

Annex 1: Measurement diagrams 22-1-0030601T048a-C01-A1

Number of pages:	18	Date of Report:	2023-Mar-31
Testing company:	cetecom advanced GmbH Im Teelbruch 116 45219 Essen Germany Tel. + 49 (0) 20 54 / 95 19-0 Fax: + 49 (0) 20 54 / 95 19-150	Applicant:	Continental Automotive Technologies GmbH
Product: Model:	Telematic Control Unit BSRF_EA_RW0		
FCC ID:	KR5-BSRFEARW0	IC:	--
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 3 Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz RSS-133, Issue 6, Amendment 1 2 GHz Personal Communications Services		

Table of Contents

1 Measurement diagrams.....3

1 Measurement diagrams

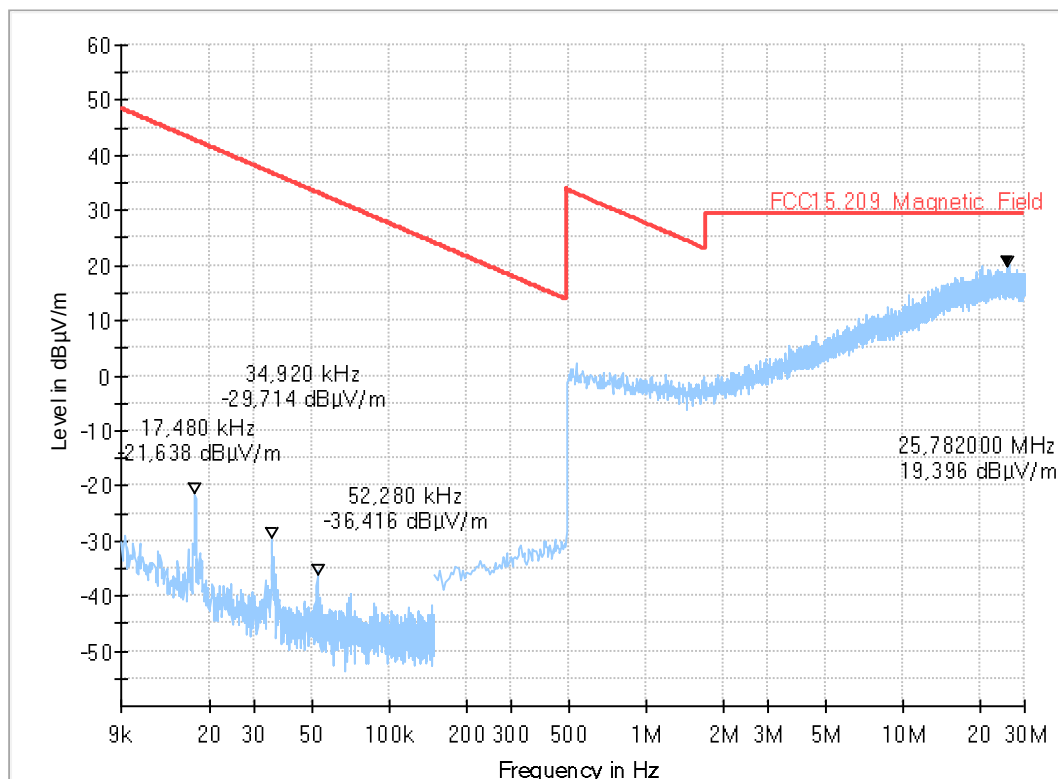
2.1901a_H_field_GSM_1900_CH_512

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:	npe
Operating Mode:	GSM 1900 TCH
Environmental Conditions:	Humidity : 50% rH; Temperature: 21 °C
EUT Setup:	2, standing
Verdict:	Passed

EUT Information

PMT number	22-1-00306S139_C01
	Full Spectrum



2.1901b_H_field_GSM_1900_CH_512

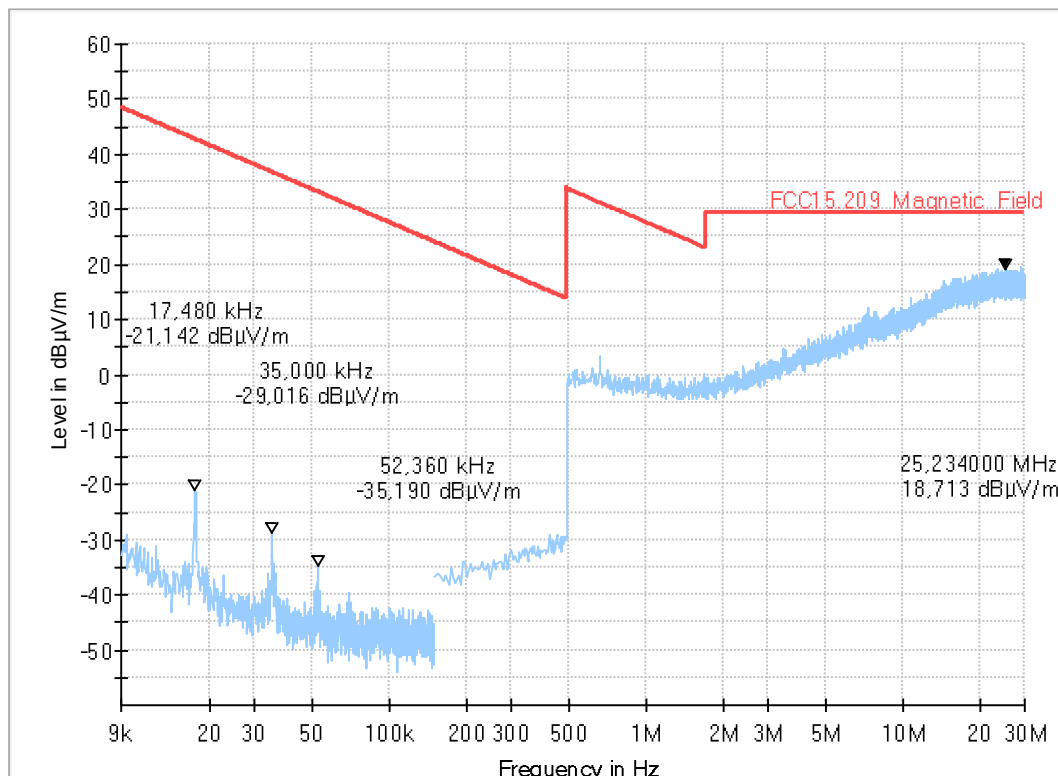
Common Information

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:	npe
Operating Mode:	GSM 1900 TCH
Environmental Conditions:	Humidity : 50% rH; Temperature: 21 °C
EUT Setup:	2, laying
Verdict:	Passed

EUT Information

PMT number	22-1-00306S139_C01
------------	--------------------

Full Spectrum



2.850a_H_field_GSM_850_CH_128

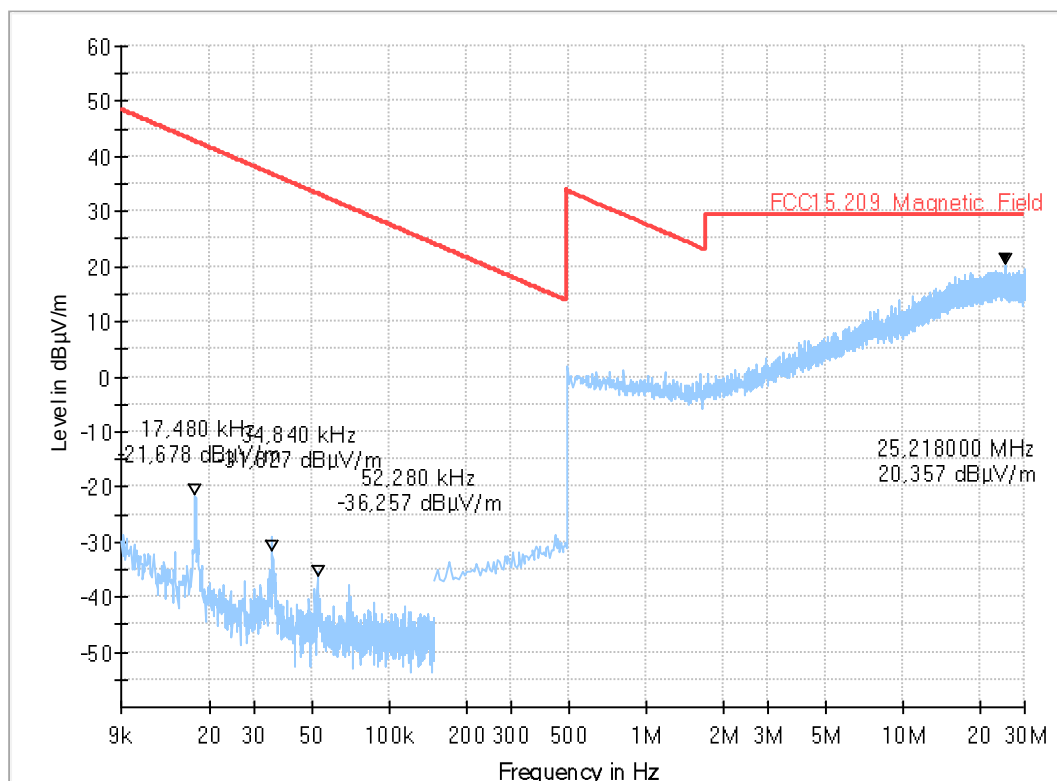
Common Information

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:	npe
Operating Mode:	GSM 850 TCH
Environmental Conditions:	Humidity : 50% rH; Temperature: 21 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number	22-1-00306S139_C01
------------	--------------------

Full Spectrum



2.850b_H_field_GSM_850_CH_128

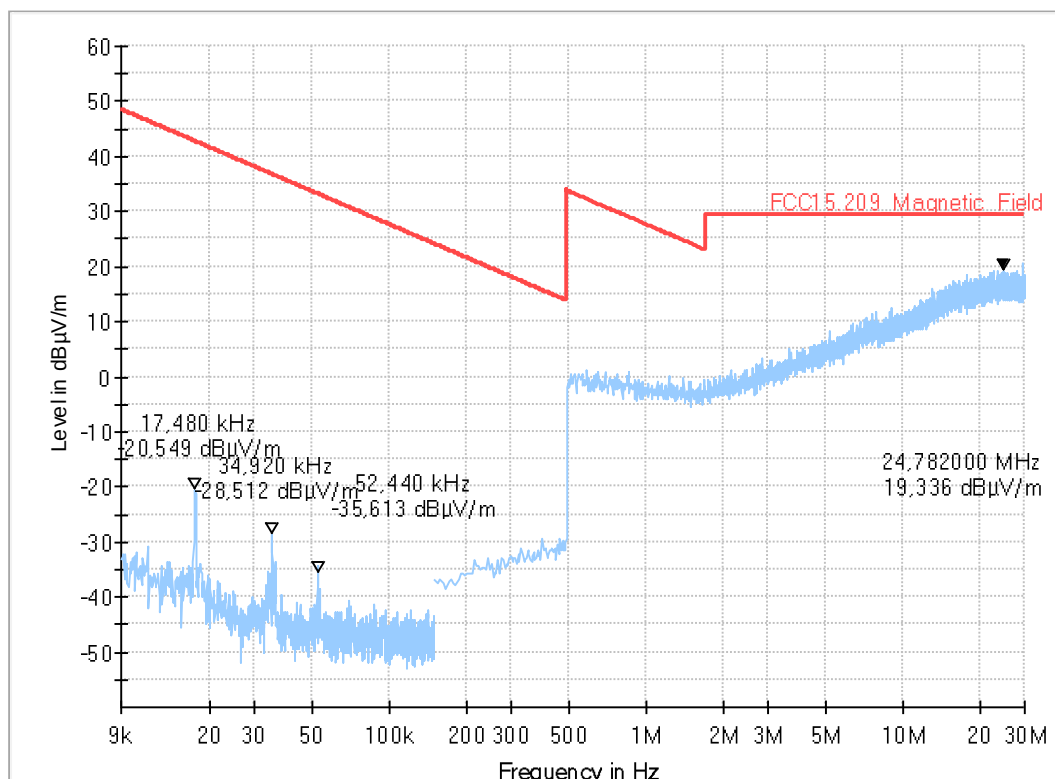
Common Information

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:	npe
Operating Mode:	GSM 850 TCH
Environmental Conditions:	Humidity : 50% rH; Temperature: 21 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number 22-1-00306S139_C01

Full Spectrum



8.01_Traffic_mode_GSM_850_CH_128

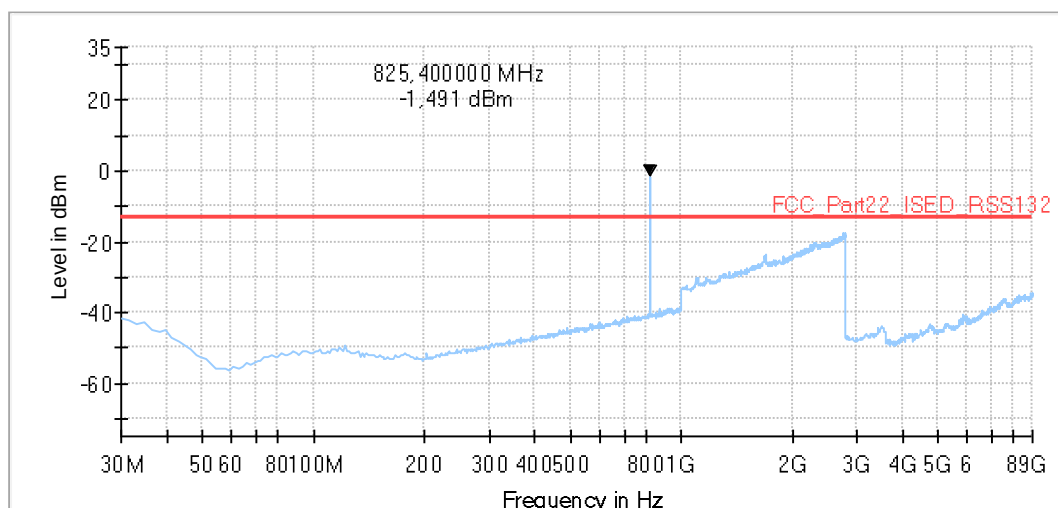
Common Information

Test Description:	Radiated emission related to 3m
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:	GSM 850 ch128
Operator:	TFra
Environmental Conditions:	Humidity : 50% rH; Temperature: 20 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	22-1-00306S139_C01
-------------	--------------------

Full Spectrum



Remark: Emission at 825.4 GHz is uplink frequency of GSM 850 and not related to result.

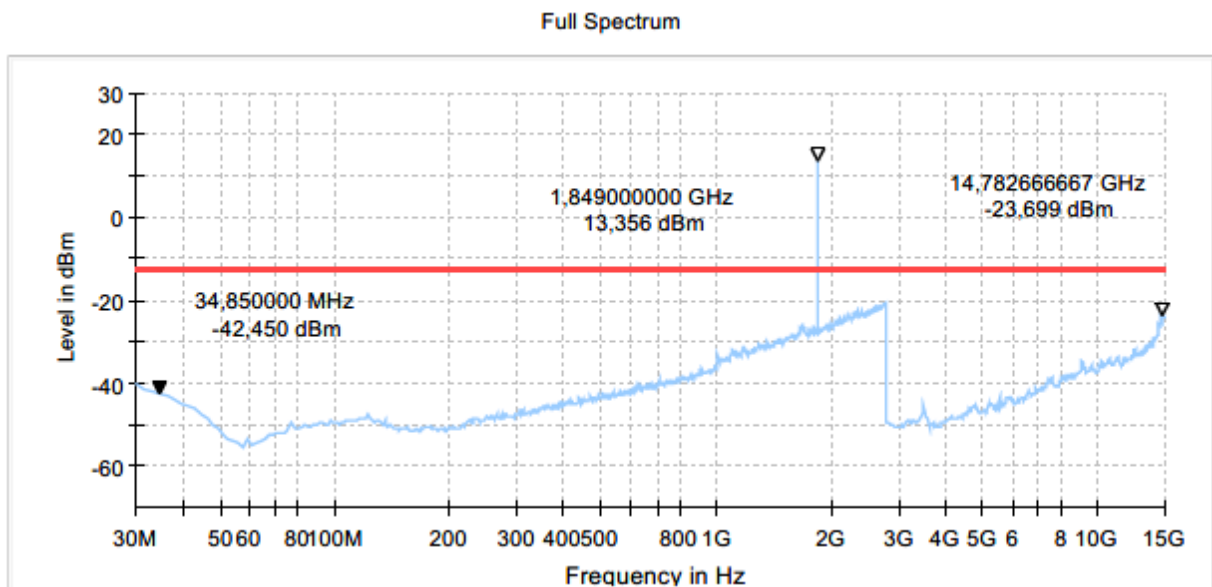
8.02_Traffic_mode_GSM_1900_CH_512

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:	GSM 1900 ch512
Operator:	TFra
Environmental Conditions:	Humidity : 45% rH; Temperature: 19 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	22-1-00306S139_C01
-------------	--------------------



Remark: Emission at 1.849 GHz is uplink frequency of GSM 1900 and not related to result.

8.03a_Traffic_mode_GSM_1900_CH_512

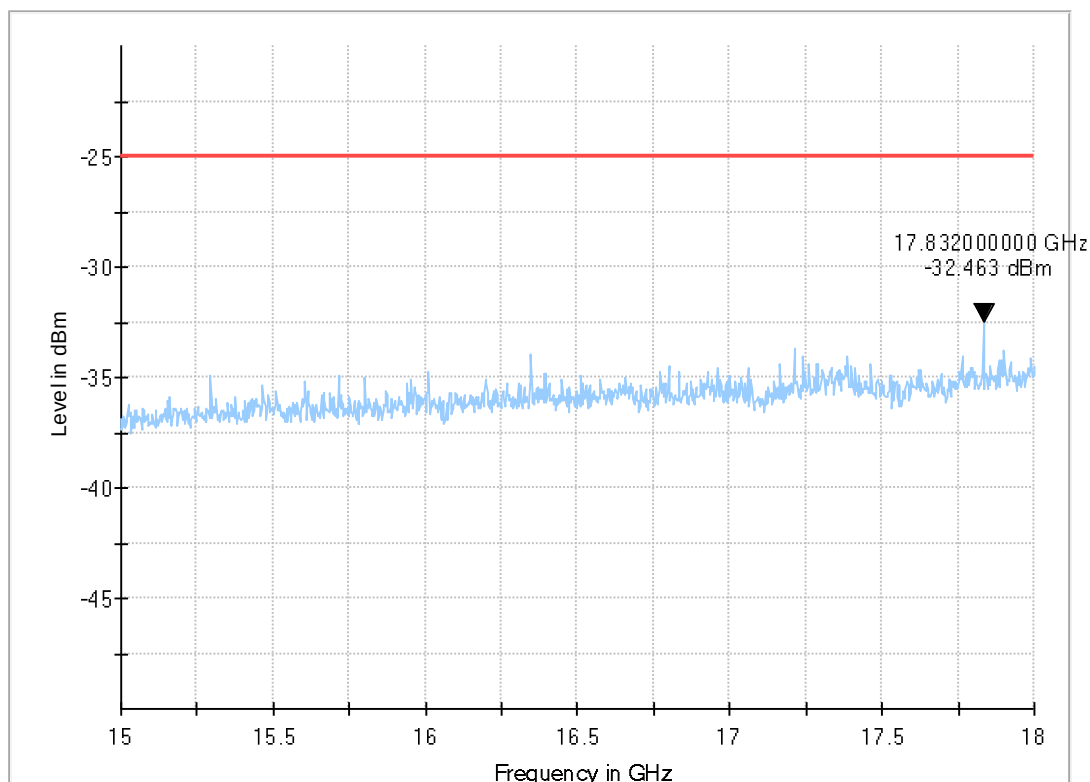
Common Information

Test Description:	Radiated Field Strength Emission
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC Part 24
Comm. Link:	GSM 1900
Operating Mode:	MS allocated channel 512
Exclusionband:	--
Environmental Conditions:	Humidity: 45% rH; Temperature: 21 °C
Operator:	npe
Set-up:	1, EUT laying, Ant Hor
Verdict:	Passed

EUT Information

PMT Sample Nr.	22-1-00306S58_C01
----------------	-------------------

Full Spectrum



8.03b_Traffic_mode_GSM_1900_CH_512

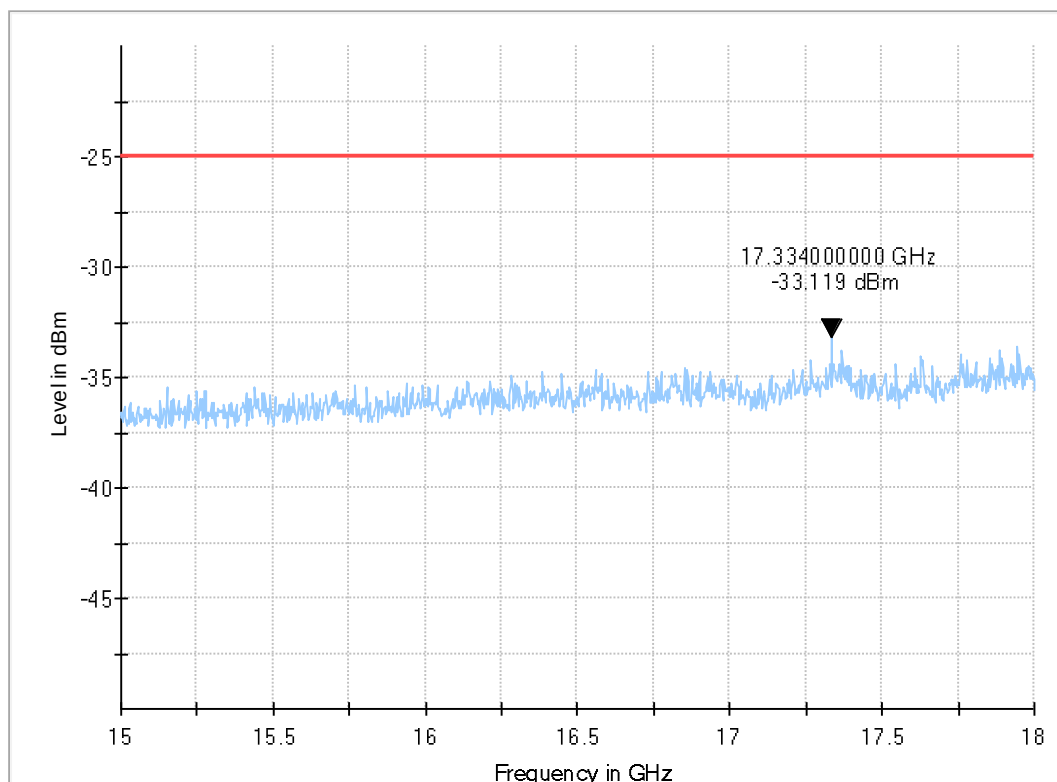
Common Information

Test Description:	Radiated Field Strength Emission
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC Part 24
Comm. Link:	GSM 1900
Operating Mode:	MS allocated channel 512
Exclusionband:	--
Environmental Conditions:	Humidity: 45% rH; Temperature: 21 °C
Operator:	npe
Set-up:	1, EUT standing, Ant Hor
Verdict:	Passed

EUT Information

PMT Sample Nr.	22-1-00306S58_C01
----------------	-------------------

Full Spectrum



8.03c_Traffic_mode_GSM_1900_CH_512

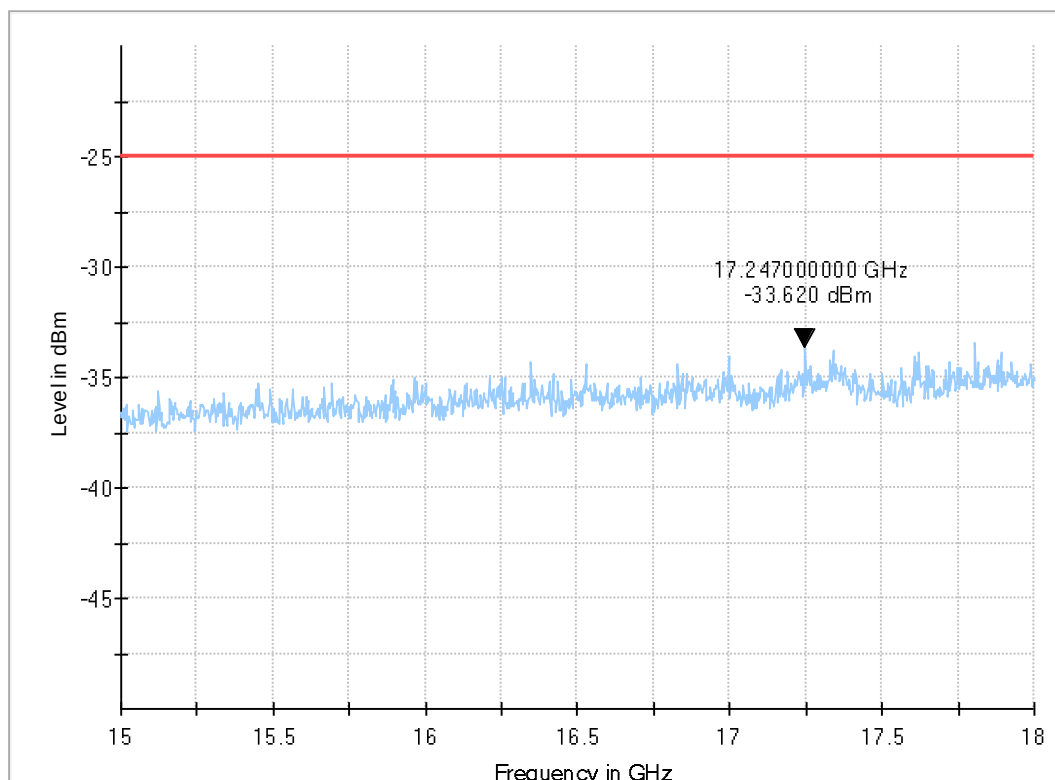
Common Information

Test Description:	Radiated Field Strength Emission
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC Part 24
Comm. Link:	GSM 1900
Operating Mode:	MS allocated channel 512
Exclusionband:	--
Environmental Conditions:	Humidity: 45% rH; Temperature: 21 °C
Operator:	npe
Set-up:	1, EUT laying, Ant Ver
Verdict:	Passed

EUT Information

PMT Sample Nr.	22-1-00306S58_C01
----------------	-------------------

Full Spectrum



8.03d_Traffic_mode_GSM_1900_CH_512

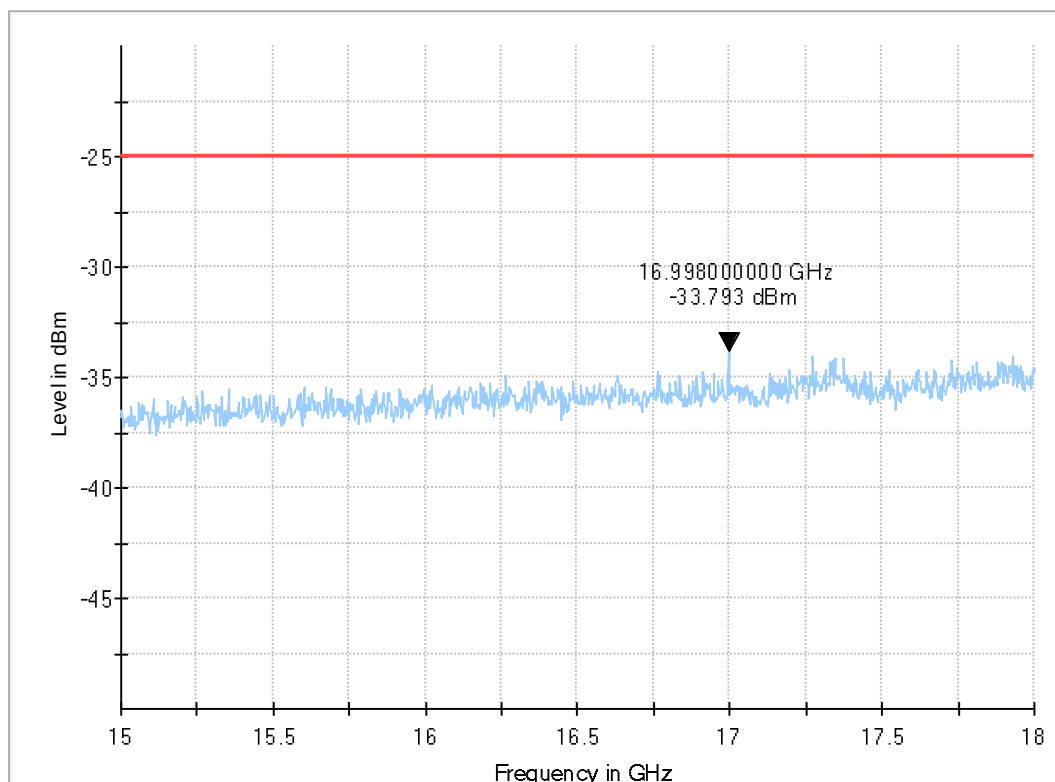
Common Information

Test Description:	Radiated Field Strength Emission
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC Part 24
Comm. Link:	GSM 1900
Operating Mode:	MS allocated channel 512
Exclusionband:	--
Environmental Conditions:	Humidity: 45% rH; Temperature: 21 °C
Operator:	npe
Set-up:	1, EUT standing, Ant Ver
Verdict:	Passed

EUT Information

PMT Sample Nr.	22-1-00306S58_C01
----------------	-------------------

Full Spectrum



8.04a_Traffic_mode_GSM_1900_CH_512

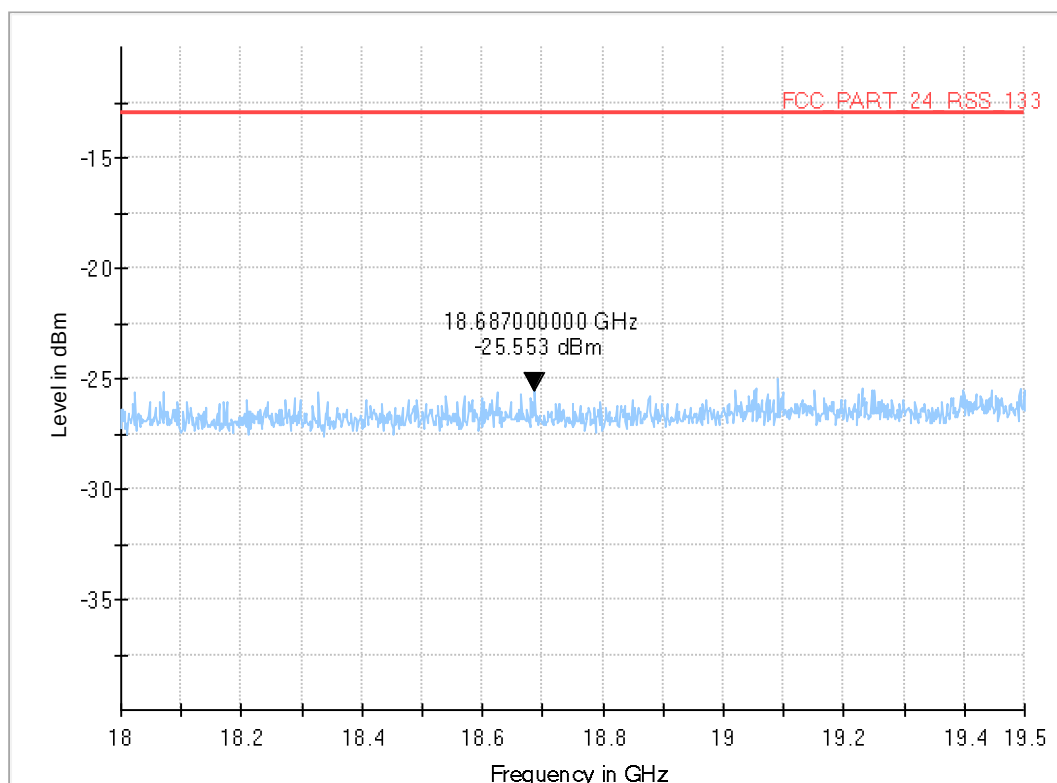
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC Part 24.238 / RSS-133
Comm. Link:	GSM1900, Voice/EDGE
Operating Mode:	MS allocated channel 512 (UL = 1850.2MHz), 661 (UL = 1880.0MHz), 810 (UL = 1909.8MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 45% rH; Temperature: 22.1 °C
Operator:	npe
EUT Setup:	1, EUT laying, Ant hor/ver, backup antenna
Verdict:	Passed

EUT Information

PMT Sample Nr.	22-1-00306S58_C01
----------------	-------------------

Full Spectrum



8.04c_Traffic_mode_GSM_1900_CH_512

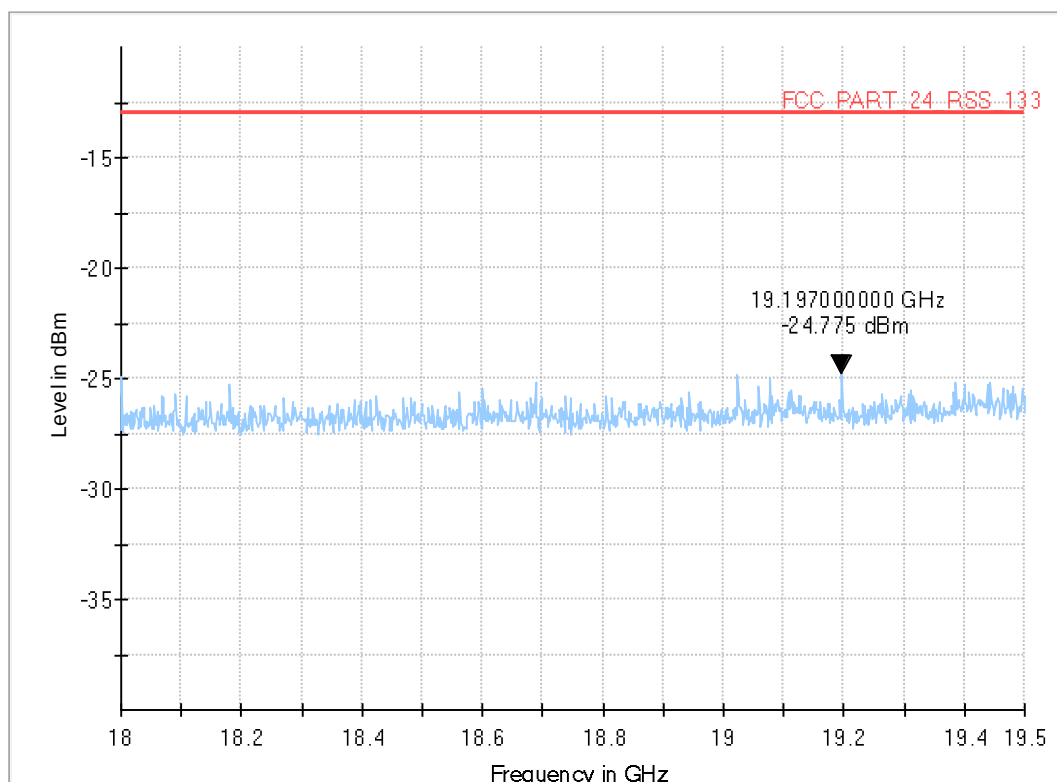
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC Part 24.238 / RSS-133
Comm. Link:	GSM1900, Voice/EDGE
Operating Mode:	MS allocated channel 512 (UL = 1850.2MHz), 661 (UL = 1880.0MHz), 810 (UL = 1909.8MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 45% rH; Temperature: 22.1 °C
Operator:	npe
EUT Setup:	1, EUT standing, Ant hor/ver, backup antenna
Verdict:	Passed

EUT Information

PMT Sample Nr. 22-1-00306S58_C01

Full Spectrum



9.850_Bandedge_low_Channel_128_UL_824.2

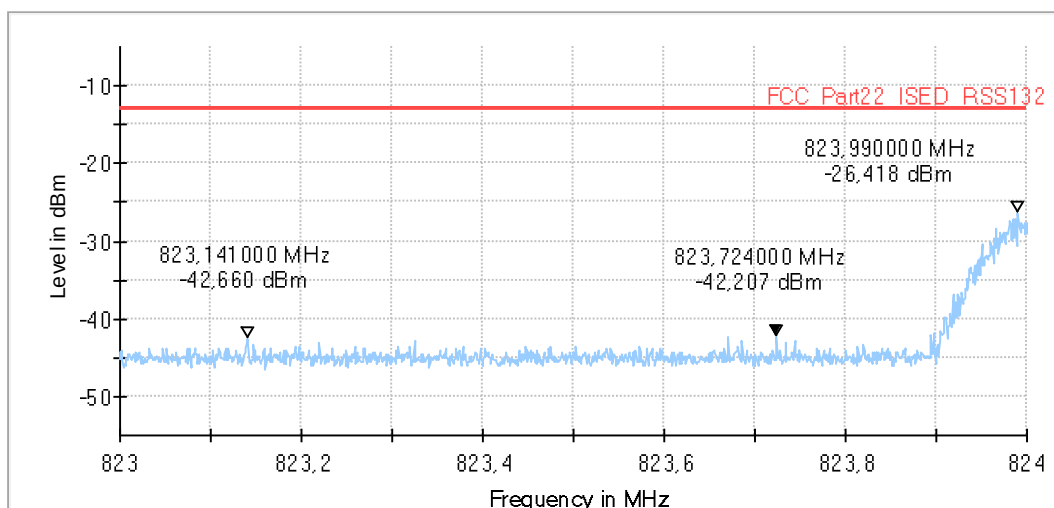
Common Information

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:	GSM 850 ch128
Operator:	TFra
Environmental Conditions:	Humidity : 45% rH; Temperature: 19 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	22-1-00306S139_C01
-------------	--------------------

Full Spectrum



9.851_Bandedge_high_Channel_251_UL_848.8

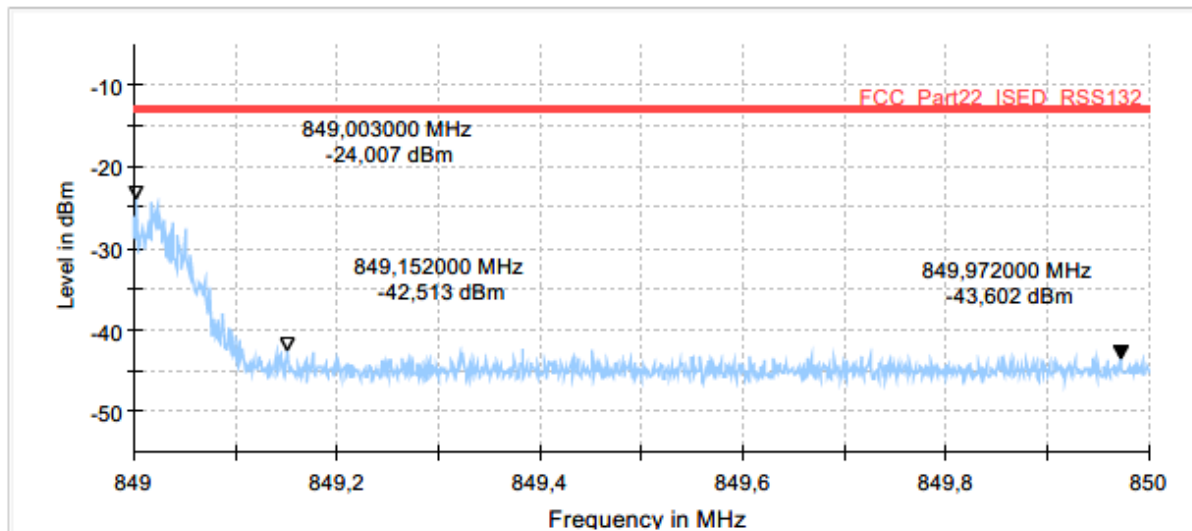
Common Information

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:	GSM 850 ch251
Operator:	TFra
Environmental Conditions:	Humidity : 45% rH; Temperature: 19 °C
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	22-1-00306S139_C01
-------------	--------------------

Full Spectrum



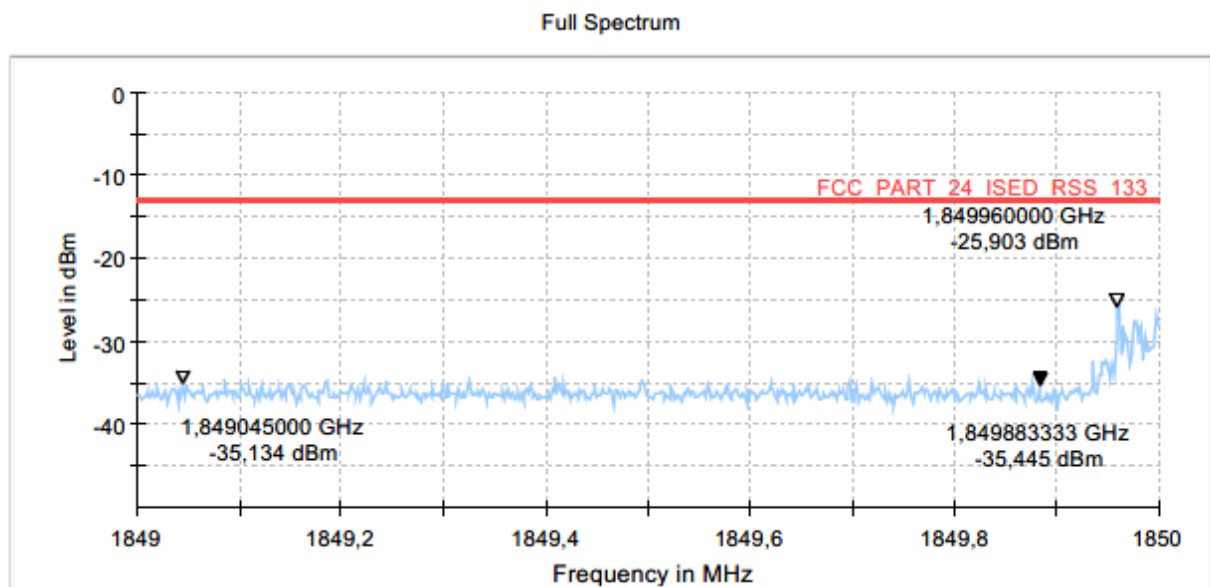
9.1901_Bandedge_low_Channel_512_UL_1850.2

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:	GSM 1900 ch512
Environmental Conditions:	Humidity : 45% rH; Temperature: 19 °C
Operator:	TFra
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	22-1-00306S139_C01
-------------	--------------------



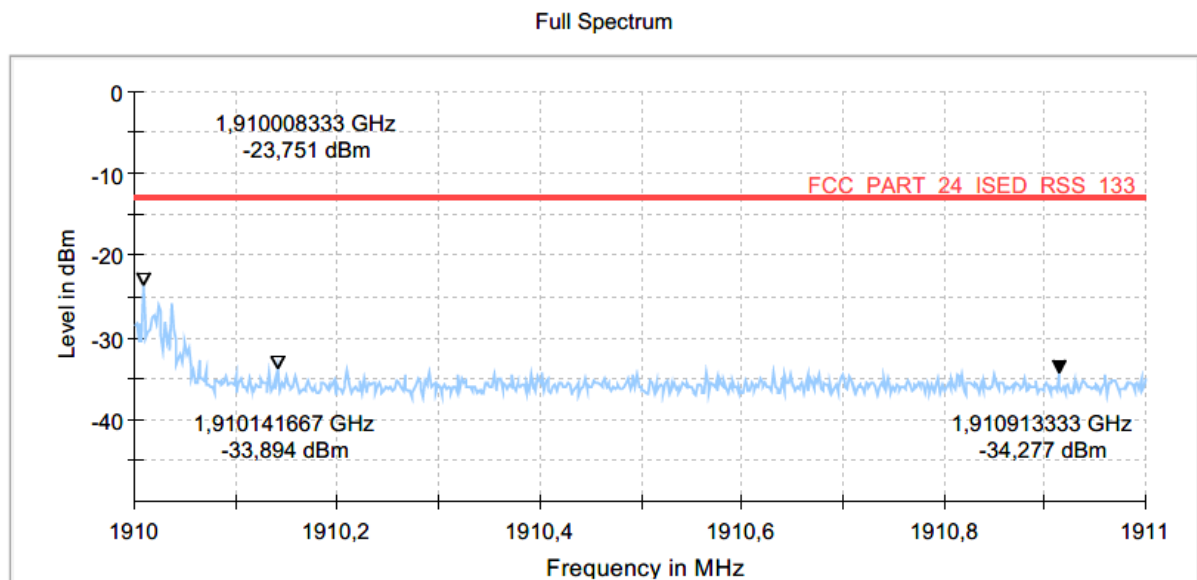
9.1902_Bandedge_high_Channel_810_UL_1909.8

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:	GSM 1900 ch810
Environmental Conditions:	Humidity : 45% rH; Temperature: 19 °C
Operator:	TFra
EUT Setup:	2
Verdict:	Passed

EUT Information

PMT number:	22-1-00306S139_C01
-------------	--------------------



End Of Annex 1