

Annex 1: Measurement diagrams to TEST REPORT

No.: 16-1-0219301T10a

According to: **FCC Regulations** Part 22, Part 24

ISED-Regulations

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

for

Actia Nordic

TEM4G

FCC-ID: 2AGKKTEM4G ISED: 20839-TEM4G PMN: TEM4G HVIN: TEM4G

FVIN: 13

Laboratory Accreditation and Listings



Accredited EMC-Test Laboratory



Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3



Voluntary Controls for Electromagnetic **Emissions**

> Reg. No.: R-20013, C-20009, T-20006, G-20013







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

Laboratory Accreditation and Listings

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1. Measurement diagrams

1.1. Magnetic field emissions for frequencies lower 30MHz (§15.209)

2.01_Ch128_GSM_intAnt_standing

Date: 05.06.2017 Page 1 of 5

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 Test software: 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: AFr

Operating mode: GSM850 Voice Ch128, Internal Antenna Operating conditions: Humidity: 50%rH; Temperature: 21°C

Power during tests: 12V DC DUT Position: Standing

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

EUT: TELEMATICS MODULE

 Serial number:
 20071090035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:

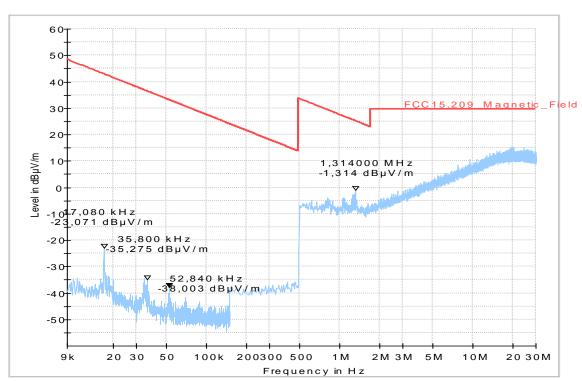


Diagram No. 2.02_Ch251_GPRS_extAnt_standing

23.05.2017 Page 1 of 2
Electric Field Strength Measurement

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: not used Used filter: TP1200

Technical Data: please see page 2 for detailed data of measurement setup

Test specification.: FCC 15.205 § 15.209; RSS-Gen: Issue 4

Operator: SLo

Operating conditions: continuous TX CH251 GPRS

Power during tests: 12 V DC Comment 1: EUT standing

EUT Information

Test description:

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

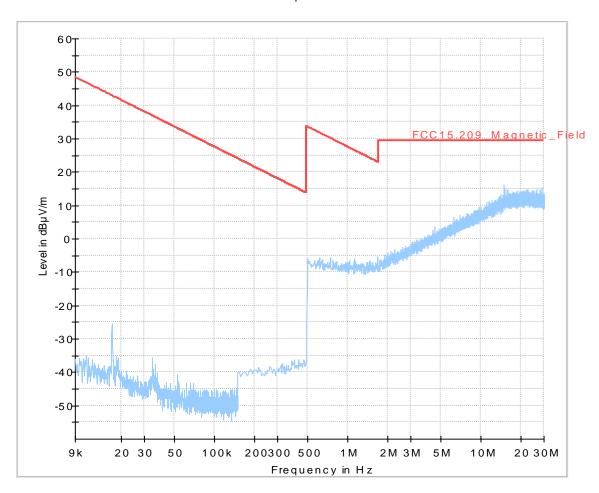
EUT: TELEMATICS MODULE

 Serial number:
 20071090035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:



2.03_Ch512_GSM_intAnt_standing

Date: 05.06.2017 Page 1 of 3

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 Test software: 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: AFr

Operating mode: GSM1900 Voice Ch512, Internal Antenna Operating conditions: Humidity: 50%rH; Temperature: 21°C

Power during tests: 12V DC DUT Position: Standing

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

EUT: TELEMATICS MODULE

 Serial number:
 20071090035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:

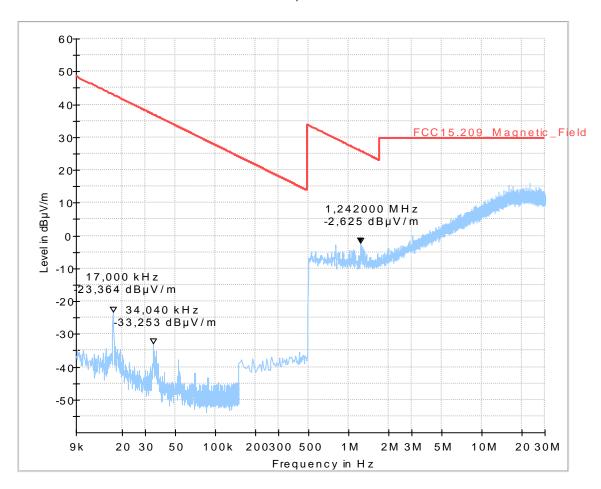


Diagram No. 2.04_Ch810_GPRS_extAnt_standing

23.05.2017 Page 1 of 1 Electric Field Strength Measurement

Test description:

Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance

Version of Test software: EMC32 V9.25.0 Distance correction: not used Used filter: TP1200

Technical Data: please see page 2 for detailed data of measurement setup

Test specification.: FCC 15.205 § 15.209; RSS-Gen: Issue 4

Operator: SLo

Operating conditions: continuous TX CH810 GPRS

Power during tests: 12 V DC Comment 1: **EUT** standing

EUT Information

Manufacturer: **ACTIA NORDIC AB**

TEM4G Model:

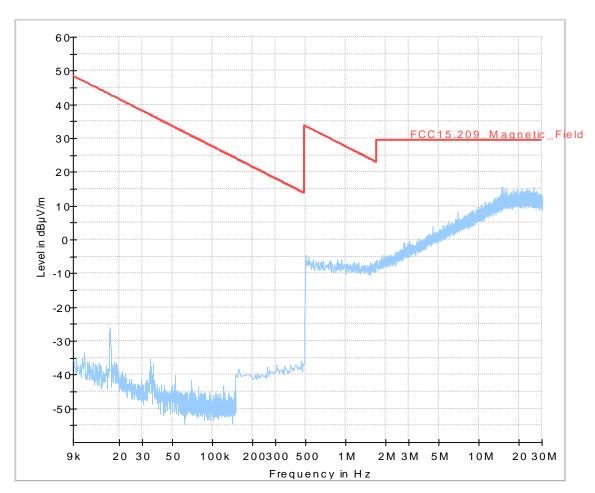
Type: TELEMATICS MODULE

EUT: TELEMATICS MODULE

20071090035

Serial number: HW: 31654860 Power Supply: 12VDC

Comments:



1.2. Spurious emissions radiated (850 MHz transmitting mode)

8.01_RSE_R_Ch128_Internal_Voice_30M_1G_Laying

Common Information

Test Description:

Radiated Emissions GSM850

Test Site Location:

CETECOM GmbH Essen

Fully Anechoic Room (FAR)

Test Standard: FCC Part22.917

Test Case:

Operating Mode: MS allocated UL channel 128

Exclusionband: 824 - 849MHz

Environmental Conditions: Humidity: 40%rH; Temperature: 20°C

Operator: Mah

Comment: Internal Antenna, Voice Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

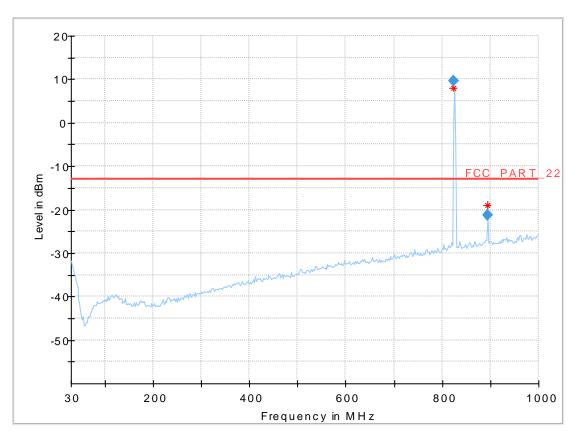
EUT: TELEMATICS MODULE

 Serial number:
 20071090026

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:
 Laying



8.01b_RSE_R_Ch128_Internal_Voice_30M_1G_standing

Common Information

Test Description:

Test Site Location:

Test Site:

Radiated Emissions GSM850

CETECOM GmbH Essen

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: Lor

Comment: Internal Antenna, Voice Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

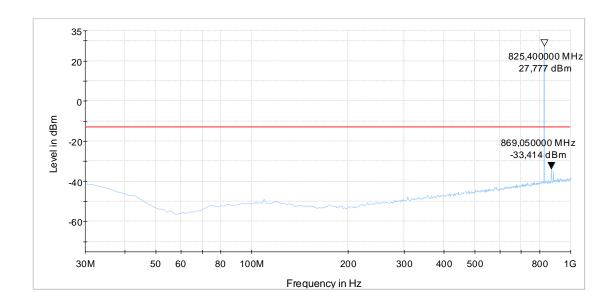
EUT: TELEMATICS MODULE

 Serial number:
 ...90035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:
 standing



8.01c_RSE_R_Ch128_GSM_1G-12G

Common Information

Radiated Spurious Emissions GSM Test Description: Test Site Location: CETECOM GmbH Essen Test Site: Fully Anechoic Room 2 (FAR2) Test Standard: FCC 22

GSM 850, Ch. 128, GSM only Test Case: **Environment Conditions:** Humidity: 46%rH; Temperature: 20°C

Antenna: internal Operator Name: PSa

EUT Information

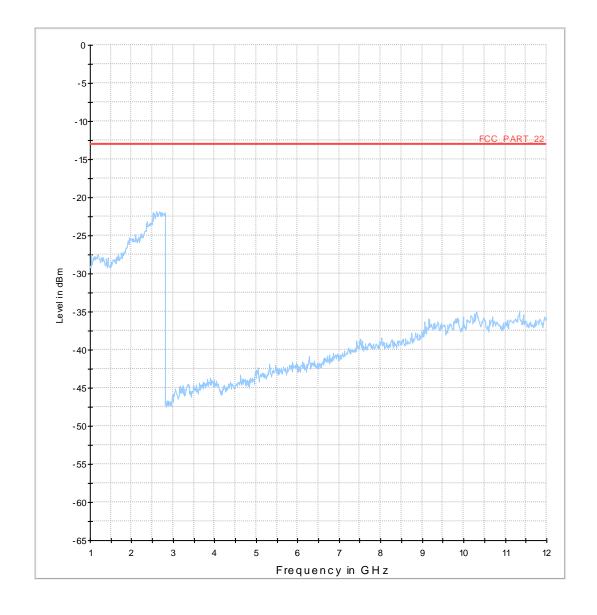
ACTIA NORDIC AB Manufacturer:

Model: TEM4G

EUT Type: **TELEMATICS MODULE**

20071090026 S/N: HW Version: 31654860 Power Supply: 12V

Comments: Standing/laying position



8.06_RSE_R_Ch251_External_GPRS_30M_1G_Laying

Common Information

Test Description:

Test Site Location:

Test Site:

Radiated Emissions GSM850

CETECOM GmbH Essen

Fully Anechoic Room (FAR)

Test Standard: FCC Part22.917

Test Case: -

Operating Mode: MS allocated UL channel 251

Exclusionband: 824 - 849MHz

Environmental Conditions: Humidity: 40%rH; Temperature: 20°C

Operator: Mah

Comment: External Antenna, GPRS

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

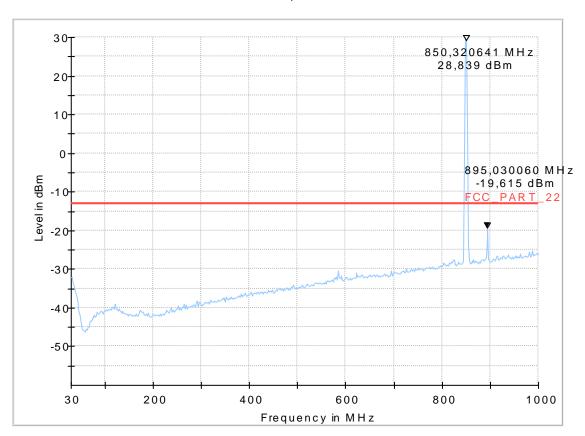
EUT: TELEMATICS MODULE

 Serial number:
 20071090026

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:



8.06b_RSE_R_Ch251_External_GPRS_30M_1G_Standing

Common Information

Test Description:

Radiated Emissions GSM850

Test Site Location:

CETECOM GmbH Essen

Fully Anechoic Room (FAR)

Test Standard:

FCC Part22.917/RSS-132

Test Case:

Operating Mode: MS allocated UL channel 251

Exclusionband: 824 - 849MHz

Environmental Conditions: Humidity: 40%rH; Temperature: 20°C

Operator: Lor

Comment: External Antenna, GPRS, standing

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

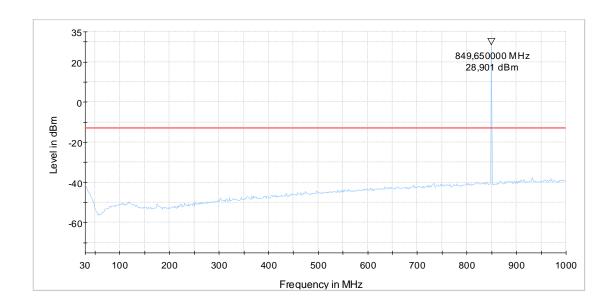
EUT: TELEMATICS MODULE

 Serial number:
 ..90035

 HW:
 31654860

 Power Supply:
 12VDC

Comments:



8.06b_RSE_R_Ch251_GPRS_1G-12G

Common Information

Test Description:

Test Site Location:

Test Site:

Test Site:

Test Standard:

Radiated Spurious Emissions GSM
CETECOM GmbH Essen
Fully Anechoic Room 2 (FAR2)
FCC 22

Test Case: GSM 850, Ch. 251, GSM+GPRS Environment Conditions: Humidity: 46%rH; Temperature: 20°C

Antenna: external Operator Name: PSa

EUT Information

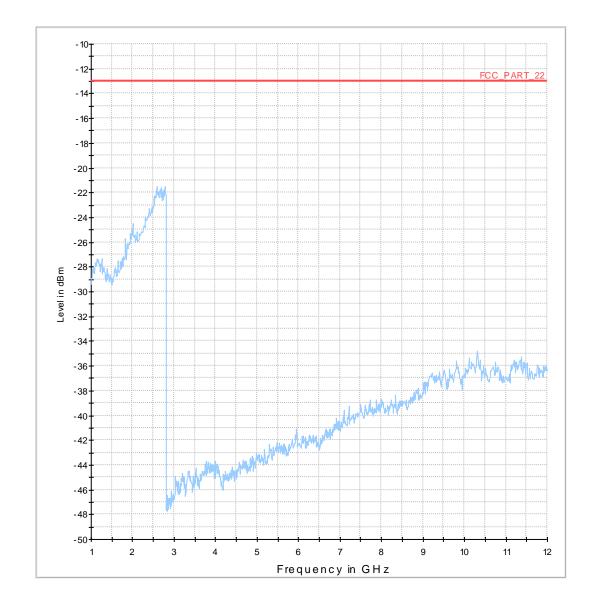
Manufacturer: ACTIA NORDIC AB

Model: TEM4G

EUT Type: TELEMATICS MODULE

S/N: 20071090026 HW Version: 31654860 Power Supply: 12V

Comments: Laying/Standing



1.3. Radiated emissions on 850 MHz transmitting band-edge

9.01_BE_R_Ch128_Internal_Voice_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: 40%rH; Temperature: 20°C

Operator: Mah

Comment: Internal Antenna, Voice Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

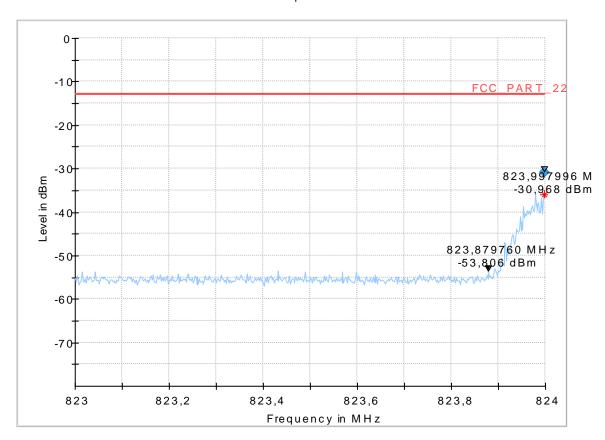
EUT: TELEMATICS MODULE

 Serial number:
 20071090026

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:
 Laying



9.01b_BE_R_Ch128_Internal_Voice_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: Lor

Comment: Internal Antenna, Voice Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

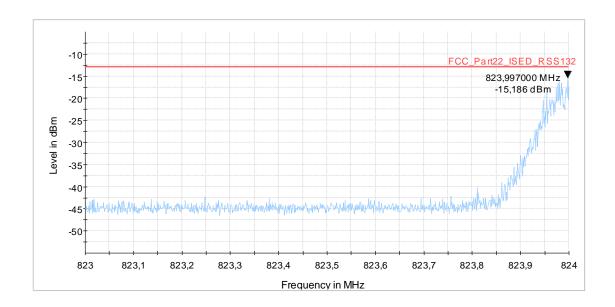
EUT: TELEMATICS MODULE

 Serial number:
 ..90035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:
 Standing



9.03_BE_R_Ch128_ExtAnt_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/RSS-132

Operating Mode: MS allocated channel 128 (fc = 824.2MHz), GPRS, PCL5 (+33dBm)

Exclusionband: 824 - 849MHz

Environmental Conditions: Humidity: 40%rH; Temperature: 20°C

Operator: Lor

Comment: Internal Antenna, Voice Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

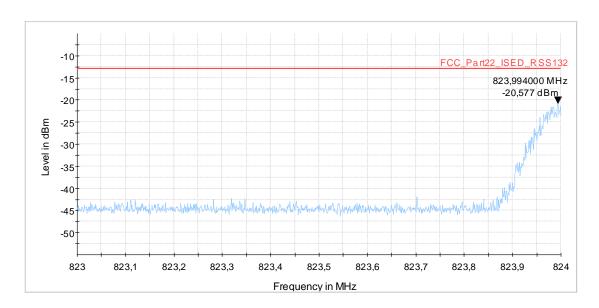
EUT: TELEMATICS MODULE

 Serial number:
 ..90035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:
 Laying



9.03b_BE_R_Ch128_ExtAnt_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/RSS-132

Operating Mode: MS allocated channel 128 (fc = 824.2MHz), GPRS, PCL5 (+33dBm)

Exclusionband: 824 - 849MHz

Environmental Conditions: Humidity: 40%rH; Temperature: 20°C

Operator: Lor

Comment: Internal Antenna, Voice Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

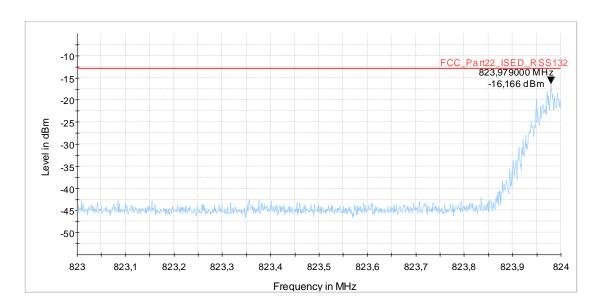
EUT: TELEMATICS MODULE

 Serial number:
 ..90035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:
 Standing



9.02_BE_R_Ch251_IntAnt_GSM_VOICE_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/RSS-132

Operating Mode: MS allocated channel 251 (fc = 848.8MHz), PCL0 (+33dBm)

Exclusionband: 824 - 849MHz

Environmental Conditions: Humidity: 40%rH; Temperature: 20°C

Operator: Mah

Comment Internal Antenna, GSM Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

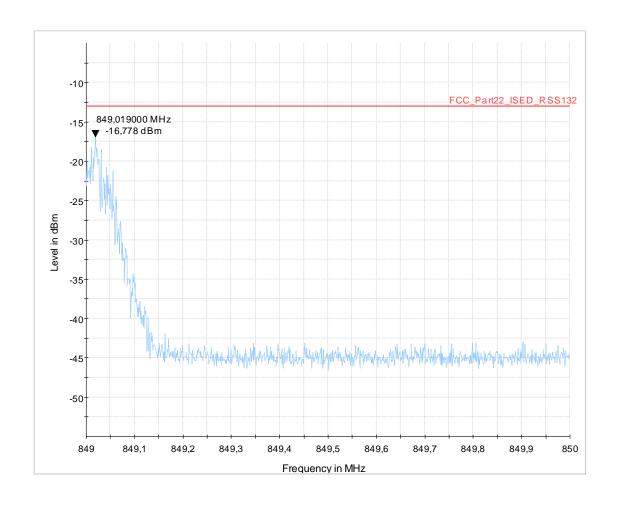
EUT: TELEMATICS MODULE

 Serial number:
 ..90035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:
 Laying



9.02b_BE_R_Ch251_IntAnt_GSM_VOICE_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/RSS-132

Operating Mode: MS allocated channel 251 (fc = 848.8MHz), PCL0 (+33dBm)

Exclusionband: 824 - 849MHz

Environmental Conditions: Humidity: 40%rH; Temperature: 20°C

Operator: Mah

Comment Internal Antenna, GSM Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

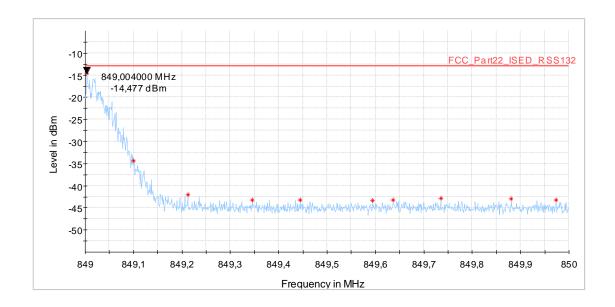
EUT: TELEMATICS MODULE

 Serial number:
 ..90035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:
 Standing



9.04_BE_R_Ch251_External_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

Comment External Antenna, GSM Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

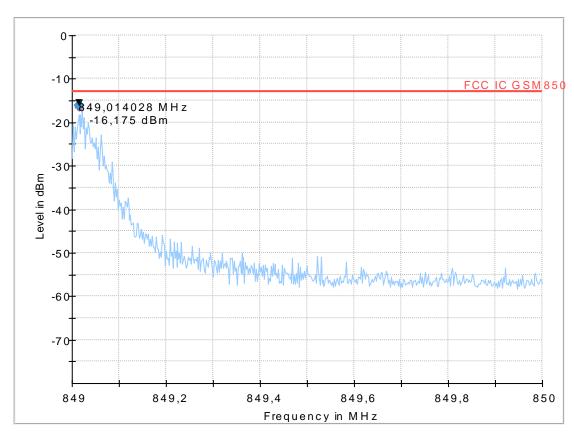
EUT: TELEMATICS MODULE

 Serial number:
 20071090026

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:
 laying



9.04b_BE_R_Ch251_External_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/RSS-132

Operating Mode: MS allocated channel 251 (fc = 848.8MHz), PCL0 (+33dBm)

Exclusionband: 824 - 849MHz

Environmental Conditions: Humidity: 40%rH; Temperature: 20°C

Operator: Lor

Comment External Antenna, GSM Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

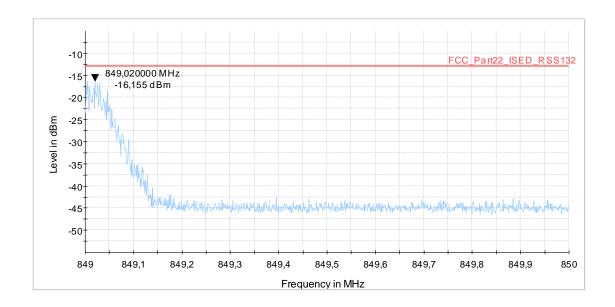
EUT: TELEMATICS MODULE

 Serial number:
 ..90035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:
 Standing



1.4. Spurious emissions radiated (1900 MHz transmitting mode)

8.10a_RSE_R_Ch512_GSM_Standing

Common Information

Test Description:
Radiated Spurious Emissions GSM
Test Site Location:
CETECOM GmbH Essen
Test Site:
Fully Anechoic Room 2 (FAR2)

Test Standard: FCC 24

Test Case: GSM 1900, Ch. 512, GSM only (Voice) Environment Conditions: Humidity: 46%rH; Temperature: 20°C

Antenna: internal Operator Name: Lor

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

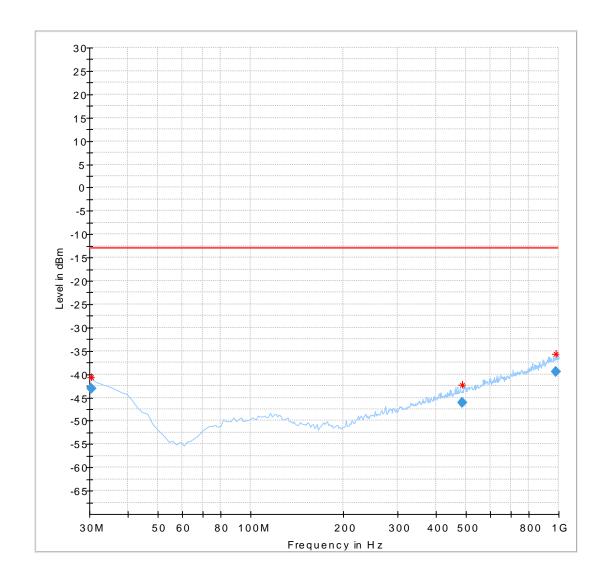
EUT Type: TELEMATICS MODULE

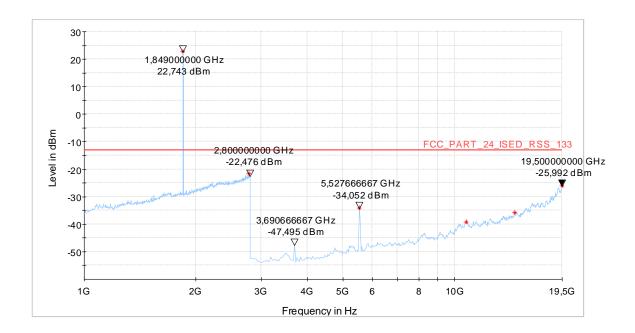
 S/N:
 ..90035

 HW Version:
 31654860

 Power Supply:
 12V

Comments: Internal Antenna





8.15_RSE_R_Ch810_External_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 Part24.238

Test Case:

Operating Mode: MS allocated UL channel 810

Exclusionband: 1850 - 1910MHz

Environmental Conditions: Humidity: 40%rH; Temperature: 20°C

Operator: Mah

Comment: External Antenna, GPRS Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

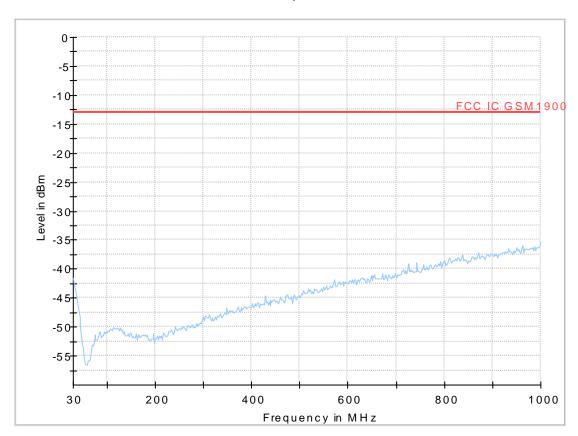
EUT: TELEMATICS MODULE

 Serial number:
 20071090026

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:



8.15_RSE_R_Ch810_External_GPRS_Standing

Common Information

Test Description: Radiated Spurious Emissions GPRS1900

Test Site Location: CETECOM GmbH Essen
Test Site: Fully Anechoic Room (FAR)
Test Standard: FCC Part24.238/RSS-133

Test Case: Operating Mode: MS allocated UL channel 810

Exclusionband: 1850 - 1910MHz

Environmental Conditions: Humidity: 40%rH; Temperature: 20°C

Operator: Lor

Comment: External Antenna, GPRS Mode

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

Type: TELEMATICS MODULE

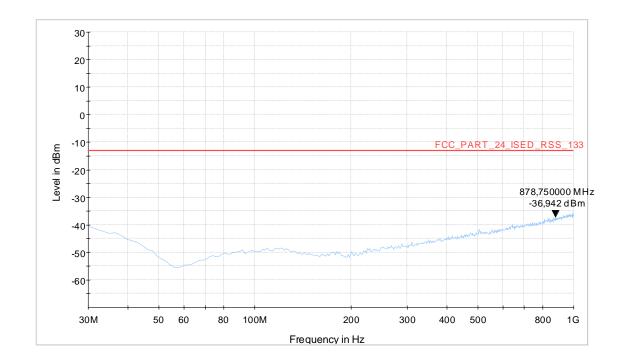
EUT: TELEMATICS MODULE

 Serial number:
 ...90035

 HW:
 31654860

 Power Supply:
 12VDC

 Comments:



8.15_RSE_R_Ch810_GPRS_1G-18G

Common Information

Test Description:
Radiated Spurious Emissions GSM
Test Site Location:
CETECOM GmbH Essen
Test Site:
Fully Anechoic Room 2 (FAR2)

Test Standard: FCC 24

Test Case: GSM 1900, Ch. 810, GSM+GPRS Environment Conditions: Humidity: 46%rH; Temperature: 20°C

Antenna: external Operator Name: PSa

EUT Information

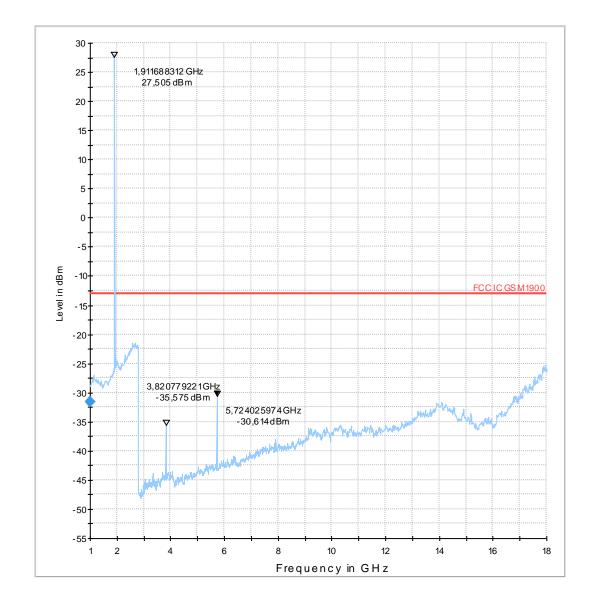
Manufacturer: ACTIA NORDIC AB

Model: TEM4G

EUT Type: TELEMATICS MODULE

S/N: 20071090026 HW Version: 31654860 Power Supply: 12V

Comments: Standing/Laying



1.5. Radiated emissions on 1900 MHz transmitting band-edge

9.07_BE_R_Ch512_Internal_Voice_Standing

Common Information

Test Description:
Radiated Spurious Emissions GSM
Test Site Location:
CETECOM GmbH Essen
Test Site:
Fully Anechoic Room 2 (FAR2)

 Test Standard:
 FCĆ 24/RSS-133

 Test Case:
 GSM 1900, Ch. 512, GSM

Environment Conditions: Humidity: 46%rH; Temperature: 20°C

Antenna: Internal Operator Name: Lor

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

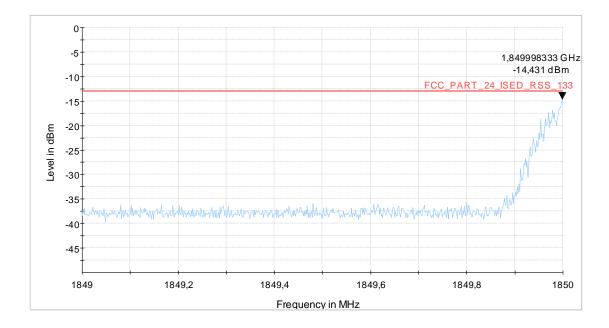
EUT Type: TELEMATICS MODULE

 S/N:
 ..90035

 HW Version:
 31654860

 Power Supply:
 12V

 Comments:
 Standing



9.07b_BE_R_Ch512_Internal_Voice_Laying

Common Information

Test Description:
Radiated Spurious Emissions GSM
Test Site Location:
CETECOM GmbH Essen
Test Site:
Fully Anechoic Room 2 (FAR2)
FOC 34/PSS 133

Test Standard: FCC 24/RSS-133
Test Case: GSM 1900, Ch. 512, GSM

Environment Conditions: Humidity: 46%rH; Temperature: 20°C

Antenna: Internal Operator Name: Lor

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

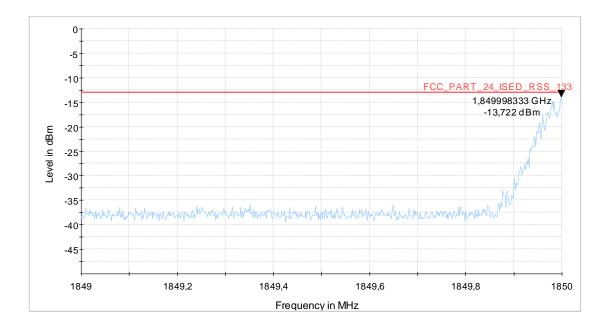
EUT Type: TELEMATICS MODULE

 S/N:
 ..90035

 HW Version:
 31654860

 Power Supply:
 12V

 Comments:
 Laying



9.08_BE_R_Ch810_Internal_Voice_Standing

Common Information

Radiated Spurious Emissions GSM Test Description: Test Site Location: CETECOM GmbH Essen Test Site: Fully Anechoic Room 2 (FAR2) Test Standard: FCC 24 / RSS-133

Test Case: GSM 1900, Ch. 810, GSM

Environment Conditions: Humidity: 46%rH; Temperature: 20°C Antenna: Internal

Operator Name: Lor

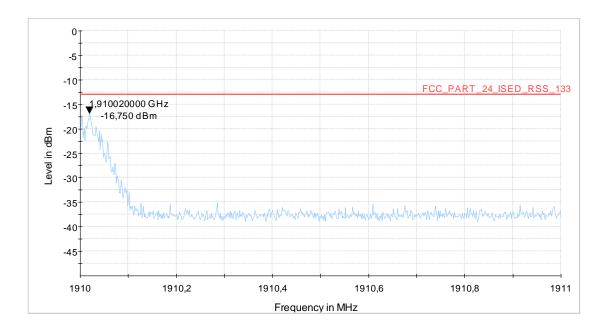
EUT Information

Manufacturer: **ACTIA NORDIC AB**

Model: TEM4G

EUT Type: **TELEMATICS MODULE**

..90035 S/N: HW Version: 31654860 Power Supply: 12V Comments: Standing



9.08b_BE_R_Ch810_Internal_Voice_Laying

Common Information

Test Description:
Radiated Spurious Emissions GSM
Test Site Location:
CETECOM GmbH Essen
Test Site:
Fully Anechoic Room 2 (FAR2)
Test Standard:
FCC 24 / RSS-133

Test Standard: FCC 24 / RSS-133
Test Case: GSM 1900, Ch. 810, GSM

Environment Conditions: Humidity: 46%rH; Temperature: 20°C

Antenna: Internal Operator Name: Lor

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

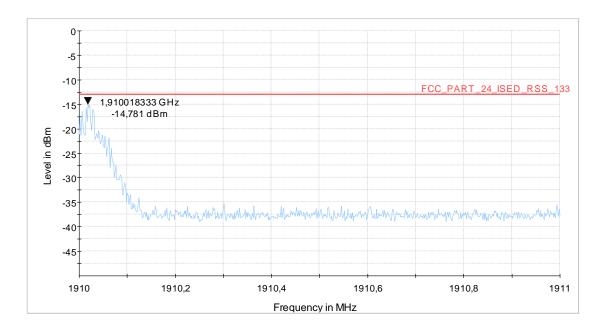
EUT Type: TELEMATICS MODULE

 S/N:
 ..90035

 HW Version:
 31654860

 Power Supply:
 12V

 Comments:
 Laying



9.09_BE_R_Ch512_ExtAnt_GPRS_Standing

Common Information

Test Description:
Radiated Spurious Emissions GSM
Test Site Location:
CETECOM GmbH Essen
Test Site:
Fully Anechoic Room 2 (FAR2)
Test Standard:
FCC 24 / RSS-133

Test Standard: FCC 24 / RSS-133
Test Case: GSM 1900, Ch. 512, GPRS

Environment Conditions: Humidity: 46%rH; Temperature: 20°C

Antenna: Internal Operator Name: Lor

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

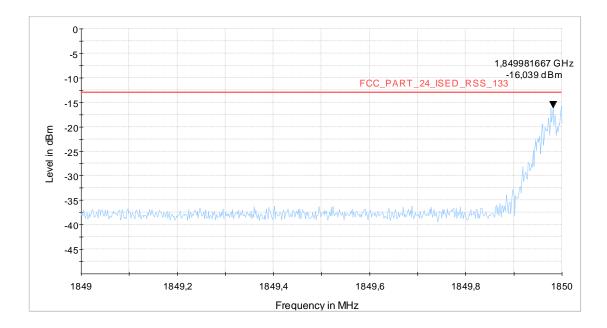
EUT Type: TELEMATICS MODULE

 S/N:
 ..90035

 HW Version:
 31654860

 Power Supply:
 12V

 Comments:
 Standing



9.09b_BE_R_Ch512_ExtAnt_GPRS_Laying

Common Information

Test Description:
Radiated Spurious Emissions GSM
Test Site Location:
CETECOM GmbH Essen
Test Site:
Fully Anechoic Room 2 (FAR2)
FCC 24 / RSS-133

Test Case: GSM 1900, Ch. 512, GPRS
Environment Conditions: Humidity: 46%rH; Temperature: 20°C

Antenna: Internal Operator Name: Lor

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

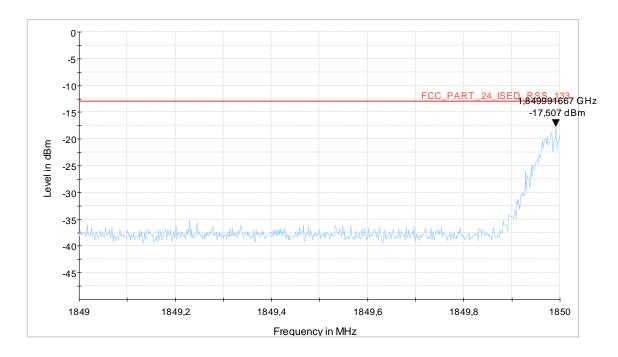
EUT Type: TELEMATICS MODULE

 S/N:
 ..90035

 HW Version:
 31654860

 Power Supply:
 12V

 Comments:
 Laying



9.10_BE_R_Ch810_ExtAnt_GPRS_Standing

Common Information

Test Description:
Radiated Spurious Emissions GSM
Test Site Location:
CETECOM GmbH Essen
Test Site:
Fully Anechoic Room 2 (FAR2)
FCC 24 / RSS-133

Test Standard: FCC 24 / RSS-133 Test Case: GSM 1900, Ch. 810, GPRS

Environment Conditions: Humidity: 46%rH; Temperature: 20°C

Antenna: Internal Operator Name: Lor

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

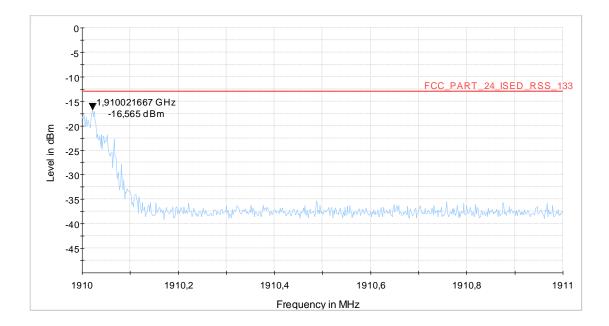
EUT Type: TELEMATICS MODULE

 S/N:
 ..90035

 HW Version:
 31654860

 Power Supply:
 12V

 Comments:
 Standing



9.10b_BE_R_Ch810_ExtAnt_GPRS_Laying

Common Information

Test Description:

Test Site Location:

Test Site:

Test Site:

Fully Anechoic Room 2 (FAR2)

FCC 24 / RSS-133

Test Case: GSM 1900, Ch. 810, GPRS
Environment Conditions: Humidity: 46%rH; Temperature: 20°C

Environment Conditions: Humidit
Antenna: Internal
Operator Name: Lor

EUT Information

Manufacturer: ACTIA NORDIC AB

Model: TEM4G

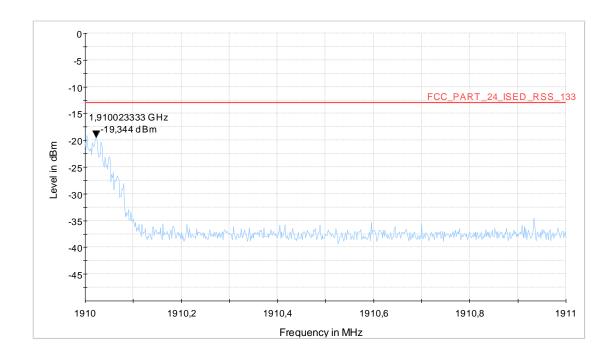
EUT Type: TELEMATICS MODULE

 S/N:
 ..90035

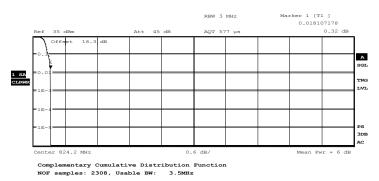
 HW Version:
 31654860

 Power Supply:
 12V

 Comments:
 Laying



1.6. Power Measurements and PAPR-Value 1.6.1. GSM 850 (GMSK Modulation)



Trace 1
Mean 30.98 dBm
Peak 31.30 dBm
Crest 0.33 dB

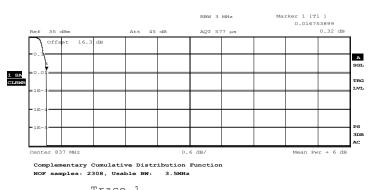
10 % 0.28 dB
1 % 0.32 dB
.1 % 0.33 dB

0.33 dB

Date: 24.MAY.2017 11:17:32

.01 %

Diagram 1: Channel 128

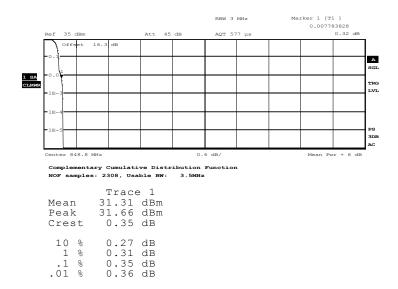


Trace 1
Mean 31.12 dBm
Peak 31.45 dBm
Crest 0.33 dB

10 % 0.27 dB
1 % 0.32 dB
.1 % 0.33 dB

Date: 24.MAY.2017 11:19:11

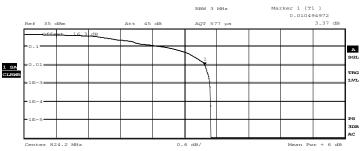
Diagram 2: Channel 192



Date: 24.MAY.2017 11:20:11

Diagram 3: Channel 251

1.6.2. GSM 850 (8-PSK Modulation)



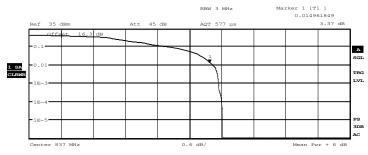
Complementary Cumulative Distribution Function NOF samples: 2308, Usable BW: 3.5MHz

Trace 1
Mean 24.57 dBm
Peak 28.06 dBm
Crest 3.49 dB

10 % 2.64 dB
1 % 3.38 dB
1.1 % 3.47 dB
.01 % 3.49 dB

Date: 24.MAY.2017 11:23:19

Diagram 4: Channel 128



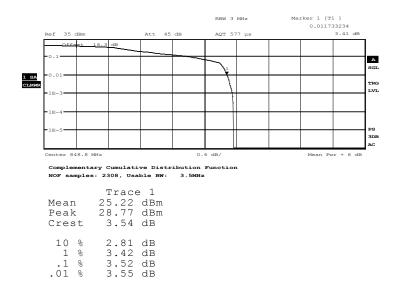
Complementary Cumulative Distribution Function NOF samples: 2308, Usable BW: 3.5MHz

Trace 1
Mean 24.65 dBm
Peak 28.27 dBm
Crest 3.62 dB

10 % 2.66 dB
1 % 3.44 dB
1 % 3.55 dB
.01 % 3.61 dB

Date: 24.MAY.2017 11:25:31

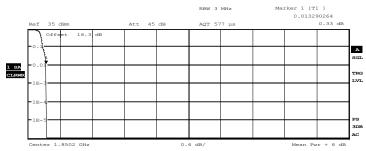
Diagram 5: Channel 192



Date: 24.MAY.2017 11:26:41

Diagram 6: Channel 251

1.6.3. GSM 1900 (GMSK Modulation)



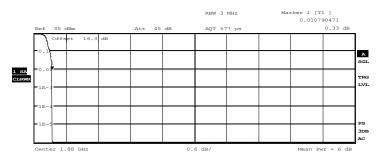
Complementary Cumulative Distribution Function NOF samples: 2308, Usable BW: 3.5MHz

Trace 1
Mean 27.51 dBm
Peak 27.85 dBm
Crest 0.34 dB

10 % 0.27 dB
1 % 0.33 dB
.1 % 0.34 dB
.01 % 0.34 dB

Date: 24.MAY.2017 10:50:00

Diagram 7: Channel 512

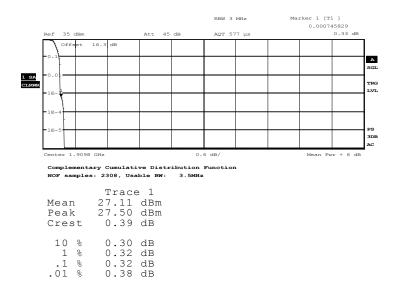


Complementary Cumulative Distribution Function NOF samples: 2308, Usable BW: 3.5MHz

Trace 1 Mean 27.16 dBm Peak 27.50 dBm Crest 0.33 dB 10 % 0.29 dB 1 % 0.33 dB 1 % 0.34 dB .01 % 0.34 dB

Date: 24.MAY.2017 10:54:17

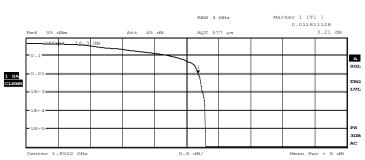
Diagram 8: Channel 661



Date: 24.MAY.2017 10:56:26

Diagram 9: Channel 810

1.6.4. GSM 1900 (8-PSK Modulation)



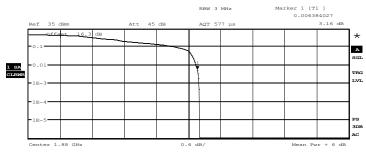
Complementary Cumulative Distribution Function NOF samples: 2308, Usable BW: 3.5 MHz

Trace 1
Mean 23.37 dBm
Peak 26.72 dBm
Crest 3.35 dB

10 % 2.70 dB
1 % 3.22 dB
.1 % 3.30 dB
.01 % 3.35 dB

Date: 24.MAY.2017 11:04:51

Diagram 10: Channel 512



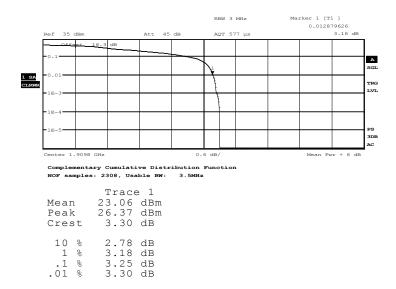
Complementary Cumulative Distribution Function NOF samples: 2308, Usable BW: 3.5MHz

Trace 1
Mean 23.31 dBm
Peak 26.51 dBm
Crest 3.20 dB

10 % 2.77 dB
1 % 3.14 dB
1 % 3.20 dB
.01 % 3.21 dB

Date: 24.MAY.2017 11:06:27

Diagram 11: Channel 661



Date: 24.MAY.2017 11:07:52

Diagram 12: Channel 810