







Annex 1: Measurement diagrams  
to  
**PARTIAL TEST REPORT**  
No.: 6-0330-13-3-6a

According to:  
**FCC Regulations**  
Part15C, Part 22, Part 24, Part 27

**IC-Regulations**  
RSS-132 Issue 3, RSS-133 Issue 6. RSS-139 Issue 2  
RSS-Gen Issue 3

for  
**u-blox AG**

RF-Module LISA-U200-01  
*FCC-ID: XPYLISAU200*  
*IC-ID: 8595A-LISAU200N*

Laboratory Accreditation and Listings			
 <p><b>DAkKS</b> Deutsche Akkreditierungsstelle D-PL-12047-01-01</p>	 <p>FEDERAL COMMUNICATIONS COMMISSION <b>FCC</b> USA Reg. No.: 736496 MRA US-EU 0003</p>	 <p>Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3</p>	 <p>Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2665, R-2666 C-2914, T-1967, G-301</p>
 <p><b>WiFi</b> ALLIANCE AUTHORIZED RF LABORATORY</p>	 <p><b>CTIA</b> Authorized Test Lab LAB CODE 20011130-00</p>		
accredited according to DIN EN ISO/IEC 17025			
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## 1. Measurement results

### 1.1. Field strength < 30 MHz (radiated) – G850 Mode

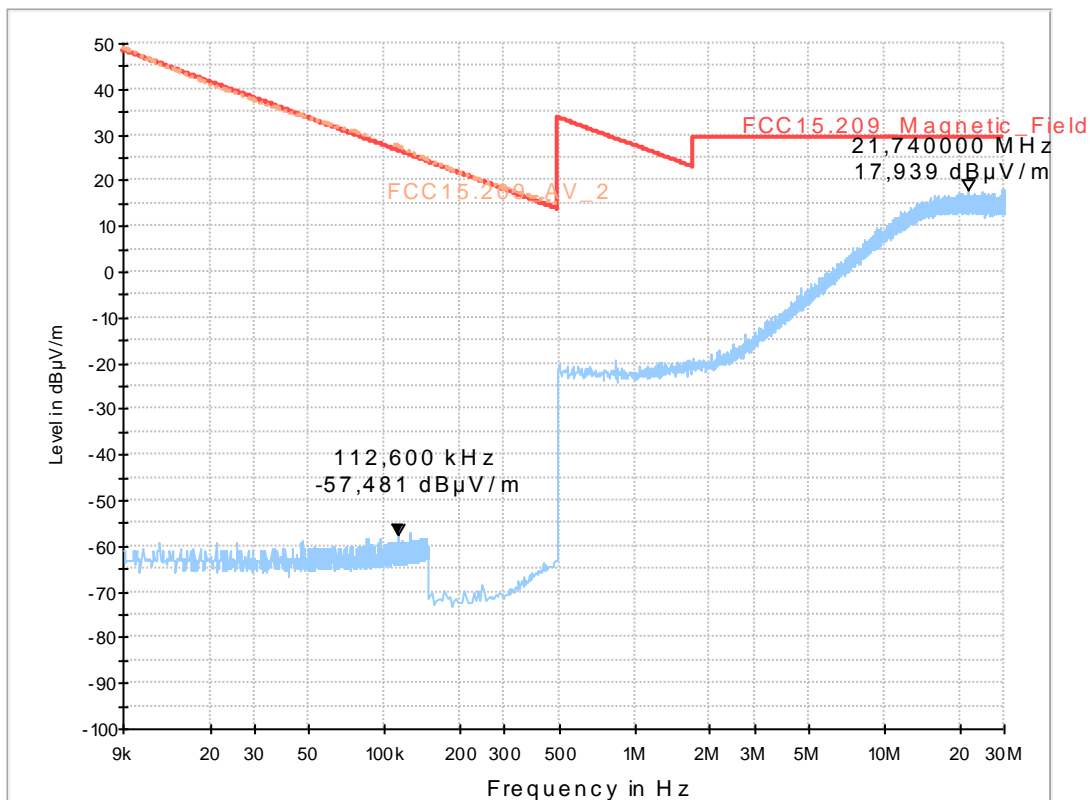
#### 2.01\_Ch192\_G850

Date:	18.10.2013	Page 1 of 2
Test description:	Magnetic Fieldstrength 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 3	
Operator:	ADa	
Operating conditions:	TX-on, G850 - GSM/GPRS, middle channel ARFCN 192	
Power during tests:	12V DC, 120 V/60Hz 6-0330-13-6-3a	

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

FCC15.209\_magn hor+vert



## 1.2 Field strength < 30 MHz (radiated) – PCS1900 Mode

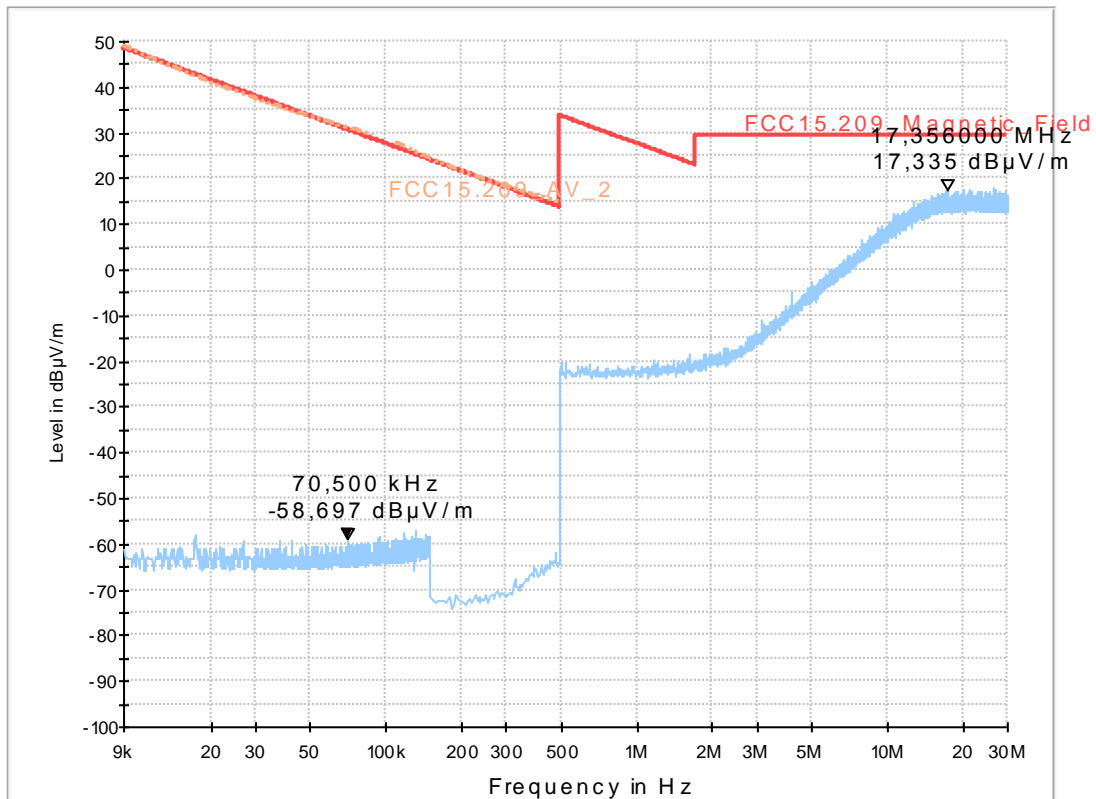
### 2.02\_Ch661\_PCS1900

Date:	18.10.2013	Page 1 of 2
Test description:	Magnetic Fieldstrength 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 3	
Operator:	ADa	
Operating conditions:	TX-on, PCS1900 - GSM/GPRS, middle channel ARFCN 661	
Power during tests:	12V DC, 120 V/60Hz 6-0330-13-6-3a	

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

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### 1.3 Field strength < 30 MHz (radiated) – FDD II Mode

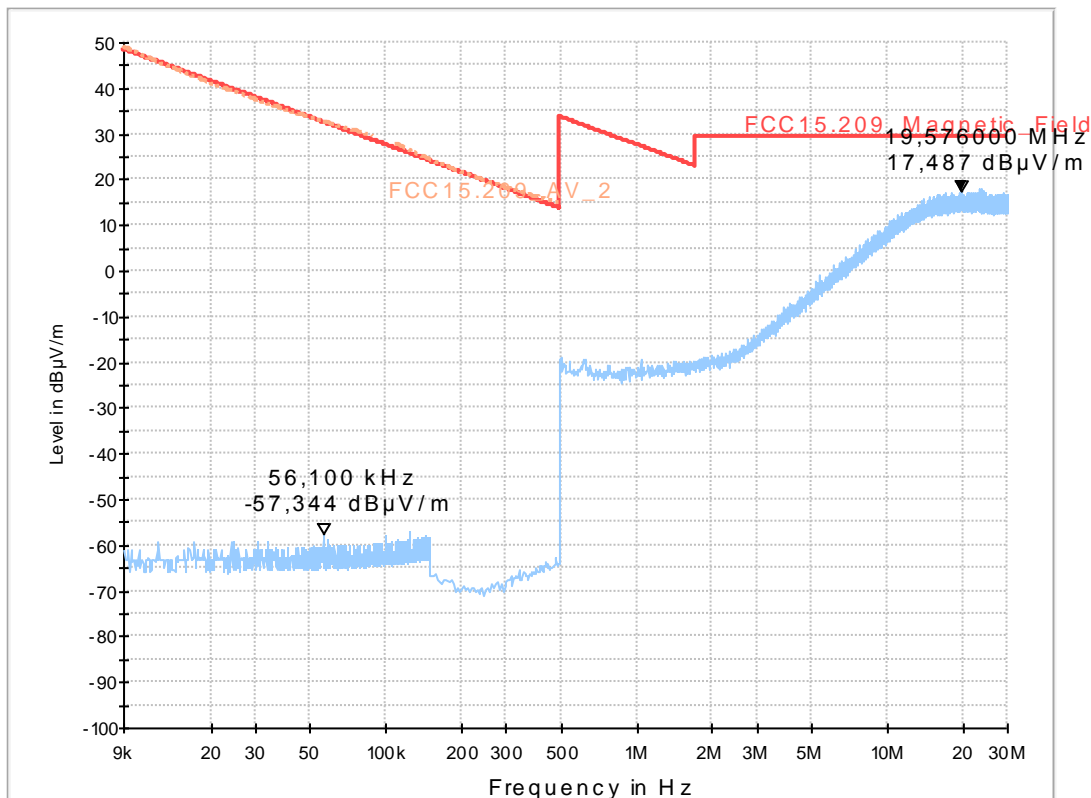
## 2.03\_Ch9400\_RMC

Date:	18.10.2013	Page 1 of 2
Test description:	Magnetic Fieldstrength 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 3	
Operator:	ADa	
Operating conditions:	TX-on, middle channel 9400	
Power during tests:	12V DC via AC/DC Power supply with 120 V/60Hz 6-0330-13-6-3a	

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

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## 1.4 Field strength < 30 MHz (radiated) – FDD IV Mode

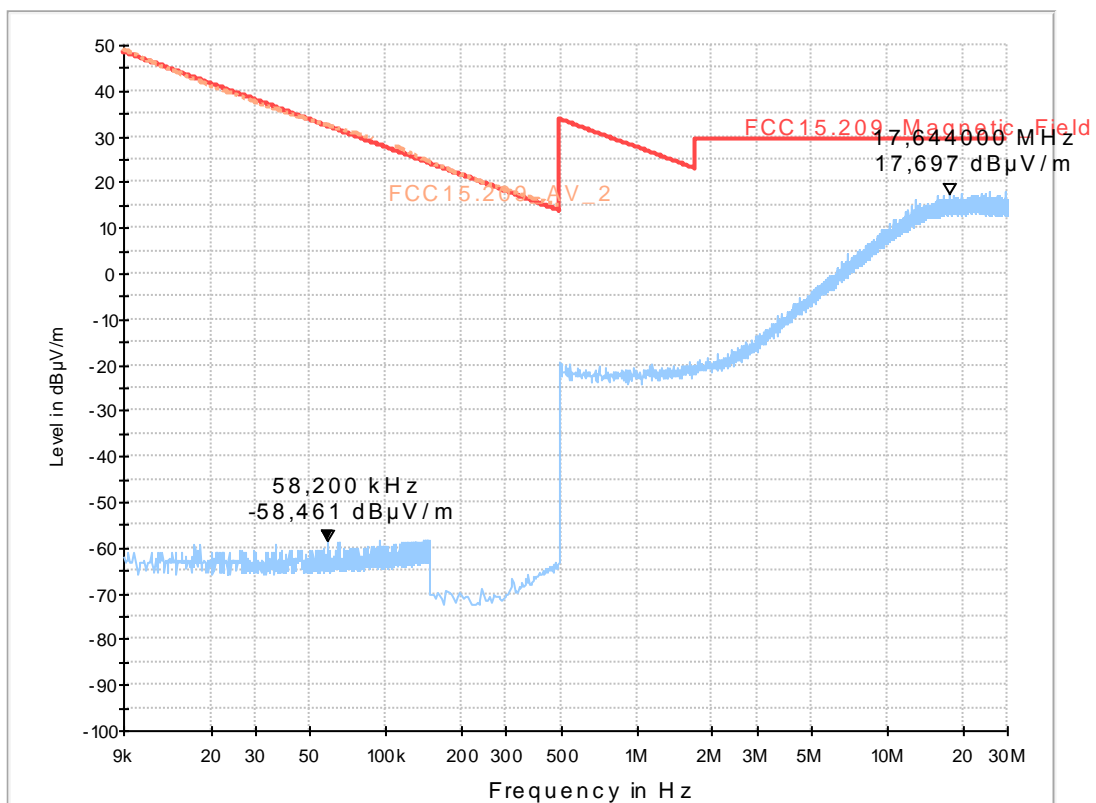
### 2.04\_Ch1413\_RMC

Date:	18.10.2013	Page 1 of 2
Test description:	Magnetic Fieldstrength 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 3	
Operator:	ADa	
Operating conditions:	TX-on, middle channel 1413	
Power during tests:	12V DC, 120 V/60Hz 6-0330-13-6-3a	

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

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## 1.5 Field strength &lt; 30 MHz (radiated) – FDD V Mode

## 2.05\_Ch4182\_RMC

## Common Information

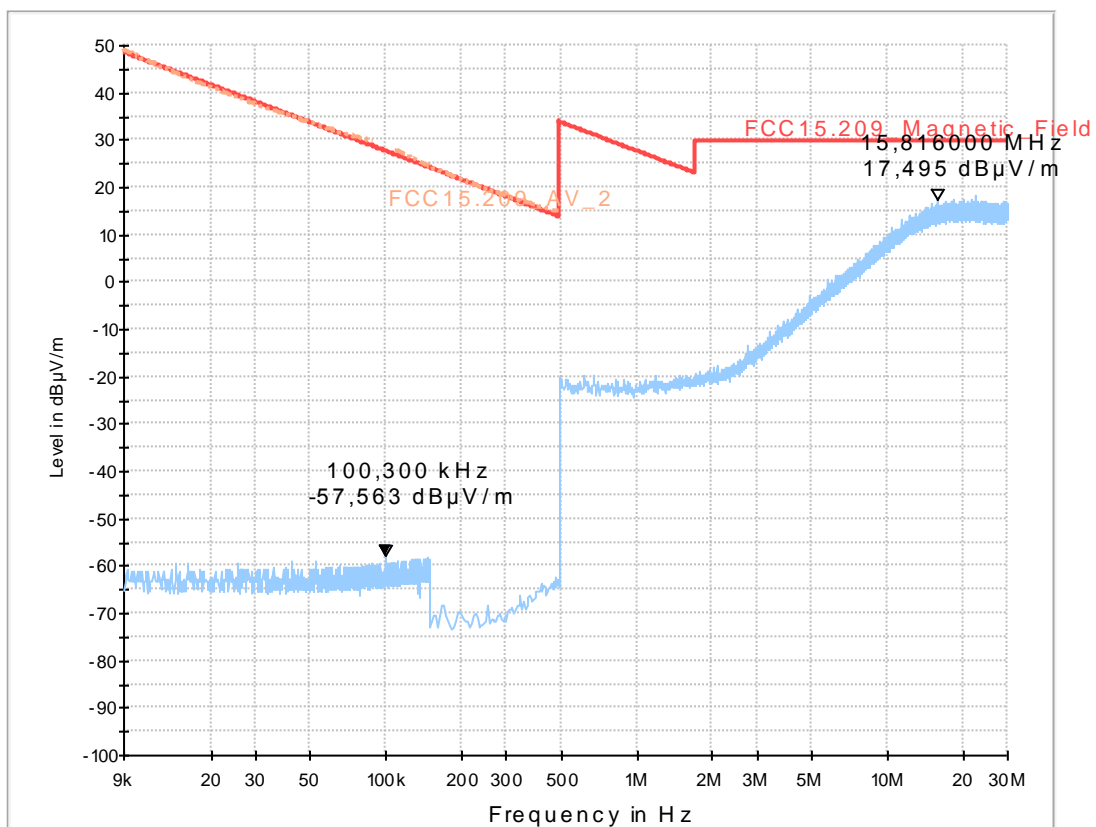
Test description:	Magnetic Fieldstrength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V8.51.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see 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 3

Operator:	ADa
Operating conditions:	TX-on, middle channel 4182
Power during tests:	12V DC, 120 V/60Hz 6-0330-13-6-3a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

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## 1.6 TX Spurious emissions conducted – G850 Mode

# Diagram No.: 36.00\_G850\_mid

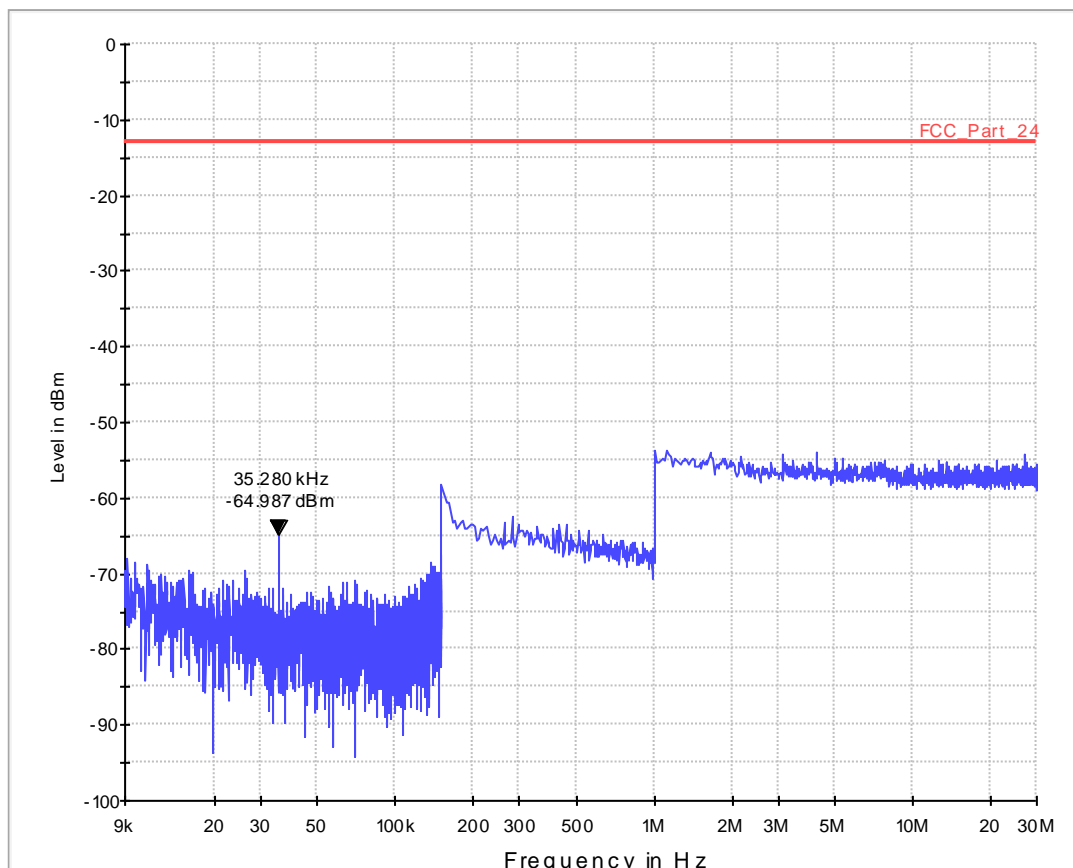
### Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22, RSS-132
Operation mode:	TX - GSM/GPRS (CS), Channel 192, (PCL= 5 (33 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--





# Diagram No.: 36.01\_GSM\_G850\_low

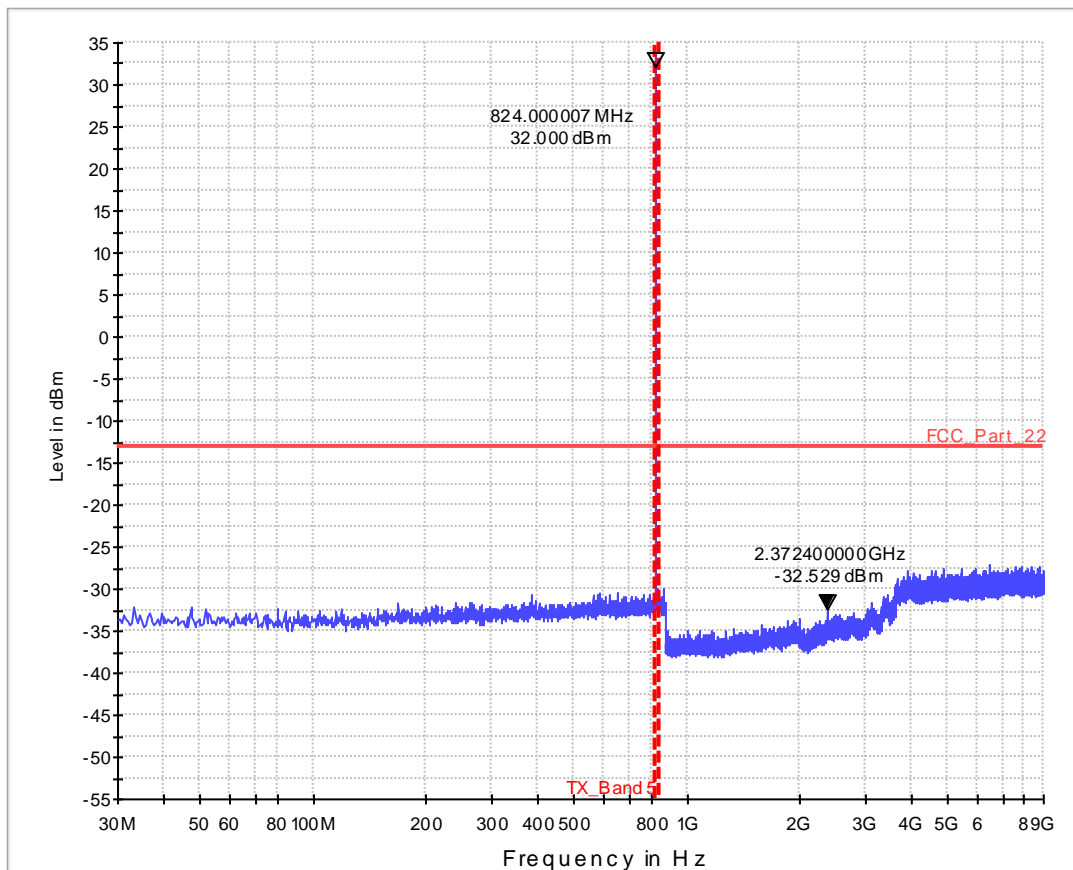
## Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22, RSS-132
Operation mode:	TX - GSM/GPRS (CS), Channel 128, (PCL= 5 (33 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



# Diagram No.: 36.02\_GSM\_G850\_mid

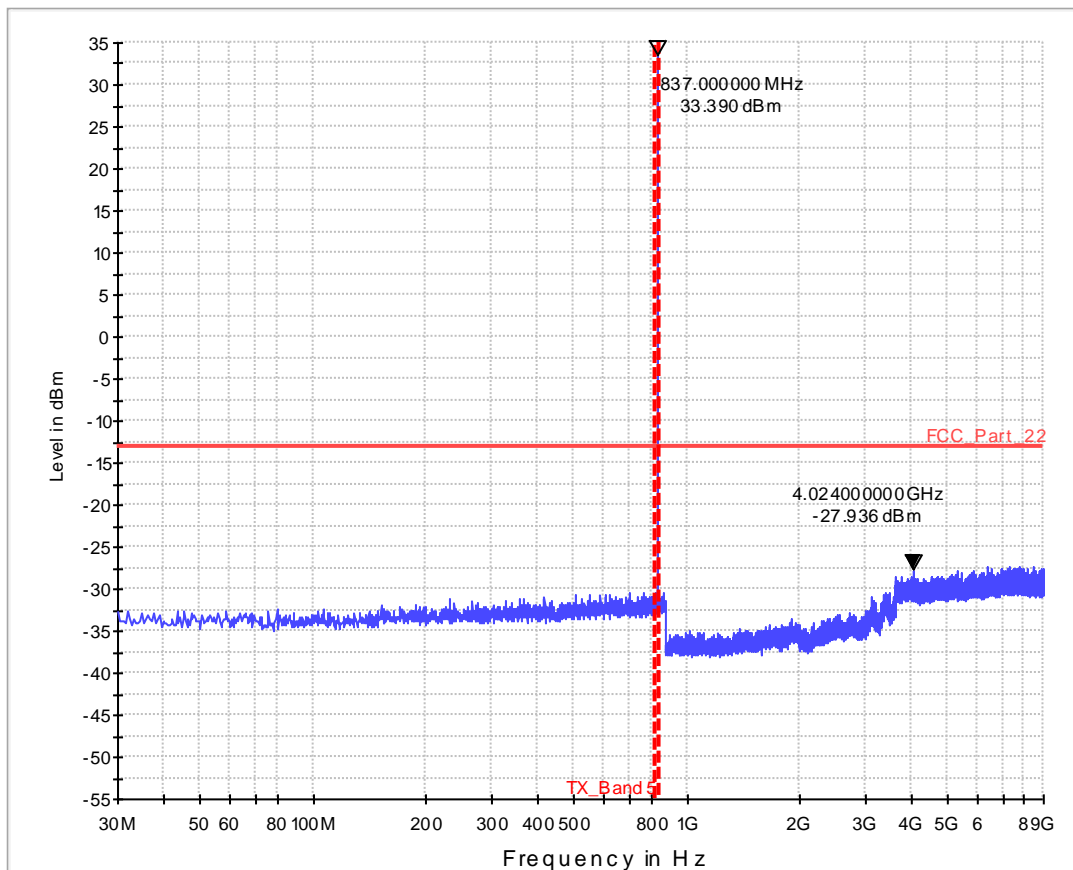
## Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22, RSS-132
Operation mode:	TX - GSM/GPRS (CS), Channel 192, (PCL= 5 (33 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## Diagram No.: 36.03\_GSM\_G850\_high

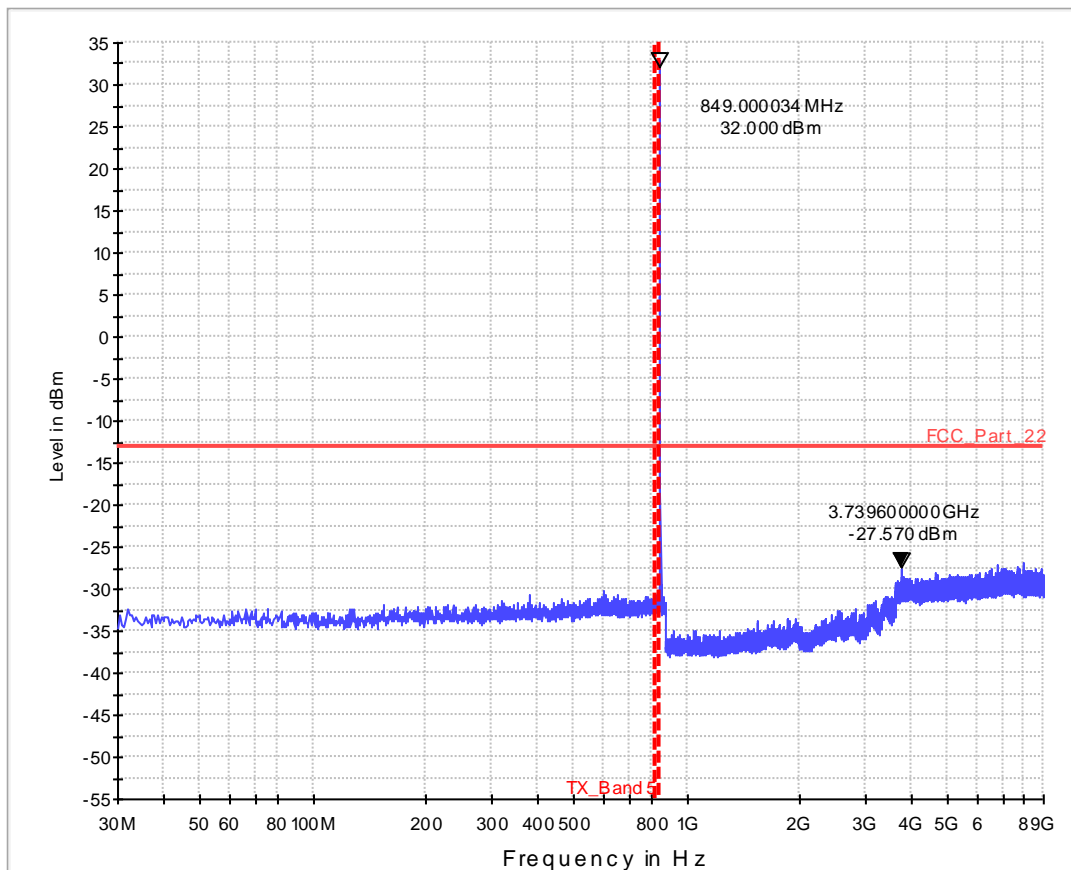
### Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22, RSS-132
Operation mode:	TX - GSM/GPRS (CS), Channel 251, (PCL= 5 (33 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## 1.7 TX Spurious emissions conducted – PCS1900 Mode

### Diagram No.: 36.07\_PCS1900\_mid

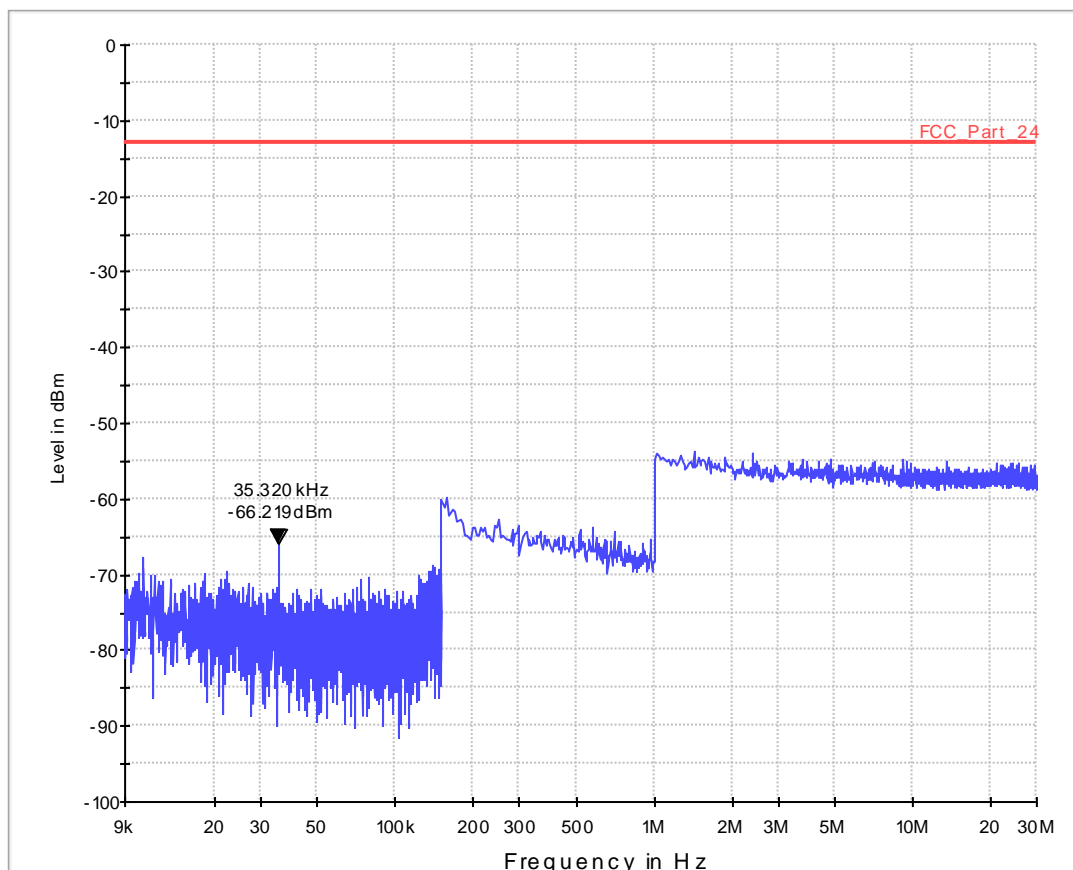
#### Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24, RSS-133
Operation mode:	TX - GSM/GPRS (CS), Channel 661, (PCL= 0 (30 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



# Diagram No.: 36.08\_PCS1900\_low

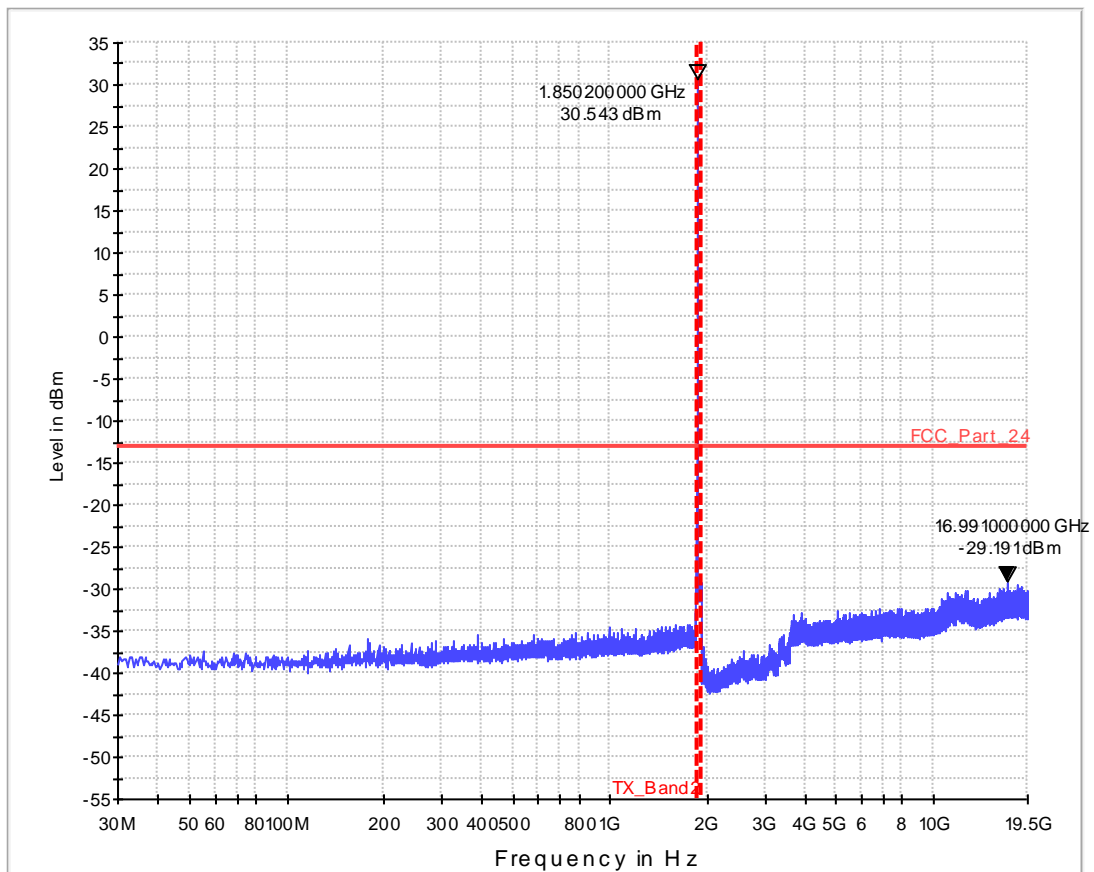
## Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24, RSS-133
Operation mode:	TX - GSM/GPRS (CS), Channel 512, (PCL= 0 (30 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## Diagram No.: 36.09\_PCS1900\_mid

### Common Information

Test Description: TX Spurious Emission Conducted §2.1051  
Test Site: Radio laboratory 2  
Test Standard: FCC Part 24, RSS-133

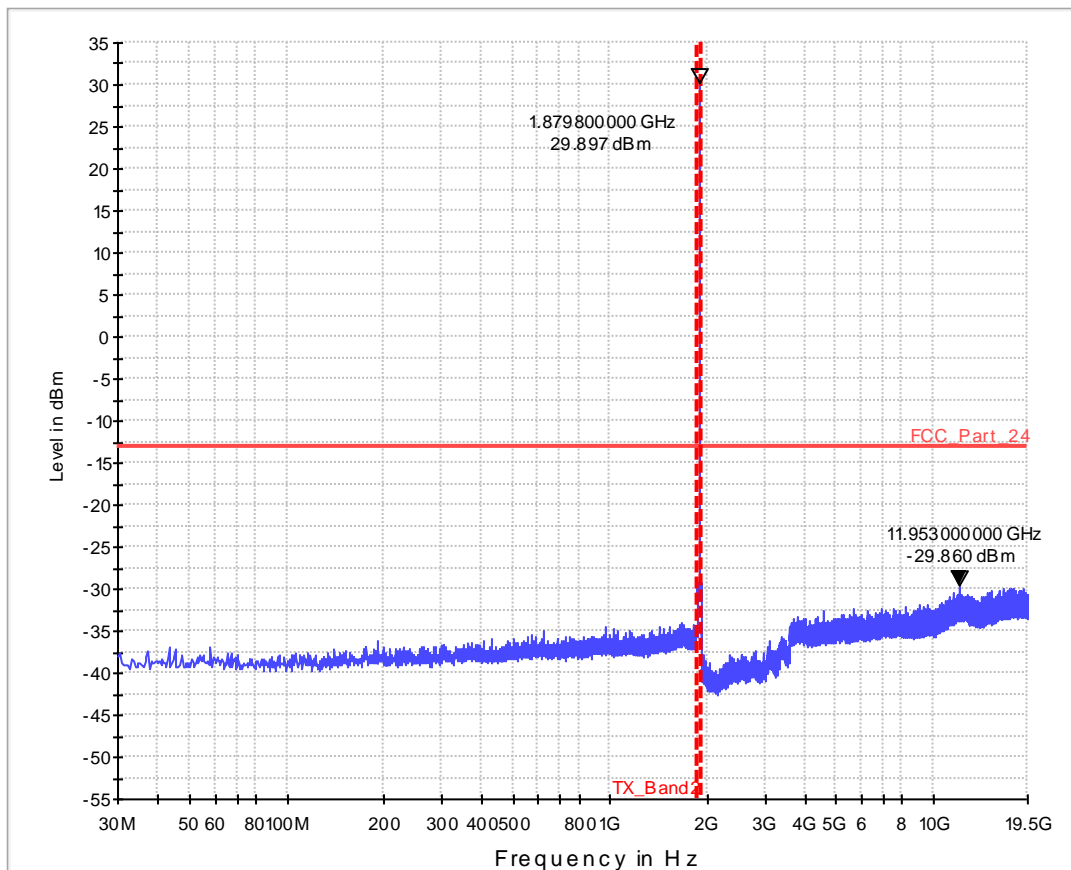
Operation mode: TX - GSM/GPRS (CS), Channel 661, (PCL= 0 (30 dBm))  
Operator: Tas  
Comment: 6-0330-13-3-6a

### EUT Information

Manufacturer: ublox AG  
Model: LISA-U200  
Type: GSM/FDD Module

-----

EUT: LISA-U200, RF Sample  
HW version: 146AB2  
FW version: 22.90  
Serial number: 358901-04-594324-5  
Connected Accessories: AC/DC Power Supply  
Power Supply: 12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main  
Comments: --



## Diagram No.: 36.10\_PCS1900\_high

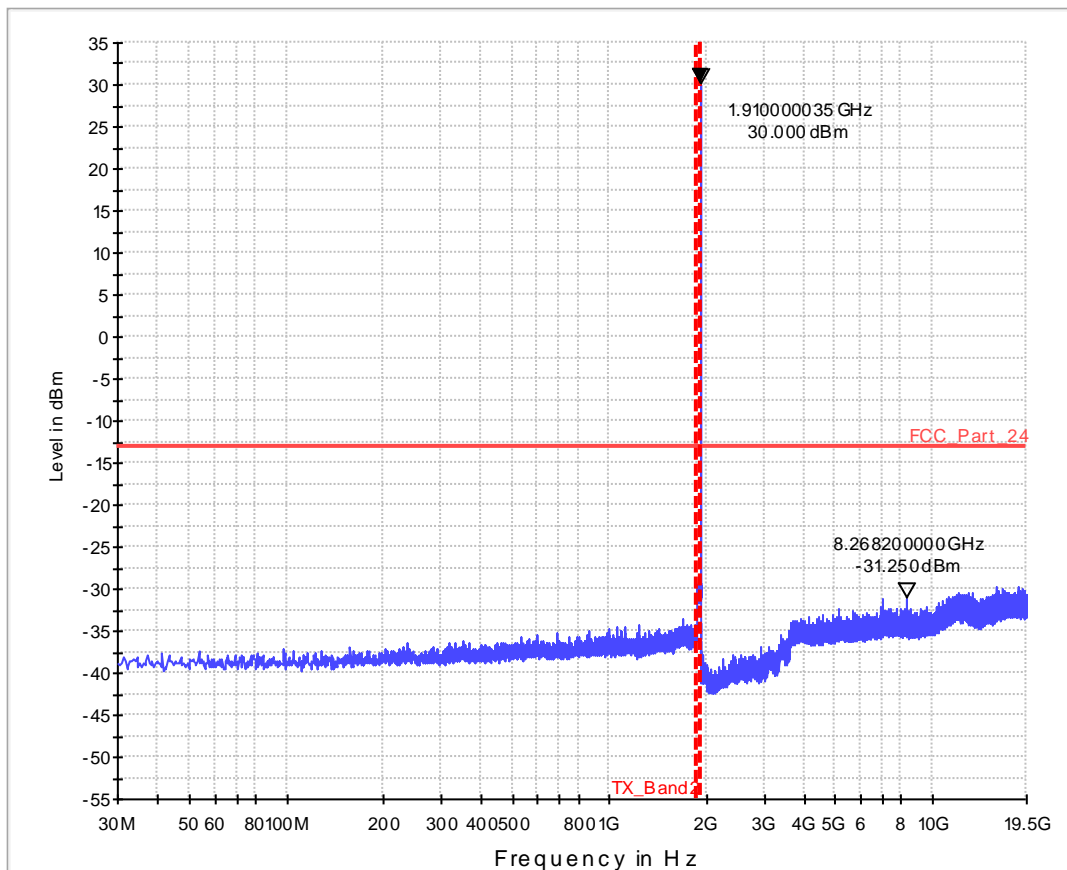
### Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24, RSS-133
Operation mode:	TX - GSM/GPRS (CS), Channel 810, (PCL= 0 (30 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## 1.8 TX Spurious emissions conducted – FDD II Mode

### Diagram No.: 36.14\_FDD II\_mid

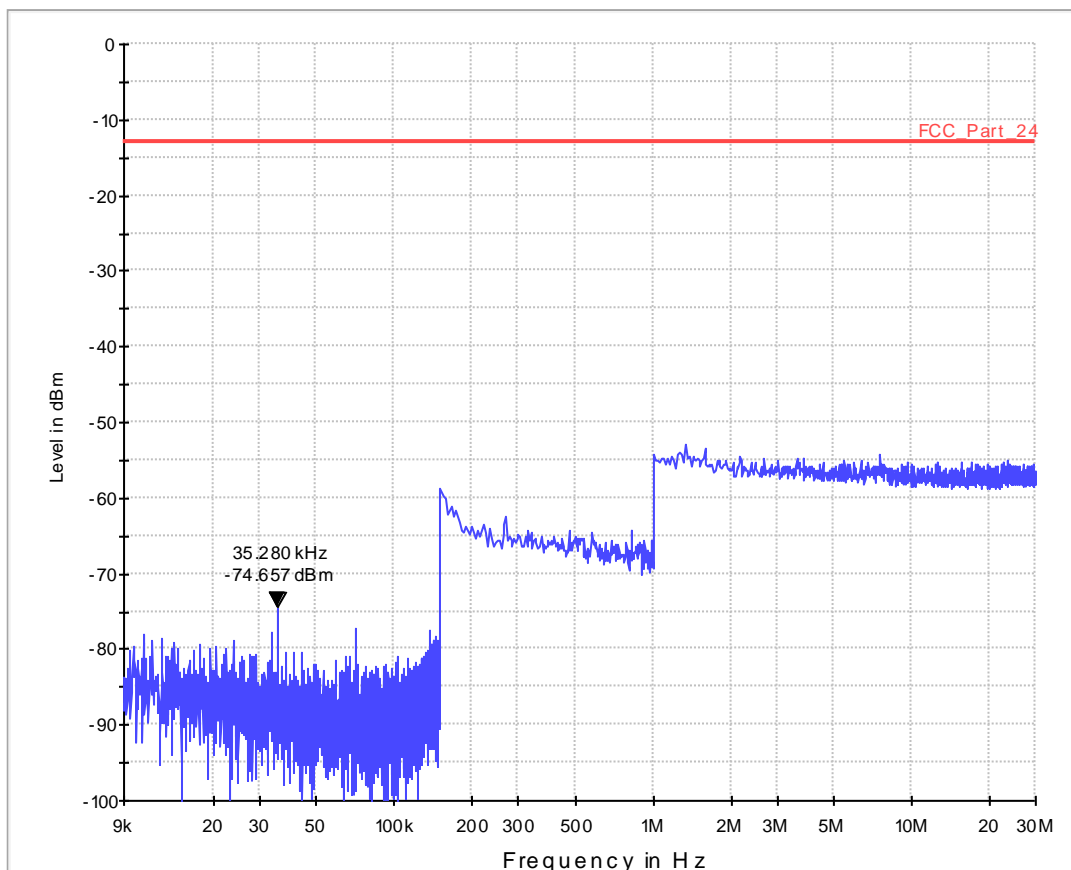
#### Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24, RSS-133
Operation mode:	TX - FDD II (RMC), Channel 9400, (PC= 24 dBm)
Operator:	Tas
Comment:	6-0330-13-3-6a

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--





# Diagram No.: 36.15\_FDD II\_low

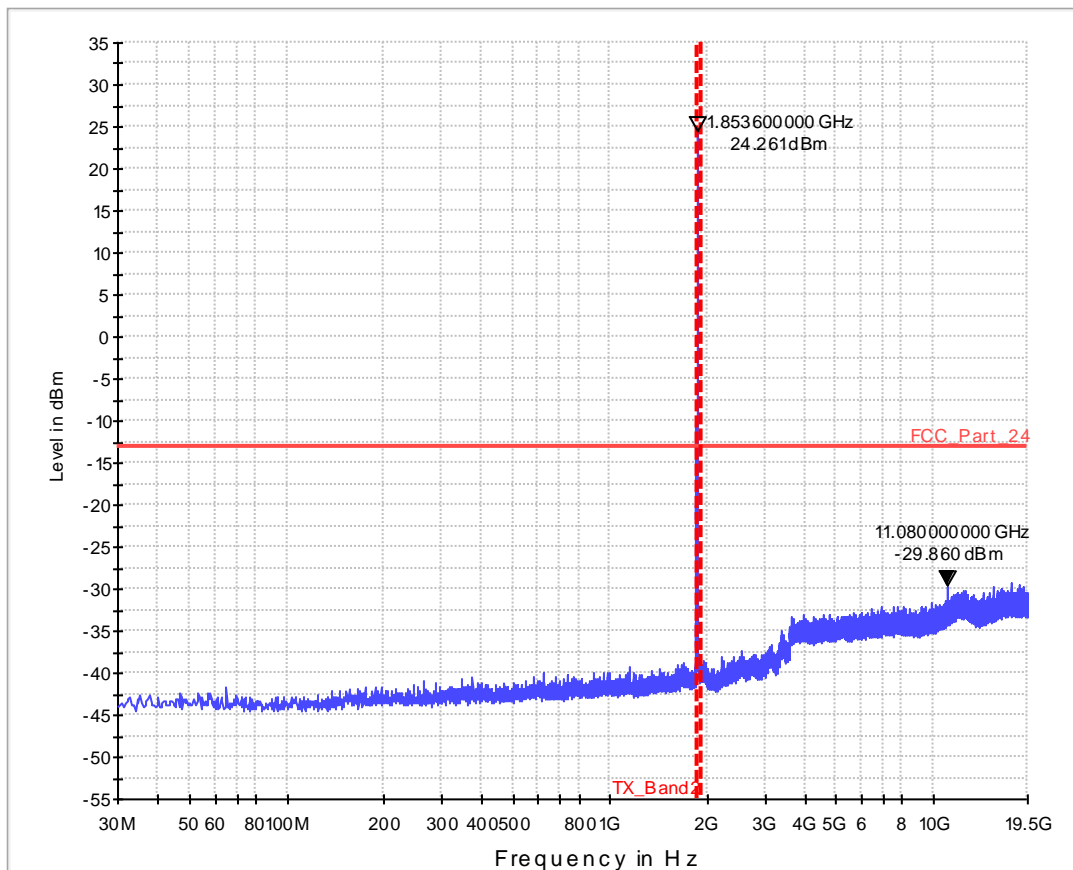
## Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24, RSS-133
Operation mode:	TX - FDD II (RMC), Channel 9262, (PCL= 3 (24 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



# Diagram No.: 36.16\_FDD II\_mid

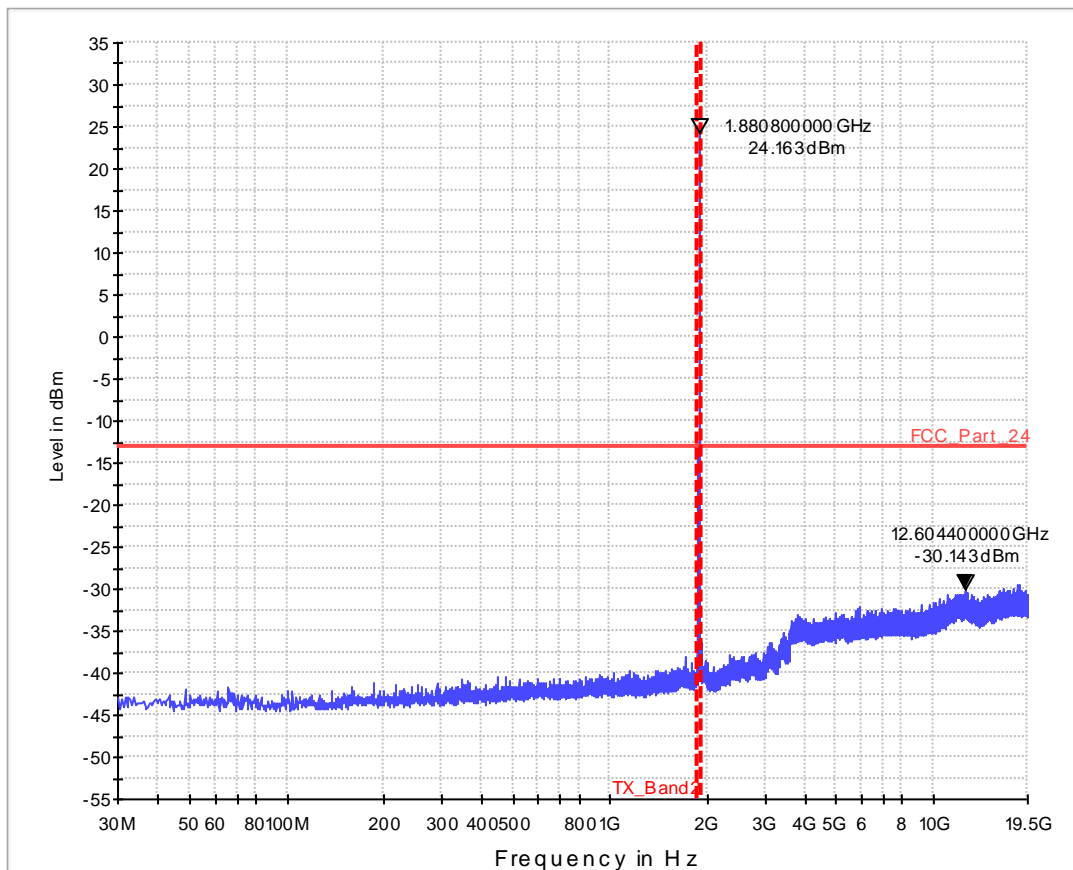
## Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24, RSS-133
Operation mode:	TX - FDD II (RMC), Channel 9400, (PC= 24 dBm)
Operator:	Tas
Comment:	6-0330-13-3-6a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



# Diagram No.: 36.17\_FDD II\_high

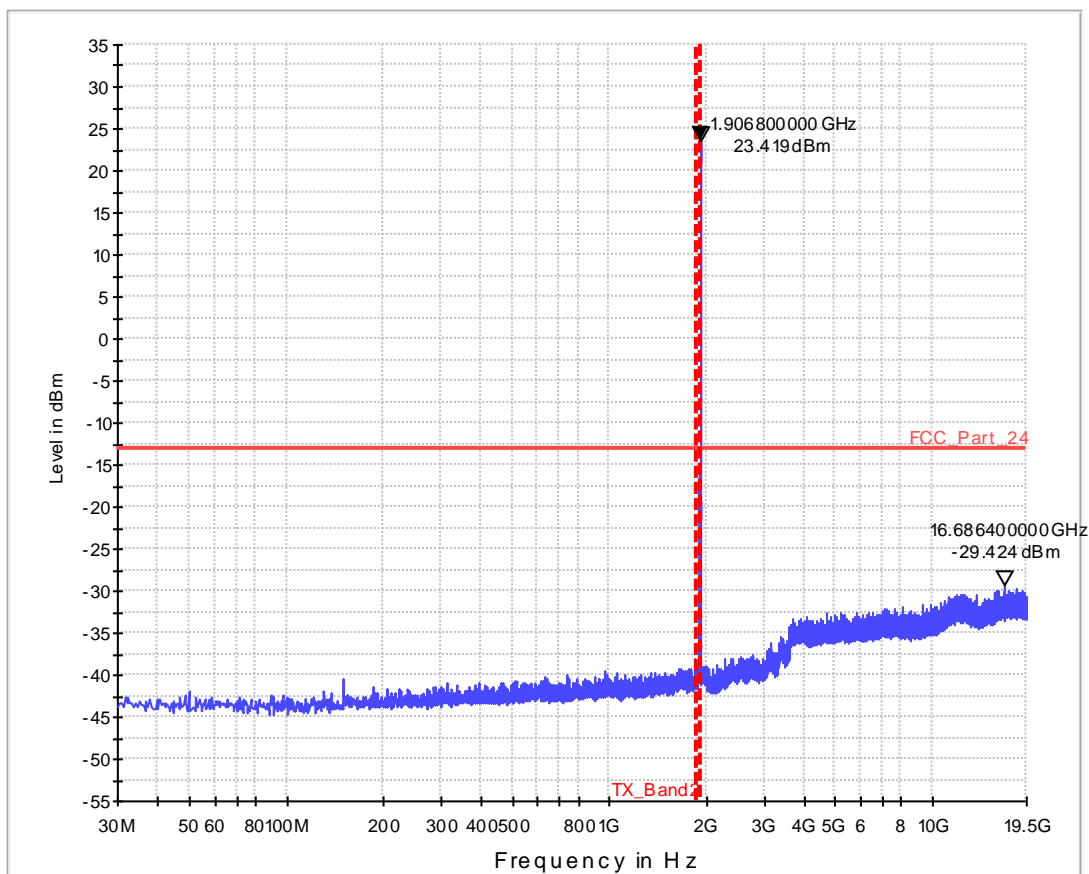
## Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 24, RSS-133
Operation mode:	TX - FDD II (RMC), Channel 9538, (PCL= 3 (24 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## 1.9 TX Spurious emissions conducted – FDD VI Mode

# Diagram No.: 36.18\_FDD IV\_mid

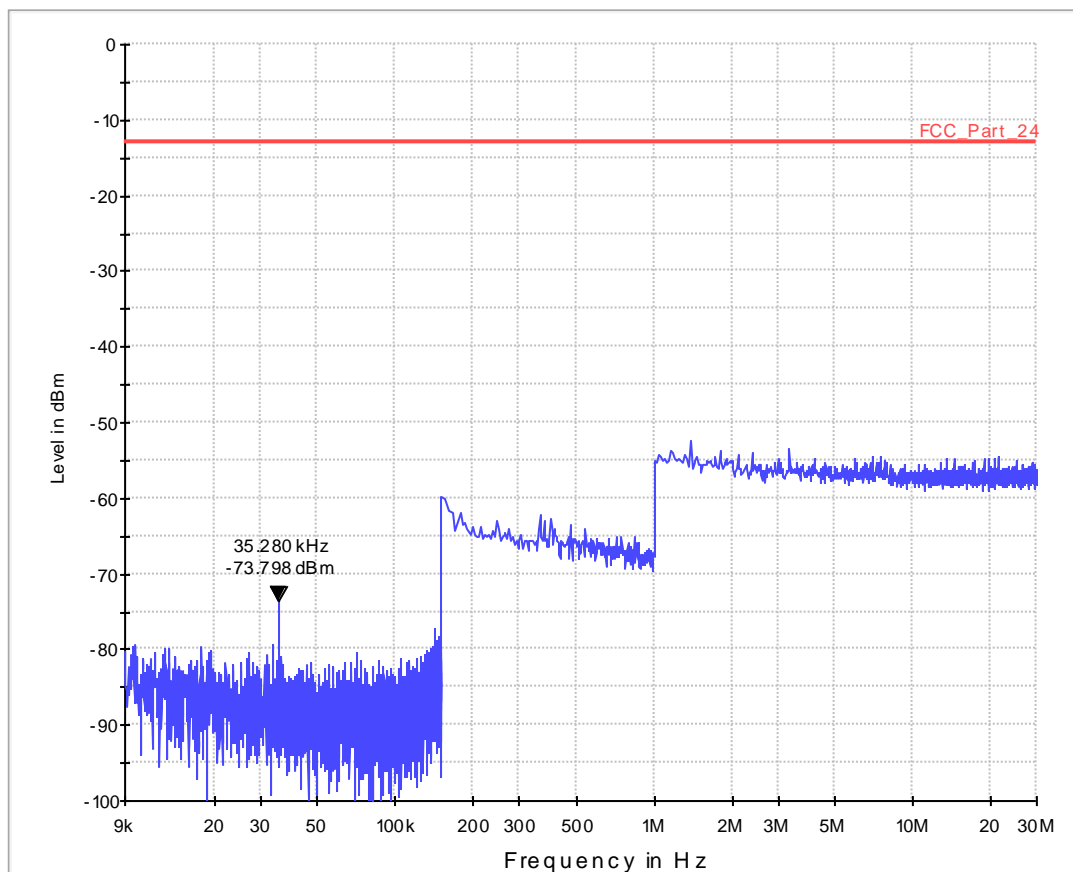
### Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 27, RSS-139
Operation mode:	TX - FDD IV (RMC), Channel 1413, (PCL= 3 (24 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



# Diagram No.: 36.19\_FDD IV\_low

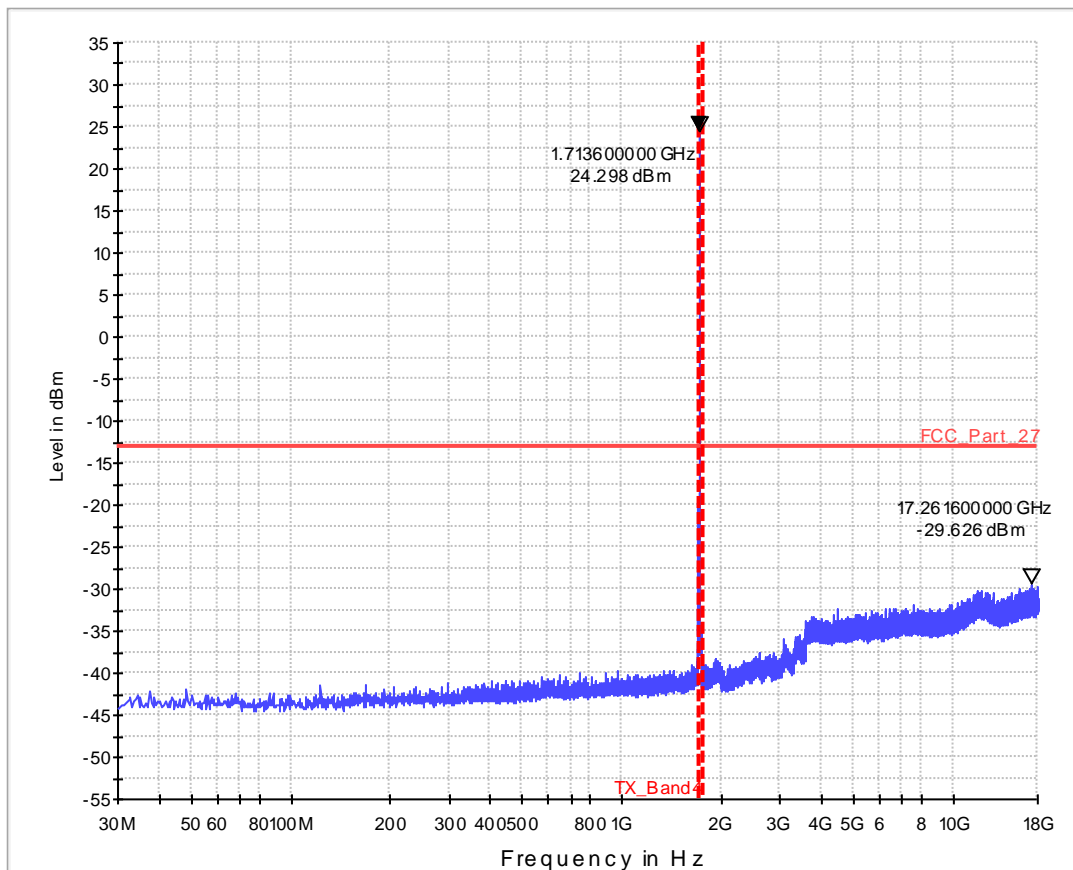
## Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 27, RSS-139
Operation mode:	TX - FDD IV (RMC), Channel 1312, (PCL= 3 (24 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## Diagram No.: 36.20\_FDD IV\_mid

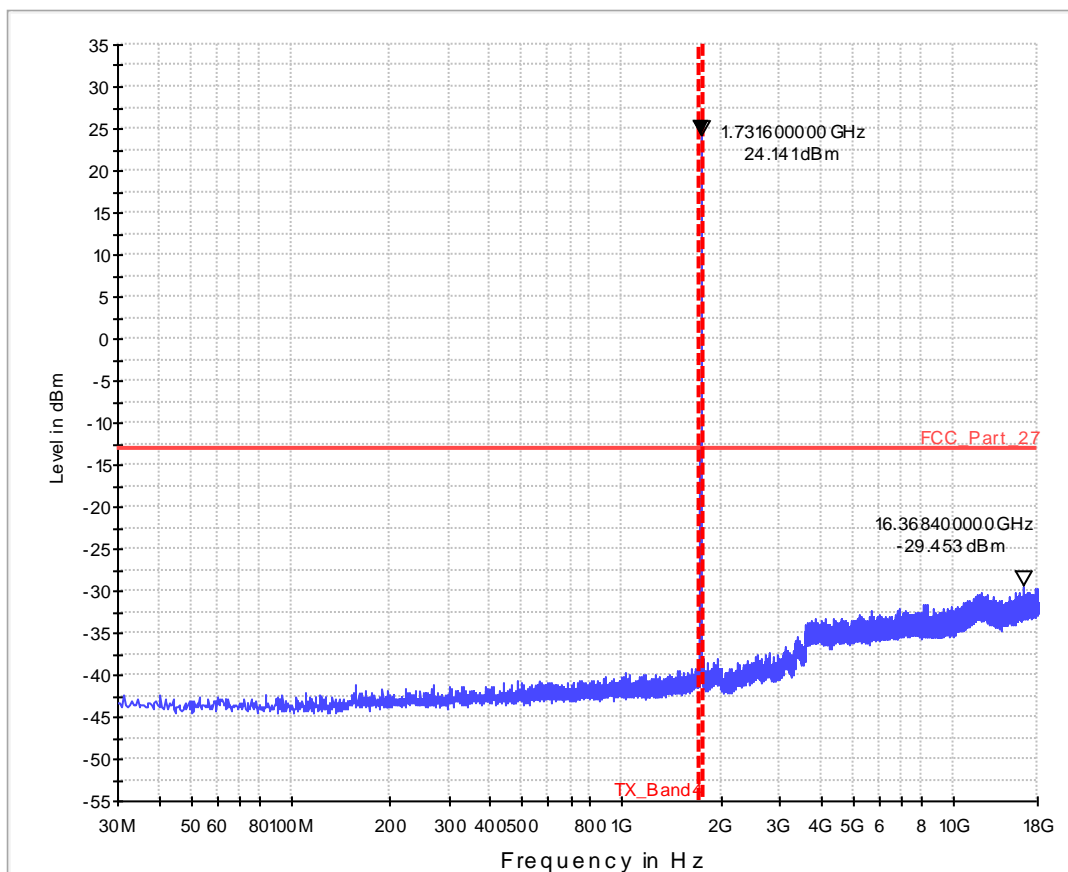
### Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 27, RSS-139
Operation mode:	TX - FDD IV (RMC), Channel 1413, (PCL= 3 (24 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



# Diagram No.: 36.21\_FDD IV\_high

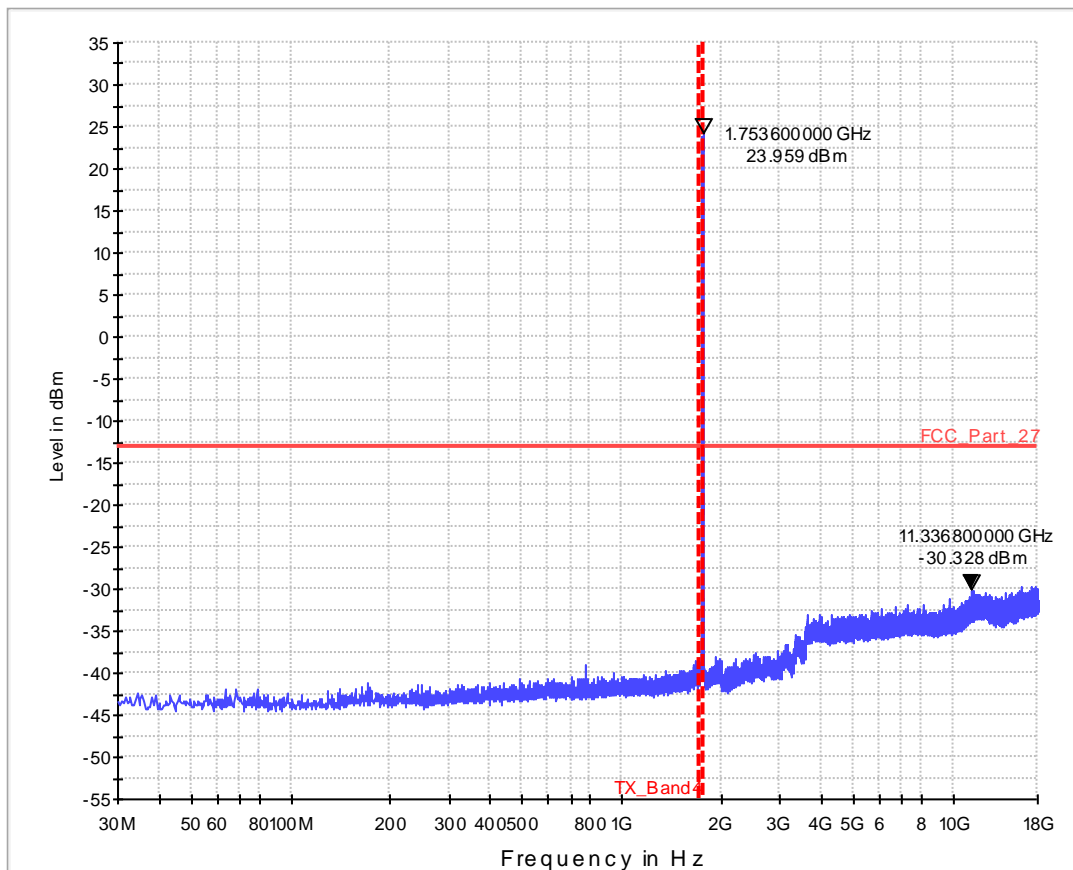
## Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 27, RSS-139
Operation mode:	TX - FDD IV (RMC), Channel 1513, (PCL= 3 (24 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## 2.0 TX Spurious emissions conducted – FDD V Mode

# Diagram No.: 36.22\_FDD V\_mid

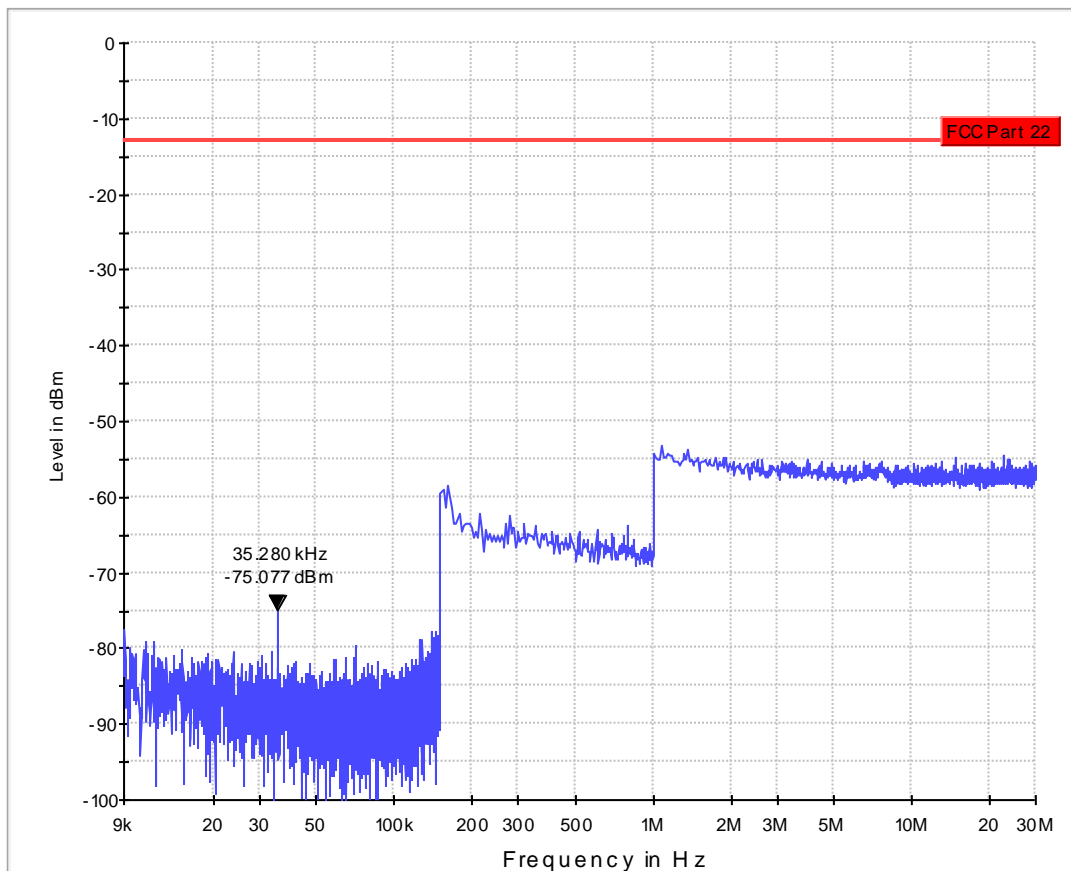
### Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22, RSS-132
Operation mode:	TX - FDD V (RMC), Channel 4182, (PCL= 3 (24 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--





## Diagram No.: 36.23\_FDD V\_low

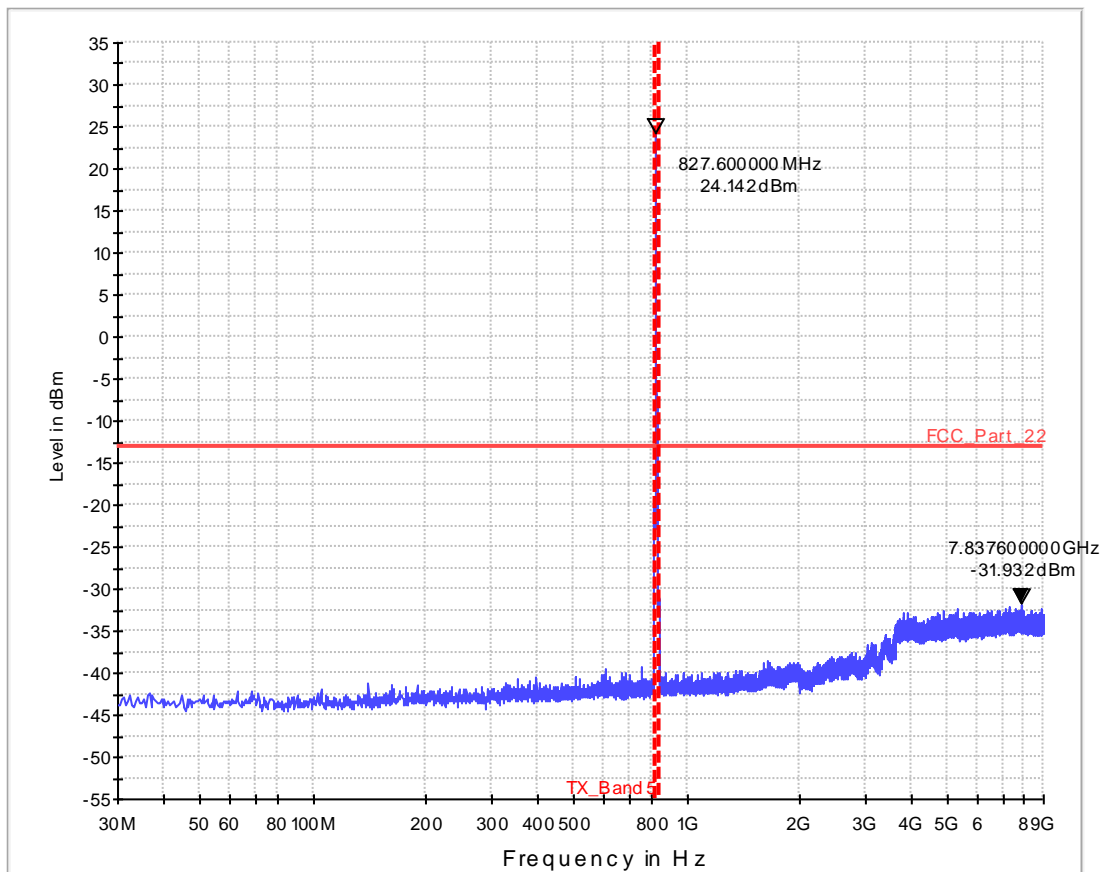
### Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22, RSS-132
Operation mode:	TX - FDD V (RMC), Channel 4132, (PCL= 3 (24 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



# Diagram No.: 36.24\_FDD V\_mid

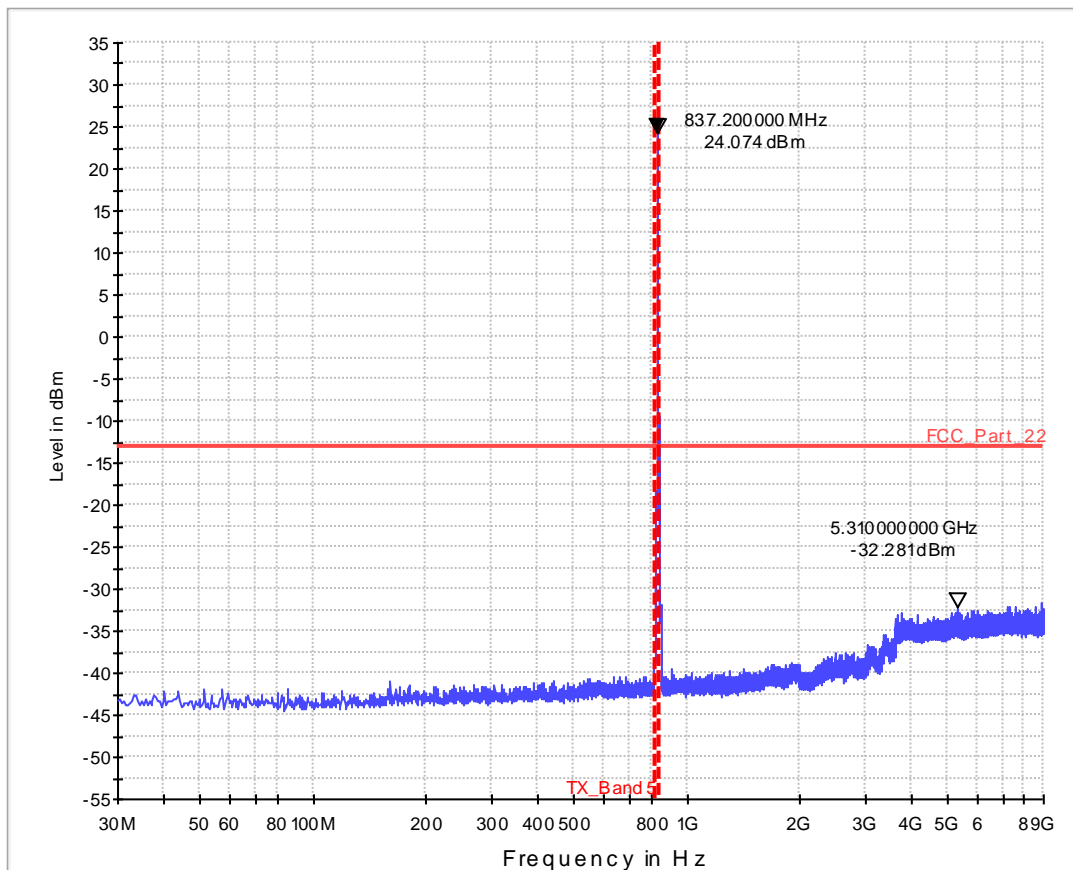
## Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22, RSS-132
Operation mode:	TX - FDD V (RMC), Channel 4182, (PCL= 3 (24 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



# Diagram No.: 36.25\_FDD V\_high

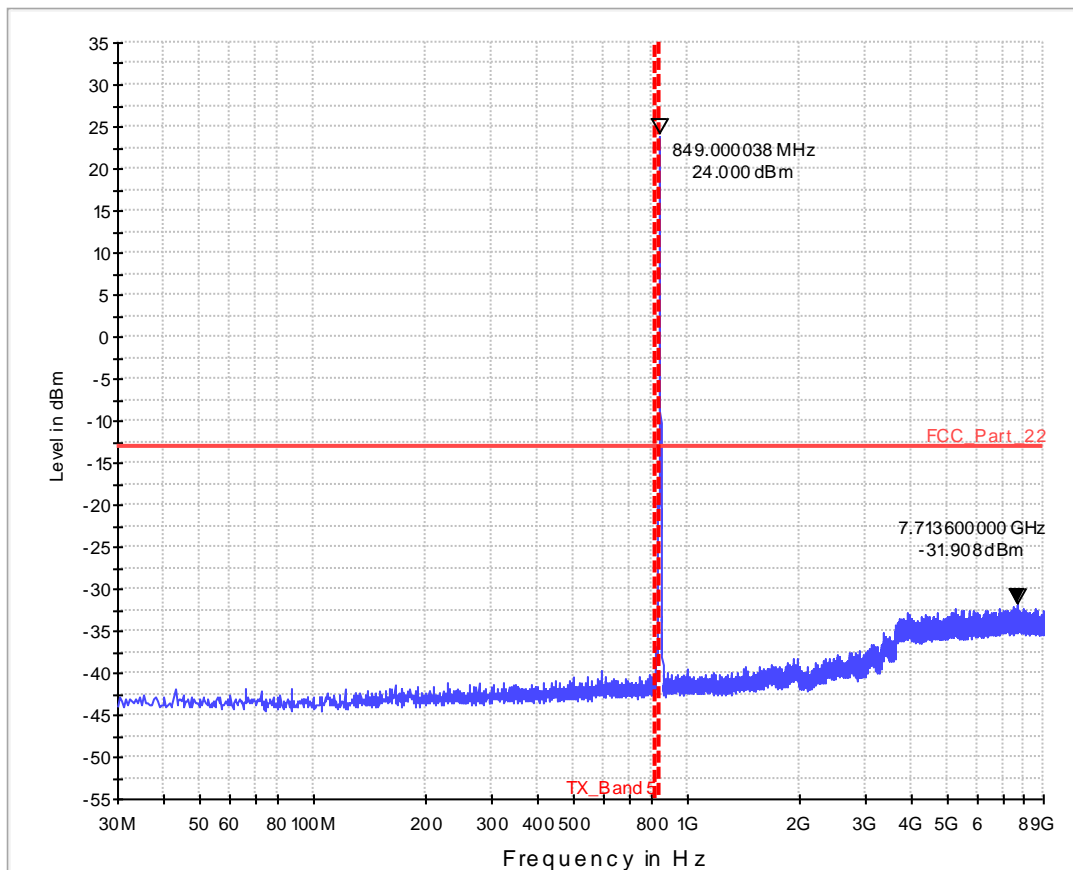
## Common Information

Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 22, RSS-132
Operation mode:	TX - FDD V (RMC), Channel 4233, (PCL= 3 (24 dBm))
Operator:	Tas
Comment:	6-0330-13-3-6a

## EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	358901-04-594324-5
Connected Accessories:	AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## 2.1 Radiated spurious emissions: $f > 30$ MHz – G850 Mode

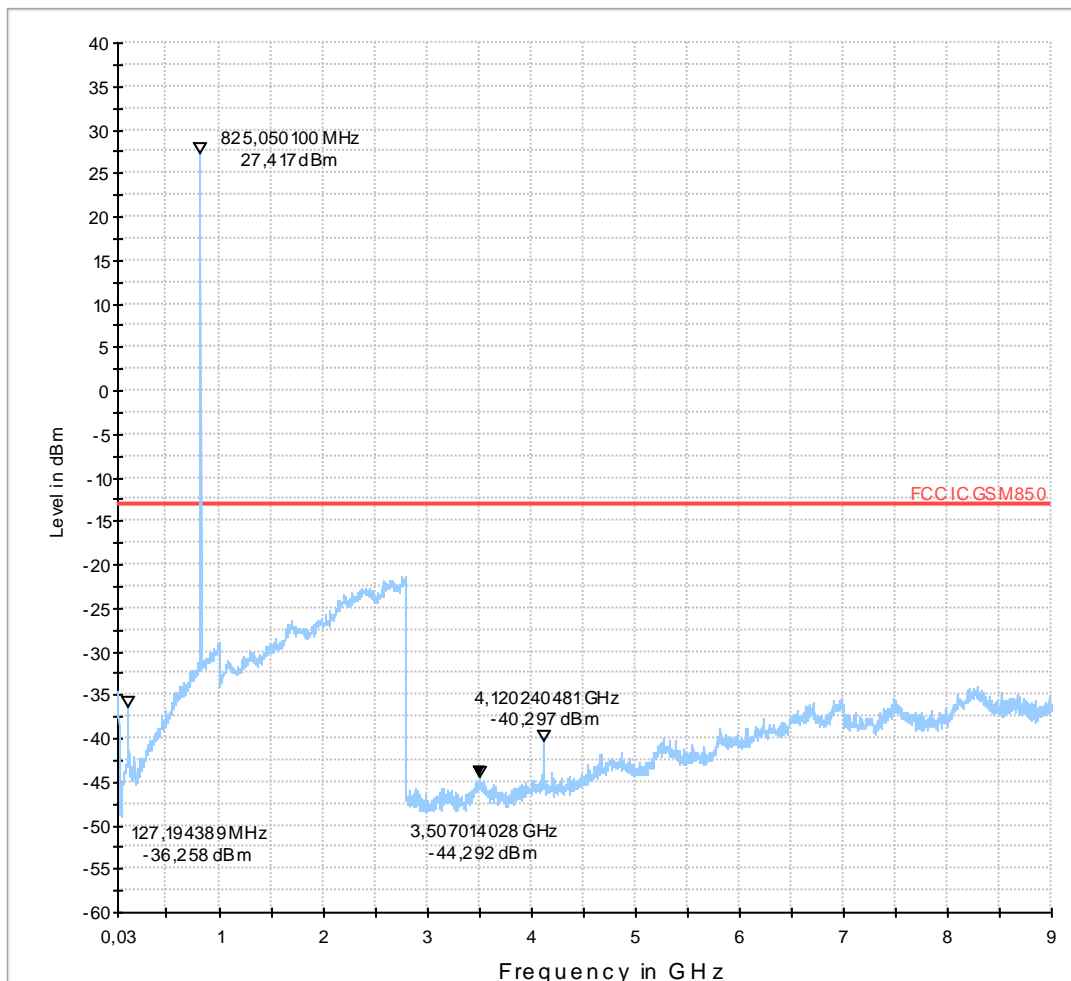
### 8.01\_Ch128\_GSM

#### Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917, RSS-132
Test Case:	TX
Operating Mode:	MS allocated UL channel 128, GSM/GPRS
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 44%rH; Temperature: 20,5°C
Operator:	Tas/Rsp 6-0330-13-3-6a

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



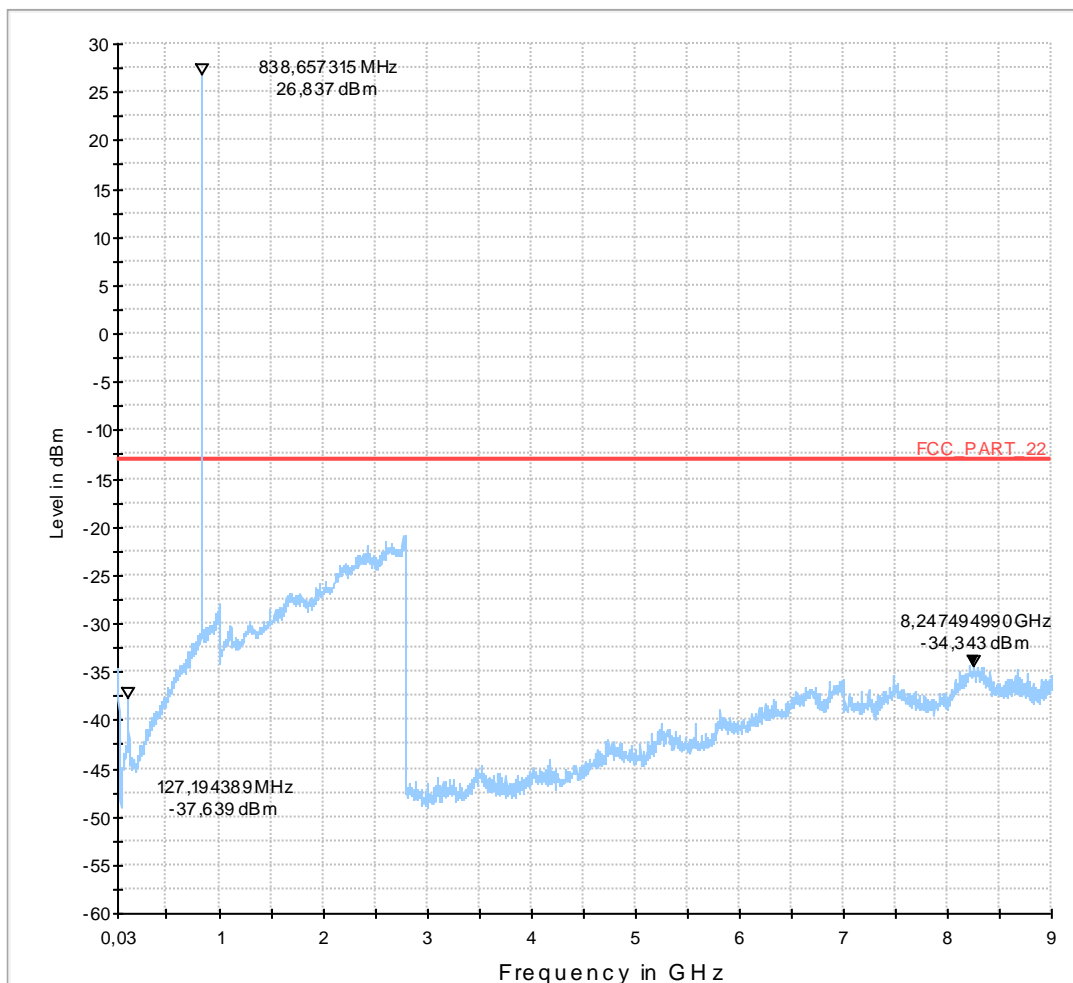
## 8.02\_Ch192\_GSM

### Common Information

Test Description:	Radiated Spurious Emissions G850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917, RSS-132
Test Case:	TX
Operating Mode:	MS allocated UL channel 192, GSM/GPRS
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 44%rH; Temperature: 20,5°C
Operator:	Tas/Rsp 6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



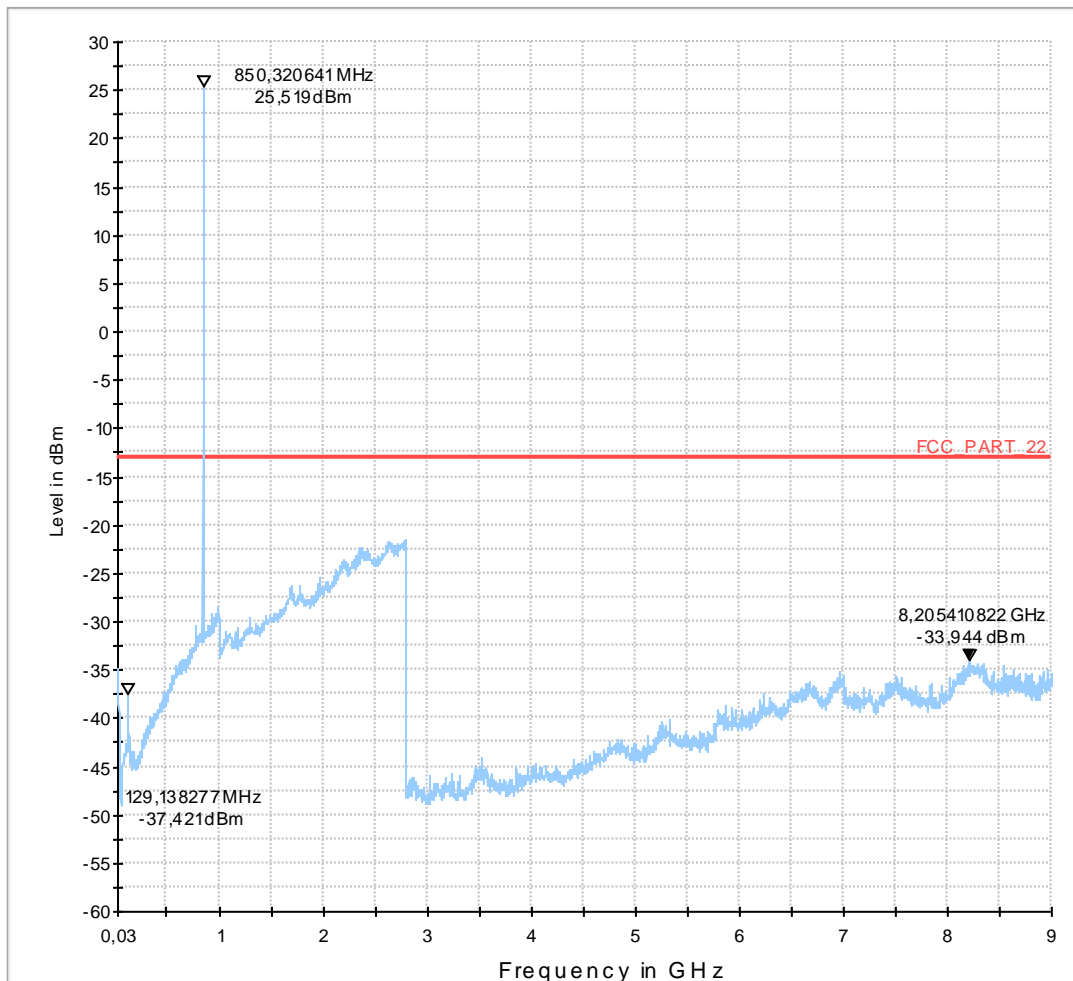
## 8.03\_Ch251\_GSM

### Common Information

Test Description:	Radiated Spurious Emissions G850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917, RSS-132
Test Case:	TX
Operating Mode:	MS allocated UL channel 251, GSM/GPRS
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 44%rH; Temperature: 20,5°C
Operator:	Tas/Rsp 6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## 2.2 Radiated spurious emissions: $f > 30$ MHz – PCS1900 Mode

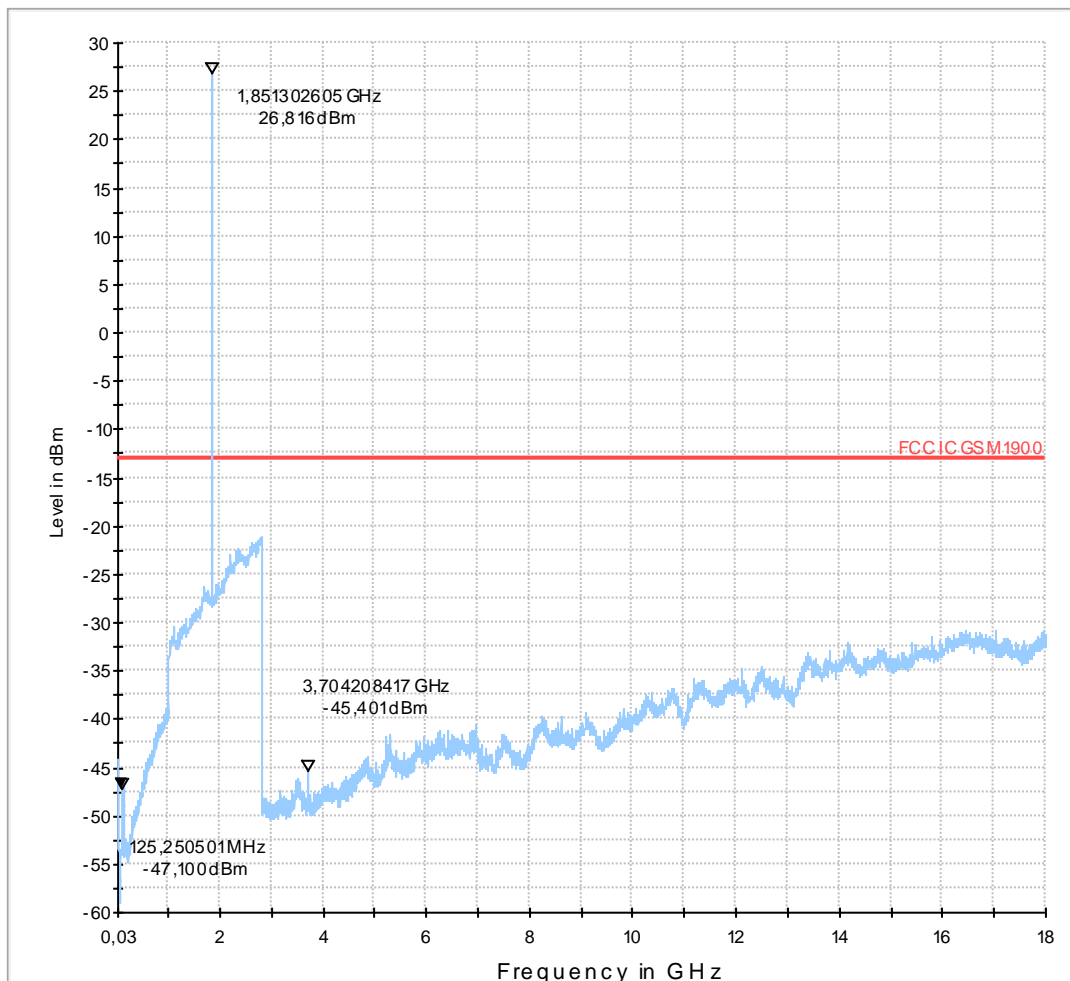
### 8.04\_Ch512\_GSM

#### 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
Comm. Link:	GSM1900, Voice
Operating Mode:	MS allocated channel 512 (UL = 1850.2MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 44%rH; Temperature: 20,5°C
Operator:	Tas/Rsp 6-0330-13-3-6a

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



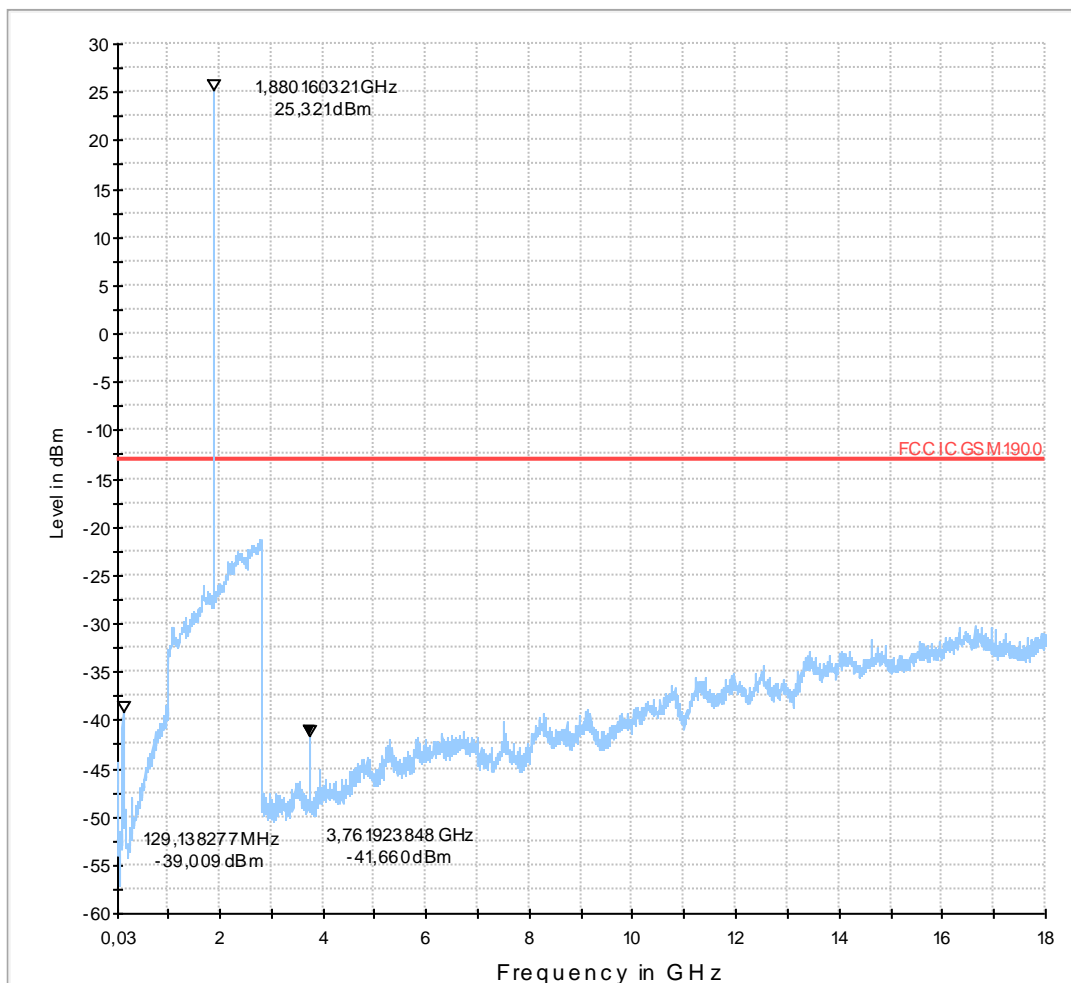
## 8.05\_Ch661\_GSM

### 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
Comm. Link:	GSM1900, Voice
Operating Mode:	MS allocated channel 661 (UL = 1880.2MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 44%rH; Temperature: 20,5°C
Operator:	Tas/Rsp 6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--





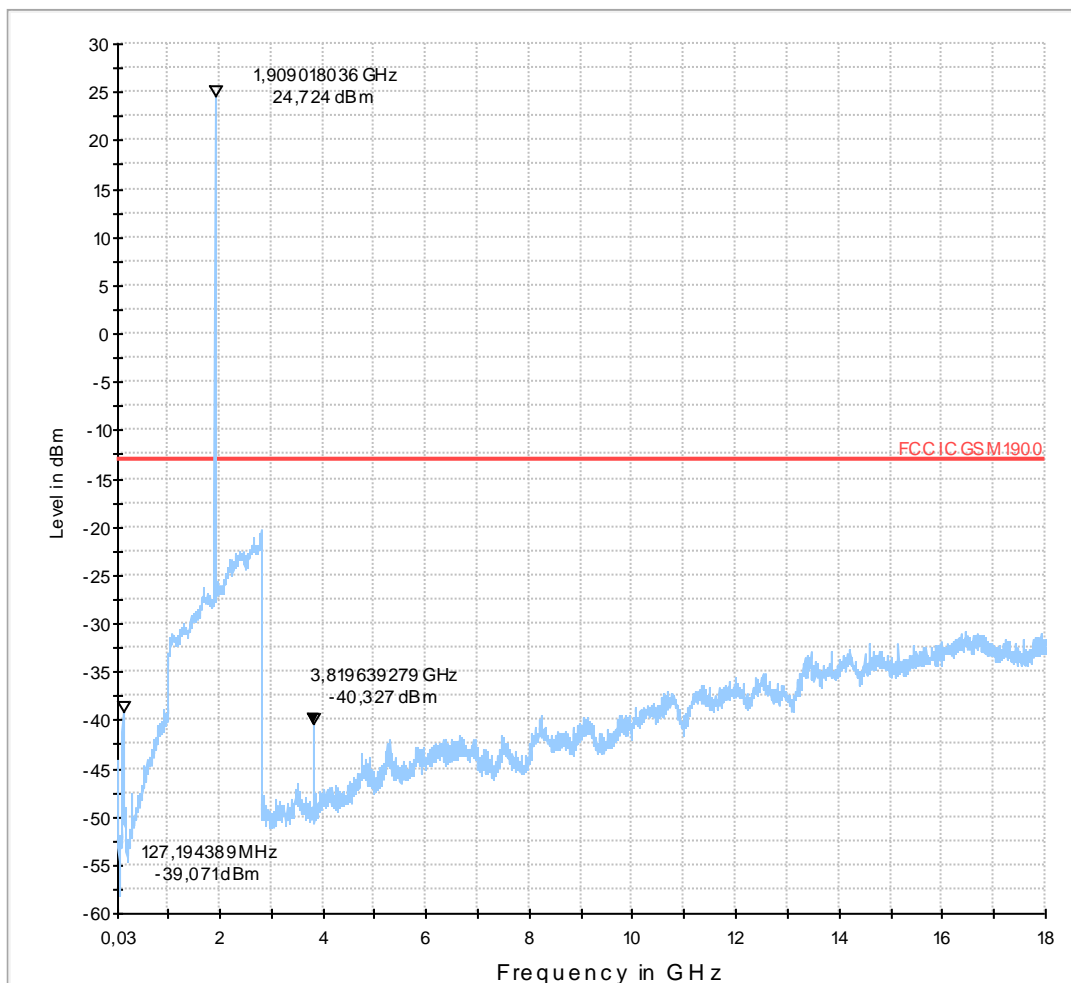
## 8.06\_Ch810\_GSM

### 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
Comm. Link:	GSM1900, Voice
Operating Mode:	MS allocated channel 810 (UL = 1909,8 MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 44%rH; Temperature: 20,5°C
Operator:	Tas/Rsp 6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## 2.3 Radiated spurious emissions: $f > 30$ MHz – FDD II Mode

### 8.20\_Ch9262\_RMC

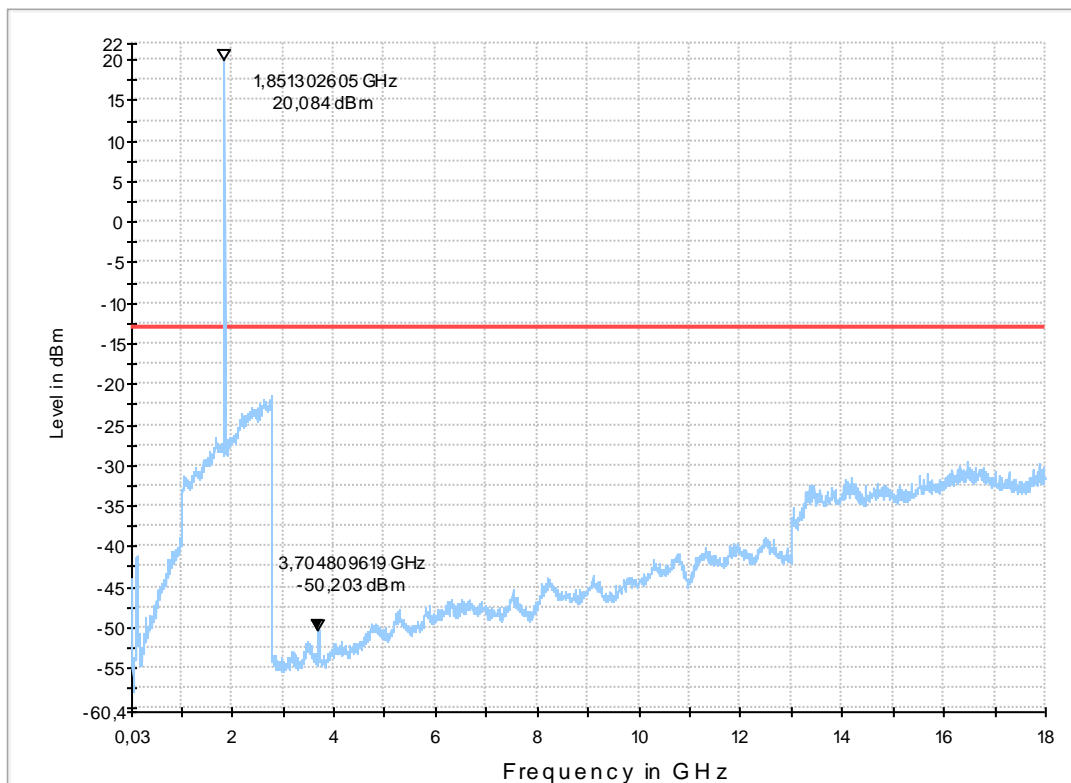
#### Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 9262 ( $f_c = 1852.4$ MHz)
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operator:	ada 6-0330-13-3-6a

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

030414\_FCC\_Part24\_UMTS-FDDII\_TX\_all\_channels\_30M-25G



## 8.21\_Ch9400\_RMC

### Common Information

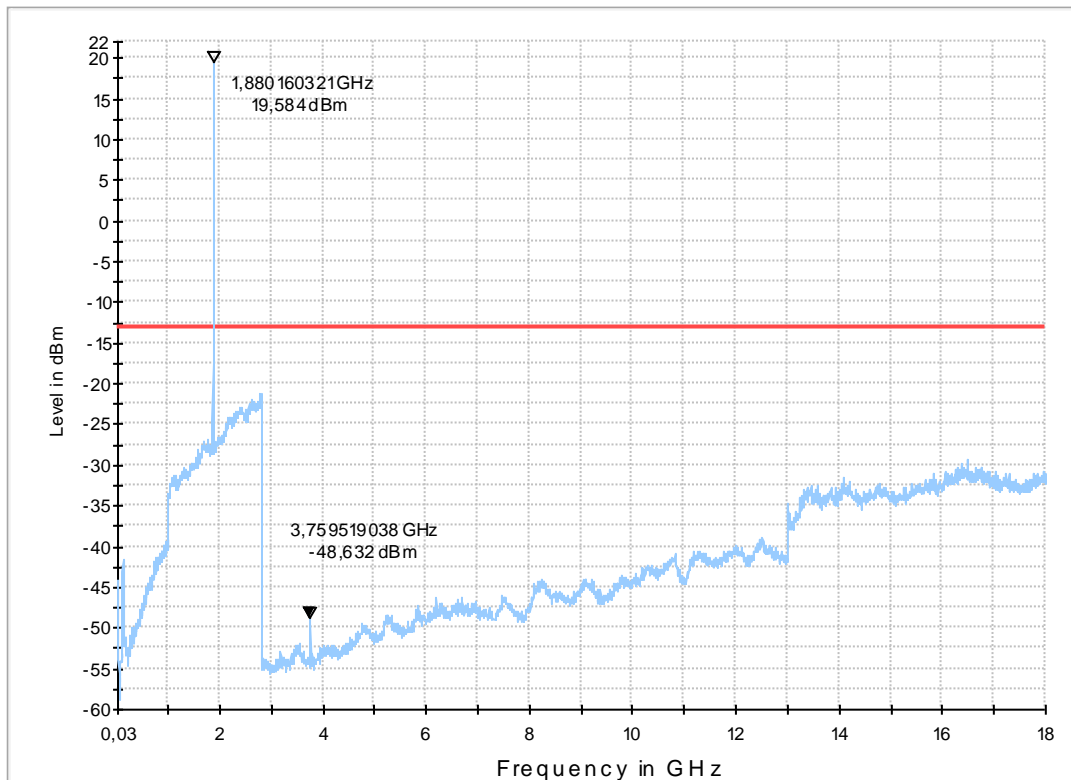
Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 9400 (fc = 1800MHz)
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operator:	ada 6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

030414\_FCC\_Part24\_UMTS-FDDII\_TX\_all\_channels\_30M-25G



## 8.22\_Ch9538\_RMC\_

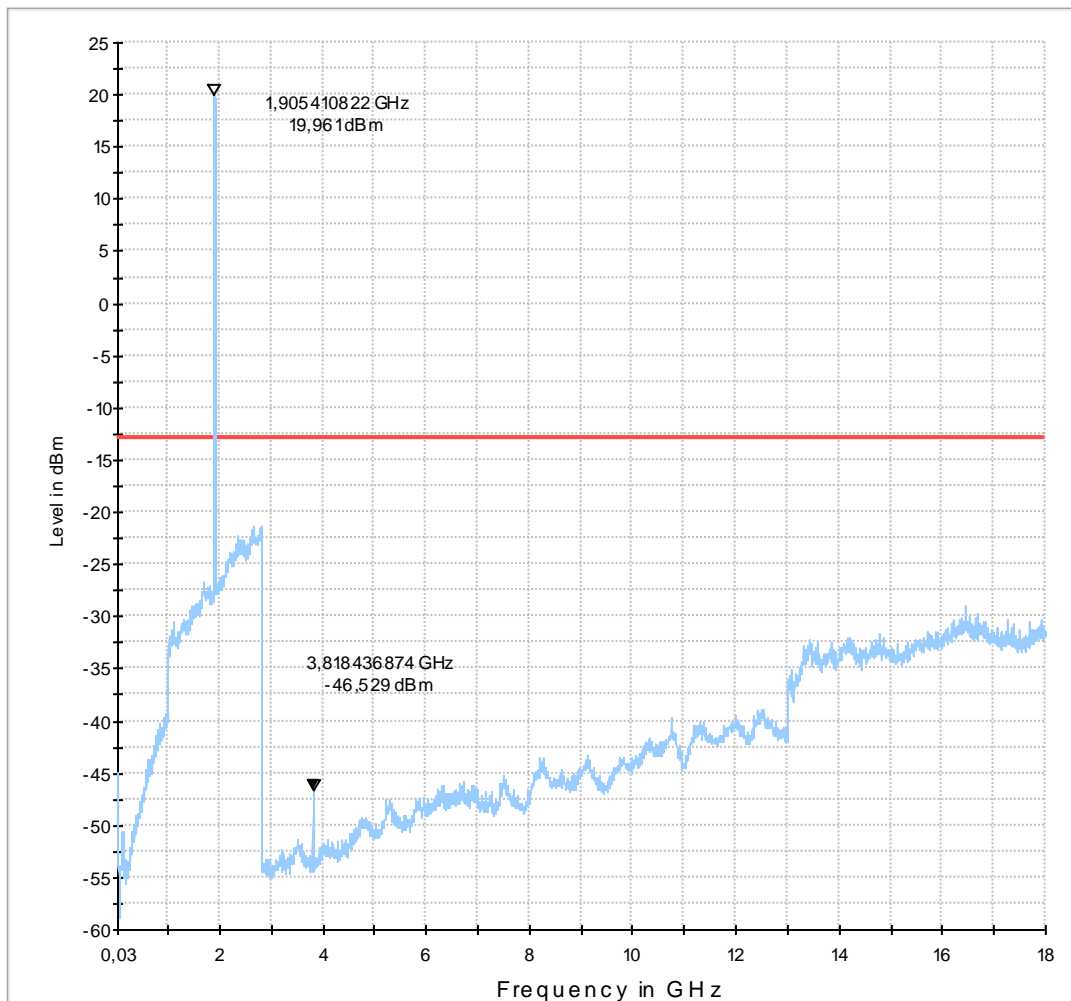
### Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238, RSS-133
Operating Mode:	UE allocated channel 9538 (fc = 1907,6MHz)
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operator:	Tas/GAr 6-0330-13-6-3a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

030414\_FCC\_Part24\_UMTS-FDDII\_TX\_all\_channels\_30M-25G



## 2.4 Radiated spurious emissions: $f > 30$ MHz – FDD IV Mode

### 8.23\_Ch1312\_RMC

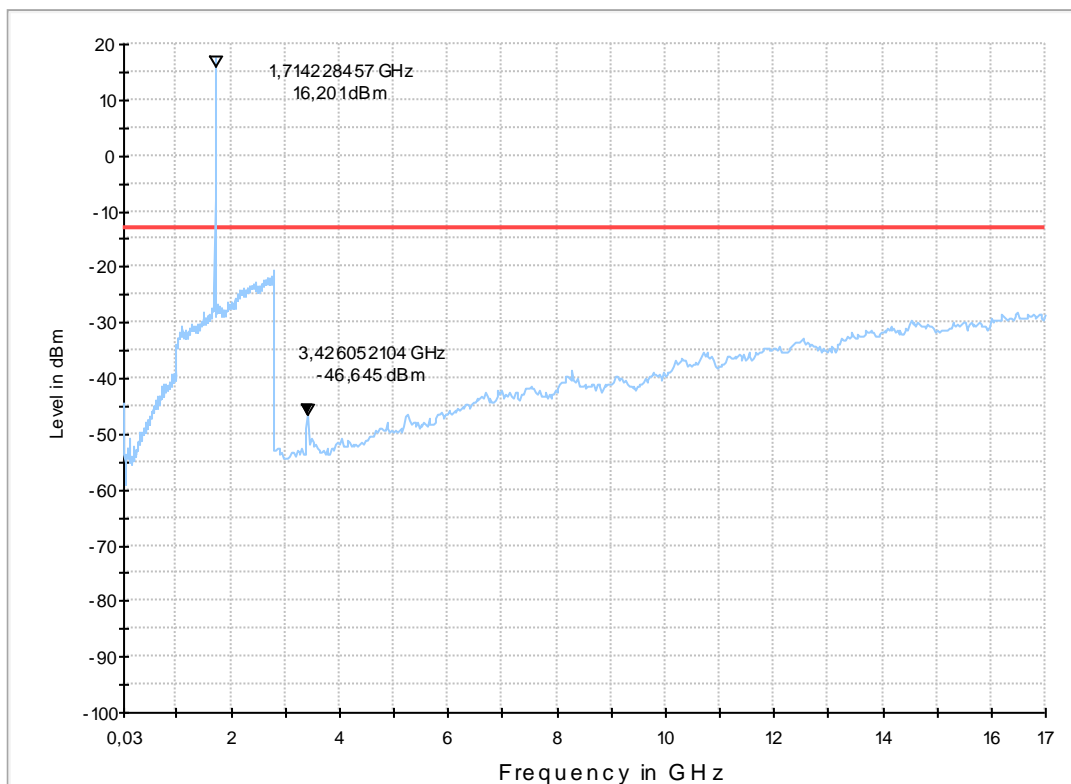
#### Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 1312 (fc 1712,4)
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operator:	ada 6-0330-13-3-6a

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

030419\_FCC\_Part27\_LTE IV\_TX\_all\_channels\_30M-18G



## 8.24\_Ch1413\_RMC

### Common Information

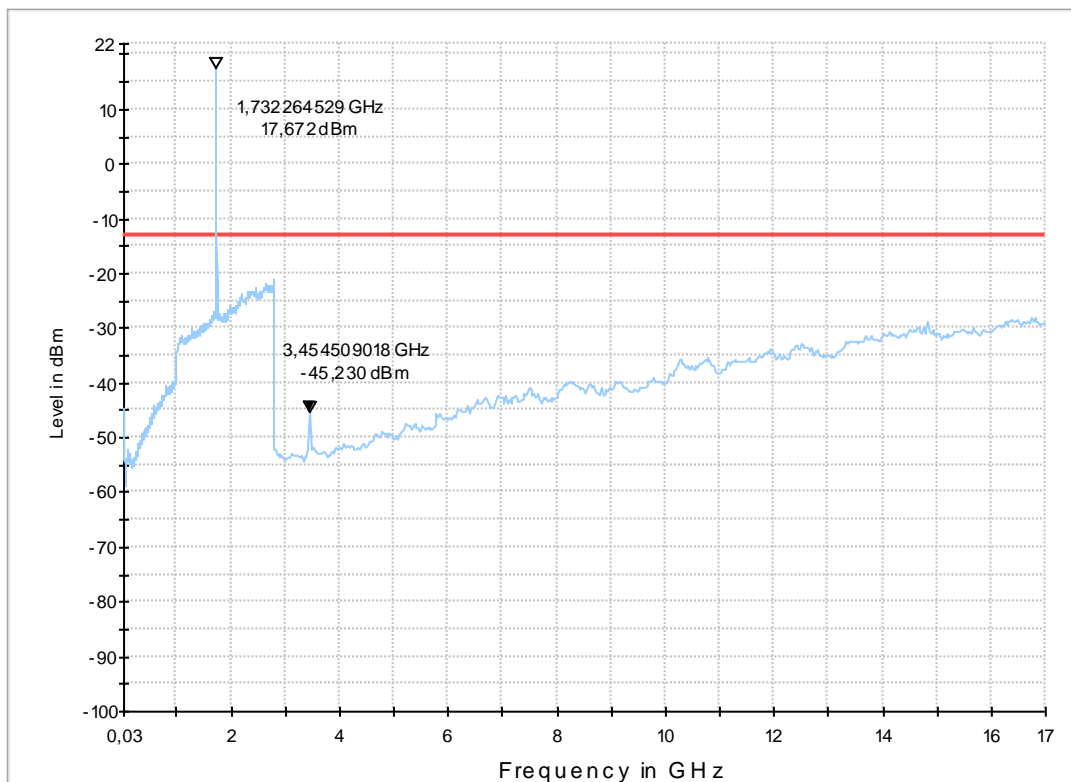
Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 1413 (fc 1736,6)
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operator:	ada 6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

030419\_FCC\_Part27\_LTE IV\_TX\_all\_channels\_30M-18G



## 8.25\_Ch1513\_RMC

### Common Information

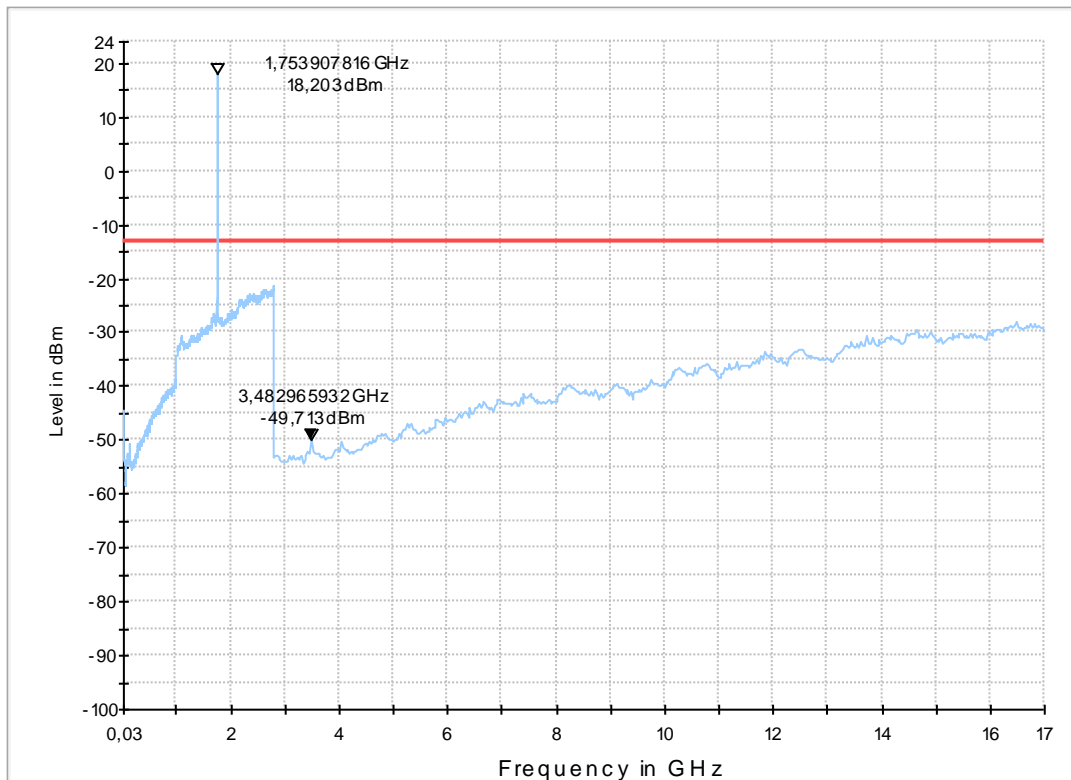
Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 1513 (fc 1752,6,6)
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operator	ada
	6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

030419\_FCC\_Part27\_LTE IV\_TX\_all\_channels\_30M-18G



## 2.5 Radiated spurious emissions: f > 30 MHz – FDD V Mode

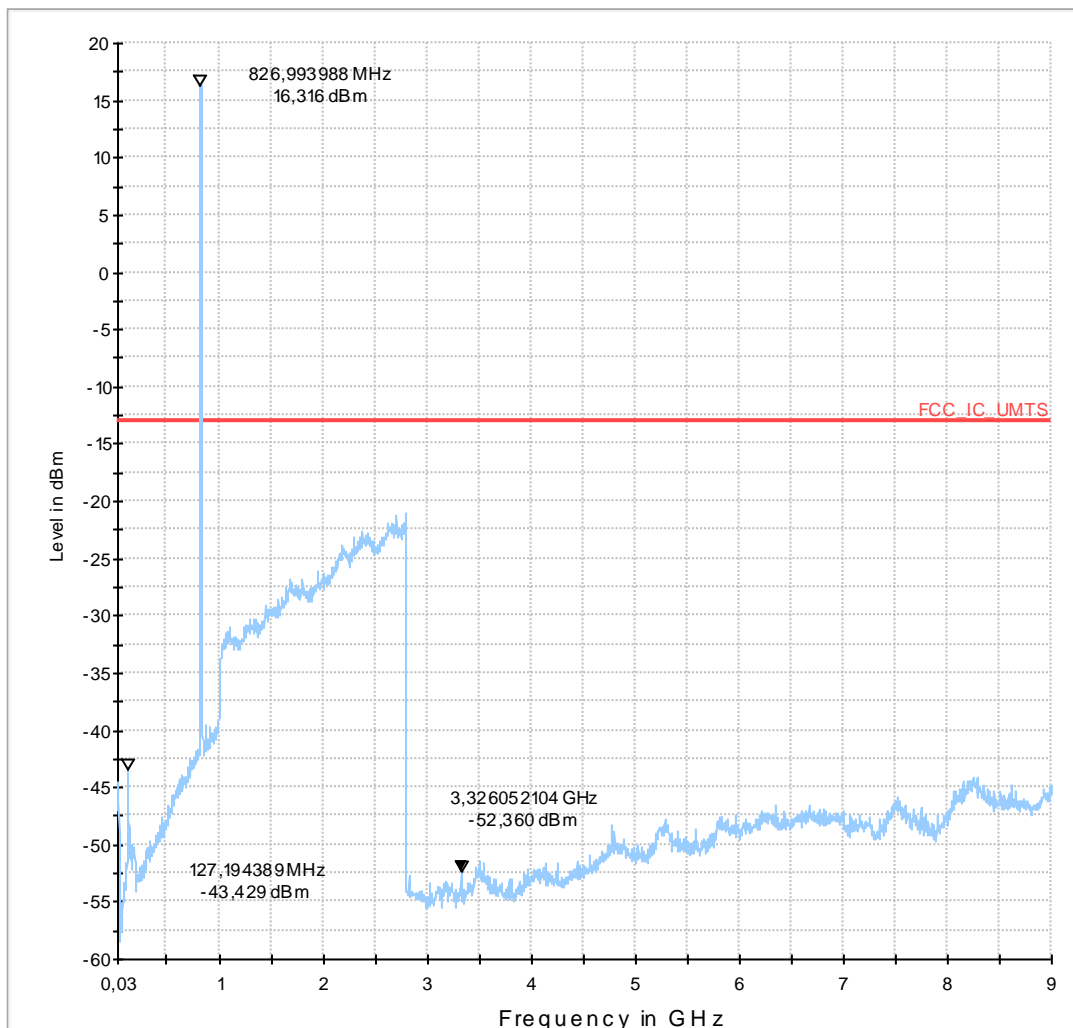
### 8.26\_Ch4132\_RMC

#### Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917, RSS-132
Operating Mode:	UE allocated middle channel 4132 (fc = 826.6 MHz)
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operator:	Tas/GAr 6-0330-13-6-3a

#### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module
-----	
EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--





## 8.27\_Ch4182\_RMC

### Common Information

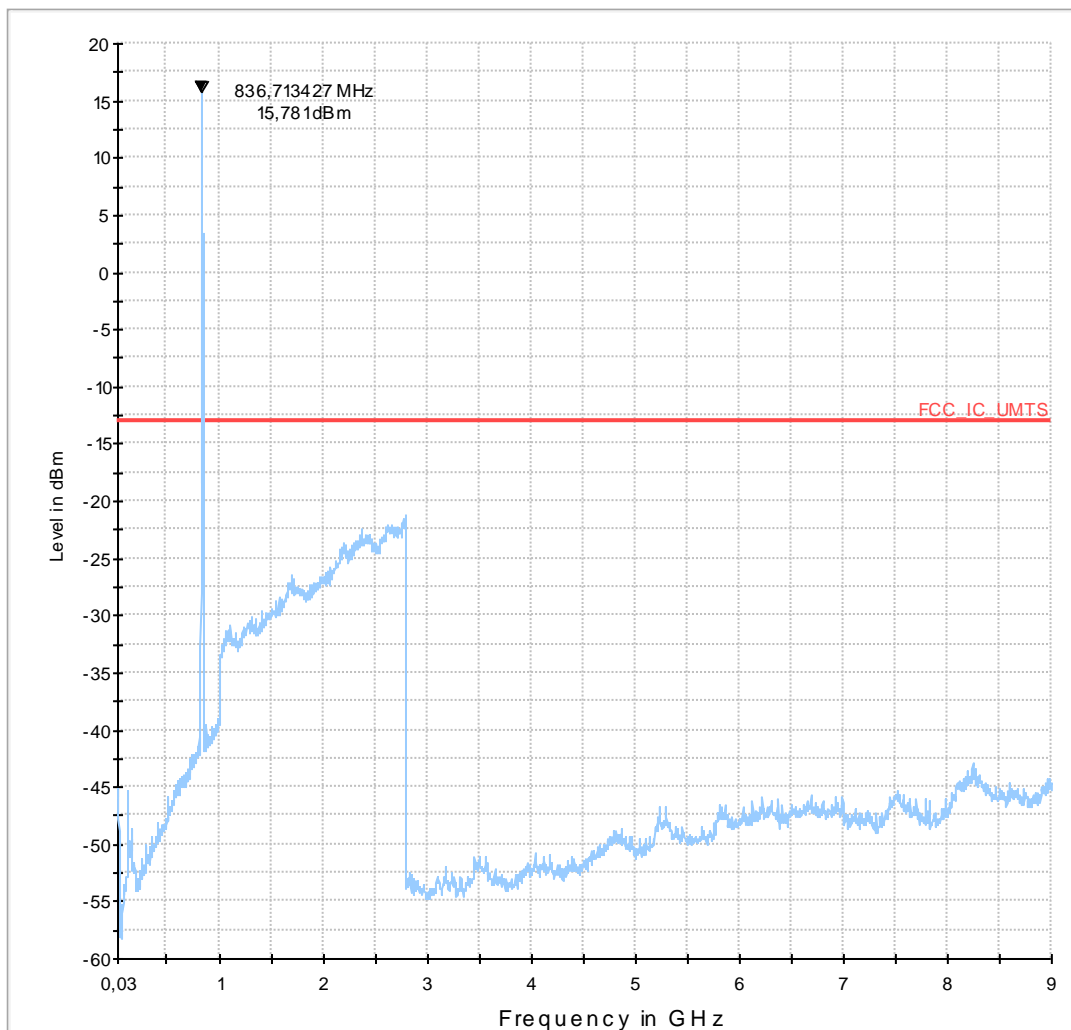
Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated middle channel 4182 (fc = 836.4 MHz),
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operator:	Tas/GAr 6-0330-13-6-3a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

---

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--



## 8.28\_Ch4233\_RMC

### Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated high channel 4233 (fc = 846.6 MHz),
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operator:	Tas/GAr 6-0330-13-3-6a

### EUT Information

Manufacturer:	ublox AG
Model:	LISA-U200
Type:	GSM/FDD Module

EUT:	LISA-U200, RF Sample
HW version:	146AB2
FW version:	22.90
Serial number:	3588901-04-594324-5
Connected Accessories:	Taoglass antenna, AC/DC Power Supply
Power Supply:	12VDC via AC/DC Power supply with 120 VAC/ 60 Hz Main
Comments:	--

