REPORT ON

Limited FCC CFR 47: Parts 15 and 24 Testing in support of an
Application for Grant of Equipment Authorisation
of an EB-VS3 GSM Cellular Phone

FCC ID: NWJ26C001A

COMMERCIAL-IN-CONFIDENCE

Report No OR614062/01 Issue 1 **June 2005**

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DATED 9th June 2005

DISTRIBUTION

Panasonic Mobile Communications of Europe Ltd (PMCDE)	Copy 1
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ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47: Parts 15 and 24. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineers;

R E Small **P J Harrison** **A R Hubbard** **G Lawler**

UKAS TESTING 0141 Group

Product Service

CONTENTS

Product Service

SECTION 1

REPORT SUMMARY

Limited FCC CFR 47: Part 24 Testing in support of an
Application for Grant of Equipment Authorisation
of an EB-VS3 GSM Cellular Phone

1.1 STATUS

EQUIPMENT UNDER TEST	EB-VS3 GSM Cellular Phone
OBJECTIVE	To undertake measurements to determine the Equipment Under Test's (EUT's) compliance with the specification.
NAME AND ADDRESS OF CLIENT	Panasonic Mobile Communications of Europe Ltd (PMCDE) 2 Gables Way Colthrop Thatcham Berkshire RG19 4ZB
SERIAL NUMBERS	IMEI: 004400013139355 Compliance Sample C14 IMEI: 004400013139363 Compliance Sample C13
HARDWARE VERSION	Rev D
SOFTWARE VERSION	VS3-VA03
TEST SPECIFICATION / ISSUE / DATE	FCC CFR 47: Part 15, Subpart C, August 2002, FCC CFR 47: Part 24, Subpart D, January 2001
NUMBER OF ITEMS TESTED	Two
SECURITY CLASSIFICATION OF EUT	Commercial In Confidence
DISPOSAL	Held pending disposal
REFERENCE NUMBER	Not Applicable
DATE	Not Applicable
ORDER NUMBER	PTP
DATE	1st April 2005
START OF TEST	3rd May 2005
FINISH OF TEST	13th May 2005
RELATED DOCUMENTS	ANSI C63.4 2001. Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz. FCC Public Notice document (DA 00-705 released 30 March 2000)

1.2 INTRODUCTION

The information contained within this report is intended to show limited verification of compliance of the EB-VS3 to the requirements of FCC Specification Parts 15 and 24.

Testing was carried out in support of an application for Grant of Equipment Authorisation in the name of EB-VS3.

1.3 BRIEF SUMMARY OF RESULTS

A brief summary of the tests carried out is shown below.

Test	Spec Clause	Test Description	Result	Comments
2.1	2.1046, 24.232	Maximum Peak Output Power (Conducted)	Pass	-
2.2	2.1047(d)	Modulation Characteristics	Pass	-
2.3	2.1049, 24.238(b)	Occupied Bandwidth	Pass	-
2.4	2.1049, 24.229	Spurious Emissions at Antenna Terminals (+/- 1MHz)	Pass	-
2.5	15.207	Conducted Spurious Emissions on Power Lines	Pass	-
2.6	2.1051, 24.238(a)	Conducted Spurious Emissions	Pass	-
2.7	2.1055, 24.135(a)	Frequency Stability Under Temperature Variation	Pass	-
2.8	2.1055, 24.135(a)	Frequency Stability Under Voltage Variation	Pass	

1.4 OPINIONS AND INTERPRETATIONS

Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation.

1.5 PRODUCT INFORMATION

1.5.1 Technical Description

The EB-VS3 Tri Band Mobile Handset operates from a 3.7 volt battery.
The EB-VS3 operates GPRS Class 10.

1.5.2 Modes of Operation

Modes of operation of the EUT during testing were as follows:

Applicable testing was carried out with the EUT transmitting at maximum power or receiving as detailed in the relevant Test Section.

1.6 TEST CONDITIONS

The EUT was set-up simulating a typical user installation in a Shielded Enclosure or Test Laboratory as appropriate and tested in accordance with the applicable specification.

For all tests, with the exception of Conducted Emissions on the AC Power Port, the EUT was configured as follows:

Handset	EB-VS3 (Compliance Sample C14)	IMEI No : 004400013139355
Dummy Battery	(Compliance Sample C21).	

For Conducted Emission on the AC Power Port the EUT was configured as follows:

Handset	EB-VS3 (Compliance Sample C13)	IMEI No: 004400013139363
Branch Cable	EB-CBX800 (Compliance Sample C27)	
USB Data Cable	(Compliance Sample C24)	
AC Charger	US Type (Compliance Sample C22)	

1.7 DEVIATIONS FROM THE STANDARD

Not Applicable

1.8 MODIFICATION RECORD

Not Applicable

SECTION 2

TEST DETAILS

Limited FCC CFR 47: Part 24 Testing in support of an
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of an EB-VS3 GSM Cellular Phone

2.1 MAXIMUM PEAK OUTPUT POWER (CONDUCTED)

2.1.1 FCC CFR 47: Part 24 Subpart E, Section 24.232

2.1.2 Equipment Under Test

EB-VS3

2.1.3 Date of Test

24th May 2005

2.1.4 Test Equipment Used (See Section 3.1 for details)

Items 1, 2, 4, 5, 6, 7, 8, 16

2.1.5 Test Procedure

Using a spectrum analyser and attenuator(s), the output power of the EUT was measured at the antenna terminals. The EUT supports both GSM and GPRS. The device is a class 10 mobile. The carrier was modulated by it's normal GMSK modulation and measurements performed with TS3 active. In GPRS mode, timeslots 3 and 4 were active.

The spectrum analyser RBW and VBW were set to 1MHz and the path loss measured and entered as a reference level offset.

2.1.6 Test Results

Maximum Power - GSM

Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
1850.2	1.24	27.90	29.14	0.820
1880.0	1.72	27.40	29.12	0.817
1909.8	1.89	27.70	29.59	0.910

Minimum Power- GSM

Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (mW)
1850.2	-28.64	27.90	-0.74	0.843
1880.0	-28.92	27.40	-1.52	0.705
1909.8	-29.05	27.70	-1.35	0.733

2.1 MAXIMUM PEAK OUTPUT POWER (CONDUCTED) - Continued

Maximum Power - GPRS

Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
1850.2	0.64	27.90	28.54	0.714
1880.0	1.03	27.40	28.43	0.697
1909.8	1.25	27.70	28.95	0.785

Minimum Power- GPRS

Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (mW)
1850.2	-28.78	27.90	-0.88	0.817
1880.0	-28.90	27.40	-1.50	0.708
1909.8	-29.13	27.70	-1.43	0.719

Limit	<2W or <+33dBm

Remarks

EUT complies with CFR 47 2.1046 and 24.232(b). The EUT does not exceed 2W or +33dBm at the measured frequencies.

2.2 MODULATION CHARACTERISTICS

2.2.1 FCC CFR 47: Part 24 Subpart E, Section 2.1047(d)

2.2.2 Equipment Under Test

EB-VS3

2.2.3 Date of Test

5th May 2005

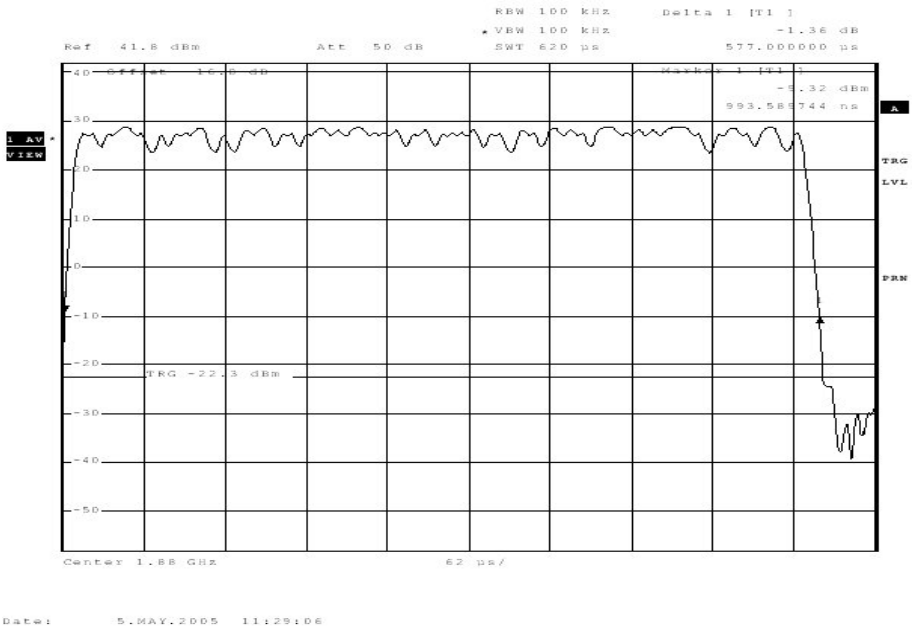
2.2.4 Test Equipment Used

Items: 1, 2, 3, 4, 5, 6, 7, 8

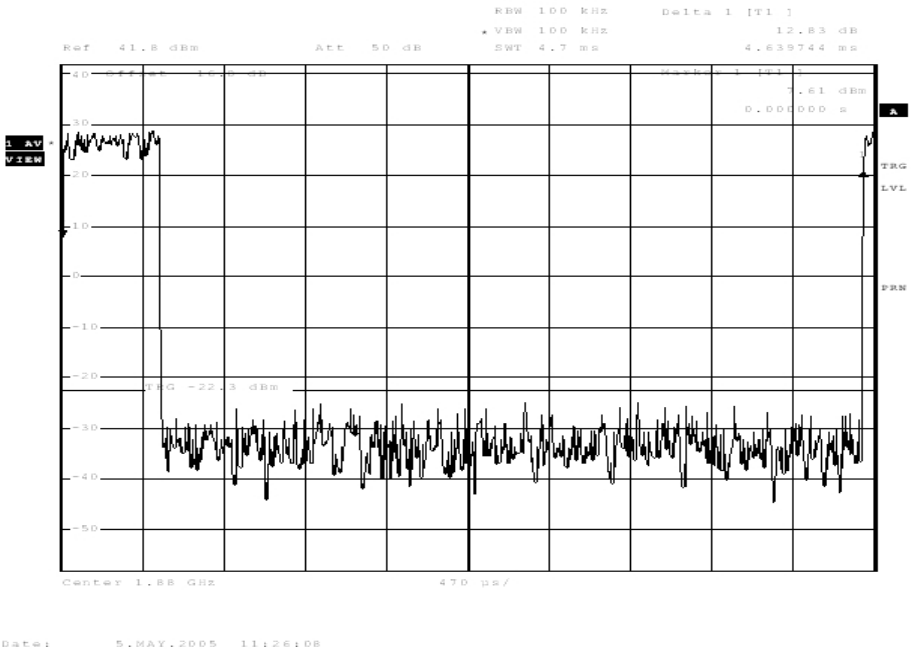
2.2.5 Modulation Description

A detailed description of the Modulation System can be found in the RF Calibration Specification submitted as a separate exhibit.

2.2 MODULATION CHARACTERISTICS - continued

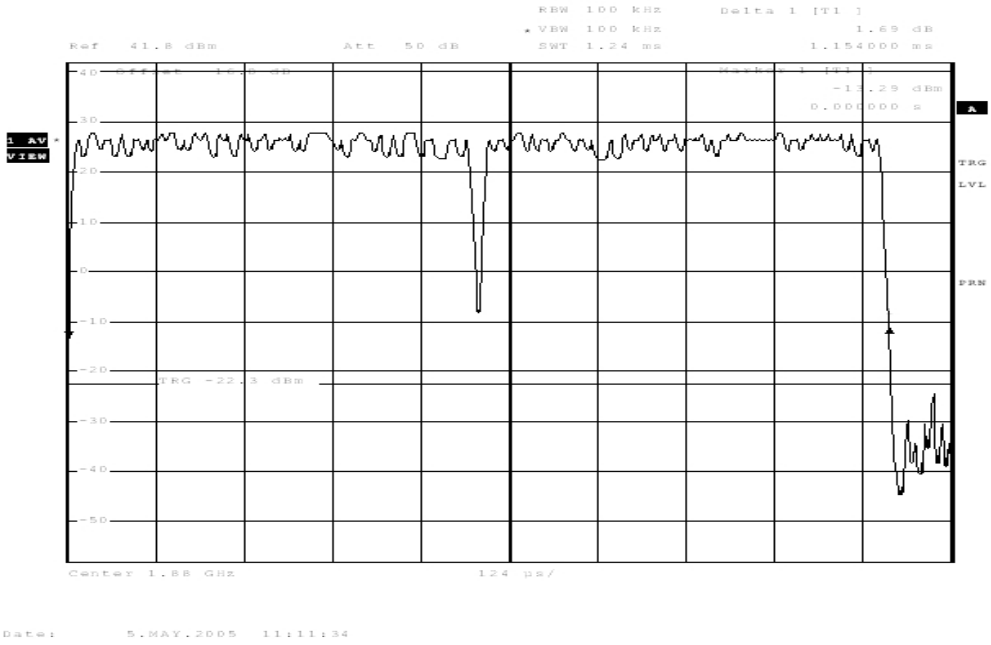


GSM Mode. View of TS3

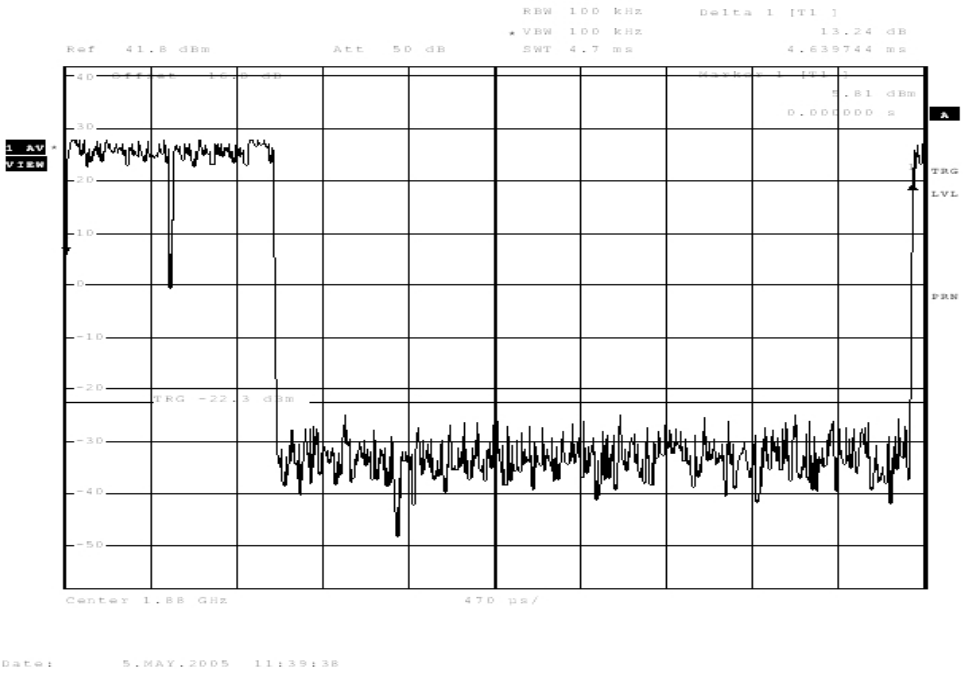


GSM Mode. View of One Complete Frame Showing TS3

2.2 MODULATION CHARACTERISTICS - continued



GPRS Mode View of TS3/TS4



GPRS Mode. View of one Complete Frame Showing TS3/TS4

2.3 OCCUPIED BANDWIDTH

2.3.1 FCC CFR 47: Part 24 Subpart E, Section 24.238(b)

2.3.2 Equipment Under Test

EB-VS3

2.33 Date of Test

5th May 2005

2.3.4 Test Equipment Used (See Section 3.1 for details)

Items: 1, 2, 3, 4, 5, 6, 7, 8

2.3.5 Test Procedure

GSM

The EUT was set to transmit on maximum power and measurements were made on Timeslot 3.

GPRS

The EUT was set to transmit on maximum power, (timeslots 3 and 4 active), and measurements were performed on Timeslot 3.

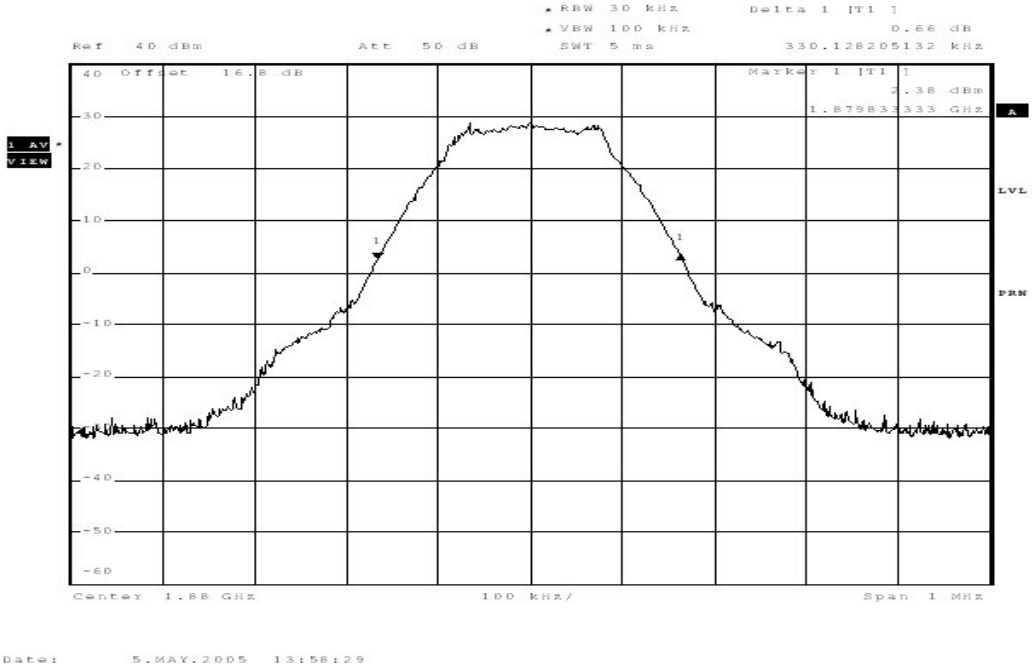
Using a resolution bandwidth of 30kHz and a video bandwidth of 100kHz, the -26dBc points were established and the emission bandwidth determined.

The plots below show the resultant display from the Spectrum Analyser.

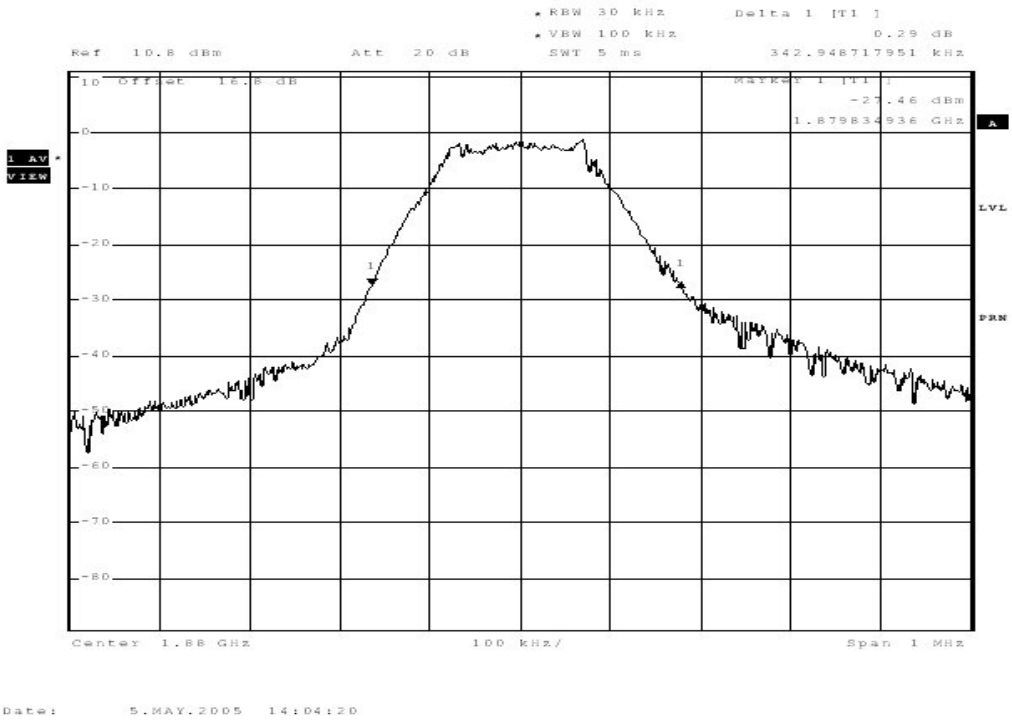
2.3 OCCUPIED BANDWIDTH - Continued

2.3.5 Test Results

Occupied Bandwidth As Defined By The -26dBc Points

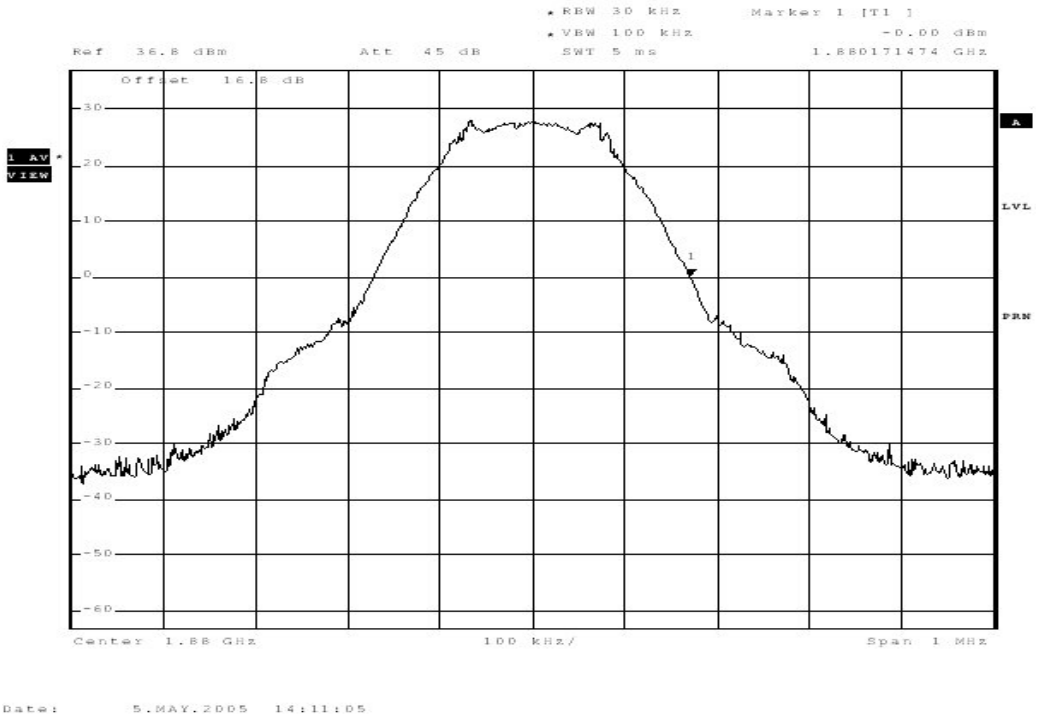


Maximum Power – Circuit Switched (GSM)

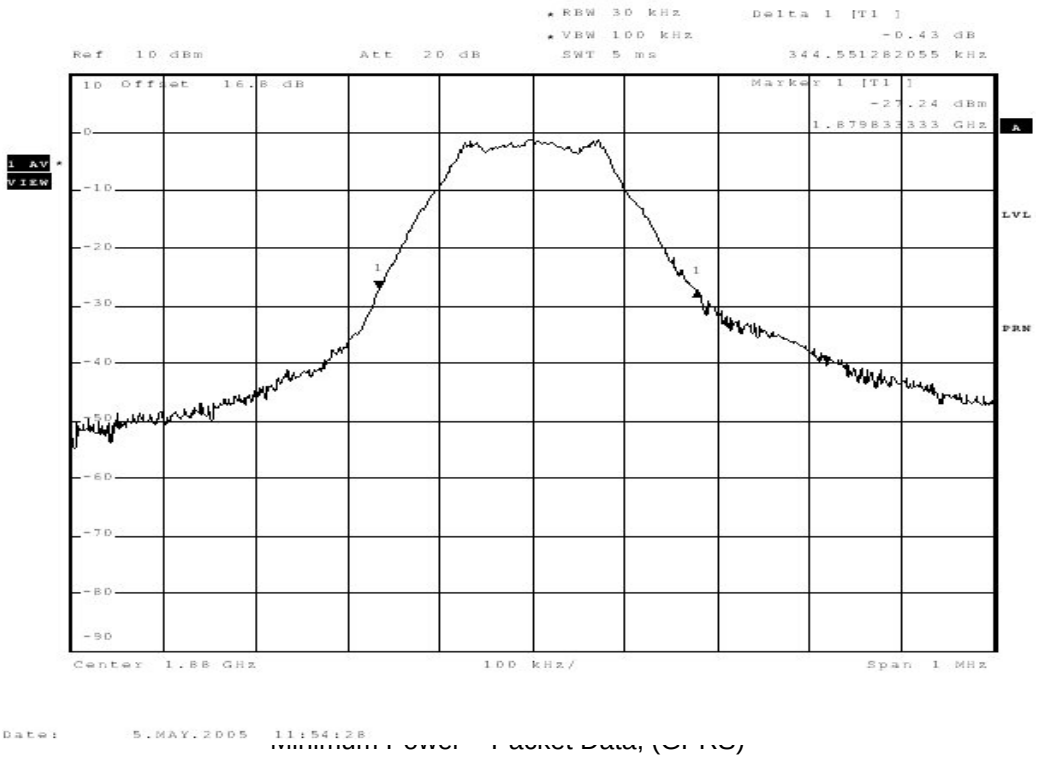


Minimum Power – Circuit Switched (GSM)

2.3 OCCUPIED BANDWIDTH - Continued



Maximum Power – Packet Data, (GPRS)



Minimum Power – Packet Data, (GPRS)

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1kHz)

2.4.1 FCC CFR 47: Part 24 Subpart E, Section 24.229

2.4.2 Equipment Under Test

EB-VS3

2.4.3 Date of Test

6th May 2005

2.4.4 Test Equipment Used (See Section 3.1 for details)

Items: 1, 2, 3, 4, 5, 6, 7, 8

2.4.5 Test Procedure

In accordance with Part 24.238, at least 1% of the 26dB bandwidth was used for the resolution and video bandwidths up to 1MHz away from the Block Edge. At greater than 1MHz, the resolution and video bandwidths were increased to 1MHz.

The reference power and path losses of all channels used for testing in each frequency block were measured. The relevant reference level offset was used throughout. Having entered the reference level offset, the limit line was displayed, showing the –13dBm, (43+10logP), limit.

The EUT was tested in GSM and GPRS modes of operation.

Below are the Frequency Blocks the EUT was tested against along with the tested channels.

Frequency Block (MHz)	Lower Block Edge Test Channels/Frequencies	Upper Block Edge Test Channels/Frequencies
A	Channel : 513 Frequency : 1850.4 MHz	Channel : 584 Frequency : 1864.6 MHz
B	Channel : 613 Frequency : 1870.4 MHz	Channel : 684 Frequency : 1884.6 MHz
C	Channel : 738 Frequency : 1895.4 MHz	Channel : 759 Frequency : 1899.6 MHz
C	Channel : 763 Frequency : 1900.4 MHz	Channel : 784 Frequency : 1904.6MHz
C	Channel : 788 Frequency : 1905.4 MHz	Channel : 809 Frequency : 1909.6 MHz
D	Channel : 588 Frequency : 1865.4 MHz	Channel : 609 Frequency : 1869.6 MHz
E	Channel : 688 Frequency : 1885.4 MHz	Channel : 709 Frequency : 1889.6 MHz
F	Channel : 713 Frequency : 1890.4 MHz	Channel : 734 Frequency : 1894.6 MHz

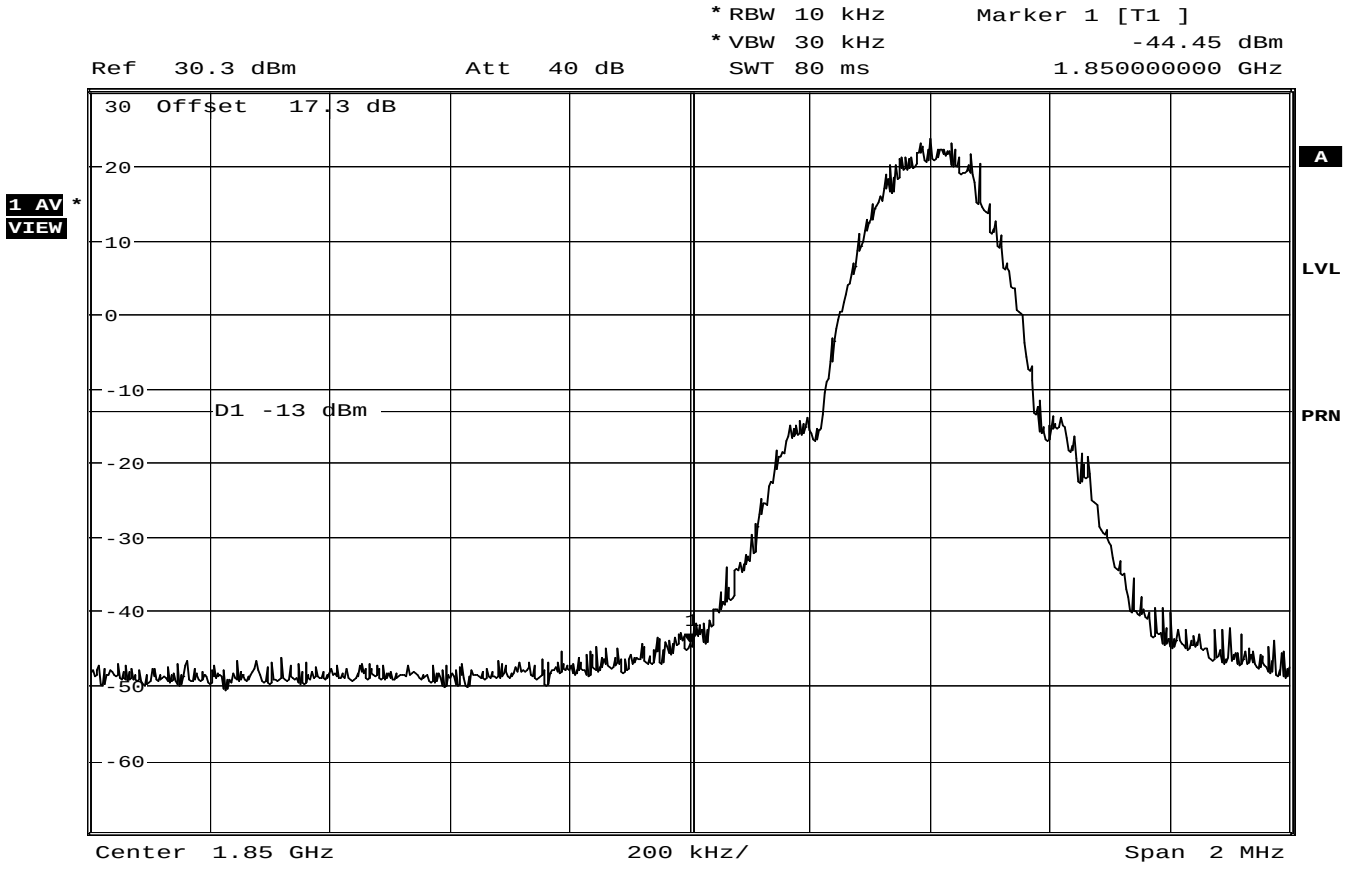
2.4.6 Test Results

The measurement plots are shown on the following pages.

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 513, (1850.4MHz)

Block A

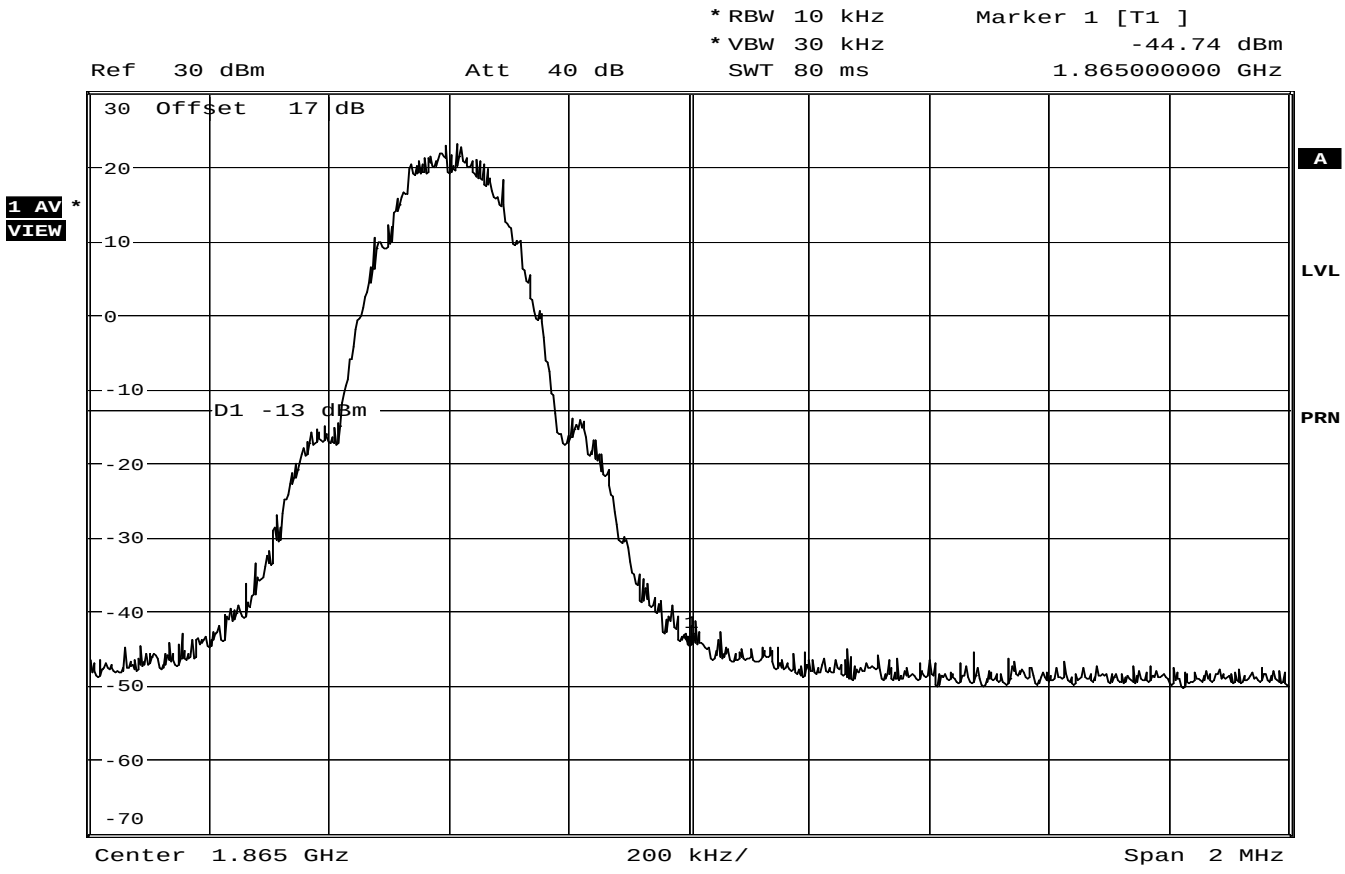


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 584, (1864.6MHz)

Block A



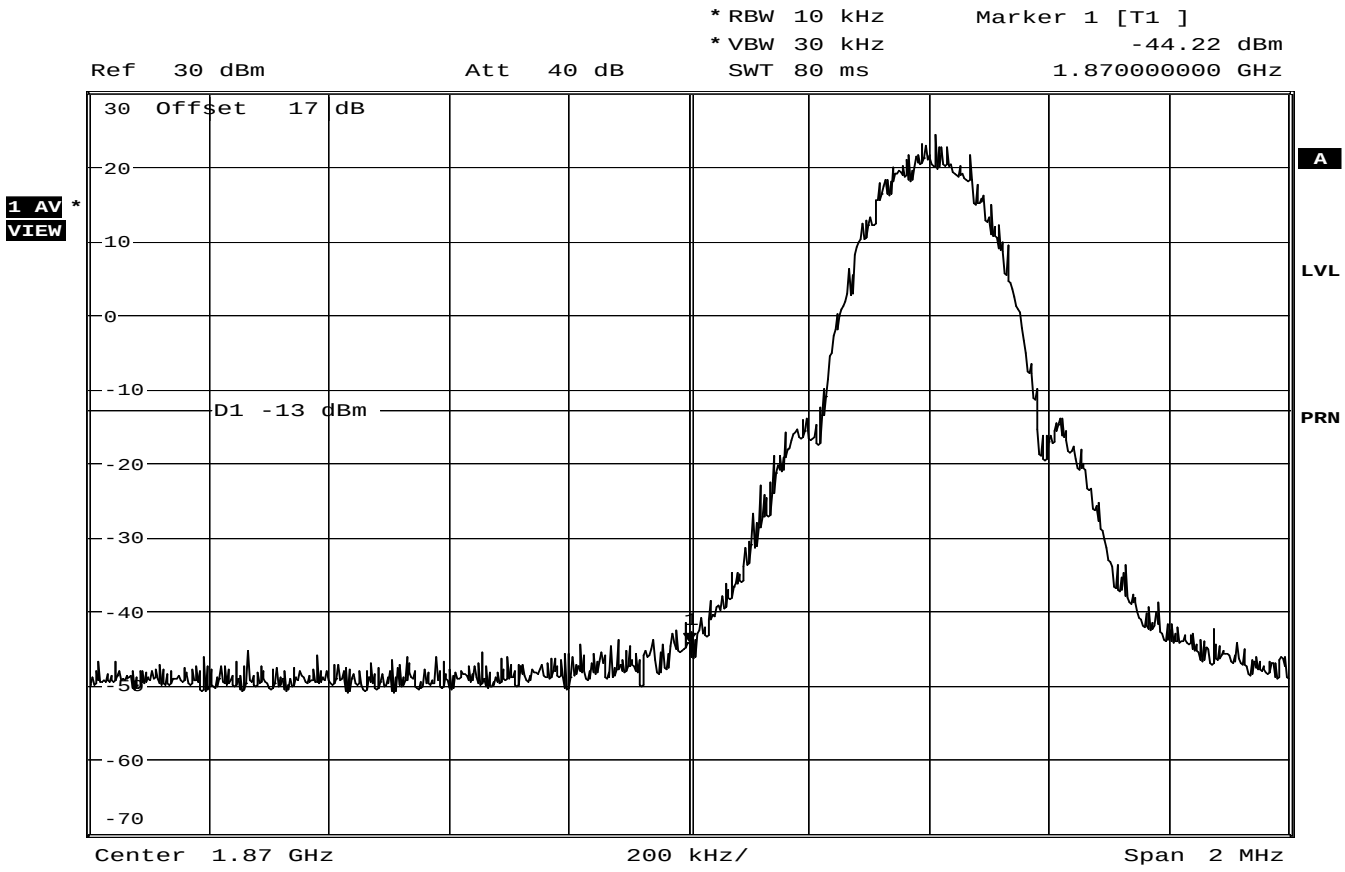
Date: 6.MAY.2005 09:43:29

GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 613, (1870.4MHz)

Block B

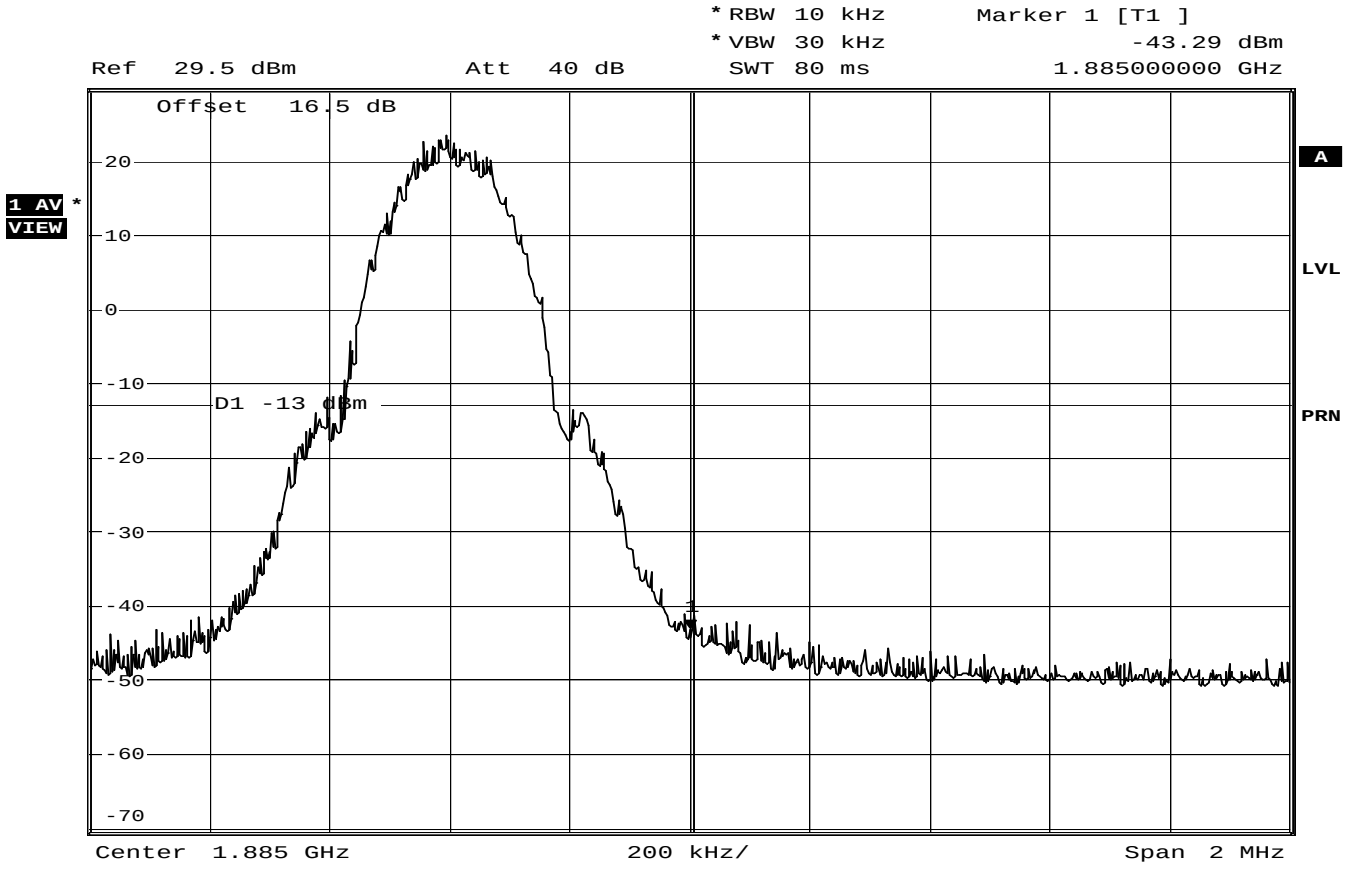


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 684, (1884.6MHz)

Block B

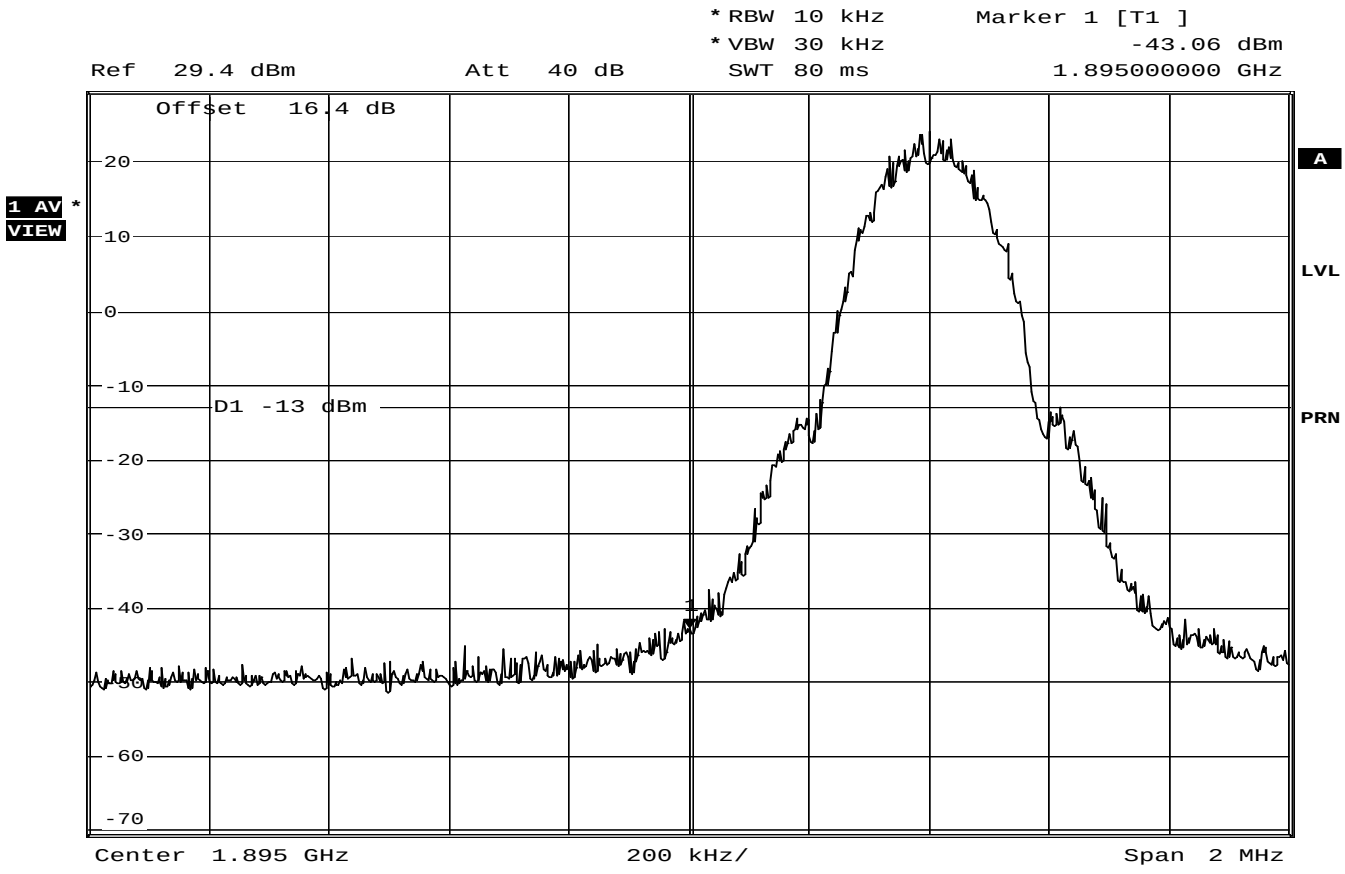


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 738, (1895.4MHz)

Block C

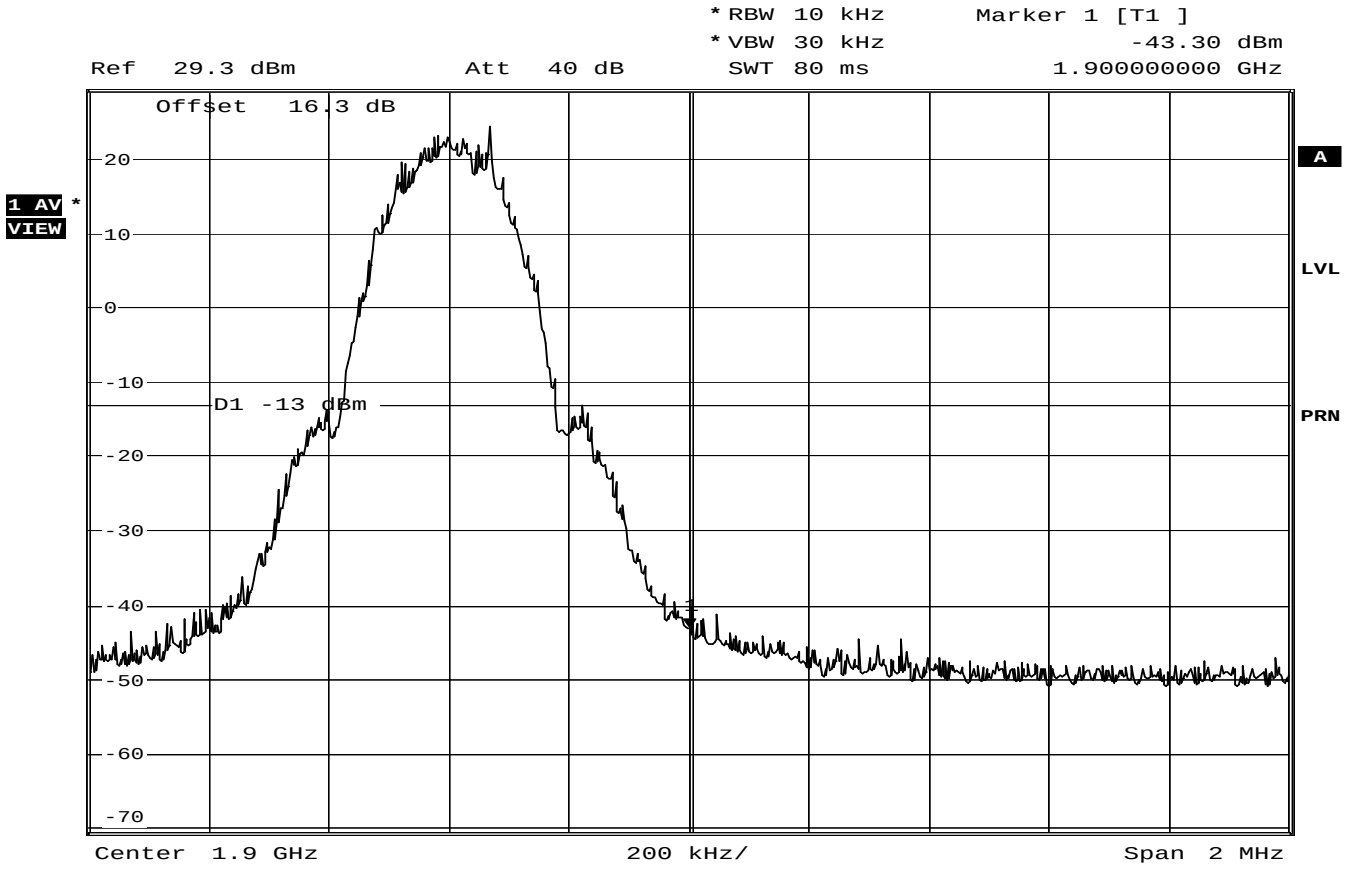


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 759, (1899.6MHz)

Block C

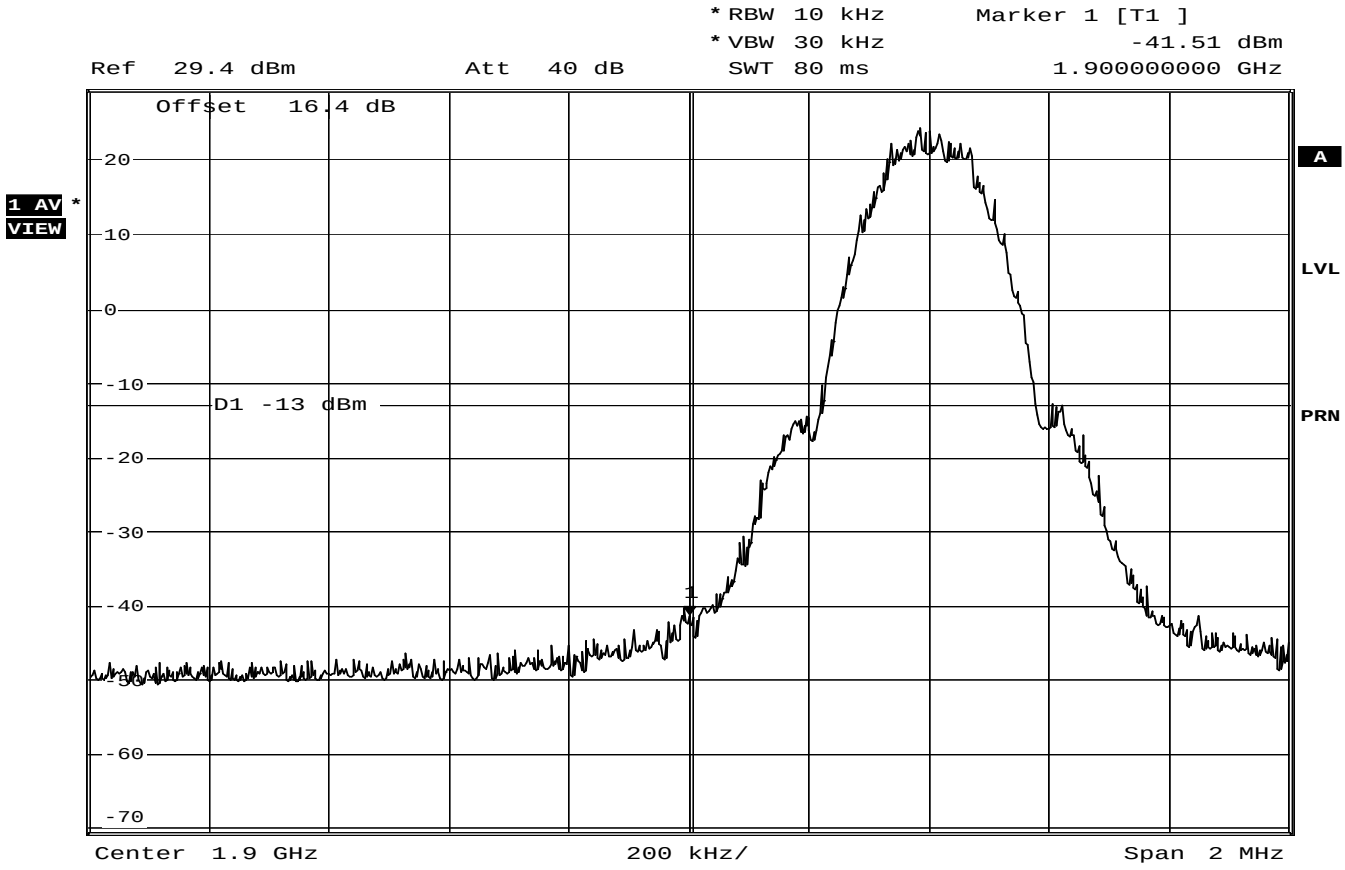


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 763, (1900.4MHz)

Block C

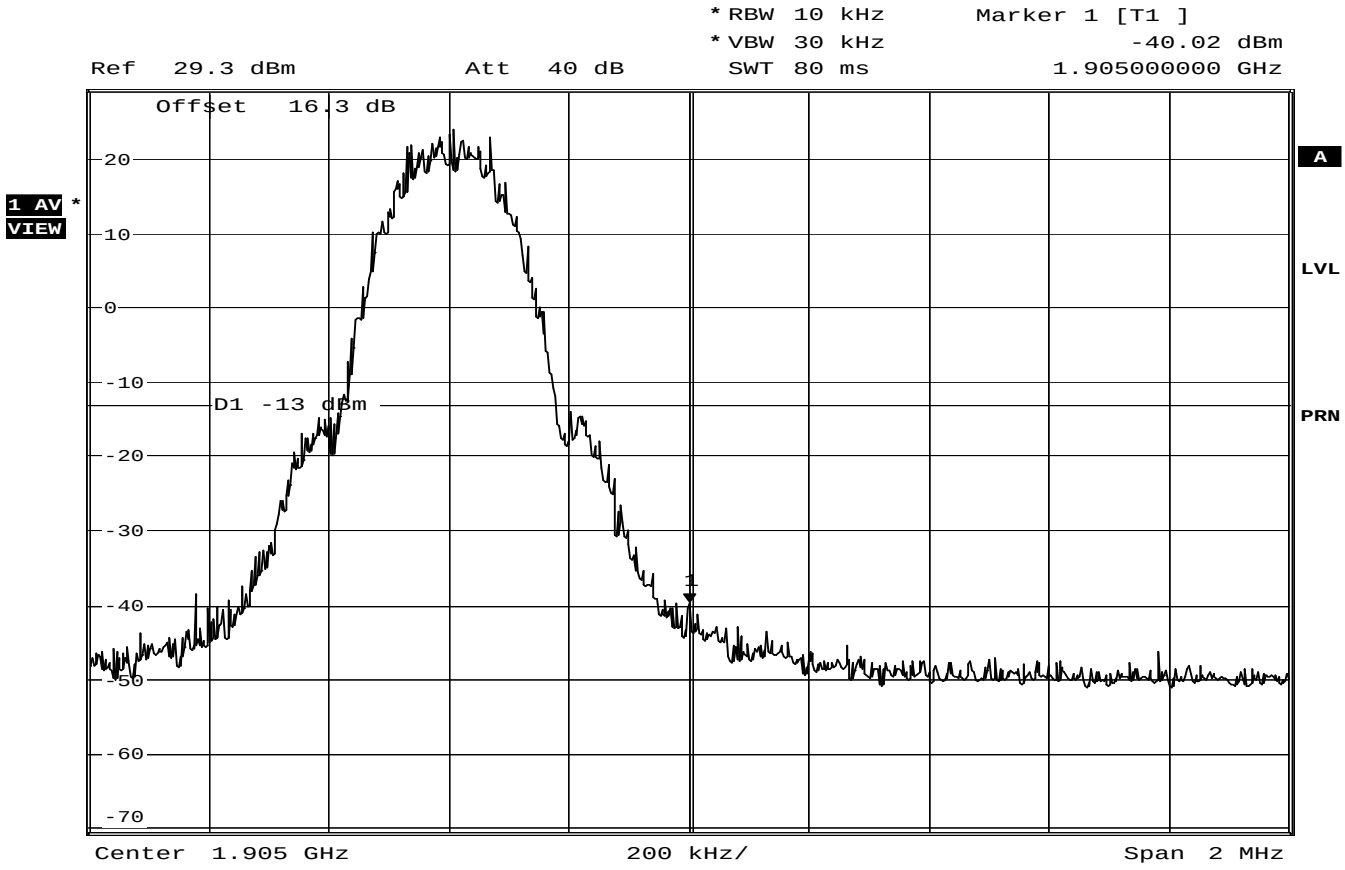


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 784, (1904.6MHz)

Block C

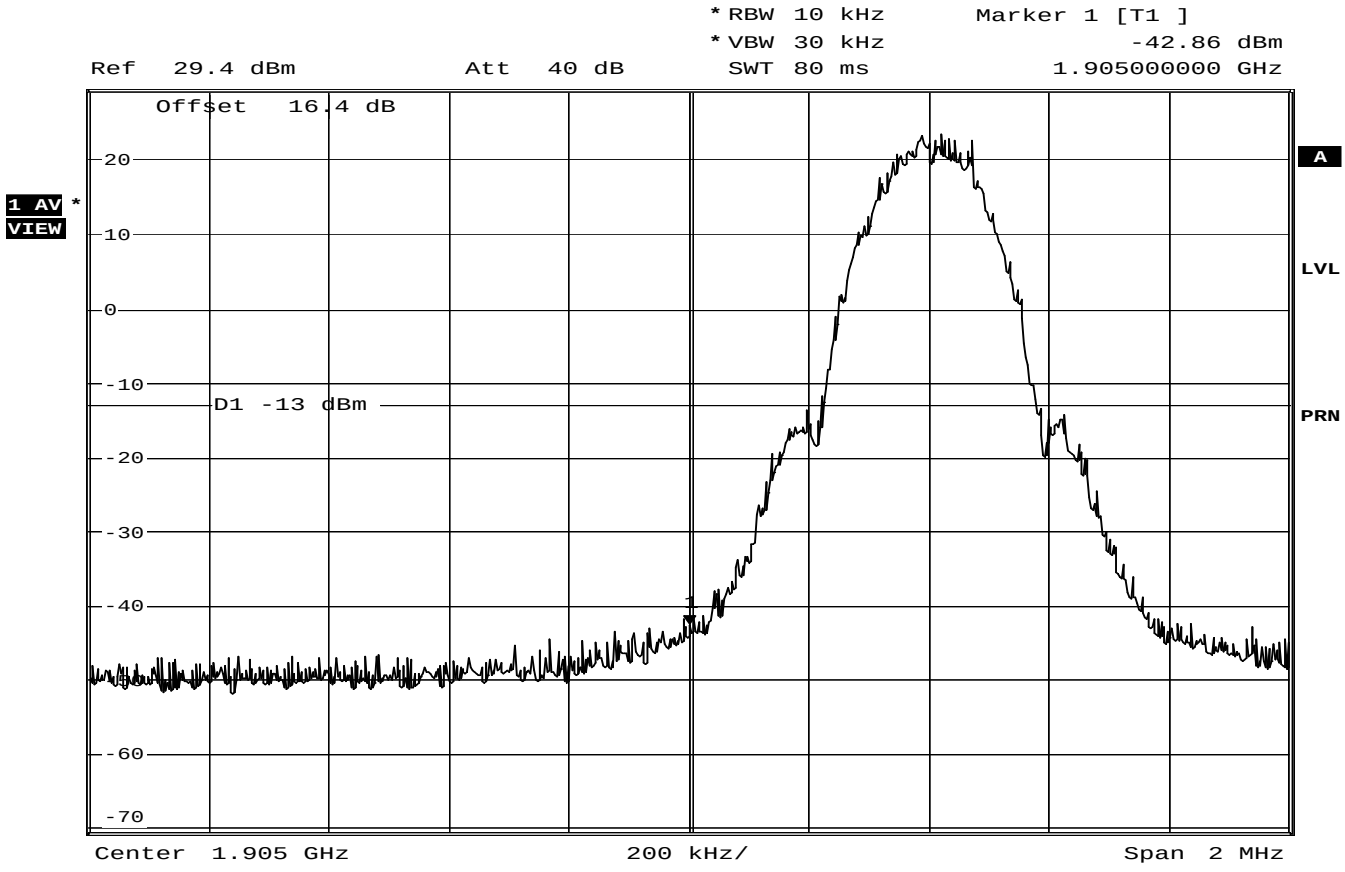


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 788, (1905.4MHz)

Block C

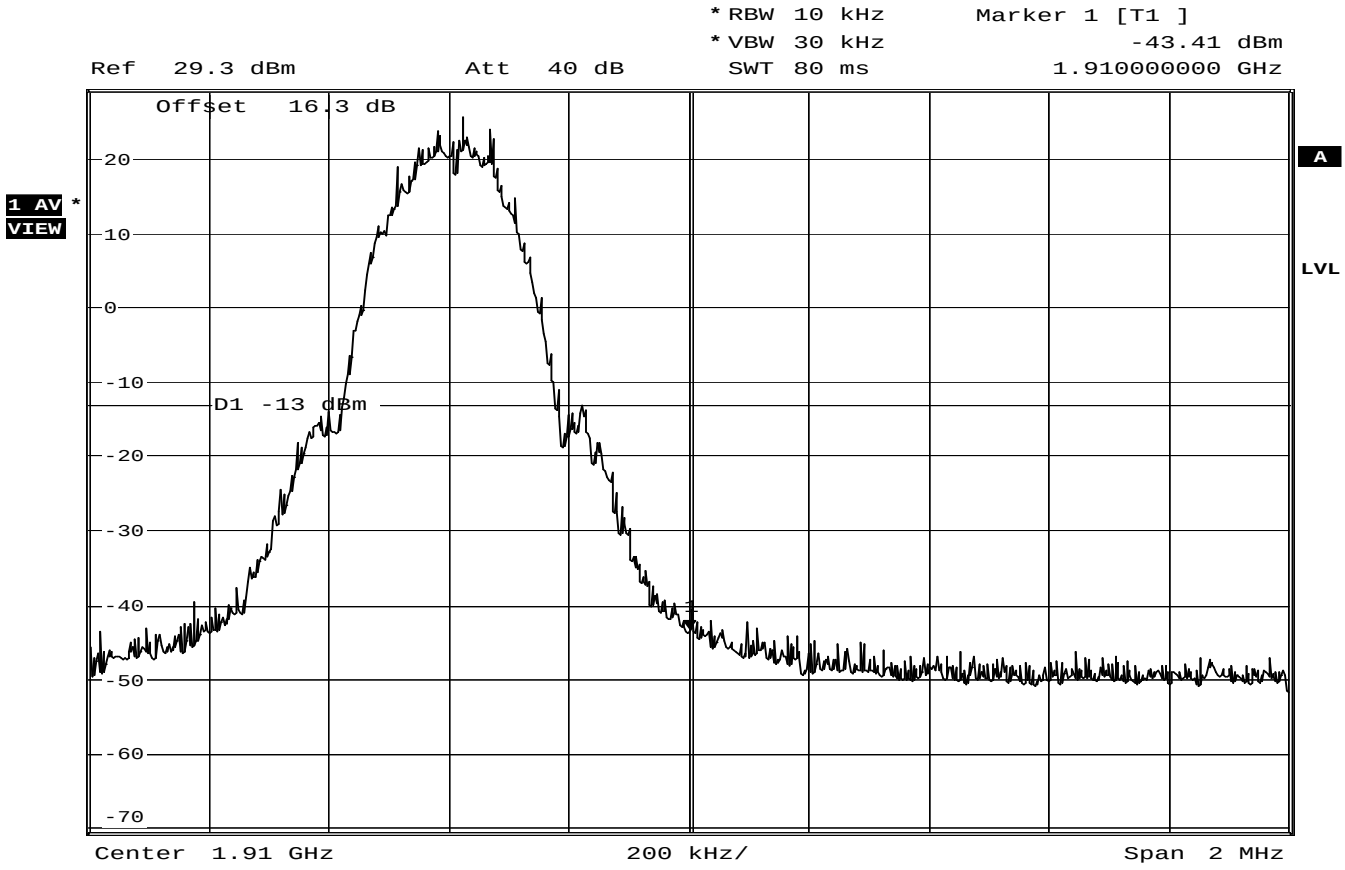


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 809, (1909.6MHz)

Block C

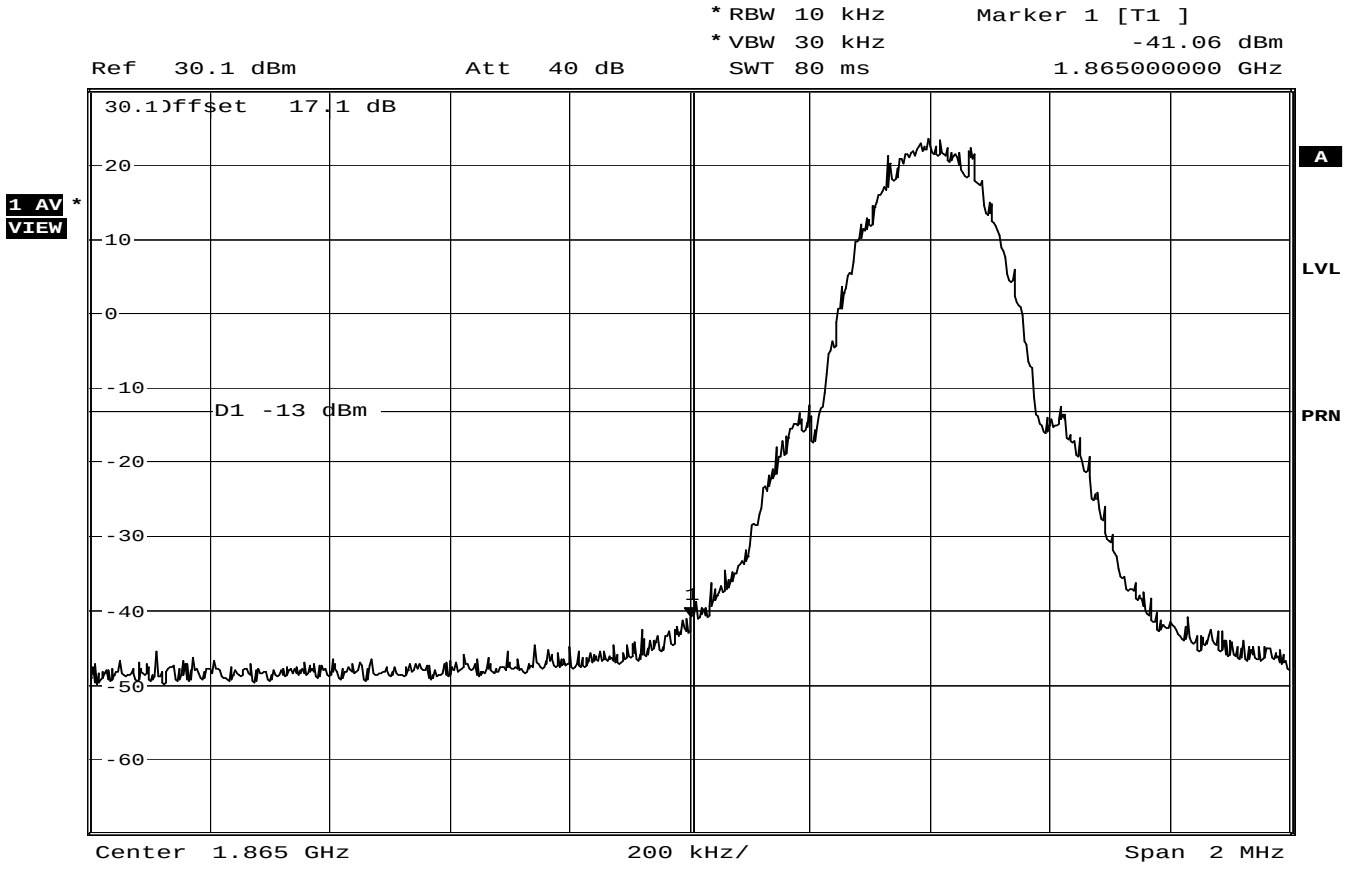


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 588, (1865.4MHz)

Block D

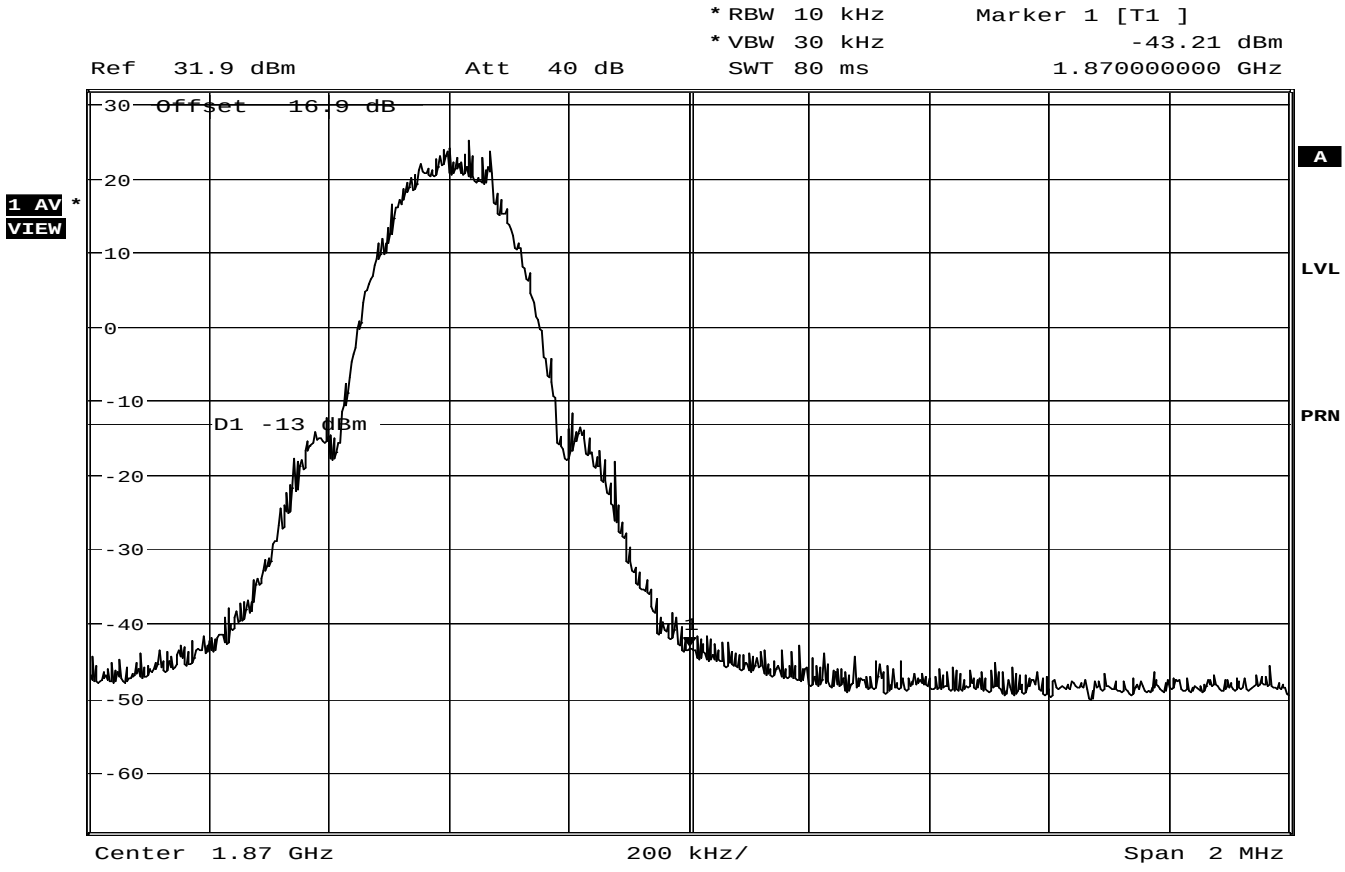


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 609, (1869.6MHz)

Block D

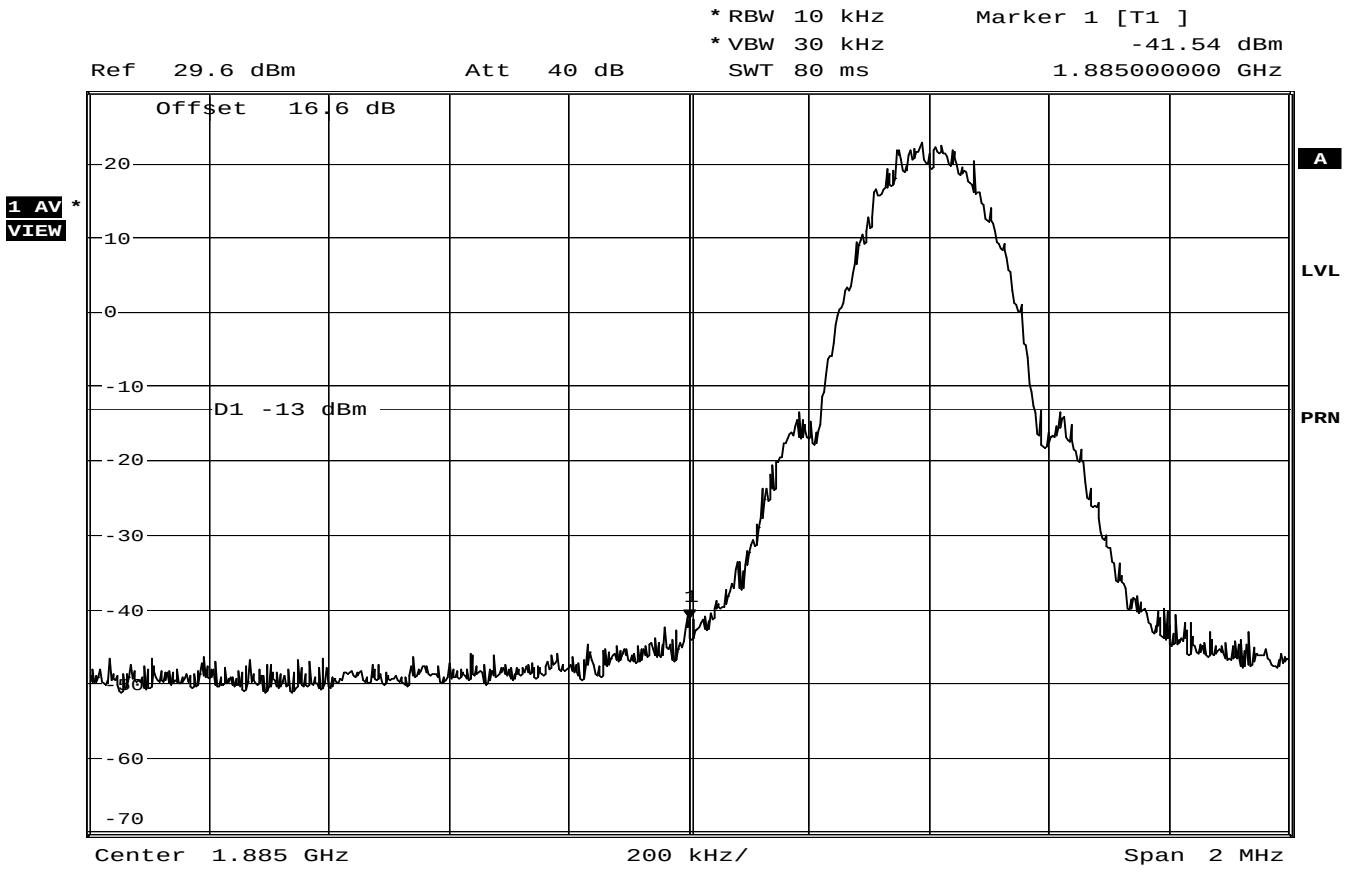


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 688, (1885.4MHz)

Block E

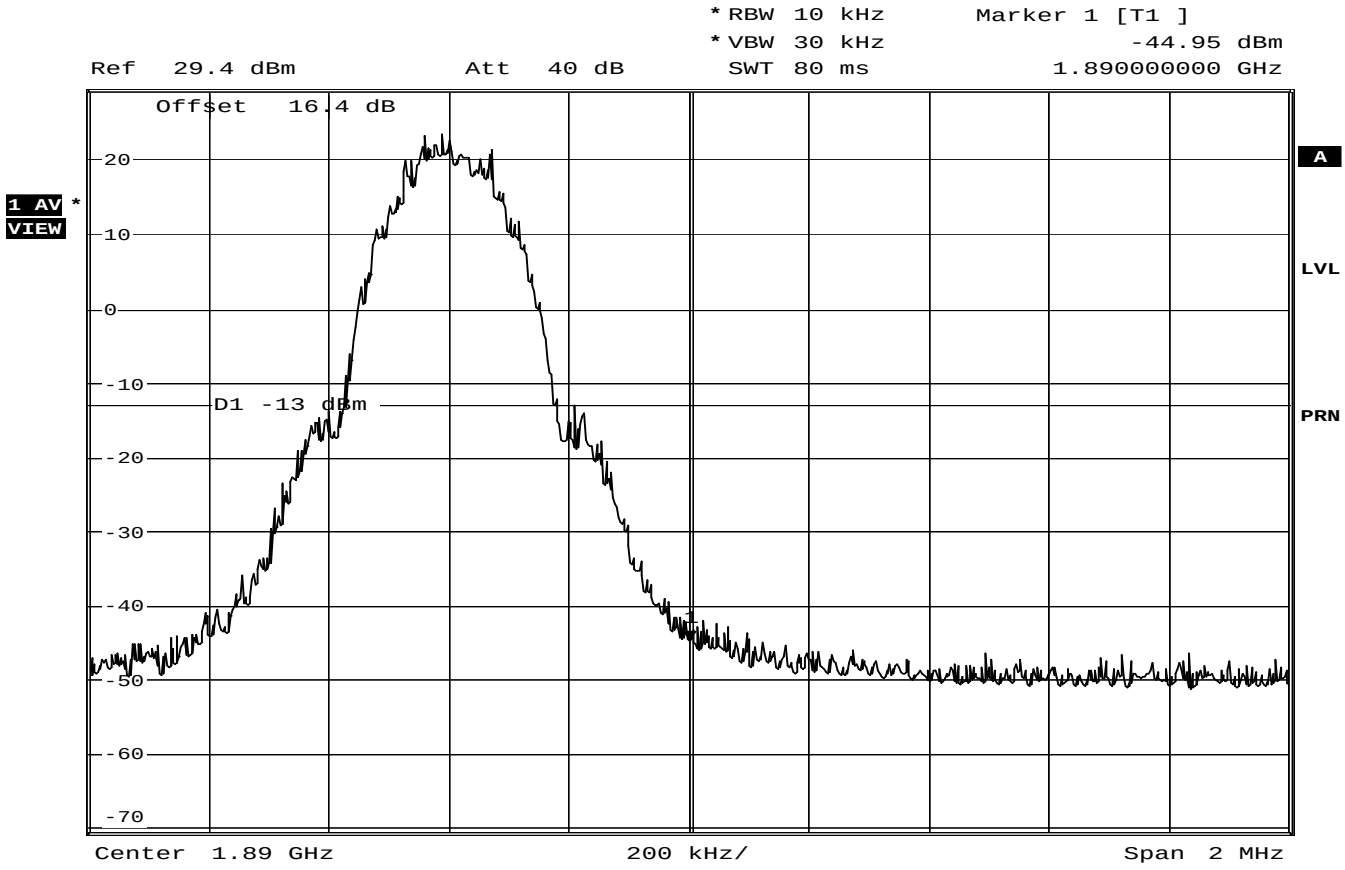


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 709 (1889.8MHz)

Block E

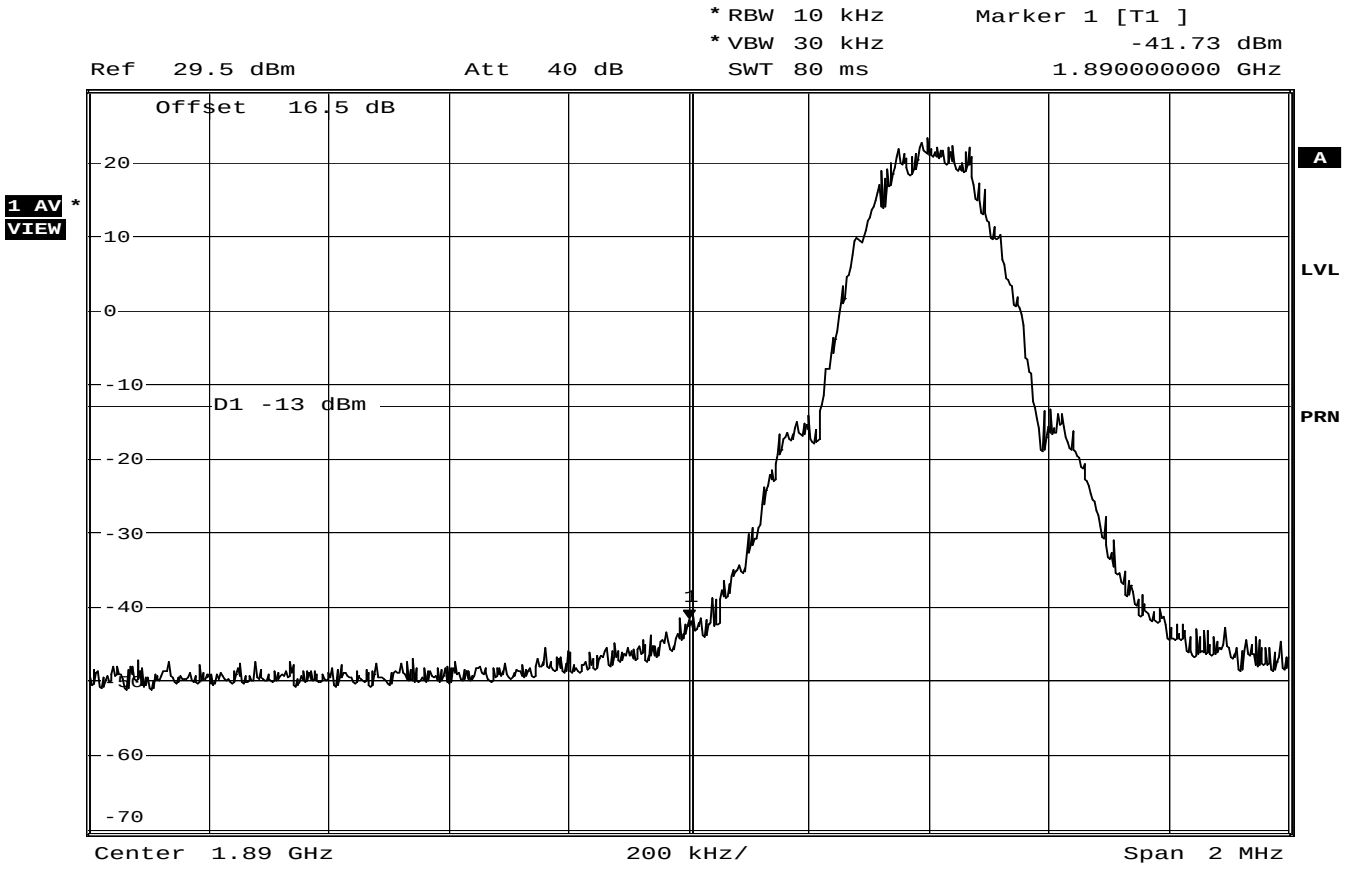


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 713, (1890.4MHz)

Block F

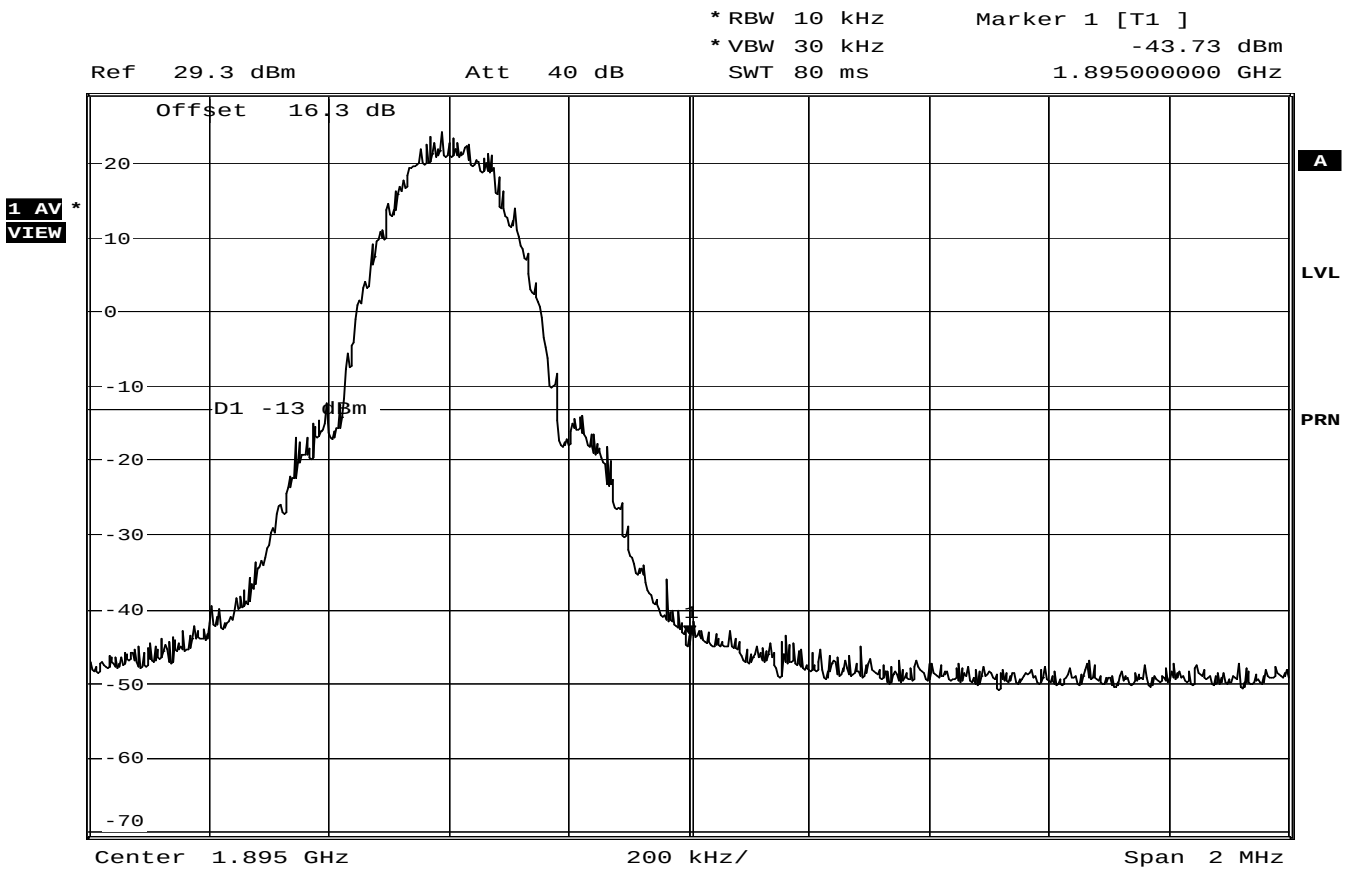


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 734, (1894.6MHz)

Block F

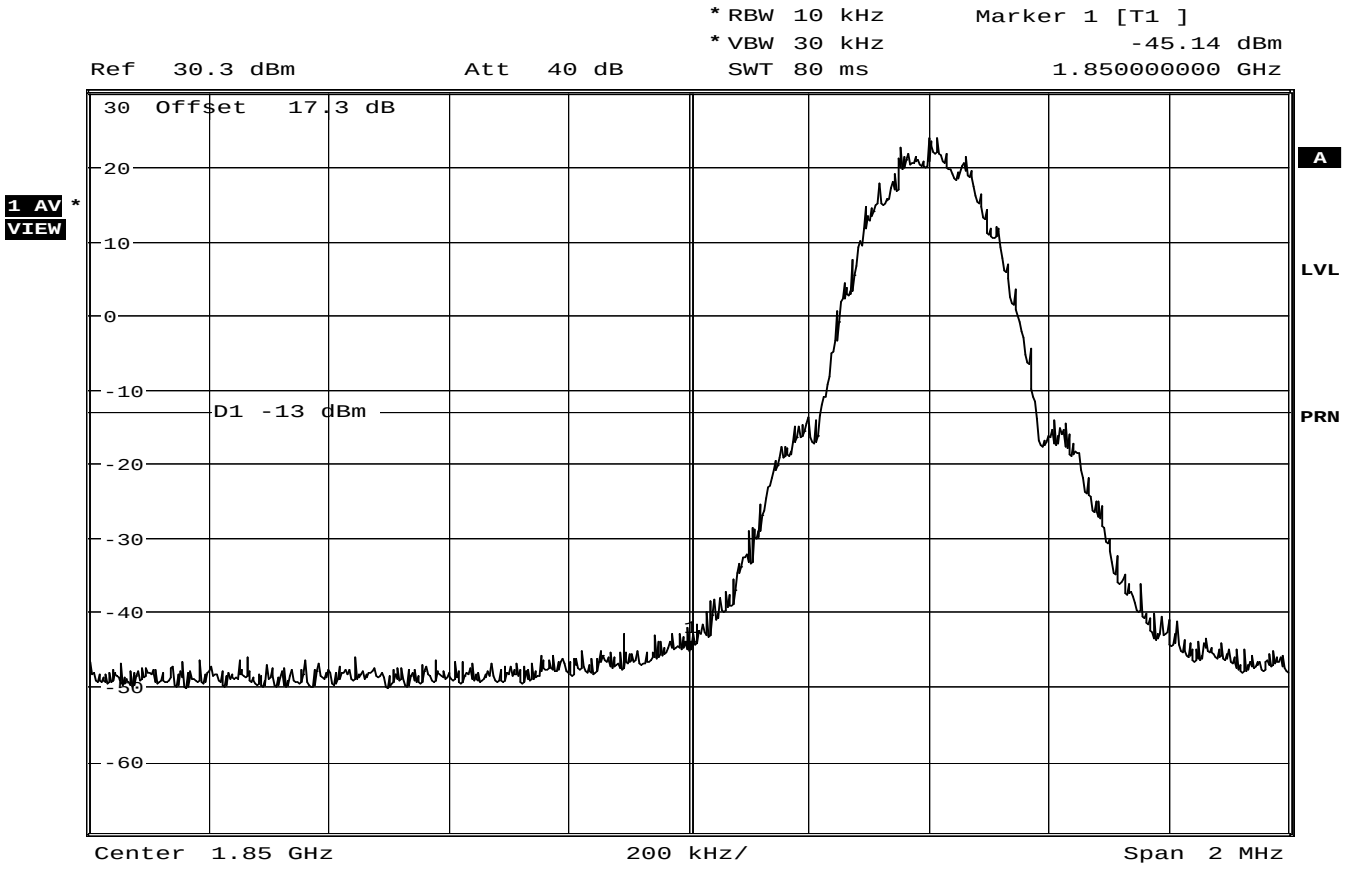


GSM – Circuit Switched

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 513, (1850.4MHz)

Block A

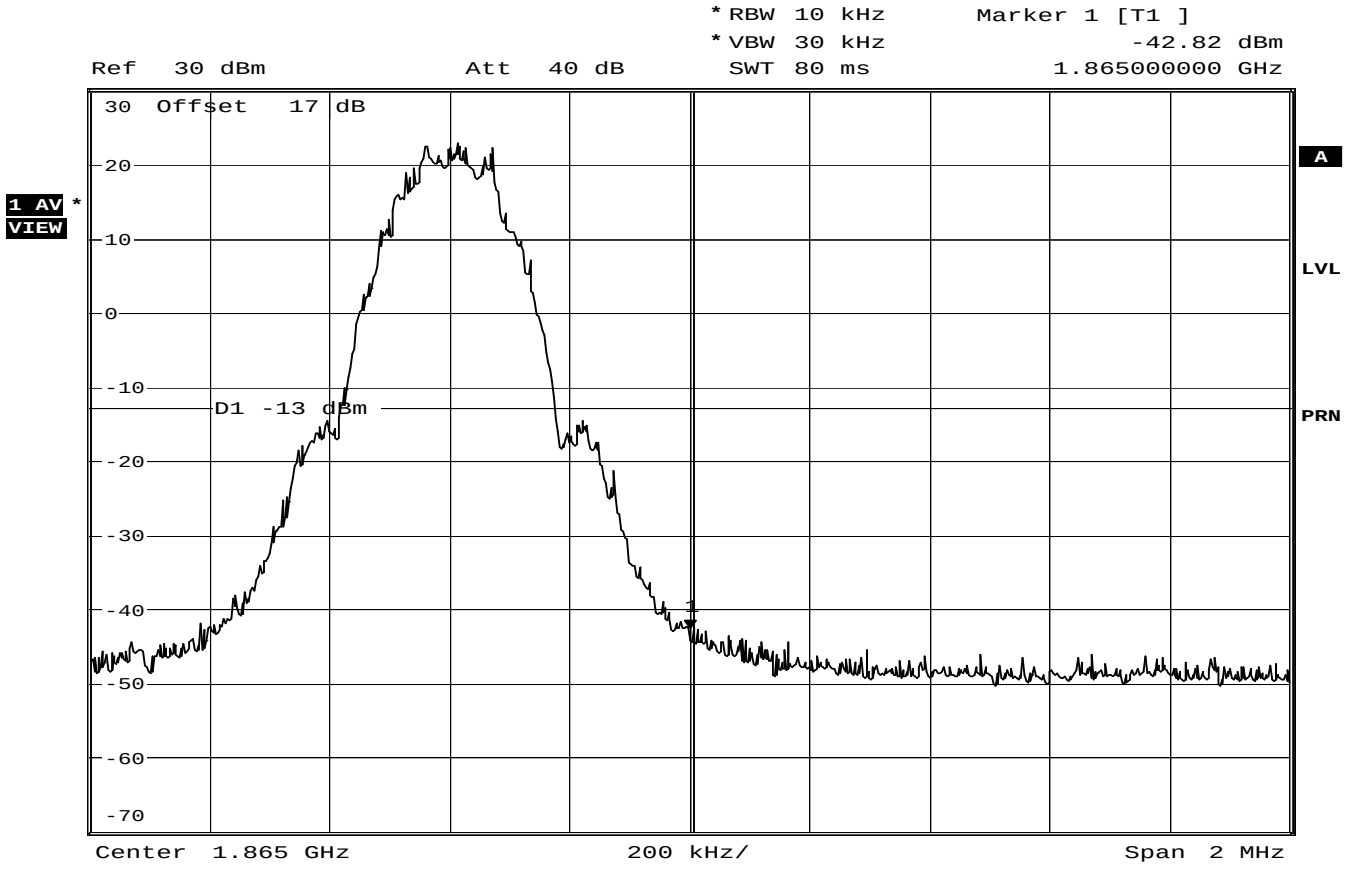


GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 584, (1864.6MHz)

Block A

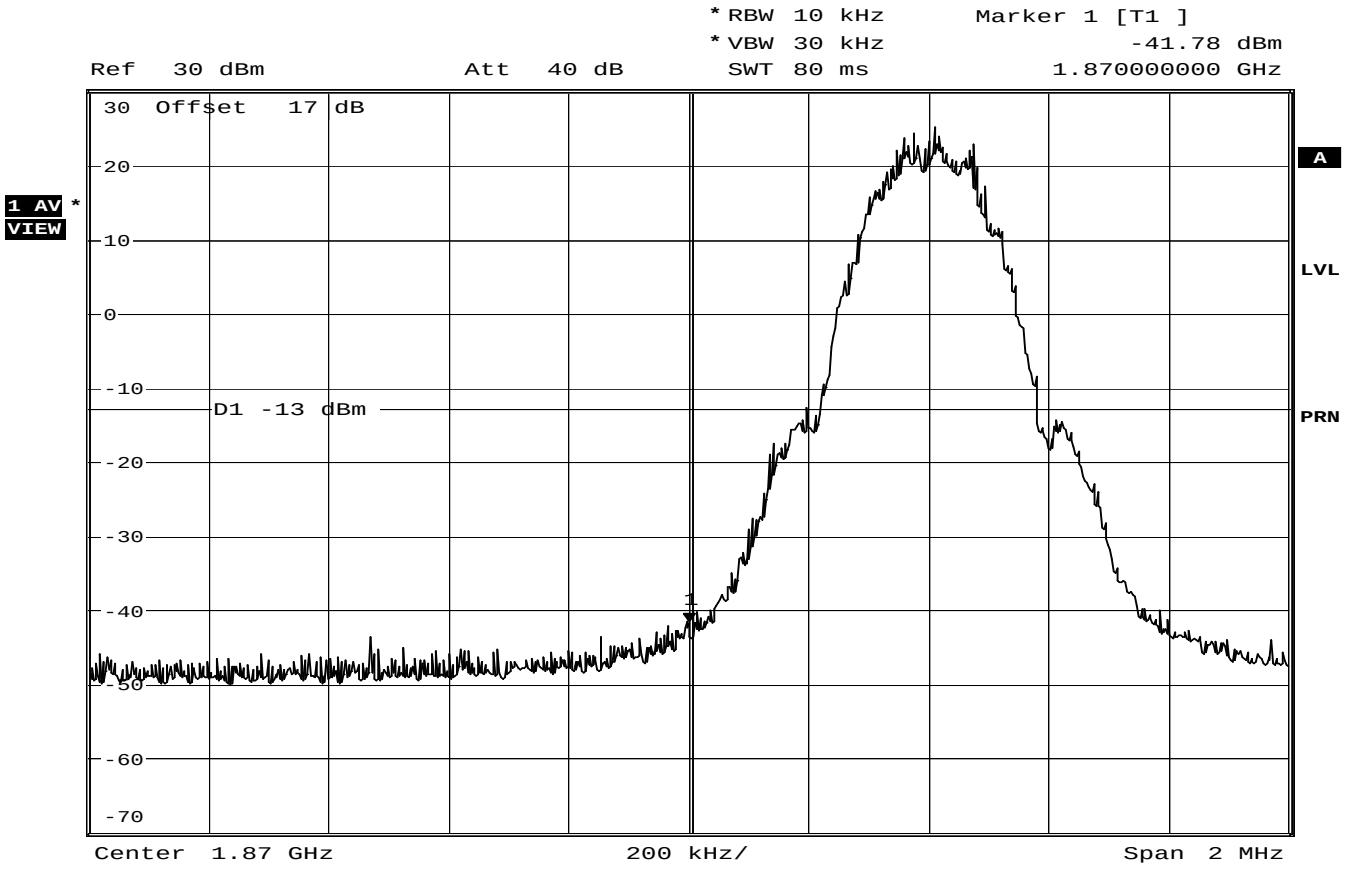


GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 613, (1870.4MHz)

Block B

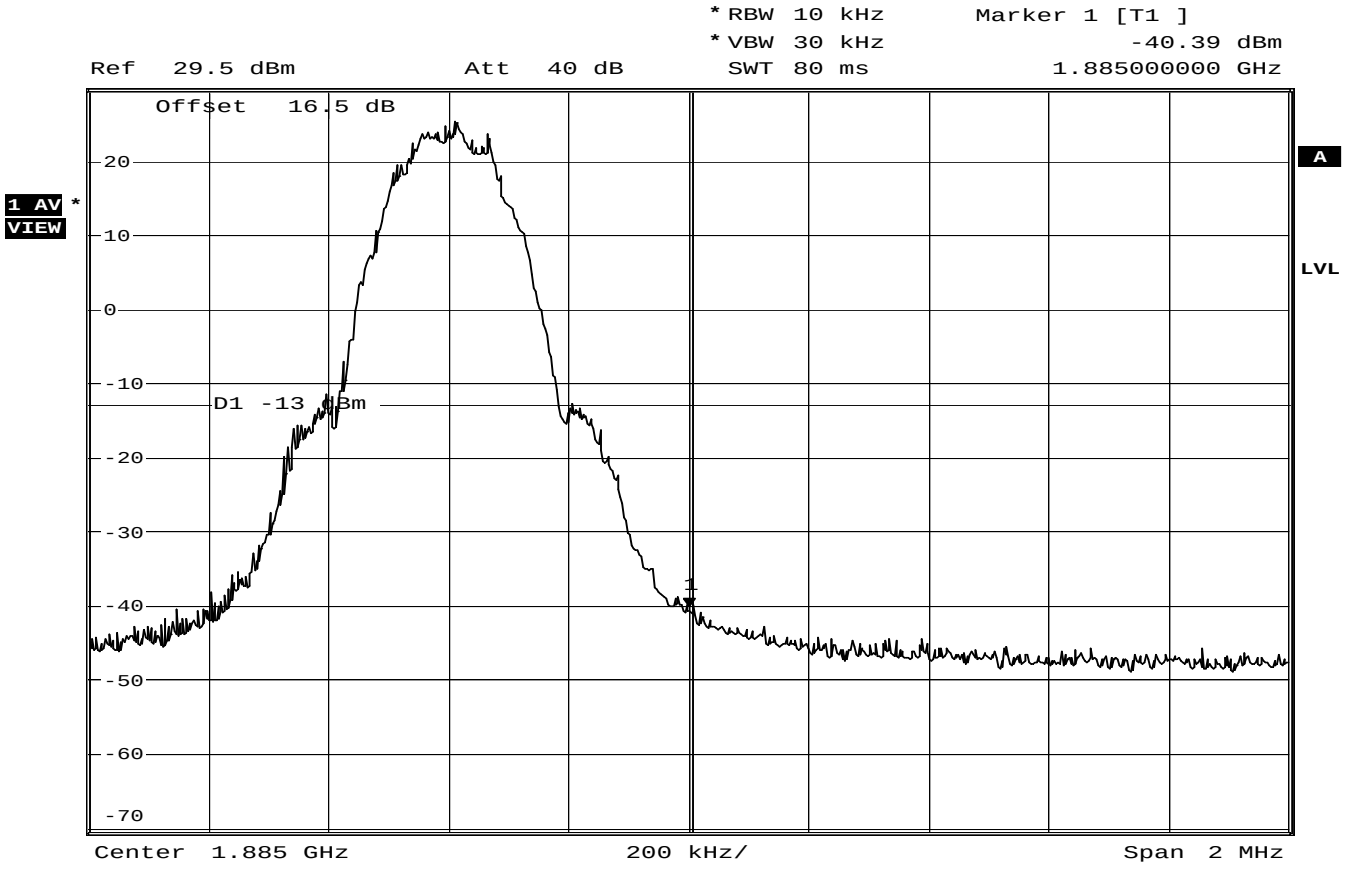


GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 684, (1884.6MHz)

Block B



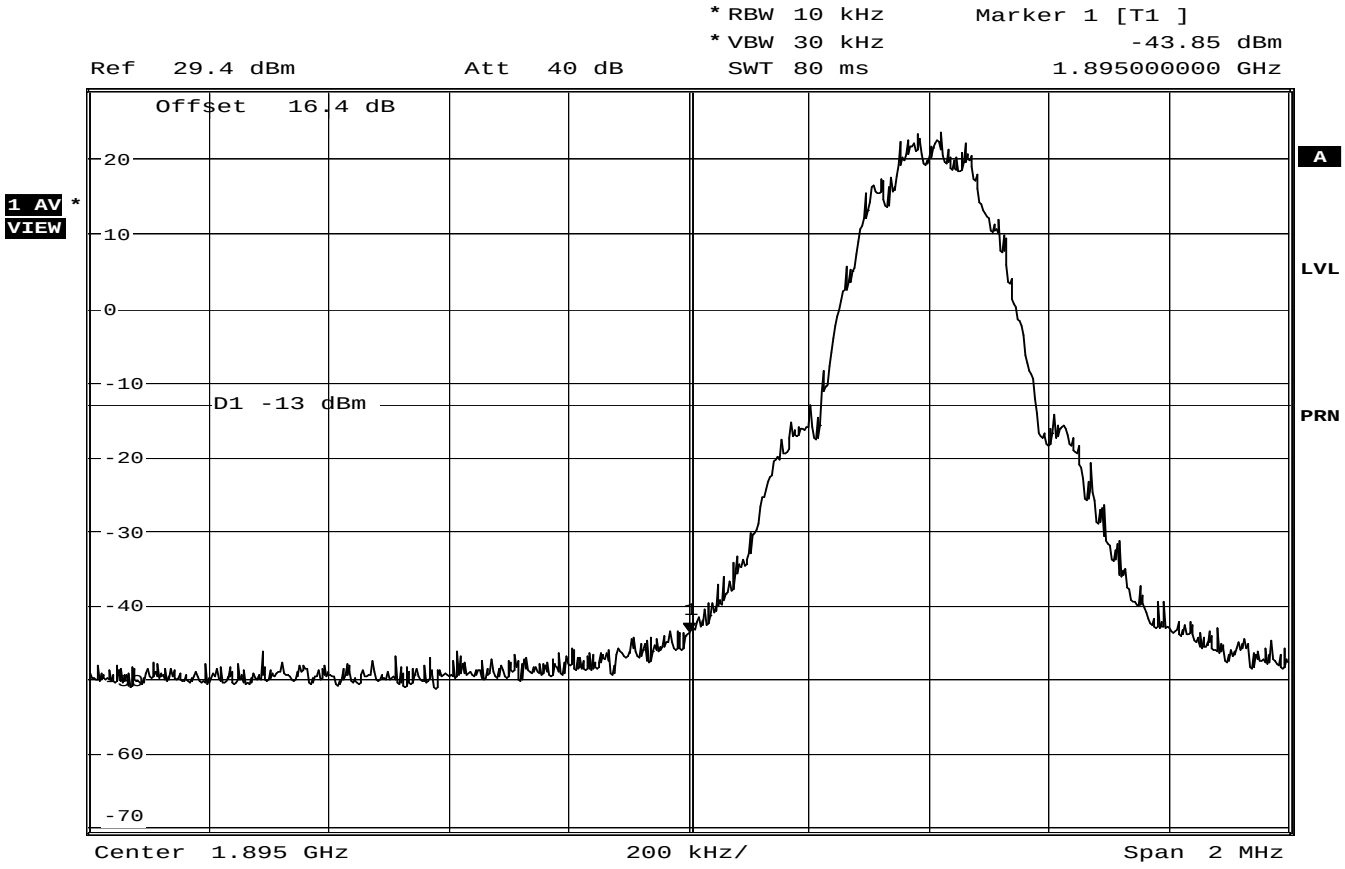
Date: 6.MAY.2005 11:00:40

GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 738, (1895.4MHz)

Block C

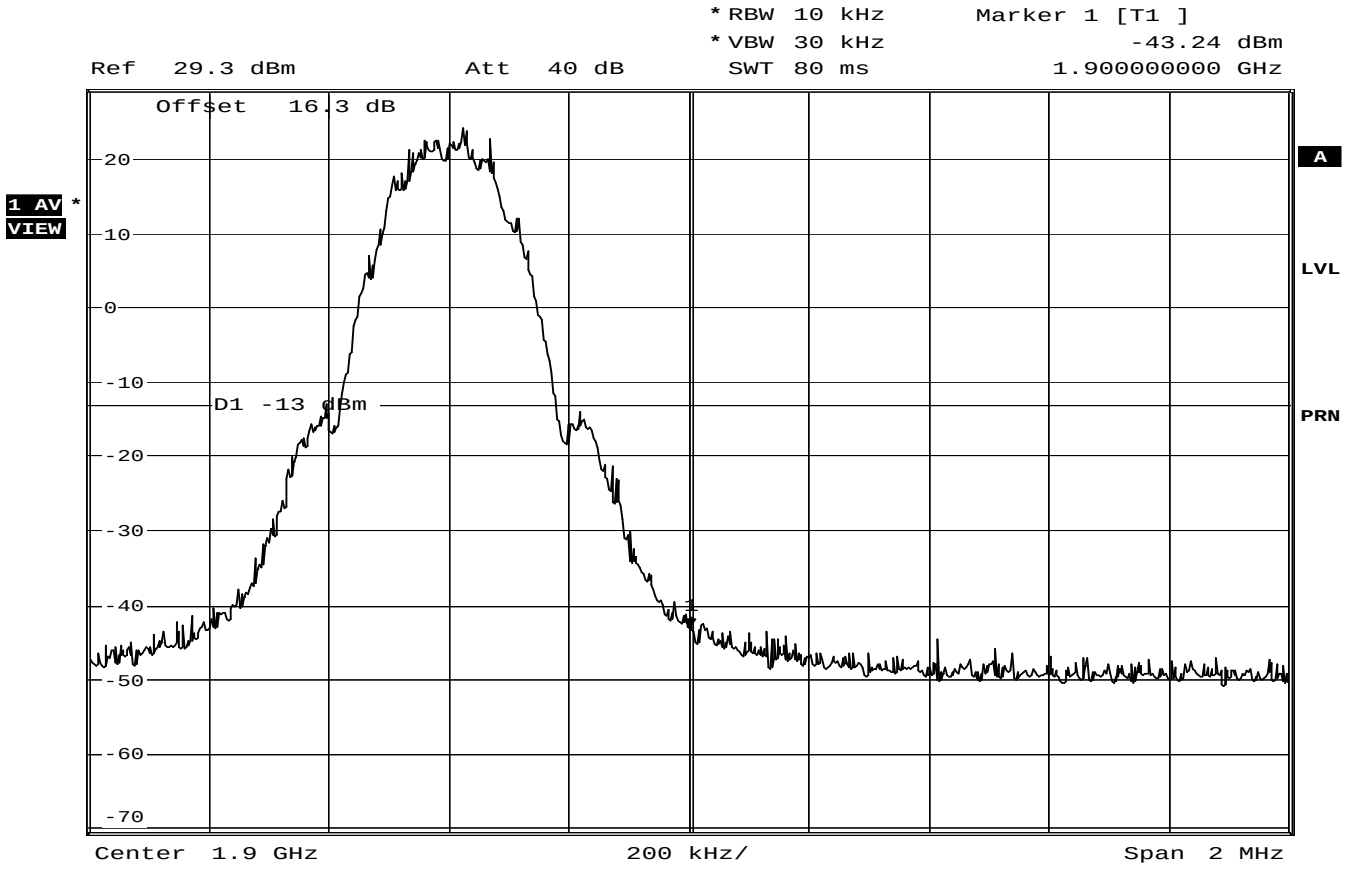


GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 759, (1899.6MHz)

Block C

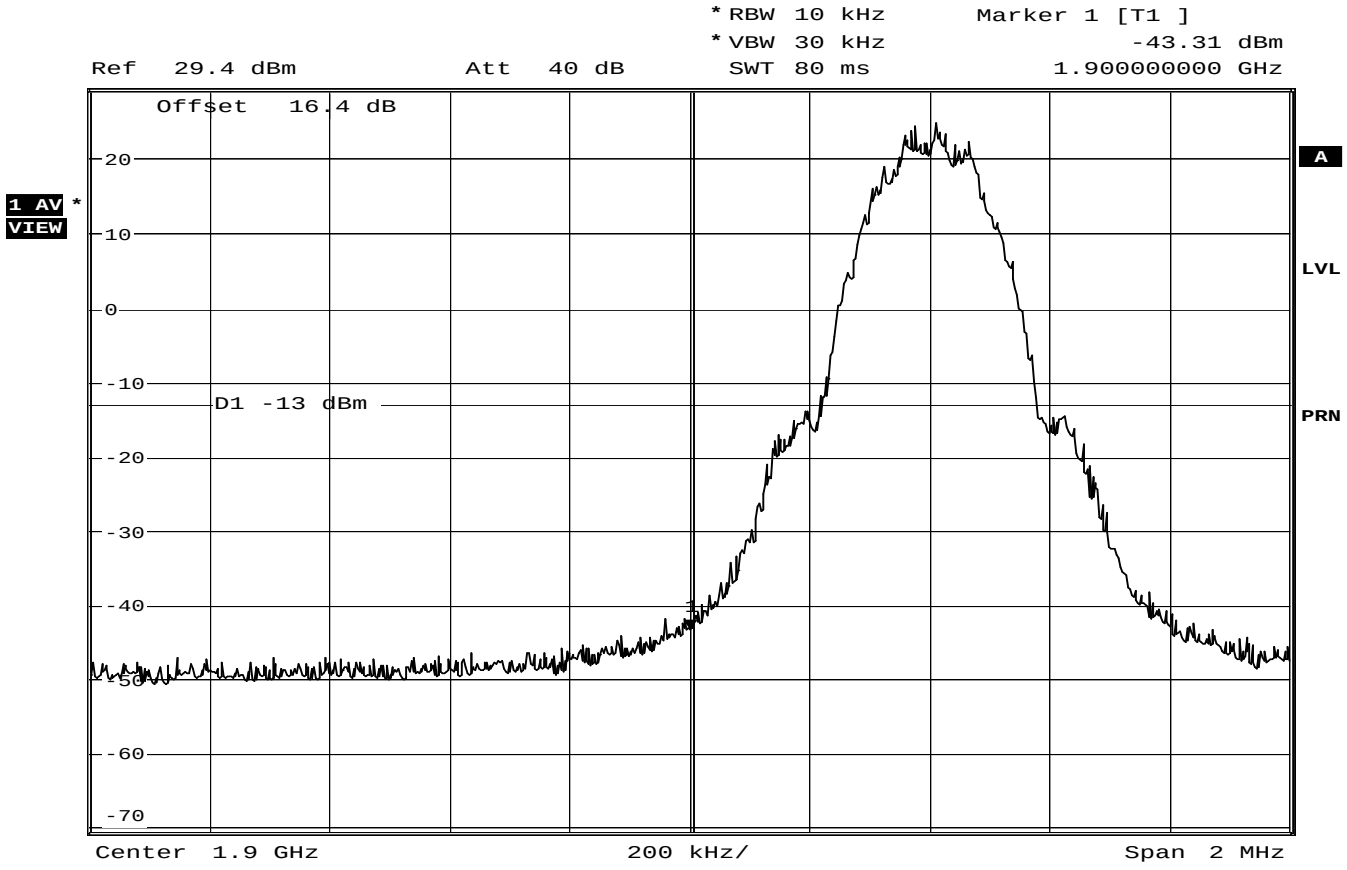


GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 763, (1900.4MHz)

Block C



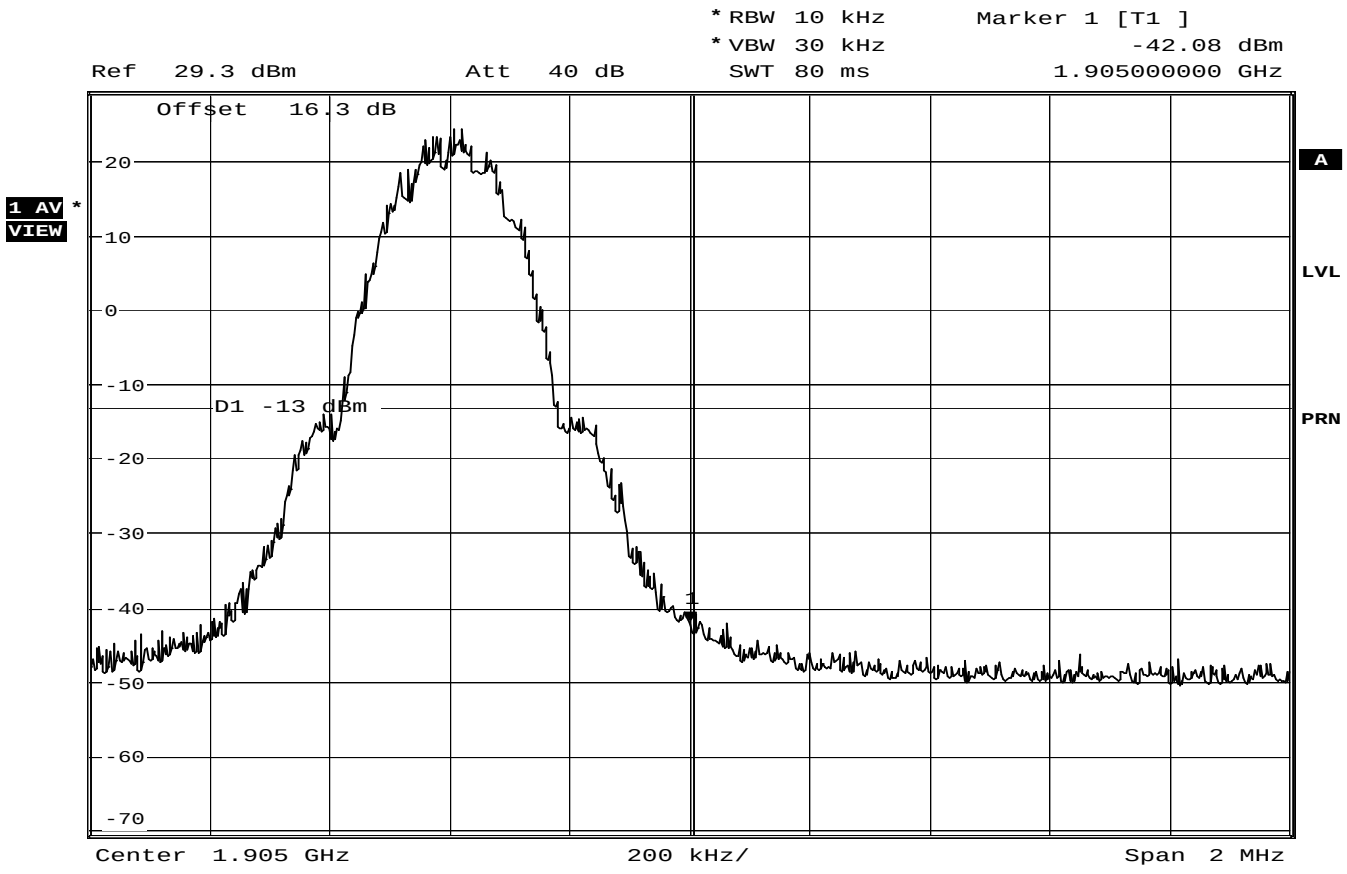
Date: 6.MAY.2005 11:07:55

GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 784, (1904.6MHz)

Block C

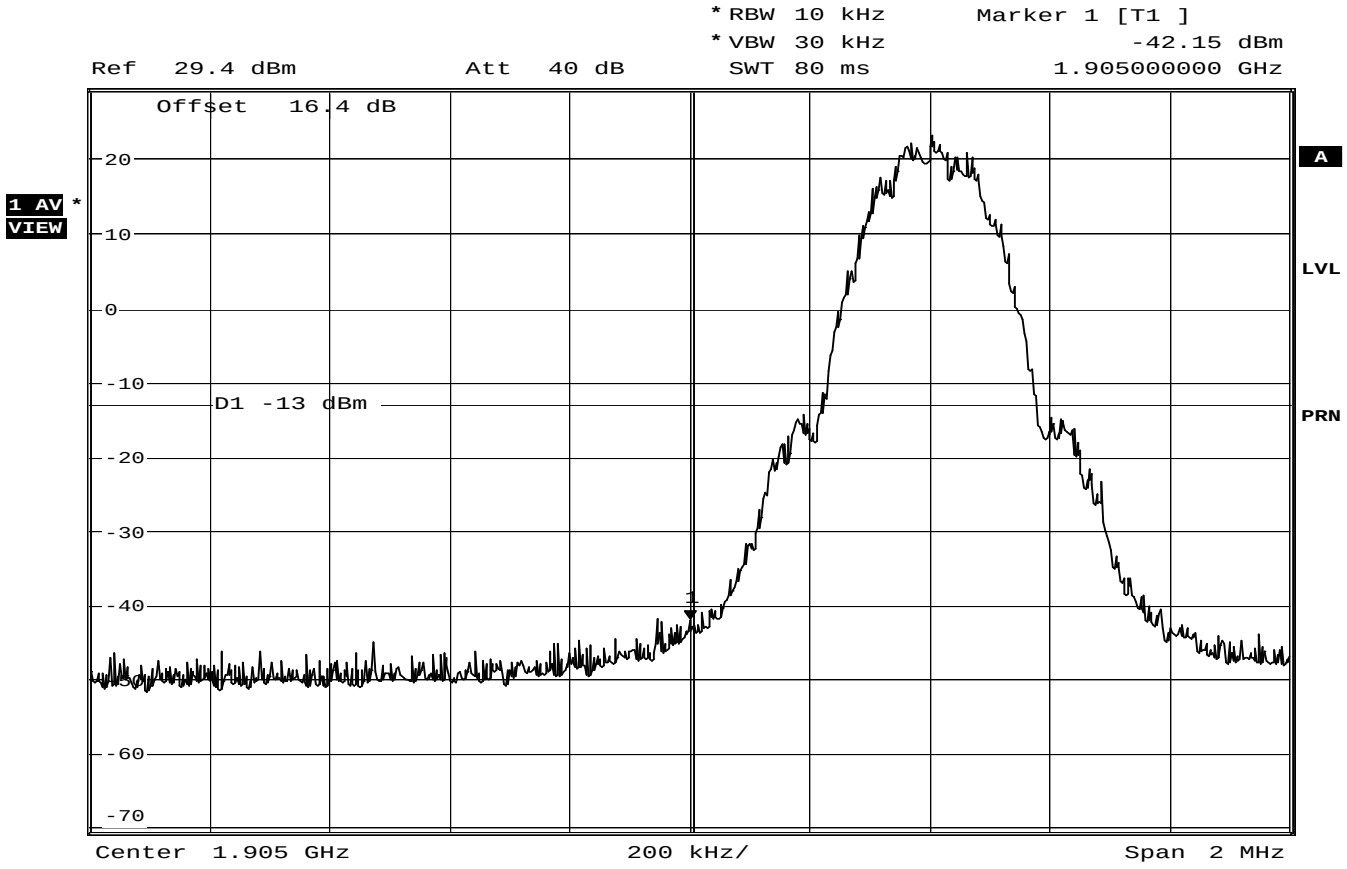


GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 788, (1905.4MHz)

Block C



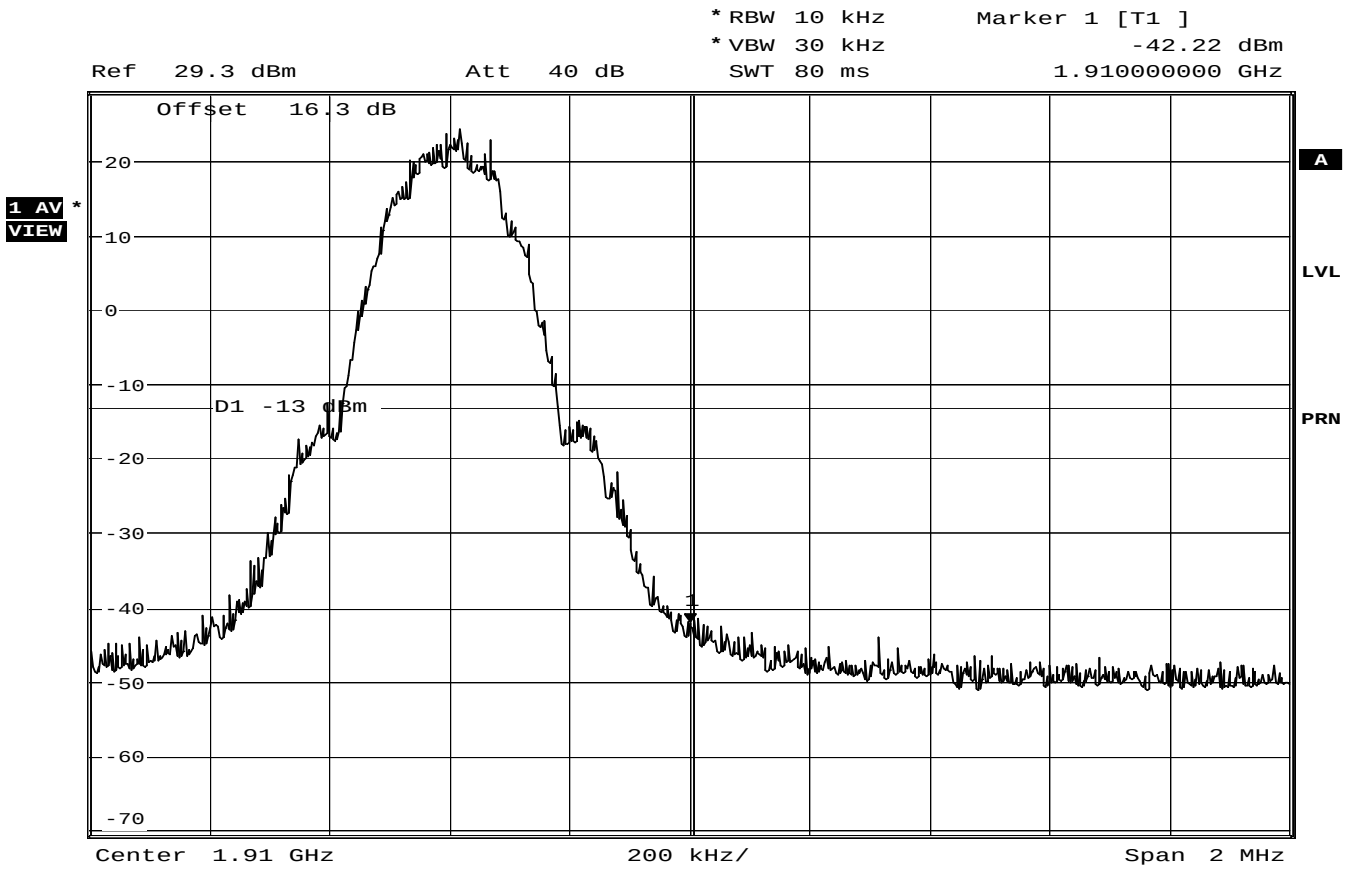
Date: 6.MAY.2005 11:10:45

GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 809, (1909.6MHz)

Block C

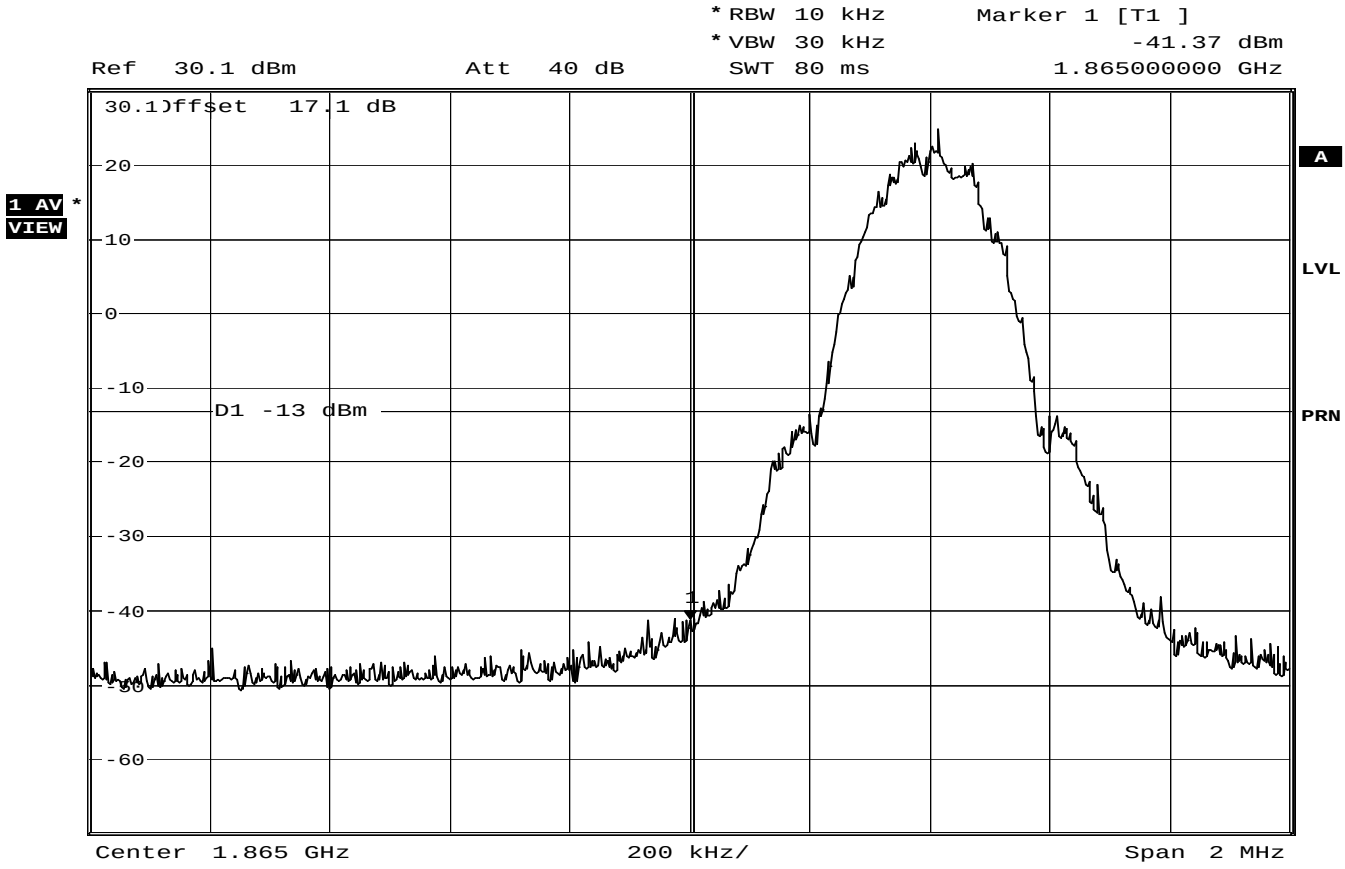


GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 588, (1865.4MHz)

Block D

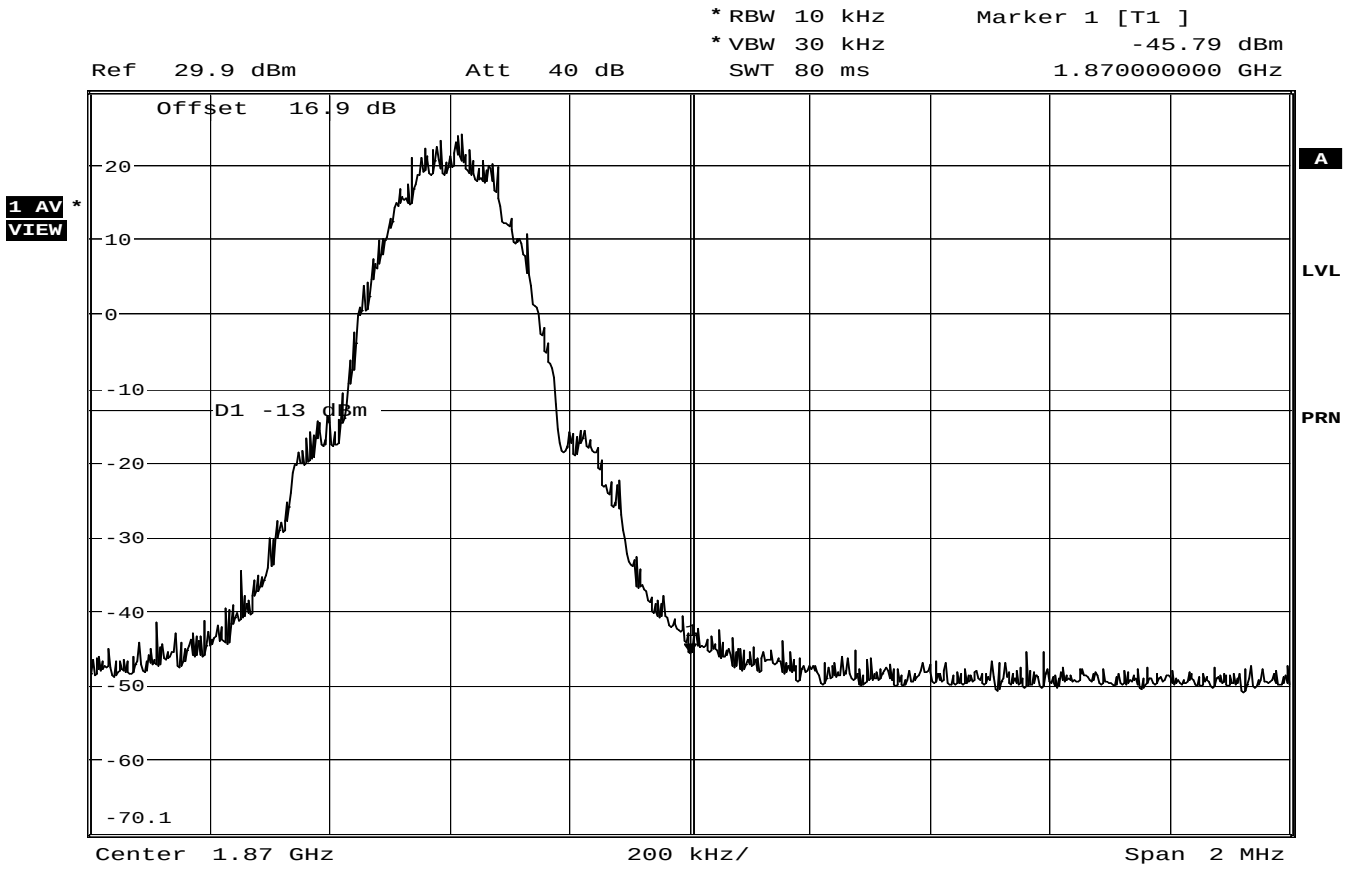


GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 609, (1869.6MHz)

Block D



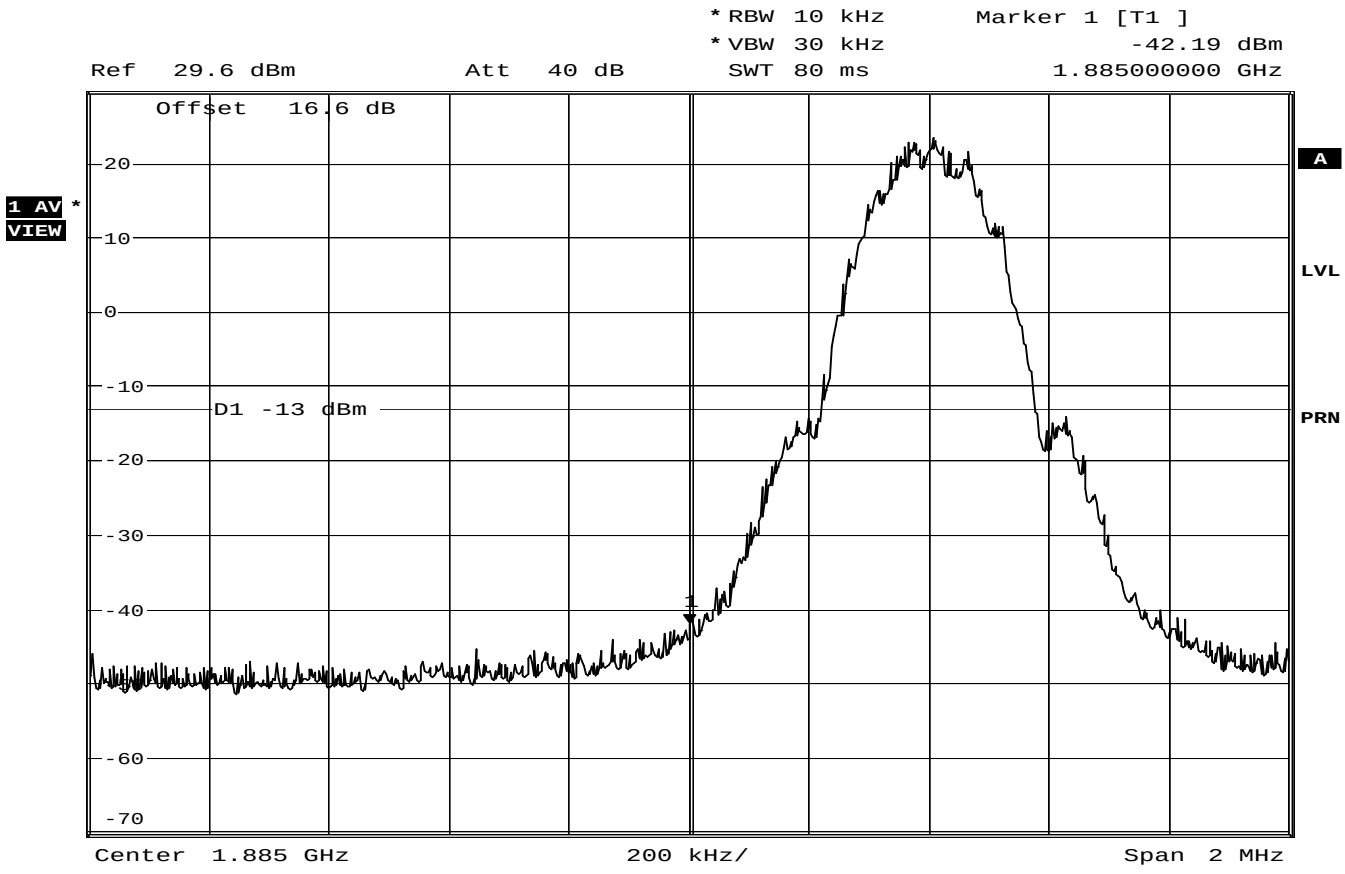
Date: 6.MAY.2005 11:15:58

GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 688, (1885.4MHz)

Block E



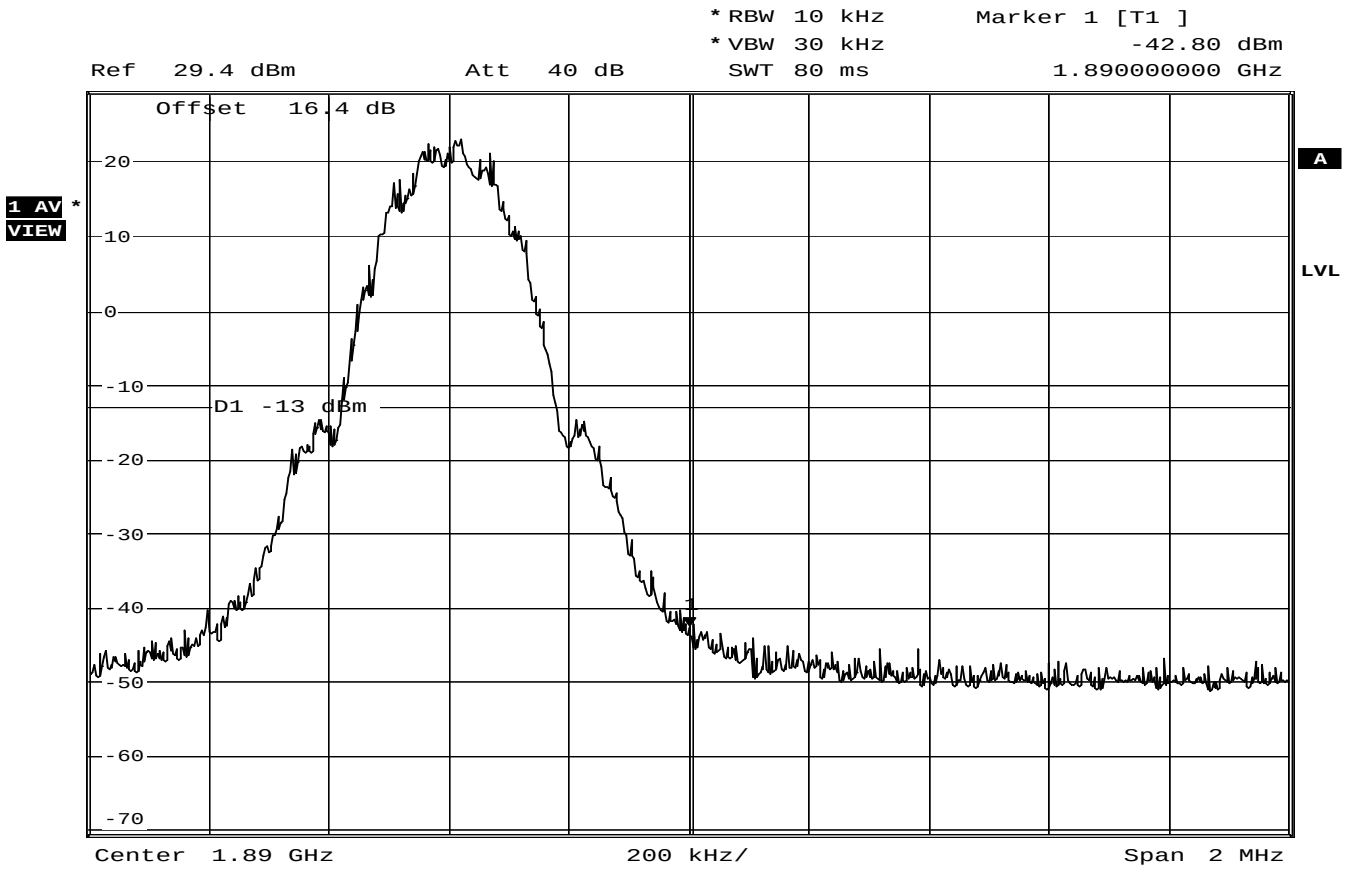
Date: 6.MAY.2005 11:17:19

GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 709 (1889.8MHz)

Block E



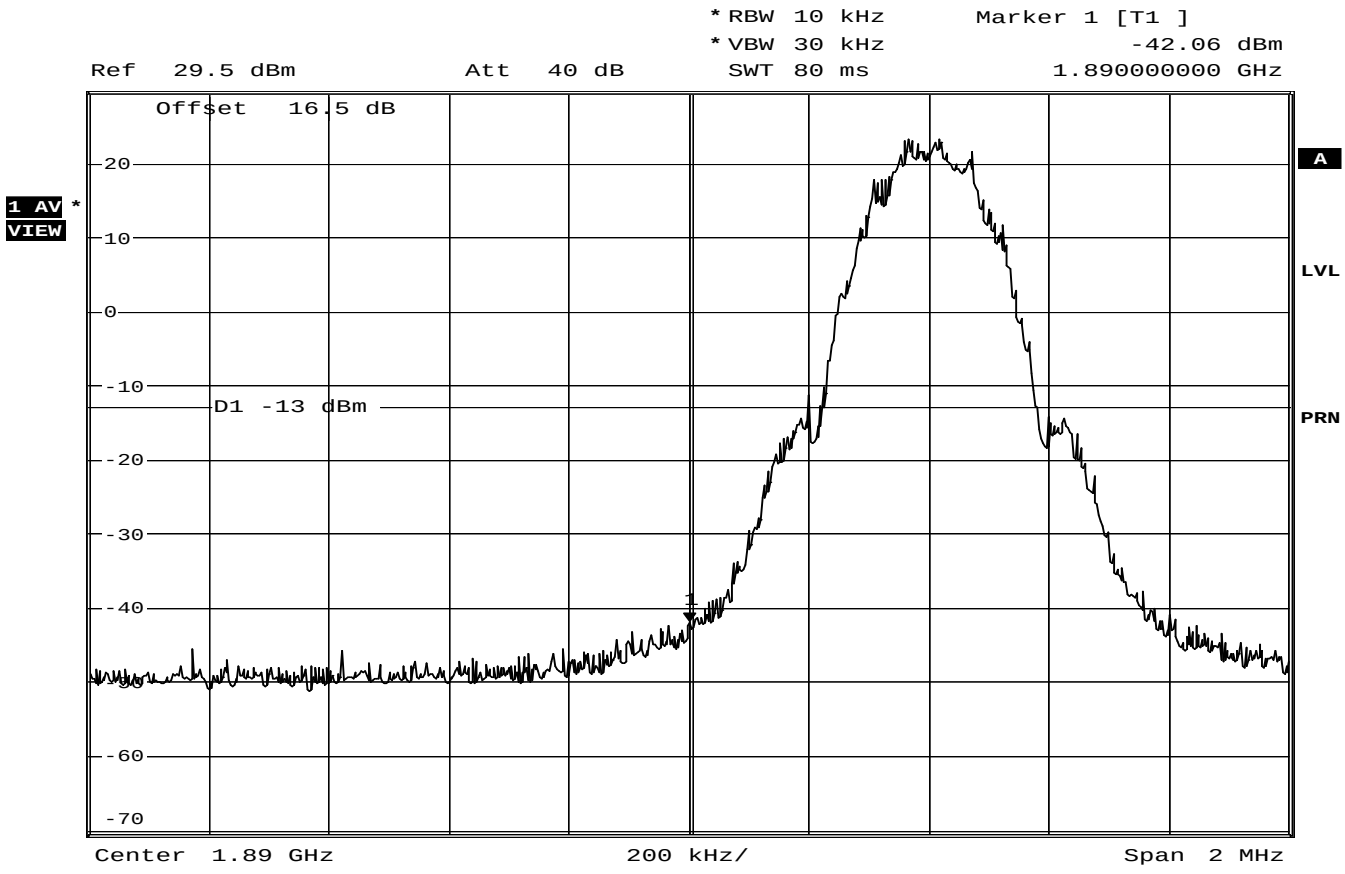
Date: 6.MAY.2005 11:18:47

GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 713, (1890.4MHz)

Block F



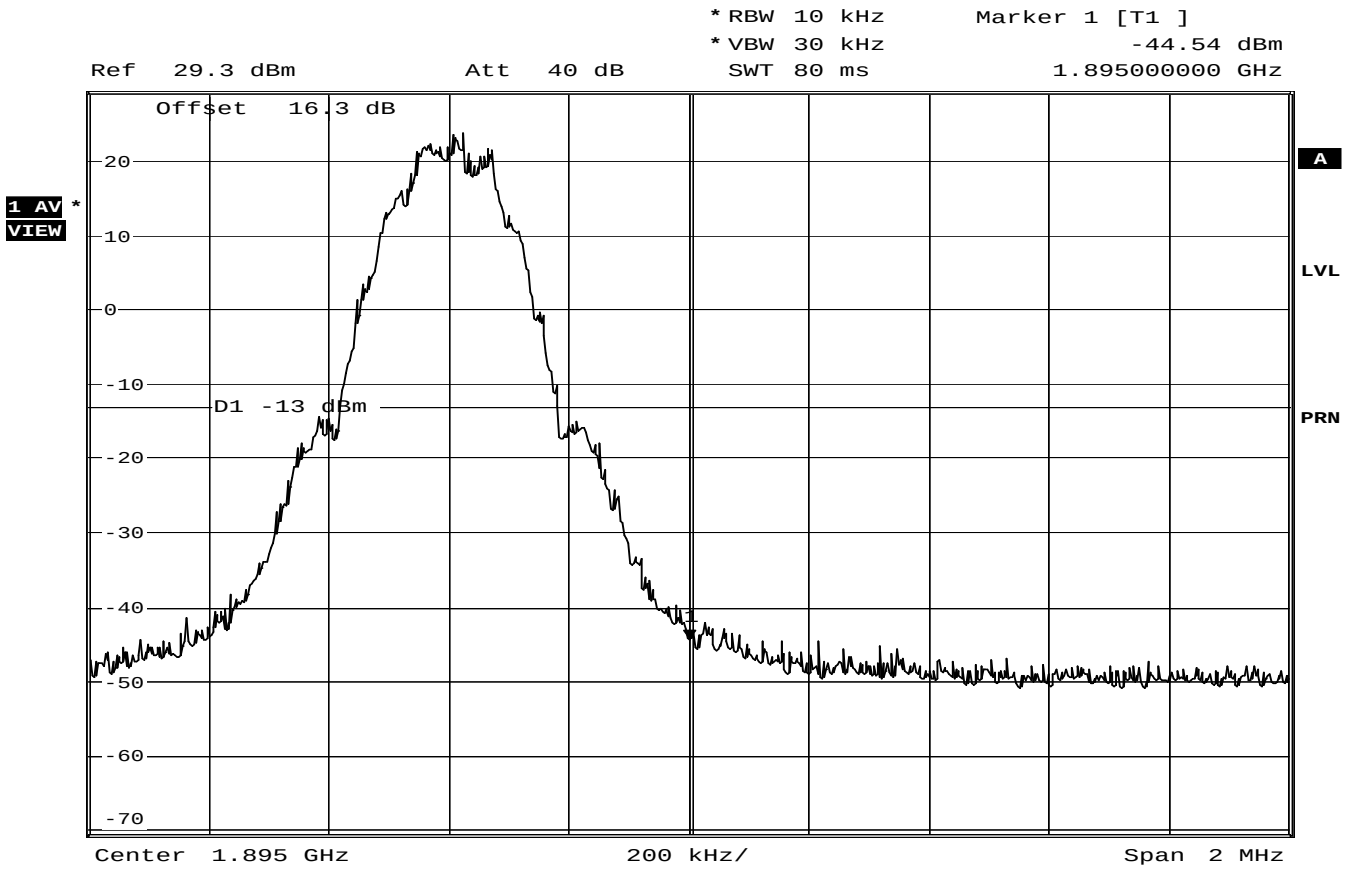
Date: 6.MAY.2005 11:20:33

GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

Block Edge Measurement with EUT Transmitting on full power on Channel 734, (1894.6MHz)

Block F



Date: 6.MAY.2005 11:22:03

GPRS – Packet Data

2.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS (+/-1MHz) – Continued

2.4.6 Test Results

All emissions are below –13dBm up to 1MHz away from each block edge.

2.5 CONDUCTED EMISSIONS ON POWER LINES

2.5.1 FCC CFR 47: Part 15 Subpart B +C, Section 15.107, 15.207

2.5.2 Equipment Under Test

EB-VS3

2.5.3 Date of Test

13th May 2005

2.5.4 Test Equipment Used (See Section 3.1 for details)

Items: 12, 13, 14, 15

2.5.5 Test Procedure

Test performed in accordance with ANSI C63.4.

The EUT was configured with Handset, Branch Cable, AC Charger and USB cable

Conducted Emission Measurements were undertaken within the semi-anechoic chamber. Emissions were measured on the Live and Neutral Lines in turn.

Emissions were formally measured using a Quasi-Peak and Average Detectors, which meet the CISPR requirements. The details of the worst-case emissions for the Live and Neutral Lines were entered in the job logbook.

The test was performed with the EUT in Link mode on Channels 512, 661 and 810 respectively and in Idle mode, locked on to the GSM test set but no call made.

The EUT was supplied from a 120V, 60Hz supply.

2.5.6 Test Results

The EUT met the Class B requirements of FCC CFR 47: Part 15 Subpart C, Section 15.207 and Part 15 Subpart B, Section 15.107 for Conducted Emissions on the Live and Neutral Lines.

No emissions were detected within 20dB below the specification limit, therefore no table of results are presented.

2.5 CONDUCTED EMISSIONS ON POWER LINES - continued

2.5.7 Set Up Photograph

Conducted Emissions Set Up Photograph

2.6 CONDUCTED SPURIOUS EMISSIONS

2.6.1 FCC CFR 47: Part 24 Subpart E, Section 24.238(a)

2.6.2 Equipment Under Test

EB-VS3

2.6.3 Date of Test

9th May 2005

2.6.4 Test Equipment Used (See Section 3.1 for details)

Items: 1, 2, 3, 4, 5, 6, 7, 8, 9

2.8.5 Test Procedure

In accordance with Part 2.1051, the spurious emissions from the antenna terminal were measured. The transmitter output power was attenuated using a combination of filters and attenuators and the frequency spectrum investigated from 9kHz to 20 GHz. The EUT was set to transmit on full power with timeslot 3 active and minimum power with timeslot 3 active for GSM and timeslots 3 and 4 active for GPRS. The EUT was tested on Bottom, Middle and Top channels for both power levels. The resolution and video bandwidths were set to 1MHz in accordance with Part 24.238. The spectrum analyser detector was set to Max Hold.

For measuring the range 9kHz to 4GHz, on maximum power, a 10dB attenuator was used. From 4 to 20GHz, attenuators and a high pass filter were used.

The maximum path loss across the measurement band was used as the reference level offset to ensure worst case

In addition, measurements were made up to the 10th harmonic of the fundamental.

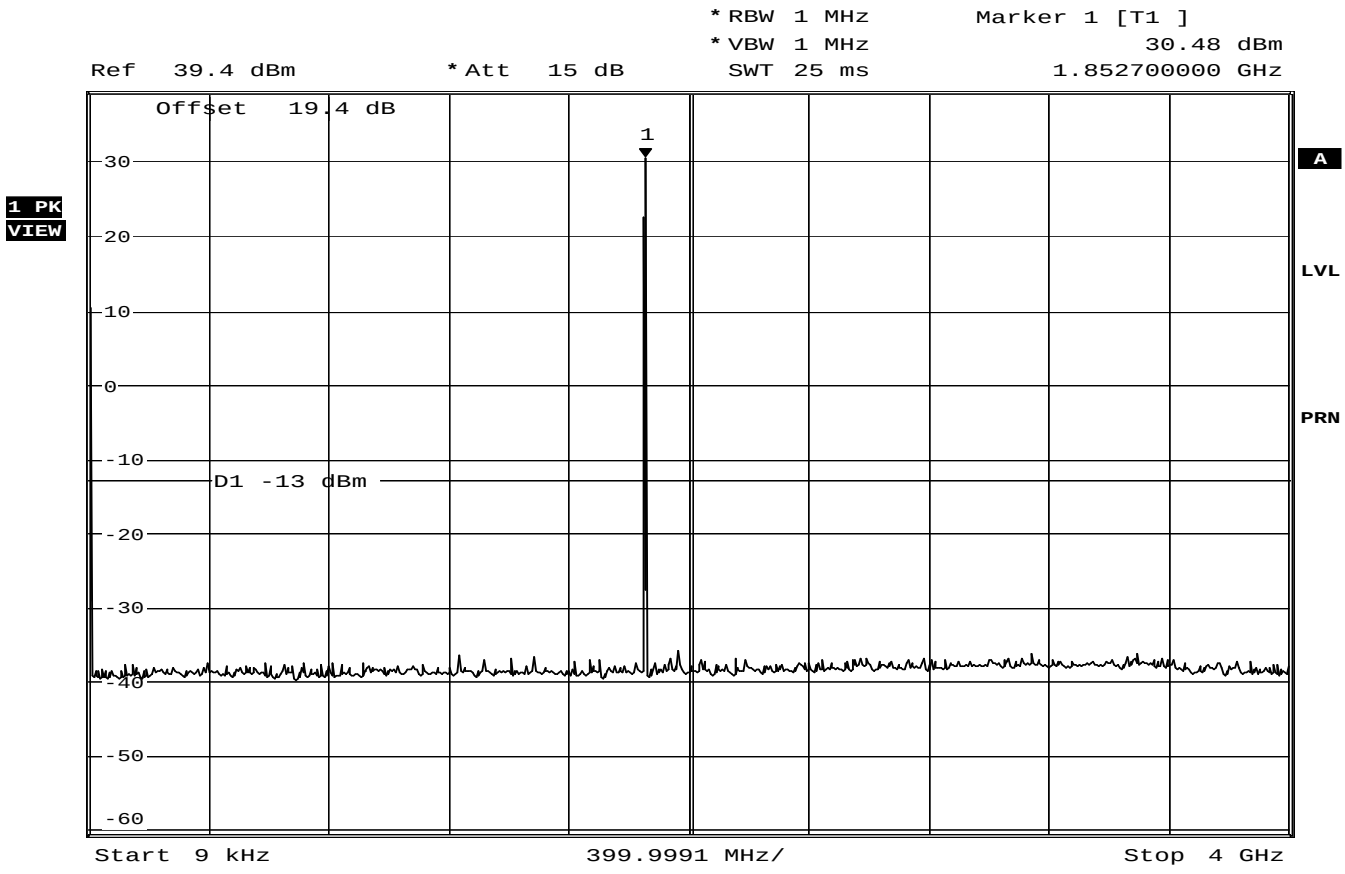
For GPRS, all test conditions were the same except 2 timeslots were active, (3 and 4).

2.8.6 Test Results

No emissions, other than the harmonics shown on pages 57 to 60, were within 20dB of the limit. The EUT passed the requirements laid out in 24.238. The plots on the following pages show the frequency spectrum from 9kHz to 20GHz of the EUT.

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (9kHz – 4GHz)
Channel 512 (1850.2MHz) - Maximum Power

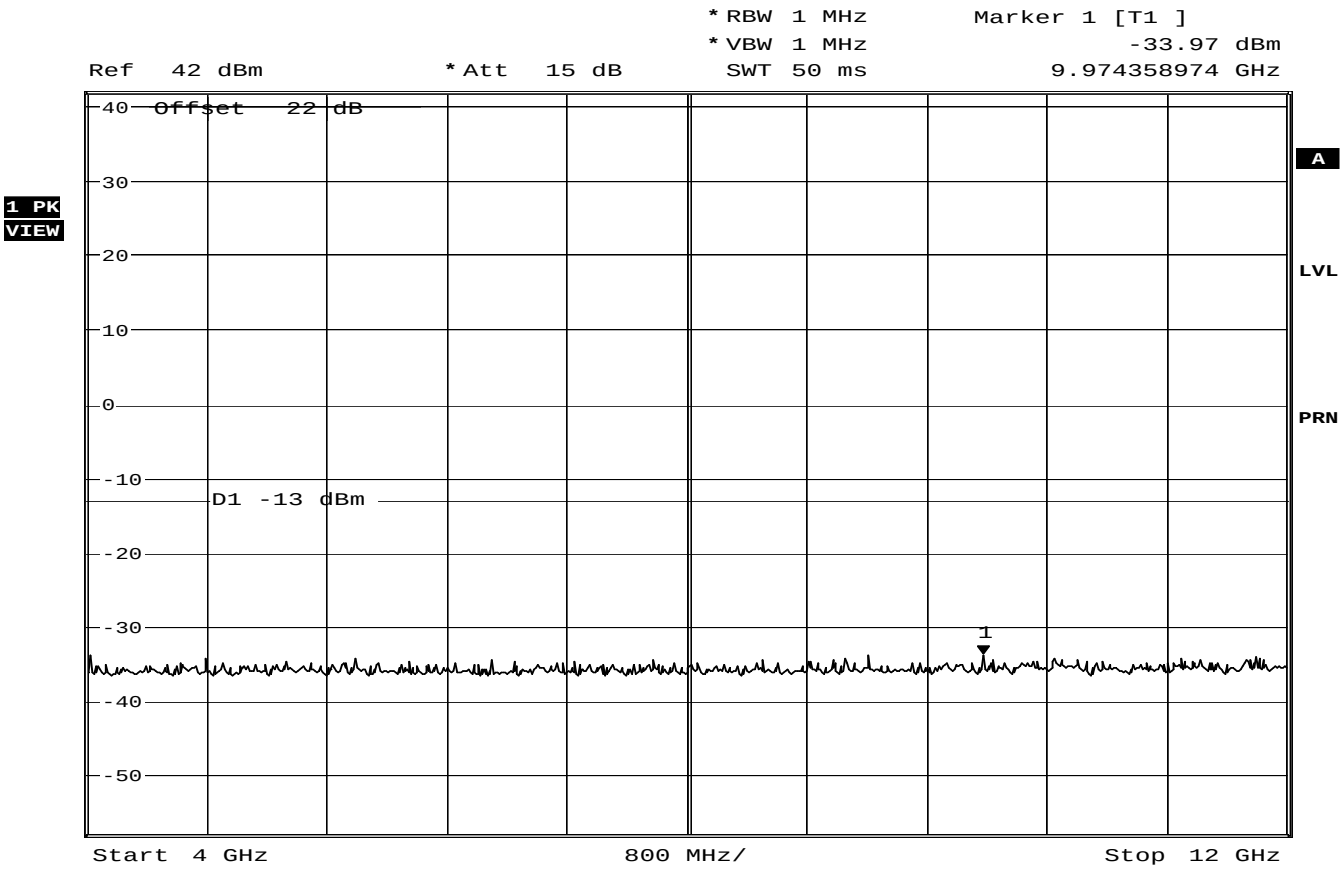


Date: 9.MAY.2005 11:41:50

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS – Continued

Spurious Emissions (4GHz – 12GHz)
Channel 512 (1850.2MHz) – Maximum Power

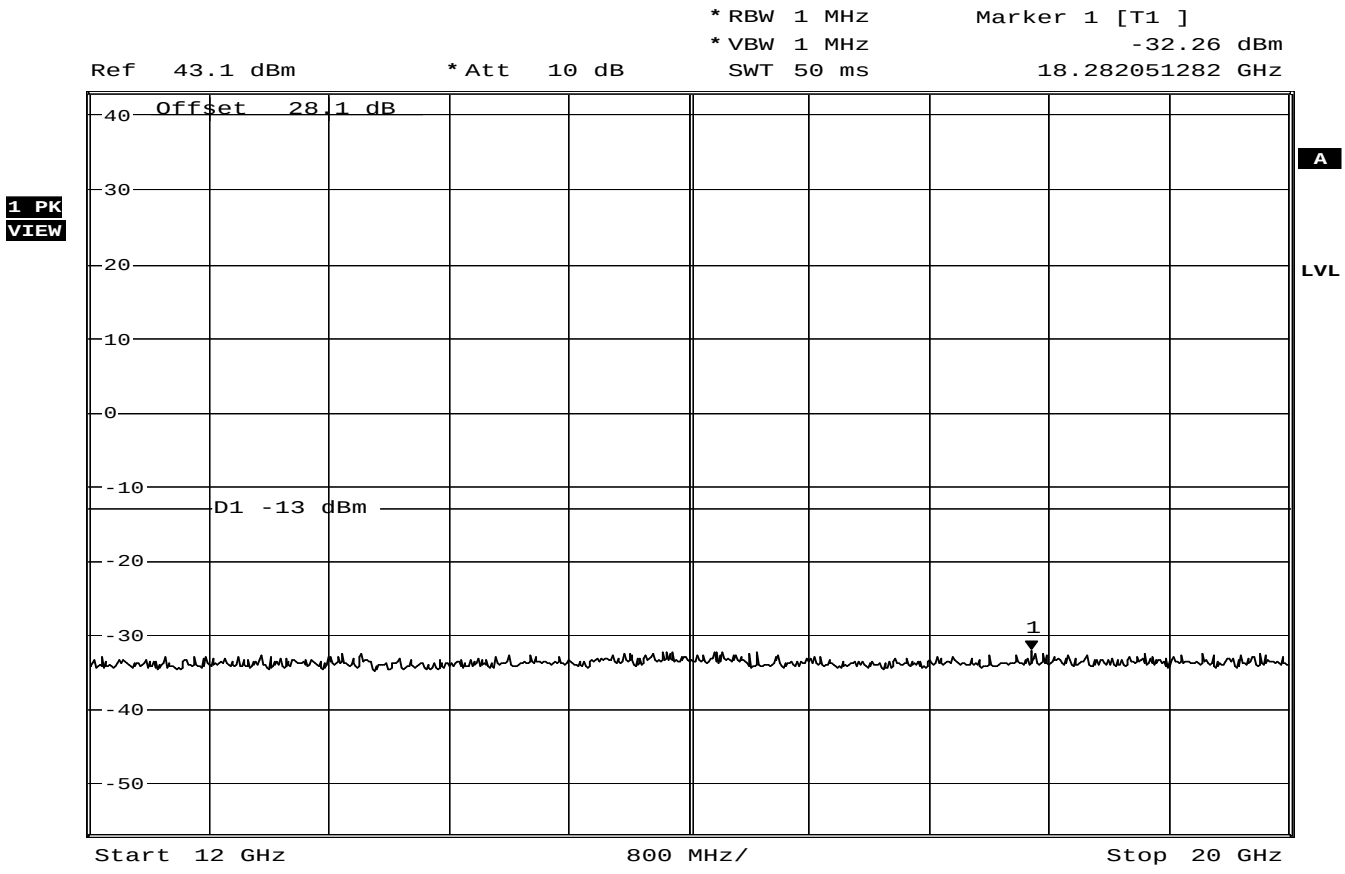


Date: 9.MAY.2005 14:01:24

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz – 20GHz)
Channel 512 (1850.2MHz) – Maximum Power

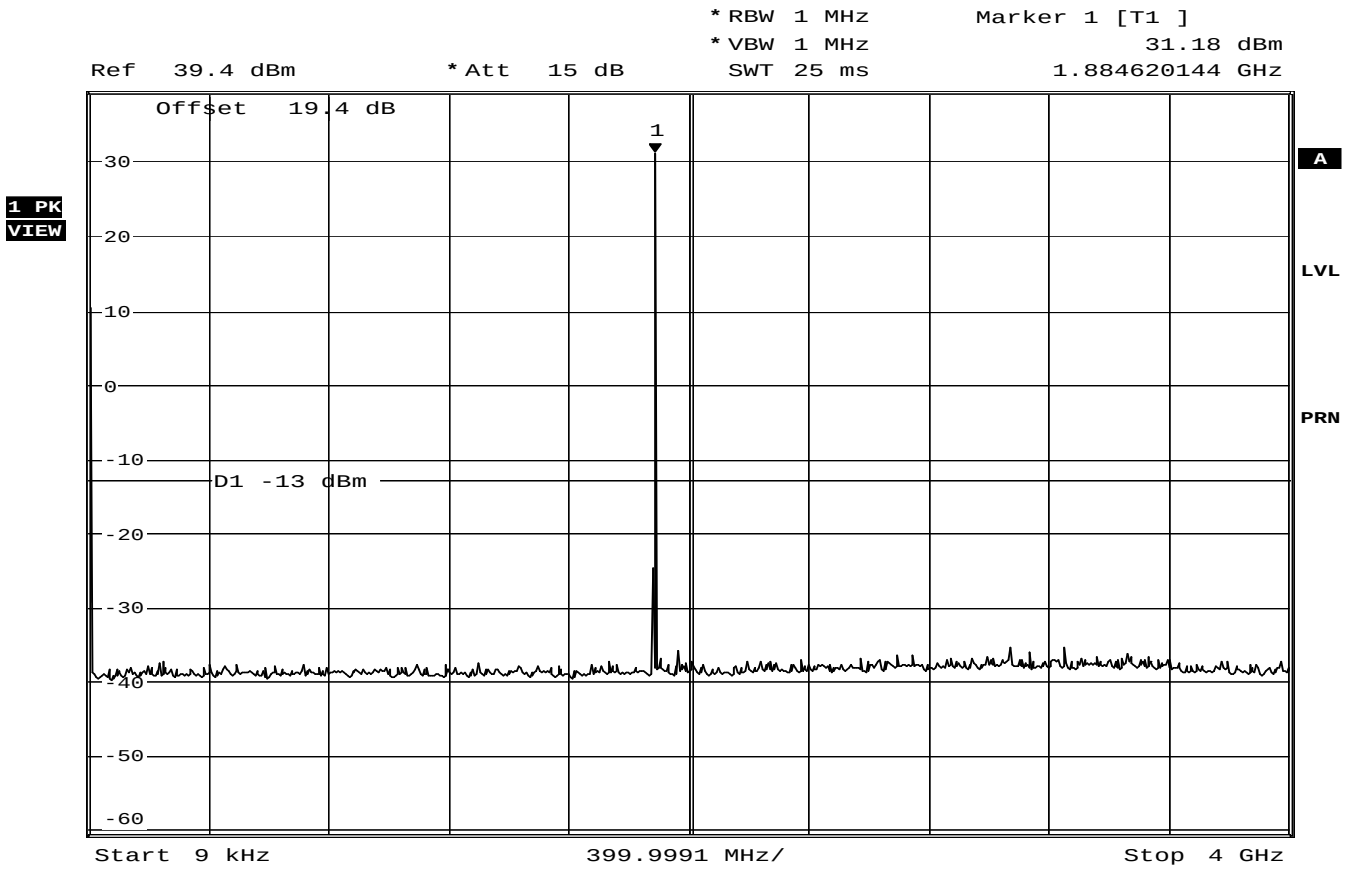


Date: 9.MAY.2005 16:53:10

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (9kHz – 4GHz)
Channel 661 (1880.0MHz) – Maximum Power

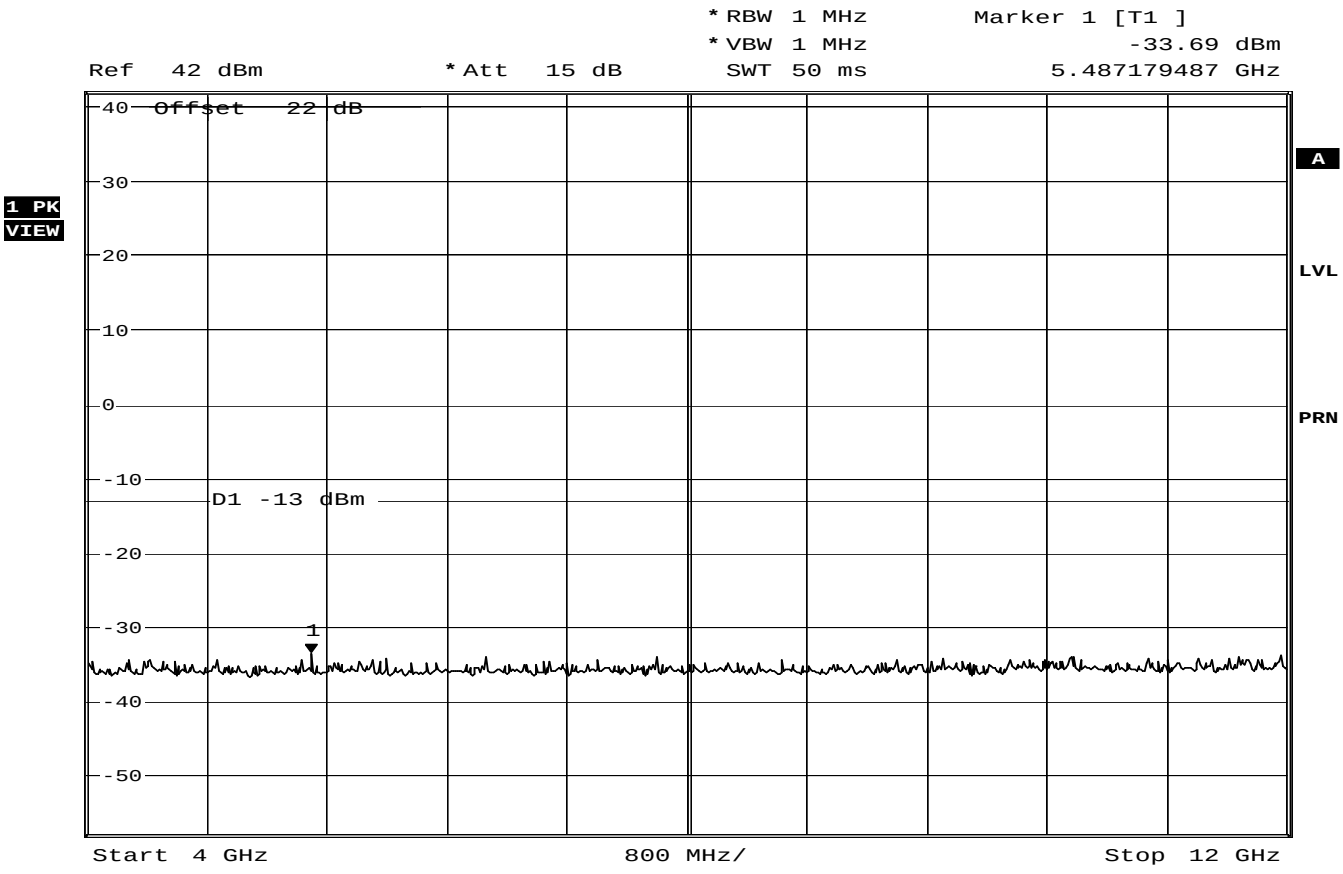


Date: 9.MAY.2005 11:43:32

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (4GHz - 12GHz)
Channel 661 (1880.0MHz) – Maximum Power

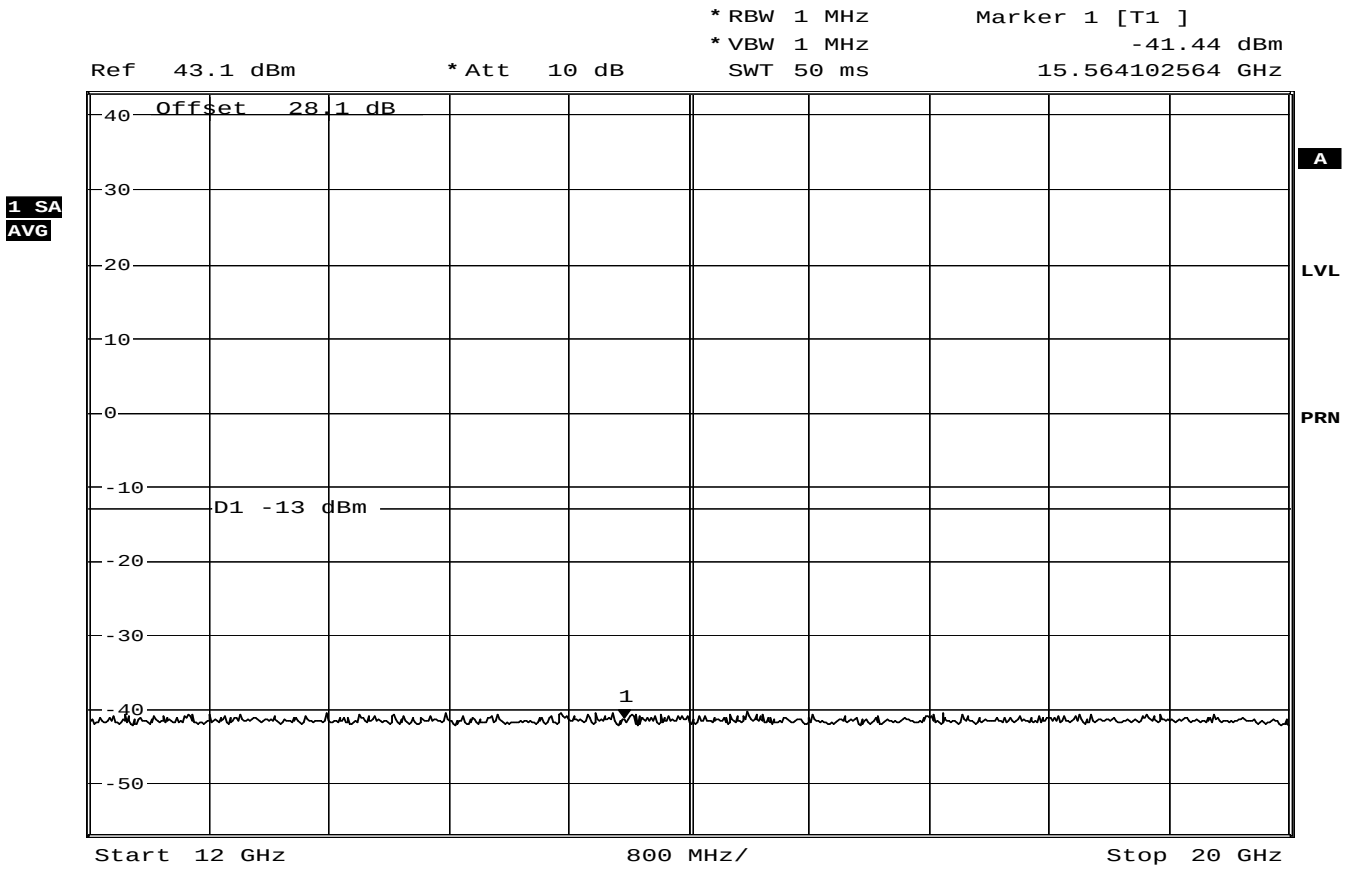


Date: 9.MAY.2005 14:09:09

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz – 20GHz)
Channel 661 (1880.0MHz) – Maximum Power

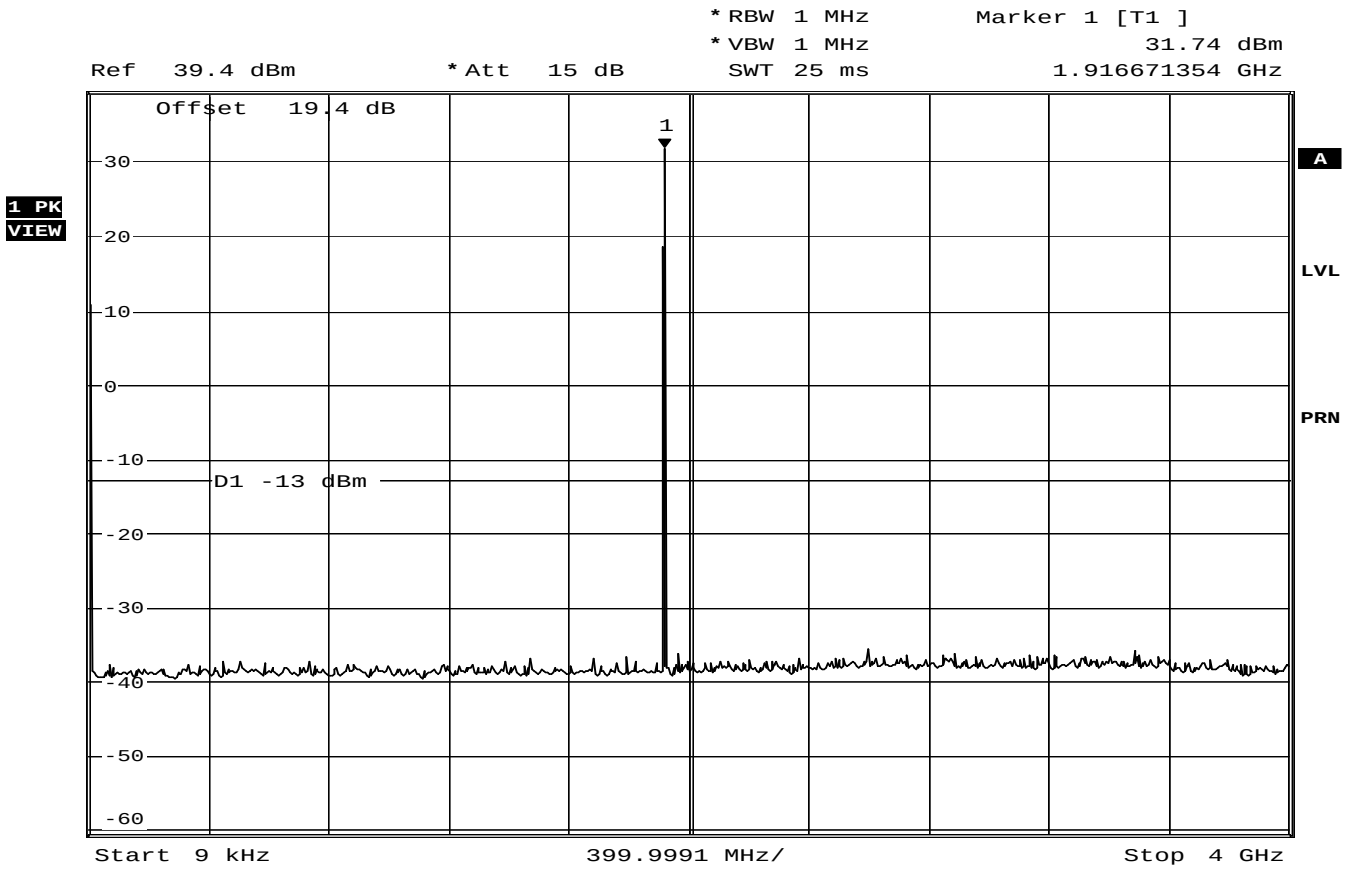


Date: 9.MAY.2005 14:19:02

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

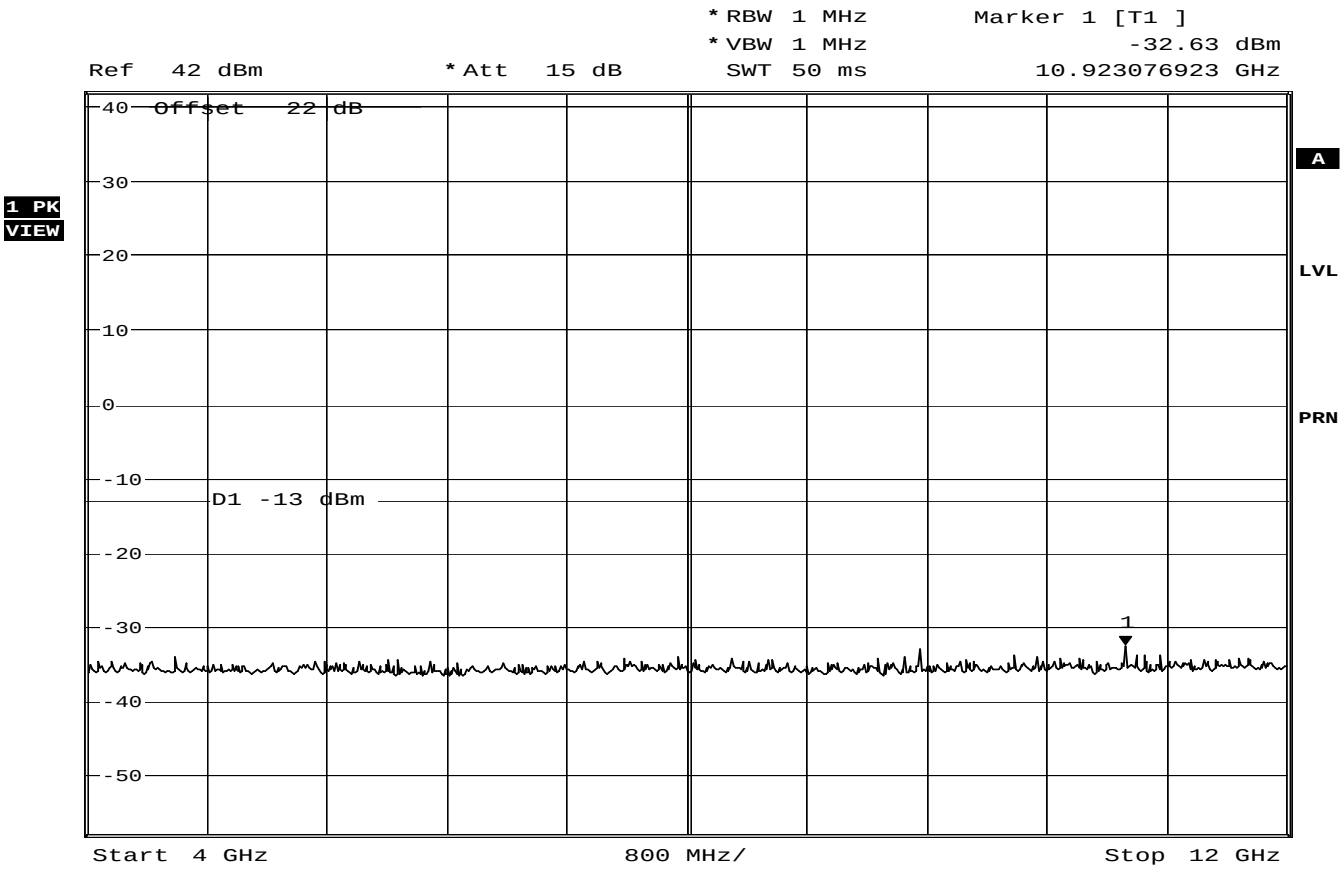
Spurious Emissions (9kHz – 4GHz)
Channel 810 (1909.8MHz) – Maximum Power



GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

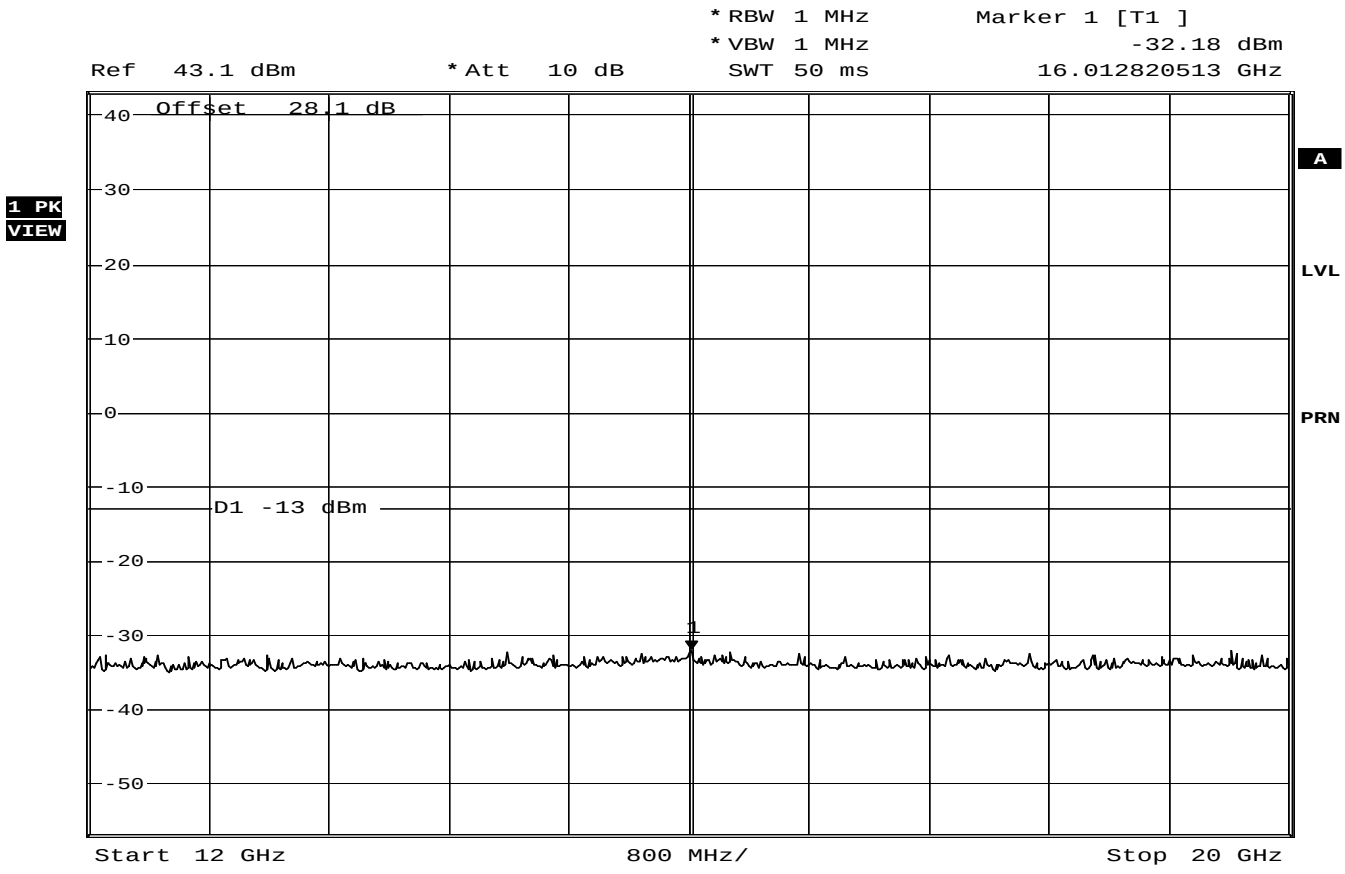
Spurious Emissions (4GHz – 12GHz)
Channel 810 (1909.8MHz) – Maximum Power



GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz – 20GHz)
Channel 810 (1909.8MHz) – Maximum Power

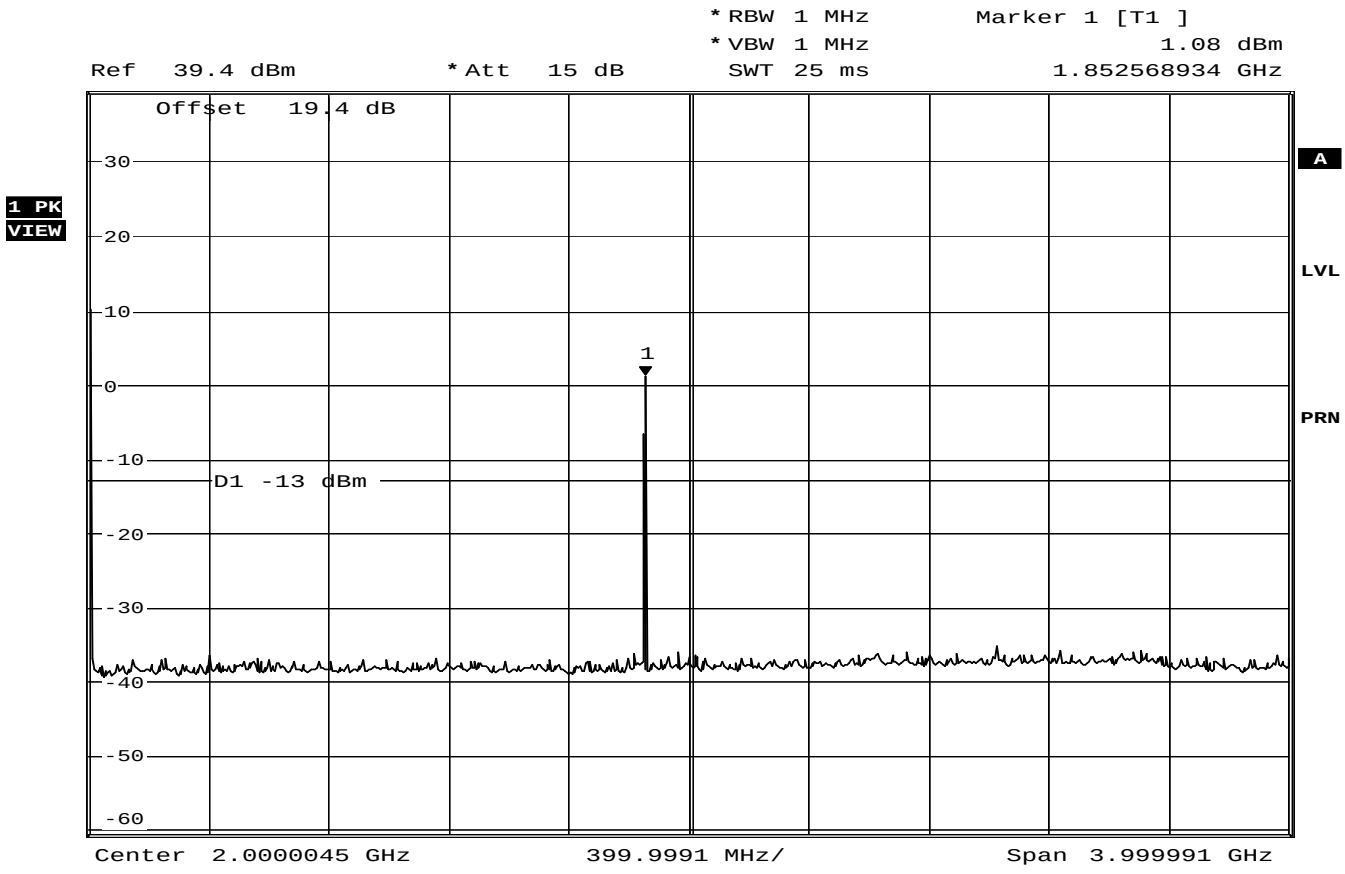


Date: 9.MAY.2005 14:20:49

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (9kHz – 4GHz)
Channel 512 (1850.2MHz) – Minimum Power

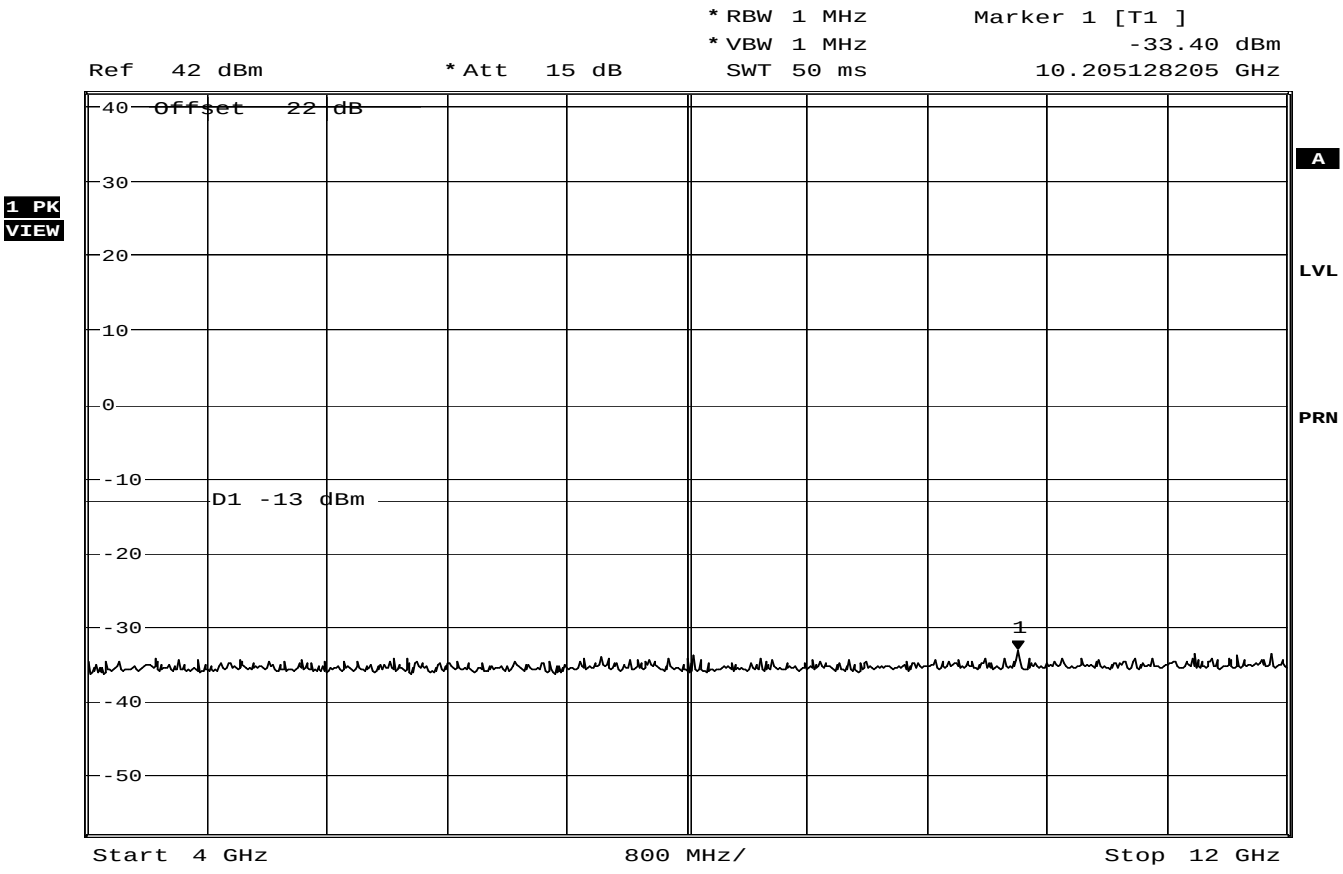


Date: 9.MAY.2005 12:06:26

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (4GHz – 12GHz)
Channel 512 (1850.2MHz) – Minimum Power

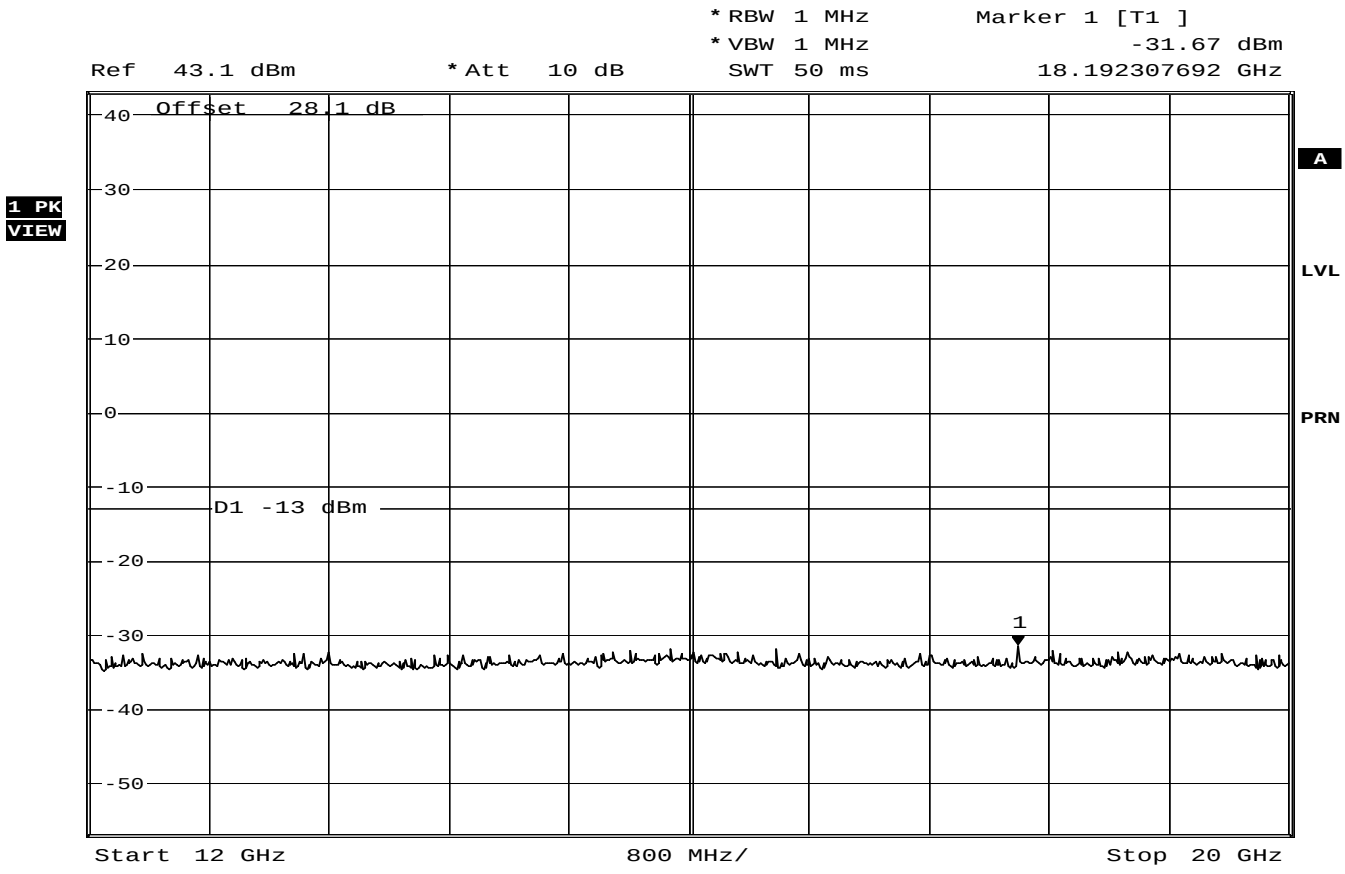


Date: 9.MAY.2005 14:11:52

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz-20GHz)
Channel 512 (1850.2MHz) – Minimum Power

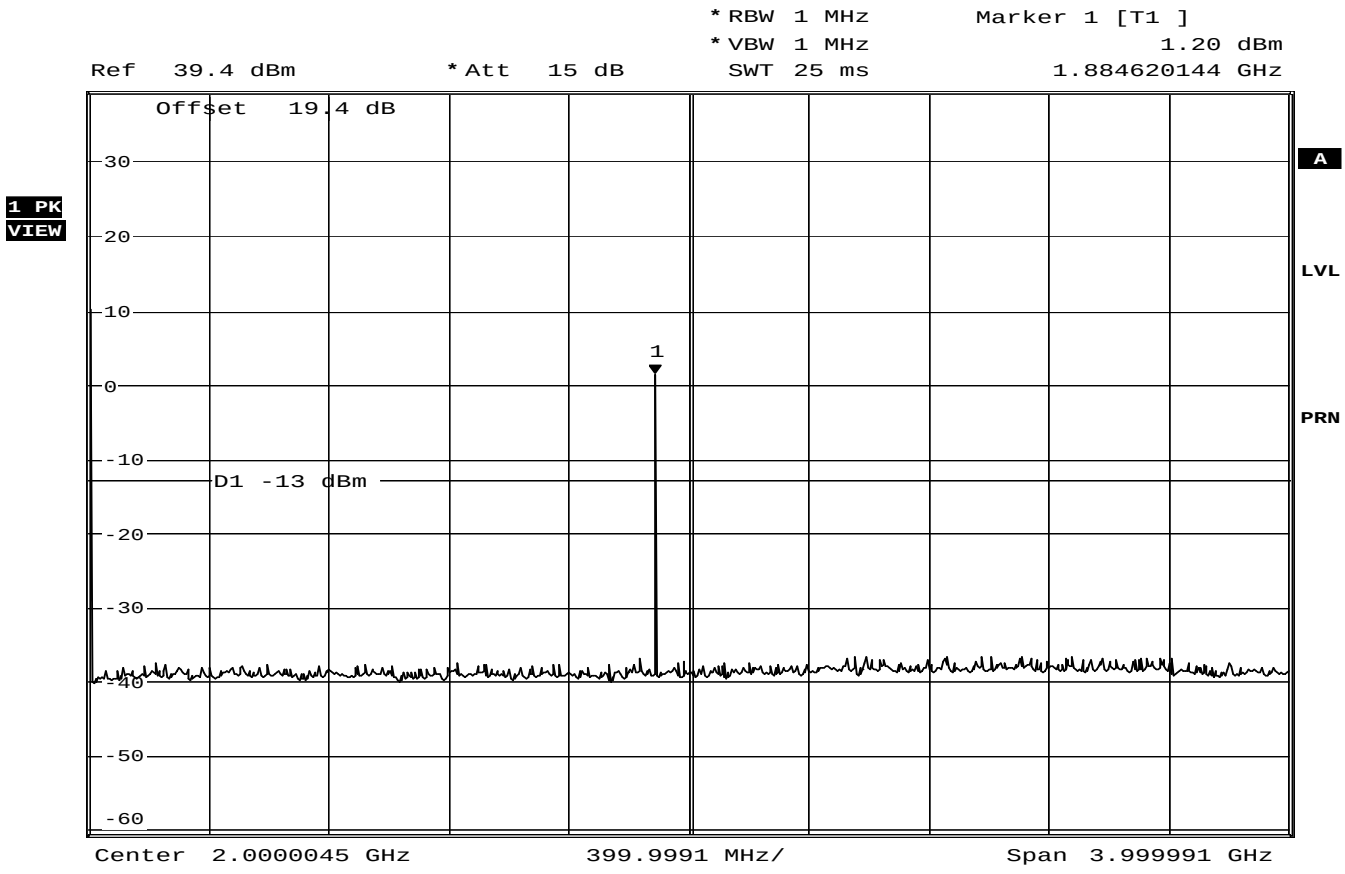


Date: 9.MAY.2005 14:22:33

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (9kHz – 4GHz)
Channel 661 (1880.0MHz) – Minimum Power

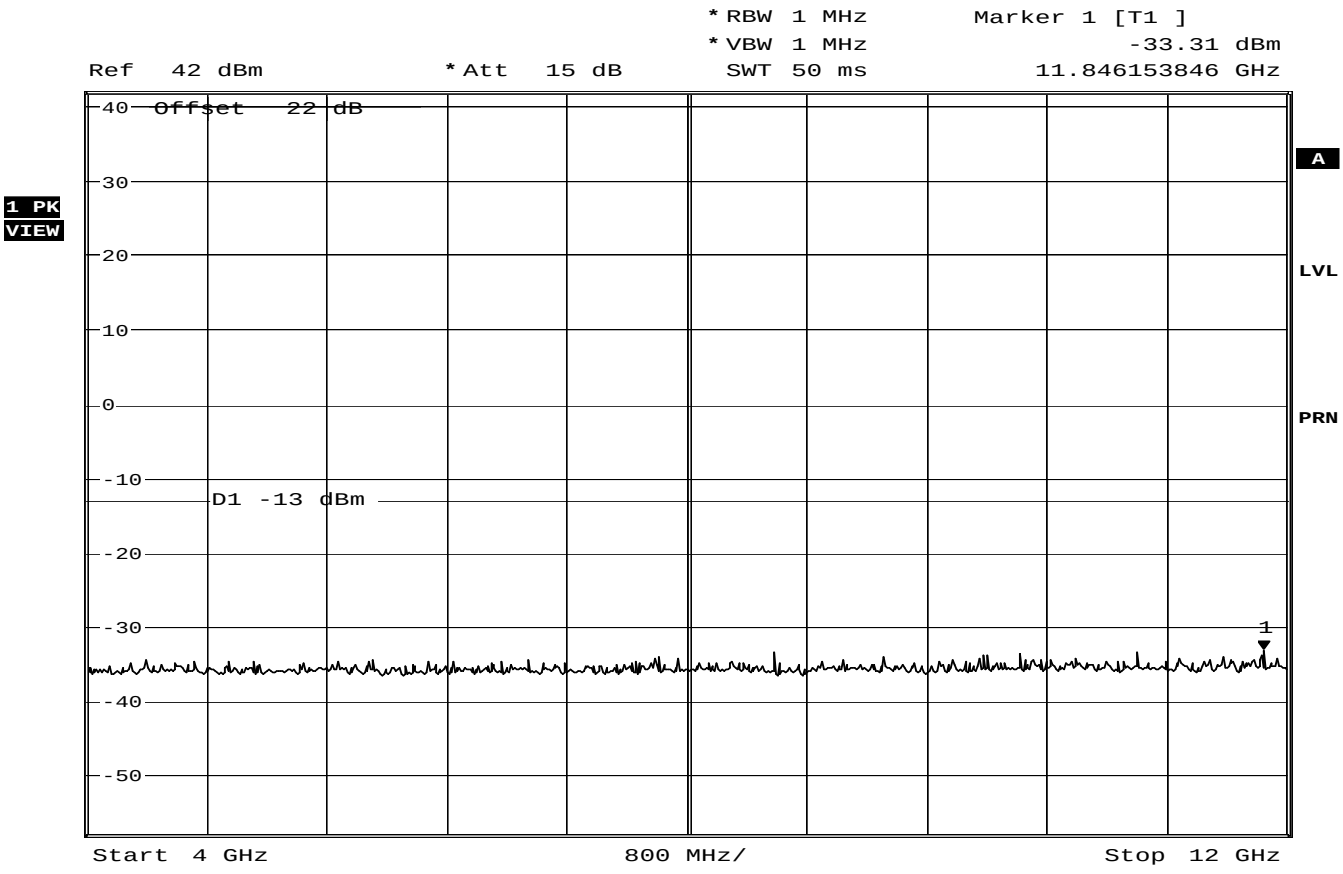


Date: 9.MAY.2005 11:54:49

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (4GHz – 12GHz)
Channel 661 (1880.0MHz) – Minimum Power

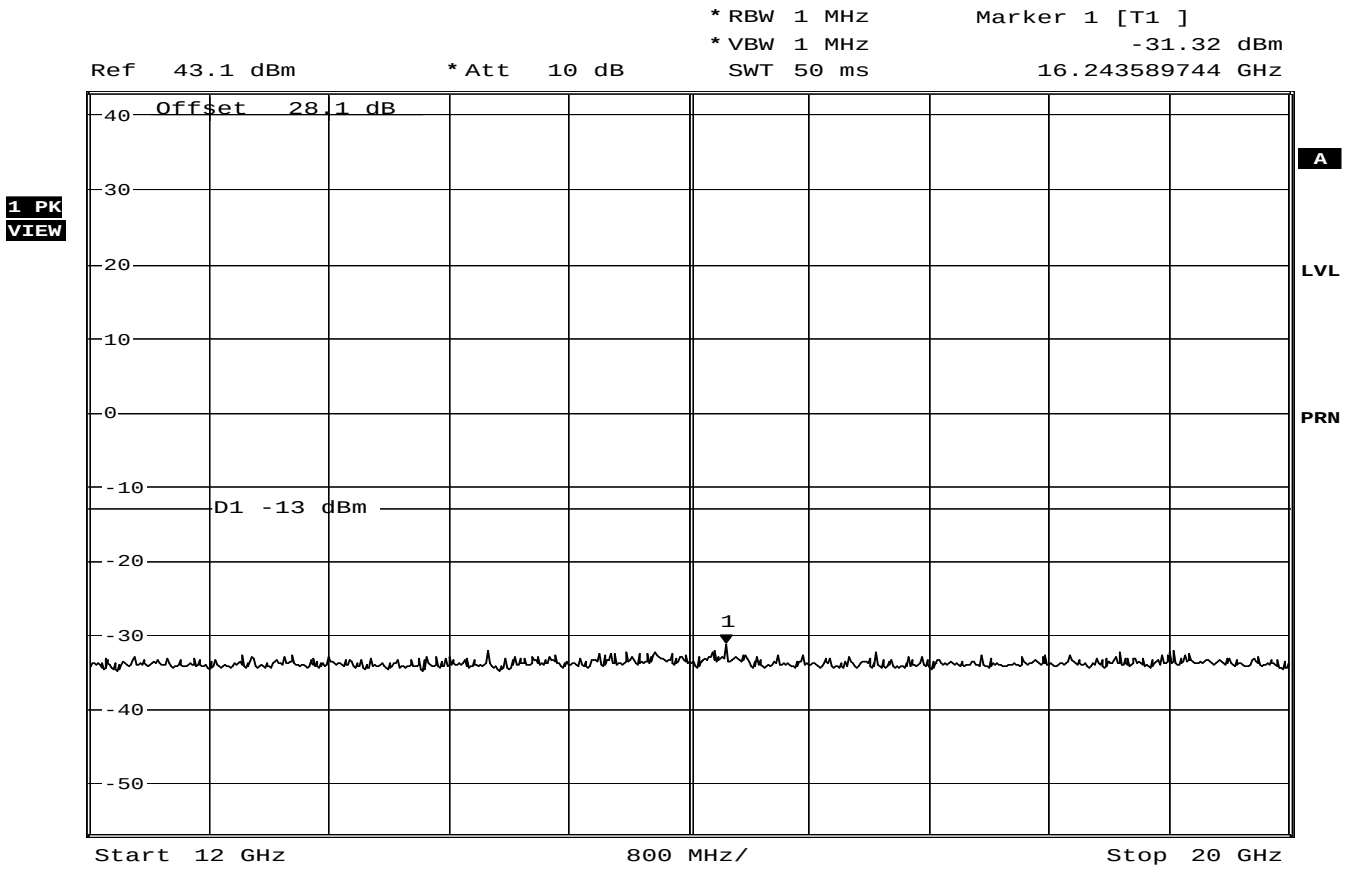


Date: 9.MAY.2005 14:12:56

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz – 20GHz)
Channel 661 (1880.0MHz) – Minimum Power

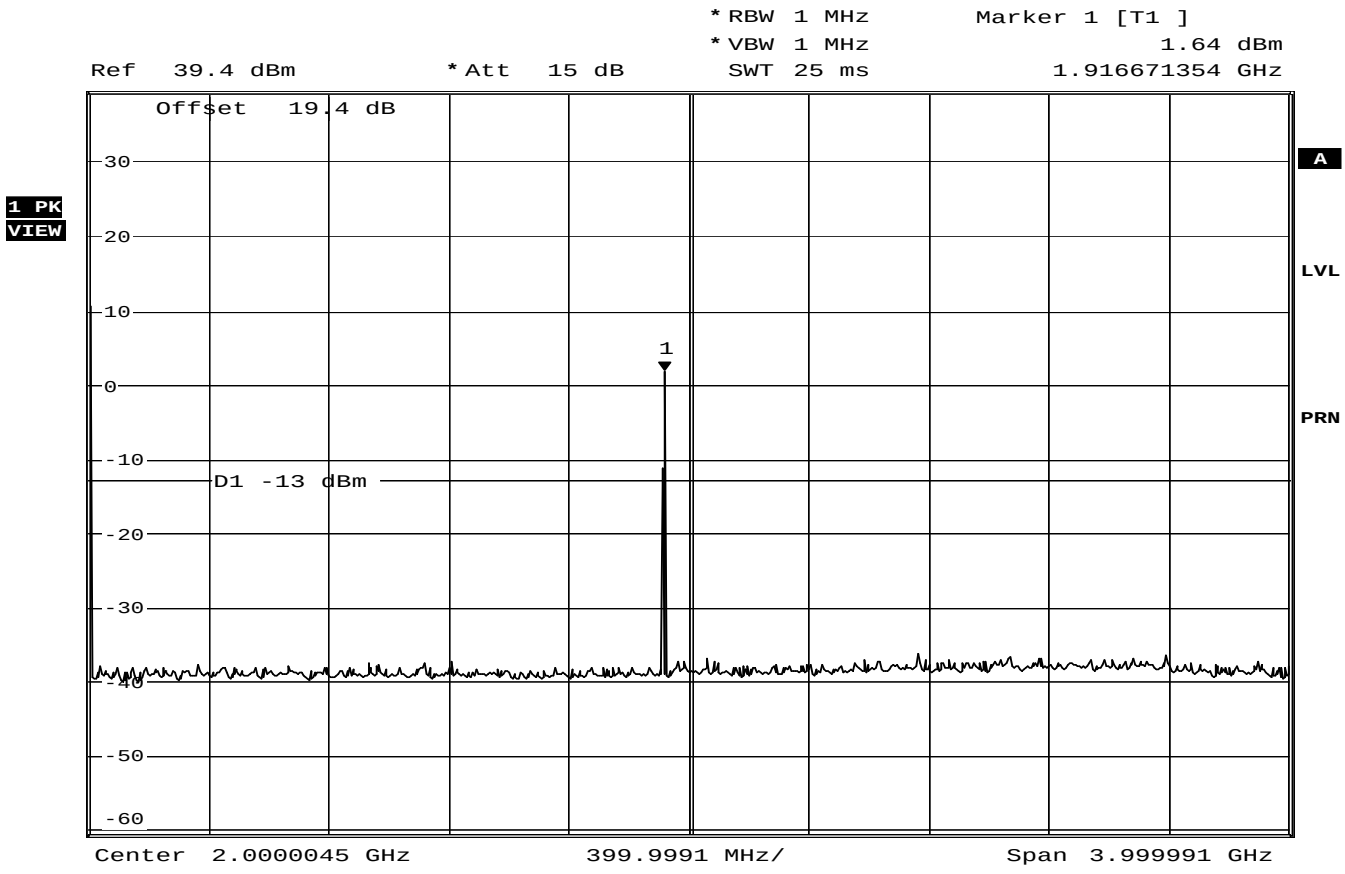


Date: 9.MAY.2005 14:23:28

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (9kHz – 4GHz)
Channel 810 (1909.8MHz) – Minimum Power

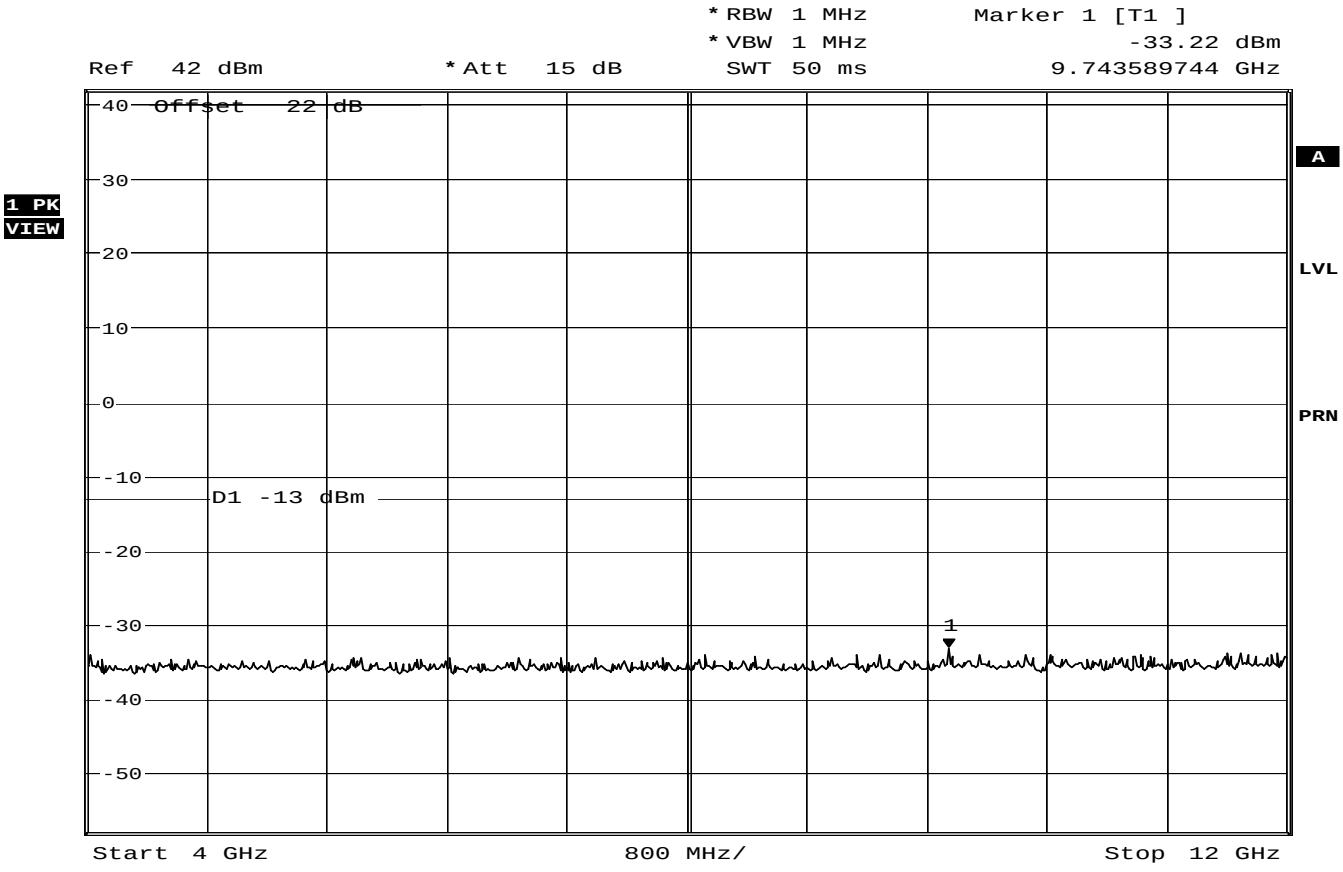


Date: 9.MAY.2005 11:55:37

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (4GHz – 12GHz)
Channel 810 (1909.8MHz) – Minimum Power

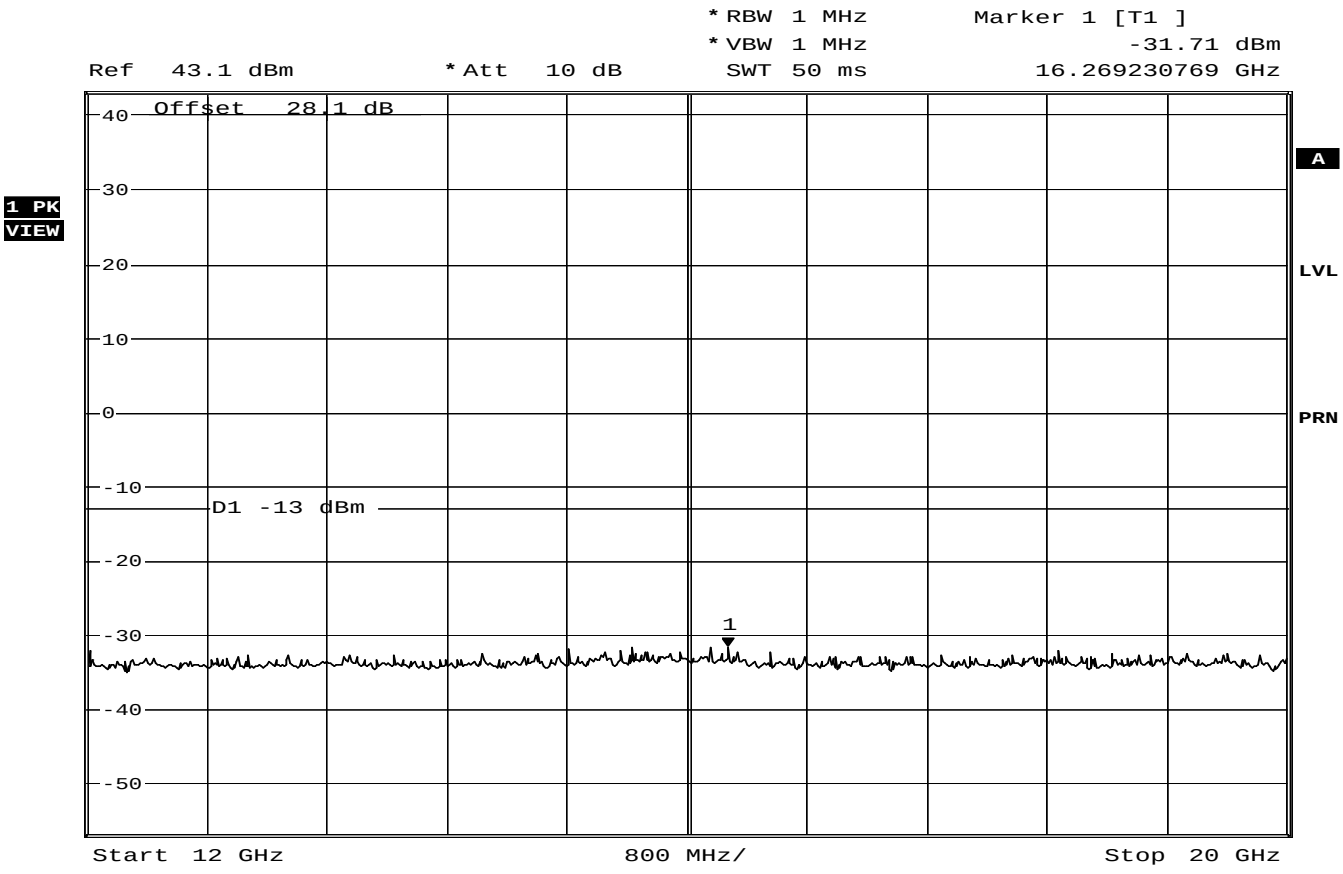


Date: 9.MAY.2005 14:14:00

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz – 20GHz)
Channel 810 (1909.8MHz) – Minimum Power

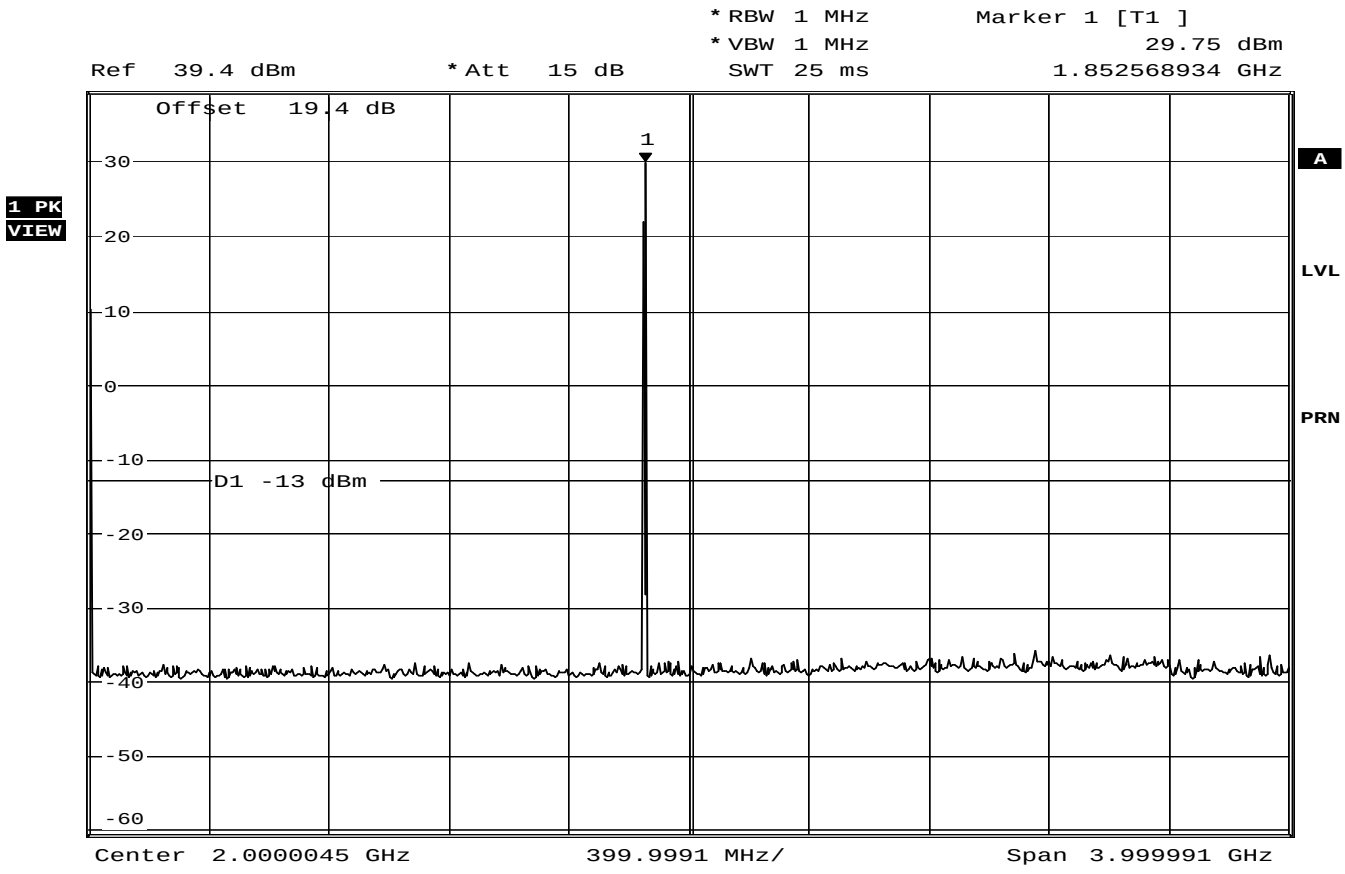


Date: 9.MAY.2005 14:24:53

GSM – Circuit Switched

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (9kHz – 4GHz)
Channel 512 (1850.2MHz) - Maximum Power

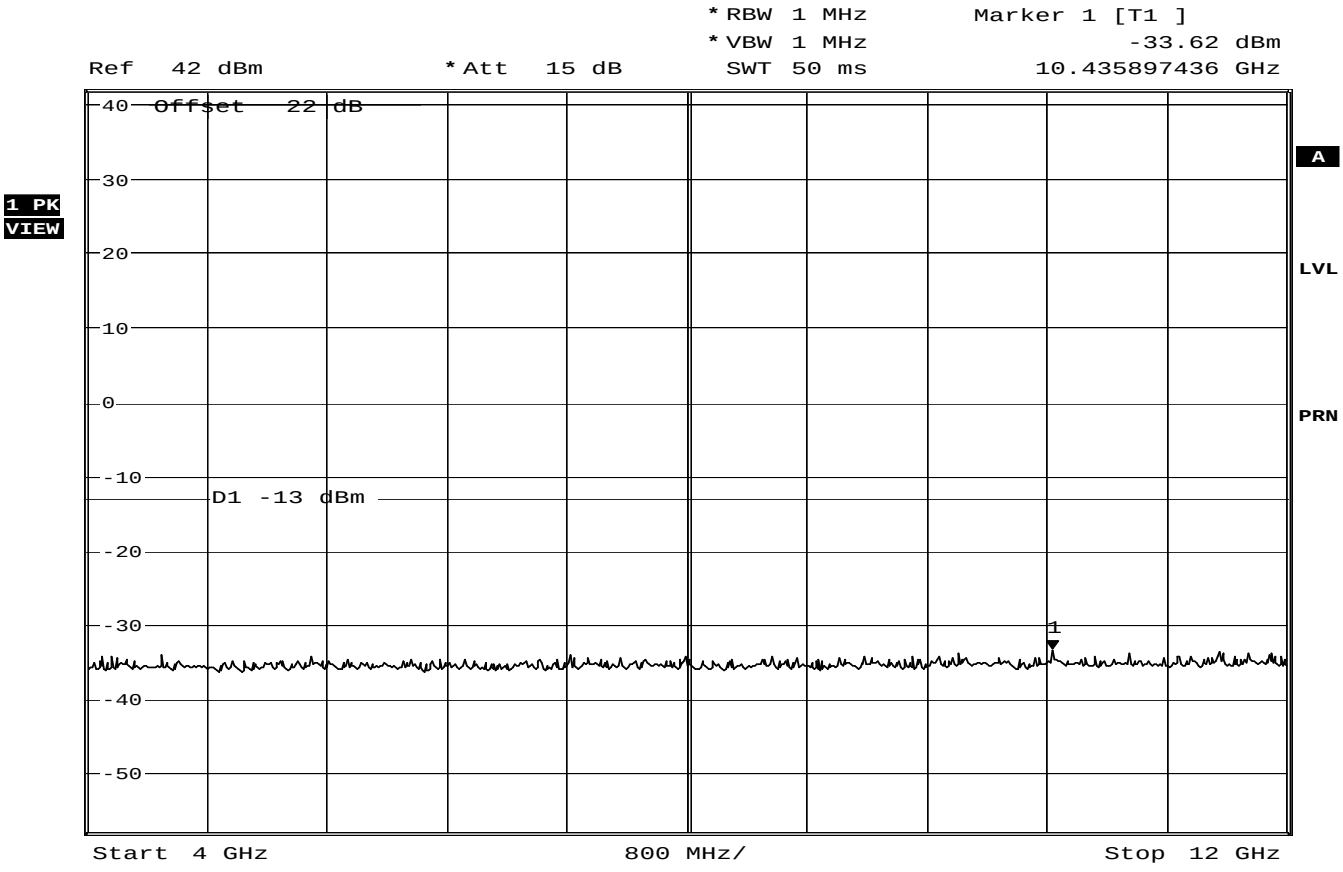


Date: 9.MAY.2005 12:00:31

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (4GHz – 12GHz)
Channel 512 (1850.2MHz) – Maximum Power

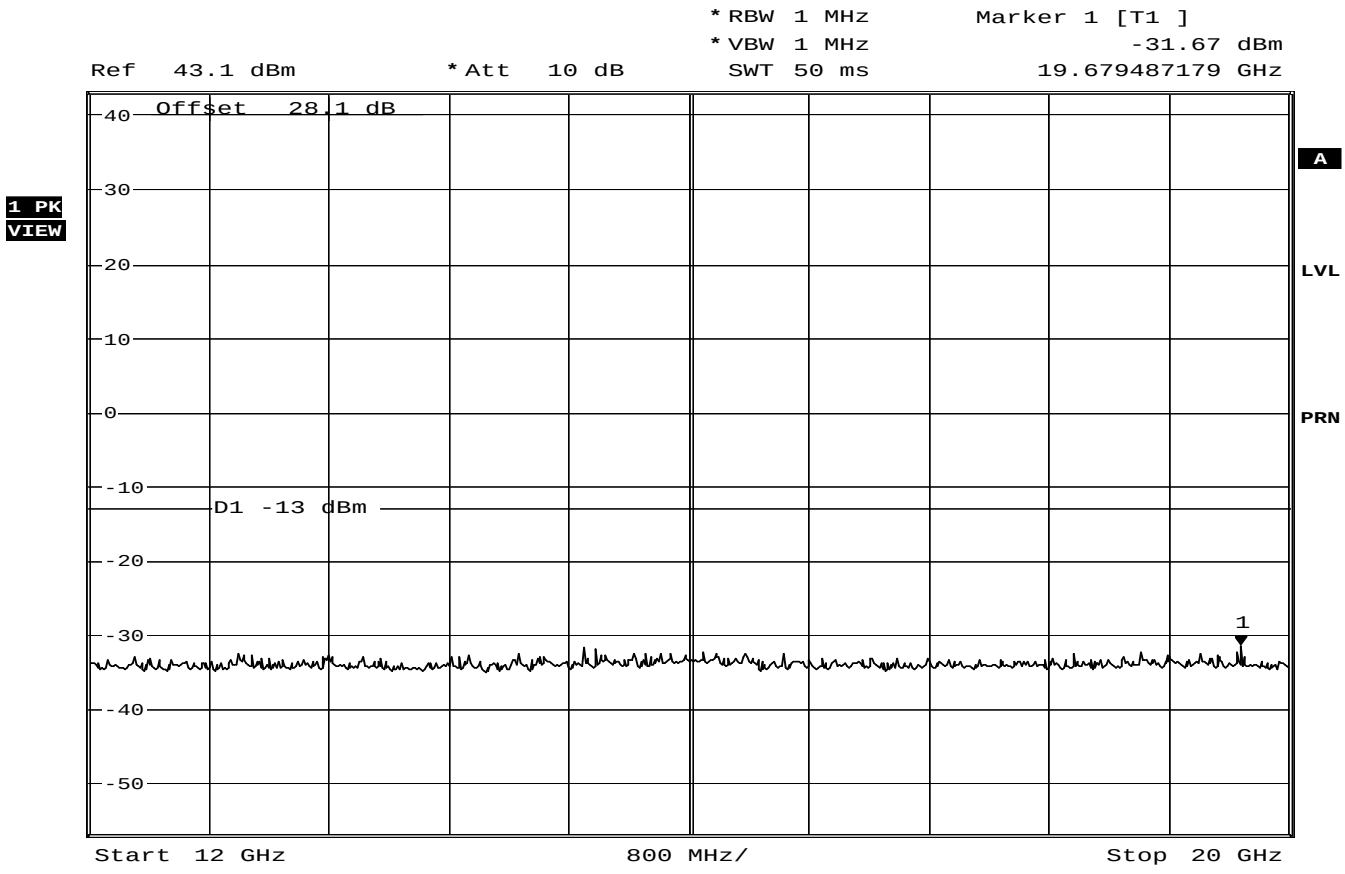


Date: 9.MAY.2005 12:13:38

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz – 20GHz)
Channel 512 (1850.2MHz) – Maximum Power

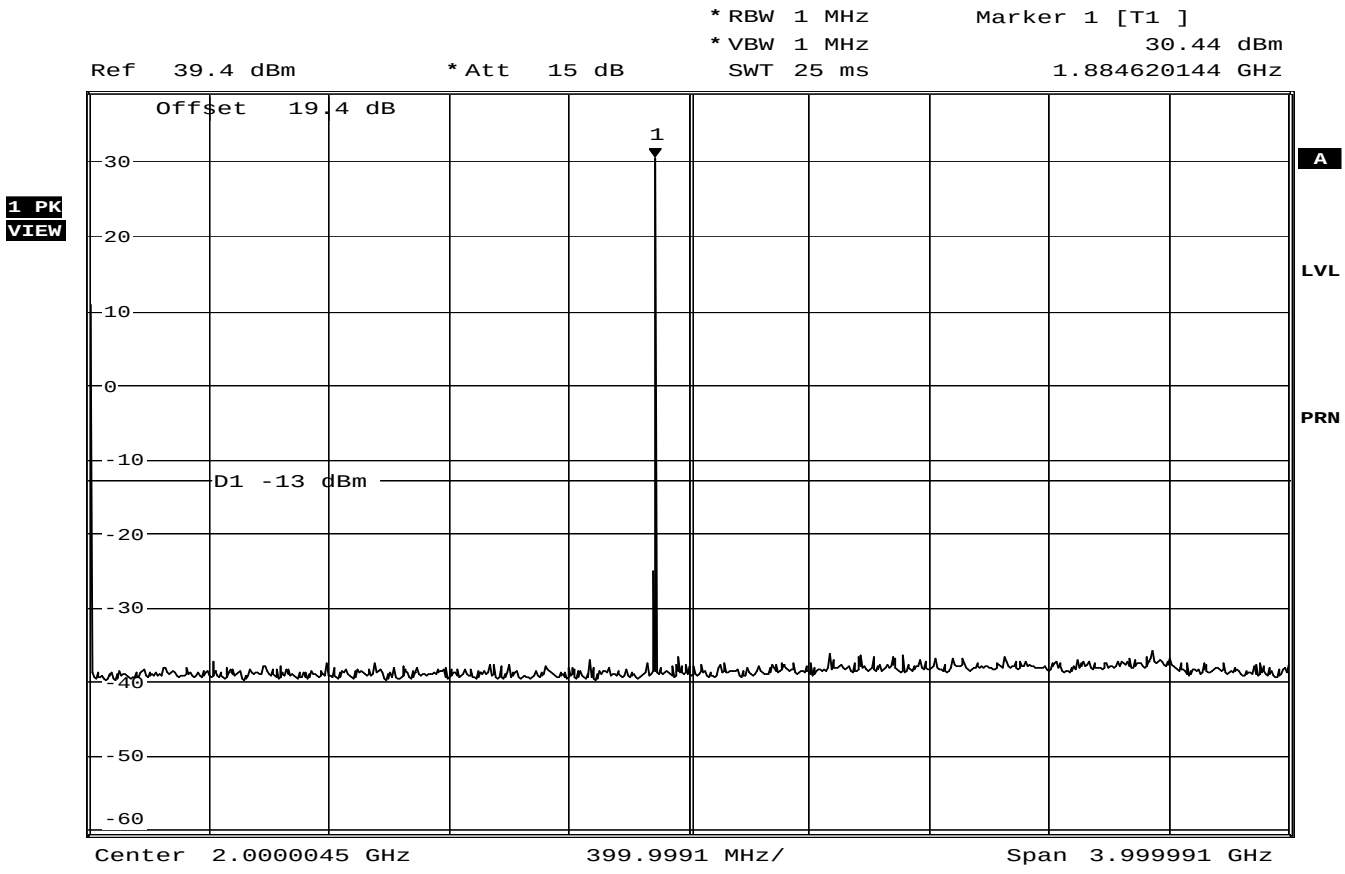


Date: 9.MAY.2005 14:27:03

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (9kHz – 4GHz)
Channel 661 (1880.0MHz) – Maximum Power

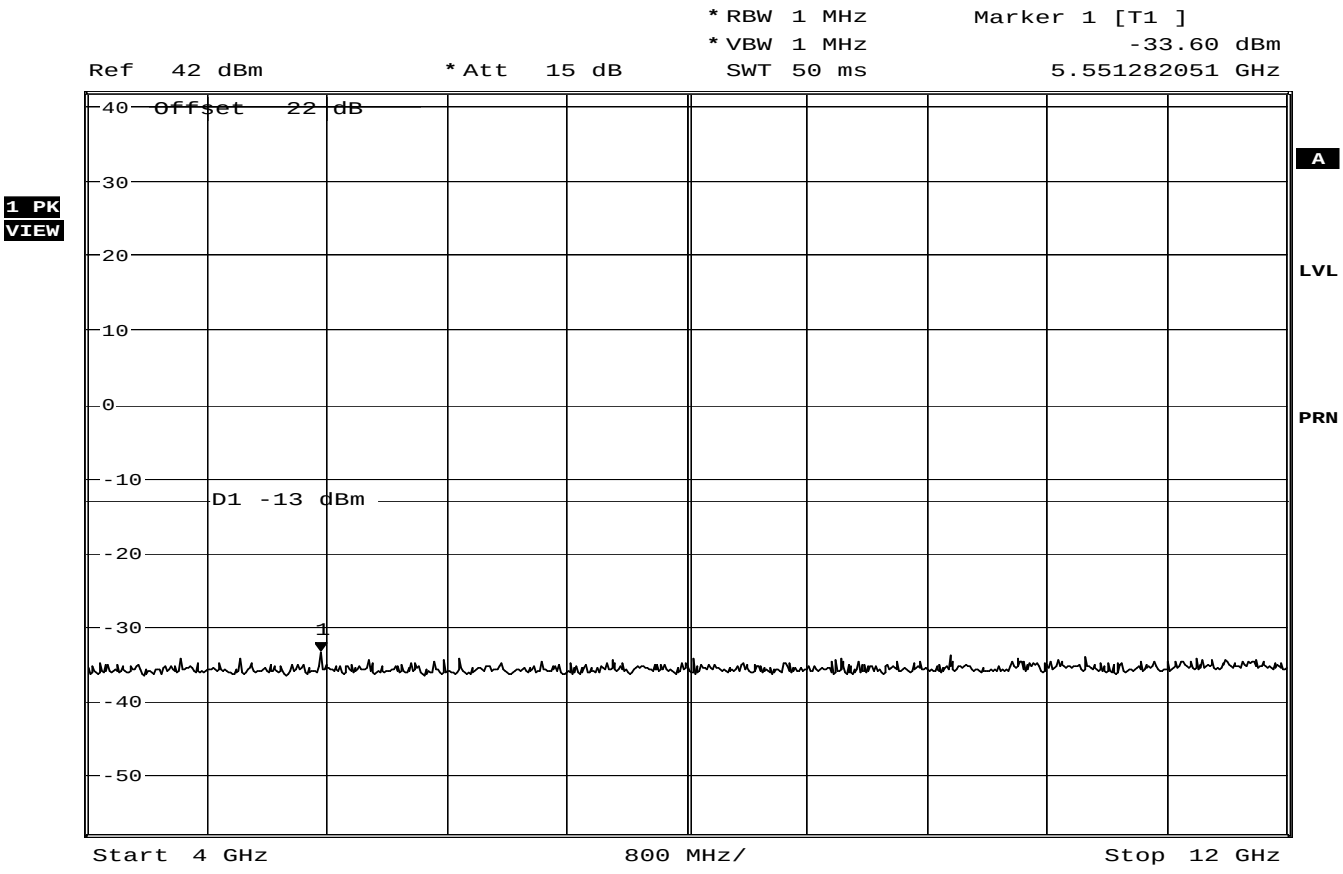


Date: 9.MAY.2005 12:01:20

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

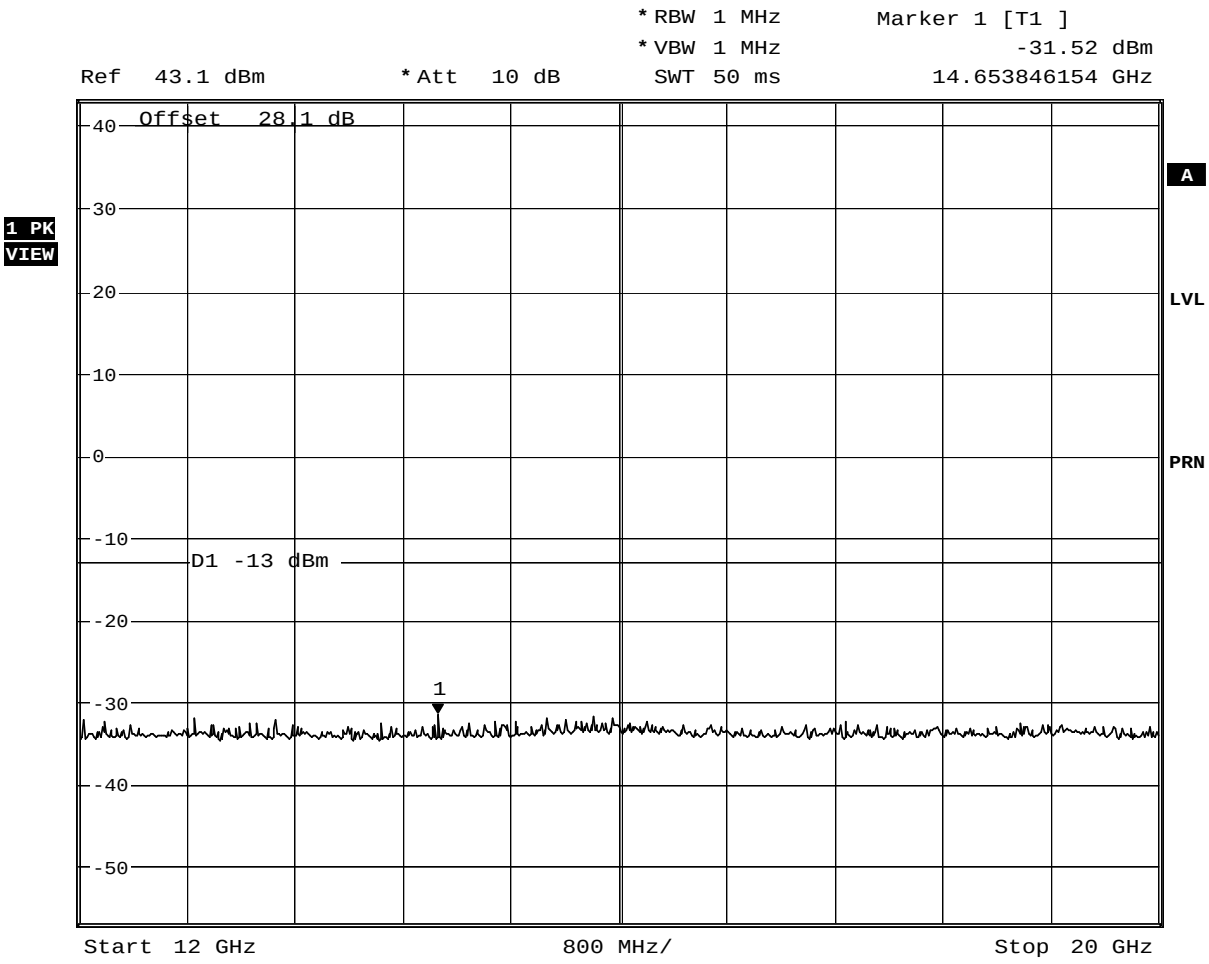
Spurious Emissions (4GHz - 12GHz)
Channel 661 (1880.0MHz) – Maximum Power



GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz – 20GHz)
Channel 661 (1880.0MHz) – Maximum Power

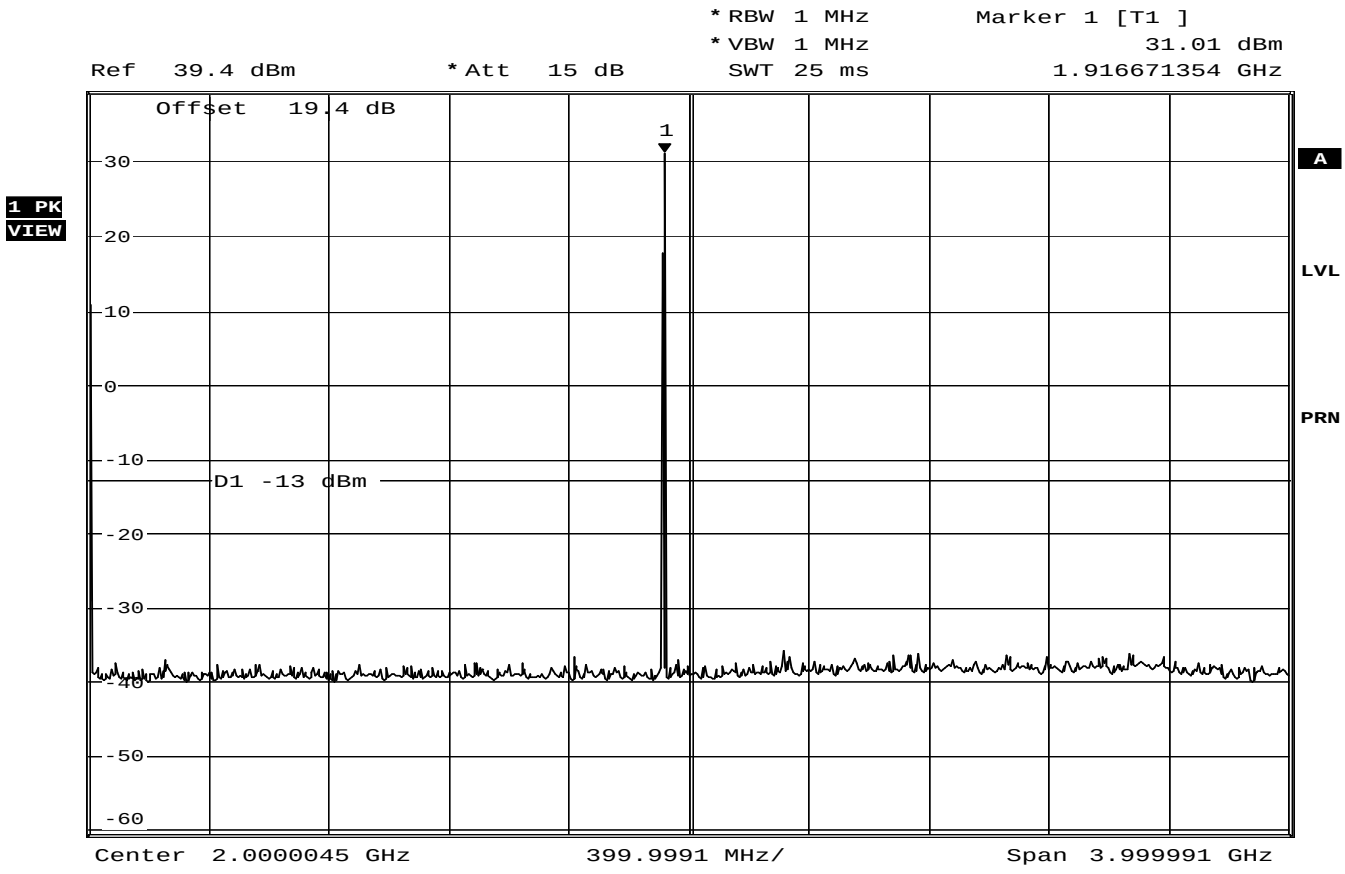


Date: 9.MAY.2005 14:27:57

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

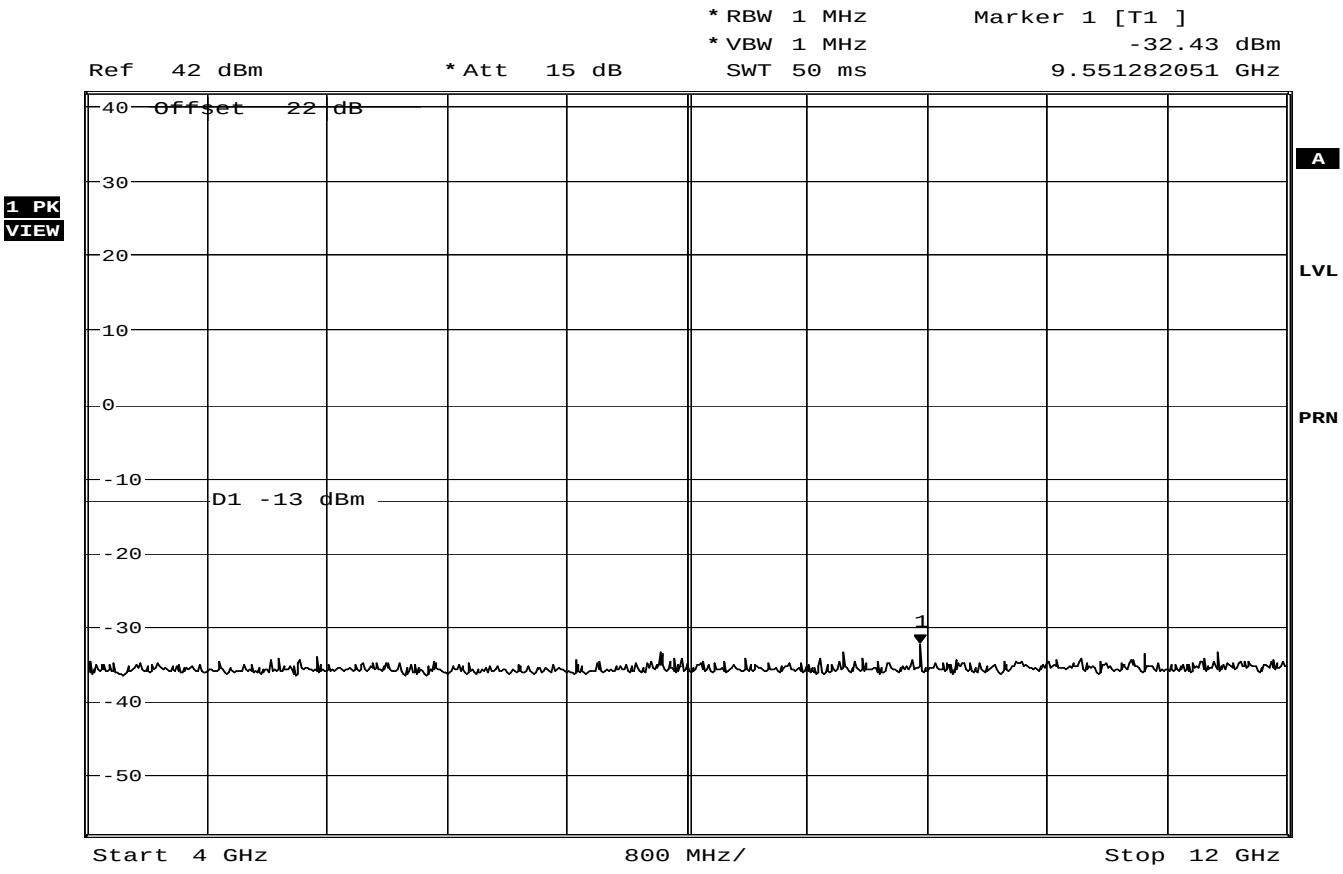
Spurious Emissions (9kHz – 4GHz)
Channel 810 (1909.8MHz) – Maximum Power



GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (4GHz – 12GHz)
Channel 810 (1909.8MHz) – Maximum Power

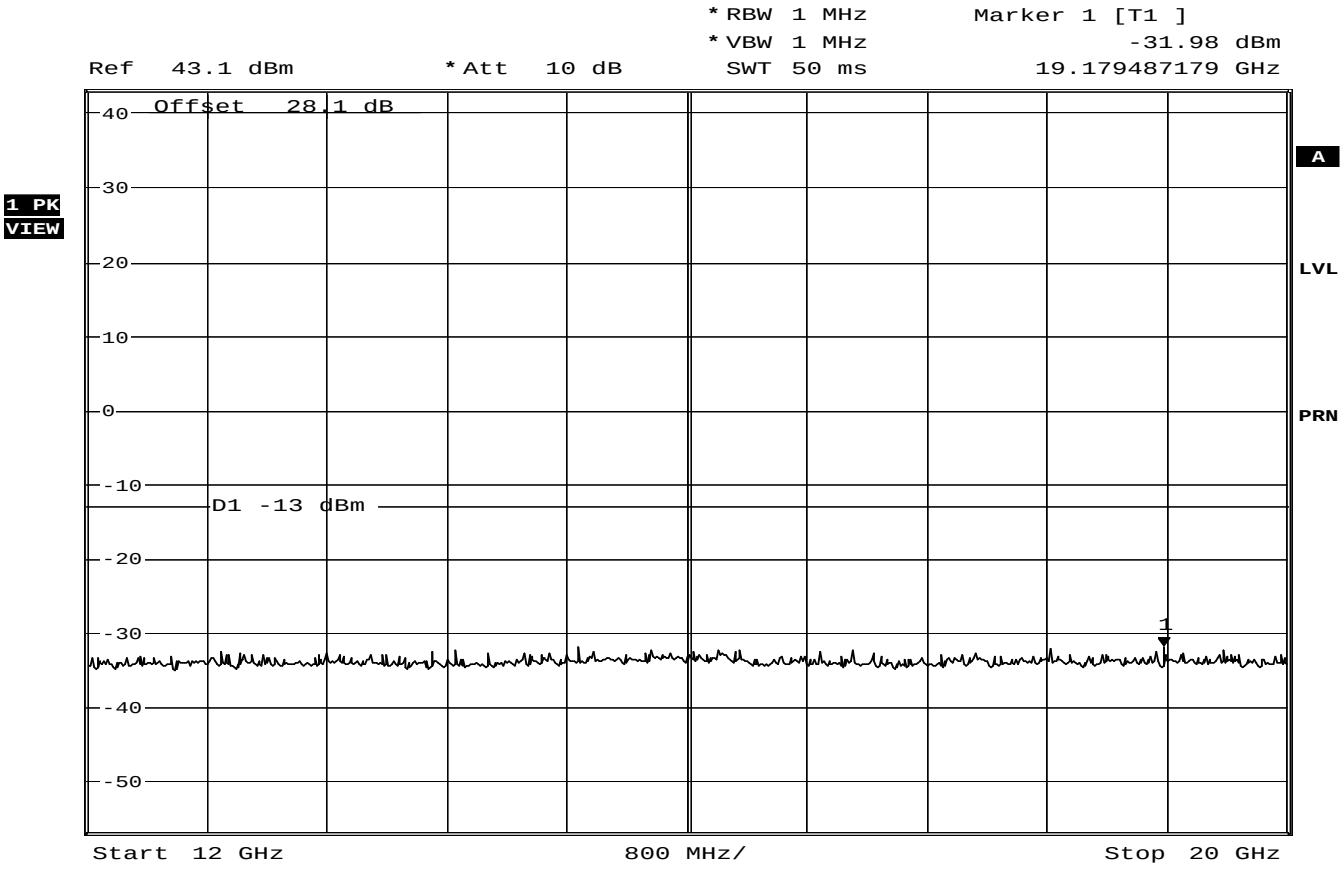


Date: 9.MAY.2005 12:15:57

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz – 20GHz)
Channel 810 (1909.8MHz) – Maximum Power

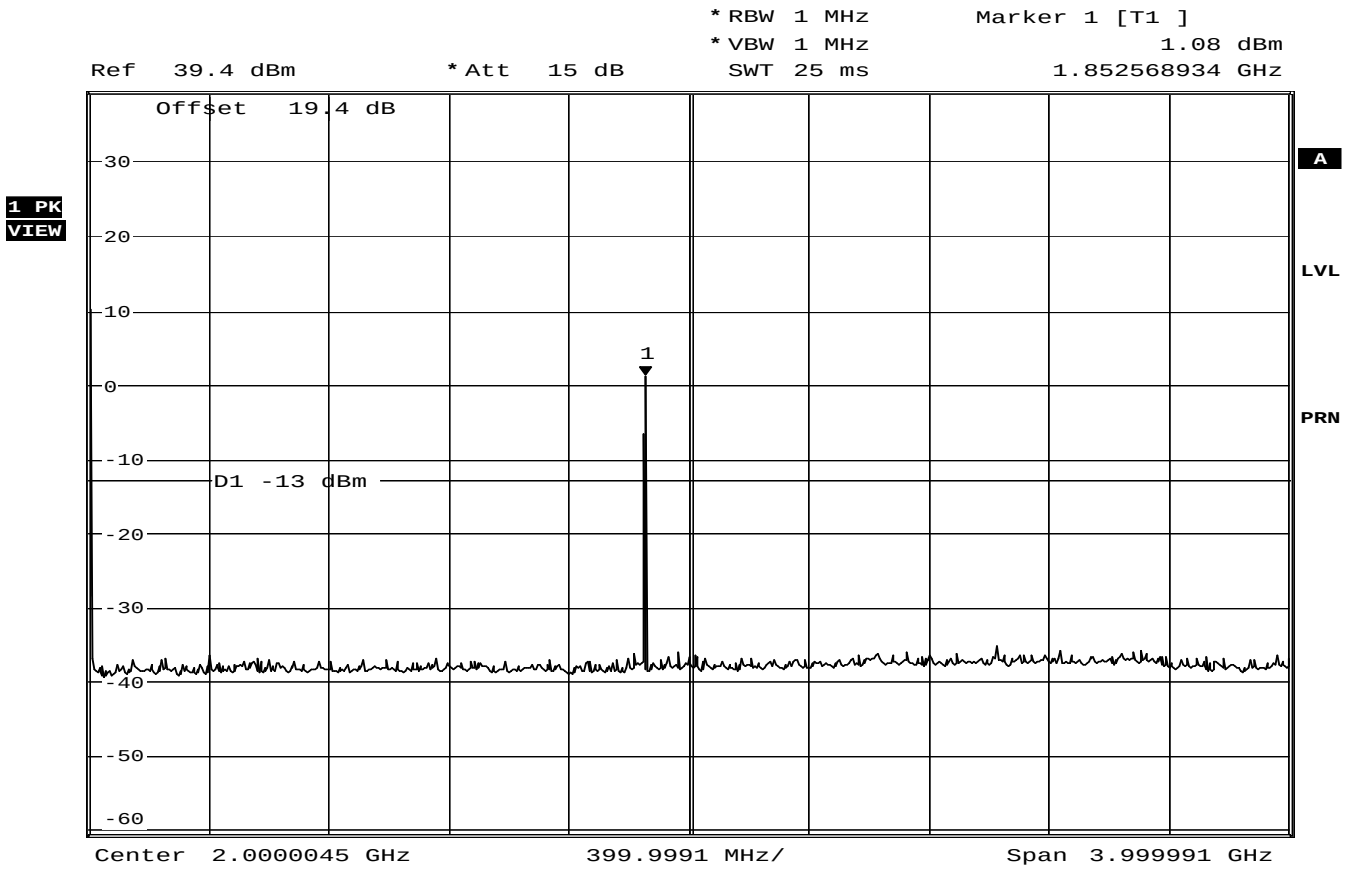


Date: 9.MAY.2005 14:28:40

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (9kHz – 4GHz)
Channel 512 (1850.2MHz) – Minimum Power

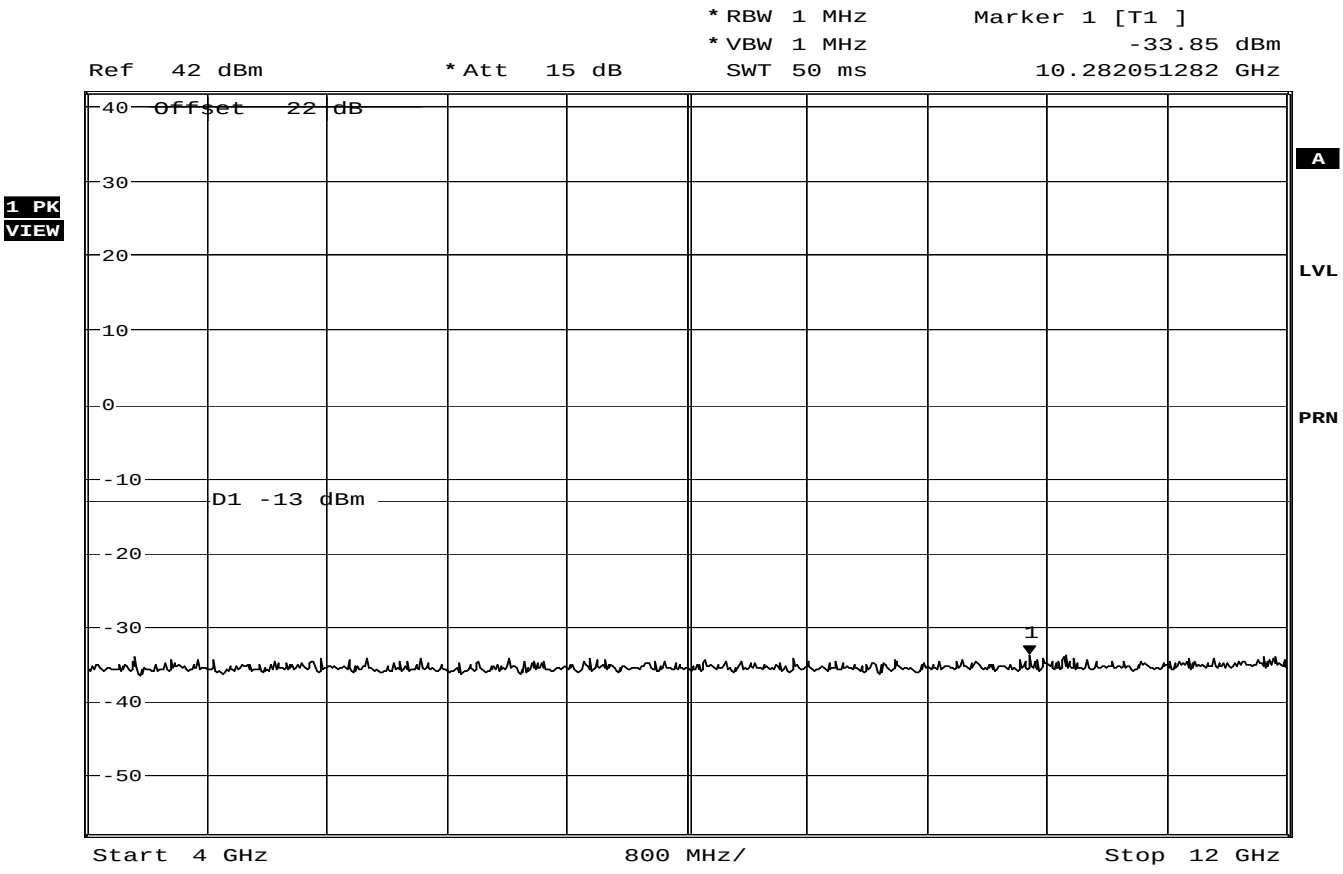


Date: 9.MAY.2005 12:06:26

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (4GHz – 12GHz)
Channel 512 (1850.2MHz) – Minimum Power

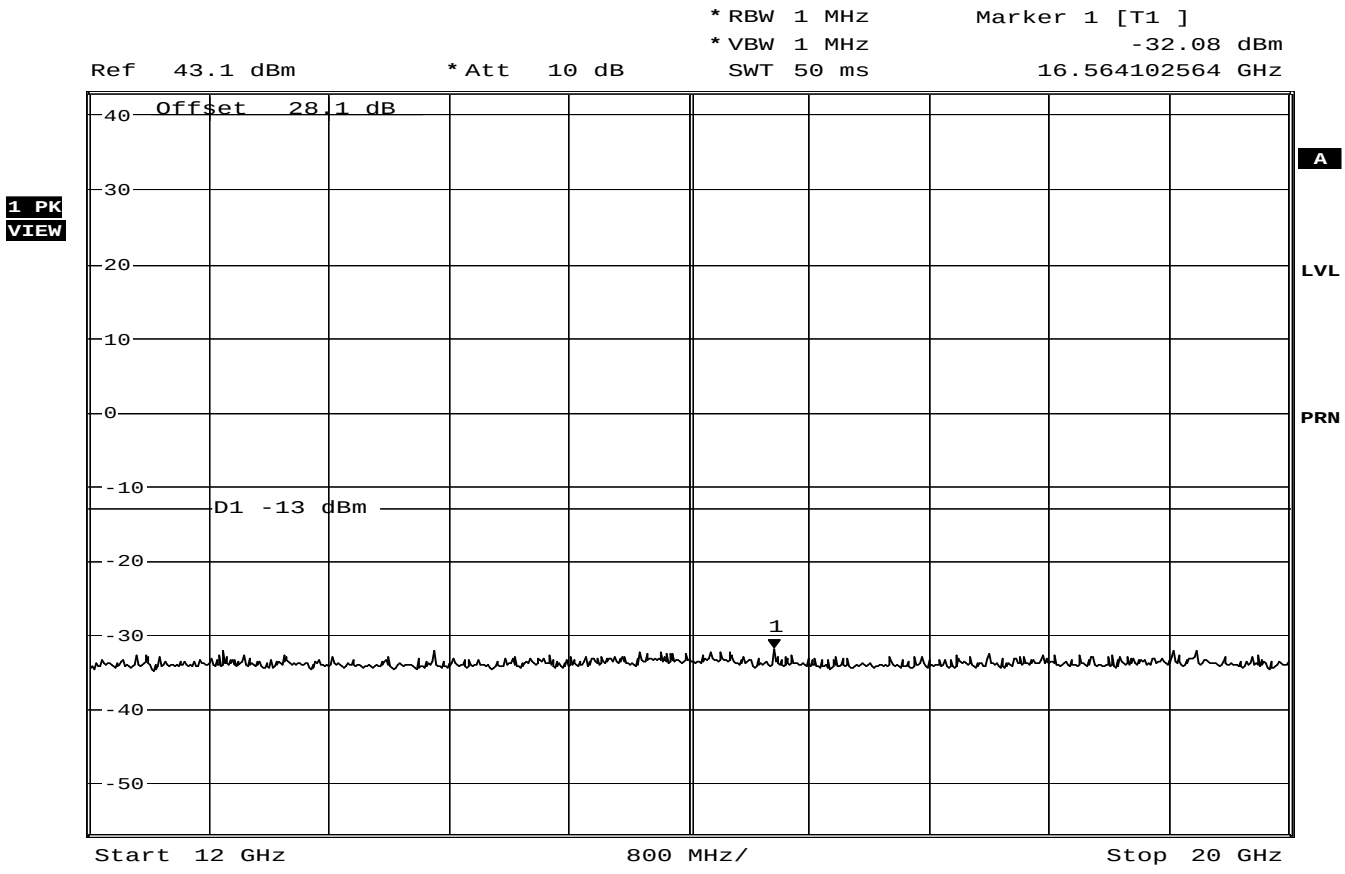


Date: 9.MAY.2005 12:12:11

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz-20GHz)
Channel 512 (1850.2MHz) – Minimum Power

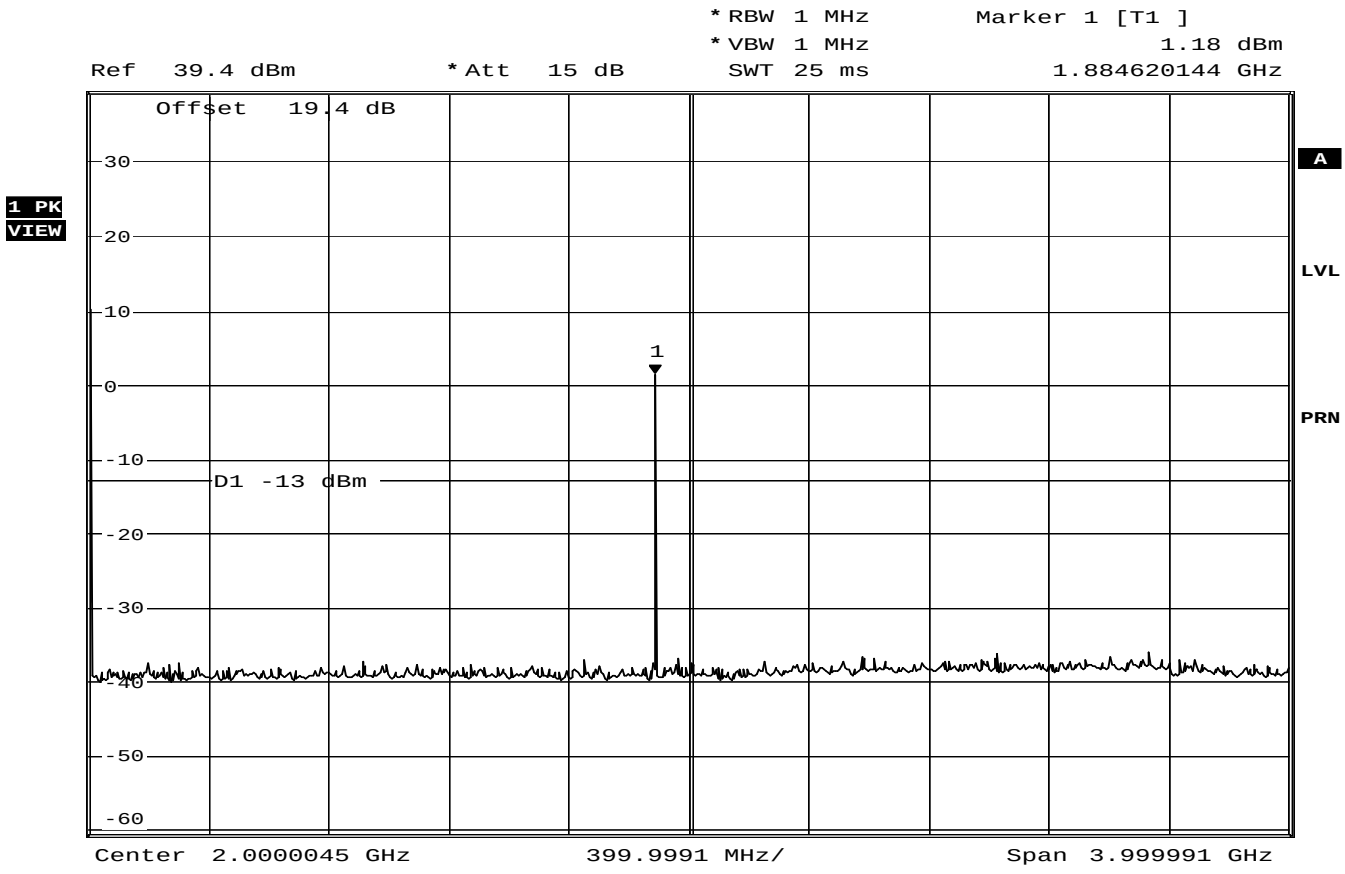


Date: 9.MAY.2005 14:29:53

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (9kHz – 4GHz)
Channel 661 (1880.0MHz) – Minimum Power

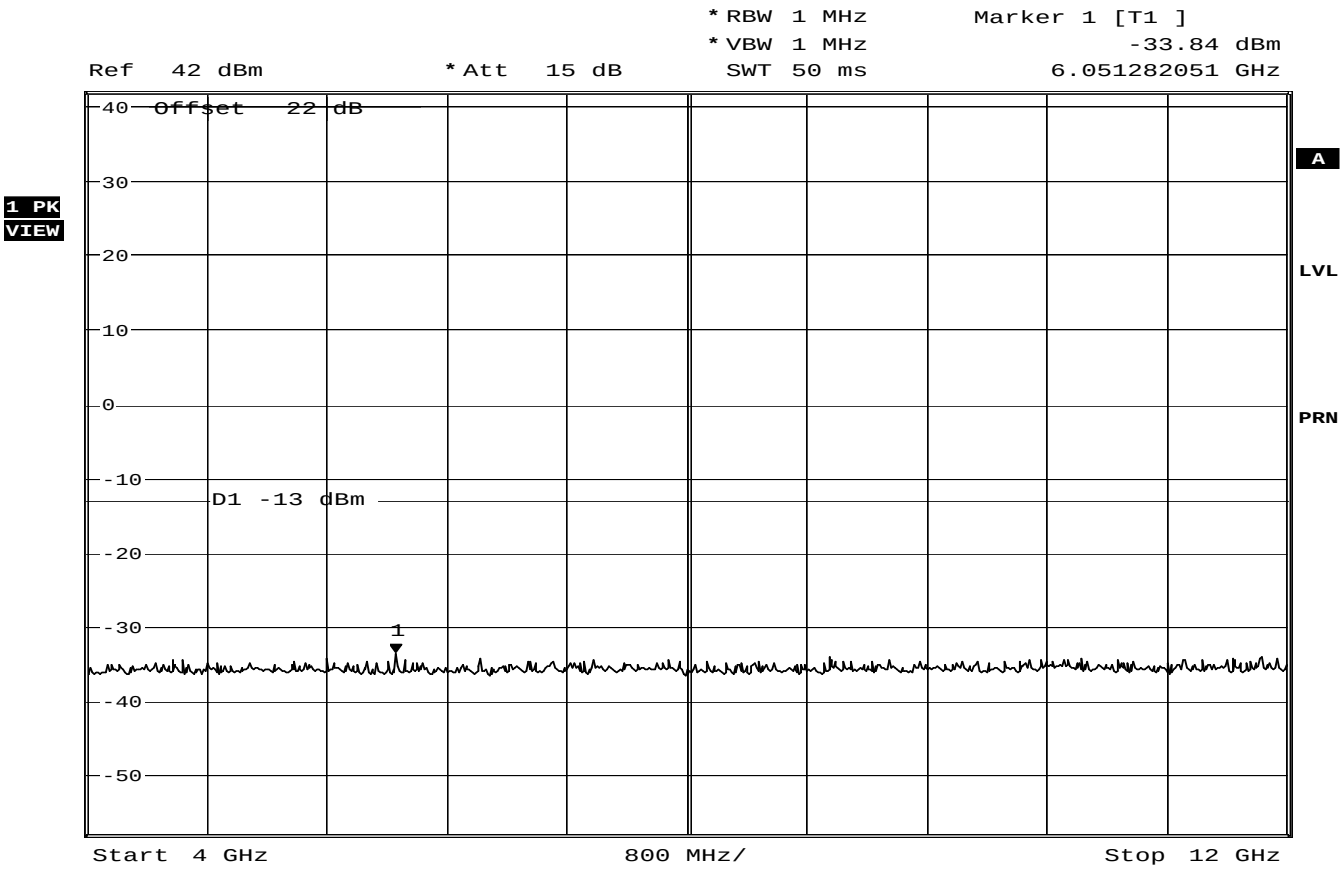


Date: 9.MAY.2005 12:07:21

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (4GHz – 12GHz)
Channel 661 (1880.0MHz) – Minimum Power

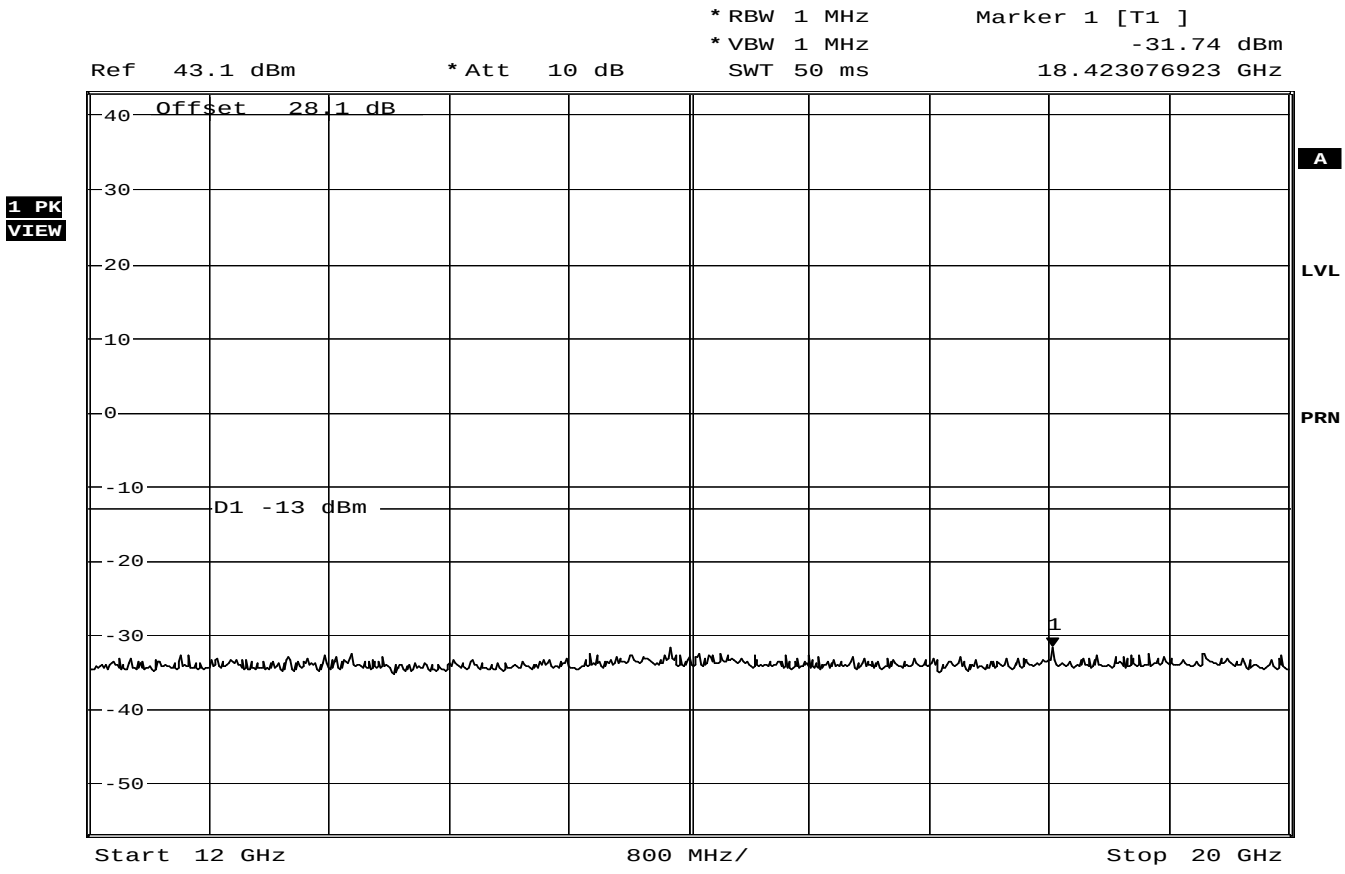


Date: 9.MAY.2005 12:11:21

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz – 20GHz)
Channel 661 (1880.0MHz) – Minimum Power

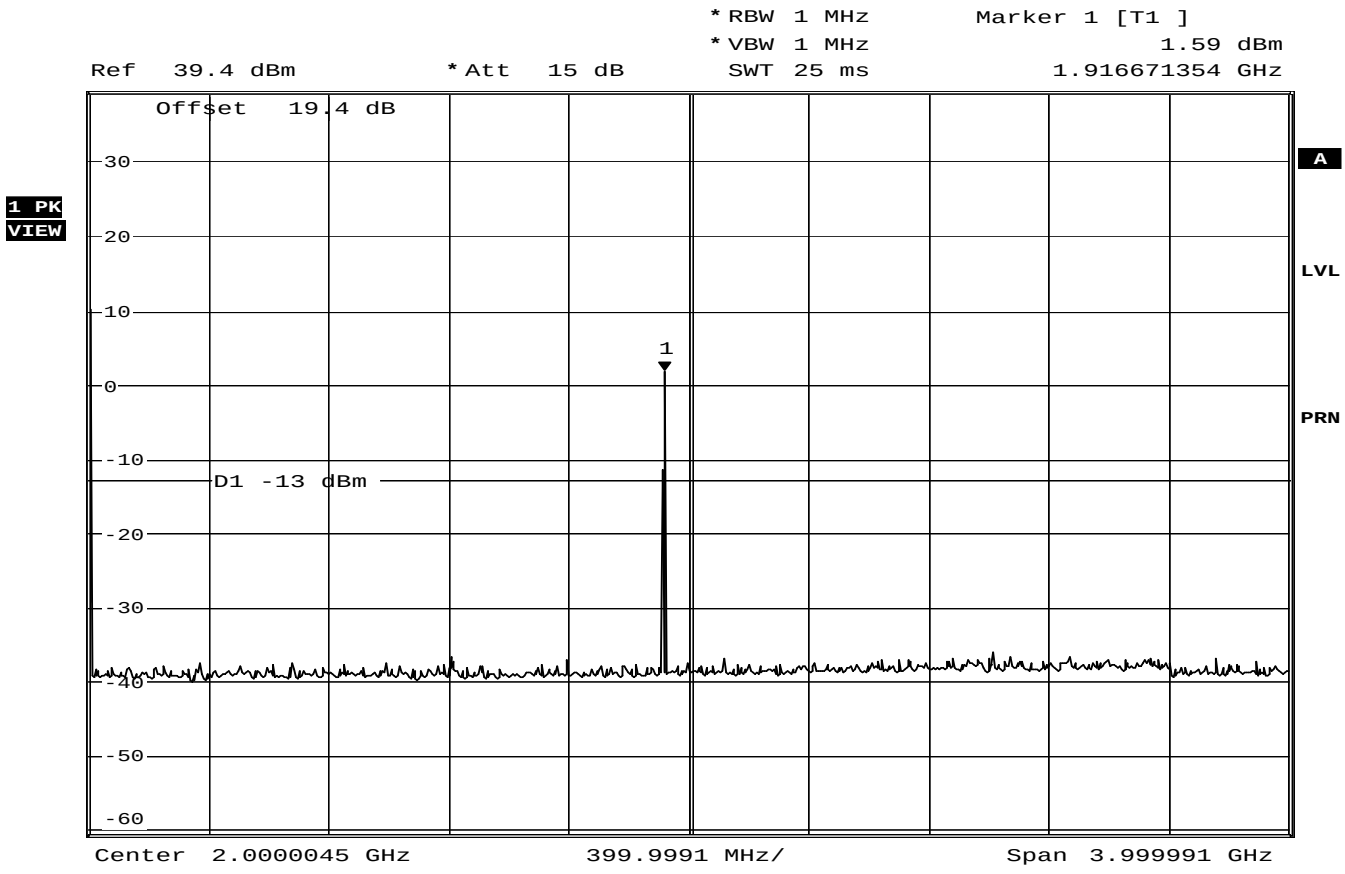


Date: 9.MAY.2005 14:30:49

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (9kHz – 4GHz)
Channel 810 (1909.8MHz) – Minimum Power

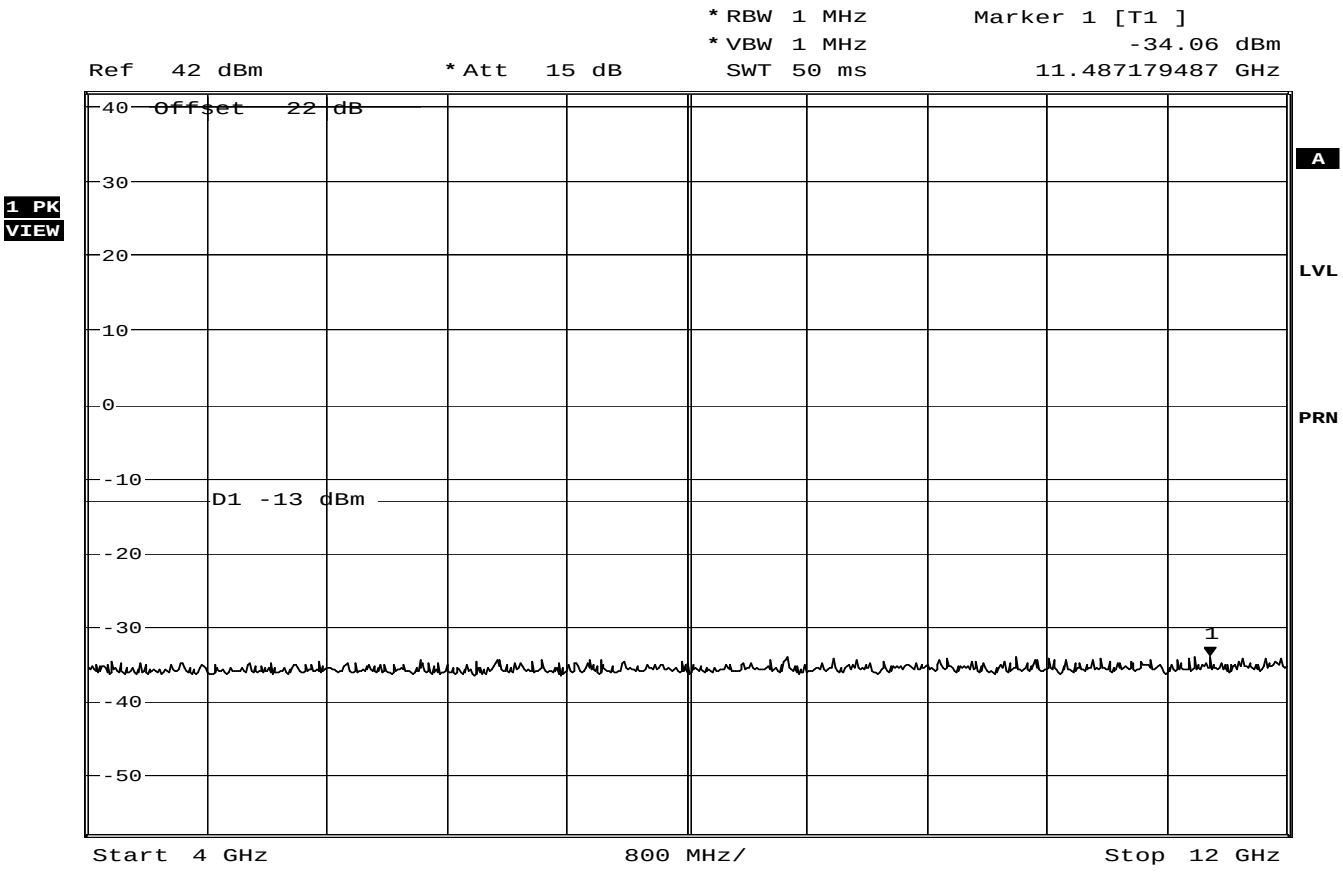


Date: 9.MAY.2005 12:08:07

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (4GHz – 12GHz)
Channel 810 (1909.8MHz) – Minimum Power

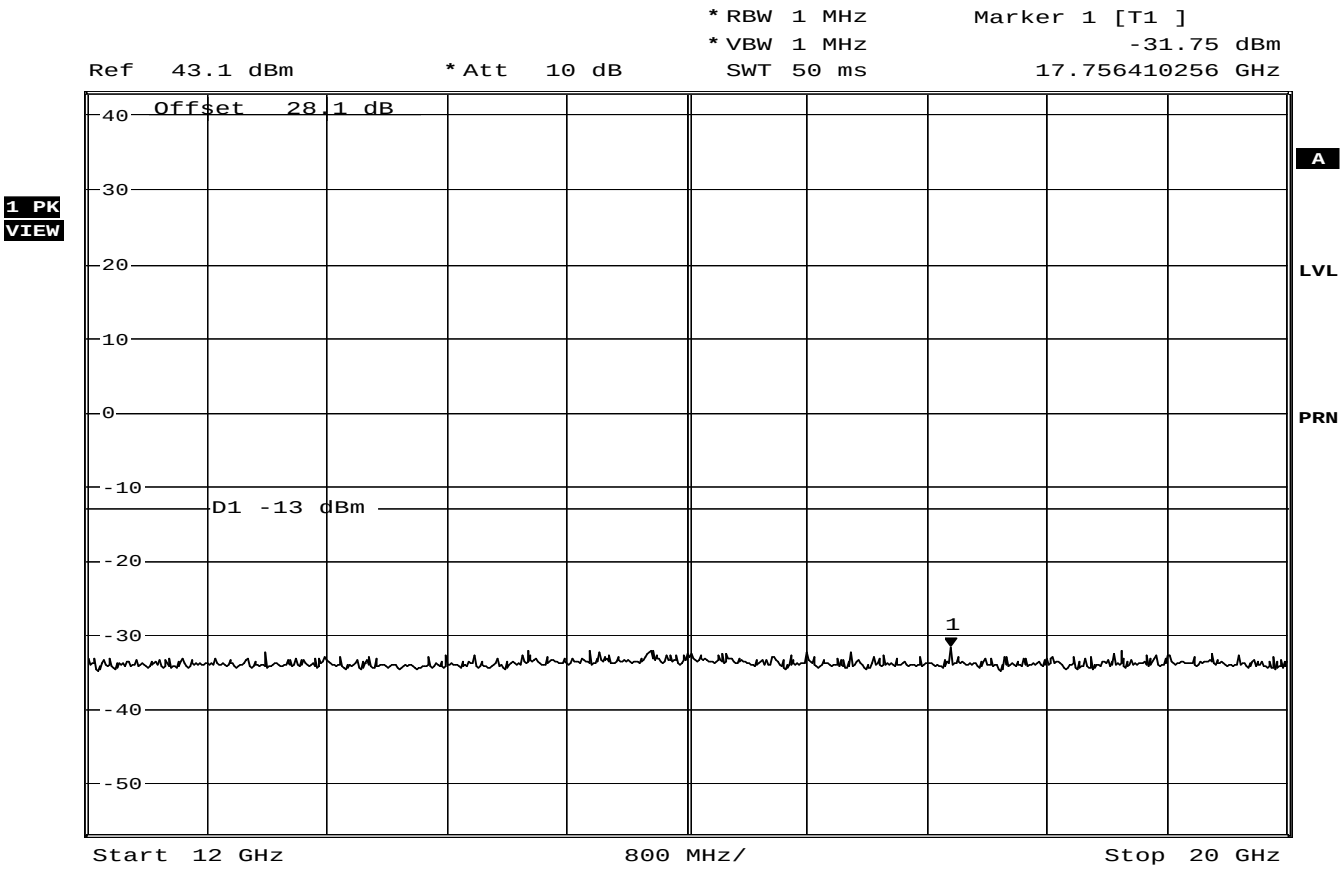


Date: 9.MAY.2005 12:10:32

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Spurious Emissions (12GHz – 20GHz)
Channel 810 (1909.8MHz) – Minimum Power



Date: 9.MAY.2005 14:31:39

GPRS – Packet Data

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Harmonic Emissions - GSM Channel 512 (1850.2MHz) – Maximum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.7004	-57.77	18.07	-39.70	-13
5.5506	-58.68	16.99	-41.69	-13
7.4008	-60.08	17.49	-42.59	-13
9.2510	-59.10	21.86	-37.24	-13
11.1012	-60.28*	21.29	-38.99	-13
12.9514	-60.07*	22.89	-37.18	-13
14.8016	-59.67	20.39	-39.28	-13
16.6518	-60.69*	23.64	-37.05	-13
18.5020	-59.78*	23.06	-36.72	-13

*Instrumentation Noise Floor

Harmonic Emissions - GSM Channel 661 (1880.0MHz)– Maximum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.760	-58.15	17.78	-40.37	- 13
5.640	-58.88	16.19	-42.69	- 13
7.520	-60.68*	18.68	-42.00	- 13
9.400	-56.43	18.45	-37.98	- 13
11.280	-60.05*	20.02	-40.03	- 13
13.160	-60.25*	20.32	-39.93	- 13
15.040	-59.96*	22.20	-37.76	- 13
16.920	-60.24*	22.68	-37.56	- 13
18.800	-60.11*	27.28	-32.83	- 13

*Instrumentation Noise Floor

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Harmonic Emissions - GSM Channel 810 (1909.8MHz) – Maximum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.8196	-58.86	18.88	-39.98	-13
5.7294	-58.71	17.93	-40.78	-13
7.6392	-60.44*	19.91	-40.53	-13
9.5490	-54.59	19.74	-34.85	-13
11.4588	-59.48*	21.18	-38.30	-13
13.3686	-60.13*	21.45	-38.68	-13
15.2784	-60.02*	21.73	-38.29	-13
17.1882	-60.43*	25.82	-34.01	-13
19.0980	-60.03*	23.77	-36.26	-13

* Instrumentation Noise Floor

Harmonic Emissions - GSM Channel 512 (1850.2MHz) – Minimum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.7004	-60.85*	18.07	-42.78	-13
5.5506	-60.80*	16.99	-43.81	-13
7.4008	-60.29*	17.49	-42.80	-13
9.2510	-60.88*	21.86	-39.02	-13
11.1012	-60.12*	21.29	-38.83	-13
12.9514	-60.20*	22.89	-37.31	-13
14.8016	-60.80*	20.39	-40.41	-13
16.6518	-60.13*	23.64	-36.49	-13
18.5020	-60.10*	23.06	-37.04	-13

*Instrumentation Noise Floor

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Harmonic Emissions - GSM Channel 661 (1880.0MHz) – Minimum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.760	-60.62*	17.78	-42.84	- 13
5.640	-60.89*	16.19	-44.70	- 13
7.520	-60.37*	18.68	-41.69	- 13
9.400	-60.37*	18.45	-41.92	- 13
11.280	-60.24*	20.02	-40.22	- 13
13.160	-59.74*	20.32	-39.42	- 13
15.040	-60.10*	22.20	-37.90	- 13
16.920	-59.91*	22.68	-37.23	- 13
18.800	-59.80*	27.28	-32.52	- 13

*Instrumentation Noise Floor

Harmonic Emissions - GSM Channel 810 (1909.8MHz) – Minimum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.8196	-60.41*	18.88	-41.53	- 13
5.7294	-60.74*	17.93	-42.81	- 13
7.6392	-60.82*	19.91	-40.91	- 13
9.5490	-60.48*	19.74	-40.74	- 13
11.4588	-60.27*	21.18	-39.09	- 13
13.3686	-60.25*	21.45	-38.80	- 13
15.2784	-60.08*	21.73	-38.35	- 13
17.1882	-60.76*	25.82	-34.94	- 13
19.0980	-59.49*	23.77	-35.72	- 13

* Instrumentation Noise Floor

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Harmonic Emissions - GPRS Channel 512 (1850.2MHz) – Maximum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.7004	-58.16	18.07	-40.09	-13
5.5506	-58.73	16.99	-41.74	-13
7.4008	-60.08	17.49	-42.59	-13
9.2510	-60.07	21.86	-38.21	-13
11.1012	-59.91*	21.29	-38.62	-13
12.9514	-60.36*	22.89	-37.47	-13
14.8016	-59.18	20.39	-38.79	-13
16.6518	-59.94*	23.64	-36.30	-13
18.5020	-60.08*	23.06	-37.02	-13

*Instrumentation Noise Floor

Harmonic Emissions - GPRS Channel 661 (1880.0MHz)– Maximum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.760	-58.82	17.78	-41.04	- 13
5.640	-58.87	16.19	-42.68	- 13
7.520	-60.56*	18.68	-41.88	- 13
9.400	-57.30	18.45	-38.85	- 13
11.280	-60.30*	20.02	-40.28	- 13
13.160	-60.22*	20.32	-39.90	- 13
15.040	-59.86*	22.20	-37.66	- 13
16.920	-59.96*	22.68	-37.28	- 13
18.800	-60.52*	27.28	-33.24	- 13

*Instrumentation Noise Floor

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Harmonic Emissions – GPRS Channel 810 (1909.8MHz) – Maximum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.8196	-59.95	18.88	-41.07	-13
5.7294	-59.10	17.93	-41.17	-13
7.6392	-60.27*	19.91	-40.36	-13
9.5490	-55.75	19.74	-36.01	-13
11.4588	-60.03*	21.18	-38.85	-13
13.3686	-60.19*	21.45	-38.74	-13
15.2784	-58.77*	21.73	-37.04	-13
17.1882	-60.52*	25.82	-34.70	-13
19.0980	-60.11*	23.77	-36.34	-13

*Instrumentation Noise Floor

Harmonic Emissions - GPRS Channel 512 (1850.2MHz) – Minimum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.7004	-60.56*	18.07	-42.49	-13
5.5506	-60.67*	16.99	-43.68	-13
7.4008	-60.66*	17.49	-43.17	-13
9.2510	-59.81*	21.86	-37.95	-13
11.1012	-60.57*	21.29	-39.28	-13
12.9514	-59.58*	22.89	-36.69	-13
14.8016	-60.33*	20.39	-39.94	-13
16.6518	-60.36*	23.64	-36.72	-13
18.5020	-59.53*	23.06	-36.47	-13

*Instrumentation Noise Floor

2.6 CONDUCTED SPURIOUS EMISSIONS - Continued

Harmonic Emissions - GPRS Channel 661 (1880.0MHz) – Minimum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.760	-60.42*	17.78	-42.64	- 13
5.640	-60.00*	16.19	-43.81	- 13
7.520	-60.84*	18..68	-42.16	- 13
9.400	-60.57*	18.45	-42.12	- 13
11.280	-60.08*	20.02	-40.06	- 13
13.160	-60.00*	20.32	-39.68	- 13
15.040	-60.13*	22.70	-37.93	- 13
16.920	-60.51*	22.68	-37.83	- 13
18.800	-60.30*	27.28	-33.02	- 13

*Instrumentation Noise Floor

Harmonic Emissions - GPRS Channel 810 (1909.8MHz) – Minimum Power

Frequency (GHz)	Raw Result (dBm)	Path Loss (dB)	Corrected Result (dBm)	Limit (dBm)
3.8196	-61.00*	18.88	-42.12	- 13
5.7294	-60.46*	17.93	-42.53	- 13
7.6392	-60.35*	19.91	-40.44	- 13
9.5490	-60.10*	19.74	-40.36	- 13
11.4588	-60.15*	21.18	-38.97	- 13
13.3686	-60.13*	21.45	-38.68	- 13
15.2784	-60.06*	21.73	-38.33	- 13
17.1882	-59.63*	25.82	-33.81	- 13
19.0980	-59.51*	23.77	-35.74	- 13

* Instrumentation Noise Floor

2.7 FREQUENCY STABILITY UNDER TEMPERATURE VARIATIONS

2.7.1 FCC CFR 47: Part 24 Subpart E, Section 24.135(a)

2.7.2 Equipment Under Test

EB-VS3

2.7.3 Date of Test

10th May 2005

2.7.4 Test Equipment Used (See Section 3.1 for details)

Items: 1, 2, 3, 4, 5, 6, 7, 8, 10, 11

2.9.5 Test Procedure

GSM

The EUT was set to transmit on maximum power and measurements were made on Timeslot 3. A Digital Communications Analyser, (CMU200), was used to measure the Frequency Error. The maximum result of measurements made over 200 bursts was recorded.

GPRS

The EUT was set to transmit on maximum power, (timeslots 3 and 4 active), and measurements performed on Timeslot 3. A Digital Communications Analyser, (CMU200), was used to measure the Frequency Error. The maximum result of measurements made over 200 bursts was recorded.

2.9.6 Test Results

GSM – Circuit Switched

Temperature Interval(ºC)	Test Frequency (GHz)	Deviation (Hz)	Limit (kHz)
- 30	1.88	+79	± 1.88
- 20	1.88	+83	± 1.88
- 10	1.88	+77	± 1.88
0	1.88	+80	± 1.88
+ 10	1.88	+57	± 1.88
+ 20	1.88	+63	± 1.88
+ 30	1.88	+75	± 1.88
+ 40	1.88	+67	± 1.88
+ 50	1.88	+62	± 1.88

2.7 FREQUENCY STABILITY UNDER TEMPERATURE VARIATIONS – Continued

GPRS – Packet Data

Temperature Interval(ºC)	Test Frequency (GHz)	Deviation (Hz)	Limit (kHz)
- 30	1.88	+69	± 1.88
- 20	1.88	+66	± 1.88
- 10	1.88	+62	± 1.88
0	1.88	+52	± 1.88
+ 10	1.88	+49	± 1.88
+ 20	1.88	+47	± 1.88
+ 30	1.88	+35	± 1.88
+ 40	1.88	+38	± 1.88
+ 50	1.88	+32	± 1.88

Limit	±0.0001% or 1ppm

Remarks

EUT complies with CFR 47 Part 24.135(a). The EUT does not exceed ±1.88kHz at the measured frequency at any temperature interval across the measured range.

2.8 FREQUENCY STABILITY UNDER VOLTAGE VARIATIONS

2.8.1 FCC CFR 47: Part 24 Subpart E, Section 24.135(a)

2.8.2 Equipment Under Test

EB-VS3

2.8.3 Date of Test

9th May 2005

2.8.4 Test Equipment Used (See Section 3.1 for details)

Items: 1, 2, 3, 4, 5, 6, 7, 8

2.10.5 Test Procedure

GSM

The EUT was set to transmit on maximum power and measurements were made on Timeslot 3. A Digital Communications Analyser, (CMU200), was used to measure the Frequency Error. The maximum result of measurements made over 200 bursts was recorded.

GPRS

The EUT was set to transmit on maximum power, (timeslots 3 and 4 active), and measurements performed on Timeslot 3. A Digital Communications Analyser, (CMU200), was used to measure the Frequency Error. The maximum result of measurements made over 200 bursts was recorded.

2.10.6 Test Results

GSM

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Deviation Limit (kHz)
3.7	1.88	+58	± 1.88
3.4	1.88	+61	± 1.88

2.8 FREQUENCY STABILITY UNDER VOLTAGE VARIATIONS - Continued

GPRS

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Deviation Limit (kHz)
3.7	1.88	+35	± 1.88
3.4	1.88	+41	± 1.88

Limit	±0.0001% or 1ppm

Remarks

EUT complies with CFR 47 Part 24.135(a). The EUT does not exceed ±1.88kHz at the measured frequency either at nominal or voltage variation.

SECTION 3

TEST EQUIPMENT USED

3.1 TEST EQUIPMENT USED

Item	Instrument	Manufacturer	Type No	Serial No	EMC / INV No	Cal. Due
1	GSM Test Set	Rohde & Schwarz	CMU 200	1039444	INV 4937	03/12/05
2	Signal Generator	Hewlett Packard	3312A	1502G03899	EMC 453	22/06/06
3	Attenuator	Pasternic	PE7004-10	N/S	EMC 1970	11/11/05
4	Thermocouple	TUV	Type T	N/S	INV 4089	-
5	Signal Generator	Marconi	2031	119530069	EMC 1979	11/11/05
6	Hygrometer	Rotronic	I-1000	N/S	INV 3229	25/10/05
7	Power Supply	Farnell	LT30-2	919	EMC 28	TU
8	Power Meter	Rohde & Schwarz	URE	881162/20	EMC 1249	10/06/05
9	Signal Generator	Hewlett Packard	8673B	2147A00421	EMC 953	10/06/05
10	Chamber	Montford	2F3, BLD 8	N/S	INV 3037	TU
11	Digital Thermometer	Fluke	51	73860011	INV 4222	27/04/06
12	Spectrum Monitor	Rohde & Schwarz	EZM	892242-023	EMC 1416	TU
13	Receiver	Rohde & Schwarz	ESH3	872742/002	EMC 1020	24/09/05
14	LISN	Rohde & Schwarz	ESH2-Z5	892107-019	EMC1584	12/10/05
15	Pulse Limiter	Hewlett Packard	11947A	3107A01837	EMC 2271	19/08/05
16	Attenuator	Weinschel	48-20-43	BJ7183	EMC 2690	17/11/05

3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:-

IN THE FREQUENCY RANGE 30MHz TO 1000MHz		
TEST	**FREQUENCY**	**AMPLITUDE**
For 6dB Bandwidth	±210.894kHz	±0.5dB
For Maximum Output Power	Not Applicable	±0.5dB
For Radiated Emissions, Quasi-Peak Measurements using the ESVP Test Receiver and Bilog Antenna	±5ppm + 500Hz	±4.1dB
For Radiated Emissions, Quasi-Peak Measurements taken in Zero Span using the Hewlett Packard EMI Receiver and Bilog Antenna	$\pm 2 \times 10^{-7}$ x Centre Frequency	5.15dB calculated in accordance with CISPR 16-4
For Spurious Conducted Emissions	Not Applicable	±3.0dB
IN THE FREQUENCY RANGE 1GHz TO 20GHz		
TEST	**FREQUENCY**	**AMPLITUDE**
For Spurious Radiated Emissions measurements	$\pm 2 \times 10^{-7}$ x Centre Frequency	±3.4dB
For Peak Power Spectral Density	Not Applicable	±1.8dB
For Effective Radiated Power (ERP) measurements	Not Applicable	±1.45dBm

SECTION 4

ACCREDITATION, DISCLAIMERS AND COPYRIGHT

4.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT

Group

This report relates only to the actual item/items tested.

Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation.

Results of tests not covered by our UKAS Accreditation Schedule are marked NUA (Not UKAS Accredited).