

Annex 1: Measurement diagrams 23-1-0043901T002a-A1

Number of pages:	47	Date of Report:	2024-Feb-07
Testing company:	cetecom advanced GmbH Untertuerkheimer Str. 6-10 66117 Saarbruecken GERMANY	Applicant:	Continental Engineering Services GmbH
Product:	Telematic Device		
Model:	STP-MID		
FCC ID:	2BDLN-STPMIDNA	IC:	N/A
Testing has been carried out in accordance with:	FCC Regulations Title 47 CFR, Chapter I, Subchapter A Part 15, Subpart C Intentional Radiators; § 15.209 Radiated emission limits; general requirements Title 47 CFR, Chapter I, Subchapter B Part 22, Subpart H Cellular Radiotelephone Service Part 24, Subpart E Paging and Radiotelephone Service Part 27, Subpart C Miscellaneous Wireless Communications Services Title 47 CFR, Chapter I, Subchapter D Part 90, Subpart I, General technical standards; Subpart S Private Land Mobile Radio Services		

Measurement diagrams

2.201_H_field_LTE_FDD_B02_CH_18900

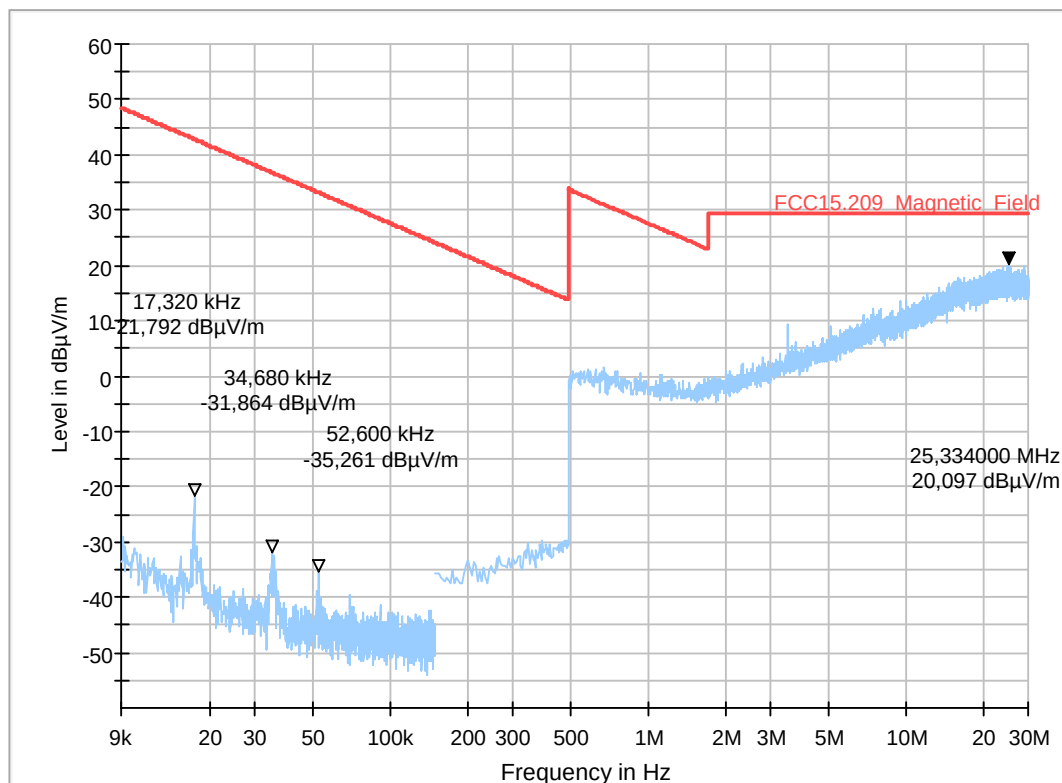
Common Information

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:	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 Standard:	FCC 15.205 § 15.209
Operator:	PSt
Operating Mode:	LTE_FDD_B02_CH_18900
Comment:	EUT laying
Environmental Conditions:	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	23-1-00439S03_C01
Power:	12 V DC

Full Spectrum



2.202_H_field_LTE_FDD_B02_CH_18900

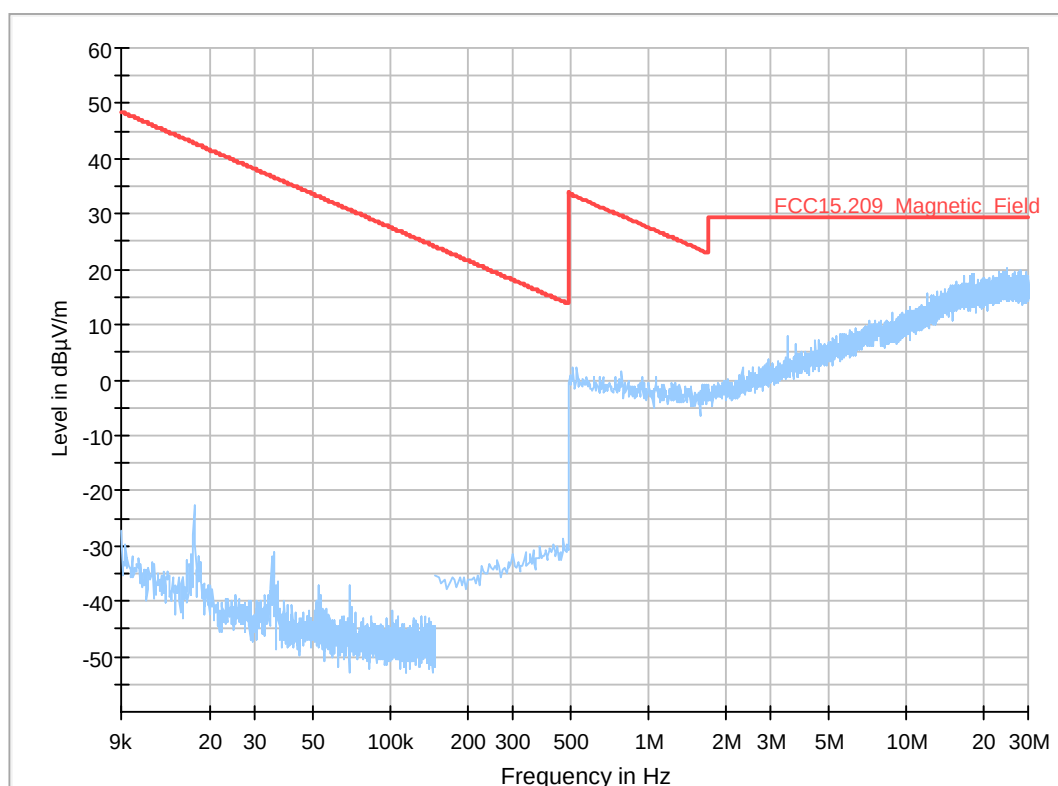
Common Information

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:	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 Standard:	FCC 15.205 § 15.209
Operator:	PSt
Operating Mode:	LTE_FDD_B02_CH_18900
Power during tests:	12 V DC
Comment:	EUT standing
Environmental Conditions:	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	23-1-00439S03_C01
Power:	12 V DC

Full Spectrum



2.401_Traffic_mode_LTE_FDD_B04_CH_20175

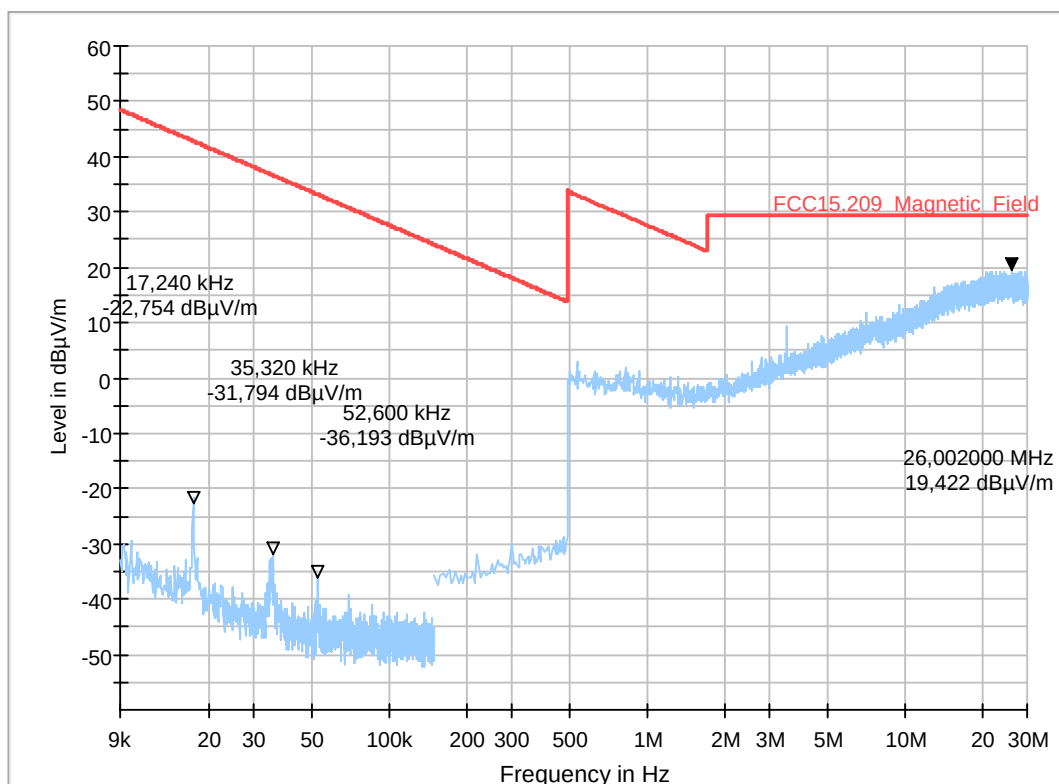
Common Information

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:	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 Standard:	FCC 15.205 § 15.209
Operator:	PSt
Operating Mode:	LTE_FDD_B04_CH_20175
Power during tests:	12 V DC
Comment:	EUT laying
Environmental Conditions:	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	23-1-00439S03_C01
Power:	12 V DC

Full Spectrum



2.501_Traffic_mode_LTE_FDD_B05_CH_20525

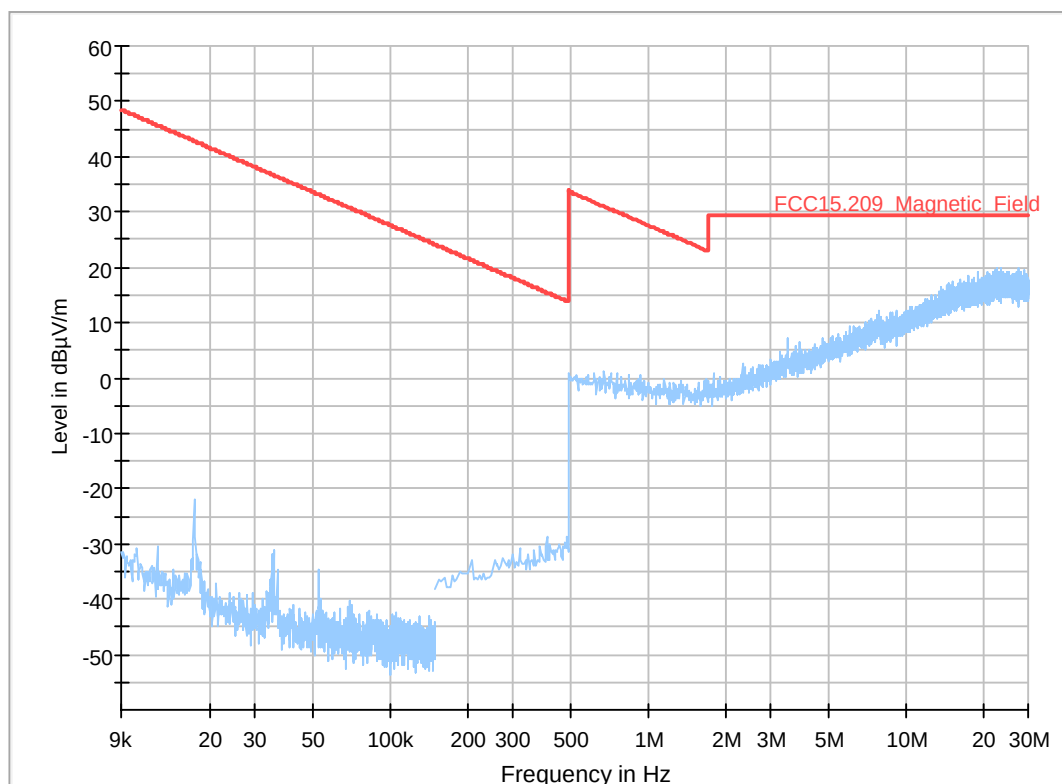
Common Information

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:	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 Standard:	FCC 15.205 § 15.209
Operator:	PSt
Operating Mode:	LTE_FDD_B05_CH_20525
Power during tests:	12 V DC
Comment:	EUT laying
Environmental Conditions:	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	23-1-00439S03_C01
Power:	12 V DC

Full Spectrum



2.701_H_field_LTE_FDD_B07_CH_21375

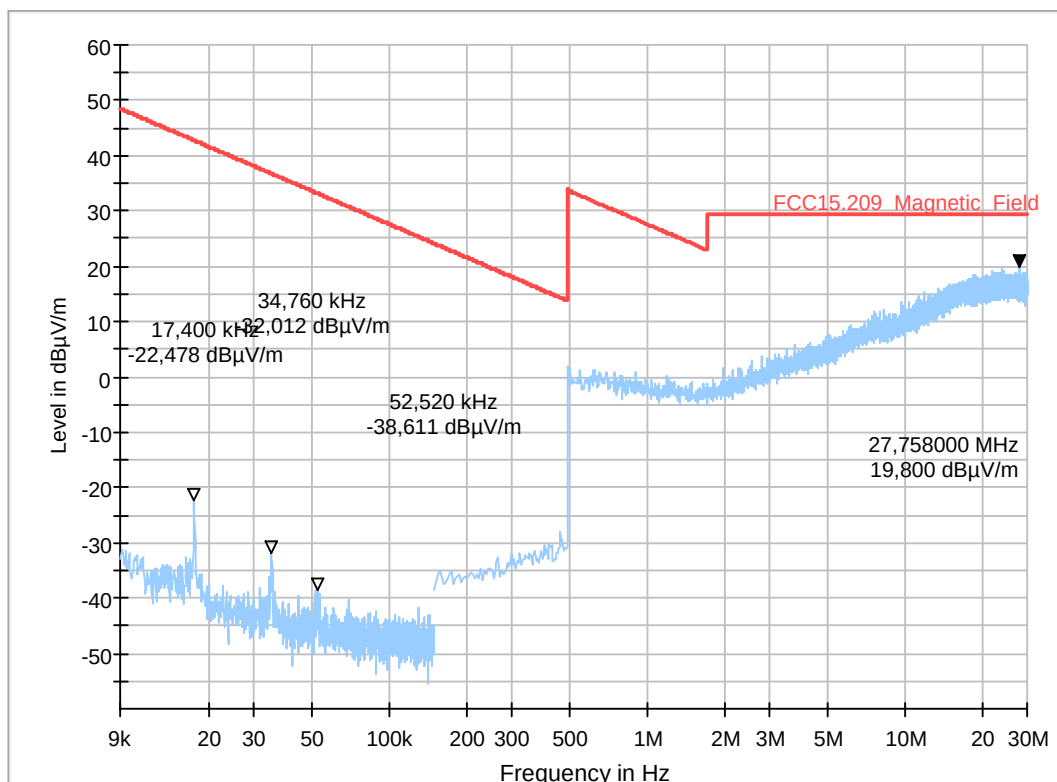
Common Information

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:	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 Standard:	FCC 15.205 § 15.209
Operator:	SOz/Maa
Operating Mode:	LTE_FDD_B07_CH_21375
Environmental Conditions:	Humidity : 40% rH; Temperature: 20 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	23-1-00439S03_C01
Power:	12 V DC

Full Spectrum



2.1201_H_field_LTE_FDD_B12_CH_23095

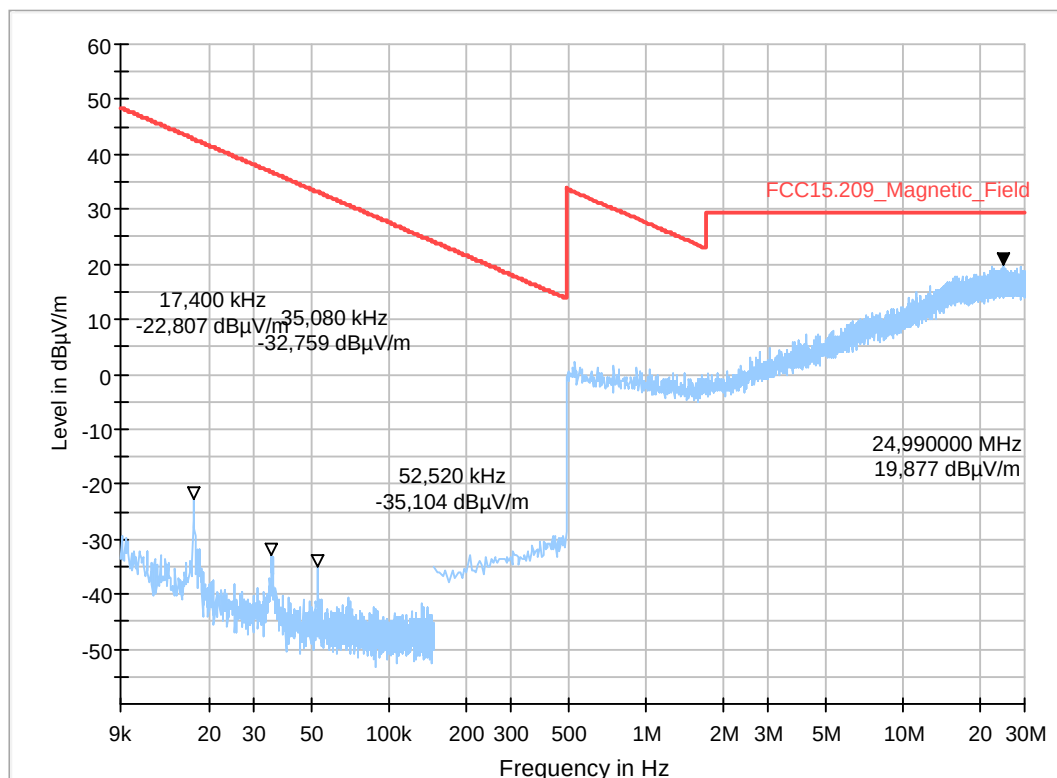
Common Information

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:	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 Standard:	FCC 15.205 § 15.209
Operator:	SOz/Maa
Operating Mode:	LTE_FDD_B12_CH_23095
Environmental Conditions:	Humidity : 40% rH; Temperature: 20 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	23-1-00439S03_C01
Power:	12 V DC

Full Spectrum



2.1301_H_field_LTE_FDD_B13_CH_23230

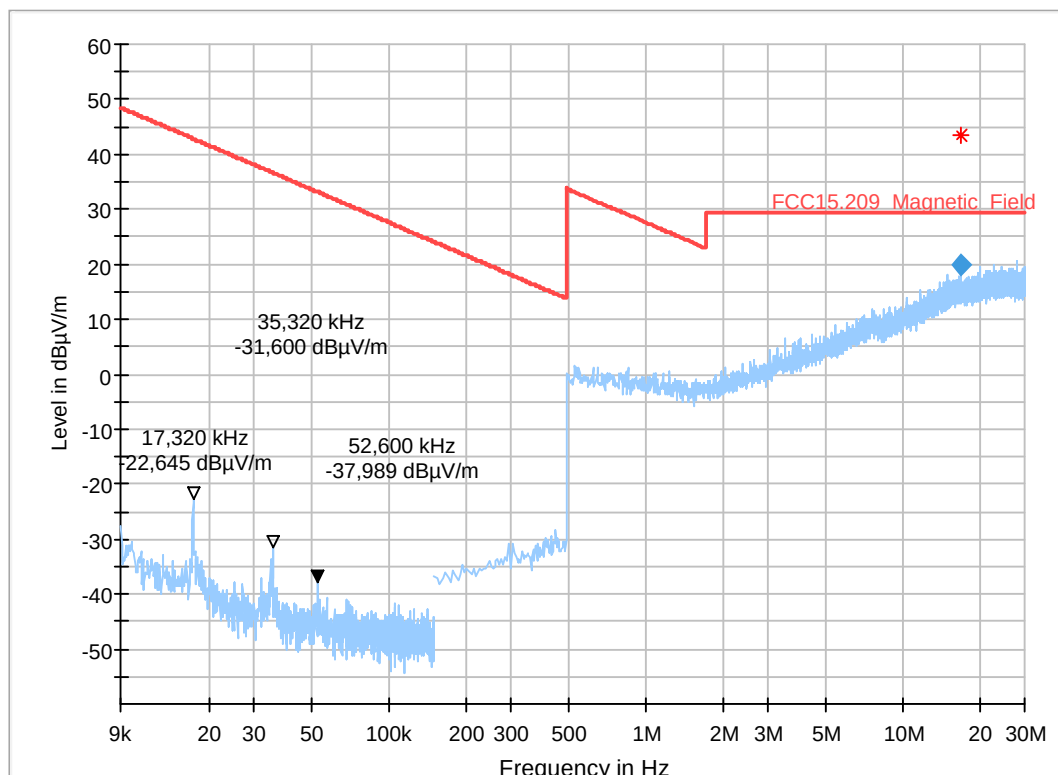
Common Information

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:	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 Standard:	FCC 15.205 § 15.209
Operator:	SOz/Maa
Operating Mode:	LTE_FDD_B13_CH_23230
Environmental Conditions:	Humidity : 40% rH; Temperature: 20 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	23-1-00439S03_C01
Power:	12 V DC

Full Spectrum



Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB/m)	Comment
16.938000	19.72	29.54	9.82	9.000	H	106.0	0.6	13:04:52 - 20.12.2023

8.02_Traffic_mode_LTE_FDD_B02_CH_18900

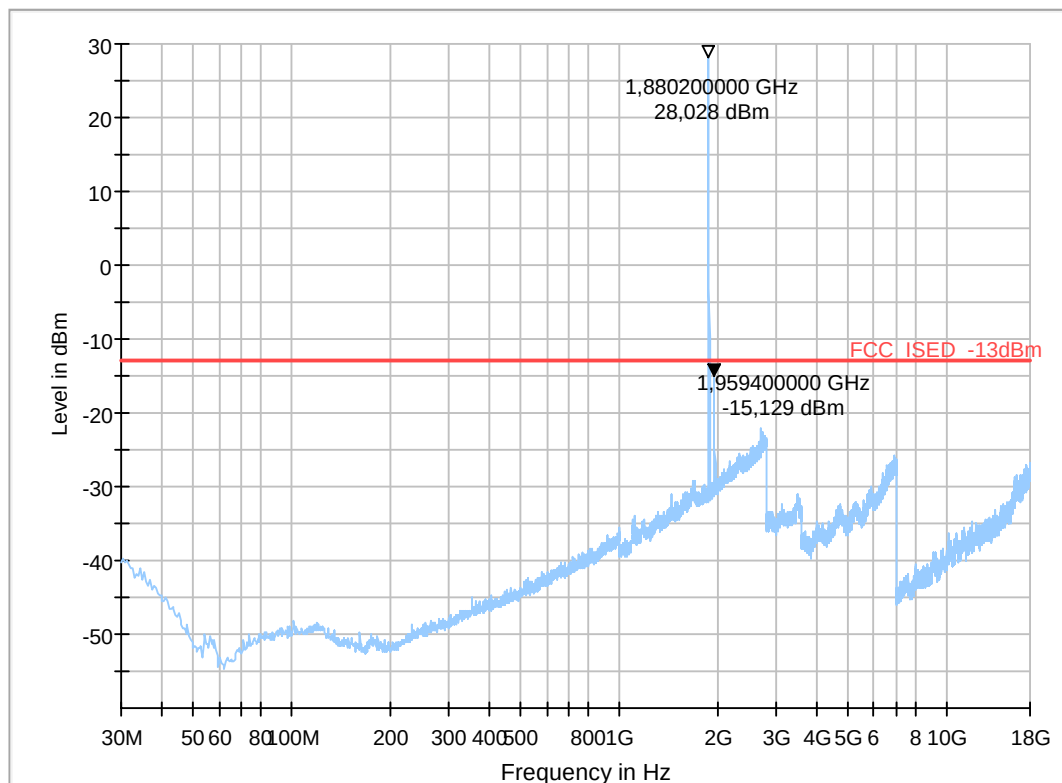
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Standard:	FCC §24.238
Antenna polarisation:	vertical / horizontal
Measurement software version	EMC32 V10.60.20
Operating Mode:	LTE_FDD_B02_CH_18900
Operator:	LAB/ASa
Comment:	Humidity : 60% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



Remark: Emission at 1.84 GHz is uplink frequency of LTE FDD 2 and not related to spurious emission 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)
1879.994643	30.31	-13.00	-43.31	100.0	1000.000	155.0	H	3.0	90.0	-62

8.04_Traffic_mode_LTE_FDD_B04_CH_20175

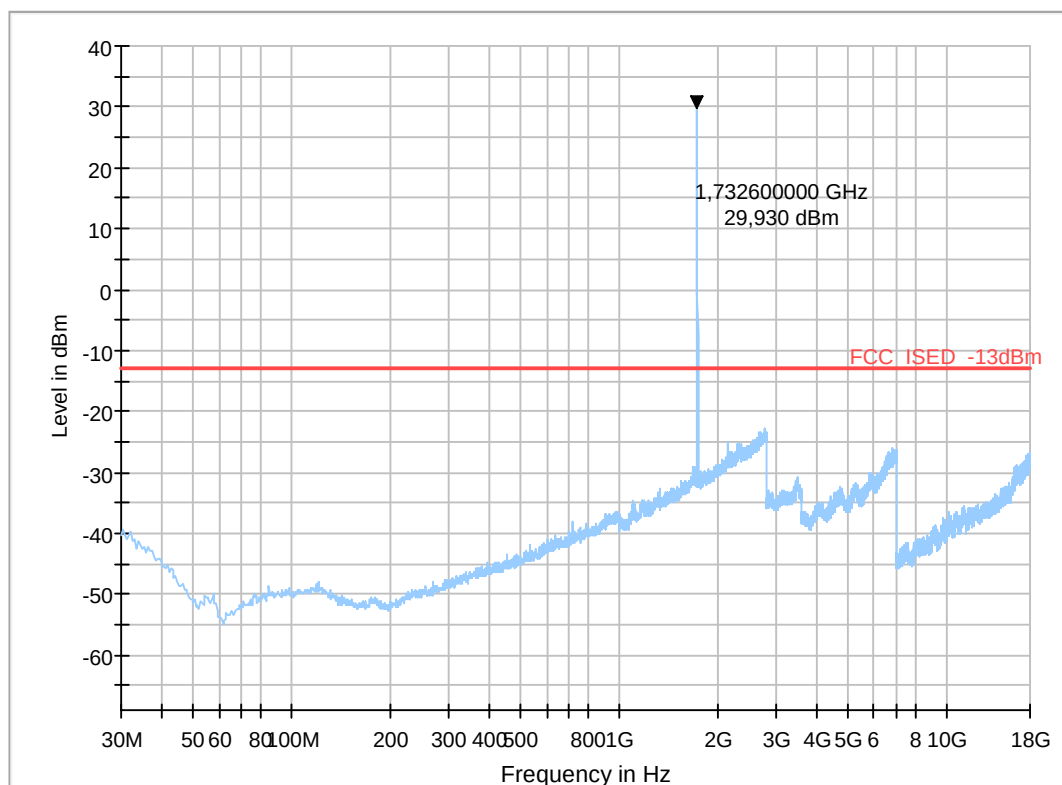
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Standard:	FCC §27.53
Antenna polarisation:	vertical / horizontal
Measurement software version	EMC32 V10.60.20
Operating Mode:	LTE_FDD_B04_CH_20175
Operator:	ASa
Comment:	Humidity : 60% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



Remark: Emission at 1.73 GHz is uplink frequency of LTE FDD 4 and not related to spurious emission results.

8.05_Traffic_mode_LTE_FDD_B05_CH_20525

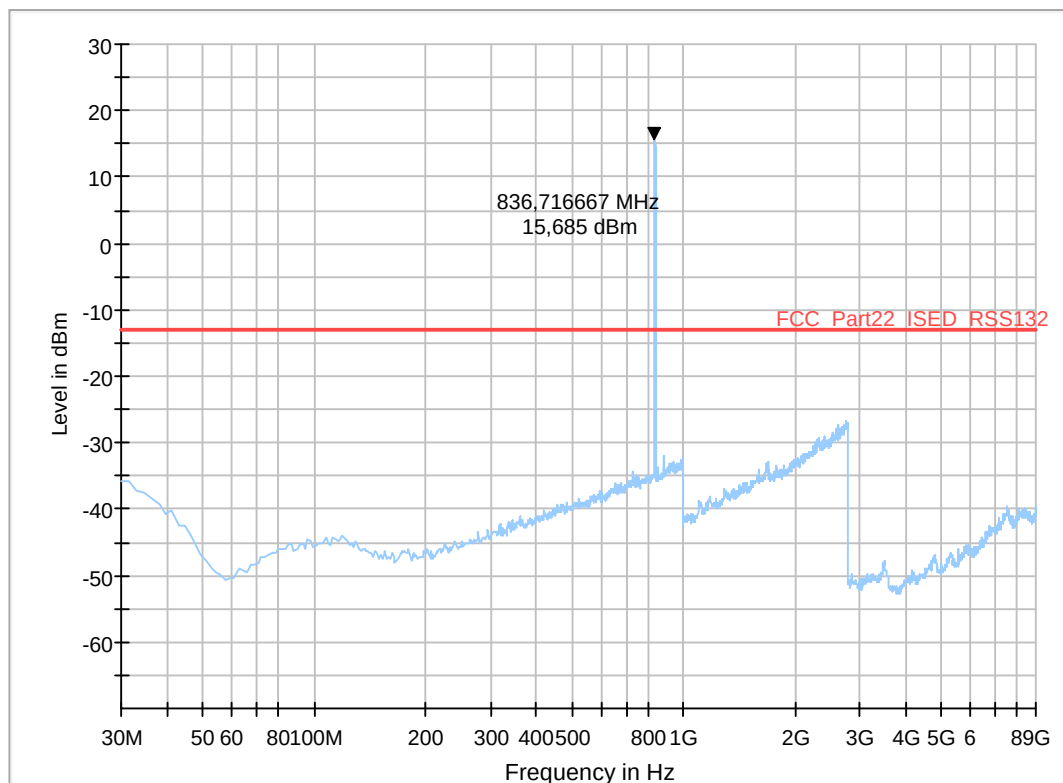
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Standard:	FCC §22.917
Antenna polarisation:	vertical / horizontal
Operating Mode:	LTE_FDD_B05_CH_20525
Operator:	ASa
Environmental Conditions:	Humidity : 60% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



Remark: Emission at 836.72 MHz is uplink frequency of LTE FDD 5 and not related to spurious emission results.

8.07a_Traffic_mode_LTE_FDD_B07_CH_21375

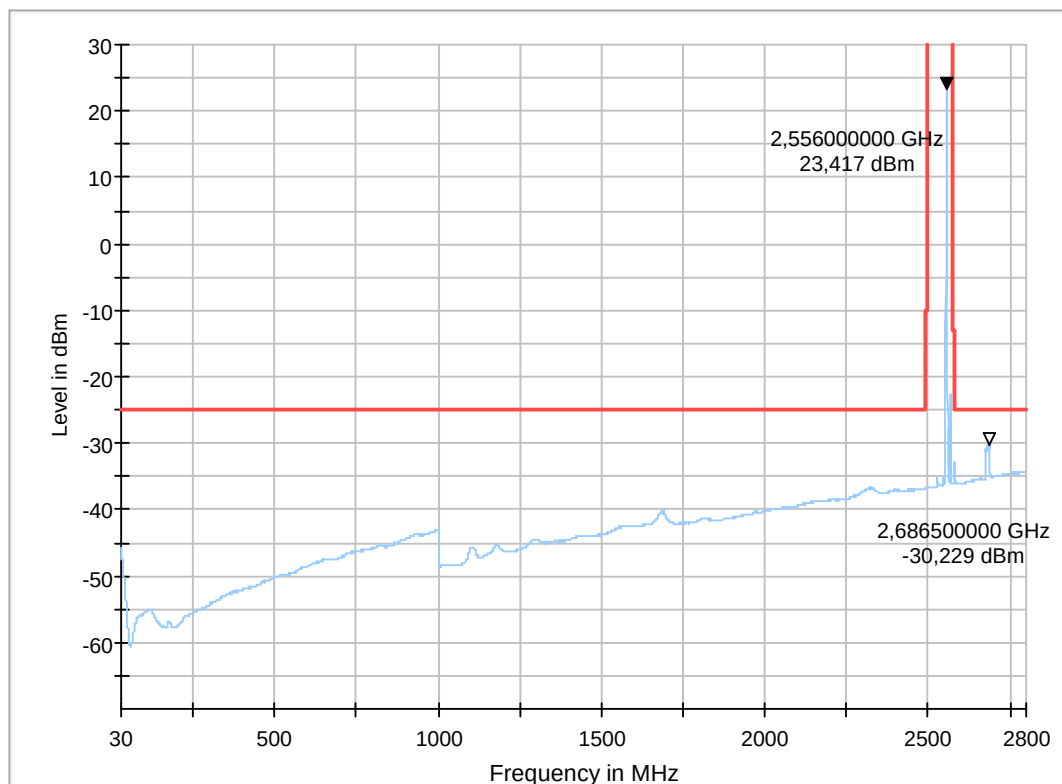
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	LTE_FDD_B07_CH_21375
Environmental Conditions:	Humidity : 60% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	SOz/ASa
Remarks:	EUT - laying/standing position
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



8.07b_Traffic_mode_LTE_FDD_B07_CH_21375

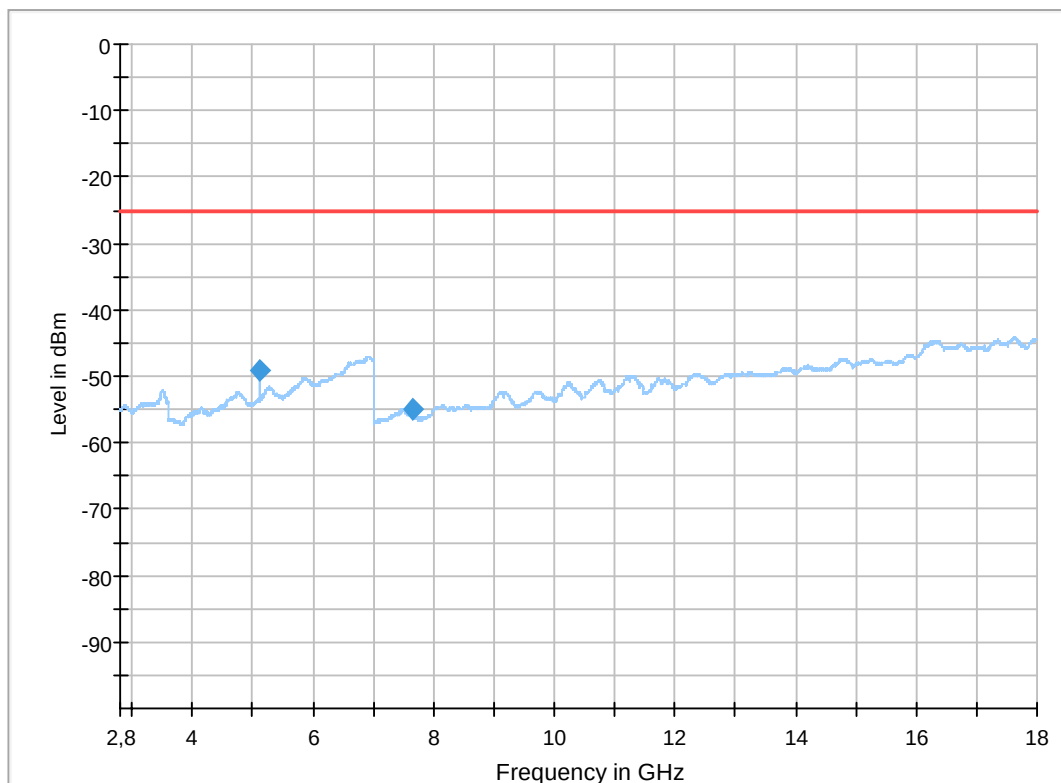
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetekom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	LTE_FDD_B07_CH_21375
Environmental Conditions:	Humidity : 60% rH; Temperature: 20 °C
Operator:	ASa
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
5111.600000	-49.05	-25.00	24.05	1000.0	1000.000	V	-30.0	90.0	-81
7667.453333	-54.95	-25.00	29.95	1000.0	1000.000	H	-40.0	90.0	-96

8.07c.a_Traffic_mode_LTE_FDD_B07_CH_21375_AntH

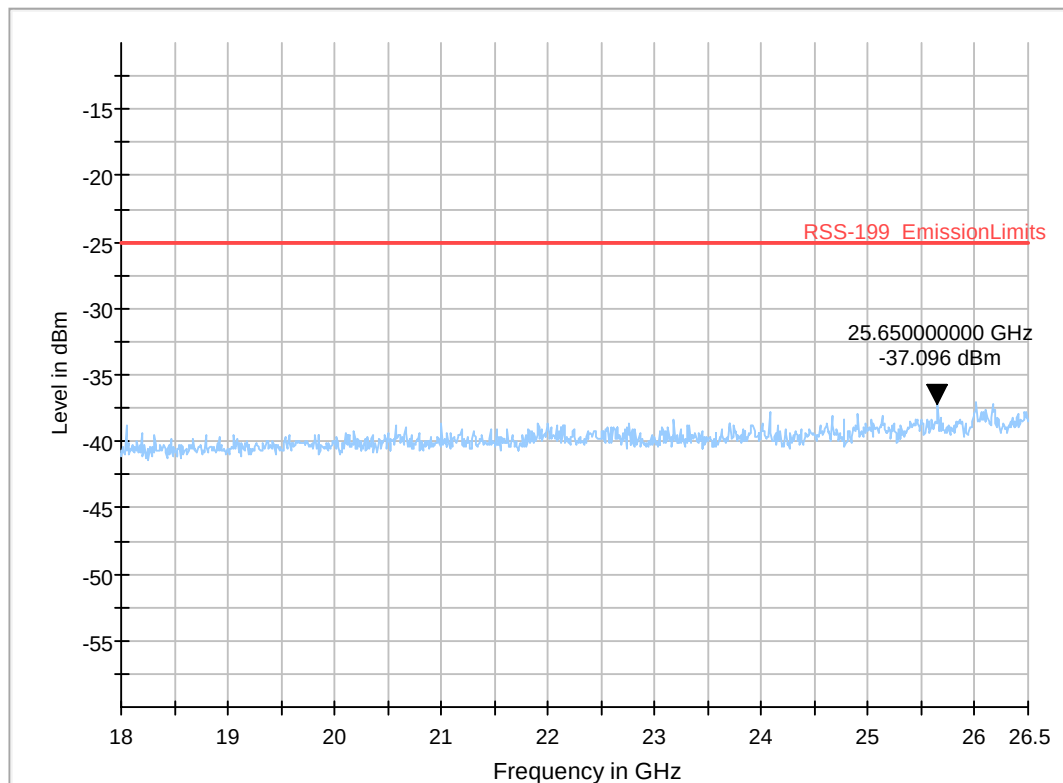
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetekom advanced GmbH Essen
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC §27.53
Comm. Link:	LTE Band 7
Operating Mode:	MS allocated channel 20850
Exclusionband:	2496 to 2690 MHz
Environmental Conditions:	Humidity: 59% rH; Temperature: 22.7 °C
Operator:	SOz
Set-up:	2
Verdict:	Passed

EUT Information

PMT Sample Nr.	23-1-00439S03_C01
power:	12 V DC

Full Spectrum



8.07c.b_Traffic_mode_LTE_FDD_B07_CH_21375_AntV

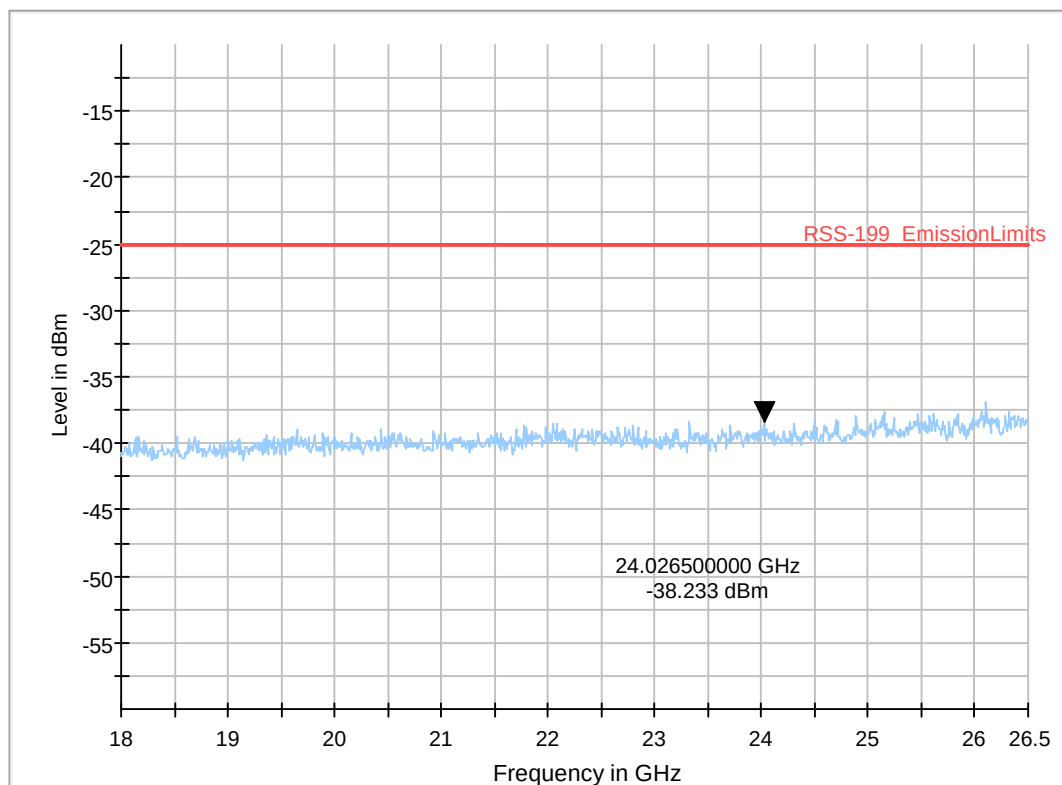
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetekom advanced GmbH Essen
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC §27.53
Comm. Link:	LTE Band 7
Operating Mode:	MS allocated channel 20850
Exclusionband:	2496 to 2690 MHz
Environmental Conditions:	Humidity: 59% rH; Temperature: 22.7 °C
Operator:	SOz
Set-up:	2
Verdict:	Passed

EUT Information

PMT Sample Nr.	23-1-00439S03_C01
power:	12 V DC

Full Spectrum



8.12_Traffic_mode_LTE_FDD_B12_CH_23095

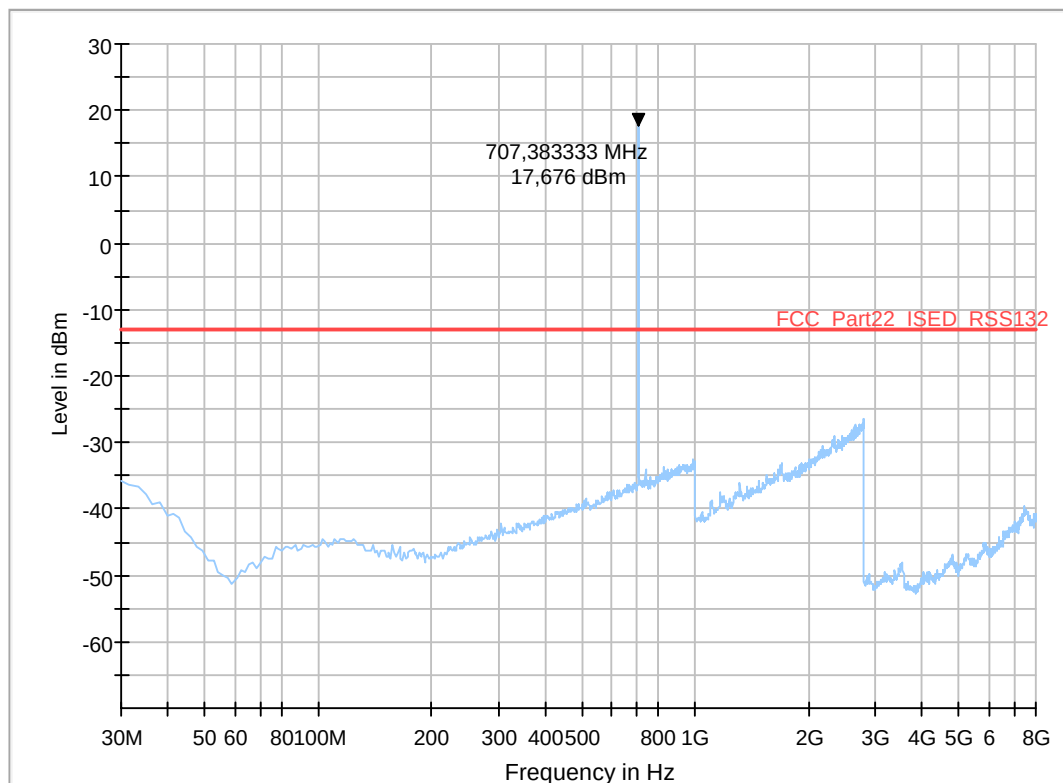
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Antenna polarisation:	vertical / horizontal
Operating Mode:	LTE_FDD_B12_CH_23095
Operator:	ASa
Environmental Conditions:	Humidity : 60% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



Remark: Emission at 707.38 MHz is uplink frequency of LTE FDD 12 and not related to spurious emission results.

8.13_Traffic_mode_LTE_FDD_B13_CH_23230

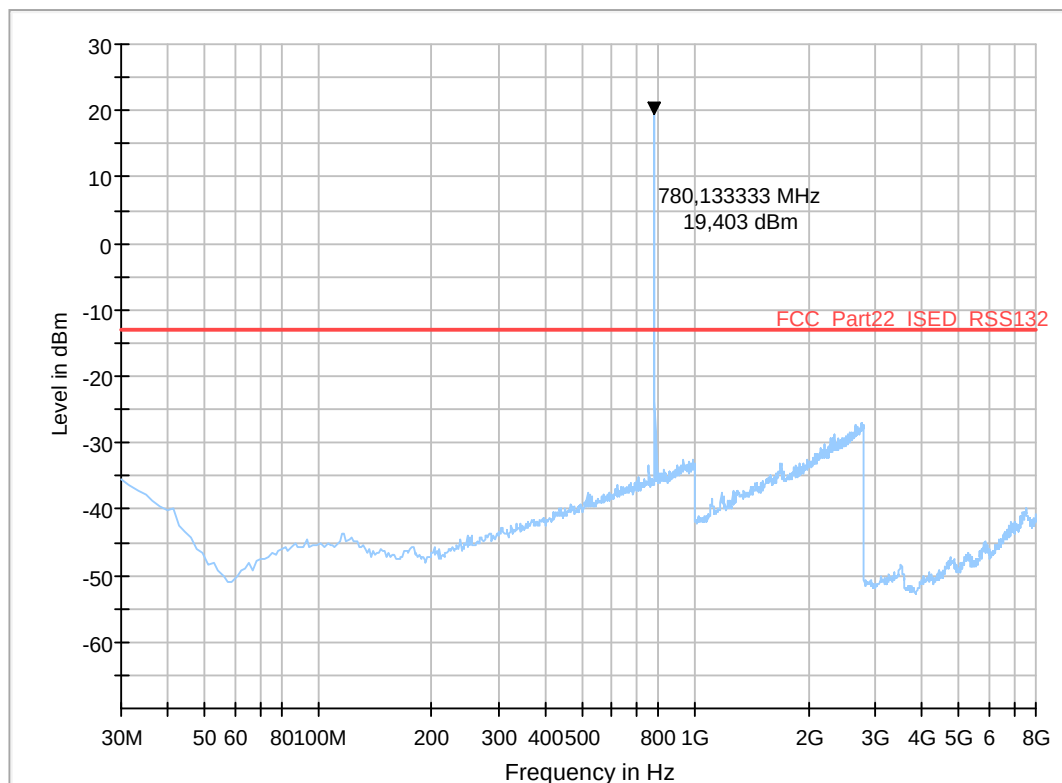
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Standard:	FCC §27.53
Antenna polarisation:	vertical / horizontal
Operating Mode:	LTE_FDD_B13_CH_23230
Operator:	ASa
Environmental Conditions:	Humidity : 60% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



Remark: Emission at 780.13 MHz is uplink frequency of LTE FDD 13 and not related to spurious emission results.

8.13a_Traffic_mode_LTE_FDD_B13_CH_23230_GPS_Band

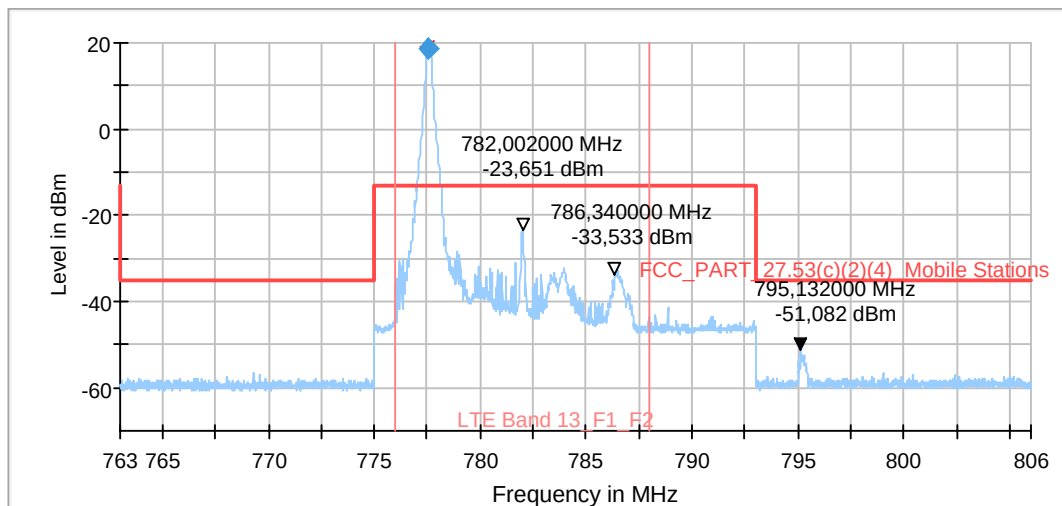
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Traffic_mode_LTE_FDD_B13_CH_23230_GPS_Band
Exclusionband:	Uplink: 776-787MHz Downlink: -31MHz Offset
Environmental Conditions:	Humidity : 52% rH; Temperature: 21 °C
Operator:	SOz/Maa
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
777.592000	18.58	-13.00	-31.58	100.0	100.000	V	15.0	90.0	-77

8.13b_Traffic_mode_LTE_FDD_B13_CH_23230_GPS_Band

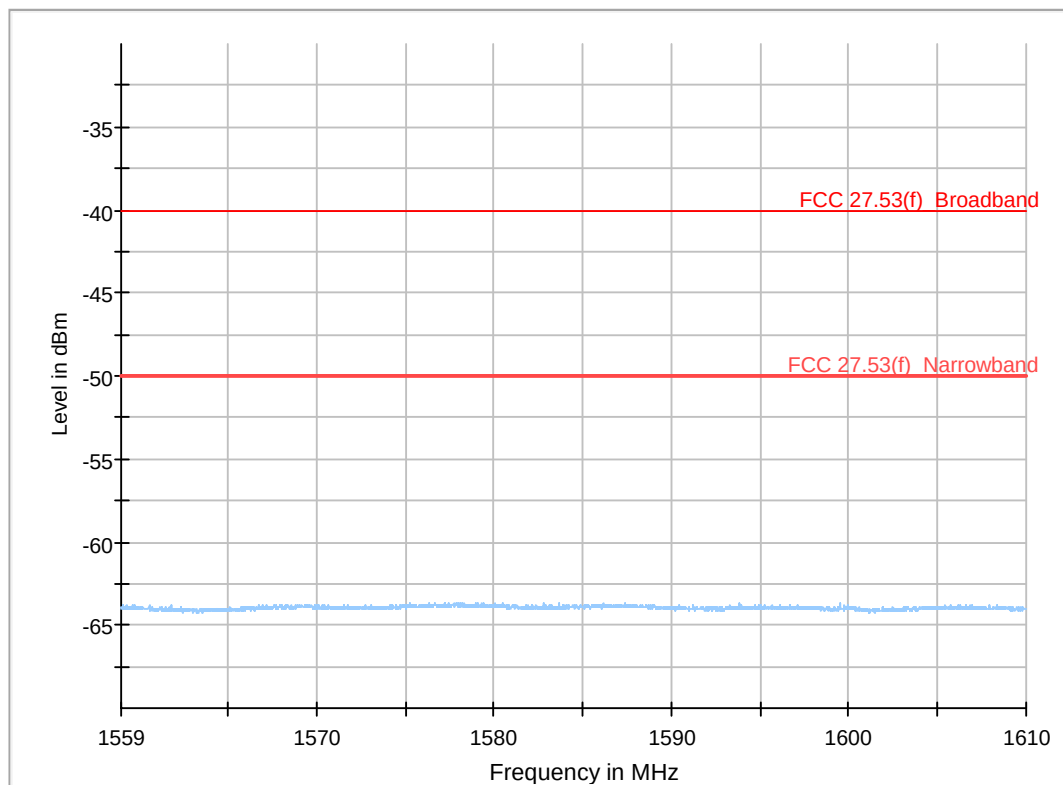
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetekom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Traffic_mode_LTE_FDD_B13_CH_23230_GPS_Band
Exclusionband:	Uplink: 776-787MHz Downlink: -31MHz Offset
Environmental Conditions:	Humidity : 52% rH; Temperature: 21 °C
Operator:	SOz/Maa
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



9.201_Bandedge_low_LTE_FDD_B02_CH_low_RB_1_low

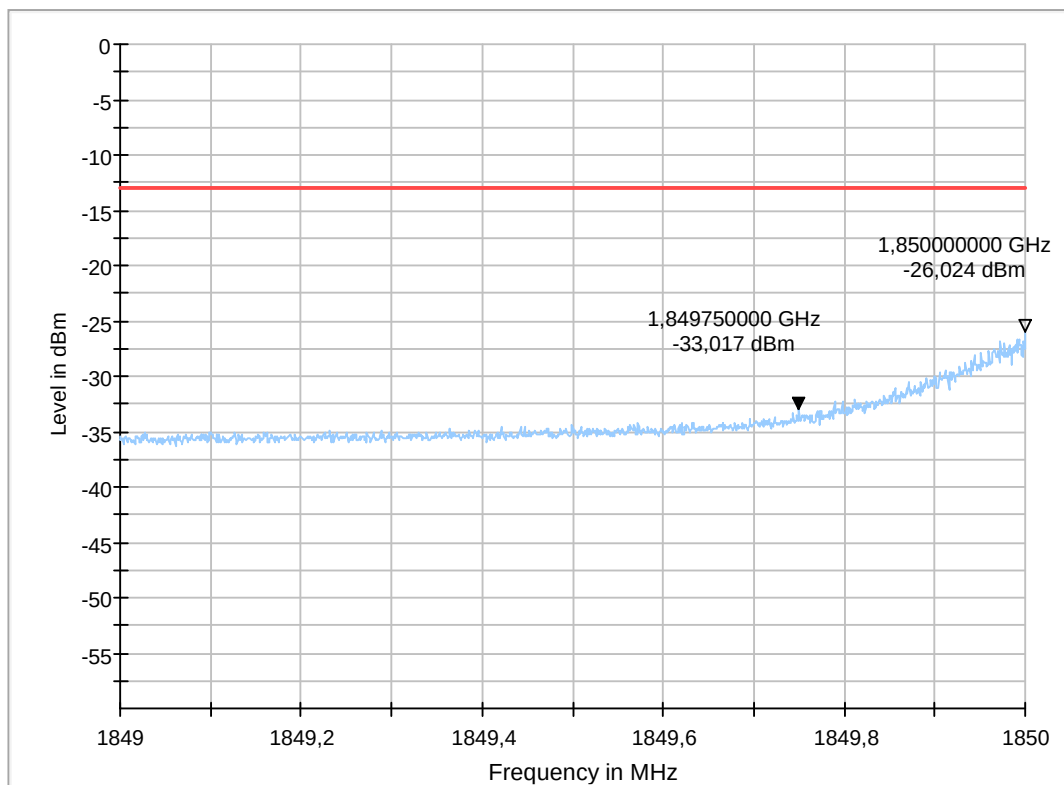
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetekom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §24.238
Operating Mode:	Bandedge_low_LTE_FDD_B02_CH_low_RB_1_low
Environmental Conditions:	Humidity : 60% rH; Temperature: 20 °C
Operator:	LAB/ASa
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



9.202_Bandedge_low_LTE_FDD_B02_CH_low_RB_Full

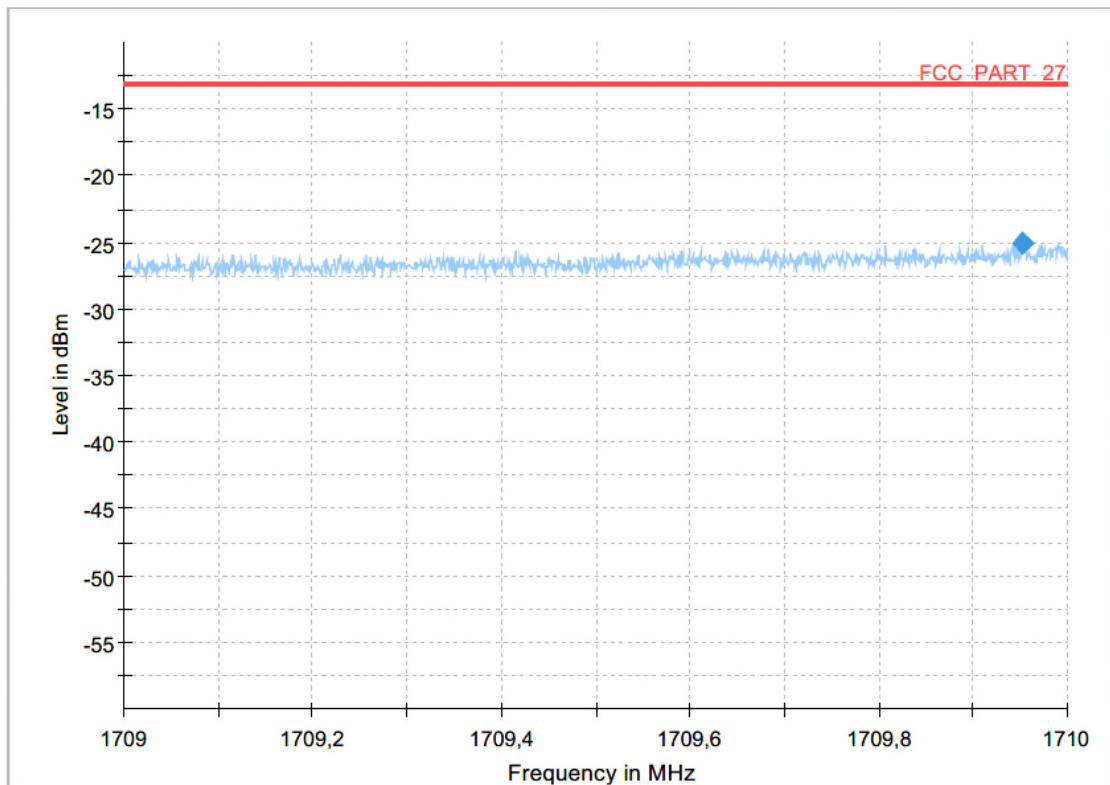
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §24.238
Operating Mode:	Bandedge_low_LTE_FDD_B02_CH_low_RB_Full
Environmental Conditions:	Humidity : 60% rH; Temperature: 20 °C
Operator:	LAB/ASa
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1709.953000	-25.12	-13.00	12.12	700.0	100.000	H	14.0	90.0	-62

9.203_Bandedge_high_LTE_FDD_B02_CH_high_RB_1_high

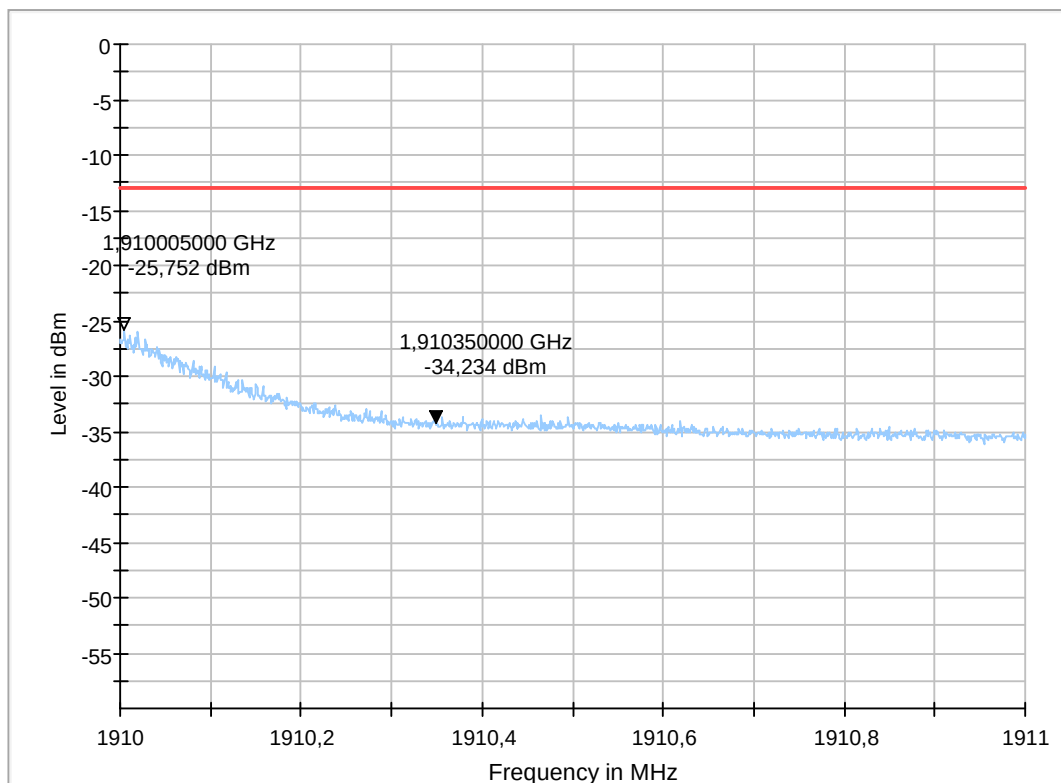
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetekom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §24.238
Operating Mode:	Bandedge_high_LTE_FDD_B02_CH_high_RB_1_high
Environmental Conditions:	Humidity : 54% rH; Temperature: 20 °C
Operator:	ASa
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



9.204_Bandedge_high_LTE_FDD_B02_CH_high_RB_Full

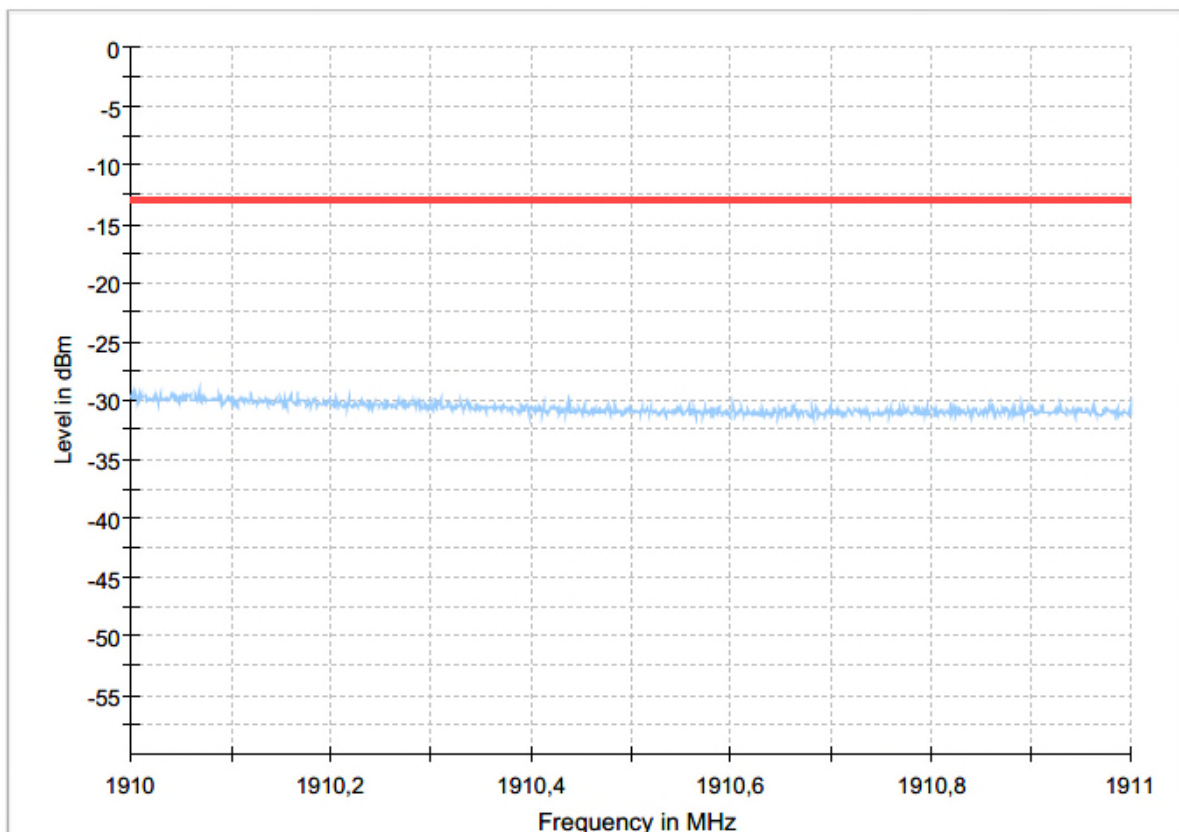
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §24.238
Test Case:	RSS-130, 132, 133, 139, 140, 199
Operating Mode:	Bandedge_high_LTE_FDD_B02_CH_high_RB_Full
Environmental Conditions:	Humidity : 54% rH; Temperature: 20 °C
Operator:	ASa
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



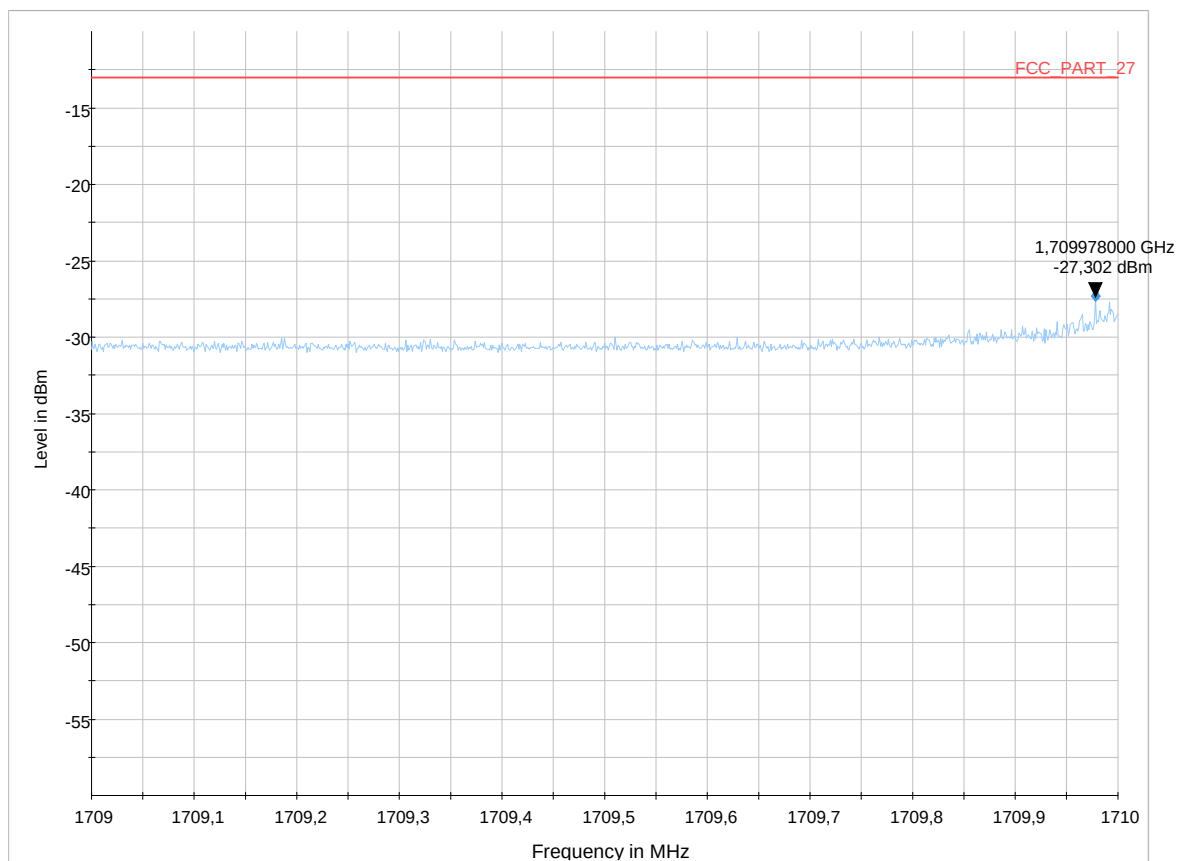
9.401_Bandedge_low_LTE_FDD_B04_CH_low_RB_1_low

Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetekom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §24.238
Test Case:	RSS-130, 132, 133, 139, 140, 199
Operating Mode:	Bandedge_high_LTE_FDD_B02_CH_high_RB_Full
Environmental Conditions:	Humidity : 54% rH; Temperature: 20 °C
Operator:	ASa
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC



9.402_Bandedge_low_LTE_FDD_B04_CH_low_RB_Full

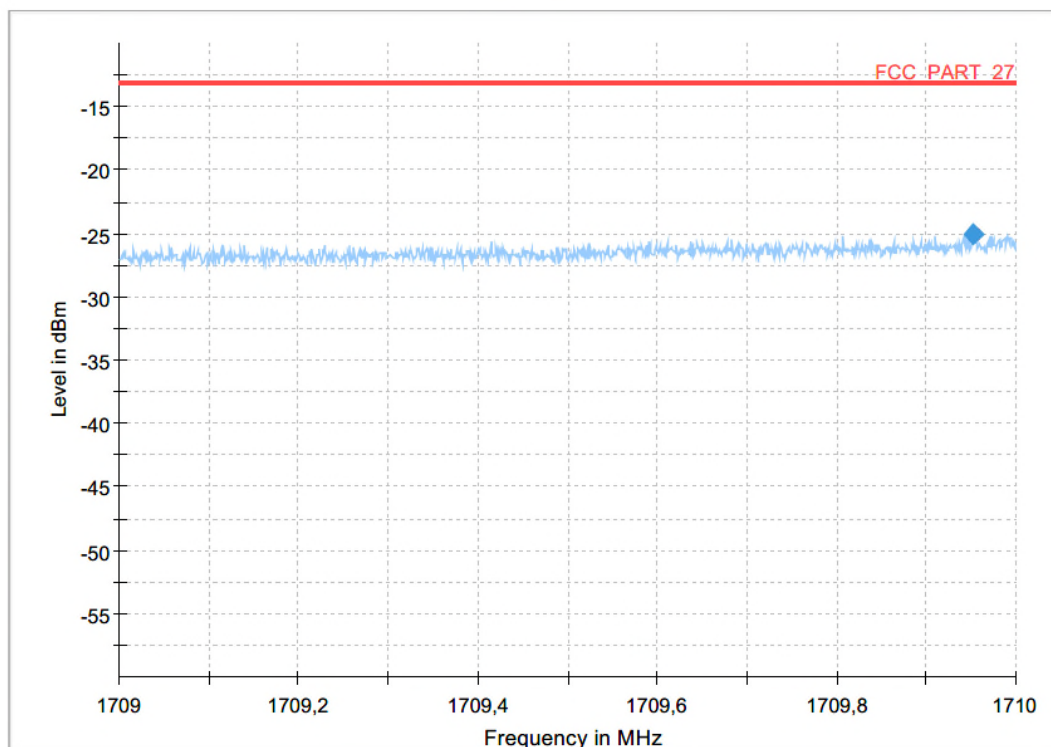
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_low_LTE_FDD_B04_CH_low_RB_Full
Environmental Conditions:	Humidity : 52% rH; Temperature: 21 °C
Operator:	SOz/ASa
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S02_C01
Power Supply:	12 V DC

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1709.953000	-25.12	-13.00	12.12	700.0	100.000	H	14.0	90.0	-62

9.403_Bandedge_high_LTE_FDD_B04_CH_high_RB_1_high

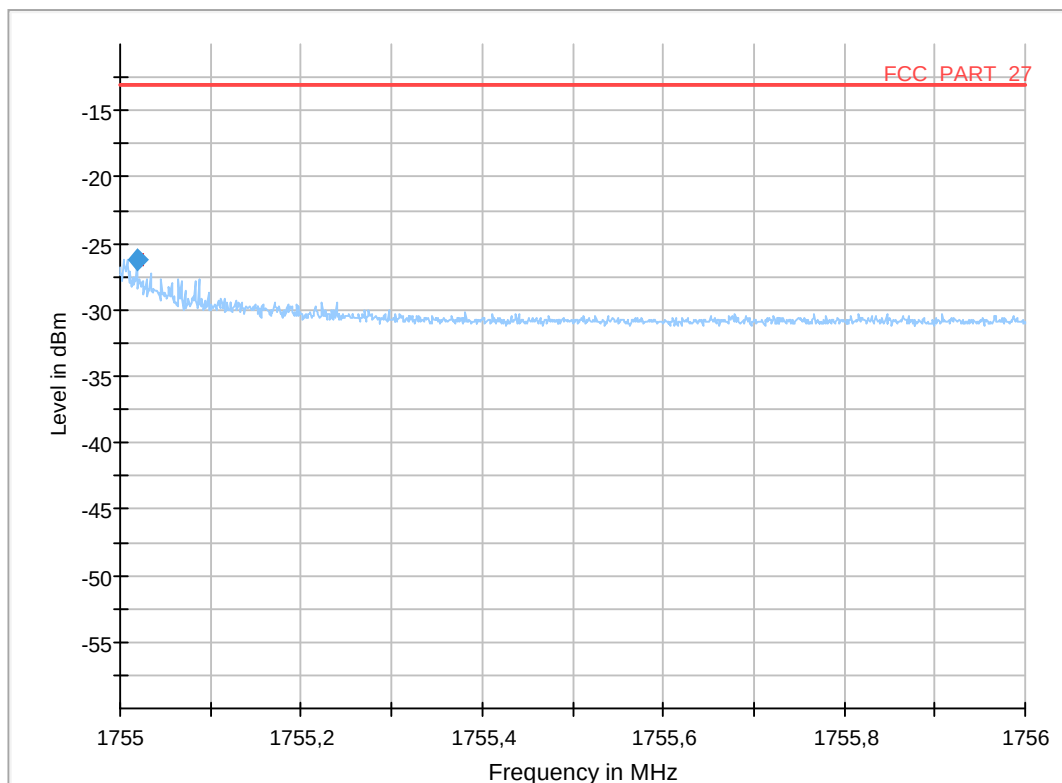
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_high_LTE_FDD_B04_CH_high_RB_1_high
Environmental Conditions:	Humidity : 52% rH; Temperature: 21 °C
Operator:	SOz/ASa
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1755.019000	-26.17	-13.00	13.17	700.0	100.000	H	14.0	90.0	-62

9.404_Bandedge_high_LTE_FDD_B04_CH_high_RB_Full

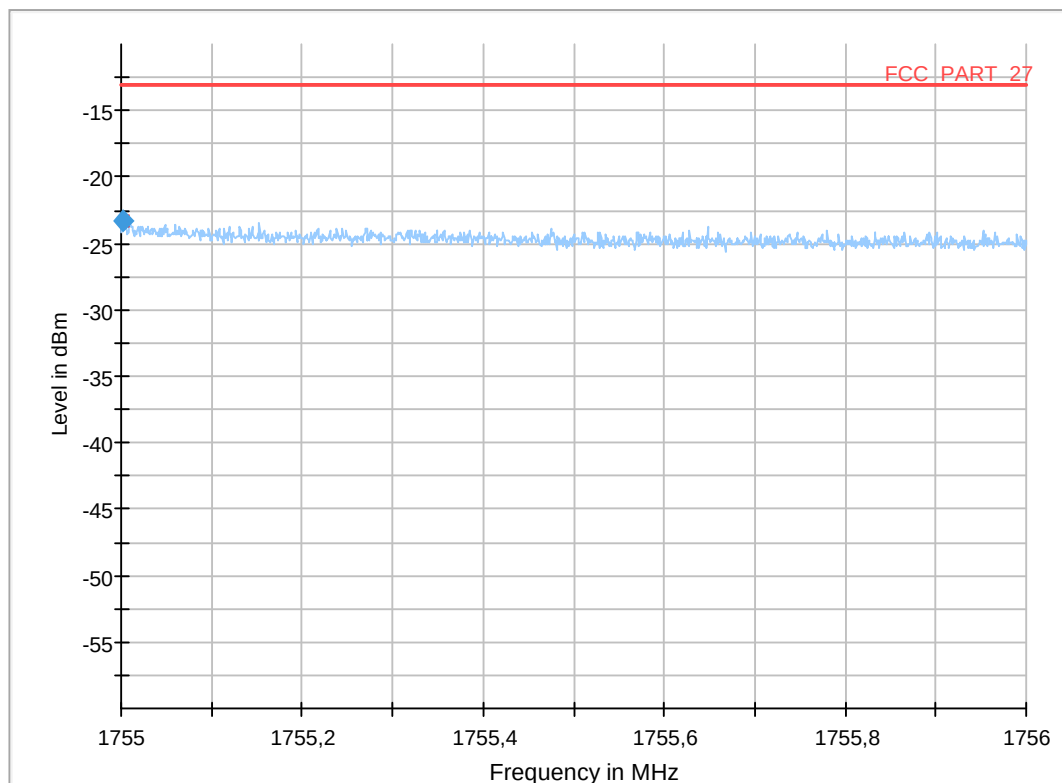
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_high_LTE_FDD_B04_CH_high_RB_Full
Environmental Conditions:	Humidity : 52% rH; Temperature: 21 °C
Operator:	PSt/ASa
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

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	-23.33	-13.00	10.33	700.0	100.000	H	12.0	90.0	-62

9.501_Bandedge_low_LTE_FDD_B05_CH_low_RB_1_low

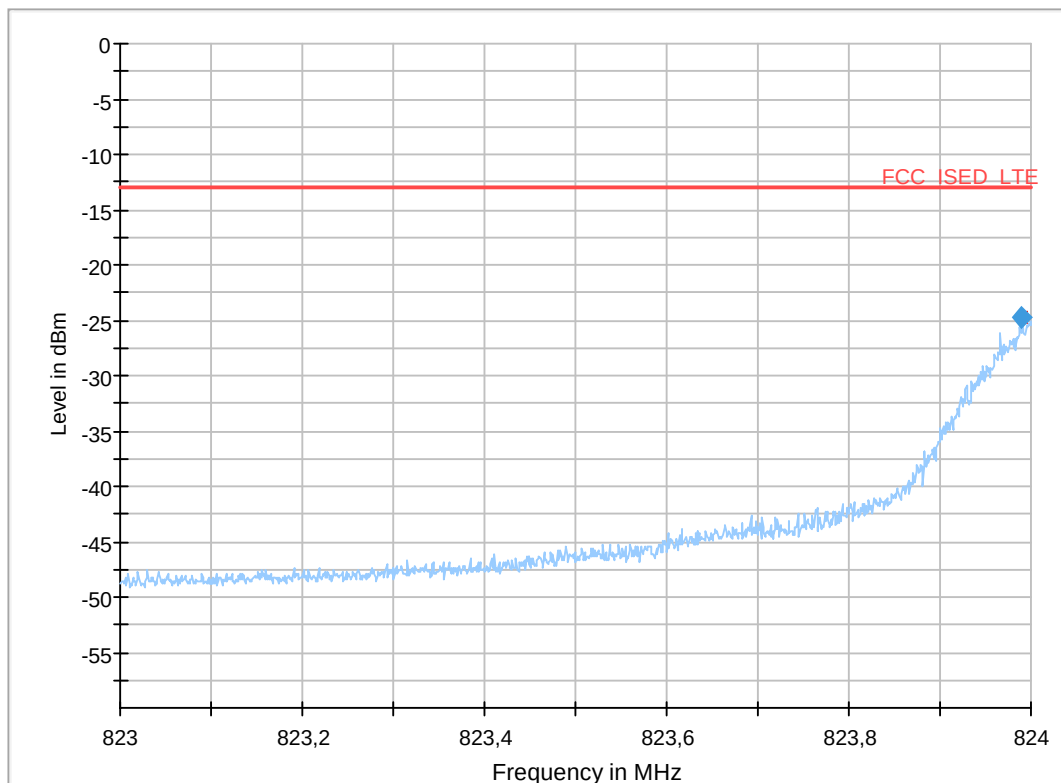
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetekom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §22.917
Operating Mode:	Bandedge_low_LTE_FDD_B05_CH_low_RB_1_low
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	PSt/ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
823.990000	-24.66	-13.00	11.66	700.0	50.000	V	134.0	0.0	-76

9.502_Bandedge_low_LTE_FDD_B05_CH_low_RB_Full

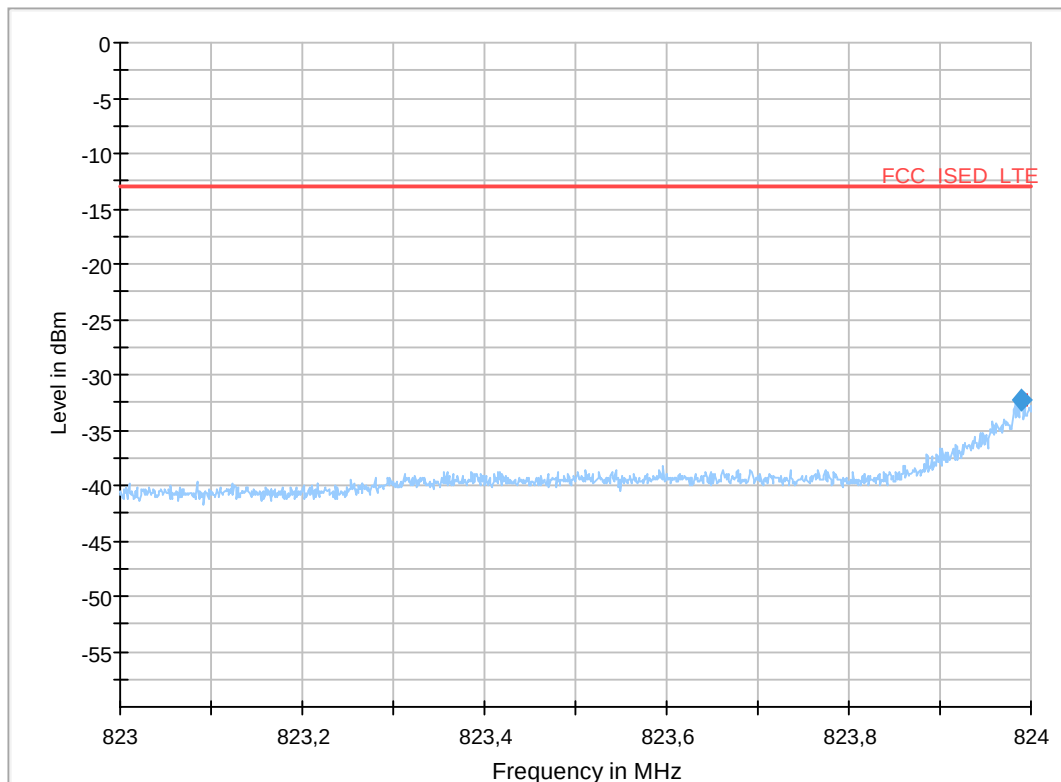
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §22.917
Operating Mode:	Bandedge_low_LTE_FDD_B05_CH_low_RB_Full
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	PSt/ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
823.990000	-32.31	-13.00	19.31	700.0	50.000	V	109.0	0.0	-76

9.503_Bandedge_low_LTE_FDD_B05_CH_high_RB_1_high

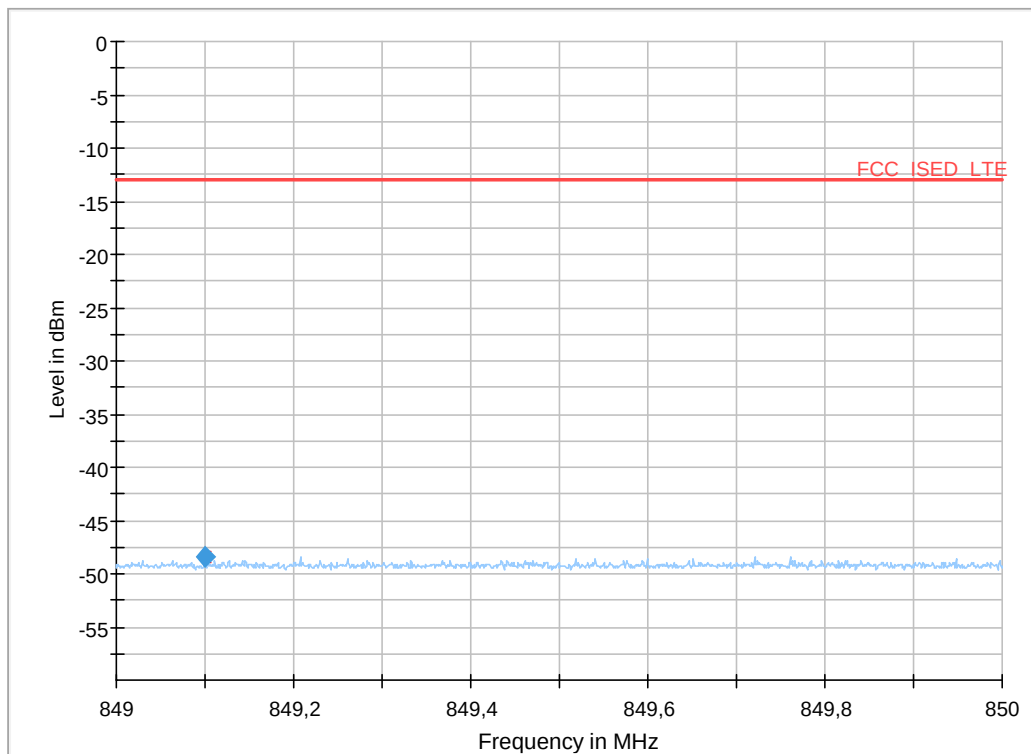
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §22.917
Operating Mode:	Bandedge_high_LTE_FDD_B05_CH_high_RB_1_high
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
849.100000	-48.35	-13.00	35.35	700.0	50.000	V	290.0	0.0	-76

9.504_Bandedge_high_LTE_FDD_B05_CH_high_RB_Full

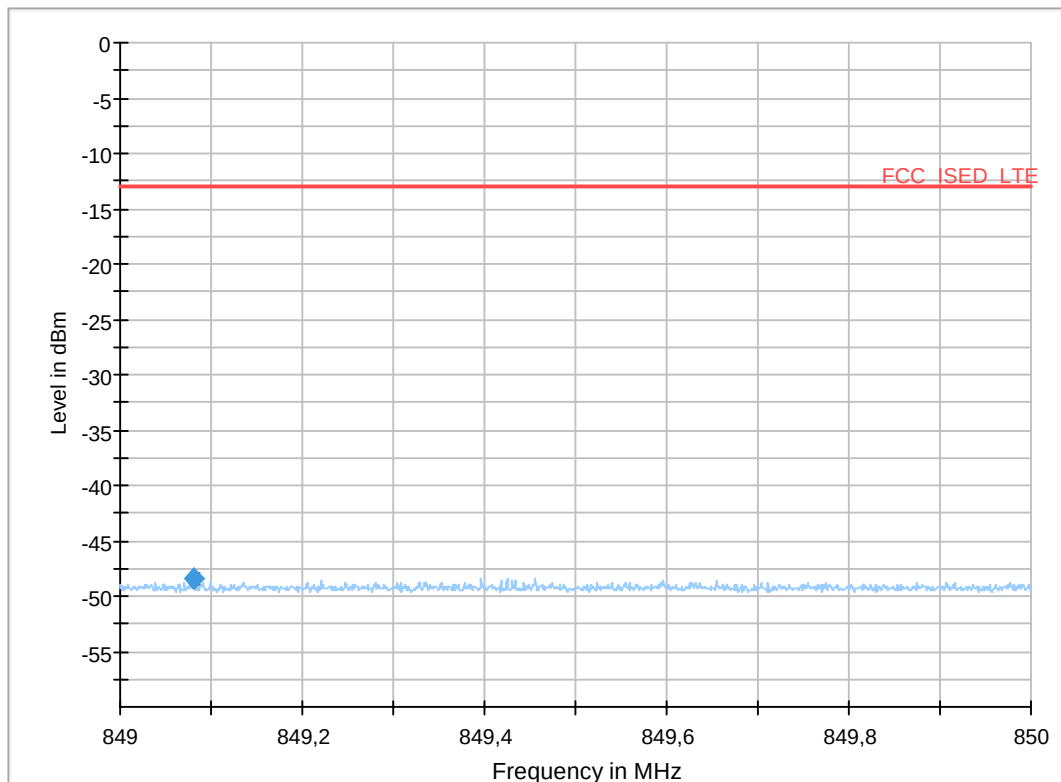
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §22.917
Operating Mode:	Bandedge_high_LTE_FDD_B05_CH_high_RB_Full
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

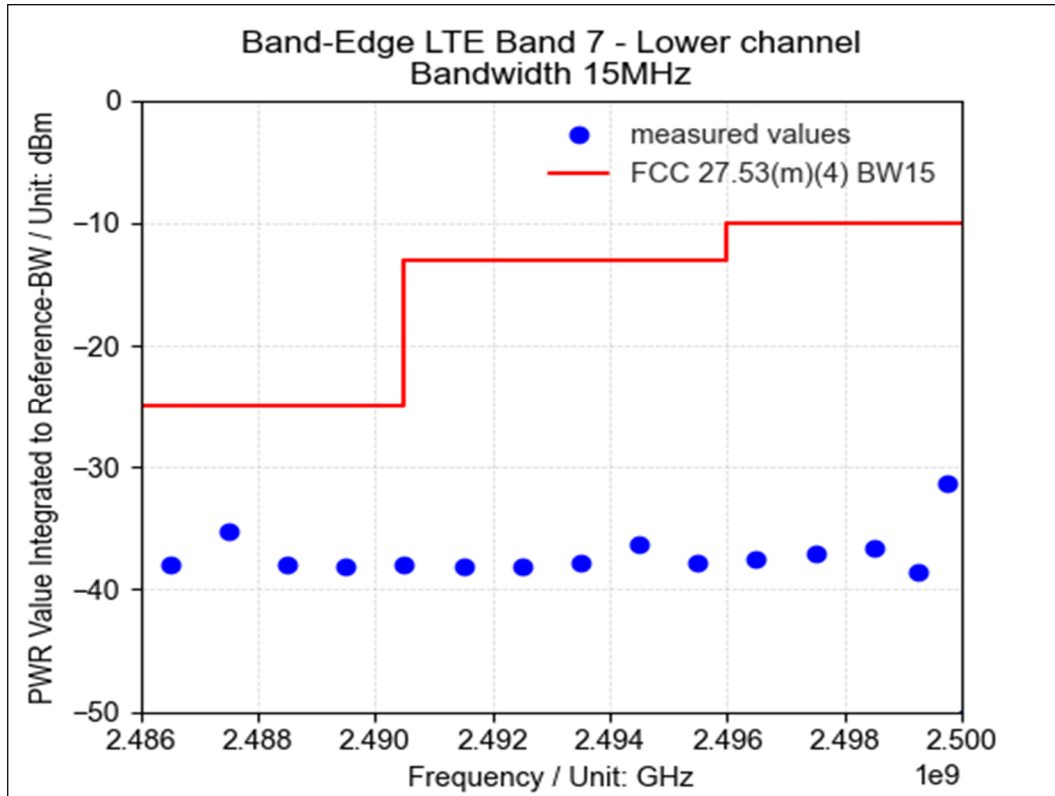
Full Spectrum



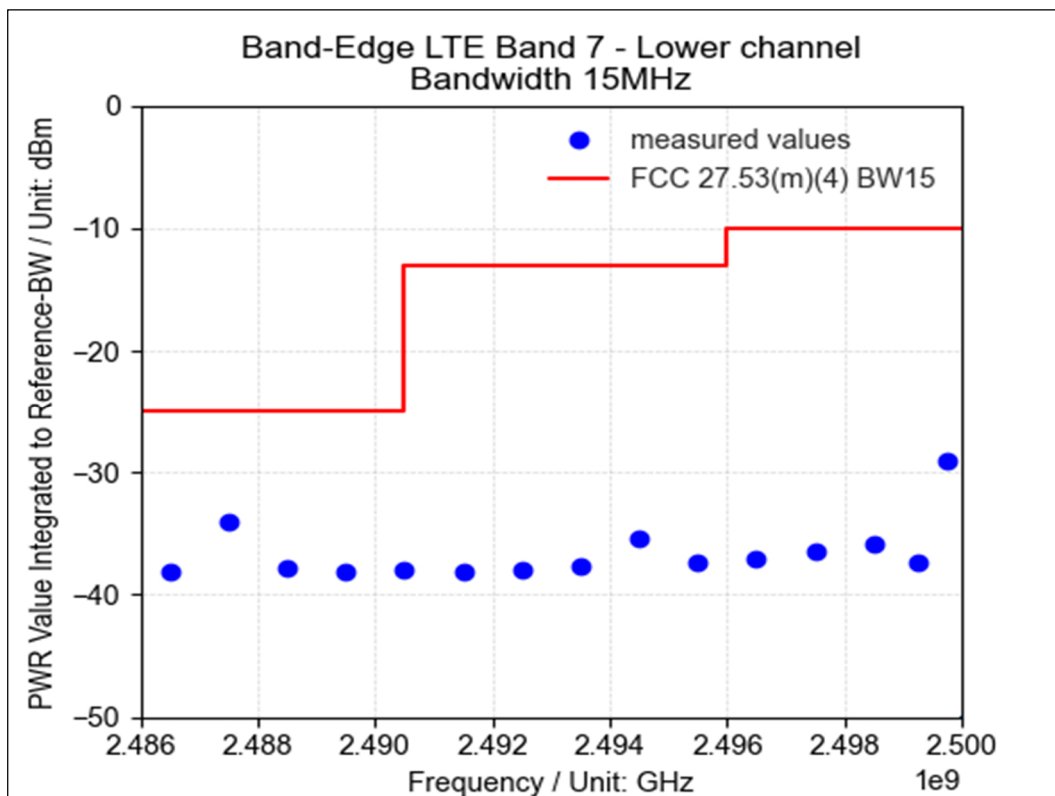
Final_Result

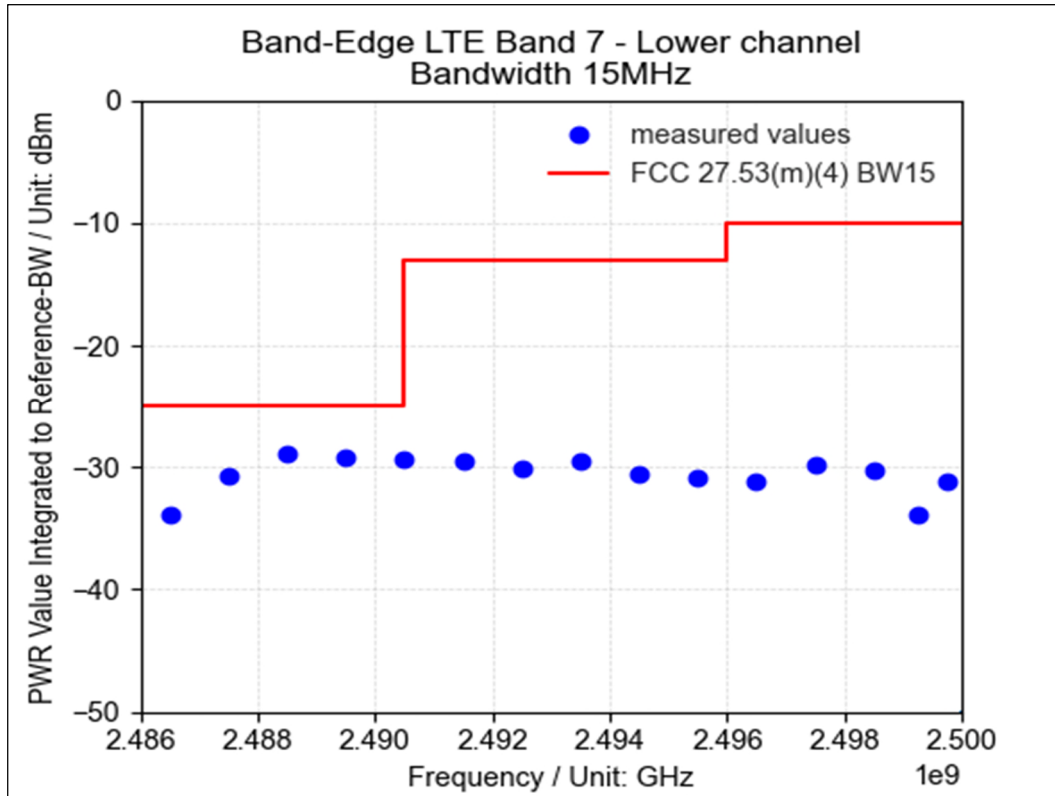
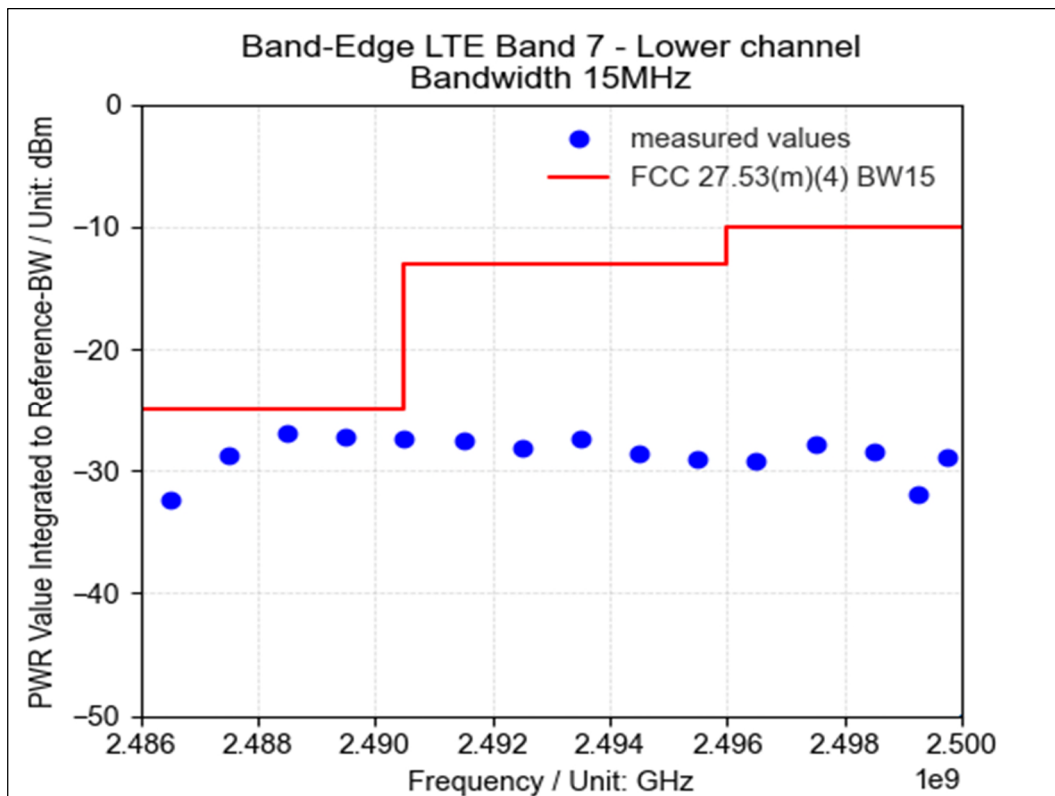
Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
849.081000	-48.39	-13.00	35.39	700.0	50.000	V	143.0	0.0	-76

9.701a_BE_low_Ch20825_1RB_low_A82_E90__AntH

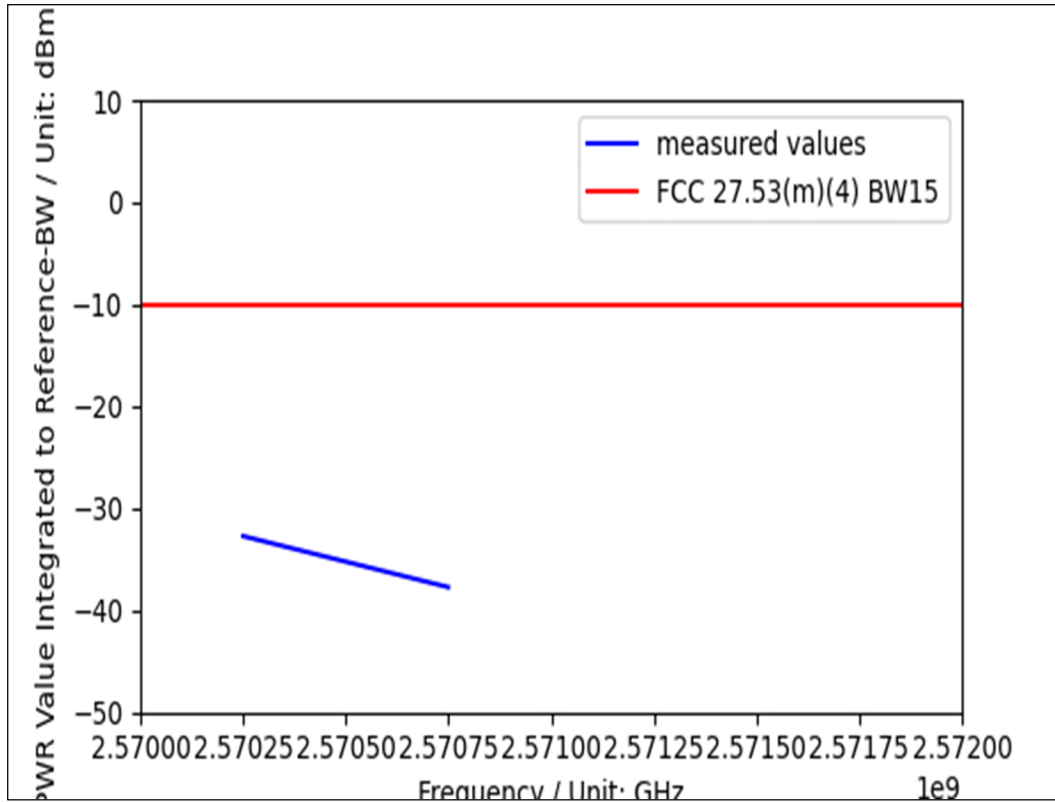


9.701b_BE_low_Ch20825_1RB_low_A87_E90__AntV

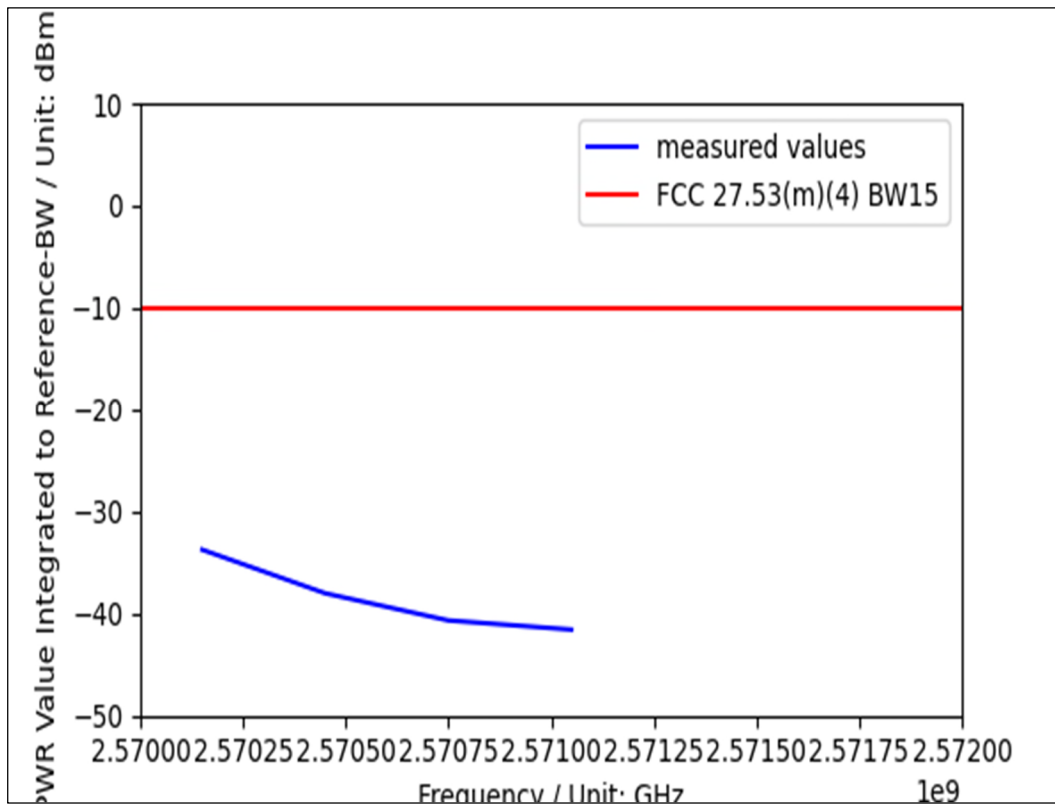


9.702a_BE_low_Ch20825_75RBs_A82_E90__AntH

9.702b_BE_low_Ch20825_75RBs_A87_E90__AntV


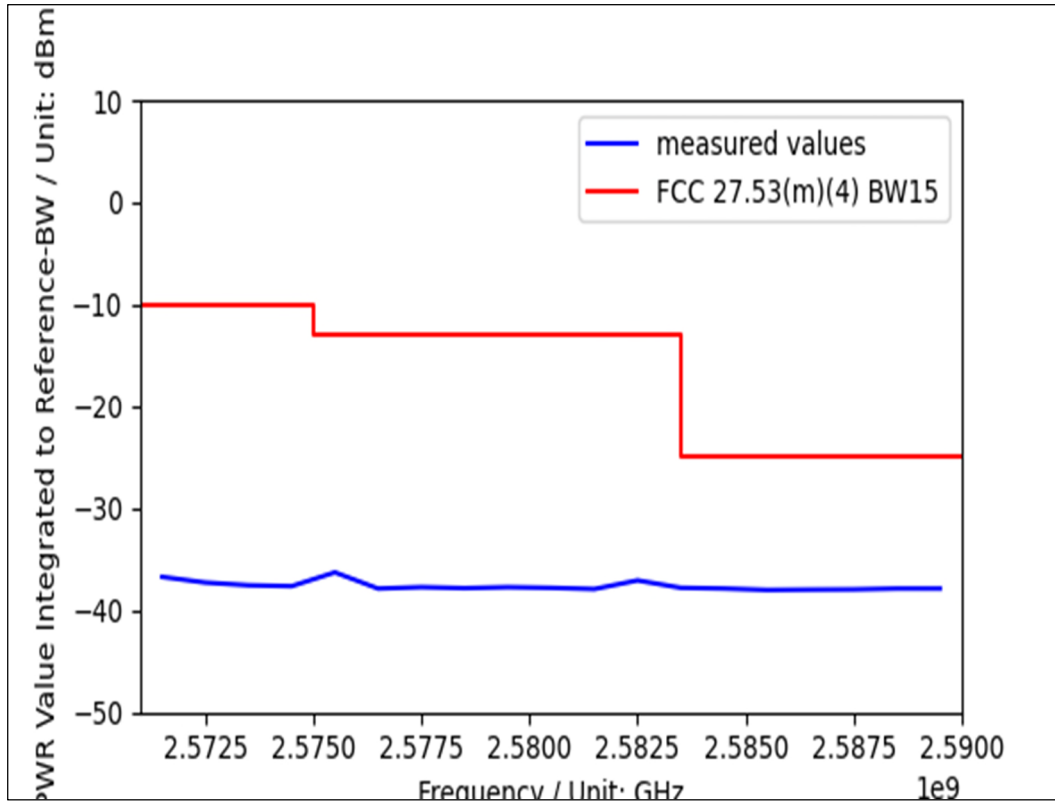
9.703a_02_BE_high_Sweep1_Ch21375_1RBhigh_A80_E90__Anth



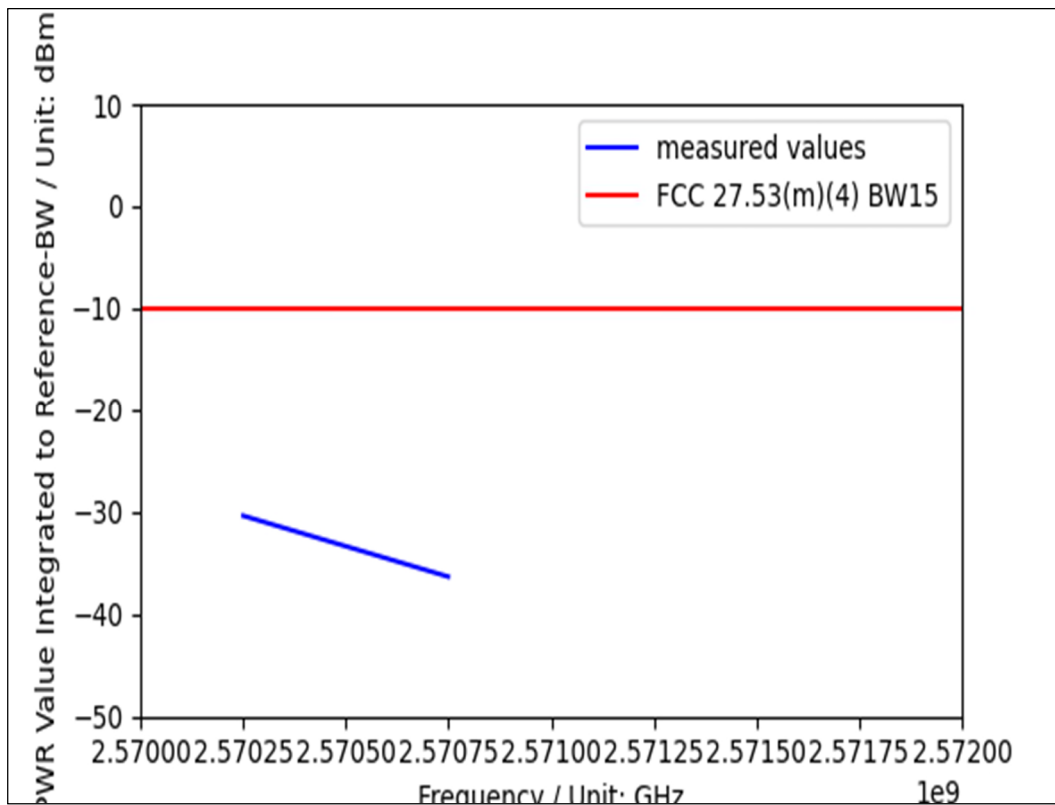
9.703a_BE_high_Sweep1_Ch21375_1RBhigh_A80_E90__Anth



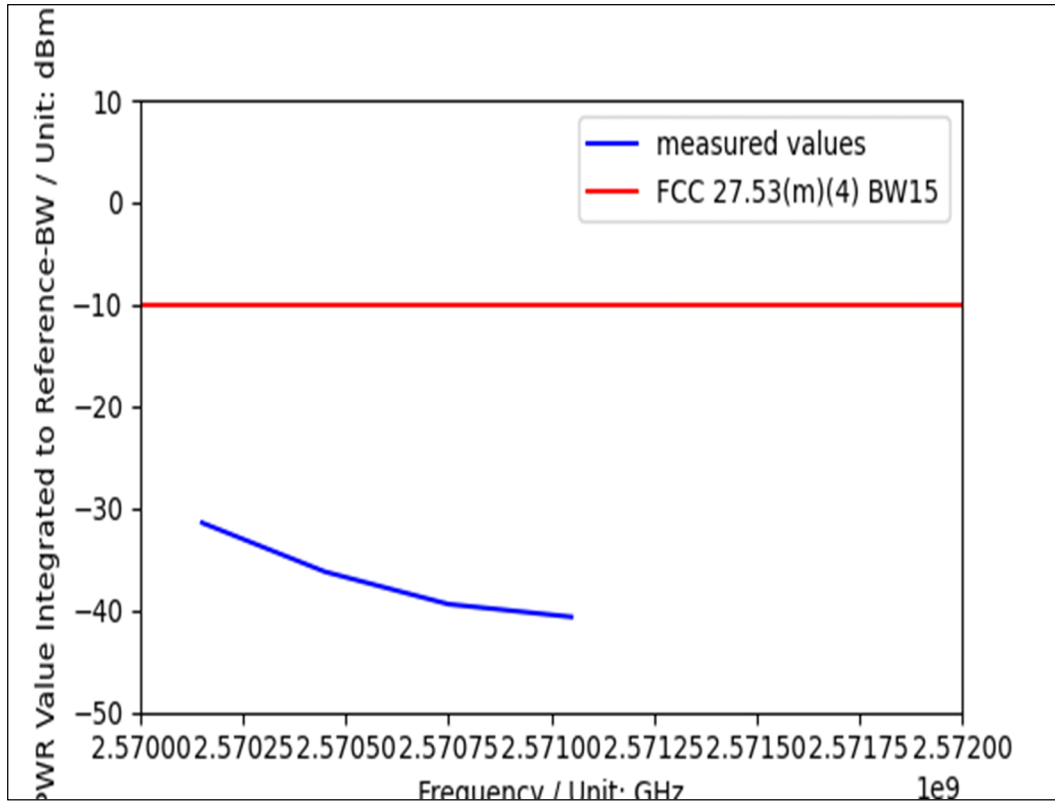
9.703a_BE_high_Sweep2_Ch21375_1RBhigh_A80_E90__Anth



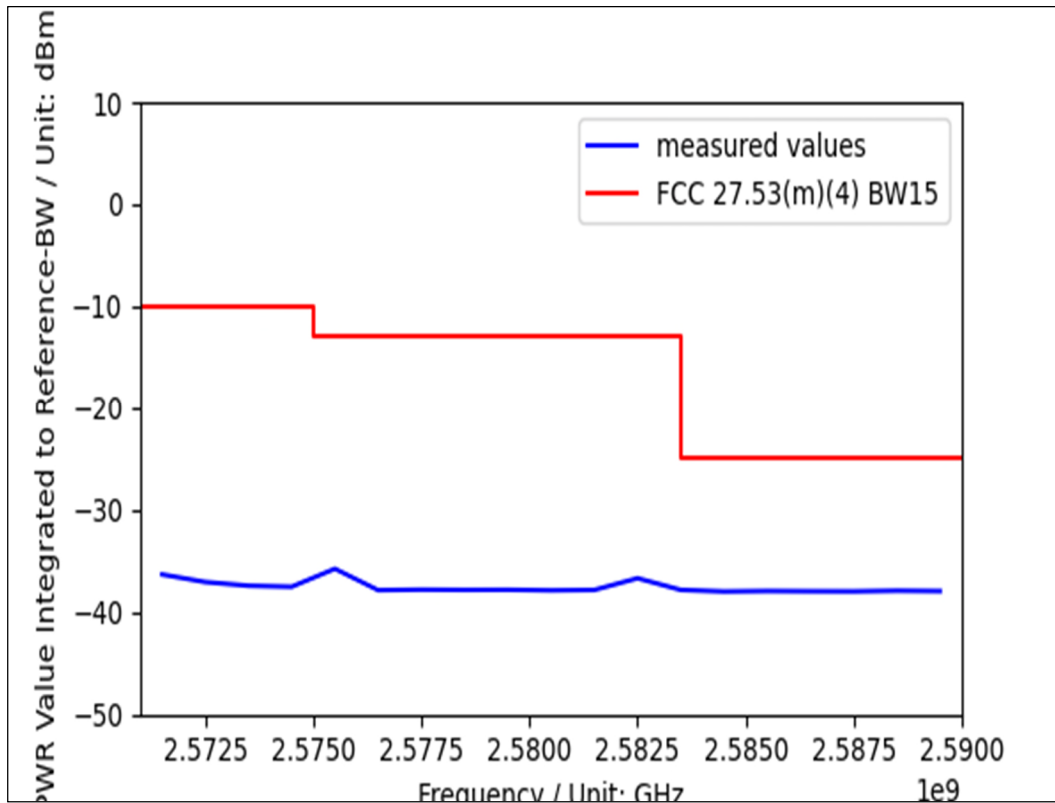
9.703b_02_BE_high_Sweep1_Ch21375_1RBhigh_A78_E90__AntV

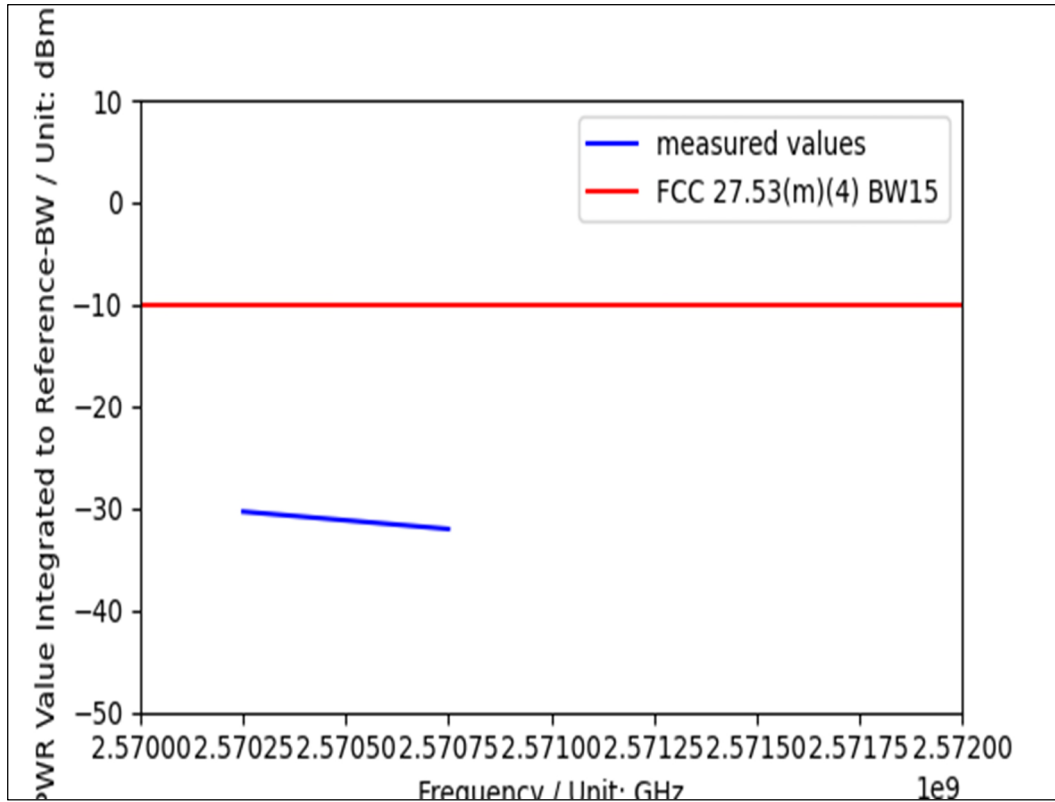
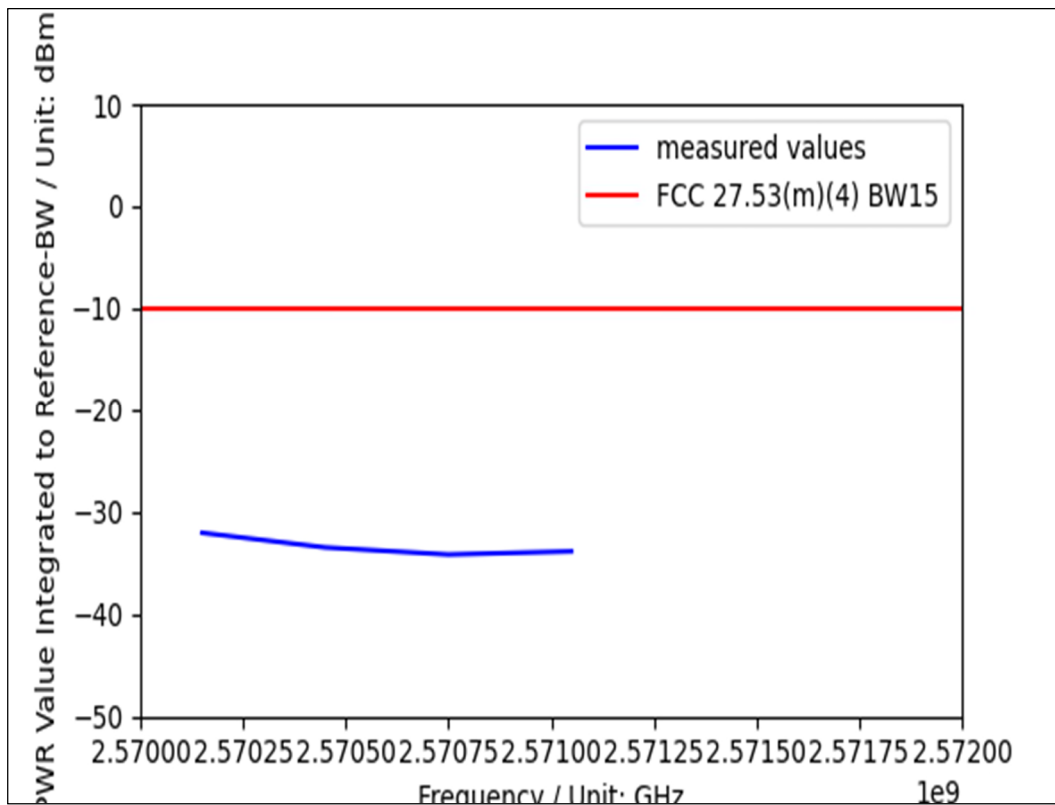


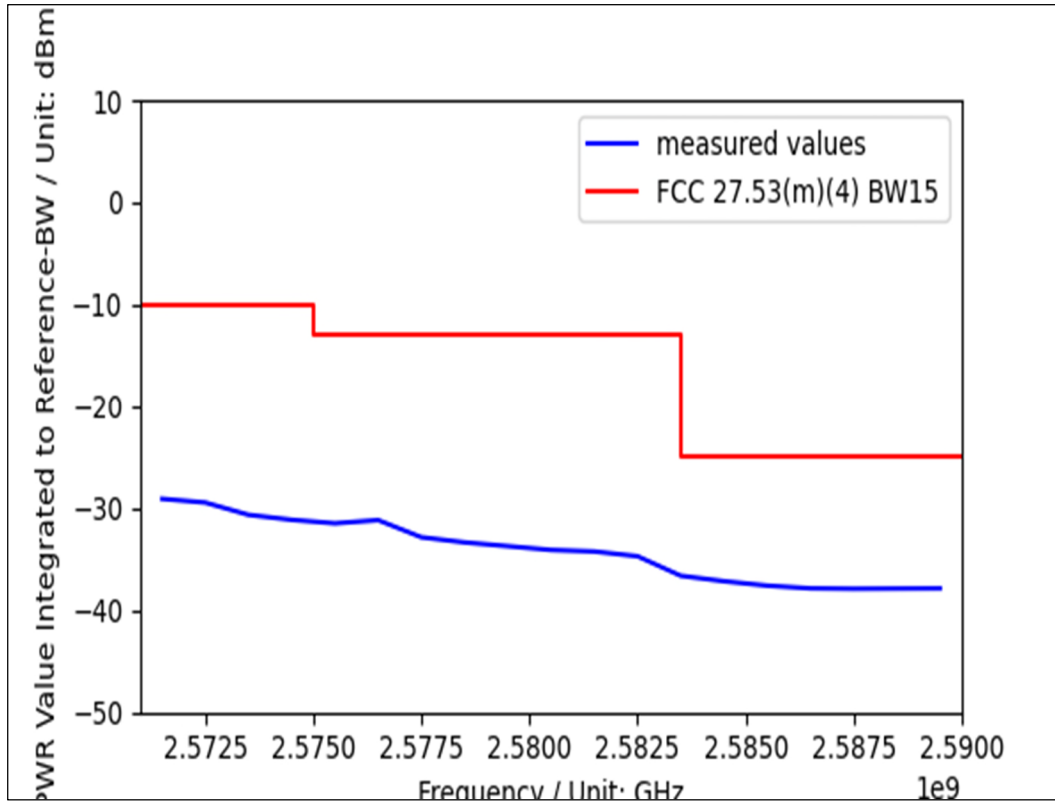
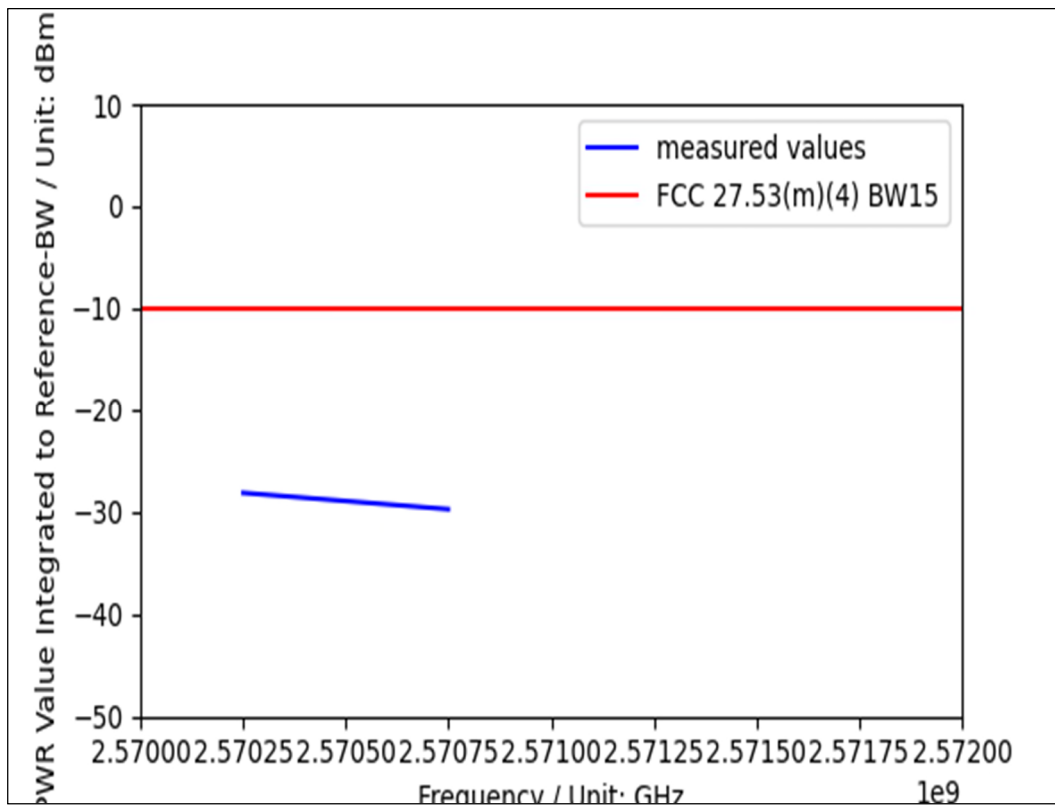
9.703b_BE_high_Sweep1_Ch21375_1RBhigh_A78_E90__AntV

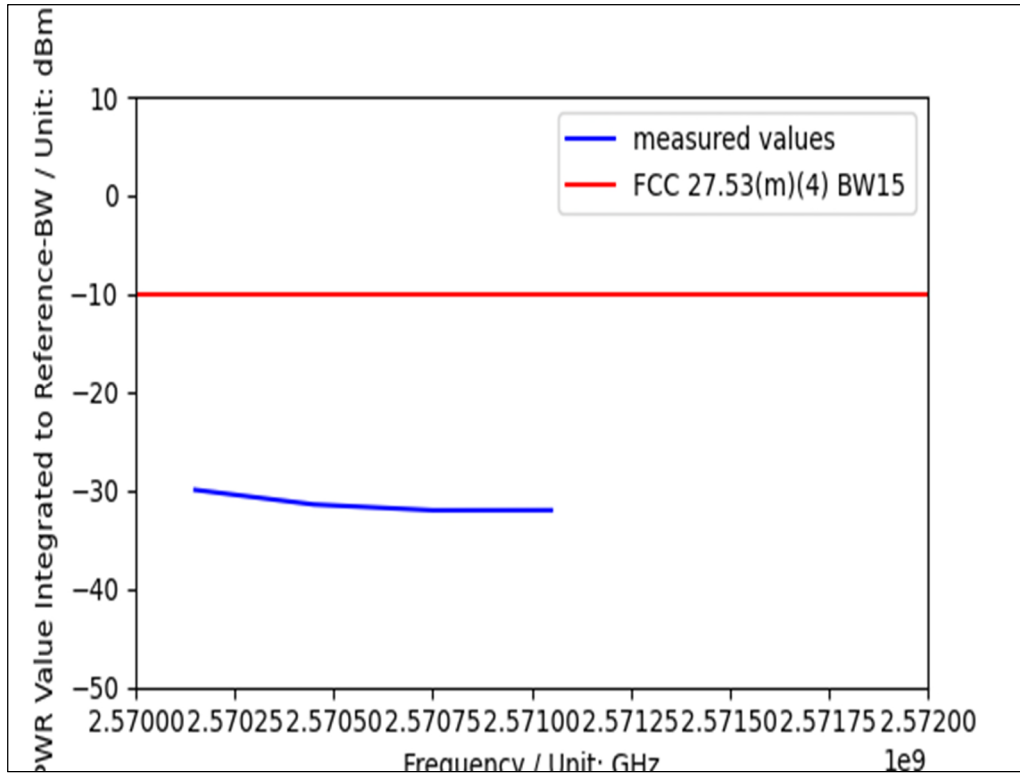
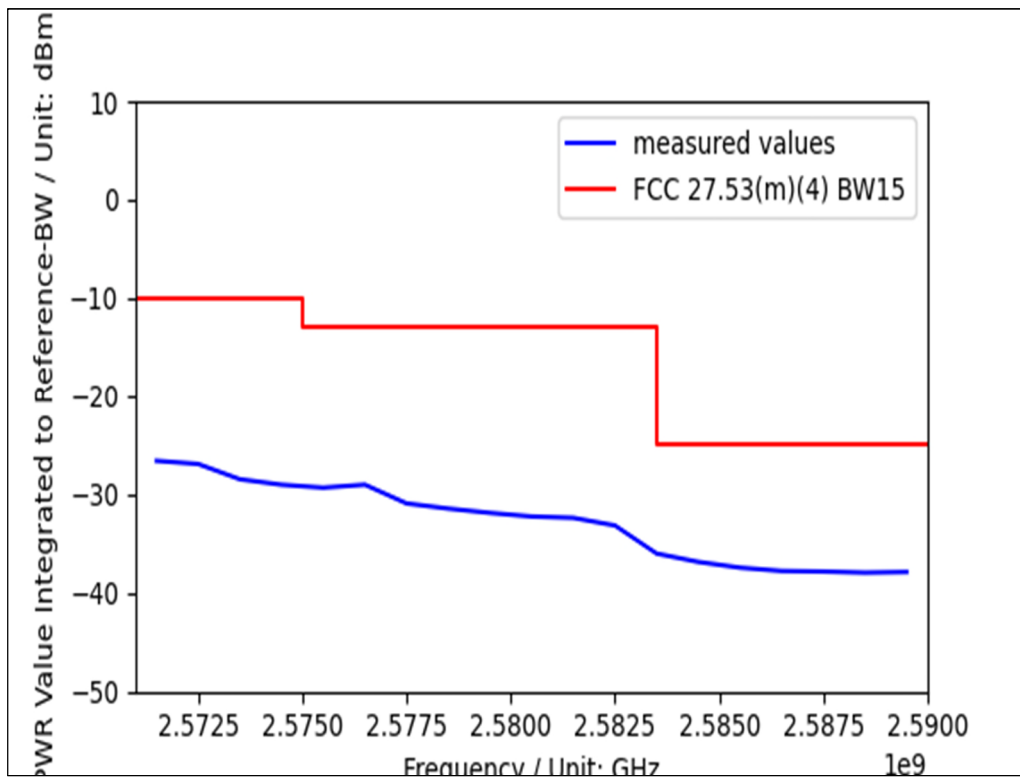


9.703b_BE_high_Sweep2_Ch21375_1RBhigh_A78_E90__AntV



9.704a_02_BE_high_Sweep1_Ch21375_RB75_A80_E90__AntH

9.704a_BE_high_Sweep1_Ch21375_RB75_A80_E90__AntH


9.704a_BE_high_Sweep2_Ch21375_RB75_A80_E90__AntH

9.704b_02_BE_high_Sweep1_Ch21375_RB75_A78_E90__AntV


9.704b_BE_high_Sweep1_Ch21375_RB75_A78_E90__AntV

9.704b_BE_high_Sweep2_Ch21375_RB75_A78_E90__AntV


9.1201_Bandedge_low_LTE_FDD_B12_CH_low_RB_1_low

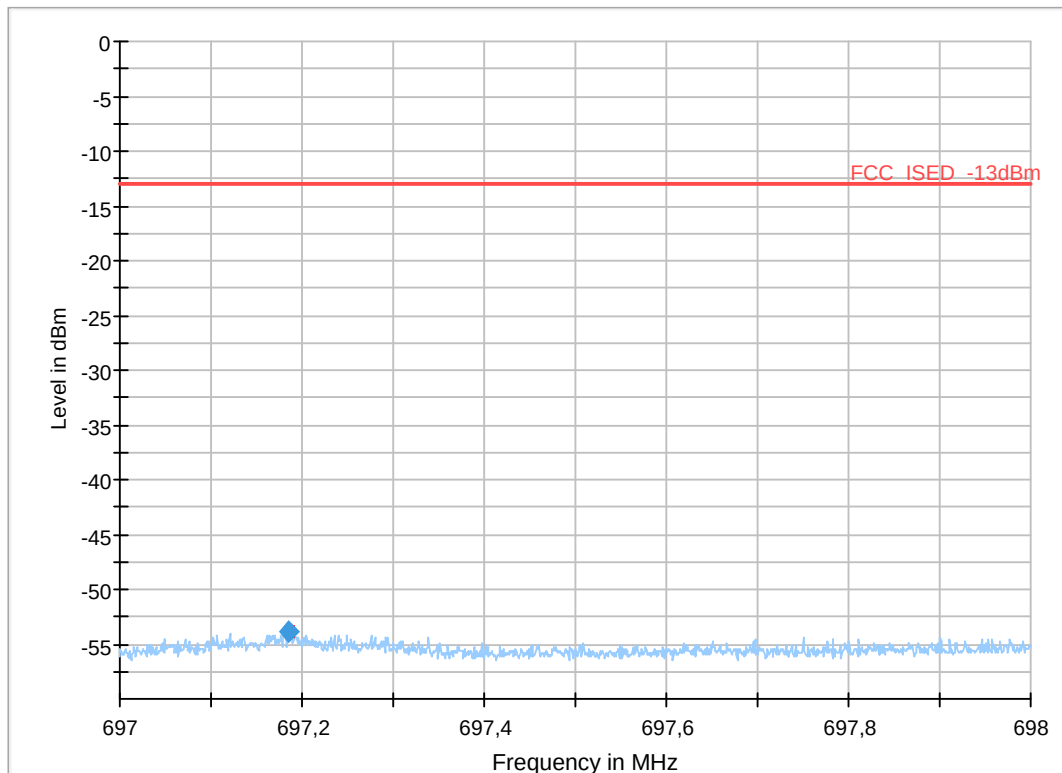
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetekom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_low_LTE_FDD_B12_CH_low_RB_1_low
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
697.185000	-53.81	-13.00	40.81	700.0	20.000	H	6.0	90.0	-78

9.1202_Bandedge_low_LTE_FDD_B12_CH_low_RB_Full

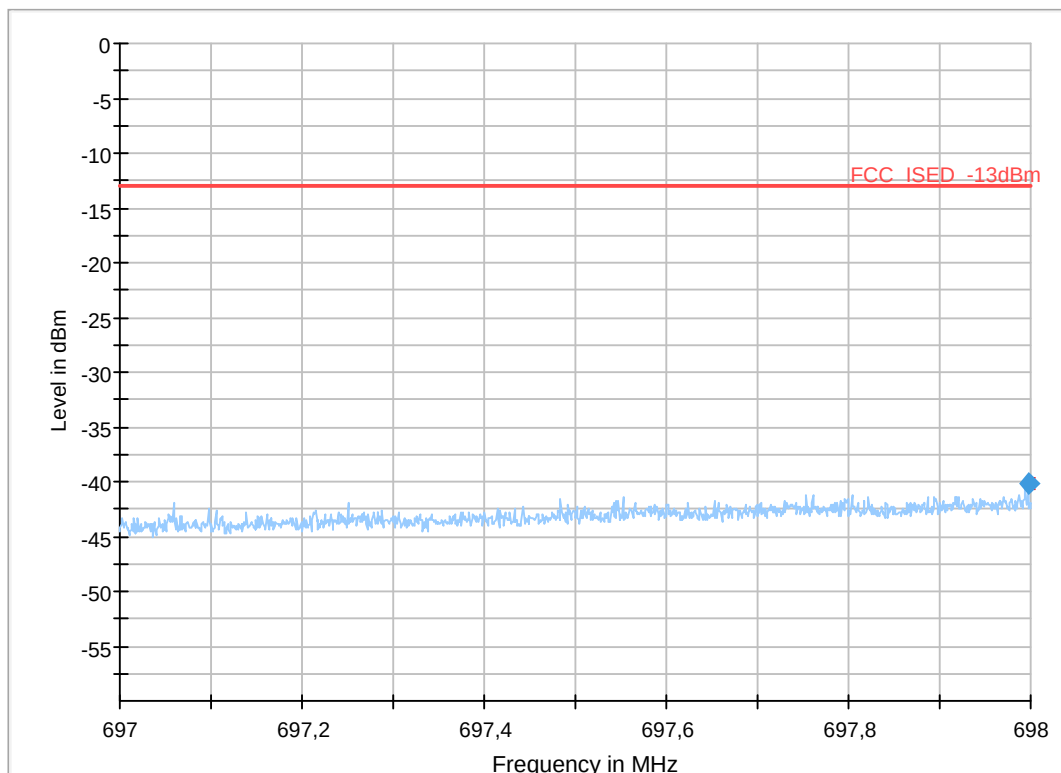
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_low_LTE_FDD_B12_CH_low_RB_Full
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
697.997000	-40.18	-13.00	27.18	700.0	20.000	H	210.0	0.0	-78

9.1203_Bandedge_high_LTE_FDD_B12_CH_high_RB_1_high

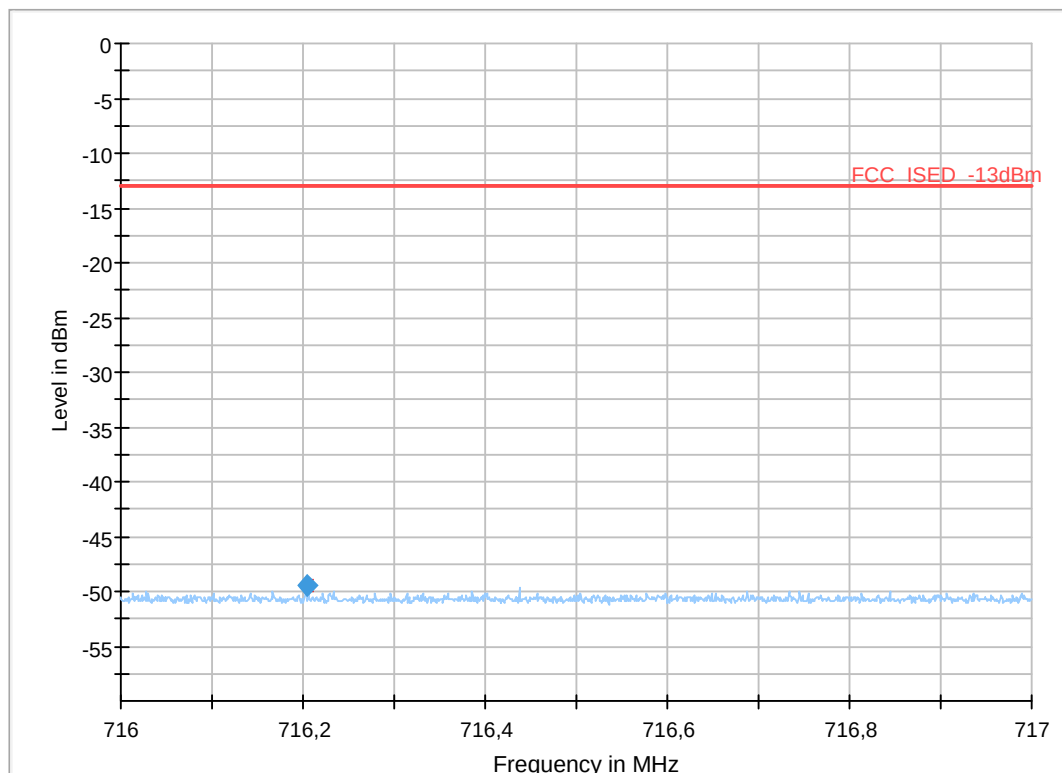
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_high_LTE_FDD_B12_CH_high_RB_1_high
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
716.204000	-49.56	-13.00	36.56	700.0	50.000	V	102.0	90.0	-78

9.1204_Bandedge_high_LTE_FDD_B12_CH_high_RB_Full

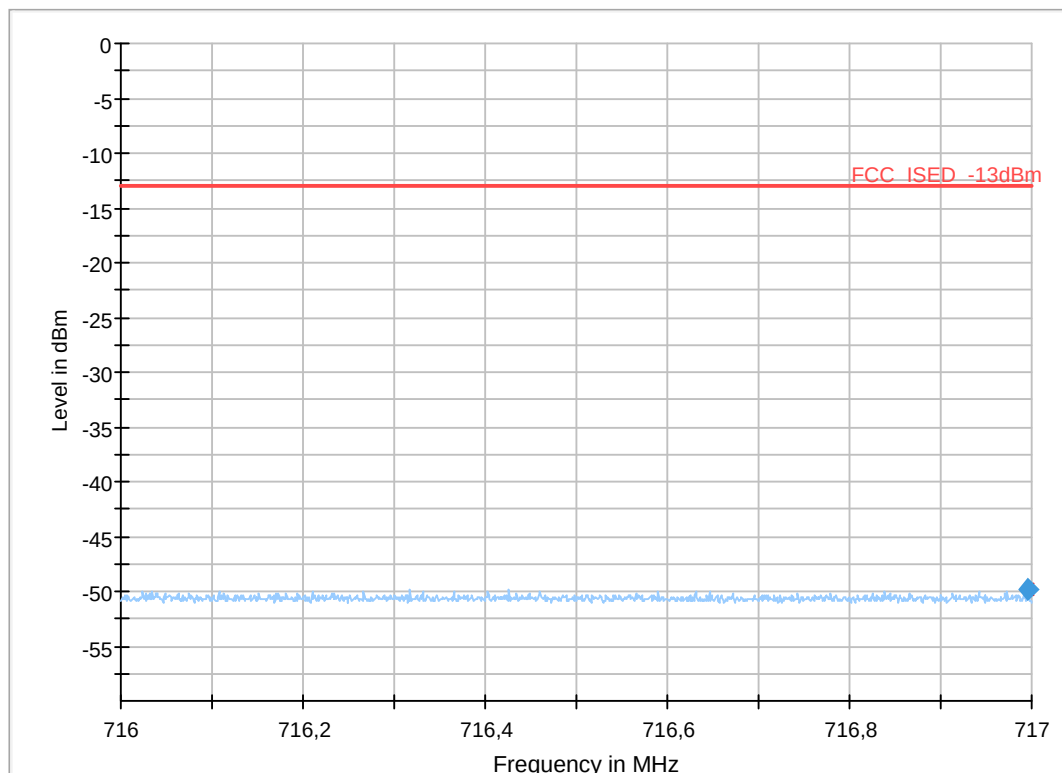
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_high_LTE_FDD_B12_CH_high_RB_Full
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
716.996000	-49.84	-13.00	36.84	700.0	50.000	V	96.0	90.0	-78

9.1301_Bandedge_low_LTE_FDD_B13_CH_low_RB_1_low

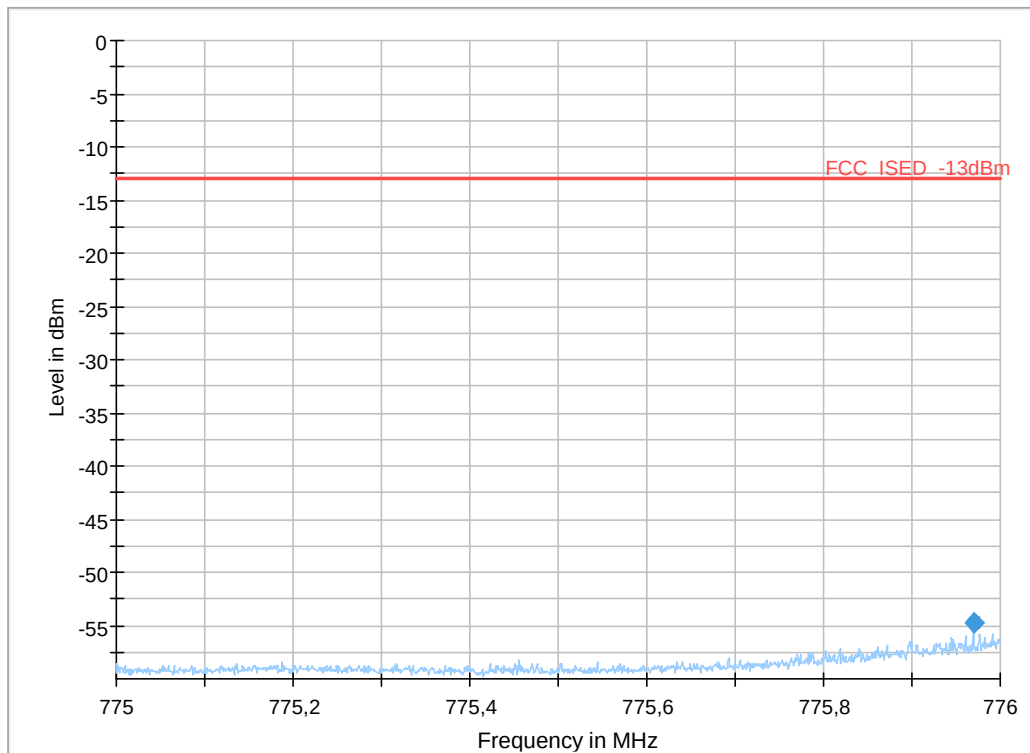
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_low_LTE_FDD_B13_CH_low_RB_1_low
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
775.970000	-54.66	-13.00	41.66	700.0	50.000	V	286.0	0.0	-77

9.1302_Bandedge_low_LTE_FDD_B13_CH_low_RB_full

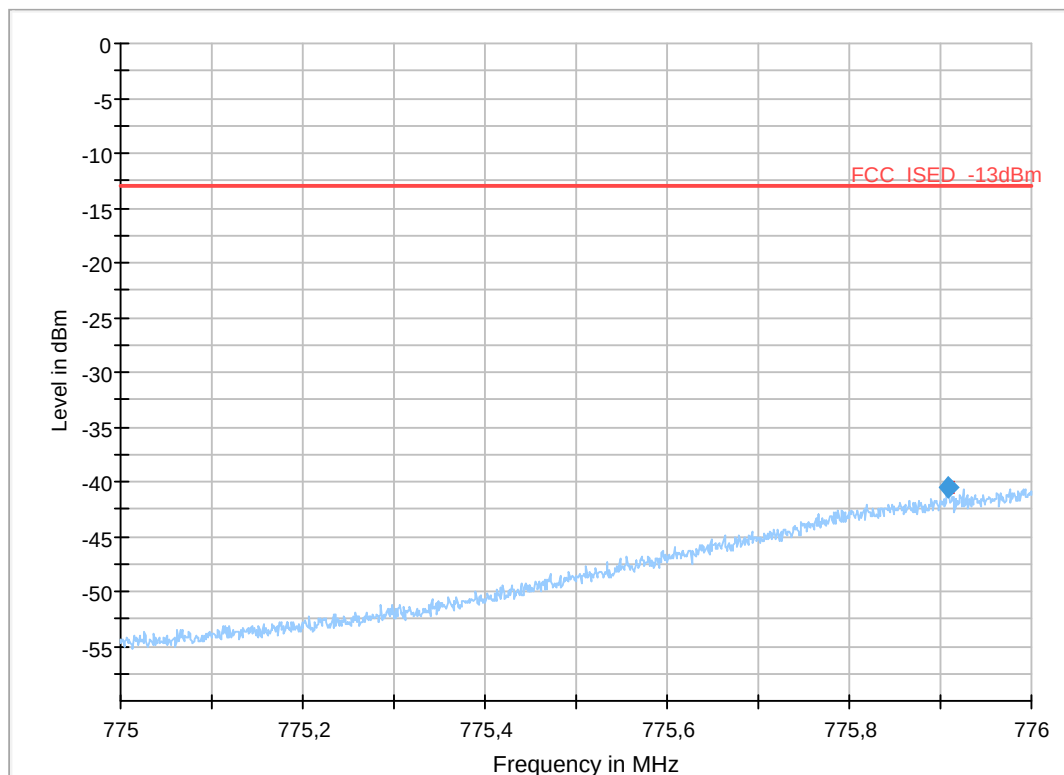
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_low_LTE_FDD_B13_CH_low_RB_full
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
775.909000	-40.58	-13.00	27.58	700.0	50.000	V	296.0	0.0	-77

9.1303_Bandedge_high_LTE_FDD_B13_CH_high_RB_1_high

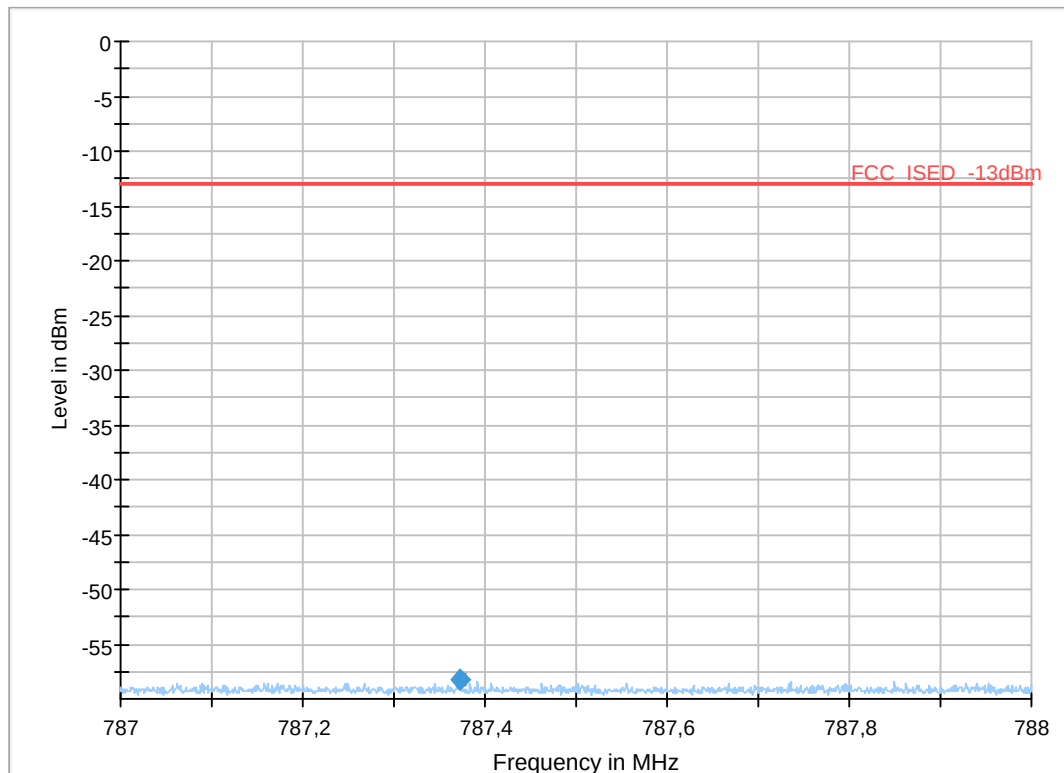
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_high_LTE_FDD_B13_CH_high_RB_1_high
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
787.372000	-58.20	-13.00	45.20	700.0	50.000	V	313.0	0.0	-77

9.1304_Bandedge_high_LTE_FDD_B13_CH_high_RB_Full

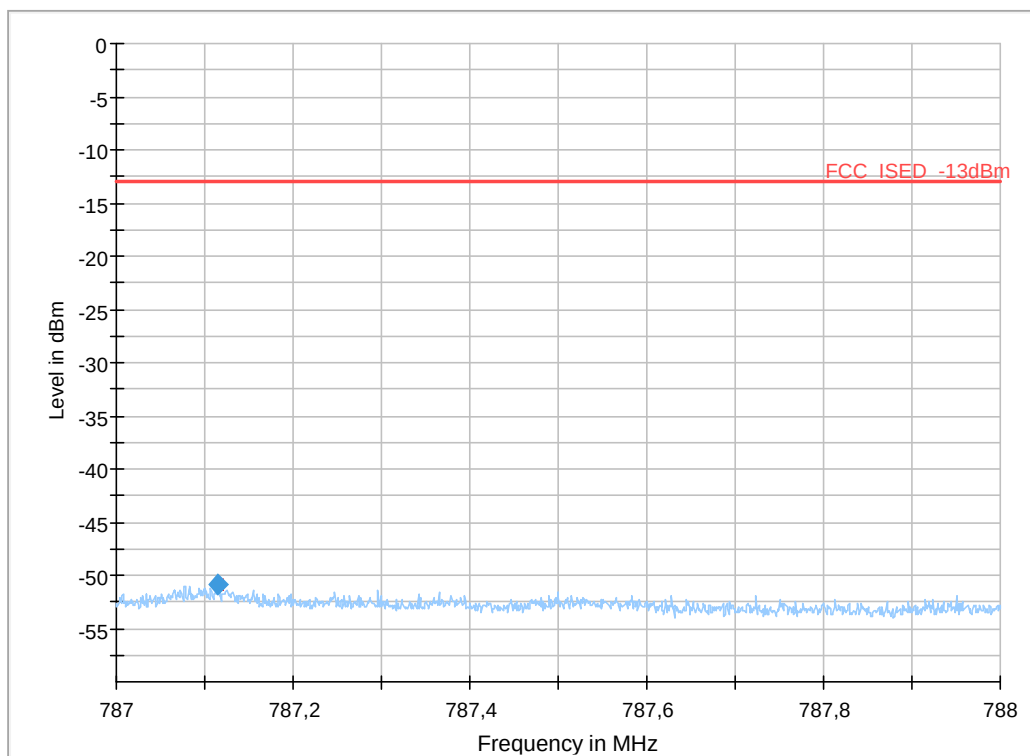
Common Information

Test Description:	Radiated Emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §27.53
Operating Mode:	Bandedge_high_LTE_FDD_B13_CH_high_RB_Full
Environmental Conditions:	Humidity : 52% rH; Temperature: 20 °C
Test SW Version:	EMC32 V10.60.20
Operator:	ASa
Remarks:	EUT - laying/standing position
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT Sample Nr:	23-1-00439S03_C01
Power Supply:	12 V DC

Full Spectrum



Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
787.115000	-50.95	-13.00	37.95	700.0	50.000	V	164.0	0.0	-77

End Of Annex 1