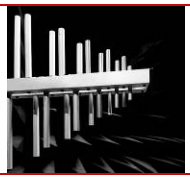
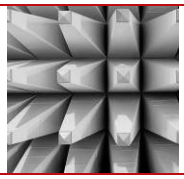




CETECOM™
CETECOM ICT Services
consulting - testing - certification

TEST REPORT

Test report no.: 1-6965/13-11-09-A

ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-12076-01-01

Testing laboratory

CETECOM ICT Services GmbH
Untertuerkheimer Strasse 6 – 10
66117 Saarbruecken / Germany
Phone: + 49 681 5 98 - 0
Fax: + 49 681 5 98 - 9075
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

Sony Mobile Communications AB
Nya Vattentornet
22188 Lund / SWEDEN
Phone: +46 46 19 30 00
Fax: -/-
Contact: Mikael Nilsson
e-mail: Micke.nilsson@sonymobile.com
Phone: +46 7 03 22 75 03

Manufacturer

Sony Mobile Communications AB
Nya Vattentornet
22188 Lund / SWEDEN

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:	**Tablet PC GPRS/EGPRS 850/900/1800/1900; UMTS HSPA FDDI/V/VI/XIX; LTE FDD1/3/19/21; WLAN b/g/n/a/ac; BT 4.0; RFID; A-GPS**
FCC ID:	**PY7TM-0041**
Frequency:	UNII bands: 5150 MHz to 5250 MHz; 5250 MHz to 5350 MHz 5470 MHz to 5725 MHz
Technology tested:	WLAN (OFDM/a – mode, n/ac HT20 – & n/ac HT40 – mode and ac HT80 – mode)
Antenna:	Integrated antenna
Power supply:	3.7 V DC by Li - polymer battery
Temperature range:	-30°C to +60°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:

cn=Stefan Boes, o=CETECOM ICT Services GmbH, ou=BOE-111011, email=Stefan.Boes@cetecom.com, c=DE
2014.03.26 14:25:36 +01'00'

Stefan Bös
Senior Testing Manager

Test performed:

p.o.
cn=Andreas Luckenbill, o=CETECOM ICT Services GmbH, ou=LUC-111202, email=andreas.luckenbill@cetecom.com, c=DE
2014.03.26 11:58:57 +01'00'

Marco Bertolino
Testing Manager

1 Table of contents

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.
The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of CETECOM ICT Services GmbH.
The testing service provided by CETECOM ICT Services GmbH has been rendered under the current "General Terms and Conditions for CETECOM ICT Services GmbH".
CETECOM ICT Services GmbH will not be liable for any loss or damage resulting from false, inaccurate, inappropriate or incomplete product information provided by the customer.
Under no circumstances does the CETECOM ICT Services GmbH test report include any endorsement or warranty regarding the functionality, quality or performance of any other product or service provided.
Under no circumstances does the CETECOM ICT Services GmbH test report include or imply any product or service warranties from CETECOM ICT Services GmbH, including, without limitation, any implied warranties of merchantability, fitness for purpose, or non-infringement, all of which are expressly disclaimed by CETECOM ICT Services GmbH.
All rights and remedies regarding vendor's products and services for which CETECOM ICT Services GmbH has prepared this test report shall be provided by the party offering such products or services and not by CETECOM ICT Services GmbH.
In no case this test report can be considered as a Letter of Approval.

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:	2013-12-19
Date of receipt of test item:	2014-02-17
Start of test:	2014-02-17
End of test:	2014-03-07
Person(s) present during the test:	-/-

3 Test standard/s

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

3.1 Measurement guidance

UNII: KDB 789033	2013-04	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E

4 Test environment

Temperature:	T_{nom}	+22	°C during room temperature tests
	T_{max}	+60	°C during high temperature tests
	T_{min}	-30	°C during low temperature tests
Relative humidity content:		41 %	
Barometric pressure:		not relevant for this kind of testing	
Power supply:	V_{nom}	3.7 V	DC by Li - polymer battery
	V_{max}	4.2 V	
	V_{min}	3.3 V	

5 Test item

Kind of test item	**:**	**Tablet PC GPRS/EGPRS 850/900/1800/1900; UMTS HSPA FDDI/V/VI/XIX; LTE FDD1/3/19/21; WLAN b/g/n/a/ac; BT 4.0; RFID; A-GPS**
S/N serial number	**:**	**Radiated unit: CB551268KBP**
HW hardware status	**:**	**AP1**
SW software status	**:**	**RF test software**
Frequency band [MHz]	**:**	**UNII bands: 5150 MHz to 5250 MHz; 5250 MHz to 5350 MHz 5470 MHz to 5725 MHz**
Type of radio transmission **Use of frequency spectrum**	**:** **:**	**OFDM**
Type of modulation	**:**	**BPSK, QPSK, 16 – QAM; 64 – QAM and 256 – QAM**
Number of channels	**:**	**19**
Antenna	**:**	**Integrated antenna**
Power supply	**:**	**3.7 V DC by Li - polymer battery**
Temperature range	**:**	**-30°C to +60 °C**

5.1 Additional information

Test setup- and EUT-photos are included in test report: 1-6965/13-11-01_AnnexA
1-6965/13-11-01_AnnexB
1-6965/13-11-01_AnnexD

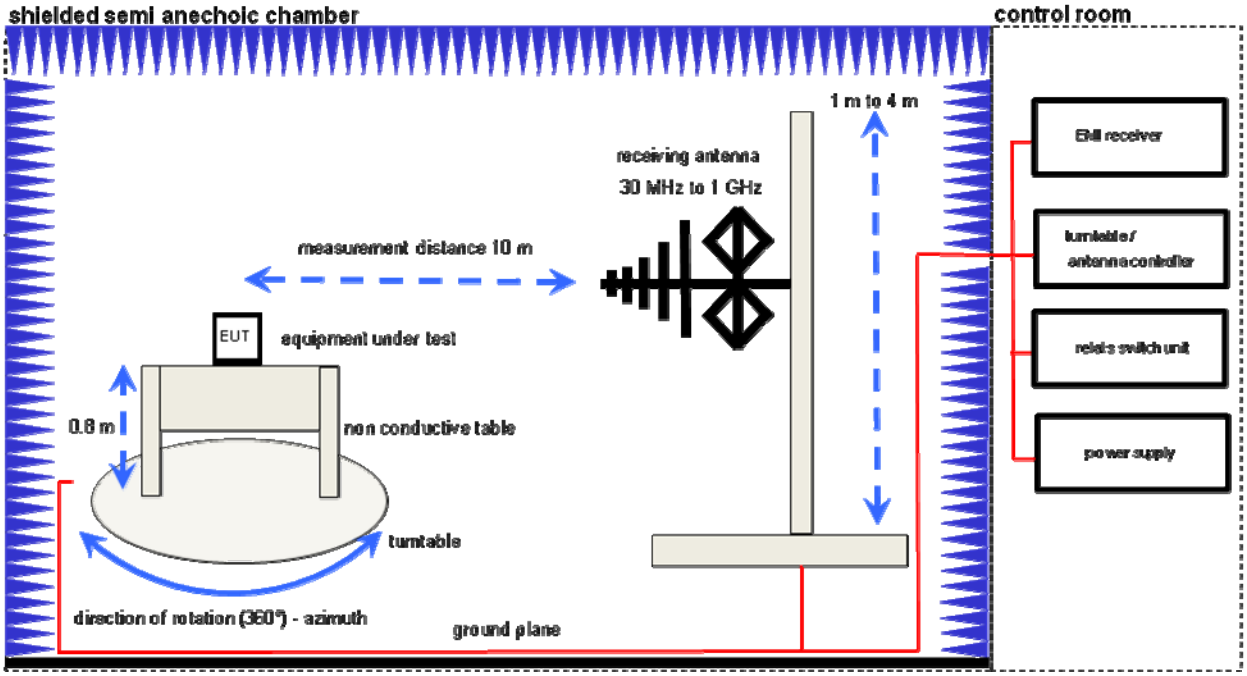
6 Test laboratories sub-contracted

None

7 Description of the test setup

7.1 Radiated measurements chamber F

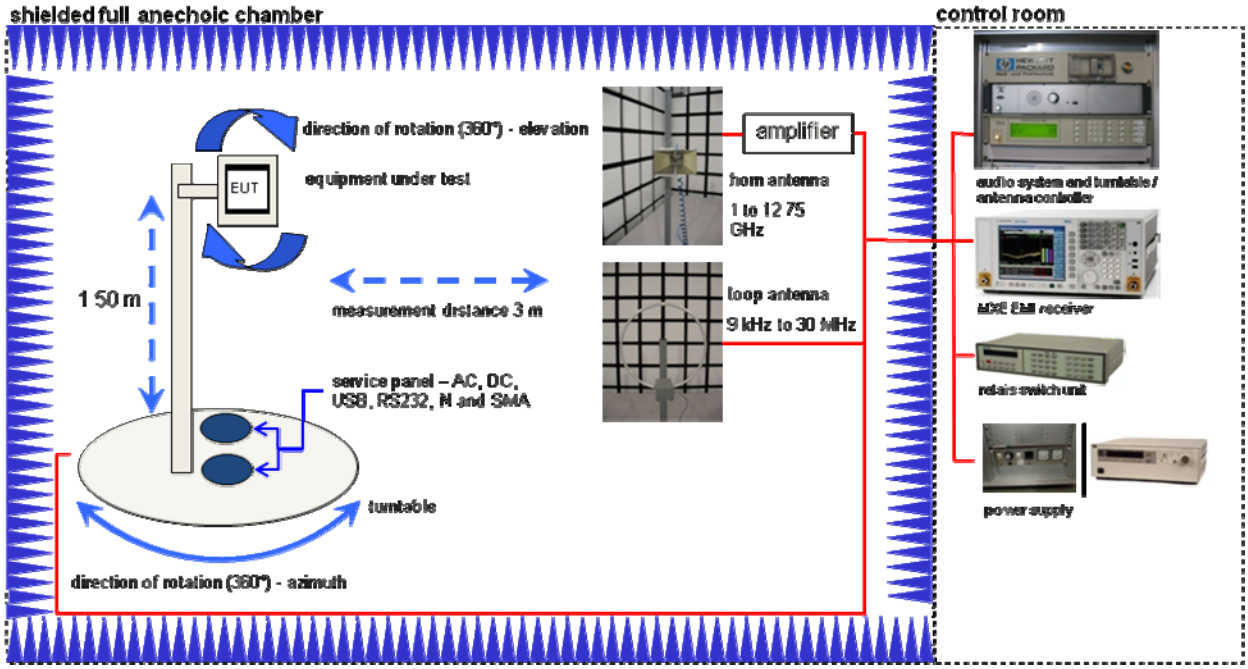
The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 1 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas 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
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

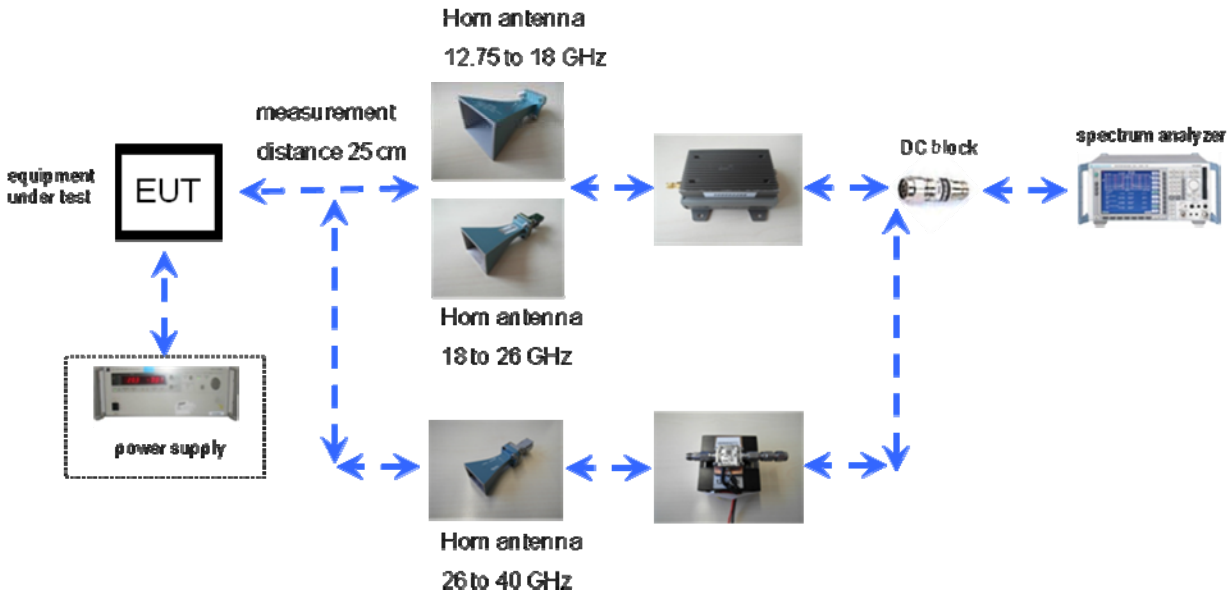
7.2 Radiated measurements chamber C



Equipment table:

Equipment	Type	Manufacturer	Serial No.	INV. No Cetecom
MXE EMI Receiver 20 Hz bis 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405
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

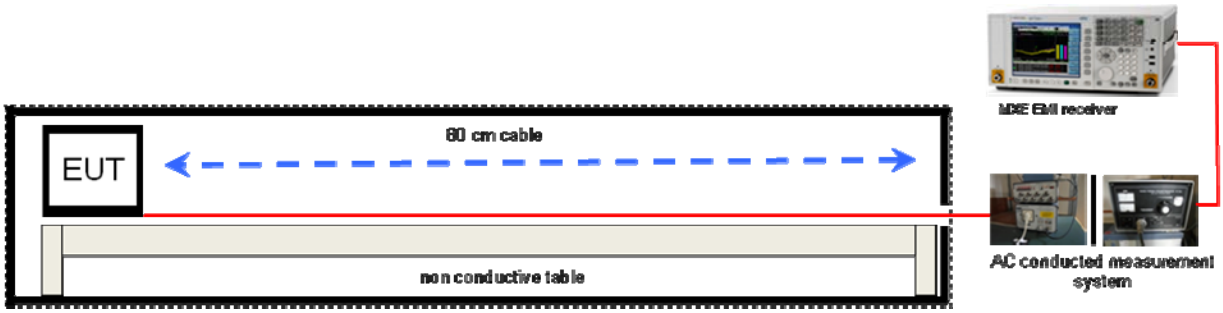
7.3 Radiated measurements 12.75 GHz to 40 GHz



Equipment table:

Equipment	Type	Manufacturer	Serial No.	INV. No Cetecom
Std. Gain Horn Antenna 12.4 to 18.0 GHz	639	Narda	8402	300000787
Std. Gain Horn Antenna 18.0 to 26.5 GHz	638	Narda	8205	300002442
Microwave System Amplifier, 0.5-26.5 GHz	83017A	HP Meßtechnik	00419	300002268
Std. Gain Horn Antenna 26.5-40.0 GHz	V637	Narda	7911	300001751
Broadband Low Noise Amplifier 18-50 GHz	CBL18503070-XX	CERNEX	19338	300004273
Spectrum Analyzer 20 Hz - 50 GHz	FSU50	R&S	200012	300003443
Signal Analyzer 40 GHz	FSV40	R&S	101042	300004517

7.4 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

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	CFR Part 15	Passed	2014-03-25	Delta tests according to manufacturer test plan!

Test specification clause	Test case	Temperature conditions	Power source voltages	Pass	Fail	NA	NP	Remark
-/-	Output power verification (conducted)	Nominal	Nominal	☐	☐	☐	☒	-/-!
-/-	Gain	Nominal	Nominal	☐	☐	☐	☒	-/-
U-NII Part 15	Duty cycle	Nominal	Nominal	☐	☐	☐	☒	-/-
§15.407(a)	Maximum output power (conducted & radiated)	Nominal	Nominal	☐	☐	☐	☒	-/-
§15.407(a)	Power spectral density	Nominal	Nominal	☐	☐	☐	☒	-/-
§15.407(a)	Spectrum bandwidth 26dB bandwidth	Nominal	Nominal	☐	☐	☐	☒	-/-
§15.407(a)	Peak excursion measurements	Nominal	Nominal	☐	☐	☐	☒	-/-
§15.205	Band edge compliance radiated	Nominal	Nominal	☒	☐	☐	☐	complies
§15.407(b)	TX spurious emissions radiated	Nominal	Nominal	☒	☐	☐	☐	complies
§15.109	RX spurious emissions radiated	Nominal	Nominal	☒	☐	☐	☐	complies
§15.209(a)	Spurious emissions radiated < 30 MHz	Nominal	Nominal	☒	☐	☐	☐	complies
§15.107(a) §15.207	Spurious emissions conducted emissions < 30 MHz	Nominal	Nominal	☒	☐	☐	☐	complies

Note: NA = Not Applicable; NP = Not Performed

9 Additional comments

Reference documents:	Main report: 1-6965/13-13-09-A / PY7TS-0020 (conducted values)	
Special test descriptions:	None	
Configuration descriptions:	None	
Test mode:	☐	No test mode available.
	☒	Special software is used. EUT is transmitting pseudo random data by itself

10 Measurement results

10.1 Band edge compliance radiated

Description:

Measurement of the radiated band edge compliance. The EUT is turned in the position that results in the maximum level at the band edge. Then a sweep over the corresponding restricted band is performed. The EUT is set to the lowest channel for the lower restricted band and to the highest channel for the upper restricted band. Measurement distance is 3m.

Measurement:

Measurement parameter	
Detector:	Peak / RMS
Sweep time:	Auto
Resolution bandwidth:	1 MHz
Video bandwidth:	10 Hz / 1 MHz
Span:	See plots!
Trace-Mode:	Max Hold

Limits:

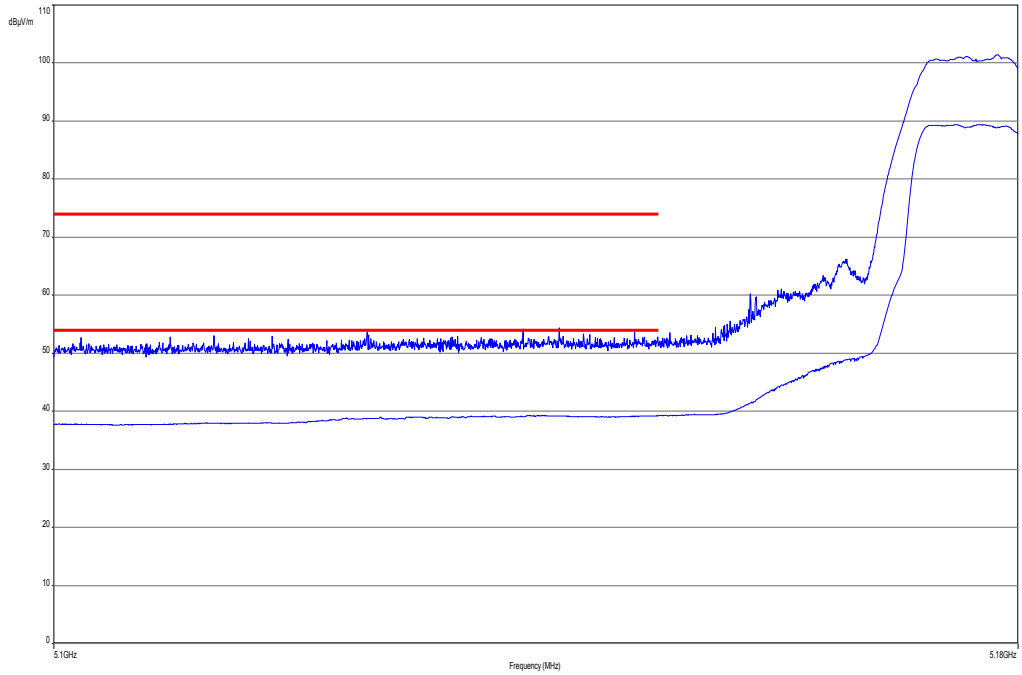
Band Edge Compliance Radiated
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 5.205(c)).
74 dBµV/m PEAK 54 dBµV/m AVG

Result:

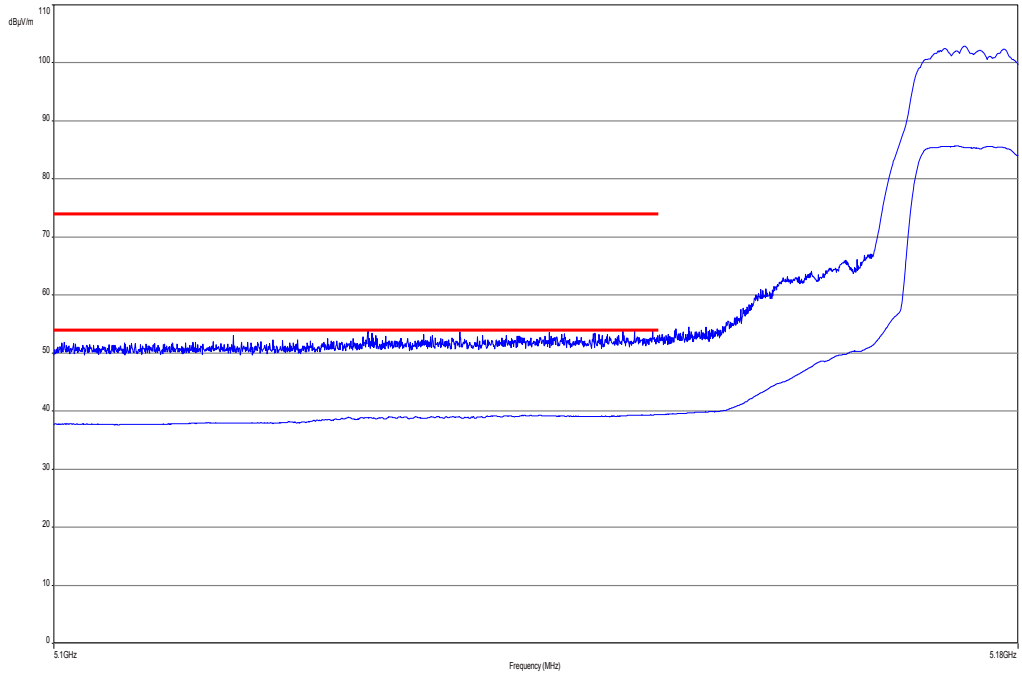
Scenario	Band Edge Compliance Radiated [dBµV/m]
band edge	< 74 dBµV/m (Peak) < 54 dBµV/m (AVG)
Measurement uncertainty	± 3 dB

Plots:

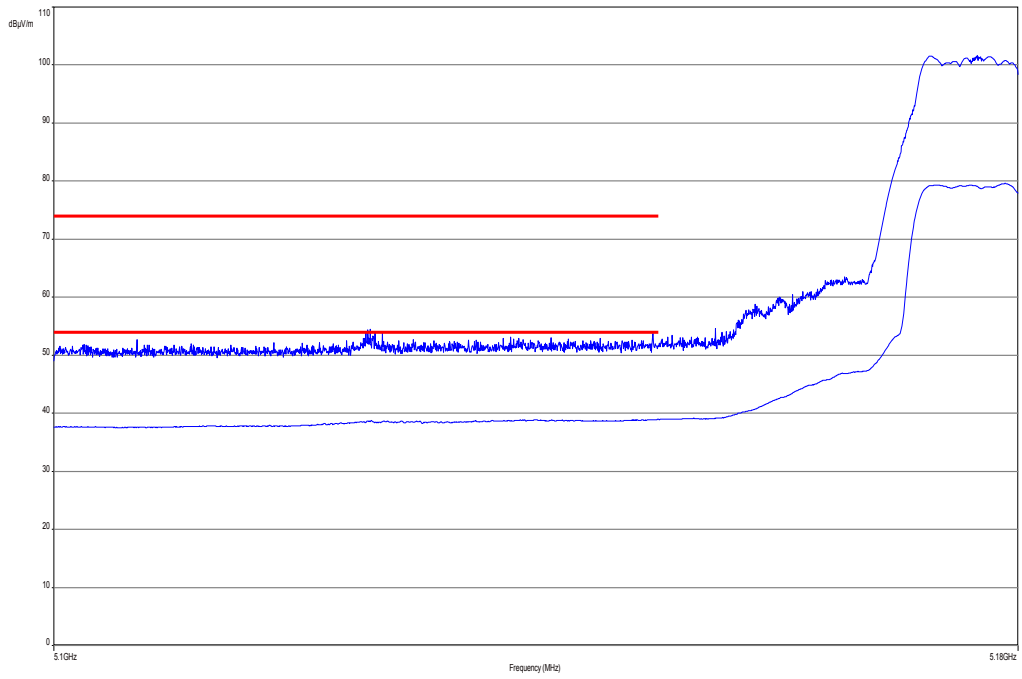
Plot 1: lower band edge, vertical & horizontal polarization (a mode), channel 36, low d. r.



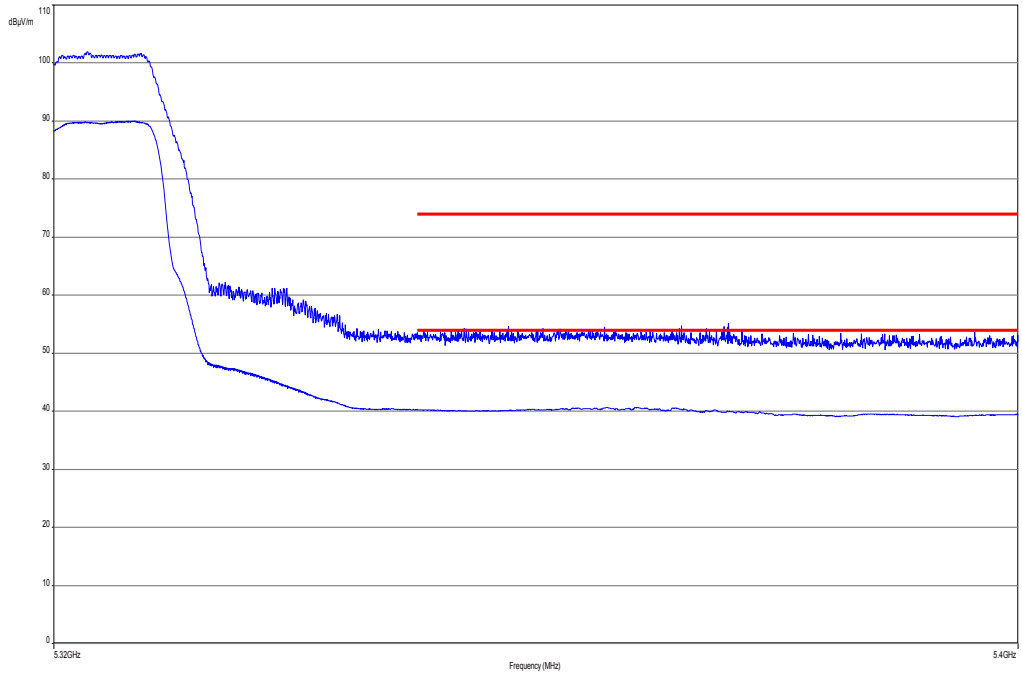
Plot 2: lower band edge, vertical & horizontal polarization (a mode), channel 36, high power d. r.



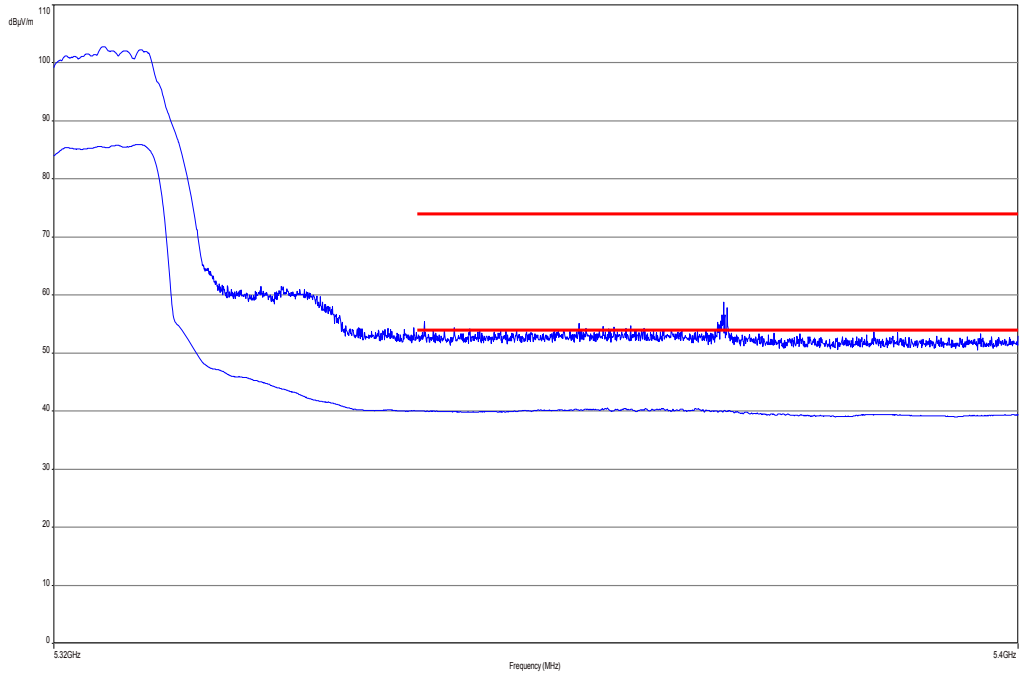
Plot 3: lower band edge, vertical & horizontal polarization (a mode), channel 36, high d. r.



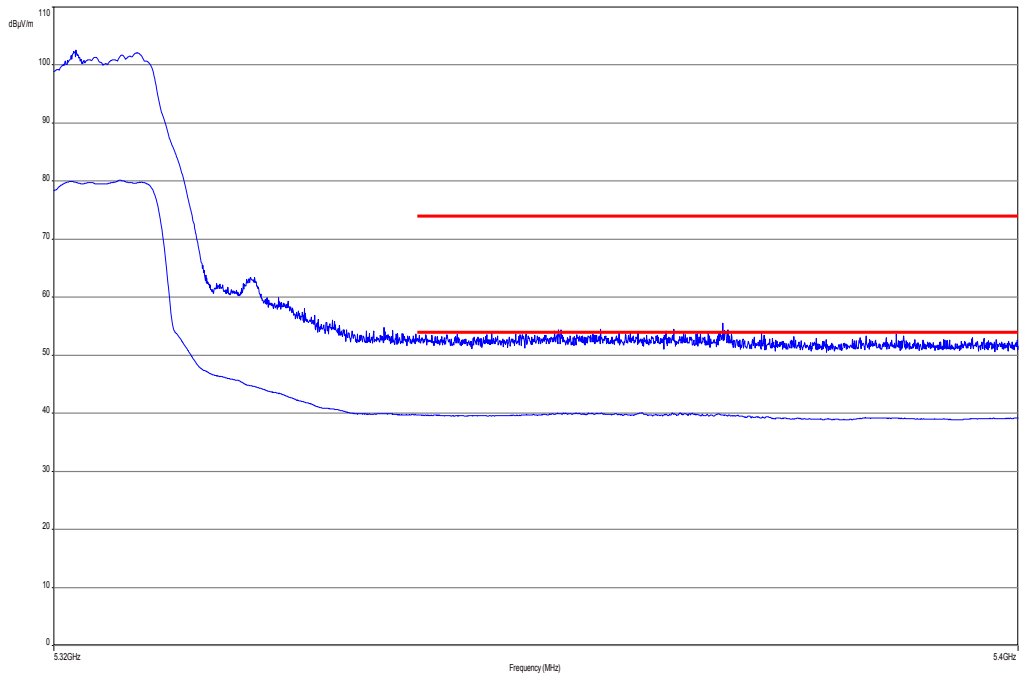
Plot 4: upper band edge, vertical & horizontal polarization (a mode), channel 64, low d. r.



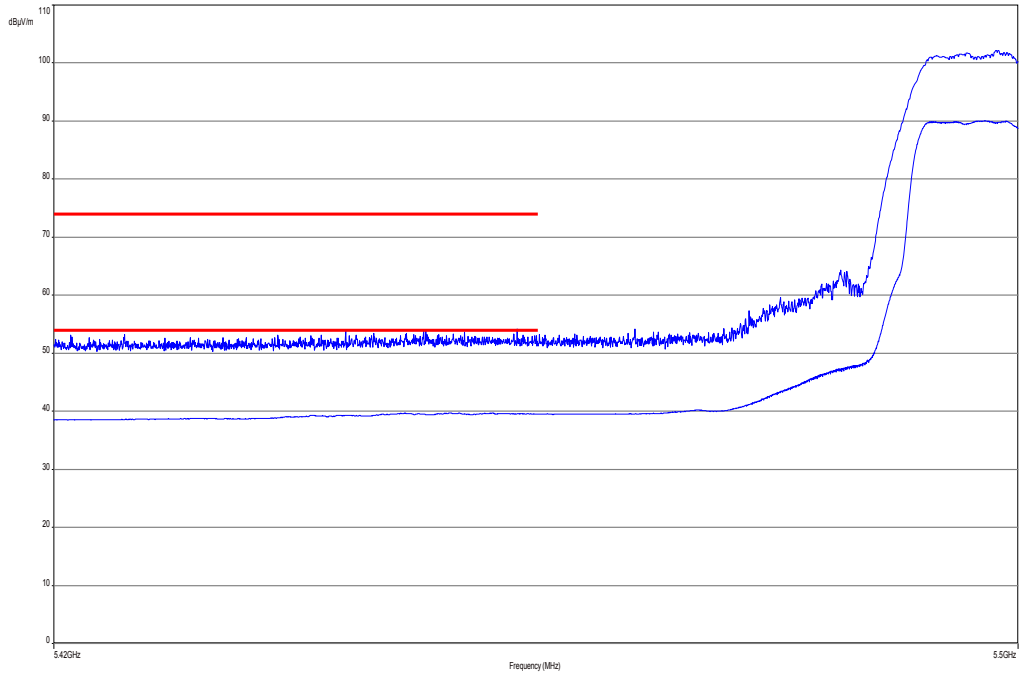
Plot 5: upper band edge, vertical & horizontal polarization (a mode), channel 64, high power d. r.



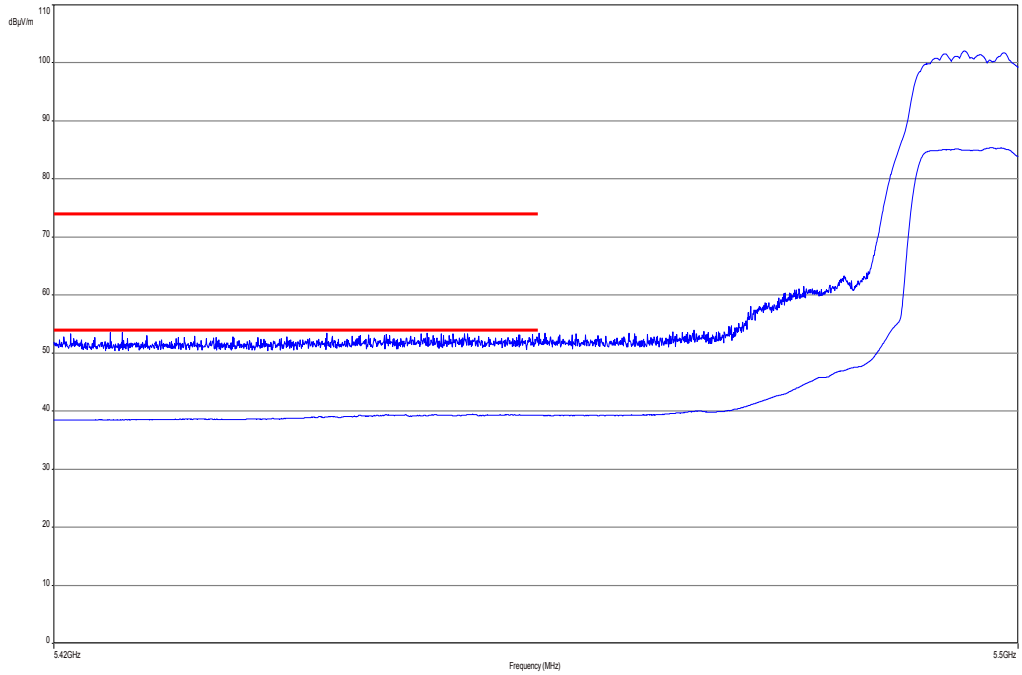
Plot 6: upper band edge, vertical & horizontal polarization (a mode), channel 64, high d. r.



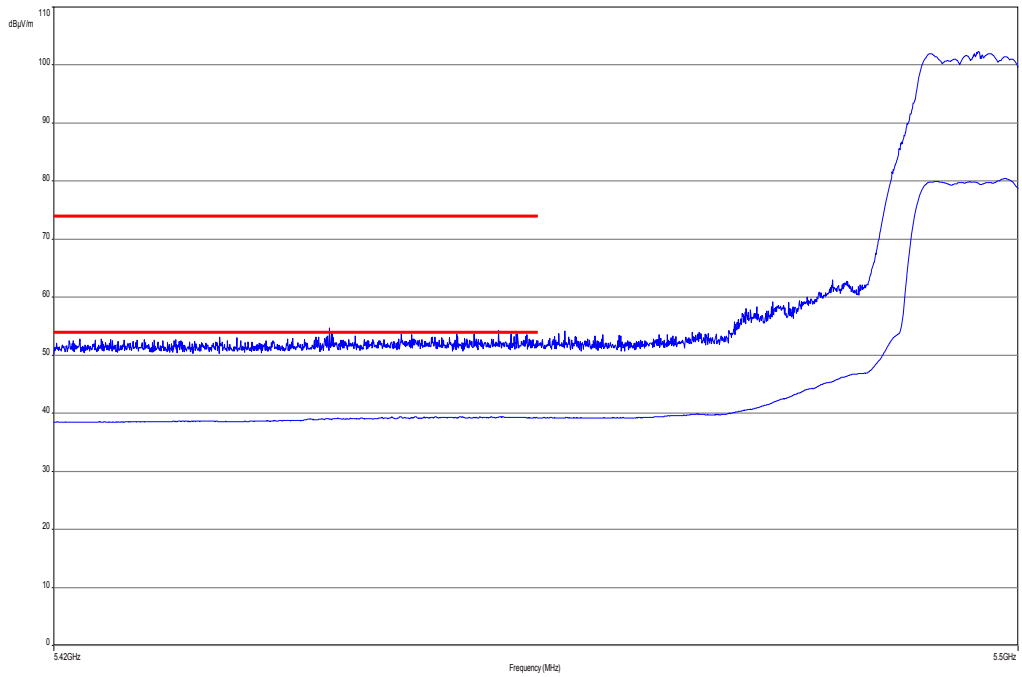
Plot 7: lower band edge, vertical & horizontal polarization (a mode), channel 100, low d. r.



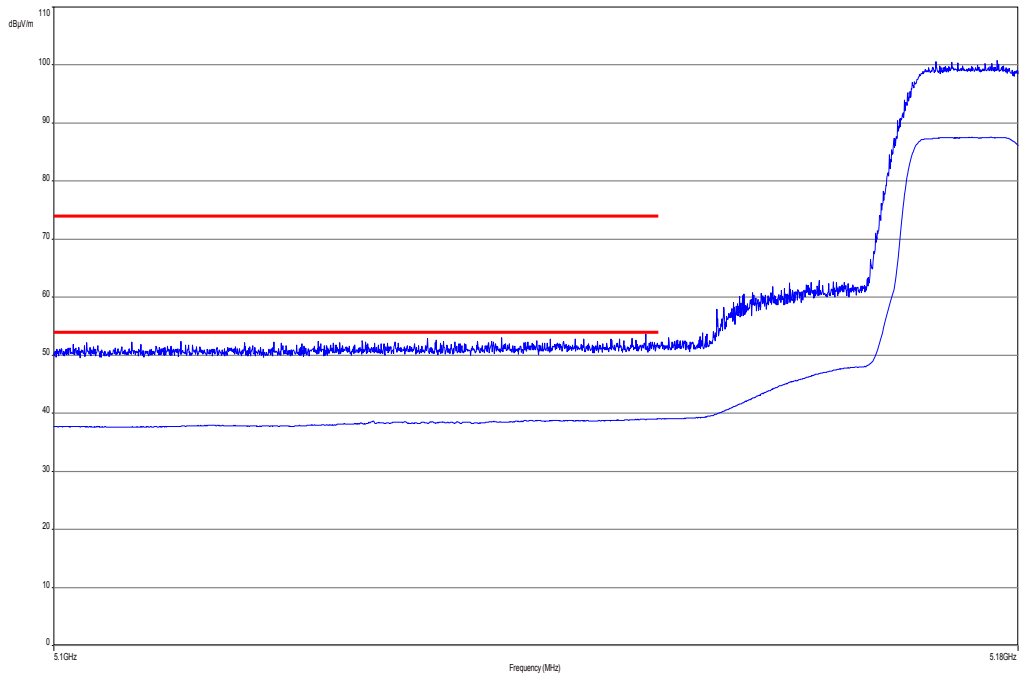
Plot 8: lower band edge, vertical & horizontal polarization (a mode), channel 100, high power d. r.



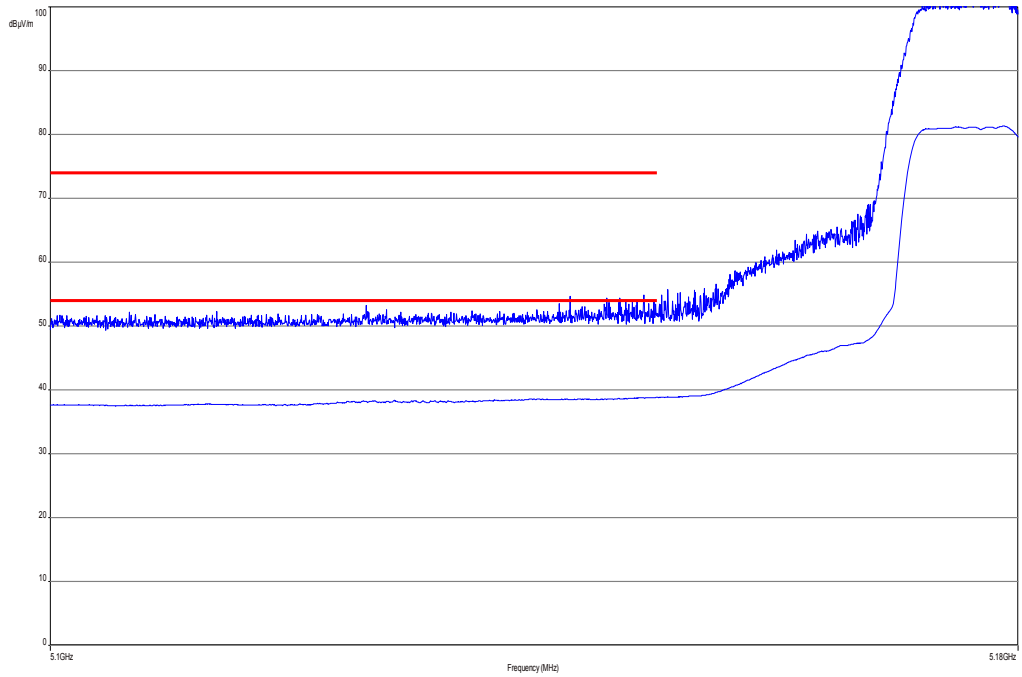
Plot 9: lower band edge, vertical & horizontal polarization (a mode), channel 100, high d. r.



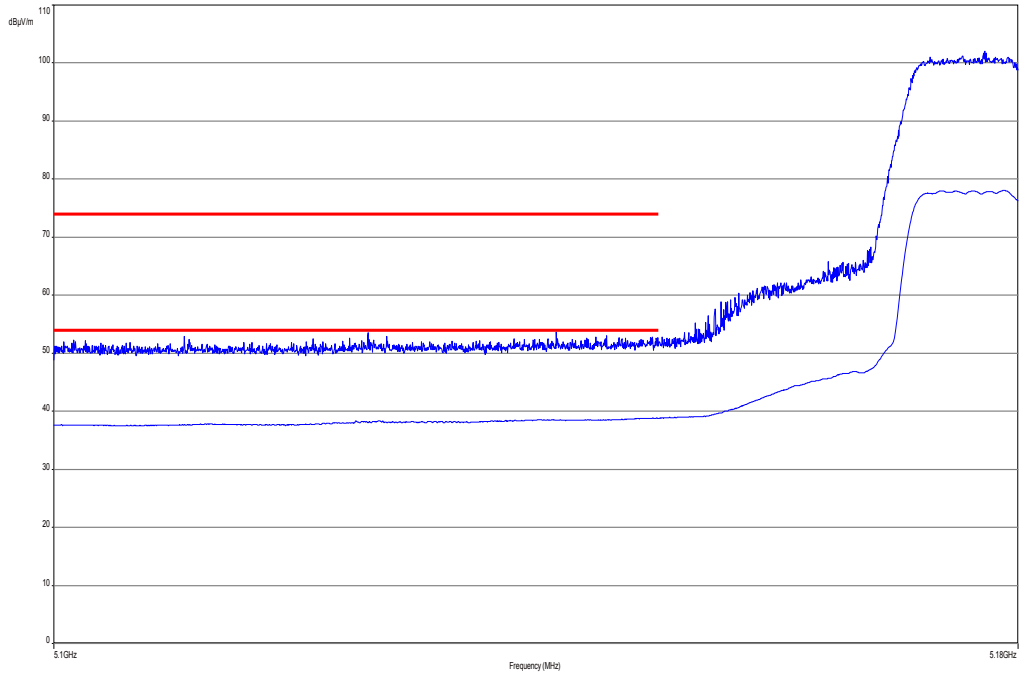
Plot 10: lower band edge, vertical & horizontal polarization (n HT 20 mode), channel 36, low d. r.



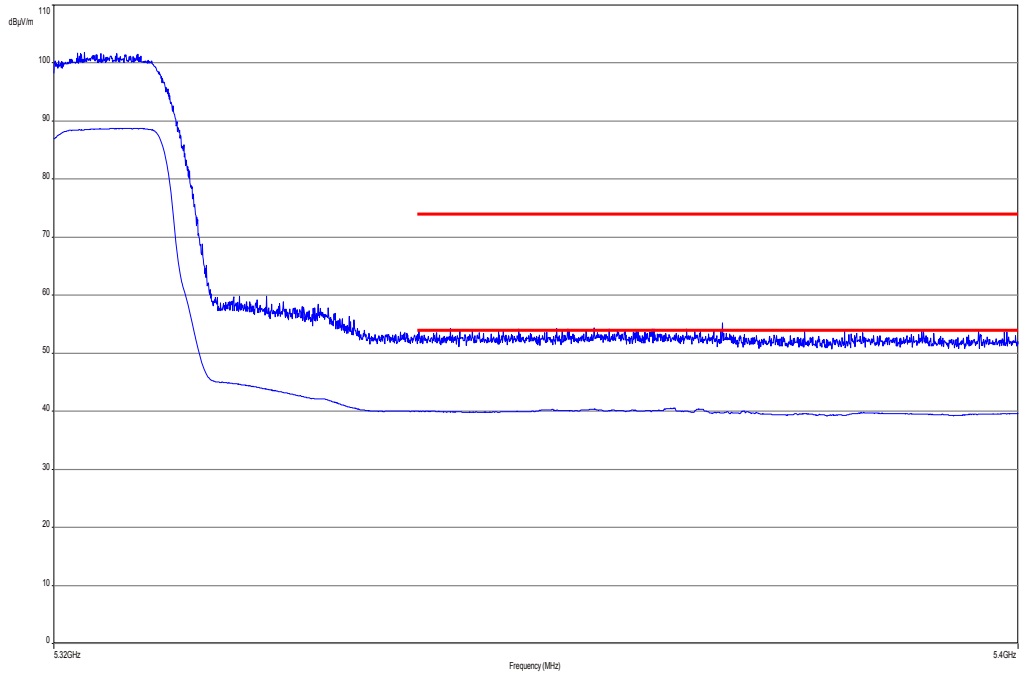
Plot 11: lower band edge, vertical & horizontal polarization (n HT 20 mode), channel 36, high power d. r.



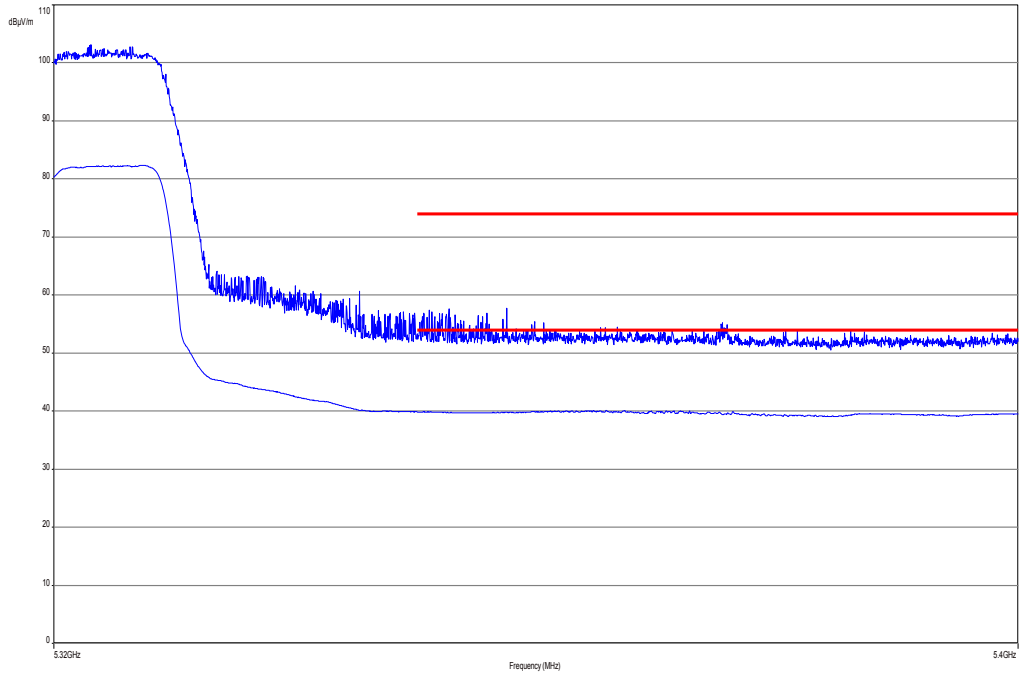
Plot 12: lower band edge, vertical & horizontal polarization (n HT 20 mode), channel 36, high d. r.



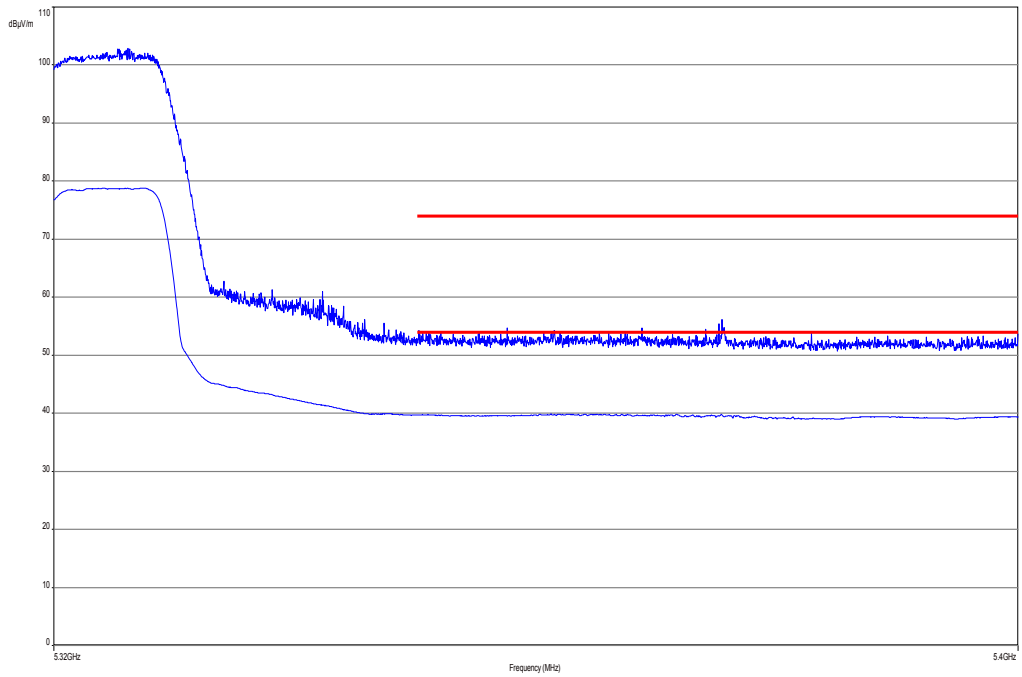
Plot 13: upper band edge, vertical & horizontal polarization (n HT 20 mode), channel 64, low d. r.



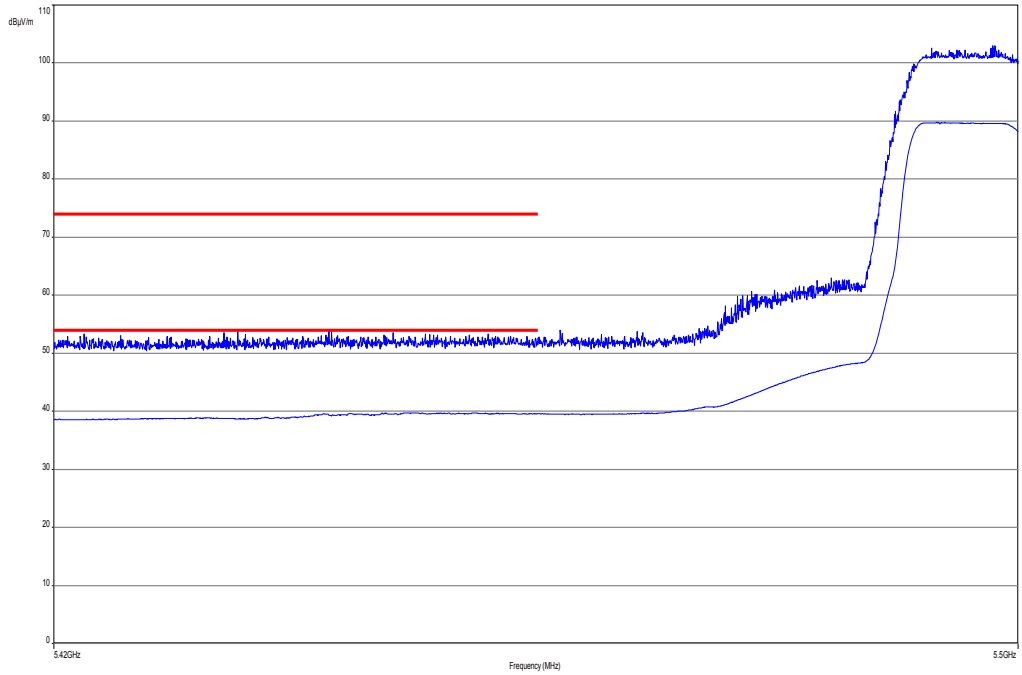
Plot 14: upper band edge, vertical & horizontal polarization (n HT 20 mode), channel 64, high power d. r.



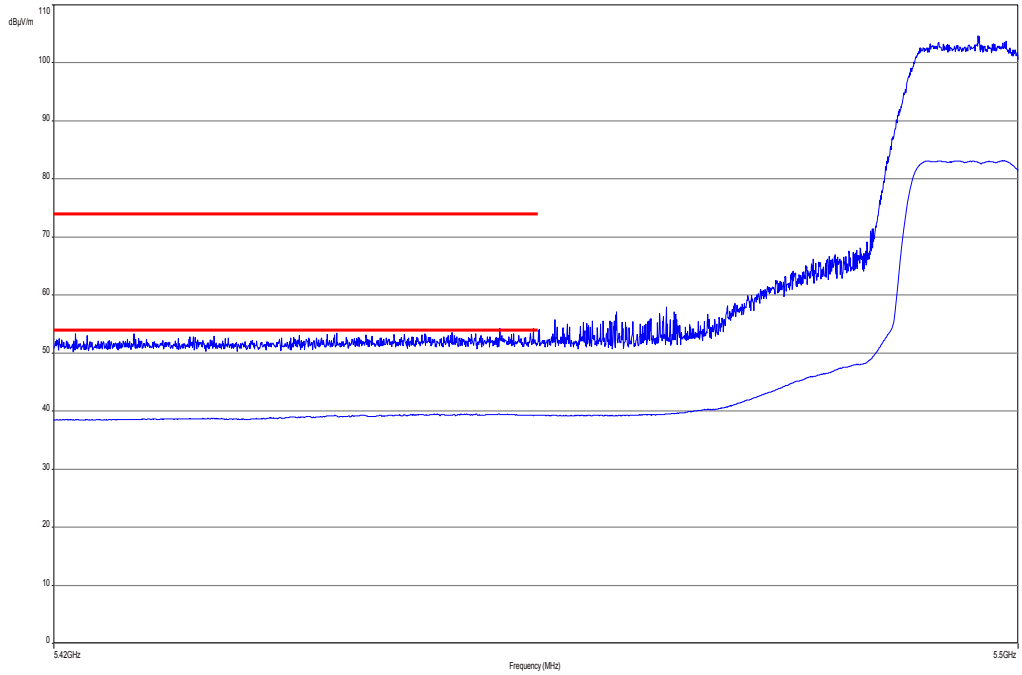
Plot 15: upper band edge, vertical & horizontal polarization (n HT 20 mode), channel 64, high d. r.



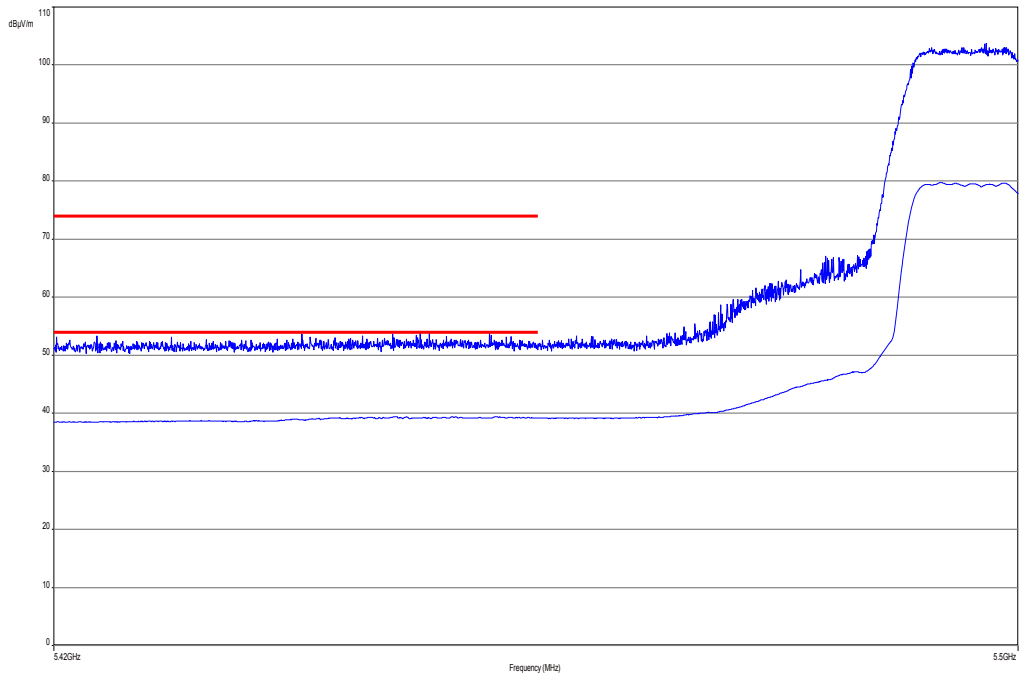
Plot 16: lower band edge, vertical & horizontal polarization (n HT 20 mode), channel 100, low d. r.



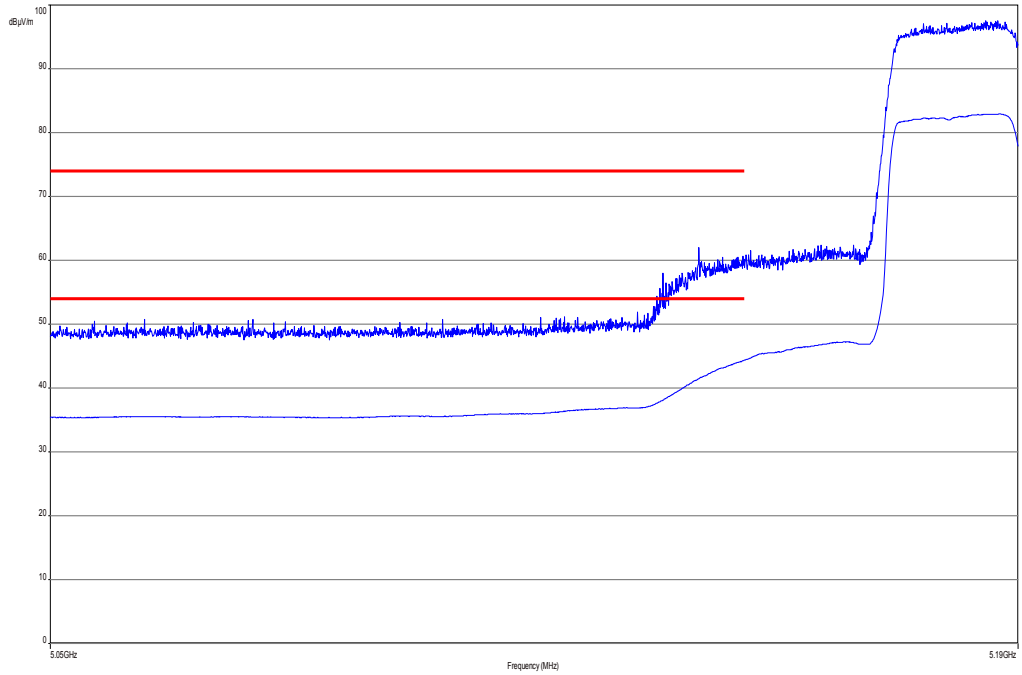
Plot 17: lower band edge, vertical & horizontal polarization (n HT 20 mode), channel 100, high power d. r.



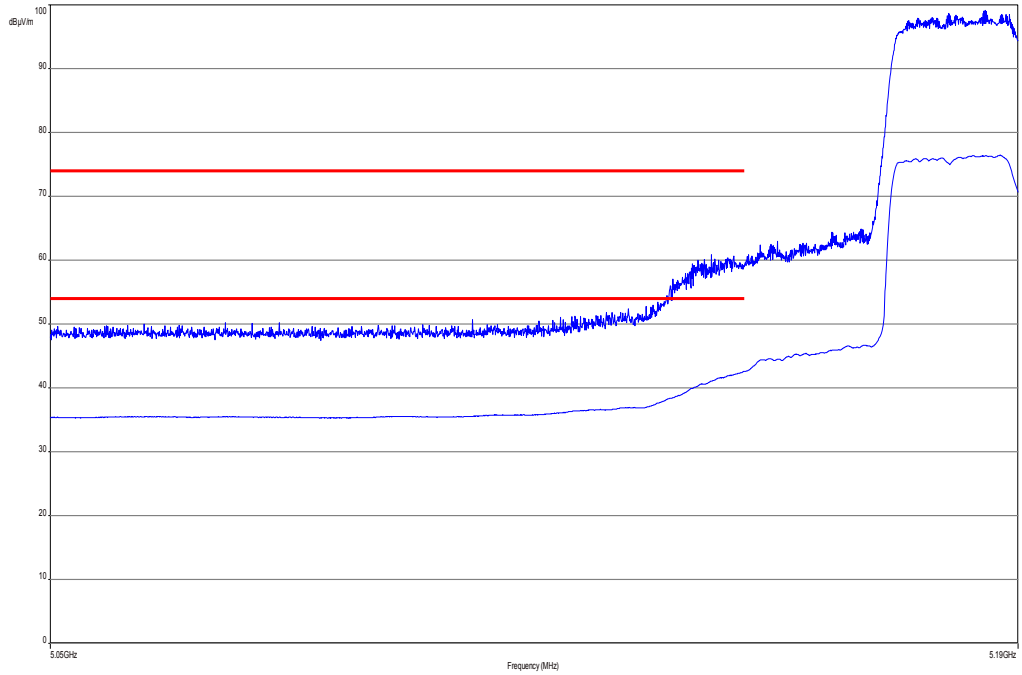
Plot 18: lower band edge, vertical & horizontal polarization (n HT 20 mode), channel 100, high d. r.



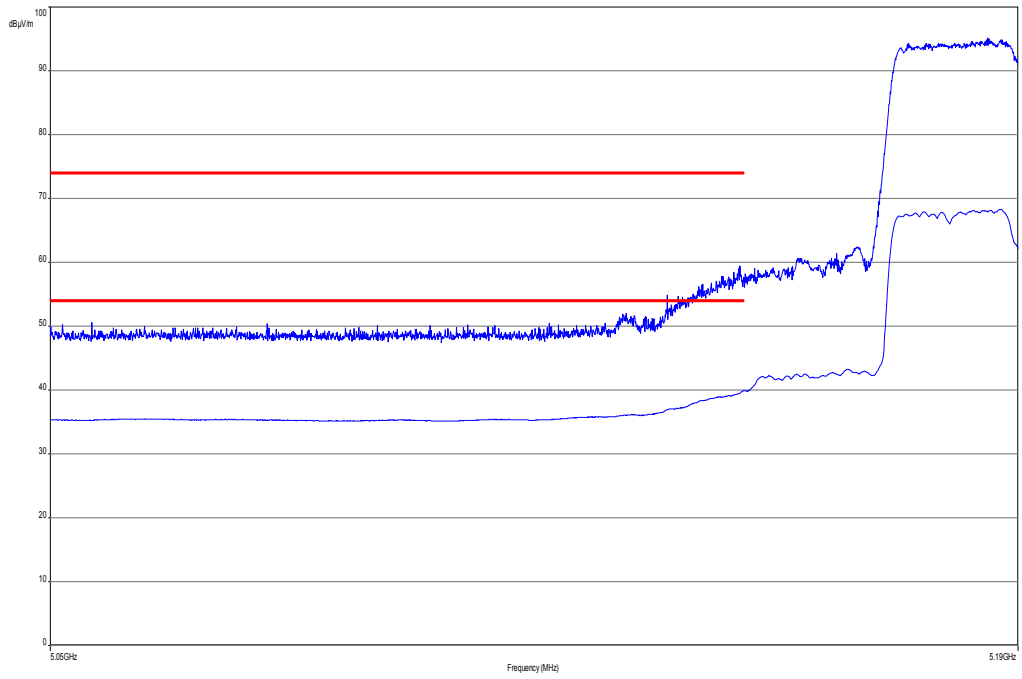
Plot 19: lower band edge, vertical & horizontal polarization (n HT 40 mode), channel 38, low d. r.



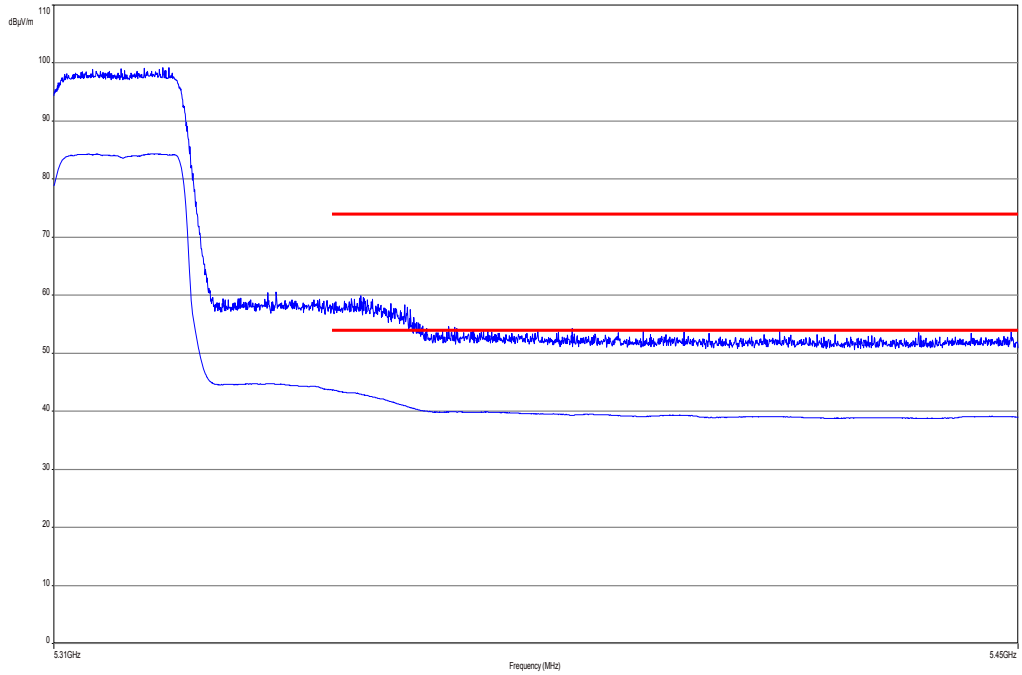
Plot 20: lower band edge, vertical & horizontal polarization (n HT 40 mode), channel 38, high power d. r.



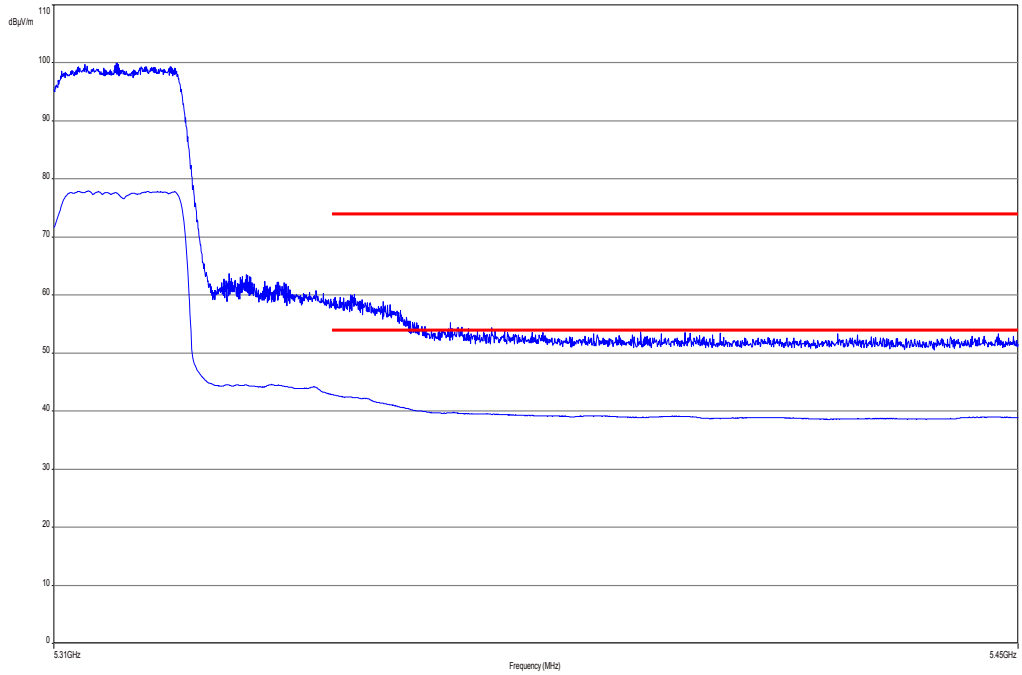
Plot 21: lower band edge, vertical & horizontal polarization (n HT 40 mode), channel 38, high d. r.



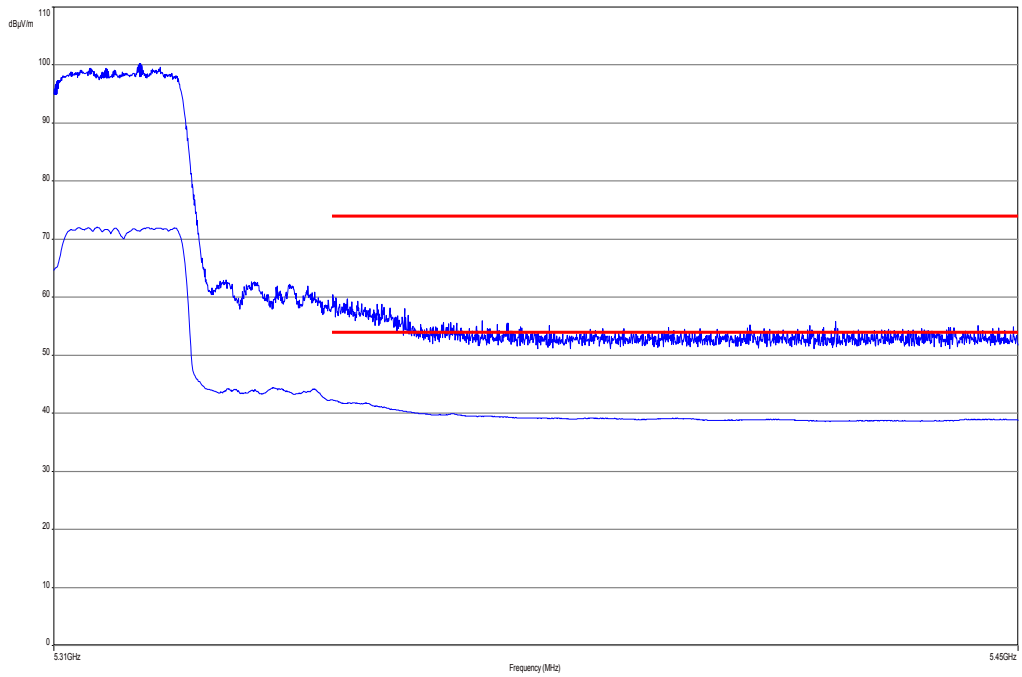
Plot 22: upper band edge, vertical & horizontal polarization (n HT 40 mode), channel 62, low d. r.



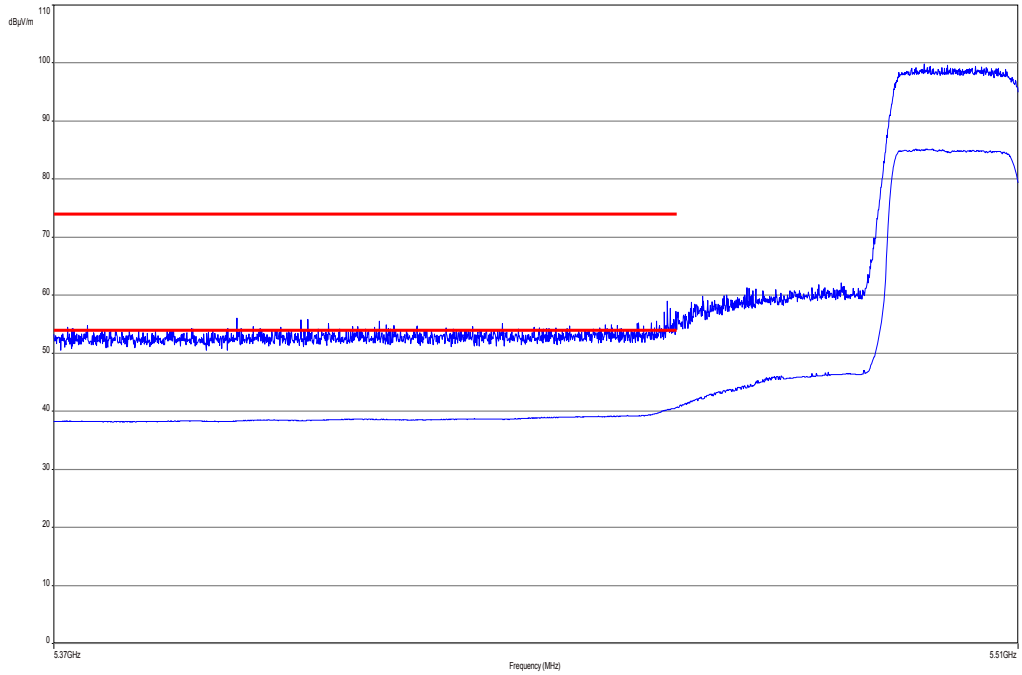
Plot 23: upper band edge, vertical & horizontal polarization (n HT 40 mode), channel 62, high power d. r.



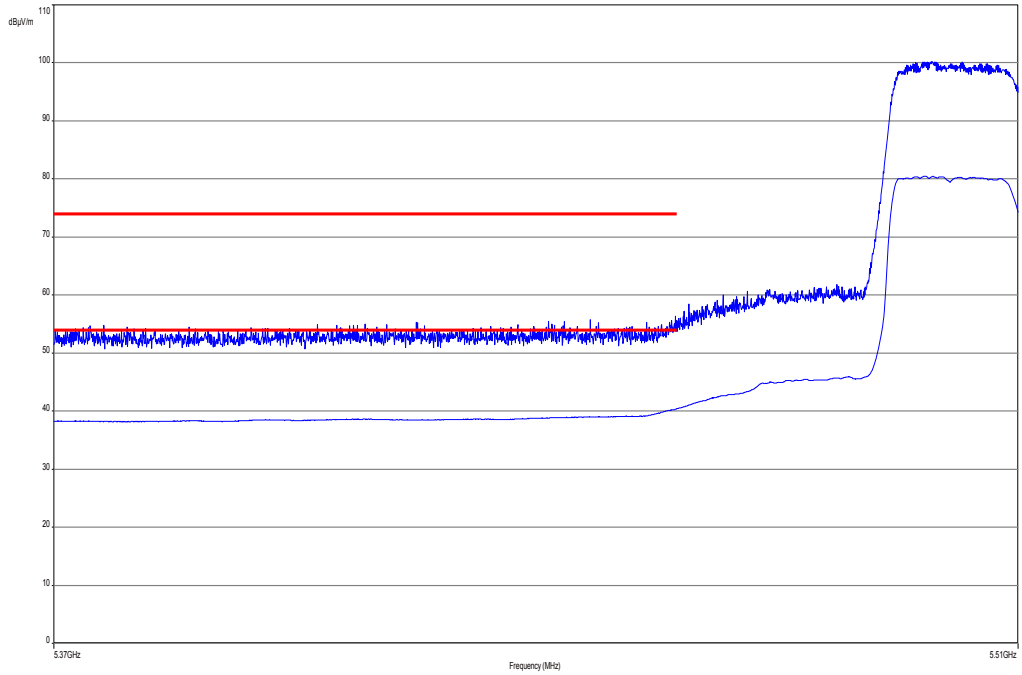
Plot 24: upper band edge, vertical & horizontal polarization (n HT 40 mode), channel 62, high d. r.



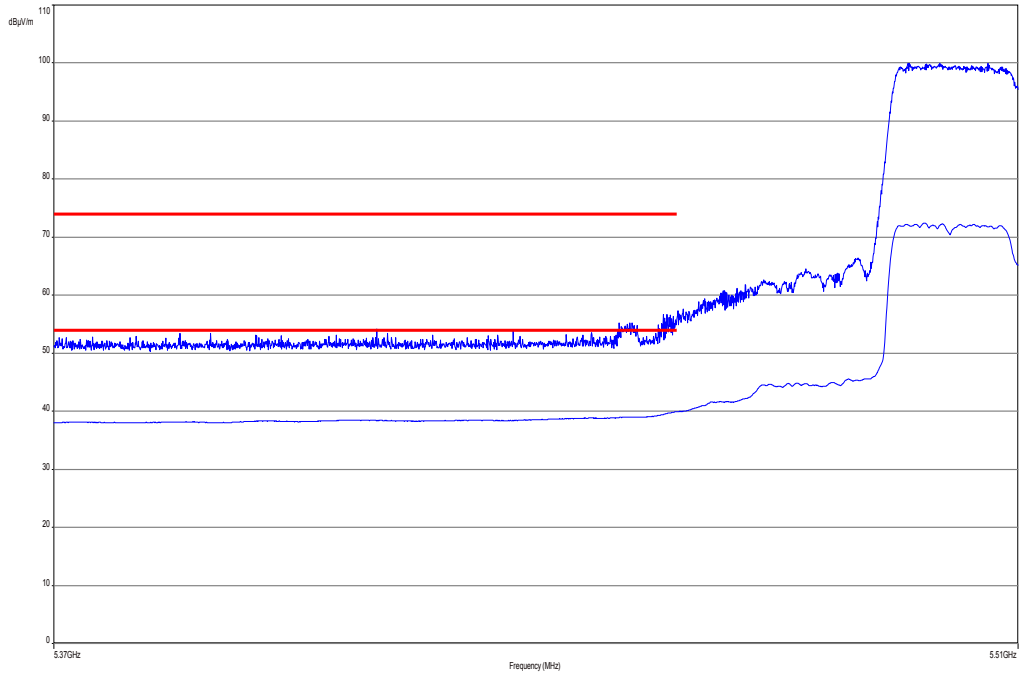
Plot 25: lower band edge, vertical & horizontal polarization (n HT 40 mode), channel 102, low d. r.



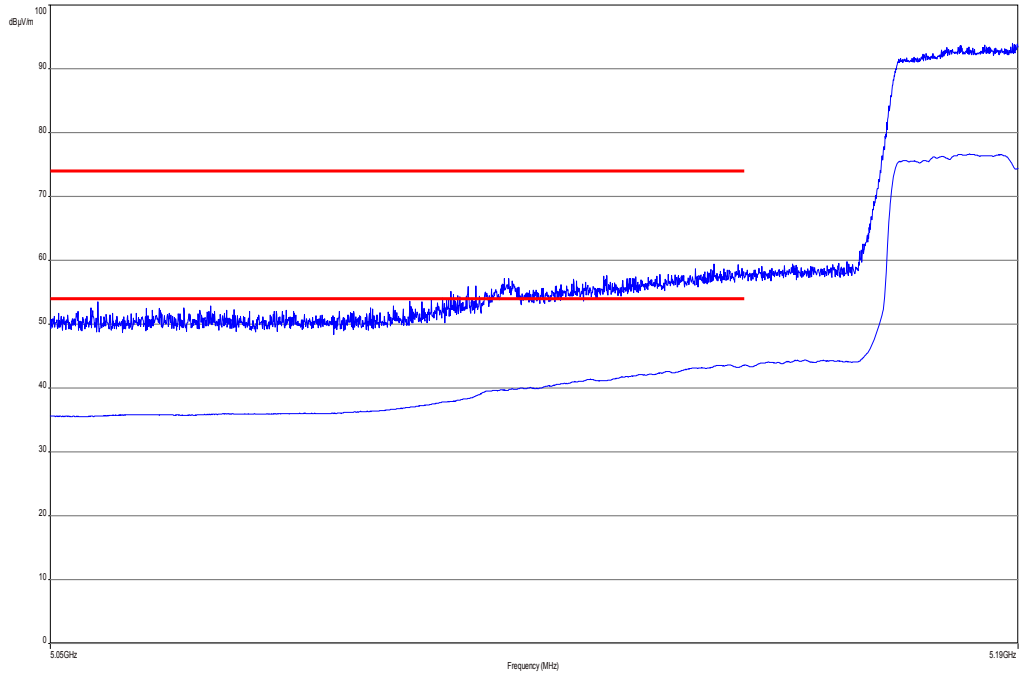
Plot 26: lower band edge, vertical & horizontal polarization (n HT 40 mode), channel 102, high power d. r.



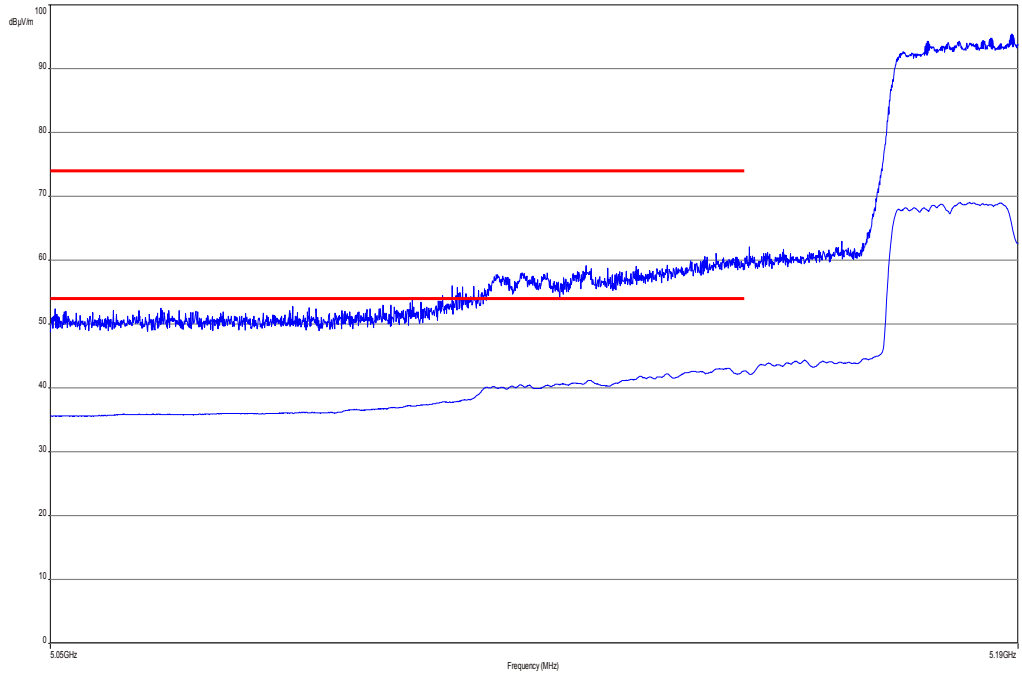
Plot 27: lower band edge, vertical & horizontal polarization (n HT 40 mode), channel 102, high d. r.



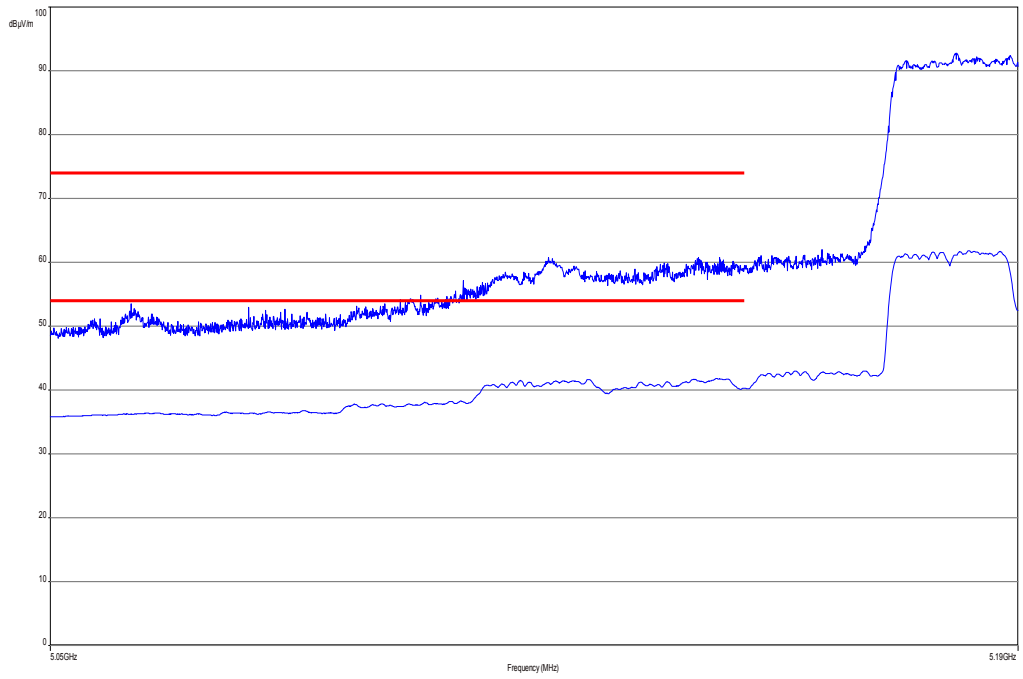
Plot 28: lower band edge, vertical & horizontal polarization (ac HT 80 mode), channel 42, low d. r.



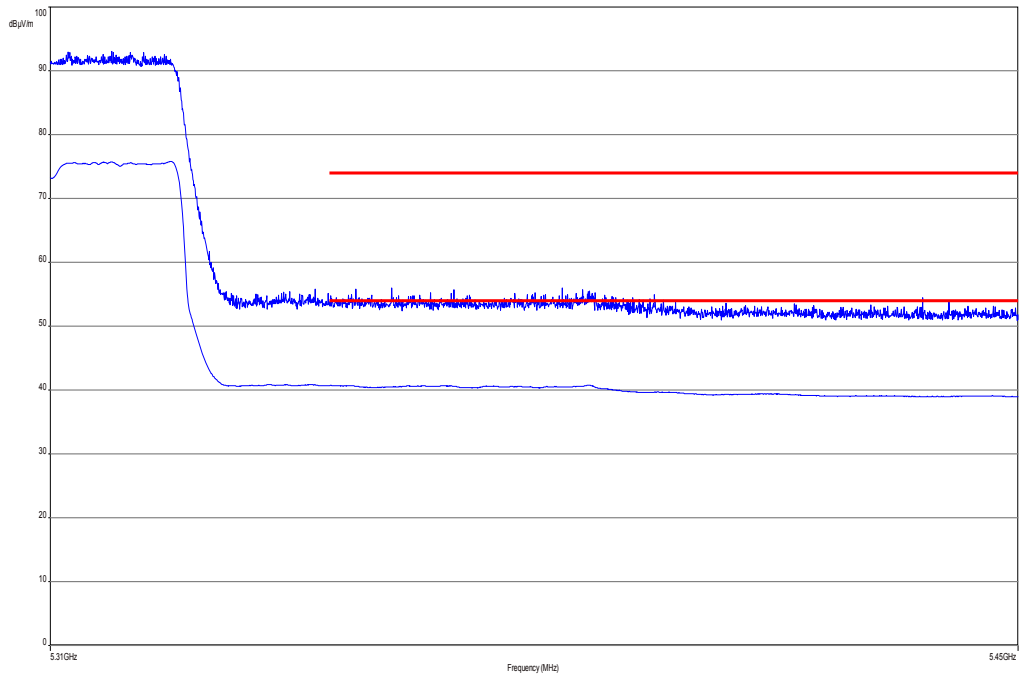
Plot 29: lower band edge, vertical & horizontal polarization (ac HT 80 mode), channel 42, high power d. r.



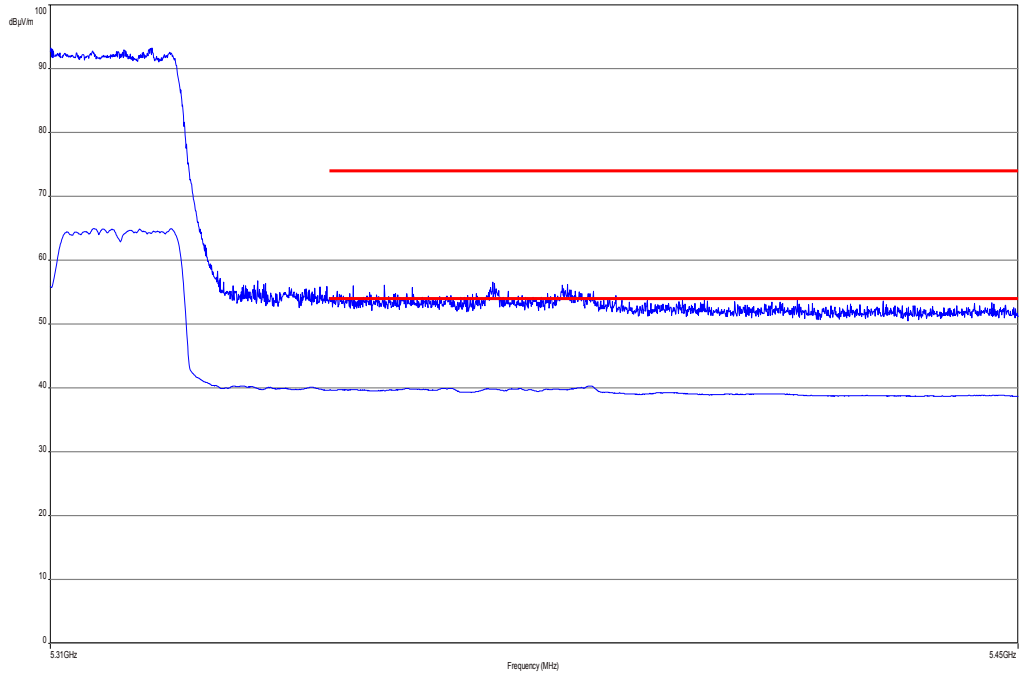
Plot 30: lower band edge, vertical & horizontal polarization (ac HT 80 mode), channel 42, high d. r.



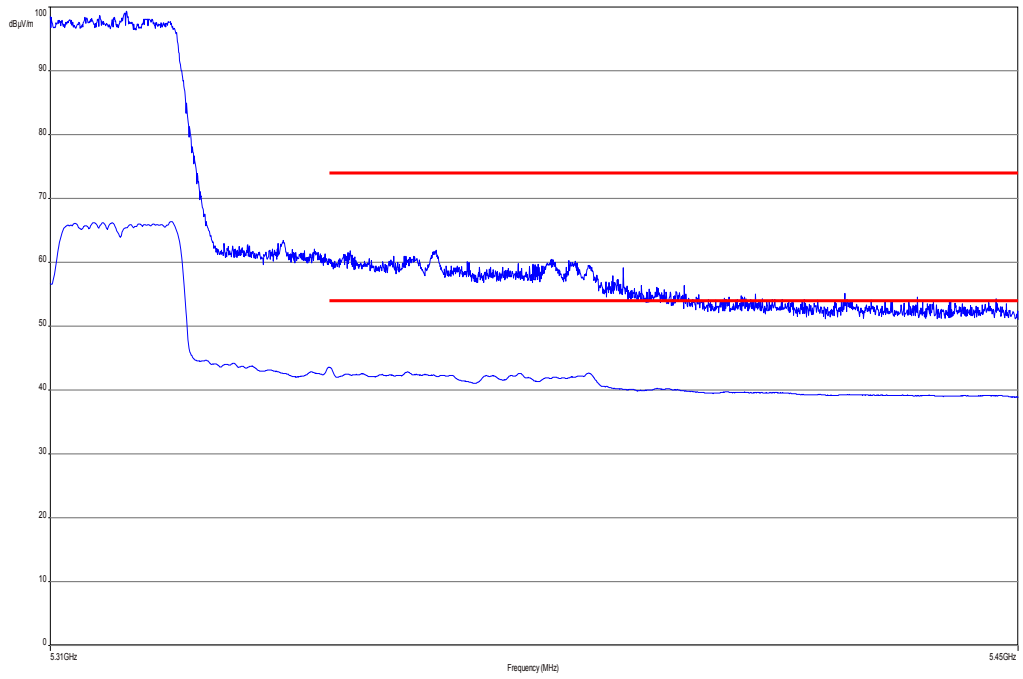
Plot 31: highest band edge, vertical & horizontal polarization (ac HT 80 mode), channel 58, low d. r.



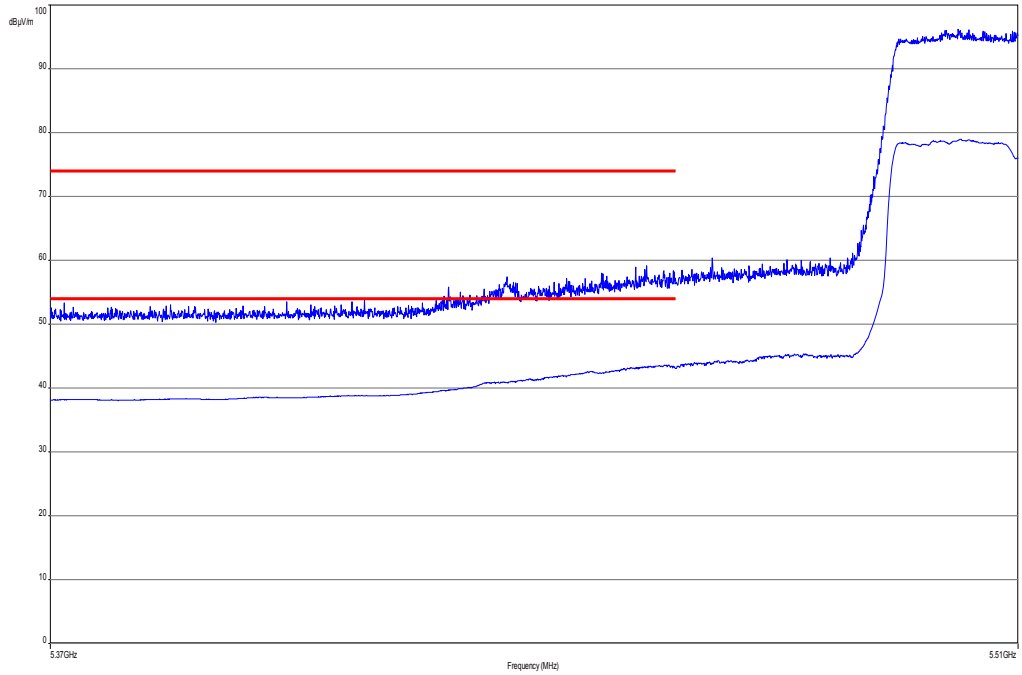
Plot 32: highest band edge, vertical & horizontal polarization (ac HT 80 mode), channel 58, high power d. r



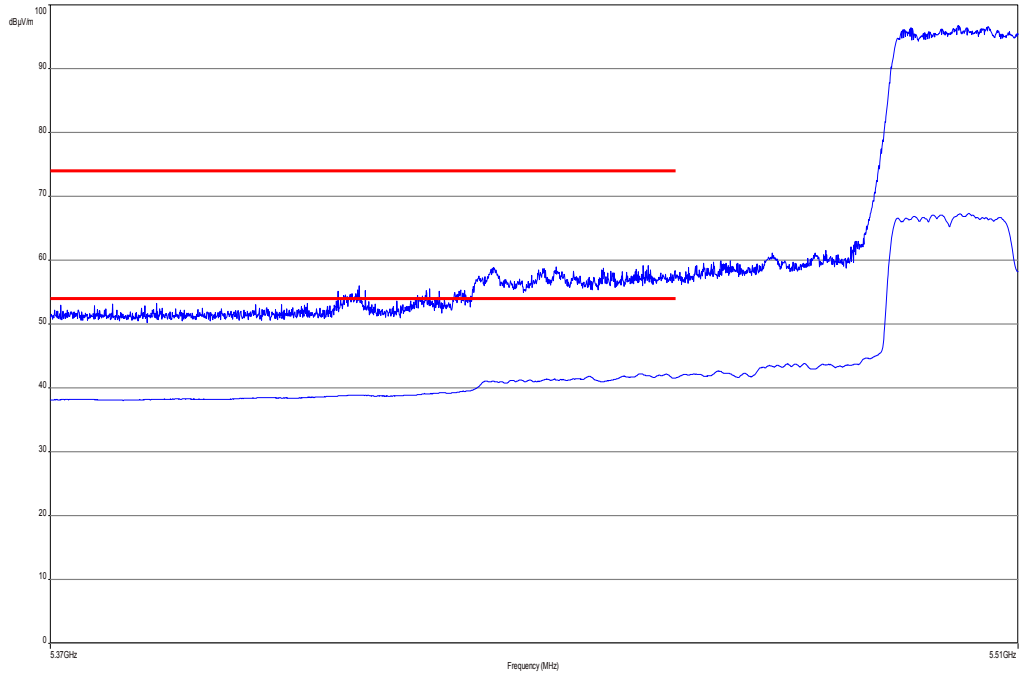
Plot 33: highest band edge, vertical & horizontal polarization (ac HT 80 mode), channel 58, high d. r.



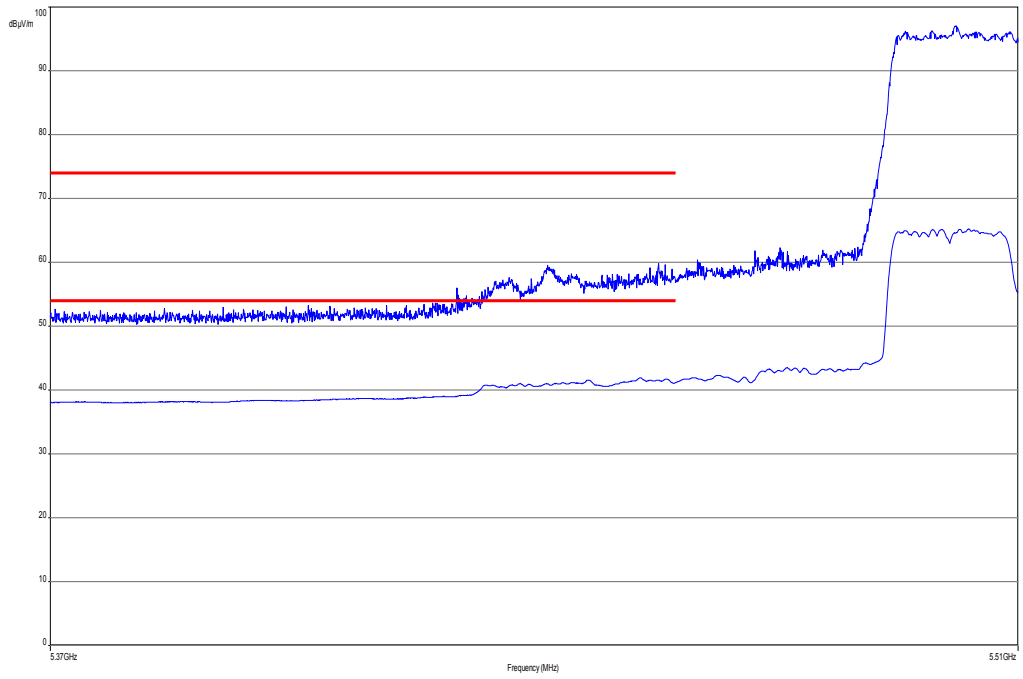
Plot 34: lowest band edge, vertical & horizontal polarization (ac HT80 mode), channel 106, low d. r.



Plot 35: lowest band edge, vertical & horizontal polarization (ac HT80 mode), channel 106, high power d. r.



Plot 36: lowest band edge, vertical & horizontal polarization (ac HT80 mode), channel 106, high d. r.



Result: **Passed**

10.2 TX spurious emissions radiated

Description:

Measurement of the radiated spurious emissions in transmit mode. The measurement is performed at lowest, middle and highest channel.

Measurement:

Measurement parameter	
Detector:	Quasi Peak below 1 GHz (alternative Peak) Peak above 1 GHz / RMS
Sweep time:	Auto
Resolution bandwidth:	F < 1 GHz: 100 kHz F > 1 GHz: 1 MHz
Video bandwidth:	F < 1 GHz: 100 kHz F > 1 GHz: ≥ 3 MHz /10 Hz
Span:	30 MHz to 40 GHz
Trace-Mode:	Max Hold / Average with 100 counts + 20 log (1 / X) for duty cycle lower than 100 %

Limits:

TX Spurious Emissions Radiated		
§15.209		
Frequency (MHz)	Field Strength (dBµV/m)	Measurement distance
30 - 88	30.0	10
88 – 216	33.5	10
216 – 960	36.0	10
Above 960	54.0	3
§15.407		
Outside the restricted bands!	-27 dBm / MHz	

Results: OFDM / a – mode

TX Spurious Emissions Radiated [dBµV/m] / dBm								
OFDM a – mode								
Lowest 5180 MHz			-/-			Highest 5240 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			-/-			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.		
For emissions above 1 GHz, please take a look at the plots.			-/-			For emissions above 1 GHz, please take a look at the plots.		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBµV/m] / dBm								
OFDM a – mode								
Lowest 5260 MHz			-/-			Highest 5320 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			-/-			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.		
For emissions above 1 GHz, please take a look at the plots.			-/-			For emissions above 1 GHz, please take a look at the plots.		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBµV/m] / dBm								
OFDM a – mode								
Lowest 5500 MHz			-/-			Highest 5700 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			-/-			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.		
For emissions above 1 GHz, please take a look at the plots.			-/-			For emissions above 1 GHz, please take a look at the plots.		
Measurement uncertainty			± 3 dB					

Result: **Passed**

Results: OFDM / n/ac – modeHT20

TX Spurious Emissions Radiated [dBµV/m] / dBm								
OFDM n/ac – mode HT20								
Lowest 5180 MHz			-/-			Highest 5240 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			-/-			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.		
For emissions above 1 GHz, please take a look at the plots.			-/-			For emissions above 1 GHz, please take a look at the plots.		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBµV/m] / dBm								
OFDM n/ac – mode HT20								
Lowest 5260 MHz			-/-			Highest 5320 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			-/-			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.		
For emissions above 1 GHz, please take a look at the plots.			-/-			For emissions above 1 GHz, please take a look at the plots.		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBµV/m] / dBm								
OFDM n/ac – mode HT20								
Lowest 5500 MHz			-/-			Highest 5700 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			-/-			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.		
For emissions above 1 GHz, please take a look at the plots.			-/-			For emissions above 1 GHz, please take a look at the plots.		
Measurement uncertainty			± 3 dB					

Result: **Passed**

Results: OFDM / n/ac – modeHT40

TX Spurious Emissions Radiated [dBµV/m] / dBm								
OFDM n/ac – mode HT40								
Lowest 5190 MHz			Middle 5230 MHz			Highest 5270 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.		
For emissions above 1 GHz, please take a look at the plots.			For emissions above 1 GHz, please take a look at the plots.			For emissions above 1 GHz, please take a look at the plots.		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBµV/m] / dBm								
OFDM n/ac – mode HT40								
Lowest 5310 MHz			Middle 5510 MHz			Highest 5670 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.		
For emissions above 1 GHz, please take a look at the plots.			For emissions above 1 GHz, please take a look at the plots.			For emissions above 1 GHz, please take a look at the plots.		
Measurement uncertainty			± 3 dB					

Results: OFDM / ac – modeHT80

TX Spurious Emissions Radiated [dBµV/m] / dBm								
OFDM ac – mode HT80								
Lowest 5210 MHz						Highest 5290 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			-/-			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.		
For emissions above 1 GHz, please take a look at the plots.			-/-			For emissions above 1 GHz, please take a look at the plots.		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBµV/m] / dBm								
OFDM ac – mode HT80								
-/-			Middle 5530 MHz			-/-		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
-/-			For emissions below 1 GHz please take a look at the table below the 1 GHz plot.			-/-		
-/-			For emissions above 1 GHz, please take a look at 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)

Plots: OFDM / a – mode

Plot 1: 30 MHz to 1 GHz, 5180 MHz, vertical & horizontal polarization

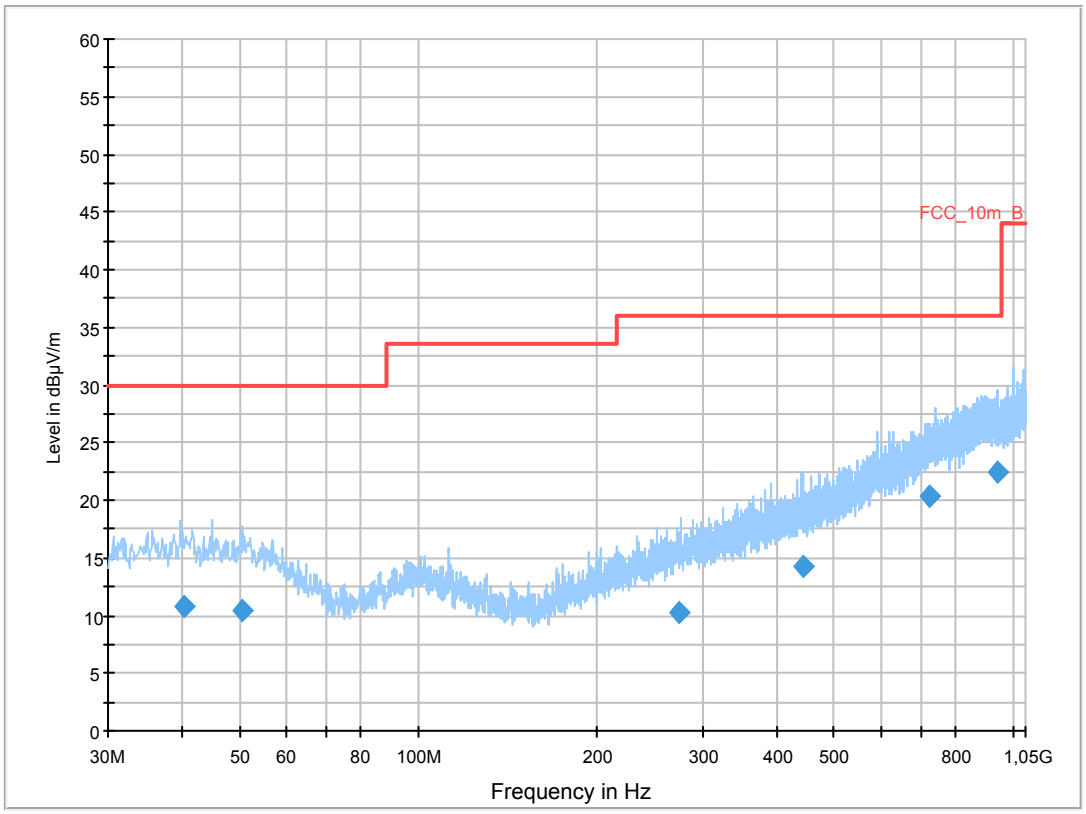
Common Information

Serial Number:	CB551268KBP
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	w-lan a-mode tx ch 36
Operator Name:	Wolsdorfer
Comment:	battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Receiver:	[ESCI 3]
Level Unit:	dBµV/m

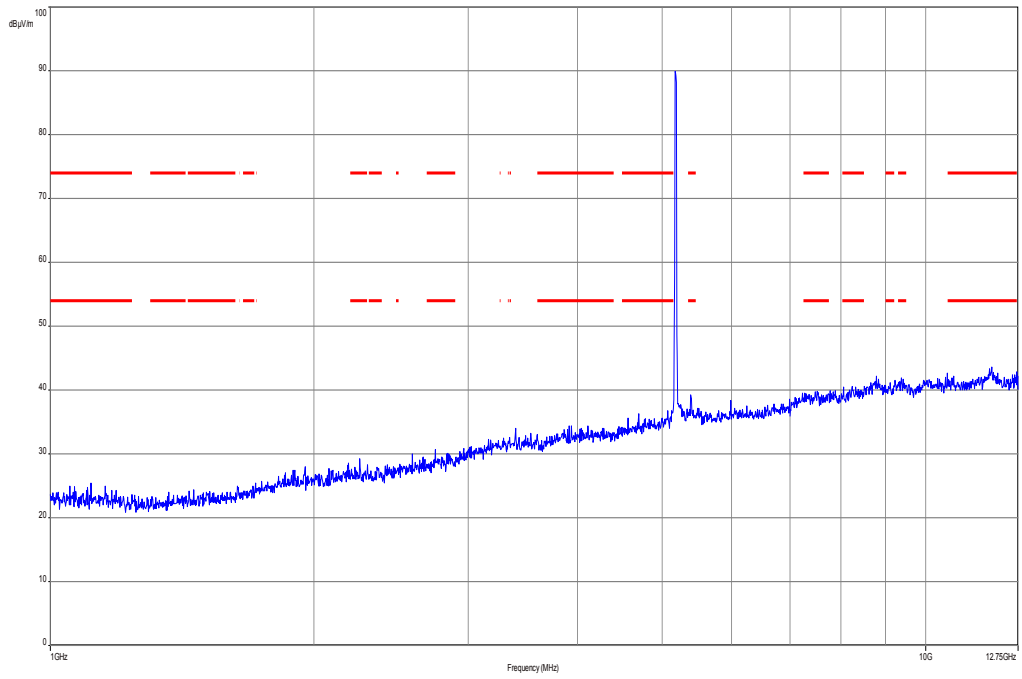
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



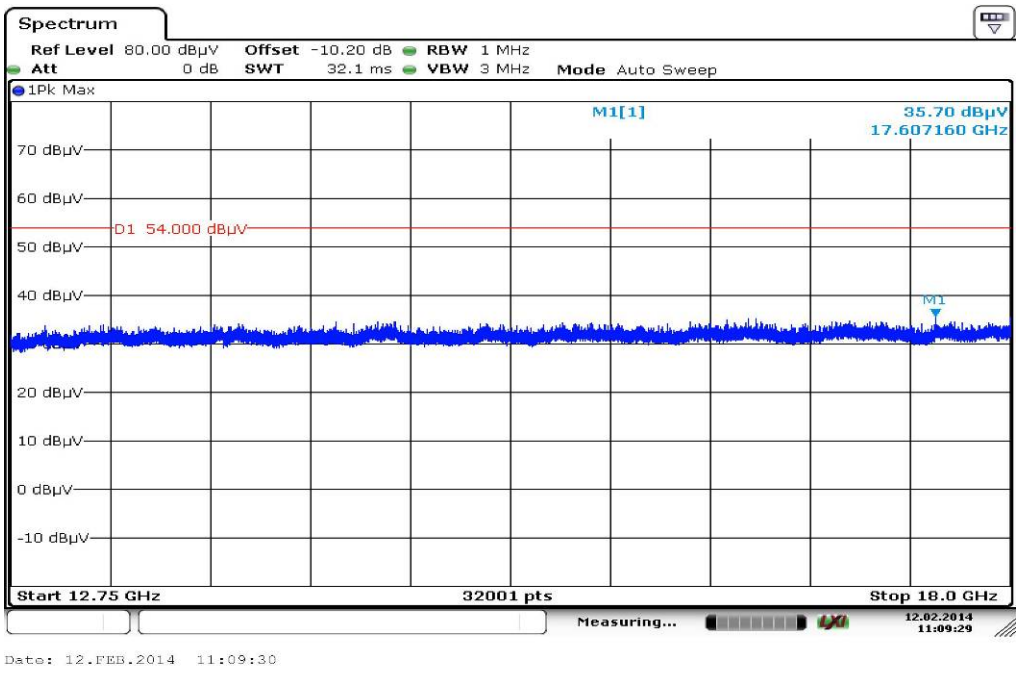
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
40.379250	10.8	1000.0	120.000	138.0	V	90.0	13.4	19.2	30.0	
50.566350	10.4	1000.0	120.000	145.0	V	90.0	13.3	19.6	30.0	
275.087550	10.3	1000.0	120.000	105.0	H	90.0	13.9	25.7	36.0	
444.825450	14.2	1000.0	120.000	98.0	V	180.0	17.6	21.8	36.0	
724.030200	20.4	1000.0	120.000	98.0	V	180.0	23.1	15.6	36.0	
944.847600	22.4	1000.0	120.000	145.0	V	0.0	25.3	13.6	36.0	

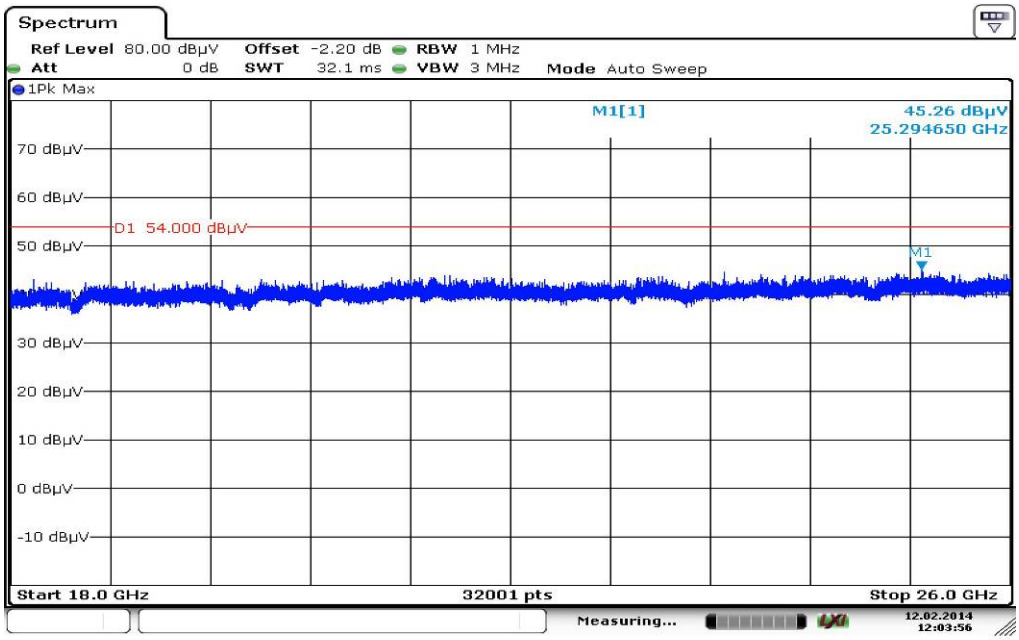
Plot 2: 1 GHz to 12.75 GHz, 5180 MHz, vertical & horizontal polarization



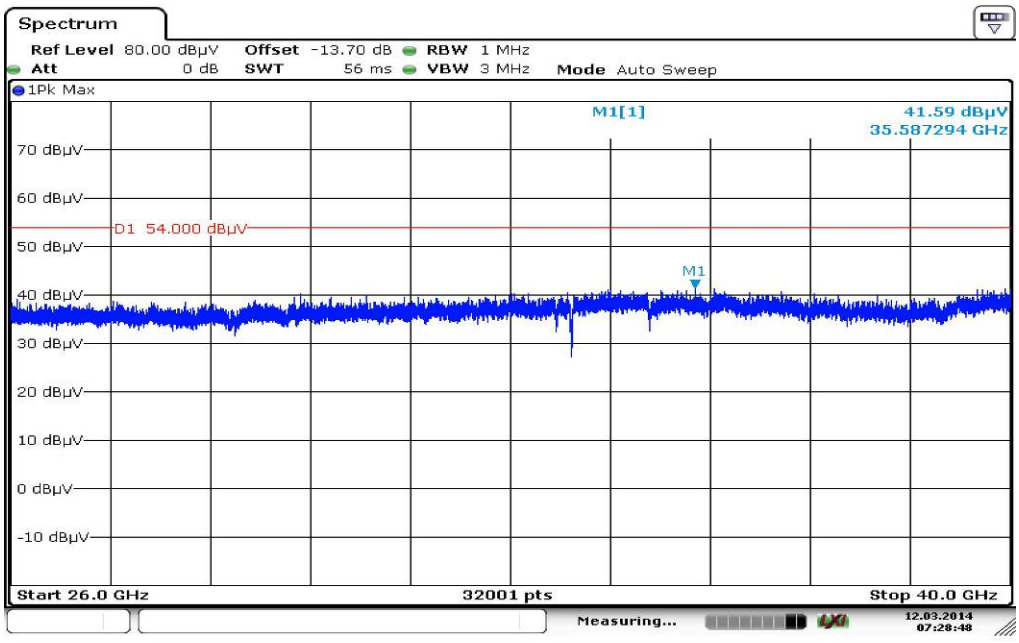
Plot 3: 12 GHz to 18 GHz, 5180 MHz, vertical & horizontal polarization



Plot 4: 18 GHz to 26 GHz, 5180 MHz, vertical & horizontal polarization



Plot 5: 26 GHz to 40 GHz, 5180 MHz, vertical & horizontal polarization



Plot 6: 30 MHz to 1 GHz, 5240 MHz, vertical & horizontal polarization

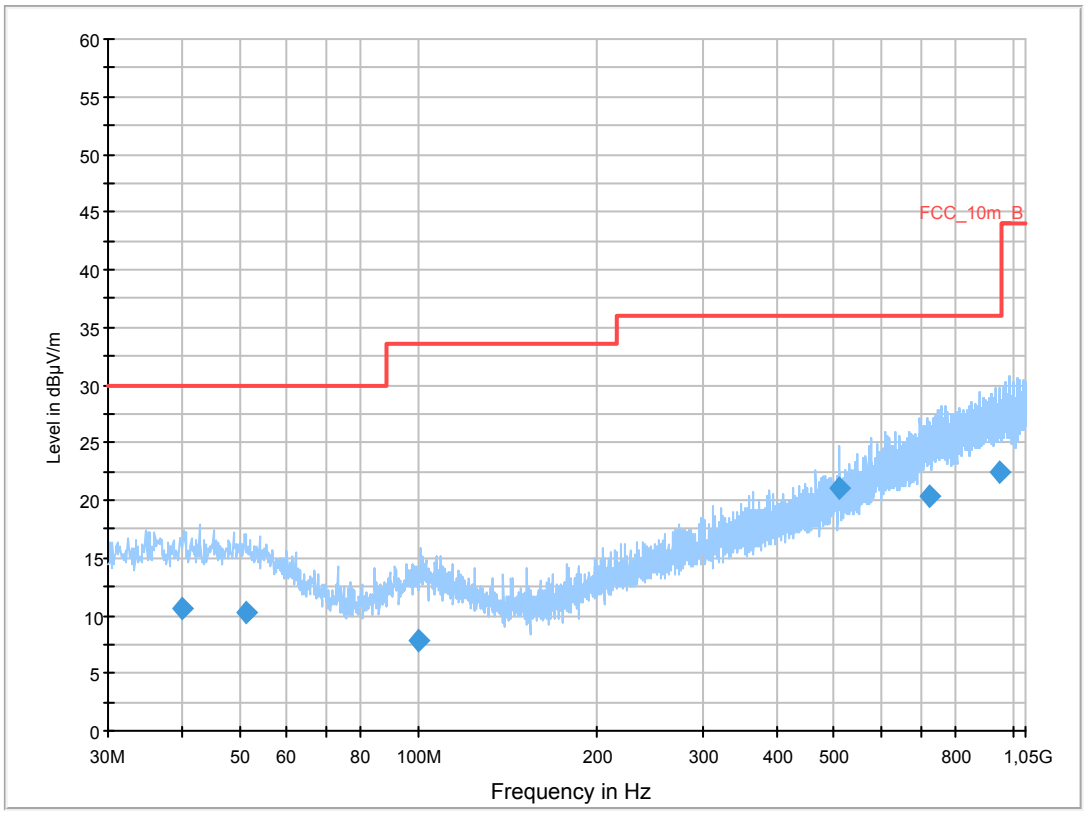
Common Information

Serial Number:	CB551268KBP
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	w-lan a-mode tx ch 48
Operator Name:	Wolsdorfer
Comment:	battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Receiver:	[ESCI 3]
Level Unit:	dBµV/m

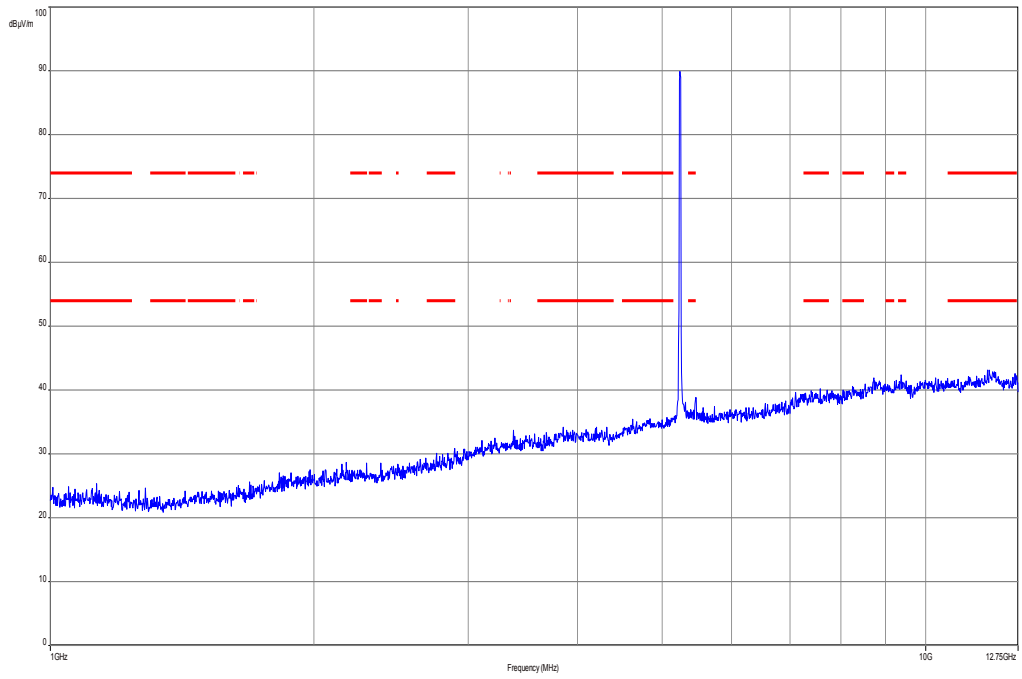
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



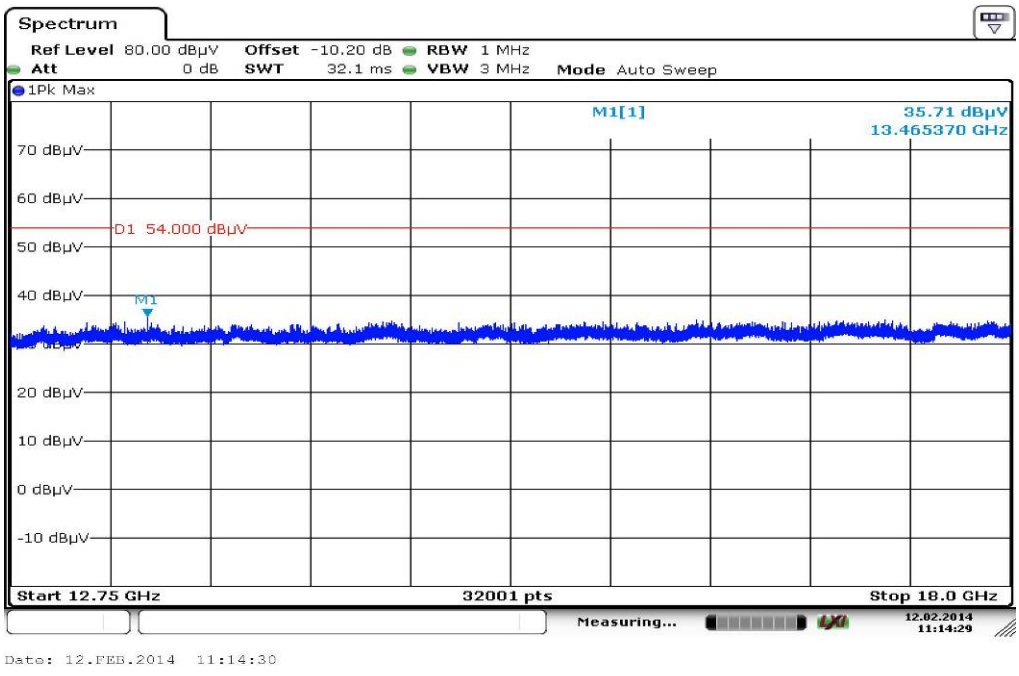
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
40.044000	10.6	1000.0	120.000	145.0	V	180.0	13.4	19.4	30.0	
51.145050	10.3	1000.0	120.000	131.0	H	0.0	13.3	19.7	30.0	
99.937500	7.9	1000.0	120.000	145.0	H	270.0	11.9	25.6	33.5	
510.006750	21.0	1000.0	120.000	132.0	V	0.0	18.8	15.0	36.0	
720.684300	20.3	1000.0	120.000	119.0	H	270.0	23.0	15.7	36.0	
951.784650	22.5	1000.0	120.000	105.0	V	270.0	25.4	13.5	36.0	

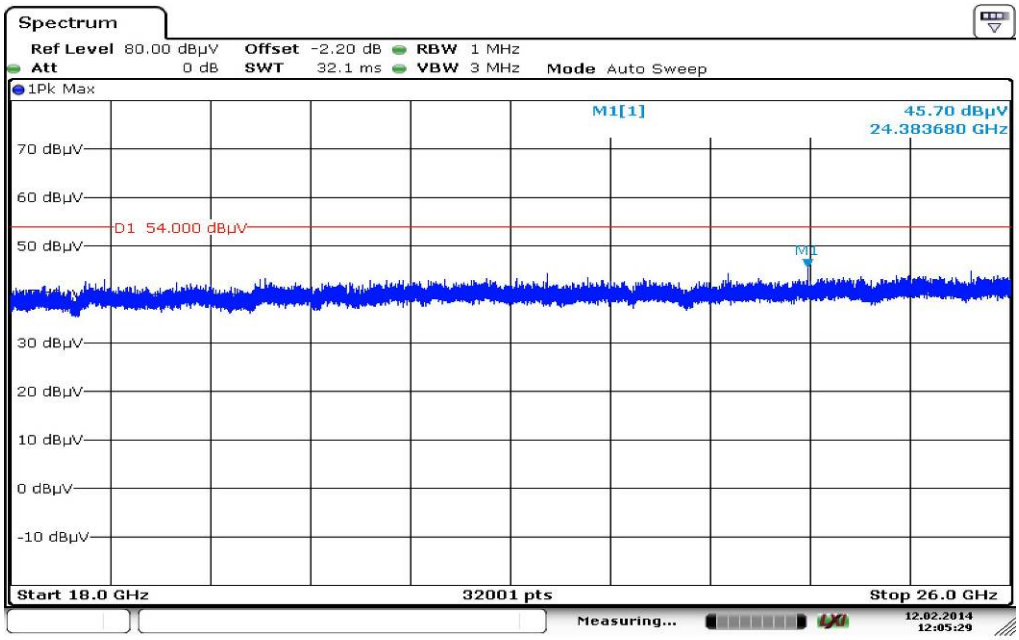
Plot 7: 1 GHz to 12.75 GHz, 5240 MHz, vertical & horizontal polarization



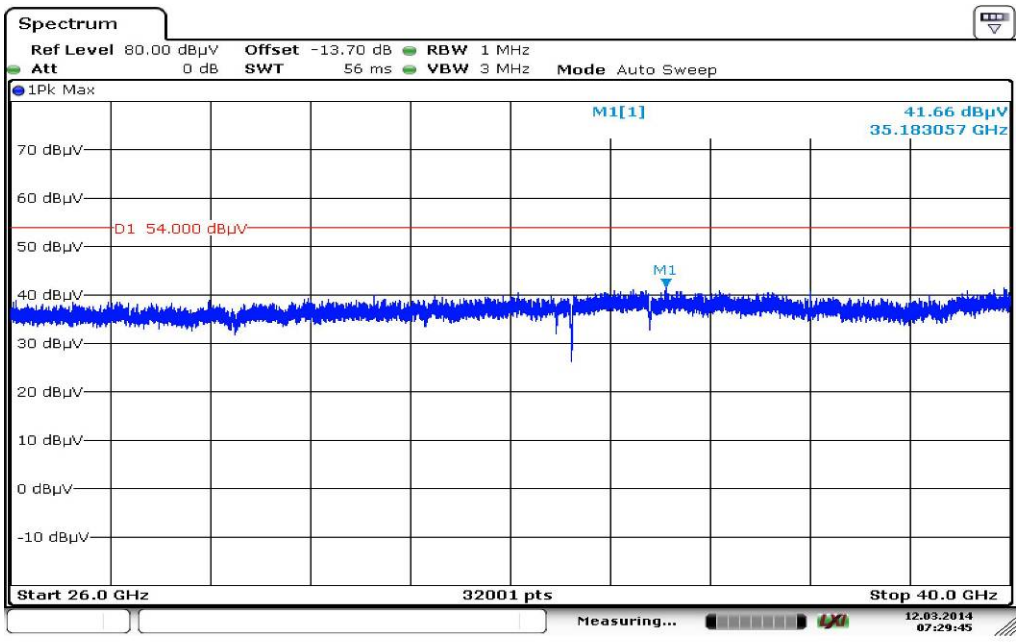
Plot 8: 12 GHz to 18 GHz, 5240 MHz, vertical & horizontal polarization



Plot 9: 18 GHz to 26 GHz, 5240 MHz, vertical & horizontal polarization



Plot 10: 26 GHz to 40 GHz, 5240 MHz, vertical & horizontal polarization



Plot 11: 30 MHz to 1 GHz, 5260 MHz, vertical & horizontal polarization

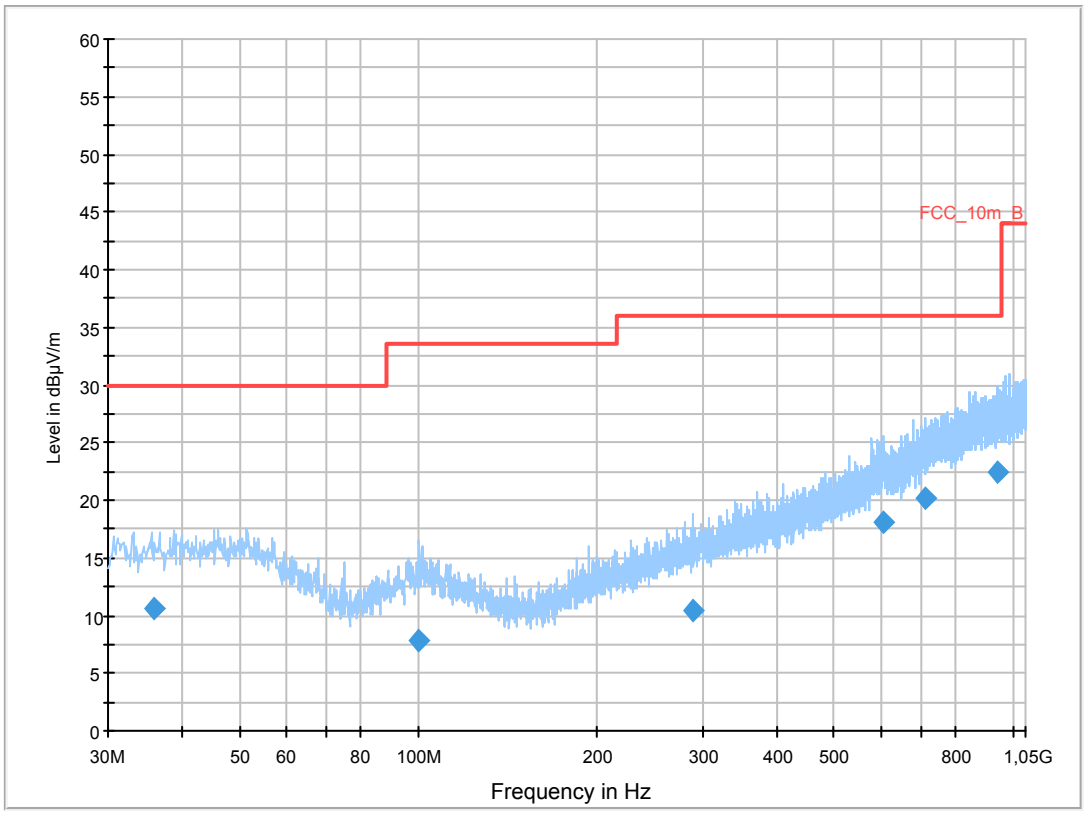
Common Information

Serial Number:	CB551268KBP
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	w-lan a-mode tx ch 52
Operator Name:	Wolsdorfer
Comment:	battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Receiver:	[ESCI 3]
Level Unit:	dBµV/m

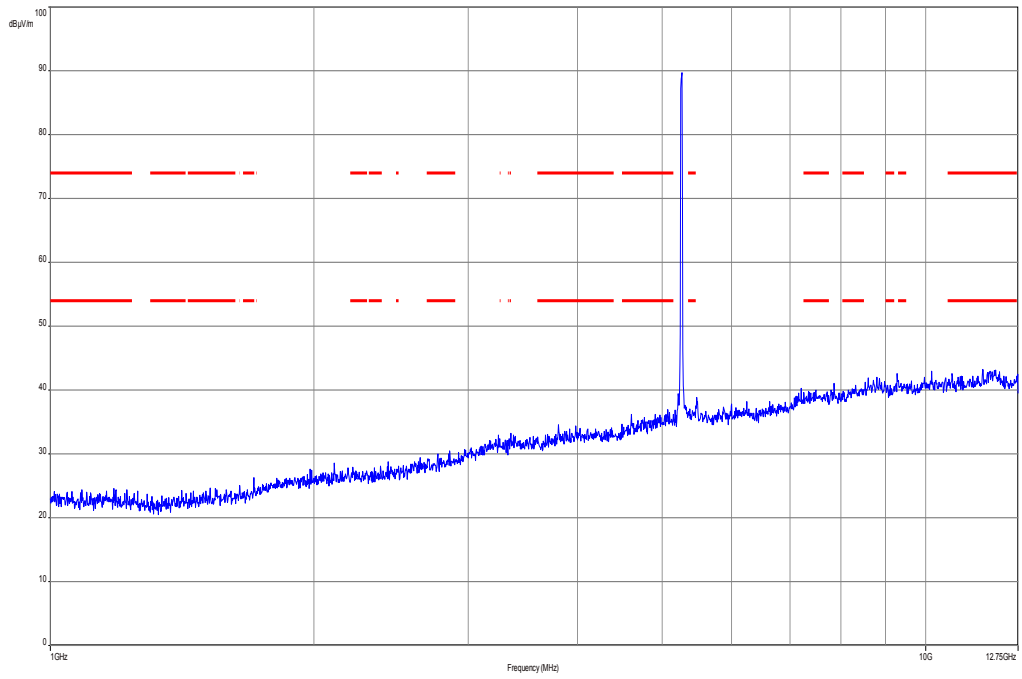
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



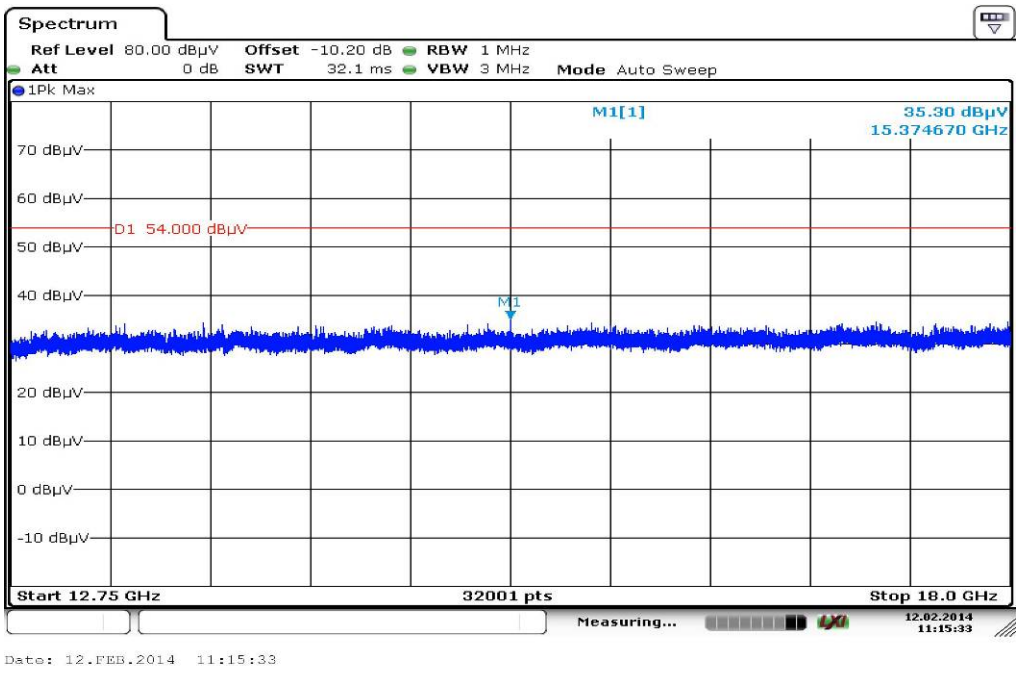
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
35.776050	10.5	1000.0	120.000	145.0	V	0.0	13.1	19.5	30.0	
100.048950	7.8	1000.0	120.000	145.0	H	180.0	11.9	25.7	33.5	
289.472400	10.5	1000.0	120.000	145.0	H	0.0	14.3	25.5	36.0	
603.447900	18.1	1000.0	120.000	145.0	H	270.0	20.8	17.9	36.0	
711.537150	20.1	1000.0	120.000	145.0	V	90.0	22.8	15.9	36.0	
940.660350	22.4	1000.0	120.000	132.0	V	270.0	25.3	13.6	36.0	

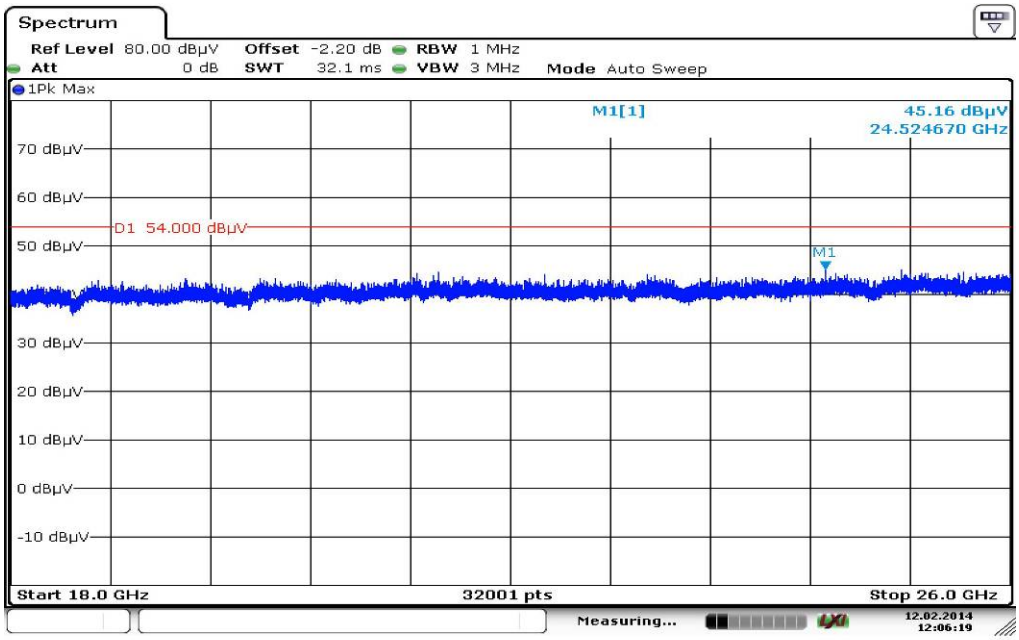
Plot 12: 1 GHz to 12.75 GHz, 5260 MHz, vertical & horizontal polarization



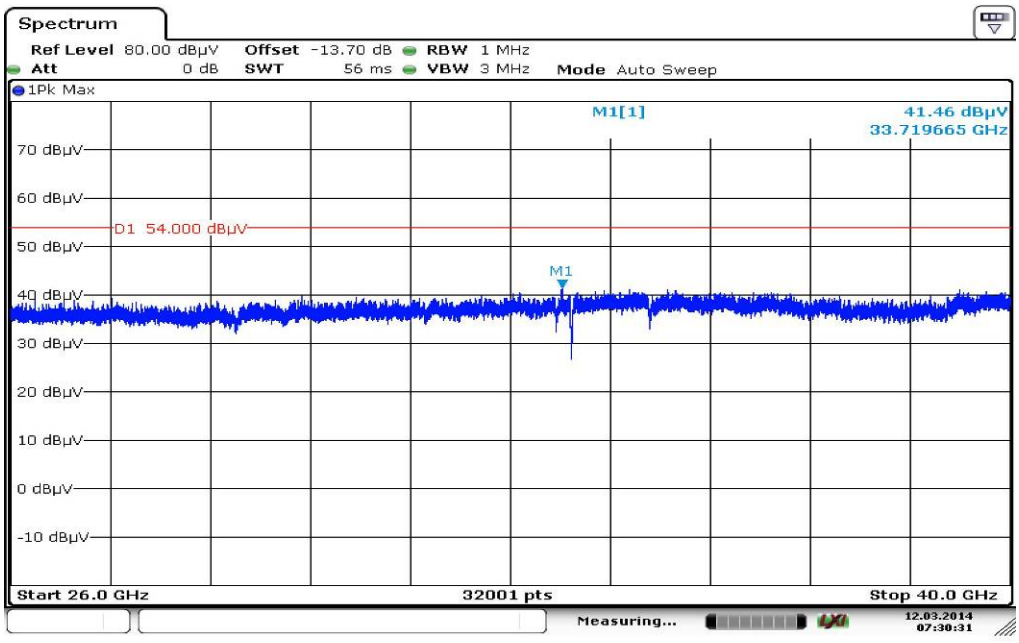
Plot 13: 12 GHz to 18 GHz, 5260 MHz, vertical & horizontal polarization



Plot 14: 18 GHz to 26 GHz, 5260 MHz, vertical & horizontal polarization



Plot 15: 26 GHz to 40 GHz, 5260 MHz, vertical & horizontal polarization



Plot 16: 30 MHz to 1 GHz, 5320 MHz, vertical & horizontal polarization

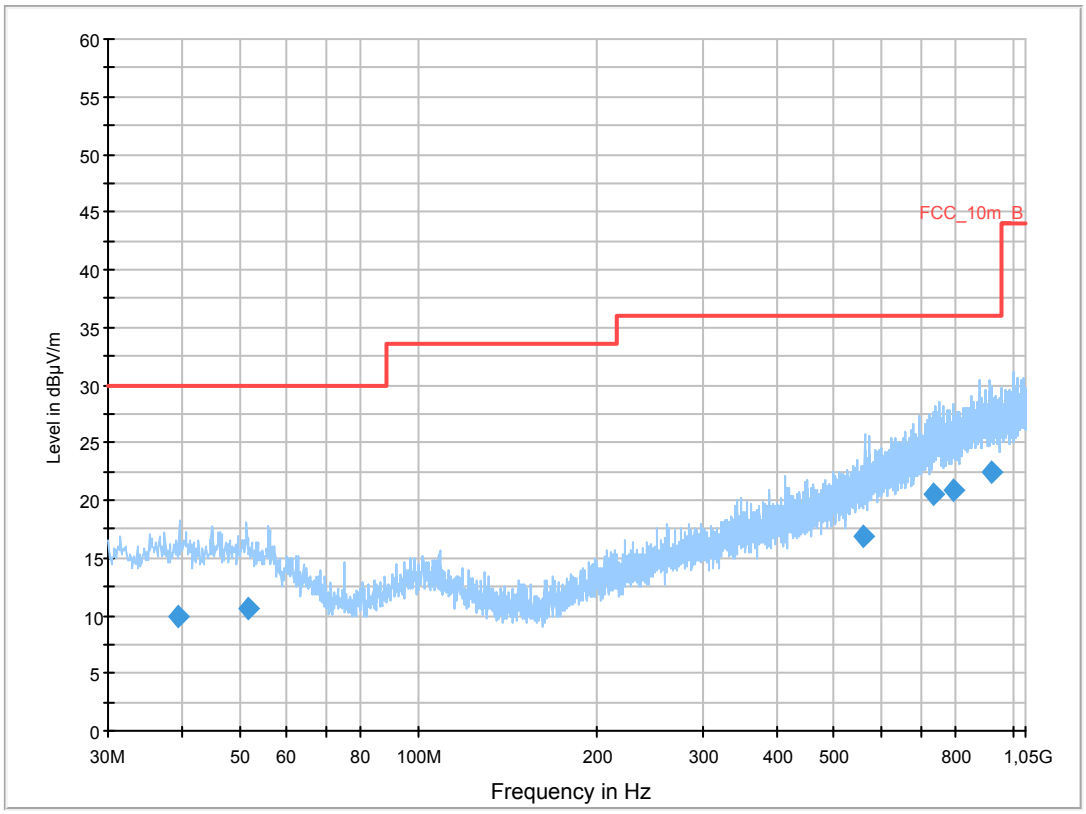
Common Information

Serial Number:	CB551268KBP
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	w-lan a-mode tx ch 64
Operator Name:	Wolsdorfer
Comment:	battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Receiver:	[ESCI 3]
Level Unit:	dBµV/m

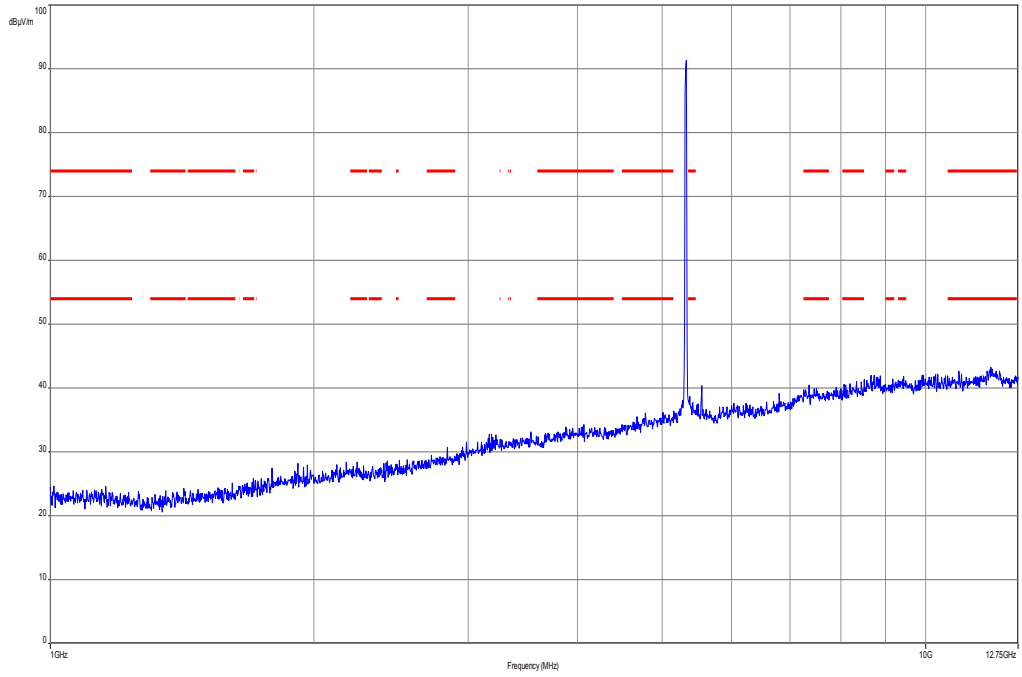
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



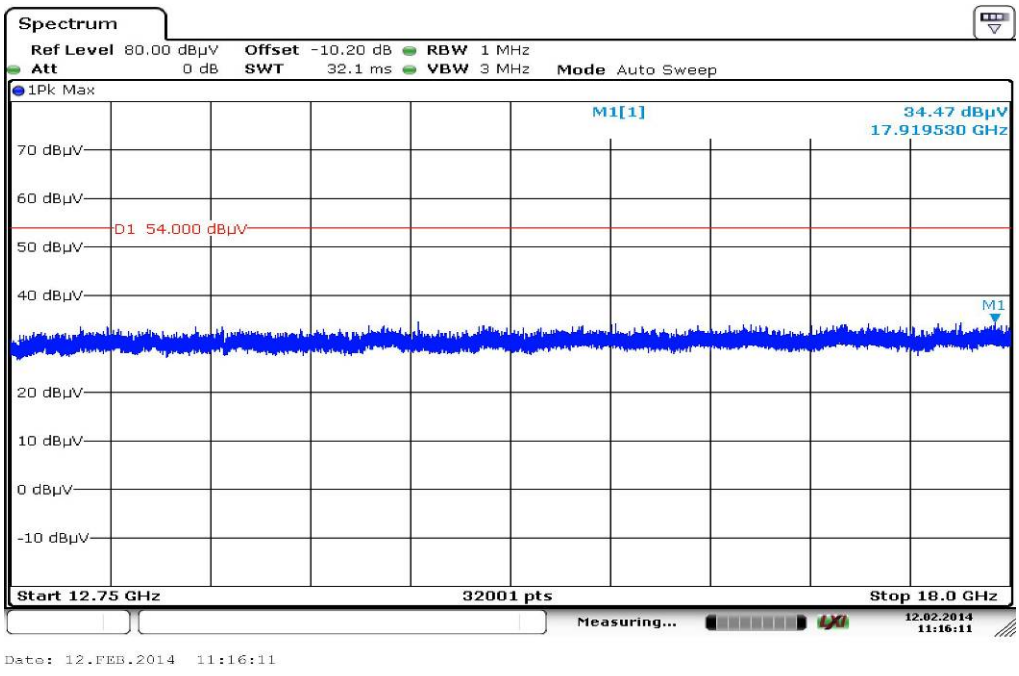
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
39.266100	9.9	1000.0	120.000	98.0	V	270.0	13.4	20.1	30.0	
51.810450	10.6	1000.0	120.000	98.0	V	180.0	13.2	19.4	30.0	
561.767400	16.9	1000.0	120.000	98.0	V	90.0	19.7	19.1	36.0	
734.170950	20.6	1000.0	120.000	145.0	H	90.0	23.3	15.4	36.0	
797.067900	20.9	1000.0	120.000	131.0	H	90.0	23.8	15.1	36.0	
916.914000	22.4	1000.0	120.000	145.0	H	0.0	25.3	13.6	36.0	

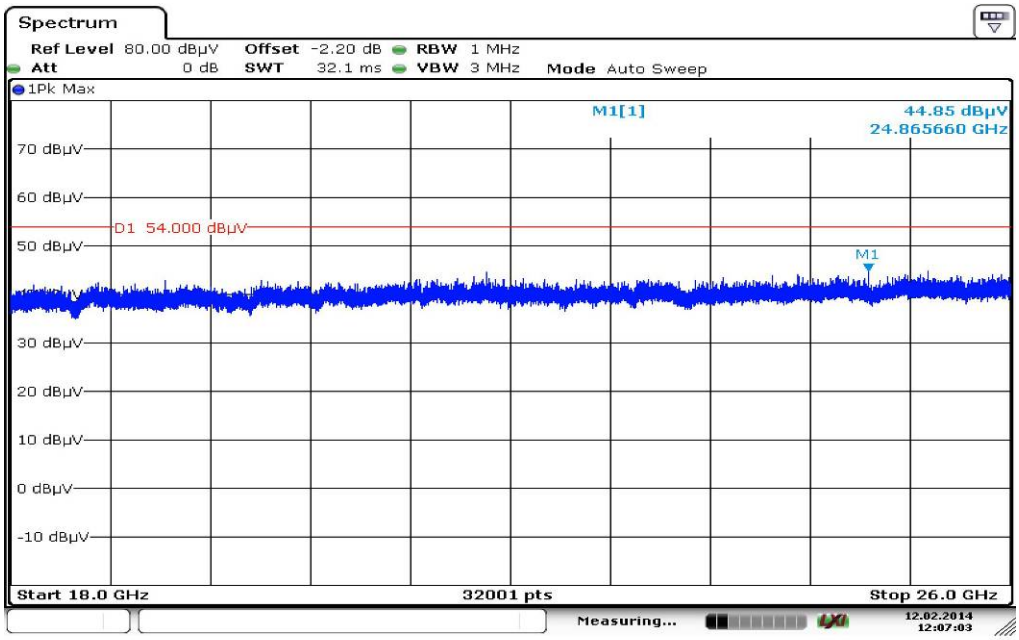
Plot 17: 1 GHz to 12.75 GHz, 5320 MHz, vertical & horizontal polarization



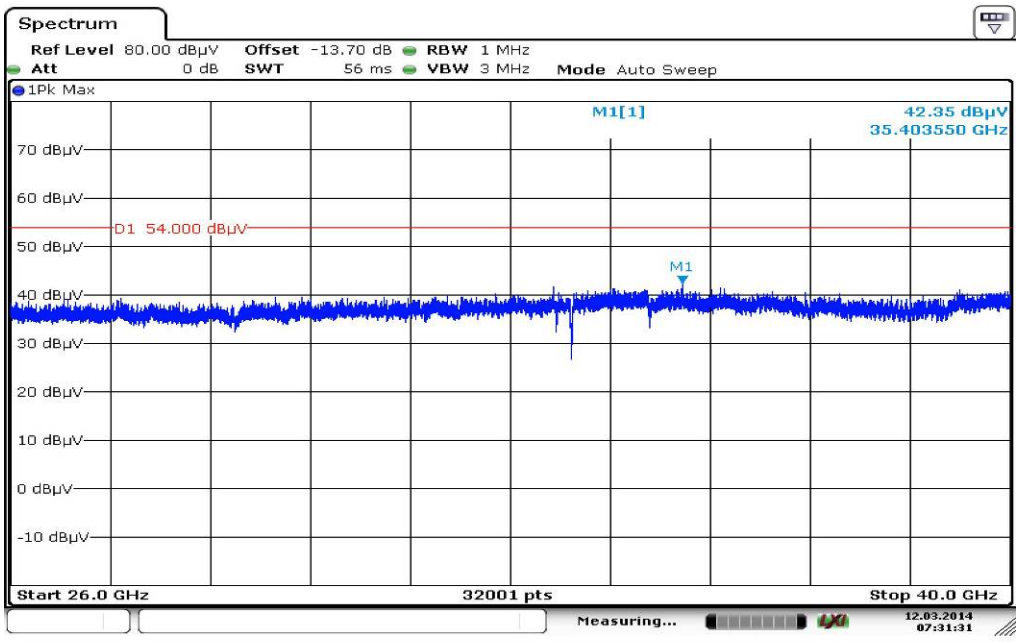
Plot 18: 12 GHz to 18 GHz, 5320 MHz, vertical & horizontal polarization



Plot 19: 18 GHz to 26 GHz, 5320 MHz, vertical & horizontal polarization



Plot 20: 26 GHz to 40 GHz, 5320 MHz, vertical & horizontal polarization



Plot 21: 30 MHz to 1 GHz, 5500 MHz, vertical & horizontal polarization

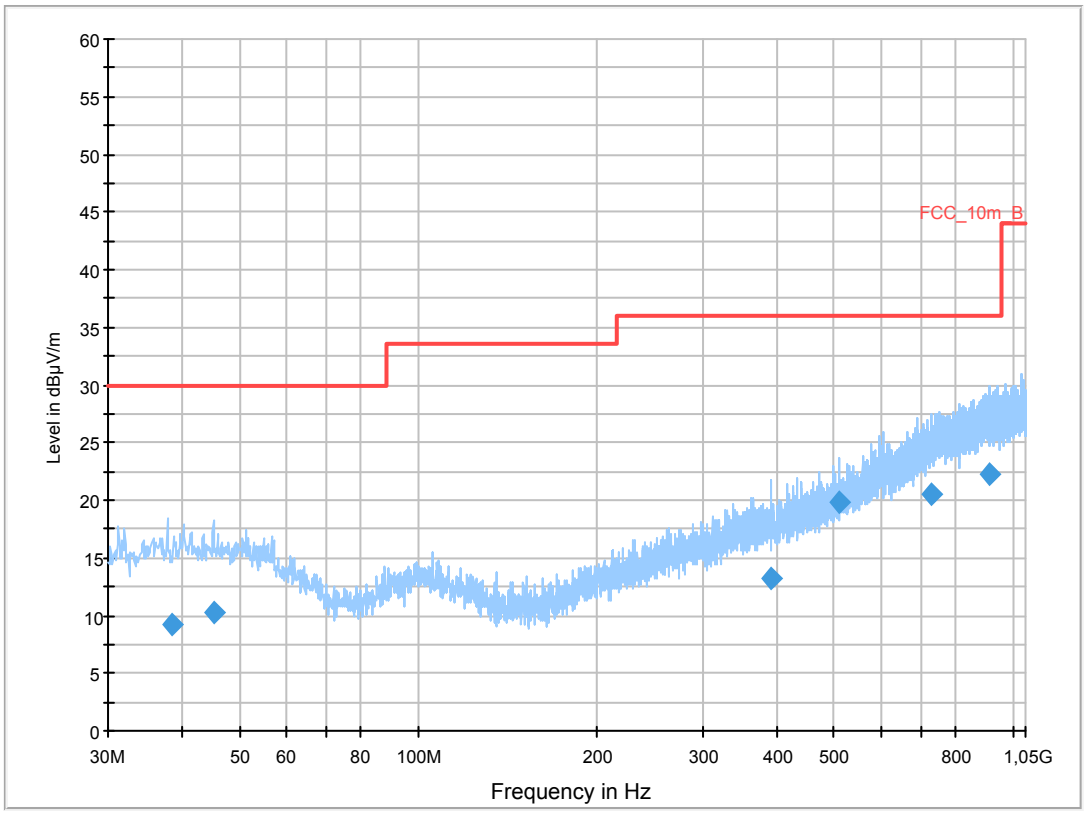
Common Information

Serial Number:	CB551268KBP
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	w-lan a-mode tx ch 100
Operator Name:	Hennemann
Comment:	battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Receiver:	[ESCI 3]
Level Unit:	dBµV/m

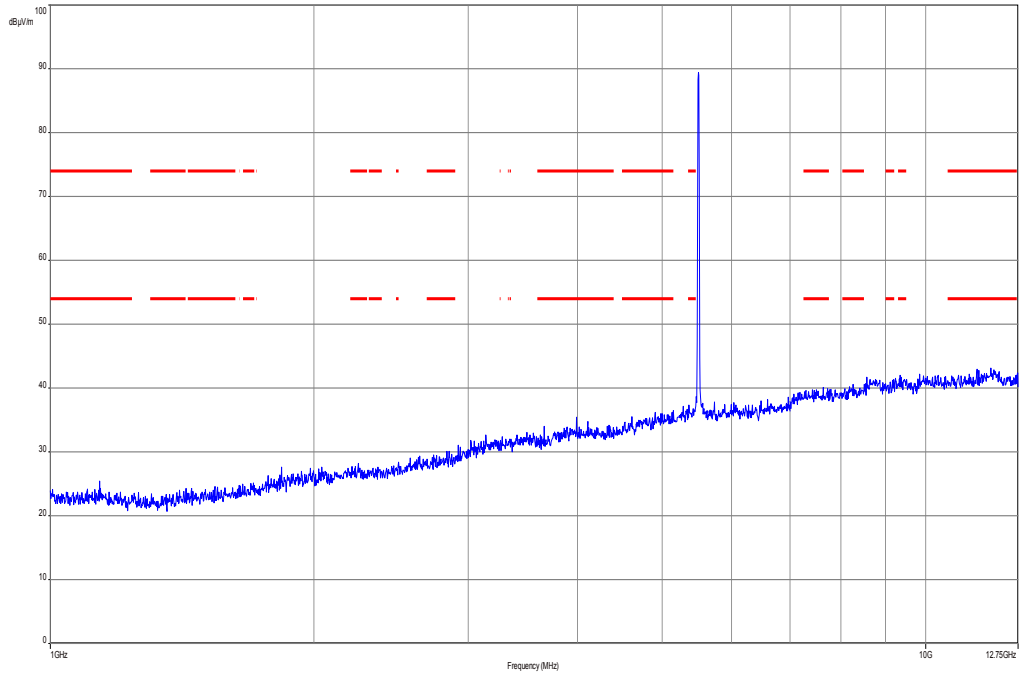
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



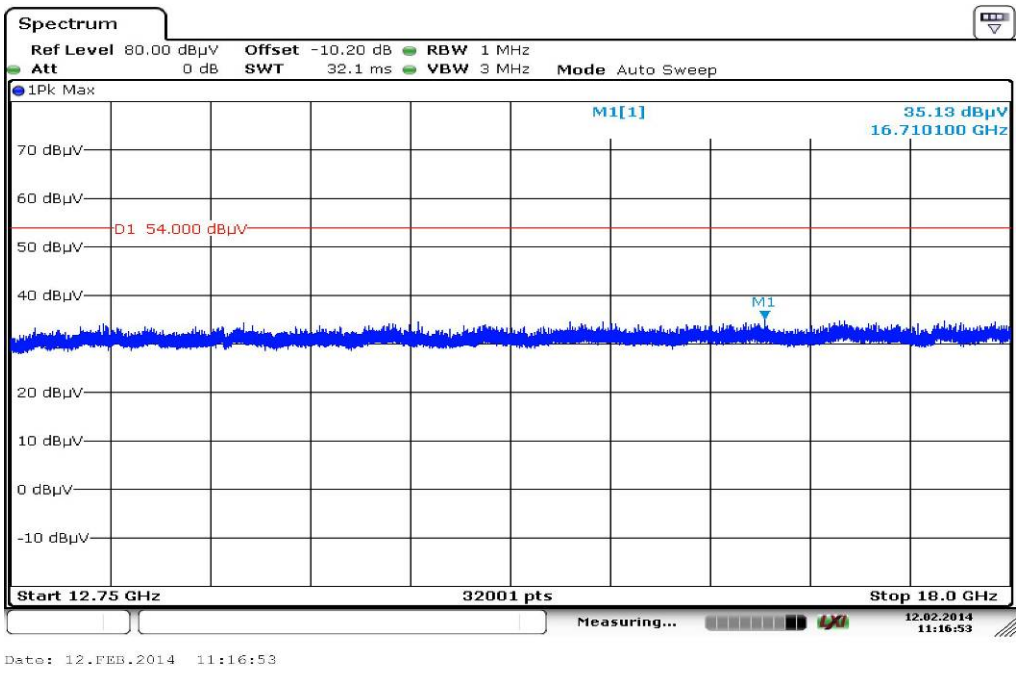
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
38.373000	9.3	1000.0	120.000	145.0	V	90.0	13.3	20.7	30.0	
45.414450	10.3	1000.0	120.000	120.0	H	180.0	13.3	19.7	30.0	
391.644000	13.3	1000.0	120.000	98.0	H	90.0	16.8	22.7	36.0	
510.030450	19.9	1000.0	120.000	145.0	V	90.0	18.8	16.1	36.0	
727.647300	20.5	1000.0	120.000	98.0	H	0.0	23.1	15.5	36.0	
915.406200	22.3	1000.0	120.000	145.0	V	0.0	25.2	13.7	36.0	

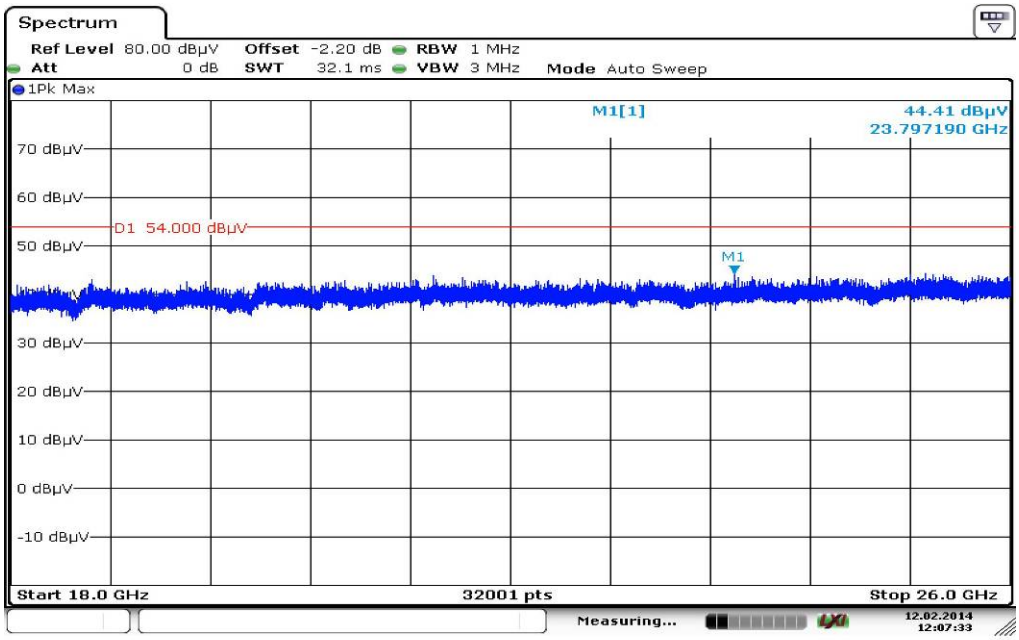
Plot 22: 1 GHz to 12.75 GHz, 5500 MHz, vertical & horizontal polarization



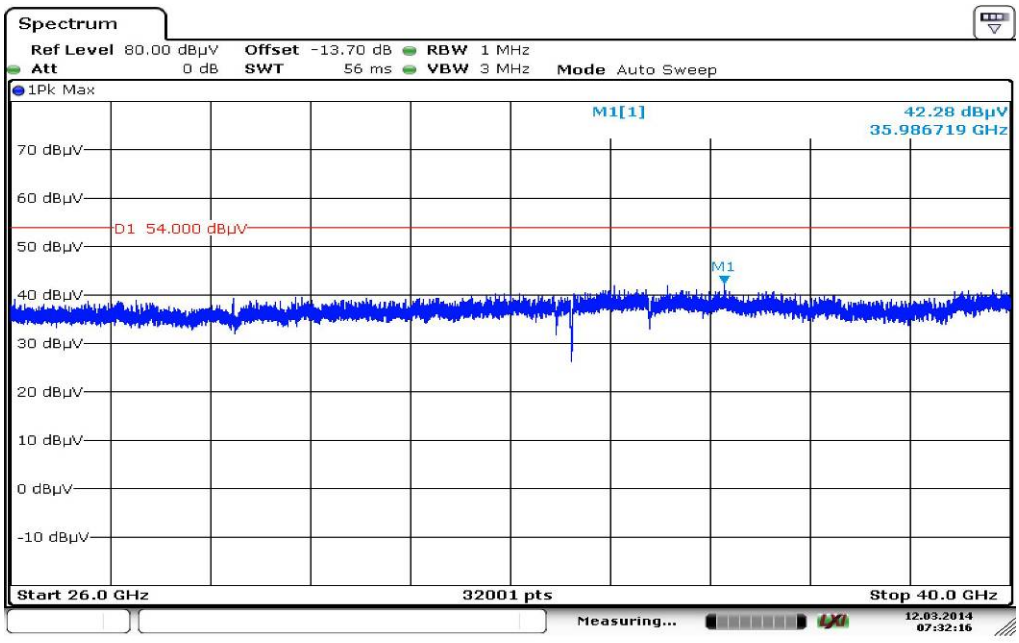
Plot 23: 12 GHz to 18 GHz, 5500 MHz, vertical & horizontal polarization



Plot 24: 18 GHz to 26 GHz, 5500 MHz, vertical & horizontal polarization



Plot 25: 26 GHz to 40 GHz, 5500 MHz, vertical & horizontal polarization



Plot 26: 30 MHz to 1 GHz, 5700 MHz, vertical & horizontal polarization

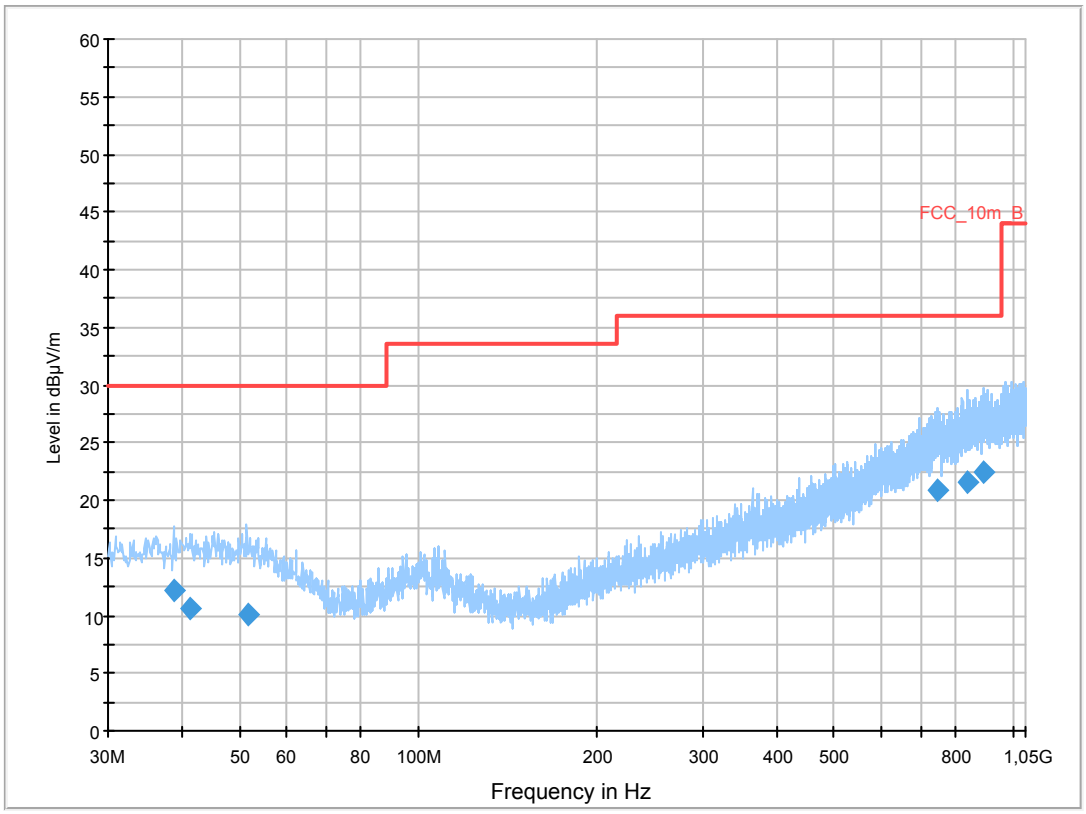
Common Information

Serial Number:	CB551268KBP
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	w-lan a-mode tx ch 140
Operator Name:	Hennemann
Comment:	battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Receiver:	[ESCI 3]
Level Unit:	dBµV/m

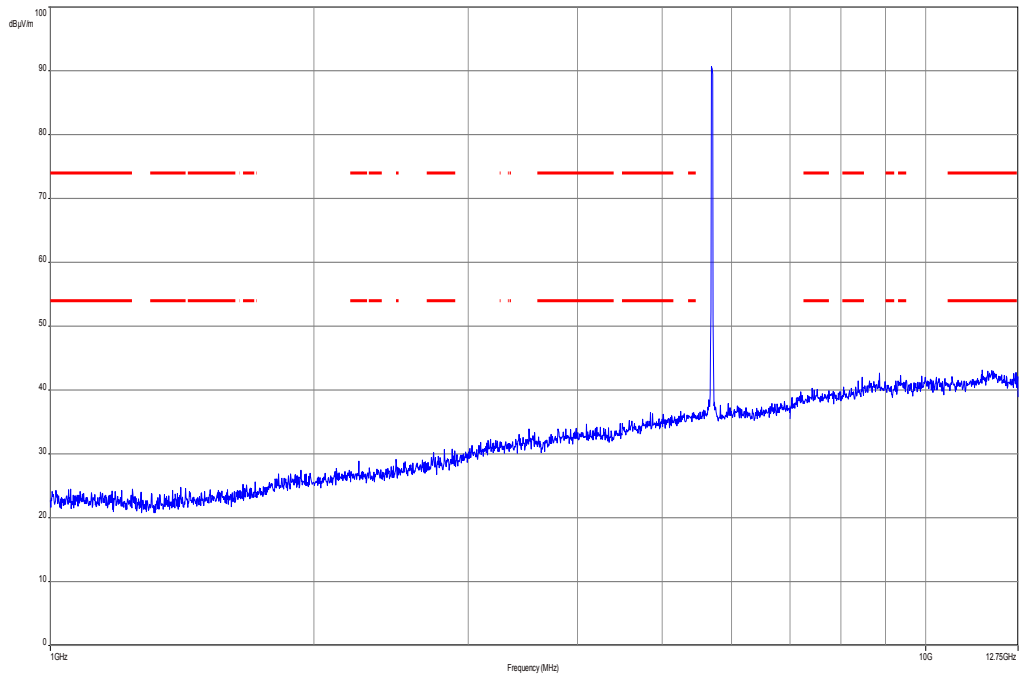
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



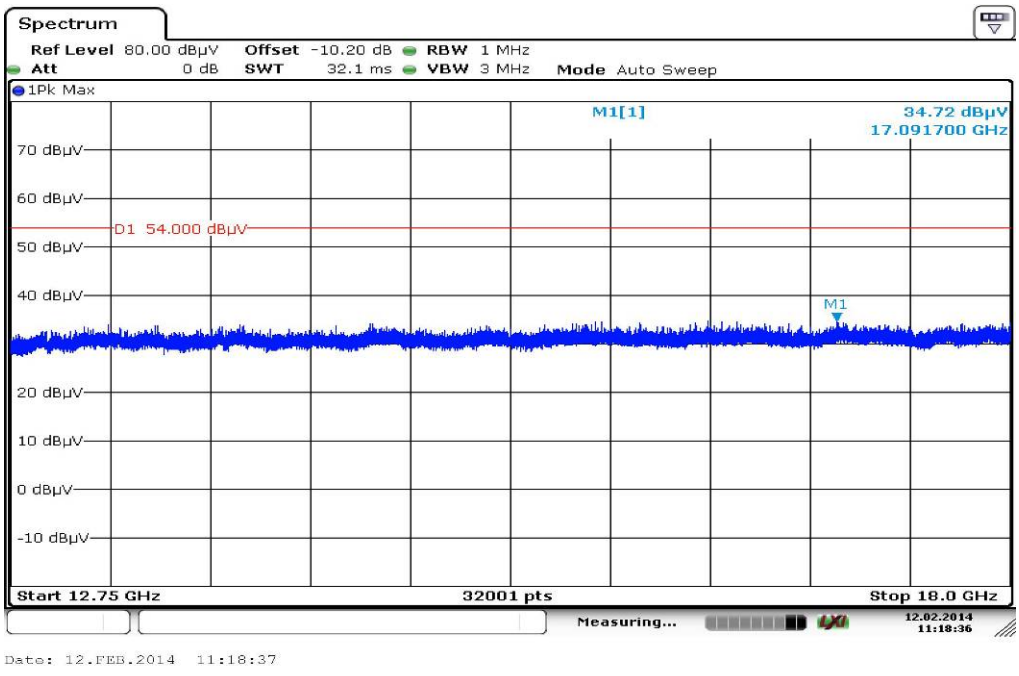
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
38.740950	12.1	1000.0	120.000	145.0	V	0.0	13.3	17.9	30.0	
41.168850	10.6	1000.0	120.000	145.0	V	0.0	13.4	19.4	30.0	
51.578550	10.2	1000.0	120.000	145.0	H	270.0	13.2	19.8	30.0	
745.049700	20.8	1000.0	120.000	145.0	V	0.0	23.5	15.2	36.0	
838.687650	21.6	1000.0	120.000	120.0	H	90.0	24.4	14.4	36.0	
889.992000	22.4	1000.0	120.000	145.0	H	0.0	25.1	13.6	36.0	

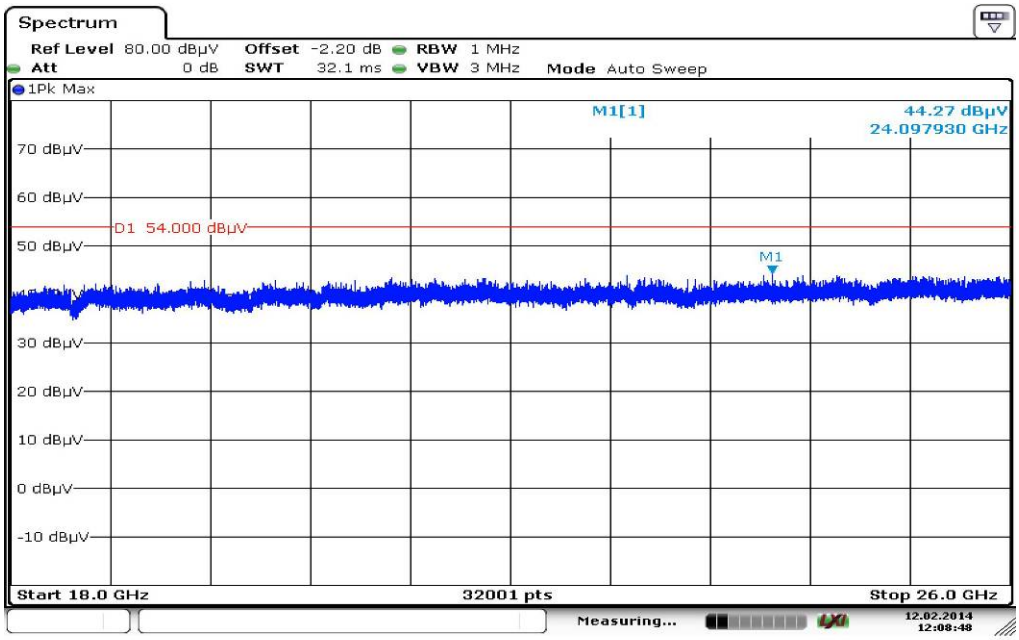
Plot 27: 1 GHz to 12.75 GHz, 5700 MHz, vertical & horizontal polarization



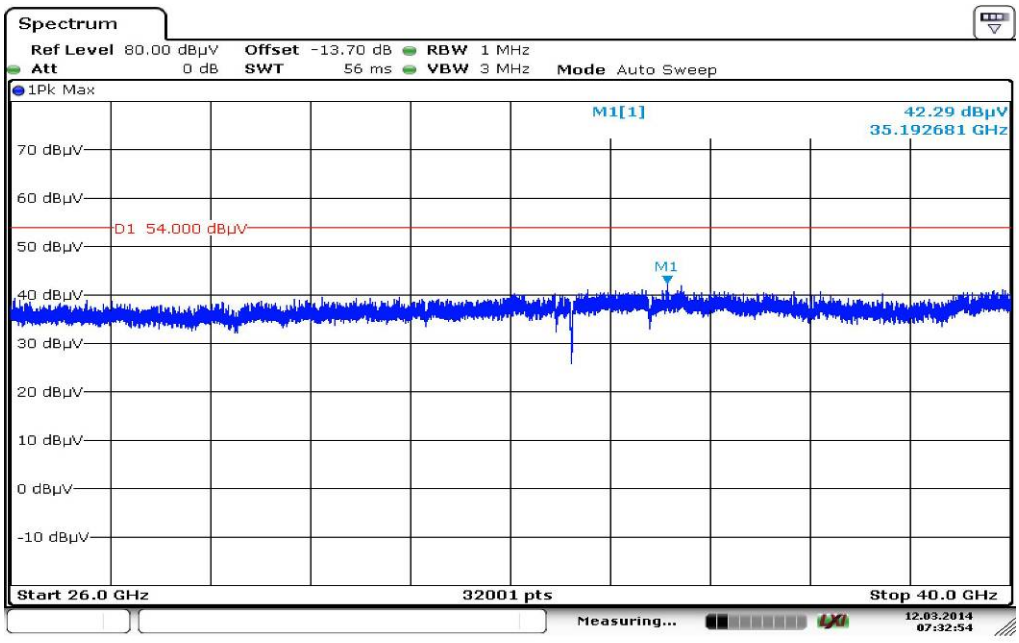
Plot 28: 12 GHz to 18 GHz, 5700 MHz, vertical & horizontal polarization



Plot 29: 18 GHz to 26 GHz, 5700 MHz, vertical & horizontal polarization



Plot 30: 26 GHz to 40 GHz, 5700 MHz, vertical & horizontal polarization



Plots: OFDM / n/ac – mode HT20

Plot 1: 30 MHz to 1 GHz, 5180 MHz, vertical & horizontal polarization

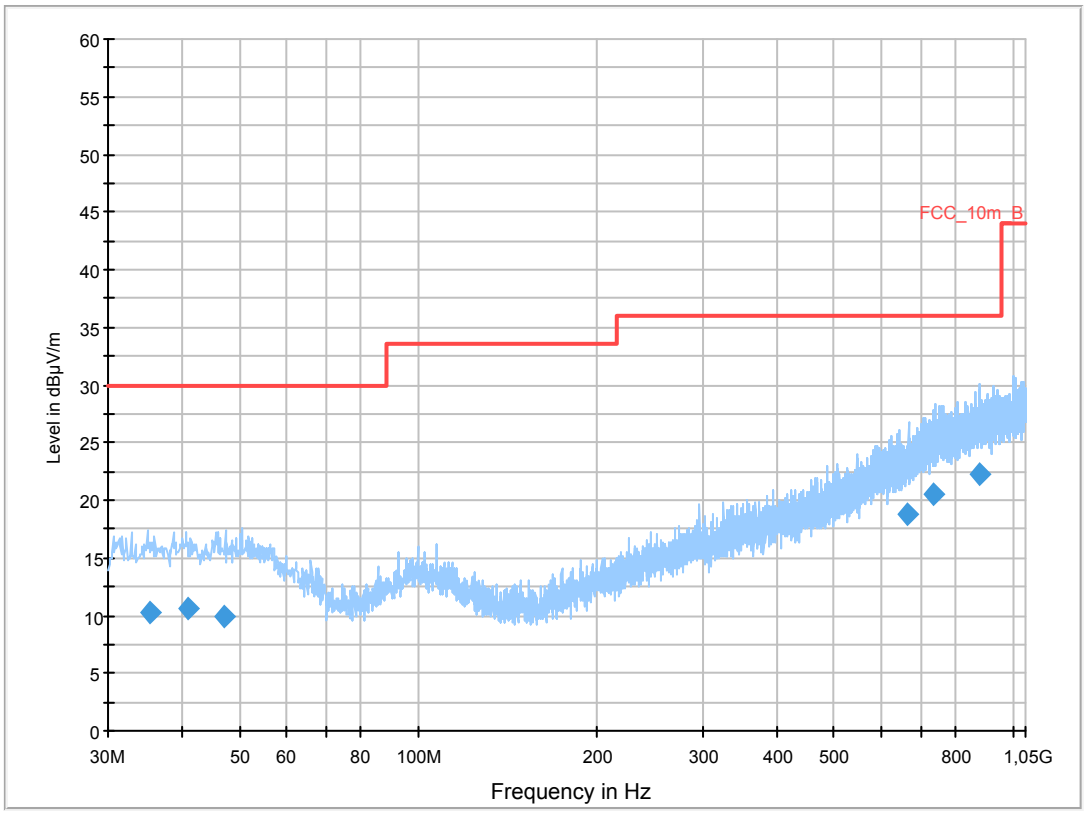
Common Information

Serial Number:	CB551268KBP
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	w-lan n-mode (HT20) tx ch 36
Operator Name:	Hennemann
Comment:	battery powered

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Receiver:	[ESCI 3]
Level Unit:	dBµV/m

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
35.325900	10.3	1000.0	120.000	139.0	V	90.0	13.1	19.7	30.0	
40.914750	10.6	1000.0	120.000	145.0	H	180.0	13.4	19.4	30.0	
47.128800	9.8	1000.0	120.000	145.0	V	180.0	13.3	20.2	30.0	
666.438900	18.8	1000.0	120.000	145.0	V	0.0	21.6	17.2	36.0	
733.895700	20.6	1000.0	120.000	138.0	H	0.0	23.3	15.4	36.0	
877.363650	22.3	1000.0	120.000	98.0	V	0.0	24.9	13.8	36.0	