

Annex 1: Measurement diagrams to TEST REPORT No.: 17-1-0105501T02a-C1

According to:
FCC Regulations
Part 22, Part 24

IC-Regulations
RSS-132 Issue 3, RSS-133 Issue 6,
RSS-Gen Issue 4

for

Daimler Trucks North America

7620 000 296
66-10777-001

FCC: 2AKC8CTP10777001
ISED: 22221-CTP10777001
PMN: CTPMIDDTNA
HVIN: CTPMIDDTNA
FVIN: 17.02.S.016

Laboratory Accreditation and Listings			
 DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01	 FCC FEDERAL COMMUNICATIONS COMMISSION USA 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
 WiFi ALLIANCE AUTHORIZED RF LABORATORY	 ctia AuthorizedTM Test Lab Lab Code: 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
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1. Measurement diagrams

1.1. Power Measurements and PAPR-Value

1.1.1. GSM 850 (GMSK Modulation)

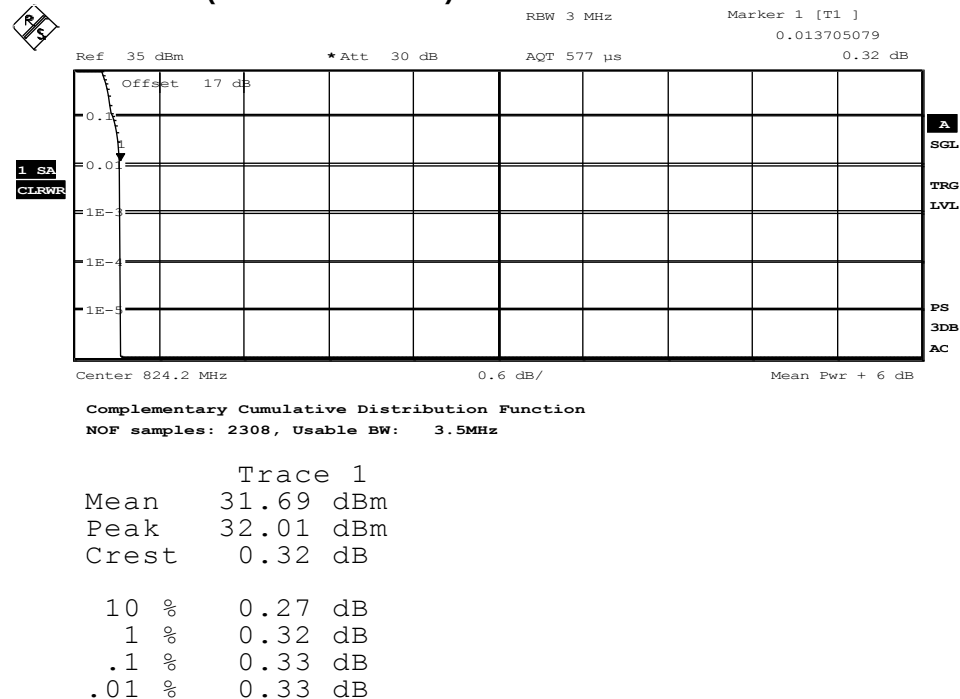


Diagram CCDF_128_GMSK

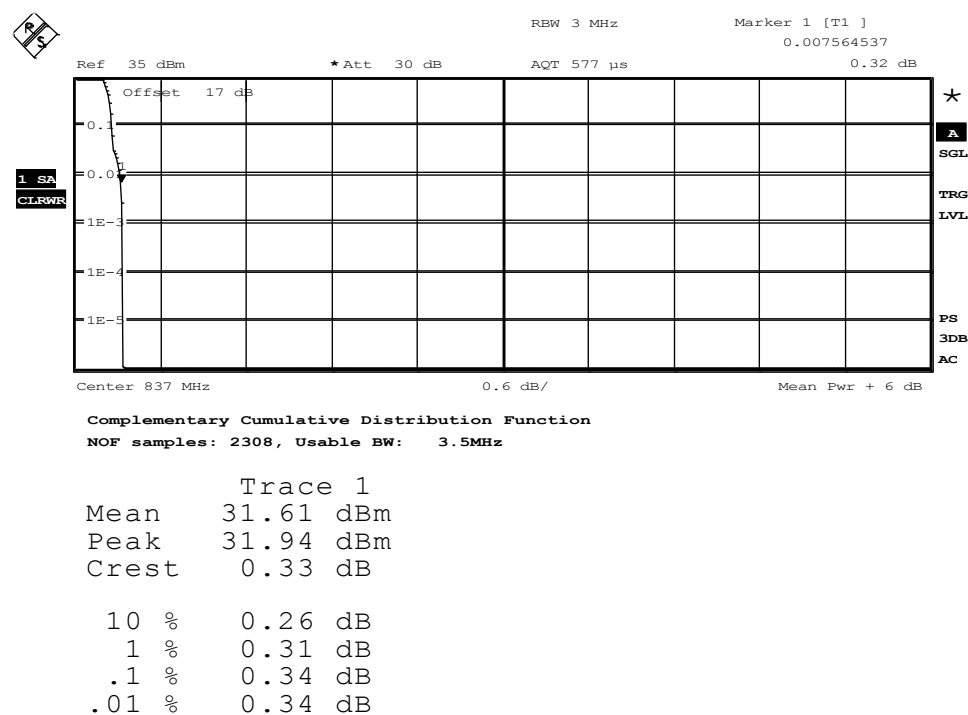
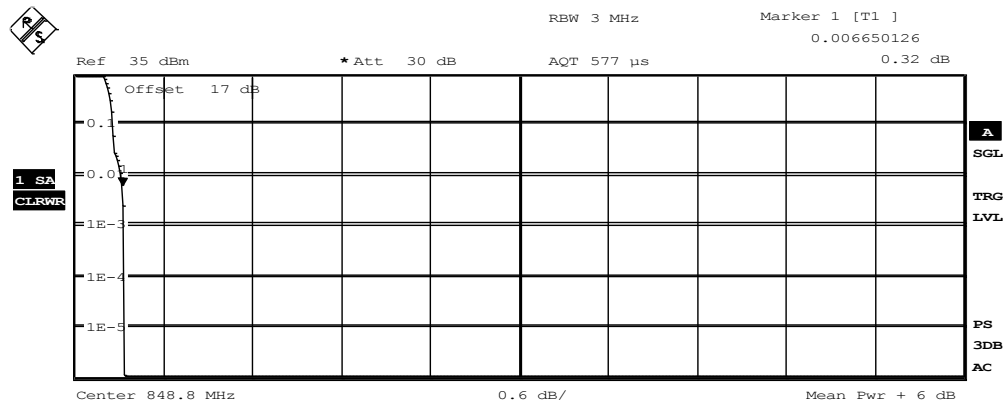


Diagram CCDF_192_GMSK



Complementary Cumulative Distribution Function
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	31.61 dBm
Peak	31.94 dBm
Crest	0.33 dB
10 %	0.26 dB
1 %	0.31 dB
.1 %	0.34 dB
.01 %	0.34 dB

Diagram CCDF_251_GMSK

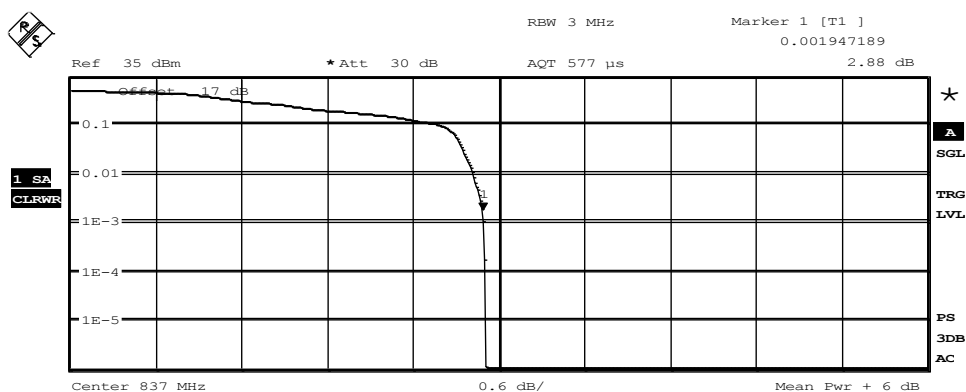
1.1.2. GSM 850 (8-PSK Modulation)



Trace 1

Mean	26.80 dBm
Peak	29.82 dBm
Crest	3.02 dB
10 %	2.32 dB
1 %	2.96 dB
.1 %	3.02 dB
.01 %	3.03 dB

Diagram CCDF_128_8PSK



Trace 1

Mean	27.14 dBm
Peak	30.04 dBm
Crest	2.90 dB
10 %	2.60 dB
1 %	2.82 dB
.1 %	2.89 dB
.01 %	2.90 dB

Diagram CCDF_192_8PSK

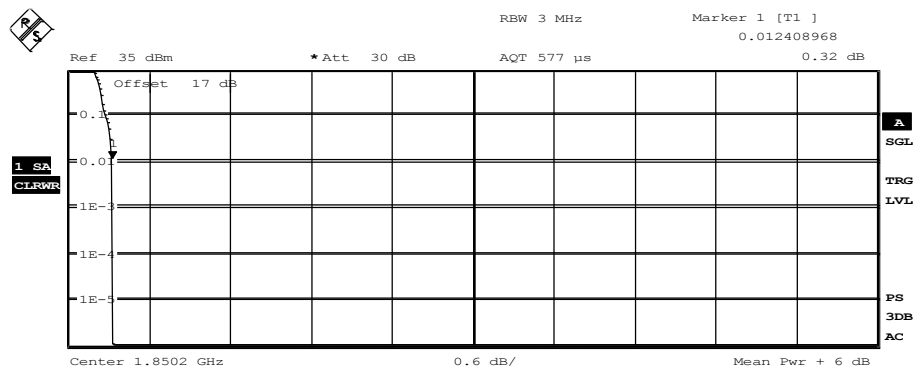


Complementary Cumulative Distribution Function
 NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	27.02 dBm
Peak	30.25 dBm
Crest	3.22 dB
10 %	2.53 dB
1 %	3.12 dB
.1 %	3.20 dB
.01 %	3.23 dB

Diagram CCDF_251_8PSK

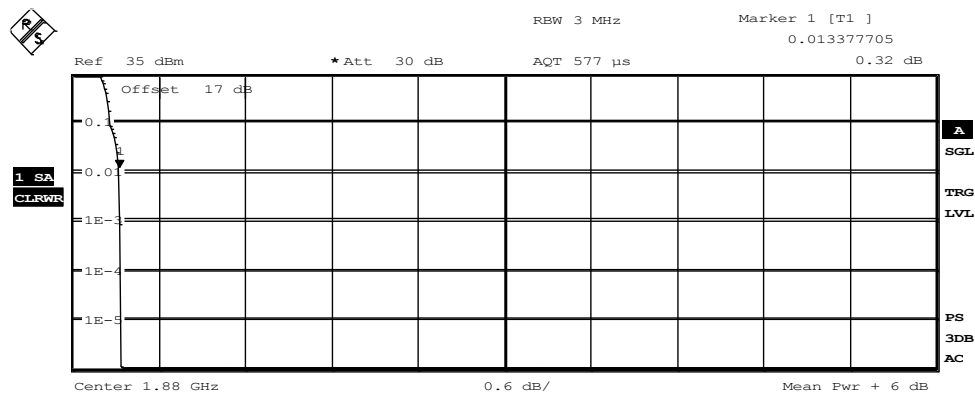
1.1.3. GSM 1900 (GMSK Modulation)



Trace 1

Mean	29.08 dBm
Peak	29.40 dBm
Crest	0.32 dB
10 %	0.27 dB
1 %	0.32 dB
.1 %	0.33 dB
.01 %	0.33 dB

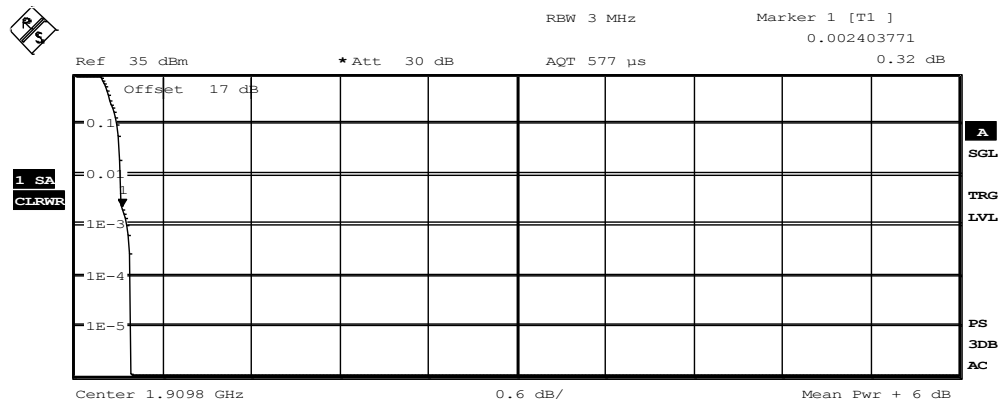
Diagram CCDF_512_GMSK



Trace 1

Mean	29.07 dBm
Peak	29.40 dBm
Crest	0.33 dB
10 %	0.26 dB
1 %	0.32 dB
.1 %	0.33 dB
.01 %	0.34 dB

Diagram CCDF_661_GMSK

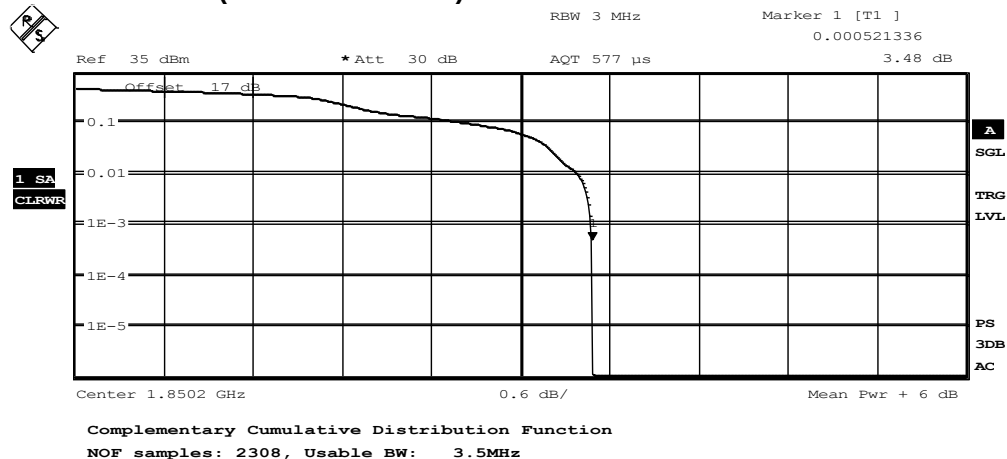


Complementary Cumulative Distribution Function
NOF samples: 2308, Usable BW: 3.5MHz

Trace 1	
Mean	29.30 dBm
Peak	29.68 dBm
Crest	0.38 dB
10 %	0.29 dB
1 %	0.32 dB
.1 %	0.36 dB
.01 %	0.38 dB

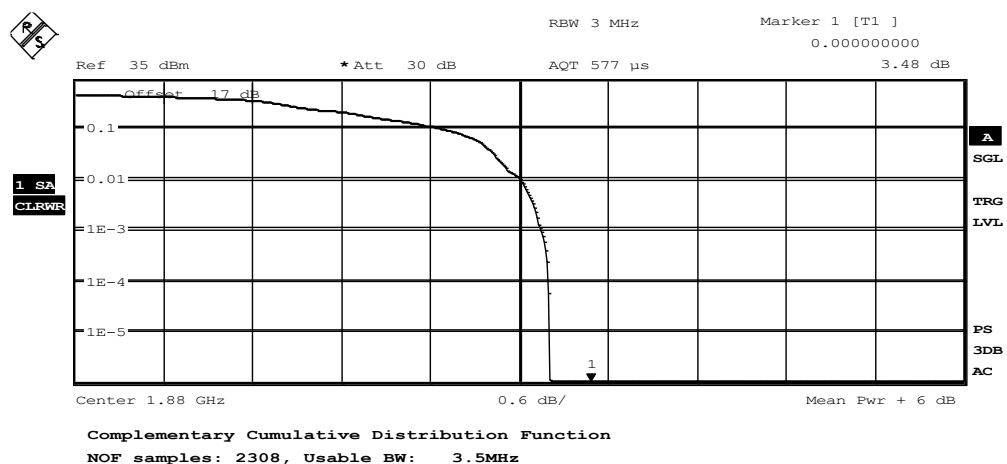
Diagram CCDF_810_GMSK

1.1.4. GSM 1900 (8-PSK Modulation)



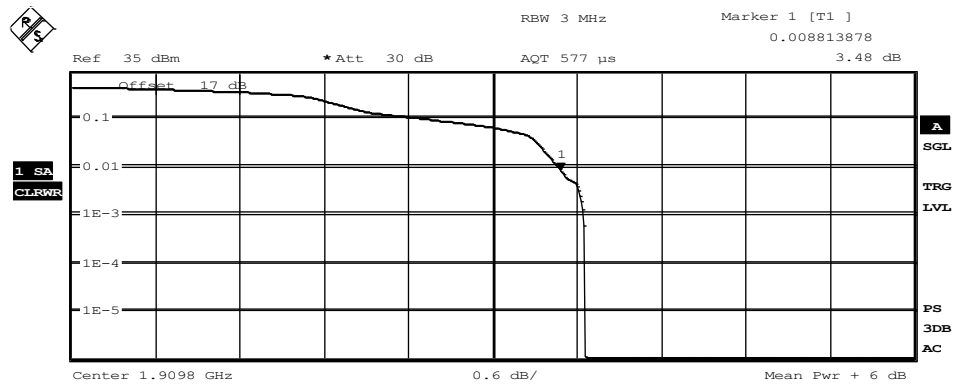
Trace 1	
Mean	25.00 dBm
Peak	28.48 dBm
Crest	3.48 dB
10 %	2.68 dB
1 %	3.38 dB
.1 %	3.48 dB
.01 %	3.49 dB

Diagram CCDF_512_8PSK



Trace 1	
Mean	25.43 dBm
Peak	28.63 dBm
Crest	3.20 dB
10 %	2.51 dB
1 %	3.01 dB
.1 %	3.15 dB
.01 %	3.20 dB

Diagram CCDF_661_8PSK



Complementary Cumulative Distribution Function
 NOF samples: 2308, Usable BW: 3.5MHz

	Trace 1
Mean	24.90 dBm
Peak	28.55 dBm
Crest	3.66 dB
10 %	2.58 dB
1 %	3.46 dB
.1 %	3.64 dB
.01 %	3.66 dB

Diagram CCDF_810_8PSK

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

Diagram No. 2.01_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
Version of Testsoftware:	EMC32 V9.25.0
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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	RI's
Operating conditions:	TX-on
Power during tests:	12V DC
Comment 1:	Channel low

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum

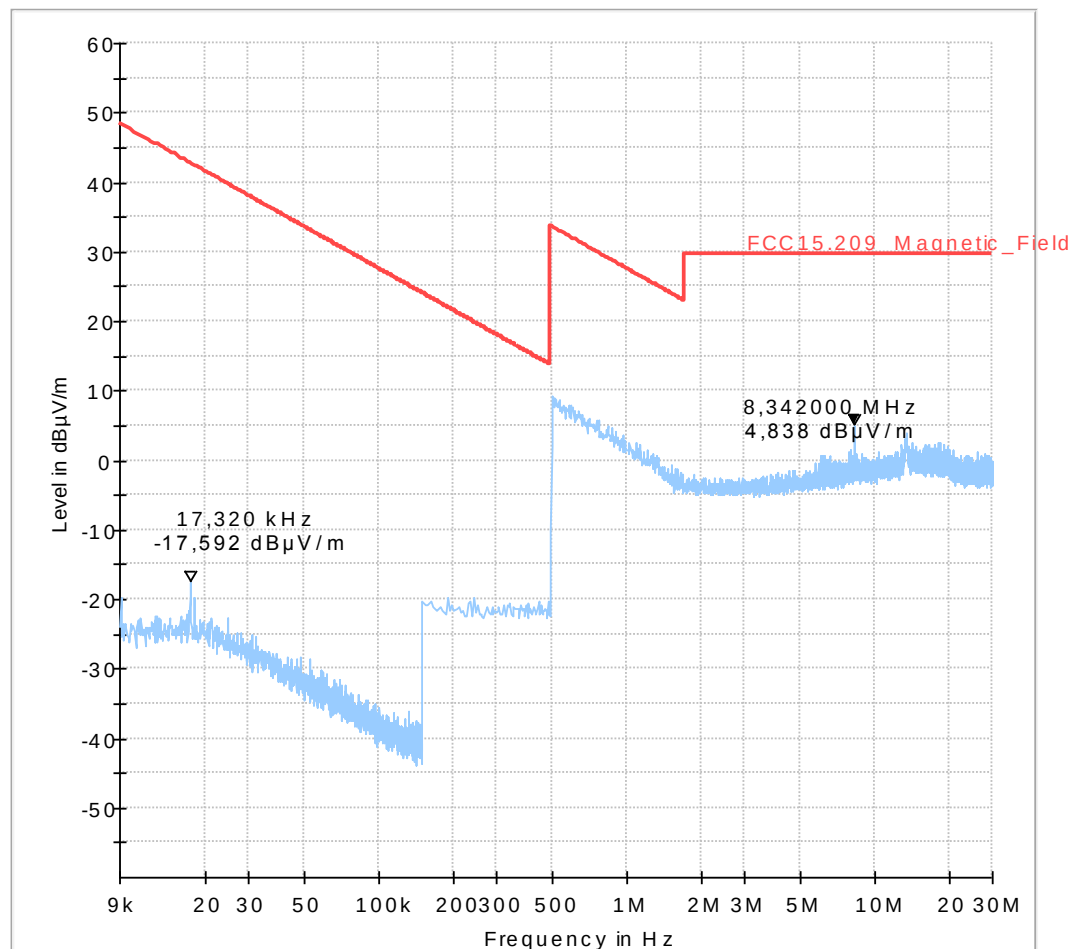


Diagram No. 2.02_RSE_R_Ch192_GPRS

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
Version of Testsoftware:	EMC32 V9.25.0
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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	RIs
Operating conditions:	TX-on
Power during tests:	12V DC
Comment 1:	Channel middle

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum

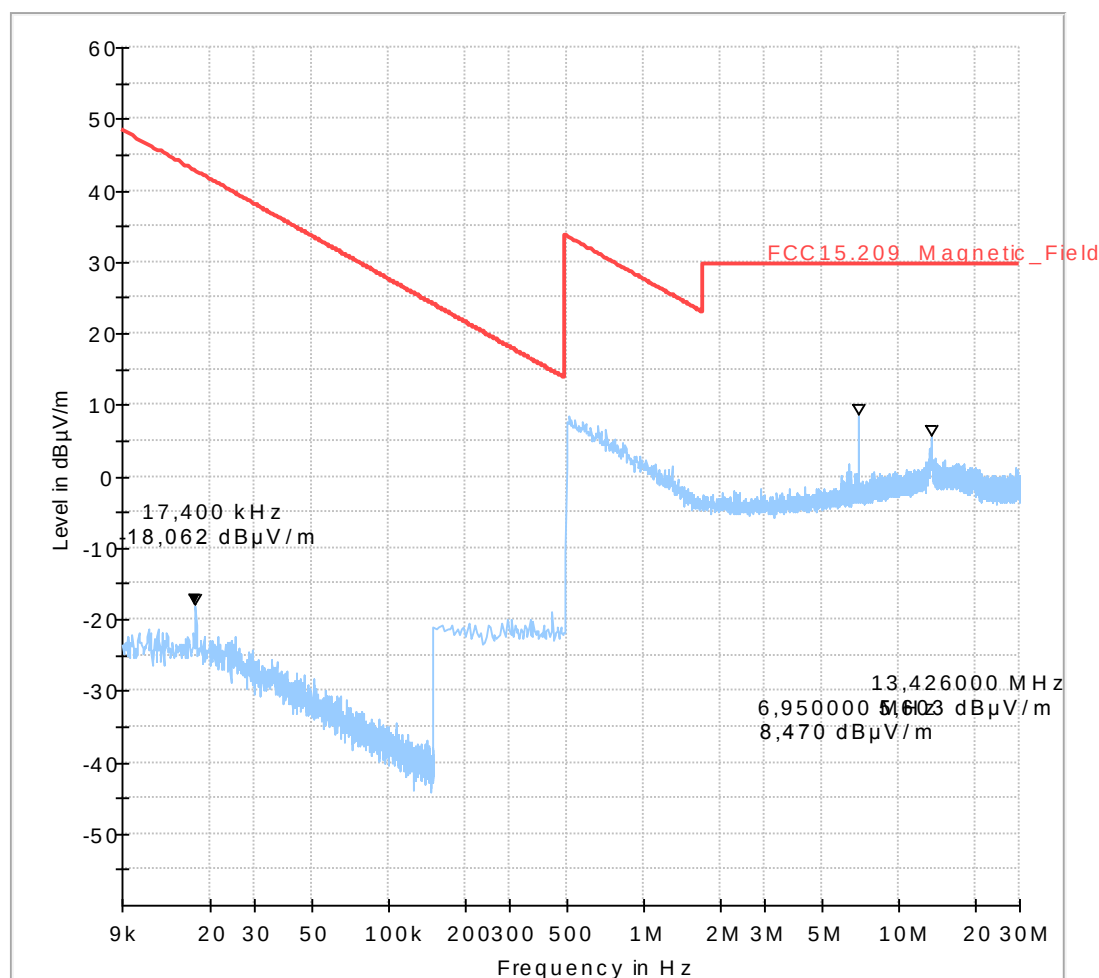


Diagram No. 2.03_RSE_R_Ch251_GPRS

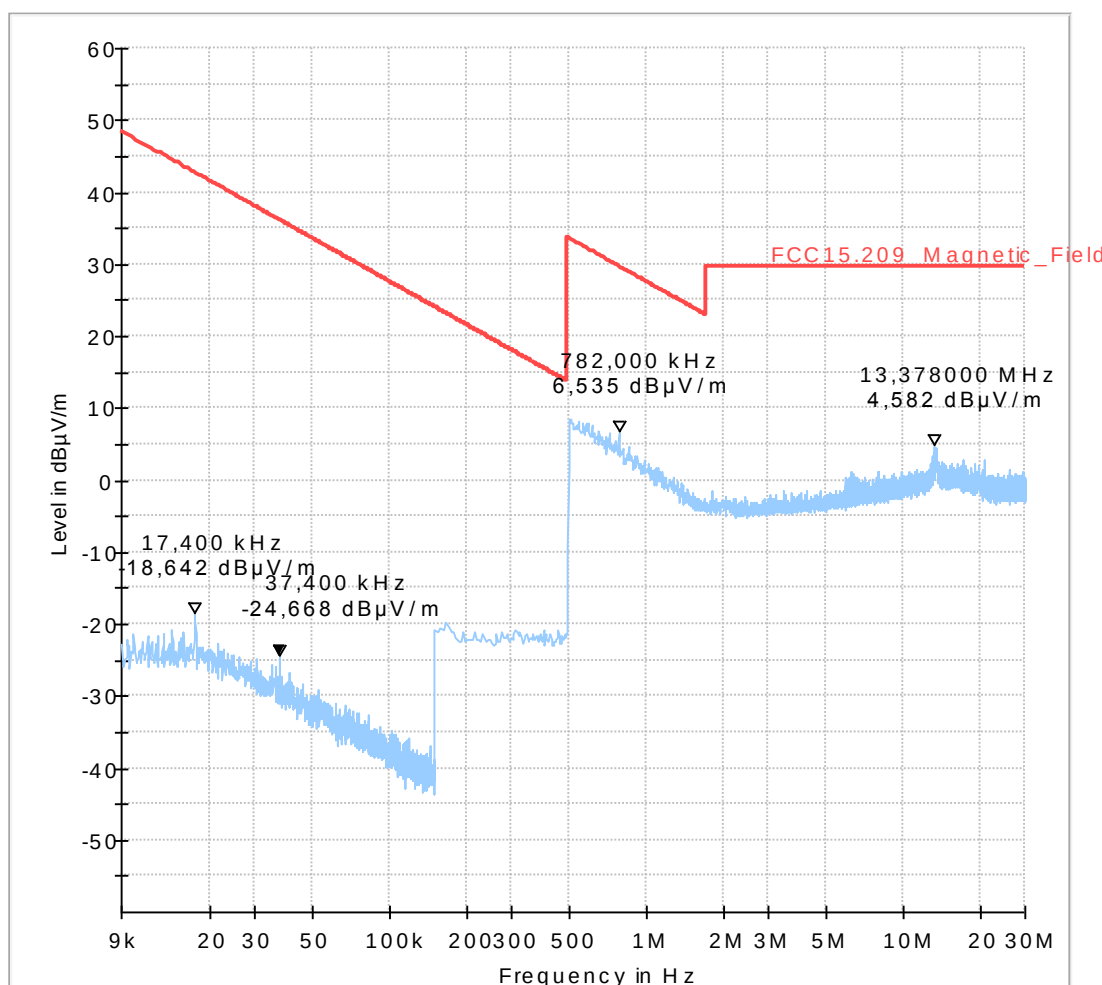
Common Information

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
Version of Testsoftware:	EMC32 V9.25.0
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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	Rls
Operating conditions:	TX-on
Power during tests:	12V DC
Comment 1:	Channel high

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum



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

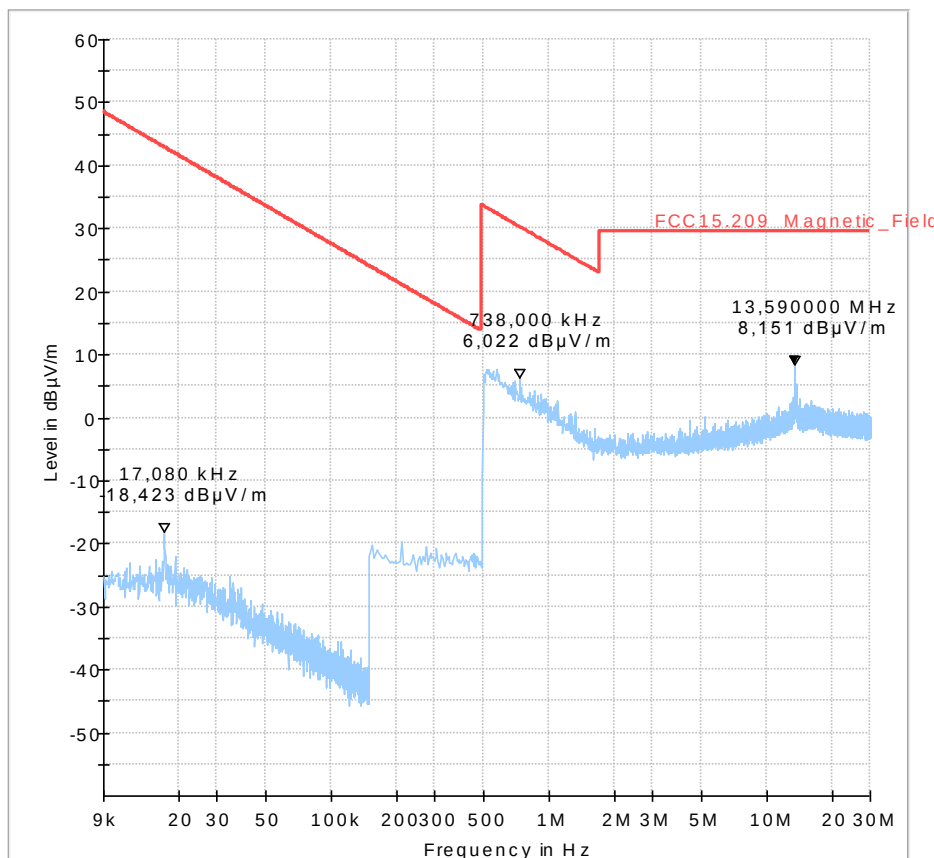
2.10_RSE_R_Ch512_GPRS

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
Version of Testsoftware:	EMC32 V9.25.0
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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	Klv
Operating conditions:	TX-on
Power during tests:	12VDC
Comment 1:	Channel 512

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC



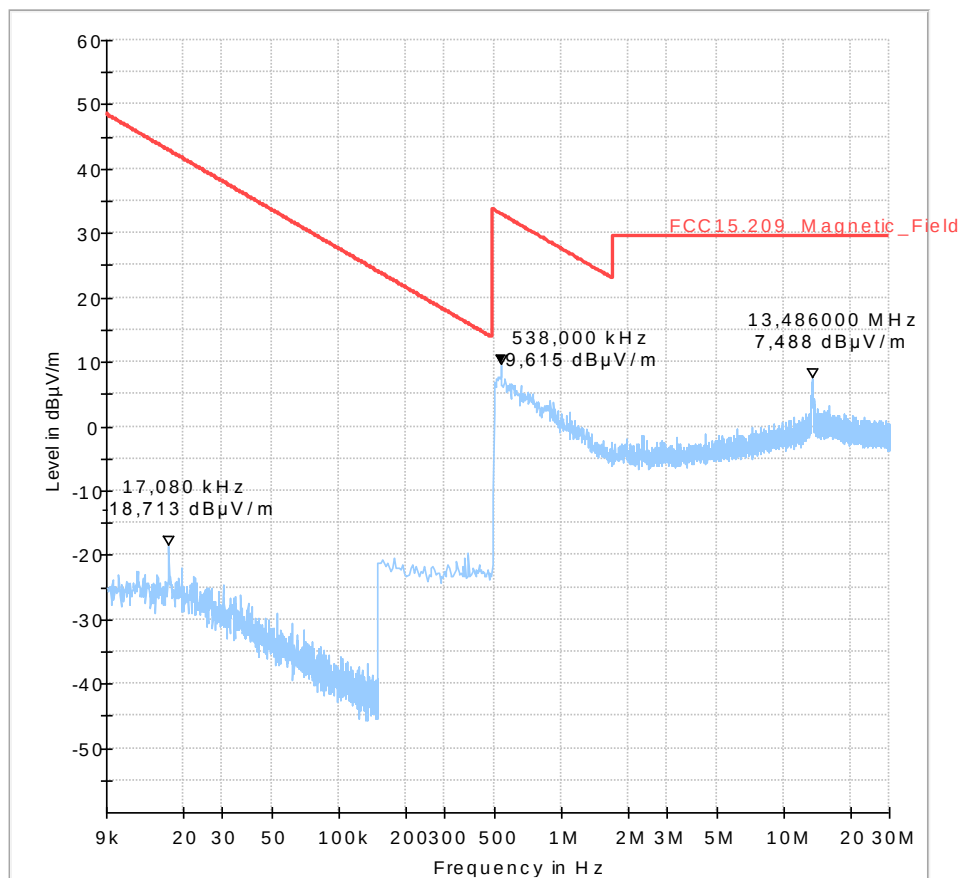
2.11_RSE_R_Ch661_GPRS

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
Version of Testsoftware:	EMC32 V9.25.0
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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	Klv
Operating conditions:	TX-on
Power during tests:	24VDC
Comment 1:	Channel 661

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC



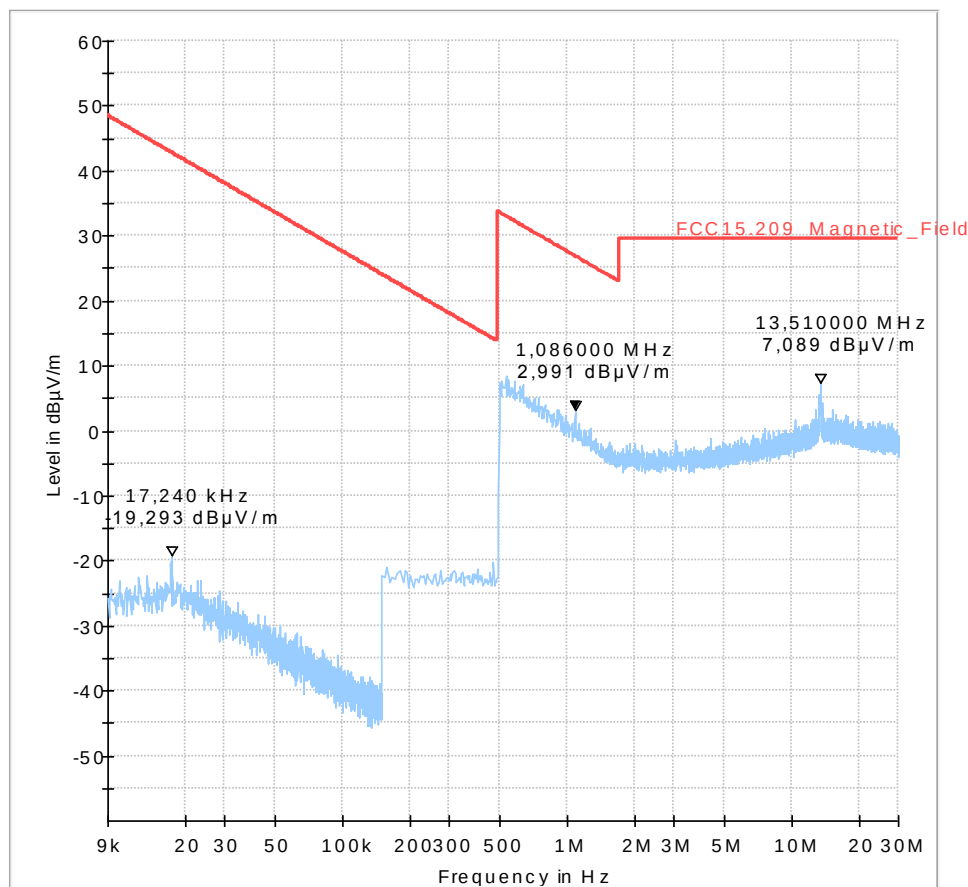
2.12_RSE_R_Ch810_GPRS

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
Version of Testsoftware:	EMC32 V9.25.0
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 specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	Klv
Operating conditions:	TX-on
Power during tests:	24VDC
Comment 1:	Channel 810

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC



1.4. Spurious emissions radiated (850 MHz transmitting mode)

8.01_RSE_R_Ch128_GPRS

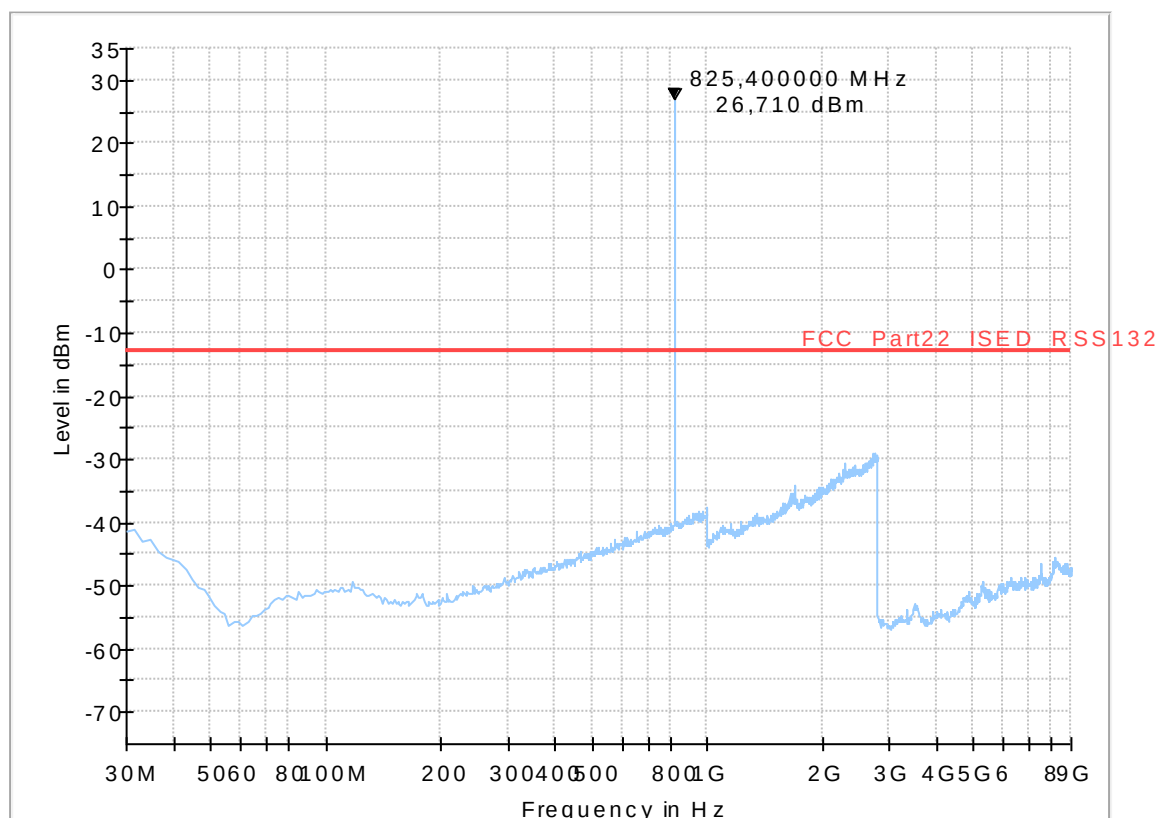
Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Manufacturer:	Robert Bosch Car Multimedia GmbH
Operating Condition:	Humidity: 48%rH; Temperature: 20°C
Operation mode:	TCH 850 CHANNEL 128
Operator Name:	TFR
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum



8.02-RSE_R_Ch192_GPRS__

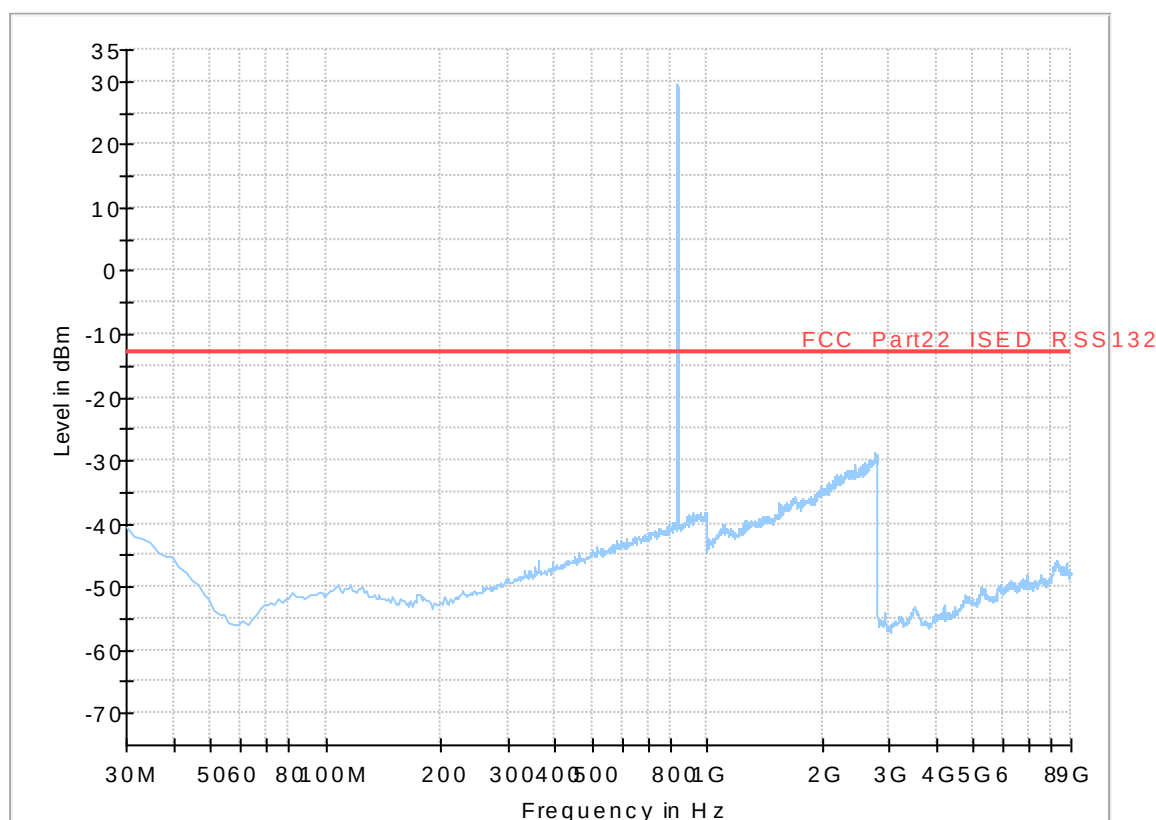
Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Manufacturer:	Robert Bosch Car Multimedia GmbH
Operating Condition:	Humidity: 48%rH; Temperature: 20°C
Operation mode:	TCH 850 CHANNEL 192
Operator Name:	Mah
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum



8.03-RSE_R_Ch251_GPRS

Common Information

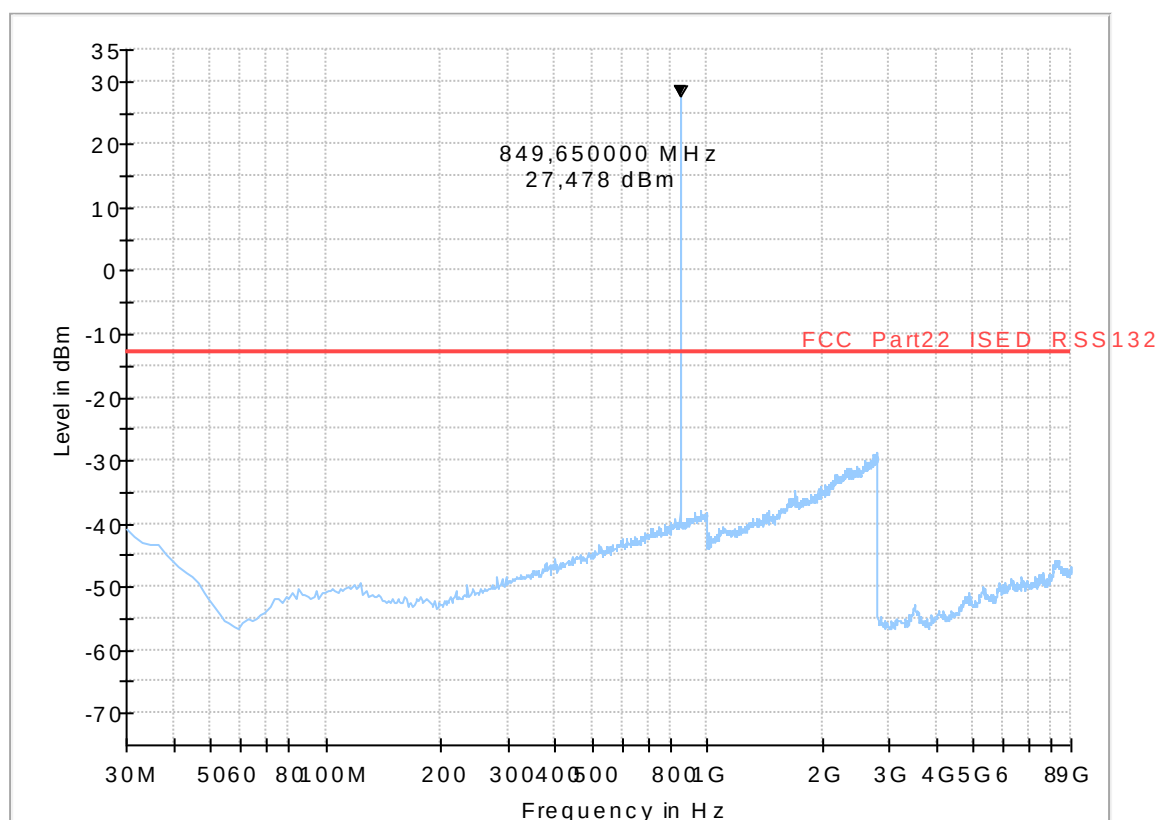
Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Manufacturer:	Robert Bosch Car Multimedia GmbH
Operating Condition:	Humidity: 48%rH; Temperature: 20°C
Operation mode:	TCH 850 CHANNEL 251
Operator Name:	TFR
Comment:	

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001

HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum



1.5. Spurious emissions radiated (1900 MHz transmitting mode)

8.10-RSE_R_ Ch512_GPRS

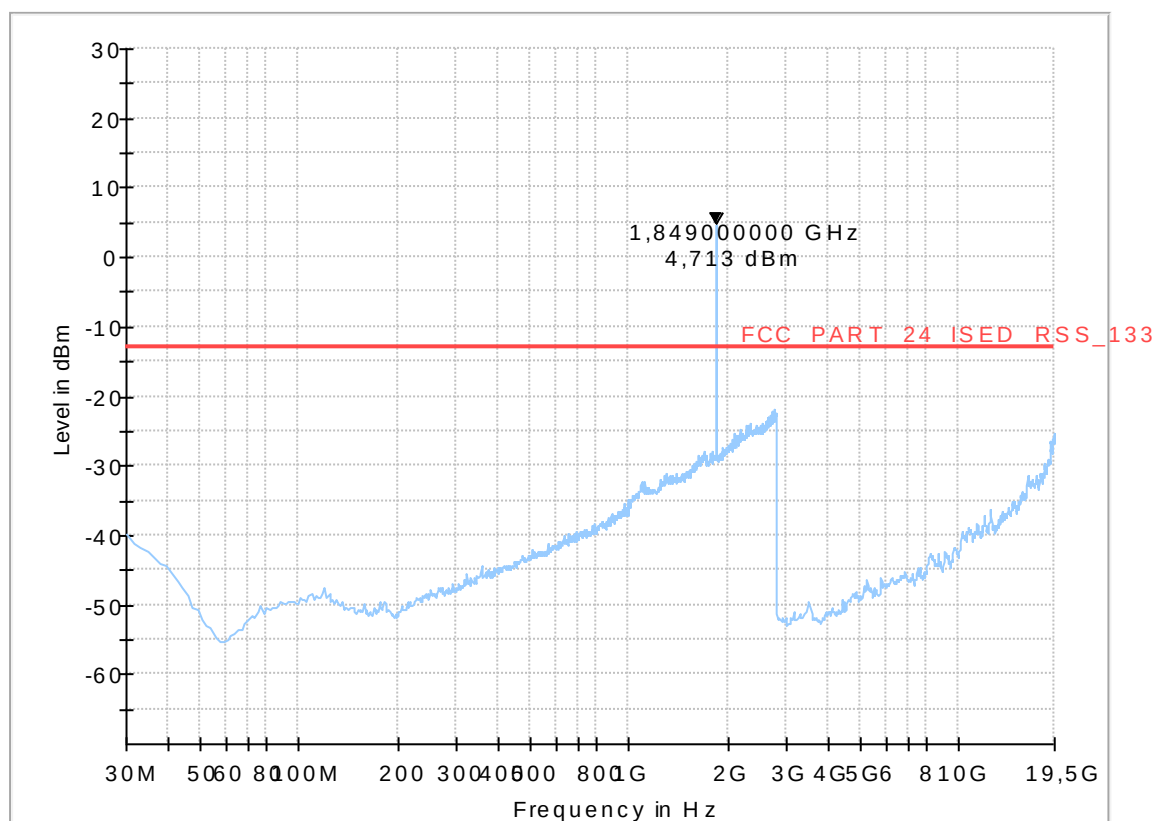
Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Operation mode:	TCH 1900, CHANNEL 512
Operator Name:	MBe
Conditions:	Humidity: 50%rH; Temperature: 20°C

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum



8.11-RSE_R_ Ch661_GPRS

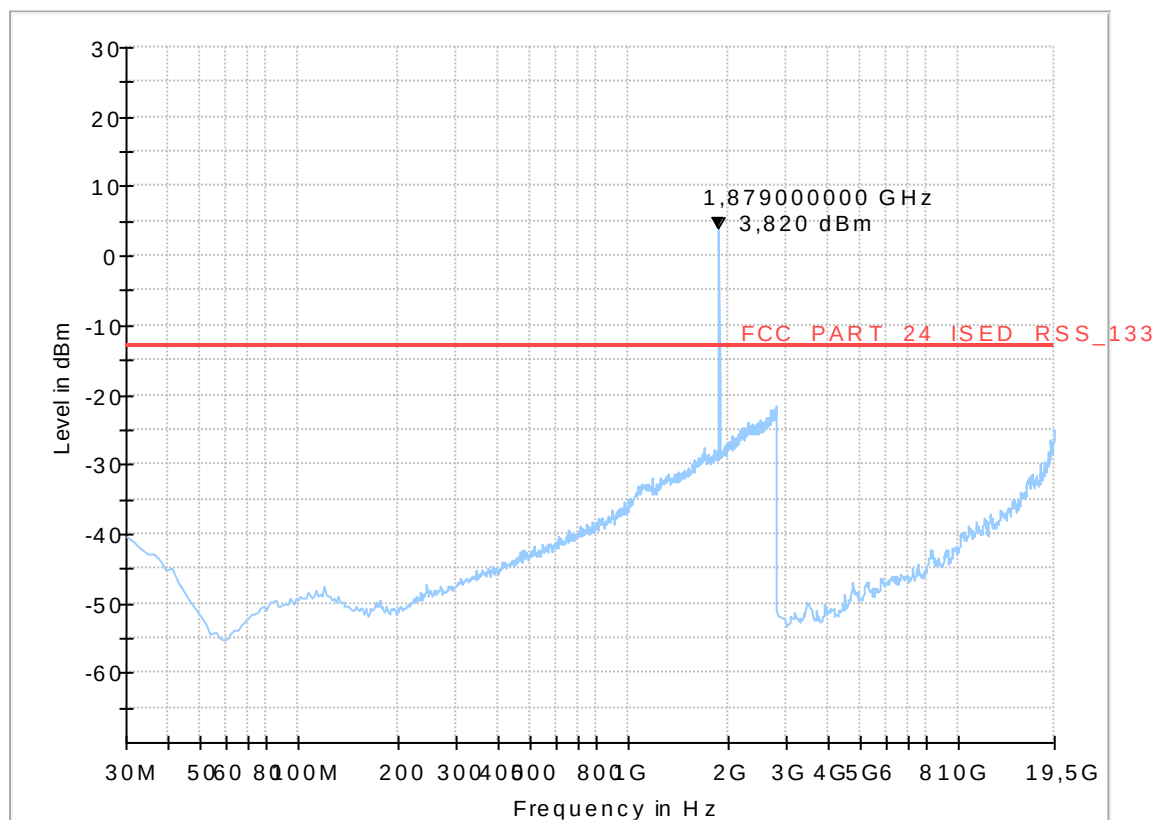
Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Operation mode:	TCH 1900, CHANNEL 661
Operator Name:	MBe
Conditions:	Humidity: 50%rH; Temperature: 20°C

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum



8.12-RSE_R_Ch810_GPRS

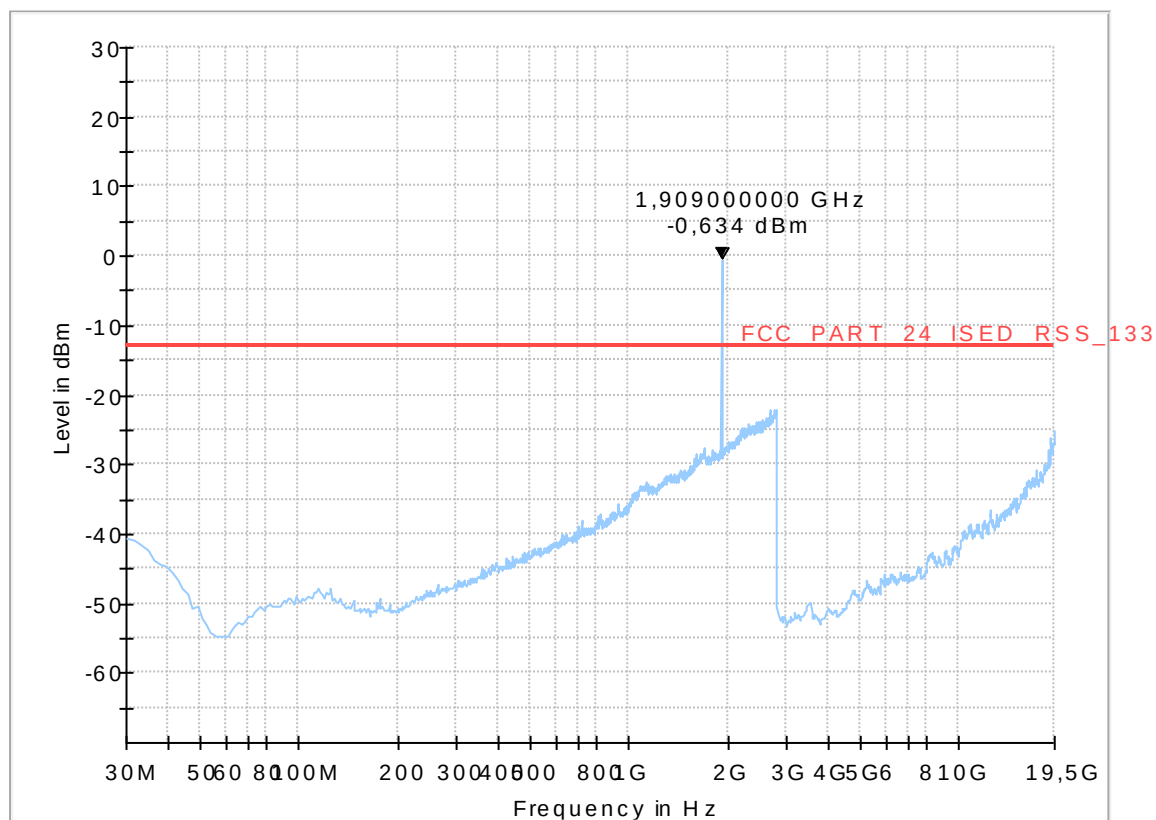
Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Operation mode:	TCH 1900, CHANNEL 810
Operator Name:	MBe
Conditions:	Humidity: 50%rH; Temperature: 20°C

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum



1.6. Radiated emissions on 850 MHz transmitting band-edge 9.01-BE_R_Ch128_GPRS

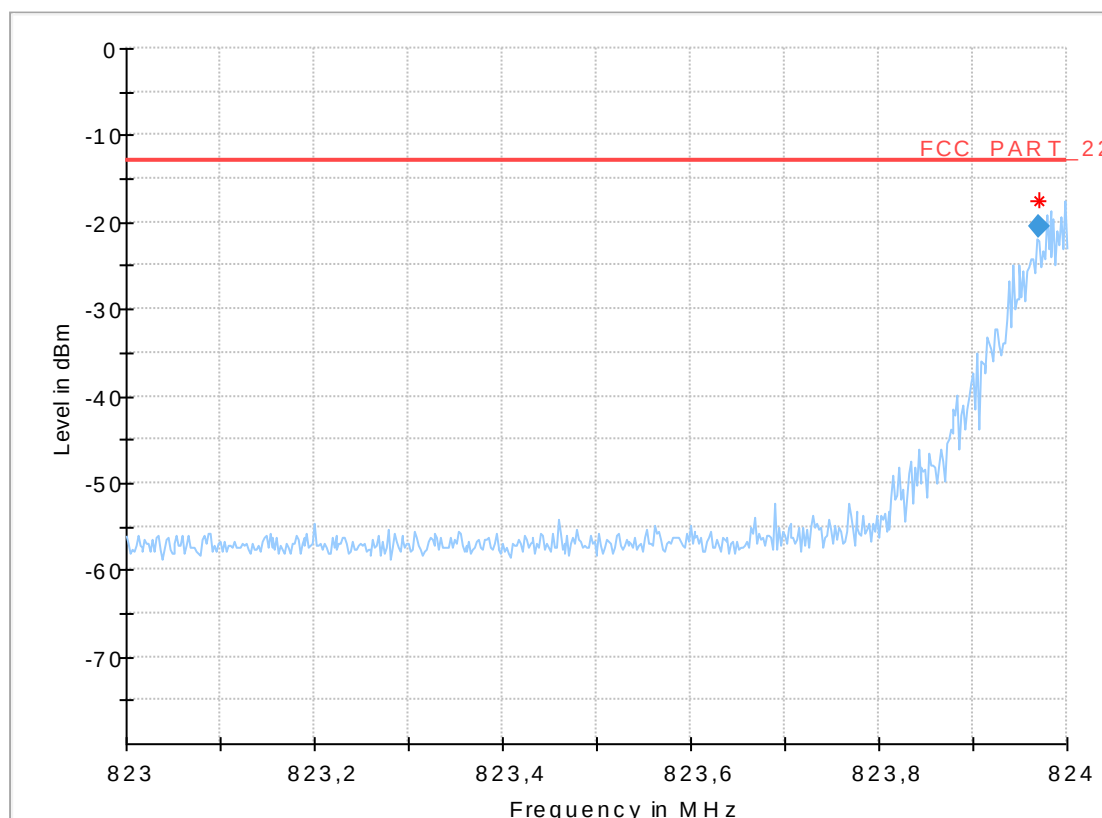
Common Information

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: 20°C
Operator:	TFR
Comment:	Channel 128

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum



9.02-BE_R_Ch251_GPRS

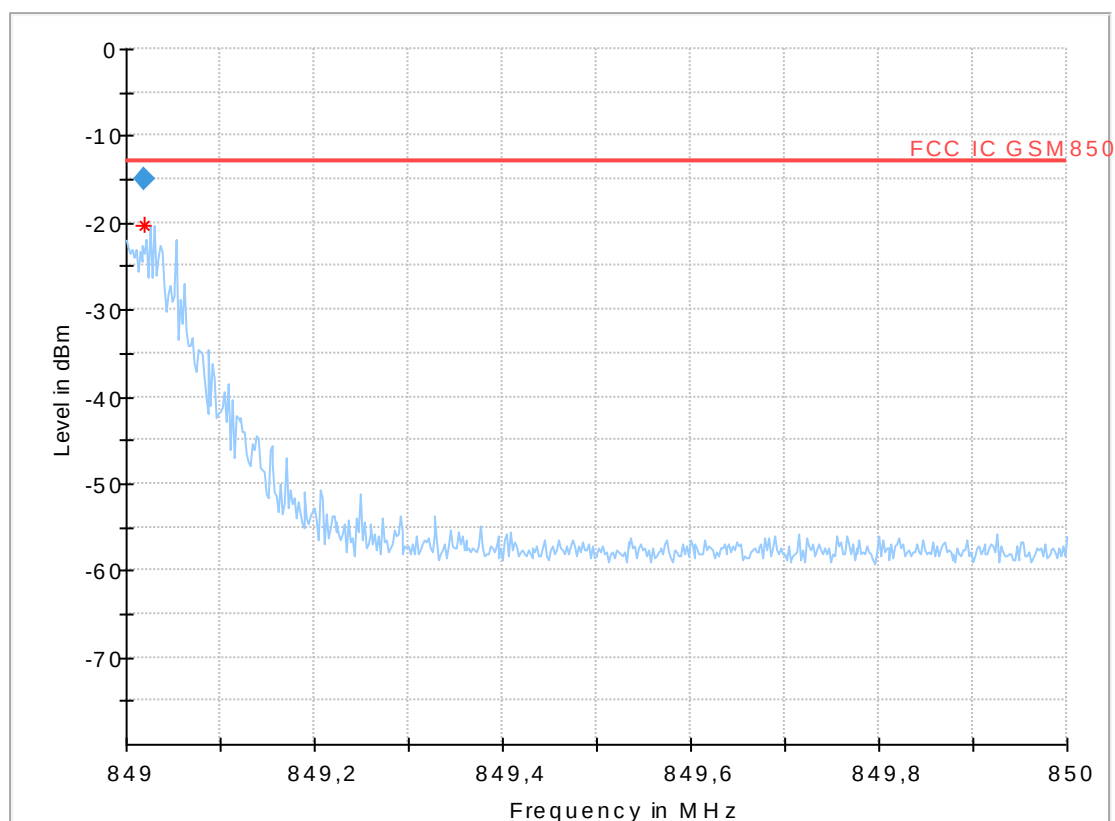
Common Information

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: 50%rH; Temperature: 20°C
Operator:	TFR

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001
HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum



1.7. Radiated emissions on 1900 MHz transmitting band-edge**9.07-BE_R_Ch512_GPRS****Common Information**

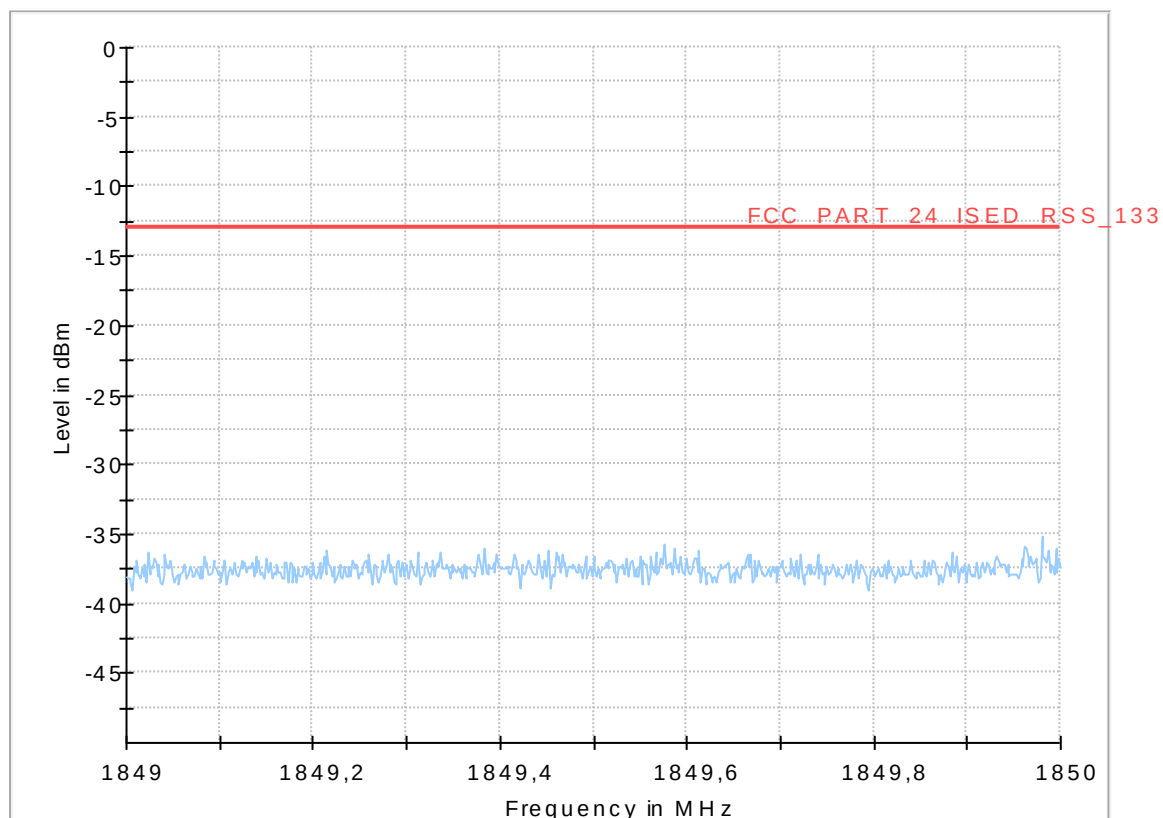
Test Description:	Radiated Spurious Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238
Comm. Link:	GSM1900
Operating Mode:	MS allocated channel 512 (UL = 1850.2MHz)
Environmental Conditions:	Humidity: 48%rH; Temperature: 20°C
Operator:	MBe

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001

HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum



9.08-BE_R_Ch810_GPRS__

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
Operating Mode:	810 (UL = 1909.8MHz)
Environmental Conditions:	Humidity: 48%rH; Temperature: 20°C
Operator:	MBe

EUT Information

Manufacturer:	Robert Bosch Car Multimedia GmbH
EuT:	66-10777-001

HW Version:	9134G05
SW Version:	17.02.S.016
Serial Number:	2950006922
Connected Interfaces:	Main wiring + DTNA Antenna
Power Supply:	12 V DC

Full Spectrum

