



<b>FCC TEST REPORT</b> <b>FCC 47 CFR Part 22H</b> <b>Industry Canada RSS-132, Issue 3</b> <b>Cellular Telephones Operating in the Bands 824-849MHz and 869-894MHz</b> <b>FCC 47 CFR Part 24E</b> <b>Industry Canada RSS-133, Issue 6</b> <b>2GHz Personal Communication Services</b>															
<b>Report Reference No.</b> .....	G0M-1502-4503-TFC224WC-V01														
<b>Testing Laboratory</b> .....	Eurofins Product Service GmbH														
<b>Address</b> .....	Storkower Str. 38c 15526 Reichenwalde Germany														
<b>Accreditation</b> .....	  A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Filed Test Laboratory, Reg.-No.: 96970 IC OATS Filing assigned code: 3470A														
<b>Applicant's name</b> .....	SMT & Hybrid GmbH														
<b>Address</b> .....	An der Priessnitzau 22 01328 Dresden GERMANY														
<b>Test specification:</b> Standard ..... 47 CFR Part 22H, 47 CFR Part 24E RSS-132, Issue 3 : 2013-01, RSS-133, Issue 6 : 2013-01 SRSP-503 Issue 7 : 2008-09, SRSP-510 Issue 5 : 2009-02 RSS-Gen, Issue 4, 2014-11, ANSI/TIA-603-C-2004															
<b>Equipment under test (EUT):</b> <table border="0"> <tr> <td>Product description</td> <td>Datenlogger</td> </tr> <tr> <td>Model No.</td> <td>Data link sensor</td> </tr> <tr> <td>Additional Model(s)</td> <td>None</td> </tr> <tr> <td>Brand Name(s)</td> <td>MONI LOG data link sensor</td> </tr> <tr> <td>Hardware version</td> <td>R3</td> </tr> <tr> <td>Firmware / Software version</td> <td>0.90</td> </tr> <tr> <td></td> <td>FCC-ID: 2AELT-08MONILOG    Contains IC: 5131A-HE910</td> </tr> </table>		Product description	Datenlogger	Model No.	Data link sensor	Additional Model(s)	None	Brand Name(s)	MONI LOG data link sensor	Hardware version	R3	Firmware / Software version	0.90		FCC-ID: 2AELT-08MONILOG    Contains IC: 5131A-HE910
Product description	Datenlogger														
Model No.	Data link sensor														
Additional Model(s)	None														
Brand Name(s)	MONI LOG data link sensor														
Hardware version	R3														
Firmware / Software version	0.90														
	FCC-ID: 2AELT-08MONILOG    Contains IC: 5131A-HE910														
<b>Test result</b>	<b>Passed</b>														

**Possible test case verdicts:**

- neither assessed nor tested ..... : N/N
- required by standard but not appl. to test object..... : N/A
- required by standard but not tested..... : N/T
- not required by standard for the test object ..... : N/R
- test object does meet the requirement..... : P (Pass)
- test object does not meet the requirement..... : F (Fail)

**Testing:**

Test Lab Temperature..... : 20 – 23 °C

Test Lab Humidity ..... : 32 – 38 %

Date of receipt of test item ..... : 2015-03-23

Date (s) of performance of tests ..... : 2015-06-10 - 2015-06-11

Compiled by ..... : Matthias Handrik

Tested by (+ signature)..... : Matthias Handrik  
(Responsible for Test)

Approved by (+ signature) ..... : Christian Weber

Date of issue ..... : 2015-06-18

Total number of pages ..... : 29

*Handrik*

*C. Weber*

**General remarks:**

**The test results presented in this report relate only to the object tested.**

**The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.**

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

**Additional comments:**

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## Version History

Version	Issue Date	Remarks	Revised by
01	2015-06-18	Initial Release	

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## 1 Equipment (Test item) Description

Description	Datenlogger		
Model	Data link sensor		
Additional Model(s)	None		
Brand Name(s)	MONI LOG data link sensor		
Serial number	20158xxx		
Hardware version	R3		
Software / Firmware version	0.90		
FCC-ID	2AELT-08MONILOG		
Contains IC	5131A-HE910		
Equipment type	End product		
Equipment classification	Mobile Device (Human Body distance > 20 cm)		
Radio type	Transceiver		
Radio technology	WCDMA FDDII / WCDMA FDDV		
Operating frequency range	FDDII : TX = 1850 MHz - 1910 MHz, RX = 1930 MHz - 1990 MHz FDDV : TX = 824 MHz - 849 MHz, RX = 869 MHz - 894 MHz		
Assigned frequency band	Cell. Service Block A & B : 824 - 849 MHz & 869 - 894 MHz Broadband PCS : 1850 - 1910 MHz & 1930 - 1990 MHz		
Main test frequencies FDDV	F <sub>LOW</sub>	CH : 4133 UL: 826.6 MHz	CH : 4358 DL: 871.6 MHz
	F <sub>MID</sub>	CH : 4175 UL: 835 MHz	CH : 4400 DL: 880 MHz
	F <sub>HIGH</sub>	CH : 4232 UL: 846.4 MHz	CH : 4457 DL: 891.4 MHz
Main test frequencies FDDII	F <sub>LOW</sub>	CH : 9263 UL: 1852.6 MHz	CH : 9663 DL: 1932.6 MHz
	F <sub>MID</sub>	CH : 9400 UL: 1880.0 MHz	CH : 9800 DL: 1960.0 MHz
	F <sub>HIGH</sub>	CH : 9537 UL: 1907.4 MHz	CH : 9937 DL: 1987.4 MHz
Supported transmission modes	HSDPA, HSUPA		
Modulations	QPSK		
Number of antennas	1		
Radio module	Type	GSM module	
	Model	HE910 G	
	Manufacturer	Telit Wireless Solutions	
	HW Version	00	
	SW Version	12.00.xx5	
	FCC-ID	RI7HE910	
	IC	5131A-HE910	
Antenna	Type	external dedicated	
	Model	TG 22.0111	
	Manufacturer	Taoglas	
	Gain	2.14dBi (costumer declaration)	

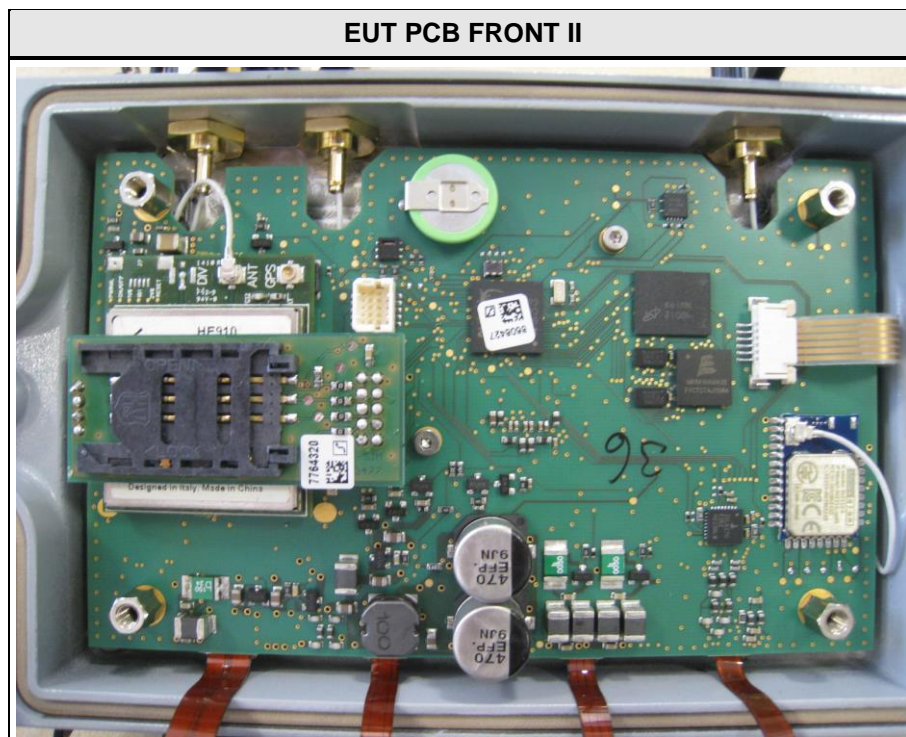
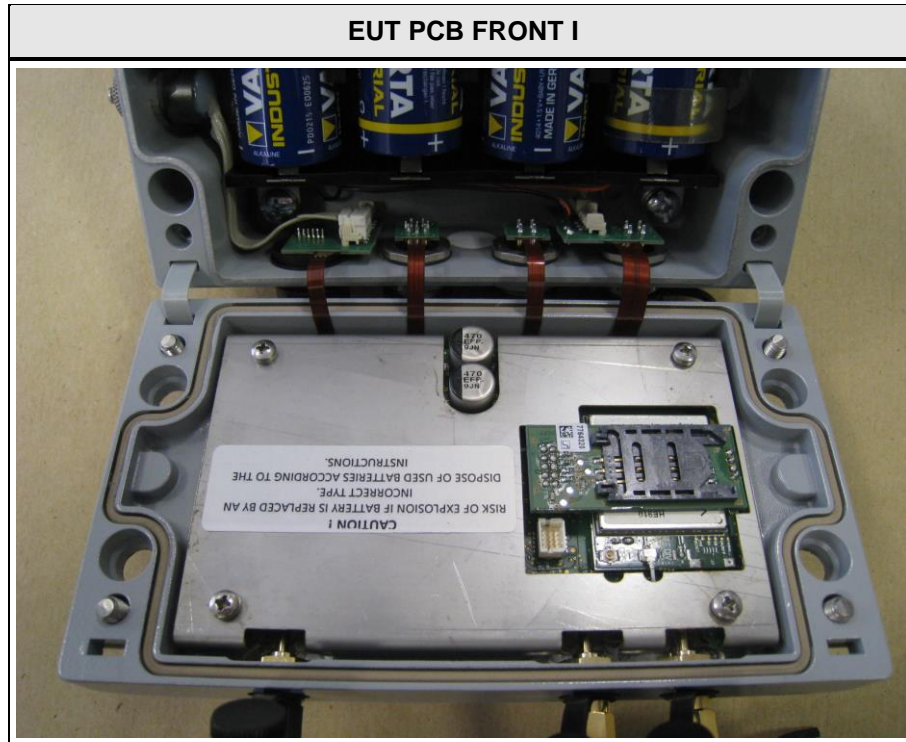
<b>Manufacturer</b>	SMT & Hybrid GmbH An der Priessnitzau 22 01328 Dresden GERMANY	
<b>Power supply</b>	$V_{NOM}$	6V DC or 12V DC
	$V_{MIN}$	N/A
	$V_{MIN}$	N/A
<b>AC/DC-Adaptor</b>	Model	N/A
	Vendor	N/A
	Input	N/A
	Output	N/A

## 1.1 Photos – Equipment External



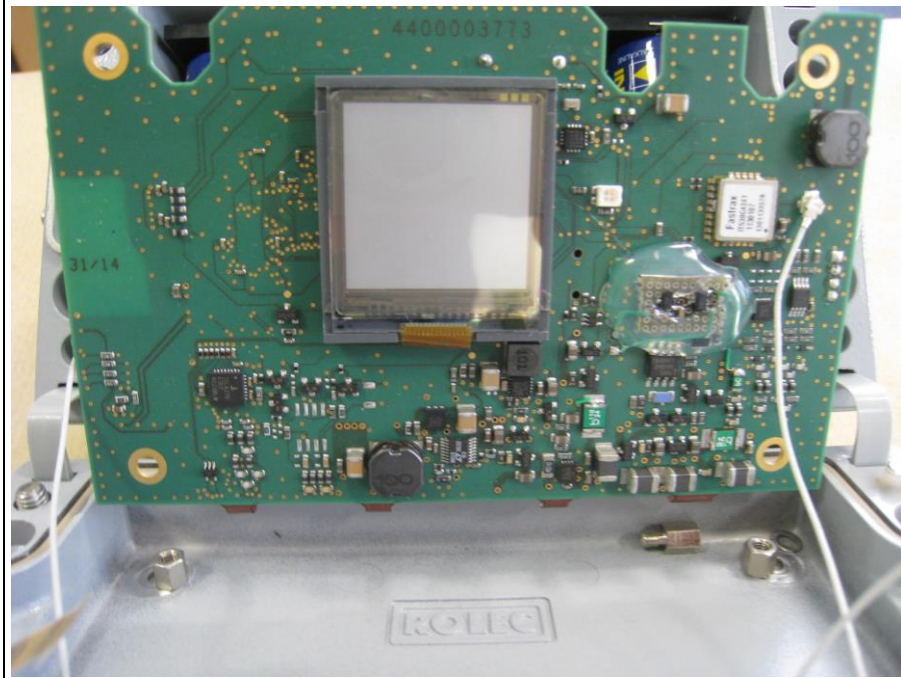


## 1.2 Photos – Equipment internal





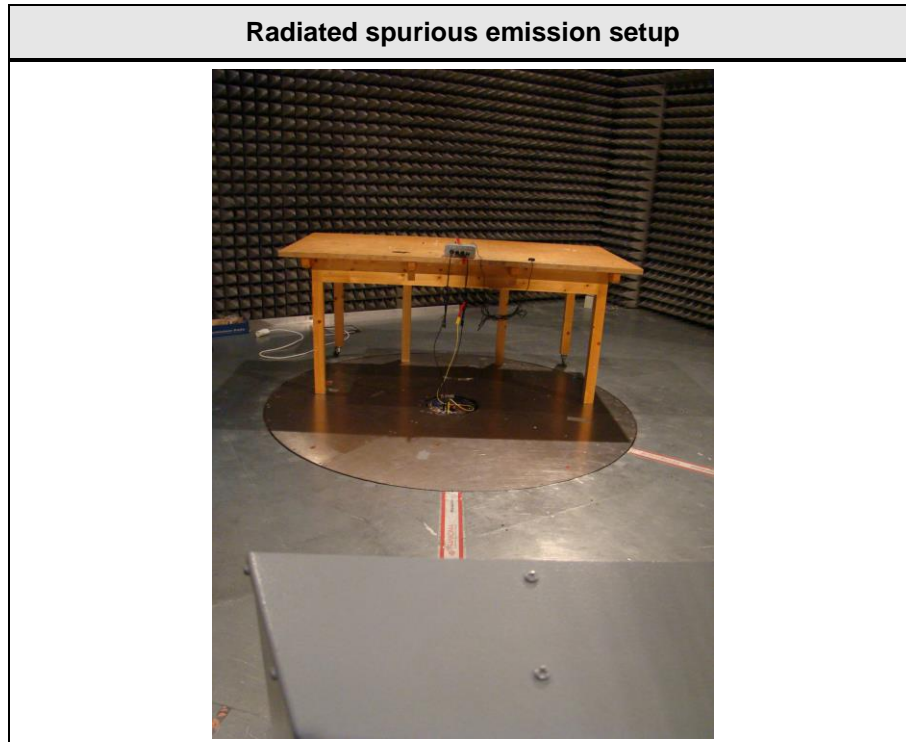
EUT PCB BACK



EUT Battery



### 1.3 Photos – Test setup



#### 1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
SIM	Radio communication tester	R&S	CMU200	
SIM : Simulator (Not Subjected to Test)				

## 1.5 Test Modes

Mode #	Description	
FDDII	General conditions:	EUT powered by laboratory power supply. Active data call to communication tester.
	Radio conditions:	Mode = HSDPA Connection = Packet switched Modulation = QPSK Power level = Pattern Type (All 1)
FDDV	General conditions:	EUT powered by laboratory power supply. Active data call to communication tester.
	Radio conditions:	Mode = HSDPA Connection = Packet switched Modulation = QPSK Power level = Pattern Type (All 1)
WCDMA IDLE FDDV	General conditions:	EUT powered by battery
	Radio conditions:	Mode = CELL-FACH
WCDMA IDLE FDDII	General conditions:	EUT powered by battery
	Radio conditions:	Mode = CELL-FACH

## 1.6 Test Equipment Used During Testing

Measurement Software			
Description	Manufacturer	Name	Version
EMC Test Software	Dare Instruments	Radimation	2014.1.15

Occupied Bandwidth					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSIQ 26	EF00242	2015-04	2016-04

Radiated power					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Fully-anechoic chamber	Frankonia	AC 3	EF00199	-	-
Spectrum Analyzer	R&S	FSIQ 26	EF00242	2015-04	2016-04
Biconical Antenna	R&S	HK 116	EF00012	2013-02	2016-02
LPD Antenna	R&S	HL 223	EF00187	2014-03	2017-03
Horn antenna	Schwarzbeck	BBHA 9120D	EF00019	2014-03	2016-03

Radiated spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-anechoic chamber	Frankonia	AC 1	EF00062	-	-
Spectrum Analyzer	R&S	FSEK 30	EF00168	2015-01	2016-01
Biconical Antenna	R&S	HK 116	EF00012	2013-02	2016-02
LPD Antenna	R&S	HL 223	EF00212	2013-02	2016-02
Horn antenna	Schwarzbeck	BBHA 9120D	EF00019	2014-03	2016-03

## 1.7 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBμV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dBμV/m). The FCC limits are given in units of μV/m. The following formula is used to convert the units of μV/m to dBμV/m:

$$\text{Limit (dB}\mu\text{V/m)} = 20 \cdot \log (\mu\text{V/m})$$

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

$$\begin{array}{rclcl} \text{Reading} & + & \text{AF} & = & \text{Net Reading} & : & \text{Net reading - FCC limit} & = & \text{Margin} \\ 21.5 \text{ dB}\mu\text{V} & + & 26 \text{ dB} & = & 47.5 \text{ dB}\mu\text{V/m} & : & 47.5 \text{ dB}\mu\text{V/m} - 57.0 \text{ dB}\mu\text{V/m} & = & -9.5 \text{ dB} \end{array}$$



## 2 Result Summary

FCC 47 CFR Part 22H, 24E, IC RSS-132, 133				
Product Specific Standard Section	Requirement – Test	Reference Method	Result	Remarks
FCC § 2.1049 RSS-Gen 6.6	Occupied Bandwidth	RSS-Gen 6.6		Informational only
FCC § 24.235 FCC § 22.355 IC RSS-132 § 4.3 IC RSS-133 § 6.3	Frequency stability	FCC § 24.235 FCC § 22.355 IC RSS-132 § 4.3 IC RSS-133 § 6.3	N/R	Conducted results of licensed radio unaffected. See module radio report.
FCC § 22.913(a)	Effective radiated power	ANSI/TIA-603-C	PASS	
FCC § 24.232(c) IC RSS-132 § 4.4 IC RSS-133 § 6.4	Equivalent isotropic radiated power	ANSI/TIA-603-C	PASS	
FCC § 24.232(d) IC RSS-133 § 6.4	Peak to average ratio	FCC § 24.232(d) IC RSS-133 § 6.4	N/R	Conducted results of licensed radio unaffected. See module radio report
FCC § 22.917(b) FCC § 24.238(b) IC RSS-132 § 4.5 IC RSS-133 § 6.5	Band-edge compliance	FCC § 22.917(b) FCC § 24.238(b) IC RSS-132 § 4.5 IC RSS-133 § 6.5	N/R	Conducted results of licensed radio unaffected. See module radio report
FCC § 22.917(a) FCC § 24.238(a) IC RSS-132 § 4.5 IC RSS-133 § 6.5	Conducted out-of-band emissions	FCC § 22.917(a) FCC § 24.238(a) IC RSS-132 § 4.5 IC RSS-133 § 6.5	N/R	Conducted results of licensed radio unaffected. See module radio report
FCC § 22.917(a) FCC § 24.238(a) IC RSS-132 § 4.5 IC RSS-133 § 6.5	Radiated out-of-band emissions	ANSI/TIA-603-C	PASS	
IC RSS-132 § 4.6 IC RSS-133 § 6.6 IC RSS-Gen 7.1	Receiver radiated spurious emissions	IC RSS-132 § 4.6 IC RSS-133 § 6.6 IC RSS-Gen 7.1	PASS	
Remarks:				

### 3 Test Conditions and Results

#### 3.1 Test Conditions and Results – Occupied Bandwidth

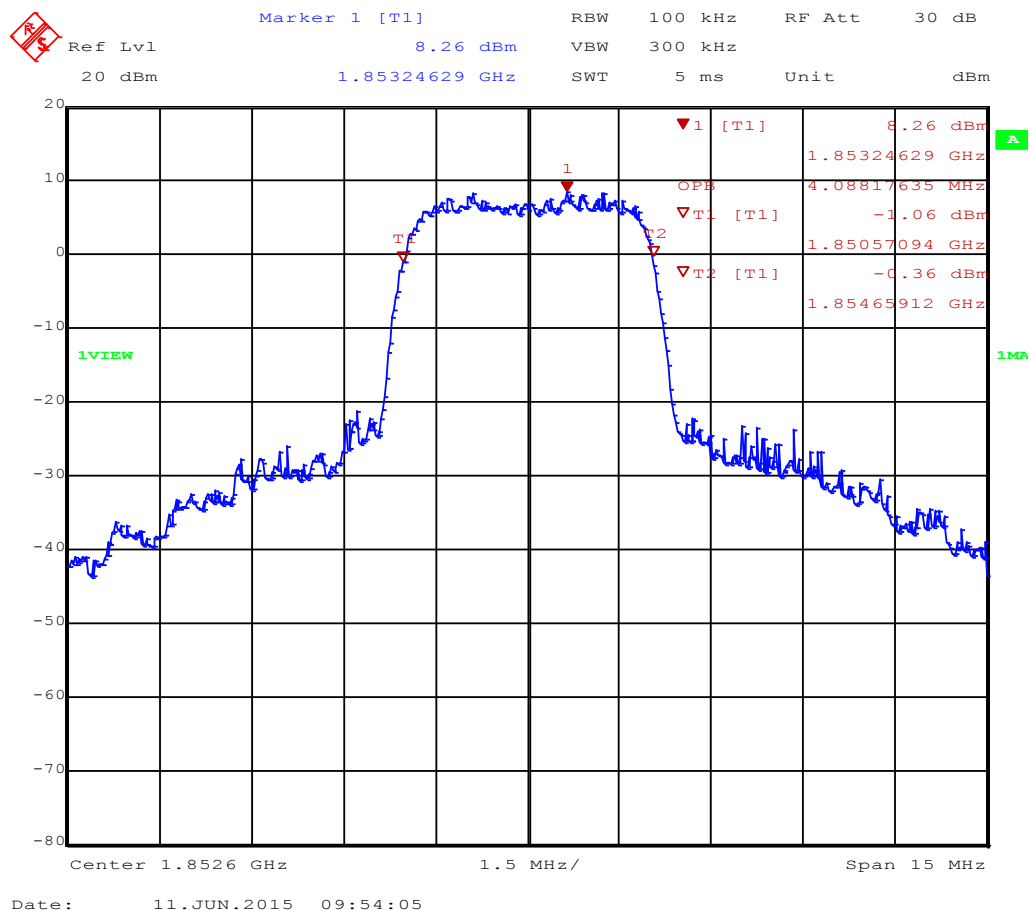
Occupied Bandwidth acc. to IC RSS-Gen			
Test according to measurement reference		Reference Method	
		RSS-Gen 6.6	
Test frequency range		Tested frequencies	
		F <sub>LOW</sub> / F <sub>MID</sub> / F <sub>HIGH</sub>	
Limits			
None (Informational only)			
Test setup			
<div><div>Spectrum Analyzer</div><div>EUT</div></div>			
Test procedure			
<div>1. EUT set to test mode (Communication tester is used if needed)</div> <div>2. Span set to at least twice the emission spectrum</div> <div>3. Resolution bandwidth set to 1 % of span</div> <div>4. Occupied Bandwidth (99 %) measurement with spectrum analyzer built in measurement function</div>			
Test results – FDDII			
Channel	Frequency [MHz]	Mode	Occupied Bandwidth [kHz]
F <sub>LOW</sub>	1852.6	HSDPA	4088
F <sub>MID</sub>	1880.0	HSDPA	4088
F <sub>HIGH</sub>	1907.4	HSDPA	4088
Test results – FDDV			
Channel	Frequency [MHz]	Mode	Occupied Bandwidth [kHz]
F <sub>LOW</sub>	826.4	HSDPA	4088
F <sub>MID</sub>	835.0	HSDPA	4088
F <sub>HIGH</sub>	846.4	HSDPA	4088
Comments:			

# Occupied Bandwidth – FDDII F<sub>Low</sub>

## Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1502-4503

Applicant: SMT & Hybrid GmbH  
EUT Name: Datenlogger  
Model: data link sensor  
Test Site: Eurofins Product Service GmbH  
Operator: Handrik  
Test Conditions: Tnom / Vnom  
Mode: Tx; WCDMA FDD II, CH.9263, RMC, TPC: ALL1  
Test Date: 2015-06-11  
Verdict: NONE (INFORMATION ONLY)  
Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used



Test Report No.: G0M-1502-4503-TFC224WC-V01

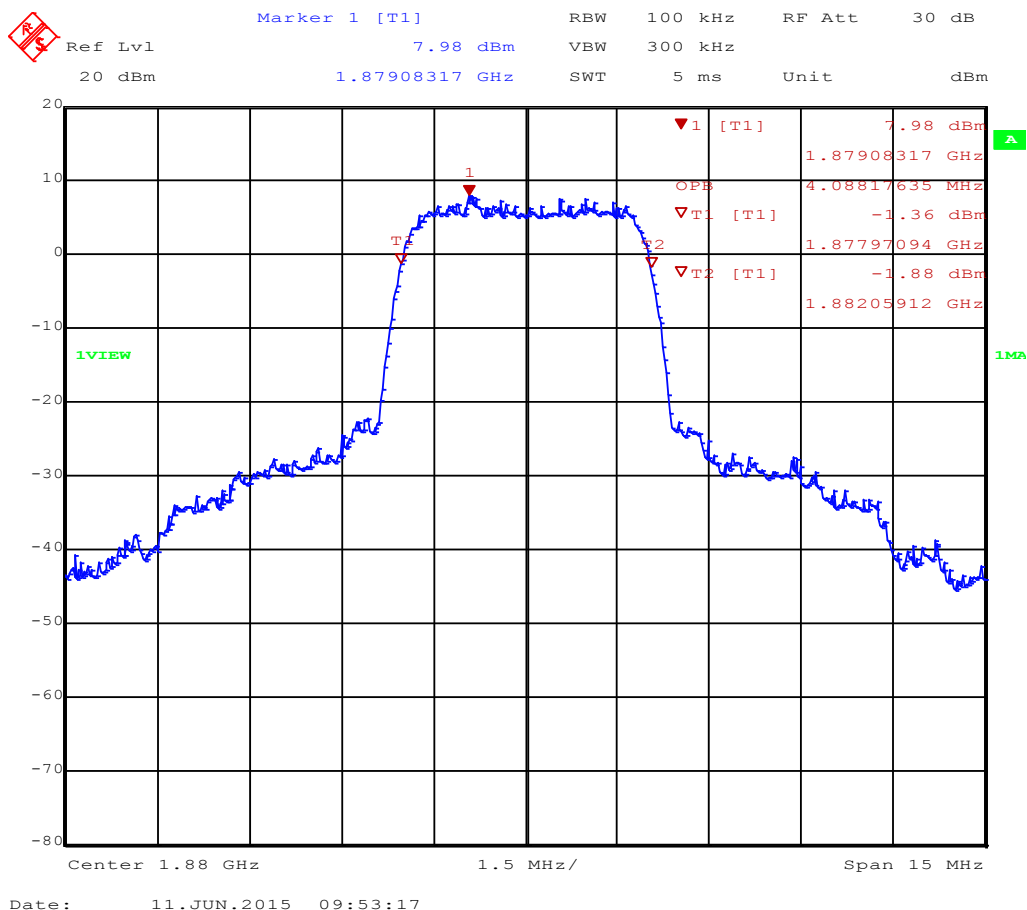
Eurofins Product Service GmbH  
Storkower Str. 38c, D-15526 Reichenwalde, Germany

# Occupied Bandwidth – FDDII F<sub>MID</sub>

## Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1502-4503

Applicant: SMT & Hybrid GmbH  
EUT Name: Datenlogger  
Model: data link sensor  
Test Site: Eurofins Product Service GmbH  
Operator: Handrik  
Test Conditions: Tnom / Vnom  
Mode: Tx; WCDMA FDD II, CH.9400, RMC, TPC: ALL1  
Test Date: 2015-06-11  
Verdict: NONE (INFORMATION ONLY)  
Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

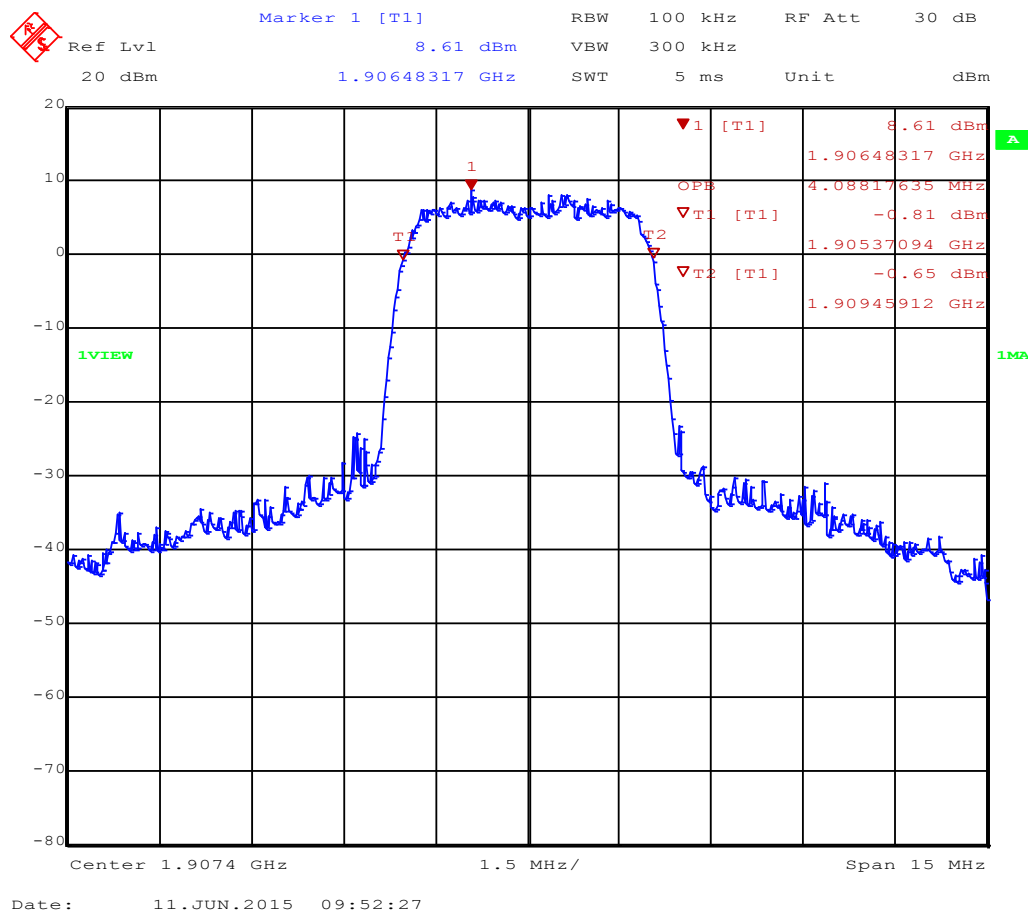


# Occupied Bandwidth – FDDII F<sub>HIGH</sub>

## Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1502-4503

Applicant: SMT & Hybrid GmbH  
EUT Name: Datenlogger  
Model: data link sensor  
Test Site: Eurofins Product Service GmbH  
Operator: Handrik  
Test Conditions: Tnom / Vnom  
Mode: Tx; WCDMA FDD II, CH.9537, RMC, TPC: ALL1  
Test Date: 2015-06-11  
Verdict: NONE (INFORMATION ONLY)  
Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used



Test Report No.: G0M-1502-4503-TFC224WC-V01

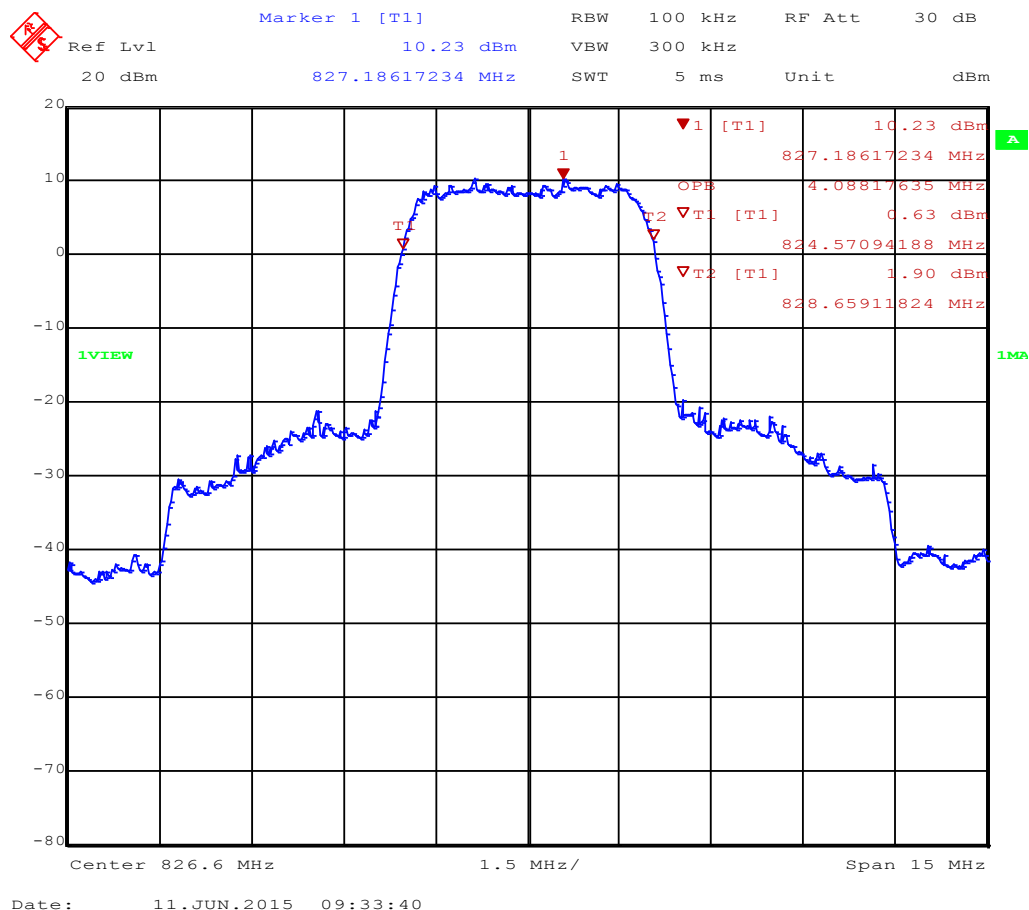
Eurofins Product Service GmbH  
Storkower Str. 38c, D-15526 Reichenwalde, Germany

# Occupied Bandwidth – FDDV F<sub>Low</sub>

## Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1502-4503

Applicant: SMT & Hybrid GmbH  
EUT Name: Datenlogger  
Model: data link sensor  
Test Site: Eurofins Product Service GmbH  
Operator: Handrik  
Test Conditions: Tnom / Vnom  
Mode: Tx; WCDMA FDD V, CH.4133, RMC, TPC: ALL1  
Test Date: 2015-06-11  
Verdict: NONE (INFORMATION ONLY)  
Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used



Test Report No.: G0M-1502-4503-TFC224WC-V01

Eurofins Product Service GmbH  
Storkower Str. 38c, D-15526 Reichenwalde, Germany

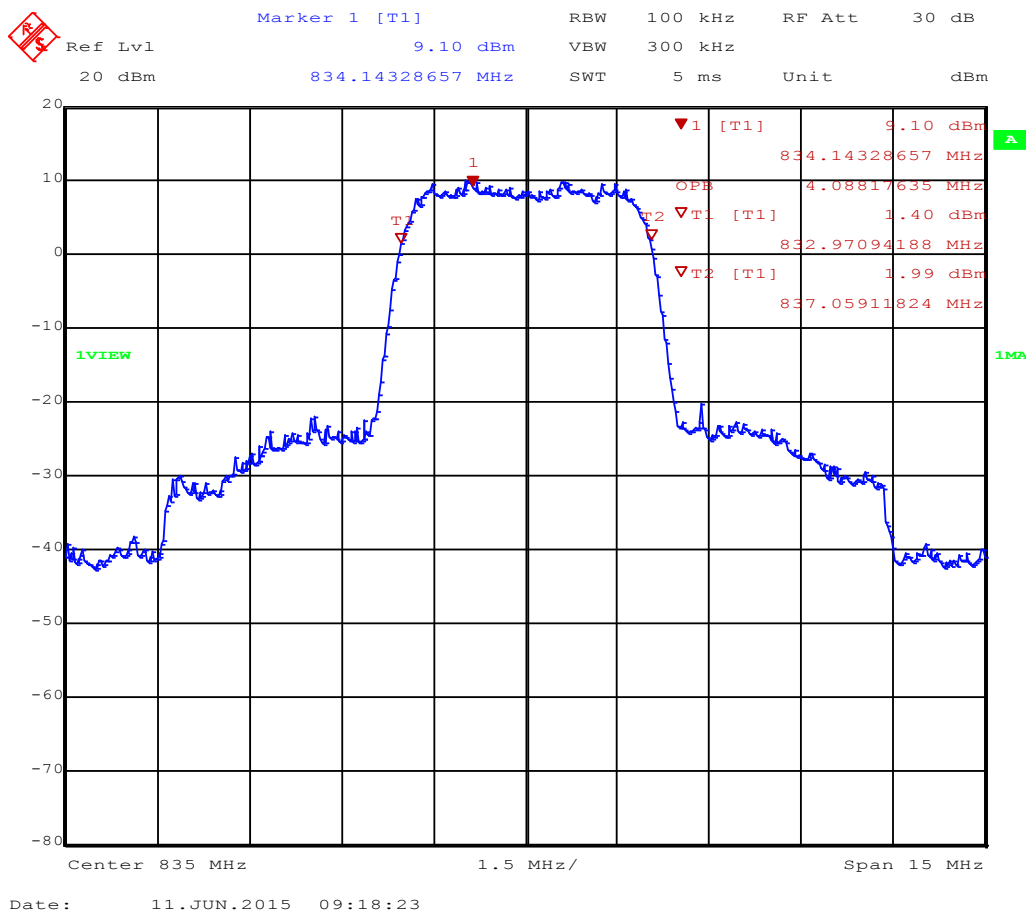


# Occupied Bandwidth – FDDV $F_{MID}$

## Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1502-4503

Applicant: SMT & Hybrid GmbH  
EUT Name: Datenlogger  
Model: data link sensor  
Test Site: Eurofins Product Service GmbH  
Operator: Handrik  
Test Conditions: Tnom / Vnom  
Mode: Tx; WCDMA FDD V, CH.4175, RMC, TPC: ALL1  
Test Date: 2015-06-11  
Verdict: NONE (INFORMATION ONLY)  
Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used



Test Report No.: G0M-1502-4503-TFC224WC-V01

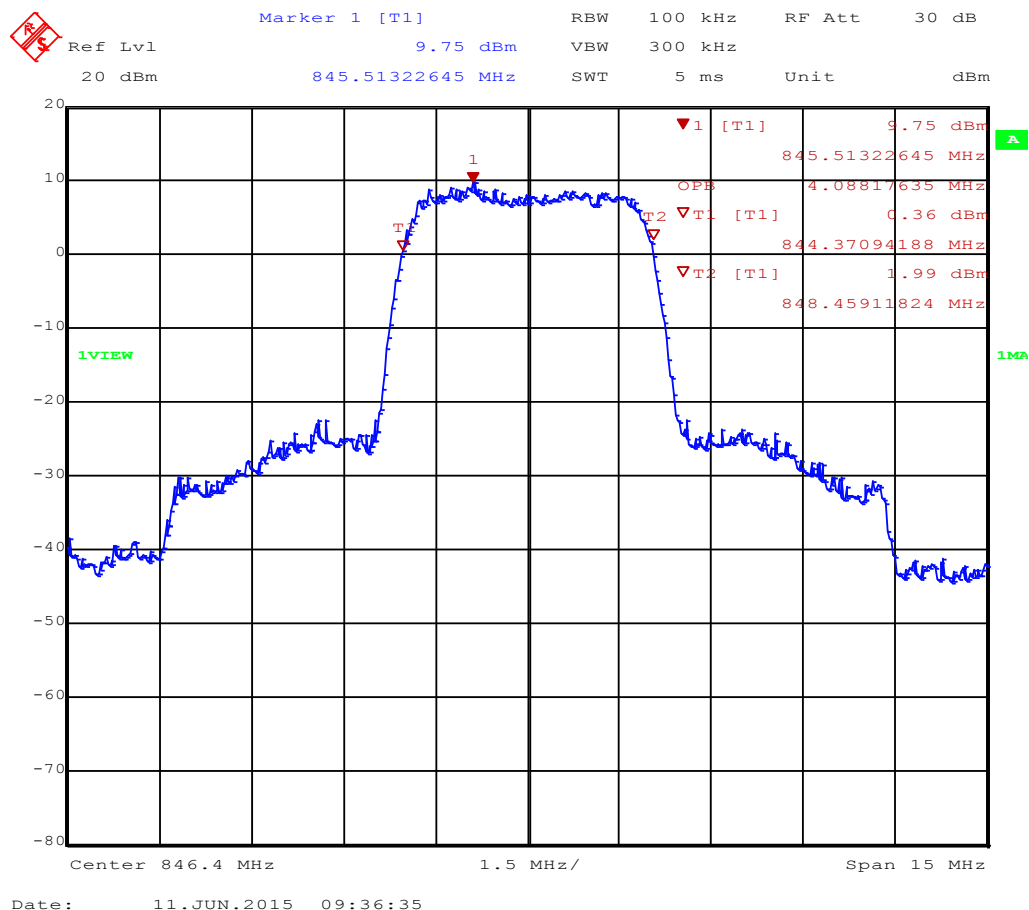
Eurofins Product Service GmbH  
Storkower Str. 38c, D-15526 Reichenwalde, Germany

# Occupied Bandwidth – FDDV F<sub>HIGH</sub>

## Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1502-4503

Applicant: SMT & Hybrid GmbH  
EUT Name: Datenlogger  
Model: data link sensor  
Test Site: Eurofins Product Service GmbH  
Operator: Handrik  
Test Conditions: Tnom / Vnom  
Mode: Tx; WCDMA FDD V, CH.4232, RMC, TPC: ALL1  
Test Date: 2015-06-11  
Verdict: NONE (INFORMATION ONLY)  
Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used



Test Report No.: G0M-1502-4503-TFC224WC-V01

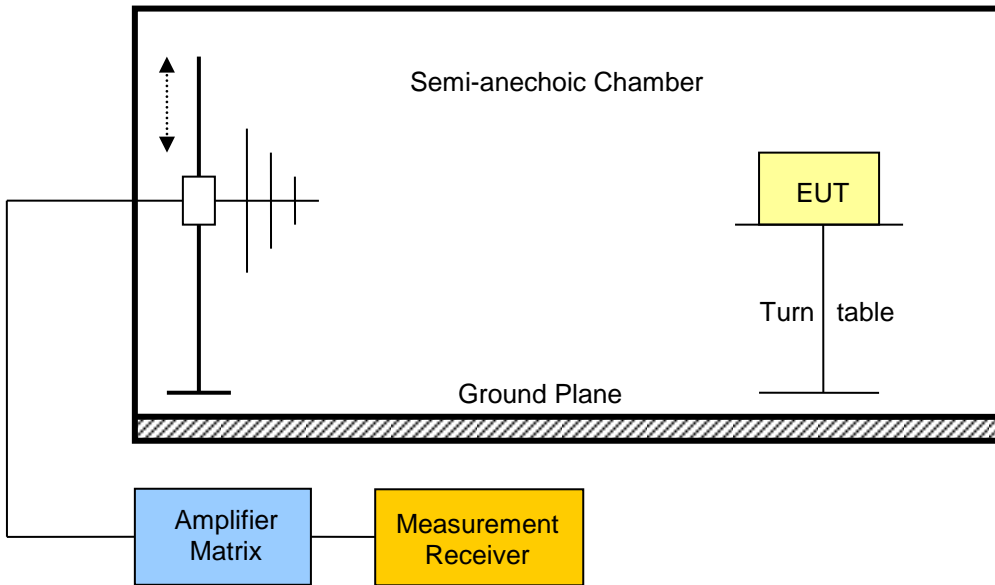
Eurofins Product Service GmbH  
Storkower Str. 38c, D-15526 Reichenwalde, Germany

### 3.2 Test Conditions and Results – Effective radiated power / Equivalent isotropic radiated power

Radiated power acc. to FCC 22H / FCC 24E / IC RSS-132 / IC RSS-133			Verdict: PASS
EUT requirement rule parts and clause	Reference		
	FCC § 22.913(a) / FCC § 24.232(c) IC RSS-132 § 4.4 /IC RSS-133 § 6.4		
Test according to measurement reference	Reference Method		
	FCC § 22.913(a) / FCC § 24.232(c) / ANSI/TIA-603-C IC RSS-132 § 4.4 /IC RSS-133 § 6.4		
Test frequency range	Tested frequencies		
	$F_{\text{LOW}}$ / $F_{\text{MID}}$ / $F_{\text{HIGH}}$		
Limits			
Frequency range	Equipment type	Power limit	
824-849 MHz	Mobile transmitter	FCC : 7 Watts (38.45 dBm) e.r.p. IC : 11.5 Watts (40.6 dBm) e.i.r.p.	
1850-1910 MHz	Mobile transmitter	FCC : 2 Watts (33 dBm) e.i.r.p. IC : 2 Watts (33 dBm) e.i.r.p.	
Test setup			
<div><div><div>Fully-anechoic Chamber</div><div><div><div><div></div><div></div><div></div></div><div></div><div></div></div><div><div>EUT</div><div>Turn table</div></div></div></div><div><div>Amplifier Matrix</div><div>Measurement Receiver</div></div></div>			
Test procedure			
<div><div>1. EUT set to test mode</div><div>2. The radiated power is measured with a measurement antenna in vertical polarization</div><div>3. To obtain maximum level the EUT is rotated</div><div>4. The EUT is replaced with a half-wave dipole and the power to the dipole is adjusted to obtain same radiated power measurement value</div></div>			

Test results – FDDV E.R.P.							
Channel	Frequency [MHz]	Mode	Pol.	Power [dBm e.r.p]	Limit [dBm e.r.p]	Margin [dB]	Result
F <sub>LOW</sub>	826.592	HSDPA	ver	16.0	38.45	-22.45	PASS
F <sub>MID</sub>	834.885	HSDPA	ver	17.6	38.45	-20.85	PASS
F <sub>HIGH</sub>	846.424	HSDPA	ver	18.6	38.45	-19.85	PASS
Test results – FDDV E.I.R.P.							
Channel	Frequency [MHz]	Mode	Pol.	Power [dBm e.i.r.p]	Limit [dBm e.i.r.p]	Margin [dB]	Result
F <sub>LOW</sub>	826.592	HSDPA	ver	18.15	40.6	-22.45	PASS
F <sub>MID</sub>	834.885	HSDPA	ver	19.75	40.6	-20.85	PASS
F <sub>HIGH</sub>	846.424	HSDPA	ver	20.75	40.6	-19.85	PASS
Test results – FDDII E.I.R.P.							
Channel	Frequency [MHz]	Mode	Pol.	Power [dBm e.i.r.p]	Limit [dBm e.i.r.p]	Margin [dB]	Result
F <sub>LOW</sub>	1852.8	GSM1900	ver	21.4	33	-11.60	PASS
F <sub>MID</sub>	1880.5	GSM1900	ver	20.1	33	-12.90	PASS
F <sub>HIGH</sub>	1906.6	GSM1900	ver	22.6	33	-10.40	PASS
Comments:							

### 3.3 Test Conditions and Results – Transmitter radiated emissions

Transmitter radiated power acc. to FCC 22H / FCC 24E / IC RSS-132 / IC RSS-133		Verdict: PASS
Test according referenced standards	Reference Method	
	FCC § 22.917(a) / FCC § 24.238(a) IC RSS-132 § 4.5 / IC RSS-133 § 6.5	
Test according to measurement reference	Reference Method	
	ANSI/TIA-603-C	
Test frequency range	Tested frequencies	
	30 MHz – 10 <sup>th</sup> Harmonic	
Limits		
Frequency range	Limit	
824-849 MHz	Attenuation below transmitter power ≥ 43 + 10 · log <sub>10</sub> (P) [dB] = -13 dBm	
1850-1910 MHz	Attenuation below transmitter power ≥ 43 + 10 · log <sub>10</sub> (P) [dB] = -13 dBm	
Test setup		
		
Test procedure		
<div>1. EUT set to test mode</div> <div>2. Maximum emission level is measured by rotating the EUT and adjusting the antenna height for vertical polarization</div> <div>3. The EUT is replaced by a substitution antenna and generator</div> <div>4. The power level is set to obtain the same power reading</div> <div>5. Measurement is repeated for horizontal polarization</div>		

Test results – FDDII							
Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbm]	Pol.	Limit [dBm]	Margin [dB]
CH 9263	1852.6	HSDPA	852.8	-34.70	hor	-13.00	-21.66
CH 9263	1852.6	HSDPA	1560	-35.70	hor	-13.00	-22.67
CH 9263	1852.6	HSDPA	1844	-30.10	ver	-13.00	-17.15
CH 9263	1852.6	HSDPA	7544	-44.30	hor	-13.00	-31.32
CH 9263	1852.6	HSDPA	7624	-44.70	ver	-13.00	-31.71
CH 9263	1852.6	HSDPA	17928	-32.80	hor	-13.00	-19.80
CH 9263	1852.6	HSDPA	26466	-25.80	hor	-13.00	-12.77
CH 9400	1880	HSDPA	864	-33.60	hor	-13.00	-20.61
CH 9400	1880	HSDPA	1672	-35.30	hor	-13.00	-22.34
CH 9400	1880	HSDPA	1961	-34.90	ver	-13.00	-21.89
CH 9400	1880	HSDPA	7568	-44.20	ver	-13.00	-31.23
CH 9400	1880	HSDPA	24494	-26.80	hor	-13.00	-13.80
CH 9537	1907.4	HSDPA	992	-34.90	ver	-13.00	-21.89
CH 9537	1907.4	HSDPA	1915	-29.20	hor	-13.00	-16.16
CH 9537	1907.4	HSDPA	1916	-28.00	ver	-13.00	-15.02
CH 9537	1907.4	HSDPA	7584	-43.80	hor	-13.00	-30.83
CH 9537	1907.4	HSDPA	17292	-33.40	ver	-13.00	-20.42
CH 9537	1907.4	HSDPA	24562	-25.80	hor	-13.00	-12.83
Test results – FDDV							
Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbm]	Pol.	Limit [dBm]	Margin [dB]
CH. 4133	826.6	HSDPA	193.88	-68.00	hor	-13.00	-55.02
CH. 4133	826.6	HSDPA	822.816	-33.90	hor	-13.00	-20.92
CH. 4133	826.6	HSDPA	822.954	-32.80	ver	-13.00	-19.81
CH. 4133	826.6	HSDPA	6976	-41.50	hor	-13.00	-28.54
CH. 4133	826.6	HSDPA	10752	-40.00	ver	-13.00	-26.95
CH. 4133	826.6	HSDPA	11096	-39.70	hor	-13.00	-26.72
CH. 4175	835	HSDPA	6672	-41.40	ver	-13.00	-28.39
CH. 4175	835	HSDPA	6960	-40.70	hor	-13.00	-27.65
CH. 4175	835	HSDPA	10160	-40.30	hor	-13.00	-27.35
CH. 4232	846.4	HSDPA	64	-69.20	hor	-13.00	-56.18
CH. 4232	846.4	HSDPA	850	-29.50	ver	-13.00	-16.55
CH. 4232	846.4	HSDPA	6648	-41.40	ver	-13.00	-28.40
CH. 4232	846.4	HSDPA	6696	-41.50	hor	-13.00	-28.52
CH. 4232	846.4	HSDPA	11184	-39.30	hor	-13.00	-26.26

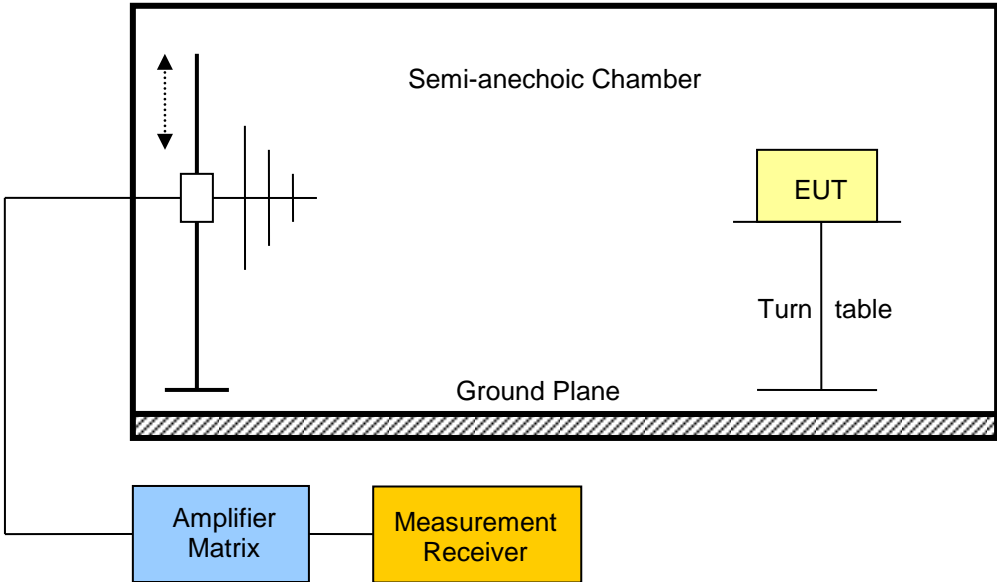
Test Report No.: G0M-1502-4503-TFC224WC-V01

Eurofins Product Service GmbH  
Storkower Str. 38c, D-15526 Reichenwalde, Germany



CH. 4232	846.4	HSDPA	11512	-39.20	ver	-13.00	-26.25
Comments: after check with 6V DC or 12 V DC spurious measurement with 6 V DC worst case							

### 3.4 Test Conditions and Results – Receiver radiated emissions

Receiver radiated emissions acc. to IC RSS-210				Verdict: PASS
Test according referenced standards	Reference Method			
	IC RSS-210 A8.5			
Test according to measurement reference	Reference Method			
	ANSI C63.4			
Test frequency range	Tested frequencies			
	30 MHz – 3 <sup>th</sup> Harmonic			
EUT test mode	Receive			
Limits				
Frequency range [MHz]	Detector	Limit [μV/m]	Limit [dBμV/m]	Limit Distance [m]
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3
Test setup				
				

Test procedure							
1. EUT set to receive mode (Communication tester is used if needed) 2. Span it set according to measurement range 3. Resolution bandwidth below 1GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1MHz with peak/average detector is used above 1GHz 4. Markers are set to peak emission levels							
Test results FDDII							
Channel	Frequency [MHz]	Emission [MHz]	Emission Level [db $\mu$ V/m]	Emission Level [ $\mu$ V/m]	Det.	Limit [ $\mu$ V/m]	Margin [ $\mu$ V/m]
CH 9400	1880	187.42	31.88	39.26	pk	150	-110.74
CH 9400	1880	199.66	32.00	39.81	pk	150	-110.19
CH 9400	1880	3754	44.11	160.51	pk	500	-339.49
CH 9400	1880	3814	43.70	153.11	pk	500	-346.89
CH 9400	1880	3982	43.50	149.62	pk	500	-350.38
CH 9400	1880	7392	52.07	401.33	pk	500	-98.67
CH 9400	1880	7880	52.19	406.91	pk	500	-93.09
CH 9400	1880	11848	45.93	197.92	pk	500	-302.08
CH 9400	1880	11984	46.40	208.93	pk	500	-291.07
Test results FDDV							
CH. 4175	835	3922	43.68	152.76	pk	500	-347.24
CH. 4175	835	3958	43.62	151.71	pk	500	-348.29
CH. 4175	835	7832	51.71	385.03	pk	500	-114.97
CH. 4175	835	7912	51.21	363.50	pk	500	-136.50
Comments:							