

Annex 1: Measurement diagrams to TEST REPORT No.: 20835060e/15

According to:
FCC Regulations:
Part 22, Part 24

IC-Regulations:
RSS-132 Issue 3
RSS-133 Issue 6
RSS-Gen Issue 4

for

Gemalto M2M GmbH

Wireless Module PLS8-X
FCC-ID: QIPPLS8-X
IC: 7830A-PLS8X
PMN: Cinterion PLS8-X, HVIN: PLS8-X

Laboratory Accreditation and Listings			
 DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01	 FCC MRA US-EU 0003	 Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301
 WiFi ALLIANCE AUTHORIZED RF LABORATORY	 CTIA Authorized Test Lab LAB CODE 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com			

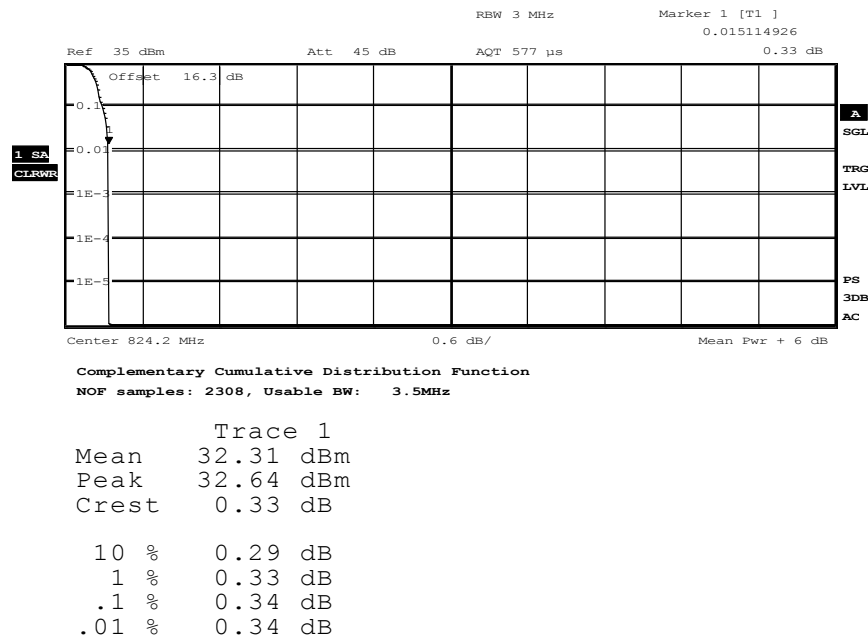
Table of contents

1. MEASUREMENT DIAGRAMS.....	3
1.1. <i>Power Measurements and PAPR-Value</i>	<i>3</i>
1.2. <i>Emission bandwidth (26dBc Bandwidth)</i>	<i>9</i>
1.3. 99% Occupied bandwidth	15
1.4. Spurious emissions conducted	21
1.5. Band-Edge compliance (conducted)	45
1.6. Magnetic field strength emissions accord. Part 15.209 Subpart C ($f < 30\text{MHz}$)	53
1.7. Spurious emissions radiated ($30\text{ MHz} < f < 18\text{ GHz}$)	59
1.8. Radiated band-edge emissions	66

1. Measurement diagrams

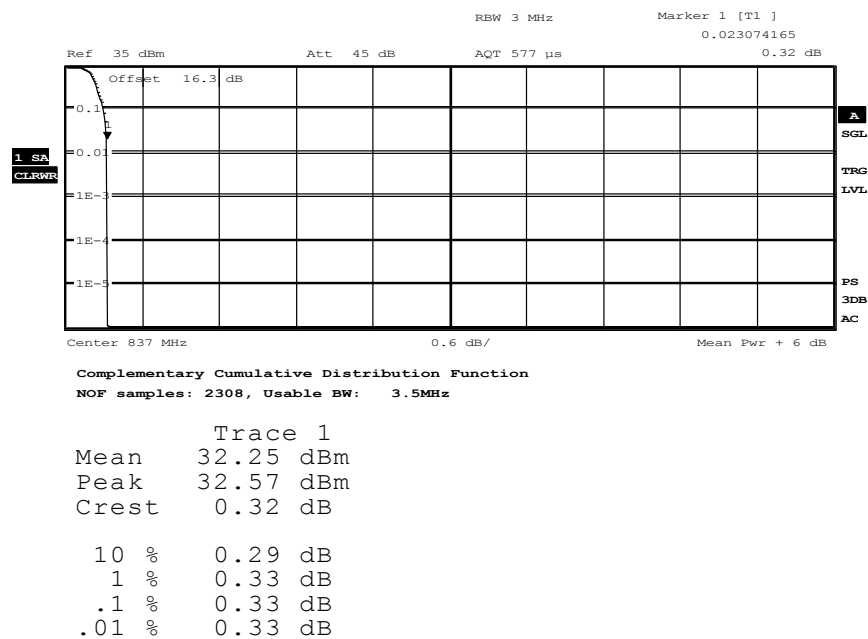
1.1. Power Measurements and PAPR-Value

1.1.1. GSM 850 (GMSK Modulation)



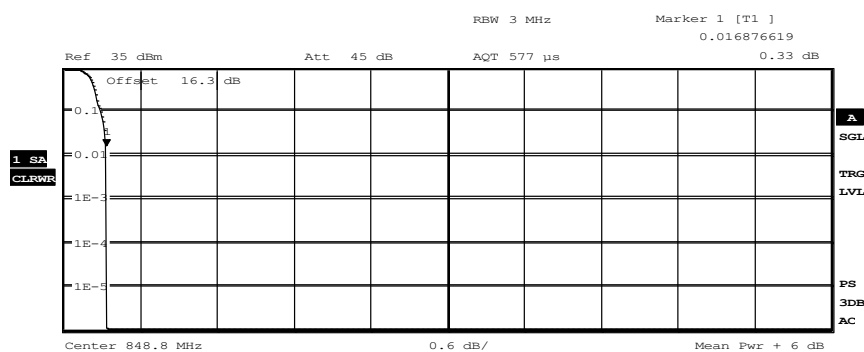
Date: 30.JUL.2015 12:04:24

Channel 128



Date: 30.JUL.2015 12:03:31

Channel 192



Complementary Cumulative Distribution Function
NOF samples: 2308, Usable BW: 3.5MHz

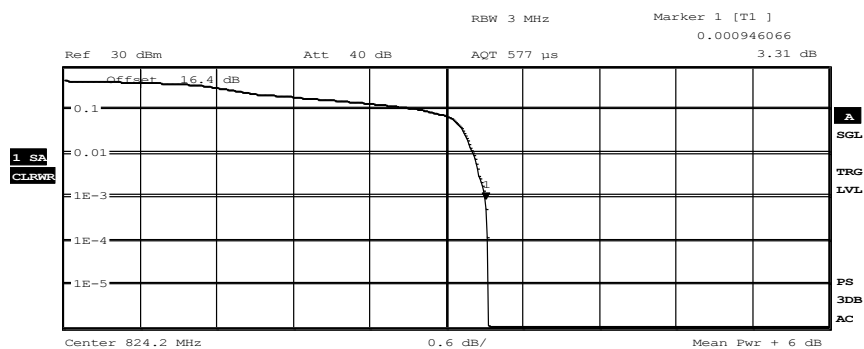
Trace 1
Mean 32.10 dBm
Peak 32.43 dBm
Crest 0.33 dB

10 %	0.29 dB
1 %	0.33 dB
.1 %	0.34 dB
.01 %	0.34 dB

Date: 30.JUL.2015 12:01:20

Channel 251

1.1.2. GSM 850 (8-PSK Modulation)



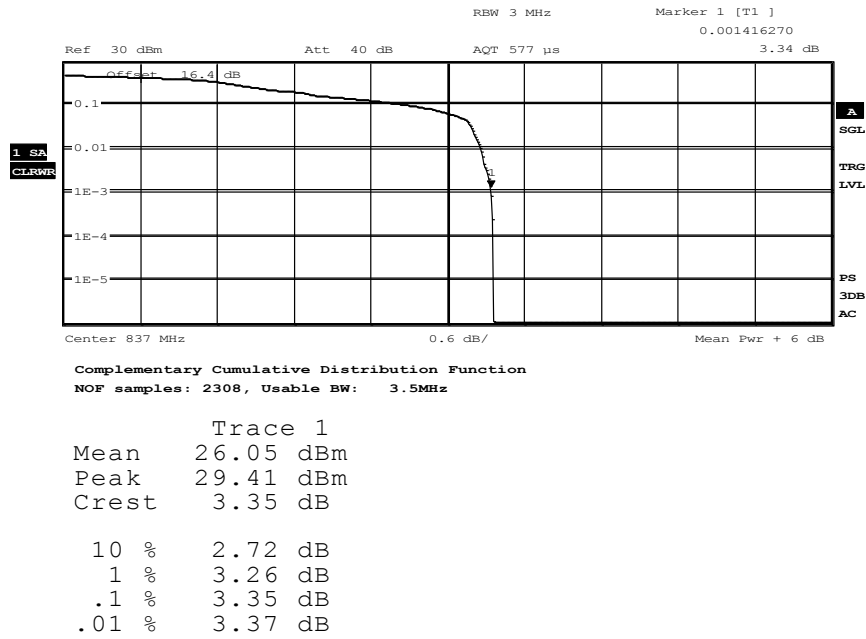
Complementary Cumulative Distribution Function
NOF samples: 2308, Usable BW: 3.5MHz

Trace 1
Mean 26.22 dBm
Peak 29.55 dBm
Crest 3.32 dB

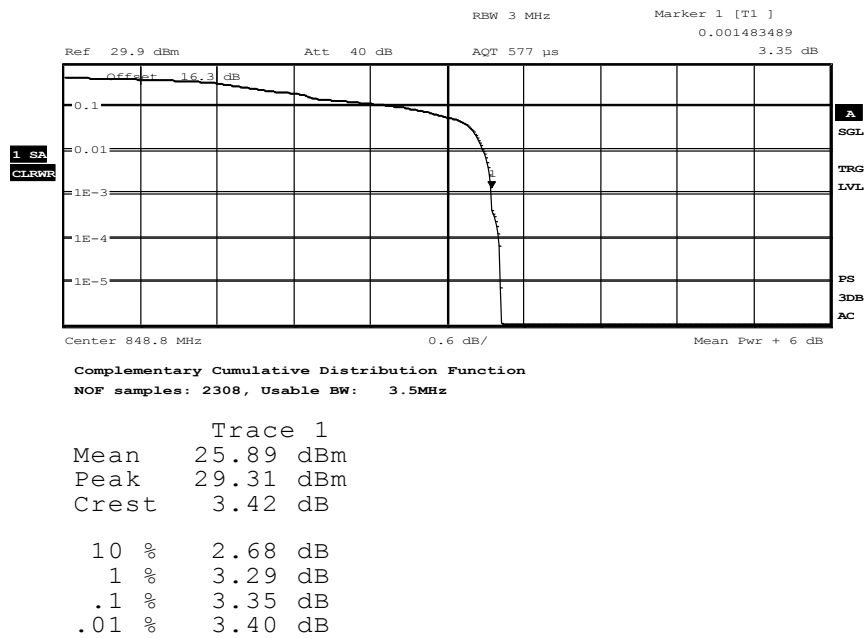
10 %	2.83 dB
1 %	3.21 dB
.1 %	3.31 dB
.01 %	3.33 dB

Date: 30.JUL.2015 11:58:51

Channel 128



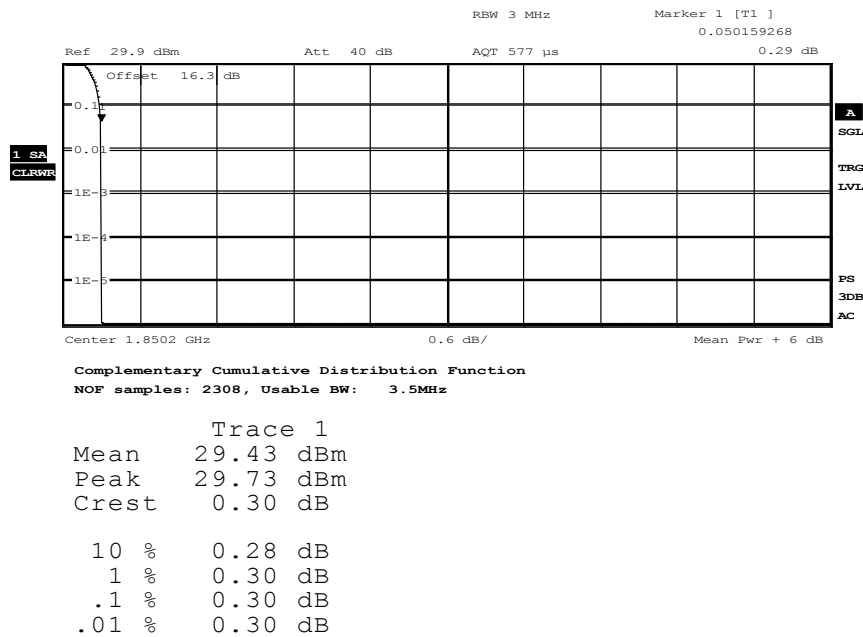
Date: 30.JUL.2015 11:57:22

Channel 192

Date: 30.JUL.2015 11:59:39

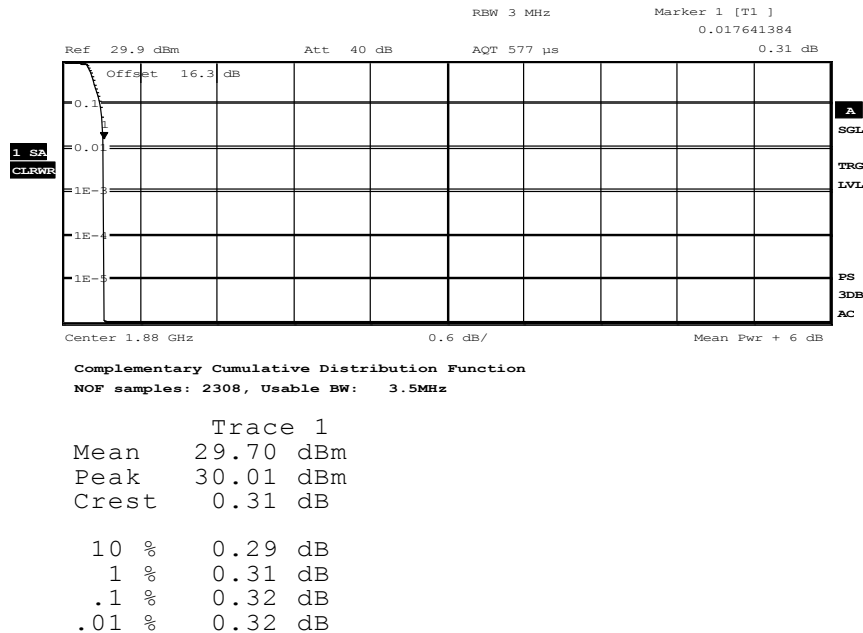
Channel 251

1.1.3. GSM 1900 (GMSK Modulation)



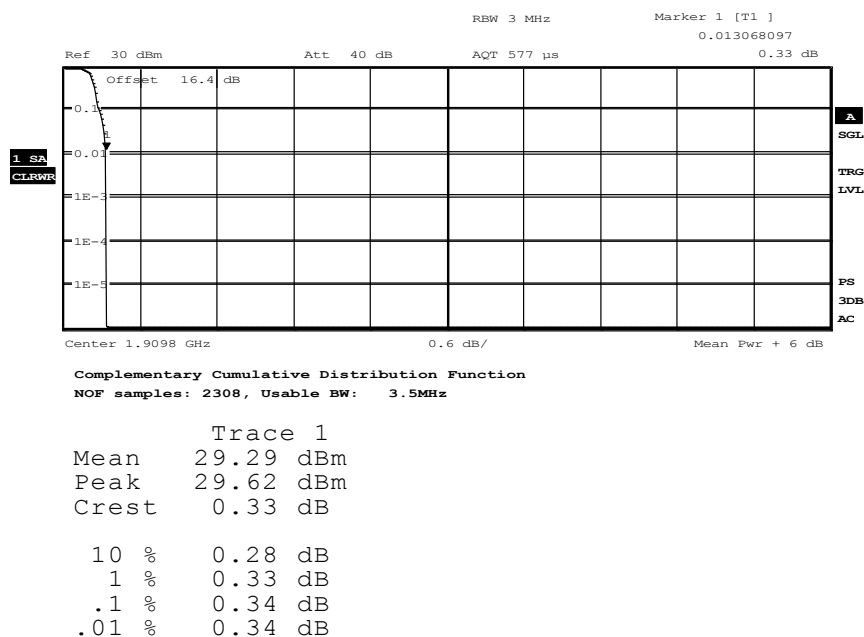
Date: 30.JUL.2015 11:53:18

Channel 512



Date: 30.JUL.2015 11:52:27

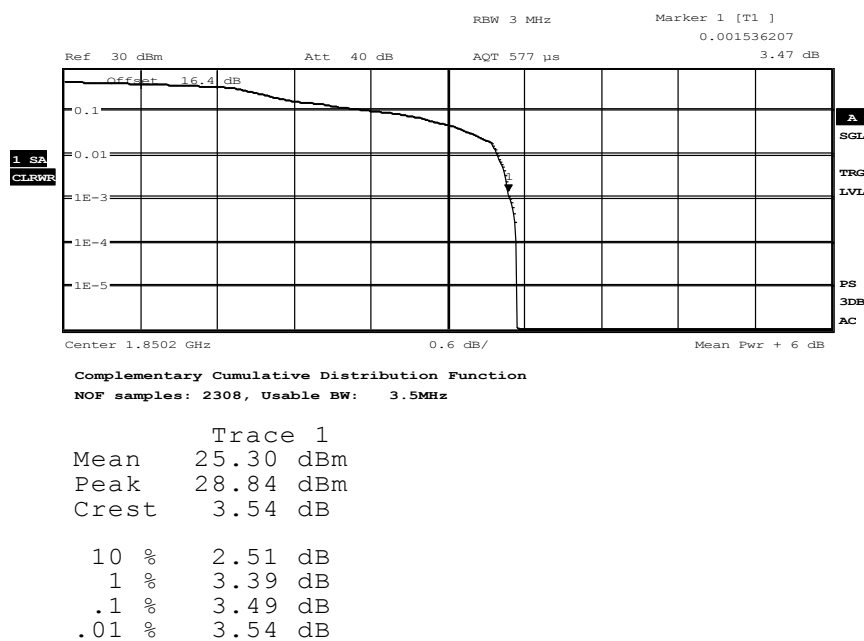
Channel 661



Date: 30.JUL.2015 11:51:02

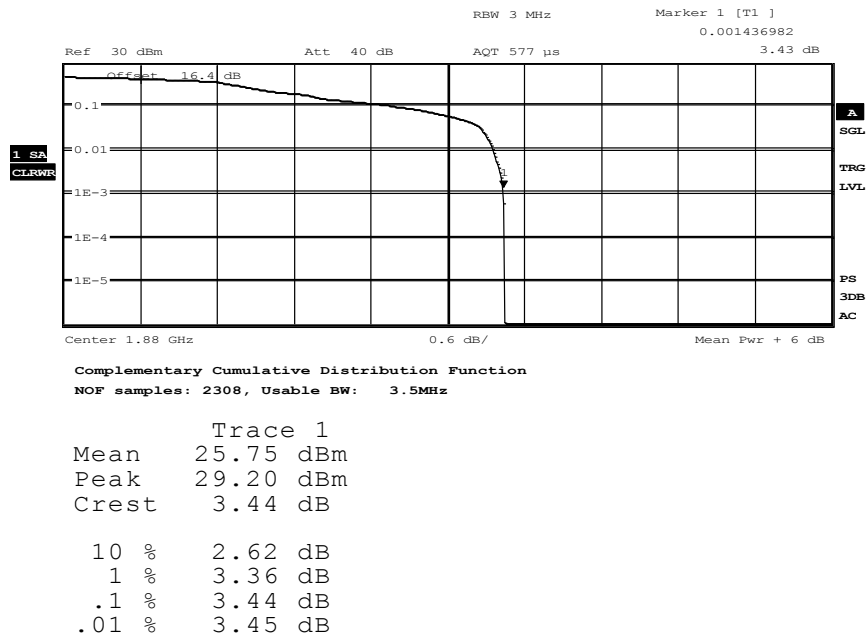
Channel 810

1.1.4. GSM 1900 (8-PSK Modulation)

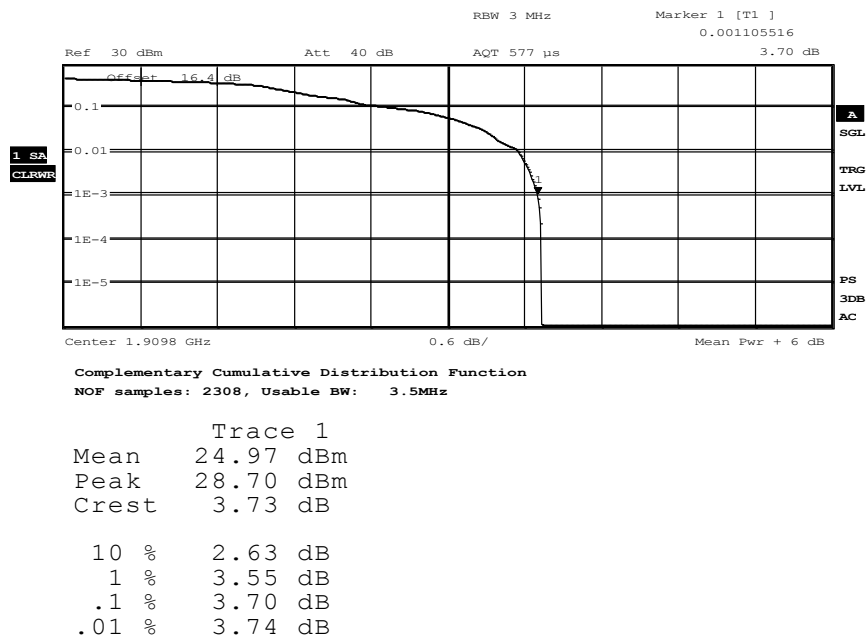


Date: 30.JUL.2015 11:47:55

Channel 512



Date: 30.JUL.2015 11:46:32

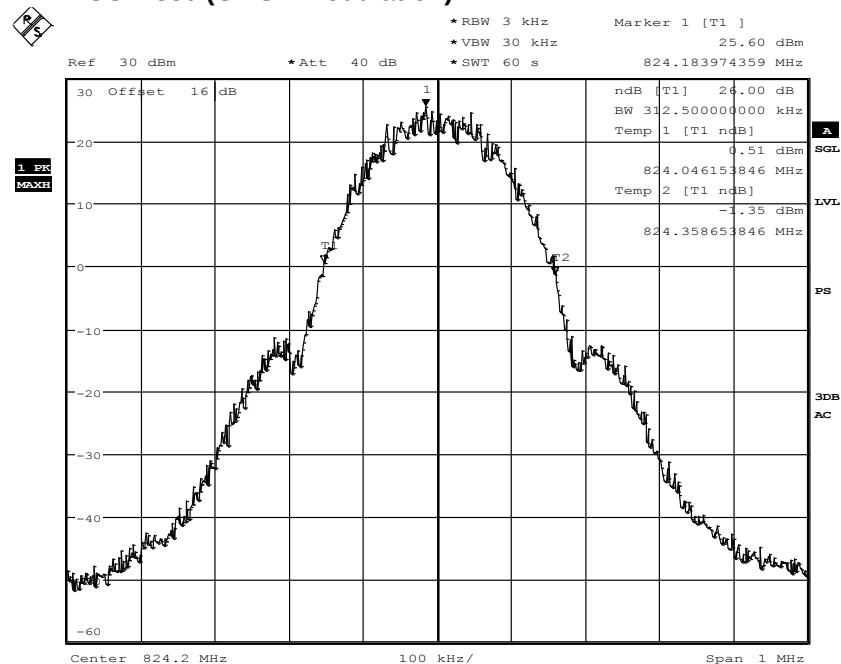
Channel 661

Date: 30.JUL.2015 11:49:06

Channel 810

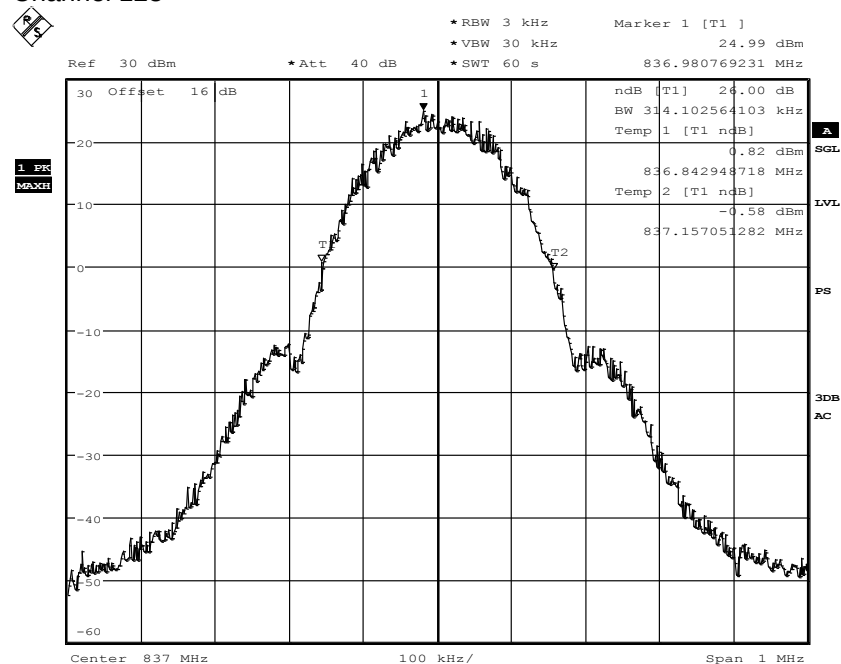
1.2. Emission bandwidth (26dBc Bandwidth)

1.2.1. GSM 850 (GMSK Modulation)



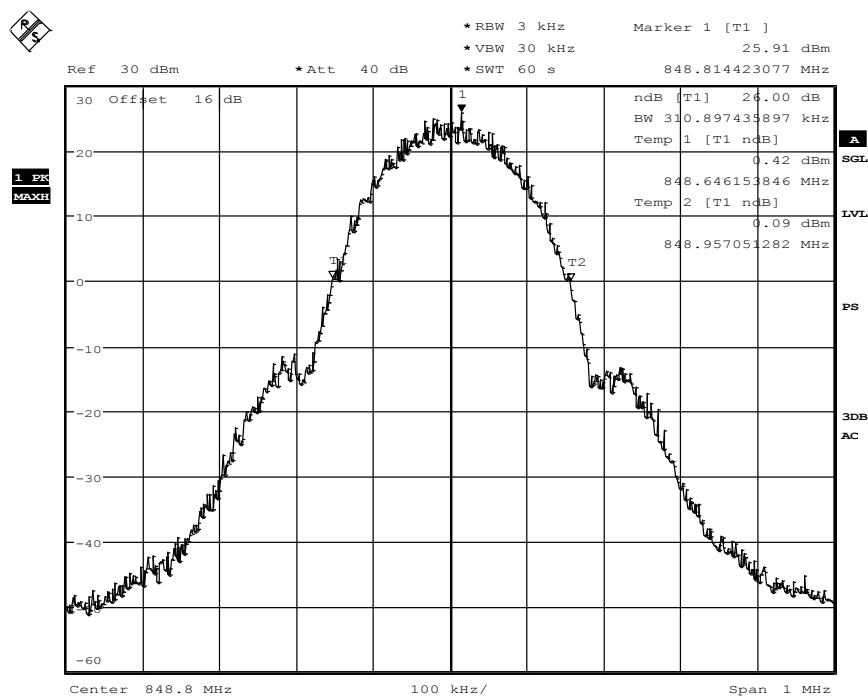
Date: 13.APR.2015 13:29:08

Channel 128



Date: 13.APR.2015 13:31:02

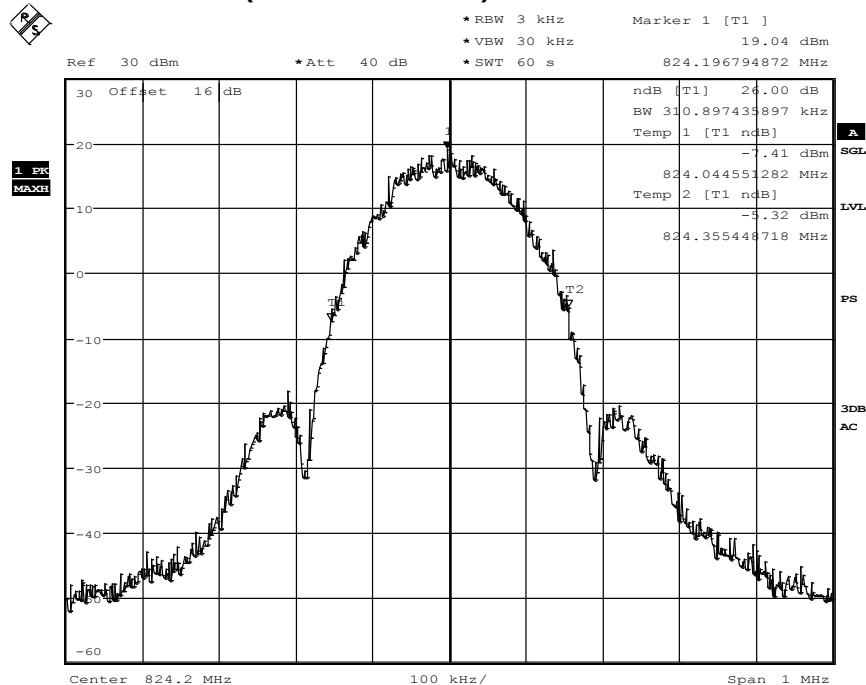
Channel 192



Date: 13.APR.2015 13:25:58

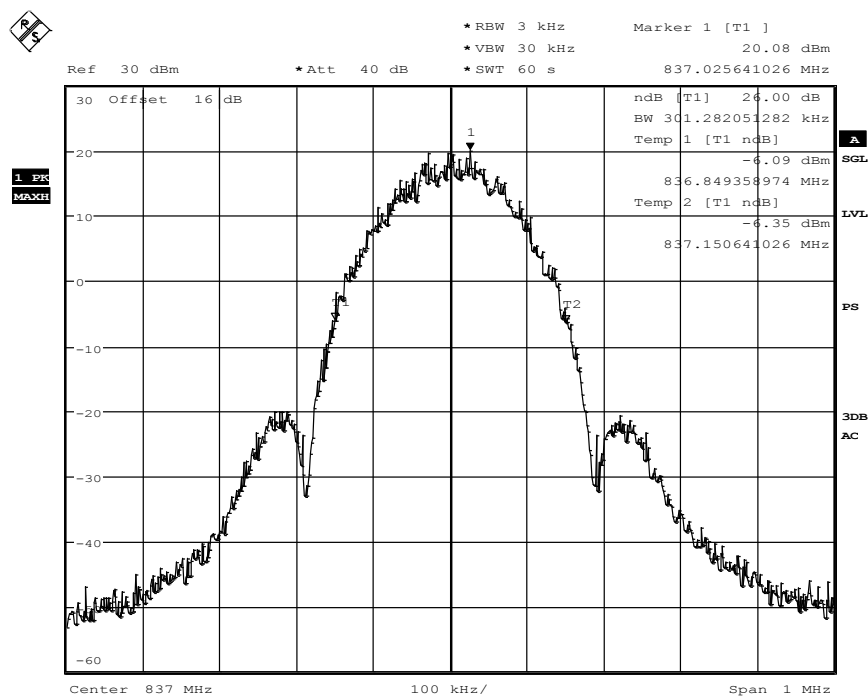
Channel 251

1.2.2. E-GPRS 850 (8-PSK Modulation)



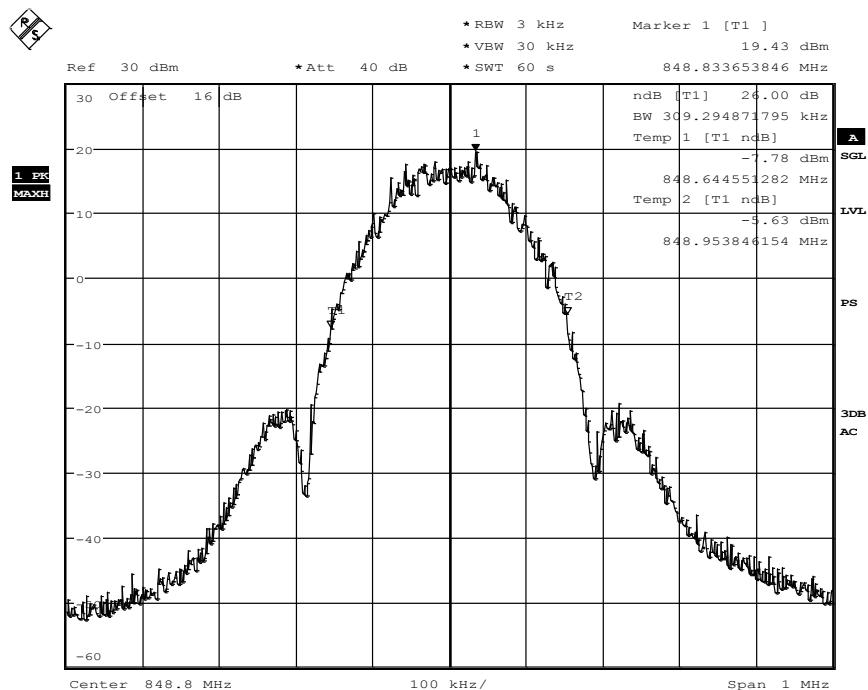
Date: 13.APR.2015 13:37:56

Channel 128



Date: 13.APR.2015 13:33:50

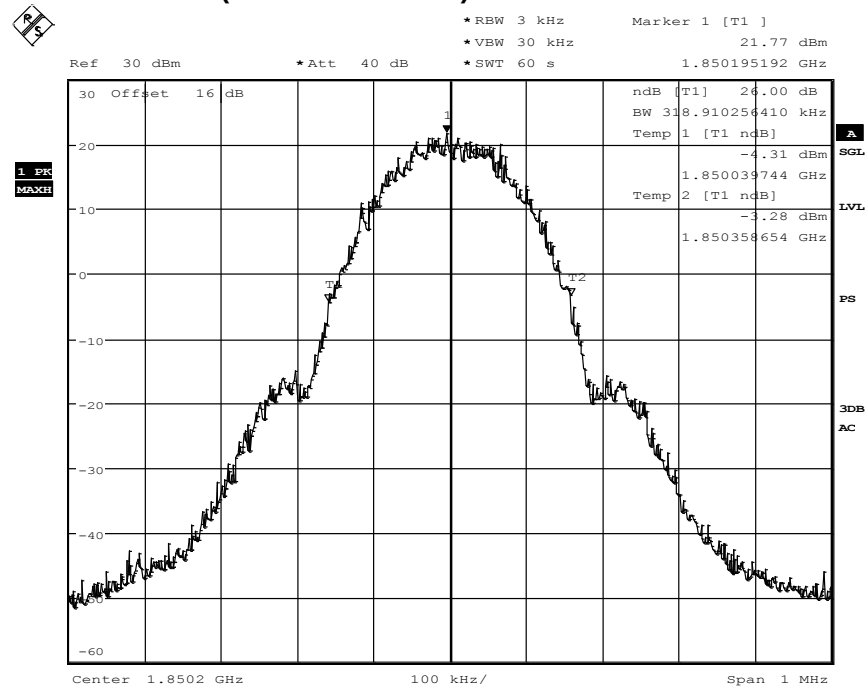
Channel 192



Date: 13.APR.2015 13:36:01

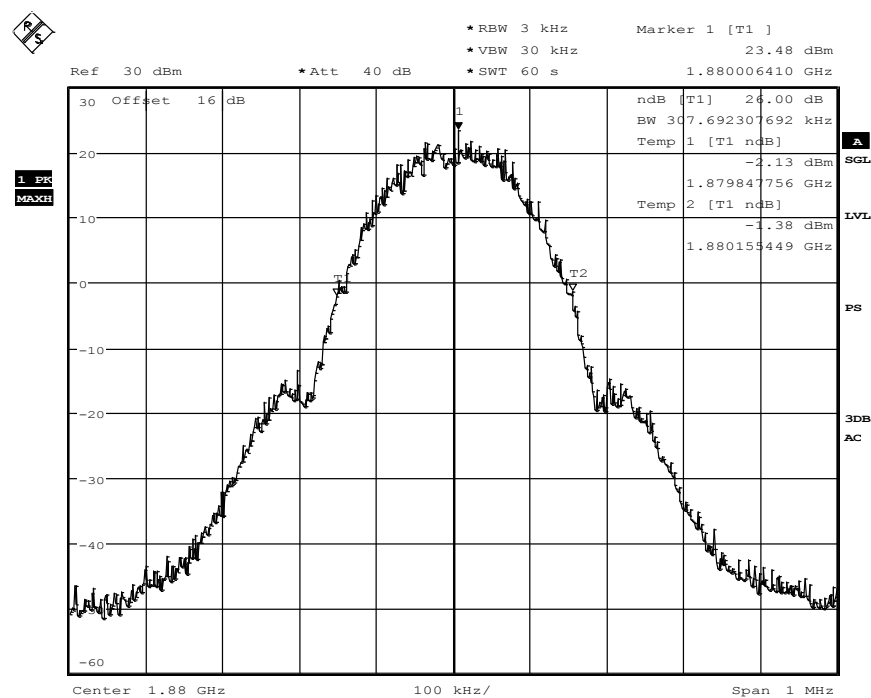
Channel 251

1.2.3. GSM 1900 (GMSK-Modulation)



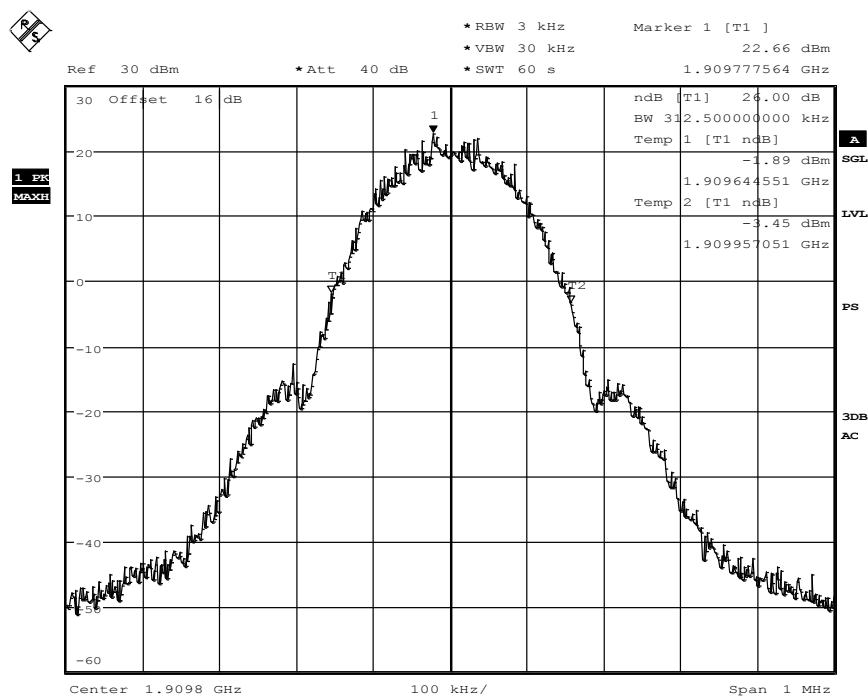
Date: 13.APR.2015 13:21:10

Channel 512



Date: 13.APR.2015 13:19:21

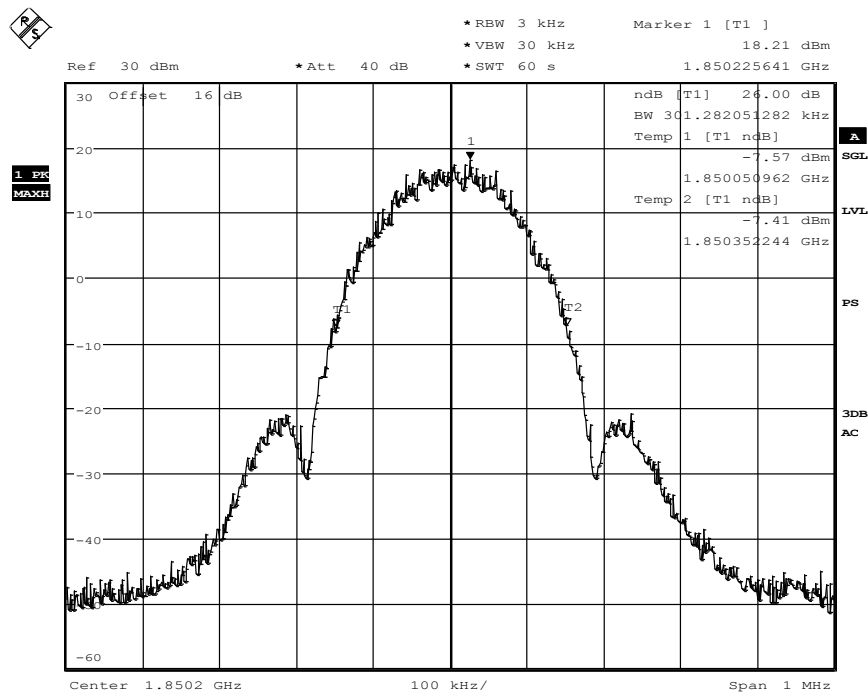
Channel 661



Date: 13.APR.2015 13:17:30

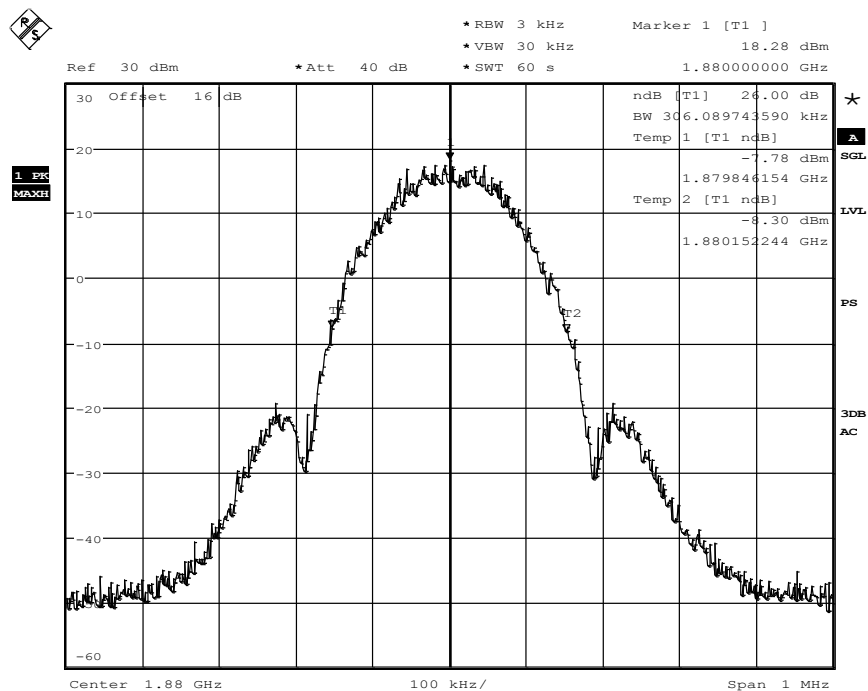
Channel 810

1.2.4. E-GPRS 1900 (8-PSK Modulation)



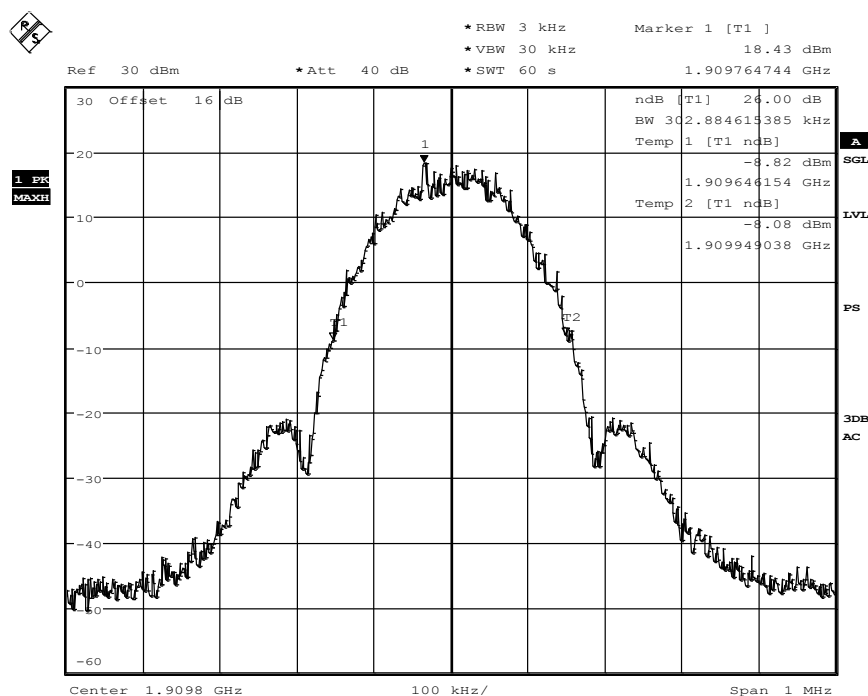
Date: 13.APR.2015 13:11:19

Channel 512



Date: 13.APR.2015 13:13:08

Channel 661

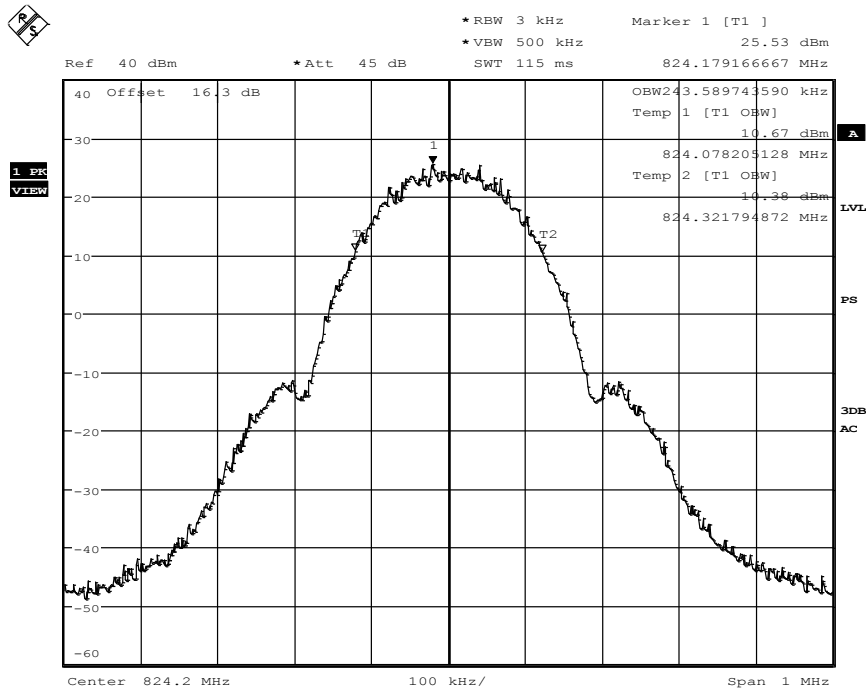


Date: 13.APR.2015 13:15:19

Channel 810

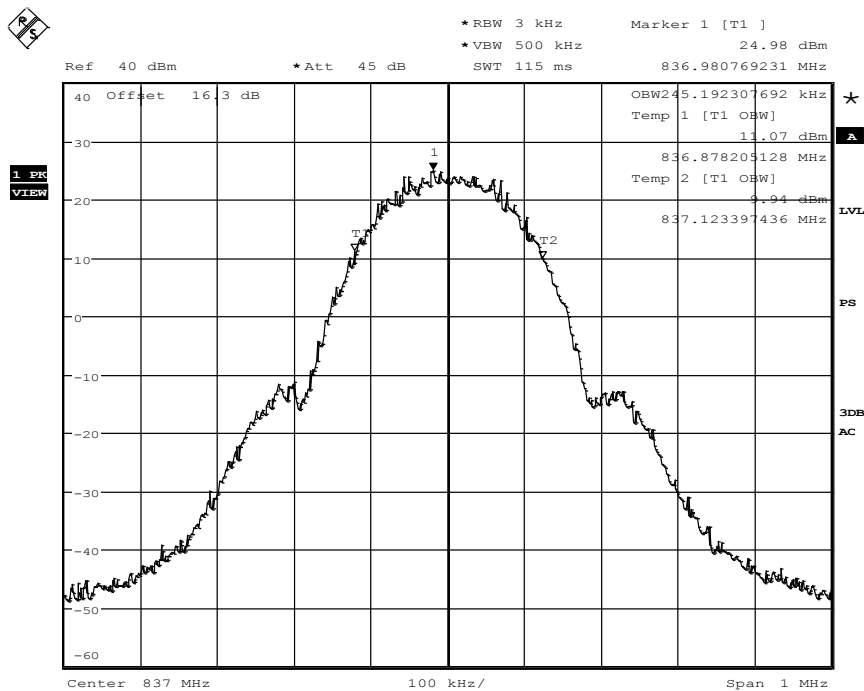
1.3. 99% Occupied bandwidth

1.3.1. GSM 850 (GMSK modulation)



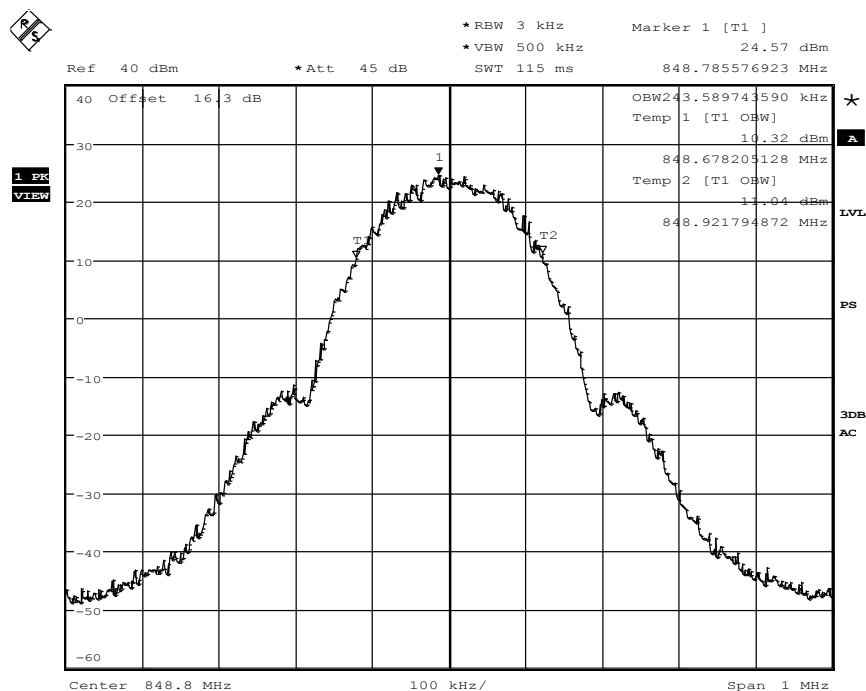
Date: 16.JUL.2015 11:12:05

Channel 128



Date: 16.JUL.2015 11:17:47

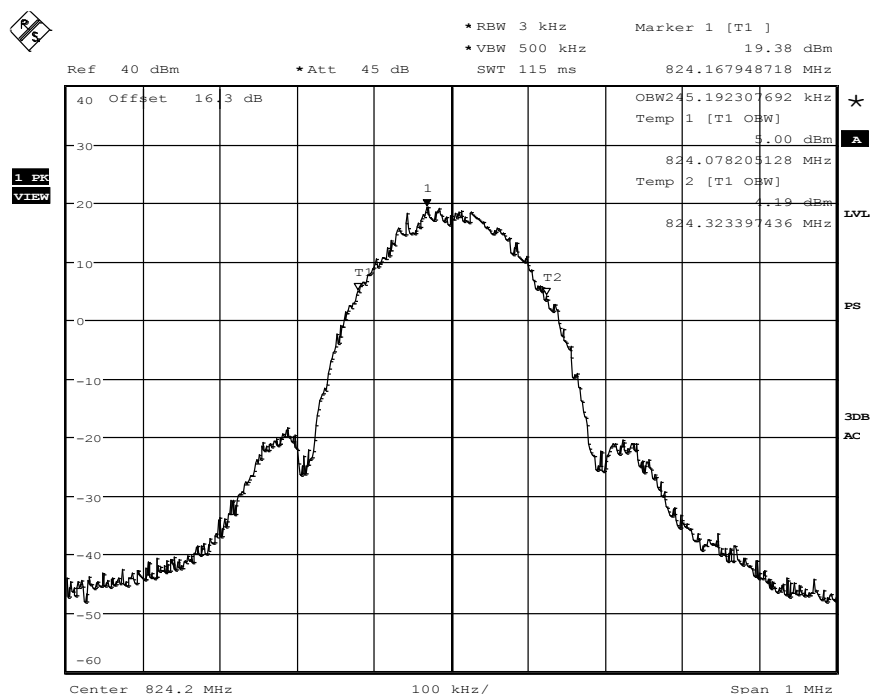
Channel 192



Date: 16.JUL.2015 11:22:42

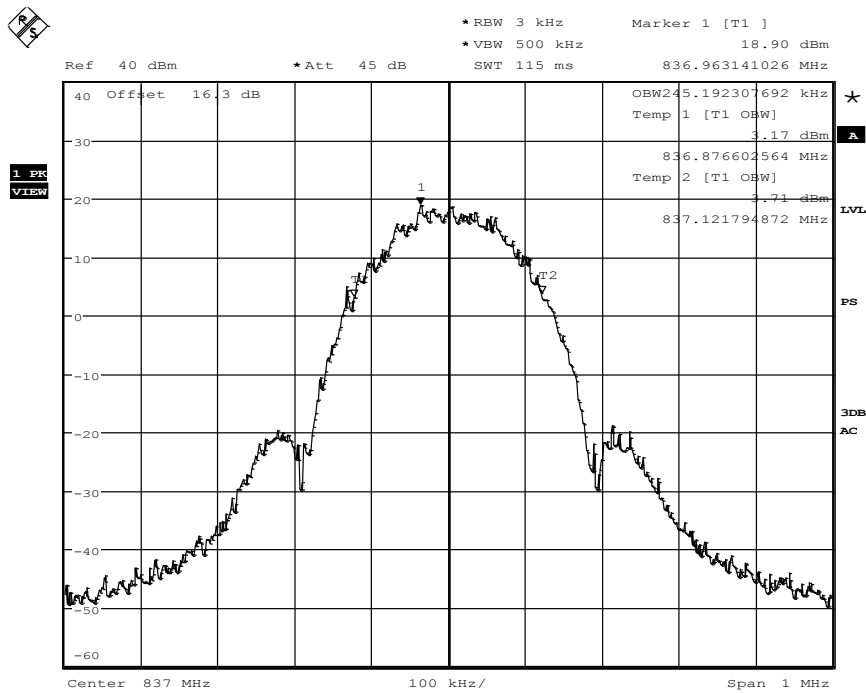
Channel 251

1.3.2. E-GPRS 850 (8PSK modulation)



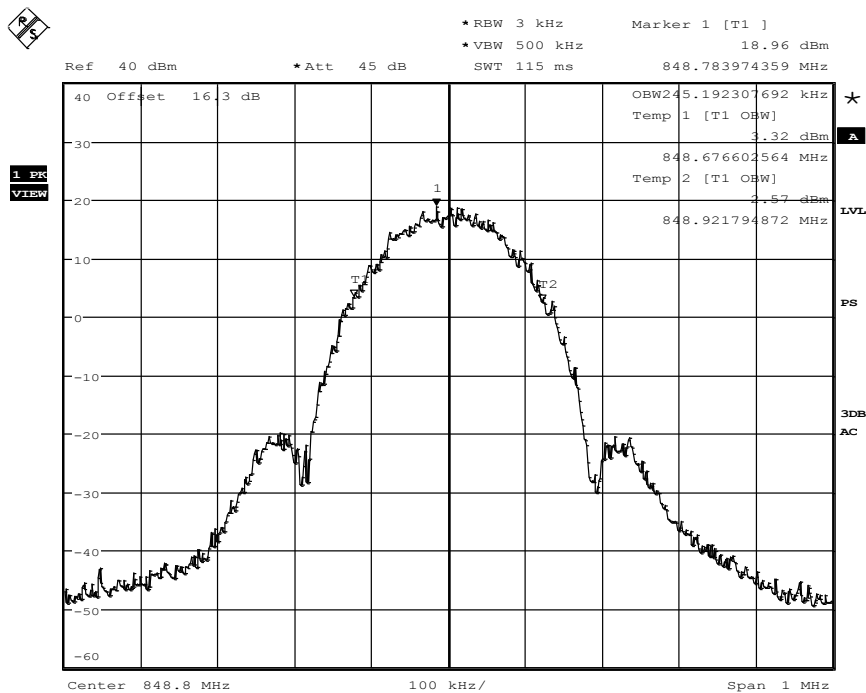
Date: 16.JUL.2015 11:38:02

Channel 128



Date: 16.JUL.2015 11:33:27

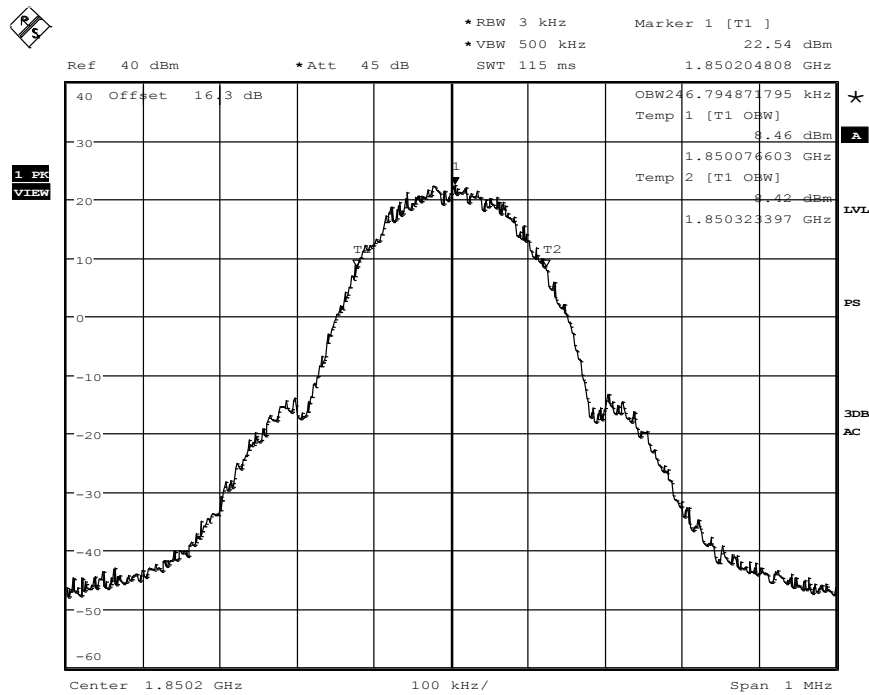
Channel 192



Date: 16.JUL.2015 11:29:26

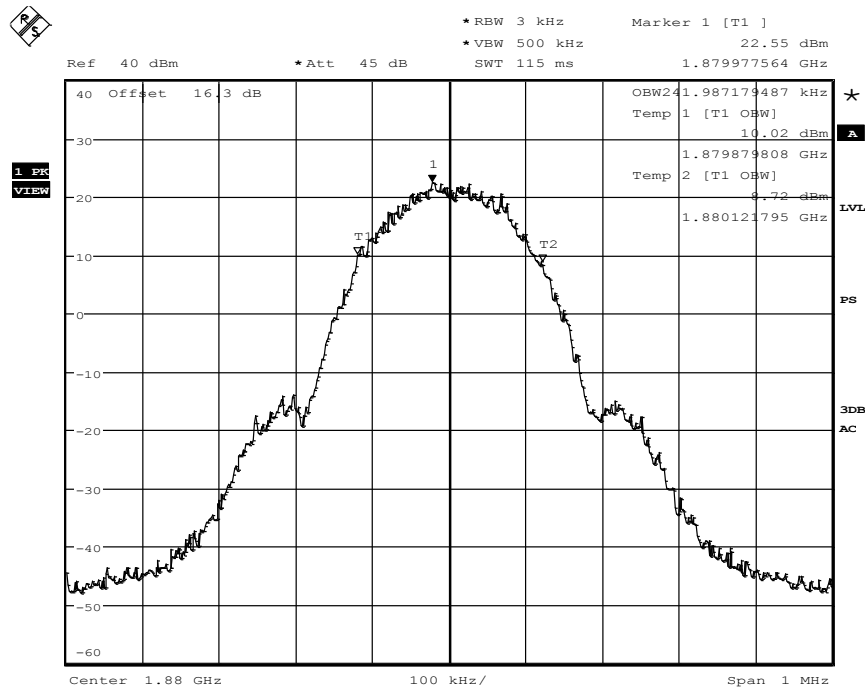
Channel 251

1.3.3. GSM 1900 (GMSK-Modulation)



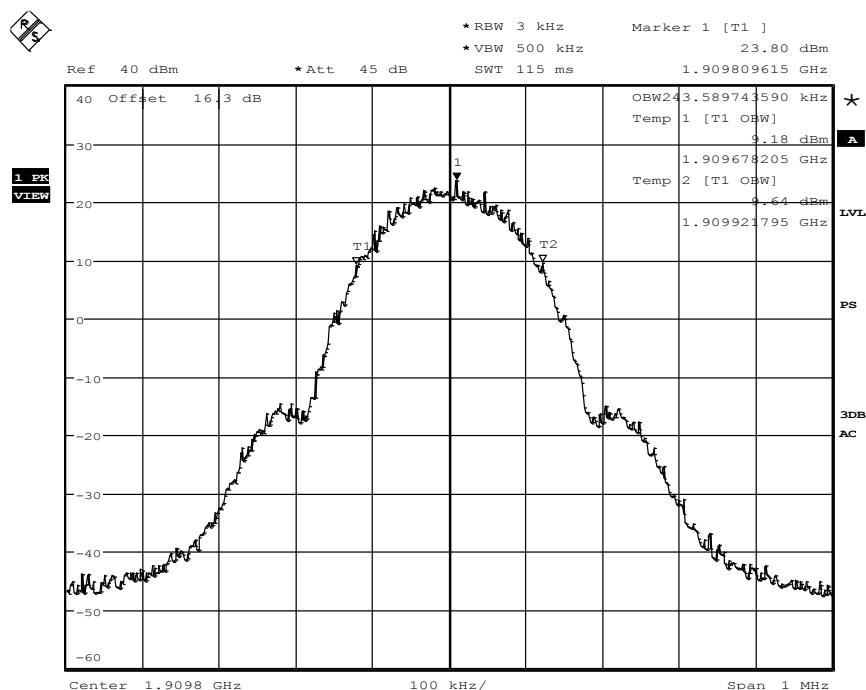
Date: 16.JUL.2015 12:03:45

Channel 512



Date: 16.JUL.2015 11:58:37

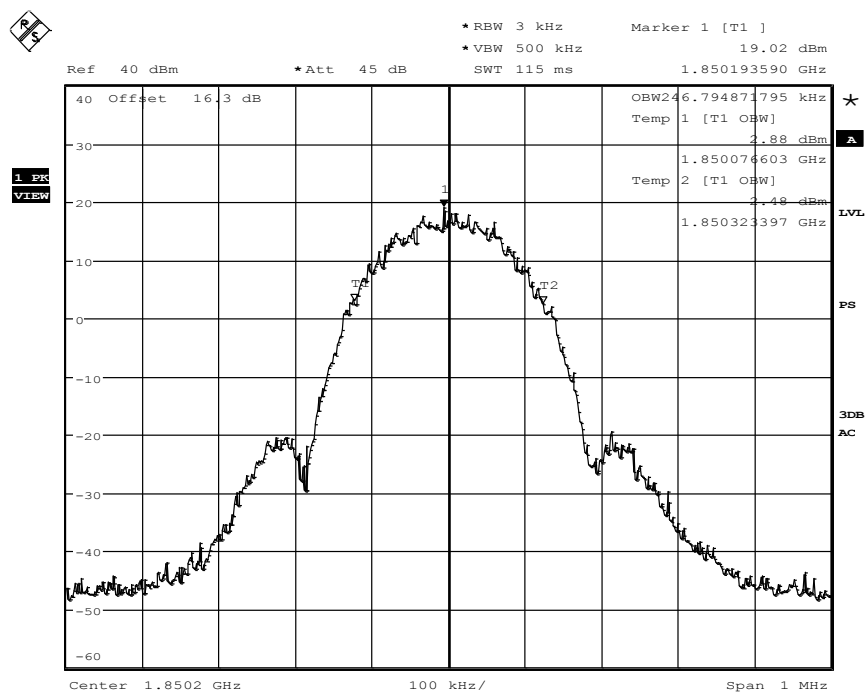
Channel 661



Date: 16.JUL.2015 11:55:14

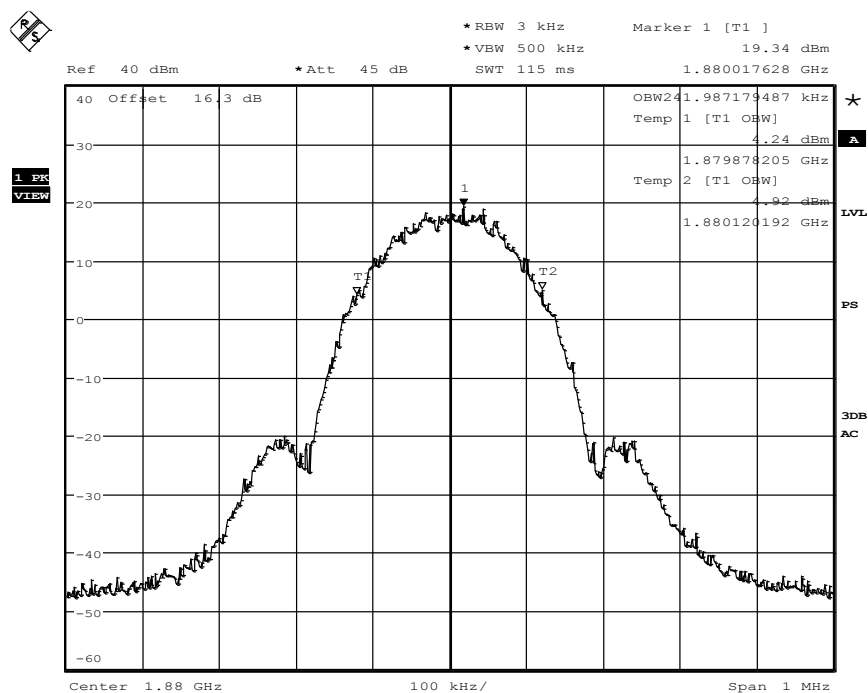
Channel 810

1.3.4. E-GPRS 1900 (8-PSK Modulation)



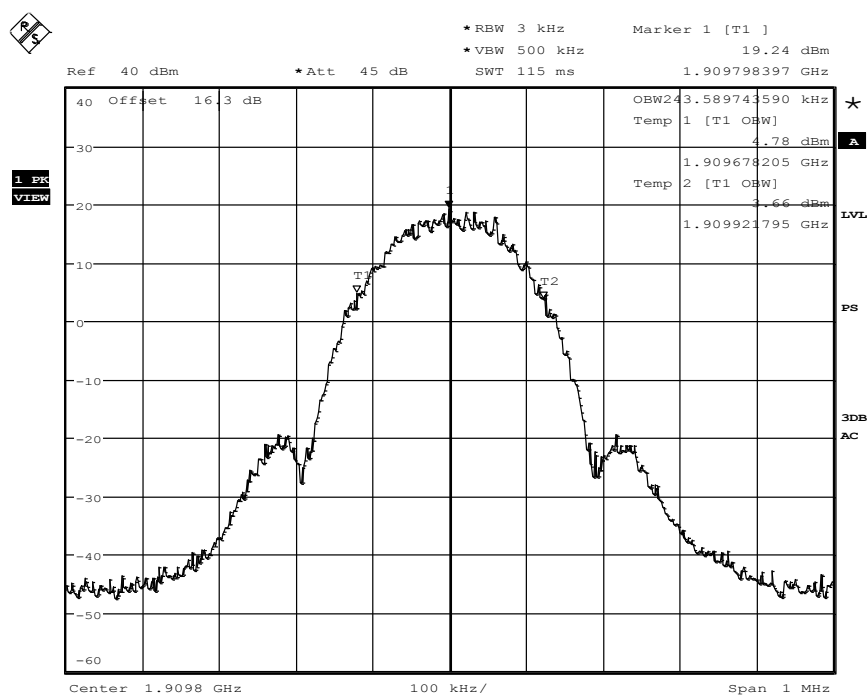
Date: 16.JUL.2015 11:42:28

Channel 512



Date: 16.JUL.2015 11:47:06

Channel 661



Date: 16.JUL.2015 11:51:22

Channel 810

1.4. Spurious emissions conducted

1.4.1. Out-of-Band emissions - GSM 1900 mode (GMSK-Modulation)

Diagram No.: 36.20_RSE_Ch512_GPRS_Sweep1

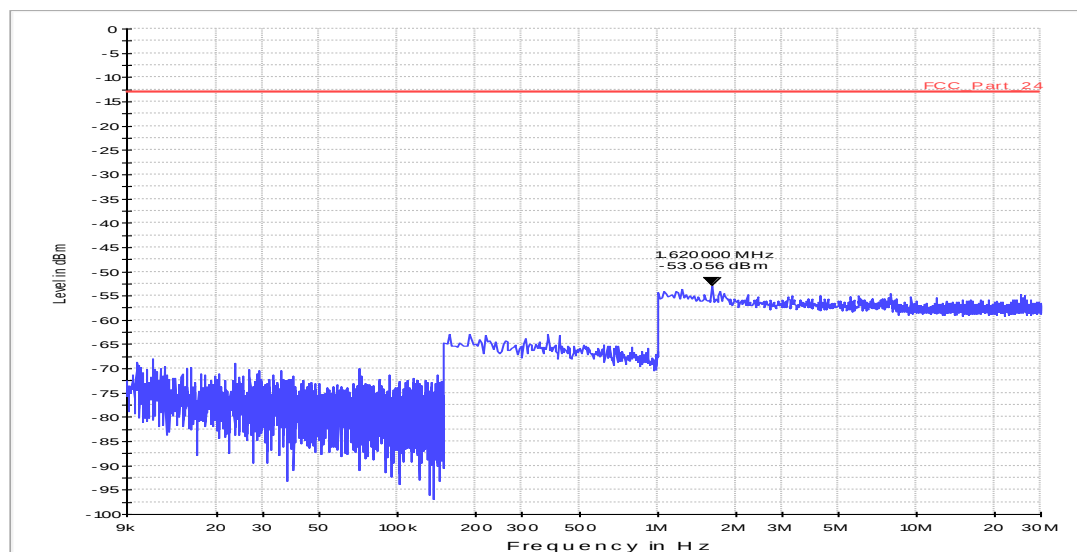
Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24 / RSS-133, Issue 6
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GPRS 1900 CH512
Channel Bandwidth	--
Operator	Lor
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Fula2_FCC_24_GSM_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_24_GSM_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.21_RSE_Ch512_GPRS_Sweep2

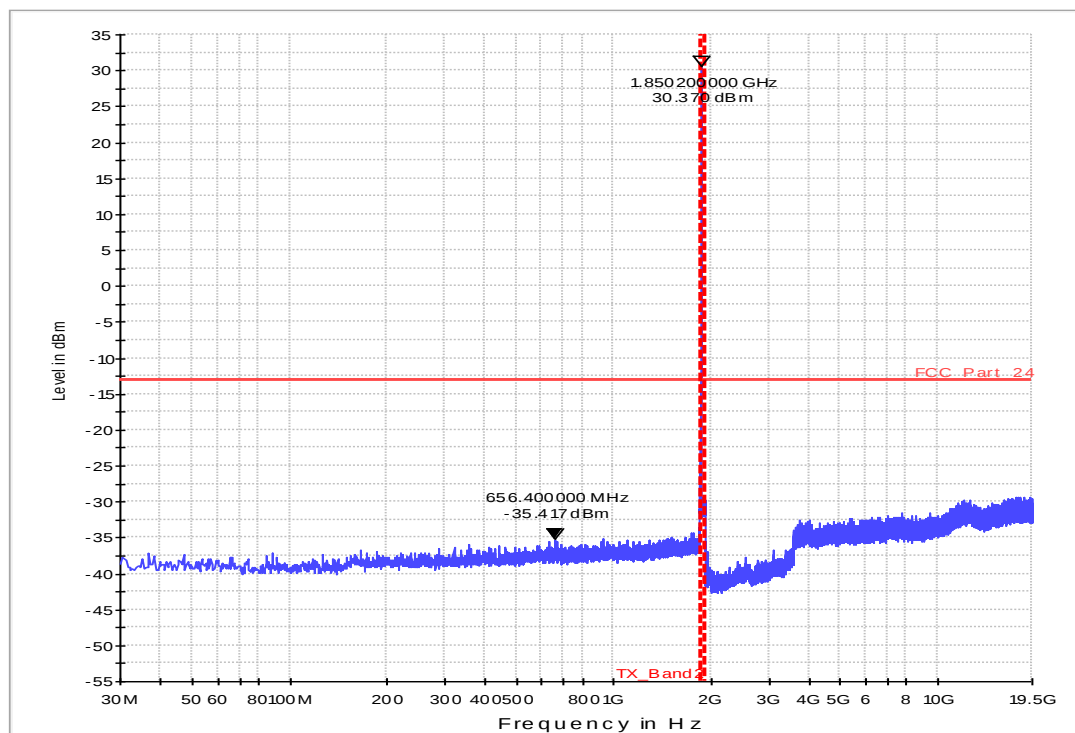
Common Information

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 24 / RSS-133, Issue 6
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - GPRS 1900 Ch512
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 1.849 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.849 GHz - 1.911 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.911 GHz - 1.915 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.915 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.22_RSE_Ch661_GPRS_Sweep1

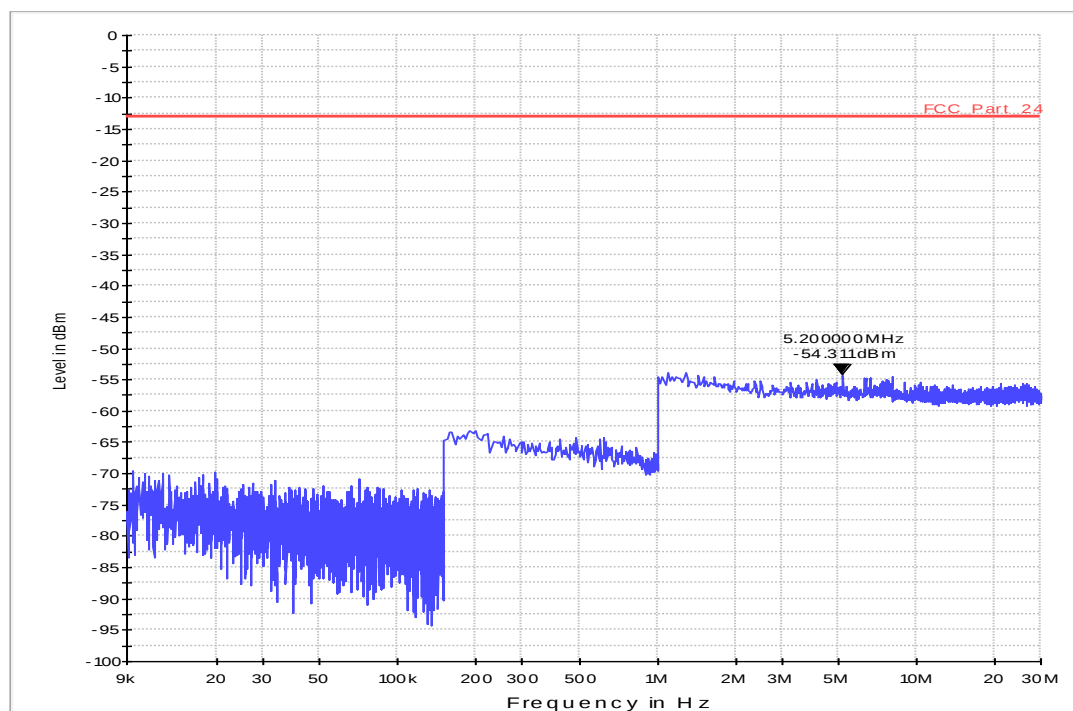
Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24 / RSS-133, Issue 6
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GPRS 1900 Ch661
Channel Bandwidth	--
Operator	Lor
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Fula2_FCC_24_GSM_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_24_GSM_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.23_RSE_Ch661_GPRS_Sweep2

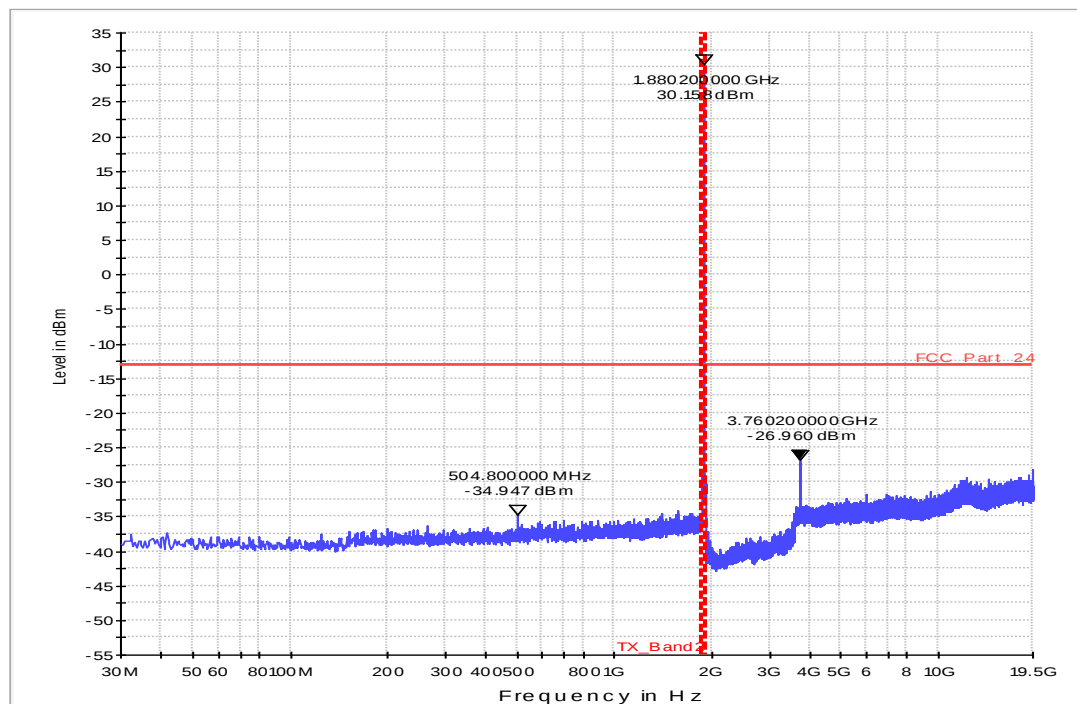
Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24 / RSS-133, Issue 6
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GPRS 1900 Ch661
Channel Bandwidth	--
Operator	Lor
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1.849 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.849 GHz - 1.911 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.911 GHz - 1.915 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.915 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.24_RSE_Ch810_GPRS_Sweep1

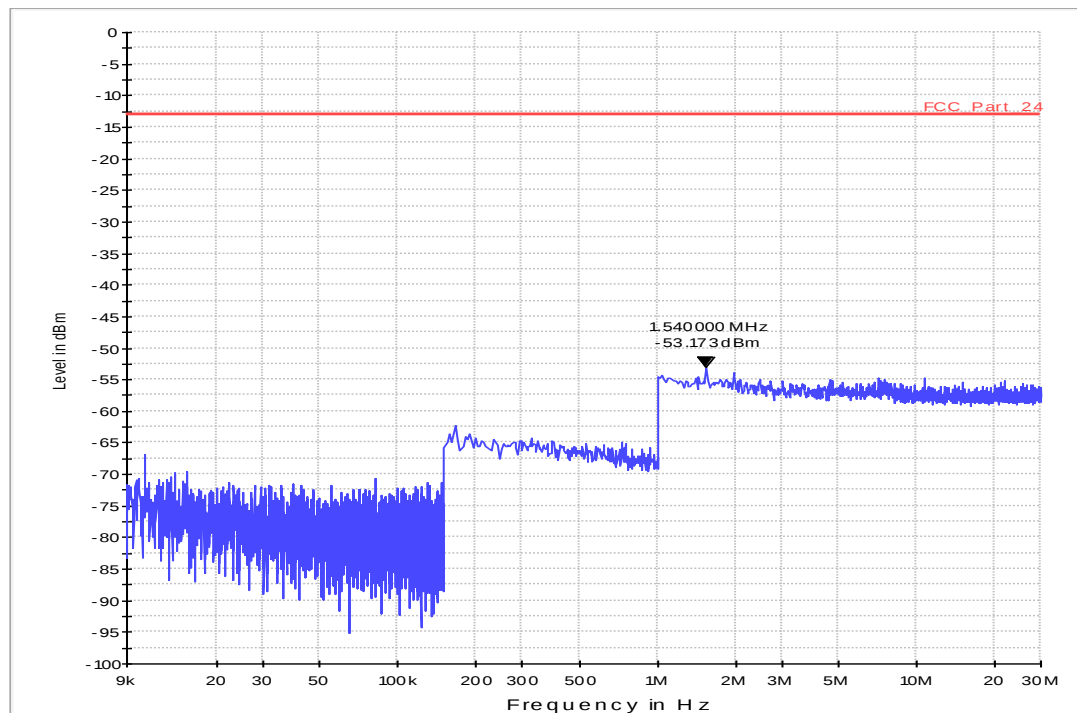
Common Information

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 24 / RSS-133, Issue 6
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - GPRS 1900 Ch810
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_24_GSM_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_24_GSM_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Diagram No.: 36.25_RSE_Ch810_GPRS_Sweep2

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.25_RSE_Ch810_GPRS_Sweep2

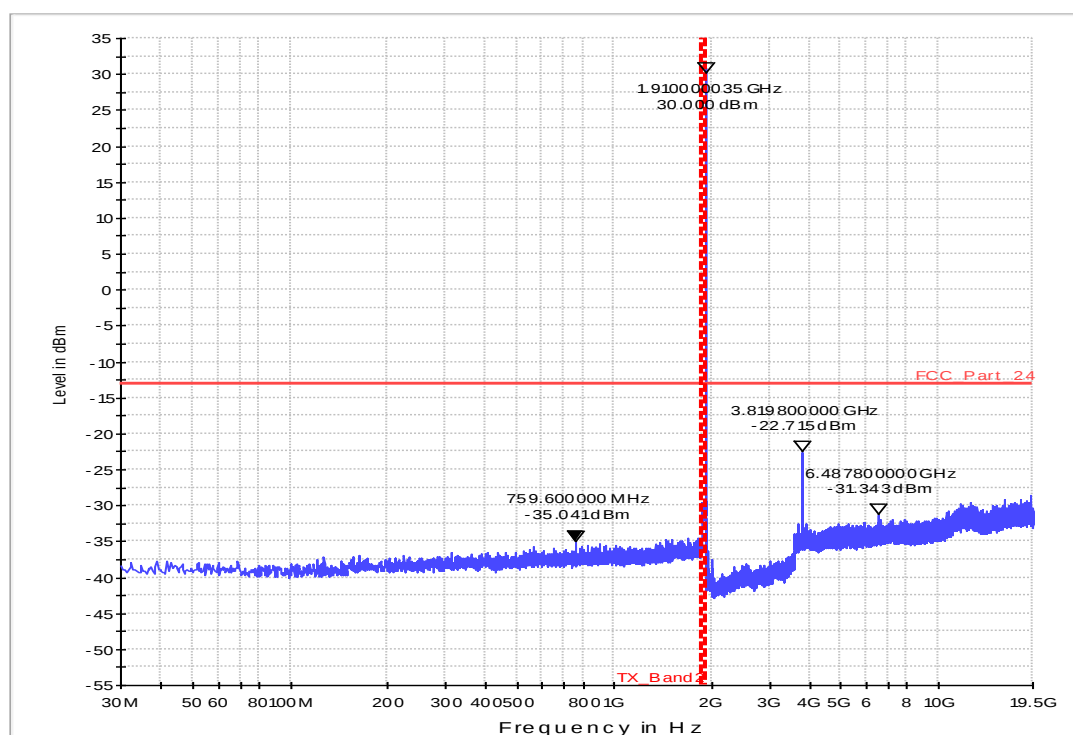
Common Information

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 24 / RSS-133, Issue 6
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - GPRS 1900 Ch810
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 1.849 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.849 GHz - 1.911 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.911 GHz - 1.915 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.915 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

1.4.2. Out-of-Band emissions E-GSM 1900 mode (8-PSK-Modulation)

Diagram No.: 36.26_RSE_Ch512_EGPRS_Sweep1

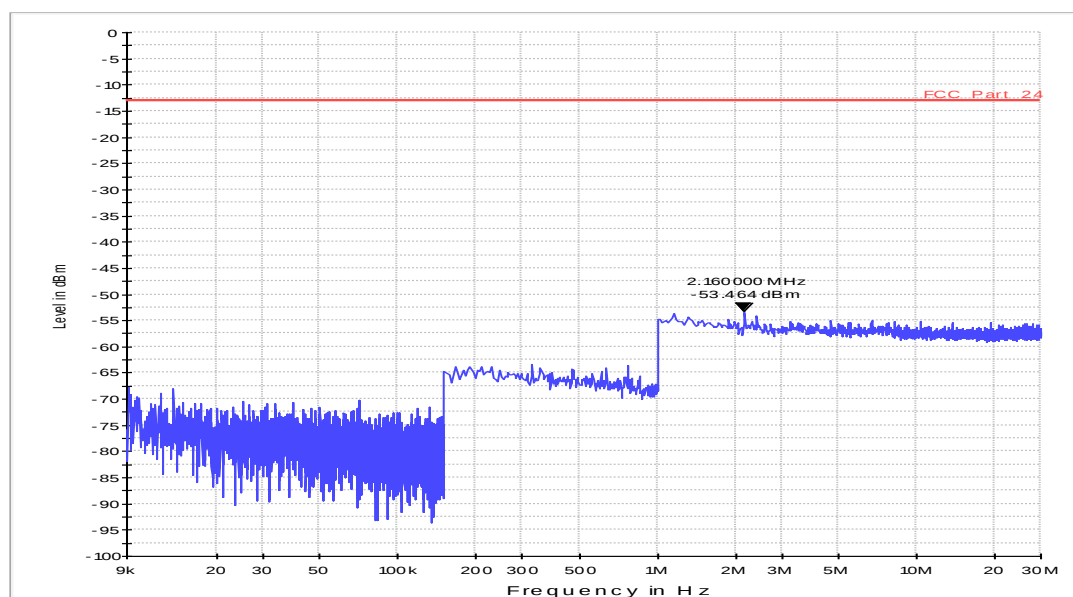
Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24 / RSS-133, Issue 6
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - EGPRS 1900 CH512
Channel Bandwidth	--
Operator	Lor
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Fula2_FCC_24_GSM_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_24_GSM_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preampl
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.27_RSE_Ch512_EGPRS_Sweep2

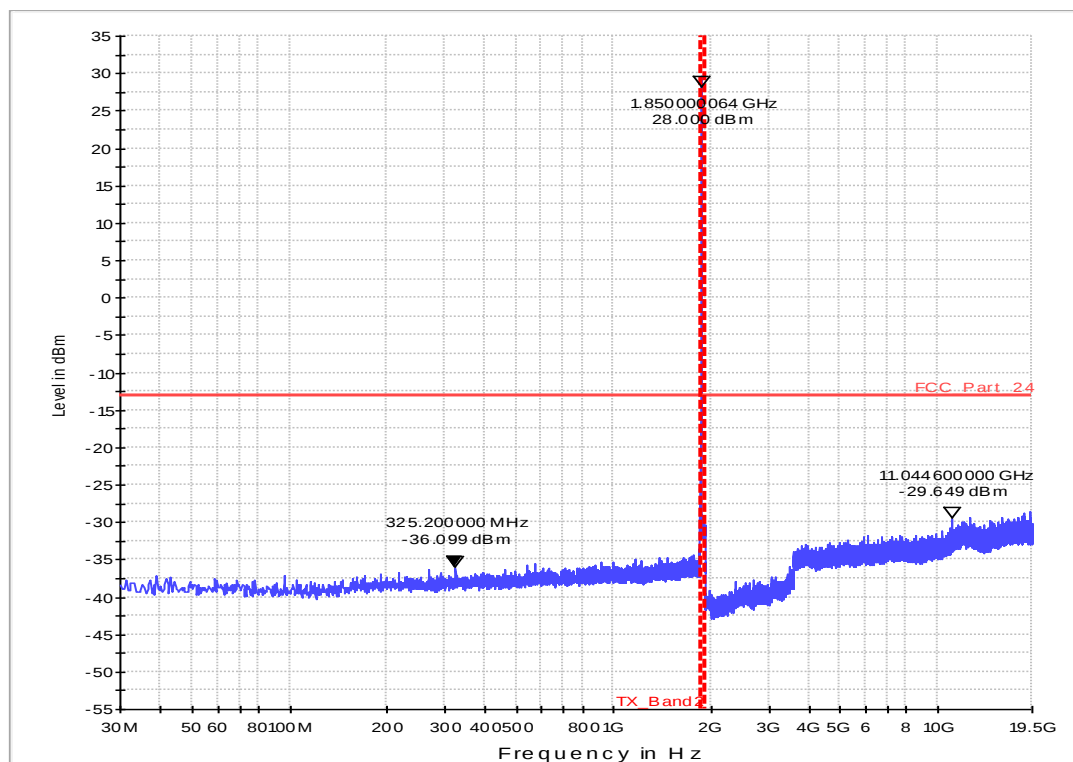
Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24 / RSS-133, Issue 6
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - EGPRS 1900 Ch512
Channel Bandwidth	--
Operator	Lor
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1.849 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.849 GHz - 1.911 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.911 GHz - 1.915 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.915 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

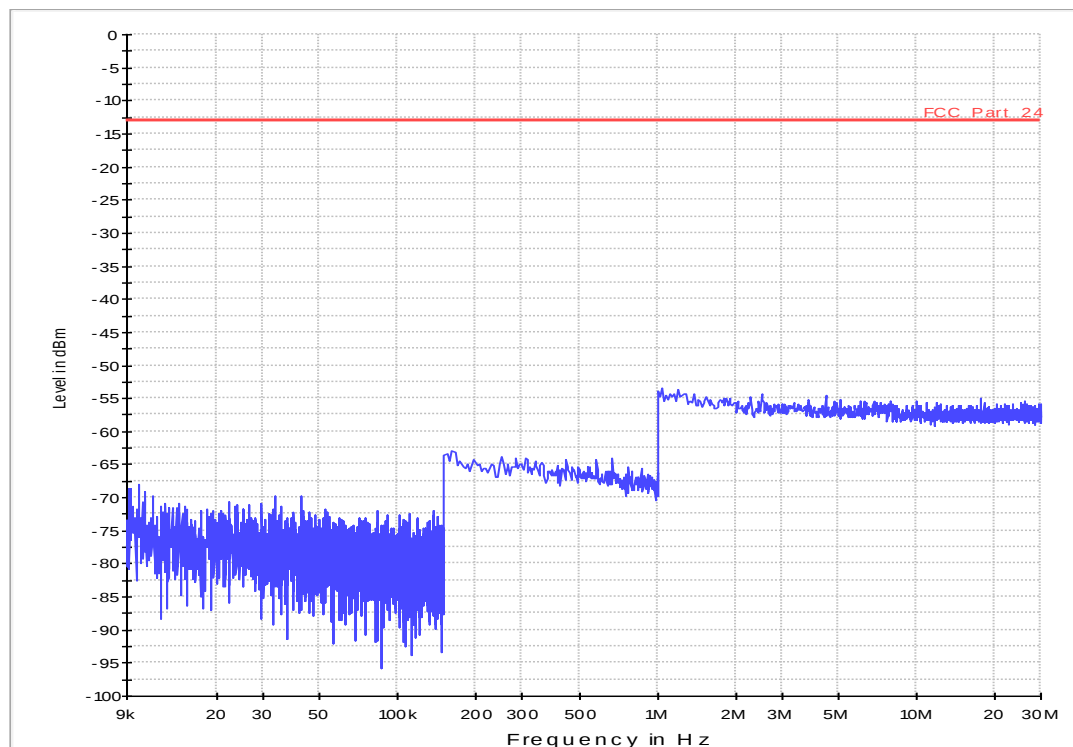
Diagram No.: 36.28_RSE_Ch661_EGPRS_Sweep1**Common Information**

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 24 / RSS-133, Issue 6
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - EGPRS 1900 Ch661
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_24_GSM_Scan1_9kHz_30MHz

**Scan Setup: Fula2_FCC_24_GSM_Scan1_9kHz_30MHz [EMI radiated]**

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.29_RSE_Ch661_EGPRS_Sweep2

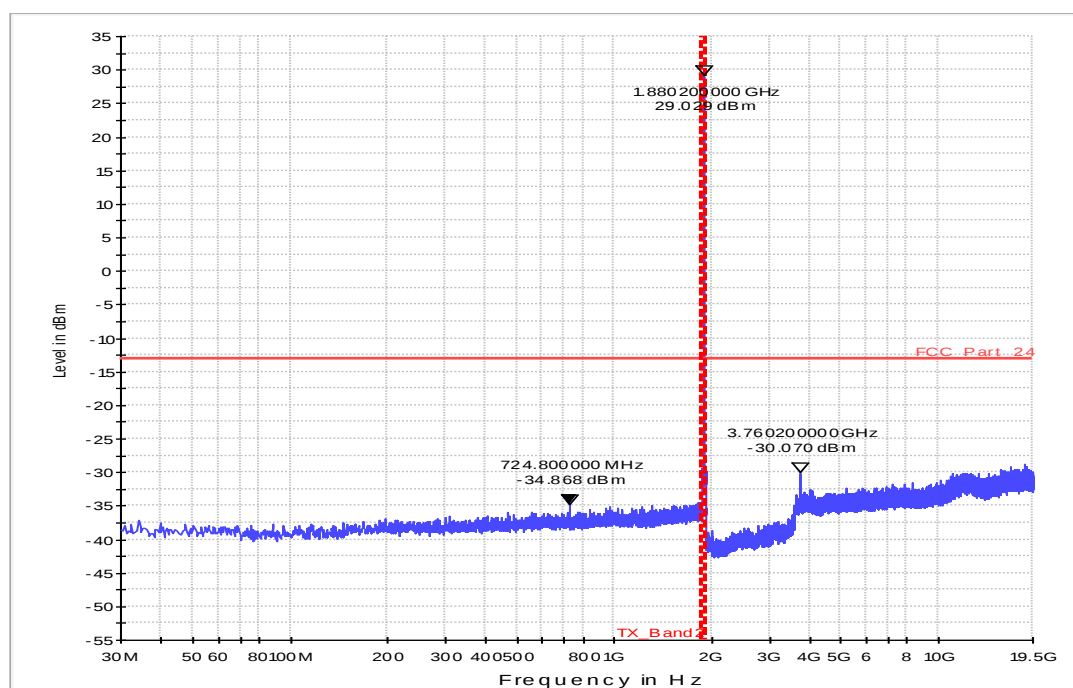
Common Information

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 24 / RSS-133, Issue 6
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - GPRS 1900 Ch661
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1.849 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.849 GHz - 1.911 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.911 GHz - 1.915 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.915 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.30_RSE_Ch810_EGPRS_Sweep1

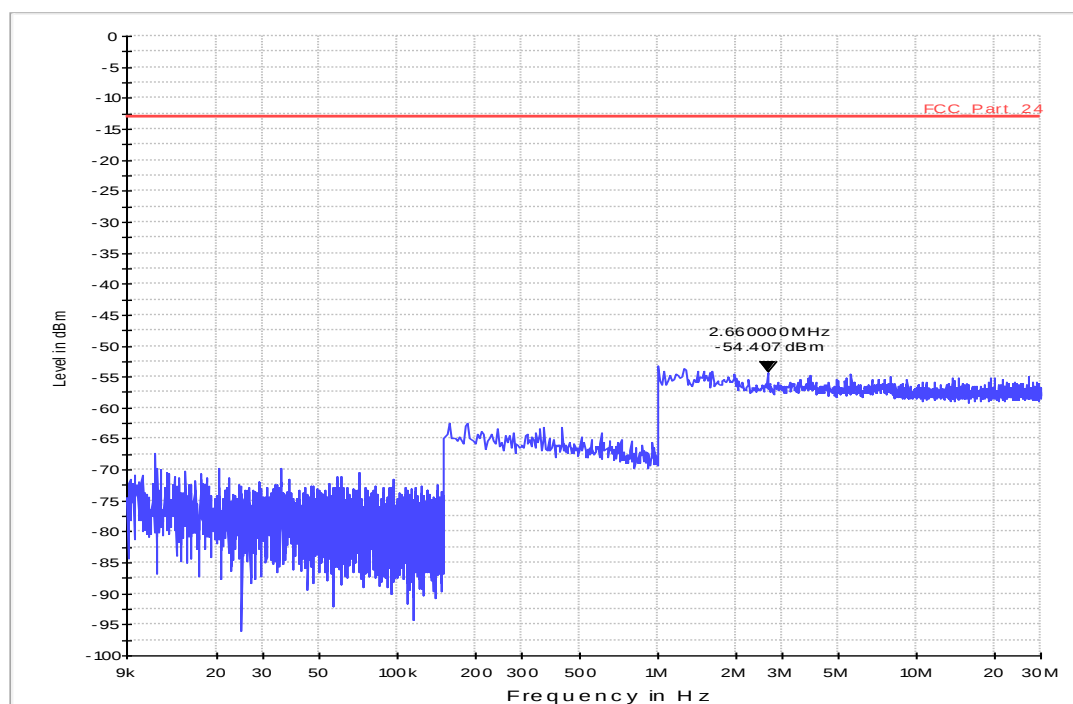
Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24 / RSS-133, Issue 6
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - EGPRS 1900 Ch810
Channel Bandwidth	--
Operator	Lor
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Fula2_FCC_24_GSM_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_24_GSM_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.31_RSE_Ch810_EGPRS_Sweep2

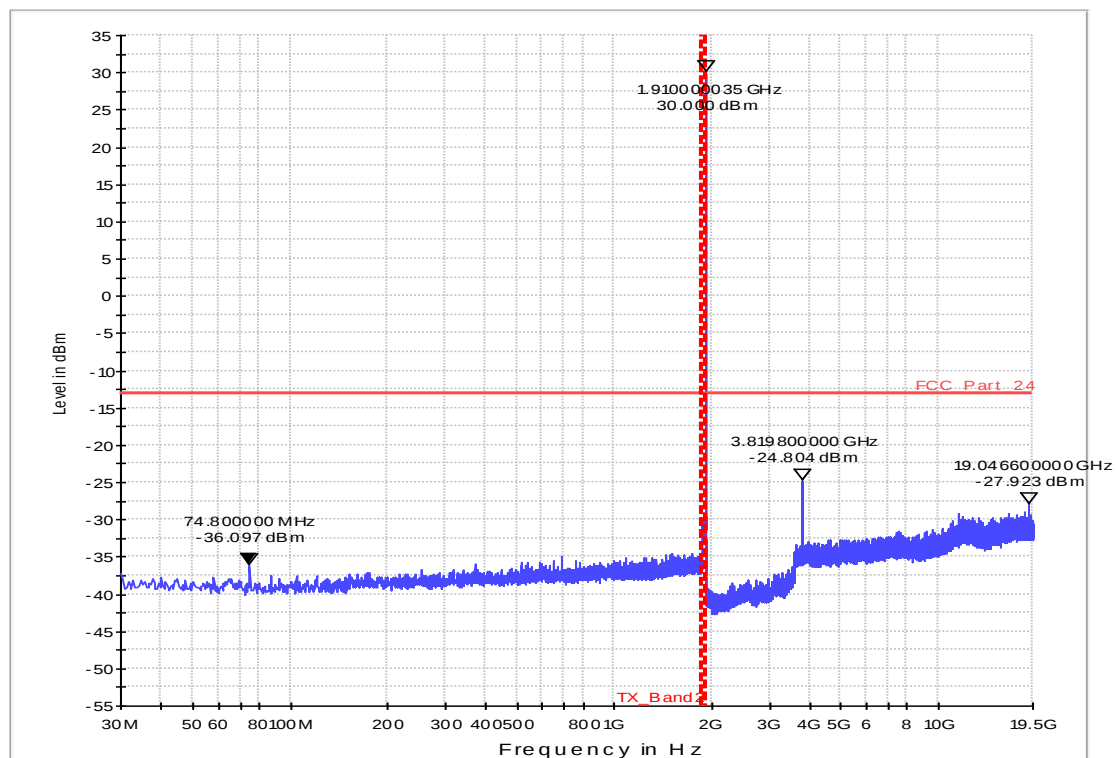
Common Information

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 24 / RSS-133, Issue 6
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - EGPRS 1900 Ch810
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_24_GSM_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preampl
30 MHz - 1.849 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.849 GHz - 1.911 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.911 GHz - 1.915 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
1.915 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

1.4.3. Out-of-Band emissions - GSM 850 mode (GMSK-Modulation)**Diagram No.: 36.01_RSE_Ch128_GSM_Sweep1****Common Information**

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22 / RSS-132, Issue 3
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GSM850 GPRS CH128
Channel Bandwidth	--
Operator	MFr
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

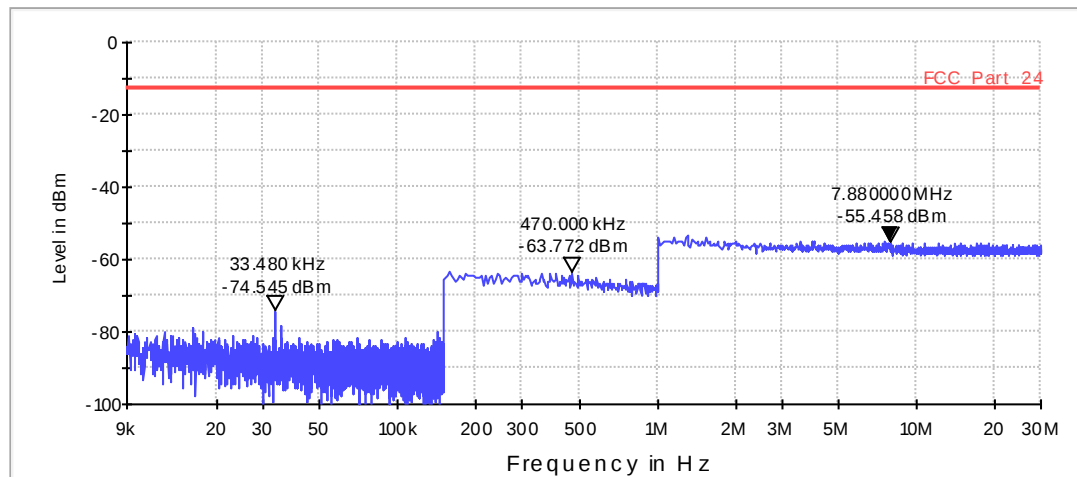
Fula2_FCC_22_GSM_Scan1_9kHz_30MHz

Diagram No.: 36.02_RSE_Ch128_GSM_Sweep2

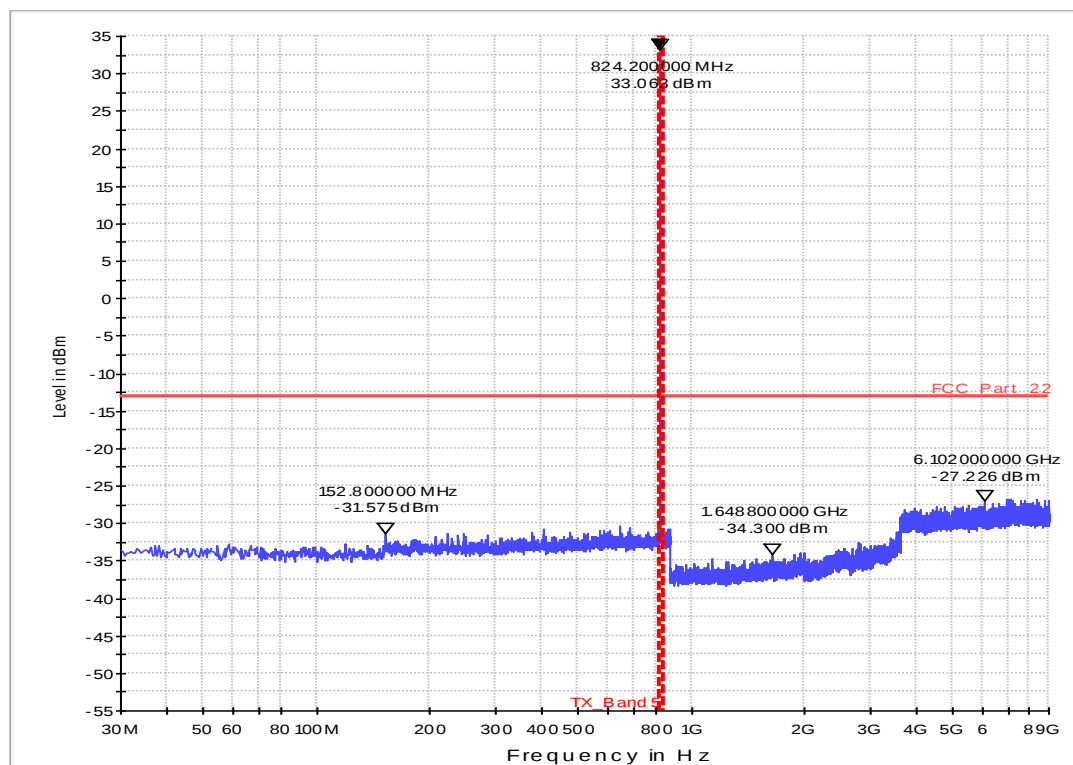
Common Information

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 22 / RSS-132, Issue 3Part 22
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - GSM850 GPRS CH128
 Channel Bandwidth: --
 Operator: MFr
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_22_GSM_Scan2_30MHz_9GHz



Scan Setup: Fula2_FCC_22_GSM_Scan2_30MHz_9GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 823 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
823 MHz - 850 MHz	400 kHz	PK+	1 MHz	0.02 s	0 dB
850 MHz - 880 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
880 MHz - 9 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.03_RSE_Ch192_GSM_Sweep1**Common Information**

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22 / RSS-132, Issue 3
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GSM850 GPRS CH192
Operator	MFr

Fula2_FCC_22_GSM_Scan1_9kHz_30MHz

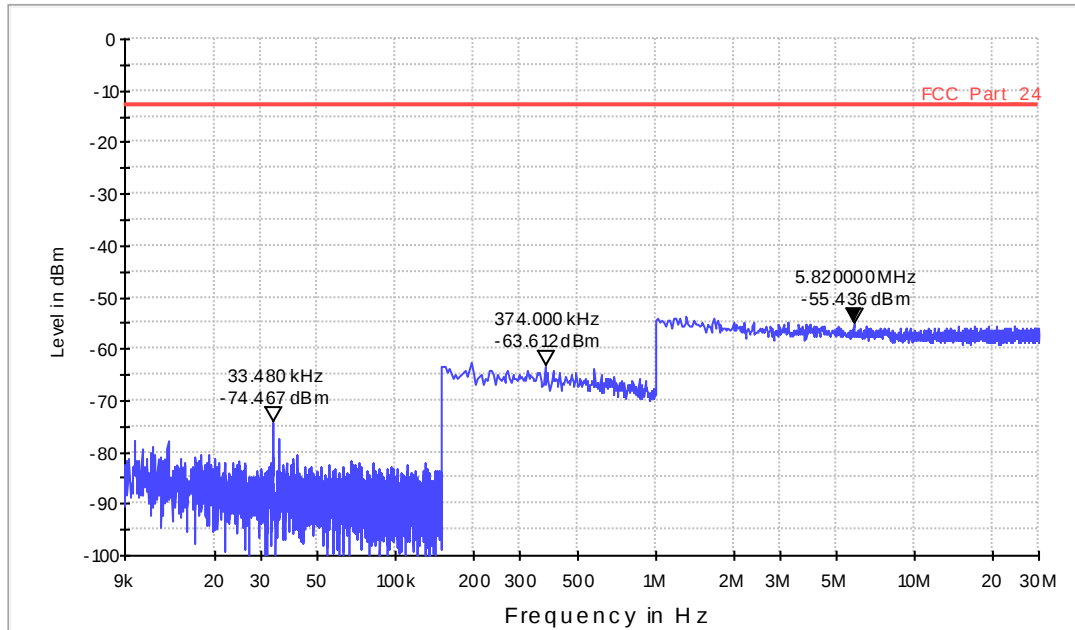


Diagram No.: 36.04_RSE_Ch192_GSM_Sweep2

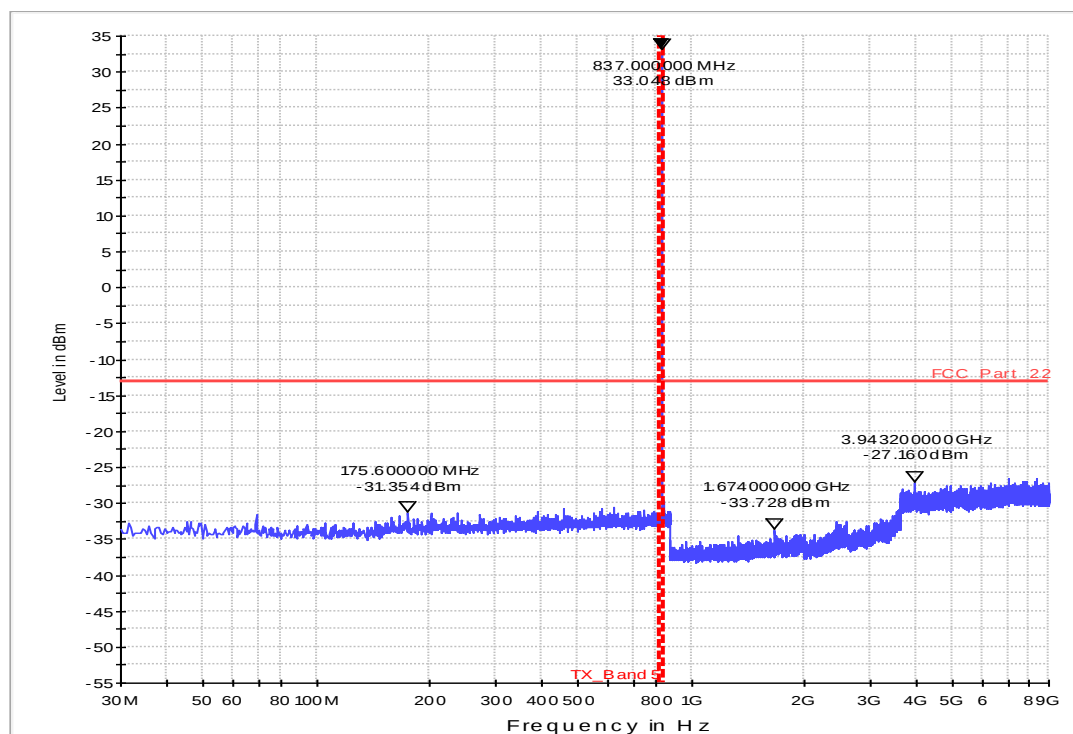
Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22 / RSS-132, Issue 3
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GSM850 GPRS Ch192
Channel Bandwidth	--
Operator	MFr
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Fula2_FCC_22_GSM_Scan2_30MHz_9GHz



Scan Setup: Fula2_FCC_22_GSM_Scan2_30MHz_9GHz [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 823 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
823 MHz - 850 MHz	400 kHz	PK+	1 MHz	0.02 s	0 dB
850 MHz - 880 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
880 MHz - 9 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.05_RSE_Ch251_GSM_Sweep1**Common Information**

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22 / RSS-132, Issue 3
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GSM850 GPRS CH251
Operator	MFr
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Fula2_FCC_22_GSM_Scan1_9kHz_30MHz

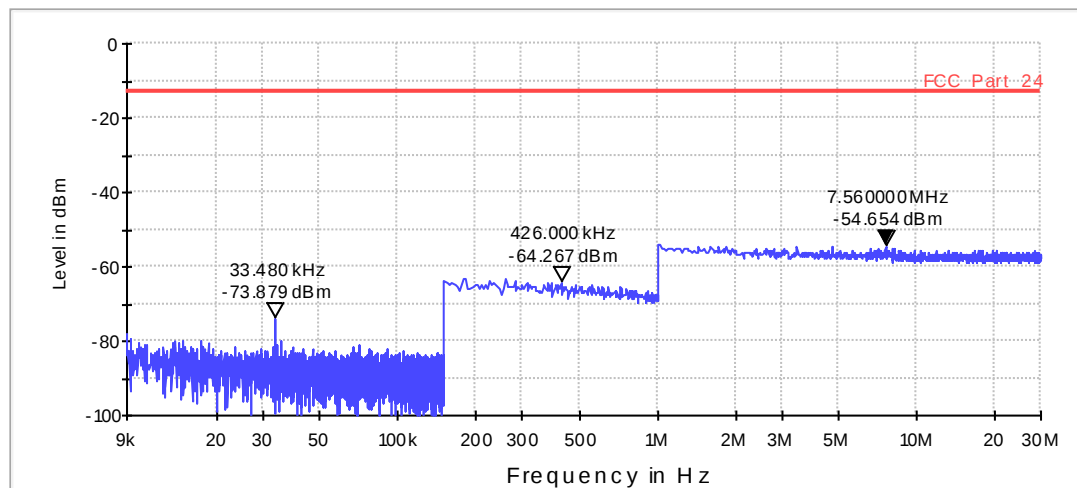


Diagram No.: 36.06_RSE_Ch251_GSM_Sweep2

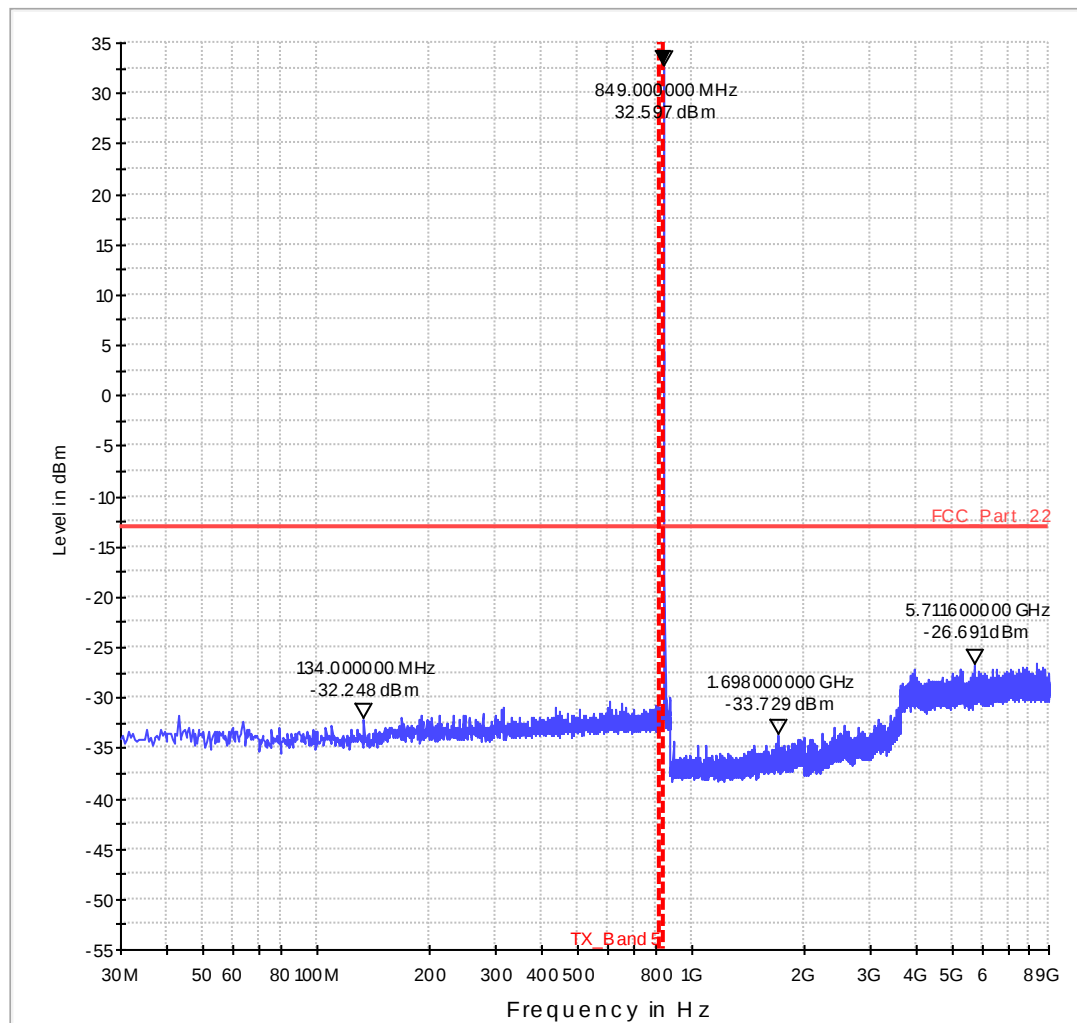
Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22 / RSS-132, Issue 3
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GSM850 GPRS CH251
Channel Bandwidth	--
Operator	MFr
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Fula2_FCC_22_GSM_Scan2_30MHz_9GHz



1.4.4. Out-of-Band emissions - E-GPRS 850 mode (8PSK-Modulation)

Diagram No.: 36.07_RSE_Ch128_EGPRS_Sweep1

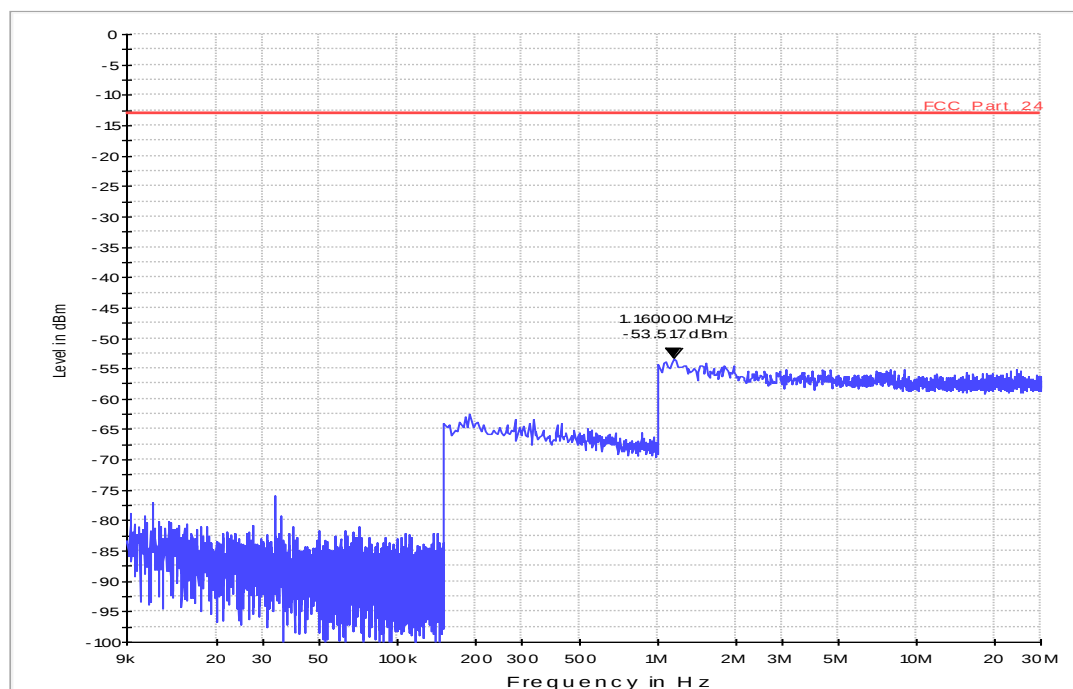
Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22 / RSS-132, Issue 3
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - E-GPRS 850; Ch128
Channel Bandwidth	--
Operator	Lor
Comment:	--

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Fula2_FCC_22_GSM_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_22_GSM_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

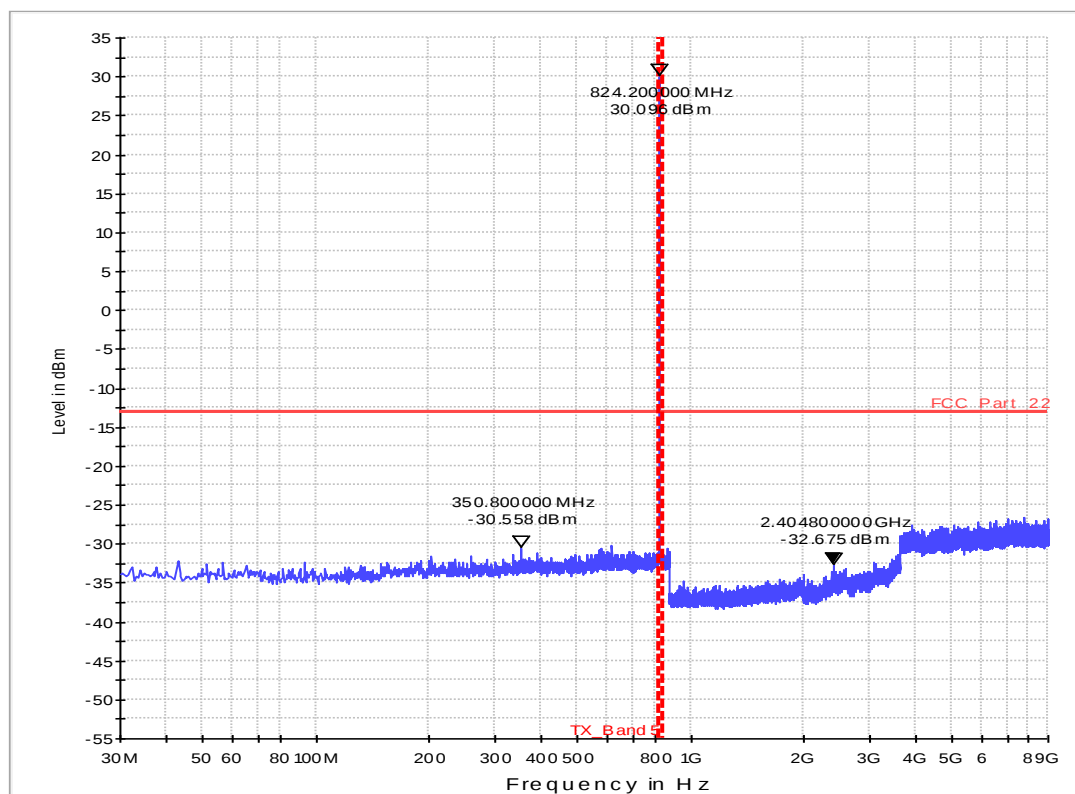
Diagram No.: 36.08_RSE_Ch128_EGPRS_Sweep2**Common Information**

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 22 / RSS-132, Issue 3
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - E-GPRS 850; Ch128
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_22_GSM_Scan2_30MHz_9GHz

**Scan Setup: Fula2_FCC_22_GSM_Scan2_30MHz_9GHz [EMI radiated]**

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 823 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
823 MHz - 850 MHz	400 kHz	PK+	1 MHz	0.02 s	0 dB
850 MHz - 880 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
880 MHz - 9 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.09_RSE_Ch192_EGPRS_Sweep1

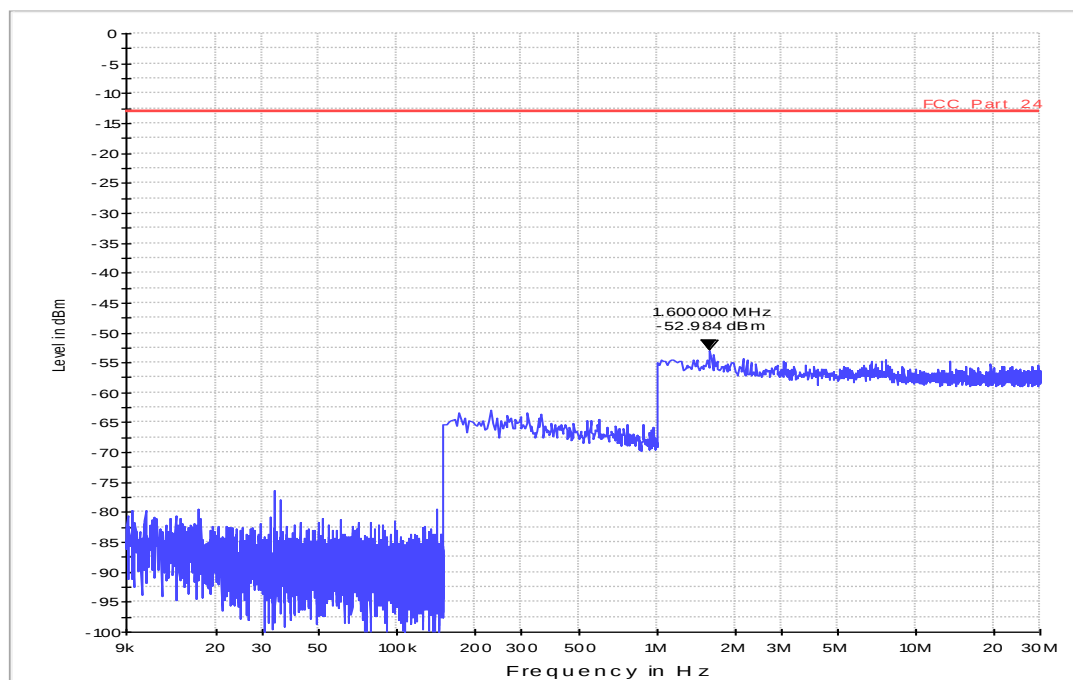
Common Information

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 22 / RSS-132, Issue 3
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - E-GPRS 850; Ch192
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_22_GSM_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_22_GSM_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.10_RSE_Ch192_EGPRS_Sweep2

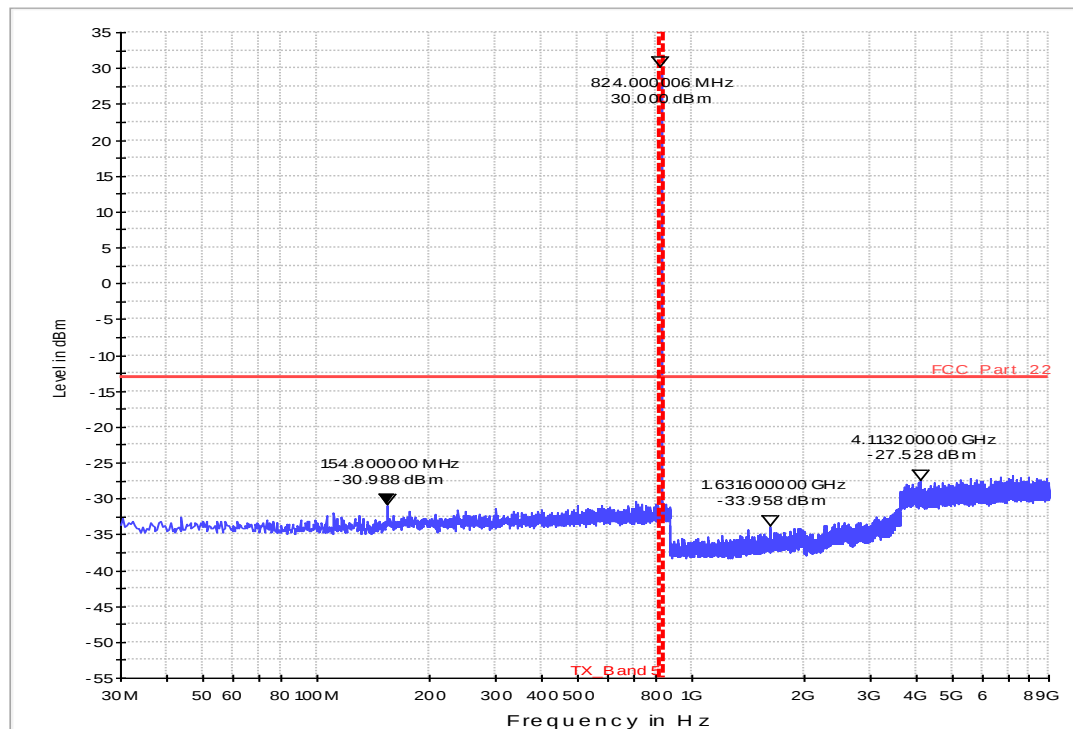
Common Information

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 22 / RSS-132, Issue 3
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - E-GPRS 850; Ch192
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_22_GSM_Scan2_30MHz_9GHz



Scan Setup: Fula2_FCC_22_GSM_Scan2_30MHz_9GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preampl
30 MHz - 823 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
823 MHz - 850 MHz	400 kHz	PK+	1 MHz	0.02 s	0 dB
850 MHz - 880 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
880 MHz - 9 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.11_RSE_Ch251_EGPRS_Sweep1

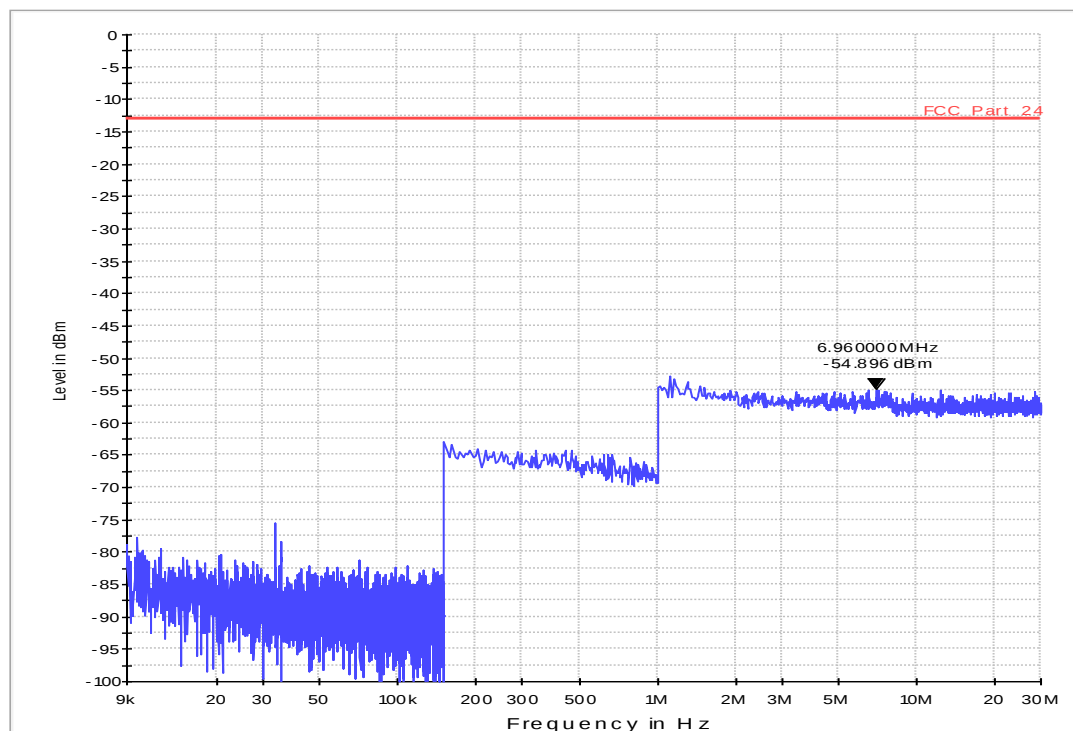
Common Information

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 22 / RSS-132, Issue 3
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - E-GPRS 850; Ch251
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_22_GSM_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_22_GSM_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.12_RSE_Ch251_EGPRS_Sweep2

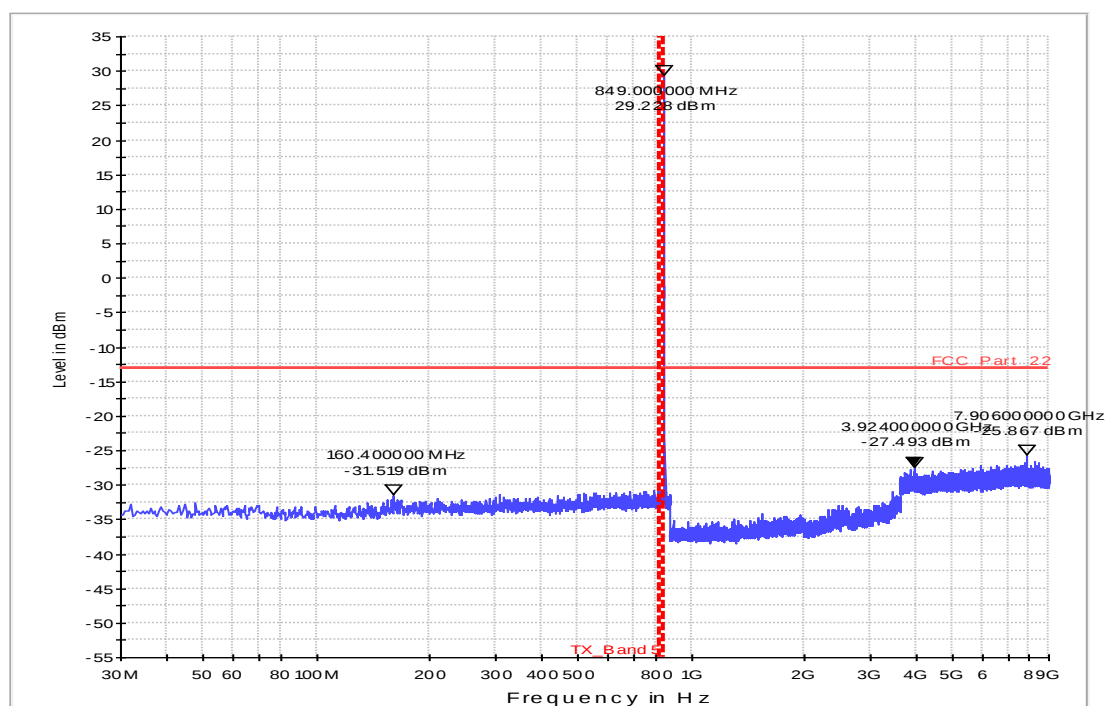
Common Information

Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 22 / RSS-132, Issue 3
 SW-Version: EMC32 V8.53.0
 Operation mode: TX - E-GPRS 850; Ch251
 Channel Bandwidth: --
 Operator: Lor
 Comment: --

EUT Information

EUT Name: WMC0534PX8 (d)
 Manufacturer: Gemalto
 Serial Number: #0044010814211345
 Hardware Rev: 2.3
 Software Rev: 02.502
 Comment: --

Fula2_FCC_22_GSM_Scan2_30MHz_9GHz



Scan Setup: Fula2_FCC_22_GSM_Scan2_30MHz_9GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 26]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 823 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
823 MHz - 850 MHz	400 kHz	PK+	1 MHz	0.02 s	0 dB
850 MHz - 880 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
880 MHz - 9 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

1.5. Band-Edge compliance (conducted)**1.5.1. Band-Edge compliance GPRS850 (GMSK-Modulation)**

Diagram No.: 37.01_BE_Ch128_GSM_AV

Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22 / RSS-132, Issue 3
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GSM850 GPRS CH128
Channel Bandwidth	--
Operator	Lor
Comment:	--

Fula2_FCC_22_BE_LOW_128_AV

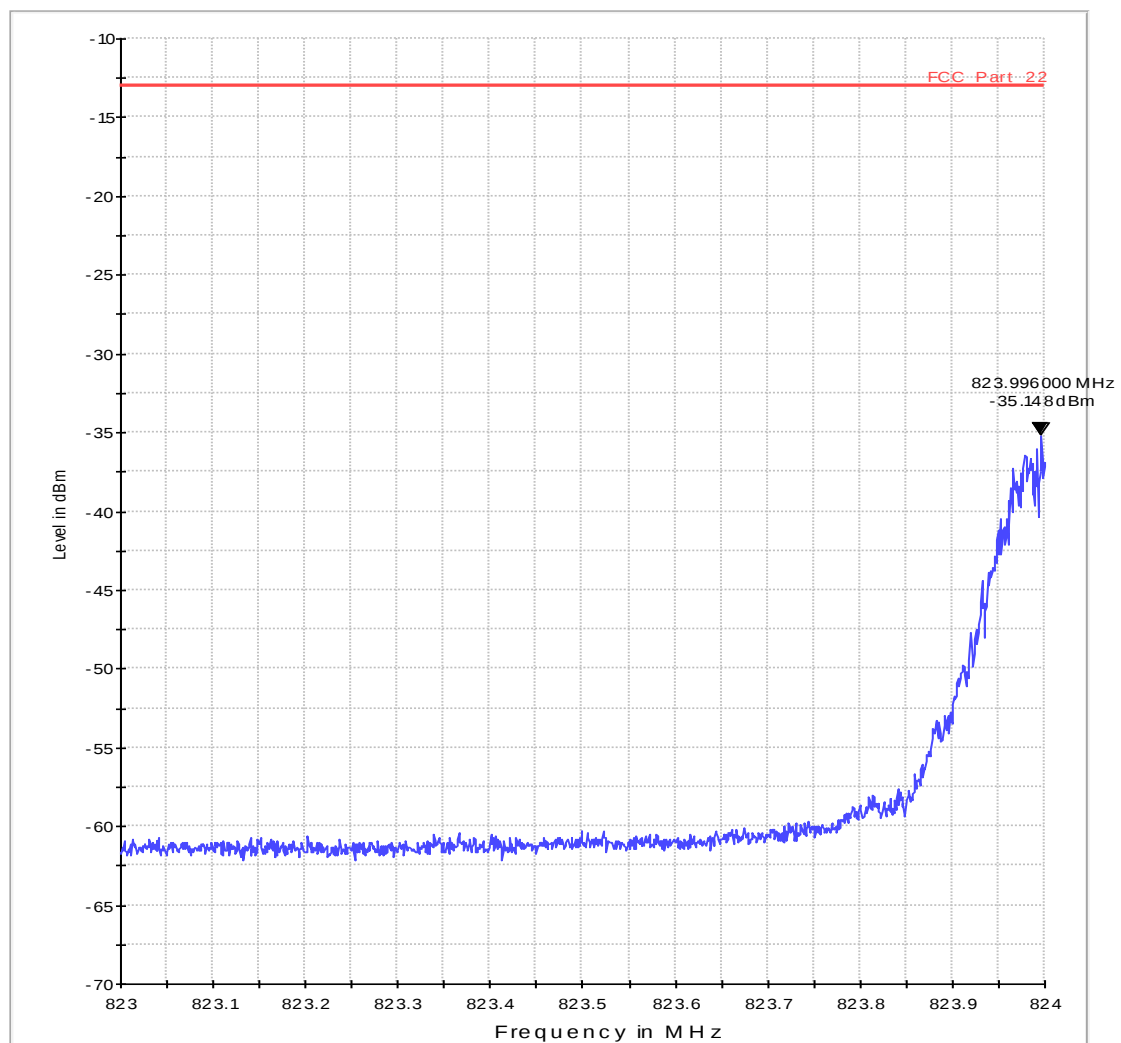
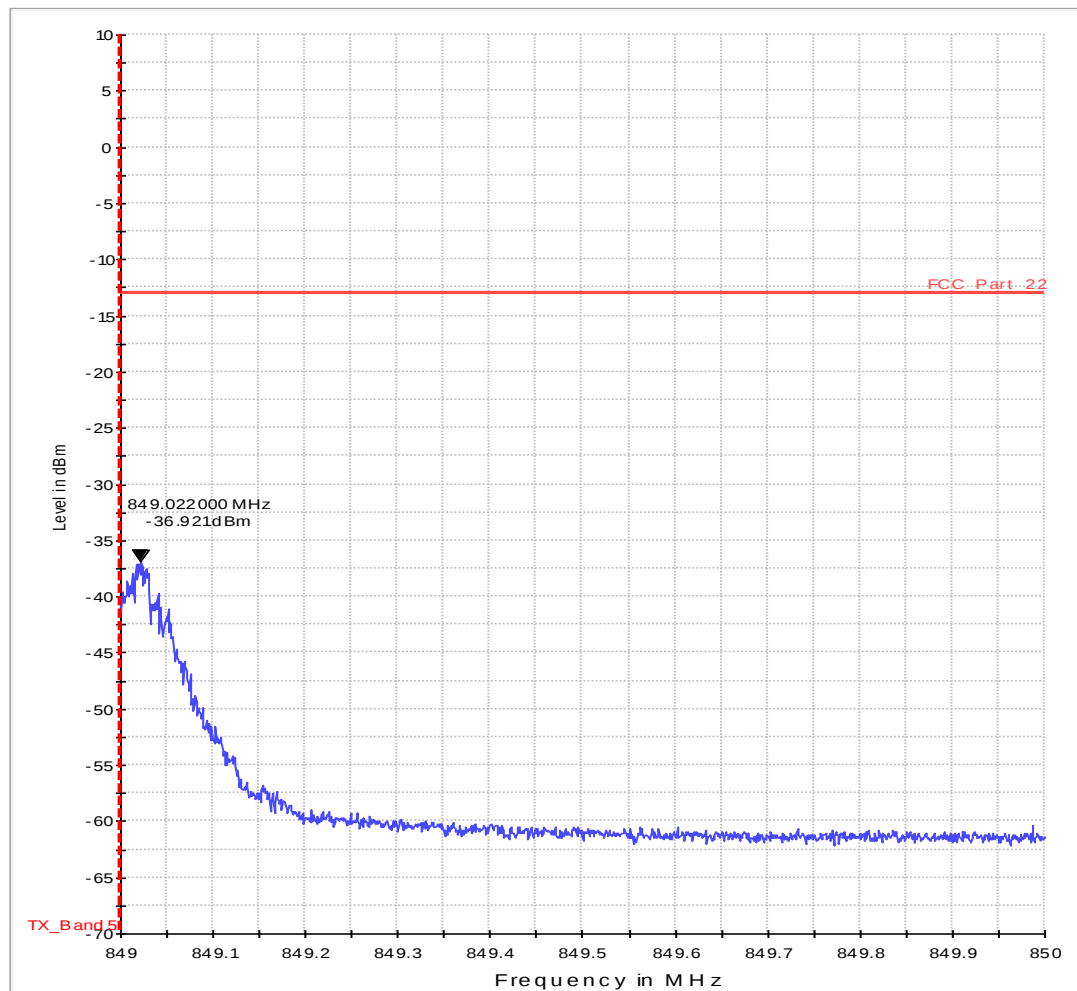


Diagram No.: 37.02_BE_Ch251_GSM_AV**Common Information**

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22 / RSS-132, Issue 3
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GSM850 GPRS CH251
Channel Bandwidth	--
Operator	Lor
Comment:	--

Fula2_FCC_22_BE_High_251_AV



1.5.2. Band-Edge compliance E-GPRS850 (8-PSK-Modulation)

Diagram No.: 37.03_BE_Ch128_EGPRS_AV

Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22 / RSS-132, Issue 3
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - E-GPRS 850; Ch128
Channel Bandwidth	--
Operator	Lor
Comment:	--

Fula2_FCC_22_BE_LOW_128_AV

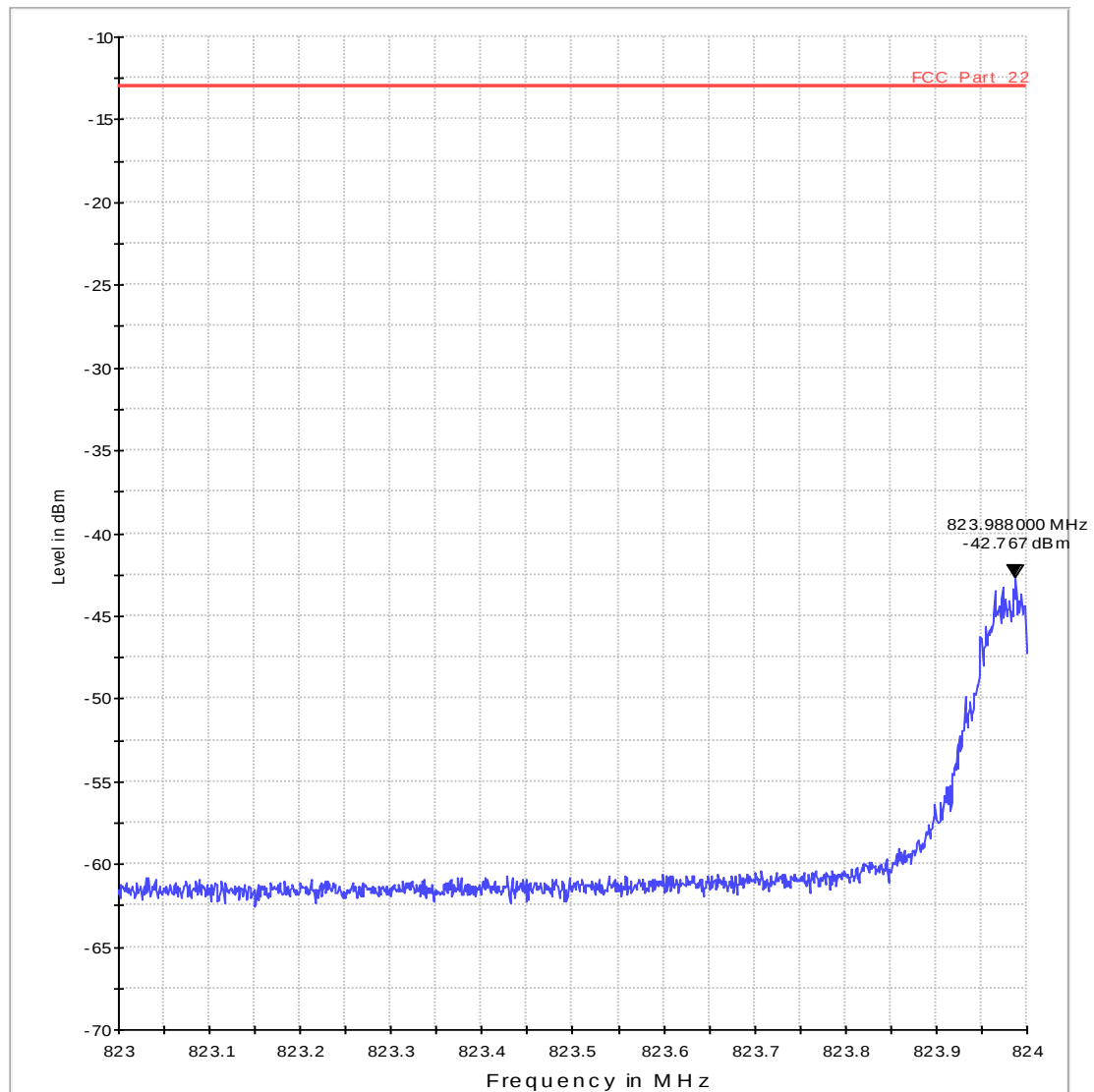
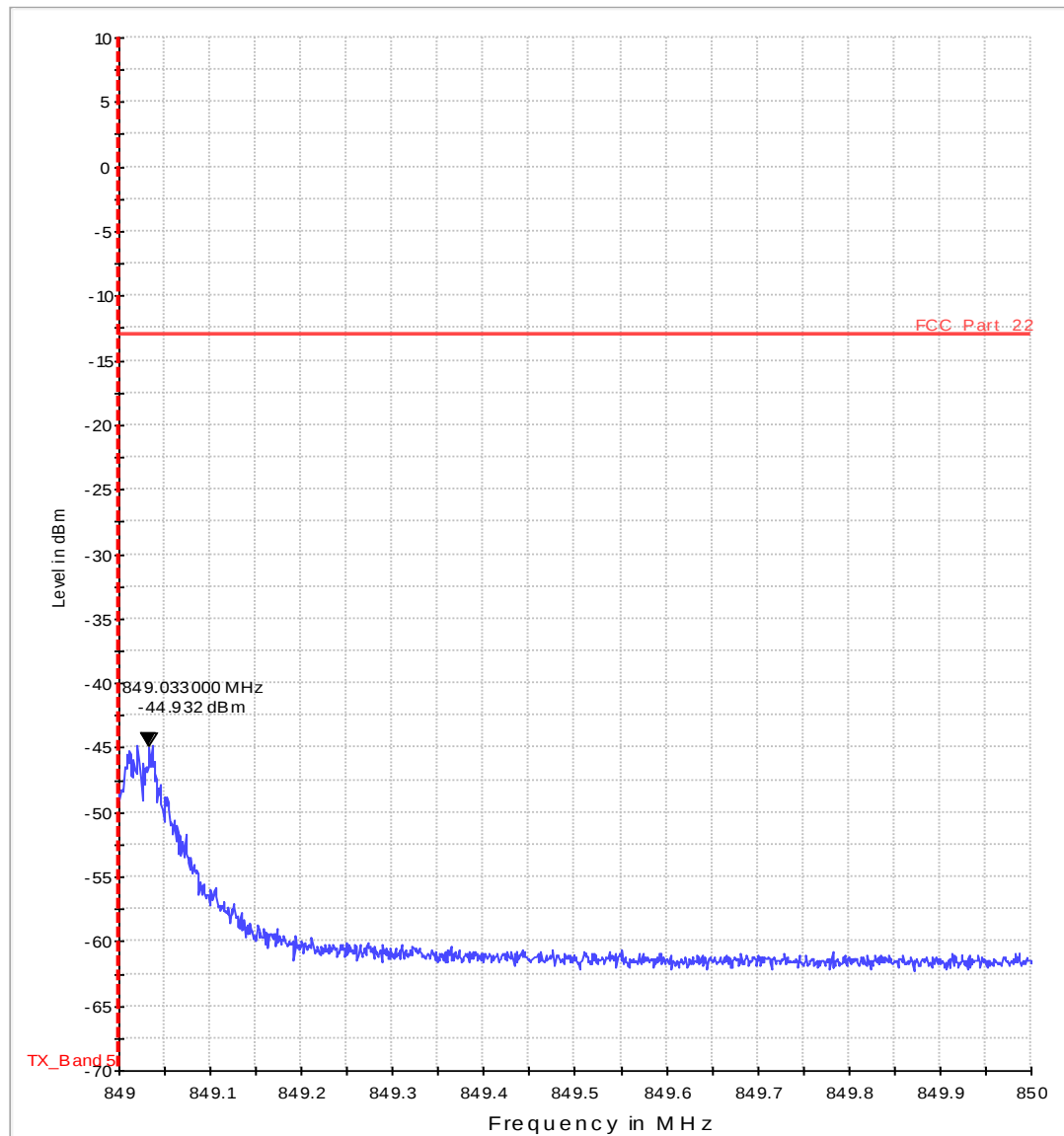


Diagram No.: 37.04_BE_Ch251_EGPRS_AV**Common Information**

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22 / RSS-132, Issue 3
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - E-GPRS 850; Ch251
Channel Bandwidth	--
Operator	Lor
Comment:	--

Fula2_FCC_22_BE_High_251_AV



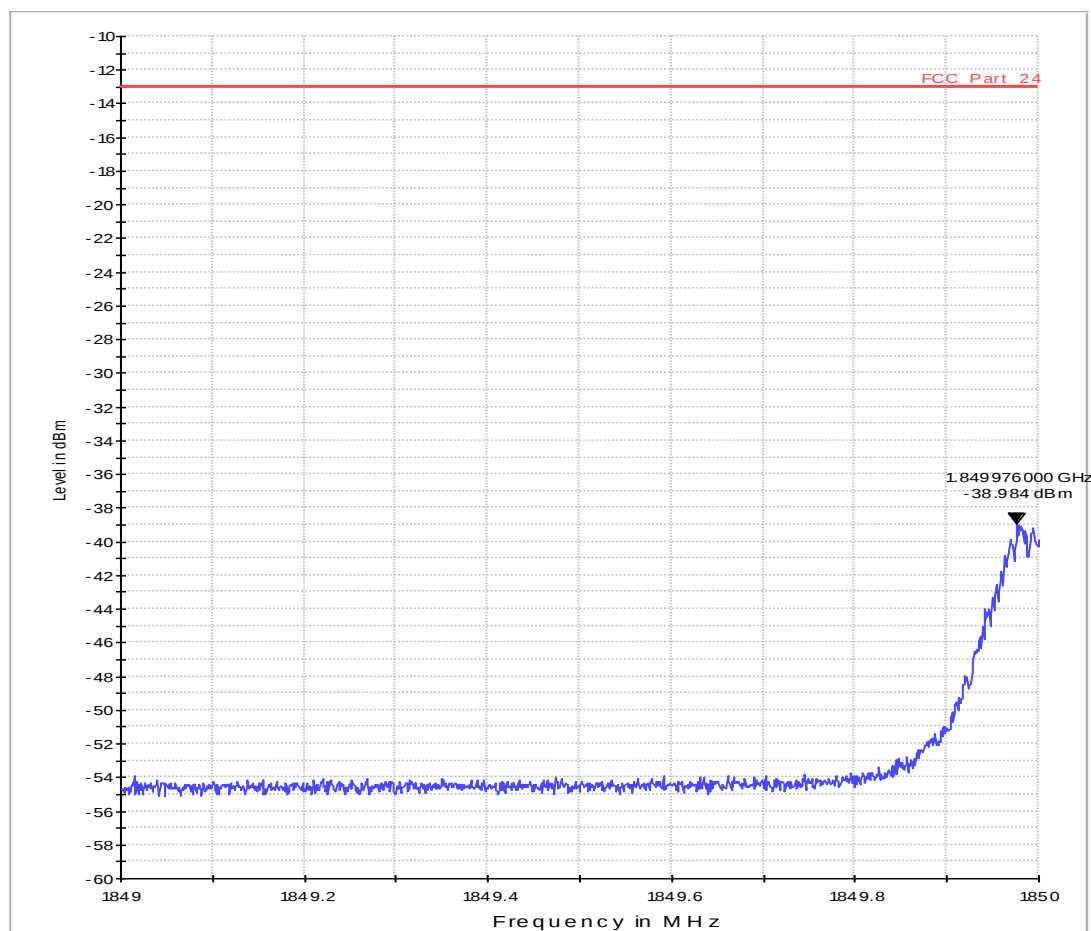
1.5.3. Band-Edge compliance GPRS-1900 (GMSK-Modulation)

Diagram No.: 37.10_BE_Ch512_GSM_AV

Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24 / RSS-133, Issue 6
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GPRS 1900 CH512
Channel Bandwidth	--
Operator	Lor
Comment:	--

Fula2_FCC_24_GSM_BE_Low_512_AV



Scan Setup: Fula2_FCC_24_GSM_BE_Low_512_AV [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

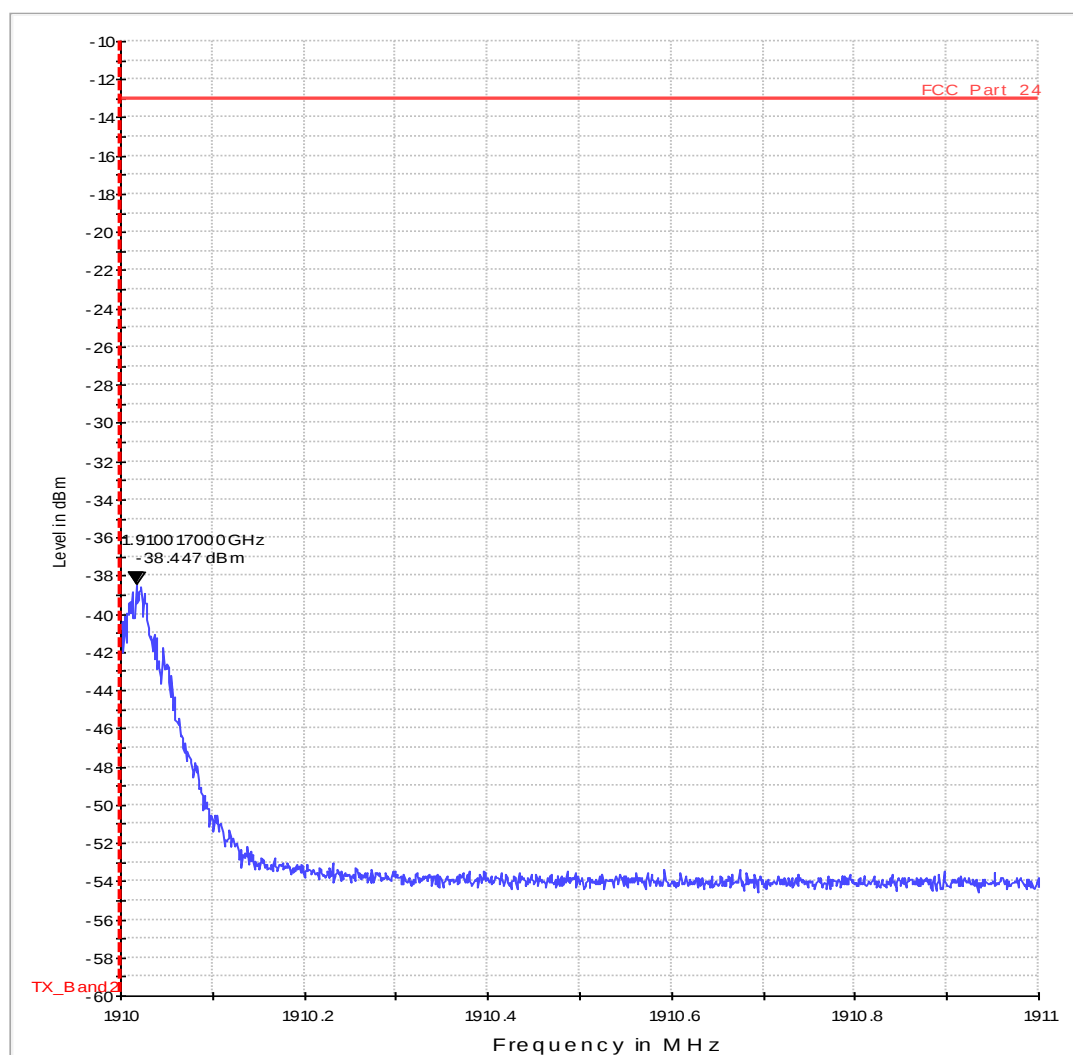
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1.849 GHz - 1.85 GHz	1 kHz	AVG	3 kHz	0.1 s	0 dB

Diagram No.: 37.11_BE_Ch810_GSM_AV

Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24 / RSS-133, Issue 6
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - GPRS 1900 CH810
Channel Bandwidth	--
Operator	Lor
Comment:	--

Fula2_FCC_24_GSM_BE_High_810_AV



Scan Setup: Fula2_FCC_24_GSM_BE_High_810_AV [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preampl
1.91 GHz - 1.911 GHz	1 kHz	AVG	3 kHz	0.1 s	0 dB

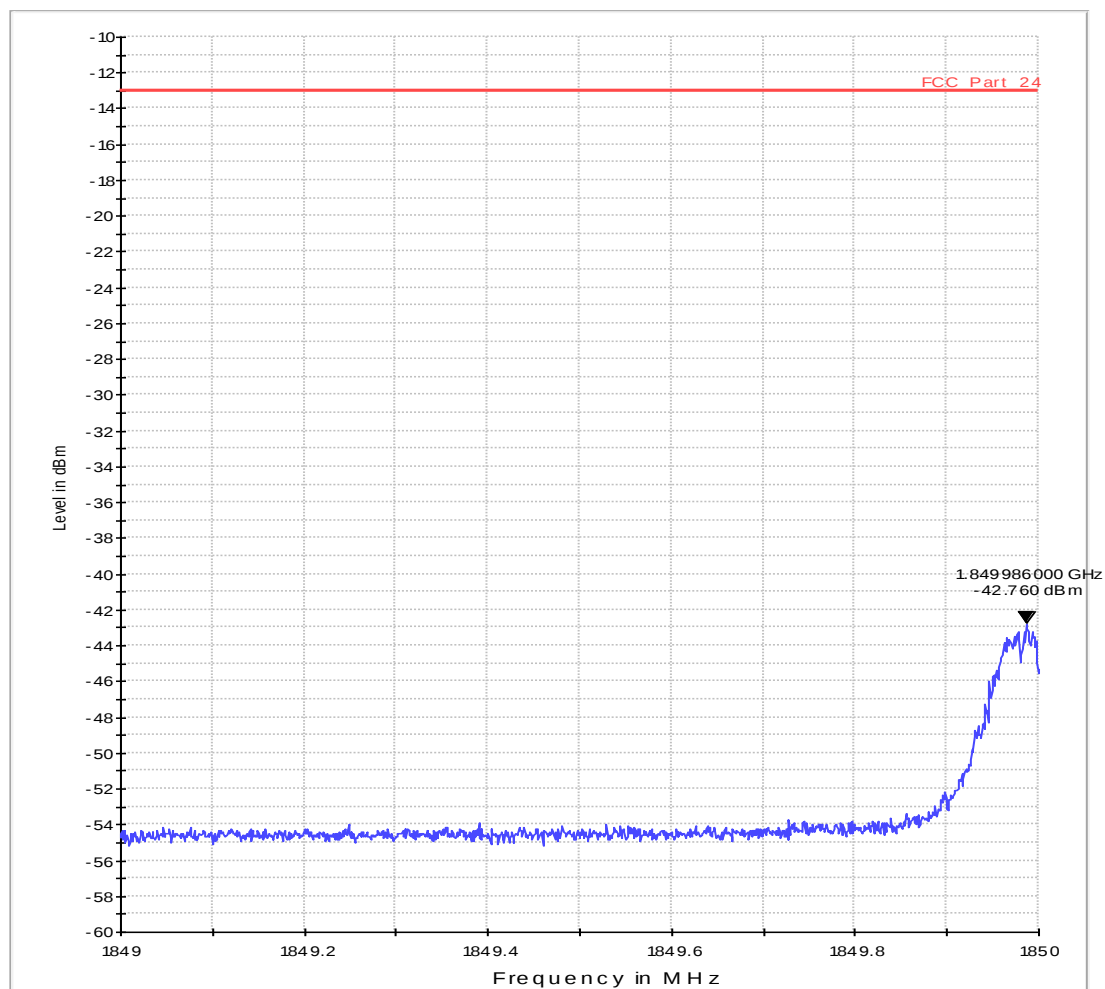
1.5.4. Band-Edge compliance E-GPRS-1900 (8-PSK-Modulation)

Diagram No.: 37.12_BE_Ch512_EGPRS_AV

Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24 / RSS-133, Issue 6
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - EGPRS 1900 CH512
Channel Bandwidth	--
Operator	Lor
Comment:	--

Fula2_FCC_24_GSM_BE_Low_512_AV



Scan Setup: Fula2_FCC_24_GSM_BE_Low_512_AV [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

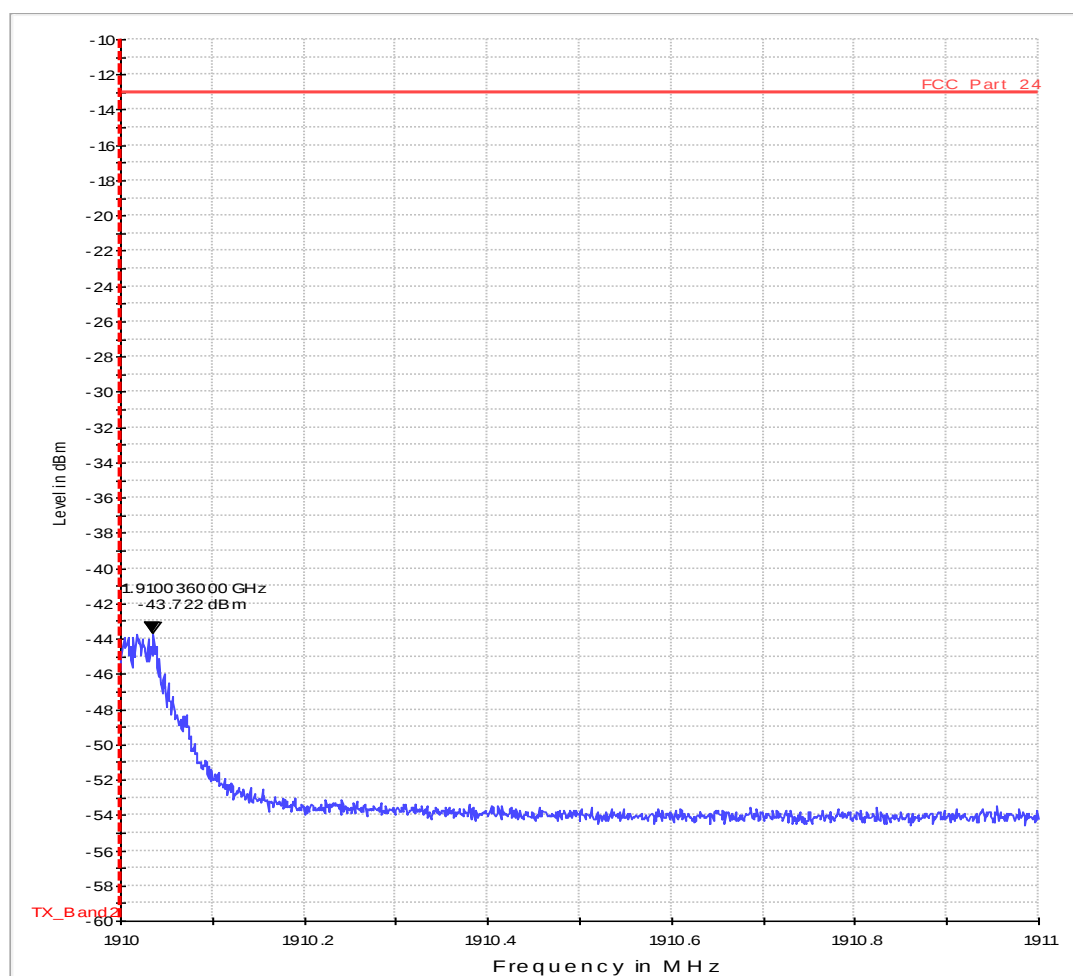
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1.849 GHz - 1.85 GHz	1 kHz	AVG	3 kHz	0.1 s	0 dB

Diagram No.: 37.13_BE_Ch810_EGPRS_AV

Common Information

Test Description:	TX Spurious Emission Conducted \$2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24 / RSS-133, Issue 6
SW-Version:	EMC32 V8.53.0
Operation mode:	TX - EGPRS 1900 CH810
Channel Bandwidth	--
Operator	Lor
Comment:	--

Fula2_FCC_24_GSM_BE_High_810_AV



Scan Setup: Fula2_FCC_24_GSM_BE_High_810_AV [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
1.91 GHz - 1.911 GHz	1 kHz	AVG	3 kHz	0.1 s	0 dB

1.6. Magnetic field strength emissions accord. Part 15.209 Subpart C (f<30MHz)

1.6.1. E_GPRS850 Band

Diagram No. 2.04_Ch128_GSM_EGPRS_850

Test description:	Date: 22.03.2015 Page 1 of 1
Test site and distance:	Magnetic Field Strength Measurement related to 30/300 m distance
Version of Testsoftware:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Distance correction:	EMC32 V8.51.0
Technical Data:	used accord. table, pls. see test report
Rec. antenna (pre-scan):	Please see page 2 for detailed data of measurement setup
Used filter:	height 1.00 m, parallel and 90° to EUT polarisation
Test specification:	bypass
	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	Kmo
Operating conditions:	EGPRS 850 ch 128
Power during tests:	12V DC
Comment 1:	
Comment 2:	

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

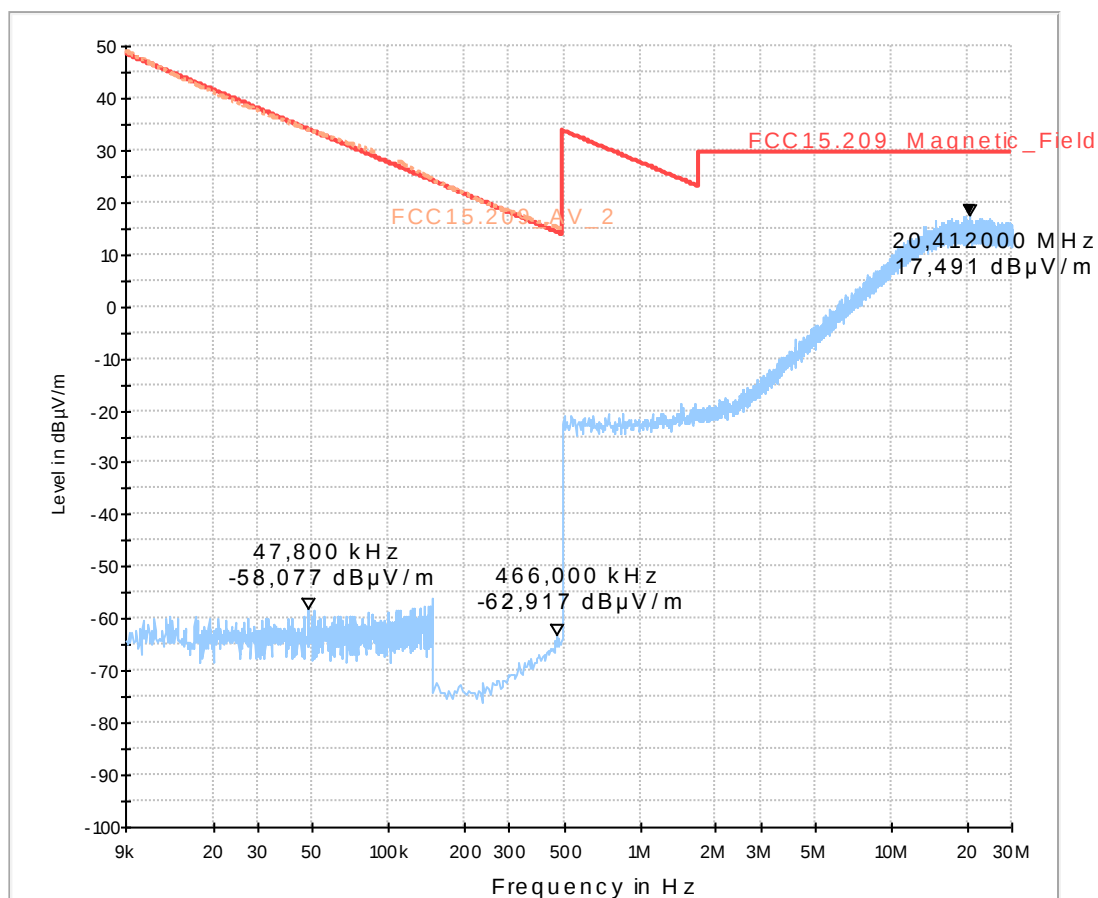


Diagram No. 2.05_Ch192_GSM_EGPRS_850

Date:	22.03.2015	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V8.51.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	Kmo	
Operating conditions:	EGPRS 850 ch 192	
Power during tests:	12V DC	
Comment 1:		

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

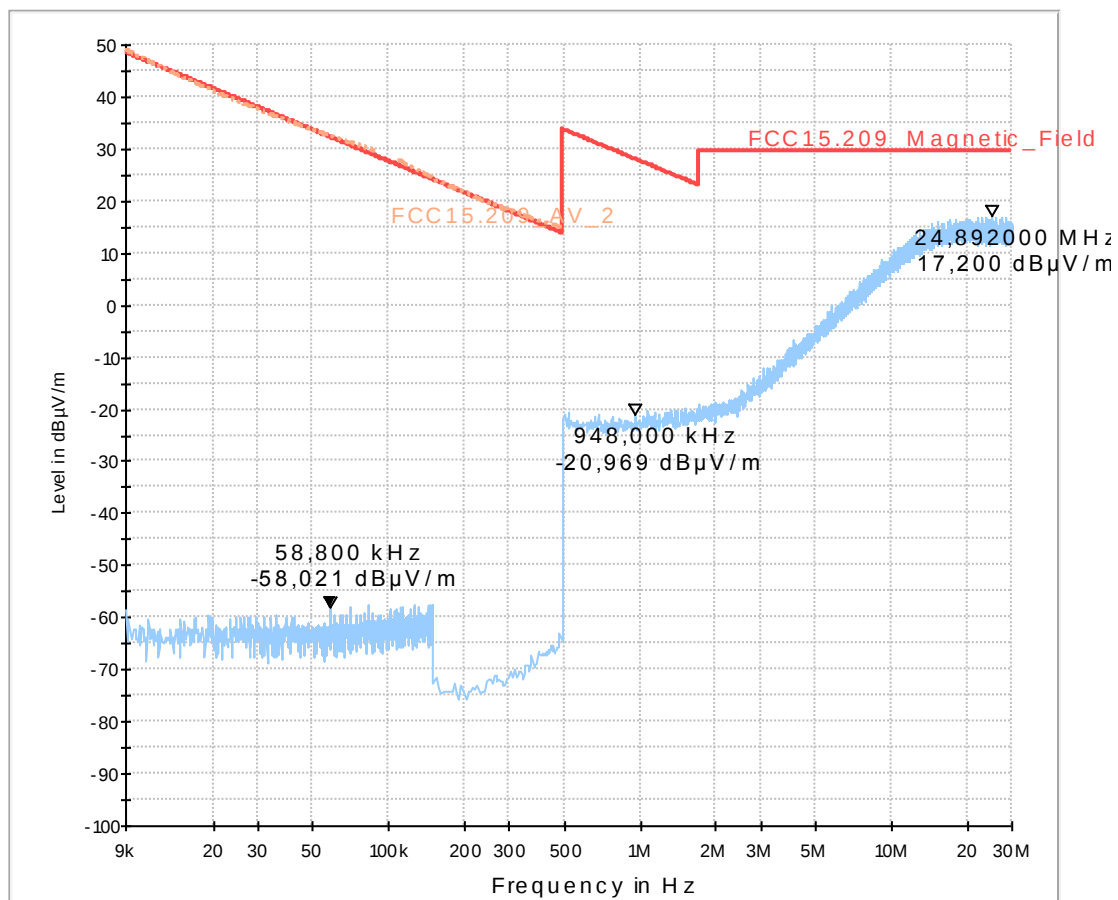
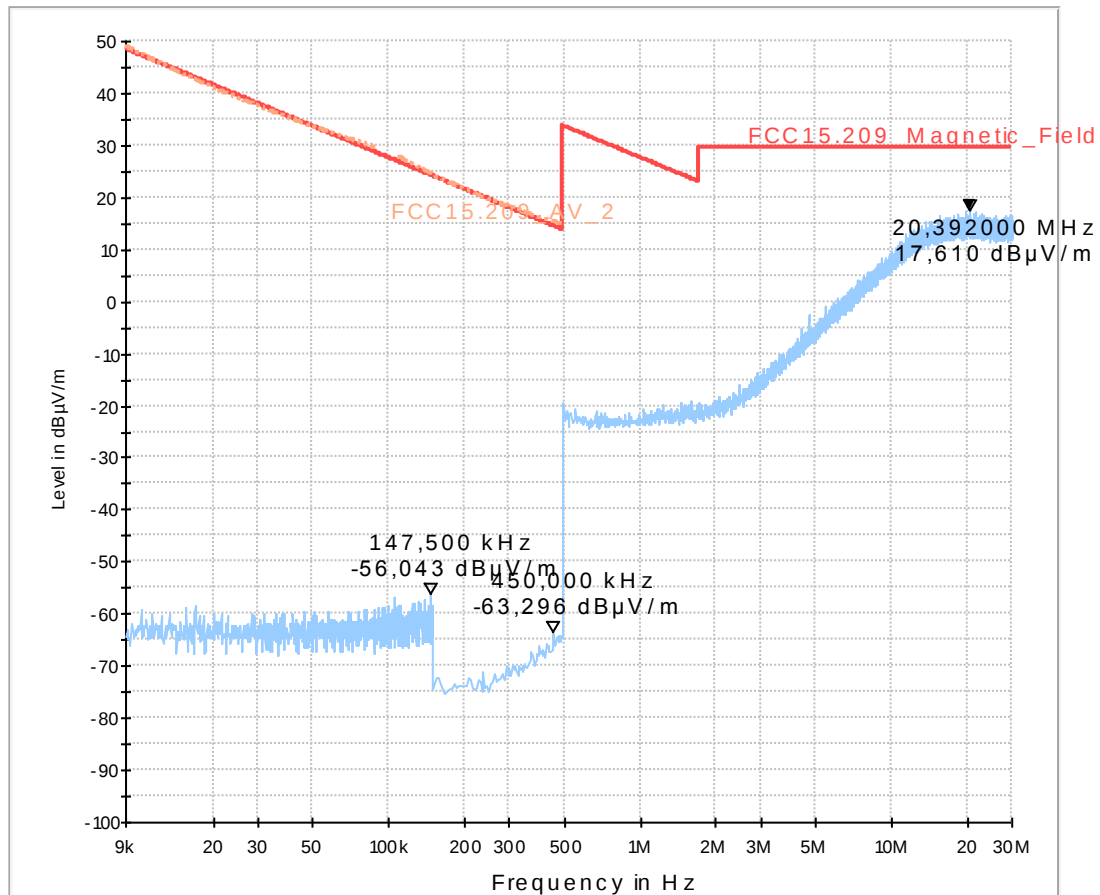


Diagram No. 2.06_Ch251_GSM_EGPRS_850

Date:	22.03.2015	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V8.51.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	Kmo	
Operating conditions:	EGPRS 850 ch 251	
Power during tests:	12V DC	
Comment 1:		

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--



1.6.2. GSM1900 Band

Diagram No. 2.01_Ch512_GSM_1900

Date:	22.03.2015	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V8.51.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	Kmo	
Operating conditions:	GPRS 1900 ch 512	
Power during tests:	12V DC	
Comment 1:		

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

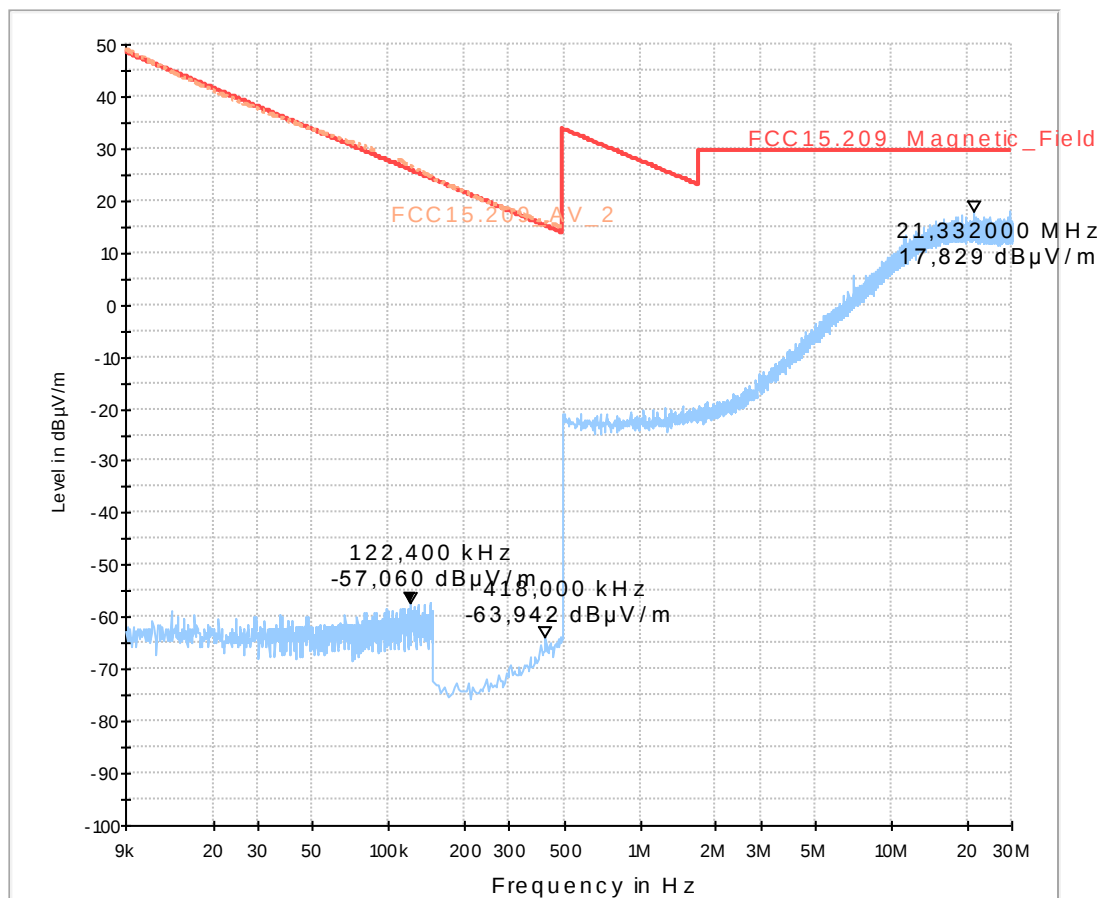


Diagram No. 2.02_Ch661_GSM_1900

Date:	22.03.2015	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V8.51.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	Kmo	
Operating conditions:	GPRS 1900 ch 661	
Power during tests:	12V DC	
Comment 1:		

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

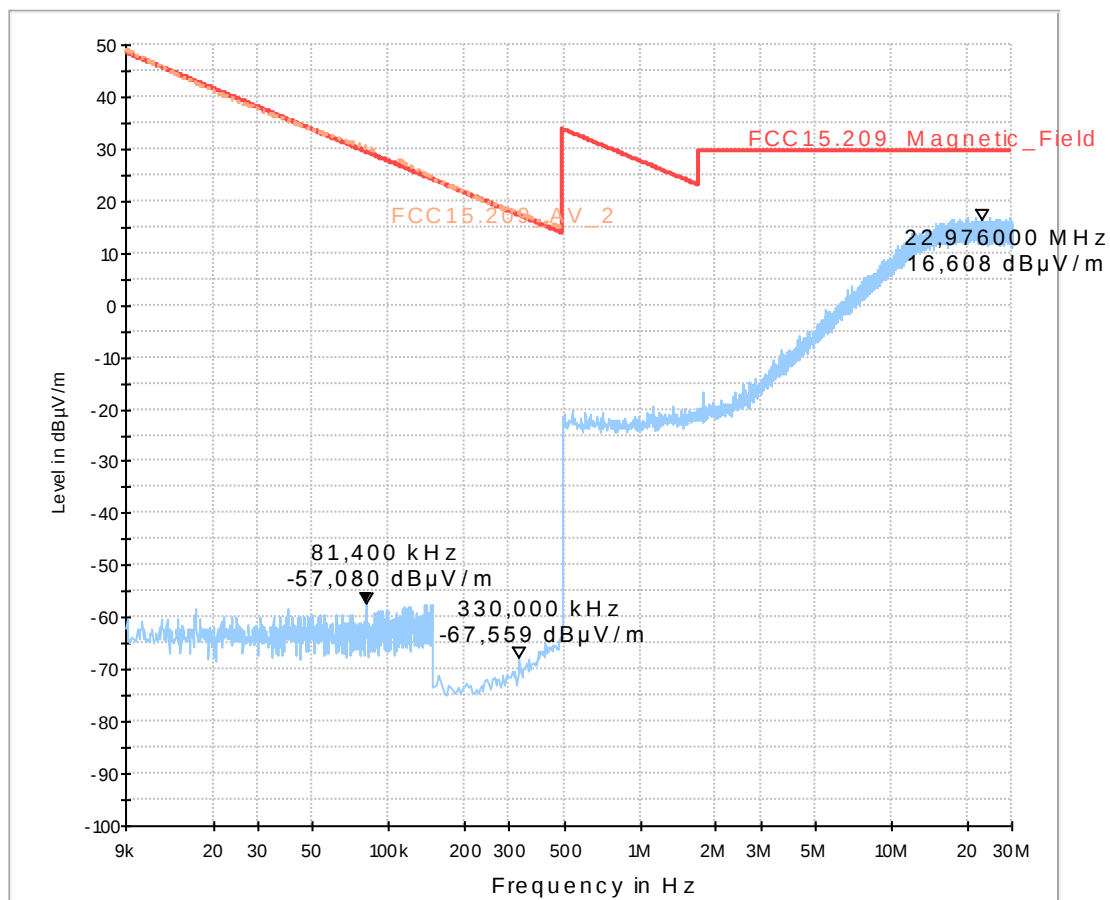
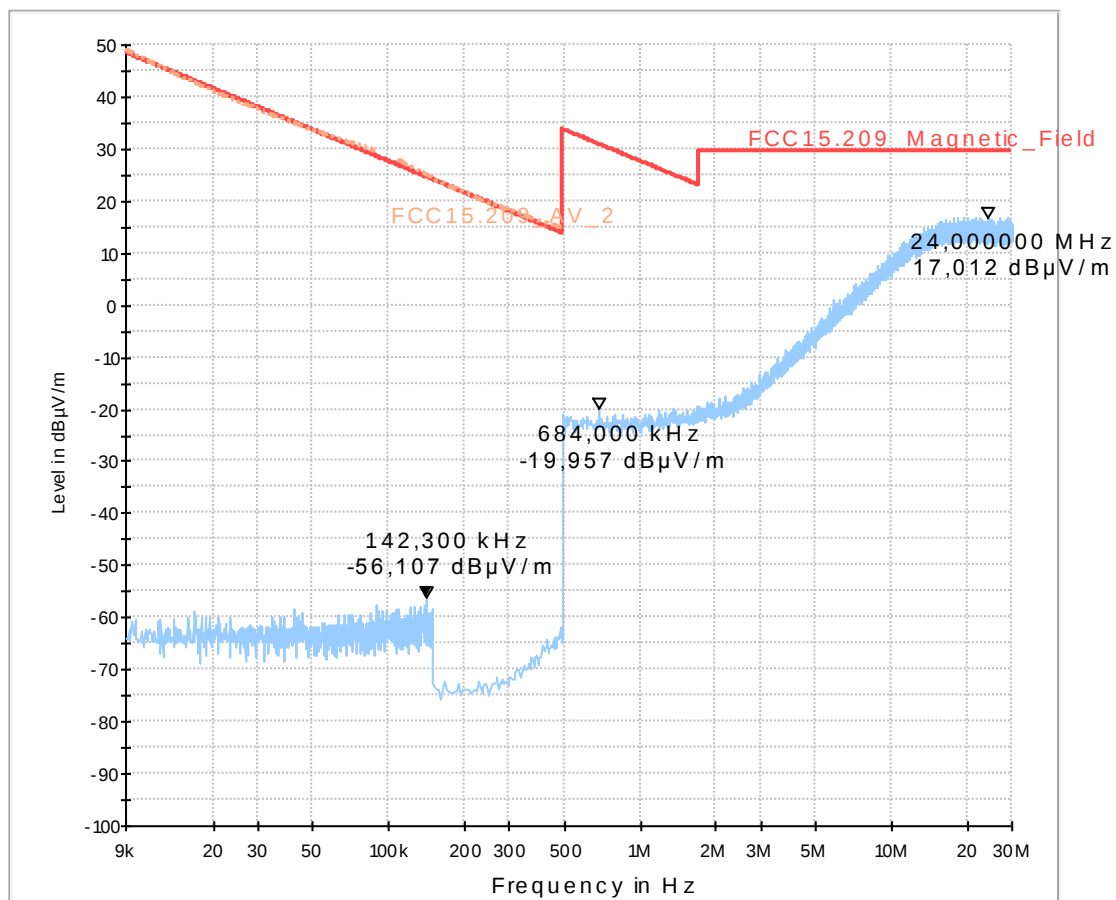


Diagram No. 2.03_Ch810_GSM_1900

Date:	22.03.2015	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V8.51.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	Kmo	
Operating conditions:	GPRS 1900 ch 810	
Power during tests:	12V DC	
Comment 1:		

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--



1.7. Spurious emissions radiated (30 MHz < f < 18 GHz)

1.7.1. GSM850 mode (GMSK-Modulation)

8.04 RSE_R_CH128_GPRS

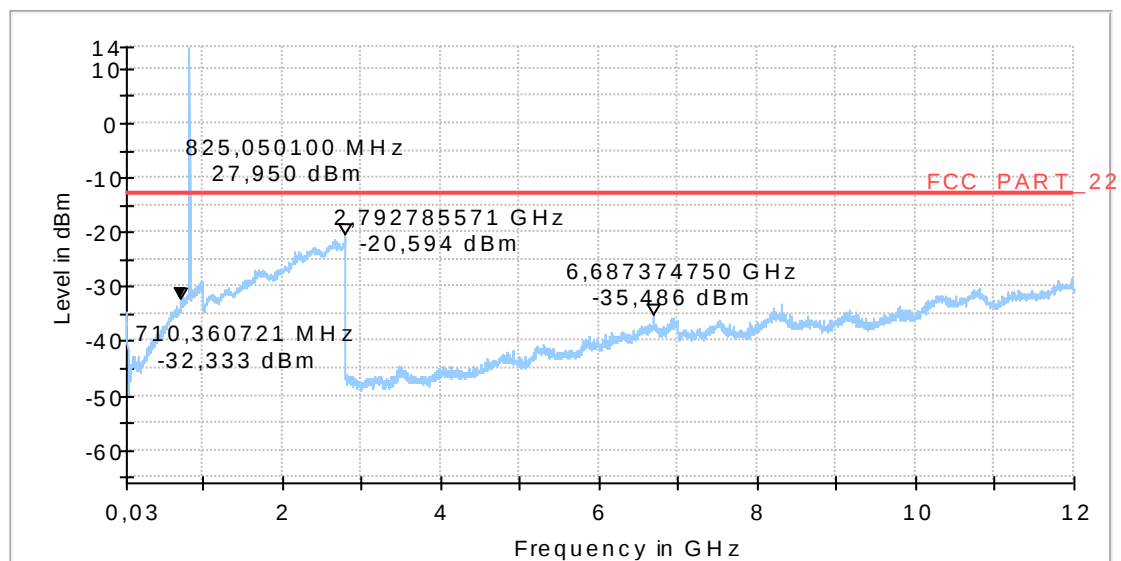
Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917 / RSS-132 Issue 3
Test Case:	-
Operating Mode:	MS allocated UL channel 128
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 37%rH; Temperature: 20.6°C
Operator:	Lor

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



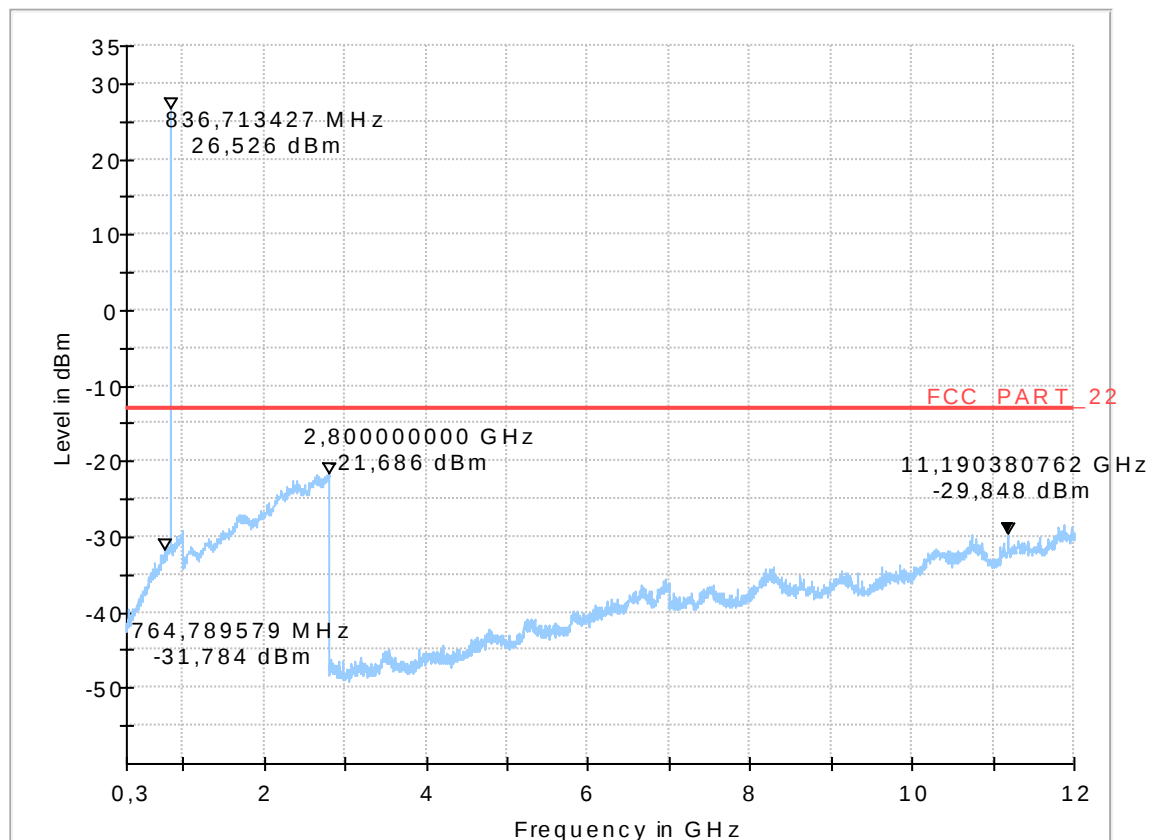
8.05 RSE_R_CH192_GPRS**Common Information**

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917 / RSS-132 Issue 3
Test Case:	-
Operating Mode:	MS allocated UL channel 192
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 37%rH; Temperature: 20.6°C
Operator:	AHo

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



8.06 RSE_R_CH251_GPRS

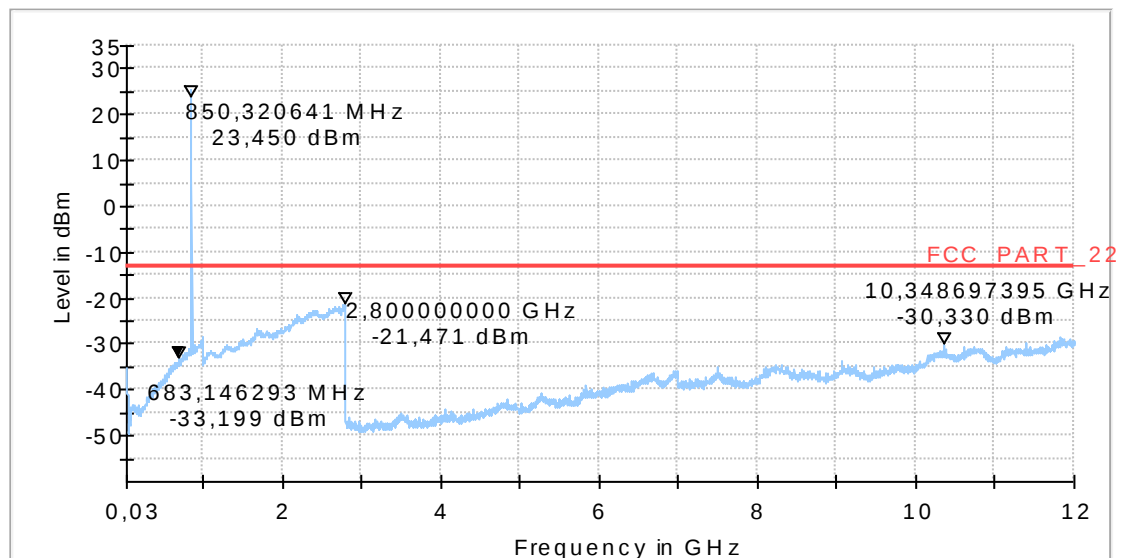
Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917 / RSS-132 Issue 3
Test Case:	-
Operating Mode:	MS allocated UL channel 251
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 37%rH: Temperature: 20.6°C
Operator:	AHo

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



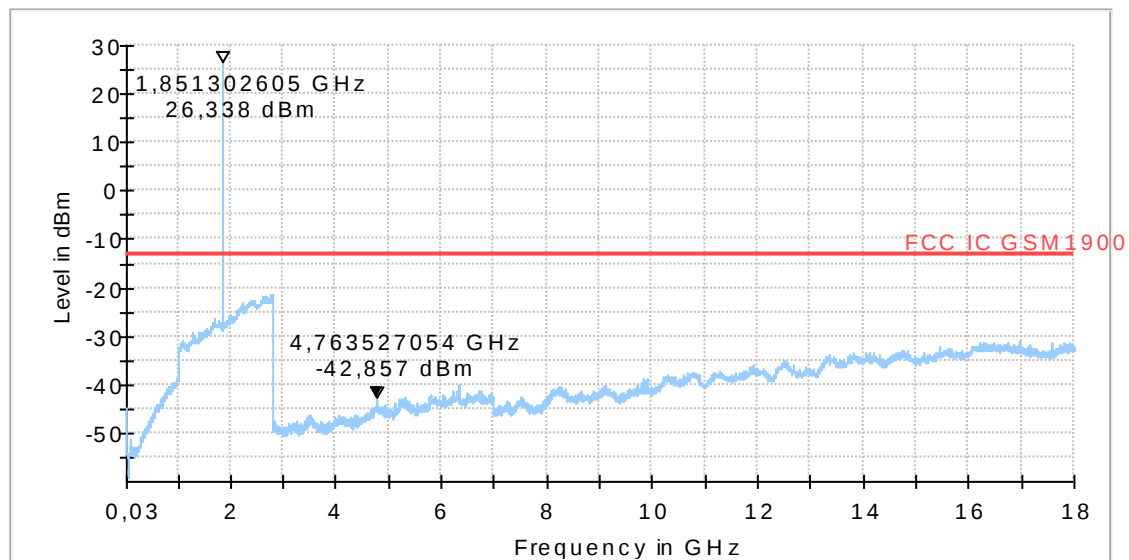
1.7.2. GSM 1900 mode (GMSK Modulation)**8.13_RSE_R_CH512_GPRS****Common Information**

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238 / RSS-133 Issue 6
Comm. Link:	GSM1900, Voice/EDGE
Operating Mode:	MS allocated channel 810 (UL = 1909.8MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 29%rH; Temperature: 24°C
Operator:	HLA

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



8.14_RSE_R_CH661_GPRS

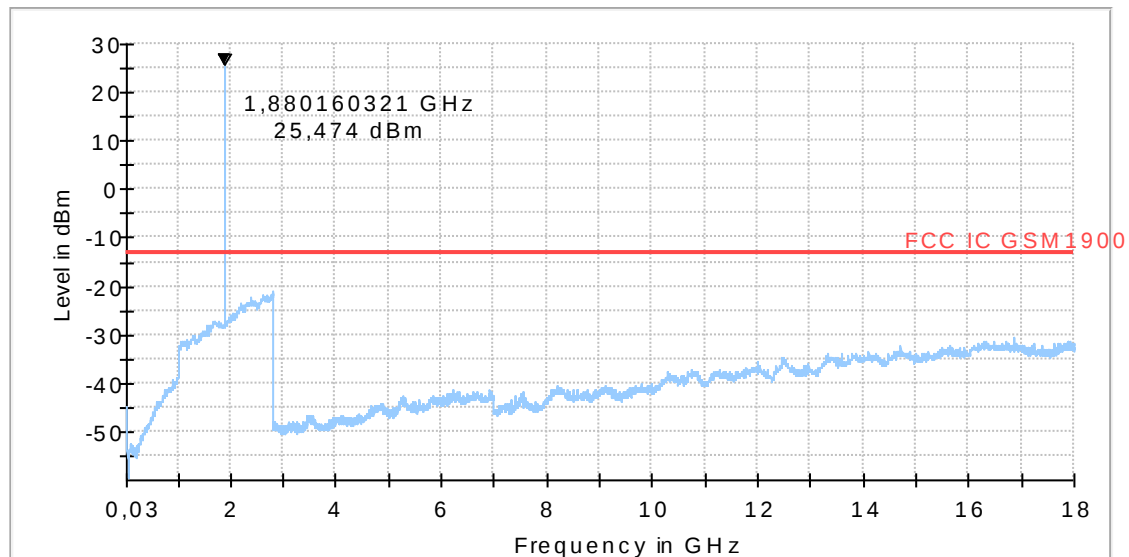
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238 / RSS-133 Issue 6
Comm. Link:	GSM1900, Voice/EDGE
Operating Mode:	MS allocated channel 661(UL = 1880.0MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 29%rH; Temperature: 24°C
Operator:	HLa

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



8.15_RSE_R_CH810_GPRS

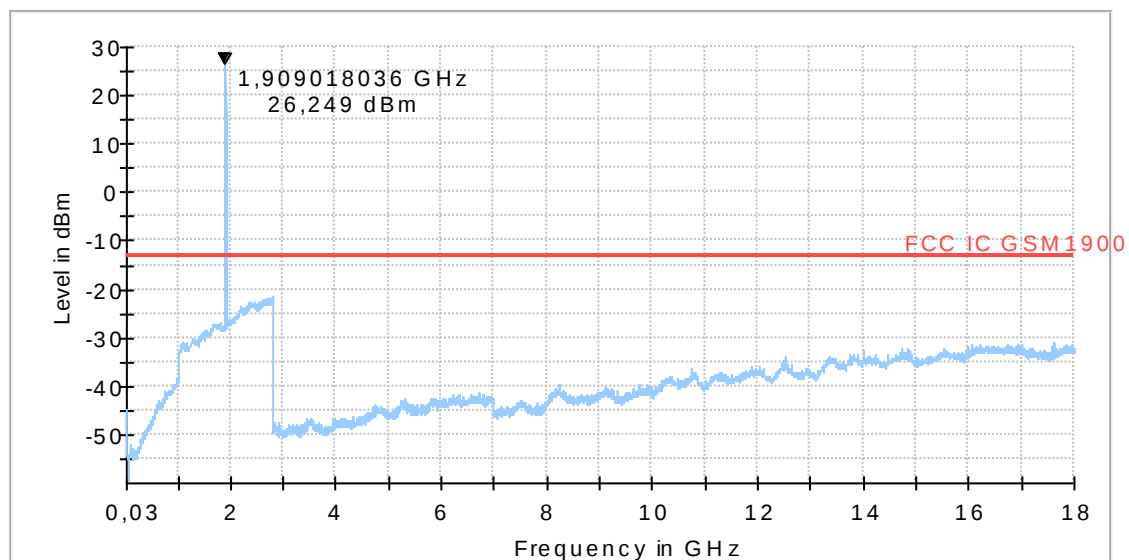
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238 / RSS-133 Issue 6
Comm. Link:	GSM1900, Voice/EDGE
Operating Mode:	MS allocated channel 810 (UL = 1909.8MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 29%rH; Temperature: 24°C
Operator:	HLA

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



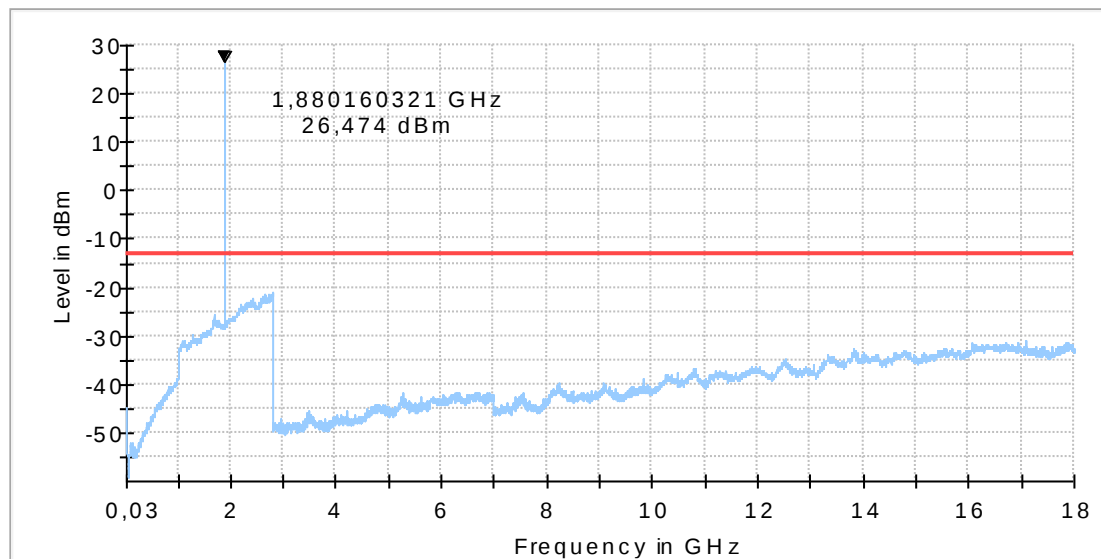
1.7.3. E-GPRS1900 mode (8PSK-Modulation)**8.17_ RSE_R_CH661_E-GPRS****Common Information**

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fullv Anechoic Room (FAR)
Test Standard:	FCC Part 24.238 / RSS-133 Issue 6
Comm. Link:	GSM1900, E-GPRS
Operating Mode:	MS allocated channel 661(UL = 1880.0MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 29%rH; Temperature: 24°C
Operator:	HLa

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



1.8. Radiated band-edge emissions

1.8.1. GSM850 Band

9.03 RSE_R_CH128_GPRS

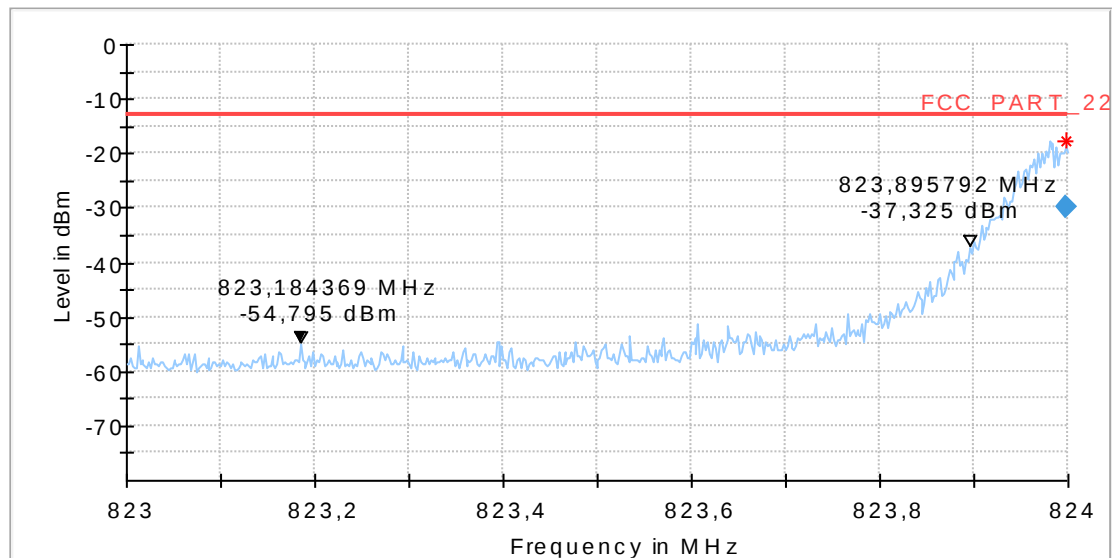
Common Information

Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917 / RSS-132, Issue 3
Operating Mode:	MS allocated channel 128_BandEdge
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 31%rH; Temperature: 23°C
Operator:	AHo

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Po l	Azimuth (deg)	Elevation (deg)	Corr. (dB)
823.997996	-13.00	16.80	10000.0	H	9.0	90.0	-75.8

9.04 RSE_R_CH251_GPRS

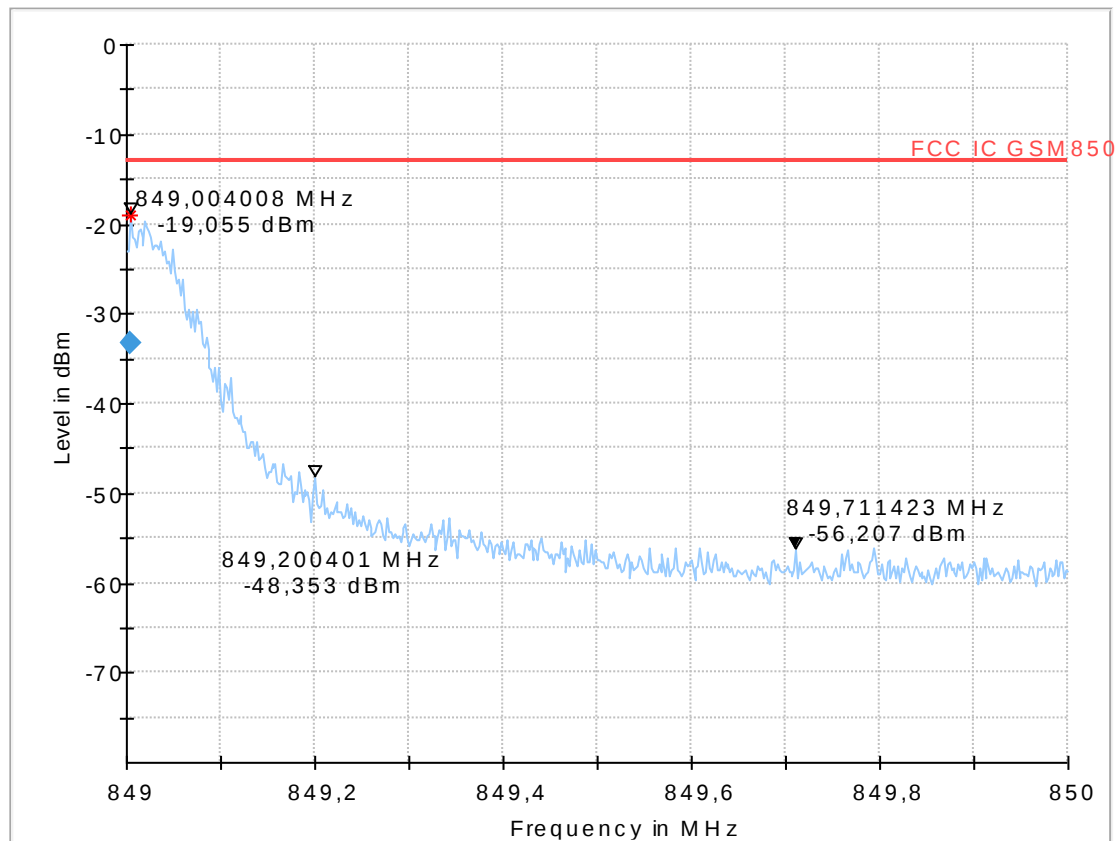
Common Information

Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917 / RSS-132, Issue 3
Operating Mode:	MS allocated channel 251 (fc = 848.8MHz), Voice, PCL0 (+33dBm)
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 31%rH; Temperature: 23°C
Operator:	

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Po l	Azimut h (deg)	Elevatio n (deg)	Corr. (dB)
849.004008	13.00	20.22	10000.0	H	14.0	90.0	-75.9

9.05_RSE_R_CH128_EGPRS

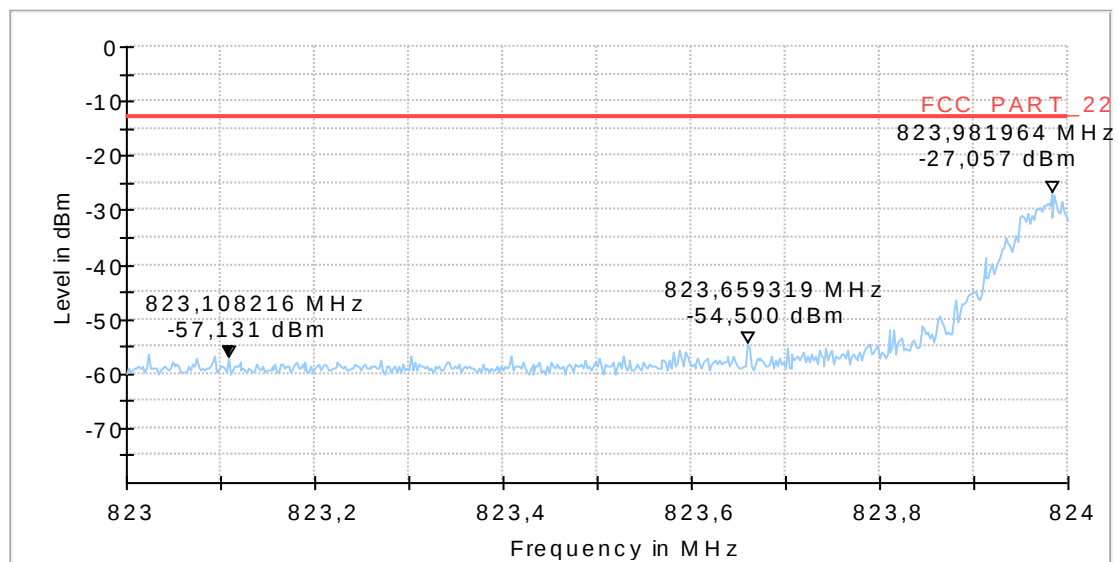
Common Information

Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917 / RSS-132, Issue 3
Operating Mode:	MS allocated channel 128 (fc = 824.2MHz), E-GPRS
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 31%rH; Temperature: 23°C
Operator:	AHo/HLA

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



9.06_RSE_R_CH251_EGPRS

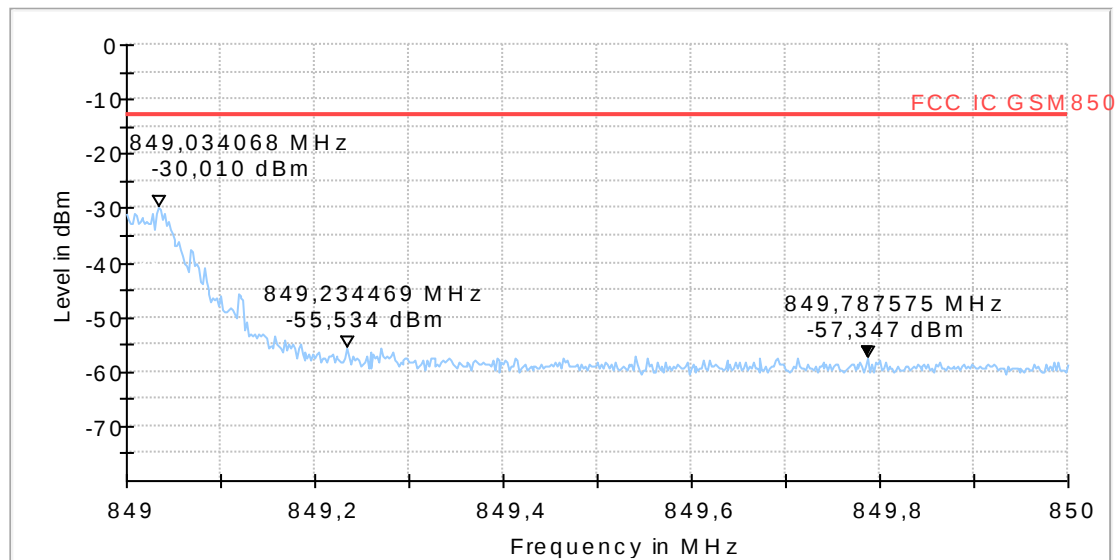
Common Information

Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917 / RSS-132, Issue 3
Operating Mode:	MS allocated channel 251 (fc = 848.8MHz), EGPRS
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 31%rH; Temperature: 23°C
Operator:	HLA

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



1.8.2. GSM1900 Band

9.09_BE_R_Ch512_GPRS

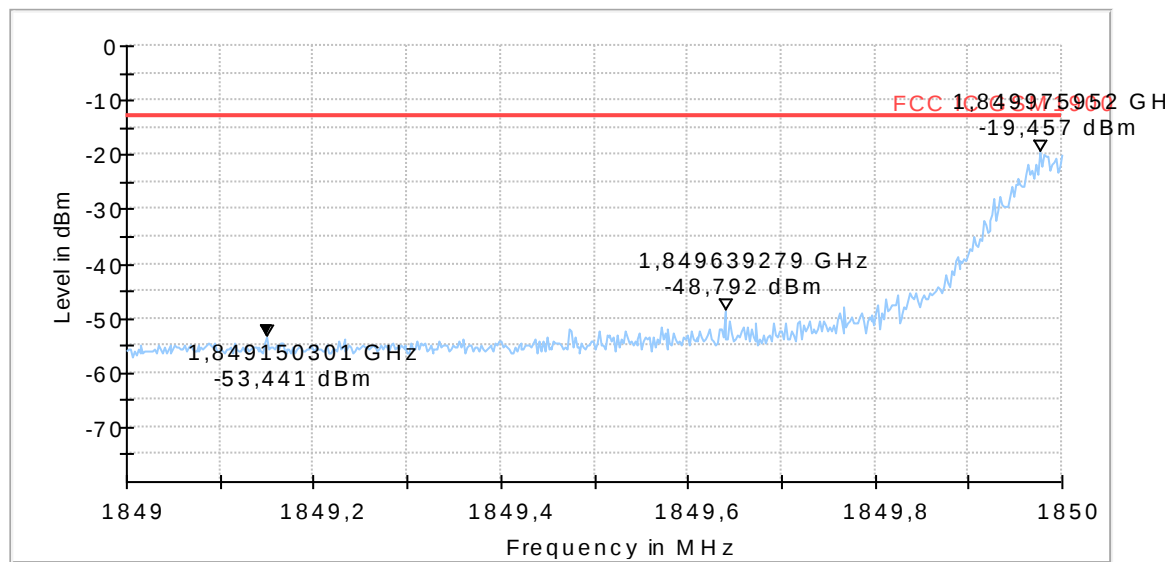
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238 / RSS-133, Issue 6
Comm. Link:	GSM1900, Voice/EDGE
Operating Mode:	MS allocated channel 512 (UL = 1850.2MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 29%rH; Temperature: 24°C
Operator:	AHo

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



9.10_BE_R_Ch810_GPRS

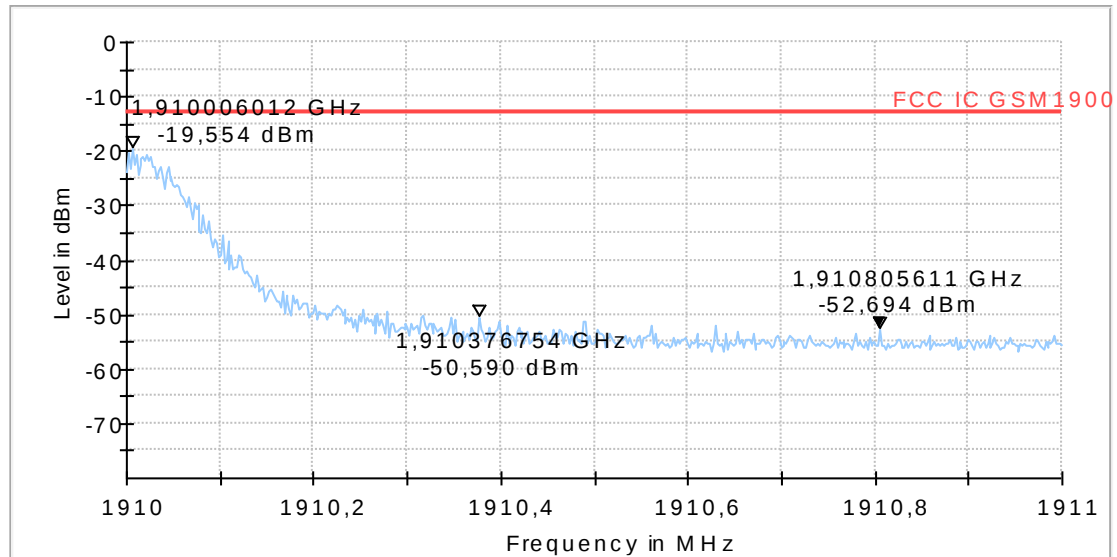
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238 / RSS-133, Issue 6
Comm. Link:	GSM1900, Voice/EDGE
Operating Mode:	MS allocated channel 810 (UL = 1909.8MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 29%rH; Temperature: 24°C
Operator:	AHo

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



9.11_BE_R_Ch512_EGPRS

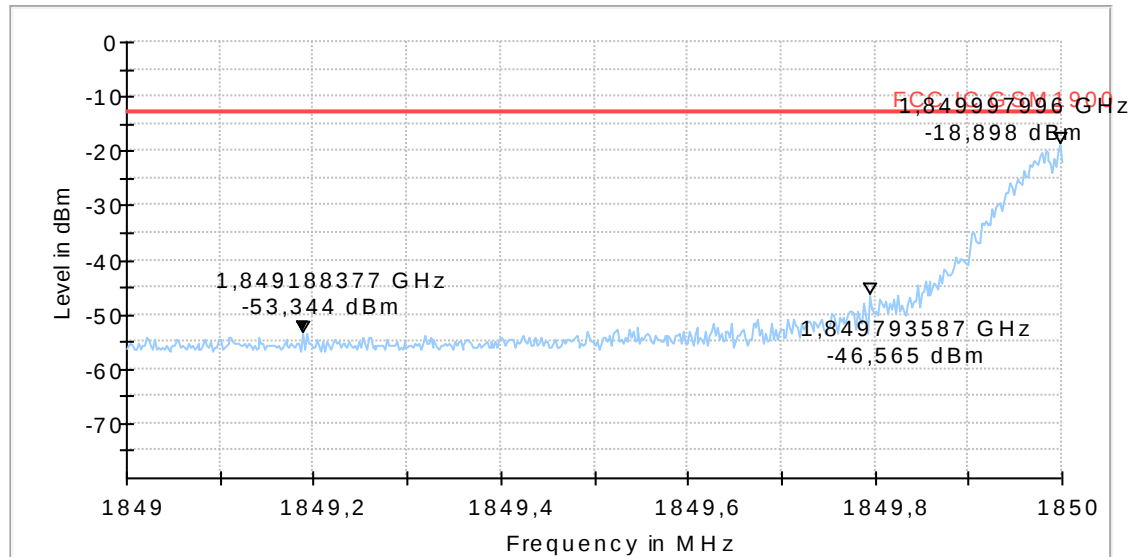
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238 / RSS-133, Issue 6
Comm. Link:	GSM1900, Voice/EDGE
Operating Mode:	MS allocated channel 512 (UL = 1850.
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 29%rH; Temperature: 24°C
Operator:	AHo

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum



9.12_BE_R_Ch810_EGPRS

Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238 / RSS-133, Issue 6
Comm. Link:	GSM1900, Voice/EDGE
Operating Mode:	MS allocated channel 810 (UL = 1909.8MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 29%rH; Temperature: 24°C
Operator:	AHo

EUT Information

EUT Name:	WMC0534PX8 (d)
Manufacturer:	Gemalto
Serial Number:	#0044010814211345
Hardware Rev:	2.3
Software Rev:	02.502
Comment:	--

Full Spectrum

