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Test Report:	2005 110898-FCC1
Applicant:	Sendum Wireless Corporation 4500 Beedie Street Burnaby, BC Canada V5J 5L2 Phone: 604 438 6451 Fax: 604 437 5726
Apparatus:	PT200
FCC ID:	TS5-6050M-PT200
In Accordance With:	FCC Part 22, Subpart H Public Mobile Services RSS-129, Issue 2 800MHz Dual-Mode CDMA Cellular Telephones FCC Part 24, Subpart E RSS-133, Issue 2, Rev.1 2GHz Personal Communications Services
Tested By:	Nemko USA
Project Number:	25-898-SEN
Date:	Nov. 17, 2005
Total Number of Pages:	50

Report Summary

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 22. Conducted measurements were performed in accordance with ANSI TIA-603-B-2002. Radiated tests were conducted is accordance with ANSI C63.4-2003. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC.

The assessment summary is as follows:

Apparatus Assessed: PT200

Specification: FCC Part 22 Public Mobile Services
FCC Part 24, Subpart E
RSS-129, Issue 2
RSS-133, Issue 2

Compliance Status: Complies

Exclusions: None

Non-compliances: None

Report Release History:

REVISION	DATE	COMMENTS
-	11-10-05	Prepared By: **A. Laudani**
-		Initial Release: **Chip Fleury**

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025.

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Section 1: Equipment Under Test

1.1 Product Identification

The Equipment Under Test was identified as follows:
Temporary label on backside of device

1.2 Samples Submitted for Assessment

The following samples of the apparatus have been submitted for type assessment:

Sample No.	Description	Serial No.
001	PT200 modified with pigtail for conducted measurements	NA
002	PT200 with charger for Radiated Measurements Charger keeps battery fully charged for test	NA

PT200 PS/CHARGER
SPS-0441000-NA
100-240 Vac 50/60 HZ 180 mA → 4.4 Vdc 1A

The first samples were received on: 10 November 2005

1.3 Theory of Operation

The device uses GPS technology to encode its location, which is transmitted via CDMA or PCS wireless telephony to keep track of the container or vehicle it is in.

1.4 Technical Specifications of the EUT

Manufacturer:	Sendum Wireless
Operating Frequency:	836.51 to 848.97 MHz, 1851.25 to 1908.75 MHz
Emission Designator:	1M28F9W
Rated Power:	24.0 dBm
Measured Power:	23.9 dBm
Modulation:	CDMA Cellular, CDMA PCS
Power Source:	4.6 V lithium battery
Antenna Gain:	Internal Integral Circuit.

1.5 Block Diagram of the EUT

See Block diagram exhibit

Section 2: Test Conditions

2.1 Specifications

The apparatus was assessed against the following specifications:

FCC Part 22, Subpart H Public Mobile Services
RSS-129, Issue 2 800MHz Dual-Mode CDMA Cellular Telephones
FCC Part 24, Subpart E Personal Communications Services
RSS-133, Issue 2, Rev.1 2GHz Personal Communications Services

2.2 Deviations From Laboratory Test Procedures

No deviations were made from laboratory test procedures.

2.3 Test Environment

All tests were performed under the following environmental conditions:

Temperature range	:	15 – 30 ^{o}C
Humidity range	:	20 - 75 %
Pressure range	:	86 - 106 kPa
Power supply range	:	+/- 5% of rated voltages

2.4 Test Equipment

Asset Number	Description	Model Number	Serial Number	Last Cal	Cal Due
101L	Signal Generator, Gigatronics	900	317101	10/5/05	10/5/06
835	Spectrum Analyzer, Rhode & Schwartz	RHDFSEK	829058/005	12/30/04	12/30/05
842	Preamp	Nemko	na	verified	10/8/05
752	Antenna, DRWG, EMCO	3115	4943	12/29/04	12/29/05
529	Antenna, DRWG, EMCO	3115	2505	4/13/05	4/13/06
112	Antenna, LPA, EMCO	3146	9101-2988	10/28/04	10/28/05
759	Antenna Set, Dipole, EMCO	3121C	1214	1/28/05	1/28/06
149	Cincinati Environmental Chamber	Plus 32	AP0552665	5/13/05	5/13/06

Section 3: Observations

3.1 Modifications Performed During Assessment

No modifications were performed during assessment.

3.2 Record Of Technical Judgements

No technical judgements were made during the assessment.

3.3 EUT Parameters Affecting Compliance

The user of the apparatus could not alter parameters that would affect compliance.

3.4 Test Deleted

No Tests were deleted from this assessment.

3.5 Additional Observations

There were no additional observations made during this assessment.

Section 4: Results Summary

This section contains the following:

The results contained in this section are representative of the operation of the apparatus as originally submitted.

FCC Part 22: Test Results

Clause	Test Method	Test Description	Required	Result
22.355	2.1055	Frequency stability		PASS
22.913	2.1046	Output power		PASS
22.917	2.1051	Conducted spurious emissions		PASS
22.917	2.1053	Radiated spurious emissions		PASS
22.905	2.1049	Occupied bandwidth		PASS

Part 24: Test Results

Clause	Test Method	Test Description	Required	Result
24.235	2.1055	Frequency stability		PASS
24.232	2.1046	Output power		PASS
24.238	2.1051	Conducted spurious emissions		PASS
24.236	2.1053	Radiated spurious emissions		PASS
24.238	2.1049	Occupied bandwidth		PASS

Notes:

Appendix A: Test Results

Frequency Stability

22.355
Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.
Table C-1. - Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency range (MHz)	Base, fixed (ppm)	Mobile >3 watts (ppm)	Mobile <=3 watts (ppm)
25 to 50		20.0 20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	**1.5**	**2.5**	**2.5**
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

Sec. 24.235 Frequency stability. The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

The fundamental frequency emissions did not stray outside the designated band 1850 to 1909 MHz during all testing within this report. See Appendix B for bandedge plots from –30 °C to + 50 °C step 10°.

Test Conditions:

Sample Number:	001	**Temperature:**	24 °C
Date:	11-8-05	**Humidity:**	31 %
Modification State:	CW	**Tester:**	A. Laudani
		Laboratory:	Nemko

Test Results: See Attached Table.

Testing procedure for 22.355:
Frequency stability measurements were made over the temperature range of -30°C to +50°C. Climatic control was accomplished using a temperature chamber. The temperature was first increased from 20C to 50C in 10C increments and then lowered to -50C and incremented back to 20C. The unit remained in the chamber during temperature transitions and during the measurement process.

836.52 MHz
2.5 ppm
2091.3 Hz -- Limit

Voltage Nominal 4.3 V

	Frequency center	Freq.difference
Temperature(°C)		
20	**836.519839**	**0**
30	**836.519839**	**0**
40	**836.519839**	**0**
50	**836.520160**	**-321**
-30	**836.520751**	**-912**
-20	**836.520751**	**-912**
-10	**836.520751**	**-912**
0	**836.520160**	**-321**
10	**836.520160**	**-321**

Voltage 85% 3.66 V

Temperature(°C)	Frequency center	Freq.difference
20	**836.519839**	**0**
30	**836.519839**	**0**
40	**836.519839**	**0**
50	**836.520160**	**-321**
-30	**836.520751**	**-912**
-20	**836.520751**	**-912**
-10	**836.520751**	**-912**
0	**836.520160**	**-321**
10	**836.520160**	**-321**

Voltage 1.15% 4.94 V

Temperature(°C)	Frequency center	Freq.difference
20	**836.519839**	**0**
30	**836.519839**	**0**
40	**836.519839**	**0**
50	**836.520160**	**-321**
-30	**836.520751**	**-912**
-20	**836.520751**	**-912**
-10	**836.520751**	**-912**
0	**836.520160**	**-321**
10	**836.520160**	**-321**

Volts	Frequency center	Freq.difference	Output power
			dBm
4.6	**836.520160**	**0**	**22.3**
4.4	**836.520160**	**0**	**22.2**
4.2	**836.520160**	**0**	**22.1**
4.1	**836.520160**	**0**	**21.7**
4.0	**836.520160**	**0**	**20.9**
3.9	**836.520160**	**0**	**22.4**
3.7	**836.520160**	**0**	**20.4**
3.6	**off**		**off**

Output Power

Clause 22.913
Para. No. 22.913(a). The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts

Clause 24.232
Para. No.: 24.232. (b) Mobile/portable stations are limited to 2 watts E.I.R.P. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

Test Results:
Radiated

Modulation	Frequency (MHz)	ERP/EIRP Measured (dBm)	Substituted (dBm)	Result Watts
CDMA	824.70	28.1	22.8	0.19
	836.52	27.5	22.8	0.19
	848.31	27.2	22.2	0.17
PCS	1851.25	23.7	22.6	0.18
	1880.00	25.3	23.6	0.23
	1908.75	25.5	23.9	0.24

Tables below.

Radiated Emissions Data

Complete	YES			Job # :	25-898-SEN	Test # :	1
Preliminary				Page	1	of	1
Client Name :	Sendum Wireless Corporation						
EUT Name :	PT200						
EUT Model # :	PT200						
EUT Part # :							
EUT Serial # :							
EUT Config. :	Transmit CW						
Specification :	FCC Part 22			Reference :			
Bicon Ant.#:	NA	Temp. (°C) :	19	Date :			
Log Ant.#:	110	Humidity (%) :	61	Time :			
DRG Ant. #	529	EUT Voltage :	120 Vac	Staff :			
Dipole Ant.#:	NA	EUT Frequency :	60 Hz	Photo ID:			
Cable#:	SOATS	Phase:	1	Peak Bandwidth:	1 MHz		
Preamp#:	842	Location:	SOATS	Video Bandwidth	1 MHz		
Spec An.#:	835	Distance:	3M				
QP #:	NA						
PreSelect#:	NA						

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
824.70	87.0	92.5	30.9	28.14	33.0	-4.9	20	1.0	Pass	
836.52	84.8	92.1	30.7	27.54	33.0	-5.5	20	1.0	Pass	
848.31	86.5	91.5	31.0	27.24	33.0	-5.8	20	1.0	Pass	

Radiated Emissions Data

Complete	YES				Job # :	25-898-SEN	Test # : 2
Preliminary					Page	1	of 1
Client Name :	Sendum Wireless Corporation						
EUT Name :	PT200						
EUT Model # :	PT200						
EUT Part # :							
EUT Serial # :							
EUT Config. :	Transmit CW						
Specification :	FCC Part 24				Reference :		
Bicon Ant.#:	NA	Temp. (°C) :	19			Date :	11/9/2005
Log Ant.#:	110	Humidity (%) :	61			Time :	
DRG Ant. #	529	EUT Voltage :	120 Vac			Staff :	AL
Dipole Ant.#:	NA	EUT Frequency :	60 Hz			Photo ID:	
Cable#:	40ft	Phase:	1			Peak Bandwidth:	1 MHz
Preamp#:	842	Location:	SOATS			Video Bandwidth	1 MHz
Spec An.#:	835	Distance:	3M				
QP #:	NA						
PreSelect#:	NA						

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
1851.25	85.4	83.2	35.7	23.7	33.0	-15.4	20	1.0	Pass	
1880.00	87.0	85.1	35.7	25.3	33.0	-13.8	20	1.0	Pass	
1908.75	87.2	85.3	35.7	25.5	33.0	-13.6	20	1.0	Pass	

Substitution Method For Radiated Emissions

Complete	Yes		Job # :	25-898-SEN	Test # : 3
Preliminary			Page	1	of 1

Client Name :	Sendum Wireless Corporation
EUT Name :	PT200
EUT Model # :	PT200
EUT Part # :	
EUT Serial # :	
EUT Config. :	Transmit

Specification :	FCC Part 22 & Part 24			Reference :	
Rod. Ant. #:	NA	Temp. (deg. C) :	19	Date :	11/10/2005
Bicon Ant.#:	NA	Humidity (%) :	61	Time :	
Log Ant.#:	110	EUT Voltage :	120 Vac	Staff :	A. Laudani
DRG Ant. #	752	EUT Frequency :	60 Hz	Photo ID:	
DRG Ant. #	529	Phase:	1	Peak Bandwidth:	RBW-1MHz, VBW-1MHz
Dipole Ant.#:	759	Location:	SOATS		
Cable#:	10ft	Distance:	3m		
Preamp#:	NA				
Spec An.#:	835				
Signal Gen.#	836				

target Frequency mHz	target level dBuV/m	dipole	cable loss dB	Signal Generator dBm	Total (EIRP) dBm	Watts
824.70	92.5	0	0.8	23.60	22.80	0.19
836.49	92.1	0	0.9	23.70	22.80	0.19
848.31	91.5	0	0.9	23.10	22.20	0.17

target Frequency mHz	target level dBuV/m	Horn Gain dBi	cable loss dB	Signal Generator dBm	Total (EIRP) dBm	
1851.31	85.8	9.24	1.2	14.60	22.64	0.18
1880.00	87.0	8.95	1.3	16.00	23.65	0.23
1908.75	87.8	8.67	1.3	16.50	23.87	0.24

Conducted Output Power:

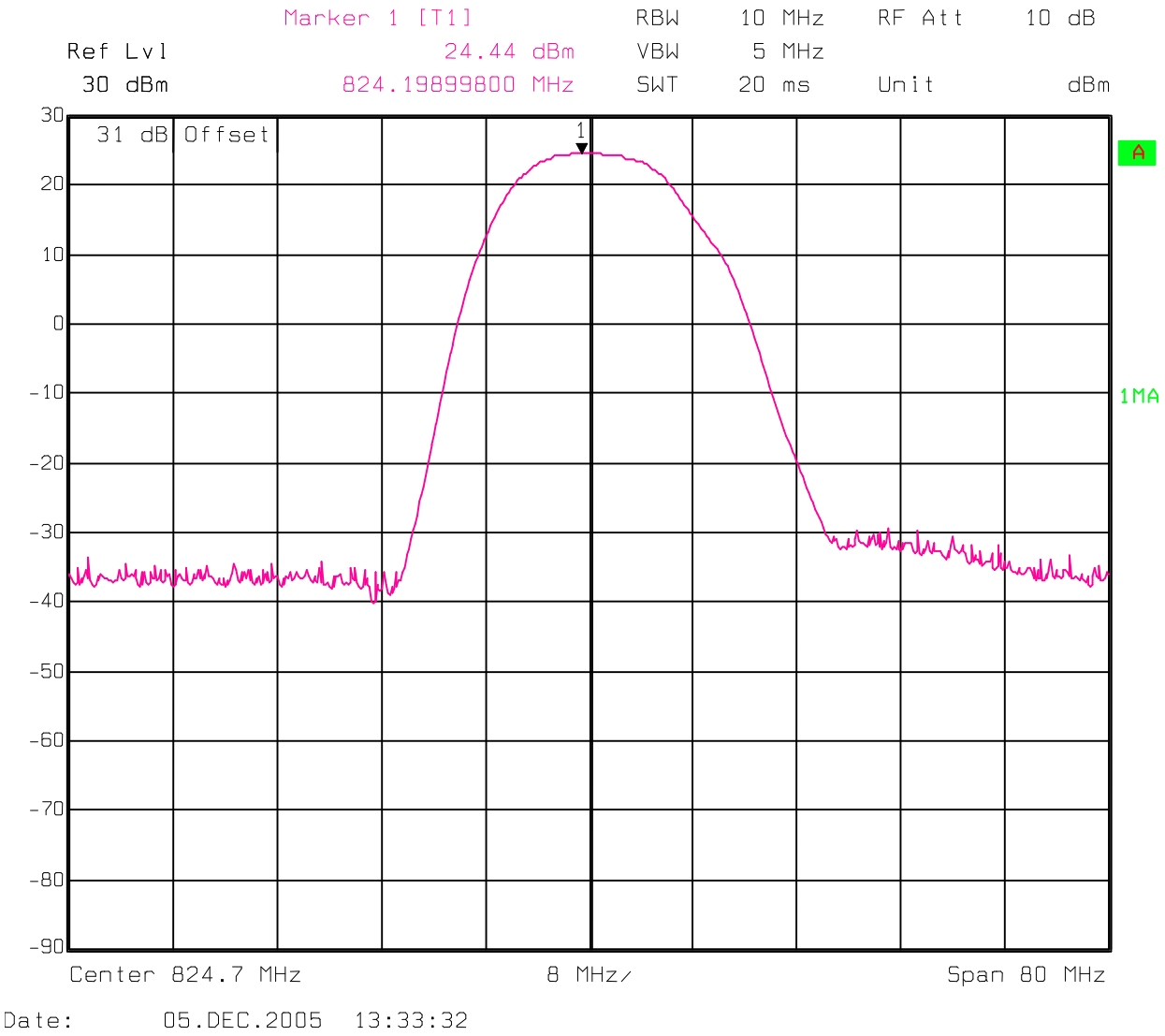
Test Conditions:

Sample Number:	001	**Temperature:**	22°C
Date:	12-5-05	**Humidity:**	29%
Modification State:	CW	**Tester:**	A. Laudani
		Laboratory:	Nemko SOATS

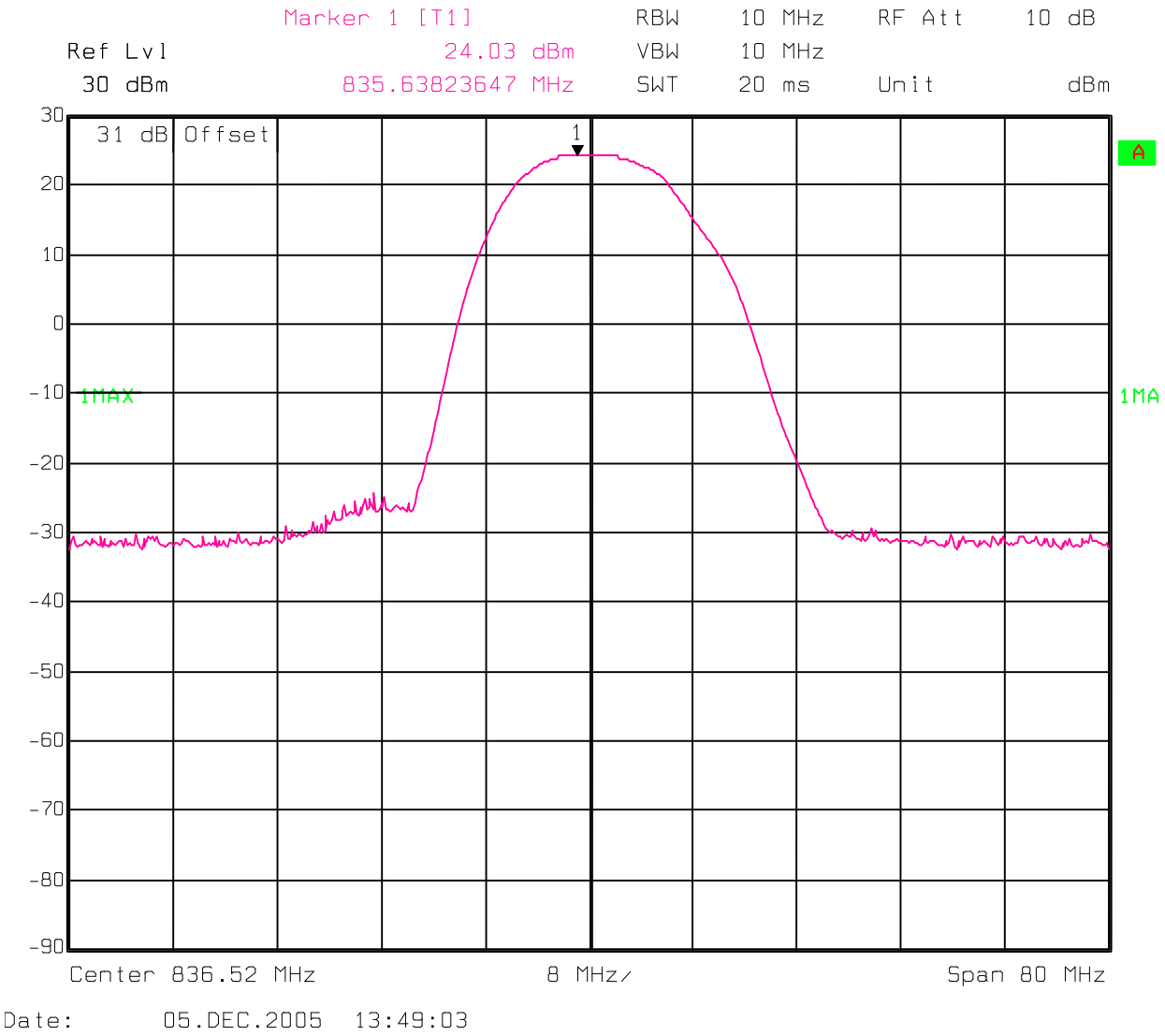
Equipment: Spectrum Analyzer 835, with 30 dB Attenuator.

Modulation	Frequency (MHz)	Measured (dBm)	Ant. Gain	Total ERP/EIRP	Result Watts
CDMA	824.70	24.4	-1.0	23.4	0.22
	836.52	24.0	-1.0	23.0	0.20
	848.31	24.3	-1.0	23.3	0.21
PCS	1851.25	24.2	-0.5	23.7	0.23
	1878	24.0	-0.5	23.5	0.22
	1908.75	24.3	-0.5	23.8	0.24

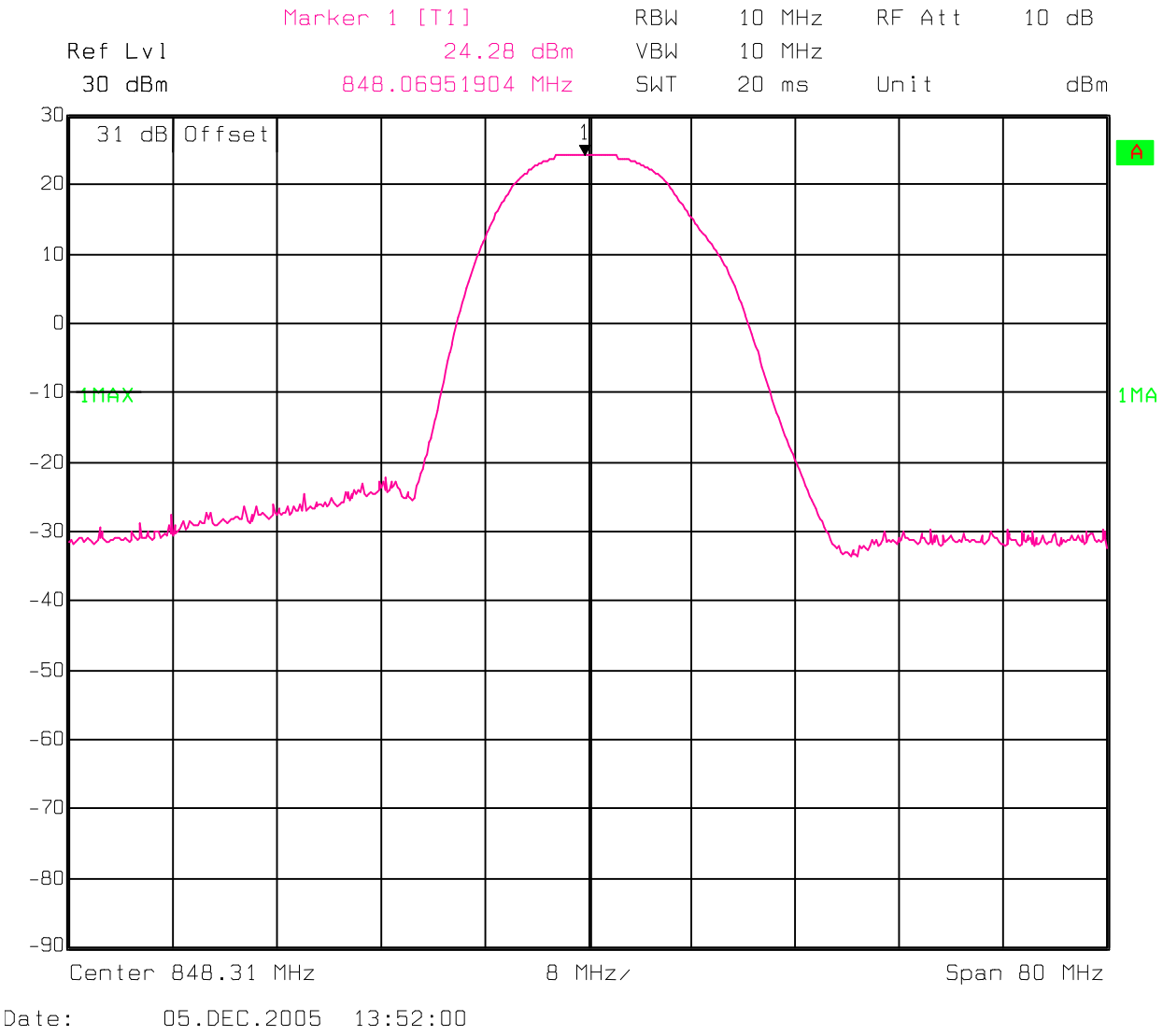
Part 22 Low Frequency Output Power



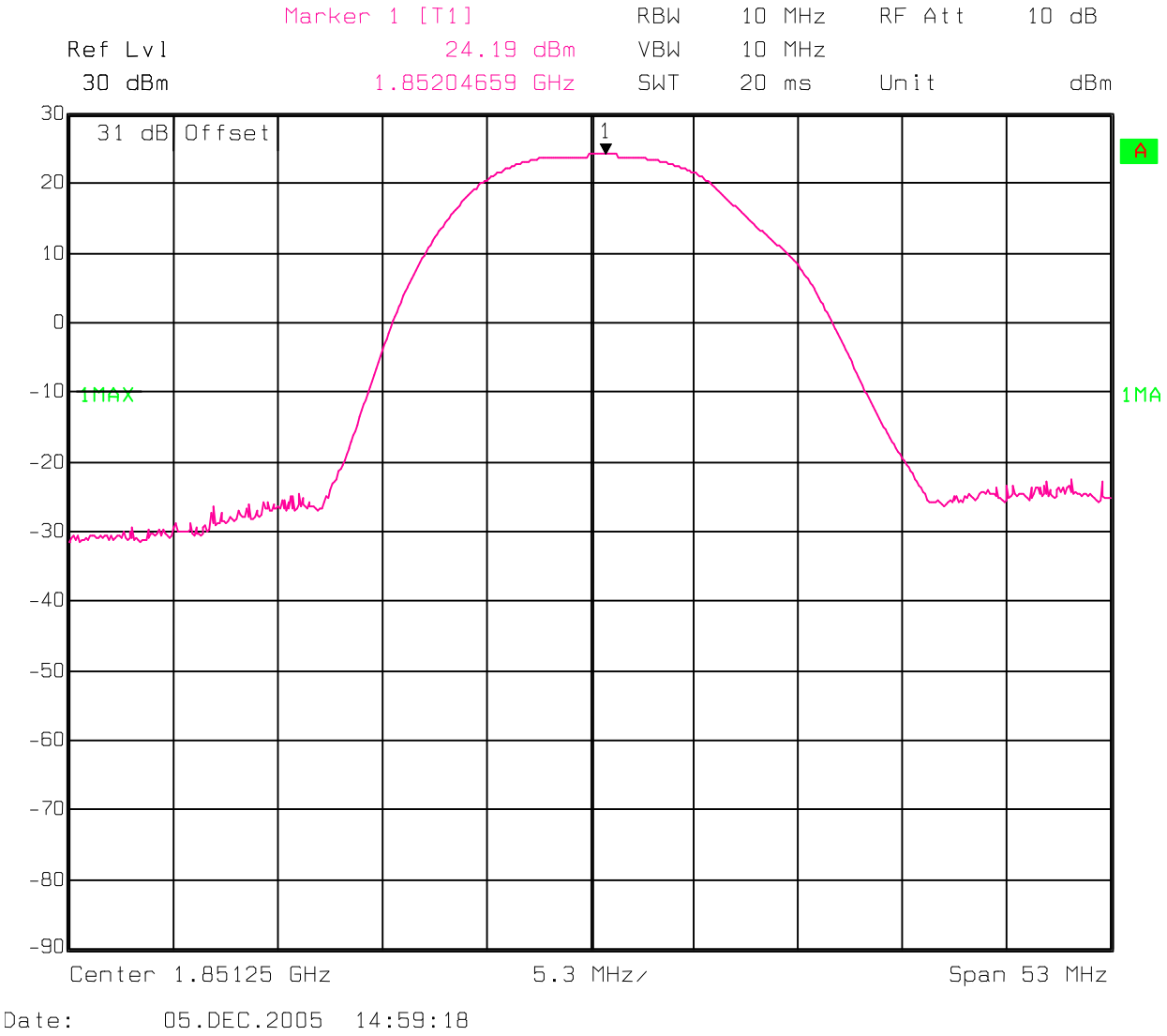
Mid Frequency Output Power



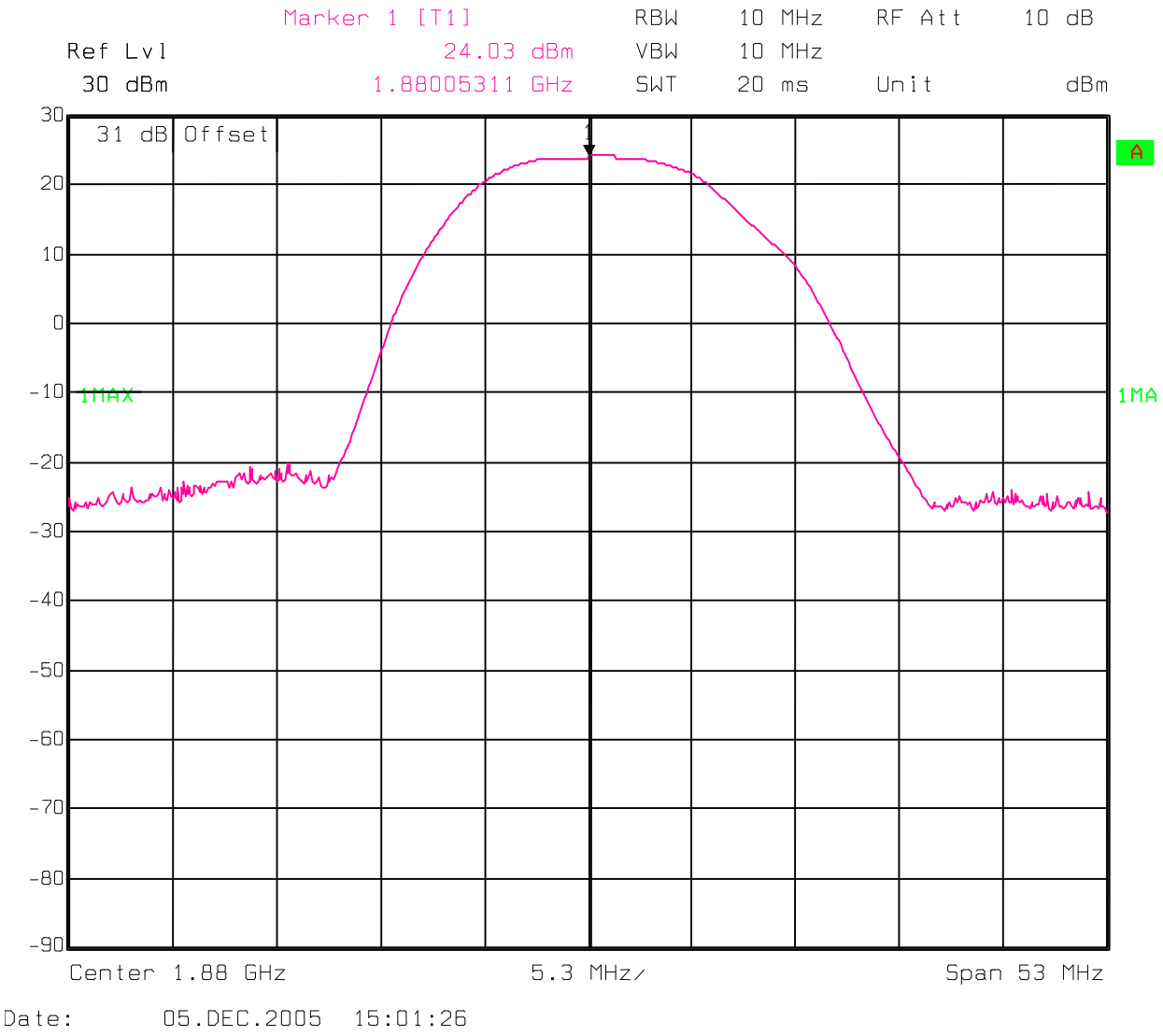
High Frequency Output Power



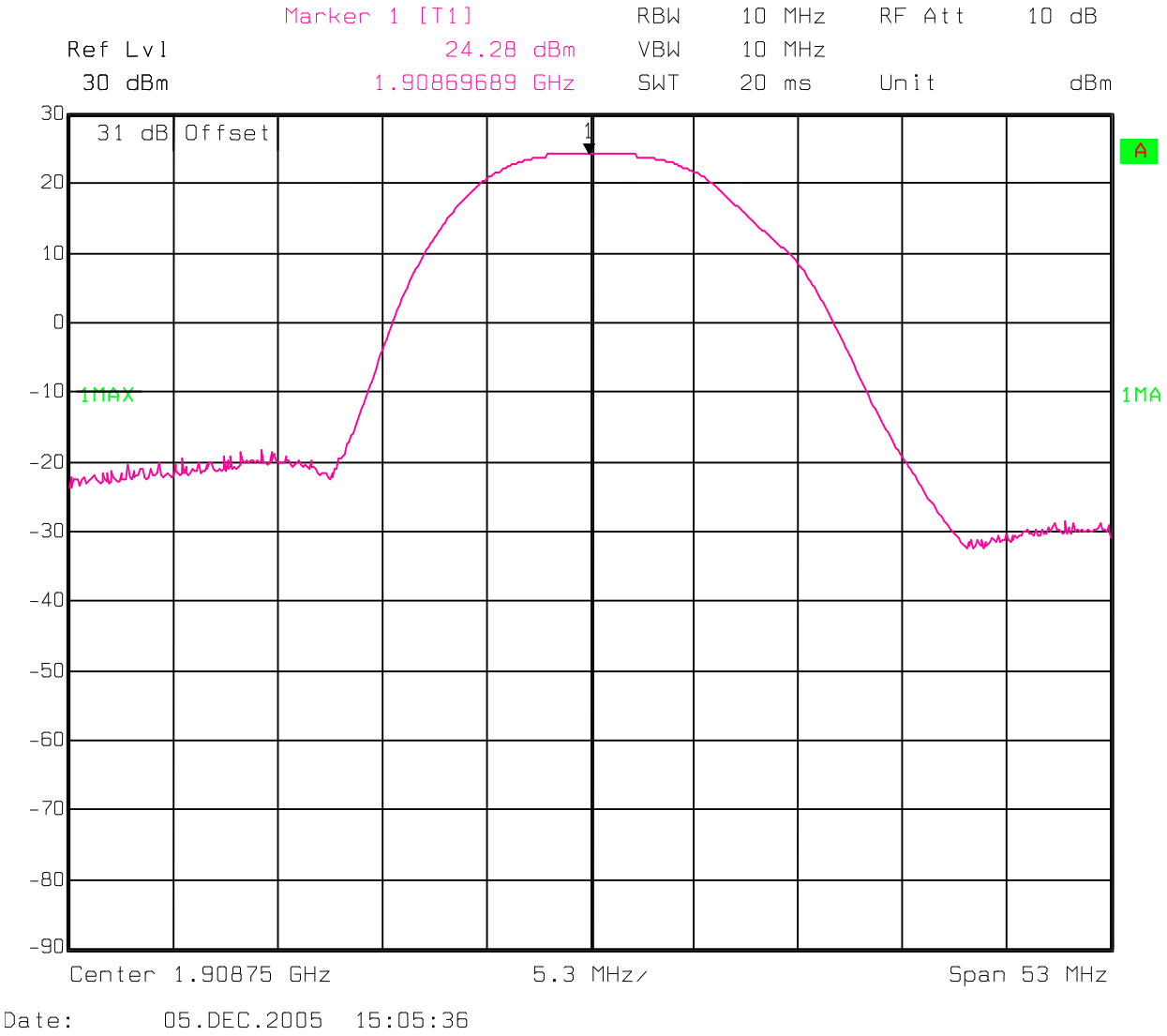
Part 24 Low Frequency Output Power



Mid Frequency Output Power



High Frequency Output Power



Conducted Spurious Emissions

22.917 a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

Test Conditions:

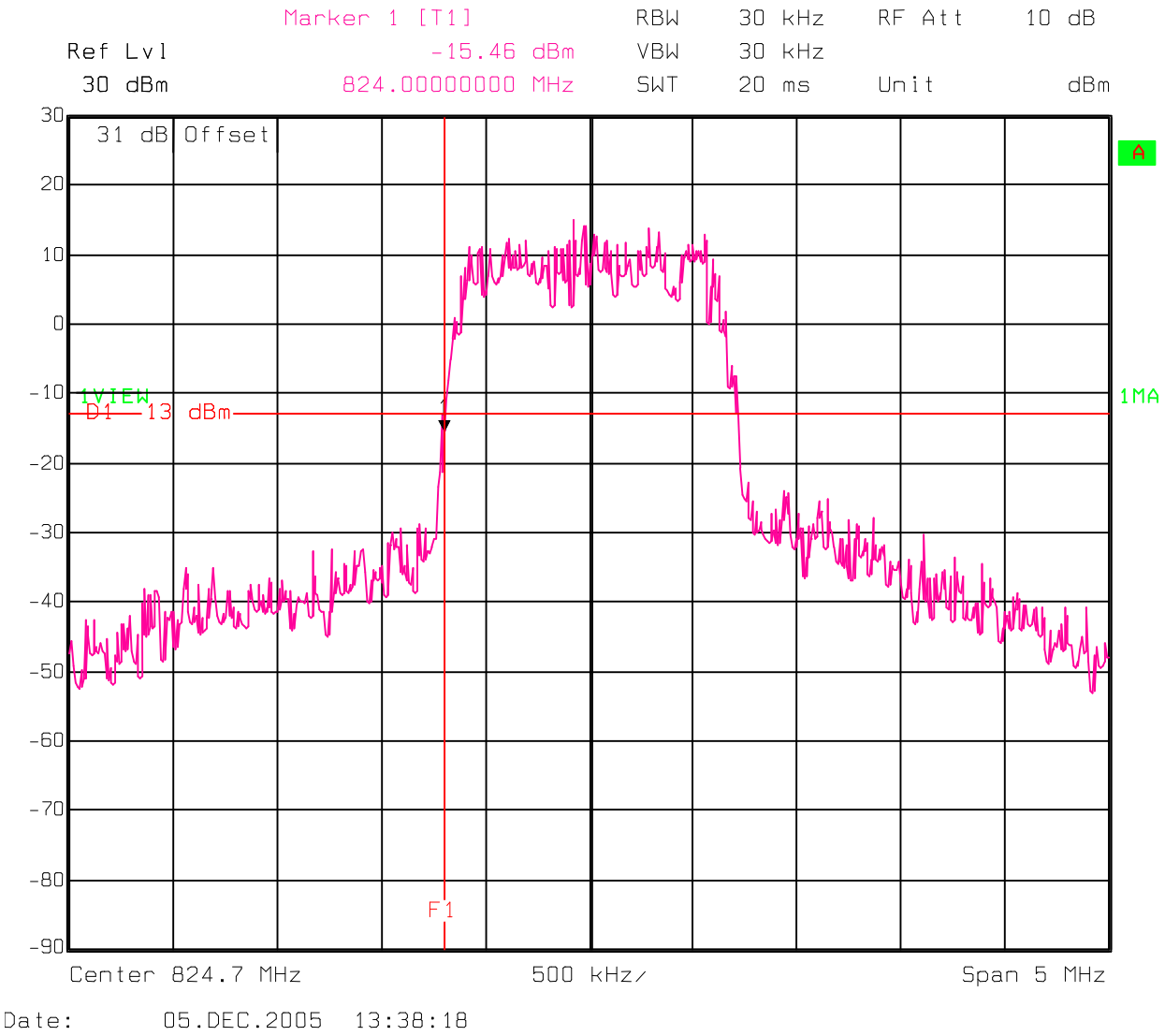
Sample Number:	001	**Temperature:**	24 °C
Date:	11-8-05	**Humidity:**	31 %
Modification State:	CW	**Tester:**	A. Laudani
		Laboratory:	Nemko

Test Results:

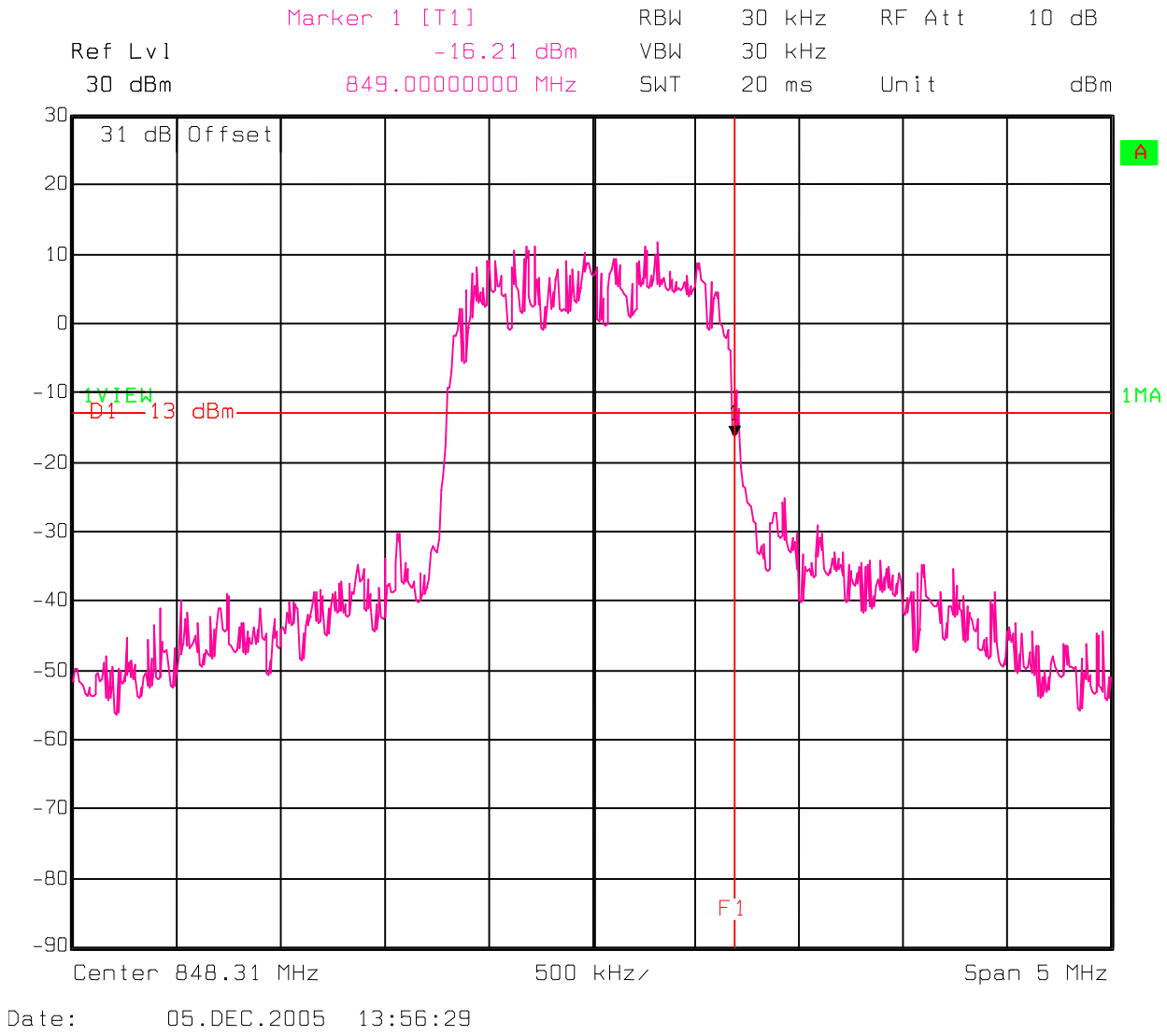
See Attached Plots.

Additional Observations:

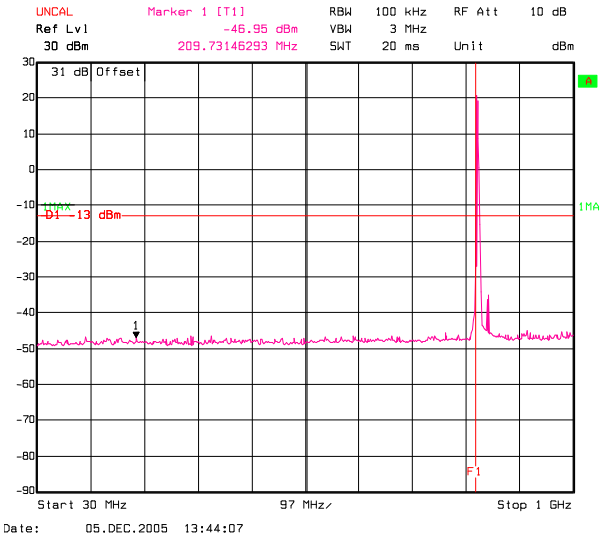
Part 22, Lower Band Edge.

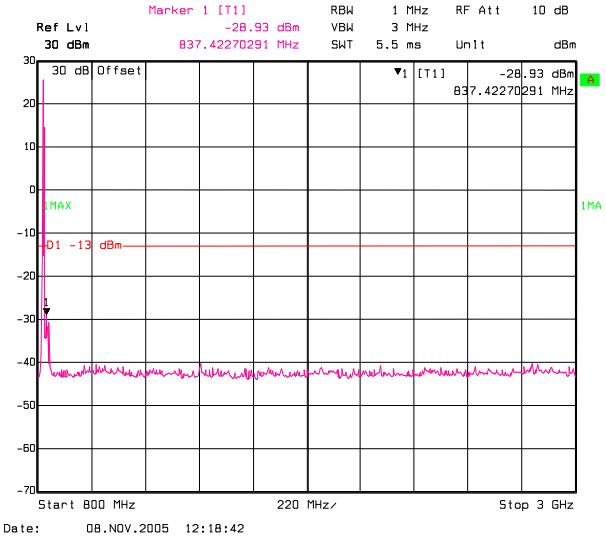


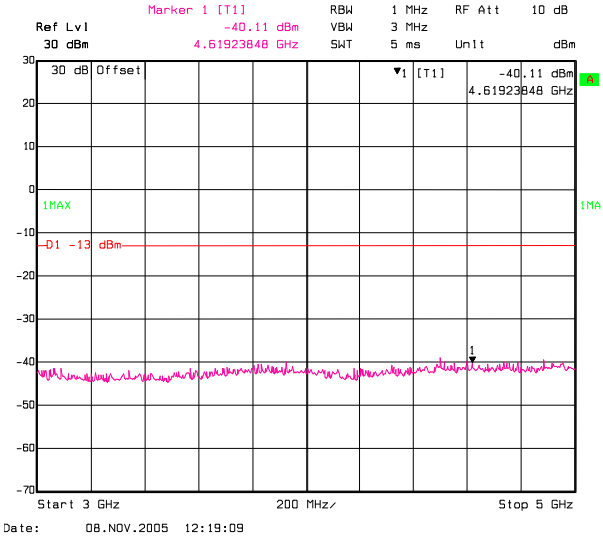
Part 22, Upper Band Edge

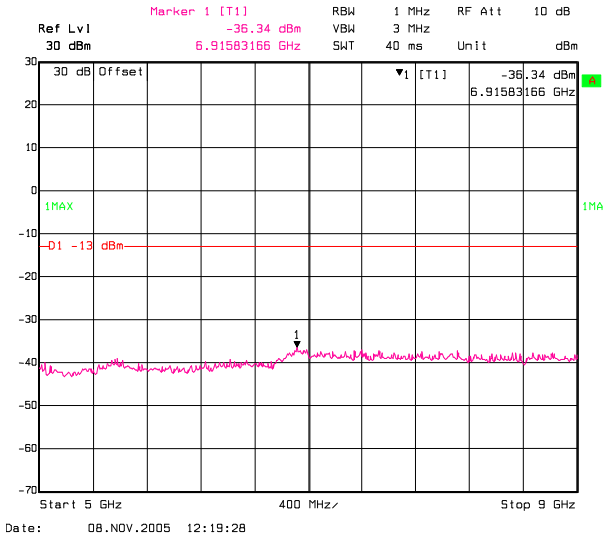


Low frequency Part 22

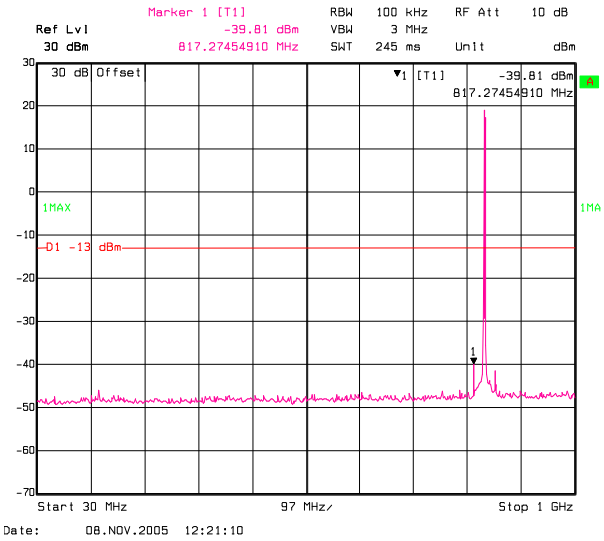


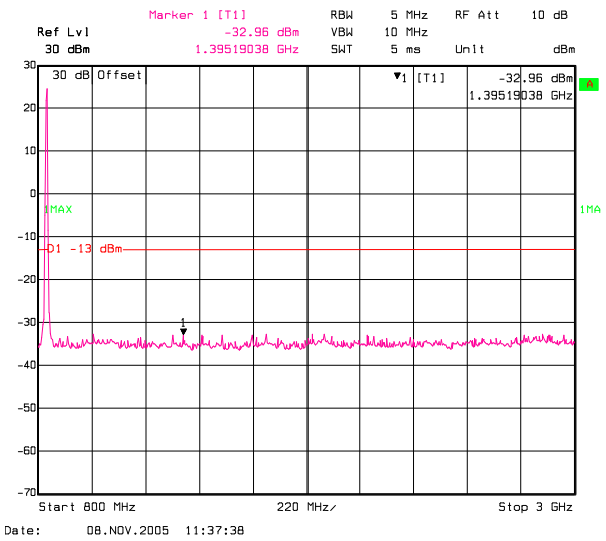


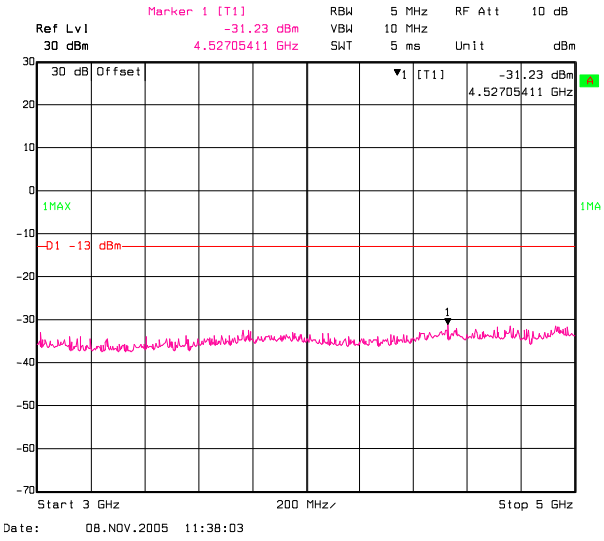


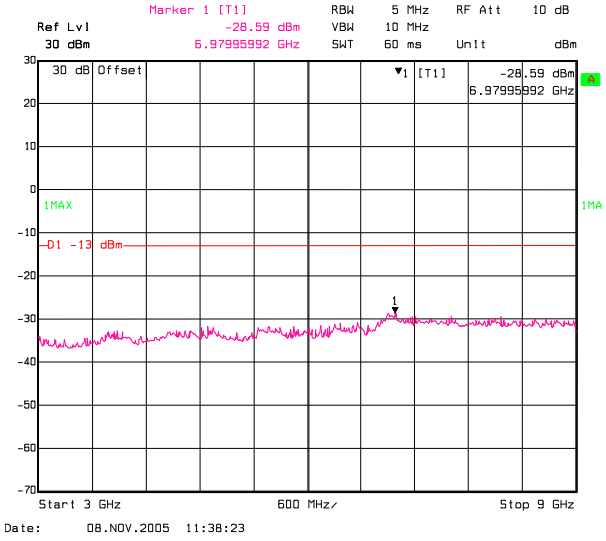


Mid frequency Part 22

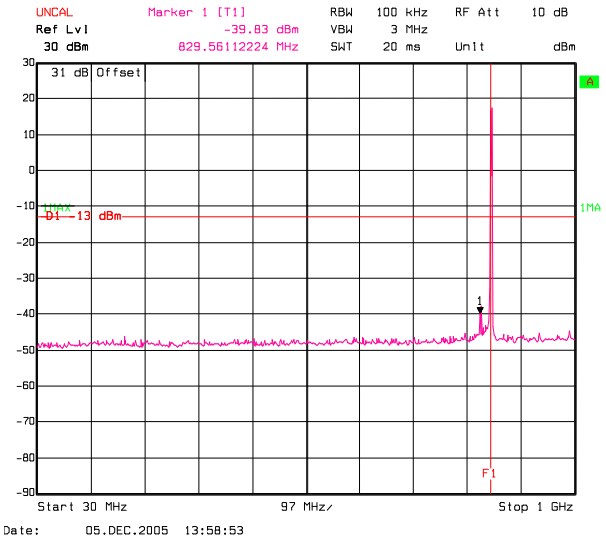


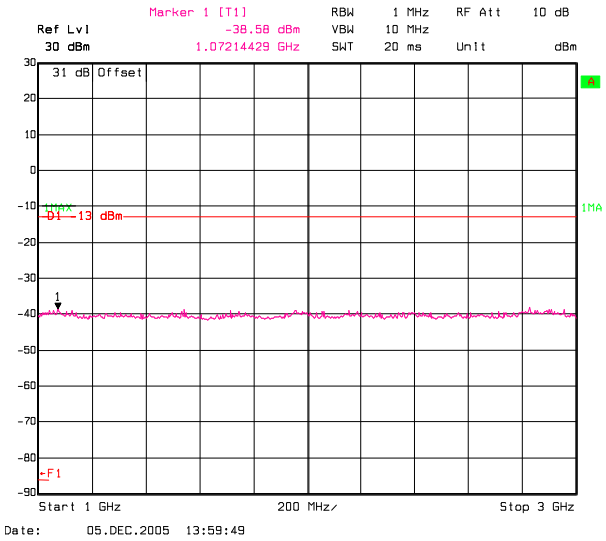


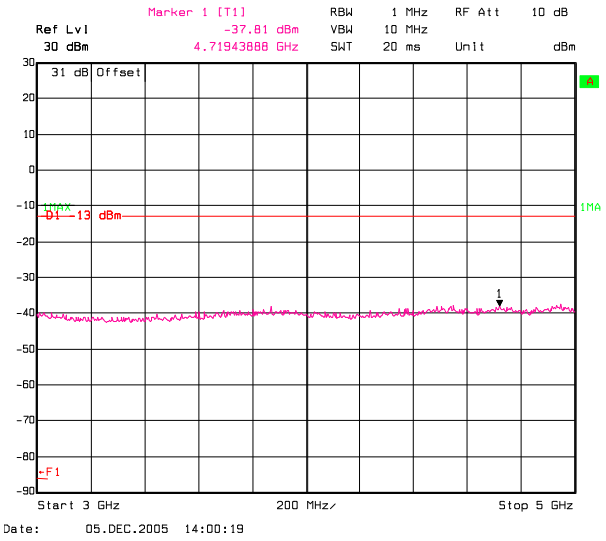


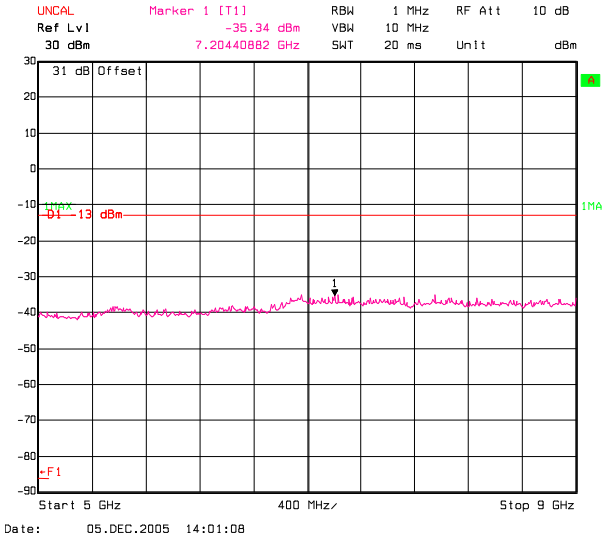


High frequency Part 22

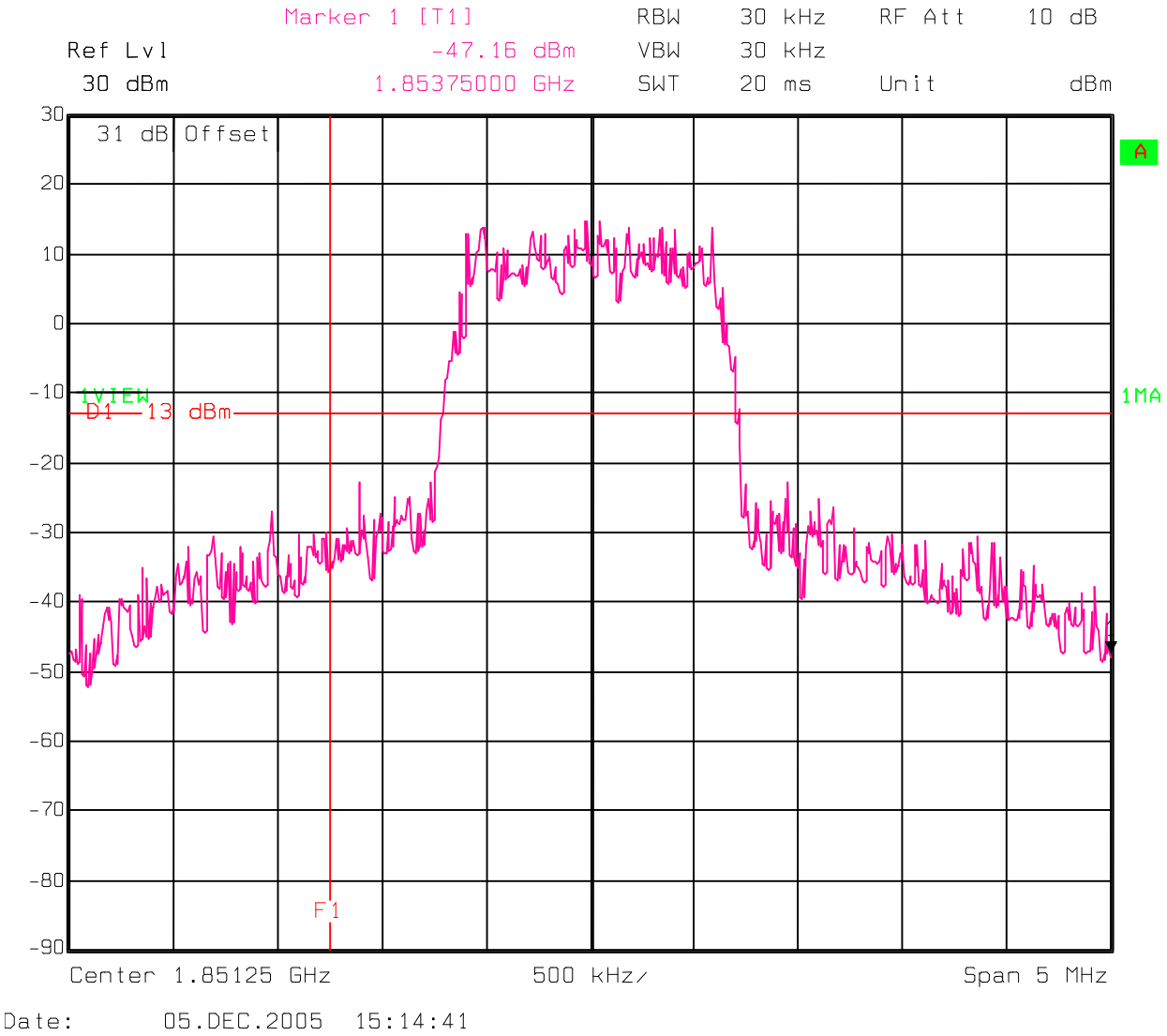




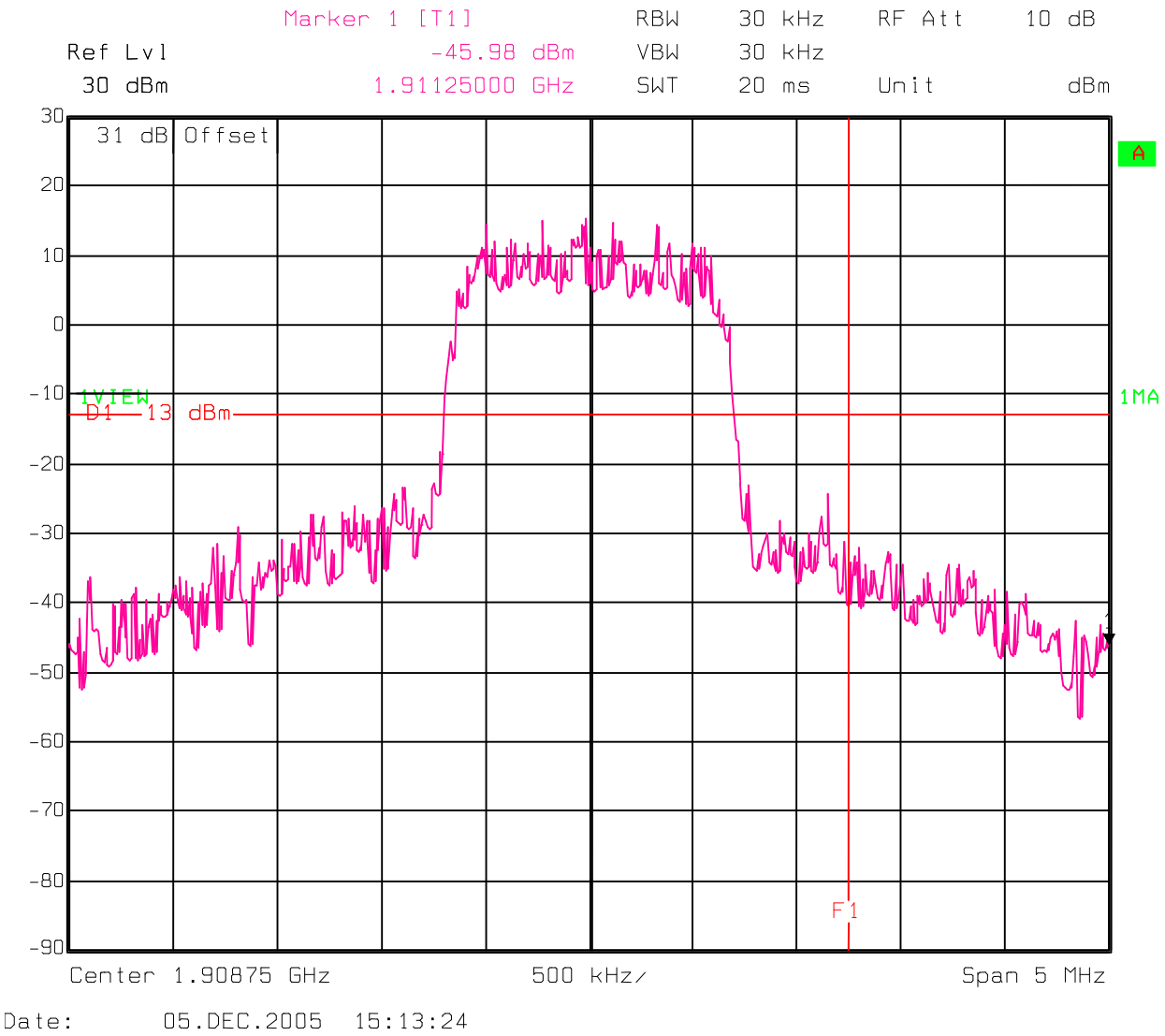




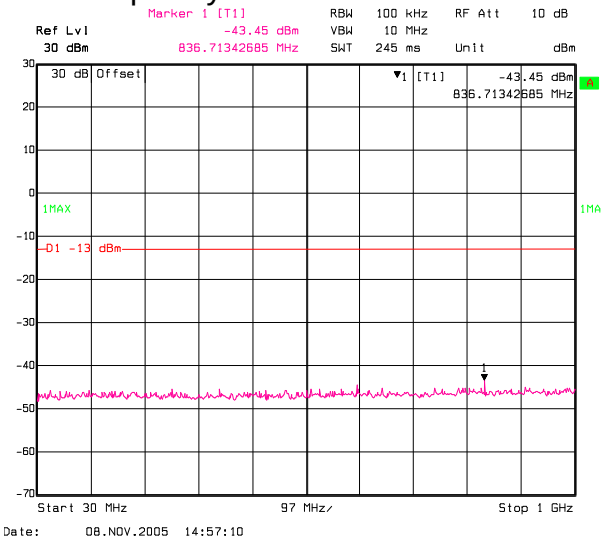
Part 24, Lower Band Edge

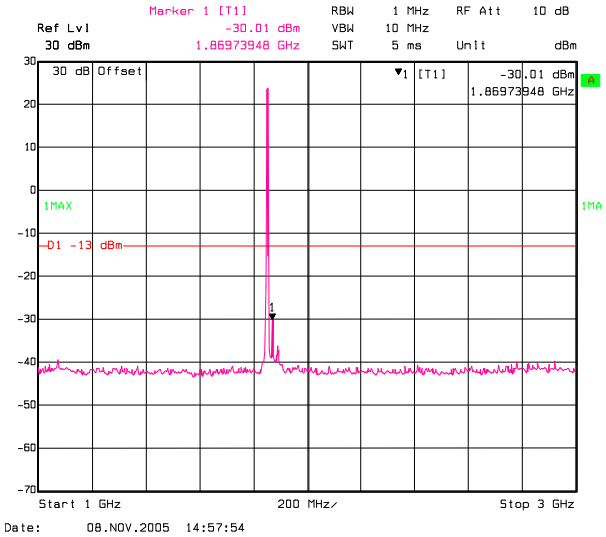


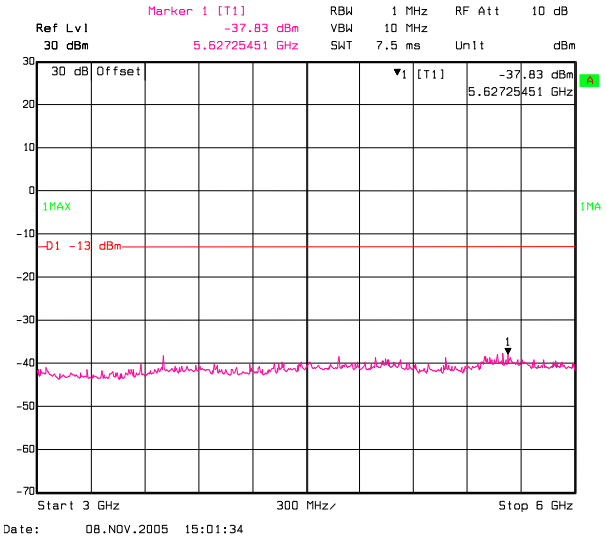
Part 24, Upper Band Edge

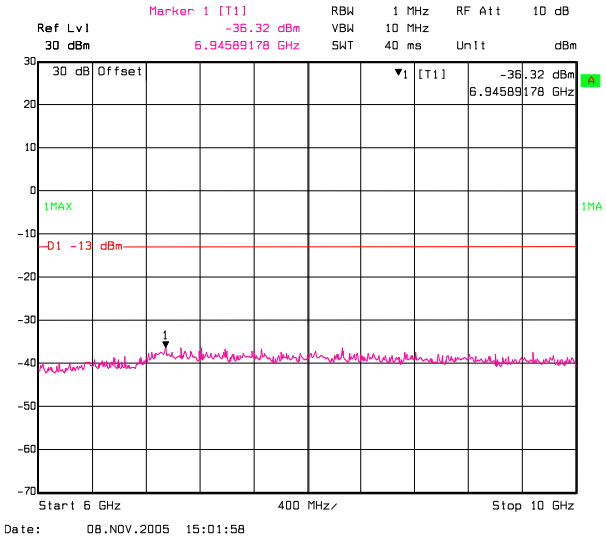


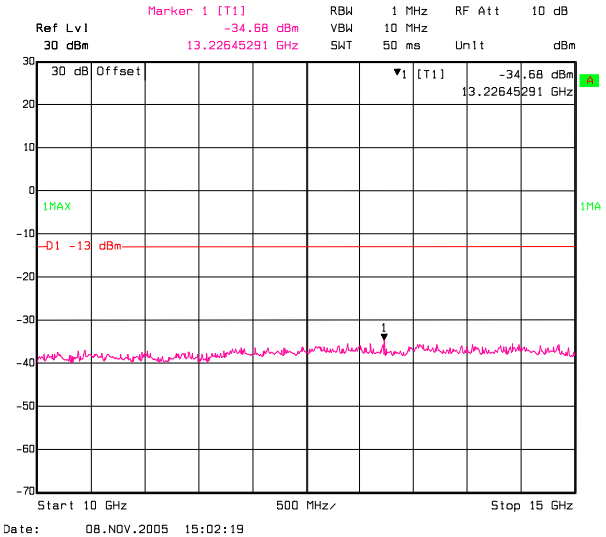
Low Frequency Part 24

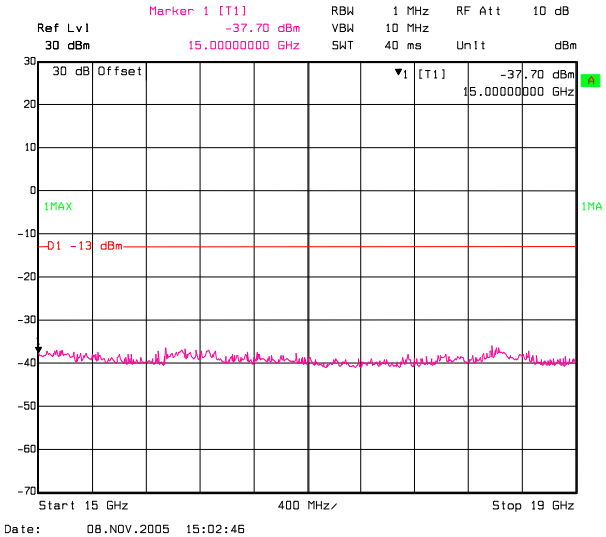




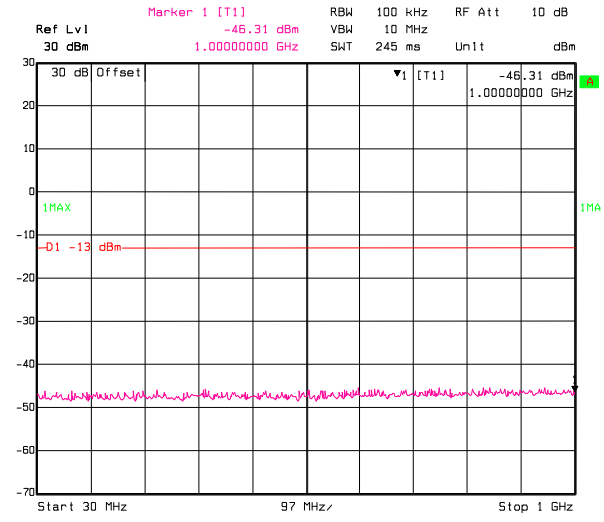


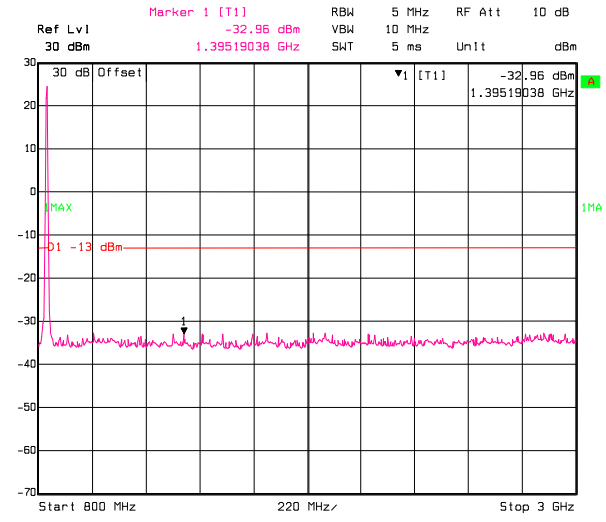


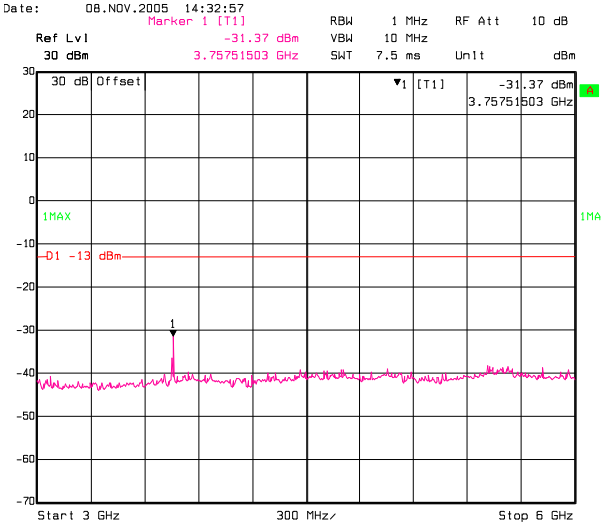


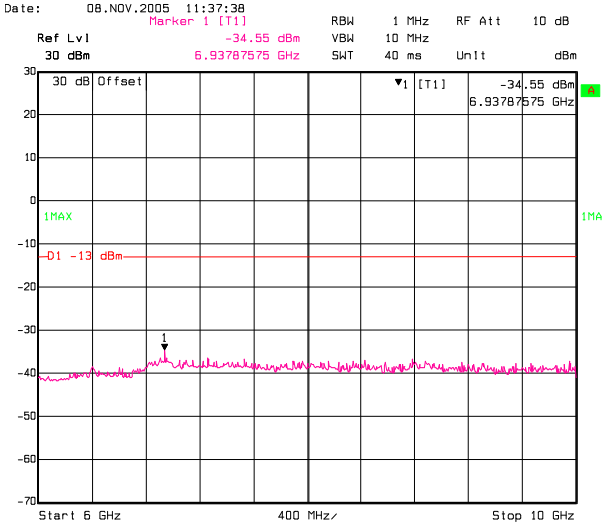


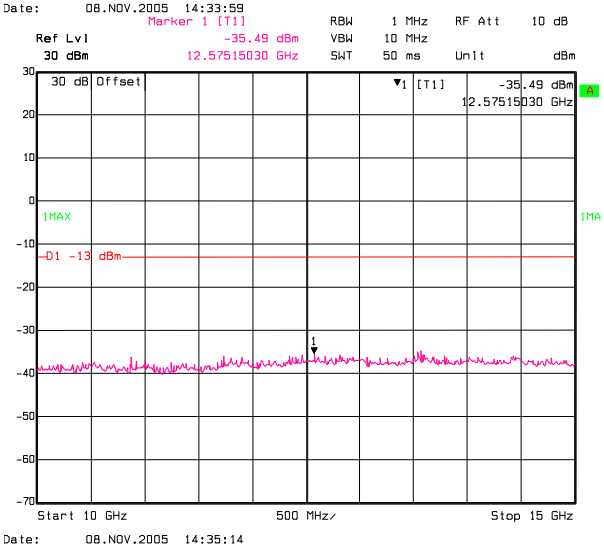
Mid Frequency Part 24

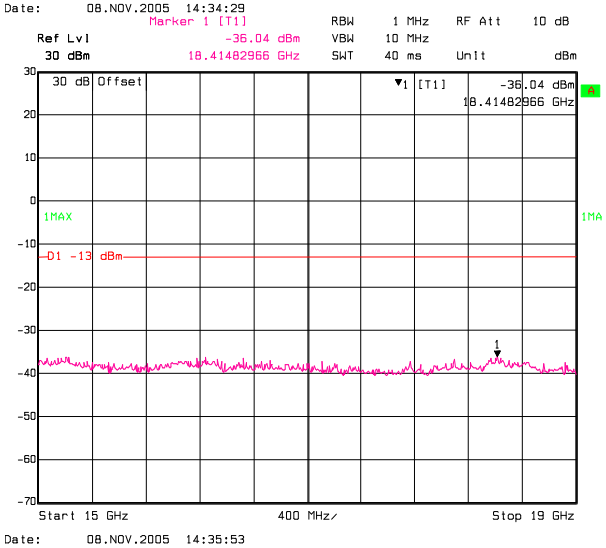




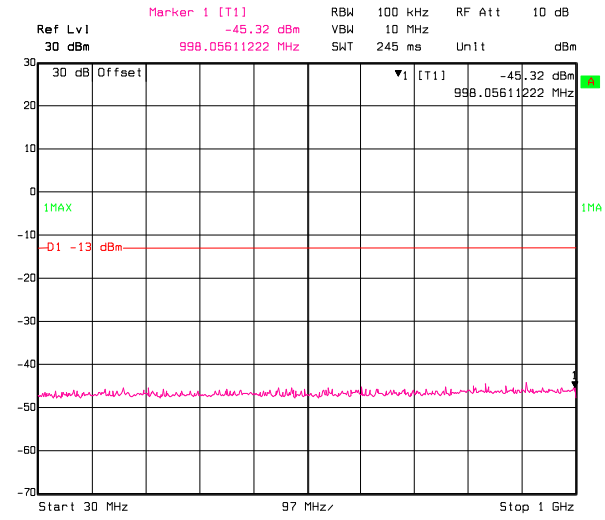


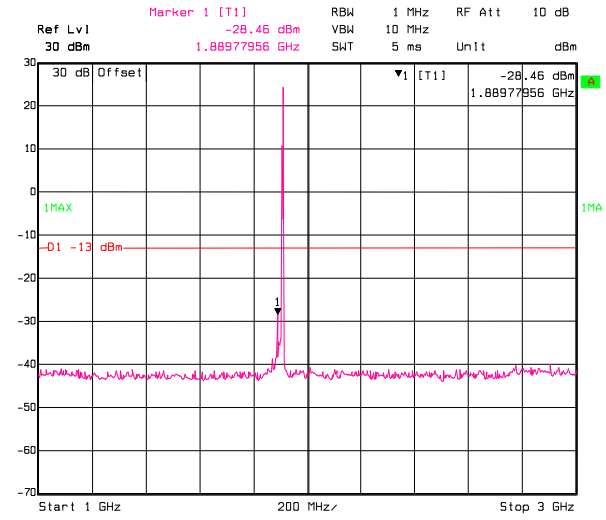


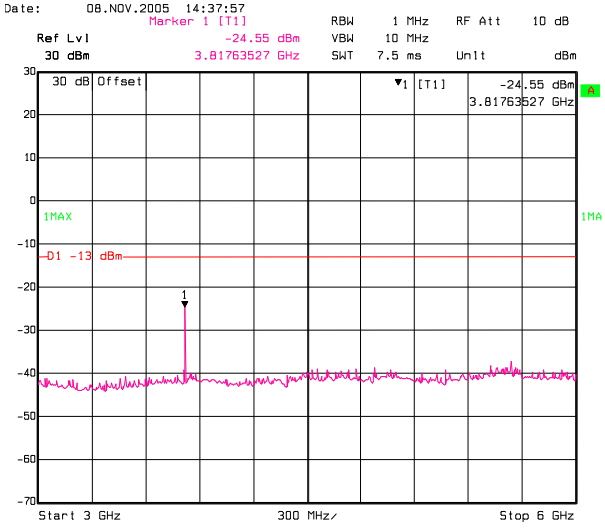


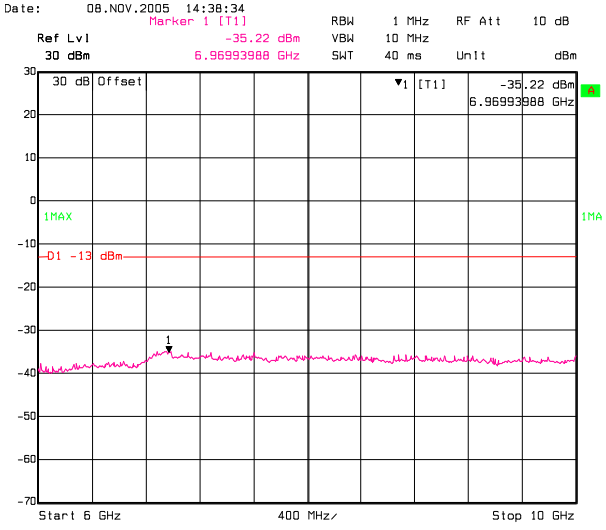


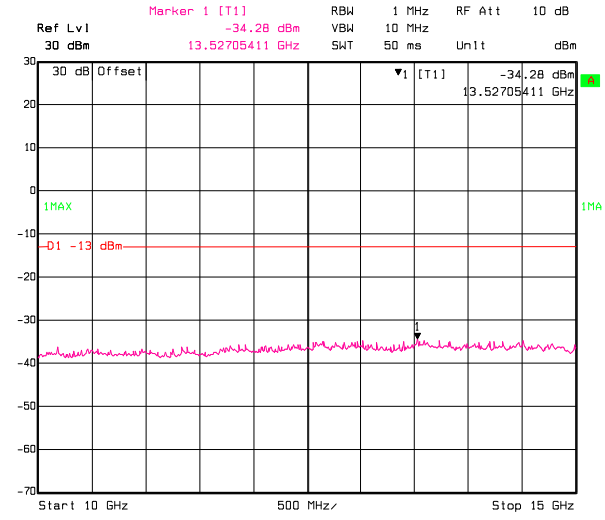
High Frequency Part 24

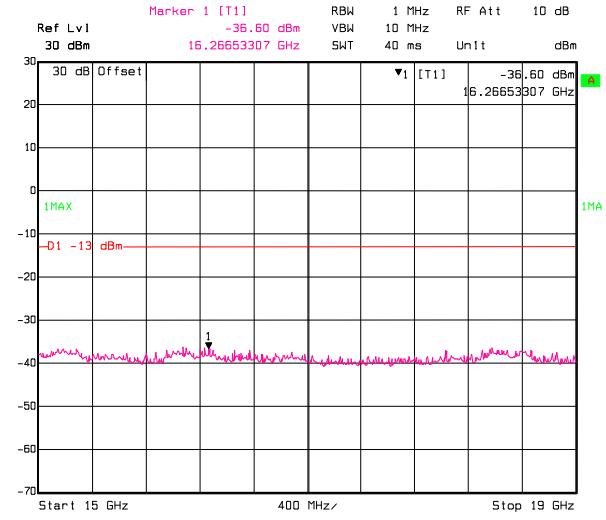












Radiated Spurious Emissions

22.917; 24.**238** Emission limits.

a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

Test Results:

See Attached Table for Results

Additional Observations:

The Spectrum was searched from 30MHz to the 10th Harmonic.

The EUT was measured on three orthogonal axis, worst case presented.

All measurements were performed using a Peak Detector with a 1MHz RBW above 1GHz at a distance of 3 meters.

Substitution was performed on emissions at a level greater than 20 dB below the limit.

Radiated Emissions Data

Complete	YES			Job # :	25-898-SEN	Test # :	1
Preliminary				Page	1	of	1
Client Name :							
EUT Name :	Sendum						
EUT Model # :	PT200						
EUT Part # :							
EUT Serial # :							
EUT Config. :	Transmit CW						
Specification :	FCC Part 24			Reference :			
Bicon Ant.#:	NA	Temp. (°C) :	18	Date :	11/4/2005		
Log Ant.#:	110	Humidity (%) :	61	Time :			
DRG Ant. #	529	EUT Voltage :	Vdc	Staff :	AL		
Dipole Ant.#:	NA	EUT Frequency :	-	Photo ID:			
Cable#:	SOATS	Phase:	-	Peak Bandwidth:	1 MHz		
Preamp#:	842	Location:	SOATS	Video Bandwidth	1 MHz		
Spec An.#:	835	Distance:	3M				
QP #:	NA						
PreSelect#:	NA						

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
1851.25										
3702.50	58.3	53.2	-3.6	-40.6	-13.0	-27.6	60	1	Pass	
5553.75	52	53.2	2.0	-40.0	-13.0	-27.0	60	1	Pass	
7405.00	57.9	52.6	3.9	-33.5	-13.0	-20.5	60	1	Pass	
9256.25	46.7	49.4	9.5	-36.4	-13.0	-23.4	60	1	Pass	
11107.50	46.9	44.10	13.0	-35.4	-13.0	-22.4	60	1	Pass	
1880										
3760	64.8	63.2	-3.6	-34.1	-13.0	-21.1	60	1	Pass	
5640	52.3	51.8	2.0	-40.9	-13.0	-27.9	60	1	Pass	
7520	53.3	49.8	5.1	-36.9	-13.0	-23.9	60	1	Pass	
9400	47.4	45.2	9.5	-38.4	-13.0	-25.4	60	1	Pass	
11280	44.7	41.5	13.0	-37.6	-13.0	-24.6	60	1	Pass	
1908.75										
3817.50	71	77.0	-3.6	-21.9	-13.0	-8.9	60	1	Pass	
5726.25	54.6	63.8	2.0	-29.4	-13.0	-16.4	60	1	Pass	
7635.00	51.7	49.7	5.1	-38.5	-13.0	-25.5	60	1	Pass	
9543.75	47.7	46.3	9.2	-38.4	-13.0	-25.4	60	1	Pass	
11452.50	45.7	42.8	13.0	-36.6	-13.0	-23.6	60	1	Pass	

Radiated Emissions Data

Complete	YES			Job # :	25-898-SEN	Test # :	2
Preliminary				Page	1	of	1
Client Name :	Sendum						
EUT Name :	PT200						
EUT Model # :	PT200						
EUT Part # :							
EUT Serial # :							
EUT Config. :	Transmit CW						
Specification :	FCC Part 22			Reference :			
Bicon Ant.#:	NA	Temp. (°C) :	16	Date :	11/4/2005		
Log Ant.#:	110	Humidity (%) :	11	Time :			
DRG Ant. #	529	EUT Voltage :	4.3 Vdc	Staff :	AL		
Dipole Ant.#:	NA	EUT Frequency :	-	Photo ID:			
Cable#:	SOATS	Phase:	-	Peak Bandwidth:	1 MHz		
Preamp#:	842	Location:	SOATS	Video Bandwidth	1 MHz		
Spec An.#:	835	Distance:	3M				
QP #:	NA						
PreSelect#:	NA						

Meas. Freq. (MHz)	Vertical (dBuV) pk	Horizontal (dBuV) pk	CF (db)	Max Level (dBm) pk	Spec. Limit (dBm) pk	Margin dB pk	EUT Rotation	Ant. Height	Pass Fail Unc.	Comment
824.05										
1648.10	**74.5**	**82.6**	**-12.7**	**-27.5**	**-13.0**	**-14.5**	**60**	**1**	Pass	
2472.15	59.7	65.3	-10.0	-42.1	-13.0	-29.1	60	1	Pass	
3296.20	52.2	51.2	-5.0	-50.2	-13.0	-37.2	60	1	Pass	
4120.25	51.0	48.2	-0.8	-47.1	-13.0	-34.1	60	1	Pass	
6592.40	51.3	46.2	2.7	-43.4	-13.0	-30.4	60	1	Pass	
836.52										
1673.04	**73.4**	**82.6**	**-12.7**	**-27.5**	**-13.0**	**-14.5**	**60**	**1**	Pass	
2509.56	63.3	61.4	-9.1	-43.2	-13.0	-30.2	60	1	Pass	
3346.08	50.2	48.7	-5.0	-52.2	-13.0	-39.2	60	1	Pass	
4182.6	49.4	47.5	-0.8	-48.7	-13.0	-35.7	60	1	Pass	
6692.16	49.3	46.7	2.7	-45.4	-13.0	-32.4	60	1	Pass	
848.97										
1697.94	**75.8**	**80.5**	**-12.7**	**-29.6**	**-13.0**	**-16.6**	**60**	**1**	Pass	
2546.91	60.4	65.4	-9.1	-41.1	-13.0	-28.1	60	1	Pass	
3395.88	50.0	51.2	-5.0	-51.2	-13.0	-38.2	60	1	Pass	
5942.79	52.7	46.2	2.0	-42.6	-13.0	-29.6	60	1	Pass	
6791.76	54.3	45.3	2.7	-40.4	-13.0	-27.4	60	1	Pass	

Substitution Method For Radiated Emissions

Job # : 25-898-SEN Test # : 3

Page 1 of 1

Client Name :		Sendum				
EUT Name :		PT200				
EUT Model # :		PT200				
EUT Part # :						
EUT Serial # :						
EUT Config. :						
		CDMA TX				
Specification :		FCC Part 22 and Part 24			Reference :	
Rod. Ant. #:		NA	Temp. (deg. C) :	16	Date :	11/4/2005
Bicon Ant.#:		NA	Humidity (%) :	11	Time :	
Log Ant.#:		NA	EUT Voltage :	4.3	Staff :	A. Laudani
DRG Ant. #	RX	529	EUT Frequency :	dc	Photo ID:	
DRG Ant. #	TX	752	Phase:	na	Peak Bandwidth:	RBW-1MHz, VBW-1MHz
Cable#:	TX	60ft	Location:	SOATS		
Signal Gen #		101L	Distance:	3m		
Spec An.#:		835				

target Frequency mHz	target level dBuV/m	Horn Gain dBi	cable loss dB	Signal Generator dBm	Total (EIRP) dBm	Spec dBm	Margin dBm
1648.10	82.60	5.37	0.65	-29.0	-24.28	-13	-11.3
1673.04	82.60	5.41	0.65	-29.0	-24.24	-13	-11.2
1697.94	80.50	5.45	0.65	-31.1	-26.30	-13	-13.3
Part 24							
3817.50	77	7.96	3.9	-25.9	-21.84	-13	-8.8
5726.25	63.8	9.32	4.7	-36.3	-31.68	-13	-18.7

Occupied Bandwidth

Using an RBW of 300Hz or 1% of the emission bandwidth, The spectral shape of the output should look similar to the input for all modulations.

Sec. 24.**238** Emission limits

(b) Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

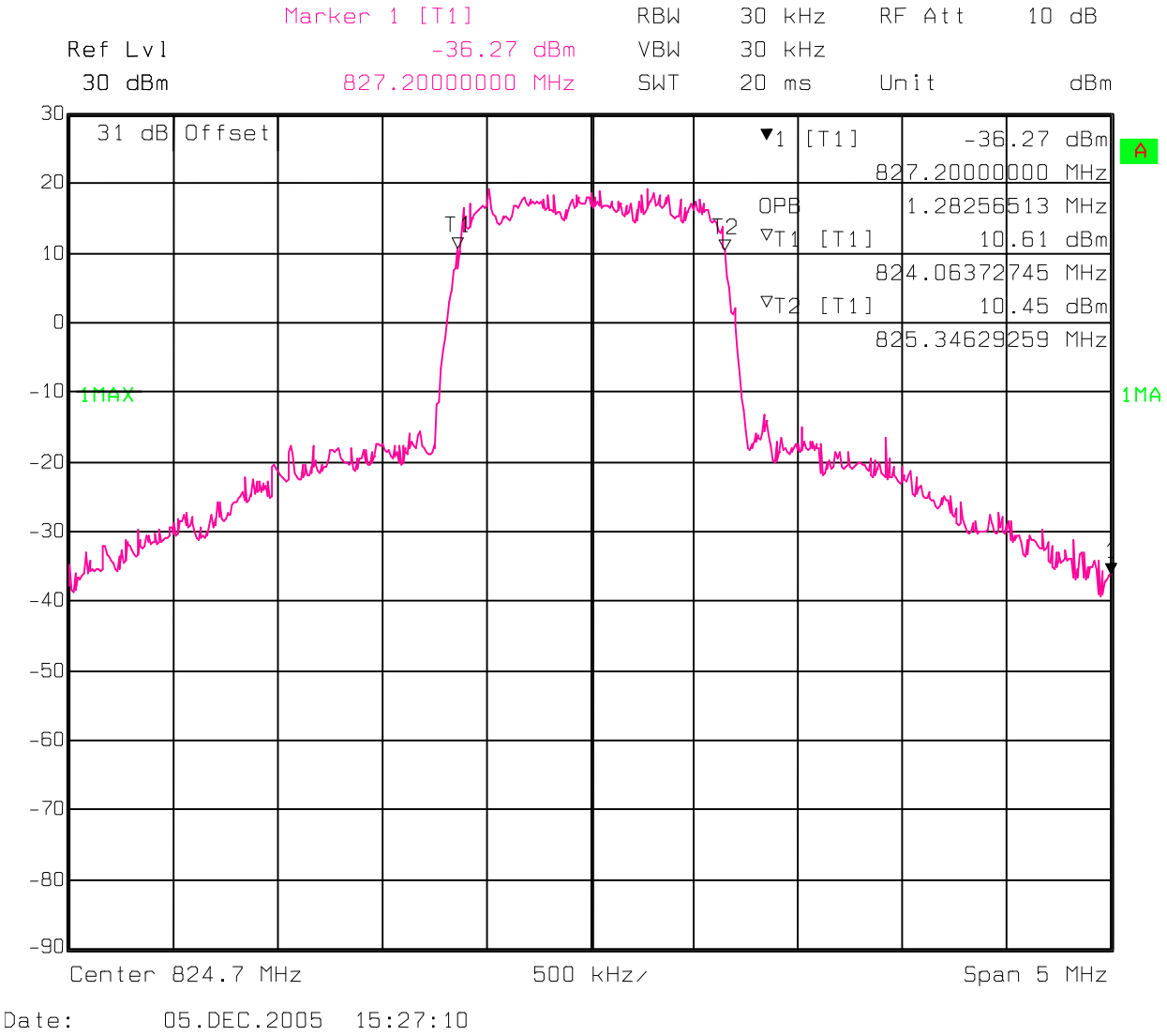
Test Conditions:

Sample Number:	001	**Temperature:**	22 °C
Date:	12-05-05	**Humidity:**	29 %
Modification State:	CW	**Tester:**	A. Laudani
		Laboratory:	Nemko AL

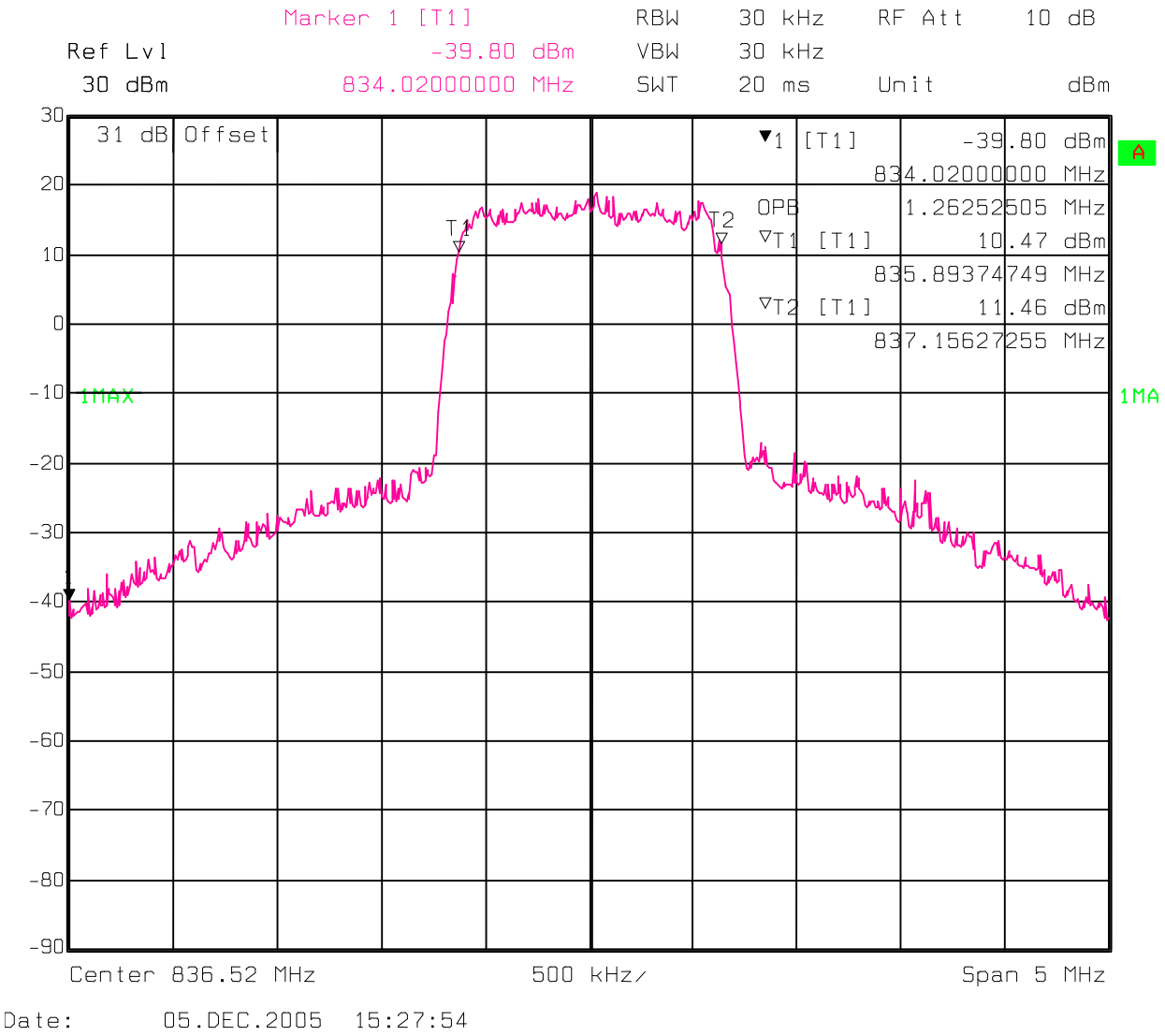
Test Results:

See Attached Plots.

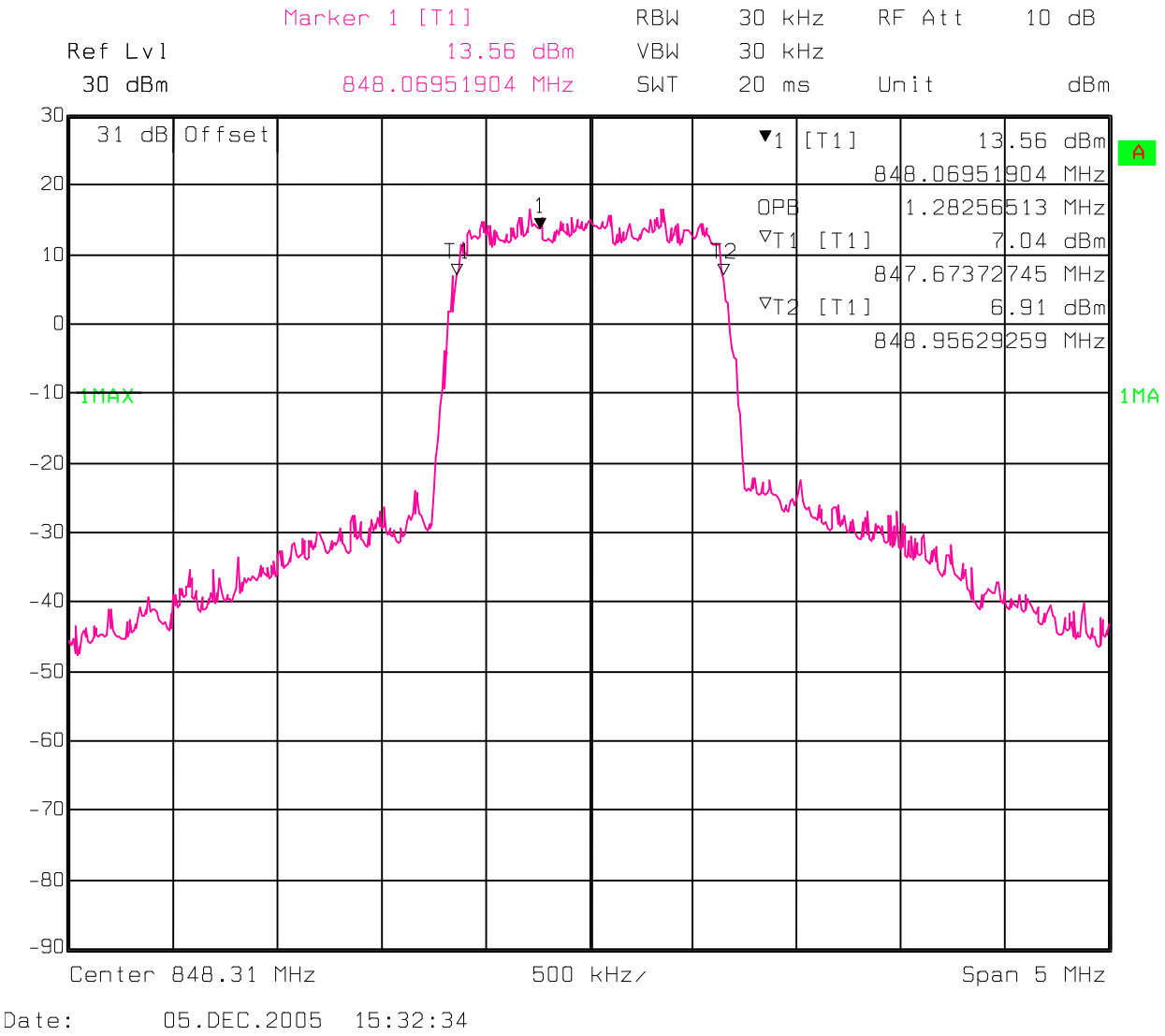
Part 22 Low Frequency Bandwidth



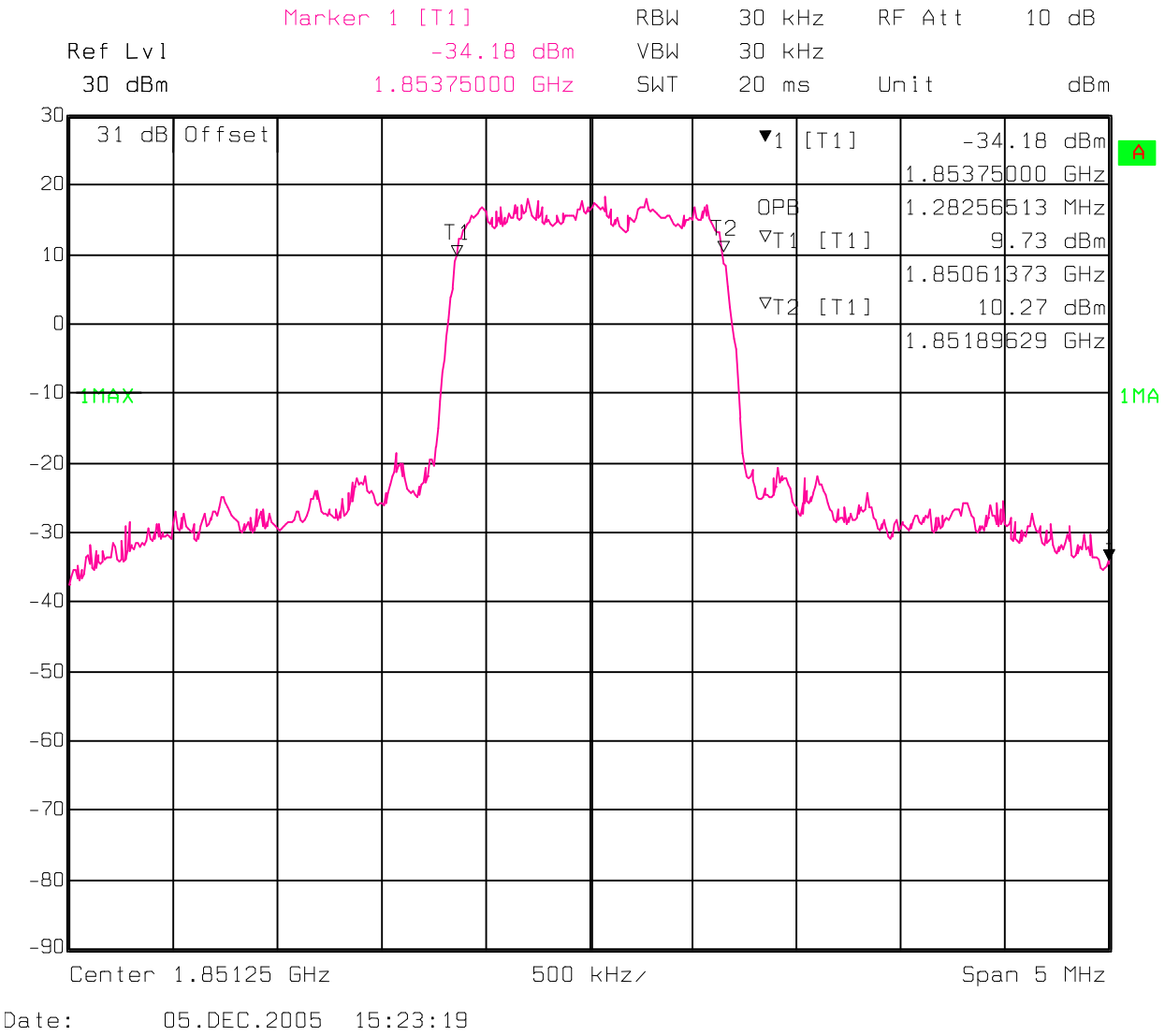
Part 22 Mid Frequency Bandwidth



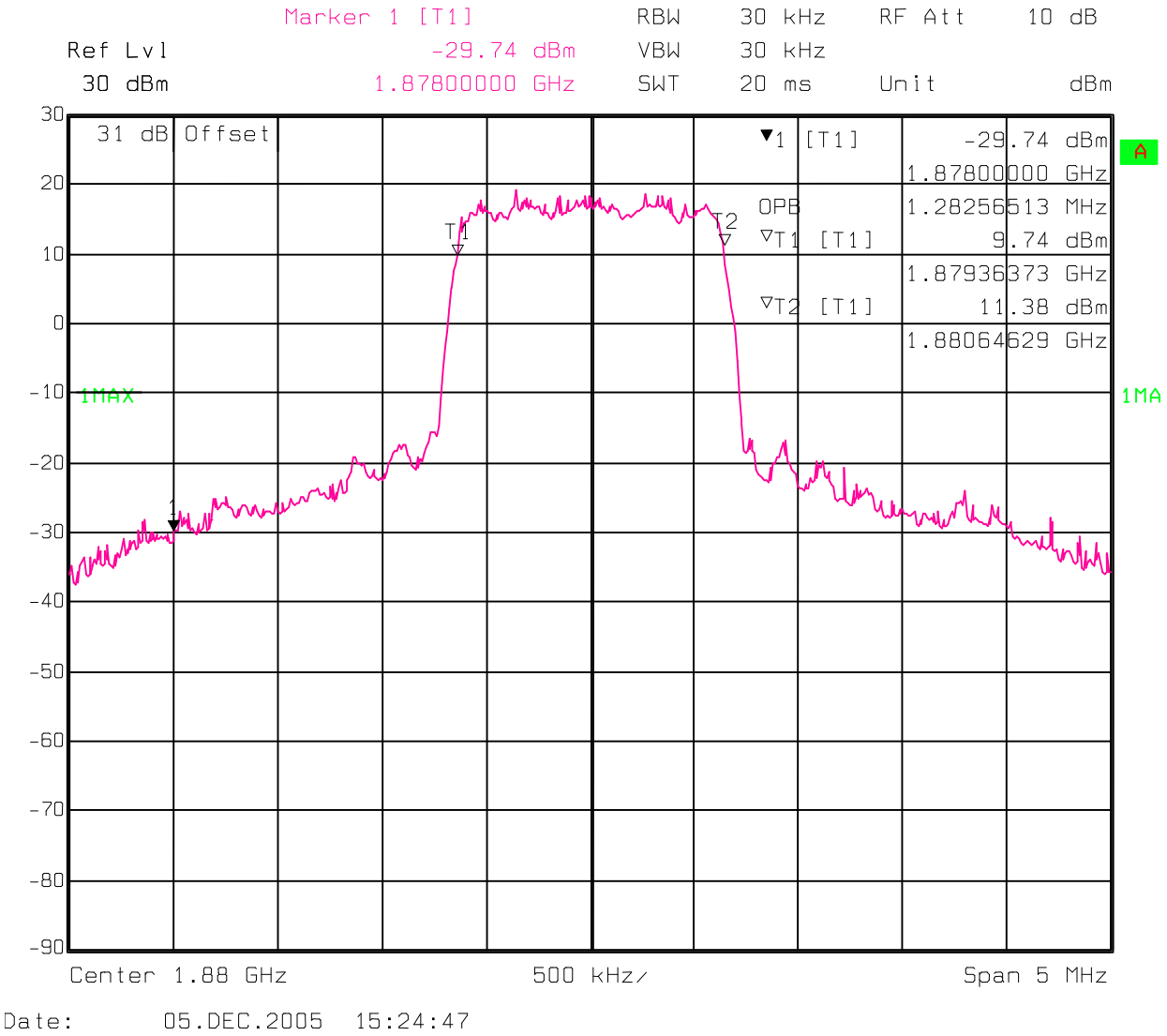
Part 22 High Frequency Bandwidth



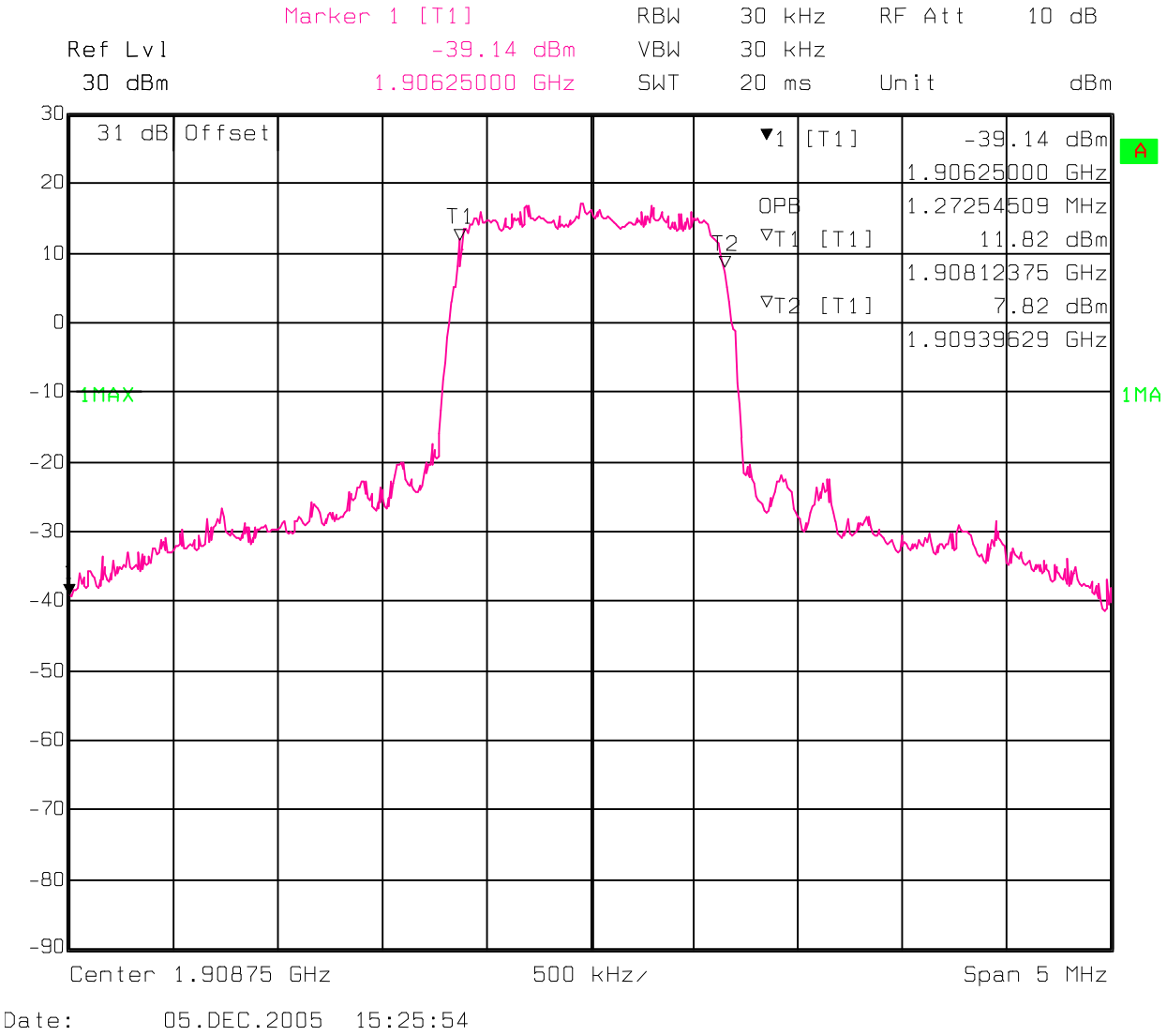
Part 24 Low Frequency Bandwidth



Part 24 Mid Frequency Bandwidth



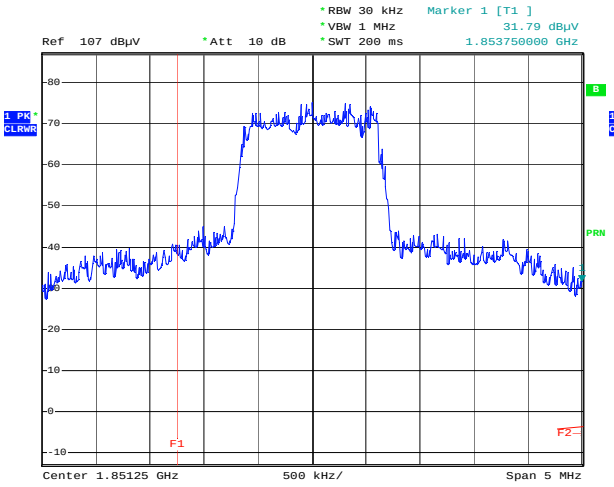
Part 24 High Frequency Bandwidth



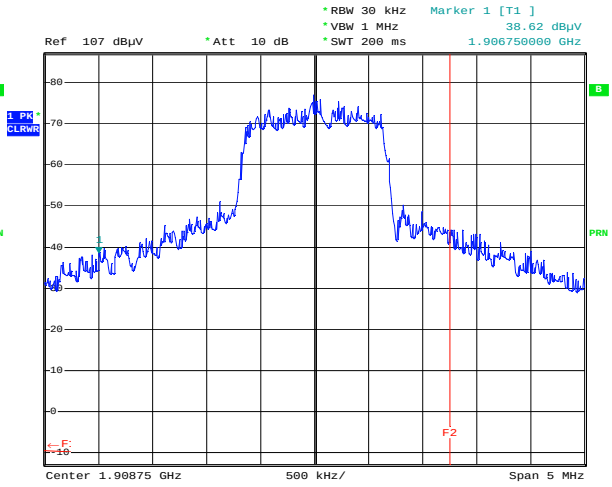
Appendix B: PCS Frequency Stability

Bandedge plots from –30 °C to + 50 °C step 10°:

-30°C

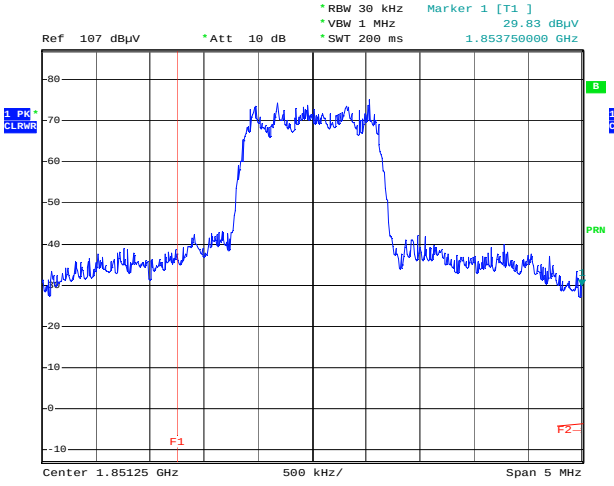


Date: 23.FEB.2006 14:22:08

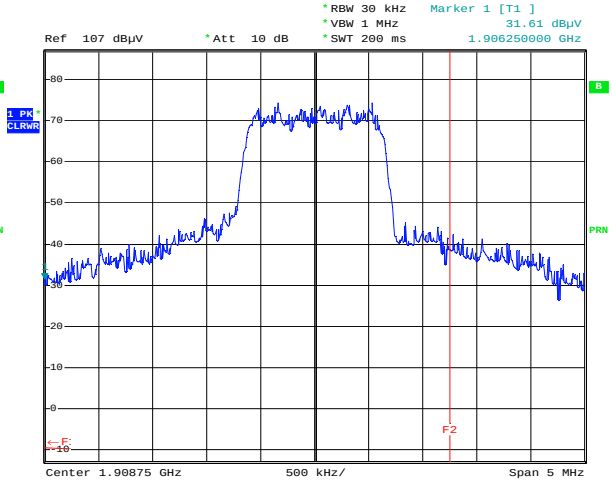


Date: 23.FEB.2006 14:21:31

-20°C

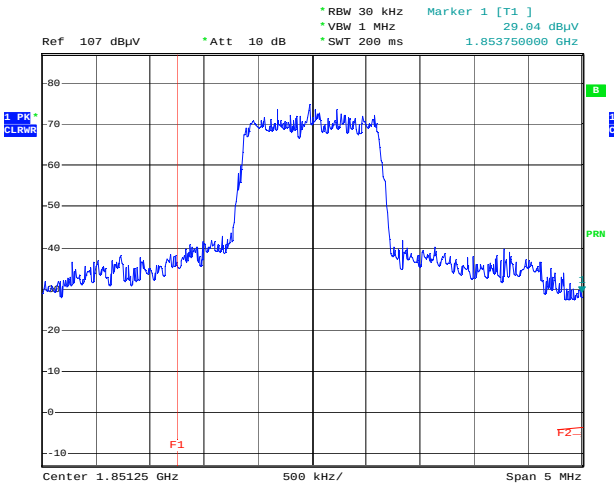


Date: 23.FEB.2006 14:34:12

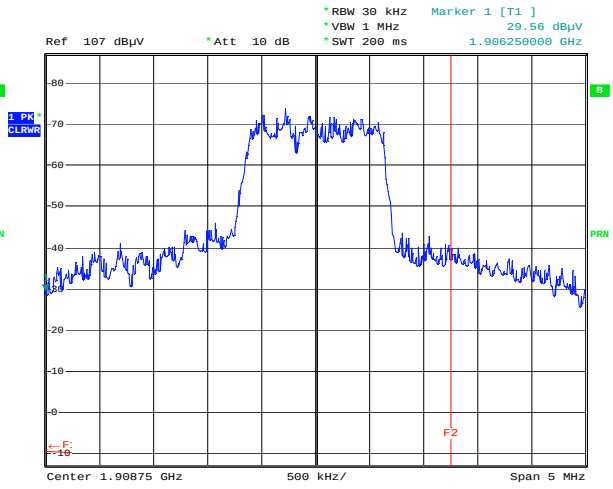


Date: 23.FEB.2006 14:34:41

-10°C

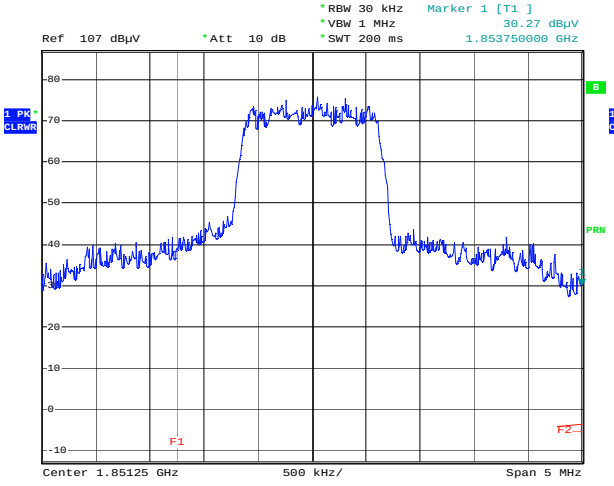


Date: 23.FEB.2006 14:49:55

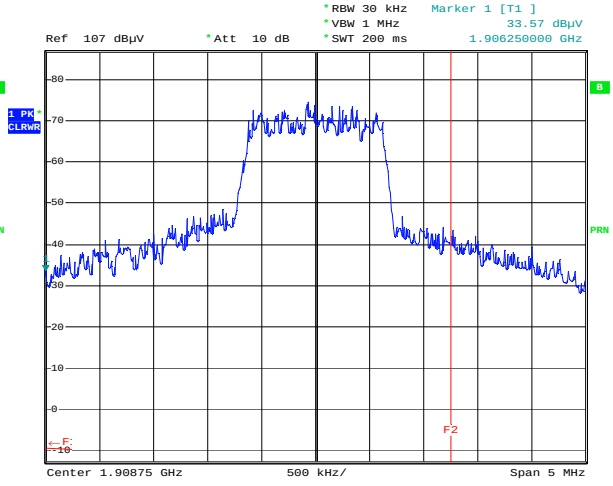


Date: 23.FEB.2006 14:49:28

0°C

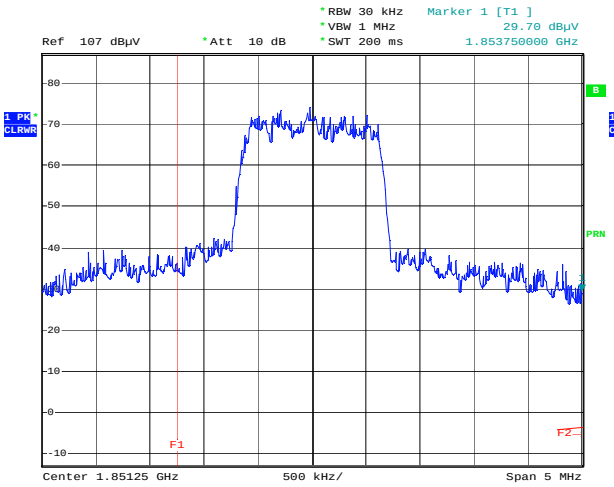


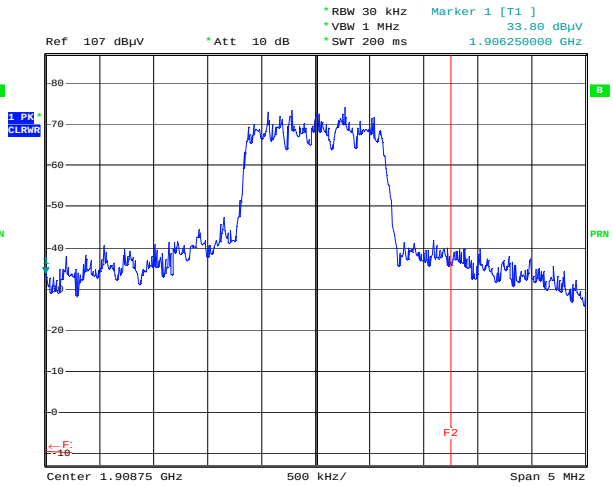
Date: 23.FEB.2006 15:00:05



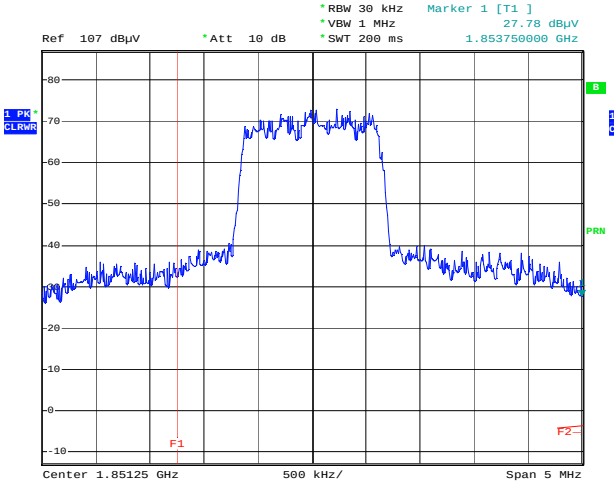
Date: 23.FEB.2006 15:00:39

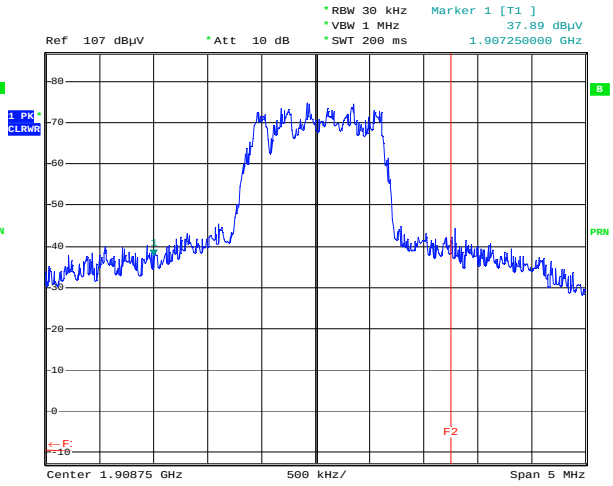
10°C



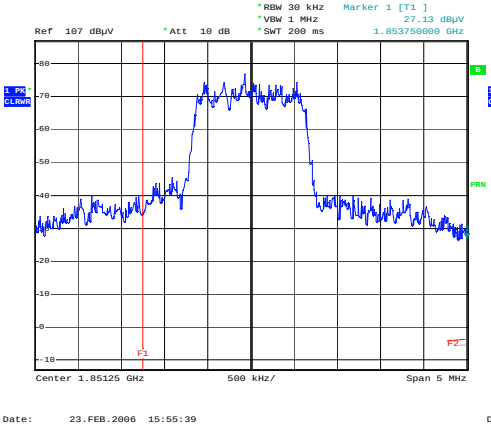


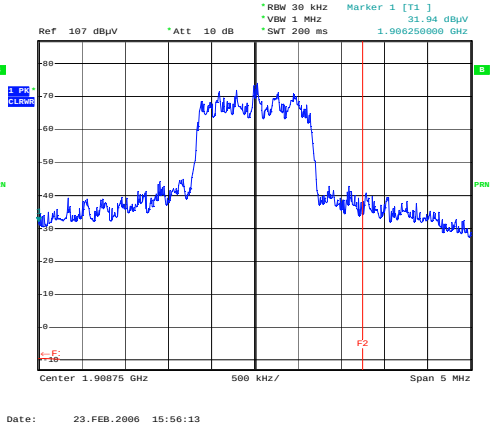
20°C Nominal Voltage



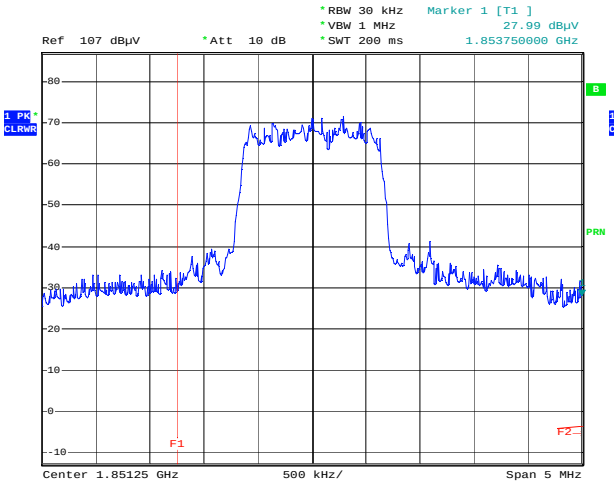


20°C Battery Expended Voltage (3.66Vdc)





30°C



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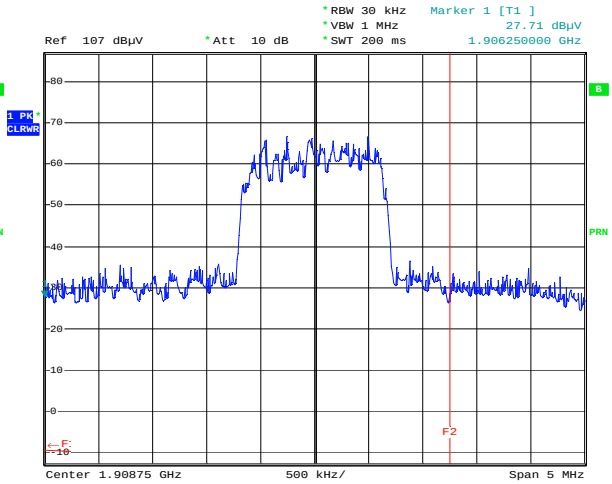

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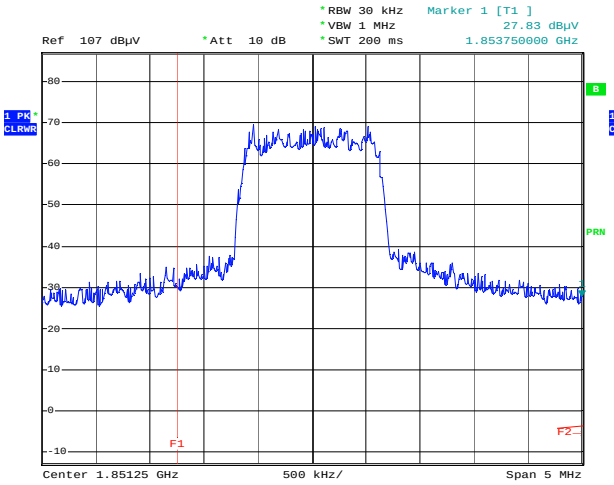
40°C



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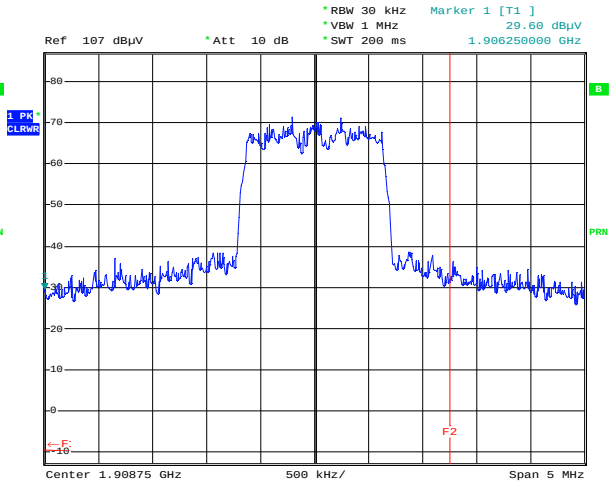

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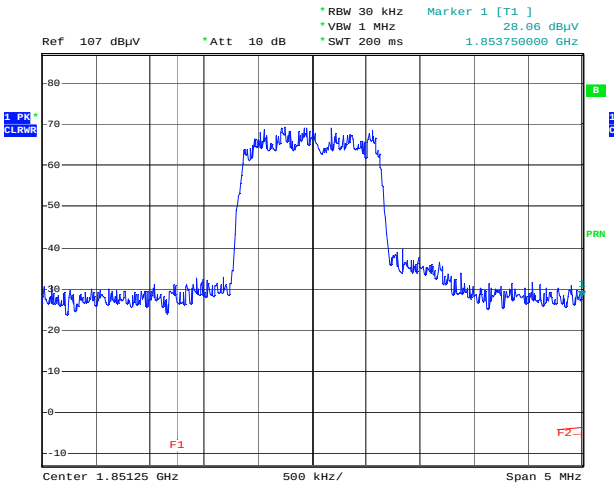
50°C



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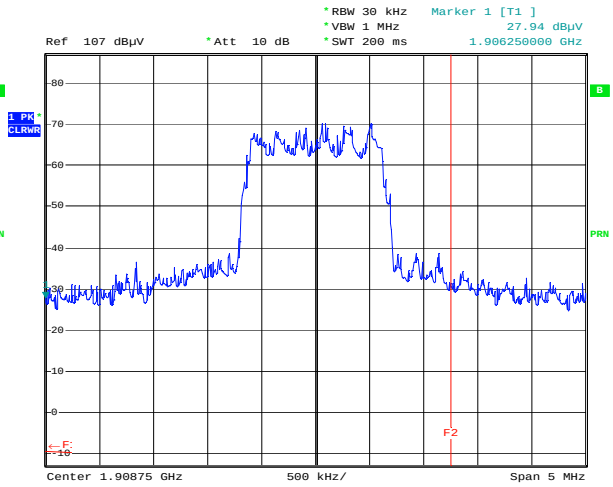

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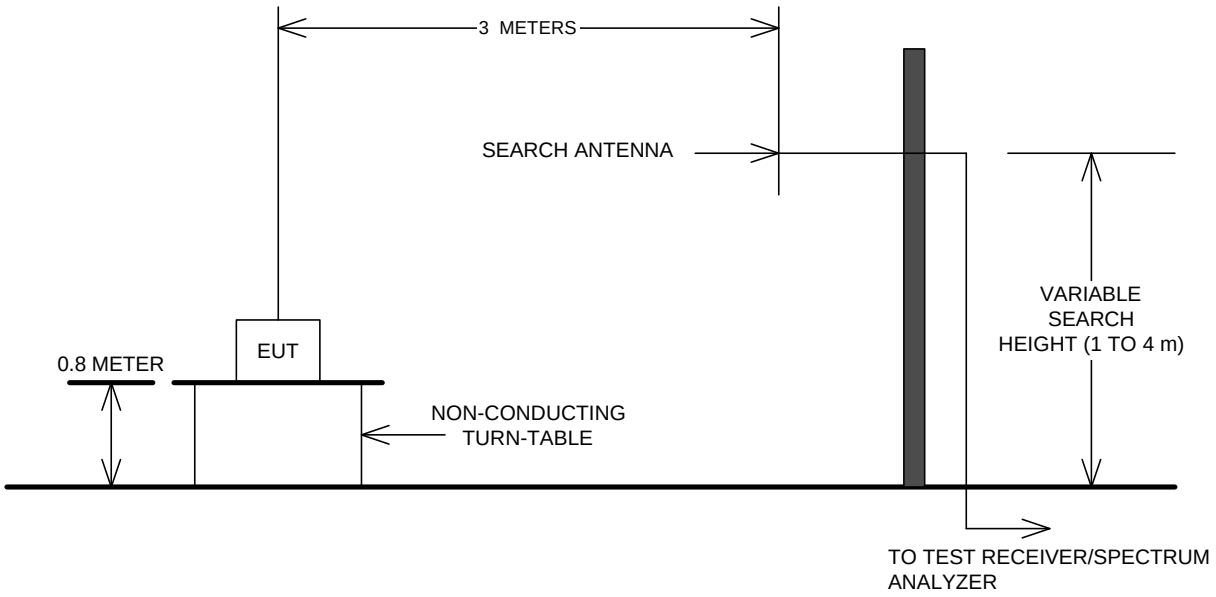
Appendix C : Block Diagram of Test Setups

Test Site For Radiated Emissions



Conducted Spurious Emissions, Output power, Occupied Bandwidth, Frequency Stability (EUT in environmental chamber)