

TEST REPORT

Test report no.: 1-7882/14-01-07



Deutsche
Akkreditierungsstelle
D-PL-12076-01-00

Testing laboratory

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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-12076-01-00

Applicant

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Ludwig-Krohne-Str. 5
47058 Duisburg / GERMANY
Phone: +49 234 588 80-152
Fax: +49 234 588 80-101
Contact: Ouzounis Charalambos
e-mail: c.ouzounis@krohne.com
Phone: +49 234 588 80-152

Manufacturer

KROHNE SAS
2 allée des Ors – BP98
26103 Romans / FRANCE

Test standard/s

47 CFR Part 15

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

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

Test Item

Kind of test item: Tank Level Probing Radar
Model name: OPTIWAVE 7400 C
FCC ID: Q6BFMCW24G74T

Frequency: 24.05 GHz – 26.05 GHz
Antenna: horn or PEEK antenna
Power Supply: 14 – 36 V DC
Temperature Range: -40 °C to +80 °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:


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Radio Communications & EMC

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Radio Communications & EMC

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

2.2 Application details

Date of receipt of order:	2014-04-14
Date of receipt of test item:	2014-05-05
Start of test:	2014-05-06
End of test:	2014-05-14
Person(s) present during the test:	-/-

3 Test standard/s

Test standard	Date	Test standard description
47 CFR Part 15	01.10.2013	Title 47 of the Code of Federal Regulations; Chapter I; Part 15 – Radio frequency devices

4 Test laboratories sub-contracted

None

5 Test environment

Temperature:	T_{nom}	+22 °C during room temperature tests
	T_{max}	-/-
	T_{min}	-/-
Relative humidity content:		45 %
Barometric pressure:		not relevant for this kind of testing
Power supply:	V_{nom}	20.0 V DC
	V_{max}	36.0 V DC
	V_{min}	14.0 V DC

6 Test item

Kind of test item	:	Tank Level Probing Radar
Type identification	:	OPTIWAVE 7400 C
S/N serial number	:	pre-series model
HW hardware status	:	pre-series model
SW software status	:	1.02.02
Frequency band	:	24.05 GHz – 26.05 GHz
Type of modulation	:	FMCW
Number of channels	:	1
Antenna	:	external horn or PEEK antenna
Power supply	:	14 – 36 V DC, < 30 mA
Temperature range	:	-40 °C to +80 °C

6.1 Additional information

The content of the following annexes is defined in the QA. It may be that not all of the listed annexes are necessary for this report, thus some values in between may be missing.

Test setup- and EUT-photos are included in test report: 1-7882/14-01-07_AnnexA
 1-7882/14-01-07_AnnexB
 1-7882/14-01-07_AnnexC

EUT-description:

The Tank Level Probing Radar OPTIWAVE 7400 is intended to measure the level of liquids or in some cases the level of solids or granulates contained in a tank.

The OPTIWAVE 7400 is always installed at the top of closed metallic tanks or reinforced concrete tanks or similar attenuating structure. The antenna of the device is thereby pointing in a downward direction transmitting the microwave energy down to the surface of the product where it is reflected back to device in order to calculate the distance between top of the tank and the product surface.

In order to react on different application scenarios which are most popular in chemical industries the device can be equipped with different antennas and flanges each designed for special purposes.



Following antennas could be installed depending on application:

Antenna type	nominal antenna gain (dBi)
Wave Horn DN 40 (stainless steel)	19.0
Wave Horn DN 50 (stainless steel)	19.8
Wave Horn DN 80 (stainless steel)	24.4
Wave Horn DN 100 (stainless steel)	25.8
Wave Horn DN 80 (metal sheet)	24.5
Wave Horn DN 100 (metal sheet)	25.9
Wave Horn DN 150 (metal sheet)	27.9
Wave Horn DN 200 (metal sheet)	28.4
Drop Antenna DN 80	25.8
Drop Antenna DN 150	30.4

7 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 15C	see table	2015-04-28	-/-

Test Specification Clause	Test Case	Temperature Conditions	Power Source Voltages	Pass	Fail	NA	NP	Results
§15.209	Unwanted emissions limit	Nominal	Nominal	☒	☐	☐	☐	complies
§15.207	Conducted limits	Nominal	Nominal	☒	☐	☐	☐	complies

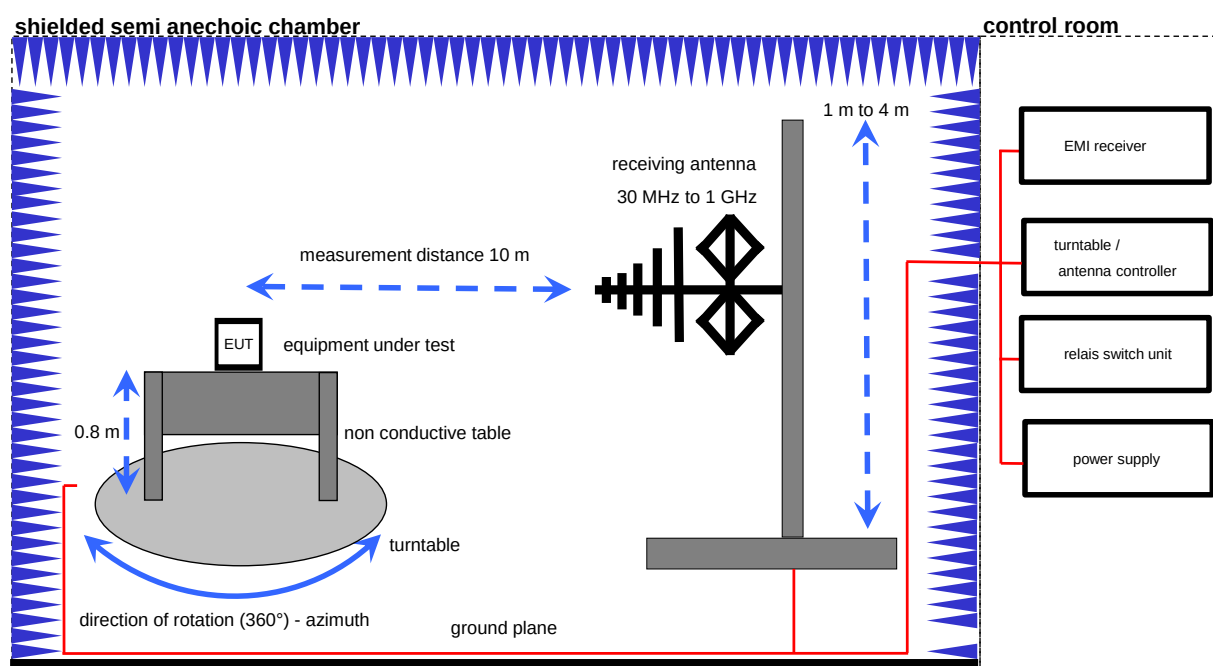
Note:

NA = Not applicable; NP = Not performed

8 Description of the test setup

8.1 Radiated measurements chamber F

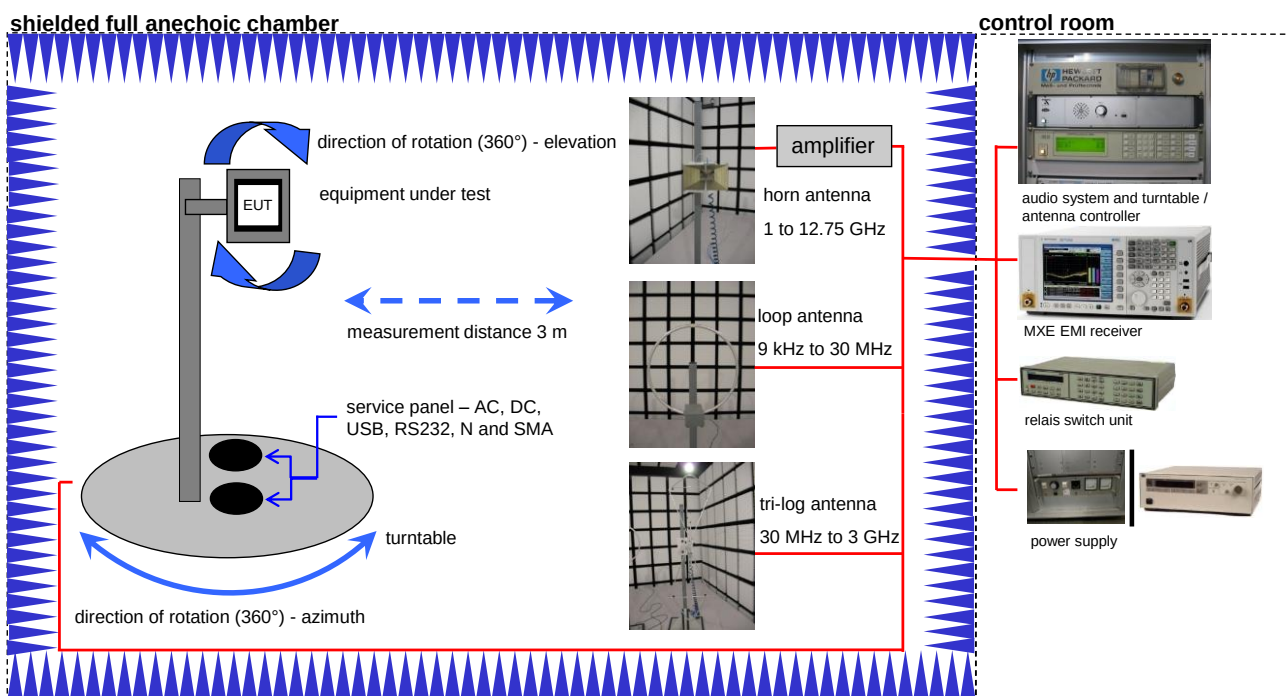
The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 1 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas 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
Software	EMC32 V. 9.12.05	R&S	-/-	-/-
Switch-Unit	3488A	HP Meßtechnik	2719A14505	300000368
DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2920A04466	300000580
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

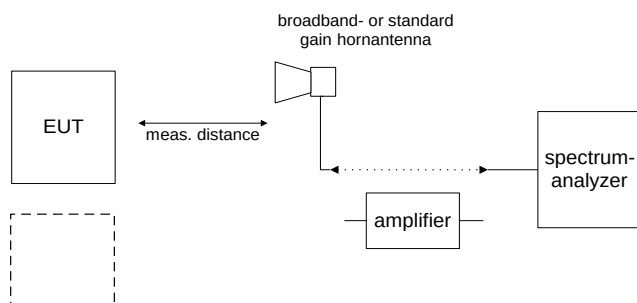
8.2 Radiated measurements chamber C



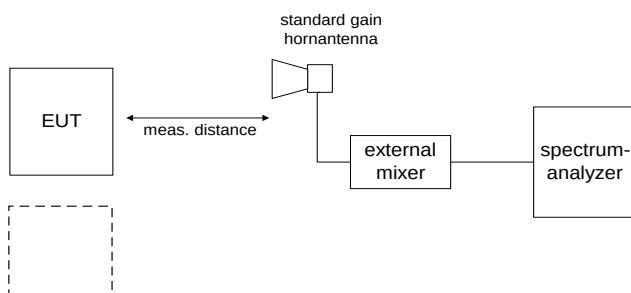
Equipment table:

Equipment	Type	Manufacturer	Serial No.	INV. No Cetecom
MXE EMI Receiver 20 Hz bis 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405
TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	371	300003854
Band Reject filter	WRCG2400/2483-2375/2505-50/10SS	Wainwright	11	300003351
Highpass Filter	WHKX7.0/18G-8SS	Wainwright	18	300003789
Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3088	300001032
Active Loop Antenna	6502	EMCO	8905-2342	300000256
Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996
Switch / Control Unit	3488A	HP Meßtechnik	*	300000199
Switch / Control Unit	3488A	HP Meßtechnik	2719A15013	300001156
Isolating Transformer	MPL IEC625 Bus Regeltrenntravo	Erfi	91350	300001155
Three-Way Power Splitter, 50 Ohm	11850C	HP Meßtechnik		300000997
Amplifier	js42-00502650-28-5a	Parzich GMBH	928979	300003143

8.3 Radiated measurements 12 GHz to 50 GHz

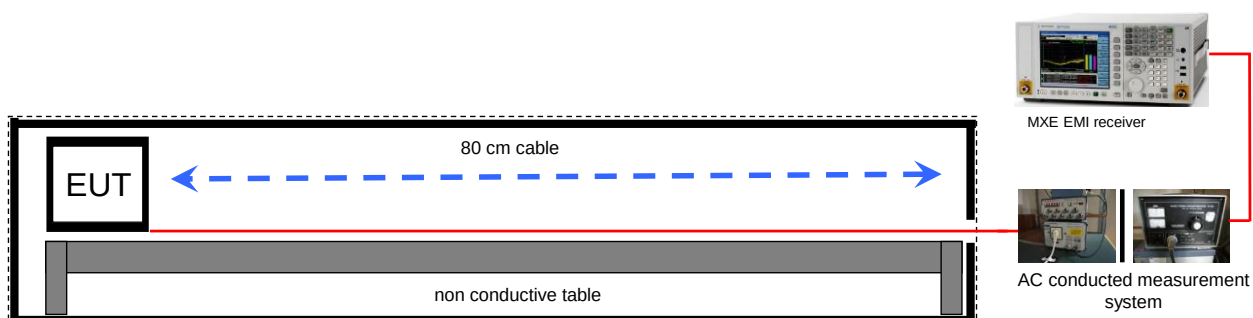


8.4 Radiated measurements 50 GHz to 110 GHz



Setup 2.4

8.5 AC conducted



Equipment table:

Equipment	Type	Manufacturer	Serial No.	INV. No Cetecom
MXE EMI Receiver 20 Hz bis 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405
Isolating Transformer	MPL IEC625 Bus Regeltrenntravo	Erfi	91350	300001155
Switch / Control Unit	3488A	HP Meßtechnik	*	300000199
Switch / Control Unit	3488A	HP Meßtechnik	2719A15013	300001168
Artificial Mains 9 kHz to 30 MHz	ESH3-Z5	R&S	828576/020	300001210

9 Test results

9.1 Unwanted emissions limit

Description:

§15.209

(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table below.

Measurement parameters:

Resolution bandwidth: 100 kHz / 1 MHz
 Video bandwidth: $\geq$ resolution bandwidth
 Detector: Quasi Peak / Average (RMS)
 Trace: Max hold

Limits:

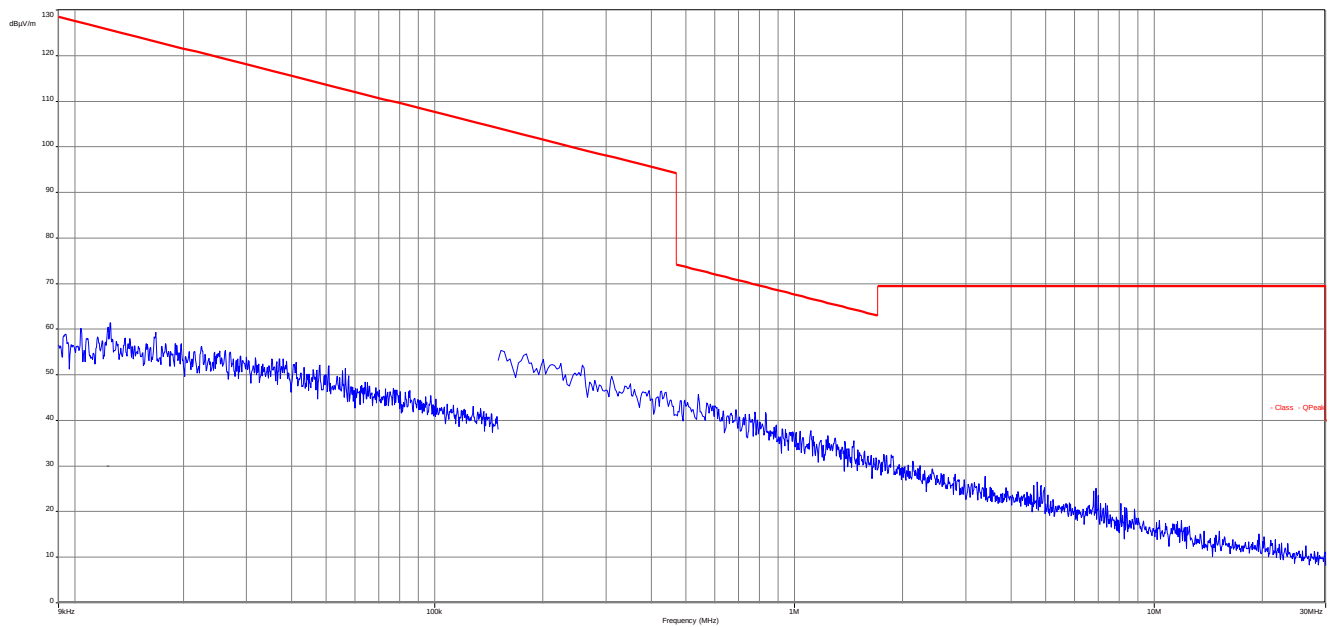
FCC §15.209		
Field strength of the harmonics and spurious.		
Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Measurement distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30 (29.5 dB $\mu\text{V/m}$)	30
30 – 88	100 (40 dB $\mu\text{V/m}$)	3
88 – 216	150 (43.5 dB $\mu\text{V/m}$)	3
216 – 960	200 (46 dB $\mu\text{V/m}$)	3
>960	500 (54 dB $\mu\text{V/m}$)	3

Results:

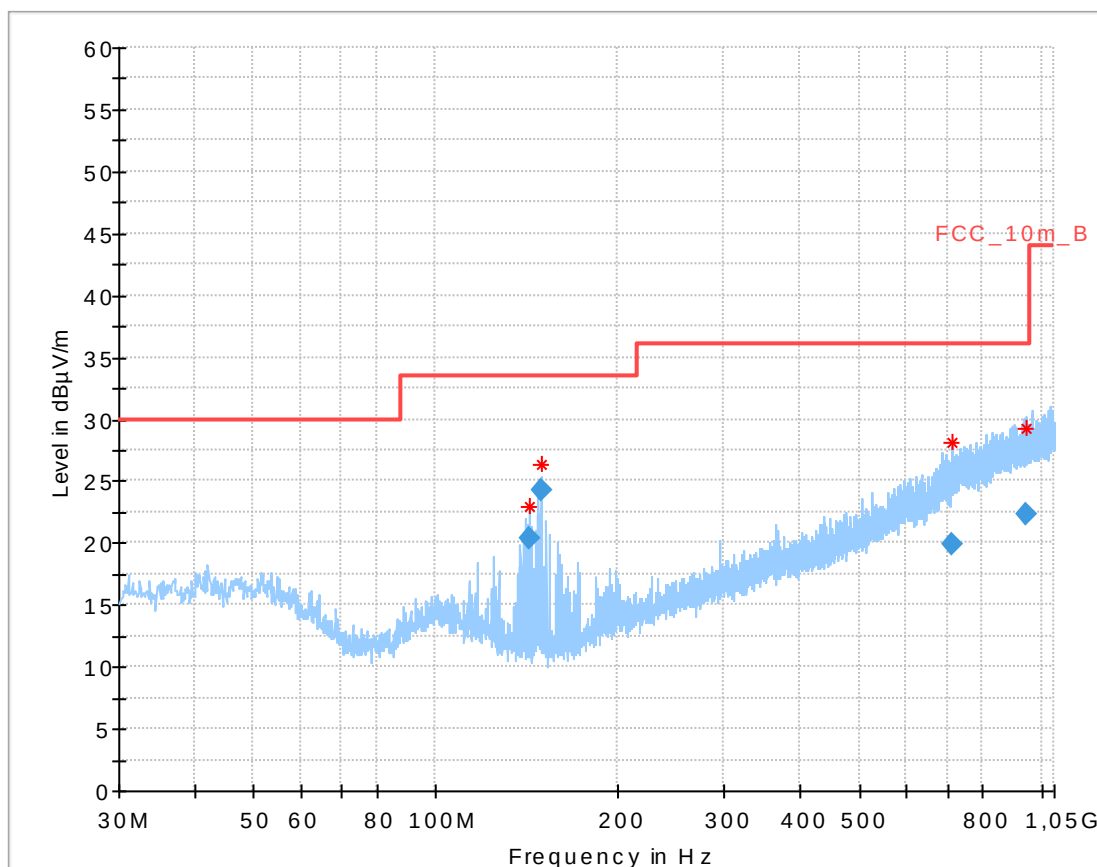
Spurious emission level (dBm)								
-/-			-/-			-/-		
Frequency [GHz]	BW [kHz]	Level [dBm]	Frequency [GHz]	BW [kHz]	Level [dBm]	Frequency [GHz]	BW [kHz]	Level [dBm]
see plots								
Measurement uncertainty			$\pm 3\text{dB}$					

Result: Test passed

Plot 1: 9 kHz – 30 MHz, special test mode, f_{low}/mid/high

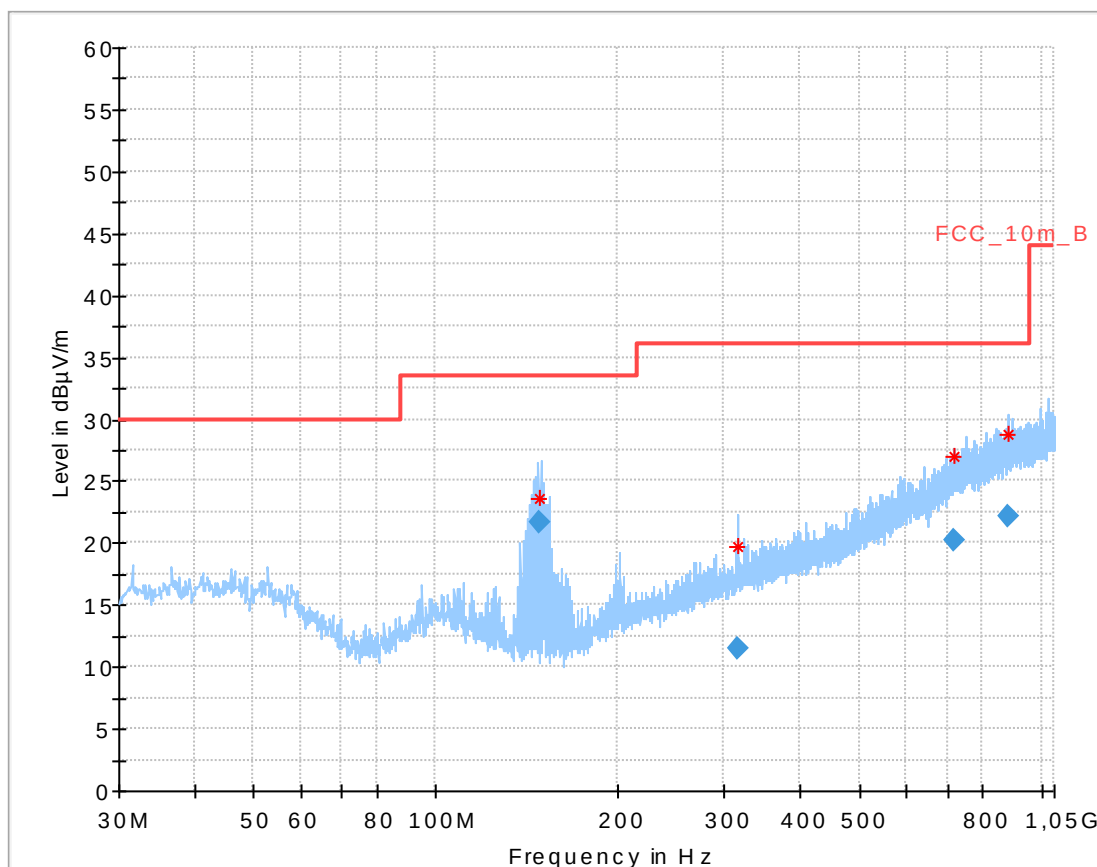


Plot 2: 30 MHz – 1000 MHz, special test mode, frequency sweep stopped at f_{low}



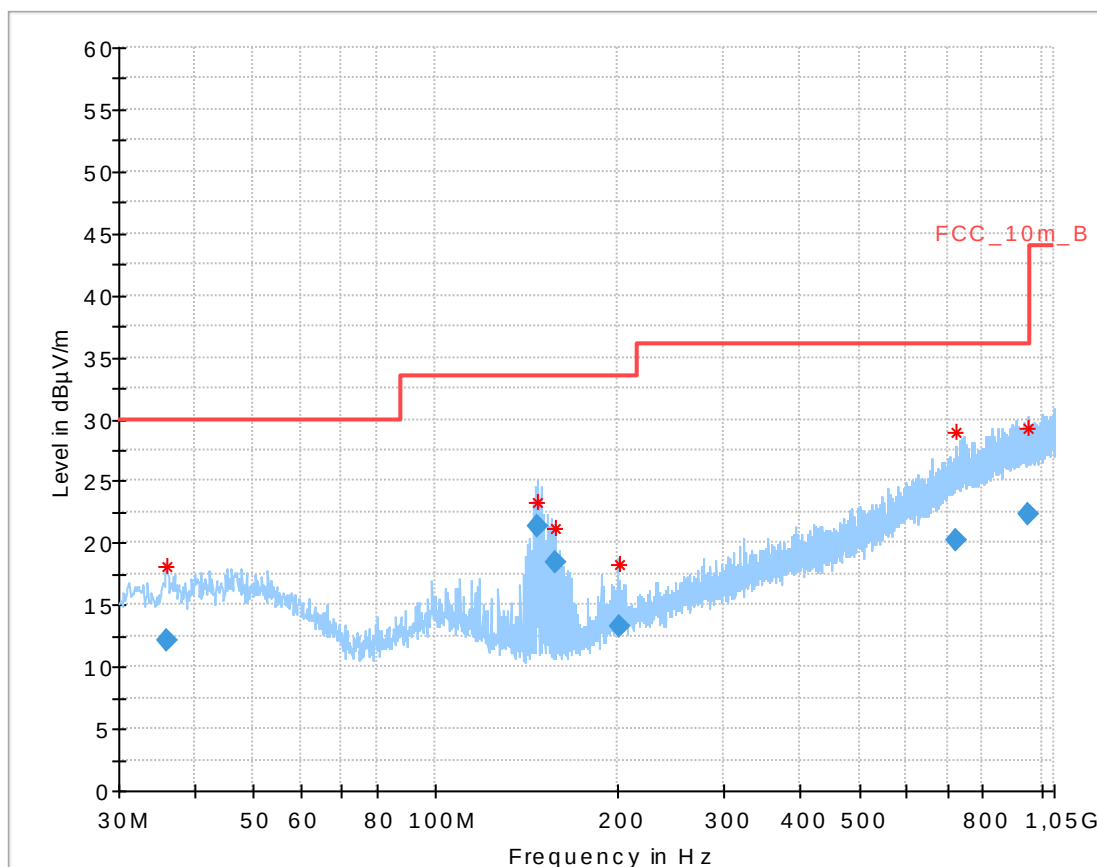
Final Result:

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
142.968000	20.37	33.50	13.13	1000.0	120.000	107.0	V	43.0	8.7
149.104050	24.27	33.50	9.23	1000.0	120.000	103.0	V	62.0	8.9
710.396700	19.95	36.00	16.05	1000.0	120.000	200.0	V	50.0	22.7
940.497000	22.32	36.00	13.68	1000.0	120.000	365.0	V	50.0	25.3

Plot 3: 30 MHz – 1000 MHz, special test mode, frequency sweep stopped at f_{mid} 

Final Result:

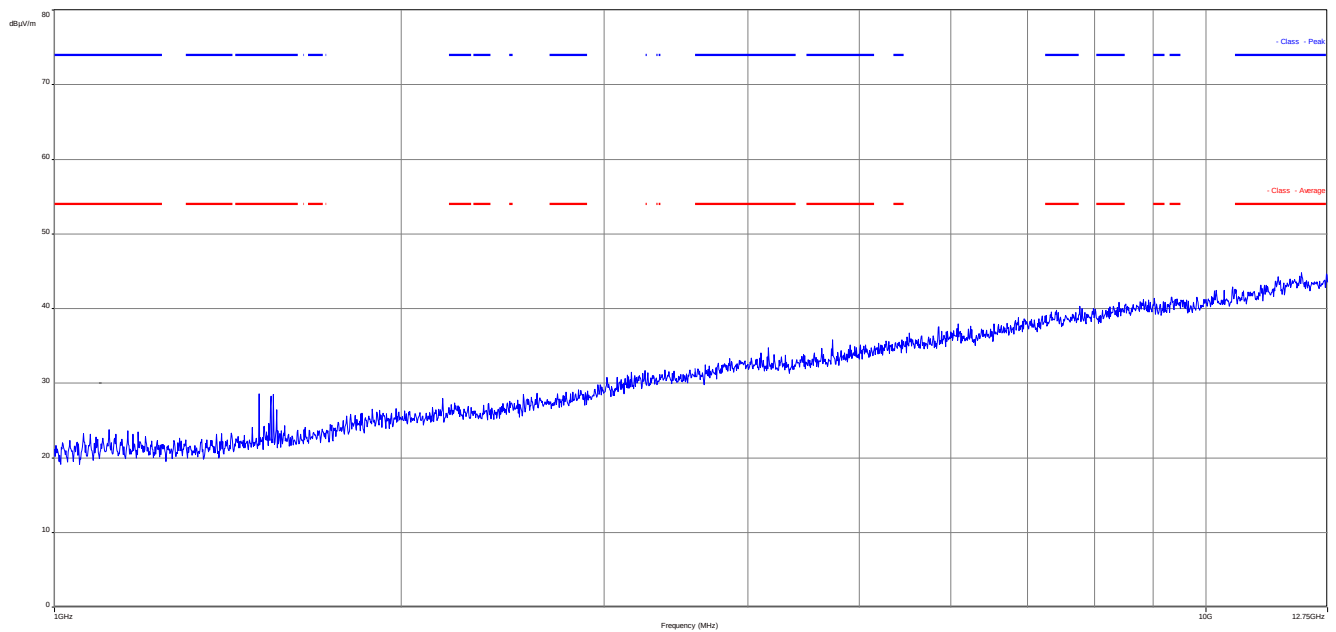
Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
148.699950	21.67	33.50	11.83	1000.0	120.000	115.0	V	27.0	8.9
314.443950	11.44	36.00	24.56	1000.0	120.000	124.0	V	302.0	15.0
718.740000	20.14	36.00	15.86	1000.0	120.000	200.0	V	300.0	22.9
880.333200	22.15	36.00	13.85	1000.0	120.000	124.0	V	199.0	24.9

Plot 4: 30 MHz – 1000 MHz, special test mode, frequency sweep stopped at f_{high} 

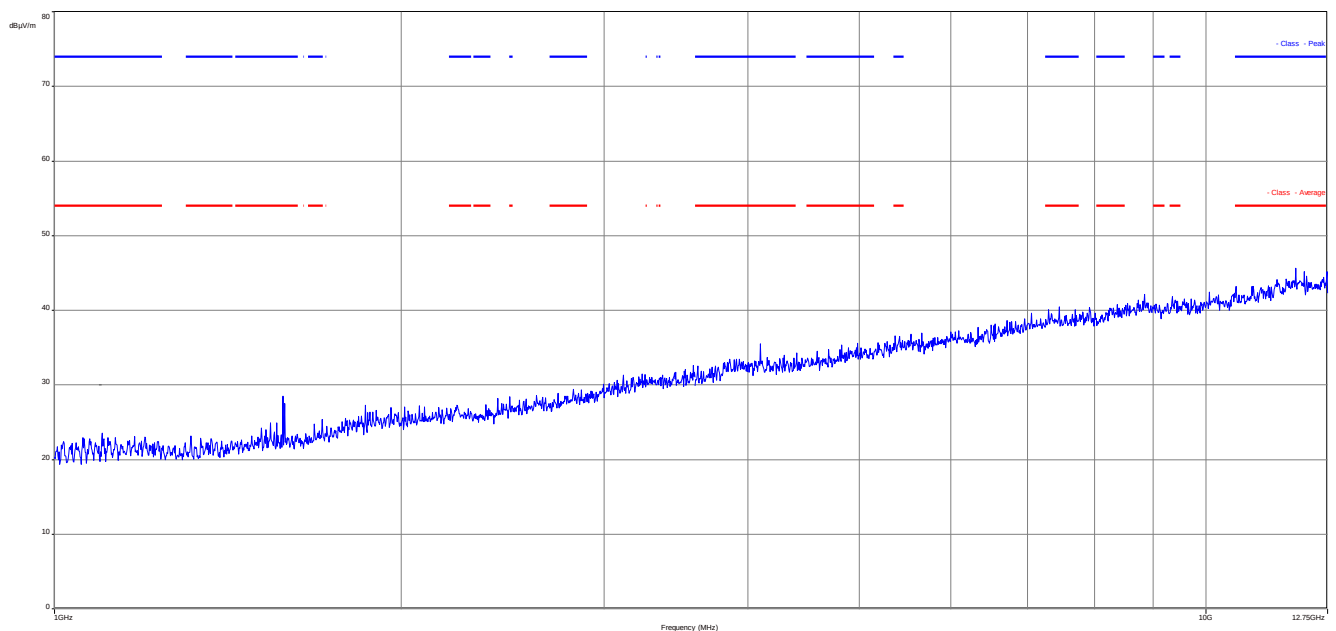
Final Result:

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
35.977050	12.18	30.00	17.82	1000.0	120.000	308.0	V	284.0	13.1
147.471450	21.33	33.50	12.17	1000.0	120.000	102.0	V	5.0	8.9
157.728900	18.43	33.50	15.07	1000.0	120.000	109.0	V	50.0	9.1
200.684700	13.33	33.50	20.17	1000.0	120.000	104.0	V	352.0	11.7
725.264550	20.21	36.00	15.79	1000.0	120.000	387.0	H	4.0	23.1
947.677500	22.27	36.00	13.73	1000.0	120.000	400.0	H	260.0	25.3

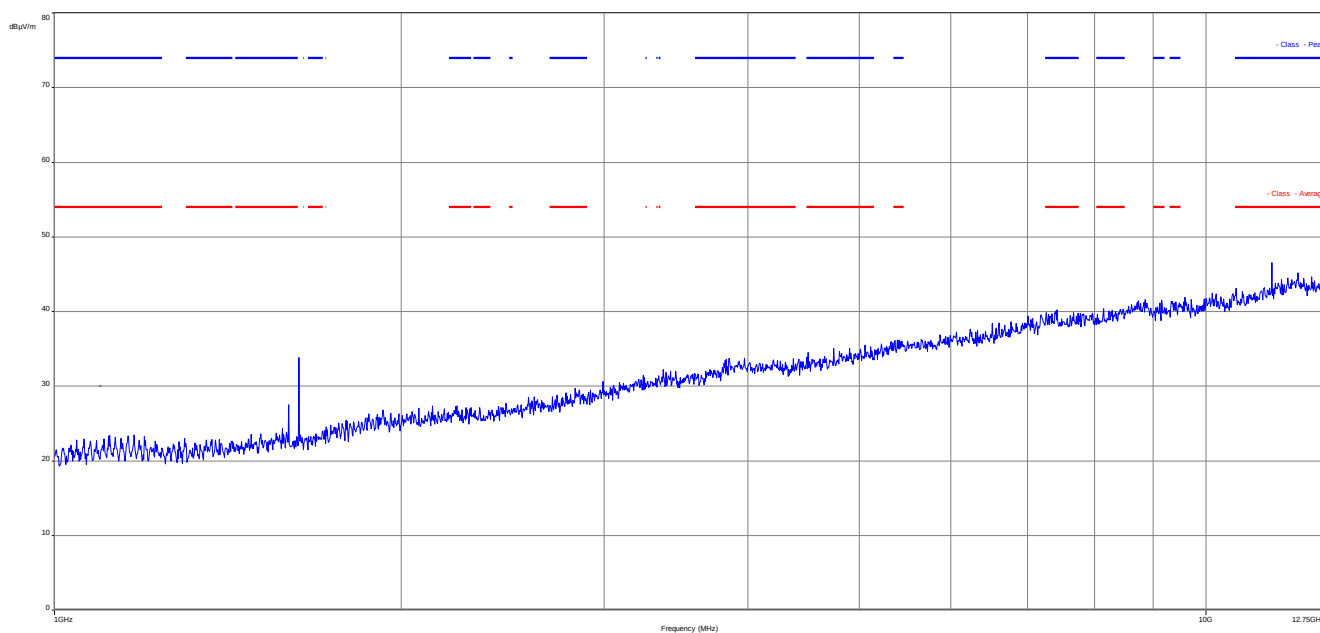
Plot 5: 1 GHz – 12.75 GHz, special test mode, frequency sweep stopped at f_{low}



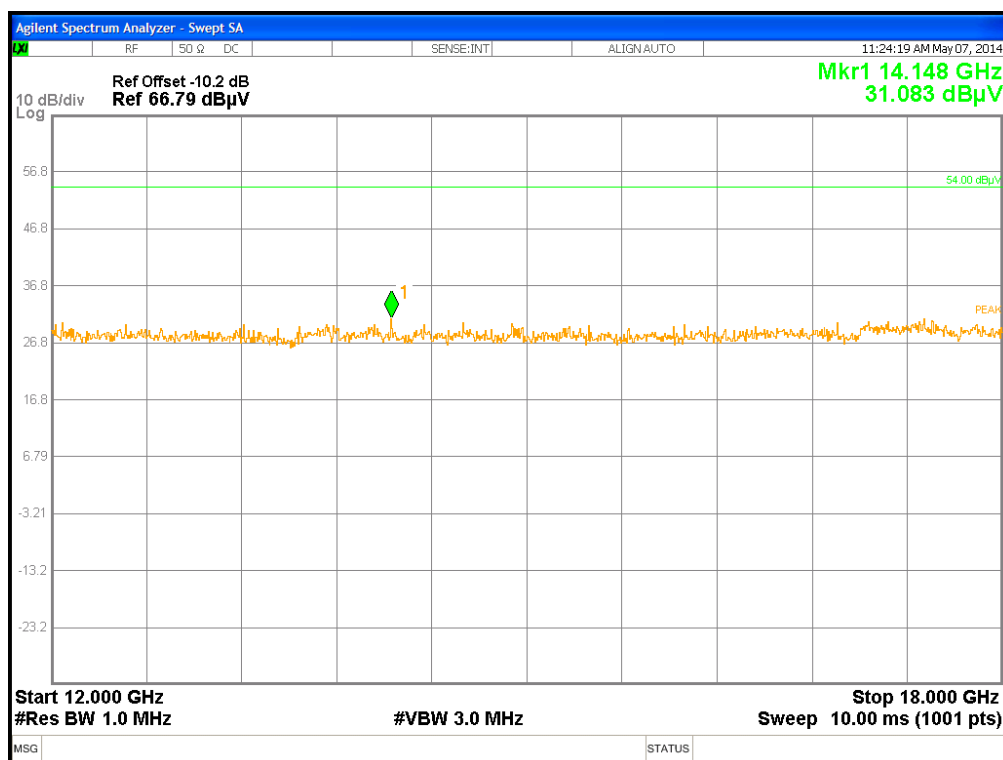
Plot 6: 1 GHz – 12.75 GHz, special test mode, frequency sweep stopped at f_{mid}



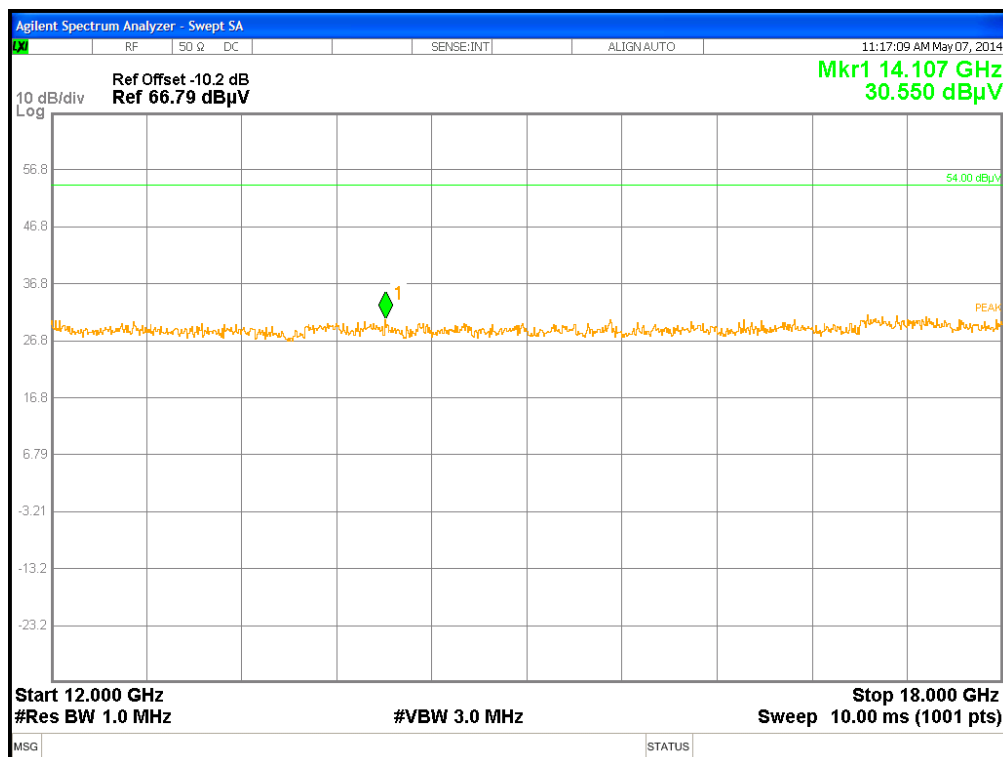
Plot 7: 1 GHz – 12.75 GHz, special test mode, frequency sweep stopped at f_{high}



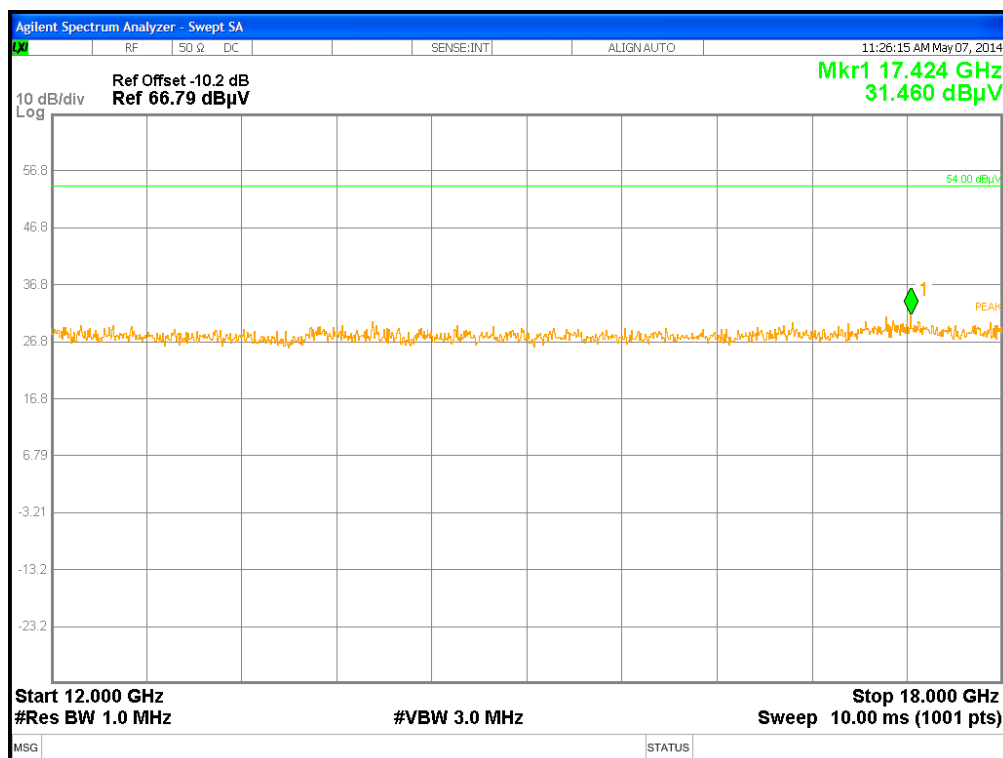
Plot 8: 12 GHz – 18 GHz, special test mode, f_{low}



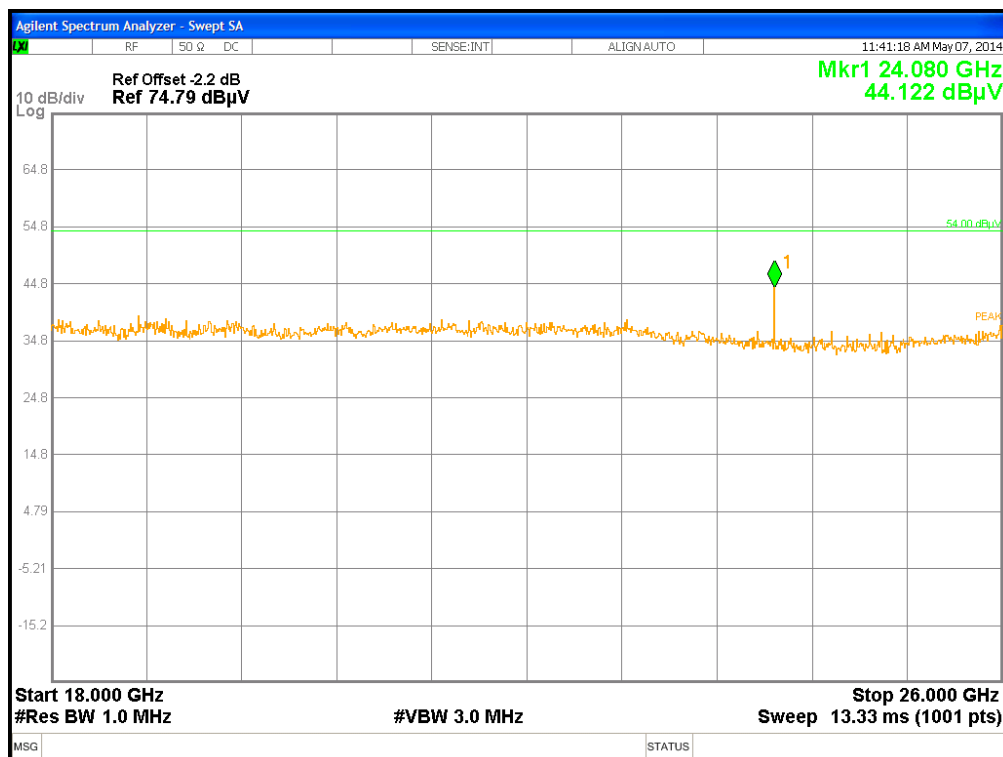
Plot 9: 12 GHz – 18 GHz, special test mode, f_{mid}



Plot 10: 12 GHz – 18 GHz, special test mode, f_{high}

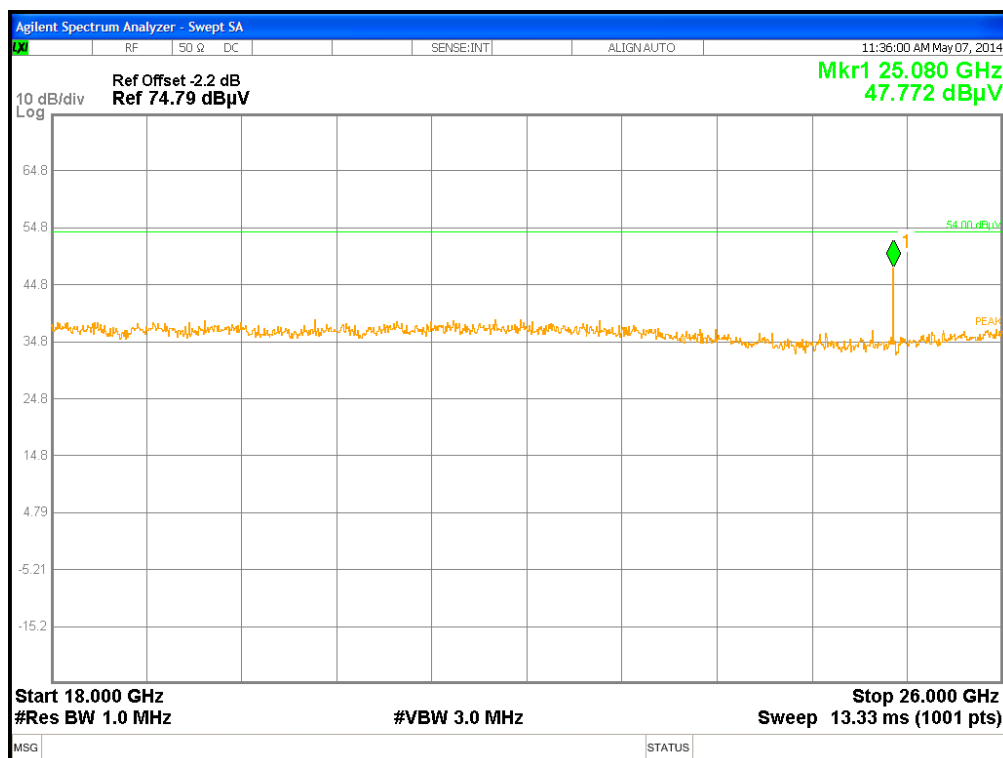


Plot 11: 18 GHz – 26 GHz, special test mode, f_{low}

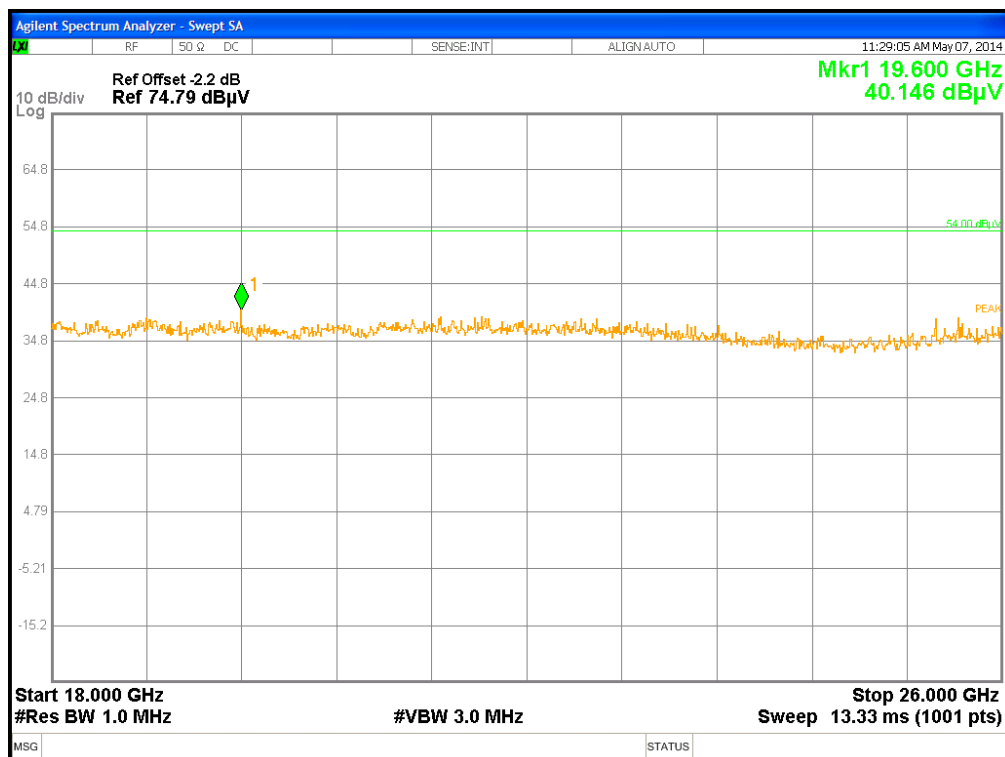
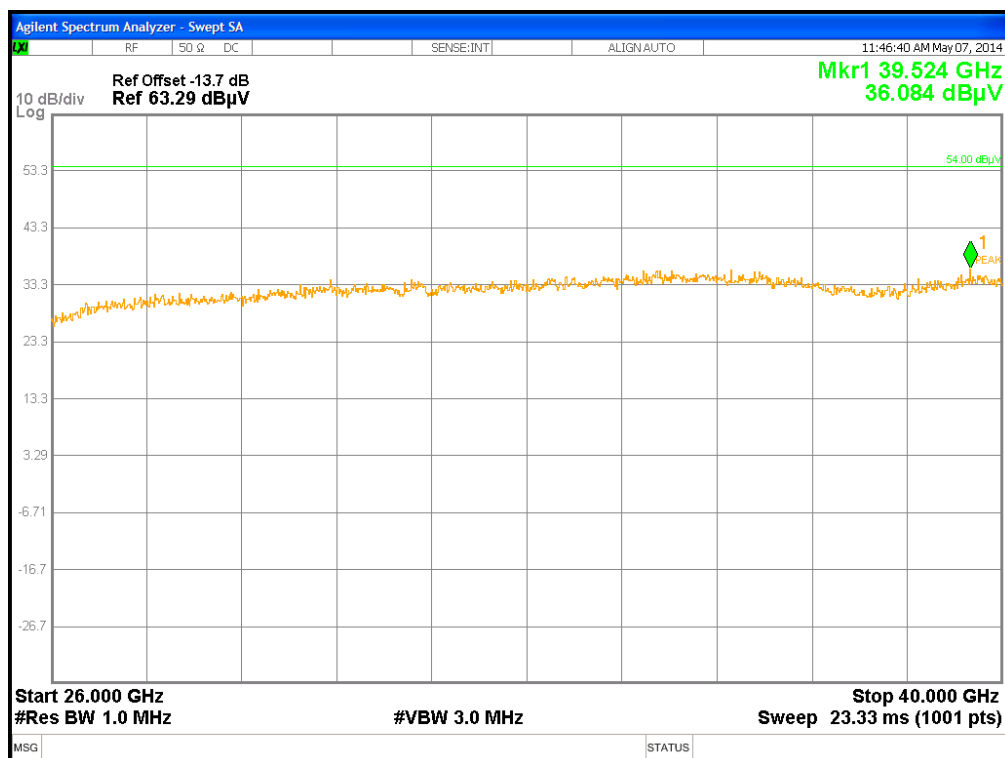


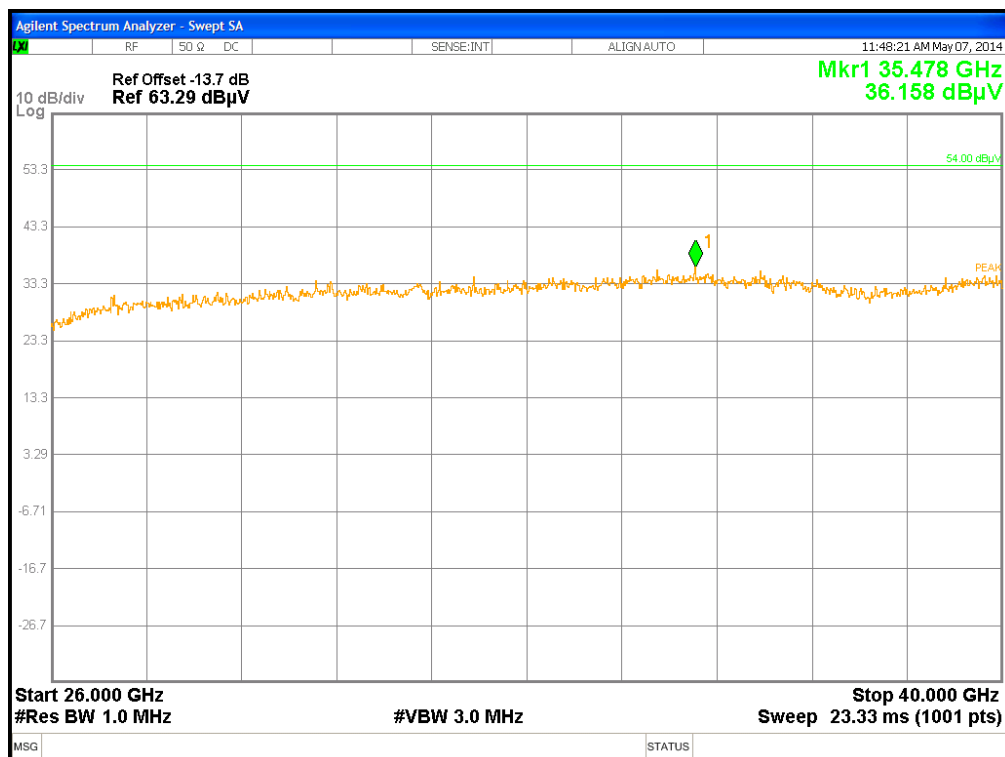
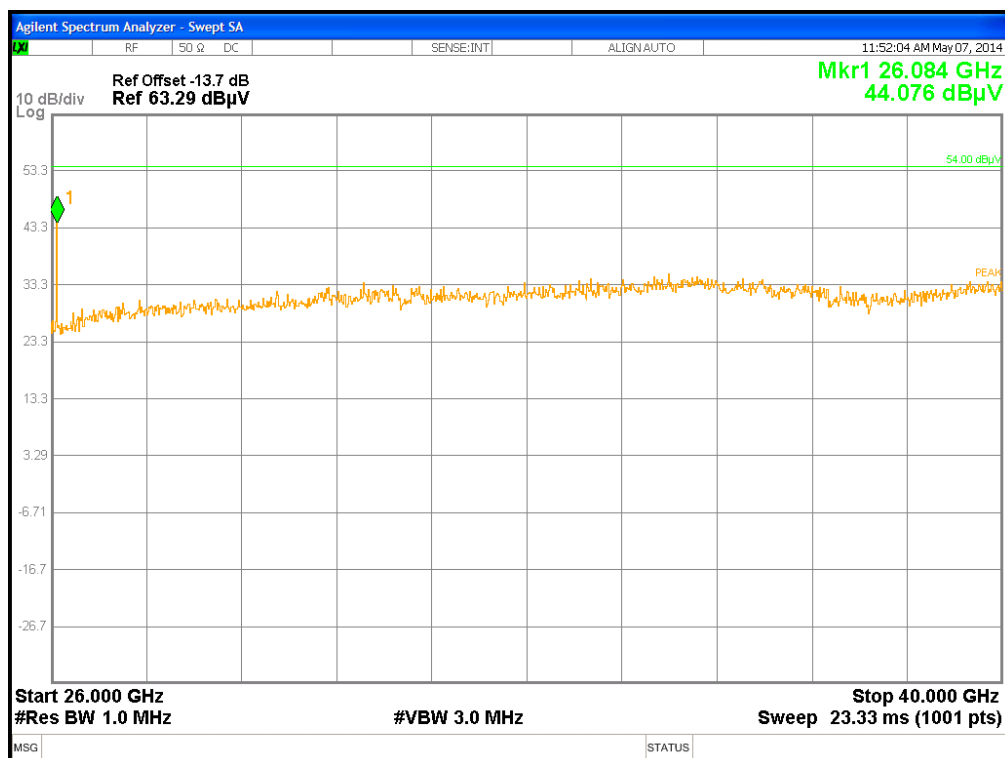
Note: Plot shows leakage of fundamental frequency.

Plot 12: 18 GHz – 26 GHz, special test mode, f_{mid}

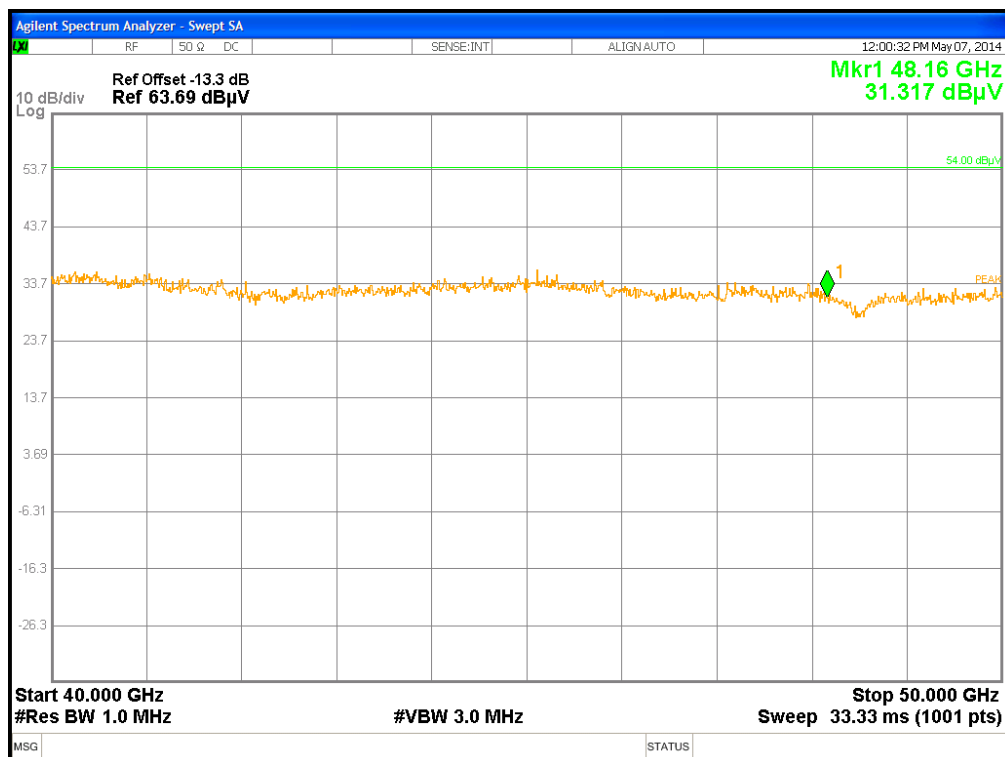
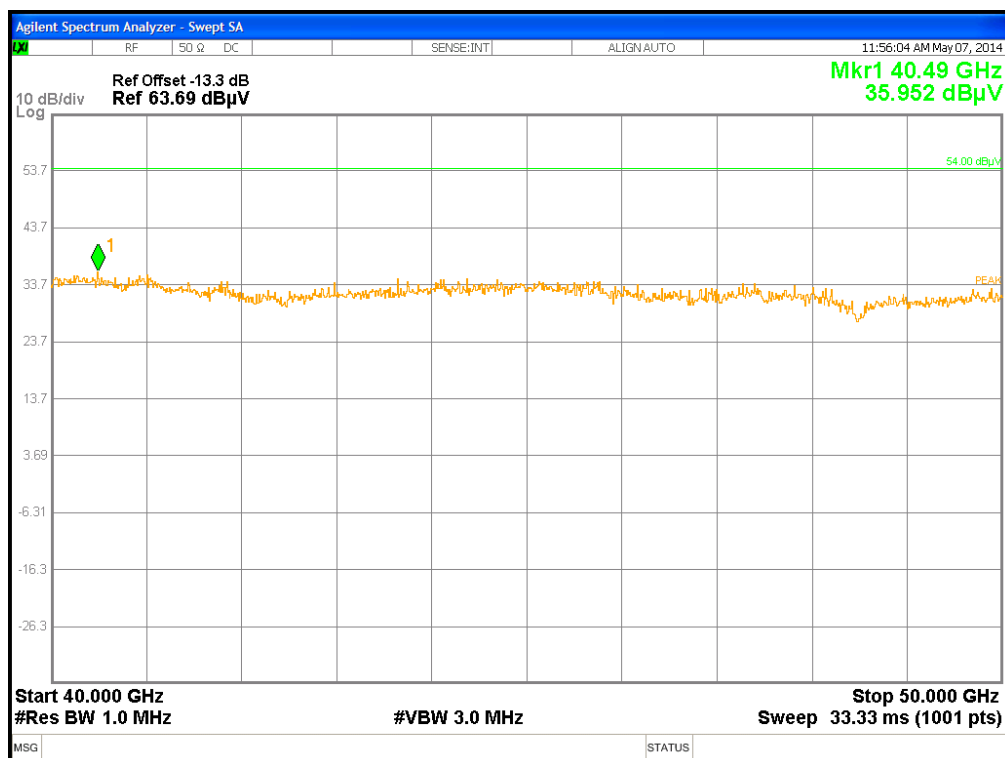


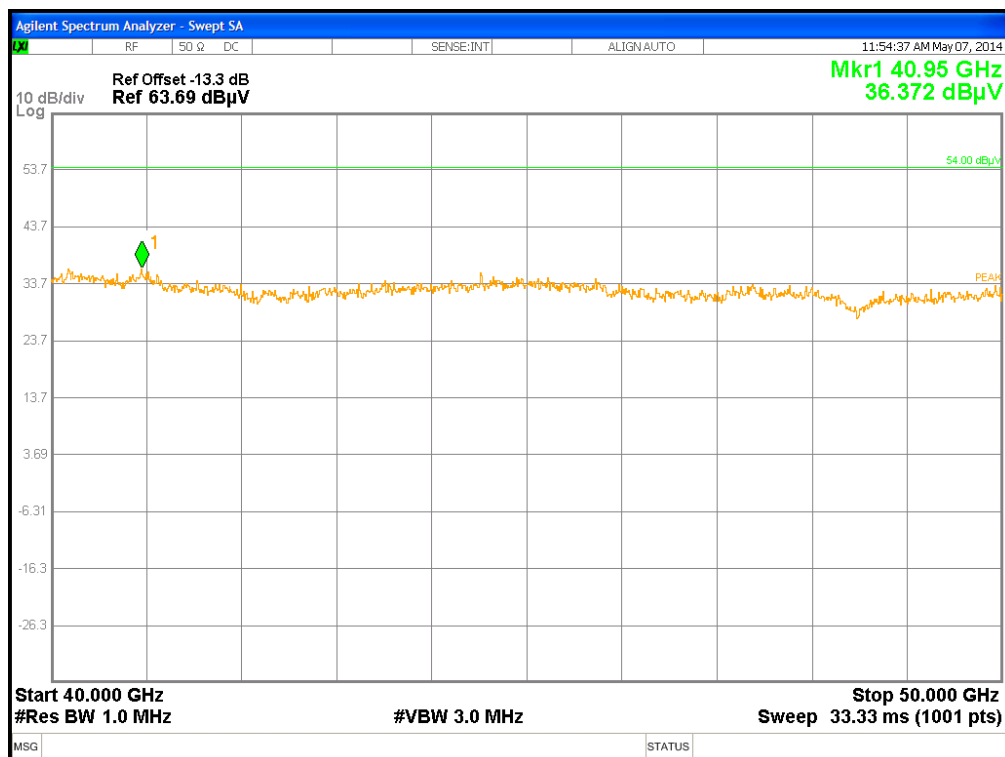
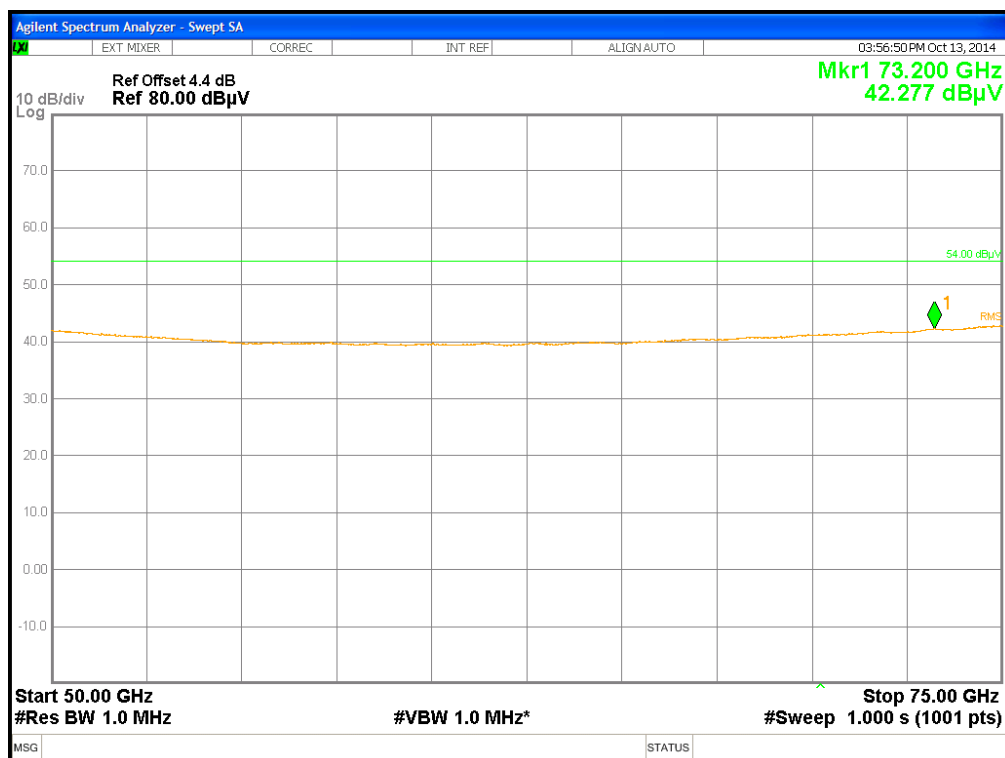
Note: Plot shows leakage of fundamental frequency.

Plot 13: 18 GHz – 26 GHz, special test mode, f_{high} Plot 14: 26 GHz – 40 GHz, special test mode, f_{low} 

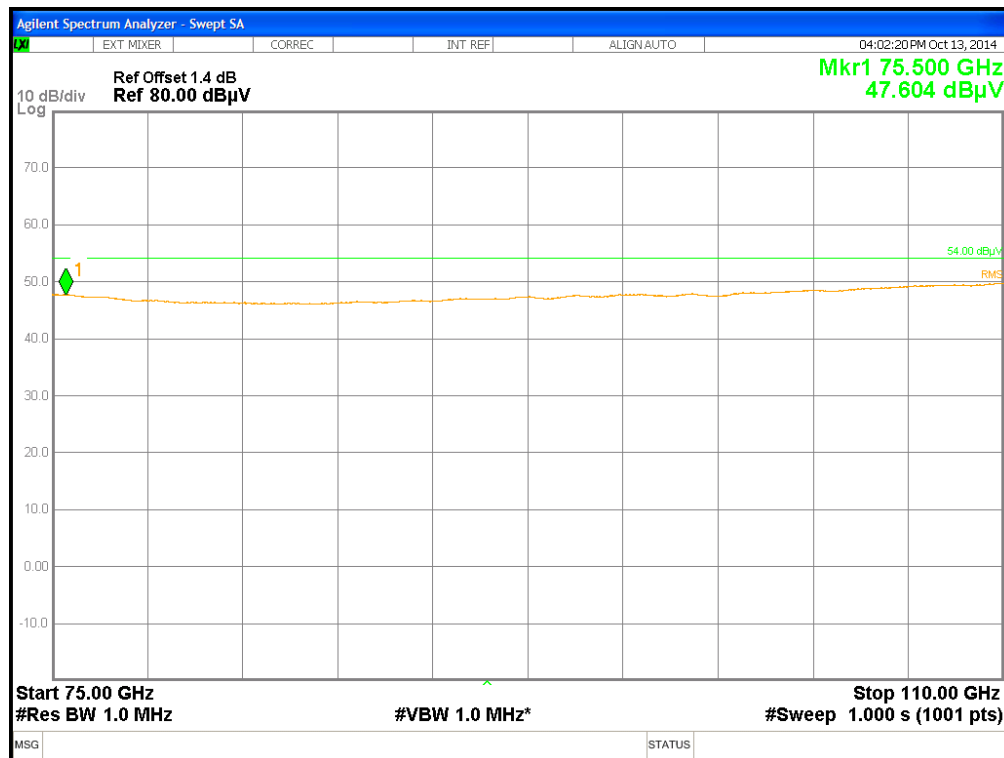
Plot 15: 26 GHz – 40 GHz, special test mode, special test mode, f_{mid} Plot 16: 26 GHz – 40 GHz, special test mode, f_{high} 

Note: Plot shows leakage of fundamental frequency.

Plot 17: 40 GHz – 50 GHz, special test mode, f_{low} Plot 18: 40 GHz – 50 GHz, special test mode, f_{mid} 

Plot 19: 40 GHz – 50 GHz, special test mode, f_{high} Plot 20: 50 GHz – 75 GHz, special test mode, $f_{\text{low/mid/high}}$ 

Plot 21: 75 GHz – 110 GHz, special test mode, flow/mid/high



9.2 Conducted limits

Description:

Measurement of the conducted spurious emissions in transmit mode below 30 MHz. Both power lines, phase and neutral line, are measured. Found peaks are re-measured with average and quasi peak detection to show compliance to the limits.

Measurement:

Measurement parameter	
Detector:	Peak - Quasi Peak / Average
Sweep time:	Auto
Resolution bandwidth:	F < 150 kHz: 200 Hz F > 150 kHz: 9 kHz
Video bandwidth:	F < 150 kHz: 1 kHz F > 150 kHz: 100 kHz
Span:	9 kHz to 30 MHz
Trace-Mode:	Max Hold

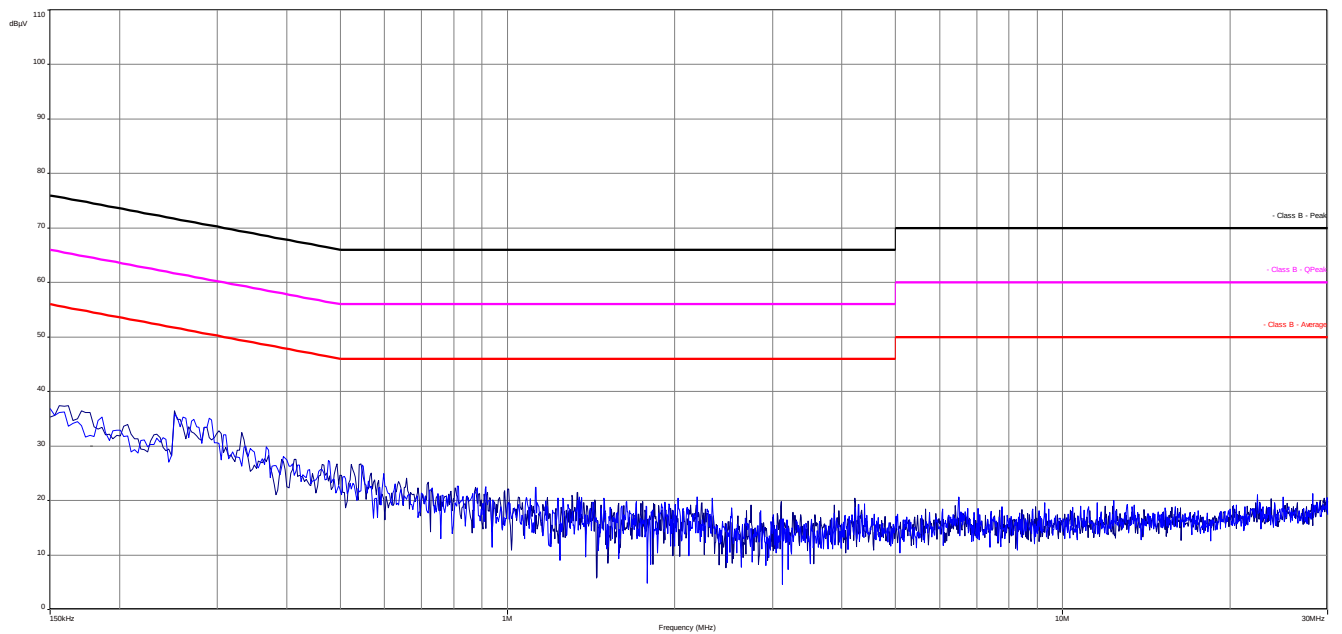
Limits:

FCC §15.107 / §15.207		
Conducted limits		
Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 - 30	60	50

*Decreases with the logarithm of the frequency

Result: Test passed

Plot 22:



10 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	n. a.	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2818A03450	300001040	Ve	12.01.2012	12.01.2015
2	n. a.	Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3088	300001032	vKI!	08.05.2013	08.05.2015
3	n. a.	Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996	ev		
4	n. a.	Switch / Control Unit	3488A	HP Meßtechnik	*	300000199	ne		
5	9	Artificial Mains 9 kHz to 30 MHz	ESH3-Z5	R&S	828576/020	300001210	Ve	30.01.2014	30.01.2016
6	n. a.	Switch / Control Unit	3488A	HP Meßtechnik	2719A15013	300001156	ne		
7	9	Isolating Transformer	MPL IEC625 Bus Regeltrenntravo	Erfi	91350	300001155	ne		
8	n. a.	Three-Way Power Splitter, 50 Ohm	11850C	HP Meßtechnik		300000997	ne		
9	90	Active Loop Antenna 10 kHz to 30 MHz	6502	Kontron Psychotech	8905-2342	300000256	k	13.06.2013	13.06.2015
10	n. a.	Amplifier	js42-00502650-28-5a	Parzich GMBH	928979	300003143	ne		
11	n. a.	Band Reject filter	WRCG1855/1910-1835/1925-40/8SS	Wainwright	7	300003350	ev		
12	n. a.	Band Reject filter	WRCG2400/2483-2375/2505-50/10SS	Wainwright	11	300003351	ev		
13	n. a.	Highpass Filter	WHKX7.0/18G-8SS	Wainwright	18	300003789	ne		
14	n. a.	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	371	300003854	vKI!	14.10.2011	14.10.2014
15	n. a.	MXE EMI Receiver 20 Hz bis 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405	k	13.03.2014	13.03.2015
16	CR 79	Std. Gain Horn Antenna 26.5-40.0 GHz	V637	Narda	7911	300001751	ne		
17	11b	Microwave System Amplifier, 0.5-26.5 GHz	83017A	HP Meßtechnik	00419	300002268	ev		
18	n. a.	Broadband Low Noise Amplifier 18-50 GHz	CBL19503070-XX	CERNEX	19338	300004273	ne		
19	A023	Std. Gain Horn Antenna 39.3-59.7 GHz	2424-20	Flann	75	300001979	ne		
20	A025	Std. Gain Horn Antenna 49.9-75.8 GHz	2524-20	Flann	*	300001983	ne		
21	A028	Std. Gain Horn Antenna 73.8-112 GHz	2724-20	Flann	*	300001991	ne		
22	A026	Std. Gain Horn Antenna 12.4 to 18.0 GHz	639	Narda	8402	300000787	k	22.07.2013	22.07.2015
23	A029	Std. Gain Horn Antenna 18.0 to 26.5 GHz	638	Narda	8205	300002442	k	19.07.2013	19.07.2015
24	8	DC Power Supply, 60V, 10A	6038A	HP Meßtechnik	3122A11097	300001204	Ve	10.01.2012	10.01.2015
25	n. a.	PXA Spectrum Analyzer 3Hz to 50GHz	N9030A PXA Signal Analyzer	Agilent Technologies	US51350267	300004338	k	09.01.2014	09.01.2015
26	n. a.	Harmonic mixer 50 - 75 GHz		HP Meßtechnik					
27	n. a.	Harmonic mixer 75-110 GHz		HP Meßtechnik					
28	n. a.	4U RF Switch Platform	L4491A	Agilent Technologies	MY50000037	300004509	ne		
29	45	Switch-Unit	3488A	HP Meßtechnik	2719A14505	300000368	g		

30	50	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2920A04466	300000580	ne		
31	n. a.	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	27.01.2014	27.01.2015
32	n. a.	EMI Test Receiver 20Hz- 26.5GHz	ESU26	R&S	100037	300003555	k	28.02.2014	28.02.2015
33	n. a.	Antenna Tower	Model 2175	ETS- LINDGREN	64762	300003745	izw		
34	n. a.	Positioning Controller	Model 2090	ETS- LINDGREN	64672	300003746	izw		
35	n. a.	Turntable Interface-Box	Model 105637	ETS- LINDGREN	44583	300003747	izw		
36	n. a.	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	295	300003787	k	22.04.2014	22.04.2016

Agenda: Kind of Calibration

k	calibration / calibrated		EK	limited calibration
ne	not required (k, ev, izw, zw not required)		zw	cyclical maintenance (external cyclical maintenance)
ev	periodic self-verification		izw	internal cyclical maintenance
Ve	long-term stability recognized		g	blocked for accredited testing
vkI!	Attention: extended calibration interval			
NK!	Attention: not calibrated		*)	next calibration ordered / currently in progress

11 Observations

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

12 Document history

Version	Applied changes	Date of release
	Initial release	2015-04-28

13 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

14 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 Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 07.03.2014 mit der
Akkreditierungsnummer D-PL-12076-01 und ist gültig 17.01.2018. Sie besteht aus diesem Deckblatt, der
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Registrierungsnummer der Urkunde: D-PL-12076-01-00

Frankfurt am Main, 07.03.2014

Datei: 00000001-00000001

Dr. Andreas D. Pl. - Dr. Ingrid Hoffmann
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EA: www.european-accreditation.org
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Note:

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

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