

12.10 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	
According to: KDB789033 D02, G.	
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: 300 kHz F > 1 GHz: 3 MHz
Span:	30 MHz to 40 GHz
Trace mode:	Max Hold / Average with 100 counts + 20 log (1 / X) for duty cycle lower than 100 %
Used test setup:	see chapter 7.1 – A, 7.2 – A,B,C, 7.3 – A
Measurement uncertainty:	see chapter 9

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	

Plots in the range from 1 GHz to 12.75 GHz shows peak and RMS traces.

Results: OFDM / a – mode, antenna 1 + 2 active

TX Spurious Emissions Radiated [dB μ V/m] / dBm								
5180 MHz			5240 MHz			5260 MHz		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
5040	Peak	58.7	5040	Peak	58.3	5080	Peak	55.1
	AVG	52.1		AVG	49.7		AVG	47.7
5440	Peak	63.5	5080	Peak	59.7	5400	Peak	58.0
	AVG	53.0		AVG	52.5		AVG	48.6
			5360	Peak	64.0			
				AVG	53.0			
			5400	Peak	63.4			
				AVG	53.8			
5320 MHz			5500 MHz			5700 MHz		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
5040	Peak	54.0	5040	Peak	54.0	5080	Peak	57.4
	AVG	46.2		AVG	46.8		AVG	50.3
5080	Peak	55.0	5080	Peak	55.1	5400	Peak	62.5
	AVG	47.7		AVG	47.2		AVG	52.8
5745 MHz			5745 MHz			5825 MHz		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
5080	Peak	57.9	5000	Peak	61.6	5080	Peak	59.0
	AVG	50.1		AVG	49.0		AVG	52.6
5400	Peak	60.0	5400	Peak	61.9	5400	Peak	63.2
	AVG	51.2		AVG	51.9		AVG	53.8
			5440	Peak	60.3			
				AVG	50.0			

Results: OFDM / n HT20 – mode, antenna 1 + 2 active

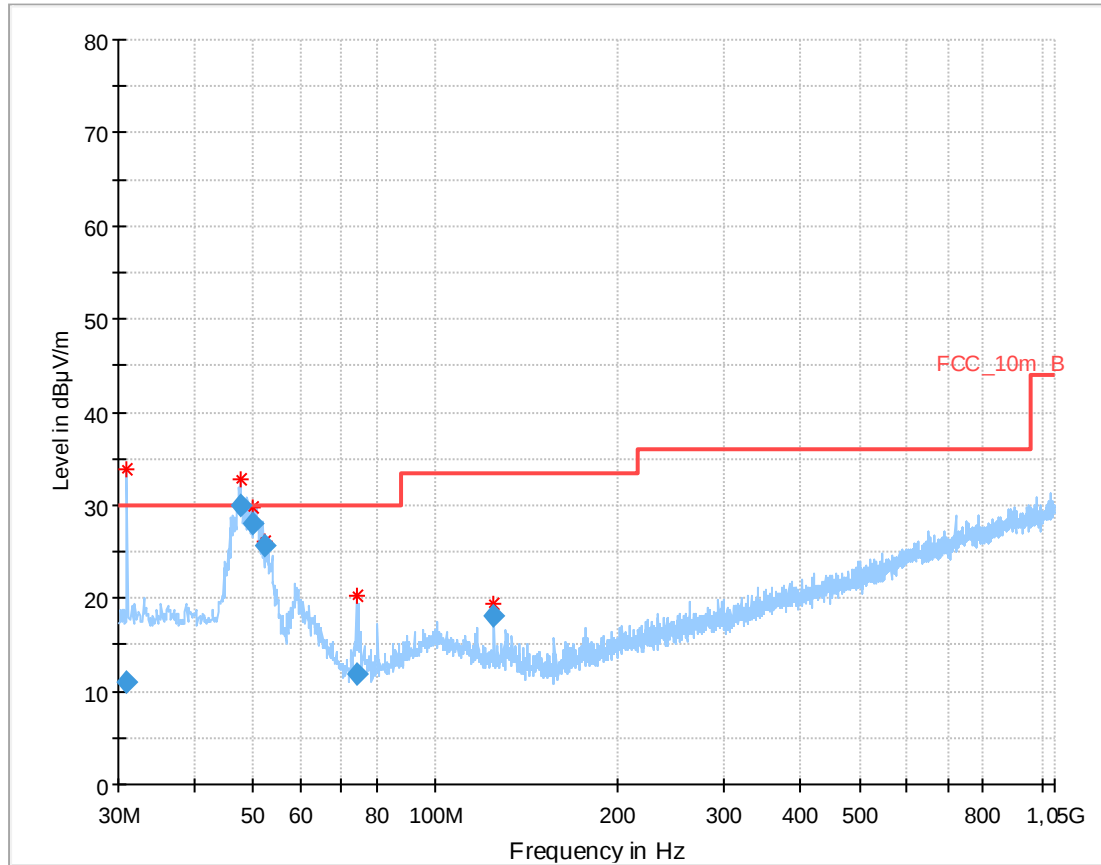
TX Spurious Emissions Radiated [dB μ V/m] / dBm								
5180 MHz			5240 MHz			5260 MHz		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
5080	Peak	54.7	5040	Peak	47.3	5040	Peak	57.2
	AVG	48.5		AVG	35.0		AVG	50.0
5400	Peak	58.0	5360	Peak	48.0	5360	Peak	62.7
	AVG	48.7		AVG	35.9		AVG	51.9
5320 MHz			5500 MHz			5700 MHz		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
4960	Peak	55.5	5360	Peak	62.2	5400	Peak	62.1
	AVG	48.3		AVG	51.9		AVG	52.4
5040	Peak	57.5	5400	Peak	61.7	5000	Peak	56.0
	AVG	49.6		AVG	52.3		AVG	47.0
5360	Peak	62.9						
	AVG	52.7						
5745 MHz			5785 MHz			5825 MHz		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
5000	Peak	61.1	5360	Peak	62.5	5000	Peak	61.5
	AVG	48.9		AVG	53.9		AVG	48.9
5400	Peak	61.7				5080	Peak	57.9
	AVG	52.4					AVG	47.5
						5400	Peak	62.0
							AVG	52.2
						5440	Peak	61.3
							AVG	50.7

Results: OFDM / n HT40 – mode, antenna 1 + 2 active

TX Spurious Emissions Radiated [dB μ V/m] / dBm								
5190 MHz			5230 MHz			5270 MHz		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
5000	Peak	61.4	5000	Peak	60.6	5000	Peak	61.2
	AVG	48.7		AVG	47.7		AVG	48.6
5400	Peak	61.6	5400	Peak	61.8	5400	Peak	62.0
	AVG	51.0		AVG	52.3		AVG	52.2
5310 MHz			5510 MHz			5670 MHz		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
5000	Peak	61.1	5000	Peak	61.1	5040	Peak	55.2
	AVG	48.6		AVG	48.6		AVG	46.4
5400	Peak	62.0	5400	Peak	61.5	5400	Peak	62.0
	AVG	51.7		AVG	50.8		AVG	51.9
5755 MHz			5795 MHz			-/-		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
5000	Peak	61.7	5000	Peak	58.5	-/-		
	AVG	48.8		AVG	48.5			
5400	Peak	62.0	5400	Peak	63.5			
	AVG	52.1		AVG	52.6			

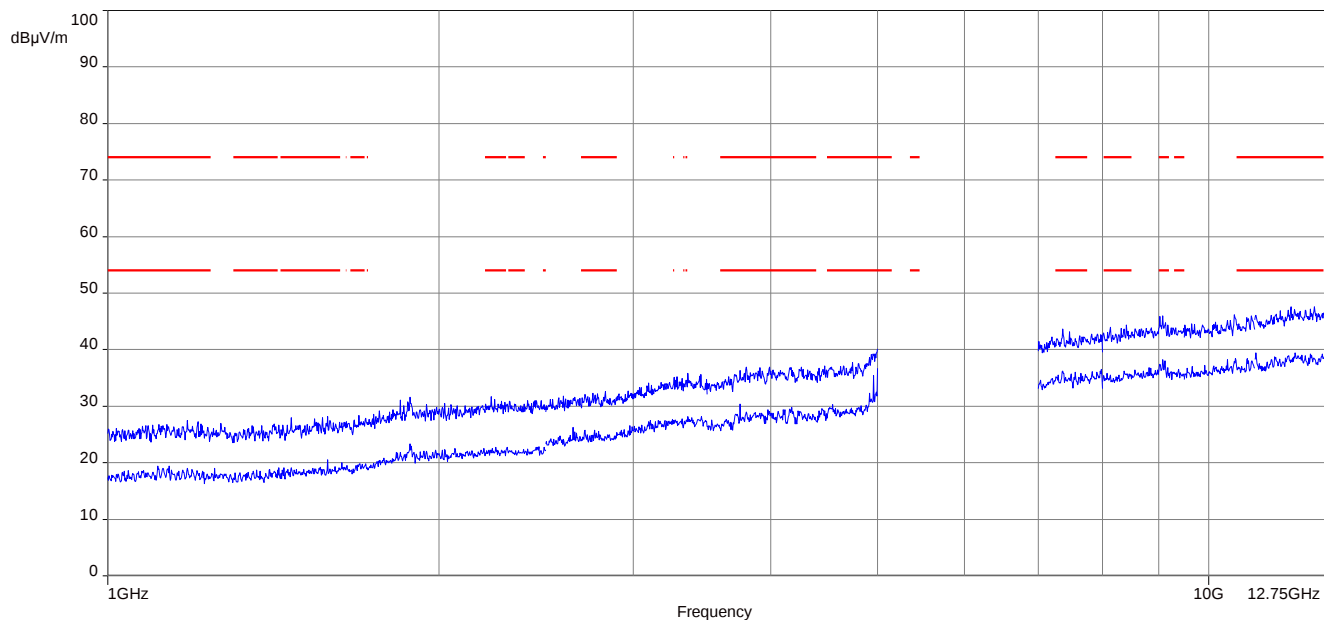
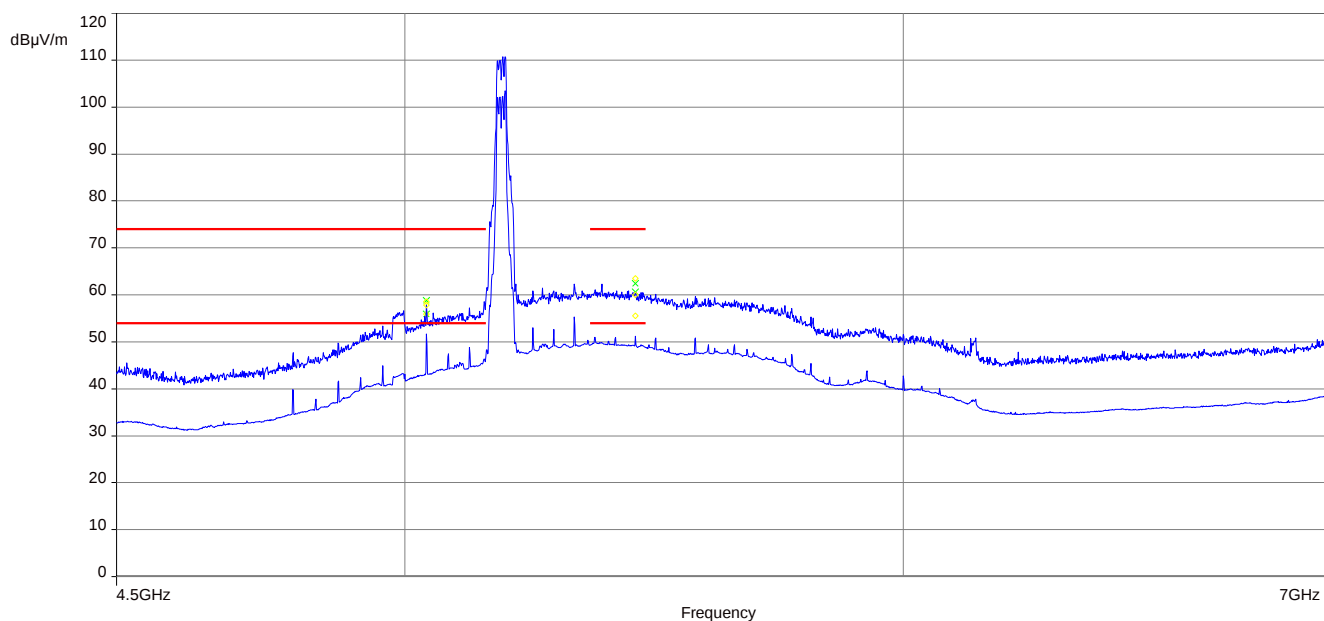
Plots: OFDM / a – mode

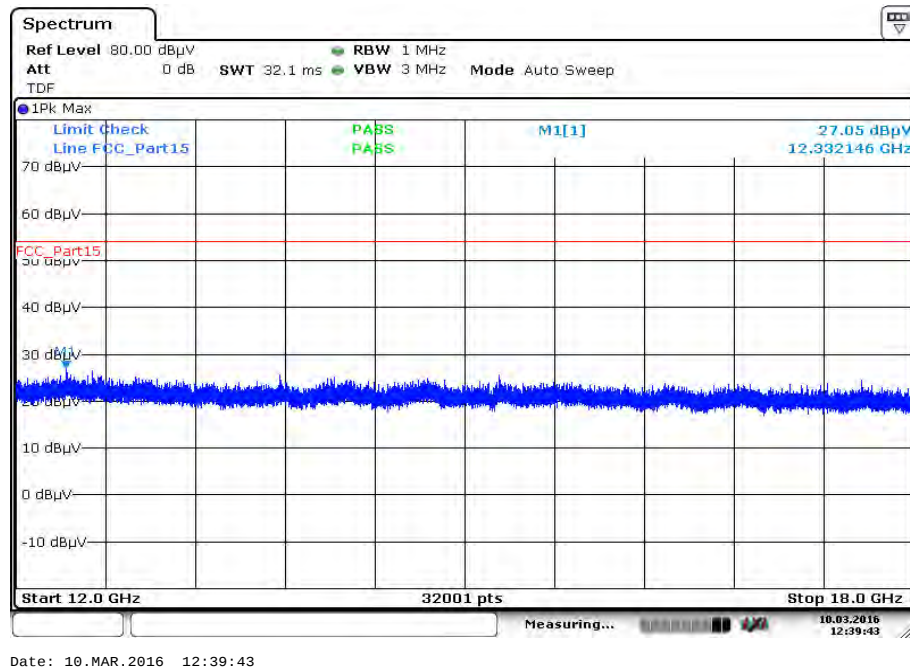
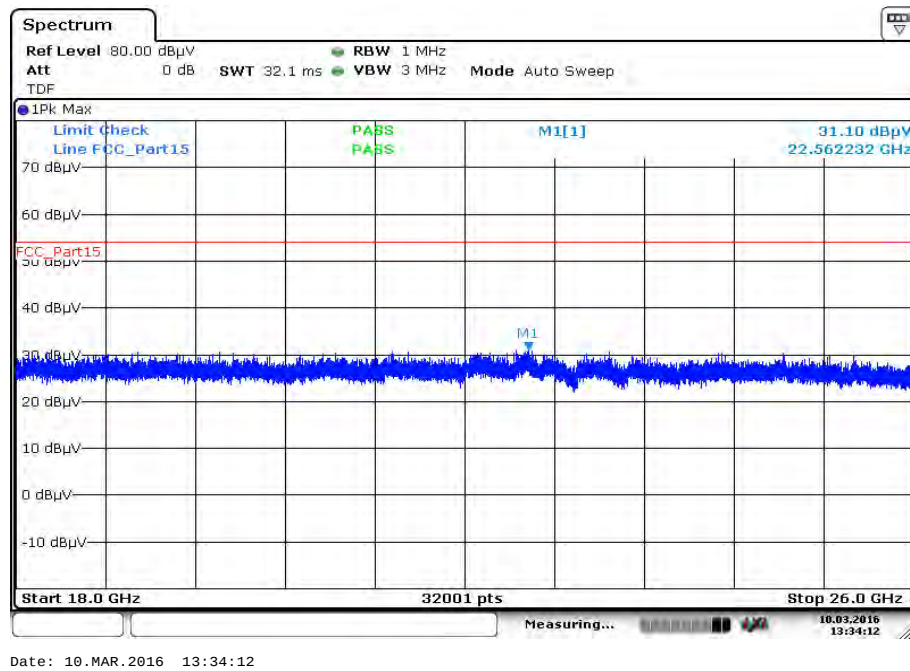
Plot 1: 30 MHz to 1 GHz, 5180 MHz, vertical & horizontal polarization



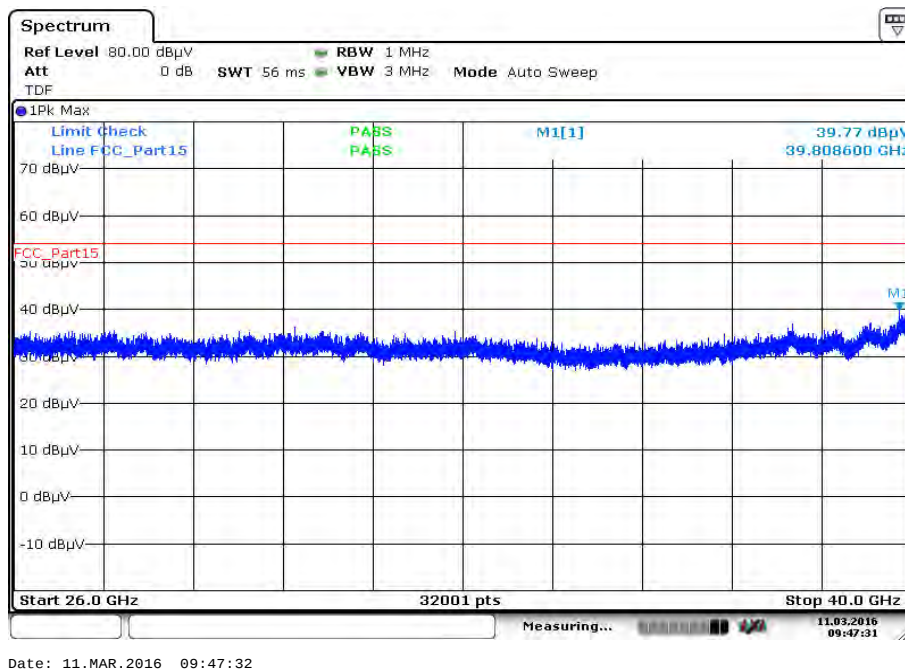
Final_Result

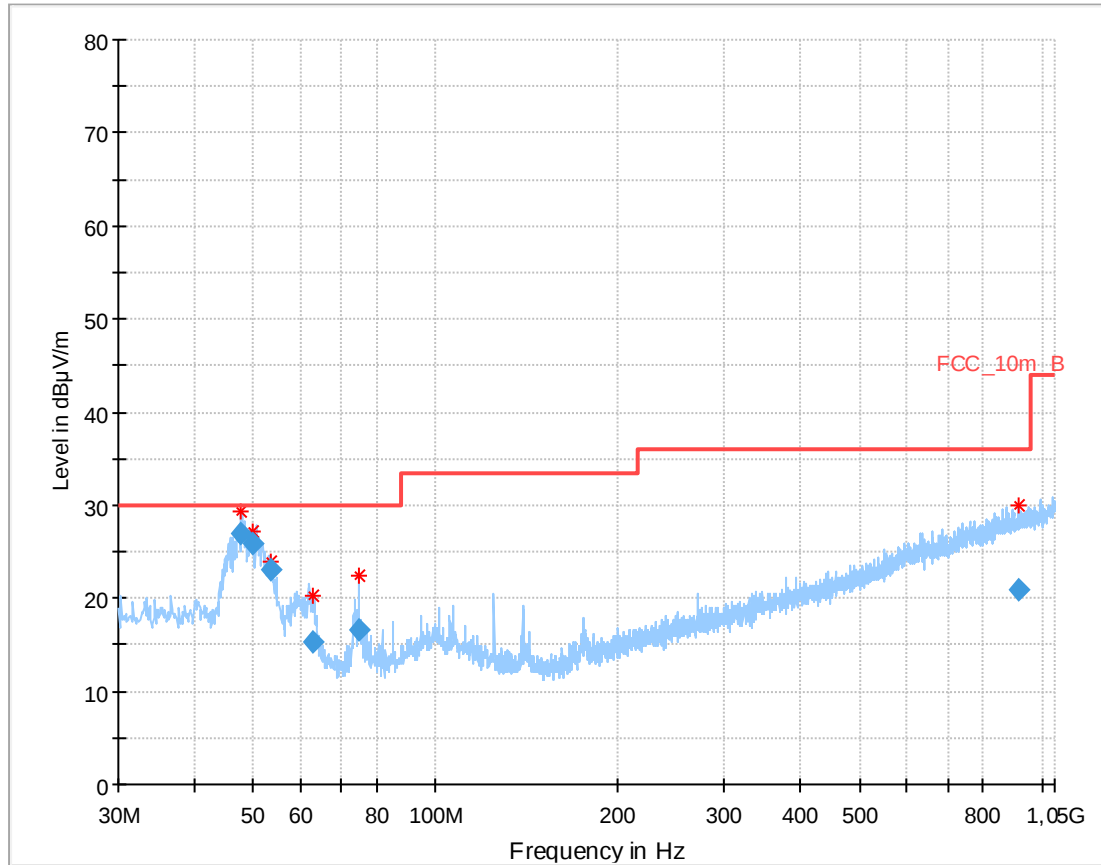
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.861150	11.01	30.00	18.99	1000.0	120.000	101.0	V	246	13.4
47.812800	29.91	30.00	0.09	1000.0	120.000	98.0	V	111	13.2
49.797750	27.98	30.00	2.02	1000.0	120.000	98.0	V	75	12.7
52.121550	25.68	30.00	4.32	1000.0	120.000	98.0	V	27	12.3
74.151750	11.76	30.00	18.24	1000.0	120.000	100.0	V	0	8.3
124.995750	18.10	33.50	15.40	1000.0	120.000	101.0	V	320	9.8

Plot 2: 1 GHz to 12.75 GHz, 5180 MHz, vertical & horizontal polarization**Plot 3:** 4.5 GHz to 7 GHz, 5180 MHz, vertical & horizontal polarization

Plot 4: 12 GHz to 18 GHz, 5180 MHz, vertical & horizontal polarization**Plot 5:** 18 GHz to 26 GHz, 5180 MHz, vertical & horizontal polarization

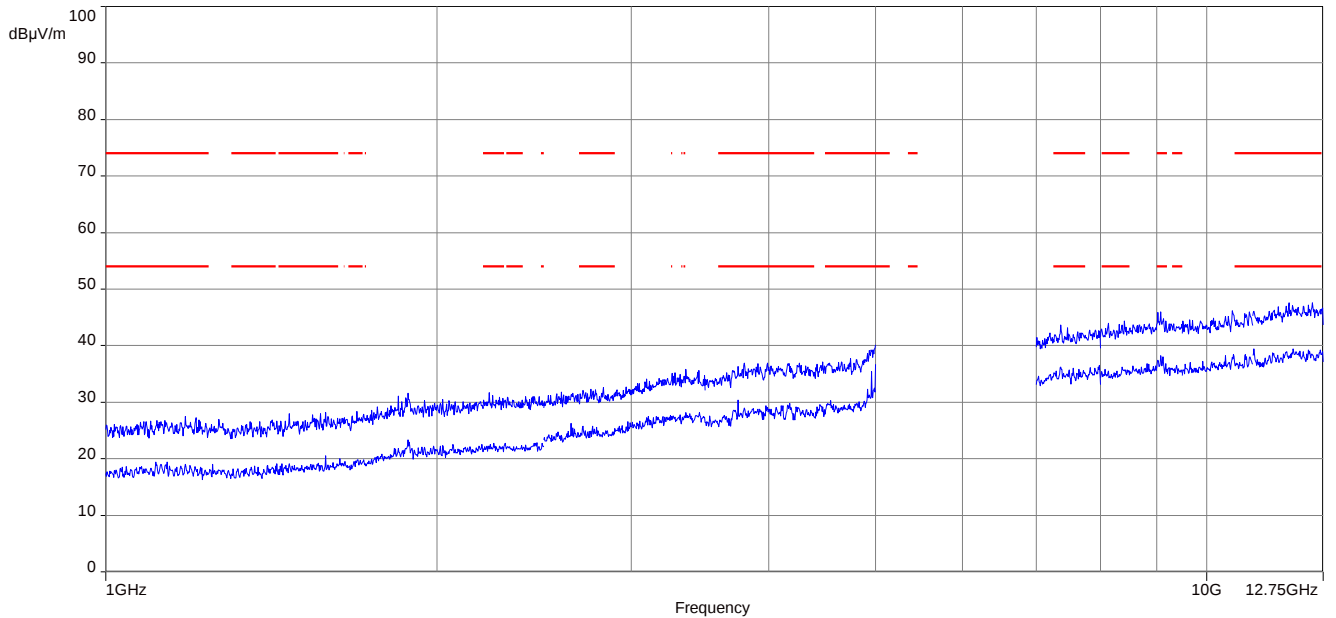
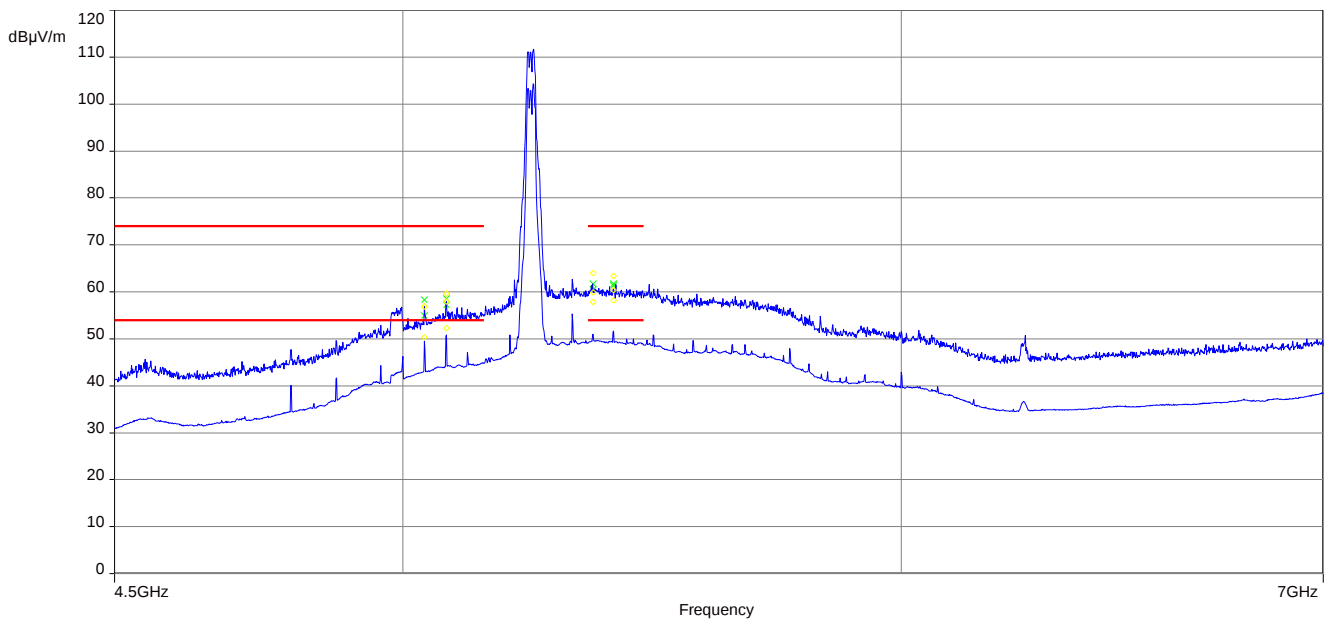
Plot 6: 26 GHz to 40 GHz, 5180 MHz, vertical & horizontal polarization

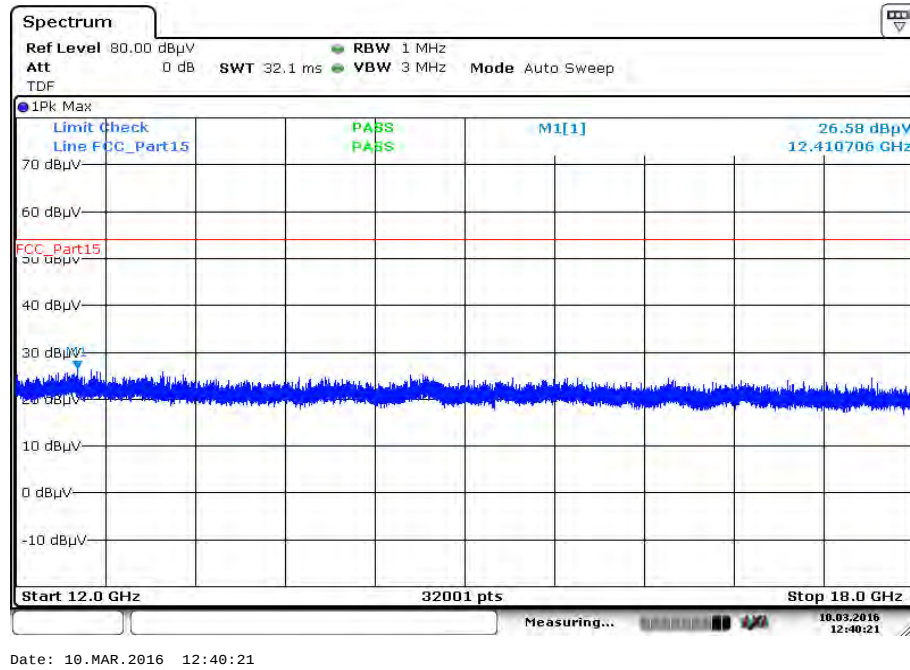
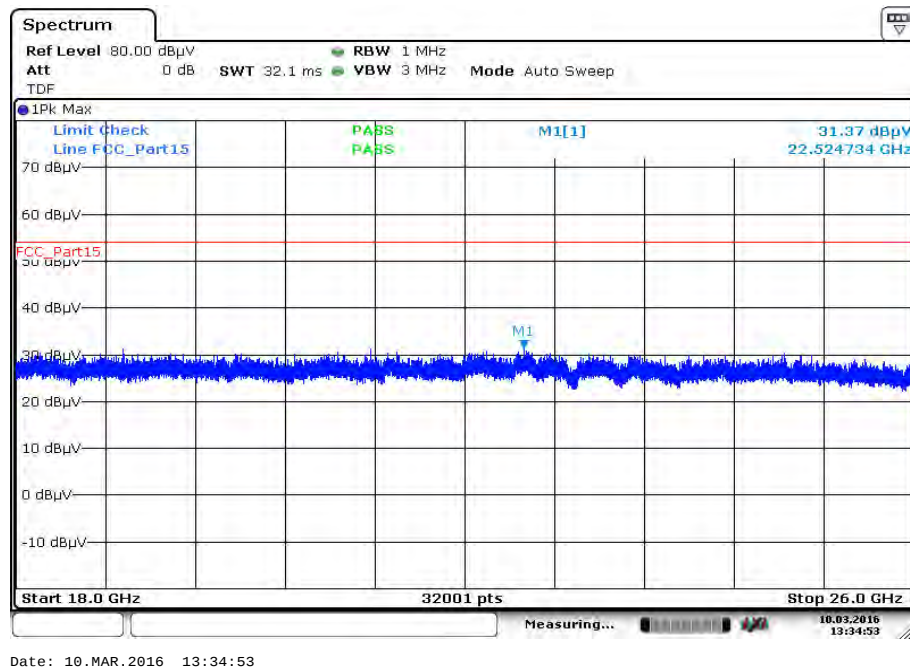


Plot 7: 30 MHz to 1 GHz, 5240 MHz, vertical & horizontal polarization

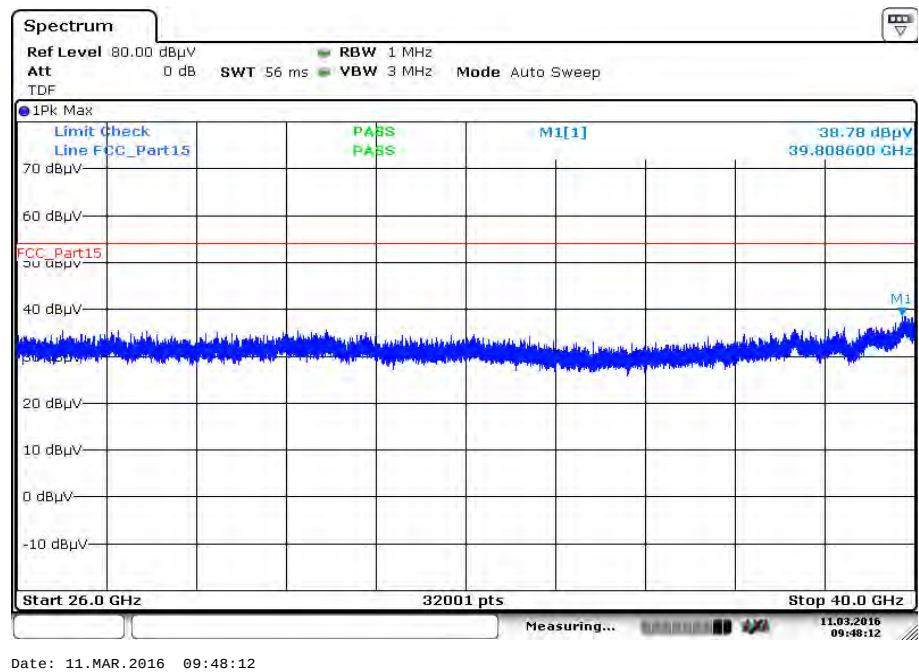
Final_Result

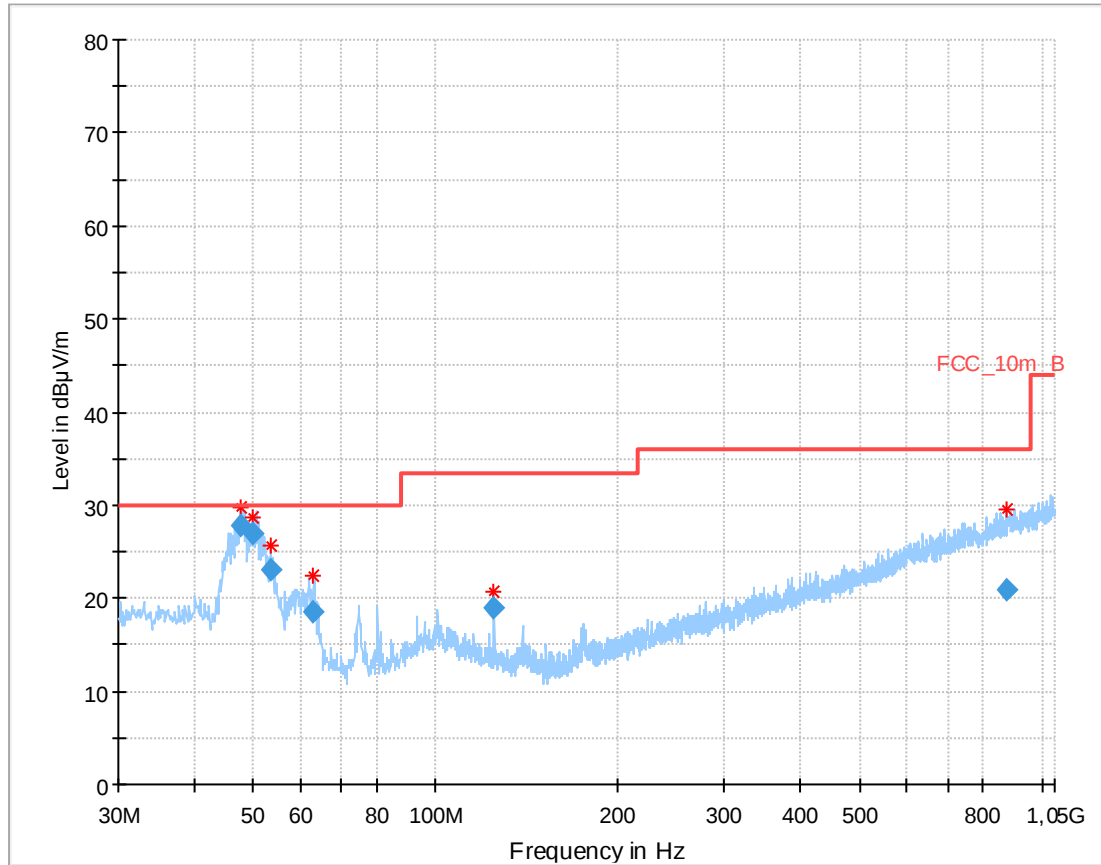
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
47.816700	27.04	30.00	2.96	1000.0	120.000	170.0	V	24	13.2
50.146500	25.77	30.00	4.23	1000.0	120.000	98.0	V	71	12.6
53.427600	23.00	30.00	7.00	1000.0	120.000	98.0	V	59	12.1
62.757150	15.21	30.00	14.79	1000.0	120.000	170.0	V	259	9.9
74.928150	16.55	30.00	13.45	1000.0	120.000	170.0	V	165	8.3
915.457950	20.99	36.00	15.01	1000.0	120.000	170.0	H	199	24.2

Plot 8: 1 GHz to 12.75 GHz, 5240 MHz, vertical & horizontal polarization**Plot 9:** 4.5 GHz to 7 GHz, 5240 MHz, vertical & horizontal polarization

Plot 10: 12 GHz to 18 GHz, 5240 MHz, vertical & horizontal polarization**Plot 11:** 18 GHz to 26 GHz, 5240 MHz, vertical & horizontal polarization

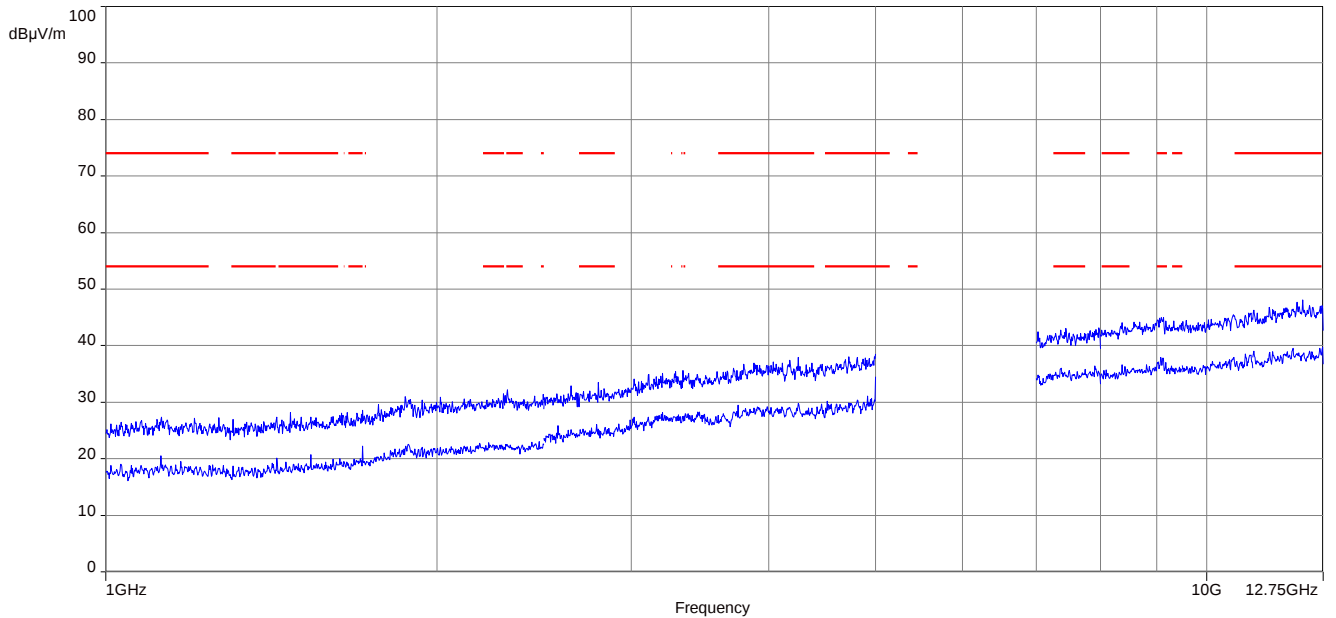
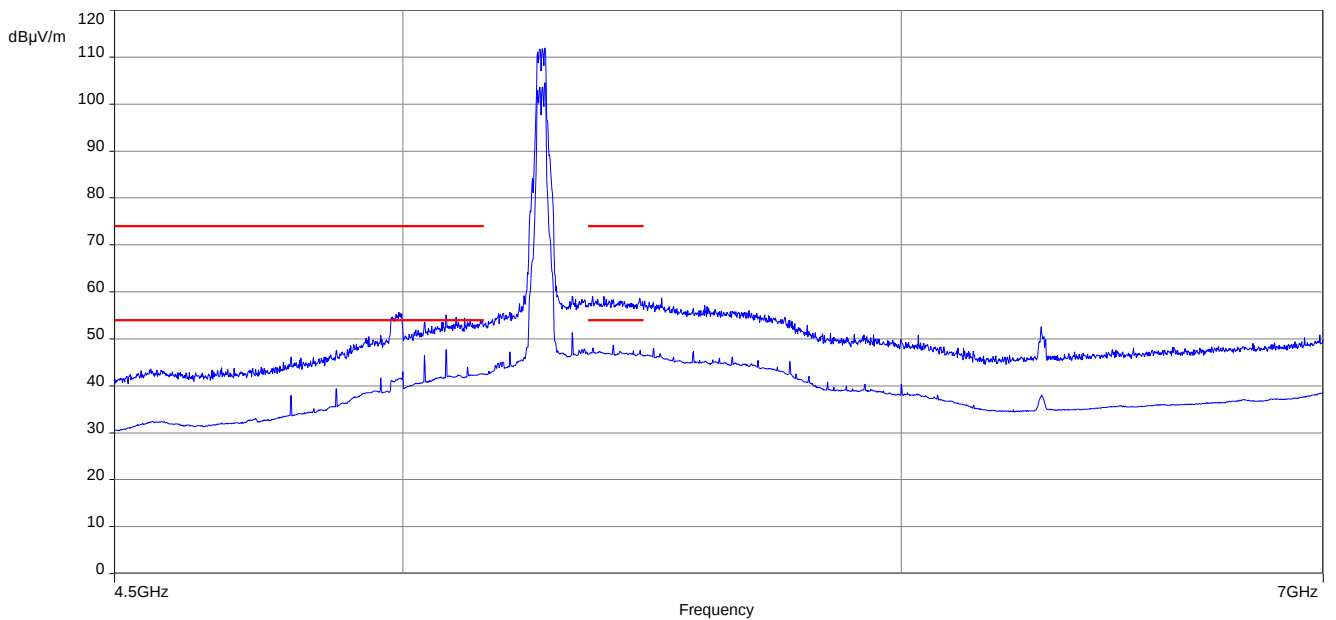
Plot 12: 26 GHz to 40 GHz, 5240 MHz, vertical & horizontal polarization

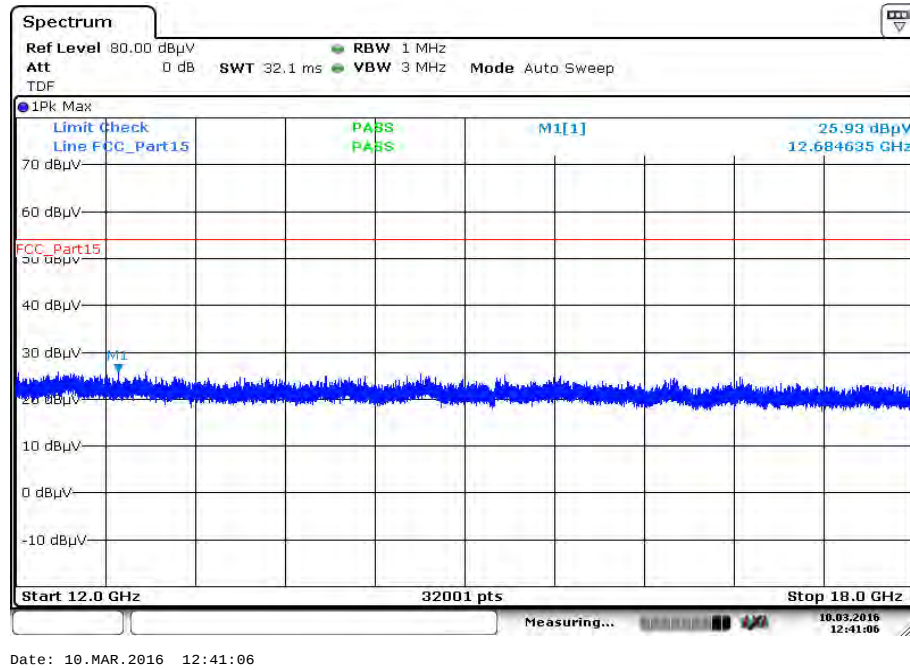
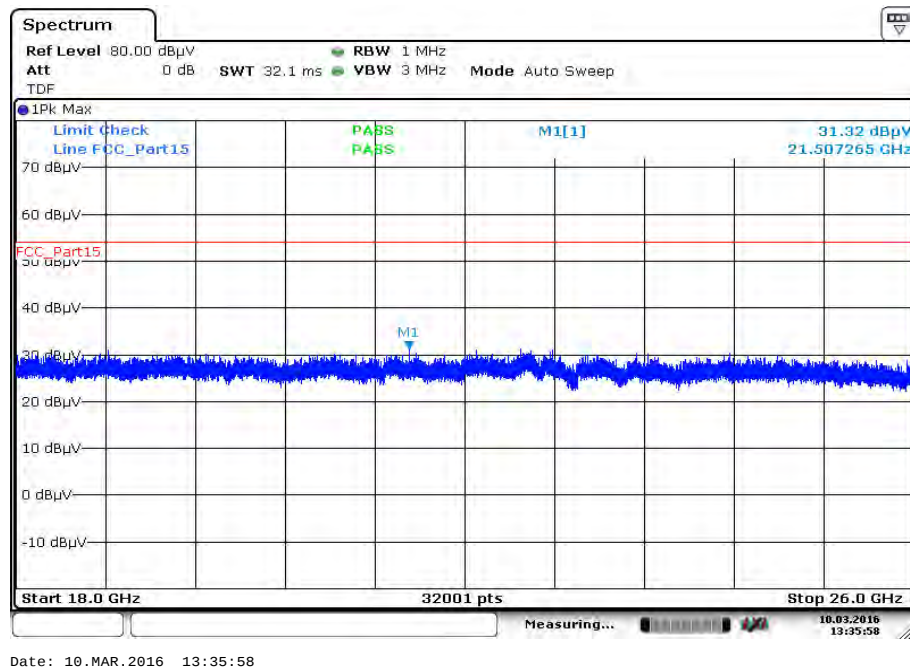


Plot 13: 30 MHz to 1 GHz, 5260 MHz, vertical & horizontal polarization

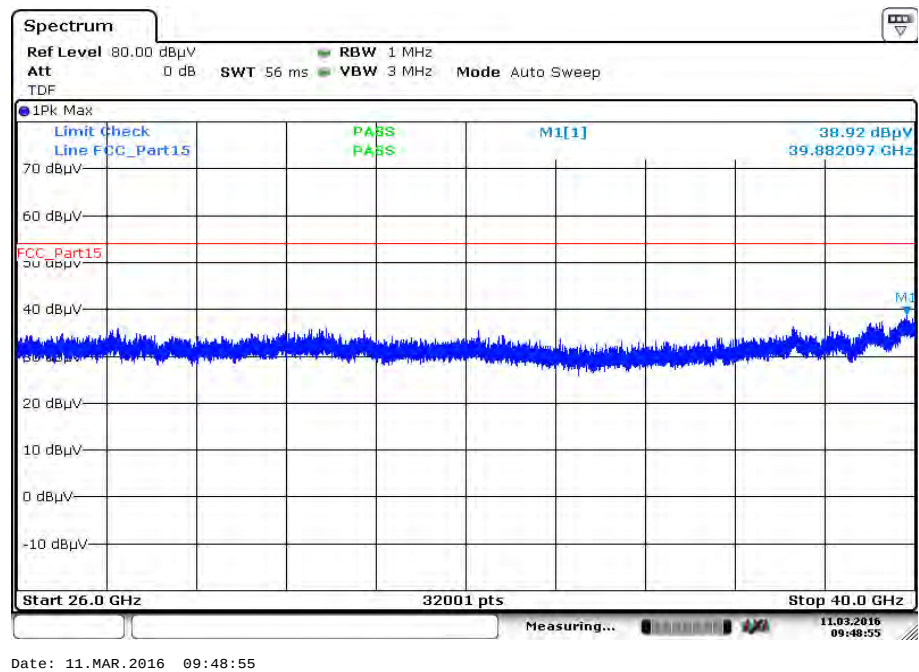
Final_Result

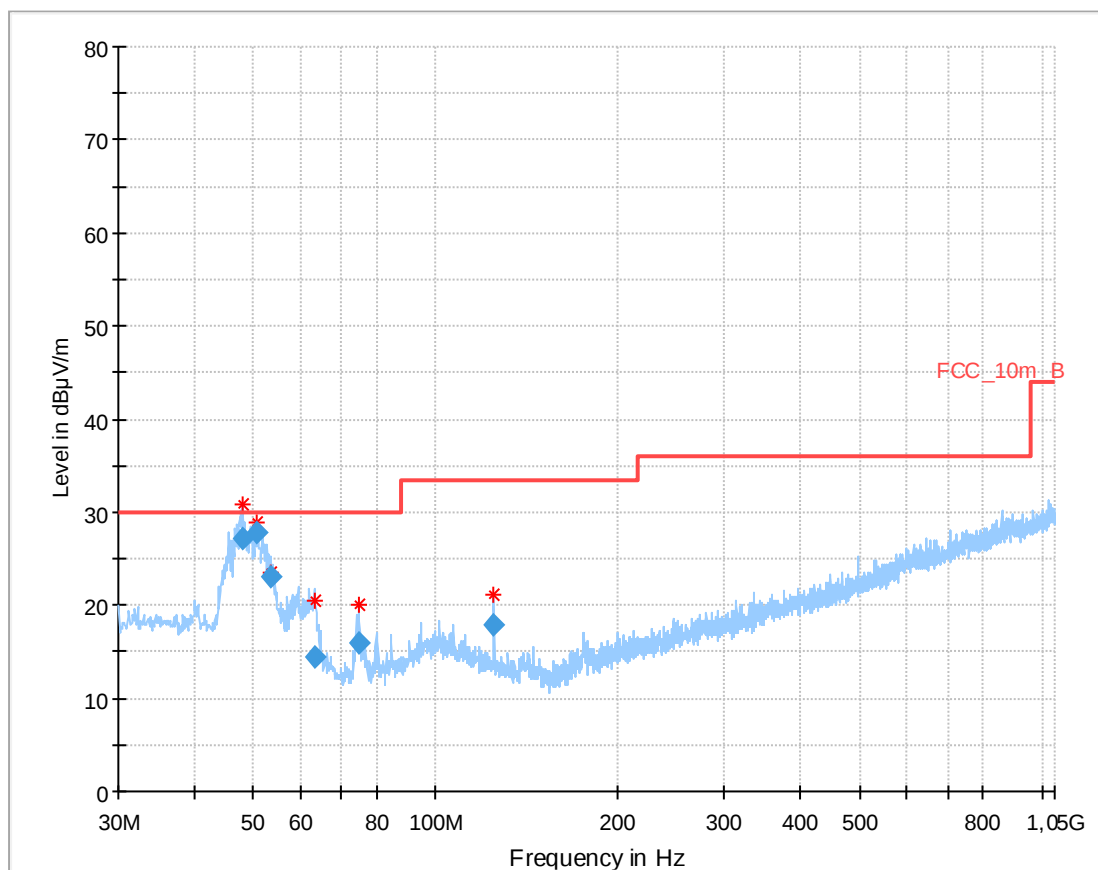
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
47.813100	27.85	30.00	2.15	1000.0	120.000	98.0	V	60	13.2
49.846950	26.90	30.00	3.10	1000.0	120.000	98.0	V	44	12.7
53.450250	23.00	30.00	7.00	1000.0	120.000	98.0	V	297	12.1
63.003900	18.51	30.00	23.49	1000.0	120.000	170.0	V	223	9.9
124.998150	18.92	33.50	14.58	1000.0	120.000	101.0	V	1	9.8
873.522600	20.82	36.00	15.18	1000.0	120.000	98.0	H	7	23.8

Plot 14: 1 GHz to 12.75 GHz, 5260 MHz, vertical & horizontal polarization**Plot 15:** 4.5 GHz to 7 GHz, 5260 MHz, vertical & horizontal polarization

Plot 16: 12 GHz to 18 GHz, 5260 MHz, vertical & horizontal polarization**Plot 17:** 18 GHz to 26 GHz, 5260 MHz, vertical & horizontal polarization

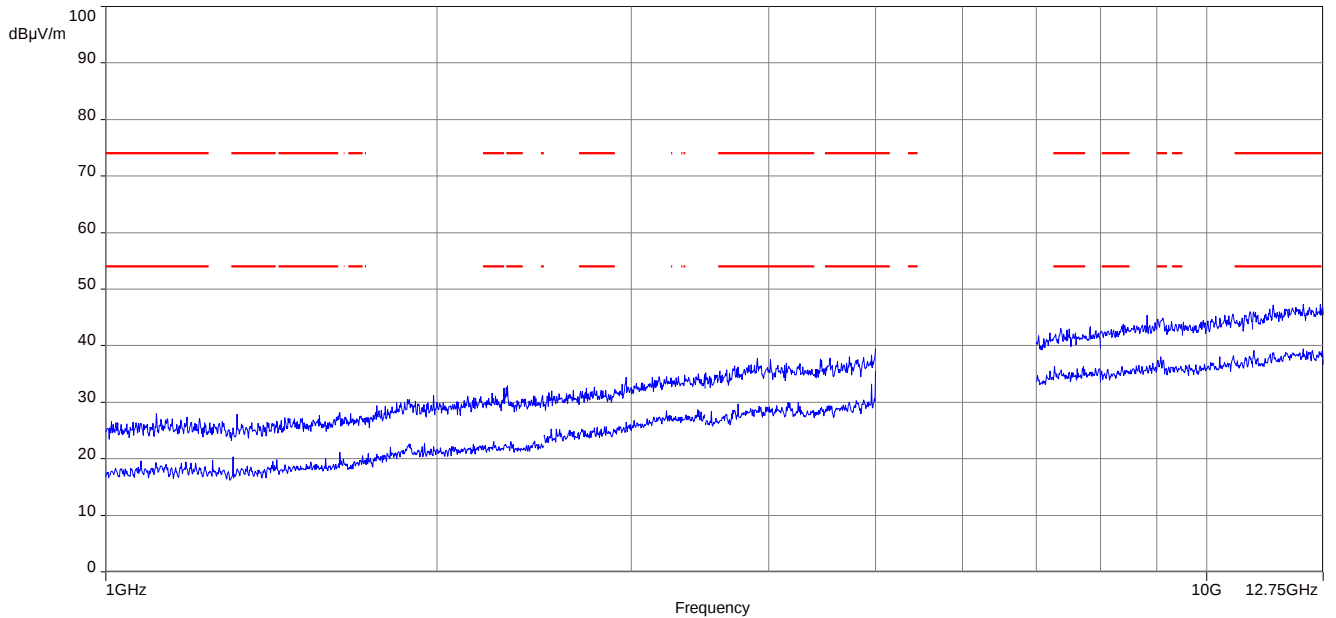
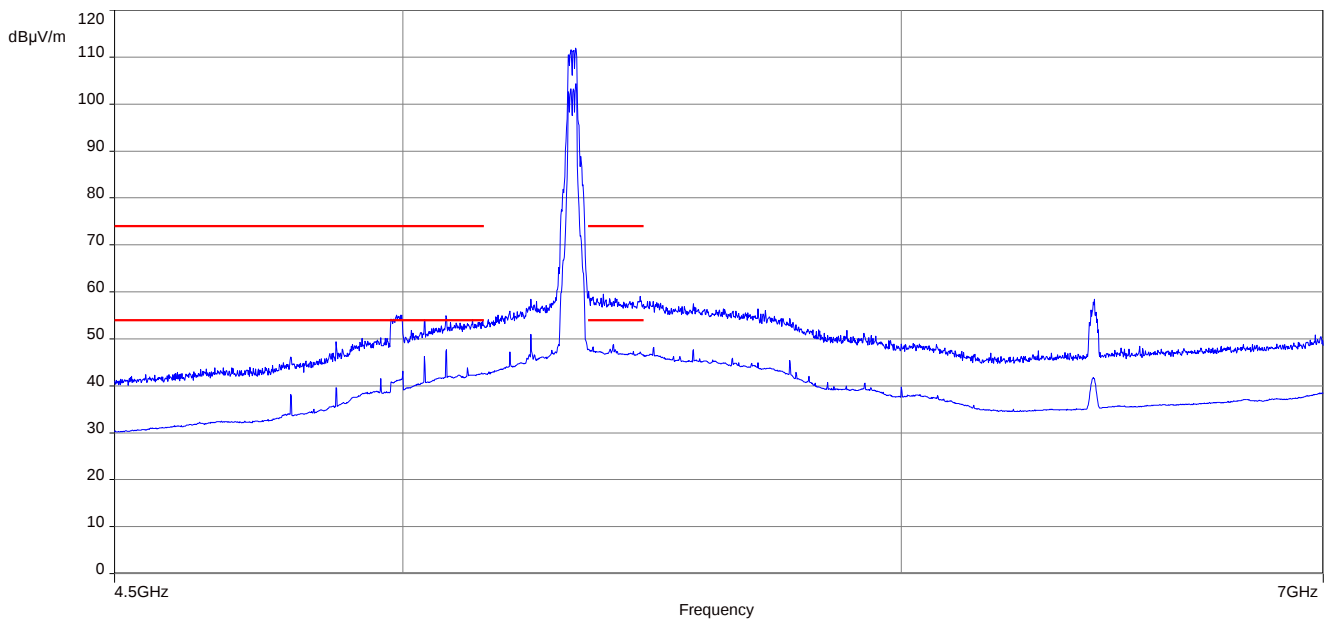
Plot 18: 26 GHz to 40 GHz, 5260 MHz, vertical & horizontal polarization

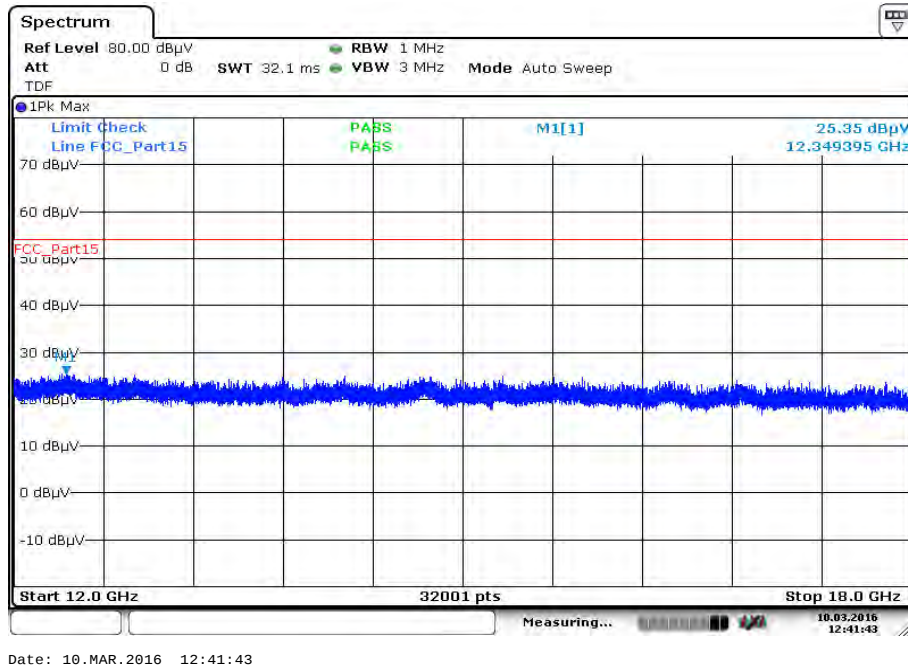
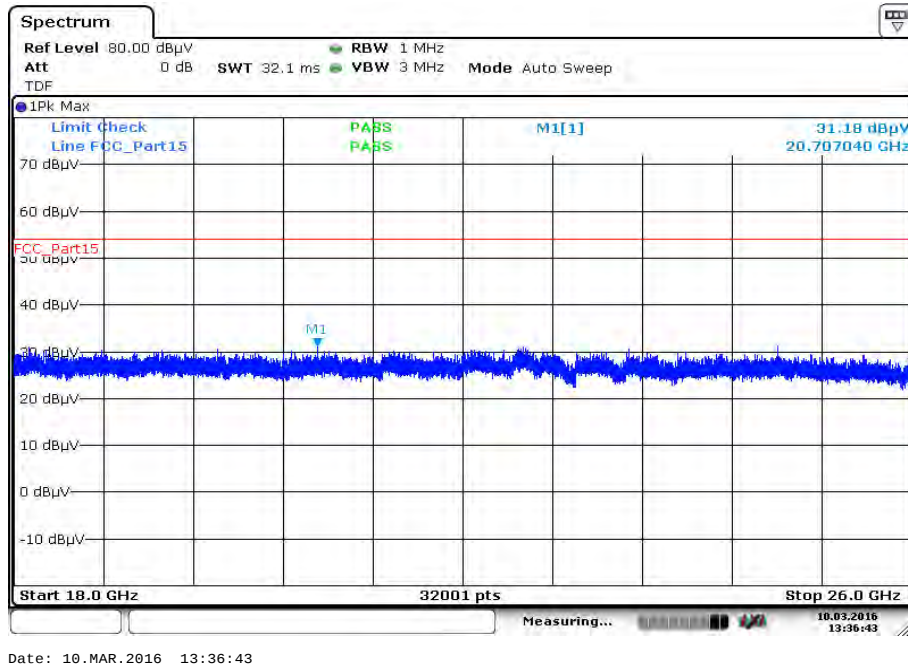


Plot 19: 30 MHz to 1 GHz, 5320 MHz, vertical & horizontal polarization

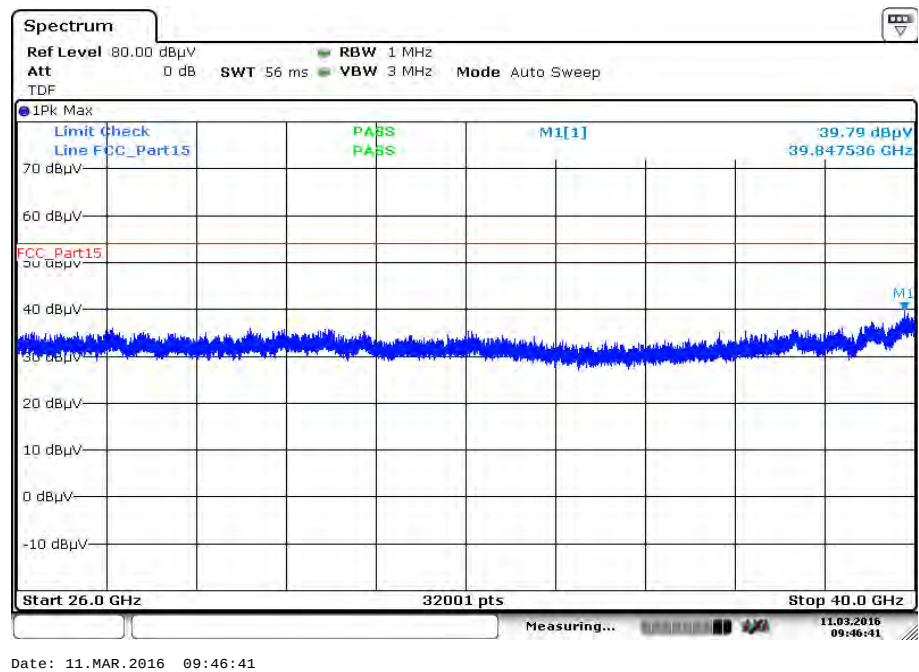
Final_Result

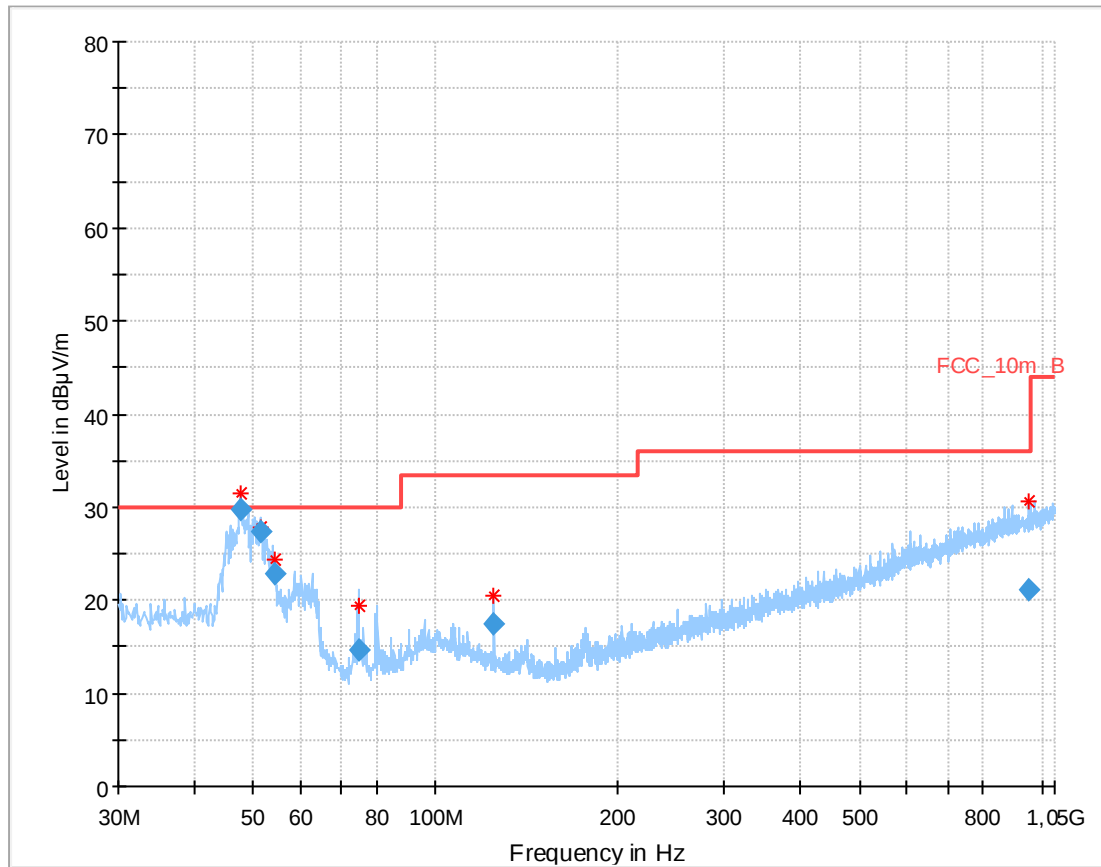
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
48.206700	27.11	30.00	2.89	1000.0	120.000	170.0	V	7	13.1
50.825250	27.92	30.00	2.08	1000.0	120.000	98.0	V	65	12.5
53.461950	23.11	30.00	6.89	1000.0	120.000	98.0	V	332	12.1
63.286200	14.54	30.00	15.46	1000.0	120.000	101.0	V	196	9.8
74.915250	16.02	30.00	13.98	1000.0	120.000	170.0	V	353	8.3
124.999800	17.82	33.50	15.68	1000.0	120.000	98.0	V	136	9.8

Plot 20: 1 GHz to 12.75 GHz, 5320 MHz, vertical & horizontal polarization**Plot 21:** 4.5 GHz to 7 GHz, 5320 MHz, vertical & horizontal polarization

Plot 22: 12 GHz to 18 GHz, 5320 MHz, vertical & horizontal polarization**Plot 23:** 18 GHz to 26 GHz, 5320 MHz, vertical & horizontal polarization

Plot 24: 26 GHz to 40 GHz, 5320 MHz, vertical & horizontal polarization

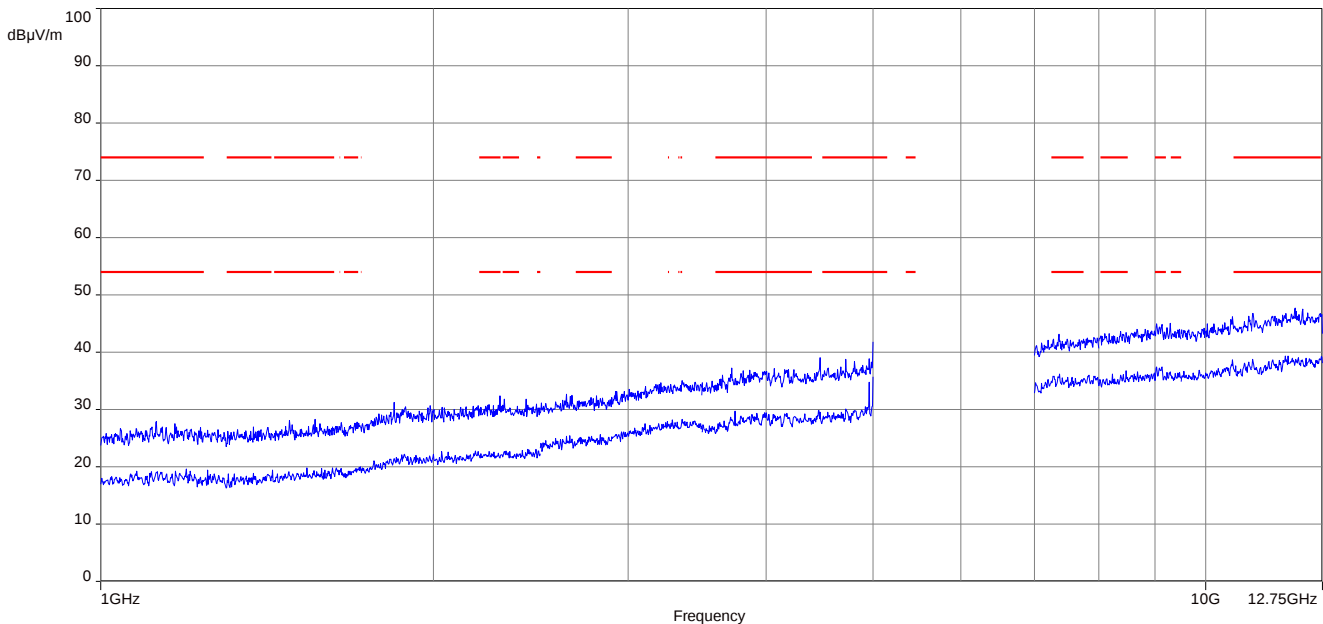


Plot 25: 30 MHz to 1 GHz, 5500 MHz, vertical & horizontal polarization

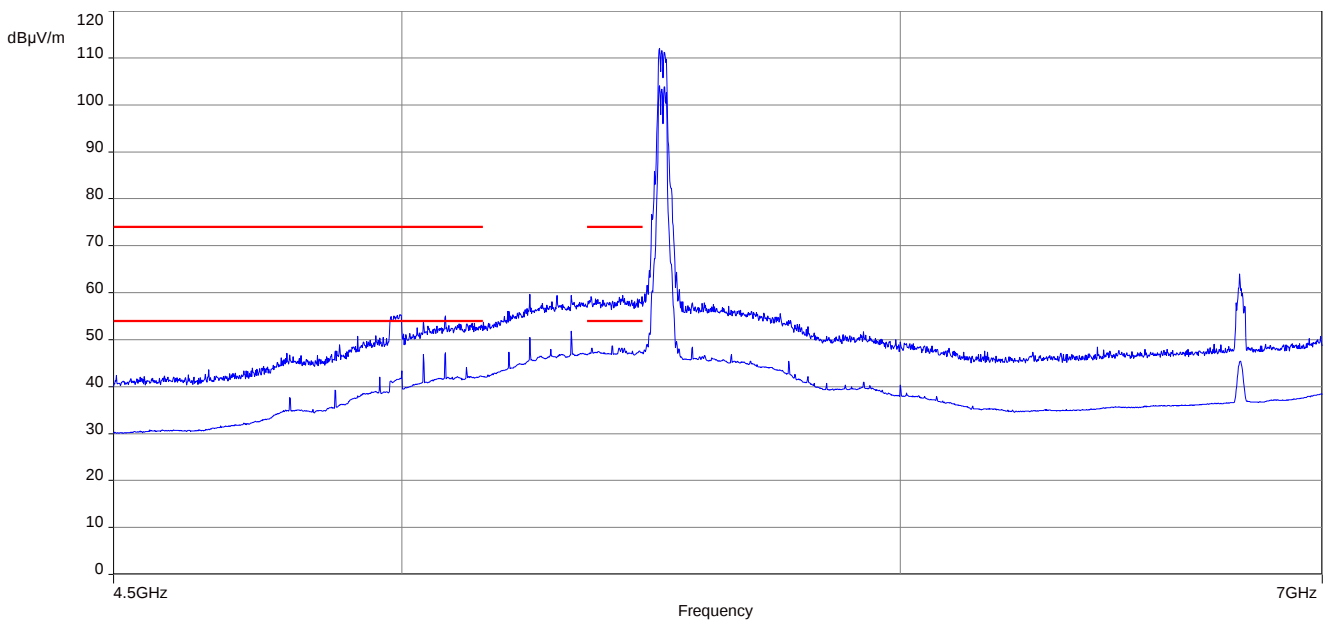
Final_Result

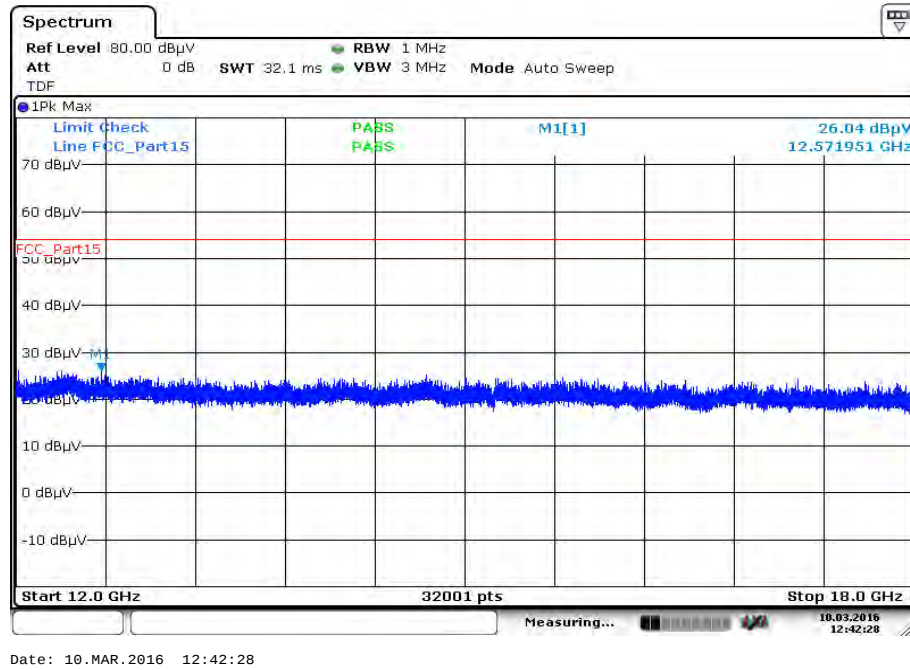
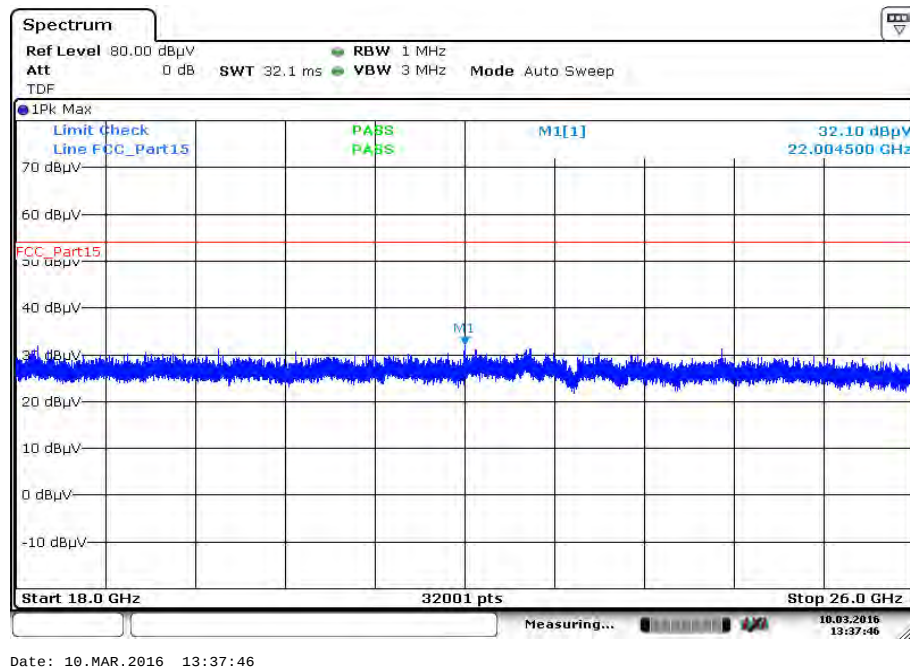
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
47.859600	29.86	30.00	0.14	1000.0	120.000	98.0	V	56	13.1
51.495000	27.37	30.00	2.63	1000.0	120.000	98.0	V	118	12.4
54.139800	22.95	30.00	7.05	1000.0	120.000	170.0	V	106	12.0
74.893200	14.77	30.00	15.23	1000.0	120.000	170.0	V	319	8.3
124.996500	17.46	33.50	16.04	1000.0	120.000	170.0	V	106	9.8
952.998900	21.10	36.00	14.90	1000.0	120.000	98.0	H	22	24.3

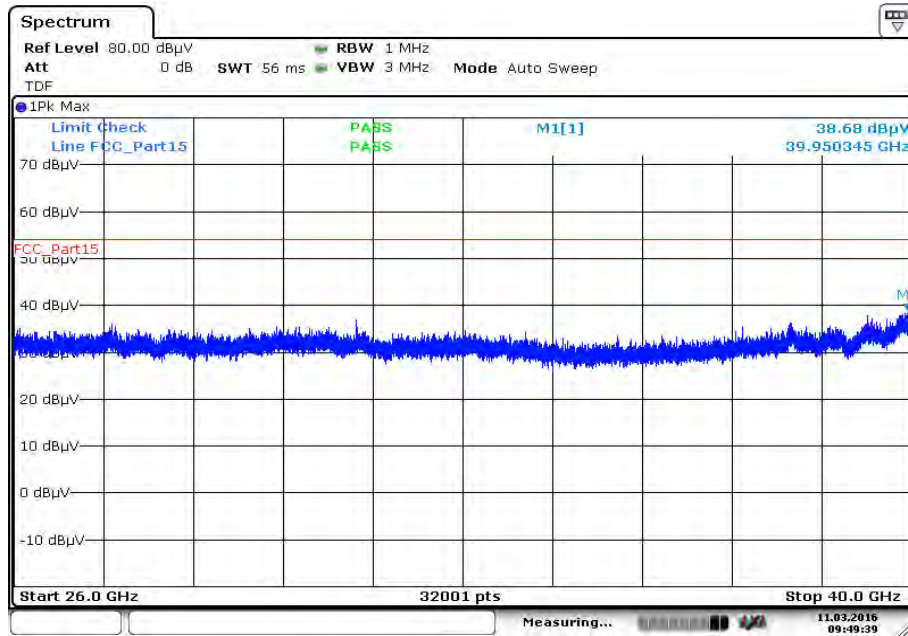
Plot 26: 1 GHz to 12.75 GHz, 5500 MHz, vertical & horizontal polarization



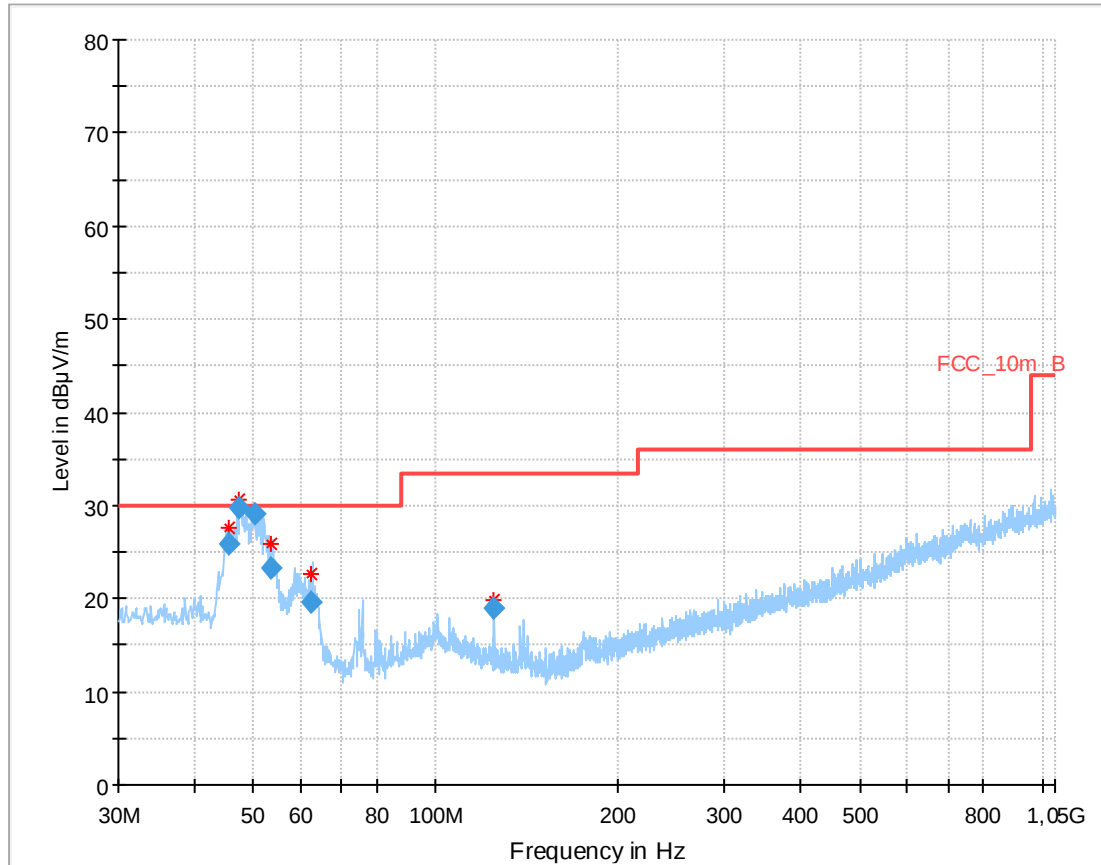
Plot 27: 4.5 GHz to 7 GHz, 5500 MHz, vertical & horizontal polarization



Plot 28: 12 GHz to 18 GHz, 5500 MHz, vertical & horizontal polarization**Plot 29:** 18 GHz to 26 GHz, 5500 MHz, vertical & horizontal polarization

Plot 30: 26 GHz to 40 GHz, 5500 MHz, vertical & horizontal polarization

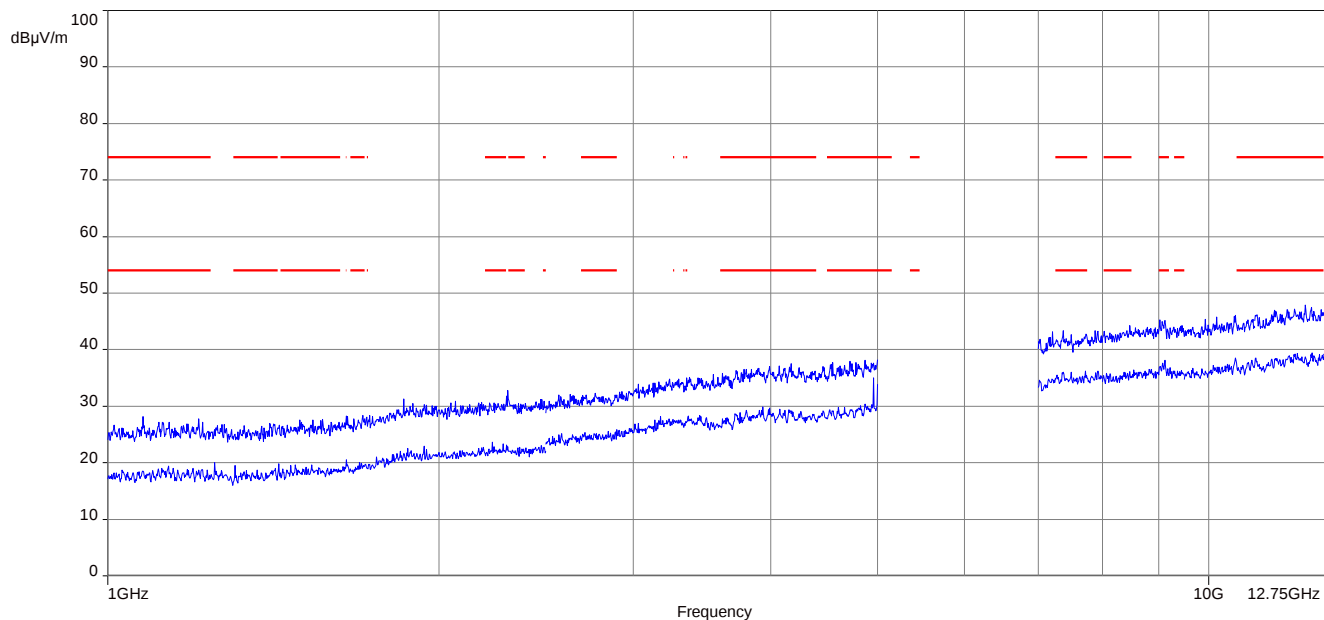
Date: 11.MAR.2016 09:49:39

Plot 31: 30 MHz to 1 GHz, 5700 MHz, vertical & horizontal polarization

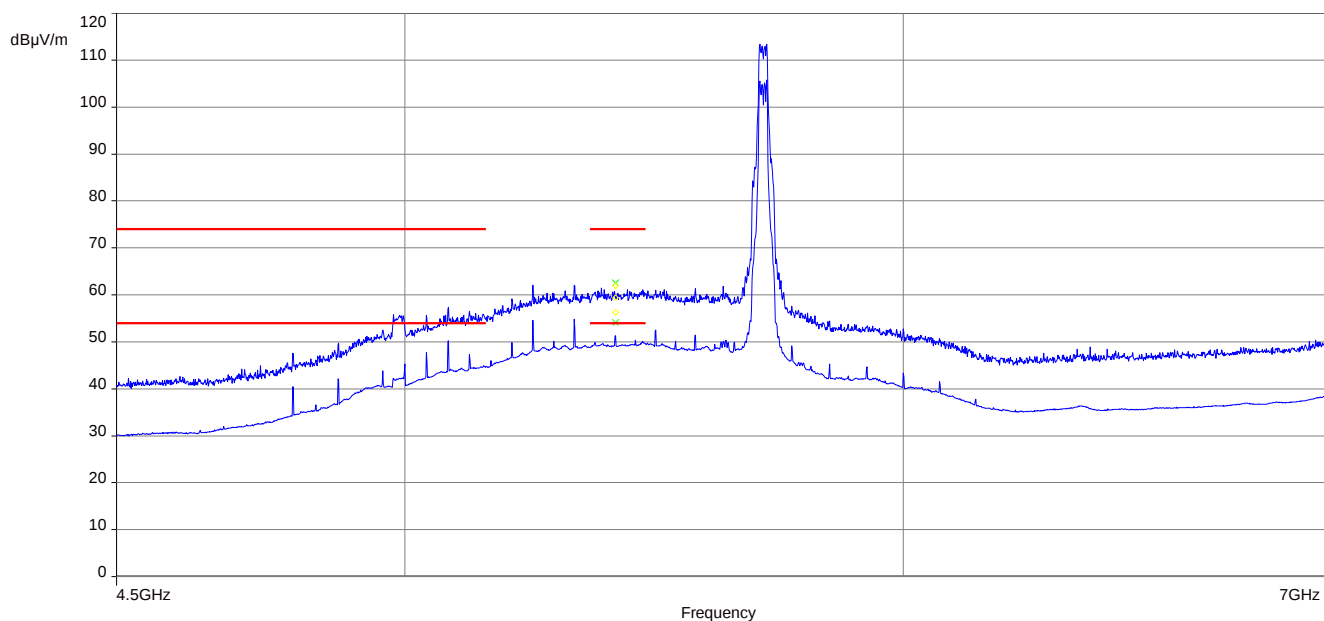
Final_Result

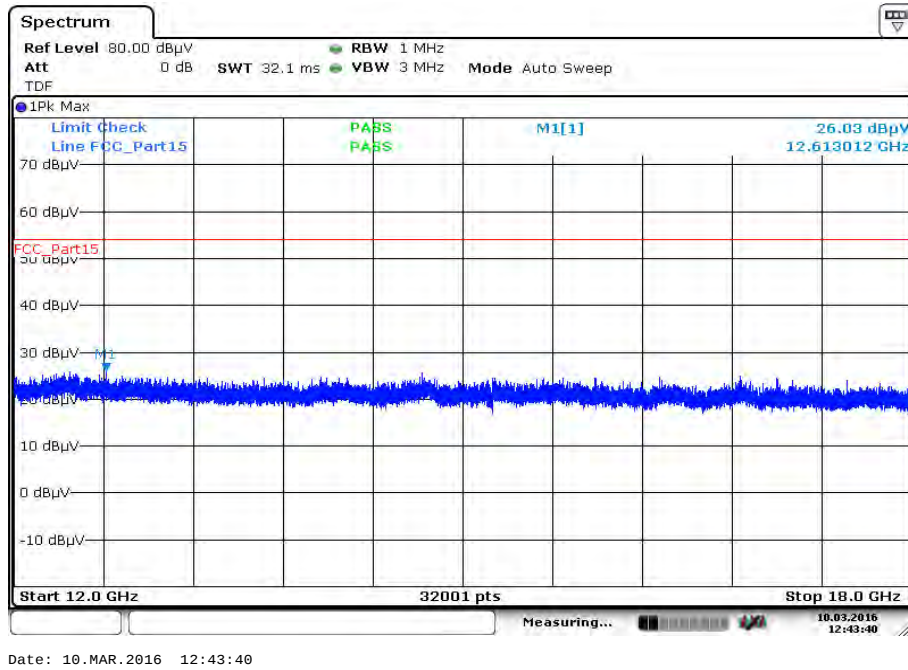
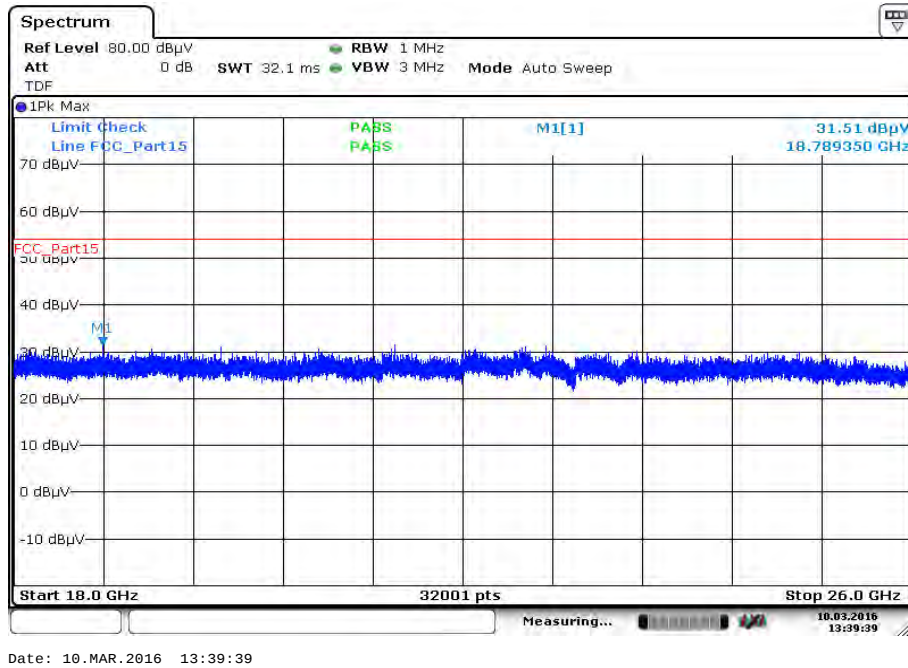
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
45.558750	25.96	30.00	4.04	1000.0	120.000	98.0	V	40	13.7
47.544600	29.66	30.00	0.34	1000.0	120.000	98.0	V	32	13.2
50.184750	29.09	30.00	0.91	1000.0	120.000	98.0	V	2	12.6
53.490900	23.31	30.00	6.69	1000.0	120.000	98.0	V	303	12.1
62.410800	19.52	30.00	10.48	1000.0	120.000	170.0	V	206	10.0
124.988850	19.07	33.50	14.43	1000.0	120.000	101.0	V	40	9.8

Plot 32: 1 GHz to 12.75 GHz, 5700 MHz, vertical & horizontal polarization

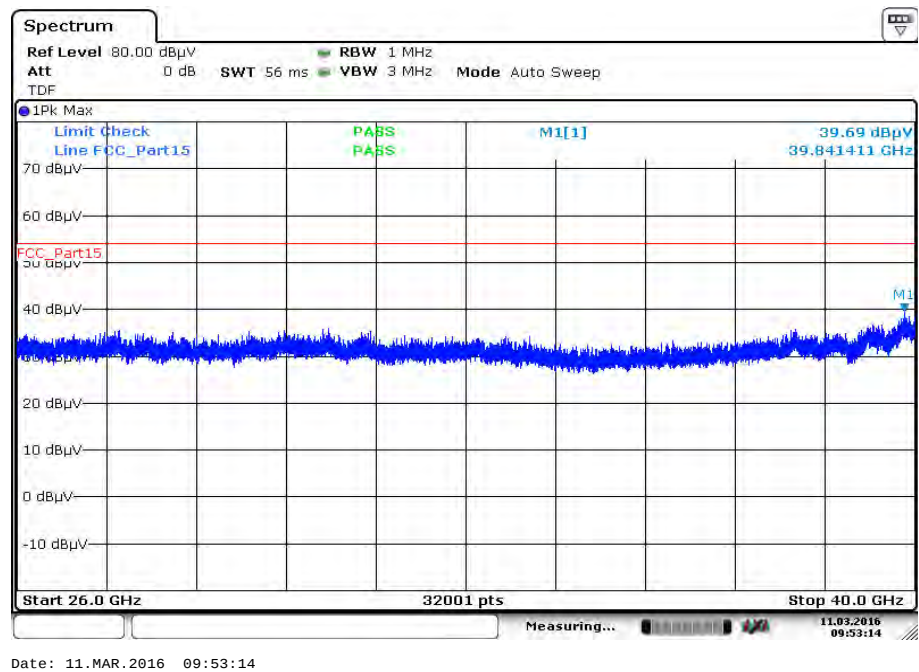


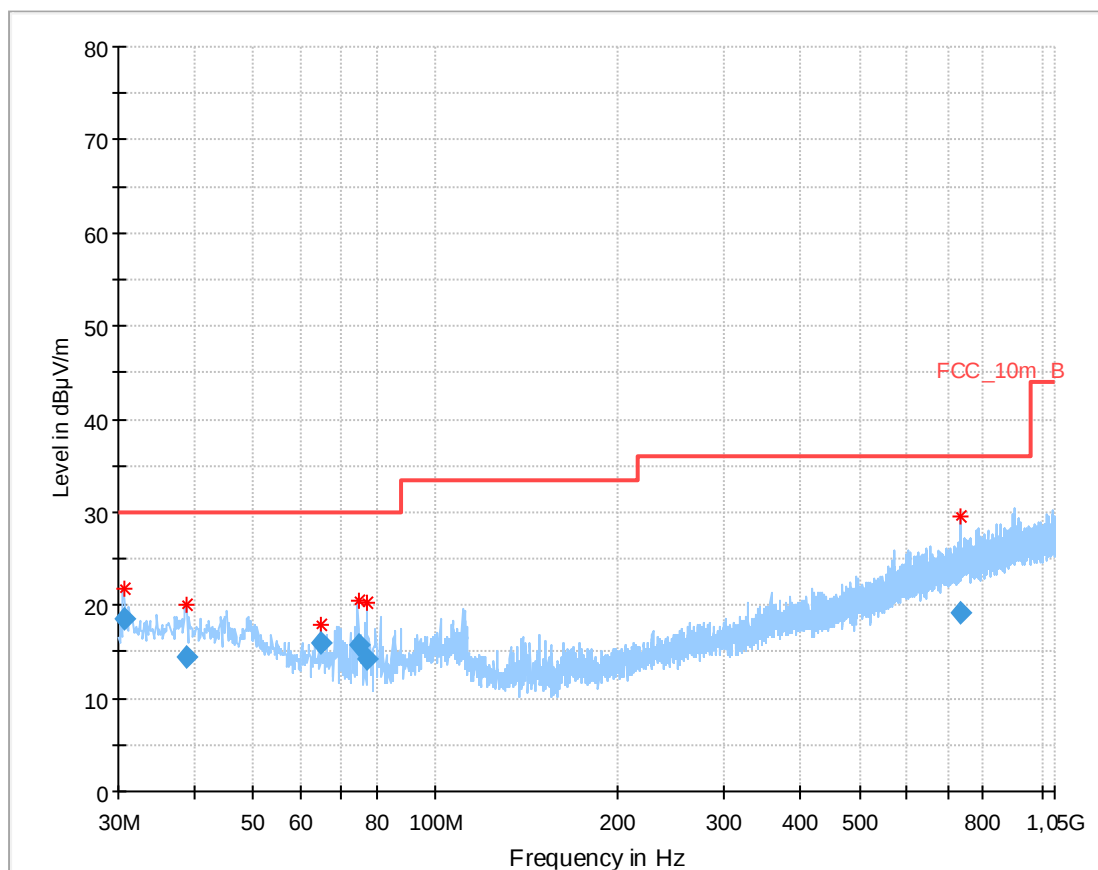
Plot 33: 4.5 GHz to 7 GHz, 5700 MHz, vertical & horizontal polarization



Plot 34: 12 GHz to 18 GHz, 5700 MHz, vertical & horizontal polarization**Plot 35:** 18 GHz to 26 GHz, 5700 MHz, vertical & horizontal polarization

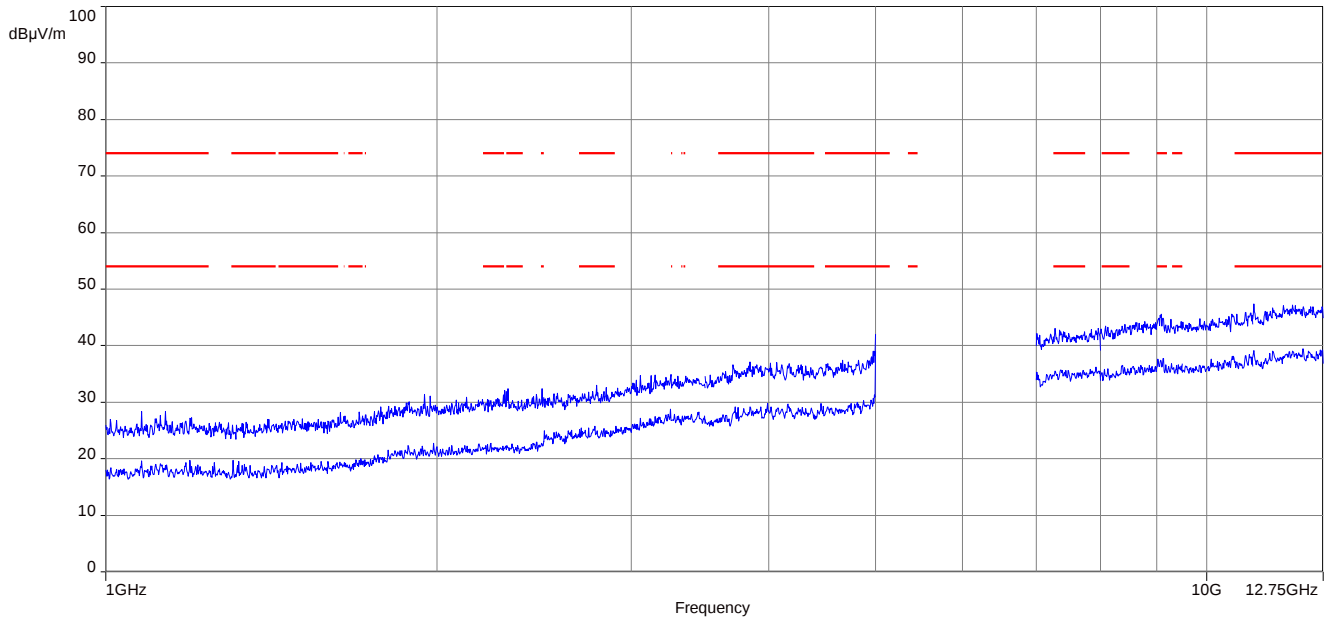
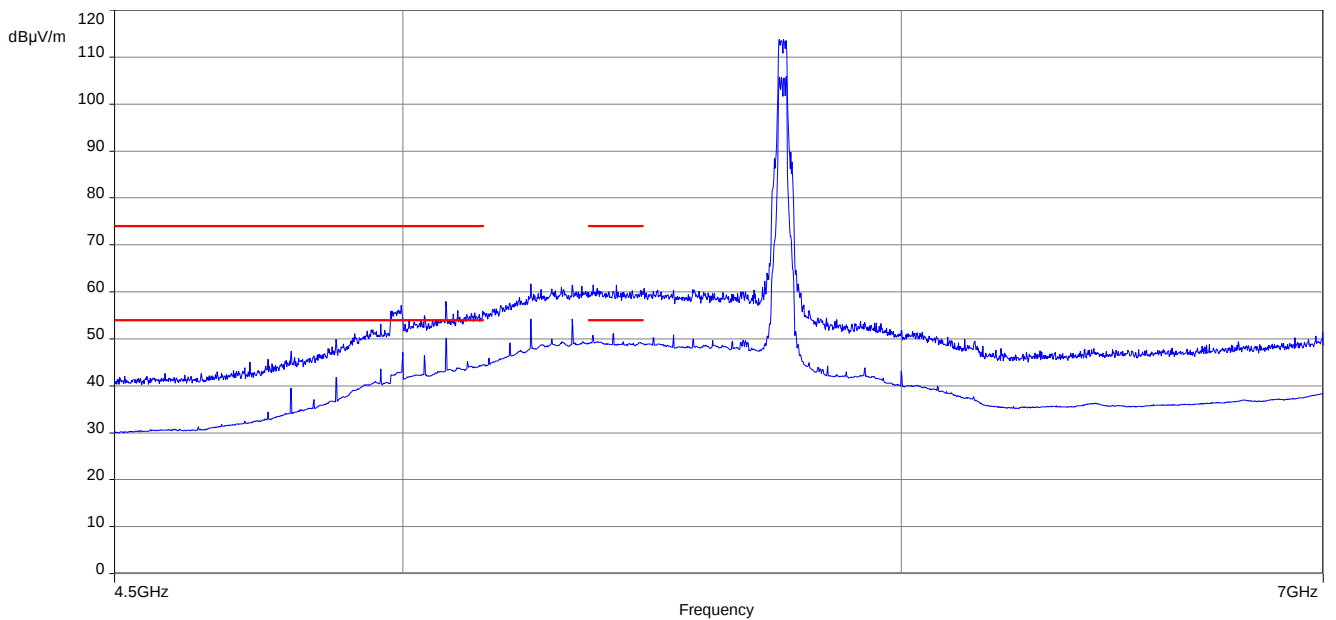
Plot 36: 26 GHz to 40 GHz, 5700 MHz, vertical & horizontal polarization

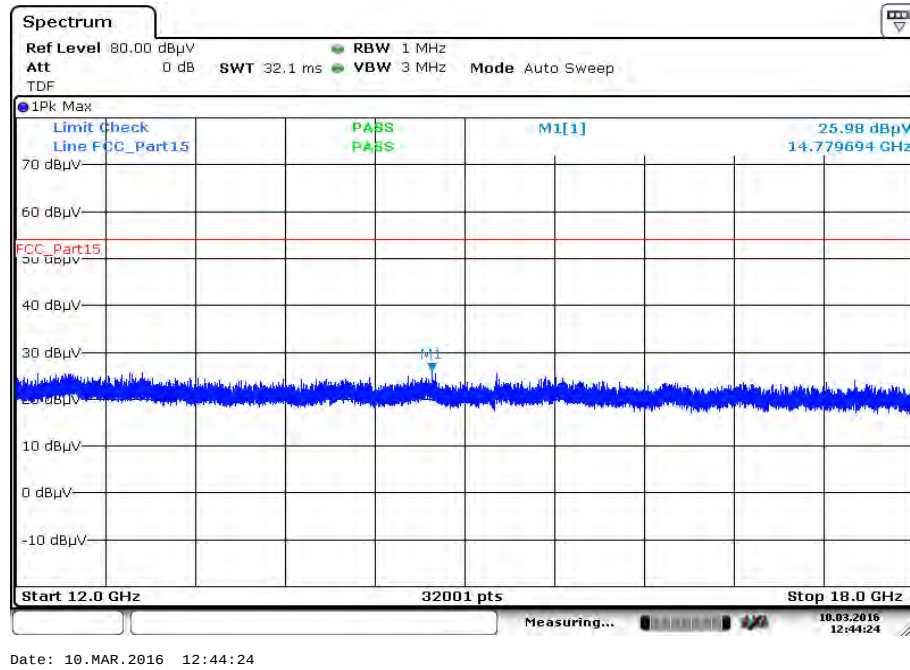
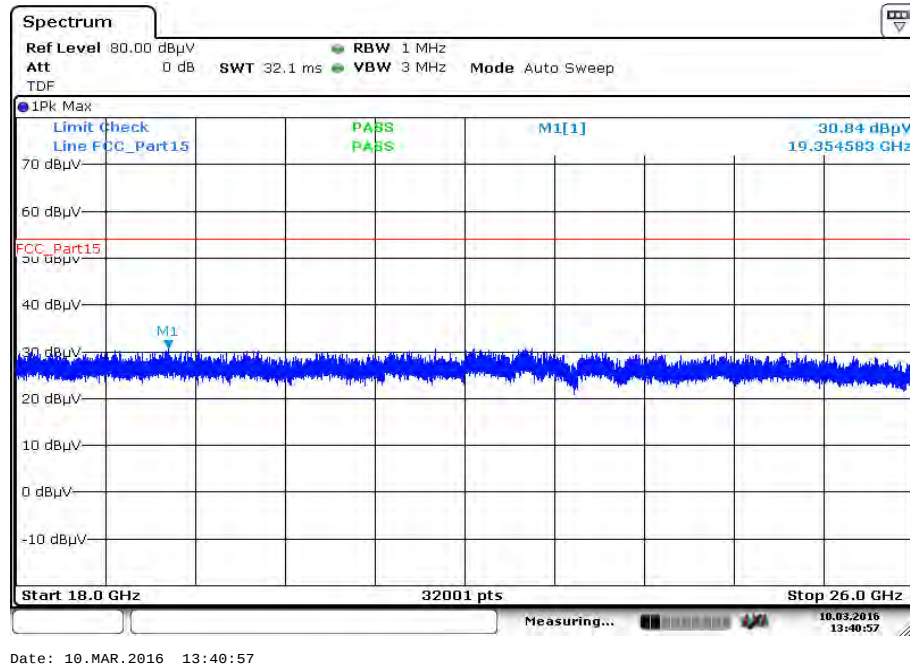


Plot 37: 30 MHz to 1 GHz, 5745 MHz, vertical & horizontal polarization

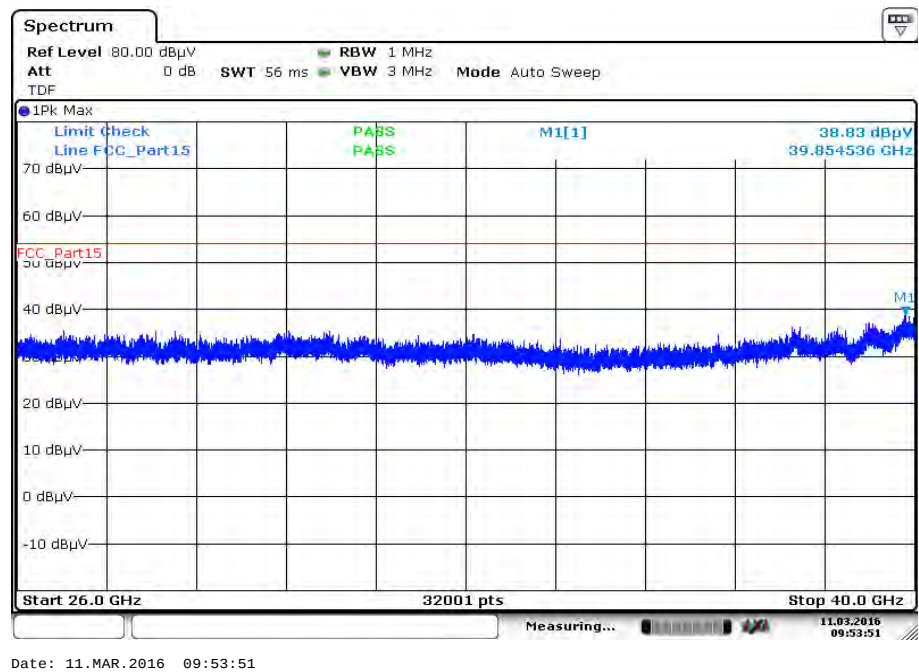
Final_Result

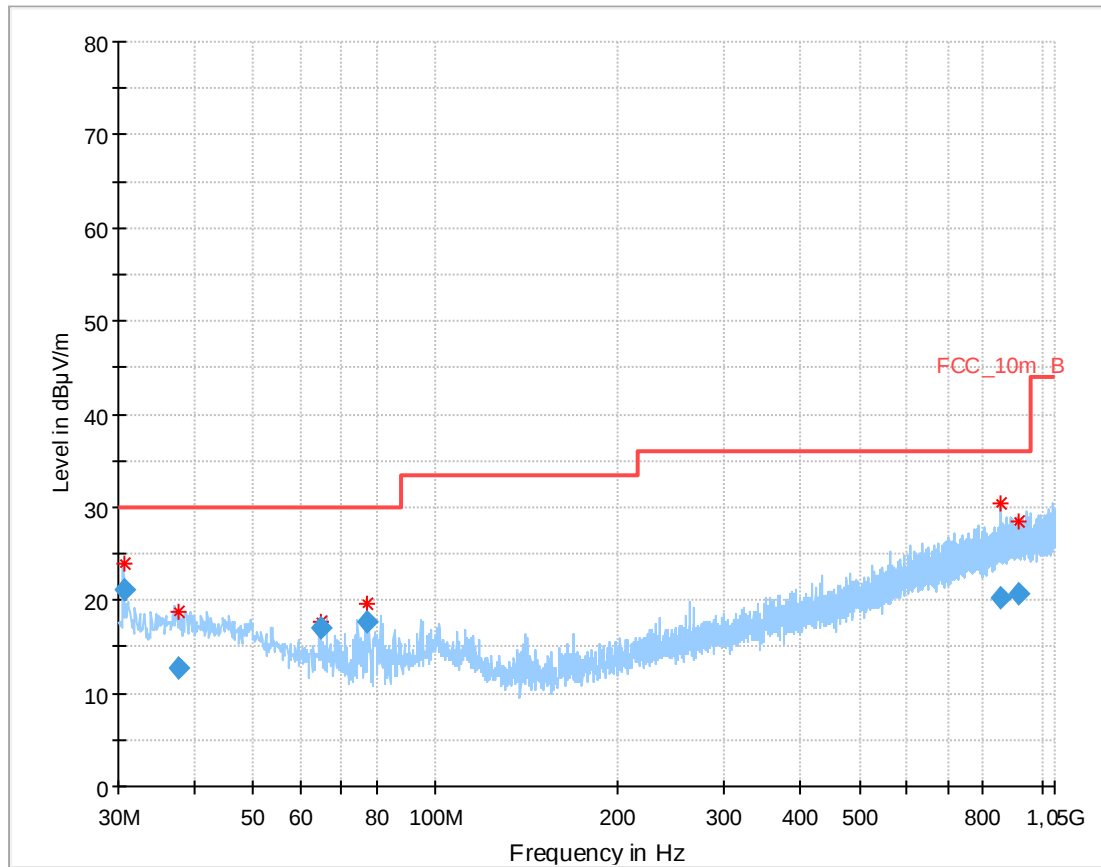
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.617438	18.58	30.00	11.42	1000.0	120.000	170.0	V	171.0	13.4
38.831100	14.50	30.00	15.50	1000.0	120.000	101.0	V	10.0	14.0
64.778100	15.92	30.00	14.08	1000.0	120.000	98.0	V	81.0	9.5
74.549550	15.69	30.00	14.31	1000.0	120.000	101.0	V	190.0	8.3
77.223450	14.20	30.00	15.80	1000.0	120.000	101.0	V	170.0	8.2
735.983550	19.24	36.00	16.76	1000.0	120.000	98.0	H	100.0	22.4

Plot 38: 1 GHz to 12.75 GHz, 5745 MHz, vertical & horizontal polarization**Plot 39:** 4.5 GHz to 7 GHz, 5745 MHz, vertical & horizontal polarization

Plot 40: 12 GHz to 18 GHz, 5745 MHz, vertical & horizontal polarization**Plot 41:** 18 GHz to 26 GHz, 5745 MHz, vertical & horizontal polarization

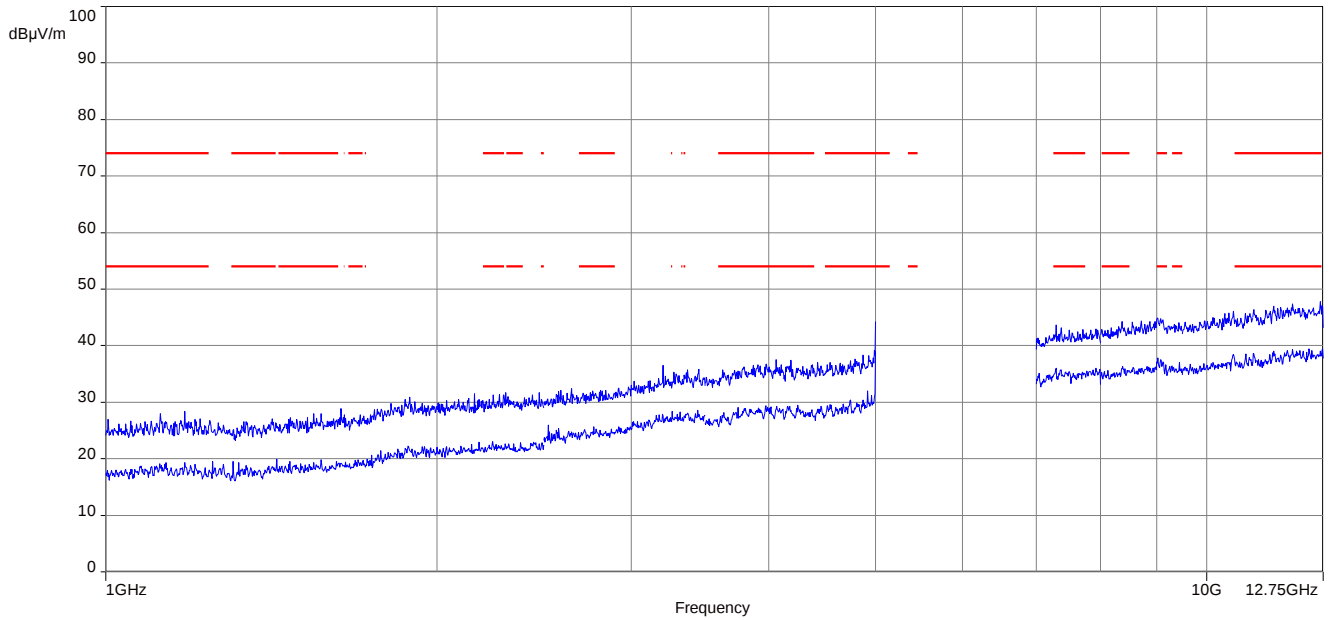
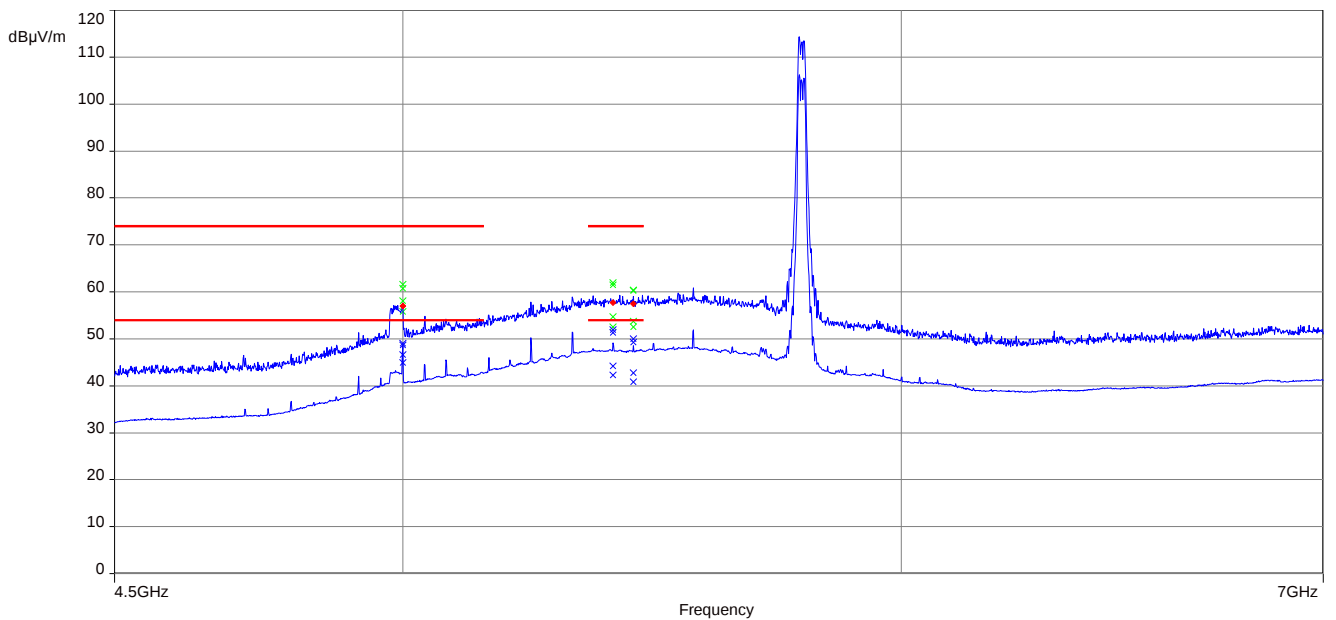
Plot 42: 26 GHz to 40 GHz, 5745 MHz, vertical & horizontal polarization

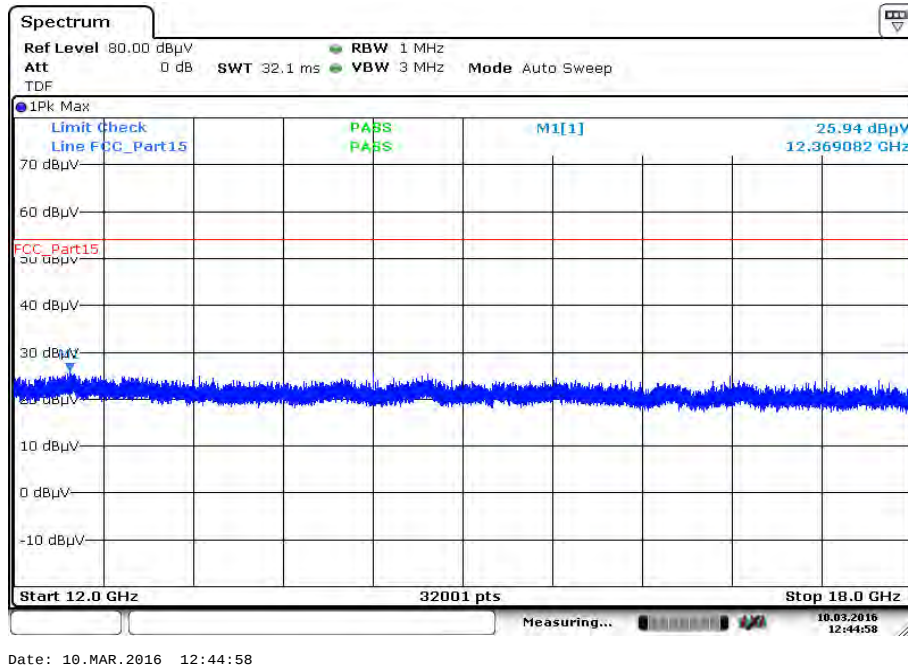
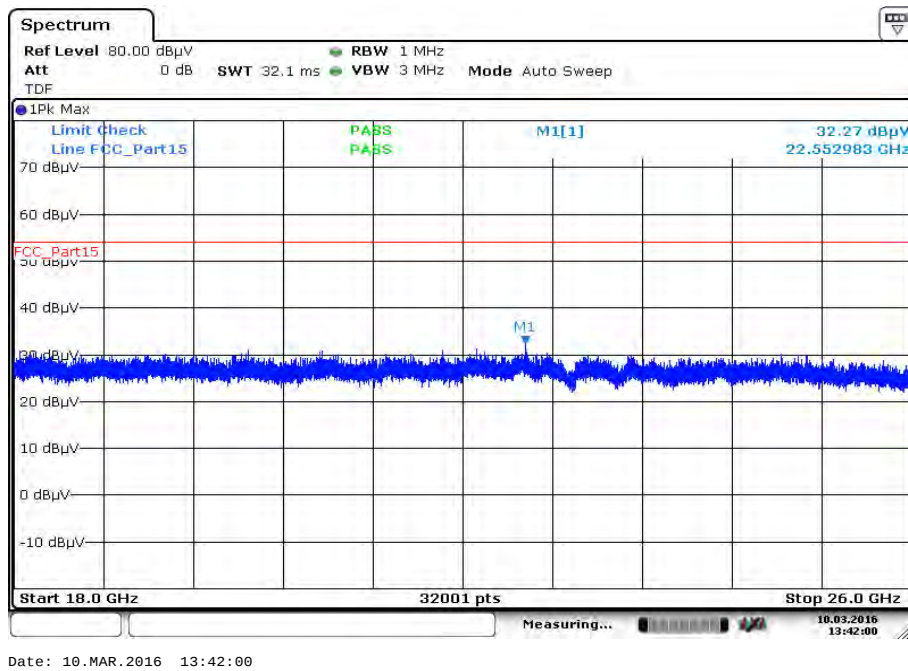


Plot 43: 30 MHz to 1 GHz, 5785 MHz, vertical & horizontal polarization

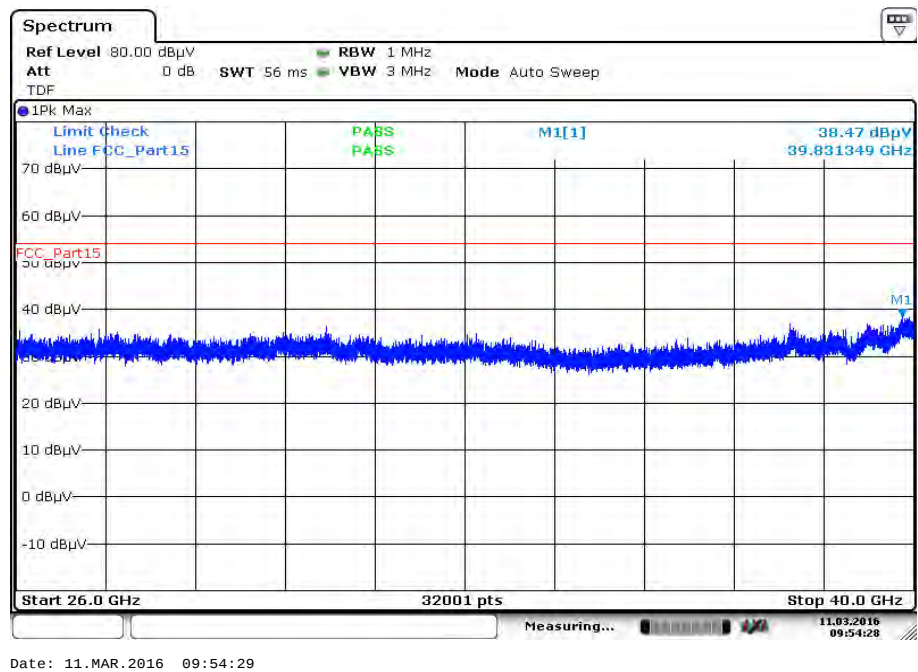
Final_Result

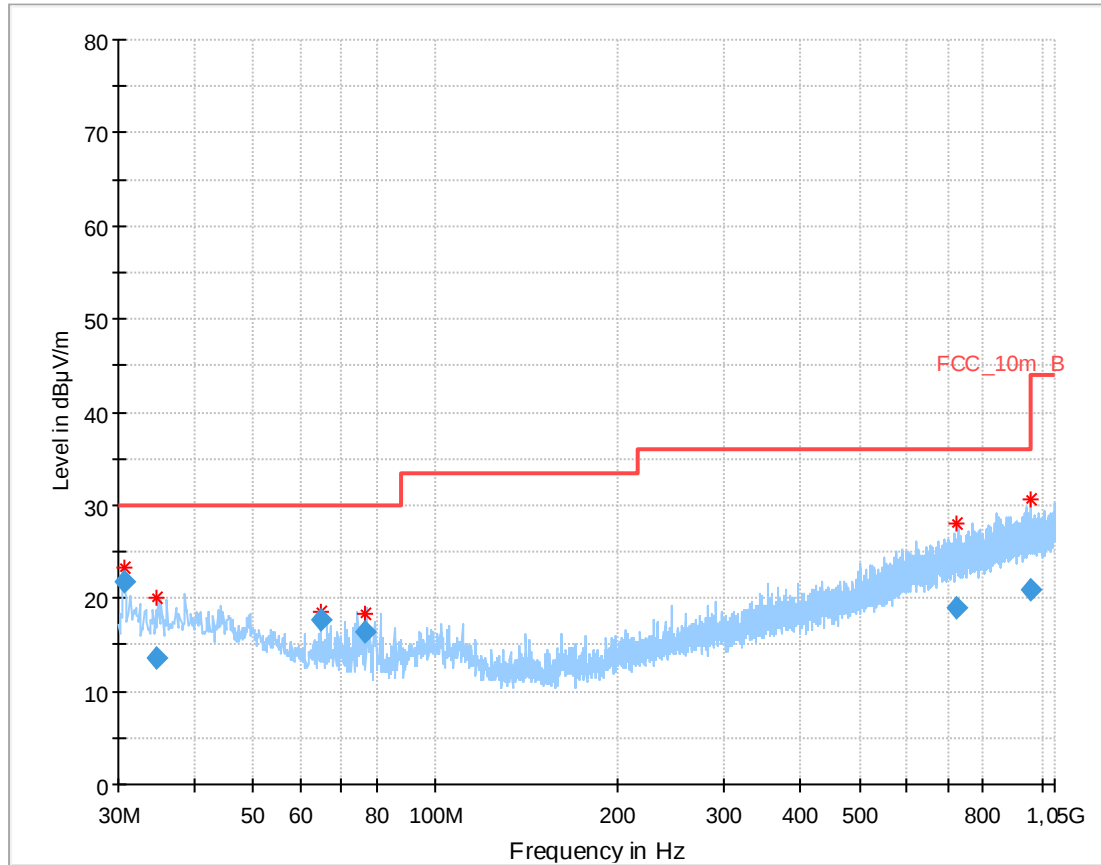
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.604811	21.13	30.00	8.87	1000.0	120.000	170.0	V	280.0	13.4
37.830000	12.82	30.00	17.18	1000.0	120.000	101.0	V	100.0	13.9
64.797750	16.99	30.00	13.01	1000.0	120.000	100.0	V	170.0	9.5
77.214600	17.59	30.00	12.41	1000.0	120.000	170.0	V	100.0	8.2
853.648500	20.36	36.00	15.64	1000.0	120.000	170.0	V	10.0	23.5
918.363300	20.72	36.00	15.28	1000.0	120.000	170.0	H	190.0	24.2

Plot 44: 1 GHz to 12.75 GHz, 5785 MHz, vertical & horizontal polarization**Plot 45:** 4.5 GHz to 7 GHz, 5785 MHz, vertical & horizontal polarization

Plot 46: 12 GHz to 18 GHz, 5785 MHz, vertical & horizontal polarization**Plot 47:** 18 GHz to 26 GHz, 5785 MHz, vertical & horizontal polarization

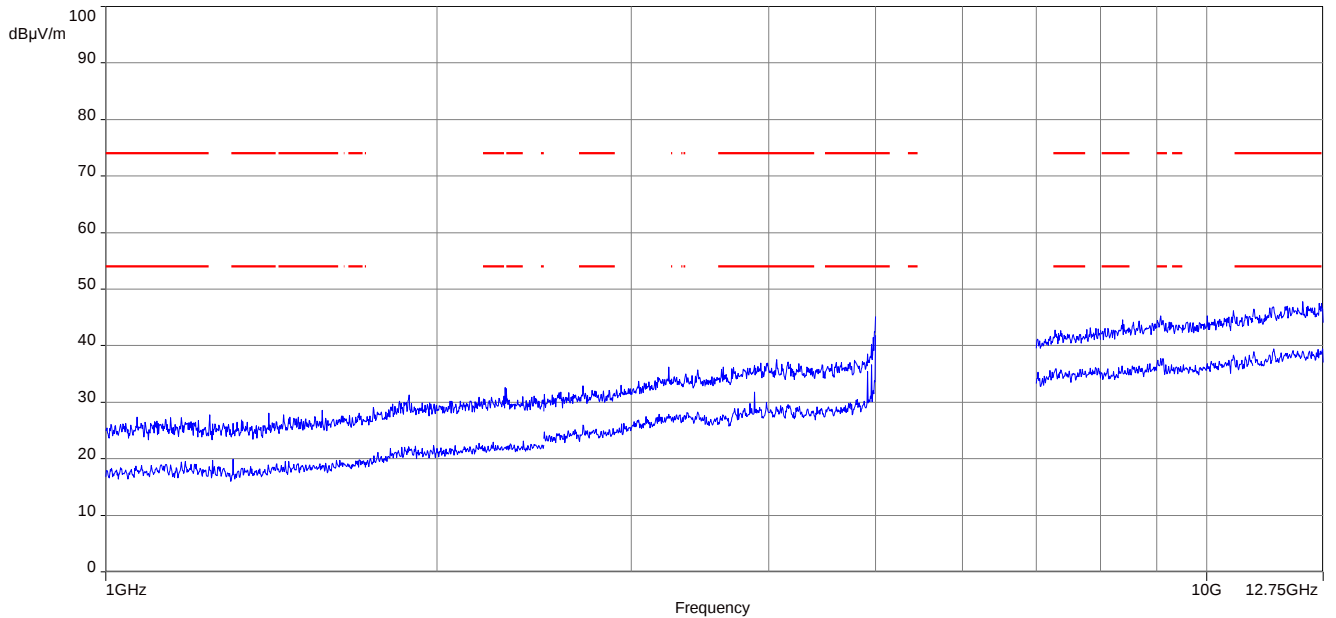
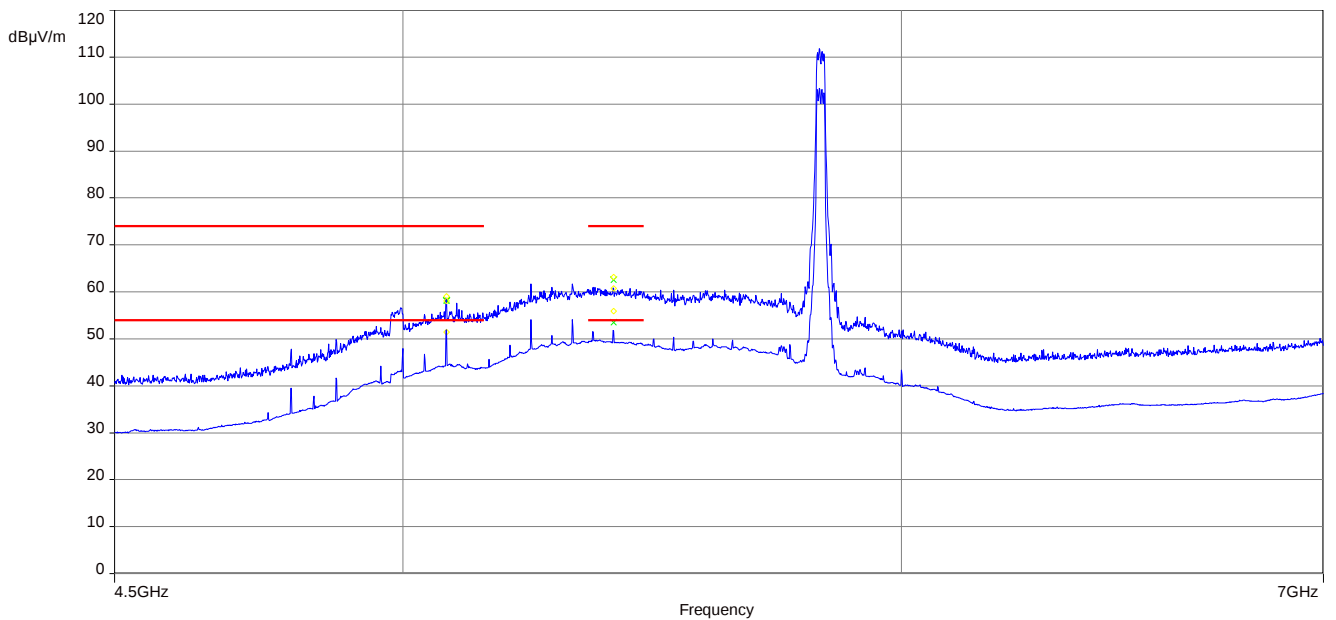
Plot 48: 26 GHz to 40 GHz, 5785 MHz, vertical & horizontal polarization

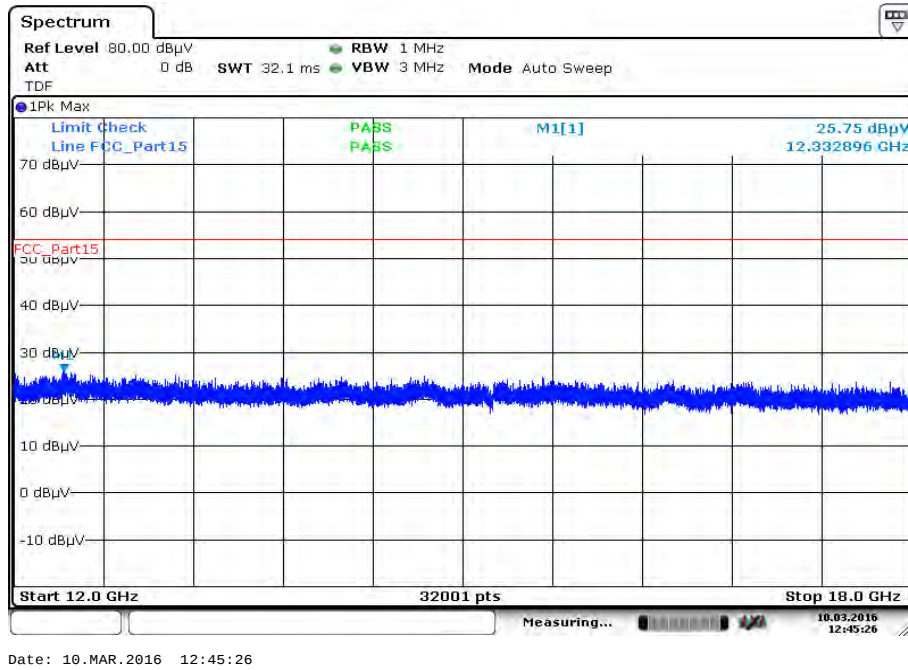
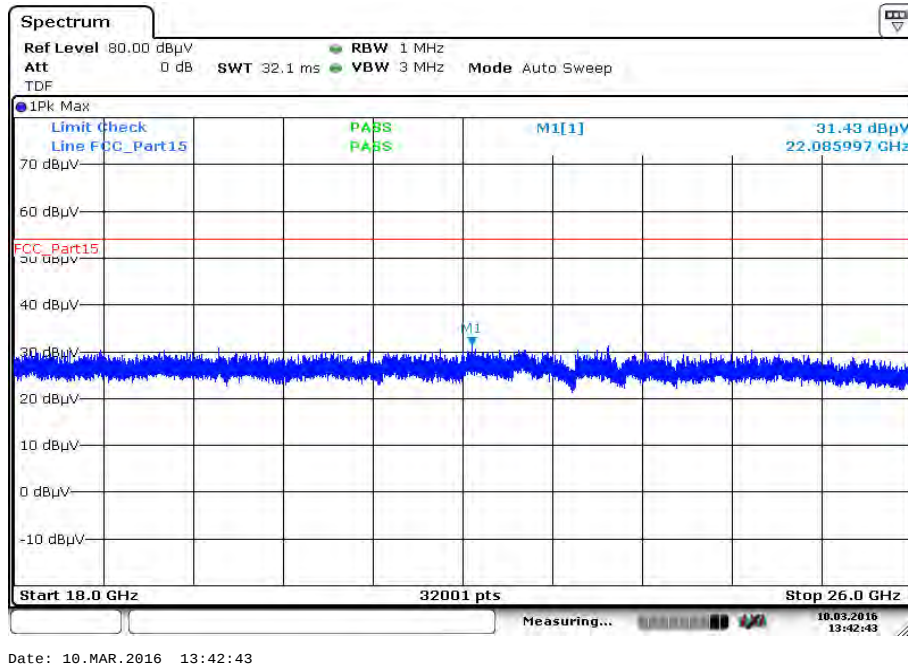


Plot 49: 30 MHz to 1 GHz, 5825 MHz, vertical & horizontal polarization

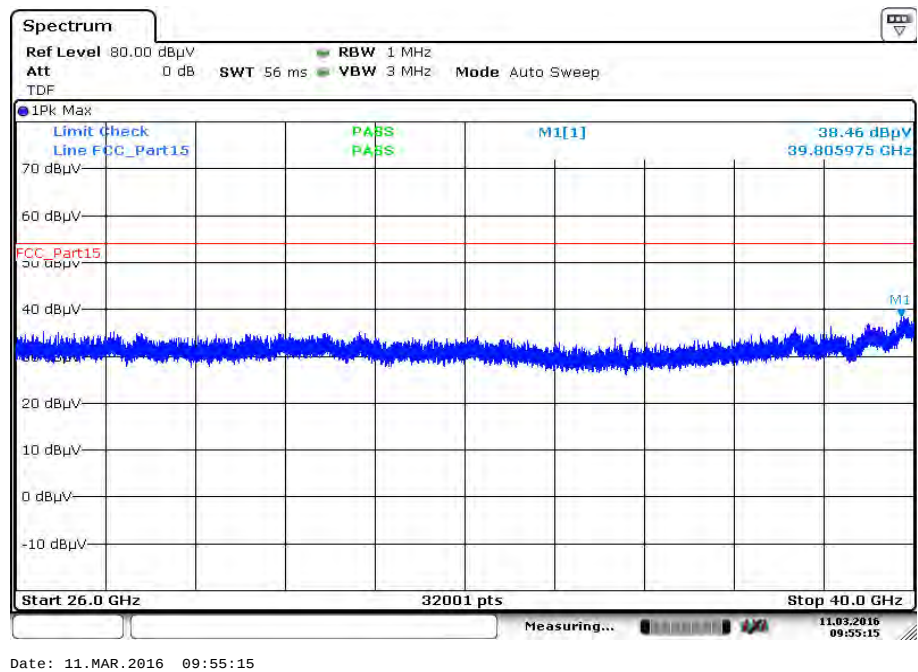
Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.623550	21.88	30.00	8.12	1000.0	120.000	101.0	V	280.0	13.4
34.671300	13.68	30.00	16.32	1000.0	120.000	98.0	V	100.0	13.8
64.779150	17.77	30.00	12.23	1000.0	120.000	101.0	V	81.0	9.5
76.561350	16.40	30.00	13.60	1000.0	120.000	170.0	V	100.0	8.2
725.742900	18.87	36.00	17.13	1000.0	120.000	170.0	V	100.0	22.1
960.902250	20.96	44.00	23.04	1000.0	120.000	170.0	H	190.0	24.4

Plot 50: 1 GHz to 12.75 GHz, 5825 MHz, vertical & horizontal polarization**Plot 51:** 4.5 GHz to 7 GHz, 5825 MHz, vertical & horizontal polarization

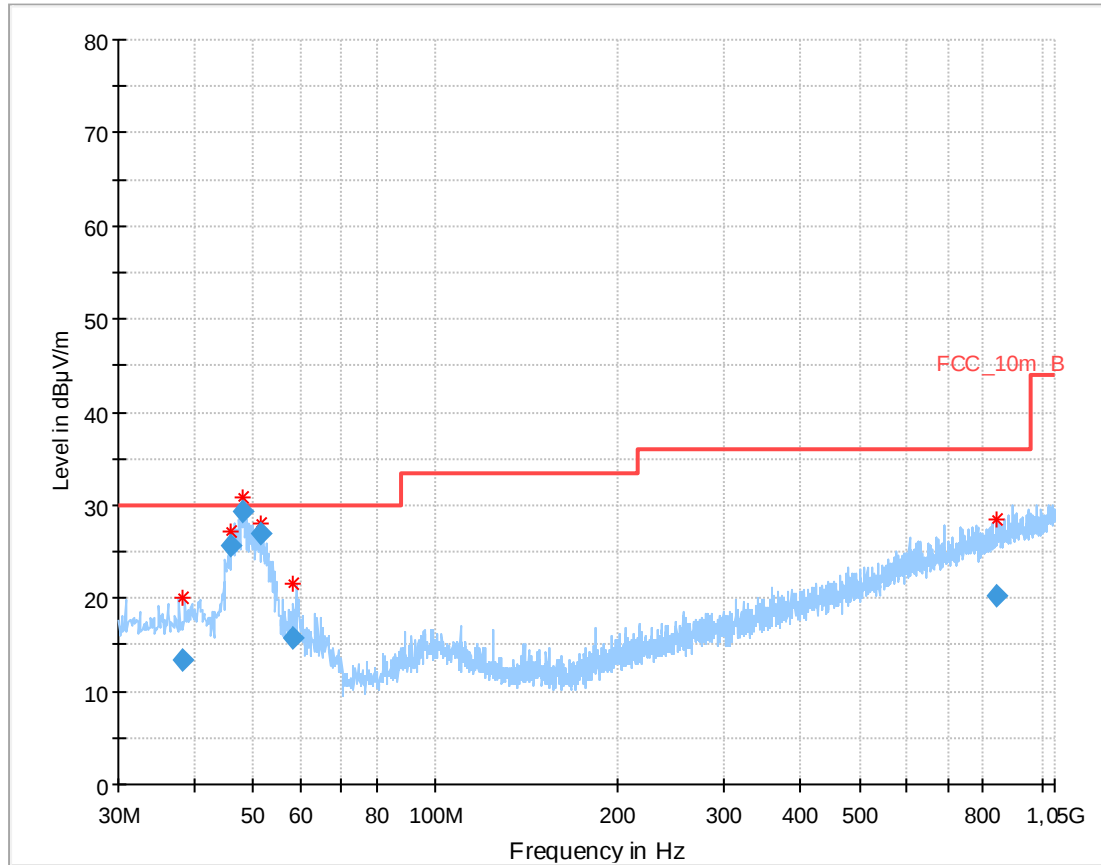
Plot 52: 12 GHz to 18 GHz, 5825 MHz, vertical & horizontal polarization**Plot 53:** 18 GHz to 26 GHz, 5825 MHz, vertical & horizontal polarization

Plot 54: 26 GHz to 40 GHz, 5825 MHz, vertical & horizontal polarization



Plots: OFDM / n HT20 – mode

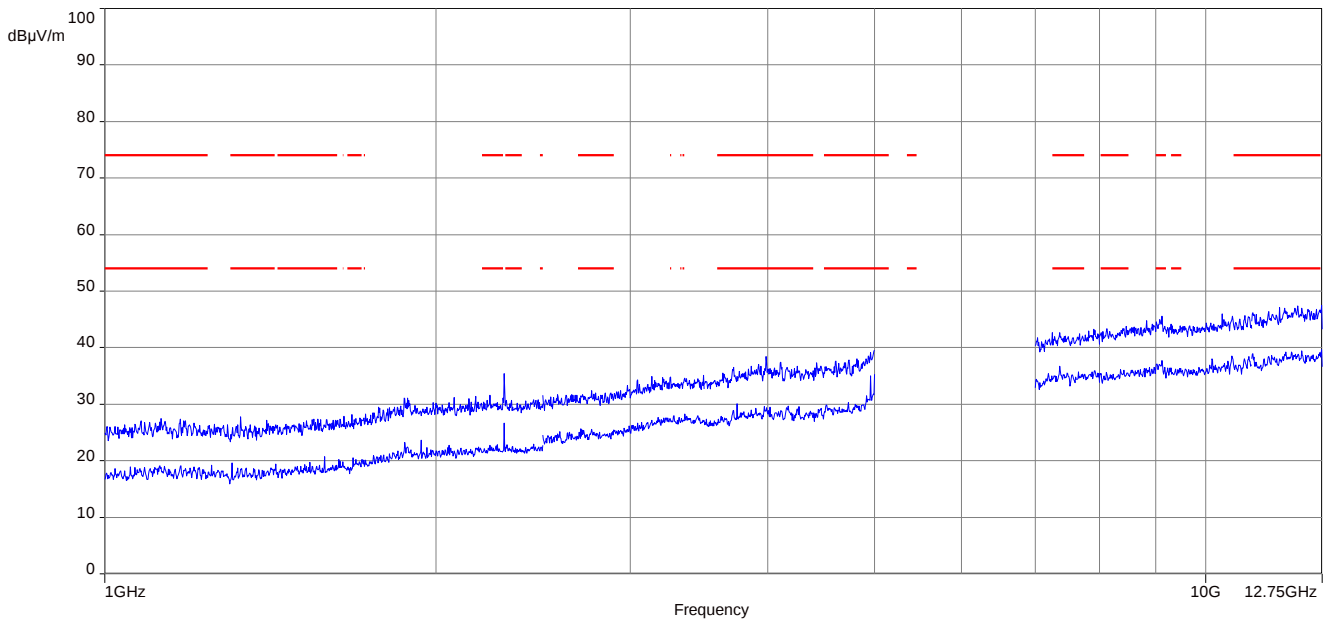
Plot 1: 30 MHz to 1 GHz, 5180 MHz, vertical & horizontal polarization



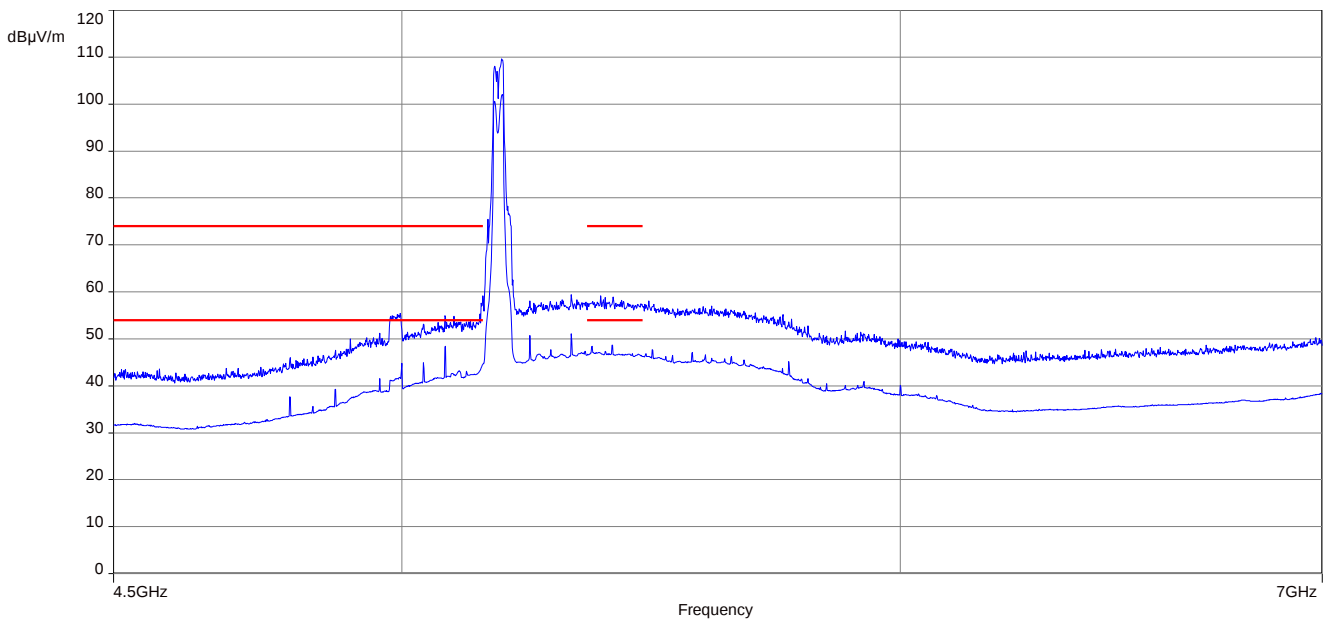
Final_Result

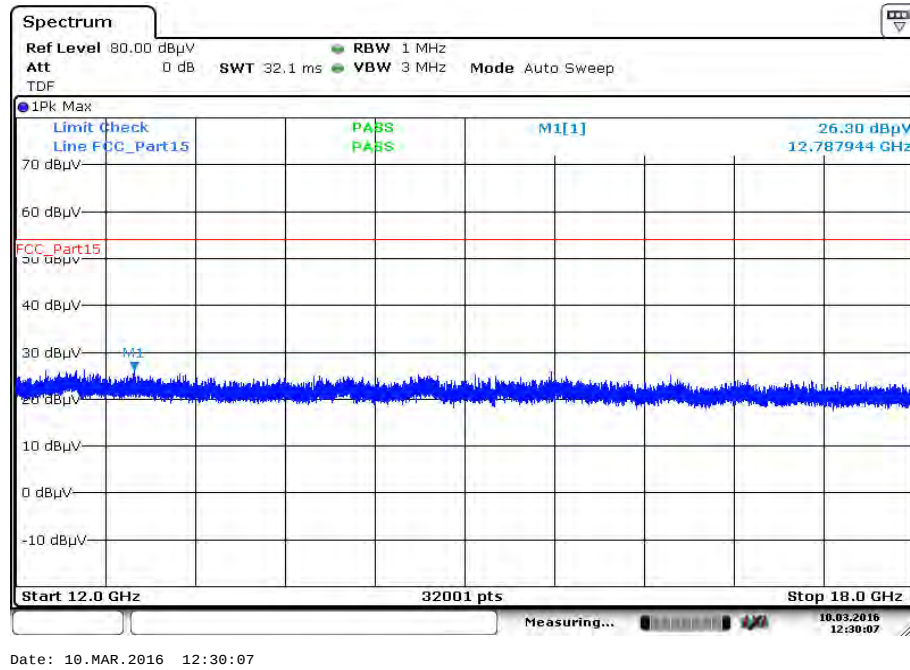
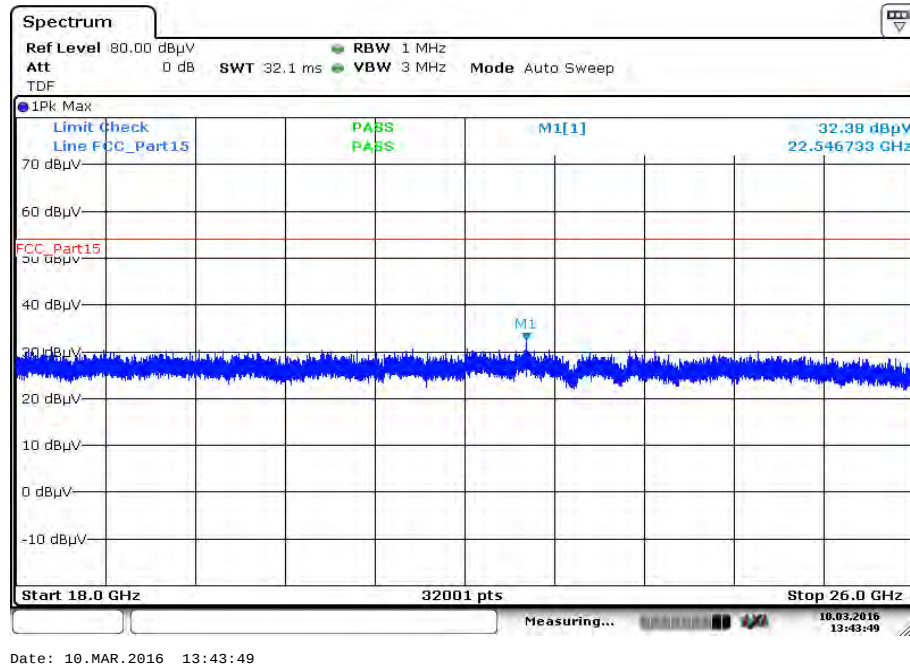
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
38.316450	13.45	30.00	16.55	1000.0	120.000	98.0	V	100	14.0
45.842100	25.59	30.00	4.41	1000.0	120.000	98.0	V	280	13.6
48.168750	29.30	30.00	0.70	1000.0	120.000	98.0	V	-9	13.1
51.467850	26.89	30.00	3.11	1000.0	120.000	98.0	V	-9	12.4
58.367850	15.80	30.00	14.20	1000.0	120.000	98.0	V	-9	11.0
841.032300	20.20	36.00	15.80	1000.0	120.000	170.0	H	260	23.3

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



Plot 3: 4.5 GHz to 7 GHz, 5180 MHz, vertical & horizontal polarization



Plot 4: 12 GHz to 18 GHz, 5180 MHz, vertical & horizontal polarization**Plot 5:** 18 GHz to 26 GHz, 5180 MHz, vertical & horizontal polarization

Spectrum

Ref Level 80.00 dBμV RBW 1 MHz
 Att 0 dB SWF 56 ms VBW 3 MHz Mode Auto Sweep
 TDF

● IPk Max

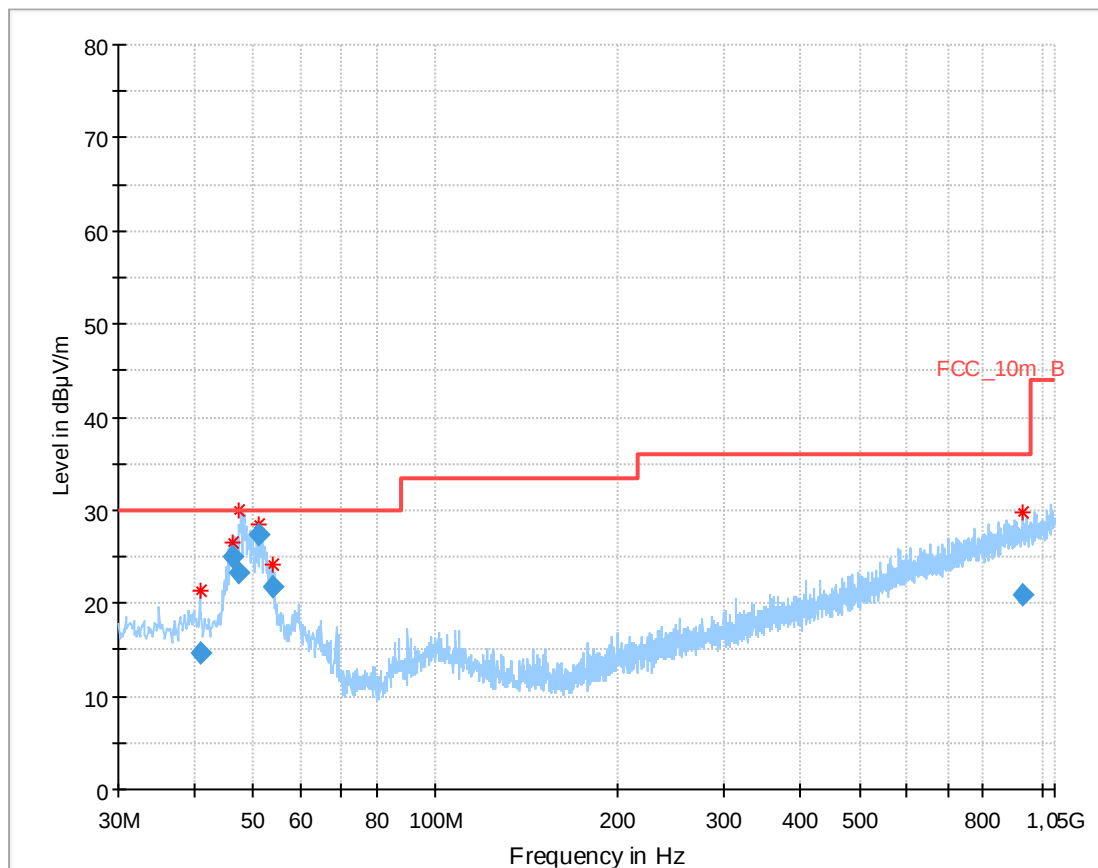
Limit Check PASS M1[1] 39.24 dBμV
 Line FCC_Part15 PASS 39.844474 GHz

FCC_Part15 50 dBμV

Start 26.0 GHz 32001 pts Stop 40.0 GHz

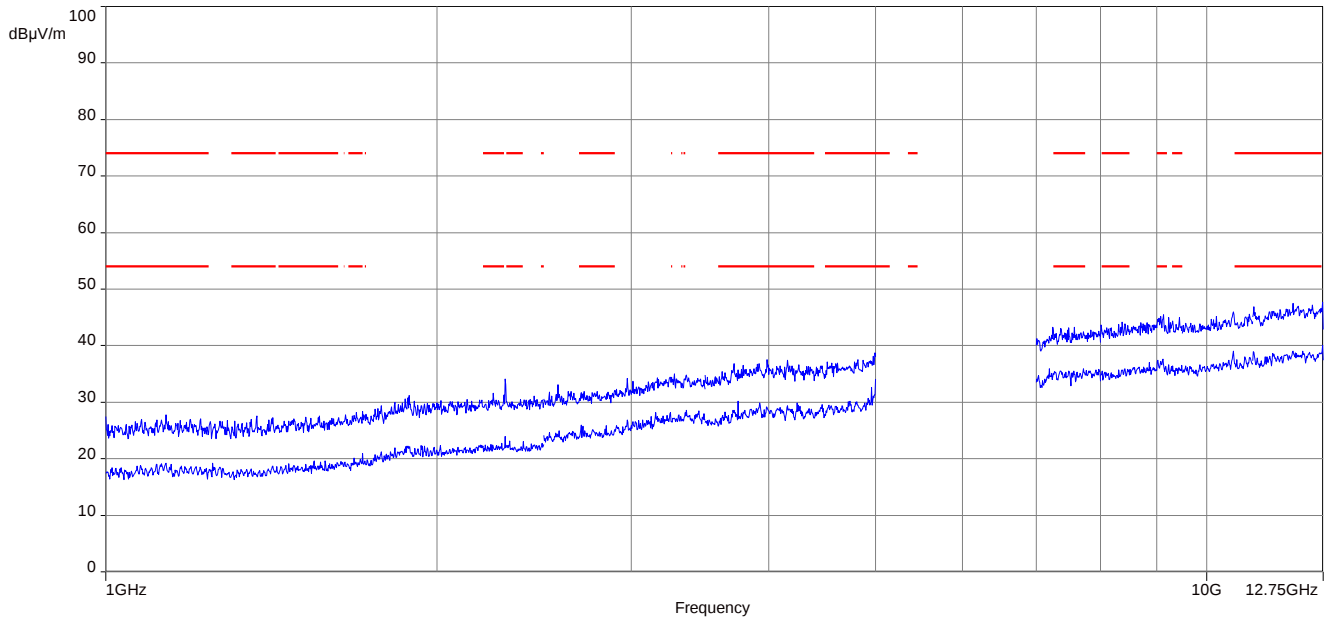
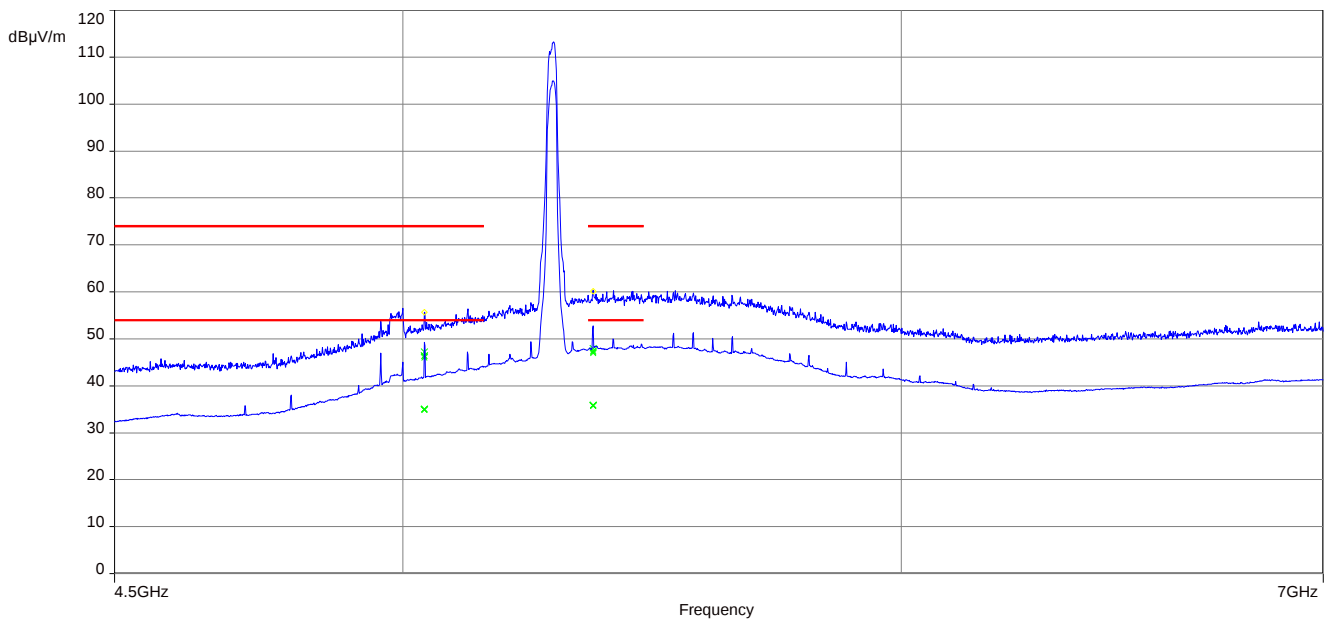
Measuring... 11.03.2016 09:57:38

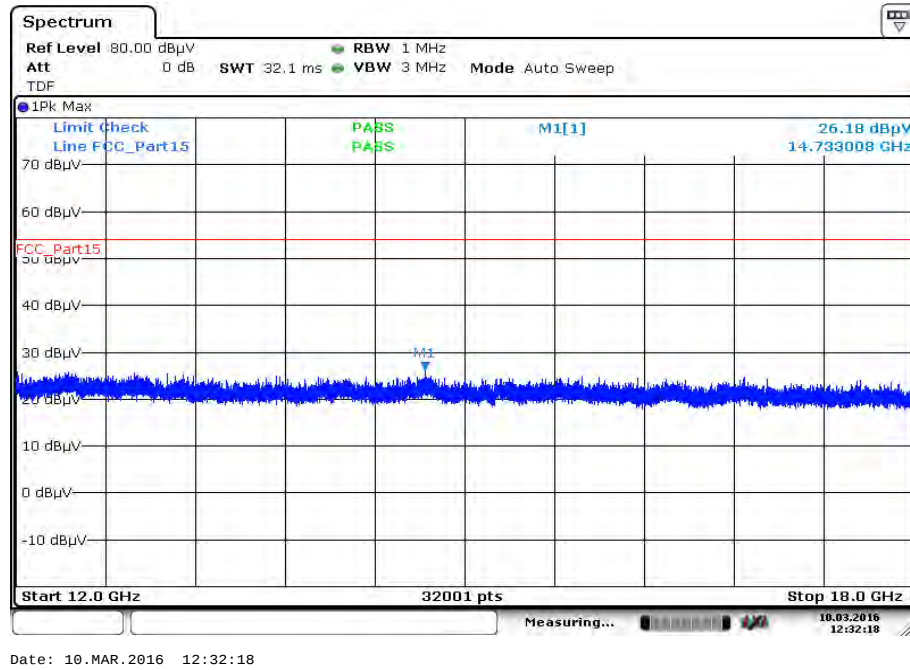
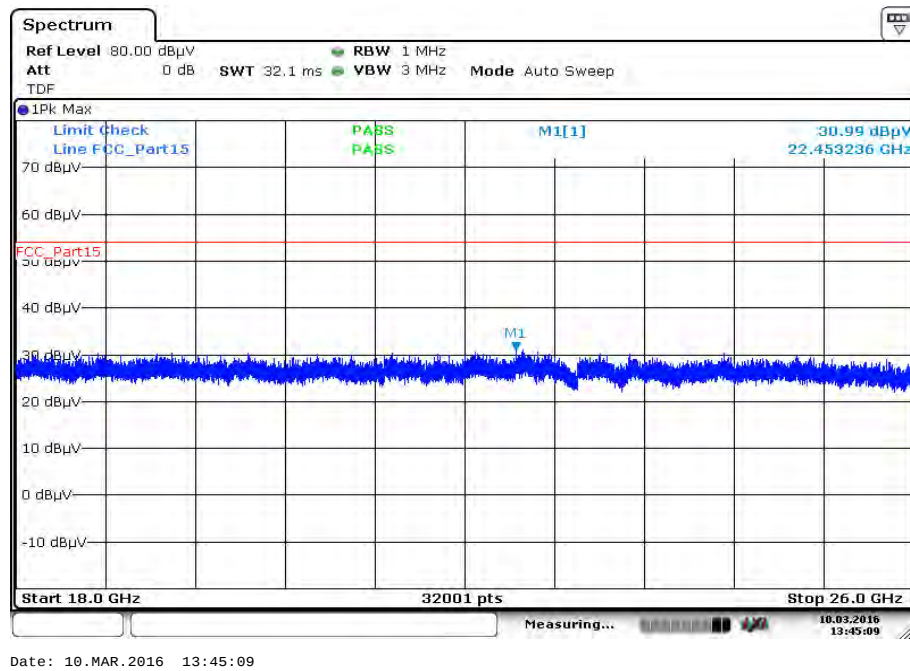
Date: 11.MAR.2016 09:57:38

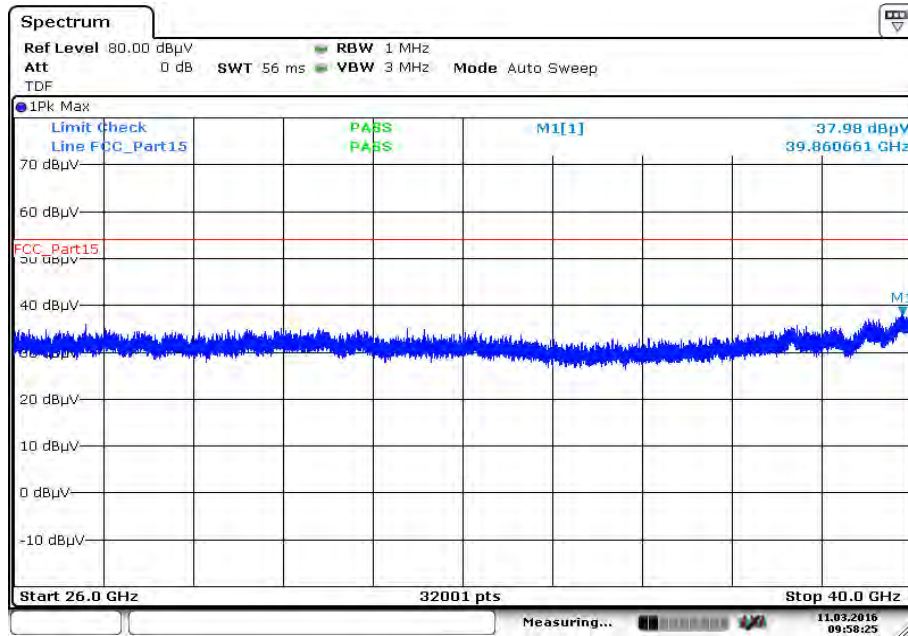
Plot 7: 30 MHz to 1 GHz, 5240 MHz, vertical & horizontal polarization

Final_Result

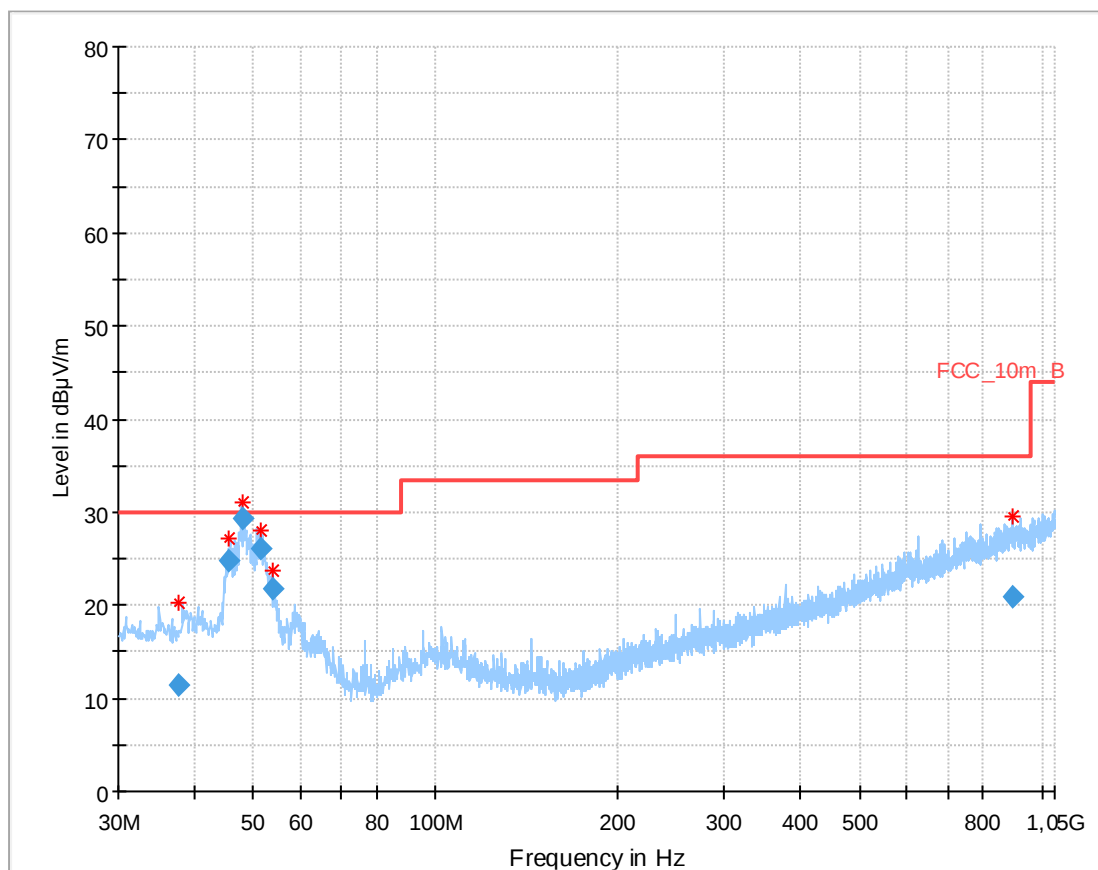
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
40.917600	14.72	30.00	15.28	1000.0	120.000	101.0	V	280	14.0
46.205100	24.92	30.00	5.08	1000.0	120.000	98.0	V	100	13.6
47.446350	23.19	30.00	6.81	1000.0	120.000	98.0	V	10	13.2
51.143700	27.34	30.00	2.66	1000.0	120.000	98.0	V	10	12.5
53.762100	21.80	30.00	8.20	1000.0	120.000	101.0	V	-10	12.0
928.424700	20.95	36.00	15.05	1000.0	120.000	101.0	H	190	24.2

Plot 8: 1 GHz to 12.75 GHz, 5240 MHz, vertical & horizontal polarization**Plot 9:** 4.5 GHz to 7 GHz, 5240 MHz, vertical & horizontal polarization

Plot 10: 12 GHz to 18 GHz, 5240 MHz, vertical & horizontal polarization**Plot 11:** 18 GHz to 26 GHz, 5240 MHz, vertical & horizontal polarization

Plot 12: 26 GHz to 40 GHz, 5240 MHz, vertical & horizontal polarization

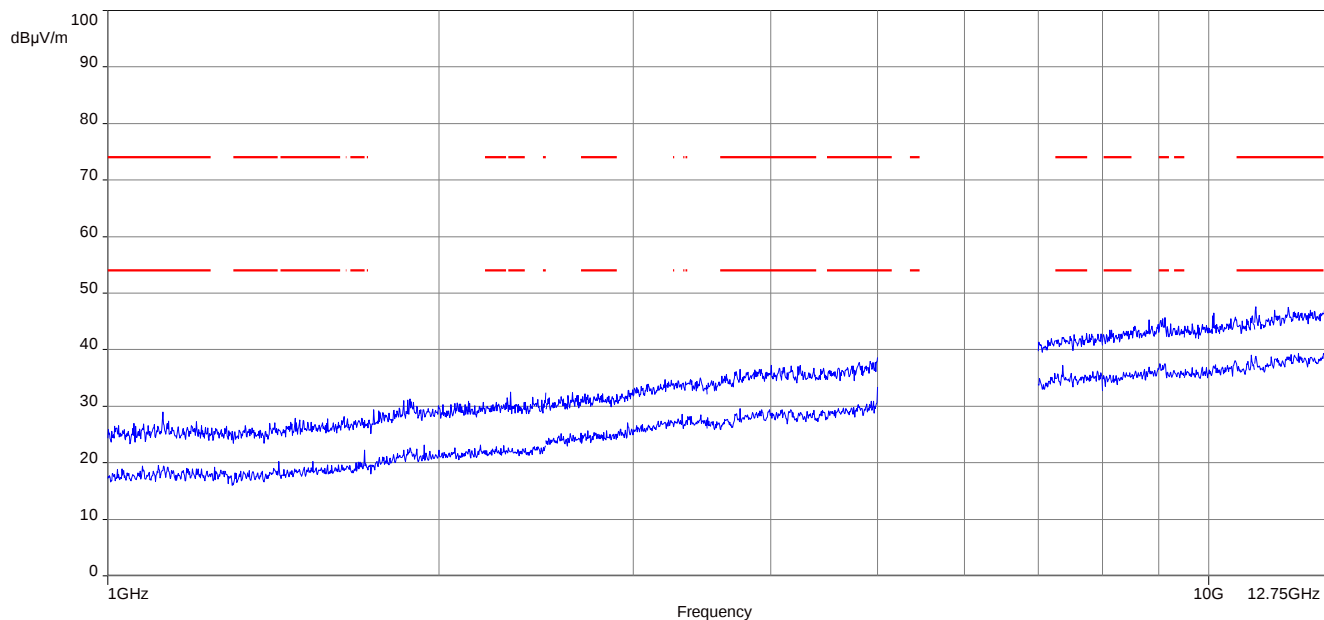
Date: 11.MAR.2016 09:58:25

Plot 13: 30 MHz to 1 GHz, 5260 MHz, vertical & horizontal polarization

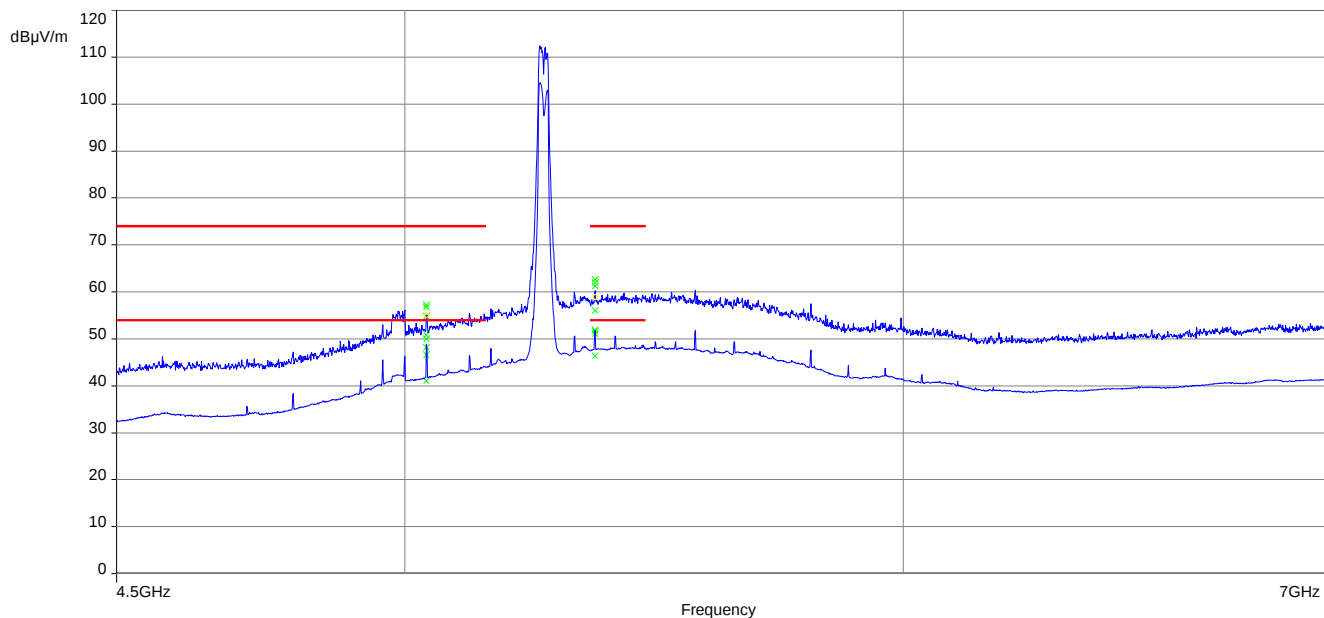
Final_Result

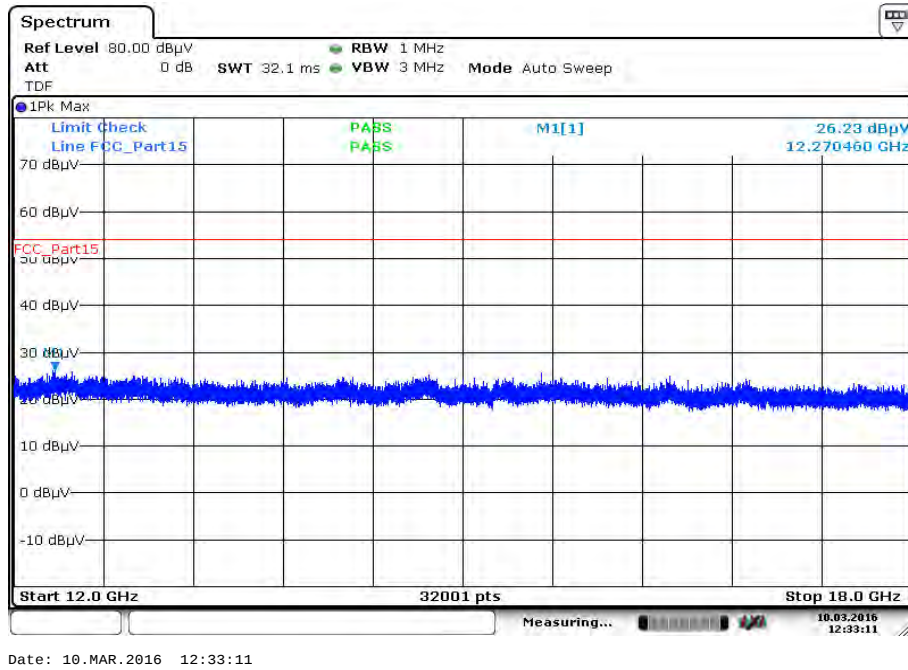
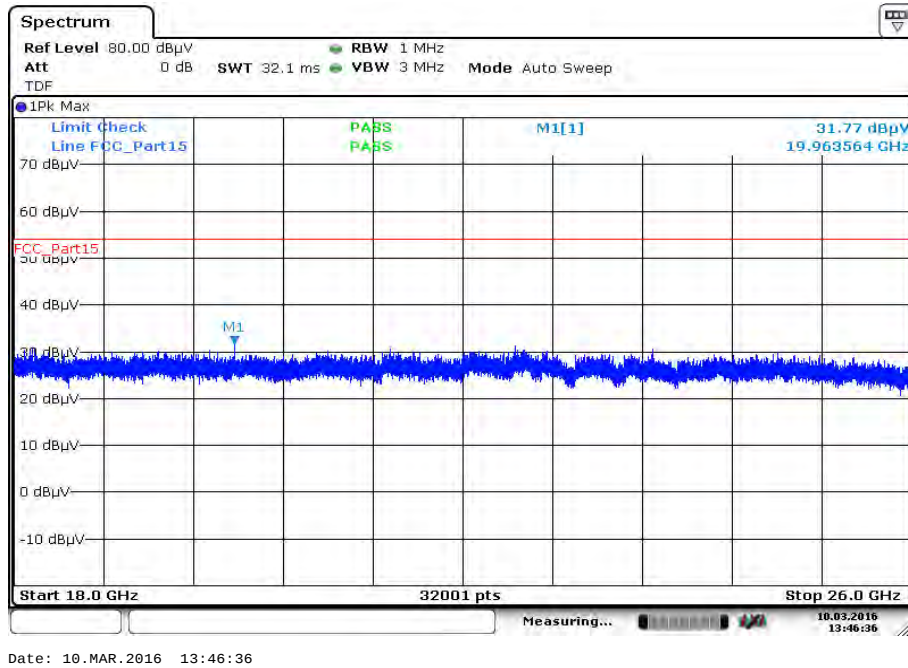
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
37.818150	11.46	30.00	18.54	1000.0	120.000	98.0	V	280	13.9
45.580050	24.84	30.00	5.16	1000.0	120.000	98.0	V	10	13.7
48.175650	29.23	30.00	0.77	1000.0	120.000	98.0	V	10	13.1
51.450150	26.05	30.00	3.95	1000.0	120.000	98.0	V	-9	12.4
53.785950	21.85	30.00	8.15	1000.0	120.000	101.0	V	10	12.0
896.515350	20.99	36.00	15.01	1000.0	120.000	170.0	H	-10	24.1

Plot 14: 1 GHz to 12.75 GHz, 5260 MHz, vertical & horizontal polarization

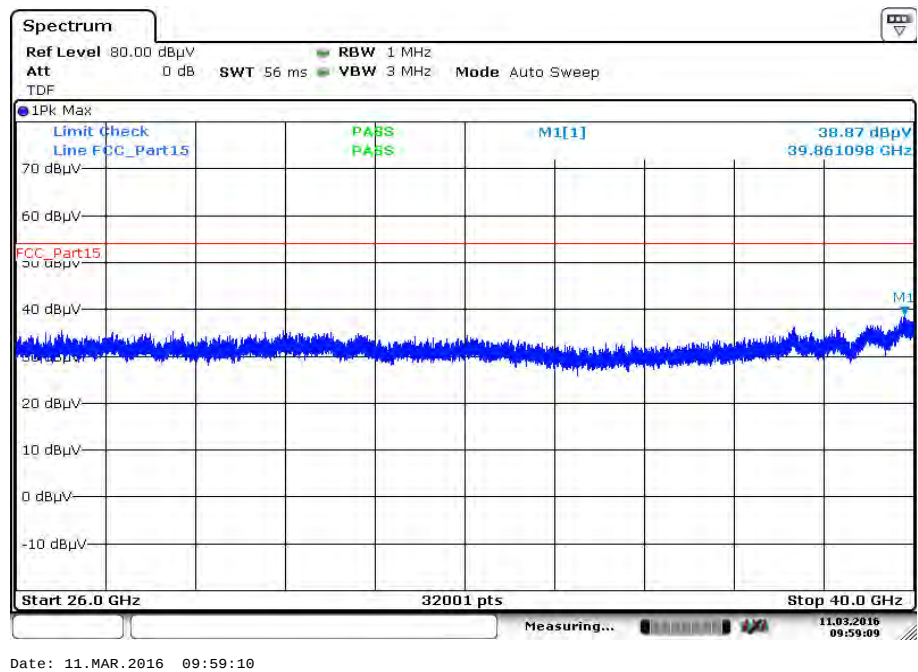


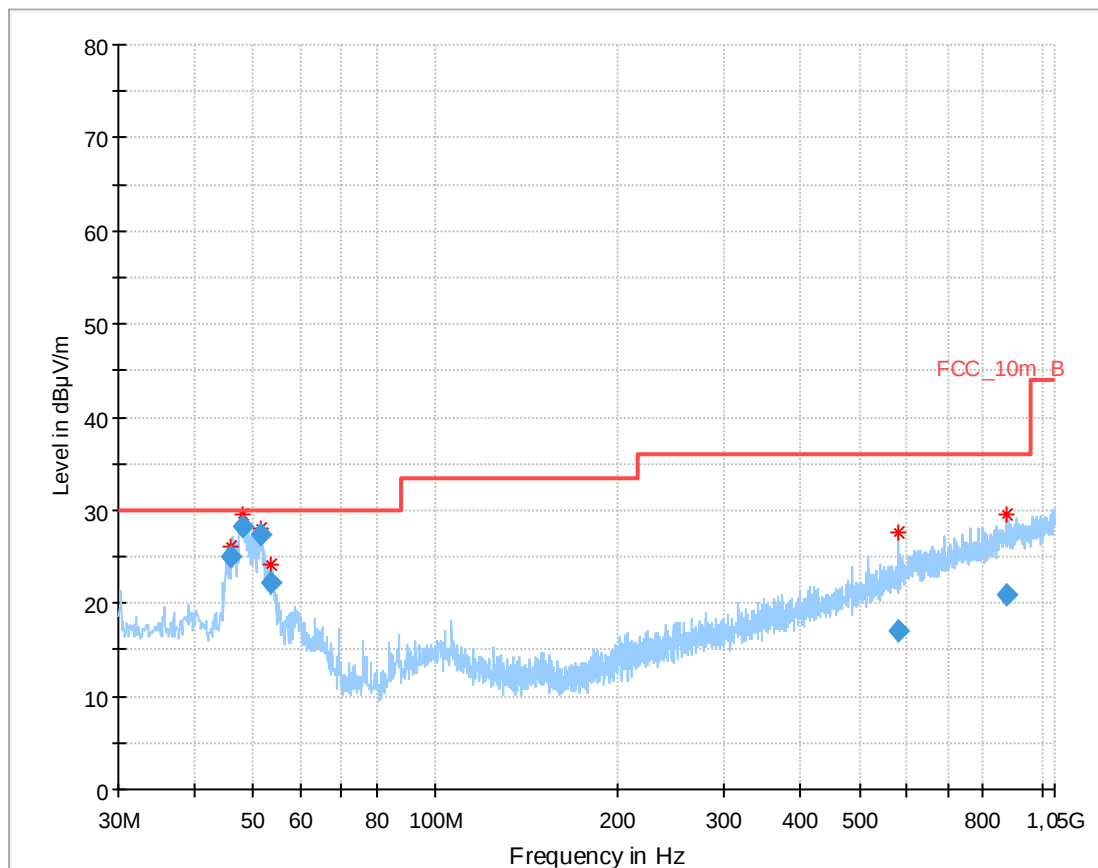
Plot 15: 4.5 GHz to 7 GHz, 5260 MHz, vertical & horizontal polarization



Plot 16: 12 GHz to 18 GHz, 5260 MHz, vertical & horizontal polarization**Plot 17:** 18 GHz to 26 GHz, 5260 MHz, vertical & horizontal polarization

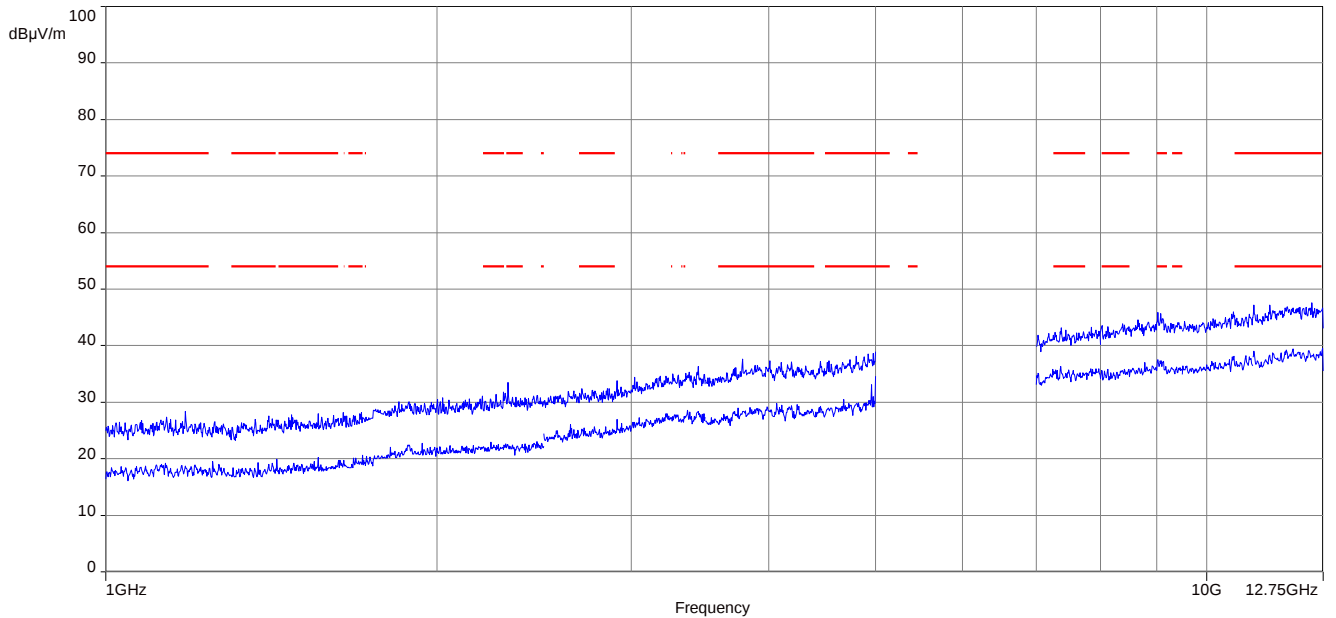
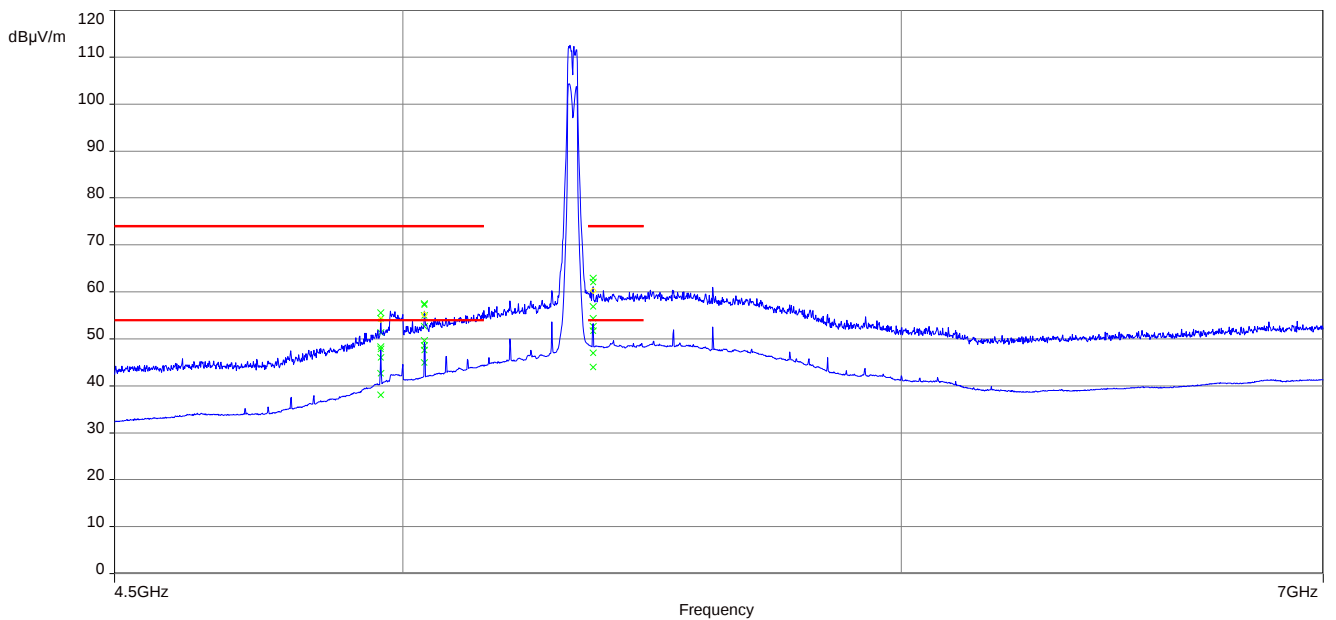
Plot 18: 26 GHz to 40 GHz, 5260 MHz, vertical & horizontal polarization

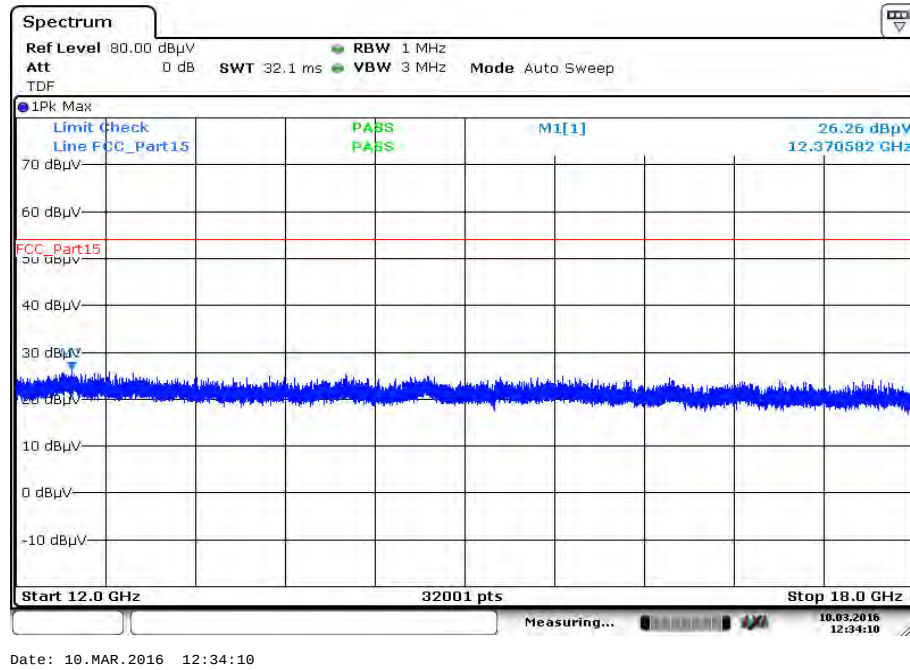
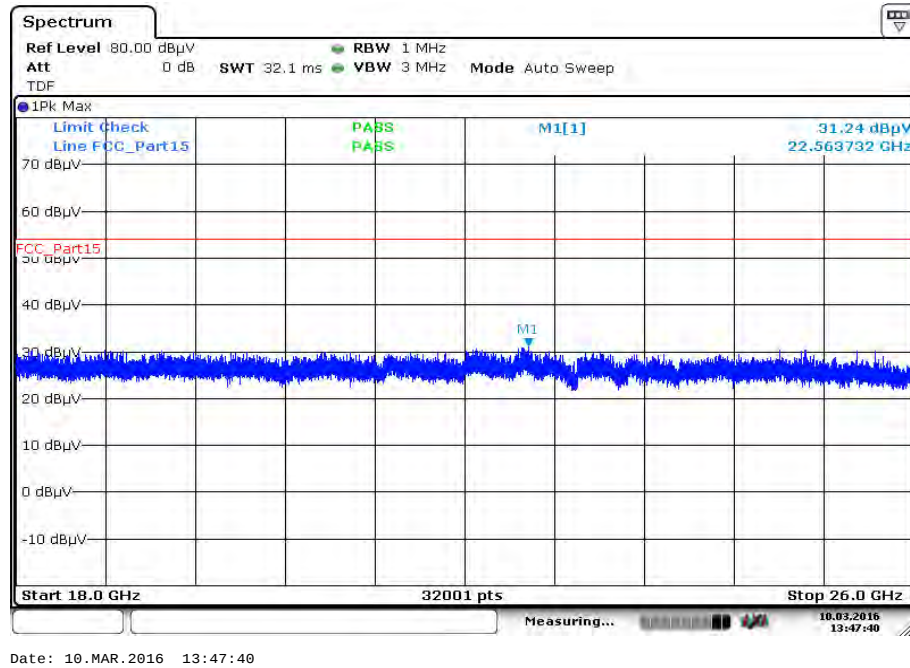


Plot 19: 30 MHz to 1 GHz, 5320 MHz, vertical & horizontal polarization

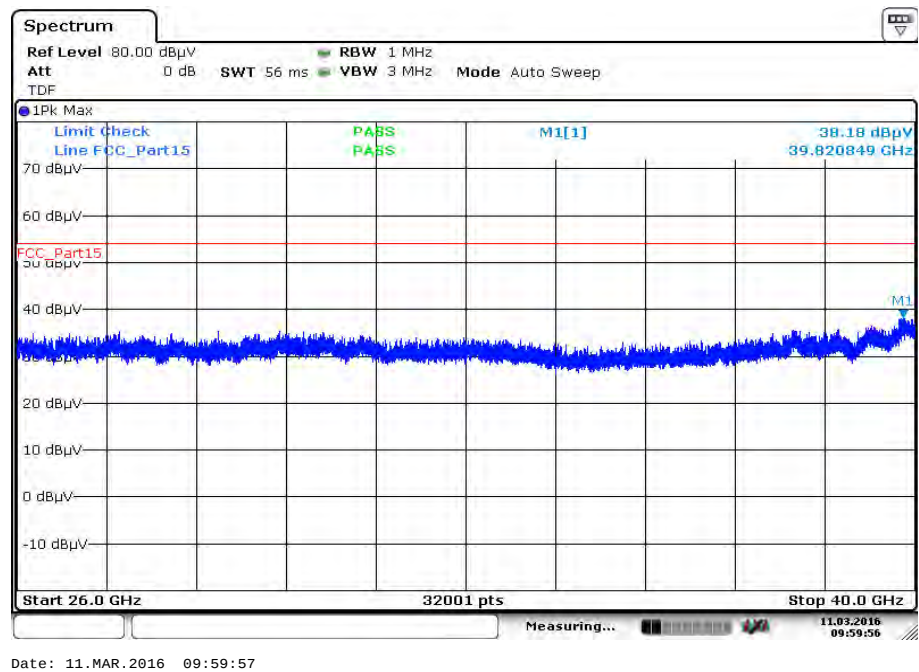
Final_Result

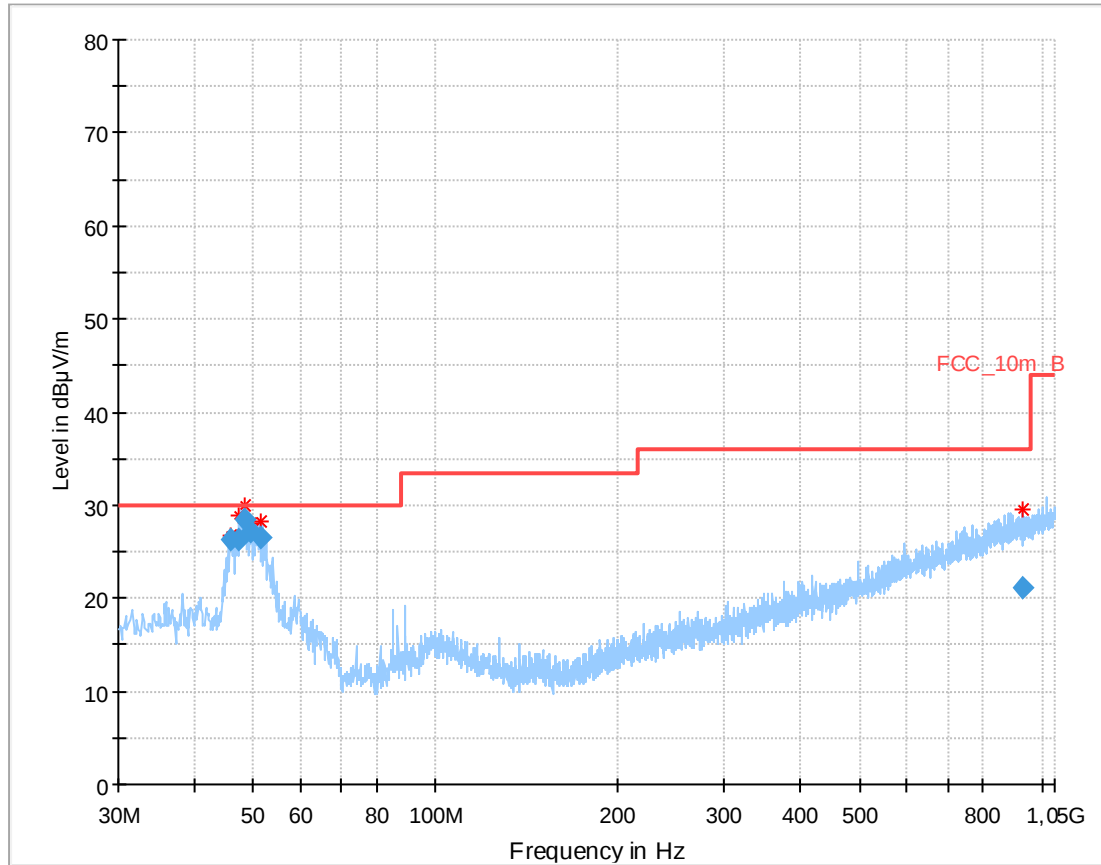
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
45.866550	25.10	30.00	4.90	1000.0	120.000	98.0	V	10	13.6
48.234750	28.33	30.00	1.67	1000.0	120.000	98.0	V	170	13.1
51.513450	27.46	30.00	2.54	1000.0	120.000	98.0	V	-10	12.4
53.521800	22.16	30.00	7.84	1000.0	120.000	98.0	V	-10	12.1
578.502300	16.94	36.00	19.06	1000.0	120.000	170.0	V	10	20.1
876.907800	20.84	36.00	15.16	1000.0	120.000	170.0	V	190	23.8

Plot 20: 1 GHz to 12.75 GHz, 5320 MHz, vertical & horizontal polarization**Plot 21:** 4.5 GHz to 7 GHz, 5320 MHz, vertical & horizontal polarization

Plot 22: 12 GHz to 18 GHz, 5320 MHz, vertical & horizontal polarization**Plot 23:** 18 GHz to 26 GHz, 5320 MHz, vertical & horizontal polarization

Plot 24: 26 GHz to 40 GHz, 5320 MHz, vertical & horizontal polarization

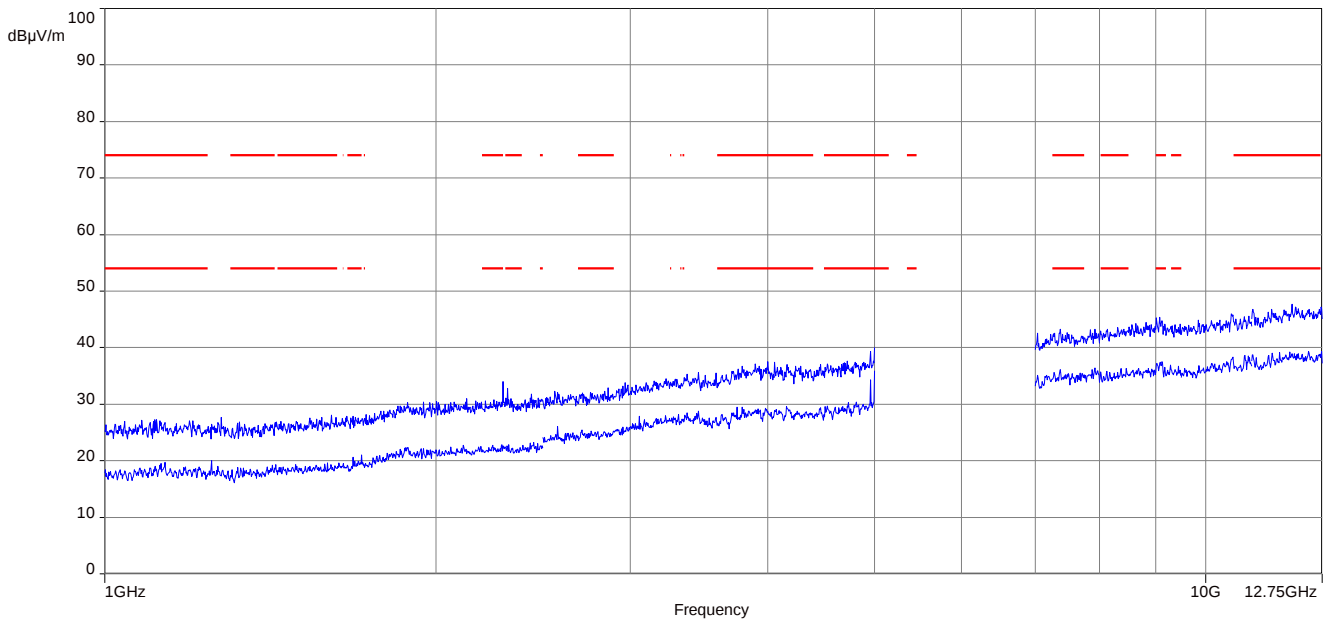


Plot 25: 30 MHz to 1 GHz, 5500 MHz, vertical & horizontal polarization

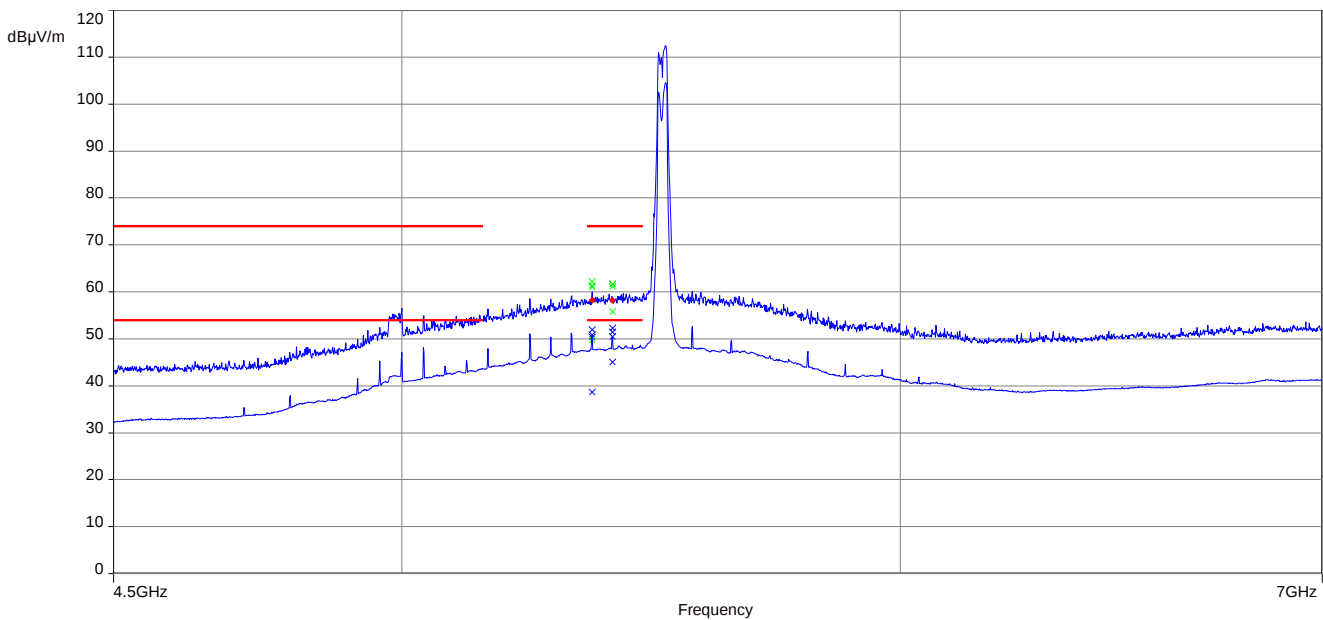
Final_Result

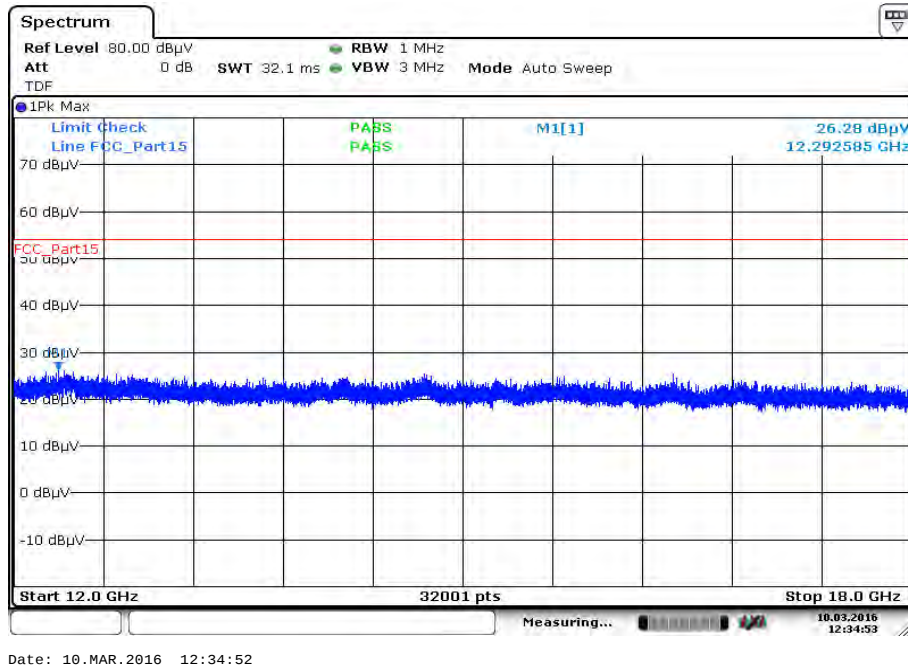
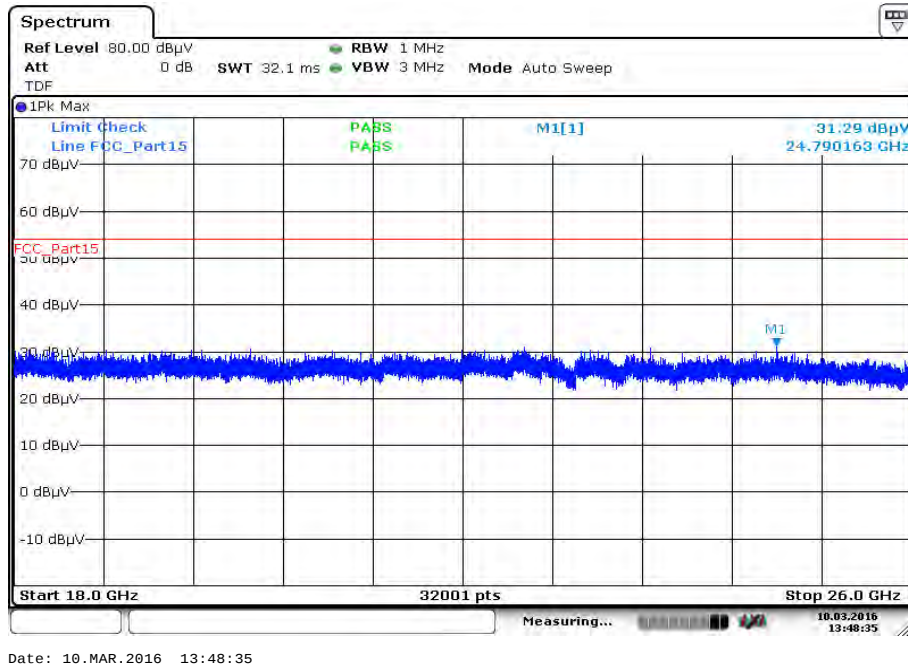
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
45.883800	26.34	30.00	3.66	1000.0	120.000	98.0	V	10	13.6
47.253600	26.35	30.00	3.65	1000.0	120.000	98.0	V	-10	13.3
48.512250	28.50	30.00	1.50	1000.0	120.000	170.0	V	10	13.0
49.506000	27.27	30.00	2.73	1000.0	120.000	98.0	V	-10	12.8
51.471750	26.55	30.00	3.45	1000.0	120.000	103.0	V	-9	12.4
931.863000	21.11	36.00	14.89	1000.0	120.000	98.0	V	260	24.2

Plot 26: 1 GHz to 12.75 GHz, 5500 MHz, vertical & horizontal polarization

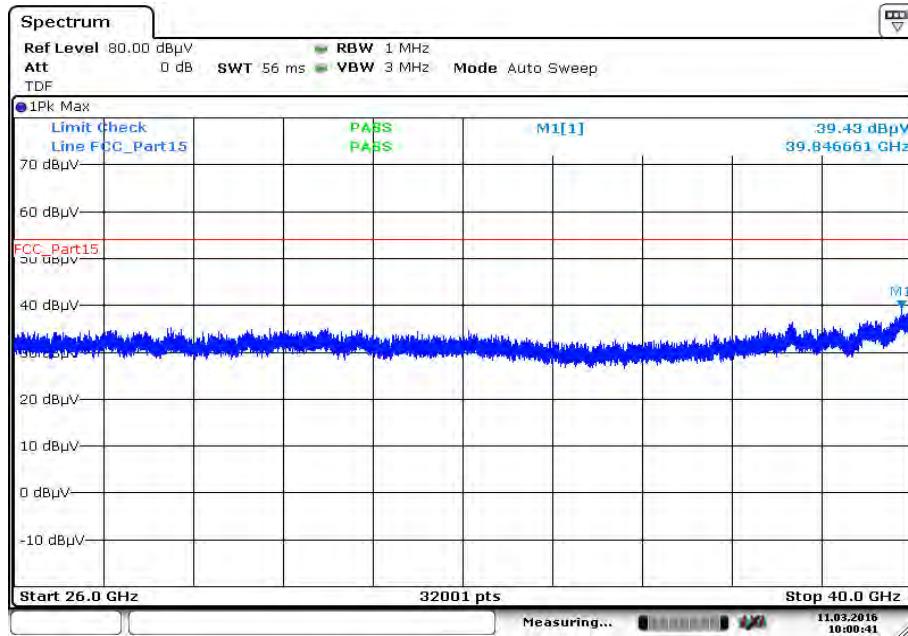


Plot 27: 4.5 GHz to 7 GHz, 5500 MHz, vertical & horizontal polarization

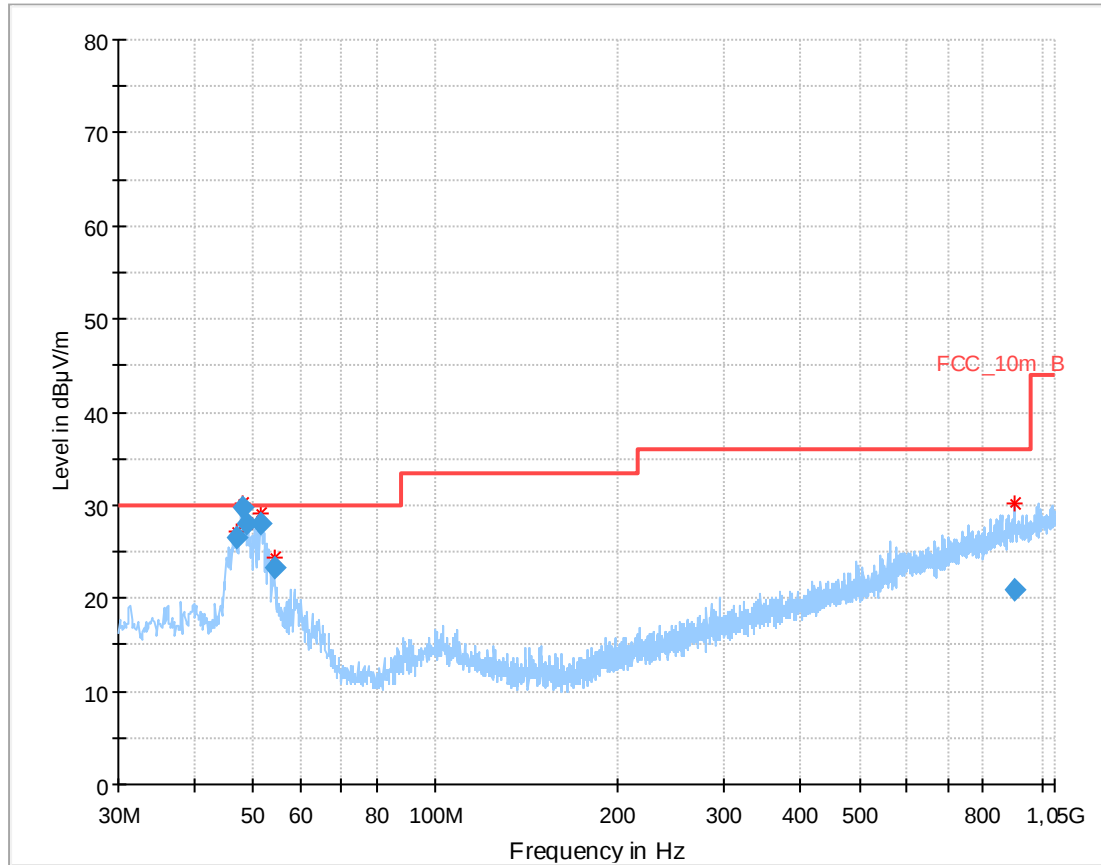


Plot 28: 12 GHz to 18 GHz, 5500 MHz, vertical & horizontal polarization**Plot 29:** 18 GHz to 26 GHz, 5500 MHz, vertical & horizontal polarization

Plot 30: 26 GHz to 40 GHz, 5500 MHz, vertical & horizontal polarization

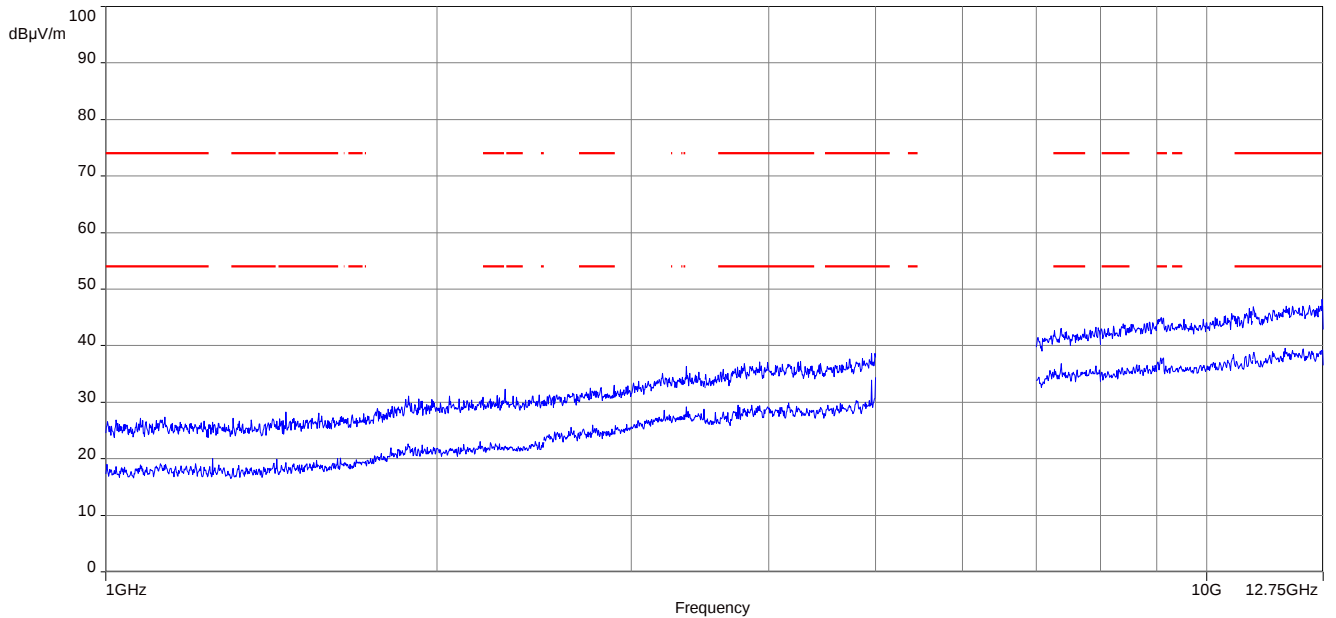
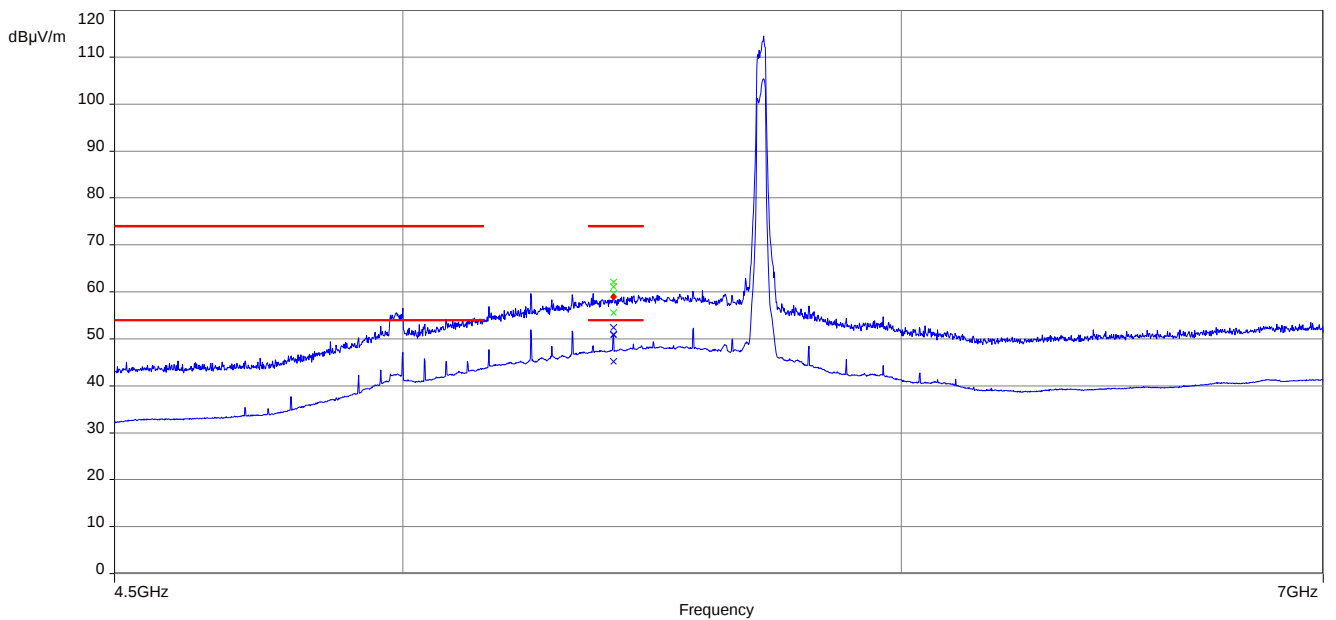


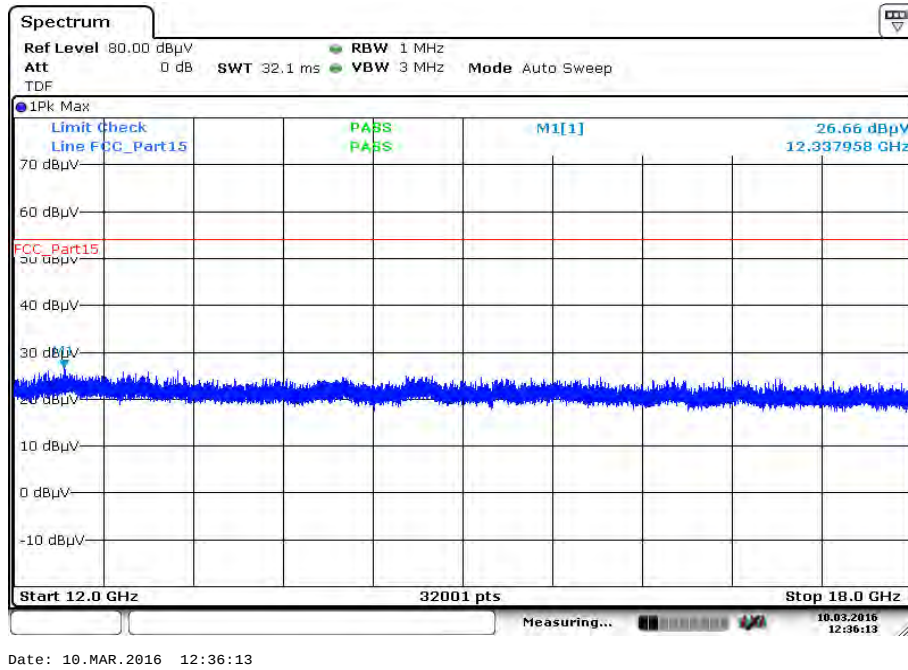
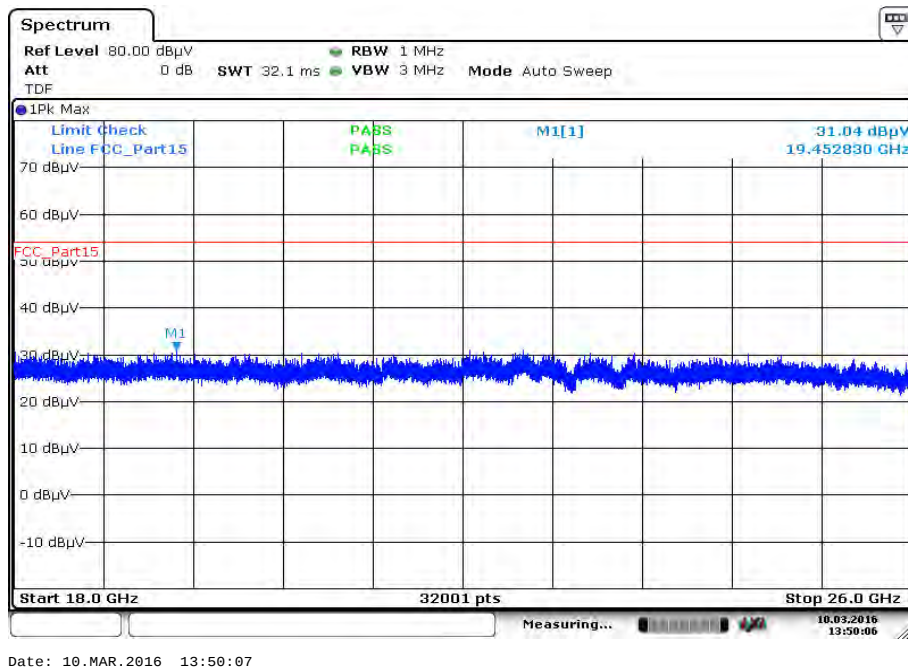
Date: 11.MAR.2016 10:00:41

Plot 31: 30 MHz to 1 GHz, 5700 MHz, vertical & horizontal polarization

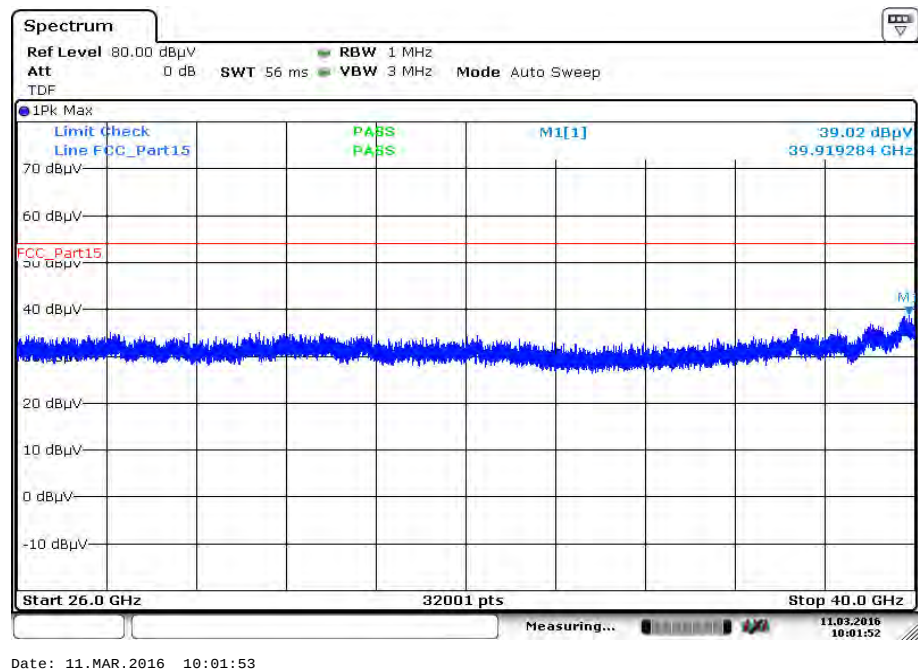
Final_Result

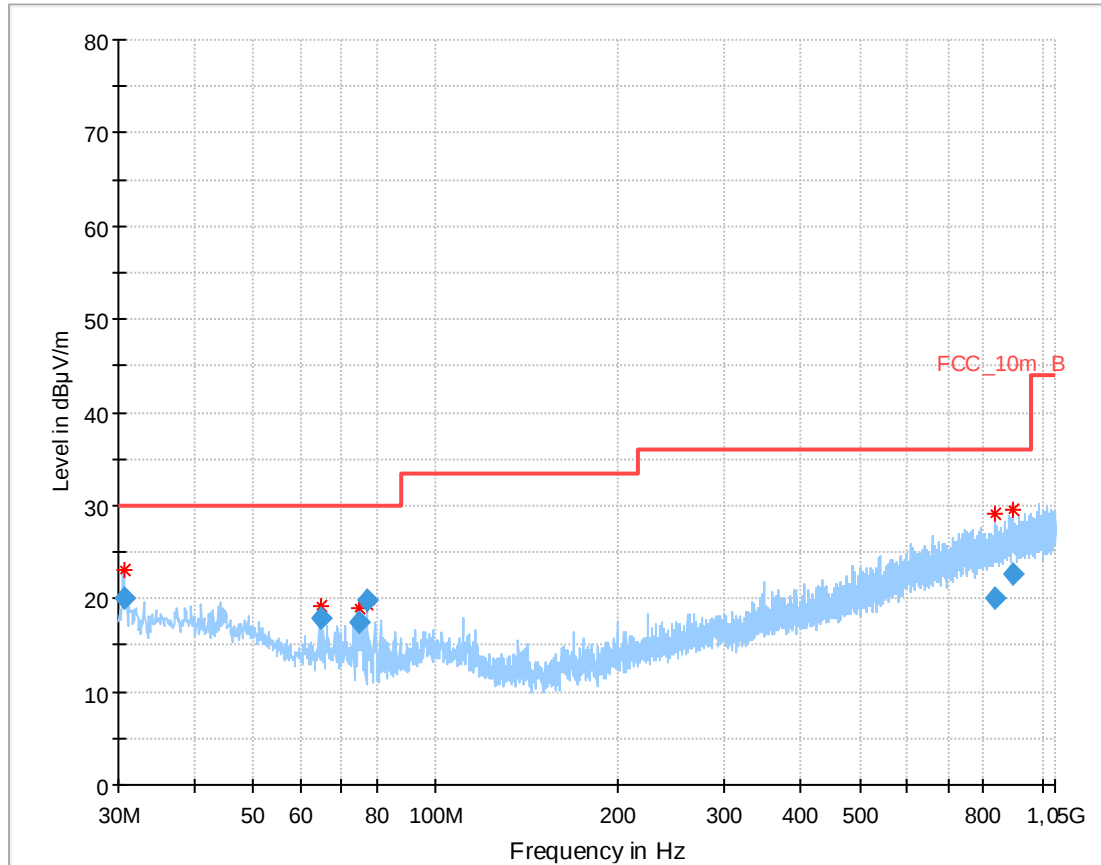
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
46.890150	26.49	30.00	3.51	1000.0	120.000	98.0	V	260	13.4
48.215100	29.86	30.00	0.14	1000.0	120.000	98.0	V	10	13.1
48.898350	28.14	30.00	1.86	1000.0	120.000	98.0	V	-9	12.9
51.500250	27.98	30.00	2.02	1000.0	120.000	98.0	V	170	12.4
54.160500	23.21	30.00	6.79	1000.0	120.000	101.0	V	-9	12.0
898.880850	21.01	36.00	14.99	1000.0	120.000	170.0	H	280	24.1

Plot 32: 1 GHz to 12.75 GHz, 5700 MHz, vertical & horizontal polarization**Plot 33:** 4.5 GHz to 7 GHz, 5700 MHz, vertical & horizontal polarization

Plot 34: 12 GHz to 18 GHz, 5700 MHz, vertical & horizontal polarization**Plot 35:** 18 GHz to 26 GHz, 5700 MHz, vertical & horizontal polarization

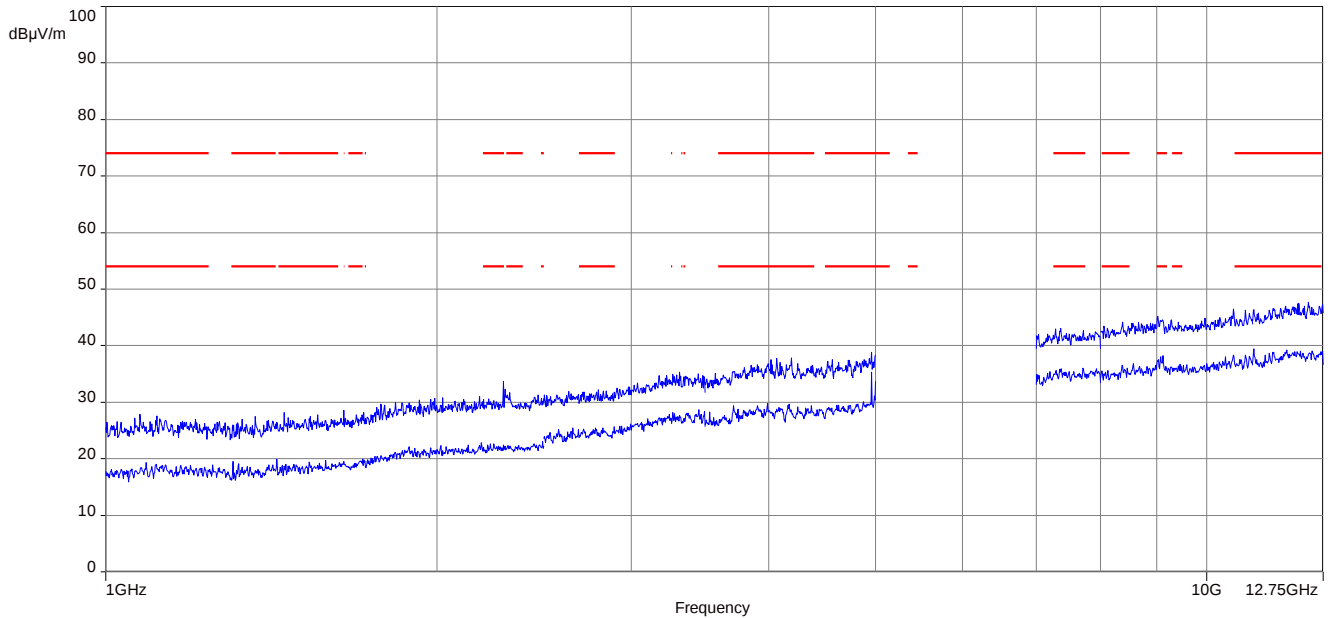
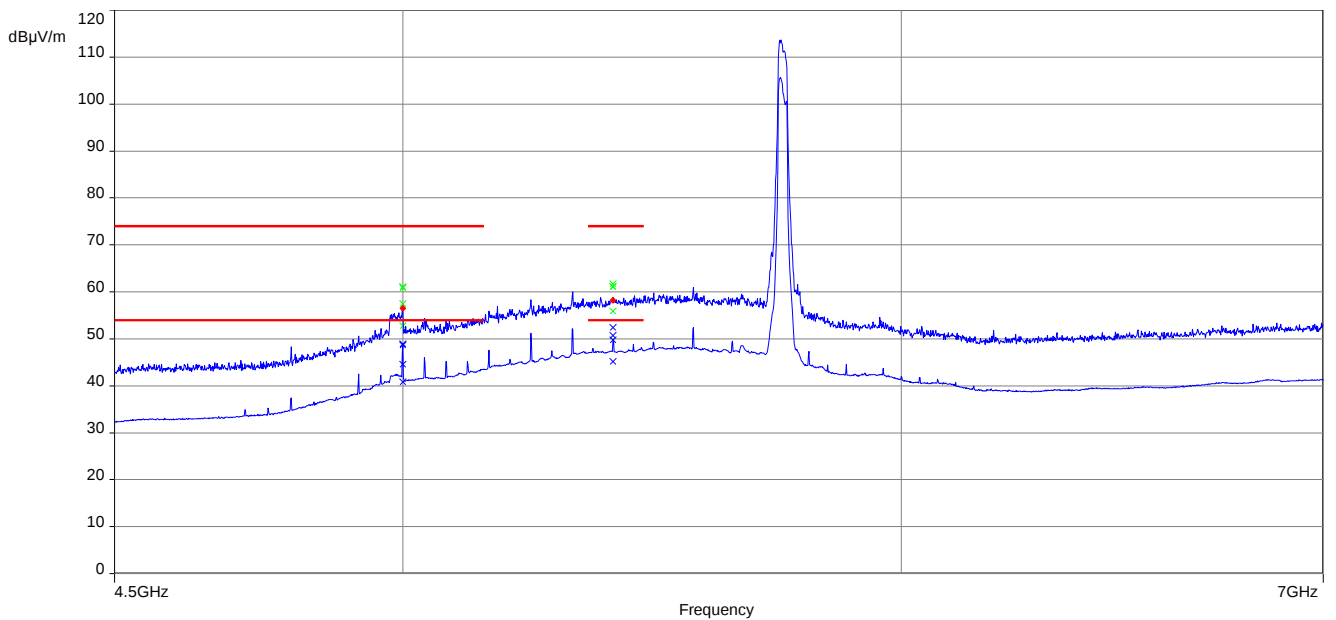
Plot 36: 26 GHz to 40 GHz, 5700 MHz, vertical & horizontal polarization

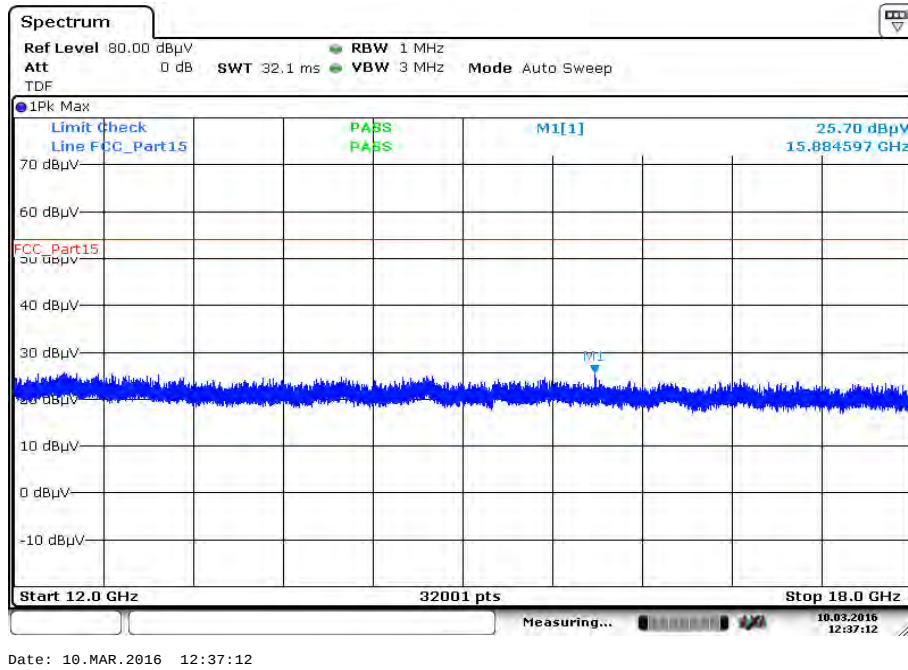
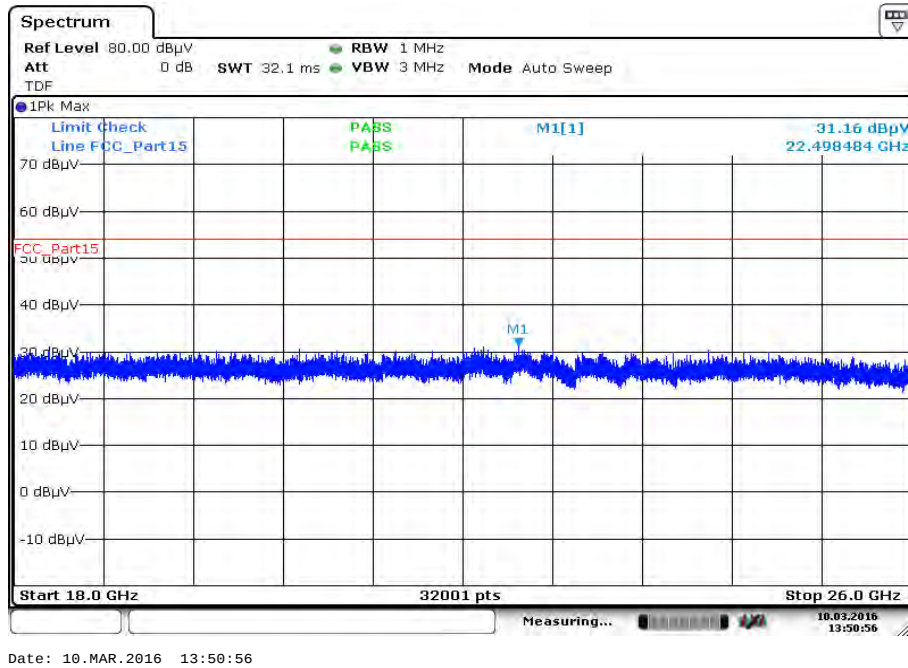


Plot 37: 30 MHz to 1 GHz, 5745 MHz, vertical & horizontal polarization

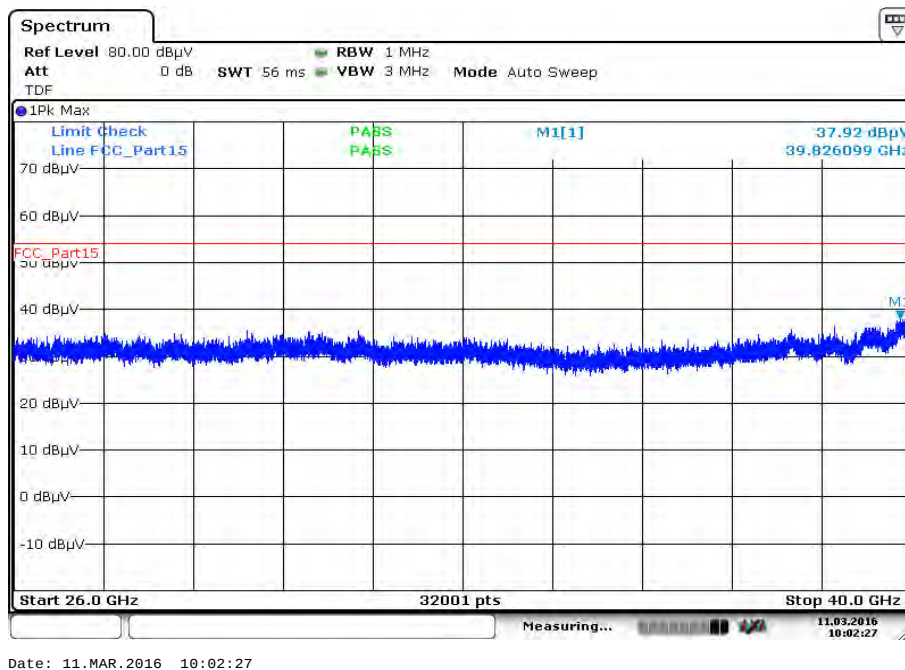
Final_Result

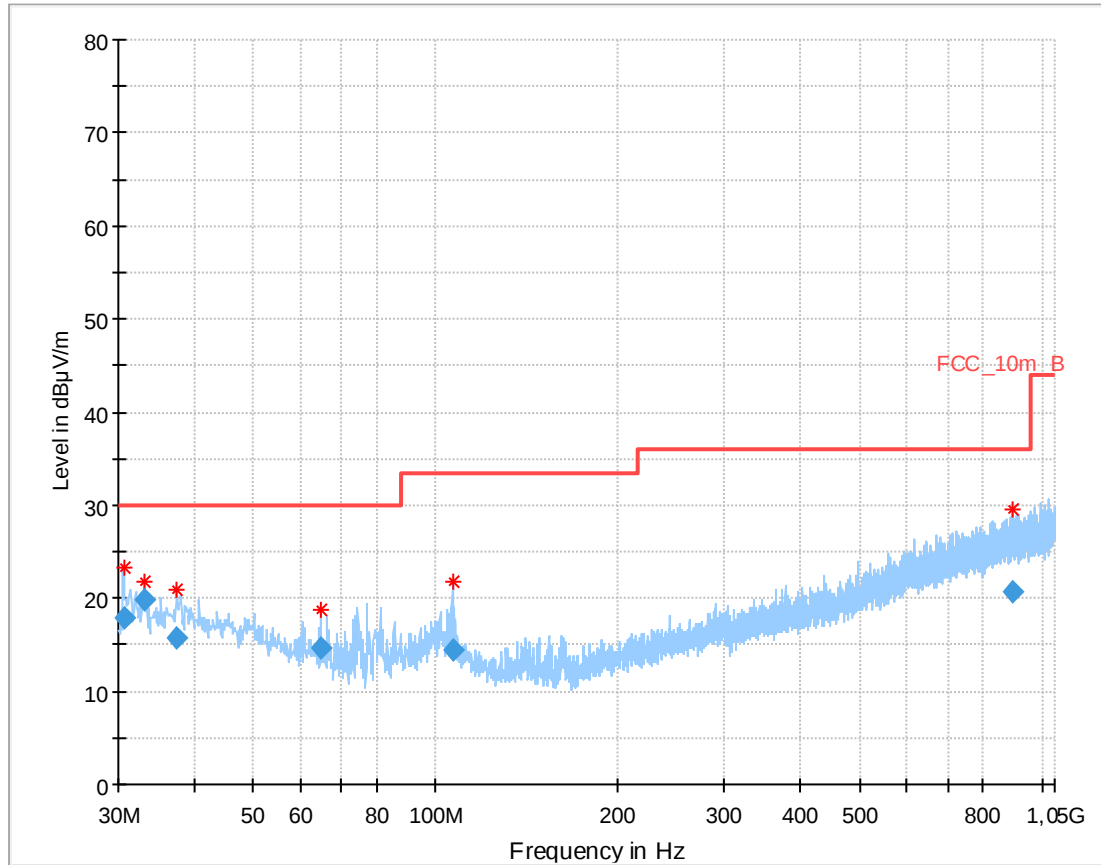
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.581100	20.08	30.00	9.92	1000.0	120.000	170.0	V	-10.0	13.4
64.797450	17.99	30.00	12.01	1000.0	120.000	101.0	V	100.0	9.5
74.546700	17.45	30.00	12.55	1000.0	120.000	101.0	V	10.0	8.3
77.208900	19.94	30.00	10.06	1000.0	120.000	170.0	V	100.0	8.2
832.632300	19.98	36.00	16.02	1000.0	120.000	170.0	V	100.0	23.2
892.177200	22.59	36.00	13.41	1000.0	120.000	98.0	H	171.0	24.0

Plot 38: 1 GHz to 12.75 GHz, 5745 MHz, vertical & horizontal polarization**Plot 39:** 4.5 GHz to 7 GHz, 5745 MHz, vertical & horizontal polarization

Plot 40: 12 GHz to 18 GHz, 5745 MHz, vertical & horizontal polarization**Plot 41:** 18 GHz to 26 GHz, 5745 MHz, vertical & horizontal polarization

Plot 42: 26 GHz to 40 GHz, 5745 MHz, vertical & horizontal polarization

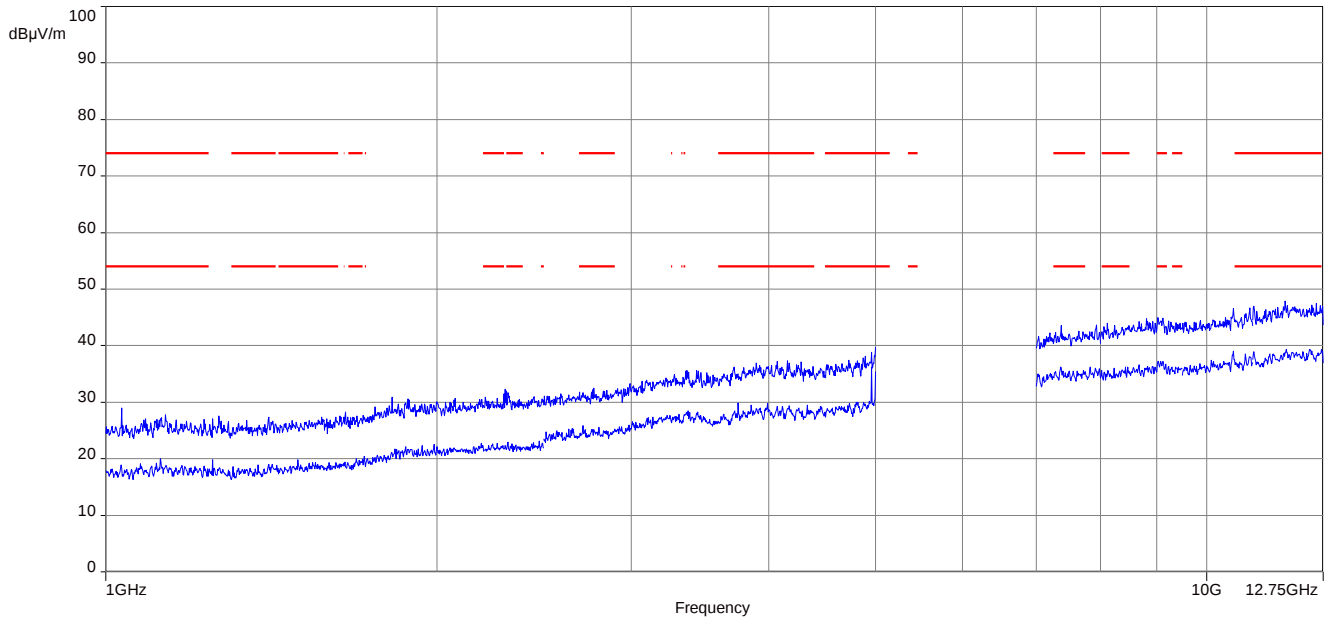


Plot 43: 30 MHz to 1 GHz, 5785 MHz, vertical & horizontal polarization

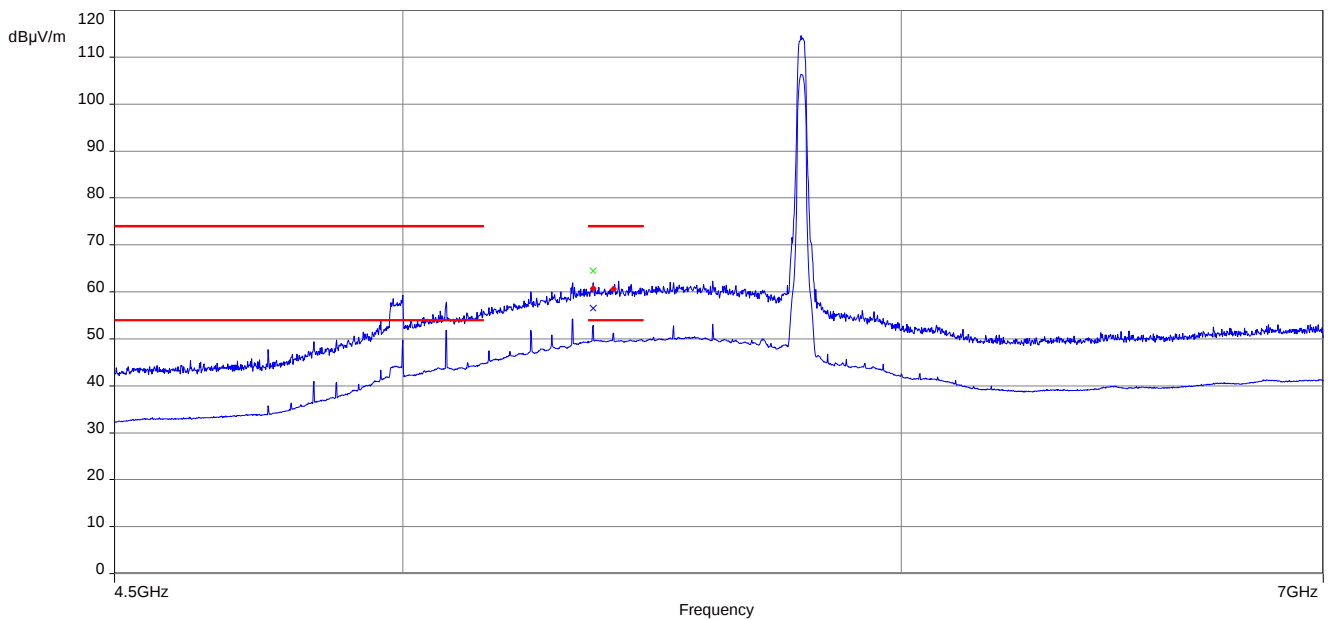
Final_Result

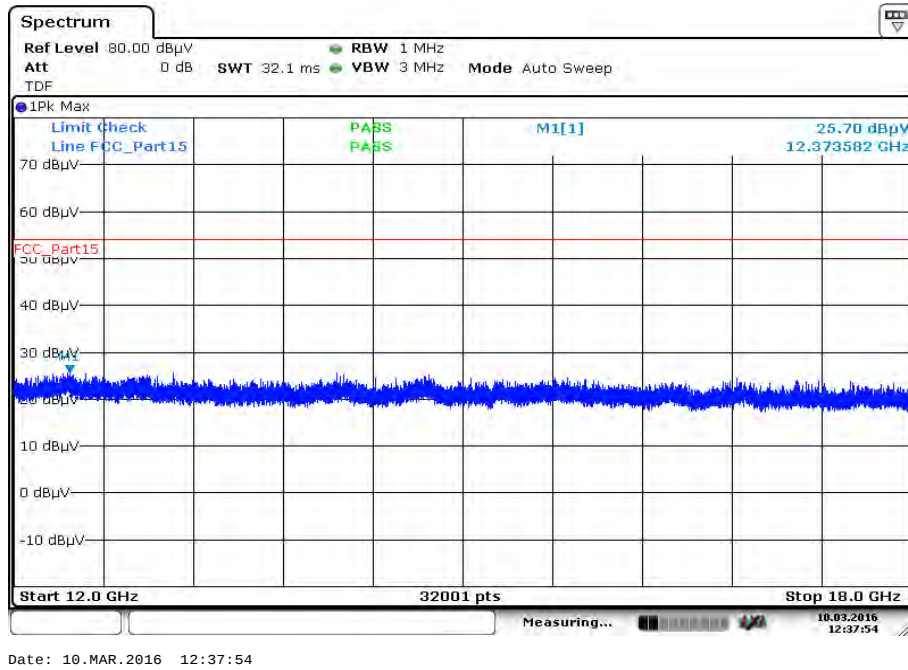
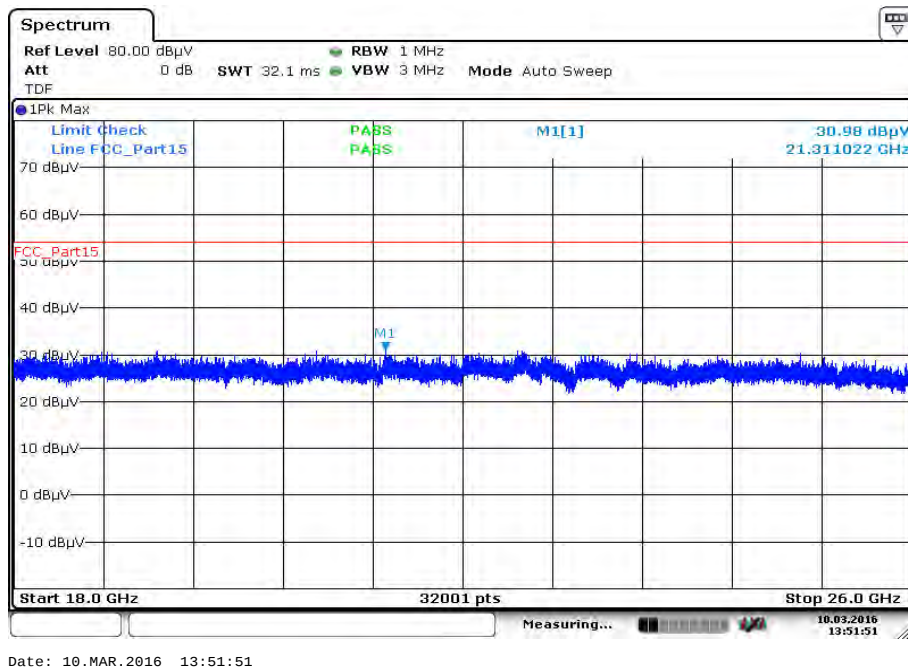
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.639776	18.00	30.00	12.00	1000.0	120.000	101.0	V	-10.0	13.4
33.177900	19.75	30.00	10.25	1000.0	120.000	101.0	V	280.0	13.6
37.355550	15.74	30.00	14.26	1000.0	120.000	101.0	V	80.0	13.9
64.784550	14.63	30.00	15.37	1000.0	120.000	98.0	V	-10.0	9.5
106.717050	14.37	33.50	19.13	1000.0	120.000	101.0	V	-9.0	11.5
895.364400	20.74	36.00	15.26	1000.0	120.000	170.0	H	261.0	24.1

Plot 44: 1 GHz to 12.75 GHz, 5785 MHz, vertical & horizontal polarization

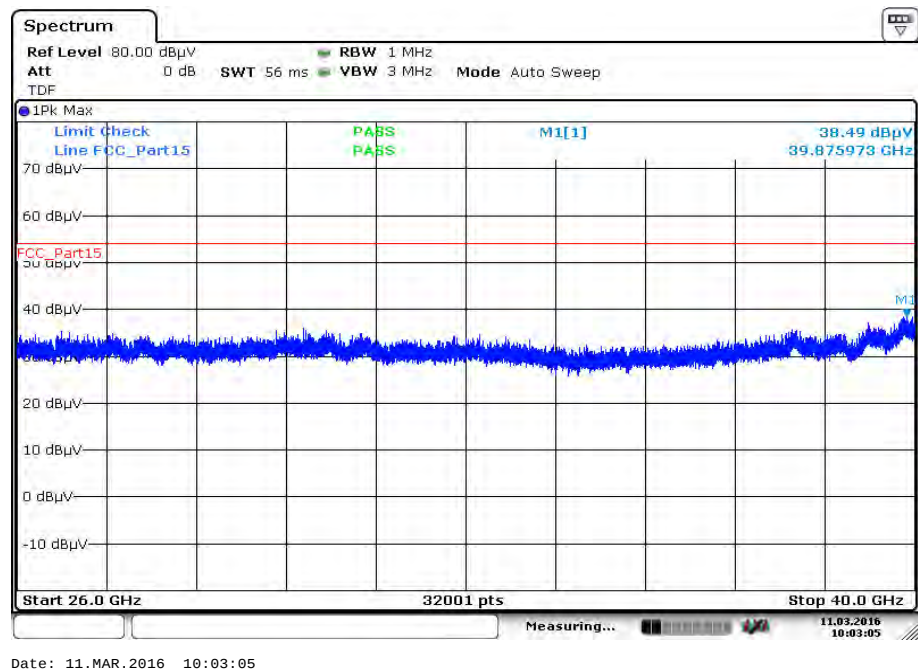


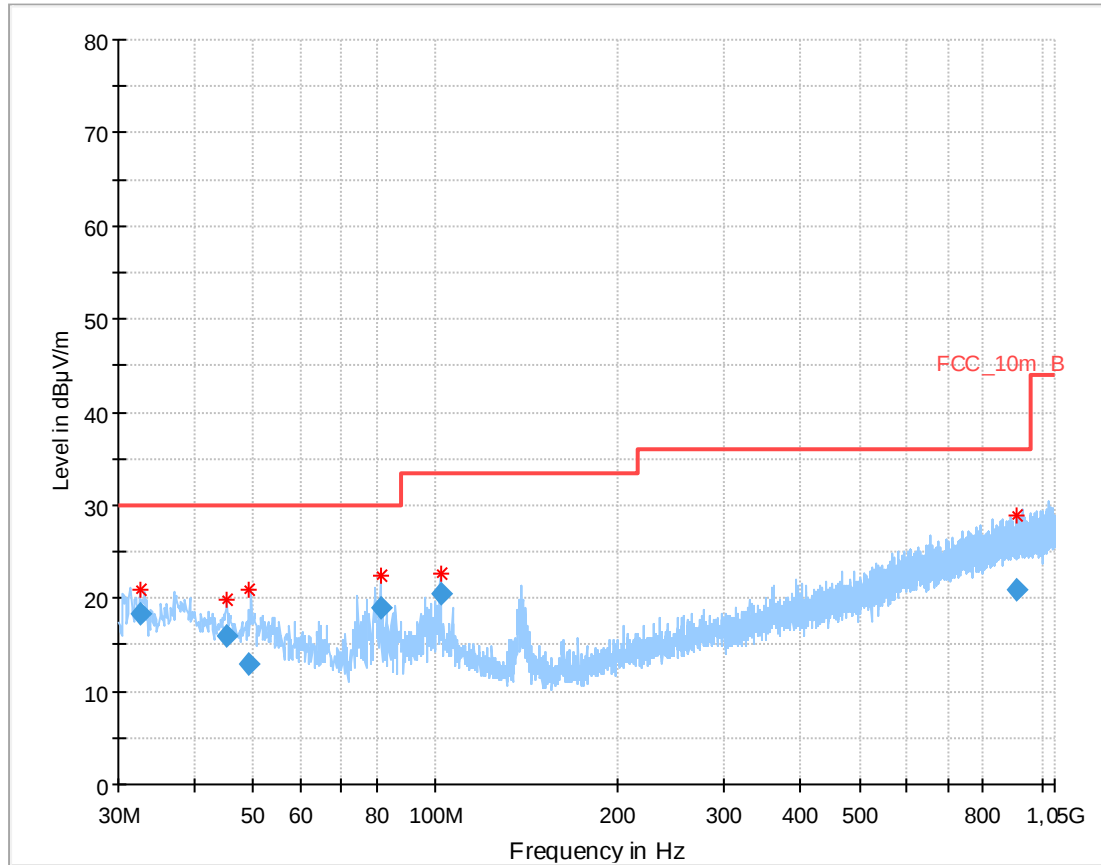
Plot 45: 4.5 GHz to 7 GHz, 5785 MHz, vertical & horizontal polarization



Plot 46: 12 GHz to 18 GHz, 5785 MHz, vertical & horizontal polarization**Plot 47:** 18 GHz to 26 GHz, 5785 MHz, vertical & horizontal polarization

Plot 48: 26 GHz to 40 GHz, 5785 MHz, vertical & horizontal polarization

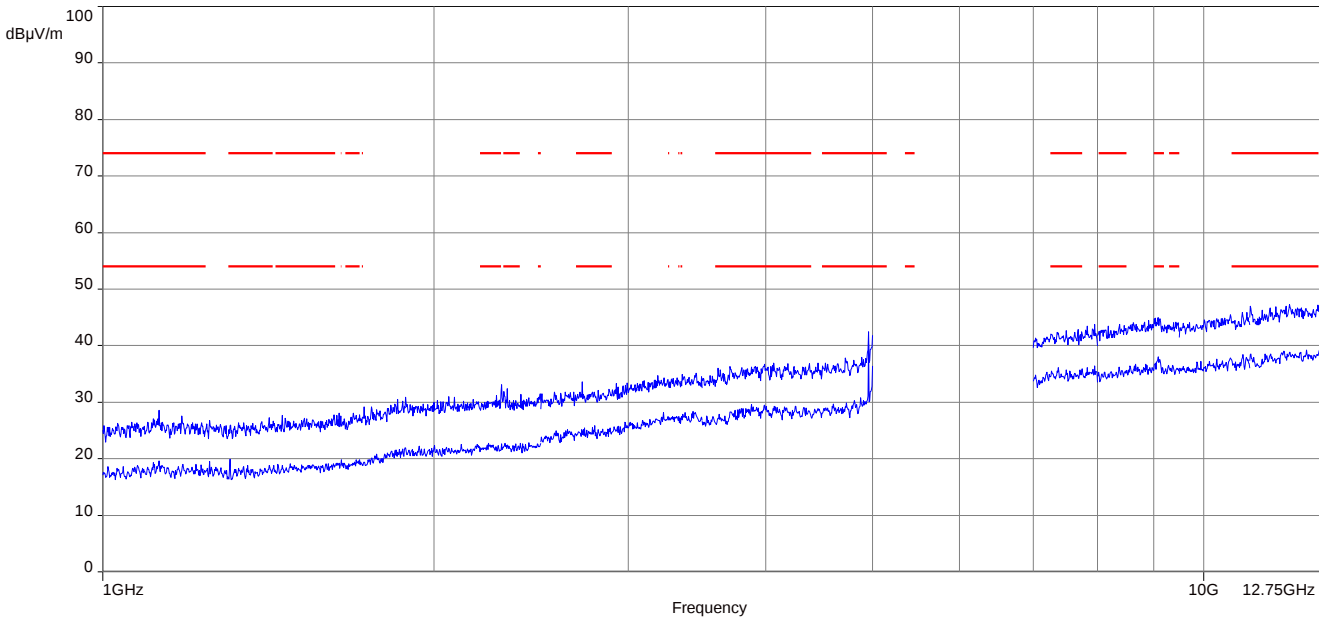


Plot 49: 30 MHz to 1 GHz, 5825 MHz, vertical & horizontal polarization

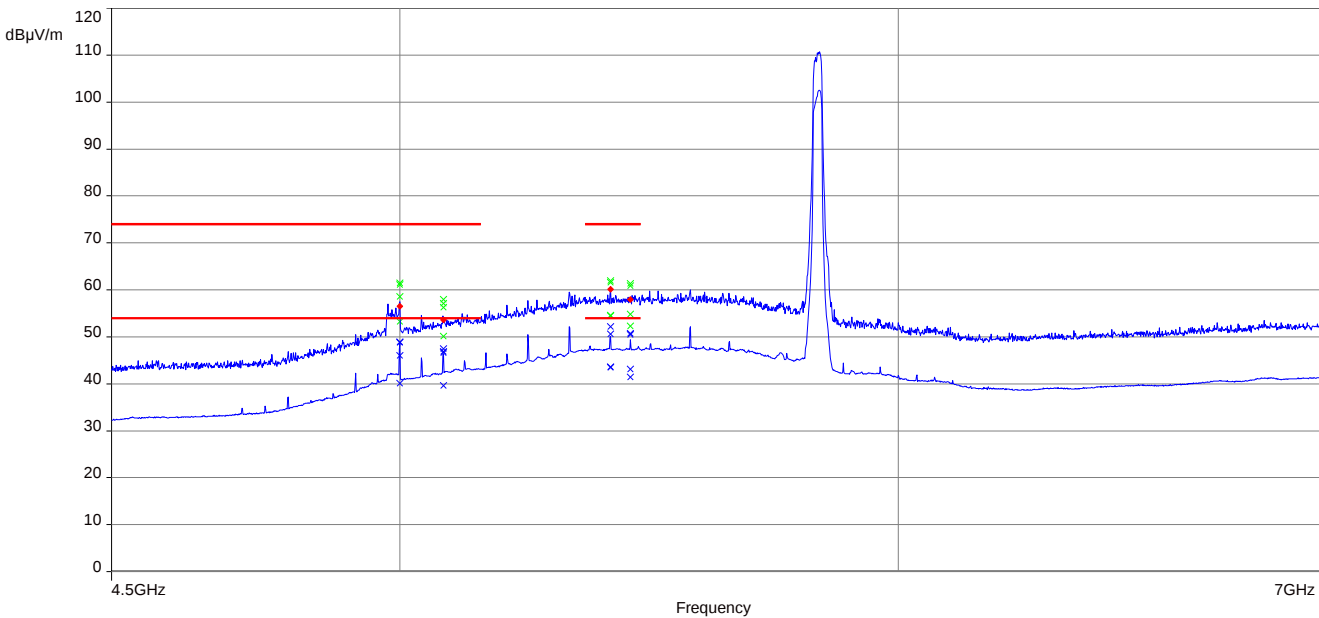
Final_Result

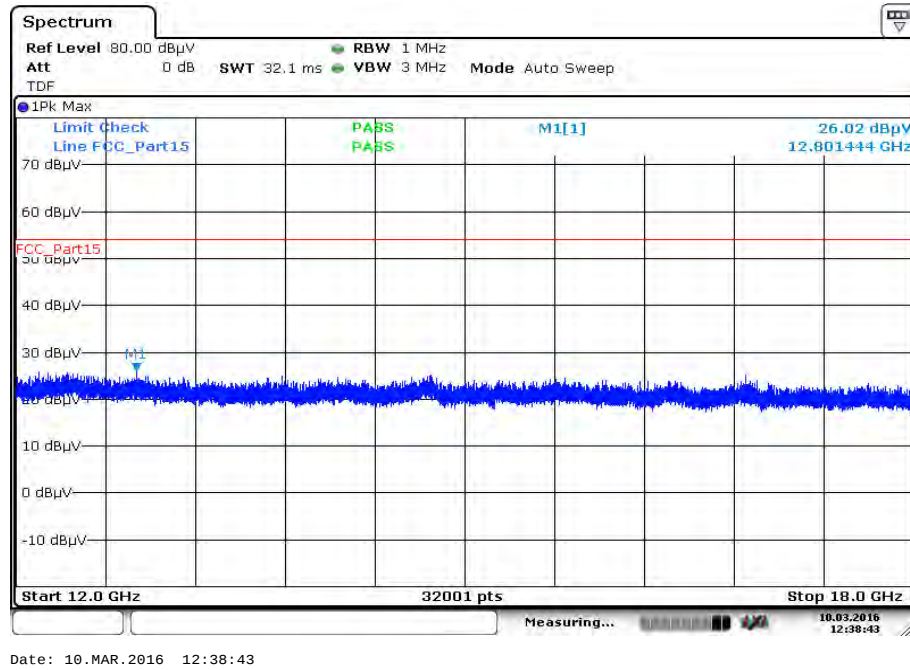
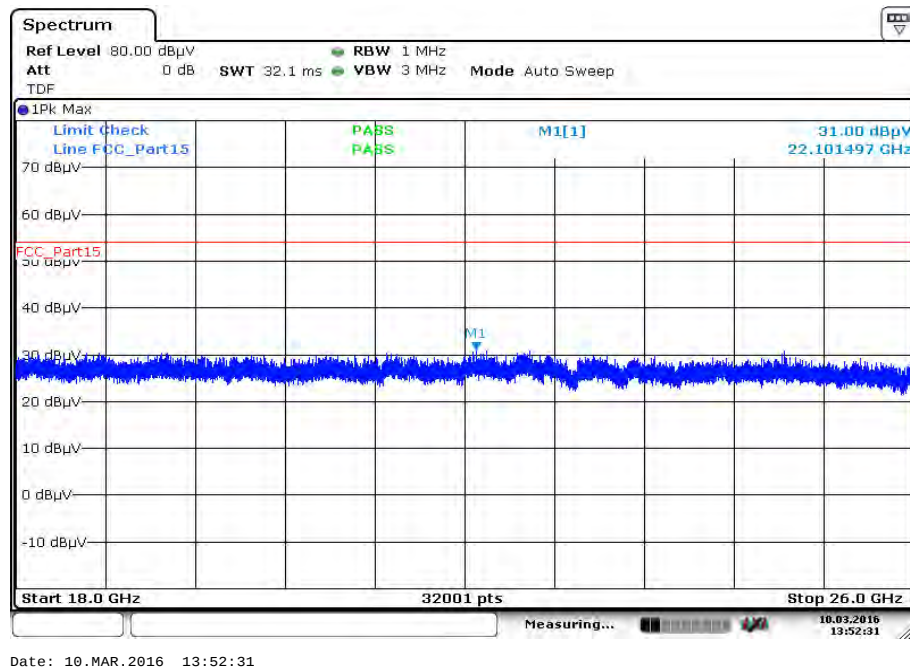
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
32.602800	18.26	30.00	11.74	1000.0	120.000	98.0	V	170.0	13.6
45.266100	16.00	30.00	14.00	1000.0	120.000	98.0	V	260.0	13.8
49.361400	12.92	30.00	17.08	1000.0	120.000	98.0	V	190.0	12.8
81.189600	18.88	30.00	11.12	1000.0	120.000	101.0	V	170.0	8.4
101.887050	20.52	33.50	12.98	1000.0	120.000	101.0	V	170.0	12.0
909.243000	20.89	36.00	15.11	1000.0	120.000	170.0	V	80.0	24.1

Plot 50: 1 GHz to 12.75 GHz, 5825 MHz, vertical & horizontal polarization

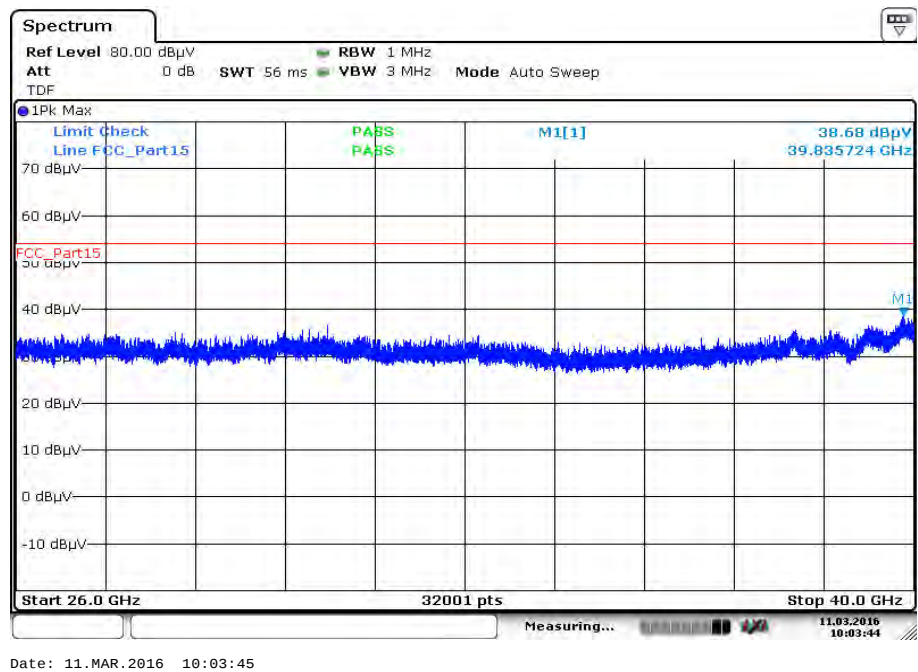


Plot 51: 4.5 GHz to 7 GHz, 5825 MHz, vertical & horizontal polarization



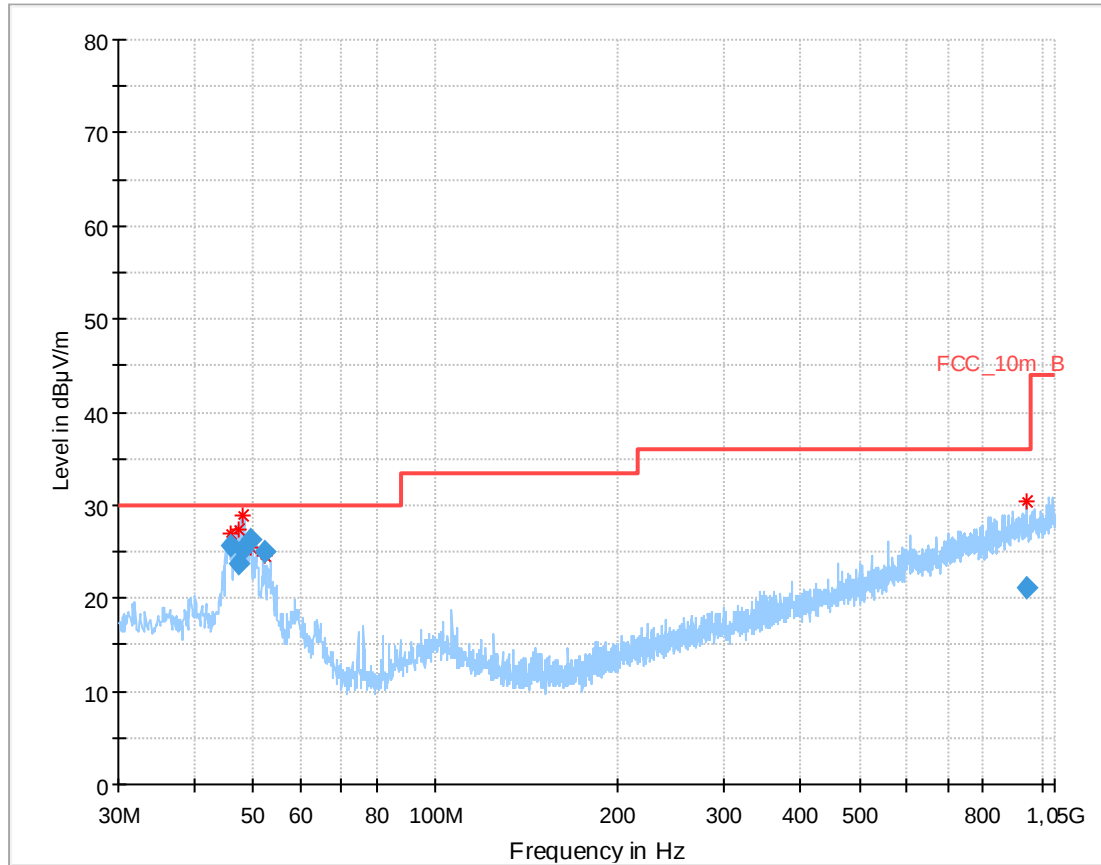
Plot 52: 12 GHz to 18 GHz, 5825 MHz, vertical & horizontal polarization**Plot 53:** 18 GHz to 26 GHz, 5825 MHz, vertical & horizontal polarization

Plot 54: 26 GHz to 40 GHz, 5825 MHz, vertical & horizontal polarization



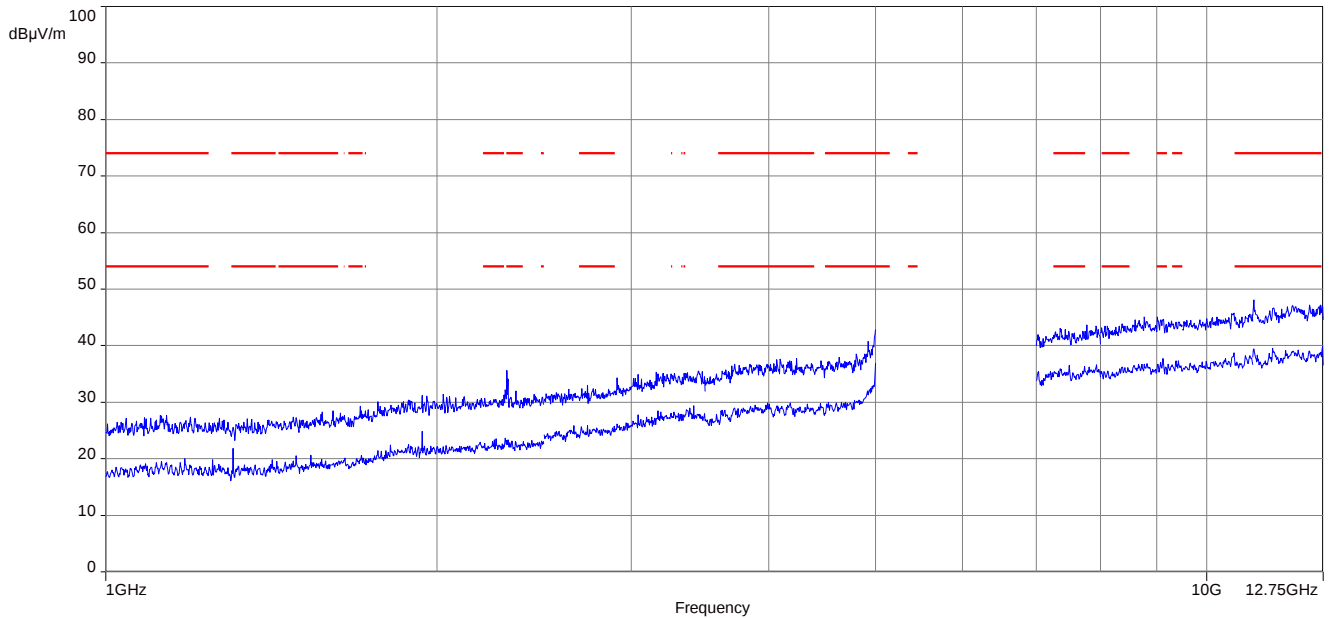
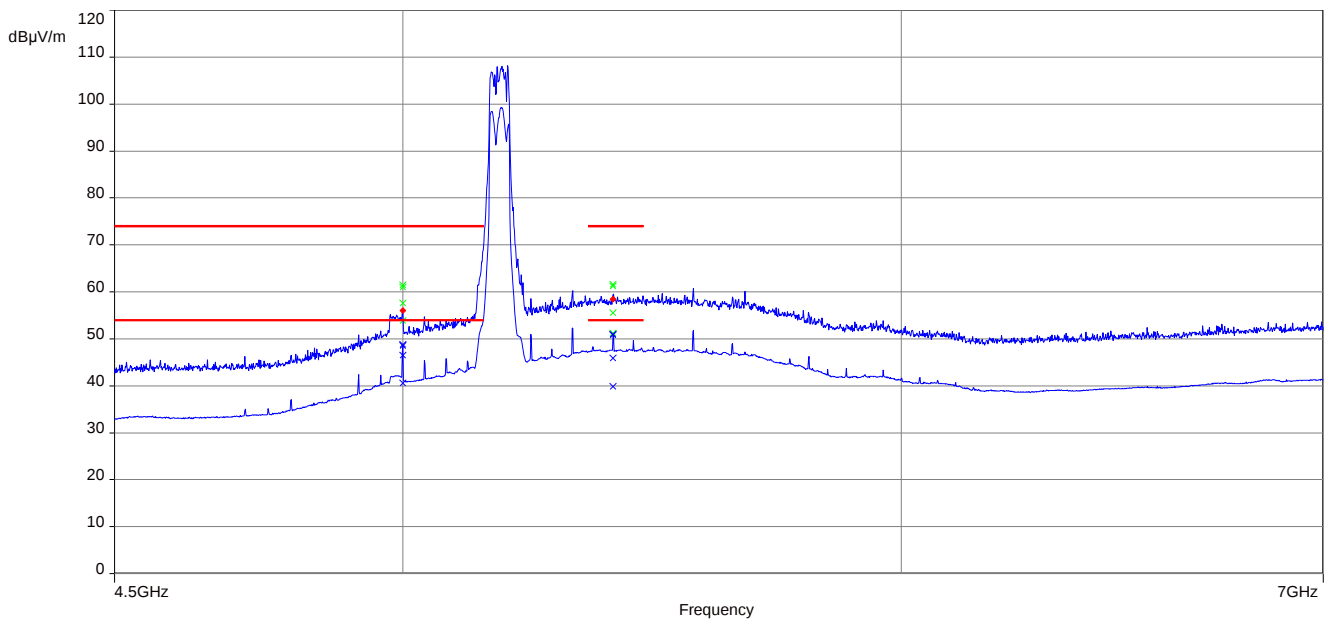
Plots: OFDM / n HT40 – mode

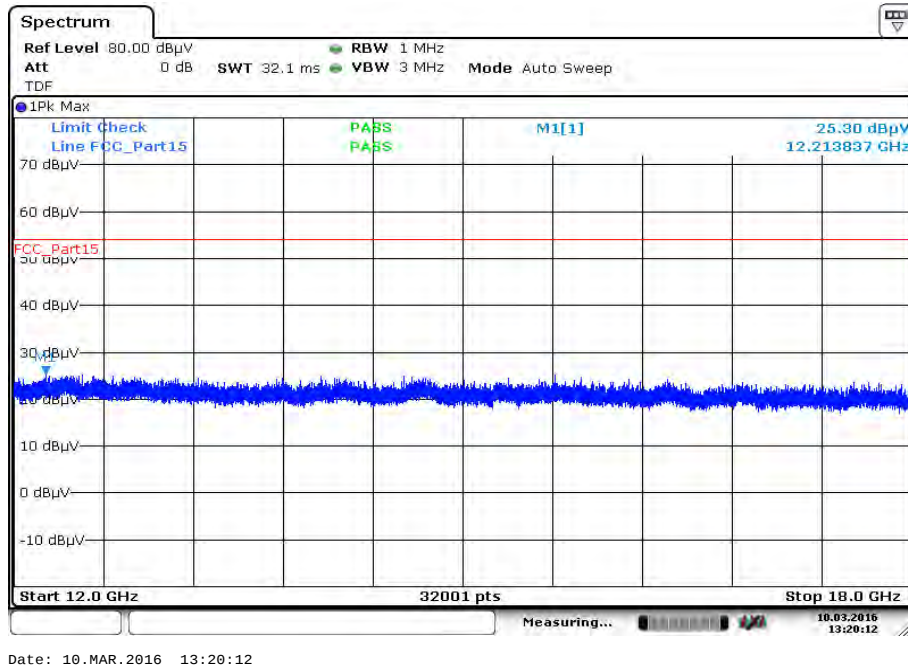
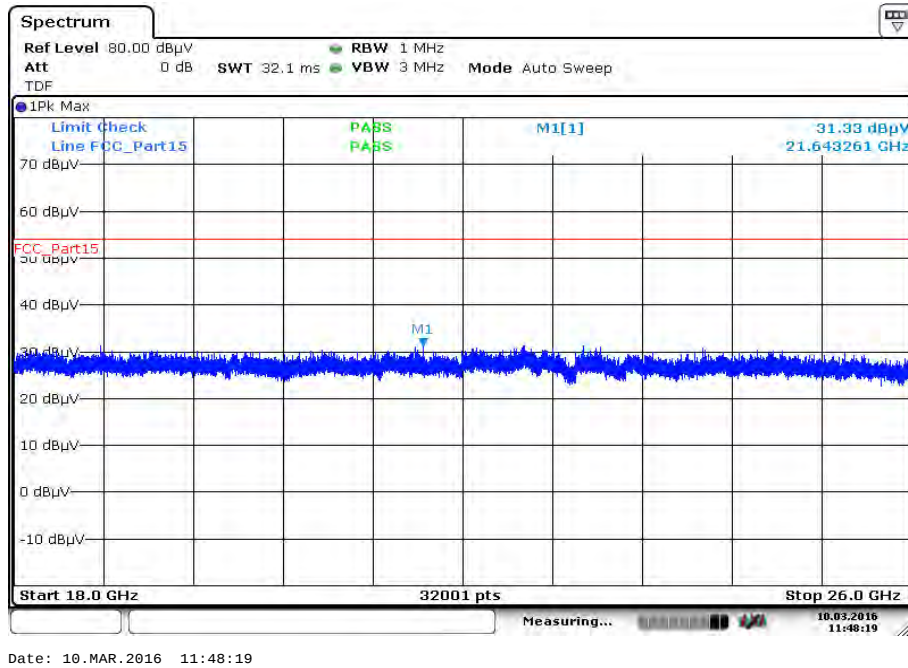
Plot 1: 30 MHz to 1 GHz, 5190 MHz, vertical & horizontal polarization



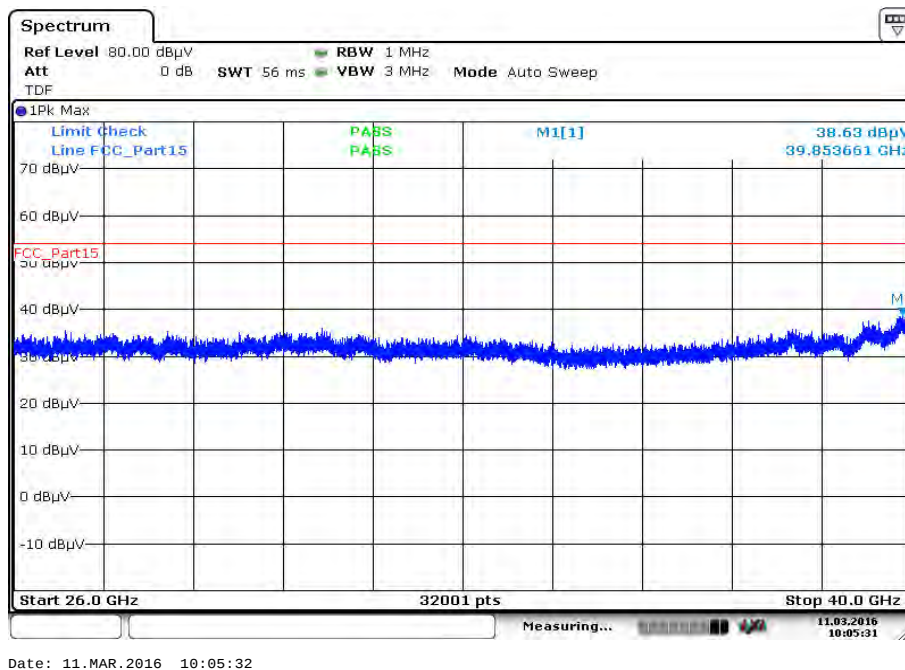
Final_Result

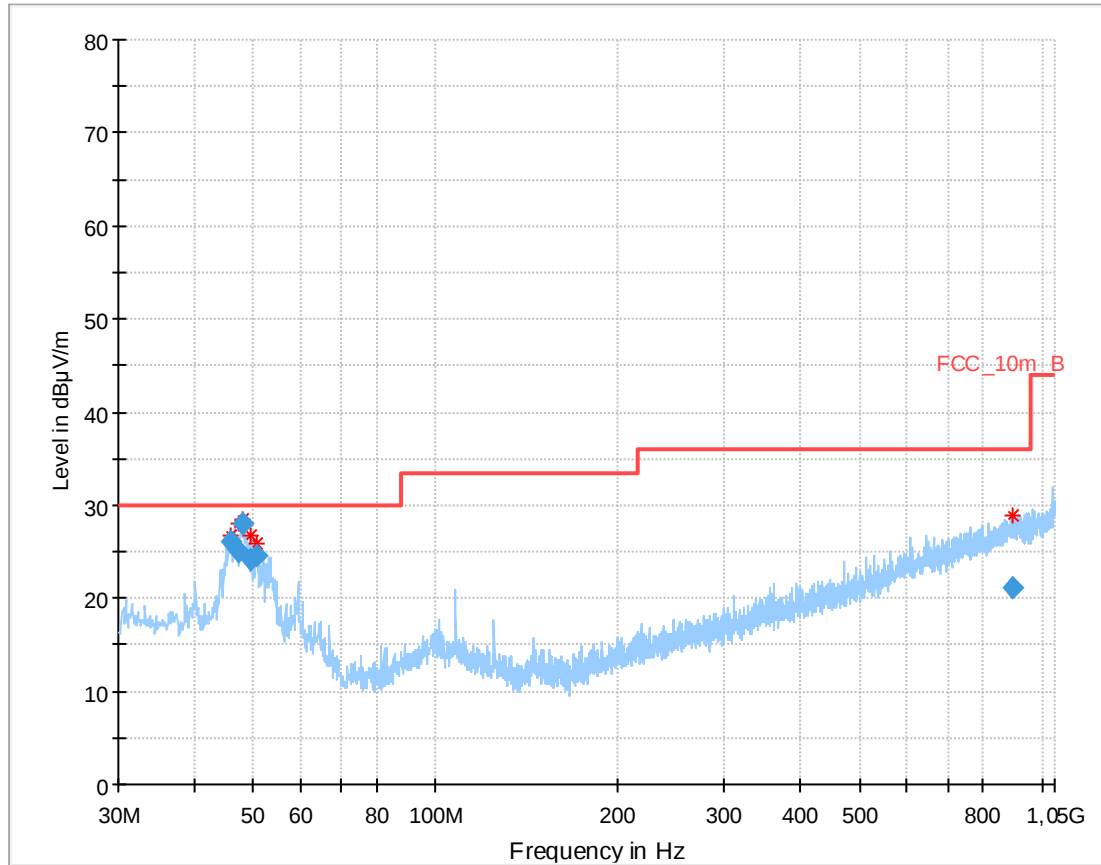
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
45.884400	25.73	30.00	4.27	1000.0	120.000	98.0	V	171	13.6
47.234550	23.69	30.00	6.31	1000.0	120.000	98.0	V	10	13.3
48.004950	25.17	30.00	4.83	1000.0	120.000	98.0	V	190	13.1
49.507050	26.30	30.00	3.70	1000.0	120.000	98.0	V	171	12.8
52.161000	24.91	30.00	5.09	1000.0	120.000	98.0	V	260	12.3
944.272350	21.10	36.00	14.90	1000.0	120.000	101.0	H	100	24.2

Plot 2: 1 GHz to 12.75 GHz, 5190 MHz, vertical & horizontal polarization**Plot 3:** 4.5 GHz to 7 GHz, 5190 MHz, vertical & horizontal polarization

Plot 4: 12 GHz to 18 GHz, 5190 MHz, vertical & horizontal polarization**Plot 5:** 18 GHz to 26 GHz, 5190 MHz, vertical & horizontal polarization

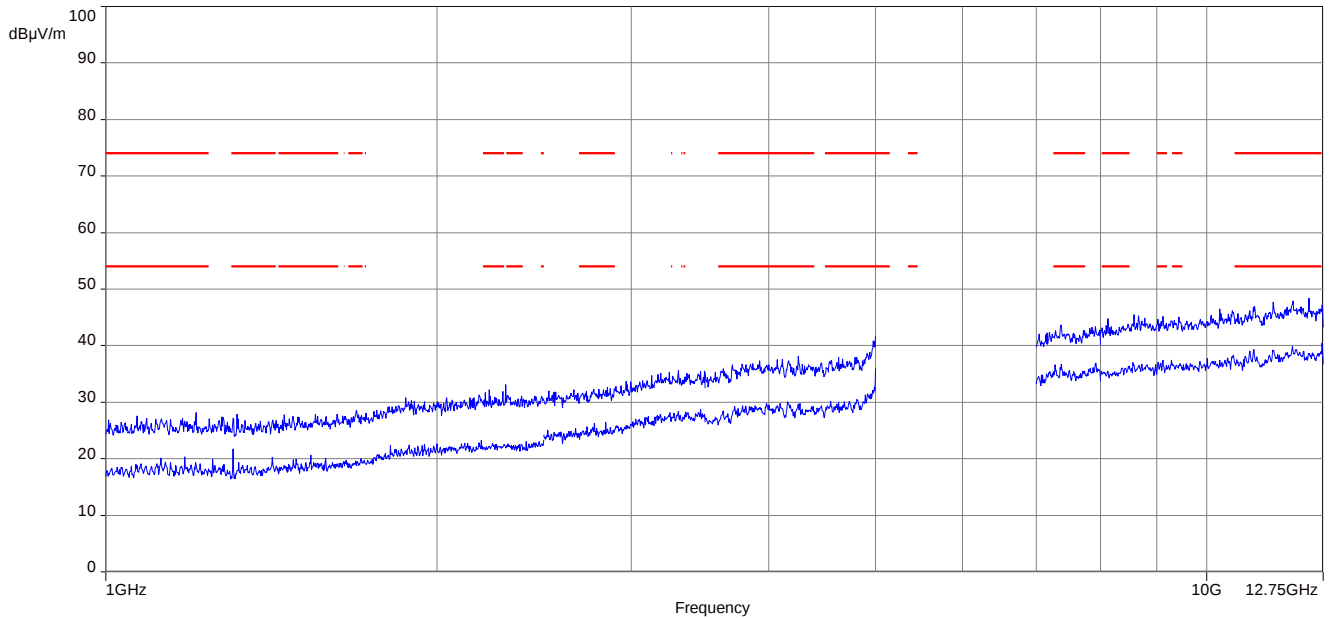
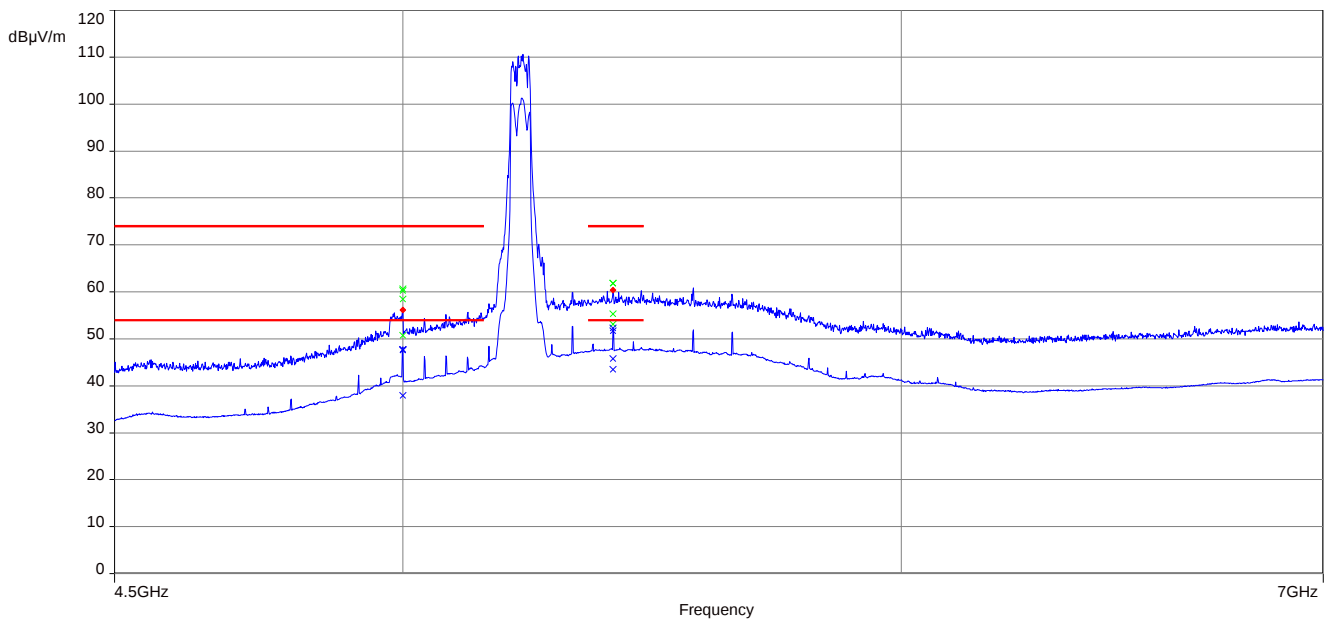
Plot 6: 26 GHz to 40 GHz, 5190 MHz, vertical & horizontal polarization

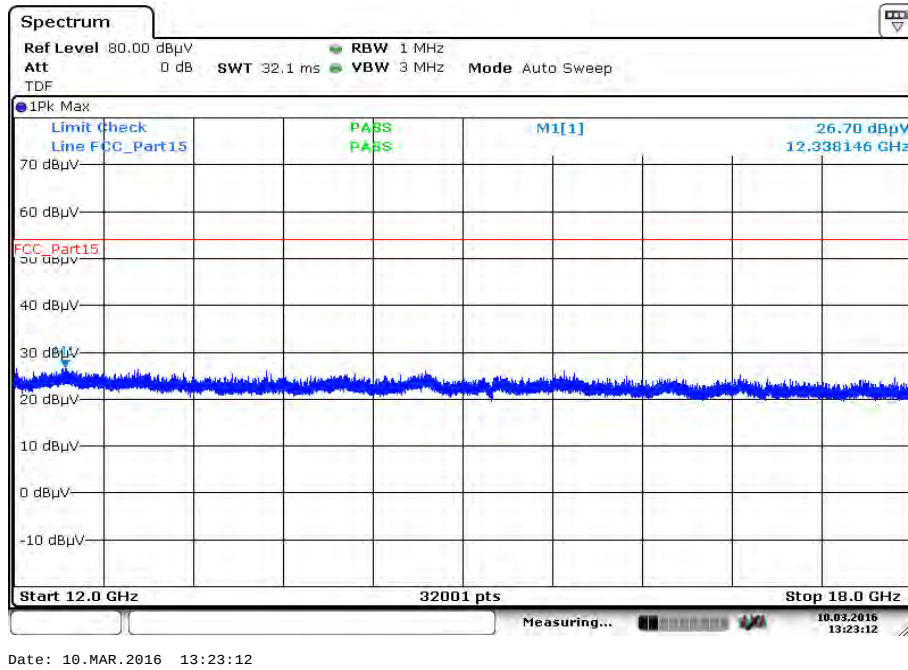
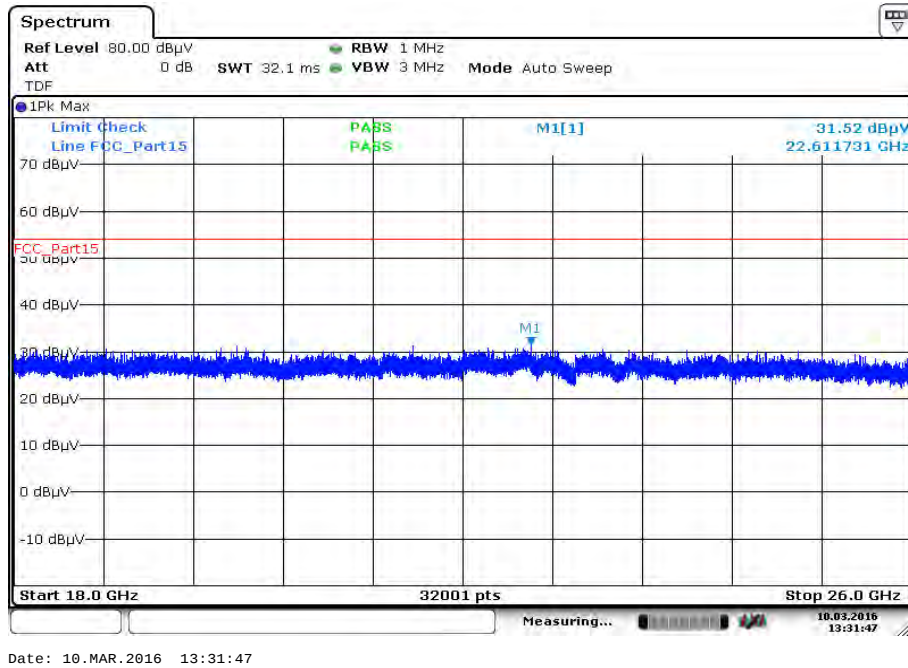


Plot 7: 30 MHz to 1 GHz, 5230 MHz, vertical & horizontal polarization

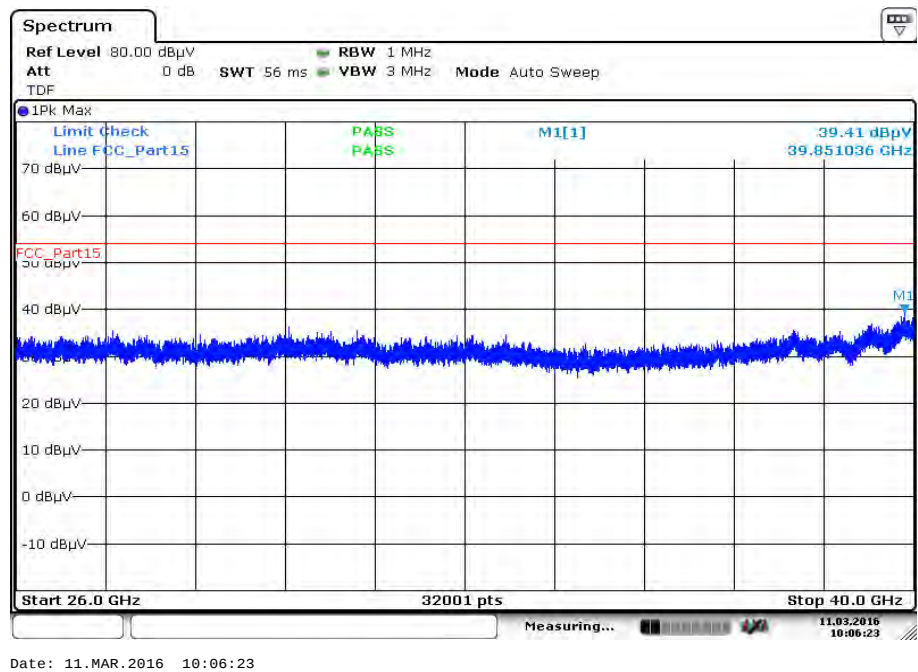
Final_Result

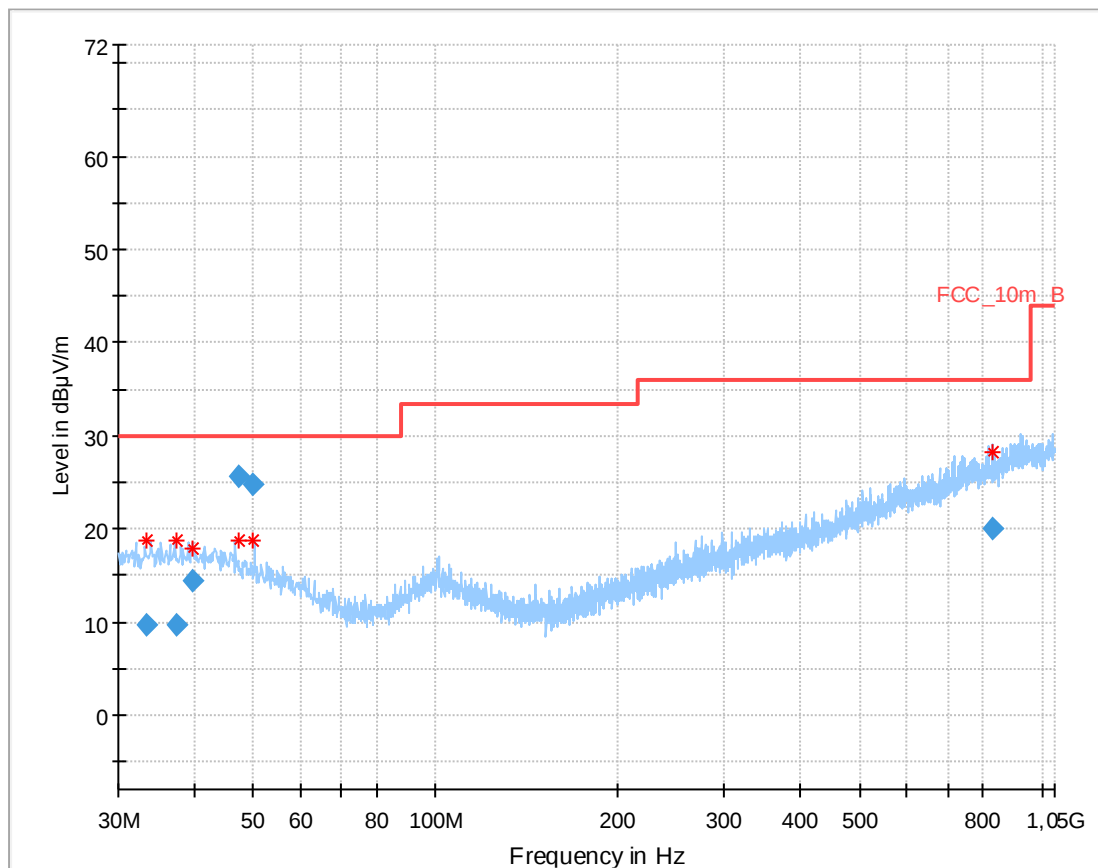
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
45.889650	26.05	30.00	3.95	1000.0	120.000	98.0	V	100	13.6
47.199750	24.93	30.00	5.07	1000.0	120.000	98.0	V	280	13.3
48.199200	27.95	30.00	2.05	1000.0	120.000	98.0	V	10	13.1
49.494750	24.10	30.00	5.90	1000.0	120.000	98.0	V	280	12.8
50.844300	24.50	30.00	5.50	1000.0	120.000	98.0	V	-10	12.5
892.398600	21.09	36.00	14.91	1000.0	120.000	170.0	H	171	24.0

Plot 8: 1 GHz to 12.75 GHz, 5230 MHz, vertical & horizontal polarization**Plot 9:** 4.5 GHz to 7 GHz, 5230 MHz, vertical & horizontal polarization

Plot 10: 12 GHz to 18 GHz, 5230 MHz, vertical & horizontal polarization**Plot 11:** 18 GHz to 26 GHz, 5230 MHz, vertical & horizontal polarization

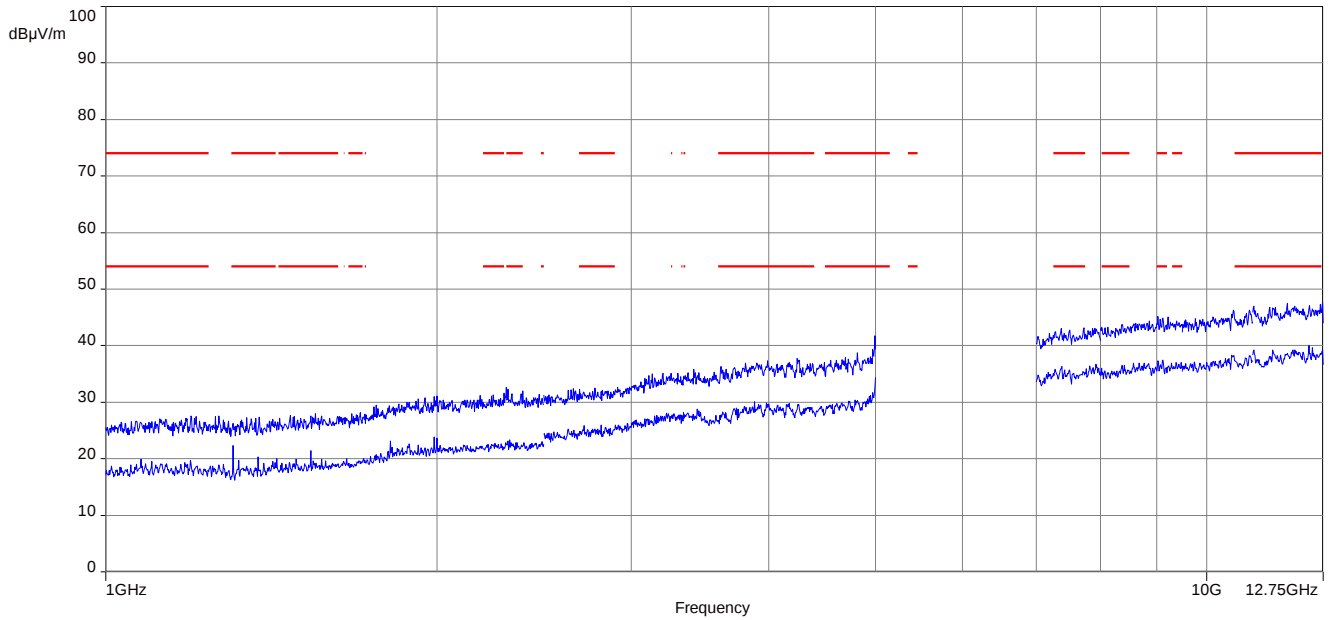
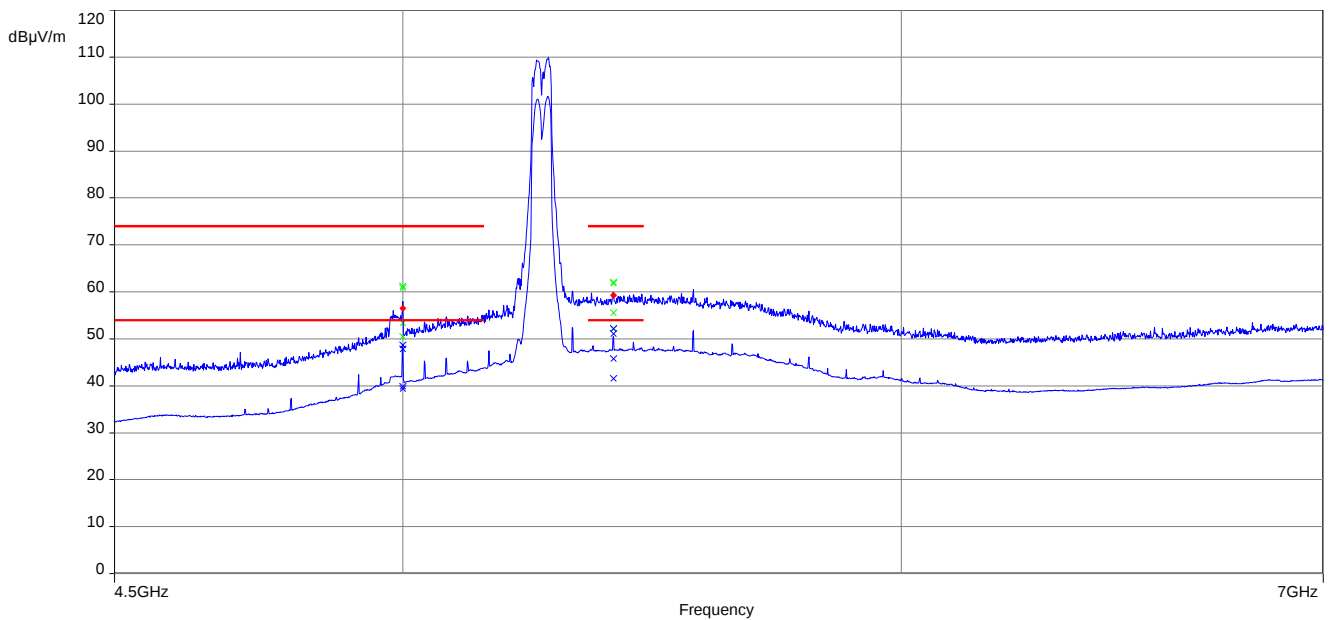
Plot 12: 26 GHz to 40 GHz, 5230 MHz, vertical & horizontal polarization

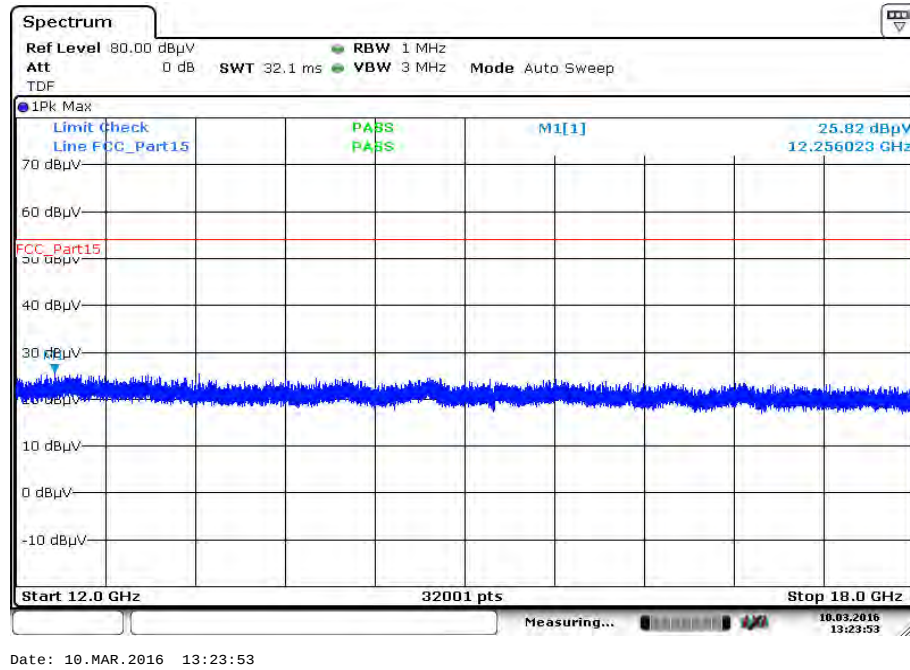
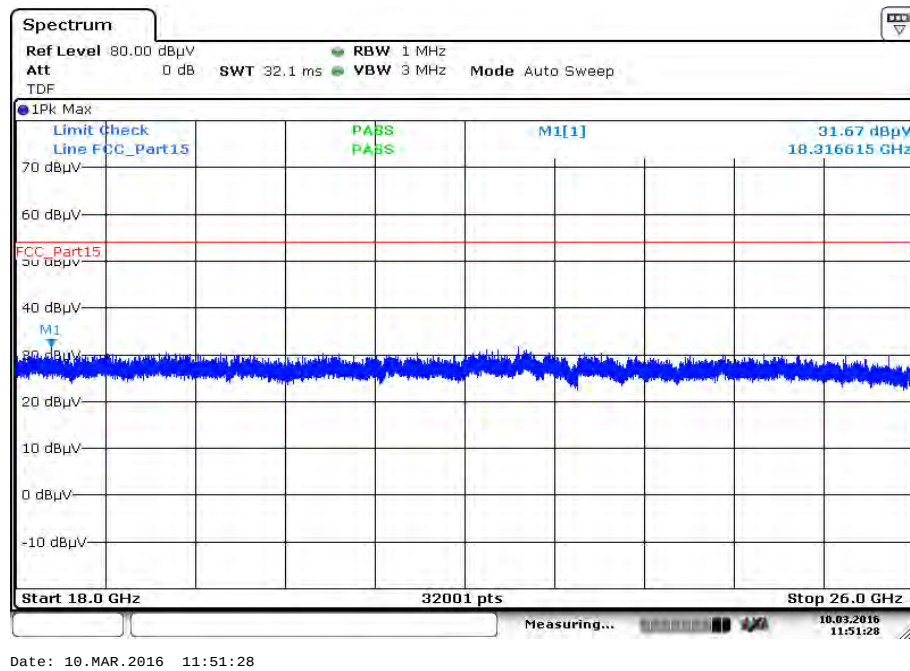


Plot 13: 30 MHz to 1 GHz, 5270 MHz, vertical & horizontal polarization

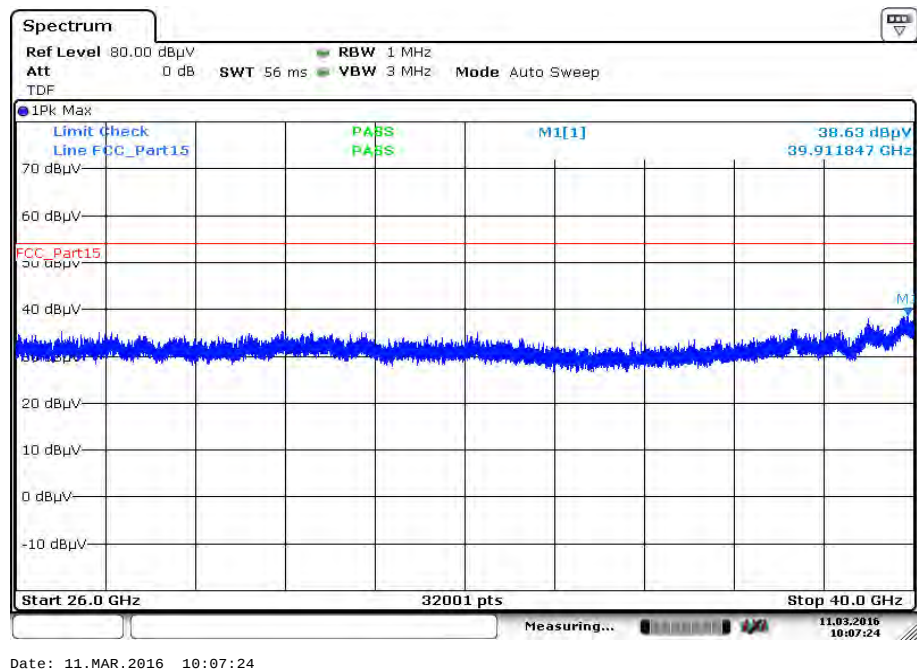
Final_Result

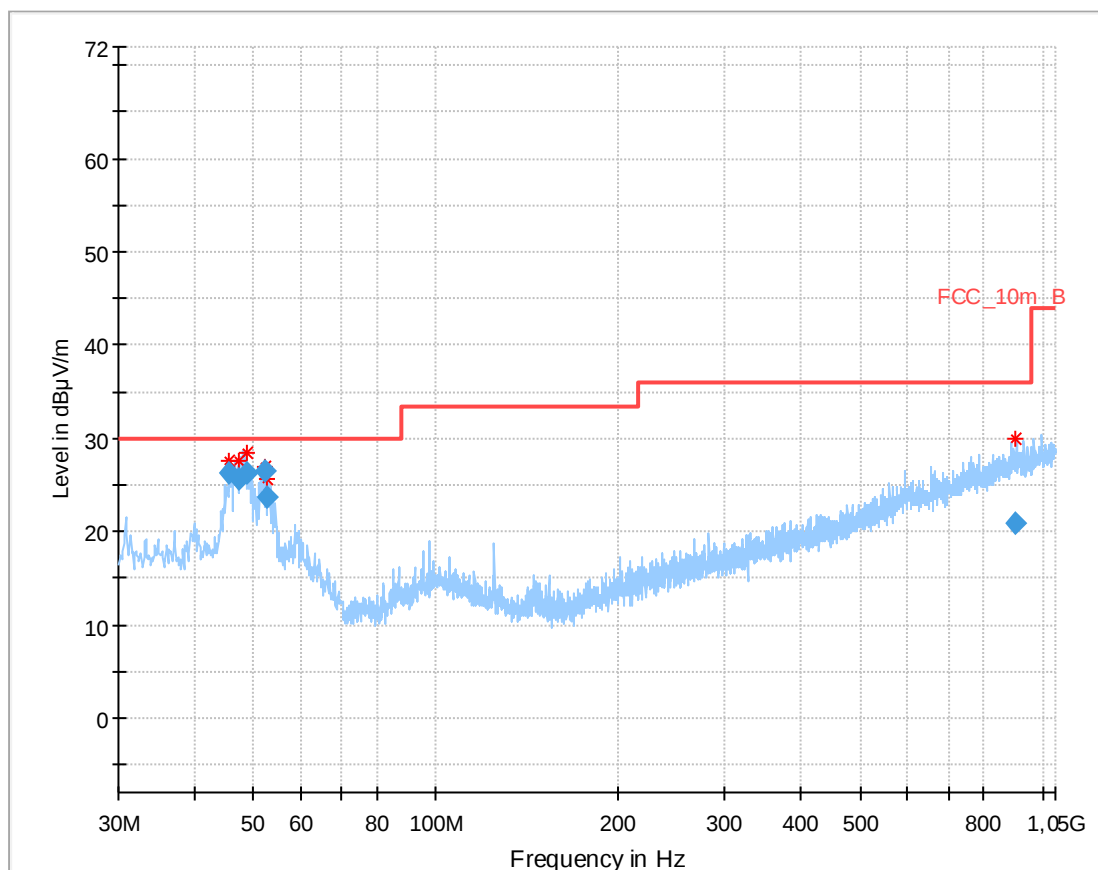
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
33.412200	9.64	30.00	20.36	1000.0	120.000	101.0	H	81	13.7
37.500900	9.66	30.00	20.34	1000.0	120.000	101.0	H	-10	13.9
39.612900	14.38	30.00	15.62	1000.0	120.000	101.0	V	280	14.0
47.229150	25.59	30.00	4.41	1000.0	120.000	98.0	V	170	13.3
49.866750	24.71	30.00	5.29	1000.0	120.000	98.0	V	80	12.7
831.817500	20.05	36.00	15.95	1000.0	120.000	170.0	H	100	23.2

Plot 14: 1 GHz to 12.75 GHz, 5270 MHz, vertical & horizontal polarization**Plot 15:** 4.5 GHz to 7 GHz, 5270 MHz, vertical & horizontal polarization

Plot 16: 12 GHz to 18 GHz, 5270 MHz, vertical & horizontal polarization**Plot 17:** 18 GHz to 26 GHz, 5270 MHz, vertical & horizontal polarization

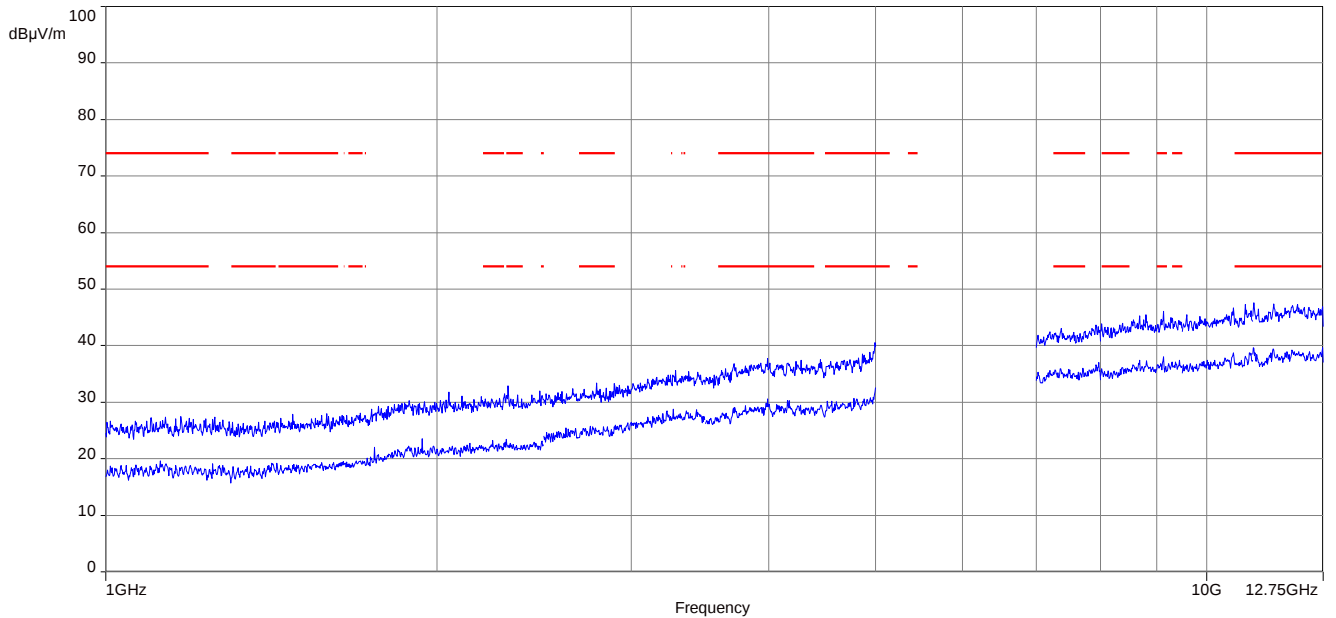
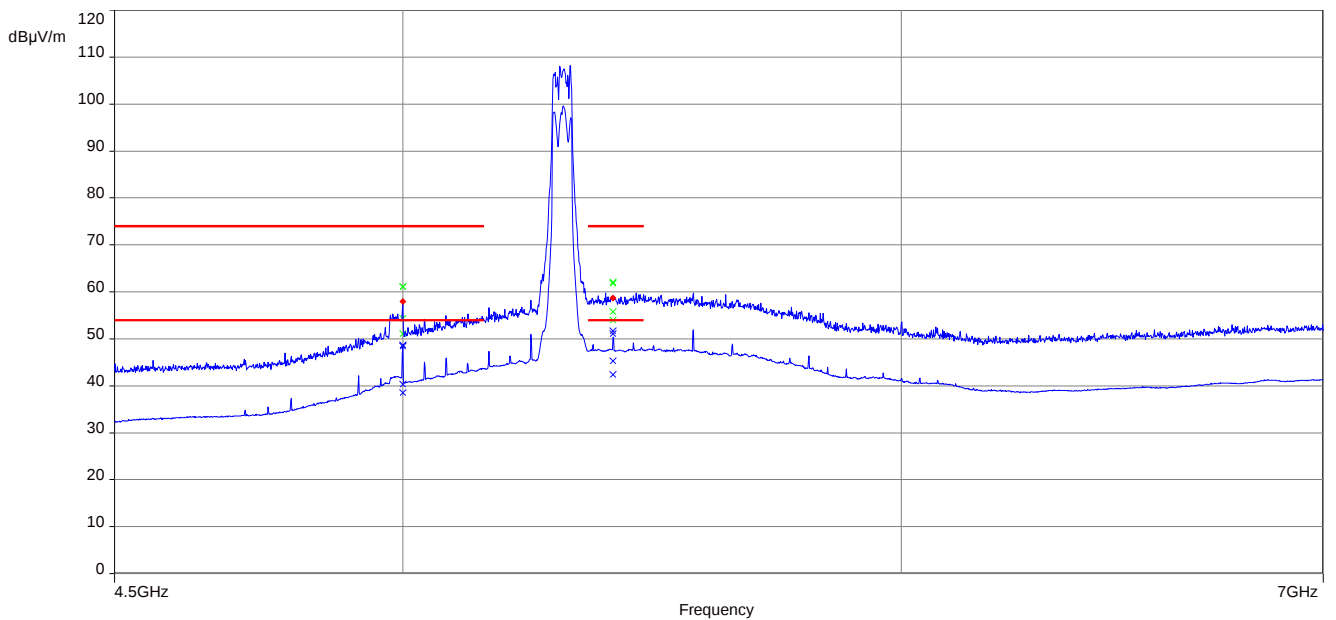
Plot 18: 26 GHz to 40 GHz, 5270 MHz, vertical & horizontal polarization

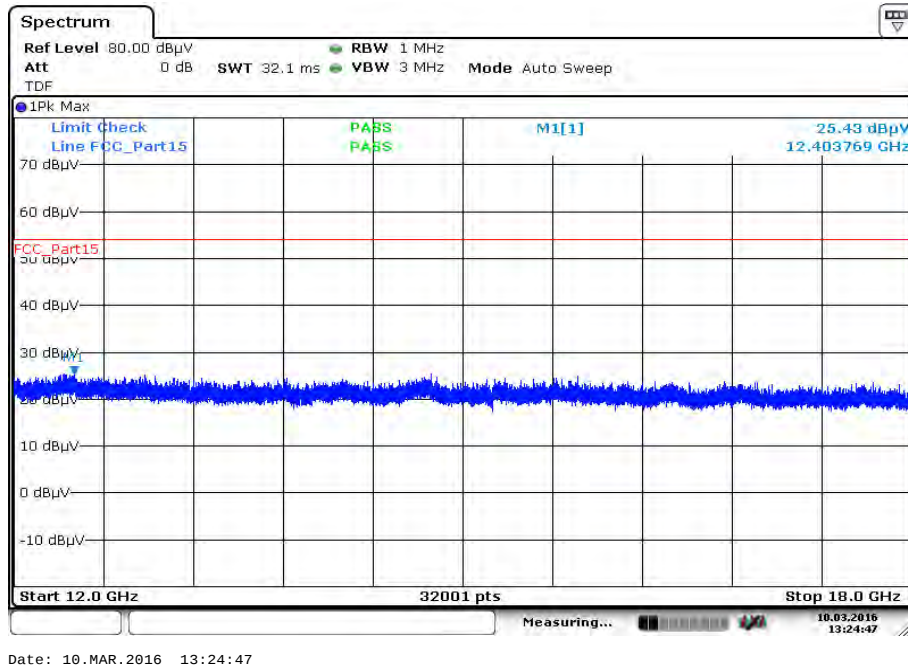
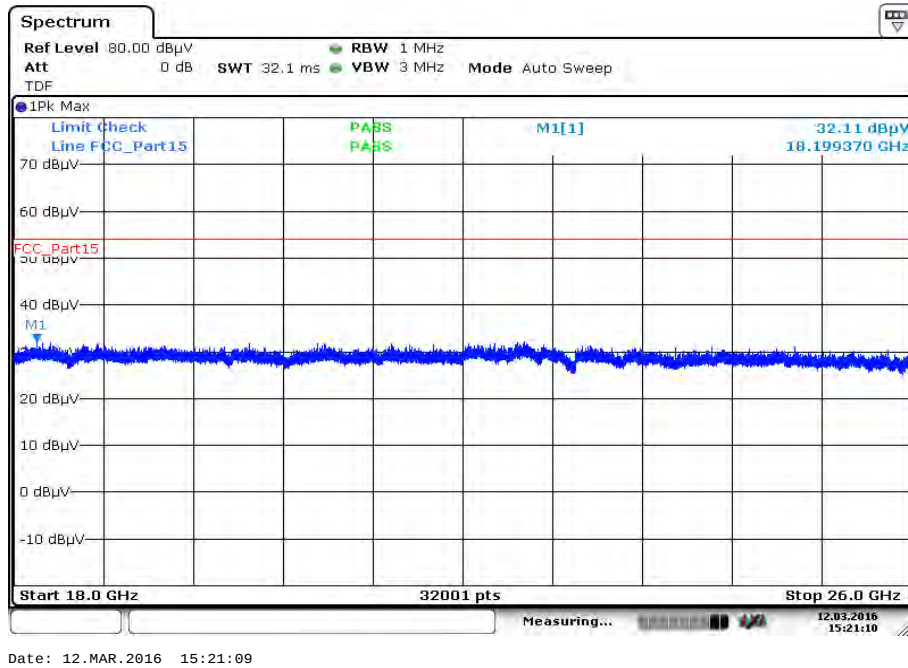


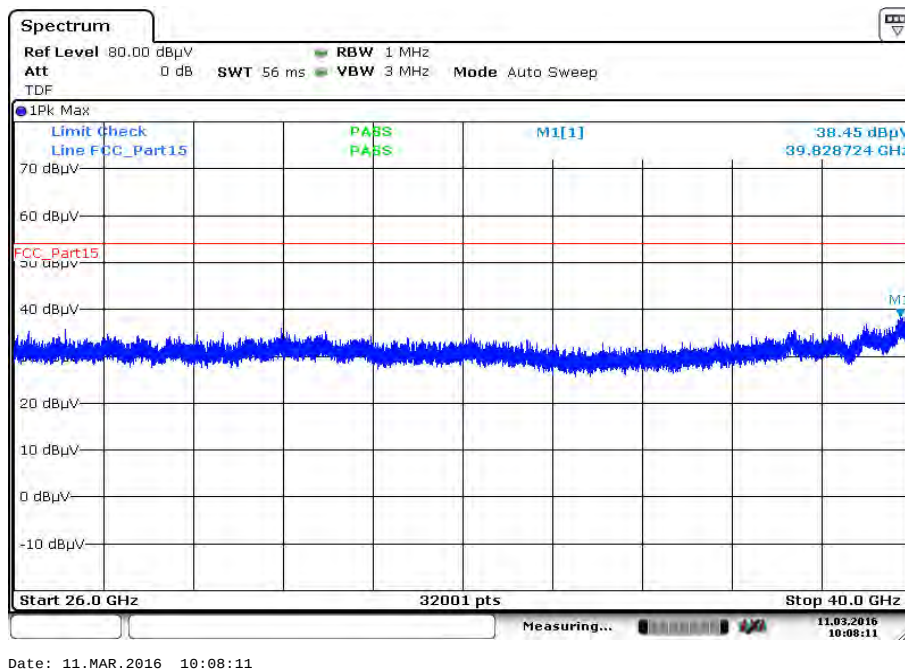
Plot 19: 30 MHz to 1 GHz, 5310 MHz, vertical & horizontal polarization

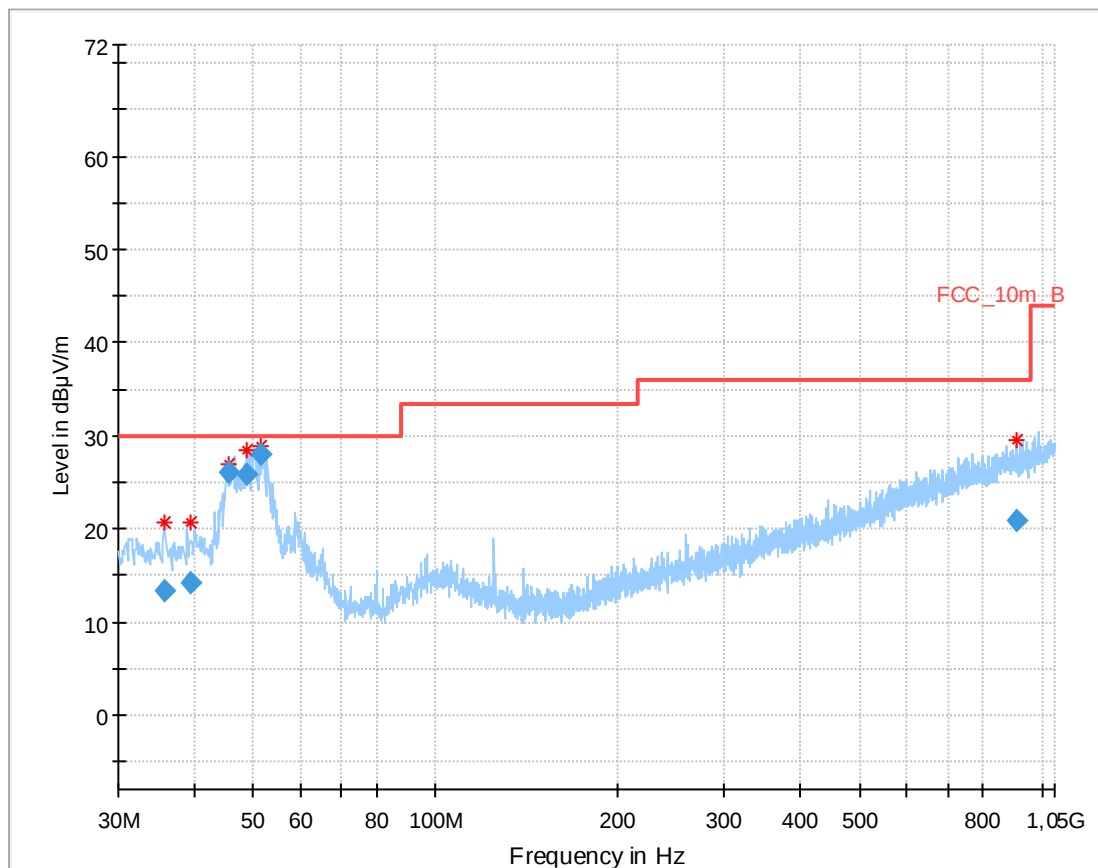
Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
45.546150	26.22	30.00	3.78	1000.0	120.000	98.0	V	190	13.7
47.210700	25.60	30.00	4.40	1000.0	120.000	98.0	V	10	13.3
48.847200	26.33	30.00	3.67	1000.0	120.000	98.0	V	10	12.9
52.157550	26.45	30.00	3.55	1000.0	120.000	98.0	V	81	12.3
52.872450	23.73	30.00	6.27	1000.0	120.000	98.0	V	170	12.2
904.973550	20.93	36.00	15.07	1000.0	120.000	170.0	V	260	24.1

Plot 20: 1 GHz to 12.75 GHz, 5310 MHz, vertical & horizontal polarization**Plot 21:** 4.5 GHz to 7 GHz, 5310 MHz, vertical & horizontal polarization

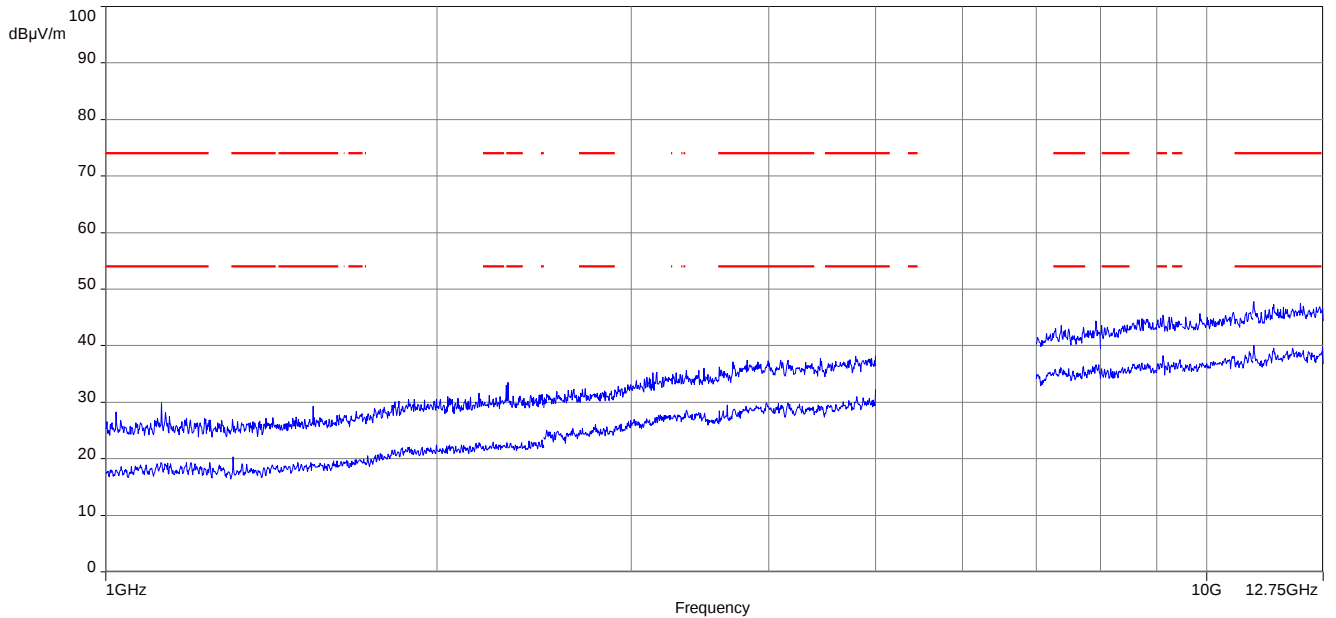
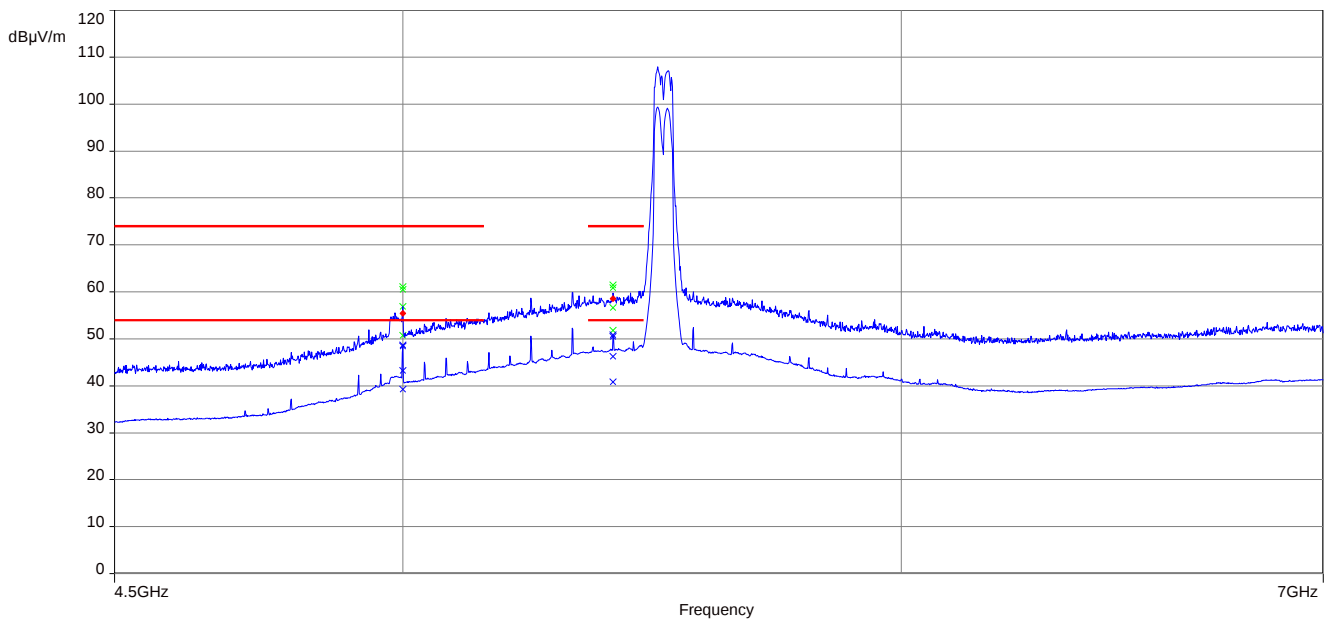
Plot 22: 12 GHz to 18 GHz, 5310 MHz, vertical & horizontal polarization**Plot 23:** 18 GHz to 26 GHz, 5310 MHz, vertical & horizontal polarization

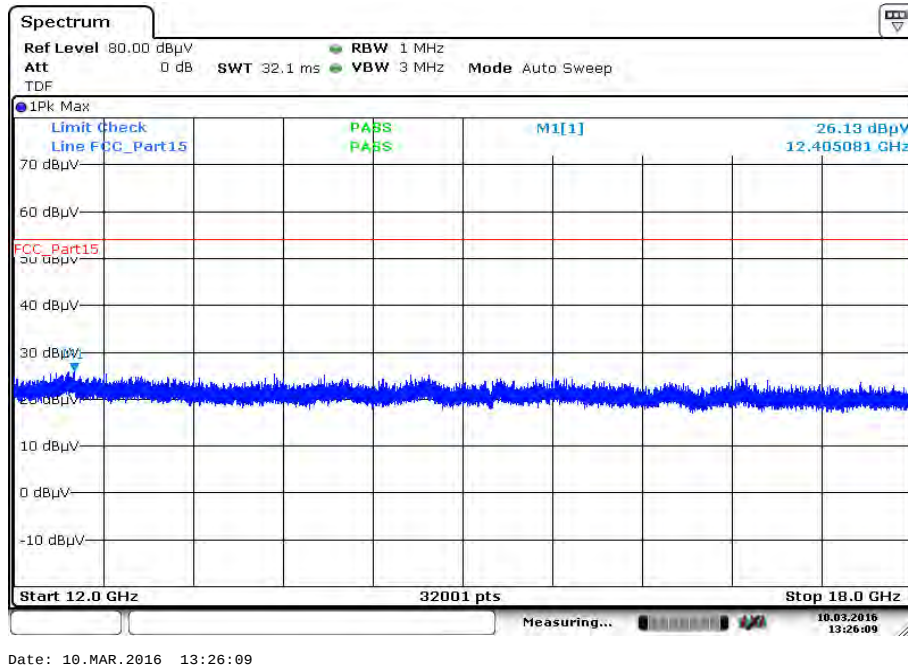
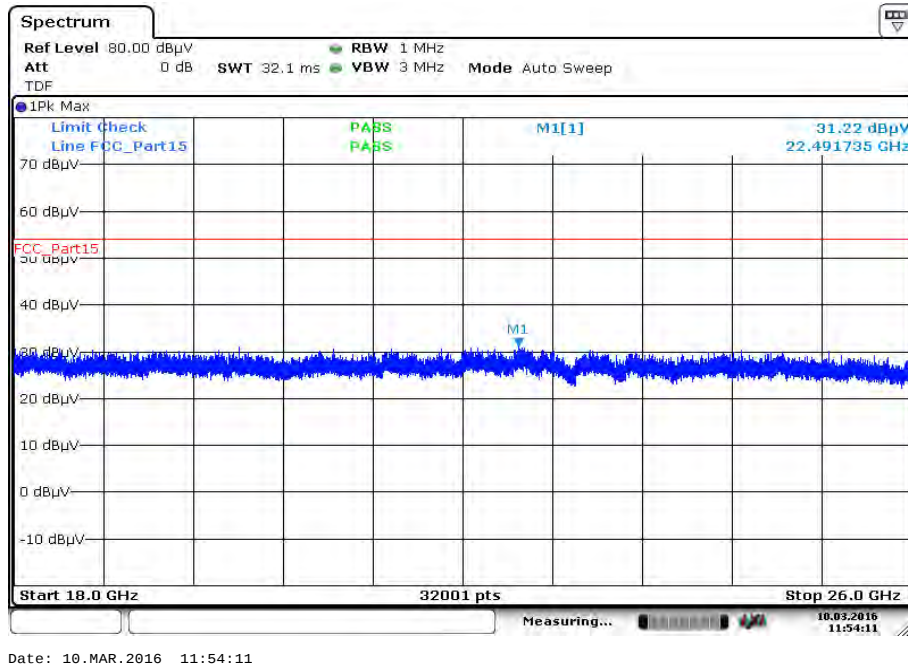
Plot 24: 26 GHz to 40 GHz, 5310 MHz, vertical & horizontal polarization

Plot 25: 30 MHz to 1 GHz, 5510 MHz, vertical & horizontal polarization


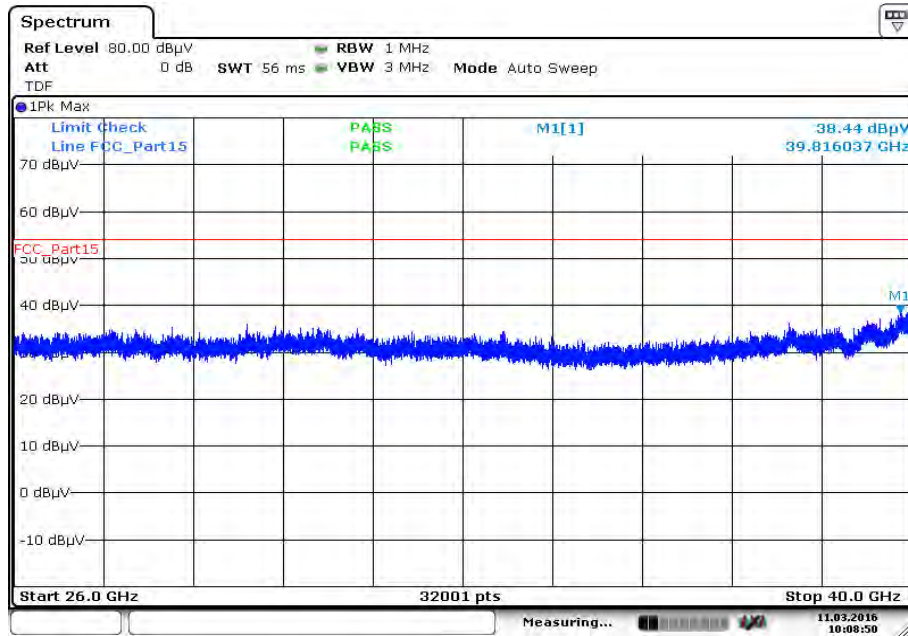
Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
35.709150	13.29	30.00	16.71	1000.0	120.000	98.0	V	171	13.8
39.483000	14.30	30.00	15.70	1000.0	120.000	170.0	V	100	14.0
45.568500	26.01	30.00	3.99	1000.0	120.000	98.0	V	260	13.7
48.895050	25.78	30.00	4.22	1000.0	120.000	98.0	V	-9	12.9
51.536700	27.96	30.00	2.04	1000.0	120.000	98.0	V	10	12.4
907.414650	20.94	36.00	15.06	1000.0	120.000	101.0	V	190	24.1

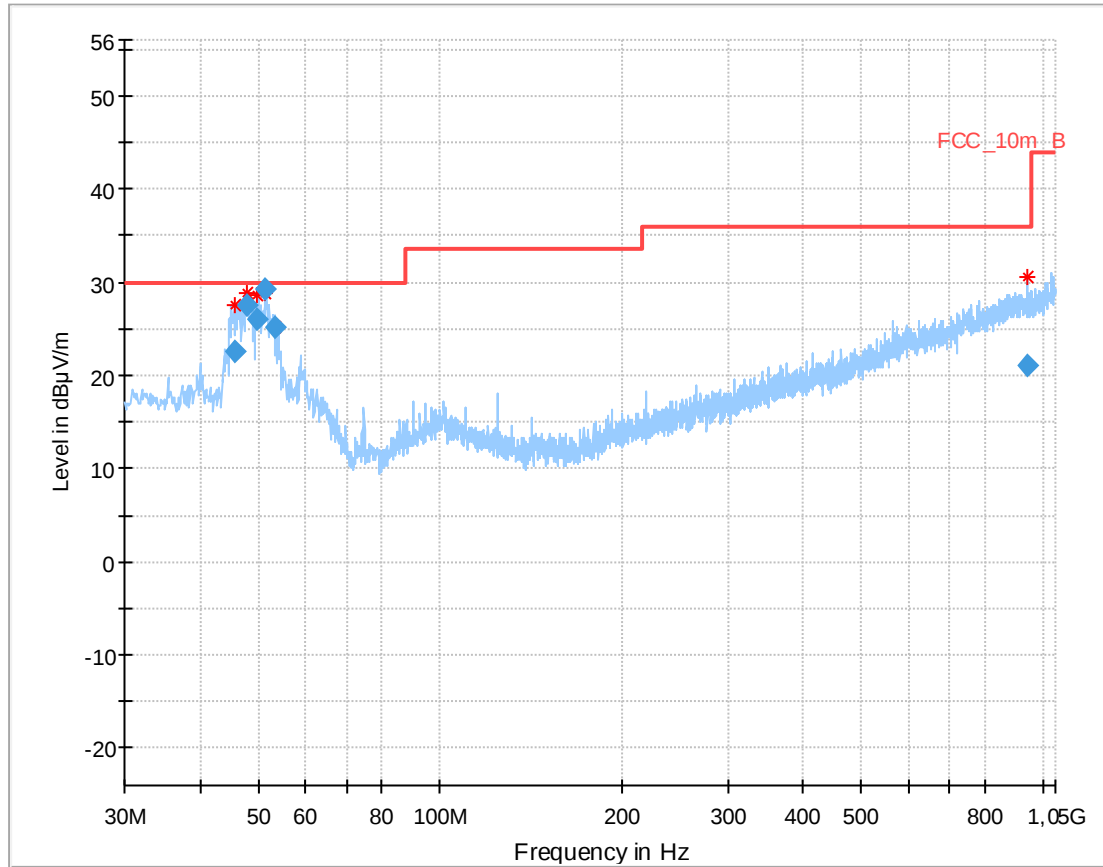
Plot 26: 1 GHz to 12.75 GHz, 5510 MHz, vertical & horizontal polarization**Plot 27:** 4.5 GHz to 7 GHz, 5510 MHz, vertical & horizontal polarization

Plot 28: 12 GHz to 18 GHz, 5510 MHz, vertical & horizontal polarization**Plot 29:** 18 GHz to 26 GHz, 5510 MHz, vertical & horizontal polarization

Plot 30: 26 GHz to 40 GHz, 5510 MHz, vertical & horizontal polarization



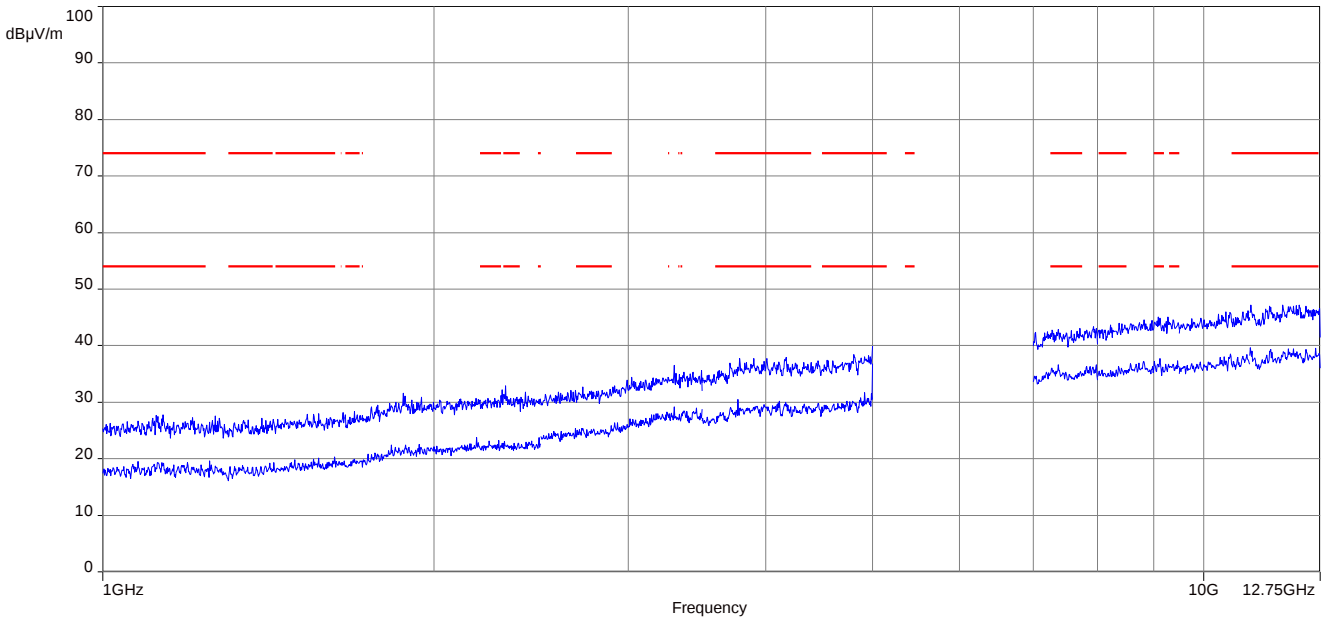
Date: 11.MAR.2016 10:08:51

Plot 31: 30 MHz to 1 GHz, 5670 MHz, vertical & horizontal polarization

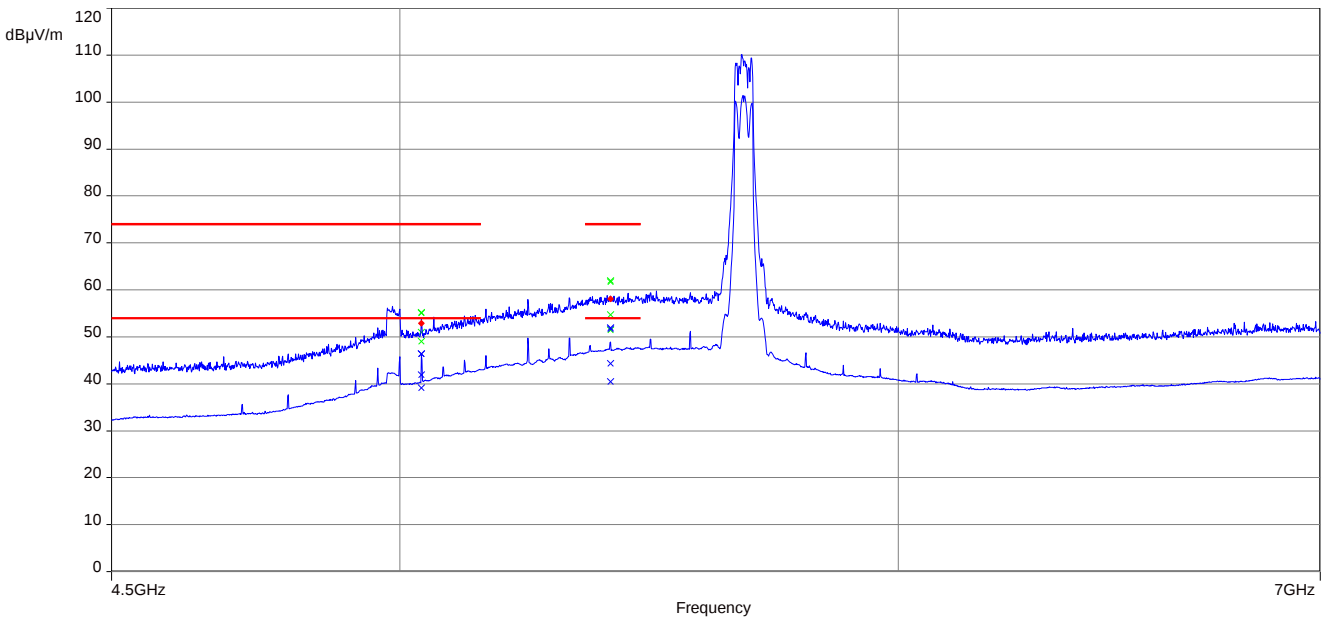
Final_Result

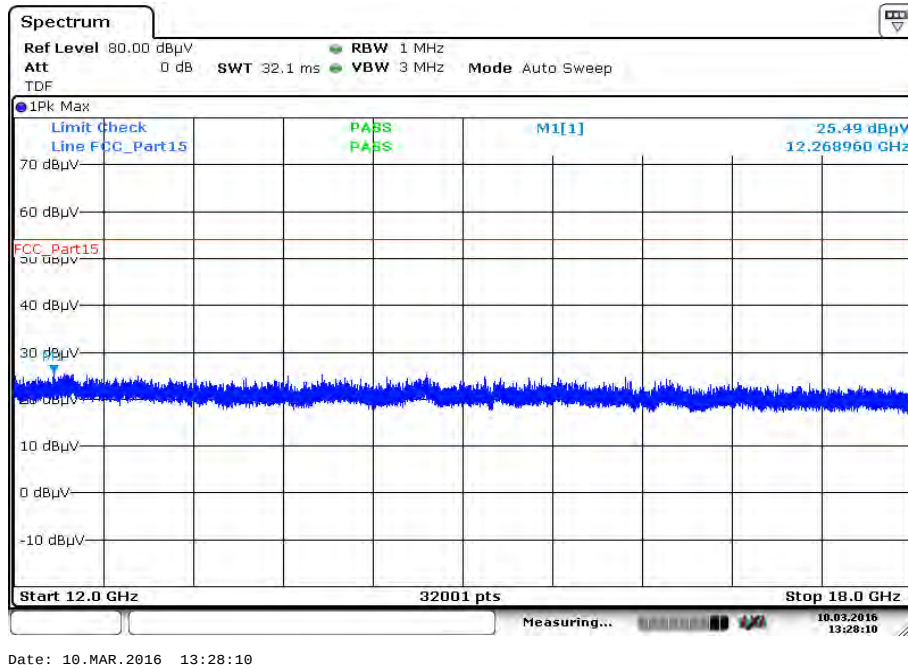
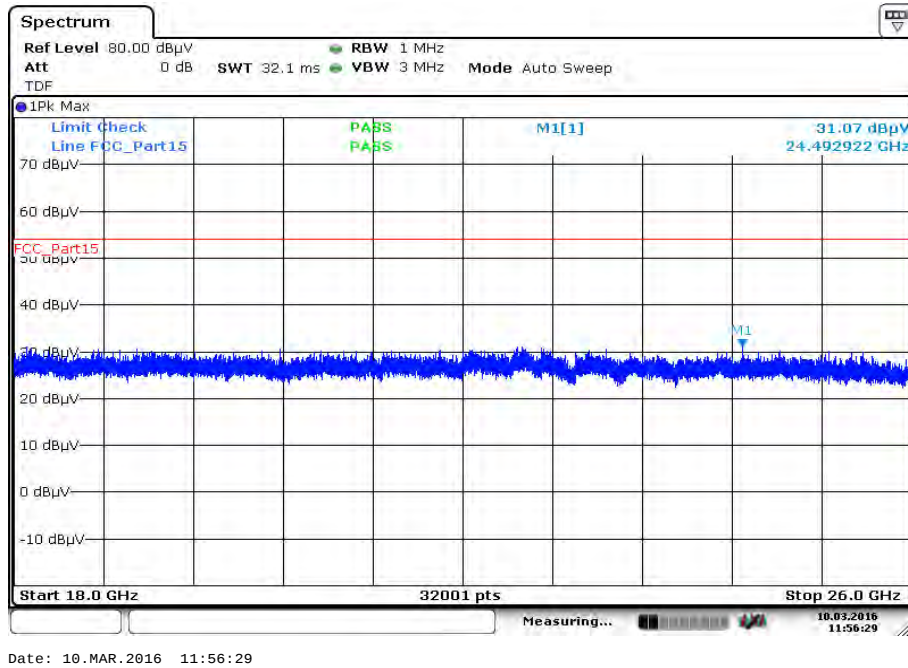
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
45.577500	22.65	30.00	7.35	1000.0	120.000	98.0	V	10	13.7
47.867550	27.46	30.00	2.54	1000.0	120.000	98.0	V	-9	13.1
49.837200	26.11	30.00	3.89	1000.0	120.000	98.0	V	-10	12.7
51.483450	29.25	30.00	0.75	1000.0	120.000	98.0	V	-10	12.4
53.136300	25.08	30.00	4.92	1000.0	120.000	98.0	V	-9	12.1
941.023500	20.98	36.00	15.02	1000.0	120.000	98.0	V	170	24.2

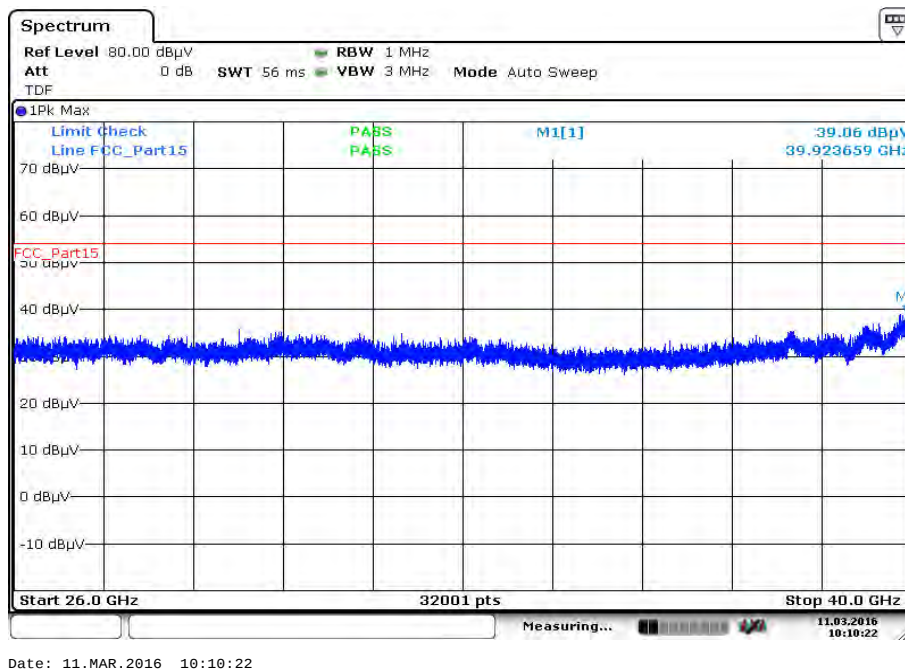
Plot 32: 1 GHz to 12.75 GHz, 5670 MHz, vertical & horizontal polarization

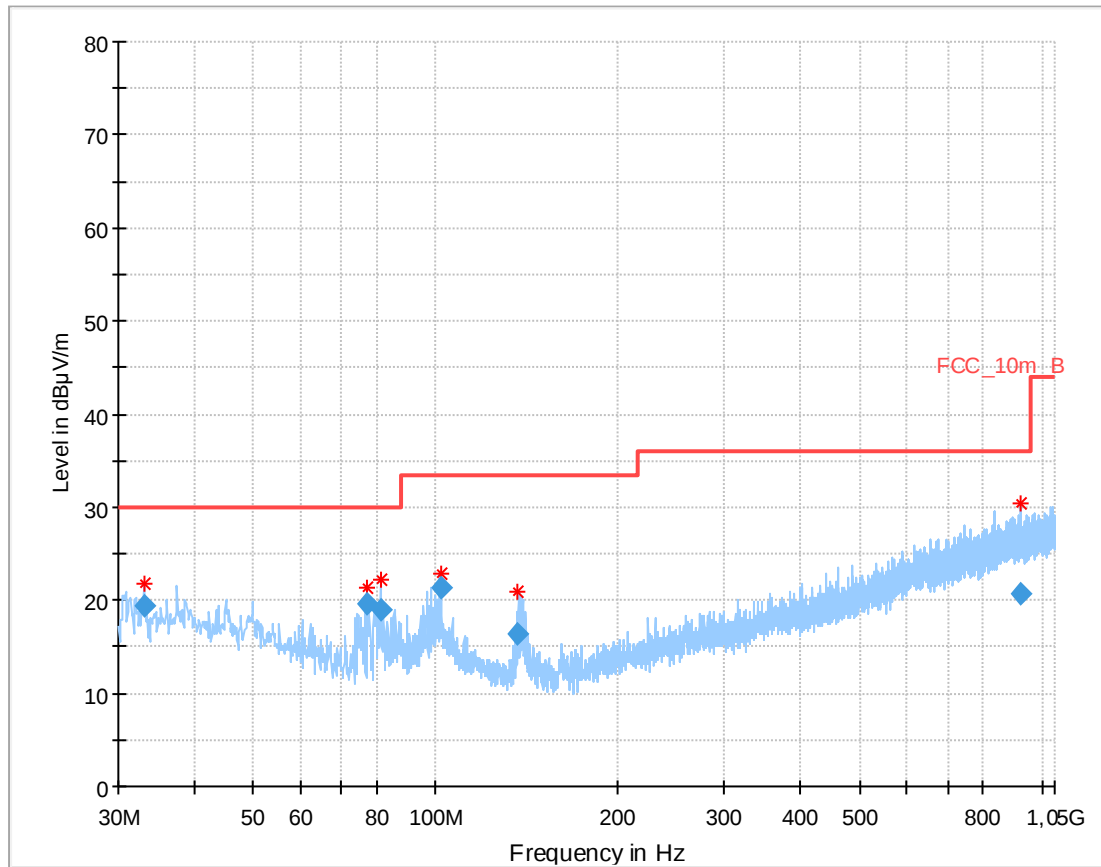


Plot 33: 4.5 GHz to 7 GHz, 5670 MHz, vertical & horizontal polarization



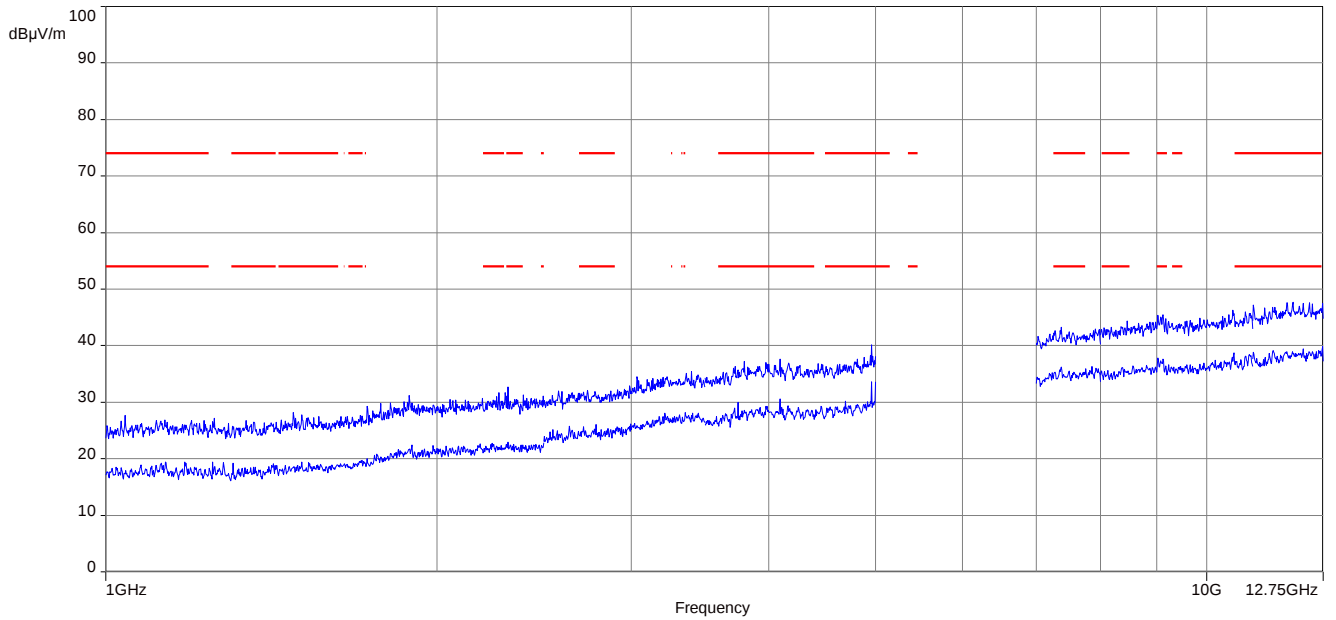
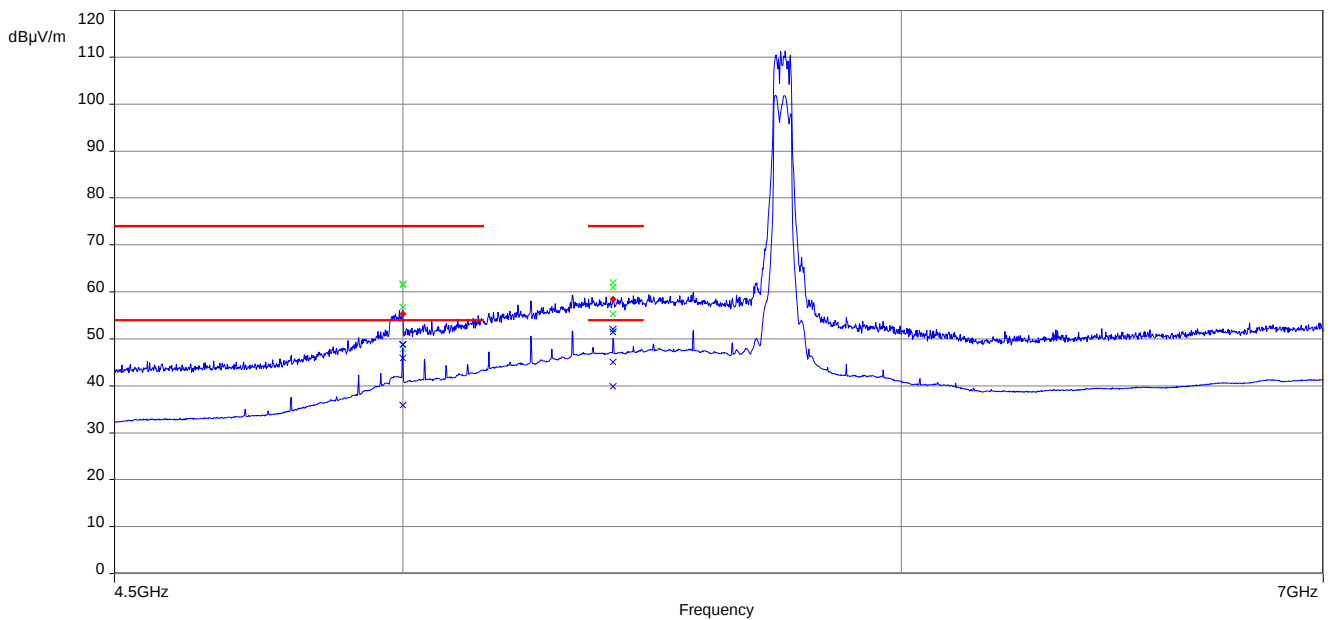
Plot 34: 12 GHz to 18 GHz, 5670 MHz, vertical & horizontal polarization**Plot 35:** 18 GHz to 26 GHz, 5670 MHz, vertical & horizontal polarization

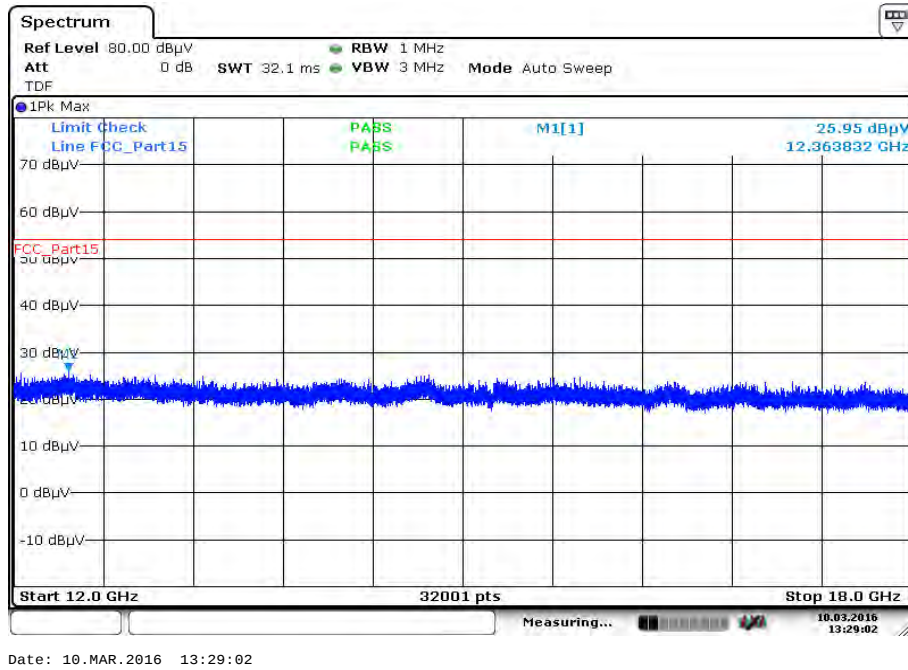
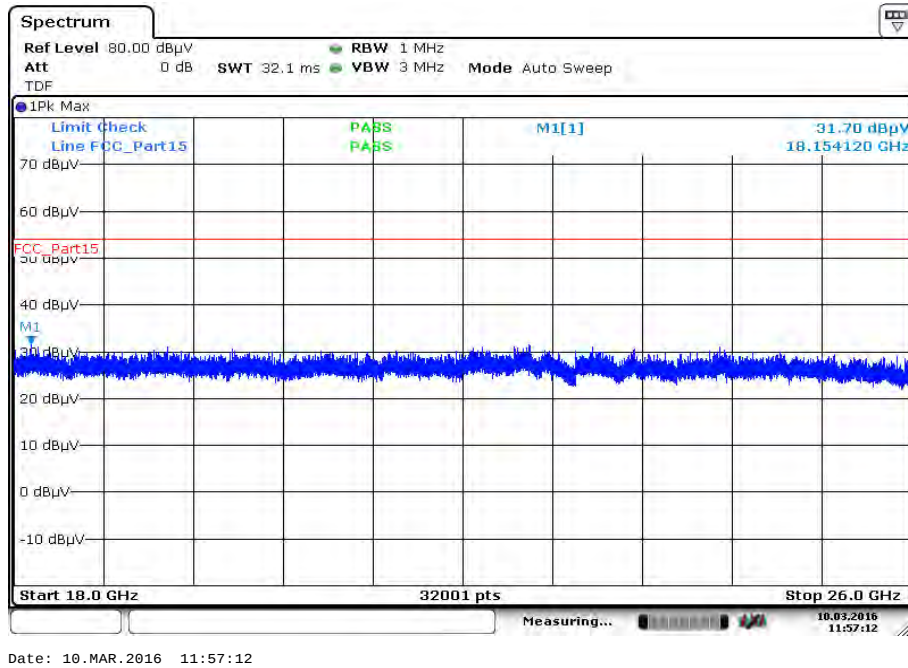
Plot 36: 26 GHz to 40 GHz, 5670 MHz, vertical & horizontal polarization

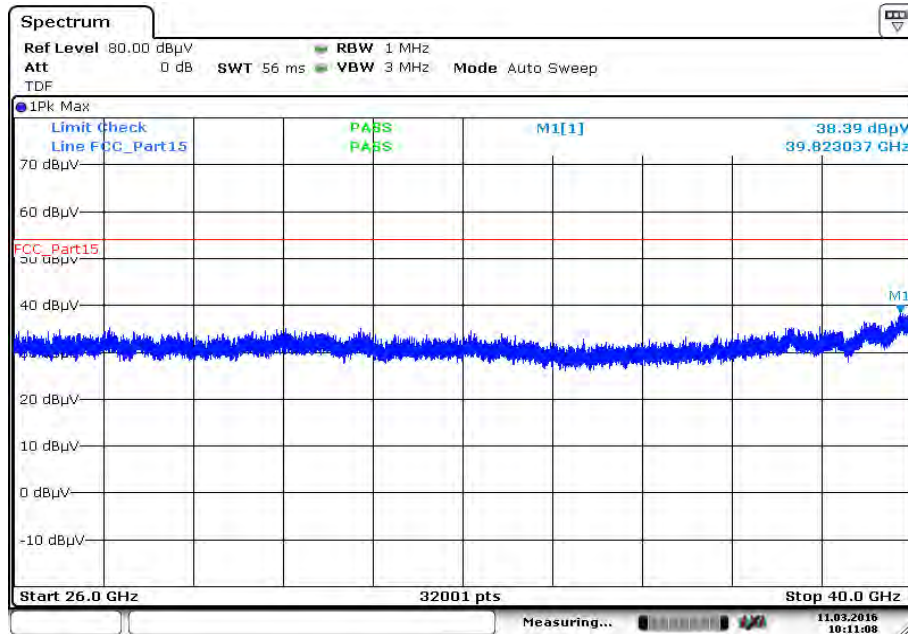
Plot 37: 30 MHz to 1 GHz, 5755 MHz, vertical & horizontal polarization

Final_Result

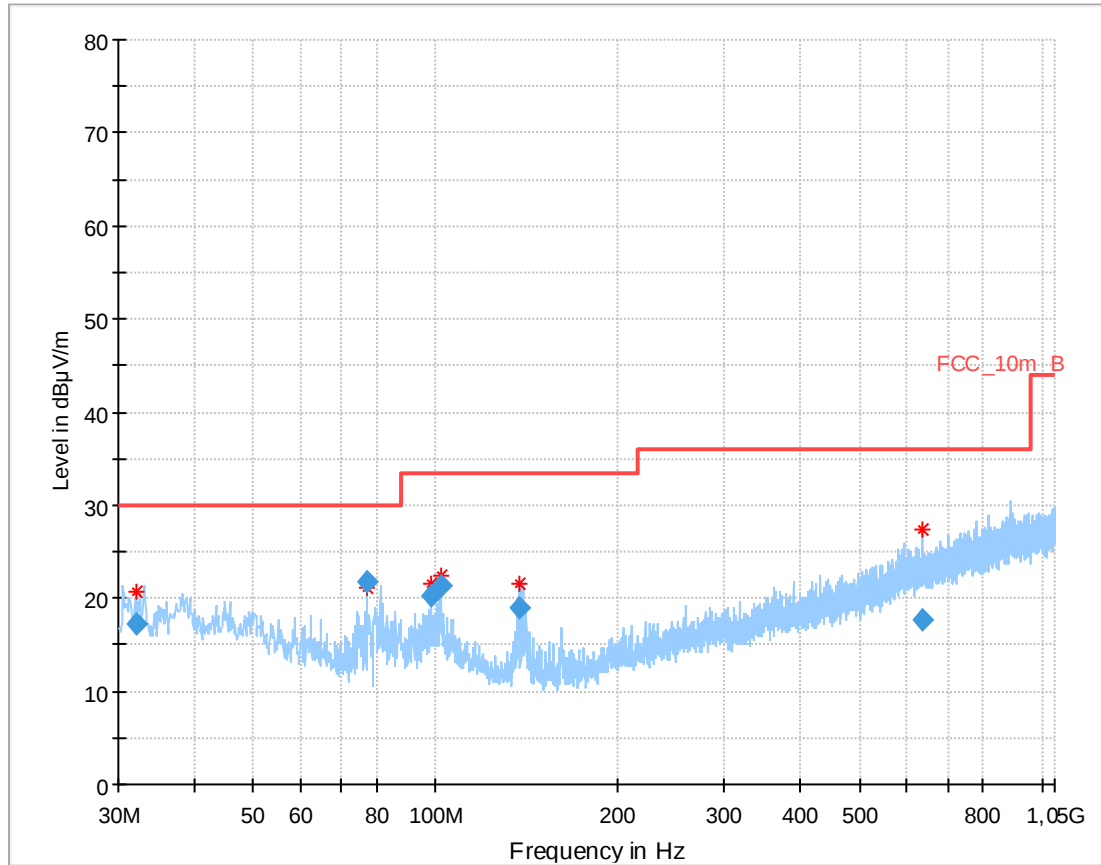
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
33.183300	19.51	30.00	10.49	1000.0	120.000	100.0	V	280.0	13.6
77.183550	19.58	30.00	10.42	1000.0	120.000	101.0	V	10.0	8.2
81.178500	18.93	30.00	11.07	1000.0	120.000	170.0	V	171.0	8.4
101.863950	21.26	33.50	12.24	1000.0	120.000	101.0	V	170.0	12.0
136.911600	16.34	33.50	17.16	1000.0	120.000	170.0	V	170.0	8.9
923.233800	20.78	36.00	15.22	1000.0	120.000	170.0	V	280.0	24.2

Plot 38: 1 GHz to 12.75 GHz, 5755 MHz, vertical & horizontal polarization**Plot 39:** 4.5 GHz to 7 GHz, 5755 MHz, vertical & horizontal polarization

Plot 40: 12 GHz to 18 GHz, 5755 MHz, vertical & horizontal polarization**Plot 41:** 18 GHz to 26 GHz, 5755 MHz, vertical & horizontal polarization

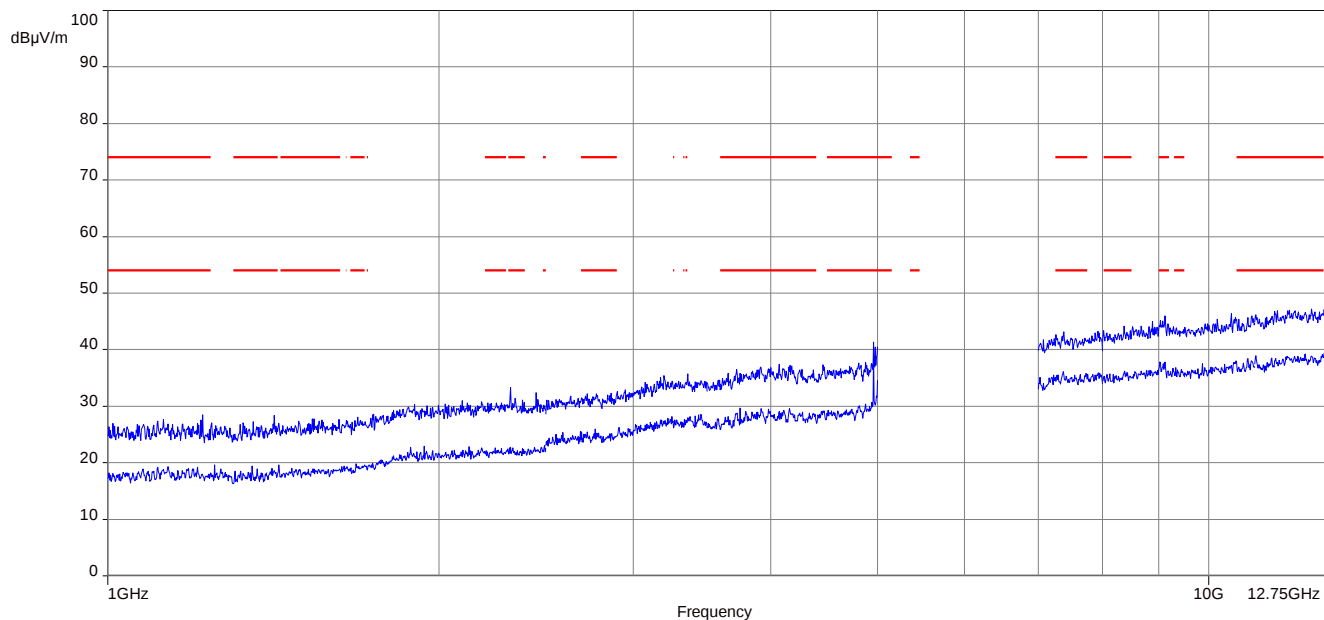
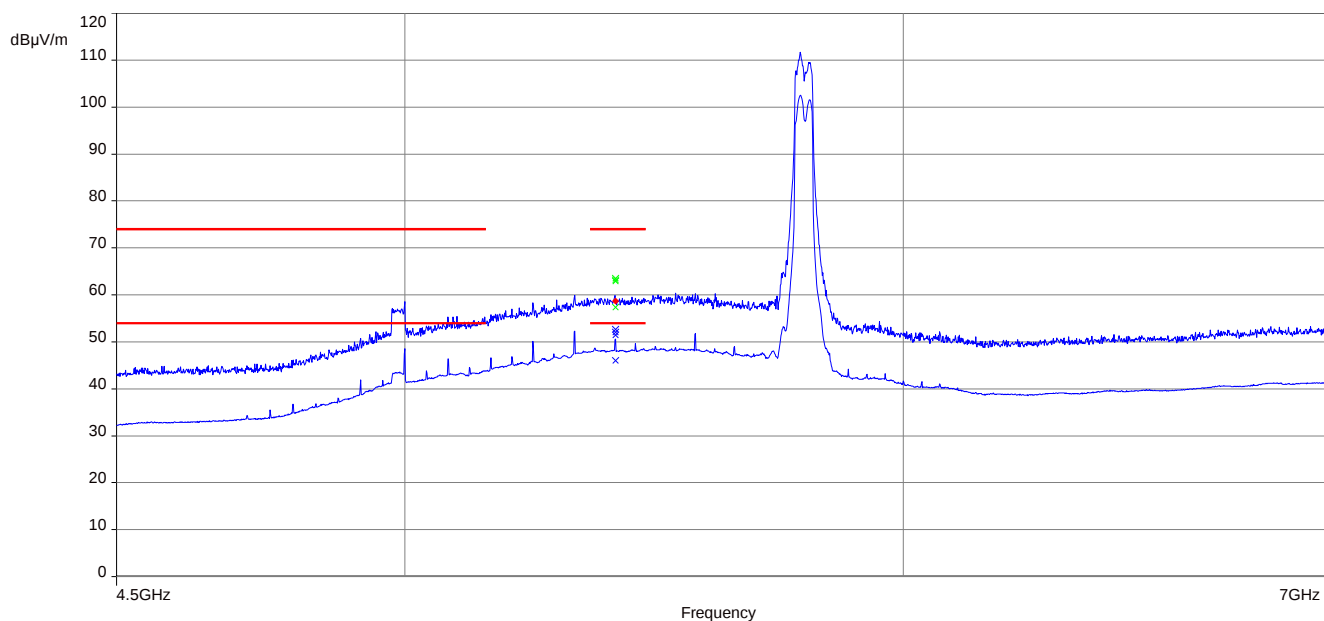
Plot 42: 26 GHz to 40 GHz, 5755 MHz, vertical & horizontal polarization

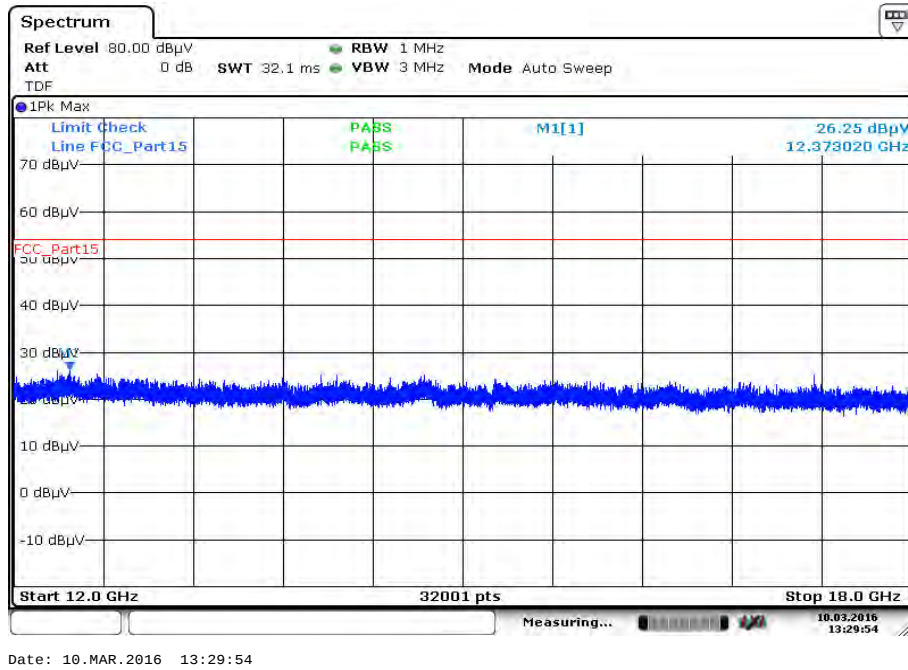
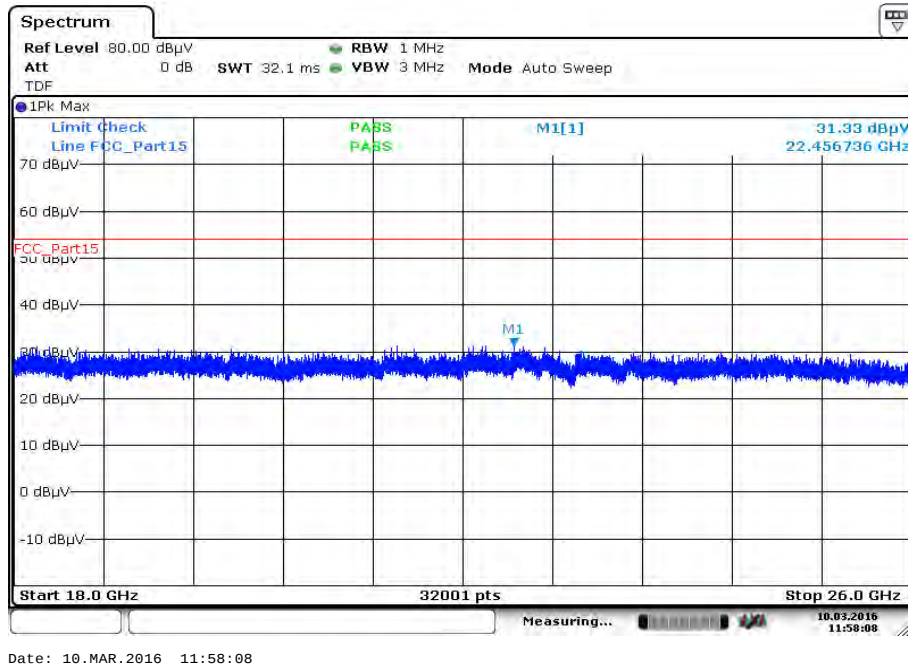
Date: 11.MAR.2016 10:11:08

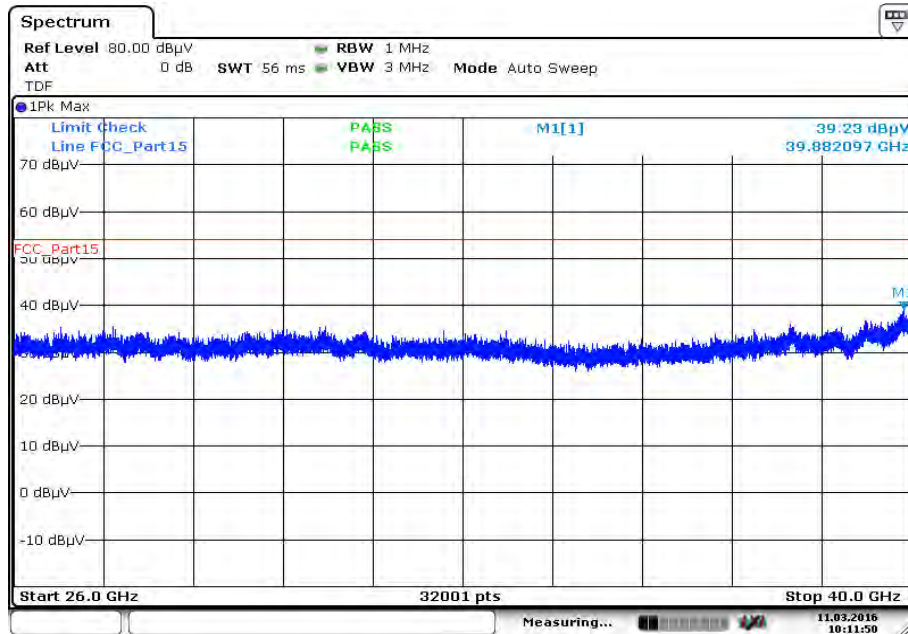
Plot 43: 30 MHz to 1 GHz, 5795 MHz, vertical & horizontal polarization

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
32.044050	17.26	30.00	12.74	1000.0	120.000	170.0	V	280.0	13.5
77.196150	21.78	30.00	8.22	1000.0	120.000	170.0	V	10.0	8.2
98.441400	20.37	33.50	13.13	1000.0	120.000	98.0	V	260.0	11.9
101.896500	21.38	33.50	12.12	1000.0	120.000	100.0	V	170.0	12.0
137.756700	19.02	33.50	14.48	1000.0	120.000	98.0	V	190.0	8.9
634.243800	17.66	36.00	18.34	1000.0	120.000	170.0	H	171.0	21.0

Plot 44: 1 GHz to 12.75 GHz, 5795 MHz, vertical & horizontal polarization**Plot 45:** 4.5 GHz to 7 GHz, 5795 MHz, vertical & horizontal polarization

Plot 46: 12 GHz to 18 GHz, 5795 MHz, vertical & horizontal polarization**Plot 47:** 18 GHz to 26 GHz, 5795 MHz, vertical & horizontal polarization

Plot 48: 26 GHz to 40 GHz, 5795 MHz, vertical & horizontal polarization

Date: 11.MAR.2016 10:11:50

12.11 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:

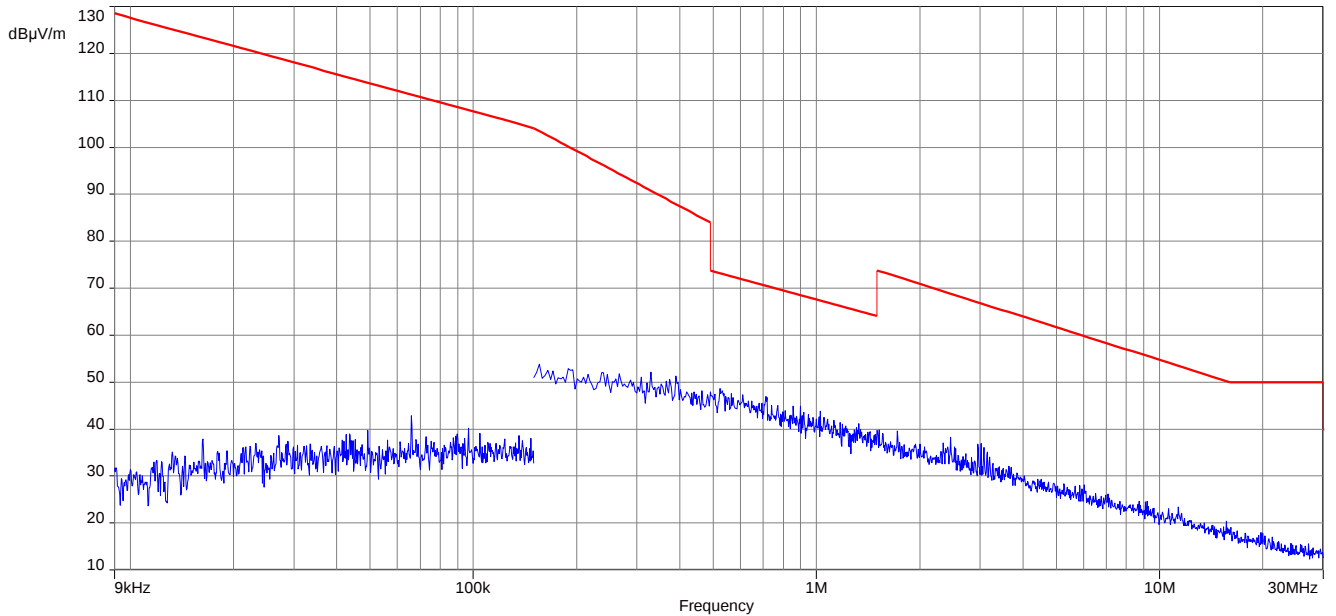
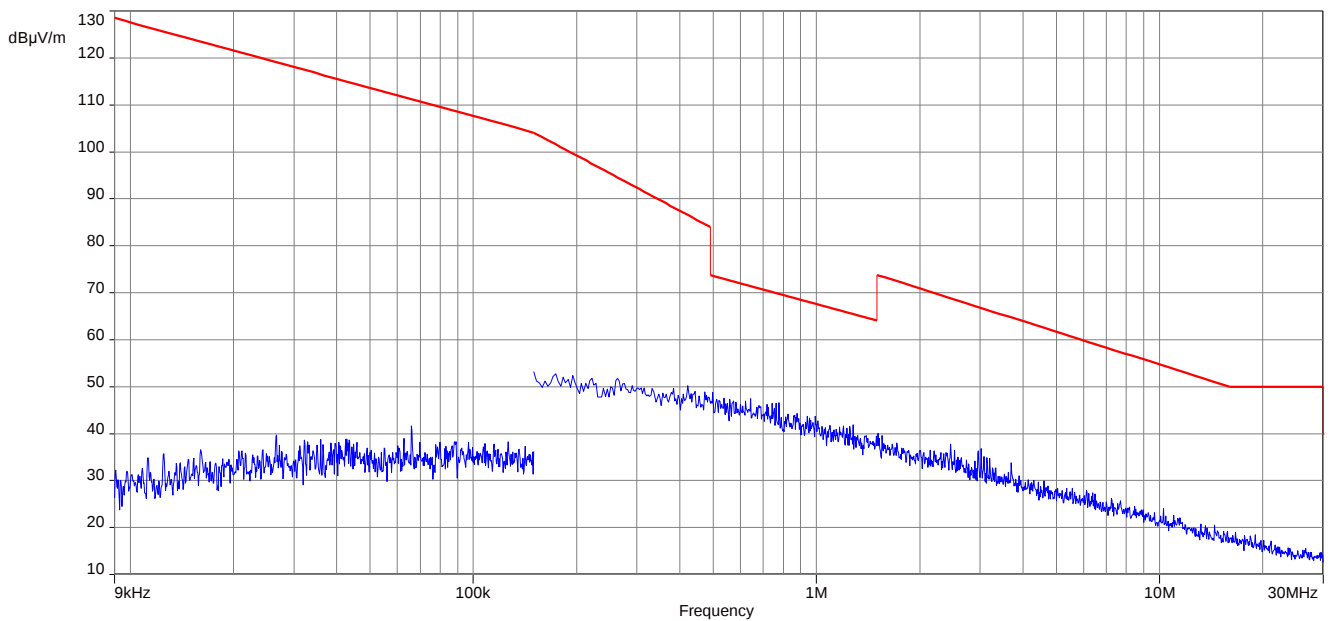
Measurement parameter	
According to: KDB789033 D02, G.	
Detector:	Peak / Quasi Peak
Sweep time:	Auto
Video bandwidth:	F < 150 kHz: 200 Hz F > 150 kHz: 9 kHz
Resolution bandwidth:	F < 150 kHz: 1 kHz F > 150 kHz: 100 kHz
Span:	9 kHz to 30 MHz
Trace-Mode:	Max Hold
Used test setup:	see chapter 7.2 – B
Measurement uncertainty:	see chapter 9

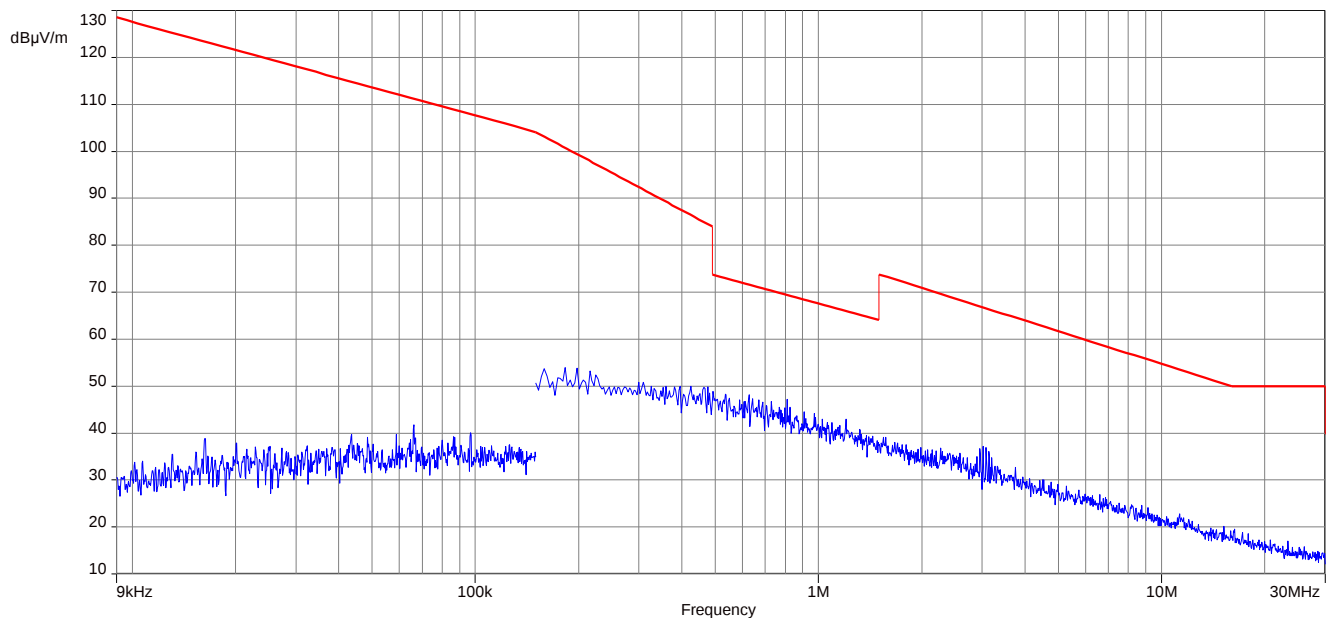
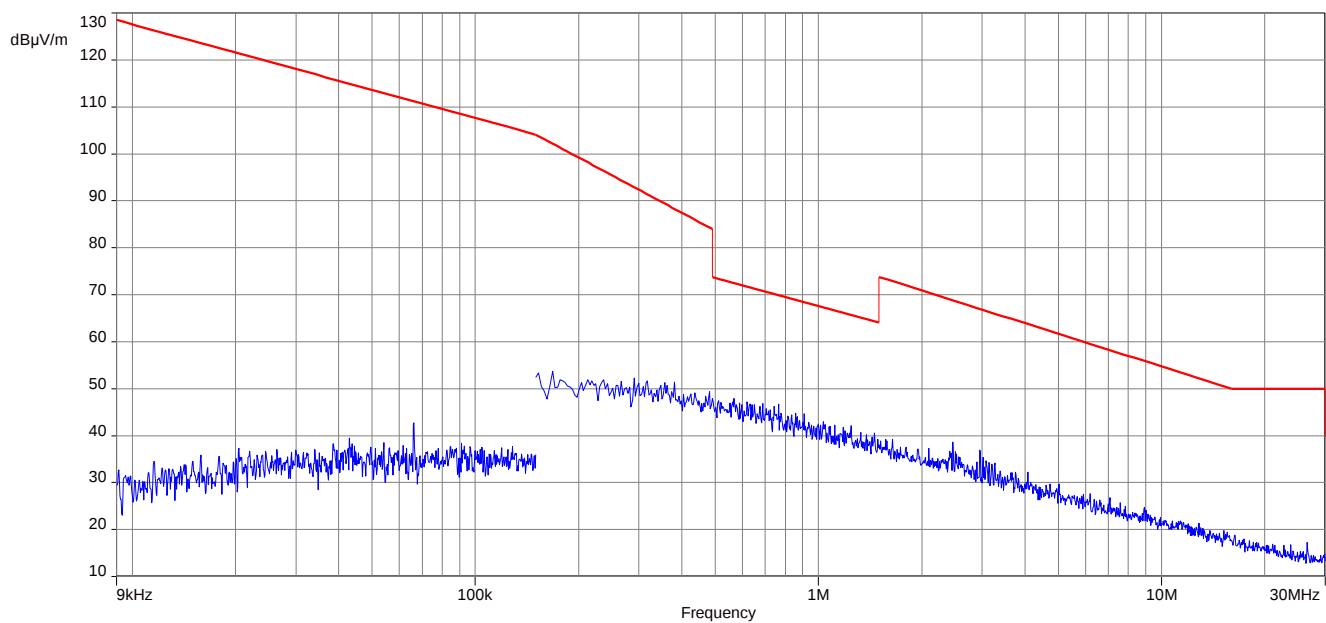
Limits:

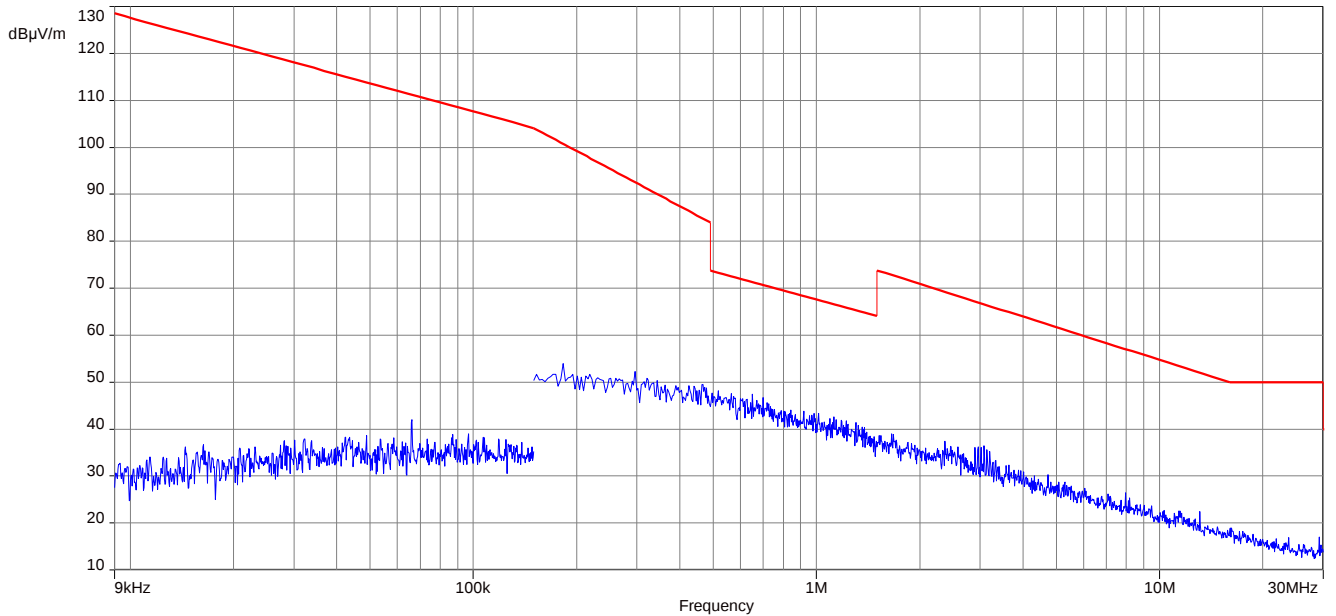
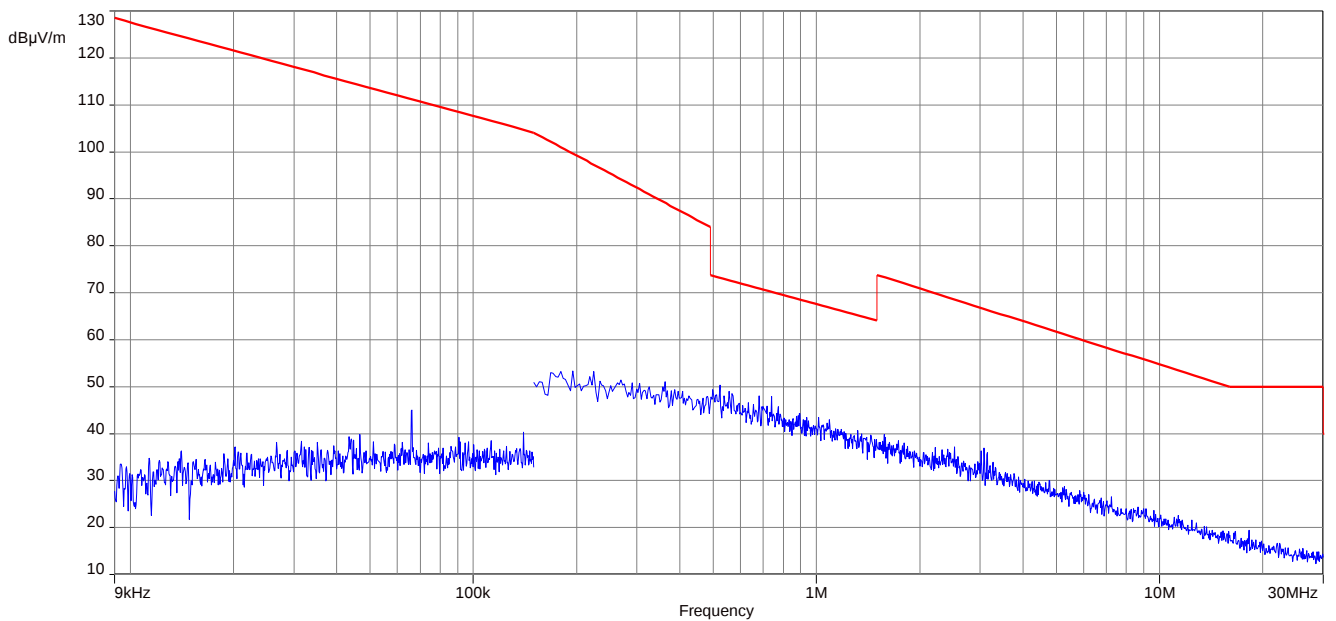
Spurious Emissions Radiated < 30 MHz		
Frequency (MHz)	Field Strength (dB μ V/m)	Measurement distance
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

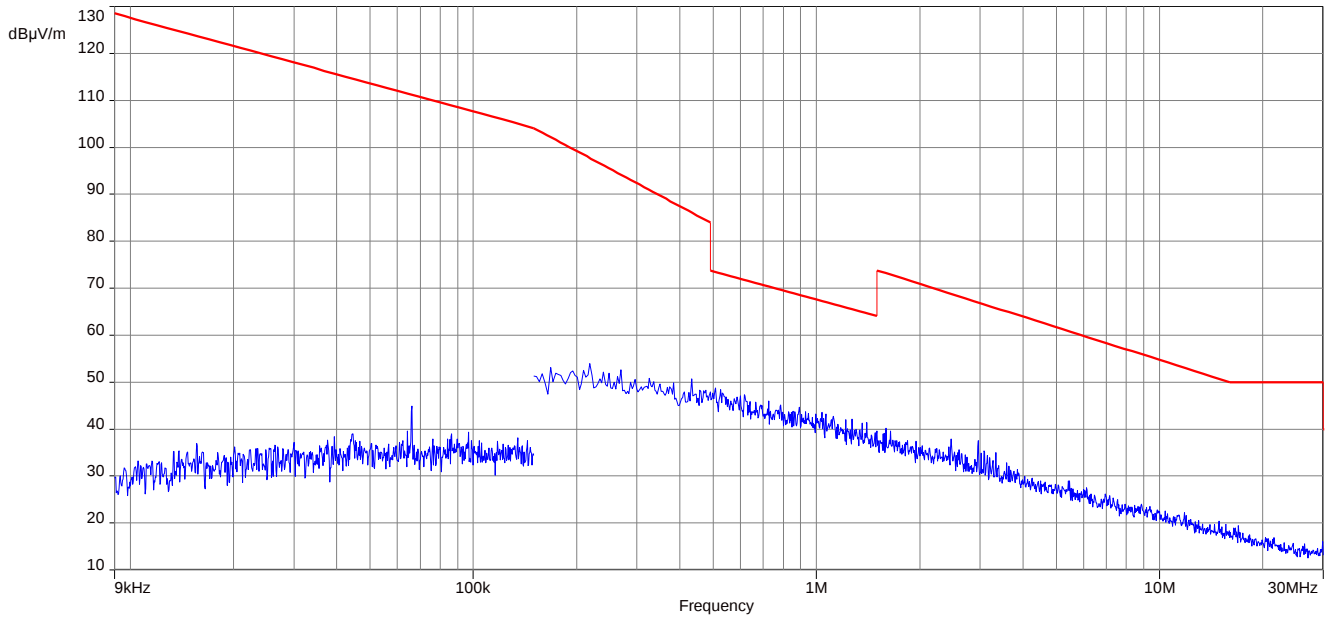
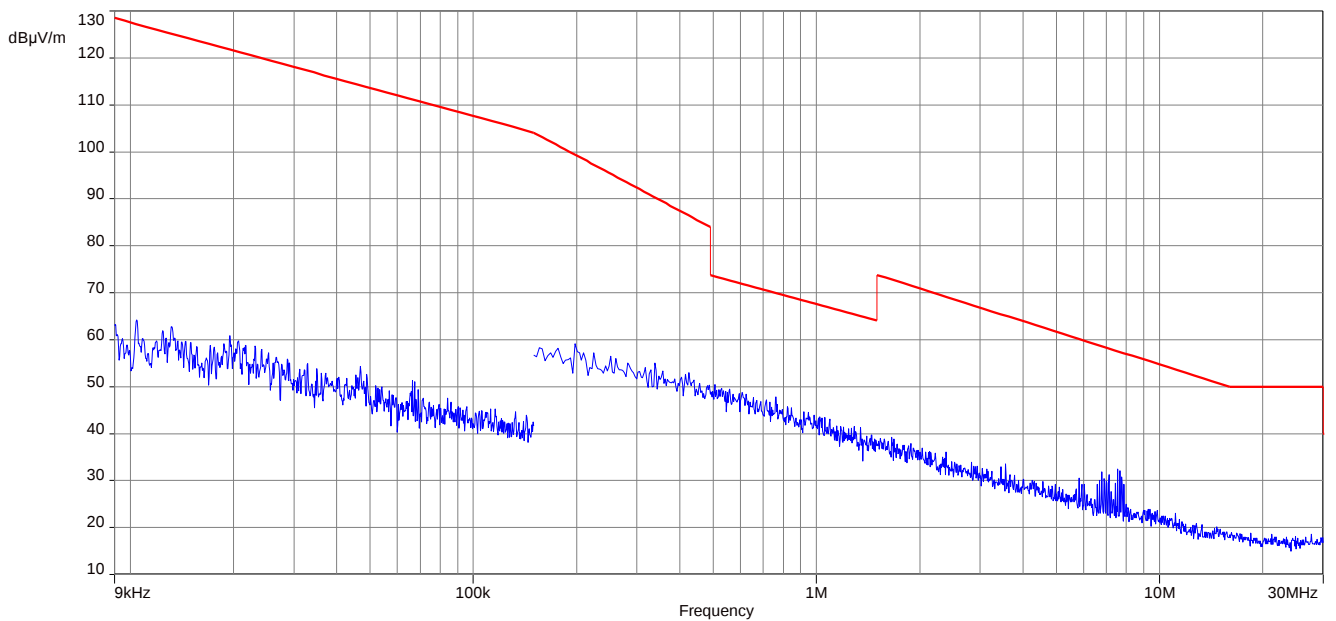
Results:

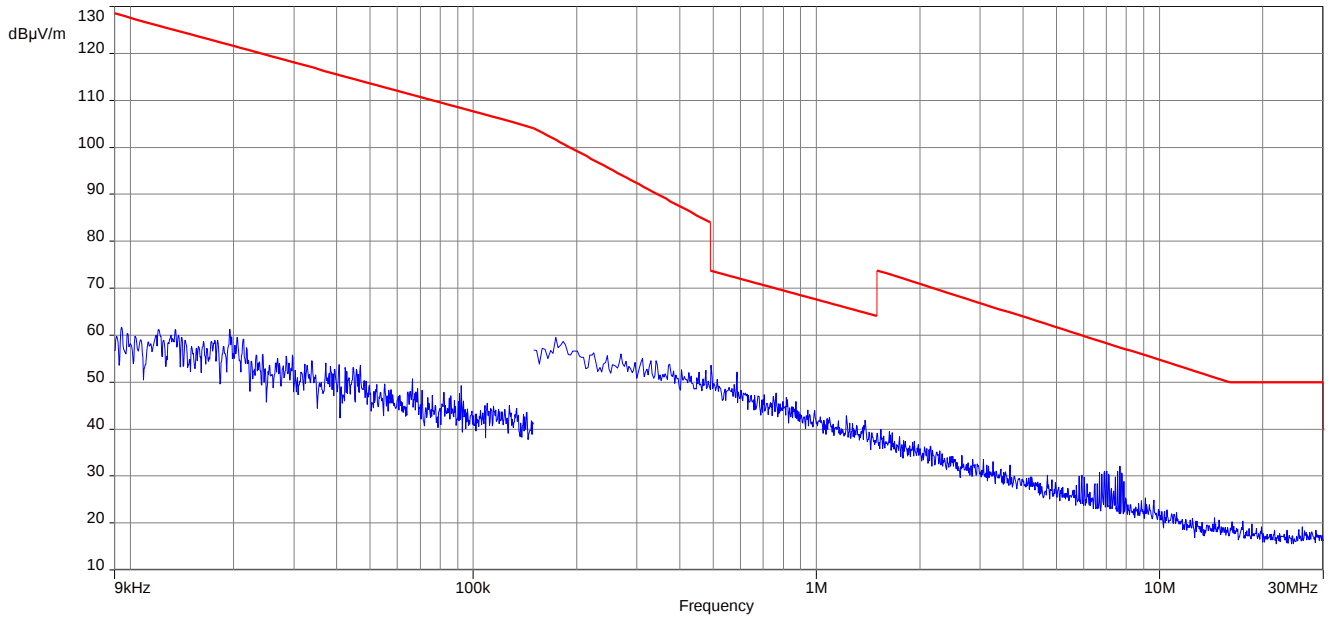
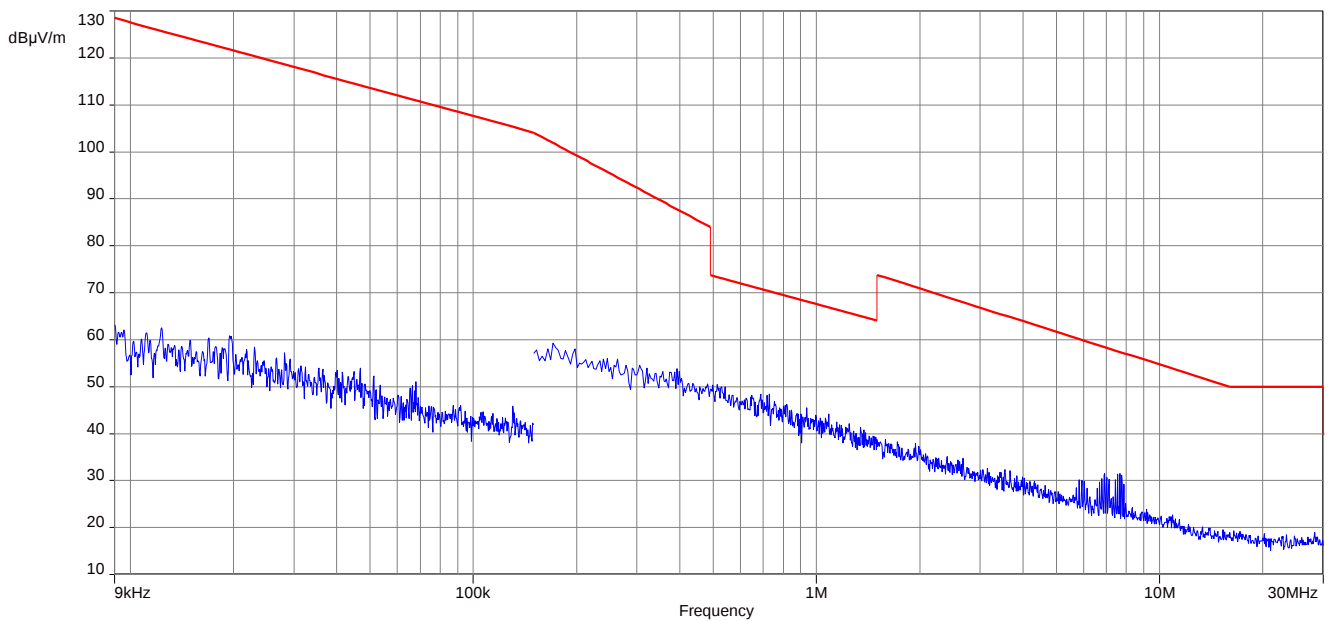
Spurious Emissions Radiated < 30 MHz [dB μ V/m]		
F [MHz]	Detector	Level [dB μ V/m]
All detected peak values are more than 10 dB below the average limit.		

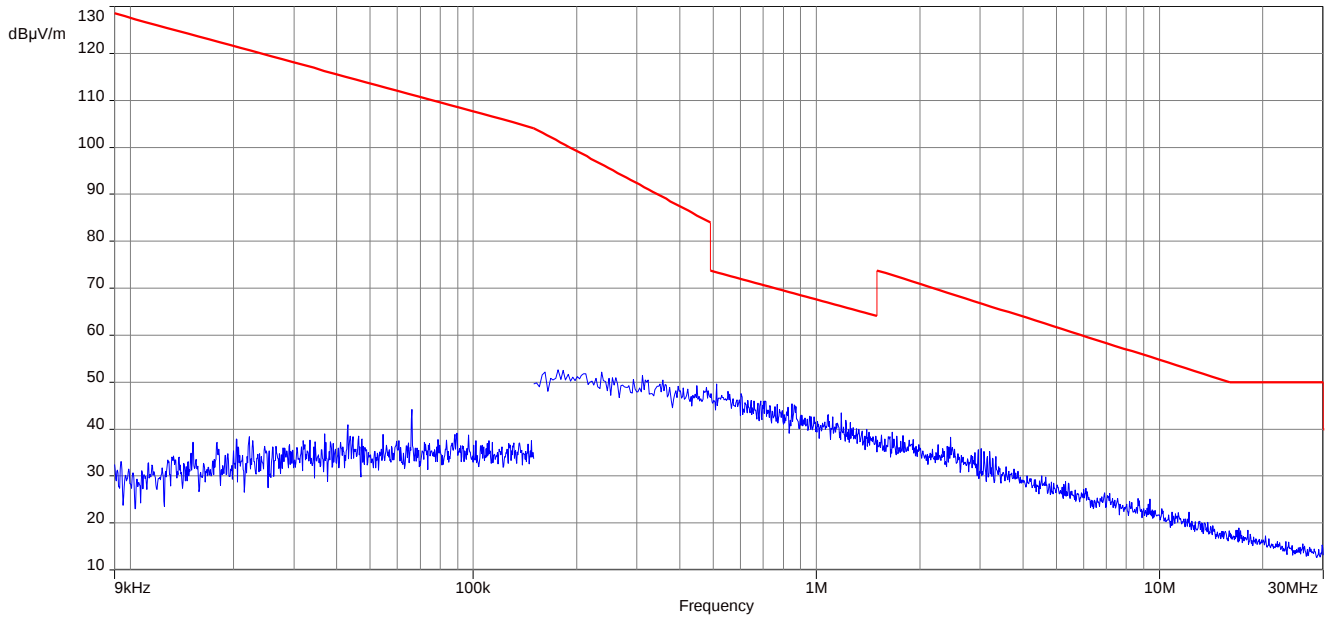
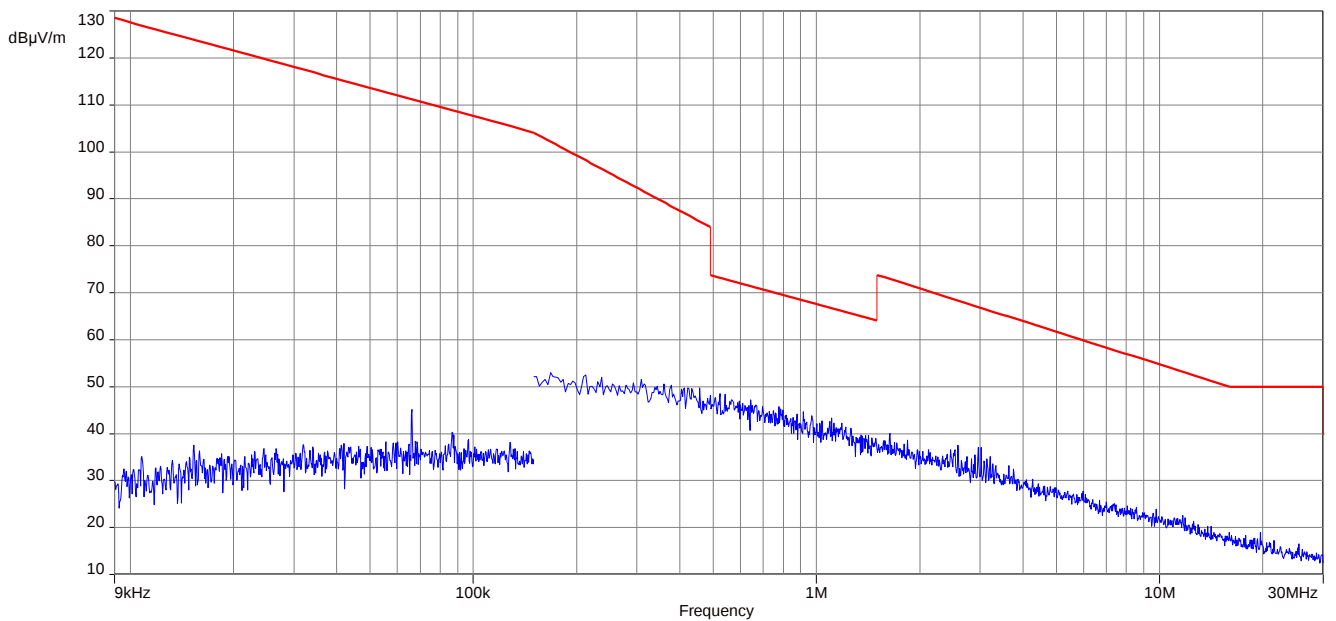
Plots:**Plot 1:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5180 MHz, OFDM / a – mode**Plot 2:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5240 MHz, OFDM / a – mode

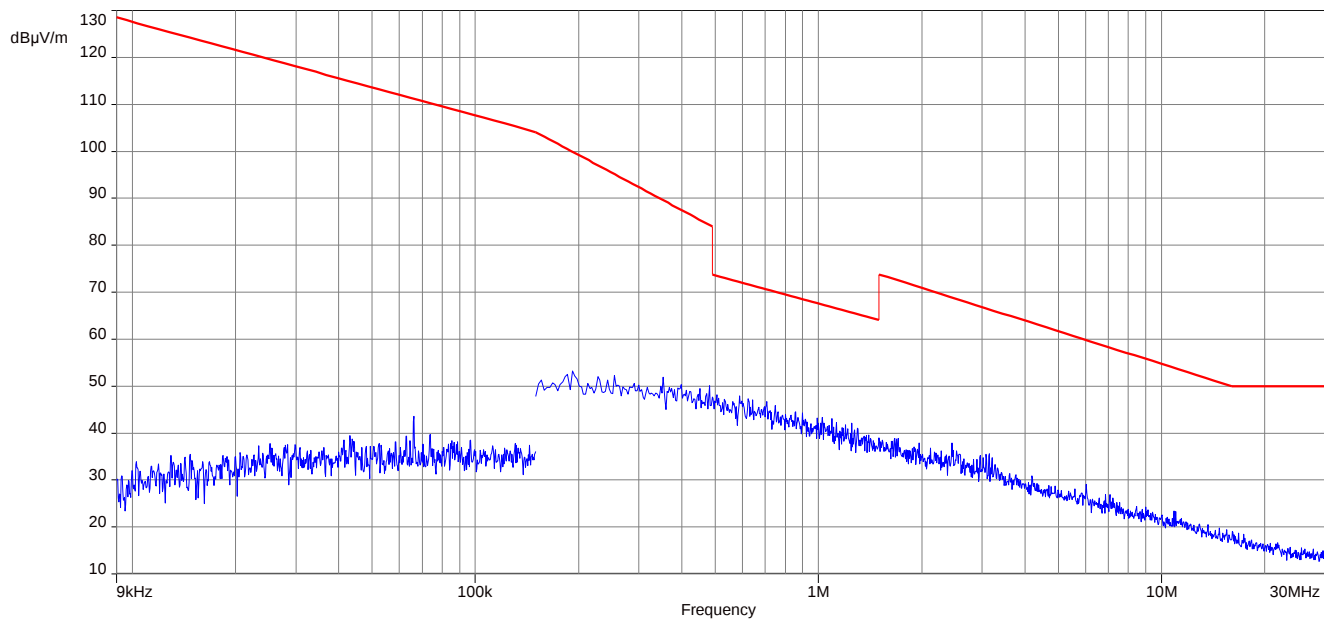
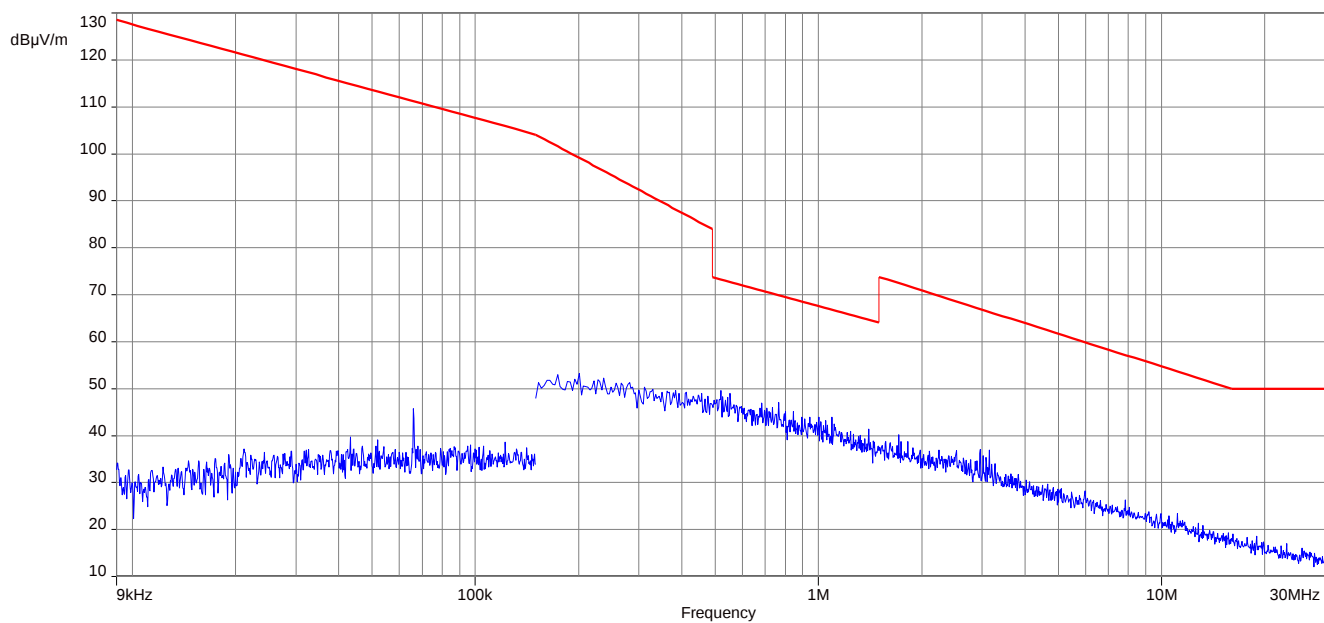
Plot 3: 9 kHz to 30 MHz, antenna 1 + 2 active, 5260 MHz, OFDM / a – mode**Plot 4:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5320 MHz, OFDM / a – mode

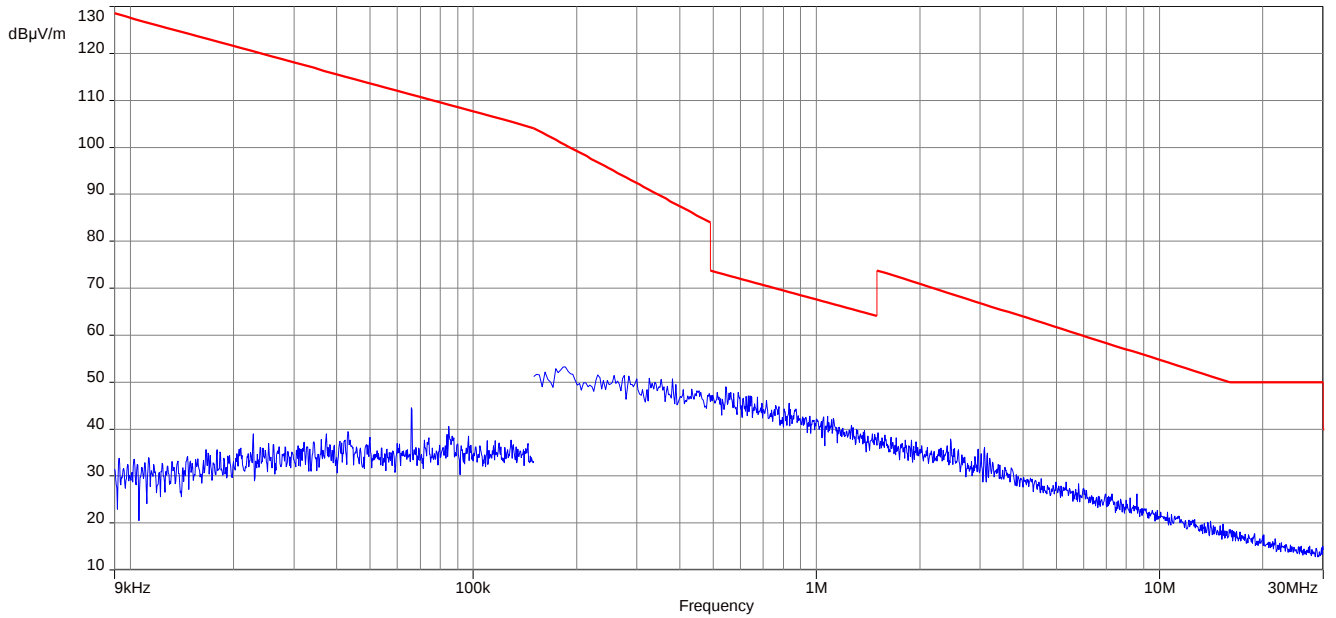
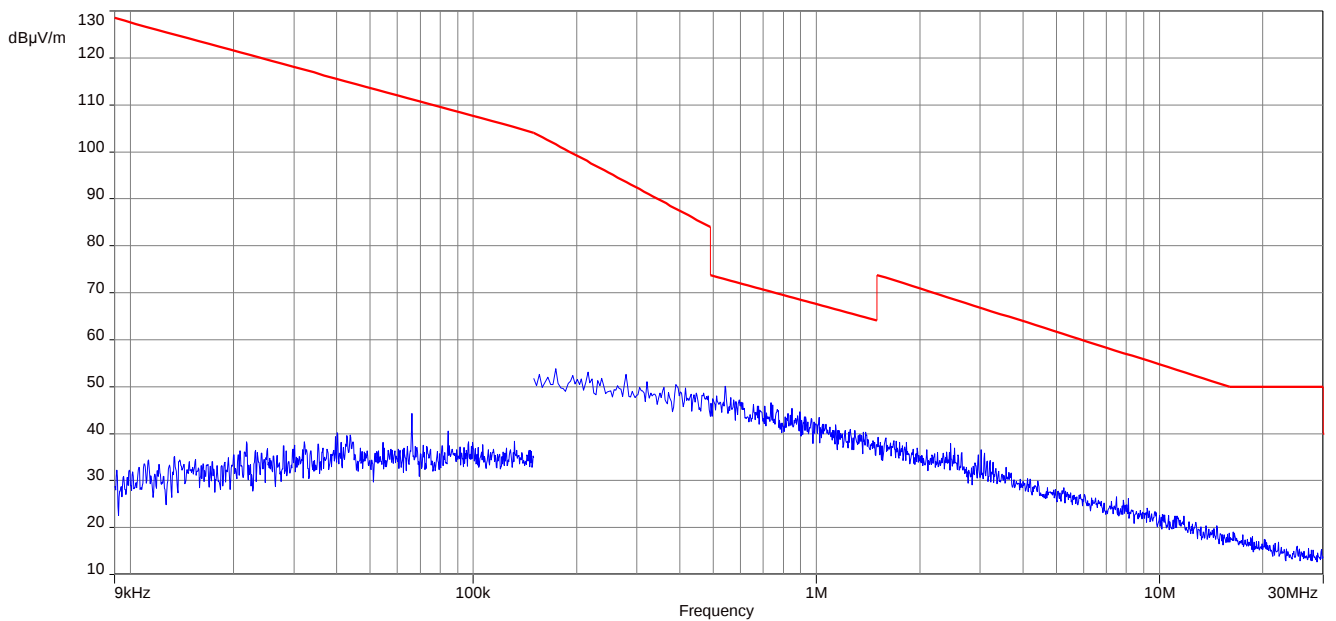
Plot 5: 9 kHz to 30 MHz, antenna 1 + 2 active, 5500 MHz, OFDM / a – mode**Plot 6:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5600 MHz, OFDM / a – mode

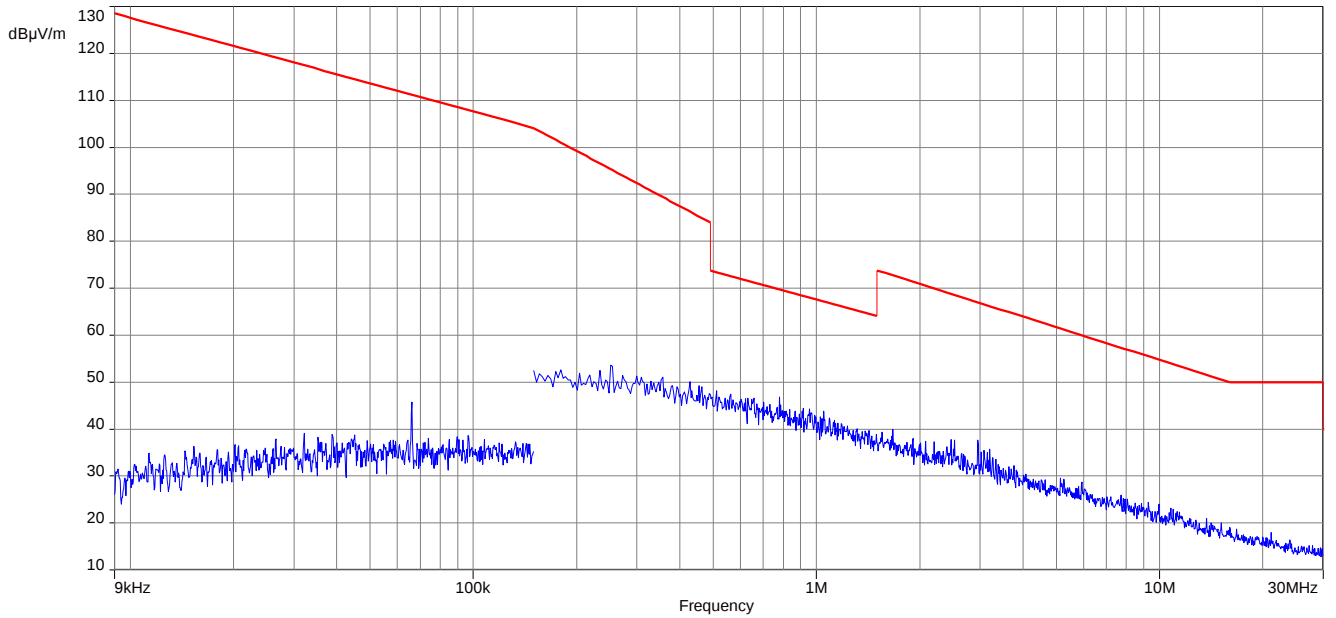
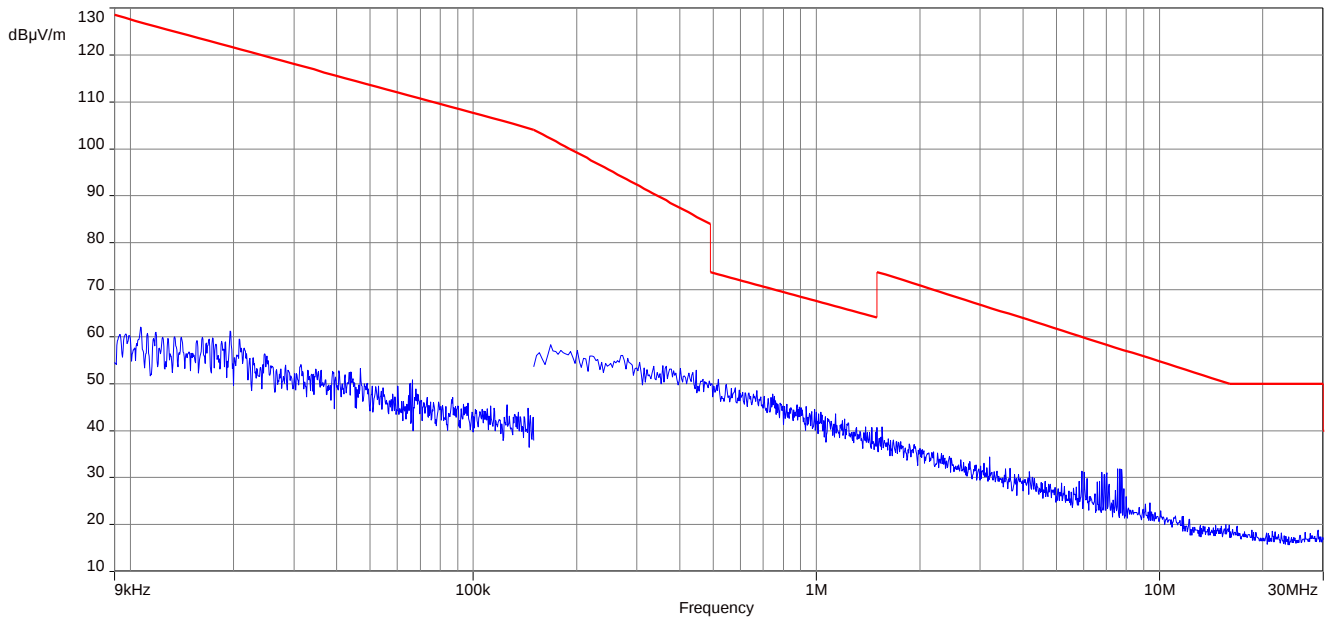
Plot 7: 9 kHz to 30 MHz, antenna 1 + 2 active, 5700 MHz, OFDM / a – mode**Plot 8:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5745 MHz, OFDM / a – mode

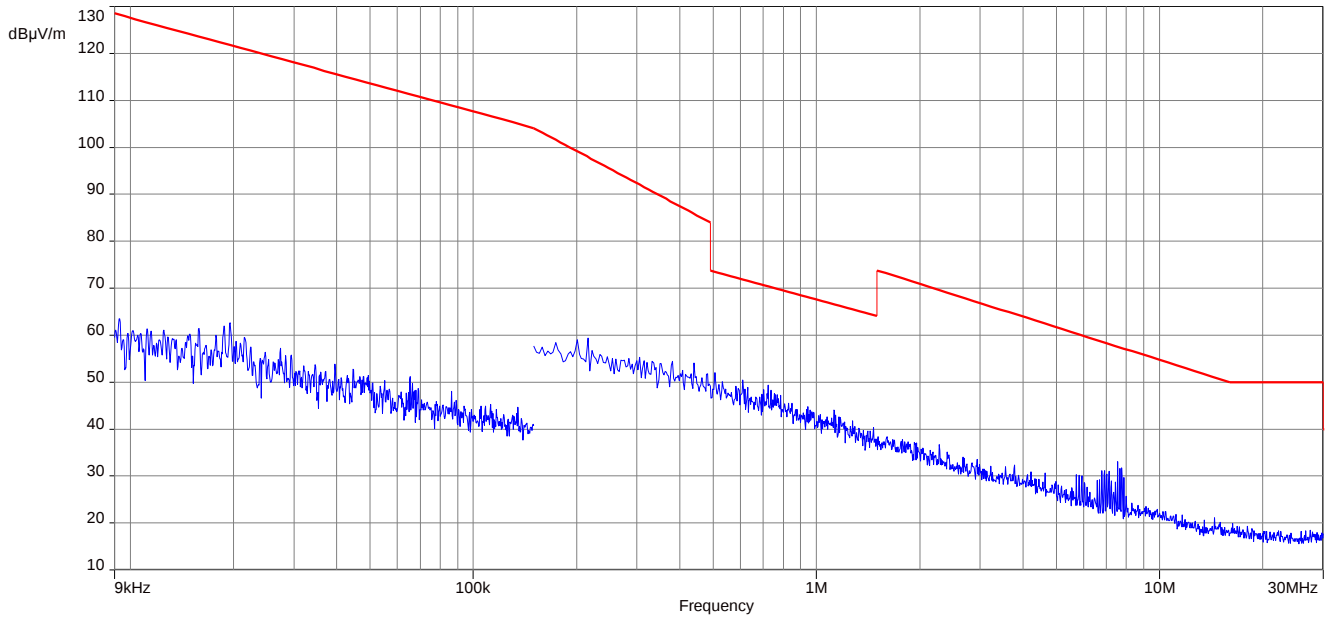
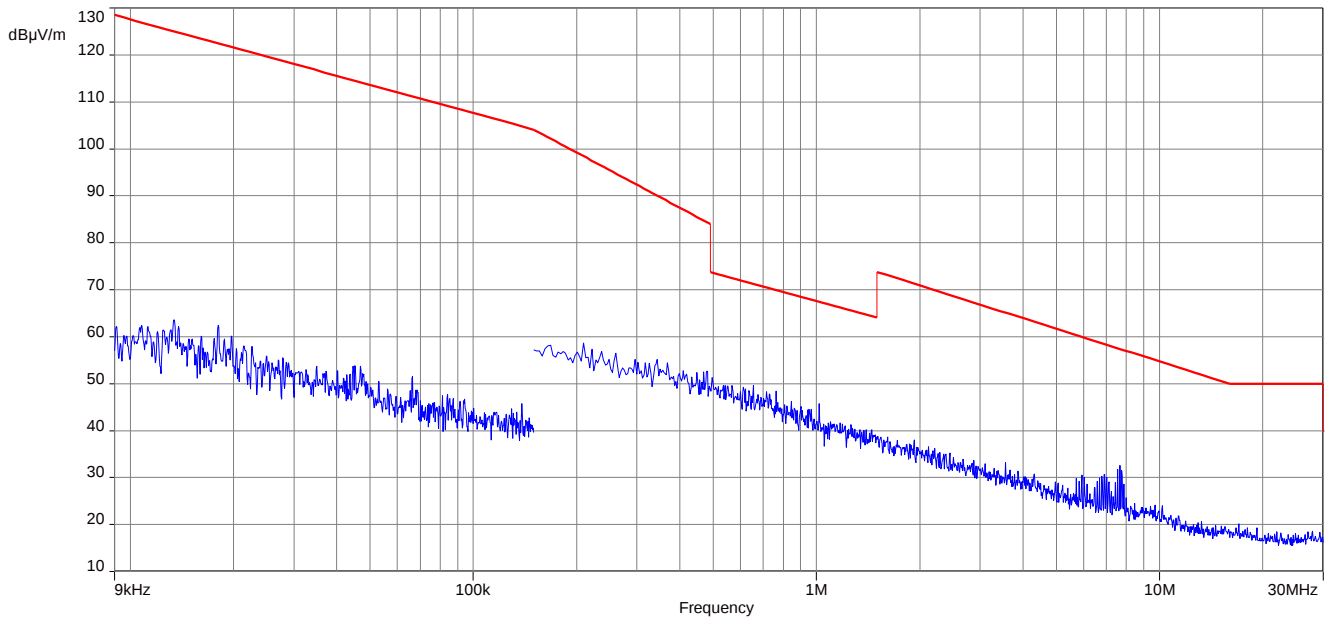
Plot 9: 9 kHz to 30 MHz, antenna 1 + 2 active, 5785 MHz, OFDM / a – mode**Plot 10:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5825 MHz, OFDM / a – mode

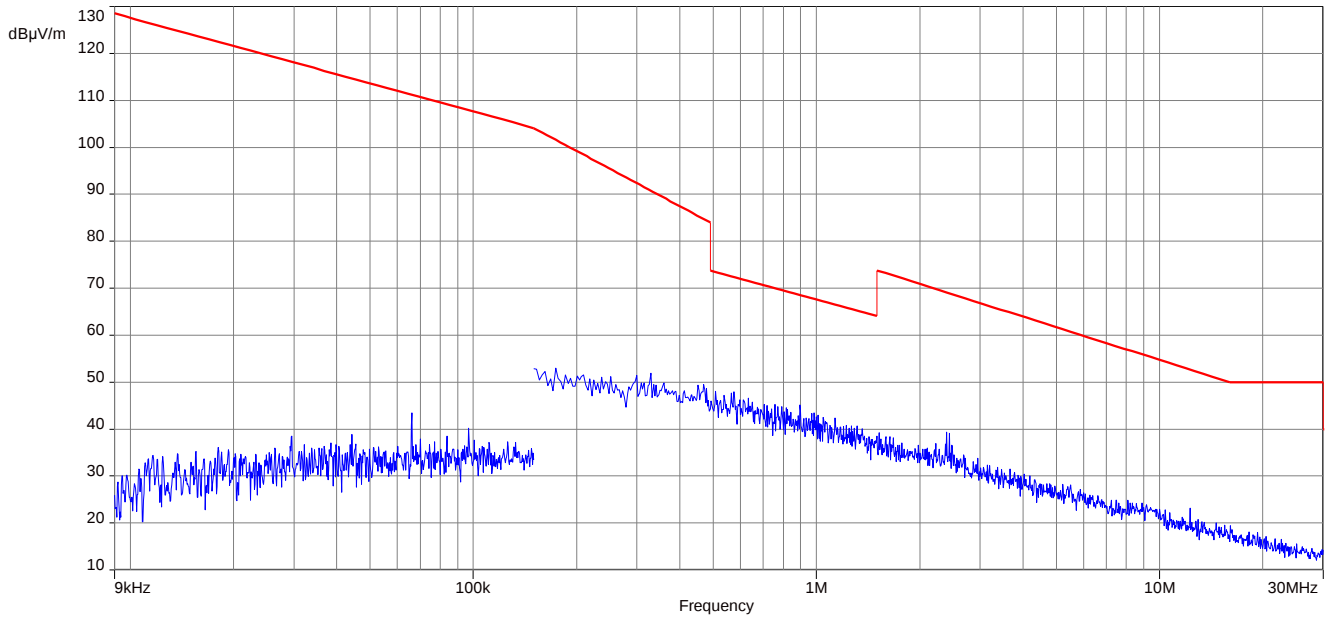
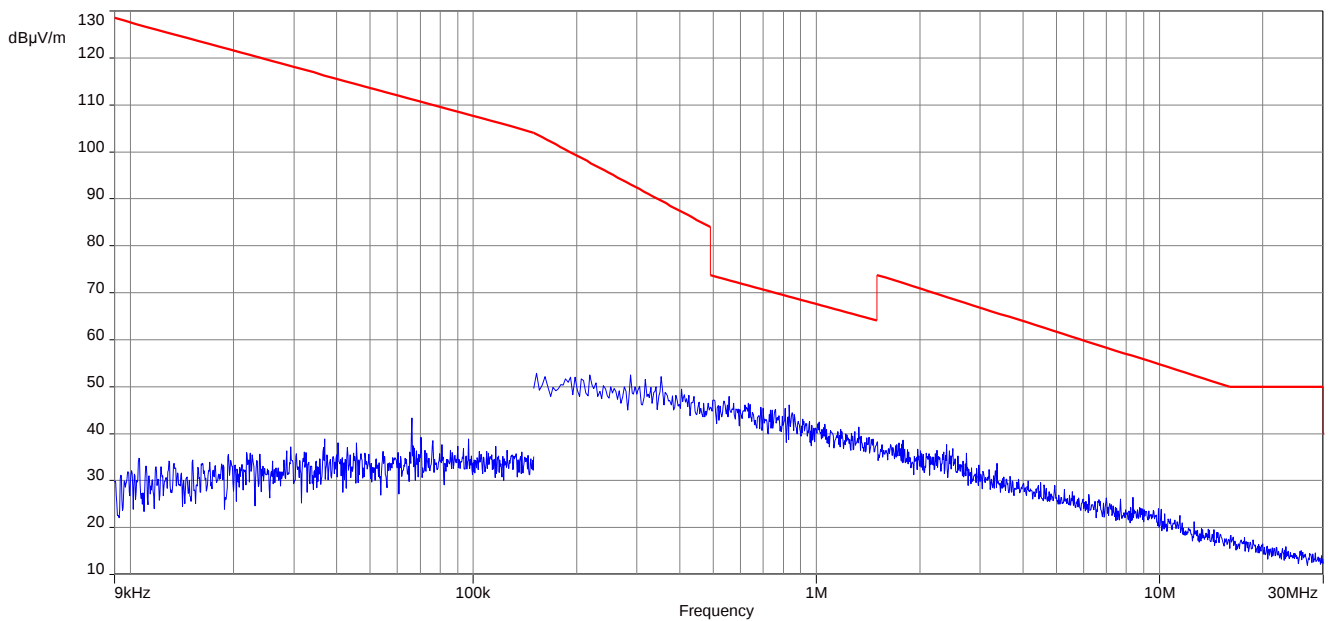
Plot 11: 9 kHz to 30 MHz, antenna 1 + 2 active, 5180 MHz, OFDM / n HT20 – mode**Plot 12:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5240 MHz, OFDM / n HT20 – mode

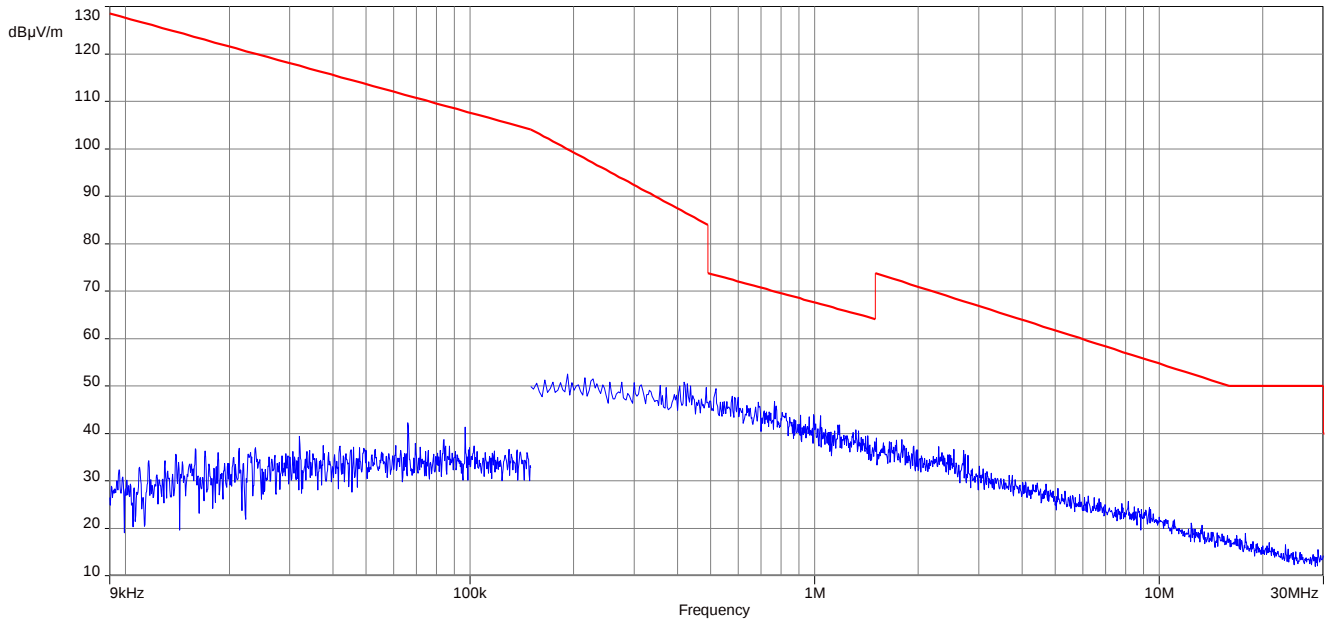
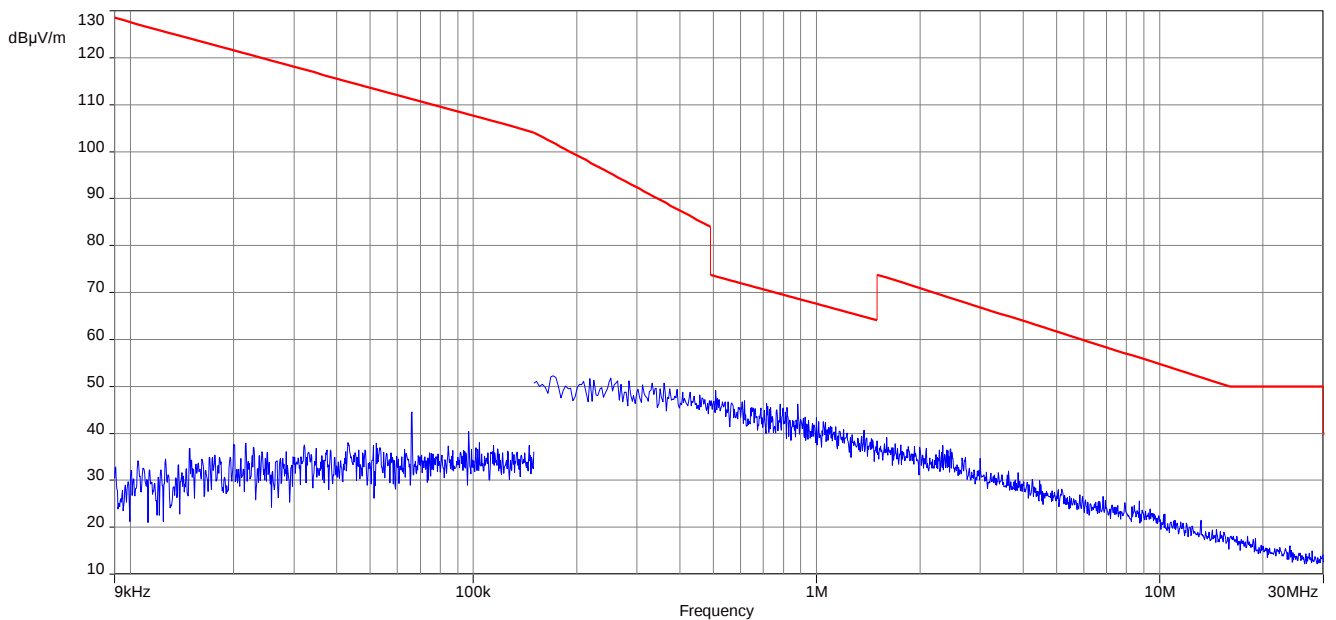
Plot 13: 9 kHz to 30 MHz, antenna 1 + 2 active, 5260 MHz, OFDM / n HT20 – mode**Plot 14:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5320 MHz, OFDM / n HT20 – mode

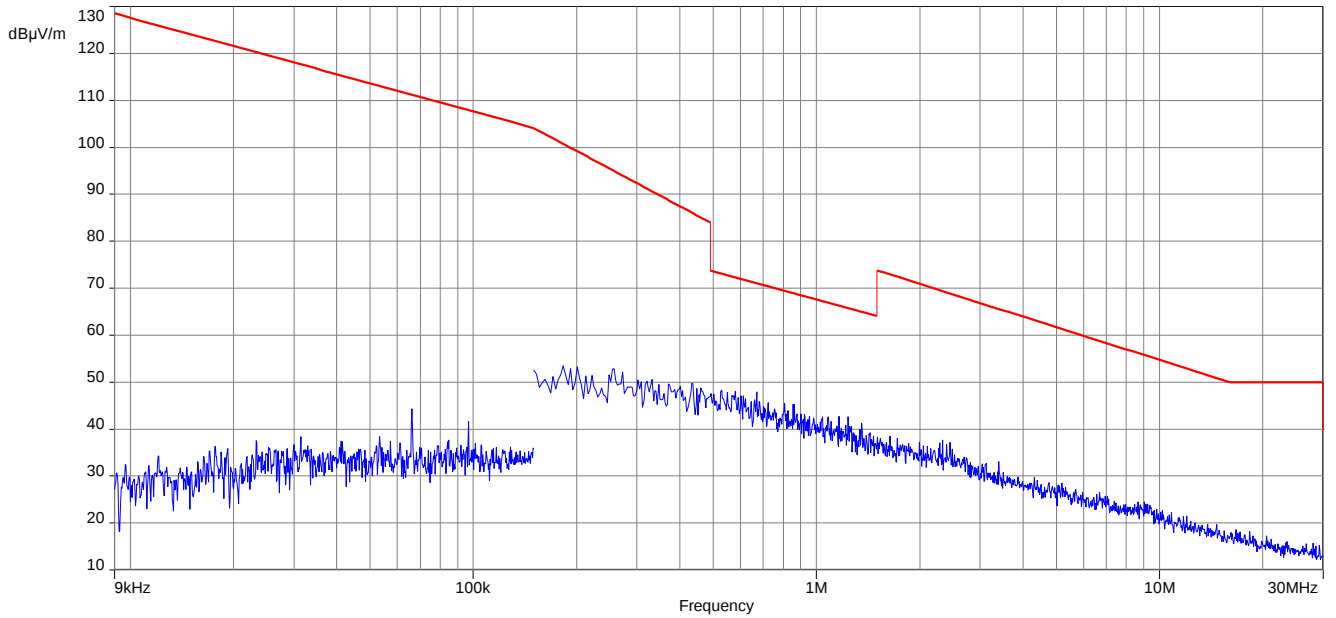
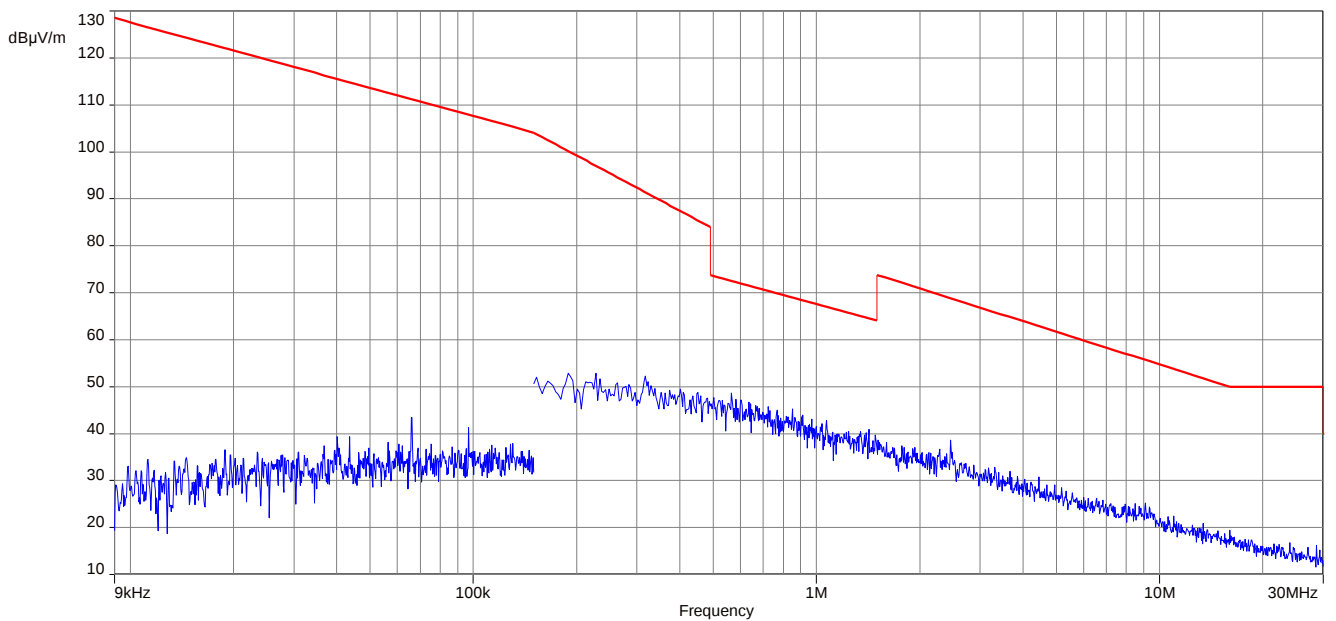
Plot 15: 9 kHz to 30 MHz, antenna 1 + 2 active, 5500 MHz, OFDM / n HT20 – mode**Plot 16:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5600 MHz, OFDM / n HT20 – mode

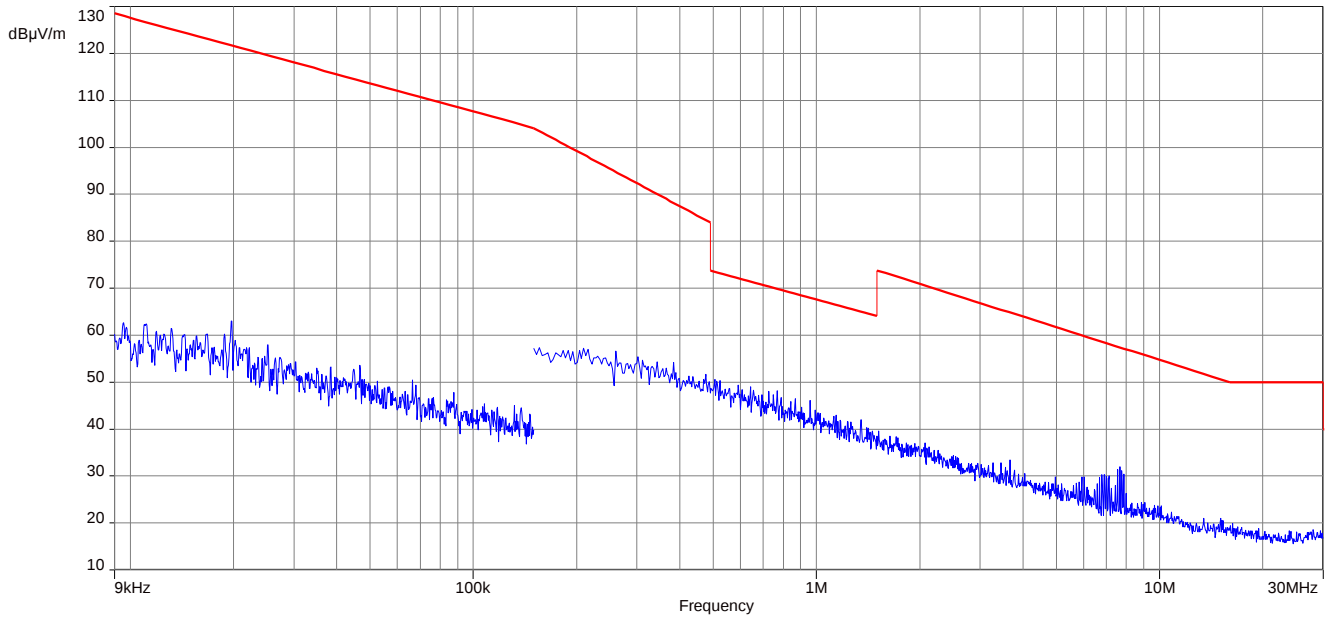
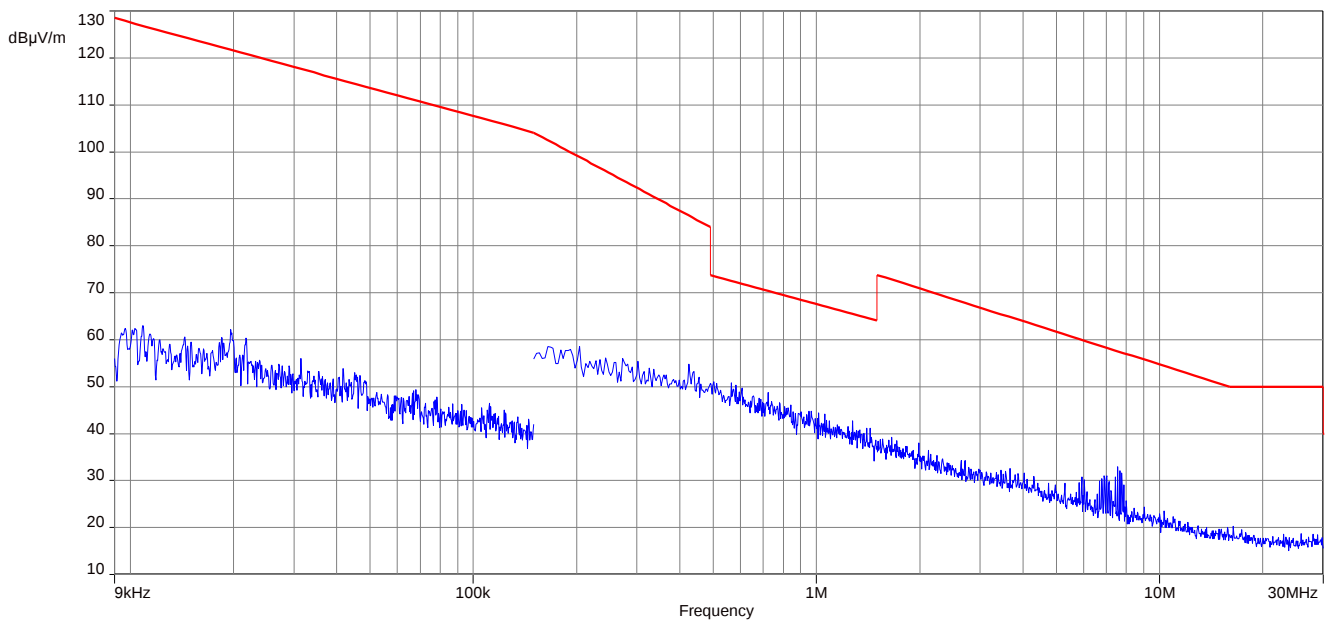
Plot 17: 9 kHz to 30 MHz, antenna 1 + 2 active, 5700 MHz, OFDM / n HT20 – mode**Plot 18:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5745 MHz, OFDM / n HT20 – mode

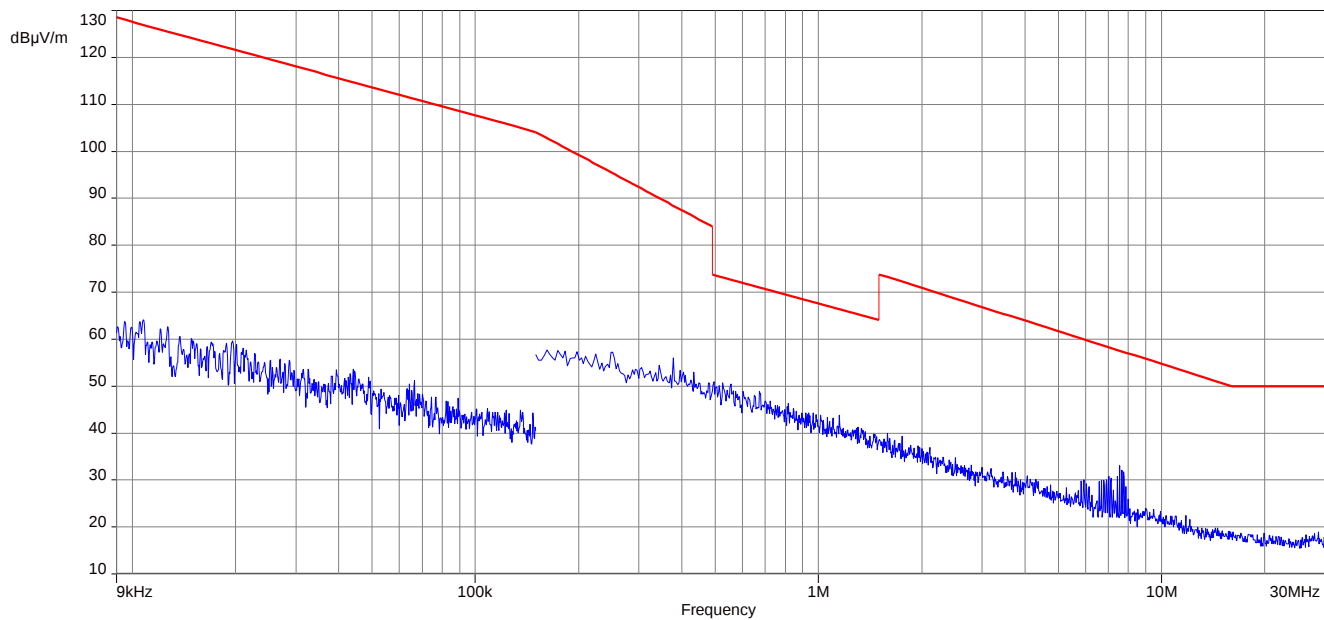
Plot 19: 9 kHz to 30 MHz, antenna 1 + 2 active, 5785 MHz, OFDM / n HT20 – mode**Plot 20:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5825 MHz, OFDM / n HT20 – mode

Plot 21: 9 kHz to 30 MHz, antenna 1 + 2 active, 5190 MHz, OFDM / n HT40 – mode**Plot 22:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5230 MHz, OFDM / n HT40 – mode

Plot 23: 9 kHz to 30 MHz, antenna 1 + 2 active, 5270 MHz, OFDM / n HT40 – mode**Plot 24:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5310 MHz, OFDM / n HT40 – mode

Plot 25: 9 kHz to 30 MHz, antenna 1 + 2 active, 5510 MHz, OFDM / n HT40 – mode**Plot 26:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5590 MHz, OFDM / n HT40 – mode

Plot 27: 9 kHz to 30 MHz, antenna 1 + 2 active, 5630 MHz, OFDM / n HT40 – mode**Plot 28:** 9 kHz to 30 MHz, antenna 1 + 2 active, 5755 MHz, OFDM / n HT40 – mode

Plot 29: 9 kHz to 30 MHz, antenna 1 + 2 active, 5795 MHz, OFDM / n HT40 – mode

13 Observations

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

Annex A Document history

Version	Applied changes	Date of release
	Initial release	2016-04-22

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
PMN	-	Product marketing name
HMN	-	Host marketing name
HVIN	-	Hardware version identification number
FVIN	-	Firmware version identification number

Annex C Accreditation Certificate

Front side of certificate

Back side of certificate



Deutsche Akkreditierungsstelle GmbH

Befähigung gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleGBV
Unterzeichnerin der Multilateralen Abkommen
von EA, ILAC und IAF zur gegenseitigen Anerkennung

Akkreditierung



Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Prüflaboratorium

CETECOM ICT Services GmbH
Untertürkheimer Straße 6-10, 66117 Saarbrücken

die Kompetenz nach DIN EN ISO/IEC 17025:2005 besitzt, Prüfungen in folgenden Bereichen durchzuführen:

Drahtgebundene Kommunikation einschließlich xDSL
VoIP und DECT
Akustik
Funk einschließlich WLAN
Short Range Devices (SRD)
RFID
WiMax und Richtfunk
Mobilfunk (GSM / GPRS, Over the Air (OTA) Performance)
Elektromagnetische Verträglichkeit (EMV) einschließlich Automotive
Produktsicherheit
SAR und Hearing Aid Compatibility (HAC)
Umweltsimulation
Smart Card Terminals
Bluetooth
Wi-Fi-Services

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 07.03.2014 mit der
Akkreditierungsnummer D-PL-12076-01 und ist gültig 17.01.2018. Sie besteht aus diesem Deckblatt, der
Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 77 Seiten.

Registrierungsnummer der Urkunde: D-PL-12076-01-00

Frankfurt am Main, 07.03.2014

Date drucken auf der Vorderseite

in Auftrag gegeben von: CETECOM ICT Services GmbH
Hauptprüfer

Deutsche Akkreditierungsstelle GmbH

Standort Berlin
Sigismundstraße 10
10117 Berlin

Standort Frankfurt am Main
Gartenstraße 6
60594 Frankfurt am Main

Standort Braunschweig
Bundesallee 100
38115 Braunschweig

Die auszugsweise Veröffentlichung der Akkreditierungsurkunde basiert auf vorherigen schriftlichen
Zustimmung der Deutsche Akkreditierungsstelle GmbH (DAkkS). Ausgenommen davon ist die separate
Weiterverbreitung des Deckblattes durch die uneingeschränkt genannte Konformitätsbewertungsstelle in
unveränderter Form.

Es darf nicht der Anschein erweckt werden, dass sich die Akkreditierung auch auf Bereiche erstreckt,
die über den durch die DAkkS bestätigten Akkreditierungsbereich hinausgehen.

Die Akkreditierung erfolgte gemäß des Gesetzes über die Akkreditierungsstelle (AkkStelleG) vom
31. Juli 2009 (BGBl. I S. 2675) sowie der Verordnung (EG) Nr. 765/2008 des Europäischen Parlaments
und des Rates vom 9. Juli 2008 über die Vorschriften für die Akkreditierung und Marktüberwachung
im Zusammenhang mit der Vermarktung von Produkten (Abk. L 218 vom 9. Juli 2008, S. 30).
Die DAkkS ist Unterzeichnerin der Multilateralen Abkommen zur gegenseitigen Anerkennung der
Europäer in operation for Accreditation (EA), des International Accreditation Forum (IAF) und
des International Laboratory Accreditation Cooperation (ILAC). Die Unterzeichner dieser Abkommen
erkennen ihre Akkreditierungen gegenseitig an.

Der aktuelle Stand der Mitgliedschaft kann folgenden Webseiten entnommen werden:
EA: www.european-accord-fellow.org
ILAC: www.ilac.org
IAF: www.iaf.eu

Note:

The current certificate including annex may be received from CETECOM ICT Services GmbH on request.