

## Annex 1: Measurement diagrams 20-1-0060701T68a-C1-A1

<b>Number of pages:</b>	50	<b>Date of Report:</b>	2021-Jul-27
<b>Testing company:</b>	CETECOM GmbH Im Teelbruch 116 45219 Essen Germany Tel. + 49 (0) 20 54 / 95 19-0 Fax: + 49 (0) 20 54 / 95 19-150	<b>Applicant:</b>	VALEO Telematik und Akustik GmbH
<b>Product:</b>	Telematic Device		
<b>Model:</b>	ATM-02-MEX-R1		
<b>FCC ID:</b>	QWY-ATM2-R-11	<b>IC:</b>	--
<b>Testing has been carried out in accordance with:</b>	Title 47 CFR, Chapter I FCC Regulations, Subchapter B Part 22 Subpart H, Part24 Subpart E, Part 27 Subpart C Part 15, Subpart C, §15.209  Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".		

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# 1 Measurement diagrams

## 2.201\_H\_field\_LTE\_FDD\_B02\_CH\_18700

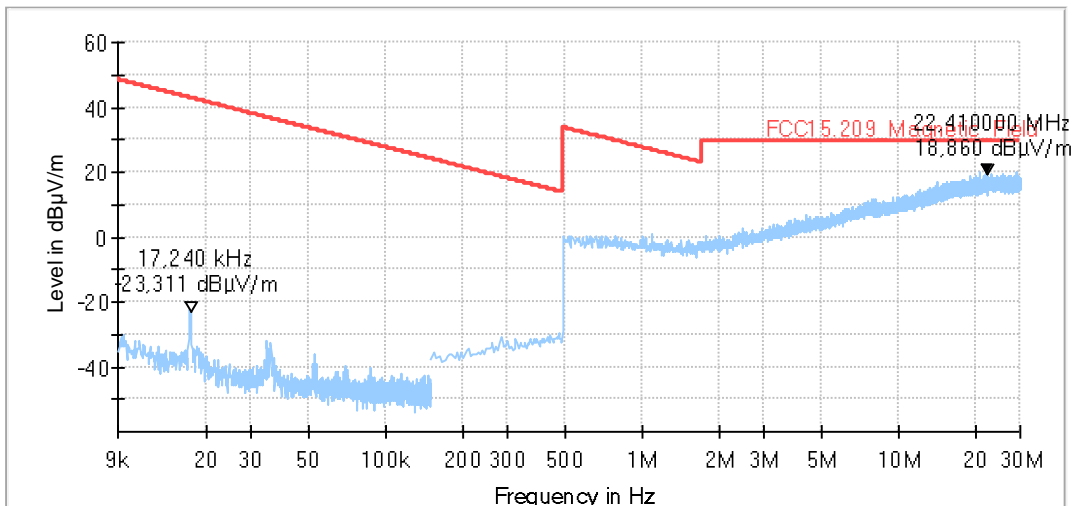
### Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	
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:	
Test Standard:	FCC
Operator:	HLa/WAbdellatif
Operating Mode:	LTE_FDD_B02_CH_18700_RB_1_high
Power during tests:	12V DC
Comment 1:	Channel 18700
Environmental Conditions::	Humidity : 32%rH; Temperature: 20°C
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S216\_C01

Full Spectrum



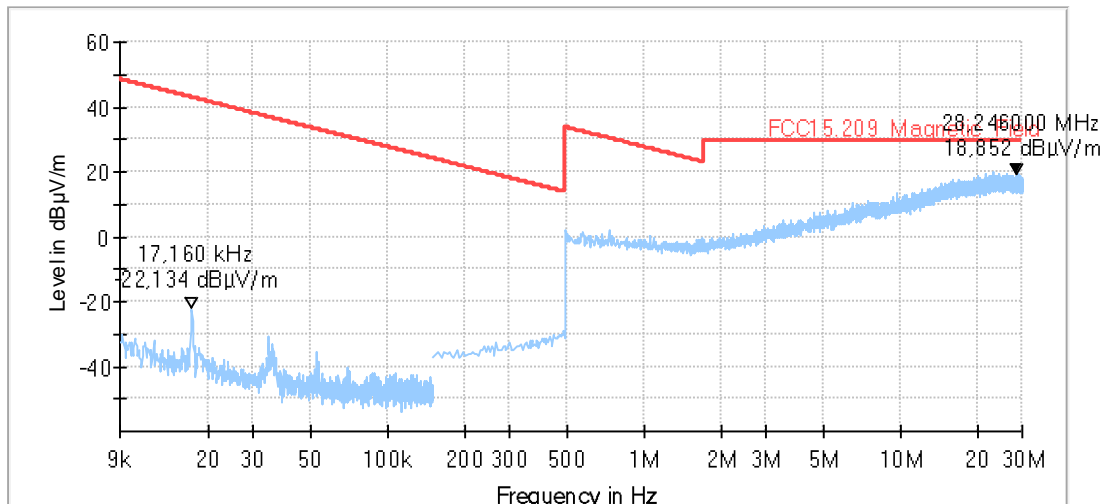
## 2.202\_H\_field\_LTE\_FDD\_B02\_CH\_18700

### Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	--
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:	--
Test Standard:	FCC
Operator:	HLa/WAbdellatif
Operating Mode:	LTE_FDD_B02_CH_18700_RB_1_high
Power during tests:	12V DC
Environmental Conditions:	Humidity : 32%rH; Temperature: 20°C
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number:	20-1-00607S216_C01
	Full Spectrum



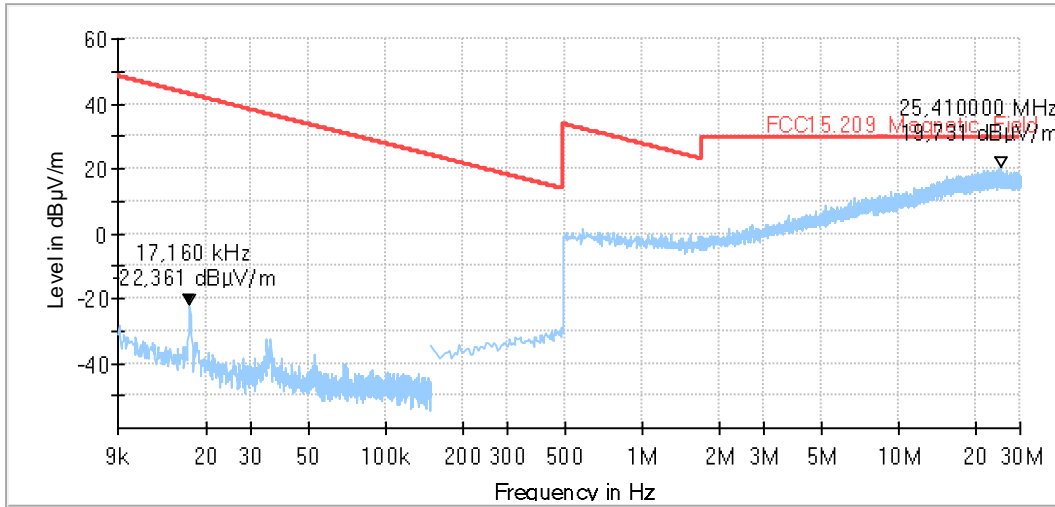
## 2.401\_Traffic\_mode\_LTE\_FDD\_B04\_CH\_20350

### Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	--
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:	--
Test Standard:	FCC
Operator:	HLa/WAbdellatif
Operating Mode:	LTE_FDD_B04_CH_20350_RB_1_low
Power during tests:	12V DC
Environmental Conditions:	Humidity : 32%rH; Temperature: 20°C
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number:	20-1-00607S216_C01
	Full Spectrum



## 2.501\_Traffic\_mode\_LTE\_FDD\_B05\_CH\_20525

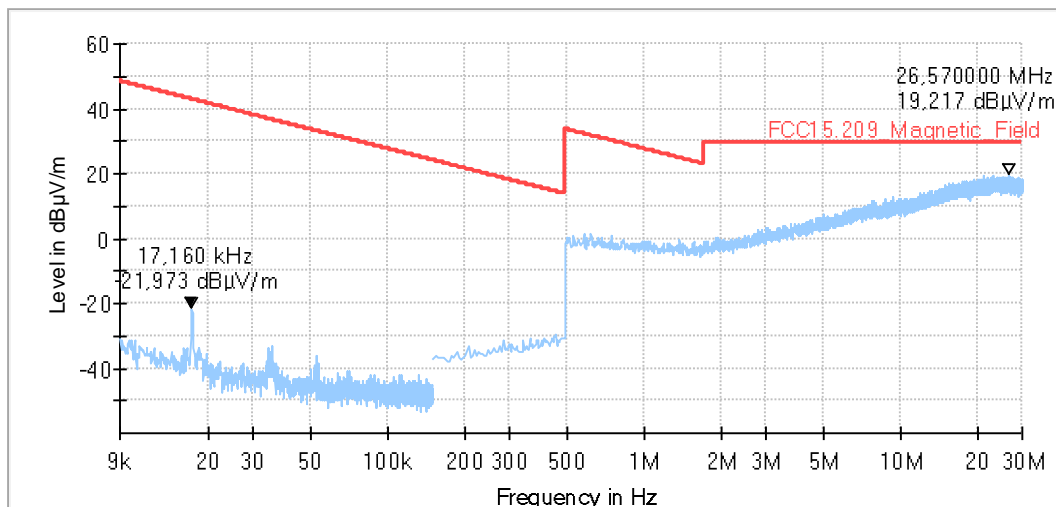
### Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	--
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:	--
Test Standard:	FCC
Operator:	HLa/WAbdellatif
Operating Mode:	LTE_FDD_B05_CH_20525_RB_1_low
Power during tests:	12V DC
Environmental Conditions:	Humidity : 32%rH; Temperature: 20°C
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number:	20-1-00607S216_C01
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Full Spectrum



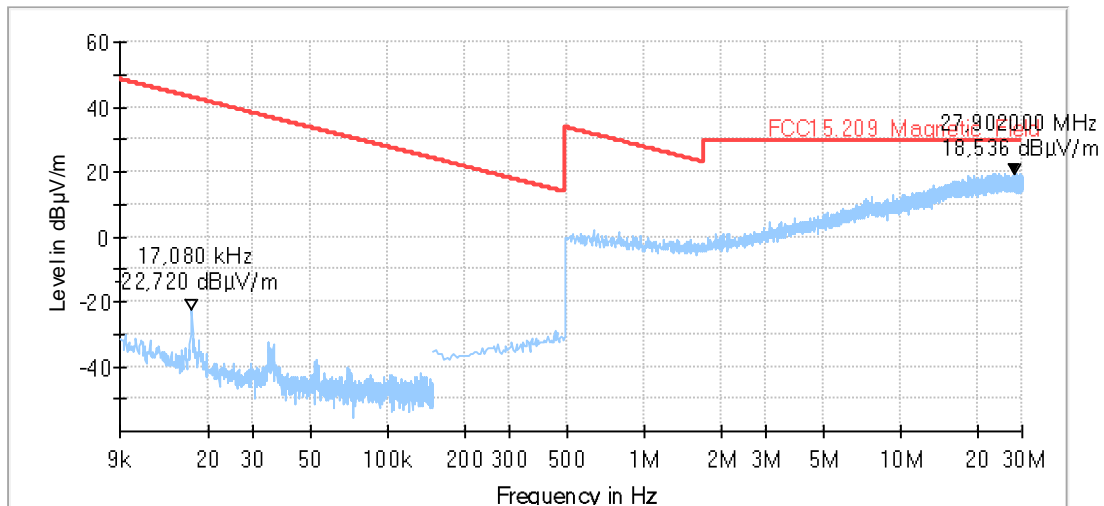
## 2.701\_H\_field\_LTE\_FDD\_B07\_CH\_20800

### Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	--
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:	--
Test Standard:	FCC
Operator:	HLa/WAbdellatif
Operating Mode:	LTE_FDD_B07_CH_20800_RB_1_low
Power during tests:	12V DC
Environmental Conditions:	Humidity : 32%rH; Temperature: 20°C
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number:	20-1-00607S216_C01
	Full Spectrum



## 2.1201\_H\_field\_LTE\_FDD\_B12\_CH\_23155

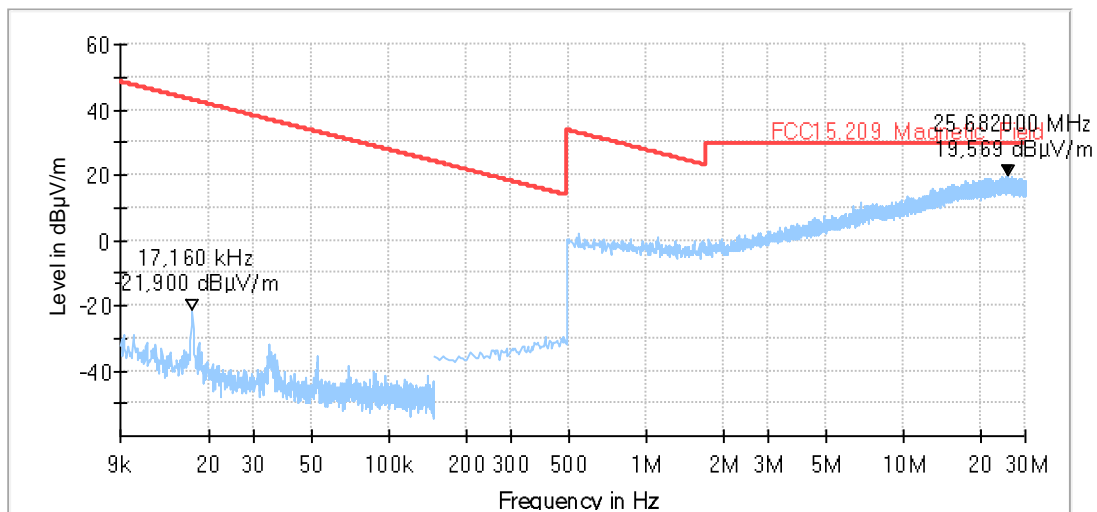
### Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	--
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:	--
Test Standard:	FCC
Operator:	HLa/WAbdellatif
Operating Mode:	LTE_FDD_B12_CH_23155_RB_1_high
Power during tests:	12V DC
Environmental Conditions:	Humidity : 32%rH; Temperature: 20°C
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number:	20-1-00607S216_C01
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Full Spectrum





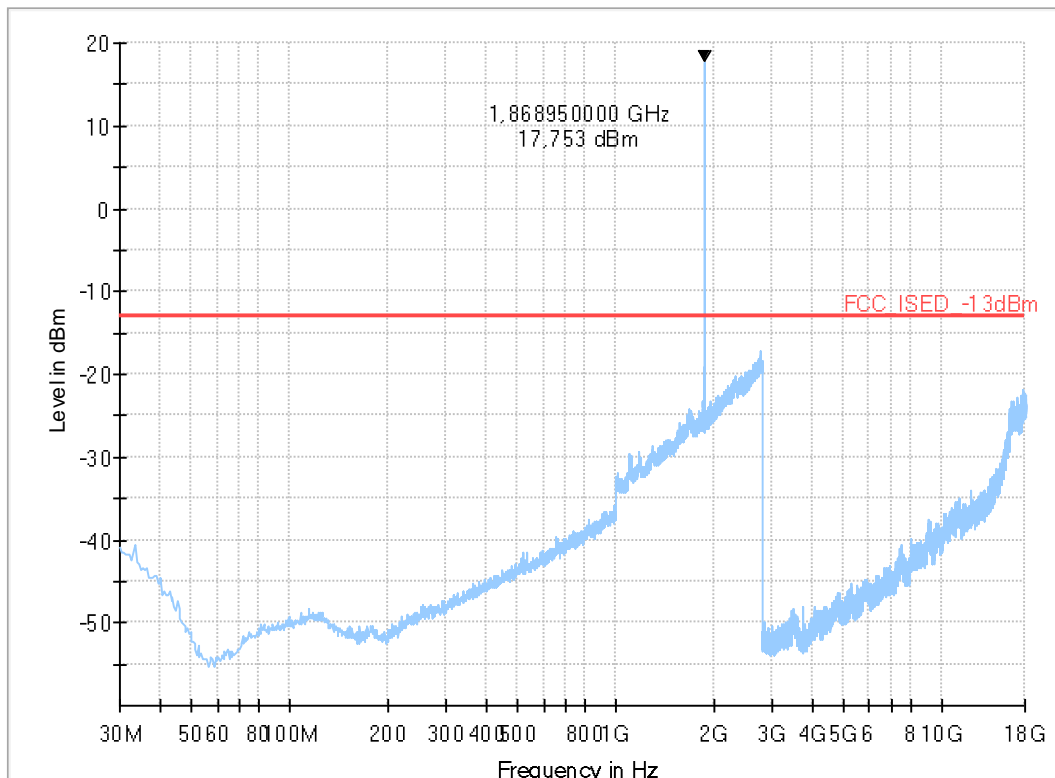
## 8.01\_Traffic\_mode\_LTE\_FDD\_B02\_CH\_18700\_Standing

### Common Information

Test Description:	Radiated emission
Test Site:	Fully-Anechoic Chamber
Test Standard:	FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3
Antenna polarisation:	vertical / horizontal
Measurement software version	EMC32 V10.60.20
Operating Mode:	LTE_FDD2   BW=20 MHz   CH_18700   RB_1_high   QPSK
Operator:	TFra
EUT Setup:	2
Verdict:	Passed

### EUT Information

PMT number:	20-1-00607S218_C01
	Full Spectrum



Remark: Emission at 1.86895 GHz is uplink frequency of LTE FDD 2 and not related to results.

### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Comment
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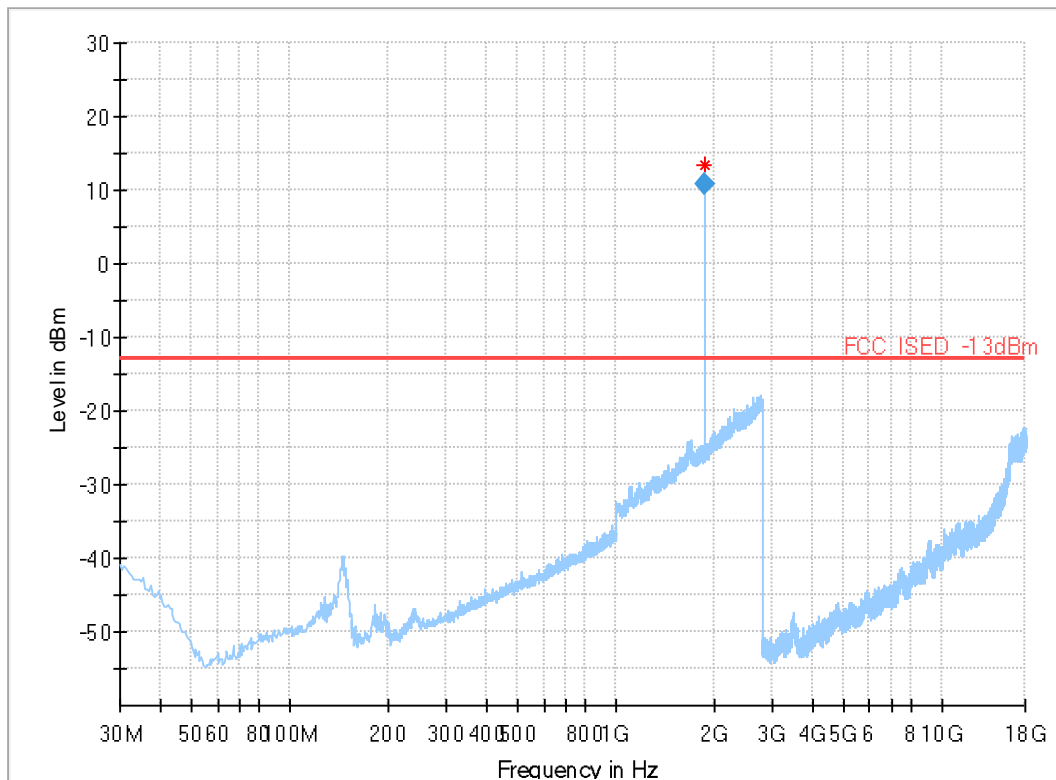
## 8.02\_Traffic\_mode\_LTE\_FDD\_B02\_CH\_18700\_Laying

### Common Information

Test Description: Radiated emission  
 Test Site: Fully-Anechoic Chamber  
 Test Standard: FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3  
 Antenna polarisation: vertical / horizontal  
 Measurement software version: EMC32 V10.60.20  
 Operating Mode: LTE\_FDD2 | BW=20 MHz | CH\_18700 | RB\_1\_high | QPSK  
 Operator: SSanthakum  
 EUT Setup: 2  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S218\_C01  
 Full Spectrum



Remark: Emission at 1.868925 GHz is uplink frequency of LTE FDD 2 and not related to results.

### Final\_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1868.925000	10.81	-13.00	-23.81	100.0	1000.000	155.0	V	75.0	0.0	-62

(continuation of the "Final\_Result" table from column 17 ...)

Frequency (MHz)	Comment
1868.925000	16:00:05 - 09.07.2021

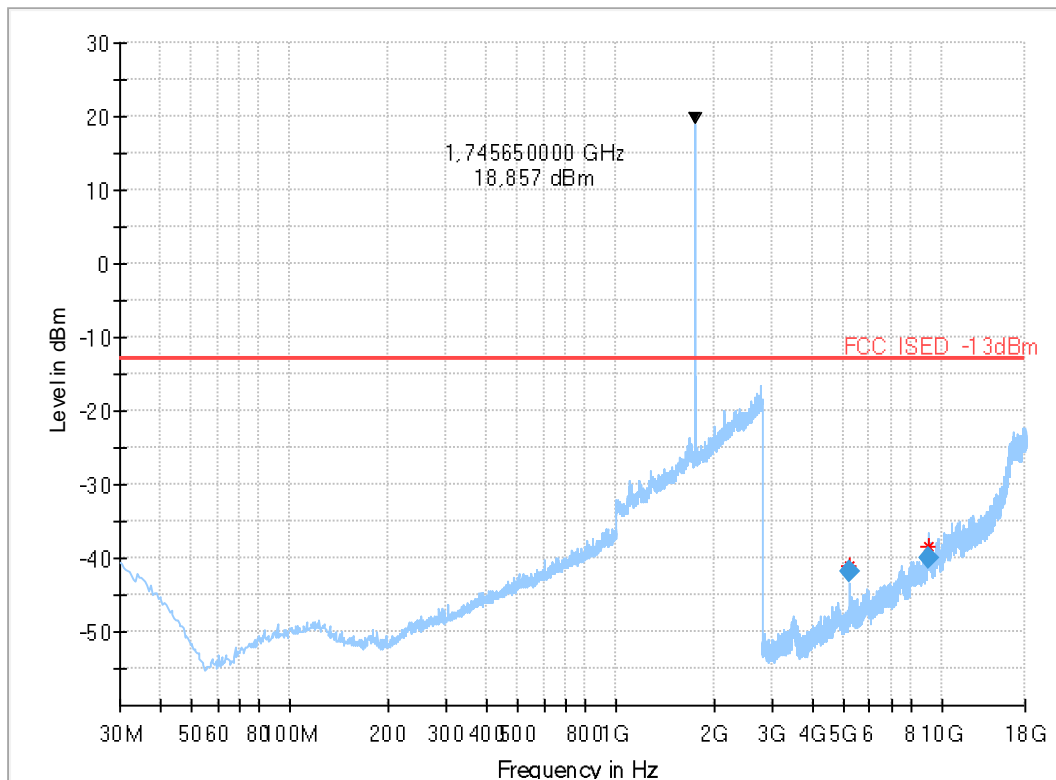
## 8.03\_Traffic\_mode\_LTE\_FDD\_B04\_CH\_20350\_Standing

### Common Information

Test Description:	Radiated emission
Test Site:	Fully-Anechoic Chamber
Test Standard:	FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3
Antenna polarisation:	vertical / horizontal
Measurement software version	EMC32 V10.60.20
Operating Mode:	LTE_FDD4   BW=10 MHz   CH_20350   RB_1_low   QPSK
Operator:	TFra
EUT Setup:	2
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S218\_C01  
Full Spectrum



Remark: Emission at 1.74565 GHz is uplink frequency of LTE FDD 4 and not related to results.

### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
5236.775000	-41.73	-13.00	28.73	100.0	1000.000	155.0	H	329.0	0.0	-87
9126.336667	-40.02	-13.00	27.02	100.0	1000.000	155.0	H	120.0	0.0	-77

(continuation of the "Final\_Result" table from column 17 ...)

Frequency (MHz)	Comment
5236.775000	19:00:20 - 08.07.2021
9126.336667	18:57:48 - 08.07.2021

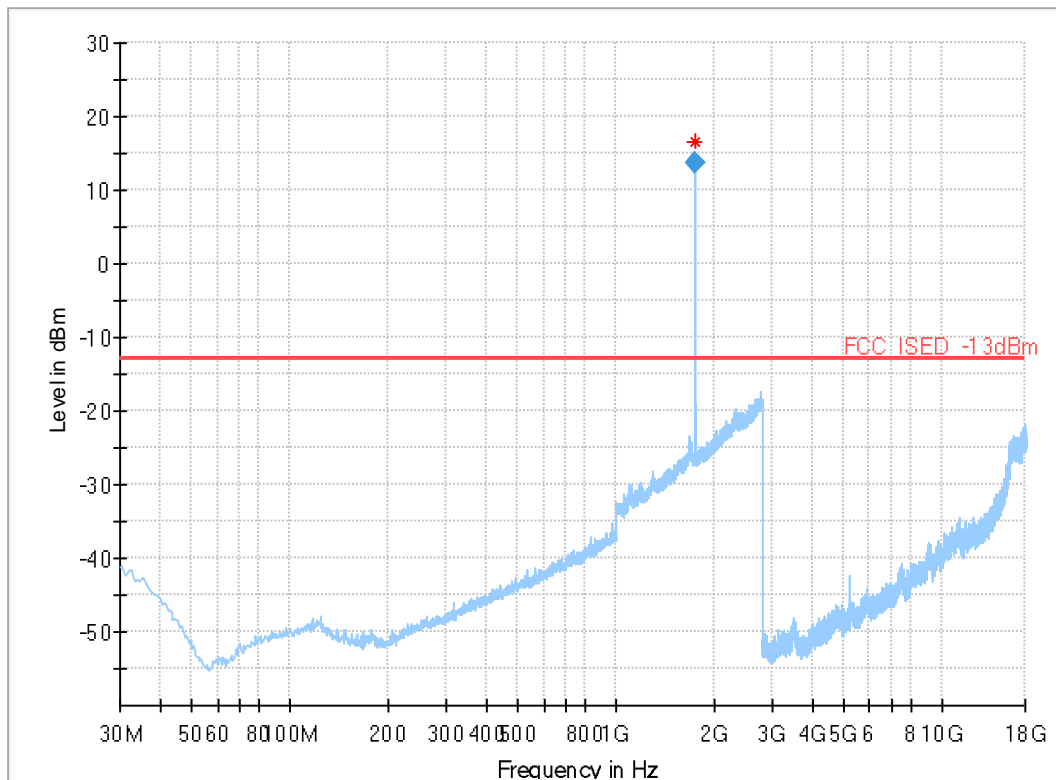
## 8.04\_Traffic\_mode\_LTE\_FDD\_B04\_CH\_20350\_Laying

### Common Information

Test Description: Radiated emission  
 Test Site: Fully-Anechoic Chamber  
 Test Standard: FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3  
 Antenna polarisation: vertical / horizontal  
 Measurement software version: EMC32 V10.60.20  
 Operating Mode: LTE\_FDD4 | BW=10 MHz | CH\_20350 | RB\_1\_low | QPSK  
 Operator: WAbdellatif  
 EUT Setup: 2  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S218\_C01  
 Full Spectrum



Remark: Emission at 1.7455375 GHz is uplink frequency of LTE FDD 4 and not related to results.

### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1745.537500	13.64	-13.00	-26.64	100.0	1000.000	155.0	V	310.0	0.0	-62

(continuation of the "Final\_Result" table from column 17 ...)

Frequency (MHz)	Comment
1745.537500	16:43:26 - 09.07.2021

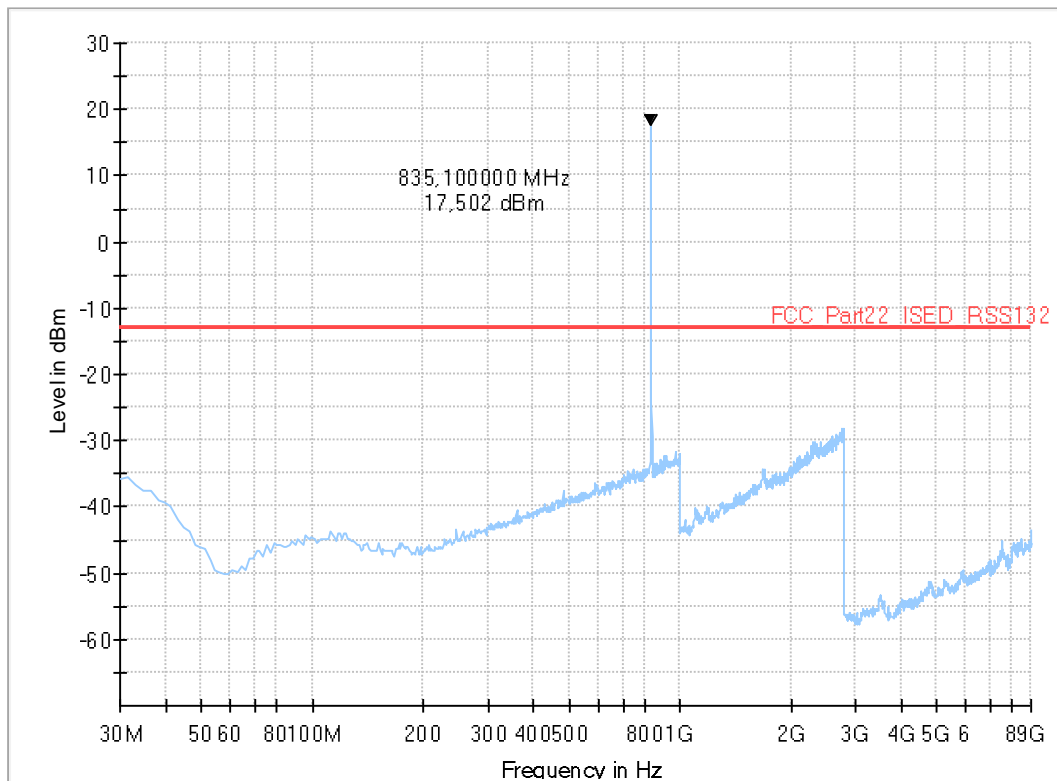
## 8.05\_Traffic\_mode\_LTE\_FDD\_B05\_CH\_20525\_Standing

### Common Information

Test Description: Radiated emission related to 1m  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20  
 Test Standard: FCC FCC Part 24.238 Broadband PCS  
 Antenna polarisation: vertical / horizontal  
 Operating Mode: LTE\_FDD5 | BW=5 MHz | CH\_20525 | RB\_1\_Low | QPSK  
 Operator: TFra  
 Environmental Conditions: Humidity : 55%rH; Temperature: 20°C  
 EUT Setup: 2  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S218\_C01  
 Full Spectrum



Remark: Emission at 835.1 MHz is uplink frequency of LTE FDD 5 and not related to results.

### Final Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)	Comment
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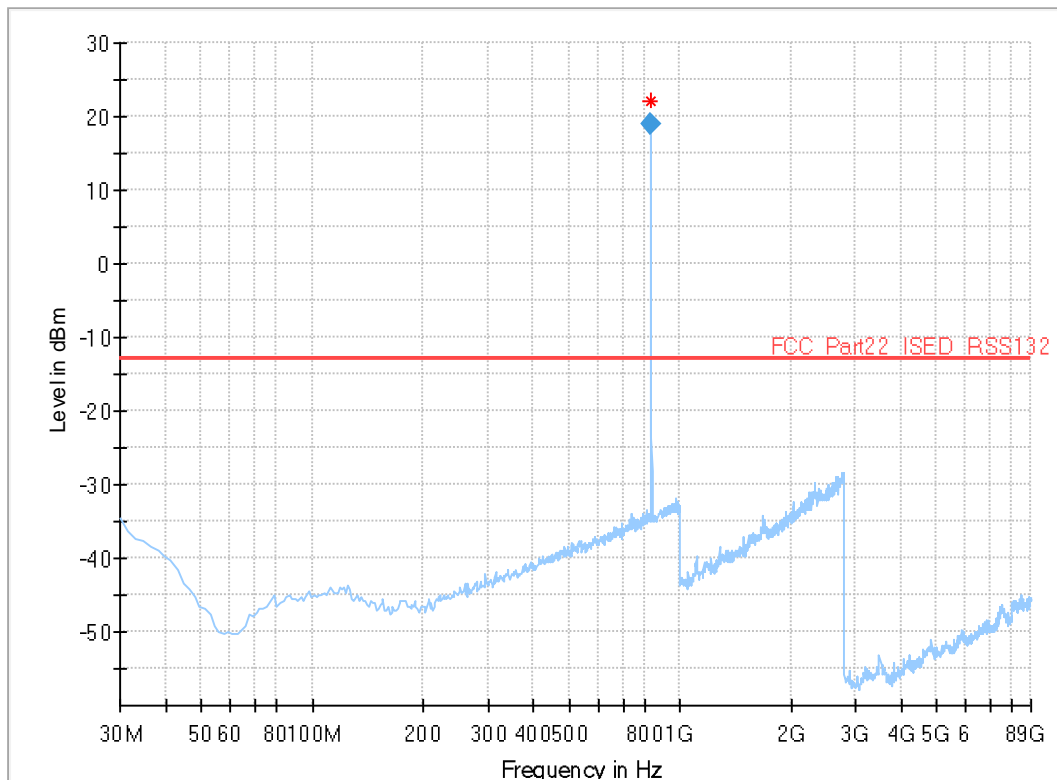
## 8.06\_Traffic\_mode\_LTE\_FDD\_B05\_CH\_20525\_Laying

### Common Information

Test Description: Radiated emission related to 1m  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20  
 Test Standard: FCC FCC Part 24.238 Broadband PCS  
 Antenna polarisation: vertical / horizontal  
 Operating Mode: LTE\_FDD5 | BW=5 MHz | CH\_20525 | RB\_1\_low | QPSK  
 Operator: WAbdellatif  
 Environmental Conditions: Humidity : 70%rH; Temperature: 20°C  
 EUT Setup: 2  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S218\_C01  
 Full Spectrum



Remark: Emission at 834.3 MHz is uplink frequency of LTE FDD 5 and not related to results.

### Final\_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
834.300000	18.94	-13.00	-31.94	100.0	100.000	155.0	V	184.0	0.0	-76

(continuation of the "Final\_Result" table from column 17 ...)

Frequency (MHz)	Comment
834.300000	17:18:21 - 09.07.2021

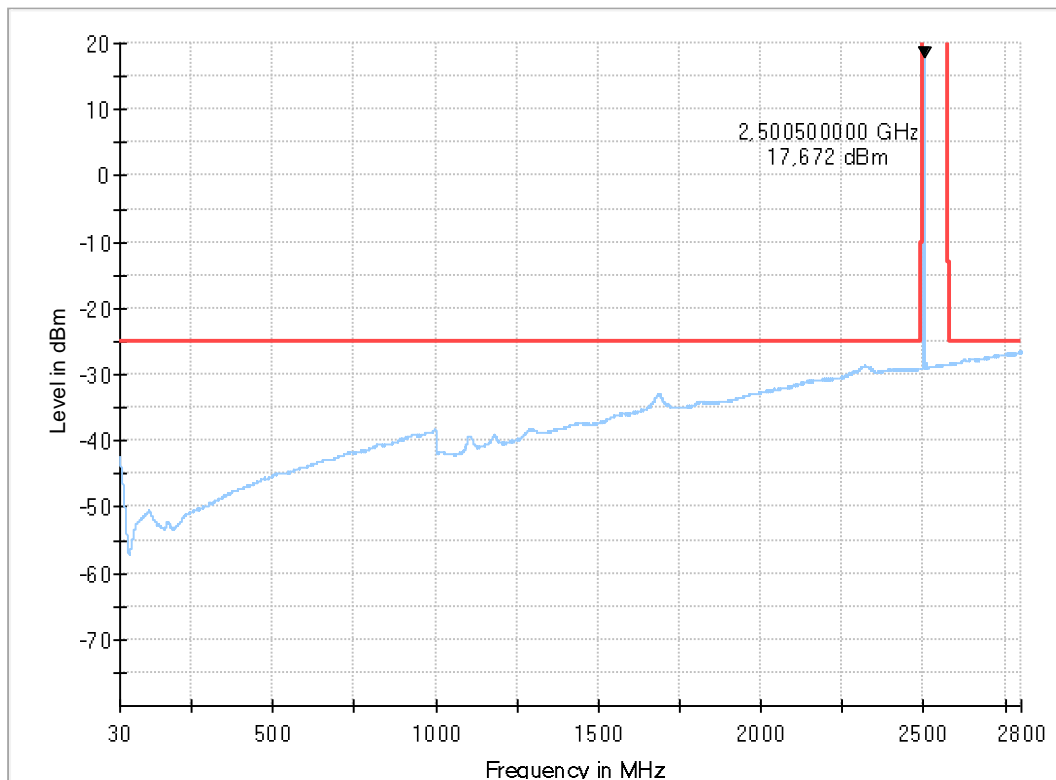
## 8.07\_Traffic\_mode\_LTE\_FDD\_B07\_CH\_20800\_Standing

### Common Information

Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC Part 27.53(l)(4) / RSS-130 Mobile stations limits
Operating Mode:	LTE_FDD7  BW=10MHz   CH_20800   RB_1_low   QPSK
Environmental Conditions::	Humidity : 65%rH; Temperature: 21°C
Test SW Version:	EMC32 V10.60.20
Operator:	SOz/PGrundmann
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S218\_C01  
Full Spectrum



Remark: Emission at 2.5005 GHz is uplink frequency of LTE FDD 7 and not related to results.

### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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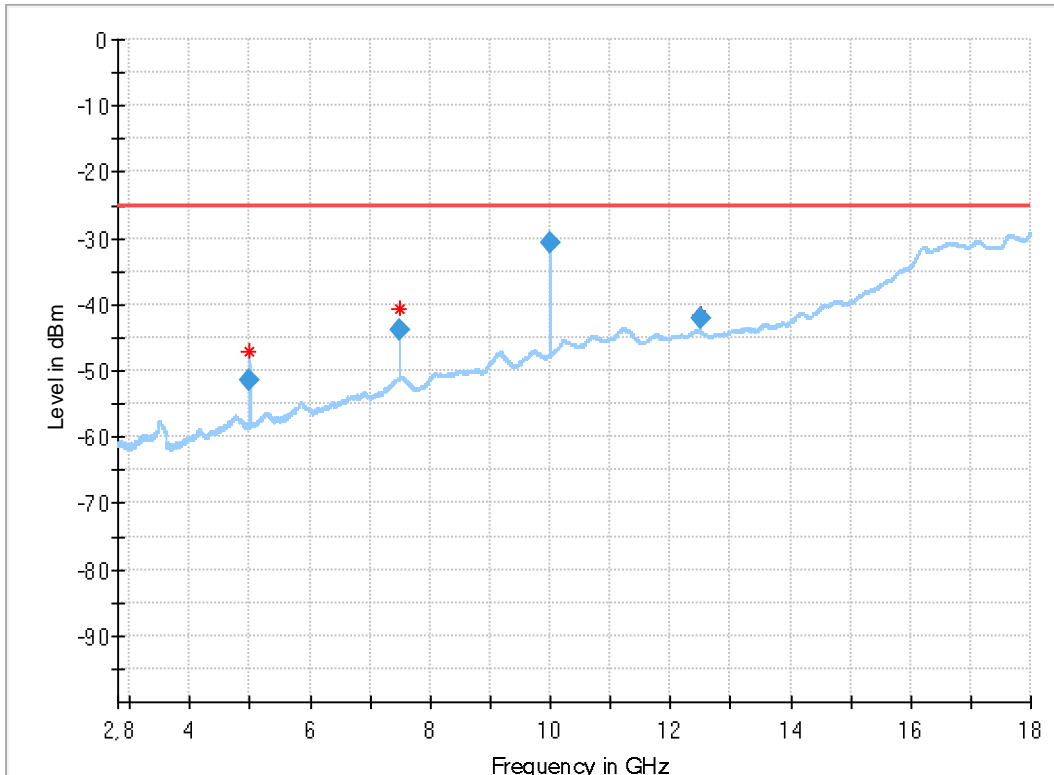
## 8.08\_Traffic\_mode\_LTE\_FDD\_B07\_CH\_20800\_Standing

### Common Information

Test Description: -  
 Test Site Location: CETECOM GmbH Essen  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20  
 Test Standard: -  
 Test Case: -  
 Operating Mode: LTE\_FDD7| BW=10MHz | CH\_20800 | RB\_1\_low | QPSK  
 Environmental Conditions: Humidity : 55%rH; Temperature: 20°C  
 Operator: TFra  
 EUT Setup: 2  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S218\_C01  
 Full Spectrum



### Final\_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
5001.088000	-51.44	-25.00	26.44	1000.0	1000.000	H	217.0	0.0	-89
7501.859250	-43.84	-25.00	18.84	1000.0	1000.000	H	94.0	0.0	-80
10002.277000	-30.80	-25.00	5.80	1000.0	1000.000	V	224.0	0.0	-77
12503.010000	-41.99	-25.00	16.99	1000.0	1000.000	V	125.0	0.0	-73



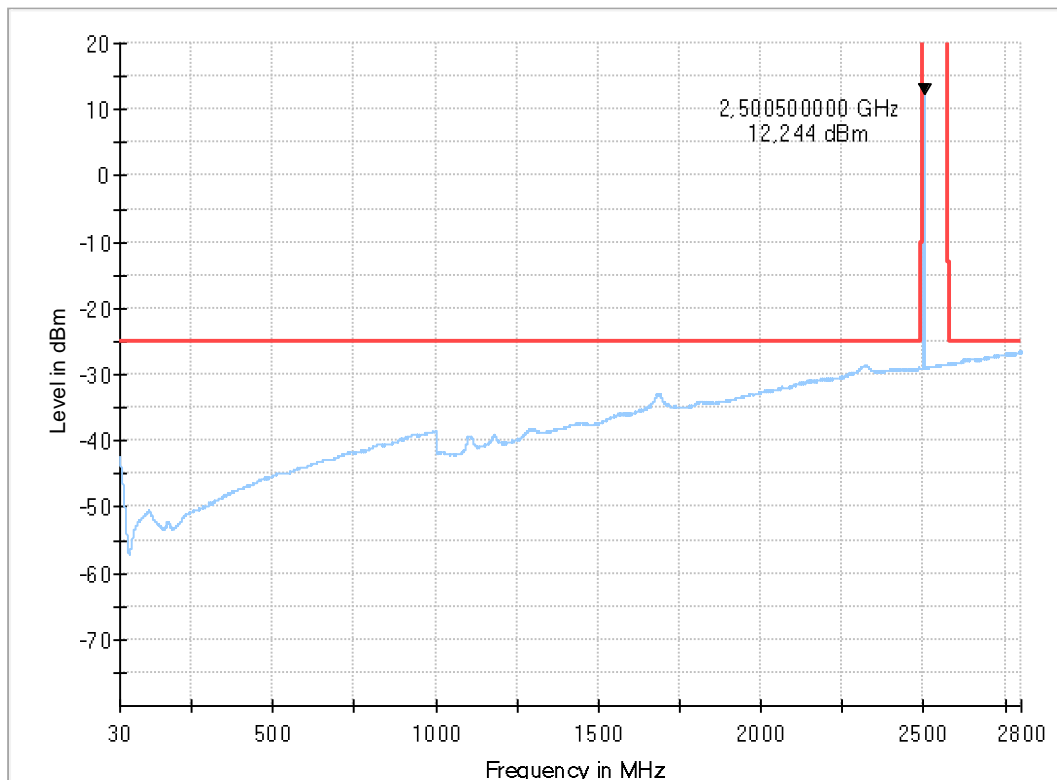
## 8.09\_Traffic\_mode\_LTE\_FDD\_B07\_CH\_20800\_Laying

### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC Part 27.53(l)(4) / RSS-130 Mobile stations limits
Operating Mode:	LTE_FDD_7   CH_20800   1RB_low
Environmental Conditions::	Humidity : 65%rH; Temperature: 19°C
Test SW Version:	EMC32 V10.60.20
Operator:	TFra
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

### EUT Information

PMT number:	20-1-00607S218_C01
	Full Spectrum



Remark: Emission at 2.5005 GHz is uplink frequency of LTE FDD 7 and not related to results.

### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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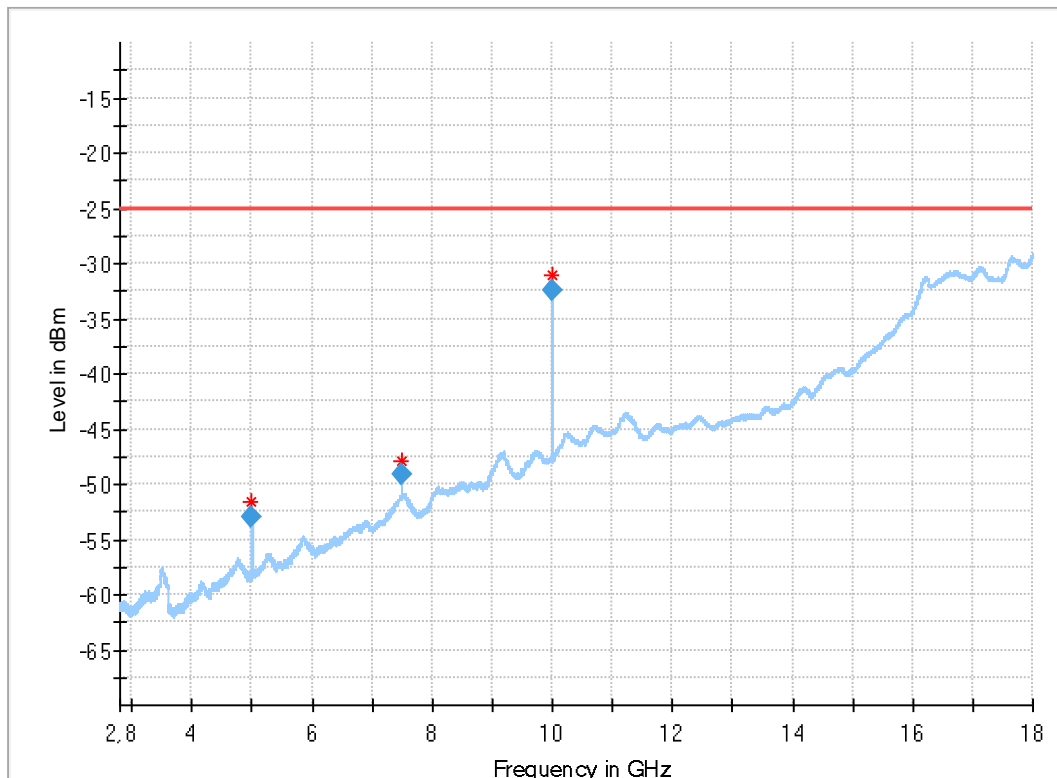
## 8.10\_Traffic\_mode\_LTE\_FDD\_B07\_CH\_20800\_Laying

### Common Information

Test Description: -  
 Test Site Location: CETECOM GmbH Essen  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20  
 Test Standard: -  
 Test Case: -  
 Operating Mode: LTE\_FDD\_7 | CH\_20800 | 1RB\_low  
 Environmental Conditions: Humidity : 65%RH; Temperature: 20°C  
 Operator: TFra  
 EUT Setup: 2  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S218\_C01  
 Full Spectrum



### Final\_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
5001.152000	-52.99	-25.00	27.99	1000.0	1000.000	V	43.0	0.0	-89
7501.742000	-49.10	-25.00	24.10	1000.0	1000.000	V	134.0	0.0	-80
10002.277000	-32.46	-25.00	7.46	1000.0	1000.000	V	133.0	0.0	-77

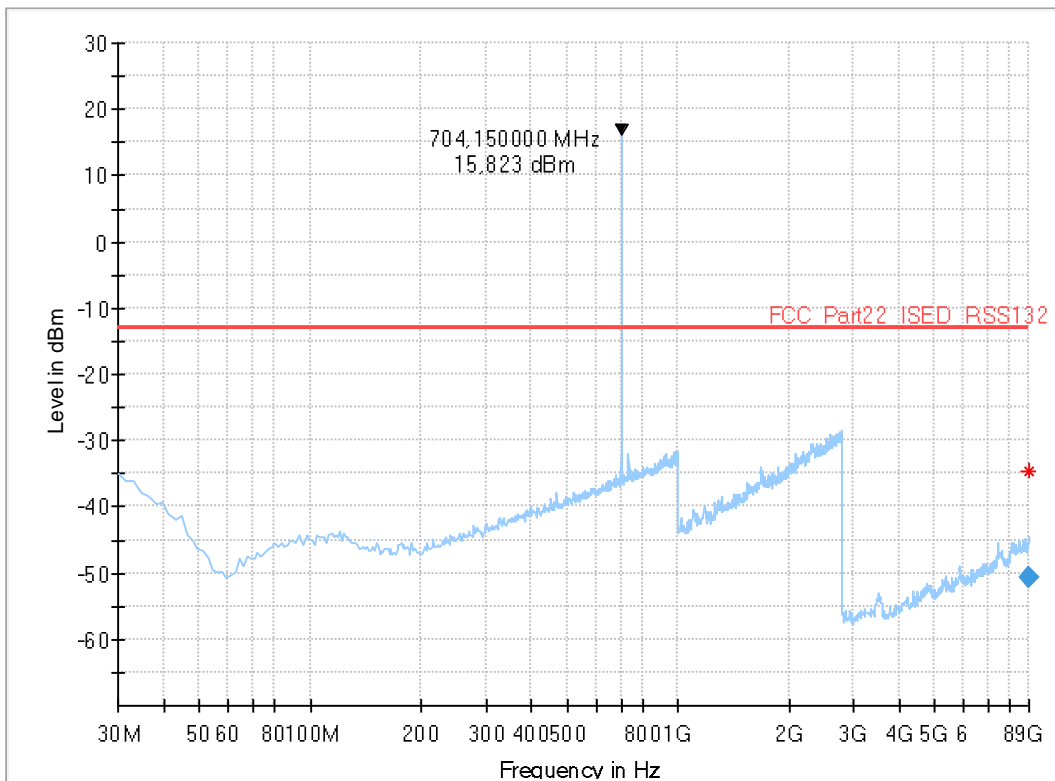
# 8.11\_Traffic\_mode\_LTE\_FDD\_B12\_CH\_23035\_Standing

## Common Information

Test Description: Radiated emission related to 1m  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20  
 Test Standard: FCC FCC Part 24.238 Broadband PCS  
 Antenna polarisation: vertical / horizontal  
 Operating Mode: LTE\_FDD12 | BW=5 MHz | CH\_23035 | RB\_1\_high | QPSK  
 Operator: TFra  
 Environmental Conditions: Humidity : 55%rH; Temperature: 20°C  
 EUT Setup: 2  
 Verdict: Passed

## EUT Information

PMT number: 20-1-00607S218\_C01  
 Full Spectrum



Remark: Emission at 704.15 MHz is uplink frequency of LTE FDD 12 and not related to results.

## Final Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
8964.300000	-50.62	-13.00	37.62	100.0	100.000	155.0	H	331.0	0.0	-79

(continuation of the "Final\_Result" table from column 17 ...)

Frequency (MHz)	Comment
8964.300000	17:59:28 - 08.07.2021

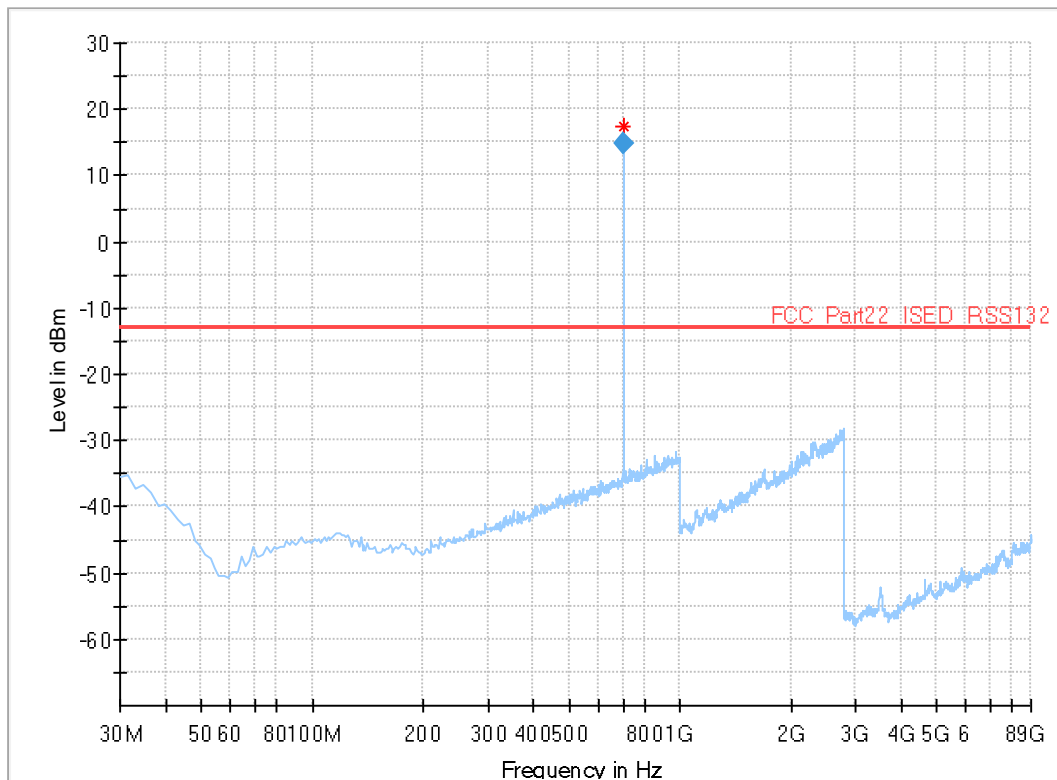
## 8.12\_Traffic\_mode\_LTE\_FDD\_B12\_CH\_23035\_Laying

### Common Information

Test Description:	Radiated emission related to 1m
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Operating Mode:	LTE_FDD12   BW=5 MHz   CH_23035   RB_1_high   QPSK
Operator:	WAbdellatif
Environmental Conditions:	Humidity : 70%rH; Temperature: 20°C
EUT Setup:	2
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S218\_C01  
Full Spectrum



Remark: Emission at 703.7 MHz is uplink frequency of LTE FDD 12 and not related to results.

### Final\_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
703.700000	14.87	-13.00	-27.87	100.0	100.000	155.0	V	280.0	0.0	-78

(continuation of the "Final\_Result" table from column 17 ...)

Frequency (MHz)	Comment
703.700000	17:54:17 - 09.07.2021

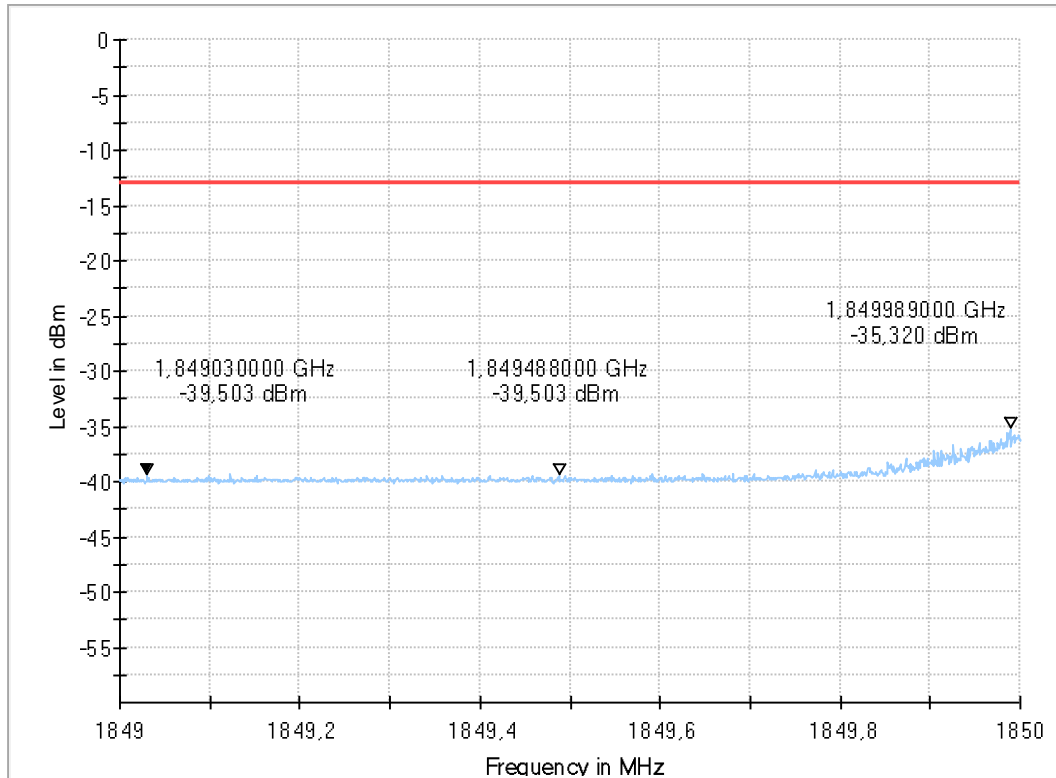
## 9.201\_Bandedge\_low\_LTE\_FDD\_B02\_CH\_low

### Common Information

Test Description: -  
 Test Site Location: CETECOM GmbH Essen  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0  
 Test Standard: -  
 Test Case: -  
 Operating Mode: LTE\_FDD2 | BW=20MHz | CH\_18700 | RB\_1 | RB\_Start low | QPSK  
 Environmental Conditions: Humidity : 38%rH; Temperature: 18°C  
 Operator: TFra  
 EUT Setup: 1  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
 Full Spectrum



### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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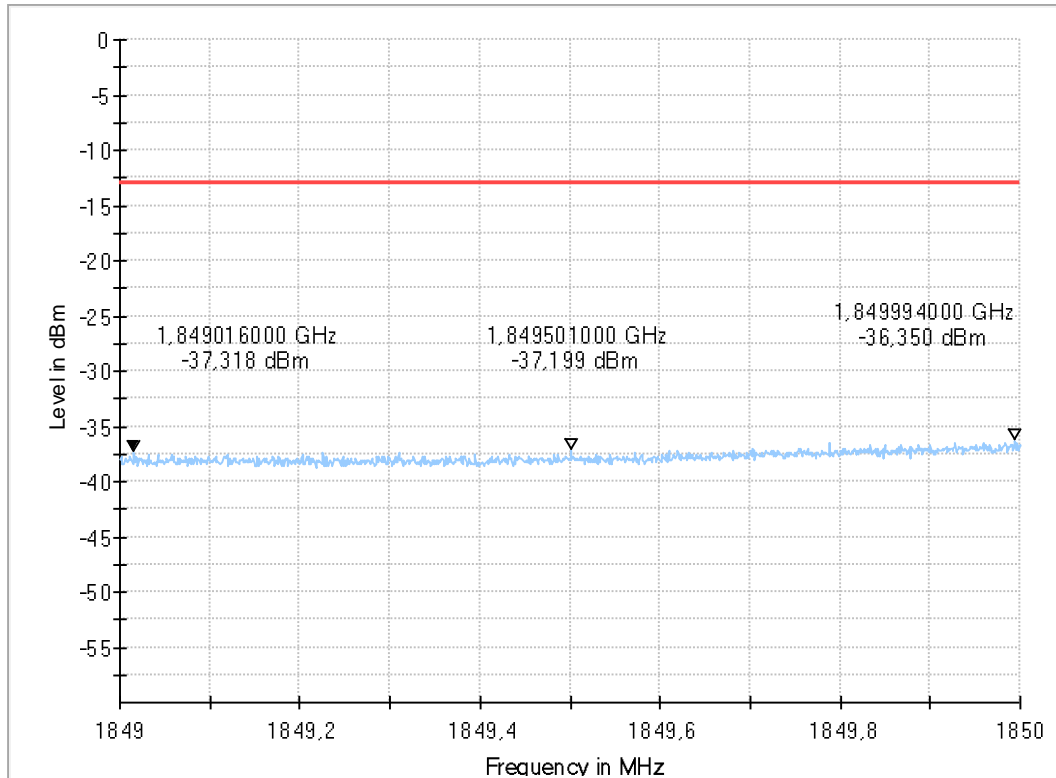
## 9.202\_Bandedge\_low\_LTE\_FDD\_B02\_CH\_low

### Common Information

Test Description: -  
 Test Site Location: CETECOM GmbH Essen  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0  
 Test Standard: -  
 Test Case: -  
 Operating Mode: LTE\_FDD2 | BW=20MHz | CH\_18700 | RB\_100 | RB\_Start low | QPSK  
 Environmental Conditions: Humidity : 38%rH; Temperature: 18°C  
 Operator: TFra  
 EUT Setup: 1  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
 Full Spectrum



### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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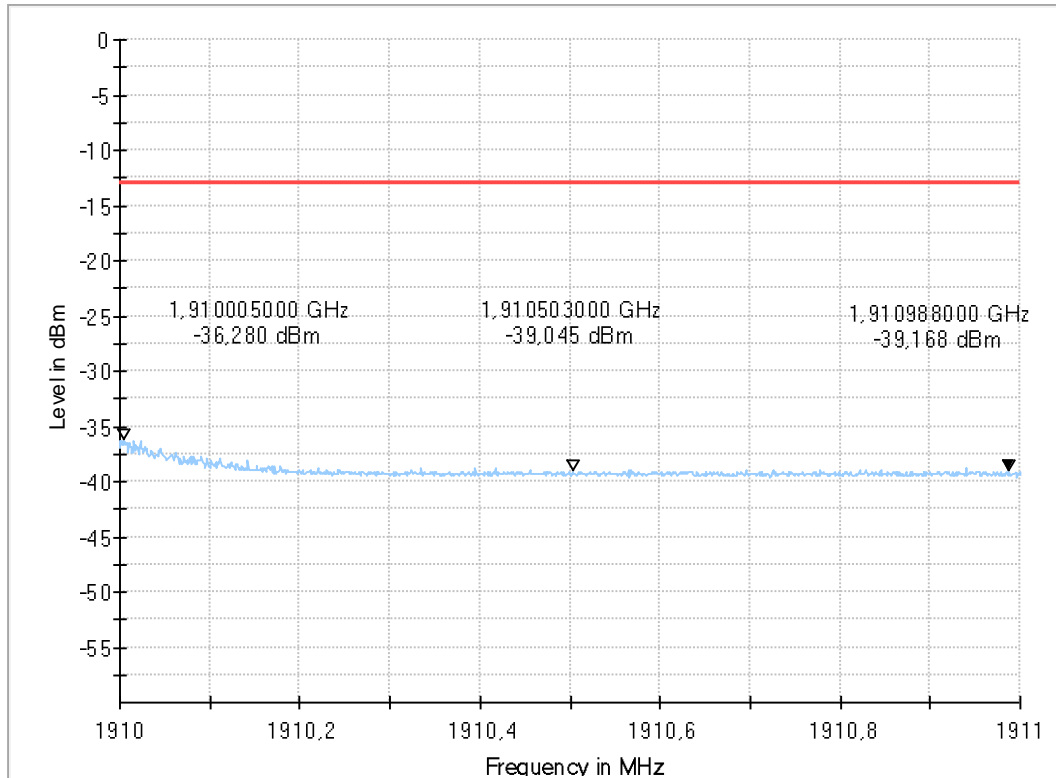
## 9.203\_Bandedge\_high\_LTE\_FDD\_B02\_CH\_high

### Common Information

Test Description: -  
 Test Site Location: CETECOM GmbH Essen  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0  
 Test Standard: -  
 Test Case: -  
 Operating Mode: LTE\_FDD2 | BW=20MHz | CH\_19100 | RB\_1 | RB\_Start high | QPSK  
 Environmental Conditions: Humidity : 38%rH; Temperature: 18°C  
 Operator: TFra  
 EUT Setup: 1  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
 Full Spectrum



### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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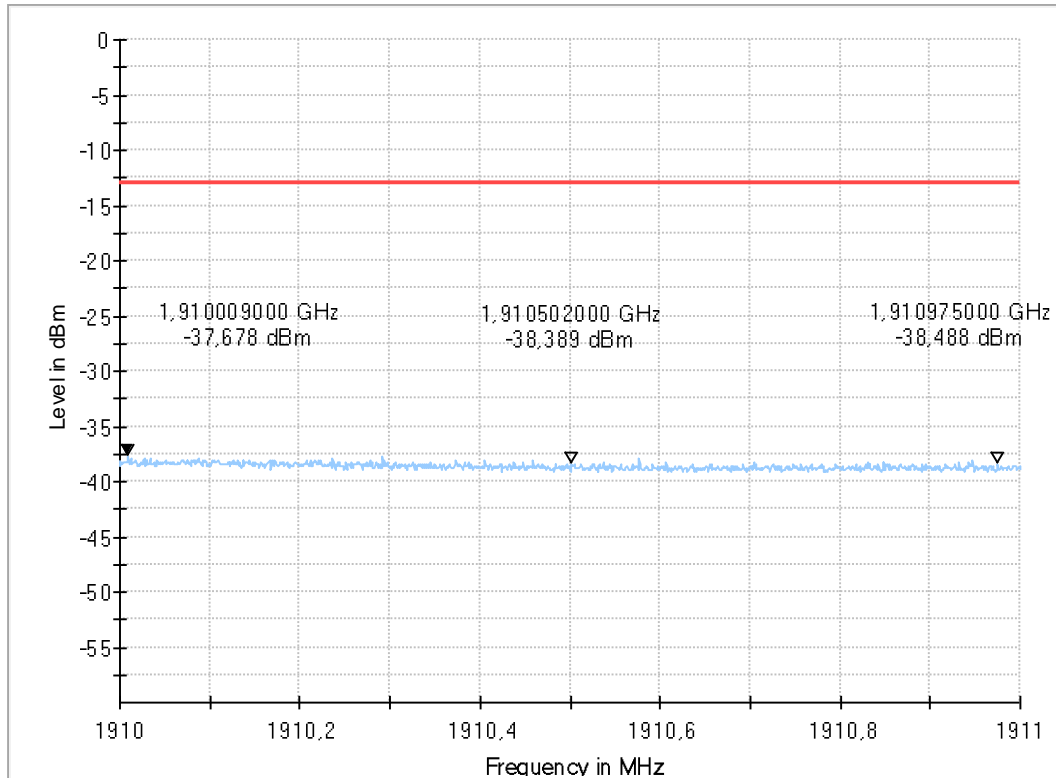
## 9.204\_Bandedge\_high\_LTE\_FDD\_B02\_CH\_high

### Common Information

Test Description: -  
 Test Site Location: CETECOM GmbH Essen  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0  
 Test Standard: -  
 Test Case: -  
 Operating Mode: LTE\_FDD2 | BW=20MHz | CH\_19100 | RB\_100 | RB\_Start high | QPSK  
 Environmental Conditions: Humidity : 38%rH; Temperature: 18°C  
 Operator: TFra  
 EUT Setup: 1  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
 Full Spectrum



### Final\_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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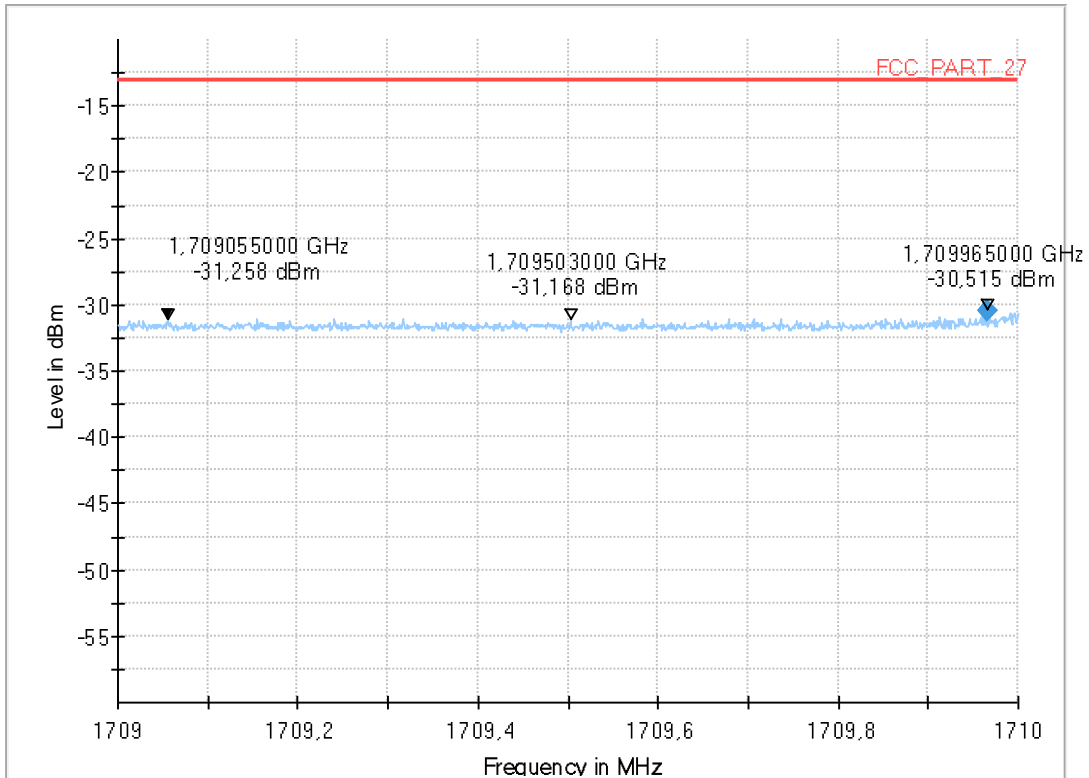
# 9.401\_Bandedge\_low\_LTE\_FDD\_B04\_CH\_low

## Common Information

Test Description: -  
 Test Site Location: CETECOM GmbH Essen  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0  
 Test Standard: -  
 Test Case: -  
 Operating Mode: LTE\_FDD4 | BW=10MHz | CH\_20000 | RB\_1 | RB\_Start low | QPSK  
 Environmental Conditions: Humidity : 38%rH; Temperature: 18°C  
 Operator: TFra  
 EUT Setup: 1  
 Verdict: Passed

## EUT Information

PMT number: 20-1-00607S216\_C01  
 Full Spectrum



## Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1709.965000	-30.52	-13.00	17.52	700.0	100.000	H	328.0	90.0	-63

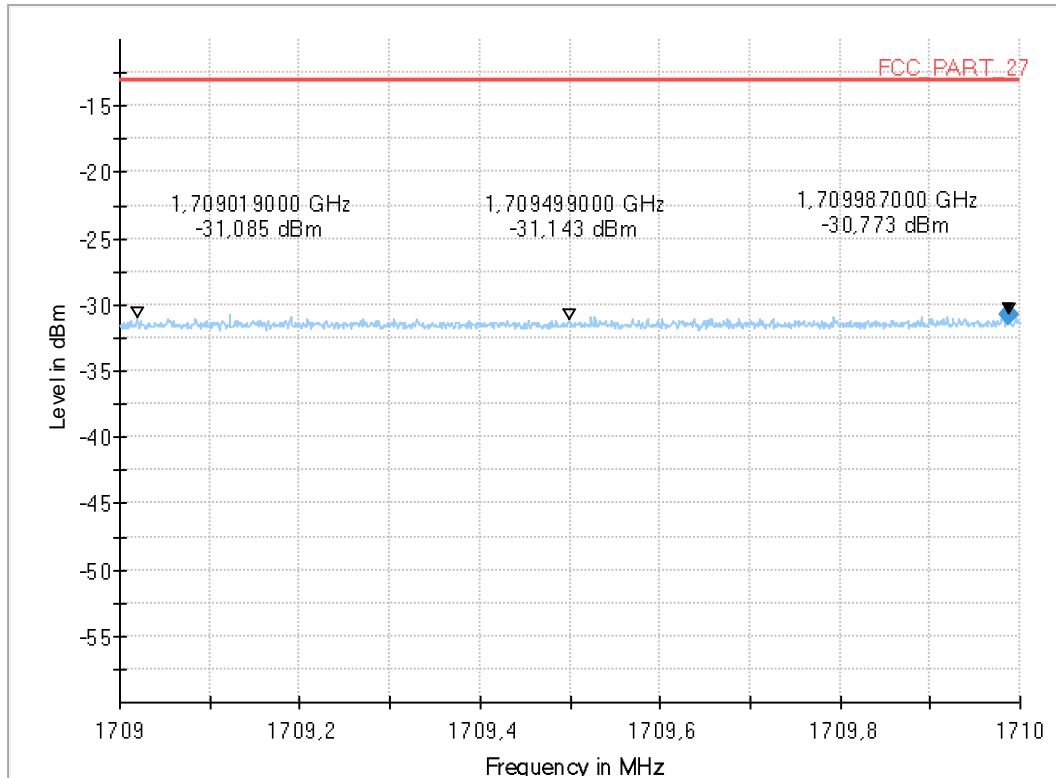
## 9.402\_Bandedge\_low\_LTE\_FDD\_B04\_CH\_low

### Common Information

Test Description: -  
 Test Site Location: CETECOM GmbH Essen  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0  
 Test Standard: -  
 Test Case: -  
 Operating Mode: LTE\_FDD4 | BW=10MHz | CH\_20000 | RB\_50 | RB\_Start low | QPSK  
 Environmental Conditions: Humidity : 38%rH; Temperature: 18°C  
 Operator: TFra  
 EUT Setup: 1  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
 Full Spectrum



### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1709.987000	-30.77	-13.00	17.77	700.0	100.000	H	323.0	90.0	-63

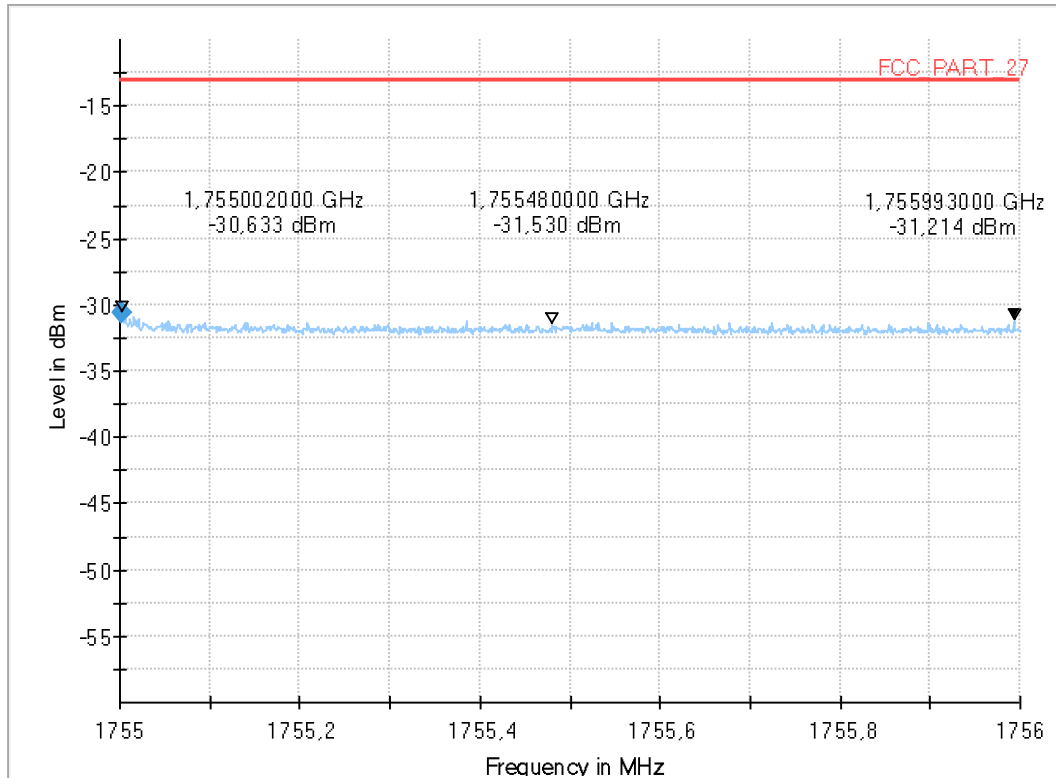
## 9.403\_Bandedge\_high\_LTE\_FDD\_B04\_CH\_high

### Common Information

Test Description: -  
 Test Site Location: CETECOM GmbH Essen  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0  
 Test Standard: -  
 Test Case: -  
 Operating Mode: LTE\_FDD4 | BW=10MHz | CH\_20350 | RB\_1 | RB\_Start high | QPSK  
 Environmental Conditions: Humidity : 38%rH; Temperature: 18°C  
 Operator: TFra  
 EUT Setup: 1  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
 Full Spectrum



### Final\_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1755.002000	-30.63	-13.00	17.63	700.0	100.000	H	333.0	90.0	-63

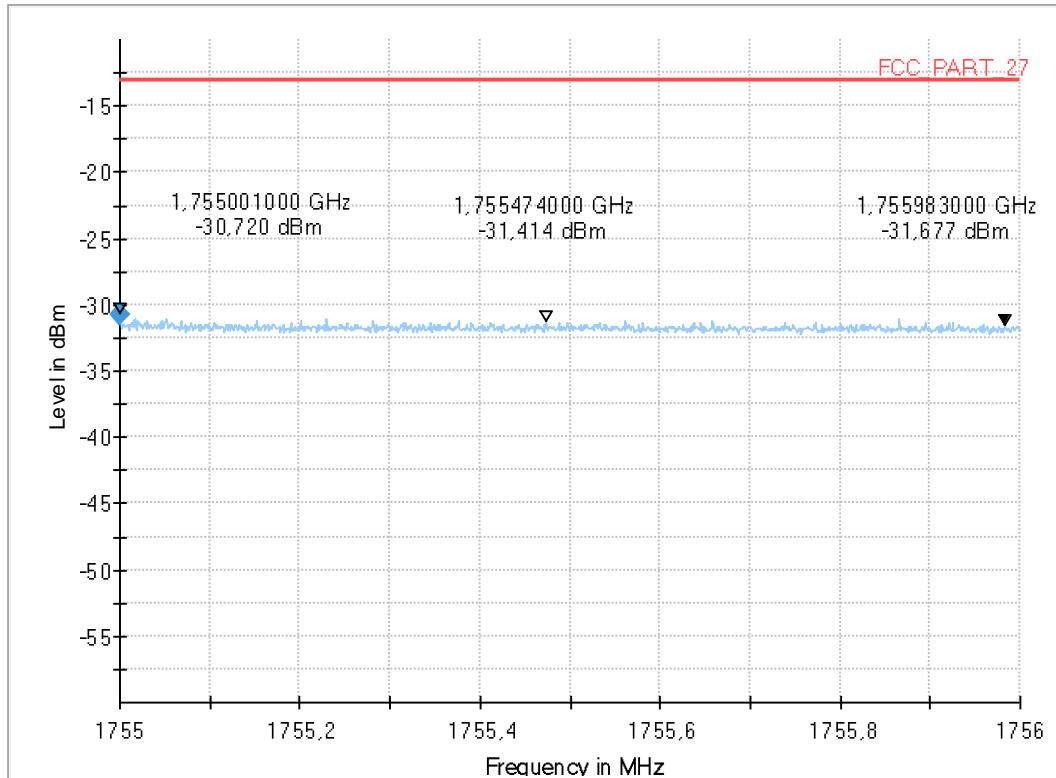
## 9.404\_Bandedge\_high\_LTE\_FDD\_B04\_CH\_high

### Common Information

Test Description: -  
 Test Site Location: CETECOM GmbH Essen  
 Test Site: Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0  
 Test Standard: -  
 Test Case: -  
 Operating Mode: LTE\_FDD4 | BW=10MHz | CH\_20350 | RB\_50 | RB\_Start high | QPSK  
 Environmental Conditions: Humidity : %rH; Temperature: °C  
 Operator: TFra  
 EUT Setup: 1  
 Verdict: Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
 Full Spectrum



### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1755.001000	-30.72	-13.00	17.72	700.0	100.000	H	330.0	90.0	-63

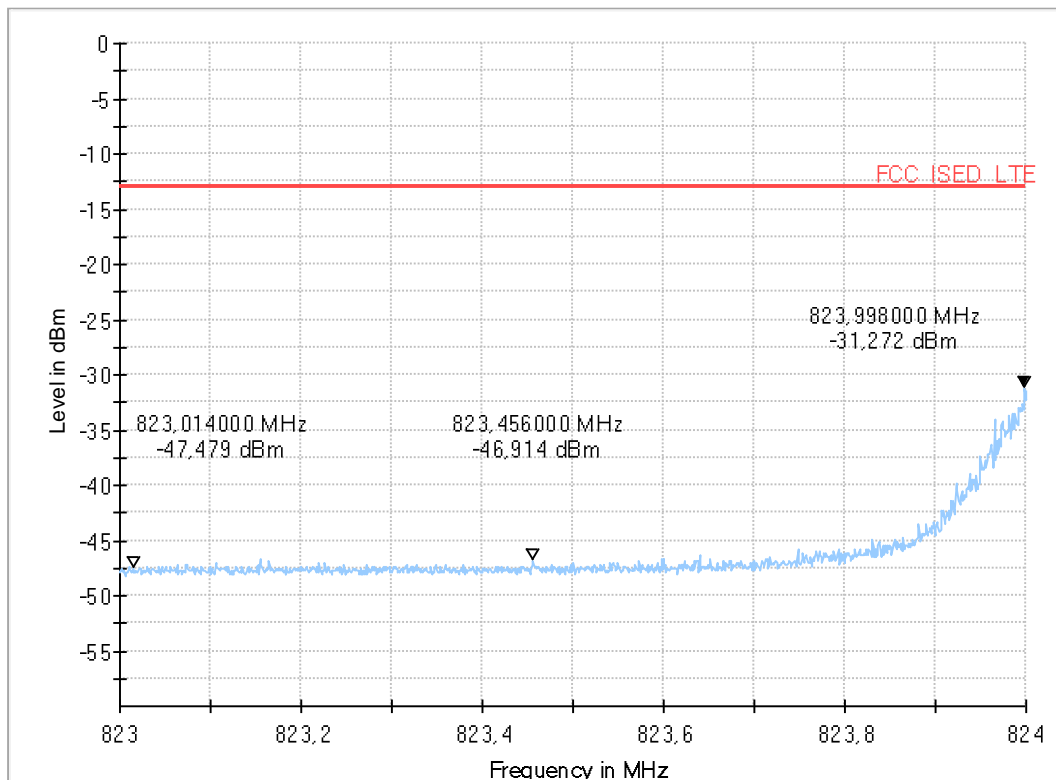
## 9.501\_Bandedge\_low\_LTE\_FDD\_B05\_CH\_low

### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0
Test Standard:	FCC Part 22.917(a) / RSS-132
Operating Mode:	LTE_FDD5   BW=5MHz   CH_20425   RB_1   RB_Start low   QPSK
Environmental Conditions::	Humidity : 38%rH; Temperature: 18°C
Test SW Version:	EMC32 V10.50.0
Operator:	TFra
Remarks:	EUT - laying/standing position
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
Full Spectrum



### Final\_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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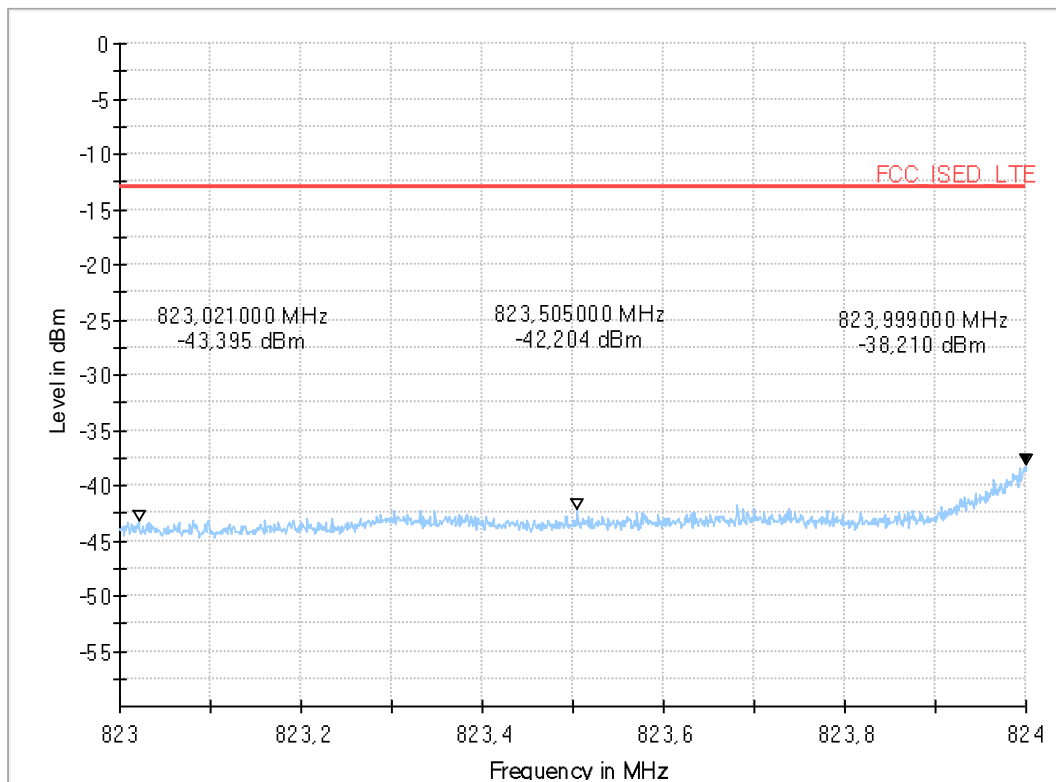
## 9.502\_Bandedge\_low\_LTE\_FDD\_B05\_CH\_low

### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0
Test Standard:	FCC Part 22.917(a) / RSS-132
Operating Mode:	LTE_FDD5   BW=5MHz   CH_20425   RB_25   RB_Start low   QPSK
Environmental Conditions:	Humidity : 38%rH; Temperature: 18°C
Test SW Version:	EMC32 V10.50.0
Operator:	TFra
Remarks:	EUT - laying/standing position
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
Full Spectrum



### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
---	---	---	---	---	---		---	---	---

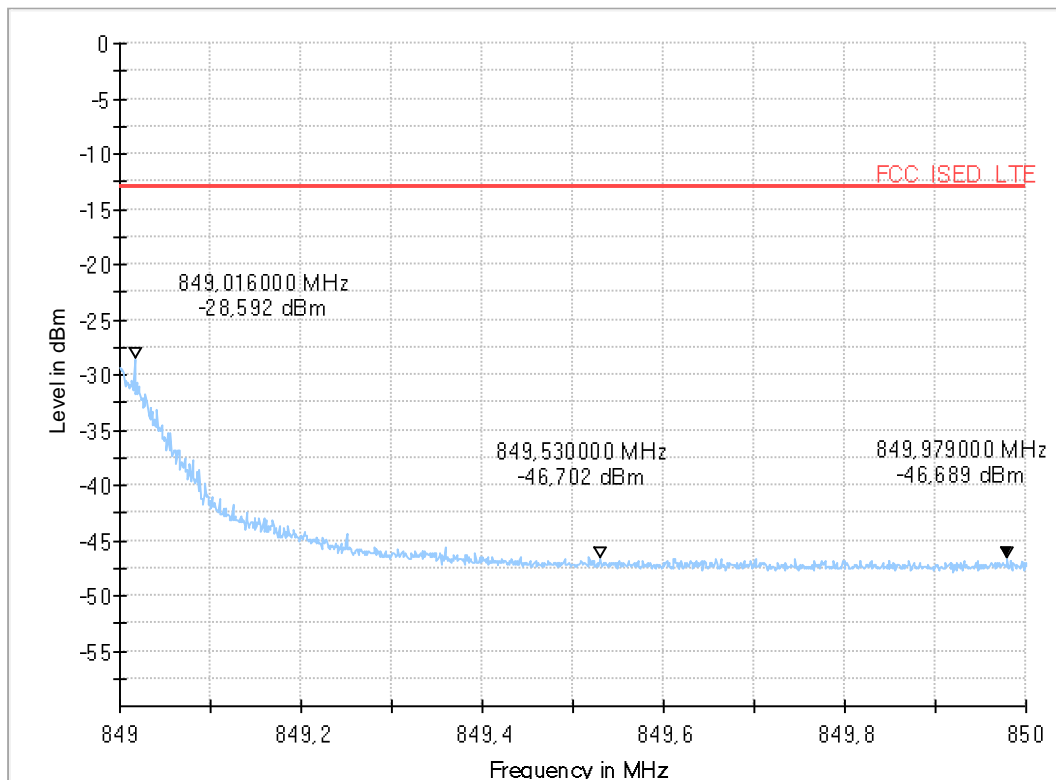
## 9.503\_Bandedge\_low\_LTE\_FDD\_B05\_CH\_high

### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0
Test Standard:	FCC Part 22.917(a) / RSS-132
Operating Mode:	LTE_FDD5   BW=5MHz   CH_20425   RB_1   RB_Start high   QPSK
Environmental Conditions::	Humidity : 38%rH; Temperature: 18°C
Test SW Version:	EMC32 V10.50.0
Operator:	TFra
Remarks:	EUT - laying/standing position
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
Full Spectrum



### Final\_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
---	---	---	---	---	---		---	---	---

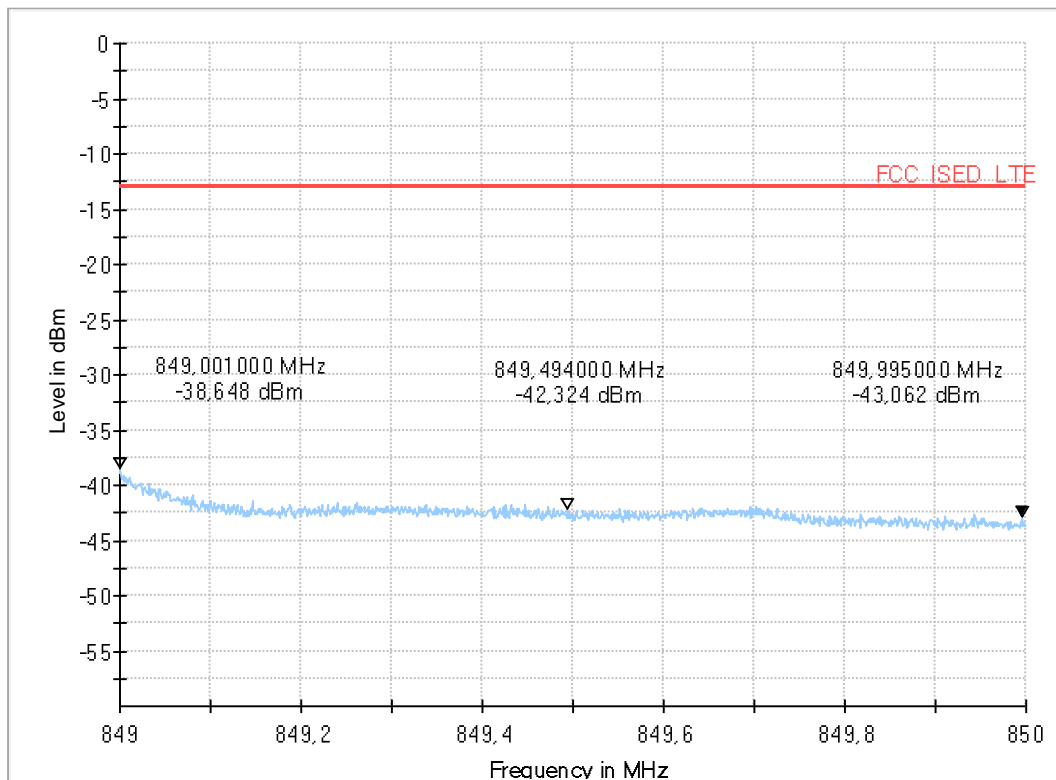
## 9.504\_Bandedge\_high\_LTE\_FDD\_B05\_CH\_high

### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0
Test Standard:	FCC Part 22.917(a) / RSS-132
Operating Mode:	LTE_FDD5   BW=5MHz   CH_20625   RB_25   RB_Start high   QPSK
Environmental Conditions::	Humidity : 38%rH; Temperature: 18°C
Test SW Version:	EMC32 V10.50.0
Operator:	TFra
Remarks:	EUT - laying/standing position
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
Full Spectrum



### Final\_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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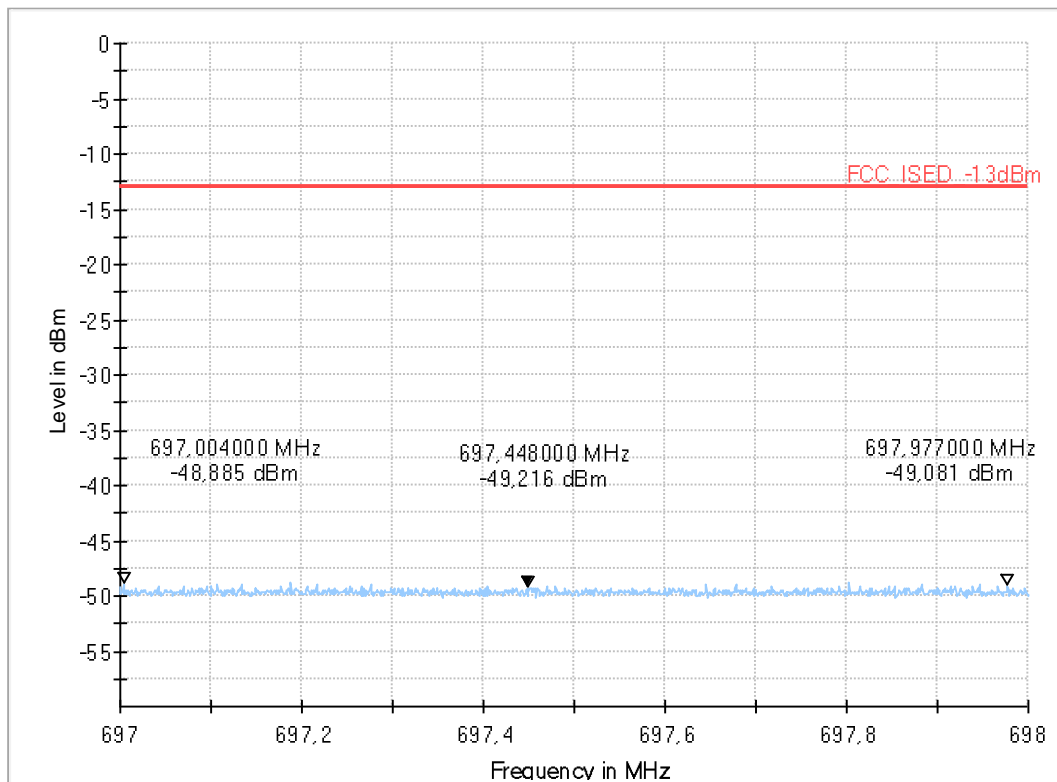
## 9.1201\_Bandedge\_low\_LTE\_FDD\_B12\_CH\_low

### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0
Test Standard:	FCC Part 22.917(a) / RSS-132
Operating Mode:	LTE_FDD12   BW=5MHz   CH_23035   RB_1   RB_Start low   QPSK
Environmental Conditions::	Humidity : 38%rH; Temperature: 18°C
Test SW Version:	EMC32 V10.50.0
Operator:	TFra
Remarks:	EUT - laying/standing position
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
Full Spectrum



### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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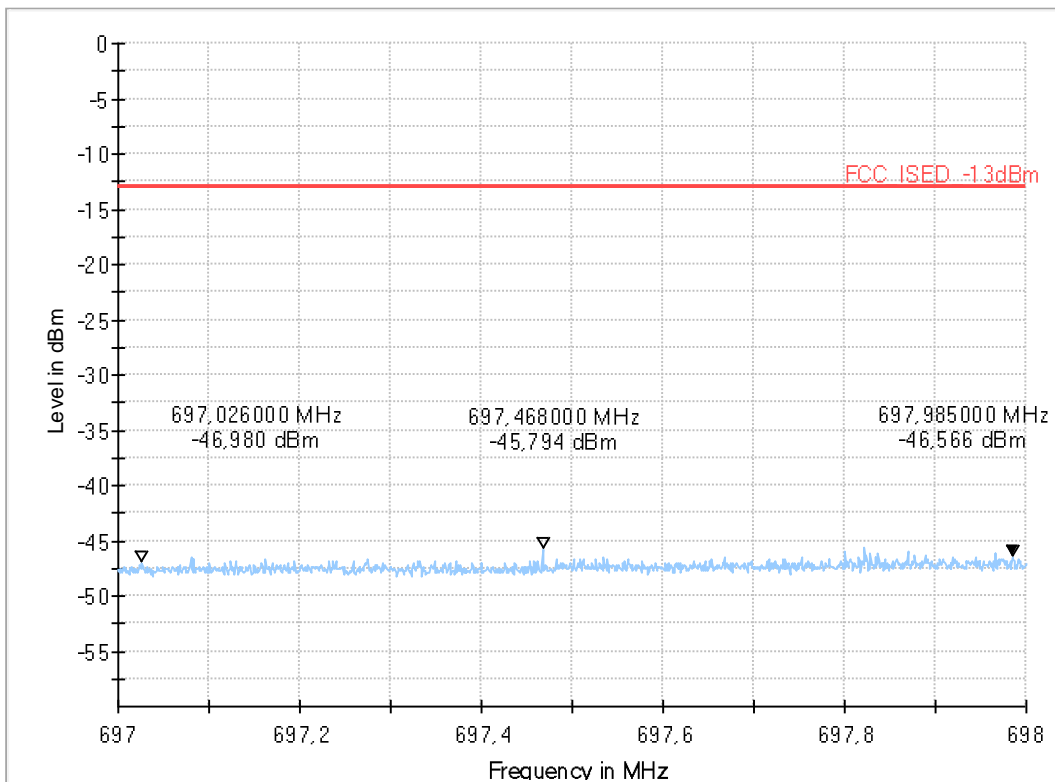
## 9.1202\_Bandedge\_low\_LTE\_FDD\_B12\_CH\_low

### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0
Test Standard:	FCC Part 22.917(a) / RSS-132
Operating Mode:	LTE_FDD12   BW=5MHz   CH_23035   RB_25   RB_Start low   QPSK
Environmental Conditions::	Humidity : 38%rH; Temperature: 18°C
Test SW Version:	EMC32 V10.50.0
Operator:	TFra
Remarks:	EUT - laying/standing position
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
Full Spectrum



### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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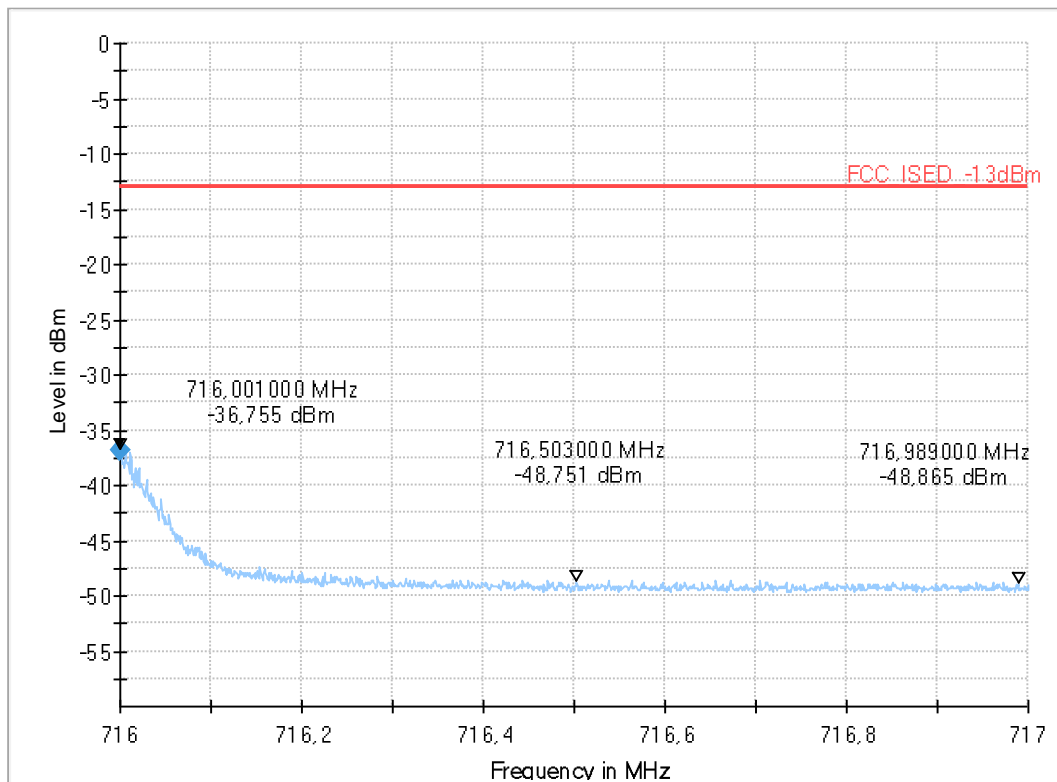
# 9.1203\_Bandedge\_high\_LTE\_FDD\_B12\_CH\_high

## Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0
Test Standard:	FCC Part 22.917(a) / RSS-132
Operating Mode:	LTE_FDD12   BW=5MHz   CH_23155   RB_1   RB_Start high   QPSK
Environmental Conditions::	Humidity : 38%rH; Temperature: 18°C
Test SW Version:	EMC32 V10.50.0
Operator:	TFra
Remarks:	EUT - laying/standing position
EUT Setup:	1
Verdict:	Passed

## EUT Information

PMT number: 20-1-00607S216\_C01  
Full Spectrum



## Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
716.001000	-36.76	-13.00	23.76	700.0	50.000	H	64.0	90.0	-76

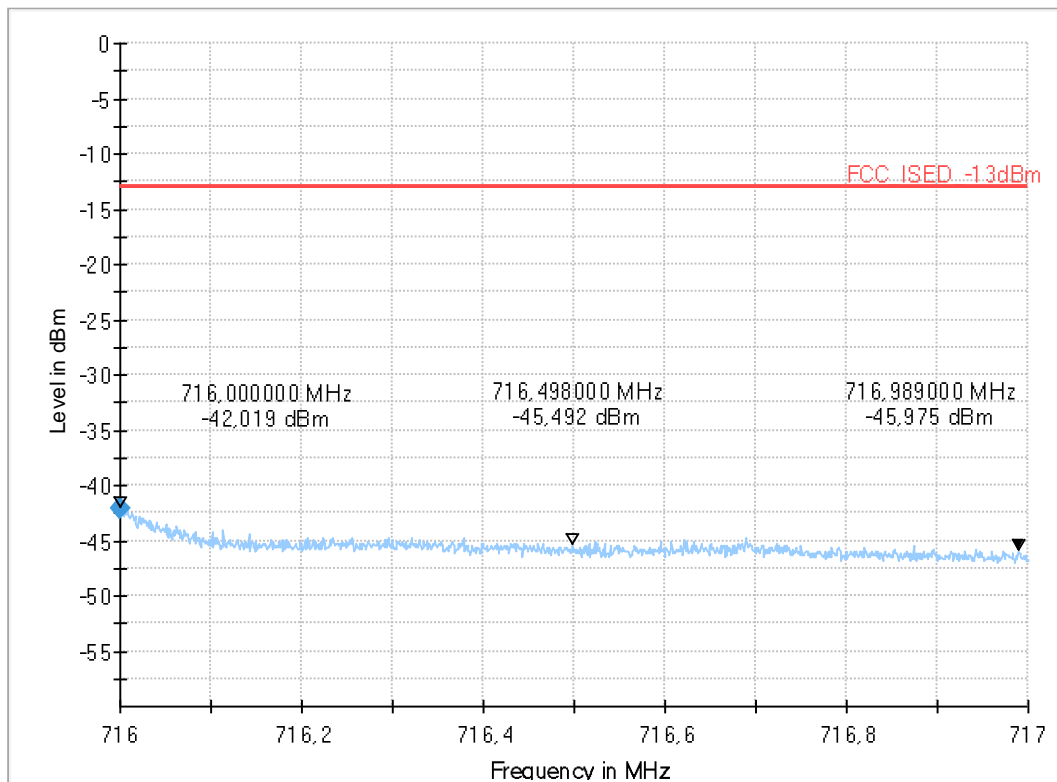
## 9.1204\_Bandedge\_high\_LTE\_FDD\_B12\_CH\_high

### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.50.0
Test Standard:	FCC Part 22.917(a) / RSS-132
Operating Mode:	LTE_FDD12   BW=5MHz   CH_23155   RB_25   RB_Start high   QPSK
Environmental Conditions::	Humidity : 38%rH; Temperature: 18°C
Test SW Version:	EMC32 V10.50.0
Operator:	TFra
Remarks:	EUT - laying/standing position
EUT Setup:	1
Verdict:	Passed

### EUT Information

PMT number: 20-1-00607S216\_C01  
Full Spectrum



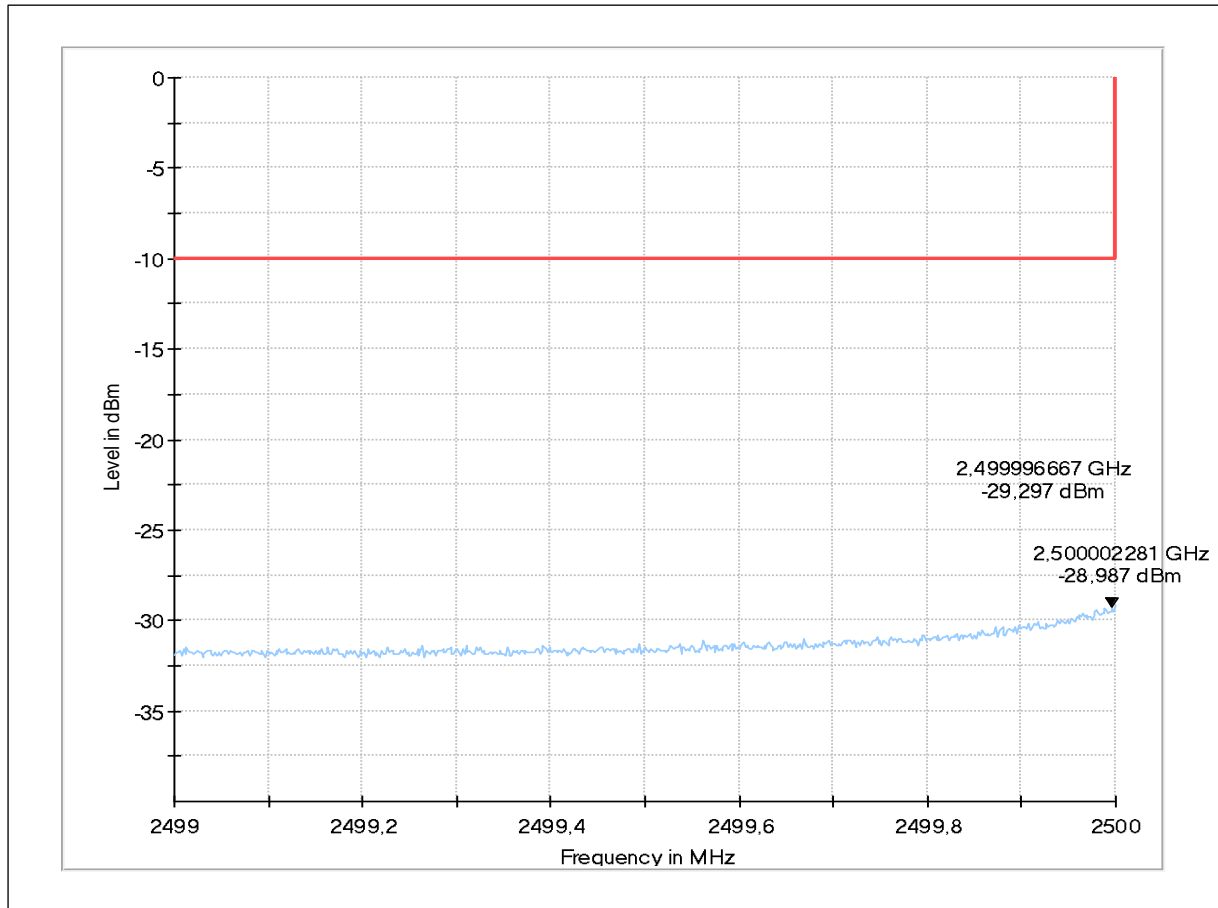
### Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
716.000000	-42.02	-13.00	29.02	700.0	50.000	H	41.0	90.0	-76

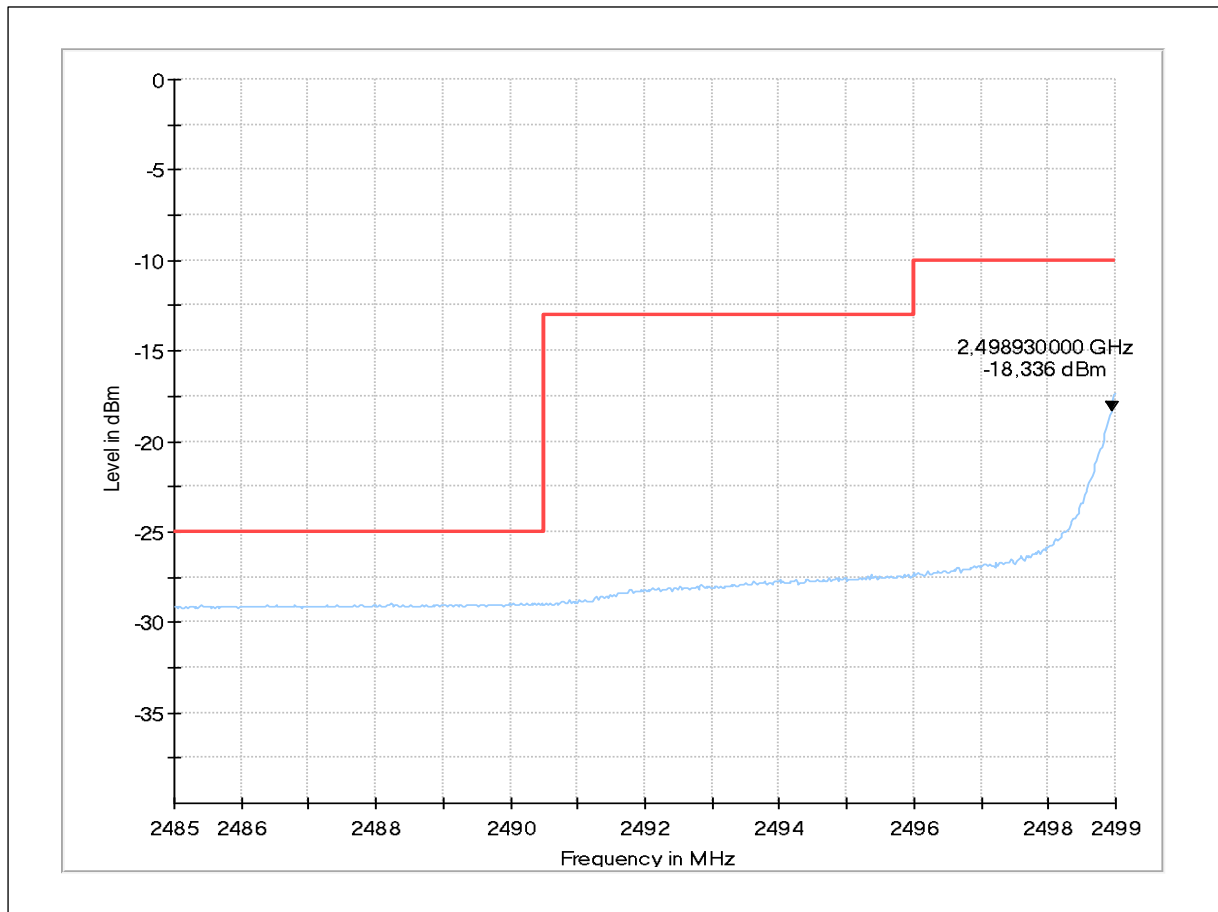
## 1.1 LTE Band 7 Band-Edge Measurements

### 1.1.1 Low-Band-Edge, Channel 20800

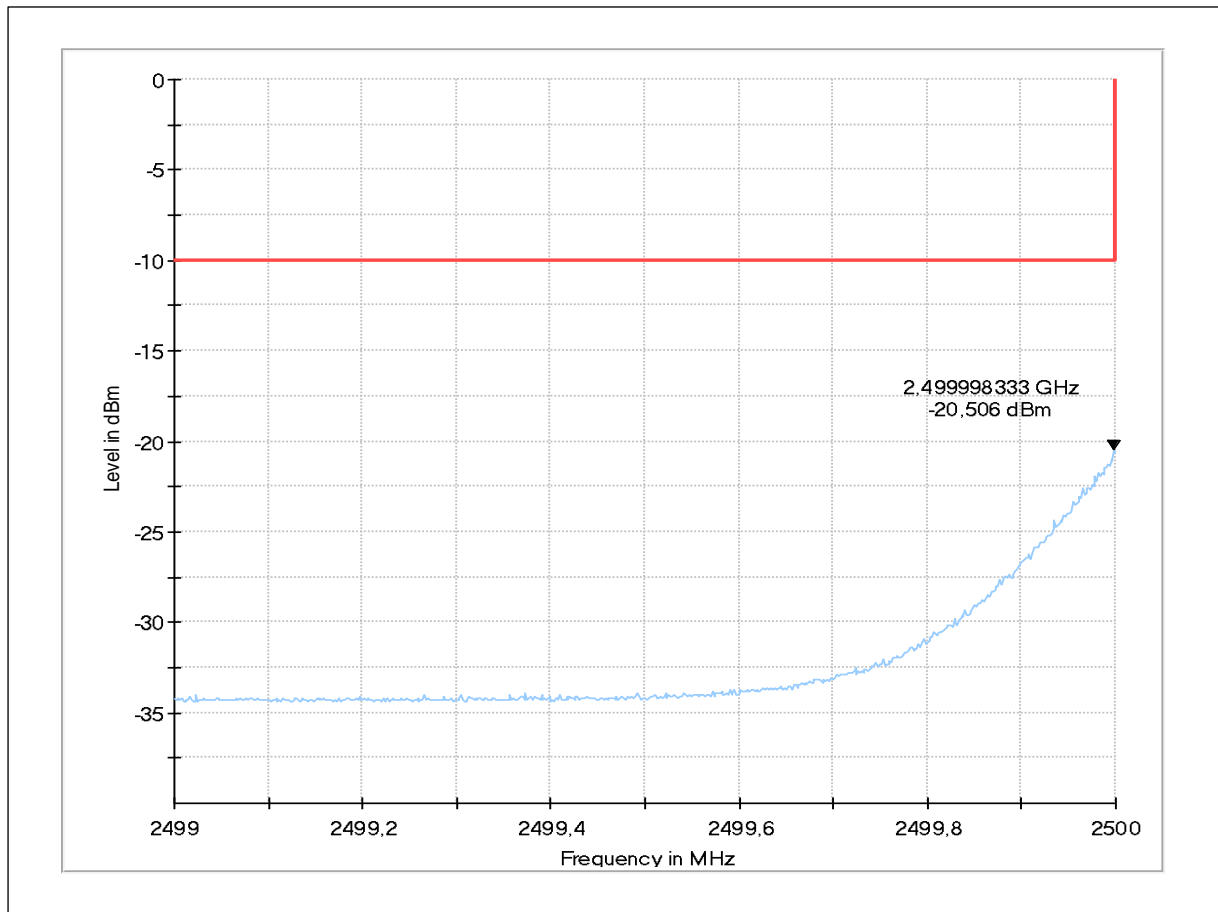
D9.7\_001\_BE\_Bd7\_Sweep1\_ch20800\_BW10\_50RBs\_QPSK\_EUTstanding



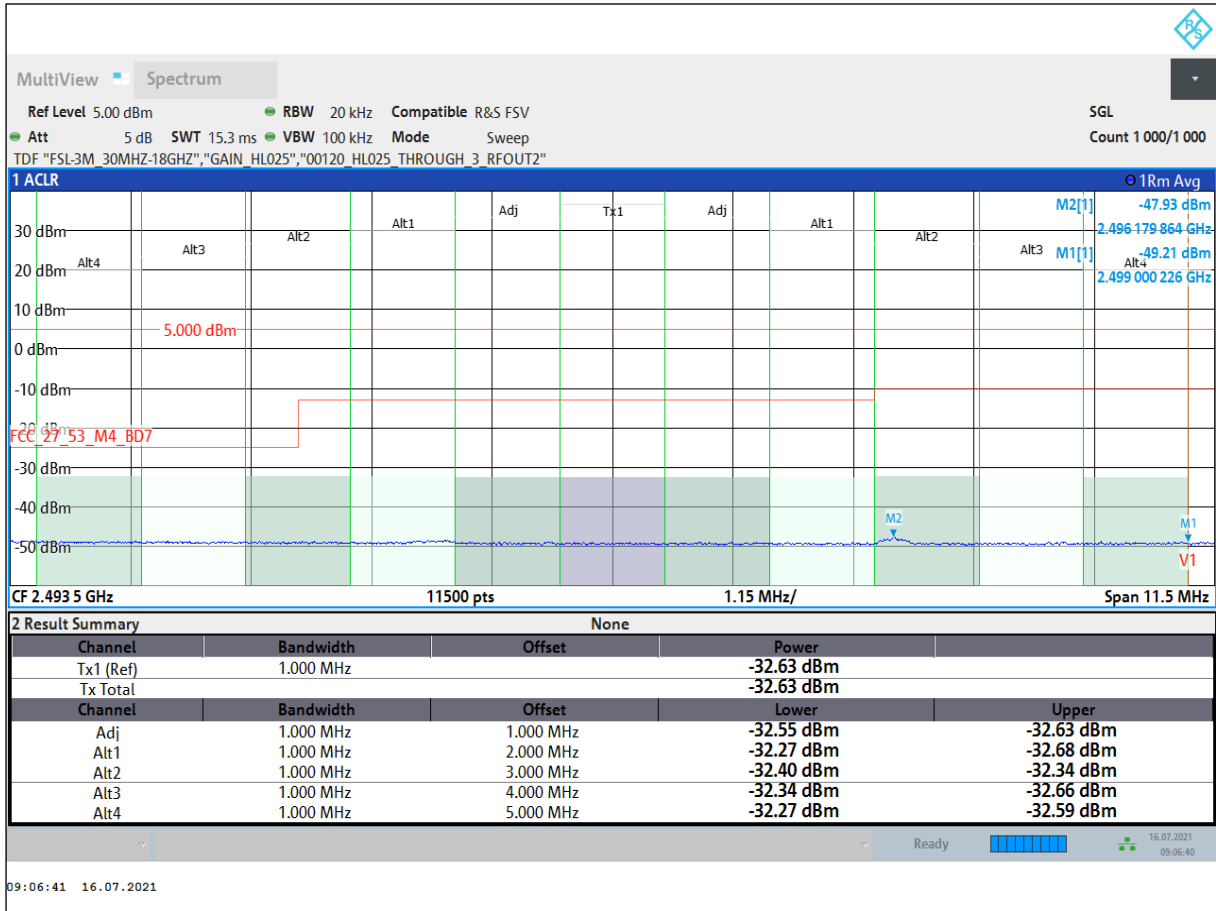
D9.7\_002\_BE\_Bd7\_Sweep2\_ch20800\_BW10\_50RBs\_QPSK\_EUTstanding



D9.7\_003\_BE\_Bd7\_Sweep1\_ch20800\_BW10\_1RBlow\_QPSK\_EUTstanding

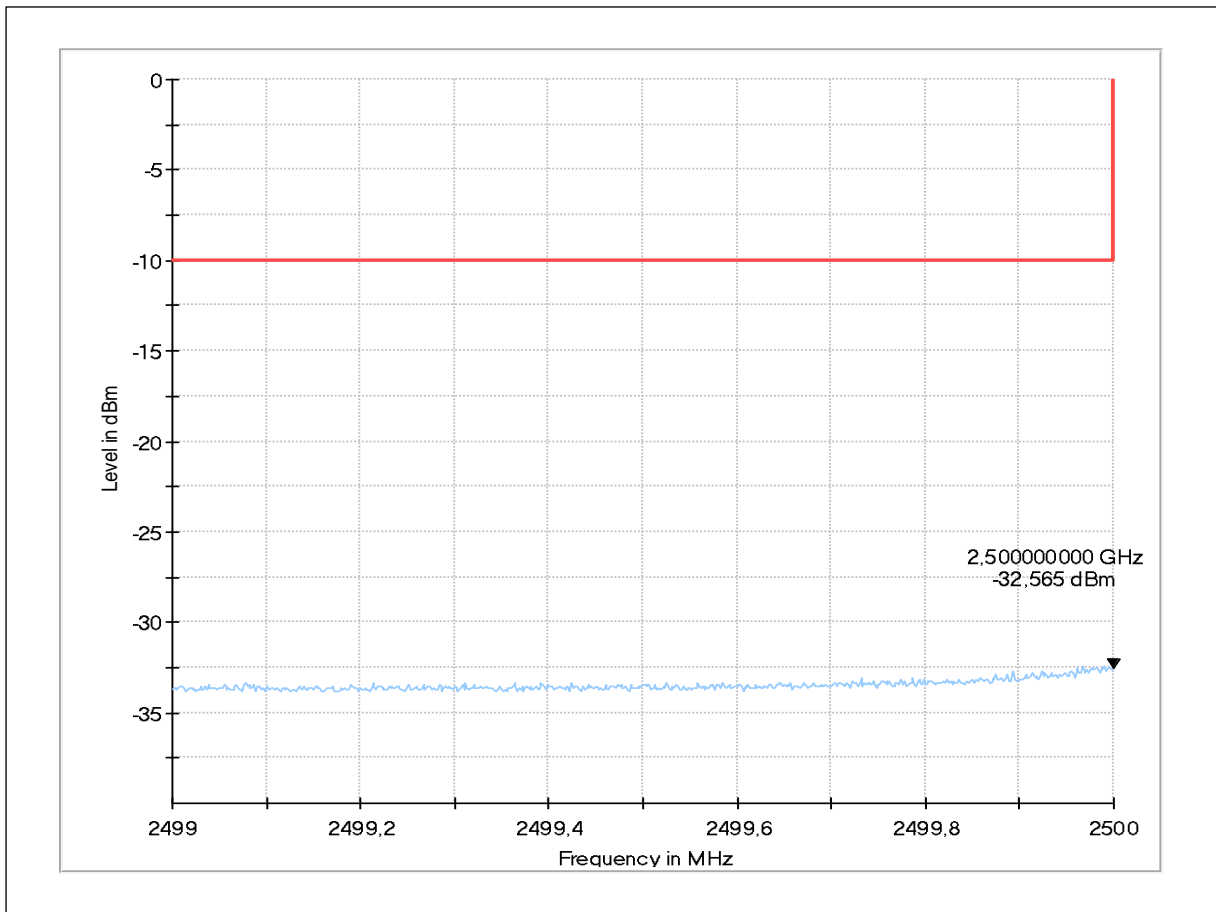


D9.7\_004\_BE\_Method2\_Bd7\_Sweep2\_ch20800\_BW10\_1RBlow\_QPSK\_EUTstanding

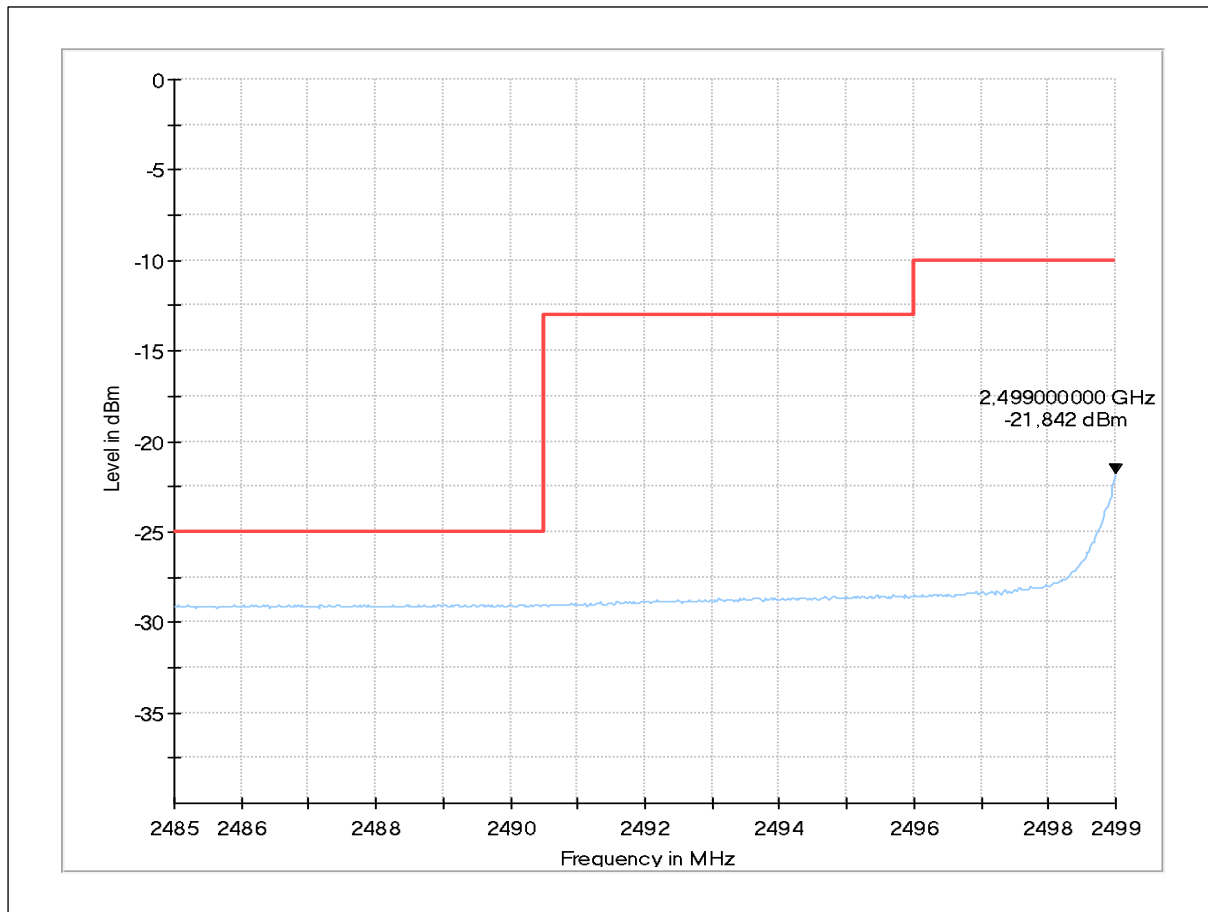




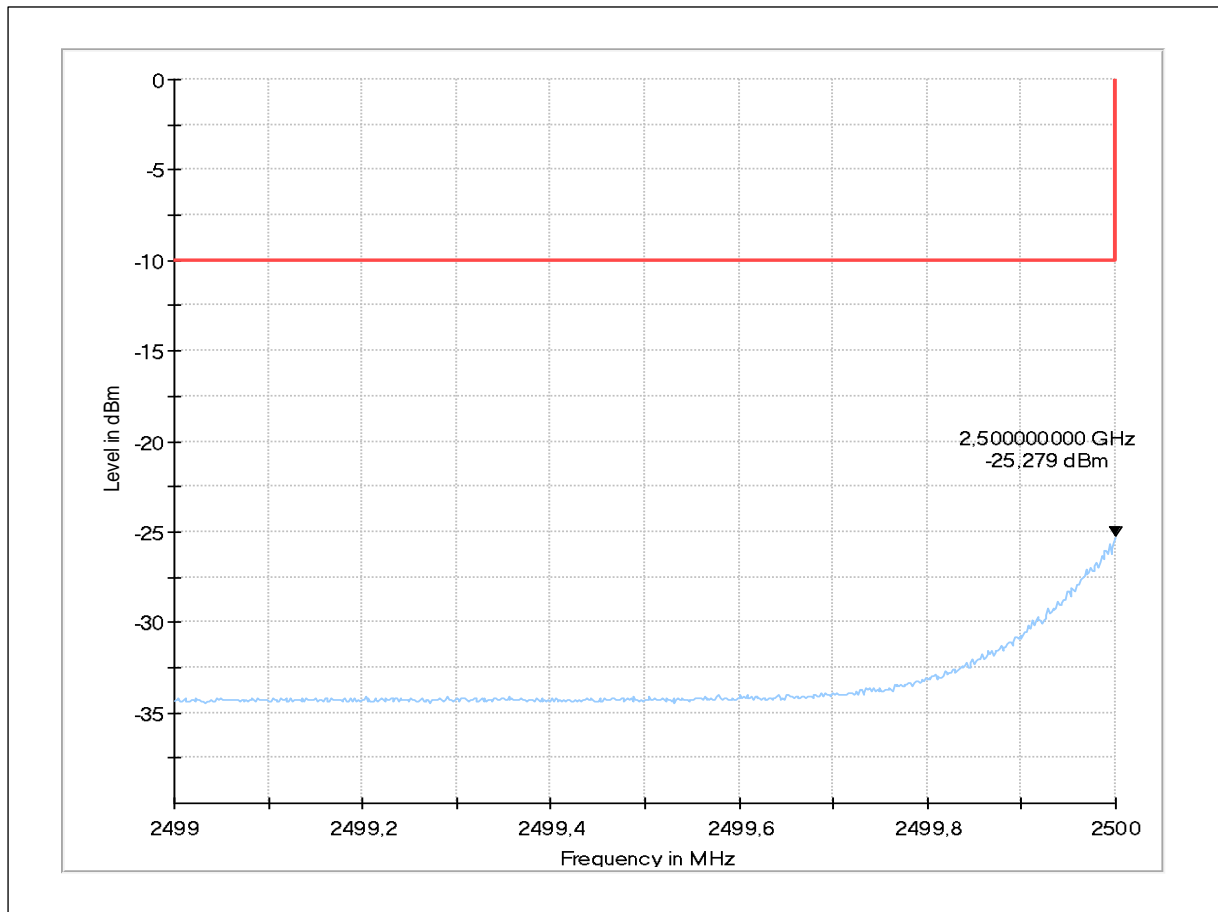
D9.7\_009\_BE\_Bd7\_Sweep1\_ch20800\_BW10\_50RBs\_QPSK\_EUTlaying



D9.7\_010\_BE\_Bd7\_Sweep2\_ch20800\_BW10\_50RBs\_QPSK\_EUTlaying

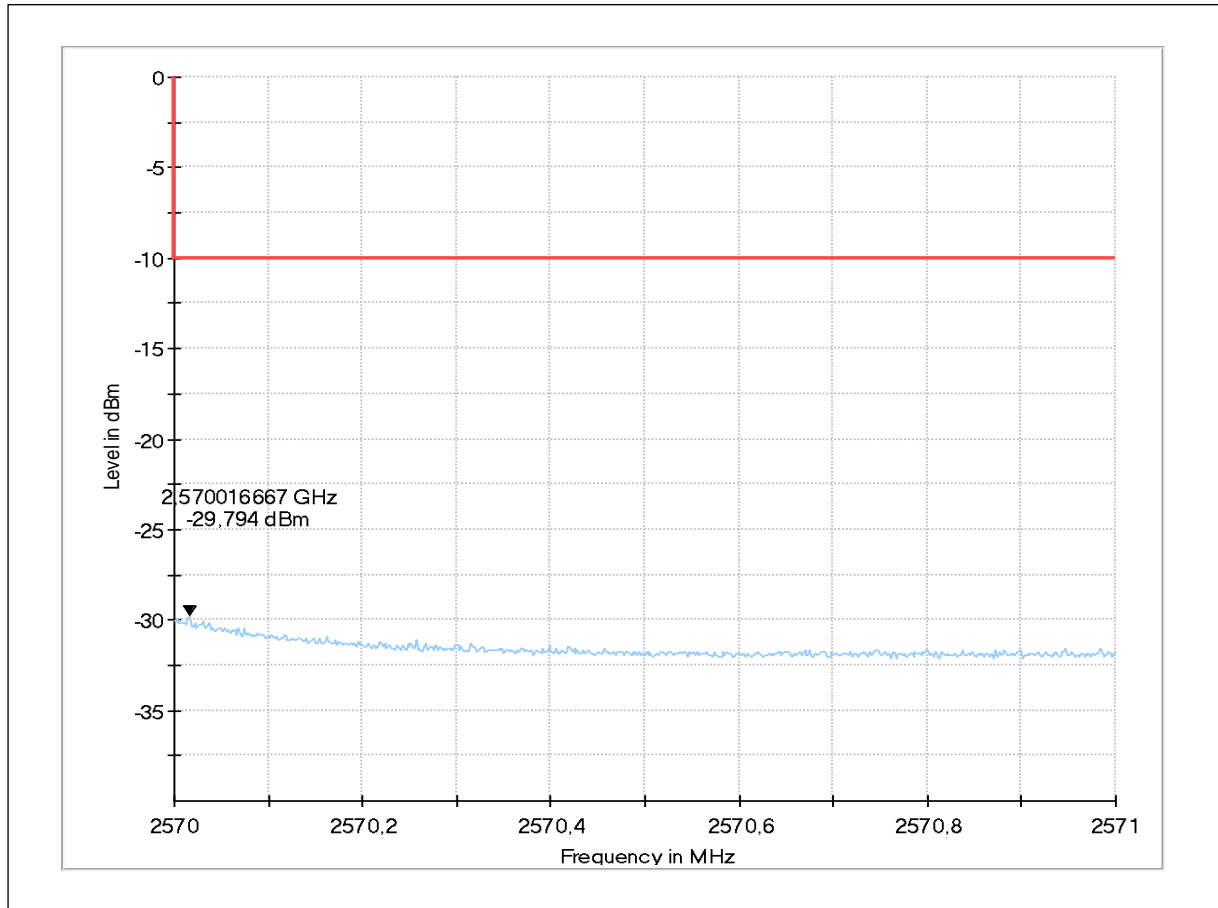


D9.7\_011\_BE\_Bd7\_Sweep1\_ch20800\_BW10\_1RBlow\_QPSK\_EUTlaying

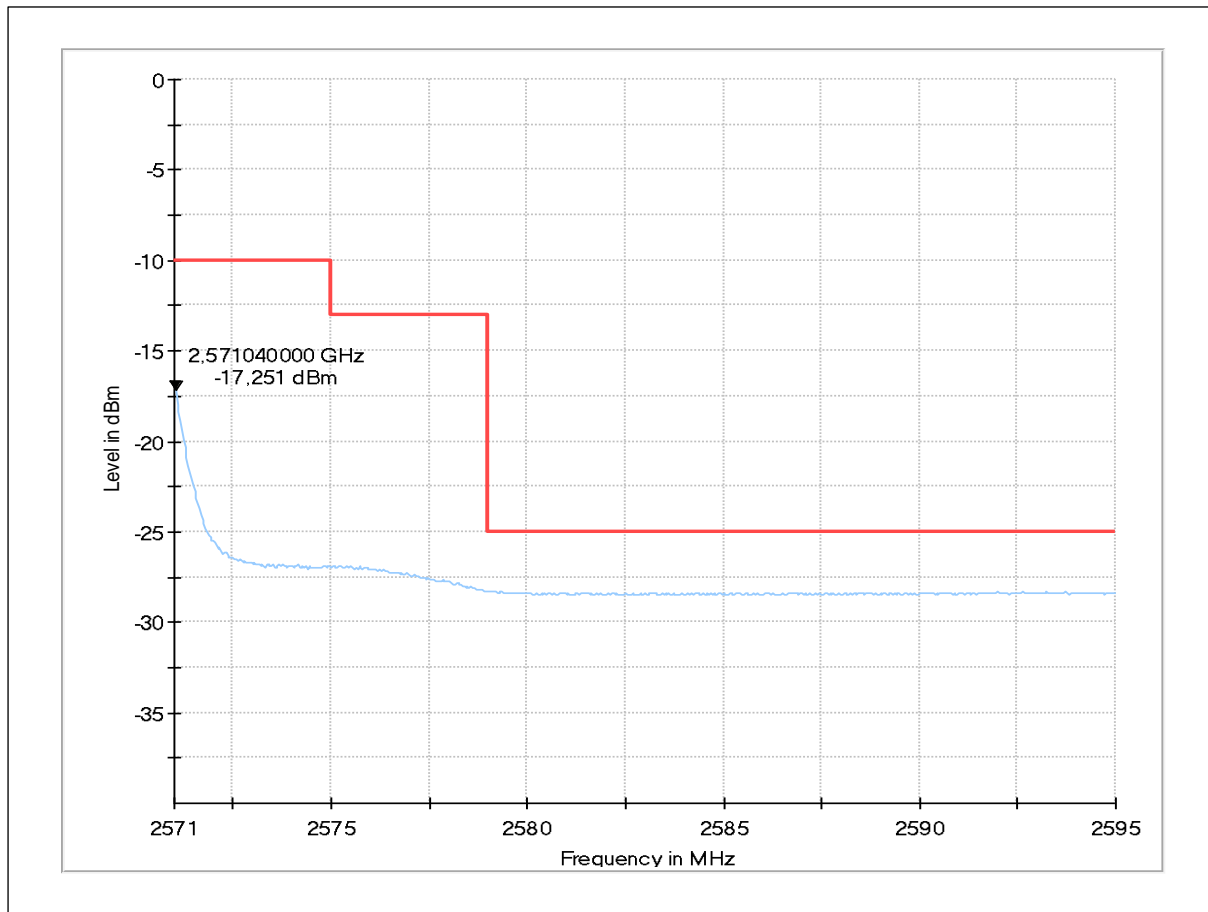


### 1.1.2 High Band-Edge, Channel 21400

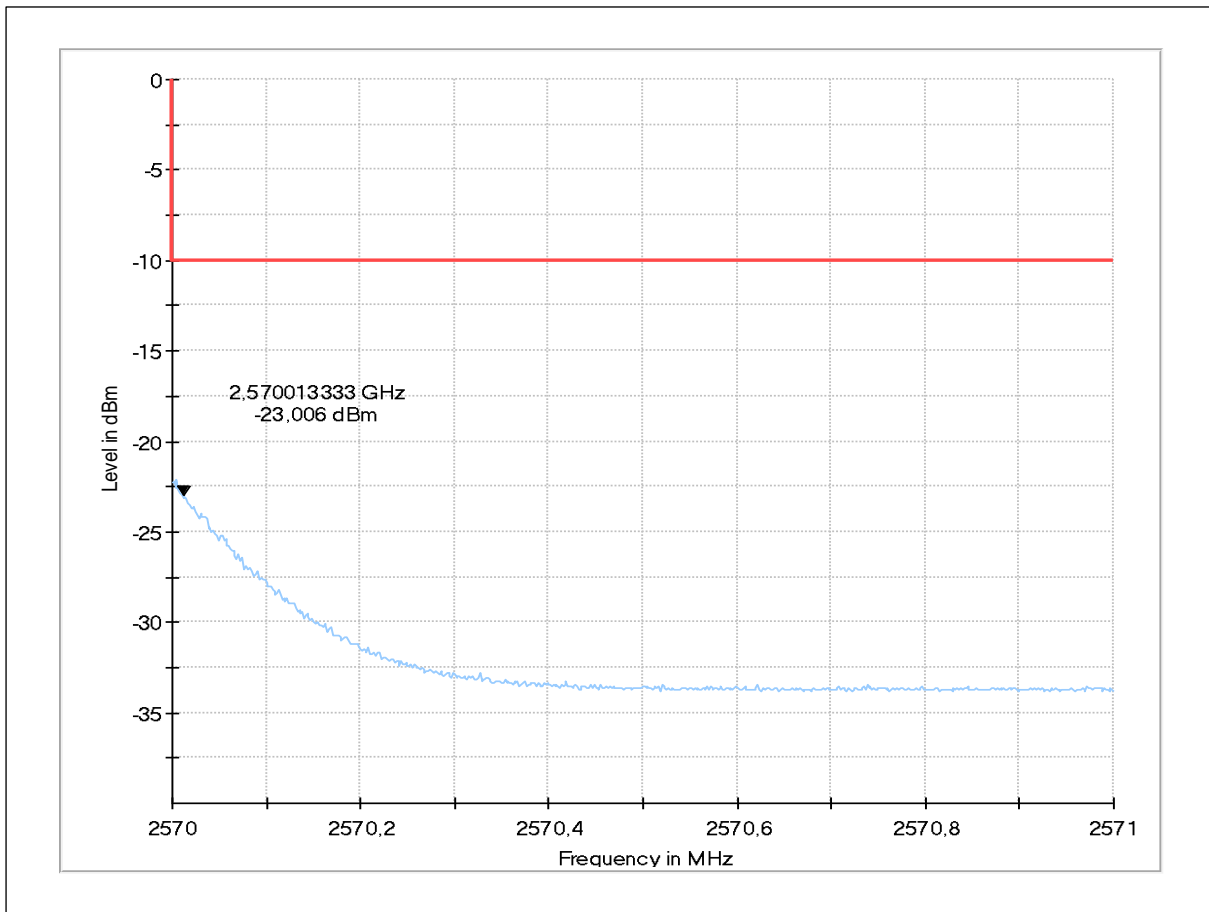
D9.7\_005\_BE\_Bd7\_Sweep1\_ch21400\_BW10\_50RBs\_QPSK\_EUTstanding



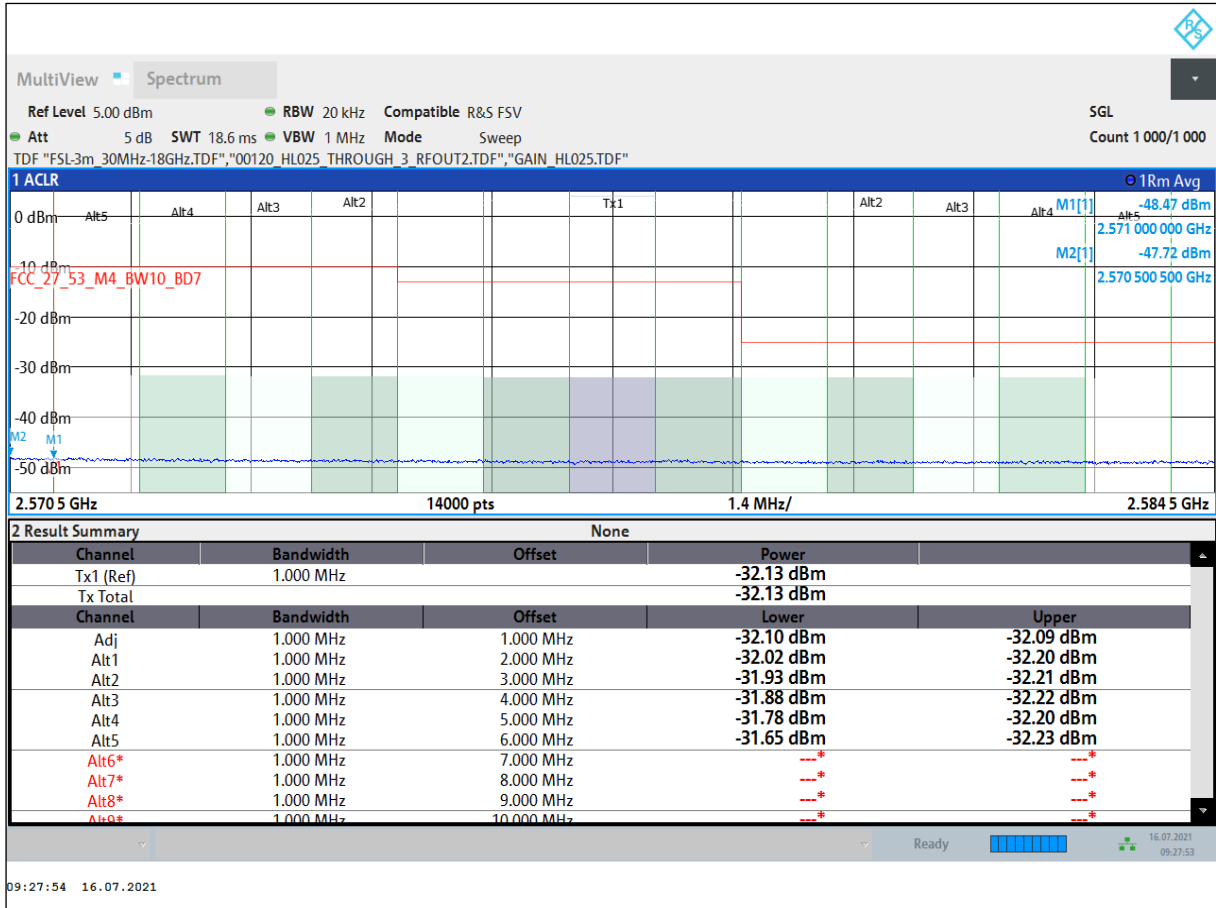
D9.7\_006\_BE\_Bd7\_Sweep2\_ch21400\_BW10\_50RBs\_QPSK\_EUTstanding



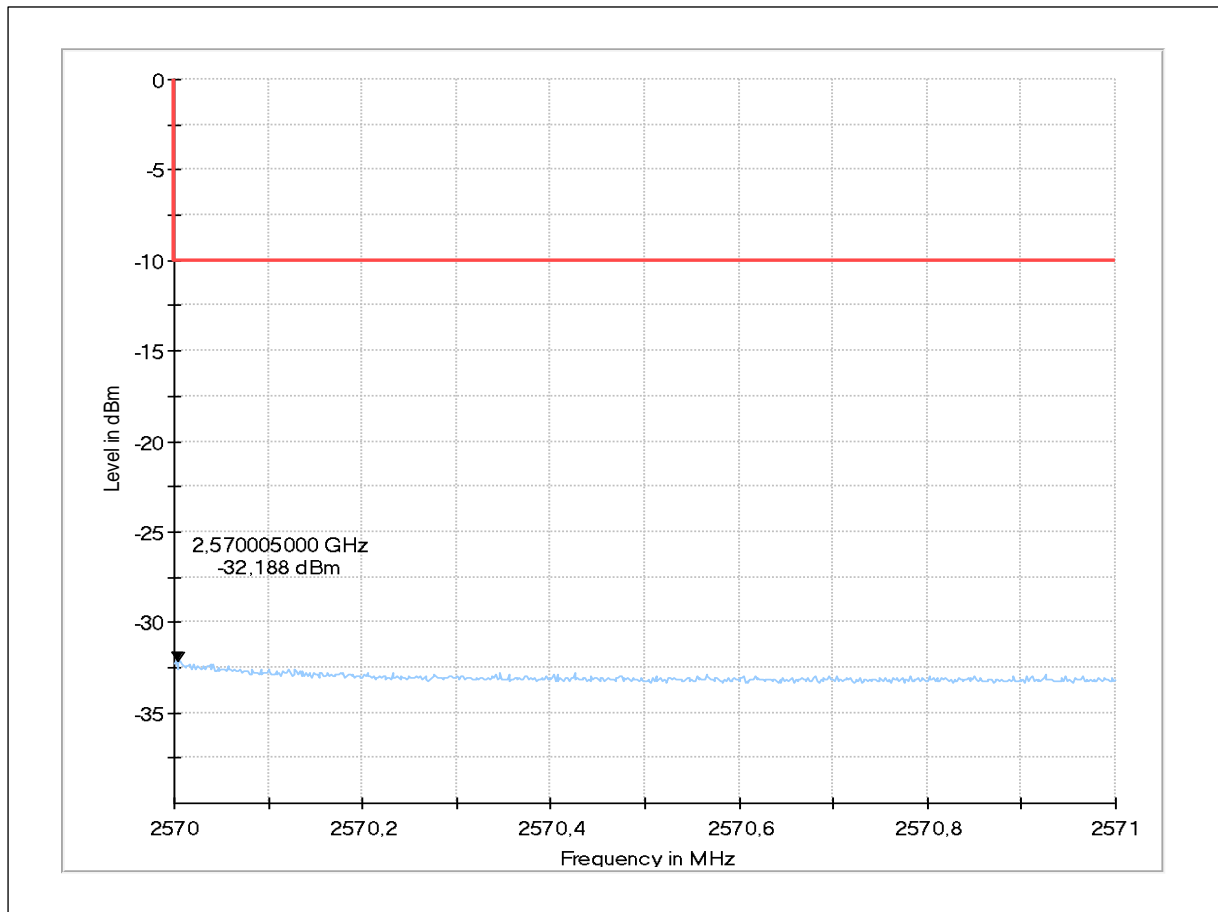
D9.7\_007\_BE\_Bd7\_Sweep1\_ch21400\_BW10\_1RBlow\_QPSK\_EUTstanding



D9.7\_008\_BE\_Method2\_Bd7\_Sweep2\_ch21400\_BW10\_1RBlow\_QPSK\_EUTstanding

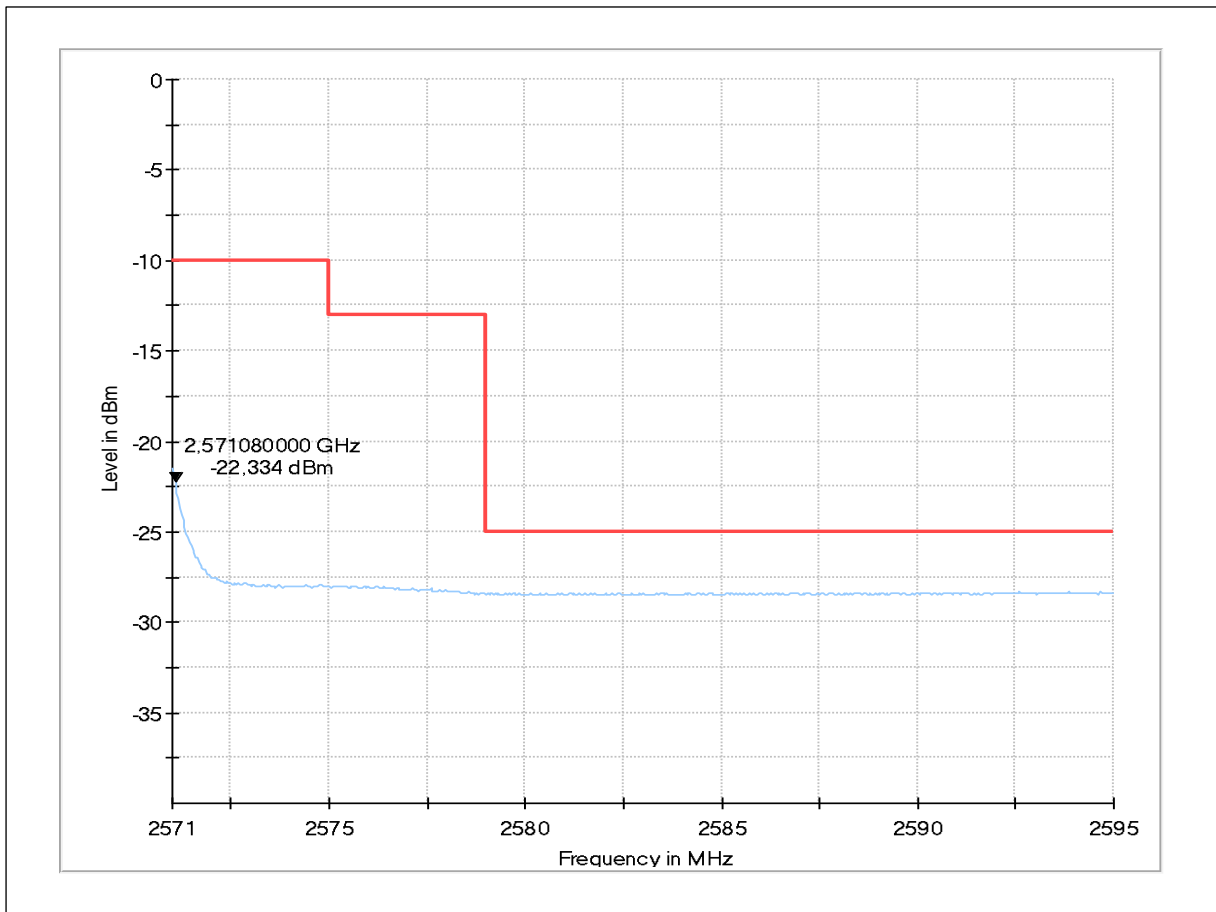


D9.7\_013\_BE\_Bd7\_Sweep1\_ch21400\_BW10\_50RBs\_QPSK\_EUTlaying

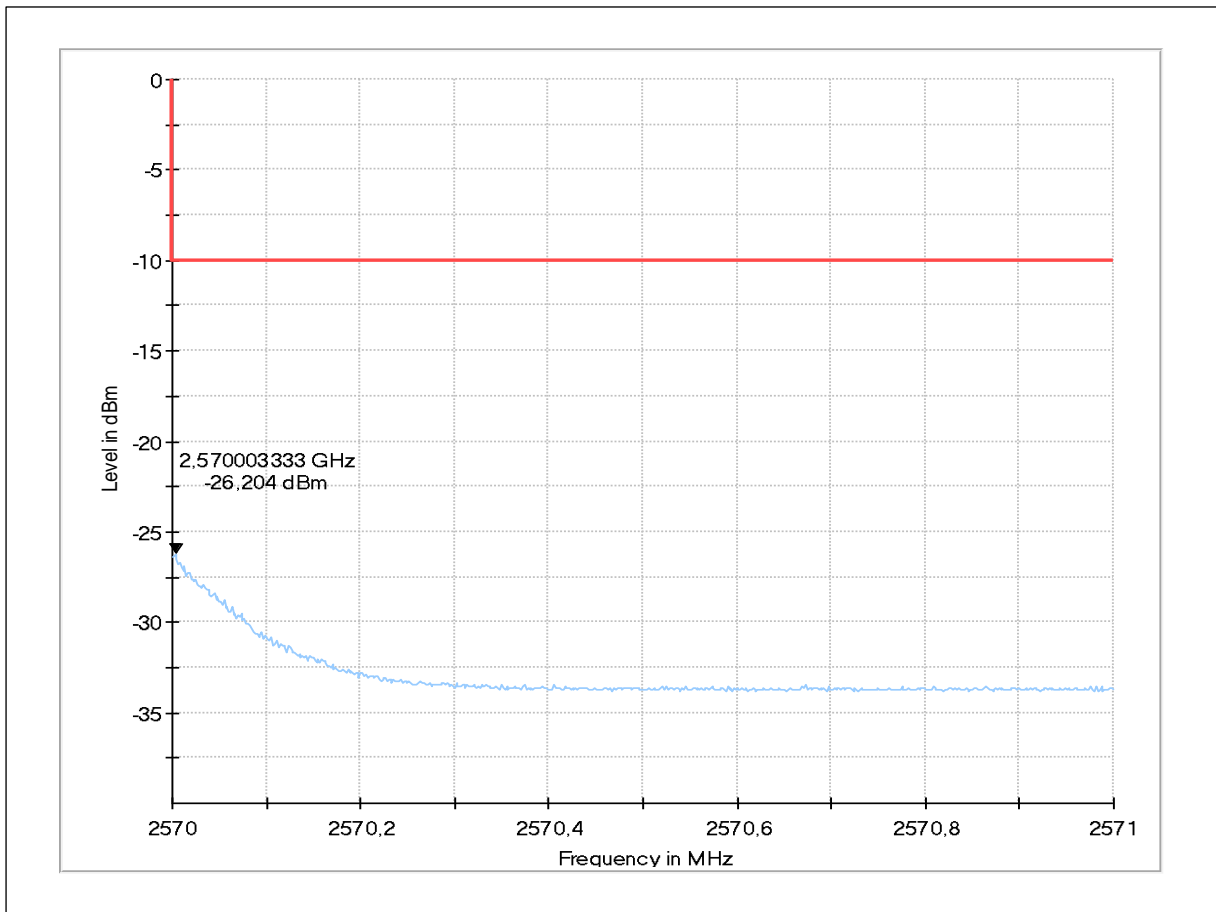




D9.7\_014\_BE\_Bd7\_Sweep2\_ch21400\_BW10\_50RBs\_QPSK\_EUTlaying



D9.7\_015\_BE\_Bd7\_Sweep1\_ch21400\_BW10\_1RBlow\_QPSK\_EUTlaying



**End of Annex 1**