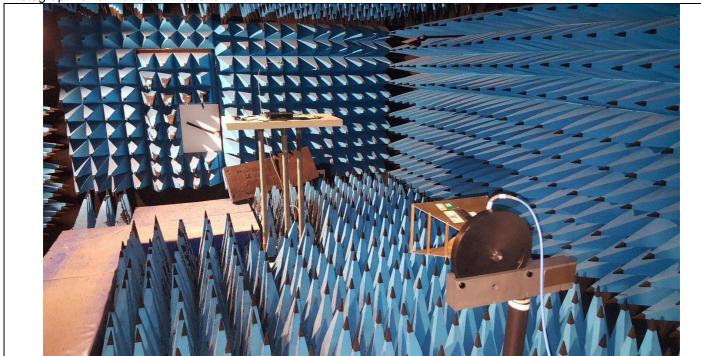
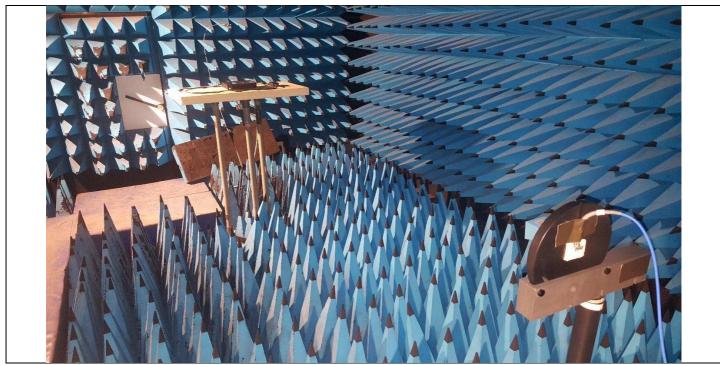


Photograph for Unwanted Emissions



Photograph for Unwanted Emissions





Photograph for Unwanted Emissions

11.3. LIMIT

Limit at 3m:

9kHz to 0,490MHz: 2400/F(kHz) μ V/m (300m) or 20log(2400/F(kHz))dB μ V/m (3m) QPeak 0,490MHz to 1.705MHz: 240000/F(kHz) μ V/m (30m) or 20log(240000/F(kHz))dB μ V/m (3m) QPeak

1.705MHz to 30MHz: 30µV/m (30m) or dBµV/m (3m) QPeak

30MHz to 88MHz: 40dBμV/m QPeak 88MHz to 216MHz: 43,5dBμV/m QPeak 216MHz to 960MHz: 46dBμV/m QPeak 960MHz to 1000MHz: 54dBμV/m QPeak Above 1000MHz: 74dBμV/m Peak 54dBμV/m Average

Limit at 10m:

30MHz to 88MHz: 29.5dBμV/m QPeak 88MHz to 216MHz: 33dBμV/m QPeak 216MHz to 960MHz: 35.5dBμV/m QPeak 43.5dBμV/m QPeak 63.5BμV/m Peak 43.5dBμV/m Peak 43.5dBμV/m Peak

43.5BµV/m Average



11.4. TEST EQUIPMENT LIST

DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Full anachoic chamber	SIEPEL	-	D3044019	2014/10	2018/10
Preamplifier	LCIE	LCIE-ALB-001	A7080073	2016/08	2018/08
Horn antenna	AH SYSTEMS	SAS 571	C2042041	2017/09	2018/09
Horn antenna (18- 26,5GHz)	PASTERNACK	PE9852/2F-20	C2042048	2017/12	2019/12
Rejector filter 2,4GHz	-	2.45GHz	A7484048	2017/09	2018/09
EMI receiver	ROHDE & SCHWARZ	ESI40 1088 740K40	A2642010	2016/07	2018/07
Cable S36 chamber	TELEDYNE	084-0505-1MTR	A5329757	2018/03	2019/03
Cable S36 chamber	TELEDYNE	084-0555-1.5MTR	A5329759	2018/03	2019/03
Open test site	LCIE	-	F2000400	2018/06	2019/06
EMI Test Receiver	ROHDE & SCHWARZ	ESIB 26	A2642021	2016/12	2018/12
Bilog antenna	CHASE	CBL 6112A	C2040040	2018/04	2019/04
Cable	-	-	A5329449	2017/09	2018/09
Cable	-	-	A5329380	2017/09	2018/09
Cable	-	-	A5329444	2017/09	2018/09
Cable S36 chamber	TELEDYNE	084-0555-3MTR	A5329760	2018/03	2019/03
Loop antenna	SCHWARZBECK	FMZB1513	C2040209	2018/03	2020/03

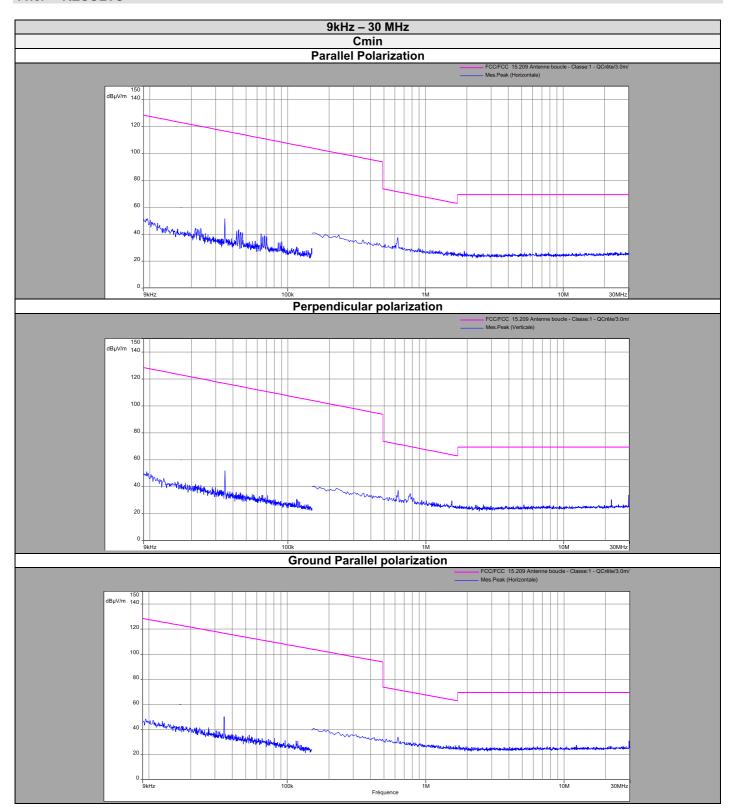
Note: In our quality system, the test equipment calibration due is more & less 2 months

11.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

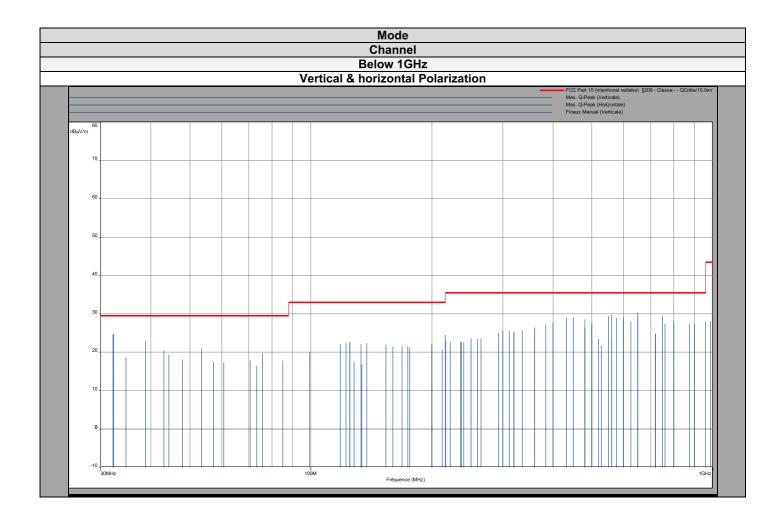
☑ None	□ Divergence:



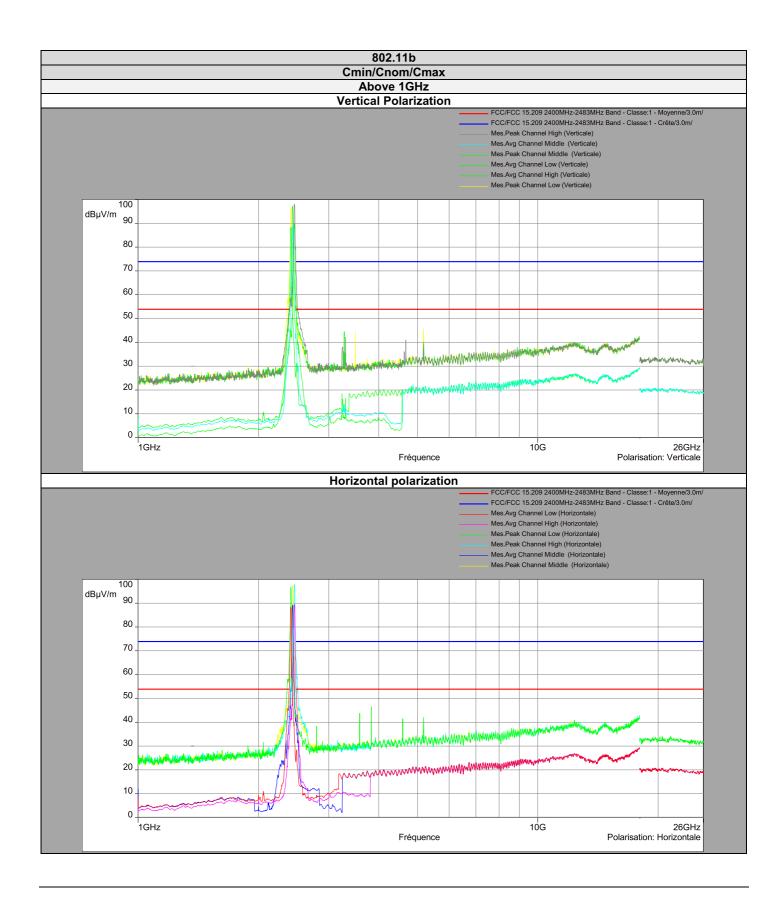
11.6. RESULTS



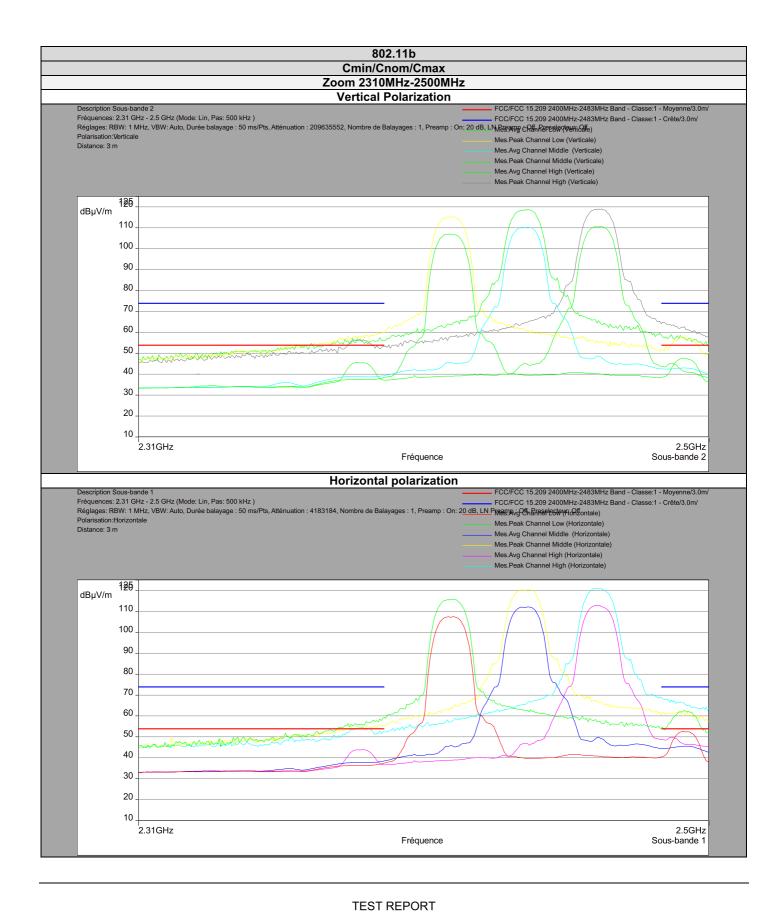




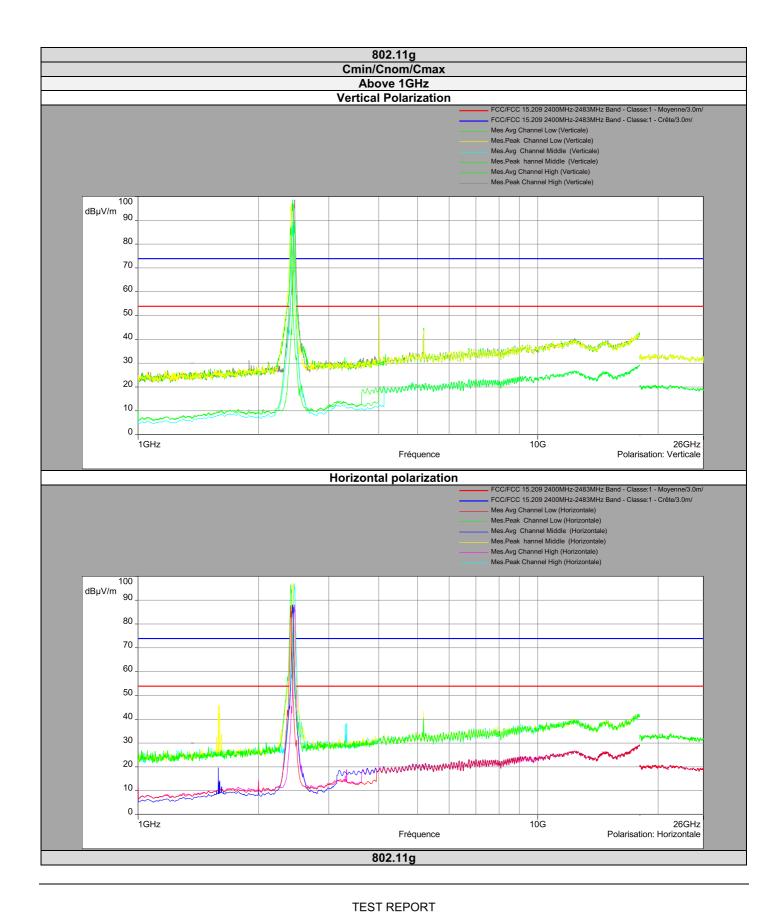




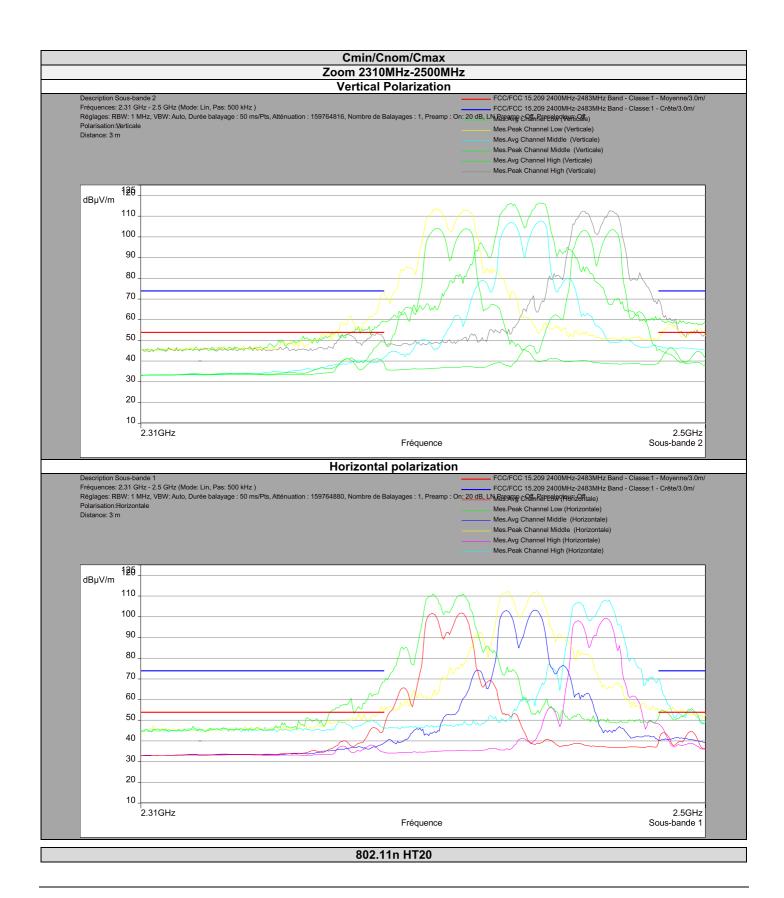




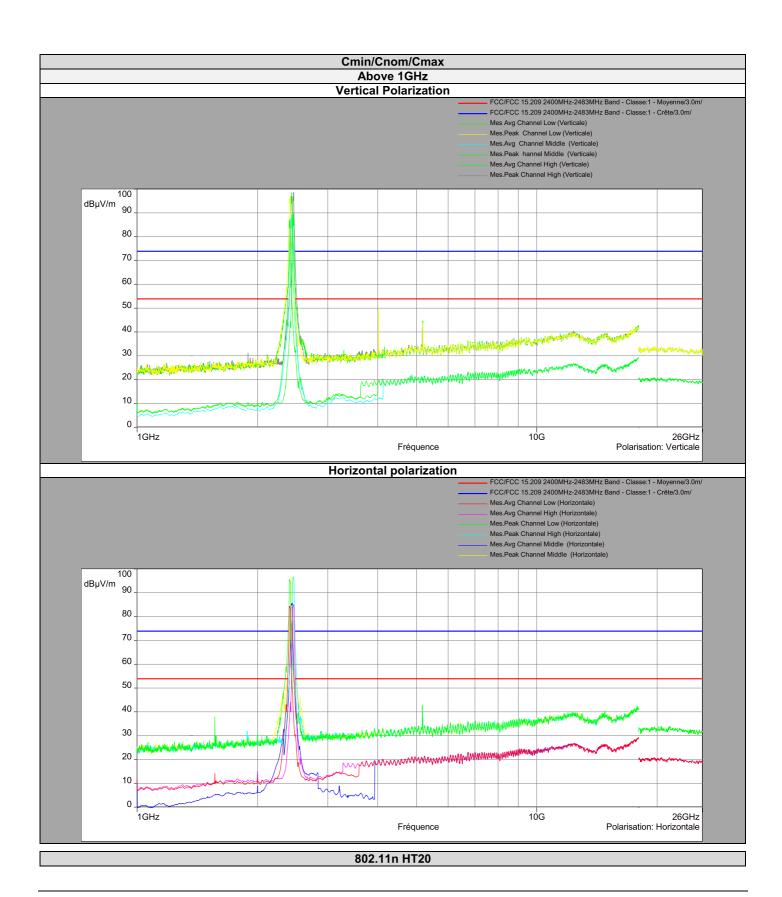




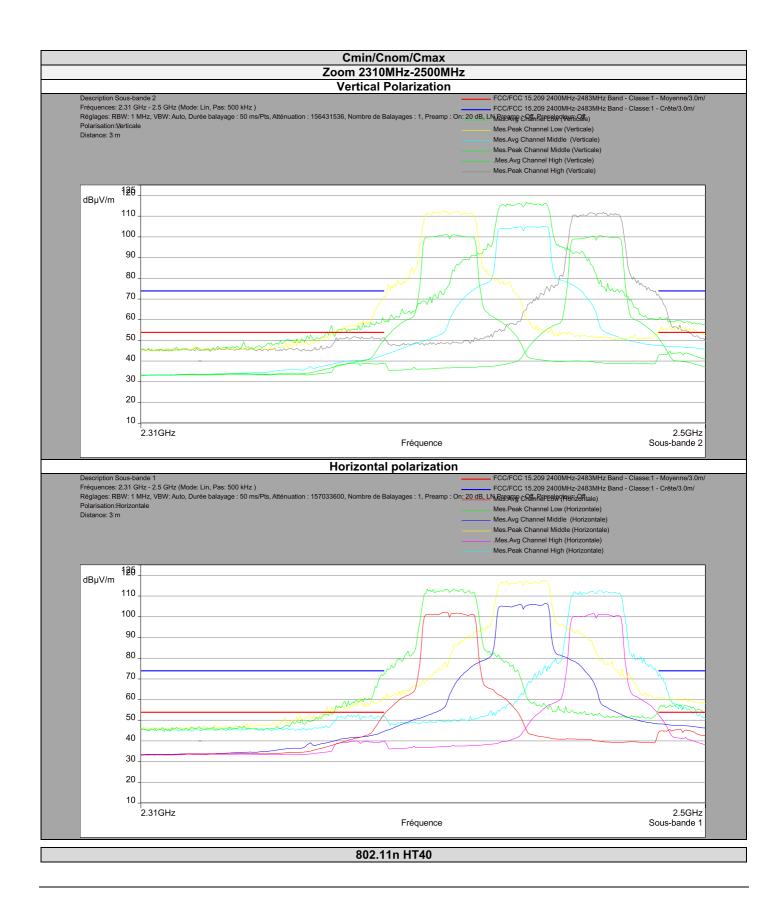




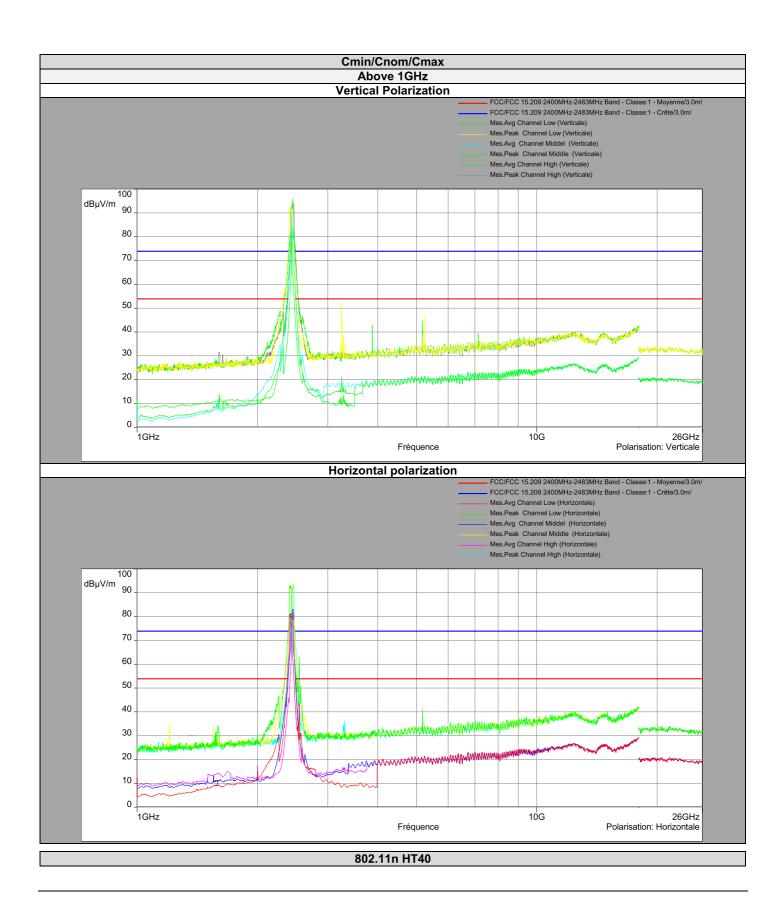




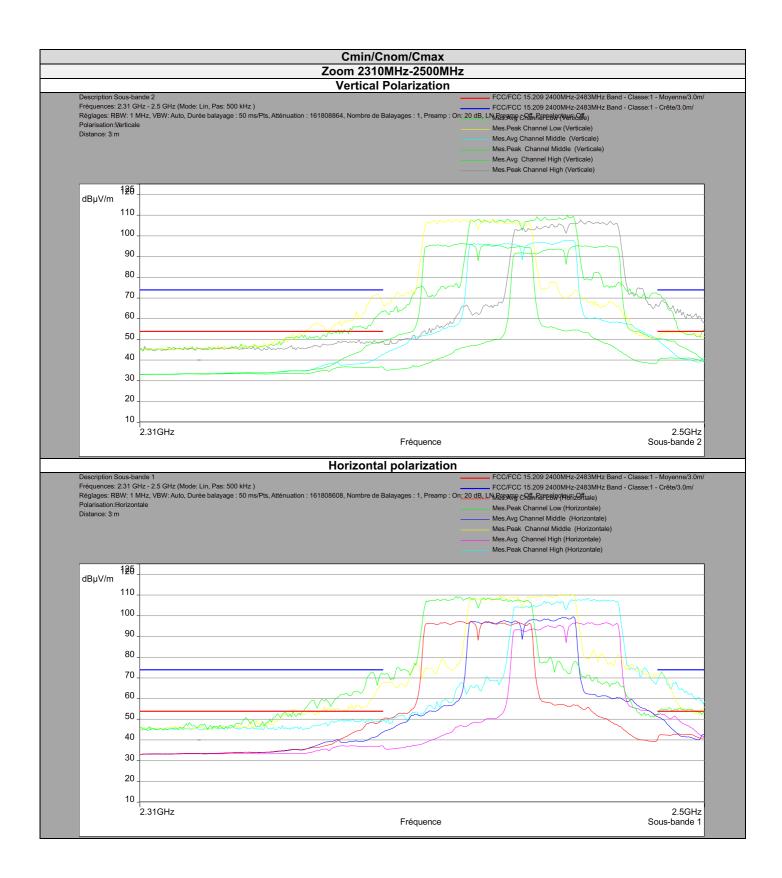














9kHz – 30 MHz						
Polarization	Frequency (MHz)	Peak Level (dBμV/m)	QPeak Level (dBμV/m)	Limit (dBµV/m)	Margin (dΒμV/m)	
all emissions were greater than 20 dB below the limit						

	Below 1GHz							
Polarization	Frequency (MHz)	Peak Level (dBµV/m)	QPeak Level (dBµV/m)	Limit (dBµV/m)	Margin (dBµV/m)			
Vertical	32.2	-	24.78	29.5	4.72			
Vertical	216	-	24.55	33	8.45			
Vertical	384	-	27.18	35.5	8.32			
Vertical	560	-	29.8	35.5	5.7			
Vertical	650	-	30.42	35.5	5.08			
Vertical	750	-	29.5	35.5	6			

	802.11b								
	Above 1GHz								
	Cmin/Cnom/Cmax								
Polarization	Frequency (MHz)	Average Level (dBµV/m)	Average Level + Duty Cycle Factor (dBµV/m)	Average Limit (dBµV/m)	Average Margin Level (dBµV/m)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin Level (dBµV/m)	
Horizontale	2058	10.98	11.07	54	43.02	31.70	74	42.30	
Horizontale	2390	37.80	37.89	54	16.20	59.40	74	14.60	
Verticale	2390	38.71	38.80	54	15.29	59.83	74	14.17	
Horizontale	2483.5	43.60	43.69	54	10.40	68.64	74	5.36	
Verticale	2483.5	43.10	43.19	54	10.90	64.06	74	9.94	
Horizontale	2798	14.12	14.21	54	39.88	38.34	74	35.66	
Verticale	3280	18.70	18.79	54	35.30	44.60	74	29.40	
Verticale	3499	18.99	19.08	54	35.01	44.72	74	29.28	
Horizontale	3583	18.89	18.98	54	35.11	43.77	74	30.23	
Horizontale	3833	20.19	20.28	54	33.81	46.43	74	27.57	
Horizontale	4595	20.70	20.79	54	33.30	41.46	74	32.54	
Verticale	4679	22.53	22.62	54	31.47	41.09	74	32.91	
Verticale	5178	21.03	21.12	54	32.97	45.54	74	28.46	
Horizontale	5181	21.55	21.64	54	32.45	42.11	74	31.89	



	802.11g Above 1GHz Cmin/Cnom/Cmax							
Polarization Frequency Level Level Cycle Average Limit Average Peak Limit Level Cycle Average Limit (dRuV/m) Average Level Level Cycle Average Limit (dRuV/m) Level Cycle Average Limit Level Cycle Average Limit Level Cycle Cycle Average Limit Level Cycle Cycl							Peak Margin Level (dBµV/m)	
Horizontale	1594	20.47	20.55	54	33.53	46.06	74	27.94
Horizontale	2390	43.10	43.18	54	10.90	68.57	74	5.43
Verticale	2390	41.22	41.30	54	12.78	71.94	74	2.06
Horizontale	2483.5	48.33	48.41	54	5.78	69.68	74	4.32
Verticale	2483.5	45.37	45.45	54	8.63	69.62	74	4.38
Horizontale	3325	18.95	19.03	54	35.05	38.36	74	35.64
Verticale	4020	20.65	20.73	54	33.35	49.90	74	24.10
Verticale	5181	22.12	22.20	54	31.88	44.70	74	29.30

	802.11n HT20							
	Above 1GHz							
			Cmi	in/Cnom/Cmax				
Polarization	Frequency (MHz)	Average Level (dBµV/m)	Average Level + Duty Cycle Factor (dBµV/m)	Average Limit (dBµV/m)	Average Margin Level (dBµV/m)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin Level (dBµV/m)
Horizontale	1564	14.25	14.49	54	39.75	37.92	74	36.08
Horizontale	2390	52.82	53.06	54	1.18	72.44	74	1.56
Verticale	2390	50.19	51.06	54	3.81	71.22	74	2.78
Horizontale	2483.5	49.88	50.12	54	4.12	72.05	74	1.95
Verticale	2483.5	51.75	51.99	54	2.25	71.08	74	2.92
Verticale	3233	17.15	17.39	54	36.85	34.11	74	39.89
Verticale	3883	19.60	19.84	54	34.40	41.50	74	32.50
Verticale	4080	20.25	20.49	54	33.75	36.21	74	37.79
Horizontale	5174	21.79	22.03	54	32.21	42.78	74	31.22



	802.11n HT40								
	Above 1GHz								
	Cmin/Cnom/Cmax								
Polarization	Frequency (MHz)	Average Level (dBµV/m)	Average Level + Duty Cycle Factor (dBµV/m)		Average Margin Level (dBµV/m)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Peak Margin Level (dBµV/m)	
Horizontale	1553	14.90	15.37	54	39.10	34.30	74	39.70	
Horizontale	1592	15.55	16.02	54	38.45	34.20	74	39.80	
Horizontale	2390	49.99	50.46	54	4.01	71.48	74	2.52	
Verticale	2390	48.58	49.05	54	5.42	66.71	74	7.29	
Horizontale	2483.5	51.81	52.28	54	2.19	68.46	74	5.54	
Verticale	2483.5	50.18	50.65	54	3.82	66.27	74	7.73	
Verticale	3246	22.22	22.69	54	31.78	52.13	74	21.87	
Horizontale	3311	18.30	18.77	54	35.70	36.70	74	37.30	
Verticale	3877	20.11	20.58	54	33.89	42.97	74	31.03	
Horizontale	5175	21.54	22.01	54	32.46	40.99	74	33.01	
Verticale	5178	21.70	22.17	54	32.30	44.80	74	29.20	
Verticale	5260	21.96	22.43	54	32.04	47.25	74	26.75	

11.7. CONCLUSION

Unwanted emissions measurement performed on the sample of the product **SAGEMCOM DCIWA384 UHD Alt US V2**, SN**253764997**, in configuration and description presented in this test report, show levels **compliant** to the 47 CFR PART 15.247 limits.



12. UNCERTAINTIES CHART

47 CFR Part 15.209 & 15.207 Kind of test	Wide uncertainty laboratory (k=2) ±x(dB) / (Hz)/ ms	Uncertainty limit
Measurement of conducted disturbances in voltage on the AC power port (9 kHz – 150 kHz)	2,67	3.8
Measurement of conducted disturbances in voltage on the AC power port (150 kHz - 30 MHz)	2,67	3.4
Measurement of conducted disturbances in voltage on the telecommunication port. (AAN)	3,67	5.0
Measurement of conducted disturbances in current (current clamp)	2,73	2.9
Measurement of disturbance power	2,67	4.5
Measurement of radiated magnetic field from 10kHz to 30MHz in SAC V01	4,48	1
Measurement of radiated magnetic field from 10kHz to 30MHz in SAC C01	4,48	1
Measurement of radiated electric field from 30 to 1000MHz in horizontal position on the OATS (Ecuelles)	4,88	6.3
Measurement of radiated electric field from 1 to 18GHz on the Ecuelles site	5.16	/
Measurement of radiated electric field from 30 to 1000MHz in vertical position on the OATS (Ecuelles)	4,99	6.3
Measurement of radiated electric field from 30 to 1000MHz in horizontal position in SAC C01	5,08	6.3
Measurement of radiated electric field from 30 to 1000MHz in vertical position in SAC C01	5,16	6.3
Measurement of radiated electric field from 30 to 1000MHz in horizontal position in SAC V01	5,08	6.3
Measurement of radiated electric field from 30 to 1000MHz in vertical position in SAC V01	5,15	6.3
Measurement of radiated electric field from 1 to 6 GHz C01	5,1	5.2
Measurement of radiated electric field from 1 to 6 GHz V01	4,85	5.2
Measurement of radiated magnetic field from 10kHz to 30MHz on the OATS (Ecuelles)	4,48	1

The uncertainty values calculated by the laboratory are lower than limit uncertainty values defined by the CISPR. The conformity of the sample is directly established by the applicable limits values. This table includes all uncertainties maximum feasible for testing in the laboratory, whether or not made in this report