

Annex 4: Measurement diagrams
to
TEST REPORT
No.: 6-0147-12-19-6b

According to:
FCC Regulations
Part 22, Part 24

IC-Regulations
RSS-132 Issue 3, RSS-133 Issue 6,
RSS-Gen Issue 3

for
Gemalto M2M GmbH

Wireless Module EHS6
(W-CDMA mode)

FCC-ID: QIPEHS6
IC-ID: 7830A-EHS6







Laboratory Accreditation and Listings			
 Deutsche Akkreditierungsstelle D-PL-12047-01-01	 FEDERAL COMMUNICATIONS COMMISSION U.S.A. Reg. No.: 736496 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-2665, R-2666 C-2914, T-1967, G-301
 WIFI™ ALLIANCE AUTHORIZED RF LABORATORY	 LAB CODE 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com			

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1. Renaming of company information

All diagrams contain applicants former company name *Cinterion Wireless Modules GmbH*. The name change was valid from 2013-05-01 on.

2. Field strength of spurious radiation

2.1. FDD Band II Operating Mode

8.20_RSE_R_Ch9262_RMC

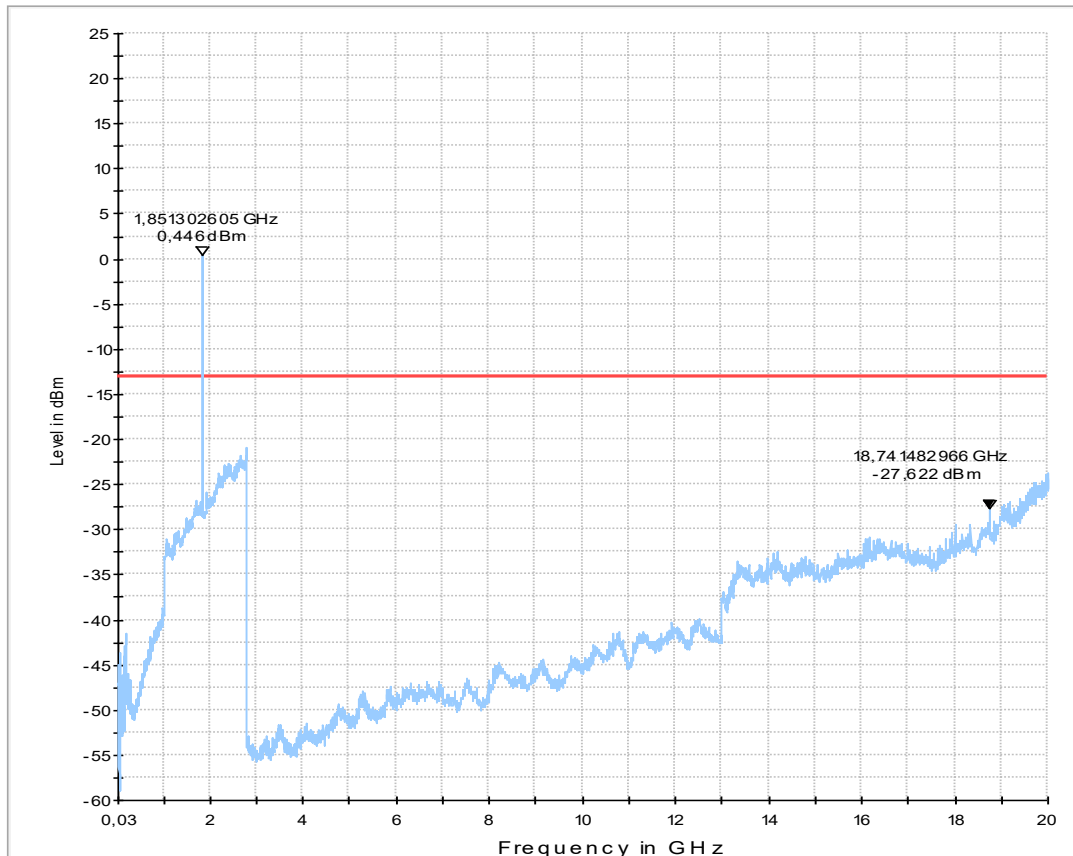
Common Information

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 (fc = 1850.0 MHz), RMC
Exclusion band:	1850.0 - 1990 MHz
Environmental Conditions:	Humidity: _45%rH; Temperature: 21°C
Operator:	Tas 6-0147-12-19

EUT Information

EUT Name:	EHS6
Manufacturer:	Cinterion
Serial Number:	004401080840396
Hardware Rev:	B1.2 /1
Software Rev:	rev 01.001
Comment:	Interface R232 used for connection with Laptop#7
Accessories:	Power supply (12V DC), Mounting Ant. 1140.26 SMA, Handset HH-S130.3/v3.0/0

030414_FCC_Part24_UMTS-FDDII_TX_all_channels_30M-25G



8.21_RSE_R_Ch9400_RMC

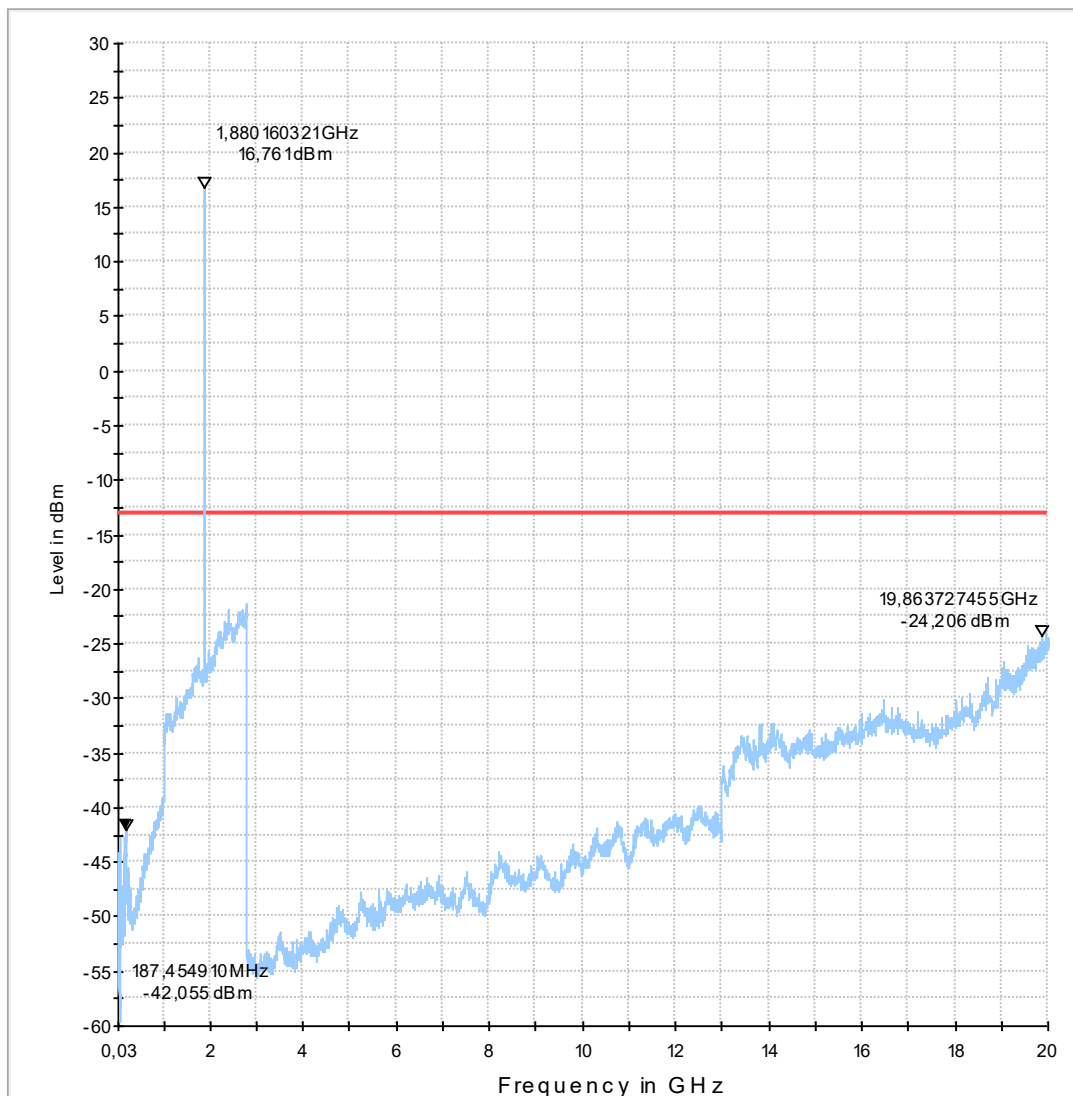
Common Information

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 = 1880.0), RMC
Exclusion band:	1850 – 1910 MHz
Environmental Conditions:	Humidity: _45%rH; Temperature: 21°C
Operator:	Tas 6-0147-12-19

EUT Information

EUT Name:	EHS6
Manufacturer:	Cinterion
Serial Number:	004401080840396
Hardware Rev:	B1.2 /1
Software Rev:	rev 01.001
Comment:	Interface R232 used for connection with Laptop#7
Accessories:	Power supply (12V DC), Mounting Ant. 1140.26 SMA, Handset HH-SI30.3/v3.0/0

030414_FCC_Part24_UMTS-FDDII_TX_all_channels_30M-25G



8.22_RSE_R_Ch9538_RMC

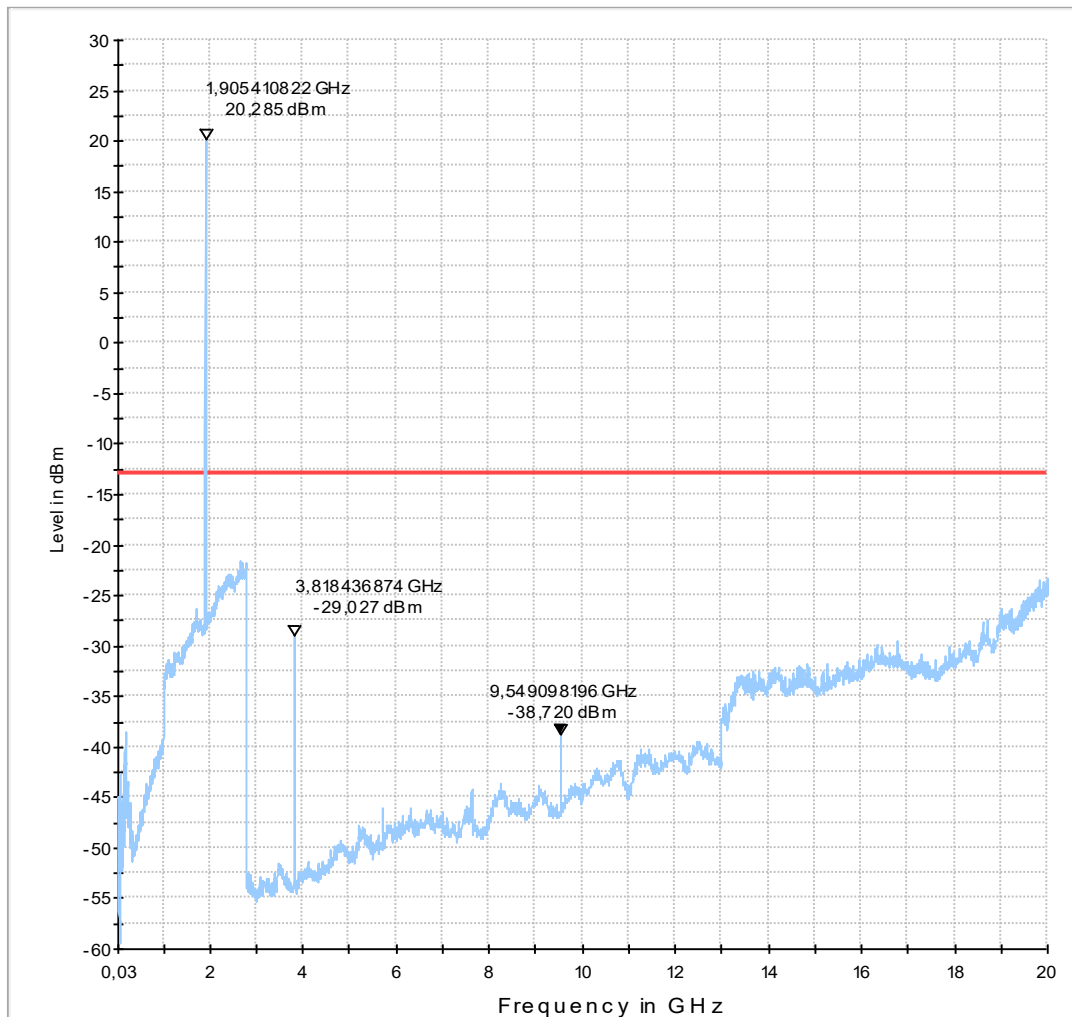
Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 9538 (fc = 1907.6 MHz), RMC
Exclusion band:	1850.0 - 1990 MHz
Environmental Conditions:	Humidity: _45%rH; Temperature: 21°C
Operator:	Tas 6-0147-12-19

EUT Information

EUT Name:	EHS6
Manufacturer:	Cinterion
Serial Number:	004401080840396
Hardware Rev:	B1.2 /1
Software Rev:	rev 01.001
Comment:	Interface R232 used for connection with Laptop#7
Accessories:	Power supply (12V DC), Mounting Ant. 1140.26 SMA, Handset HH-SI30.3/v3.0/0

030414_FCC_Part24_UMTS-FDDII_TX_all_channels_30M-25G



2.2. FDD Band V Operating Mode

8.50_RSE_R_Ch4132_RMC

Common Information

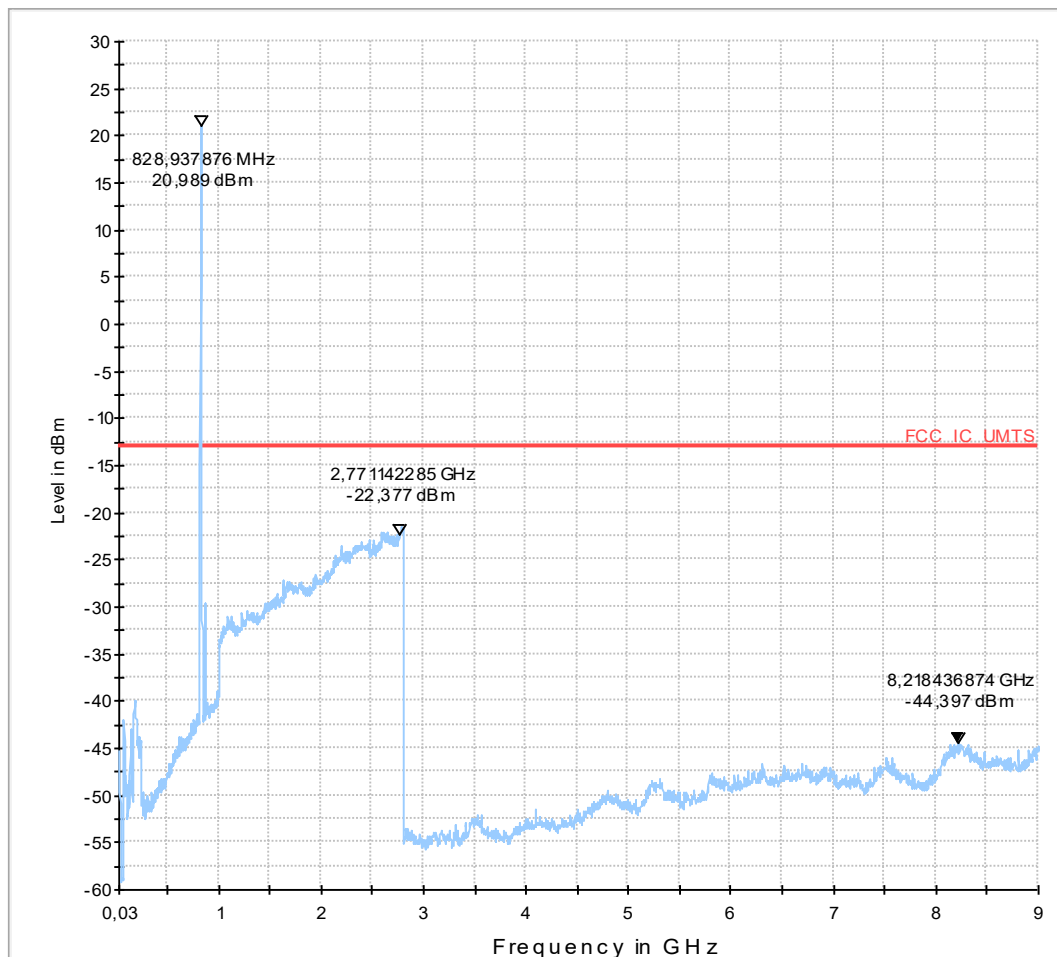
Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 4132/4182/4233 (fc = 826.4 MHz), RMC99
Environmental Conditions:	Humidity: 45%rH; Temperature: 21°C
Operator:	Tas

EUT Information

Manufacturer:	Cinterion GmbH
Model:	Wireless Module
Type:	GSM/E-GPRS/W-CDMA

EUT:	EHS6
Serial number:	004401 08 084039 6
Hardware Rev.	B1.2/1
Software Rev.	rev 01.001
Connected Interfaces:	USB/RS-232/Audio
Power Supply:	9V DC to DSB75
Comments:	Accessories: DSB75-Adapter, Handset Votronic, Smarteq MiniMag mount antenna

030411_FCC_Part22_UMTS-FDDV_TX_all_channels_30M-12G



8.51_RSE_R_Ch4183_RMC

Common Information

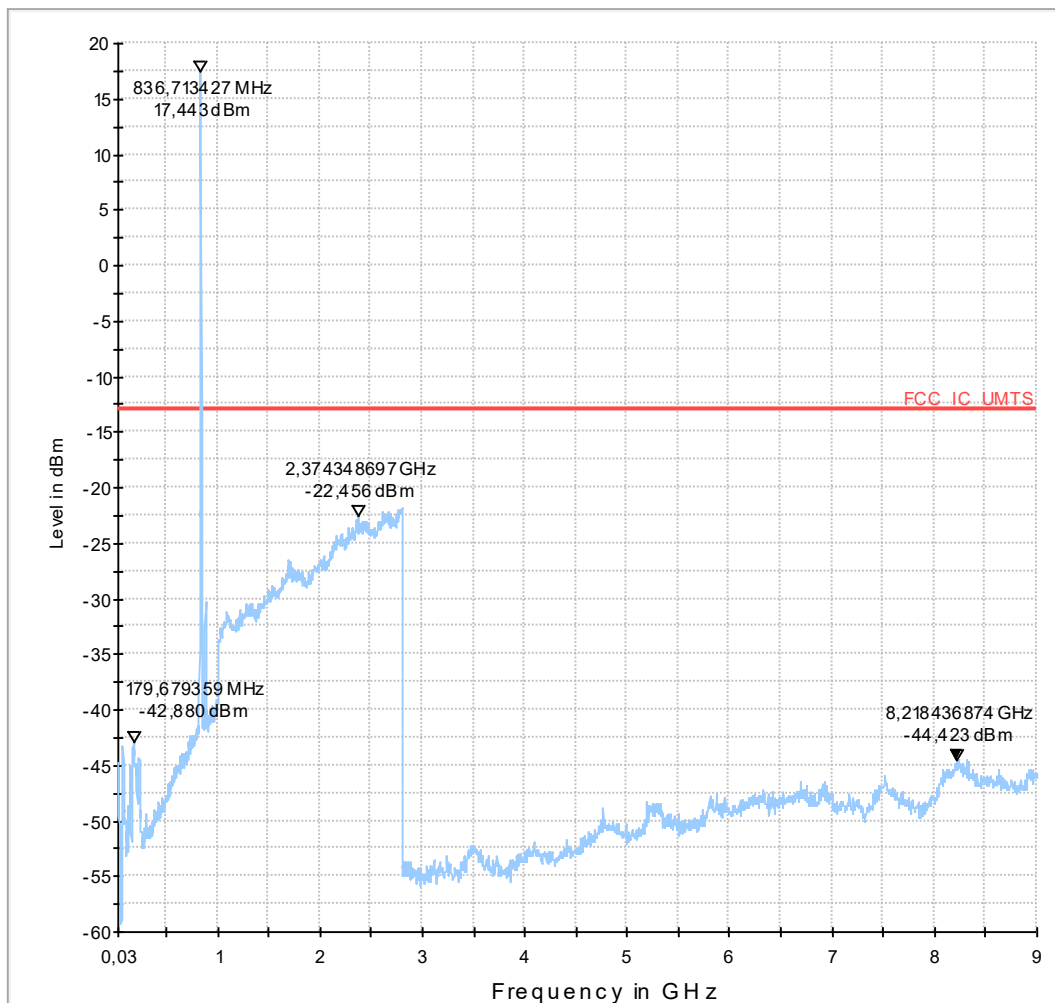
Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 4183 (fc = 836.4 MHz), RMC99
Environmental Conditions:	Humidity: 45%RH; Temperature: 21°C
Operator:	Tas

EUT Information

Manufacturer:	Cinterion GmbH
Model:	Wireless Module
Type:	GSM/E-GPRS/W-CDMA

EUT:	EHS6
Serial number:	004401 08 084039 6
Hardware Rev.	B1.2/1
Software Rev.	rev 01.001
Connected Interfaces:	USB/RS-232/Audio
Power Supply:	9V DC to DSB75
Comments:	Accessories: DSB75-Adapter, Handset Votronic, Smarteq MiniMag mount antenna

030411_FCC_Part22_UMTS-FDDV_TX_all_channels_30M-12G



8.52_RSE_R_Ch4233_RMC

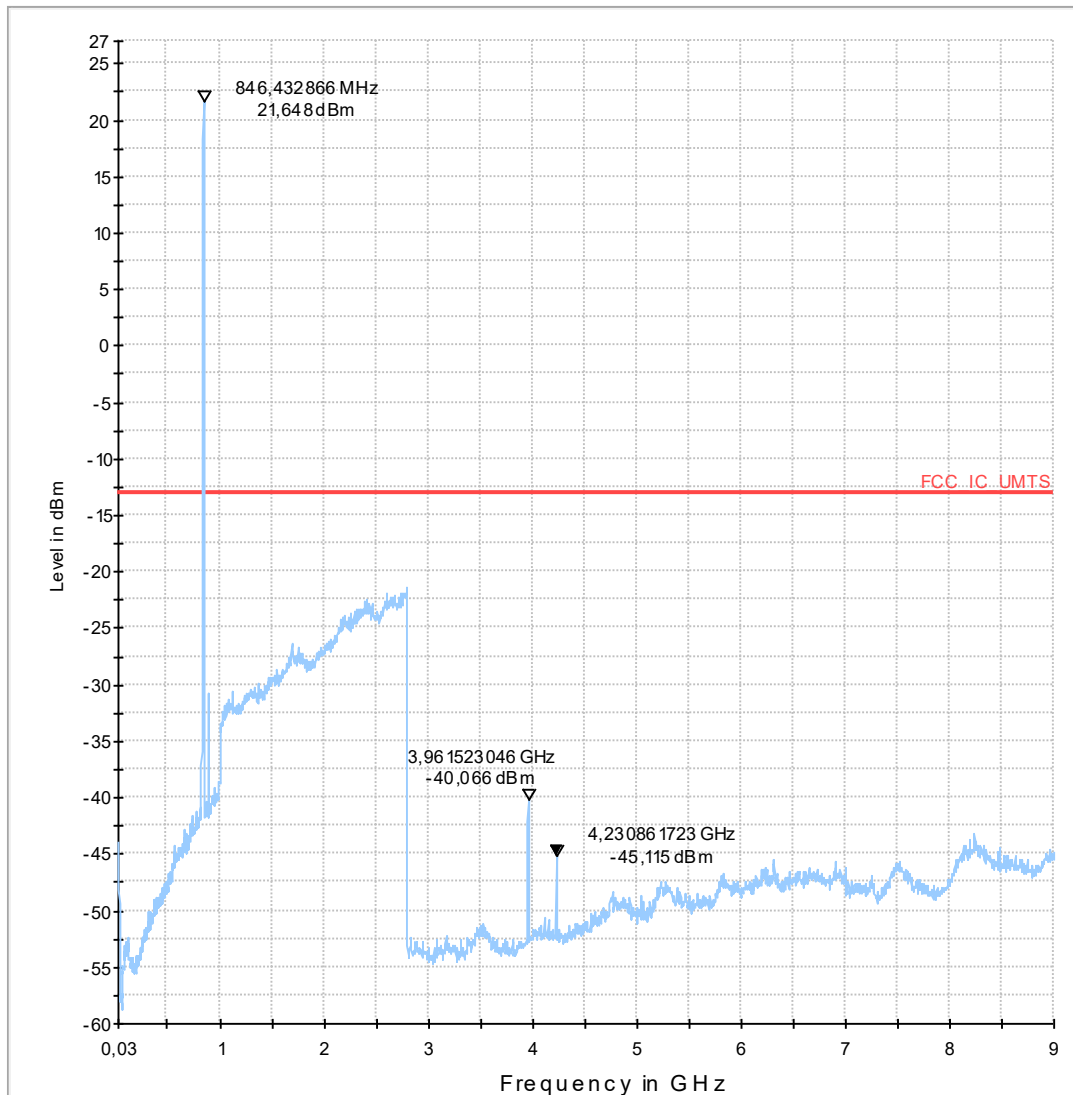
Common Information

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 channel 4233 (fc = 846.6 MHz), RMC
Environmental Conditions:	Humidity: _45%RH; Temperature: 21°C
Operator:	Tas 6-0147-12-19

EUT Information

EUT Name:	EHS6
Manufacturer:	Cinterion
Serial Number:	004401080840396
Hardware Rev:	B2 rev.3
Software Rev:	--
Comment:	Interface R232 used for connection with Laptop#7
Accessories:	Power supply (12V DC), Mounting Ant. 1140.26 SMA, Handset HH-SI30.3/v3.0/0

030411_FCC_Part22_UMTS-FDDV_TX_all_channels_30M-12G



2.3. Band-Edge compliance for FDD Band II operation mode (outside frequency block)

9.20_BE_Ch9262_RMC

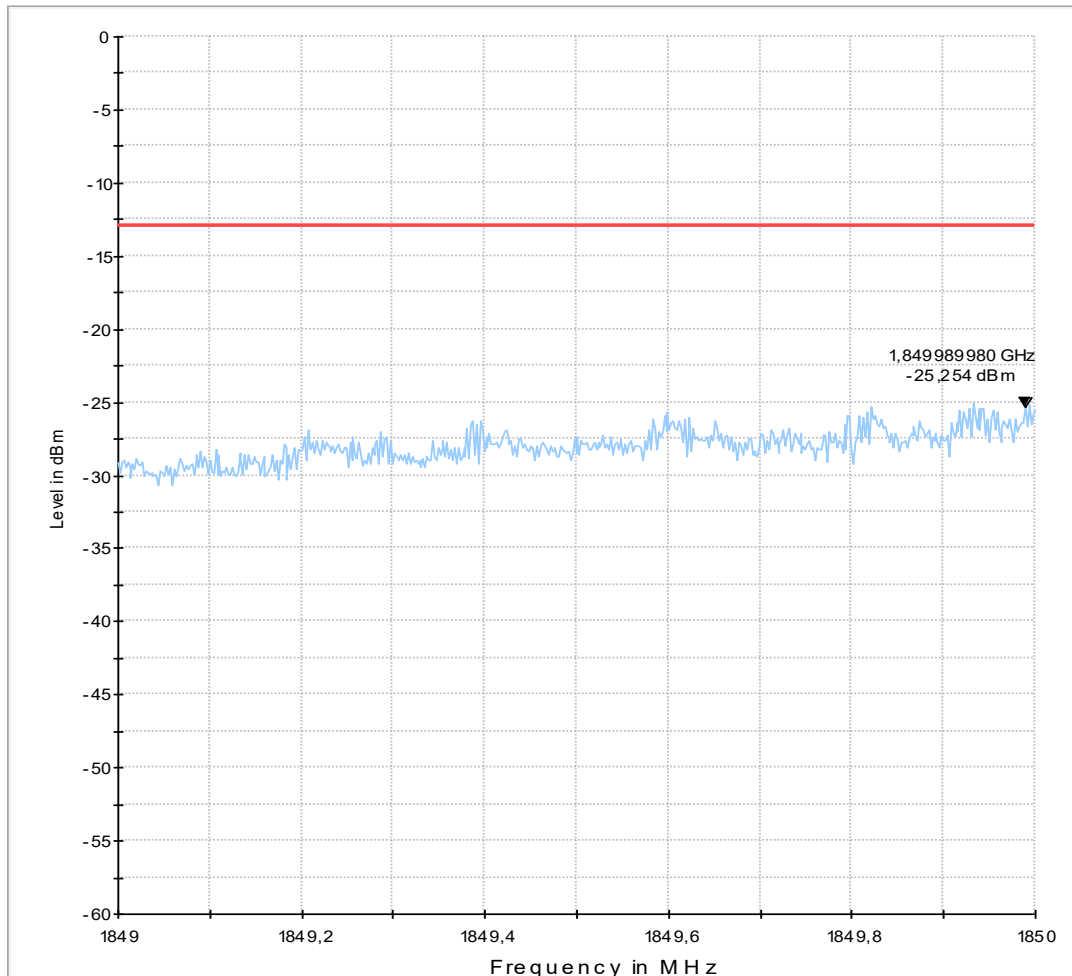
Common Information

Test Description:	Band-Edge Radiated - UMTS FDD II
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 9262 (fc = 1850.0 MHz), RMC
Environmental Conditions:	Humidity: _45%rH; Temperature: 21°C
Operator:	Tas 6-0147-12-19

EUT Information

EUT Name:	EHS6
Manufacturer:	Cinterion
Serial Number:	004401080840396
Hardware Rev:	B1.2 /1
Software Rev:	rev 01.001
Comment:	Interface R232 used for connection with Laptop#7
Accessories:	Power supply (12V DC), Mounting Ant. 1140.26 SMA, Handset HH-SI30.3/v3.0/0

030415_FCC_Part24_UMTS-FDDII_TX_low_channel_band_edge



9.21_BE_Ch9538_RMC

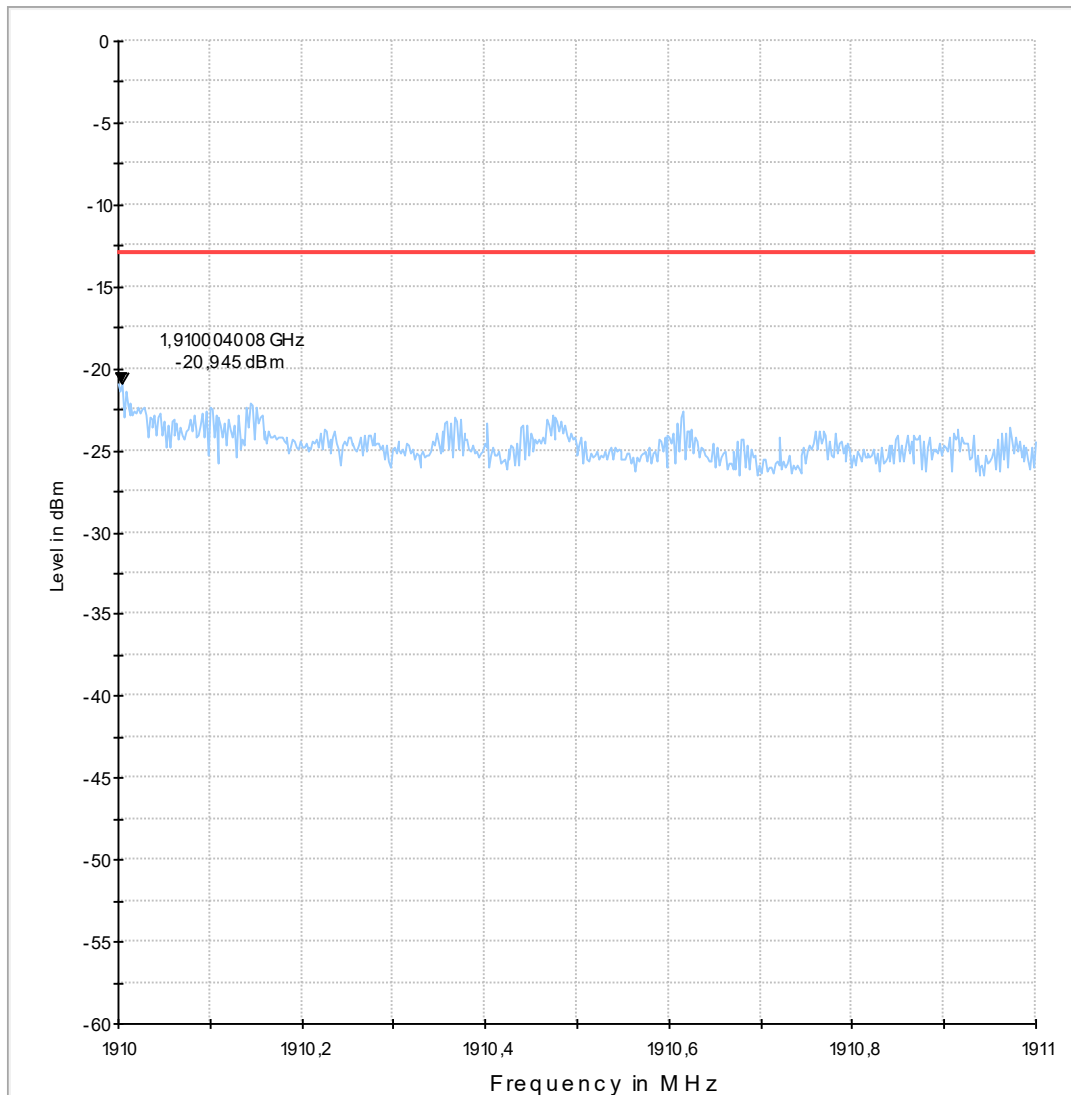
Common Information

Test Description:	Band-Edge Radiated - UMTS FDD II
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 9538 (fc = 1907.6 MHz), RMC
Environmental Conditions:	Humidity: _45%rH; Temperature: 21°C
Operator:	Tas 6-0147-12-19

EUT Information

EUT Name:	EHS6
Manufacturer:	Cinterion
Serial Number:	004401080840396
Hardware Rev:	B1.2 /1
Software Rev:	rev 01.001
Comment:	Interface R232 used for connection with Laptop#7
Accessories:	Power supply (12V DC), Mounting Ant. 1140.26 SMA, Handset HH-SI30.3/v3.0/0

030416_FCC_Part24_UMTS-FDDII_TX_high_channel_band_edge



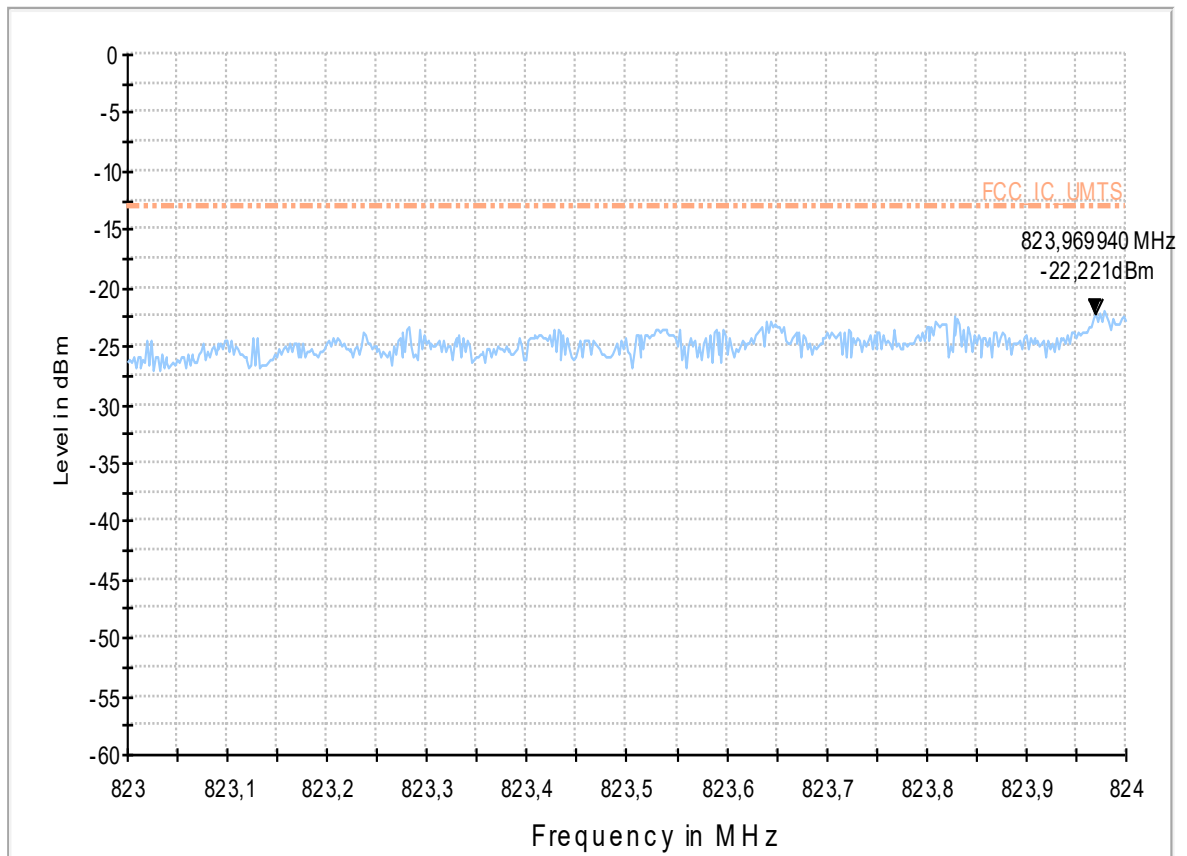
2.4. Band-Edge compliance for FDD band V operation mode (outside frequency block)

9.50_BE_R_Ch4132_RMC

Common Information

Test Description:	Radiated Band Edge Compliance UMTS-FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917
Operating Mode:	MS allocated channel 4133 (fc = 826.6MHz), RMC Mode, PCL3 (+24dBm)

030412_FCC_Part22_UMTS-FDDV_TX_low_channel_band_edge



Band_Edge_9.51_BE_H

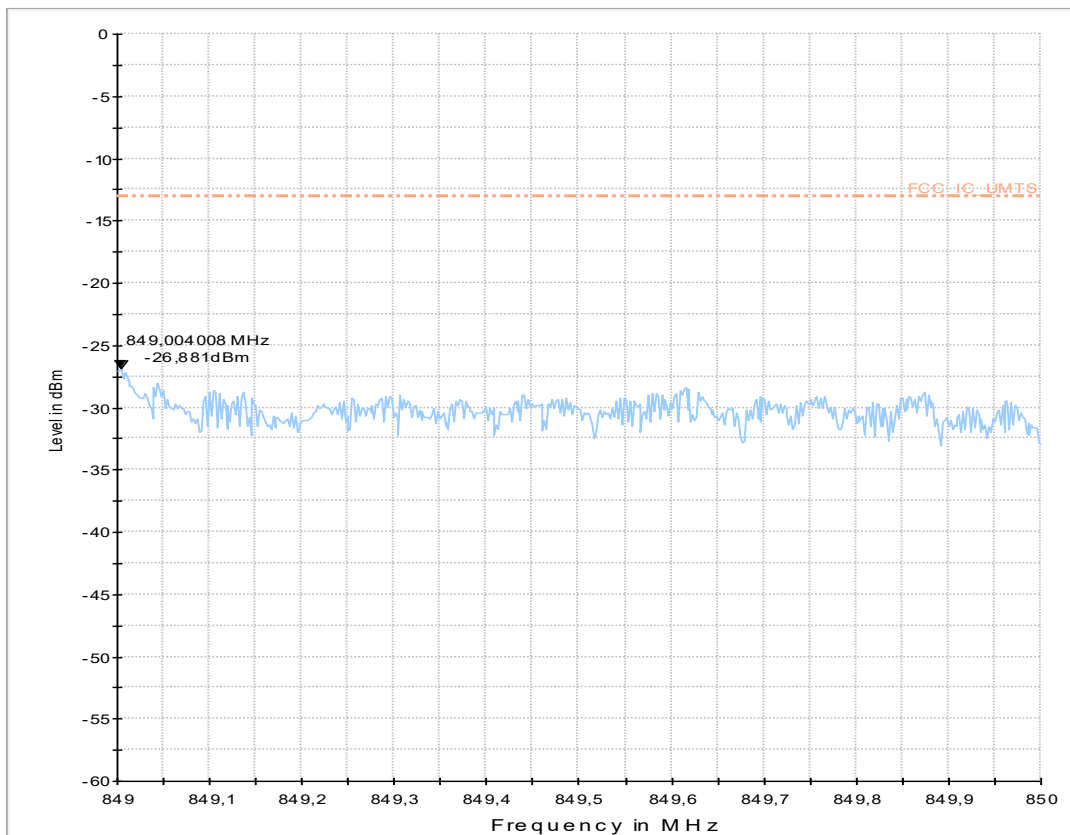
Common Information

Test Description:	Band-Edge Radiated - UMTS FDDV
Test site:	Fully Anechoic Room (FAR)
Test specification:	FCC Part 22, RSS-132
Temperature and humidity	Humidity:45%rH; Temperature: 21°C
Operating mode	UE allocated channel 4233 (fc = 846.6 MHz), RMC
Operator	Tas 6-0147-12-19

EUT Information

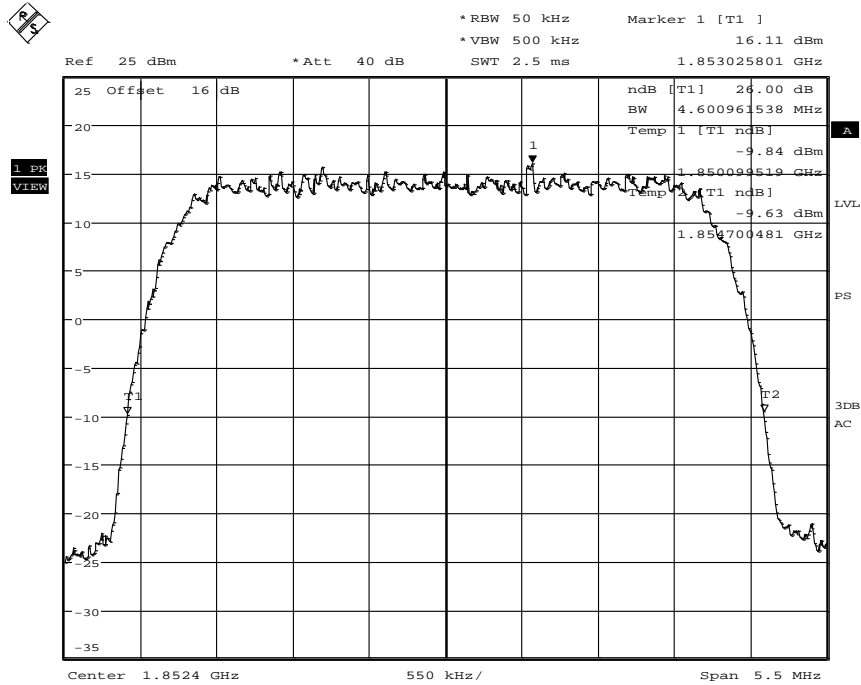
EUT Name:	EHS6
Manufacturer:	Cinterion
Serial Number:	004401080840396
Hardware Rev:	B2 rev.3
Software Rev:	--
Comment:	Interface R232 used for connection with Laptop#7
Accessories:	Power supply (12V DC), Mounting Ant. 1140.26 SMA, Handset HH-SI30.3/v3.0/0

030413_FCC_Part22_UMTS-FDDV_TX_high_channel_band_edge



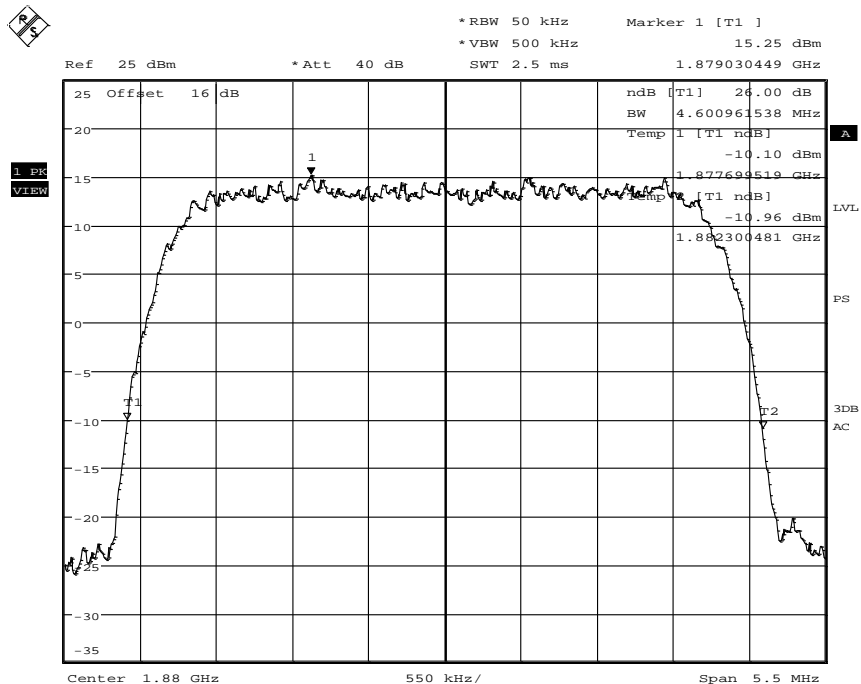
3. Emission Bandwidth (26 dBc)

3.1. FDD Band II operating mode



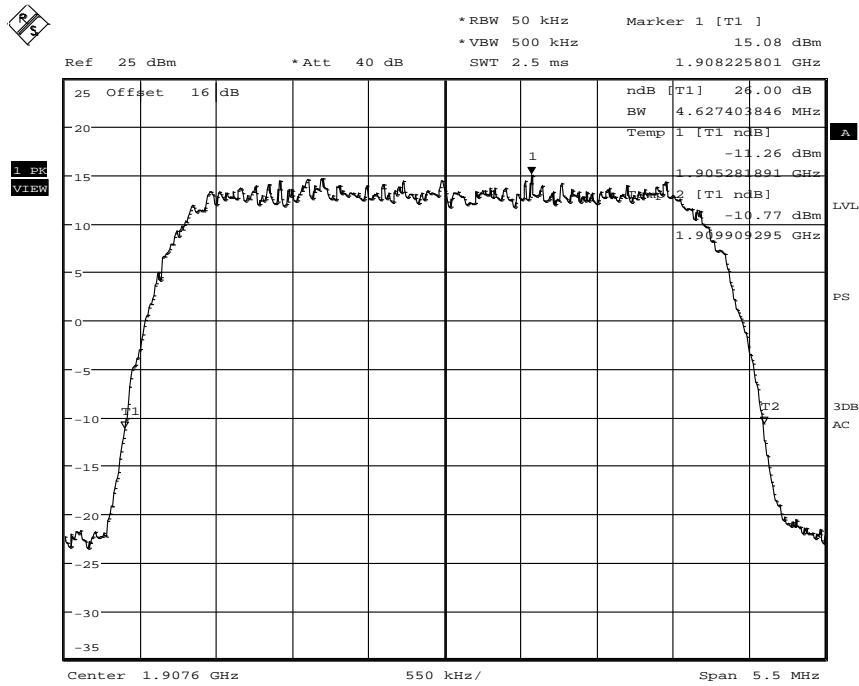
Date: 21.NOV.2012 17:01:31

Channel 9262



Date: 21.NOV.2012 16:59:37

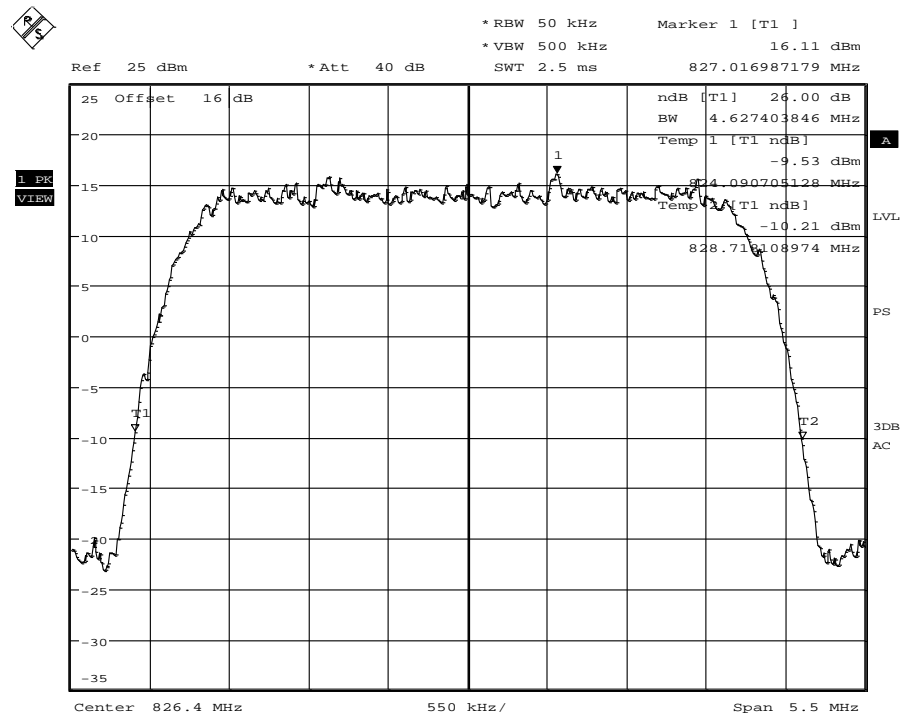
Channel 9400



Date: 21.NOV.2012 16:56:32

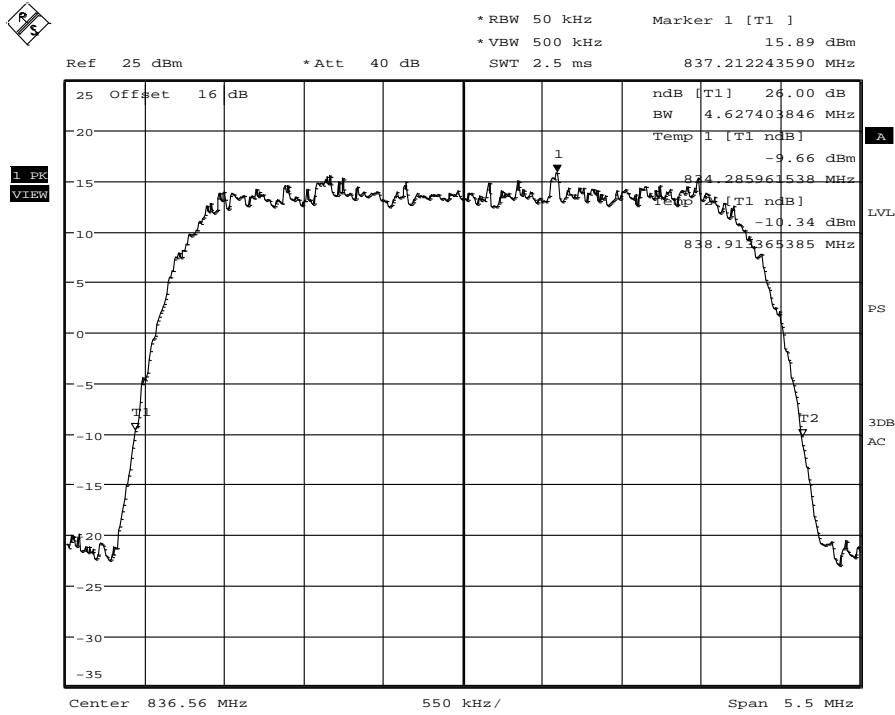
Channel 9538

3.2. FDD Band V operating mode



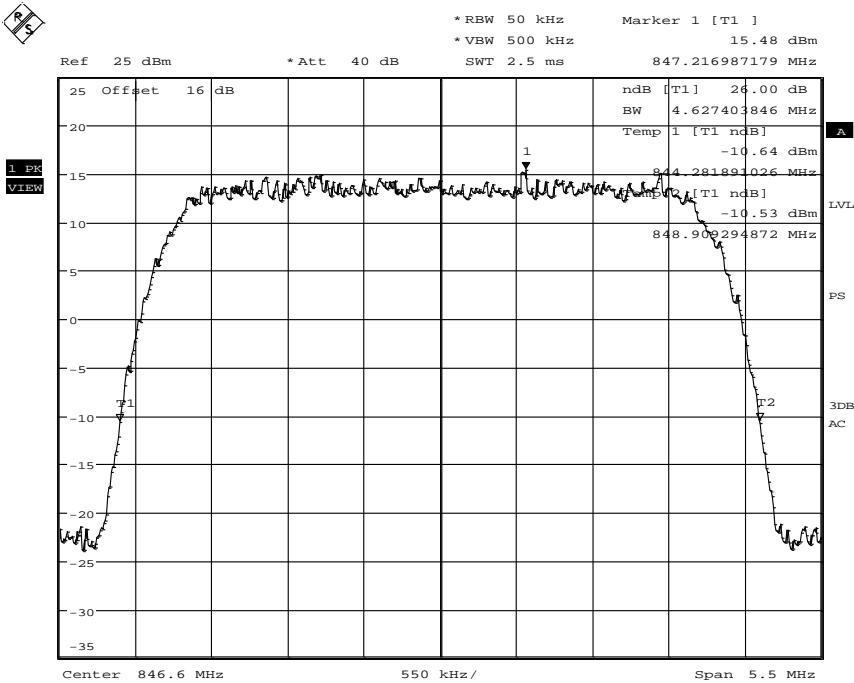
Date: 21.NOV.2012 16:28:45

Channel 4132



Date: 21.NOV.2012 16:25:53

Channel 4183

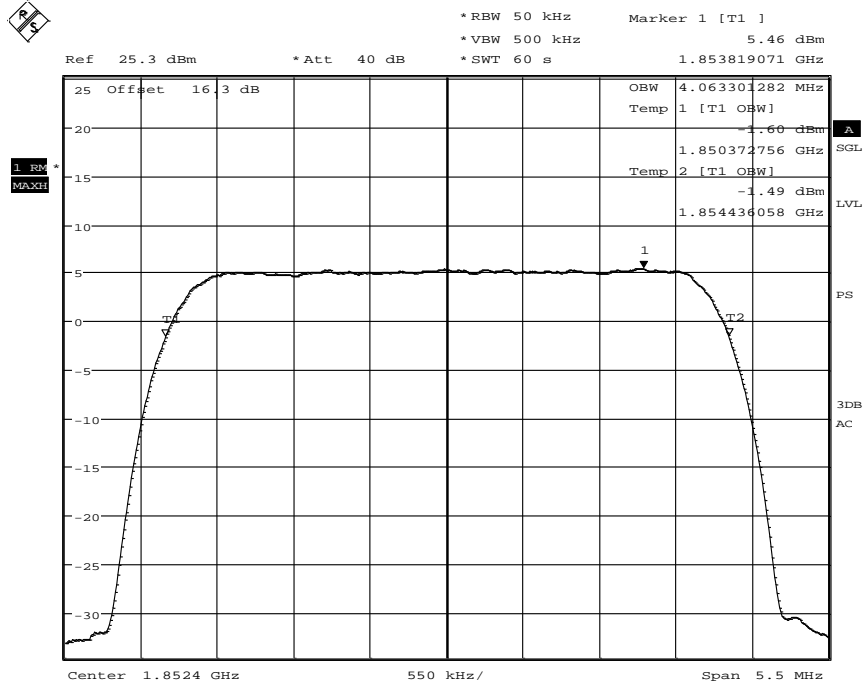


Date: 21.NOV.2012 16:21:45

Channel 4233

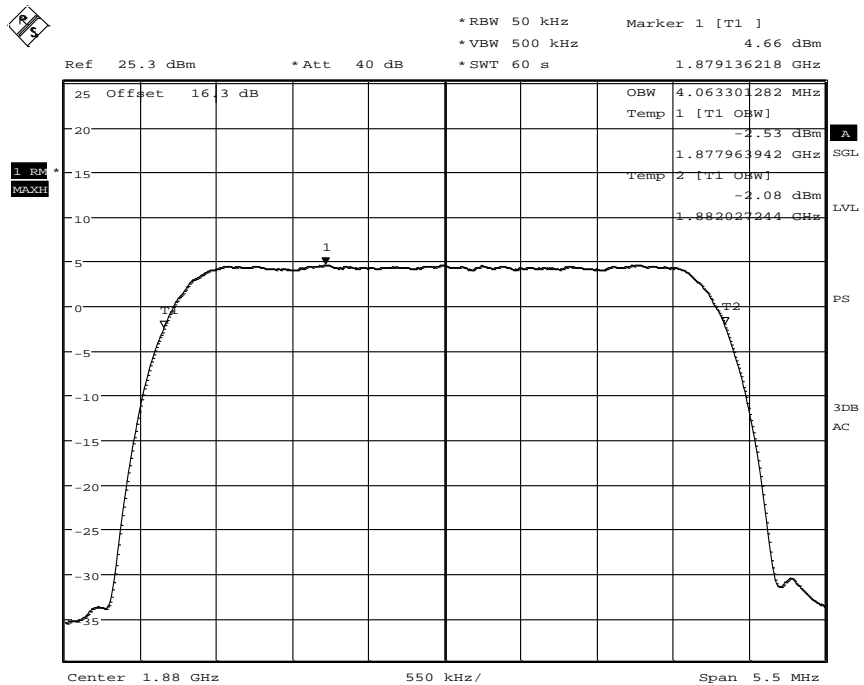
4. Occupied Bandwidth

4.1. FDD Band II operating mode



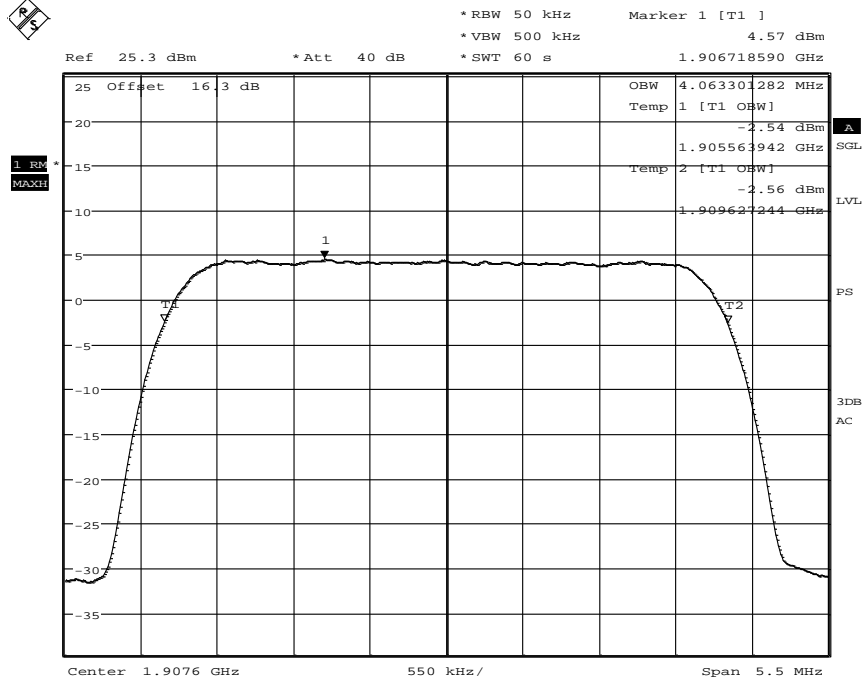
Date: 21.NOV.2012 16:47:48

Channel 9262



Date: 21.NOV.2012 16:49:54

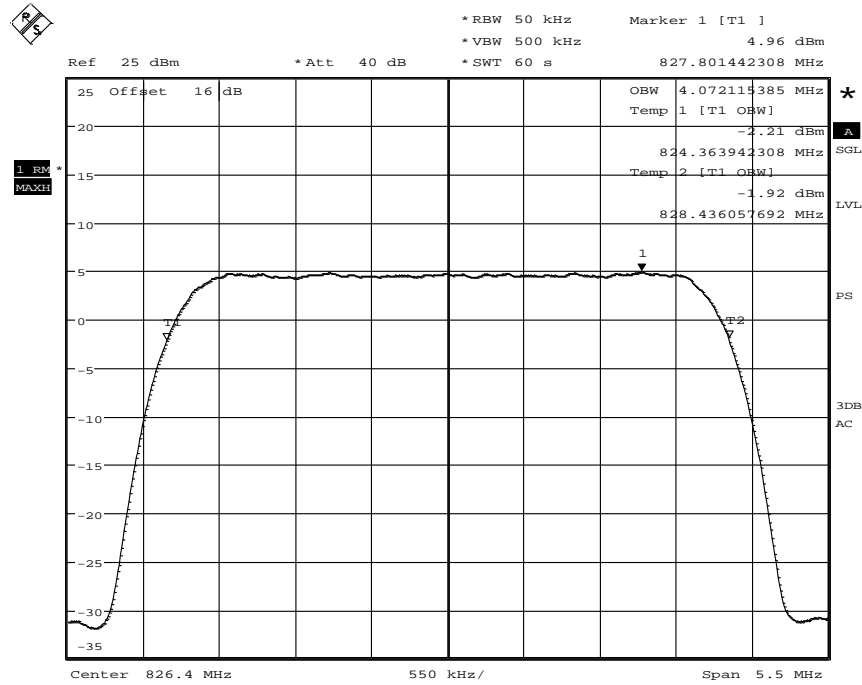
Channel 9400



Date: 21.NOV.2012 16:52:41

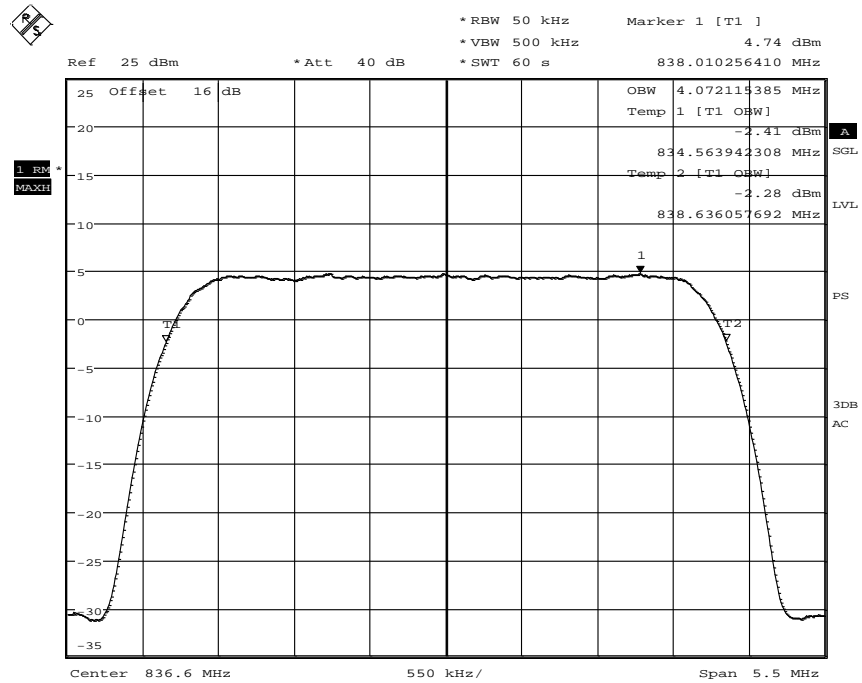
Channel 9538

4.2. FDD V operating mode



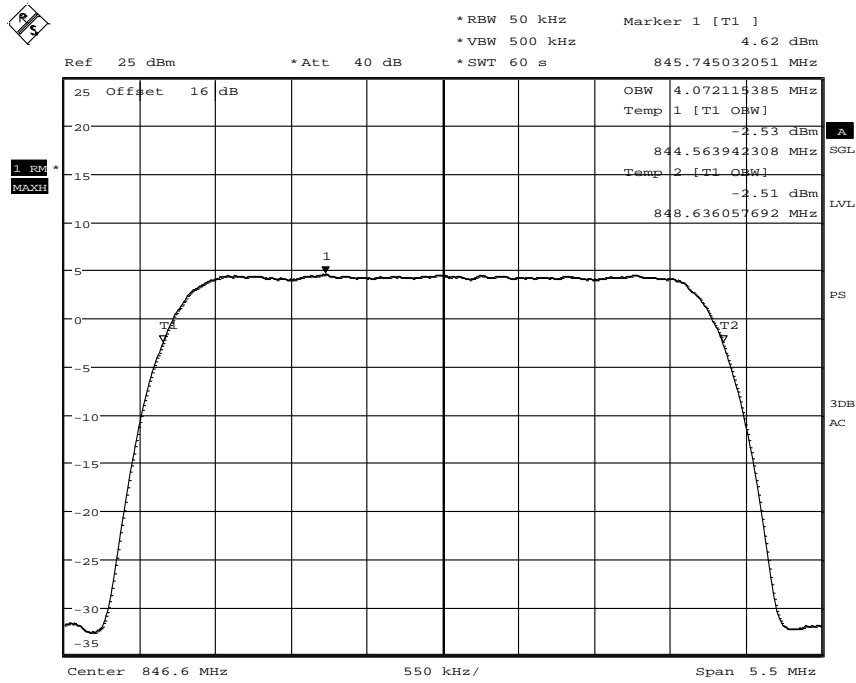
Date: 21.NOV.2012 16:34:40

Channel 4132



Date: 21.NOV.2012 16:37:50

Channel 4183



Date: 21.NOV.2012 16:41:12

Channel 4233

5. Spurious emissions (antenna terminal)

5.1. FDDII operating mode

Diagram No.: 36.60_RSE_Ch9262_RMC_Sweep1

Common Information

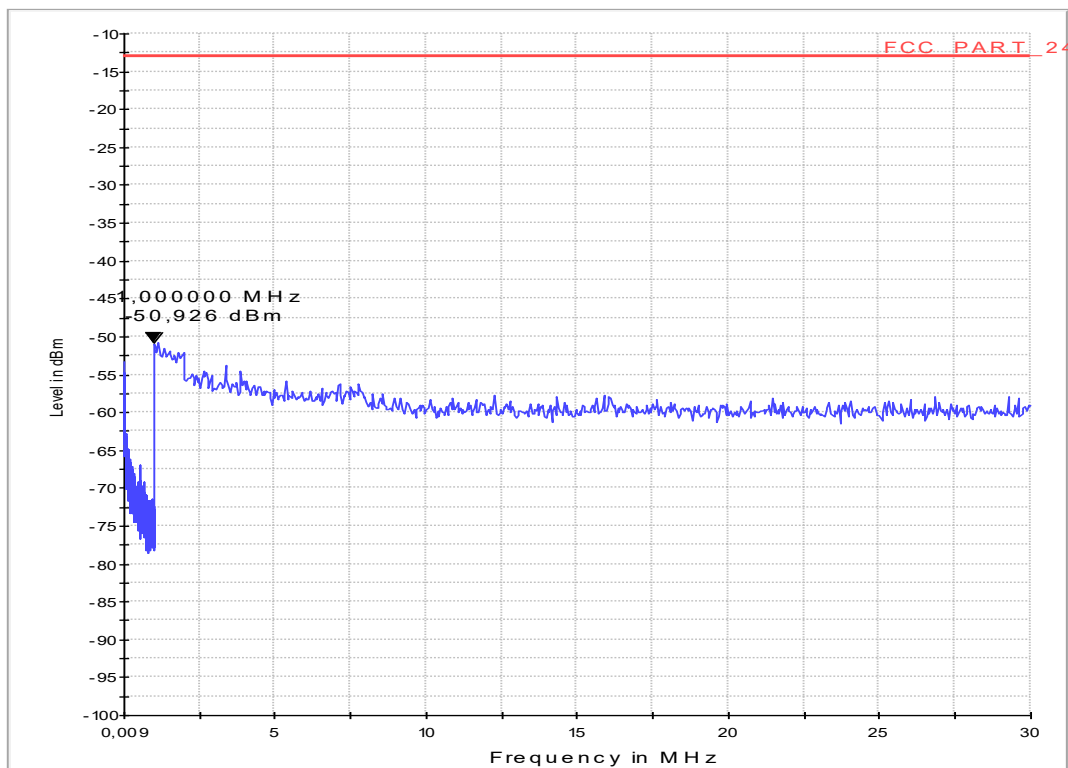
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD II (RMC), low channel on U-ARFCN 9262
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_1



Sweep Setup: Sweep_1 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 1 MHz	792,8 Hz	PK+	1 kHz	20 s	0 dB
1 MHz - 30 MHz	46,474 kHz	PK+	100 kHz	7 s	0 dB

Diagram No.: 36.61_RSE_Ch9262_RMC_Sweep2

Common Information

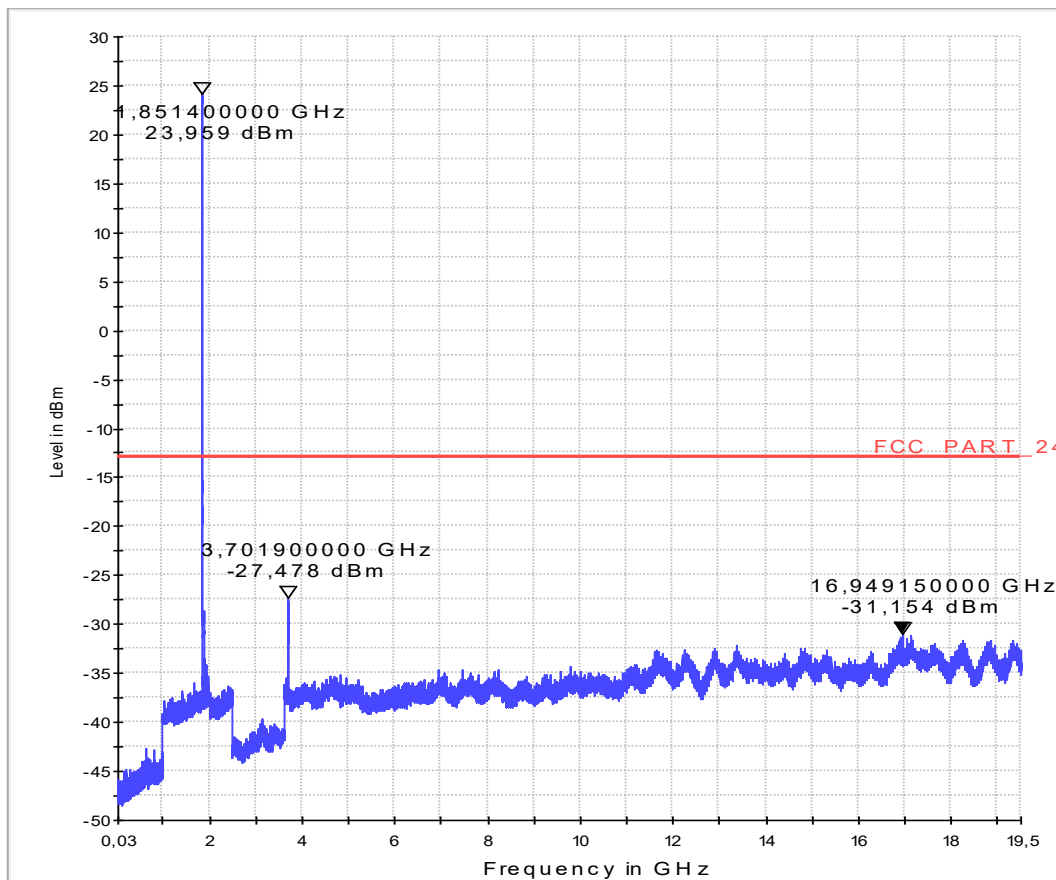
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD II (RMC), low channel on U-ARFCN 9262
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_2



Sweep Setup: Sweep_2 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	388 kHz	PK+	1 MHz	20 s	0 dB
1 GHz - 2,5 GHz	600 kHz	PK+	1 MHz	30 s	0 dB
2.5 GHz - 19,5 GHz	850 kHz	PK+	1 MHz	500 s	0 dB

Diagram No.: 36.62_RSE_Ch9400_RMC_Sweep1

Common Information

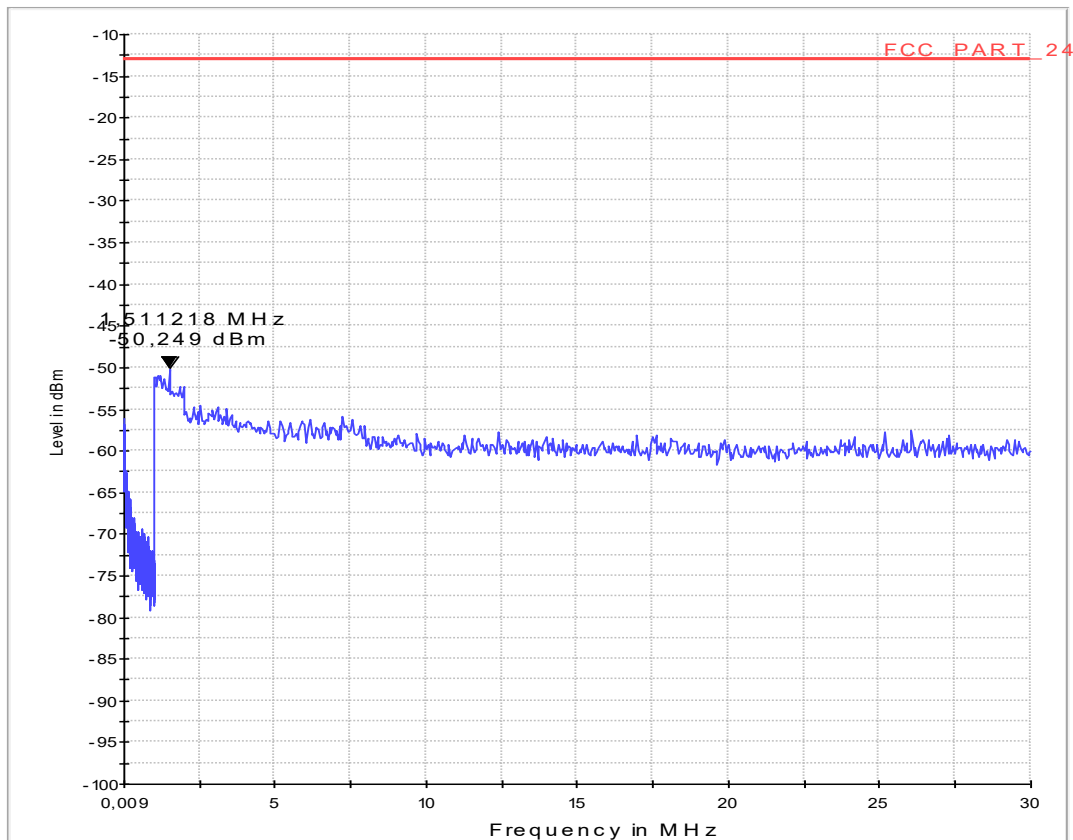
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD V (RMC), middle channel on U-ARFCN 9400
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_1



Sweep Setup: Sweep_1 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 1 MHz	792,8 Hz	PK+	1 kHz	20 s	0 dB
1 MHz - 30 MHz	46,474 kHz	PK+	100 kHz	7 s	0 dB

Diagram No.: 36.63_RSE_Ch9400_RMC_Sweep2

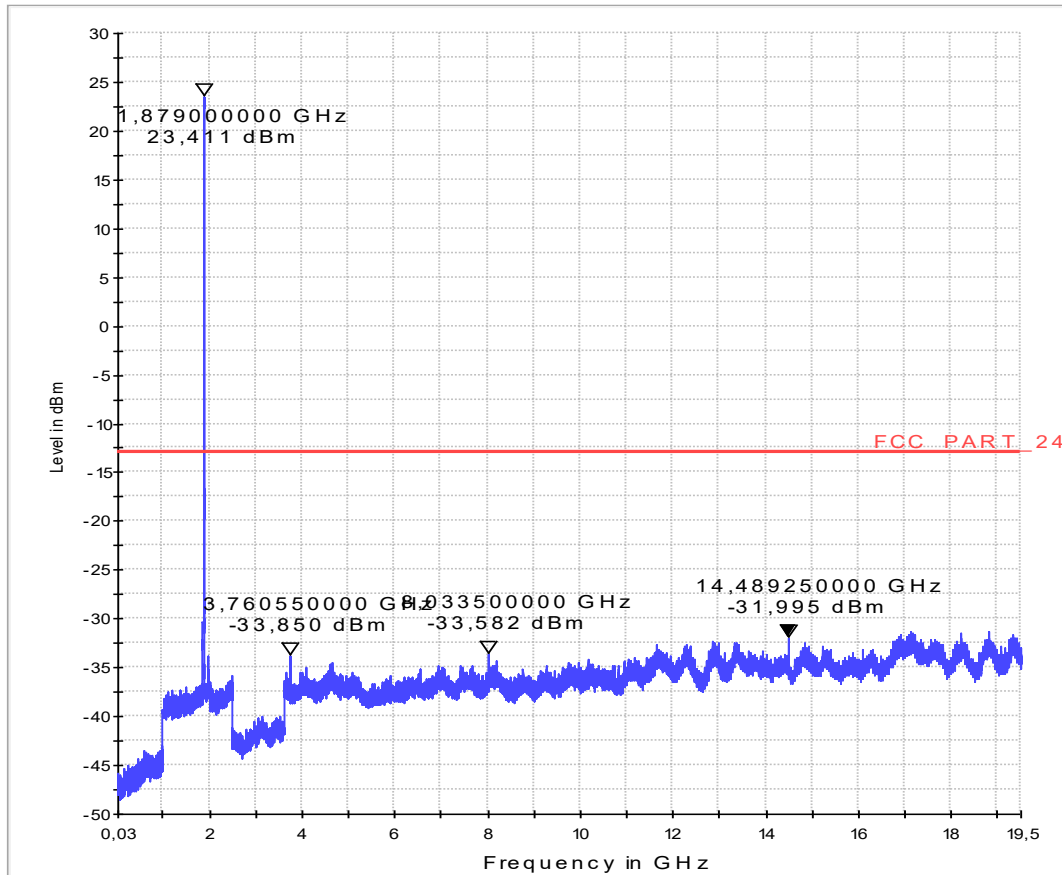
Common Information

Test Description:	TX Spurious Emission conducted §2.1051
Test Site:	Radio laboratory 1
Test Standard:	FCC FCC Part 22&24
Operation mode:	TX - FDD II (RMC), middle channel on U-ARFCN 9400
Operator Name:	Lor
Comment:	--

EUT Information

EUT Name:	EHS6
Manufacturer:	Cinterion
Serial Number:	#2 Conducted
Hardware Rev:	B1.2/1
Software Rev:	01.001
Comment:	Interface R232
Accessories:	Power supply (9V DC)

Sweep_2



Sweep Setup: Sweep_2 [EMI radiated]

Hardware Setup:	31_ESU_Conducted_FCC_Part_15_22_24
Receiver:	[ESU 40]
Level Unit:	dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	388 kHz	PK+	1 MHz	20 s	0 dB
1 GHz - 2,5 GHz	600 kHz	PK+	1 MHz	30 s	0 dB
2.5 GHz - 19,5 GHz	850 kHz	PK+	1 MHz	500 s	0 dB

Diagram No.: 36.64_RSE_Ch9538_RMC_Sweep1

Common Information

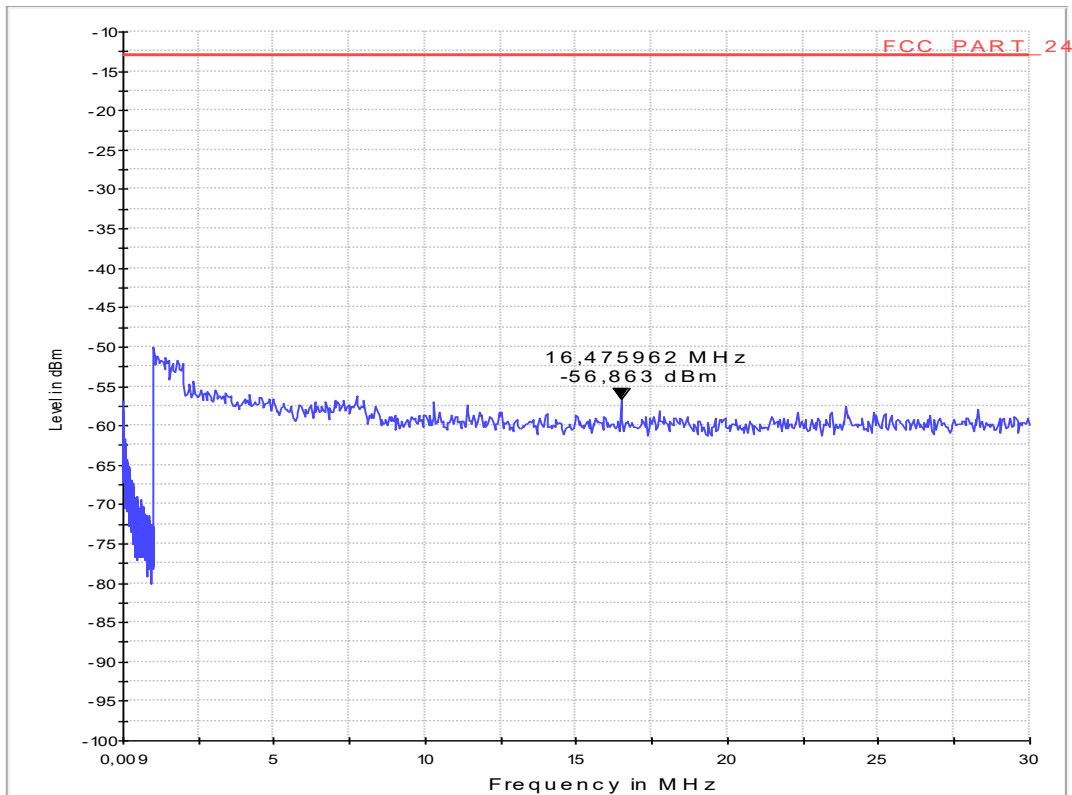
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

Operation mode: TX - FDD V (RMC), high channel on U-ARFCN 9538
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_1



Sweep Setup: Sweep_1 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 1 MHz	792,8 Hz	PK+	1 kHz	20 s	0 dB
1 MHz - 30 MHz	46,474 kHz	PK+	100 kHz	7 s	0 dB

Diagram No.: 36.65_RSE_Ch9538_RMC_Sweep2

Common Information

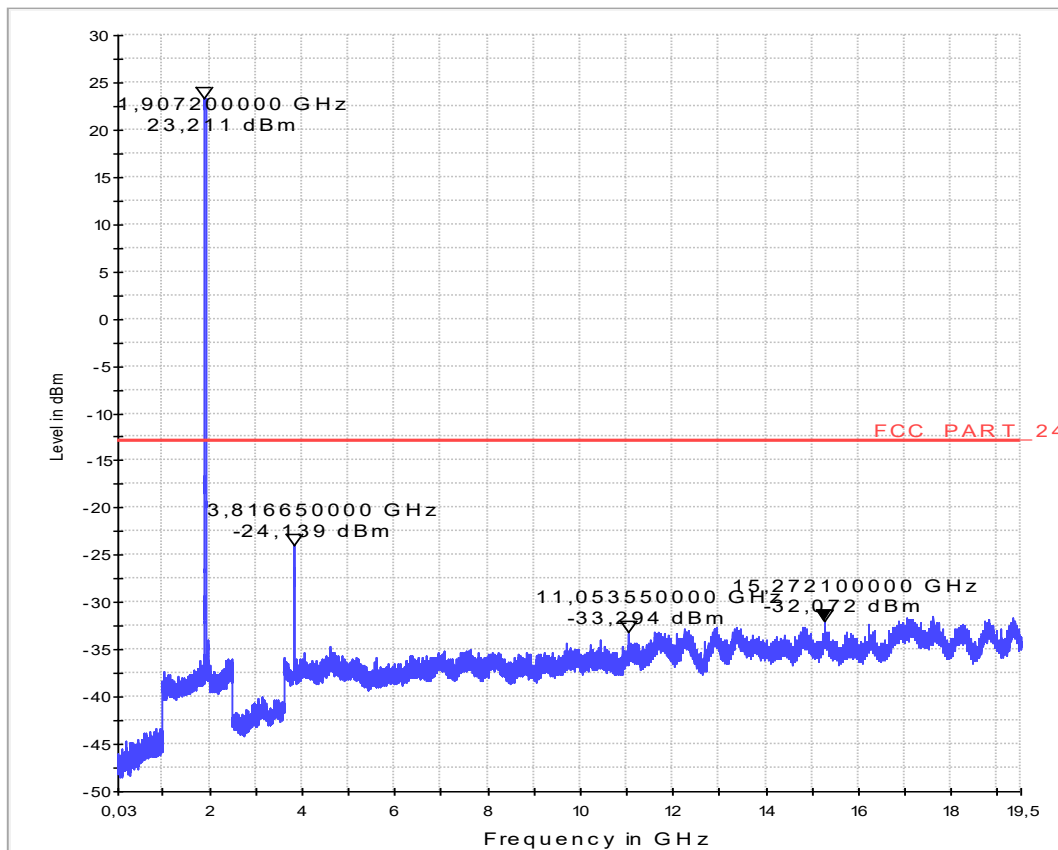
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD II (RMC), high channel on U-ARFCN 9538
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_2



Sweep Setup: Sweep_2 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	388 kHz	PK+	1 MHz	20 s	0 dB
1 GHz - 2,5 GHz	600 kHz	PK+	1 MHz	30 s	0 dB
2.5 GHz - 19,5 GHz	850 kHz	PK+	1 MHz	500 s	0 dB

5.2. Band-Edge compliance for FDDII operation mode (outside frequency block)

Diagram No.: 37.60_BE_Ch9262_RMC_PK

Common Information

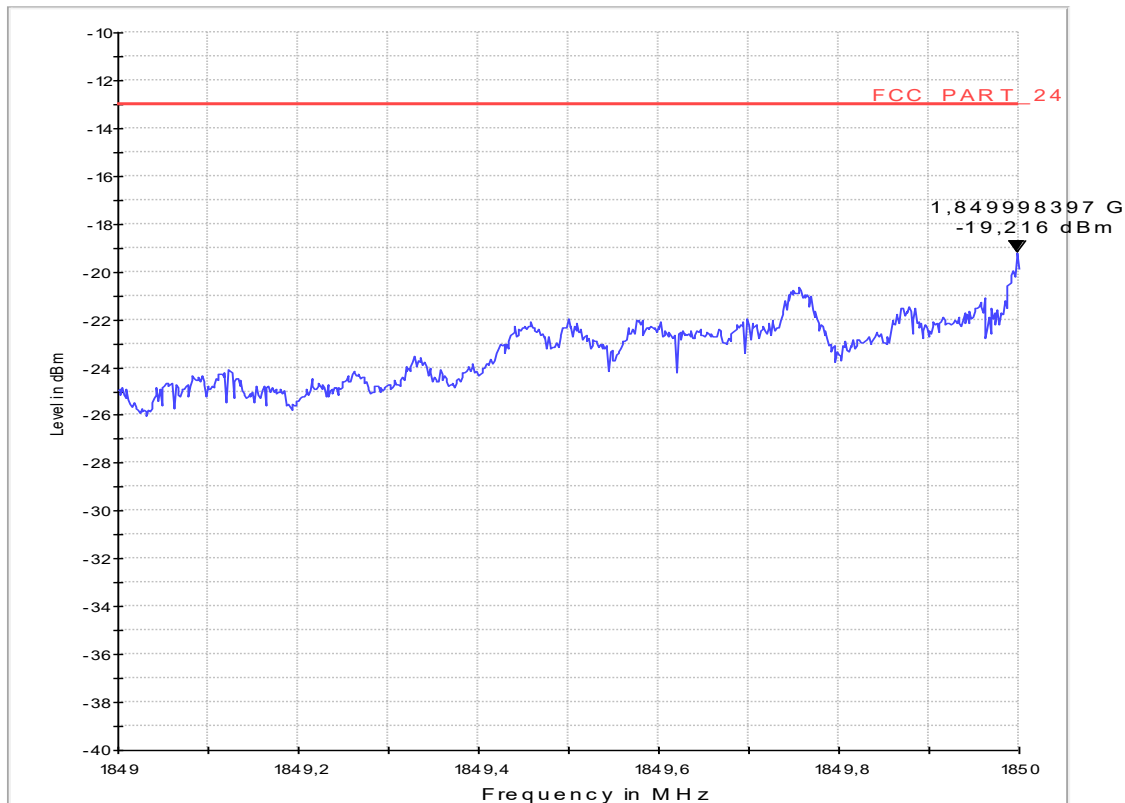
Test Description: TX Spurious Emission conducted §2.1051 - Band-Edge Compliance
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD II (RMC), low channel on U-ARFCN 9262
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_3a_Band_Edge_Channel_9262_PK



Sweep Setup: Sweep_3a_Band_Edge_Channel_9262_PK [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
1.849 GHz - 1.85 GHz	1,603 kHz	PK+	50 kHz	70 s	0 dB

Diagram No.: 37.61_BE_Ch9538_RMC_PK

Common Information

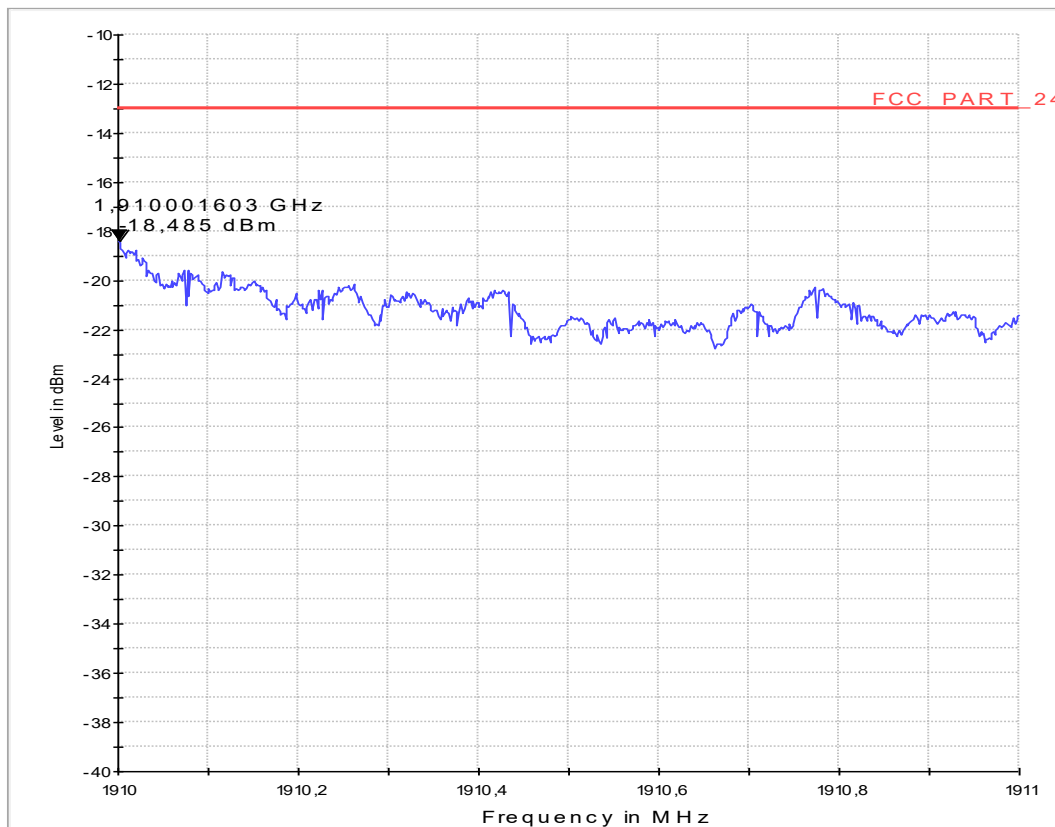
Test Description: TX Spurious Emission conducted §2.1051 - Band-Edge Compliance
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD II (RMC), high channel on U-ARFCN 9538
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_4a_Band_Edge_Channel_9538_PK



Sweep Setup: Sweep_4a_Band_Edge_Channel_9538_PK [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
1.91 GHz - 1,911 GHz	1,603 kHz	PK+	50 kHz	70 s	0 dB

5.3. FDD Band V operating mode

Diagram No.: 36.40_RSE_Ch4132_RMC_Sweep1

Common Information

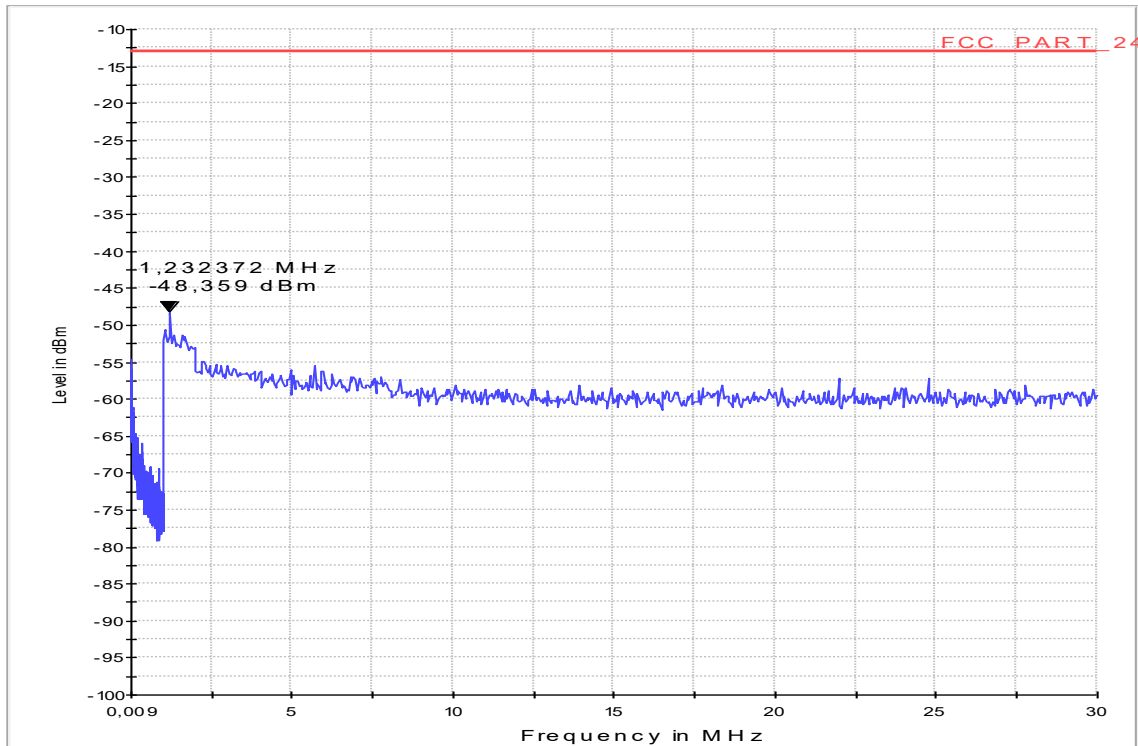
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD V (RMC), low channel on U-ARFCN 4132
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_1



Sweep Setup: Sweep_1 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 1 MHz	792,8 Hz	PK+	1 kHz	20 s	0 dB
1 MHz - 30 MHz	46,474 kHz	PK+	100 kHz	5 s	0 dB

Diagram No.: 36.41_RSE_Ch4132_RMC_Sweep2

Common Information

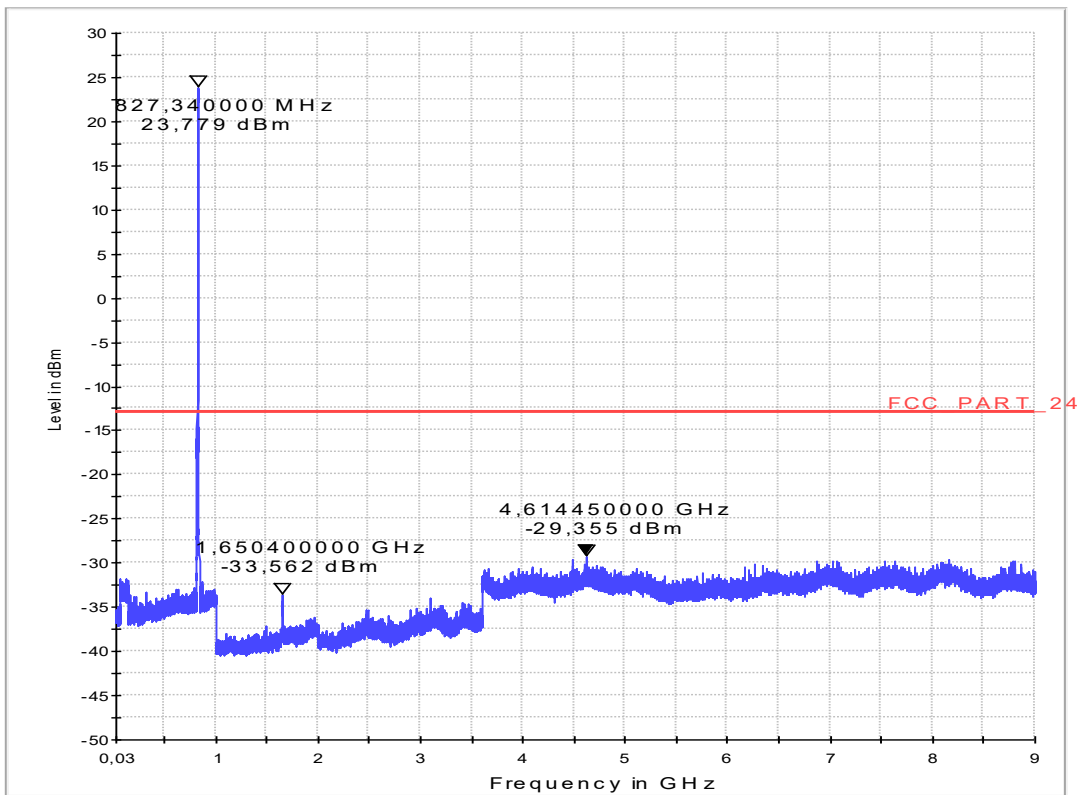
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD V (RMC), low channel on U-ARFCN 4132
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_2



Sweep Setup: Sweep_2 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	388 kHz	PK+	1 MHz	20 s	0 dB
1 GHz - 2,5 GHz	600 kHz	PK+	1 MHz	30 s	0 dB
2.5 GHz - 9 GHz	325 kHz	PK+	1 MHz	150 s	0 dB

Diagram No.: 36.42_RSE_Ch4183_RMC_Sweep1

Common Information

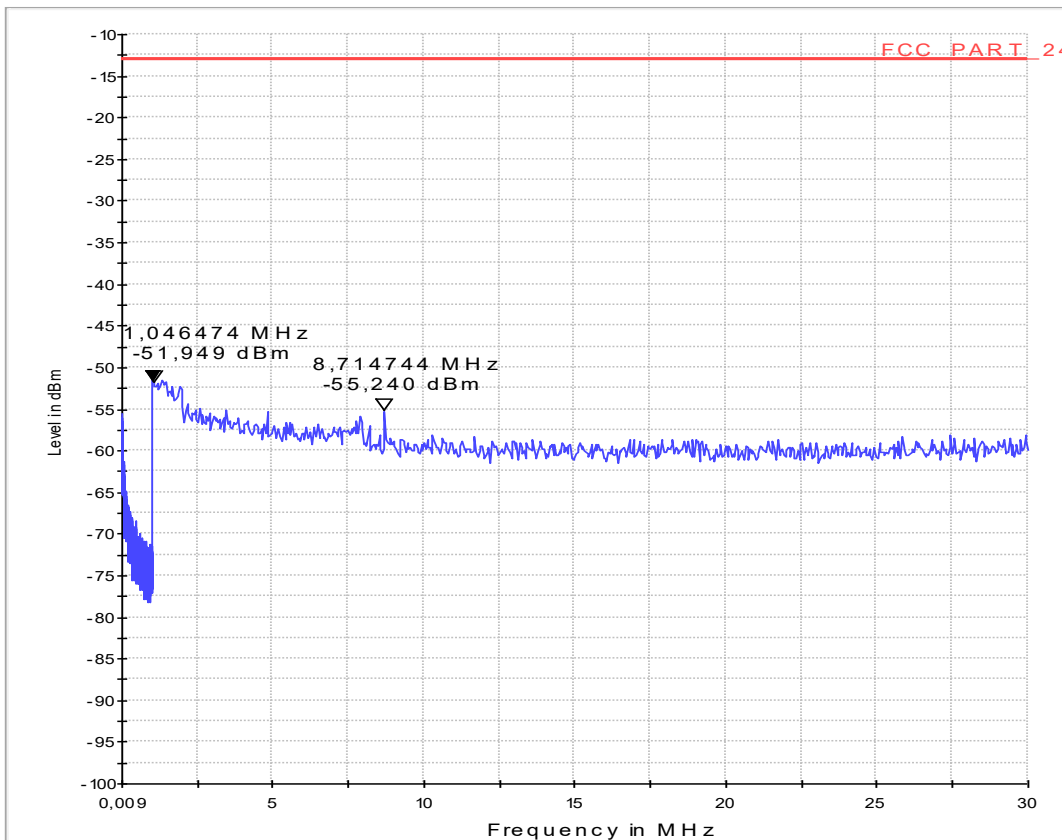
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD V (RMC), middle channel on U-ARFCN 4183
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_1



Sweep Setup: Sweep_1 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 1 MHz	792,8 Hz	PK+	1 kHz	20 s	0 dB
1 MHz - 30 MHz	46,474 kHz	PK+	100 kHz	5 s	0 dB

Diagram No.: 36.43_RSE_Ch4183_RMC_Sweep2

Common Information

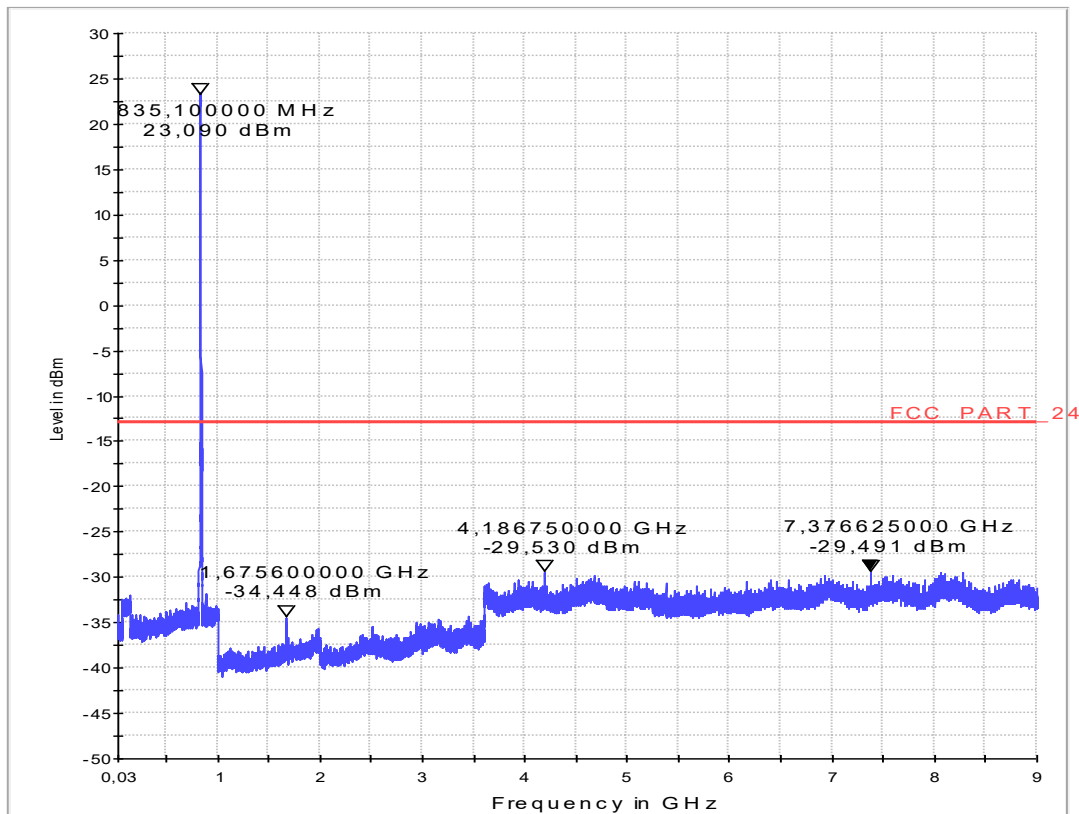
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD V (RMC), middle channel on U-ARFCN 4183
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_2



Sweep Setup: Sweep_2 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	388 kHz	PK+	1 MHz	20 s	0 dB
1 GHz - 2,5 GHz	600 kHz	PK+	1 MHz	30 s	0 dB
2.5 GHz - 9 GHz	325 kHz	PK+	1 MHz	150 s	0 dB

Diagram No.: 36.44_RSE_Ch4233_RMC_Sweep1

Common Information

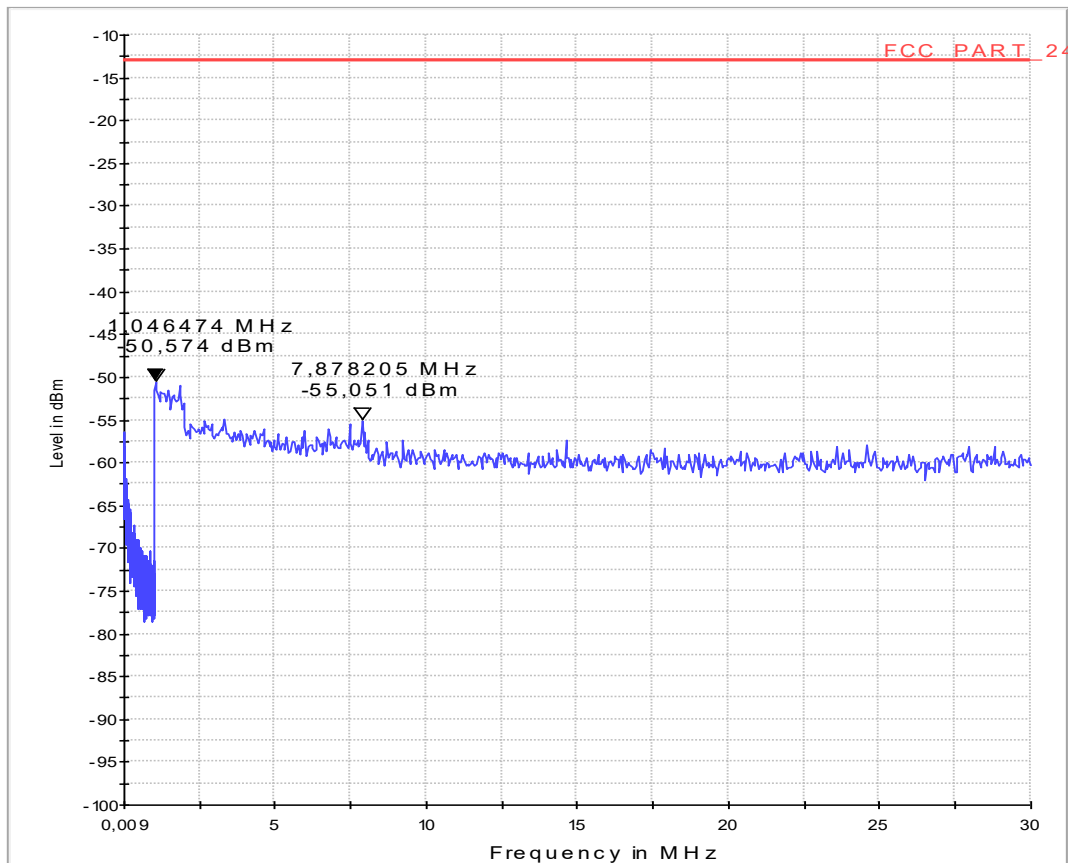
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD V (RMC), high channel on U-ARFCN 4233
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_1



Sweep Setup: Sweep_1 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 1 MHz	792,8 Hz	PK+	1 kHz	20 s	0 dB
1 MHz - 30 MHz	46,474 kHz	PK+	100 kHz	5 s	0 dB

Diagram No.: 36.45_RSE_Ch4233_RMC_Sweep2

Common Information

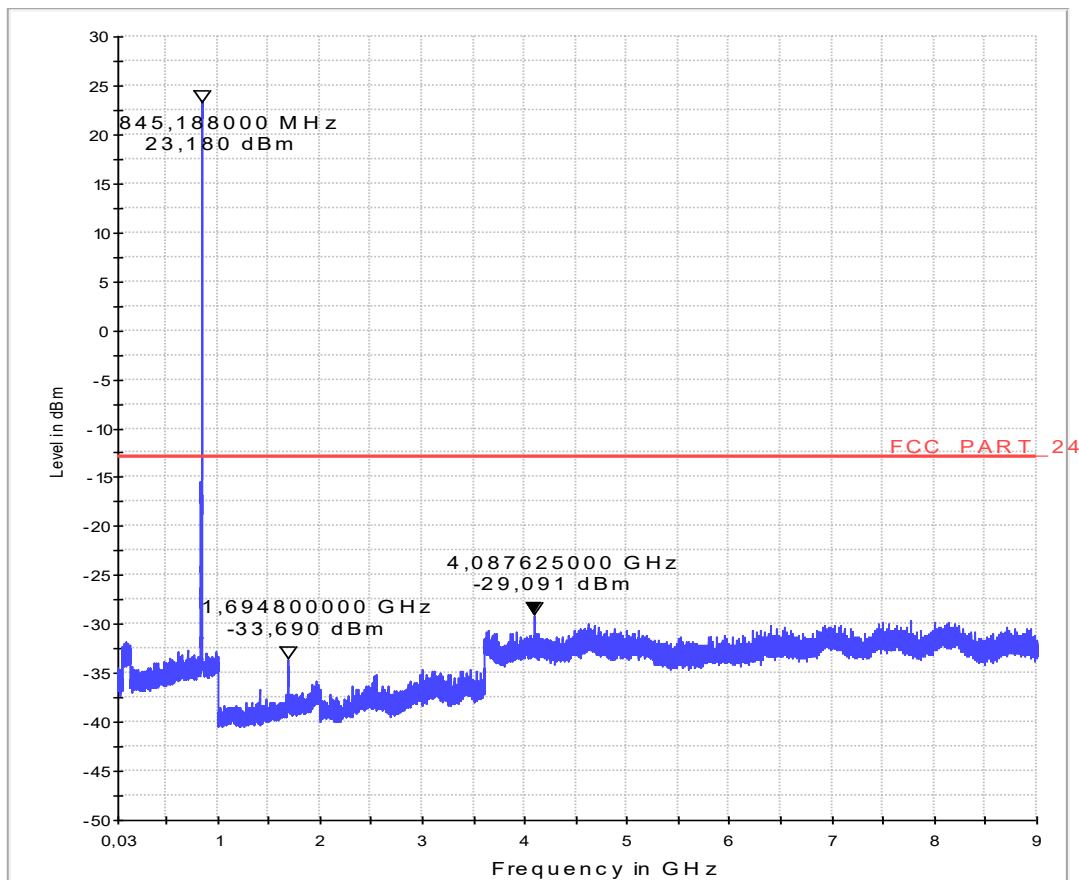
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD V (RMC), high channel on U-ARFCN 4233
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_2



Sweep Setup: Sweep_2 [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	388 kHz	PK+	1 MHz	20 s	0 dB
1 GHz - 2,5 GHz	600 kHz	PK+	1 MHz	30 s	0 dB
2.5 GHz - 9 GHz	325 kHz	PK+	1 MHz	150 s	0 dB

5.4. Band-Edge compliance for FDD Band V operation (outside frequency block)

Diagram No.: 37.40_BE_Ch4132_RMC_PK

Common Information

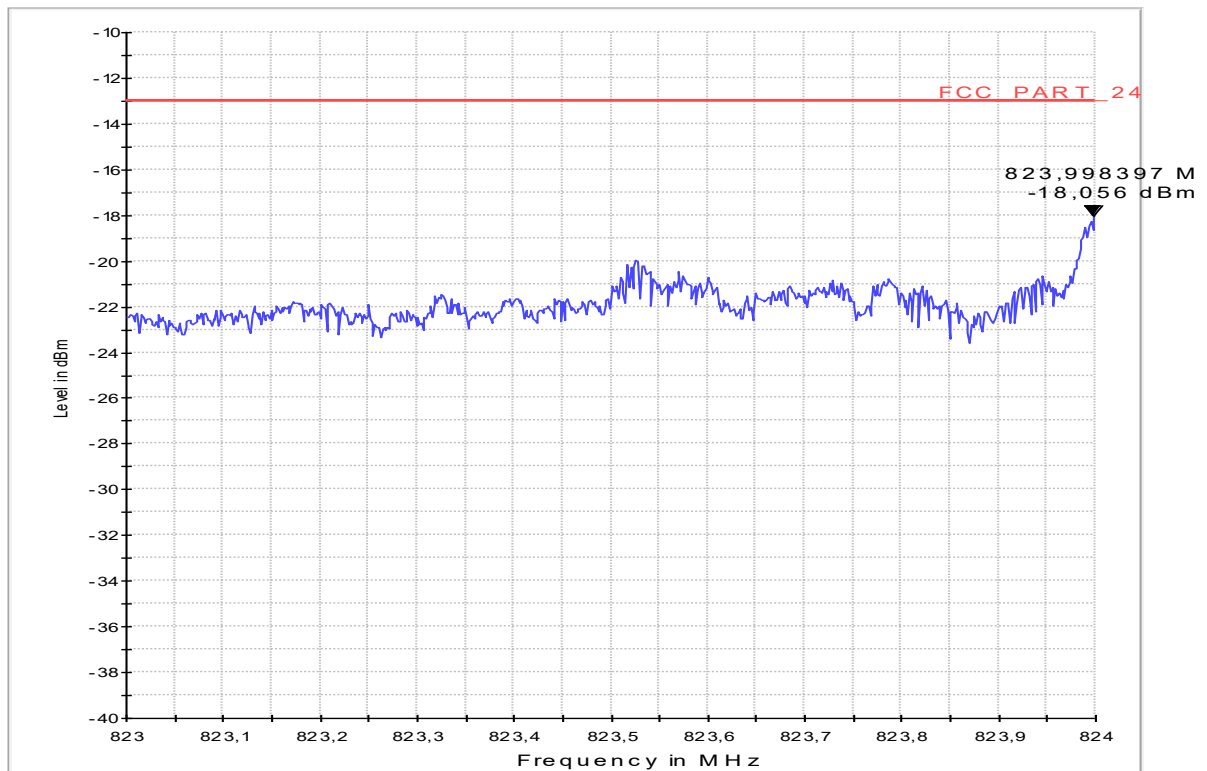
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

 Operation mode: TX - FDD V (RMC), low channel on U-ARFCN 4132
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_3a_Band_Edge_Channel_4132_PK



Sweep Setup: Sweep_3a_Band_Edge_Channel_4132_PK [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
823 MHz - 824 MHz	1,603 kHz	PK+	50 kHz	30 s	0 dB

Diagram No.: 37.41_BE_Ch4233_RMC_PK

Common Information

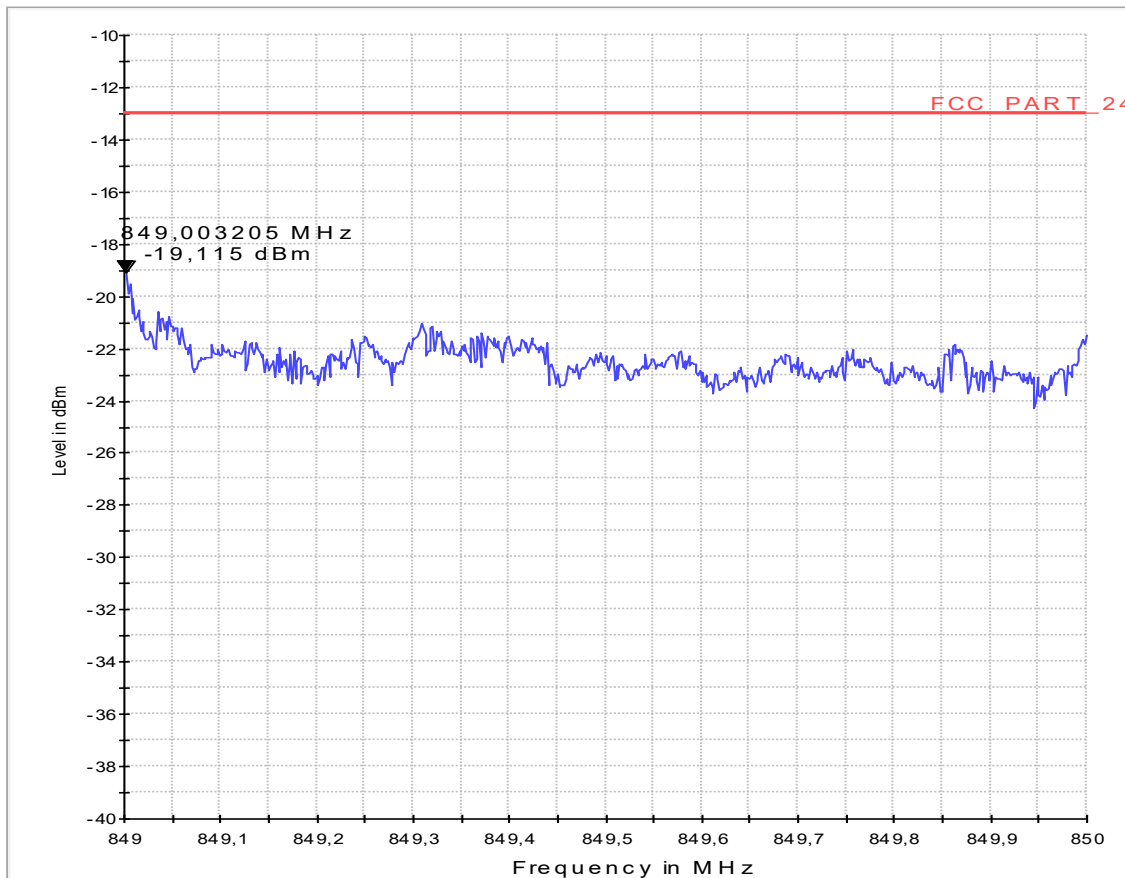
Test Description: TX Spurious Emission conducted §2.1051
 Test Site: Radio laboratory 1
 Test Standard: FCC FCC Part 22&24

Operation mode: TX - FDD V (RMC), high channel on U-ARFCN 4233
 Operator Name: Lor
 Comment: --

EUT Information

EUT Name: EHS6
 Manufacturer: Cinterion
 Serial Number: #2 Conducted
 Hardware Rev: B1.2/1
 Software Rev: 01.001
 Comment: Interface R232
 Accessories: Power supply (9V DC)

Sweep_4a_Band_Edge_Channel_4233_PK



Sweep Setup: Sweep_4a_Band_Edge_Channel_4233_PK [EMI radiated]

Hardware Setup: 31_ESU_Conducted_FCC_Part_15_22_24
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
849 MHz - 850 MHz	1,603 kHz	PK+	50 kHz	30 s	0 dB