**CETECOM™****CETECOM ICT Services**
consulting - testing - certification >>>

TEST REPORT

Test report no.: 1-7531/14-01-02-D

Deutsche
Akkreditierungsstelle
D-PL-12076-01-01

Testing laboratory

CETECOM ICT Services GmbH

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Internet: <http://www.cetecom.com>e-mail: ict@cetecom.com**Accredited Testing Laboratory:**

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2005) by the Deutsche Akkreditierungsstelle GmbH (DAkkS)

The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number: D-PL-12076-01-01

Area of Testing:

Radio Communications & EMC (RCE)

Applicant

Valeo Comfort and Driving Assistance

Europarc - 76 rue Auguste Perret

F-94046 CRETEIL / FRANCE

Phone: +33 1 48 84 57 14

Fax: -/-

Contact: Jerome Hugot

e-mail: jerome.hugot@valeo.com

Manufacturer

Valeo Sistemas Electronicos, S. de R.L. de C.V

Carretera Matamoros Mazatlan, km 99, Brecha 115

Colonia Celanese

88920 Rio Bravo / Mexico

Test standard/s

47 CFR Part 15

Title 47 of the Code of Federal Regulations; Chapter I
Part 15 - Radio frequency devices

RSS - 210 Issue 8

Spectrum Management and Telecommunications - Radio Standards Specification
Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands):
Category I Equipment

For further applied test standards please refer to section 3 of this test report.

Test Item

Kind of test item: Transmitter, Rigid- Flap Key**Model name:** A08TDB**FCC ID:** N5F-A08TDA**IC:** 3248A-A08TDA

Frequency: 902.375 MHz

903.425 MHz

Technology tested: Proprietary

Antenna: Integrated antenna

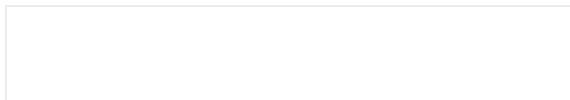
Power supply: 3.0V DC by battery (CR2032)

Temperature range: -10°C to +50°C

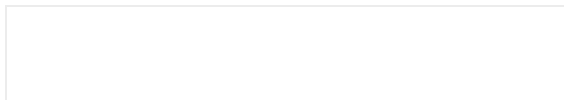


This test report is electronically signed and valid without handwriting signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

Test report authorised:

Tobias Wittenmeier
Expert

Test performed:

David Lang
Testing Manager

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2 General information

2.1 Notes and disclaimer

The test results of this test report relate exclusively to the test item specified in this test report. CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item.

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2.2 Application details

Date of receipt of order:	2014-03-27
Date of receipt of test item:	2014-04-10
Start of test:	2014-04-10
End of test:	2014-04-09
Person(s) present during the test:	-/-

3 Test standard/s

Test standard	Date	Test standard description
47 CFR Part 15	2012-10	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices
RSS - 210 Issue 8	2010-12	Spectrum Management and Telecommunications - Radio Standards Specification Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment

4 Test environment

Temperature:	T_{nom}	+22 °C during room temperature tests
	T_{max}	+50 °C during high temperature tests
	T_{min}	-10 °C during low temperature tests
Relative humidity content:		45 %
Barometric pressure:		not relevant for this kind of testing
Power supply:	V_{nom}	3.0 V DC by battery (CR2032)
	V_{max}	3.6 V
	V_{min}	2.3 V

5 Test item

Kind of test item	:	Transmitter, Rigid- Flap Key
Type identification	:	A08TDB
S/N serial number	:	Rad. 084142-00060 Cond. 084142-00056
HW hardware status	:	b007527_rev. C
SW software status	:	084142-00060
Frequency band [MHz]	:	902.375 MHz 903.425 MHz
Type of radio transmission	:	single carrier
Use of frequency spectrum	:	
Type of modulation	:	FSK
Number of channels	:	2
Antenna	:	Integrated antenna
Power supply	:	3.0 V DC by battery (CR2032)
Temperature range	:	-10°C to +50 °C

5.1 Additional information

Test setup- and EUT-photos are included in test report:

1-7531_14-01-02 Annex A

1-7531_14-01-02 Annex B

1-7531_14-01-02 Annex D

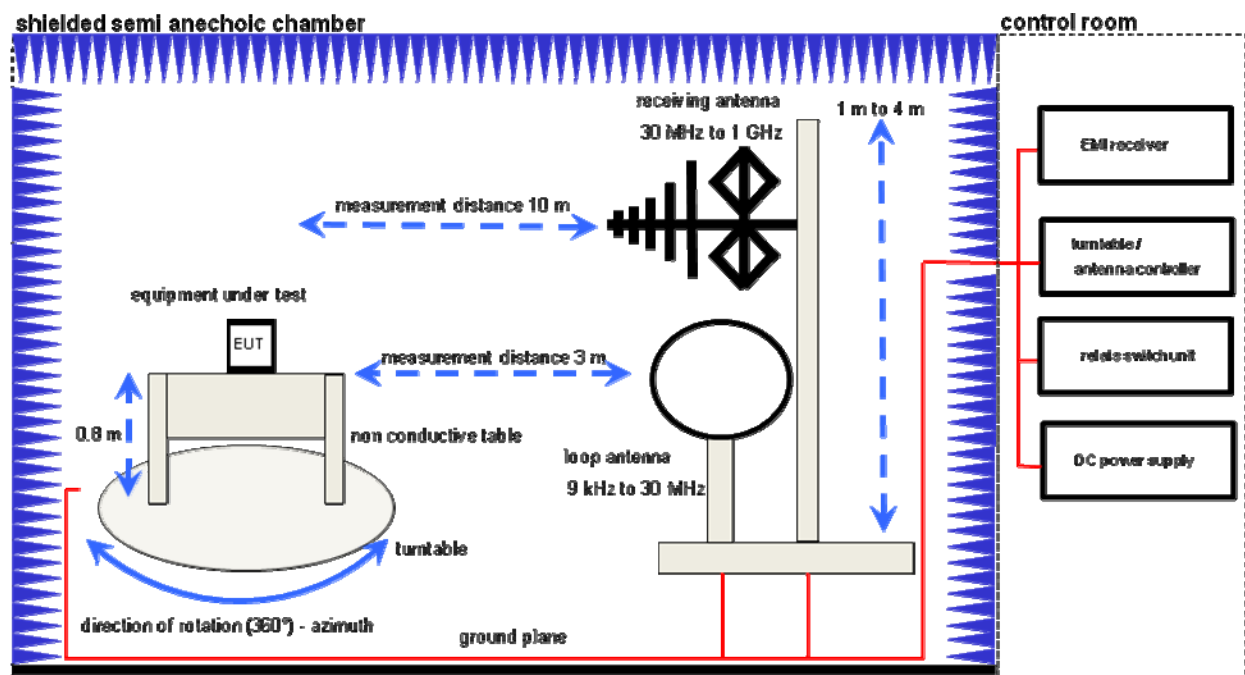
6 Test laboratories sub-contracted

None

7 Description of the test setup

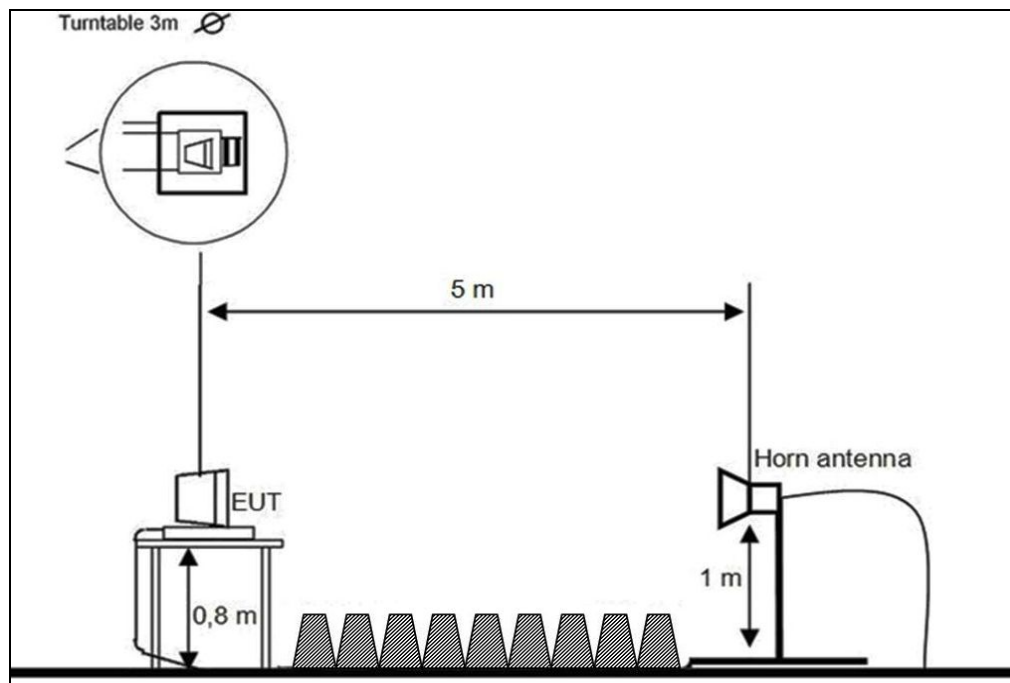
7.1 Radiated measurements (30 MHz – 1 GHz)

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 1 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas are confirmed with specifications ANSI C63. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test setups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received. The wanted and unwanted emissions are received by spectrum analysers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.



Equipment table:

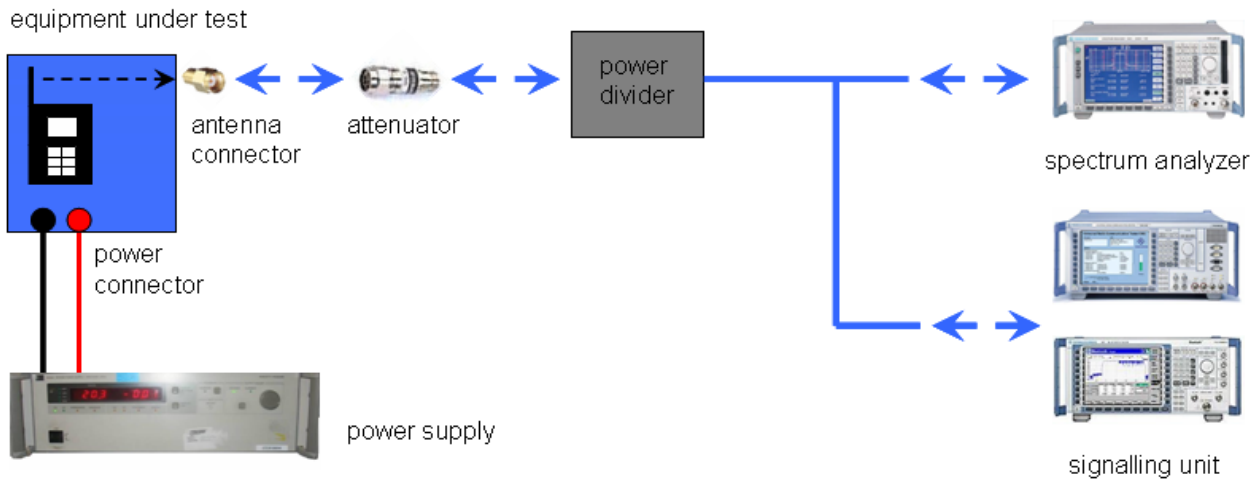
Equipment	Type	Manufacturer	Serial No.	INV. No Cetecom
Switch-Unit	3488A	HP Meßtechnik	2719A14505	300000368
EMI Test Receiver	ESCI 3	R&S	100083	300003312
Amplifier	JS42-00502650-28-5A	MITEQ	1084532	300003379
Antenna Tower	Model 2175	ETS-LINDGREN	64762	300003745
Positioning Controller	Model 2090	ETS-LINDGREN	64672	300003746
Turntable Interface-Box	Model 105637	ETS-LINDGREN	44583	300003747
TRILOG Broadband Test-Antenna 30 MHz – 3 GHz	VULB9163	Schwarzbeck	295	300003787
Test Receiver	ESH2	R&S	871921/095	300002505
Loop Antenna 9 KHz – 30 MHz	HFH2-Z2	R&S	872096/61	300001824
EMI Test Receiver 9 kHz – 3 GHz incl. Preselector	ESPI3	R&S	101713	300004059

7.2 Radiated measurements (1 GHz – 10 GHz)

Equipment	Type	Manufacturer	Serial No.	INV. No Cetecom
Spectrum Analyzer	ESU 26	R&S	100037	300003555
Horn Antenna	9120B	Schwarzbeck	9120B188	300003896

7.2.1 Conducted measurements

The EUT's RF signal is coupled out by the antenna connector which is supplied by the manufacturer. The signal is first 10dB attenuated before it is power divided (~6dB loss per branch). One of the signal paths is connected to the communication base Station (CMU200 or other), the other one is connected to the spectrum analyser. The specific losses for both signal paths are first checked within a calibration. The measurement readings on the signalling unit/spectrum analyser are corrected by the specific test set-up loss. The attenuator, power divider, signalling unit and the spectrum analyser are impedance matched on 50 Ohm.



8 Summary of measurement results



No deviations from the technical specifications were ascertained



There were deviations from the technical specifications ascertained

TC Identifier	Description	Verdict	Date	Remark
RF-Testing	47 CFR Part 15	Passed	2014-06-06	-/-

Test specification clause	Test case	Temperature conditions	Power source voltages	Pass	Fail	NA	NP	Results
§ 15.35 ©/ RSS-GEN Issue 2	Timing of the transmitter (Duty cycle correction factor)	Nominal	Nominal	☒	☐	☐	☐	complies
§ 15.231 (a) (1)/ RSS-210 Issue 8	Switch off time	Nominal	Nominal	☒	☐	☐	☐	complies
§15.249(a)	Field strength of emissions (wanted signal)	Nominal	Nominal	☒	☐	☐	☐	complies
§2.1049	Occupied bandwidth (99% bandwidth)	Nominal	Nominal	☒	☐	☐	☐	complies
§15.231 ©	Occupied bandwidth (90% bandwidth)	Nominal	Nominal	☒	☐	☐	☐	complies
§15.209(a) / §15.249(b)(1)(2)(3)	Field strength of emissions (spurious)	Nominal	Nominal	☒	☐	☐	☐	complies
§15.207(a)	Conducted emissions < 30 MHz	Nominal	Nominal	☐	☐	☒	☐	Battery powered
§15.109	Field strength of emissions (spurious)	Nominal	Nominal	☒	☐	☐	☐	complies

Note: NA = Not Applicable; NP = Not Performed

9 RF measurement testing

9.1.1 Additional comments

Reference documents: None

Special test descriptions: None

Configuration descriptions: None

Test mode: ☐ Normal operation, no special test mode available.

☒ Special software is used

10 Measurement results

10.1 Timing of the transmitter

Measurement:

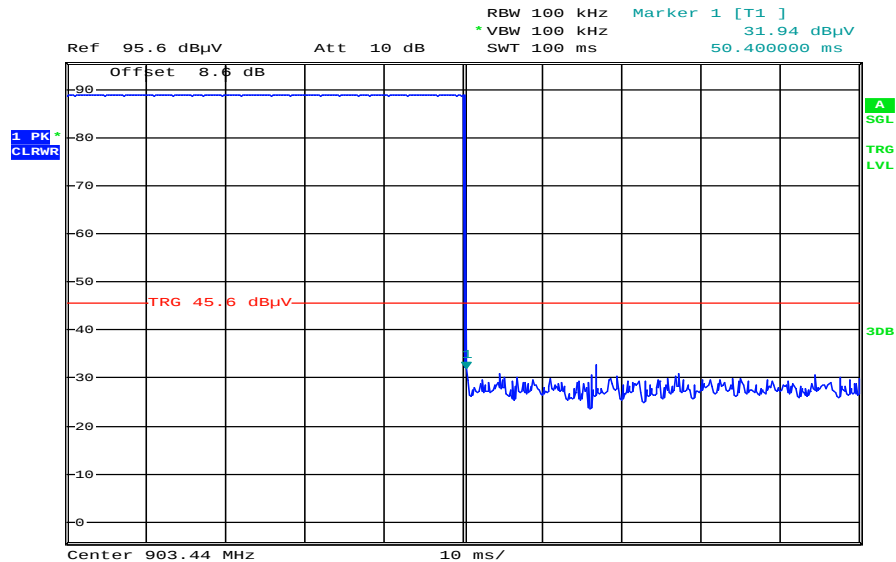
Measurement parameter	
Detector:	Peak
Sweep time:	1 s / 300 ms
Resolution bandwidth:	3 kHz
Video bandwidth:	3 kHz
Span:	Zero span
Trace-Mode:	Clear write / Trigger video / single sweep

Limits:

FCC	IC
CFR Part SUBCLAUSE § 15.35 ©	RSS-GEN Issue 2 Section 4.5
Timing of the transmitter	
© Unless otherwise specified, e.g. Section 15.255(b), when the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to notification or verification.	

Result:

Plot 1: Pulse train



Date: 9.MAY.2014 11:59:24

Manufacturer statement:

2014.) Lock/unlock function:

Transmit time (Tx on 1) = 50.4 ms

Duty cycle = 50.4 % (100 ms range)

The peak-to-average correction factor is calculated with $20 \log [Tx \text{ on} / (Tx \text{ on} + Tx \text{ off})]$.
 Hereby the peak-to-average correction factor is.

Peak-to-average correction factor: 6.0 dB

2.) Remote start function:

Transmit time (Tx on 1) = 76 ms

Duty cycle = 76 % (100 ms range)

The peak-to-average correction factor is calculated with $20 \log [Tx \text{ on} / (Tx \text{ on} + Tx \text{ off})]$.
 Hereby the peak-to-average correction factor is.

Peak-to-average correction factor: 2.4 dB

Result: Passed.

10.2 Switch off time**Measurement:**

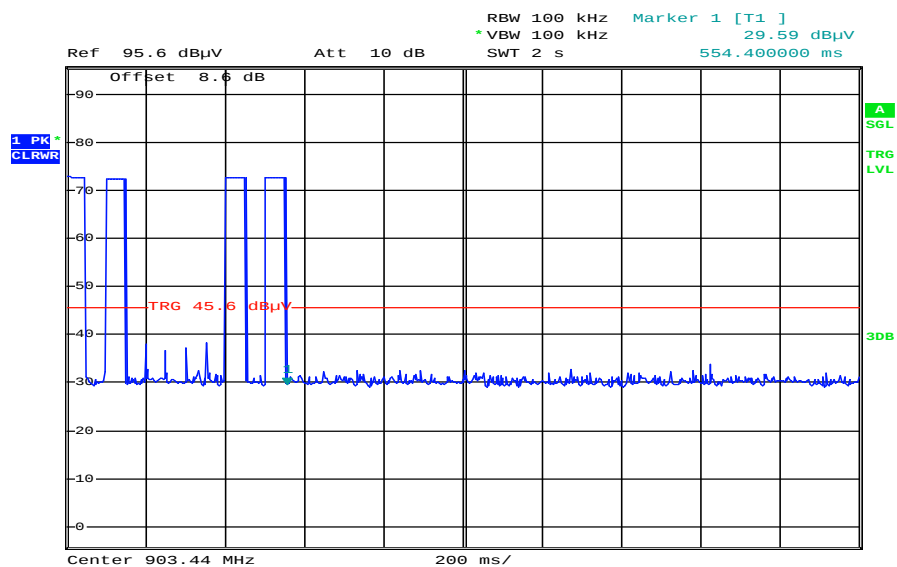
Measurement parameter	
Detector:	Peak
Sweep time:	1 s
Resolution bandwidth:	3 kHz
Video bandwidth:	3 kHz
Span:	Zero span
Trace-Mode:	Clear write / Trigger video / single sweep

Limits:

FCC	IC
CFR Part SUBCLAUSE § 15.231 (a) (1)	RSS-GEN Issue 2 Section 4.5
Switch off time	
A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.	

Results:

Plot 1: Pulse train



Date: 9.MAY.2014 12:00:29

The EUT automatically ceases transmission within not more than 555 ms after releasing the switch.

Result: Passed.

10.3 Field strength of emissions (wanted signal)

Description:

Measurement of the maximum radiated field strength of the wanted signal.

Measurement:

Measurement parameter	
Detector:	Pos-Peak
Sweep time:	Auto
Video bandwidth:	Auto
Resolution bandwidth:	1 MHz
Span:	max. 100 MHz
Trace-Mode:	Max Hold

Limits:

FCC		
Field strength of emissions		
The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:		
Frequency [MHz]	Field Strength [dBμV/m]	Measurement distance
902 – 928 MHz	94	3

Result:

Test condition	Maximum field strength	
	Frequency [MHz]	Field strength [dBμV/m] @ 3 m
T_{nom} / V_{nom}	902.375	88.1
T_{nom} / V_{nom}	903.425	87.8
Measurement uncertainty	± 3 dB	

Result: **Passed.**

10.4 Occupied bandwidth (99% bandwidth)

Description:

Measurement of the 99% bandwidth of the wanted signal.

Measurement:

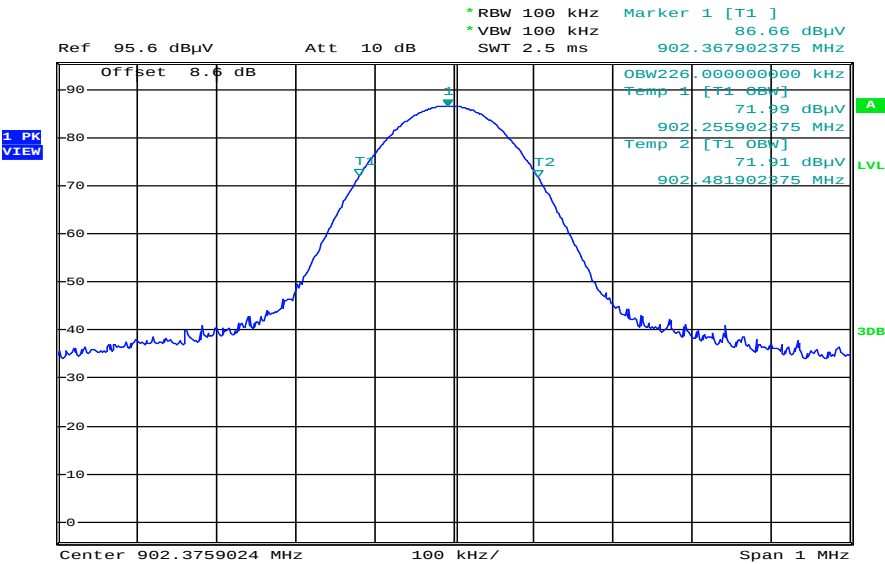
Measurement parameter	
Detector:	Peak
Sweep time:	Auto
Video bandwidth:	100 kHz
Resolution bandwidth:	100 kHz
Span:	8 MHz
Trace-Mode:	Max Hold

Results:

Test condition	Occupied bandwidth	
	Frequency [MHz]	Occupied bandwidth [kHz]
$T_{\text{nom}} / V_{\text{nom}}$	902.375	226
$T_{\text{nom}} / V_{\text{nom}}$	903.425	224
Measurement uncertainty	± 3 dB	

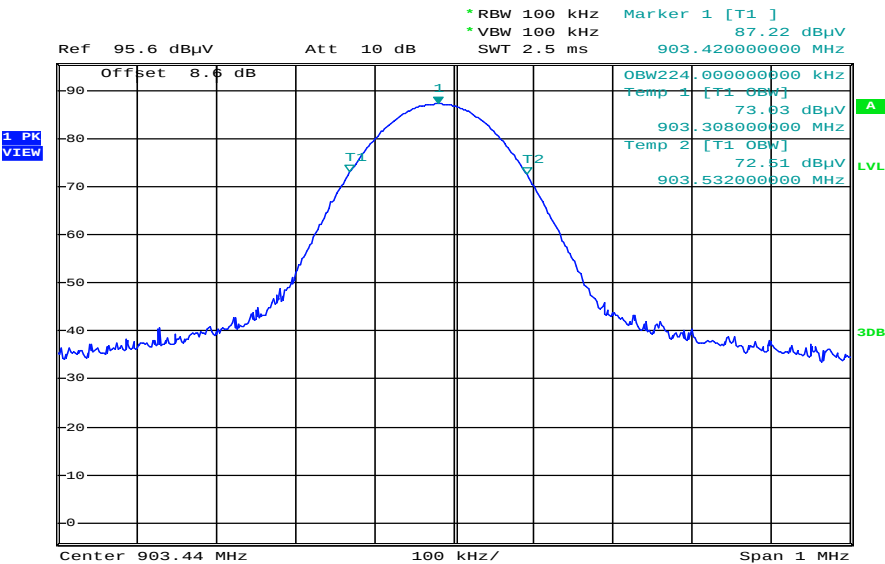
Result: **Passed.**

Plot 1:



Date: 23.MAY.2014 11:14:08

Plot 2:



Date: 8.MAY.2014 13:43:27

10.5 Occupied bandwidth (90% bandwidth)**Description:**

Measurement of the 99% bandwidth of the wanted signal.

Measurement:

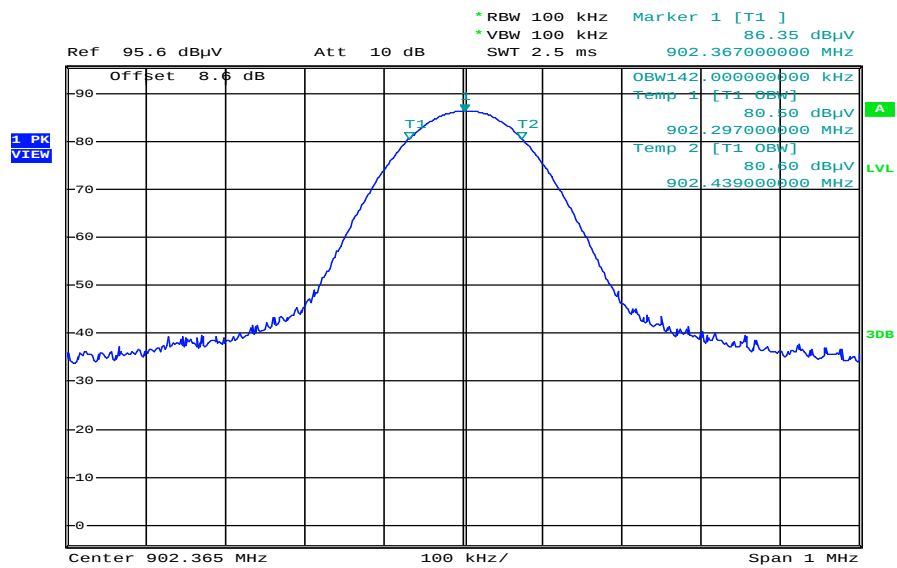
Measurement parameter	
Detector:	Peak
Sweep time:	Auto
Video bandwidth:	100 kHz
Resolution bandwidth:	100 kHz
Span:	8 MHz
Trace-Mode:	Max Hold

Results:

Test condition	Occupied bandwidth	
	Frequency [MHz]	Occupied bandwidth [kHz]
$T_{\text{nom}} / V_{\text{nom}}$	902.375	142
$T_{\text{nom}} / V_{\text{nom}}$	903.425	142
Measurement uncertainty	± 3 dB	

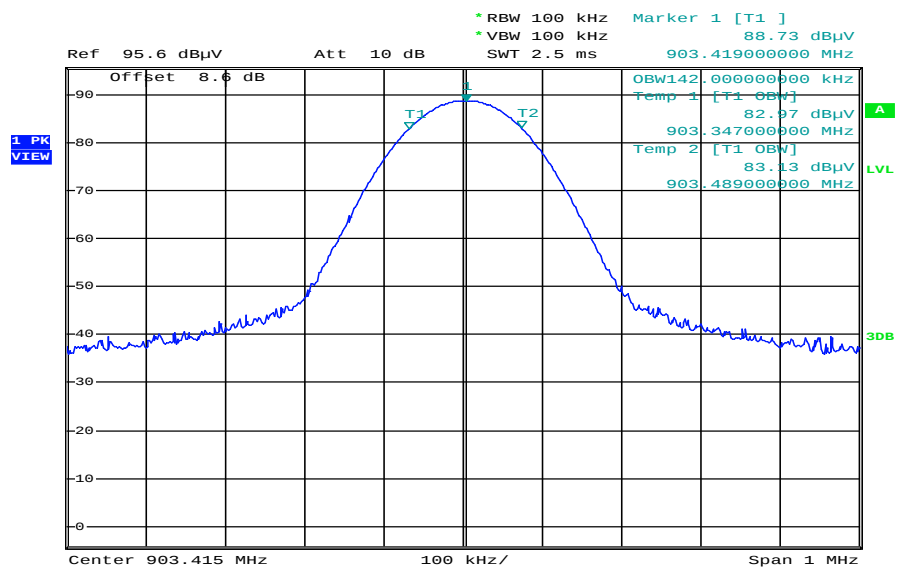
Result: **Passed.**

Plot 1:



Date: 3.JUN.2014 11:20:48

Plot 2:



Date: 3.JUN.2014 11:19:29

10.6 Field strength of emissions (radiated spurious)

Description:

Measurement of the radiated spurious emissions in transmit mode.

Measurement:

Measurement parameter	
Detector:	Peak / Quasi Peak
Sweep time:	Auto
Video bandwidth:	Auto
Resolution bandwidth:	F < 1 GHz: 100 kHz F > 1 GHz: 1 MHz
Frequency range:	30 MHz to 100 GHz
Trace-Mode:	Max Hold

Limits:

FCC		
Radiated Spurious Emissions		
Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.		
Frequency (MHz)	Field Strength (dBμV/m)	Measurement distance
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	30.0	10
88 – 216	33.5	10
216 – 960	36.0	10
Above 960	54.0	3

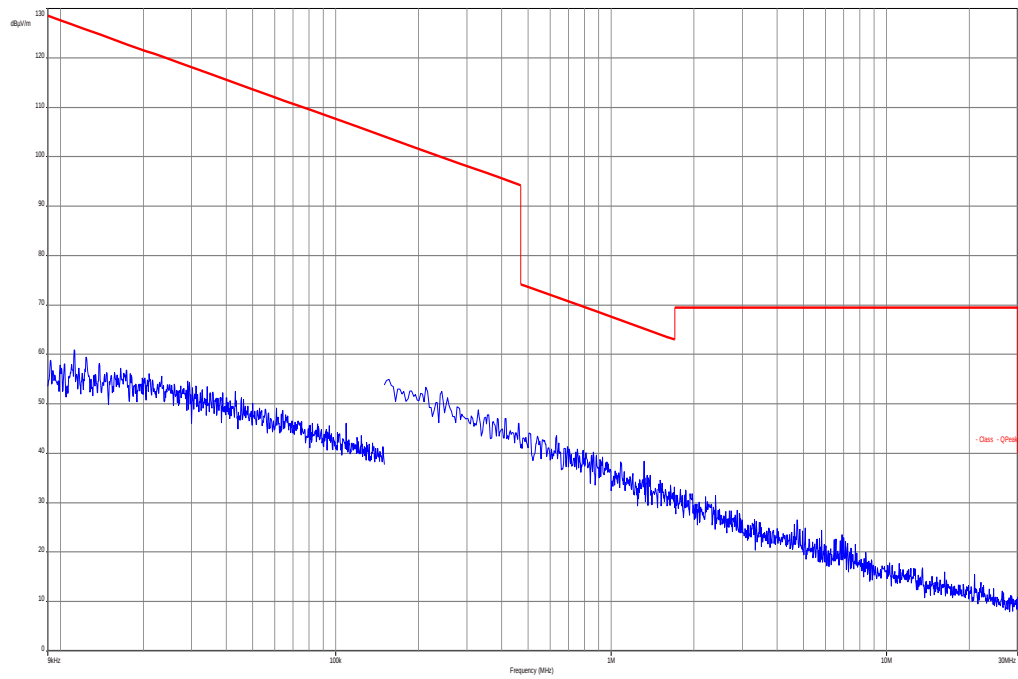
Results:

TX Spurious Emissions Radiated [dBμV/m]								
TX 902.375 MHz			TX 903.425 MHz			-/-		
F [MHz]	Detector	Level [dBμV/m]	F [MHz]	Detector	Level [dBμV/m]	F [MHz]	Detector	Level [dBμV/m]
See result tables of the plots.			See result tables of the plots.			-/-		
Measurement uncertainty			± 3 dB					

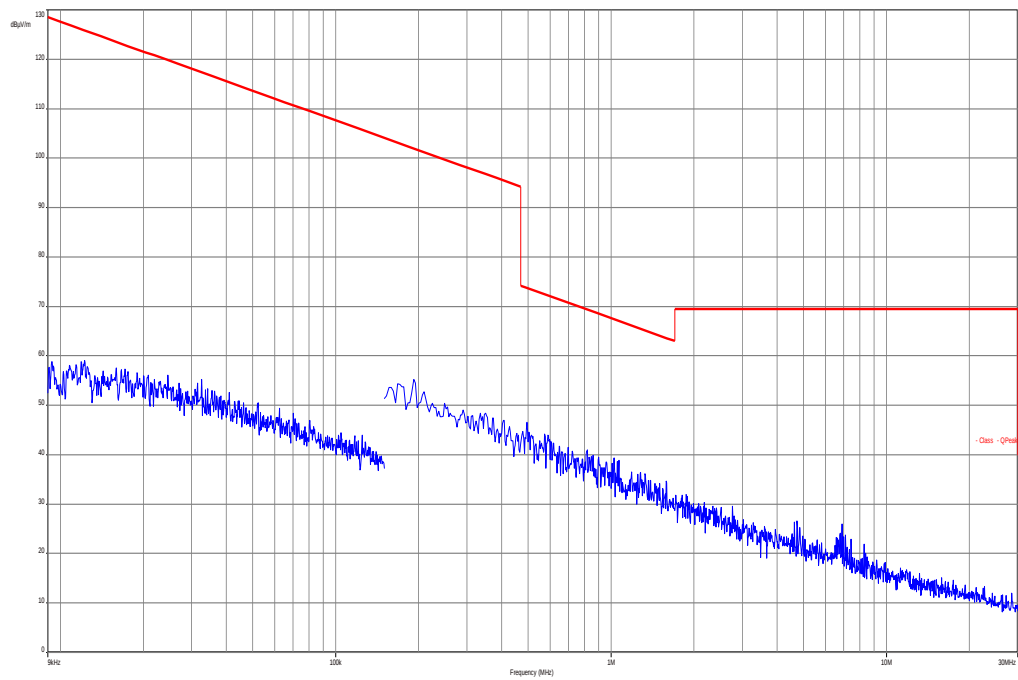
Result: passed.

Note: The limit was recalculated with 20 dB / decade (Part 15.31) for all radiated spurious emissions 30 MHz to 1 GHz from 3 meter limit to a 10 meter distance. (40dB/decade for emissions < 30MHz)

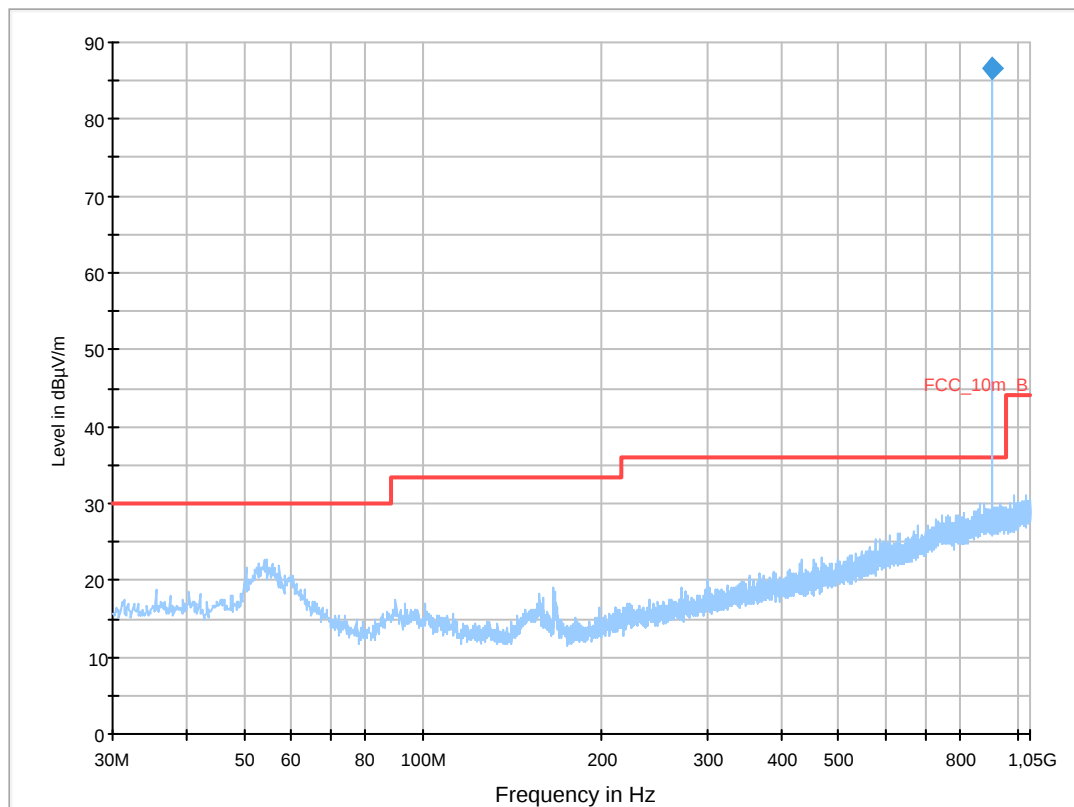
Plot 1: 9 kHz to 30 MHz; 902.375



Plot 2: 9 kHz to 30 MHz; 903.425



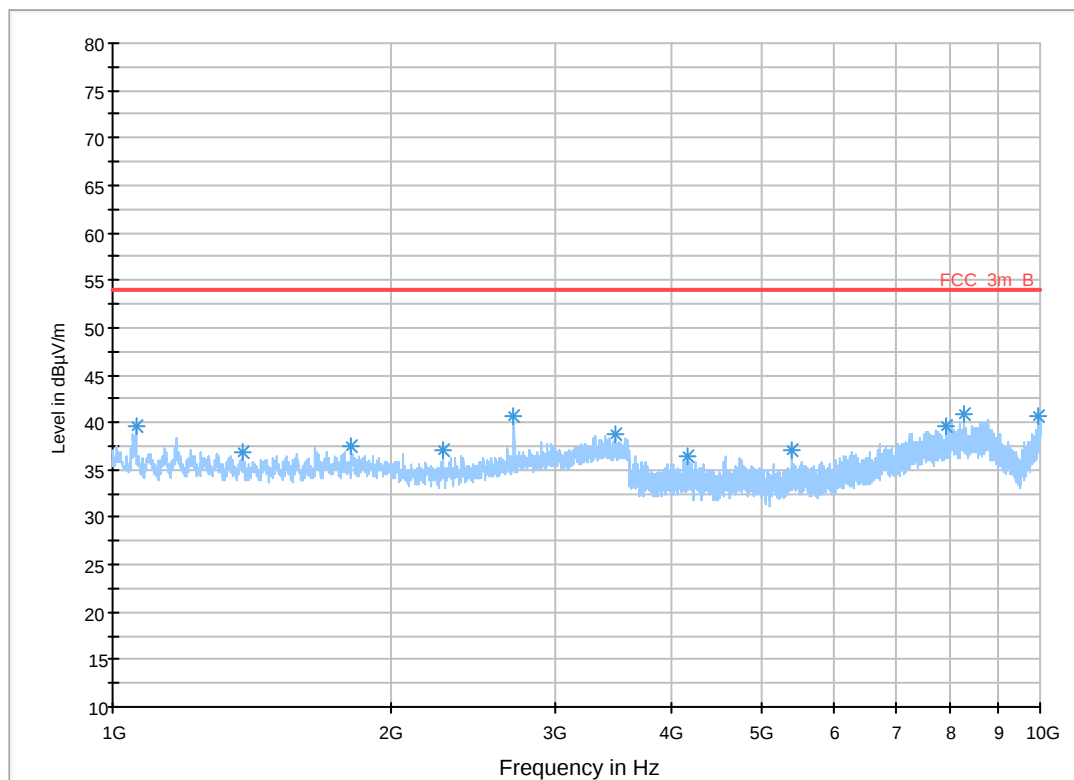
Plot 3: 30 MHz to 1 GHz, horizontal / vertical polarization – max hold; 902.375MHz



Frequency (MHz)	MaxPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)	Comment
902.421200	86.7	100.0	120.000	100.0	H	15.0	25.2	-50.7	36.0	

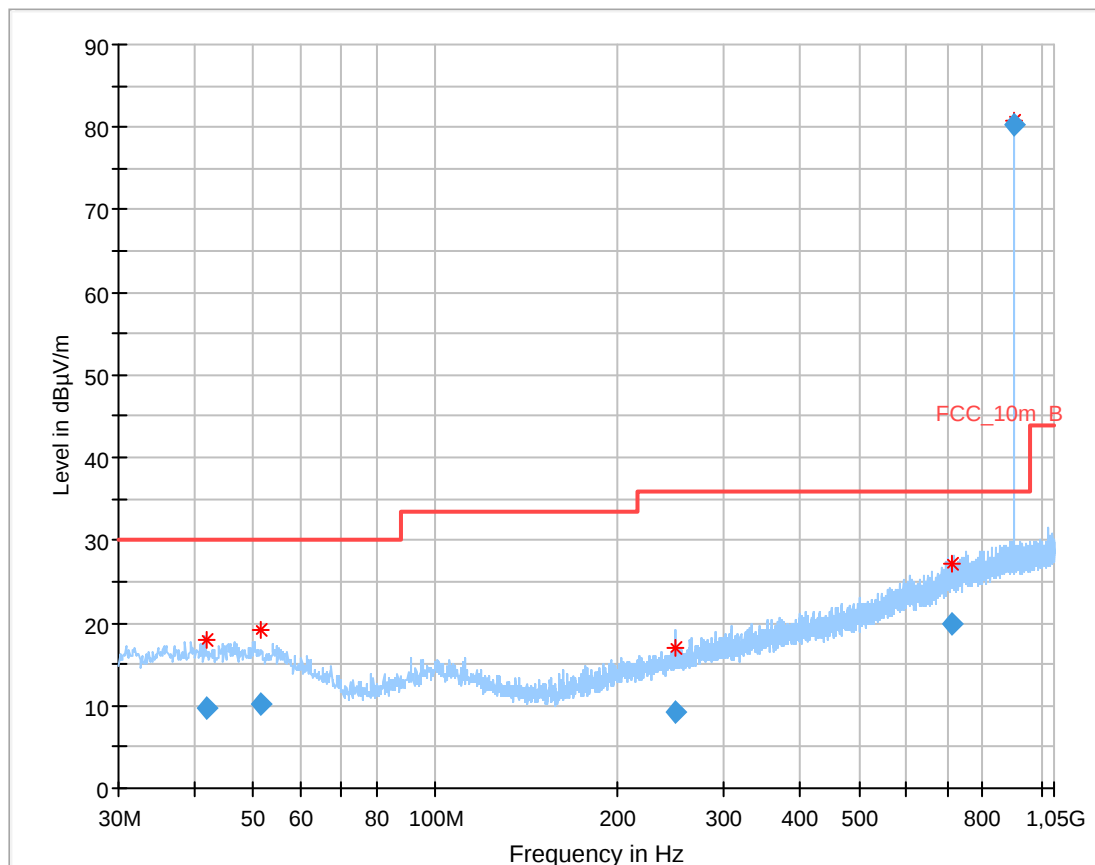
Plot 4: 1 GHz to 10 GHz, horizontal / vertical polarization – max hold, 902.375 MHz

FCC_1_10_B_5m



Frequency (MHz)	MaxPeak-MaxHold (dBμV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Comment
1059.400000	39.6	100.0	V	217.0	-4.7	
1383.400000	36.8	100.0	V	185.0	-4.8	
1806.400000	37.5	100.0	H	249.0	-4.4	
2276.200000	37.1	100.0	V	110.0	-4.2	
2710.000000	40.7	100.0	V	192.0	-3.6	
3475.900000	38.7	100.0	H	45.0	-2.1	
4168.000000	36.5	100.0	H	201.0	-2.0	
5387.500000	37.1	100.0	H	258.0	-0.6	
7930.000000	39.6	100.0	H	71.0	3.8	
8259.400000	40.8	100.0	H	339.0	4.0	
9964.900000	40.7	100.0	V	344.0	4.6	

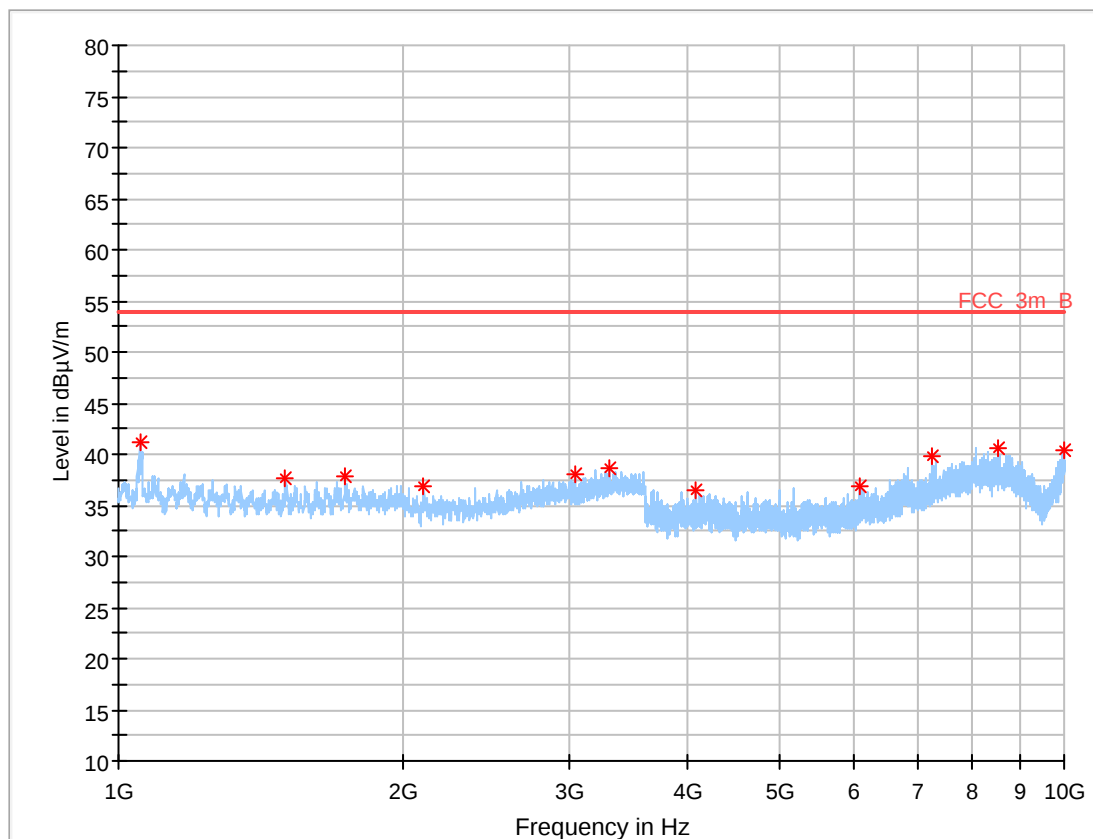
Plot 5: 30 MHz to 1 GHz, horizontal / vertical polarization – max hold; 903.425 MHz



Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
41.786250	9.73	30.00	20.27	1000.0	120.000	215.0	H	270.0	13.4
51.666000	10.12	30.00	19.88	1000.0	120.000	175.0	V	95.0	13.2
248.859000	9.25	36.00	26.75	1000.0	120.000	224.0	V	309.0	13.3
714.587100	19.97	36.00	16.03	1000.0	120.000	344.0	V	127.0	22.8
903.418650	80.30	36.00	-41.20	1000.0	120.000	100.0	H	131.0	25.2

Plot 6: 1 GHz to 10 GHz, horizontal / vertical polarization – max hold; 903.425 MHz

Full Spectrum



Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
3036.700000	38.01	54.00	15.99	---	---	100.0	H	12.0	-2.7
3306.700000	38.55	54.00	15.45	---	---	100.0	H	48.0	-2.3
7249.600000	39.89	54.00	14.11	---	---	100.0	H	108.0	2.8
6072.400000	36.80	54.00	17.20	---	---	100.0	H	170.0	0.7
1737.100000	37.79	54.00	16.21	---	---	100.0	H	181.0	-4.5
1502.200000	37.61	54.00	16.39	---	---	100.0	H	201.0	-4.8
9992.800000	40.42	54.00	13.58	---	---	100.0	V	23.0	4.8
2103.400000	36.78	54.00	17.22	---	---	100.0	V	107.0	-4.2
1053.100000	41.09	54.00	12.91	---	---	100.0	V	121.0	-4.6
4085.200000	36.38	54.00	17.62	---	---	100.0	V	159.0	-2.1
8528.500000	40.68	54.00	13.32	---	---	100.0	V	330.0	4.1

11 Test equipment and ancillaries used for tests

Typically, the calibrations of the test apparatus are commissioned to and performed by an accredited calibration laboratory. The calibration intervals are determined in accordance with the DIN EN ISO/IEC 17025. In addition to the external calibrations, the laboratory executes comparison measurements with other calibrated test systems or effective verifications. Weekly chamber inspections and range calibrations are performed. Where possible, rf-generating and signalling equipment as well as measuring receivers and analyzers are connected to an external high-precision 10 MHz reference (GPS-based or rubidium frequency standard).

In order to simplify the identification of the equipment used at some special tests, some items of test equipment and ancillaries can be provided with an identifier or number in the equipment list below (Lab/Item).

No.	Lab / Item	Equipment	Type	Manufact.	Serial No.	INV. No Cetecom	Kind of Calibration	Last Calibration	Next Calibration
1	45	Switch-Unit	3488A	HP Meßtechnik	2719A14505	300000368	g		
2	50	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2920A04466	300000580	ne		
3	n. a.	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	27.01.2014	27.01.2015
4	n. a.	Funkstörmessempfänger 20Hz-26,5GHz	ESU26	R&S	100037	300003555	k	28.02.2014	28.02.2015
5	n. a.	Antenna Tower	Model 2175	ETS-LINDGREN	64762	300003745	izw		
6	n. a.	Positioning Controller	Model 2090	ETS-LINDGREN	64672	300003746	izw		
7	n. a.	Turntable Interface-Box	Model 105637	ETS-LINDGREN	44583	300003747	izw		
8	n. a.	TRILOG Broadband Test-Antenna 30 MHz – 3 GHz	VULB9163	Schwarzbeck	295	300003787	k	12.04.2012	12.04.2014
9	n. a.	Breitband Doppelsteg-Hornantenne	BBHA9120 B	Schwarzbeck	188	300003896	k	23.05.2013	23.05.2015
10	n. a.	Signal Analyzer 20Hz-26,5GHz-150 to + 30 DBM	FsiQ26	R&S	835111/0004	300002678	Ve	15.01.2013	15.01.2015
11	n. a.	Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3088	300001032	vKI!	08.05.2013	08.05.2015
12	n. a.	Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996	ev		
13	n. a.	Switch / Control Unit	3488A	HP Meßtechnik	*	300000199	ne		
14	90	Active Loop Antenna 10 kHz to 30 MHz	6502	Kontron Psychotech	8905-2342	300000256	k	13.06.2013	13.06.2015
15	n. a.	TRILOG Broadband Test-Antenna 30 MHz – 3 GHz	VULB9163	Schwarzbeck	371	300003854	vKI!	14.10.2011	14.10.2014
16	n. a.	MXE EMI Receiver 20 Hz bis 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405	k	13.03.2014	13.03.2015

Agenda: Kind of Calibration

k calibration / calibrated
 ne not required (k, ev, izw, zw not required)
 ev periodic self verification
 Ve long-term stability recognized
 vKI! Attention: extended calibration interval
 NK! Attention: not calibrated

EK limited calibration
 zw cyclical maintenance (external cyclical maintenance)
 izw internal cyclical maintenance
 g blocked for accredited testing
 *) next calibration ordered / currently in progress

12 Observations

No observations exceeding those reported with the single test cases have been made.

Annex A Document history

Version	Applied changes	Date of release
	Initial release	2014-05-23
-A	Editorial corrections; Addition of second channel	2014-05-23
-B	Addition of second duty cycle	2014-05-27
-C	Addition of 90%-bandwidth	2014-06-03
-D	Model Name changed to A08TDB	2014-06-06

Annex B Further information**Glossary**

AVG	-	Average
DUT	-	Device under test
EMC	-	Electromagnetic Compatibility
EN	-	European Standard
EUT	-	Equipment under test
ETSI	-	European Telecommunications Standard Institute
FCC	-	Federal Communication Commission
FCC ID	-	Company Identifier at FCC
HW	-	Hardware
IC	-	Industry Canada
Inv. No.	-	Inventory number
N/A	-	Not applicable
PP	-	Positive peak
QP	-	Quasi peak
S/N	-	Serial number
SW	-	Software

Annex C Accreditation Certificate

Front side of certificate

Back side of certificate



Deutsche Akkreditierungsstelle GmbH

Befähigung gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleGBV
Unterzeichnerin der Multilateralen Abkommen
von EA, ILAC und IAF zur gegenseitigen Anerkennung

Akkreditierung



Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Prüflaboratorium

CETECOM ICT Services GmbH
Untertürkheimer Straße 6-10, 66117 Saarbrücken

die Kompetenz nach DIN EN ISO/IEC 17025:2005 besitzt, Prüfungen in folgenden Bereichen durchzuführen:

Drahtgebundene Kommunikation einschließlich xDSL
VoIP und DECT
Akustik
Funk einschließlich WLAN
Short Range Devices (SRD)
RFID
WiMax und Richtfunk
Mobilfunk (GSM / DCS, Over the Air (OTA) Performance)
Elektromagnetische Verträglichkeit (EMV) einschließlich Automotive
Produktsicherheit
SAR und Hearing Aid Compatibility (HAC)
Umweltsimulation
Smart Card Terminals
Bluetooth
Wi-Fi Services

Die Akkreditierungskunde gilt nur in Verbindung mit dem Bescheid vom 18.01.2013 mit der
Akkreditierungsnummer D-PL-12076-01 und ist gültig 17.01.2018. Sie besteht aus diesem Deckblatt, der
Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 80 Seiten.

Registrierungsnummer der Urkunde: D-PL-12076-01-01

Frankfurt am Main, 18.01.2013
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Im Auftrag
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Die auszugsweise Veröffentlichung der Akkreditierungskunde bedarf der vorherigen schriftlichen
Zustimmung der Deutschen Akkreditierungsstelle GmbH (DAKKS). Ausgenommen davon ist die separate
Weiterverbreitung des Deckblatts durch die umseitig genannte Konformitätsbewertungsstelle in
unveränderter Form.

Es darf nicht der Anschein erweckt werden, dass sich die Akkreditierung auch auf Bereiche erstreckt,
die über den durch die DAKKS bestätigten Akkreditierungsbereich hinausgehen.

Die Akkreditierung erfolgte gemäß des Gesetzes über die Akkreditierungsstelle (AkkStelleG) vom
31. Juli 2009 (BGBl. I S. 2625) sowie der Verordnung (EG) Nr. 765/2008 des Europäischen Parlaments
und des Rates vom 9. Juli 2008 über die Vorschriften für die Akkreditierung und Marktüberwachung
im Zusammenhang mit der Vermarktung von Produkten (Abl. L 218 vom 9. Juli 2008, S. 30).
Die DAKKS ist Unterzeichnerin der Multilateralen Abkommen zur gegenseitigen Anerkennung der
European co-operation for Accreditation (EA), des International Accreditation Forum (IAF) und
der International Laboratory Accreditation Cooperation (ILAC). Die Unterzeichner dieser Abkommen
erkennen ihre Akkreditierungen gegenseitig an.

Der aktuelle Stand der Mitgliedschaft kann folgenden Webseiten entnommen werden:
EA: www.european-accreditation.org
ILAC: www.ilac.org
IAF: www.iaf.nu

Note:

The current certificate including annex is published on our website (see link below) or may be received from CETECOM ICT Services on request.

<http://www.cetecom.com/eu/de/cetecom-group/europa/deutschland-saarbruecken/akkreditierungen.html>