

Annex 1: Measurement diagrams 23-1-0043901T004a-A1

Number of pages:	12	Date of Report:	2024-Feb-07
Testing company:	cetecom advanced GmbH Untertuerkheimer Str. 6-10 66117 Saarbruecken GERMANY	Applicant:	Continental Engineering Services GmbH
Product: Model:	Telematic Device 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		

Measurement diagrams

2.850_H_field_GSM_850_CH_128

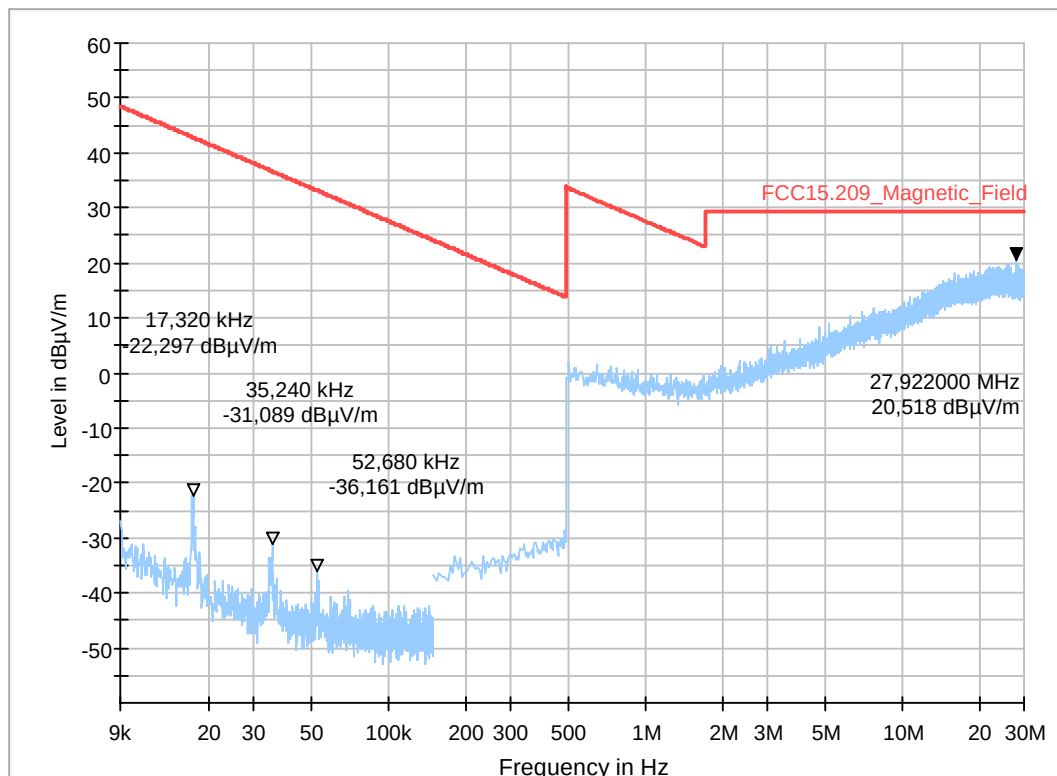
Common Information

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; RSS-Gen: Issue 5
Operator:	MNu/PSt
Operating Mode:	GSM_850_CH_128
Power during tests:	12 V DC
Environmental Conditions:	Temperature: 20 °C, Humidity: 50% rH
EUT Setup:	1
Verdict:	Passed

EUT Information

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

Full Spectrum



2.851_H_field_GSM_850_CH_251

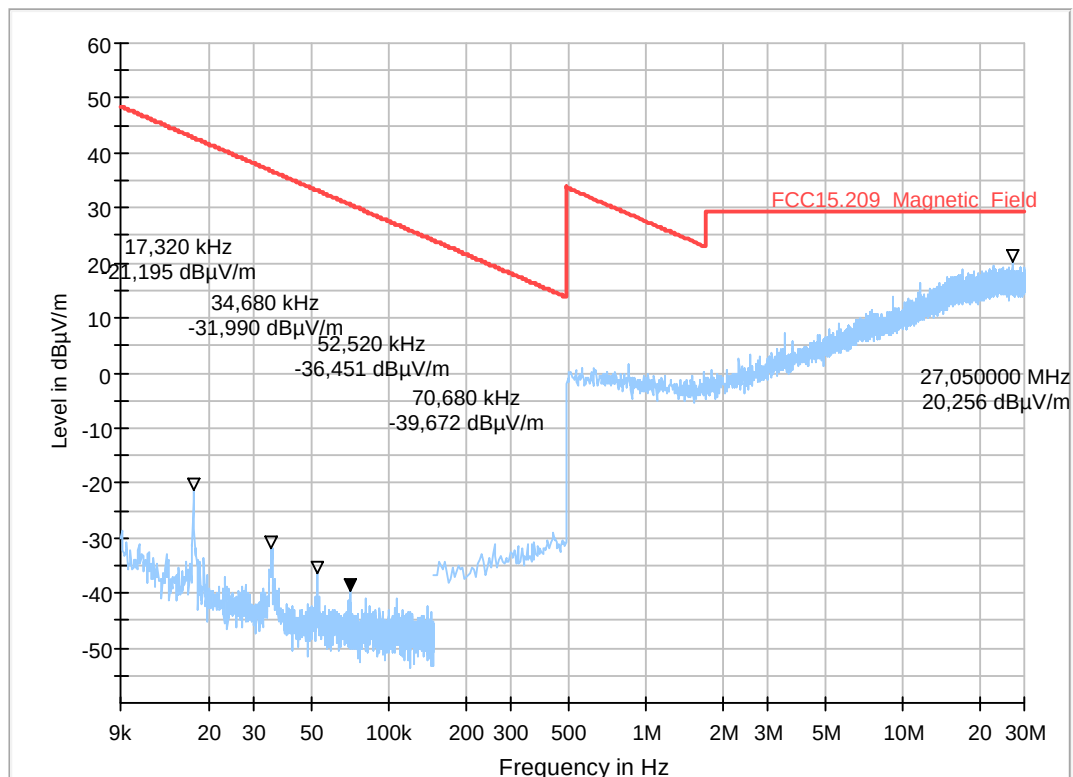
Common Information

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
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Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 5
Operator:	MNu/PSt
Operating Mode:	GSM_850_CH_251
Power during tests:	12 V DC
Environmental Conditions:	Temperature: 20 °C, Humidity: 50% rH
EUT Setup:	1
Verdict:	Passed

EUT Information

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

Full Spectrum



2.1901_H_field_GSM_1900_CH_810

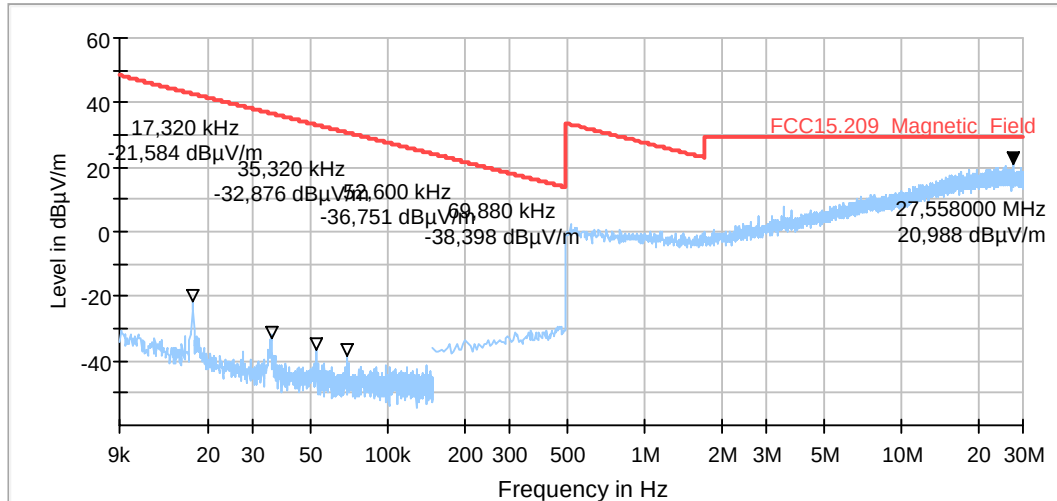
Common Information

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; RSS-Gen: Issue 5
Operator:	PSt
Operating Mode:	GSM_1900_CH_810
Power during tests:	12 V DC
Environmental Conditions:	Humidity: 50% rH; Temperature: 20 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

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

Full Spectrum



8.01_Traffic_mode_GSM_850_CH_251

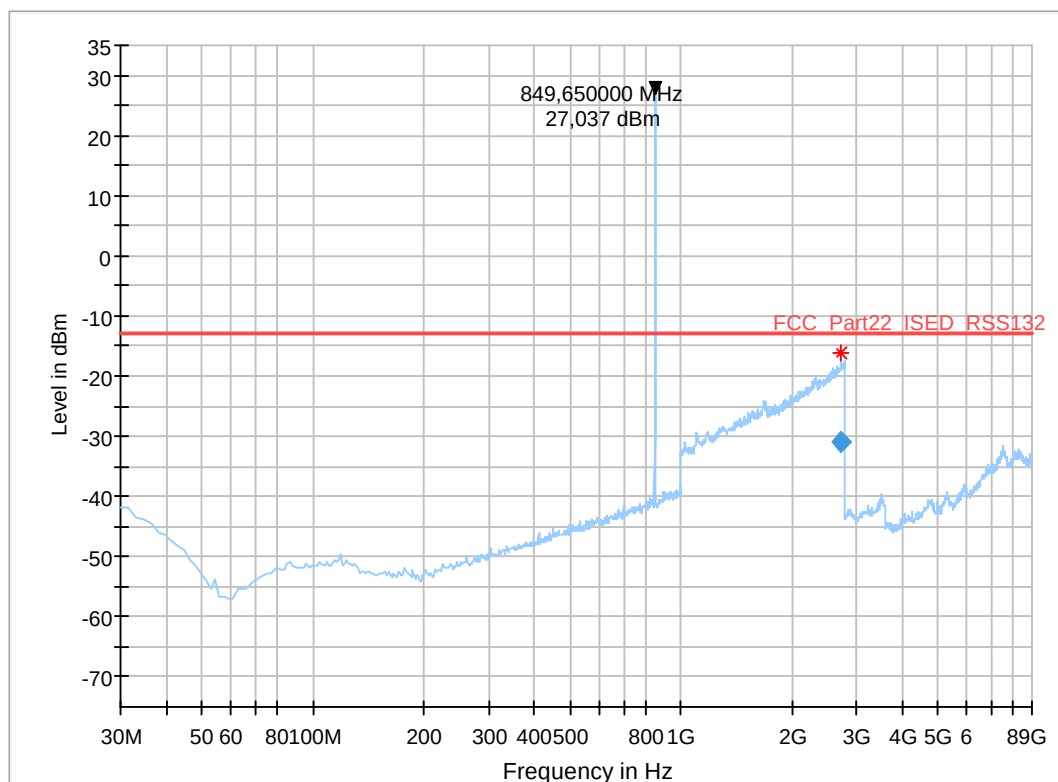
Common Information

Test Description:	Radiated Spurious Emissions GSM850
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §22.917
Antenna polarisation:	vertical / horizontal
Operating Mode:	GSM_850_CH_251
Operator:	LAB/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 849.65 MHz is uplink frequency of GSM 850 and not related to spurious emission results.

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
2722.783333	-30.82	-13.00	17.82	1000.0	100.000	V	153.0	0.0	-56

8.02_Traffic_mode_GSM_1900_CH_810

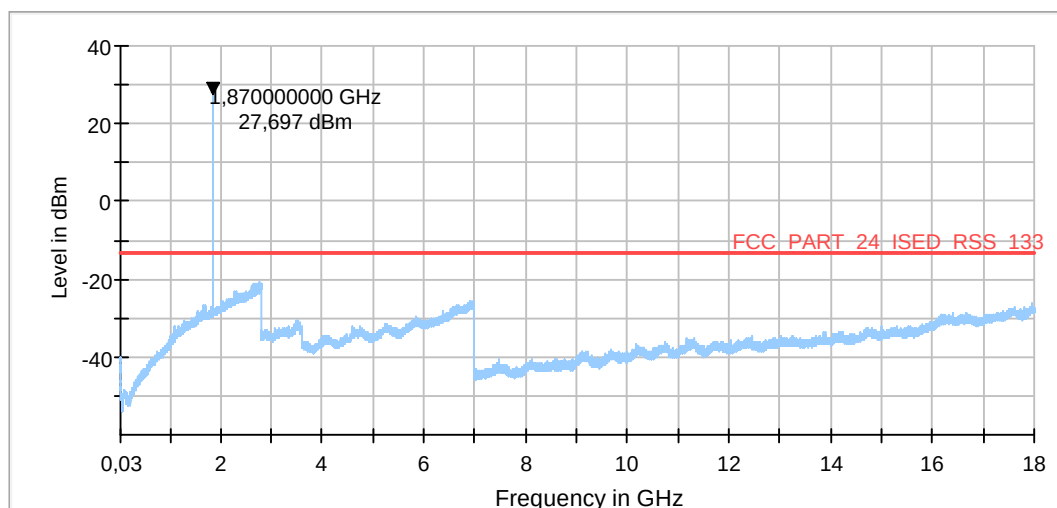
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §24.238
Antenna polarisation:	vertical / horizontal
Operating Mode:	GSM_1900_CH_810
Operator:	LAB
Environmental Conditions:	Humidity: 50% 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 1.87 MHz GHz is uplink frequency of GSM 1900 and not related to spurious emission results.

8.03a_Traffic_mode_GSM_1900_CH_810_laying

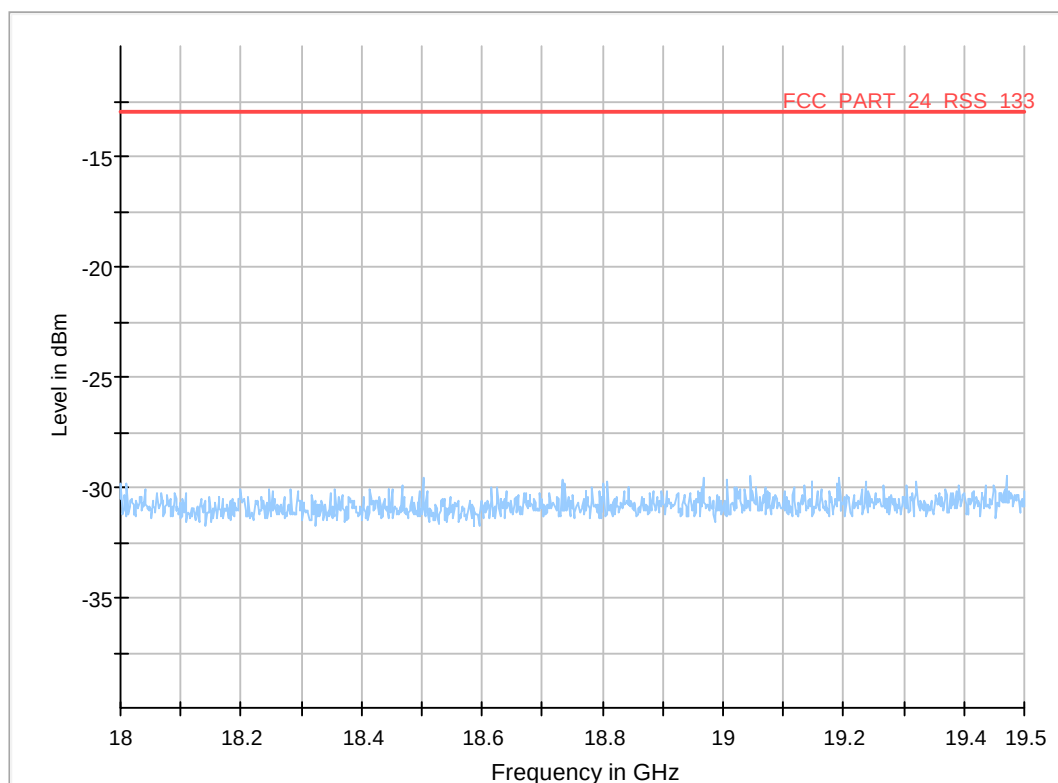
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	cetecom advanced GmbH
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC §24.238
Operating Mode:	GSM_1900_CH_810_laying
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 59% rH; Temperature: 22.7 °C
Operator:	DMA
EUT Setup:	1
Verdict:	Passed

EUT Information

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

Full Spectrum



8.03b_Traffic_mode_GSM_1900_CH_810_standing

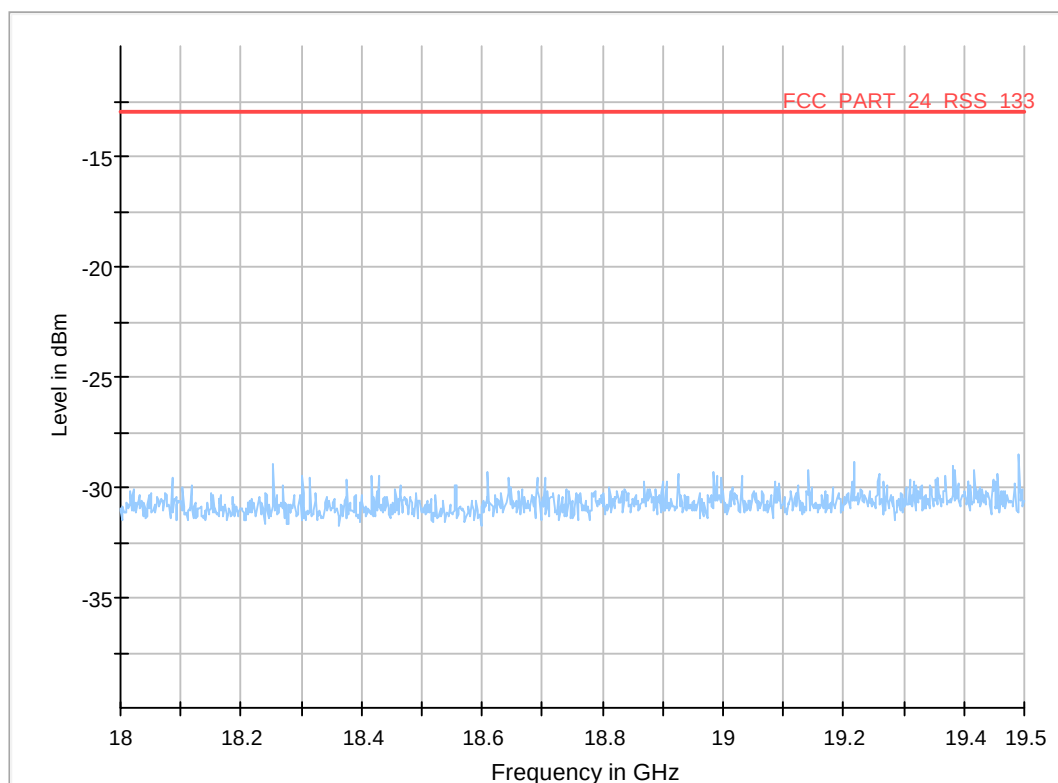
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	cetecom advanced GmbH
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC §24.238
Operating Mode:	GSM_1900_CH_810_standing
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 59% rH; Temperature: 22.7 °C
Operator:	DMA
EUT Setup:	1
Verdict:	Passed

EUT Information

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

Full Spectrum



9.850_Bandedge_low_Channel_128_UL_824.2

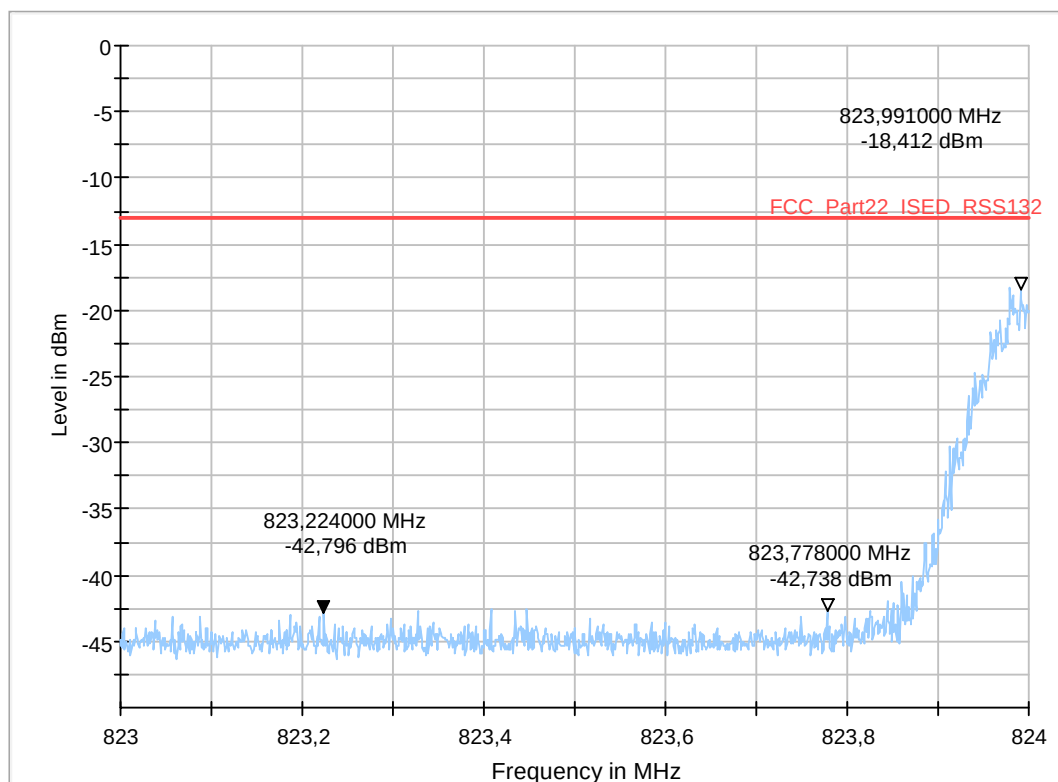
Common Information

Test Description:	Radiated emission
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §22.917
Antenna polarisation:	vertical / horizontal
Operating Mode:	Bandedge_low_Channel_128_UL_824.2
Operator:	LAB/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



9.851_Bandedge_high_Channel_251_UL_848.8

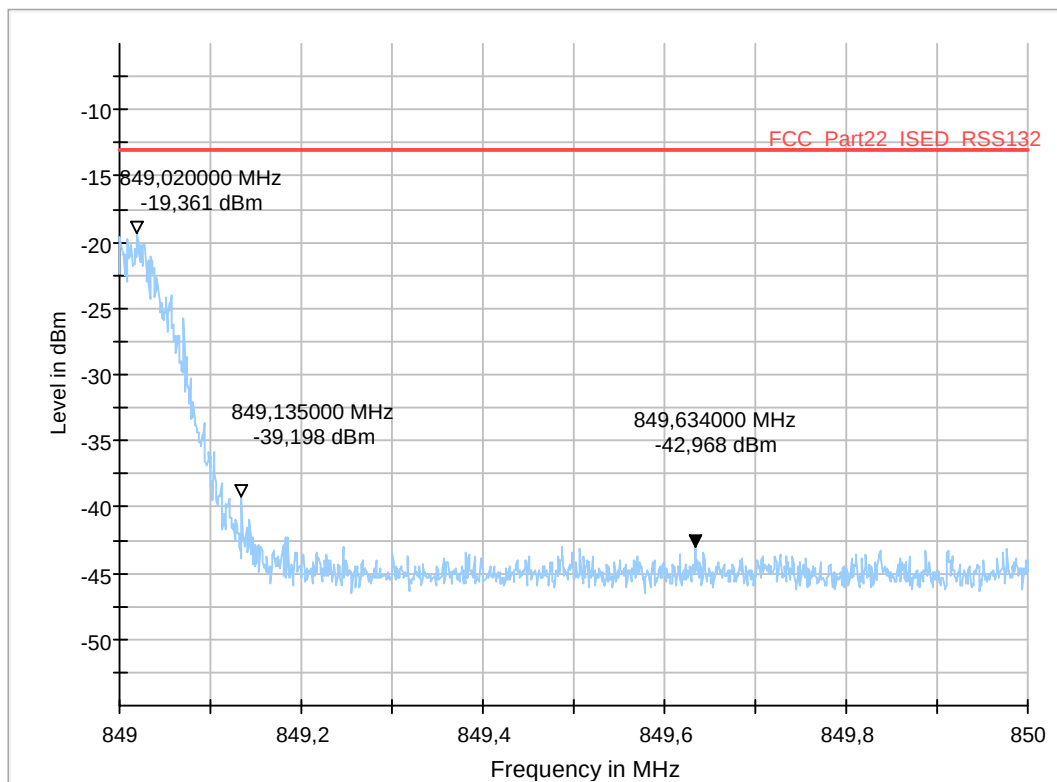
Common Information

Test Description:	Radiated emission
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §22.917
Antenna polarisation:	vertical / horizontal
Operating Mode:	Bandedge_high_Channel_251_UL_848.8
Operator:	LAB/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



9.1901_Bandedge_low_Channel_512_UL_1850.2

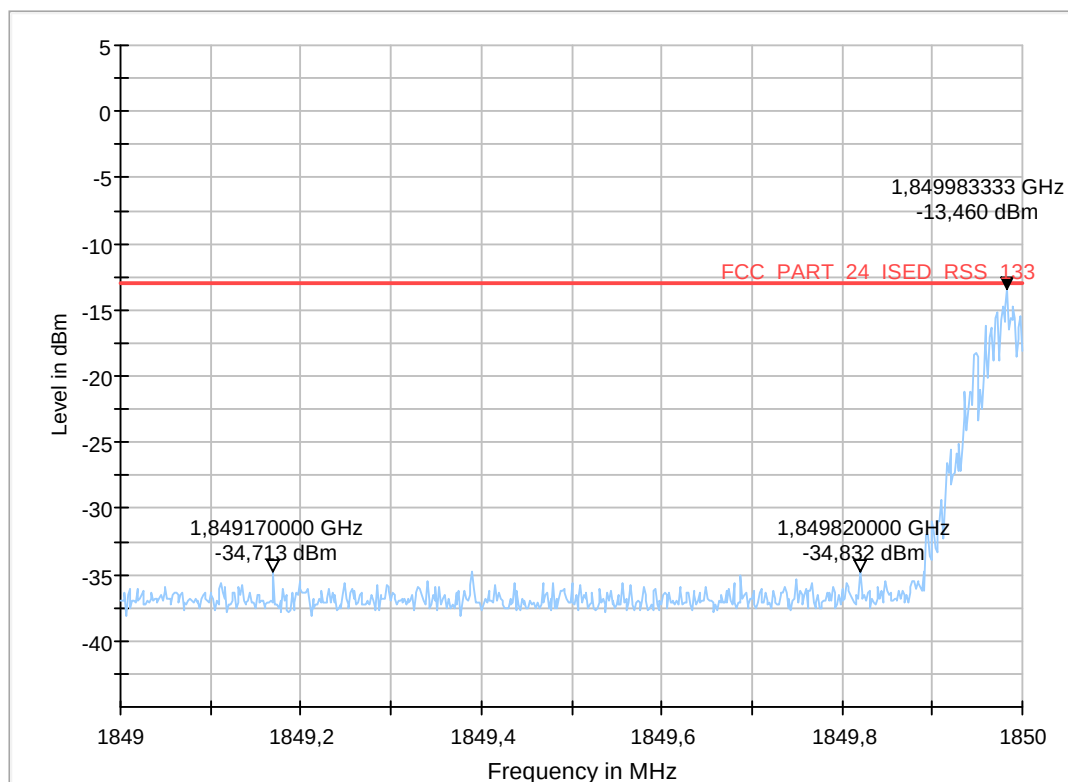
Common Information

Test Description:	Radiated emissions
Test Site Location:	cetecom advanced GmbH
Test Site:	Fully Anechoic Chamber (FAC1) - EMC32 V10.60.20
Test Standard:	FCC §24.238
Operating Mode:	Bandedge_low_Channel_512_UL_1850.2
Environmental Conditions:	Humidity: 60% rH; Temperature: 20 °C
Operator:	LAB
EUT Setup:	1
Verdict:	Passed

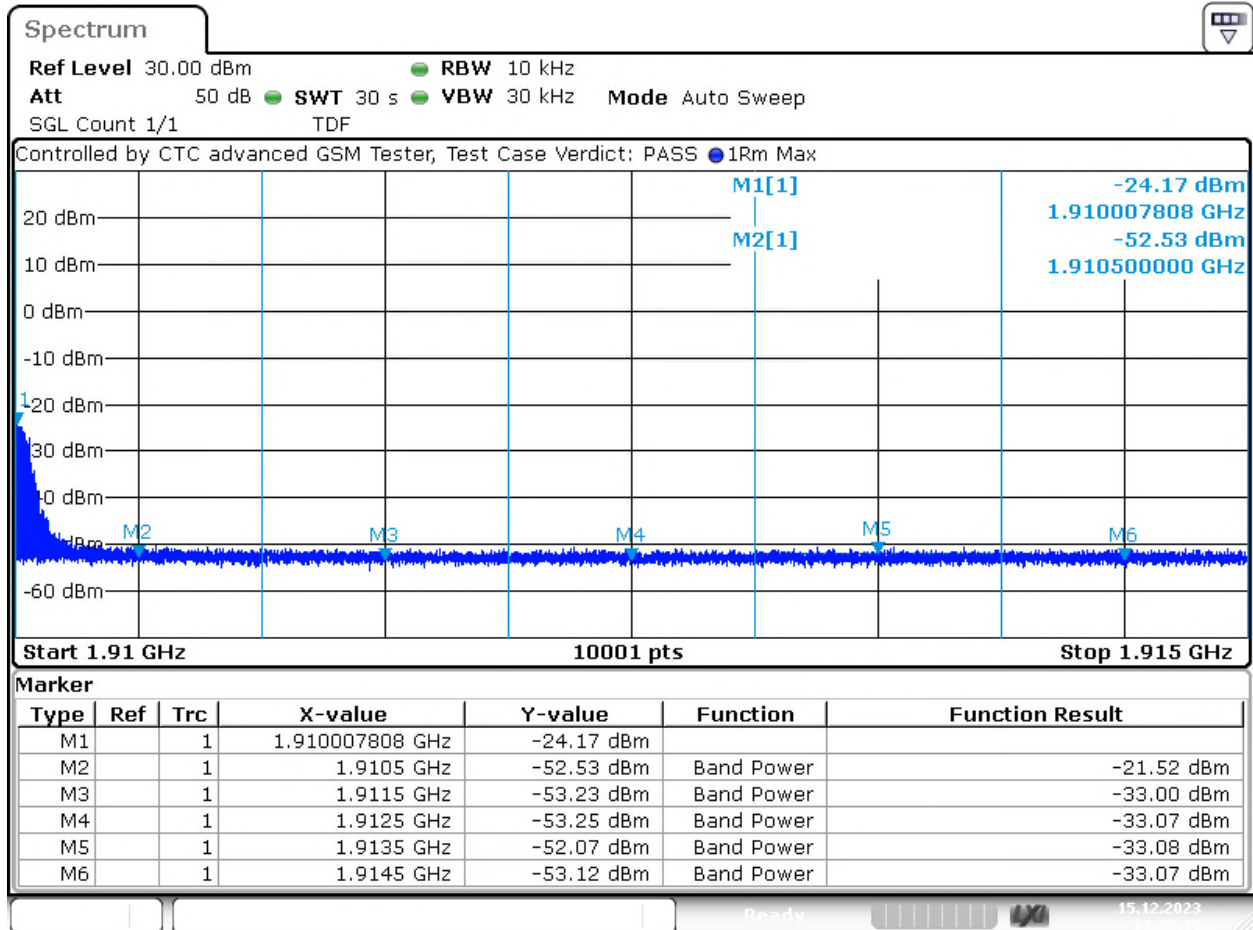
EUT Information

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

Full Spectrum



9.1902_Bandedge_high_Channel_810_UL_1909.8



Date: 15.DEC.2023 14:33:20

End Of Annex 1