

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			
 <b>DAkKS</b> Deutsche Akkreditierungsstelle D-PL-12047-01-01	 <b>FCC</b> 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
 <b>WiFi</b> ALLIANCE AUTHORIZED RF LABORATORY	 <b>CTIA Authorized Test Lab</b> LAB CODE 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
<b>CETECOM GmbH</b> 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			

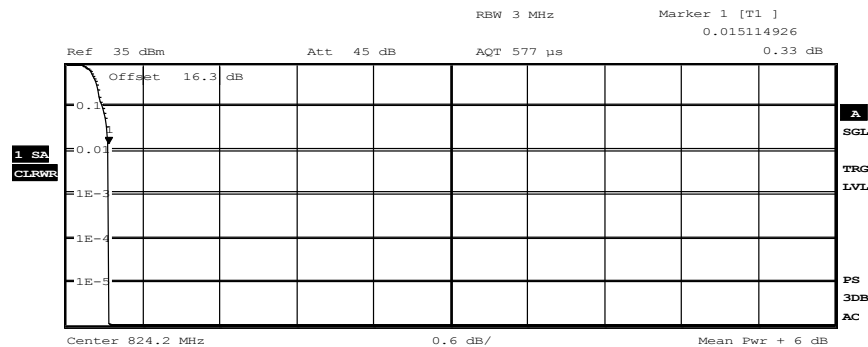
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# 1. Measurement diagrams

## 1.1. Power Measurements and PAPR-Value

### 1.1.1. GSM 850 (GMSK Modulation)

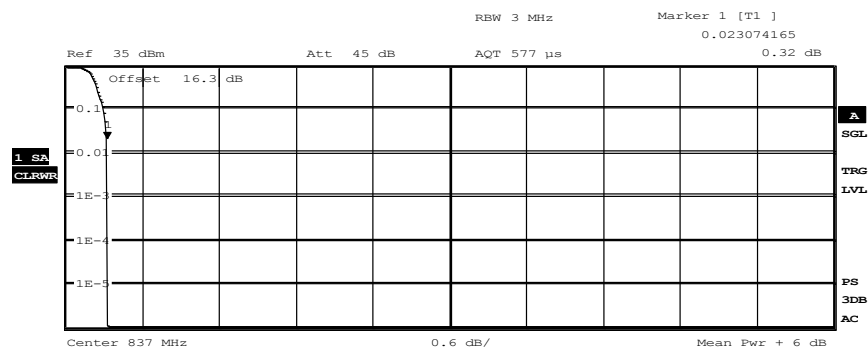


Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	32.31 dBm
Peak	32.64 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 12:04:24

### Channel 128

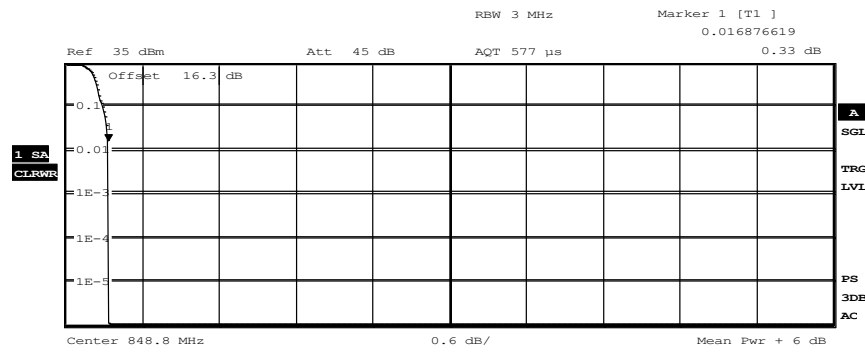


Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	32.25 dBm
Peak	32.57 dBm
Crest	0.32 dB
10 %	0.29 dB
1 %	0.33 dB
.1 %	0.33 dB
.01 %	0.33 dB

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

### Channel 192



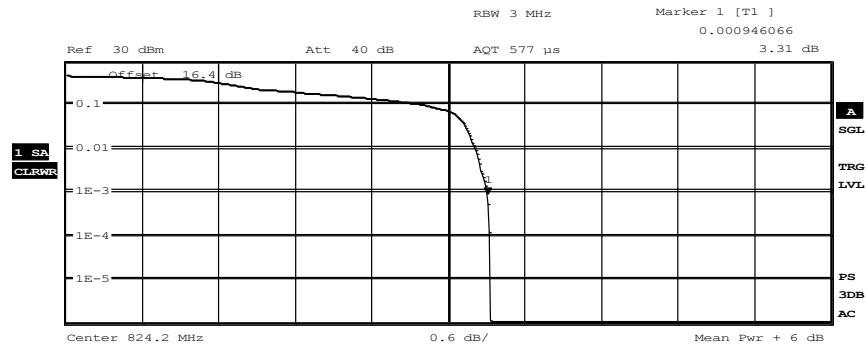
Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

	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)

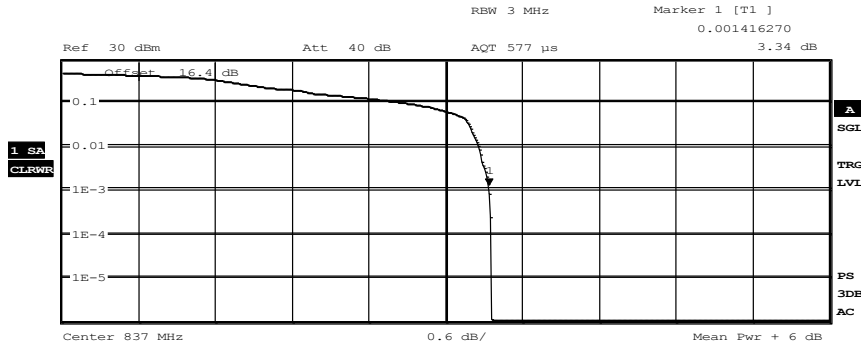


Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

	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

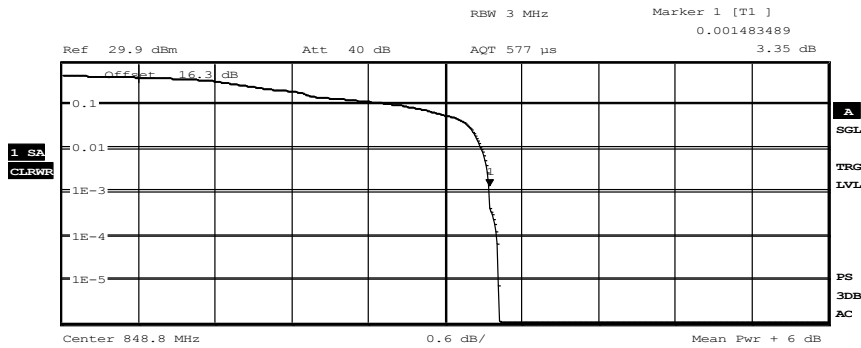


Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	26.05 dBm
Peak	29.41 dBm
Crest	3.35 dB
10 %	2.72 dB
1 %	3.26 dB
.1 %	3.35 dB
.01 %	3.37 dB

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

### Channel 192



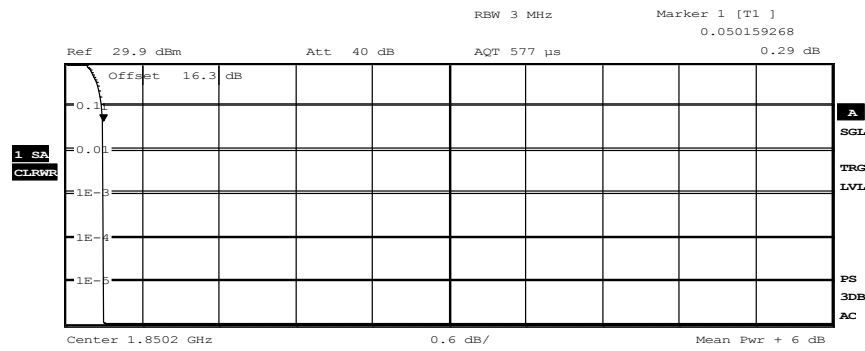
Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	25.89 dBm
Peak	29.31 dBm
Crest	3.42 dB
10 %	2.68 dB
1 %	3.29 dB
.1 %	3.35 dB
.01 %	3.40 dB

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

### Channel 251

### 1.1.3. GSM 1900 (GMSK Modulation)

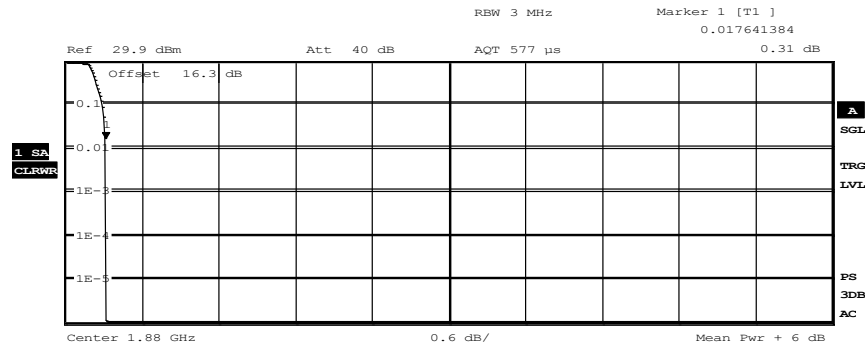


Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	29.43 dBm
Peak	29.73 dBm
Crest	0.30 dB
10 %	0.28 dB
1 %	0.30 dB
.1 %	0.30 dB
.01 %	0.30 dB

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

#### Channel 512

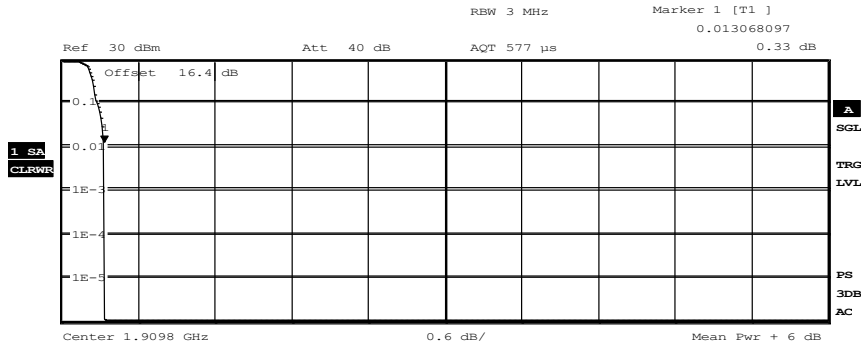


Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	29.70 dBm
Peak	30.01 dBm
Crest	0.31 dB
10 %	0.29 dB
1 %	0.31 dB
.1 %	0.32 dB
.01 %	0.32 dB

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

#### Channel 661



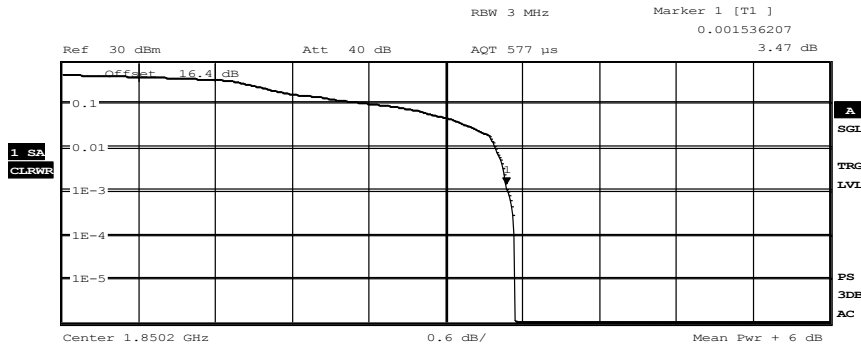
Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	29.29 dBm
Peak	29.62 dBm
Crest	0.33 dB
10 %	0.28 dB
1 %	0.33 dB
.1 %	0.34 dB
.01 %	0.34 dB

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

### Channel 810

#### 1.1.4. GSM 1900 (8-PSK Modulation)

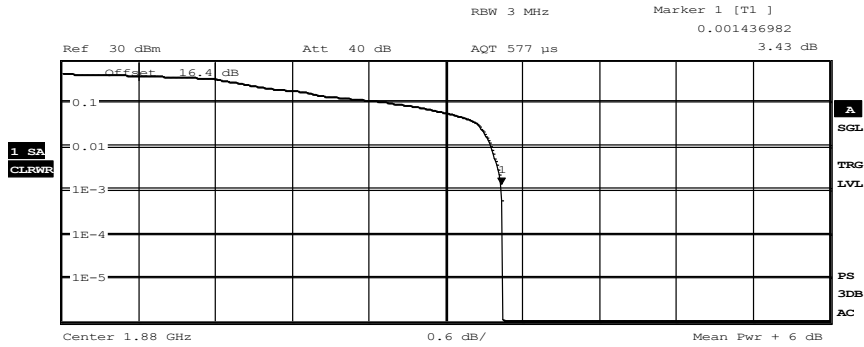


Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	25.30 dBm
Peak	28.84 dBm
Crest	3.54 dB
10 %	2.51 dB
1 %	3.39 dB
.1 %	3.49 dB
.01 %	3.54 dB

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

### Channel 512

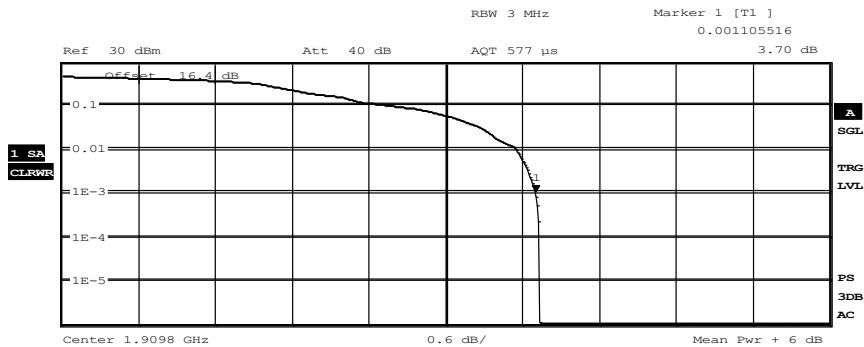


Complementary Cumulative Distribution Function  
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	25.75 dBm
Peak	29.20 dBm
Crest	3.44 dB
10 %	2.62 dB
1 %	3.36 dB
.1 %	3.44 dB
.01 %	3.45 dB

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

### Channel 661



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

Trace 1	
Mean	24.97 dBm
Peak	28.70 dBm
Crest	3.73 dB
10 %	2.63 dB
1 %	3.55 dB
.1 %	3.70 dB
.01 %	3.74 dB

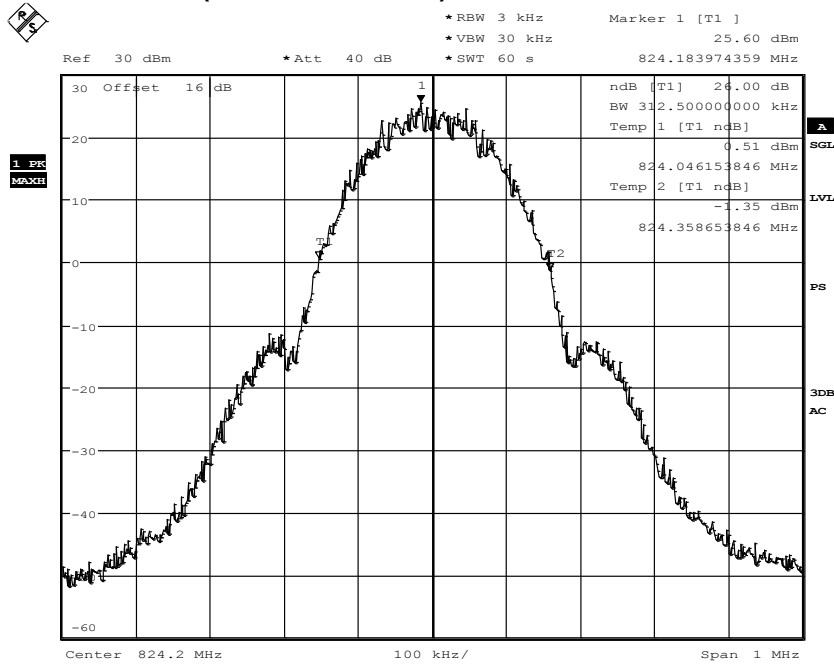
Date: 30.JUL.2015 11:49:06

### Channel 810



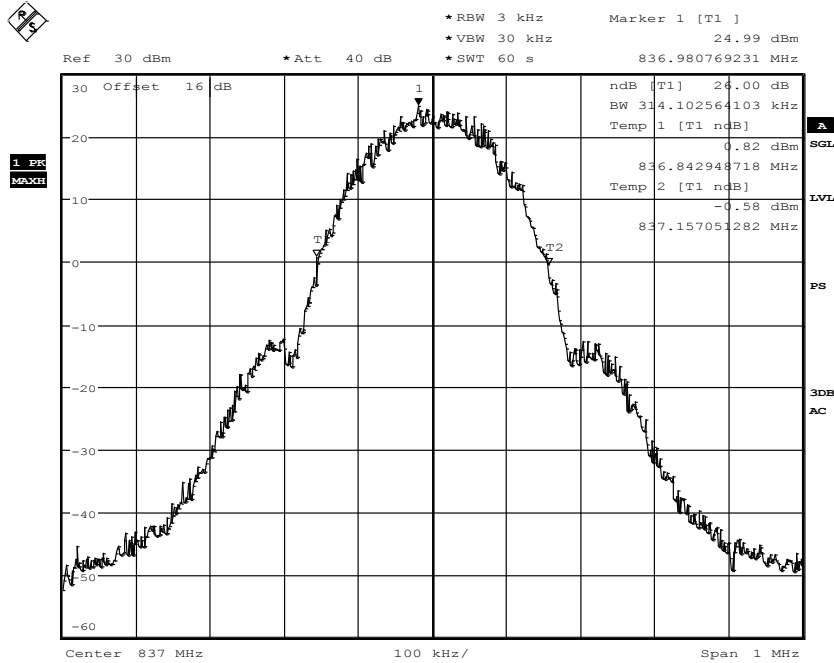
## 1.2. Emission bandwidth (26dBc Bandwidth)

### 1.2.1. GSM 850 (GMSK Modulation)



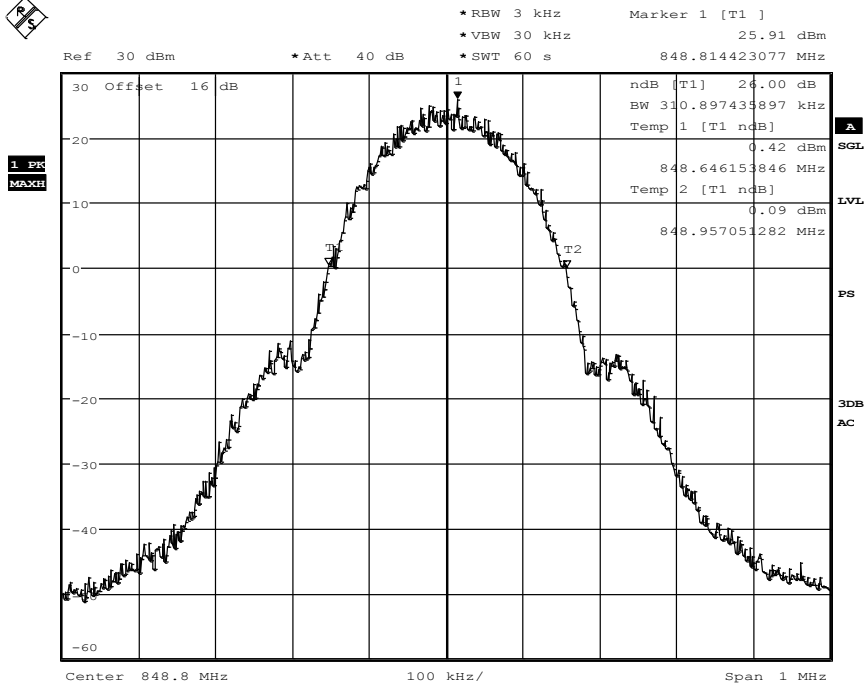
Date: 13.APR.2015 13:29:08

### Channel 128



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

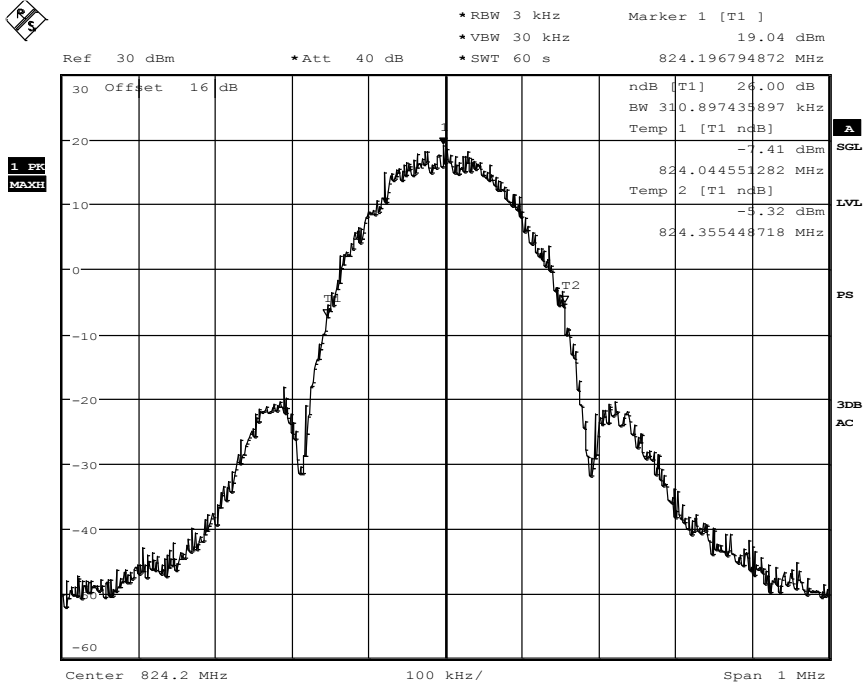
### Channel 192



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

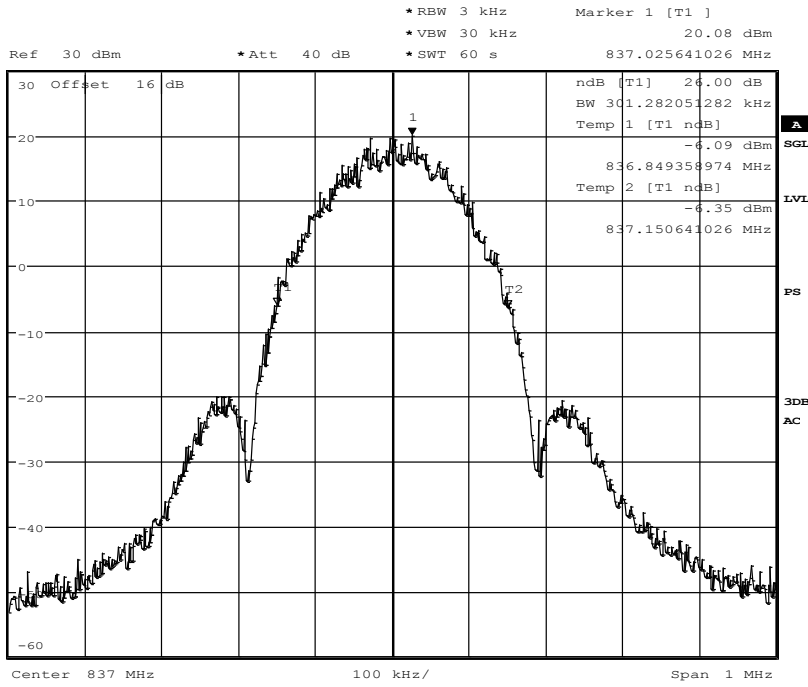
Channel 251

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



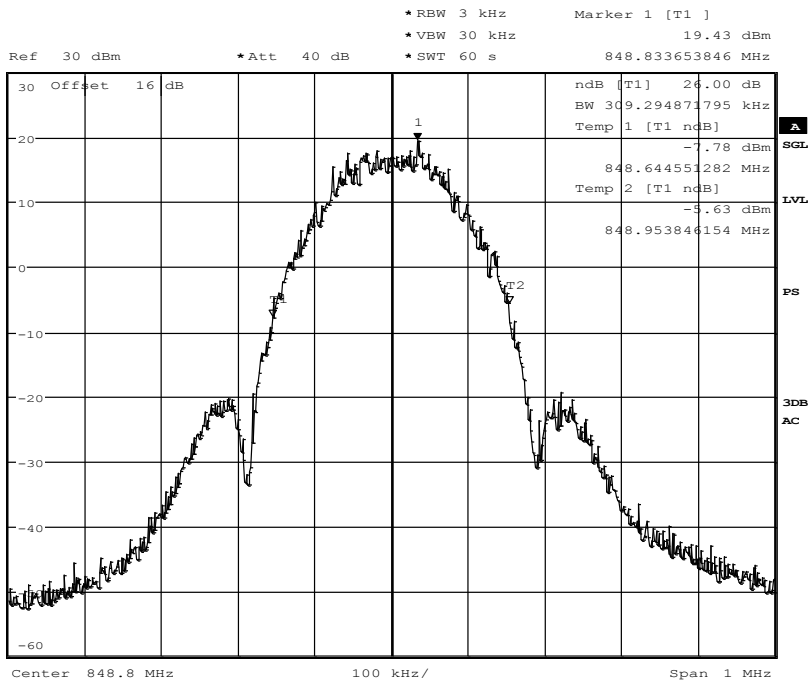
Date: 13.APR.2015 13:37:56

Channel 128



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

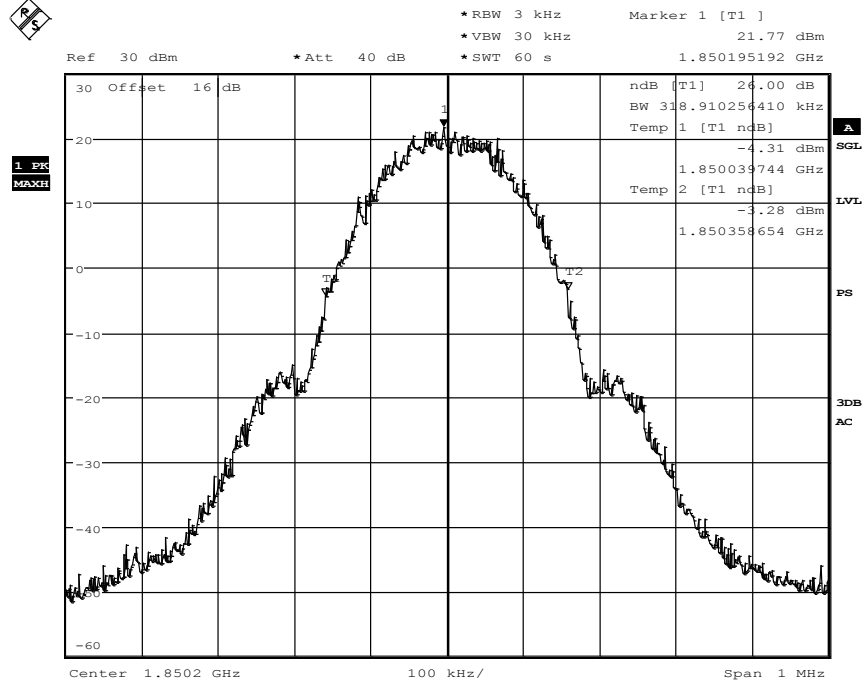
Channel 192



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

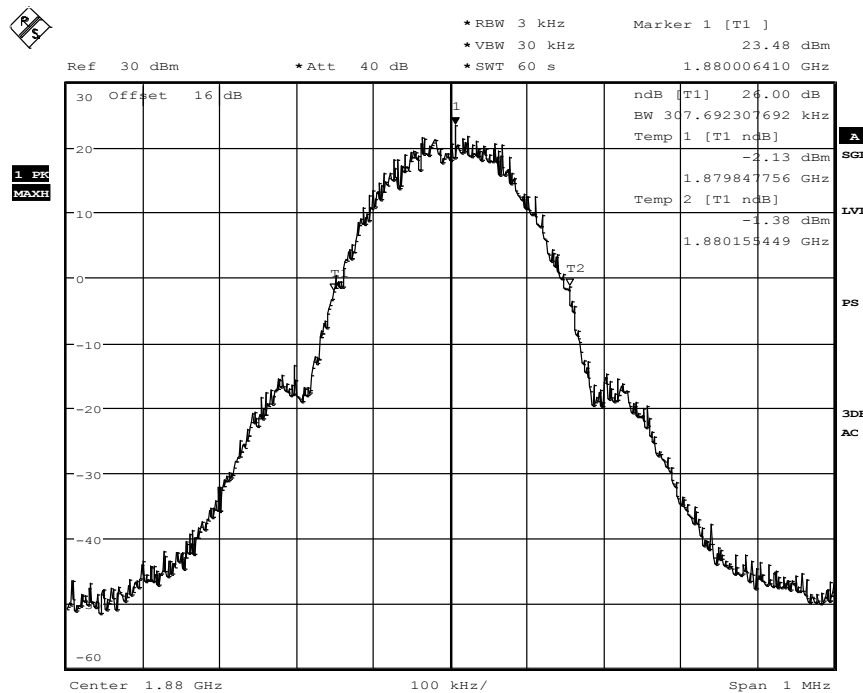
Channel 251

### 1.2.3. GSM 1900 (GMSK-Modulation)



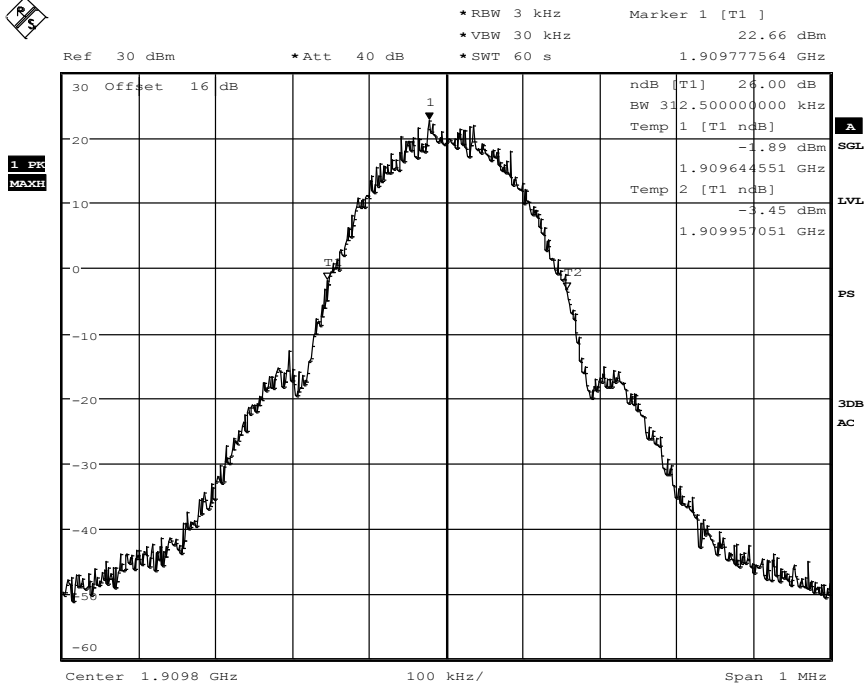
Date: 13.APR.2015 13:21:10

#### Channel 512



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

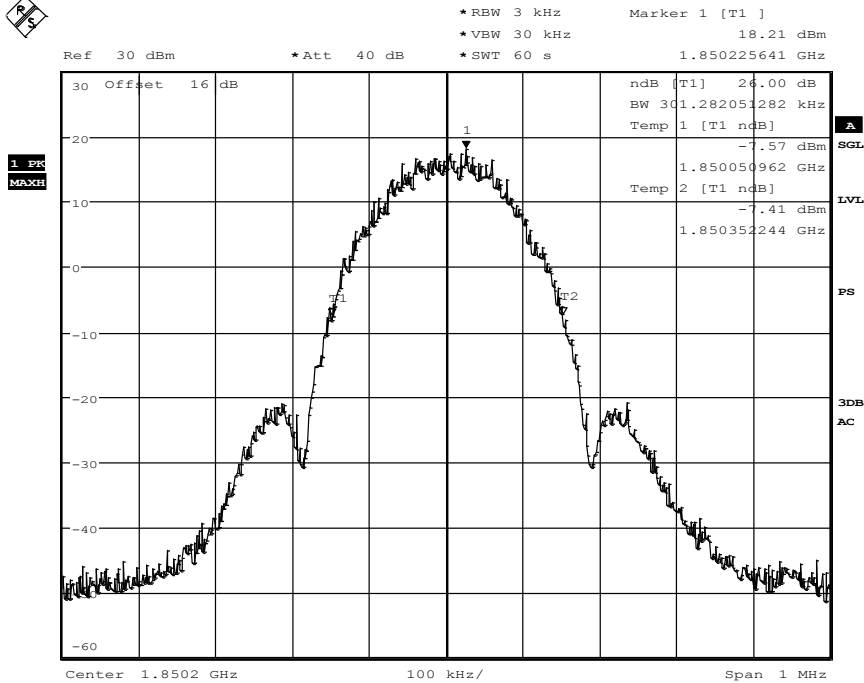
#### Channel 661



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

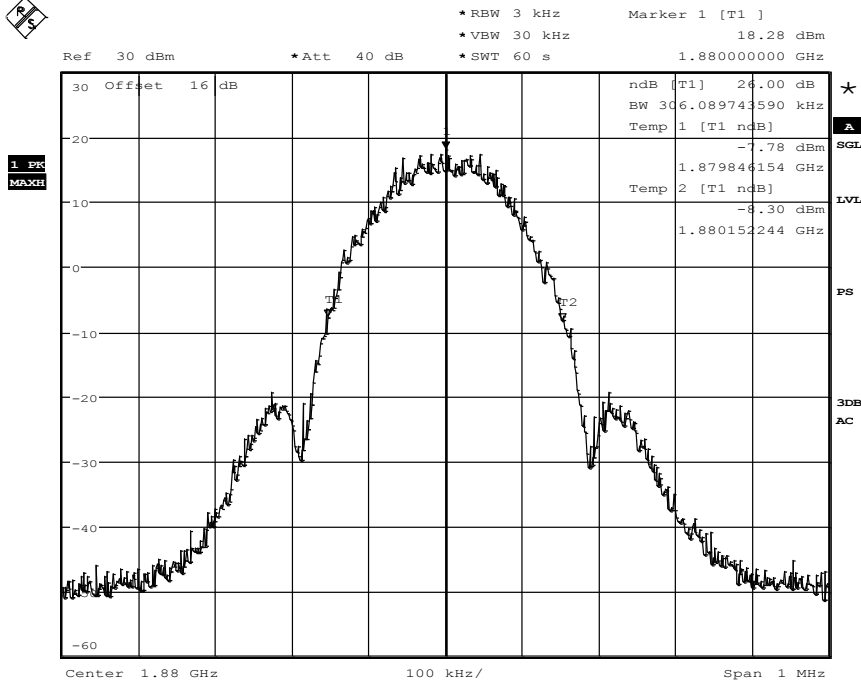
Channel 810

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



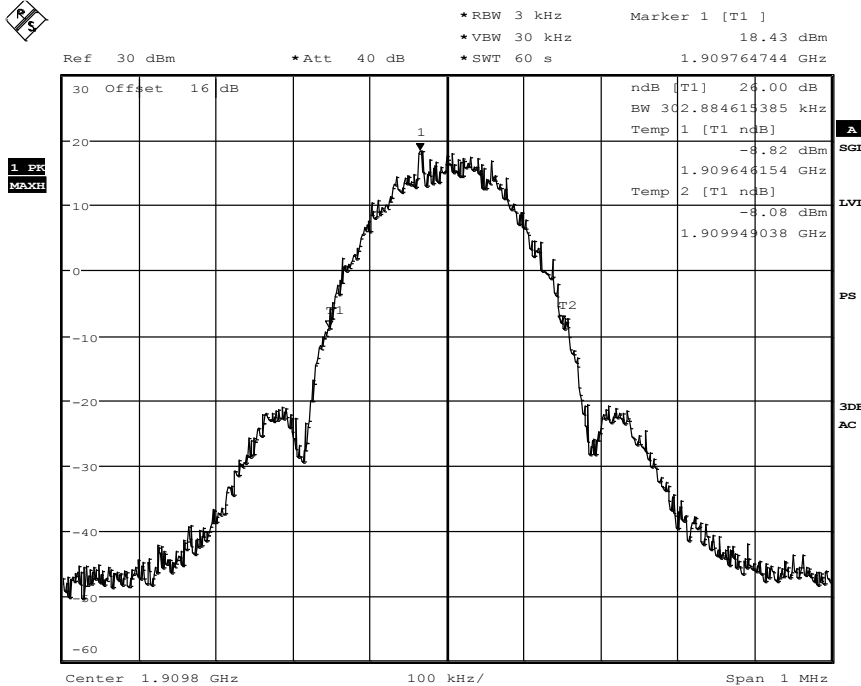
Date: 13.APR.2015 13:11:19

Channel 512



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

Channel 661

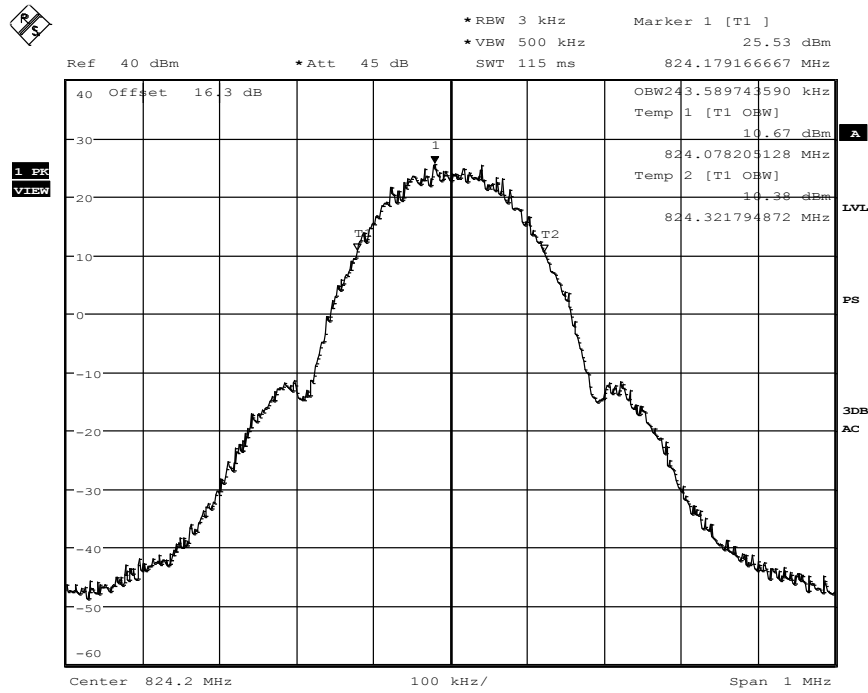


Date: 13.APR.2015 13:15:19

Channel 810

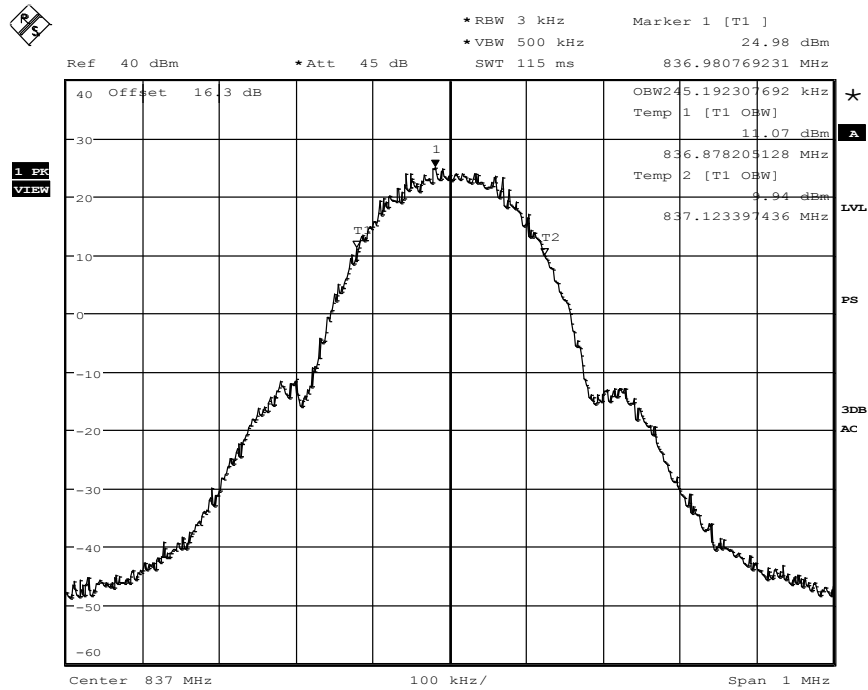
### 1.3. 99% Occupied bandwidth

#### 1.3.1. GSM 850 (GMSK modulation)



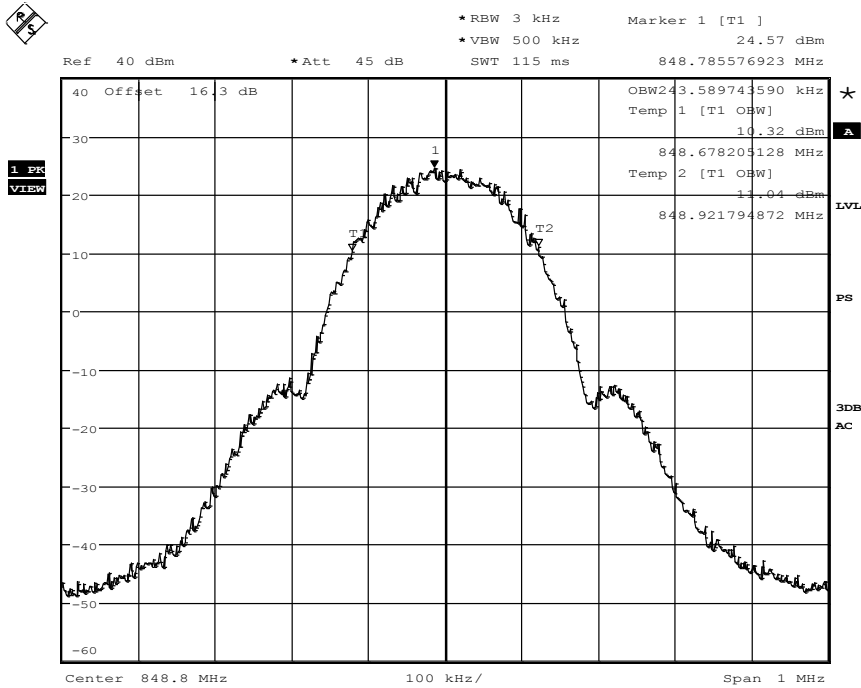
Date: 16.JUL.2015 11:12:05

Channel 128



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

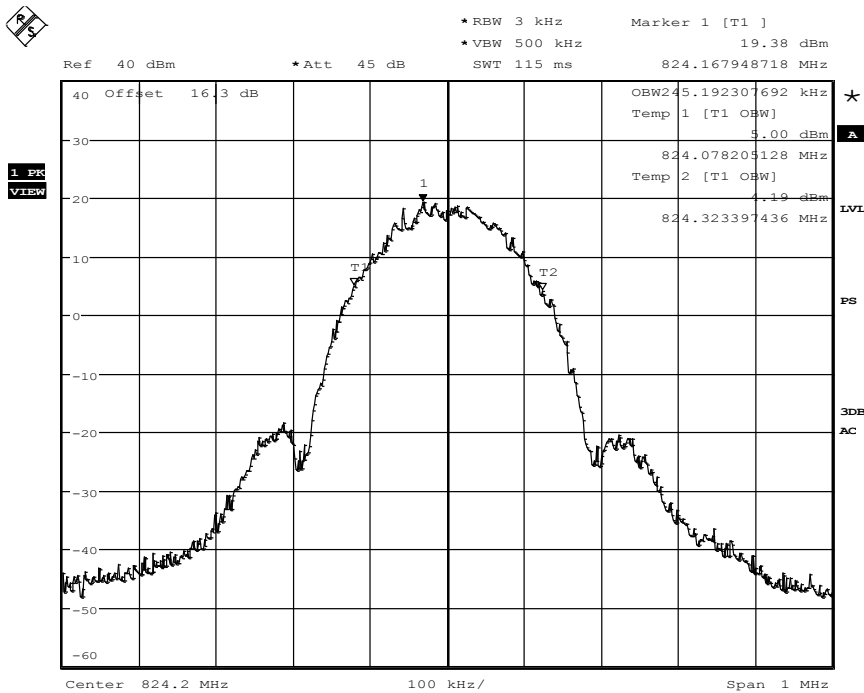
Channel 192



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

Channel 251

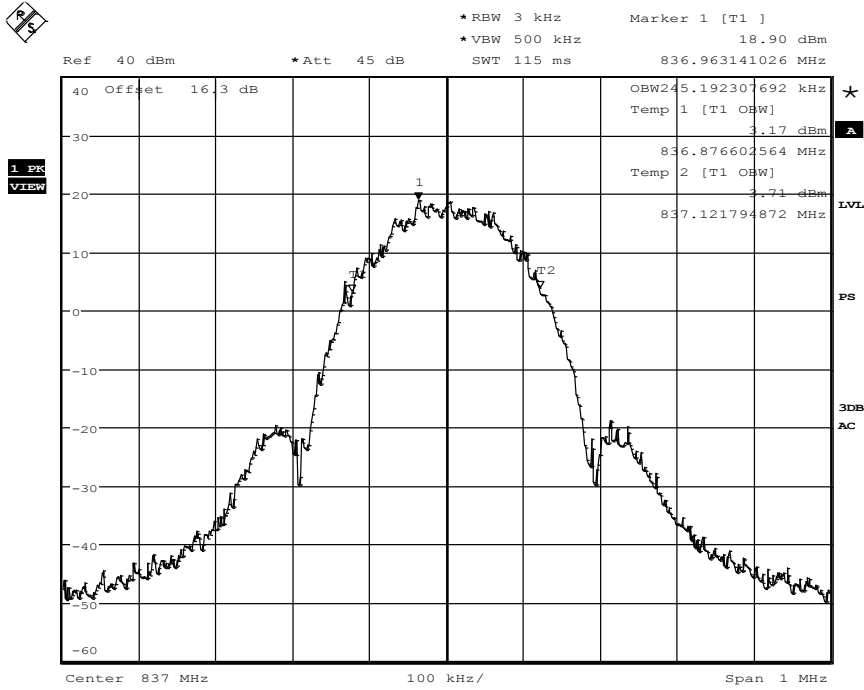
### 1.3.2. E-GPRS 850 (8PSK modulation)



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

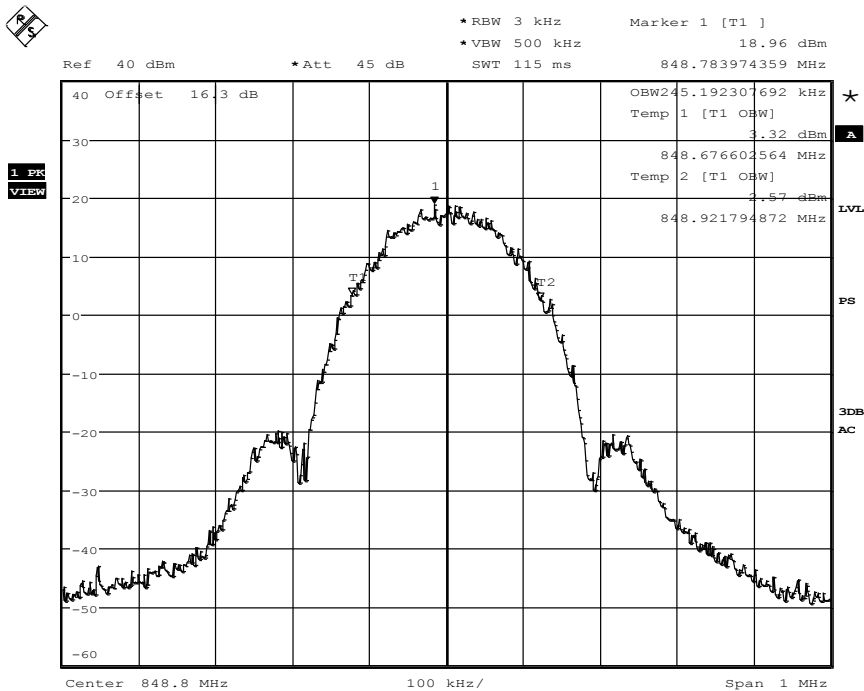
Channel 128





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

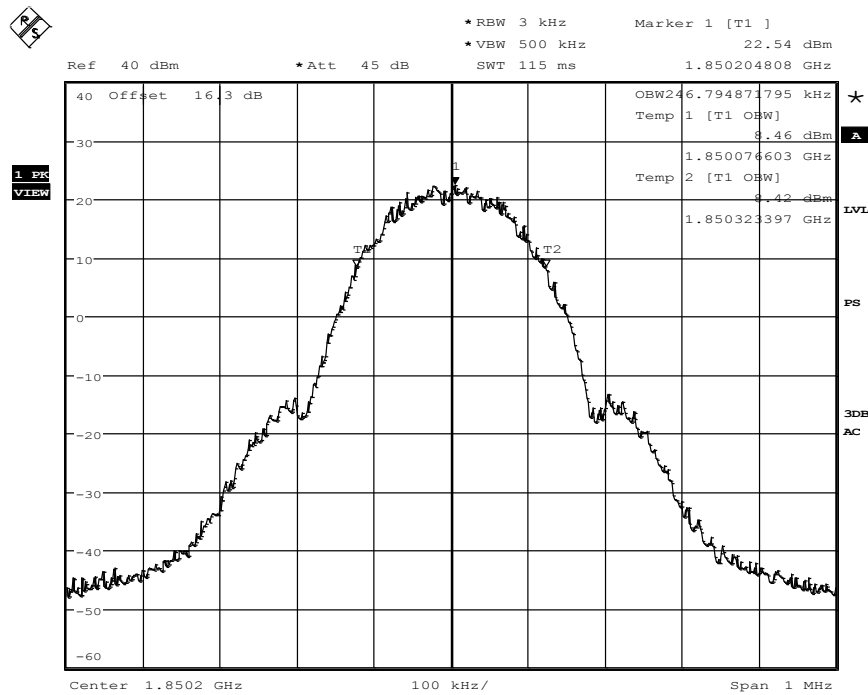
Channel 192



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

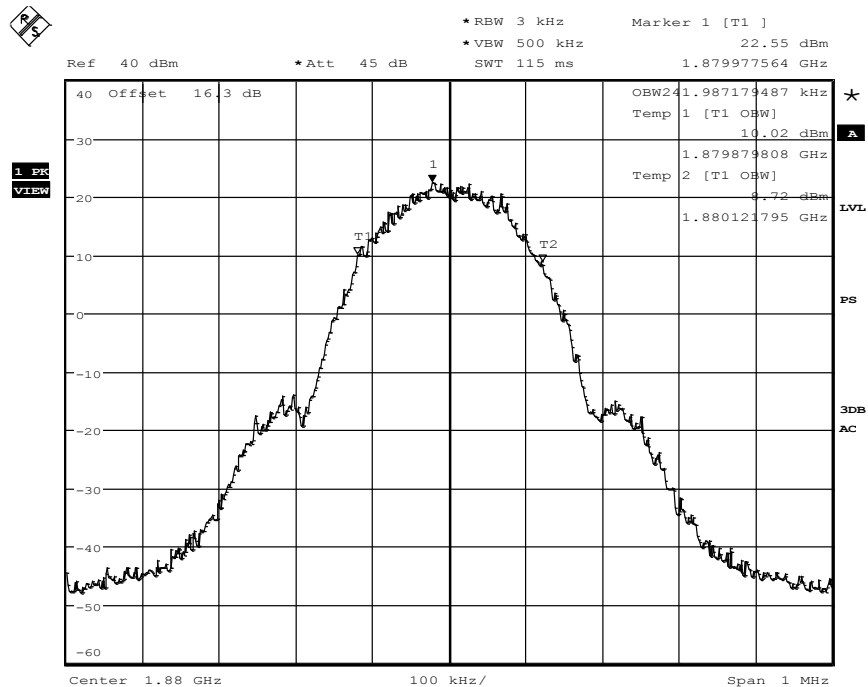
Channel 251

### 1.3.3. GSM 1900 (GMSK-Modulation)



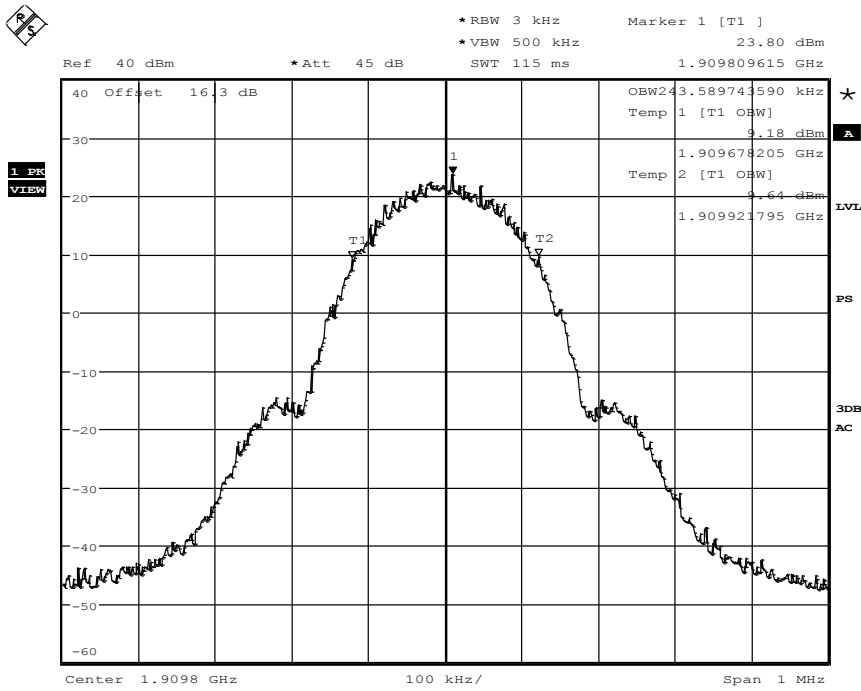
Date: 16.JUL.2015 12:03:45

Channel 512



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

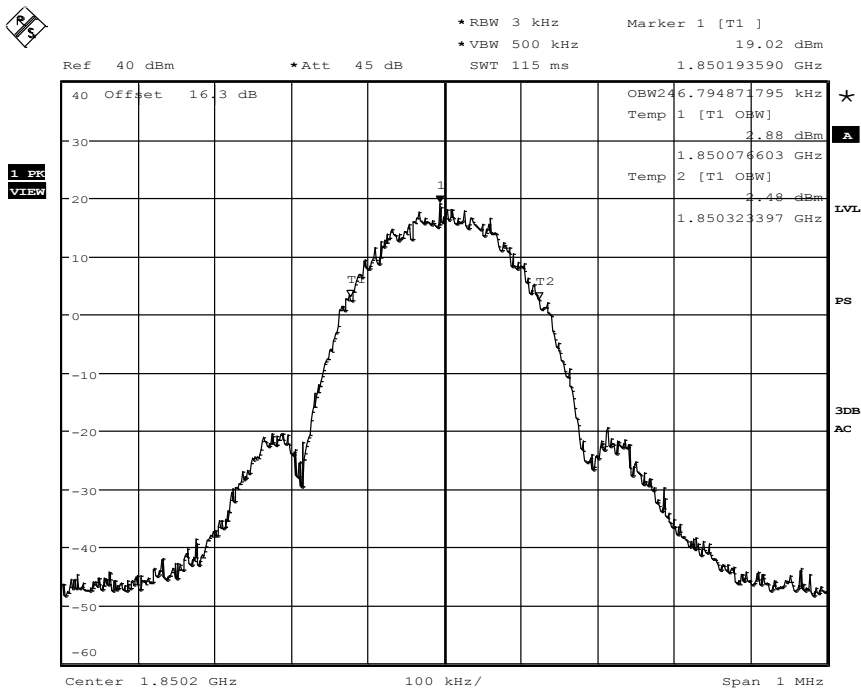
Channel 661



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

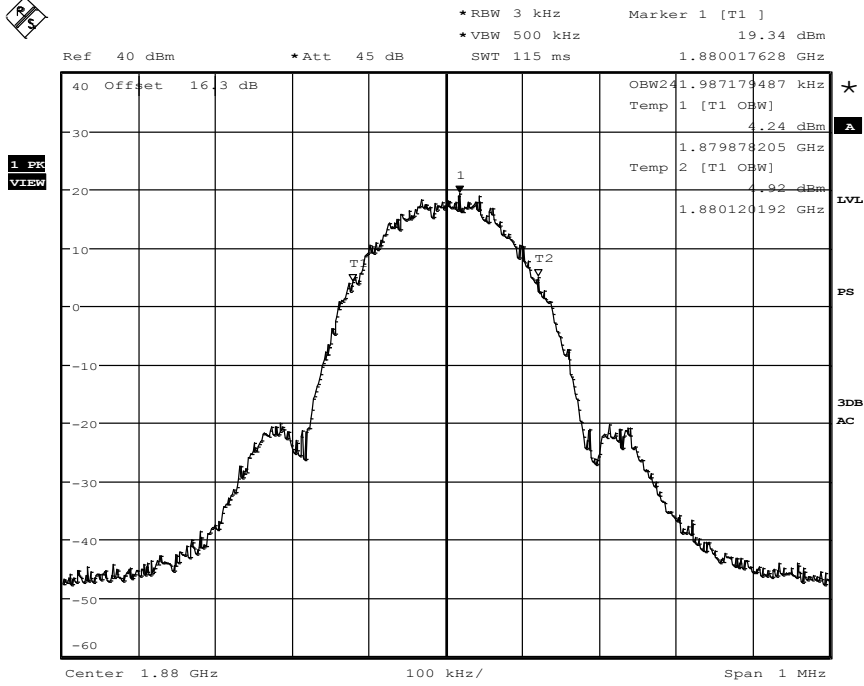
Channel 810

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



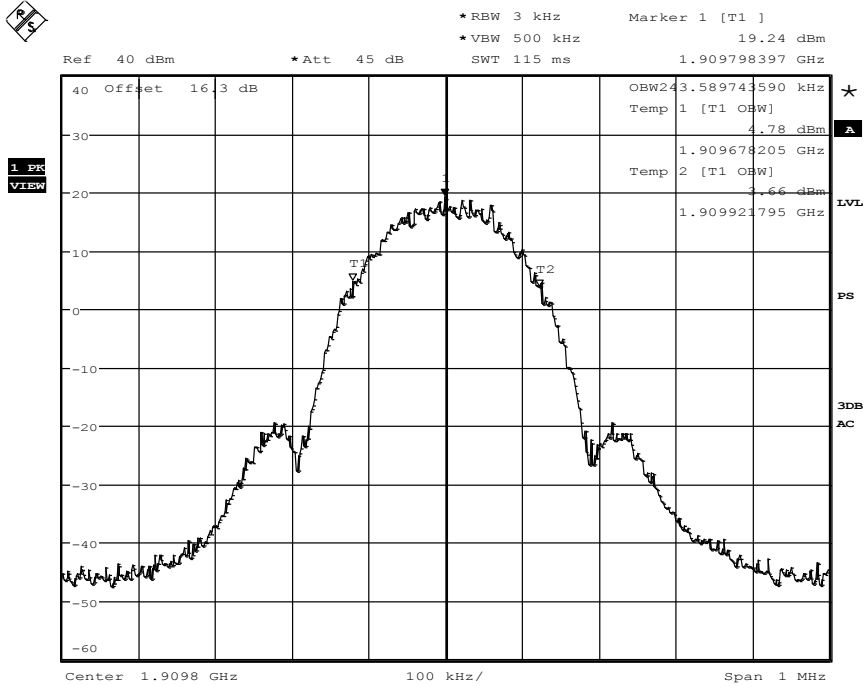
Date: 16.JUL.2015 11:42:28

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

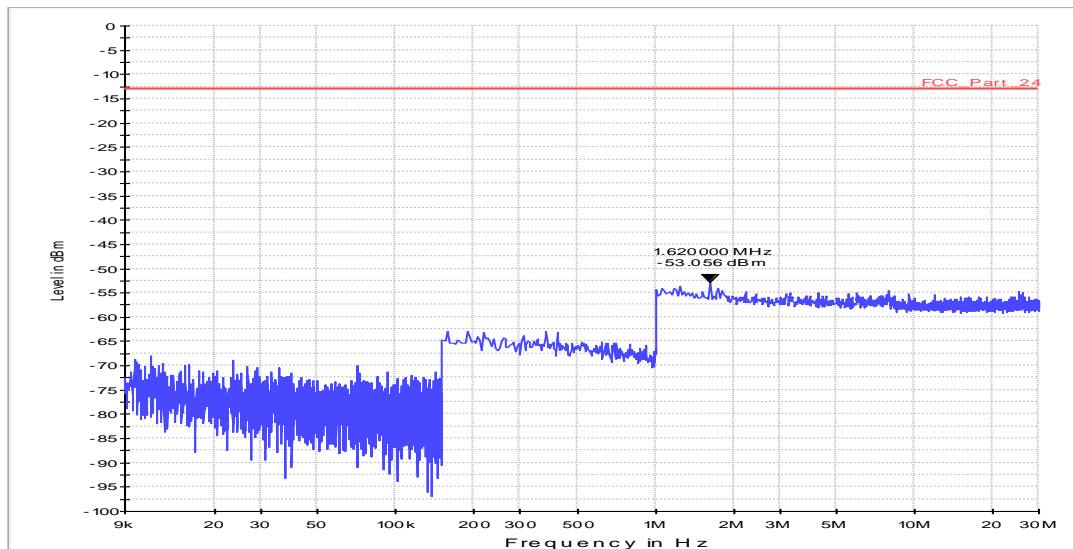
#### Common Information

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**

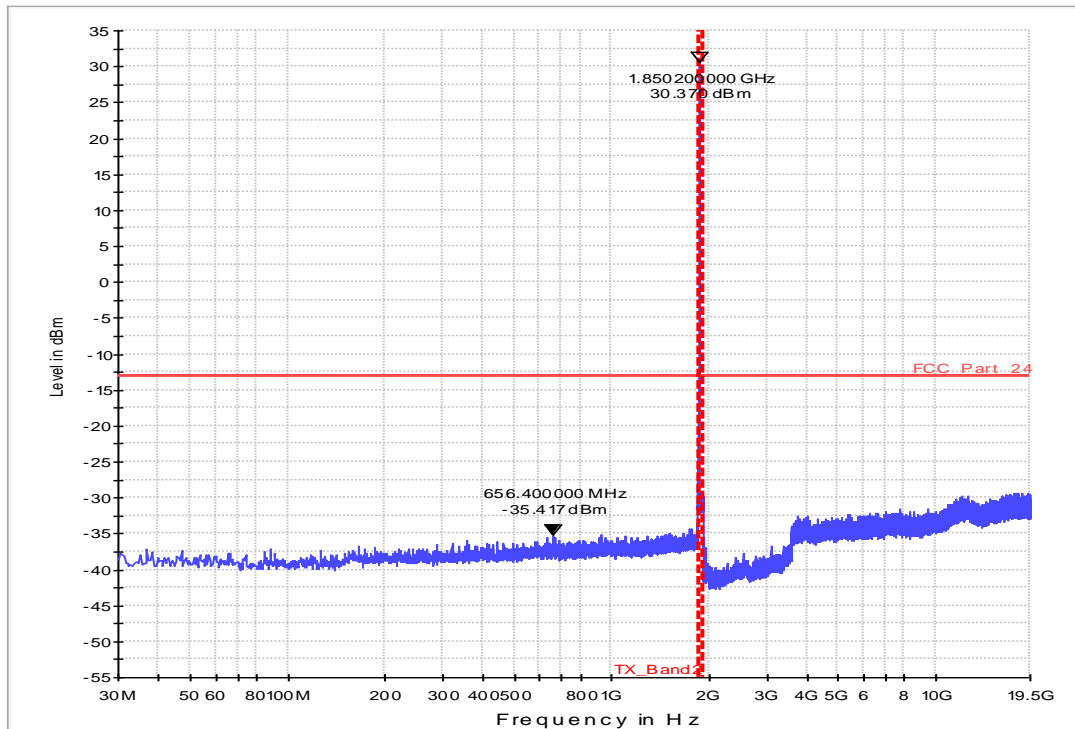
**Common Information**

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	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.: 36.22\_RSE\_Ch661\_GPRS\_Sweep1

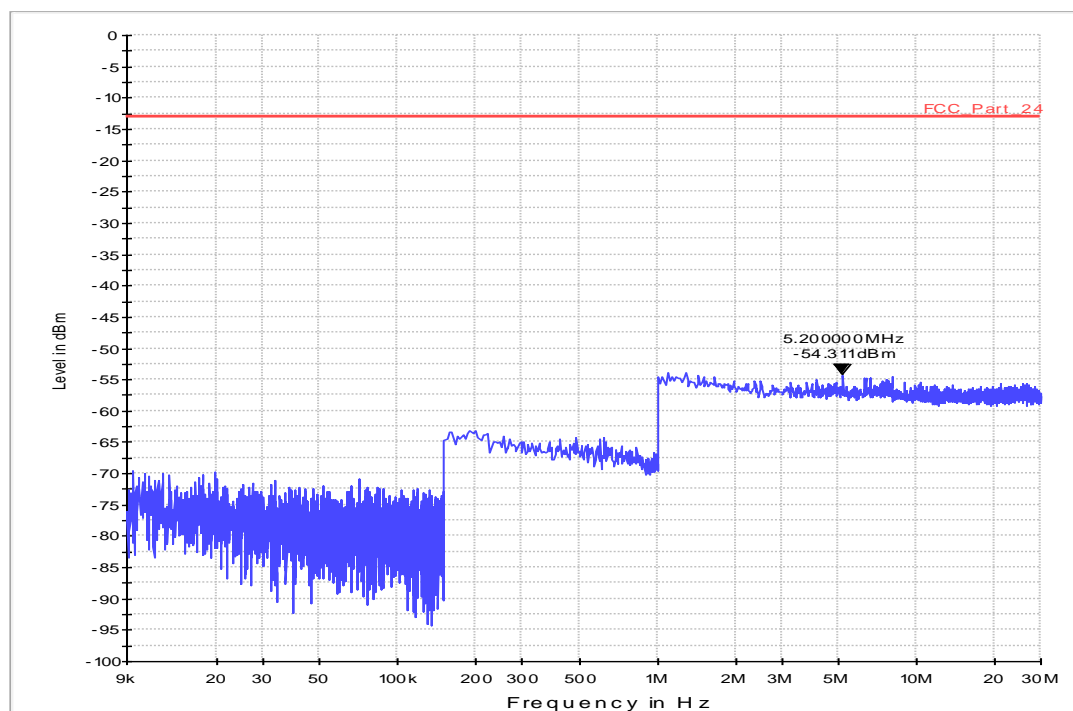
#### Common Information

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	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.: 36.23\_RSE\_Ch661\_GPRS\_Sweep2**

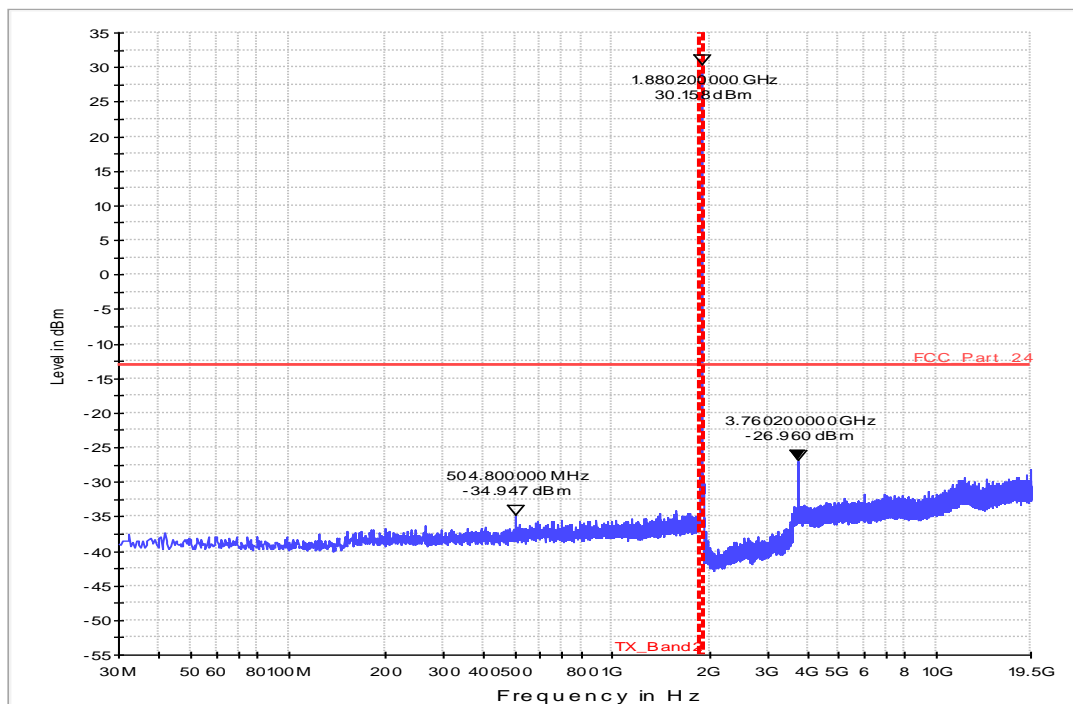
**Common Information**

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**

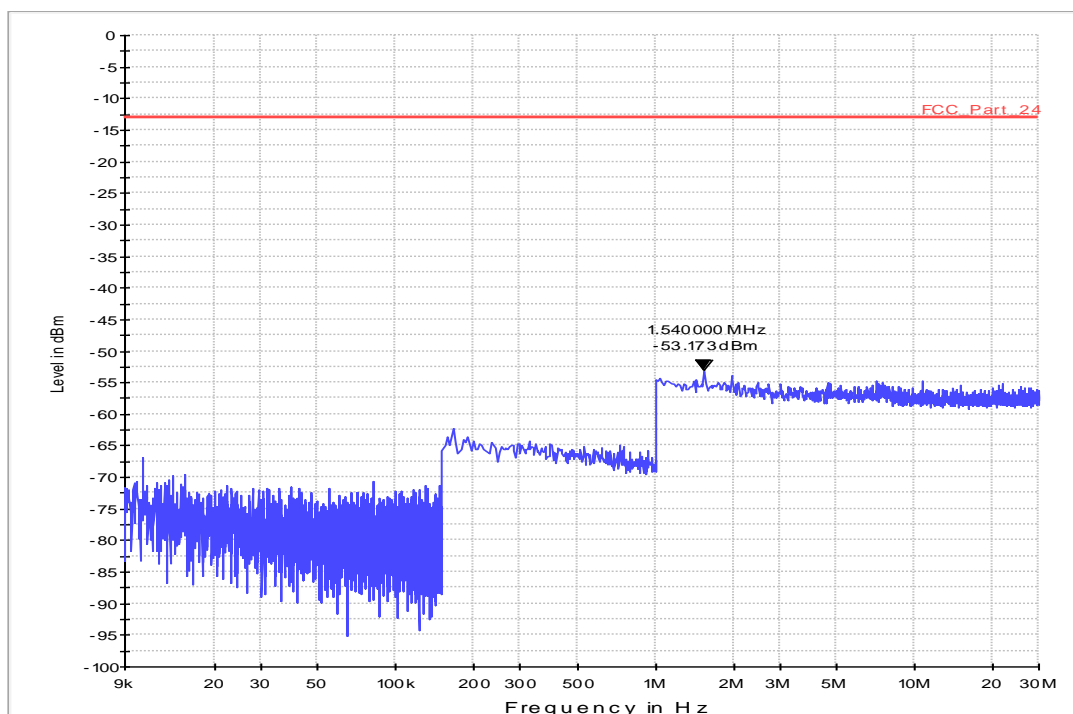
**Common Information**

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**

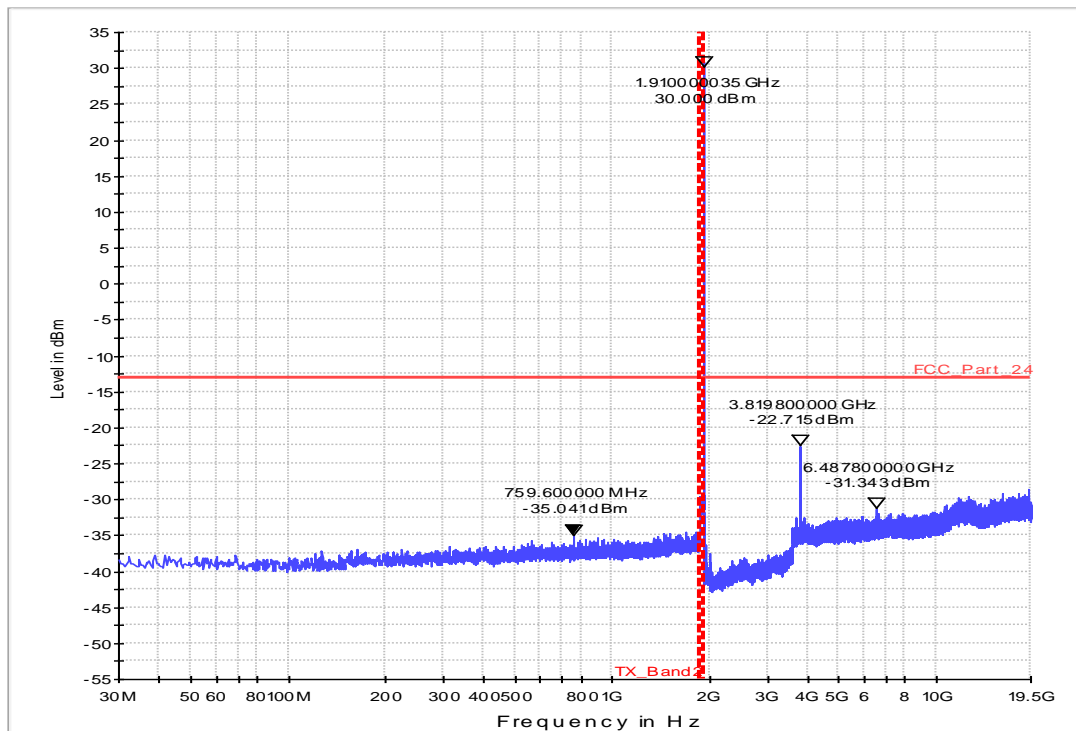
**Common Information**

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	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

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

Diagram No.: 36.26\_RSE\_Ch512\_EGPRS\_Sweep1

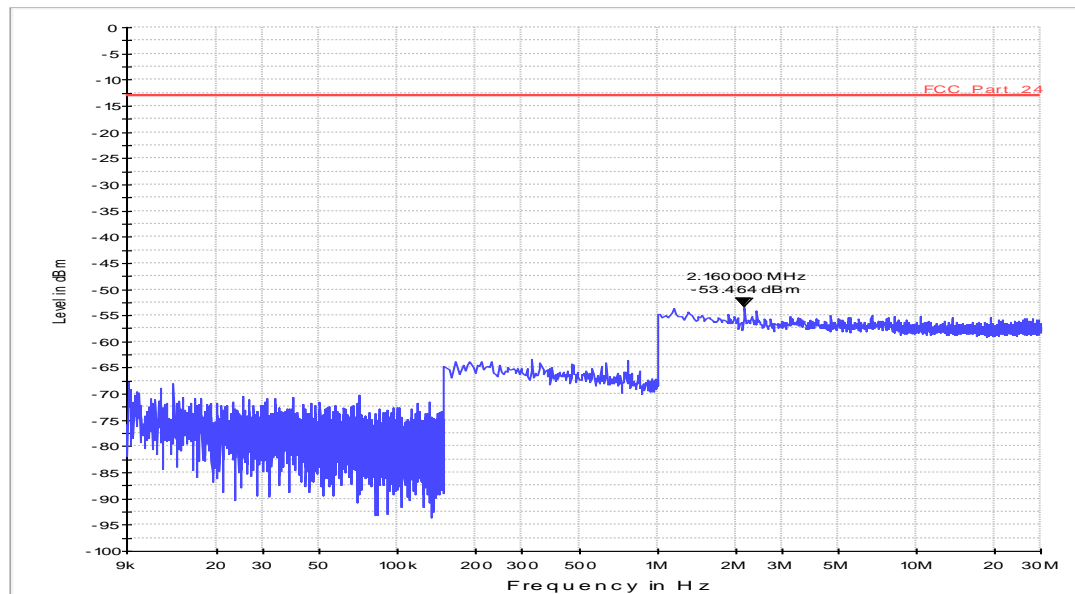
#### Common Information

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	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.: 36.27\_RSE\_Ch512\_EGPRS\_Sweep2**

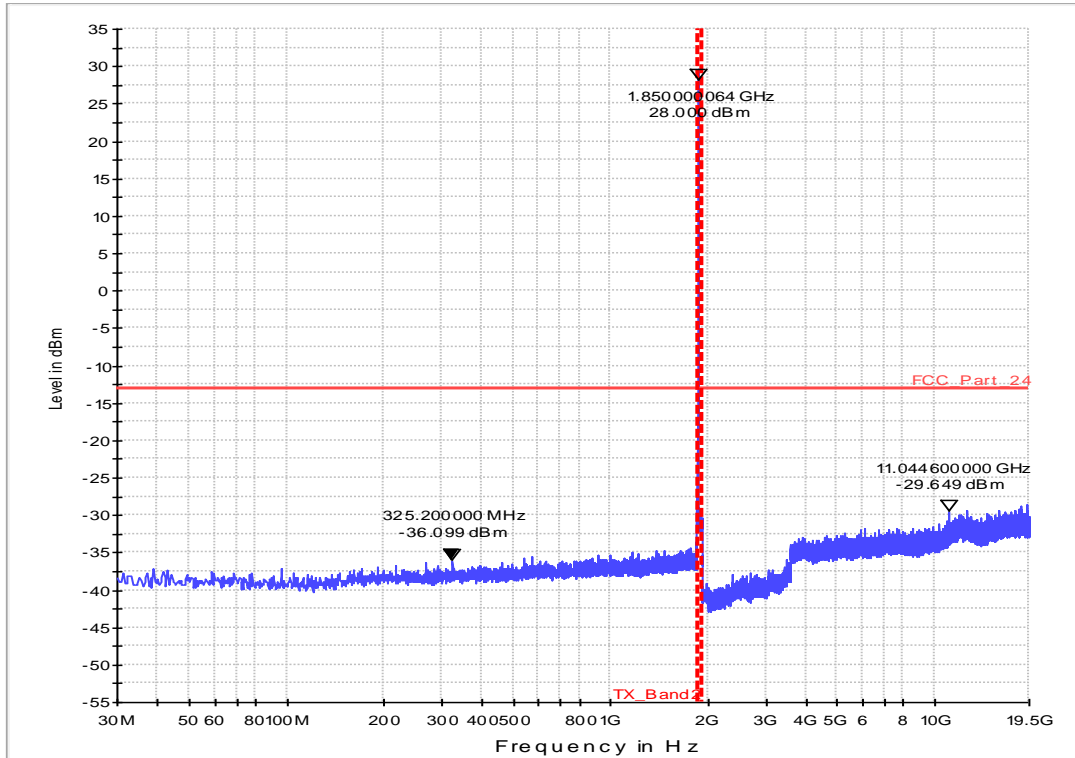
**Common Information**

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**

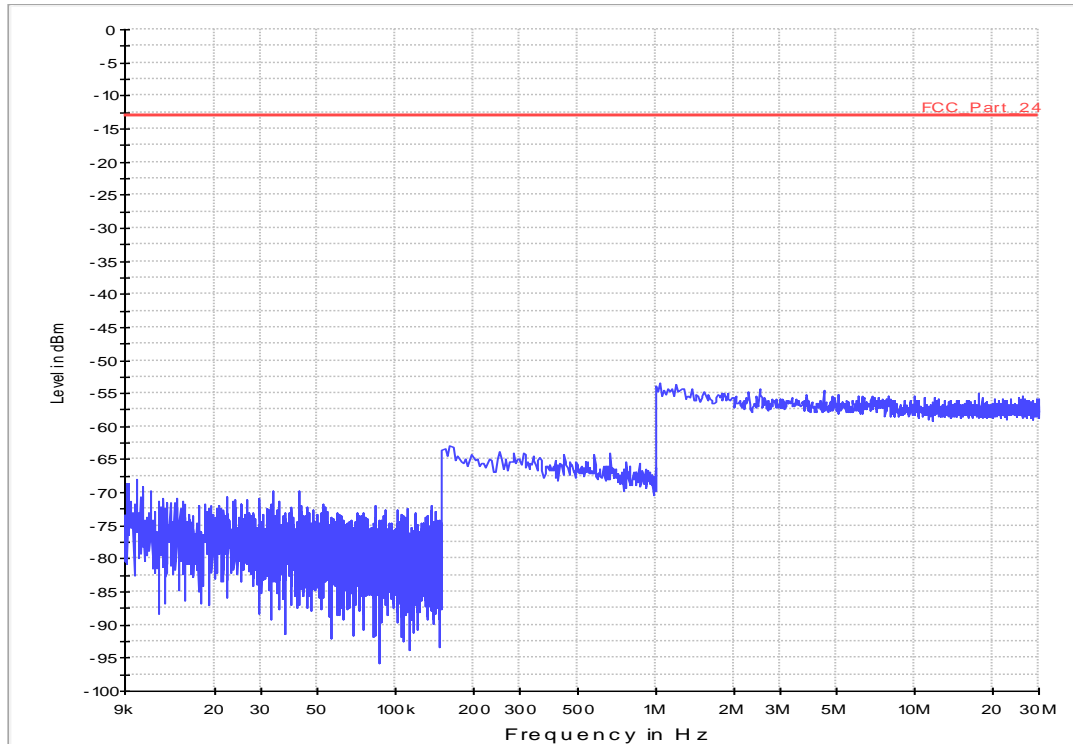
**Common Information**

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

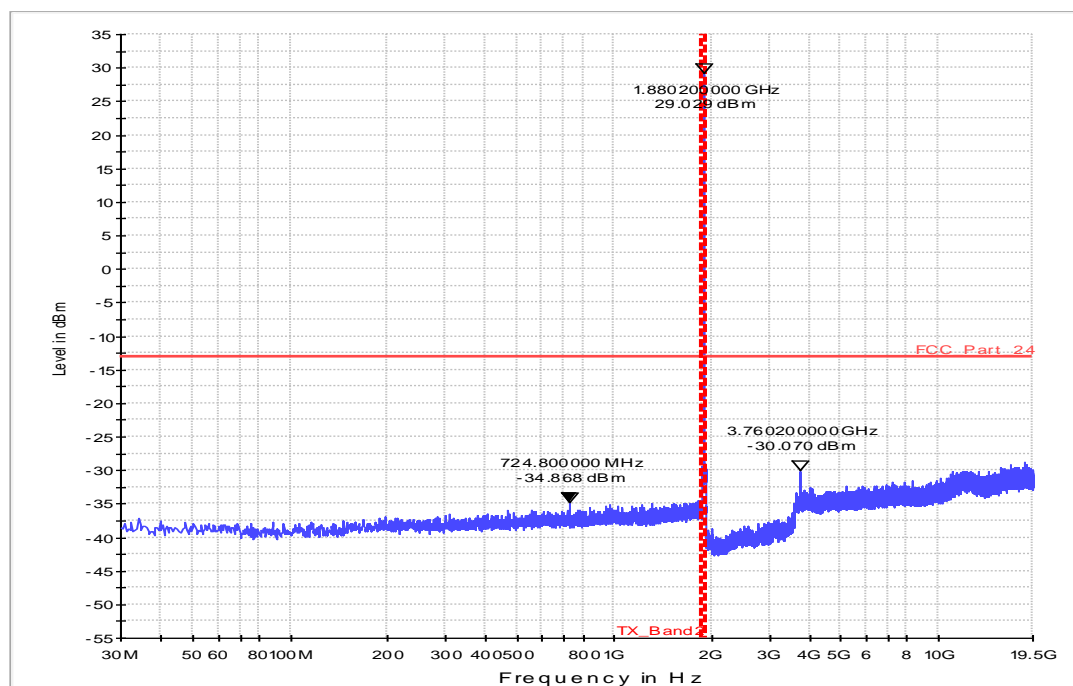
## Common Information

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

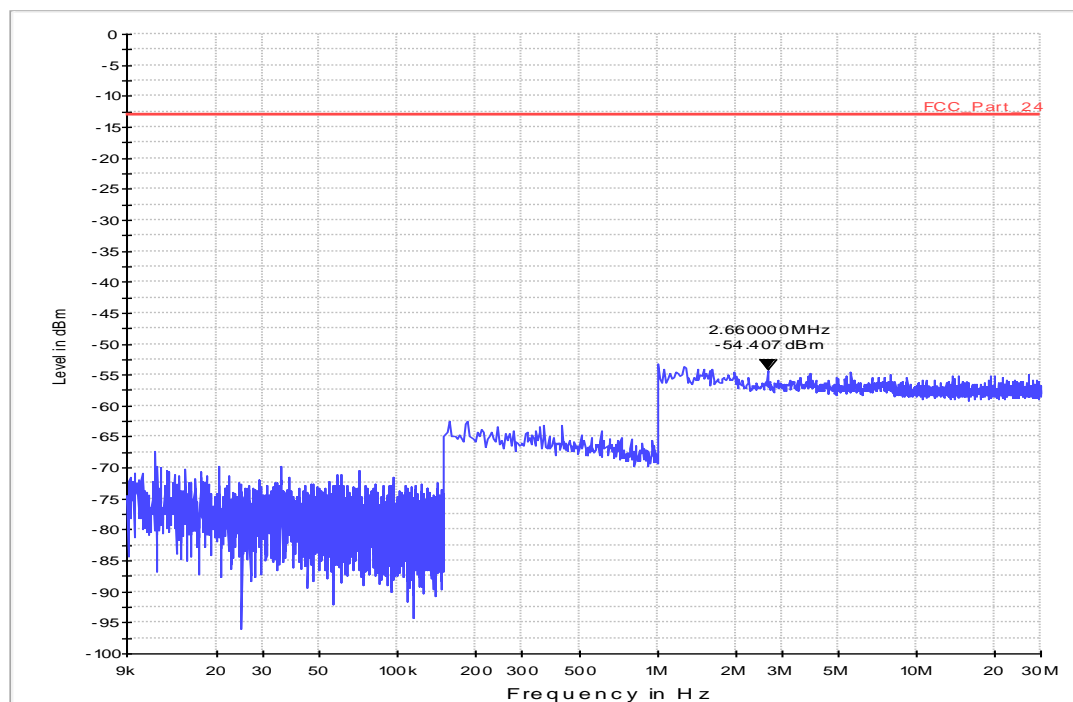
**Common Information**

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**

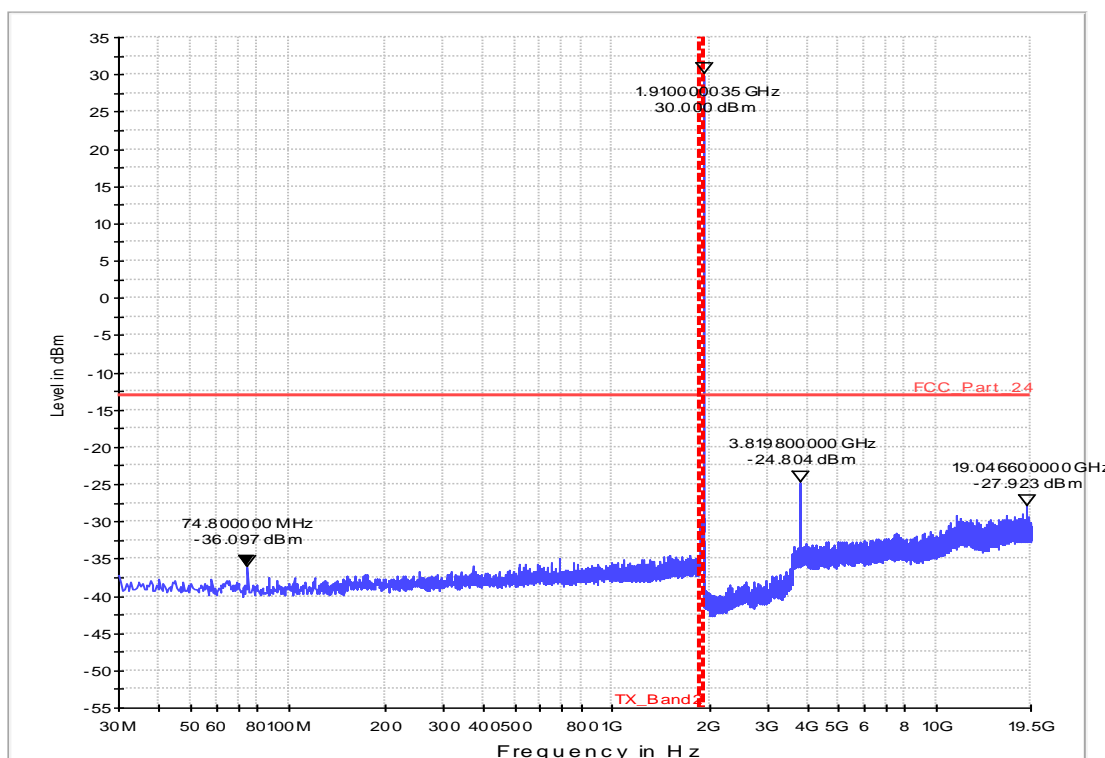
**Common Information**

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	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



### 1.4.3. Out-of-Band emissions - GSM 850 mode (GMSK-Modulation)

#### Diagram No.: 36.01\_RSE\_Ch128\_GSM\_Sweep1

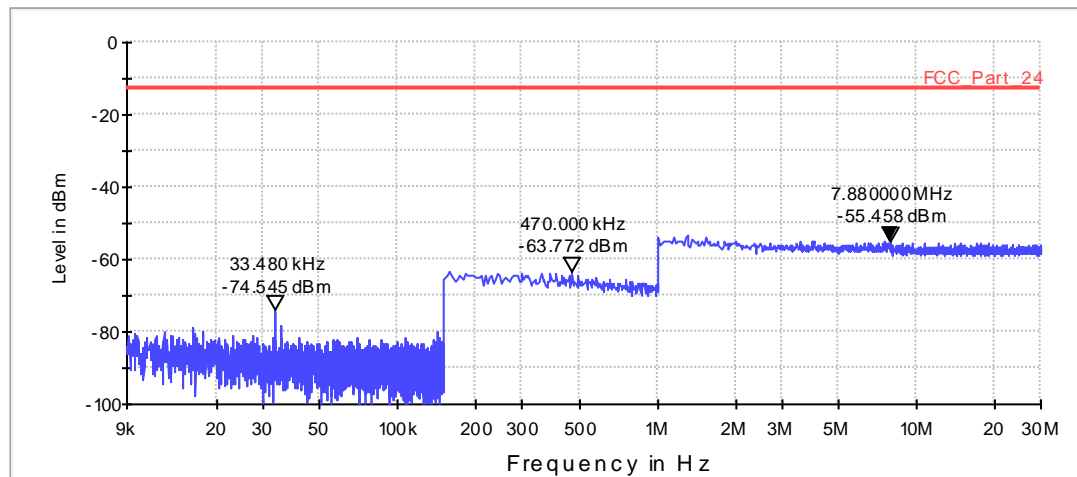
##### Common Information

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**

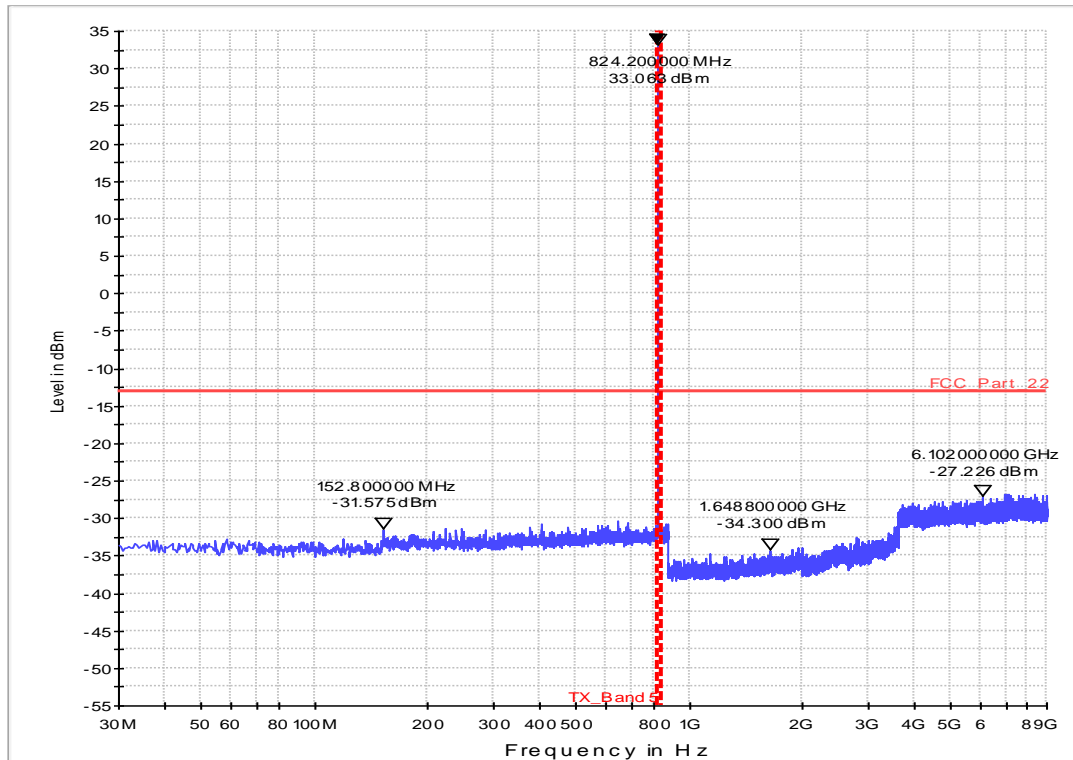
**Common Information**

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

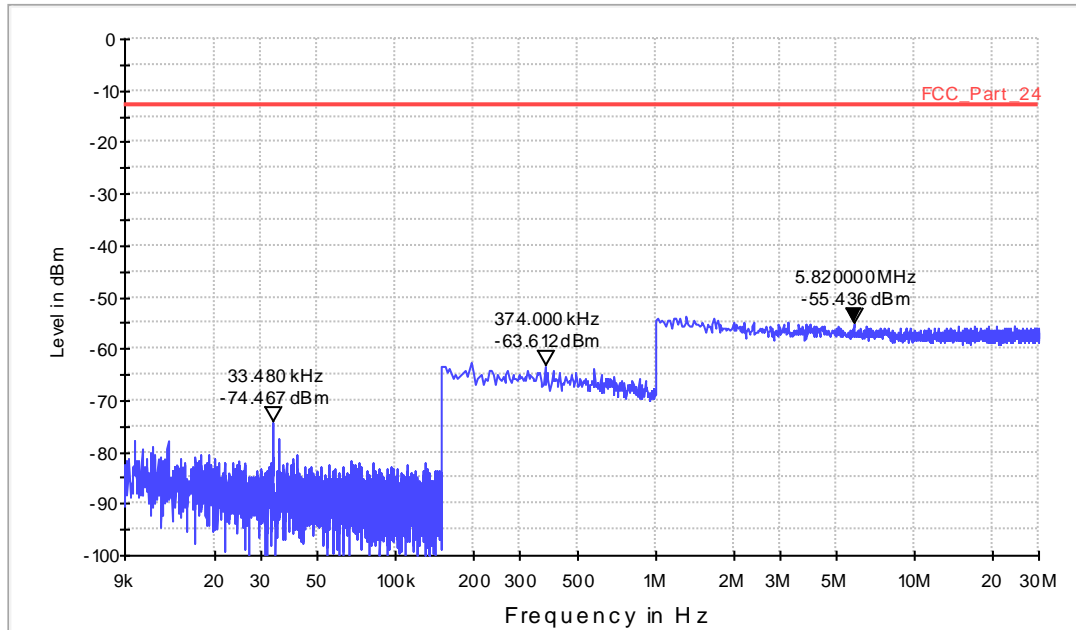
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 823 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
823 MHz - 850 MHz	400 kHz	PK+	1 MHz	0.02 s	0 dB
850 MHz - 880 MHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
880 MHz - 9 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.03\_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**

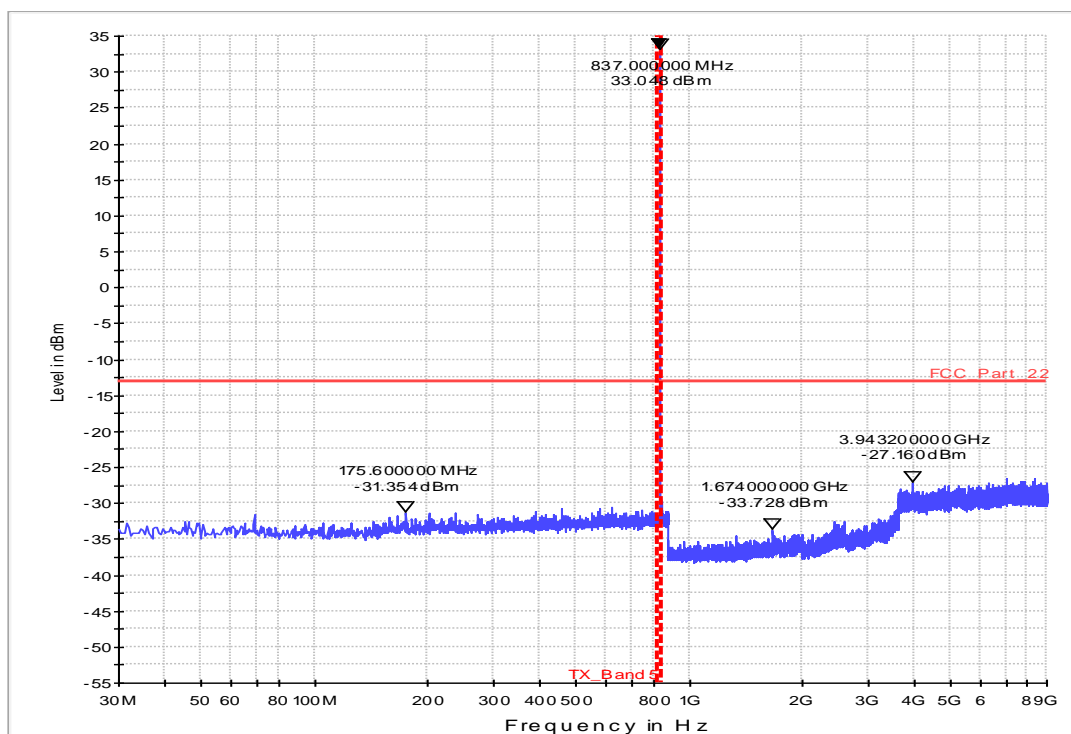
**Common Information**

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**

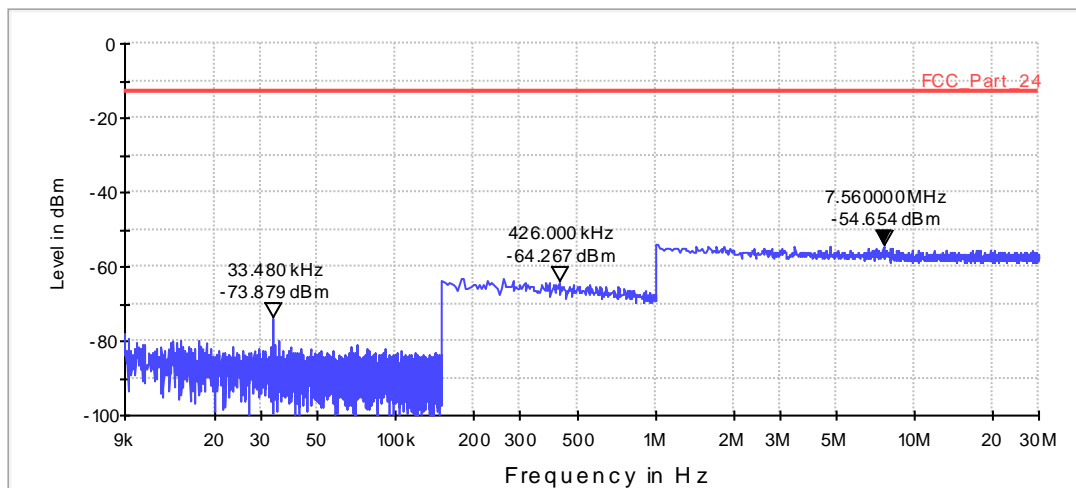
**Common Information**

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**

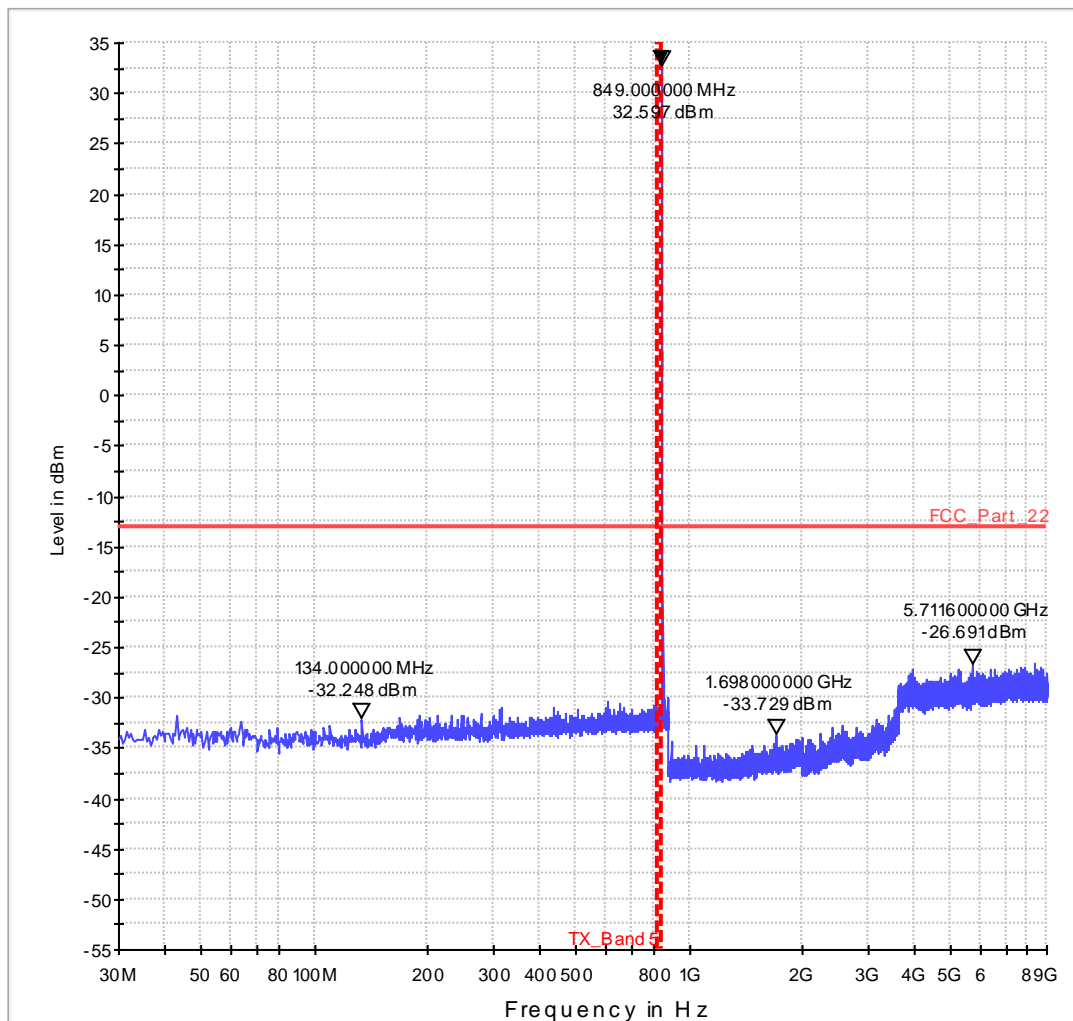
**Common Information**

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

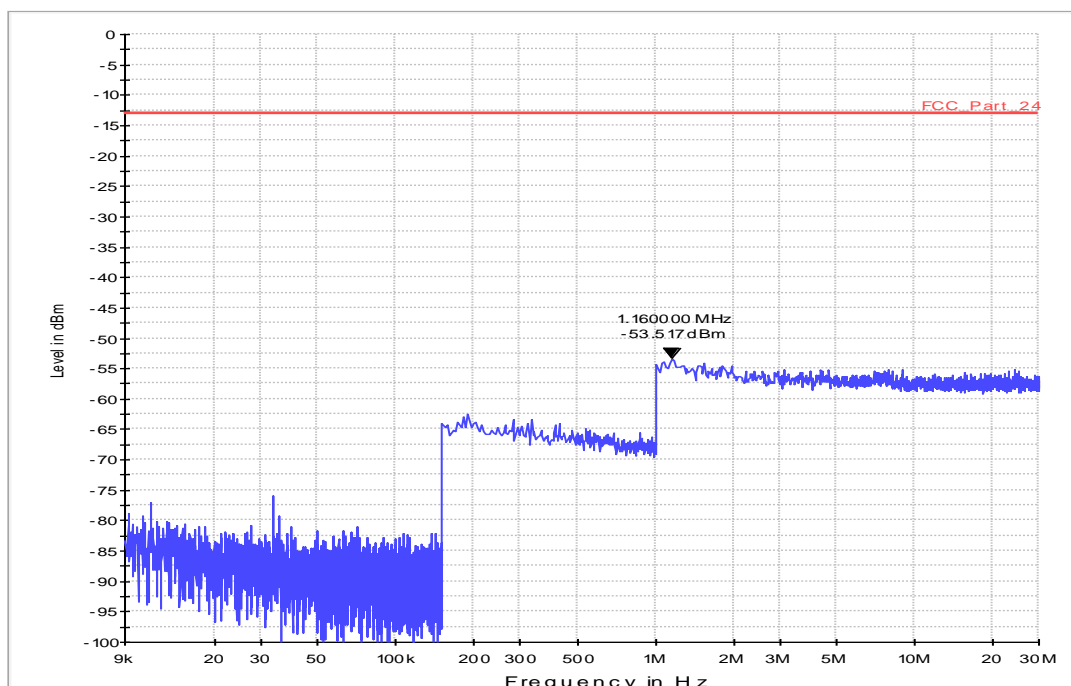
#### Common Information

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	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.: 36.08\_RSE\_Ch128\_EGPRS\_Sweep2**

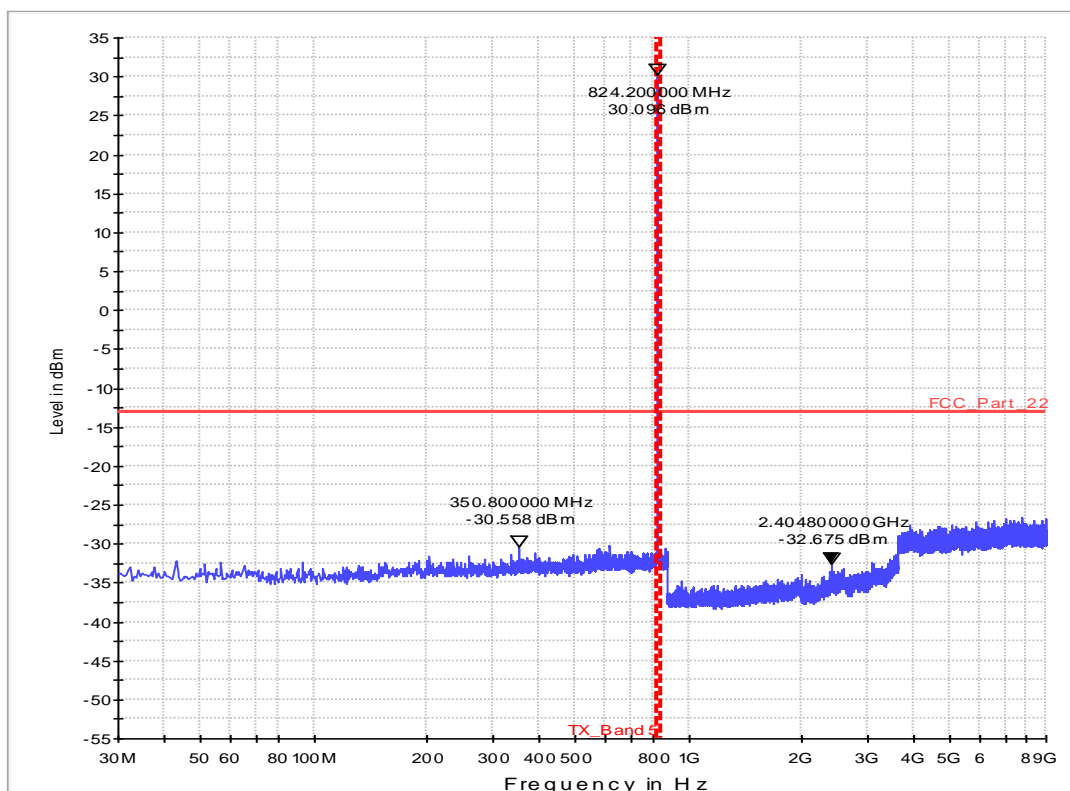
**Common Information**

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

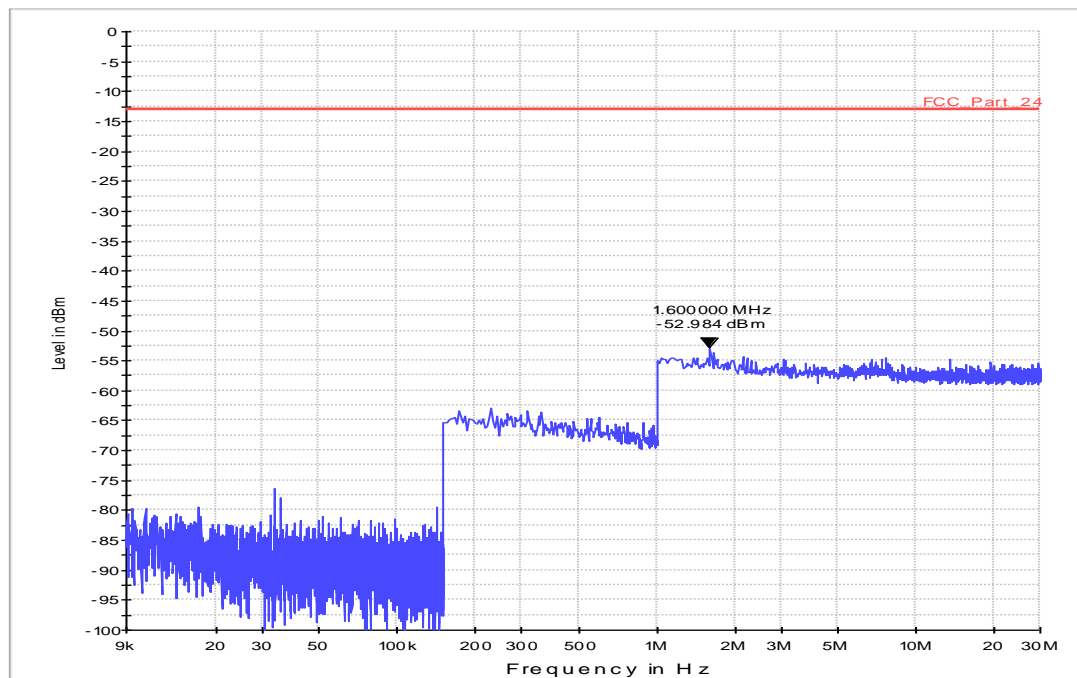
**Common Information**

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**

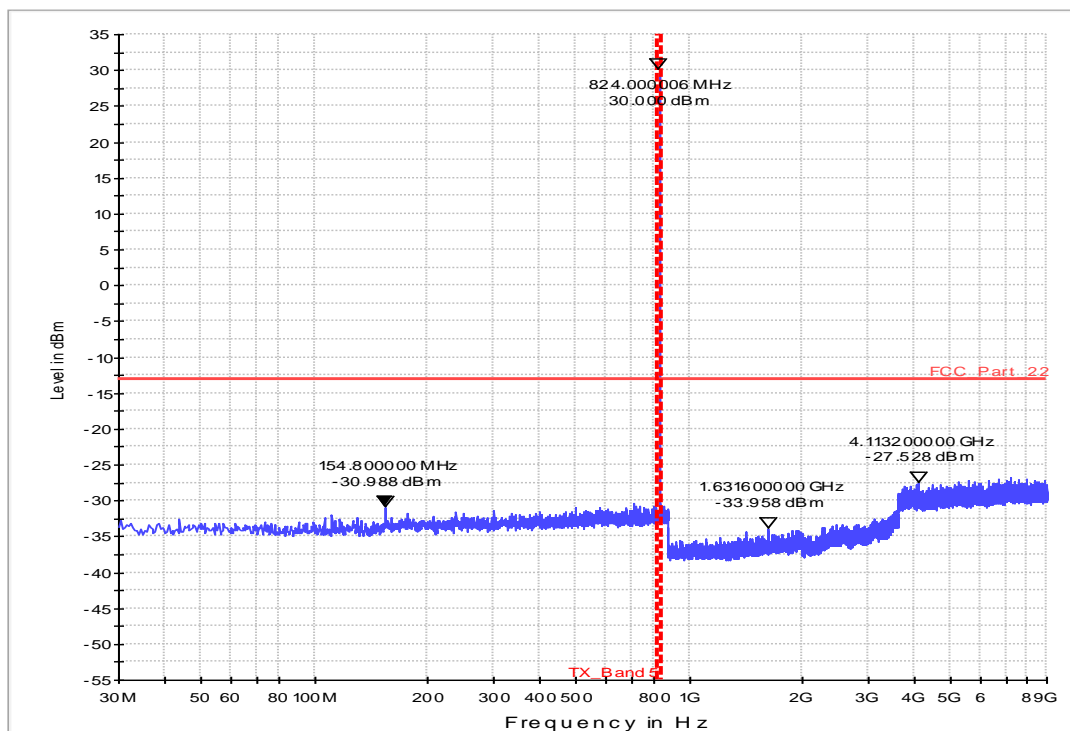
**Common Information**

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	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.: 36.11\_RSE\_Ch251\_EGPRS\_Sweep1**

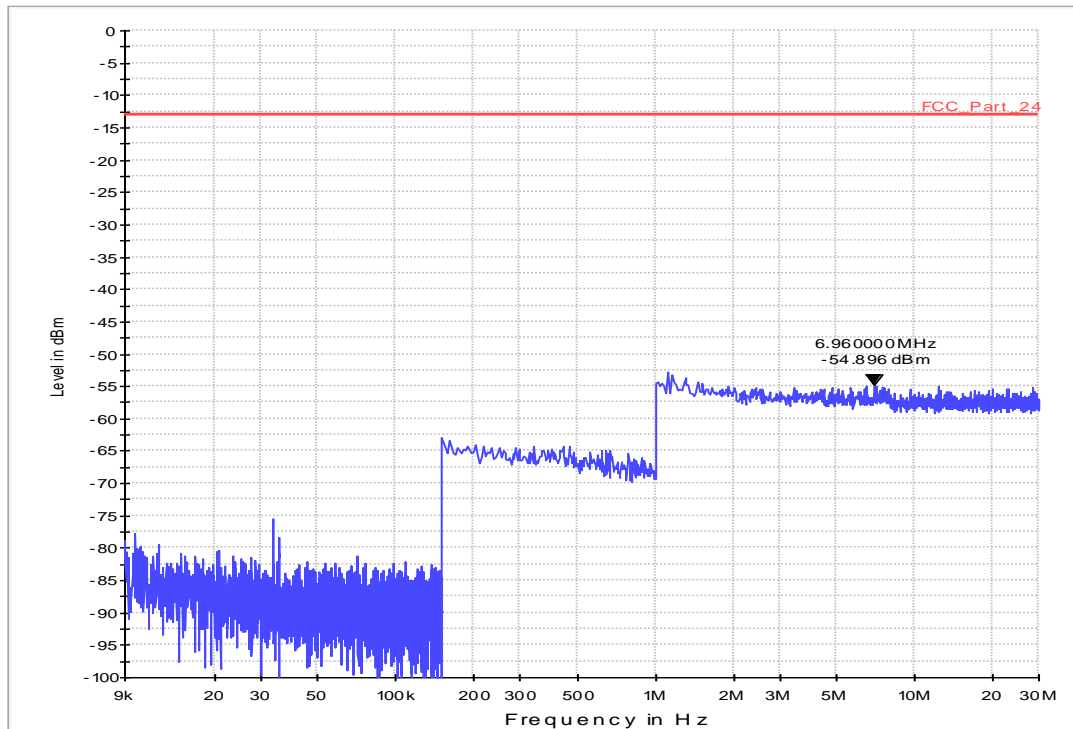
**Common Information**

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	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.: 36.12\_RSE\_Ch251\_EGPRS\_Sweep2**

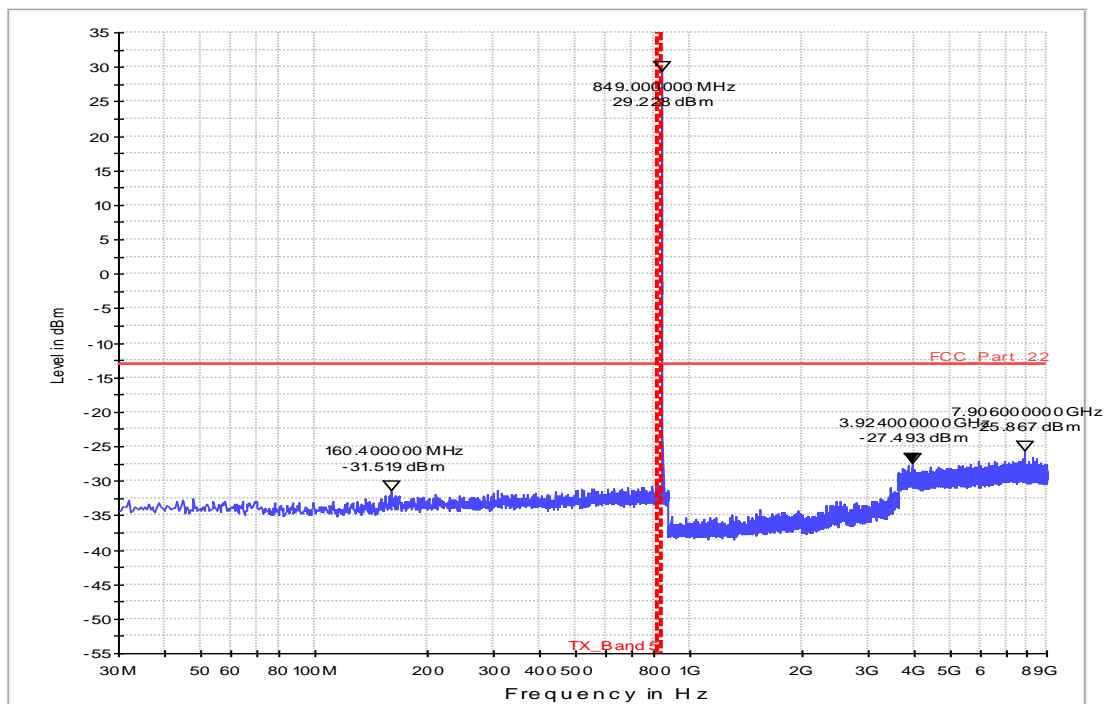
**Common Information**

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

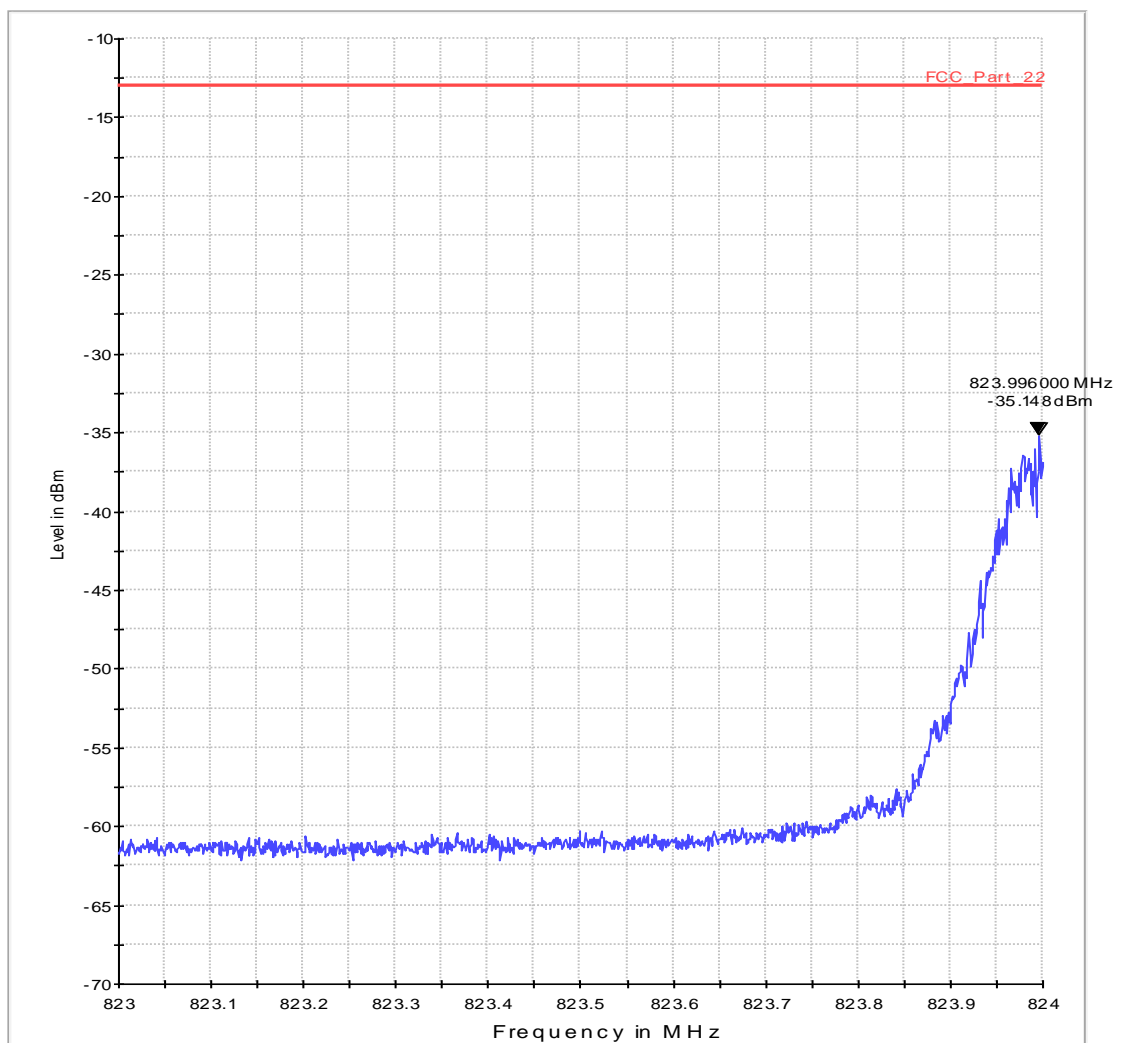
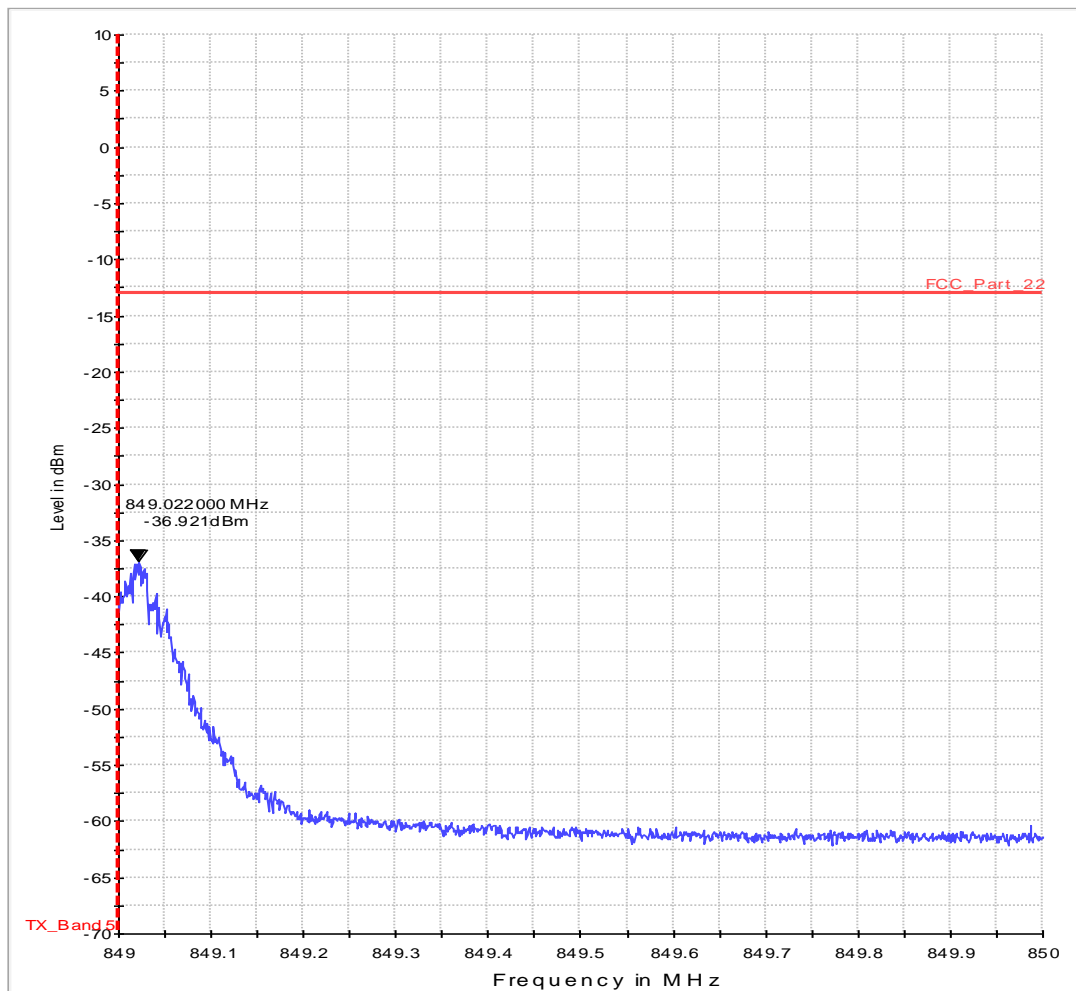


Diagram No.: 37.02\_BE\_Ch251\_GSM\_AV

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

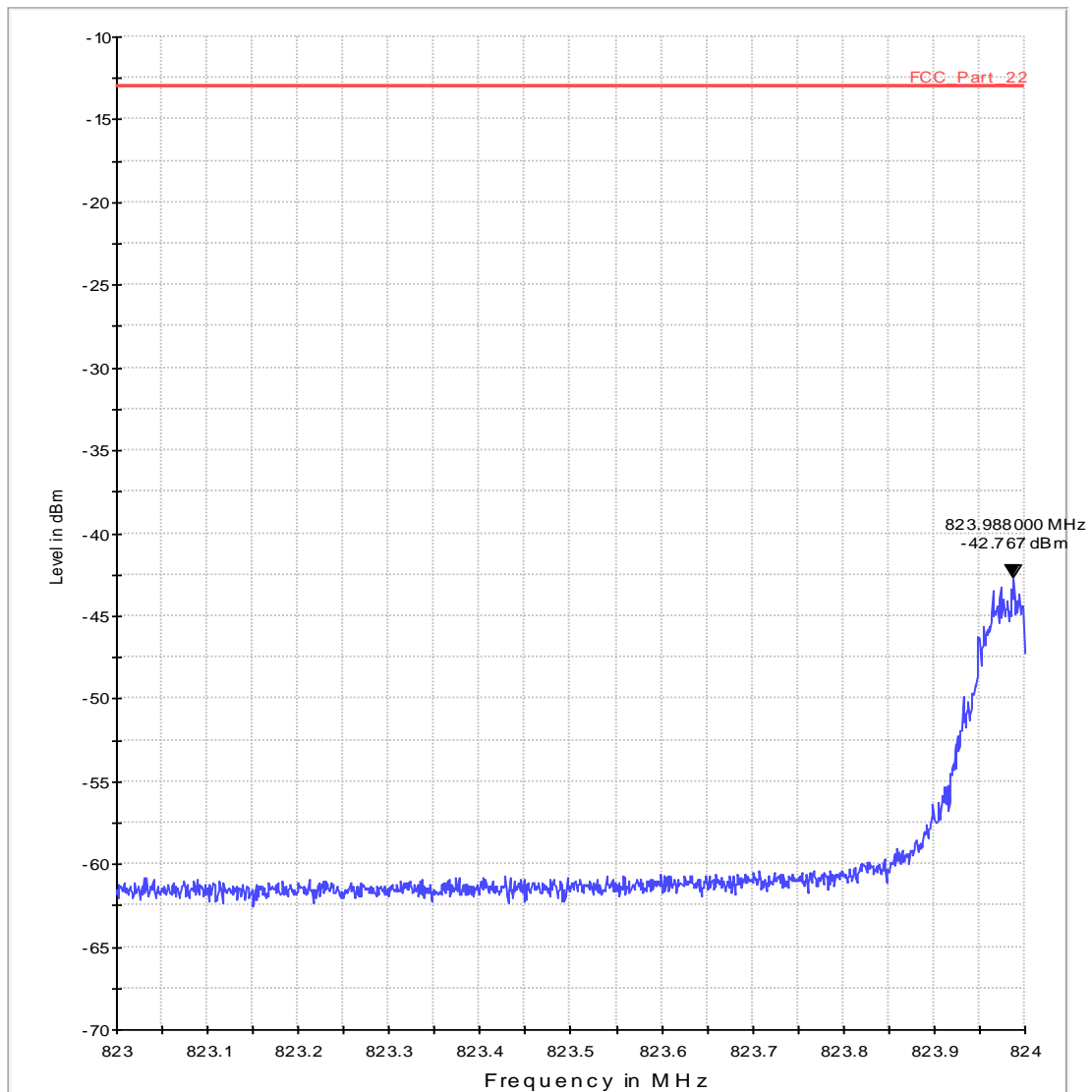
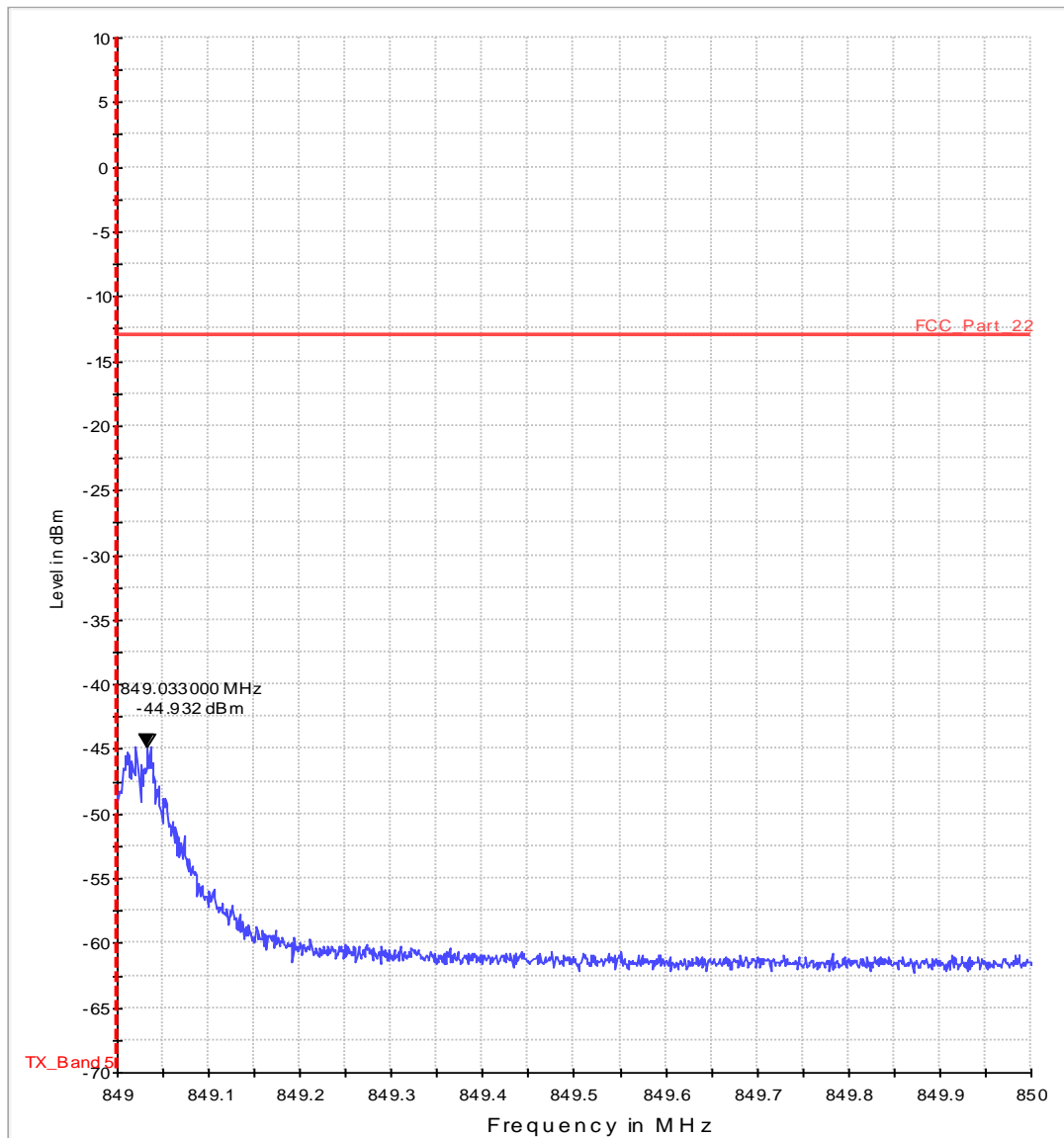


Diagram No.: 37.04\_BE\_Ch251\_EGPRS\_AV

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





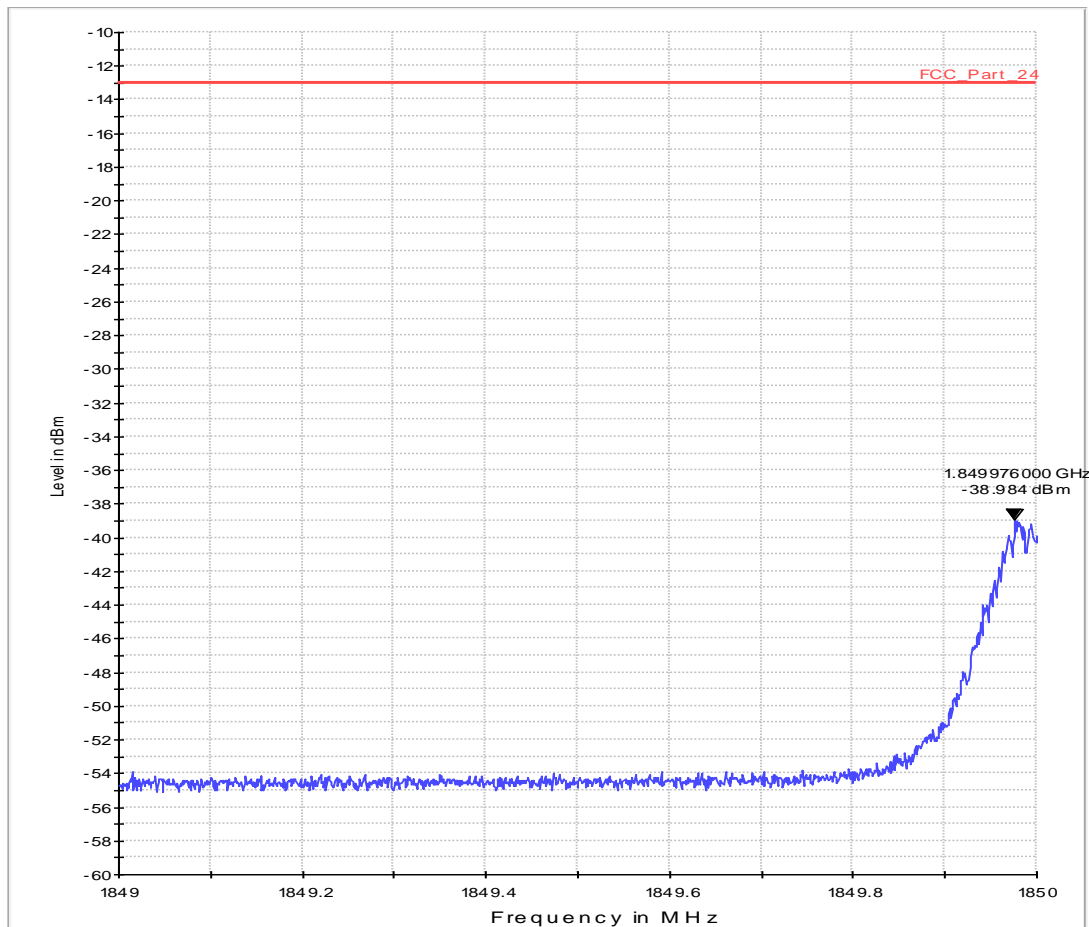
**1.5.3. Band-Edge compliance GPRS-1900 (GMSK-Modulation)**

**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

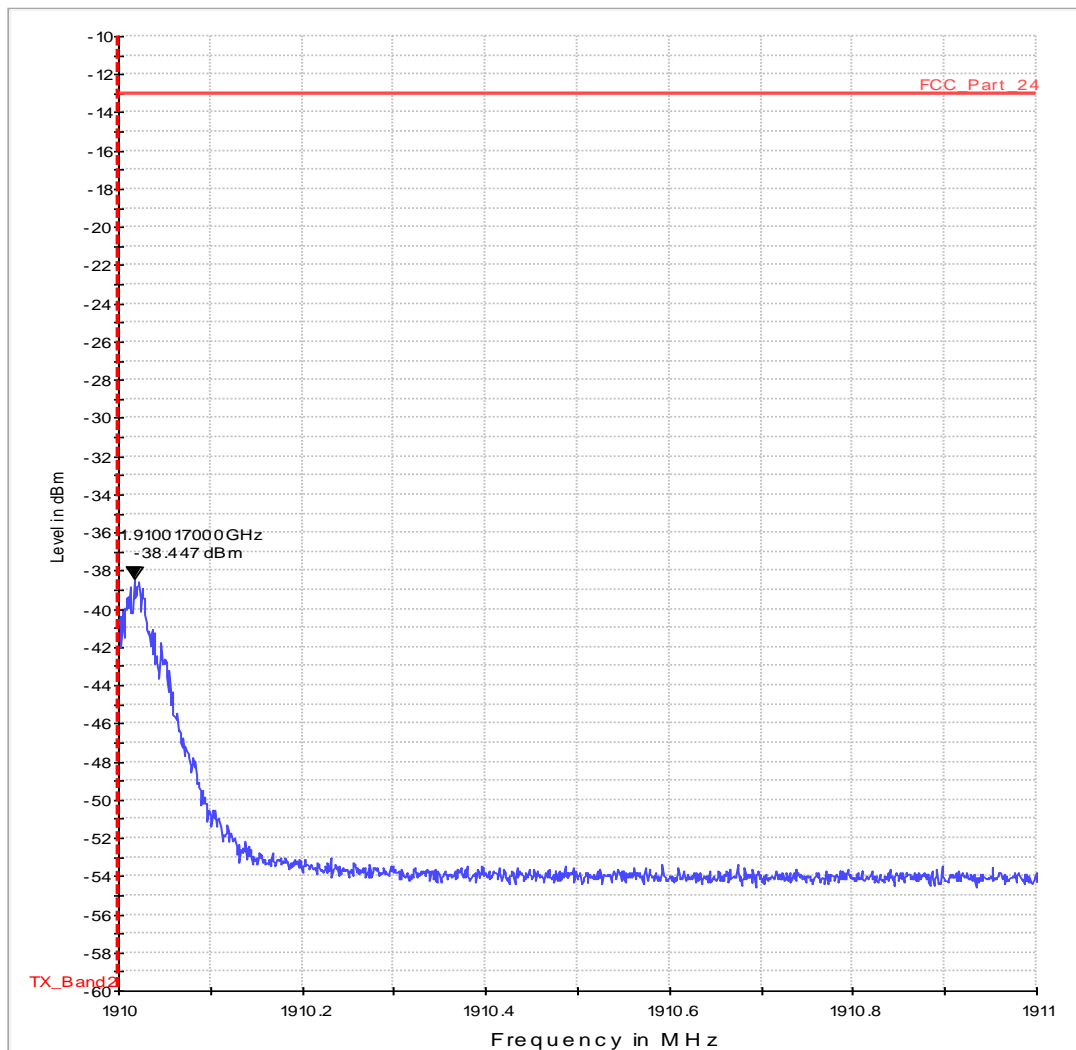
<b>Subrange</b>	<b>Step Size</b>	<b>Detectors</b>	<b>IF BW</b>	<b>Meas. Time</b>	<b>Preamp</b>
1.849 GHz - 1.85 GHz	1 kHz	AVG	3 kHz	0.1 s	0 dB

## 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	Preamp
1.91 GHz - 1.911 GHz	1 kHz	AVG	3 kHz	0.1 s	0 dB

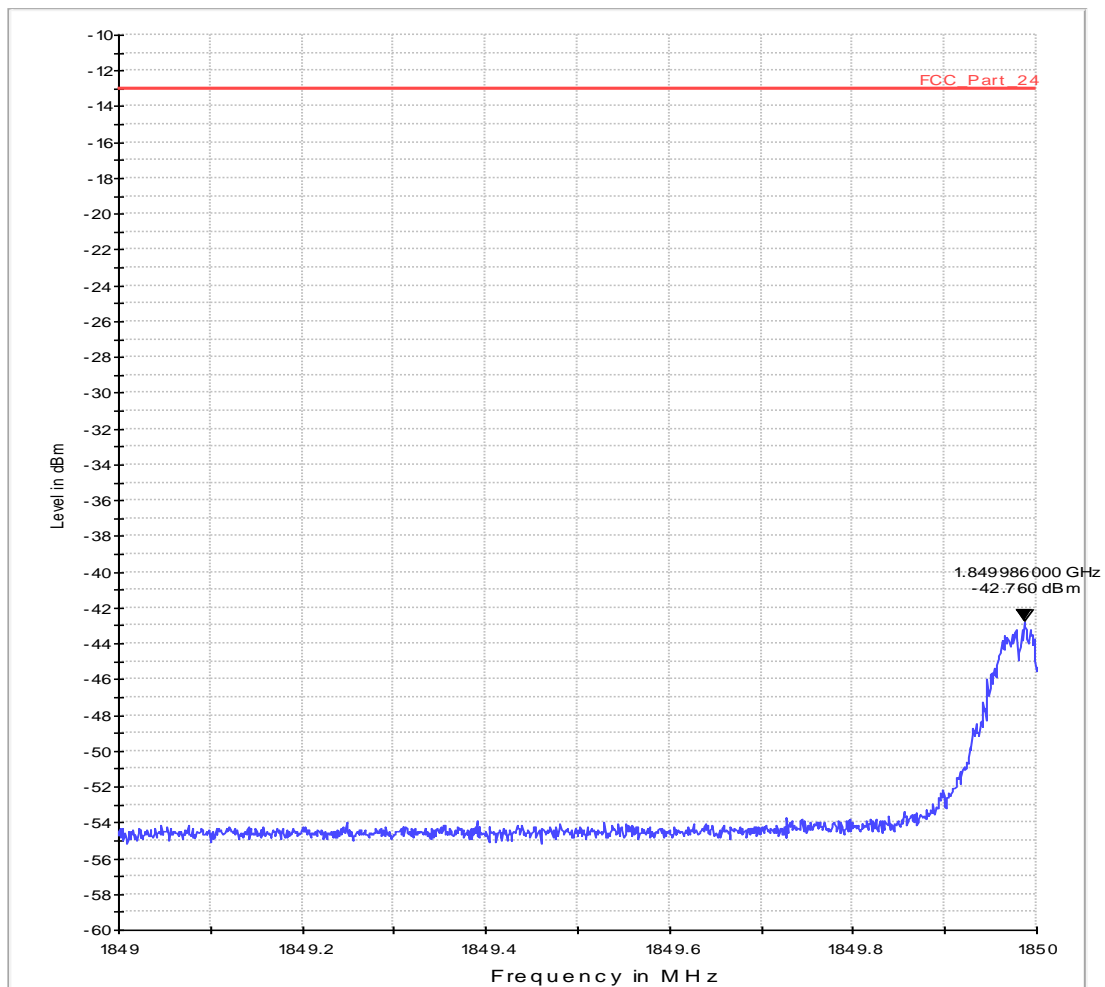
**1.5.4. Band-Edge compliance E-GPRS-1900 (8-PSK-Modulation)**

**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

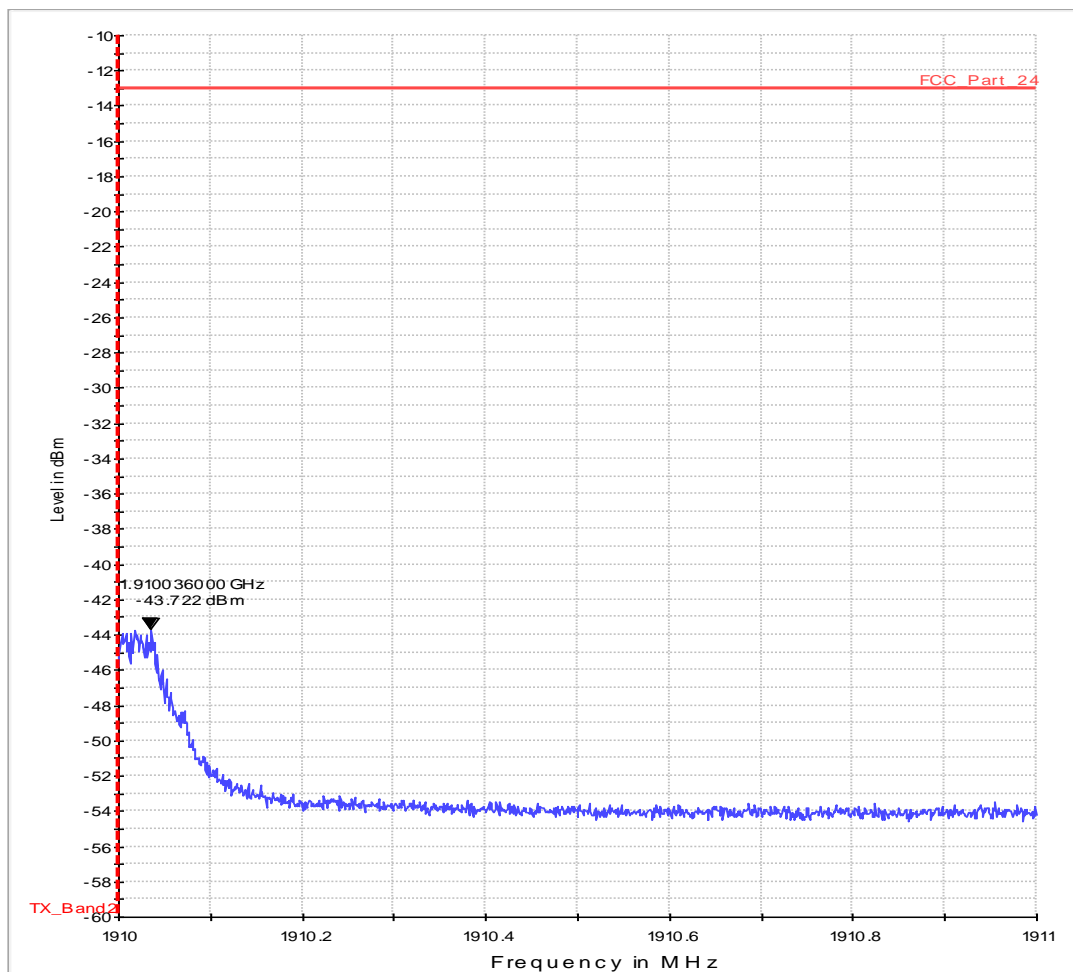
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1.849 GHz - 1.85 GHz	1 kHz	AVG	3 kHz	0.1 s	0 dB

## 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	Preamp
1.91 GHz - 1.911 GHz	1 kHz	AVG	3 kHz	0.1 s	0 dB

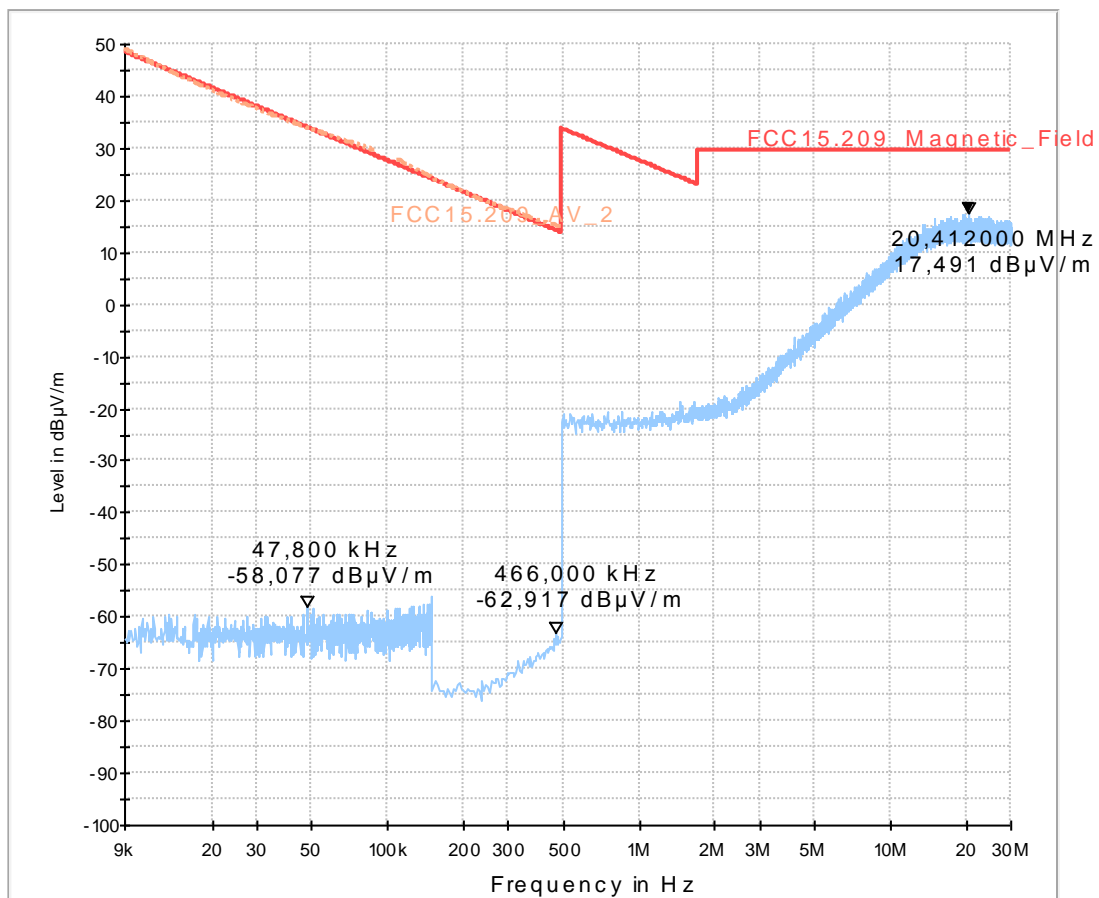
**1.6. Magnetic field strength emissions accord. Part 15.209 Subpart C (f<30MHz)**  
**1.6.1. E\_GPRS850 Band**

**Diagram No. 2.04\_Ch128\_GSM\_EGPRS\_850**

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 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:	--

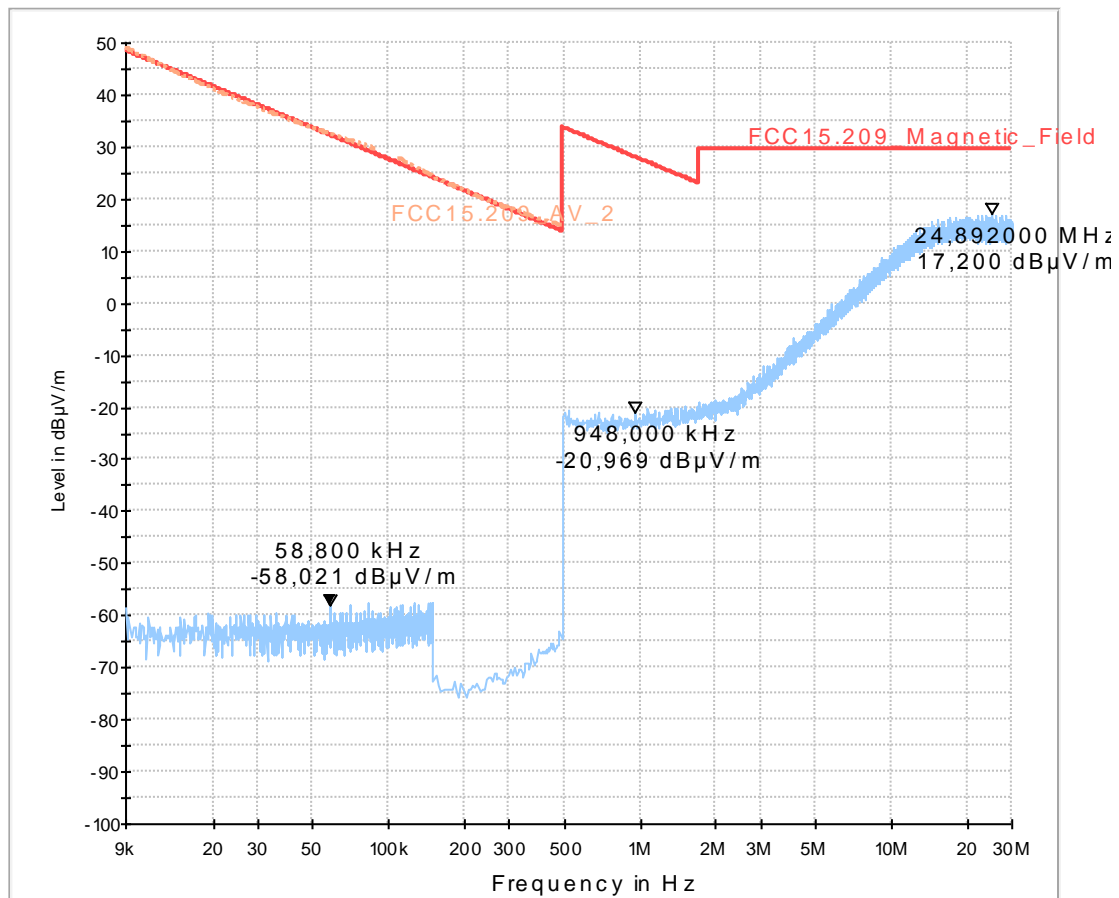


## Diagram No. 2.05\_Ch192\_GSM\_EGPRS\_850

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:	--

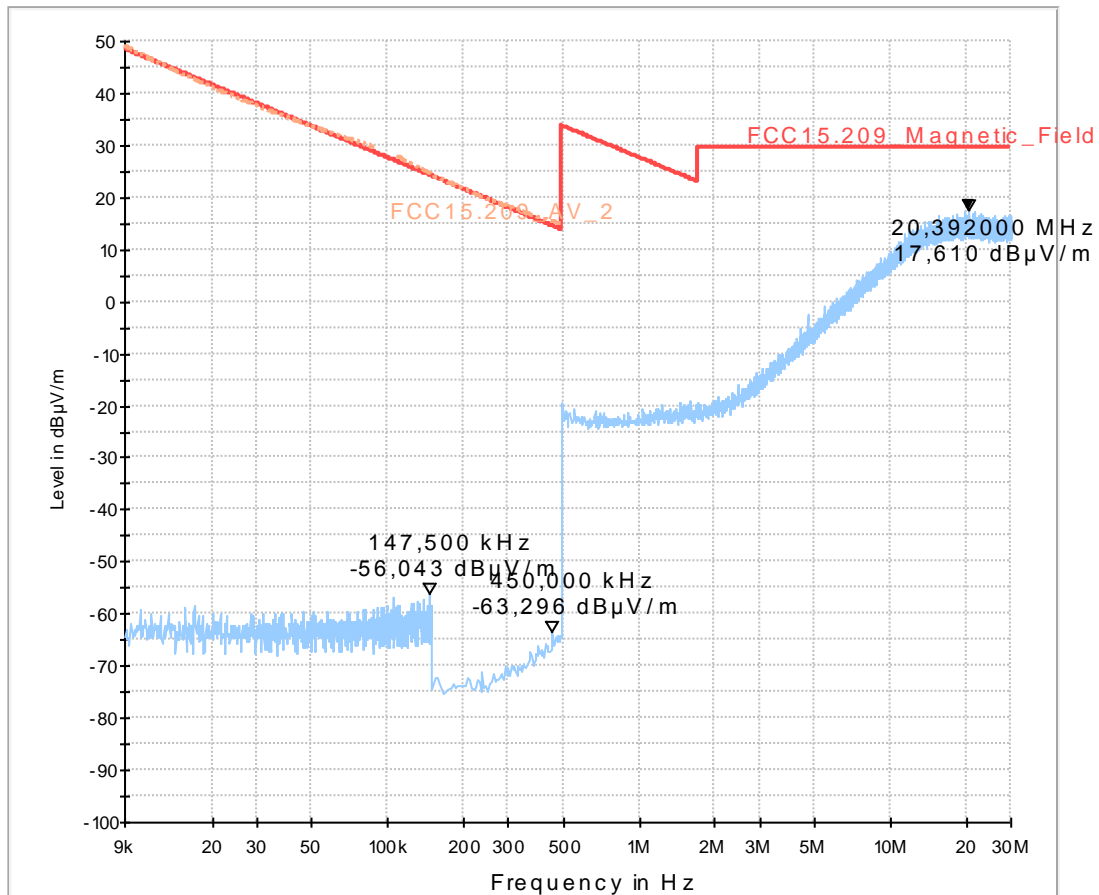


## Diagram No. 2.06\_Ch251\_GSM\_EGPRS\_850

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:	--



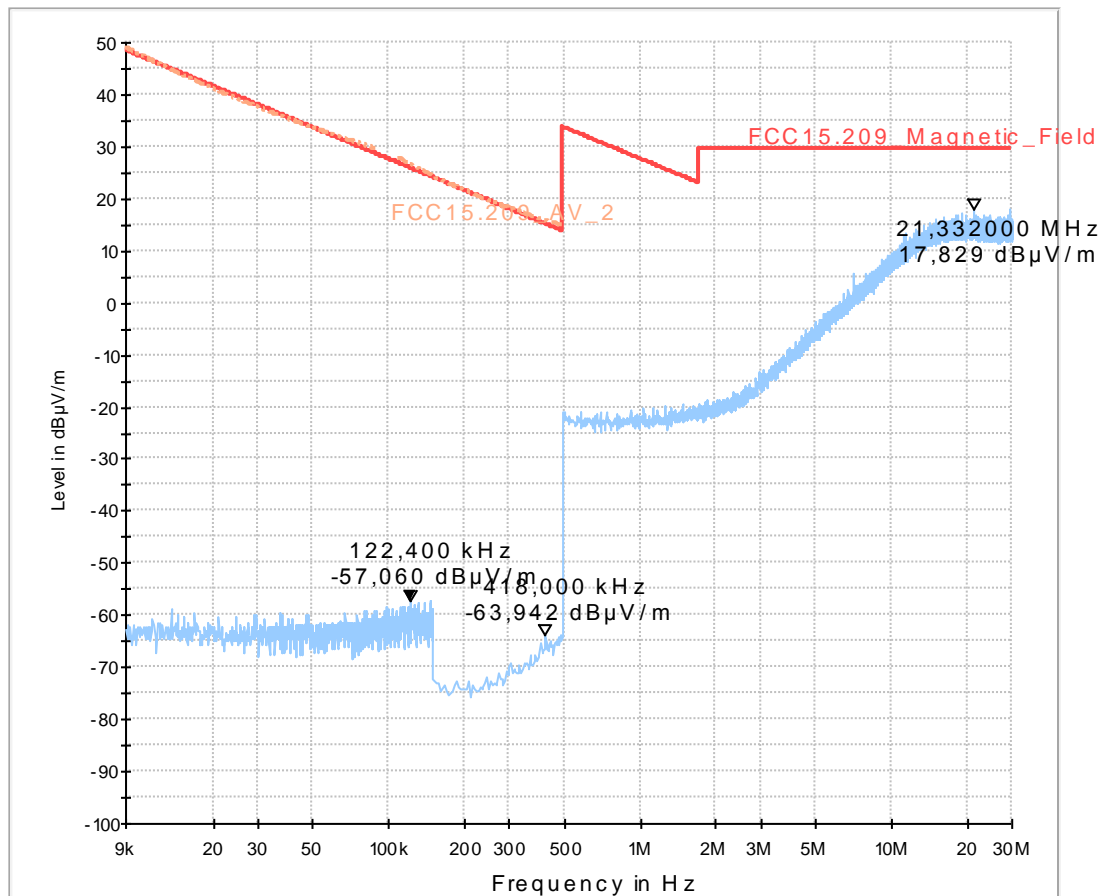
## 1.6.2. GSM1900 Band

### 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:	--



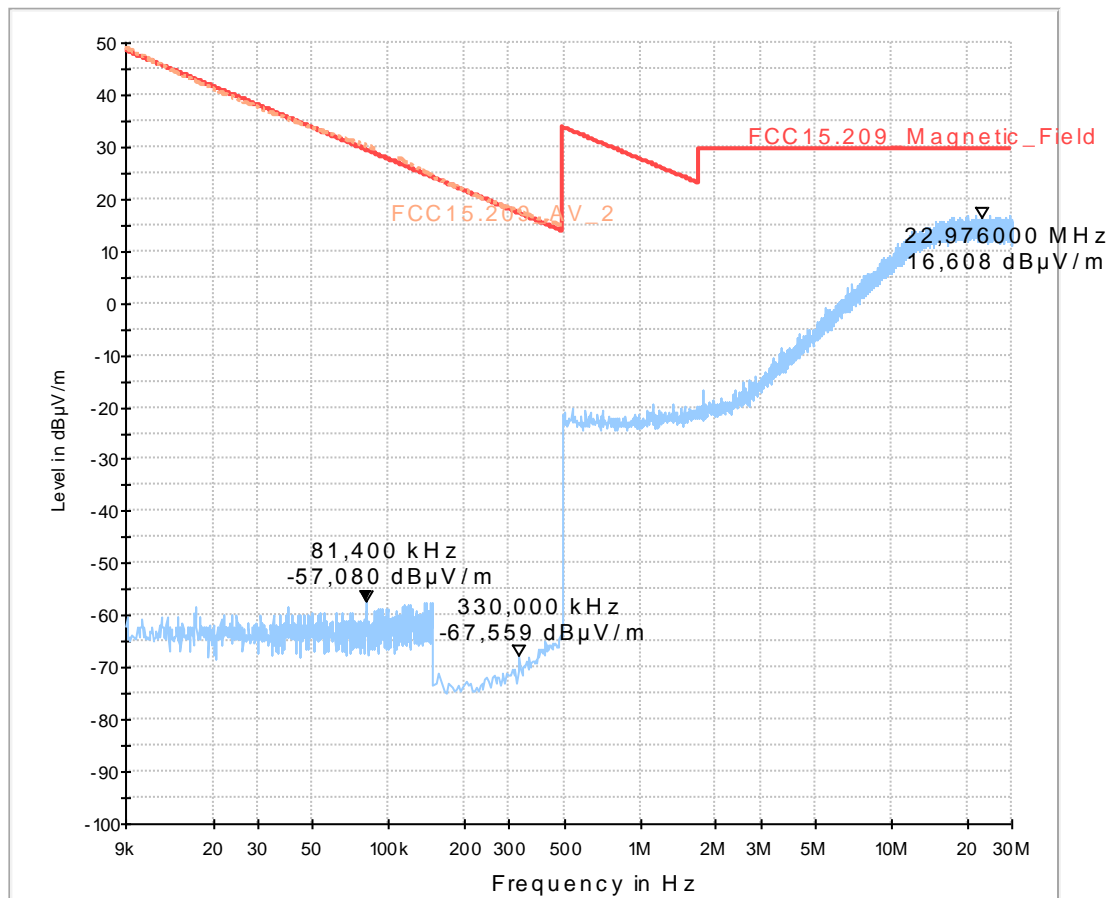


## Diagram No. 2.02\_Ch661\_GSM\_1900

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:	--

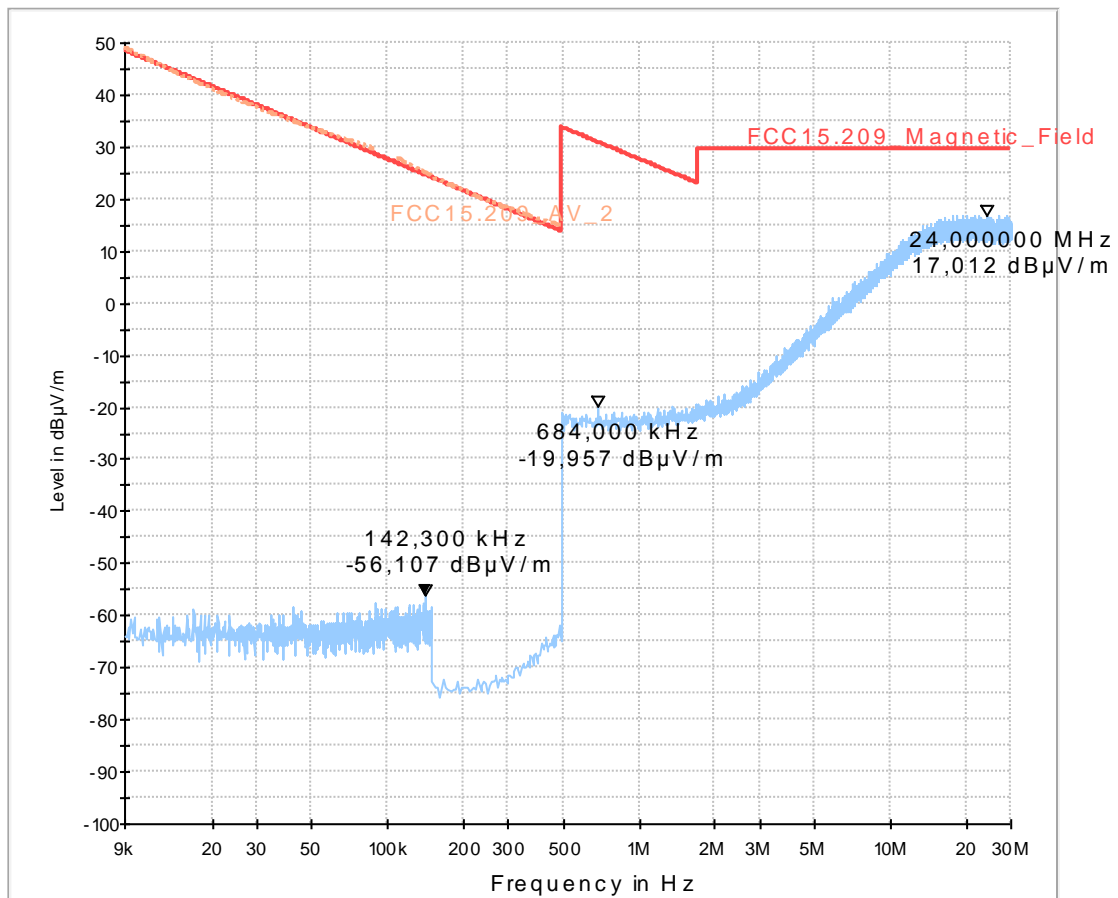


## Diagram No. 2.03\_Ch810\_GSM\_1900

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:	--



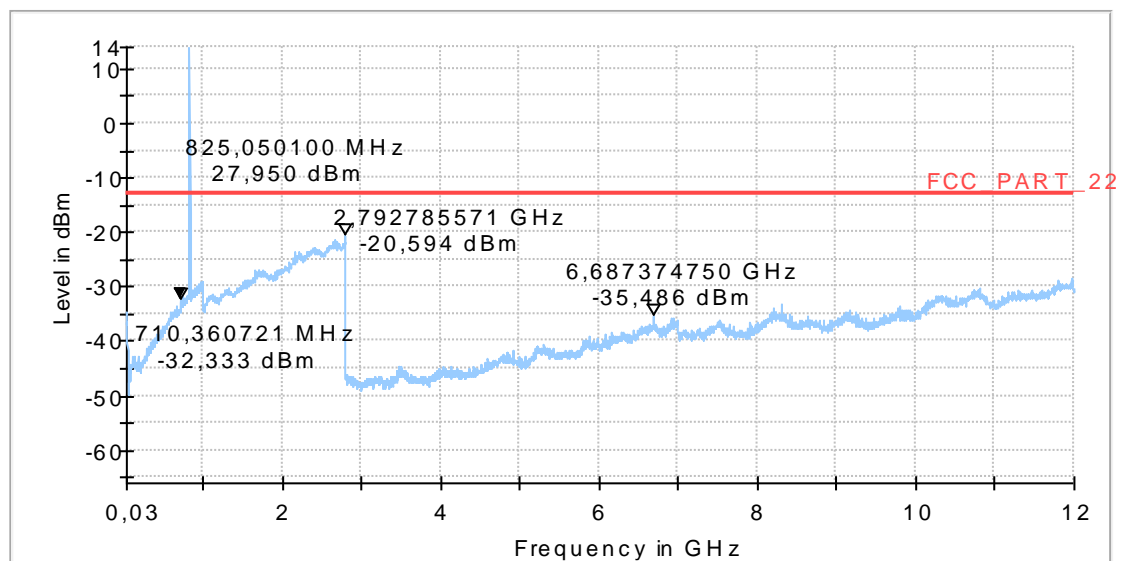
**1.7. Spurious emissions radiated (30 MHz < f < 18 GHz)****1.7.1. GSM850 mode (GMSK-Modulation)****8.04 RSE\_R\_CH128\_GPRS****Common Information**

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

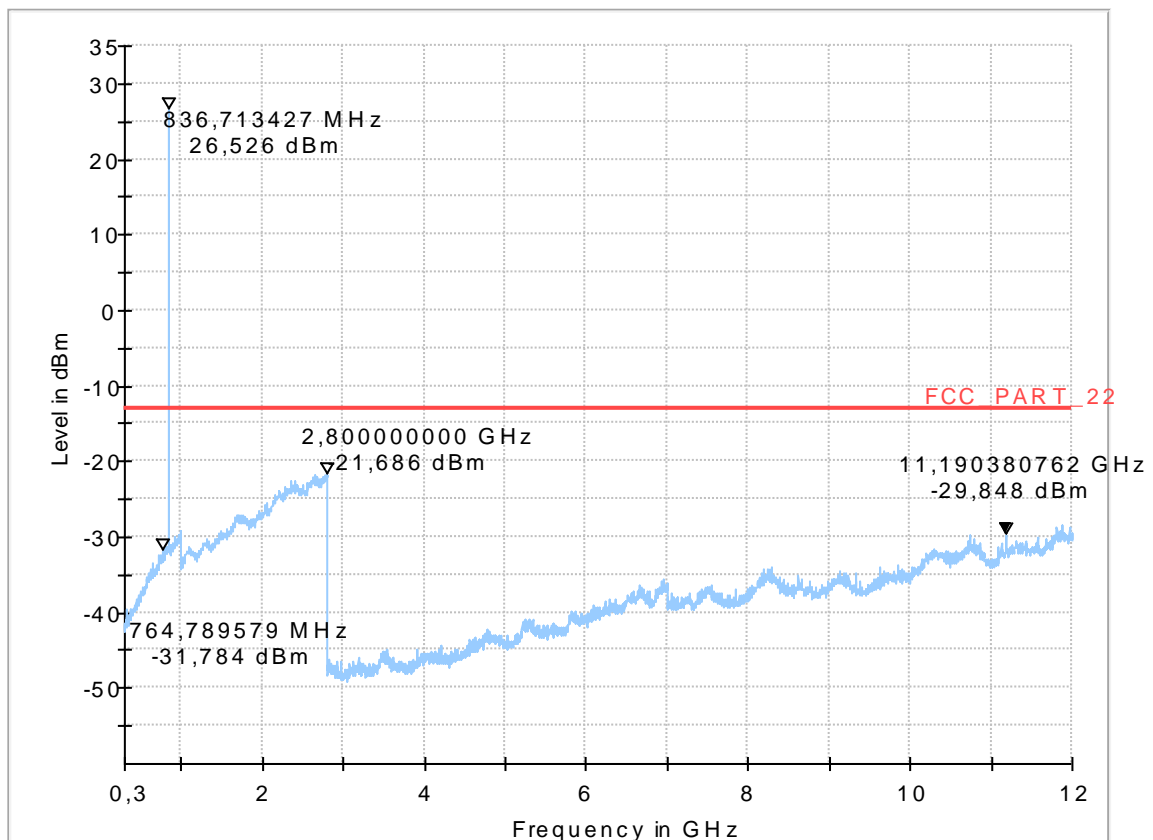
#### Common Information

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



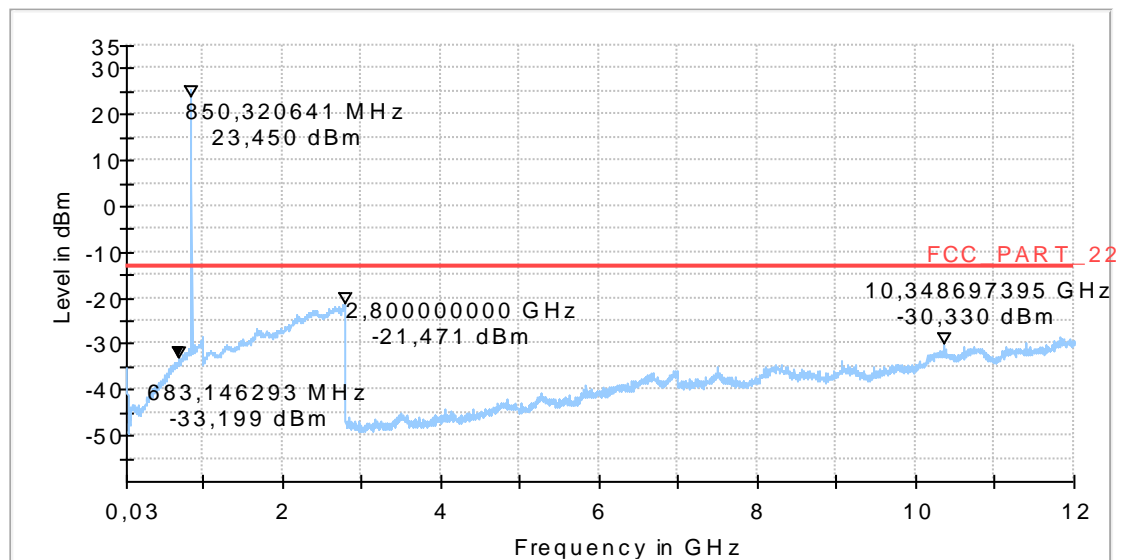
**8.06 RSE\_R\_CH251\_GPRS****Common Information**

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



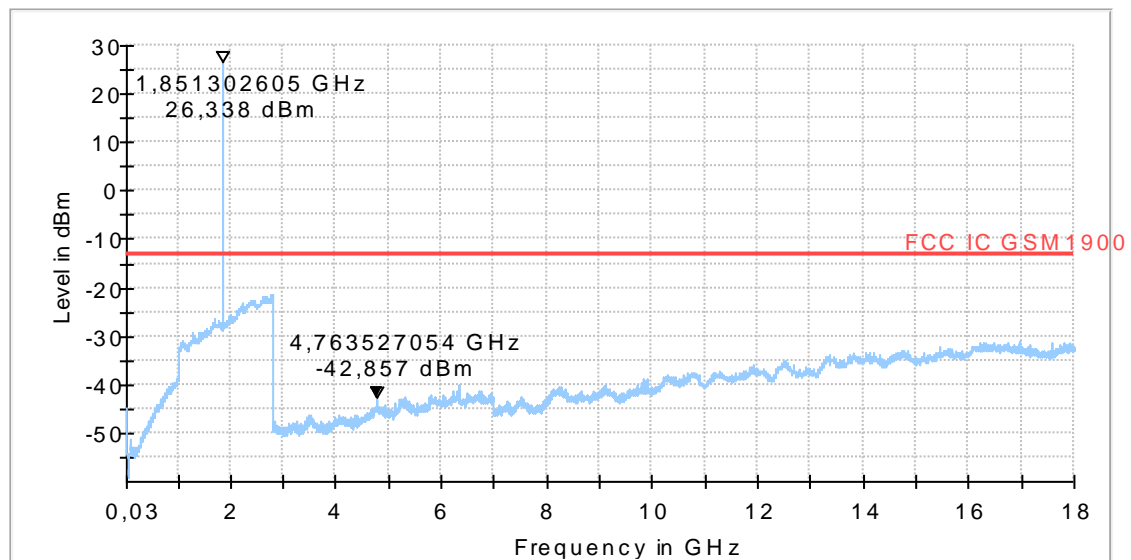
**1.7.2. GSM 1900 mode (GMSK Modulation)****8.13\_RSE\_R\_CH512\_GPRS****Common Information**

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

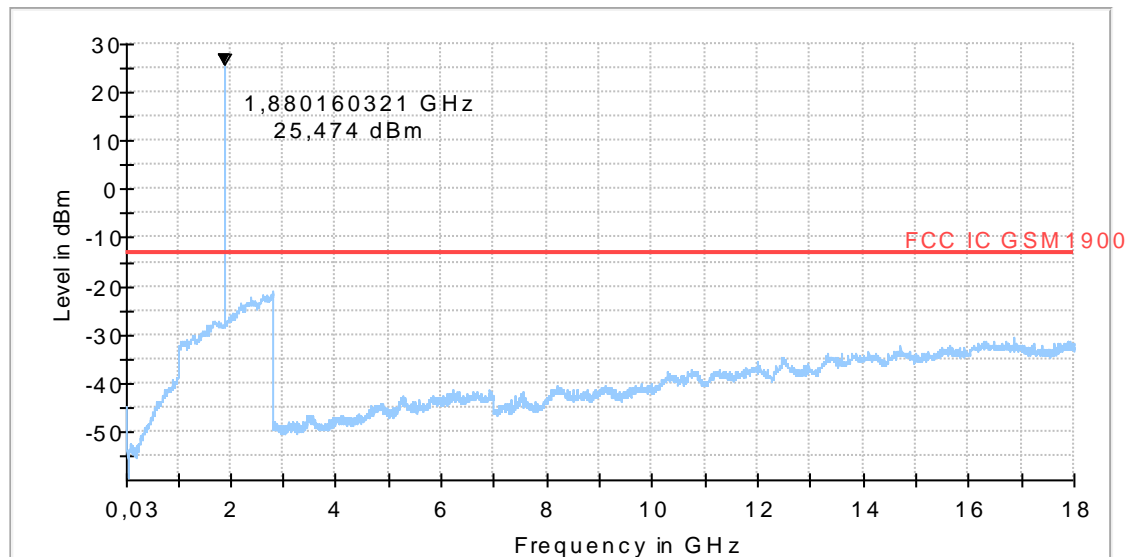
### Common Information

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

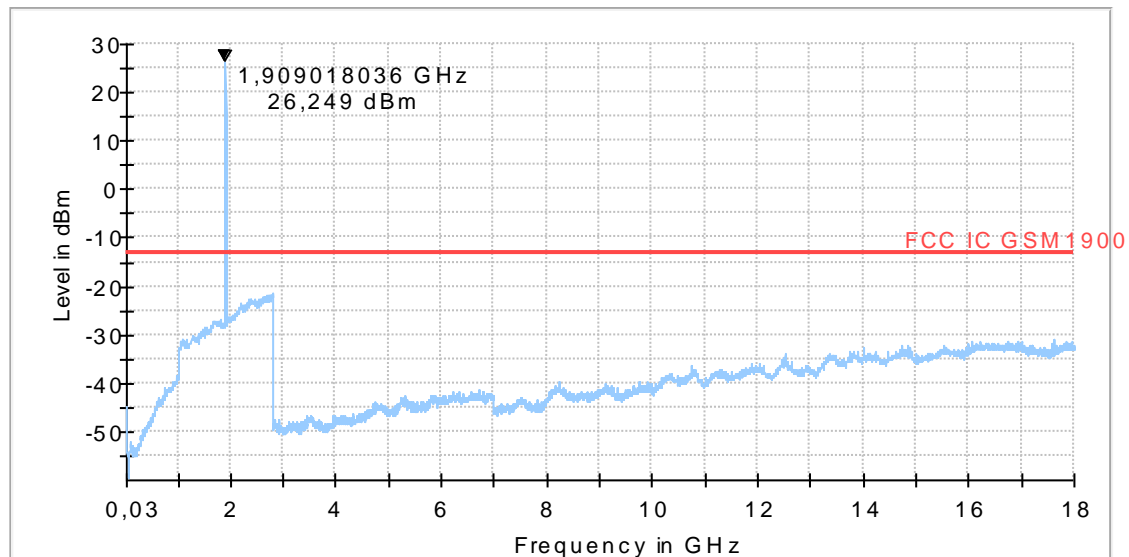
### Common Information

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





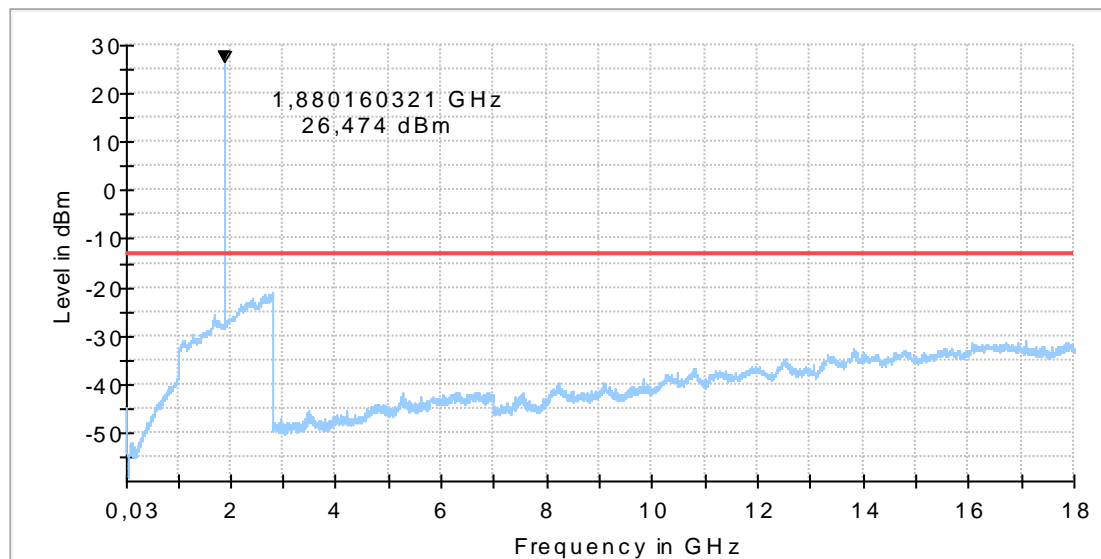
**1.7.3. E-GPRS1900 mode (8PSK-Modulation)****8.17\_ RSE\_R\_CH661\_E-GPRS****Common Information**

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Full 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**

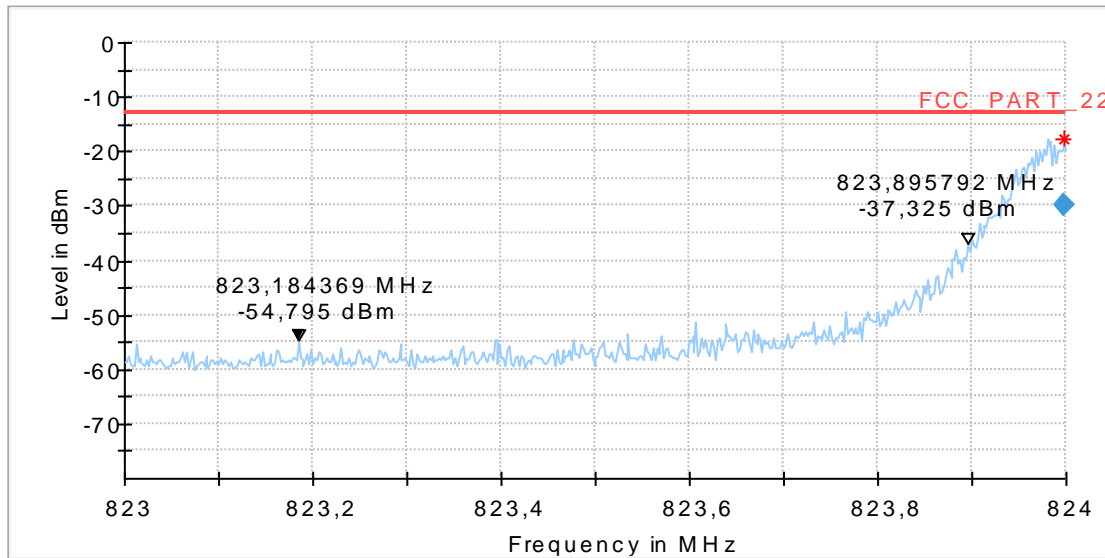
**Common Information**

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

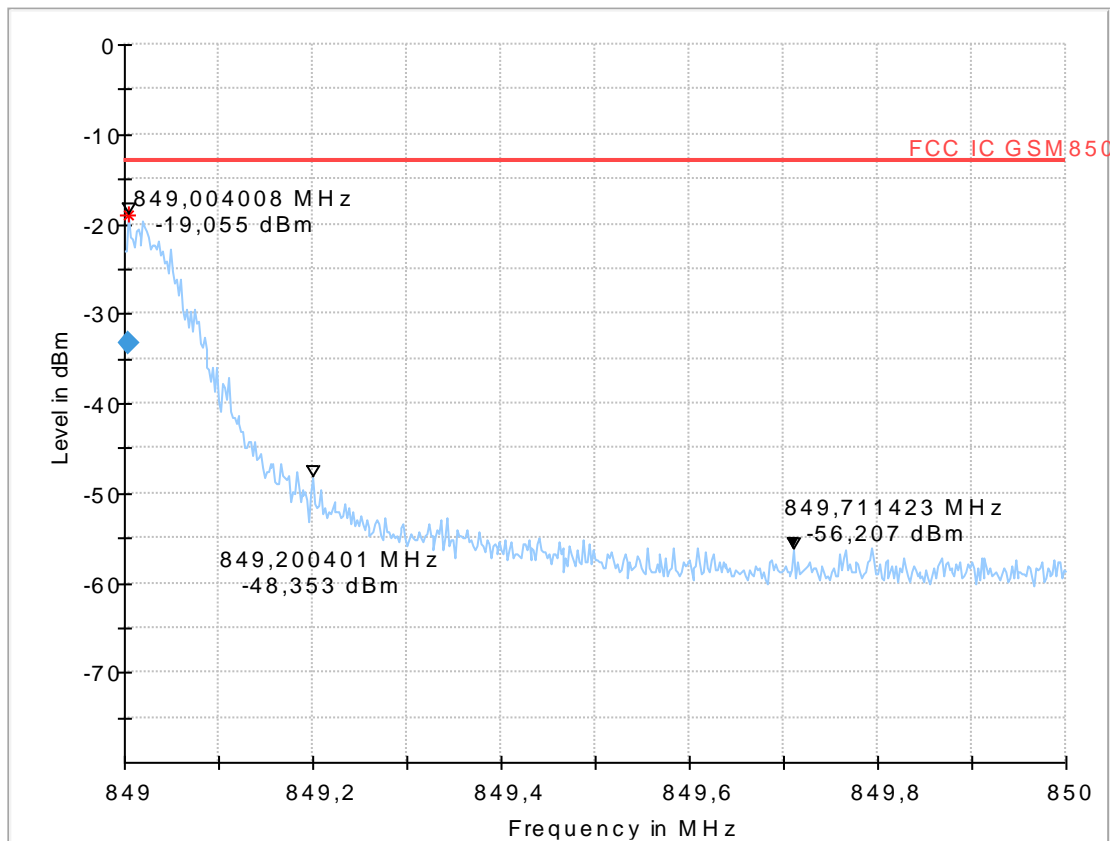
### Common Information

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	Azimuth (deg)	Elevation (deg)	Corr. (dB)
849.004008	13.00	20.22	10000.0	H	14.0	90.0	-75.9

## 9.05\_RSE\_R\_CH128\_EGPRS

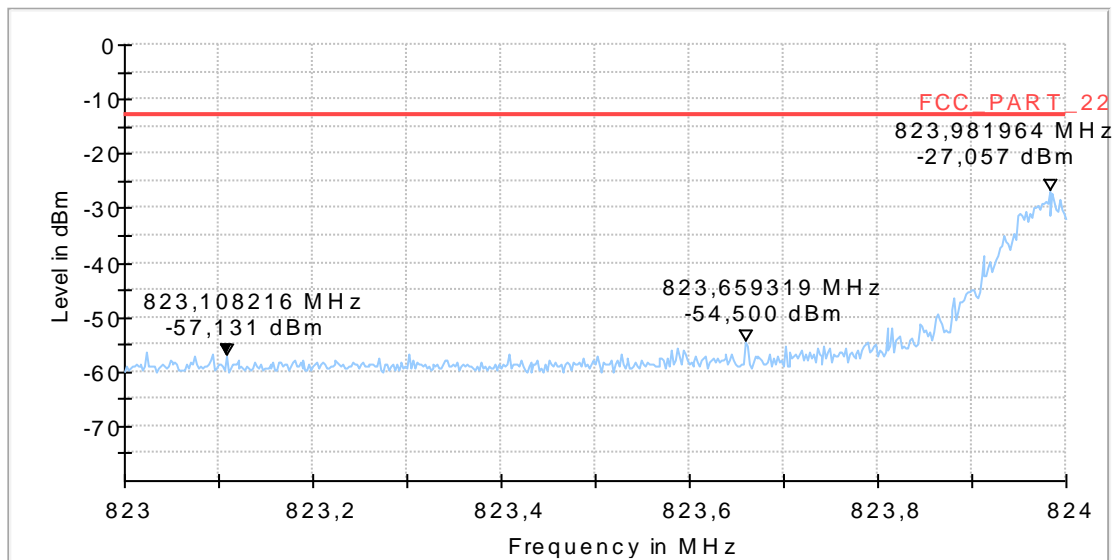
### Common Information

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

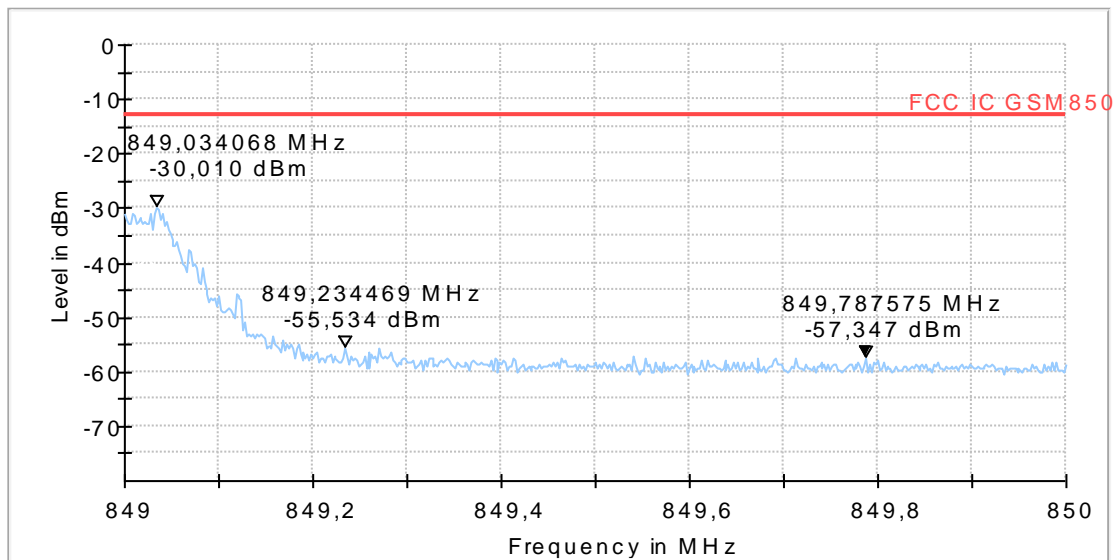
### Common Information

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

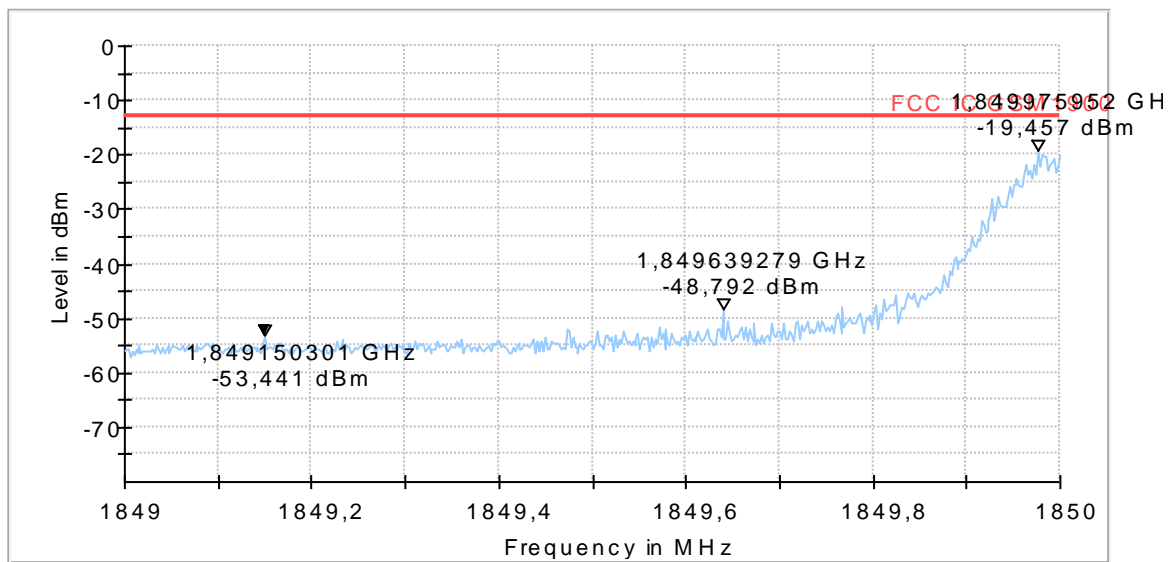
Common Information

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

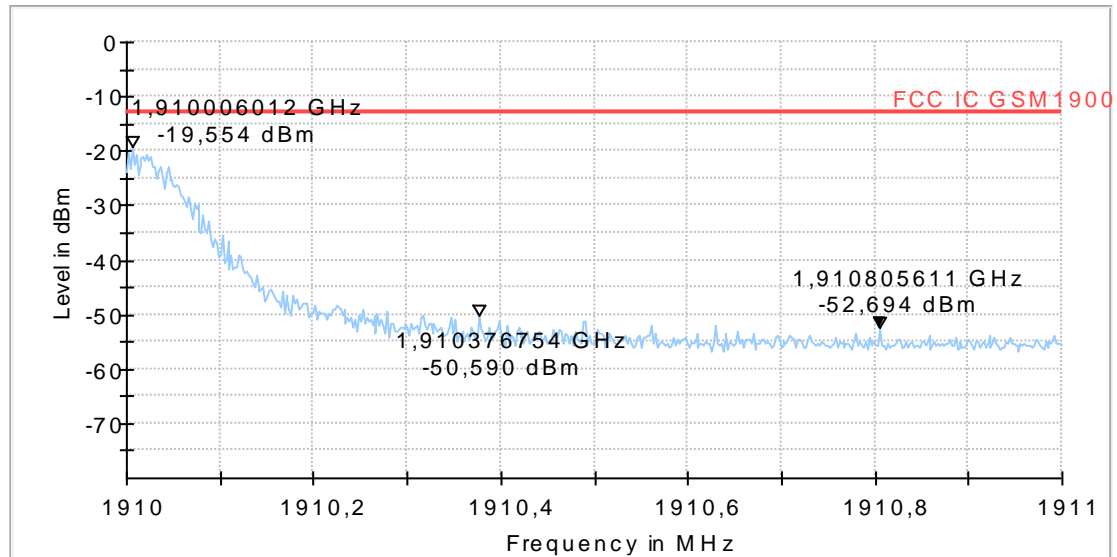
### Common Information

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

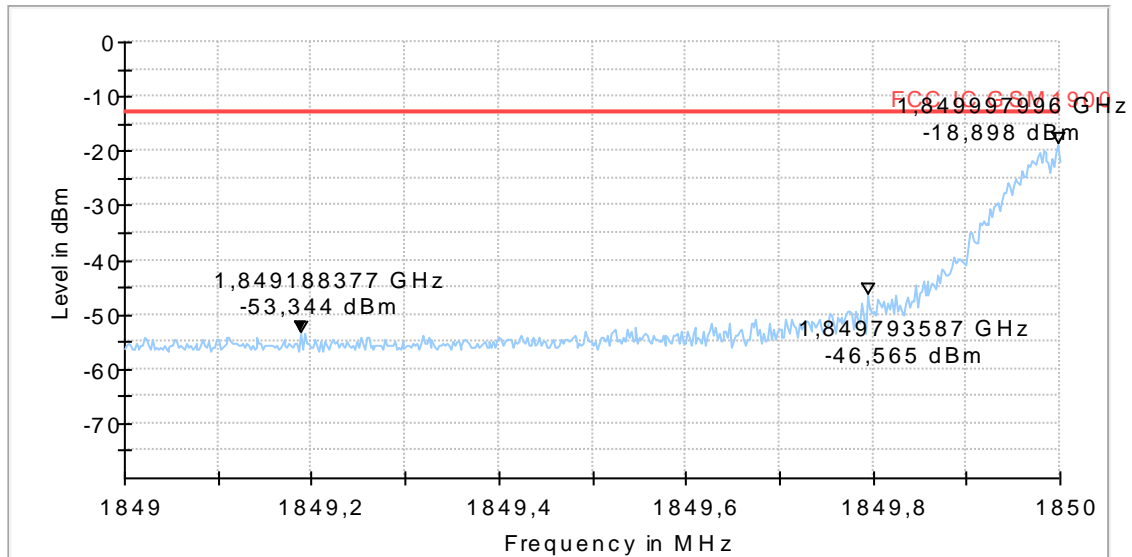
### Common Information

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

