

Plots: OFDM / n HT20 – mode

Plot 1: 30 MHz to 1 GHz, channel 36, vertical & horizontal polarization

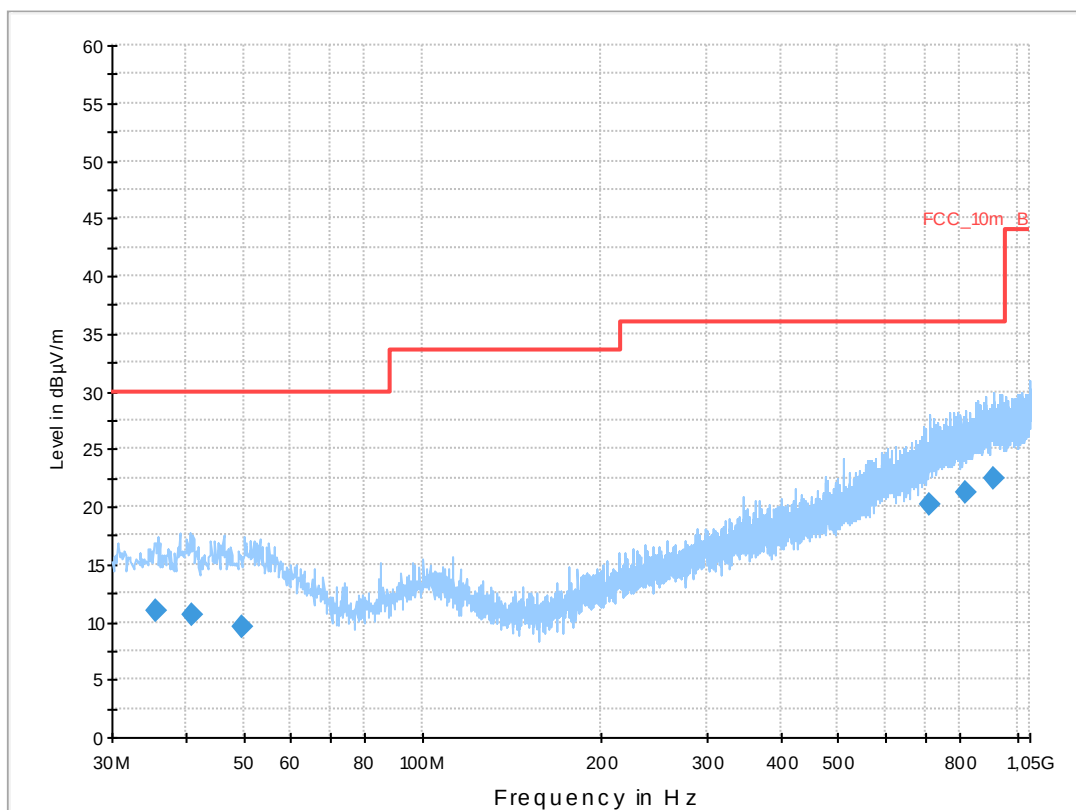
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT20) Ch.36
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

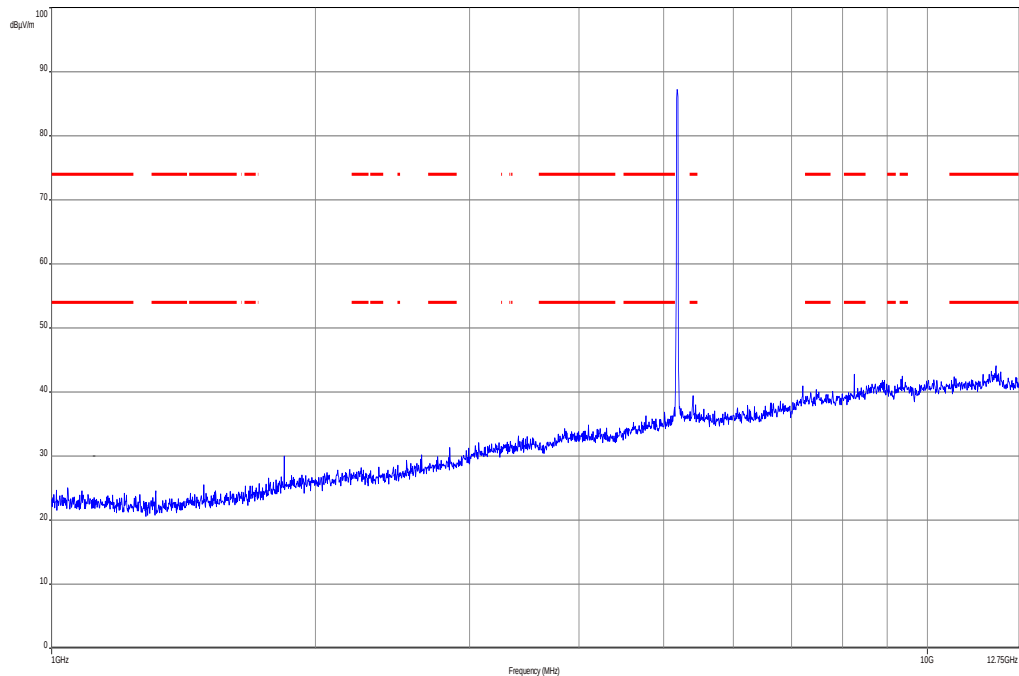
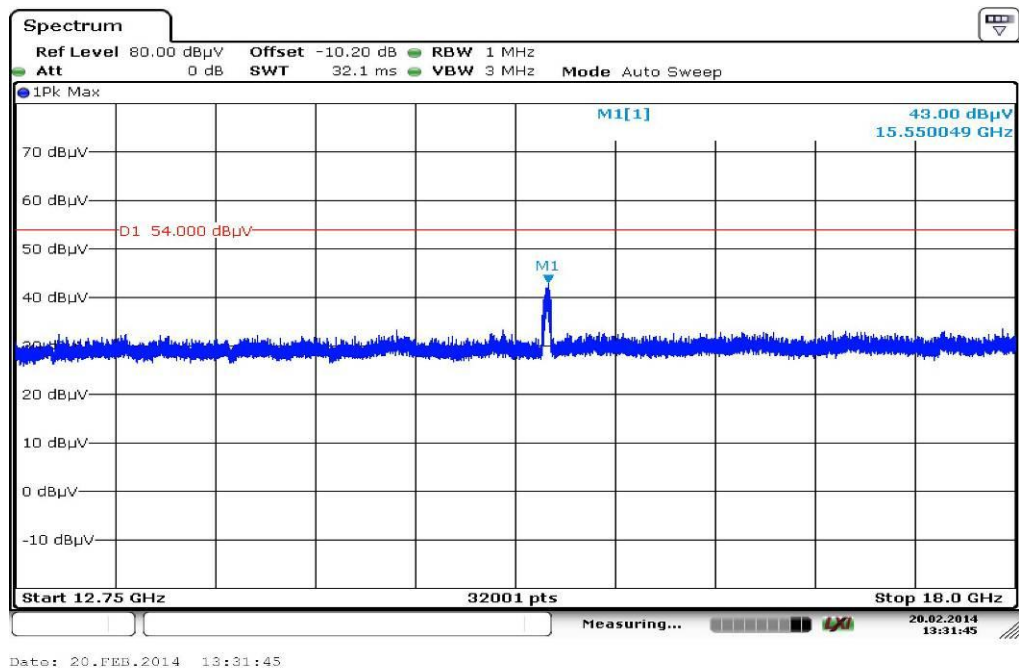
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

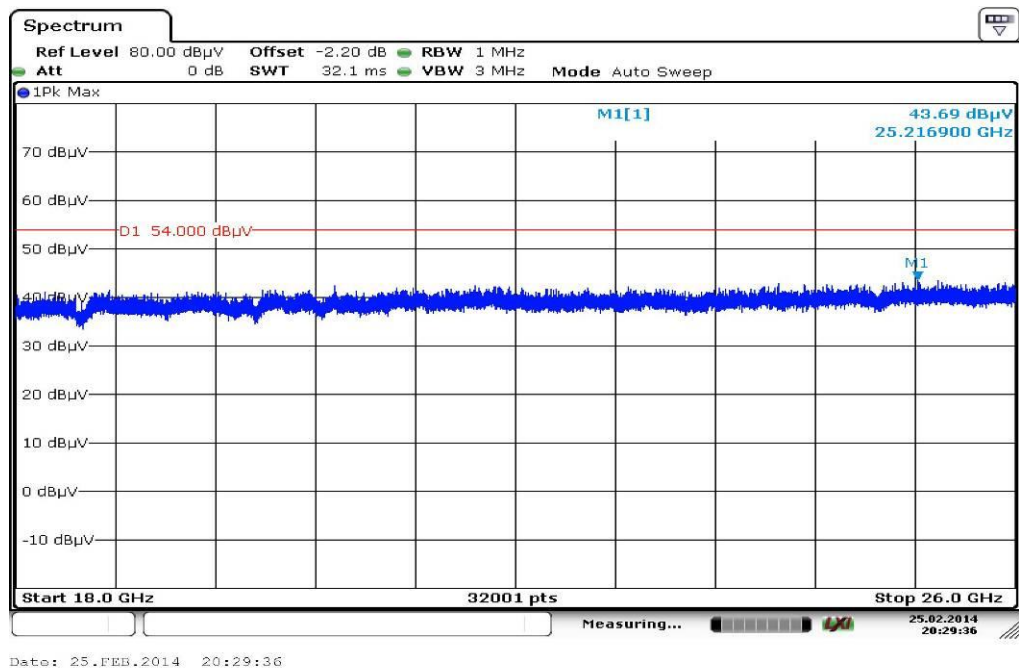
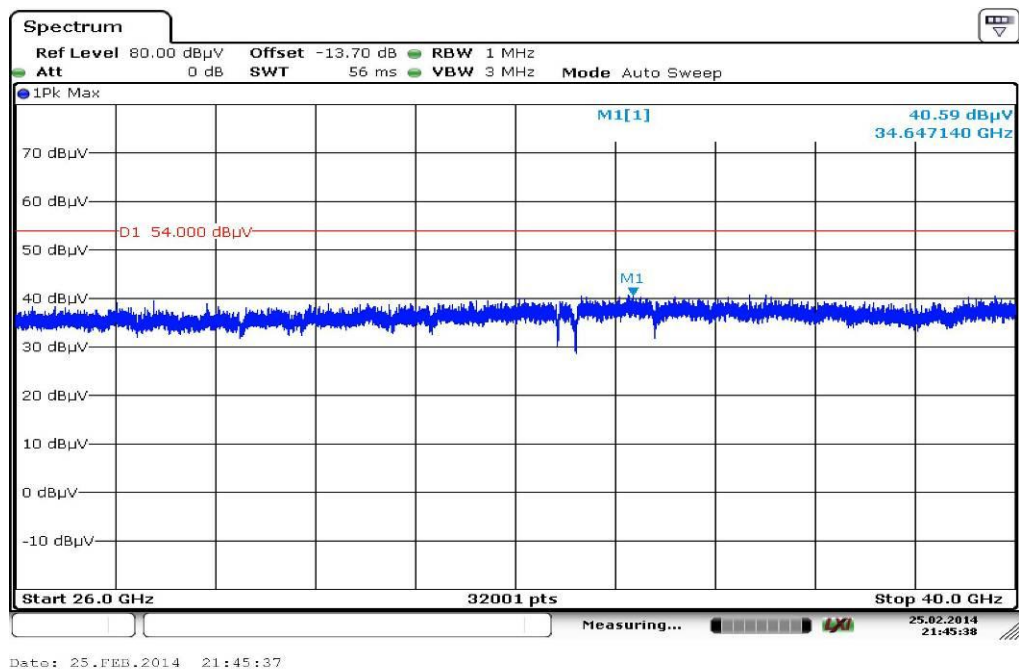
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



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
35.489100	10.9	1000.0	120.000	161.0	V	267.0	13.1	19.1	30.0	
40.878300	10.6	1000.0	120.000	152.0	V	190.0	13.4	19.4	30.0	
49.506600	9.6	1000.0	120.000	111.0	H	100.0	13.4	20.4	30.0	
711.585150	20.1	1000.0	120.000	170.0	V	170.0	22.8	15.9	36.0	
816.054750	21.2	1000.0	120.000	170.0	V	178.0	24.0	14.8	36.0	
912.946950	22.4	1000.0	120.000	170.0	H	261.0	25.2	13.6	36.0	

Plot 2: 1 GHz to 12.75 GHz, channel 36, vertical & horizontal polarization**Plot 3:** 12 GHz to 18 GHz, channel 36, vertical & horizontal polarization

Plot 4: 18 GHz to 26 GHz, channel 36, vertical & horizontal polarization**Plot 5:** 26 GHz to 40 GHz, channel 36, vertical & horizontal polarization

Plot 6: 30 MHz to 1 GHz, channel 48, vertical & horizontal polarization

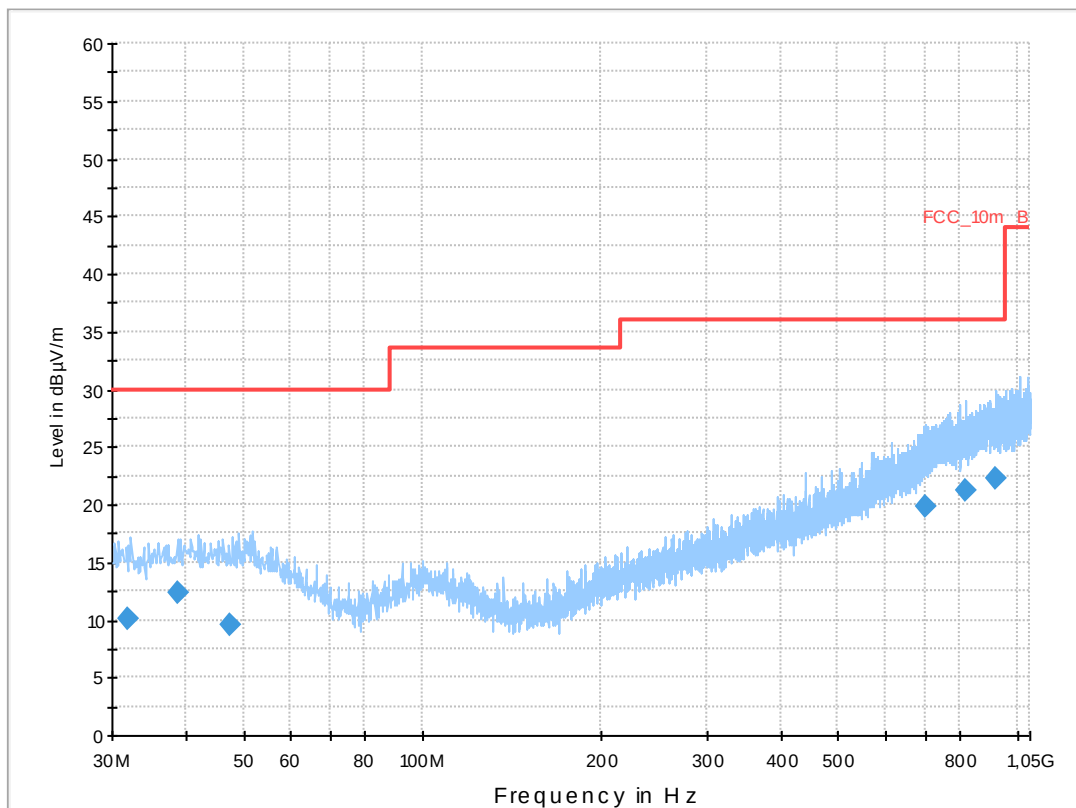
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT20) Ch.48
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

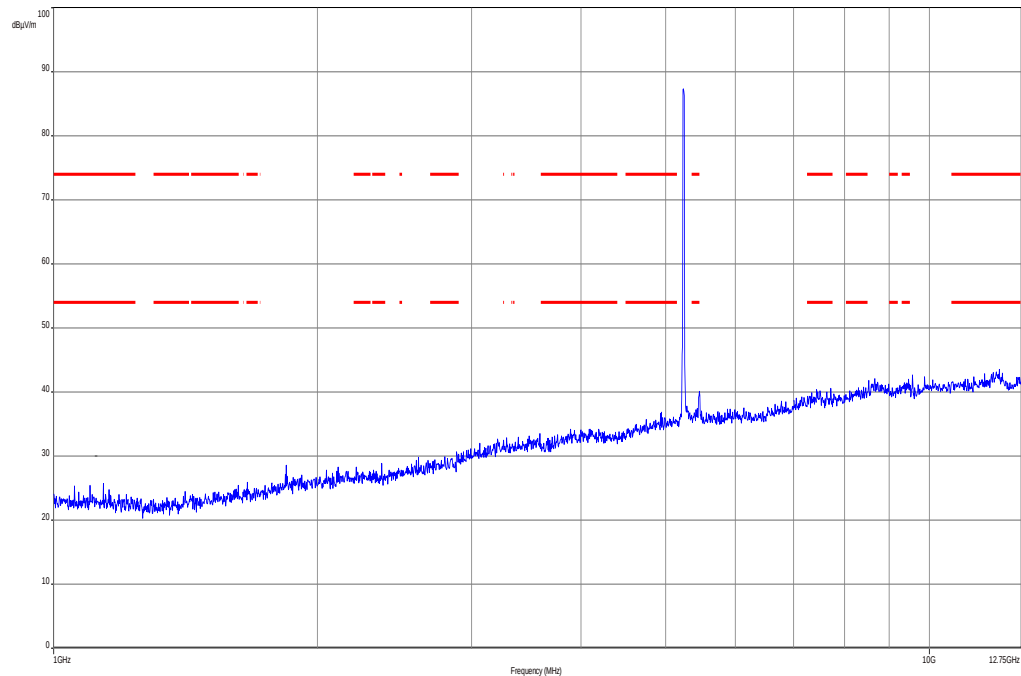
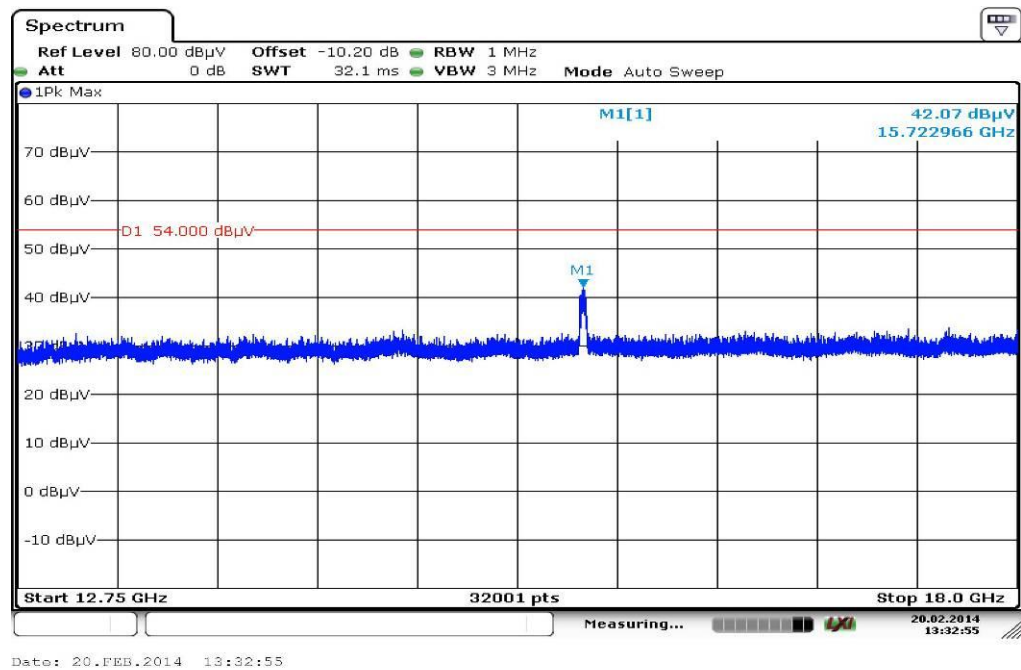
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

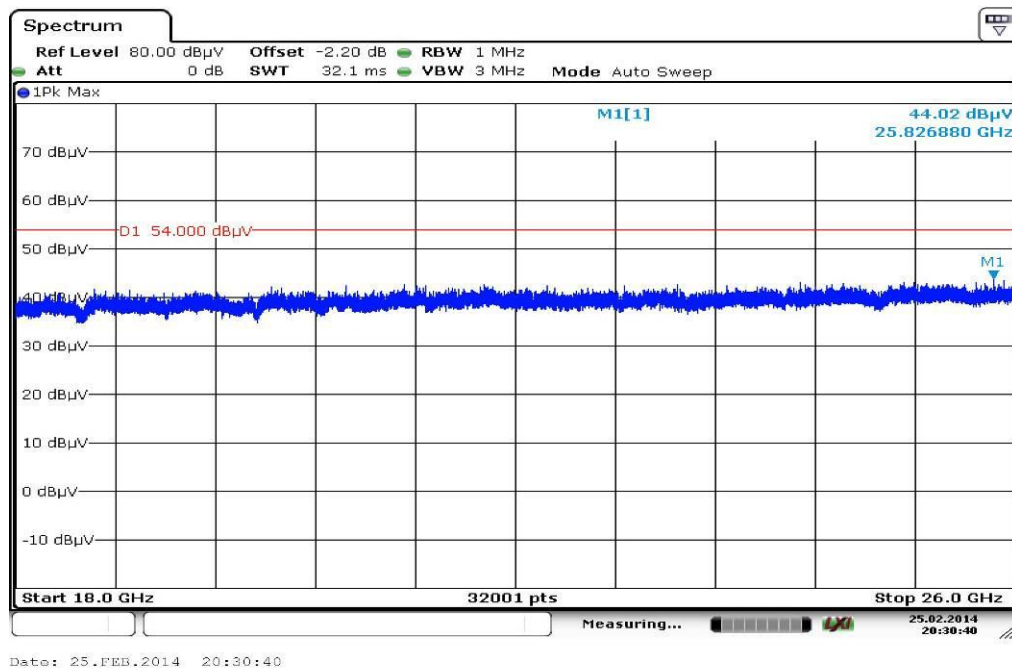
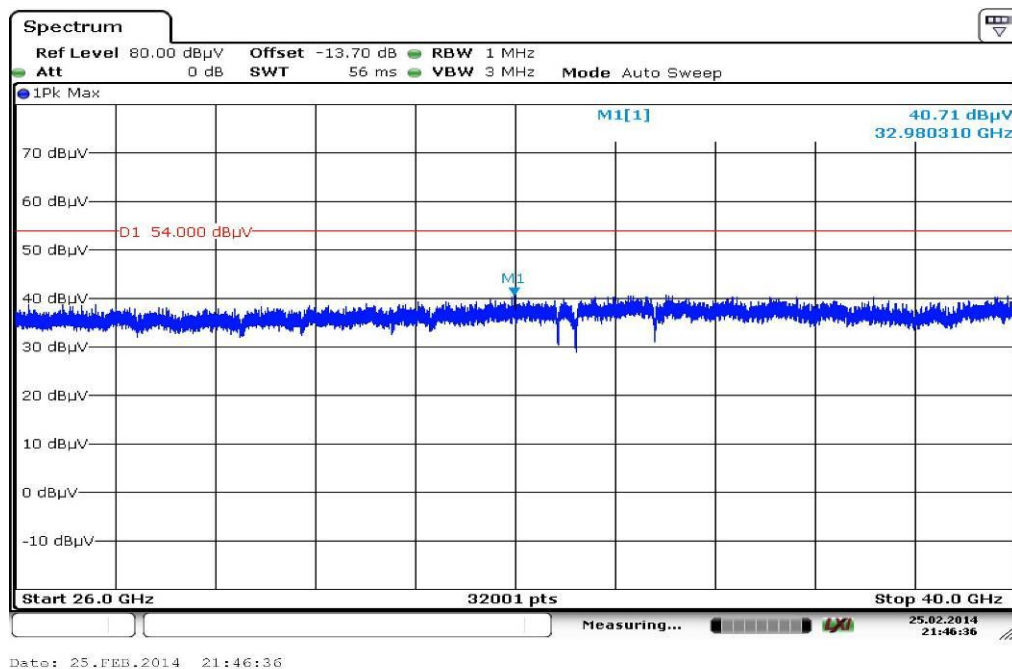
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



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
31.913250	10.1	1000.0	120.000	111.0	V	92.0	12.7	19.9	30.0	
38.734350	12.4	1000.0	120.000	143.0	V	178.0	13.3	17.6	30.0	
47.337300	9.5	1000.0	120.000	170.0	V	170.0	13.3	20.5	30.0	
699.516300	19.8	1000.0	120.000	98.0	H	267.0	22.5	16.2	36.0	
818.496900	21.2	1000.0	120.000	170.0	H	92.0	24.1	14.8	36.0	
922.906800	22.3	1000.0	120.000	98.0	V	100.0	25.3	13.7	36.0	

Plot 7: 1 GHz to 12.75 GHz, channel 48, vertical & horizontal polarization**Plot 8:** 12 GHz to 18 GHz, channel 48, vertical & horizontal polarization

Plot 9: 18 GHz to 26 GHz, channel 48, vertical & horizontal polarization**Plot 10:** 26 GHz to 40 GHz, channel 48, vertical & horizontal polarization

Plot 11: 30 MHz to 1 GHz, channel 52, vertical & horizontal polarization

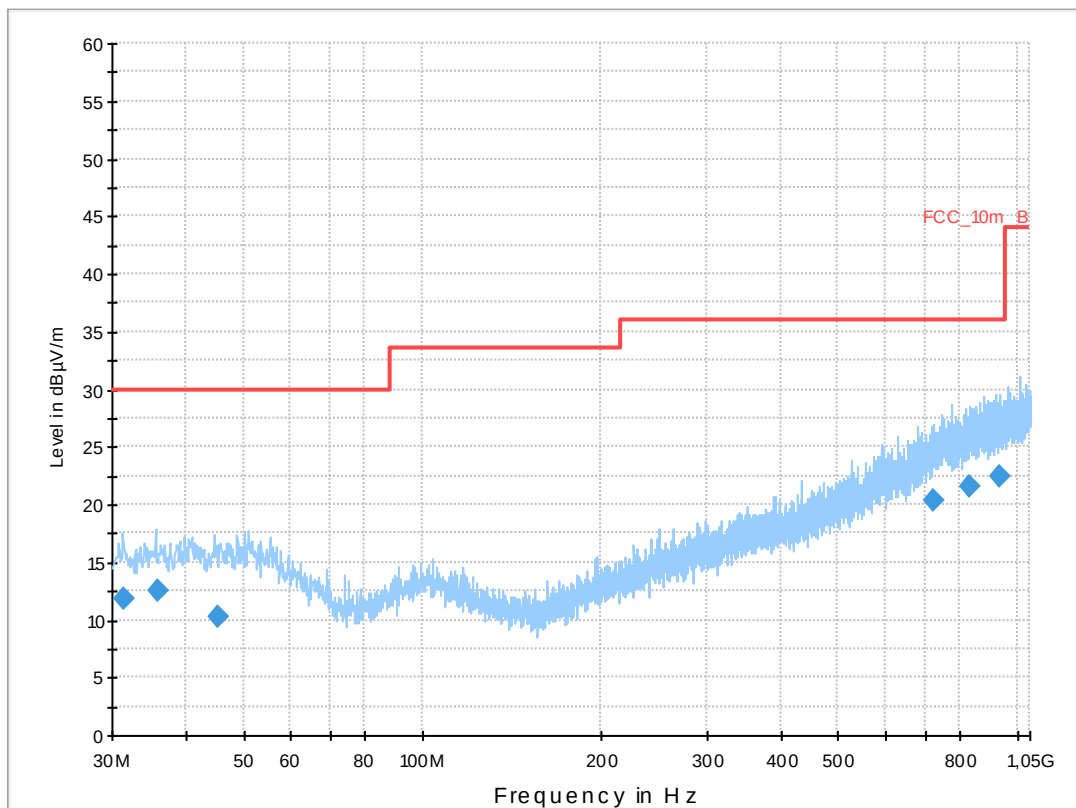
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT20) Ch.52
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

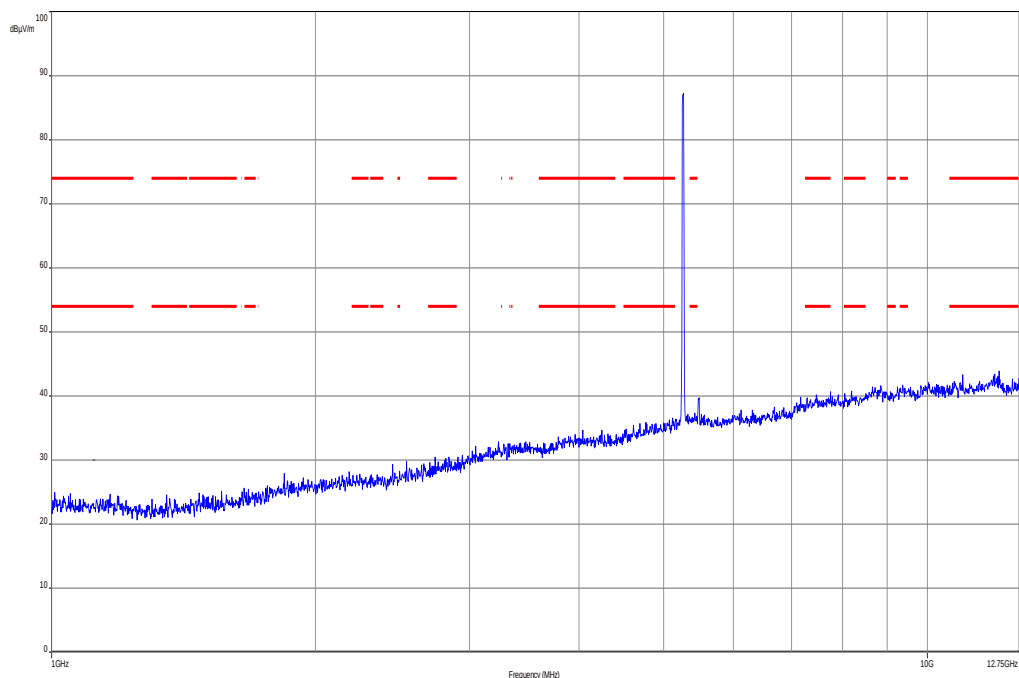
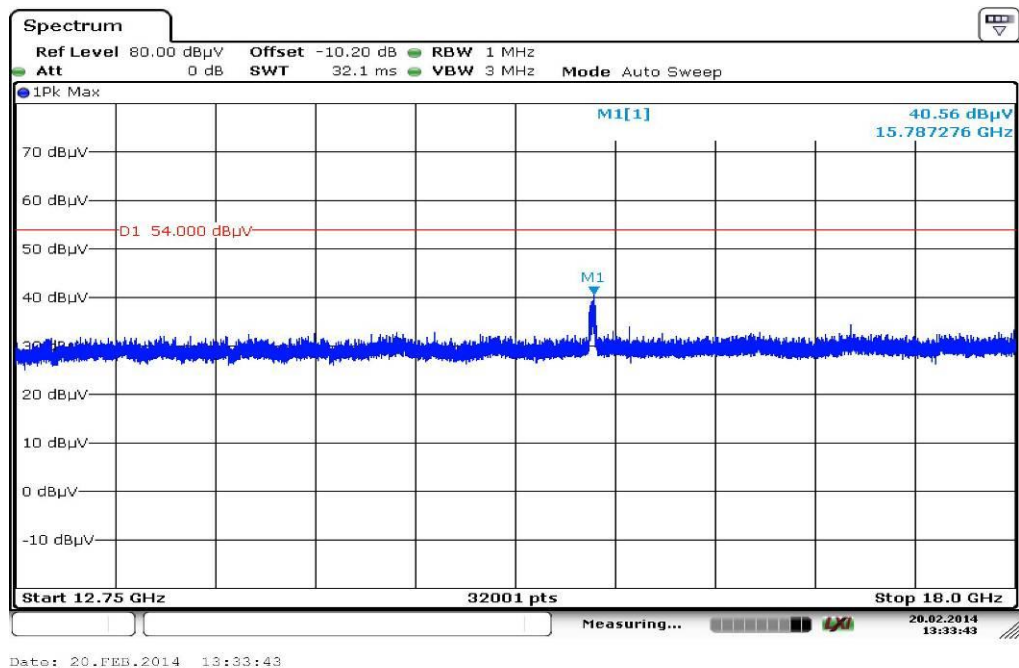
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

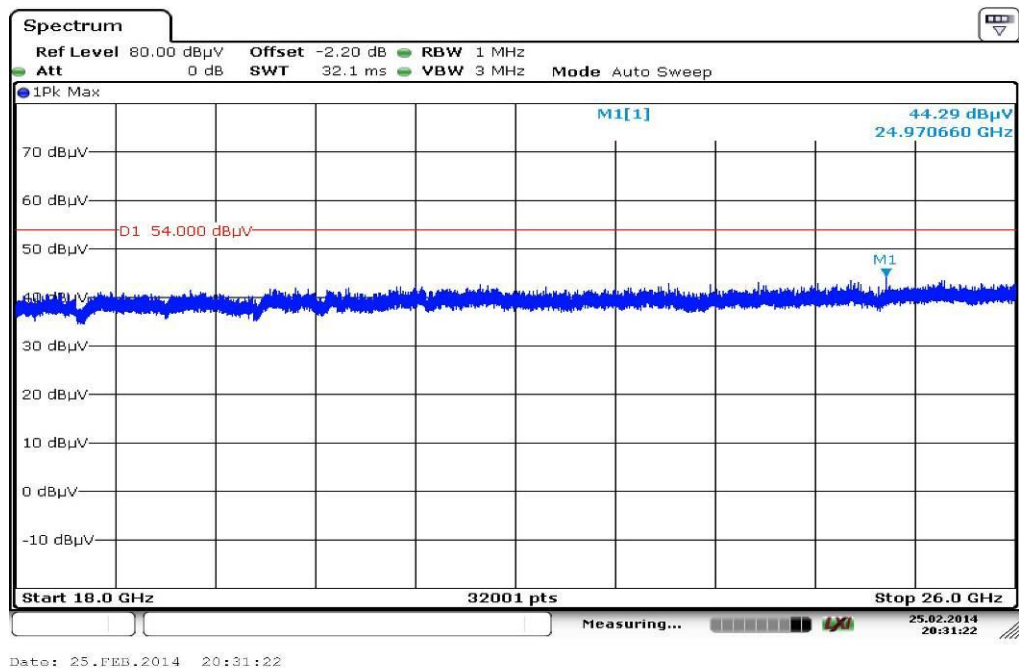
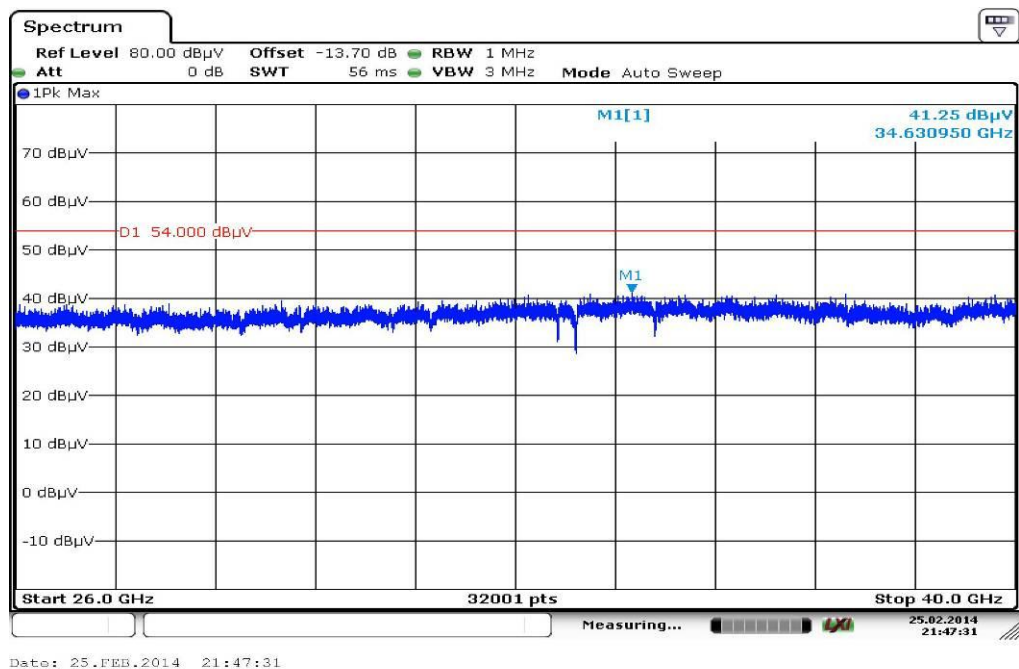
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



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
31.358100	11.9	1000.0	120.000	160.0	V	171.0	12.6	18.1	30.0	
35.994300	12.6	1000.0	120.000	112.0	V	-5.0	13.1	17.4	30.0	
45.256800	10.2	1000.0	120.000	170.0	H	10.0	13.3	19.8	30.0	
722.095650	20.3	1000.0	120.000	170.0	H	10.0	23.0	15.7	36.0	
830.886000	21.5	1000.0	120.000	134.0	H	261.0	24.3	14.5	36.0	
931.933800	22.5	1000.0	120.000	120.0	V	85.0	25.3	13.5	36.0	

Plot 12: 1 GHz to 12.75 GHz, channel 52, vertical & horizontal polarization**Plot 13:** 12 GHz to 18 GHz, channel 52, vertical & horizontal polarization

Plot 14: 18 GHz to 26 GHz, channel 52, vertical & horizontal polarization**Plot 15:** 26 GHz to 40 GHz, channel 52, vertical & horizontal polarization

Plot 16: 30 MHz to 1 GHz, channel 64, vertical & horizontal polarization

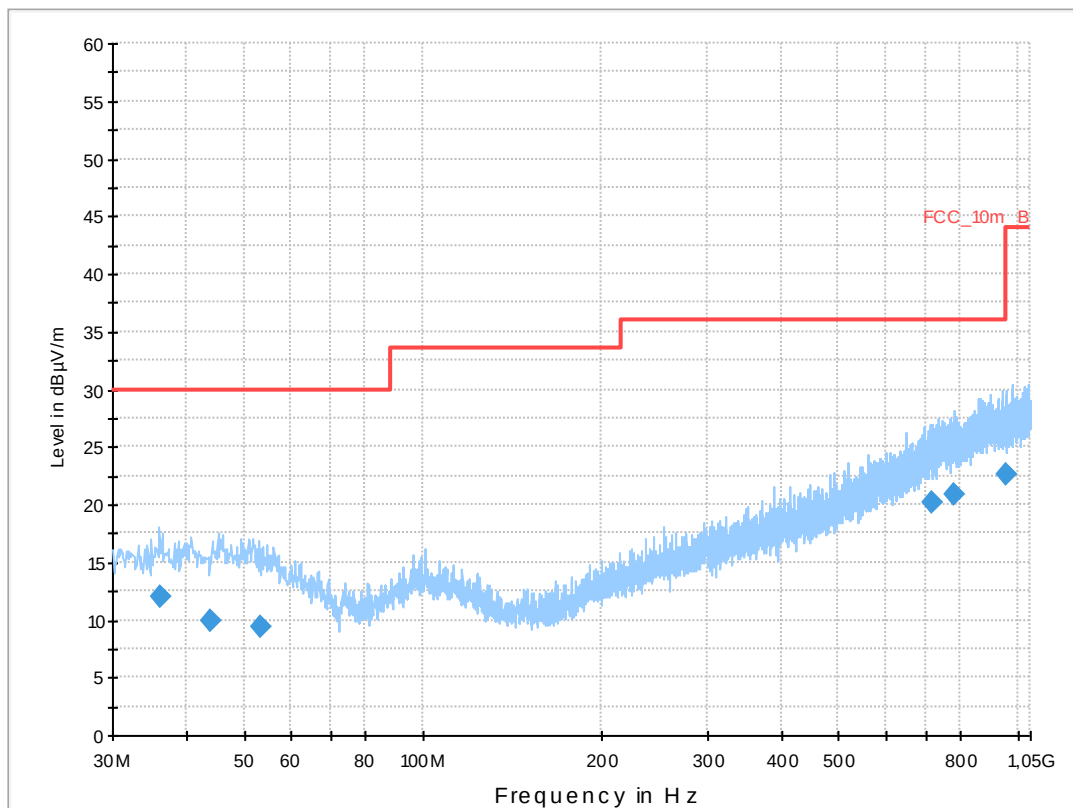
Common Information

Serial Number: CB5126DAHF
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT20) Ch. 64
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

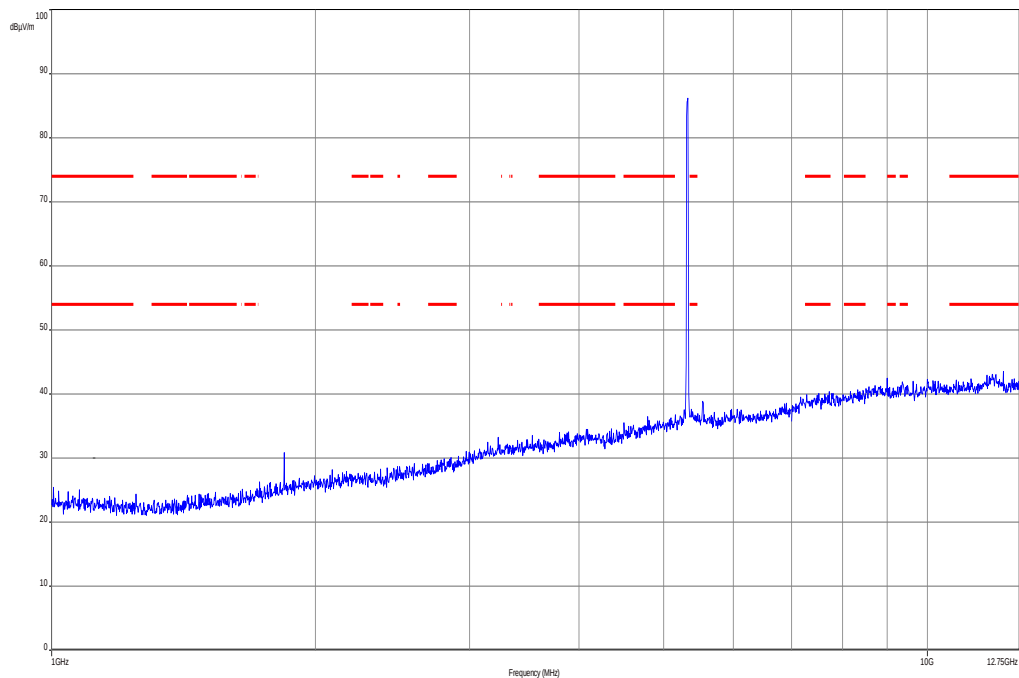
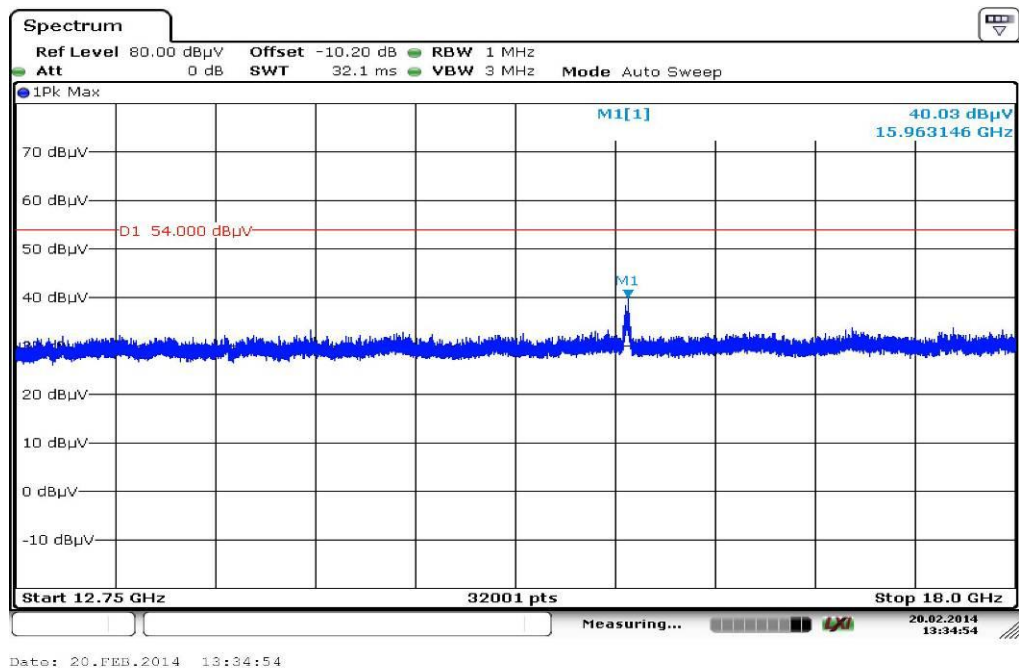
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

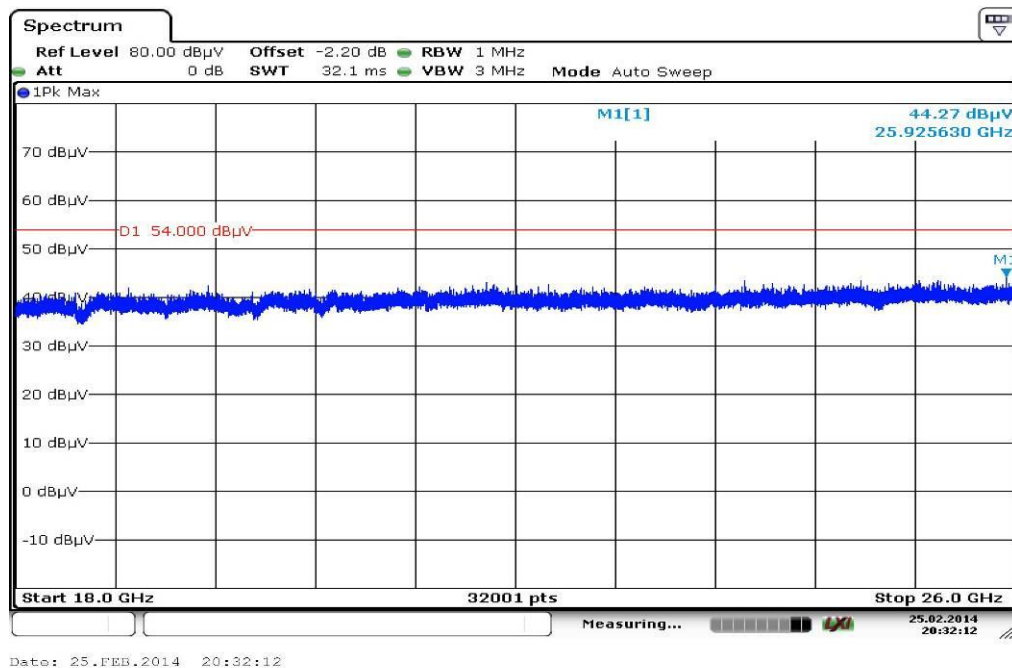
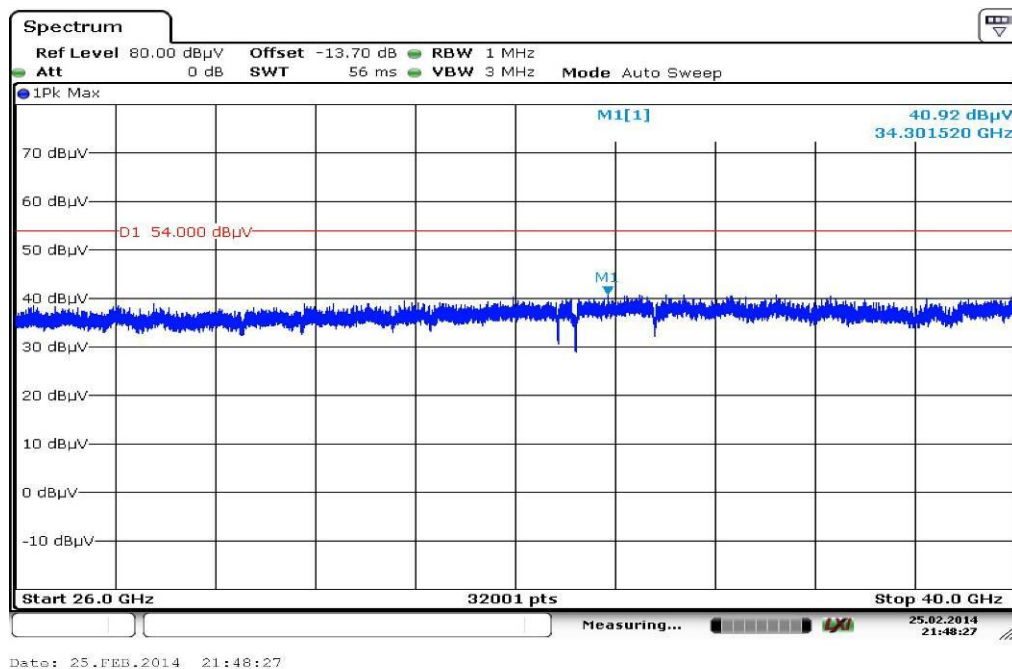
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



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
36.022650	12.0	1000.0	120.000	162.0	V	100.0	13.1	18.0	30.0	
43.821000	10.0	1000.0	120.000	170.0	V	-3.0	13.3	20.0	30.0	
53.143350	9.5	1000.0	120.000	170.0	V	80.0	13.1	20.5	30.0	
716.225400	20.2	1000.0	120.000	142.0	H	182.0	22.9	15.8	36.0	
784.135050	20.8	1000.0	120.000	170.0	H	92.0	23.8	15.2	36.0	
957.763950	22.6	1000.0	120.000	170.0	H	92.0	25.4	13.4	36.0	

Plot 17: 1 GHz to 12.75 GHz, channel 64, vertical & horizontal polarization**Plot 18:** 12 GHz to 18 GHz, channel 64, vertical & horizontal polarization

Plot 19: 18 GHz to 26 GHz, channel 64, vertical & horizontal polarization**Plot 20:** 26 GHz to 40 GHz, channel 64, vertical & horizontal polarization

Plot 21: 30 MHz to 1 GHz, channel 100, vertical & horizontal polarization

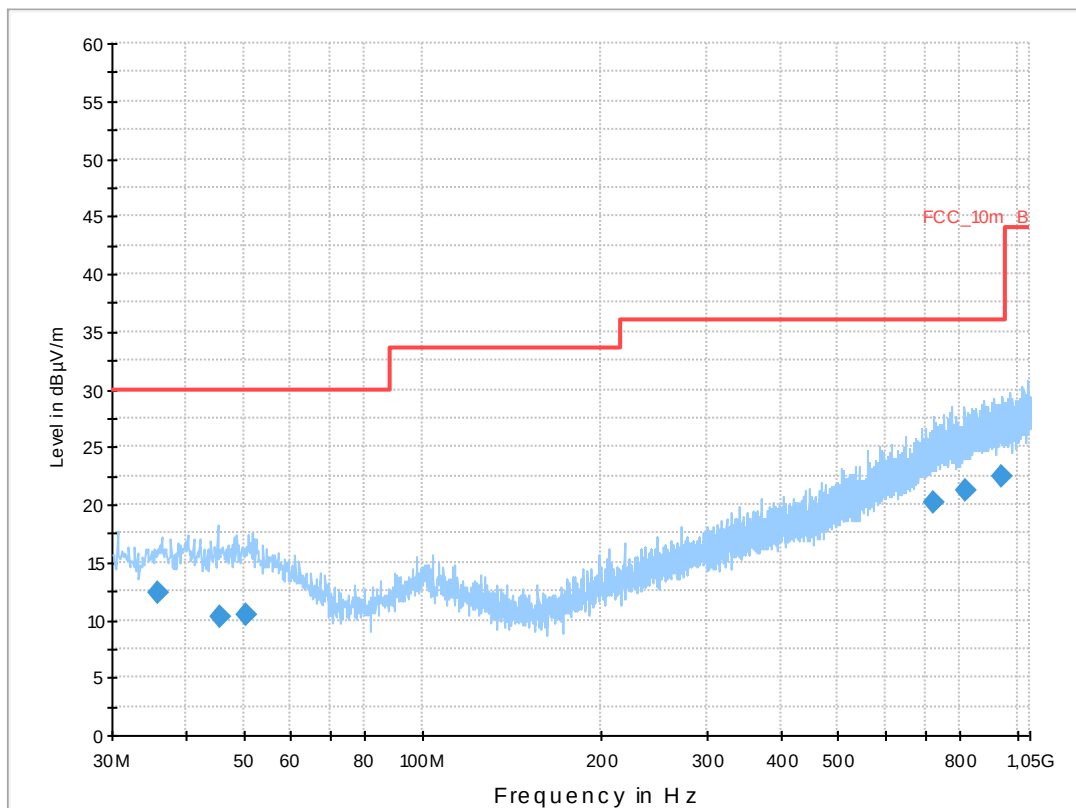
Common Information

Serial Number: CB5126DAHF
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT20) Ch. 100
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

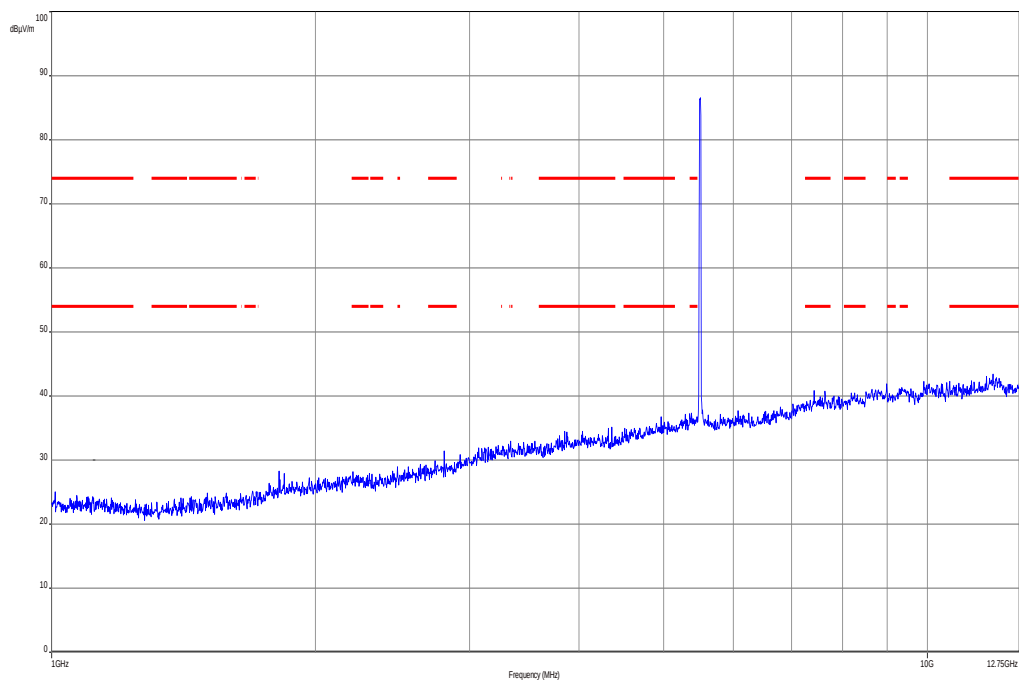
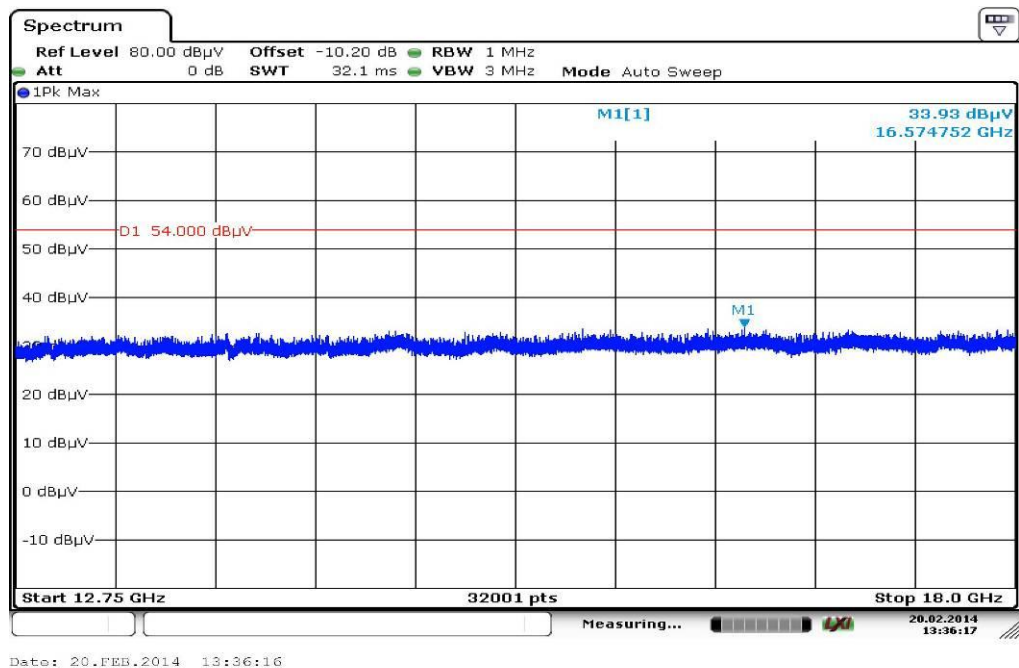
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dB μ V/m

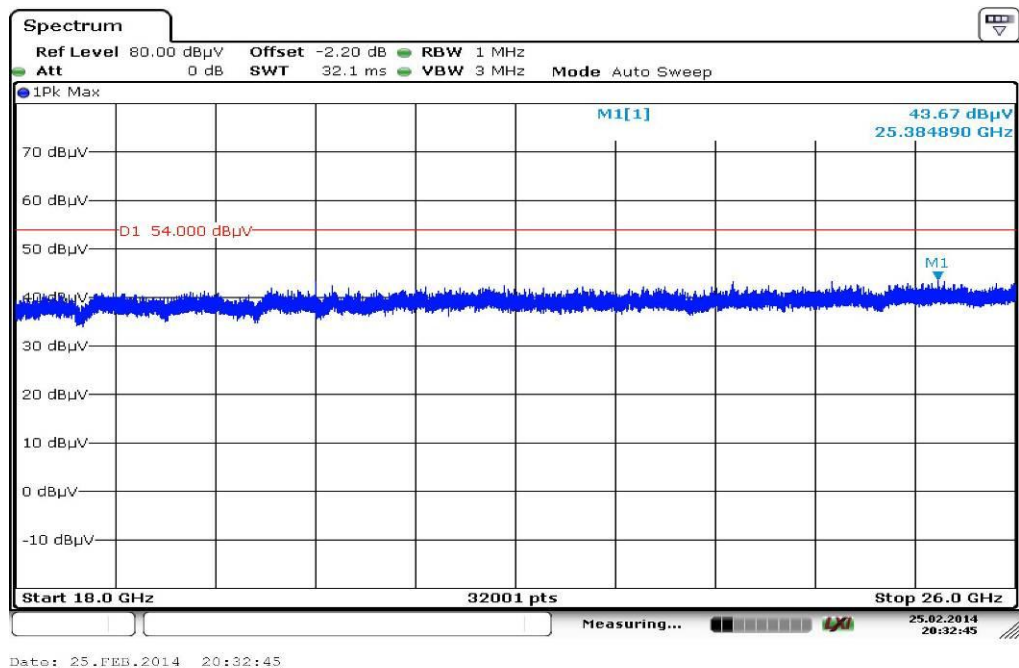
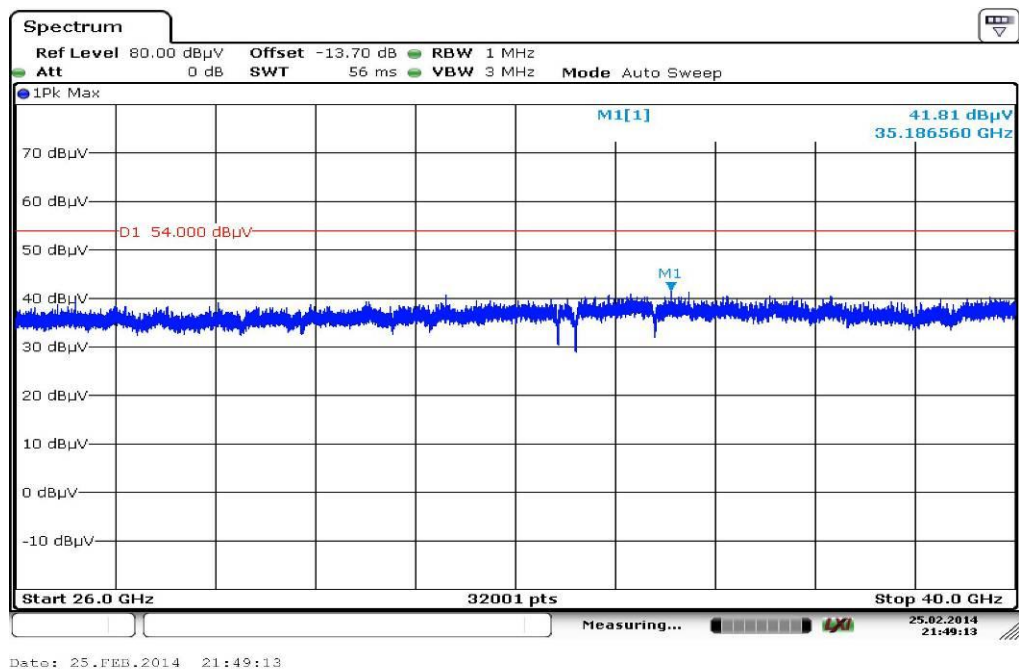
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)	Comment
35.985900	12.4	1000.0	120.000	162.0	V	88.0	13.1	17.6	30.0	
45.649800	10.3	1000.0	120.000	111.0	H	80.0	13.3	19.7	30.0	
50.602500	10.4	1000.0	120.000	170.0	V	100.0	13.3	19.6	30.0	
720.765450	20.2	1000.0	120.000	111.0	V	10.0	23.0	15.8	36.0	
816.178200	21.2	1000.0	120.000	170.0	V	178.0	24.0	14.8	36.0	
939.724800	22.4	1000.0	120.000	170.0	H	10.0	25.3	13.6	36.0	

Plot 22: 1 GHz to 12.75 GHz, channel 100, vertical & horizontal polarization**Plot 23:** 12 GHz to 18 GHz, channel 100, vertical & horizontal polarization

Plot 24: 18 GHz to 26 GHz, channel 100, vertical & horizontal polarization**Plot 25:** 26 GHz to 40 GHz, channel 100, vertical & horizontal polarization

Plot 26: 30 MHz to 1 GHz, channel 140, vertical & horizontal polarization

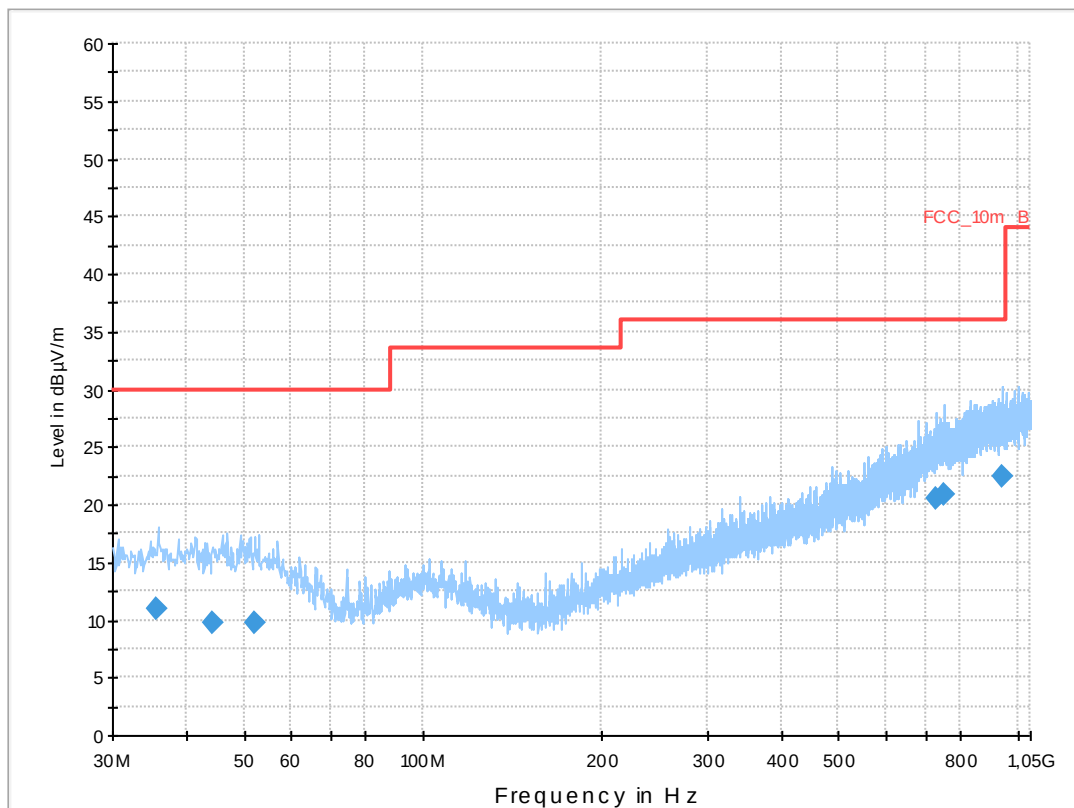
Common Information

Serial Number: CB5126DAHF
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT20) Ch. 140
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

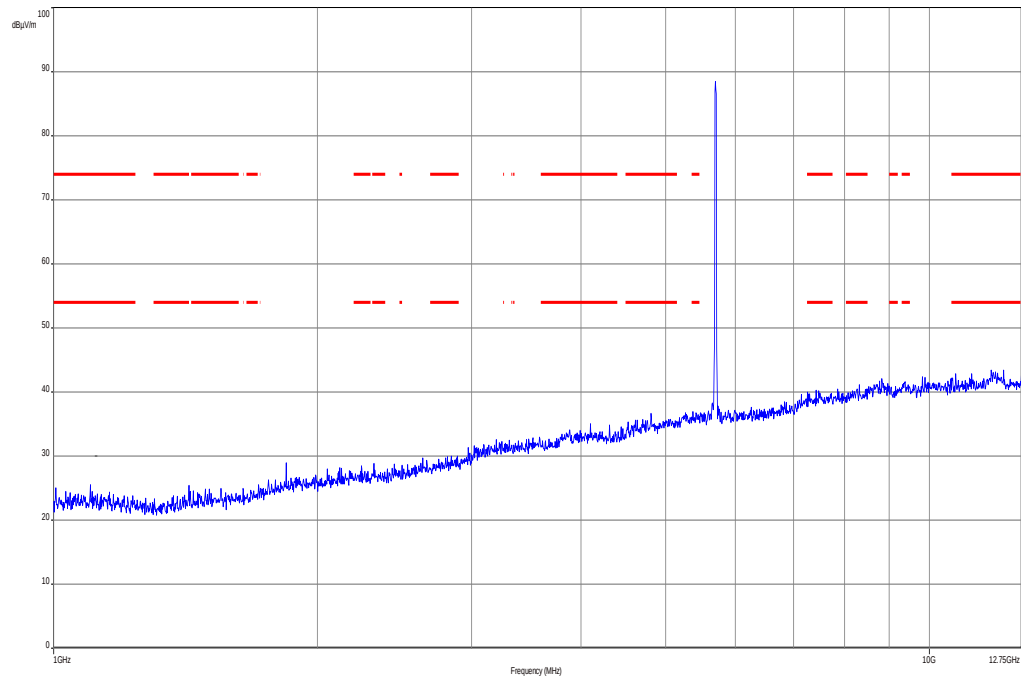
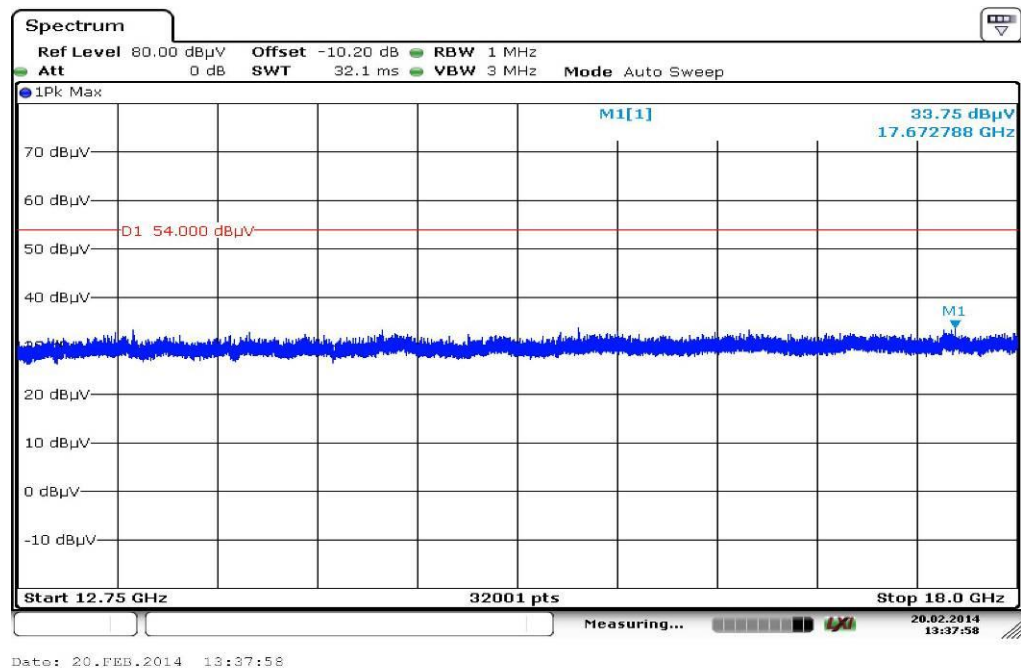
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

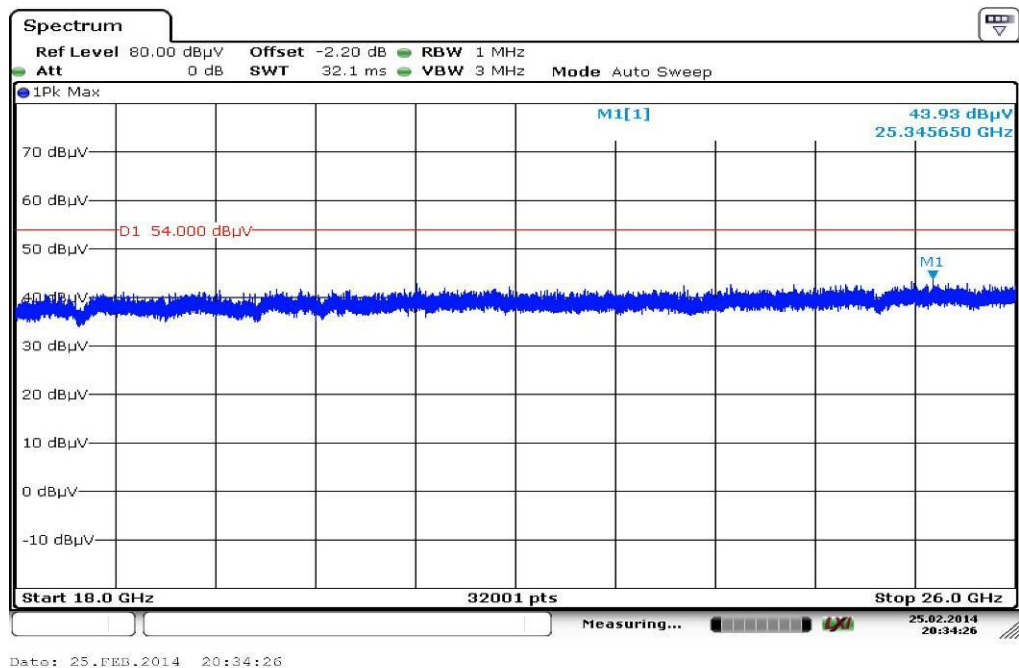
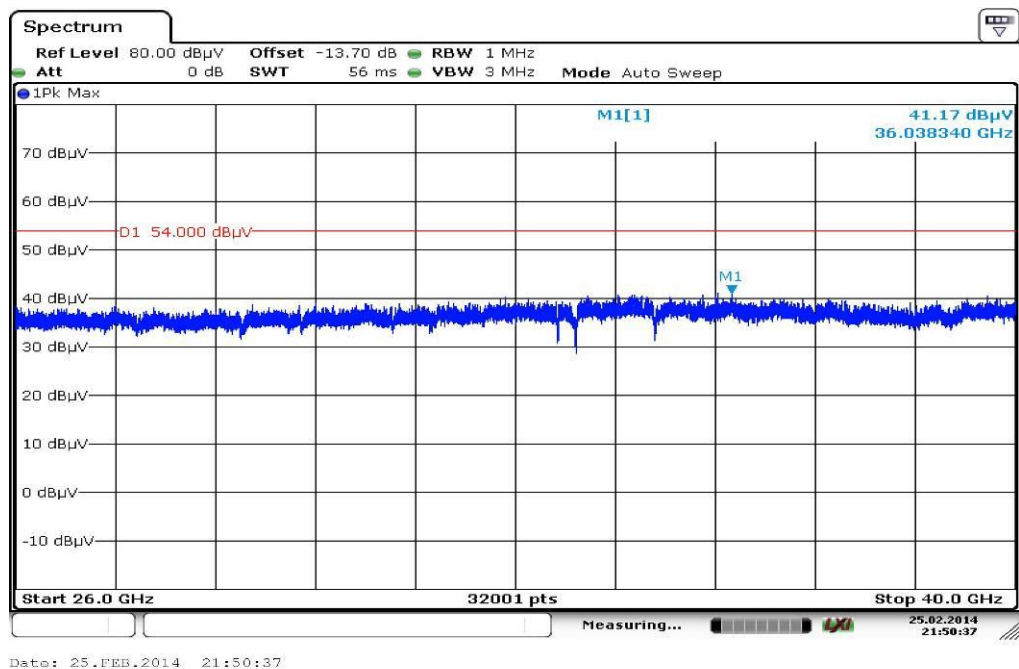
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



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
35.471850	10.9	1000.0	120.000	170.0	V	10.0	13.1	19.1	30.0	
44.306400	9.8	1000.0	120.000	170.0	V	271.0	13.3	20.2	30.0	
52.110600	9.8	1000.0	120.000	170.0	H	10.0	13.2	20.2	30.0	
730.940250	20.5	1000.0	120.000	170.0	H	265.0	23.2	15.5	36.0	
754.756950	20.9	1000.0	120.000	98.0	H	10.0	23.7	15.1	36.0	
942.493500	22.5	1000.0	120.000	170.0	H	80.0	25.3	13.5	36.0	

Plot 27: 1 GHz to 12.75 GHz, channel 140, vertical & horizontal polarization**Plot 28:** 12 GHz to 18 GHz, channel 140, vertical & horizontal polarization

Plot 29: 18 GHz to 26 GHz, channel 140, vertical & horizontal polarization**Plot 30:** 26 GHz to 40 GHz, channel 140, vertical & horizontal polarization

Plots: OFDM / n HT40 – mode

Plot 1: 30 MHz to 1 GHz, channel 38, vertical & horizontal polarization

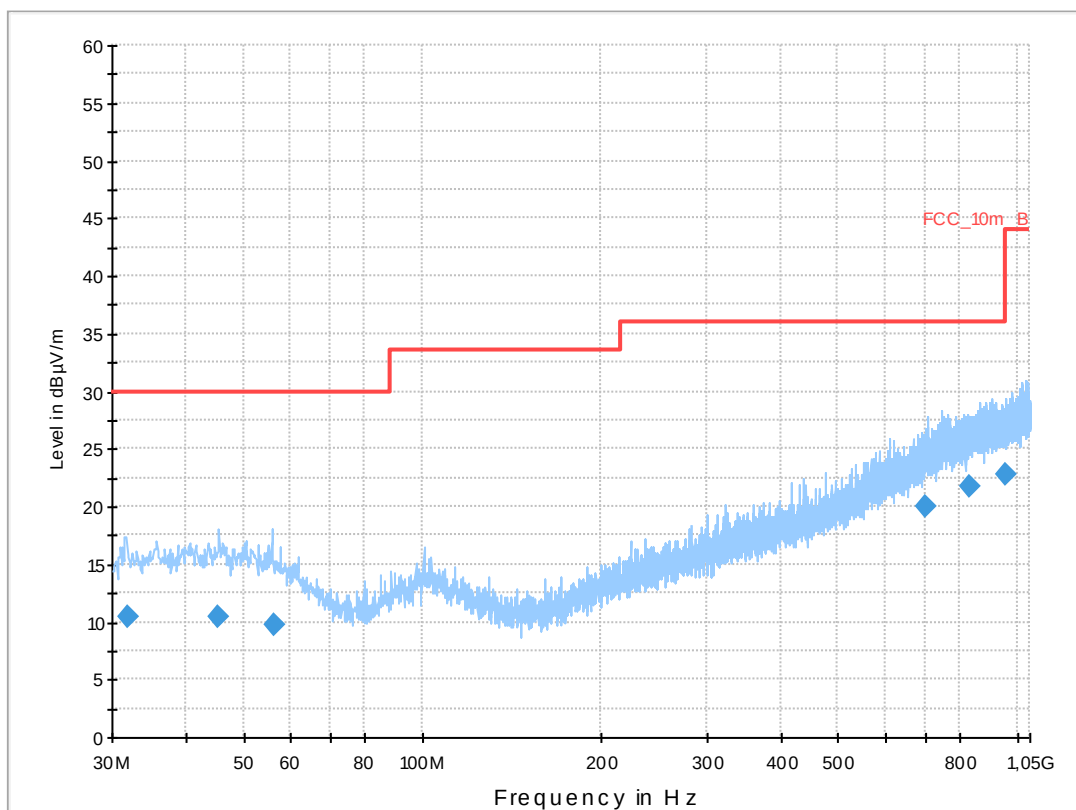
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT40) Ch. 38
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

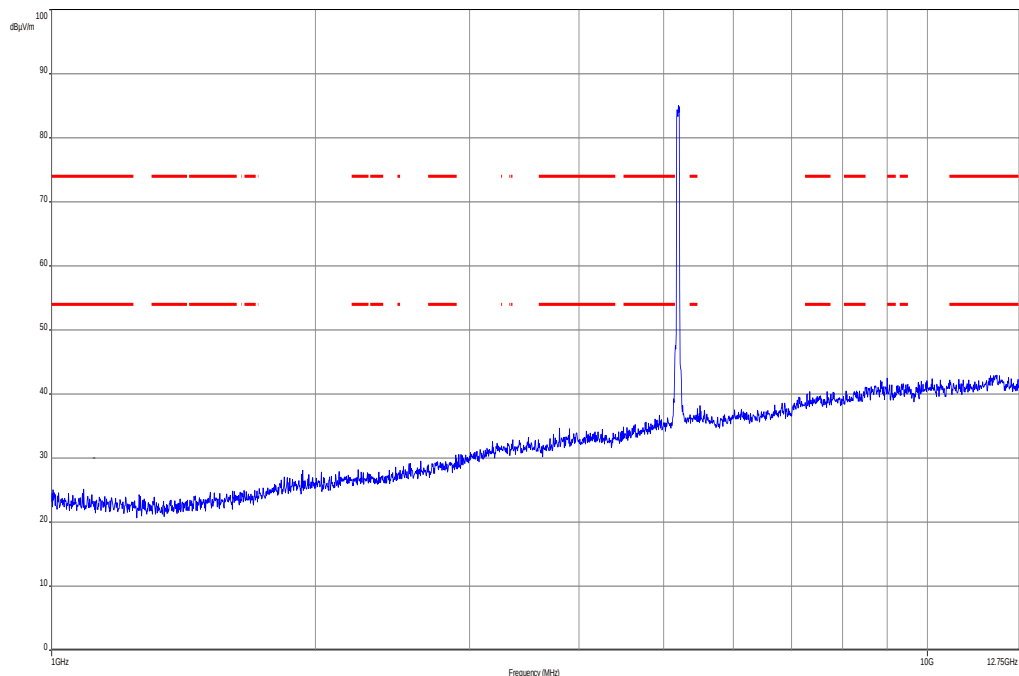
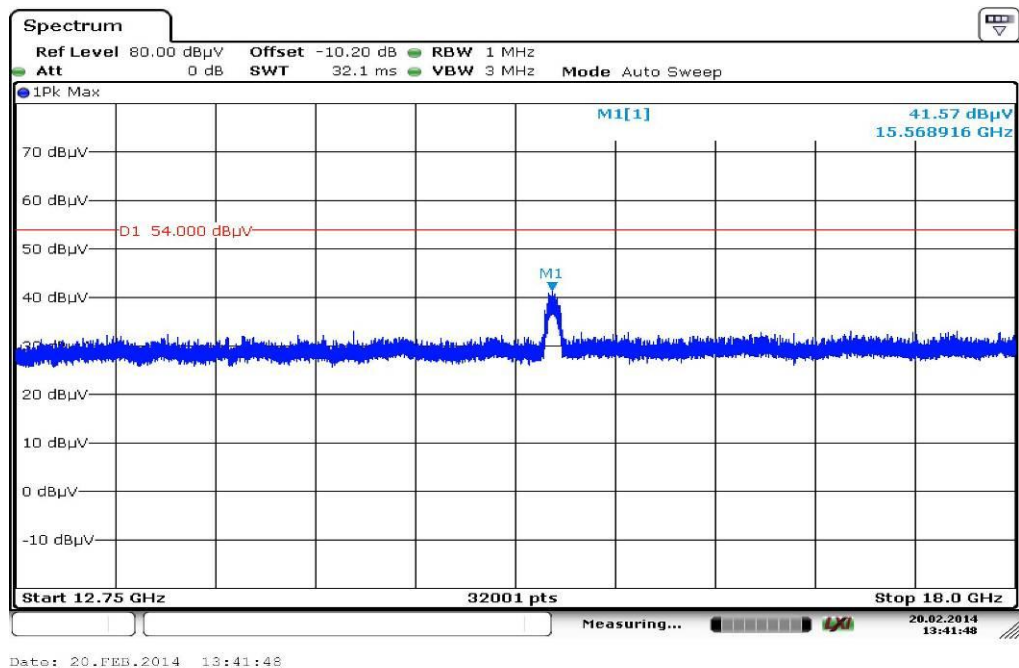
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

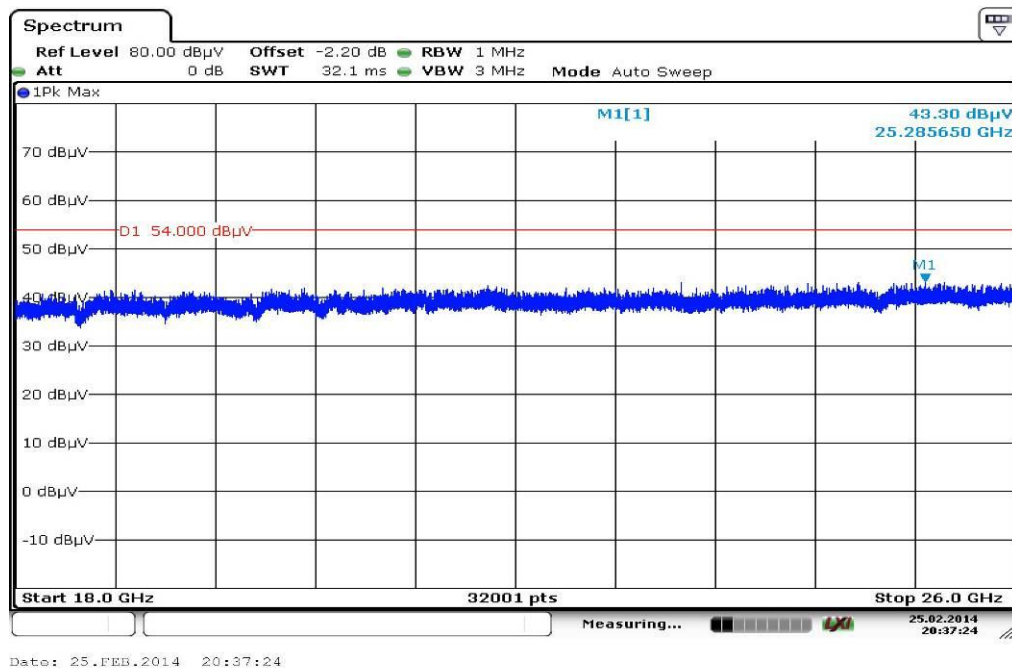
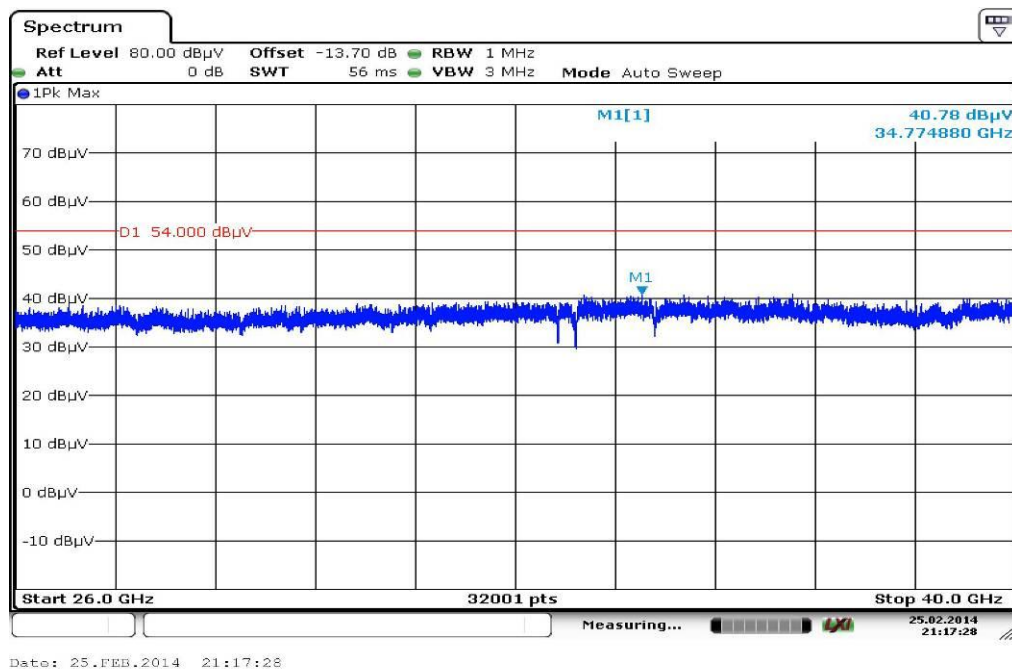
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



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
31.999800	10.5	1000.0	120.000	145.0	V	265.0	12.7	19.5	30.0	
45.323400	10.4	1000.0	120.000	170.0	H	180.0	13.3	19.6	30.0	
56.311650	9.7	1000.0	120.000	98.0	H	170.0	12.5	20.3	30.0	
703.696800	20.0	1000.0	120.000	113.0	H	280.0	22.6	16.0	36.0	
832.087200	21.7	1000.0	120.000	170.0	V	265.0	24.3	14.3	36.0	
959.107200	22.7	1000.0	120.000	122.0	H	0.0	25.4	13.3	36.0	

Plot 2: 1 GHz to 12.75 GHz, channel 38, vertical & horizontal polarization**Plot 3:** 12 GHz to 18 GHz, channel 38, vertical & horizontal polarization

Plot 4: 18 GHz to 26 GHz, channel 38, vertical & horizontal polarization**Plot 5:** 26 GHz to 40 GHz, channel 38, vertical & horizontal polarization

Plot 6: 30 MHz to 1 GHz, channel 46, vertical & horizontal polarization

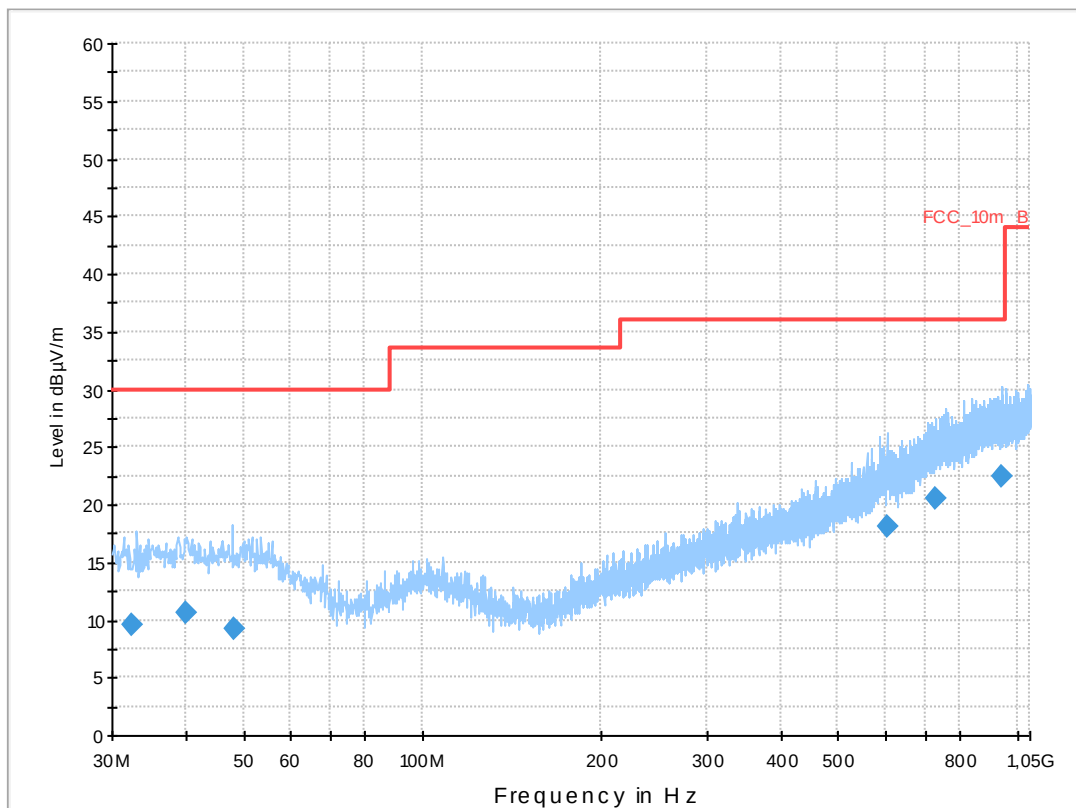
Common Information

Serial Number: CB5126DAHF
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT40) Ch. 46
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

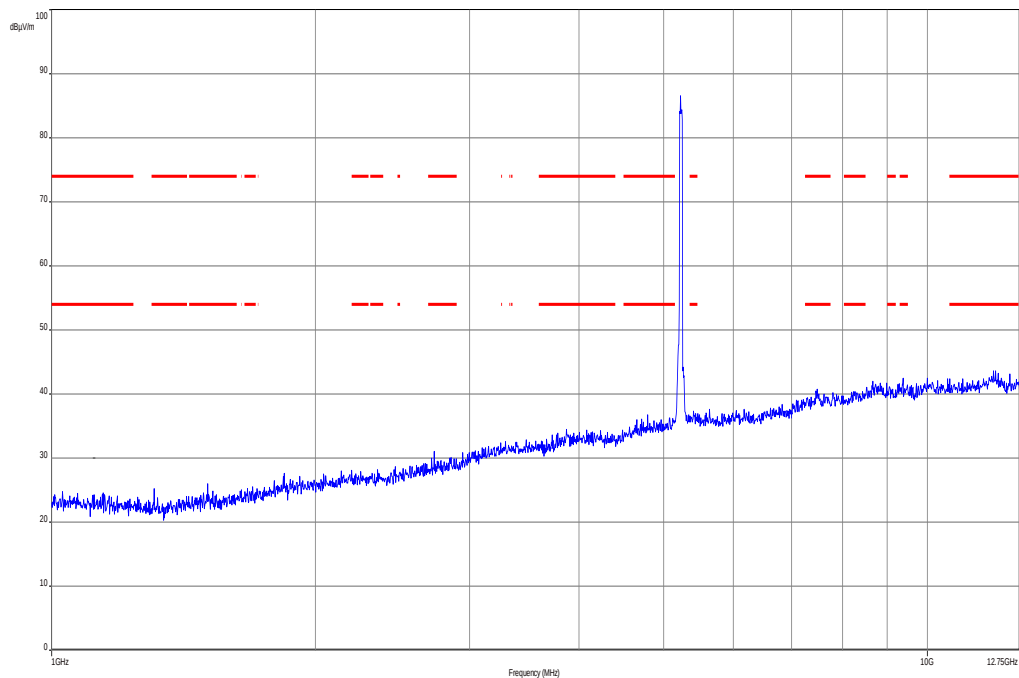
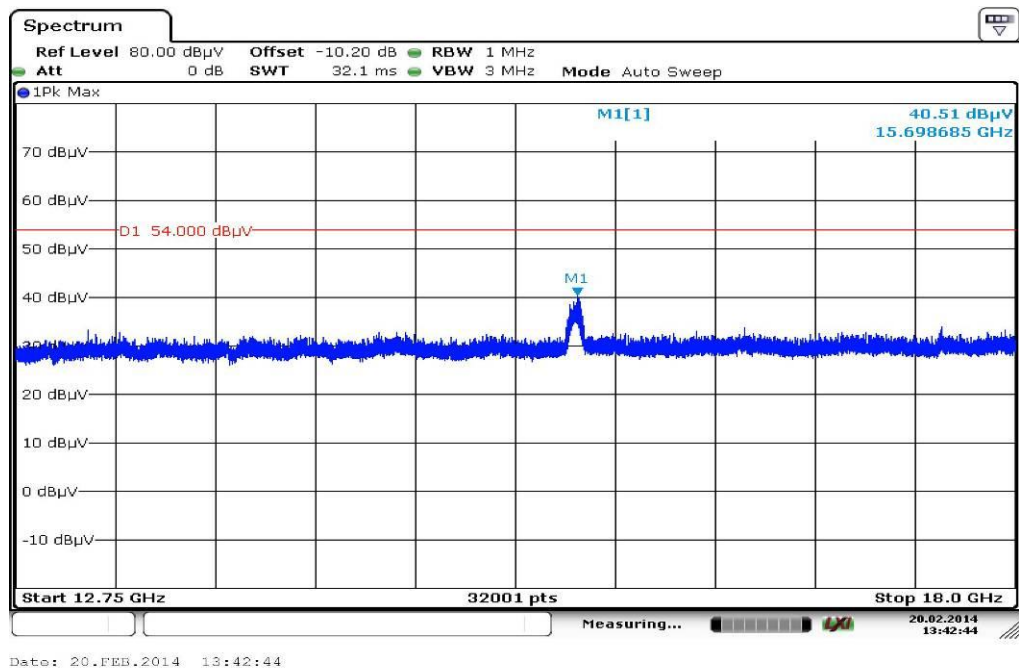
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dB μ V/m

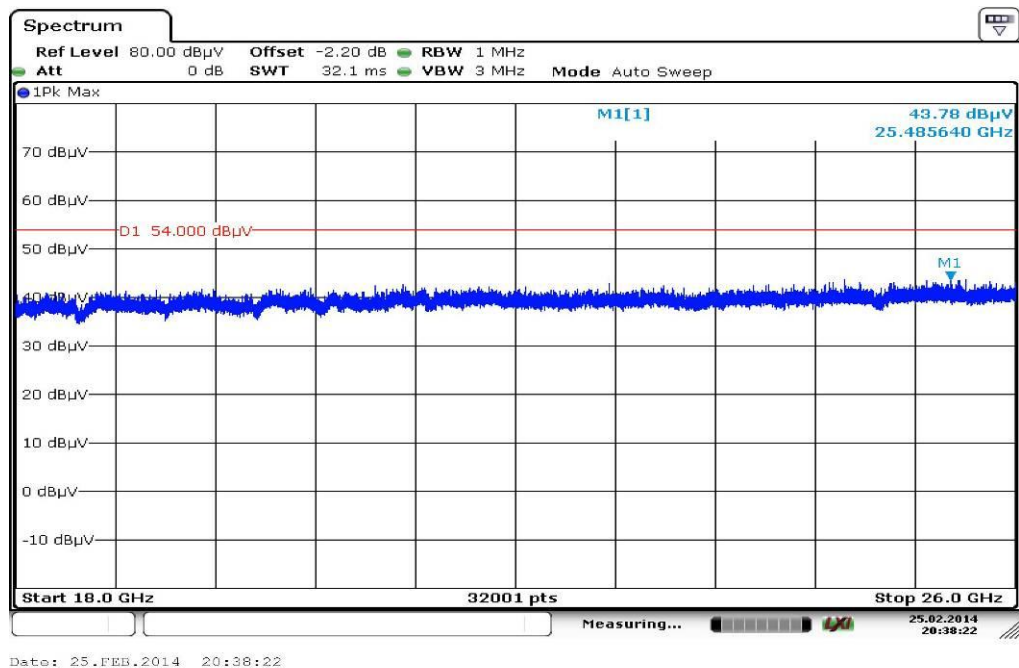
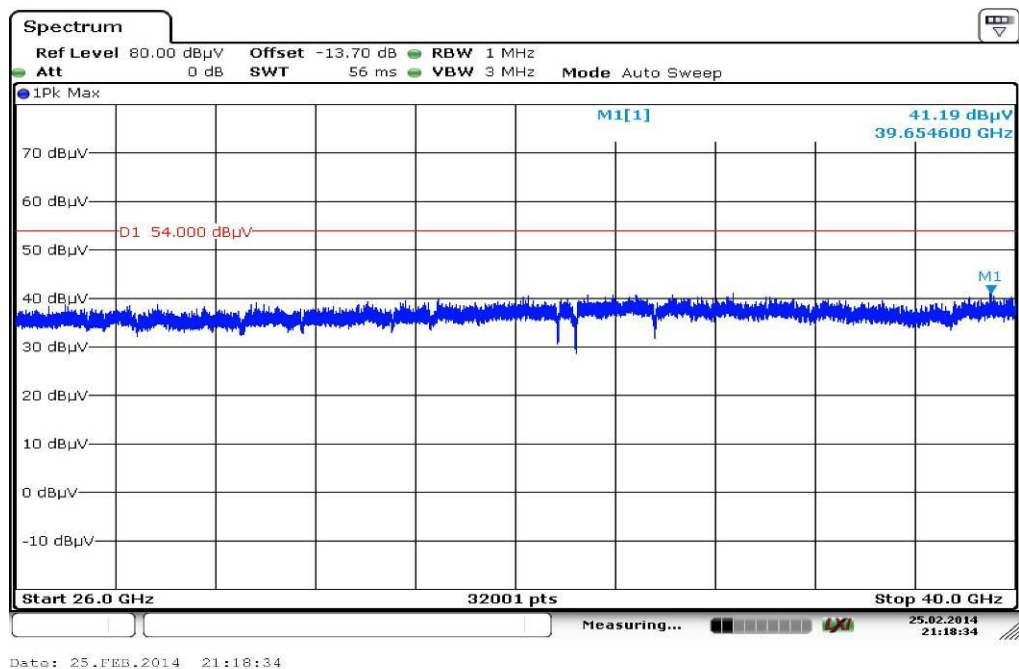
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)	Comment
32.443650	9.6	1000.0	120.000	170.0	H	10.0	12.8	20.4	30.0	
40.128900	10.6	1000.0	120.000	170.0	H	92.0	13.4	19.4	30.0	
48.321600	9.2	1000.0	120.000	170.0	V	190.0	13.3	20.8	30.0	
602.851050	18.1	1000.0	120.000	170.0	V	100.0	20.8	17.9	36.0	
729.312150	20.5	1000.0	120.000	161.0	H	280.0	23.2	15.5	36.0	
944.088600	22.5	1000.0	120.000	170.0	V	170.0	25.3	13.5	36.0	

Plot 7: 1 GHz to 12.75 GHz, channel 46, vertical & horizontal polarization**Plot 8:** 12 GHz to 18 GHz, channel 46, vertical & horizontal polarization

Plot 9: 18 GHz to 26 GHz, channel 46, vertical & horizontal polarization**Plot 10:** 26 GHz to 40 GHz, channel 46, vertical & horizontal polarization

Plot 11: 30 MHz to 1 GHz, channel 54, vertical & horizontal polarization

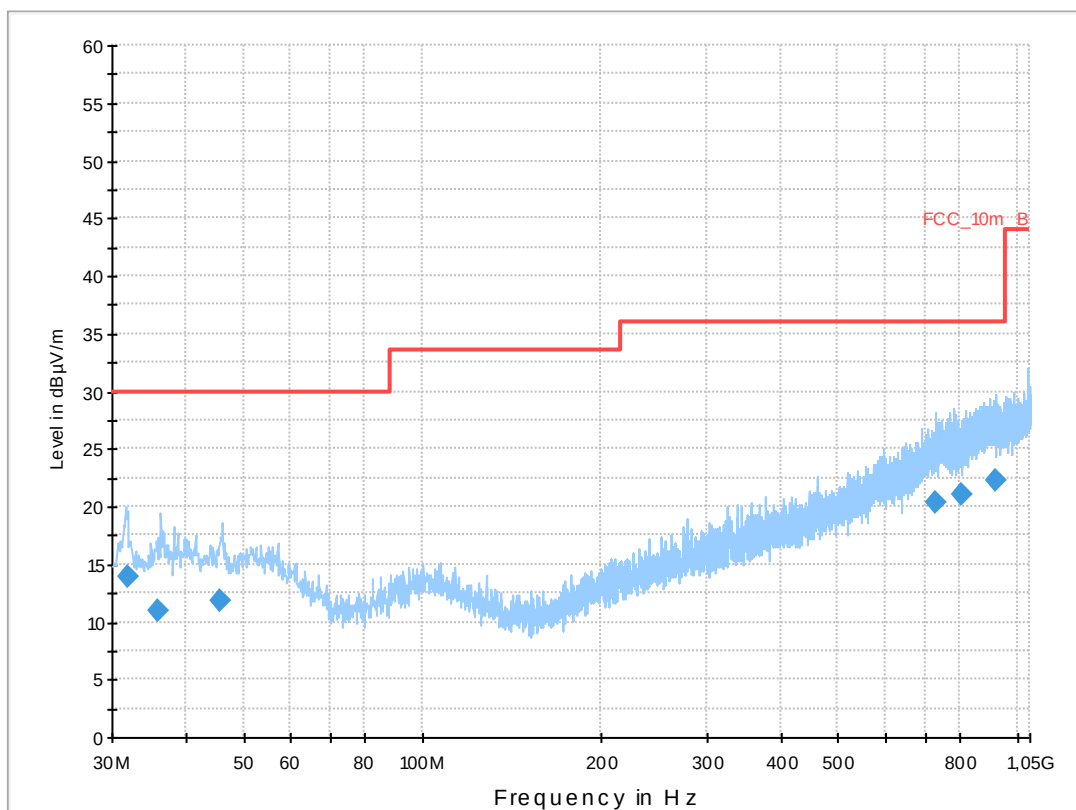
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT40) Ch. 54
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

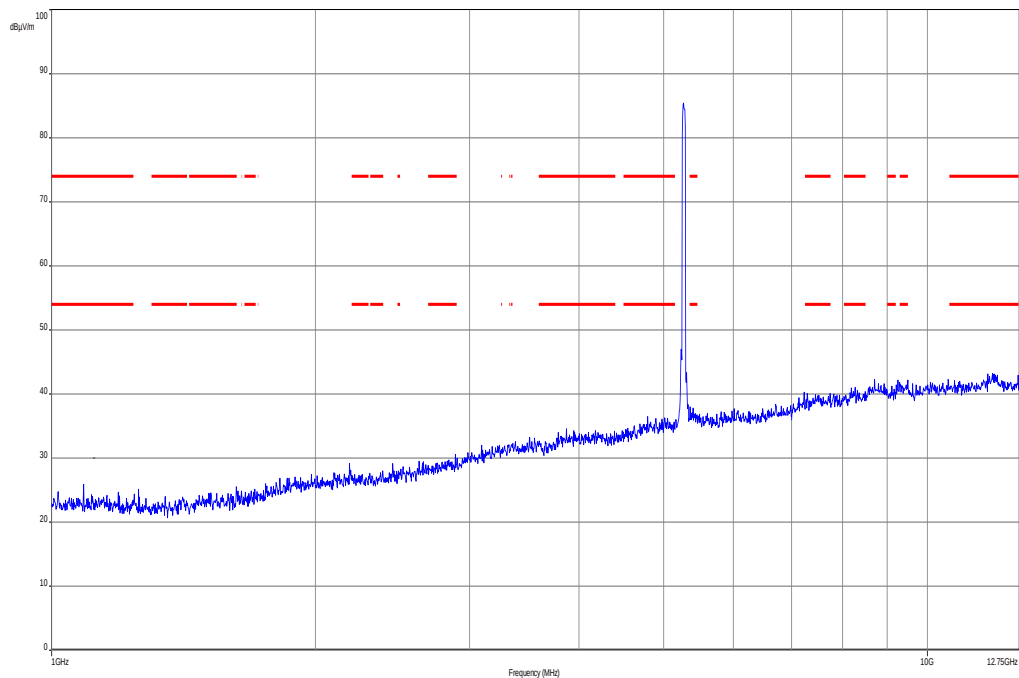
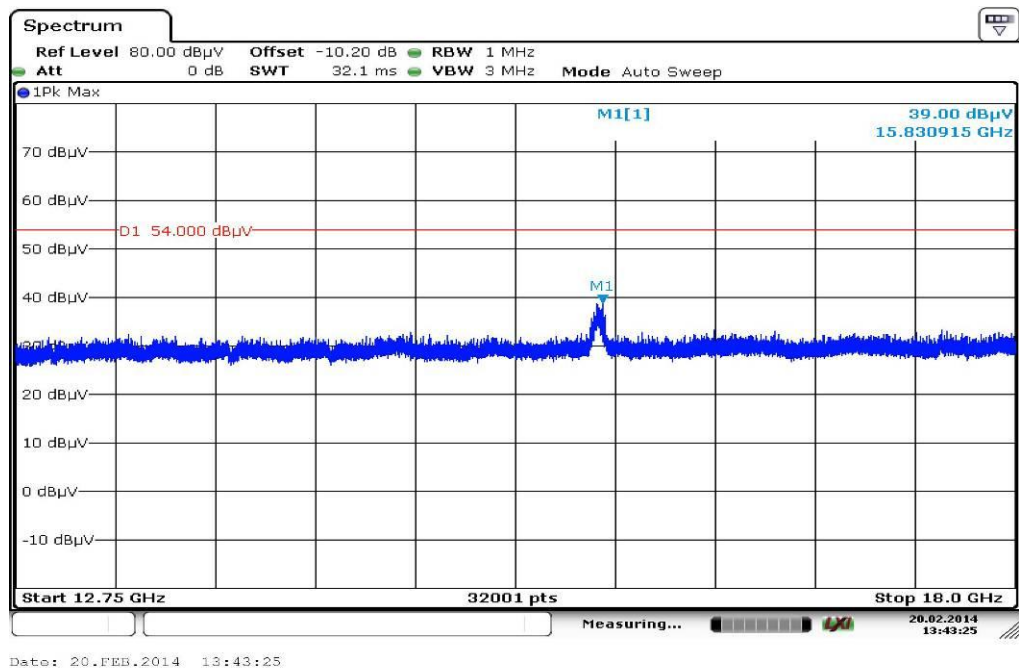
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

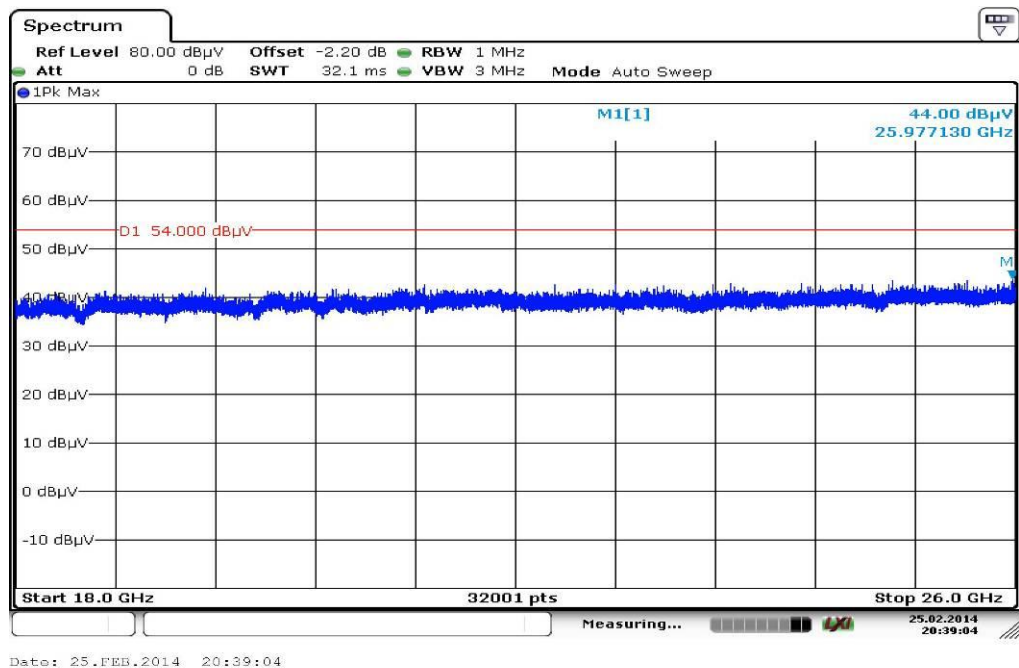
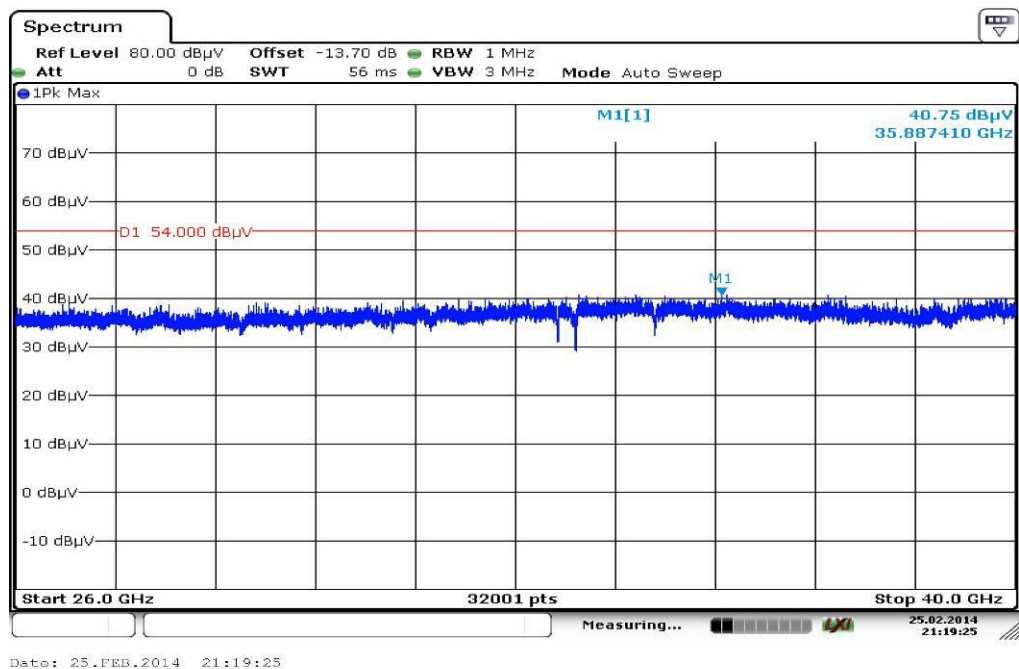
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



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
31.937100	13.8	1000.0	120.000	170.0	V	170.0	12.7	16.2	30.0	
35.866500	11.0	1000.0	120.000	170.0	V	280.0	13.1	19.0	30.0	
45.731850	11.9	1000.0	120.000	142.0	V	280.0	13.3	18.1	30.0	
727.531350	20.4	1000.0	120.000	112.0	V	268.0	23.1	15.6	36.0	
808.690350	21.1	1000.0	120.000	170.0	V	272.0	23.9	14.9	36.0	
919.960650	22.3	1000.0	120.000	170.0	V	272.0	25.3	13.7	36.0	

Plot 12: 1 GHz to 12.75 GHz, channel 54, vertical & horizontal polarization**Plot 13:** 12 GHz to 18 GHz, channel 54, vertical & horizontal polarization

Plot 14: 18 GHz to 26 GHz, channel 54, vertical & horizontal polarization**Plot 15:** 26 GHz to 40 GHz, channel 54, vertical & horizontal polarization

Plot 16: 30 MHz to 1 GHz, channel 62, vertical & horizontal polarization

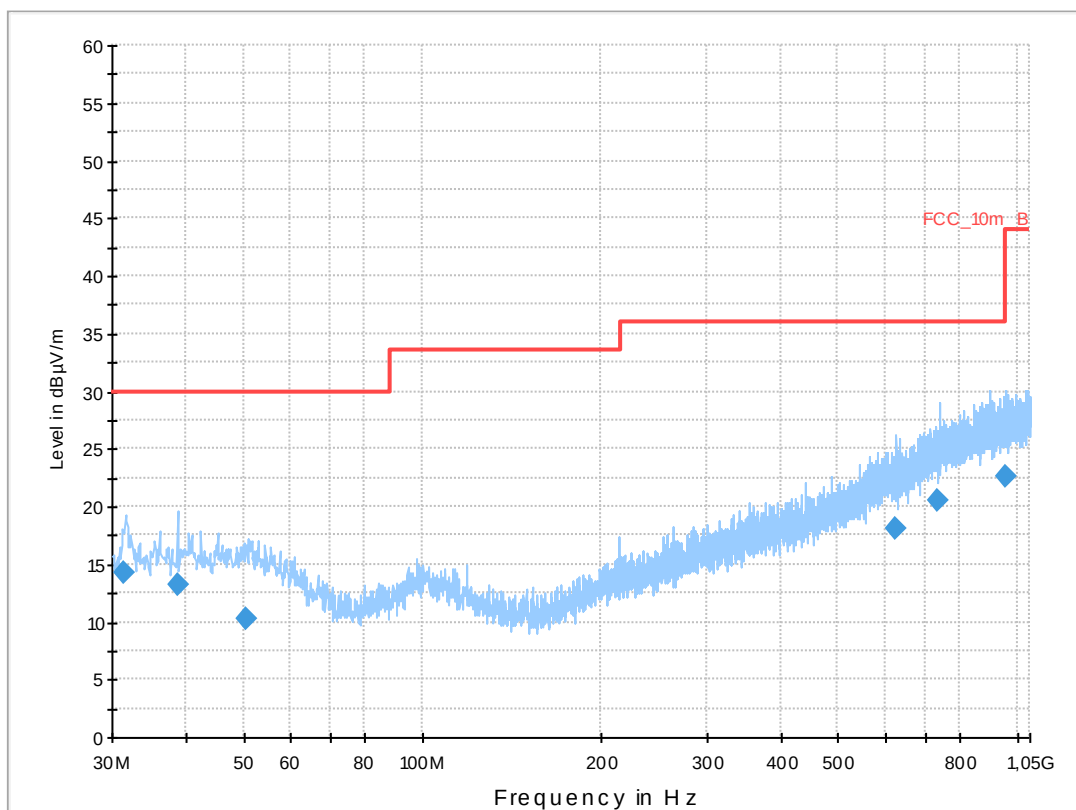
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT40) Ch. 62
 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
31.401750	14.3	1000.0	120.000	104.0	V	170.0	12.7	15.7	30.0	
38.702700	13.3	1000.0	120.000	132.0	V	180.0	13.3	16.7	30.0	
50.324100	10.2	1000.0	120.000	111.0	H	-10.0	13.3	19.8	30.0	
626.201100	18.1	1000.0	120.000	170.0	H	280.0	21.0	17.9	36.0	
731.868750	20.6	1000.0	120.000	170.0	H	10.0	23.2	15.4	36.0	
956.807250	22.5	1000.0	120.000	170.0	H	100.0	25.4	13.5	36.0	

Spectrum

Ref Level 80.00 dBμV Offset -10.20 dB RBW 1 MHz
 Att 0 dB SWT 32.1 ms VBW 3 MHz Mode Auto Sweep

1Pk Max

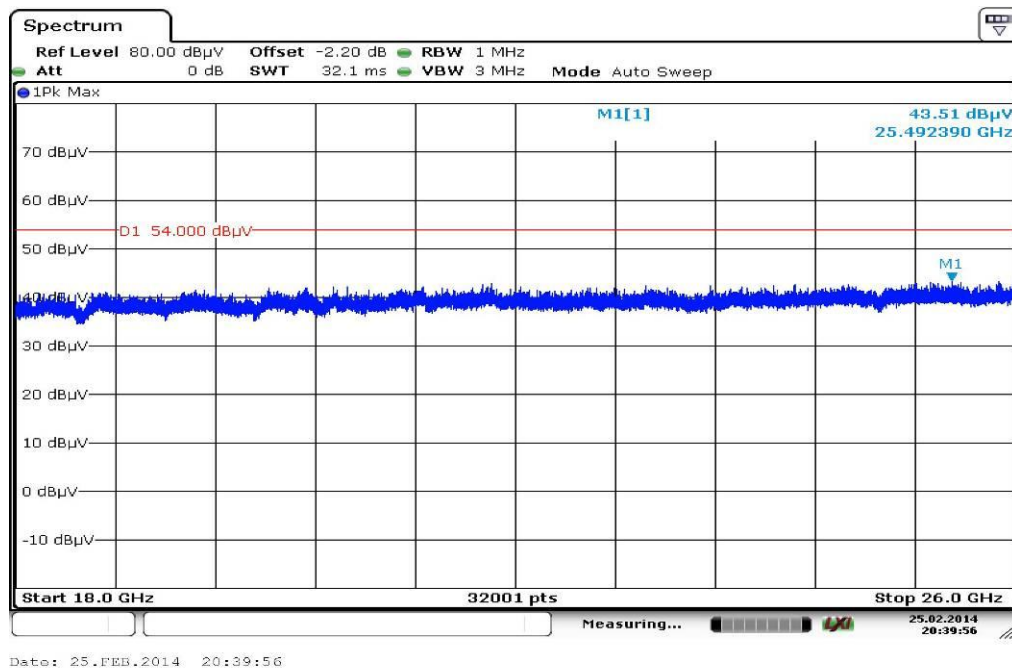
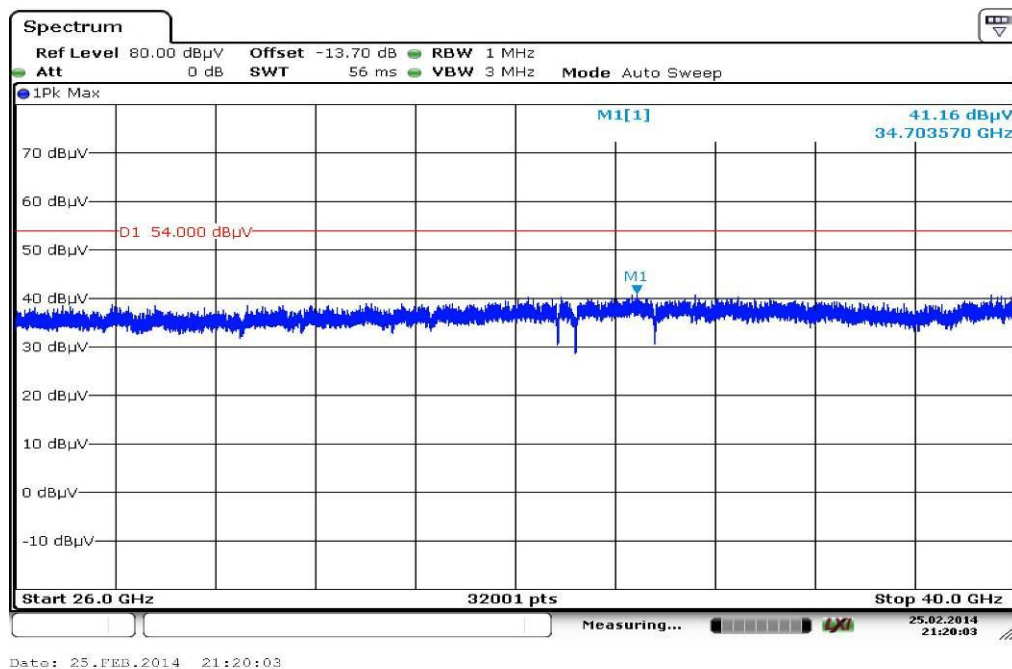
M1[1] 39.42 dBμV 15.921639 GHz

D1 54.000 dBμV

Start 12.75 GHz 32001 pts Stop 18.0 GHz

Measuring...

Date: 20.FEB.2014 13:44:35

Plot 19: 18 GHz to 26 GHz, channel 62, vertical & horizontal polarization**Plot 20:** 26 GHz to 40 GHz, channel 62, vertical & horizontal polarization

Plot 21: 30 MHz to 1 GHz, channel 102, vertical & horizontal polarization

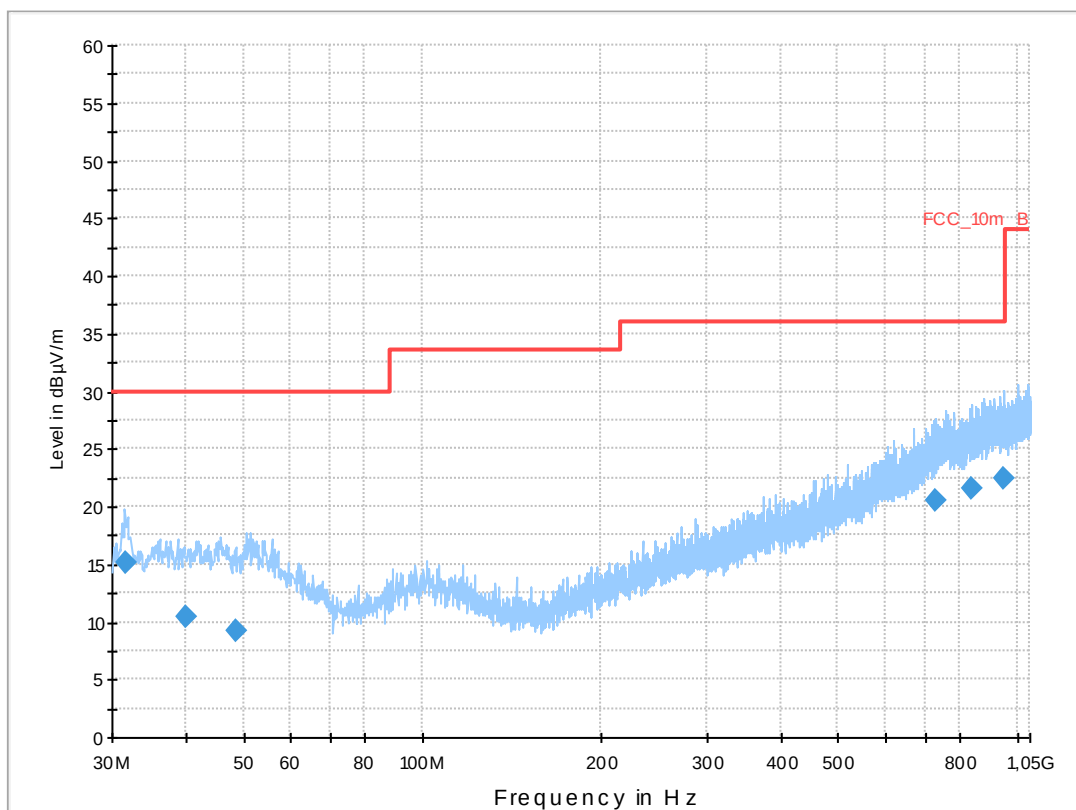
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT40) Ch. 102
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

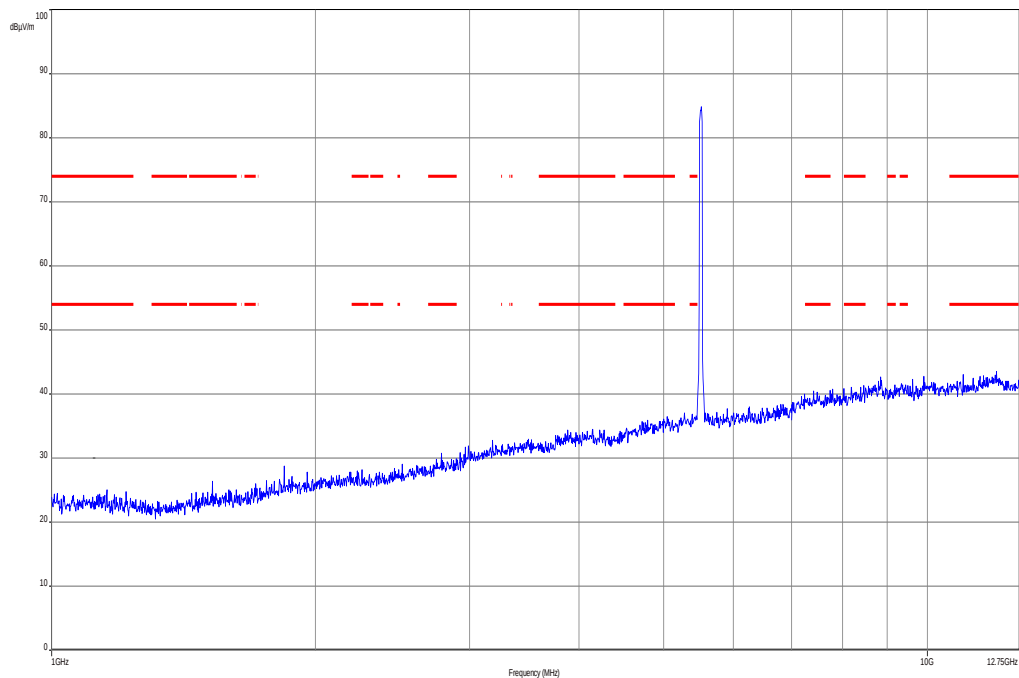
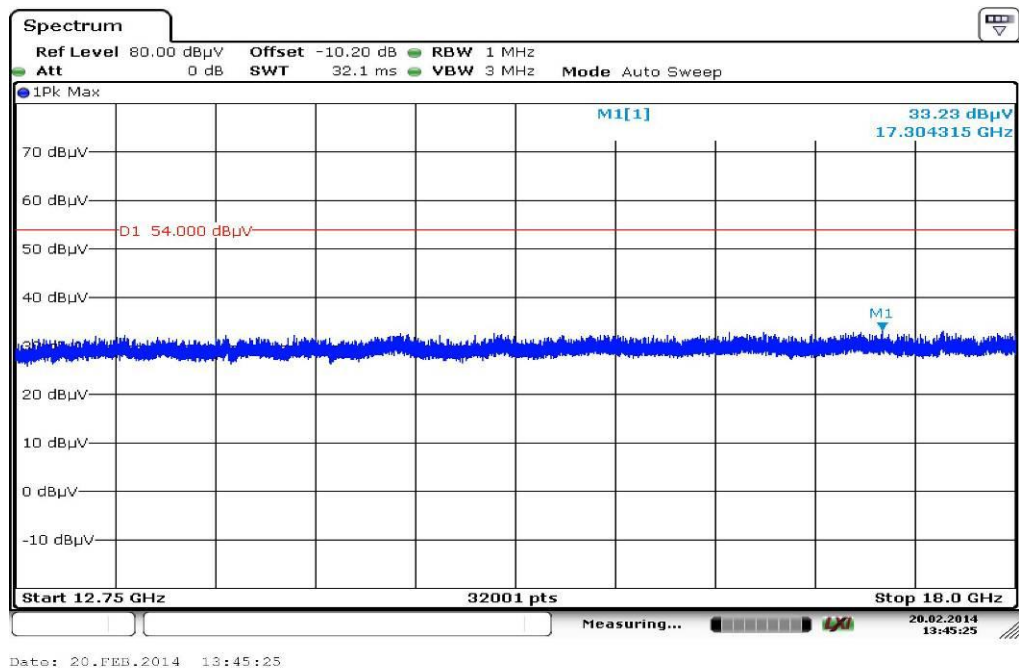
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

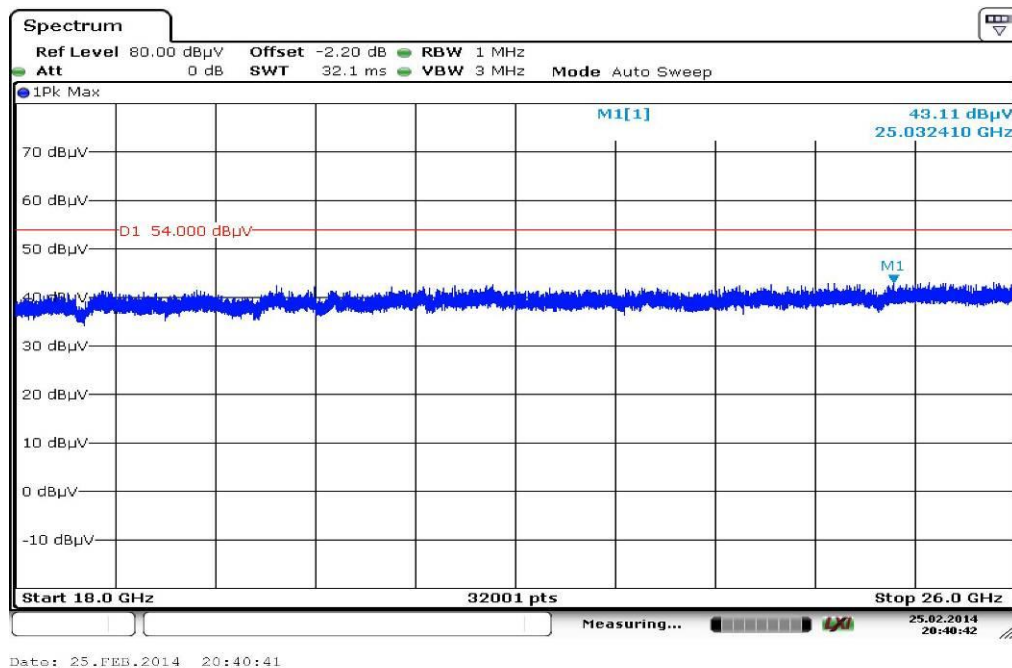
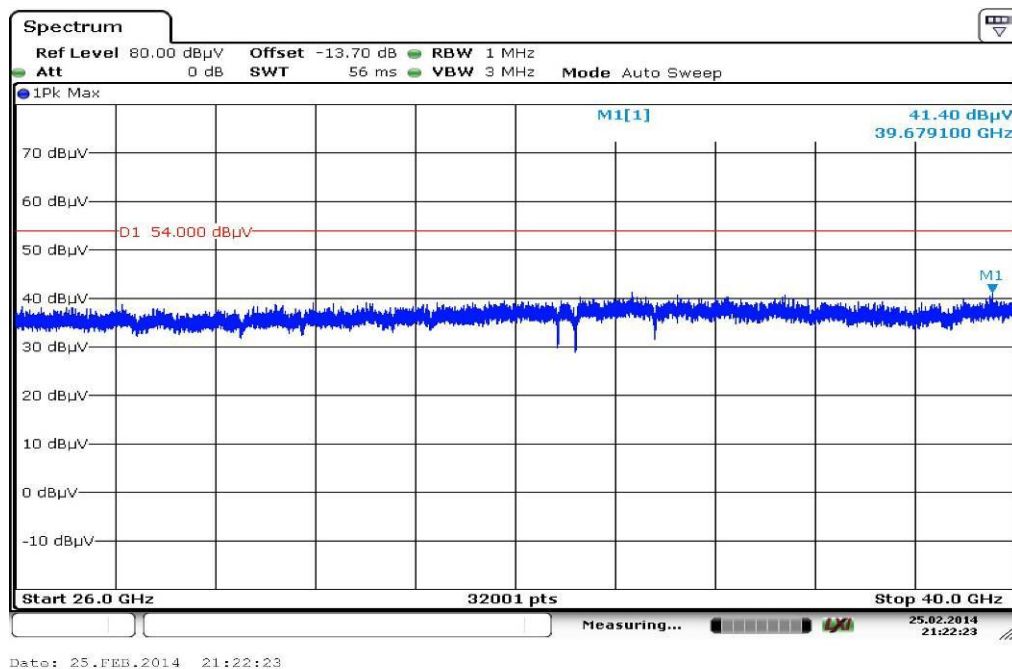
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



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
31.562100	15.1	1000.0	120.000	98.0	V	3.0	12.7	14.9	30.0	
39.914550	10.5	1000.0	120.000	170.0	V	270.0	13.4	19.5	30.0	
48.519750	9.2	1000.0	120.000	170.0	V	190.0	13.3	20.8	30.0	
730.116300	20.4	1000.0	120.000	170.0	V	10.0	23.2	15.6	36.0	
837.040500	21.6	1000.0	120.000	170.0	H	-3.0	24.4	14.4	36.0	
948.648300	22.4	1000.0	120.000	170.0	H	-3.0	25.3	13.6	36.0	

Plot 22: 1 GHz to 12.75 GHz, channel 102, vertical & horizontal polarization**Plot 23:** 12 GHz to 18 GHz, channel 102, vertical & horizontal polarization

Plot 24: 18 GHz to 26 GHz, channel 102, vertical & horizontal polarization**Plot 25:** 26 GHz to 40 GHz, channel 102, vertical & horizontal polarization

Plot 26: 30 MHz to 1 GHz, channel 134, vertical & horizontal polarization

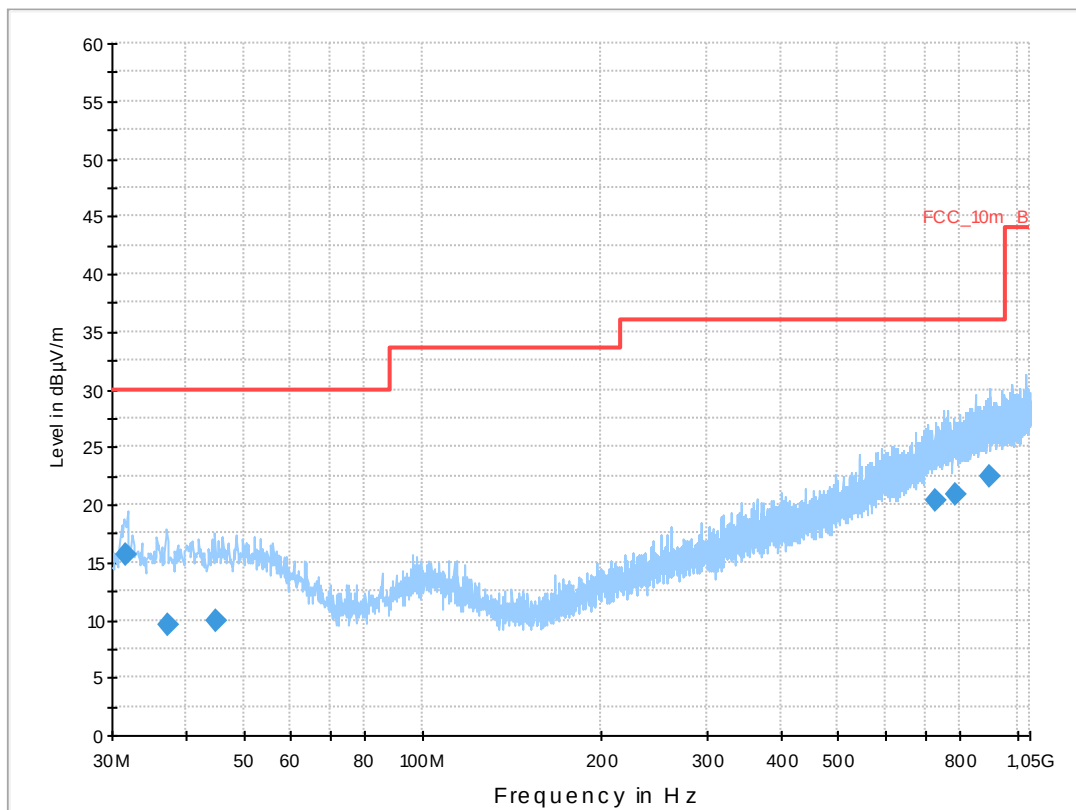
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX n-mode (HT40) Ch. 134
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

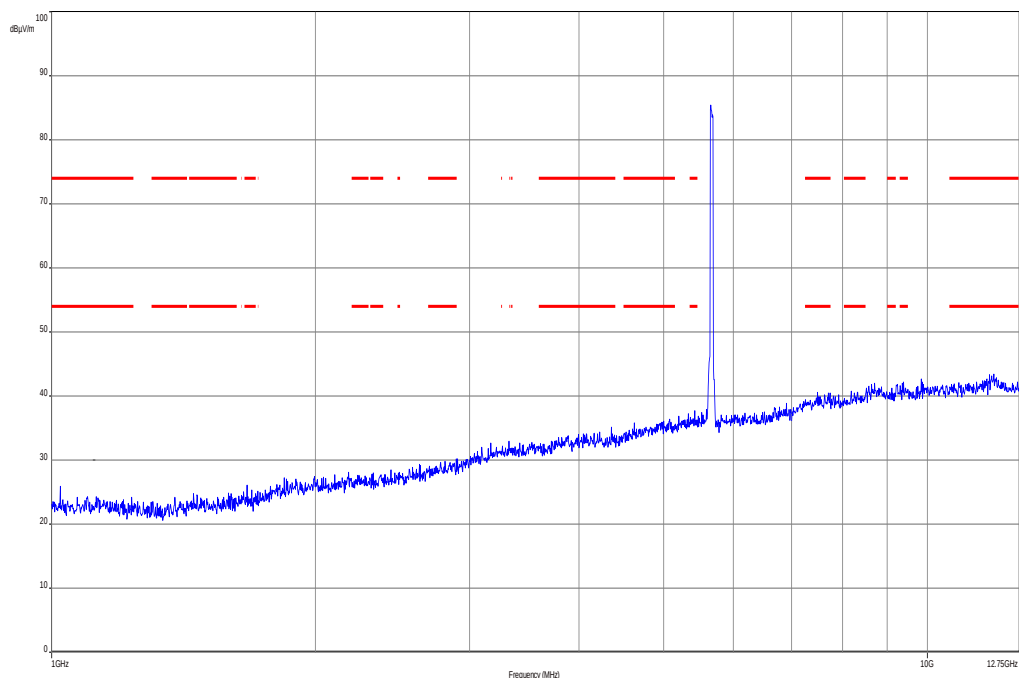
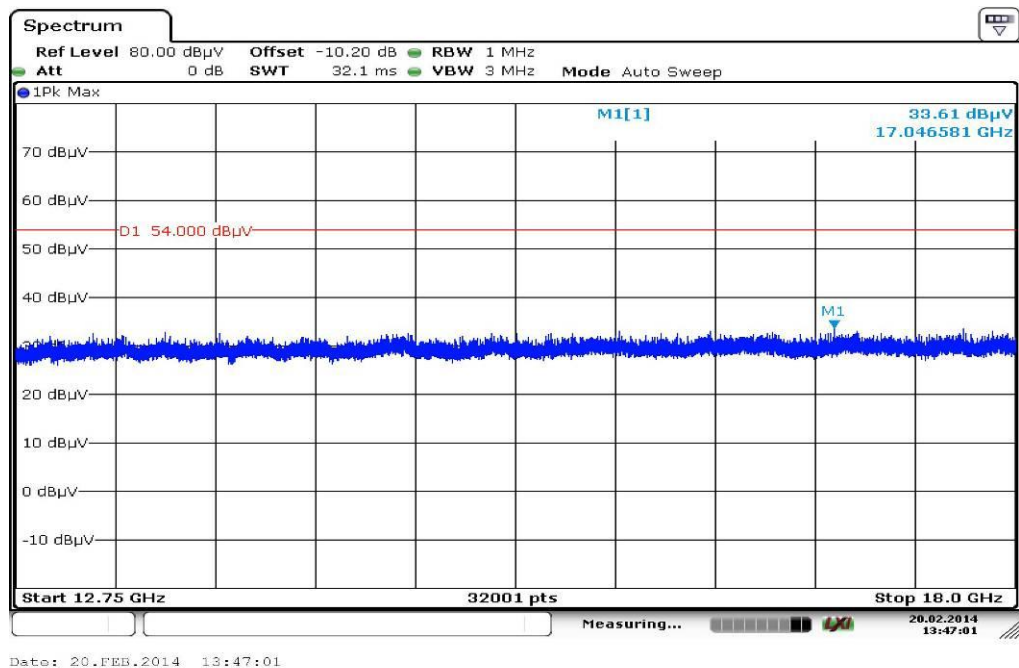
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

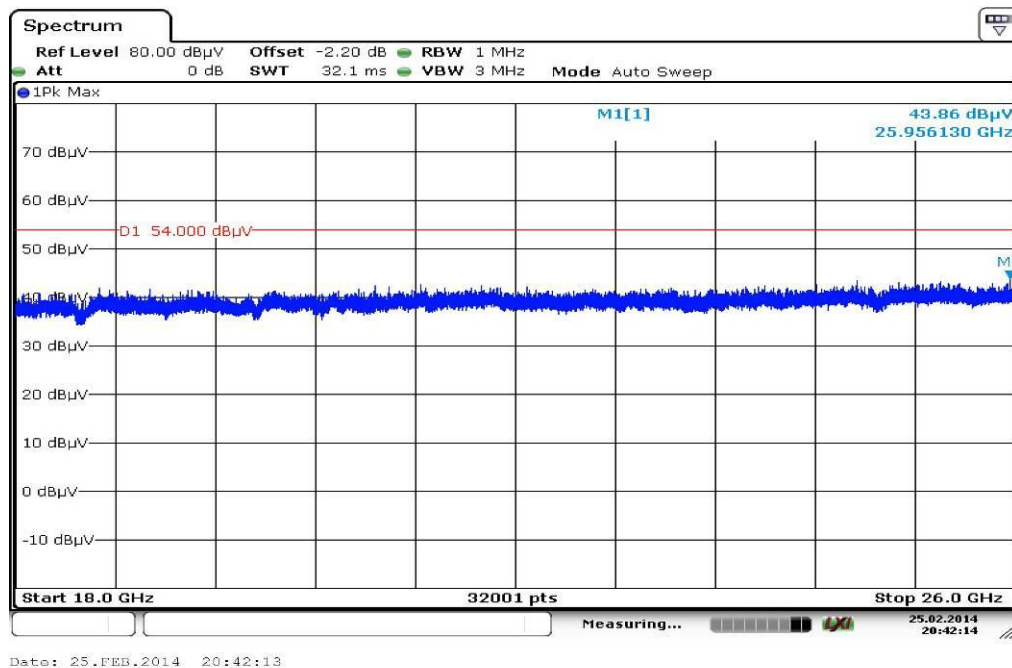
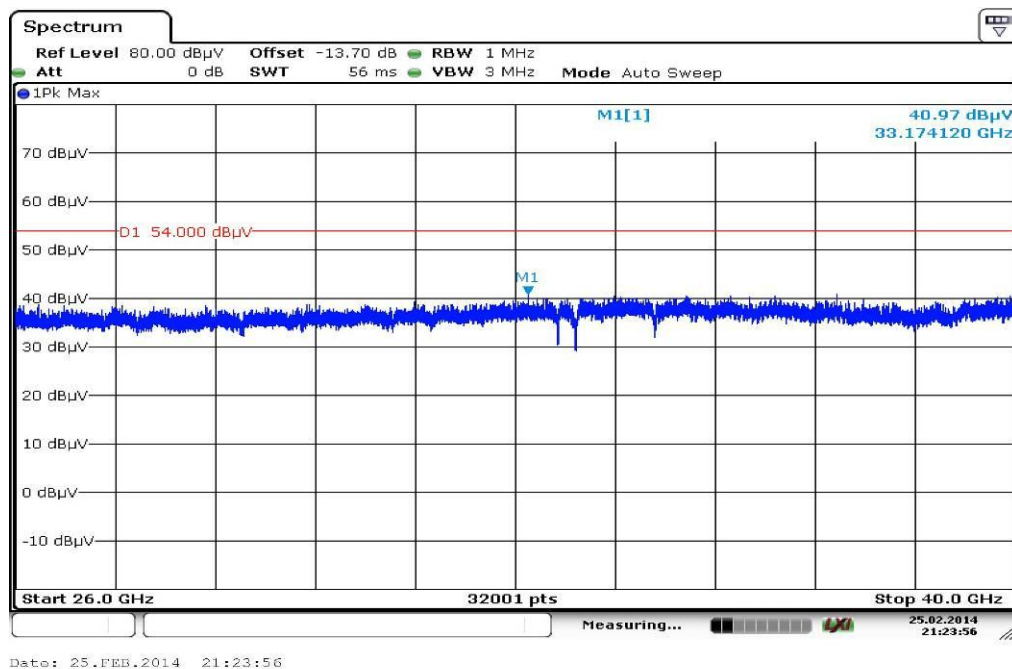
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



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
31.650150	15.7	1000.0	120.000	98.0	V	90.0	12.7	14.3	30.0	
37.298250	9.6	1000.0	120.000	170.0	H	100.0	13.2	20.4	30.0	
44.844600	10.0	1000.0	120.000	98.0	H	270.0	13.3	20.0	30.0	
730.564800	20.4	1000.0	120.000	123.0	V	170.0	23.2	15.6	36.0	
785.185350	20.9	1000.0	120.000	121.0	H	81.0	23.8	15.1	36.0	
899.055450	22.4	1000.0	120.000	170.0	H	2.0	25.2	13.6	36.0	

Plot 27: 1 GHz to 12.75 GHz, channel 134, vertical & horizontal polarization**Plot 28:** 12 GHz to 18 GHz, channel 134, vertical & horizontal polarization

Plot 29: 18 GHz to 26 GHz, channel 134, vertical & horizontal polarization**Plot 30:** 26 GHz to 40 GHz, channel 134, vertical & horizontal polarization

Plots: OFDM / n HT80 – mode

Plot 31: 30 MHz to 1 GHz, channel 42, vertical & horizontal polarization

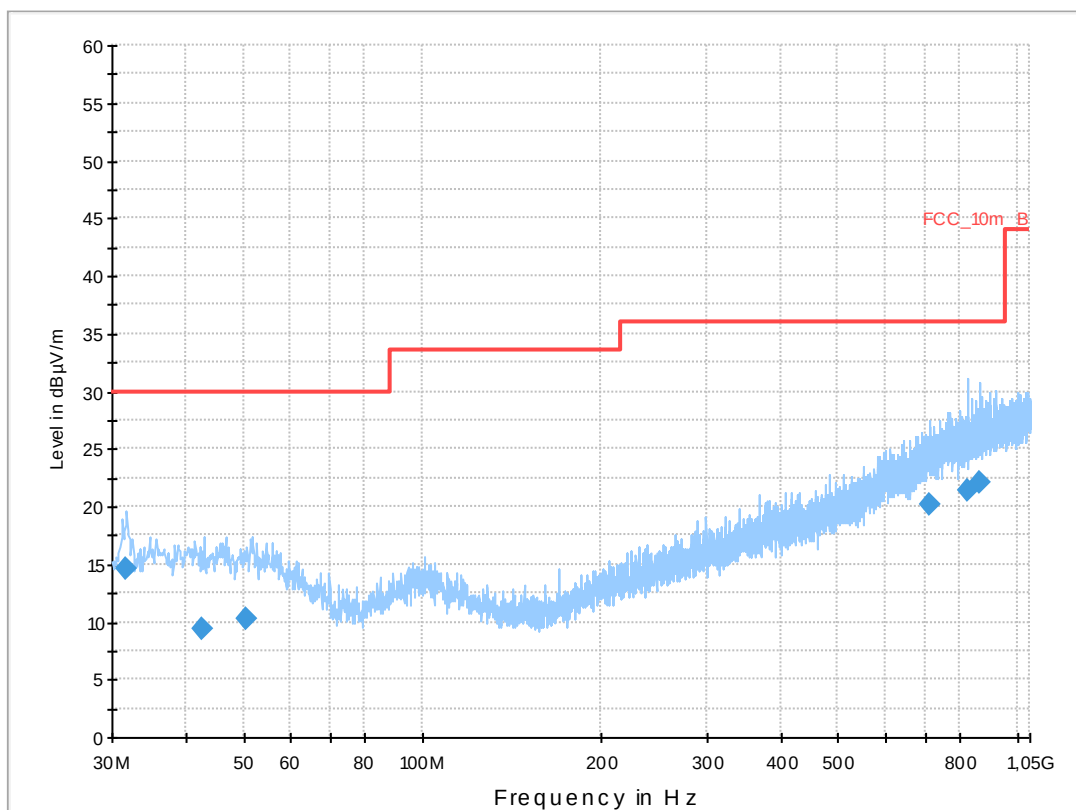
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX ac-mode (HT80) Ch. 42
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

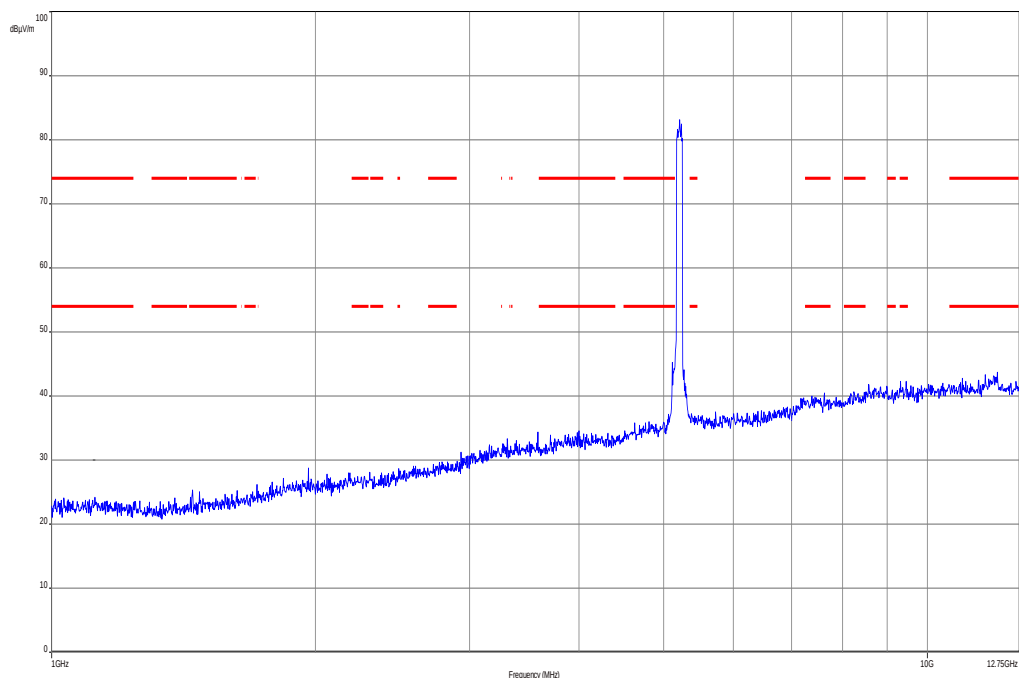
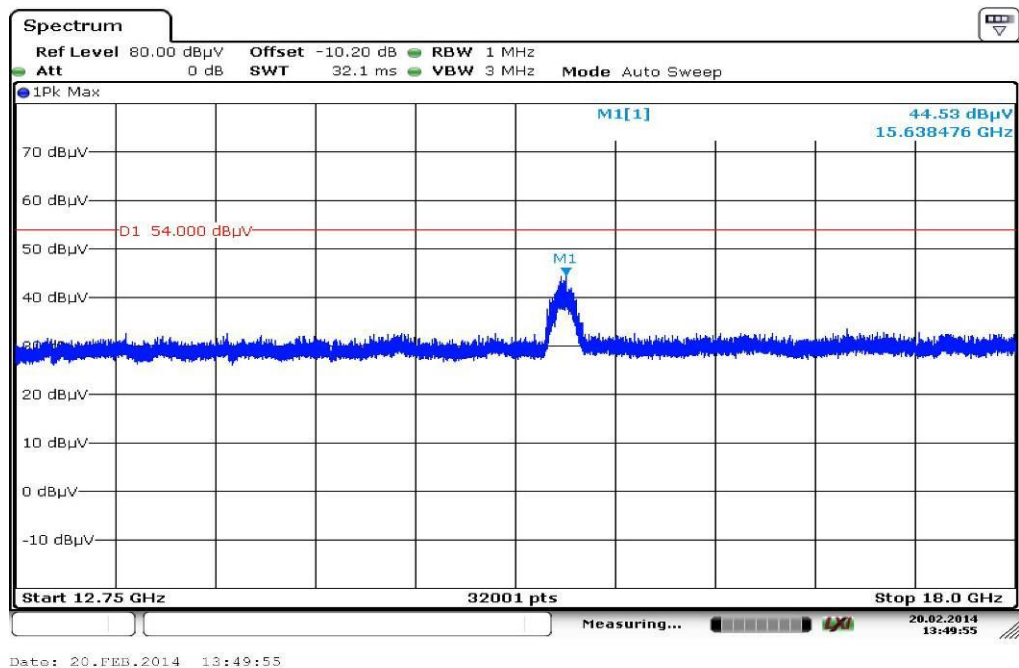
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

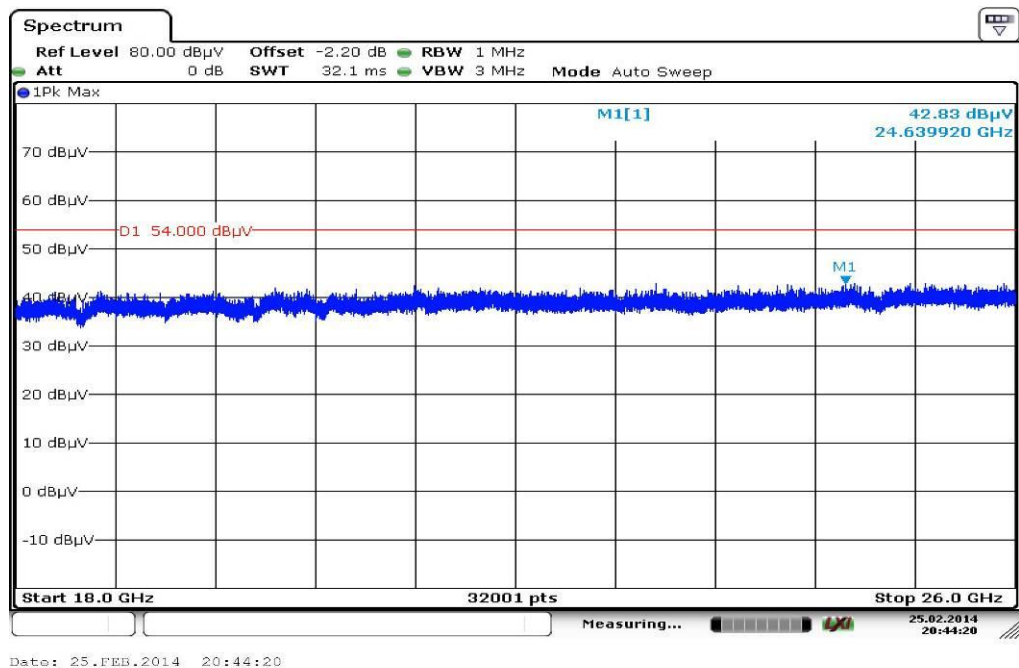
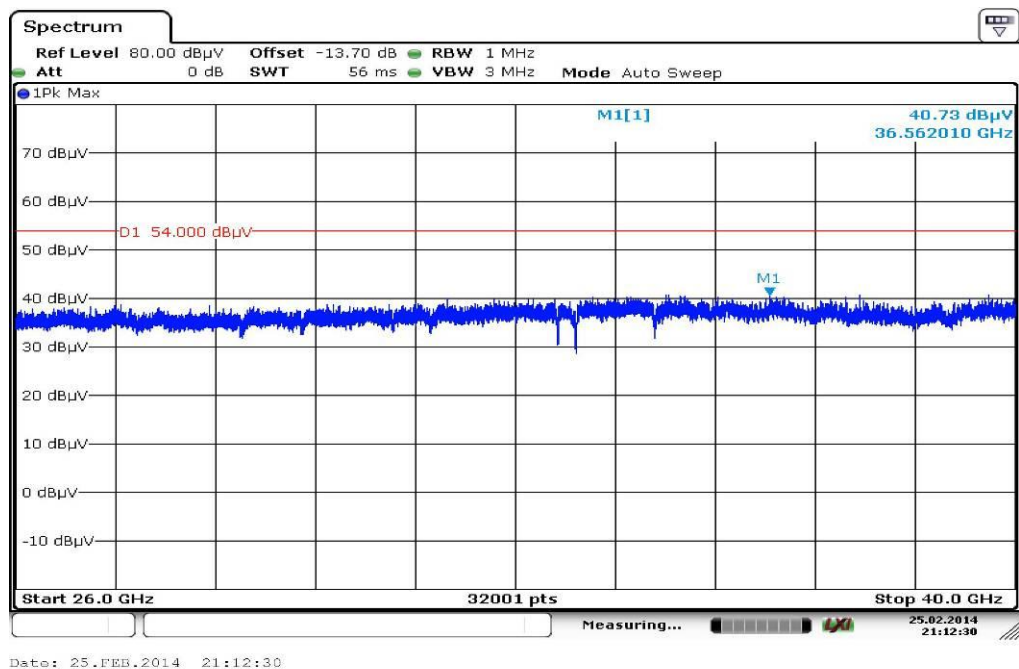
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



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
31.649250	14.7	1000.0	120.000	170.0	V	190.0	12.7	15.3	30.0	
42.385350	9.4	1000.0	120.000	98.0	H	190.0	13.4	20.6	30.0	
50.629200	10.3	1000.0	120.000	170.0	H	260.0	13.3	19.7	30.0	
714.574350	20.1	1000.0	120.000	163.0	V	178.0	22.8	15.9	36.0	
827.183550	21.4	1000.0	120.000	170.0	V	261.0	24.2	14.6	36.0	
866.324550	22.1	1000.0	120.000	170.0	V	190.0	24.8	13.9	36.0	

Plot 32: 1 GHz to 12.75 GHz, channel 42, vertical & horizontal polarization**Plot 33:** 12 GHz to 18 GHz, channel 42, vertical & horizontal polarization

Plot 34: 18 GHz to 26 GHz, channel 42, vertical & horizontal polarization**Plot 35:** 26 GHz to 40 GHz, channel 42, vertical & horizontal polarization

Plot 36: 30 MHz to 1 GHz, channel 58, vertical & horizontal polarization

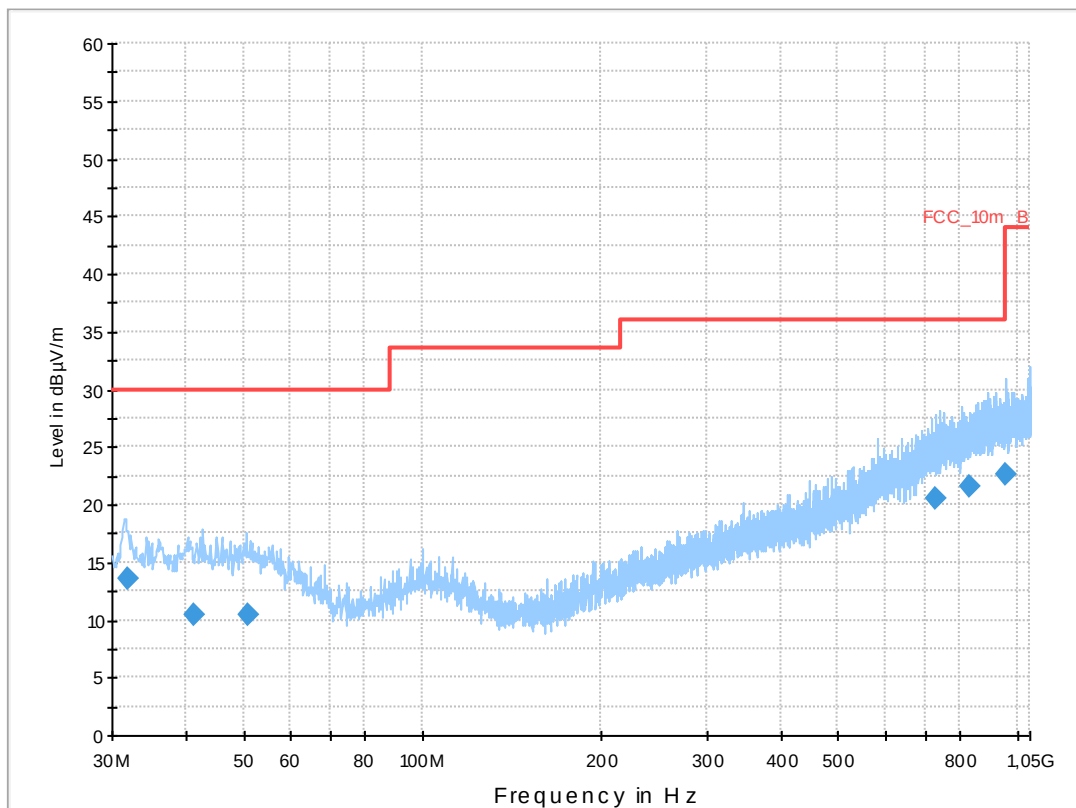
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX ac-mode (HT80) Ch. 58
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

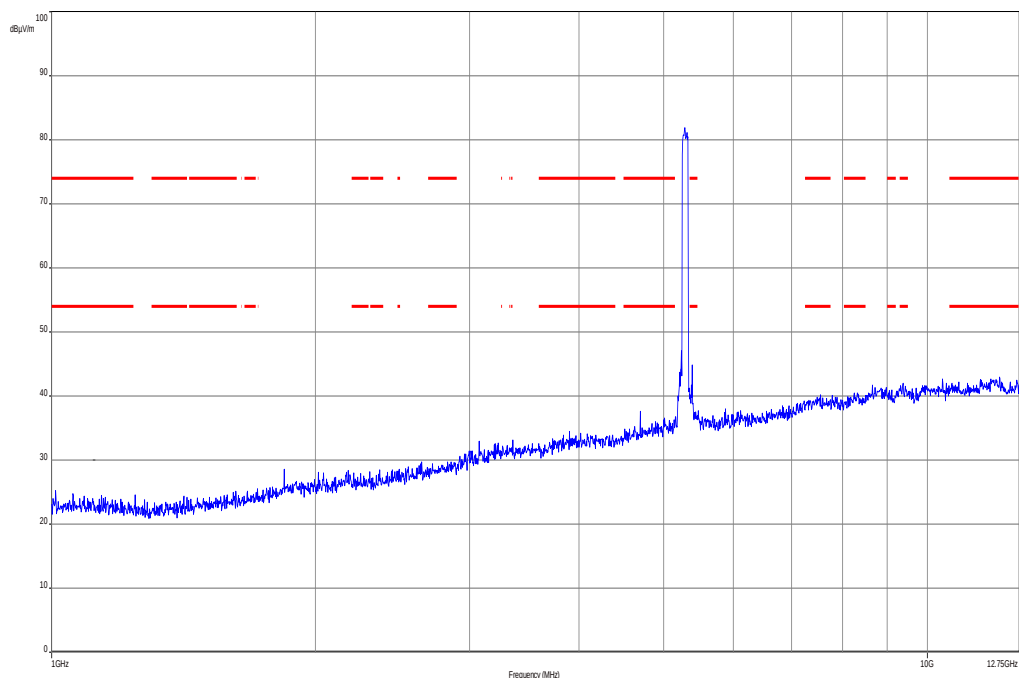
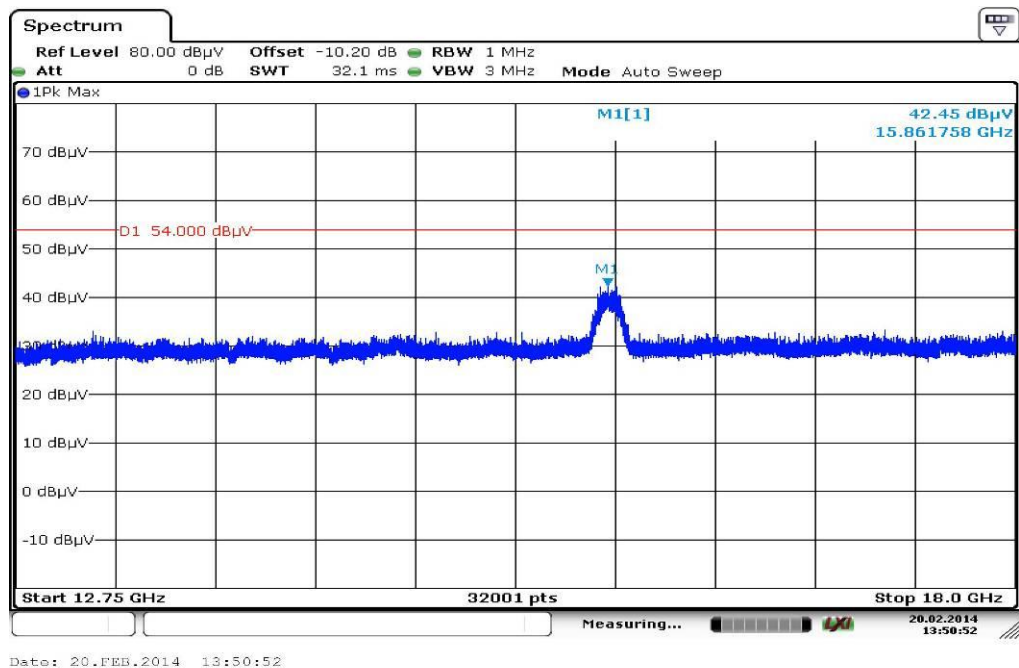
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dB μ V/m

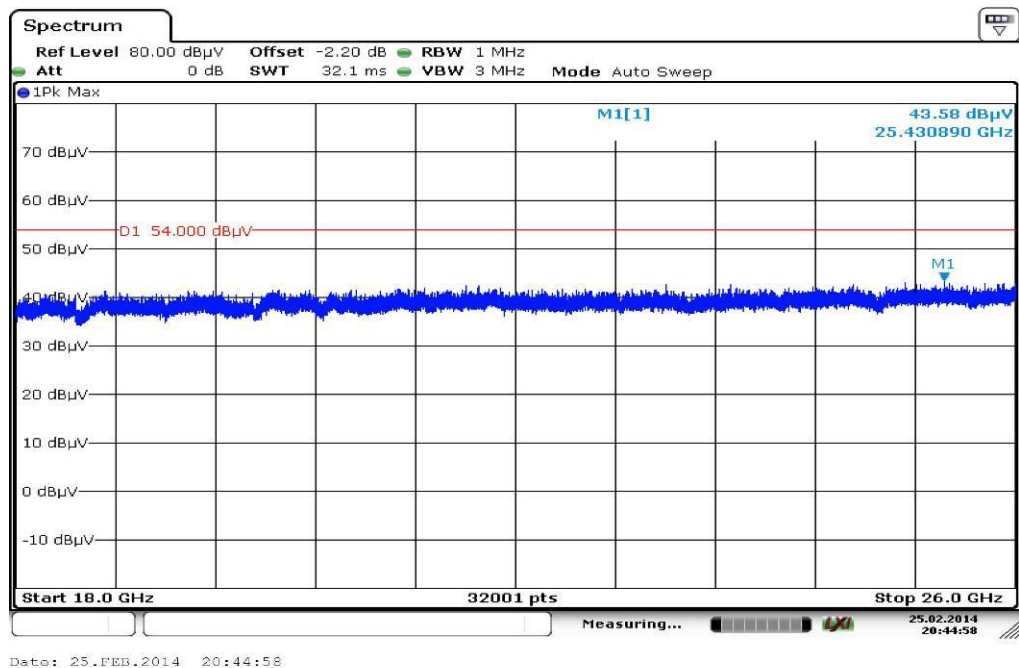
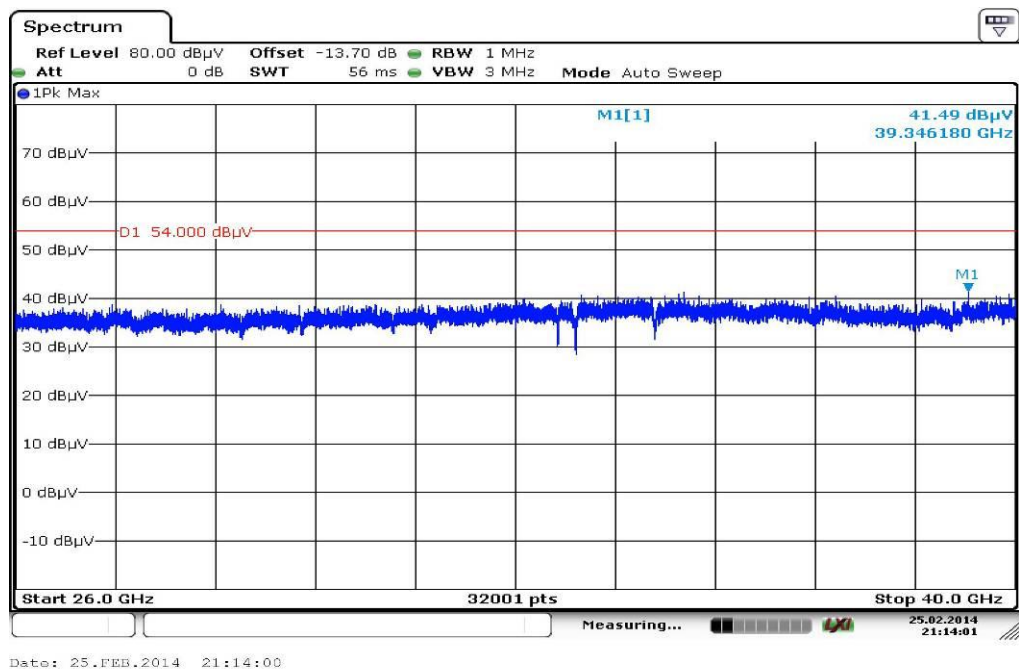
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)	Comment
31.826550	13.5	1000.0	120.000	170.0	V	10.0	12.7	16.5	30.0	
41.269500	10.4	1000.0	120.000	111.0	V	100.0	13.4	19.6	30.0	
50.716950	10.4	1000.0	120.000	170.0	V	89.0	13.3	19.6	30.0	
730.826550	20.5	1000.0	120.000	112.0	V	180.0	23.2	15.5	36.0	
832.357350	21.5	1000.0	120.000	143.0	V	171.0	24.3	14.5	36.0	
954.850800	22.6	1000.0	120.000	161.0	V	190.0	25.4	13.4	36.0	

Plot 37: 1 GHz to 12.75 GHz, channel 58, vertical & horizontal polarization**Plot 38:** 12 GHz to 18 GHz, channel 58, vertical & horizontal polarization

Plot 39: 18 GHz to 26 GHz, channel 58, vertical & horizontal polarization**Plot 40:** 26 GHz to 40 GHz, channel 58, vertical & horizontal polarization

Plot 41: 30 MHz to 1 GHz, channel 106, vertical & horizontal polarization

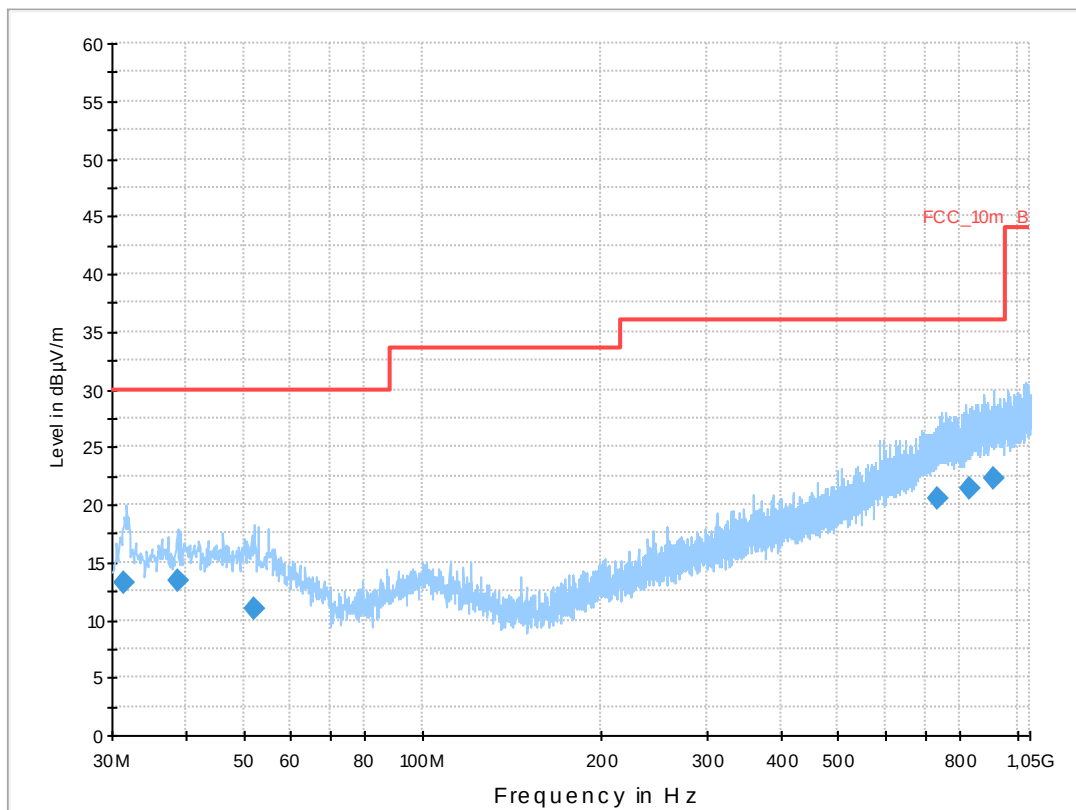
Common Information

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN TX ac-mode (HT80) Ch. 106
 Operator Name: Hennemann
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

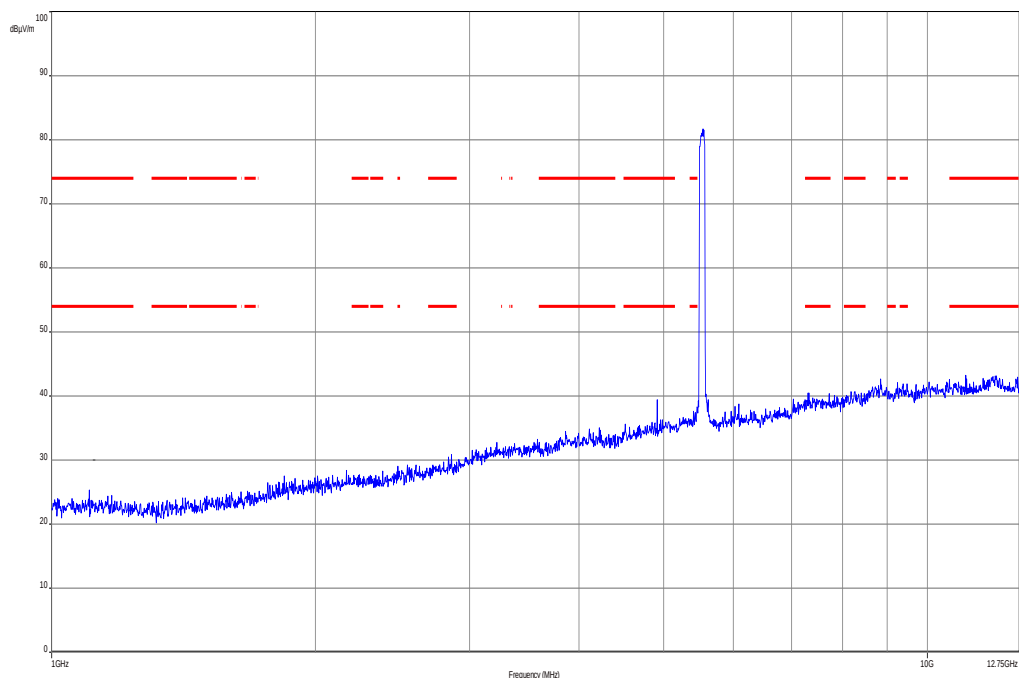
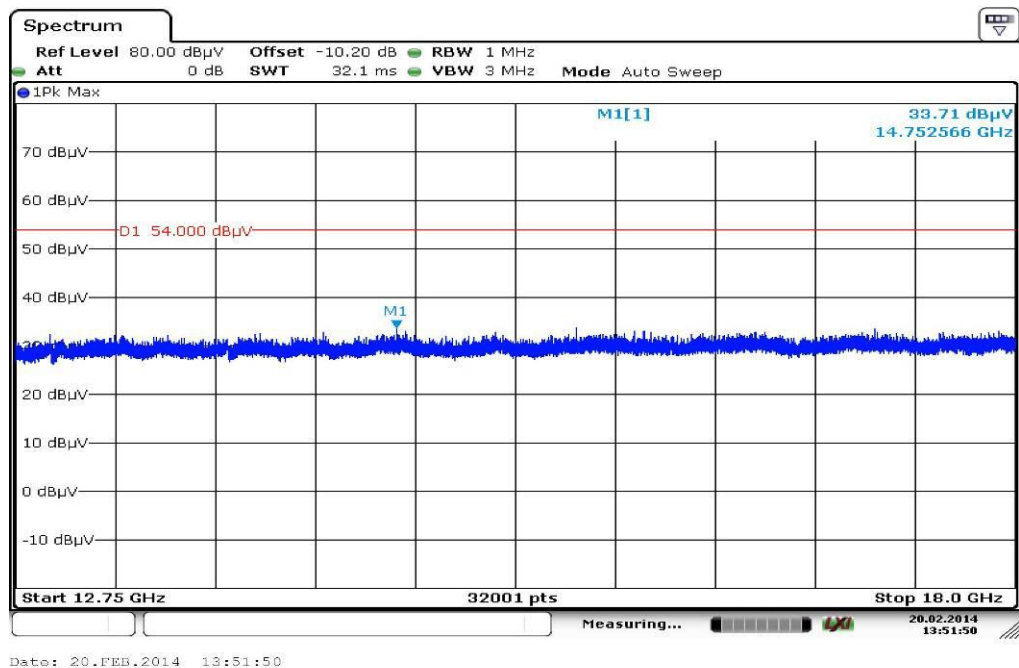
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dB μ V/m

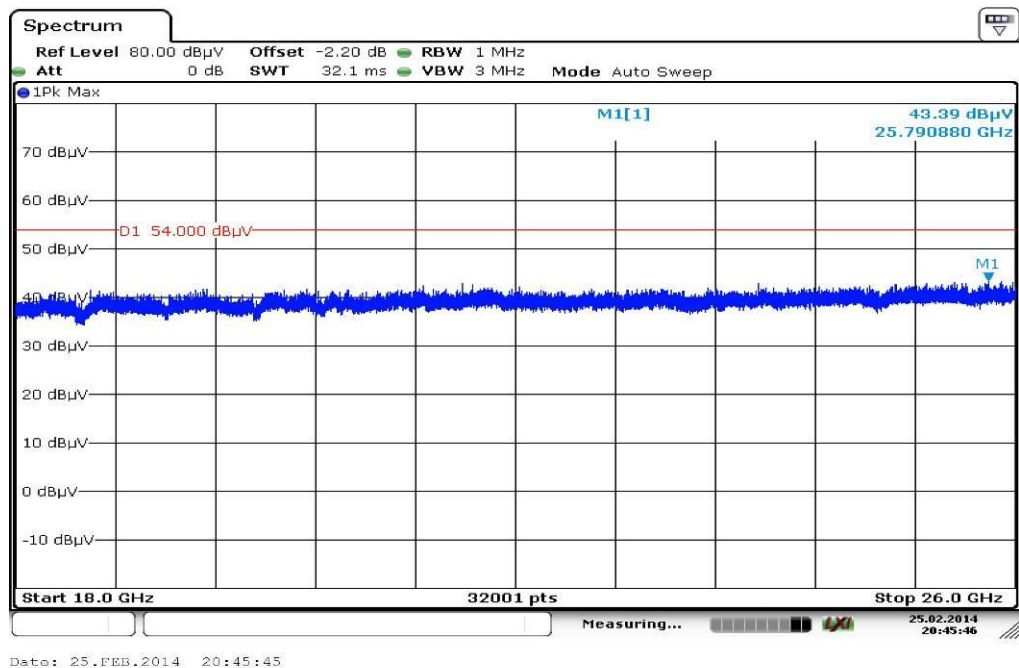
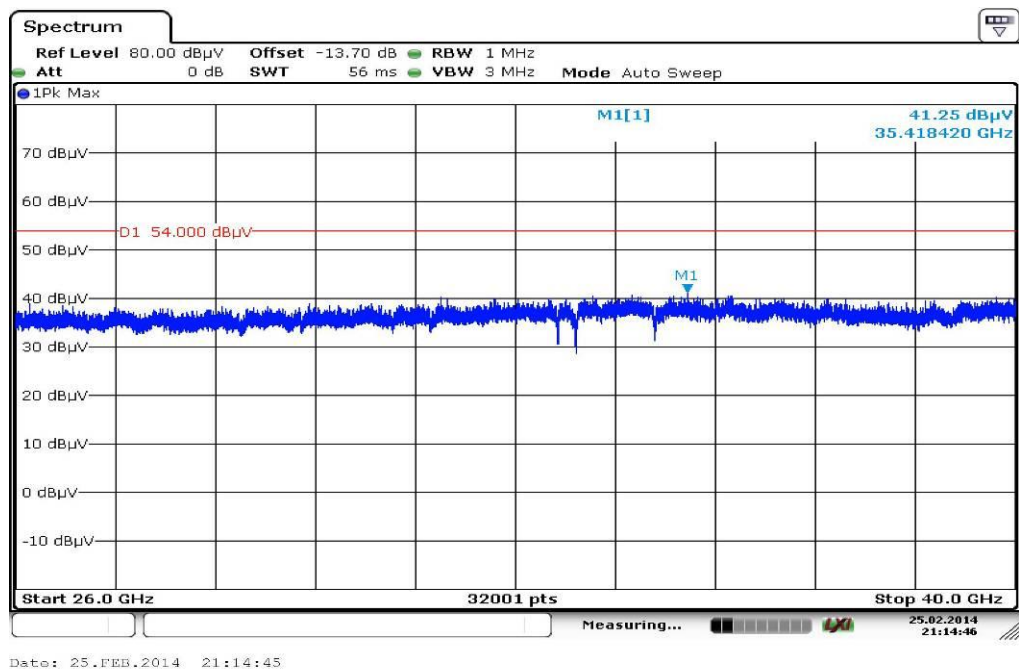
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)	Comment
31.333950	13.2	1000.0	120.000	170.0	V	88.0	12.6	16.8	30.0	
38.721900	13.4	1000.0	120.000	98.0	V	92.0	13.3	16.6	30.0	
52.054050	11.0	1000.0	120.000	104.0	V	268.0	13.2	19.0	30.0	
734.700750	20.6	1000.0	120.000	132.0	H	-2.0	23.3	15.4	36.0	
829.097400	21.4	1000.0	120.000	170.0	V	178.0	24.2	14.6	36.0	
910.329450	22.3	1000.0	120.000	98.0	V	92.0	25.2	13.7	36.0	

Plot 42: 1 GHz to 12.75 GHz, channel 106, vertical & horizontal polarization**Plot 43:** 12 GHz to 18 GHz, channel 106, vertical & horizontal polarization

Plot 44: 18 GHz to 26 GHz, channel 106, vertical & horizontal polarization**Plot 45:** 26 GHz to 40 GHz, channel 106, vertical & horizontal polarization

10.3 RX spurious emissions radiated

Description:

Measurement of the radiated spurious emissions in idle/receive mode.

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:

RX Spurious Emissions Radiated		
Frequency (MHz)	Field Strength (dB μ V/m)	Measurement distance
30 - 88	30.0	10
88 - 216	33.5	10
216 - 960	36.0	10
Above 960	54.0	3

Results:

RX Spurious Emissions Radiated [dB μ V/m]		
F [MHz]	Detector	Level [dB μ V/m]
For emissions below 1 GHz, please take a look at the table below the 1 GHz plot.		
All detected peak emissions above 1 GHz are below the average limit. See 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)

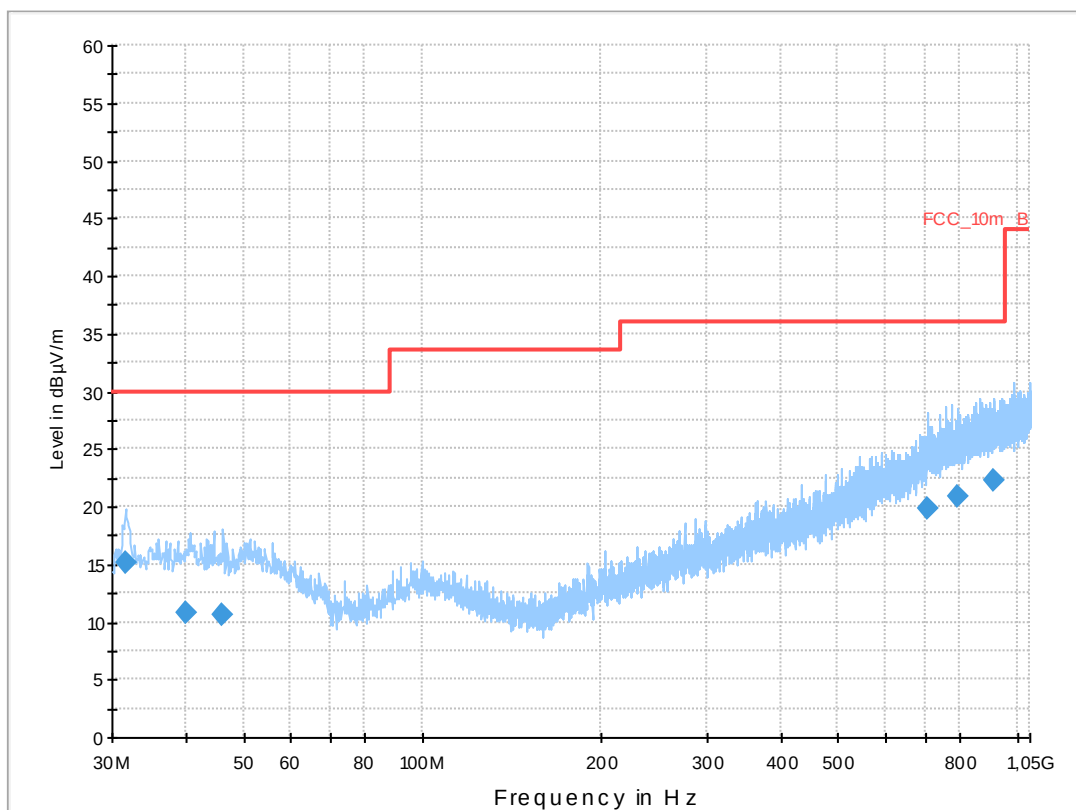
Plots: RX / Idle – mode**Plot 1:** 30 MHz to 1 GHz, vertical & horizontal polarization**Common Information**

Serial Number: CB5126DAHf
 Test Description: FCC part 15 class B
 Operating Conditions: WLAN RX
 Operator Name: Hennemann
 Comment: battery powered

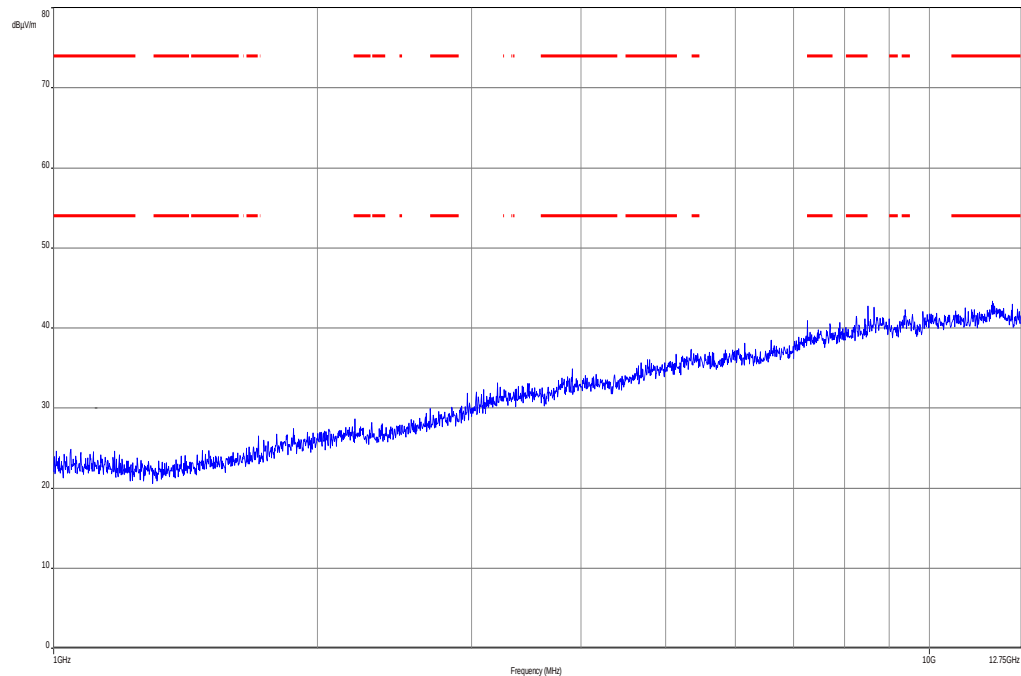
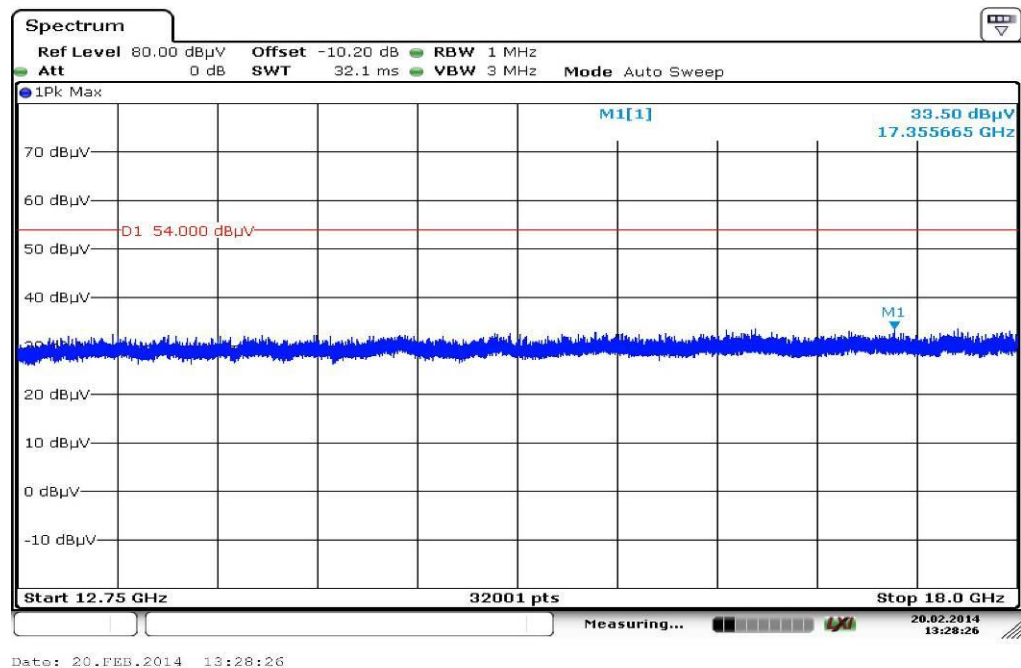
Scan Setup: STAN_Fin [EMI radiated]

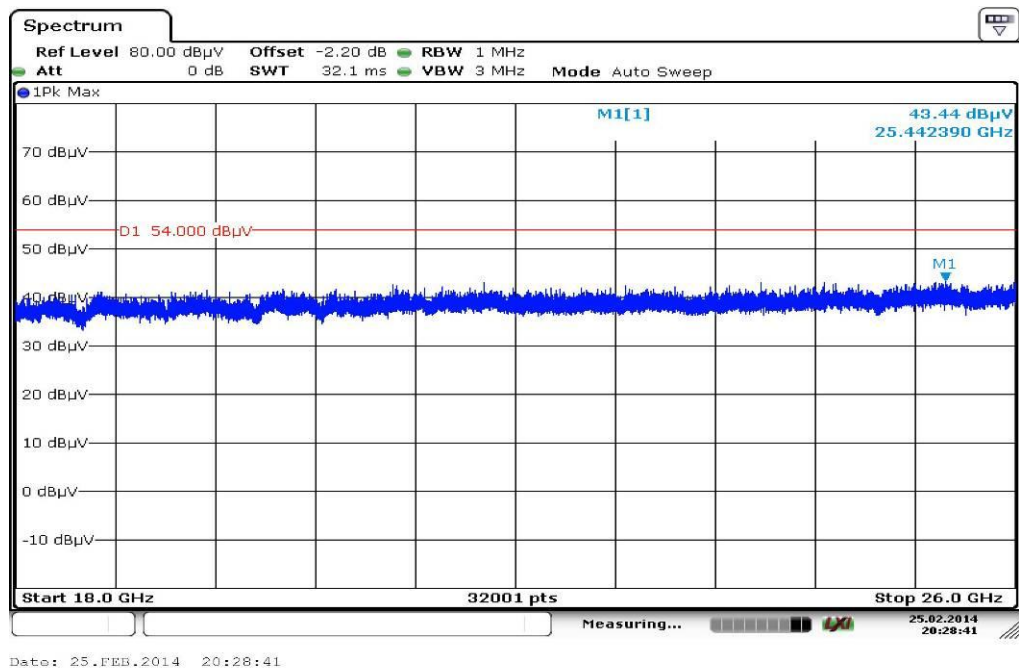
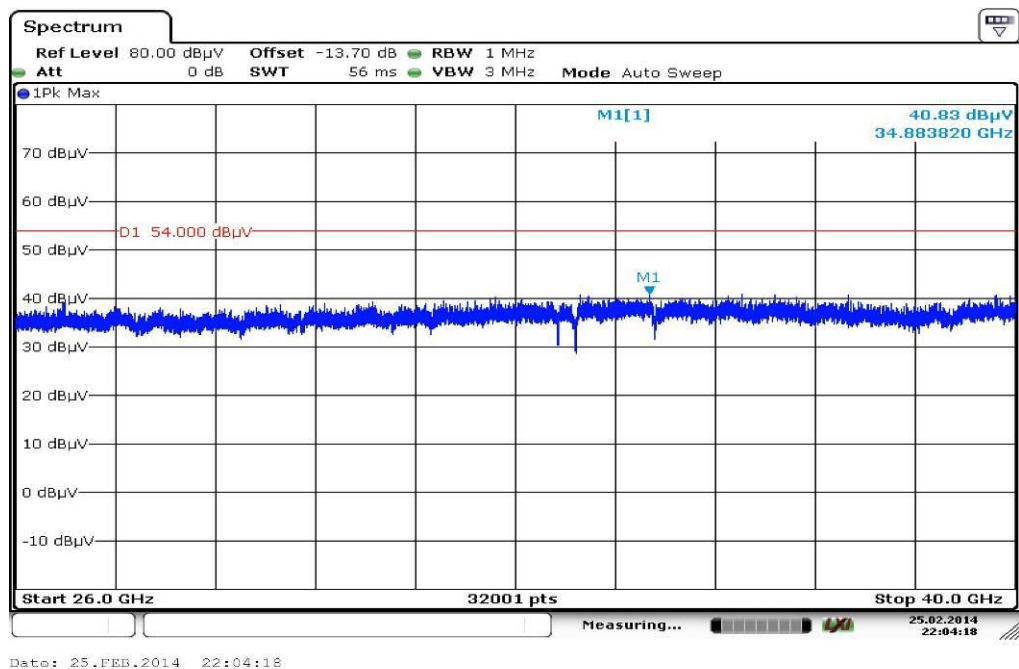
Hardware Setup: Electric Field (NOS)
 Receiver: [ESCI 3]
 Level Unit: dBμV/m

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
31.703100	15.2	1000.0	120.000	98.0	V	100.0	12.7	14.8	30.0	
40.063950	10.7	1000.0	120.000	170.0	V	178.0	13.4	19.3	30.0	
46.012500	10.7	1000.0	120.000	98.0	V	-10.0	13.3	19.3	30.0	
704.545950	19.9	1000.0	120.000	170.0	H	100.0	22.6	16.1	36.0	
794.278350	20.9	1000.0	120.000	170.0	V	100.0	23.8	15.1	36.0	
910.534050	22.3	1000.0	120.000	154.0	V	10.0	25.2	13.7	36.0	

Plot 2: 1 GHz to 12.75 GHz, vertical & horizontal polarization**Plot 3:** 12 GHz to 18 GHz, vertical & horizontal polarization

Plot 4: 18 GHz to 26 GHz, vertical & horizontal polarization**Plot 5:** 26 GHz to 40 GHz, vertical & horizontal polarization

10.4 Spurious emissions radiated < 30 MHz

Description:

Measurement of the radiated spurious emissions in transmit mode and receive mode below 30 MHz. The EUT is set first to middle channel. This measurement is representative for all channels and modes. If peaks are found the lowest channel and the highest channel will be measured too. Then the EUT is set to receive or idle mode. The limits are recalculated to a measurement distance of 3 m with 40 dB/decade according CFR Part 2.

Measurement:

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

Limits:

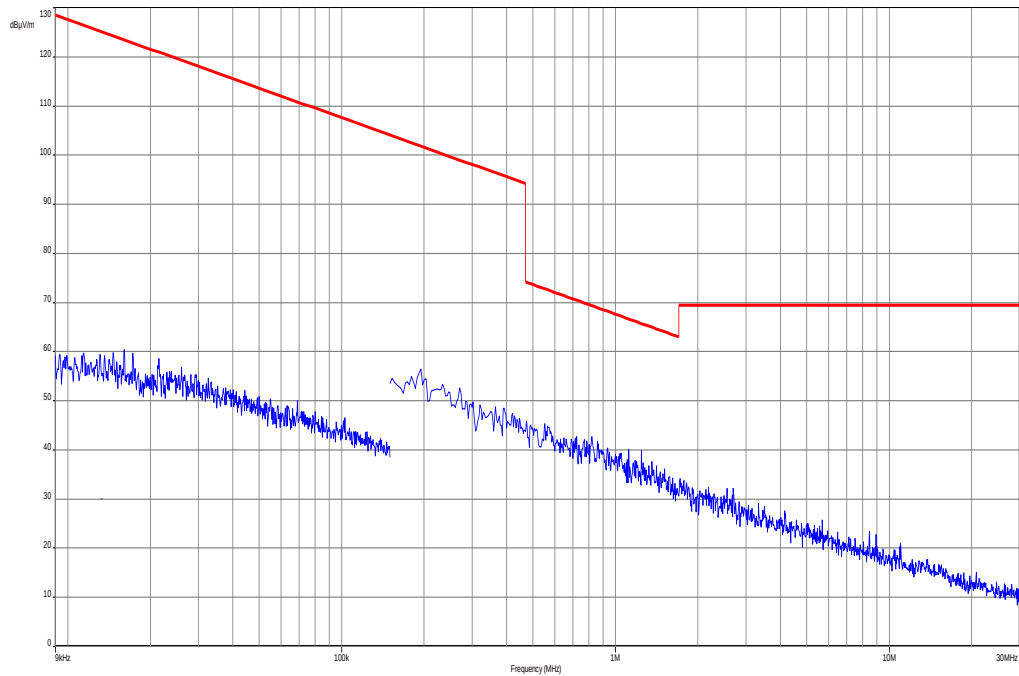
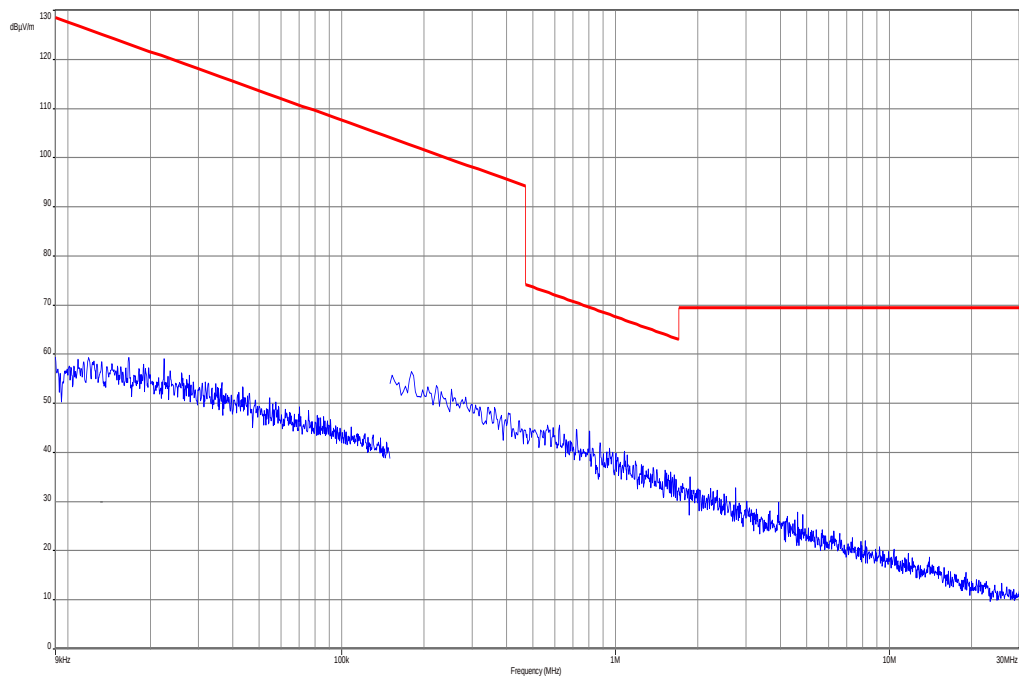
Spurious Emissions Radiated < 30 MHz		
Frequency (MHz)	Field Strength (dB μ V/m)	Measurement distance
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

Results:

Spurious Emissions Radiated < 30 MHz [dB μ V/m]		
F [MHz]	Detector	Level [dB μ V/m]
No peaks detected		
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:**Plot 1:** 9 kHz to 30 MHz, TX mode**Plot 2:** 9 kHz to 30 MHz, RX mode

10.5 Spurious emissions conducted < 30 MHz

Description:

Measurement of the conducted spurious emissions in transmit mode below 30 MHz. The EUT is set to middle channel. If peaks are found the lowest channel and the highest channel will be measured too. Both power lines, phase and neutral line, are measured. Found peaks are remeasured with average and quasi peak detection to show compliance to the limits.

Measurement:

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

Limits:

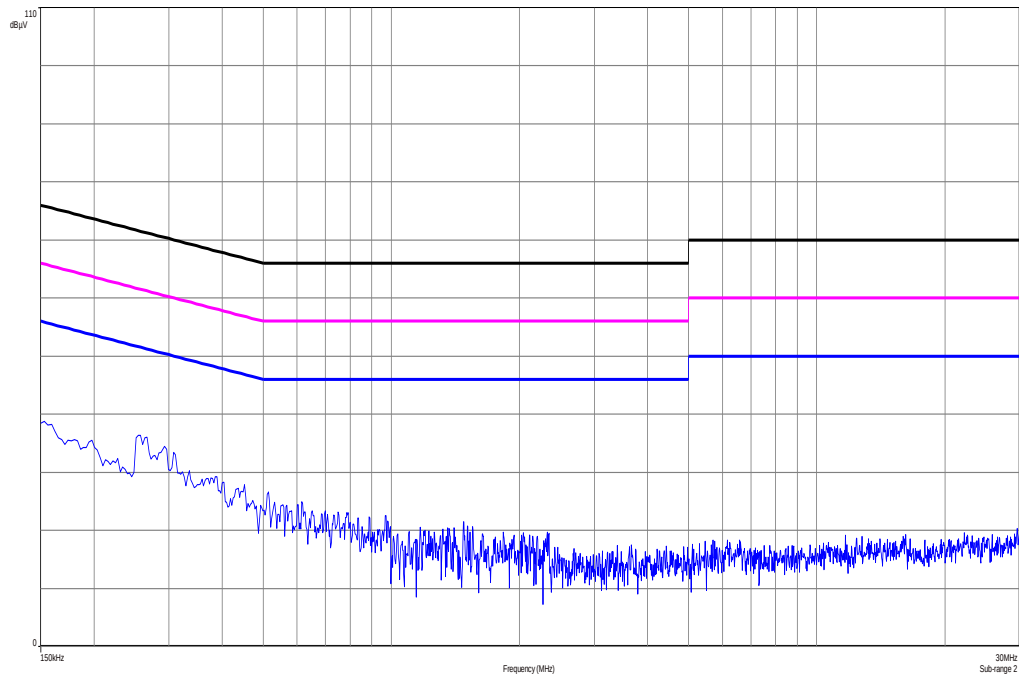
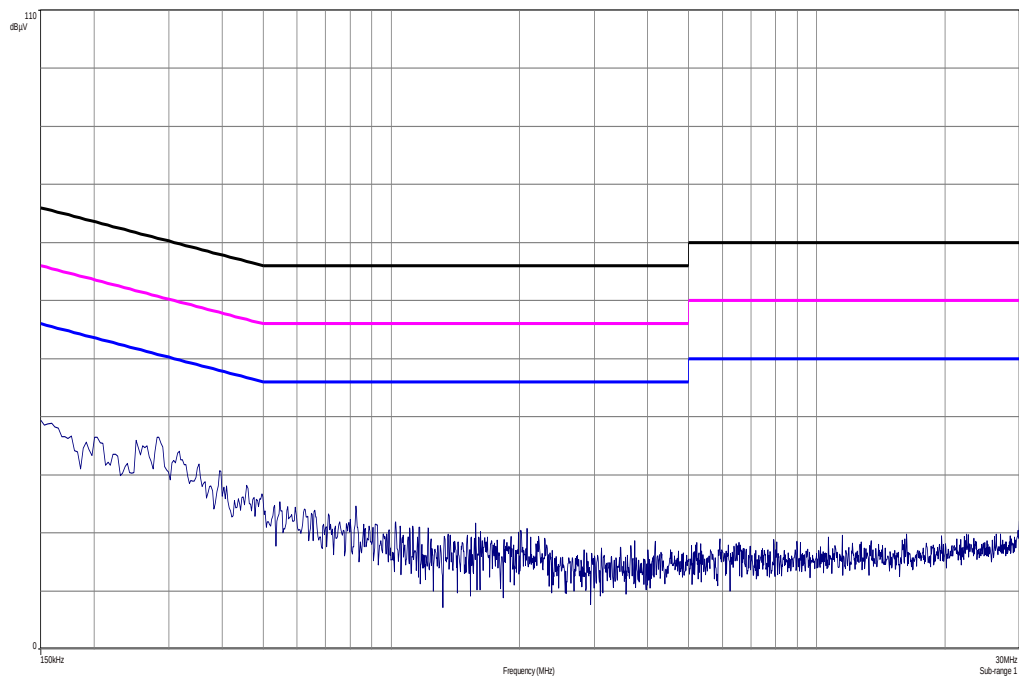
Spurious Emissions Conducted < 30 MHz		
Frequency (MHz)	Quasi-Peak (dB μ V/m)	Average (dB μ V/m)
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30.0	60	50

*Decreases with the logarithm of the frequency

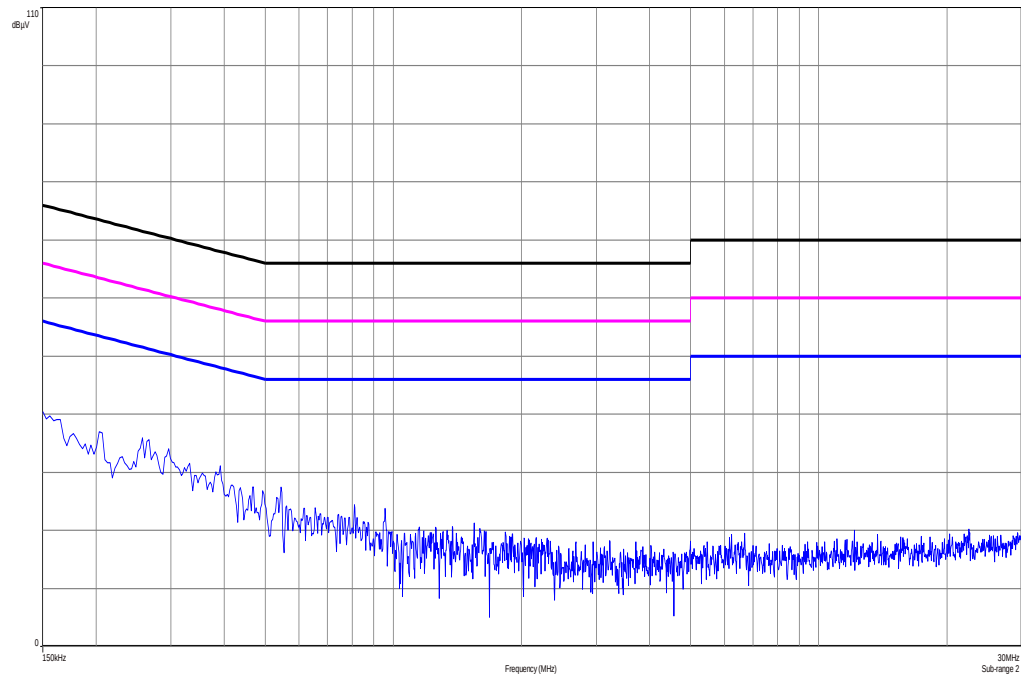
Results:

Spurious Emissions Conducted < 30 MHz [dB μ V/m]		
F [MHz]	Detector	Level [dB μ V/m]
No peaks detected.		
Measurement uncertainty	± 3 dB	

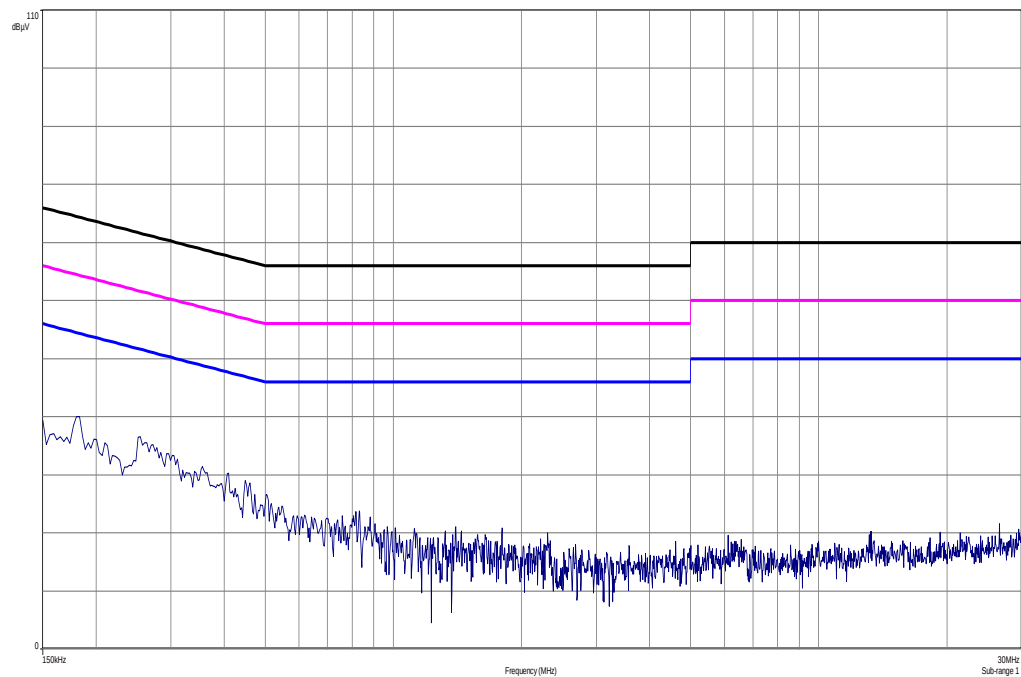
Result: Passed

Plots:**Plot 1:** 150 kHz to 30 MHz / phase Line, TX mode**Plot 2:** 150 kHz to 30 MHz / neutral Line, TX mode

Plot 3: 150 kHz to 30 MHz / phase Line, RX mode



Plot 4: 150 kHz to 30 MHz / neutral Line, RX mode



11 Test equipment and ancillaries used for tests

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

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

No.	Lab / Item	Equipment	Type	Manufact.	Serial No.	INV. No Cetecom	Kind of Calibration	Last Calibration	Next Calibration
1	45	Switch-Unit	3488A	HP Meßtechnik	2719A14505	300000368	g		
2	50	DC power supply, 60Vdc, 50A, 1200 W	6032A	HP Meßtechnik	2920A04466	300000580	ne		
3	n. a.	EMI Test Receiver	ESCI 3	R&S	100083	300003312	k	27.01.2014	27.01.2015
4	n. a.	Antenna Tower	Model 2175	ETS-LINDGREN	64762	300003745	izw		
5	n. a.	Positioning Controller	Model 2090	ETS-LINDGREN	64672	300003746	izw		
6	n. a.	Turntable Interface-Box	Model 105637	ETS-LINDGREN	44583	300003747	izw		
7	n. a.	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck	295	300003787	k	12.04.2012	12.04.2014
8	n. a.	Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3088	300001032	vIKI!	08.05.2013	08.05.2015
9	n. a.	Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996	ev		
10	n. a.	Switch / Control Unit	3488A	HP Meßtechnik	*	300000199	ne		
11	n. a.	Switch / Control Unit	3488A	HP Meßtechnik	2719A15013	300001156	ne		
12	9	Isolating Transformer	MPL IEC625 Bus Regeltrennt ravo	Erfi	91350	300001155	ne		
13	n. a.	Three-Way Power Splitter, 50 Ohm	11850C	HP Meßtechnik		300000997	ne		
14	90	Active Loop Antenna 10 kHz to 30 MHz	6502	Kontron Psychotech	8905-2342	300000256	k	13.06.2013	13.06.2015
15	n. a.	Amplifier	js42-00502650-28-5a	Parzich GMBH	928979	300003143	ne		
16	n. a.	MXE EMI Receiver 20 Hz bis 26,5 GHz	N9038A	Agilent Technologies	MY51210197	300004405	k	21.02.2013	21.02.2015
17	11b	Microwave System Amplifier, 0.5-26.5 GHz	83017A	HP Meßtechnik	00419	300002268	ev		
18	A026	Std. Gain Horn Antenna 12.4 to 18.0 GHz	639	Narda	8402	300000787	k	22.07.2013	22.07.2015
19	A029	Std. Gain Horn Antenna 18.0 to 26.5 GHz	638	Narda	8205	300002442	k	19.07.2013	19.07.2015
20	A031	Std. Gain Horn Antenna 26.5 to 40.0 GHz	637	Narda		300000510	k	19.07.2013	19.07.2015
21	n. a.	Broadband Low Noise Amplifier 18-50 GHz	CBL18503 070-XX	CERNEX	19338	300004273	ne		
22	n. a.	Signal Analyzer 40 GHz	FSV40	R&S	101042	300004517	k	21.01.2014	21.01.2015

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
vlk!	Attention: extended calibration interval		
NK!	Attention: not calibrated	*)	next calibration ordered / currently in progress

12 Observations

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

Annex A Document history

Version	Applied changes	Date of release
	Initial release	2014-02-26
A	Editorial change	2014-03-17

Annex B Further information**Glossary**

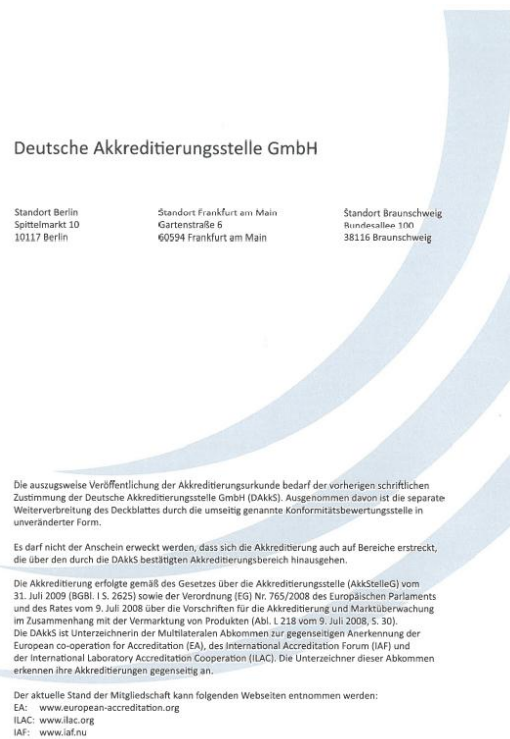
AVG	-	Average
DUT	-	Device under test
EMC	-	Electromagnetic Compatibility
EN	-	European Standard
EUT	-	Equipment under test
ETSI	-	European Telecommunications Standard Institute
FCC	-	Federal Communication Commission
FCC ID	-	Company Identifier at FCC
HW	-	Hardware
IC	-	Industry Canada
Inv. No.	-	Inventory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

Annex C Accreditation Certificate

Front side of certificate



Back side of certificate



Note:

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

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