

Test Report

Customer:

Continental Automotive GmbH

Siemenstrasse 12
93055 Regensburg
Germany

Tel.: +49 941 790-0

RF test report

160637-AU01+W01



Industry Industrie
Canada Canada

Continental Automotive GmbH

Transceiver

NCMF1_01



The test result refers exclusively to the tested model.
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EMV **TESTHAUS** GmbH

Gustav-Hertz-Straße 35
94315 Straubing
Tel.: +49 9421 56868-0
Fax: +49 9421 56868-100
Email: info@emv-testhaus.com

Accreditation:



FCC facility registration number: 221458
Test Firm Type "2.948 listed": Valid until 2017-04-22
Test Firm Type "accredited": Valid until 2017-06-09
MRA US-EU, FCC designation number: DE0010
BnetzA-CAB-02/21-02/04 Valid until 2018-11-27

Industry Canada test site numbers with registration expiry date:
3472A-1, expiring 2018-11-09
3472A-2, expiring 2018-11-12

Test Laboratory:

EMV **TESTHAUS** GmbH
Gustav-Hertz-Straße 35
94315 Straubing
Germany

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1 Test regulations

47 CFR Part 2: 10-2015	Code of Federal Regulations Part 2 (Frequency allocation and radio treaty matters; General rules and regulations) of the Federal Communication Commission (FCC)
47 CFR Part 15: 10-2015	Code of Federal Regulations Part 15 (Radio Frequency Devices) of the Federal Communication Commission (FCC)
ANSI C63.10:2013-06	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
ICES-003 Issue 6, January 2016	Spectrum Management and Telecommunications Interference-Causing Equipment Standard Information Technology Equipment (ITE) – Limits and methods of measurement
RSS-Gen Issue 4, November 2014	Spectrum Management and Telecommunications Radio Standards Specification General Requirements and Information for the Certification of Radiocommunication Equipmment
RSS-102 Issue 5, March 2015	Spectrum Management and Telecommunications Radio Standards Specification Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)
RSS-210 Issue 9, August 2016	Spectrum Management and Telecommunications Radio Standards Specification Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment



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2 Summary of test results

Standard	Test result
47 CFR Part 15, section 15.209, 15.111	Passed
RSS-210 Issue 9 Section 4.3 (with appropriate references to RSS-Gen Issue 4)	Passed

Straubing, November 16, 2016



Martin Müller
Test engineer
EMV **TESTHAUS** GmbH



Rainer Heller
Head of EMC/Radio department
EMV **TESTHAUS** GmbH



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3 Equipment under Test (EUT)

Product type: Transceiver
Model Name: NCMF1_01
Applicant: Continental Automotive GmbH
Manufacturer: Continental Automotive GmbH
Serial number: #3
FCC ID: KR5NCMF101
IC certification number: 7812D-NCMF101
Application frequency band: n/a
Frequency range: 125 kHz (TX) / 433,92 MHz (RX)
Operating frequency: 125 kHz (TX) / 433,92 MHz (RX)
Number of RF-channels: 1
Modulation: ASK

Highest frequency generated or used in the device or on which the device operates or tunes: 21.9 MHz

Antenna type(s): PCB antenna
 detachable not detachable

Power supply: Battery powered
nominal: 12.8 VDC
minimal: 9.0 VDC
maximal: 16.0 VDC

Temperature range: -40°C to +85°C



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3.1 Photo documentation

For external photos of the EUT see annex B, for internal ones see annex C.
For photos taken during testing including EUT positions see annex A.

3.2 Short description of the EUT

Transceiver for vehicles.

3.3 Operation mode

EUT was set to pulsed wave (125 kHz).
According to customer information there is no possibility to set another mode of operation.
The 433,92 MHz receiver was continuously activated.

The EUT was tested in 3 orthogonal positions. These are documented in annex A.



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3.4 Configuration

The following peripheral devices and interface cables were connected during the tests:

Device	Model:	Serial or inventory no.
Transceiver	NCMF1_01	#3
Door antenna 1	REF SI581 03 113 00	----
Door antenna 2	REF SI581 03 113 00	----
Kazashi	350µH/7 Ohms	----
Middle antenna	28E6 5RA0A	----
Bumper antenna	285E4 JK60A or 285E5 JK60A	----
TEST BOX	Test box NewCFM1	----
DC power supply (120 V / 60 Hz <-> 9.0 V DC)	Statron 3231.1	E00017
AC power supply (230 V / 50 Hz <-> 120 V / 60 Hz)	Chroma 61605	ASQ000000305

3.5 Used cables

Port	Classification	Cable type	Cable length	
			used	maximum
DC power	dc power	Unshielded	1.0 m	---



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4 Radiated emission measurement (<1 GHz)

according to 47 CFR Part 15, section 15.205(a), 15.209(a), 15.111(b) and
RSS-210, section 4.3 with RSS-Gen, sections 8.10 ,8.9 and 7.1.2

4.1 Test Location

- Scan with peak detector in 3 m CDC.
- Final CISPR measurement with quasi peak detector on 3 m open area test site.

Description	Manufacturer	Inventory No.
CDC	Albatross Projects	E00026
Open area test site (OATS)	EMV TESTHAUS GmbH	E00354

4.2 Test instruments

	Description	Manufacturer	Inventory No.
<input type="checkbox"/>	ESU 26 (AC)	Rohde & Schwarz	W00002
<input checked="" type="checkbox"/>	ESCI (CDC & OATS)	Rohde & Schwarz	E00001
<input type="checkbox"/>	ESR7 (SAC)	Rohde & Schwarz	E00739
<input checked="" type="checkbox"/>	VULB 9163 (OATS)	Schwarzbeck	E00013
<input checked="" type="checkbox"/>	VULB 9160 (CDC)	Schwarzbeck	E00011
<input type="checkbox"/>	VULB 9162-041 (SAC)	Schwarzbeck	E00643
<input checked="" type="checkbox"/>	HFH2-Z2 (CDC & OATS)	Rohde & Schwarz	E00060
<input checked="" type="checkbox"/>	Cable set CDC	Huber + Suhner	E00459, E00446
<input type="checkbox"/>	Cable set AC 3 m	Huber + Suhner	W00095, E00432, E00307
<input checked="" type="checkbox"/>	Cable set OATS 3 m	Huber + Suhner	E00453, E00456, E00458
<input type="checkbox"/>	Cable set SAC 3 m	Huber + Suhner	E00804, E00806, E00807



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4.3 Limits

The field strength of any emissions (including spurious emissions) falling into restricted bands as specified in 15.205(a) shall not exceed the general radiated emission limits as specified in 15.209.

Frequency [MHz]	Field strength Fs [$\mu\text{V/m}$]	Field strength [dB $\mu\text{V/m}$]	Measurement distance d [m]
0.009 – 0.490	266.6 – 4.9	48.5 – 13.8	300
0.490 – 1.705	48.98 – 14.08	33.8 – 22.97	30
1.705 – 30.0	30	29.54	30
30 – 88	100	40	3
88 – 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Note:

Limits for 3 m test distance are calculated according to ANSI C63.10, section 6.4.4.2 “Extrapolation from the measurement of a single point”.

According to 15.35(b) on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. When average radiated emission measurements are specified, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions of 20 dB above the maximum permitted average emission limit.



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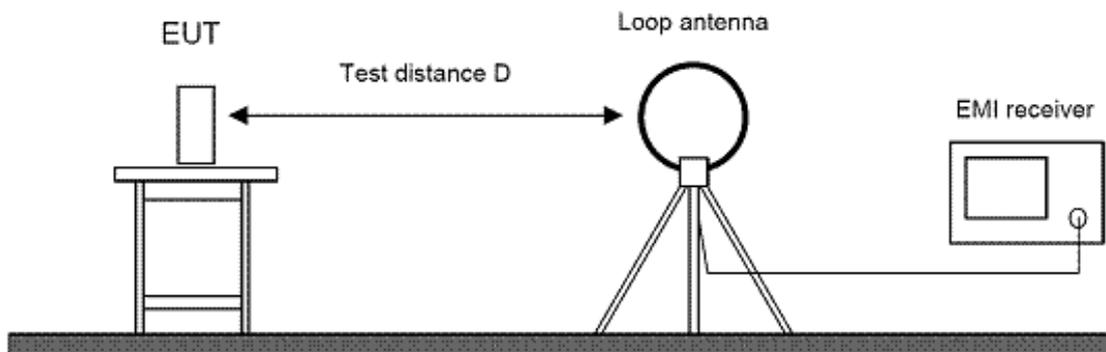
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4.4 Test procedure

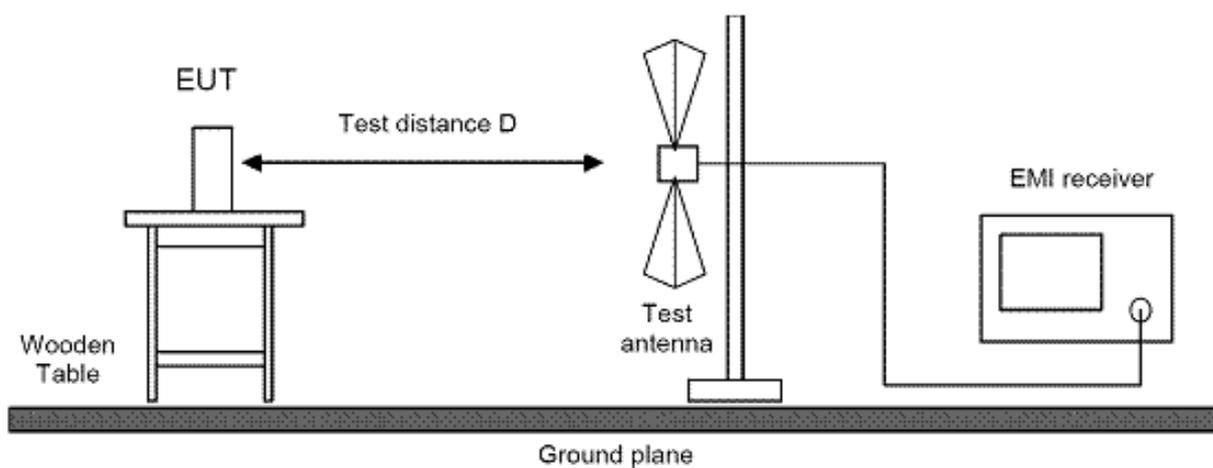
1. EUT was configured according to ANSI C63.10. It was placed on the top of the turntable 0.8 meter above ground. The receiving antenna was placed 3 meters from the turntable. The test setup was placed inside a compact diagnostic chamber.
2. EUT and all peripherals were powered on.
3. The broadband antenna was set to vertical polarization.
4. The EMI receiver performed a scan from 30 MHz to 1000 MHz with peak detector peak and measurement bandwidth set to 120 kHz.
5. The turn table was rotated to 6 different positions ($360^\circ / 6$) and the antenna polarization was changed to horizontal.
6. Test procedure at step 4 and 5 was repeated.
7. The test setup was then placed in an OATS at 3 m distance and all peak values over or with less margin to the limit than 6dB were marked and re-measured with a quasi-peak detector.
8. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
9. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization. The highest value was recorded.
10. For emissions below 30 MHz measurements were done using a loop antenna. Prescan was performed with peak detector and final measurements with quasi-peak except for the frequency bands 9 to 90 kHz and 110 to 490 k Hz where average detector applies. Antenna height was not changed during this test. Appropriate CISPR bandwidths of 200 Hz for frequencies up to 150 kHz and 9 or 10 kHz for frequencies above were used.



4.5 Test setup



Picture 1: Test setup for radiated emission measurement (< 30 MHz)



Picture 2: Test setup for radiated emission measurement (< 1 GHz)

4.6 Test deviation

There is no deviation from the standards referred to.

4.7 Test results

Temperature:	21°C	Humidity:	49%
Tested by:	Martin Müller	Test date:	2016-09-26

Radiated Emission Measurement 9 kHz - 30 MHz

Recalculation factor is determined according to ANSI C63.10, section 6.4.4.2 "Extrapolation from the measurement of a single point":

$$d_{\text{near field}} = 47.77 / f_{\text{MHz}}, \text{ or}$$

$$f_{\text{MHz}} = 47.77 / d_{\text{near field}}$$

The frequency f_{MHz} at which the near field distance is equal to the limit and/or test distance is important for selection of the right formula for determining the recalculation factor:

$$f_{\text{MHz}}(300 \text{ m}) \approx 0.159 \text{ MHz}$$

$$f_{\text{MHz}}(30 \text{ m}) \approx 1.592 \text{ MHz}$$

$$f_{\text{MHz}}(3 \text{ m}) \approx 15.923 \text{ MHz}$$

For $9 \text{ kHz} \leq f \leq 159 \text{ kHz}$ and $490 \text{ kHz} < f \leq 1.592 \text{ MHz}$:

$$\text{Recalculation factor} = -40 \log(d_{\text{limit}} / d_{\text{measure}})$$

For $159 \text{ kHz} < f \leq 490 \text{ kHz}$ and $1.592 \text{ MHz} < f \leq 15.923 \text{ MHz}$:

$$\text{Recalculation factor} = -40 \log(d_{\text{near field}} / d_{\text{measure}}) - 20 \log(d_{\text{limit}} / d_{\text{near field}})$$

For $f > 15.923 \text{ MHz}$:

$$\text{Recalculation factor} = -20 \log(d_{\text{limit}} / d_{\text{near field}})$$

The limits in the graphics and value lists are derived from the general radiated emission limits as specified in 15.209 using the recalculation factor as described above.



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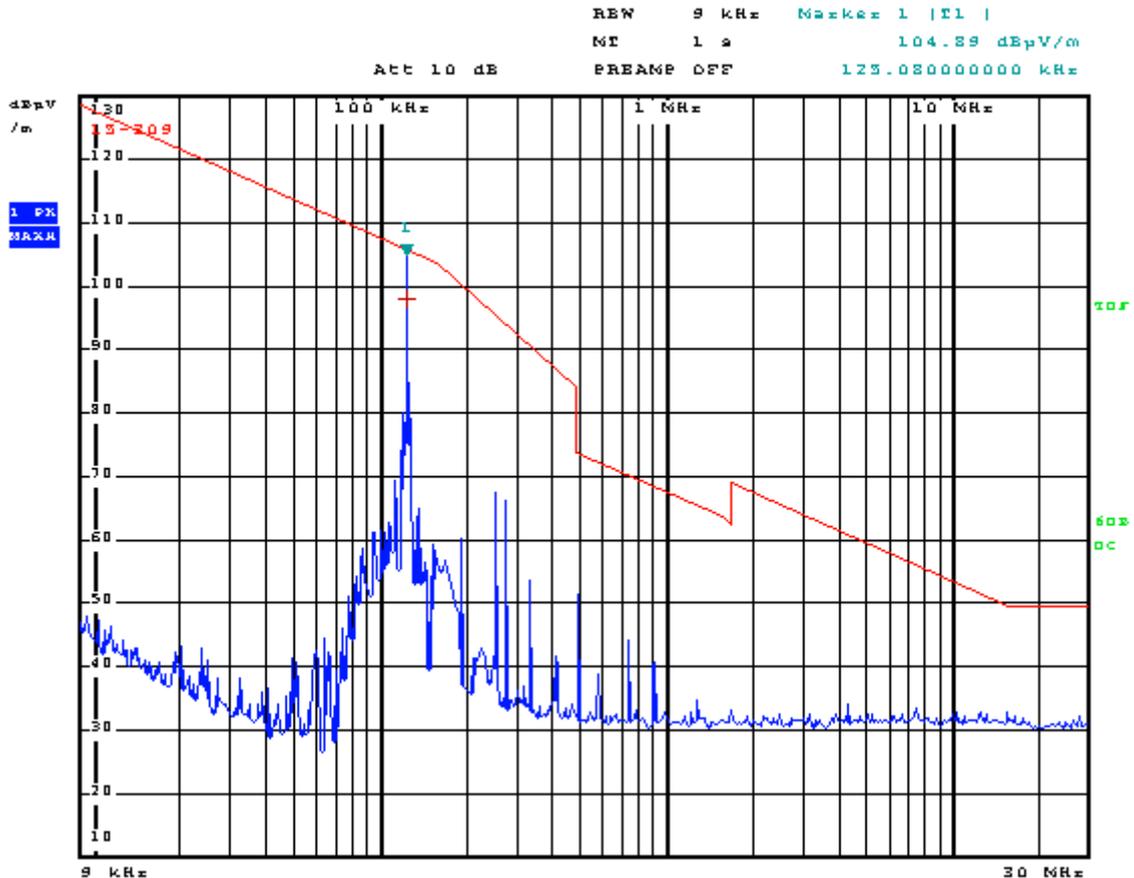
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Frequency range	Step size	IF Bandwidth	Detector		Measurement Time		Preamplifier
			Prescan	Final scan	Prescan	Final scan	
9 kHz – 90 kHz	80 Hz	200 Hz	PK	AV	1 ms	1 s	off
90 kHz – 110 kHz	80 Hz	200 Hz	PK	QPK	1 ms	1 s	off
110 kHz – 150 kHz	80 Hz	200 Hz	PK	AV	1 ms	1 s	off
150 kHz – 490 kHz	4 kHz	9 kHz	PK	AV	1 ms	1 s	off
490 kHz – 30 MHz	4 kHz	9 kHz	PK	QPK	1 ms	1 s	off

The following picture shows the worst-case-emissions for the spurious emissions at EUT-position 3, antenna in line.



Picture 3: Radiated emission 9 kHz – 30 MHz @ 3m distance

Frequency [kHz]	Measured value [dBµV/m]	Detector	Recalculation factor [dB]	Field strength [dBµV/m]	Limit [dBµV/m]	Margin	Result
125.080	98.02	AV	-80.0	18.02	25.66	7.64	Pass
125.080	104.89	PK	-80.0	24.89	45.66	20.77	Pass



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Recalculation factor is determined according to ANSI C63.10, section 6.4.4.2 "Extrapolation from the measurement of a single point":

$$d_{\text{near field}} = 47.77 / f_{\text{MHz}}$$

$$\text{Recalculation factor} = -40 \log(d_{\text{limit}} / d_{\text{measure}})$$

f_{MHz} [kHz]	$d_{\text{near field}}$ [m]	d_{measure} [m]	d_{limit} [m]	Recalculation factor [dB]
125.080	381.916	3.0	300.0	-80.0



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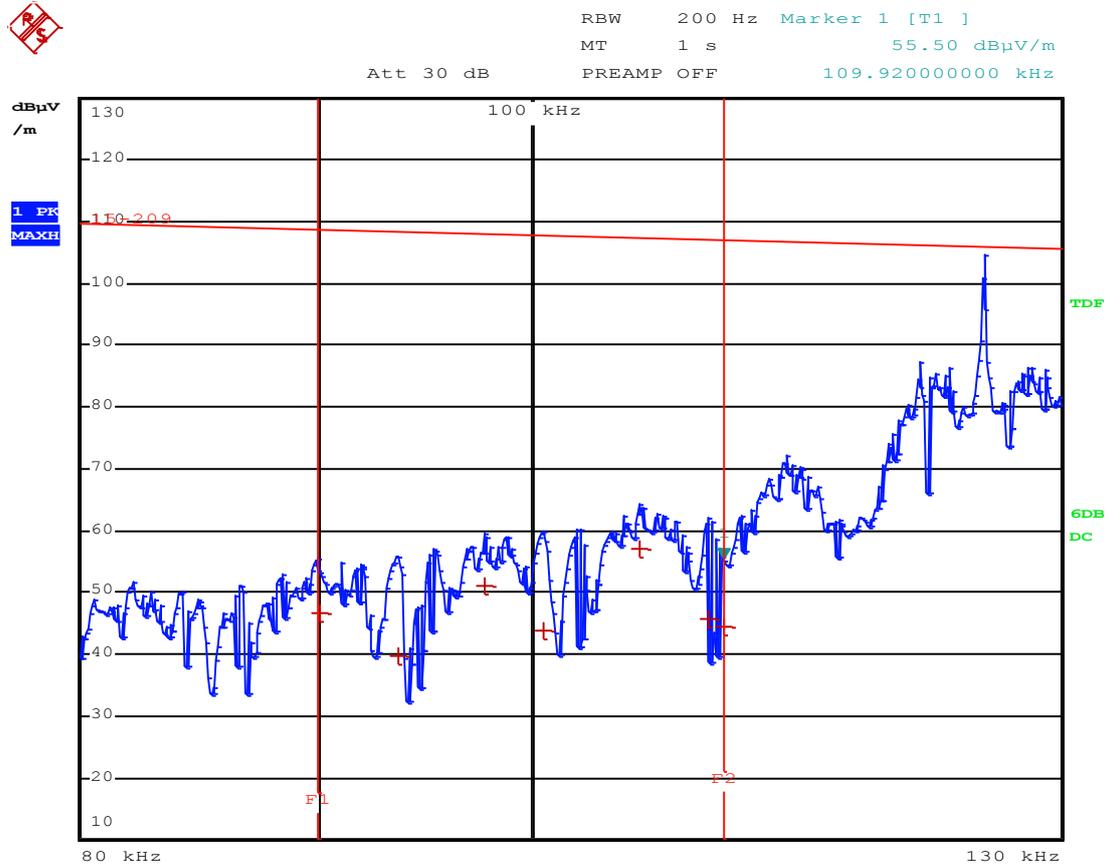
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Restricted band of operation from 0.090 MHz to 0.110 MHz

The following pictures show the worst-case-emissions for the spurious emissions at EUT-position 3, antenna in line.



Picture 4: Restricted band of operation, QP @ 3m distance

Frequency [kHz]	Measured value [dBµV/m]	Detector	Recalculation factor [dB]	Field strength [dBµV/m]	Limit [dBµV/m]	Margin	Result
90.00	46.59	QP	-80.0	-33.41	28.52	61.93	Pass
93.52	39.87	QP	-80.0	-40.13	28.19	68.32	Pass
97.68	51.20	QP	-80.0	-28.80	27.81	56.61	Pass
100.56	43.89	QP	-80.0	-36.11	27.56	63.67	Pass
105.44	57.10	QP	-80.0	-22.90	27.14	50.04	Pass
109.12	45.64	QP	-80.0	-34.36	26.85	61.21	Pass
109.92	44.59	QP	-80.0	-35.41	26.78	62.19	Pass

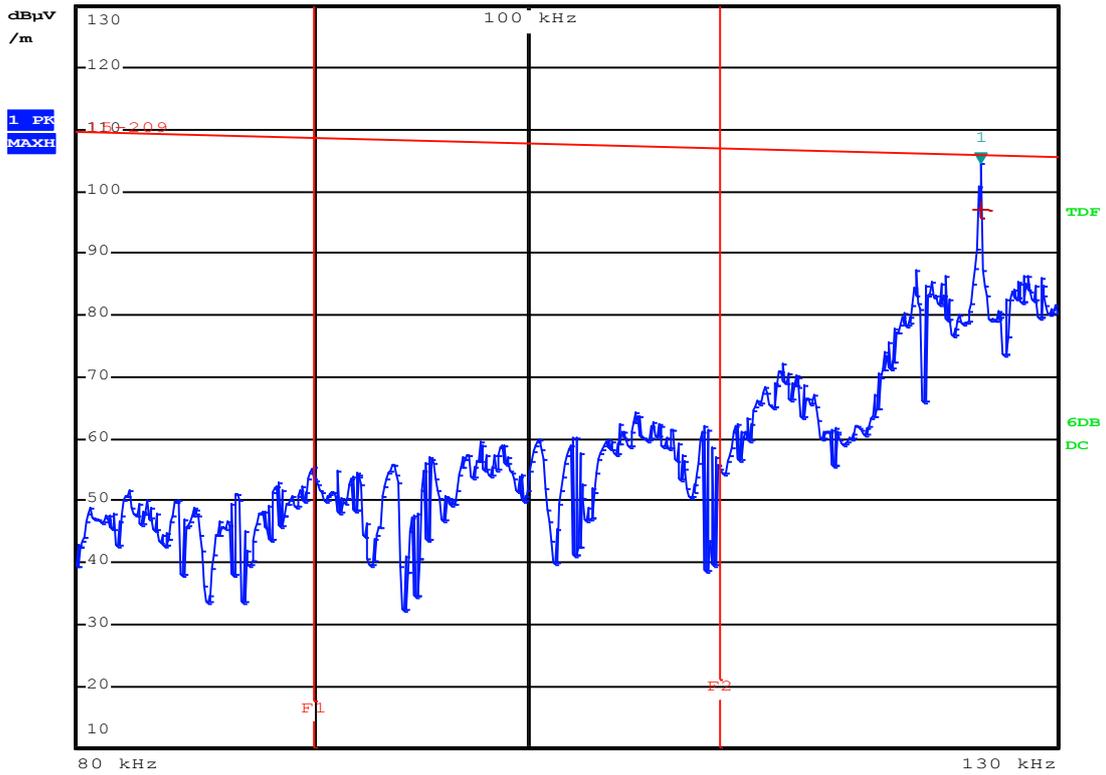


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RBW 200 Hz Marker 1 [T1]
 MT 1 s 104.59 dBµV/m
 Att 30 dB PREAMP OFF 125.04000000 kHz



Picture 5: Restricted band of operation, AV @ 3m distance

Frequency [kHz]	Measured value [dBµV/m]	Detector	Recalculation factor [dB]	Field strength [dBµV/m]	Limit [dBµV/m]	Margin	Result
125.04	97.07	AV	-80.0	17.07	25.66	8.59	Pass



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Recalculation factor is determined according to ANSI C63.10, section 6.4.4.2 "Extrapolation from the measurement of a single point":

$$d_{\text{near field}} = 47.77 / f_{\text{MHz}}$$

$$\text{Recalculation factor} = -40 \log(d_{\text{limit}} / d_{\text{measure}})$$

f_{MHz} [MHz]	d_{near field} [m]	d_{measure} [m]	d_{limit} [m]	Recalculation factor [dB]
90.00	530.78	3.0	300.0	-80.0
93.52	510.80	3.0	300.0	-80.0
97.68	489.05	3.0	300.0	-80.0
100.56	475.04	3.0	300.0	-80.0
105.44	453.05	3.0	300.0	-80.0
109.12	437.77	3.0	300.0	-80.0
109.92	434.59	3.0	300.0	-80.0
125.04	382.04	3.0	300.0	-80.0



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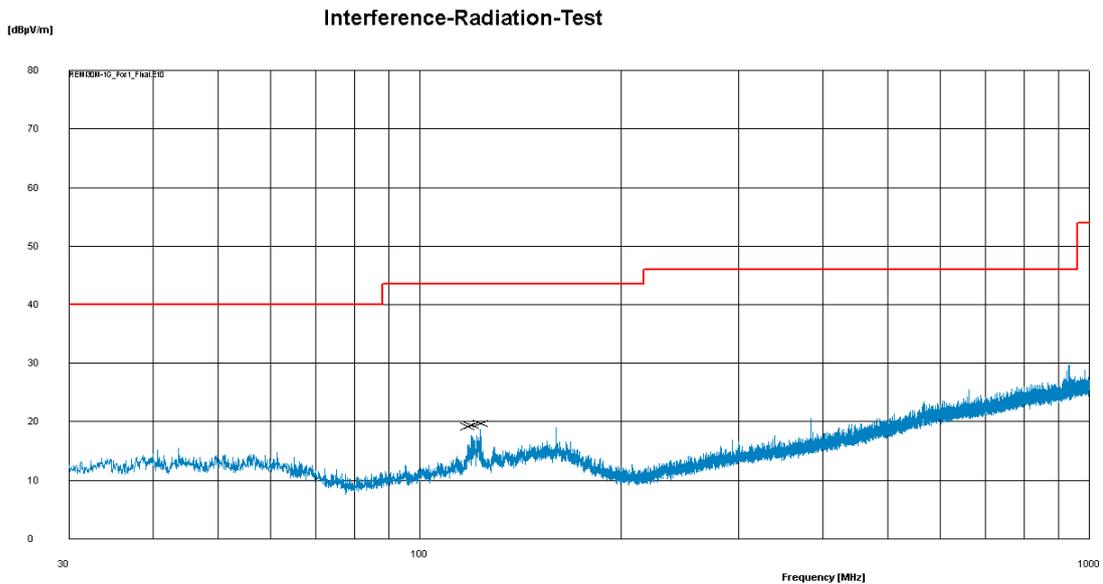
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Radiated Emission Measurement 30 MHz - 1000 MHz

Frequency range	Polarisation	Step size	IF Bandwidth	Detector		Measurement Time		Pre-amplifier
				Prescan	Final scan	Prescan	Final scan	
30 MHz – 1 GHz	H / V	60 kHz	120 kHz	PK	QPK	1 ms	1 s	20 dB

The following pictures show the worst-case-emissions at EUT-position 1.



f [MHz]	E _{final} [dBV/m]	Limit [dBµV/m]	Height [cm]	TT [°]	Polarisation	Result
118.08	19.13	43.52	100	58.8	V	Pass
119.64	19.35	43.52	100	68.7	V	Pass
123.42	19.70	43.52	100	87.3	V	Pass

Picture 6: Radiated emission 30 MHz - 1000MHz @ 3m distance



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5 Radiated emission measurement (>1 GHz)

according to 47 CFR Part 15, section 15.209(a),
RSS-210, section 4.3 with RSS-Gen, section 8.9 and 7.1.2

5.1 Test Location

- Scan with peak and average detector in 3 m semi anechoic chamber.
- Final measurement with peak and average detector in 3 m semi anechoic chamber.

Description	Manufacturer	Inventory No.
Semi anechoic chamber (SAC)	Albatross Projects GmbH	E00716

5.2 Test instruments

	Description	Manufacturer	Inventory No.
<input type="checkbox"/>	ESCI (OATS)	Rohde & Schwarz	E00552
<input type="checkbox"/>	ESU 26 (AC)	Rohde & Schwarz	W00002
<input type="checkbox"/>	ESCI (CDC)	Rohde & Schwarz	E00001
<input checked="" type="checkbox"/>	ESR7 (SAC)	Rohde & Schwarz	E00739
<input type="checkbox"/>	VULB 9163 (OATS)	Schwarzbeck	E00013
<input type="checkbox"/>	VULB 9160 (CDC)	Schwarzbeck	E00011
<input type="checkbox"/>	VULB 9162-041 (SAC)	Schwarzbeck	E00643
<input type="checkbox"/>	HFH2-Z2 (CDC & OATS)	Rohde & Schwarz	E00060
<input checked="" type="checkbox"/>	BBHA 9120D	Schwarzbeck	E00053
<input checked="" type="checkbox"/>	AMF-5D-00501800	Miteq	W00089
<input type="checkbox"/>	Cable set CDC	Huber + Suhner	E00459, E00446
<input type="checkbox"/>	Cable set AC 3 m	Huber + Suhner	W00095, E00432, E00307
<input type="checkbox"/>	Cable set OATS 3 m	Huber + Suhner	E00453, E00456, E00458
<input checked="" type="checkbox"/>	Cable set SAC 3 m	Huber + Suhner	E00804, E00806, E00807

Note: Although the highest frequency generated or used in the device or on which the device operates or tunes is less than 108 MHz (see clause 3) radiated emission test above 1 GHz was performed and is therefore documented in this test report.



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5.3 Limits

The field strength of any emissions including spurious emissions falling into restricted bands as specified in 15.205(a) shall not exceed the general radiated emission limits as specified in 15.209.

Frequency [MHz]	Field strength Fs [$\mu\text{V/m}$]	Field strength [dB $\mu\text{V/m}$]	Measurement distance d [m]
0.009 – 0.490	266.6 – 4.9	48.5 – 13.8	300
0.490 – 1.705	48.98 – 14.08	33.8 – 22.97	30
1.705 – 30.0	30	29.54	30
30 – 88	100	40	3
88 – 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

According to 15.35(b) on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. When average radiated emission measurements are specified, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions of 20 dB above the maximum permitted average emission limit.



5.4 Test procedure

1. The test setup is placed inside a semi anechoic chamber with floor absorbers between receiving antenna and EUT.
2. EUT and peripherals are configured according to ANSI C63.10. EUT is placed on the top of the turntable 0.8 meter above ground. EUT and all peripherals are powered on.
3. Exploratory radiated emissions measurements are performed by moving the receiving antenna over all sides of the EUT at a closer distance while observing the display of the test receiver to find the emissions to be re-tested during final radiated emission measurements. As a result a list of frequencies containing position of EUT as well as polarization of receiving antenna.
4. For final radiated emission measurements the receiving antenna is placed 3 meters from the turntable.
5. The receiving antenna is set to vertical polarization.
6. The EMI receiver performs a scan from 1000 MHz up to the frequency as specified in 15.33(a) for intentional radiator part and 15.33(b) for unintentional radiator part of EUT. The detector is set to Peak and Average with a measurement bandwidth of 1 MHz.
7. The turn table is rotated to 12 different positions ($360^\circ / 12 = 30^\circ$) and the antenna is moved between 1 m and 4 m height. The tilt of the antenna is changed automatically by changing the height of the antenna.
8. Change polarization to horizontal and repeat step 6 and 7.
9. After recording prescan values in horizontal and vertical polarization data reduction is performed using a margin of 10 dB to the appropriate limit. The critical frequencies are re-measured using a Peak and Average detector with a bandwidth set to 1 MHz. At every frequency the polarization with the emission closest to the limit is selected for final test.
10. During Final measurement the turntable is rotated by $\pm 30^\circ$ to determine the position of the highest radiation around the maximum emission found during the prescan.
11. The height of the broadband receiving antenna is varied between 1 m and 4 m above ground, the slope of the antenna is changed automatically by variation of the antenna height to find the maximum emissions field strength of both horizontal and vertical polarization. The highest value is recorded.

During pre-tests EUT-position 2 was investigated as worst-case.



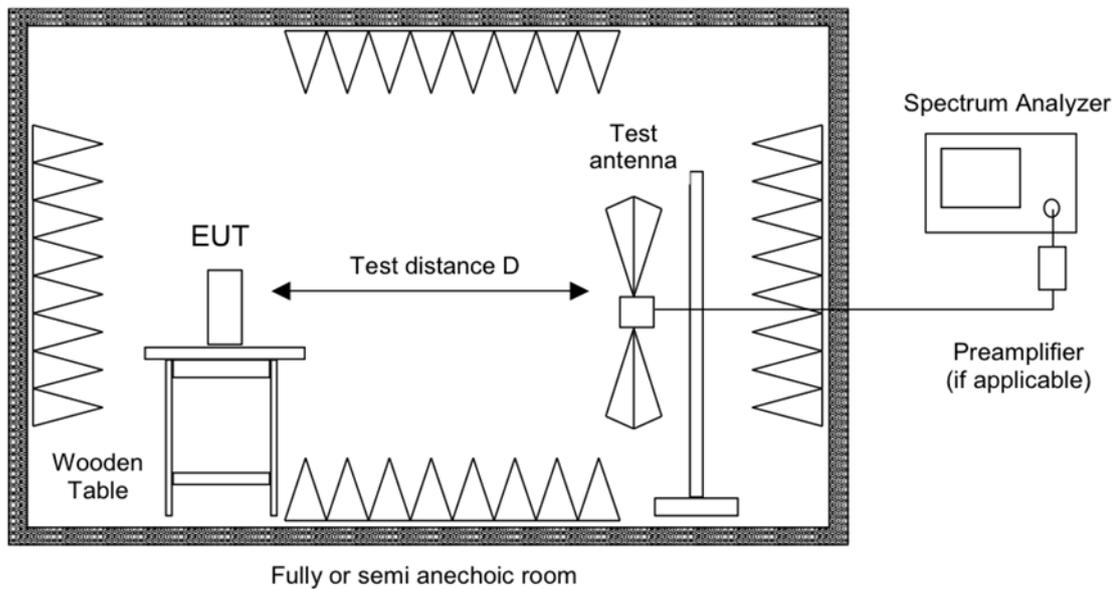
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5.5 Test setup



Picture 7: Test setup for radiated emission measurement (> 1 GHz)

5.6 Test deviation

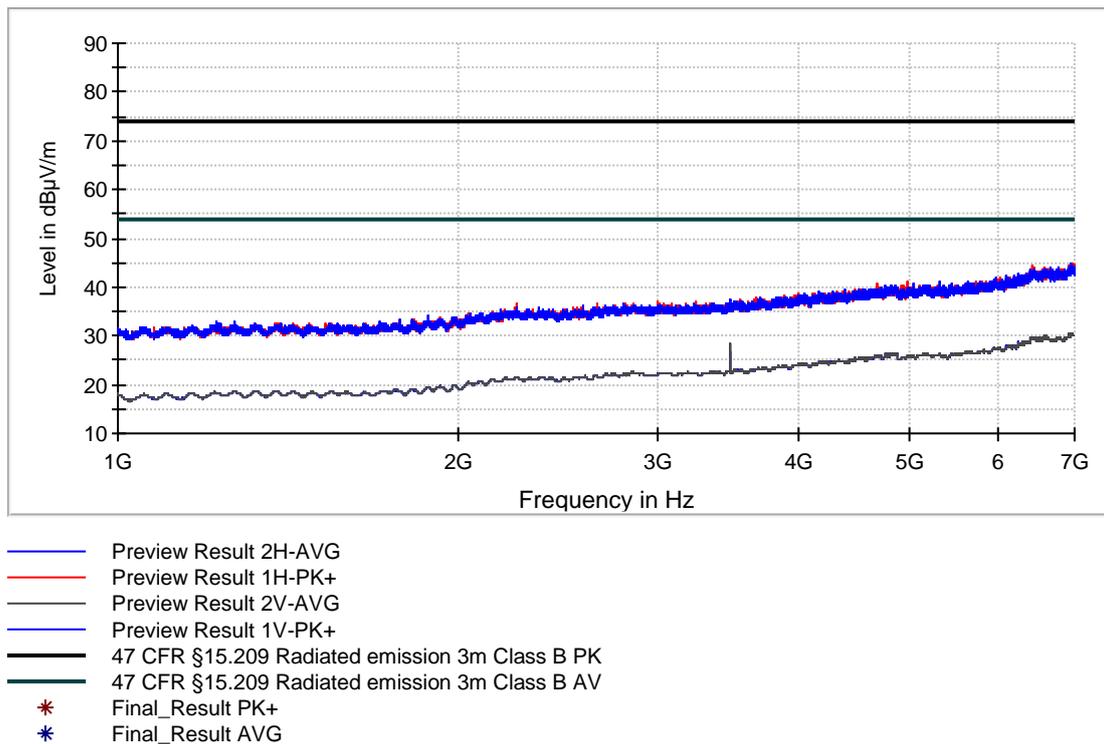
There is no deviation from the standards referred to.

5.7 Test results

Temperature:	21°C	Humidity:	51%
Tested by:	Martin Müller	Test date:	2016-10-04

Frequency range	Polarisation	Step size	IF Bandwidth	Detector		Measurement Time		Pre-amplifier
				Prescan	Final scan	Prescan	Final scan	
1 GHz - 7 GHz	H / V	250 kHz	1 MHz	PK / AV	PK / AV	1 ms	1 s	20 dB

The following pictures show the worst-case-emissions at EUT-position 1.



Picture 8: Radiated emission measurement (>1 GHz)

6 Bandwidths

according to CFR 47 Part 2, section 2.202(a), and RSS-Gen, section 6.6

6.1 Test Location

See clause 4.1 on page 10.

6.2 Test instruments

See clause 4.2 on page 10.

6.3 Limits

The bandwidths are recorded only. There are no limits specified in CFR 47 Part 15, section 15.209, and RSS-210, section 4.3

6.4 Test setup

See clause 4.5 on page 13.

6.5 Test deviation

There is no deviation from the standards referred to.



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6.6 Test results

Temperature:	22°C	Humidity:	49%
Tested by:	Martin Müller	Test date:	2016-09-26

Occupied bandwidth (99 %)

Test procedure

When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured. The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used given that a peak or peak hold may produce a wider bandwidth than actual.

The trace data points are recovered and directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded. The span between the two recorded frequencies is the occupied bandwidth. For this purpose the appropriate measurement function of the spectrum analyzer is used.



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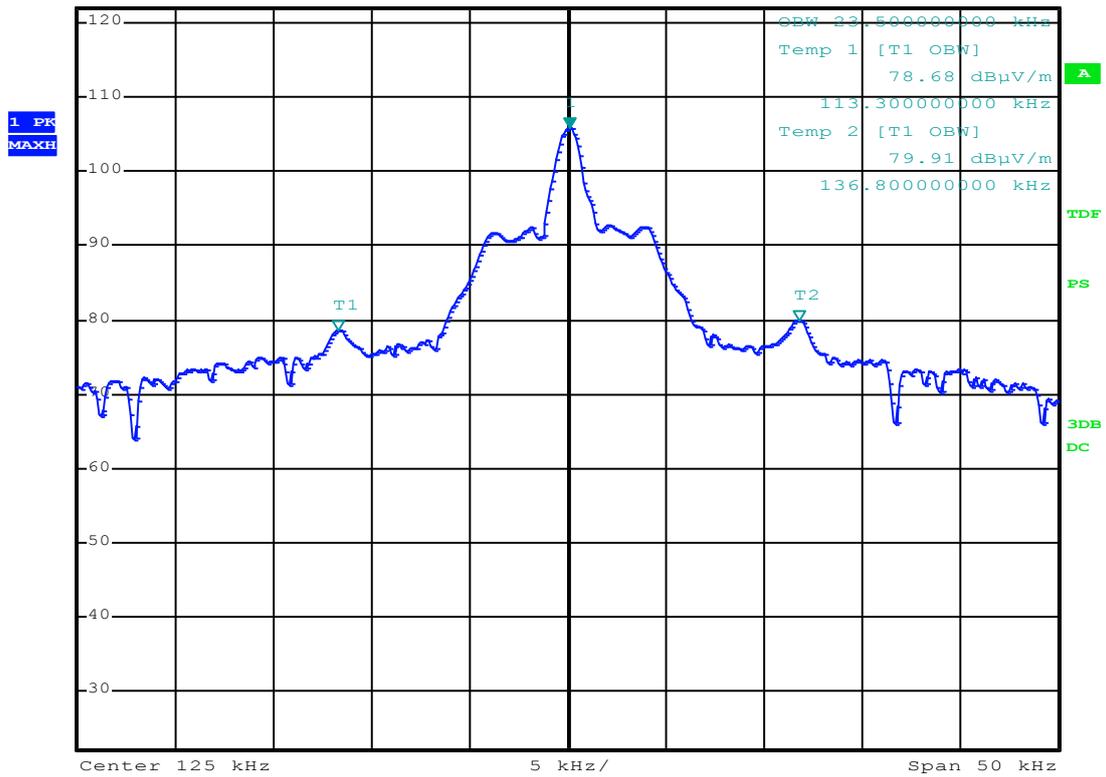
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Ref 122 dB μ V/m *Att 30 dB *RBW 1 kHz Marker 1 [T1] VBW 3 kHz 105.81 dB μ V/m SWT 50 ms 125.100000000 kHz



Picture 9: Occupied bandwidth (99 %)

Measured occupied bandwidth (99 %): 23.500 kHz



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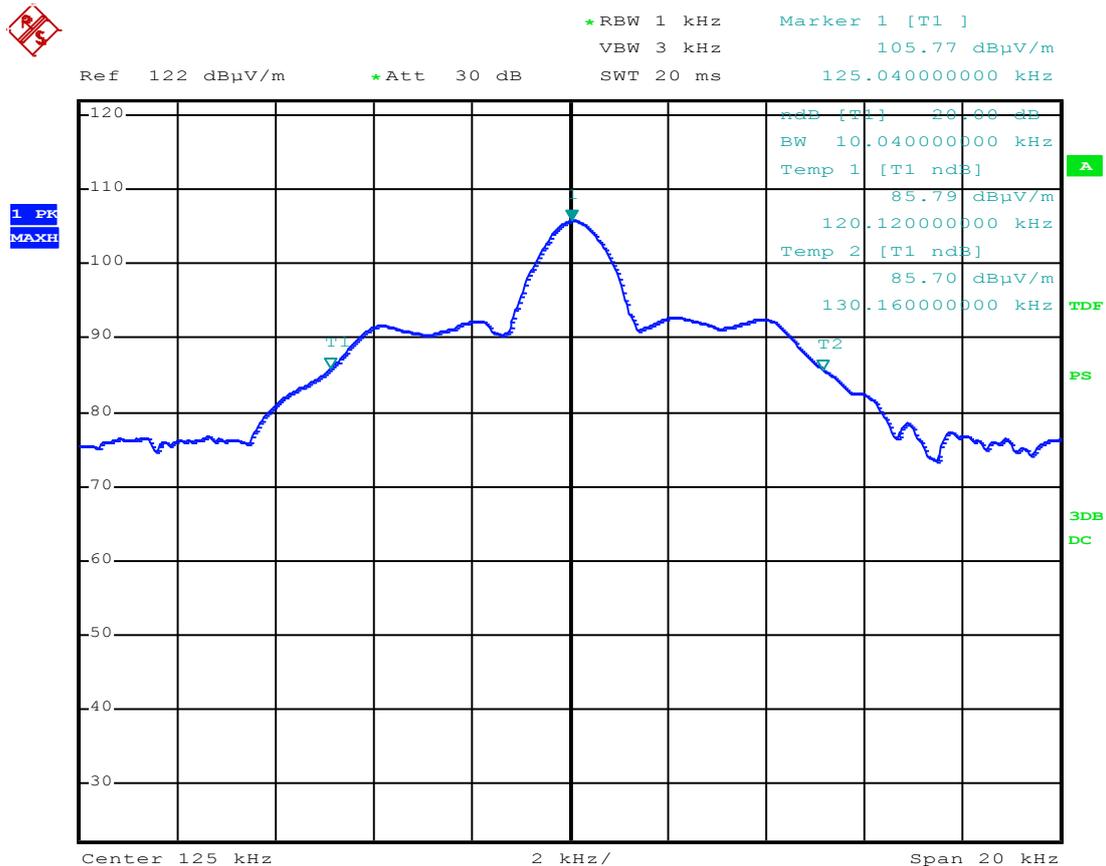
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-20 dB emission bandwidth

Test procedure

Where indicated, the -20 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 20 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.



Picture 10: -20 dB emission bandwidth

Measured -20 dB emission bandwidth: 10.040 kHz



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7 Equipment calibration status

Description	Modell number	Serial number	Inventory number(s)	Last calibration	Next calibration
Test receiver	ESCI	100013	E00001	2016-02	2018-02
Test receiver	ESR7	101059	E00739	2016-02	2018-02
Broadband antenna	VULB 9160	9160-3050	E00011	2014-09	2017-09 (see note 1)
Broadband antenna	VULB 9163	9163-114	E00013	2015-09	2017-09
Broadband horn antenna	BBHA 9120D	9120D-593	E00053	2014-03	2017-03
Loop antenna	HFH2-Z2	871398/0050	E00060	2016-09	2018-09
Preamplifier	AMF-5D-00501800	1319793	W00089	2015-05	2017-05
Compact diagnostic chamber (CDC)	VK041.0174	D62128-A502-A69-2-0006	E00026	N/A	
Open area test site (OATS)	OATS	---	E00354	2015-10	2017-10
Semi-anechoic chamber (SAC)	P26726	C62128-A520-A643-x-0006	E00716	2015-03	2017-03
Cable set CDC	Cables no. 37 and 38	---	E00459 E00460	2015-05	2017-05
Cable set OATS 3 m	Cables no. 19, 34 and 36	---	E00453 E00456 E00458	2015-11	2017-11
Cable set SAC 3 m	Cables no. 57, 58 and 59	---	E00453 E00455 E00458	2015-10	2017-10

Table 1: Equipment calibration status

Note 1: Used for prescans only.

Note 2: Expiry date of measurement facility registration by

- FCC (registration number 221458): 2017-04
- Industry Canada (test site numbers 3472A-1 and 3472A-2): 2018-11



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8 Measurement uncertainty

Description	Max. deviation	k
Conducted emission AMN (9kHz to 30 MHz)	± 4.0 dB	2
Radiated emission open field (30 MHz to 1 GHz)	± 4.5 dB	2
Radiated emission absorber chamber (> 1000 MHz)	± 5.4 dB	2

Table 2: Measurement uncertainty

The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k. For a confidence level of 95 % the coverage factor k is 2.



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94315 Straubing
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9 Revision History

Date	Description	Person	Revision
2016-11-16	First edition	M. Müller	0



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