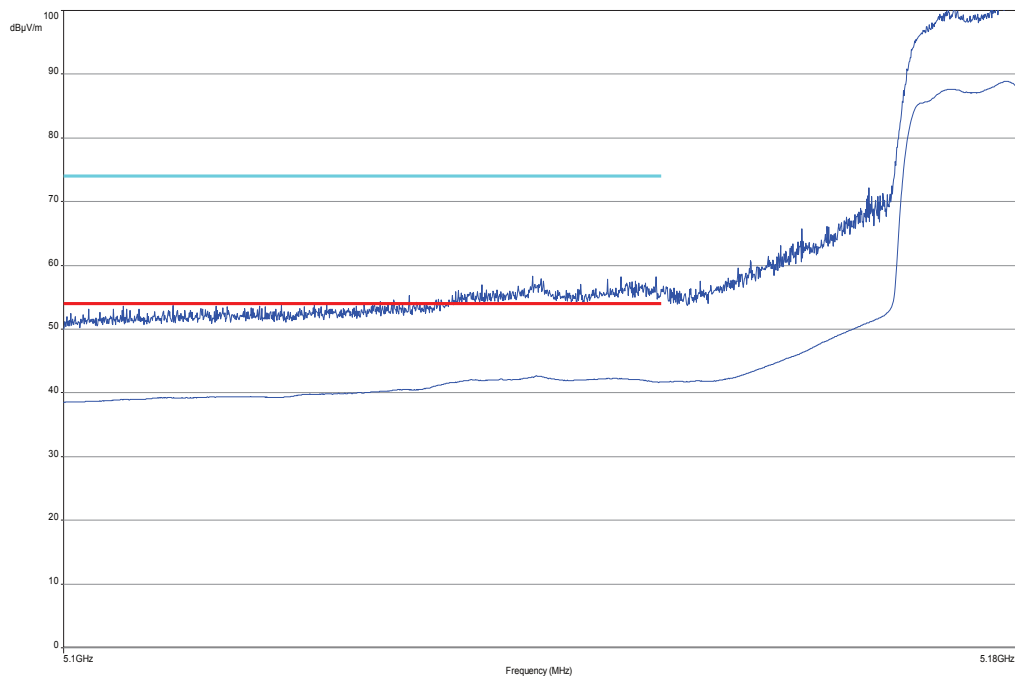
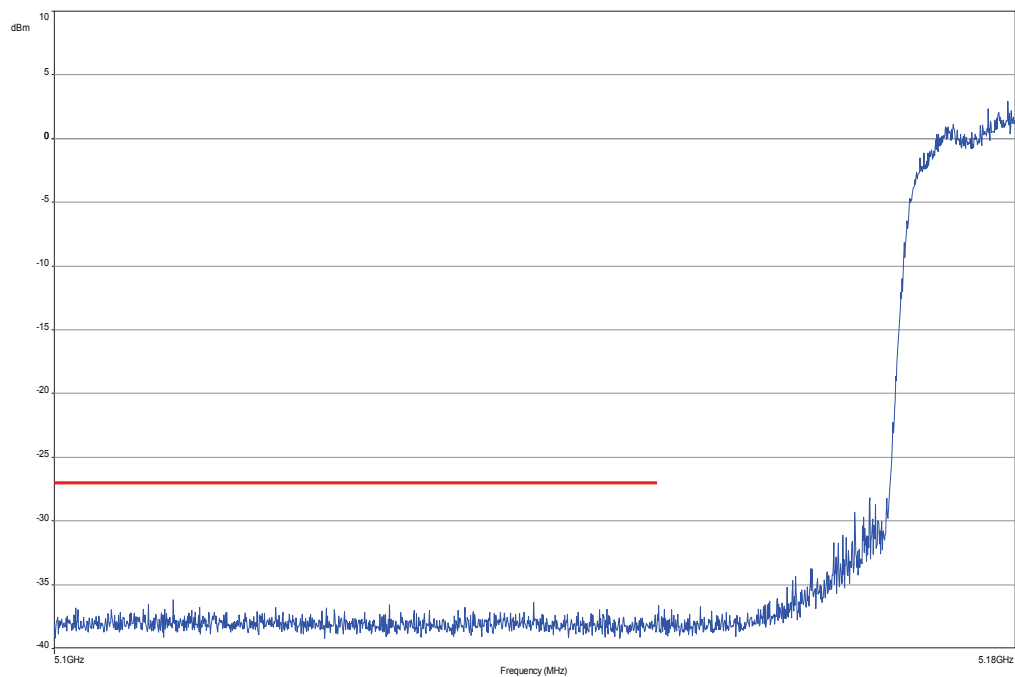


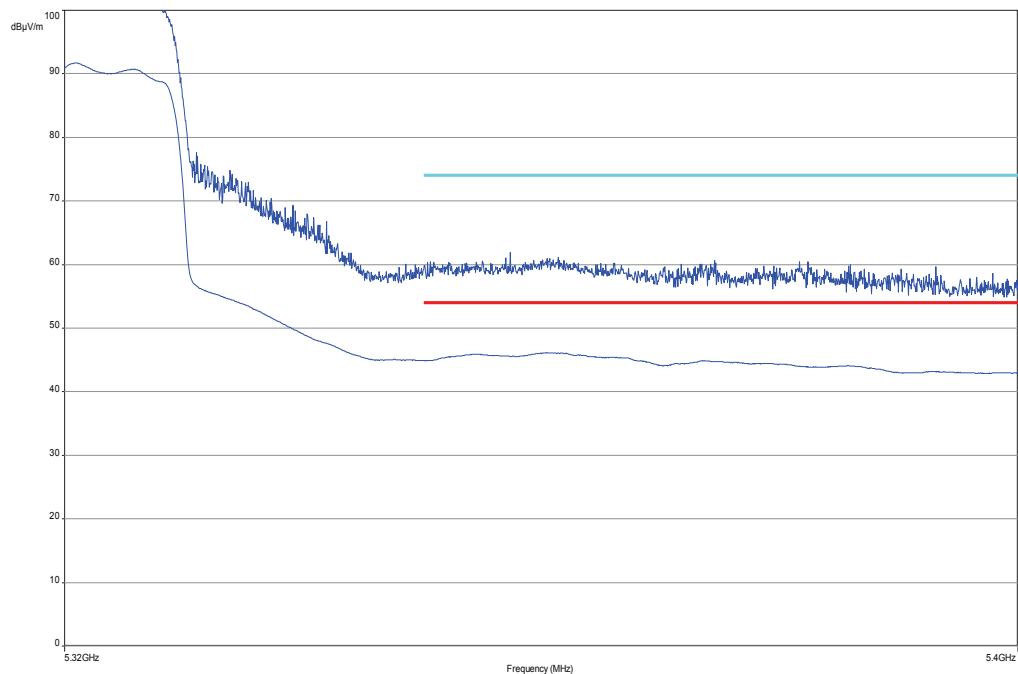
Plot 9: lower band edge, vertical & horizontal polarization (n mode), channel 36, according Part 15.247



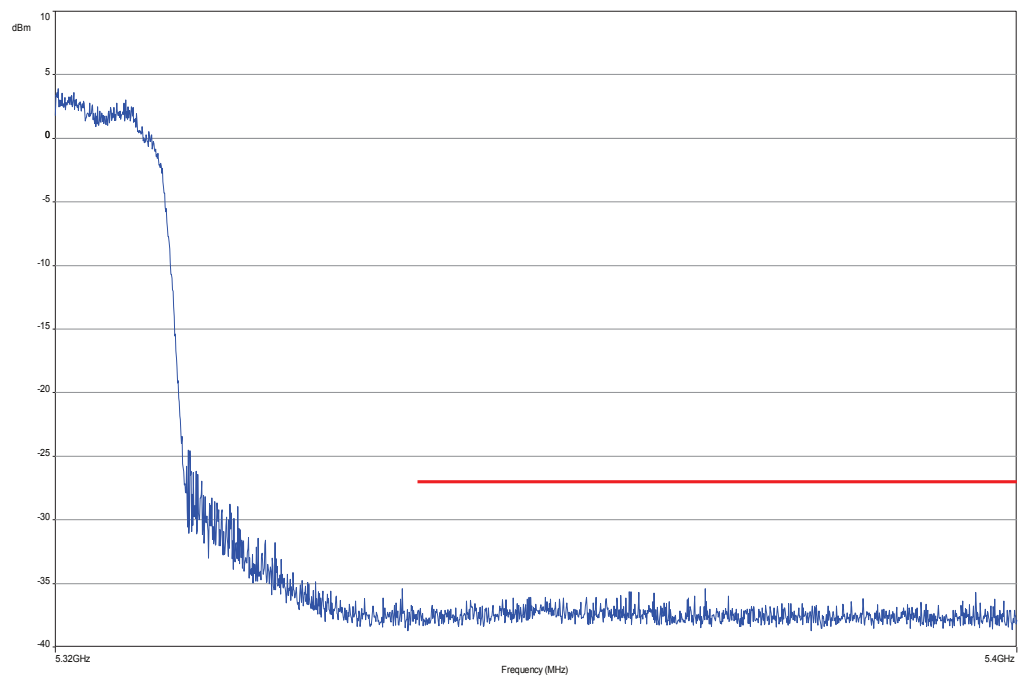
Plot 10: lower band edge, vertical & horizontal polarization (n mode), channel 36, according Part 15.407



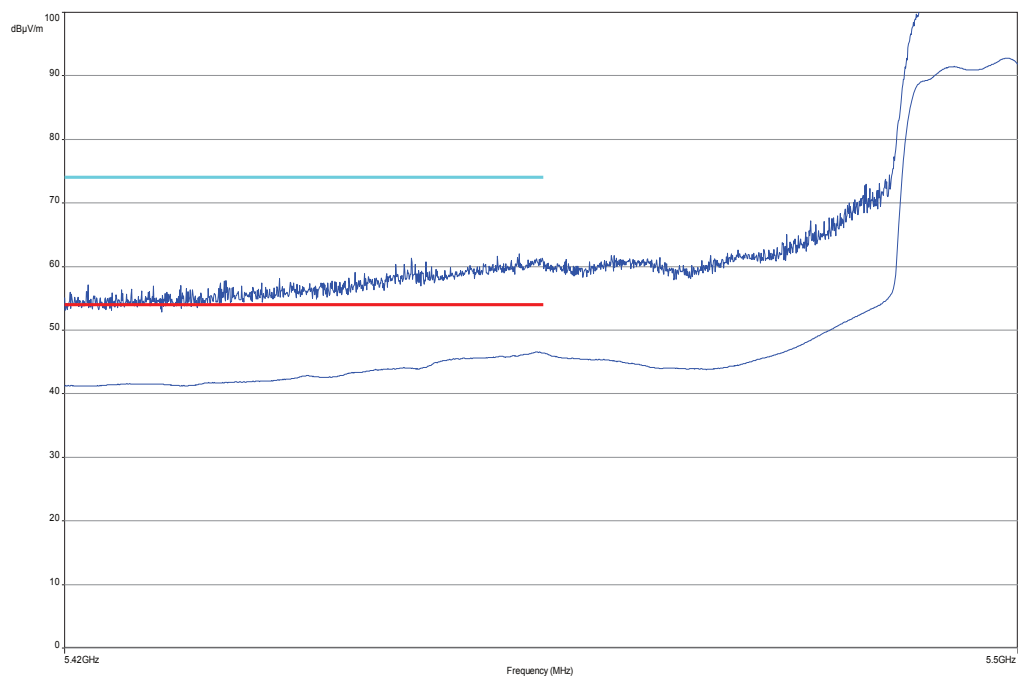
Plot 11: upper band edge, vertical & horizontal polarization (n mode), channel 64, according Part 15.247



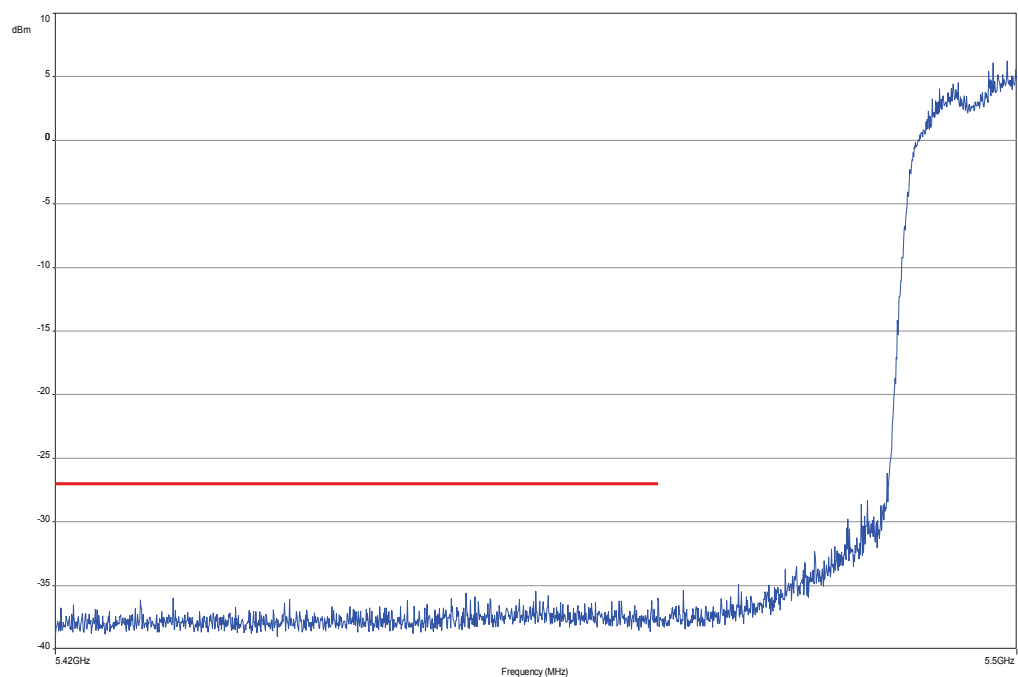
Plot 12: upper band edge, vertical & horizontal polarization (n mode), channel 64, according Part 15.407



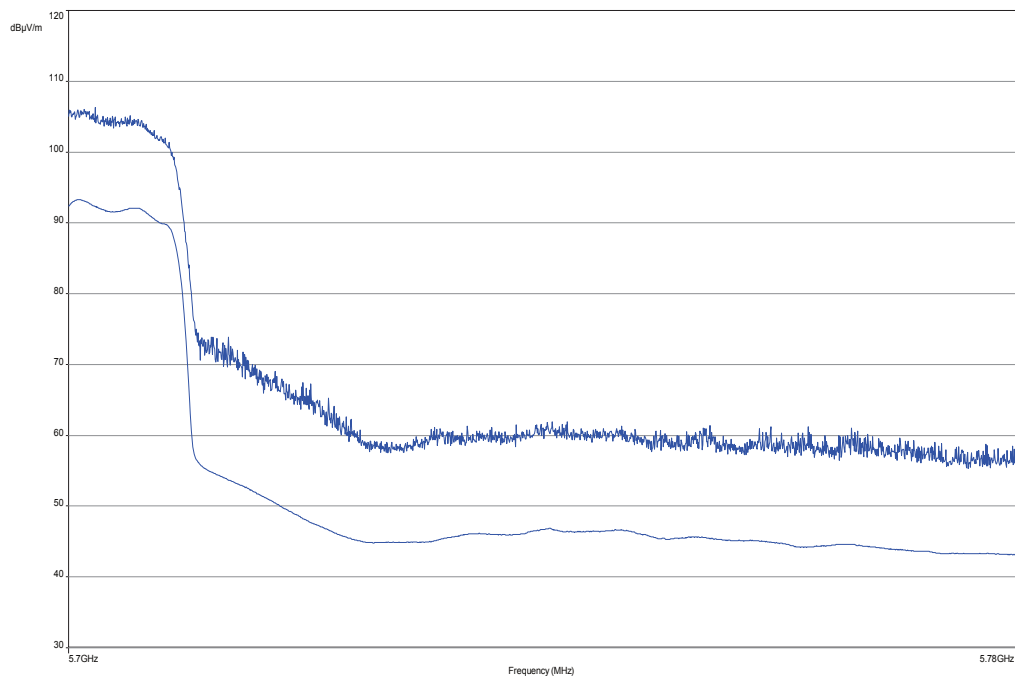
Plot 13: lower band edge, vertical & horizontal polarization (n mode), channel 100, according Part 15.247



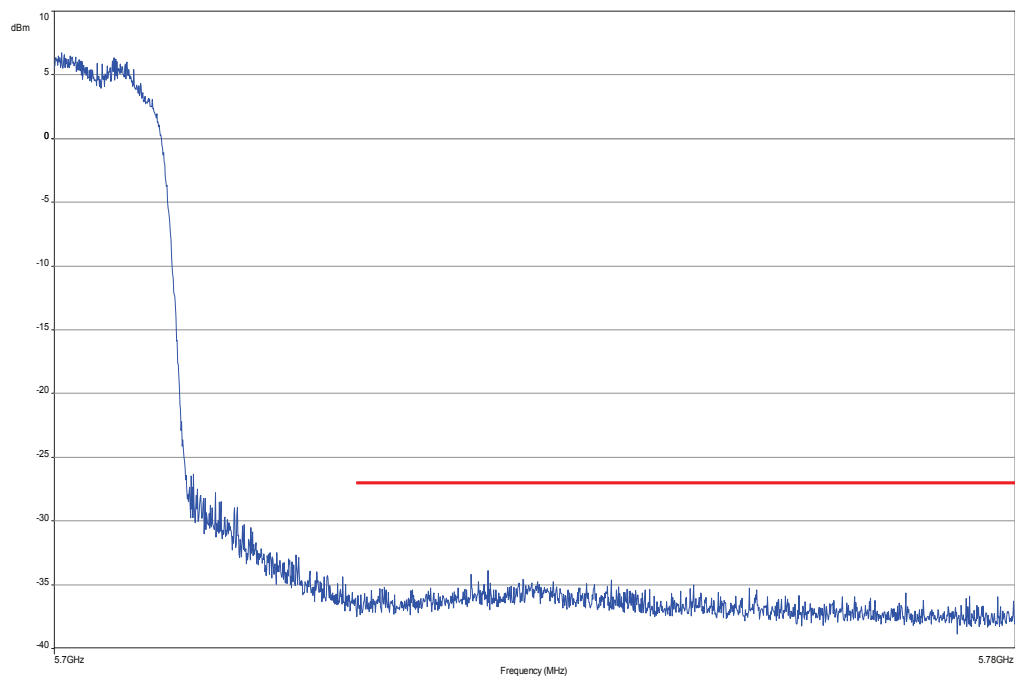
Plot 14: lower band edge, vertical & horizontal polarization (n mode), channel 100, according Part 15.407



Plot 15: upper band edge, vertical & horizontal polarization (n mode), channel 140, according Part 15.247



Plot 16: upper band edge, vertical & horizontal polarization (n mode), channel 140, according Part 15.407



Result: Passed

9.10 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 (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
§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 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!			All detected peak emissions above 1 GHz are below the average limit!			All detected peak emissions above 1 GHz are below the average limit!		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBμV/m] / dBm								
OFDM a – mode								
-/-			-/-			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 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!			All detected peak emissions above 1 GHz are below the average limit!			All detected peak emissions above 1 GHz are below the average limit!		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBμV/m] / dBm								
OFDM a – mode								
Lowest 5500 MHz			Middle 5600 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 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!			All detected peak emissions above 1 GHz are below the average limit!			All detected peak emissions above 1 GHz are below the average limit!		
Measurement uncertainty			± 3 dB					

Result: Passed

Results: OFDM / n – mode HT20

TX Spurious Emissions Radiated [dBμV/m] / dBm								
OFDM n – 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 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!			All detected peak emissions above 1 GHz are below the average limit!			All detected peak emissions above 1 GHz are below the average limit!		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBμV/m] / dBm								
OFDM n – mode HT20								
-/-			-/-			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 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!			All detected peak emissions above 1 GHz are below the average limit!			All detected peak emissions above 1 GHz are below the average limit!		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBμV/m] / dBm								
OFDM n – mode HT20								
Lowest 5500 MHz			Middle 5600 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 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!			All detected peak emissions above 1 GHz are below the average limit!			All detected peak emissions above 1 GHz are below the average limit!		
Measurement uncertainty			± 3 dB					

Result: Passed

Plots: OFDM / a – mode

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

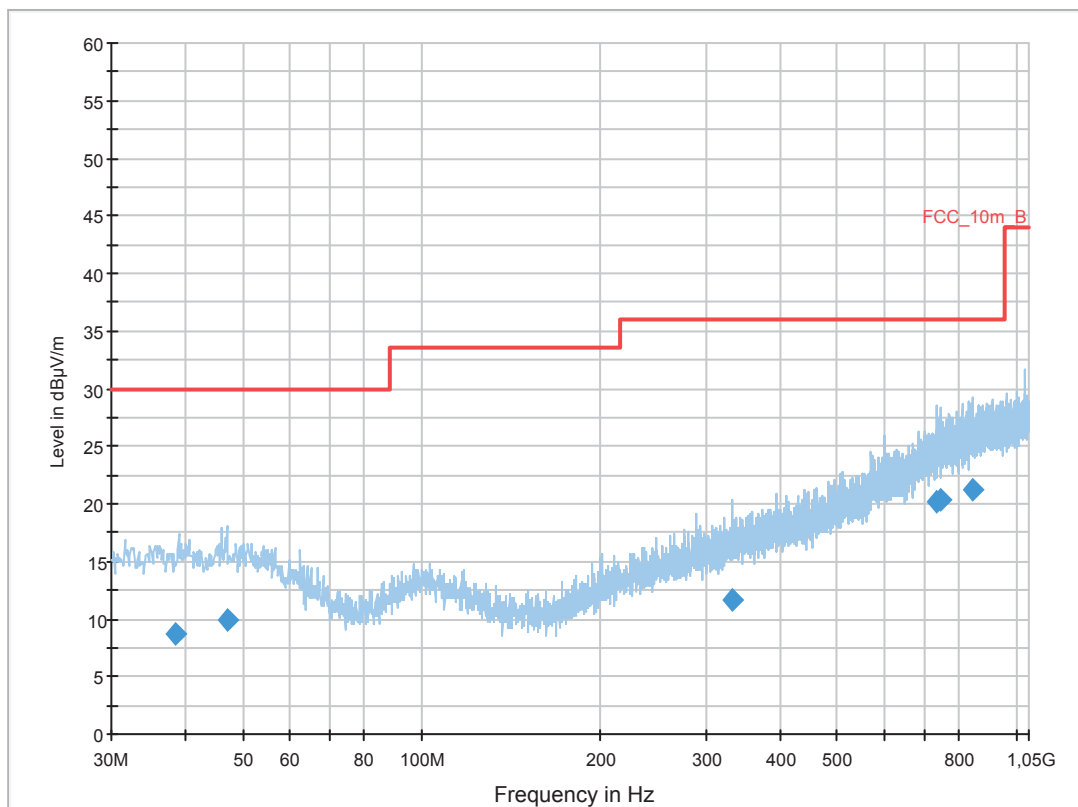
Common Information

EUT: RFM121LW
 Serial Number: lmei:990002430036317
 Test Description: FCC part 15 C class B @ 10 m
 Operating Conditions: w-lan a mode CH36 6Mbps
 Operator Name: Wolsdorfer
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

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

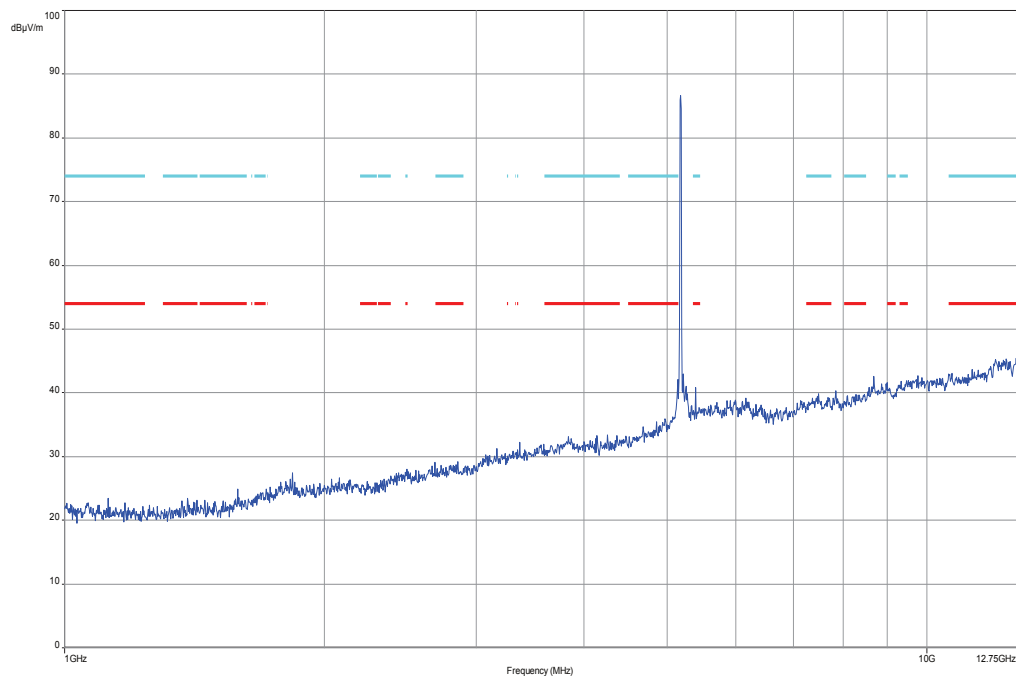
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



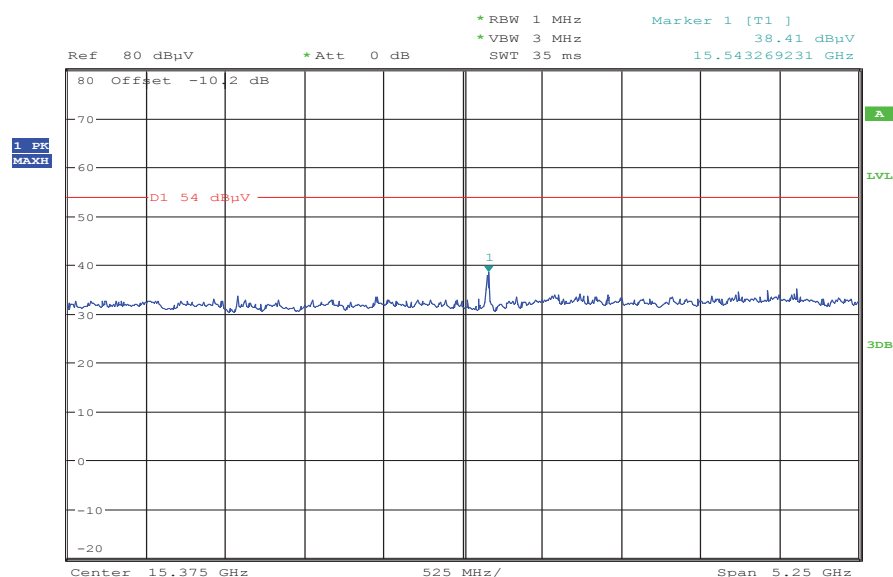
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)	Comment
38.586000	8.7	1000.0	120.000	170.0	H	273.0	13.3	21.3	30.0	
47.091900	9.9	1000.0	120.000	105.0	V	190.0	13.3	20.1	30.0	
333.750300	11.7	1000.0	120.000	170.0	H	10.0	15.6	24.3	36.0	
733.233450	20.1	1000.0	120.000	161.0	V	178.0	23.3	15.9	36.0	
747.445800	20.3	1000.0	120.000	170.0	H	2.0	23.6	15.7	36.0	
845.292300	21.2	1000.0	120.000	170.0	V	-9.0	24.5	14.8	36.0	

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

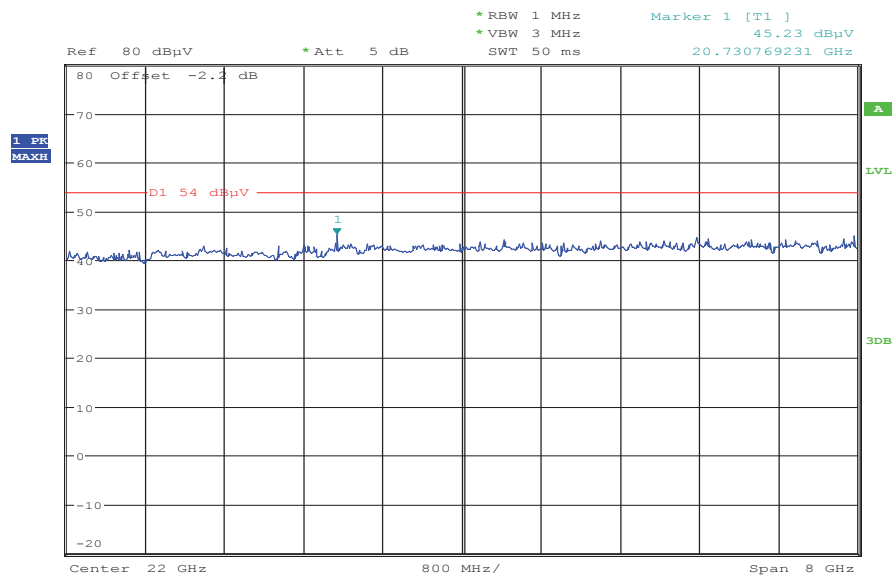


Plot 3: 12 GHz to 18 GHz, 5180 MHz, vertical & horizontal polarization



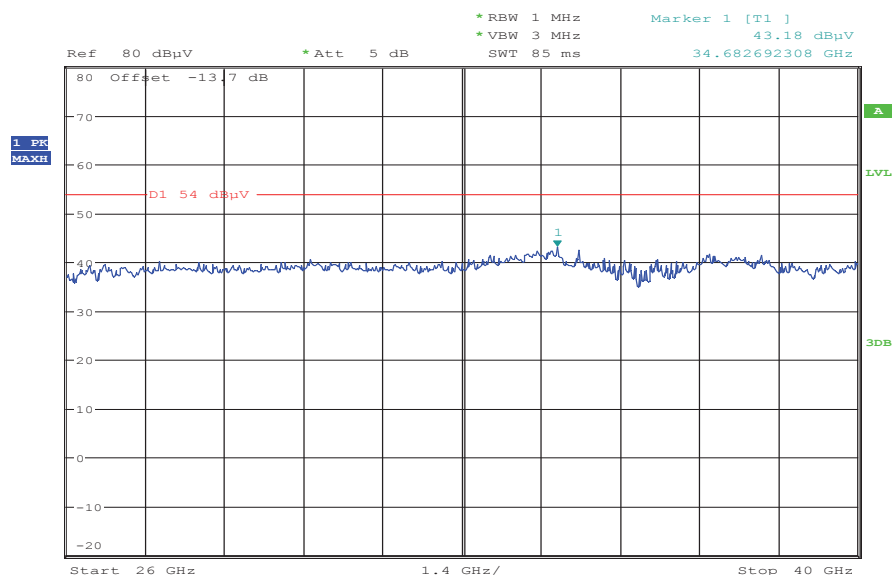
Date: 25.MAR.2013 09:56:19

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



Date: 25.MAR.2013 10:19:11

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



Date: 25.MAR.2013 10:37:25

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

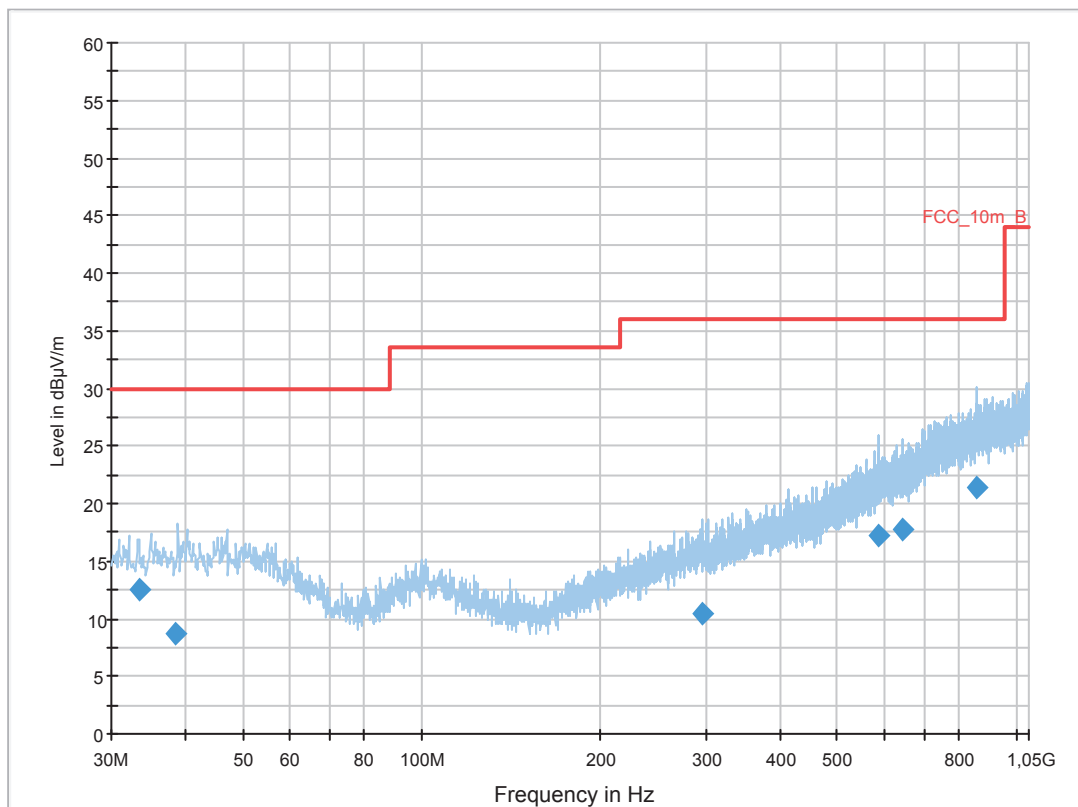
Common Information

EUT: RFM121LW
 Serial Number: lmei:990002430036317
 Test Description: FCC part 15 C class B @ 10 m
 Operating Conditions: w-lan a mode CH48 6Mbps
 Operator Name: Wolsdorfer
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

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

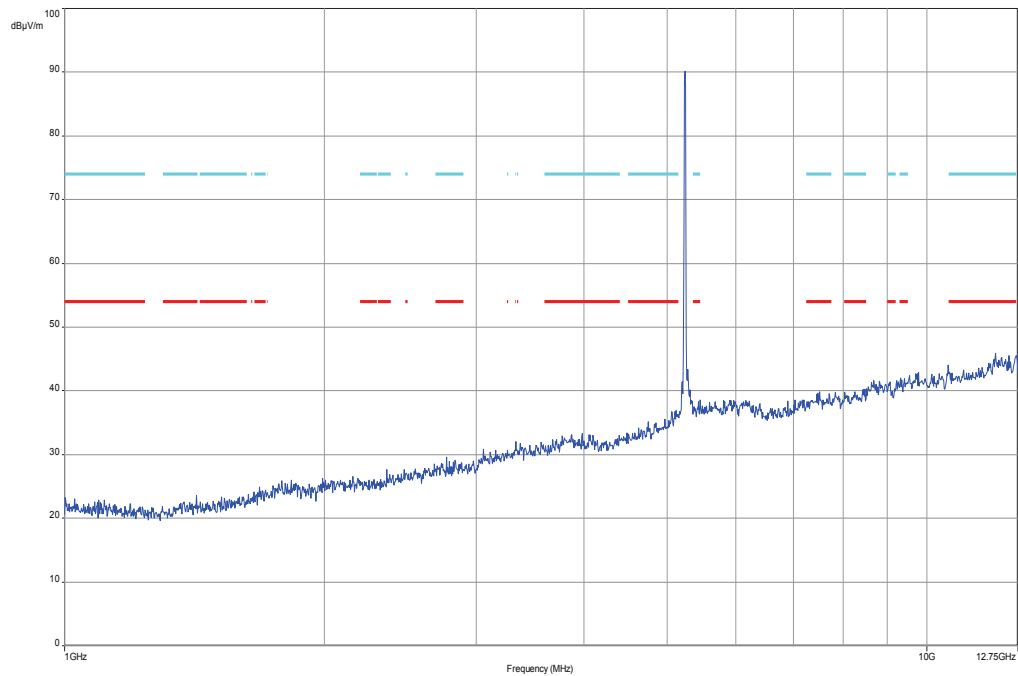
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



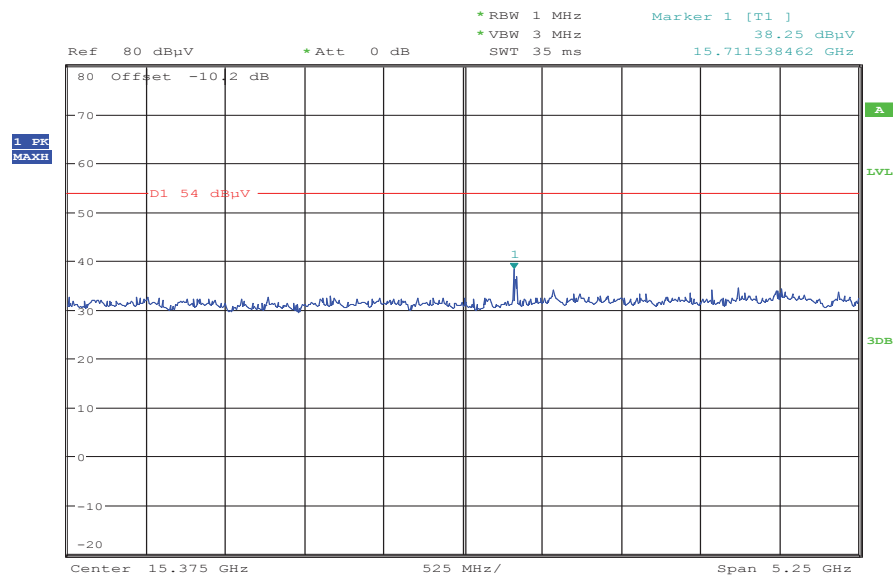
Final Result 1

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
33.371850	12.5	1000.0	120.000	98.0	V	-9.0	12.9	17.5	30.0	
38.455200	8.8	1000.0	120.000	170.0	V	81.0	13.3	21.2	30.0	
296.852100	10.4	1000.0	120.000	98.0	V	280.0	14.4	25.6	36.0	
584.447100	17.2	1000.0	120.000	170.0	V	2.0	20.4	18.8	36.0	
644.650500	17.8	1000.0	120.000	98.0	H	261.0	21.1	18.2	36.0	
855.618600	21.4	1000.0	120.000	161.0	H	10.0	24.6	14.6	36.0	

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

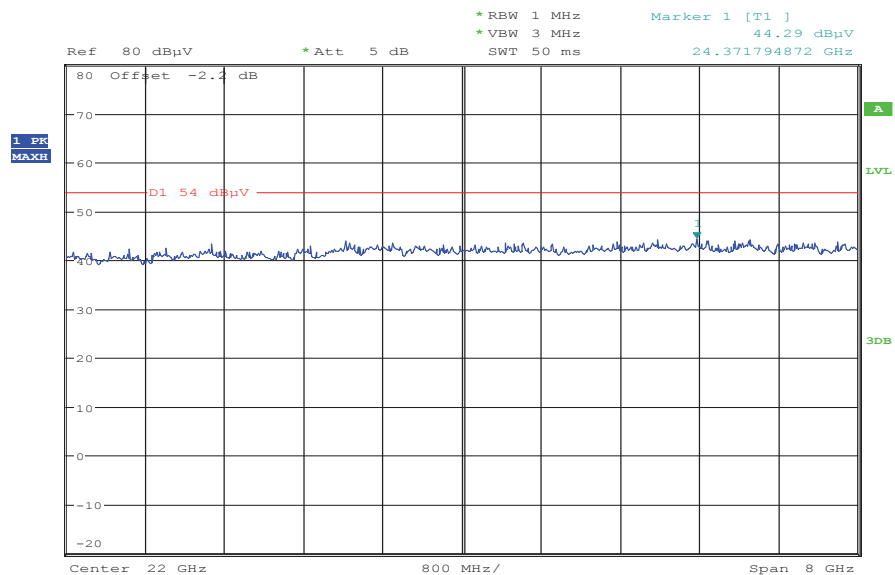


Plot 8: 12 GHz to 18 GHz, 5240 MHz, vertical & horizontal polarization



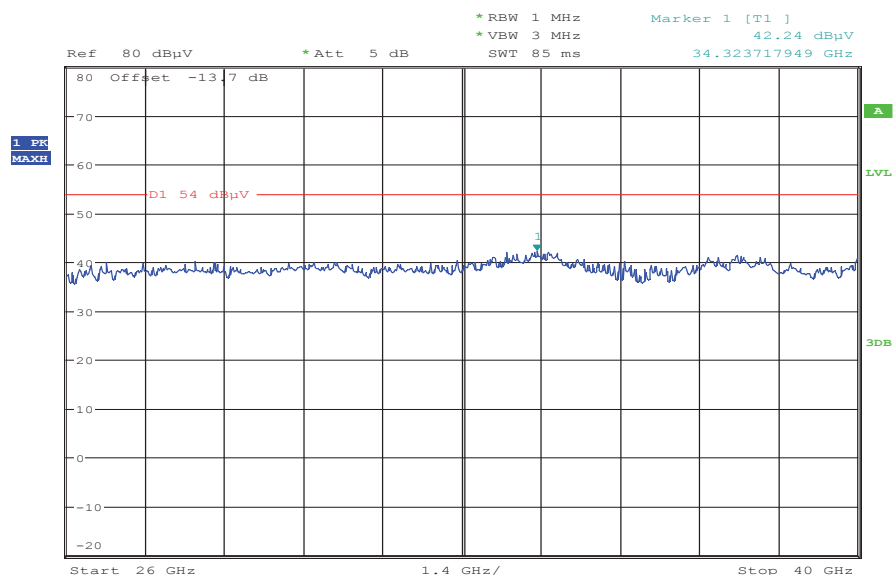
Date: 25.MAR.2013 09:57:29

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



Date: 25.MAR.2013 10:20:34

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



Date: 25.MAR.2013 10:38:51

Plot 11: 30 MHz to 1 GHz, 5320 MHz, vertical & horizontal polarization

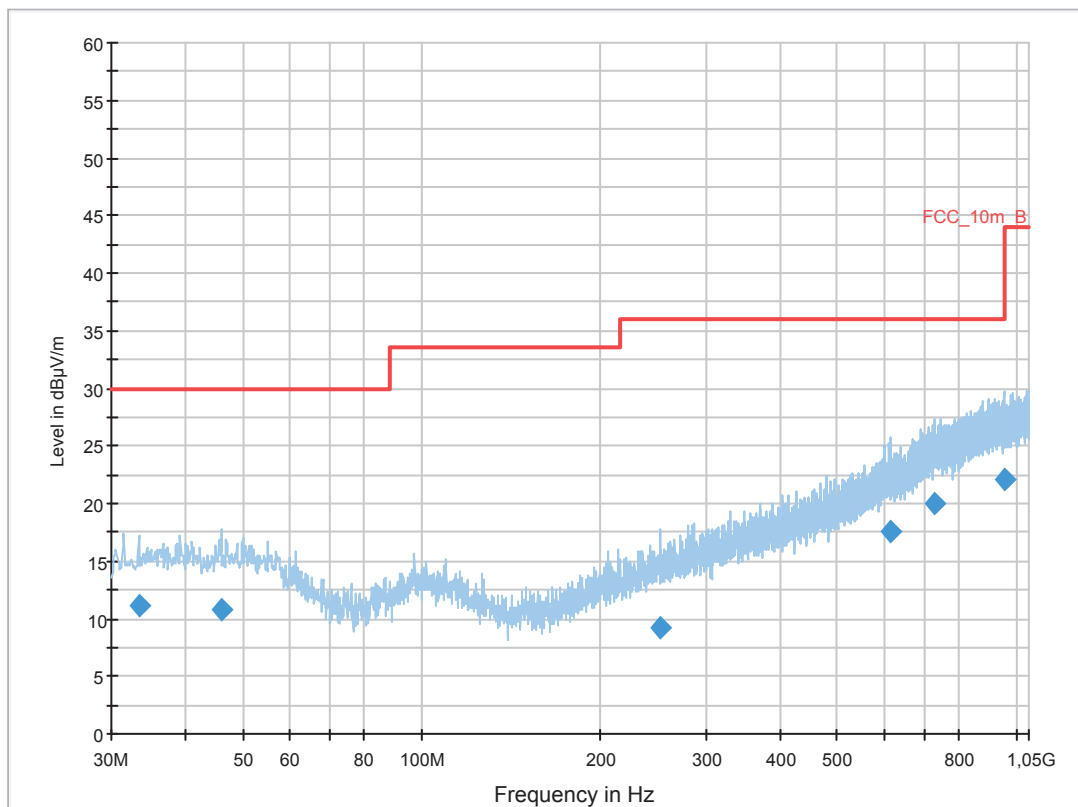
Common Information

EUT: RFM121LW
 Serial Number: lmei:990002430036317
 Test Description: FCC part 15 C class B @ 10 m
 Operating Conditions: w-lan a mode CH64 6Mbps
 Operator Name: Wolsdorfer
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

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

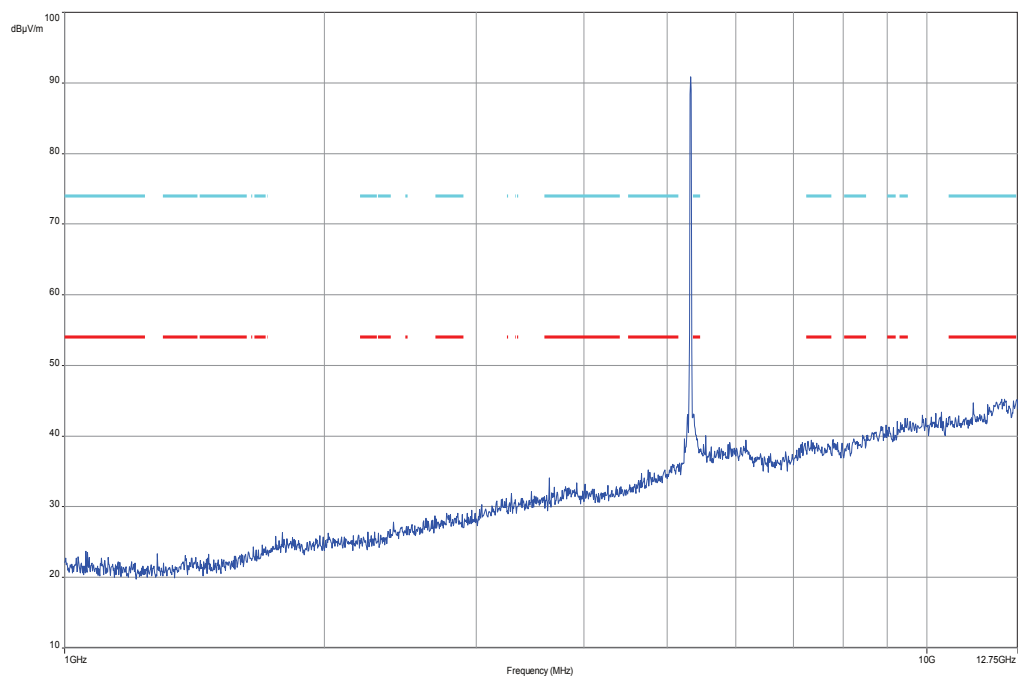
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



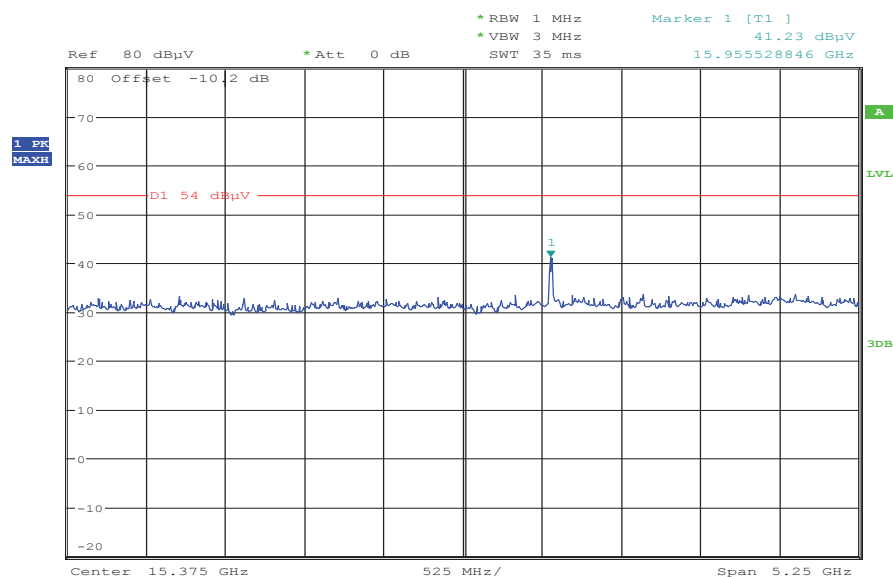
Final Result 1

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
33.423300	11.1	1000.0	120.000	98.0	V	88.0	12.9	19.0	30.0	
46.061550	10.7	1000.0	120.000	98.0	V	88.0	13.3	19.3	30.0	
251.162700	9.2	1000.0	120.000	170.0	V	270.0	13.3	26.8	36.0	
613.824000	17.5	1000.0	120.000	170.0	V	85.0	20.9	18.5	36.0	
729.037950	20.0	1000.0	120.000	170.0	V	-10.0	23.2	16.0	36.0	
953.246100	22.0	1000.0	120.000	170.0	H	10.0	25.4	14.0	36.0	

Plot 12: 1 GHz to 12.75 GHz, 5320 MHz, vertical & horizontal polarization

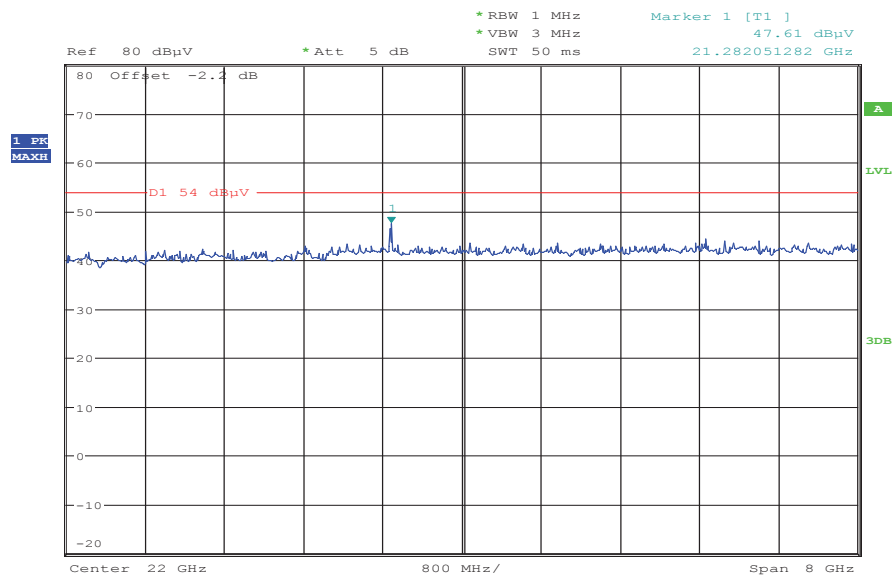


Plot 13: 12 GHz to 18 GHz, 5320 MHz, vertical & horizontal polarization



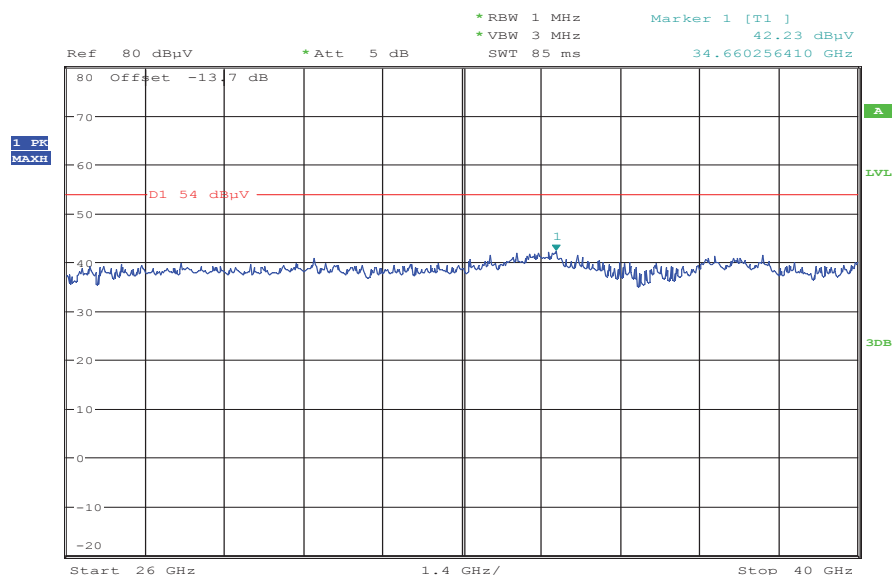
Date: 25.MAR.2013 09:58:37

Plot 14: 18 GHz to 26 GHz, 5320 MHz, vertical & horizontal polarization



Date: 25.MAR.2013 10:21:35

Plot 15: 26 GHz to 40 GHz, 5320 MHz, vertical & horizontal polarization



Date: 25.MAR.2013 10:40:07

Plot 16: 30 MHz to 1 GHz, 5500 MHz, vertical & horizontal polarization

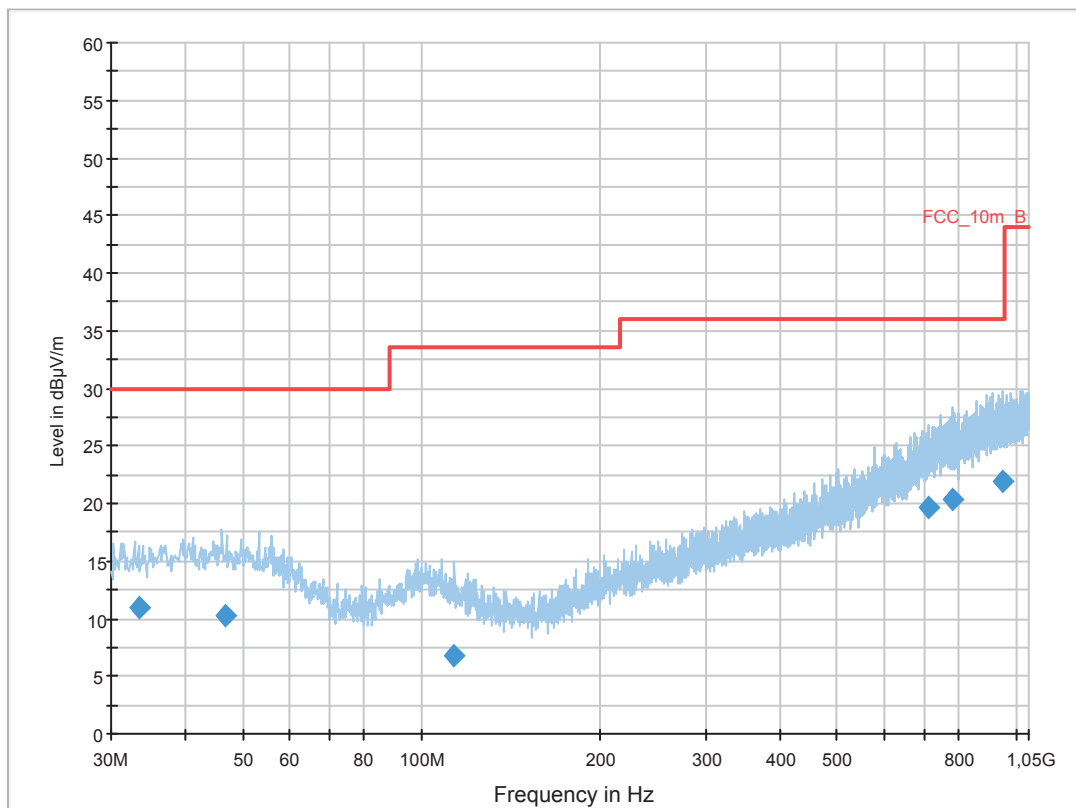
Common Information

EUT: RFM121LW
 Serial Number: lmei:990002430036317
 Test Description: FCC part 15 C class B @ 10 m
 Operating Conditions: w-lan a mode CH100 6Mbps
 Operator Name: Wolsdorfer
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

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

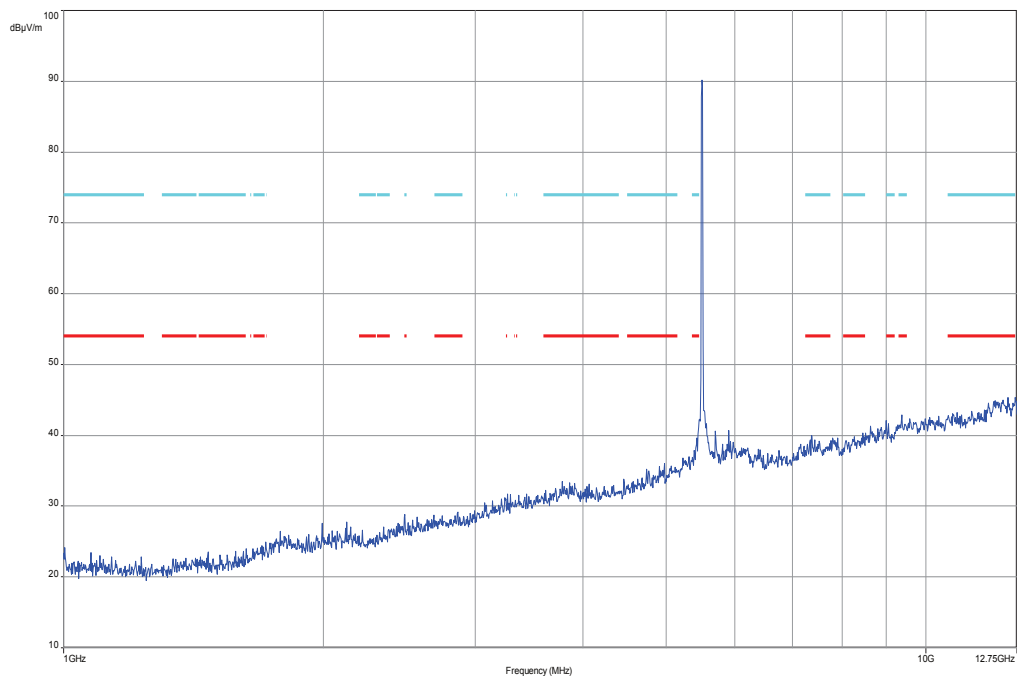
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



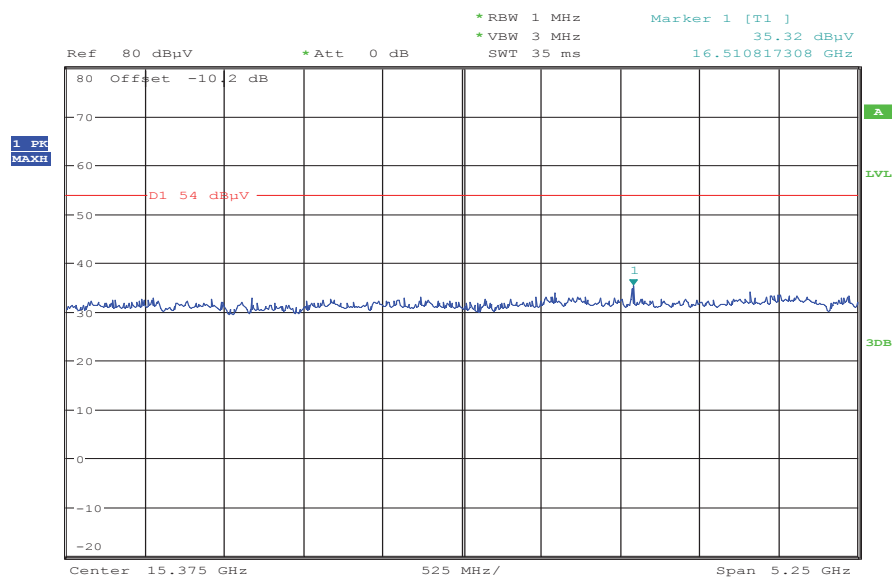
Final Result 1

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
33.322500	11.0	1000.0	120.000	170.0	V	182.0	12.9	19.0	30.0	
46.630350	10.2	1000.0	120.000	98.0	V	261.0	13.3	19.8	30.0	
113.109300	6.8	1000.0	120.000	170.0	V	92.0	10.8	26.7	33.5	
711.024750	19.6	1000.0	120.000	98.0	H	280.0	22.8	16.4	36.0	
778.975500	20.4	1000.0	120.000	170.0	H	93.0	23.7	15.6	36.0	
952.008450	22.0	1000.0	120.000	170.0	V	190.0	25.4	14.0	36.0	

Plot 17: 1 GHz to 12.75 GHz, 5500 MHz, vertical & horizontal polarization

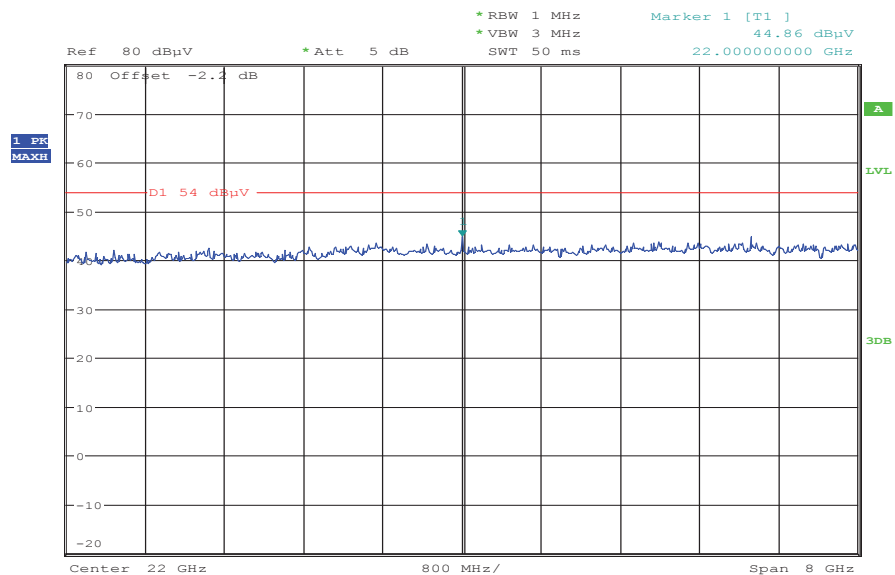


Plot 18: 12 GHz to 18 GHz, 5500 MHz, vertical & horizontal polarization



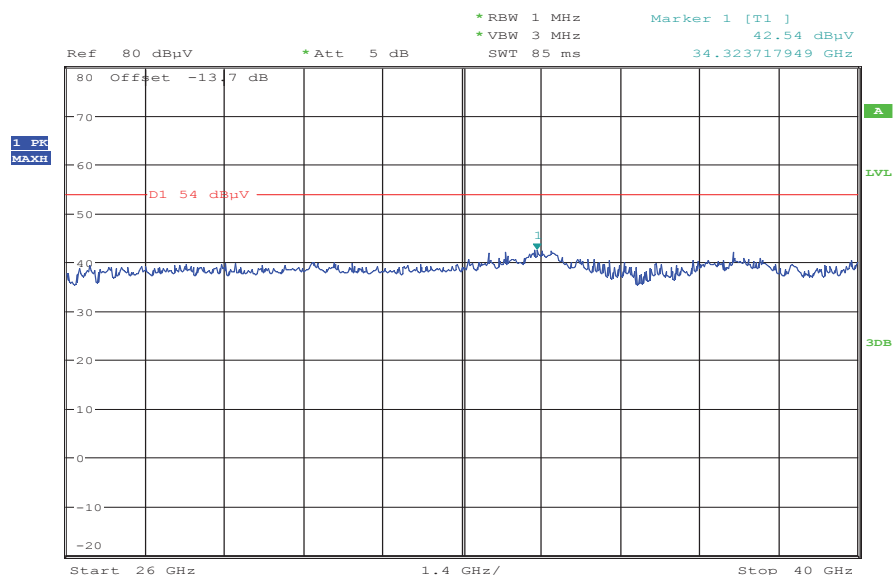
Date: 25.MAR.2013 09:59:37

Plot 19: 18 GHz to 26 GHz, 5500 MHz, vertical & horizontal polarization



Date: 25.MAR.2013 10:22:39

Plot 20: 26 GHz to 40 GHz, 5500 MHz, vertical & horizontal polarization



Date: 25.MAR.2013 10:41:36

Plot 21: 30 MHz to 1 GHz, 5600 MHz, vertical & horizontal polarization

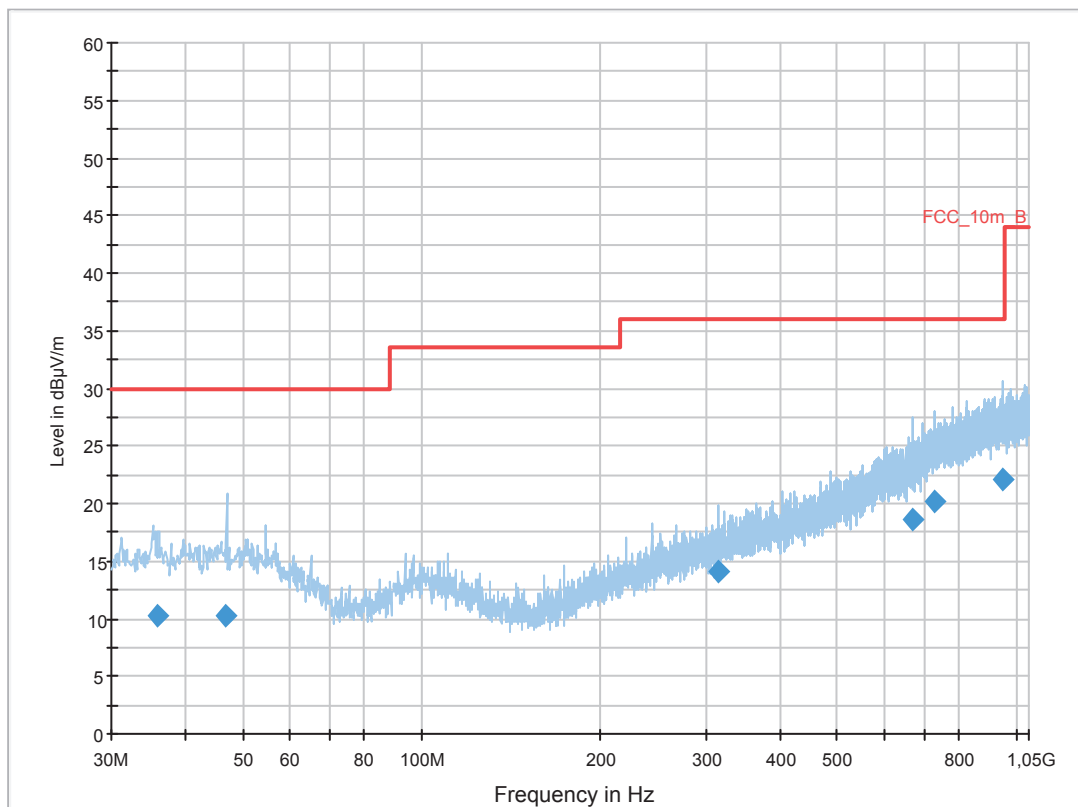
Common Information

EUT: RFM121LW
 Serial Number: lmei:990002430036317
 Test Description: FCC part 15 C class B @ 10 m
 Operating Conditions: w-lan a mode CH120 6Mbps
 Operator Name: Wolsdorfer
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

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

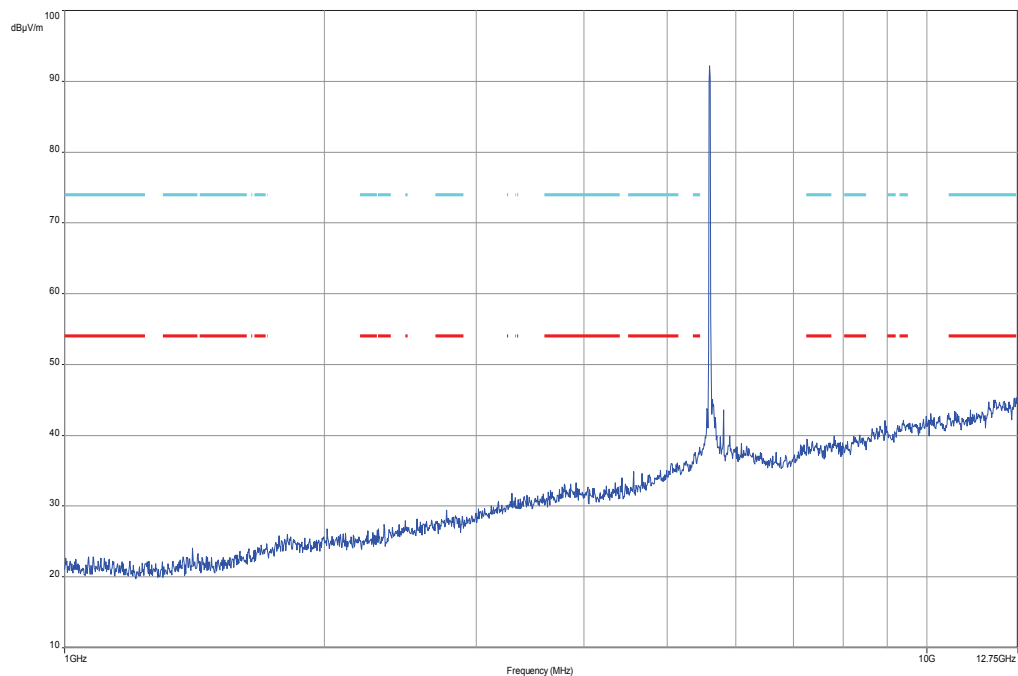
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



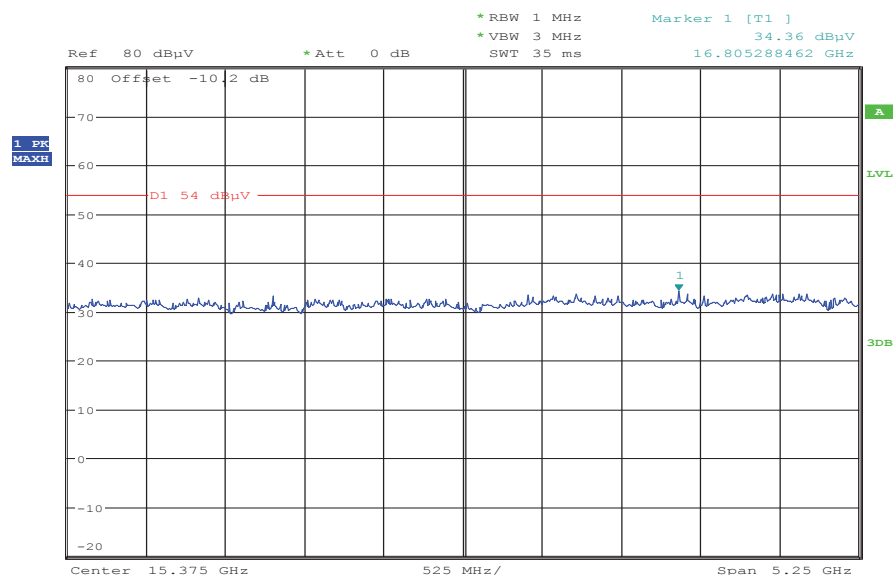
Final Result 1

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
35.753100	10.3	1000.0	120.000	111.0	V	-10.0	13.1	19.7	30.0	
46.631400	10.3	1000.0	120.000	104.0	V	190.0	13.3	19.7	30.0	
315.018300	14.0	1000.0	120.000	104.0	V	10.0	15.0	22.0	36.0	
667.717650	18.5	1000.0	120.000	170.0	V	100.0	21.6	17.5	36.0	
729.147300	20.2	1000.0	120.000	170.0	H	-10.0	23.2	15.8	36.0	
949.452750	22.2	1000.0	120.000	170.0	H	261.0	25.3	13.8	36.0	

Plot 22: 1 GHz to 12.75 GHz, 5600 MHz, vertical & horizontal polarization

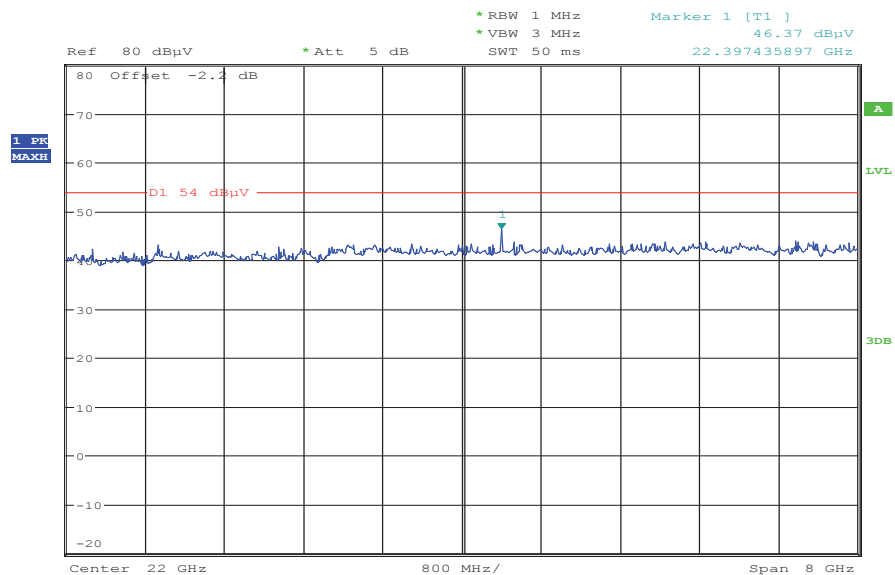


Plot 23: 12 GHz to 18 GHz, 5600 MHz, vertical & horizontal polarization



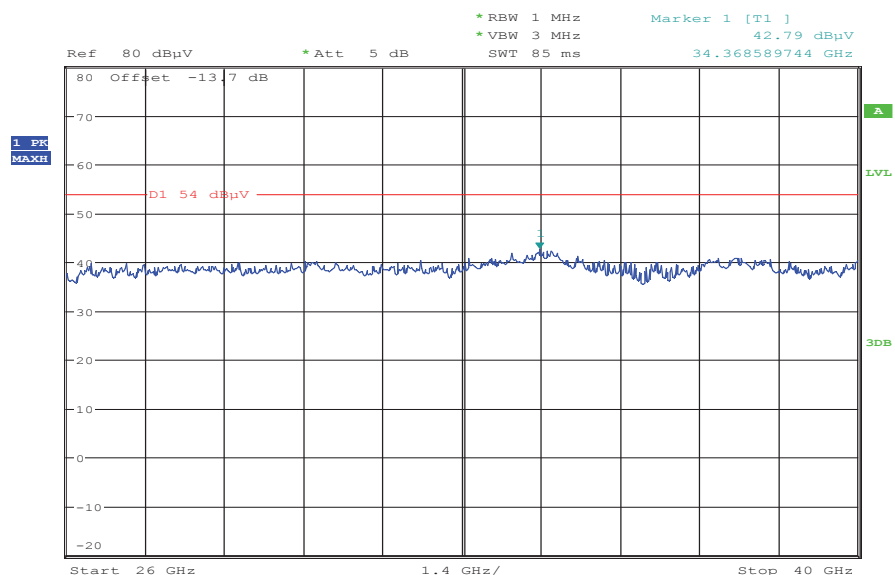
Date: 25.MAR.2013 10:00:55

Plot 24: 18 GHz to 26 GHz, 5600 MHz, vertical & horizontal polarization



Date: 25.MAR.2013 10:23:29

Plot 25: 26 GHz to 40 GHz, 5600 MHz, vertical & horizontal polarization



Date: 25.MAR.2013 10:43:28

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

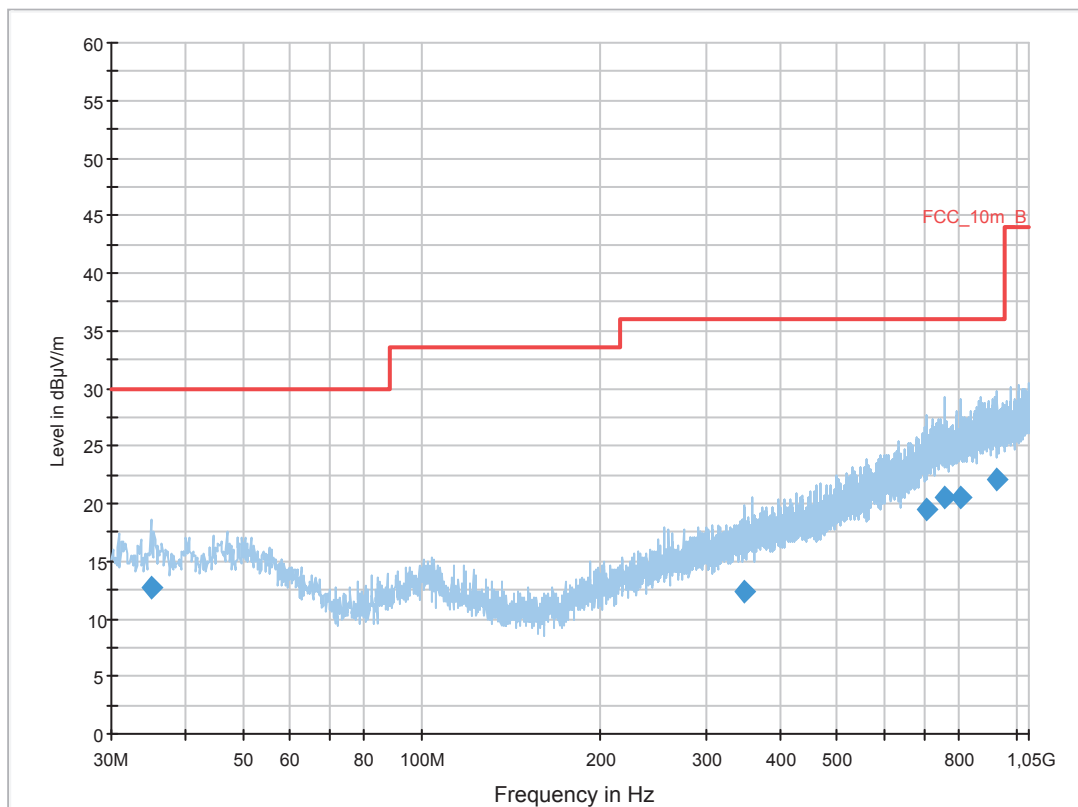
Common Information

EUT: RFM121LW
 Serial Number: lmei:990002430036317
 Test Description: FCC part 15 C class B @ 10 m
 Operating Conditions: w-lan a mode CH140 6Mbps
 Operator Name: Wolsdorfer
 Comment: battery powered

Scan Setup: STAN_Fin [EMI radiated]

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

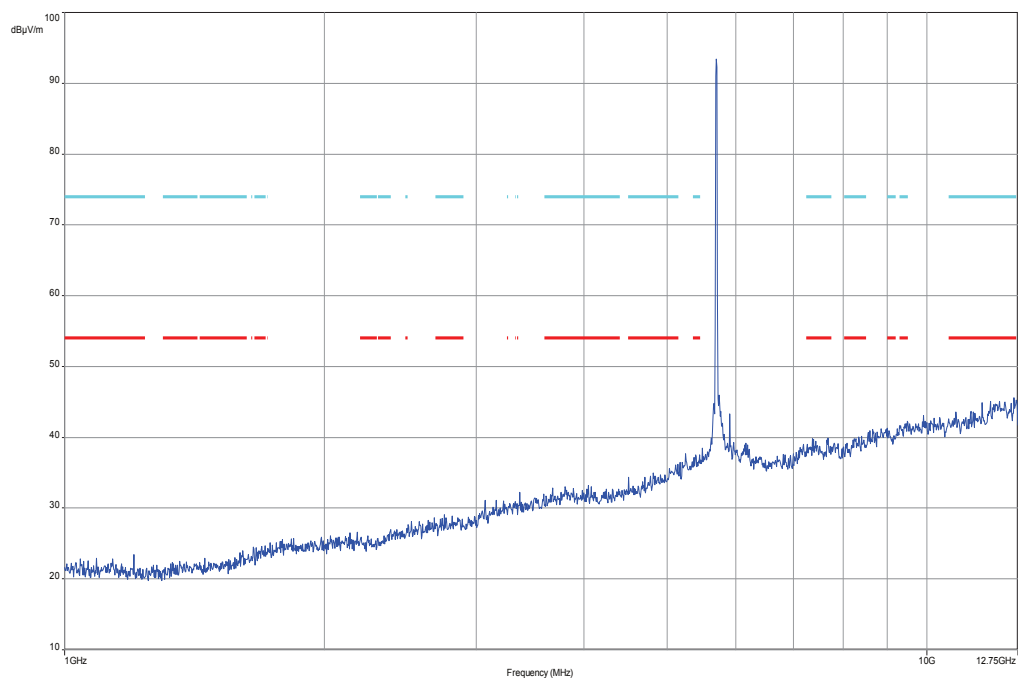
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



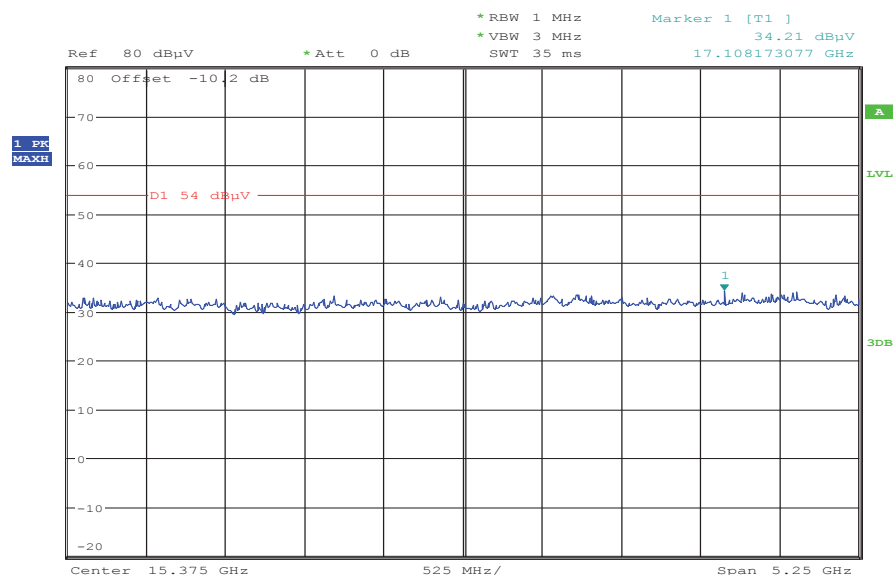
Final Result 1

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
35.005950	12.7	1000.0	120.000	170.0	V	-10.0	13.0	17.3	30.0	
347.922000	12.4	1000.0	120.000	170.0	V	176.0	16.0	23.6	36.0	
704.384550	19.5	1000.0	120.000	170.0	V	10.0	22.6	16.5	36.0	
756.543900	20.5	1000.0	120.000	170.0	H	-10.0	23.7	15.5	36.0	
804.467550	20.6	1000.0	120.000	131.0	V	280.0	23.9	15.4	36.0	
930.496200	22.1	1000.0	120.000	170.0	V	-9.0	25.3	13.9	36.0	

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

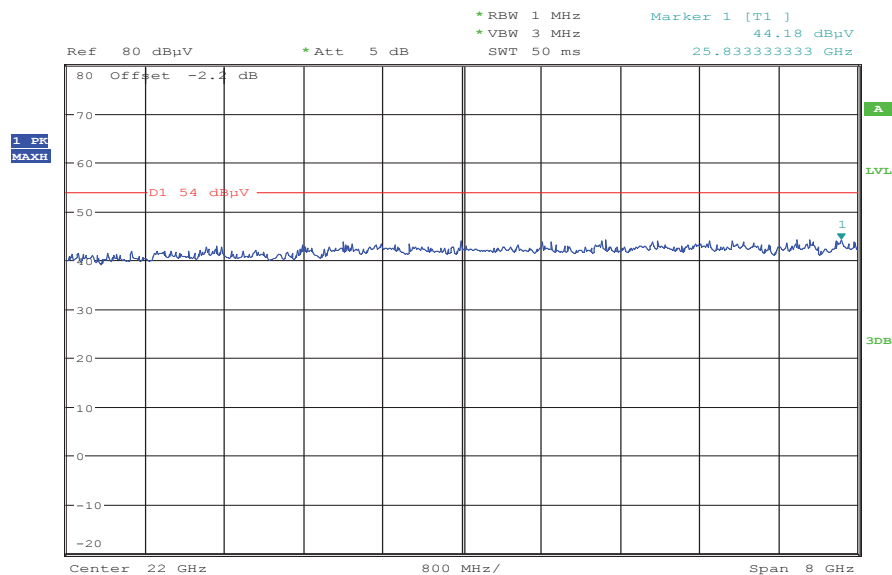


Plot 28: 12 GHz to 18 GHz, 5700 MHz, vertical & horizontal polarization



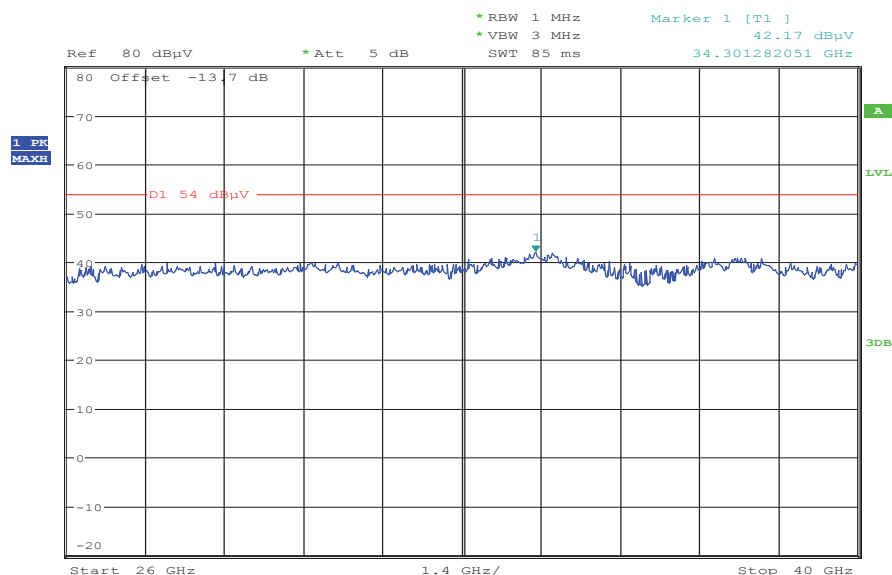
Date: 25.MAR.2013 10:02:15

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



Date: 25.MAR.2013 10:24:55

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



Date: 25.MAR.2013 10:44:55

Plots: OFDM / n – mode HT20

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

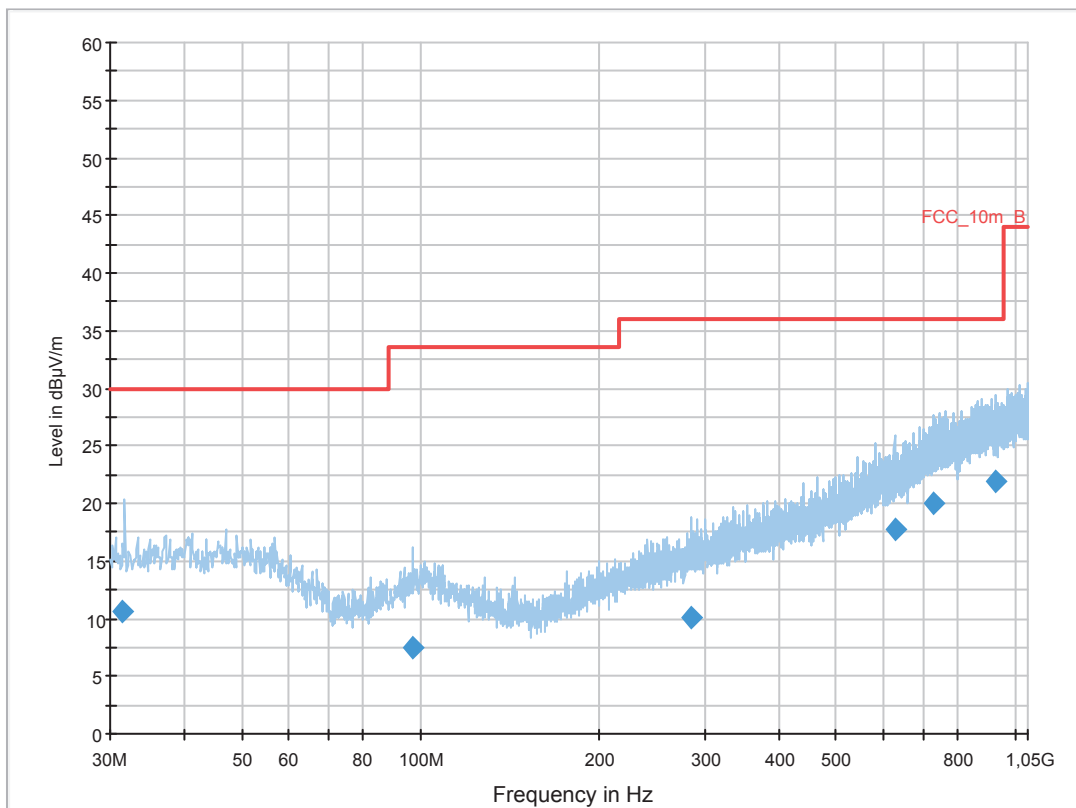
Common Information

EUT:	RFM121LW
Serial Number:	Imei:990002430036317
Test Description:	FCC part 15 C class B @ 10 m
Operating Conditions:	w-lan n mode CH36 mcs0
Operator Name:	Wolsdorfer
Comment:	battery powered

Scan Setup: STAN_Fin [EMI radiated]

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

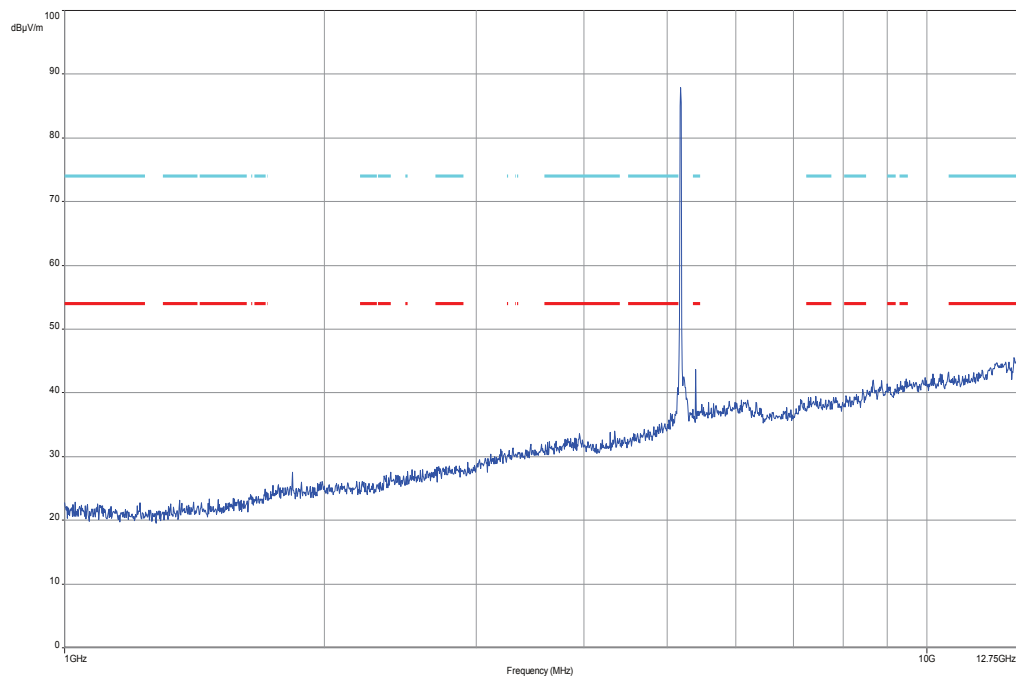
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2 GHz	60 kHz	QPK	120 kHz	1 s	20 dB



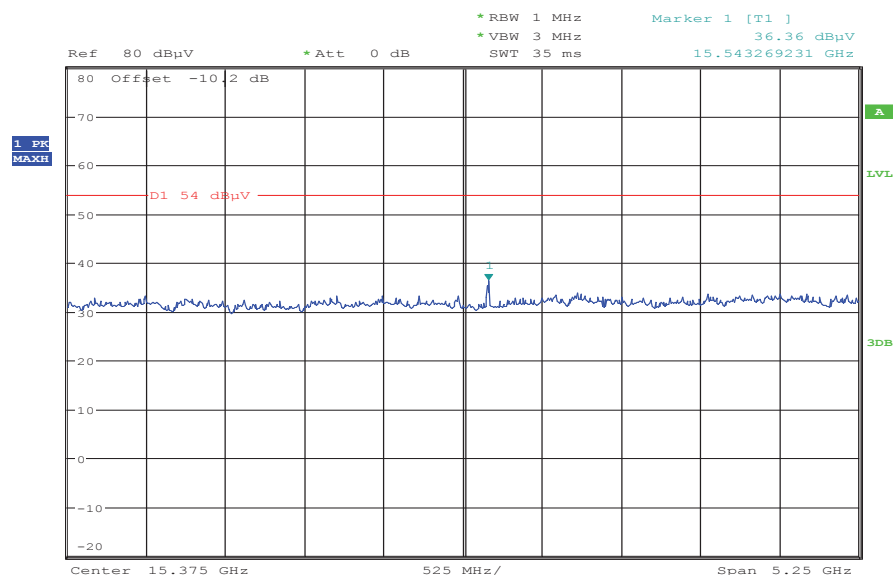
Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth h (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)	Comment
31.309050	10.5	1000.0	120.000	98.0	V	-10.0	12.6	19.5	30.0	
97.117950	7.6	1000.0	120.000	170.0	V	-10.0	11.5	25.9	33.5	
285.437850	10.1	1000.0	120.000	145.0	V	-10.0	14.2	25.9	36.0	
626.777700	17.7	1000.0	120.000	170.0	H	2.0	21.0	18.3	36.0	
729.554400	20.0	1000.0	120.000	155.0	V	10.0	23.2	16.0	36.0	
927.863400	21.9	1000.0	120.000	170.0	V	92.0	25.3	14.1	36.0	

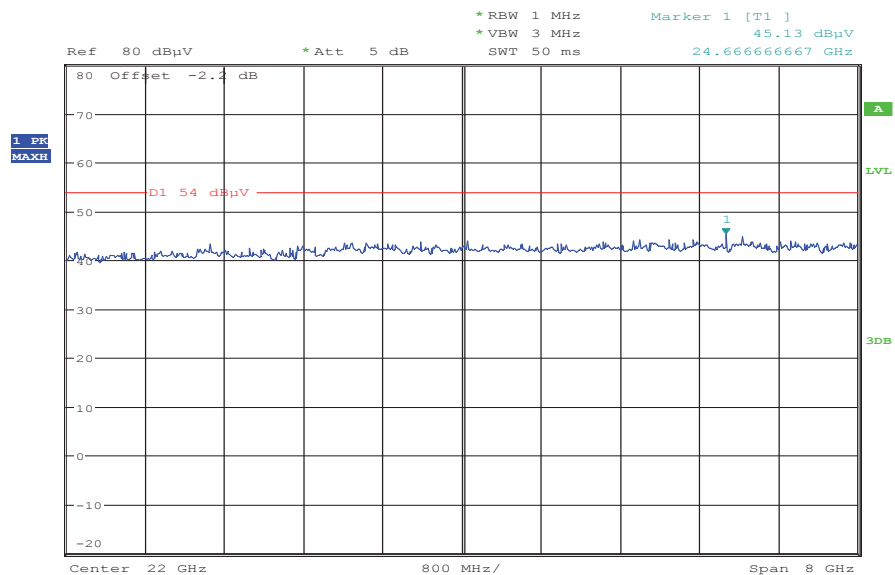
Plot 2: 1 GHz to 12.75 GHz, 5180 MHz, vertical & horizontal polarization



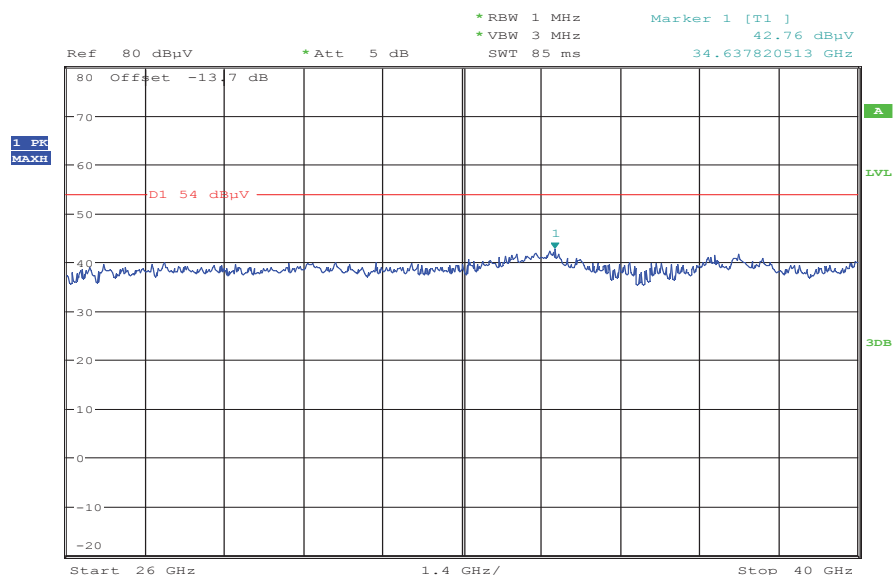
Plot 3: 12 GHz to 18 GHz, 5180 MHz, vertical & horizontal polarization



Date: 25.MAR.2013 10:05:06

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

Date: 25.MAR.2013 10:26:53

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

Date: 25.MAR.2013 10:47:16

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

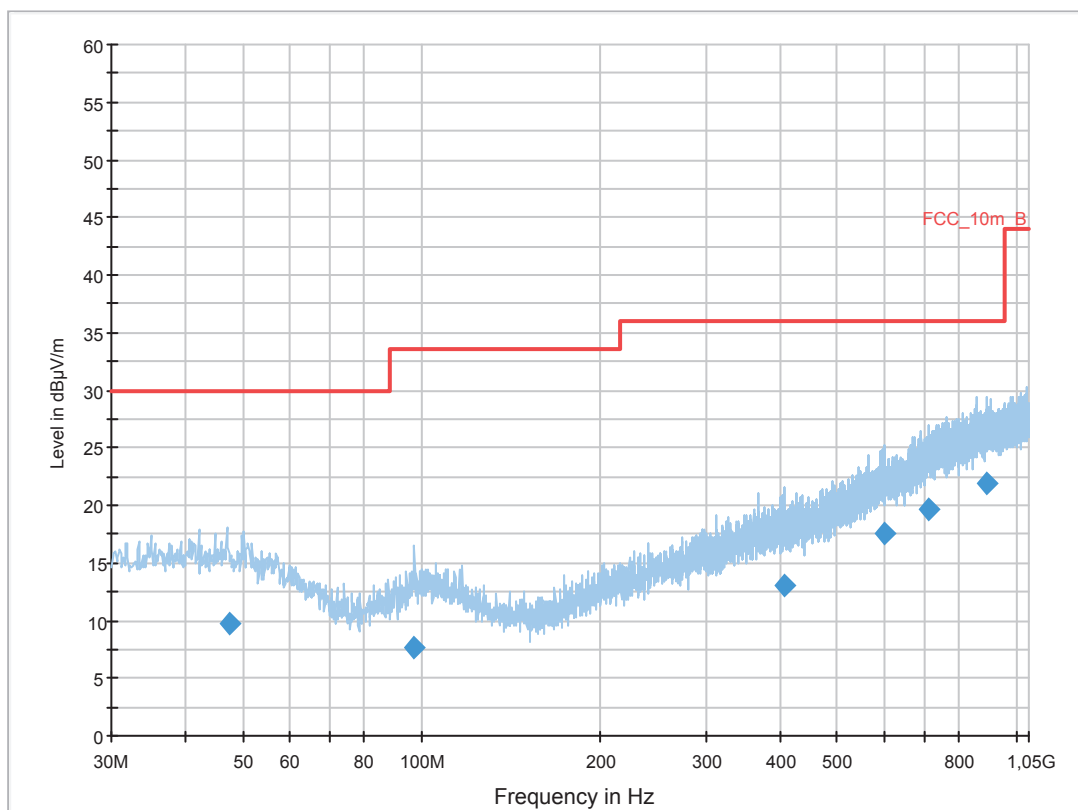
Common Information

EUT: RFM121LW
 Serial Number: lmei:990002430036317
 Test Description: FCC part 15 C class B @ 10 m
 Operating Conditions: w-lan n mode CH48 mcs0
 Operator Name: Wolsdorfer
 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
47.375400	9.7	1000.0	120.000	98.0	V	260.0	13.3	20.3	30.0	
96.593850	7.6	1000.0	120.000	145.0	H	190.0	11.5	25.9	33.5	
408.266100	13.1	1000.0	120.000	170.0	V	182.0	17.0	22.9	36.0	
599.638950	17.6	1000.0	120.000	120.0	V	100.0	20.8	18.4	36.0	
712.255500	19.7	1000.0	120.000	98.0	V	272.0	22.8	16.3	36.0	
894.775200	21.8	1000.0	120.000	170.0	H	10.0	25.1	14.2	36.0	