuV) + Total Correction Factor (dB/m)

(c) Select the frequency and E-field levels for ERP/EIRP measurements.

(d) Substitute the EUT by a signal generator and one of the following transmitting antennas (substitution antenna): .DIPOLE antenna for frequency from 30-1000 MHz or .HORN antenna for frequency above 1 GHz}.

(e) Mount the transmitting antenna at 1.5 meter high from the ground plane.

(f) Use one of the following antenna as a receiving antenna: .DIPOLE antenna for frequency from 30-1000 MHz or .HORN antenna for frequency above 1 GHz }.

(g) If the DIPOLE antenna is used, tune its elements to the frequency as specified in the calibration manual.

(h) Adjust both transmitting and receiving antenna in a VERTICAL polarization.

(i) Tune the EMI Receivers to the test frequency.

(j) Lower or raise the test antenna from 1 to 4 meters until the maximum signal level was detected.

(k) The transmitter was rotated through 360 o about a vertical axis until a higher maximum signal was received.

(l) Lower or raise the test antenna from 1 to 4 meters until the maximum signal level was detected.

(m) Adjust input signal to the substitution antenna until an equal or a known related level to that detected from the transmitter was obtained in the test receiver.

(n) Record the power level read from the Average Power Meter and calculates the ERP/EIRP as follows:

P = P1 - L1 = (P2 + L2) – L1 = P3 + A + L2 - L1
EIRP = P + G1 = P3 + L2 - L1 + A + G1
ERP = EIRP – 2.15 dB
Total Correction factor in EMI Receiver # 2 = L2 – L1 + G1
Where: P: Actual RF Power fed into the substitution antenna port after corrected.
P1: Power output from the signal generator
P2: Power measured at attenuator A input
P3: Power reading on the Average Power Meter
EIRP: EIRP after correction
ERP: ERP after correction

(o) Adjust both transmitting and receiving antenna in a HORIZONTAL polarization, then repeat step (k) to (o)

(p) Repeat step (d) to (o) for different test frequency

(q) Repeat steps (c) to (j) with the substitution antenna oriented in horizontal polarization.

(r) Actual gain of the EUT's antenna is the difference of the measured EIRP and measured RF power at the RF port. Correct the antenna gain if necessary.

Results: S 910 C Band 1: 482 MHz to 518 MHz; 518 MHz to 554 MHz

TEST CONDITIONS		TRANSMITTER OUTPUT POWER					
Frequency (MHz)		5M2A 482 MHz	5M2A 500 MHz	5M2A 518 MHz	5M2B 518 MHz	5M2B 536 MHz	5M2B 554 MHz
T_{nom}	V_{nom}	9.85 dBm	9.04 dBm	10.09 dBm	9.49 dBm	8.94 dBm	8.79 dBm
antenna gain		0 dB					
Maximum deviation from output power under extreme test conditions (dBc)		±3.6 dB					
Measurement uncertainty		±0.5dB					

Results: S 910 C Band 2: 554 MHz to 590 MHz; 590 MHz to 626 MHz

TEST CONDITIONS		TRANSMITTER OUTPUT POWER					
Frequency (MHz)		5M9A 554 MHz	5M9A 572 MHz	5M9A 590 MHz	5M9B 590 MHz	5M9B 608 MHz	5M9B 614 MHz
T_{nom}	V_{nom}	11.73 dBm	10.83 dBm	11.68 dBm	11.16 dBm	10.11 dBm	10.31 dBm
antenna gain		0 dB					
Maximum deviation from output power under extreme test conditions (dBc)		±3.2 dB					
Measurement uncertainty		±0.5dB					

Results: S 910 C Band 3: 626 MHz to 662 MHz; 662 MHz to 698 MHz

TEST CONDITIONS		TRANSMITTER OUTPUT POWER					
Frequency (MHz)		6M6A 626 MHz	6M6A 644 MHz	6M6A 662 MHz	6M6B 662 MHz	6M6B 680 MHz	6M6B 698 MHz
T_{nom}	V_{nom}	11.24 dBm	11.63 dBm	10.07 dBm	11.68 dBm	11.70 dBm	11.59 dBm
antenna gain		0 dB					
Maximum deviation from output power under extreme test conditions (dBc)		±4.2 dB					
Measurement uncertainty		±0.5dB					

Sample calculation:

Freg	SA Reading	SG Setting	Ant. gain	Dipol gain	Cable loss	ERP Result	ERP Result
MHz	dBµV	dBm	dBi	dBd	dB	dBm	mW
758.0	108.5	13.9	-	0.0	2.9	11.0	12.6

ERP = SG (dBm) - Cable Loss (dB) + Ant. gain (dBd)

LIMIT **FCC Rule Part 74.861**

Frequency range MHz	Power level
54-72, 76-88, 174-216	50 mW / 17 dBm
470-608, 614-806	250 mW / 24 dBm

8.2 AFC frequency error vs. voltage FCC rule Part 74.861

Method of measurement:

The EUT was fixed in test fixture to a resistive coaxial attenuator of normal load impedance, and the un-modulated carrier was measured by means of a spectrum analyzer. The input voltage was varied in an range from 2.2V to 3.1V and the maximum change in frequency was noted within one minute. The temperature tests were performed for each frequency range on one channel.

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
482,000	2.2	500	0,000104	1,037344
482,000	2.4	500	0,000104	1,037344
482,000	2.6	300	0,000062	0,622407
482,000	2.8	400	0,000083	0,829876
482,000	3.0	500	0,000104	1,037344
482,000	3.1	600	0,000124	1,244813

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
500,000	2.2	-200	-0,000040	-0,400000
500,000	2.4	-200	-0,000040	-0,400000
500,000	2.6	-100	-0,000020	-0,200000
500,000	2.8	-150	-0,000030	-0,300000
500,000	3.0	-200	-0,000040	-0,400000
500,000	3.1	-220	-0,000044	-0,440000

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
536,000	2.2	-600	-0,000112	-1,119403
536,000	2.4	-600	-0,000112	-1,119403
536,000	2.6	-600	-0,000112	-1,119403
536,000	2.8	-500	-0,000093	-0,932836
536,000	3.0	-500	-0,000093	-0,932836
536,000	3.1	-600	-0,000112	-1,119403

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
572,000	2.2	-200	-0,000035	-0,349650
572,000	2.4	-200	-0,000035	-0,349650
572,000	2.6	-180	-0,000031	-0,314685
572,000	2.8	-200	-0,000035	-0,349650
572,000	3.0	-200	-0,000035	-0,349650
572,000	3.1	-220	-0,000038	-0,384615

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
607,925	2.2	1000	0,000164	1,644940
607,925	2.4	900	0,000148	1,480446
607,925	2.6	700	0,000115	1,151458
607,925	2.8	800	0,000132	1,315952
607,925	3.0	800	0,000132	1,315952
607,925	3.1	700	0,000115	1,151458

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
614,075	2.2	600	0,000098	0,977079
614,075	2.4	700	0,000114	1,139926
614,075	2.6	700	0,000114	1,139926
614,075	2.8	800	0,000130	1,302772
614,075	3.0	1000	0,000163	1,628466
614,075	3.1	800	0,000130	1,302772

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
644,000	2.2	900	0,000140	1,397516
644,000	2.4	800	0,000124	1,242236
644,000	2.6	1000	0,000155	1,552795
644,000	2.8	900	0,000140	1,397516
644,000	3.0	1000	0,000155	1,552795
644,000	3.1	1100	0,000171	1,708075

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
680,000	2.2	270	0,000040	0,397059
680,000	2.4	250	0,000037	0,367647
680,000	2.6	250	0,000037	0,367647
680,000	2.8	250	0,000037	0,367647
680,000	3.0	270	0,000040	0,397059
680,000	3.1	270	0,000040	0,397059

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
697,925	2.2	500	0,000072	0,716409
697,925	2.4	800	0,000115	1,146255
697,925	2.6	700	0,000100	1,002973
697,925	2.8	600	0,000086	0,859691
697,925	3.0	600	0,000086	0,859691
697,925	3.1	800	0,000115	1,146255

LIMIT **FCC Rule Part 74.861(4)**

The frequency tolerance of the transmitter shall be 0.005 percent

8.3 AFC frequency error vs. temperature FCC rule Part 74.861

Method of measurement:

The EUT was connected to a resistive coaxial attenuator of normal load impedance, and the un-modulated carrier was measured by means of a spectrum analyzer. With all power removed, the temperature was decreased to –30°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute. With power OFF, the temperature was raised in 10°C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency error was noted within one minute. The temperature tests were performed for each frequency range on one channel

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
482,000	-30	400	0,000083	0,829876
482,000	-20	1100	0,000228	2,282158
482,000	-10	2500	0,000519	5,186722
482,000	0	2000	0,000415	4,149378
482,000	10	1000	0,000207	2,074689
482,000	20	700	0,000145	1,452282
482,000	30	500	0,000104	1,037344
482,000	40	400	0,000083	0,829876
482,000	50	300	0,000062	0,622407

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
500,000	-30	-200	-0,000040	-0,400000
500,000	-20	1100	0,000220	2,200000
500,000	-10	1700	0,000340	3,400000
500,000	0	900	0,000180	1,800000
500,000	10	-150	-0,000030	-0,300000
500,000	20	-200	-0,000040	-0,400000
500,000	30	-300	-0,000060	-0,600000
500,000	40	-800	-0,000160	-1,600000
500,000	50	-1220	-0,000244	-2,440000

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
536,000	-30	300	0,000056	0,559701
536,000	-20	990	0,000185	1,847015
536,000	-10	1000	0,000187	1,865672
536,000	0	400	0,000075	0,746269
536,000	10	100	0,000019	0,186567
536,000	20	-300	-0,000056	-0,559701
536,000	30	-500	-0,000093	-0,932836
536,000	40	-750	-0,000140	-1,399254
536,000	50	-800	-0,000149	-1,492537

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
572,000	-30	5900	0,001031	10,314685
572,000	-20	6000	0,001049	10,489510
572,000	-10	6700	0,001171	11,713287
572,000	0	2000	0,000350	3,496503
572,000	10	1200	0,000210	2,097902
572,000	20	800	0,000140	1,398601
572,000	30	-300	-0,000052	-0,524476
572,000	40	-1800	-0,000315	-3,146853
572,000	50	-2500	-0,000437	-4,370629

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
607,925	-30	2000	0,000329	3,289880
607,925	-20	2500	0,000411	4,112349
607,925	-10	2900	0,000477	4,770325
607,925	0	2700	0,000444	4,441337
607,925	10	1800	0,000296	2,960892
607,925	20	800	0,000132	1,315952
607,925	30	800	0,000132	1,315952
607,925	40	500	0,000082	0,822470
607,925	50	200	0,000033	0,328988

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
607,925	-30	3600	0,000592	5,921783
607,925	-20	1000	0,000164	1,644940
607,925	-10	-4700	-0,000773	-7,731217
607,925	0	-2000	-0,000329	-3,289880
607,925	10	800	0,000132	1,315952
607,925	20	600	0,000099	0,986964
607,925	30	400	0,000066	0,657976
607,925	40	-660	-0,000109	-1,085660
607,925	50	-1600	-0,000263	-2,631904

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
644,000	-30	1900	0,000295	2,950311
644,000	-20	2200	0,000342	3,416149
644,000	-10	2800	0,000435	4,347826
644,000	0	2000	0,000311	3,105590
644,000	10	900	0,000140	1,397516
644,000	20	1000	0,000155	1,552795
644,000	30	1100	0,000171	1,708075
644,000	40	1000	0,000155	1,552795
644,000	50	800	0,000124	1,242236

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
680,000	-30	-1270	-0,000187	-1,867647
680,000	-20	200	0,000029	0,294118
680,000	-10	2250	0,000331	3,308824
680,000	0	2250	0,000331	3,308824
680,000	10	1250	0,000184	1,838235
680,000	20	600	0,000088	0,882353
680,000	30	270	0,000040	0,397059
680,000	40	-900	-0,000132	-1,323529
680,000	50	-1270	-0,000187	-1,867647

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
697,925	-30	1500	0,000215	2,149228
697,925	-20	2600	0,000373	3,725329
697,925	-10	3800	0,000544	5,444711
697,925	0	2700	0,000387	3,868611
697,925	10	600	0,000086	0,859691
697,925	20	500	0,000072	0,716409
697,925	30	600	0,000086	0,859691
697,925	40	200	0,000029	0,286564
697,925	50	-100	-0,000014	-0,143282

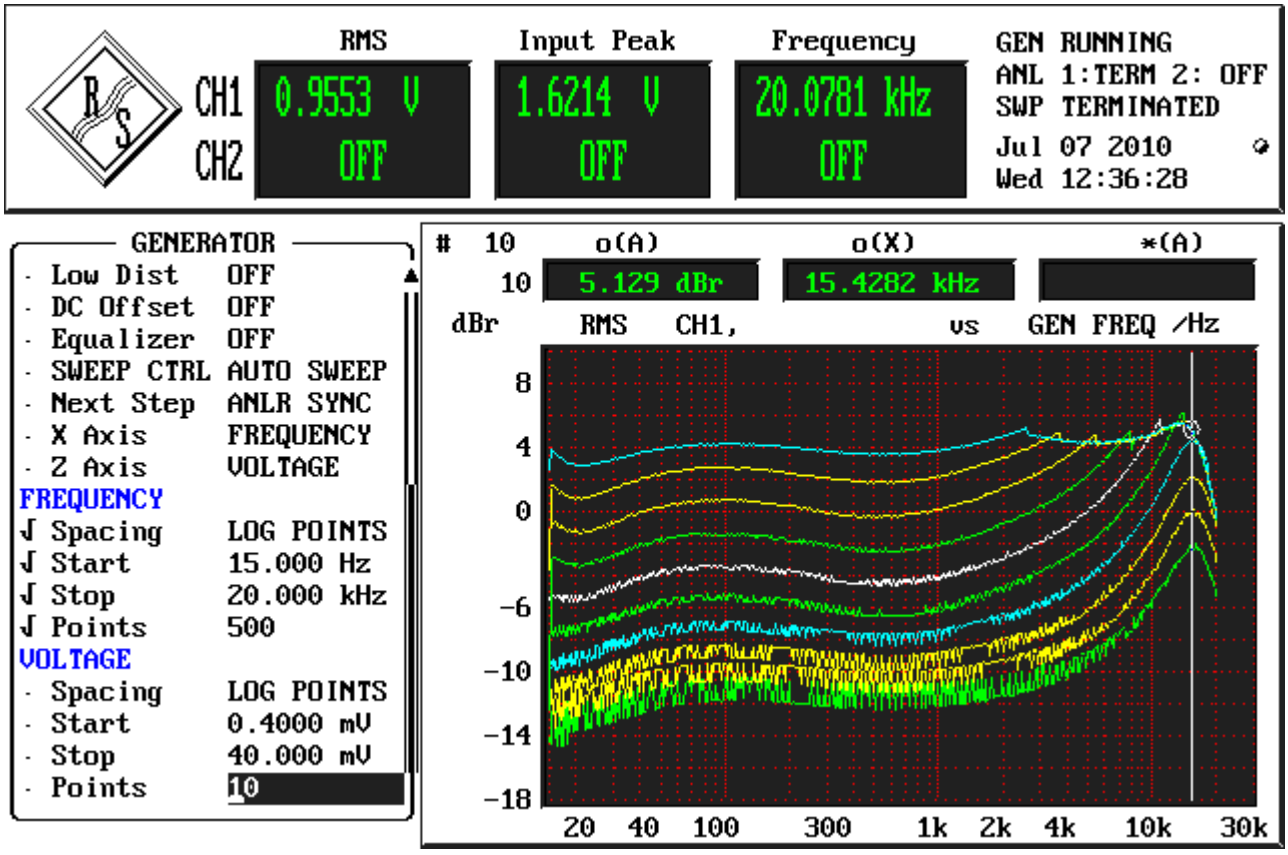
LIMIT **FCC Rule Part 74.861**

The frequency tolerance of the transmitter shall be 0.005 percent

8.4 Characteristics of the audio modulation circuitry FCC rule Part 74 .861(e3)

Method of measurement:

The audio frequency responds was measured in accordance with EIA/TIA 603. The plots shows 10 curves with different modulation levels, starting from 0.4mV to 40 mV (30%+20 dB Modulation), the frequency is varied from 15 Hz to 20 kHz.



Max. measured frequency deviation : 60 kHz

This measurement is valid for all channels

Limit: max Deviation ±75kHz

8.5 Occupied bandwidth FCC rule Part 74.861(e)(3), (5)/ Sec. 2.1049

Test method:

The audio frequency responds was measured in accordance with EIA/TIA 603.

Data in the plots show that all sidebands between 50 & 100% for the authorized bandwidth are attenuated by at least 25dB. From 100 to 250% of the authorized bandwidth they are attenuated by at least 35dB and beyond 250% 43 log(Po) dB. The plot shows the transmitter modulated with 15000 Hz (the highest modulation frequency), adjusted for 50% modulation plus 16 dB. The spectrum analyzer was set with the un-modulated carrier at the top of the screen. The test procedure diagram and occupied bandwidth plots follow.

TEST CONDITIONS		OCCUPIED BANDWIDTH (kHz)					
Frequency (MHz)		**482.000 MHz**	**500.000 MHz**	**536.000 MHz**	**572.000 MHz**	**607.925 MHz**	**614.075 MHz**
T_{nom}	V_{nom}	94	94	151	93	91	91
max. Deviation (FM)		60 kHz					
Measurement uncertainty		±0.5%					

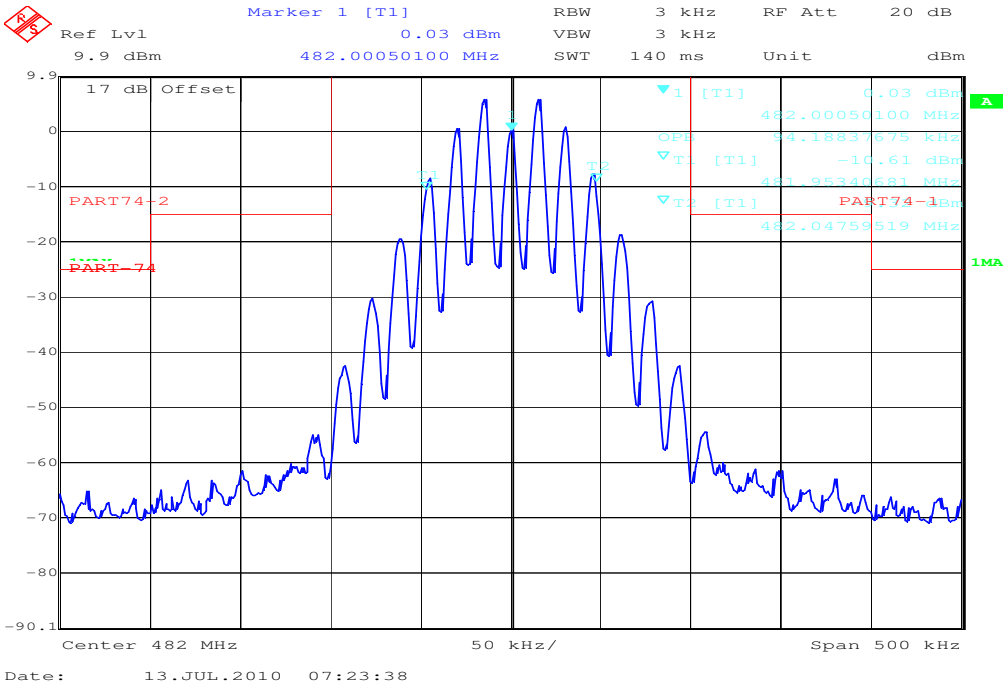
TEST CONDITIONS		OCCUPIED BANDWIDTH (kHz)					
Frequency (MHz)		**644.000 MHz**	**680.000 MHz**	**697.925 MHz**	**-/-**	**-/-**	**-/-**
T_{nom}	V_{nom}	151	151	124	**-/-**	**-/-**	**-/-**
max. Deviation (FM)		60 kHz					
Measurement uncertainty		±0.5%					

Limits **FCC Rule Part 74.861(e)(5)**

The operating bandwidth shall not exceed 200 kHz

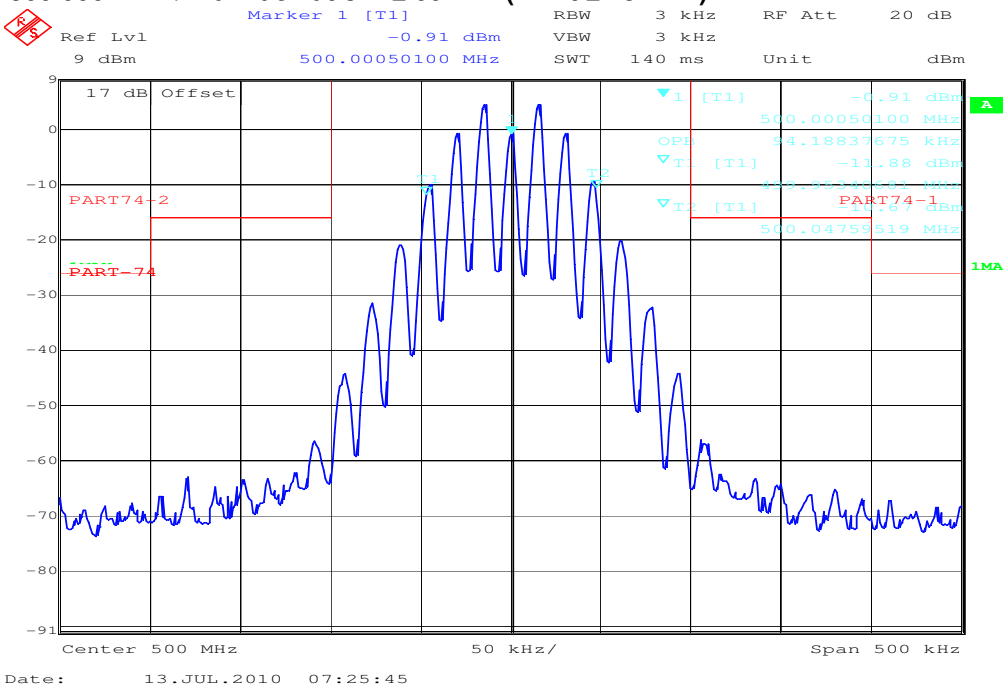
OCCUPIED BANDWIDTH **FCC Rule Part 74.861(e)(3), (5)/ Sec. 2.989**

Frequency: 482.000 MHz / max. deviation: ± 60 kHz (Limit ± 75 kHz)



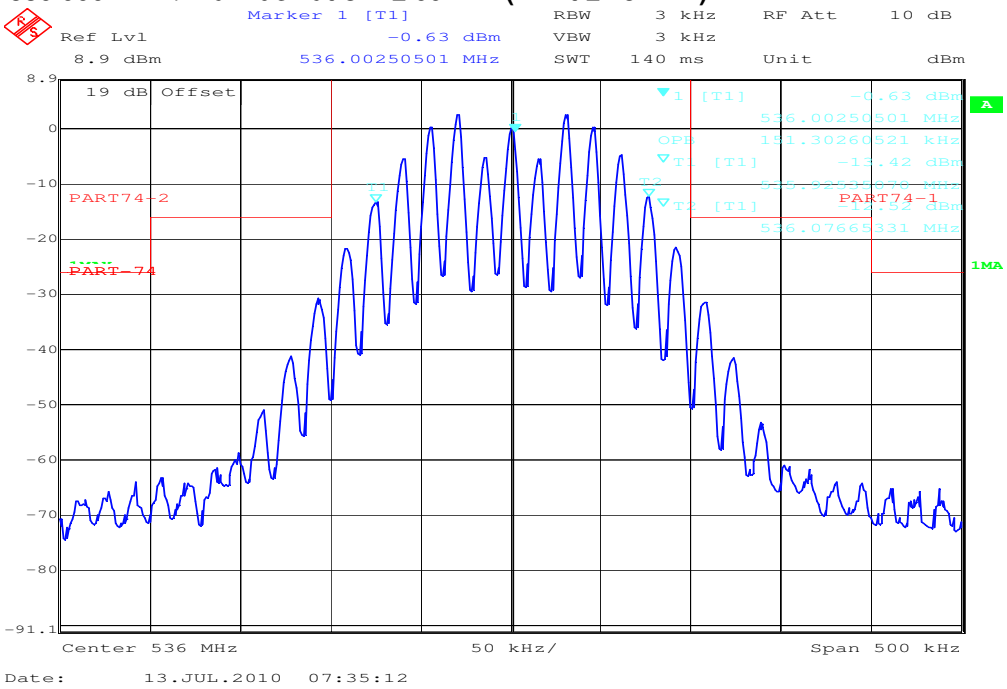
OCCUPIED BANDWIDTH **FCC Rule Part 74.861(e)(3), (5)/ Sec. 2.1049**

Frequency: 500.000 MHz / max. deviation: ± 60 kHz (Limit ± 75 kHz)



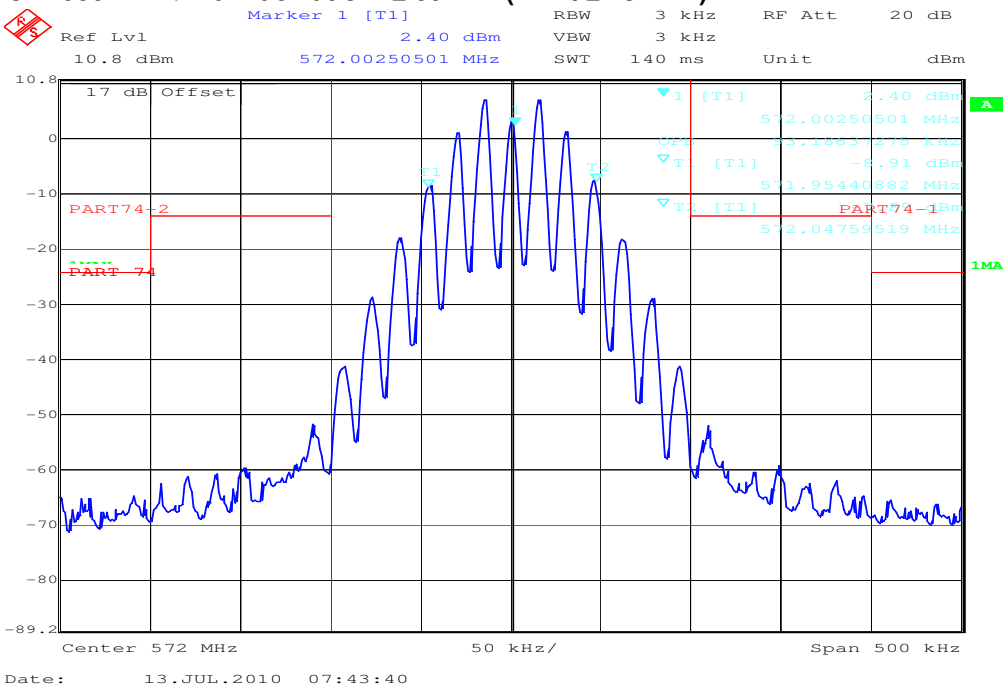
OCCUPIED BANDWIDTH **FCC Rule Part 74.861(e)(3), (5)/ Sec. 2.1049**

Frequency: 536.000 MHz / max. deviation: ± 60 kHz (Limit ± 75 kHz)



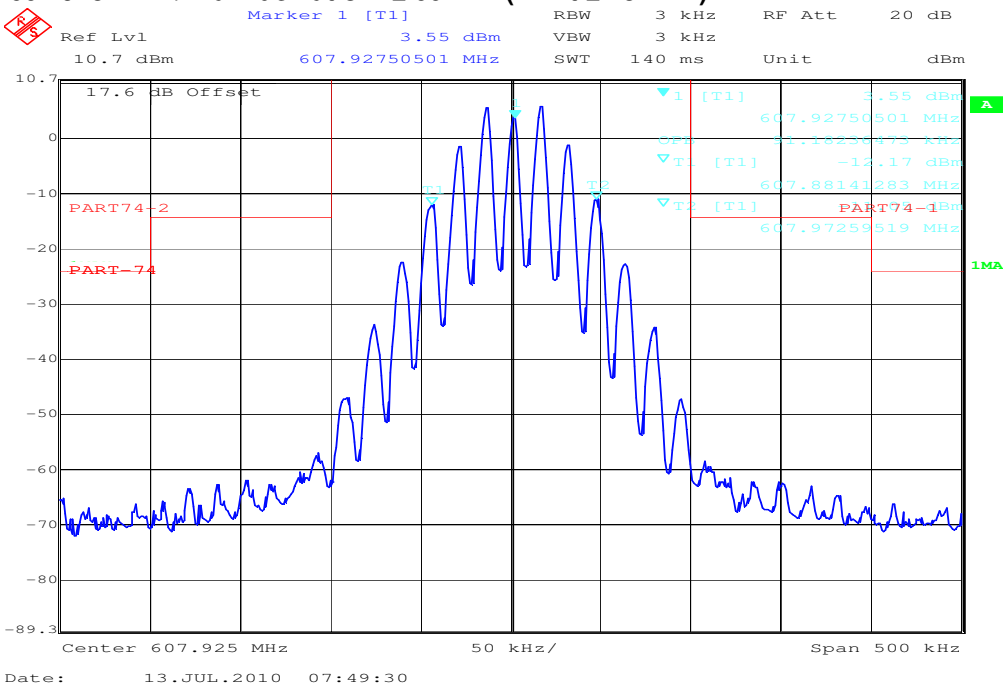
OCCUPIED BANDWIDTH **FCC Rule Part 74.861(e)(3), (5)/ Sec. 2.989**

Frequency: 572.000 MHz / max. deviation: ± 60 kHz (Limit ± 75 kHz)



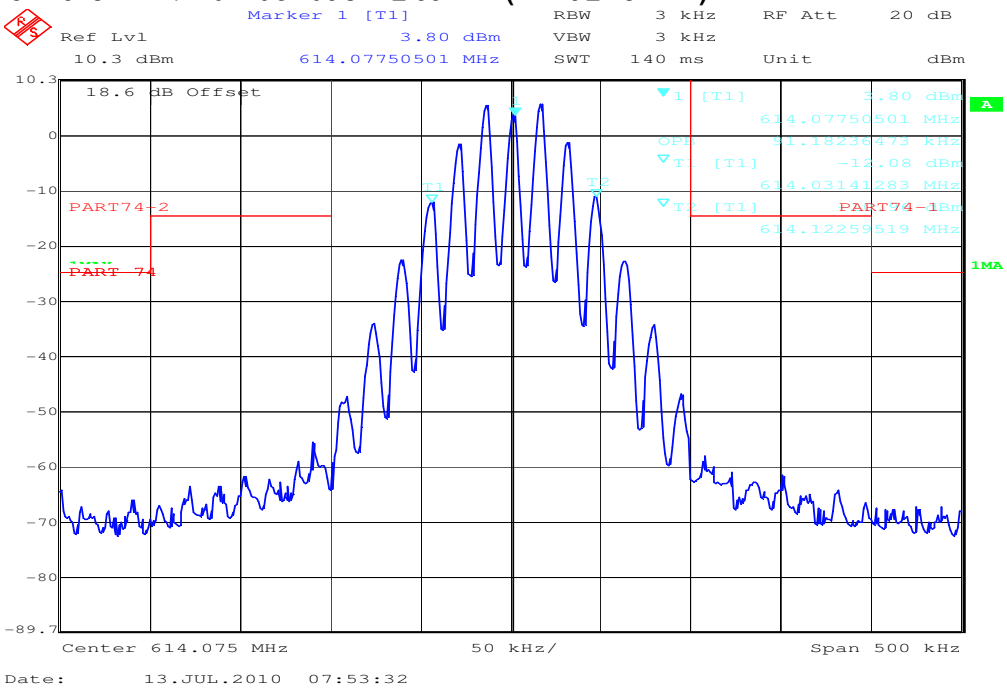
OCCUPIED BANDWIDTH **FCC Rule Part 74.861(e)(3), (5)/ Sec. 2.1049**

Frequency: 607.925 MHz / max. deviation: ± 60 kHz (Limit ± 75 kHz)



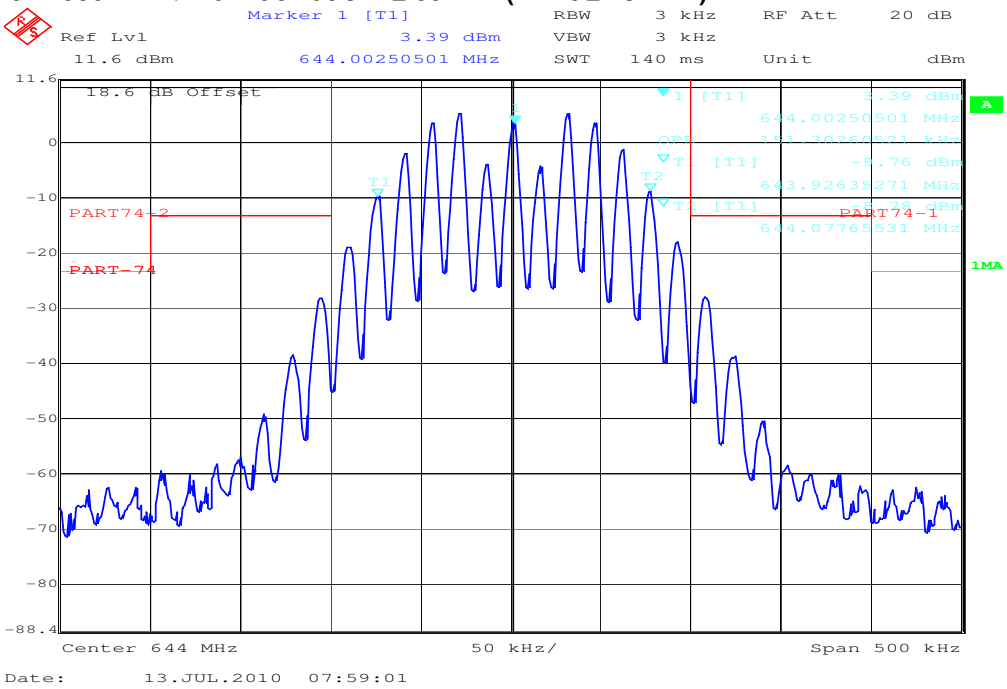
OCCUPIED BANDWIDTH **FCC Rule Part 74.861(e)(3), (5)/ Sec. 2.1049**

Frequency: 614.075 MHz / max. deviation: ± 60 kHz (Limit ± 75 kHz)



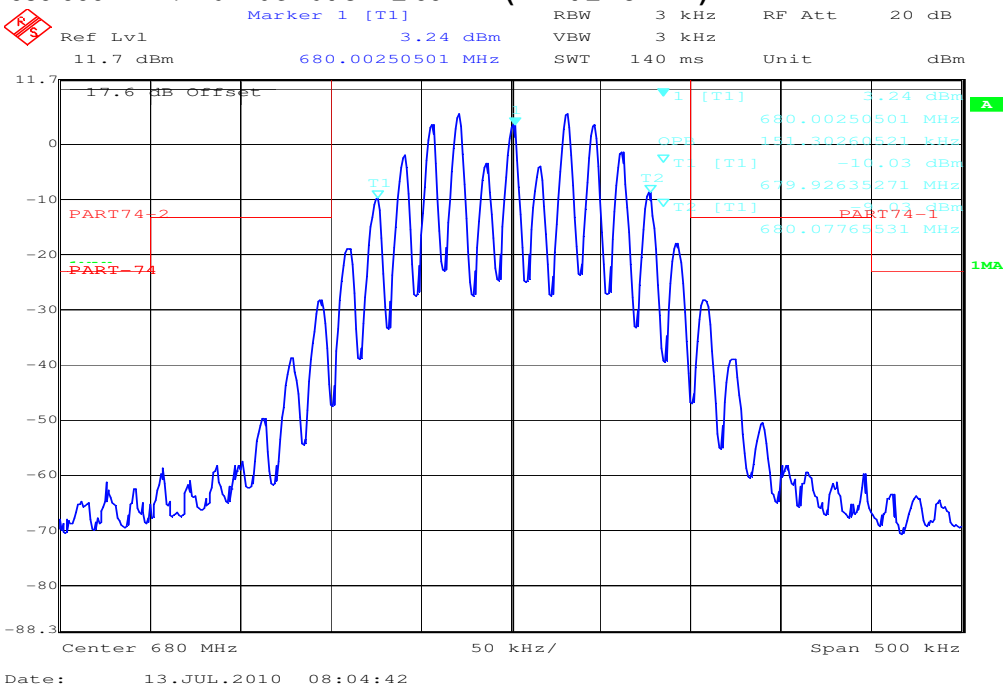
OCCUPIED BANDWIDTH **FCC Rule Part 74.861(e)(3), (5)/ Sec. 2.1049**

Frequency: 644.000 MHz / max. deviation: ± 60 kHz (Limit ± 75 kHz)



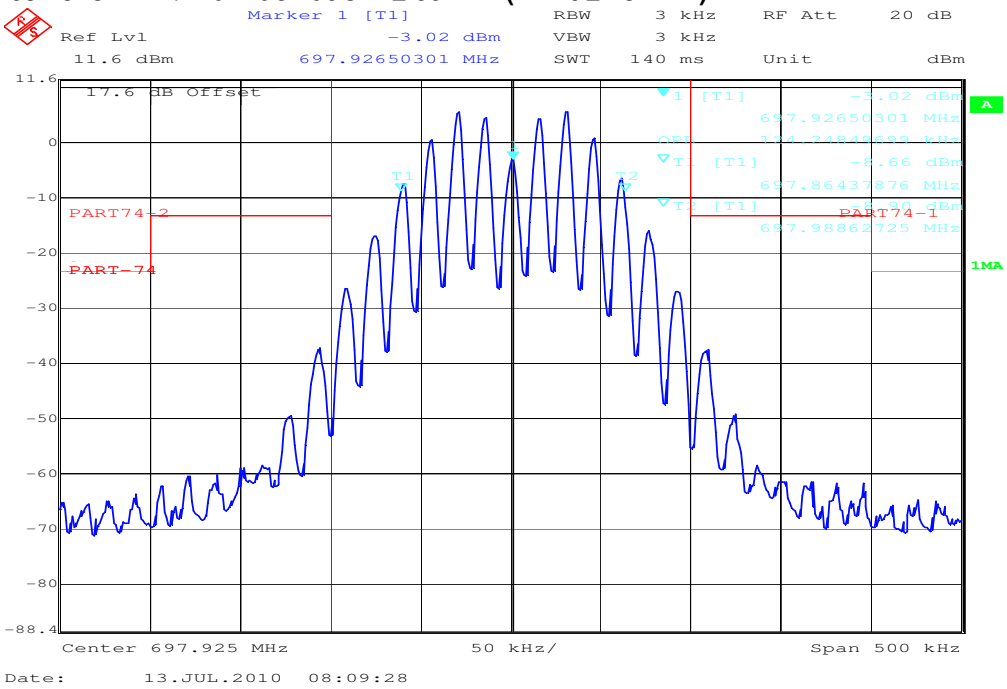
OCCUPIED BANDWIDTH **FCC Rule Part 74.861(e)(3), (5)/ Sec. 2.1049**

Frequency: 680.000 MHz / max. deviation: ± 60 kHz (Limit ± 75 kHz)



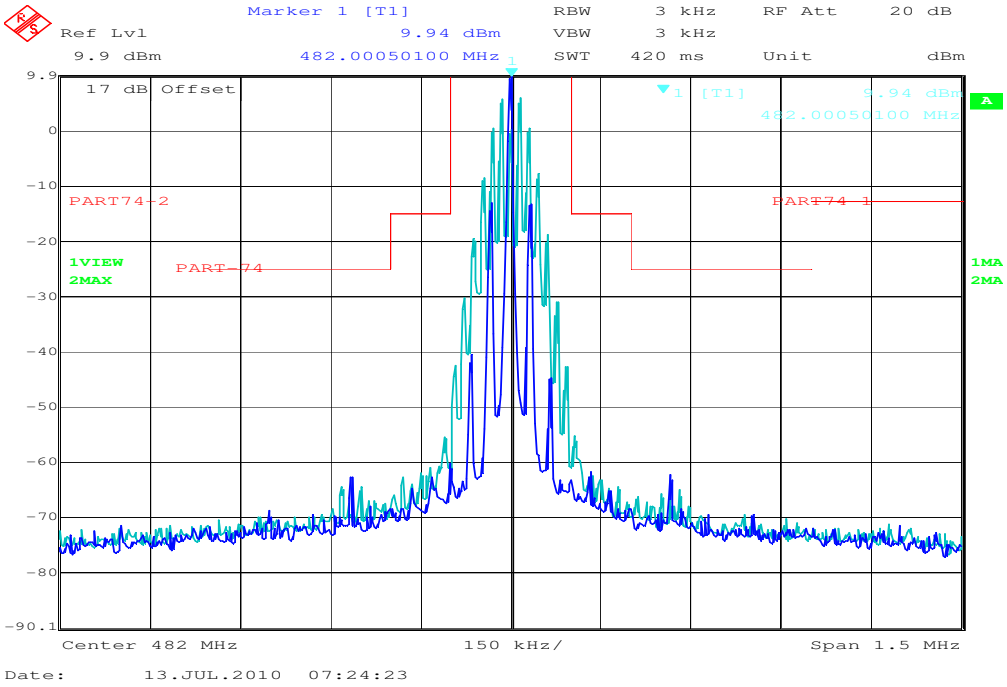
OCCUPIED BANDWIDTH **FCC Rule Part 74.861(e)(3), (5)/ Sec. 2.1049**

Frequency: 697.925 MHz / max. deviation: ± 60 kHz (Limit ± 75 kHz)

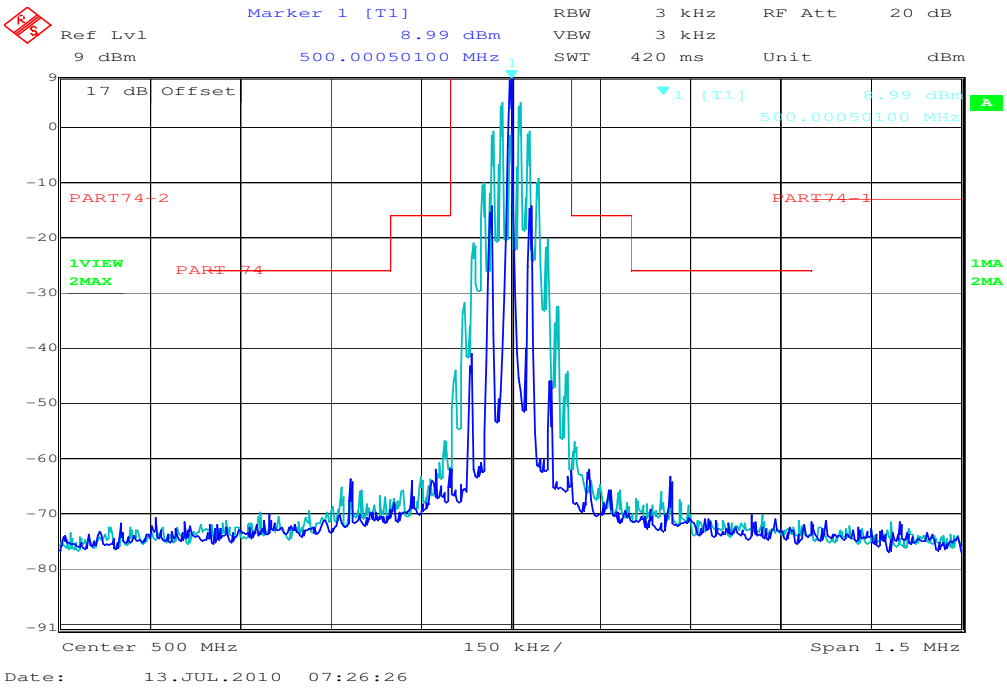


8.6 Emission mask FCC 74 861(e)(6)

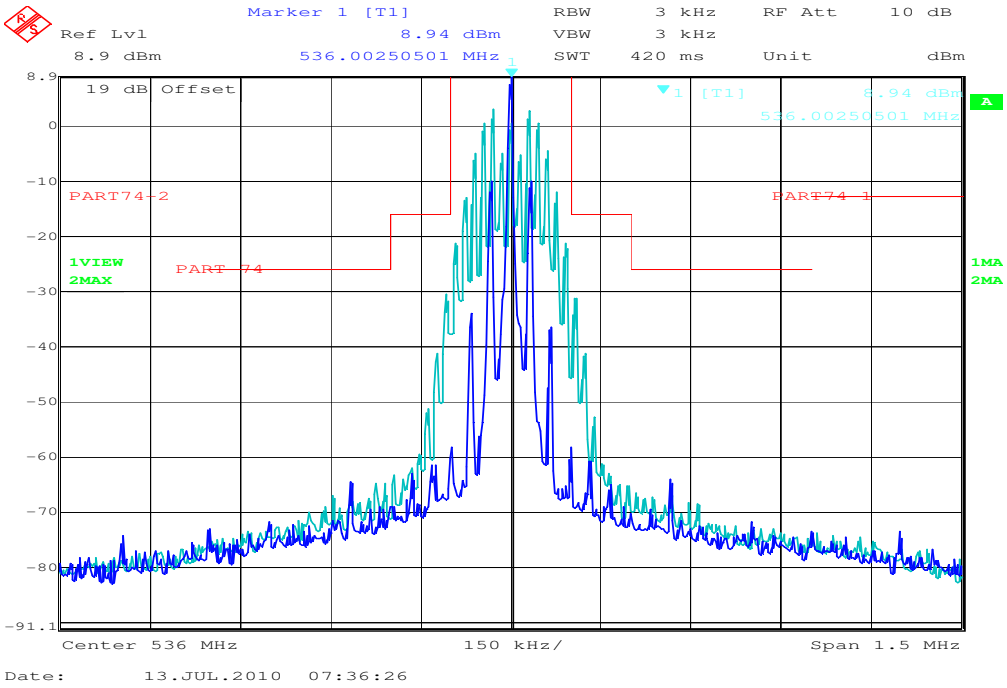
Frequency: 482.000 MHz



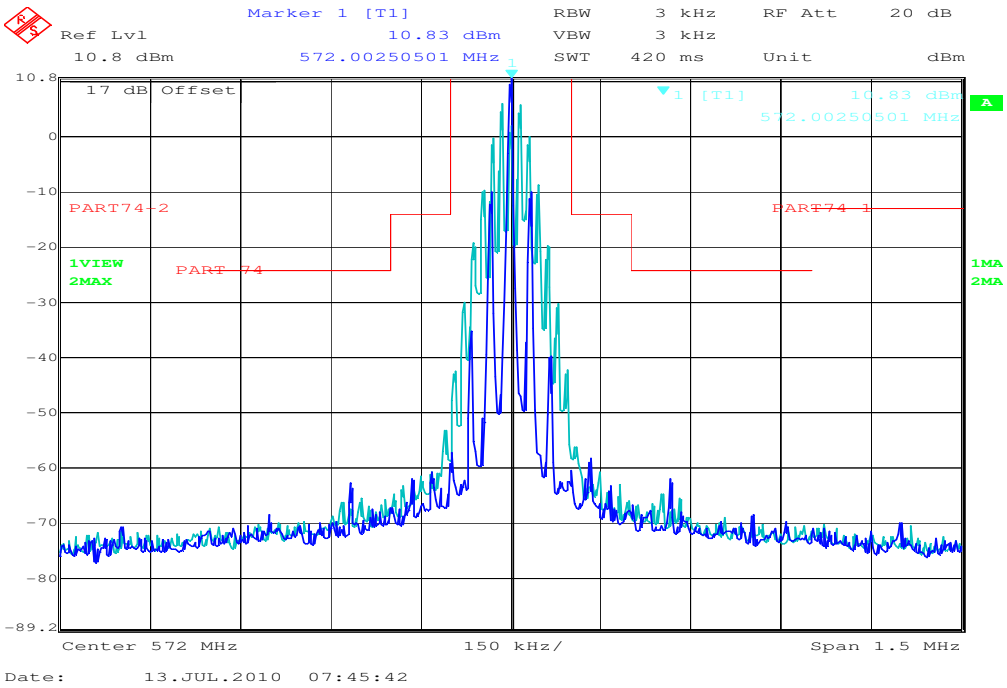
Frequency: 500.000 MHz



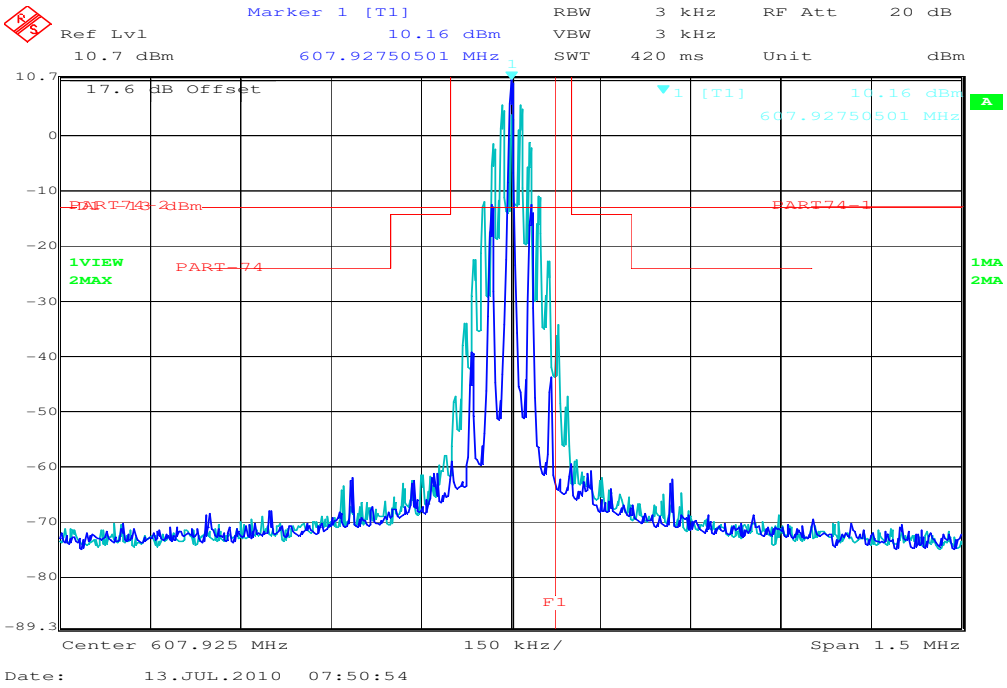
Frequency: 536.000 MHz



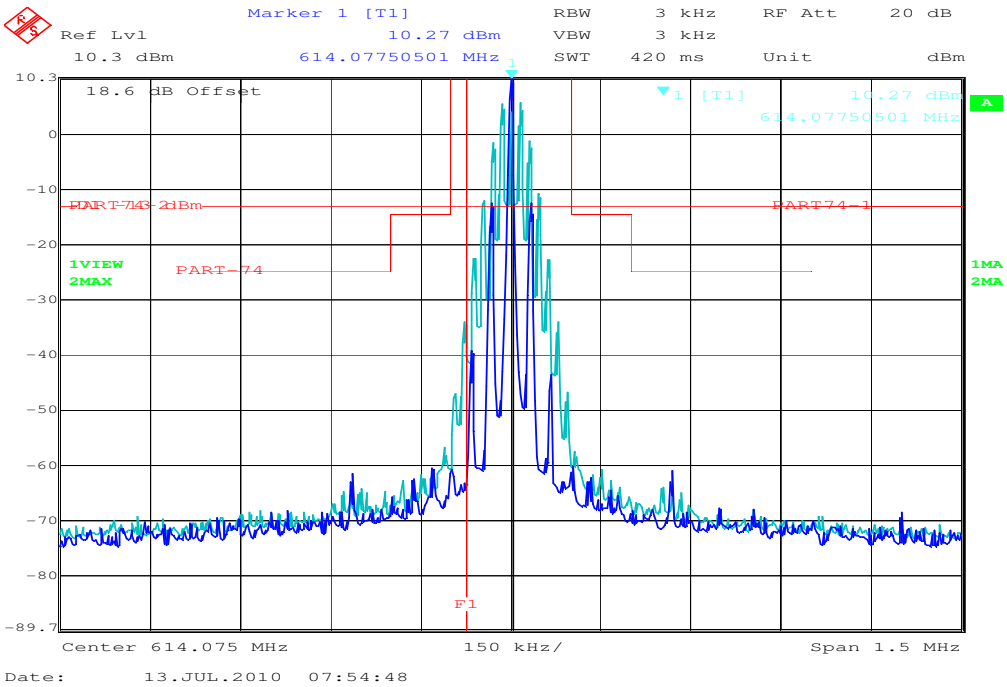
Frequency: 572.000 MHz



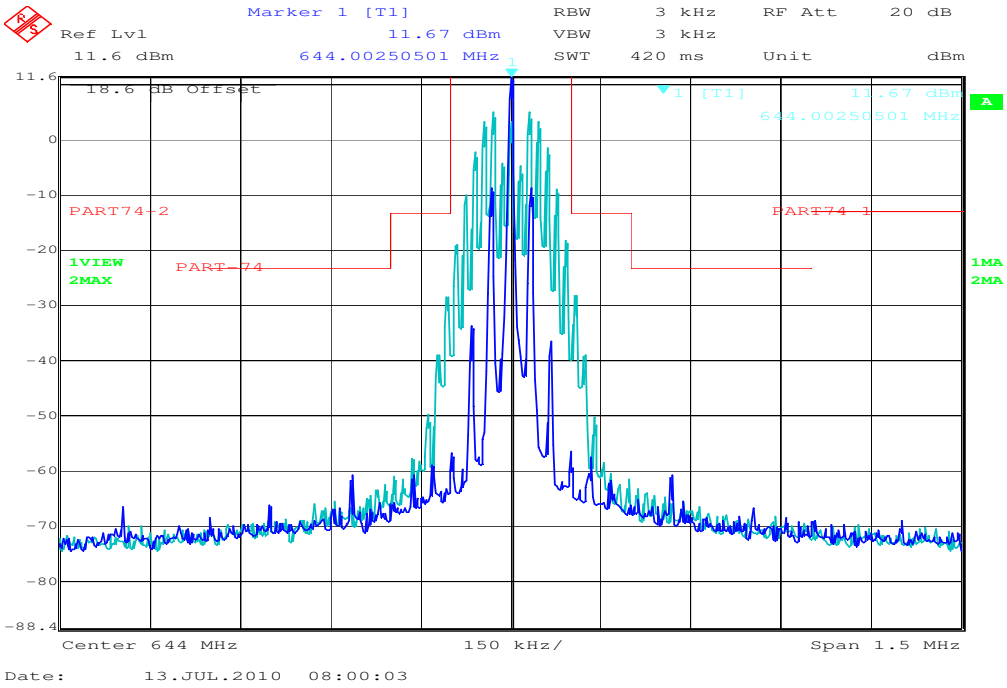
Frequency: 607.925 MHz



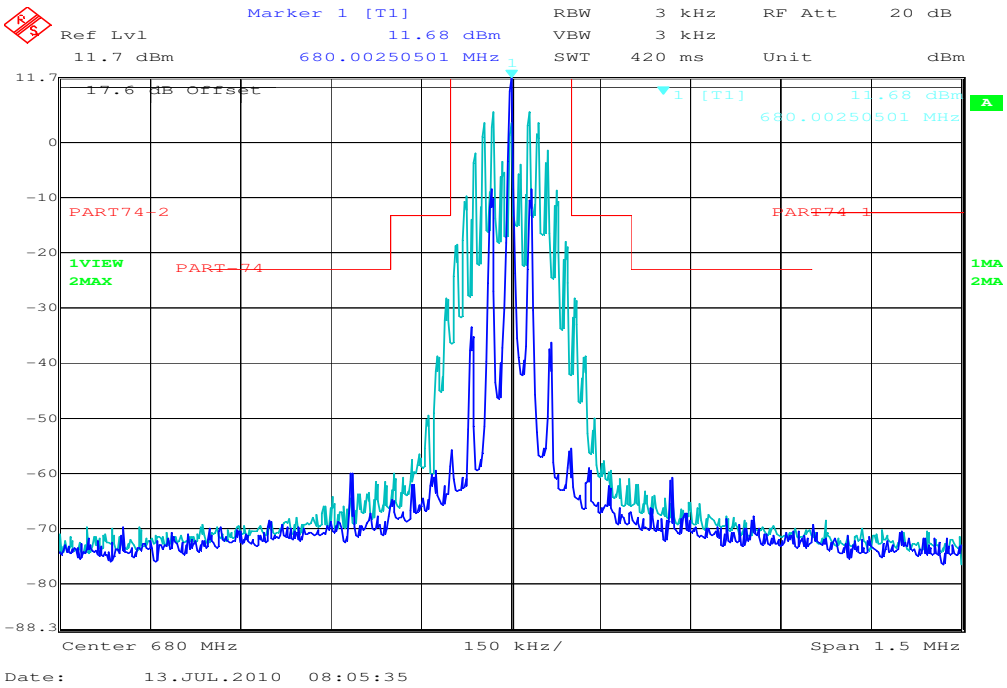
Frequency: 614.075 MHz



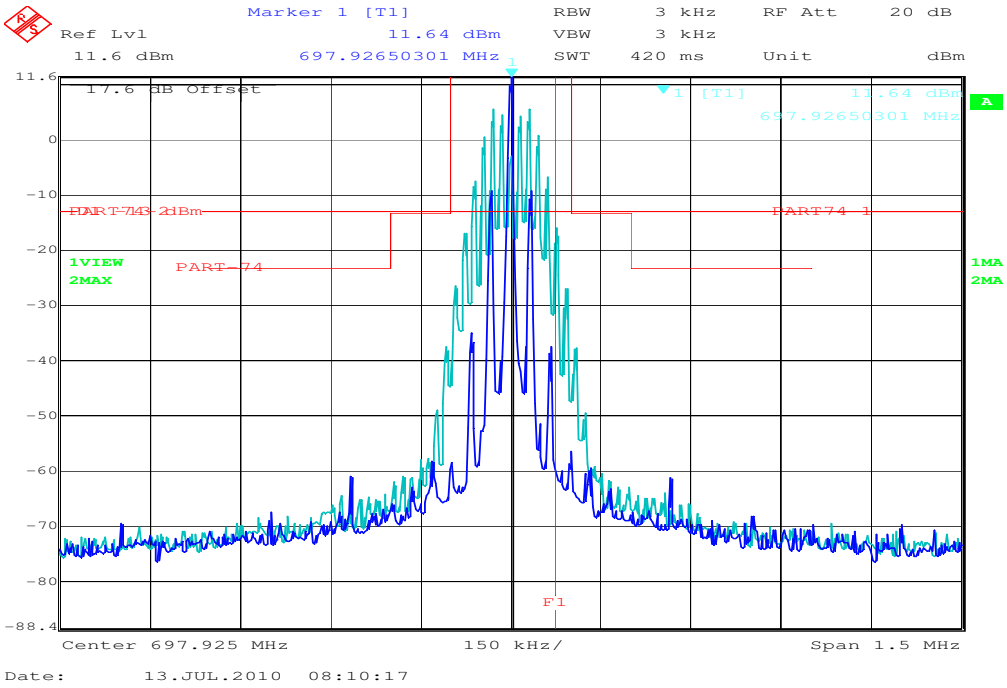
Frequency: 644.000 MHz



Frequency: 680.000 MHz



Frequency: 697.925 MHz



Limits **FCC Rule Part 74.861(e)(6)**

f ± 100 kHz to f ± 200 kHz	f ± 200 kHz to f ± 500 kHz	f ± 500 kHz
25 dBc	35 dBc	-43 +10 $\log_{10}$(mean output power in watts) dB below the mean output power

8.7 Radiated emissions FCC rule Part 74 subpart H

Test procedure

1). on a test site, the EUT shall be placed on a turntable and in the position closest to the normal use as declared by the user.

2). the test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the frequency of the transmitter.

3). the output of the test antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.

4). the transmitter shall be switched on, if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.

5). the test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.

6). the transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

7). the test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.

8). the maximum signal level detected by the measuring receiver shall be noted.

9). the transmitter shall be replaced by a substitution antenna (tuned dipole for f less than 1GHz and horn for frequency higher than 1GHz).

10). the substitution antenna shall be oriented for vertical polarization and the length (if a dipole antenna is used) of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.

11). the substitution antenna shall be connected to a calibrated signal generator.

12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.

13). the test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.

14). the input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.

15). the input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.

16). the measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

17). the measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

18). Repeat above substitution measurement procedure for fundamental and all harmonica emissions.

8.7.1 Results of the measurements

Wireless microphone: S 910 C

Results: 5M2A

TX Spurious Emissions Radiated [dBm]								
TX mode								
Low channel			Mid channel			High channel		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
964.01	120 kHz	-34.84 dBm vertical -36.82 dBm horizontal	3499.95	1 MHz	-34.34 dBm vertical -32.66 dBm horizontal	-/-	-/-	-/-
1445.09	1 MHz	-40.05 dBm vertical -40.35 dBm horizontal	3999.91	1 MHz	-38.33 dBm vertical -38.43 dBm horizontal			
1927.97	1 MHz	-39.90 dBm vertical -38.36 dBm horizontal						
2410.01	1 MHz	-42.79 dBm vertical -43.79 dBm horizontal						
3373.99	1 MHz	-32.51 dBm vertical -33.48 dBm horizontal						
3856.09	1 MHz	-36.80 dBm vertical -38.80 dBm horizontal						
4338.04	1 MHz	-37.09 dBm vertical -34.39 dBm horizontal						
Measurement uncertainty			± 3 dB					

Results: 5M2B

TX Spurious Emissions Radiated [dBm]								
TX mode								
Low channel			Mid channel			High channel		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
1072.07	1 MHz	-43.89 dBm vertical -42.37 dBm horizontal	-/-	-/-	-/-	-/-	-/-	-/-
3216.14	1 MHz	-42.34 dBm vertical -42.50 dBm horizontal						
Measurement uncertainty			± 3 dB					

Limits **FCC Rule Part 74.861(e)(6)**

f ± 100 kHz to f ± 200 kHz	f ± 200 kHz to f ± 500 kHz	f ± 500 kHz
25 dBc	35 dBc	-43 +10 $\log_{10}$(mean output power in watts) dB below the mean output power

Results: 5M9A

TX Spurious Emissions Radiated [dBm]								
TX mode								
Low channel			Mid channel			High channel		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
-/-	-/-	-/-	1144.01	1 MHz	-40.79 dBm vertical -36.54 dBm horizontal	-/-	-/-	-/-
			1715.93	1 MHz	-45.84 dBm vertical -42.15 dBm horizontal			
			3432.02	1 MHz	-33.38 dBm vertical -31.43 dBm horizontal			
			4000.31	1 MHz	-30.71 dBm vertical -30.29 dBm horizontal			
			4576.01	1 MHz	-35.39 dBm vertical -36.33 dBm horizontal			
Measurement uncertainty			± 3 dB					

Results: 5M9B

TX Spurious Emissions Radiated [dBm]								
TX mode								
Low channel			Mid channel			High channel		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
-/-	-/-	-/-	1216.04	1 MHz	-39.07 dBm vertical -37.06 dBm horizontal	-/-	-/-	-/-
			1823.88	1 MHz	-42.23 dBm vertical -40.61 dBm horizontal			
			3040.13	1 MHz	-36.56 dBm vertical -37.18 dBm horizontal			
			3648.12	1 MHz	-34.19 dBm vertical -35.19 dBm horizontal			
			4256.00	1 MHz	-45.44 dBm vertical -30.71 dBm horizontal			
Measurement uncertainty			± 3 dB					

Limits **FCC Rule Part 74.861(e)(6)**

f ± 100 kHz to f ± 200 kHz	f ± 200 kHz to f ± 500 kHz	f ± 500 kHz
25 dBc	35 dBc	-43 +10 $\log_{10}$(mean output power in watts) dB below the mean output power

Results: 6M6A

TX Spurious Emissions Radiated [dBm]								
TX mode								
Low channel			Mid channel			High channel		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
-/-	-/-	-/-	No critical peaks detected! All detected spurious emissions are more than 20 dB below the limit.			-/-	-/-	-/-
Measurement uncertainty			± 3 dB					

Results: 6M6B

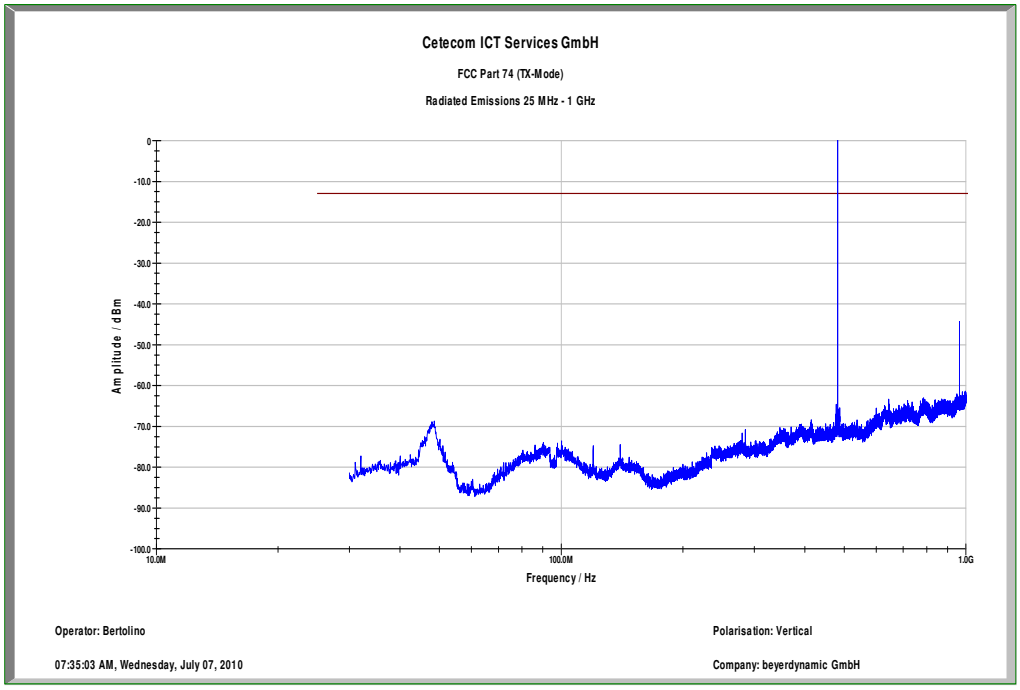
TX Spurious Emissions Radiated [dBm]								
TX mode								
Low channel			Mid channel			High channel		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
-/-	-/-	-/-	1360.10	1 MHz	-39.49 dBm vertical -38.53 dBm horizontal	2094.02	1 MHz	-48.12 dBm vertical -47.07 dBm horizontal
			2039.99	1 MHz	-39.85 dBm vertical -34.26 dBm horizontal	2791.99	1 MHz	-39.83 dBm vertical -38.25 dBm horizontal
			2720.00	1 MHz	-34.23 dBm vertical -34.87 dBm horizontal	3490.97	1 MHz	-37.26 dBm vertical -36.72 dBm horizontal
			3399.00	1 MHz	-40.18 dBm vertical -39.33 dBm horizontal			
Measurement uncertainty			± 3 dB					

Limits **FCC Rule Part 74.861(e)(6)**

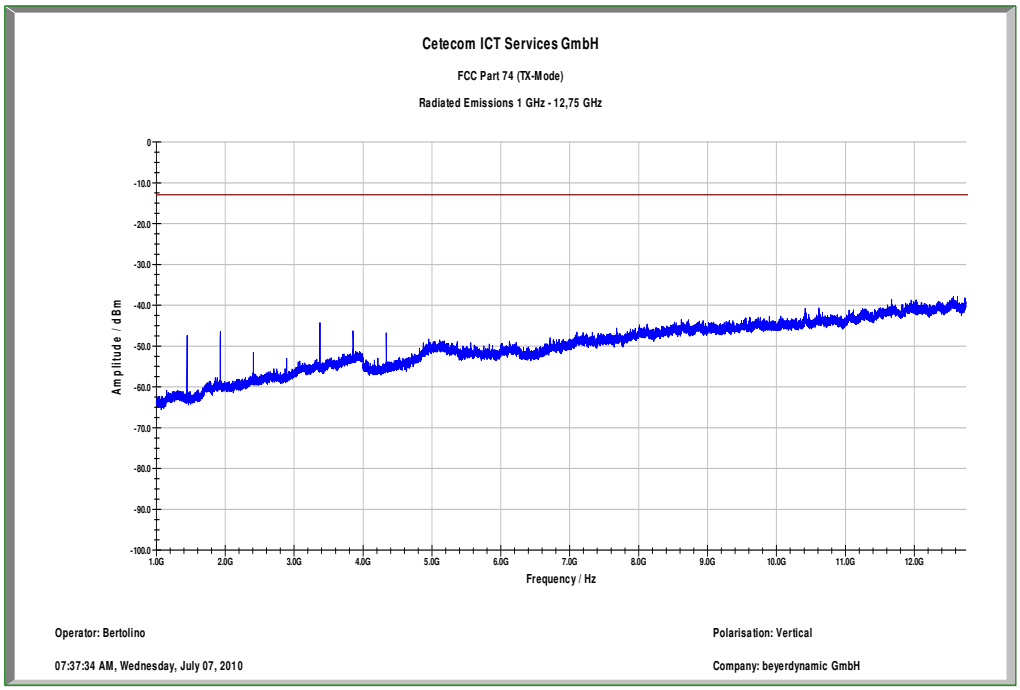
f ± 100 kHz to f ± 200 kHz	f ± 200 kHz to f ± 500 kHz	f ± 500 kHz
25 dBc	35 dBc	-43 +10 $\log_{10}$(mean output power in watts) dB below the mean output power

8.7.2 Plots of the measurements

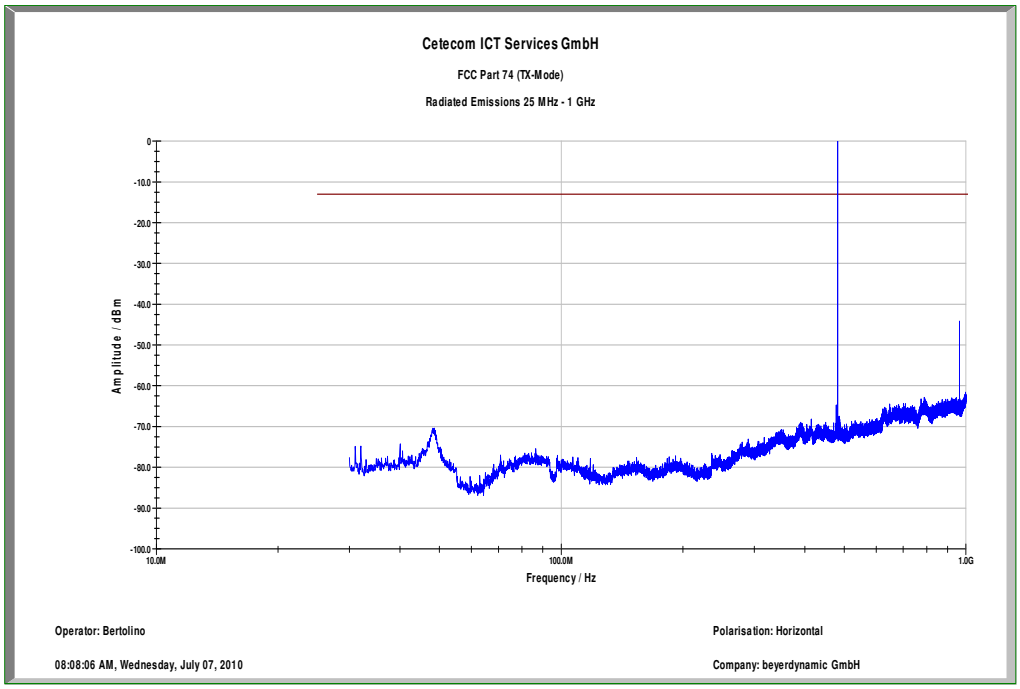
Plot 1: 5M2A band 1 low, TX mode, low channel, 30 MHz to 1 GHz, vertical polarization



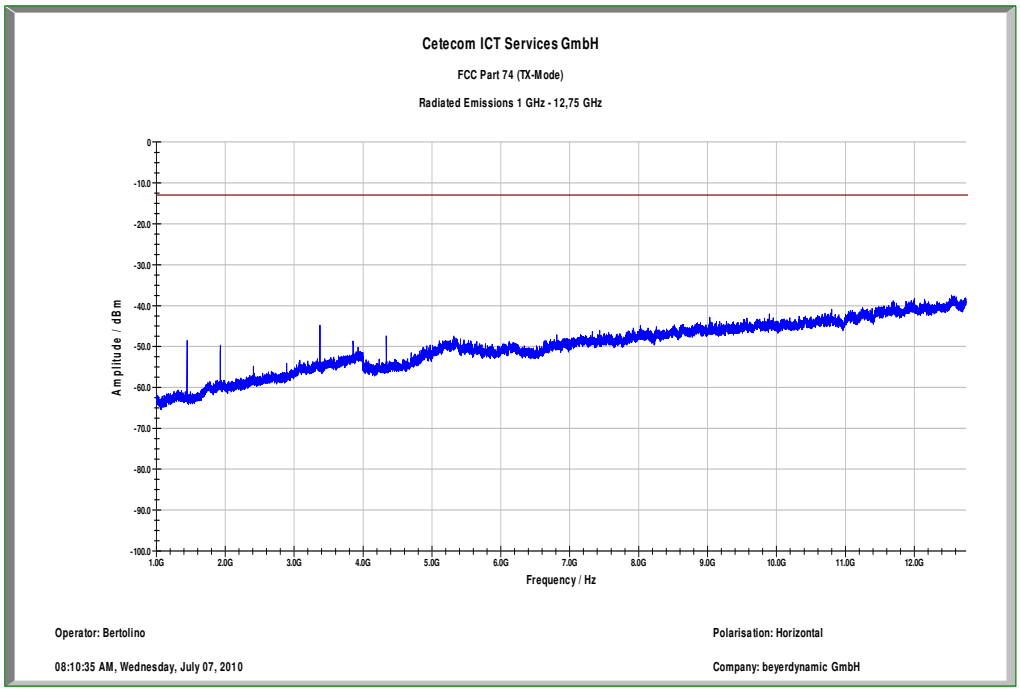
Plot 2: 5M2A band 1 low, TX mode, low channel, 1 GHz to 12.75 GHz, vertical polarization



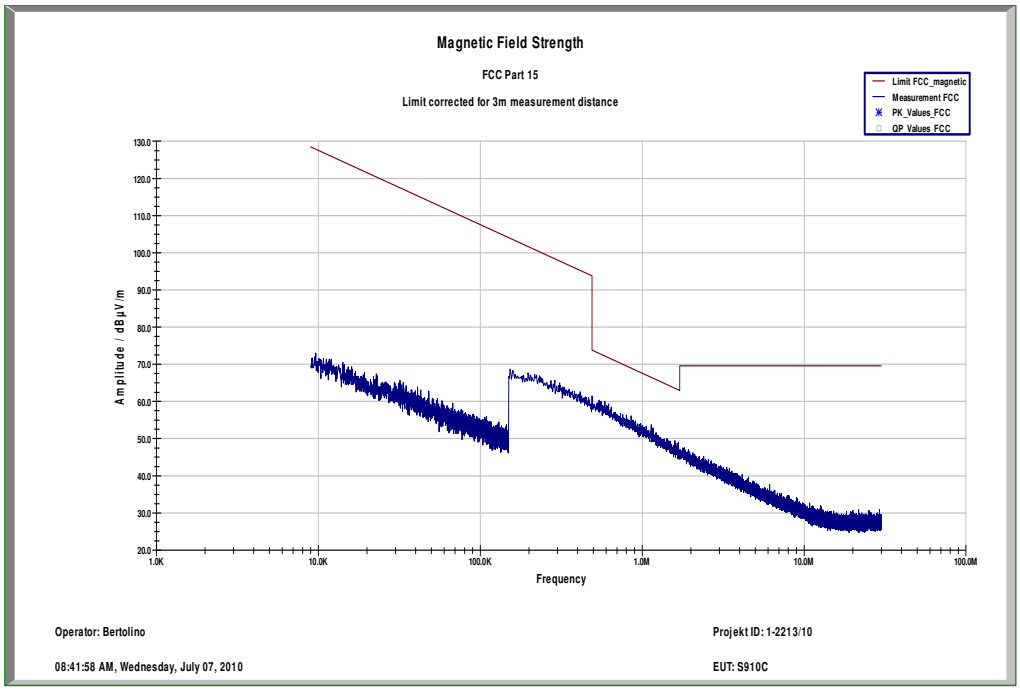
Plot 3: 5M2A band 1 low, TX mode, low channel, 30 MHz to 1 GHz, horizontal polarization



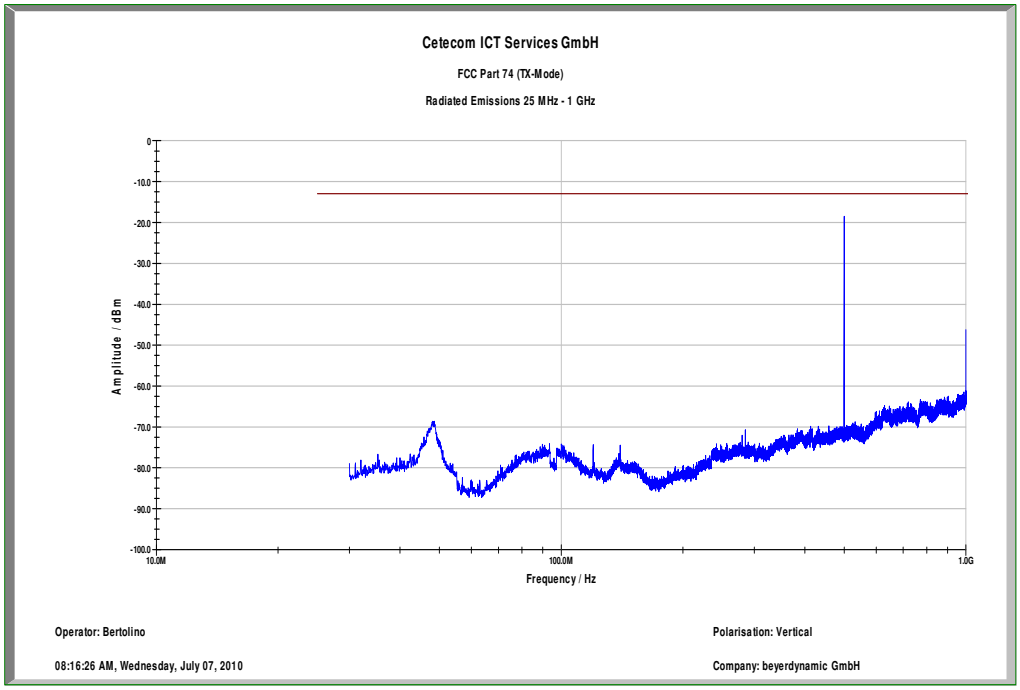
Plot 4: 5M2A band 1 low, TX mode, low channel, 1 GHz to 12.75 GHz, horizontal polarization



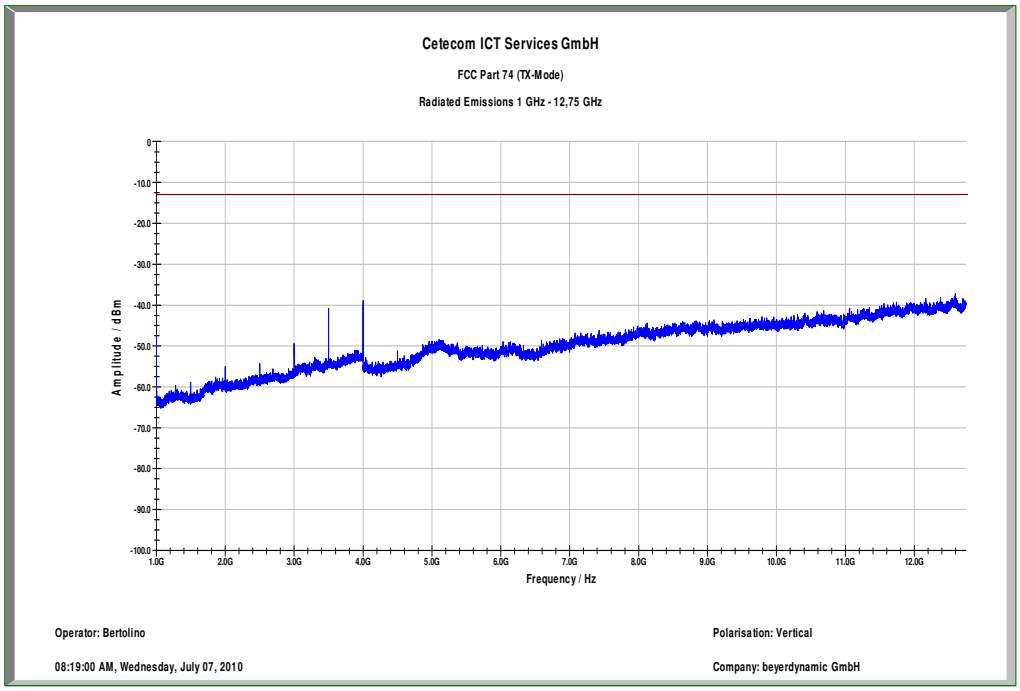
Plot 5: 5M2A band 1 low, TX mode, mid channel, 9 kHz to 30 MHz, magnetic (valid for all 5M2A channels)



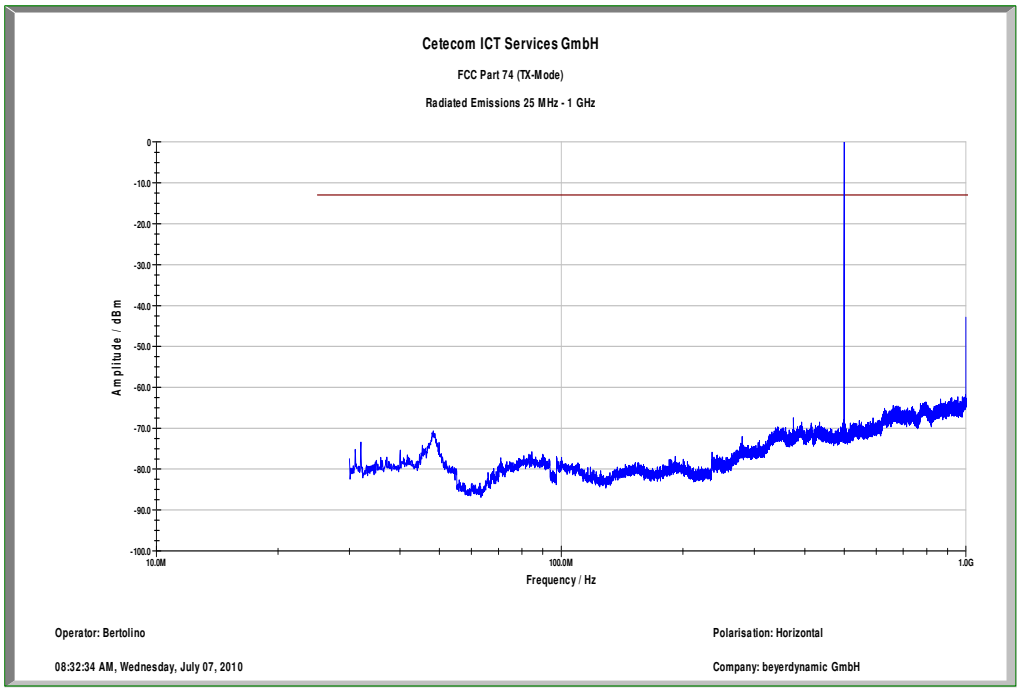
Plot 6: 5M2A band 1 low, TX mode, mid channel, 30 MHz to 1 GHz, vertical polarization



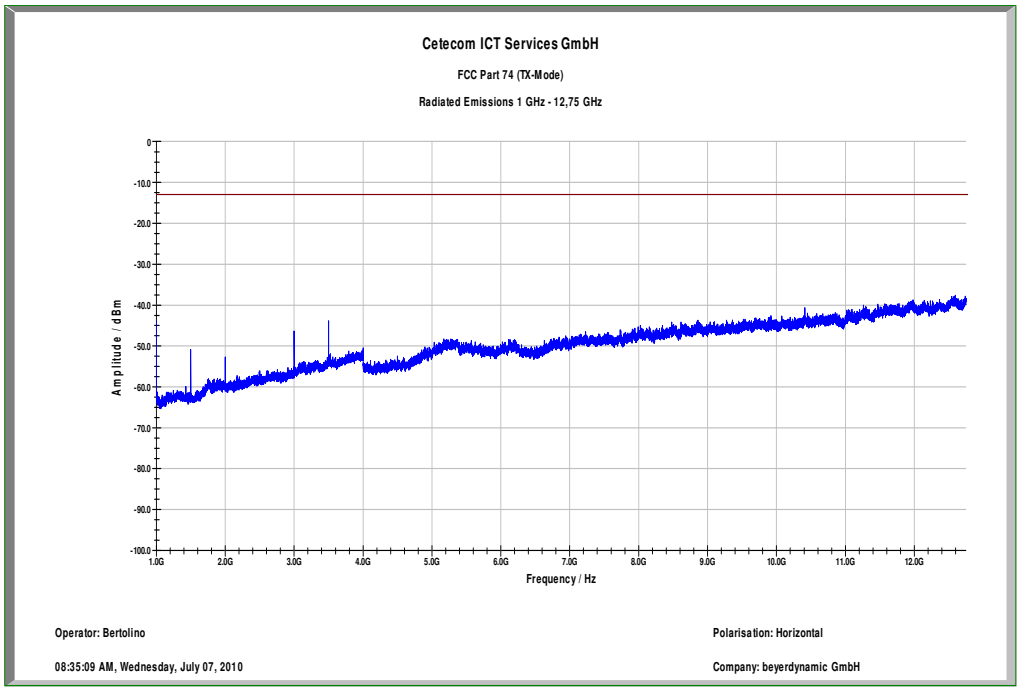
Plot 7: 5M2A band 1 low, TX mode, mid channel, 1 GHz to 12.75 GHz, vertical polarization



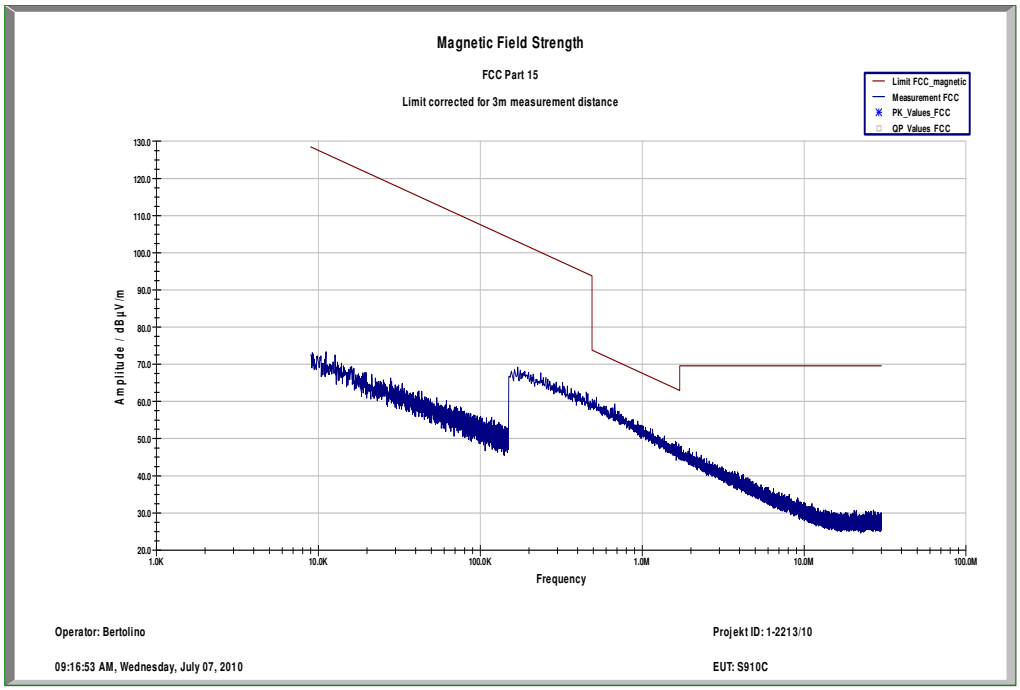
Plot 8: 5M2A band 1 low, TX mode, mid channel, 30 MHz to 1 GHz, horizontal polarization



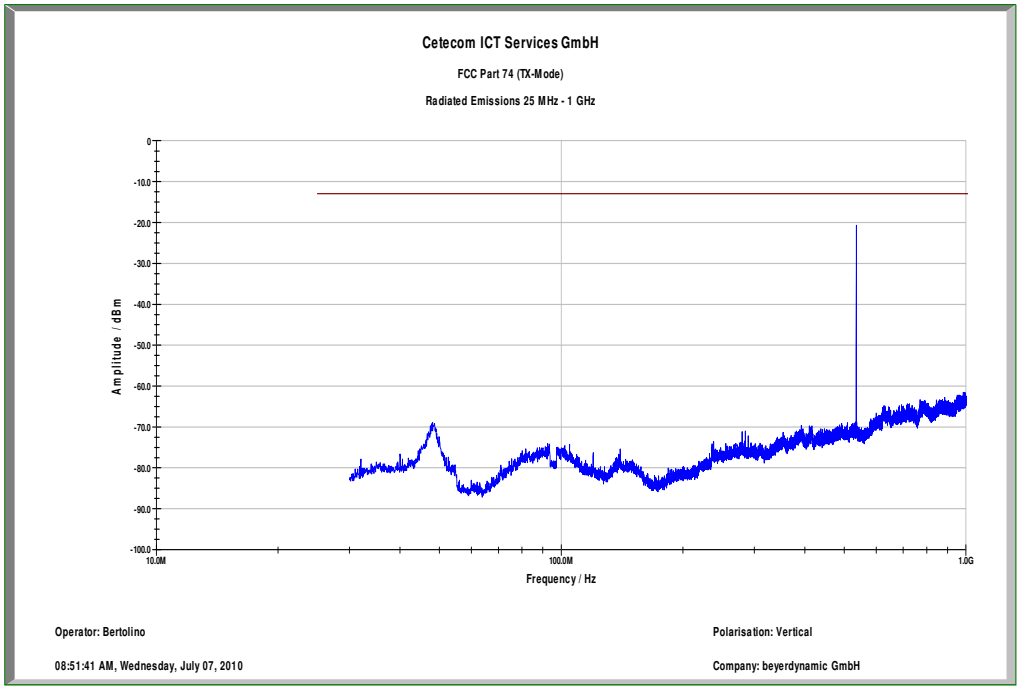
Plot 9: 5M2A band 1 low, TX mode, mid channel, 1 GHz to 12.75 GHz, horizontal polarization



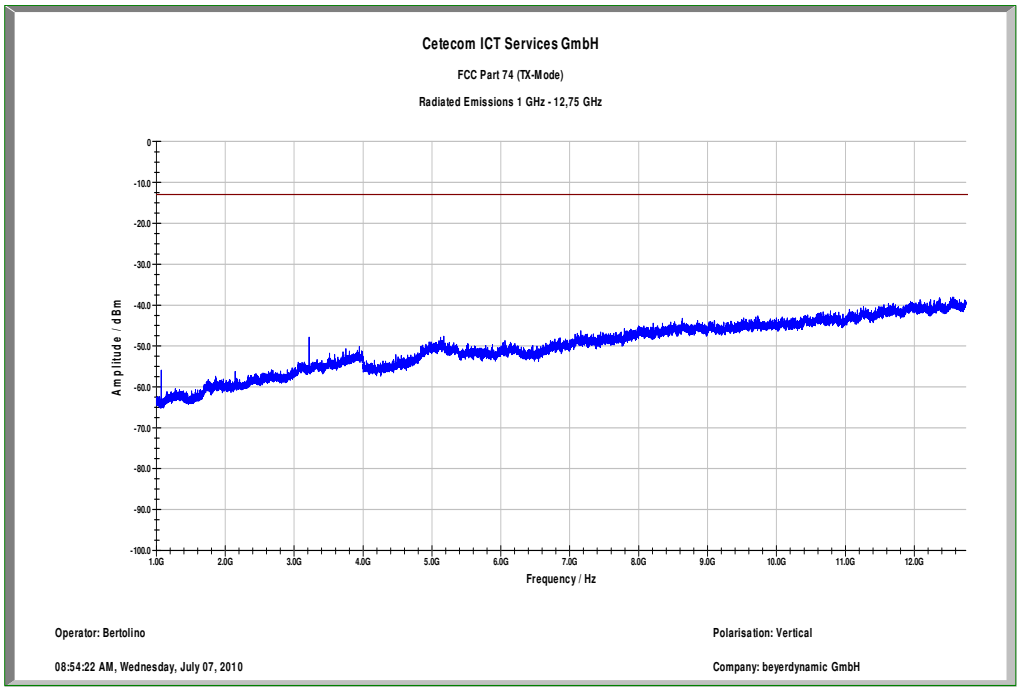
Plot 10: 5M2B band 1 high, TX mode, mid channel, 9 kHz to 30 MHz, magnetic (valid for all 5M2B channels)



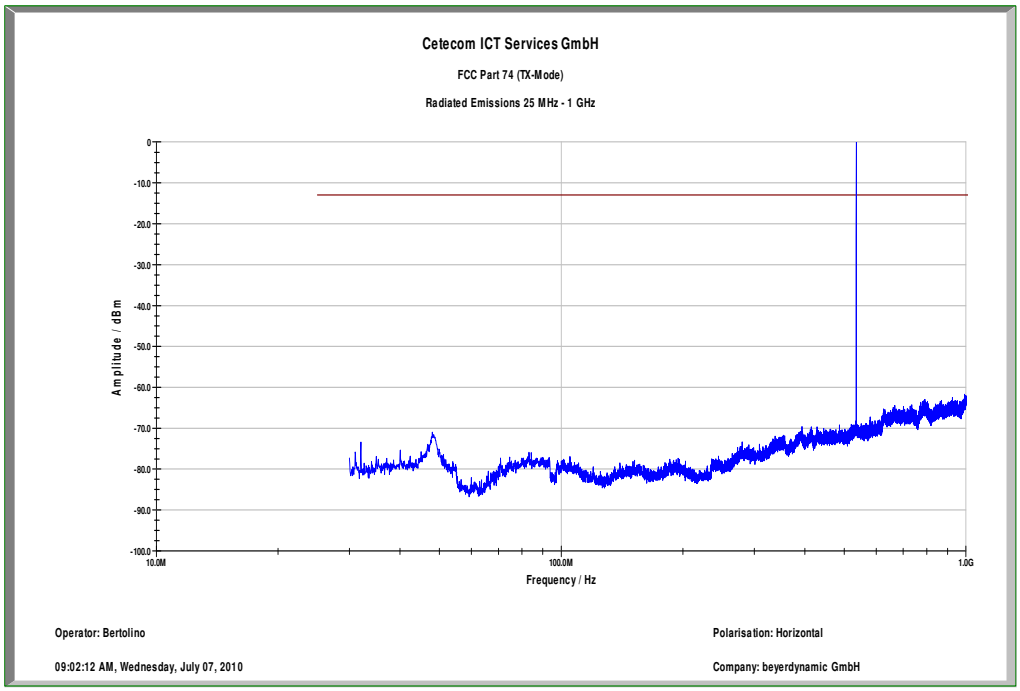
Plot 11: 5M2B band 1 high, TX mode, mid channel, 30 MHz to 1 GHz, vertical polarization



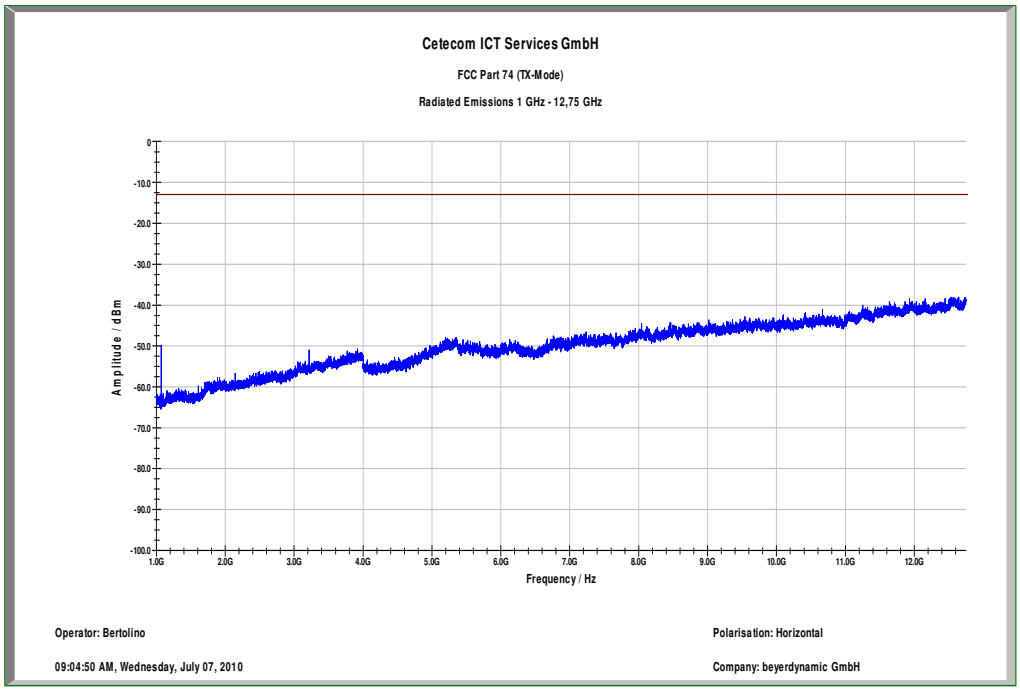
Plot 12: 5M2B band 1 high, TX mode, mid channel, 1 GHz to 12.75 GHz, vertical polarization



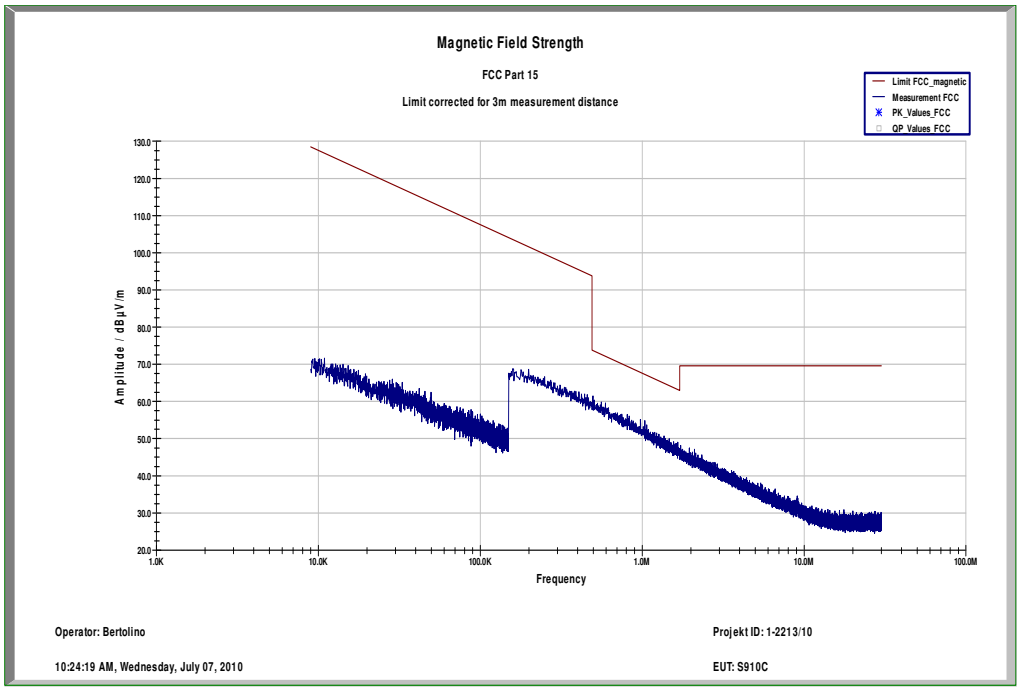
Plot 13: 5M2B band 1 high, TX mode, mid channel, 30 MHz to 1 GHz, horizontal polarization



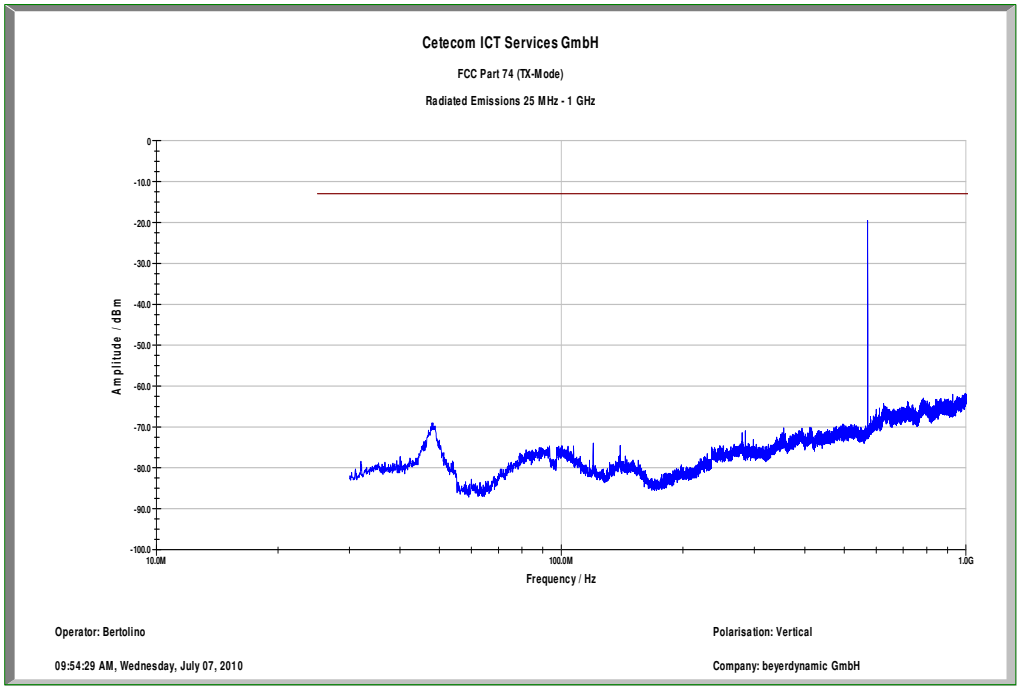
Plot 14: 5M2B band 1 high, TX mode, mid channel, 1 GHz to 12.75 GHz, horizontal polarization



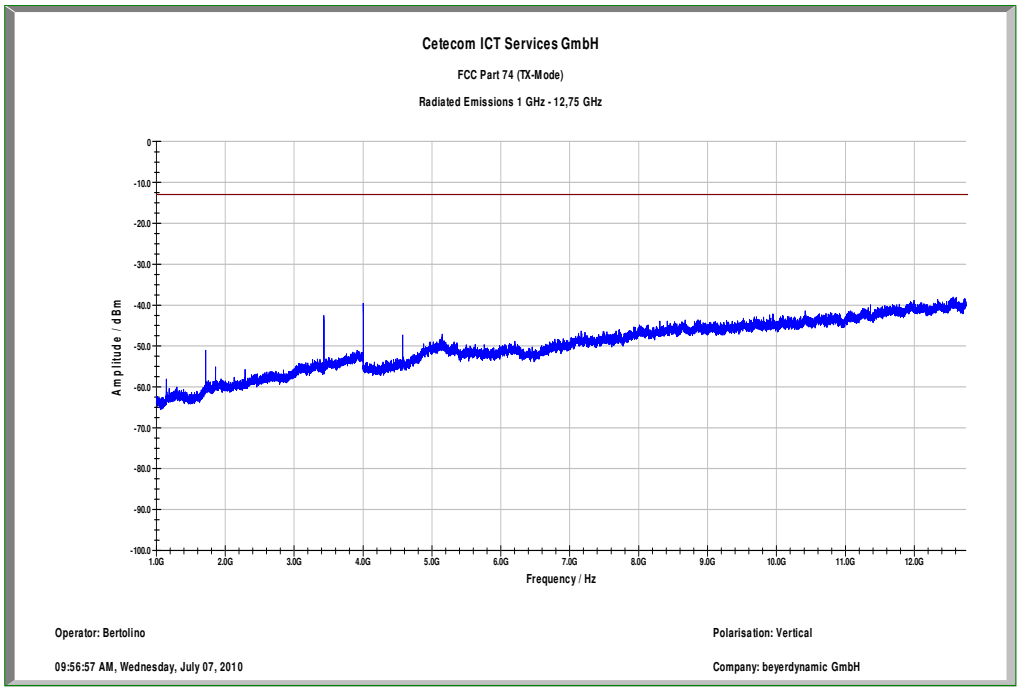
Plot 15: 5M9A band 2 low, TX mode, mid channel, 9 kHz to 30 MHz, magnetic (valid for all 5M9A channels)



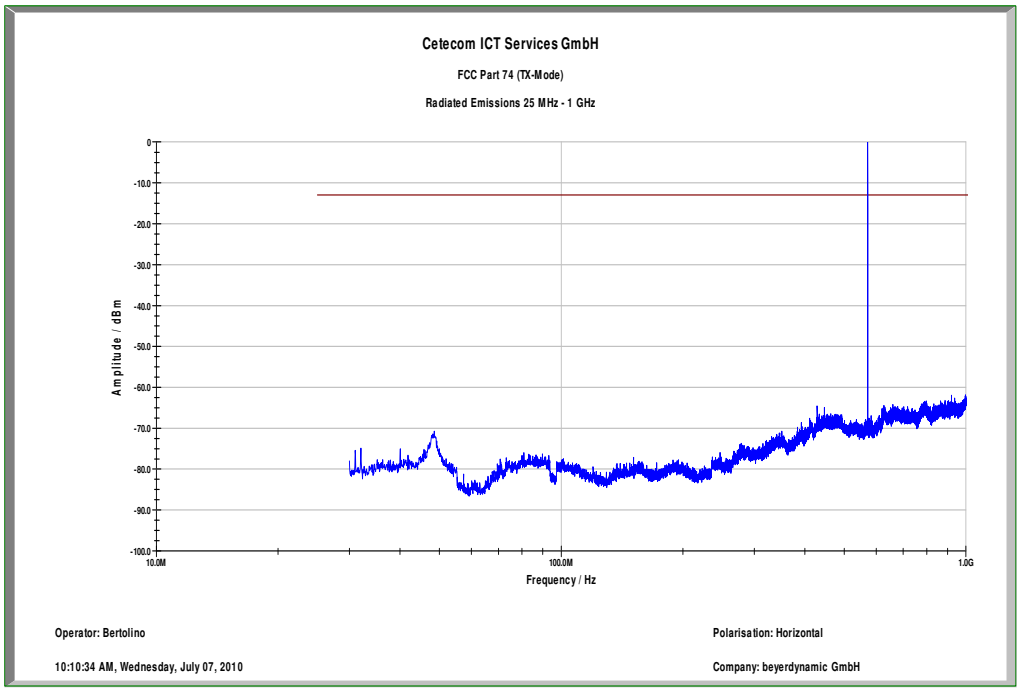
Plot 16: 5M9A band 2 low, TX mode, mid channel, 30 MHz to 1 GHz, vertical polarization



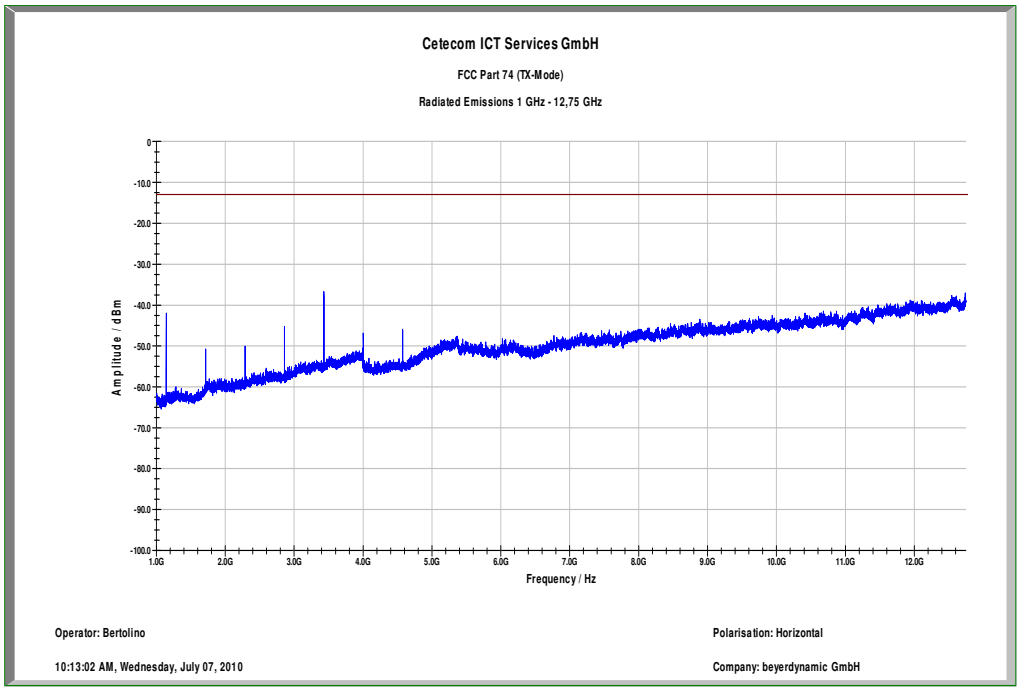
Plot 17: 5M9A band 2 low, TX mode, mid channel, 1 GHz to 12.75 GHz, vertical polarization



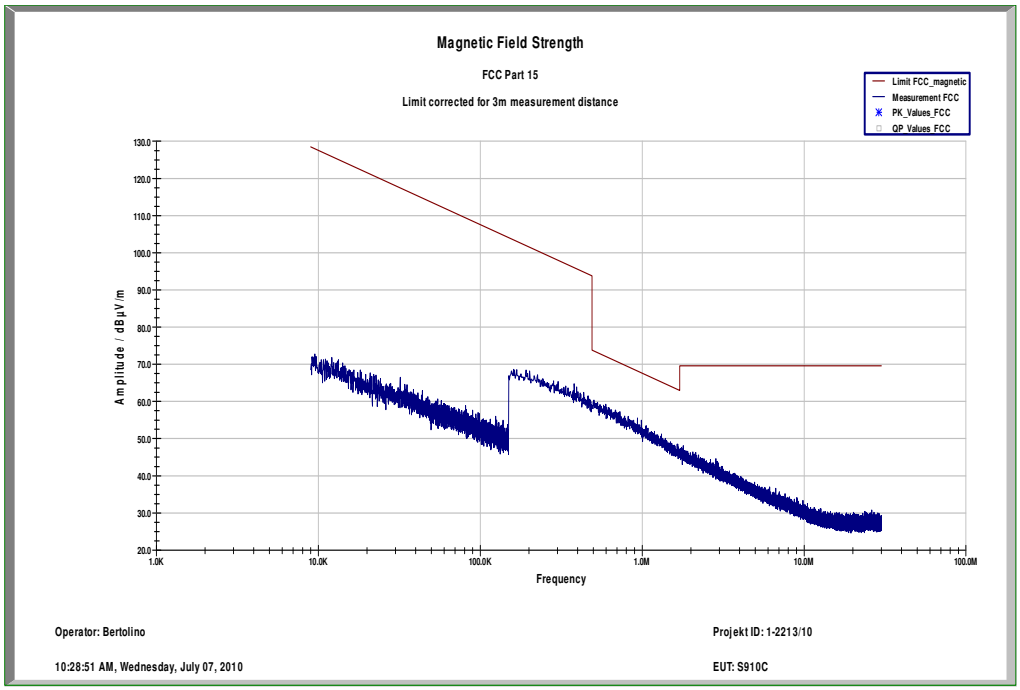
Plot 18: 5M9A band 2 low, TX mode, mid channel, 30 MHz to 1 GHz, horizontal polarization



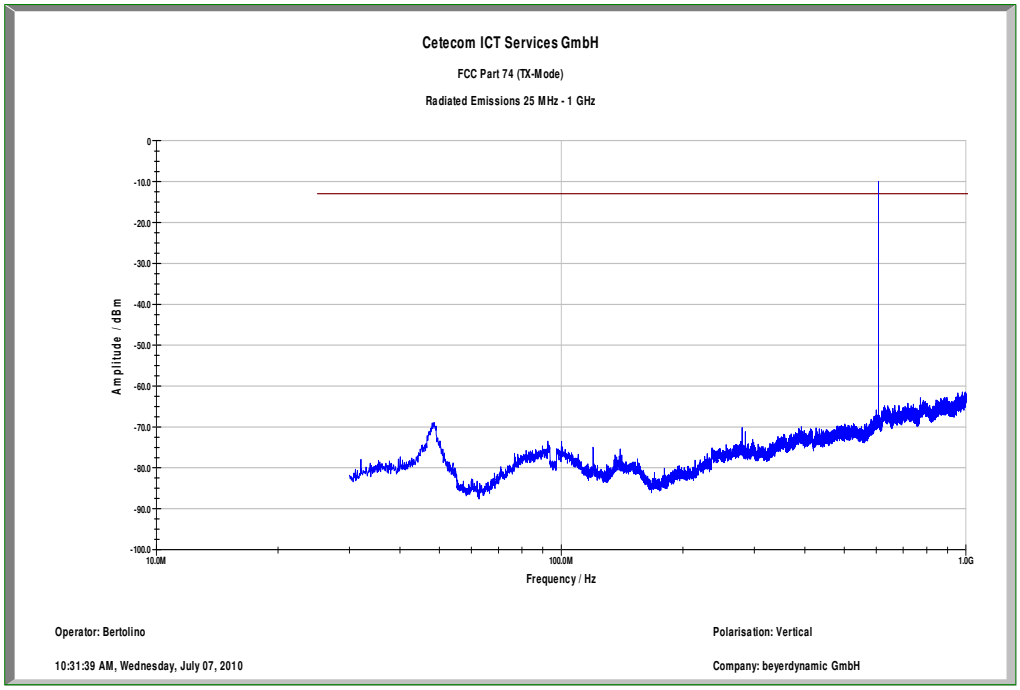
Plot 19: 5M9A band 2 low, TX mode, mid channel, 1 GHz to 12.75 GHz, horizontal polarization



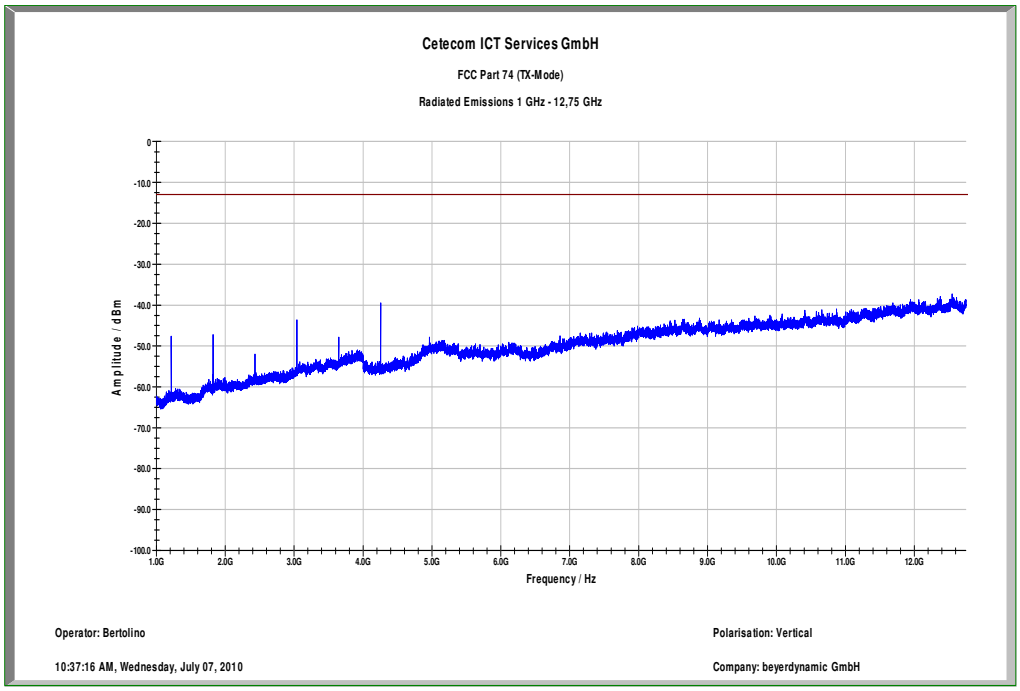
Plot 20: 5M9B band 2 high, TX mode, mid channel, 9 kHz to 30 MHz, magnetic (valid for all 5M2B channels)



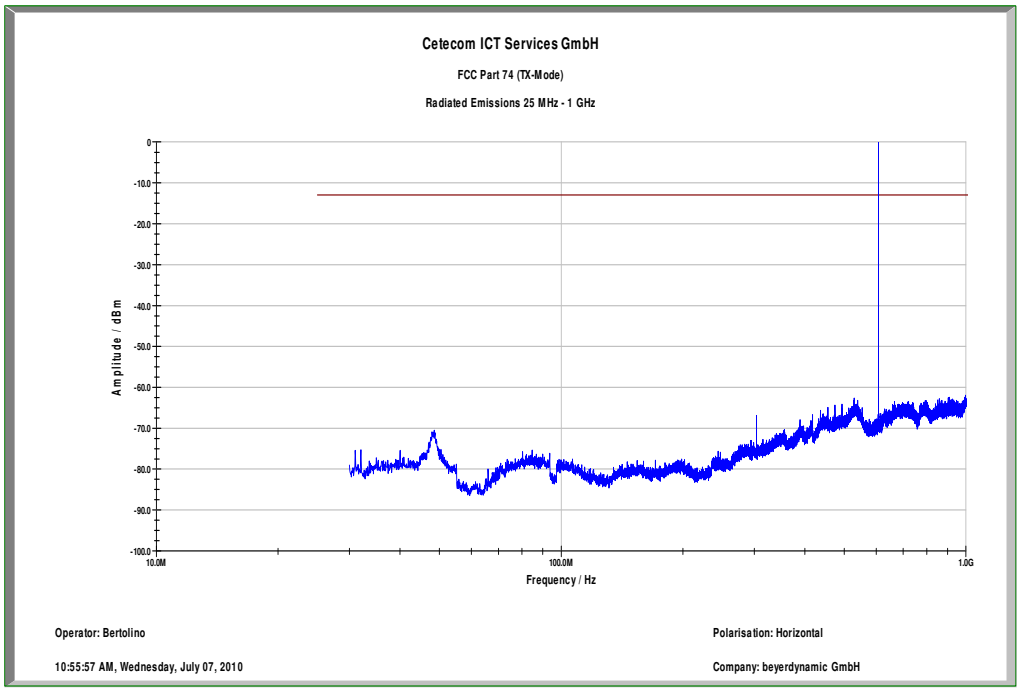
Plot 21: 5M9B band 2 high, TX mode, mid channel, 30 MHz to 1 GHz, vertical polarization



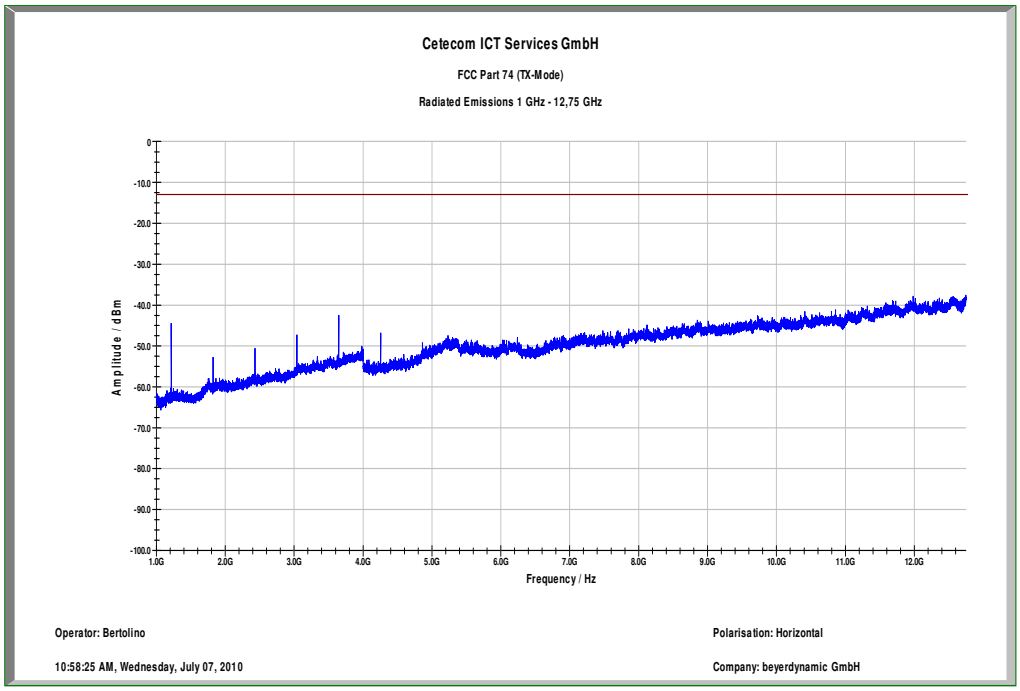
Plot 22: 5M9B band 2 high, TX mode, mid channel, 1 GHz to 12.75 GHz, vertical polarization



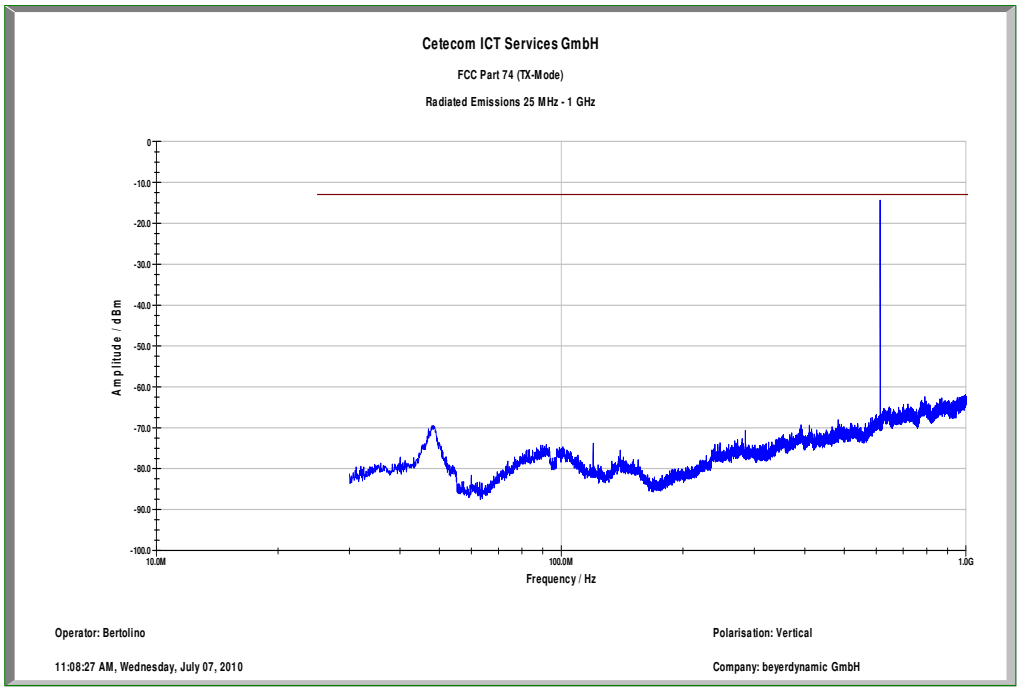
Plot 23: 5M9B band 2 high, TX mode, mid channel, 30 MHz to 1 GHz, horizontal polarization



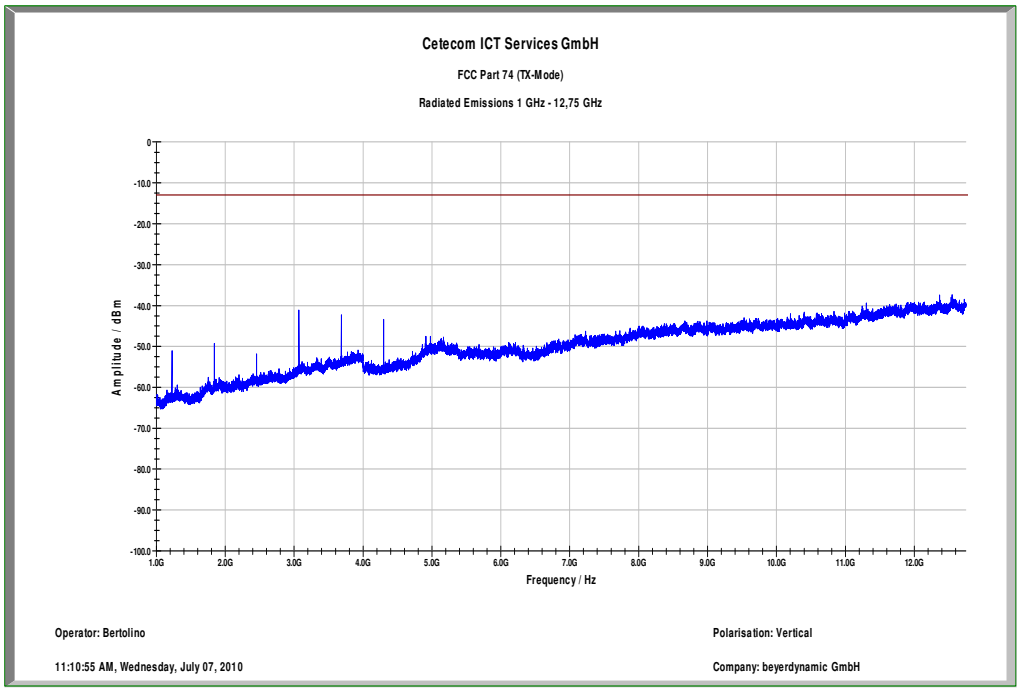
Plot 24: 5M9B band 2 high, TX mode, mid channel, 1 GHz to 12.75 GHz, horizontal polarization



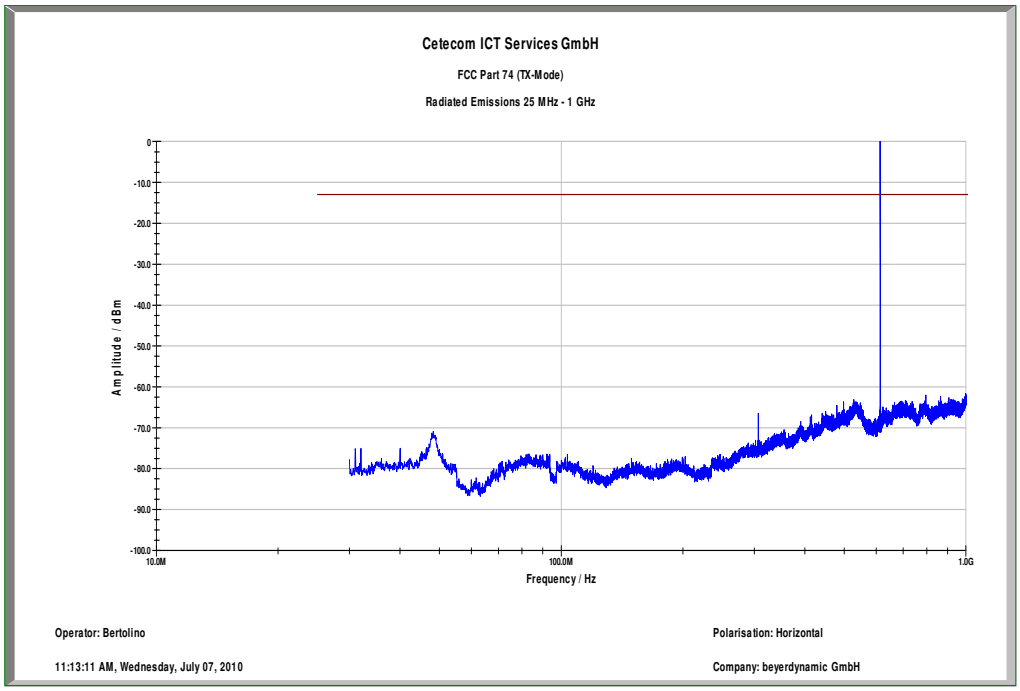
Plot 25: 5M9B band 2 high, TX mode, high channel, 30 MHz to 1 GHz, vertical polarization



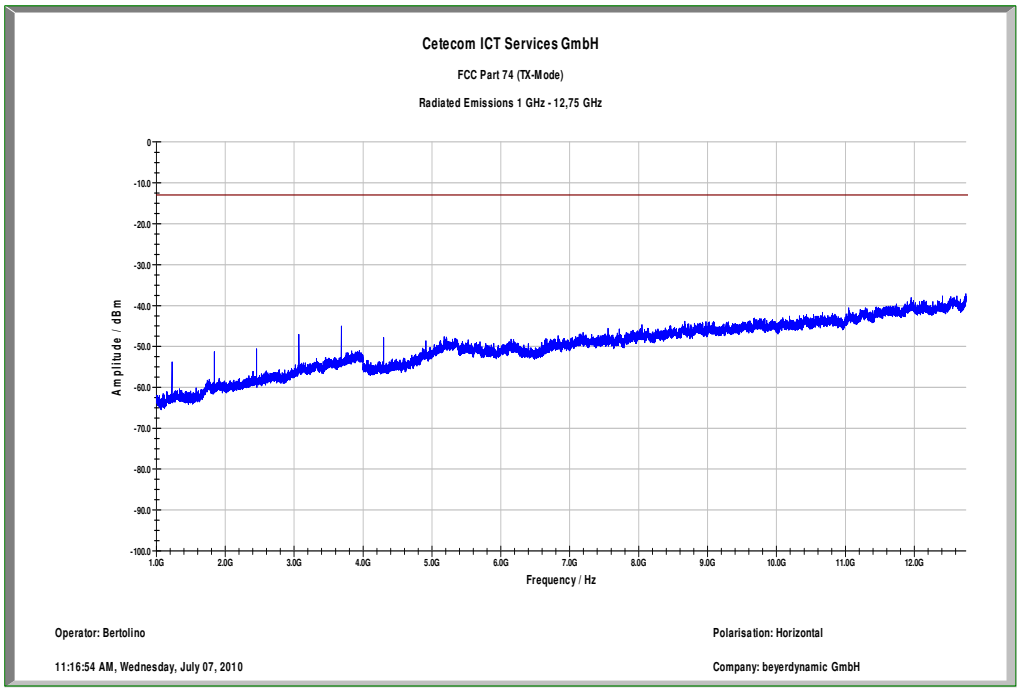
Plot 26: 5M9B band 2 high, TX mode, high channel, 1 GHz to 12.75 GHz, vertical polarization



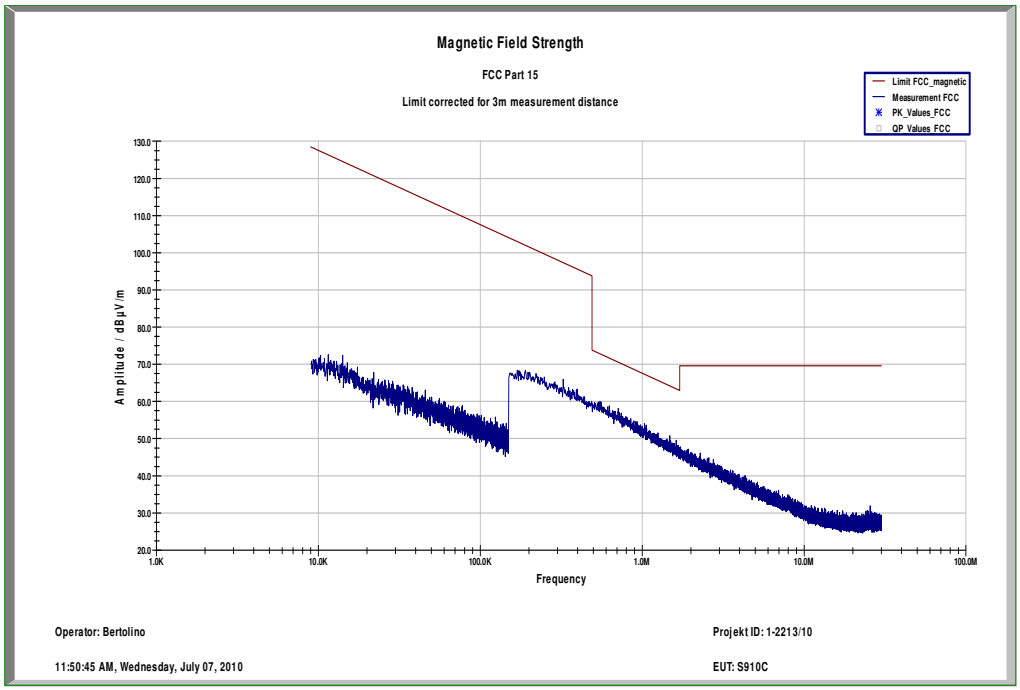
Plot 27: 5M9B band 2 high, TX mode, high channel, 30 MHz to 1 GHz, horizontal polarization



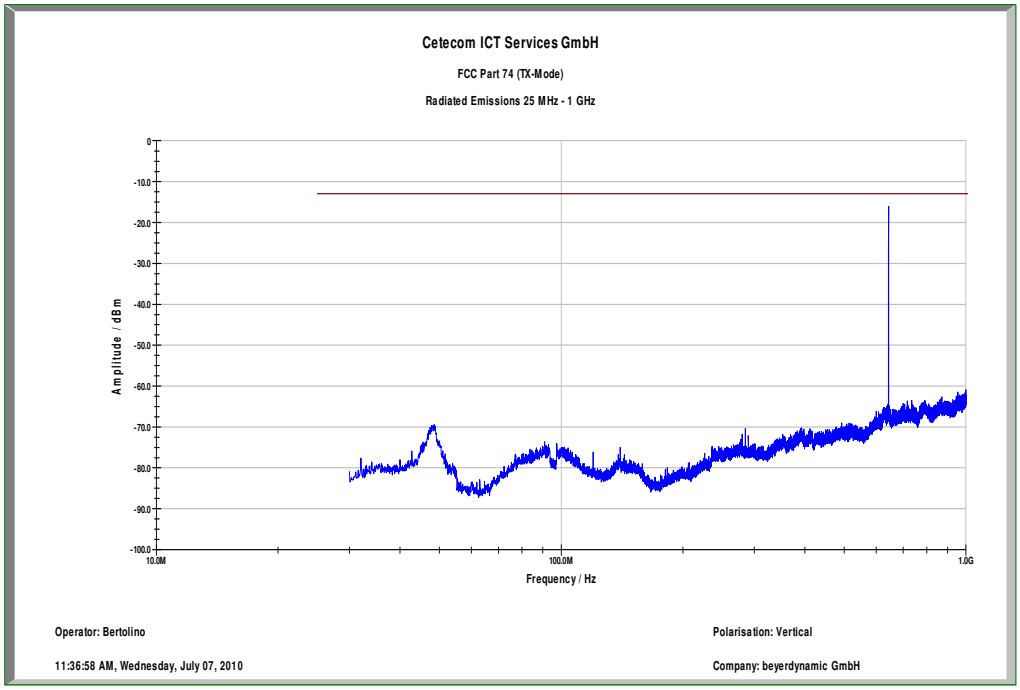
Plot 28: 5M9B band 2 high, TX mode, high channel, 1 GHz to 12.75 GHz, horizontal polarization



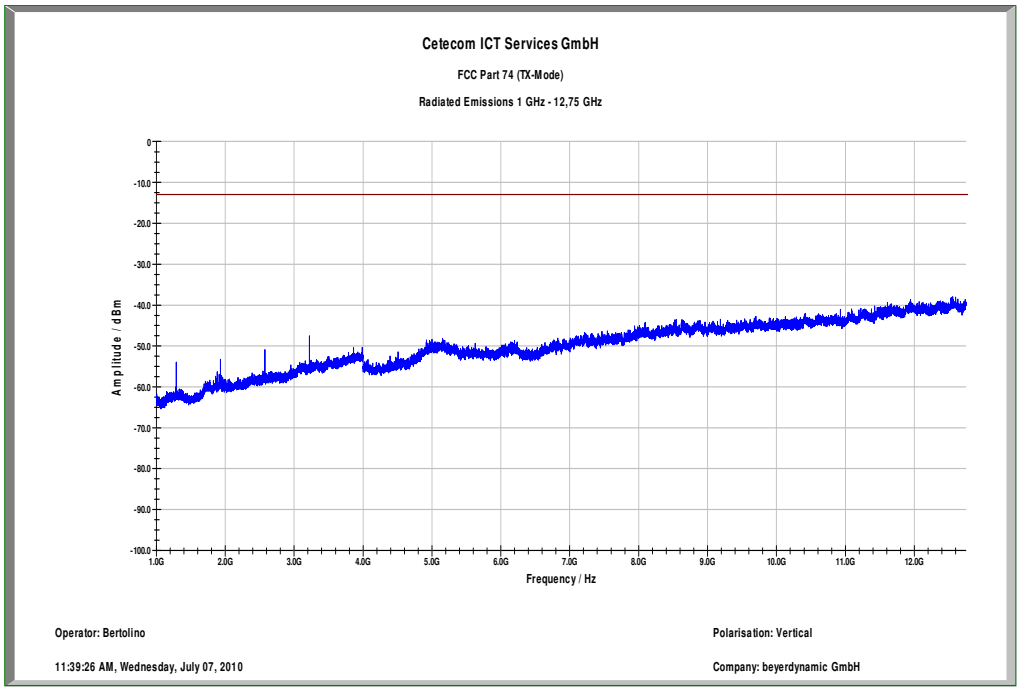
Plot 29: 6M6A band 3 low, TX mode, mid channel, 9 kHz to 30 MHz, magnetic (valid for all 6M6A channels)



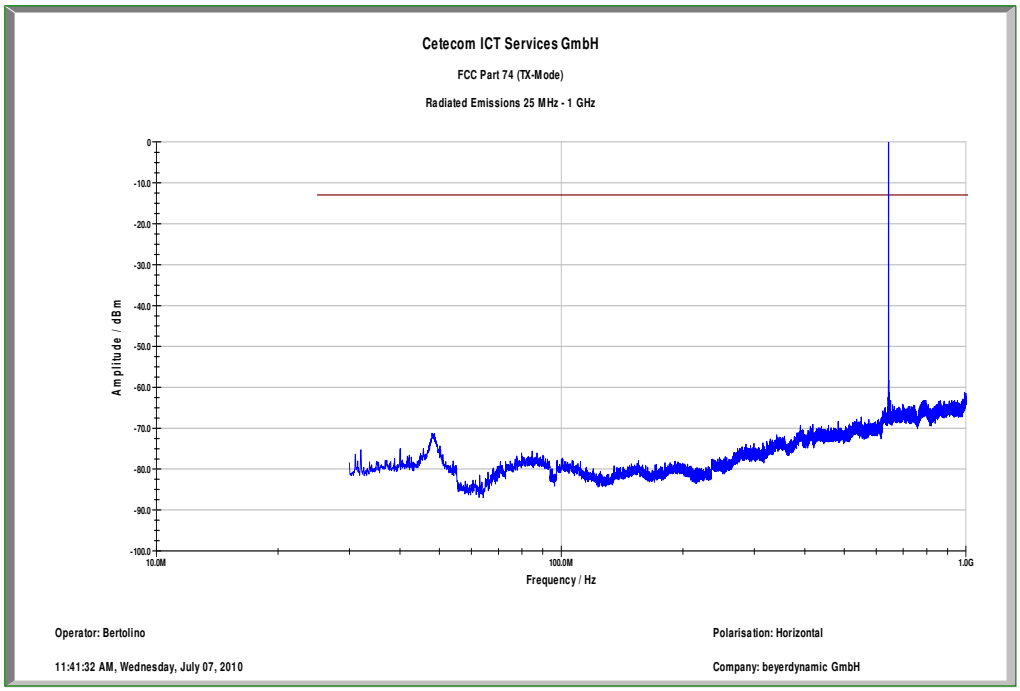
Plot 30: 6M6A band 3 low, TX mode, mid channel, 30 MHz to 1 GHz, vertical polarization



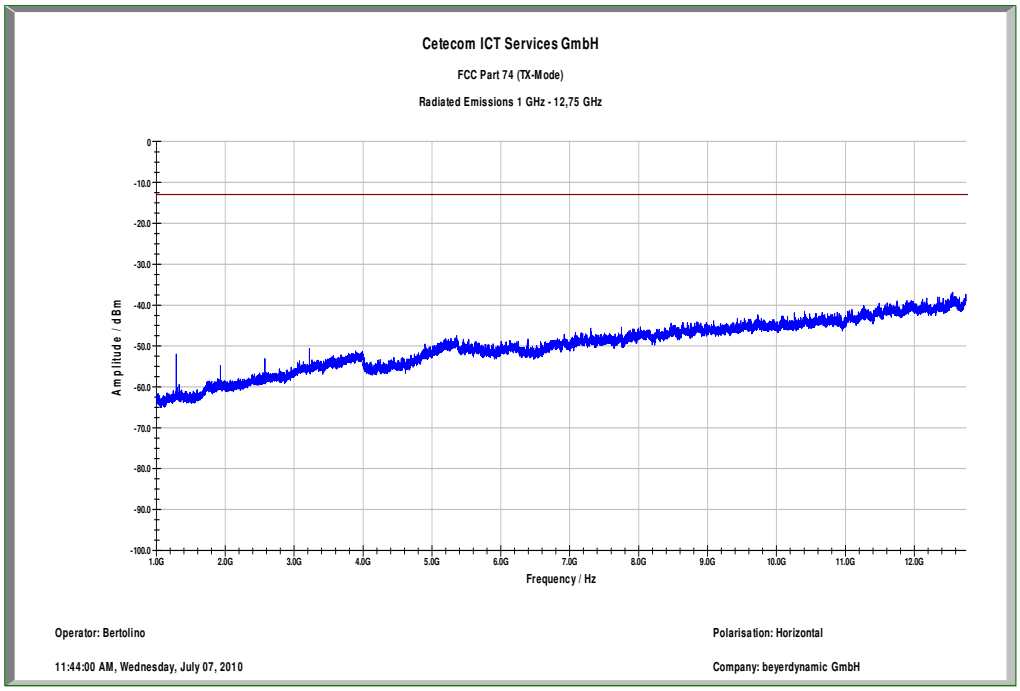
Plot 31: 6M6A band 3 low, TX mode, mid channel, 1 GHz to 12.75 GHz, vertical polarization



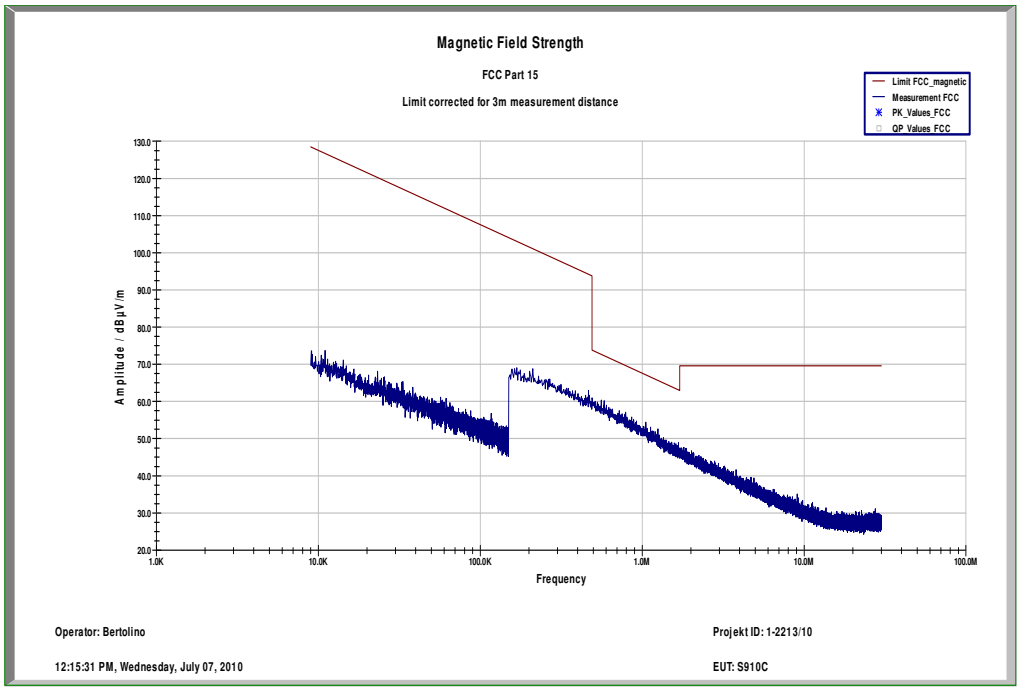
Plot 32: 6M6A band 3 low, TX mode, mid channel, 30 MHz to 1 GHz, horizontal polarization



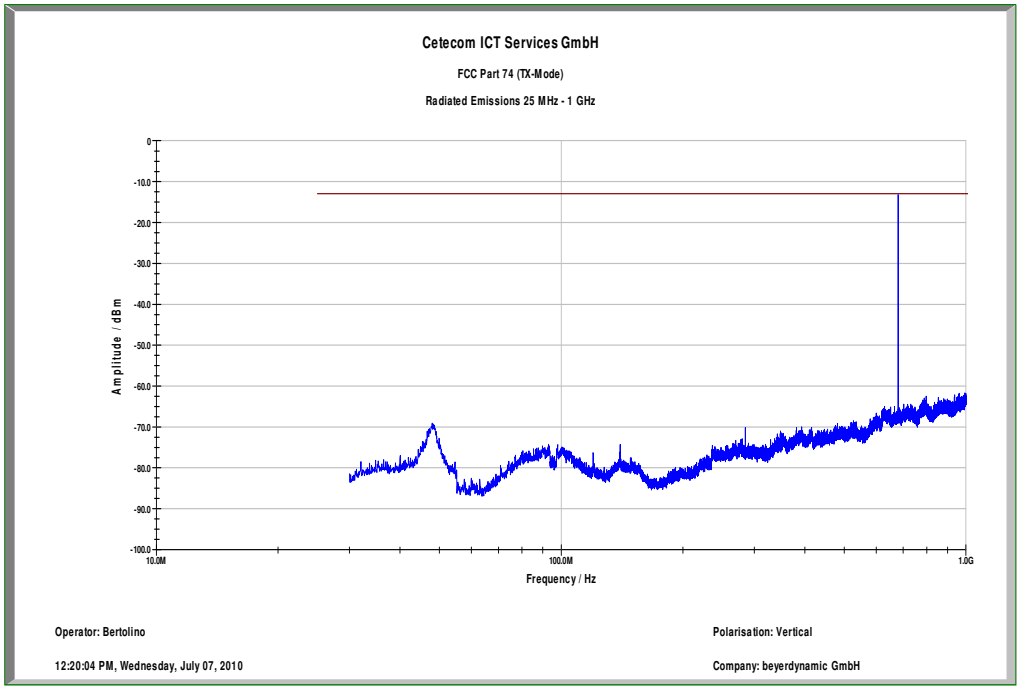
Plot 33: 6M6A band 3 low, TX mode, mid channel, 1 GHz to 12.75 GHz, horizontal polarization



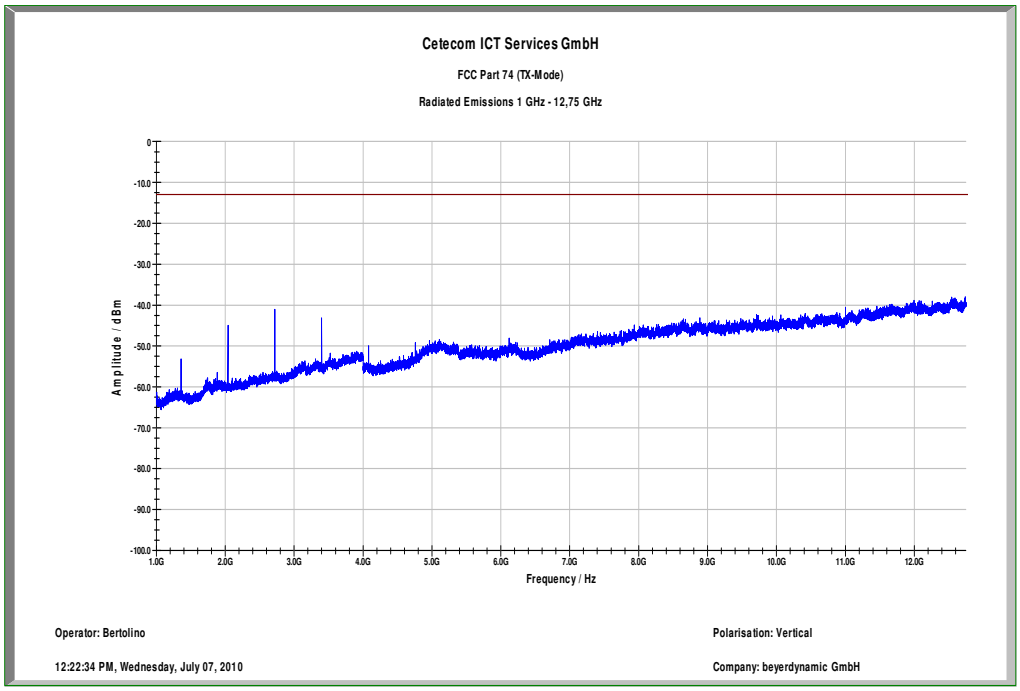
Plot 34: 6M6B band 3 high, TX mode, mid channel, 9 kHz to 30 MHz, magnetic (valid for all 6M6B channels)



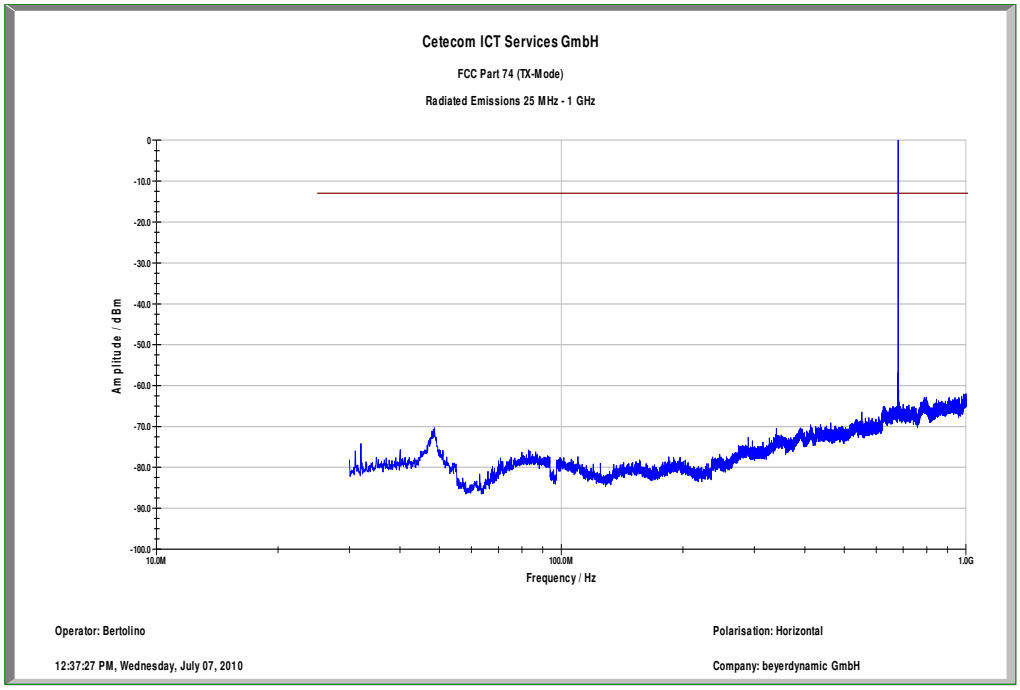
Plot 35: 6M6B band 3 high, TX mode, mid channel, 30 MHz to 1 GHz, vertical polarization



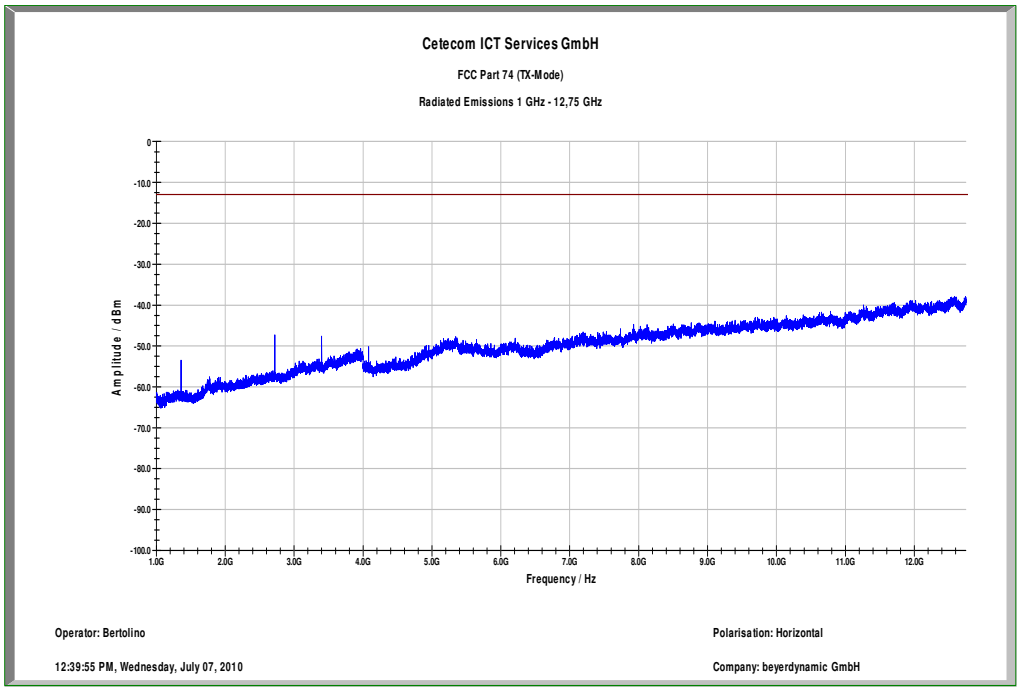
Plot 36: 6M6B band 3 high, TX mode, mid channel, 1 GHz to 12.75 GHz, vertical polarization



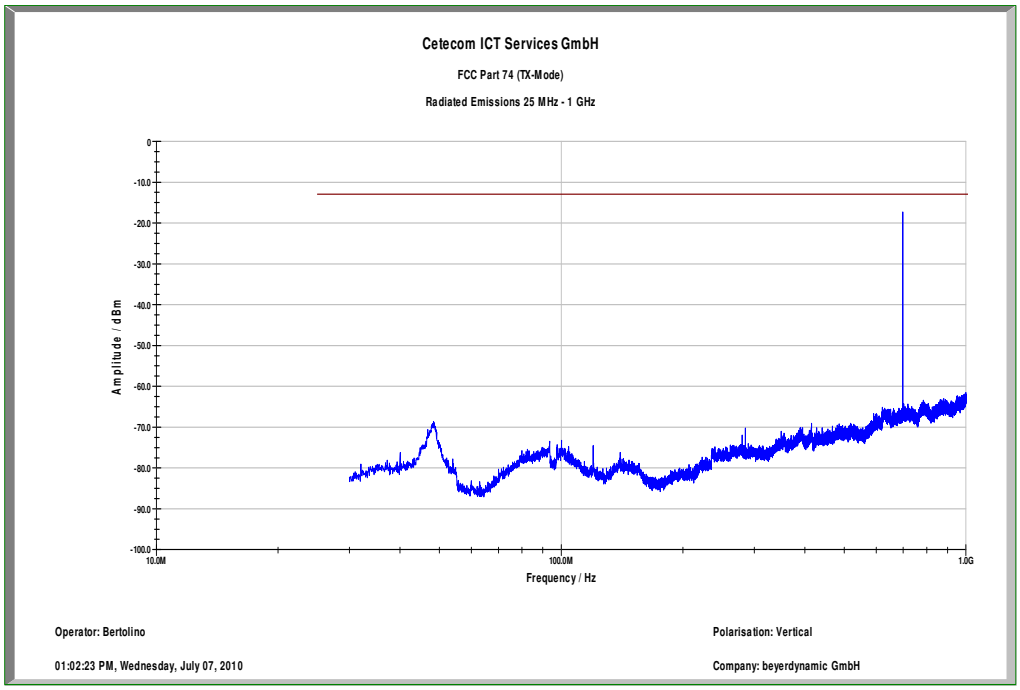
Plot 37: 6M6B band 3 high, TX mode, mid channel, 30 MHz to 1 GHz, horizontal polarization



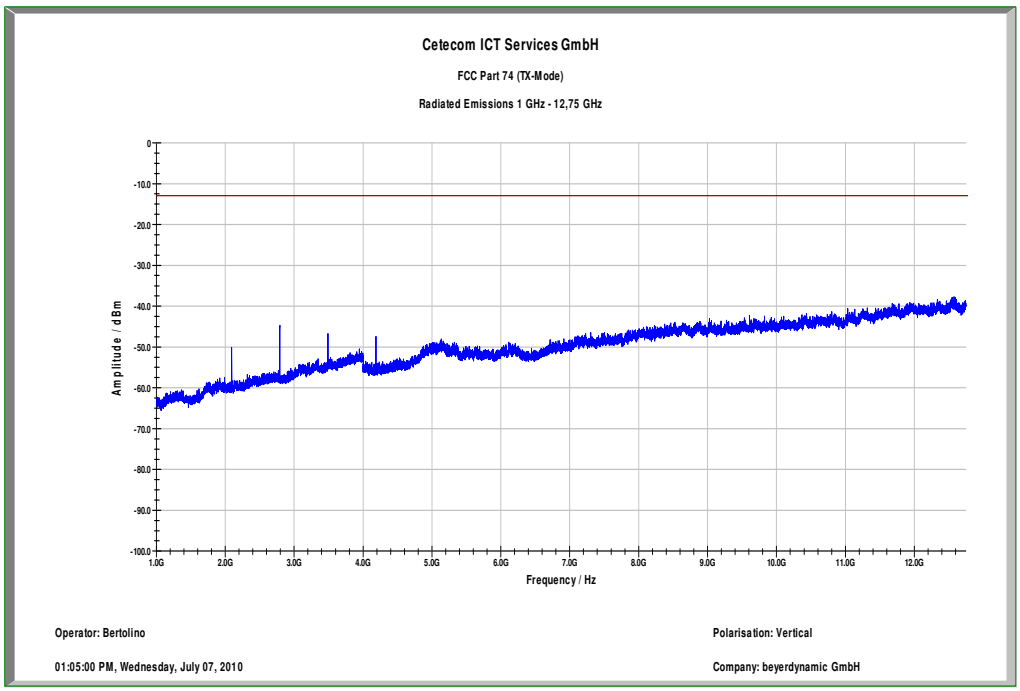
Plot 38: 6M6B band 3 high, TX mode, mid channel, 1 GHz to 12.75 GHz, horizontal polarization



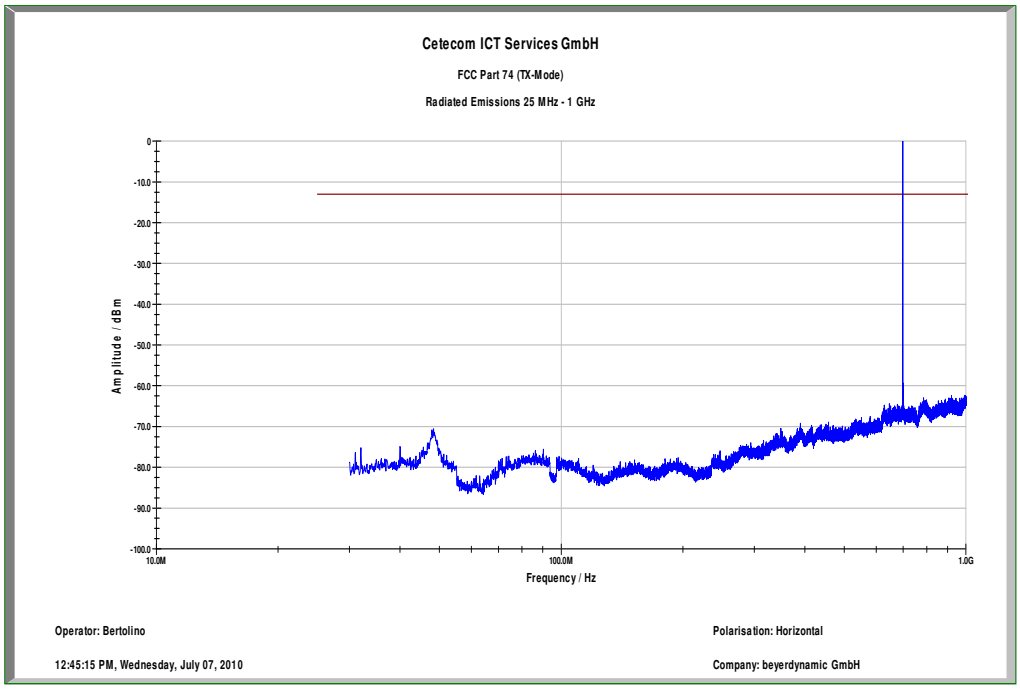
Plot 39: 6M6B band 3 high, TX mode, high channel, 30 MHz to 1 GHz, vertical polarization



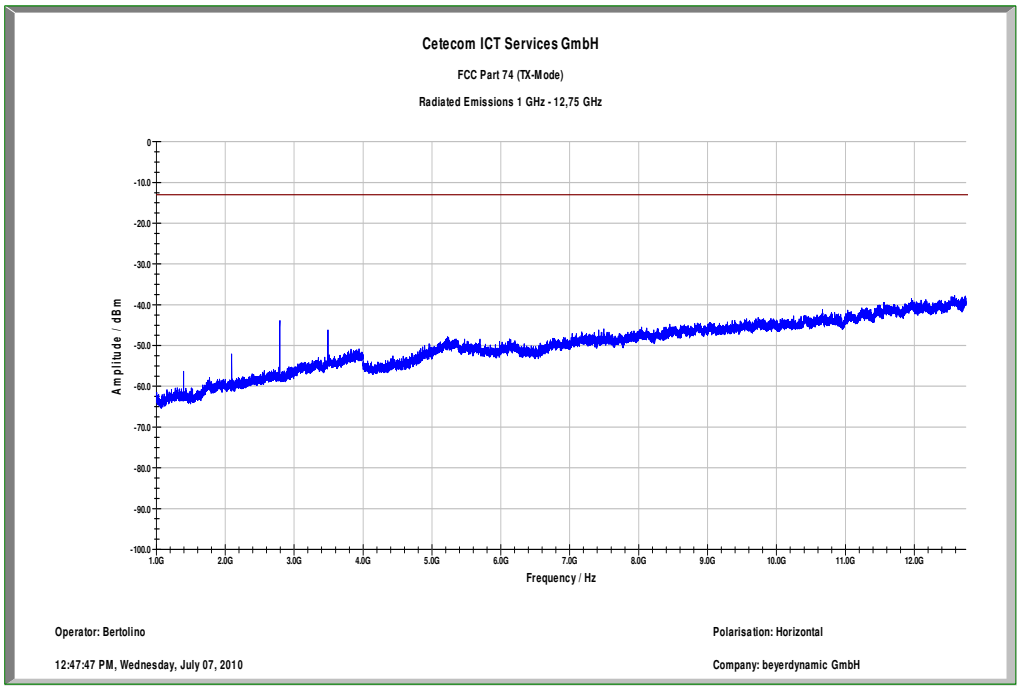
Plot 40: 6M6B band 3 high, TX mode, high channel, 1 GHz to 12.75 GHz, vertical polarization



Plot 41: 6M6B band 3 high, TX mode, high channel, 30 MHz to 1 GHz, horizontal polarization



Plot 42: 6M6B band 3 high, TX mode, high channel, 1 GHz to 12.75 GHz, horizontal polarization



9 Test equipment and ancillaries used for tests

In order to simplify the identification of the equipment used at each specific test, each item of test equipment and ancillaries are provided with an identifier or number in the equipment list below. Typically, the calibrations of the test apparatus are commissioned to and performed by an accredited calibration laboratory. The calibration intervals are determined in accordance with the DIN EN ISO/IEC 17025. In addition to the external calibrations, the laboratory executes comparison measurements with other calibrated test systems or effective verifications. Weekly chamber inspections and range calibrations are performed. Where possible, rf-generating and signalling equipment as well as measuring receivers and analyzers are connected to an external high-precision 10 MHz reference (GPS-based or rubidium frequency standard).

No.	Labor / Item	Equipment	Type	Manufact.	Serial No.	INV. No Cetecom	Kal. Art	Last Calibration	Next Calibration
1	n. a.	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2818A03450	300001040	Ve	08.01.2009	08.01.2012
2	n. a.	PowerAttenuator	8325	Byrd	1530	300001595			
3	n. a.	Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3088	300001032	vlKl!	05.03.2009	05.03.2011
4	n. a.	Active Loop Antenna	6502	EMCO	2210	300001015	ne		
5	n. a.	Anechoic chamber		MWB	87400/02	300000996			
6	Spec.A. 2_2e	System rack for EMI measurement solution	85900	HP I.V.	*	300000222	ne		
7	9	Artificial Mains 9 kHz to 30 MHz, 4 x 25 Ampere	ESH3-Z5	R&S	828576/020	300001210	Ve	06.01.2010	06.01.2012
8	n. a.	Relais Matrix	3488A	HP Meßtechnik	2719A15013	300001156	ne		
9	n. a.	Relais Matrix	PSU	R&S	890167/024	300001168	ne		
10	n. a.	Isolating Transformer	RT5A	Grundig	9242	300001263	ne		
11	n. a.	Three-Way Power Splitter, 50 Ohm	11850C	HP Meßtechnik		300000997	ne		
12	n. a.	Switch / Control Unit	3488A	HP	2605e08770	300001443	ne		
13	n. a.	Band Reject filter	WRCG1855/1910-1835/1925-40/8SS	Wainwright	7	300003350	ev		
14	n. a.	Band Reject filter	WRCG2400/2483-2375/2505-50/10SS	Wainwright	11	300003351	ev		
15	n. a.	TILE-Software Emission	Quantum Change, Modell TILE-ICS/FULL	EMCO	none	300003451	ne		
16	n. a.	Highpass Filter	WHKX2.9/18G-12SS	Wainwright	1	300003492	ev		
17	n. a.	Highpass Filter	WHK1.1/15G-10SS	Wainwright	3	300003255	ev		
18	n. a.	Highpass Filter	WHKX7.0/18G-8SS	Wainwright	18	300003789	ne		
19	n. a.	PSA Spectrum Analyzer 3 Hz - 26.5 GHz	E4440A	Agilent Technologies	MY48250080	300003812	k	05.08.2008	05.08.2010
20	n. a.	MXG Microwave Analog Signal Generator	N5183A	Agilent Technologies	MY47420220	300003813	k	06.08.2008	06.08.2010
21	n. a.	RF Filter Section 9kHz - 1GHz	N9039A	Agilent Technologies	MY48260003	300003825	vlKl!	19.08.2008	19.08.2010
22	n. a.	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	371	300003854	vlKl!	17.12.2008	17.12.2010
23	n. a.	DC Power Supply 0 – 32V	1108-32	Heiden	001802	300001383	Ve	23.06.2010	23.06.2013
24	n. a.	Temperature Test Chamber	VT 4002	Heraeus Voetsch	521/83761	300002326	Ve	28.05.2009	28.05.2011
25	n. a.	Signal Analyzer 20Hz-26,5GHz-150 to + 30 DBM	FSiQ26	R&S	835111/0004	300002678	Ve	06.01.2009	06.01.2011

Annex A Photographs of the test set-up

Photo documentation: S 910 C

Photo 1:

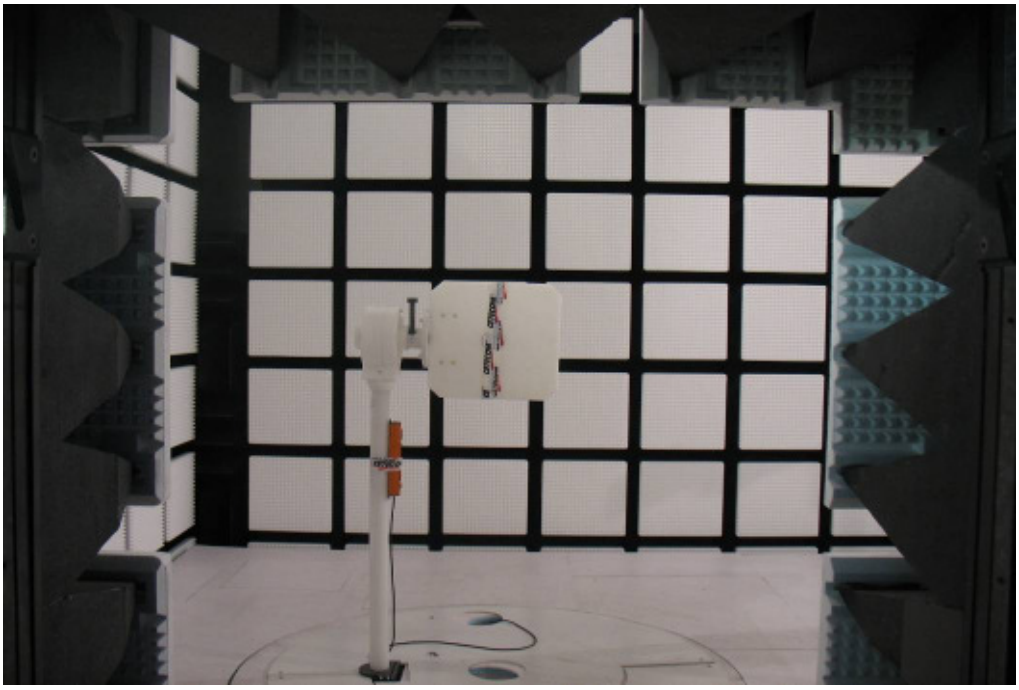


Photo 2:

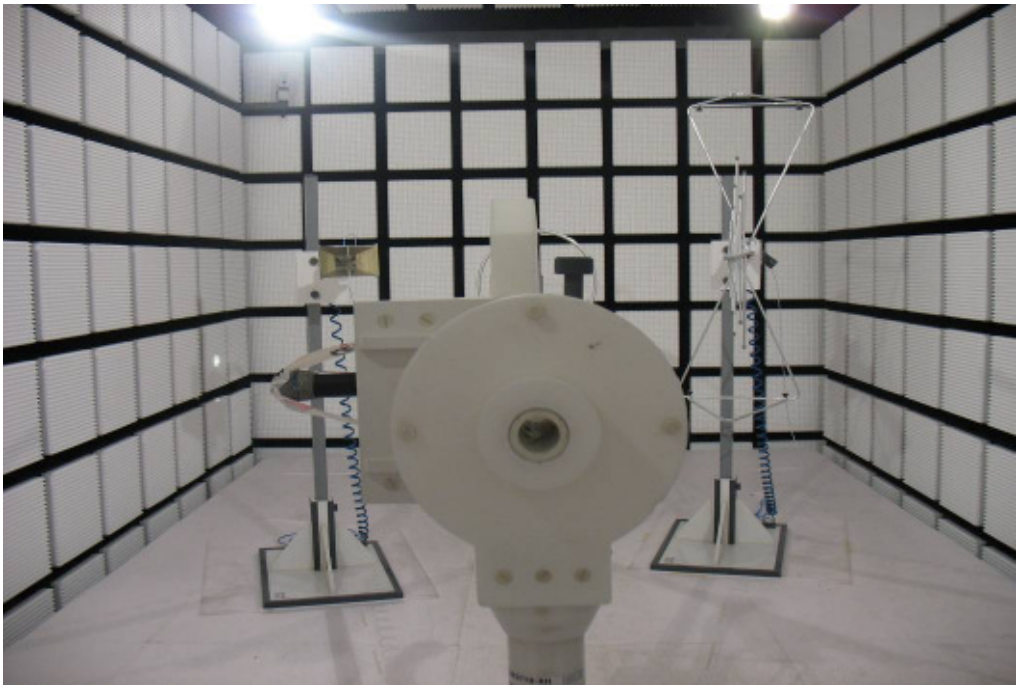


Photo 3:

Photo 4:

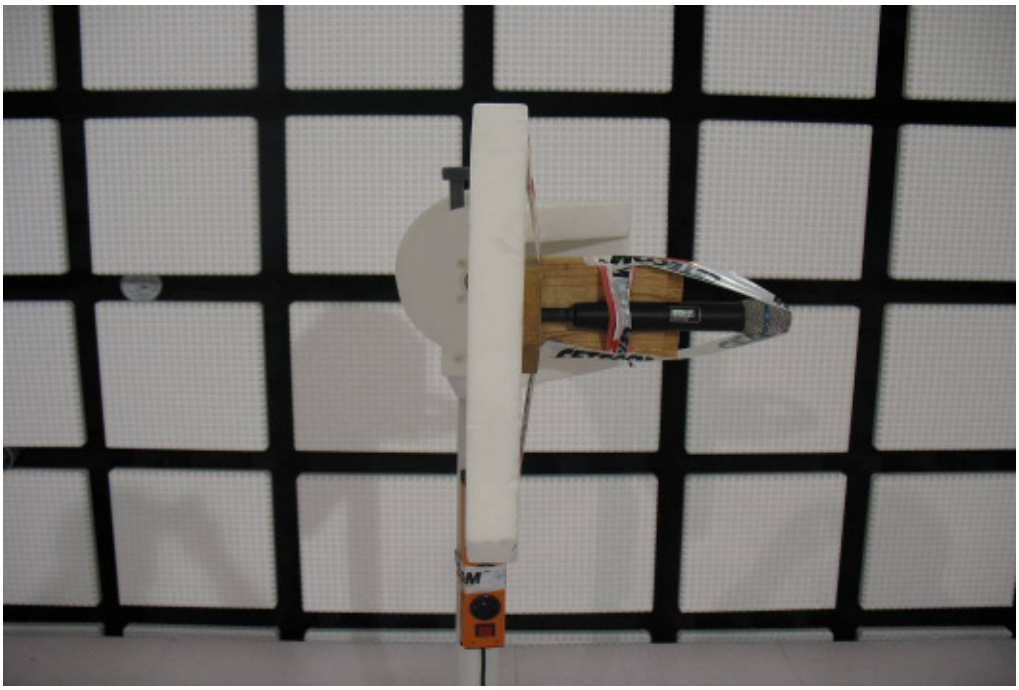
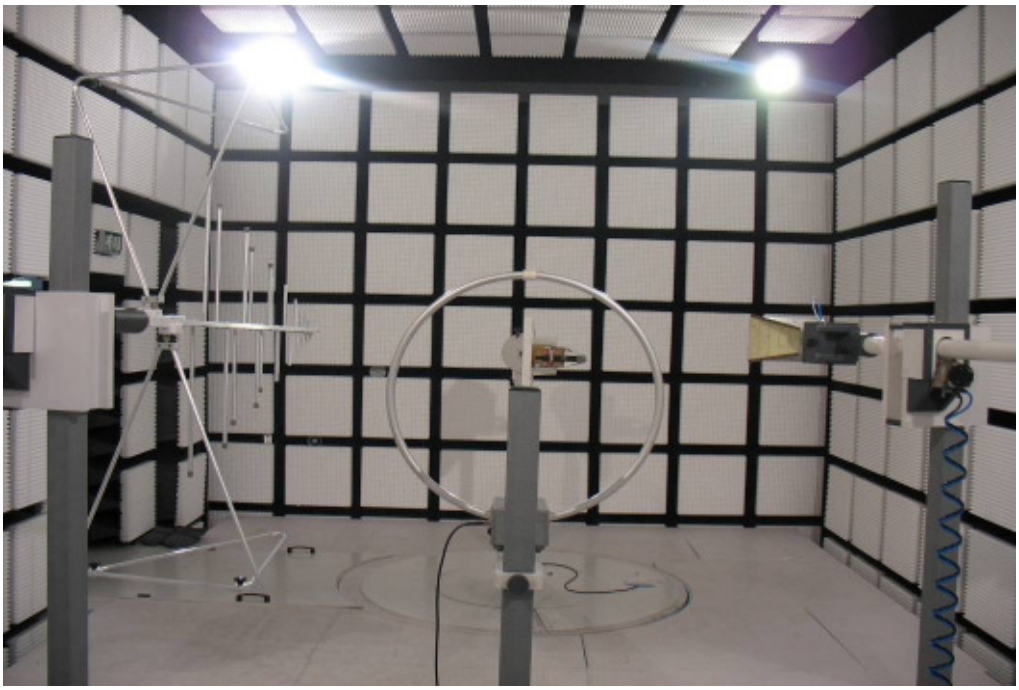


Photo 5:



Annex B External photographs of the EUT

Photo documentation: S 910 C

Photo 1:

Photo 2:

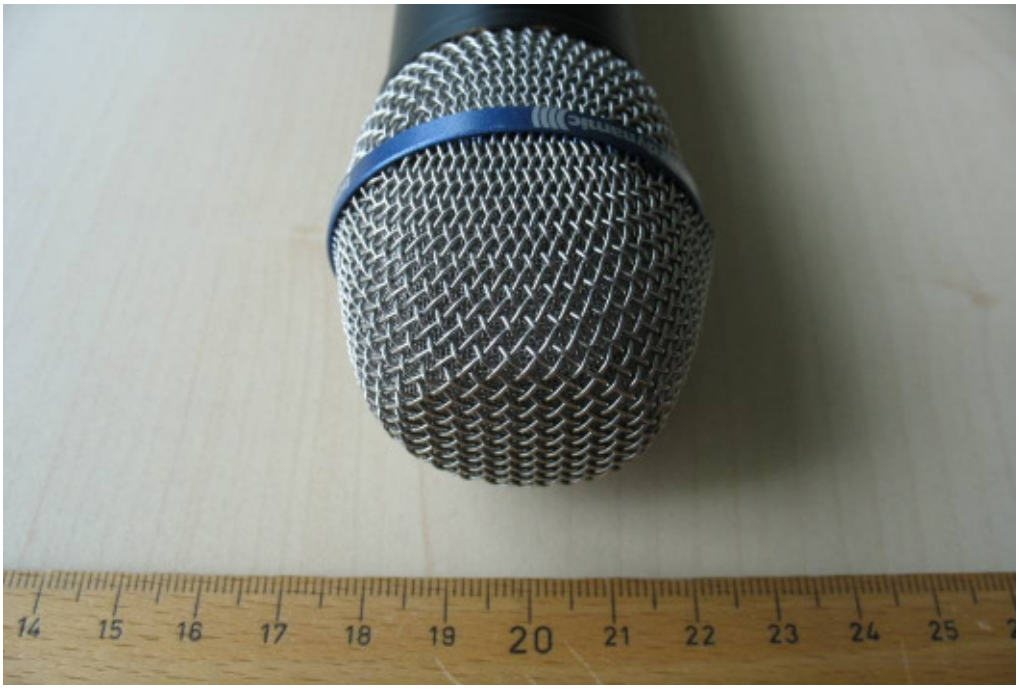


Photo 3:

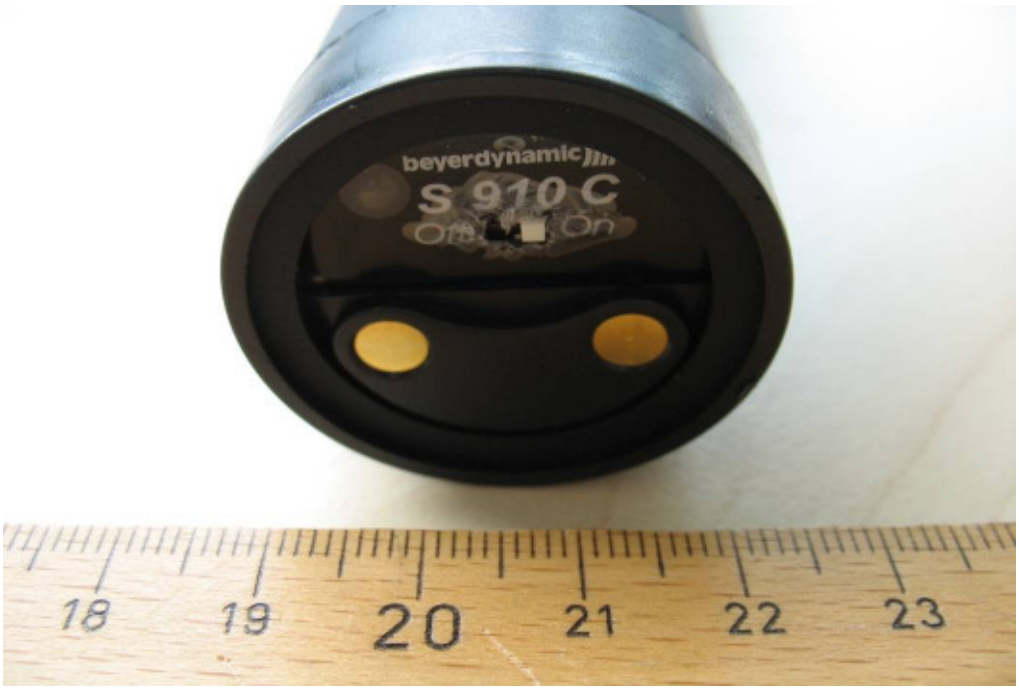


Photo 4:

Photo 5:

Photo 6:

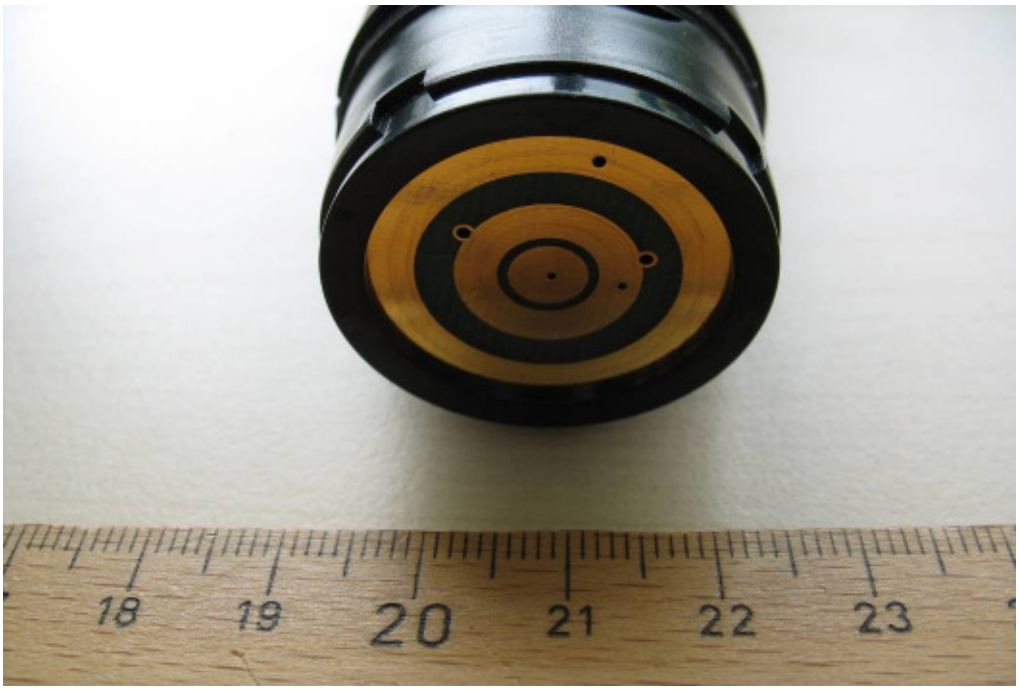


Photo 7:

Photo 8:

Photo 9:

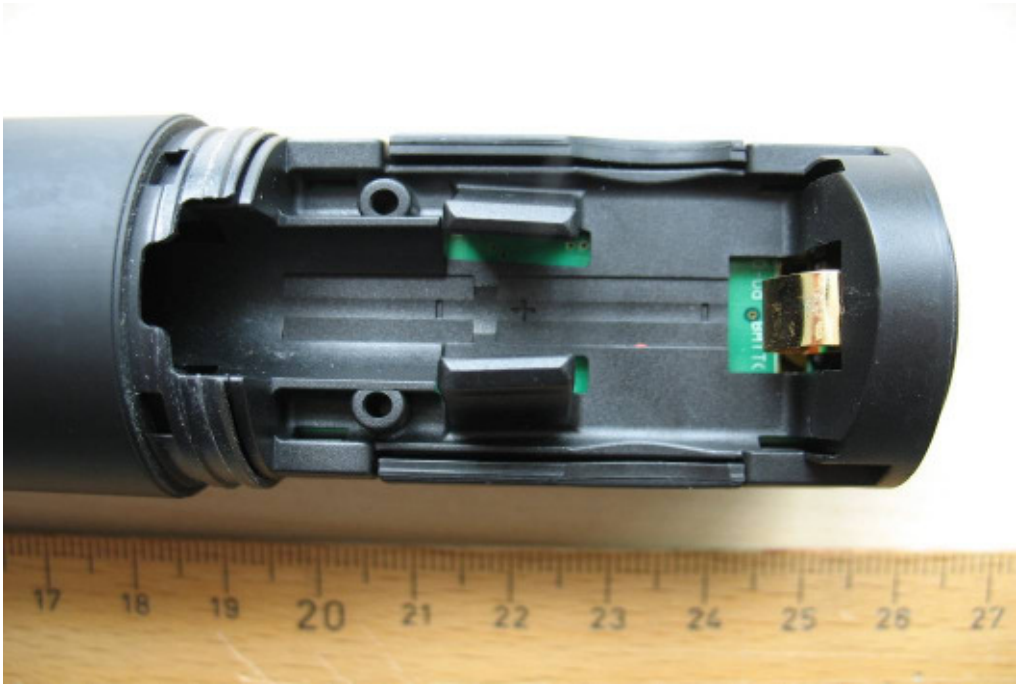


Photo 10:

Photo 11:

Photo 12:

Photo 13:

Photo 14:

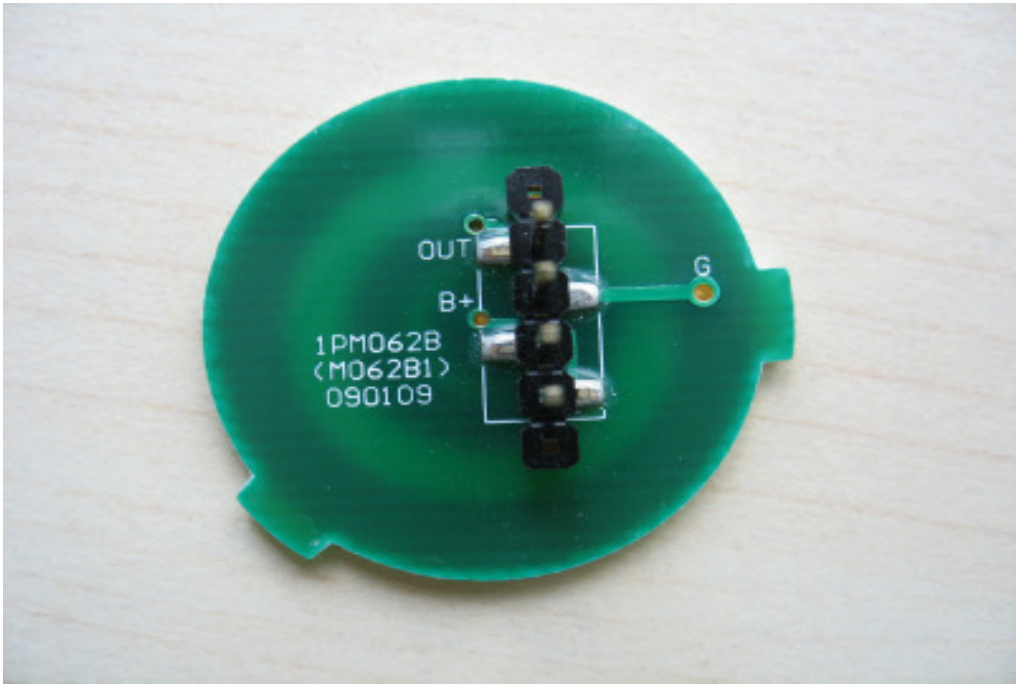
Photo 15:

Annex C Internal Photographs of the EUT

Photo documentation: S 910 C

Photo 1:

Photo 2:


OUT
B+
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1PM062B
(M062B1)
090109

Photo 3:

Photo 4:

Photo 5:

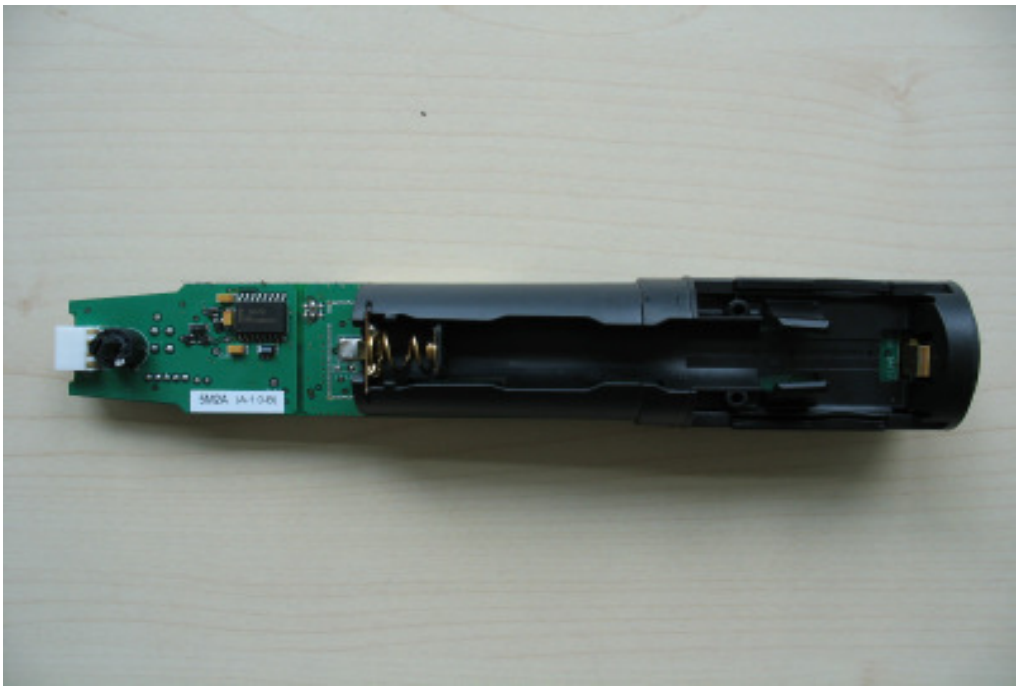


Photo 6:

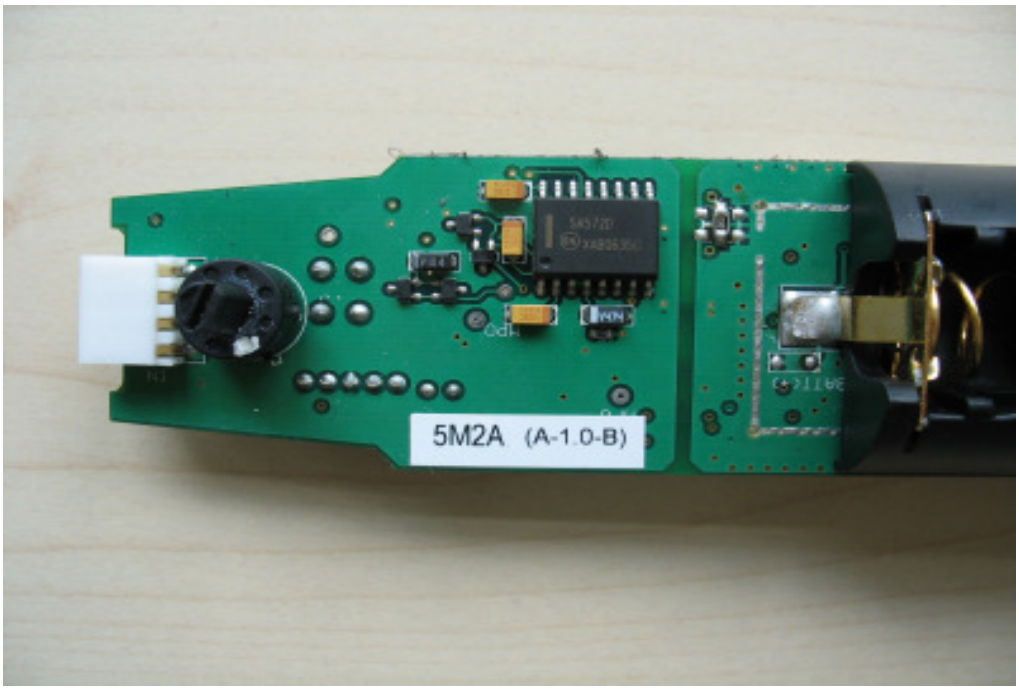


Photo 7:

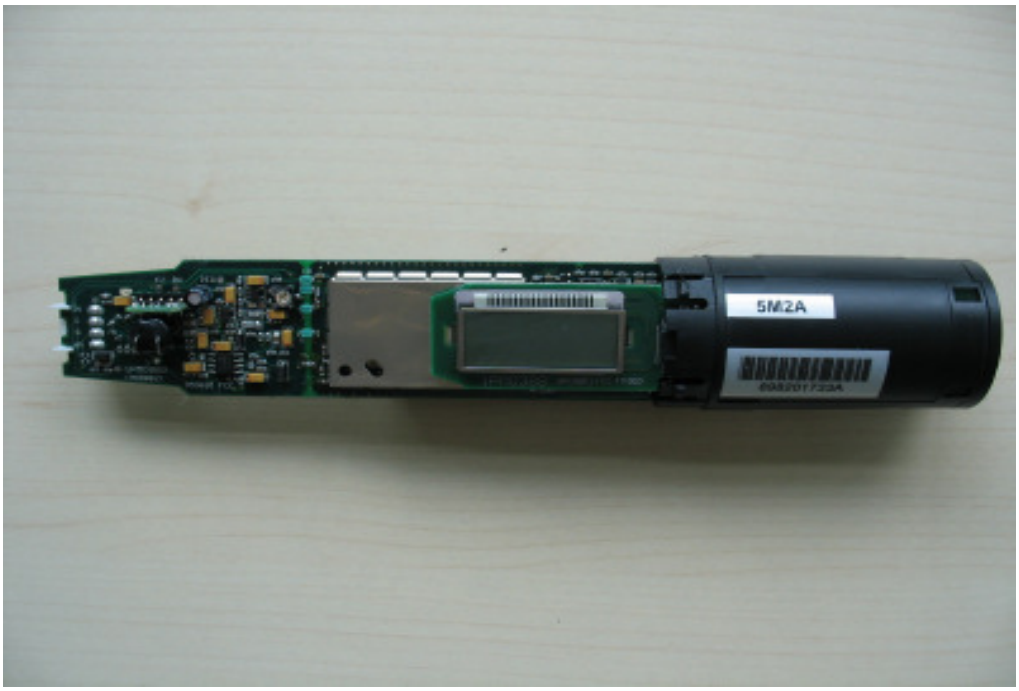


Photo 8:

Photo 9:

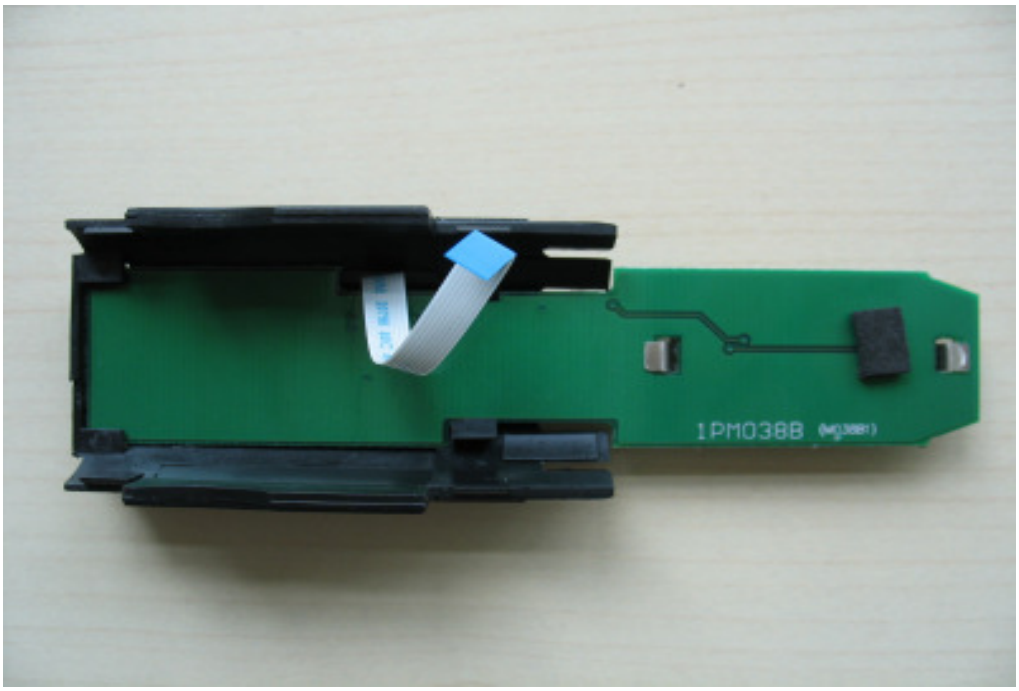
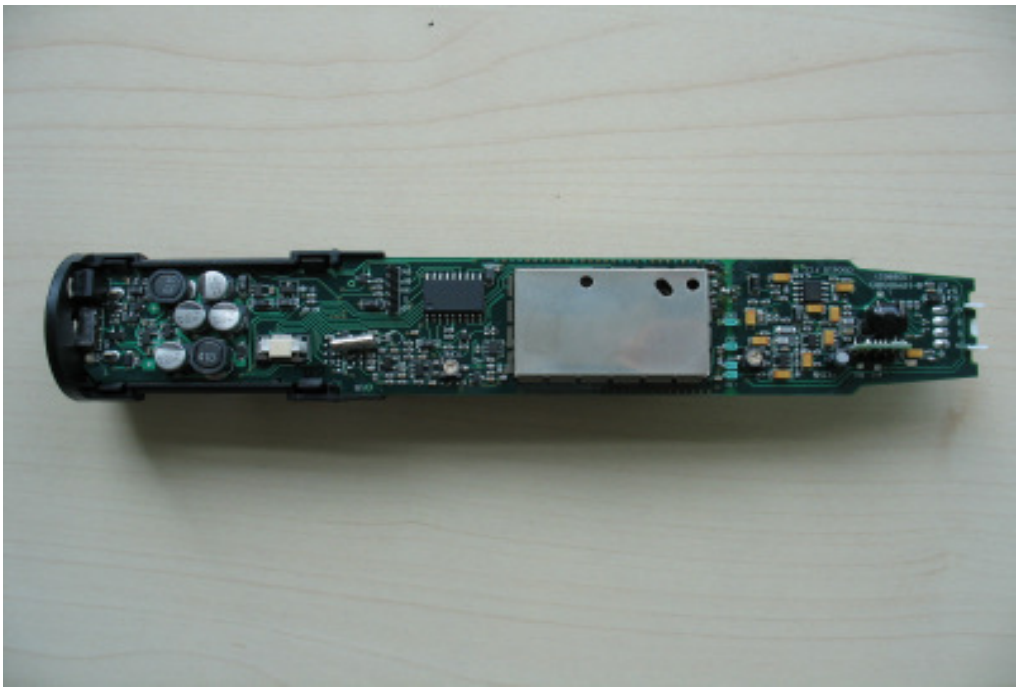


Photo 10:



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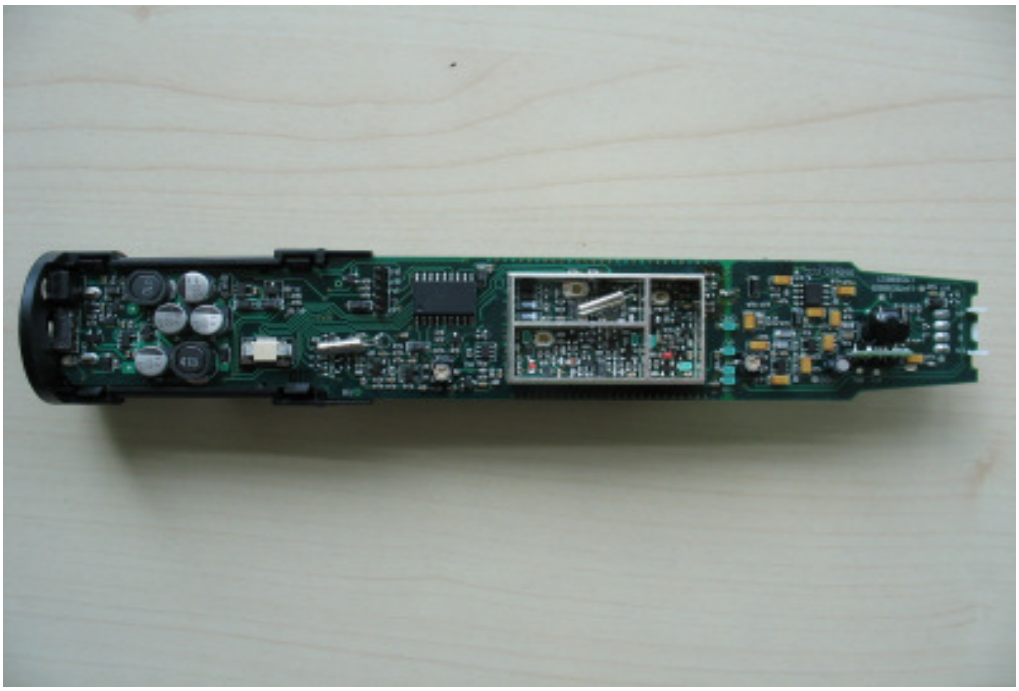
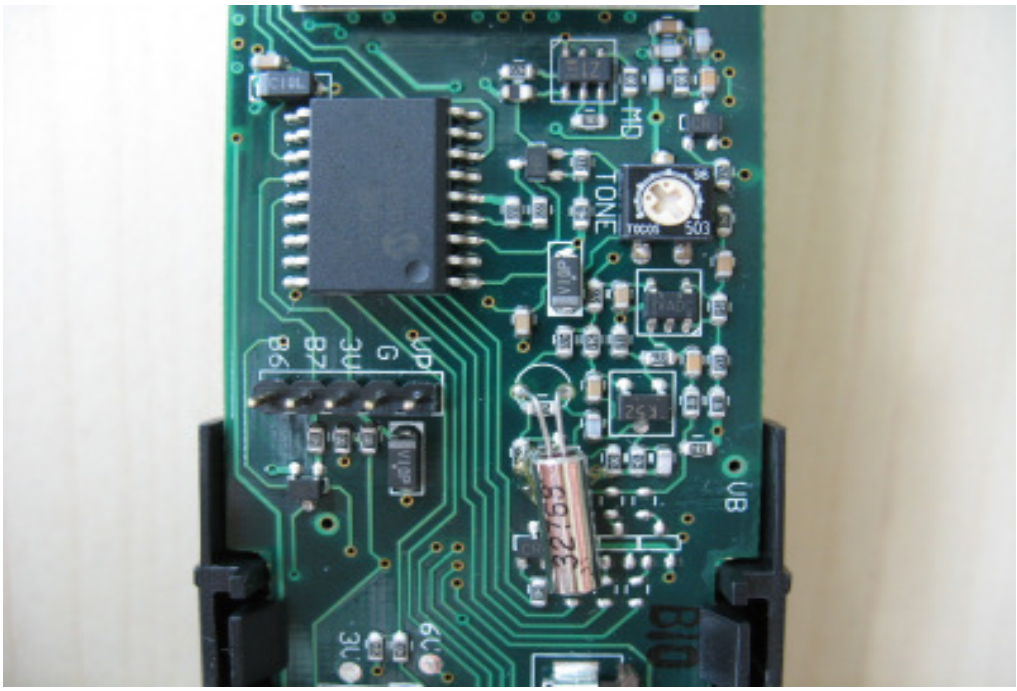


Photo 12:

Photo 13:



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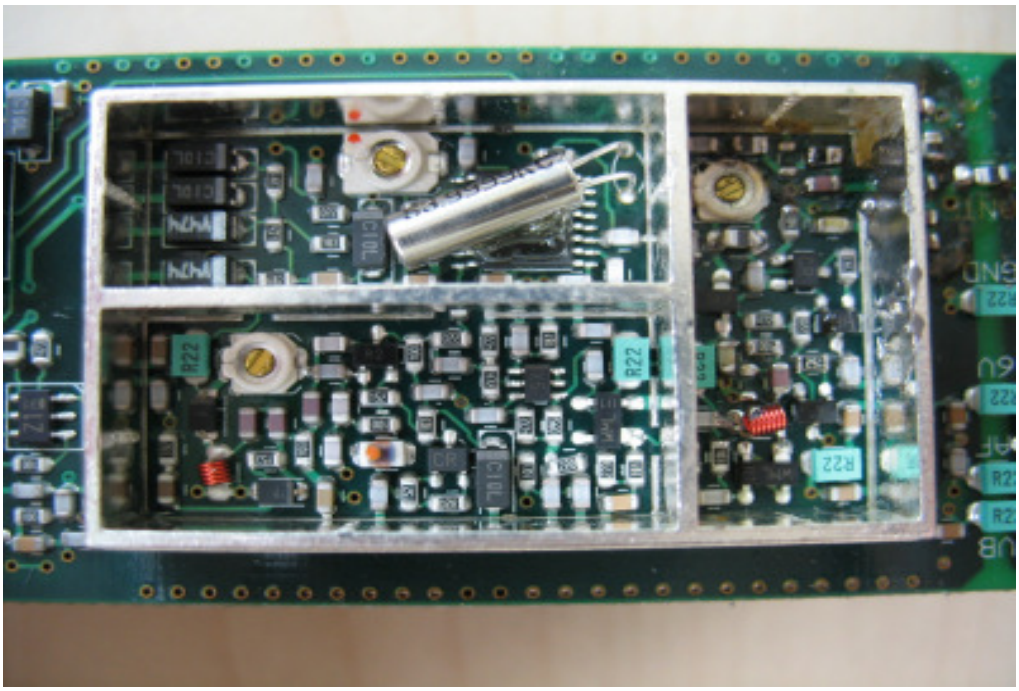
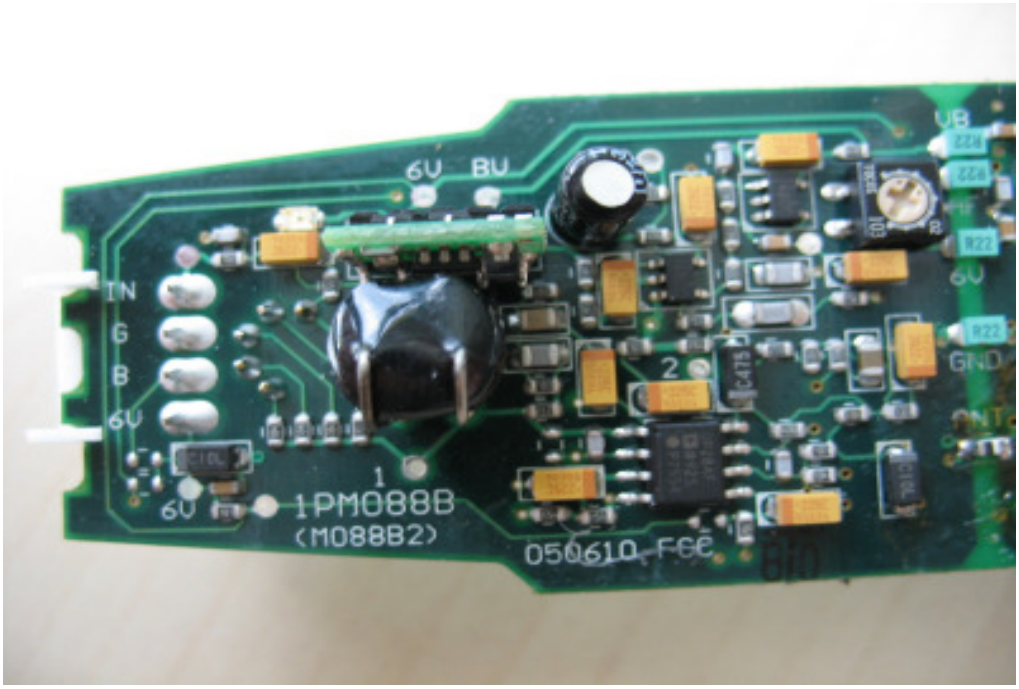


Photo 15:



Annex D Document history

Version	Applied changes	Date of release
1.0	Initial release	2010-07-15
1.0-A	Additional plot description, modified FCC ID, recalculated measurement results Wrong data imported to frequency error measurement -> corrected	2010-11-16

Annex E Further information

Glossary

DUT	-	Device under Test
EMC	-	Electromagnetic Compatibility
EUT	-	Equipment under Test
FCC	-	Federal Communication Commission
FCC ID	-	Company Identifier at FCC
HW	-	Hardware
IC	-	Industry Canada
Inv. No.	-	Inventory number
N/A	-	not applicable
S/N	-	Serial Number
SW	-	Software