

Inter**Lab**[®]

Final Report on

EA-UMTS-IP; 100.0801BU

Report Reference: MDE_LEIT_1701_01

Date: July 14, 2017

Test Laboratory:

7layers GmbH
Borsigstraße 11
40880 Ratingen
Germany



Deutsche
Akkreditierungsstelle
D-PL-12140-01-00

Note:

The following test results relate only to the devices specified in this document. This report shall not be reproduced in parts without the written approval of the test laboratory.

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1 Administrative Data

1.1 Project Data

Project Responsible: Robert Machulec
Date Of Test Report: 2017/07/14
Date of first test: 2017/05/31
Date of last test: 2017/06/01

1.2 Applicant Data

Company Name: Leitronic AG
Street: Engellostr.16
City: CH-5621 Zufikon
Country: Switzerland

Contact Person: Mr. Silvan Tognella
Function: Geschäftsleiter
Phone: +41 (0) 56 648 40 40
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E-Mail: silvan.tognella@leitronic.ch

1.3 Test Laboratory Data

The following list shows all places and laboratories involved for test result generation:

7 layers DE

Company Name : 7layers GmbH
Street : Borsigstrasse 11
City : 40880 Ratingen
Country : Germany
Contact Person : Mr. Michael Albert
Phone : +49 2102 749 201
Fax : +49 2102 749 444
E Mail : Michael.Albert@7Layers.com

Laboratory Details

Lab ID	Identification	Responsible	Accreditation Info
Lab 1	Radiated Emissions	Mr. Marco Kullik Mr. Jens Dörwald	DAkKS-Registration no. D-PL-12140-01-00 ISED OATS registration number 3699A-1 FCC accreditation registration number 929146

1.4 Signature of the Testing Responsible



Robert Machulec
responsible for tests performed in: Lab 1

1.5 Signature of the Accreditation Responsible



Michael Albert

Accreditation scope responsible person
responsible for Lab 1

2 Test Object Data

2.1 General OUT Description

The following section lists all OUTs (Object's Under Test) involved during testing.

OUT: EA-UMTS-IP

Type / Model / Family:	EA-UMTS-IP; 100.0801BU additional available models: 100.0803BU 100.080XBU
Product Category:	Others
Manufacturer:	
Company Name:	see applicant data
Contact Person:	see applicant data

2.2 Detailed Description of OUT Samples

Sample : aa01

OUT Identifier	EA-UMTS-IP		
Sample Description	includes Telit UL865-EUR		
Serial No.	IMEI: 355856050785571		
HW Status	L437C; L419B		
SW Status	V3.20 Test		
Nominal Voltage	230 V	Normal Temp.	25 °C

2.3 OUT Features

Features for OUT: EA-UMTS-IP

Designation	Description	Allowed Values	Supported Value(s)
Features for scope: GERAN_v1			
A.1/2	Extended GSM Band (E-GSM), (including standard Band)		
A.1/4	DCS 1800 band		
A.1/7	Small Mobile Station		
A.1/10	GSM Power Class 4		
A.1/12	DCS Power Class 1		
A.1/78	GPRS Multislot Class12		
Features for scope: UTRA_v2			
34121_A.6/2	Frequency band: 1920 - 1980, 2110 - 2170 MHz		
34121_A.6/11	UE Power Class 3 for Operation Band I (+24 dBm)		
34121_A.6/19	Frequency band: 880 - 915, 925 - 960 MHz		
34121_A.6/a/19	UE Power Class 3 for Operation Band VIII (+24 dBm)		

2.4 Setups used for Testing

For each setup a relation is given to determine if and which samples and auxiliary equipment is used. The left side list all OUT samples and the right side lists all auxiliary equipment for the given setup.

Setup No.	List of OUT samples	List of auxiliary equipment
Sample No.	Sample Description	AE No. AE Description

S01_AA01

Sample: aa01 includes Telit UL865-EUR

3 Results

3.1 General

Documentation of tested devices:

Available at the test laboratory.

Interpretation of the test results:

The results of the inspection are described on the following pages, where 'Conformity' or 'Passed' means that the certification criteria were verified and that the tested device is conform to the applied standard.

In cases where 'Declaration' is printed, the required documents are available in the manufacturers product documentation.

In cases where 'not applicable' is printed, the test case requirements are not relevant to the specific equipment implementation.

Note:

1. The environmental conditions are recorded and available in the InterLab system for each performed test.
2. The test case selection was done on customer's demand.
3. Additional available variants according to applicants information are: 100.0803BU and 100.080XBU

3.2 List of the Applicable Body

(Body for Scope: GERAN_v1)

<i>Designation</i>	<i>Description</i>
R&TTE - EN 301 511 V12.1.1	Official R&TTE version based on the latest OJ publication and EN 301 511.

(Body for Scope: UTRA_v2)

<i>Designation</i>	<i>Description</i>
RED - EN 301 908-1 (v11.1.1) & RED - EN 301 908-2 (v11.1.1)	Official RED version based on the latest OJ publication. RED - EN 301 908-1 (v11.1.1) & RED - EN 301 908-2 (v11.1.1)

3.3 List of Test Specification

Test Specification: **51.010-1**
Date / Version 2017/07/06 Version: v13.4.0
Title: 3GPP TS 51.010-1
Description: Part 1: Conformance specification

Test Specification: **ETSI EN 301 908-1 (v11.1.1)**
Date / Version 2016/07/01 Version: 11.1.1
Title: IMT cellular networks;
Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU;
Part 1: Introduction and common requirements
Description: Radiated emissions (UE)
Control and monitoring functions (UE)

3.4 Summary

Test Case Identifier / Name

Test (condition)	Cat	Result	Date of Test	Lab Ref.	Setup
Test Specification: 51.010-1					
12.2.1 Radiated spurious emissions, MS allocated a channel					
12.2.1; Frequency Band = 1800, VN	A	Passed	2017/06/01	Lab 1	S01_AA01
12.2.1; Frequency Band = 900, VN	A	Passed	2017/05/31	Lab 1	S01_AA01
12.2.2 Radiated spurious emissions, MS in idle mode					
12.2.2; Frequency Band = 1800, VN	A	Passed	2017/06/01	Lab 1	S01_AA01
12.2.2; Frequency Band = 900, VN	A	Passed	2017/05/31	Lab 1	S01_AA01
Test Specification: ETSI EN 301 908-1 (v11.1.1)					
5.3.1 Radiated emissions (UE)					
5.3.1; FDD1, Idle	A	Passed	2017/05/31	Lab 1	S01_AA01
5.3.1; FDD1, traffic	A	Passed	2017/05/31	Lab 1	S01_AA01
5.3.1; FDD8, Idle	A	Passed	2017/06/01	Lab 1	S01_AA01
5.3.1; FDD8, traffic	A	Passed	2017/06/01	Lab 1	S01_AA01

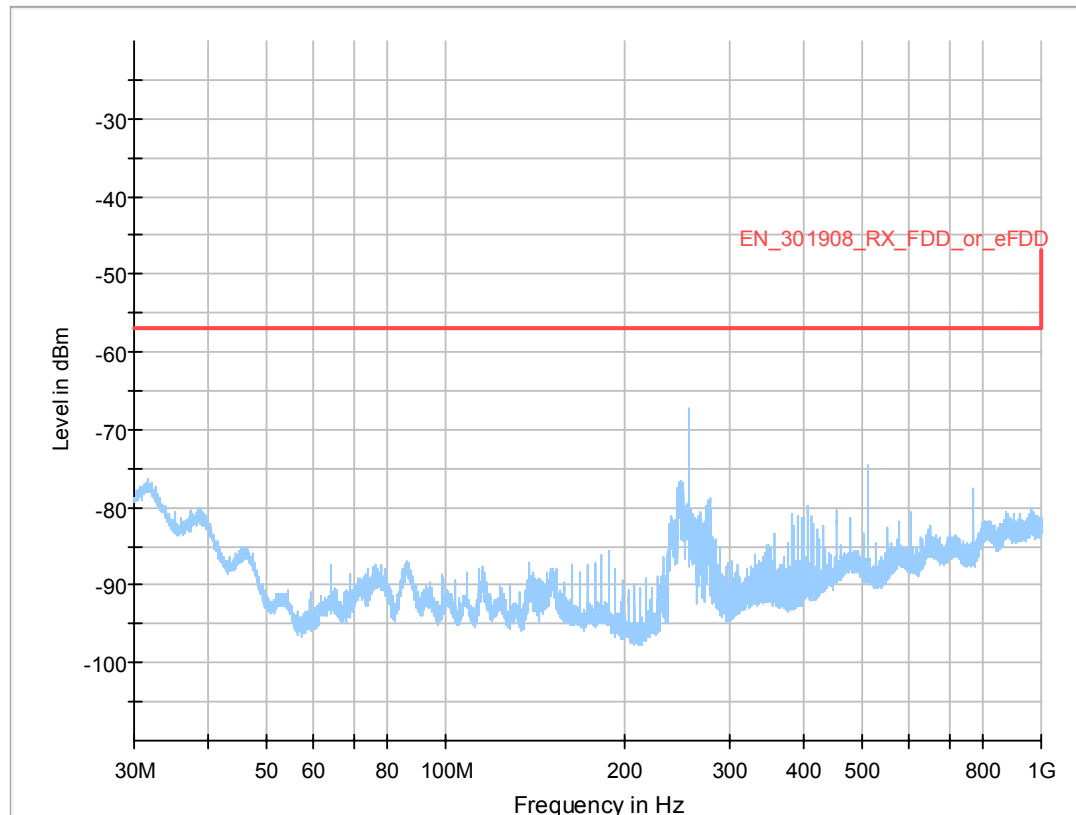
3.5 Detailed Results

3.5.1 5.3.1 Radiated emissions (UE)

Test: 5.3.1; FDD1, Idle

<i>Result:</i>	Passed
<i>Setup No.:</i>	S01_AA01
<i>Date of Test:</i>	2017/05/31 6:08
<i>Body:</i>	RED - EN 301 908-1 (v11.1.1) & RED - EN 301 908-2 (v11.1.1)
<i>Test Specification:</i>	ETSI EN 301 908-1 (v11.1.1)

Detailed Results:

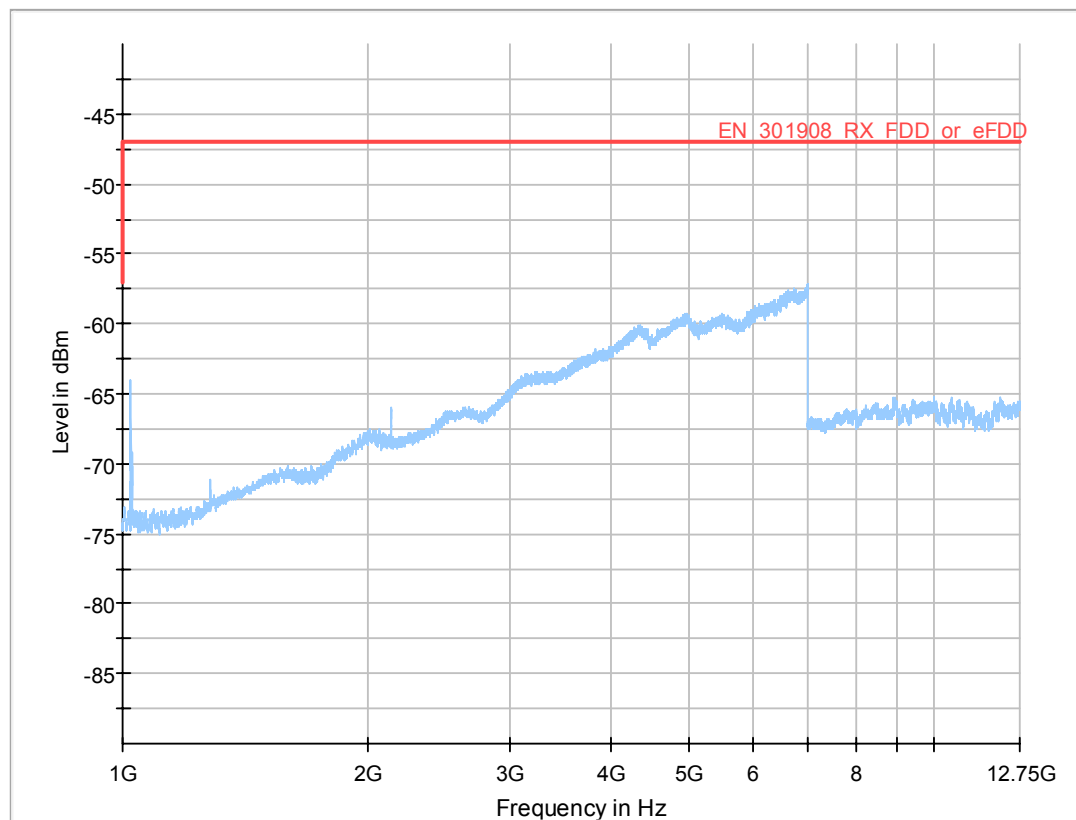


Critical_Freqs

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Critical_Freqs

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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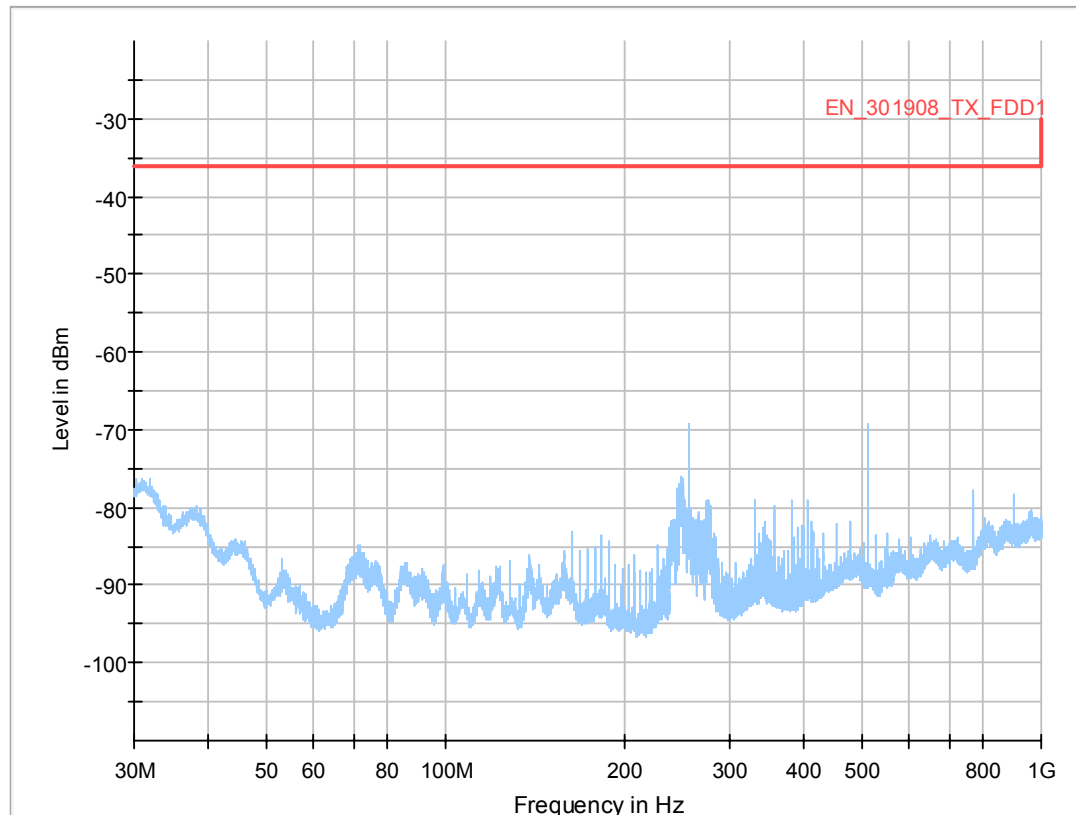
Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Test: 5.3.1; FDD1, traffic

Result:	Passed
Setup No.:	S01_AA01
Date of Test:	2017/05/31 6:43
Body:	RED - EN 301 908-1 (v11.1.1) & RED - EN 301 908-2 (v11.1.1)
Test Specification:	ETSI EN 301 908-1 (v11.1.1)

Detailed Results:

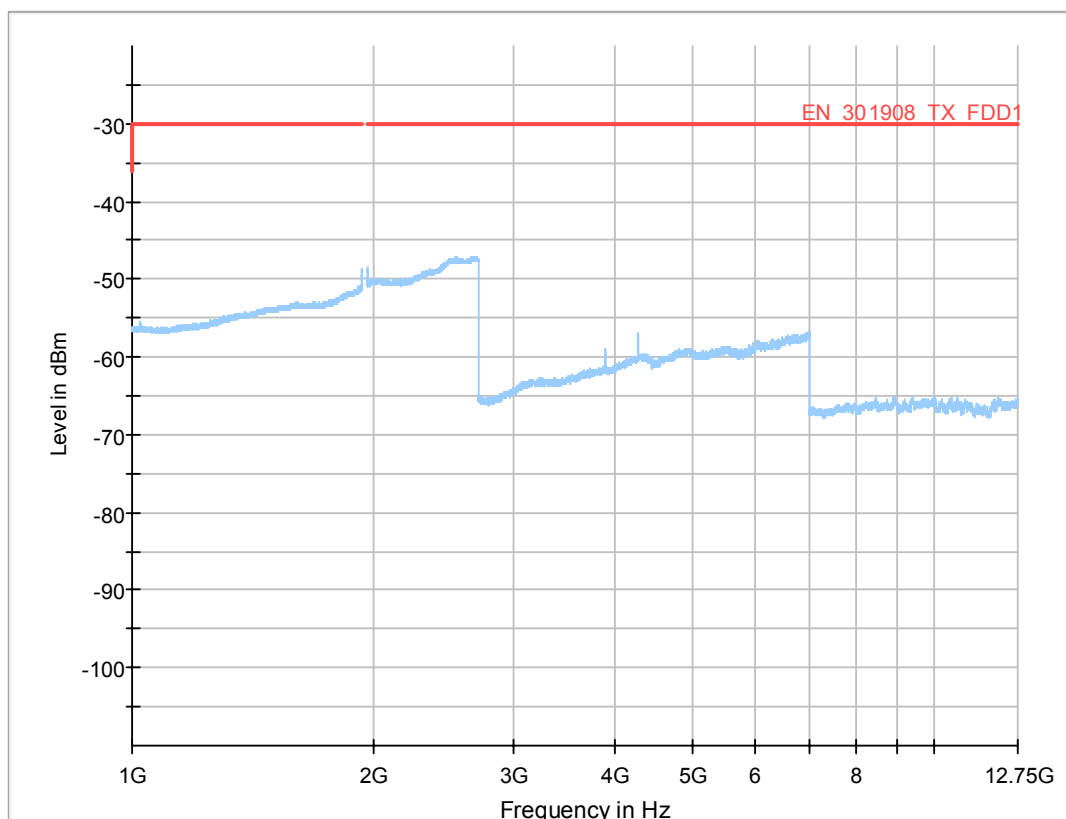


Critical_Freqs

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Critical_Freqs

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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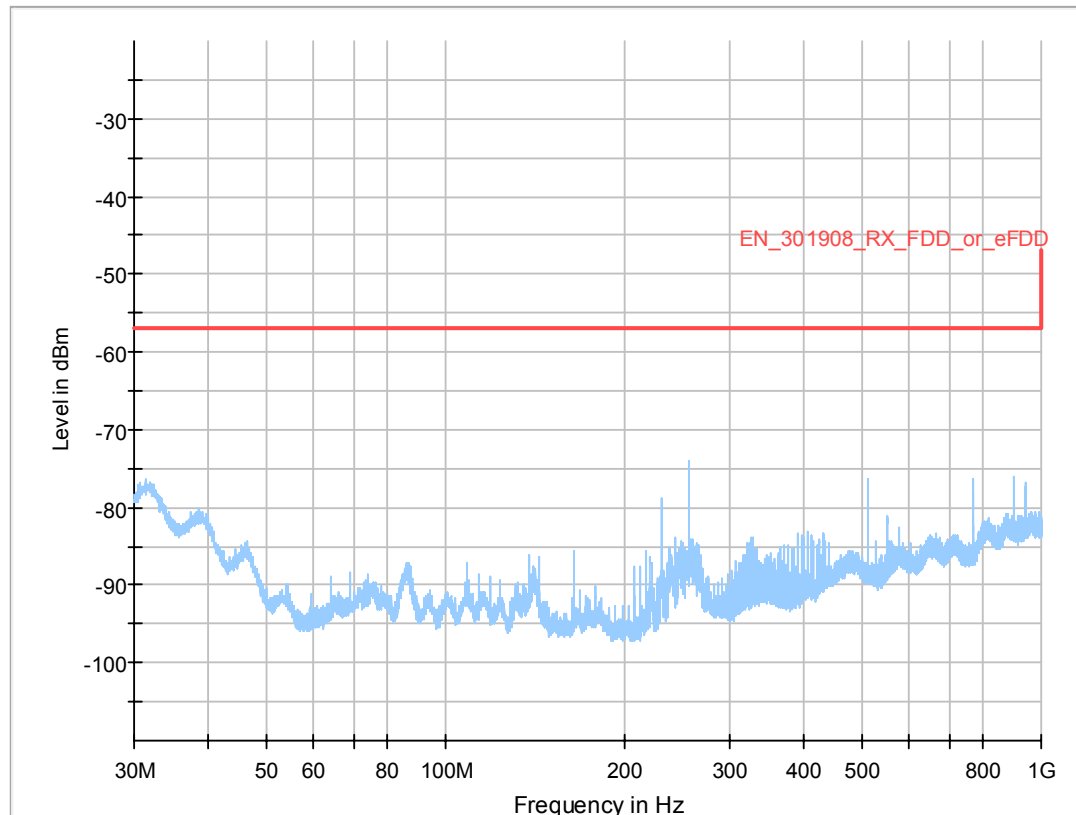
Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Test: 5.3.1; FDD8, Idle

Result:	Passed
Setup No.:	S01_AA01
Date of Test:	2017/06/01 8:28
Body:	RED - EN 301 908-1 (v11.1.1) & RED - EN 301 908-2 (v11.1.1)
Test Specification:	ETSI EN 301 908-1 (v11.1.1)

Detailed Results:

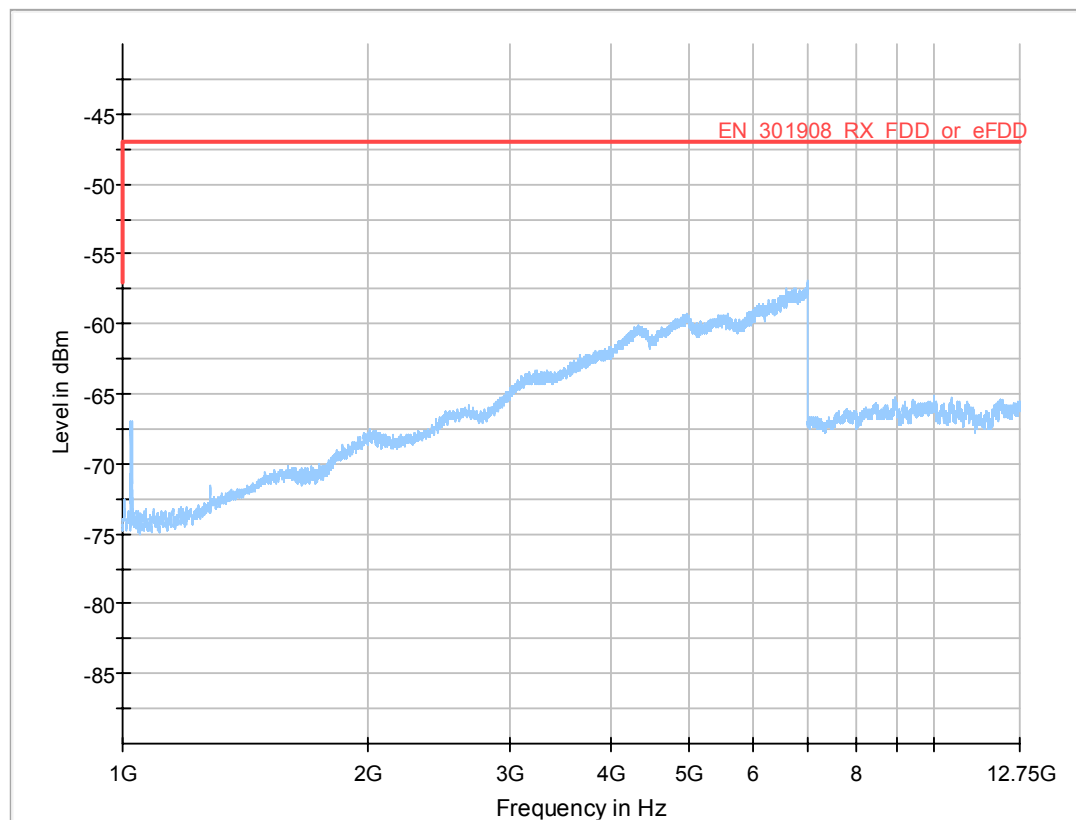


Critical_Freqs

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Critical_Freqs

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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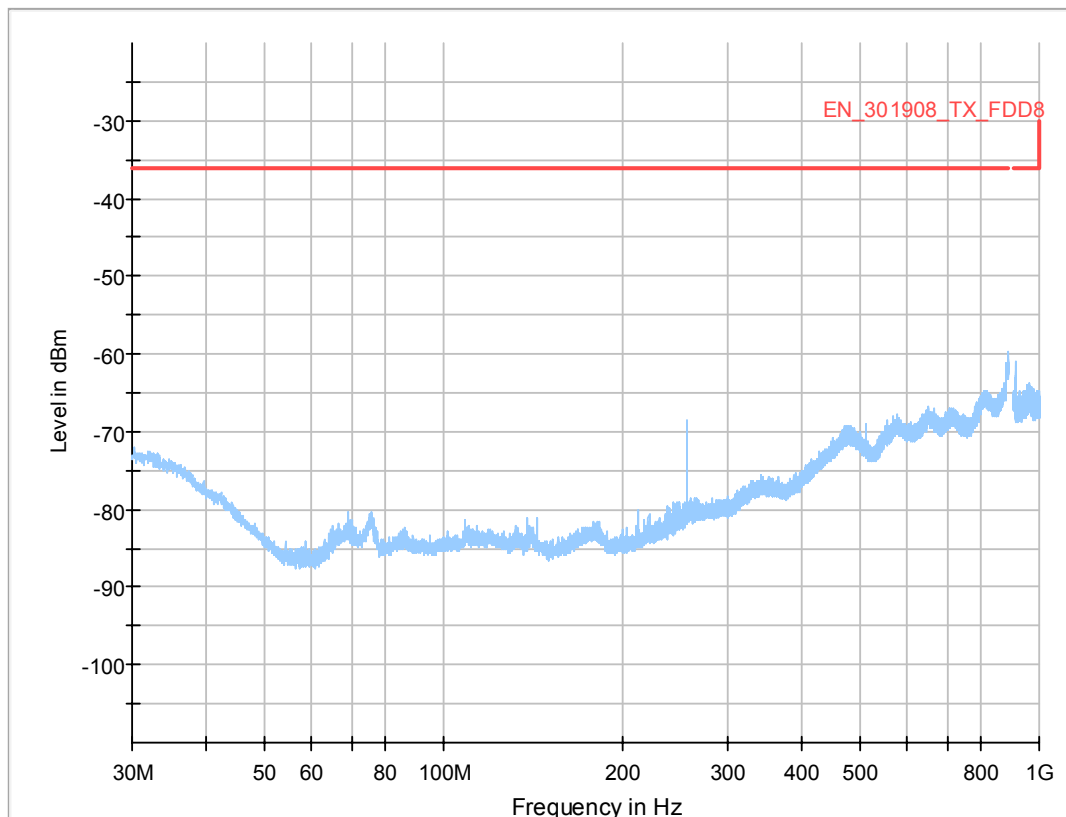
Final_Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Test: 5.3.1; FDD8, traffic

Result:	Passed
Setup No.:	S01_AA01
Date of Test:	2017/06/01 7:22
Body:	RED - EN 301 908-1 (v11.1.1) & RED - EN 301 908-2 (v11.1.1)
Test Specification:	ETSI EN 301 908-1 (v11.1.1)

Detailed Results:

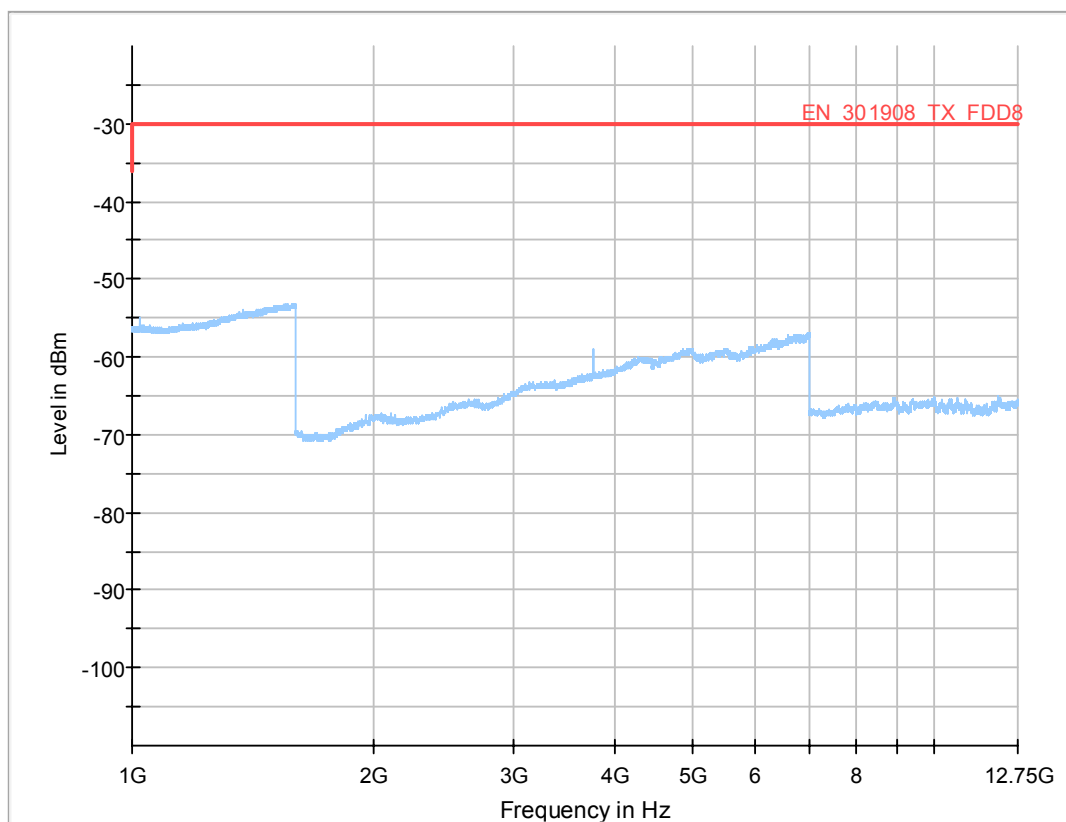


Critical_Freqs

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Critical_Freqs

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Final_Result

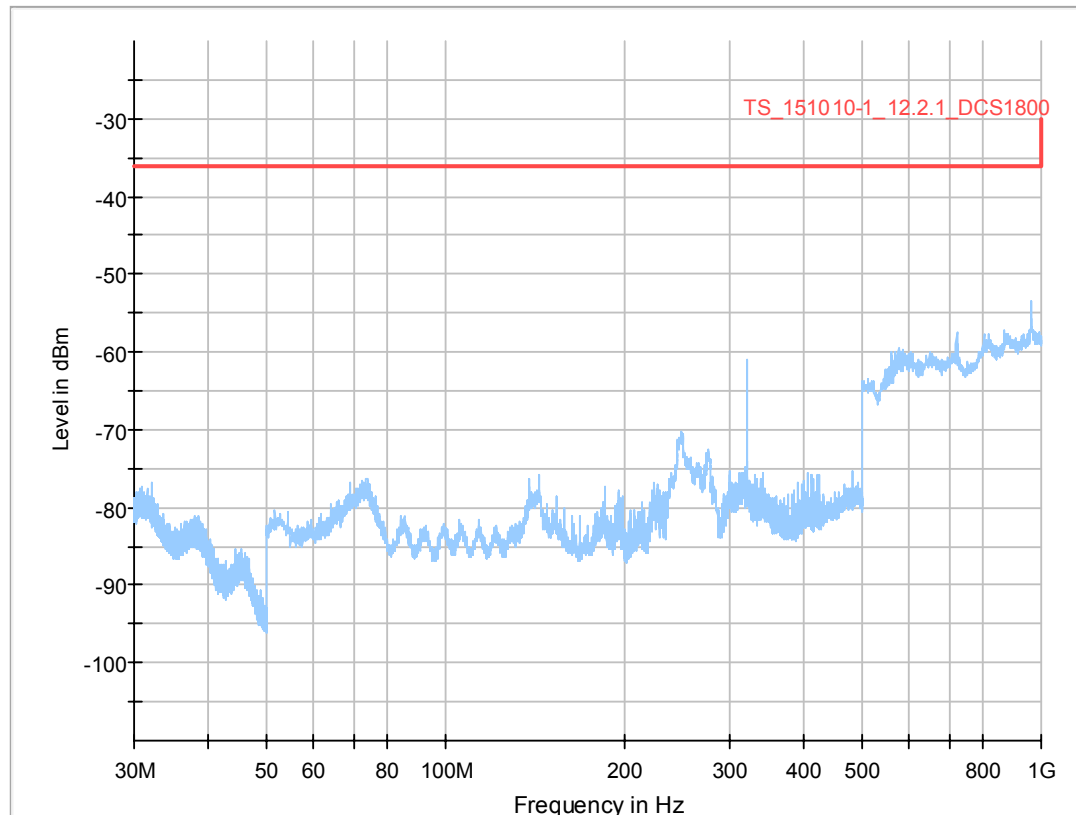
Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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3.5.2 12.2.1 Radiated spurious emissions, MS allocated a channel

Test: 12.2.1; Frequency Band = 1800, VN

<i>Result:</i>	Passed
<i>Setup No.:</i>	S01_AA01
<i>Date of Test:</i>	2017/06/01 4:03
<i>Body:</i>	R&TTE - EN 301 511 V12.1.1
<i>Test Specification:</i>	51.010-1

Detailed Results:

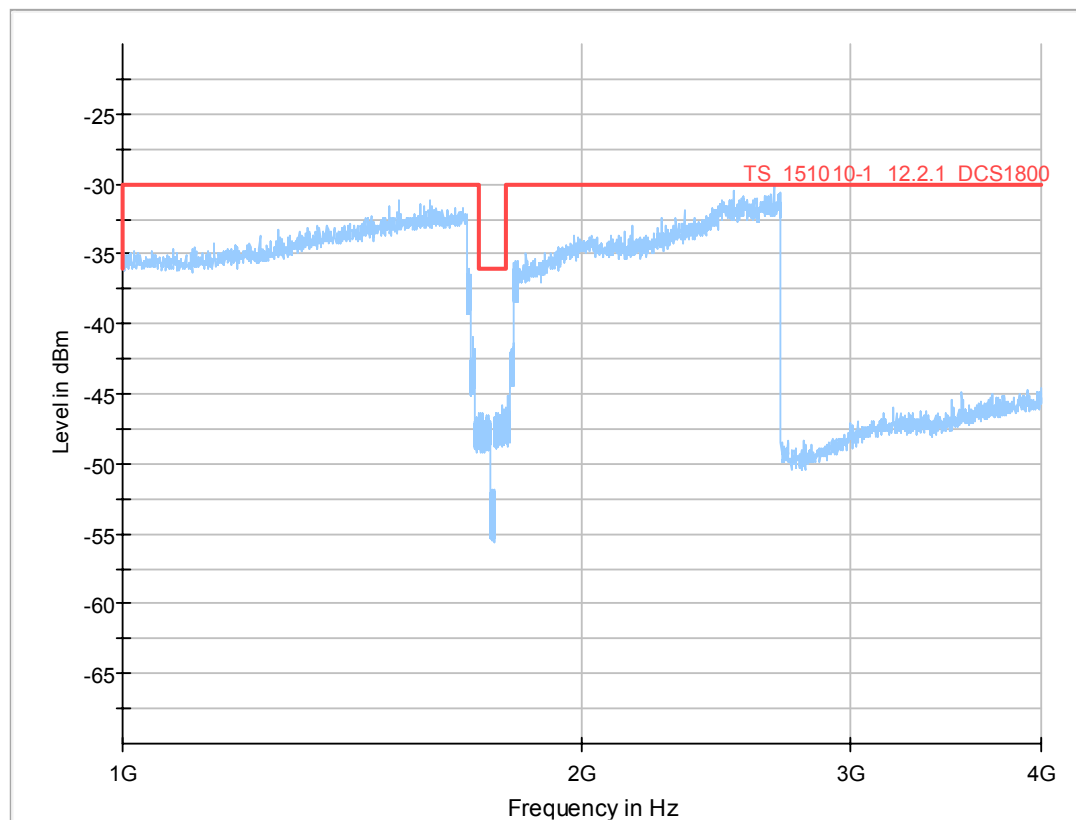


Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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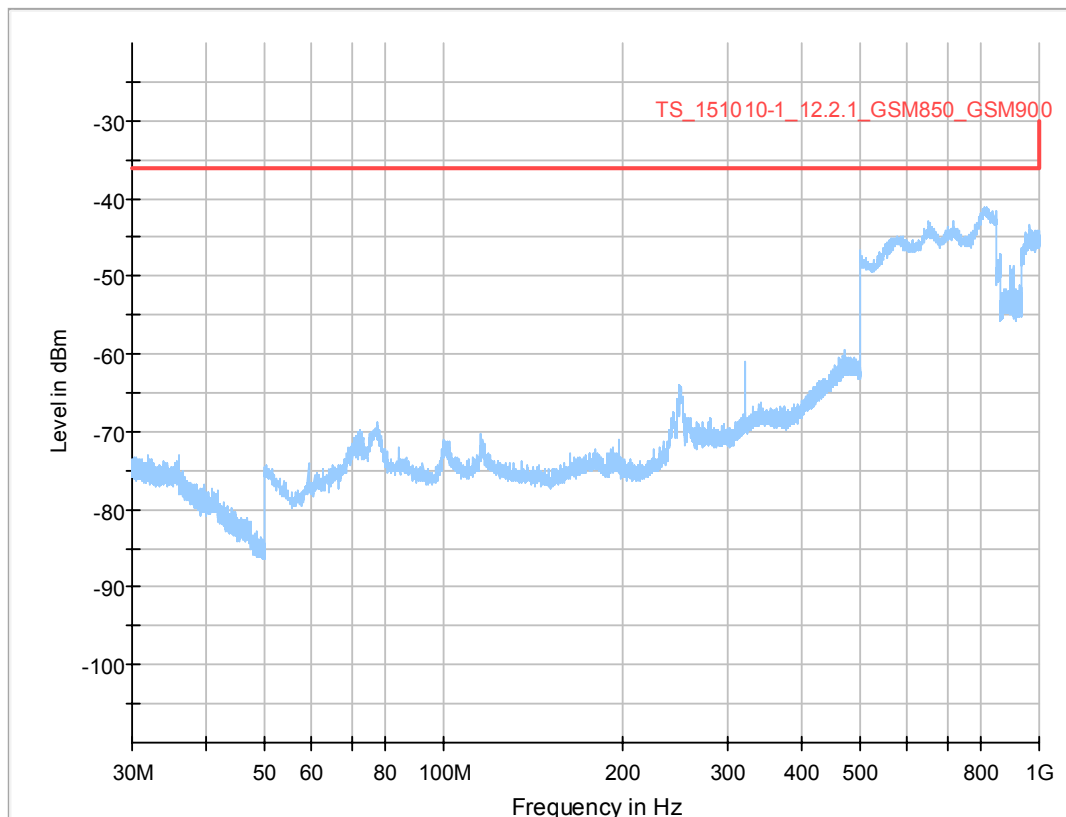
Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Test: 12.2.1; Frequency Band = 900, VN

Result: Passed
 Setup No.: S01_AA01
 Date of Test: 2017/05/31 5:27
 Body: R&TTE - EN 301 511 V12.1.1
 Test Specification: 51.010-1

Detailed Results:

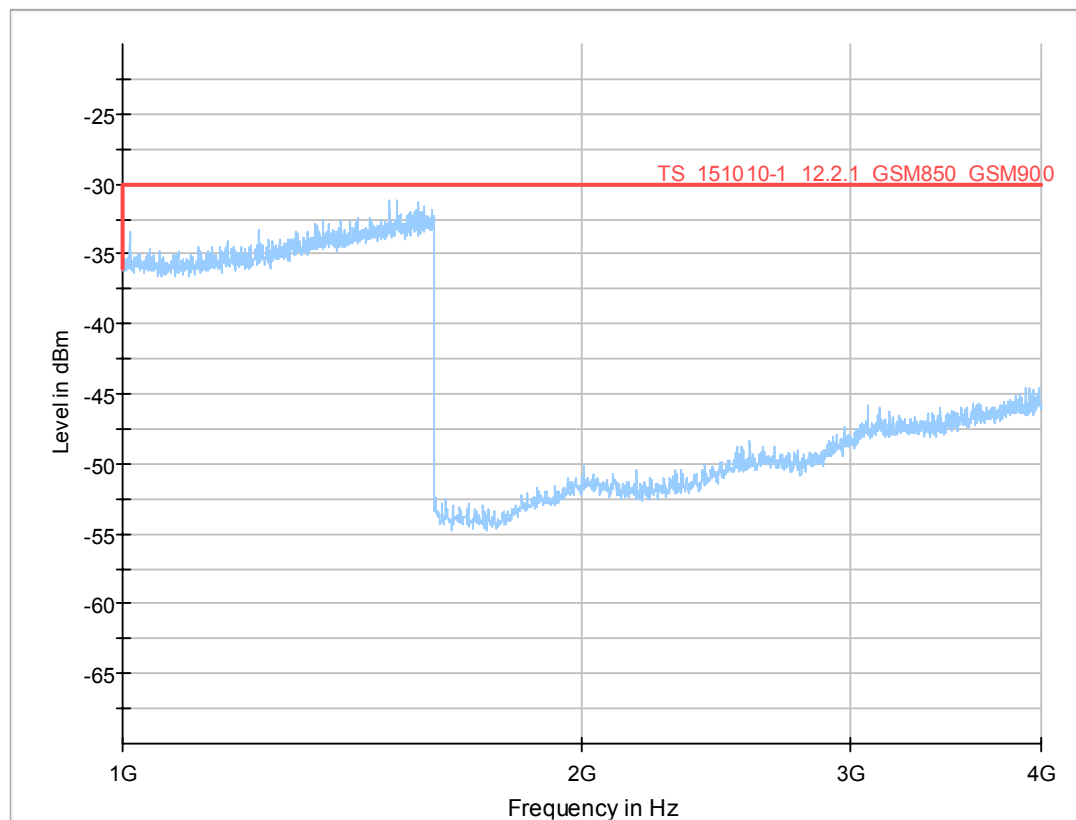


Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Final_Result

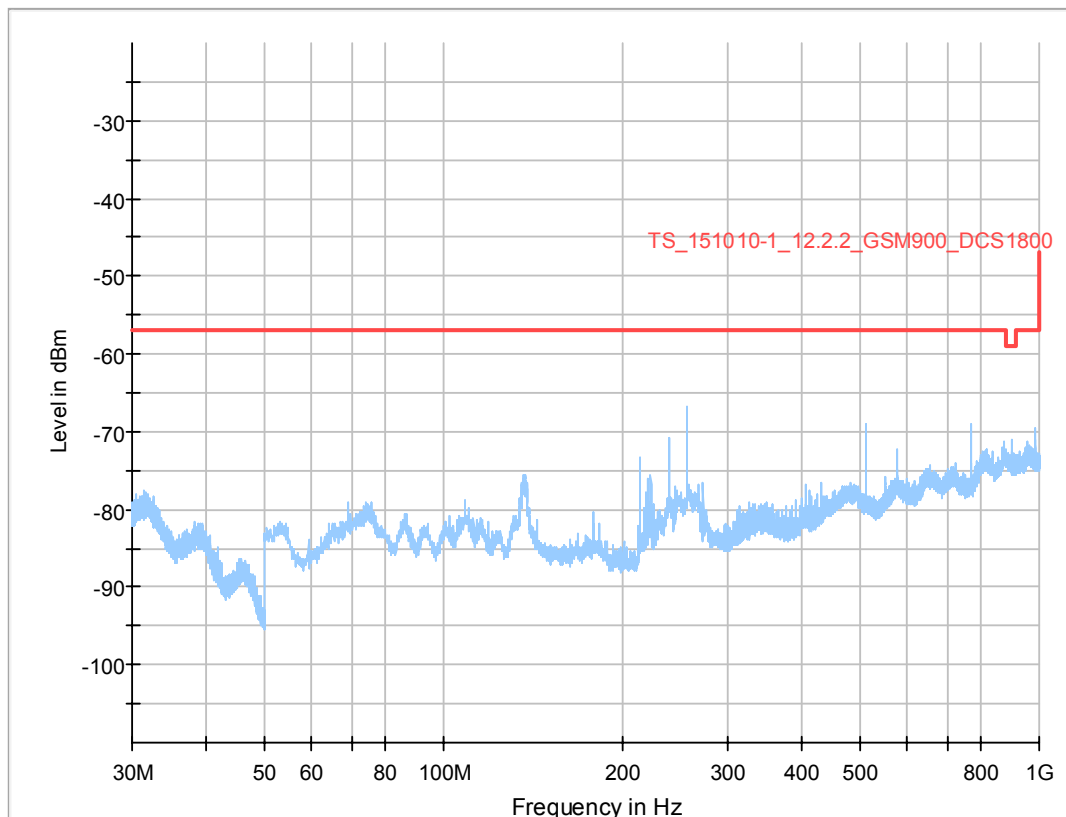
Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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3.5.3 12.2.2 Radiated spurious emissions, MS in idle mode

Test: 12.2.2; Frequency Band = 1800, VN

<i>Result:</i>	Passed
<i>Setup No.:</i>	S01_AA01
<i>Date of Test:</i>	2017/06/01 6:23
<i>Body:</i>	R&TTE - EN 301 511 V12.1.1
<i>Test Specification:</i>	51.010-1

Detailed Results:

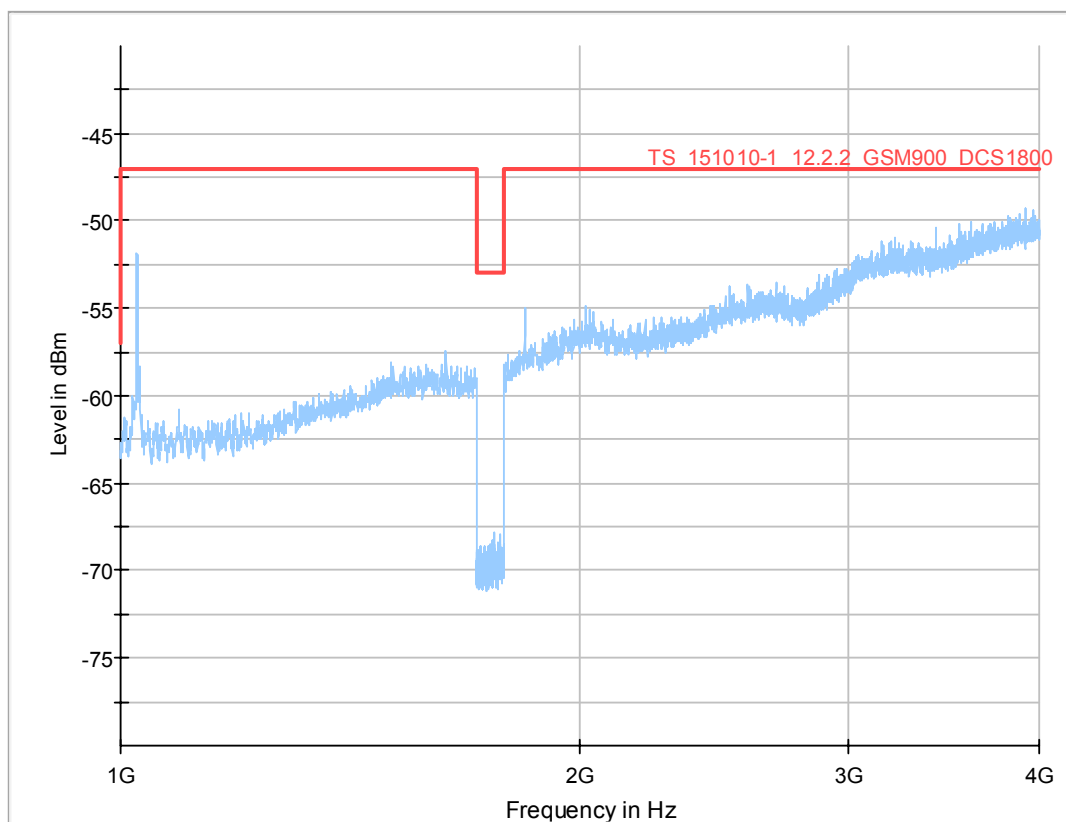


Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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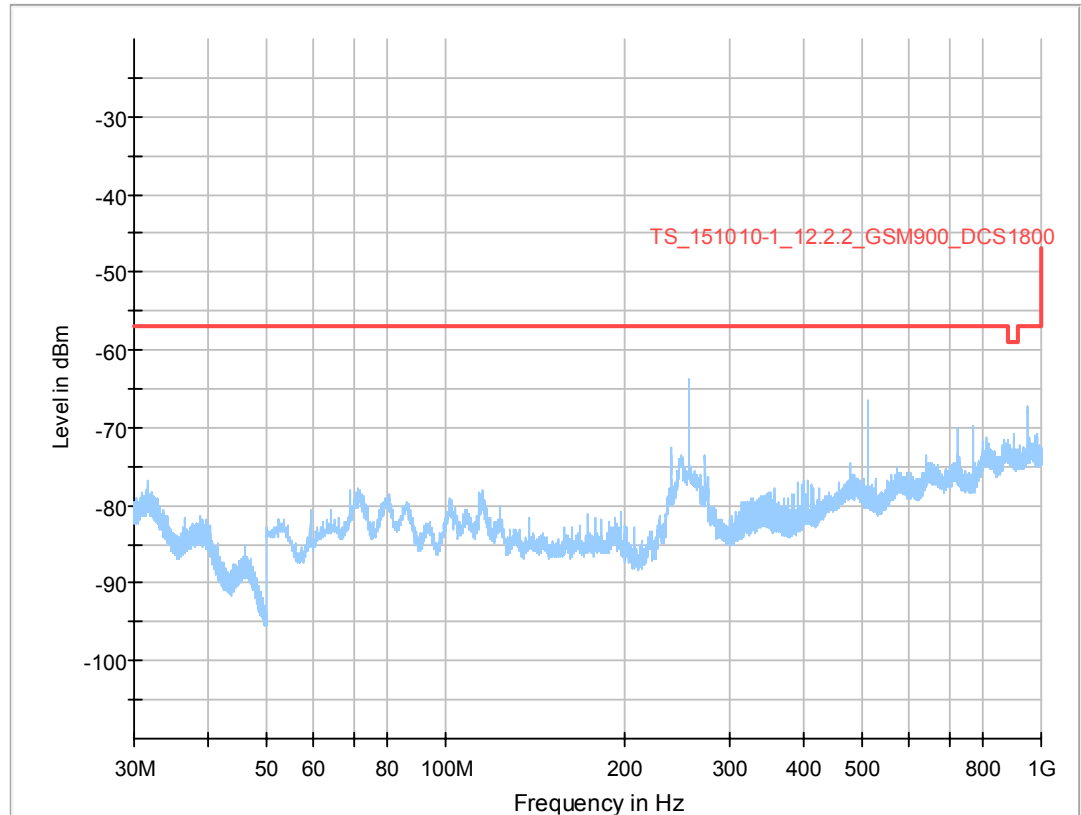
Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Test: 12.2.2; Frequency Band = 900, VN

Result:	Passed
Setup No.:	S01_AA01
Date of Test:	2017/05/31 5:29
Body:	R&TTE - EN 301 511 V12.1.1
Test Specification:	51.010-1

Detailed Results:

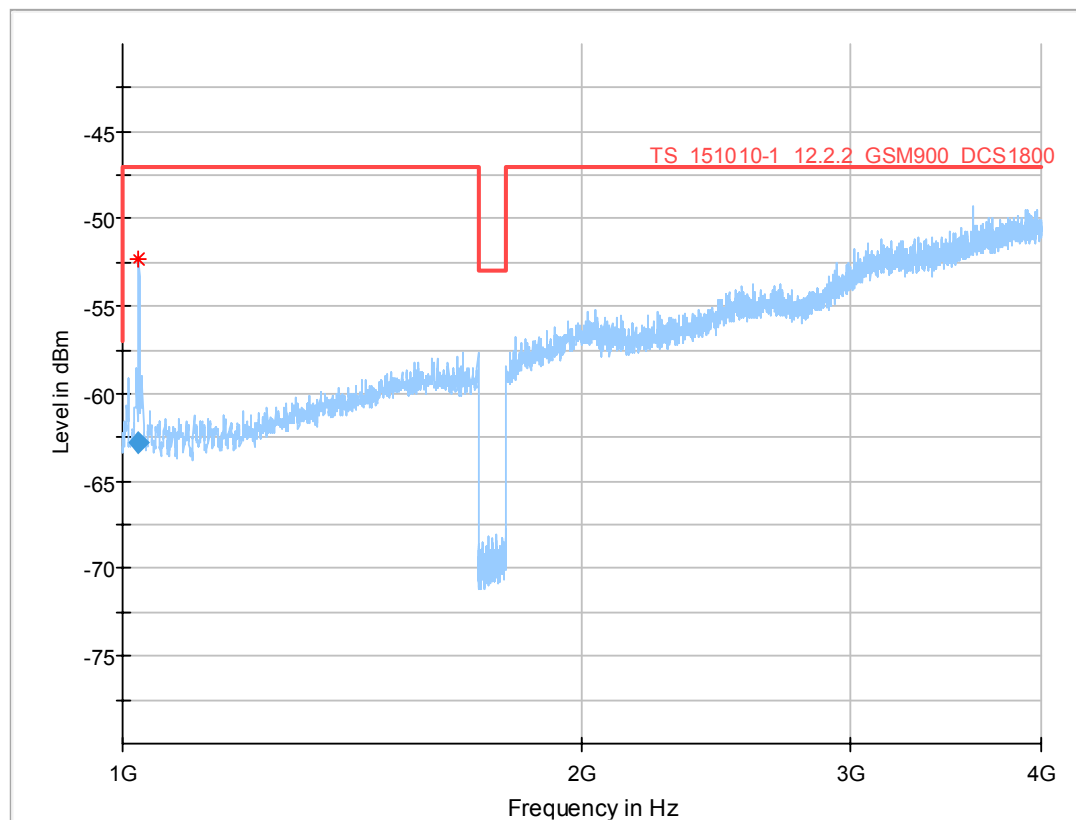


Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
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Critical_Freqs

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1024.850000	-52.32	-47.00	5.32	---	---	150.0	H	-90.0	22.3	-102.7

Final_Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1024.850000	-62.77	-47.00	15.77	1000.0	100.000	150.0	H	-90.0	21.8	-102.7

4 Test Equipment Details

4.1 List of Used Test Equipment

The calibration, hardware and software states are shown for the testing period.

Test Equipment Anechoic Chamber

Lab ID: Lab 1
Description: Anechoic Chamber for radiated testing

Single Devices for Anechoic Chamber

Single Device Name	Type	Serial Number	Manufacturer
Air compressor	none	-	
Anechoic Chamber	10.58 x 6.38 x 6.00 m ³	none	
Anechoic Chamber	8.8m x 4.6m x 4.05 m	B83117-S40-X191	Albatross Projects GmbH
Controller Maturo	MCU	961208	Maturo GmbH
EMC camera	CE-CAM/1	-	
EMC camera Nr.2	CCD-400E	0005033	
Filter ISDN	B84312-C110-E1		
Filter Universal 1A	BB4312-C30-H3	-	

Test Equipment Auxiliary Equipment for Radiated emissions

Lab ID: Lab 1
Description: Equipment for emission measurements
Serial Number: see single devices

Single Devices for Auxiliary Equipment for Radiated emissions

Single Device Name	Type	Serial Number	Manufacturer
Antenna mast	AM 4.0	AM4.0/180/11920 513	Maturo GmbH
Biconical Broadband Antenna	SBA 9119	9119-005	
Biconical dipole	VUBA 9117	9117-108	
Broadband Amplifier 1 GHz - 4 GHz	AFS4-01000400-1Q-10P-4	-	
Broadband Amplifier 18 GHz - 26 GHz	JS4-18002600-32-5P	849785	
Broadband Amplifier 30 MHz - 18 GHz	JS4-00101800-35-5P	896037	
Cable "ESI to EMI Antenna"	EcoFlex10	W18.01-2+W38.01-2	
Cable "ESI to Horn Antenna"	SucoFlex	W18.02-2+W38.02-2	
Double-ridged horn	HF 906	357357/002	Rohde & Schwarz GmbH & Co. KG
		<i>Calibration Details</i>	<i>Last Execution</i> <i>Next Execution</i>
		Standard Calibration	2015/06/23 2018/06/22
Double-ridged horn	HF 907	102444	Rohde & Schwarz GmbH & Co. KG
		<i>Calibration Details</i>	<i>Last Execution</i> <i>Next Execution</i>

Single Devices for Auxiliary Equipment for Radiated emissions (continued)

<i>Single Device Name</i>	<i>Type</i>	<i>Serial Number</i>	<i>Manufacturer</i>	
	Standard Calibration		2015/05/11	2018/05/10
Double-ridged horn-duplicated 2015-07-15 10:47:55	HF 906	357357/001	Rohde & Schwarz GmbH & Co. KG	
High Pass Filter	4HC1600/12750-1.5-KK	9942011		
High Pass Filter	5HC2700/12750-1.5-KK	9942012		
High Pass Filter	5HC3500/18000-1.2-KK	200035008		
High Pass Filter	WHKX 7.0/18G-8SS	09		
Horn Antenna Schwarzbeck 15-26.5 GHz BBHA 9170	BBHA 9170	BBHA9170262		
Log.-per. Antenna	HL 562 Ultralog	100609	Rohde & Schwarz GmbH & Co. KG	
Log.-per. Antenna (upgraded)	HL 562 Ultralog new biconicals	830547/003	Rohde & Schwarz GmbH & Co. KG	
<i>Calibration Details</i>			<i>Last Execution</i>	<i>Next Execution</i>
	Standard Calibration		2015/06/30	2018/06/29
Loop Antenna	HFH2-Z2	829324/006	Rohde & Schwarz GmbH & Co. KG	
<i>Calibration Details</i>			<i>Last Execution</i>	<i>Next Execution</i>
	DKD Calibration		2014/11/27	2017/11/27
Standard Gain / Pyramidal Horn Antenna 40 GHz	3160-10	00086675		
Tilt device Maturo (Rohacell)	Antrieb TD1.5-10kg	TD1.5-10kg/024/3790709	Maturo GmbH	

Test Equipment Auxiliary Test Equipment

Lab ID:	Lab 1
<i>Description:</i>	Single Devices for various Test Equipment
<i>Type:</i>	various
<i>Serial Number:</i>	none

Single Devices for Auxiliary Test Equipment

<i>Single Device Name</i>	<i>Type</i>	<i>Serial Number</i>	<i>Manufacturer</i>		
Broadband Power Divider N (Aux)	1506A / 93459	LM390			
Broadband Power Divider SMA	WA1515	A855			
Digital Multimeter 03 (Multimeter)	Fluke 177	86670383			
	<i>Calibration Details</i>			<i>Last Execution</i>	<i>Next Execution</i>
	DAkKS Calibration			2016/02/04	2018/02/28
Digital Multimeter 13 (Clamp Meter)	Fluke 325	31270091WS	FLUKE		
	<i>Calibration Details</i>			<i>Last Execution</i>	<i>Next Execution</i>
	DAkKS-Calibration			2016/02/04	2019/02/28
Fibre optic link Satellite (Aux)	FO RS232 Link	181-018			
Fibre optic link Transceiver (Aux)	FO RS232 Link	182-018			
Isolating Transformer	LTS 604	1888			
Notch Filter Ultra Stable (Aux)	WRCA800/960-6EEK	24			
Signal Analyzer	FSV30	103005	Rohde & Schwarz GmbH & Co. KG		
	<i>Calibration Details</i>			<i>Last Execution</i>	<i>Next Execution</i>
	DKD calibration			2016/02/25	2018/02/24
Spectrum Analyser	FSU26	200418			
	<i>Calibration Details</i>			<i>Last Execution</i>	<i>Next Execution</i>
	Standard calibration			2016/11/03	2017/11/02
Spectrum Analyzer	FSP3	836722/011	Rohde & Schwarz GmbH & Co. KG		
	<i>Calibration Details</i>			<i>Last Execution</i>	<i>Next Execution</i>
	DKD calibration			2015/06/23	2018/06/22
Vector Signal Generator	SMIQ 03B	832492/061			

Test Equipment Digital Signalling Devices

Lab ID: **Lab 1**
Description: Signalling equipment for various wireless technologies.

Single Devices for Digital Signalling Devices

Single Device Name	Type	Serial Number	Manufacturer	
CMW500	CMW500	107500		
	Calibration Details			
	Standard calibration		Last Execution	Next Execution
			2015/07/13	2017/07/14
Digital Radio Communication Tester	CMD 55	831050/020	Rohde & Schwarz GmbH & Co. KG	
	Calibration Details			
	DKD calibration		Last Execution	Next Execution
			2014/12/02	2017/12/01
Universal Radio Communication Tester	CMU 200	837983/052	Rohde & Schwarz GmbH & Co. KG	
Vector Signal Generator	SMU200A	100912		

Test Equipment Emission measurement devices

Lab ID: **Lab 1**
Description: Equipment for emission measurements
Serial Number: see single devices

Single Devices for Emission measurement devices

Single Device Name	Type	Serial Number	Manufacturer	
EMI Receiver / Spectrum Analyzer	ESR 7	101424		
	Calibration Details			
	DKD Calibration		Last Execution	Next Execution
			2016/11/29	2018/11/28
Personal Computer	Dell	30304832059		
Power Meter	NRVD	828110/016		
	Calibration Details		Last Execution	Next Execution
	Standard calibration		2017/05/17	2018/05/16
Sensor Head A	NRV-Z1	827753/005		
	Calibration Details			
	Standard calibration		Last Execution	Next Execution
			2017/05/18	2018/05/17
Signal Generator	SMR 20	846834/008	Rohde & Schwarz GmbH & Co. KG	
	Calibration Details			
	Standard Calibration		Last Execution	Next Execution
			2014/06/24	2017/06/23
Spectrum Analyzer	ESIB 26	830482/004	Rohde & Schwarz GmbH & Co. KG	
	Calibration Details			
	DAkKS Calibration (DK)			
	HW/SW Status			
	Firmware-Update 4.34.4 from 3.45 during calibration		Date of Start	Date of End
			2009/12/03	
Spectrum Analyzer	FSW 43	103779		
	Calibration Details			
	DKD calibration		Last Execution	Next Execution
			2016/12/02	2018/12/01

Test Equipment Multimeter 03

Lab ID: Lab 1
Description: Fluke 177
Serial Number: 86670383

Single Devices for Multimeter 03

Single Device Name	Type	Serial Number	Manufacturer
Digital Multimeter 03 (Multimeter)	Fluke 177	86670383	
Calibration Details		Last Execution	Next Execution
DAkkS Calibration		2016/02/04	2018/02/28

Test Equipment T/A Logger 13

Lab ID: Lab 1
Description: Lufft Opus10 TPR
Type: Opus10 TPR
Serial Number: 13936

Single Devices for T/A Logger 13

Single Device Name	Type	Serial Number	Manufacturer
ThermoAirpressure Datalogger 13 (Environ)	Opus10 TPR (8253.00)	13936	
Calibration Details		Last Execution	Next Execution
Customized calibration		2017/04/10	2019/04/09

Test Equipment T/H Logger 12

Lab ID: Lab 1
Description: Lufft Opus10
Serial Number: 12482

Single Devices for T/H Logger 12

Single Device Name	Type	Serial Number	Manufacturer
ThermoHygro Datalogger 12 (Environ)	Opus10 THI (8152.00)	12482	
Calibration Details		Last Execution	Next Execution
Customized calibration		2017/03/30	2019/03/29

5 Index

1 Administrative Data	2
1.1 Project Data	2
1.2 Applicant Data	2
1.3 Test Laboratory Data	2
1.4 Signature of the Testing Responsible	3
1.5 Signature of the Accreditation Responsible	3
2 Test Object Data	3
2.1 General OUT Description	3
2.2 Detailed Description of OUT Samples	3
2.3 OUT Features	4
2.4 Setups used for Testing	4
3 Results	4
3.1 General	4
3.2 List of the Applicable Body	5
3.3 List of Test Specification	5
3.4 Summary	6
3.5 Detailed Results	7
3.5.1 5.3.1 Radiated emissions (UE)	7
3.5.2 12.2.1 Radiated spurious emissions, MS allocated a channel	16
3.5.3 12.2.2 Radiated spurious emissions, MS in idle mode	21
4 Test Equipment Details	26
4.1 List of Used Test Equipment	26
5 Index	31