

Handled by, department
Jonas Bremholt
Electronics
+46 (0)33 16 54 38, jonas.bremholt@sp.se

ERICSSON AB
Per Helmersson
Färögatan 2, Kista
164 80 STOCKHOLM

Equipment Authorization measurements on GSM Base station Transceiver unit with FCC ID: B5KAKRC1311013-2 in the RBS 2250 cabinet (10 appendices)

Test object

Transceiver Unit dTRU 10-19 Edge, KRC 131 1013/2, R2A

Summary

Standard	Compliant	Appendix	Remarks
FCC CFR 47			
2.1046 RF Power output	Yes	2	
2.1047 Modulation characteristics	Yes	3	
2.1049 Occupied bandwidth	Yes	4	
2.1049 Band Edge	Yes	5	Note 1
2.1051 Spurious emission at antenna	Yes	6	
2.1053 Field strength of spurious radiation	Yes	7	
2.1055 Frequency stability	Yes	8	

Note 1: The maximum peak output powers with GMSK modulation that can be used on the channels adjacent to the frequency band edges are 40.3 dBm (channel 512) and 42.0 dBm (channel 810) in order to comply.

SP Swedish National Testing and Research Institute Electronics - EMC


Jan Welinder
Technical Manager


Jonas Bremholt
Technical Officer

SP Swedish National Testing and Research Institute

Postal address
SP
Box 857
SE-501 15 Borås
SWEDEN

Office location
Västeråsen
Brinellgatan 4
Borås

Phone / Fax / E-mail
+46 33 16 50 00
+46 33 13 55 02
info@sp.se

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FCC ID: B5KAKRC1311013-2

Appendix 1

Description - Equipment Under Test (EUT)

Equipment: GSM Base station transceiver 1900 MHz

Tx Frequency range: 1930.2-1989.8 MHz

Nominal power voltage: 24 V DC

Tested Channels

All tests were performed with the EUT operating together with power amplifier, MCPA KRB 111 103/1 Rev R1B with FCC ID: E675JS0068.

Radiated measurements:

RF configuration 1x4

dTRU	ARFCN	Frequency	Modulation
No 1	512	1930.2 MHz	GMSK
	712	1970.2 MHz	8-PSK
No 2	610	1949.8 MHz	GMSK
	810	1989.8 MHz	8-PSK

RF configuration 1x8

dTRU	ARFCN	Frequency	Modulation
No 1	512	1930.2 MHz	GMSK
	537	1935.2 MHz	8-PSK
No 2	687	1965.2 MHz	GMSK
	712	1970.2 MHz	8-PSK
No 3	610	1949.8 MHz	GMSK
	635	1954.8 MHz	8-PSK
No 4	785	1984.8 MHz	GMSK
	810	1989.8 MHz	8-PSK

RF configuration 1x12

dTRU	ARFCN	Frequency	Modulation
No 1	512	1930.2 MHz	GMSK
	537	1935.2 MHz	8-PSK
No 2	587	1945.2 MHz	GMSK
	637	1955.2 MHz	8-PSK
No 3	687	1965.2 MHz	GMSK
	712	1970.2 MHz	8-PSK
No 4	610	1949.8 MHz	GMSK
	635	1954.8 MHz	8-PSK
No 5	685	1964.8 MHz	GMSK
	735	1974.8 MHz	8-PSK
No 6	785	1984.8 MHz	GMSK
	810	1989.8 MHz	8-PSK

Note : For configuration 1x12 the maximum output power was limited to 2 dB below maximum output power.

The radiated spurious emission measurements were done with the three RF configurations listed above at the same time to simulate worst case.

All radiated measurements were performed with the EUT installed in a RBS 2250 TRX cabinet powered with DC power. The RBS 2250 is a dual band cabinet. During the test the RBS 2250 was also equipped with 800 MHz transceivers and activated to simulate worst case scenario.

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Appendix 1

Conducted measurements:

ARFCN	Frequency
512	1930.2
513	1930.4
537	1935.2
661	1960.0
785	1984.8
809	1989.6
810	1989.8

All RF conducted measurements were performed with the EUT installed in a RBS 2250 TRX cabinet powered with DC power. The measurements were done at the output connector of CDU-L19 (BFL 119 438/1 rev. R1B) with serial number A400157595. The dTRU with serial number AE51646995 was used for the measurements. The measurement was performed with configurations that represents worst case scenario.

Manufacturer's representative

Per Helmersson, Ericsson AB

Purpose of test

The purpose of the tests is to verify compliance to the performance characteristics specified in FCC CFR47.

References

Measurements were done according to relevant parts of the following standards:

ANSI/TIA/EIA-603-B-2002

J-STD007A Vol 1

ANSI/TIA/EIA 136-280-B-2000

Reservation

The test results in this report apply only to the particular Equipment Under Test (EUT) as declared in the report.

Delivery of test object

The test object was delivered: 2005-02-28

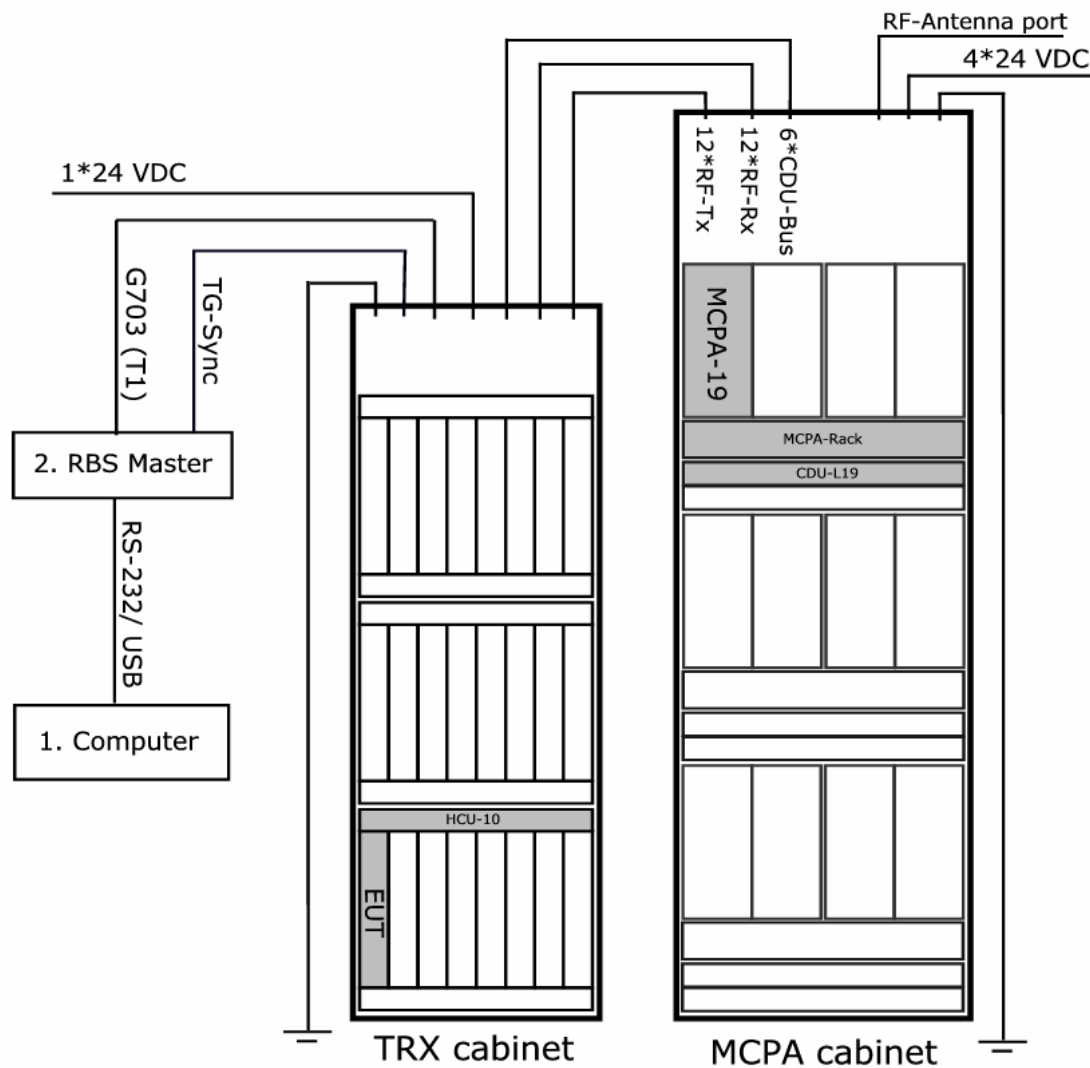
Test engineers

Reinhold Reul, Peter Grahn, and Jonas Bremholt

Test witnesses

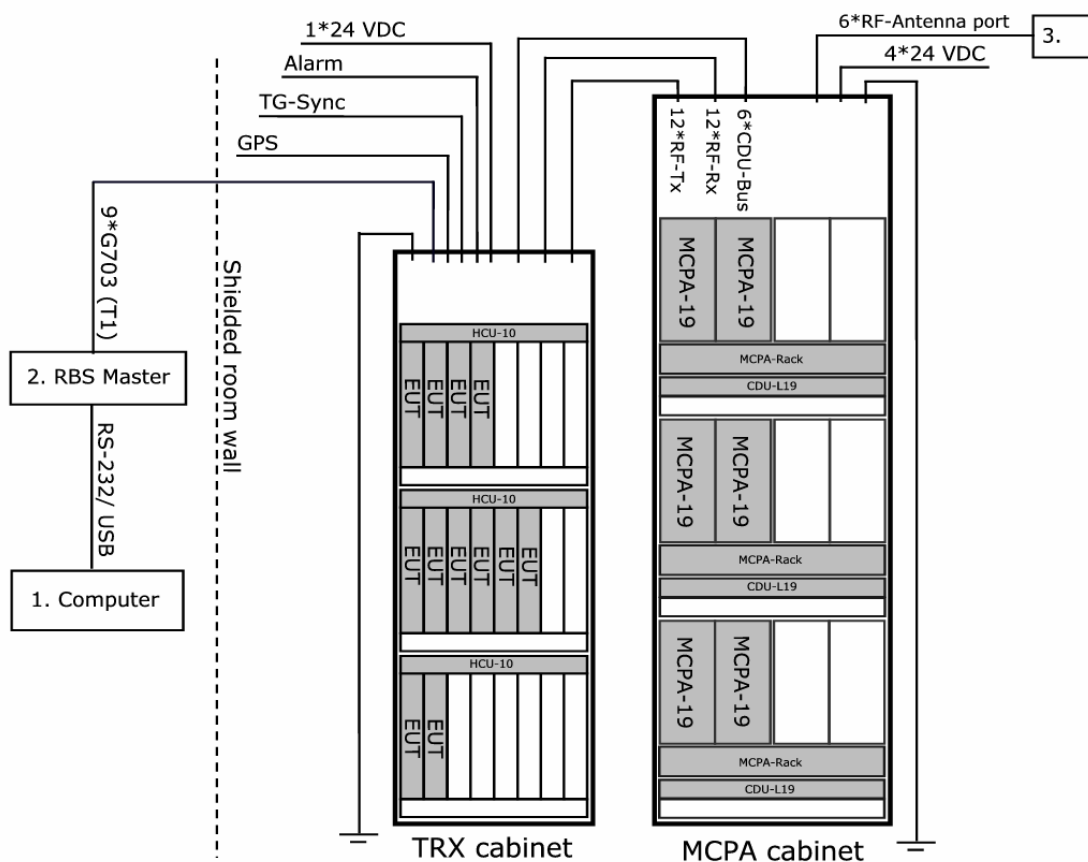
Lars Hagbjörk, Ericsson AB

Test set-up, conducted measurements



1. Computer, with software RBSMMI ver. R9A02
2. Ericsson RBS Master 2 LPY 107 1007/1 software ver. R4C01

Test set-up, radiated measurements



1. 3 units, Computers, with software RBSMMI ver. R9A02
2. 3 units, Ericsson RBS Master 2 LPY 107 1007/1 software ver. R4C01
3. 6 units, Dummy loads (50 ohm)

Interfaces:

24 VDC
Antenna: Coaxial cable (50 ohm)
G703: T1, shielded multi-wire (120 ohm)
TG-sync: Shielded multi-wire
Alarm: Unshielded 4 wire
GPS: Shielded multiwire

Type of port:

DC power
Antenna
Telecom
Signal
Signal
Signal

RF Power output measurements according to 47CFR 2.1046

Date 2005-03-09	Temperature 22 °C ± 3 °C	Humidity 20 % ± 5 %
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Test set-up and procedure

Measurements were made at CDU-L19 output connector. The output was connected to a Peak power analyser via a 50 ohm attenuator. The transmitter was modulated with pseudorandom data and with maximum power in all the time slots during the measurements.

Measurement equipment	Calibration Due	SP number
Boonton RF Peak power meter/analyzer	2005-03	503 144
Boonton Power sensor 56518-S/4	2005-03	503 145
Multimeter Fluke 87	2005-11	502 190
Testo 610, Temperature and humidity meter	2006-12	502 658

Measurement uncertainty: 0.5 dB

Results

GMSK

Rated output power level after CDU-L19 (maximum): 45 dBm

Test conditions T _{nom} 22 °C/ V _{nom} 24 V DC	Transmitter power (dBm) Peak/ Average		
	Channel 512	Channel 661	Channel 810
TRX 1:	44.6/ 43.8	45.0/ 44.2	44.2/ 43.6
TRX 2:	44.5/ 43.8	45.0/ 44.2	44.1/ 43.4

8-PSK

Rated output power level after CDU-L19 (maximum): 45 dBm

Test conditions T _{nom} 22 °C/ V _{nom} 24 V DC	Transmitter power (dBm) Peak/ Average		
	Channel 512	Channel 661	Channel 810
TRX 1:	44.6/ 40.7	45.0/ 41.1	44.3/ 40.4
TRX 2:	44.5/ 40.7	45.0/ 41.1	44.1/ 40.2

Limit

§ 24.232: Maximum peak output power shall not exceed 100W (50dBm).

GMSK: The measured output power shall be within ± 2dB of the rated output power (J-STD007A Vol 1)

8-PSK: The measured output power shall be within +1 to -3 dB of the rated output power (ANSI/TIA/EIA 136-280-B)

Complies?	Yes
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Modulation characteristics measurements according to 47CFR 2.1047

Date 2005-03-02	Temperature 21 °C ± 3 °C	Humidity 22 % ± 5 %
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Test set-up and procedure

Measurements were made at CDU-L19 output connector. The output was connected to a spectrum analyser. The spectrum analyser was connected to an external 10 MHz reference standard during measurement.

The transmitter was activated at maximum output power and modulated with pseudorandom data during the measurements.

Measurement equipment	Calibration Due	SP number
R&S FSIQ	2005-04	503 738
Multimeter Fluke 87	2005-11	502 190
Testo 610, Temperature and humidity meter	2006-12	502 658

Results

Tested channel: 661 (1960.0 MHz)

GMSK

Test conditions		Phase error (° _{RMS})	
Supply voltage DC (V)	T (°C)	TRX 1	TRX 2
24.0	+20	1.6	1.5
Maximum phase error (°)		1.6	

8-PSK

Test conditions		EVM (% _{RMS})	
Supply voltage DC (V)	T (°C)	TRX 1	TRX 2
24.0	+20	3.1	2.8
Maximum EVM (% _{RMS})		3.1	

Test conditions		Origin offset (dBc)	
Supply voltage DC (V)	T (°C)	TRX 1	TRX 2
24.0	+20	-41.1	39.2
Maximum origin offset (dBc)		-39.2	

Limits

GMSK: The tolerance of the maximum output phase error shall not be greater than 5 degrees (J-STD007A Vol 1).

8-PSK: The Error Vector Magnitude (EVM) shall be less than 12.5 %_{RMS}
The origin offset in any burst shall be less than -30 dBc.
(ANSI/TIA/EIA 136-280-B)

Complies?	Yes
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Occupied bandwidth measurements according to 47CFR 2.1049

Date 2005-03-09	Temperature 22 °C ± 3 °C	Humidity 20 % ± 5 %
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Test set-up and procedure

The measurements were made per definition in §24.238. Measurements were made at CDU-J19 output connector. The output was connected to a spectrum analyser. The spectrum analyser was connected to an external 10 MHz reference standard during the measurements. The transmitter was activated at maximum output power and modulated with pseudorandom data during the measurements.

Measurement equipment	Calibration Due	SP number
R&S FSIQ	2005-04	503 738
Testo 610, Temperature and humidity meter	2006-12	502 658

Measurement uncertainty: 3.7 dB

Results

The results are shown in appendix 4.1

GMSK**TRX 1:**

- Diagram 1 Ch 661 Reference level
Diagram 2 Ch 661 26 dB points

TRX 2:

- Diagram 3 Ch 661 Reference level
Diagram 4 Ch 661 26 dB points

8-PSK**TRX 1:**

- Diagram 5 Ch 661 Reference level
Diagram 6 Ch 661 26 dB points

TRX 2:

- Diagram 7 Ch 661 Reference level
Diagram 8 Ch 661 26 dB points

Limits

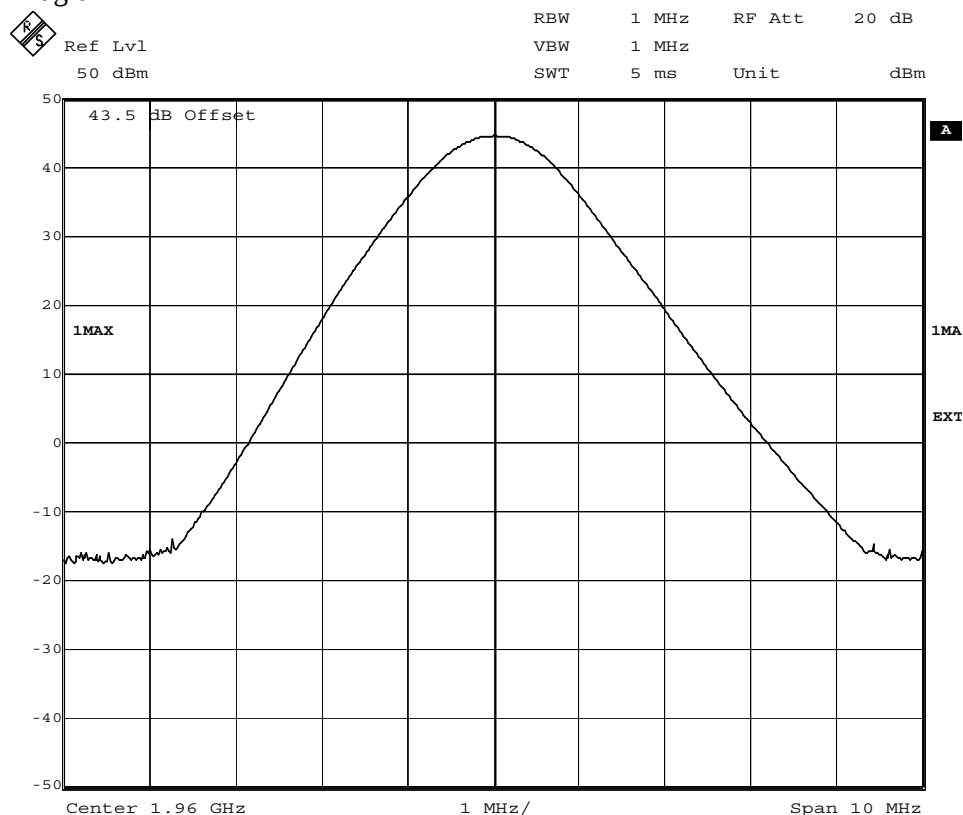
The power of any emission outside the frequency band shall be attenuated below the transmitter power (P) by at least $43 + 10 \log P$ dB.

Complies?	Yes
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FCC ID: B5KAKRC1311013-2

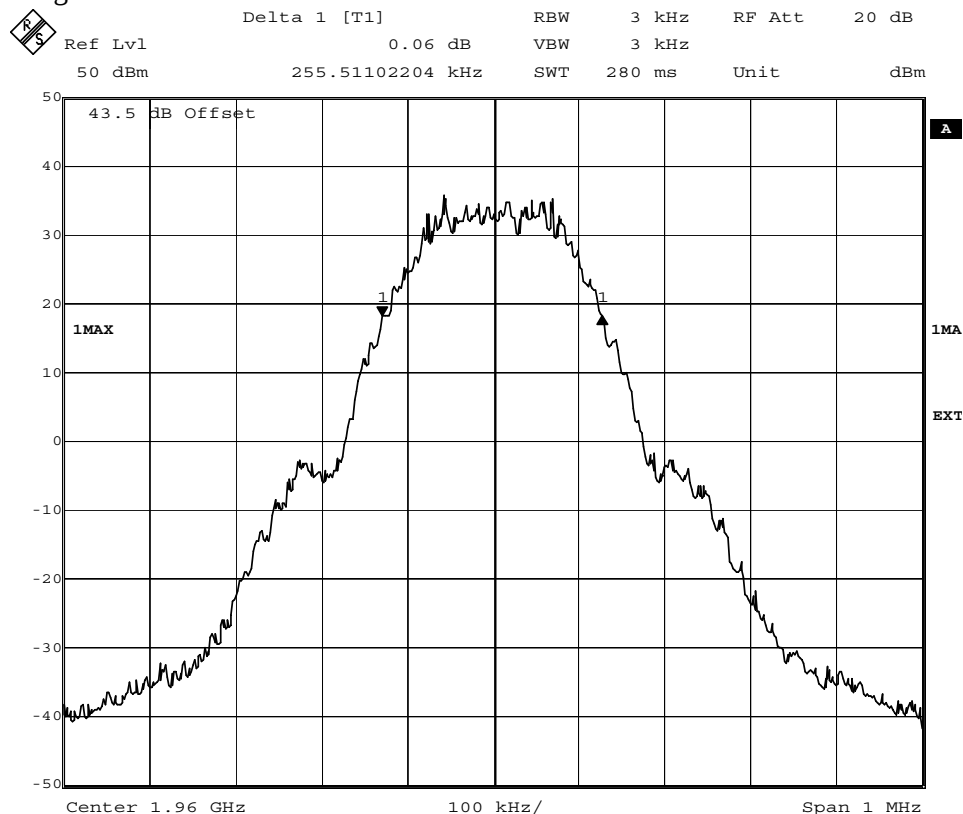
Appendix 4.1

Diagram 1



Date: 9.MAR.2005 12:16:25

Diagram 2

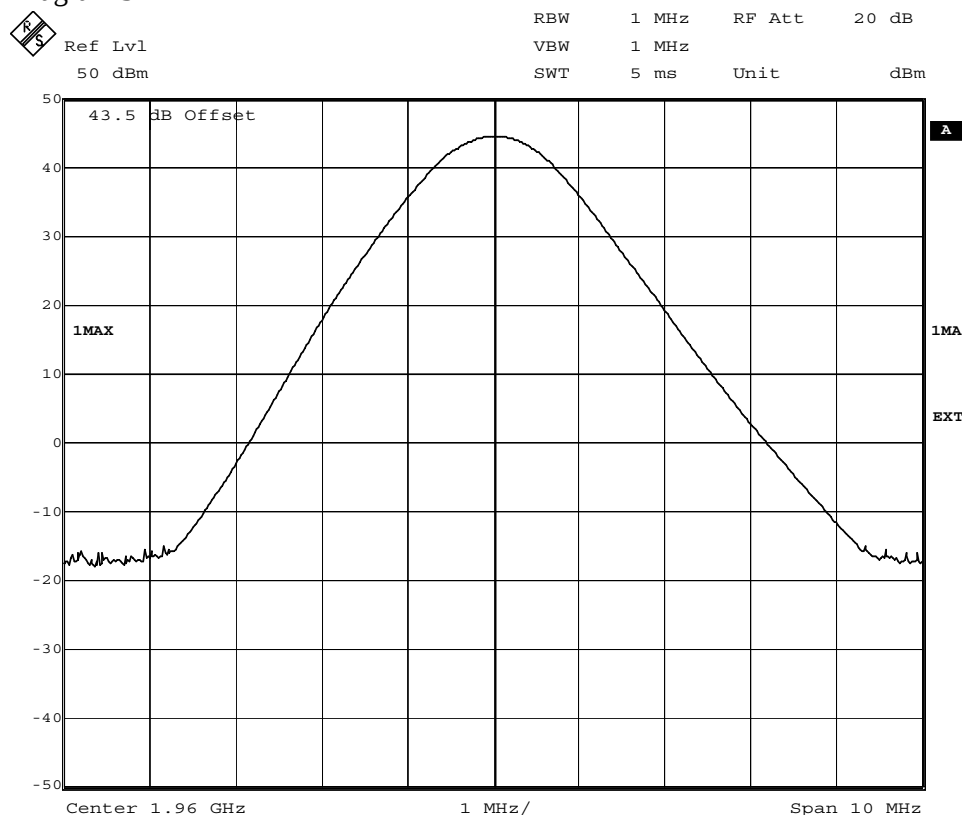


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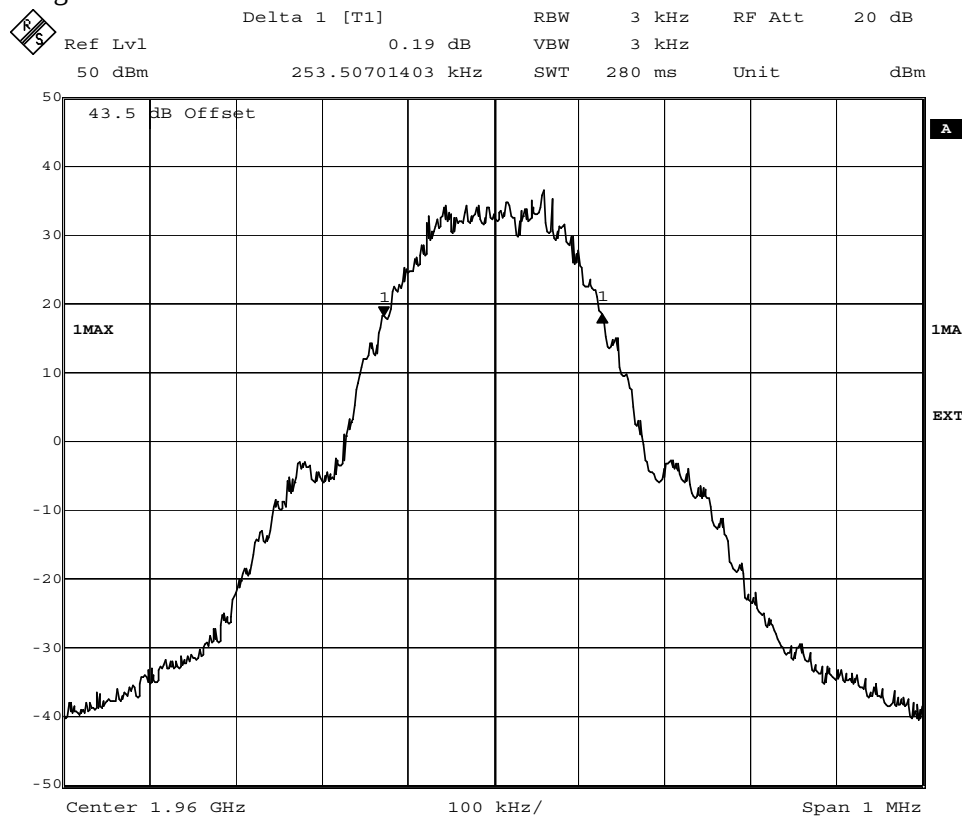
Appendix 4.1

Diagram 3



Date: 9.MAR.2005 12:19:10

Diagram 4

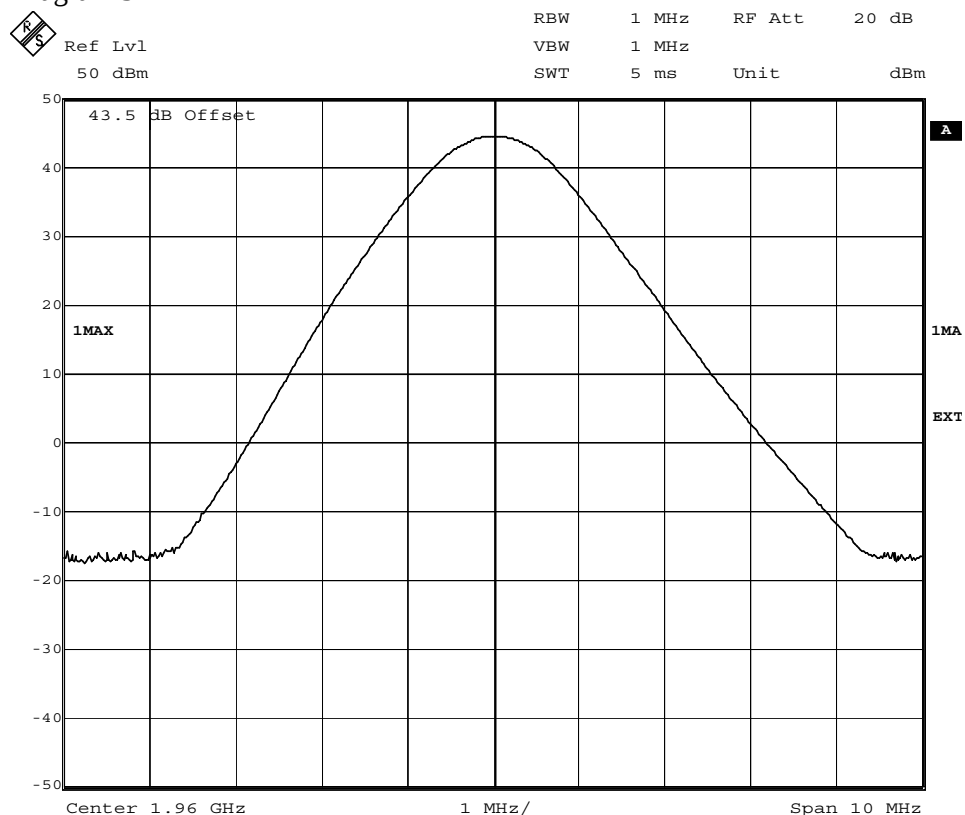


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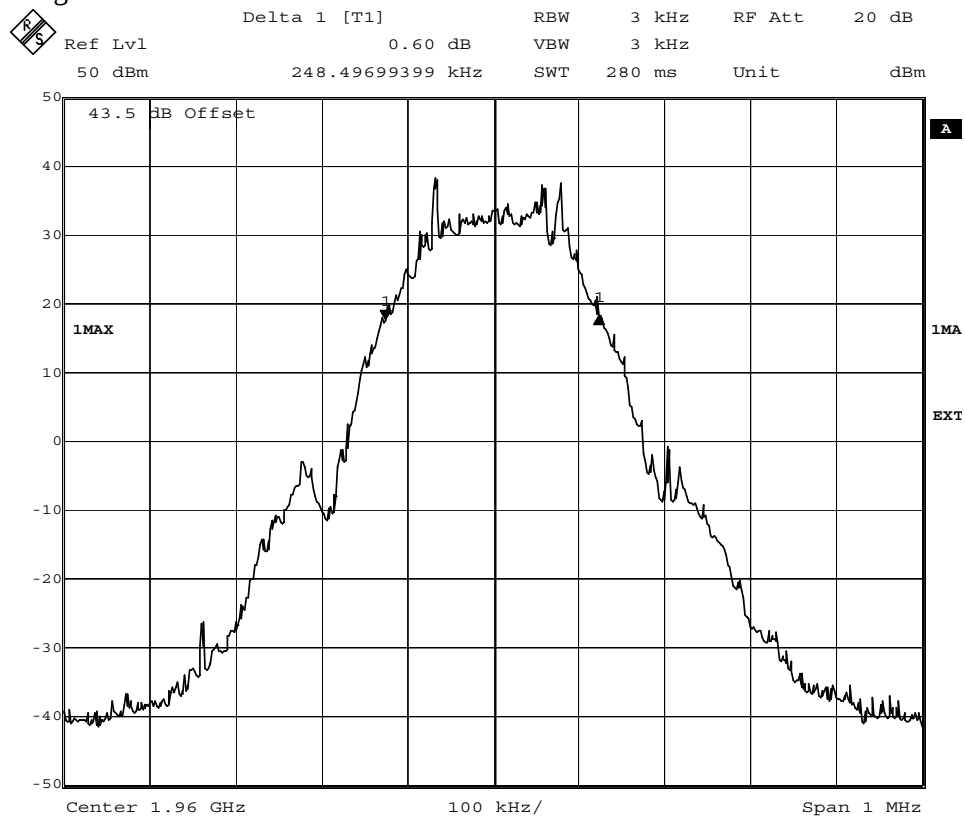
Appendix 4.1

Diagram 5



Date: 9.MAR.2005 11:14:30

Diagram 6

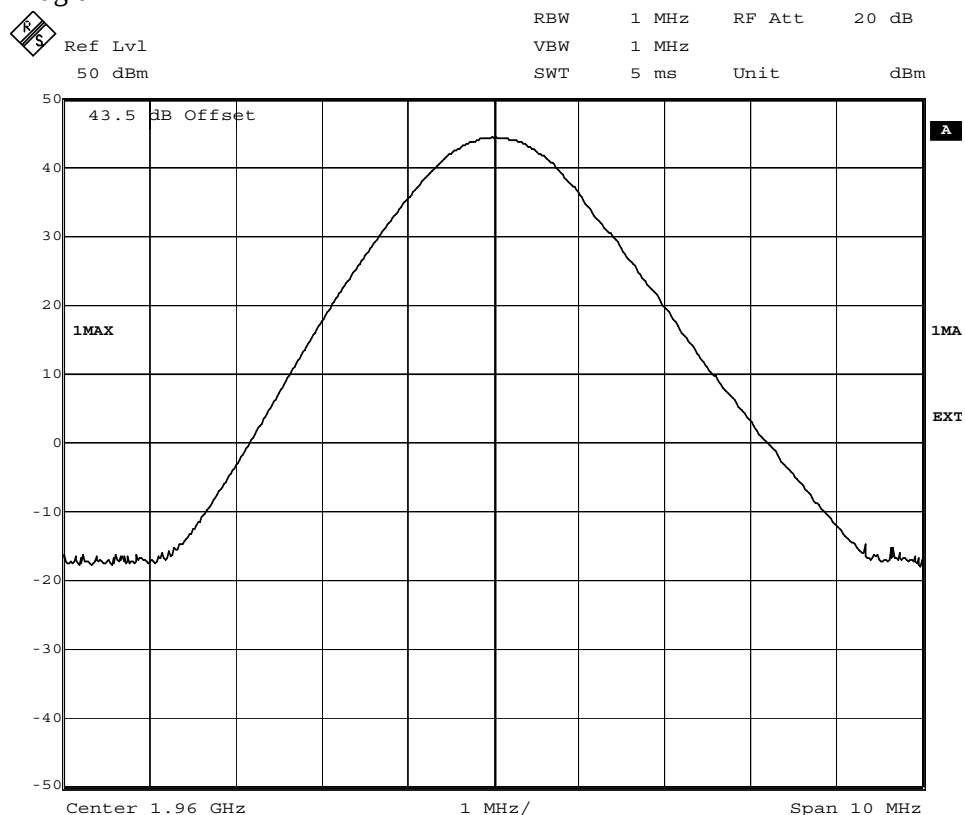


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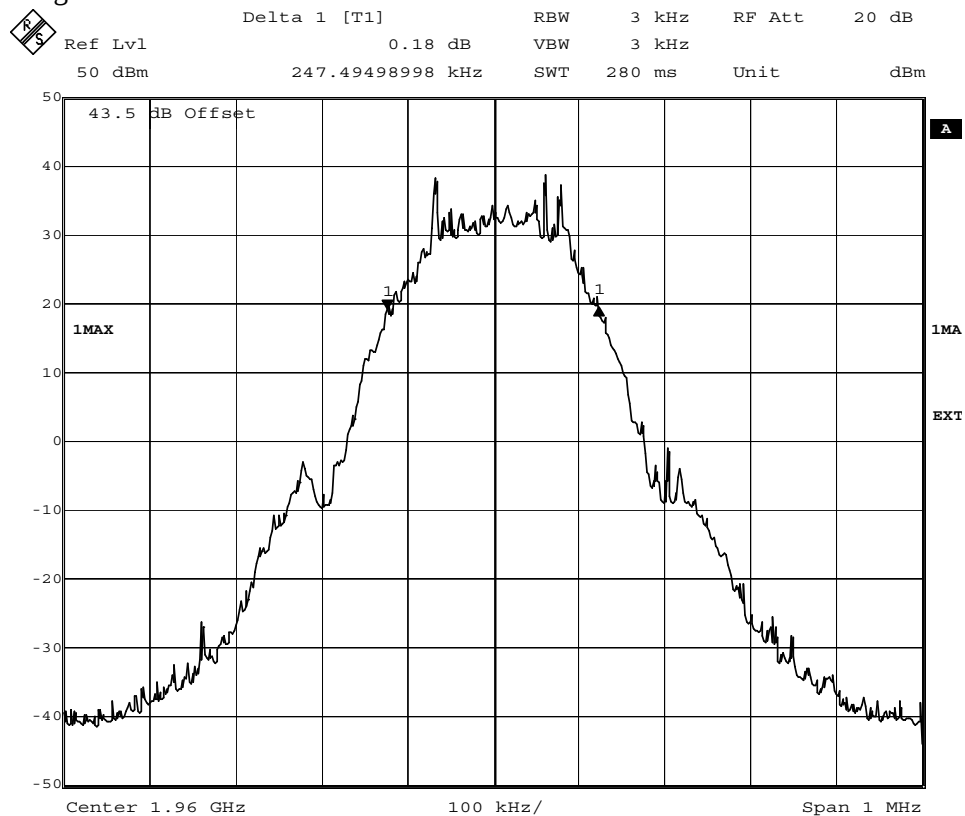
Appendix 4.1

Diagram 7



Date: 9.MAR.2005 11:25:26

Diagram 8



Date: 9.MAR.2005 11:27:09

Band edge measurements according to 47CFR 2.1049

Date 2005-03-09	Temperature 22 °C ± 3 °C	Humidity 20 % ± 5 %
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Test set-up and procedure

The measurements were made per definition in 24.238. The measurements were made at CDU-L19 output connectors. The output was connected to a spectrum analyser with the average detector activated. A resolution bandwidth of 3 kHz (1% of OBW) was used up to 5 MHz away from the band edges. As the FCC rules specify a RBW of 1 MHz for measurements of emissions >1 MHz away from the band edges, the limit was adjusted with 25.2 dB to -38.2 dBm to compensate for the reduced measurement bandwidth.

The spectrum analyzer was connected to an external 10 MHz reference standard during the measurements. The transmitter was modulated with pseudorandom data during the measurements.

Measurement equipment	Calibration Due	SP number
R&S FSIQ	2005-04	503 738
Testo 610, Temperature and humidity meter	2004-12	502 658

Measurement uncertainty: 3.7 dB

Results

The results are shown in appendix 5.1

GMSK

TRX 1:

- Diagram 1 Ch 512 (1930.2 MHz) Band edge 40.3 dBm output power
- Diagram 2 Ch 513 (1930.4 MHz) Band edge 45 dBm output power
- Diagram 3 Ch 809 (1989.6 MHz) Band edge 45 dBm output power
- Diagram 4 Ch 810 (1989.8 MHz) Band edge 42.0 dBm output power

TRX 2:

- Diagram 5 Ch 512 (1930.2 MHz) Band edge 40.3 dBm output power
- Diagram 6 Ch 513 (1930.4 MHz) Band edge 45 dBm output power
- Diagram 7 Ch 809 (1989.6 MHz) Band edge 45 dBm output power
- Diagram 8 Ch 810 (1989.8 MHz) Band edge 42.0 dBm output power

8-PSK

TRX 1:

- Diagram 9 Ch 512 (1930.2 MHz) Band edge 45 dBm output power
- Diagram 10 Ch 810 (1989.8 MHz) Band edge 45 dBm output power

TRX 2:

- Diagram 11 Ch 512 (1930.2 MHz) Band edge 45 dBm output power
- Diagram 12 Ch 810 (1989.8 MHz) Band edge 45 dBm output power

Remarks

The maximum peak output powers with GMSK modulation that can be used on the channels adjacent to the frequency band edges are 40.3 dBm (channel 512) and 42.0 dBm (channel 810) in order to comply.



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Appendix 5

Limits

The power of any emission outside the frequency band shall be attenuated below the transmitter power (P) by at least $43 + 10 \log P$ dB.

Complies?	Yes
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FCC ID: B5KAKRC1311013-2

Appendix 5.1

Diagram 1

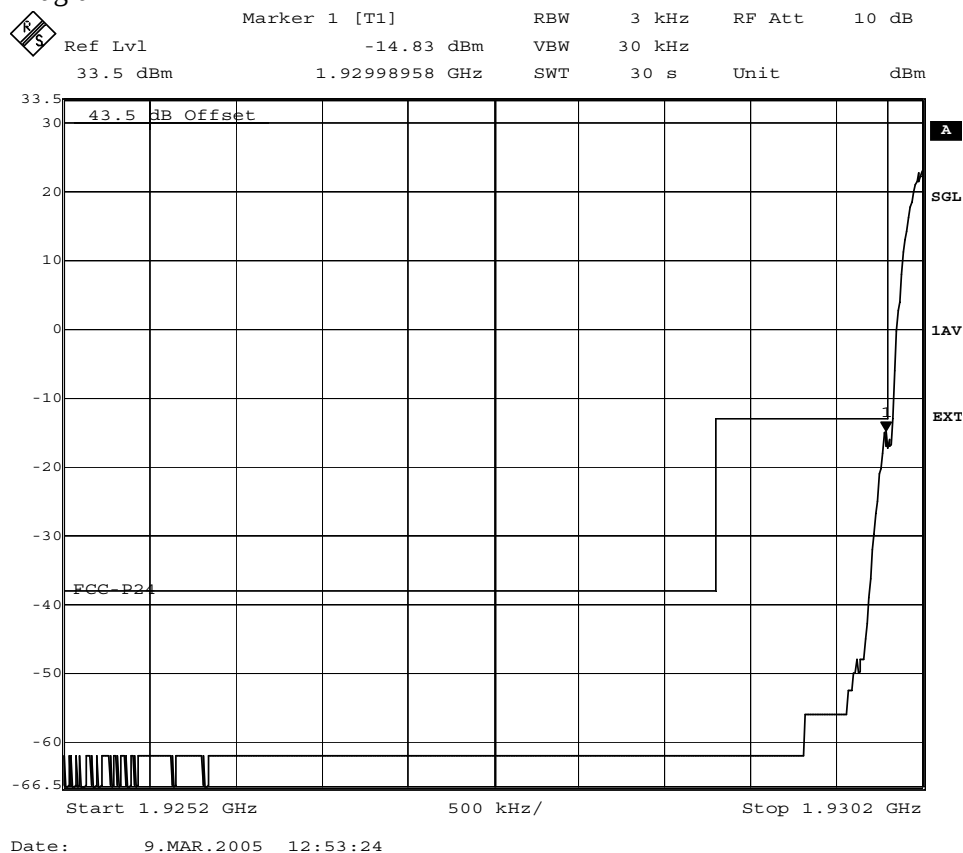
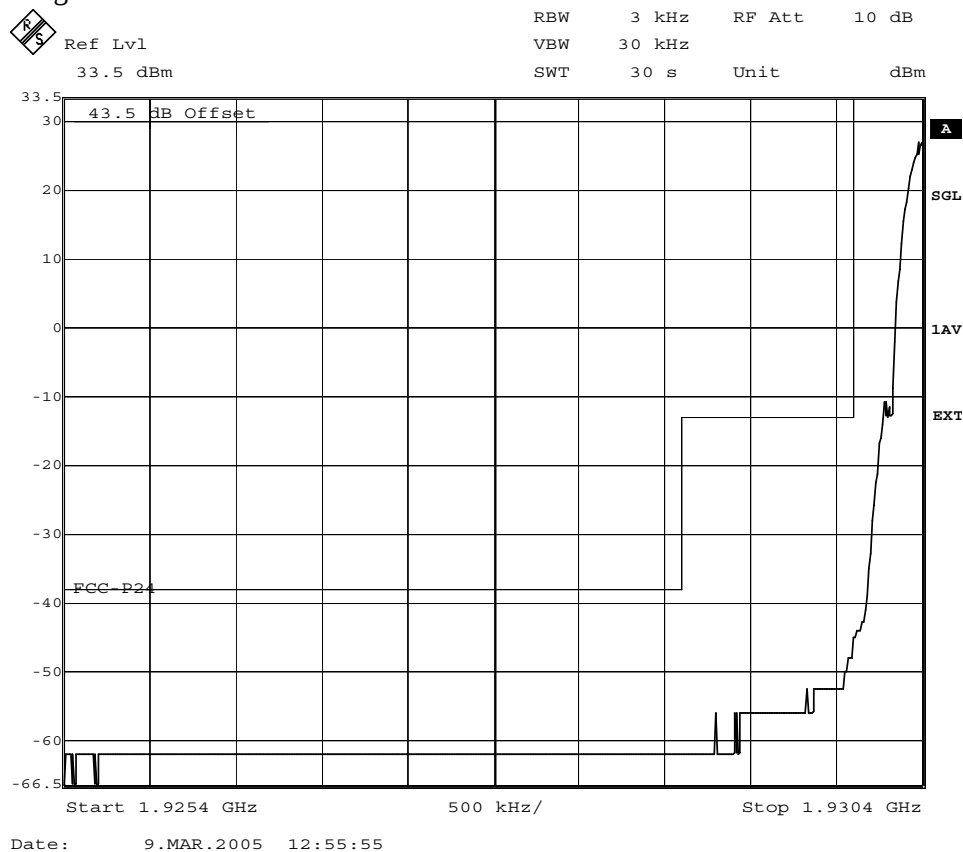


Diagram 2



FCC ID: B5KAKRC1311013-2

Appendix 5.1

Diagram 3

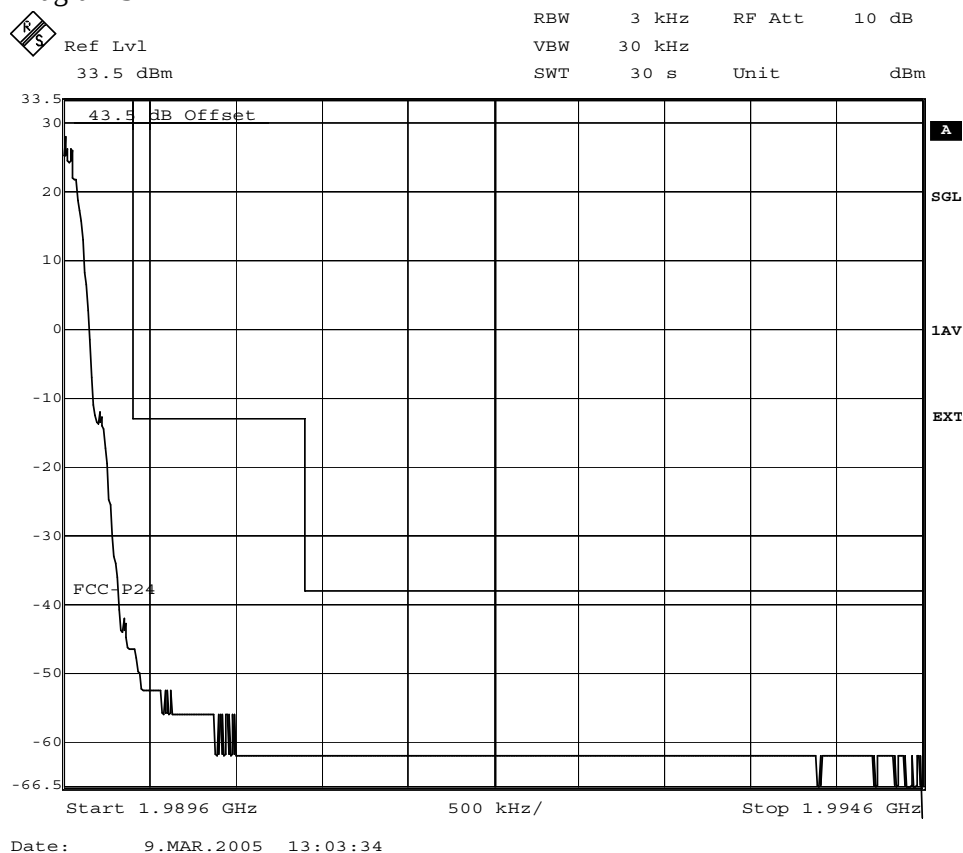
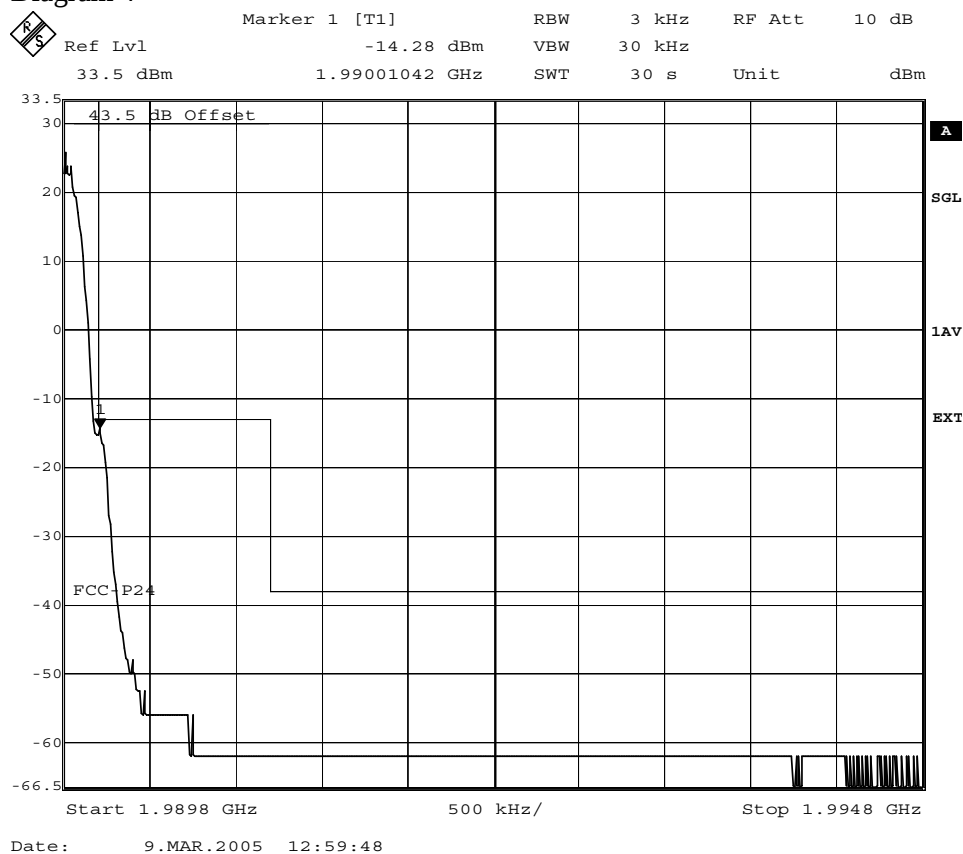


Diagram 4



FCC ID: B5KAKRC1311013-2

Appendix 5.1

Diagram 5

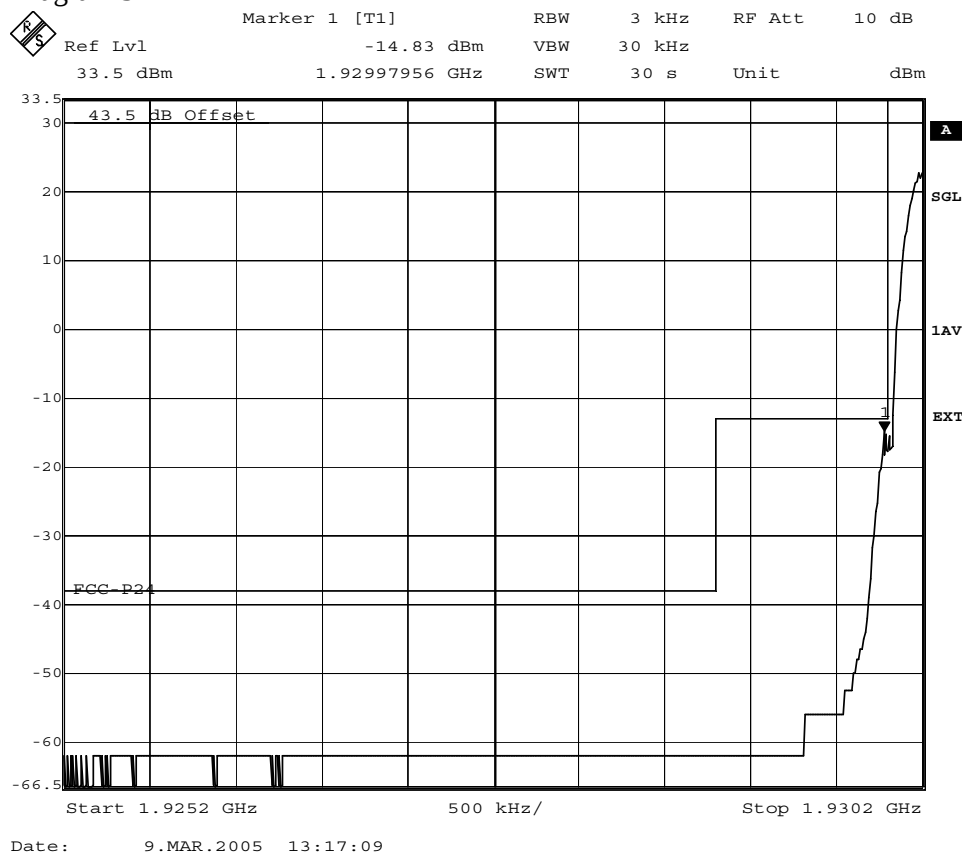
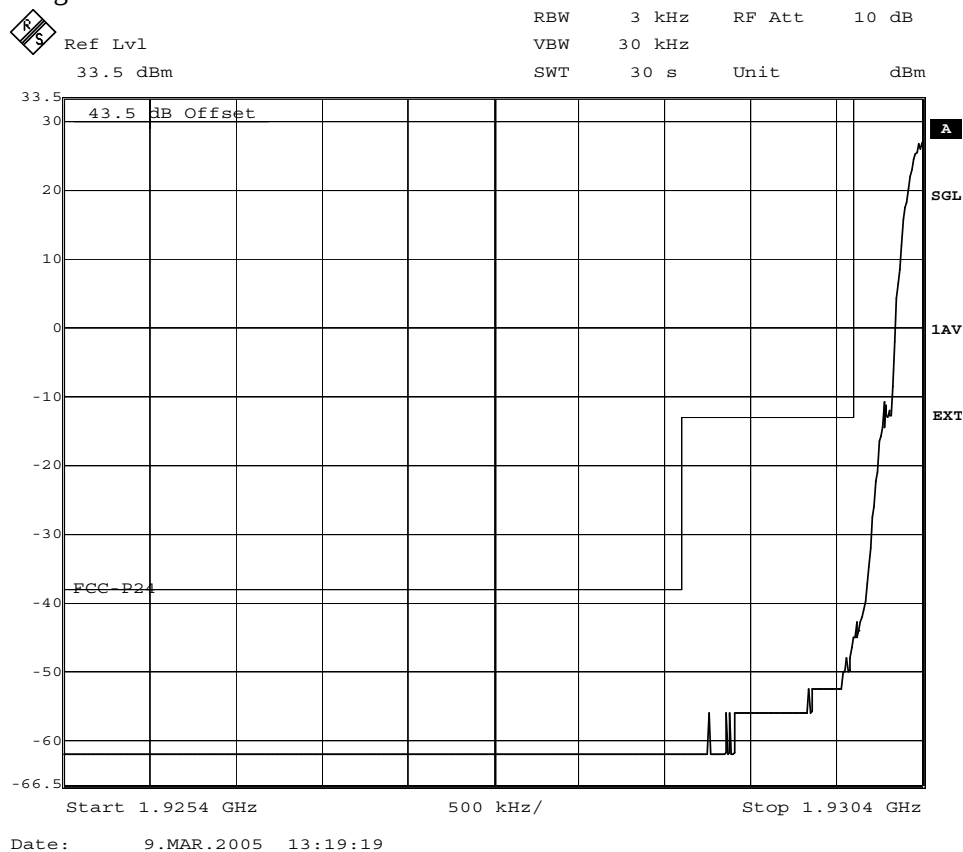


Diagram 6



FCC ID: B5KAKRC1311013-2

Appendix 5.1

Diagram 7

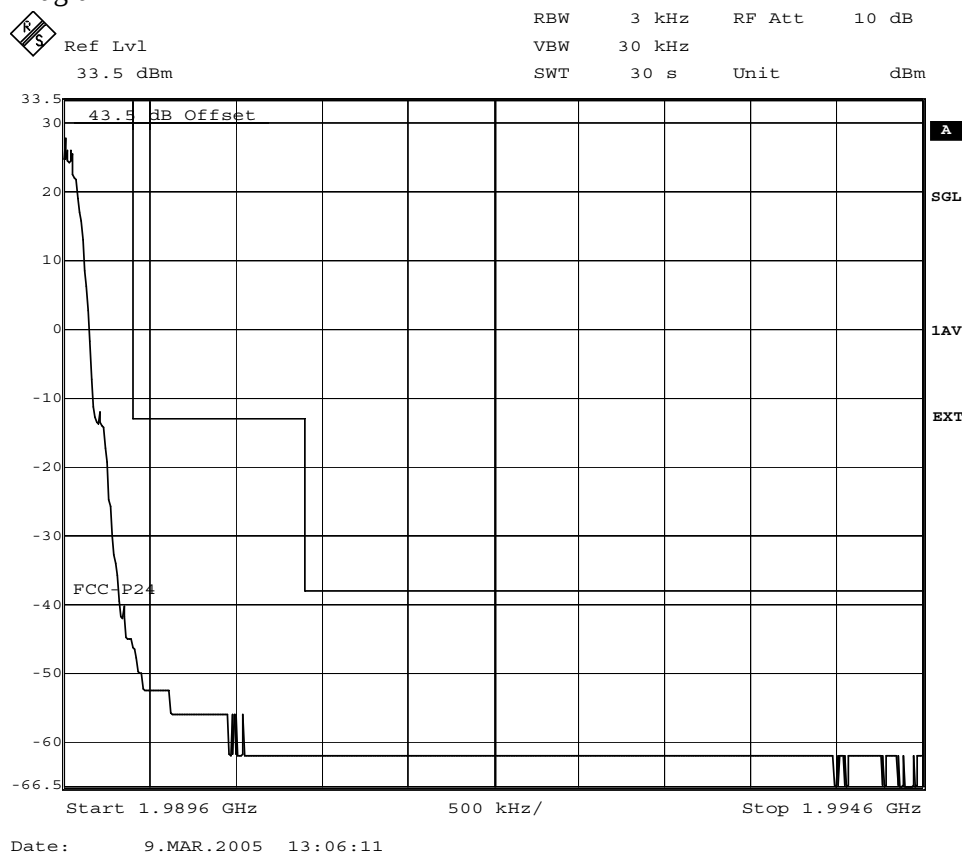
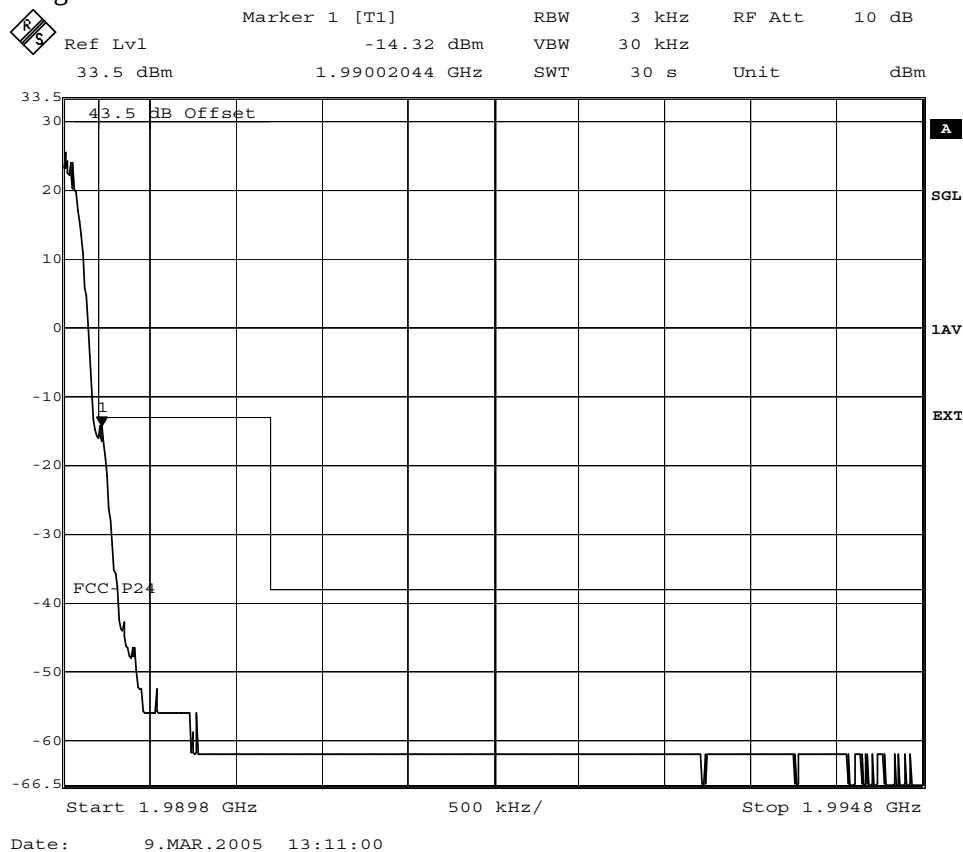


Diagram 8



FCC ID: B5KAKRC1311013-2

Appendix 5.1

Diagram 9

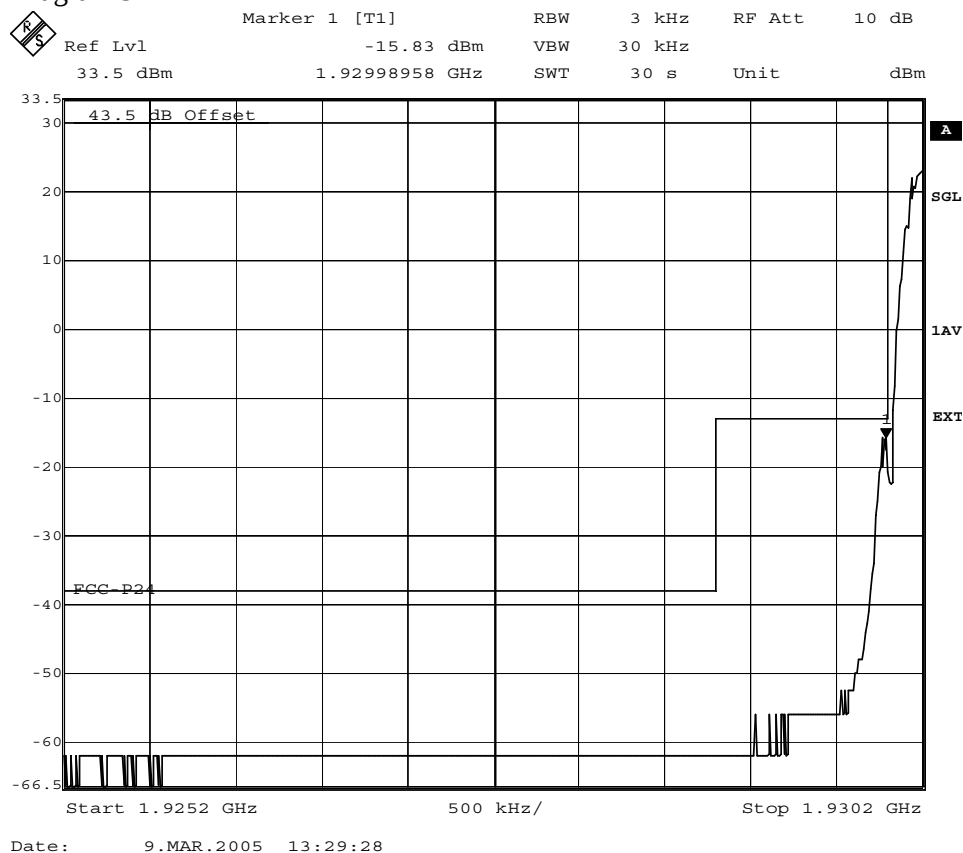
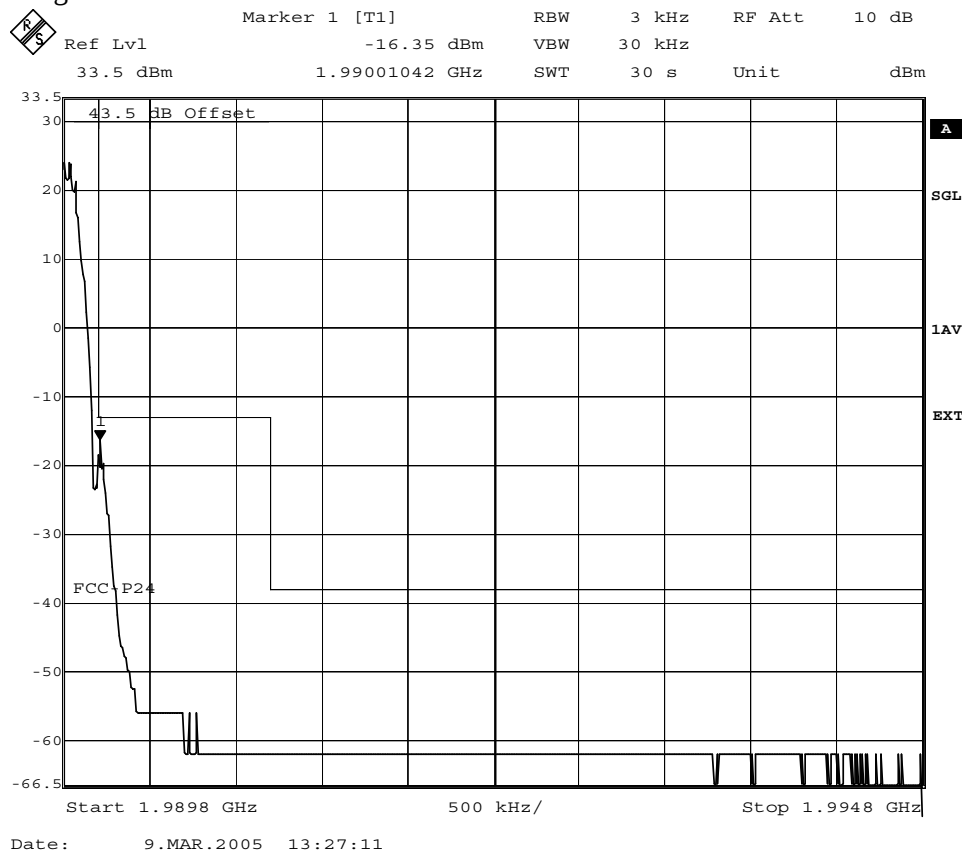


Diagram 10



FCC ID: B5KAKRC1311013-2

Appendix 5.1

Diagram 11

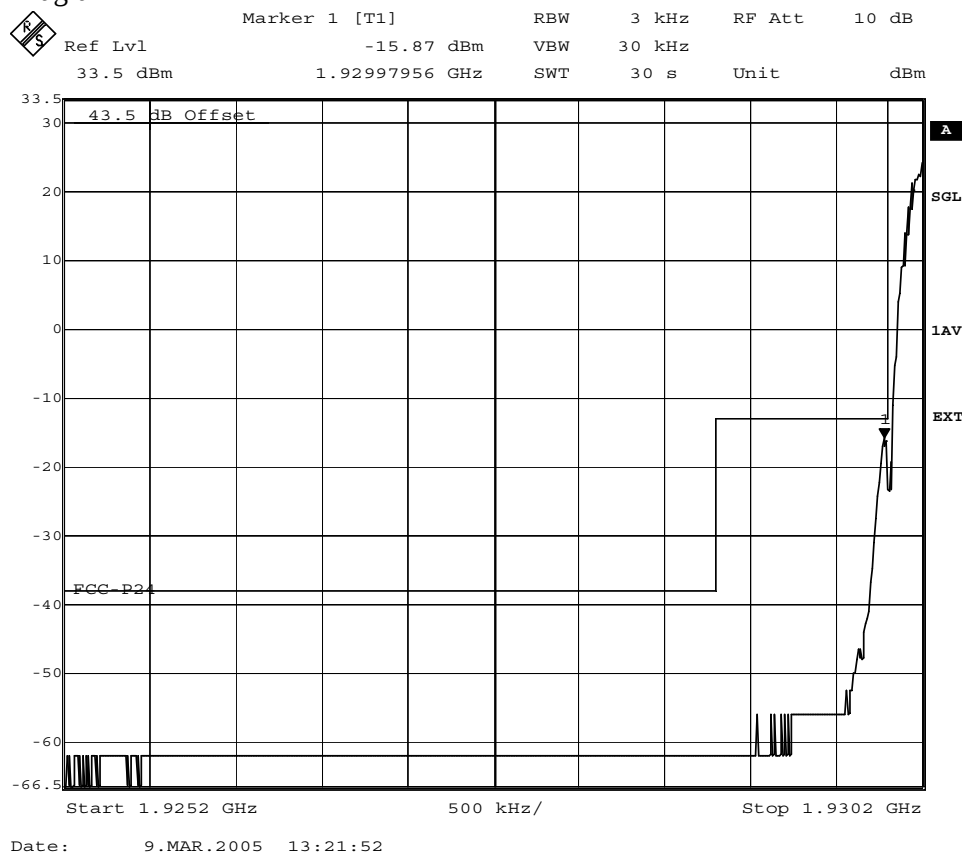
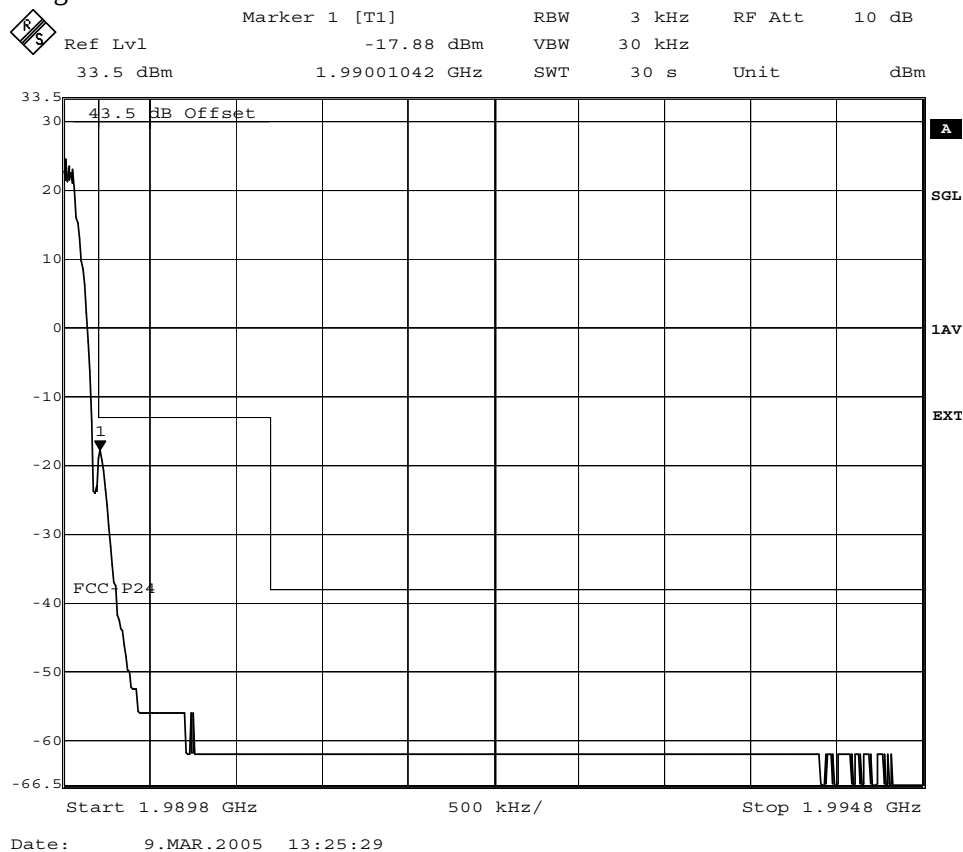


Diagram 12



Conducted spurious emission measurements according to 47CFR 2.1051

Date 2005-03-09	Temperature 22 °C ± 3 °C	Humidity 20 % ± 5 %
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Test set-up and procedure

The measurements were made per definition in 24.238. Measurements were made at CDU-L19 output connector. The output was connected to a spectrum analyser. The spectrum analyser was connected to an external 10 MHz reference standard during the measurements. The transmitter was activated at maximum output power and modulated with pseudorandom data during the measurements.

Measurement equipment	Calibration Due	SP number
R&S FSIQ	2005-04	503 738
HP filter	2005-04	502 758
Testo 610, Temperature and humidity meter	2006-12	502 658

Measurement uncertainty: 3.7 dB

Results

The results are shown in appendix 6.1

GMSK

TRX 1:

Diagram 1: Ch 512

Diagram 2: Ch 810

TRX 2:

Diagram 3: Ch 512

Diagram 4: Ch 810

TRX 1+2:

Diagram 5: TRX 1 Ch 512 and TRX 2 ch 537

Diagram 6: TRX 1 Ch 810 and TRX 2 ch 785

8-PSK

TRX 1:

Diagram 7: Ch 512

Diagram 8: Ch 810

TRX 2:

Diagram 9: Ch 512

Diagram 10: Ch 810

TRX 1+2:

Diagram 11: TRX 1 Ch 512 and TRX 2 ch 537

Diagram 12: TRX 1 Ch 810 and TRX 2 ch 785

Limits

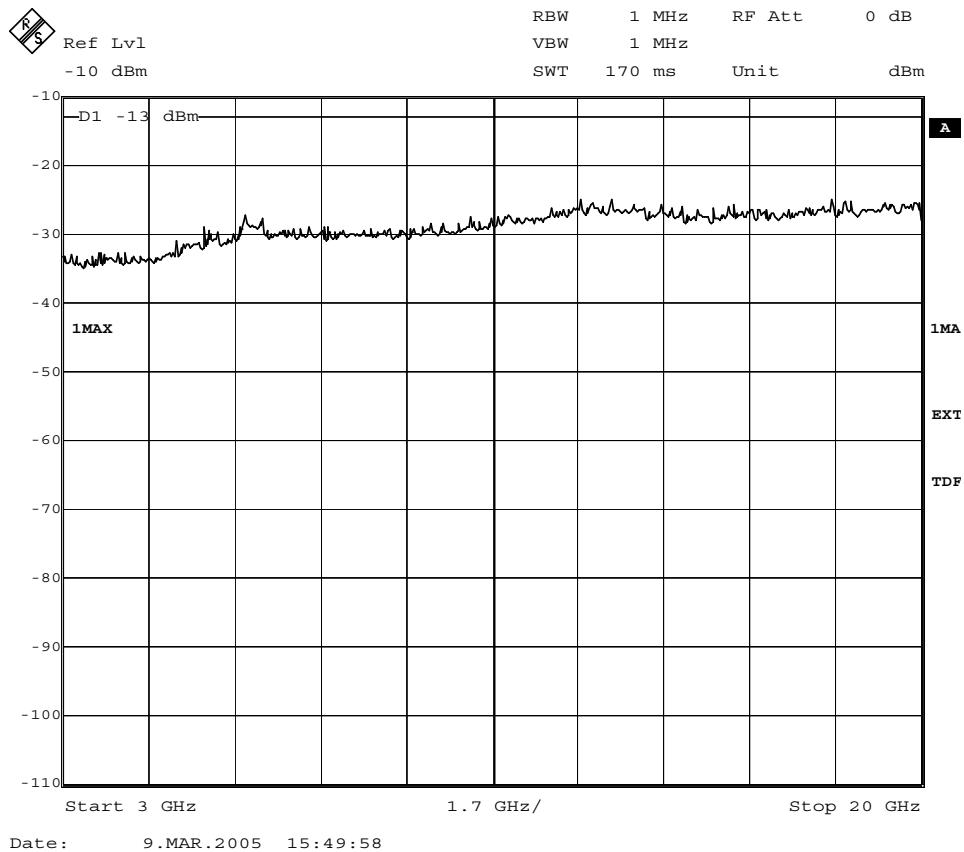
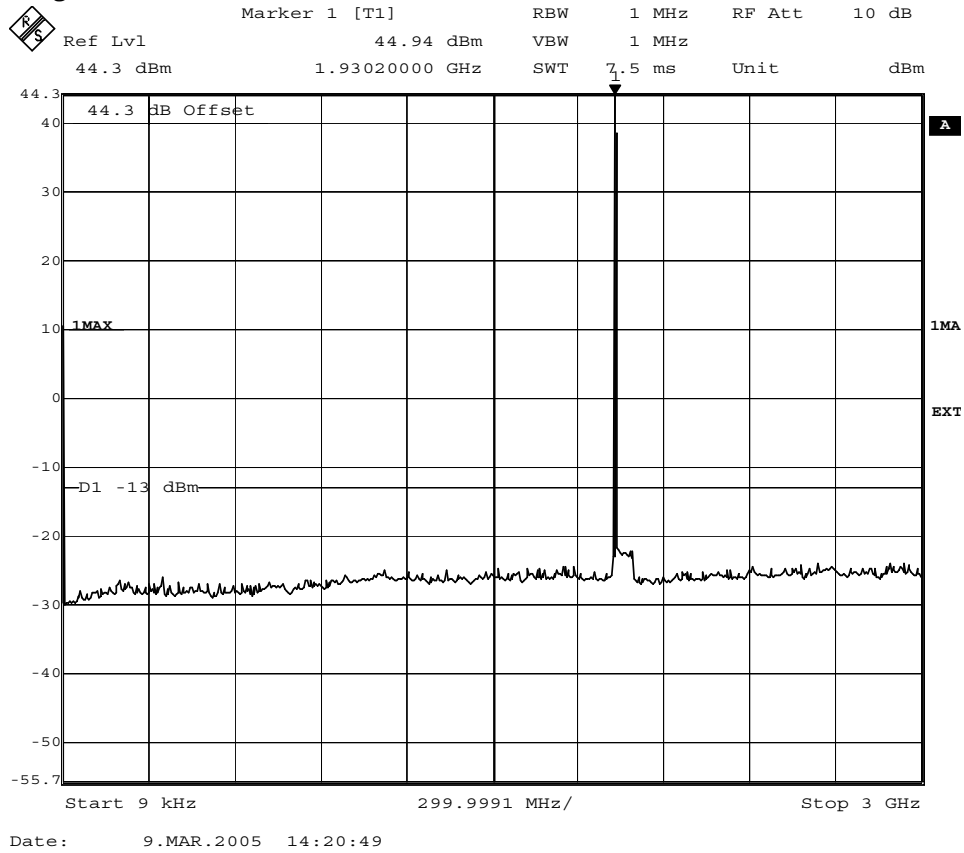
The power of any emission outside the frequency band shall be attenuated below the transmitter power (P) by at least $43 + 10 \log P$ dB.

Complies?	Yes
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FCC ID: B5KAKRC1311013-2

Appendix 6.1

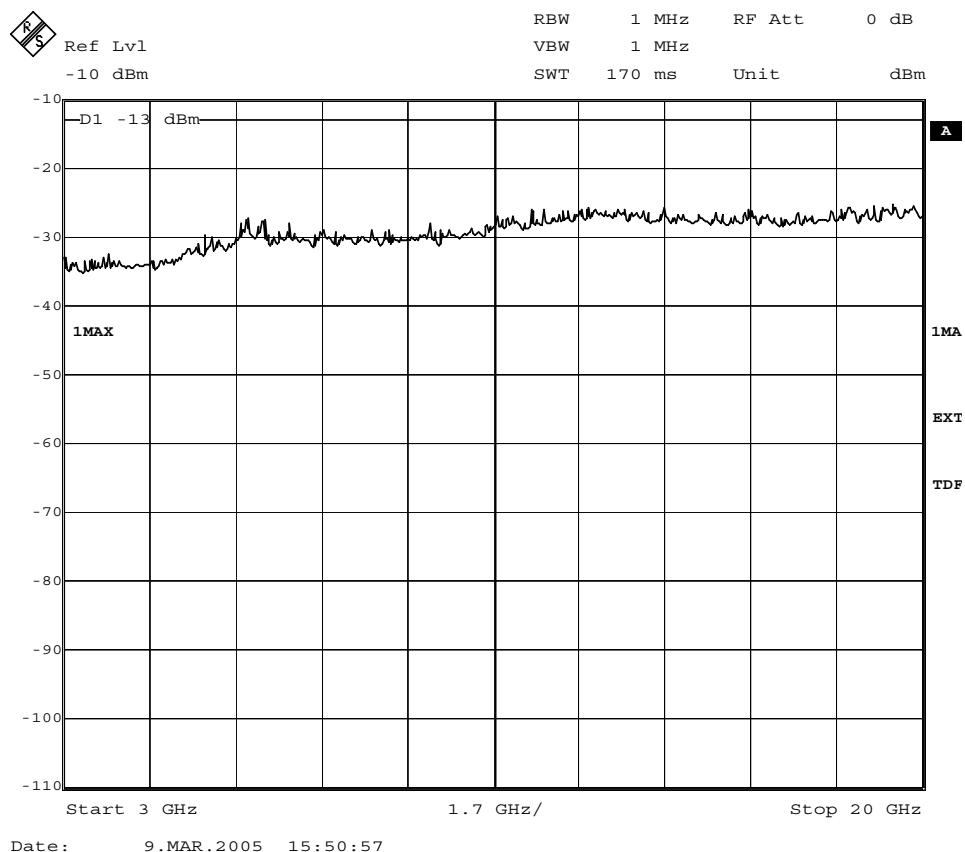
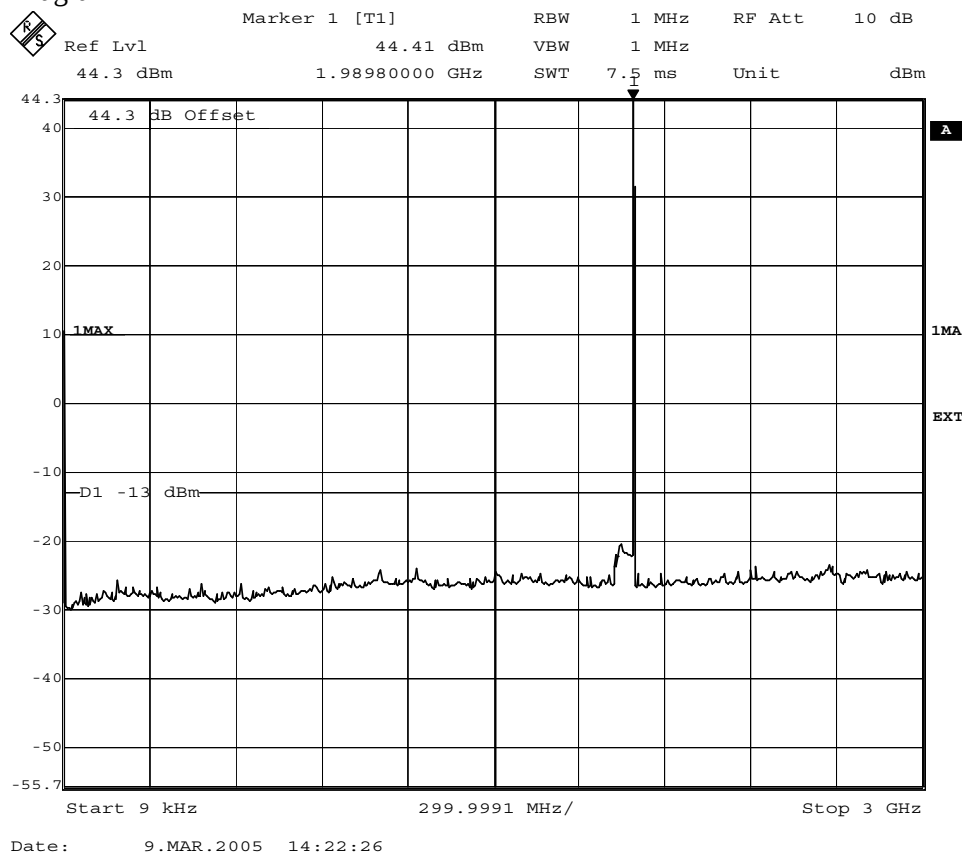
Diagram 1



FCC ID: B5KAKRC1311013-2

Appendix 6.1

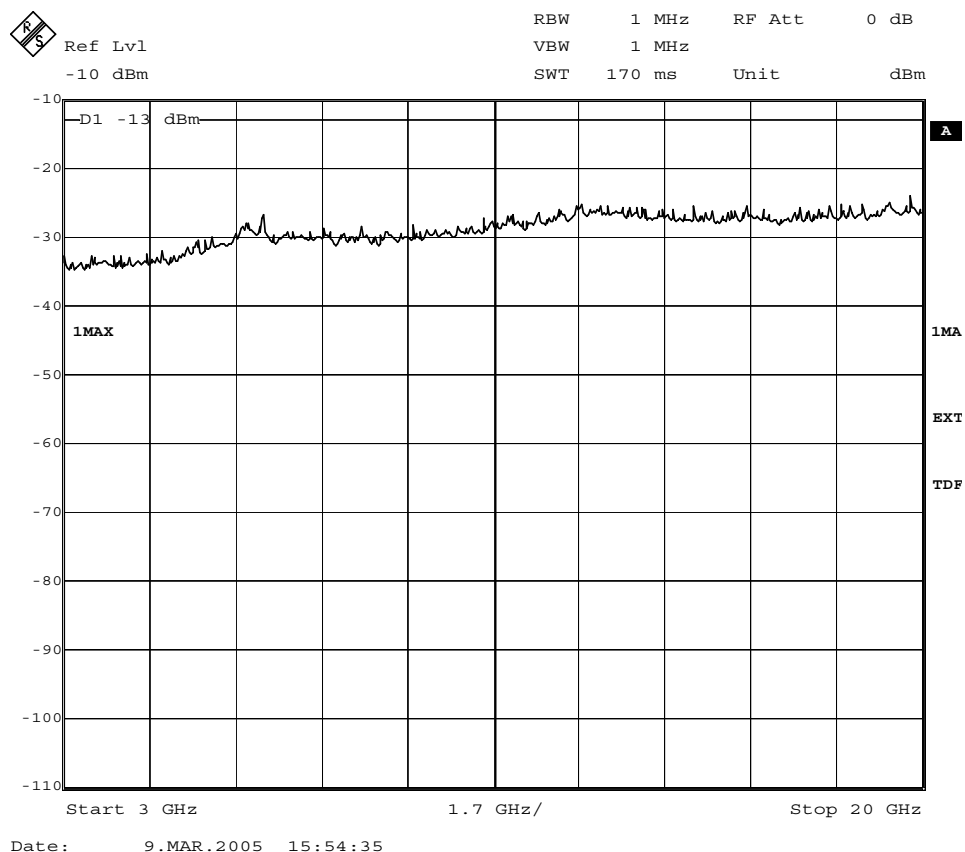
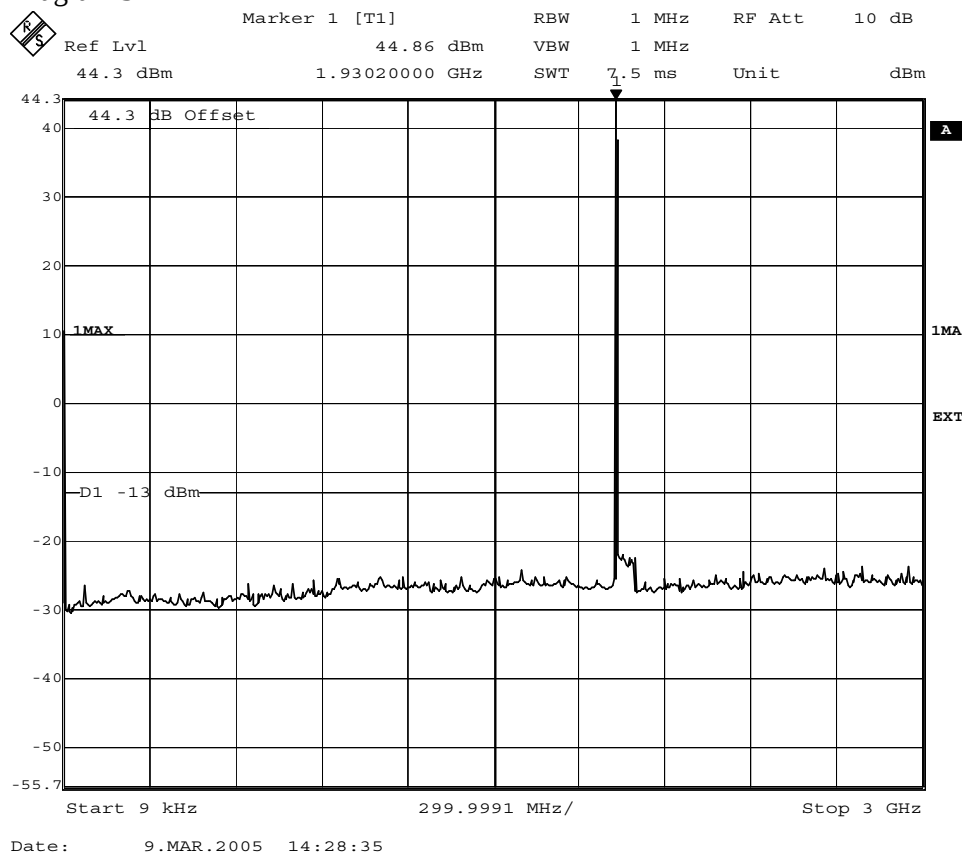
Diagram 2



FCC ID: B5KAKRC1311013-2

Appendix 6.1

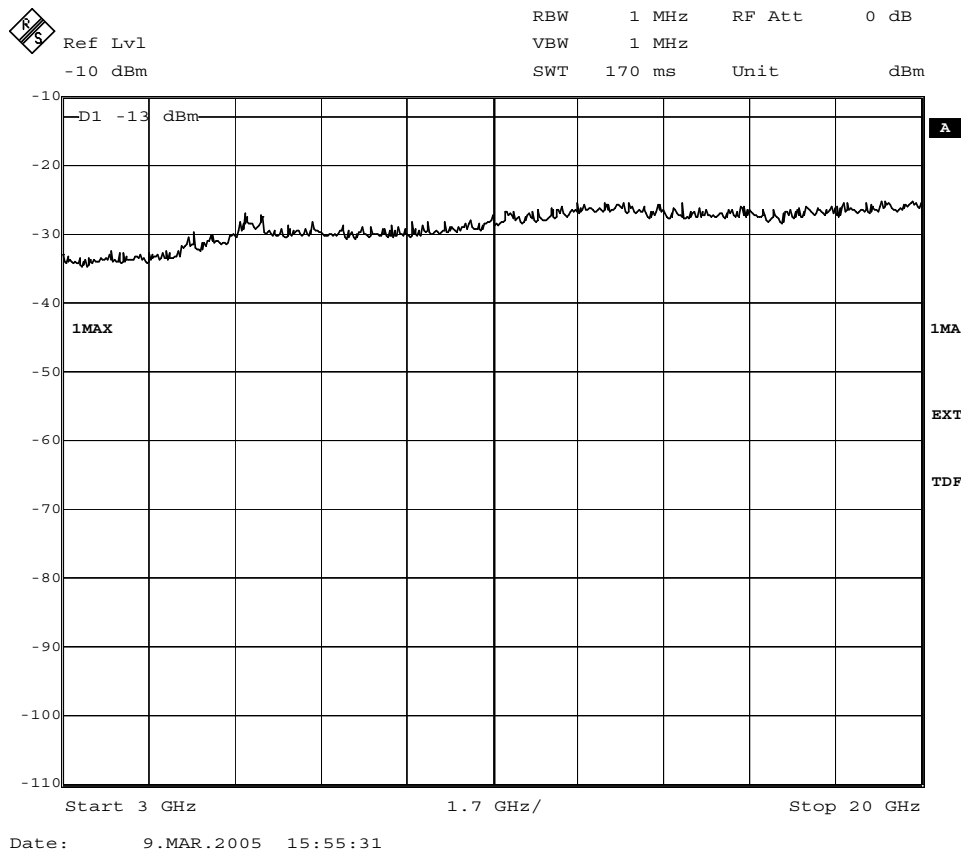
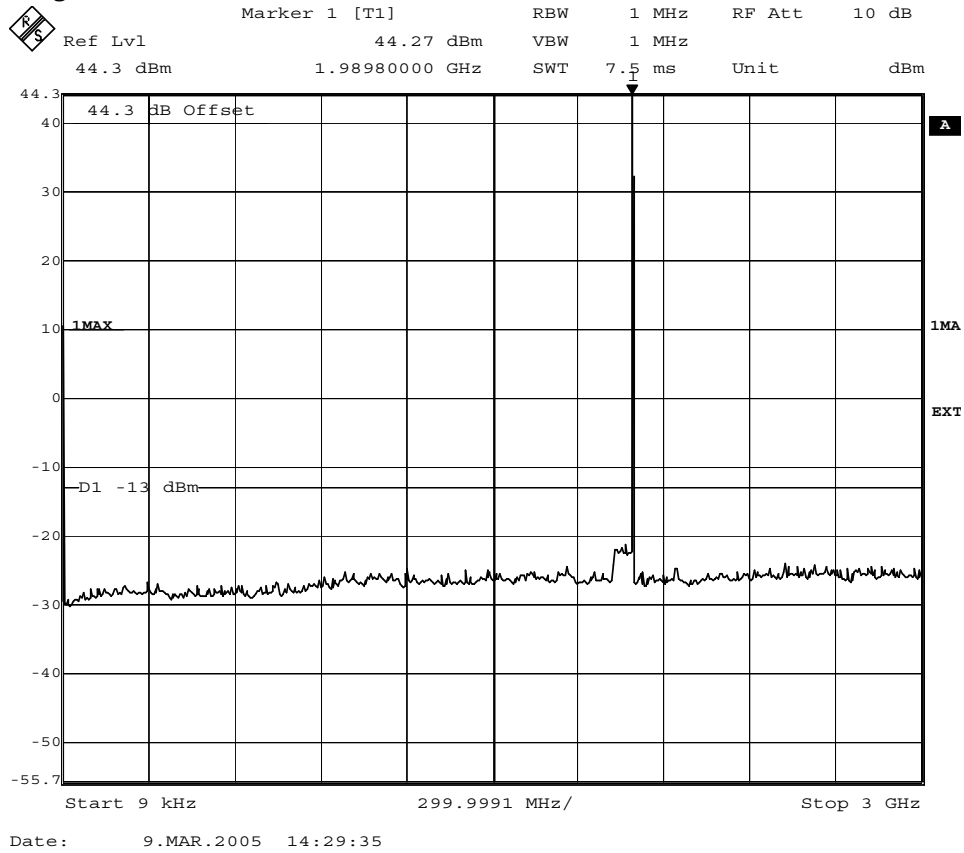
Diagram 3



FCC ID: B5KAKRC1311013-2

Appendix 6.1

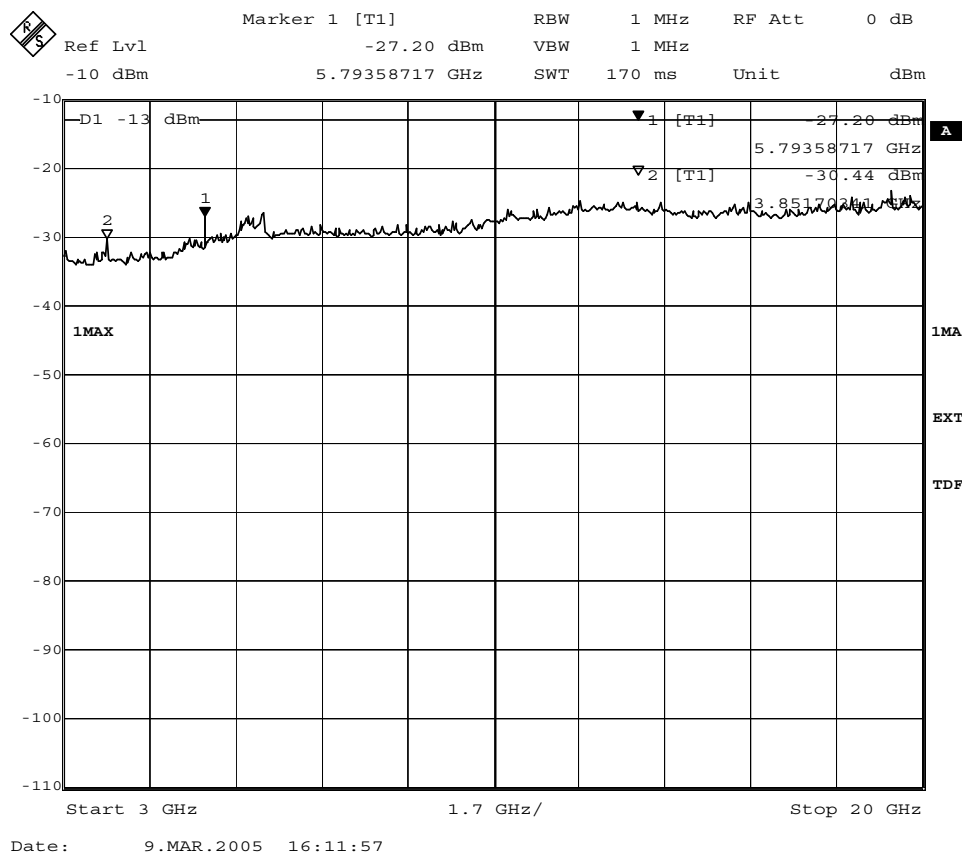
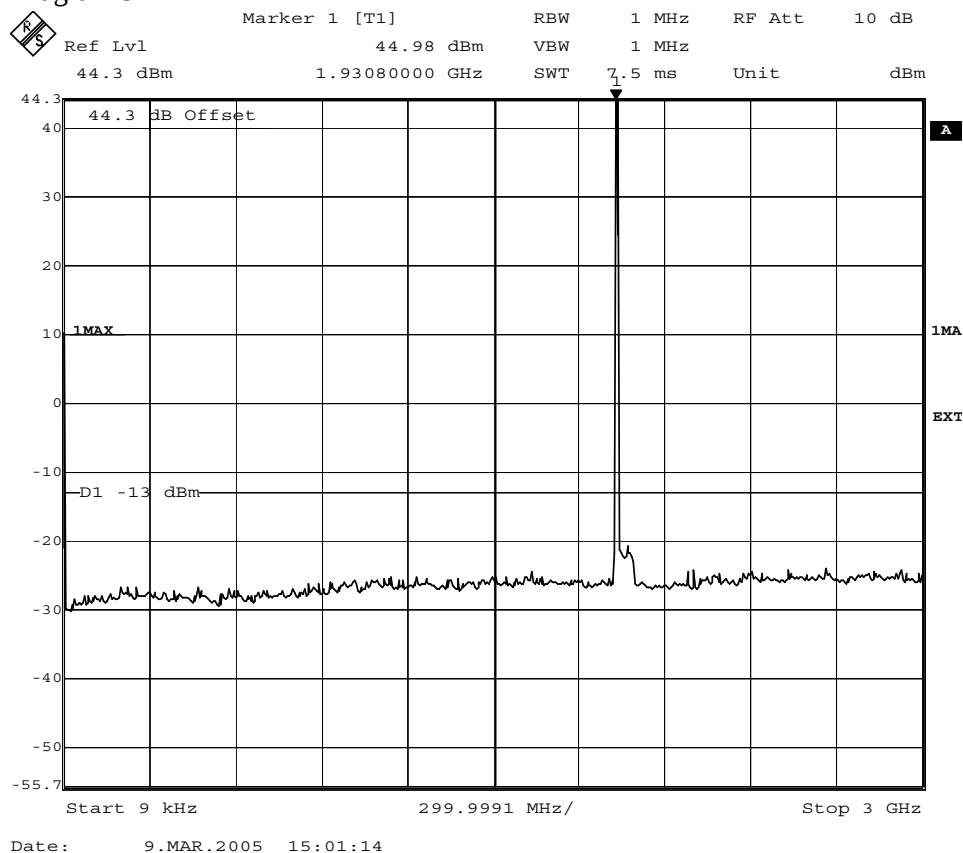
Diagram 4



FCC ID: B5KAKRC1311013-2

Appendix 6.1

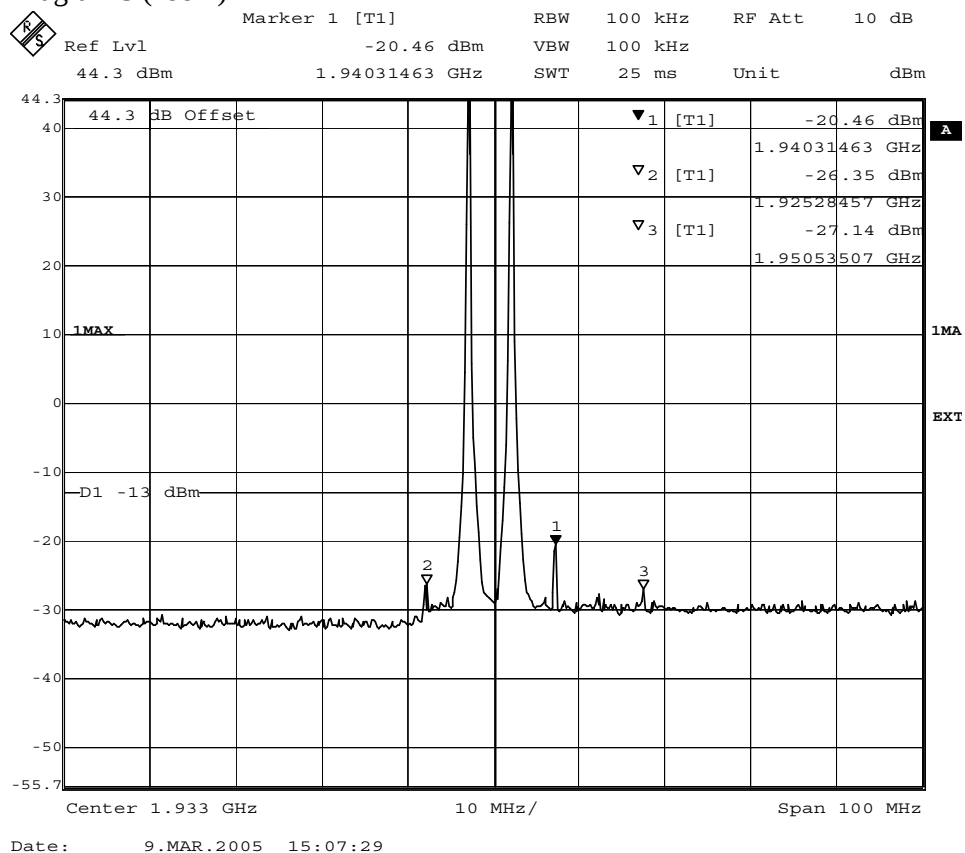
Diagram 5



FCC ID: B5KAKRC1311013-2

Appendix 6.1

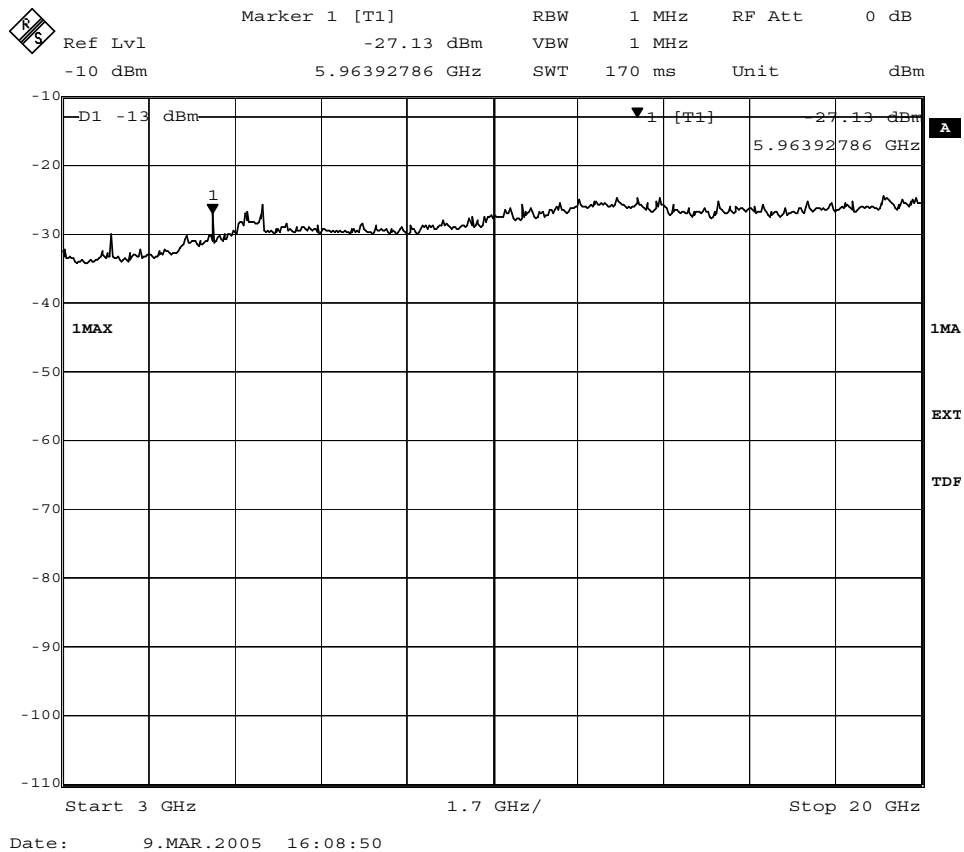
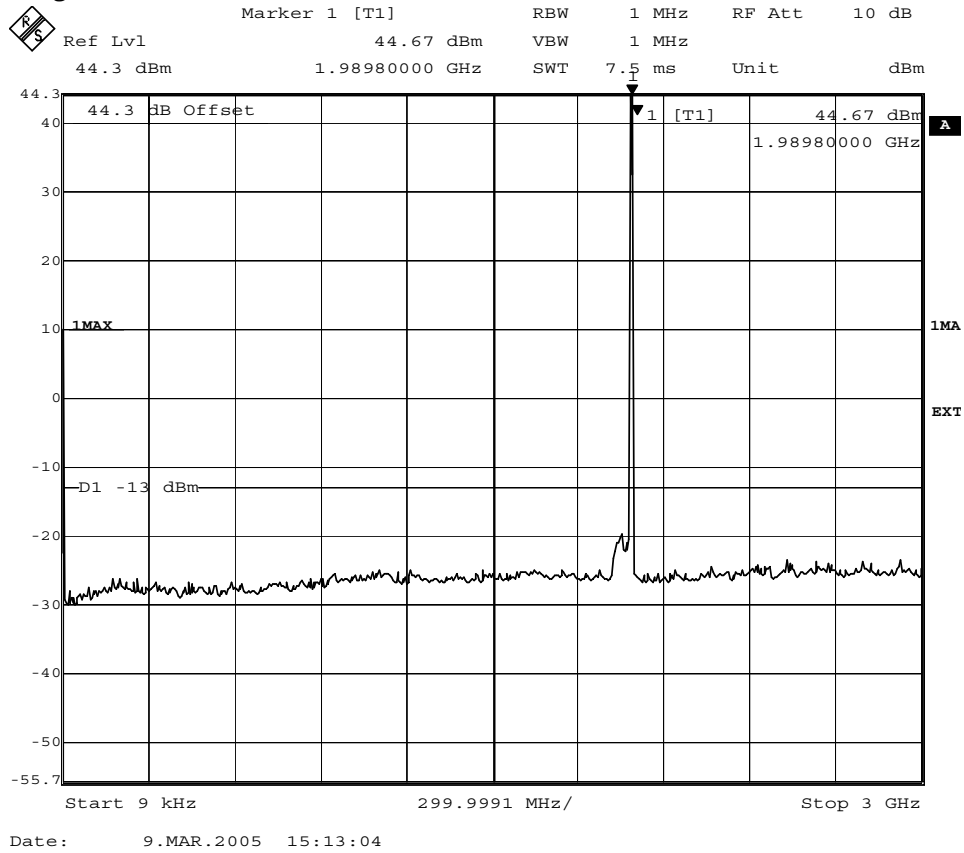
Diagram 5 (zoom)



FCC ID: B5KAKRC1311013-2

Appendix 6.1

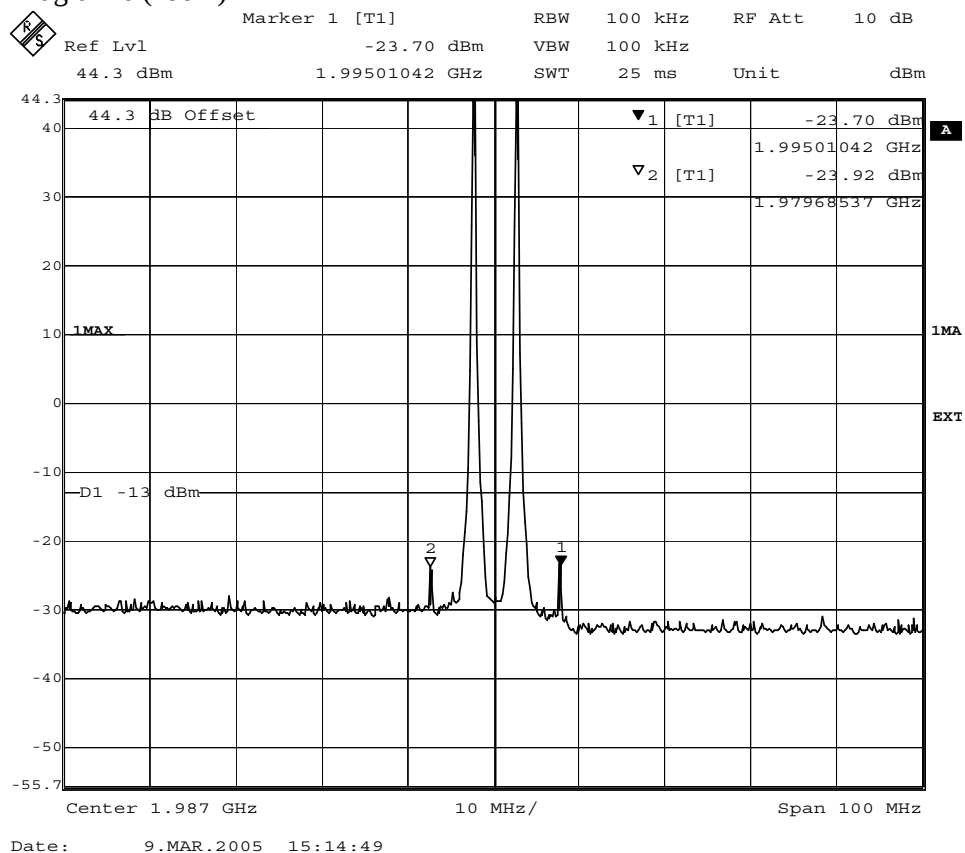
Diagram 6



FCC ID: B5KAKRC1311013-2

Appendix 6.1

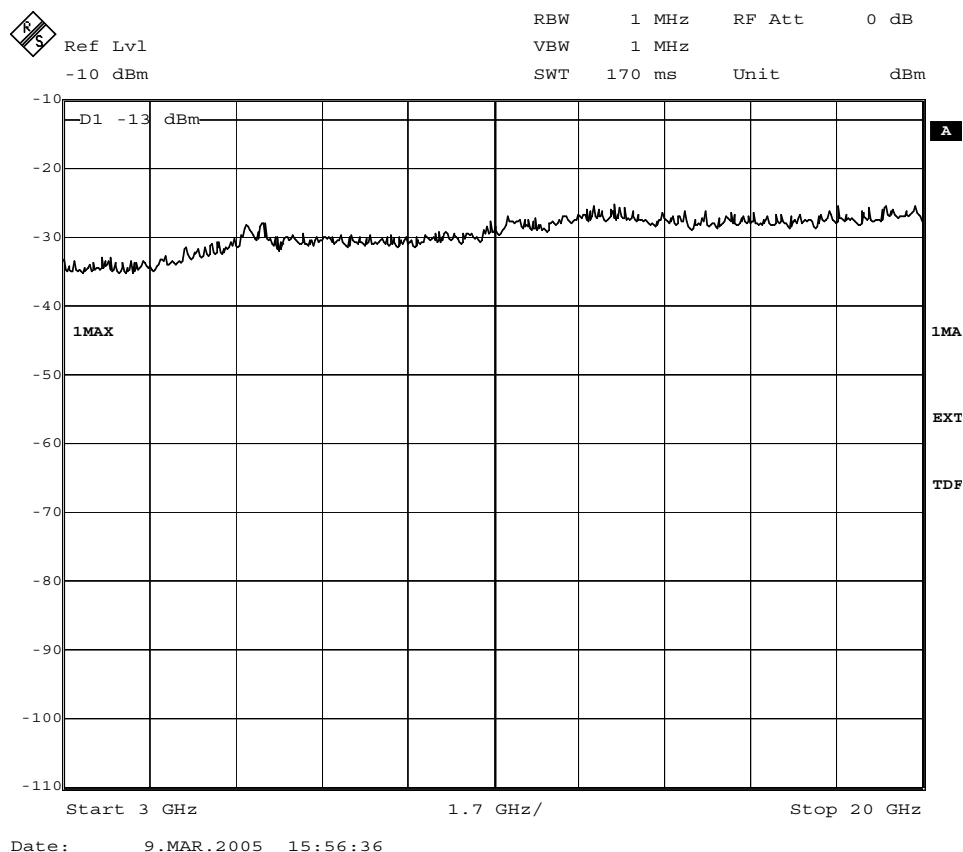
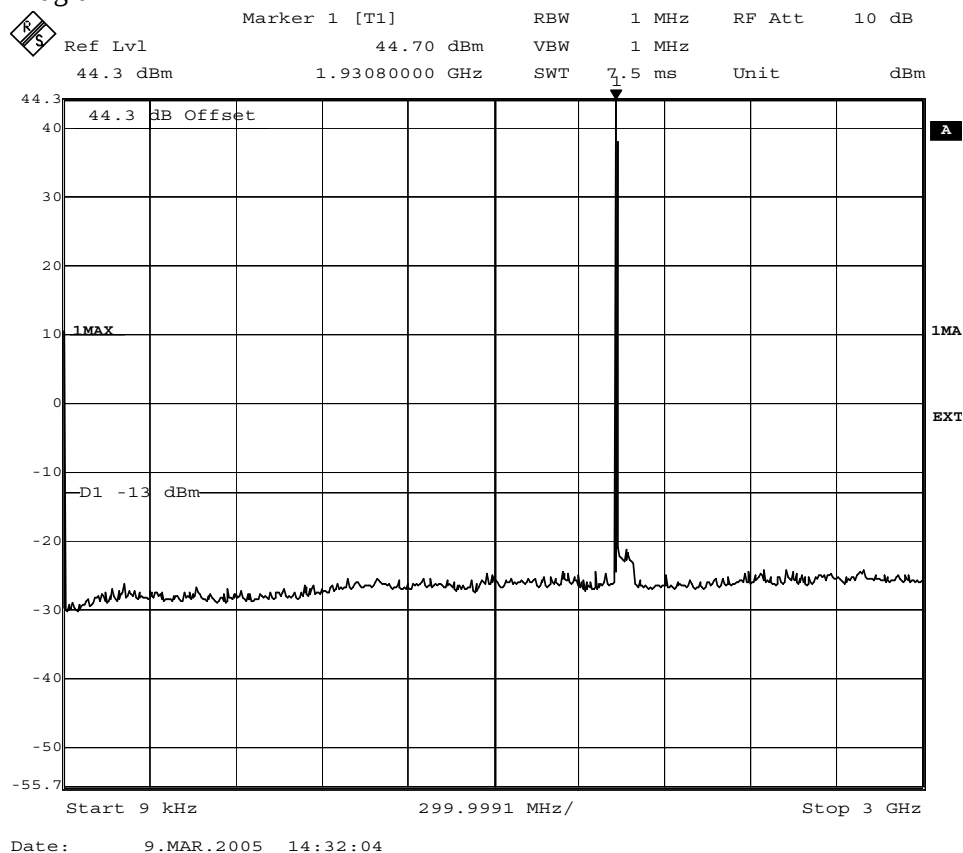
Diagram 6 (zoom)



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Appendix 6.1

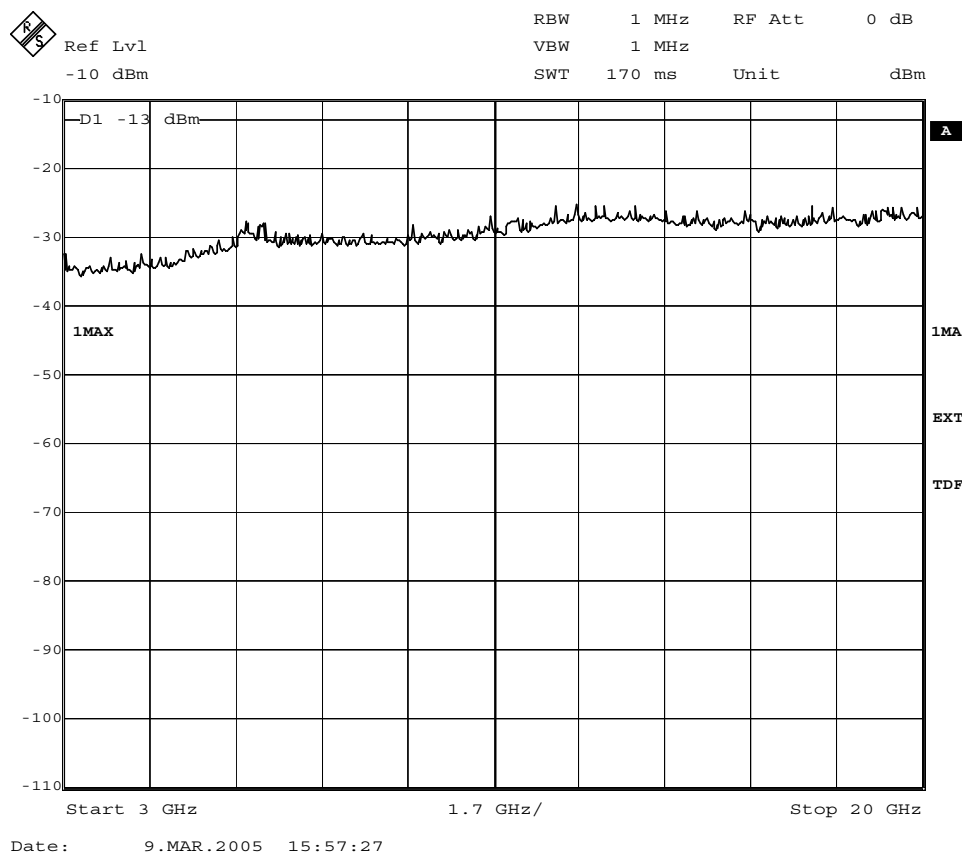
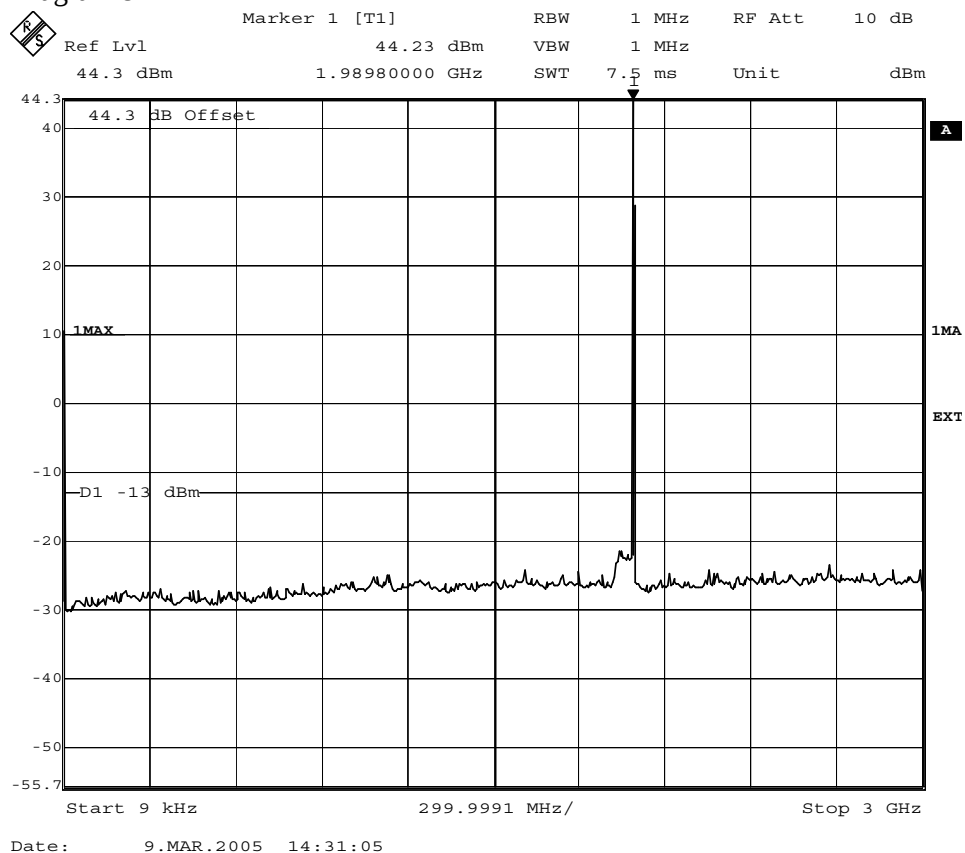
Diagram 7



FCC ID: B5KAKRC1311013-2

Appendix 6.1

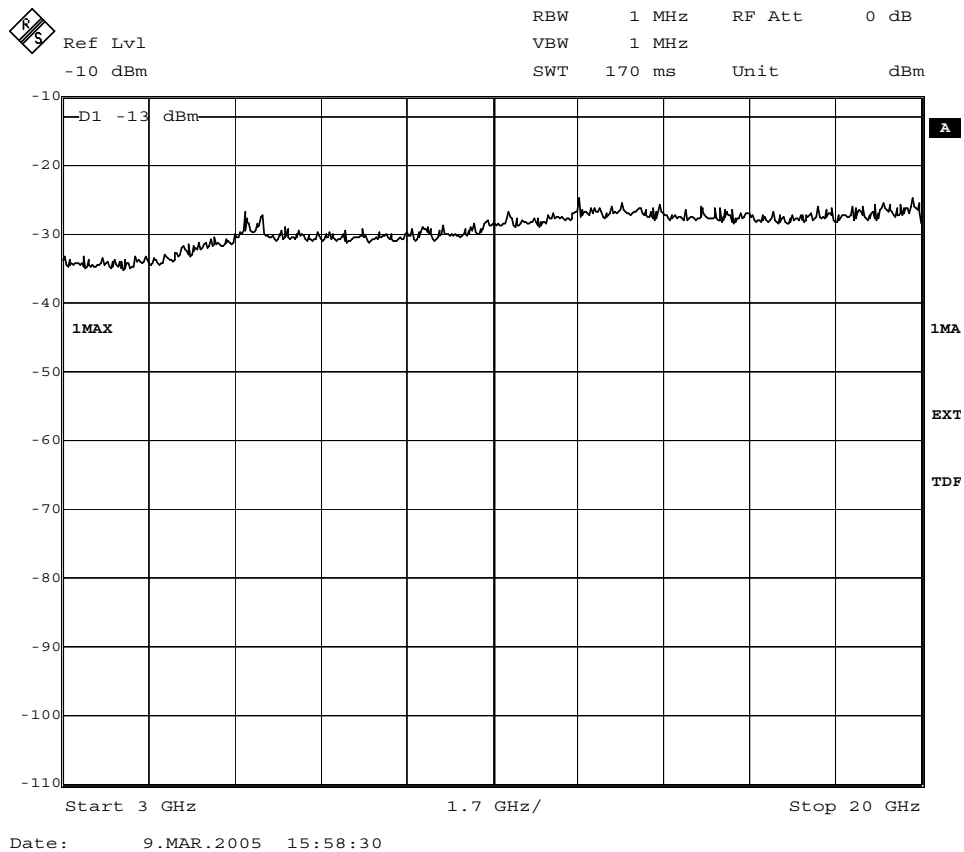
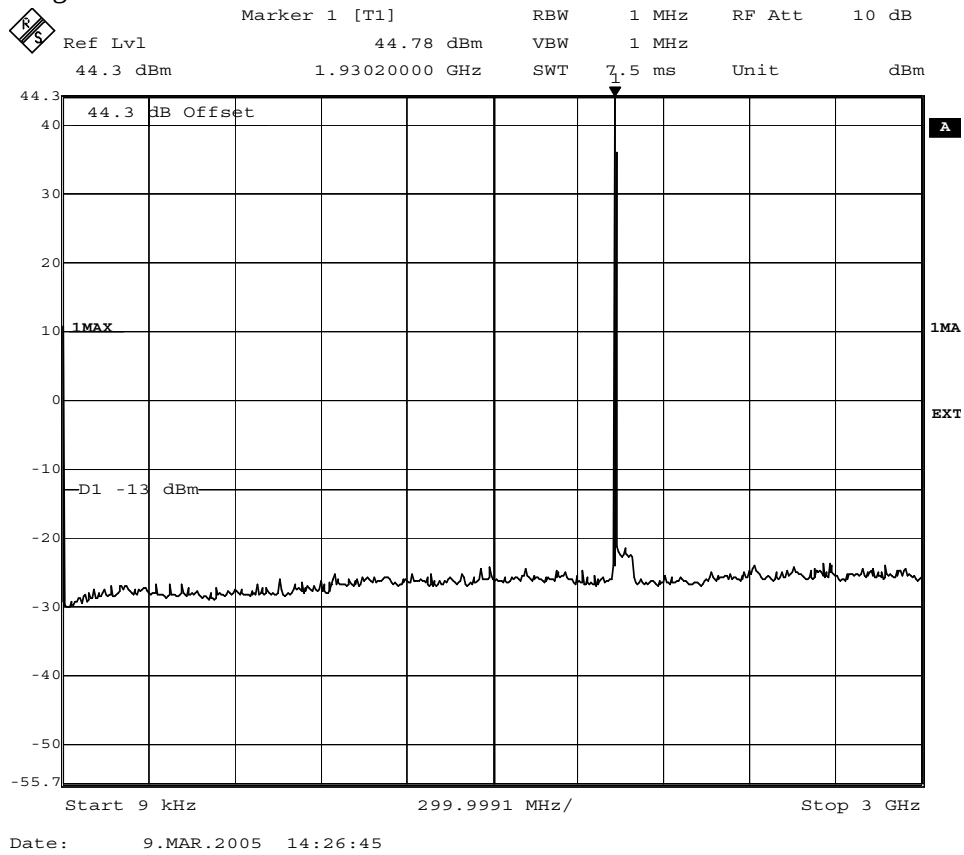
Diagram 8



FCC ID: B5KAKRC1311013-2

Appendix 6.1

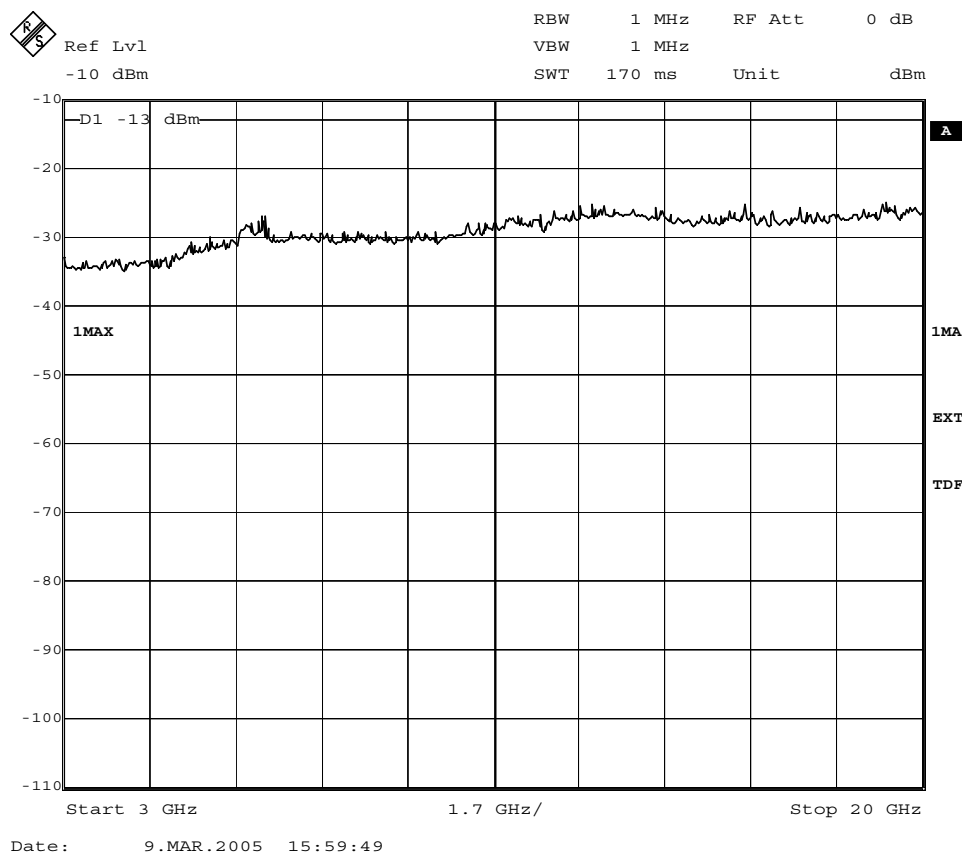
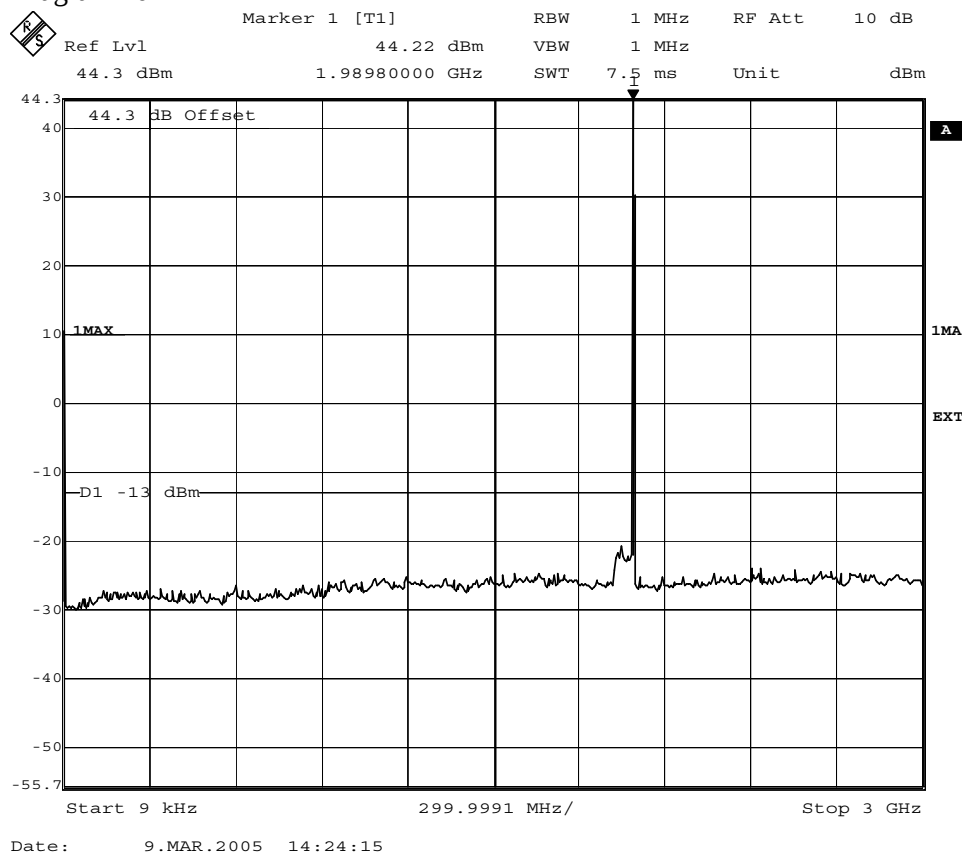
Diagram 9



FCC ID: B5KAKRC1311013-2

Appendix 6.1

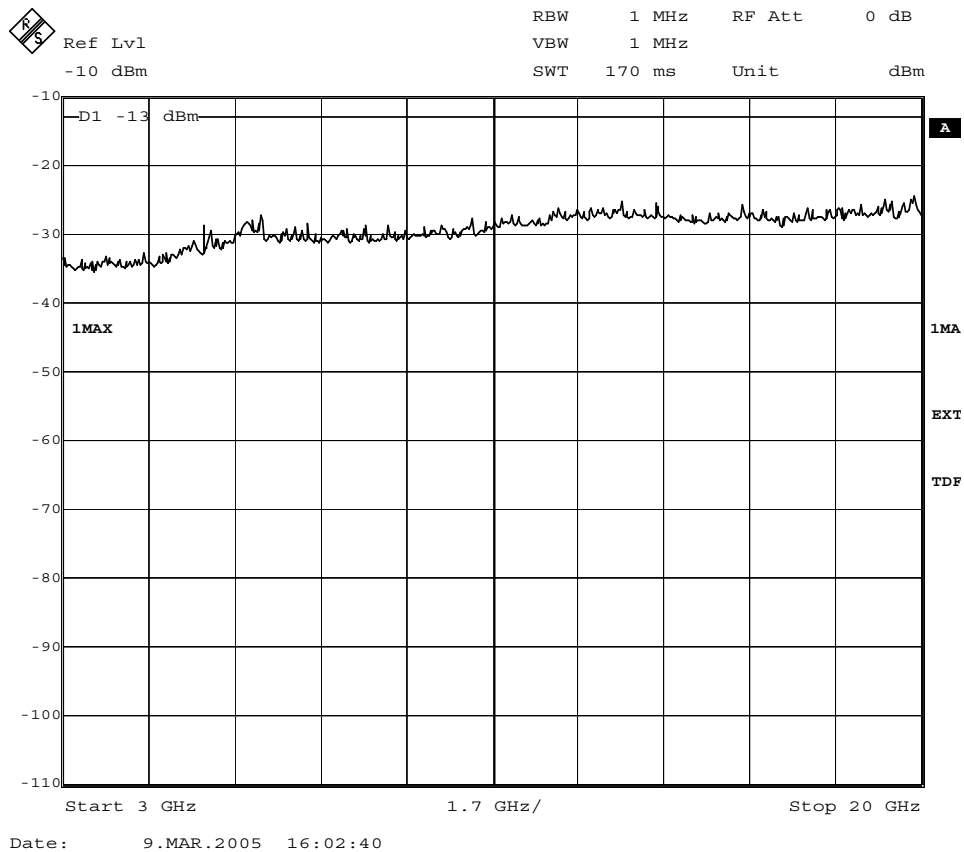
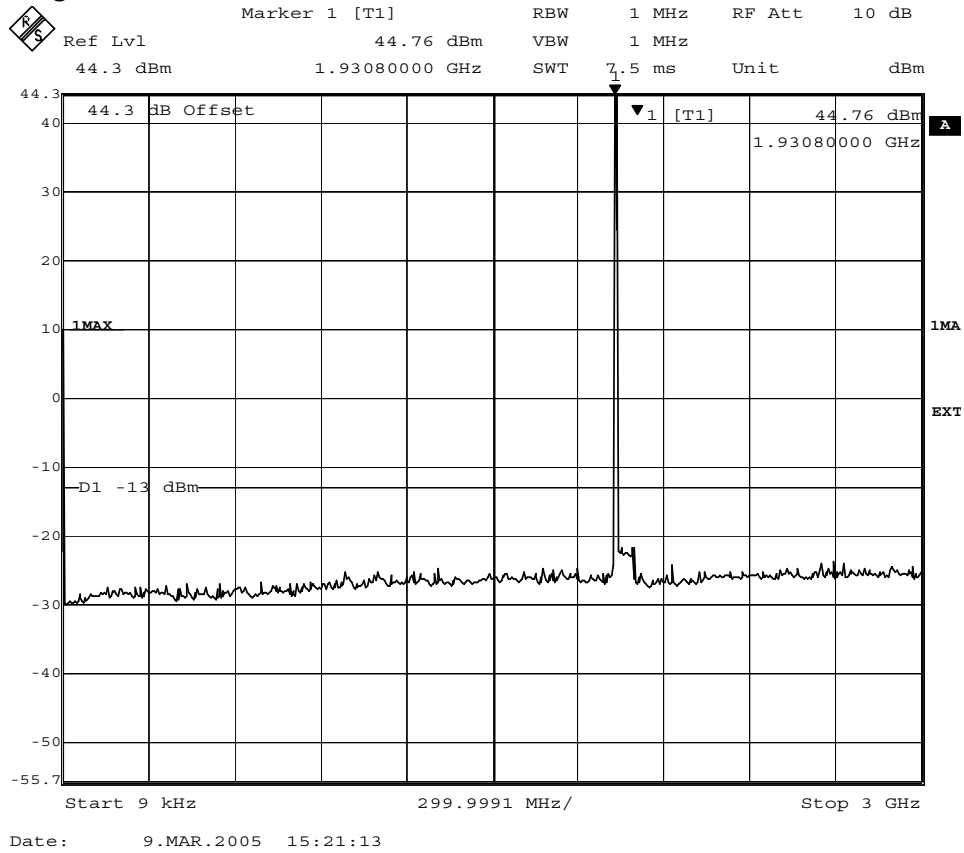
Diagram 10



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Appendix 6.1

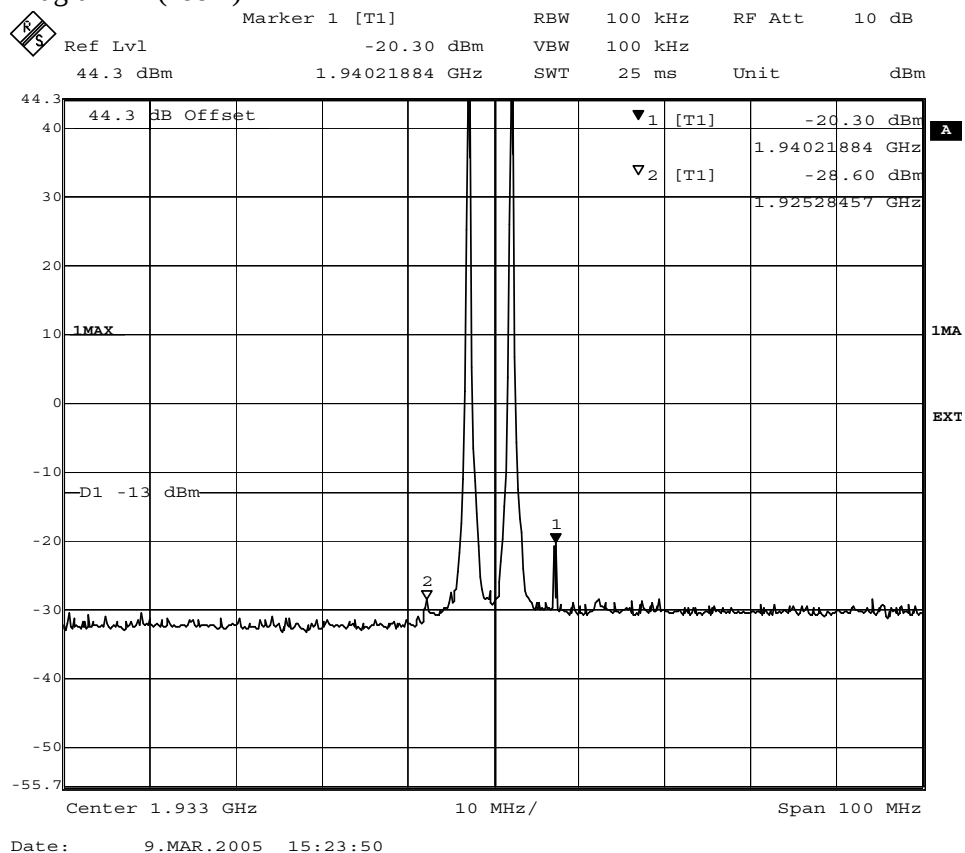
Diagram 11



FCC ID: B5KAKRC1311013-2

Appendix 6.1

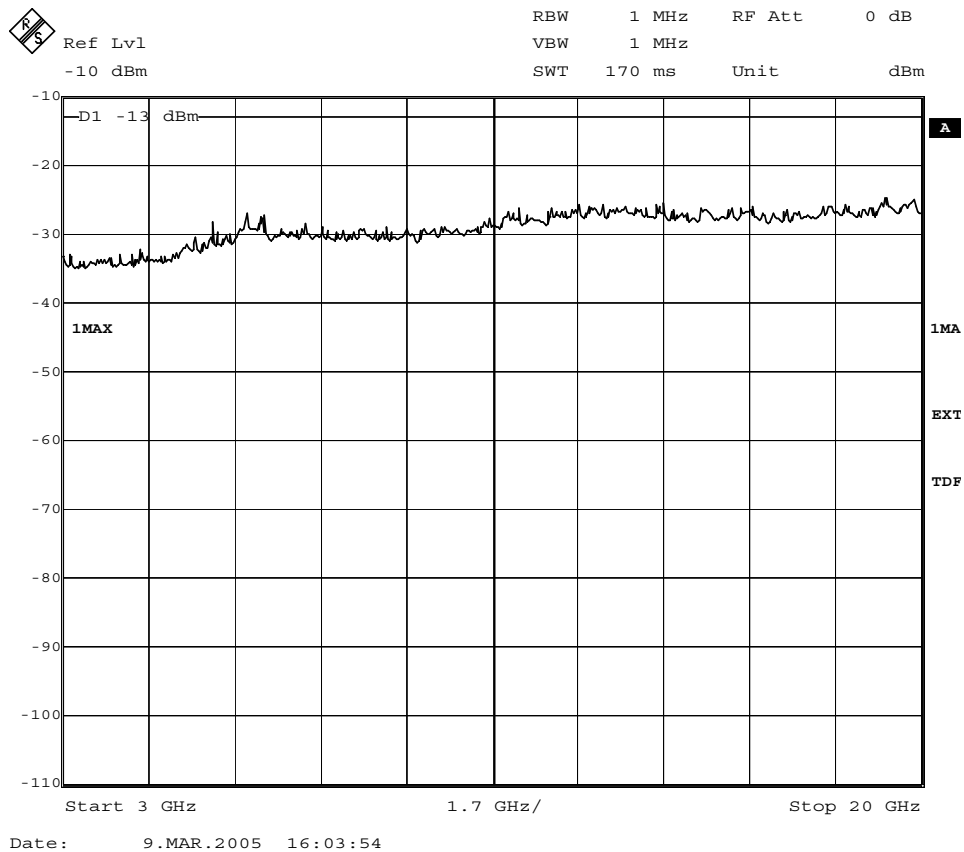
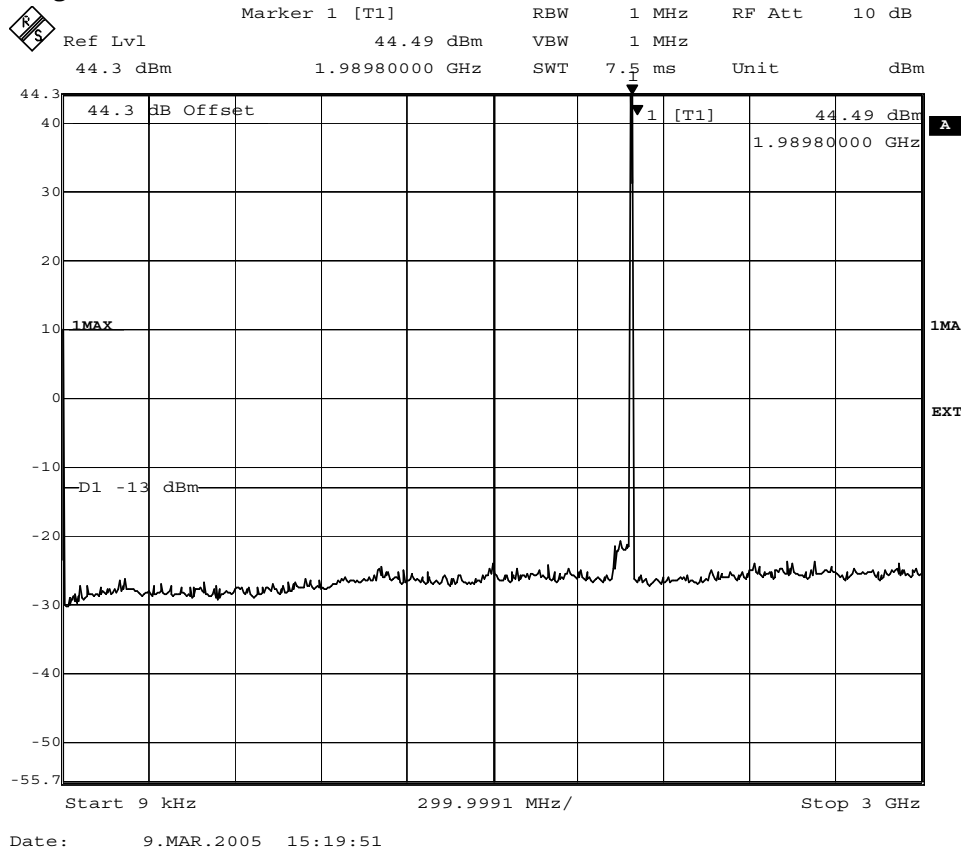
Diagram 11 (zoom)



FCC ID: B5KAKRC1311013-2

Appendix 6.1

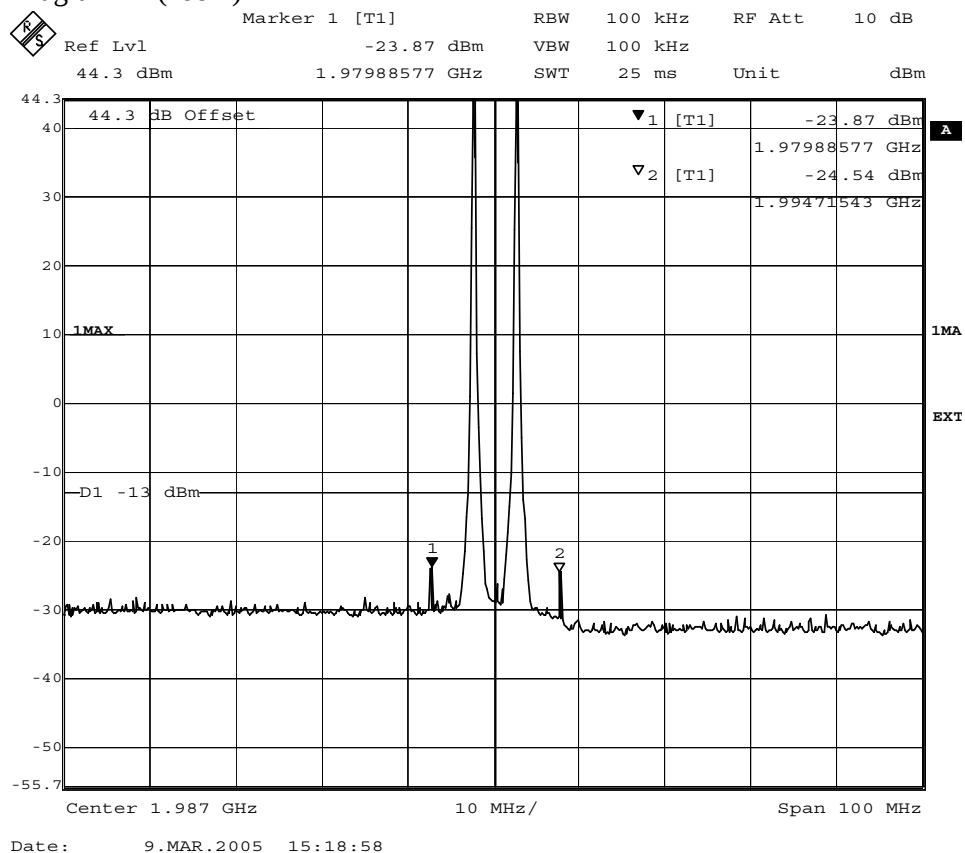
Diagram 12



FCC ID: B5KAKRC1311013-2

Appendix 6.1

Diagram 12 (zoom)



Field strength of spurious radiation measurements according to 47CFR 2.1053

Date 2005-03-16	Temperature 21 °C ± 3 °C	Humidity 22 % ± 5 %
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Test set-up and procedure

The chamber is listed at FCC, Columbia with registration number: 93866. The test site also complies with RSS 212, Issue 1, Industry Canada file no.:IC 3482.

The transmitter was modulated with pseudorandom data during the measurements. The antenna ports were terminated with 50 ohm loads.

The measurements were performed with both horizontal and vertical polarisation of the antenna. The antenna distance was 3 m in the frequency range 30 MHz – 18 GHz and 1m in the frequency range 18-20 GHz.

A pre-measurement was first performed:

In the frequency range 30 MHz-20 GHz the measurement was performed in power with a RBW of 1 MHz. A propagation loss in free space was calculated. The used formula was,

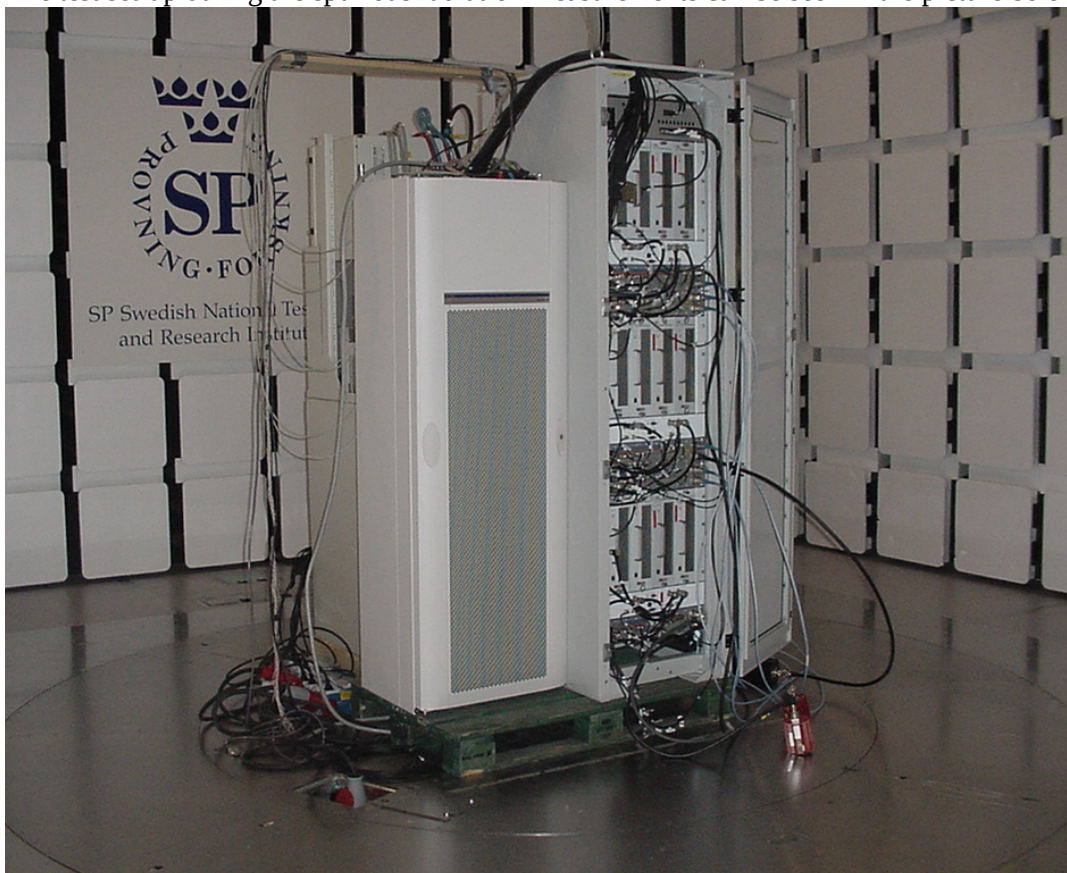
$$\gamma = 20 \log \left(\frac{4\pi D}{\lambda} \right), \gamma \text{ is the propagation loss and } D \text{ is the antenna distance.}$$

The measurement procedure was as the following:

1. The pre-measurement was first performed with peak detector. The EUT was measured in eight directions and with the antenna at three heights, 1.0 m, 1.5 m and 2.0 m.
2. Spurious radiation on frequencies closer than 20 dB to the limit is scanned 0-360 degrees and the antenna is scanned 1-4 m for maximum response. The emission is then measured with the average detector and the average value is reported, frequencies closer than 10 dB to the limit measured with the average detector was measured with the substitution method according to the standard.

Measurement equipment	Calibration Due	SP number
Anechoic chamber	-	15:115
R&S ESI 26	2005-08	503 292
Control computer	-	503 479
Software: R&S ES-K1, ver. 1.60	-	-
Chase Bilog antenna CBL 6111A	2006-08	503 182
EMCO Horn Antenna 3115	2006-11	502 548
MITEQ Low Noise Amplifier	2005-04	503 285
Testo 615, Temperature and humidity meter	2005-09	503 505

The test set-up during the spurious radiation measurements can be seen in the picture below



Results

GMSK and 8-PSK

Frequency (MHz)	Spurious emission level (dBm)	
	Vertical	Horizontal
5816.5	--	-21.6
5850.7	--	-24.5
5878.6	--	-24.1
5917.9	-25.9	--
5926.3	-24.3	--
5943.7	-26.9	--
7772.5	--	-23.9
7820.2	-26.8	--
30-20 000	All other emission > 20 dB below limit	All other emission > 20 dB below limit
Measurement uncertainty		4.7 dB

Limits

The power of any emission outside the frequency band shall be attenuated below the transmitter power (P) by at least $43 + 10 \log P$ dB.

Complies?	Yes
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Frequency stability measurements according to 47CFR 2.1055

Date 2005-03-02 to 2005-03-04	Temperature 21 °C ± 3 °C	Humidity 23 % ± 5 %
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Test set-up and procedure

The measurements were made per J-STD-007A Vol 1 (GMSK) and TIA/EIA-136-280-B (8-PSK).

The test was made with the dTRU mounted in the RBS 2250 cabinet.

Measurements were made at CDU-L19 output connector. The output was connected to a spectrum analyser. The spectrum analyser was connected to an external 10 MHz reference standard during measurement.

The transmitter was activated at maximum output power and modulated with pseudorandom data during the measurements.

Measurement equipment	Calibration Due	SP number
Climate chamber	2006-02	503 546
R&S FSIQ	2005-04	503 738
Multimeter Fluke 87	2005-09	502 190
Testo 610, Temperature and humidity meter	2006-12	502 658

Results

Nominal Voltage 24 V DC

Channel 661 (1960.0 MHz)

Test conditions		Frequency error (Hz)			
Supply voltage DC (V)	Temperature (°C)	GMSK		8-PSK	
		TRX 1	TRX 2	TRX 1	TRX 2
24.0	+20	-22	+22	+30	+28
27.6	+20	-19	-17	-30	+23
20.4	+20	-22	+25	-27	-28
24.0	+30	-20	+22	-26	+24
24.0	+40	-24	-25	-33	-36
24.0	+50	-23	-22	-30	-32
24.0	+10	+23	+25	+26	+34
24.0	0	+20	+30	+31	+35
24.0	-10	-22	-23	-29	-32
24.0	-20	-41	-30	-63	-45
24.0	-30	+20	+19	-27	+24
Maximum freq. error (Hz)		41		63	
Measurement uncertainty		$< \pm 1 \times 10^{-7}$			



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Appendix 8

Note1: At 0 and -10 °C the following was reported in the RBS Fault log:
“CF Fault 2A No. 16: Indoor Temp Out Of Normal Conditional Range“.

Note2: At -20 and -30 °C the following was reported in the RBS Fault log:
“CF Fault 1A No. 10: Indoor Temp Out of Safe Range“.

Limits

The maximum frequency error shall not be greater than 0.05 ppm (98 Hz).

Complies?	Yes
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Appendix 9

RBS 2250 - TRX cabinet

Unit	Product number	Serial Number	Revision
Cabinet	SEB 112 1147/1	- -	- -
IDM-04	BMG 980 31/1	B351000827	R1B
FCU-01	BGM 136 1001/2	B991768720	R3A
DC Filter-05	KFE 101 1145/6	X181091415	R1A
Subrack 3			
HCU 10	KRF 201 463/1	A400143219	R1A
DXU-22	BOE 602 17/1	TU85503378	R1B
DXU-22	BOE 602 17/1	TU85503384	R1B
dTRU 10-19 Edge	KRC 131 1013/2	AE51648003	R2A
dTRU 10-19 Edge	KRC 131 1013/2	AE51646997	R2A
dTRU 10-19 Edge	KRC 131 1013/2	AE51646979	R2A
dTRU 10-19 Edge	KRC 131 1013/2	AE51647029	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645876	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645852	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645884	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645875	R2A
RX splitter 02	KRF 201 464/1	A400145122	R1A
Subrack 2			
HCU 10	KRF 201 463/1	A400143334	R1A
DXU-22	BOE 602 17/1	TU85503342	R1B
DXU-22	BOE 602 17/1	TU85503325	R1B
dTRU 10-19 Edge	KRC 131 1013/2	AE51648009	R2A
dTRU 10-19 Edge	KRC 131 1013/2	AE51646999	R2A
dTRU 10-19 Edge	KRC 131 1013/2	AE51647000	R2A
dTRU 10-19 Edge	KRC 131 1013/2	AE51646998	R2A
dTRU 10-19 Edge	KRC 131 1013/2	AE51646996	R2A
dTRU 10-19 Edge	KRC 131 1013/2	AE51646994	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645885	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645874	R2A
RX splitter 02	KRF 201 464/1	A400145125	R1A
Subrack 1			
HCU 10	KRF 201 463/1	A400133525	R1A
DXU-22	BOE 602 17/1	TU85503410	R1B
DXU-22	BOE 602 17/1	TU85503351	R1B
dTRU 10-19 Edge	KRC 131 1013/2	AE51646995	R2A
dTRU 10-19 Edge	KRC 131 1013/2	AE51646988	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645887	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645878	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645873	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645883	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645871	R2A
dTRU 10-8 Edge	KRC 131 1010/2	AE51645888	R2A
RX splitter 02	KRF 201 464/1	A400145124	R1A

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Appendix 9

RBS 2250 - MCPA cabinet

Unit	Product number	Serial Number	Revision
Cabinet	1/SEB 112 1146	829530	R1A
IDM-05	BMG 980 36/1	T580000015	R1B/A
Subrack 1			
MCPA 19	KRB 111 103/1	VS000118NL	R1B
MCPA 19	KRB 111 103/1	VS000118N9	R1B
MCPA 8	KRB 111 102/1	PD00000CRU	R1B
MCPA 8	KRB 111 102/1	PD00000CRM	R1B
Subrack	BFL 119 440/1	C000012XJ3	R1B
CDU-L19	BFL 119 438/1	A400157595	R1B
CDU-L8	BFL 119 437/1	A400157578	R1B
Subrack 2			
MCPA 19	KRB 111 103/1	VS00011C4V	R1B
MCPA 19	KRB 111 103/1	VS00011C5F	R1B
MCPA 8	KRB 111 102/1	PD00000CRY	R1B
MCPA 8	KRB 111 102/1	PD00000CUM	R1B
Subrack	BFL 119 440/1	C000012XJ5	R1B
CDU-L19	BFL 119 438/1	A400157593	R1B
CDU-L8	BFL 119 437/1	A400154972	R1B
Subrack 3			
MCPA 19	KRB 111 103/1	VS000118K3	R1B
MCPA 19	KRB 111 103/1	VS000118ND	R1B
MCPA 8	KRB 111 102/1	PD00000CUP	R1B
MCPA 8	KRB 111 102/1	PD00000CRT	R1B
Subrack	BFL 119 440/1	C000012XJF	R1B
CDU-L19	BFL 119 438/1	A400157591	R1B
CDU-L8	BFL 119 437/1	A400154973	R1B

Software	Revision
R11B	R07E

Description of EUT

The EUT is a dTRU that can be installed in a GSM Base station that are designed to provide mobile telephone users with a connection to a mobile network or the PSTN.

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Appendix 10

Photos

Transceiver Unit KRC 131 1013/2, R2A

Front side



Rear side



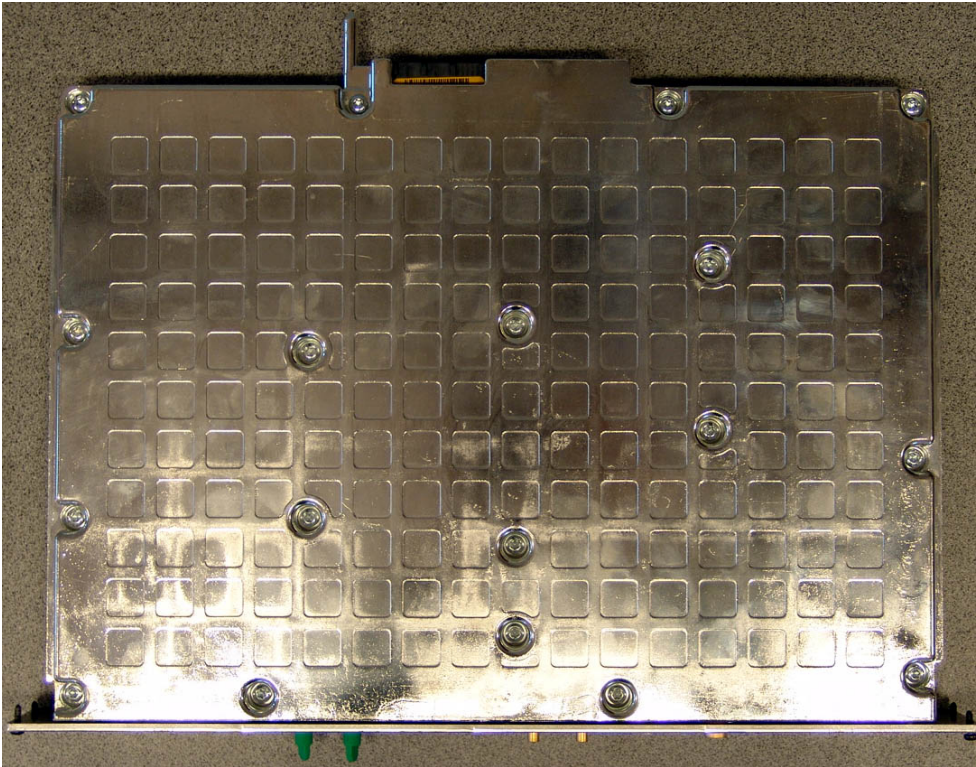
FCC ID label



FCC ID: B5KAKRC1311013-2

Appendix 10

Left side



Right side

