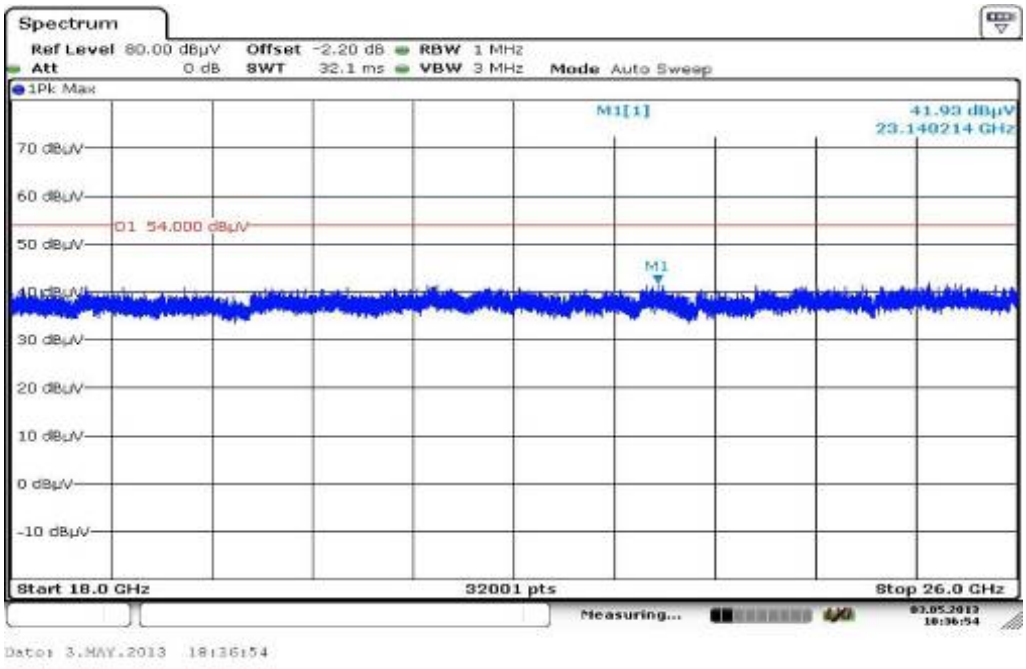
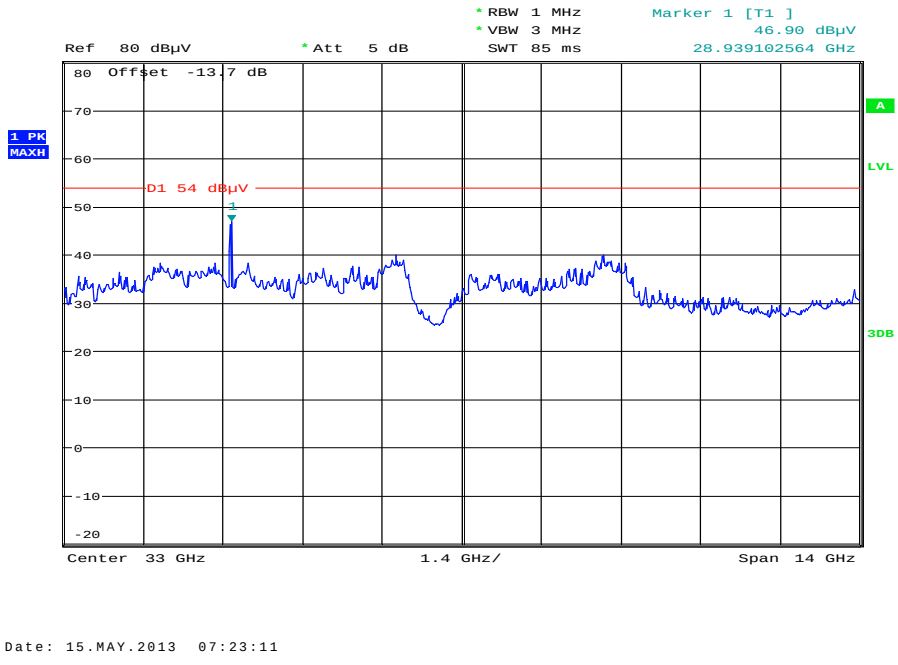
Plot 9: Middle channel, 18 GHz to 26 GHz, vertical & horizontal polarization



Plot 10: Middle channel, 26 GHz to 40 GHz, vertical & horizontal polarization



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

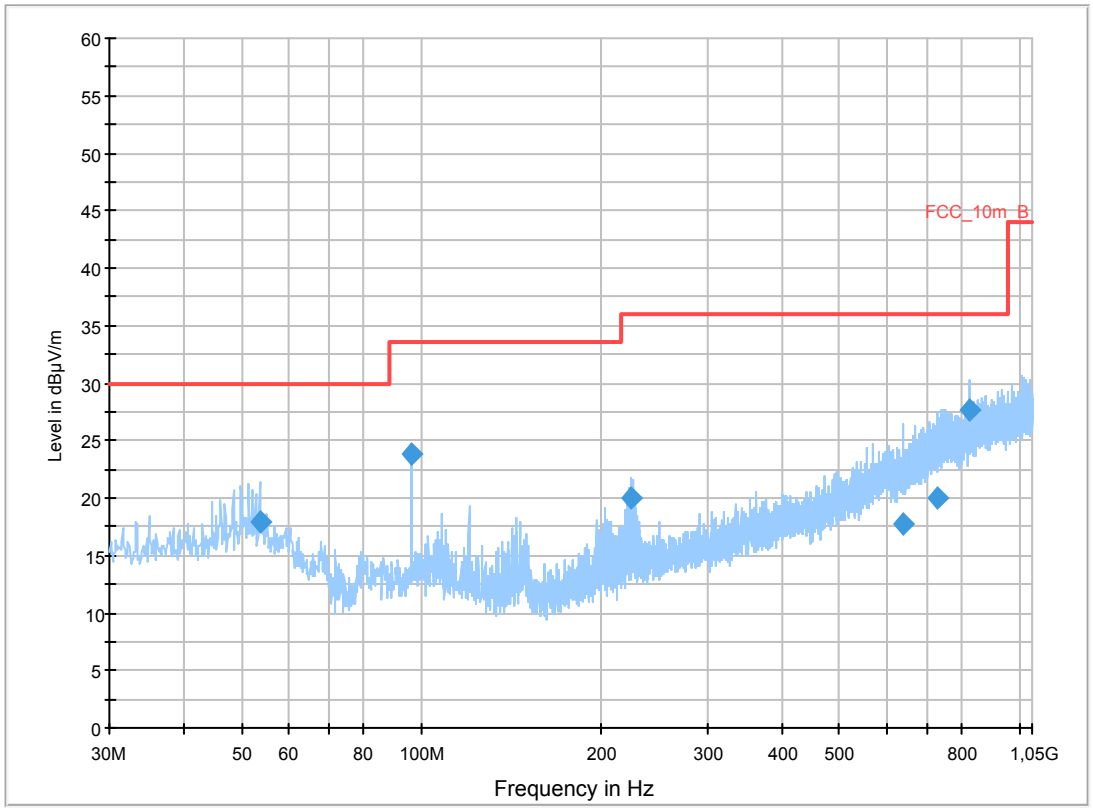
Common Information

EUT:	WLANBV2-A + antenna 453564271931
Serial Number:	eval
Test Description:	FCC part 15 C class B @ 10 m
Operating Conditions:	wlan tx n-mode HT20 ch165
Operator Name:	Wolsdorfer
Comment:	DC 12V

Scan Setup: STAN_Fin [EMI radiated]

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

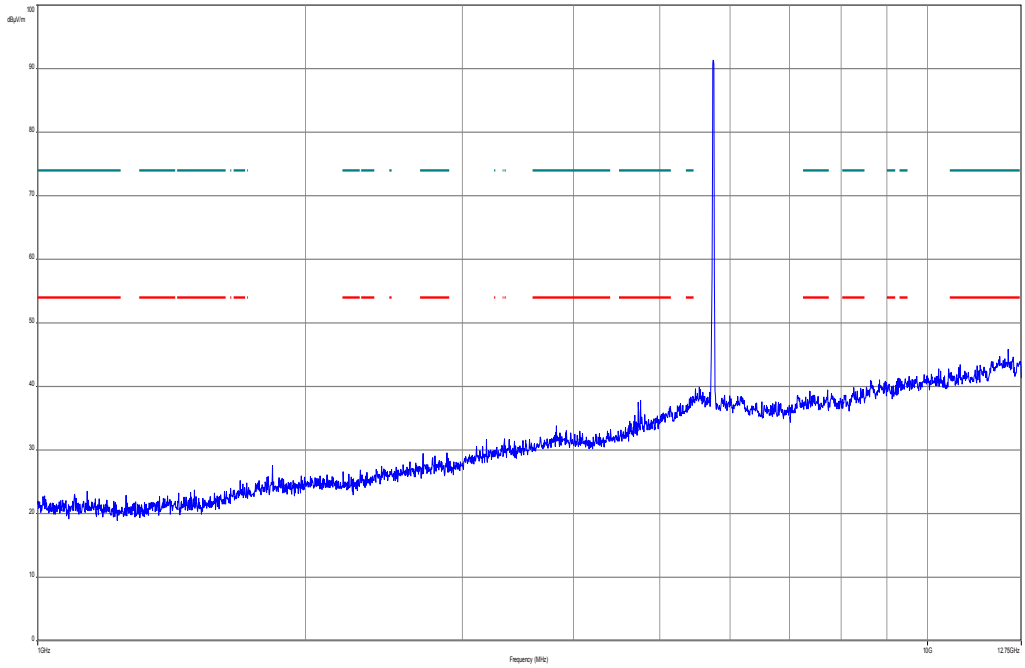
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



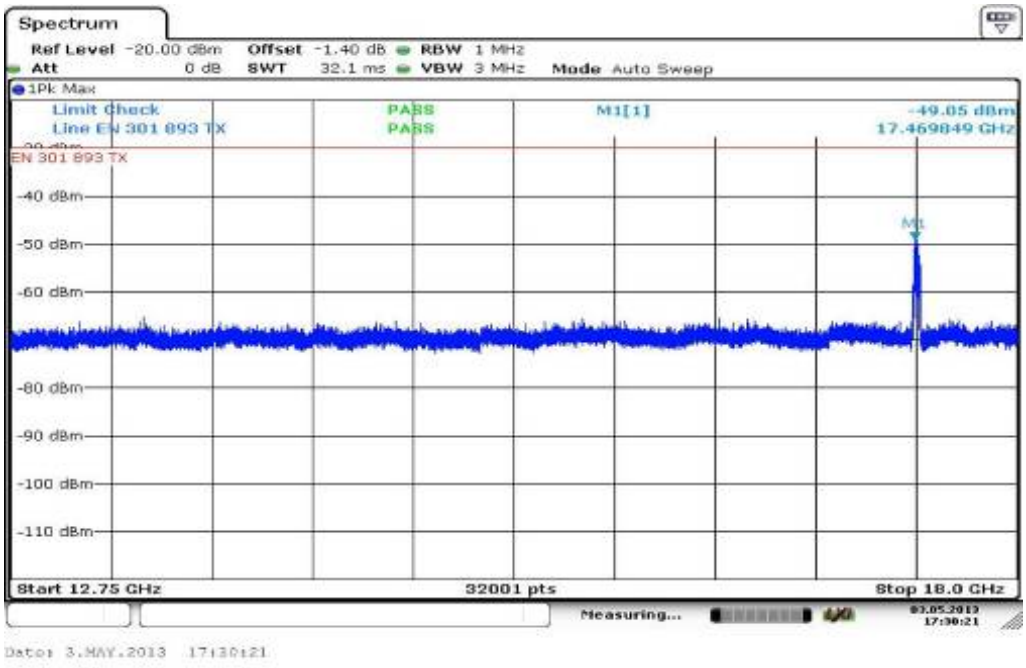
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
53.635500	17.9	1000.0	120.000	111.0	V	261.0	13.0	12.1	30.0	
96.041250	23.9	1000.0	120.000	120.0	V	90.0	11.4	9.6	33.5	
224.368500	19.9	1000.0	120.000	170.0	V	-5.0	12.5	16.1	36.0	
638.182200	17.7	1000.0	120.000	111.0	H	190.0	21.0	18.3	36.0	
728.233050	19.9	1000.0	120.000	132.0	H	280.0	23.2	16.1	36.0	
824.182050	27.7	1000.0	120.000	120.0	V	190.0	24.2	8.3	36.0	

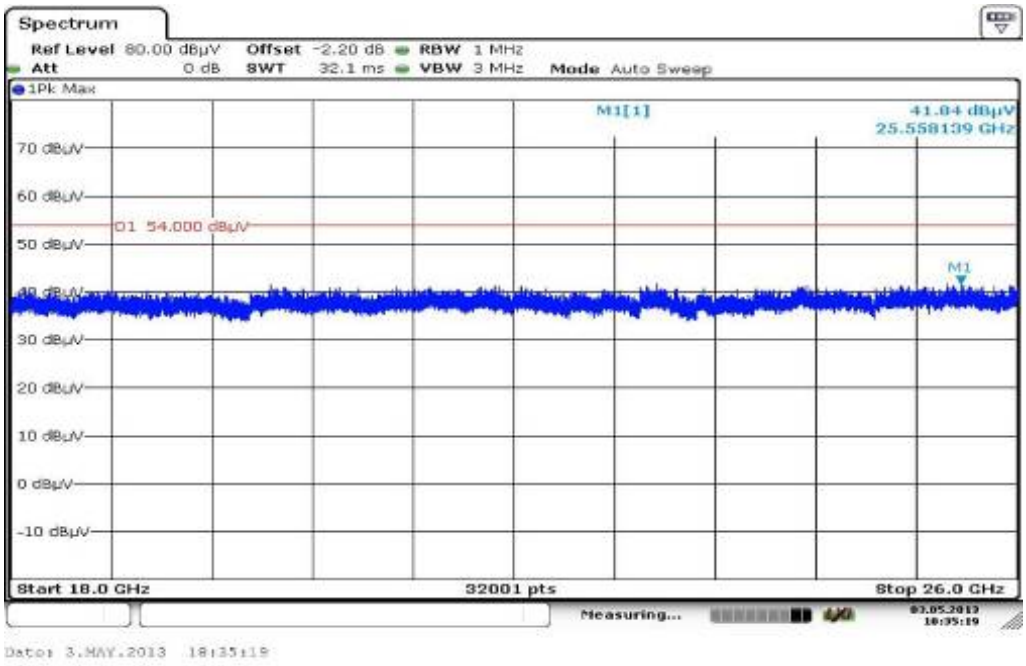
Plot 12: Highest channel, 1 GHz to 12.75 GHz, vertical & horizontal polarization



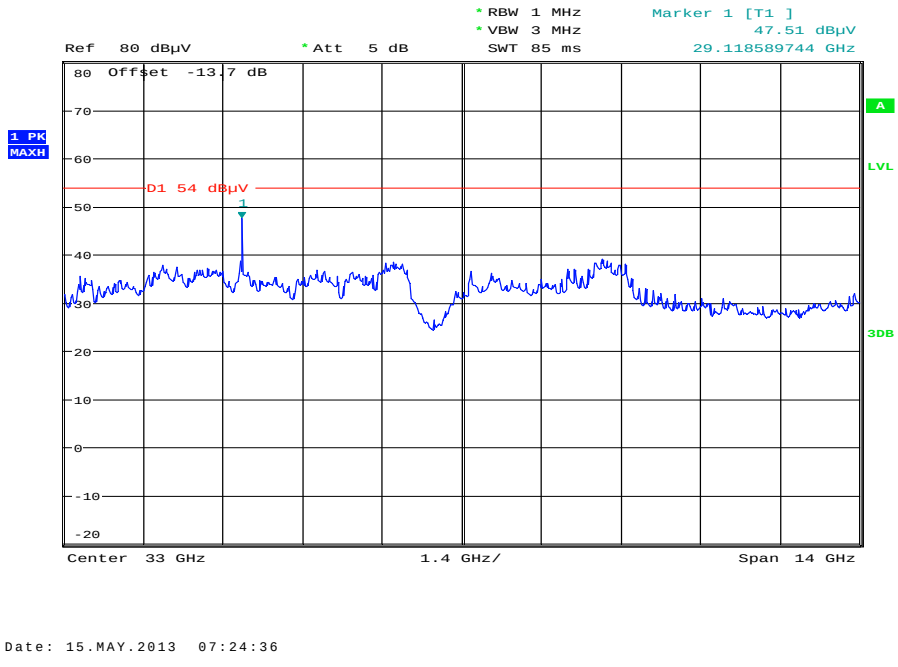
Plot 13: Highest channel, 12.75 GHz to 18 GHz, vertical & horizontal polarization



Plot 14: Highest channel, 18 GHz to 26 GHz, vertical & horizontal polarization



Plot 15: Highest channel, 26 GHz to 40 GHz, vertical & horizontal polarization



Plots: OFDM / n – mode HT40

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

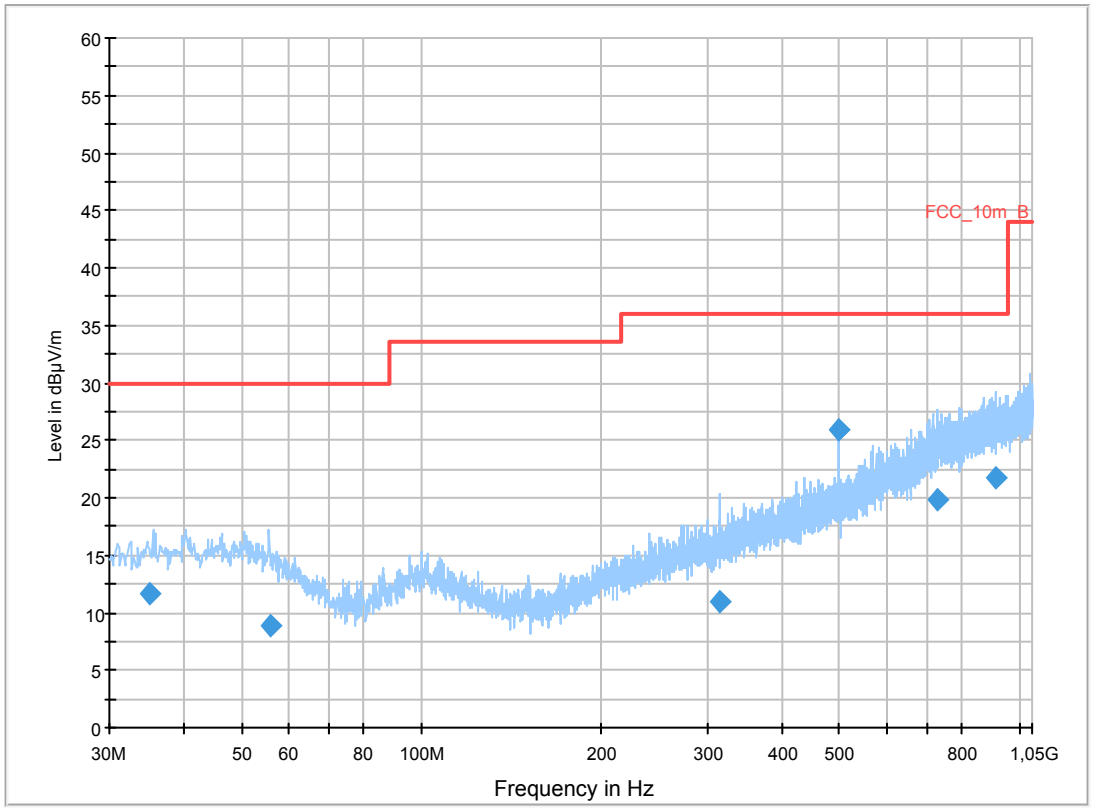
Common Information

EUT:	WLANBV2-A + antenna 453564271931
Serial Number:	eval
Test Description:	FCC part 15 C class B @ 10 m
Operating Conditions:	wlan tx n-mode HT40 @5745MHz
Operator Name:	Wolsdorfer
Comment:	DC 5V

Scan Setup: STAN_Fin [EMI radiated]

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

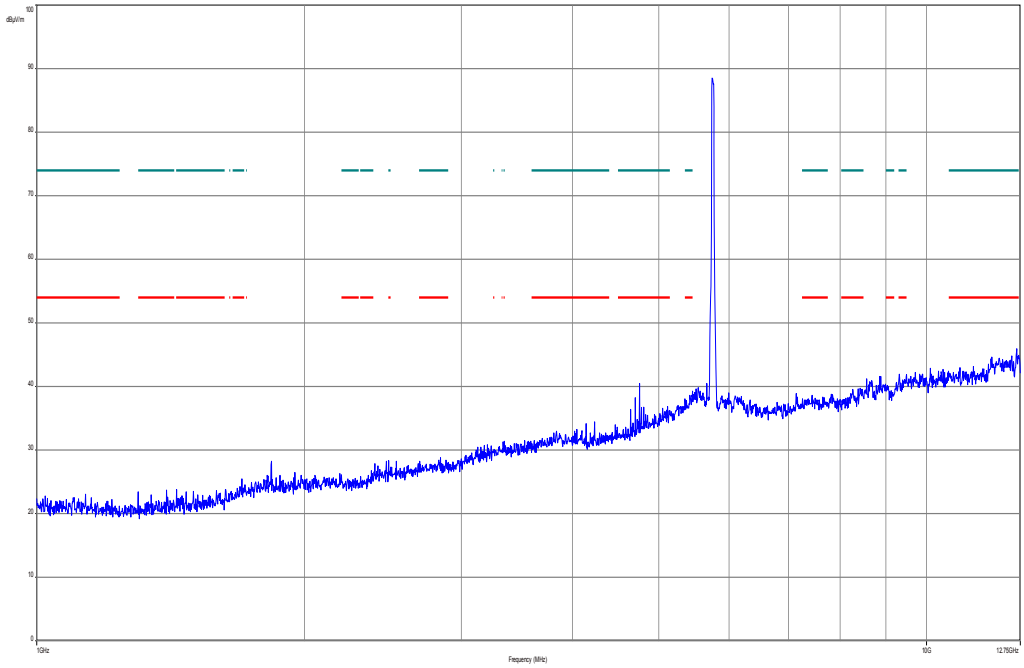
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



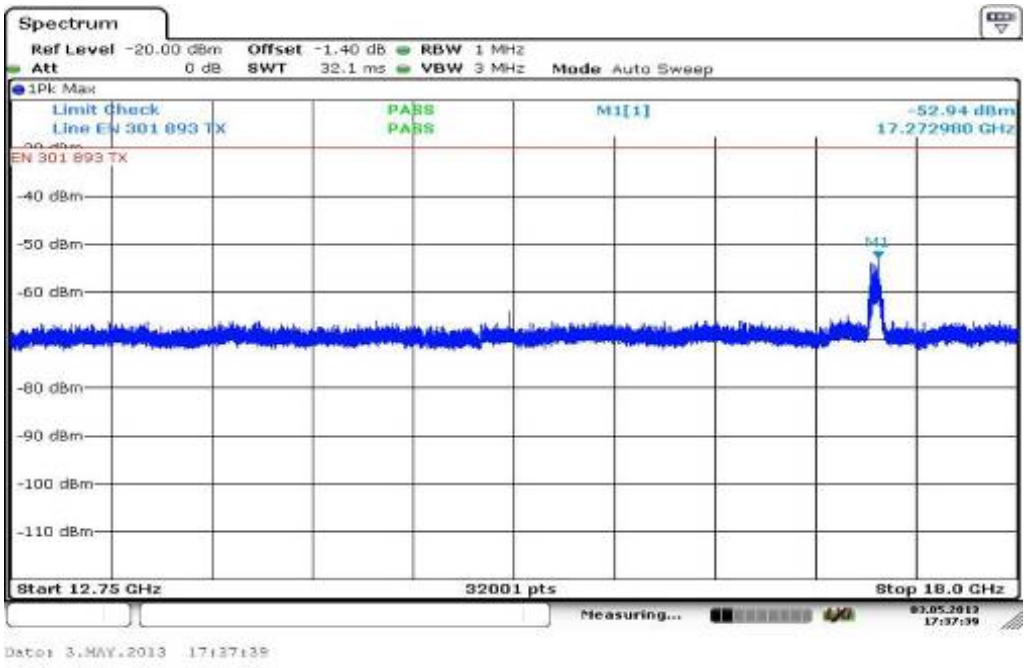
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
34.990800	11.7	1000.0	120.000	111.0	V	88.0	13.0	18.3	30.0	
55.971750	8.9	1000.0	120.000	111.0	H	80.0	12.6	21.1	30.0	
316.045050	11.0	1000.0	120.000	170.0	H	171.0	15.0	25.0	36.0	
500.001750	25.9	1000.0	120.000	170.0	H	-9.0	18.7	10.1	36.0	
730.313250	19.8	1000.0	120.000	130.0	V	-10.0	23.2	16.2	36.0	
913.364550	21.8	1000.0	120.000	111.0	H	177.0	25.2	14.2	36.0	

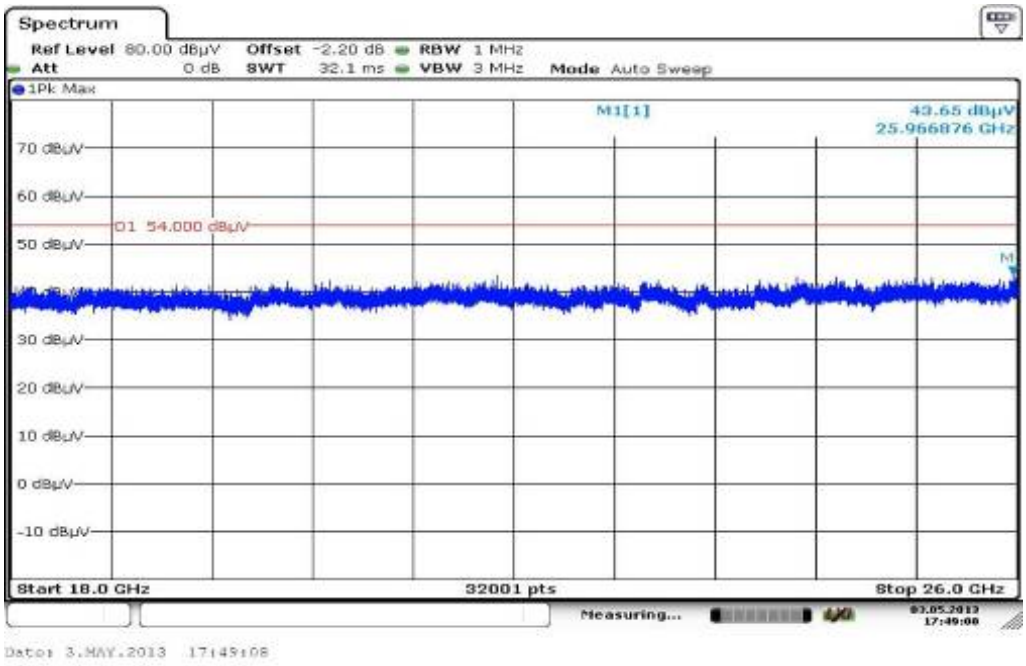
Plot 2: Lowest channel, 1 GHz to 12.75 GHz, vertical & horizontal polarization



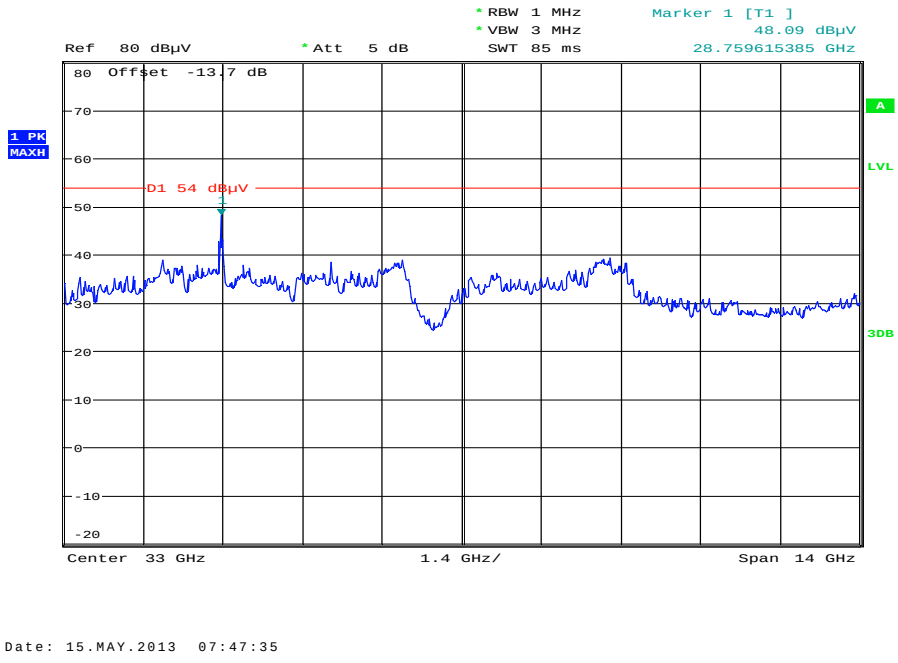
Plot 3: Lowest channel, 12.75 GHz to 18 GHz, vertical & horizontal polarization



Plot 4: Lowest channel, 18 GHz to 26 GHz, vertical & horizontal polarization



Plot 5: Lowest channel, 26 GHz to 40 GHz, vertical & horizontal polarization



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

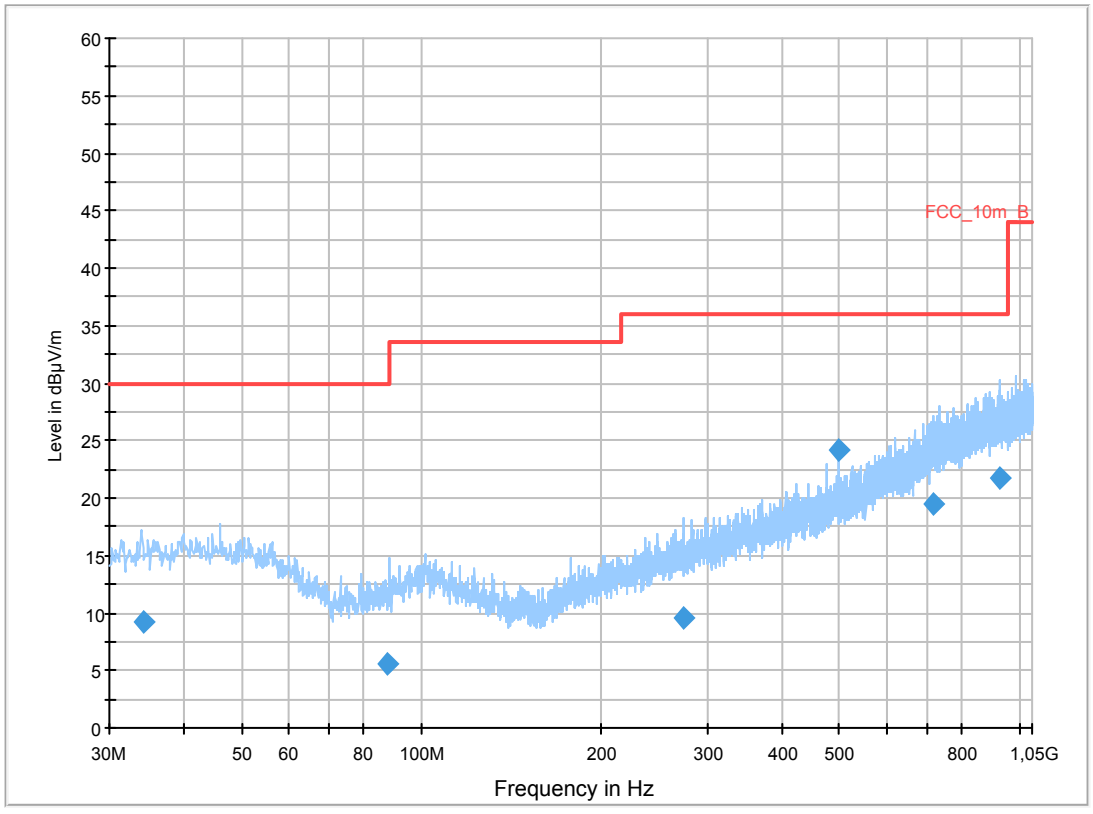
Common Information

EUT:	WLANBV2-A + antenna 453564271931
Serial Number:	eval
Test Description:	FCC part 15 C class B @ 10 m
Operating Conditions:	wlan tx n-mode HT40 @5795MHz
Operator Name:	Wolsdorfer
Comment:	DC 5V

Scan Setup: STAN_Fin [EMI radiated]

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

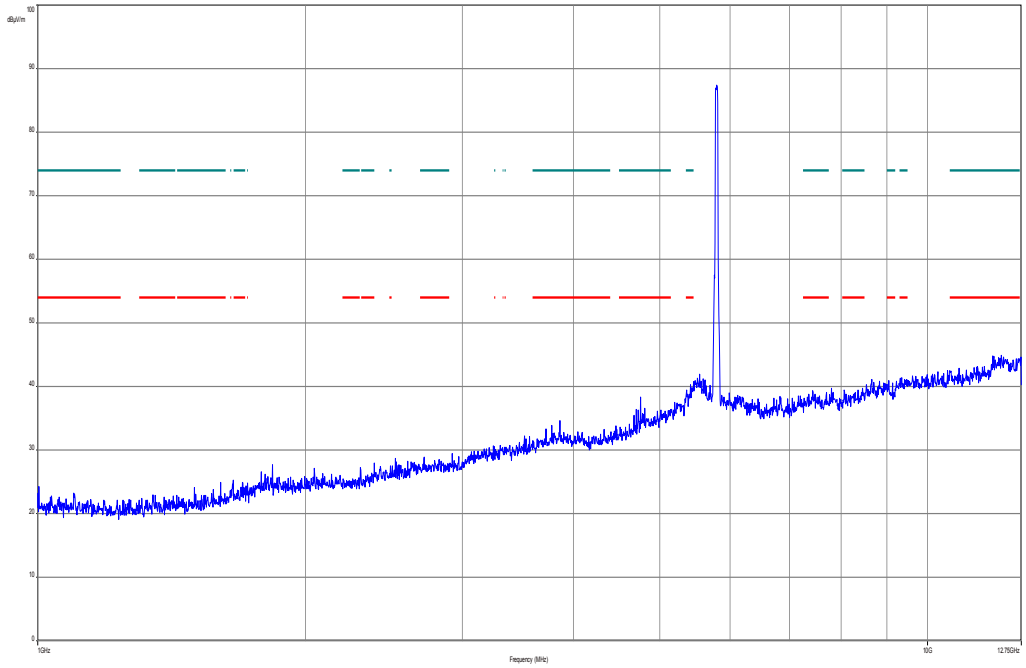
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



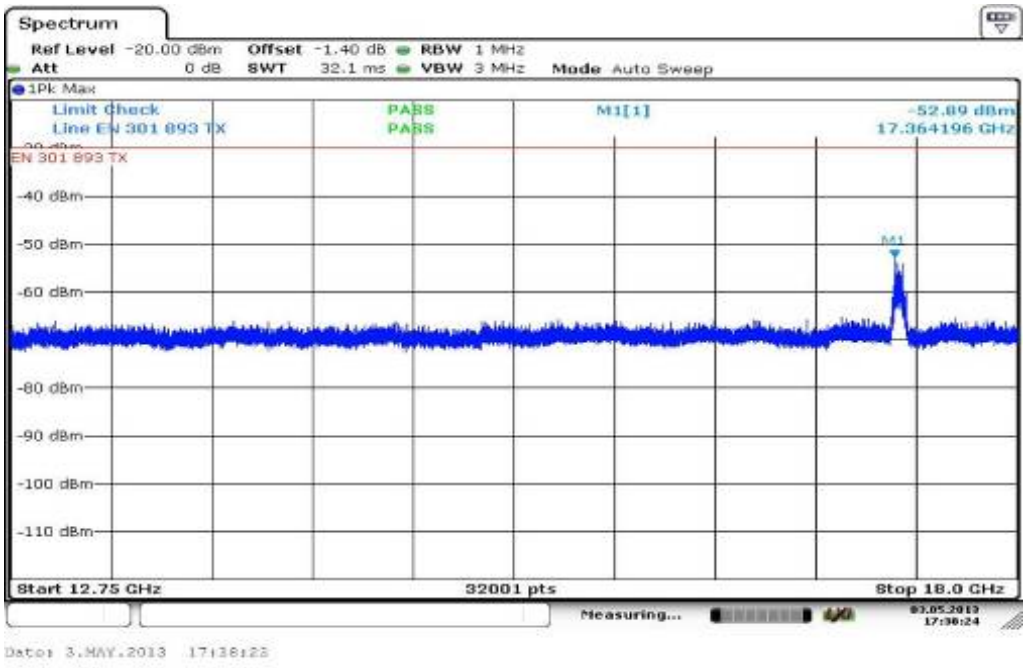
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
34.219200	9.2	1000.0	120.000	98.0	V	260.0	12.9	20.8	30.0	
87.841650	5.5	1000.0	120.000	170.0	H	268.0	10.2	24.5	30.0	
274.005000	9.6	1000.0	120.000	132.0	H	0.0	13.9	26.4	36.0	
500.020500	24.2	1000.0	120.000	170.0	H	171.0	18.7	11.8	36.0	
719.106450	19.6	1000.0	120.000	143.0	H	81.0	22.9	16.4	36.0	
924.378600	21.7	1000.0	120.000	121.0	H	100.0	25.3	14.3	36.0	

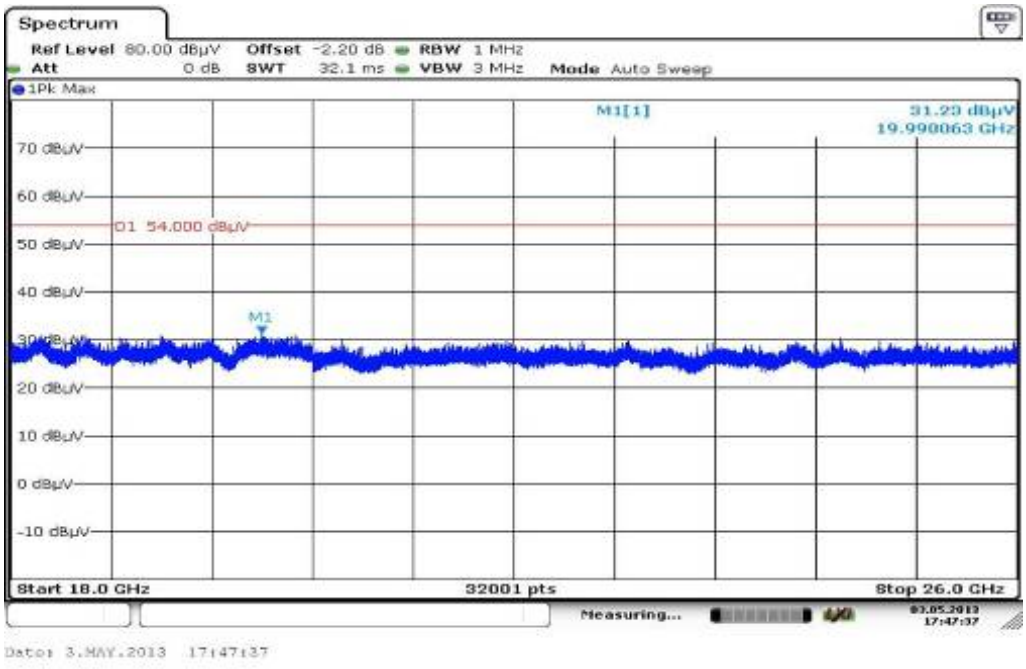
Plot 7: Highest channel, 1 GHz to 12.75 GHz, vertical & horizontal polarization



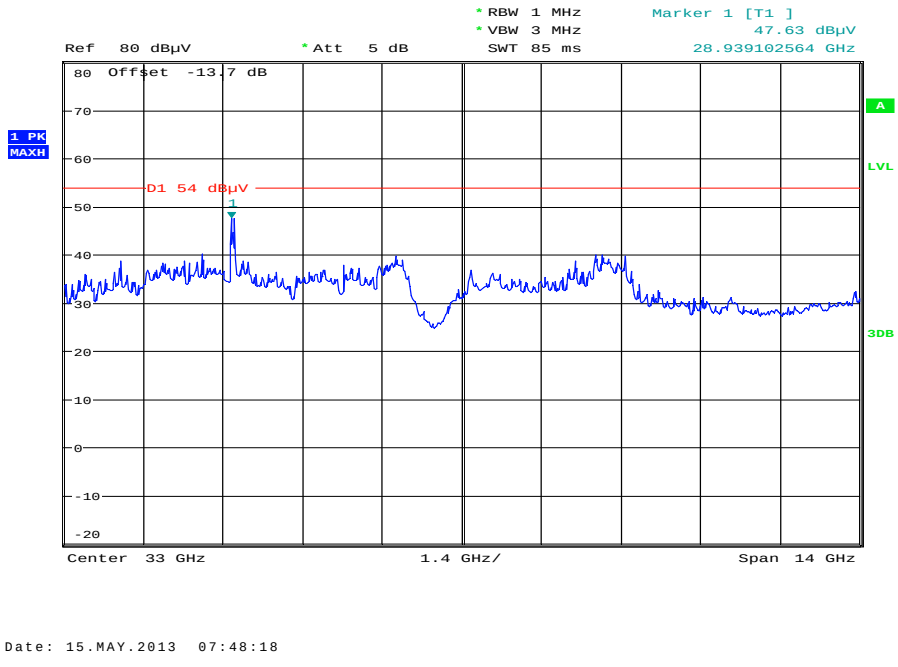
Plot 8: Highest channel, 12.75 GHz to 18 GHz, vertical & horizontal polarization



Plot 9: Highest channel, 18 GHz to 26 GHz, vertical & horizontal polarization



Plot 10: Highest channel, 26 GHz to 40 GHz, vertical & horizontal polarization



4 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 (dBµV/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 [dBµV/m]		
F [MHz]	Detector	Level [dBµV/m]
No critical peaks found		
Measurement uncertainty	± 3 dB	

Result: Passed

Plots: RX / Idle – mode Antenna M3002-66494

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

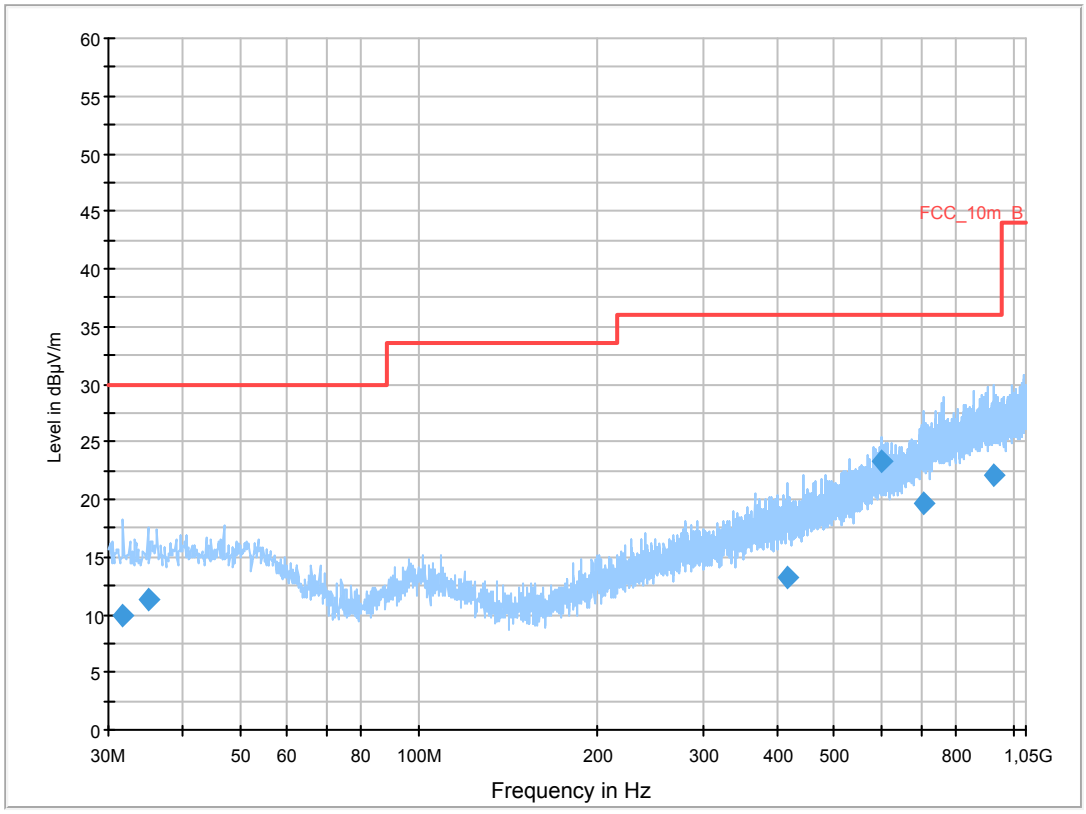
Common Information

EUT:	WLANBV2-A + antenna M3002-66494
Serial Number:	eval 2
Test Description:	FCC part 15 B class B @ 10 m
Operating Conditions:	wlan n-mode rx @5300MHz
Operator Name:	Wolsdorfer
Comment:	DC 5V

Scan Setup: STAN_Fin [EMI radiated]

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

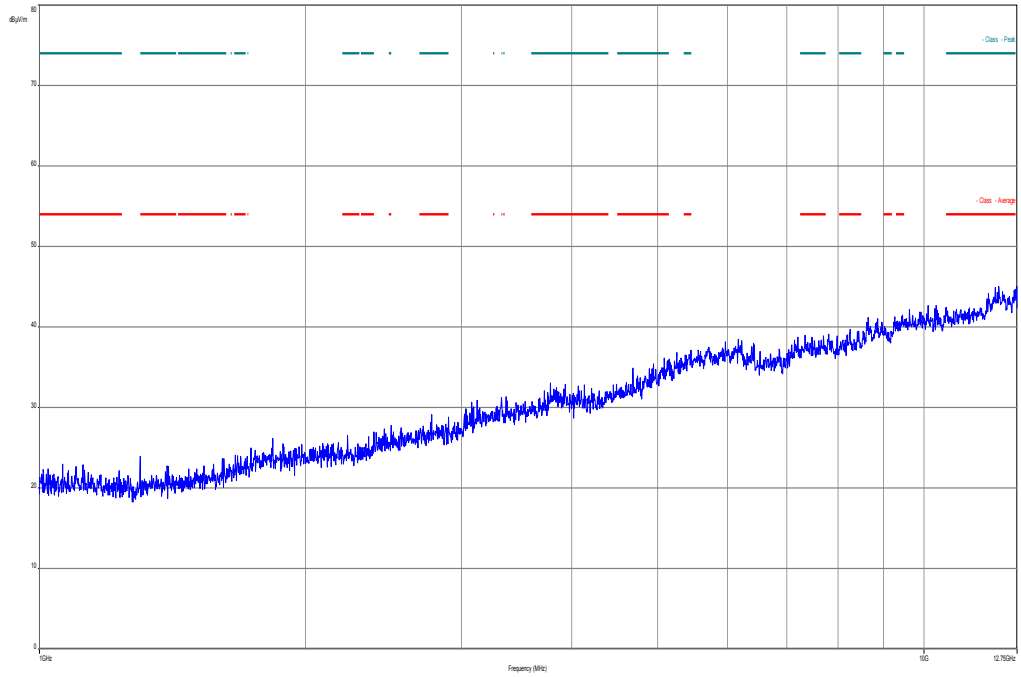
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



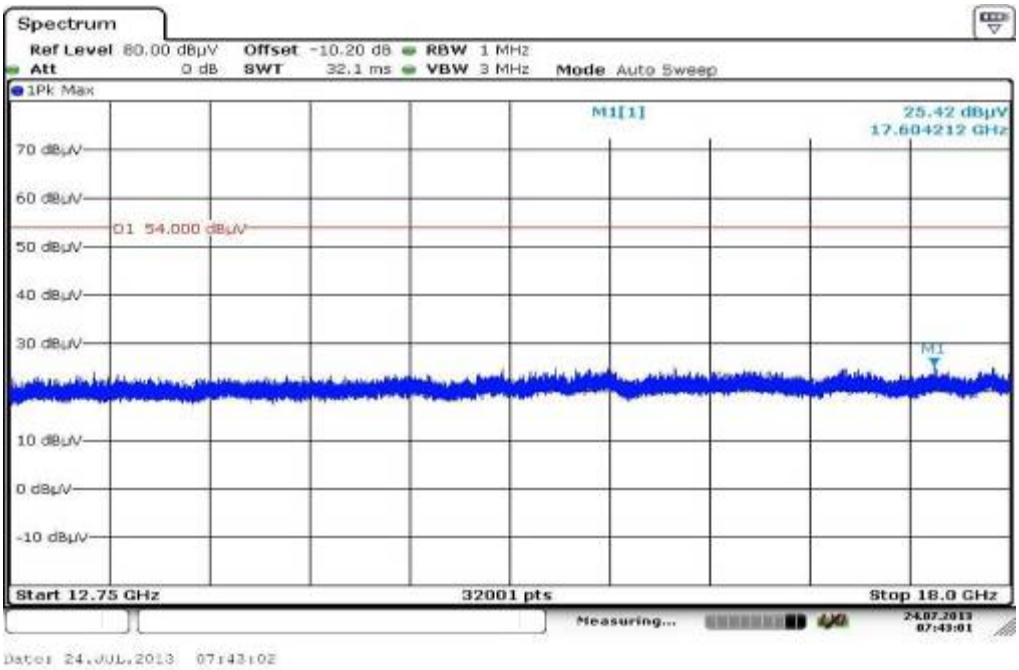
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
31.615350	10.0	1000.0	120.000	144.0	V	10.0	12.7	20.0	30.0	
34.989600	11.2	1000.0	120.000	170.0	V	10.0	13.0	18.8	30.0	
415.315200	13.2	1000.0	120.000	170.0	V	280.0	17.1	22.8	36.0	
599.981700	23.3	1000.0	120.000	170.0	H	261.0	20.8	12.7	36.0	
708.236550	19.7	1000.0	120.000	170.0	H	0.0	22.7	16.3	36.0	
930.388650	22.0	1000.0	120.000	143.0	V	10.0	25.3	14.0	36.0	

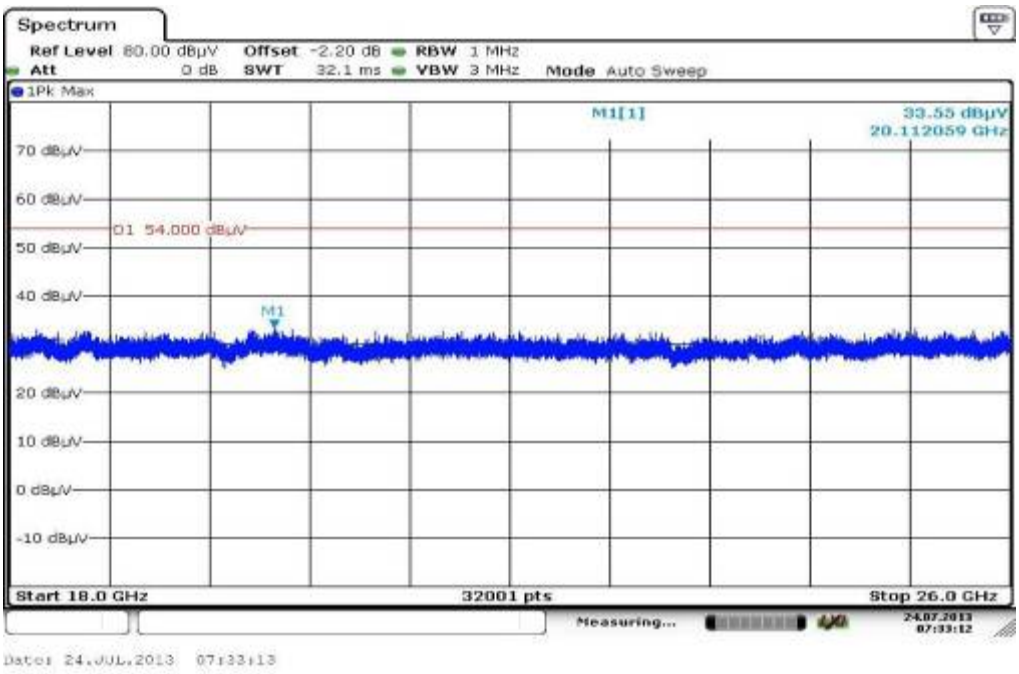
Plot 2: 1 GHz to 12.75 GHz, vertical & horizontal polarization



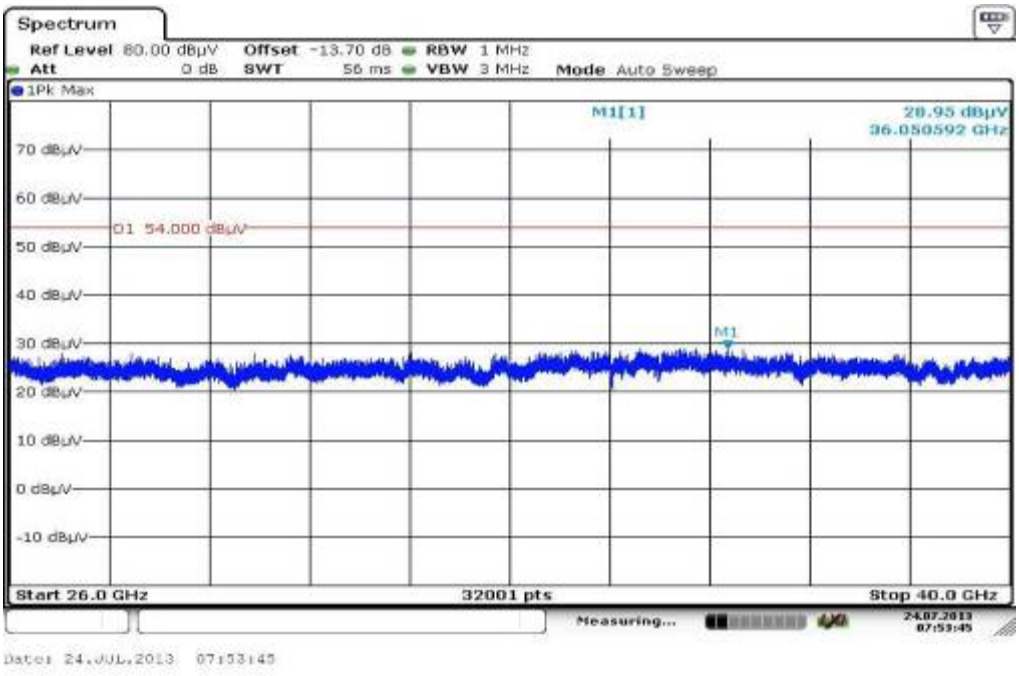
Plot 3: 12 GHz to 18 GHz, vertical & horizontal polarization



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



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



Plots: RX / Idle – mode Antenna 453564154611

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

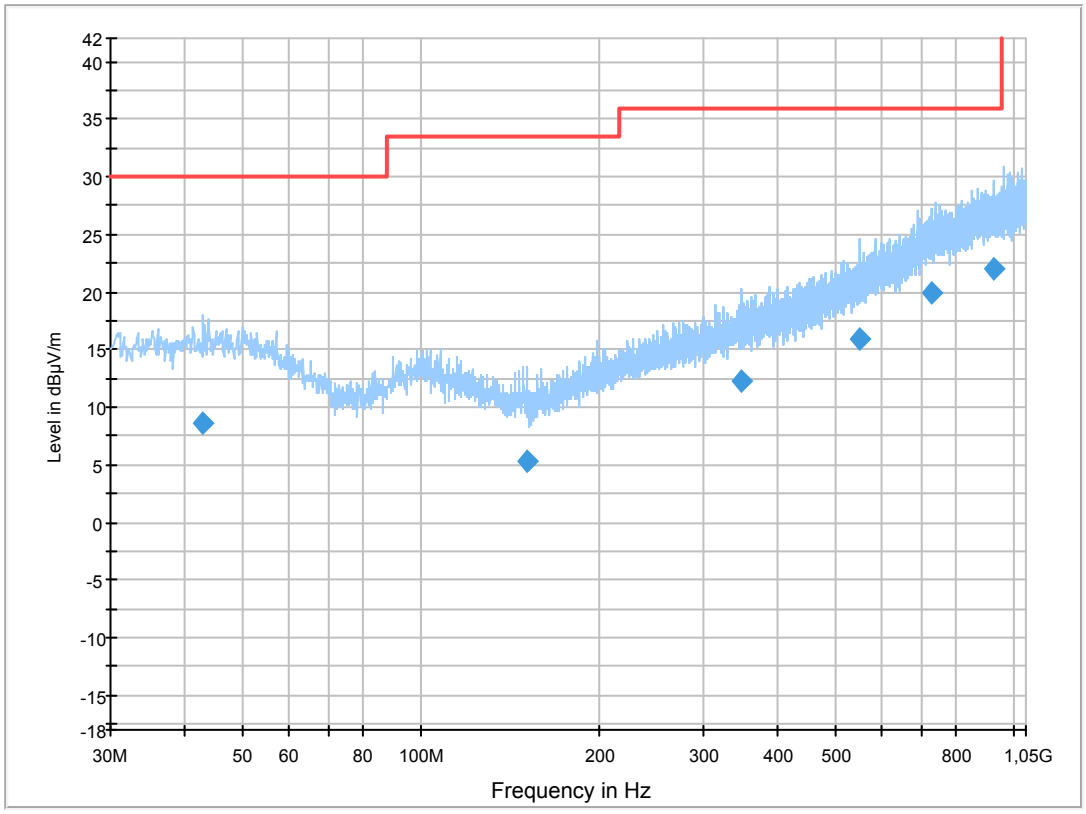
Common Information

EUT:	WLANBV2-A + antenna 453564154611
Serial Number:	eval 2
Test Description:	FCC part 15 C class B @ 10 m
Operating Conditions:	wlan n-mode Rx
Operator Name:	Wolsdorfer
Comment:	DC 5V

Scan Setup: STAN_Fin [EMI radiated]

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

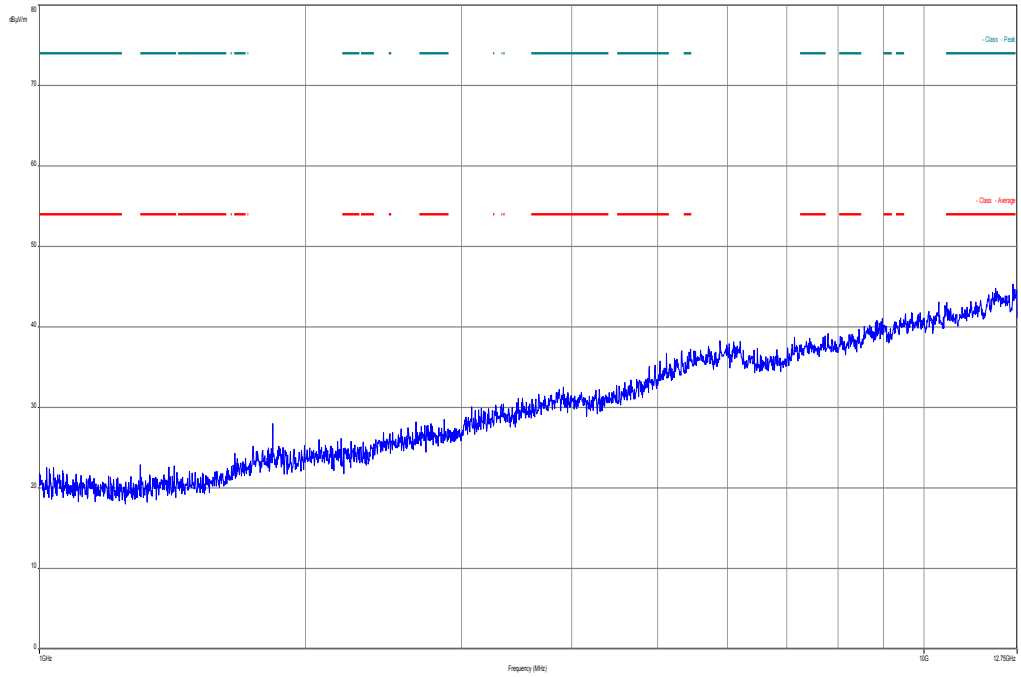
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



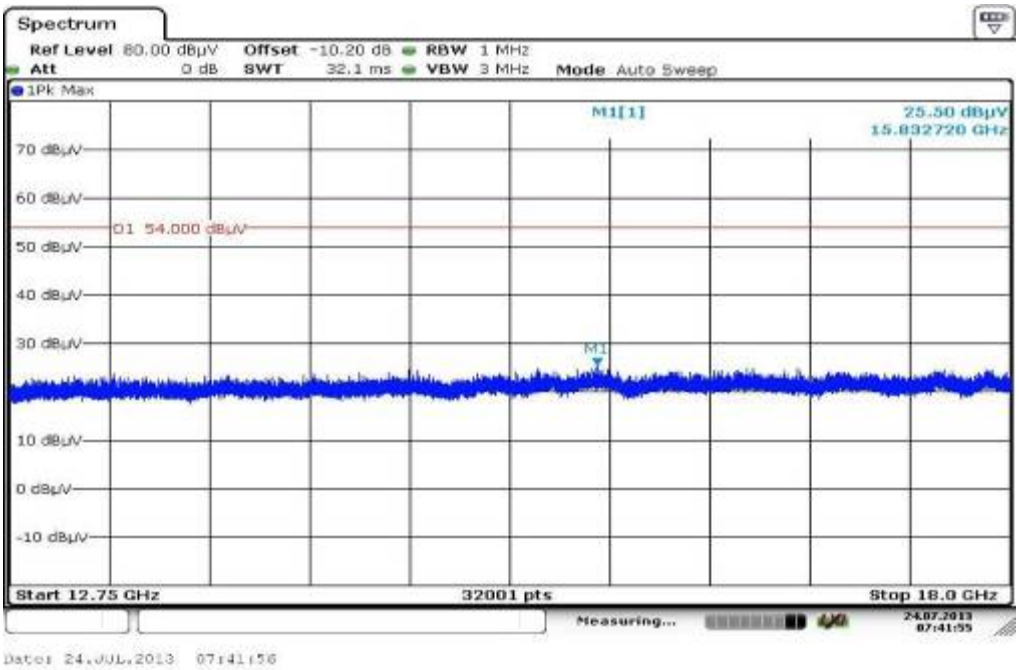
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
42.994350	8.7	1000.0	120.000	170.0	V	261.0	13.3	21.3	30.0	
151.301250	5.4	1000.0	120.000	133.0	V	261.0	9.0	28.1	33.5	
348.758250	12.2	1000.0	120.000	170.0	H	10.0	16.0	23.8	36.0	
551.631450	15.9	1000.0	120.000	170.0	V	268.0	19.4	20.1	36.0	
730.294500	20.0	1000.0	120.000	98.0	V	261.0	23.2	16.0	36.0	
926.574450	22.0	1000.0	120.000	162.0	H	80.0	25.3	14.0	36.0	

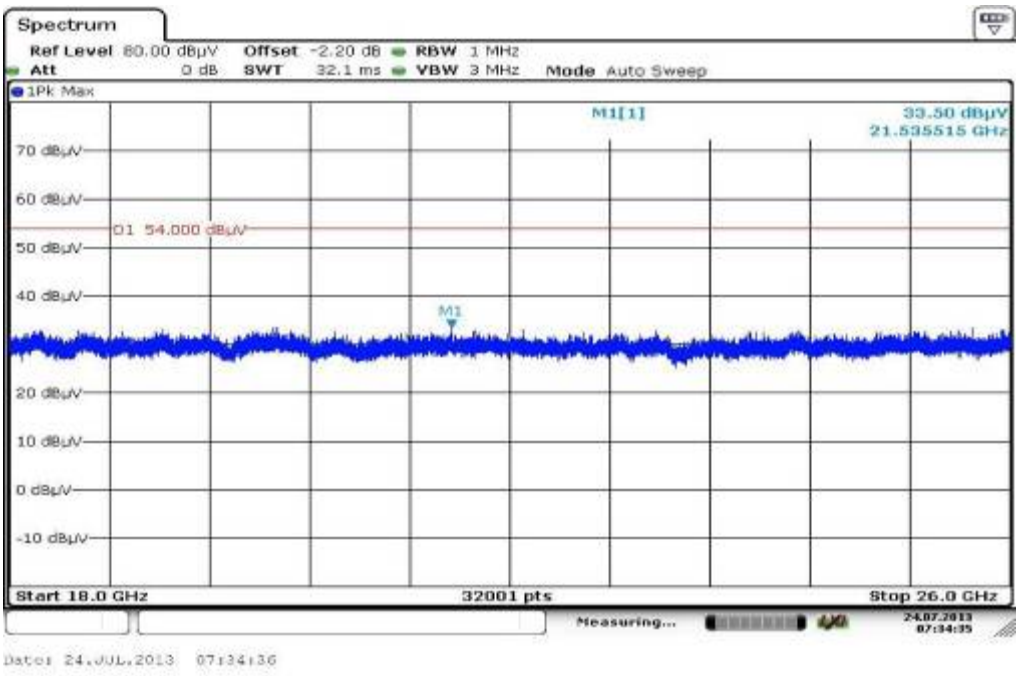
Plot 7: 1 GHz to 12.75 GHz, vertical & horizontal polarization



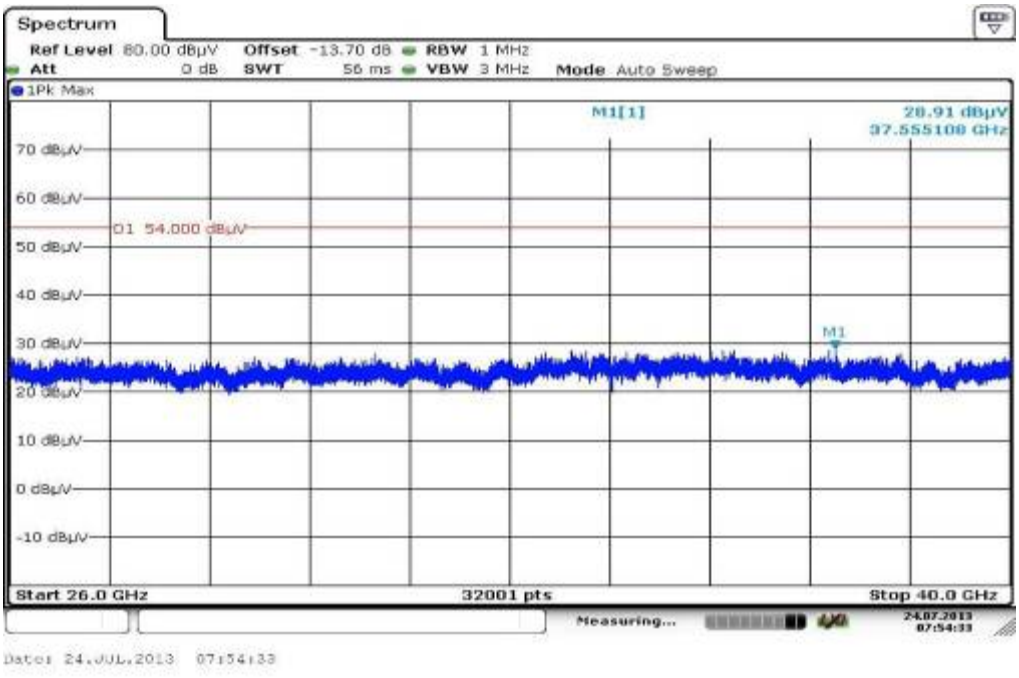
Plot 8: 12 GHz to 18 GHz, vertical & horizontal polarization



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



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



Plots: RX / Idle – mode Antenna 453564175981

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

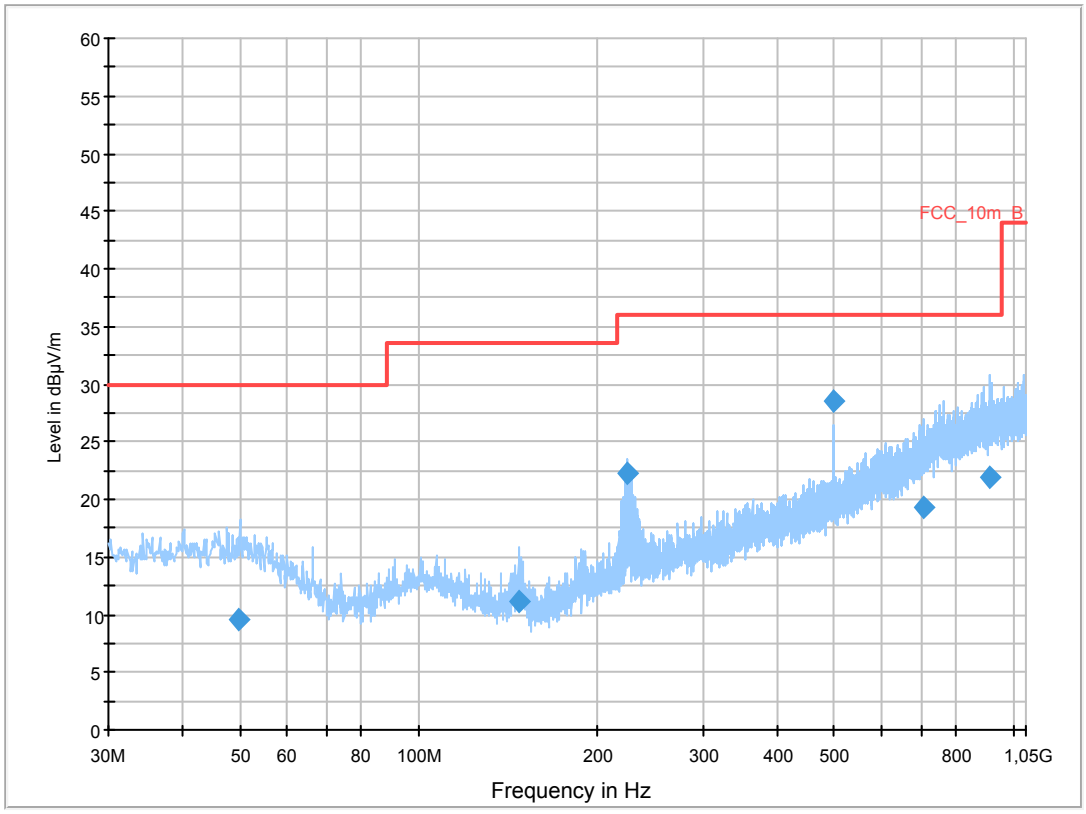
Common Information

EUT:	WLANBV2-A + antenna 453564175981
Serial Number:	eval 2
Test Description:	FCC part 15 C class B @ 10 m
Operating Conditions:	wlan rx
Operator Name:	Wolsdorfer
Comment:	DC 5V

Scan Setup: STAN_Fin [EMI radiated]

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

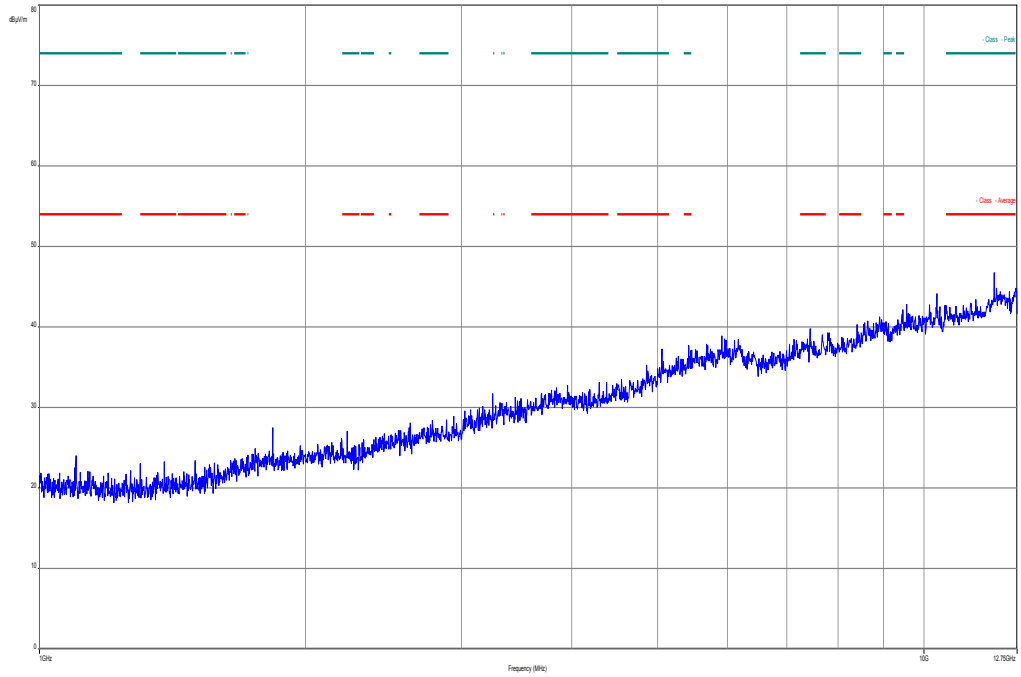
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



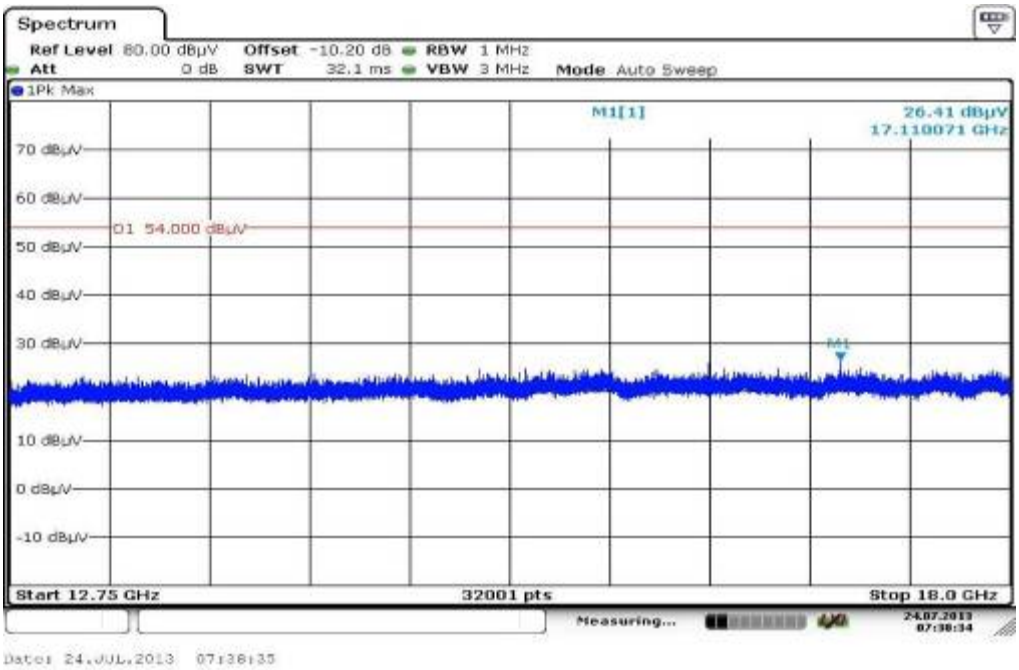
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
49.872750	9.6	1000.0	120.000	170.0	V	3.0	13.4	20.4	30.0	
147.683850	11.0	1000.0	120.000	154.0	V	272.0	8.9	22.5	33.5	
223.424400	22.3	1000.0	120.000	170.0	V	171.0	12.5	13.7	36.0	
500.001600	28.4	1000.0	120.000	170.0	H	10.0	18.7	7.6	36.0	
704.979750	19.4	1000.0	120.000	170.0	V	90.0	22.6	16.6	36.0	
913.588350	21.9	1000.0	120.000	98.0	H	3.0	25.2	14.1	36.0	

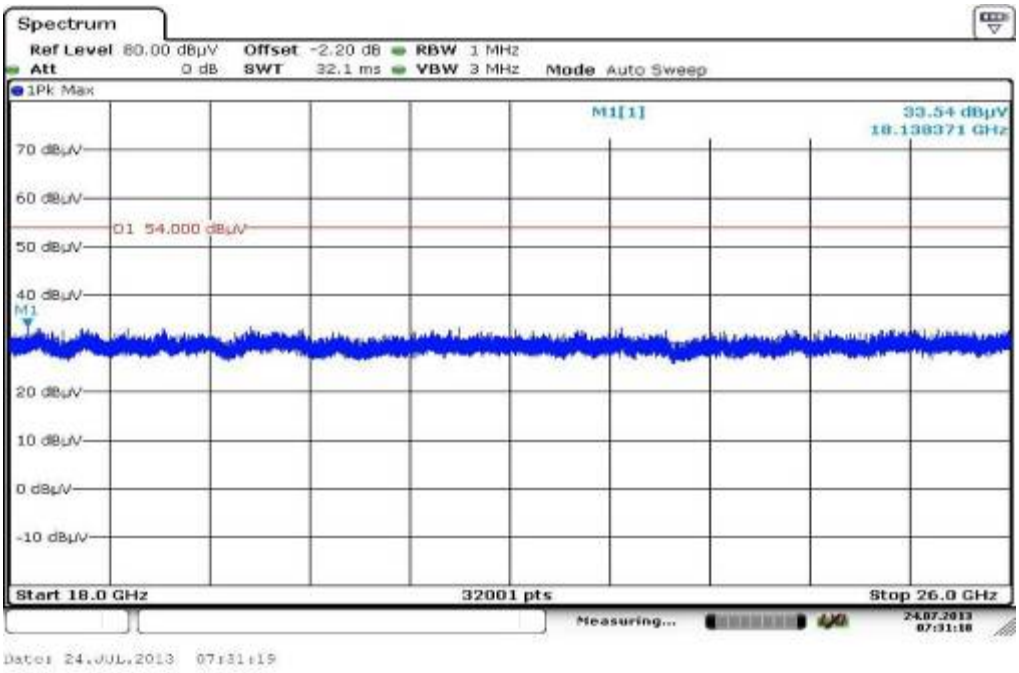
Plot 12: 1 GHz to 12.75 GHz, vertical & horizontal polarization



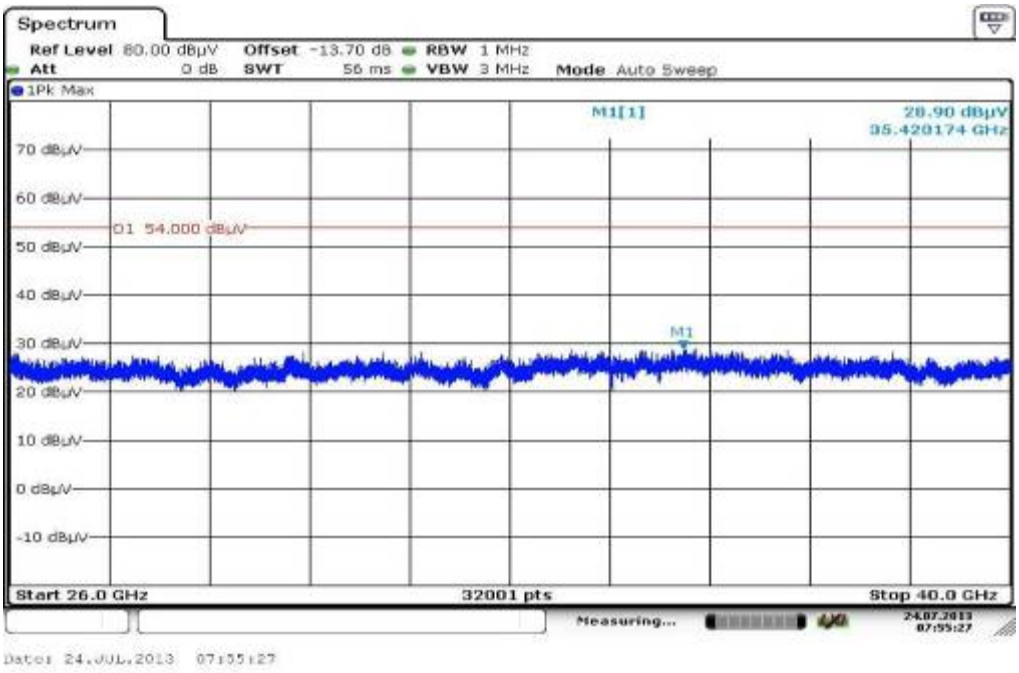
Plot 13: 12 GHz to 18 GHz, vertical & horizontal polarization



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



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



Plots: RX / Idle – mode Antenna 453564271931

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

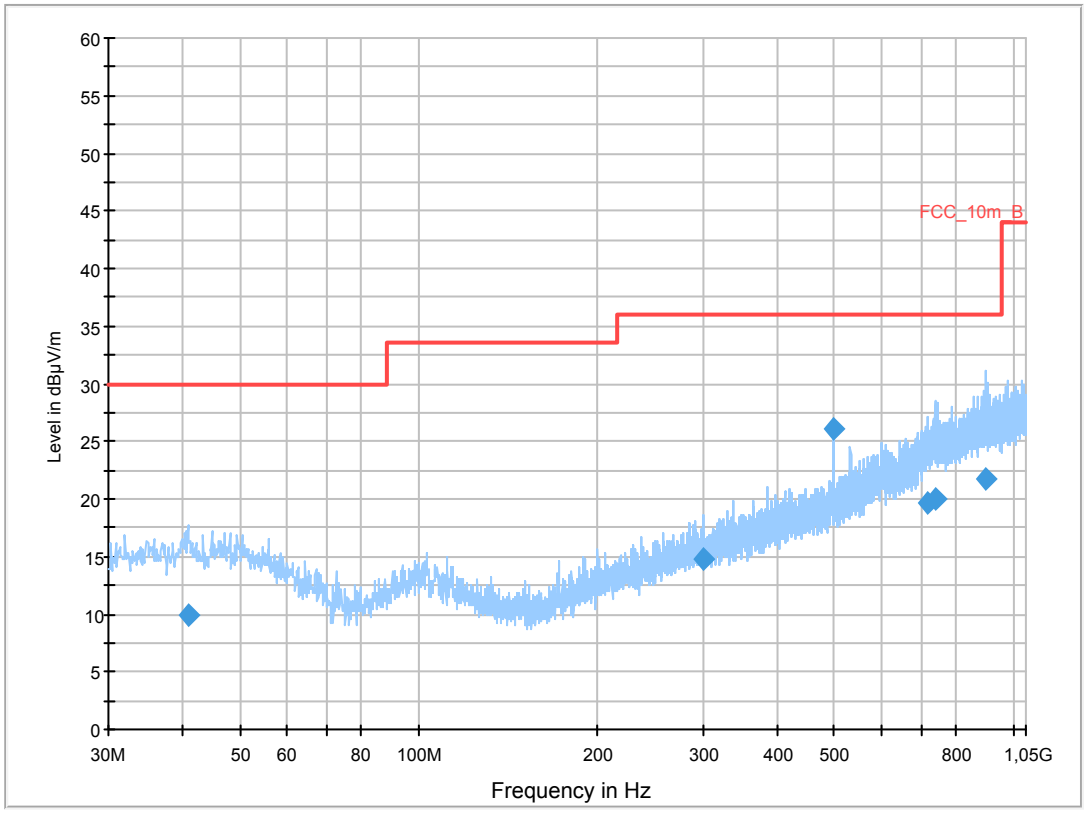
Common Information

EUT:	WLANBV2-A + antenna 453564271931
Serial Number:	eval
Test Description:	FCC part 15 C class B @ 10 m
Operating Conditions:	wlan rx n-mode @5500MHz
Operator Name:	Wolsdorfer
Comment:	DC 5V

Scan Setup: STAN_Fin [EMI radiated]

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

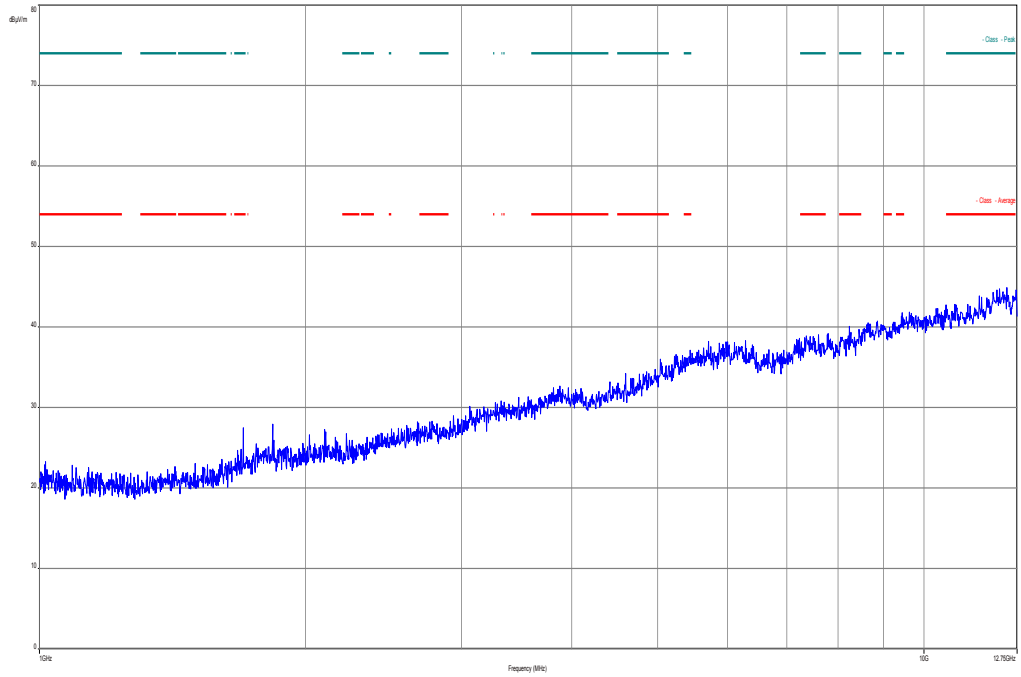
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



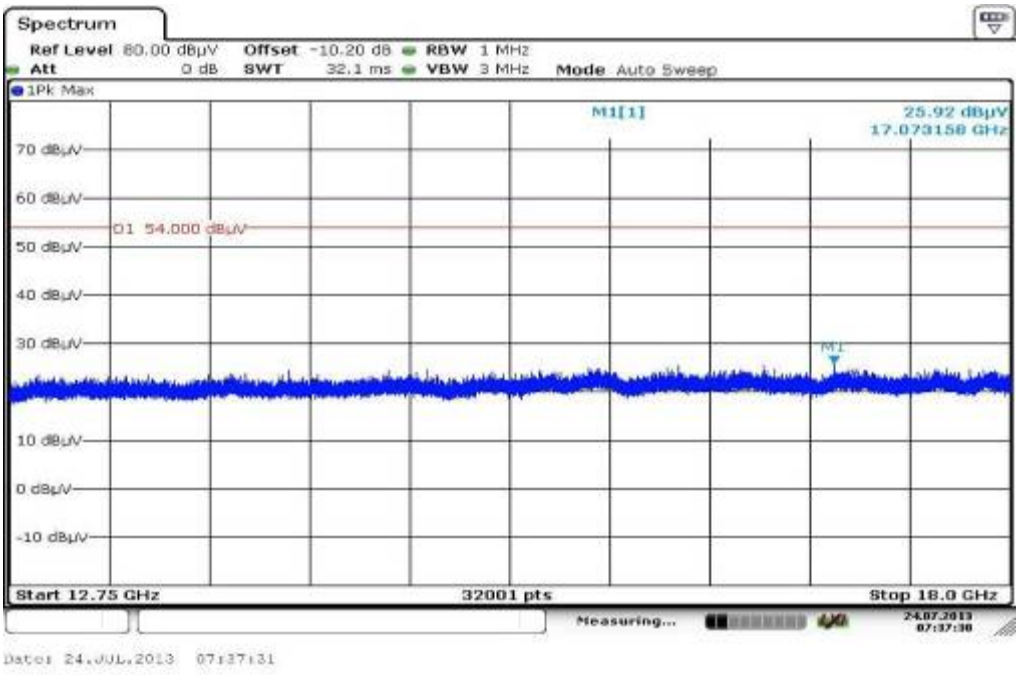
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
40.825650	9.8	1000.0	120.000	170.0	H	100.0	13.4	20.2	30.0	
299.992350	14.7	1000.0	120.000	170.0	H	-2.0	14.5	21.3	36.0	
499.996950	26.1	1000.0	120.000	170.0	H	-3.0	18.7	9.9	36.0	
716.641800	19.6	1000.0	120.000	170.0	V	81.0	22.9	16.4	36.0	
737.995050	20.0	1000.0	120.000	170.0	V	171.0	23.4	16.0	36.0	
897.068550	21.8	1000.0	120.000	154.0	V	260.0	25.2	14.2	36.0	

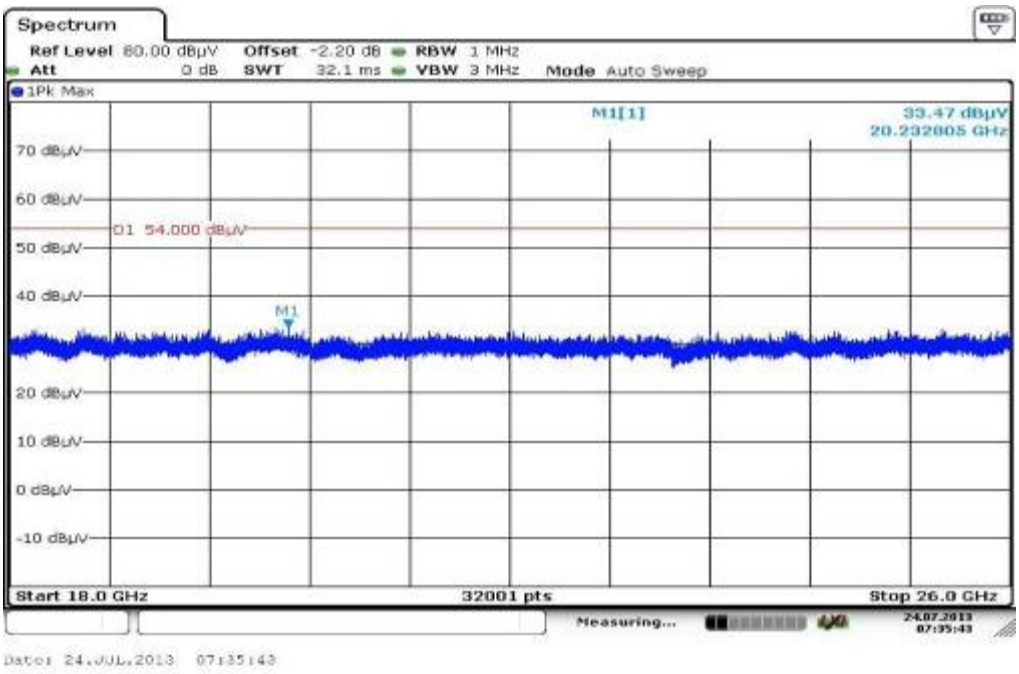
Plot 17: 1 GHz to 12.75 GHz, vertical & horizontal polarization



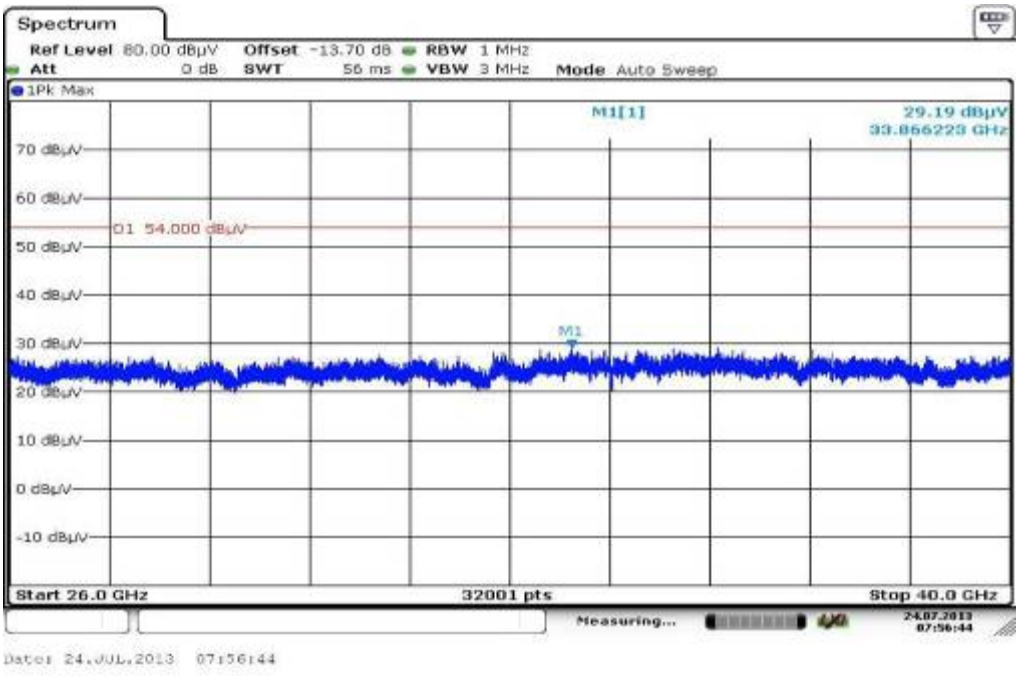
Plot 18: 12 GHz to 18 GHz, vertical & horizontal polarization



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



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



5 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 critical 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 (dBµV/m)	Measurement distance
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

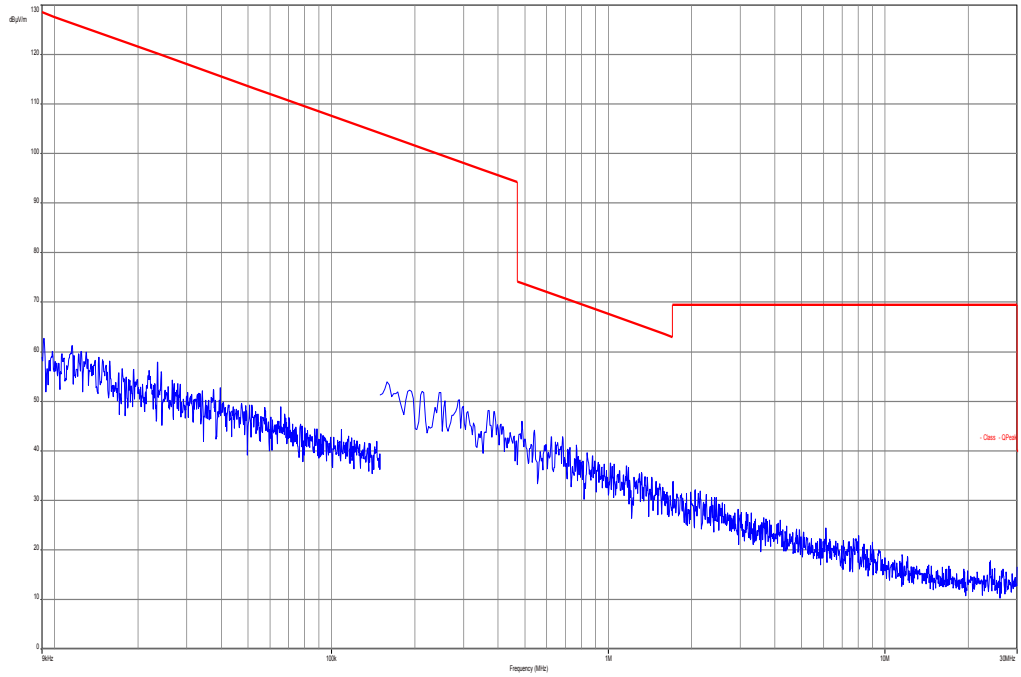
Results:

Spurious Emissions Radiated < 30 MHz [dBµV/m]		
F [MHz]	Detector	Level [dBµV/m]
No peaks found		
Measurement uncertainty	± 3 dB	

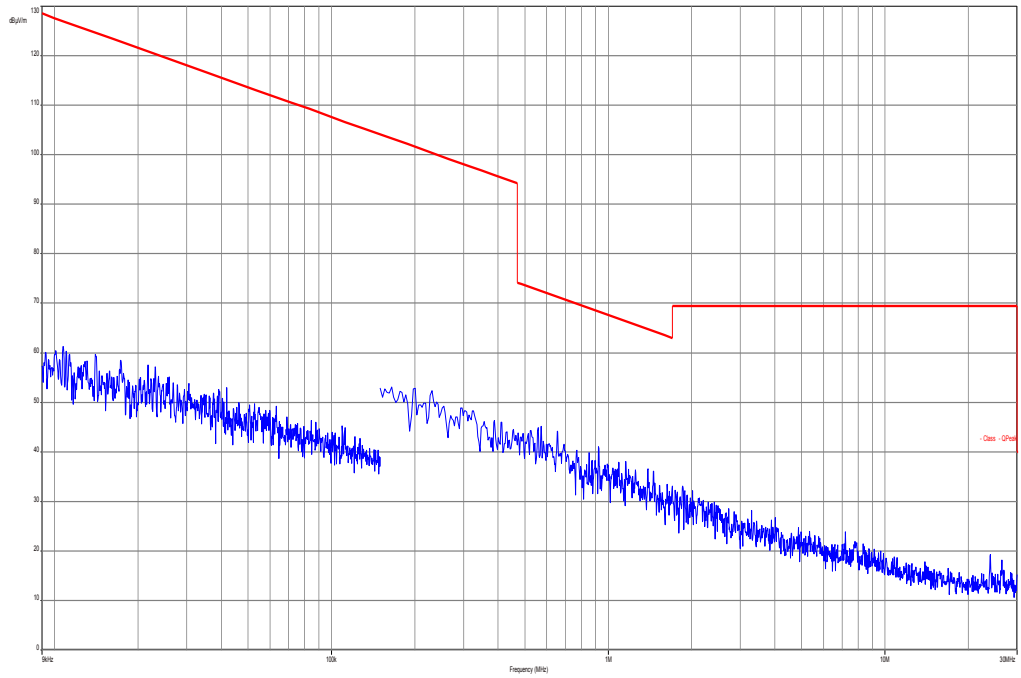
Result: Passed

Plots Antenna M3002-66494:

Plot 1: 9 kHz to 30 MHz, TX mode

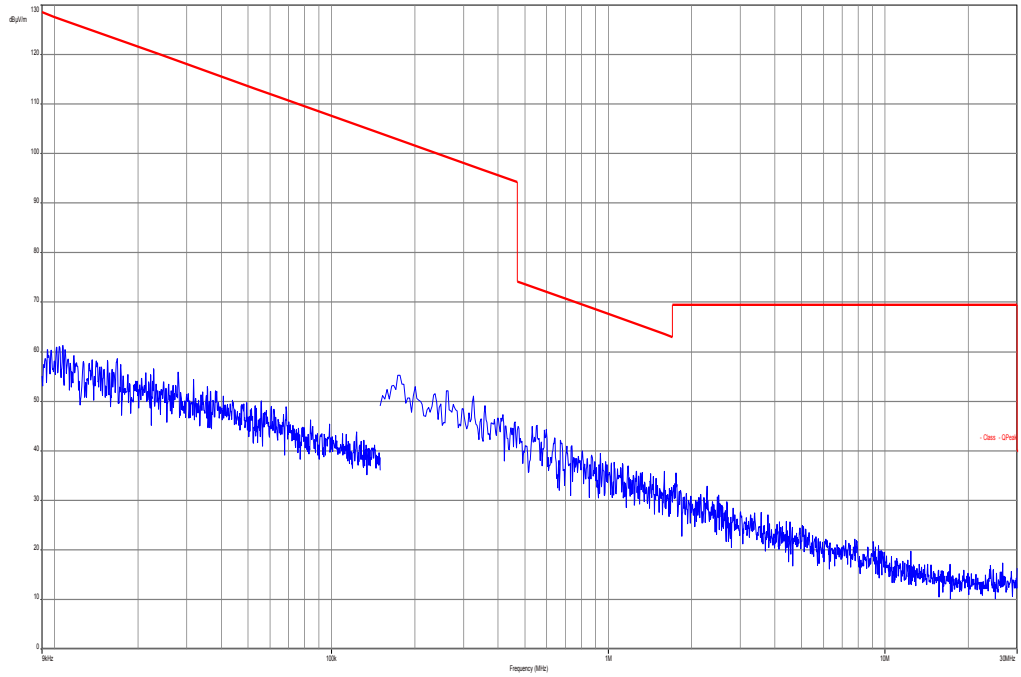


Plot 2: 9 kHz to 30 MHz, RX mode

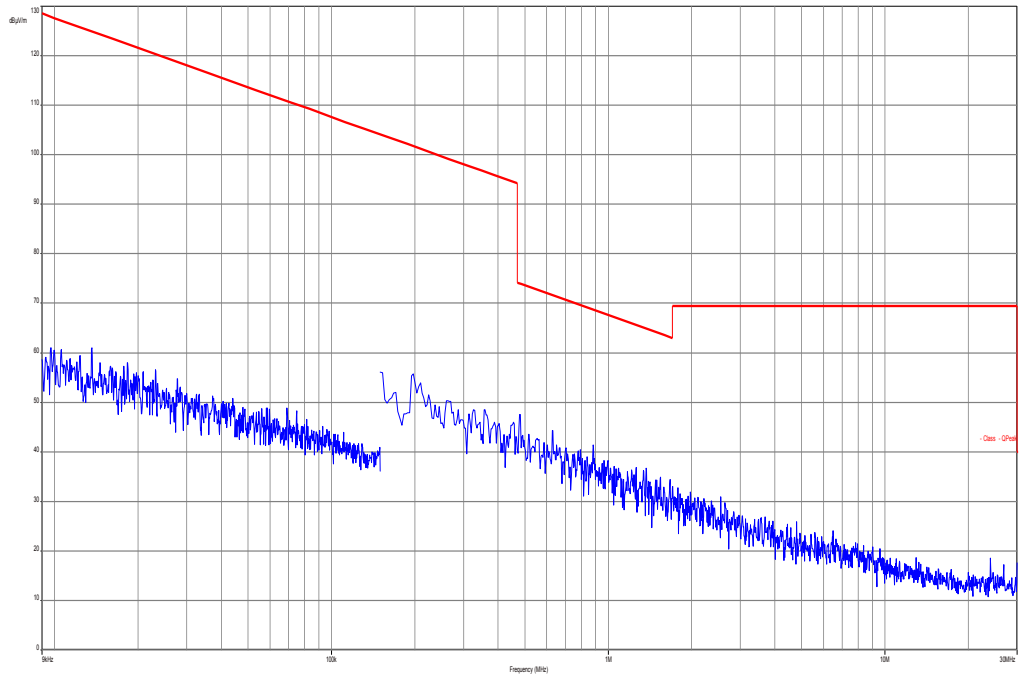


Plots Antenna 453564154611:

Plot 3: 9 kHz to 30 MHz, TX mode

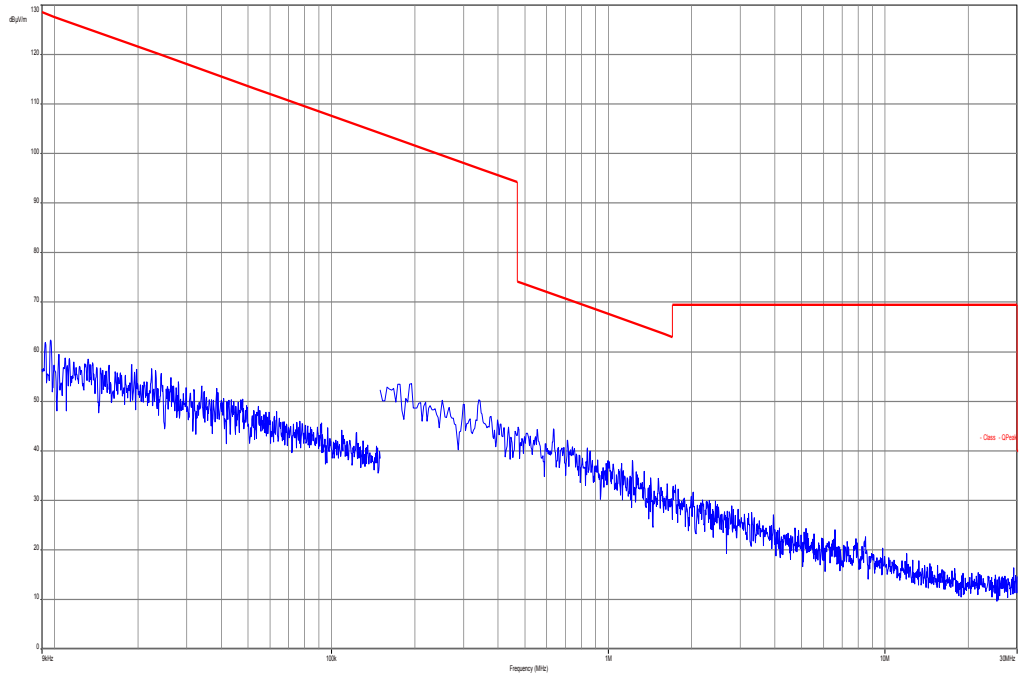


Plot 4: 9 kHz to 30 MHz, RX mode

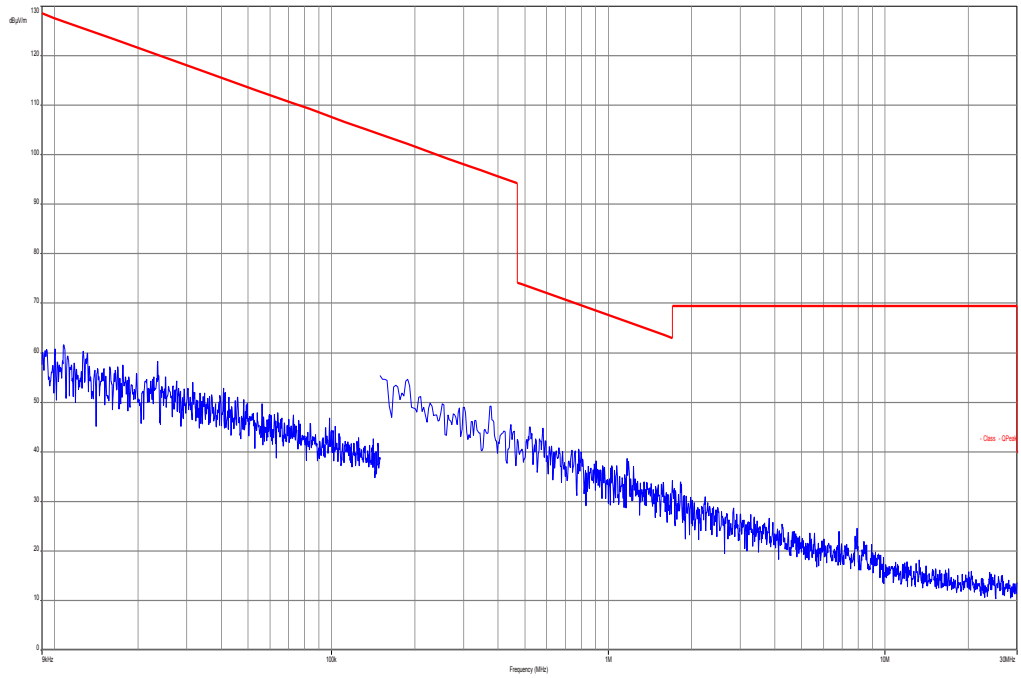


Plots Antenna 453564175981:

Plot 5: 9 kHz to 30 MHz, TX mode

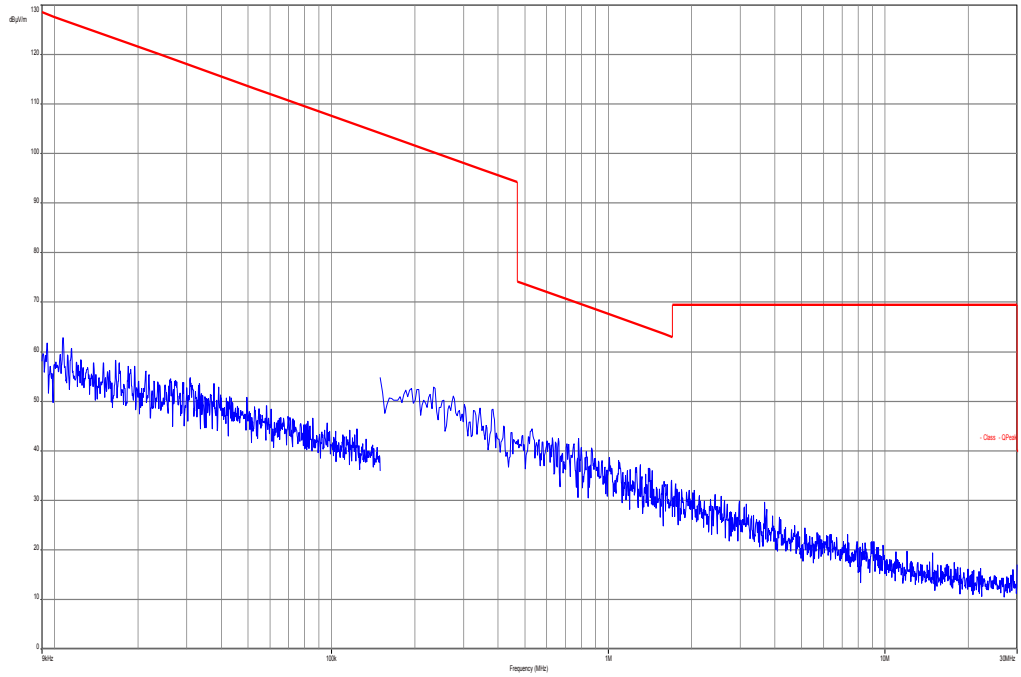


Plot 6: 9 kHz to 30 MHz, RX mode

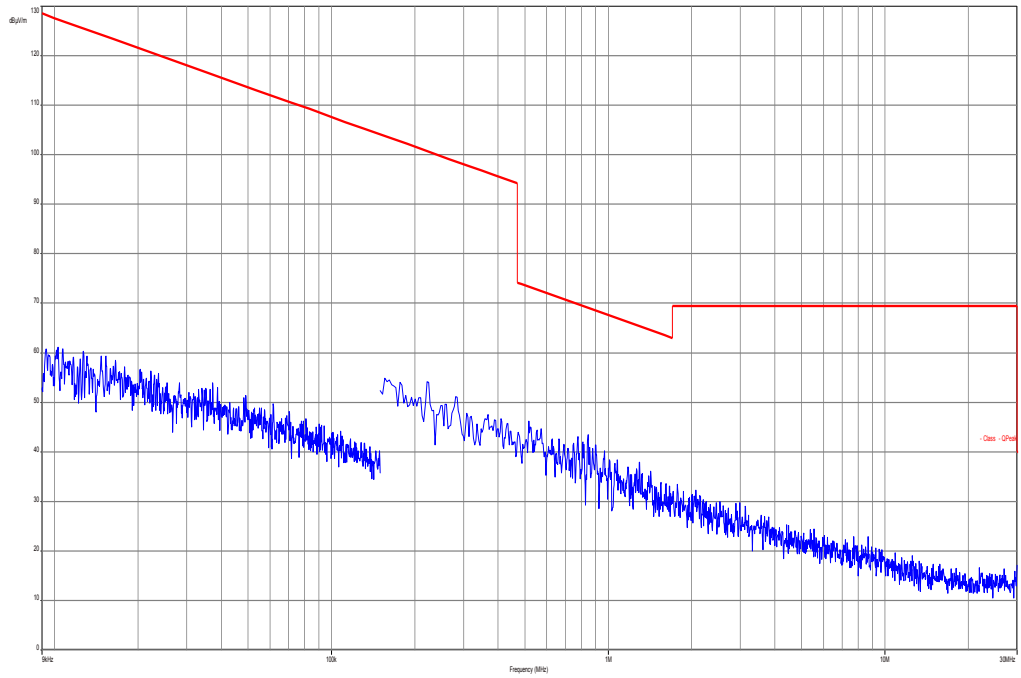


Plots Antenna 453564271931:

Plot 7: 9 kHz to 30 MHz, TX mode



Plot 8: 9 kHz to 30 MHz, RX mode



6 Document history

Version	Applied changes	Date of release
	Initial release	2017-04-18