

Annex 1: Measurement diagrams to
TEST REPORT
 No.: 16-1-0051801T02a

According to:
FCC Regulations
 Part 22, Part 24

for

Daimler Trucks North America

7 620 000 283
 CTPDIN

FCC-ID: 2AMIOCTP4465460

Laboratory Accreditation and Listings			
 Deutsche Akkreditierungsstelle D-PL-12047-01-01	 MRA US-EU 0003	 Industry Canada Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301
 AUTHORIZED RF LABORATORY	 Authorized™ Test Lab Lab Code: 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com			

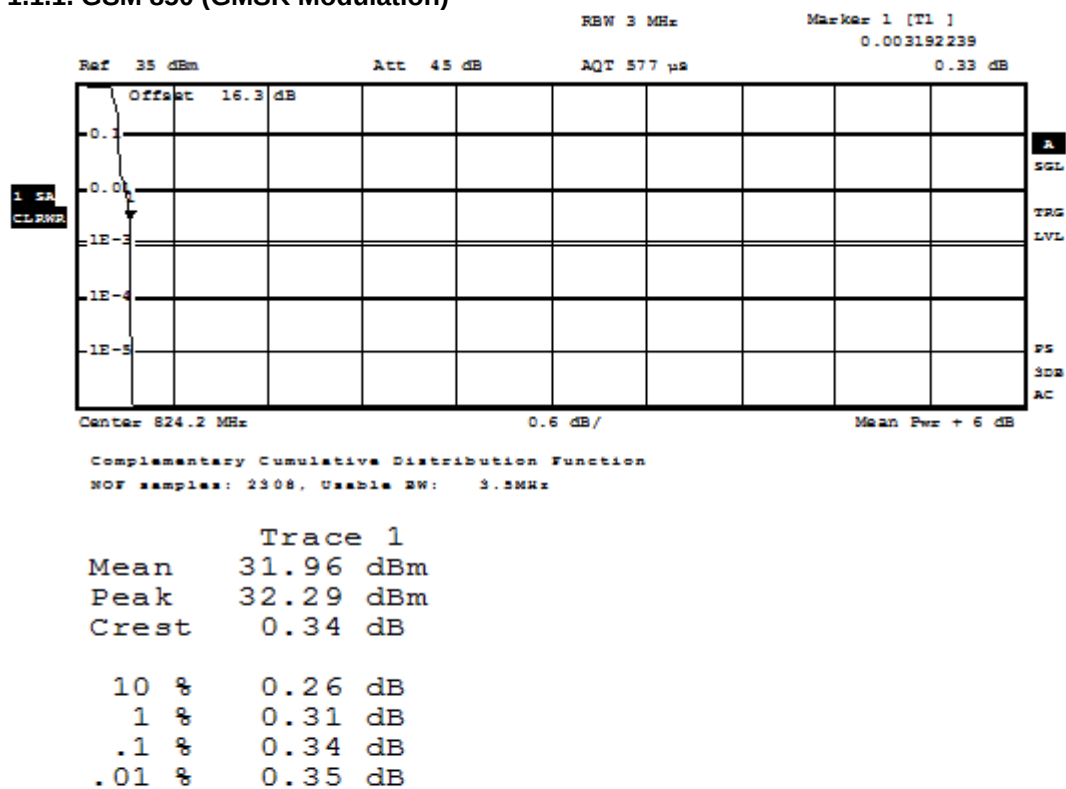
Table of contents

1. MEASUREMENT DIAGRAMS.....	3
1.1. Power Measurements and PAPR-Value	3
1.2. Magnetic field emissions radiated (850 MHz transmitting mode).....	15
1.3. Magnetic field emissions radiated (1900 MHz transmitting mode).....	21
1.4. Spurious emissions radiated (850 MHz transmitting mode).....	27
1.5. Spurious emissions radiated (1900 MHz transmitting mode).....	33
1.6. Radiated emissions on 850 MHz transmitting band-edge.....	38
1.7. Radiated emissions on 1900 MHz transmitting band-edge.....	42

1. Measurement diagrams

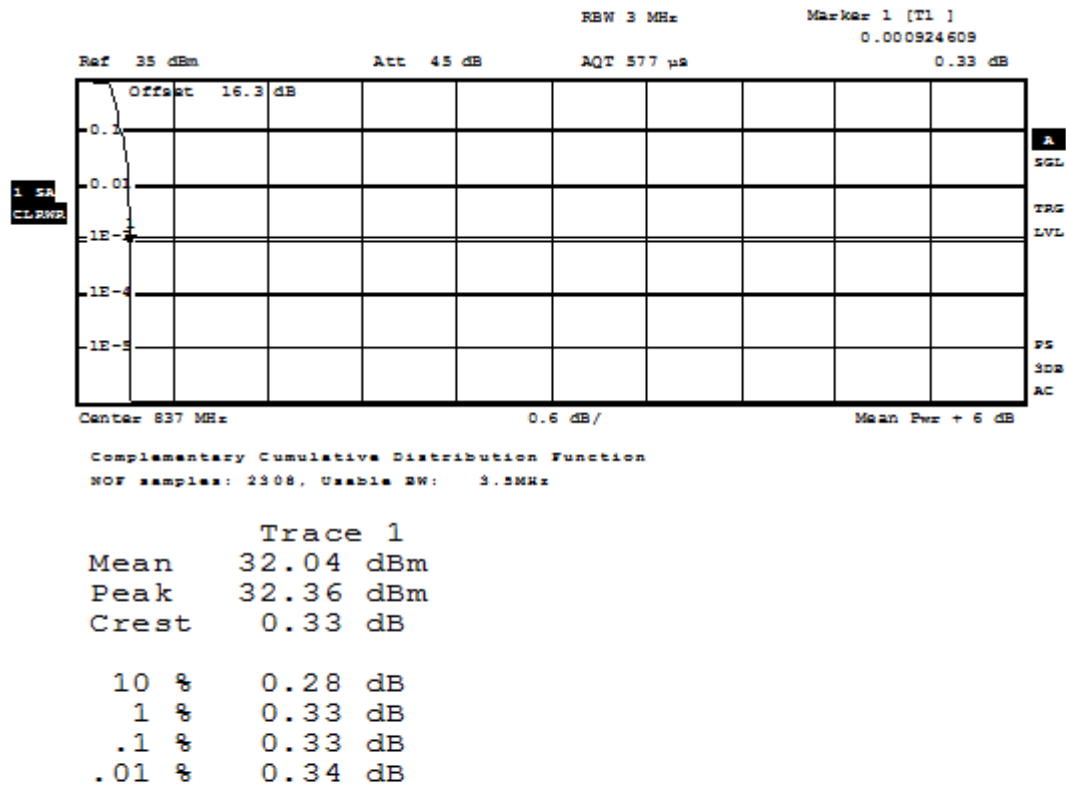
1.1. Power Measurements and PAPR-Value

1.1.1. GSM 850 (GMSK Modulation)



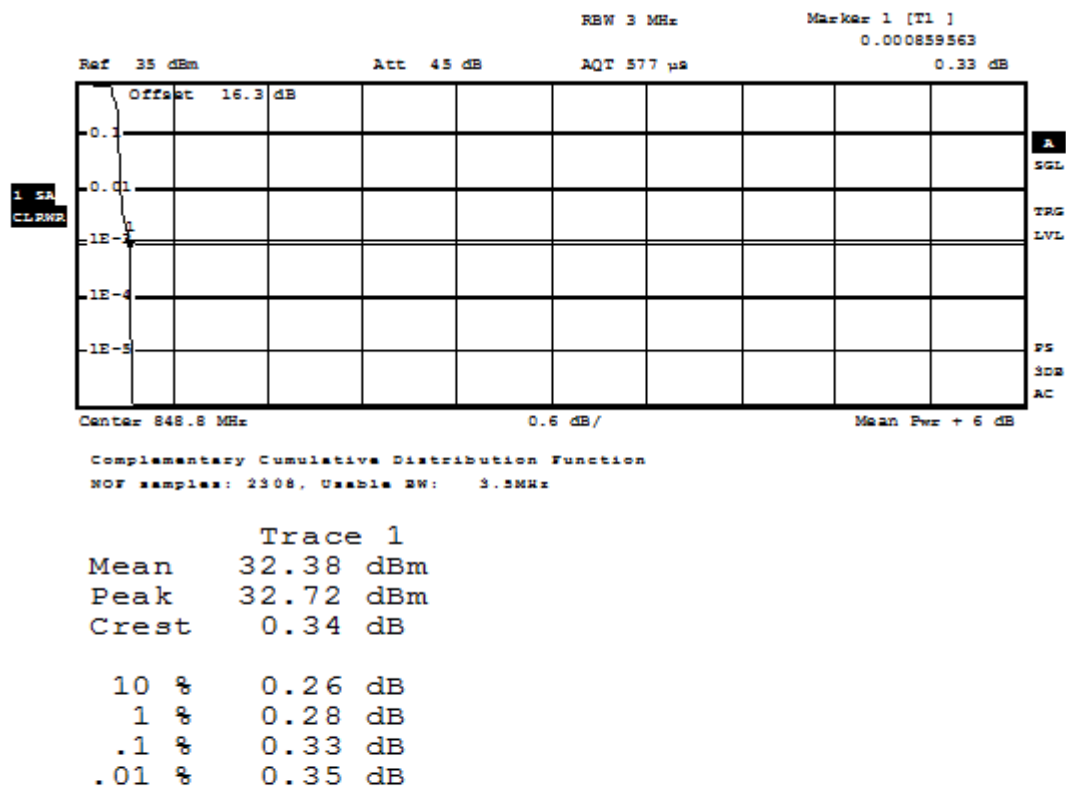
Date: 24.MAY.2017 16:39:01

Diagram CCDF_128_GMSK



Date: 24.MAY.2017 16:40:25

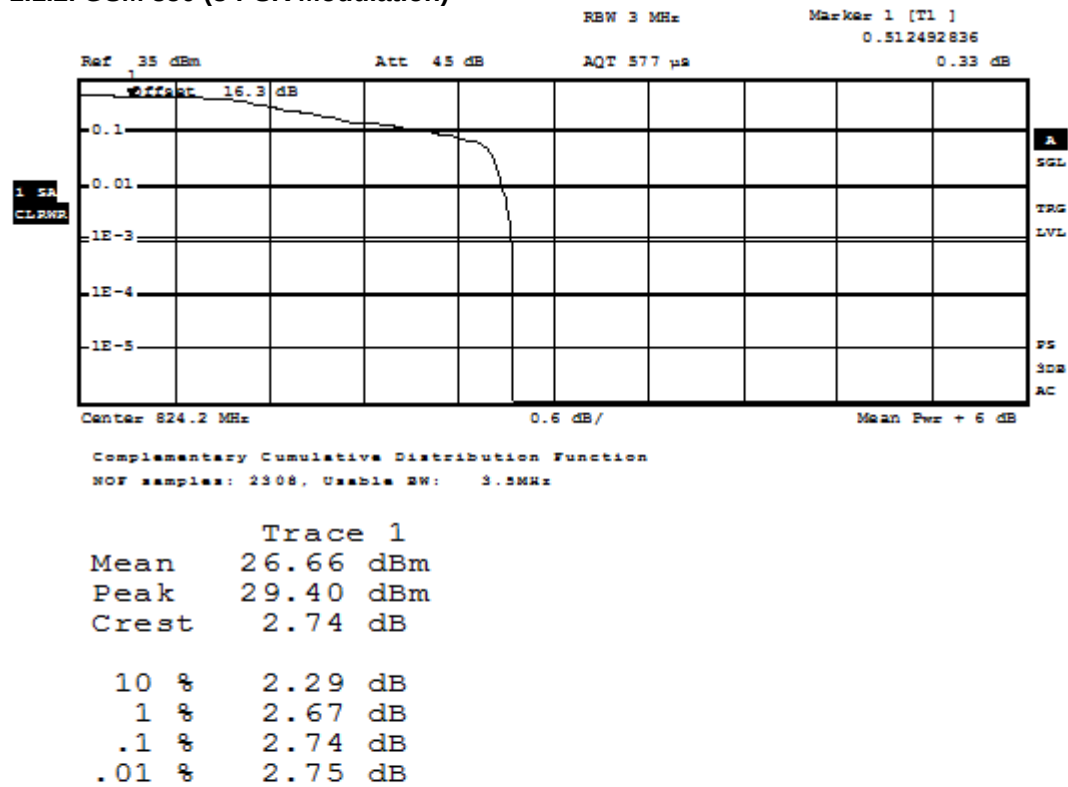
Diagram CCDF_192_GMSK



Date: 24.MAY.2017 16:41:38

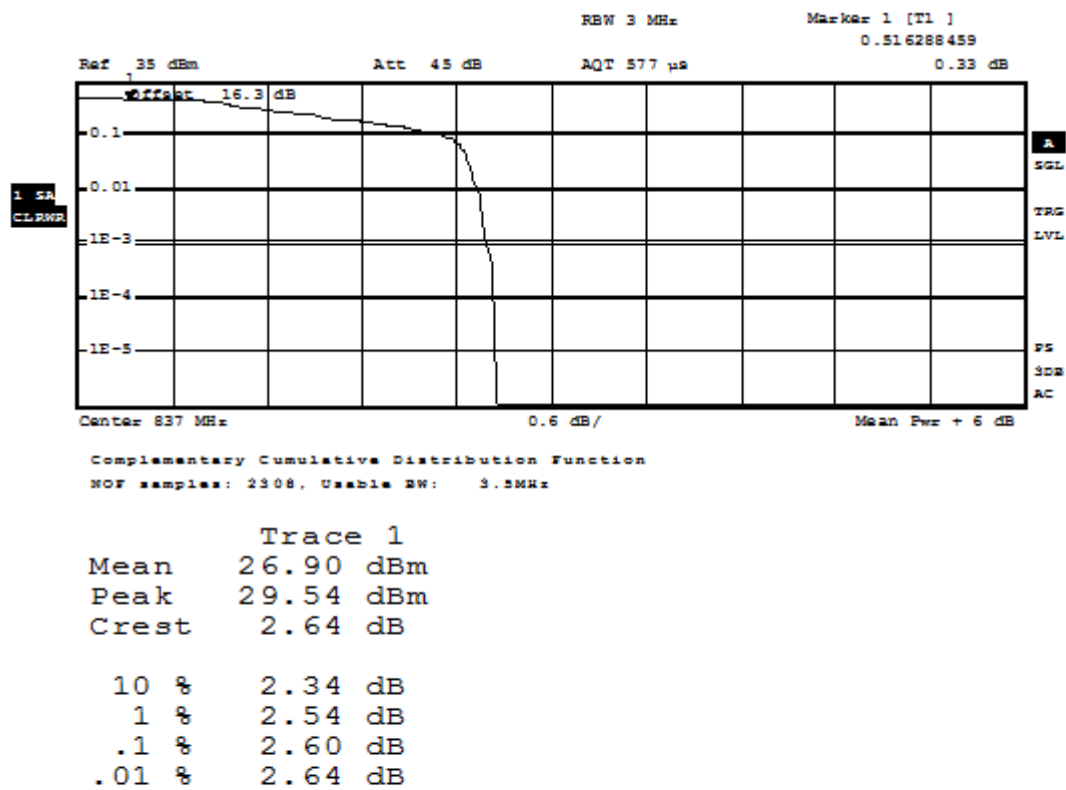
Diagram CCDF_251_GMSK

1.1.2. GSM 850 (8-PSK Modulation)



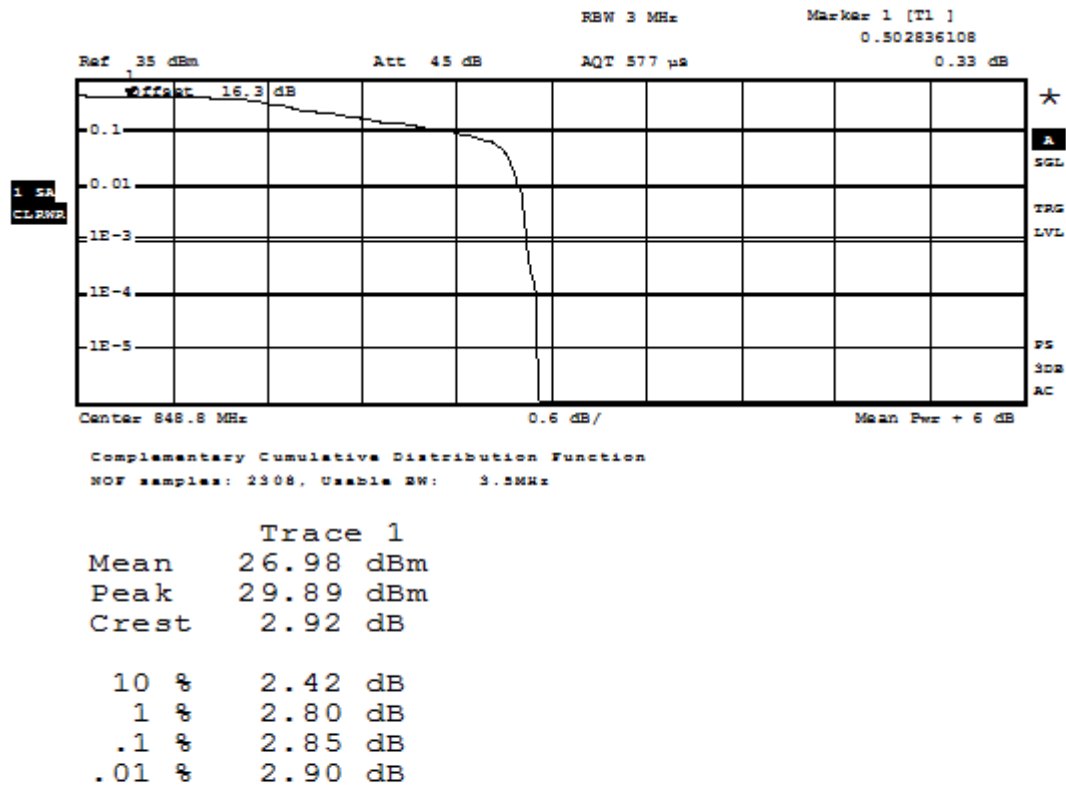
Date: 24.MAY.2017 16:33:45

Diagram CCDF_128_8PSK



Date: 24.MAY.2017 16:35:12

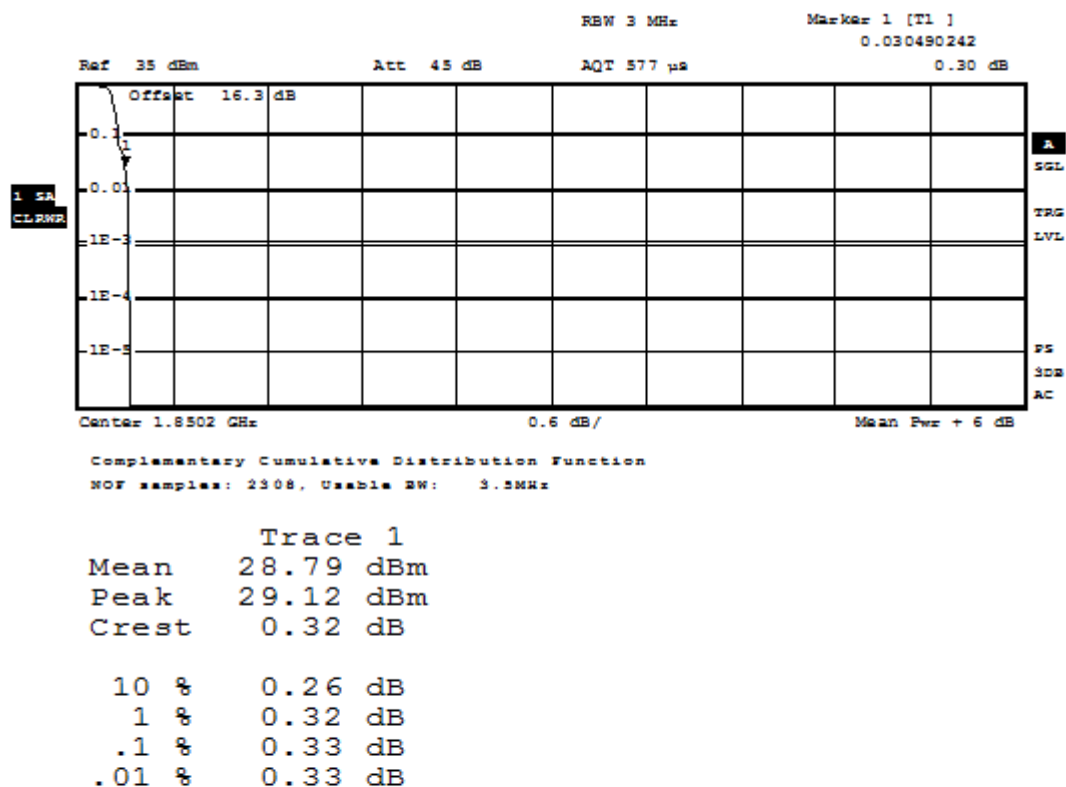
Diagram CCDF_192_8PSK



Date: 24.MAY.2017 16:36:32

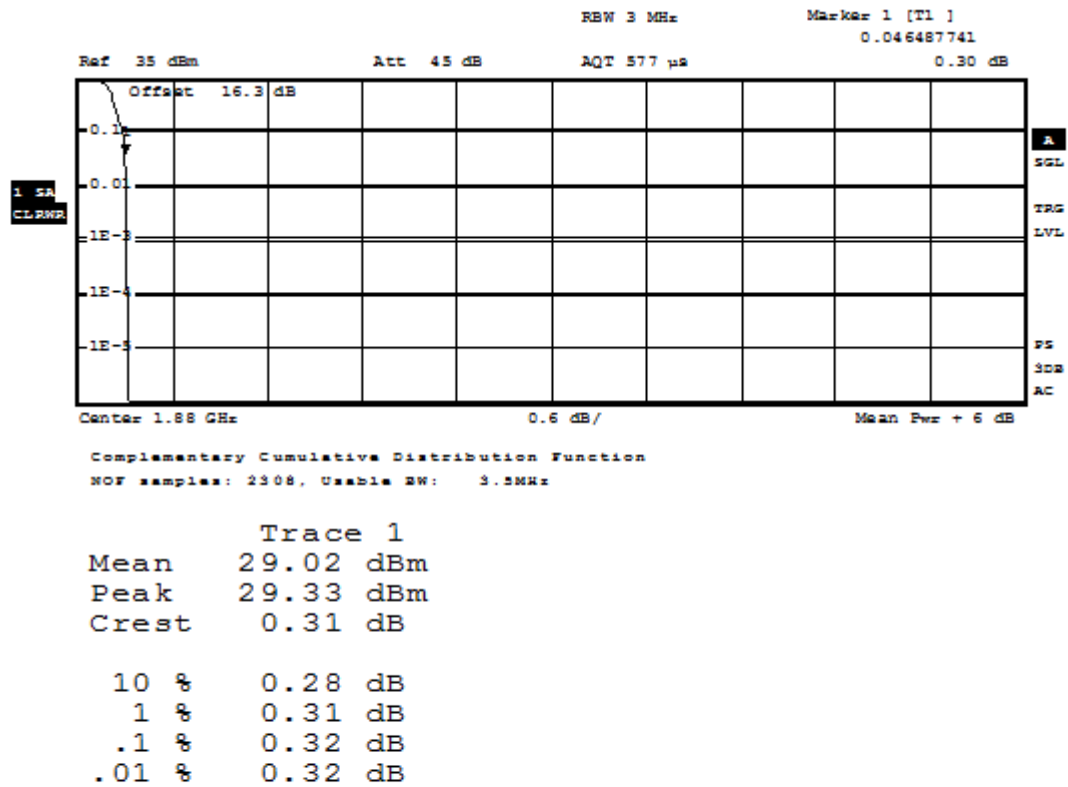
Diagram CCDF_251_8PSK

1.1.3. GSM 1900 (GMSK Modulation)



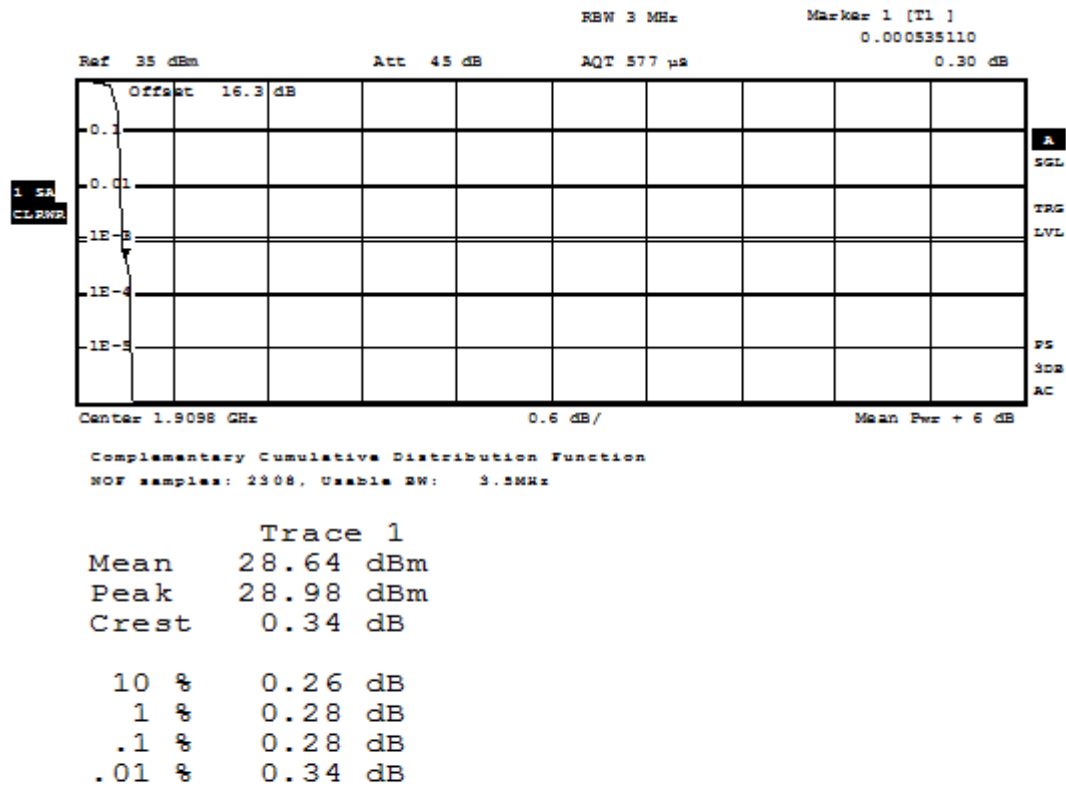
Date: 24.MAY.2017 16:51:55

Diagram CCDF_512_GMSK



Date: 24.MAY.2017 16:52:59

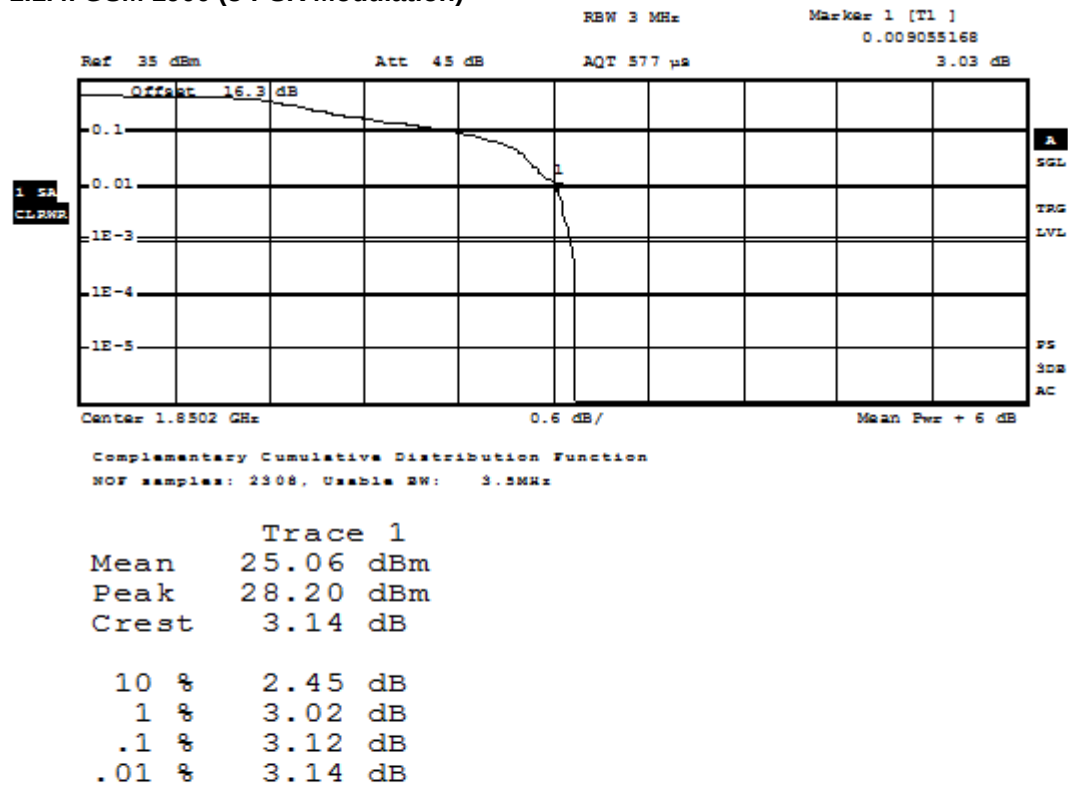
Diagram CCDF_661_GMSK



Date: 24.MAY.2017 16:53:54

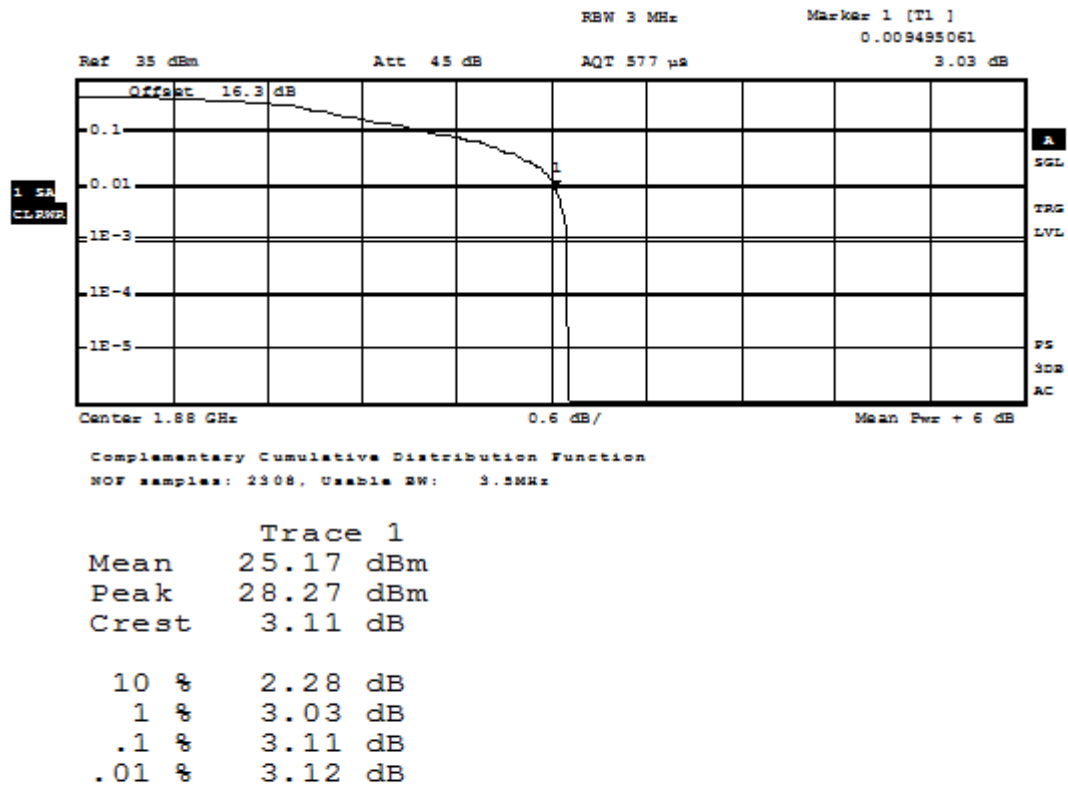
Diagram CCDF_810_GMSK

1.1.4. GSM 1900 (8-PSK Modulation)



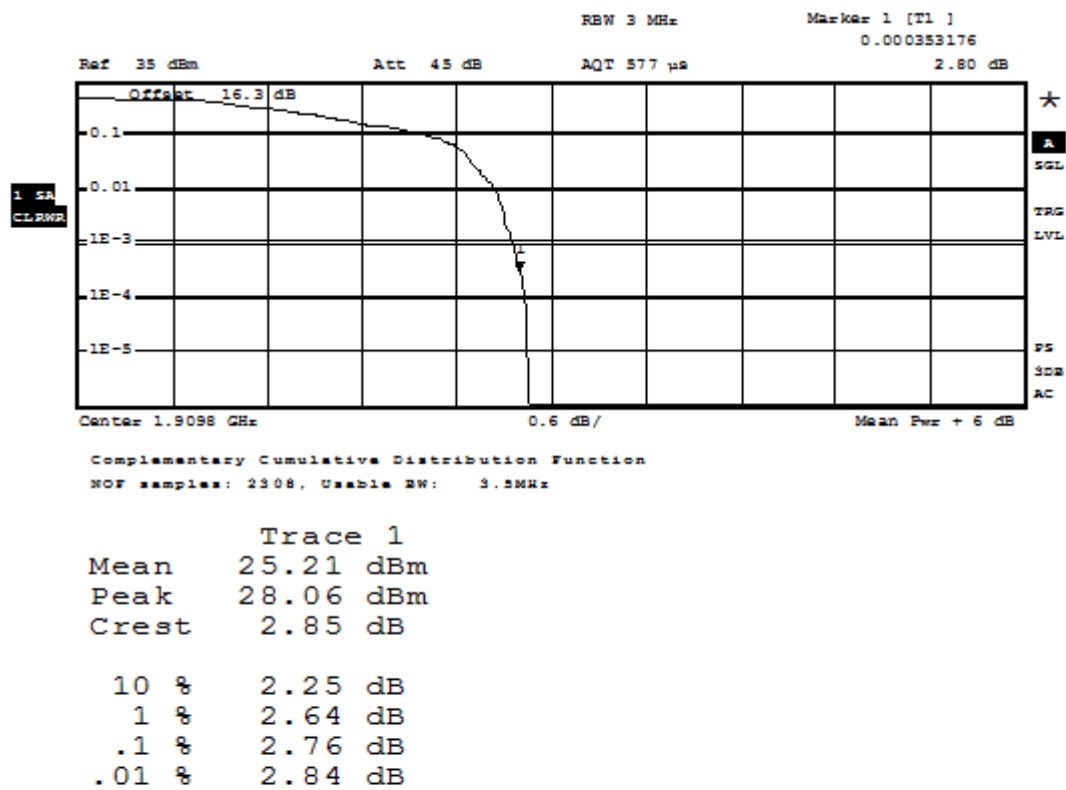
Date: 24.MAY.2017 16:44:37

Diagram CCDF_512_8PSK



Date: 24.MAY.2017 16:46:41

Diagram CCDF_661_8PSK



Date: 24.MAY.2017 16:48:39

Diagram CCDF_810_8PSK

1.2. Magnetic field emissions radiated (850 MHz transmitting mode) 2.01a_RSE_R_Ch128_GPRS_standing

Common Information

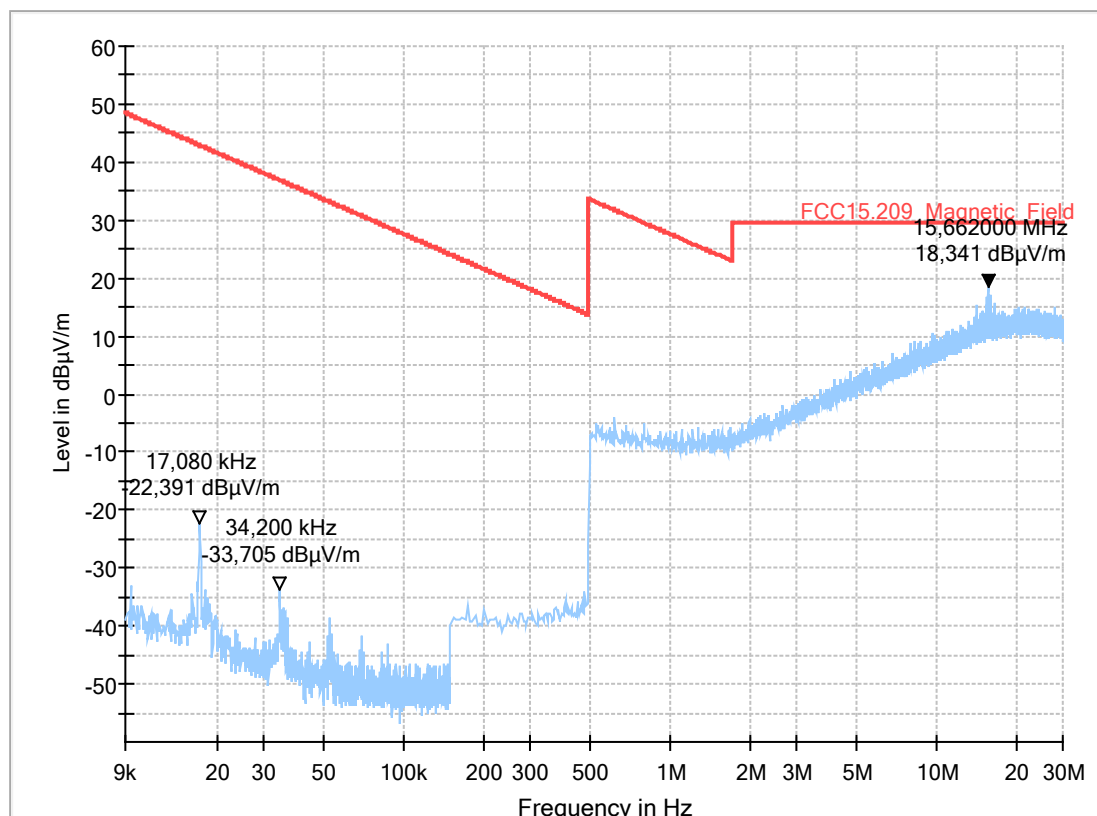
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-GEN: Issue 4
EUT Position:	EUT standing
Operating Conditions:	TX Mode_GSM850 12V DC
Operator:	Mah
Comment:	Channel No: 128

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum

Full Spectrum



2.01b_RSE_R_Ch128_GPRS

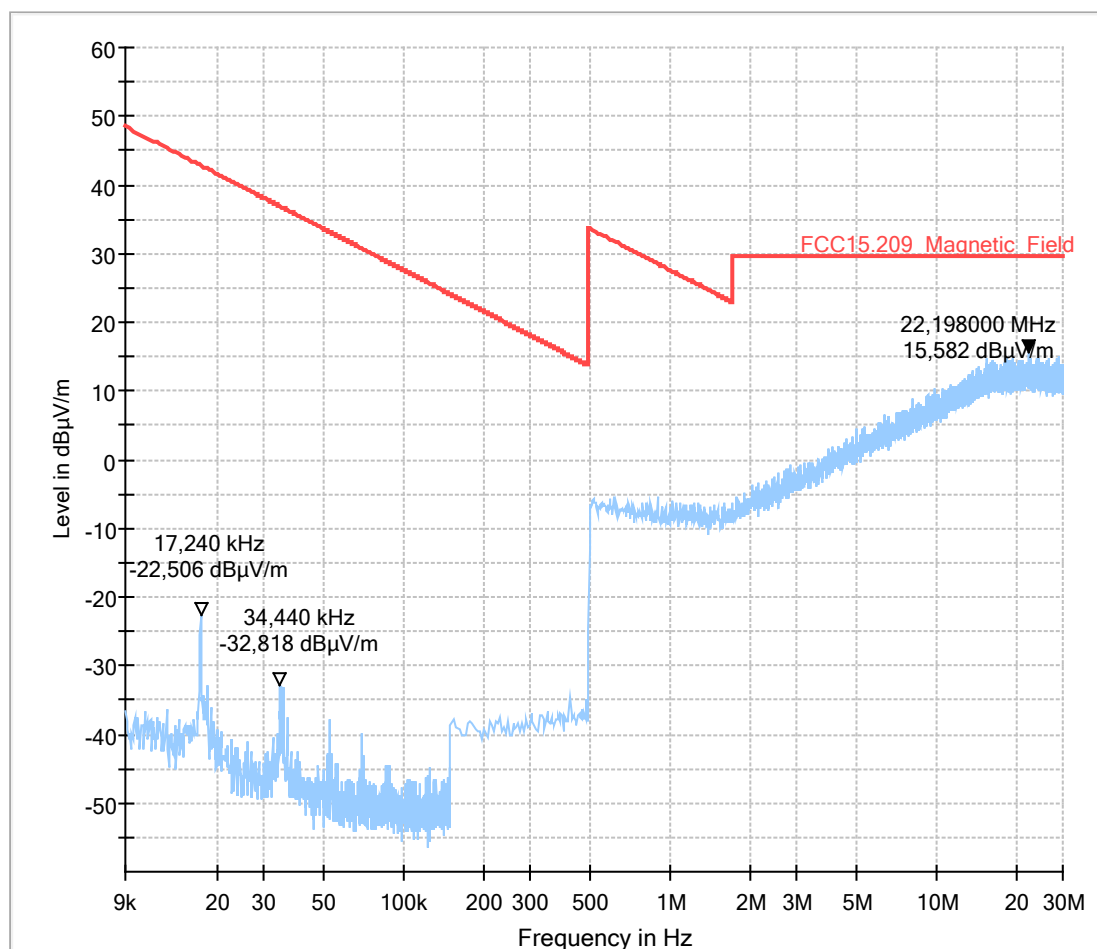
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	RIS
Operating conditions:	TX Mode_GSM850
Power during tests:	24V DC
Comment 1:	Channel No: 128

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



2.02a_RSE_R_Ch192_GPRS_standing

Common Information

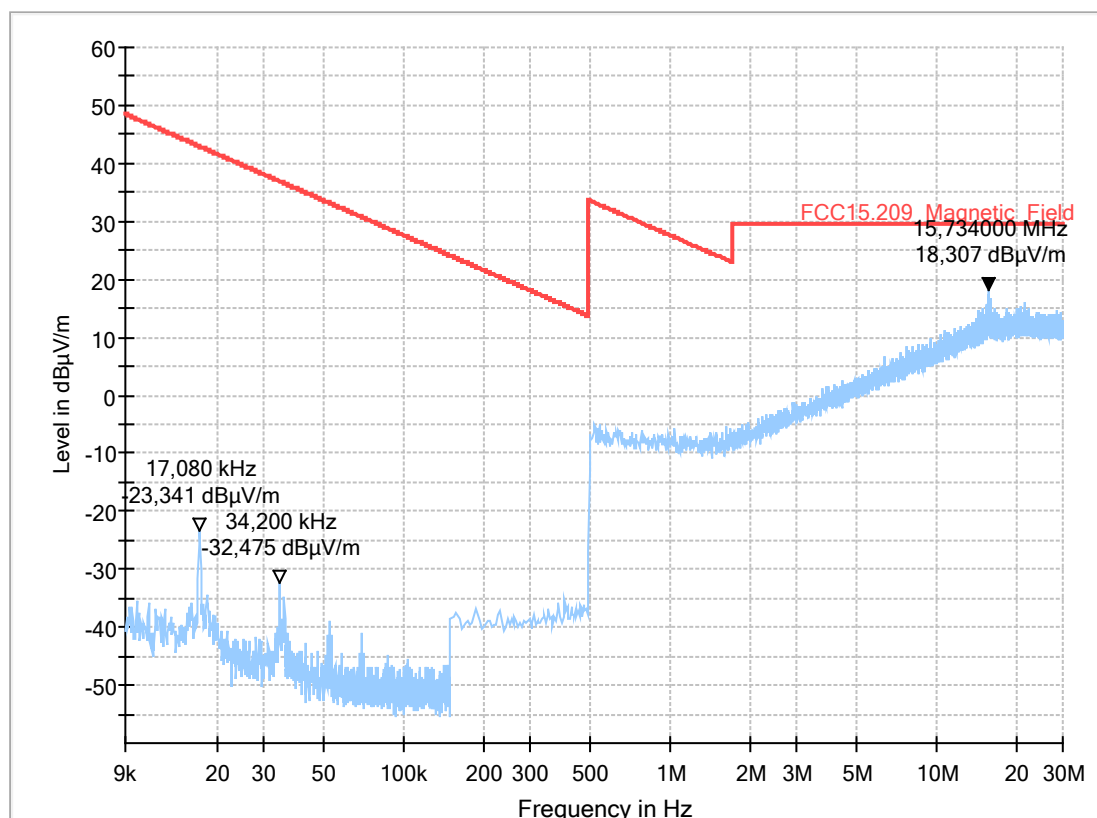
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification	FCC 15.205 § 15.209; RSS-GEN: Issue 4
EUT Position:	EUT standing
Operating Conditions:	TX Mode_GSM850 12V DC
Operator:	Mah
Comment:	Channel No: 192

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum

Full Spectrum



2.02b_RSE_R_Ch192_GPRS_Laying

Common Information

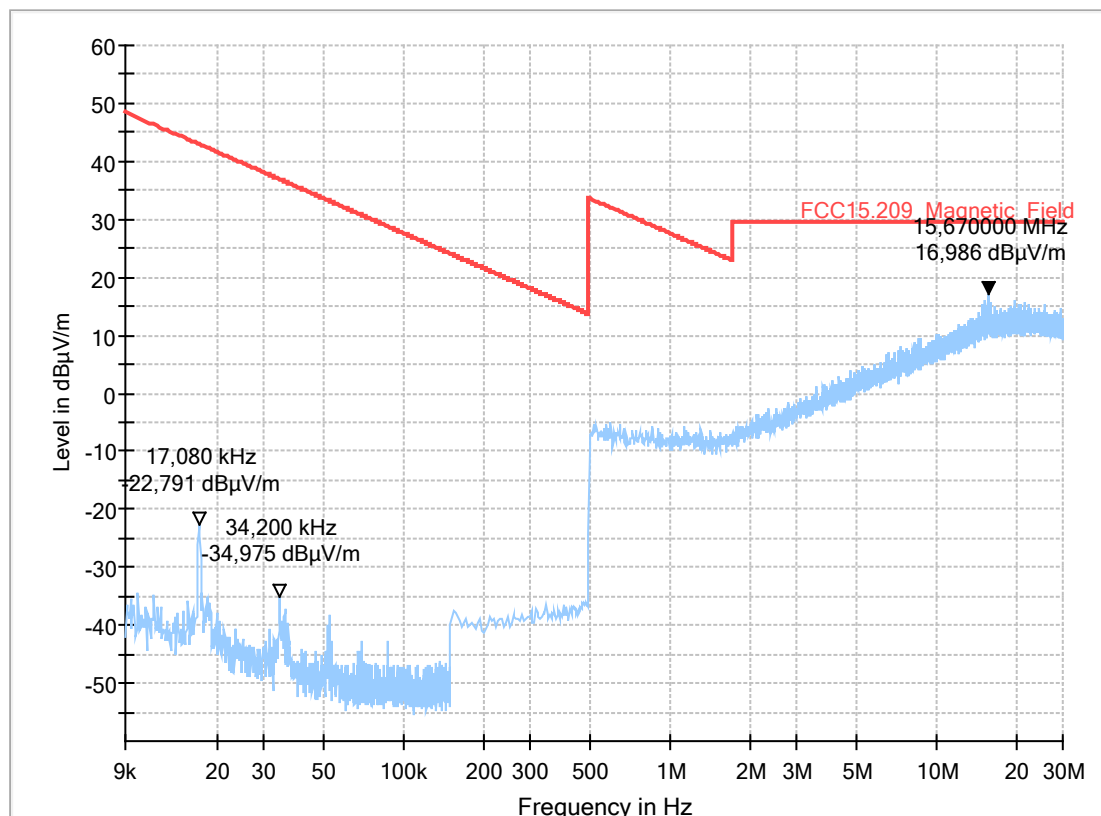
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-GEN: Issue 4
Operating Conditions:	TX Mode_GSM850
Operator:	Mah
Comment:	Channel No: 128
EUT Position:	EUT Laying

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum

Full Spectrum



2.03a_RSE_R_Ch251_GPRS_standing

Common Information

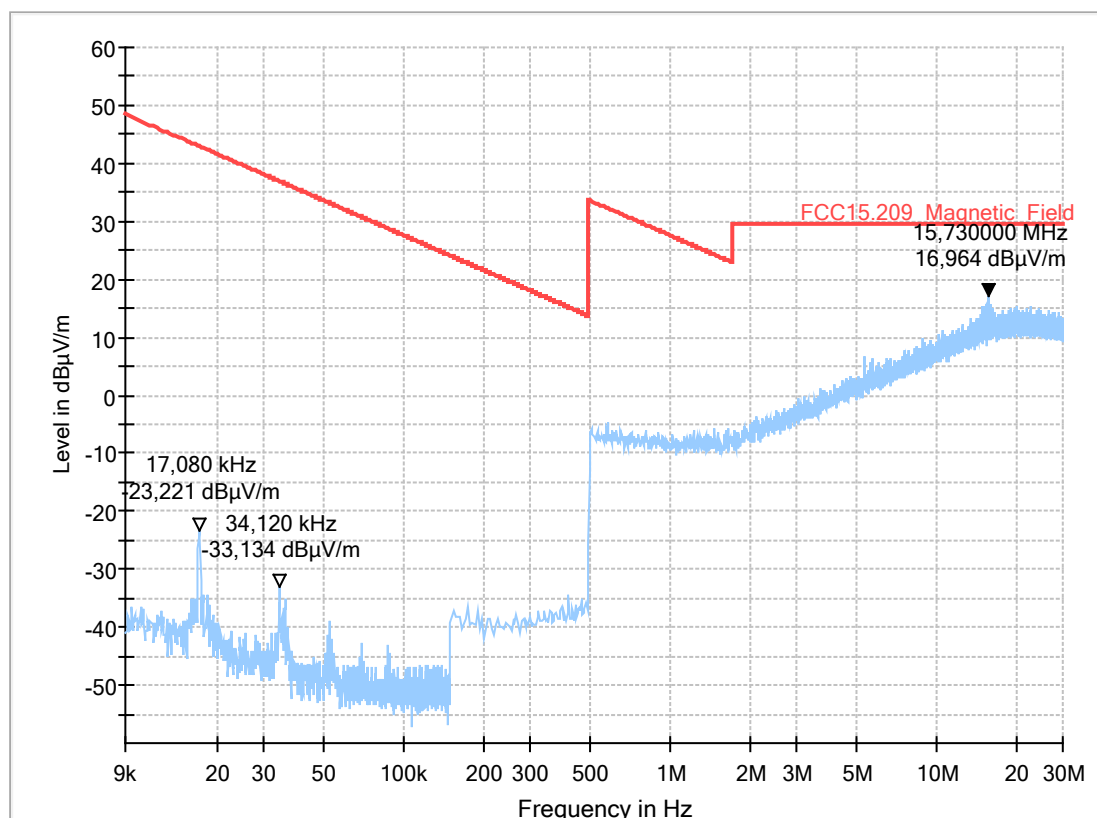
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification	FCC 15.205 § 15.209; RSS-GEN: Issue 4
EUT Position:	EUT standing
Operating Conditions:	TX Mode_GSM850 12V DC
Operator:	Mah
Comment:	Channel No: 251

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum

Full Spectrum



2.03b_RSE_R_Ch251_GPRS_Laying

Common Information

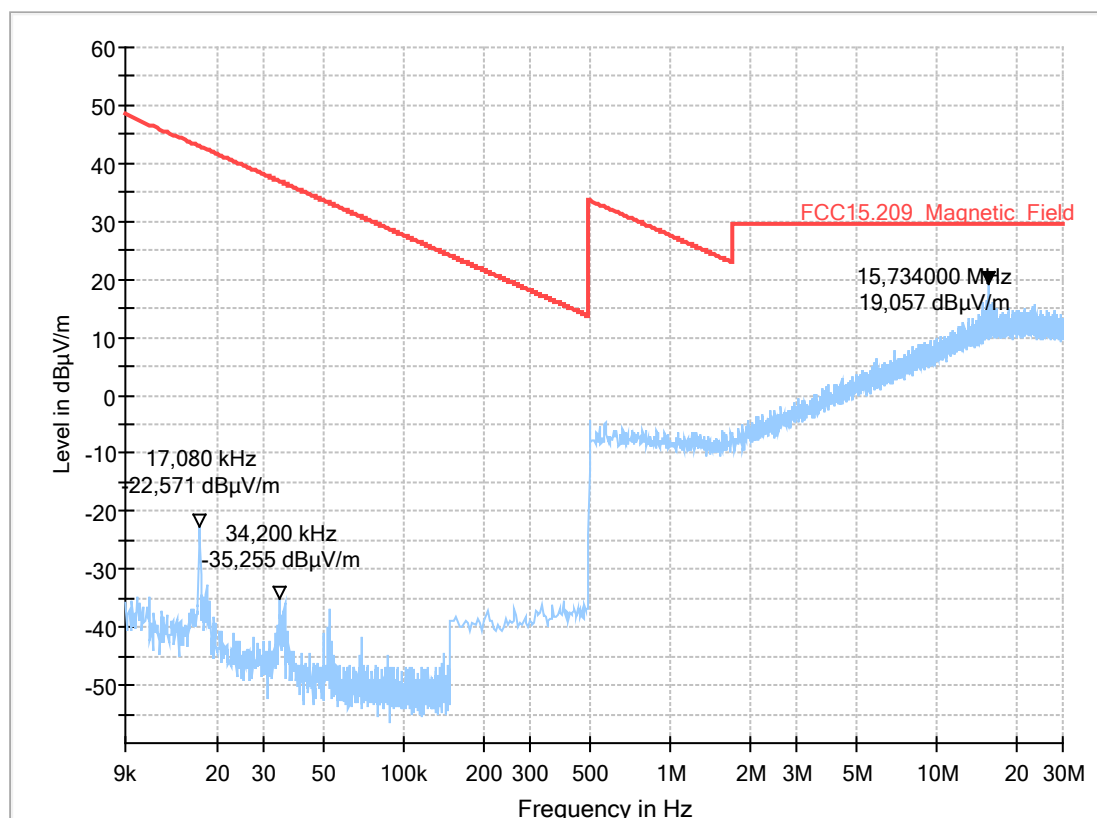
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification	FCC 15.205 § 15.209; RSS-GEN: Issue 4
EUT Position:	EUT Laying
Operating Conditions:	TX Mode_GSM850 , 12 V DC
Operator:	Mah
Comment:	Channel No: 251

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum

Full Spectrum



1.3. Magnetic field emissions radiated (1900 MHz transmitting mode)

2.10a_RSE_R_Ch512_GPRS_standing

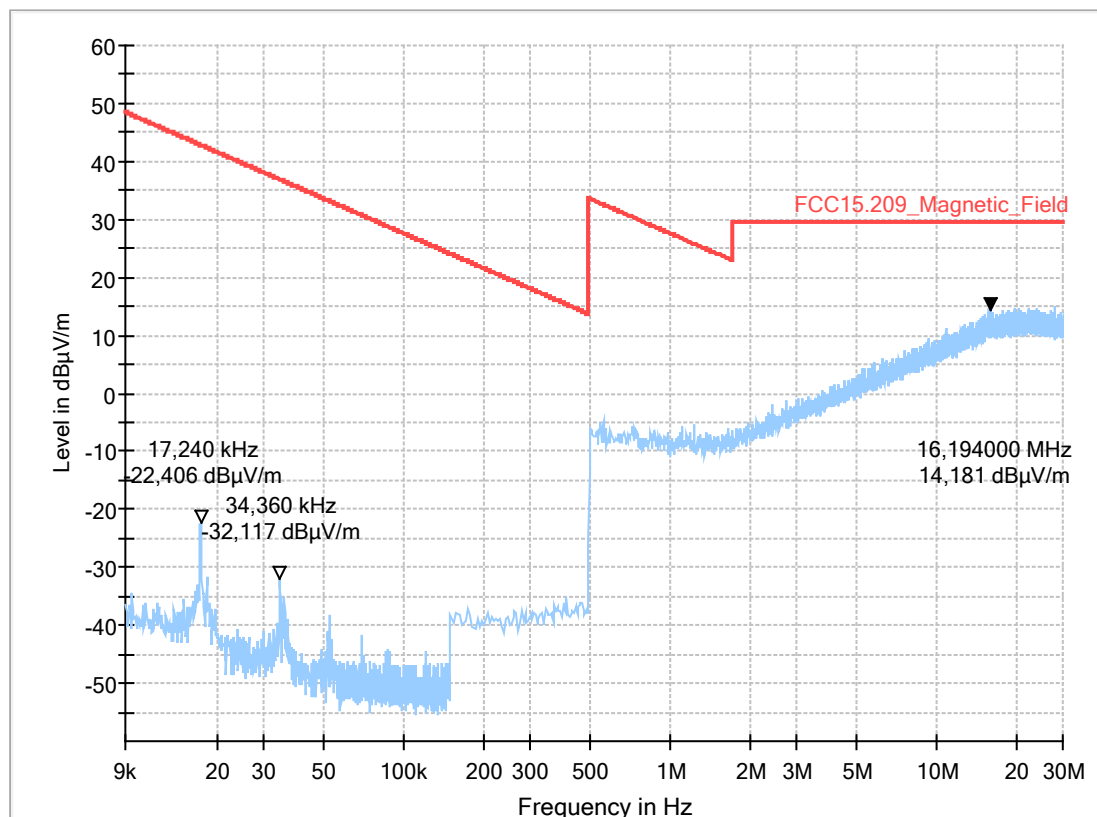
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	AFr
Operating mode:	GPRS 1900 Channel 512
Operating conditions:	Humidity: 40%rH; Temperature: 20°C
Power during tests:	12V DC
Comment 1:	DUT Standing

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



2.10b_RSE_R_Ch512_GPRS_laying

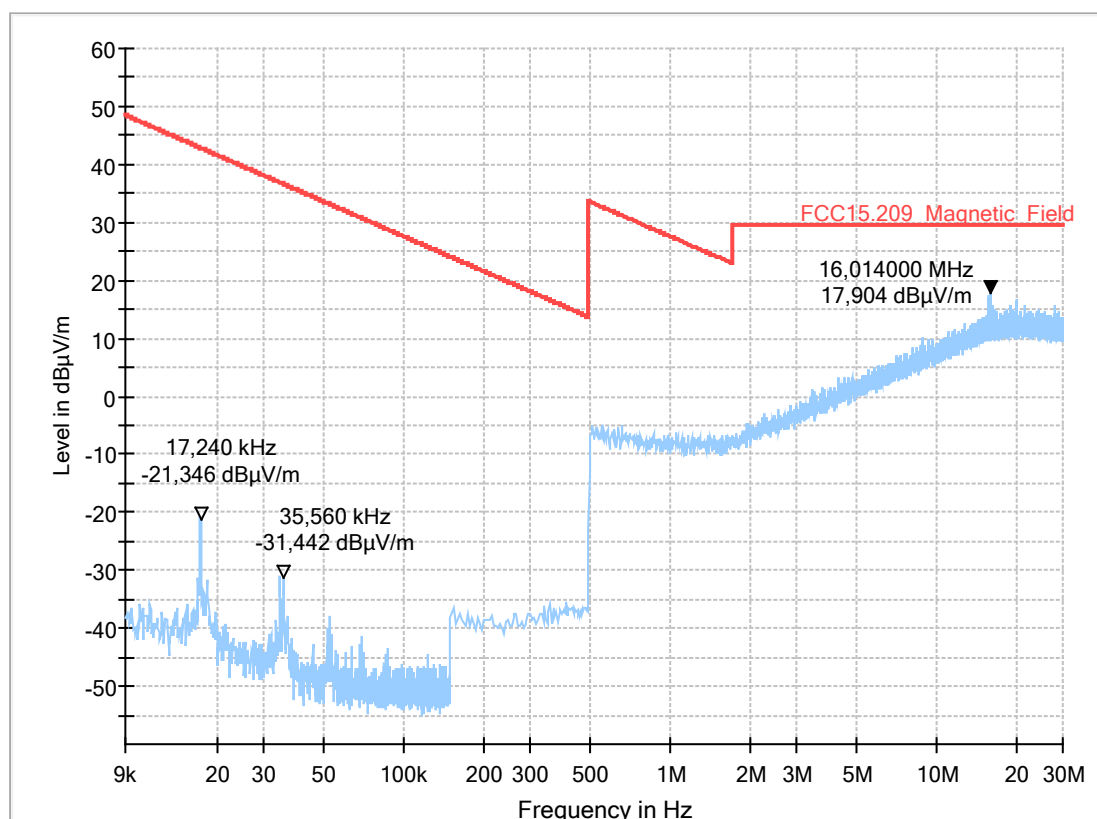
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	MBe
Operating conditions:	TX Mode_GSM1900 , 12 V DC
Power during tests:	12V DC
Comment 1:	Channel No: 512

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



2.11a_RSE_R_Ch661_GPRS_standing

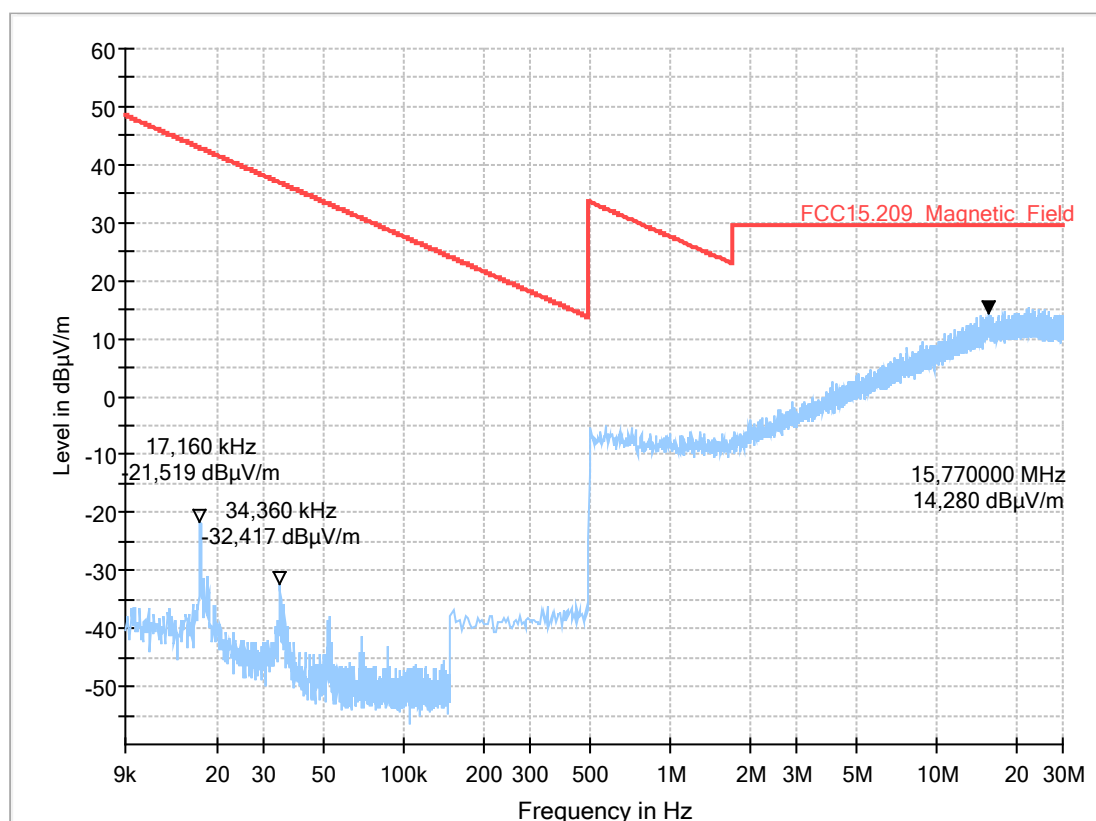
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	AFr
Operating mode:	GPRS 1900 Channel 661
Operating conditions:	Humidity: 40%rH; Temperature: 20°C
Power during tests:	12V DC
Comment 1:	DUT Standing

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



2.11b_RSE_R_Ch661_GPRS_laying

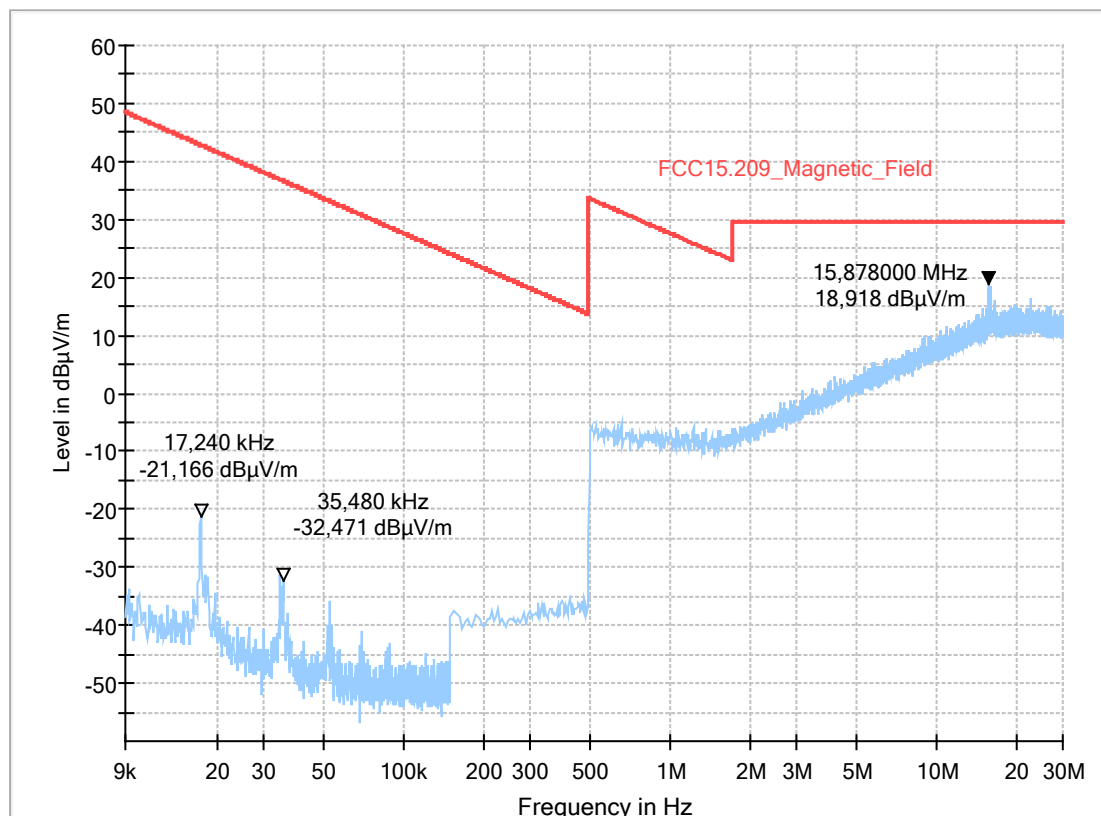
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	MBe
Operating conditions:	TX Mode_GSM1900 , 12 V DC
Power during tests:	12V DC
Comment 1:	Channel No: 661

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



2.12a_RSE_R_Ch810_GPRS_standing

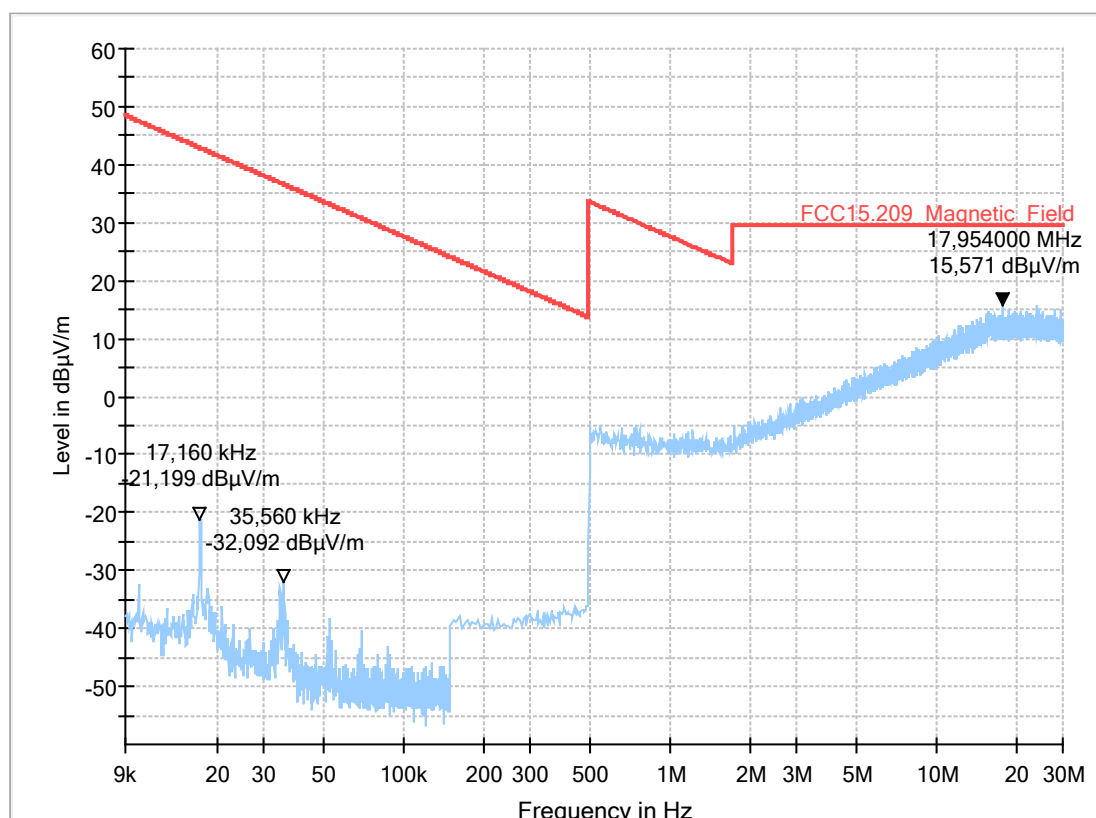
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	AFr
Operating mode:	GPRS 1900 Channel 810
Operating conditions:	Humidity: 40%rH; Temperature: 20°C
Power during tests:	24 V DC
Comment 1:	DUT Standing

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



2.12b_RSE_R_Ch810_GPRS_laying

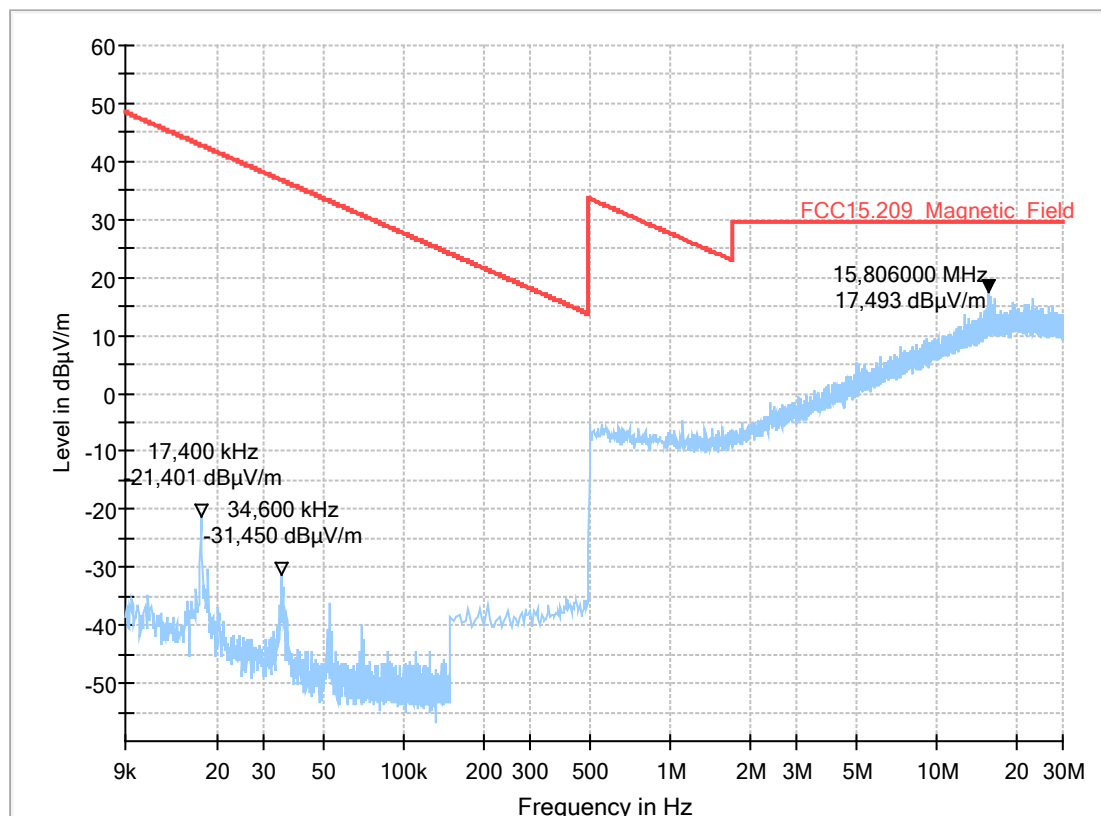
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	MBe
Operating conditions:	TX Mode_GSM1900 , 12 V DC
Power during tests:	12V DC
Comment 1:	Channel No: 810

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



1.4. Spurious emissions radiated (850 MHz transmitting mode)

8.01a_RSE_R_Ch128_GPRS_standing

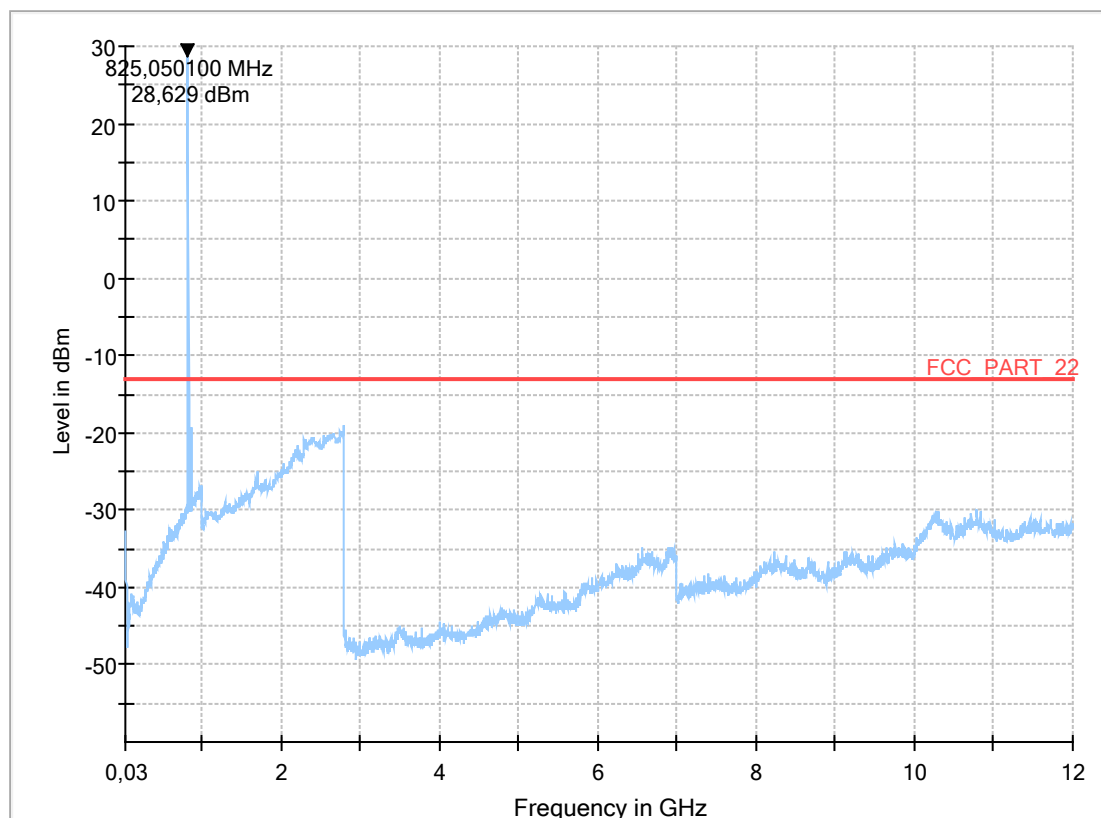
Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917
Test Case:	UE allocated channel 128
Operating Mode:	MS allocated UL channel 128,190,251
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mah
EUT Position:	EUT Standing

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



8.01b_RSE_R_Ch128_GPRS_laying

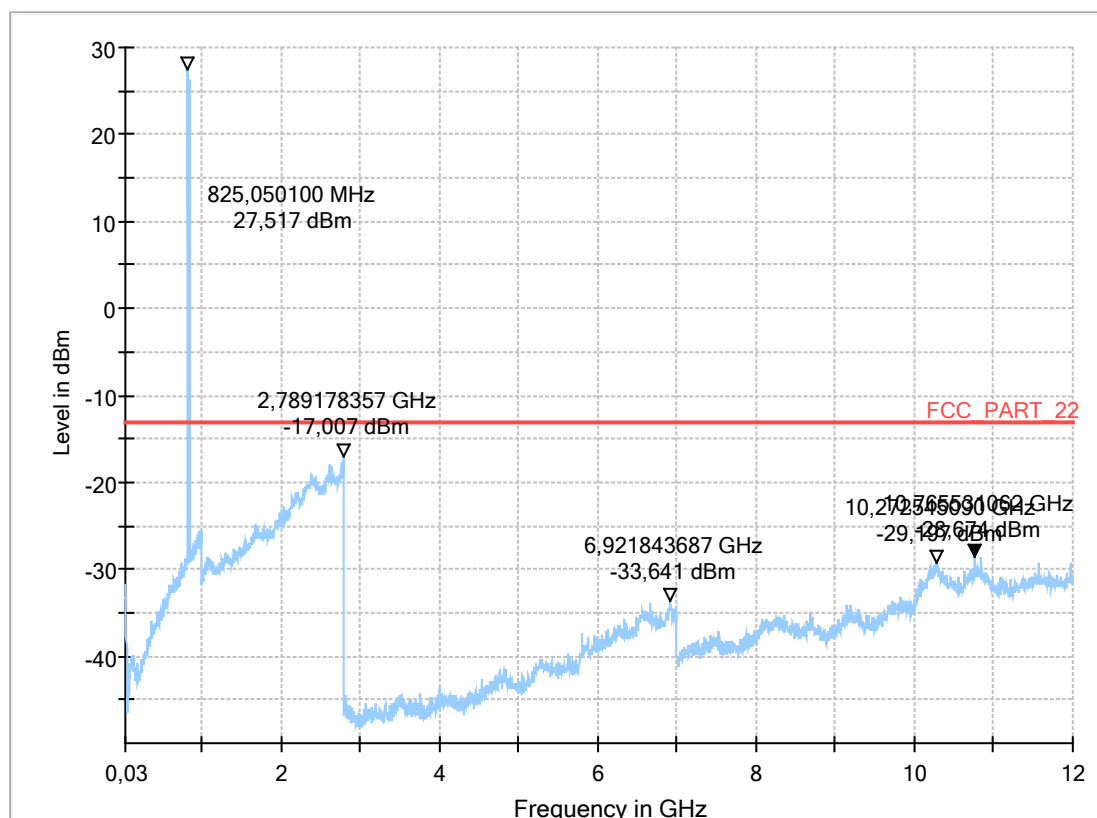
Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917
Test Case:	-
Operating Mode:	MS allocated UL channel 128,190,251
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	DLe
Comments:	DUT LAYING

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



8.02a_RSE_R_Ch192_GPRS_standing

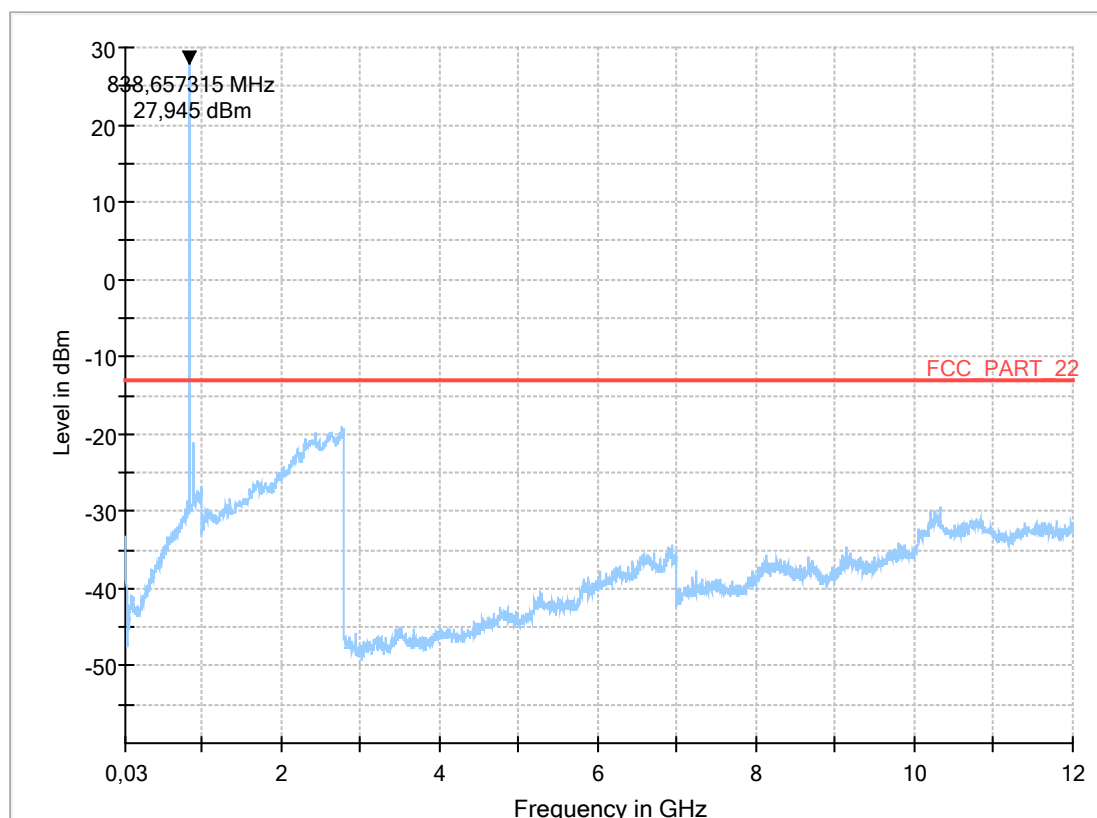
Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917
Test Case:	UE allocated channel 192
Operating Mode:	MS allocated UL channel 128,190,251
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mah
EUT Position:	EUT Standing

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



8.02b_RSE_R_Ch192_GPRS_laying

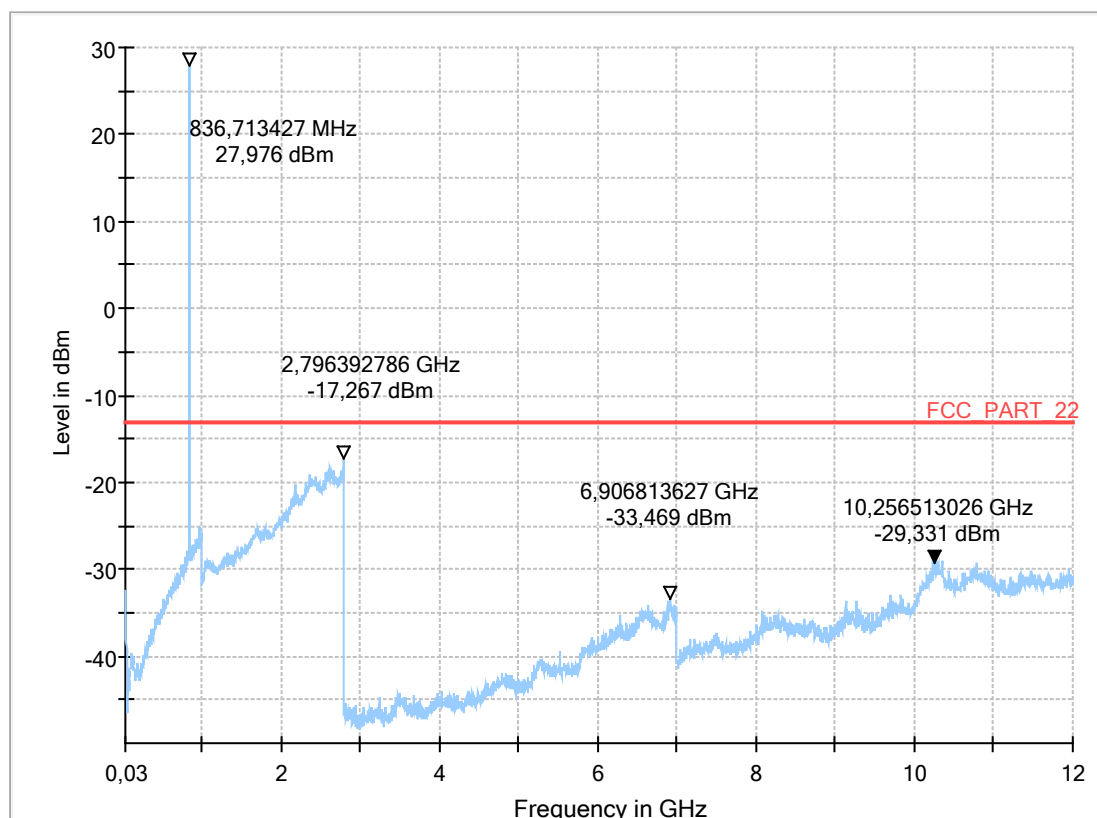
Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917
Test Case:	-
Operating Mode:	MS allocated UL channel 128,190,251
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	DLe
Comments:	DUT LAYING

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



8.03a_RSE_R_Ch251_GPRS_standing

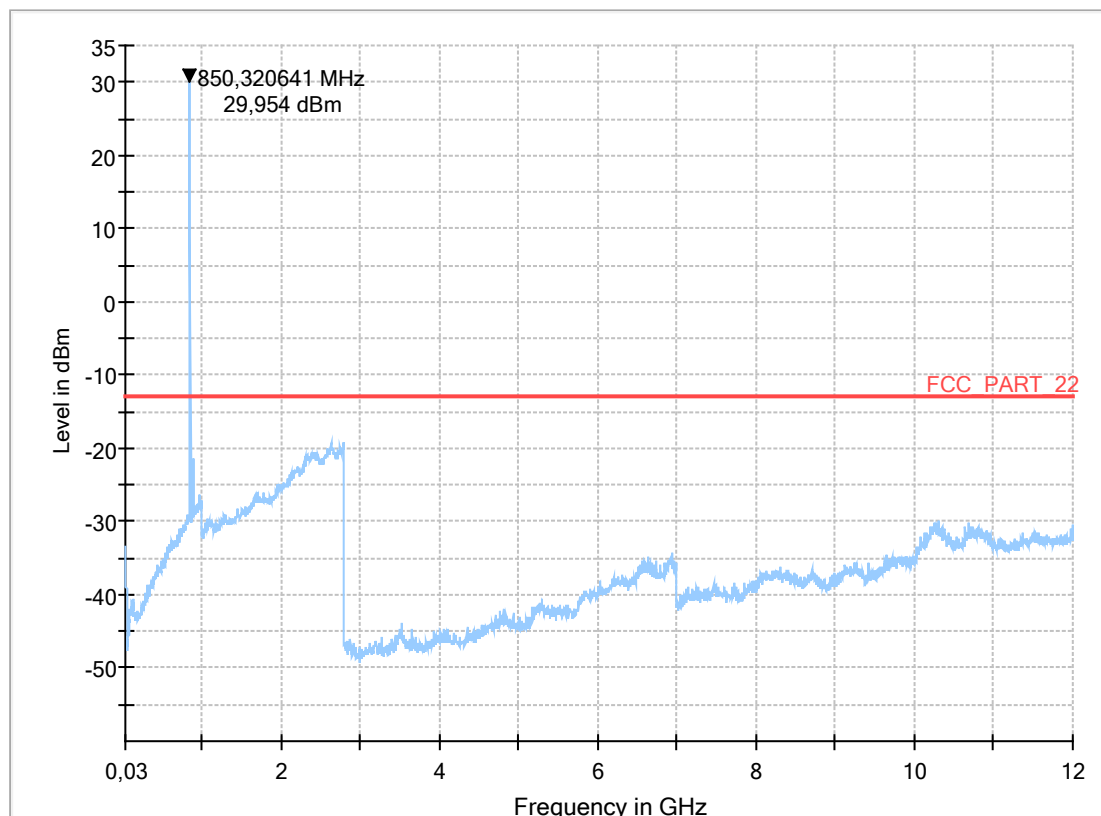
Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917
Test Case:	UE allocated channel 251
Operating Mode:	MS allocated UL channel 128,190,251
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mah
EUT Position:	EUT Standing

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



8.03b_RSE_R_Ch251_GPRS_laying

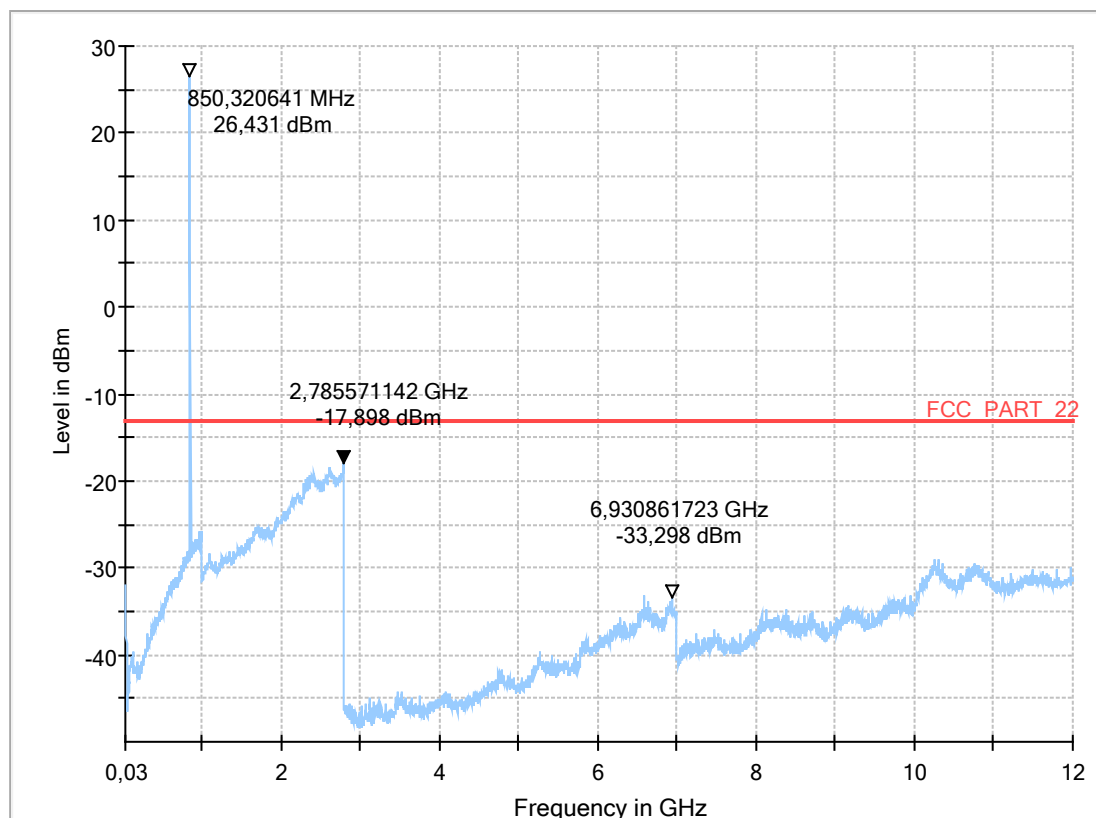
Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917
Test Case:	-
Operating Mode:	MS allocated UL channel 128,190,251
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	DLe
Comments:	DUT LAYING
Comments:	CH 251

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



1.5. Spurious emissions radiated (1900 MHz transmitting mode)

8.10b_RSE_R_Ch512_GPRS_laying

Common Information

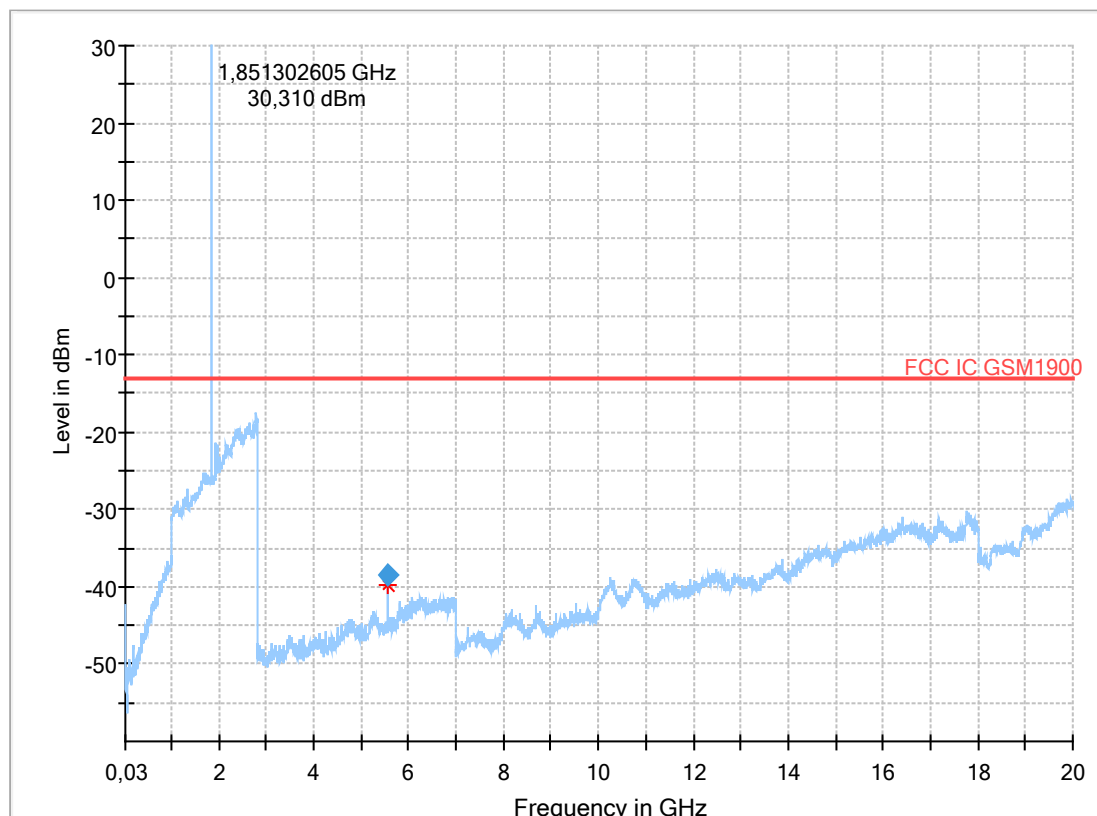
Test Description:	Radiated Emissions GPRS1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part24.238
Test Case:	-
Operating Mode:	MS allocated UL channel 512
Exclusionband:	1850 - 1910MHz
Environmental Conditions:	Humidity: 35%rH; Temperature: 19.4°C
Operator:	MBe

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN

HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
5550.806614	-	25.49	1000.0	V	304.0	0.0	-89.9

8.11a_RSE_R_Ch661_GPRS_standing

Common Information

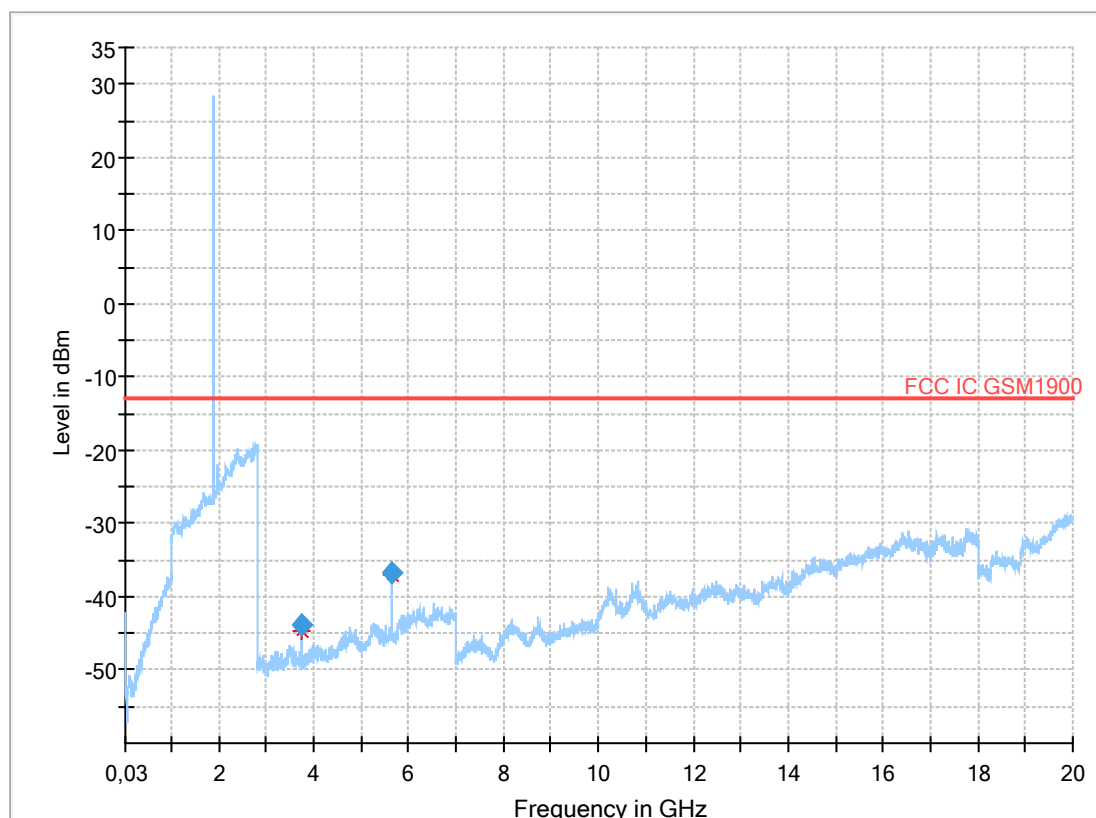
Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part24.238
Test Case:	-
Operating Mode:	MS allocated UL channel 512,661,810
Exclusionband:	1850 - 1910MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mah
EUT Position:	EUT Standing

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN

HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 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)
3760.015030	-43.86	-13.00	30.86	1000.0	1000.000	V	316.0	0.0	-95.1
5640.205411	-36.73	-13.00	23.73	1000.0	1000.000	H	322.0	0.0	-89.7

8.11b_RSE_R_Ch661_GPRS_laying

Common Information

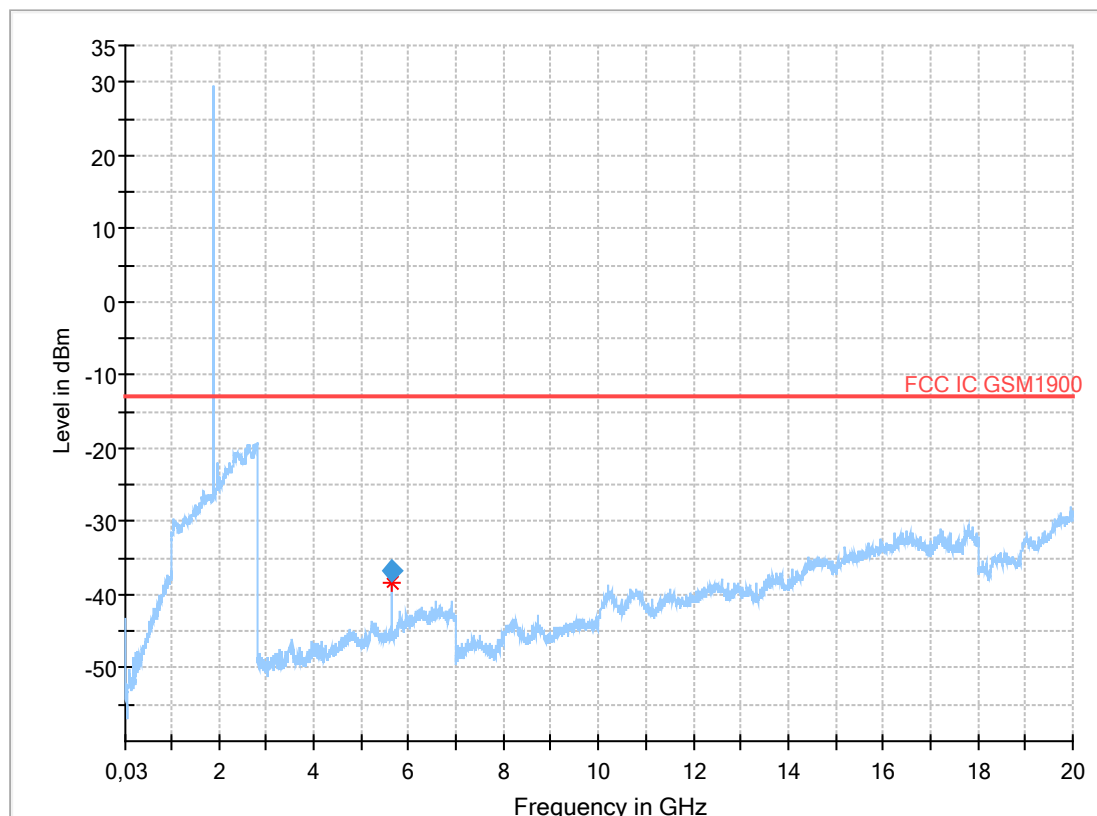
Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part24.238
Test Case:	-
Operating Mode:	MS allocated UL channel 661
Exclusionband:	1850 - 1910MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mah
EUT Position:	EUT Laying

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN

HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 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)
5640.205411	-36.86	-13.00	23.86	1000.0	1000.000	V	36.0	0.0	-89.7

8.12a_RSE_R_Ch810_GPRS_standing

Common Information

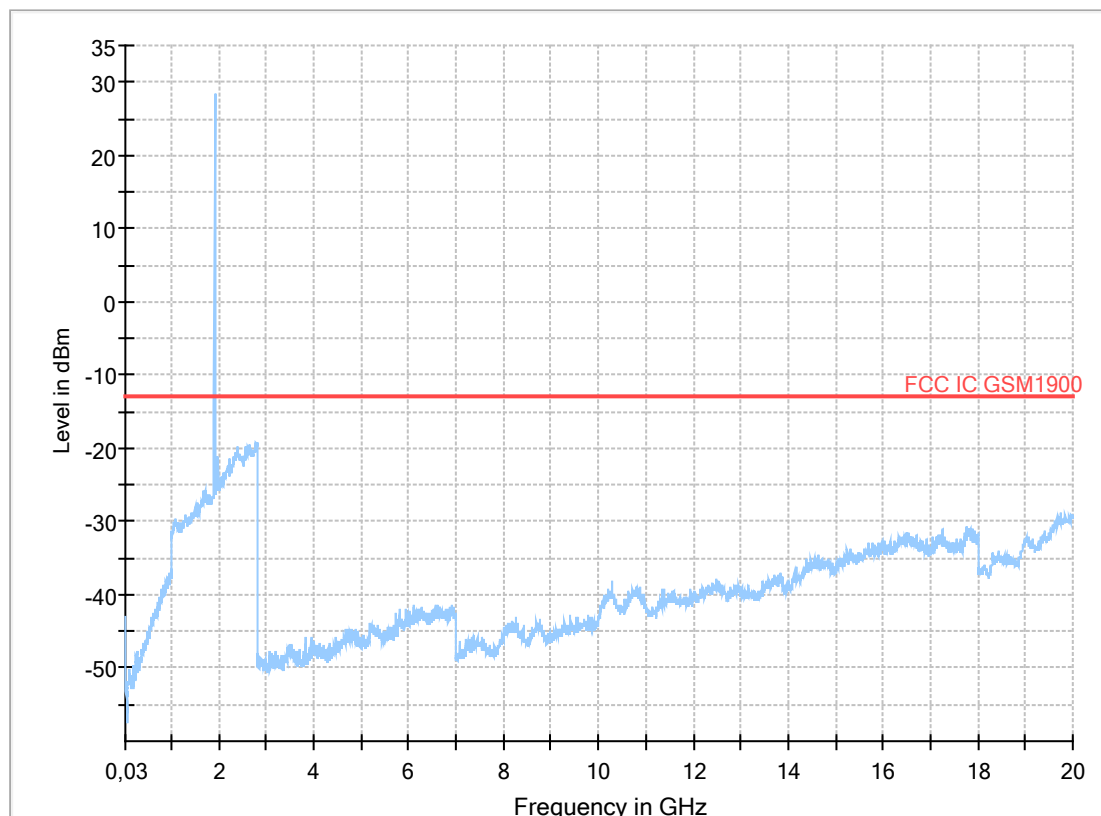
Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part24.238
Test Case:	-
Operating Mode:	MS allocated UL channel 810
Exclusionband:	1850 - 1910MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mah
EUT Position:	EUT Standing

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN

HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



8.12b_RSE_R_Ch810_GPRS_laying

Common Information

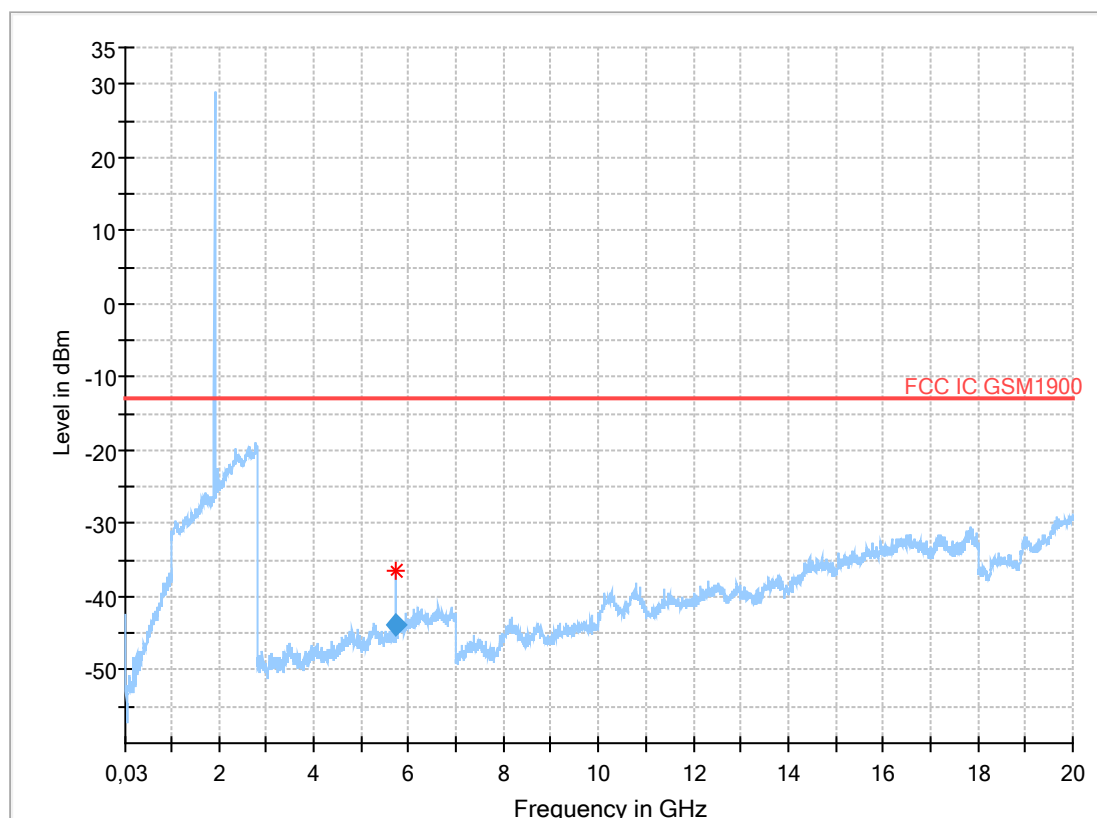
Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part24.238
Test Case:	-
Operating Mode:	MS allocated UL channel 810
Exclusionband:	1850 - 1910MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mah
EUT Position:	EUT Laying

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN

HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 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)
5729.594189	-43.79	-13.00	30.79	1000.0	1000.000	V	-15.0	0.0	-89.4

1.6. Radiated emissions on 850 MHz transmitting band-edge

9.01_BE_R_Ch128_GPRS_standing

Common Information

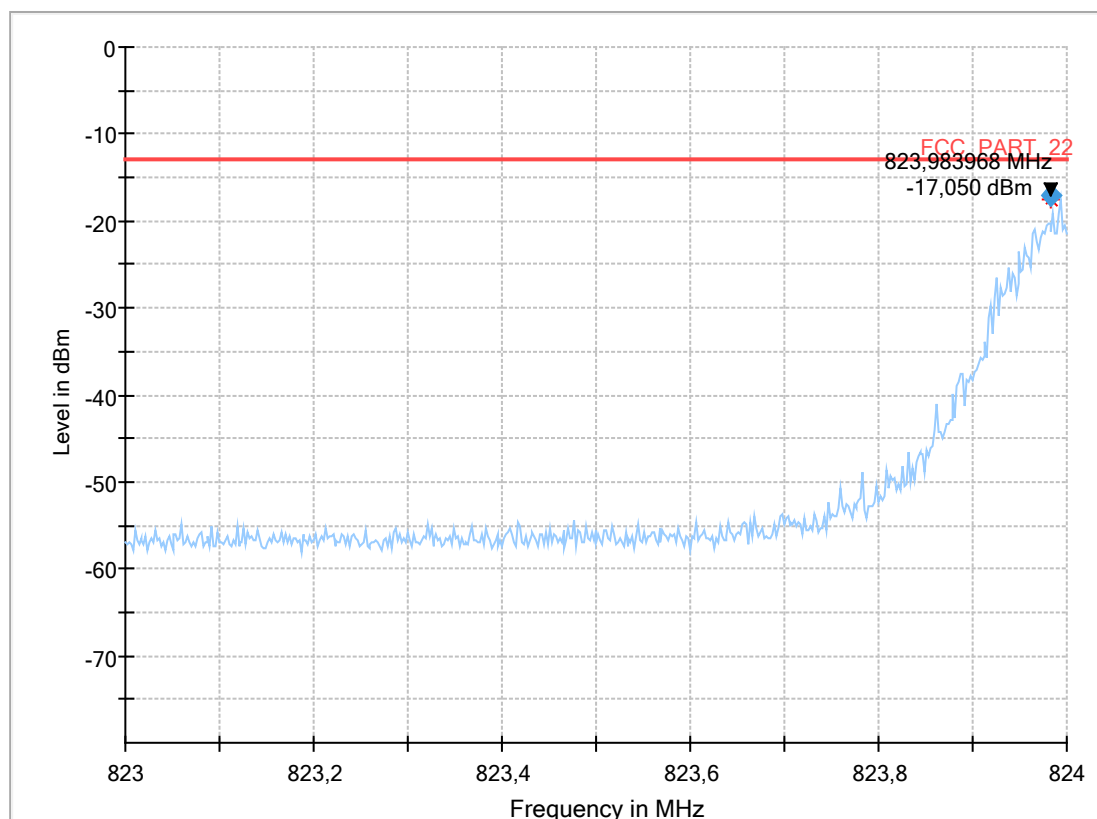
Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917
Operating Mode:	MS allocated channel 128 (fc = 824.2MHz), Voice, PCL5 (+33dBm)
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mah

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN

HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
823.983968	-13.00	4.05	10000.0	H	307.0	0.0	-75.8

9.01b_BE_R_Ch128_GPRS_laying

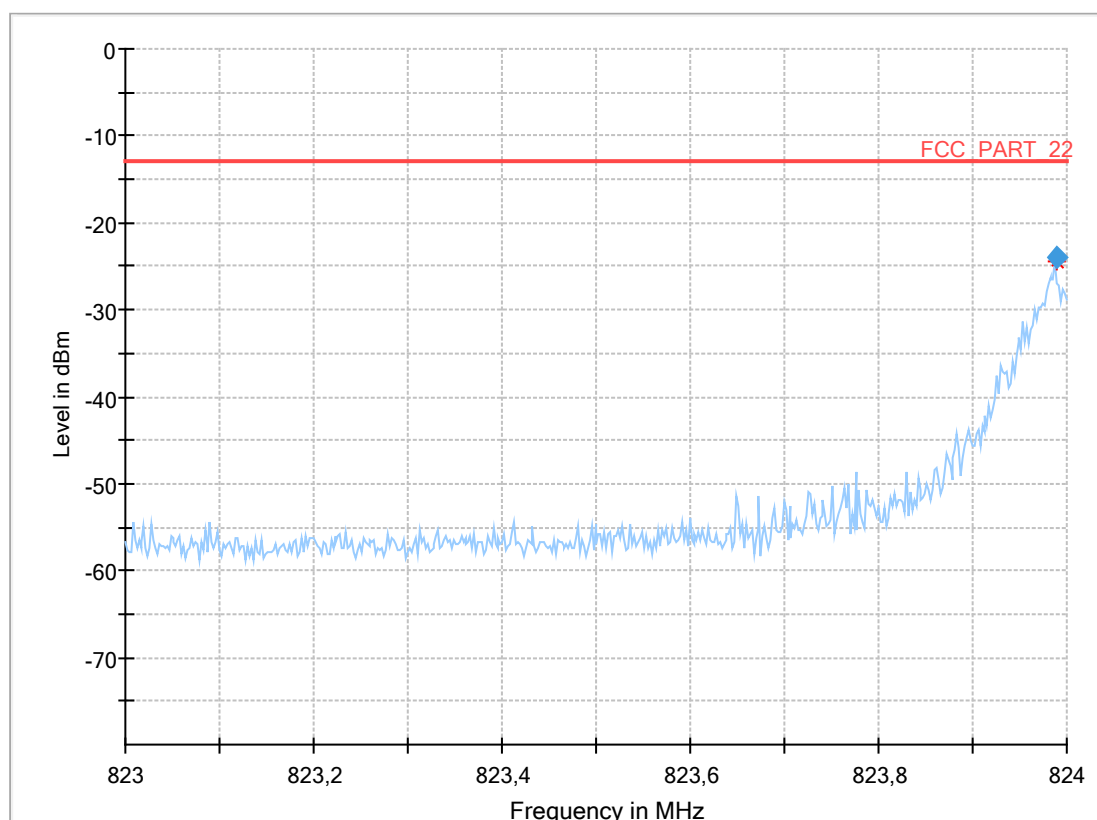
Common Information

Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917
Operating Mode:	MS allocated channel 128 (fc = 824.2MHz), Voice, PCL5 (+33dBm)
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 50%rH; Temperature: 19°C
Operator:	DLe
	EUT - laying

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



9.02_BE_R_Ch251_GPRS_Standing

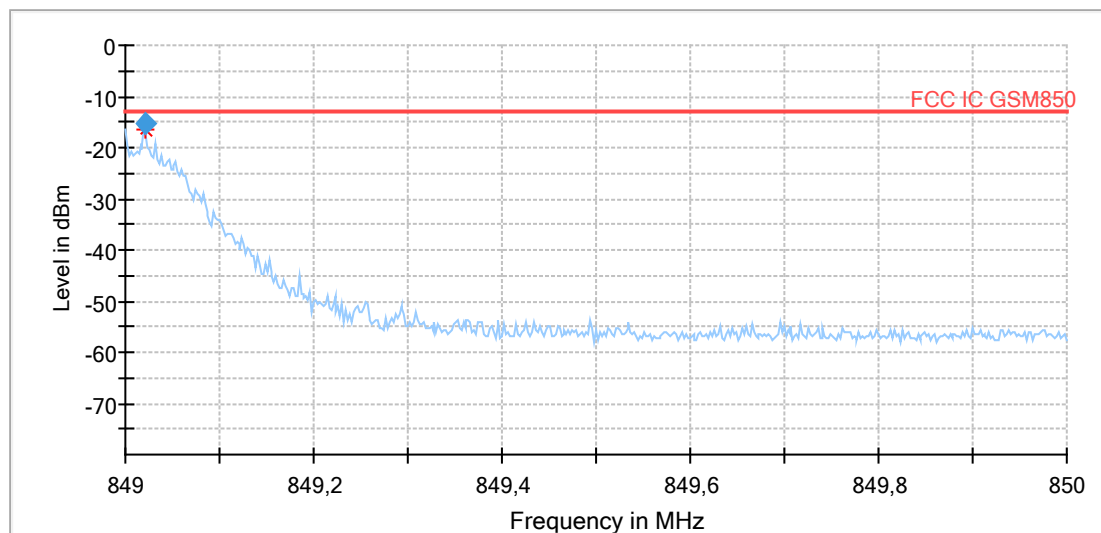
Common Information

Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917
Operating Mode:	MS allocated channel 251 (fc = 848.8MHz), Voice, PCL0 (+33dBm)
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mah

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



9.02_BE_R_Ch251_GPRS_laying

Common Information

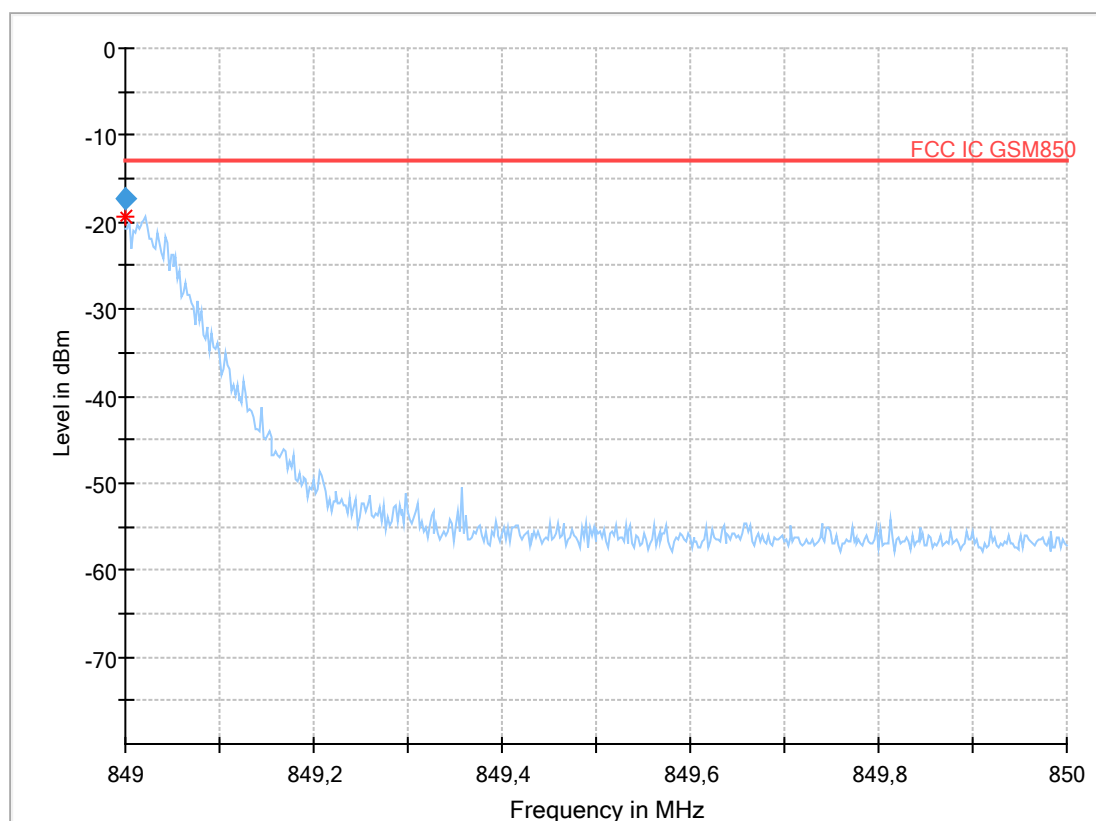
Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917
Operating Mode:	MS allocated channel 251 (fc = 848.8MHz), Voice, PCL0 (+33dBm)
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	Mah

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP_DIN

HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
849.000000	-13.00	4.31	10000.0	V	188.0	0.0	-75.9

1.7. Radiated emissions on 1900 MHz transmitting band-edge

9.07a_BE_R_Ch512_GPRS_standing

Common Information

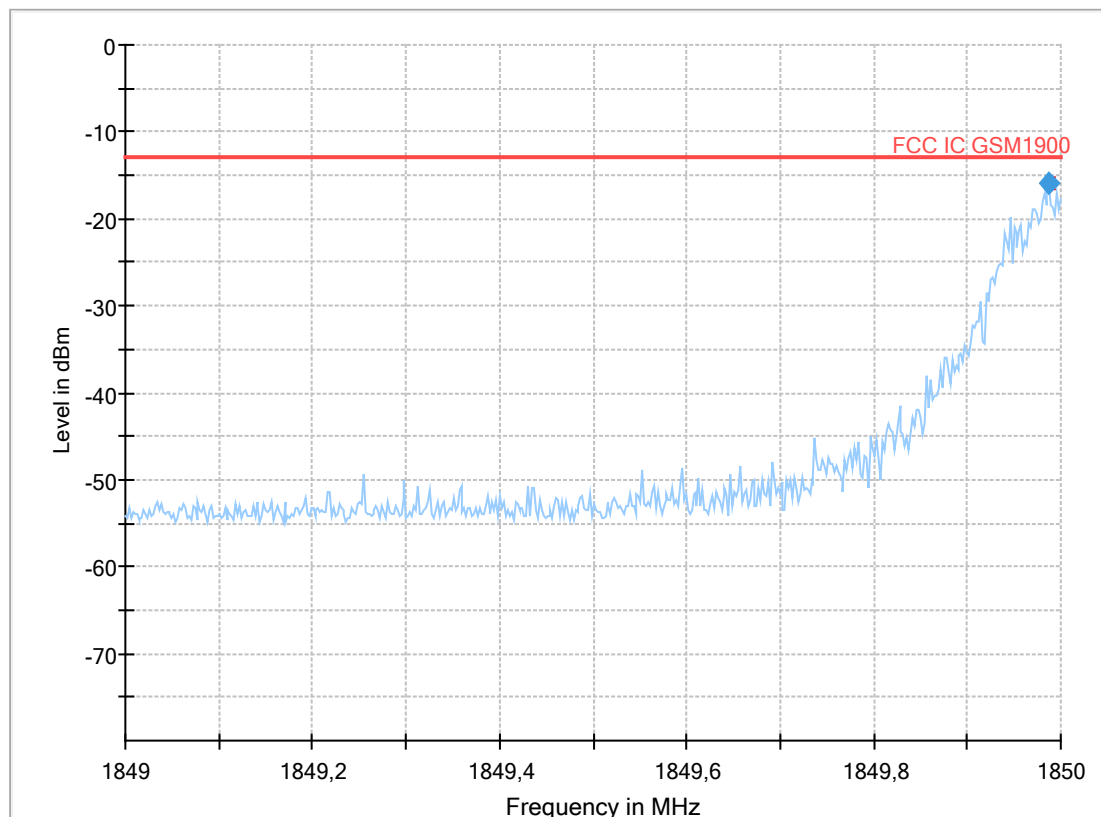
Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238
Comm. Link:	GSM1900, Voice/EDGE
Operating Mode:	MS allocated channel 512 (UL = 1850.2MHz),661(UL = 1880.0MHz),810 (UL = 1909.8MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	DLe
Comments	DUT Standing

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN

HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



Final Result

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

1849.987976	-	2.98	5.0	H	53.0	0.0	-63.1
-------------	---	------	-----	---	------	-----	-------

9.07b_BE_R_Ch512_GPRS_laying

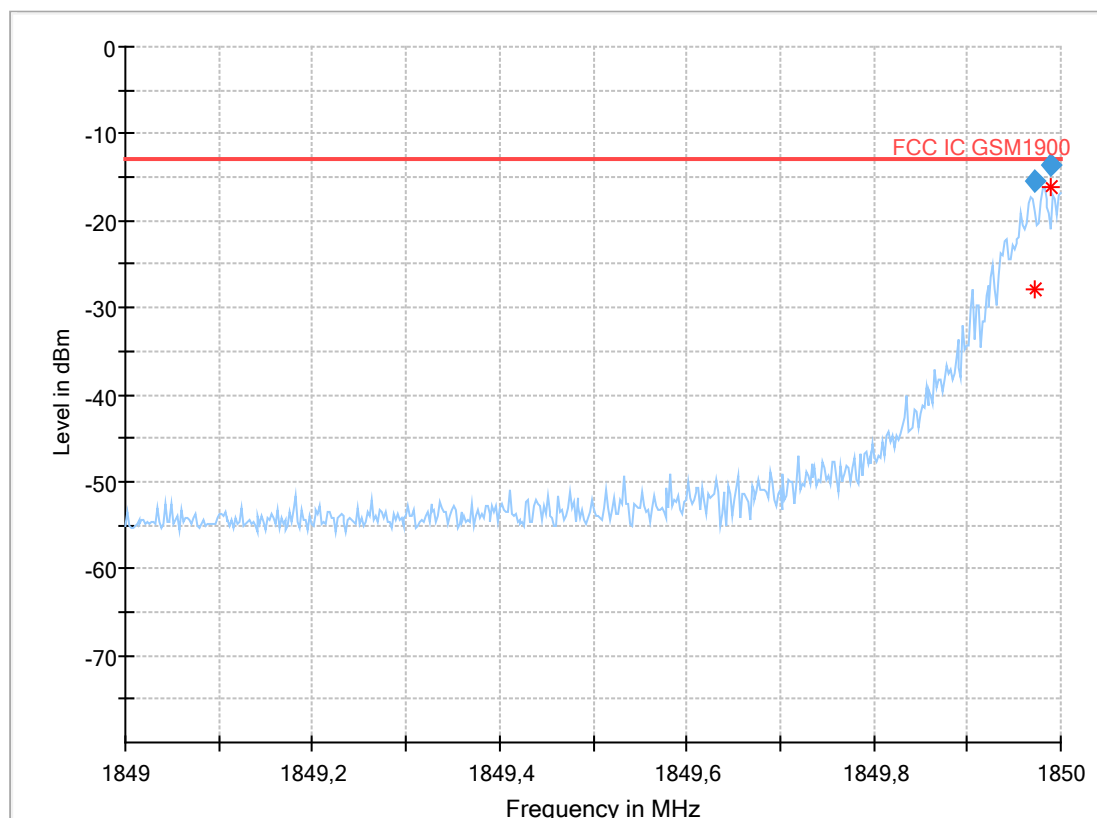
Common Information

Test Description:	Radiated Spurious Emissions GPRS1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238
Comm. Link:	GPRS 1900
Operating Mode:	MS allocated channel 512 (UL = 1850.2MHz),661(UL = 1880.0MHz),810 (UL = 1909.8MHz)
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 35%rH; Temperature: 19.4°C
Operator:	Lor

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	12 V DC

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1849.971944	-13.00	2.44	10000.0	V	206.0	0.0	-63.1

1849.989980	13.00	0.68	10000.0	V	208.0	0.0	-63.1
-------------	-------	------	---------	---	-------	-----	-------

9.08a_BE_R_Ch810_GPRS_standing

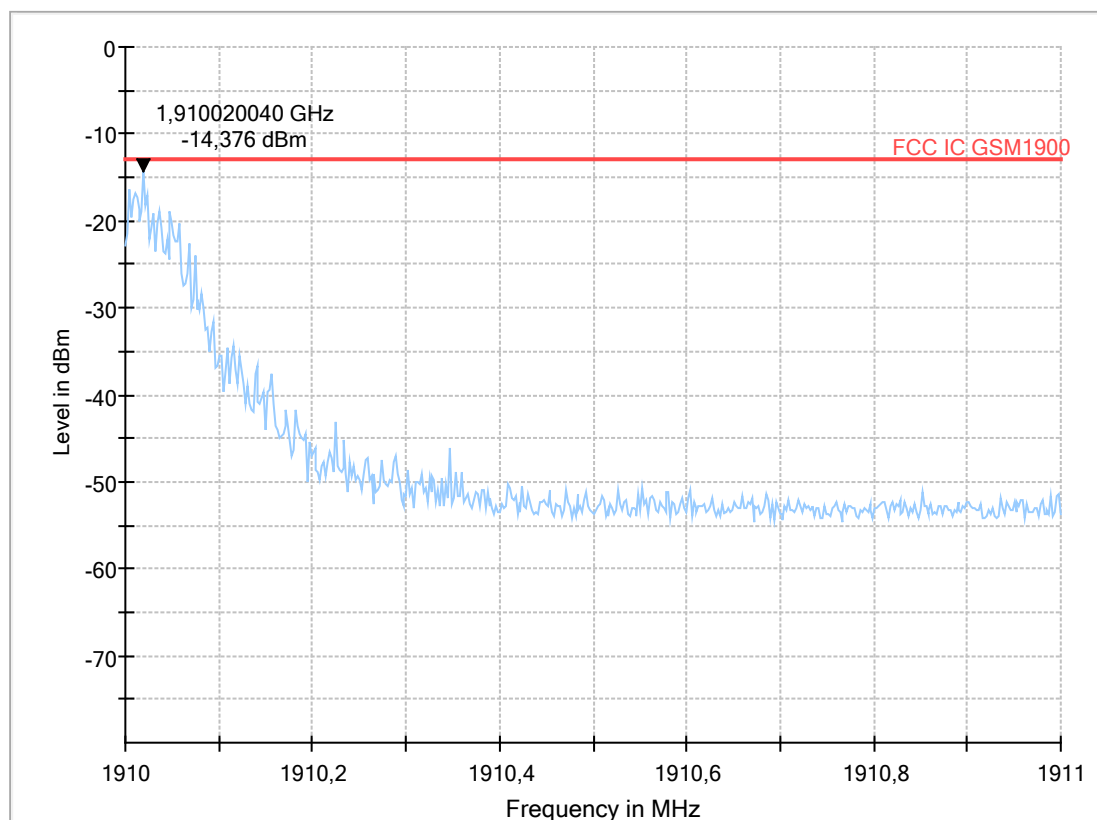
Common Information

Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238
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: 40%rH; Temperature: 20°C
Operator:	DLe
Comments	DUT Standing

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN
HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



9.08b_BE_R_Ch810_GPRS_laying

Common Information

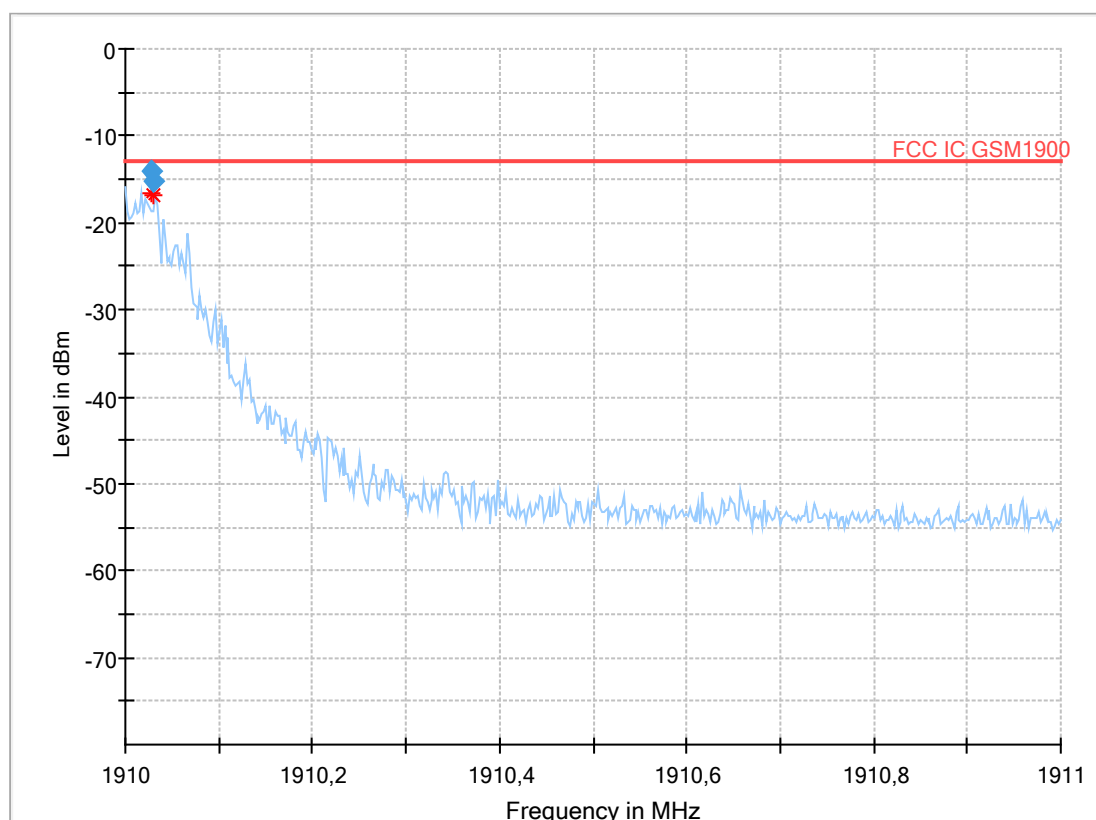
Test Description:	Radiated Spurious Emissions GPRS1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238
Comm. Link:	GPRS1900
Operating Mode:	MS allocated UL channel 810
Exclusionband:	1850- 1910MHz
Environmental Conditions:	Humidity: 35%rH; Temperature: 19.4°C
Operator:	MBe

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	ECU cTP _DIN

HW Version:	6797G04
SW Version:	16.099.2
Serial Number:	2830006236
Connected Interfaces:	Main wiring + SFTP 920 151 014
Power Supply:	24 V DC

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1910.028056	-13.00	0.96	10000.0	V	208.0	0.0	-62.8
1910.030060	-13.00	2.15	10000.0	V	230.0	0.0	-62.8