

Annex 1: Measurement diagrams

23-1-0017601T026_TR1-A201-R03

Number of pages:	21	Date of Report:	2024-Oct-11
Testing company:	cetecom advanced GmbH Untertuerkheimer Str. 6-10 66117 Saarbruecken GERMANY	Applicant:	VALEO Telematik und Akustik GmbH
Product:	Emergency call control unit		
Model:	MBECALL-NAR-01		
FCC ID:	QWY-MBECALL-NAR01	IC:	6588A-MBECALLNAR1
		PMN:	MBECALL-NAR-01
		HVIN:	MBECALL-NAR-01
		FVIN:	E120 R551
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 ISED-Regulations Radio Standards Specification RSS-Gen, Issue 5 General Requirements for Compliance of Radio Apparatus RSS-132, Issue 4 Cellular Systems Operating in the Bands 824-849 MHz and 869-894 MHz RSS-133, Issue 7 Personal Communications Service Equipment Operating in the Bands 1850-1915 MHz and 1930-1995 MHz		

Measurement diagrams

1.1 External antenna

2.01a_H_field_GSM_850_CH_190

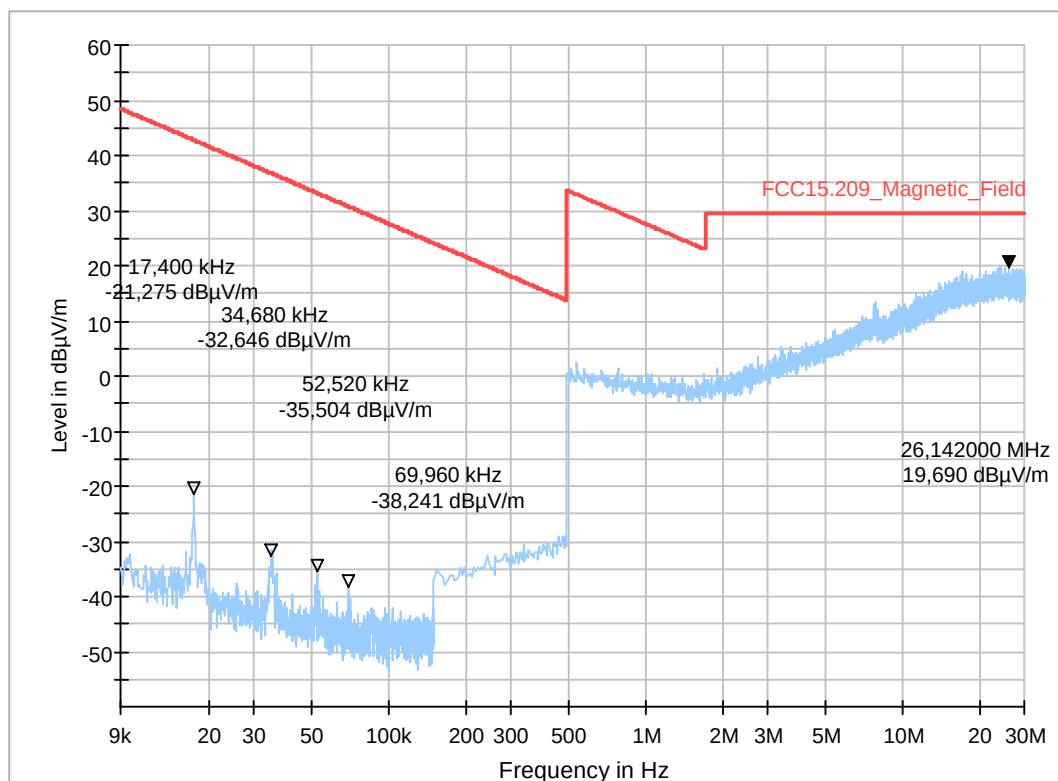
Common Information

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 V10.60.20
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
EUT Position:	lying
Operator:	PSt
Operating Mode:	GSM_850_CH_190
Environmental Conditions:	Humidity: 44% rH; Temperature: 20.2 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	23-1-00176S32_C01
Power:	12 V DC

Full Spectrum



2.01b_H_field_GSM_850_CH_190

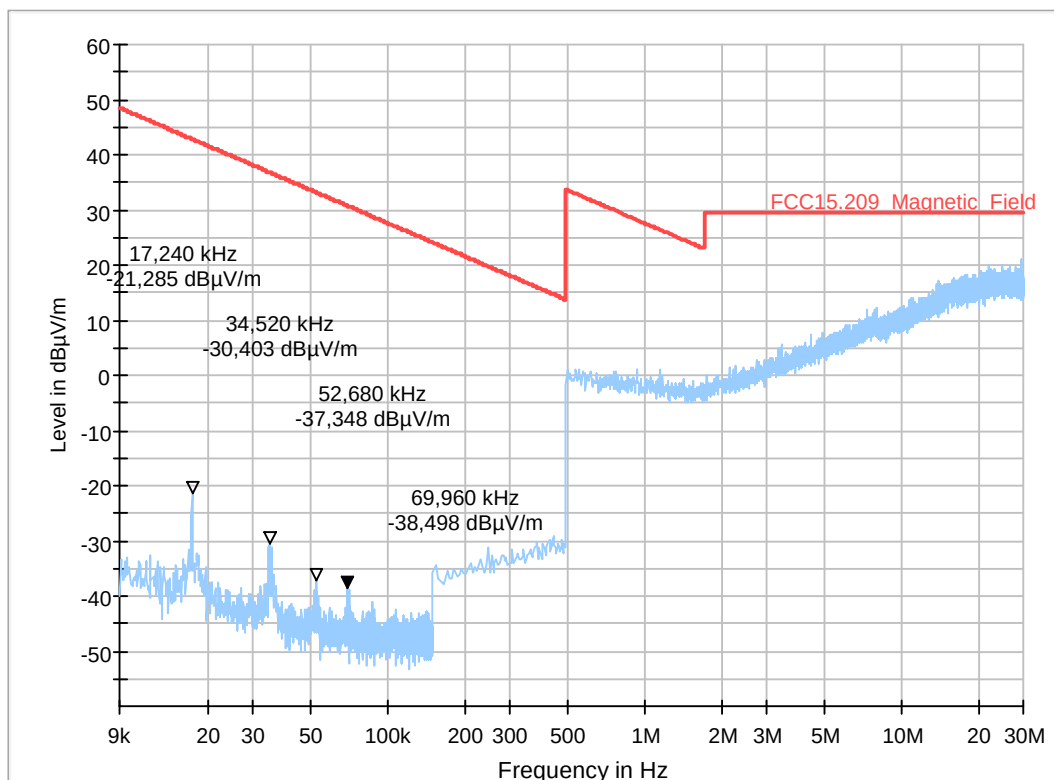
Common Information

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 V10.60.20
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
EUT Position:	standing
Operator:	PSt
Operating Mode:	GSM_850_CH_190
Environmental Conditions:	Humidity: 44% rH; Temperature: 20.2 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	23-1-00176S32_C01
Power:	12 V DC

Full Spectrum



2.02a_H_field_GSM_1900_CH_661

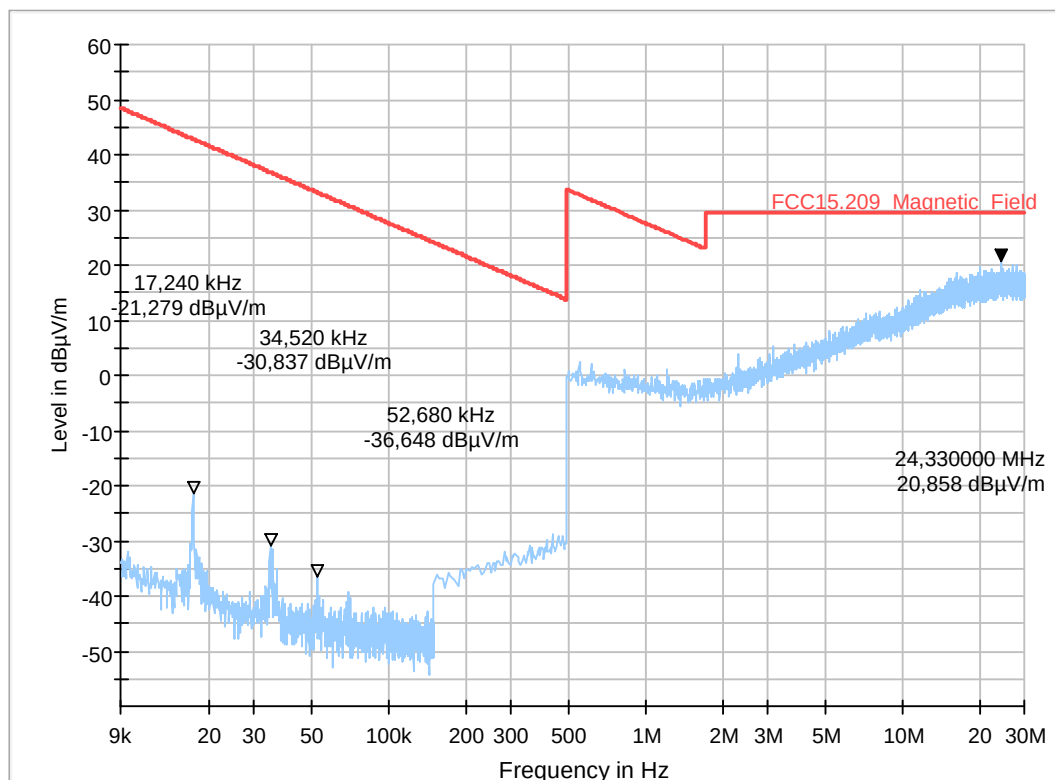
Common Information

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 V10.60.20
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
EUT Position:	standing
Operator:	PSt
Operating Mode:	GSM_1900_CH_661
Environmental Conditions:	Humidity: 44% rH; Temperature: 20.2 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	23-1-00176S32_C01
Power:	12 V DC

Full Spectrum



8.01_RSE_GSM850_ch190

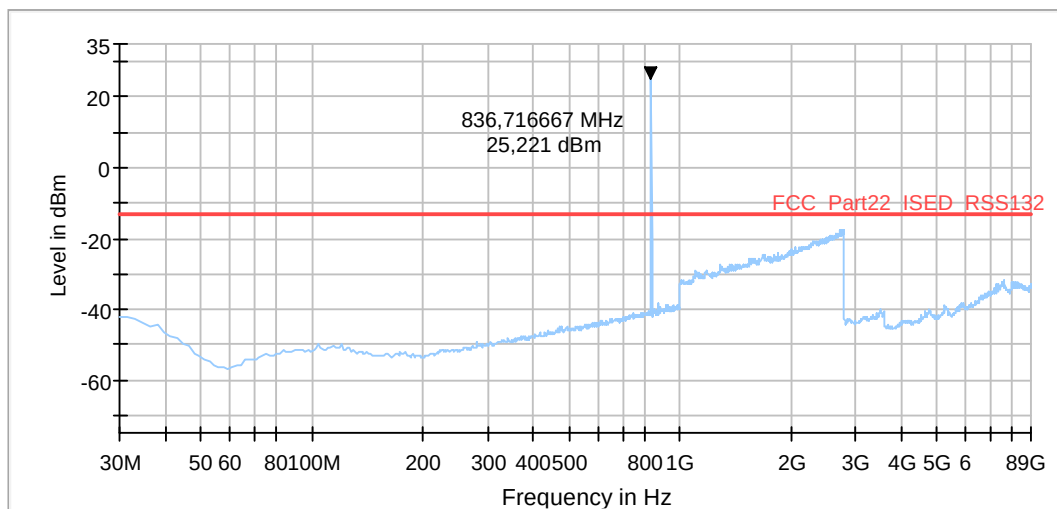
Common Information

Test Description:	Radiated emission
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 22 / RSS-132
Antenna polarisation:	vertical / horizontal
Operating Mode:	GSM_850_CH_190
Operator:	TFra
Comment:	
Environmental Conditions:	Humidity : 39%rH; Temperature: 21°C
EUT Setup:	1
Verdict:	Passed

EUT Information

Sample:	23-1-00176S31_C01
Power Supply:	12 V DC

Full Spectrum



Remark: Emission at 836 MHz is uplink frequency of GSM band 850 and not related to emission results.

8.02a_RSE_GSM1900_ch661

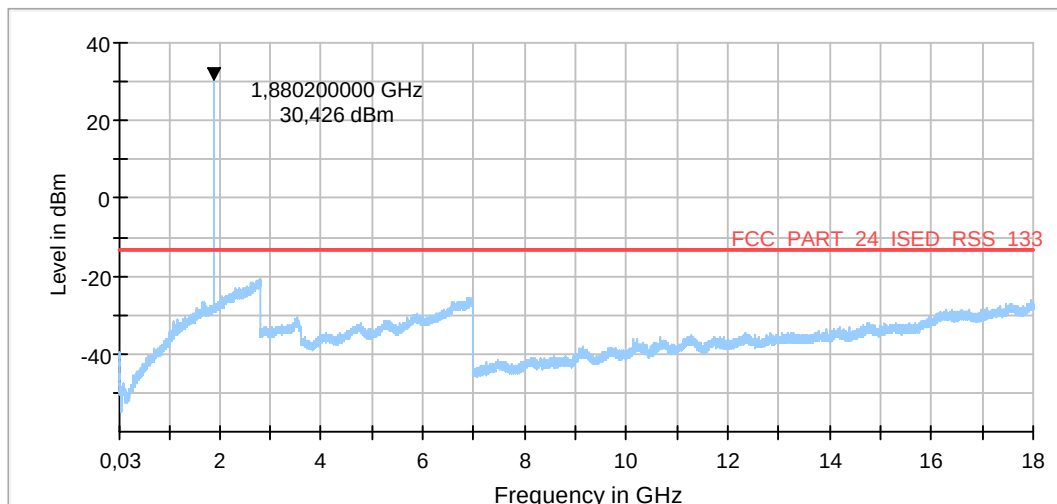
Common Information

Test Description:	Radiated emission
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 24 / RSS-133
Operating Mode:	GSM_1900_CH_661
Environmental Conditions:	Humidity: 54% rH; Temperature: 21 °C
Operator:	TFra
EUT Setup:	1
Verdict:	Passed

EUT Information

Sample:	23-1-00176S31_C01
Power Supply:	12 V DC

Full Spectrum



Remark: Emission at 1.88 GHz is uplink frequency of GSM band 1900 and not related to emission results.

8.02b_RSE_GSM1900_ch661

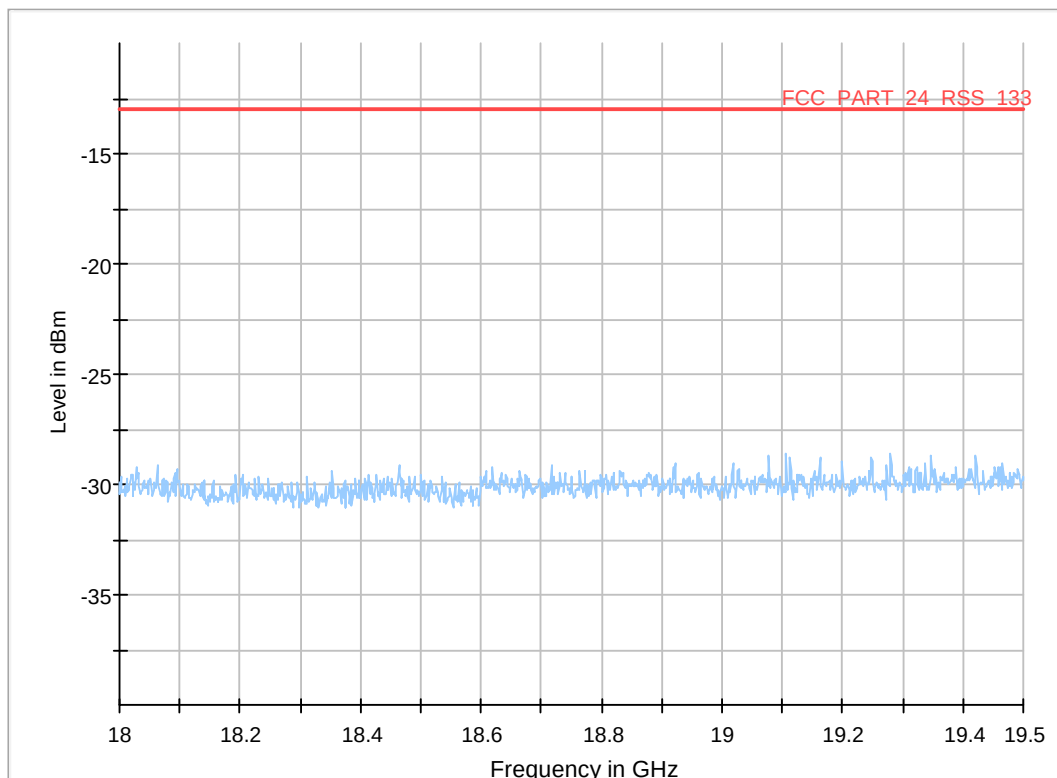
Common Information

Test Description:	Radiated emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Room
Test Standard:	FCC Part 24 / RSS-133
Comm. Link:	GSM1900, GPRS
Operating Mode:	GSM_1900_CH_661
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 22°C
Operator:	MNu
EUT Setup:	01
Verdict:	Passed

EUT Information

PMT Sample Nr.	23-1-00176S33_C01
power:	12 V DC

Full Spectrum



9.01_BE_GSM850_ch128

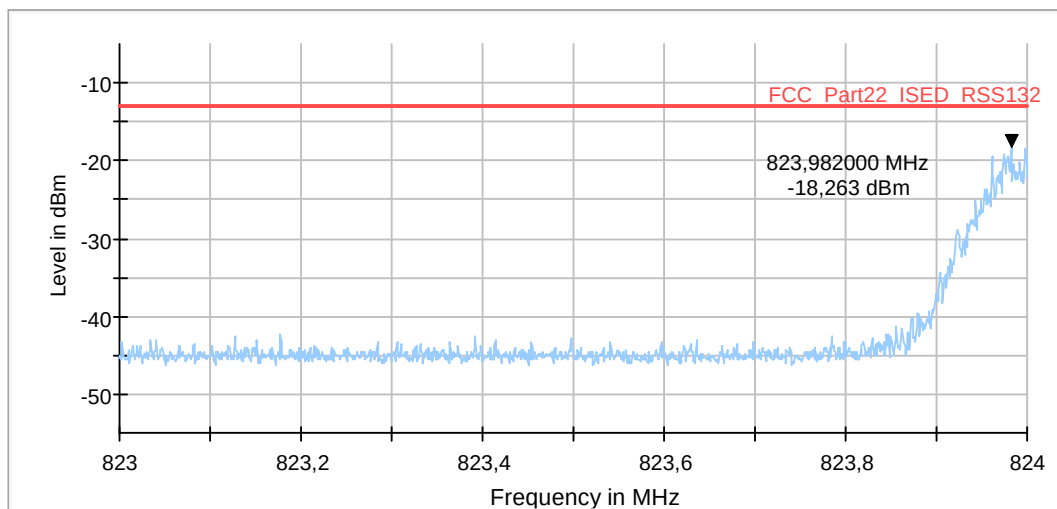
Common Information

Test Description:	Band-Edge low
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 22 / RSS-132
Antenna polarisation:	vertical / horizontal
Operating Mode:	GSM_850_CH_190
Operator:	TFra
Comment:	
Environmental Conditions:	Humidity : 39%rH; Temperature: 21°C
EUT Setup:	1
Verdict:	Passed

EUT Information

Sample:	23-1-00176S31_C01
Power Supply:	12 V DC

Full Spectrum



9.02_BE_GSM850_ch251

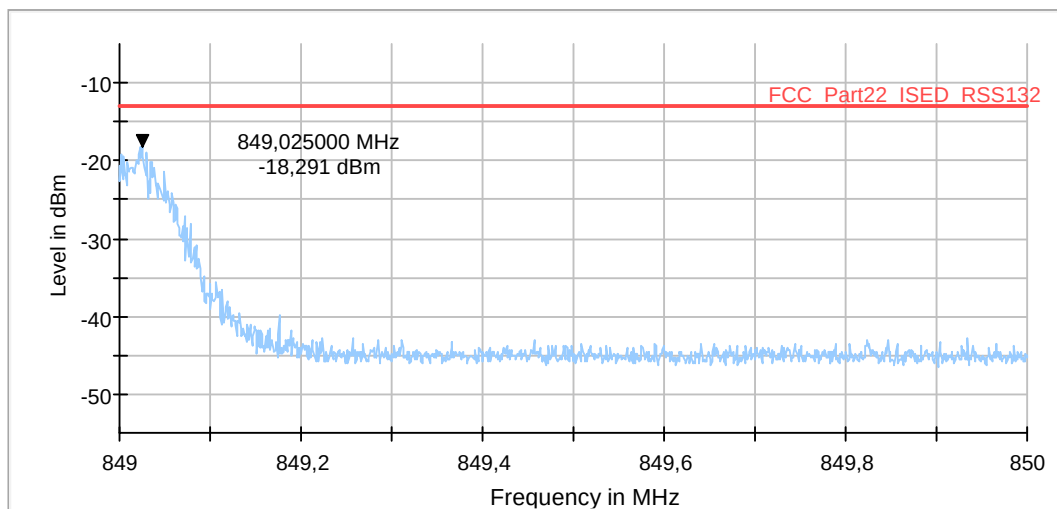
Common Information

Test Description:	Band-Edge high
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 22 / RSS-132
Antenna polarisation:	vertical / horizontal
Operating Mode:	GSM_850_CH_251
Operator:	TFra
Comment:	
Environmental Conditions:	Humidity : 41%rH; Temperature: 21°C
EUT Setup:	1
Verdict:	Passed

EUT Information

Sample:	23-1-00176S31_C01
Power Supply:	12 V DC

Full Spectrum



9.03_BE_GSM1900_ch512

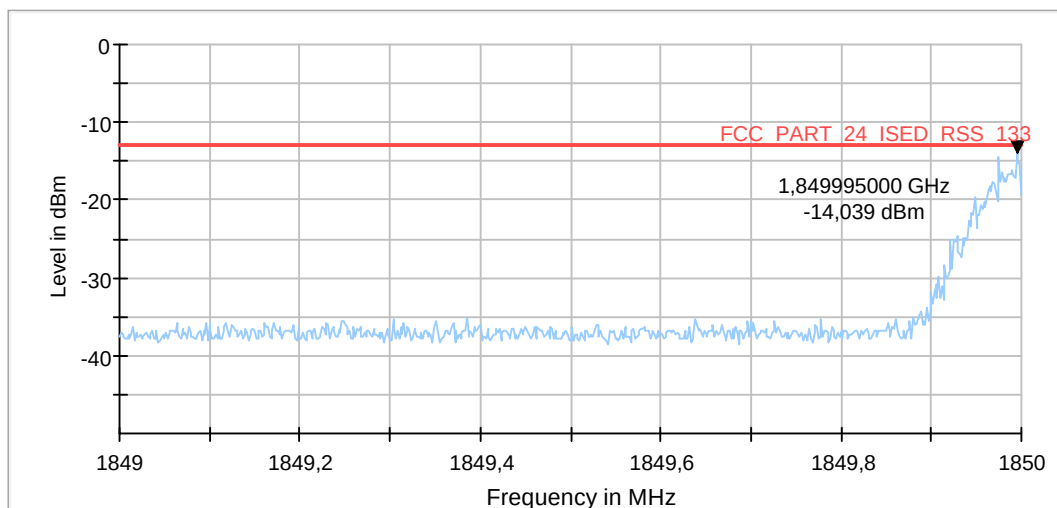
Common Information

Test Description:	Band-Edge low
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 24 / RSS-133
Test Case:	-
Operating Mode:	GSM_1900_CH_512
Environmental Conditions:	Humidity: 54% rH; Temperature: 21 °C
Operator:	TFra
EUT Setup:	1
Verdict:	Passed

EUT Information

Sample:	23-1-00176S31_C01
Power Supply:	12 V DC

Full Spectrum



9.04_BE_GSM1900_ch810

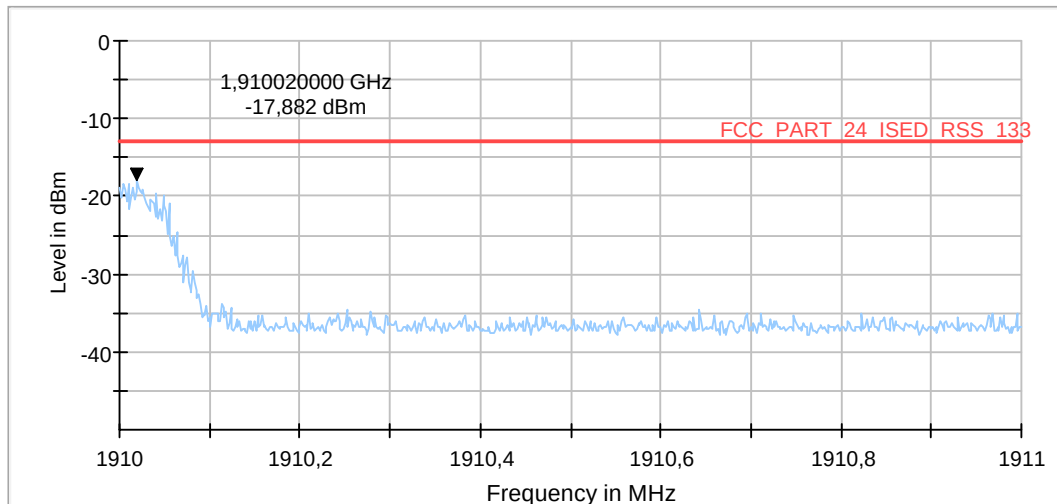
Common Information

Test Description:	Band-Edge high
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 24 / RSS-133
Operating Mode:	GSM_1900_CH_810
Environmental Conditions:	Humidity: 54% rH; Temperature: 21 °C
Operator:	TFra
EUT Setup:	1
Verdict:	Passed

EUT Information

Sample:	23-1-00176S31_C01
Power Supply:	12 V DC

Full Spectrum



1.2 Internal antenna

2.01a_H_field_GSM_850_CH_190

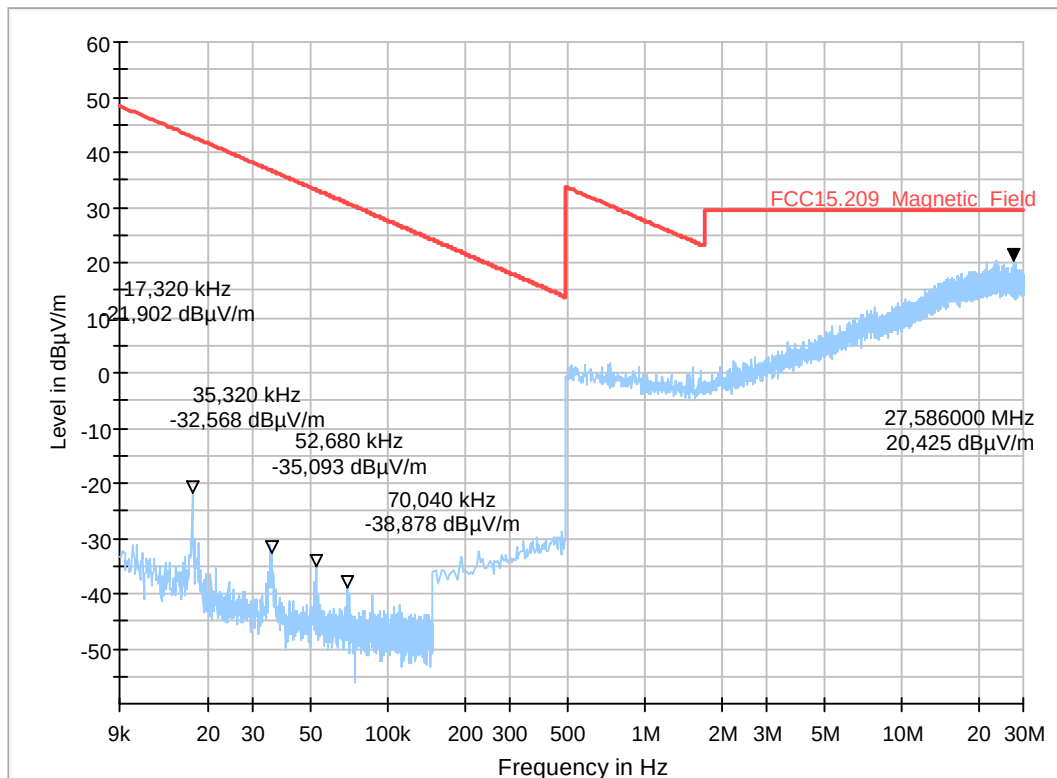
Common Information

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 V10.60.20
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_850_CH_190
Environmental Conditions:	Humidity: 44% rH; Temperature: 20.2 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	23-1-00176S32_C01
Power:	12 V DC

Full Spectrum



2.01b_H_field_GSM_850_CH_190

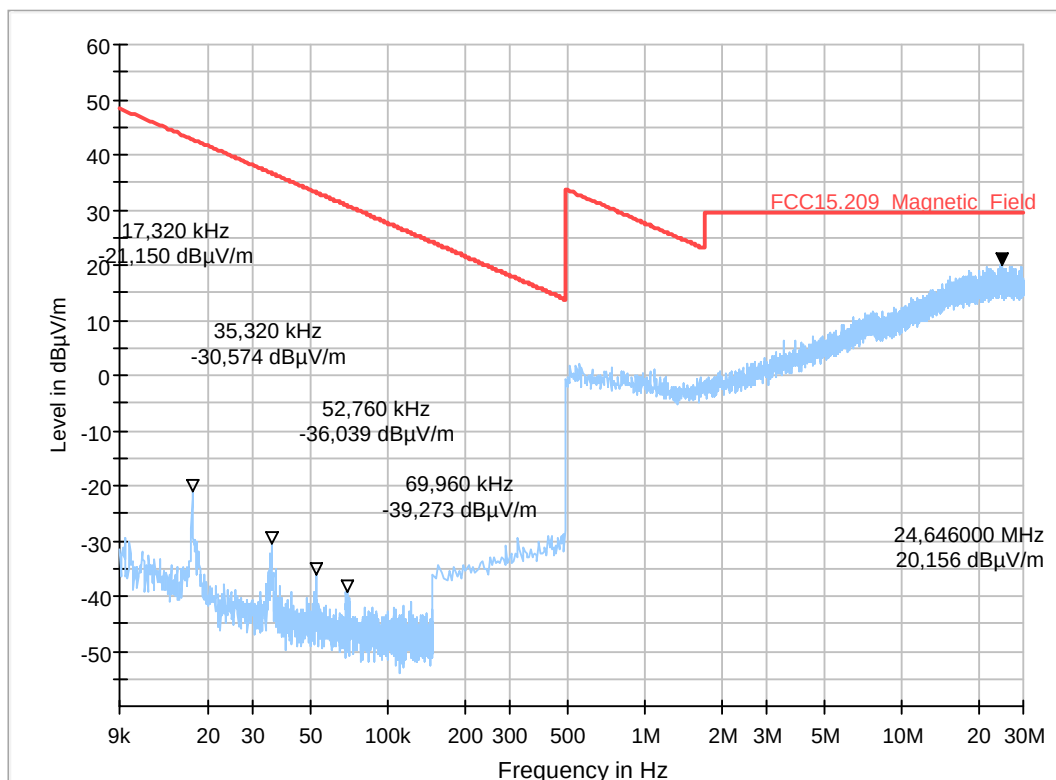
Common Information

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 V10.60.20
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
EUT Position:	standing
Operator:	PSt
Operating Mode:	GSM_850_CH_190
Environmental Conditions:	Humidity: 44% rH; Temperature: 20.2 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	23-1-00176S32_C01
Power:	12 V DC

Full Spectrum



2.02a_H_field_GSM_1900_CH_661

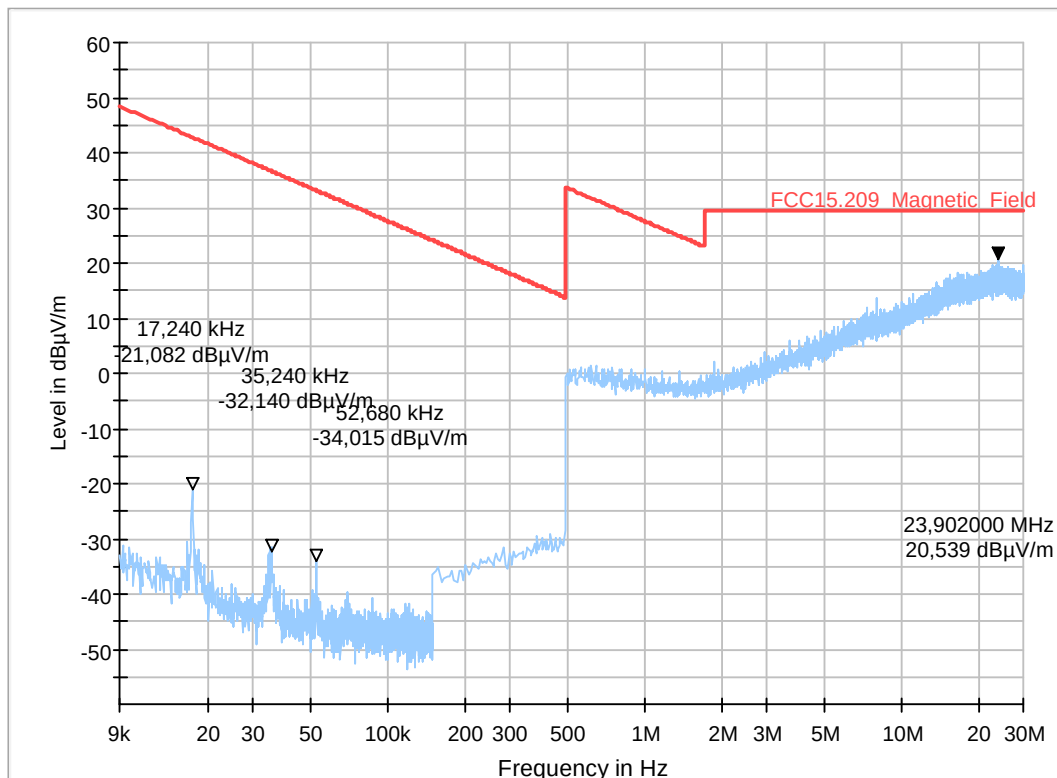
Common Information

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 V10.60.20
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
EUT Position:	standing
Operator:	PSt
Operating Mode:	GSM_1900_CH_661
Environmental Conditions:	Humidity: 44% rH; Temperature: 20.2 °C
EUT Setup:	1
Verdict:	Passed

EUT Information

PMT number:	23-1-00176S32_C01
Power:	12 V DC

Full Spectrum



8.01_RSE_GSM850_ch190

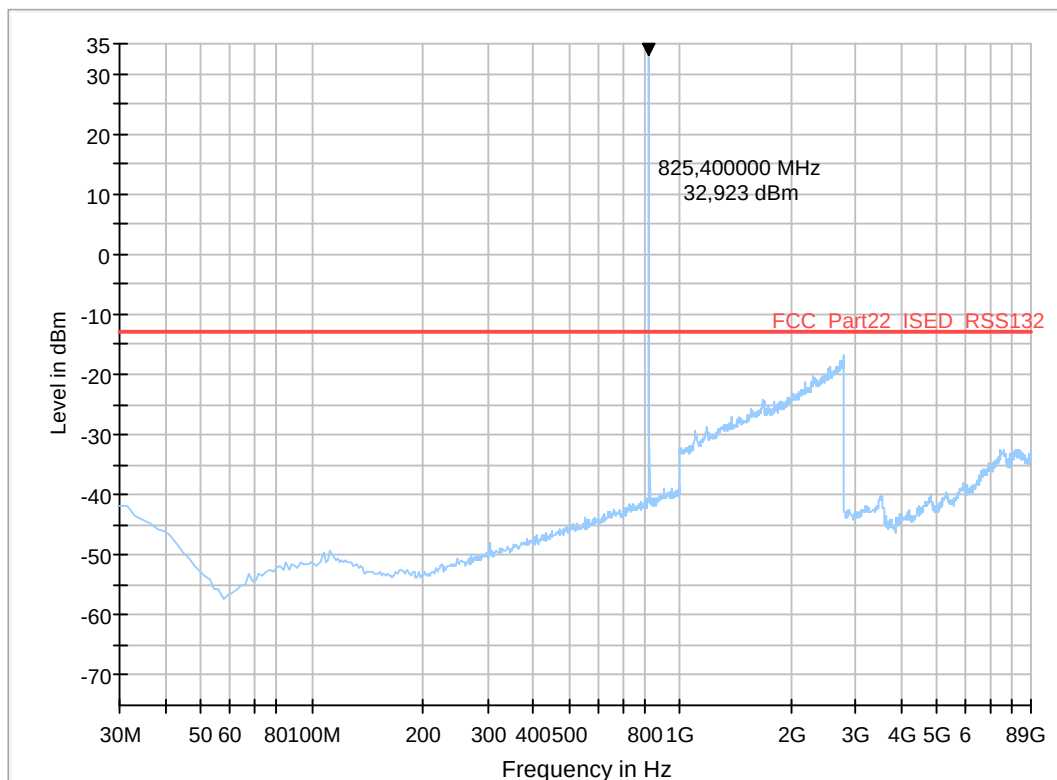
Common Information

Test Description:	Radiated emission
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 22 / RSS-132
Antenna polarisation:	vertical / horizontal
EUT:	
Manufacturer:	
Operating Mode:	GSM_850_CH_190
Operator:	ASa
Environmental Conditions:	KTe
EUT Setup:	01
Verdict:	Passed

EUT Information

Sample:	23-1-00176S31_C01
Power Supply:	12 V DC

Full Spectrum



Remark: Emission at 825 MHz is uplink frequency of GSM band 850 and not related to emission results.

8.02_RSE_GSM1900_ch661

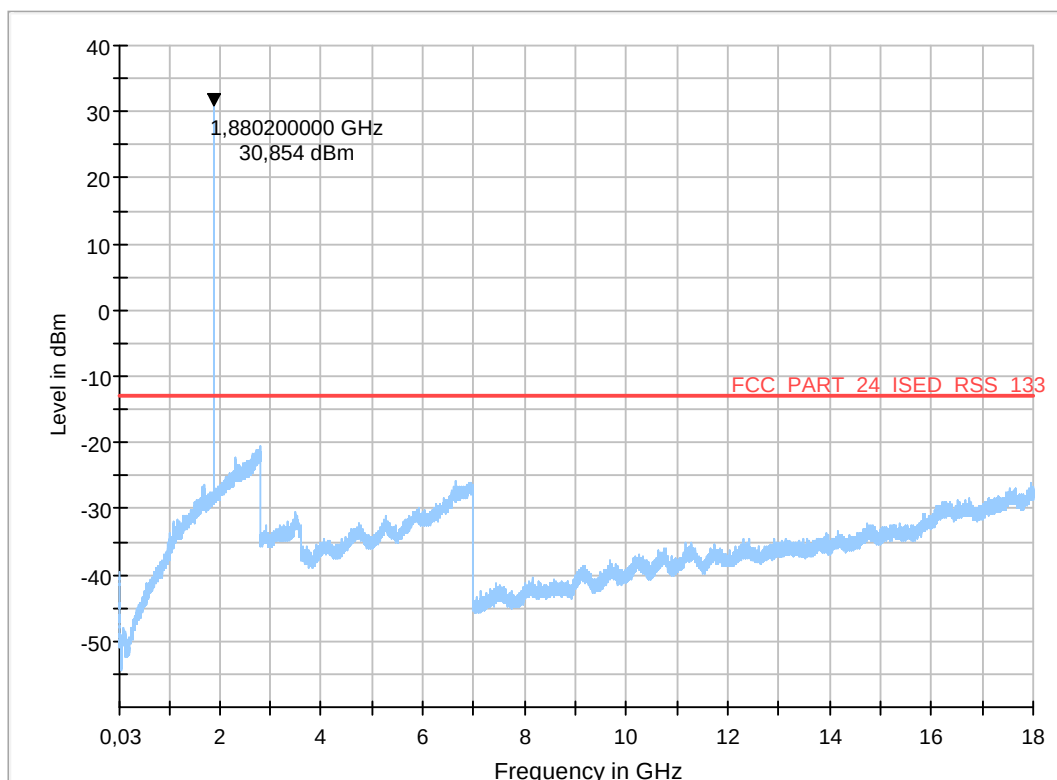
Common Information

Test Description:	Radiated emission
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 24 / RSS-133
Antenna polarisation:	vertical / horizontal
Operating Mode:	GSM_1900_CH_661
Operator:	ASa
Environmental Conditions:	Humidity : 50%rH; Temperature: 20°C
EUT Setup:	01
Verdict:	Passed

EUT Information

Sample:	23-1-00176S031_C01
Power Supply:	12 V DC

Full Spectrum



Remark: Emission at 1.88 GHz is uplink frequency of GSM band 1900 and not related to emission results.

8.02b_RSE_GSM1900_ch661

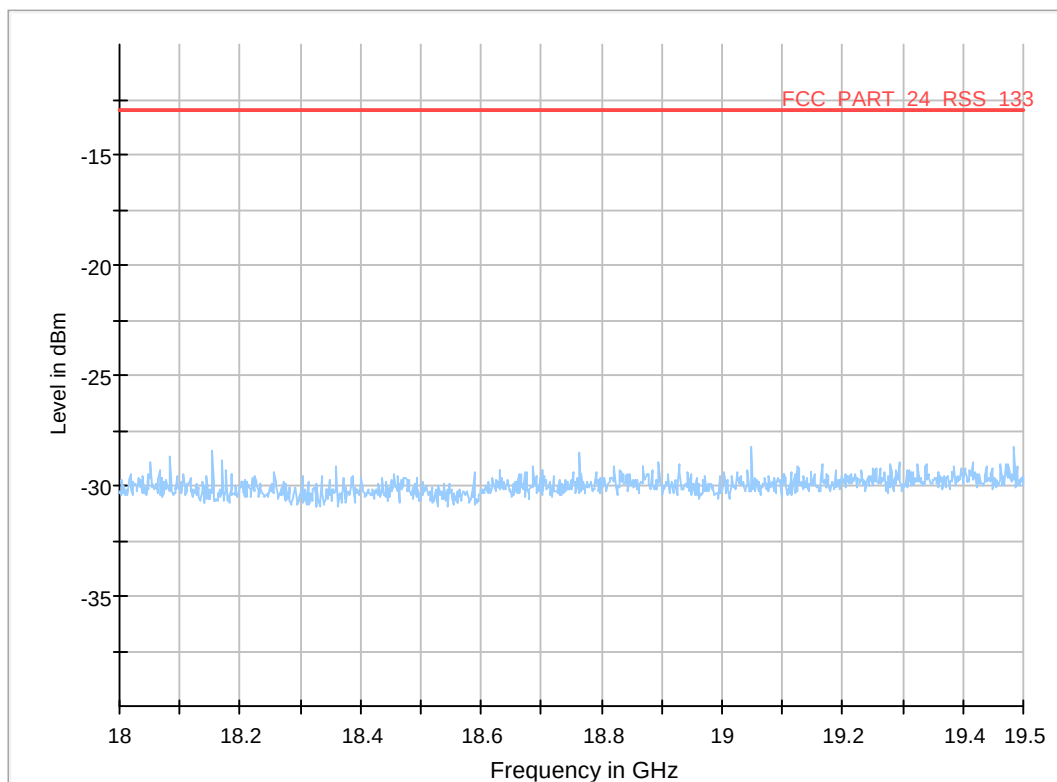
Common Information

Test Description:	Radiated emissions
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 24 / RSS-133
Operating Mode:	GSM_1900_CH_661
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 22°C
Operator:	SOz
EUT Setup:	01
Verdict:	Passed

EUT Information

PMT Sample Nr.	23-1-00176S33_C01
power:	12 V DC

Full Spectrum



9.01_BE_GSM850_ch128

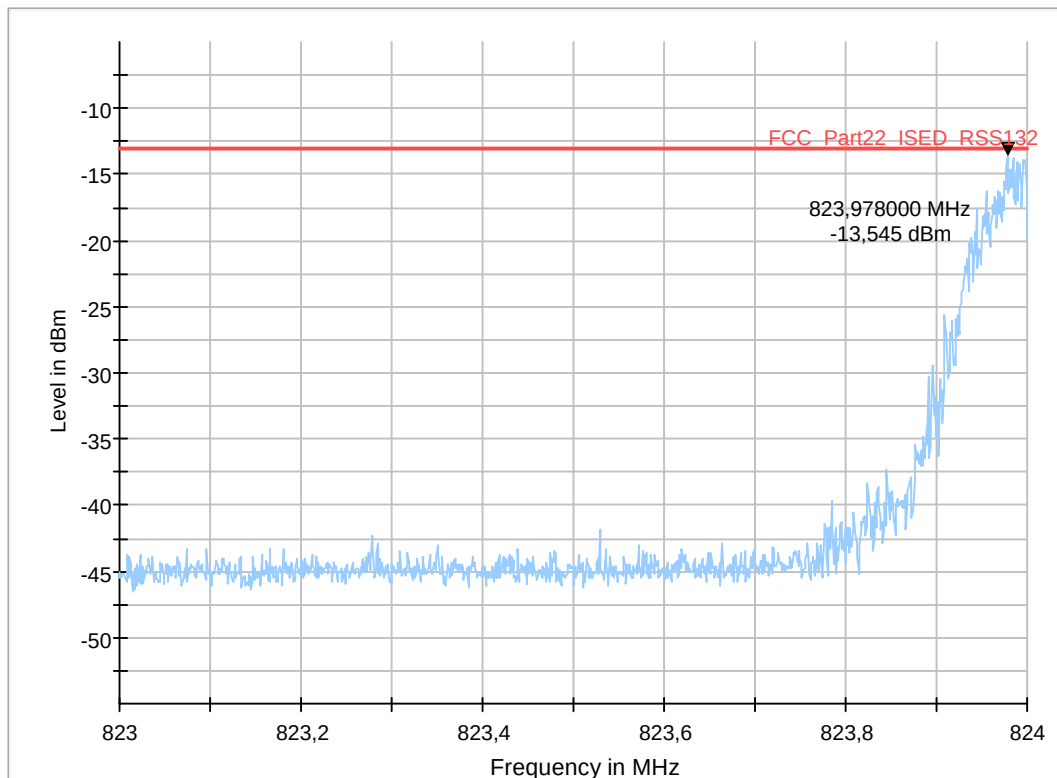
Common Information

Test Description:	Band-Edge low
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 22 / RSS-132
Antenna polarisation:	vertical / horizontal
Manufacturer:	
Operating Mode:	GSM_850_CH_128
Operator:	Asa
Environmental Conditions:	Humidity : 50%rH; Temperature: 20°C
EUT Setup:	01
Verdict:	Passed

EUT Information

Sample:	23-1-00176S31_C01
Power Supply:	12 V DC

Full Spectrum



9.02_BE_GSM850_ch251_Retest_170424

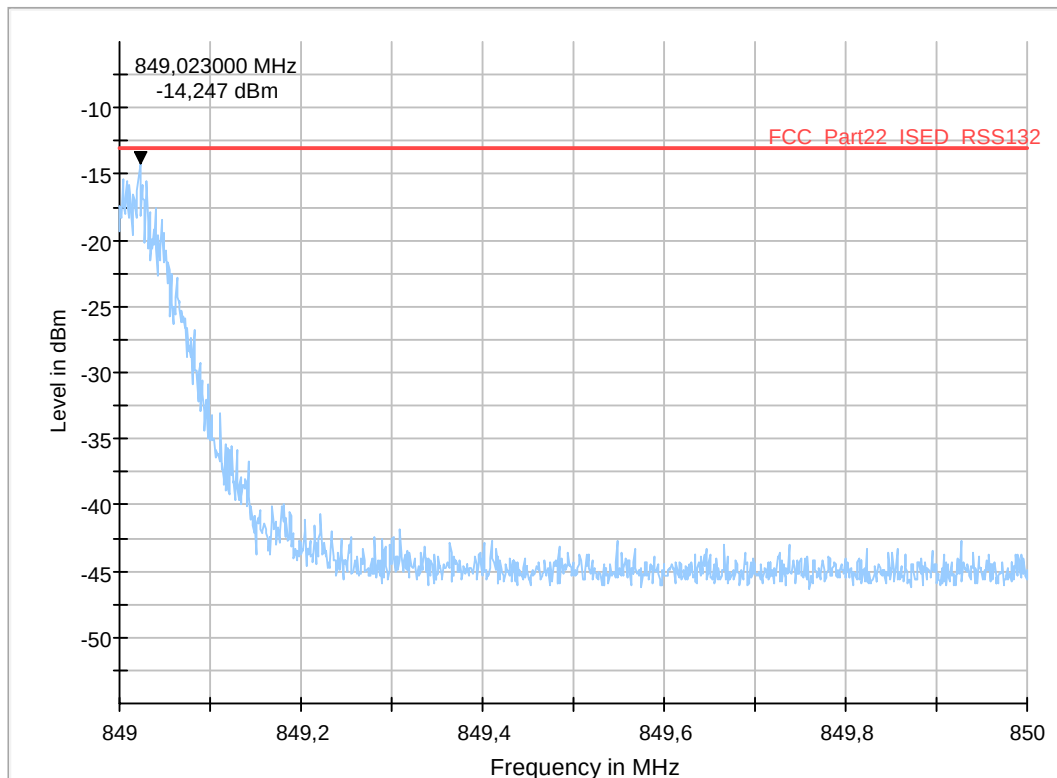
Common Information

Test Description:	Band-Edge high
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 22 / RSS-132
Antenna polarisation:	vertical / horizontal
Operating Mode:	GSM_850_CH_251
Operator:	PShin
EUT Setup:	1
Verdict:	Passed

EUT Information

Sample:	23-1-00176S35_C01
Power Supply:	12 V DC

Full Spectrum



9.03_BE_GSM1900_ch512

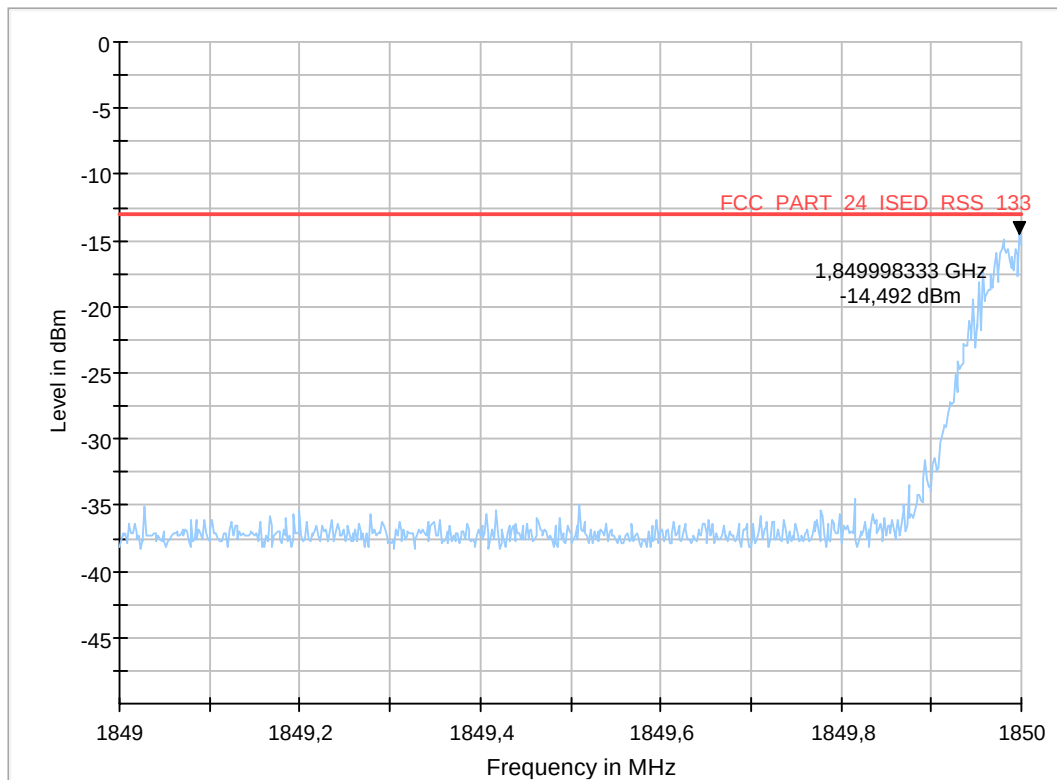
Common Information

Test Description:	Band-Edge low
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 24 / RSS-133
Test Case:	-
Operating Mode:	GSM_1900_CH_512
Environmental Conditions:	Humidity : 50%rH; Temperature: 20°C
Operator:	ASa
EUT Setup:	01
Verdict:	Passed

EUT Information

Sample:	23-1-00176S31_C01
Power Supply:	12 V DC

Full Spectrum



9.04_BE_GSM1900_ch810

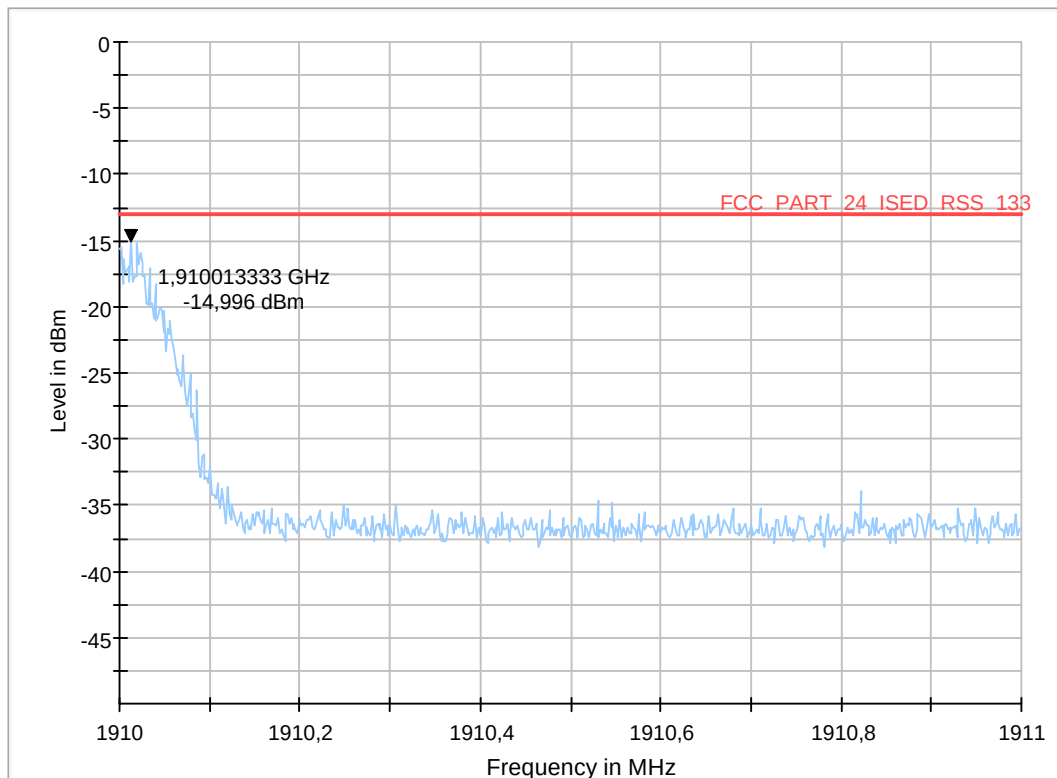
Common Information

Test Description:	Band-Edge high
Test Site Location:	cetecom advanced GmbH Essen
Test Site:	Fully Anechoic Chamber
Test Standard:	FCC Part 24 / RSS-133
Test Case:	-
Operating Mode:	GSM_1900_CH_810
Environmental Conditions:	Humidity : 50%rH; Temperature: 20°C
Operator:	PSt/ASa
EUT Setup:	01
Verdict:	Passed

EUT Information

Sample:	23-1-00176S31_C01
Power Supply:	12 V DC

Full Spectrum



End Of Annex 1