

Appendix I: Test Data for LTE Band 14

Product Name: TD0301 LTE Wi-Fi Hotspot

Test Model: TD0301

11. Effective (Isotropic) Radiated Power Output Data

I1.1 Test Result

Test Band: 14 5MHz Bandwidth													
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict	
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH			
QPSK	1	0	24.37	24.23	23.71	-1.15	1.00	23.22	23.08	22.56	34.77	PASS	
		13	24.21	23.90	23.71	-1.15	1.00	23.06	22.75	22.56	34.77	PASS	
		24	23.76	23.48	23.45	-1.15	1.00	22.61	22.33	22.30	34.77	PASS	
	12	0	23.52	23.06	22.77	-1.15	1.00	22.37	21.91	21.62	34.77	PASS	
		6	23.39	23.01	22.72	-1.15	1.00	22.24	21.86	21.57	34.77	PASS	
		13	23.06	22.78	22.59	-1.15	1.00	21.91	21.63	21.44	34.77	PASS	
	25	0	23.39	23.05	22.68	-1.15	1.00	22.24	21.90	21.53	34.77	PASS	
	23.46		23.51	22.60	-1.15	1.00	22.31	22.36	21.45	34.77	PASS		
16QAM	1	13	23.26	23.39	22.48	-1.15	1.00	22.11	22.24	21.33	34.77	PASS	
		24	22.83	23.05	22.34	-1.15	1.00	21.68	21.90	21.19	34.77	PASS	
		0	22.28	22.01	21.76	-1.15	1.00	21.13	20.86	20.61	34.77	PASS	
	12	6	22.20	21.87	21.70	-1.15	1.00	21.05	20.72	20.55	34.77	PASS	
		13	21.99	21.63	21.56	-1.15	1.00	20.84	20.48	20.41	34.77	PASS	
		25	0	22.12	22.02	21.46	-1.15	1.00	20.97	20.87	20.31	34.77	PASS
	Note: 1) dBd = dBi - 2.15 2) EIRP = Conducted output power + Antenna gain (dBi) 3) ERP = Conducted output power + Antenna gain (dBd)												

Note:

- 1) $\text{dBd} = \text{dBi} - 2.15$
- 2) $\text{EIRP} = \text{Conducted output power} + \text{Antenna gain (dBi)}$
- 3) $\text{ERP} = \text{Conducted output power} + \text{Antenna gain (dBd)}$

I2. Frequency stability

I2.1 Test Result

Test Band: 14 5MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NT	LV	- 2.675 1	- 1.931 2	- 0.629 4	-0.0034	-0.0024	-0.0008	2.50	PASS
				NV	- 3.089 9	- 0.886 9	- 0.672 3	-0.0039	-0.0011	-0.0008	2.50	PASS
				HV	- 3.418 9	- 0.915 5	- 0.472 1	-0.0043	-0.0012	-0.0006	2.50	PASS
16QAM	25	0	NT	LV	- 2.074 2	- 1.330 4	- 1.215 9	-0.0026	-0.0017	-0.0015	2.50	PASS
				NV	- 2.374 6	- 1.545 0	- 1.072 9	-0.0030	-0.0019	-0.0013	2.50	PASS
				HV	- 2.217 3	- 1.945 5	- 1.101 5	-0.0028	-0.0025	-0.0014	2.50	PASS

Test Band: 14 5MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NV	-30.00	- 2.889 6	- 1.430 5	- 0.515 0	-0.0037	-0.0018	-0.0006	2.50	PASS
				-20.00	- 2.303 1	- 0.929 8	0.343 3	-0.0029	-0.0012	0.0004	2.50	PASS
				-10.00	- 2.732 3	- 1.058 6	0.114 4	-0.0035	-0.0013	0.0001	2.50	PASS
				0.00	- 3.018 4	- 0.829 7	- 0.758 2	-0.0038	-0.0010	-0.0010	2.50	PASS
				10.00	- 2.546 3	- 1.616 5	- 0.572 2	-0.0032	-0.0020	-0.0007	2.50	PASS
				20.00	- 2.160 1	- 1.130 1	- 0.357 6	-0.0027	-0.0014	-0.0004	2.50	PASS
				30.00	- 1.688 0	- 1.387 6	- 0.672 3	-0.0021	-0.0017	-0.0008	2.50	PASS
				40.00	- 1.545 0	- 0.557 9	- 1.587 9	-0.0020	-0.0007	-0.0020	2.50	PASS
				50.00	- 2.045 6	- 1.158 7	- 0.958 4	-0.0026	-0.0015	-0.0012	2.50	PASS

16QAM	25	0	NV	-30.00	- 2.646 4	- 0.801 1	- 0.901 2	-0.0033	-0.0010	-0.0011	2.50	PASS
				-20.00	- 2.560 6	- 1.730 9	- 0.901 2	-0.0032	-0.0022	-0.0011	2.50	PASS
				-10.00	- 2.002 7	- 1.387 6	- 0.529 3	-0.0025	-0.0017	-0.0007	2.50	PASS
				0.00	- 1.945 5	- 1.115 8	- 0.371 9	-0.0025	-0.0014	-0.0005	2.50	PASS
				10.00	- 2.088 5	- 1.516 3	- 1.173 0	-0.0026	-0.0019	-0.0015	2.50	PASS
				20.00	- 2.002 7	- 0.801 1	- 1.144 4	-0.0025	-0.0010	-0.0014	2.50	PASS
				30.00	- 2.403 3	- 0.743 9	- 1.144 4	-0.0030	-0.0009	-0.0014	2.50	PASS
				40.00	- 2.975 5	- 1.058 6	- 0.414 8	-0.0038	-0.0013	-0.0005	2.50	PASS
				50.00	- 2.603 5	- 1.101 5	- 0.743 9	-0.0033	-0.0014	-0.0009	2.50	PASS

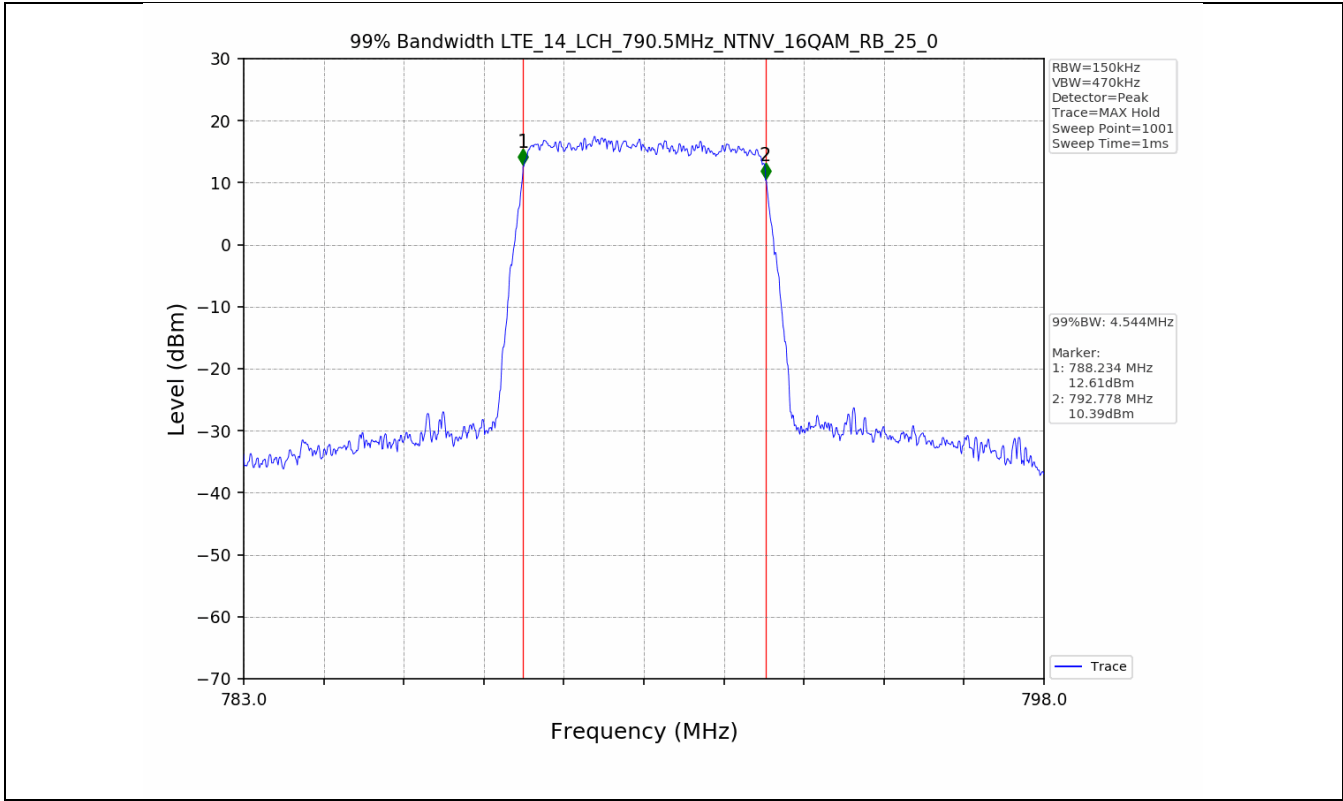
Test Band: 14_ 10MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NT	LV	/	- 1.072 9	/	/	-0.0014	/	2.50	PASS
				NV	/	- 1.144 4	/	/	-0.0014	/	2.50	PASS
				HV	/	- 1.287 5	/	/	-0.0016	/	2.50	PASS
16QAM	50	0	NT	LV	/	- 0.829 7	/	/	-0.0010	/	2.50	PASS
				NV	/	- 1.244 5	/	/	-0.0016	/	2.50	PASS
				HV	/	- 1.573 6	/	/	-0.0020	/	2.50	PASS

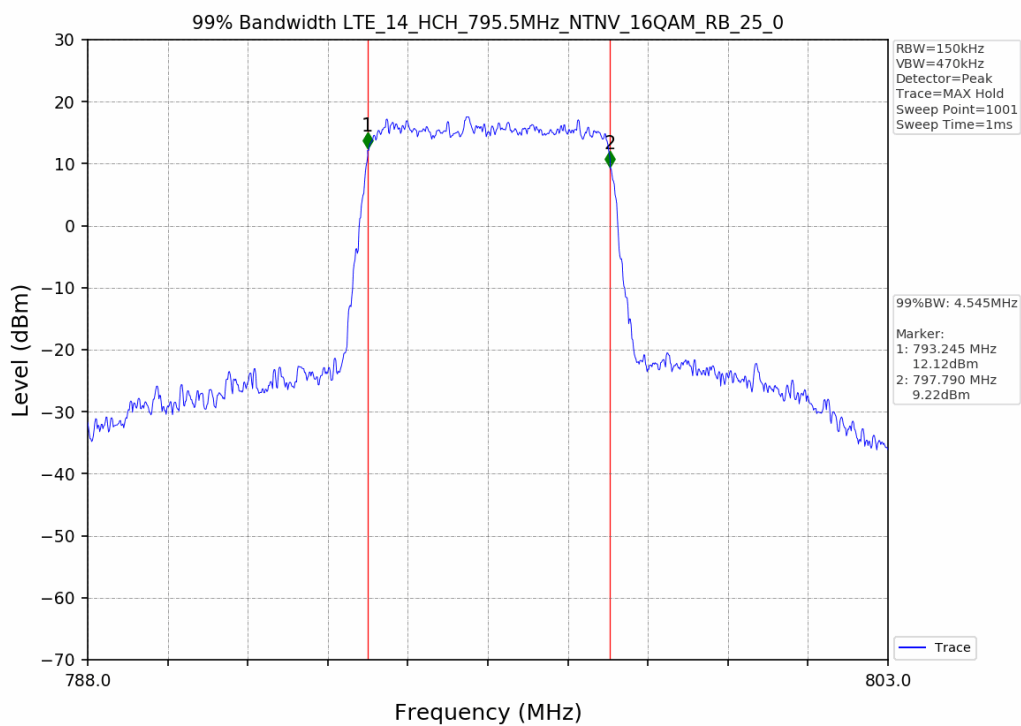
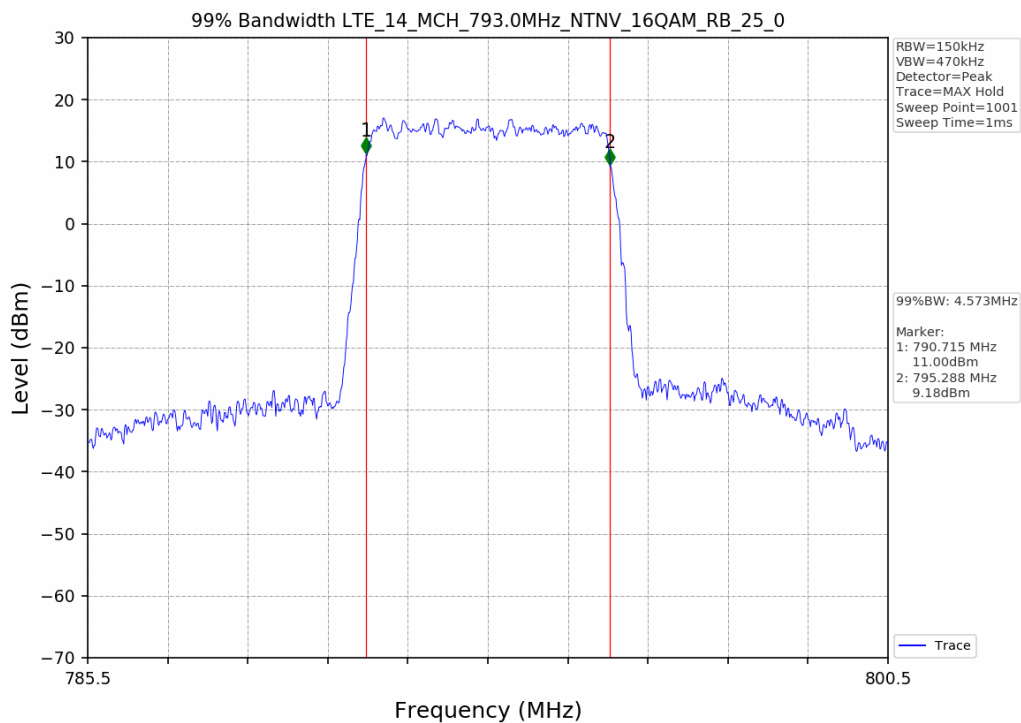
Test Band: 14 10MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NV	-30.00	/	- 0.858 3	/	/	-0.0011	/	2.50	PASS
				-20.00	/	- 1.573 6	/	/	-0.0020	/	2.50	PASS
				-10.00	/	- 1.230 2	/	/	-0.0016	/	2.50	PASS
				0.00	/	- 0.772 5	/	/	-0.0010	/	2.50	PASS
				10.00	/	- 1.716 6	/	/	-0.0022	/	2.50	PASS
				20.00	/	- 1.359 0	/	/	-0.0017	/	2.50	PASS
				30.00	/	- 1.273 2	/	/	-0.0016	/	2.50	PASS
				40.00	/	- 0.686 6	/	/	-0.0009	/	2.50	PASS
				50.00	/	- 0.772 5	/	/	-0.0010	/	2.50	PASS
16QAM	50	0	NV	-30.00	/	- 1.487 7	/	/	-0.0019	/	2.50	PASS
				-20.00	/	- 1.444 8	/	/	-0.0018	/	2.50	PASS
				-10.00	/	- 0.586 5	/	/	-0.0007	/	2.50	PASS
				0.00	/	- 1.072 9	/	/	-0.0014	/	2.50	PASS
				10.00	/	- 1.001 4	/	/	-0.0013	/	2.50	PASS
				20.00	/	- 1.087 2	/	/	-0.0014	/	2.50	PASS
				30.00	/	- 1.230 2	/	/	-0.0016	/	2.50	PASS
				40.00	/	- 1.401 9	/	/	-0.0018	/	2.50	PASS
				50.00	/	- 1.158 7	/	/	-0.0015	/	2.50	PASS

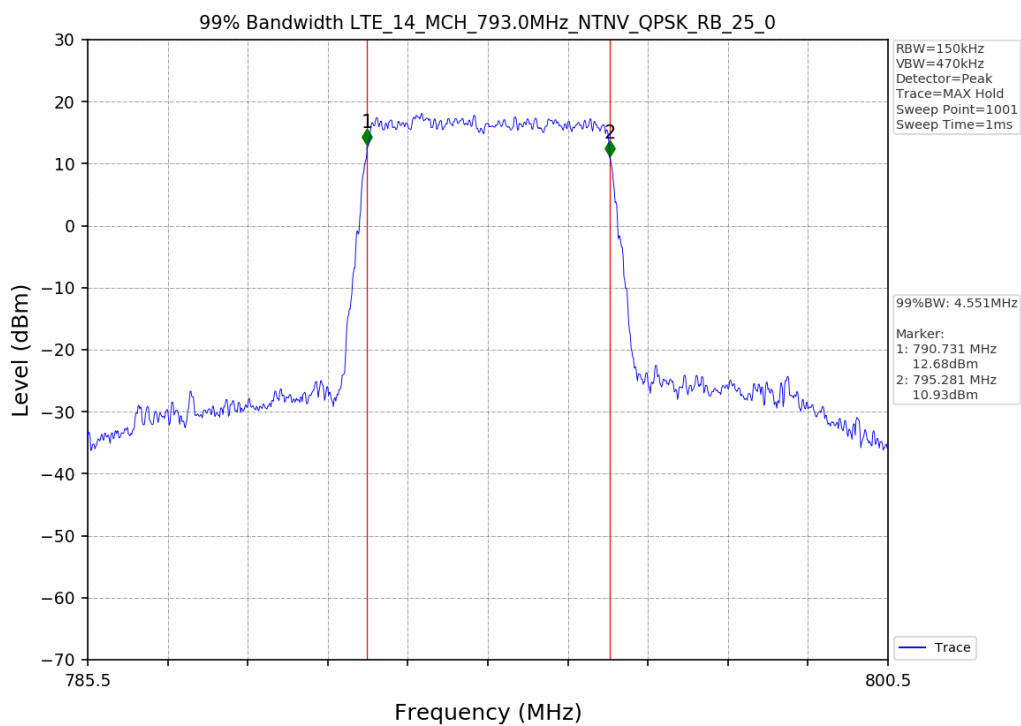
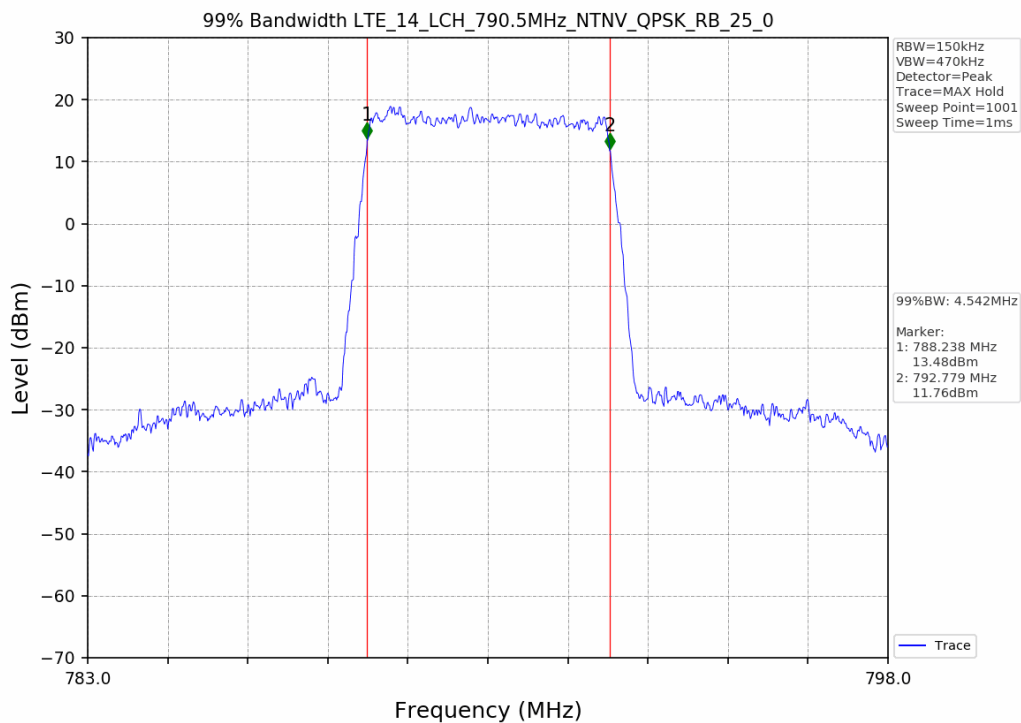
I3. 99% & 26dB Bandwidth

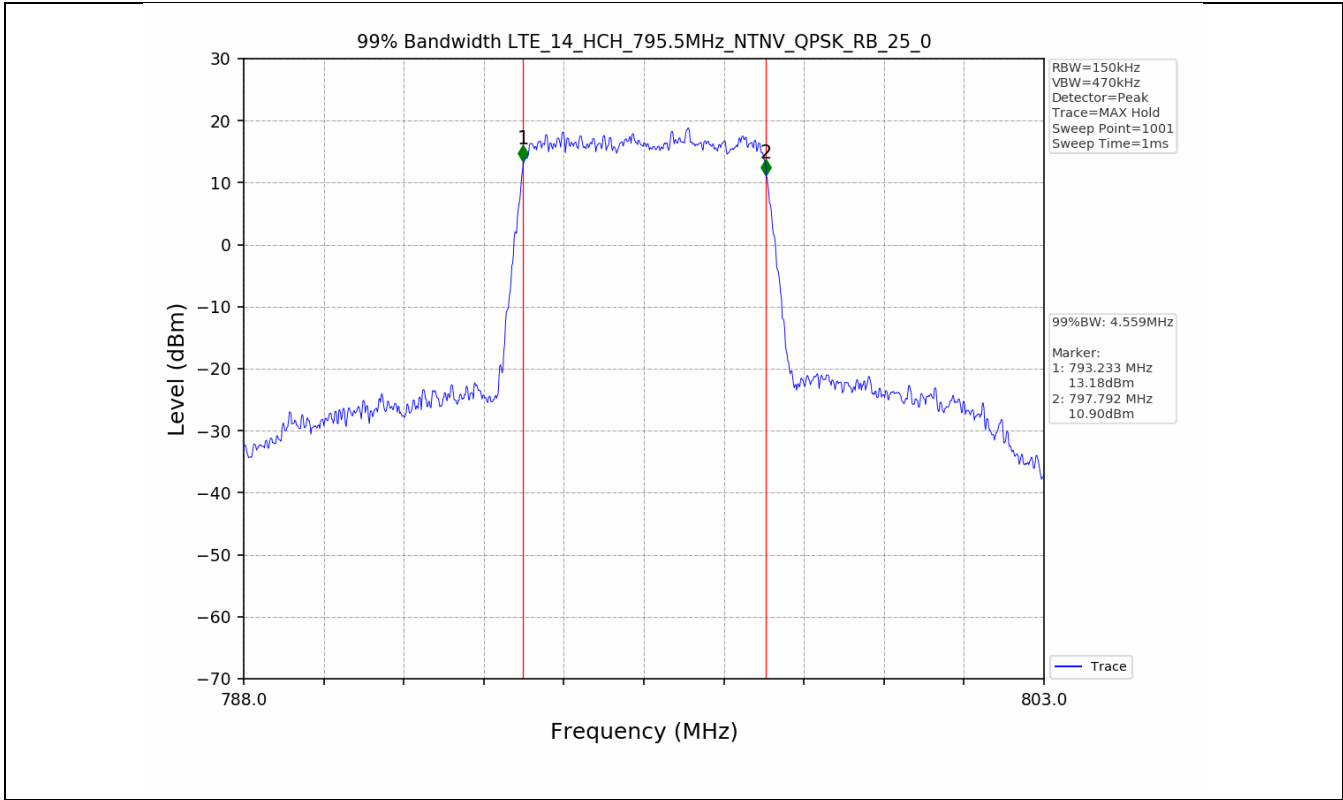
3.1 Test Result

Test Band: 14_5MHz Bandwidth							
Test Mode	RB Allocation		99% Occupied Bandwidth (MHz)			Limit	Verdict
	Size	Offset	LCH	MCH	HCH		
QPSK	25	0	4.542	4.551	4.559	N/A	PASS
16QAM	25	0	4.544	4.573	4.545	N/A	PASS

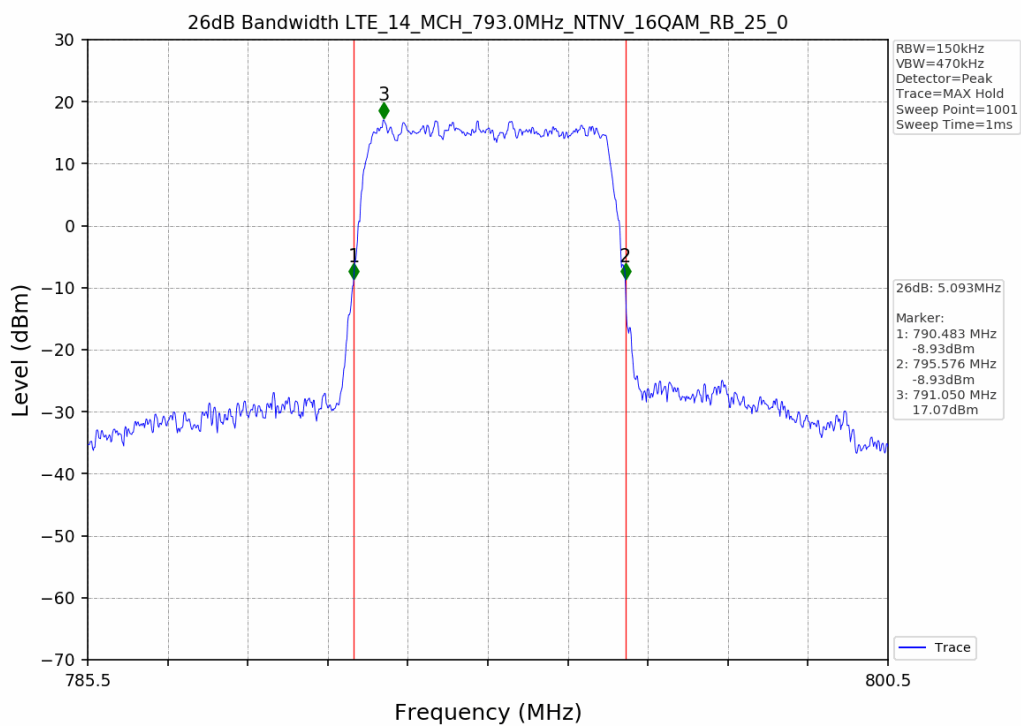
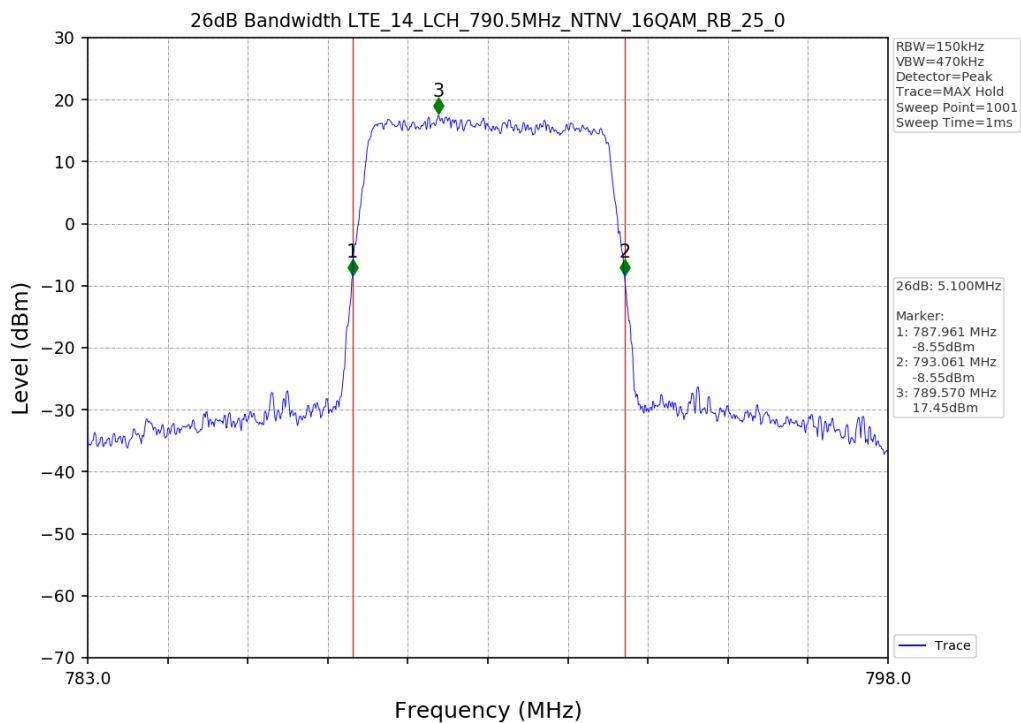


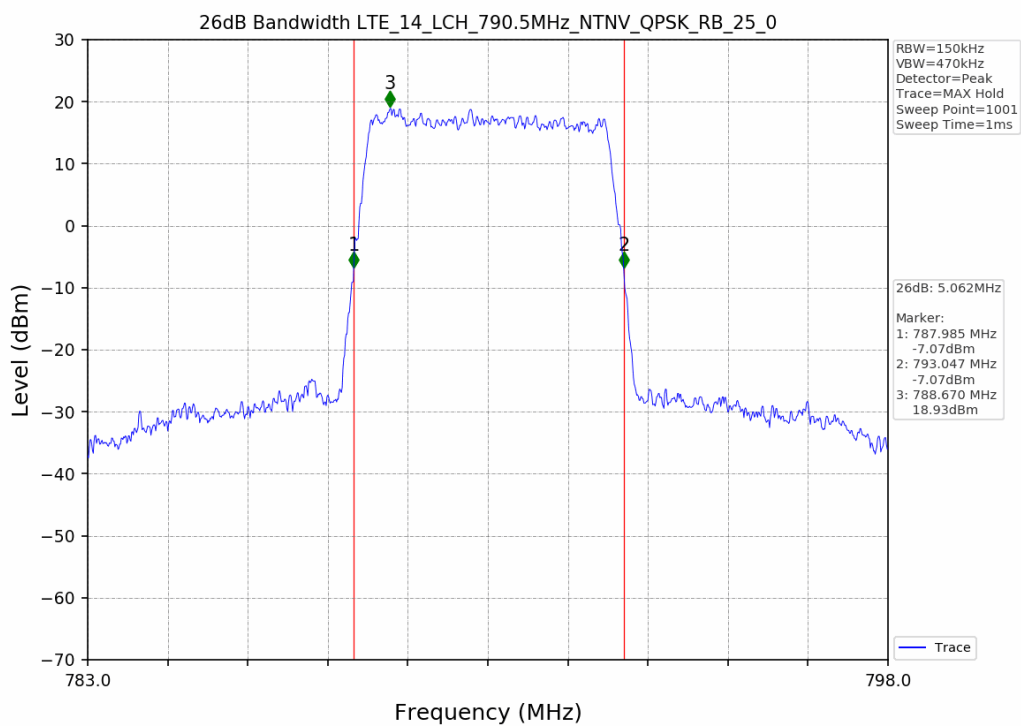
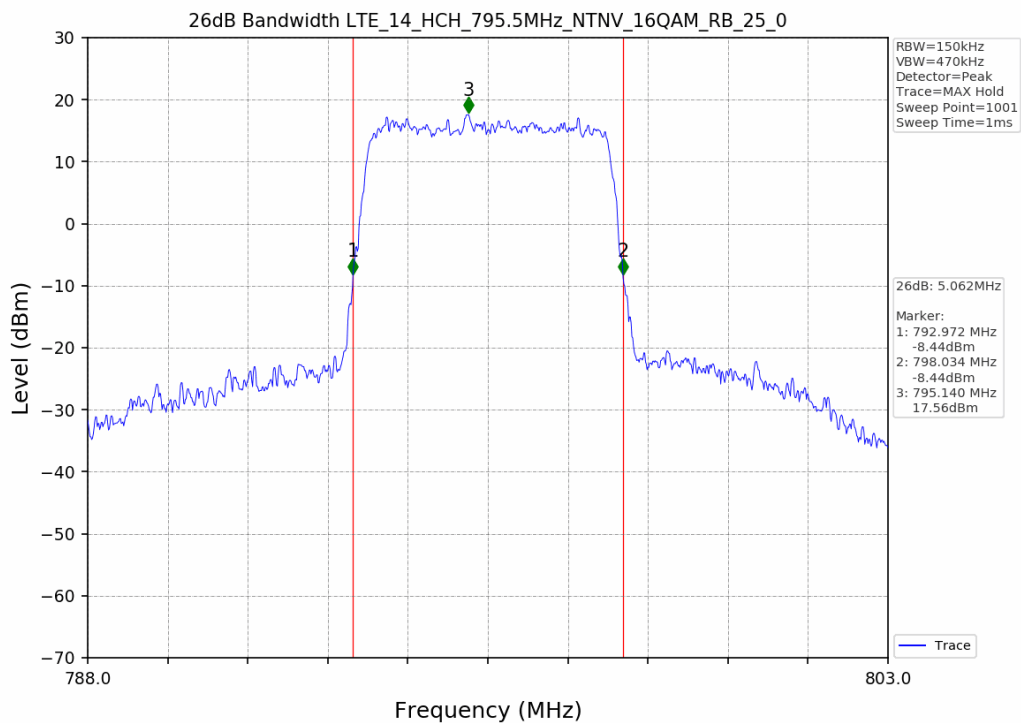


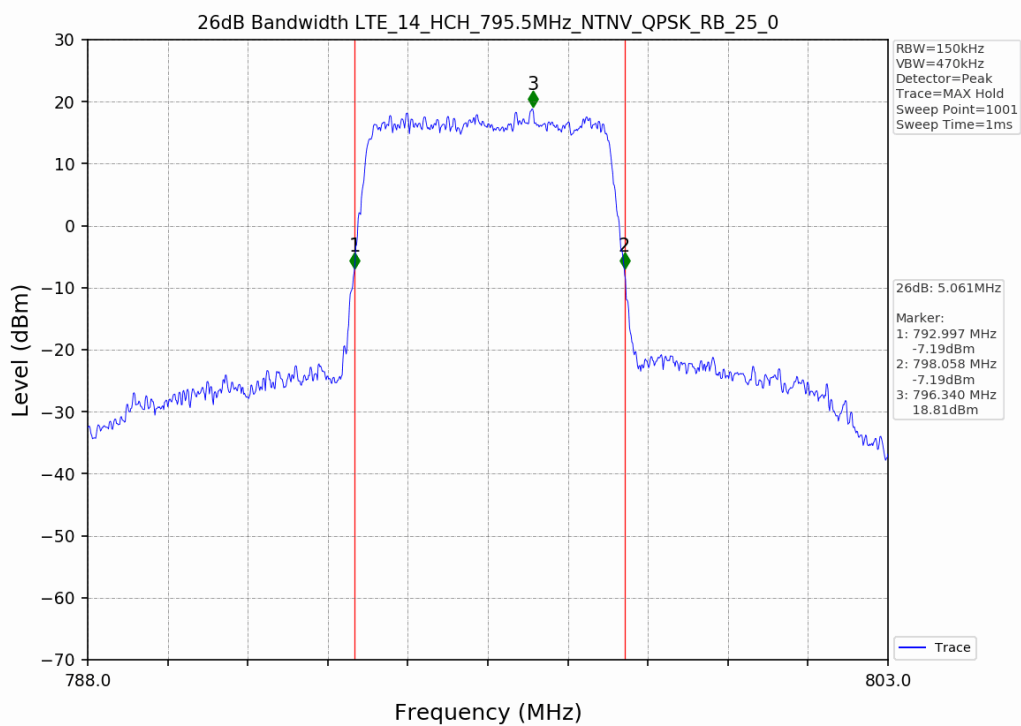
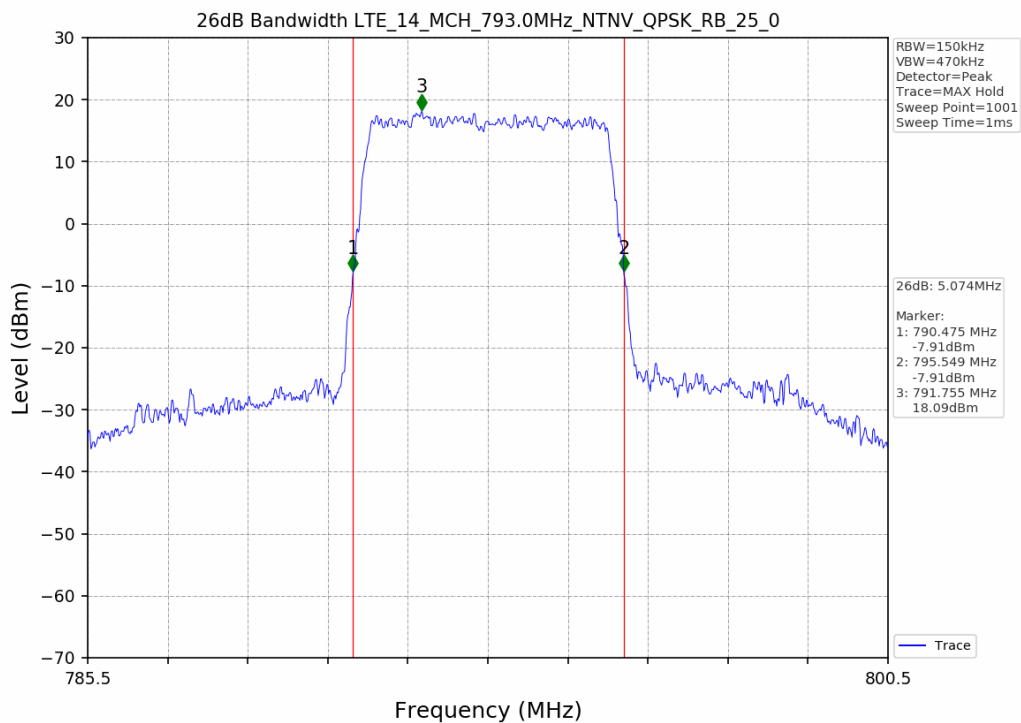




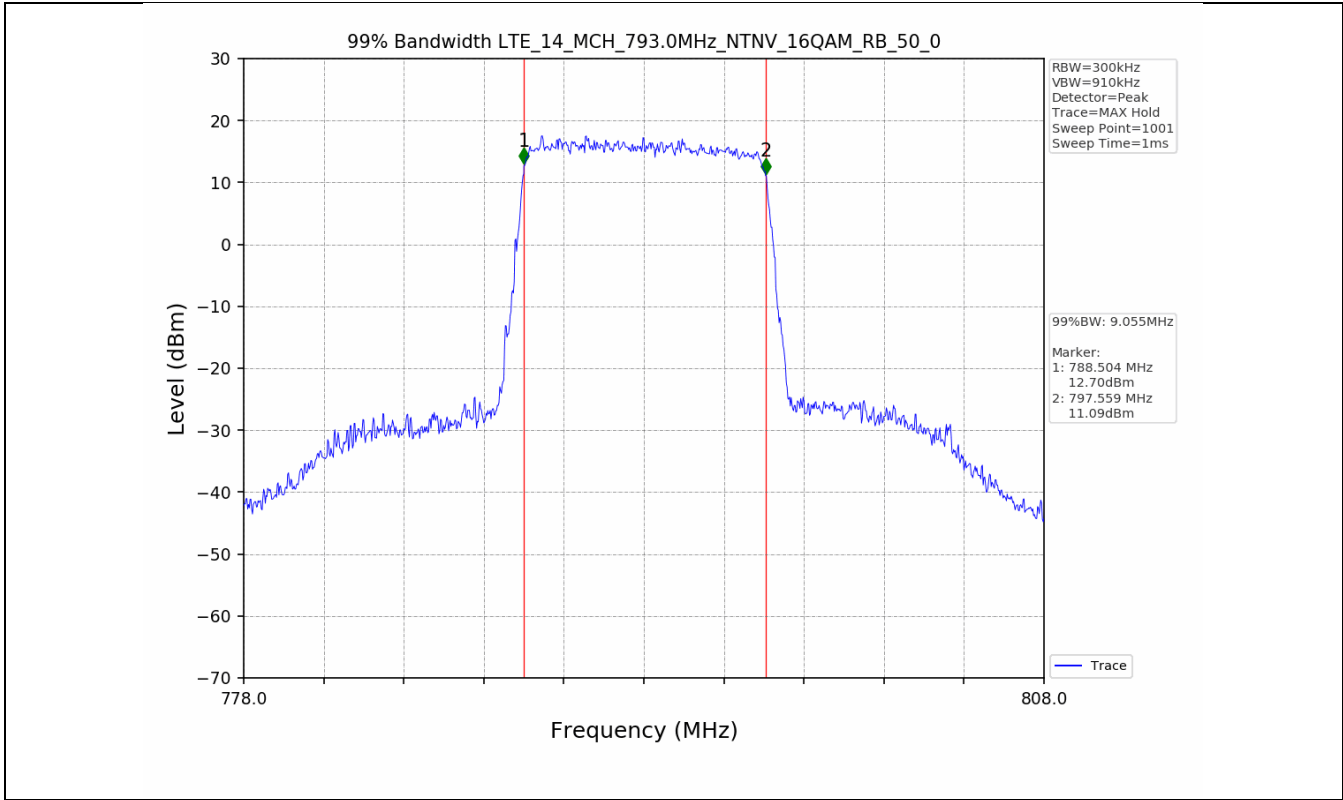
Test Band: 14 _ 5MHz Bandwidth							
Test Mode	RB Allocation		26dB Bandwidth (MHz)			Limit	Verdict
	Size	Offset	LCH	MCH	HCH		
QPSK	25	0	5.062	5.074	5.061	N/A	PASS
16QAM	25	0	5.100	5.093	5.062	N/A	PASS

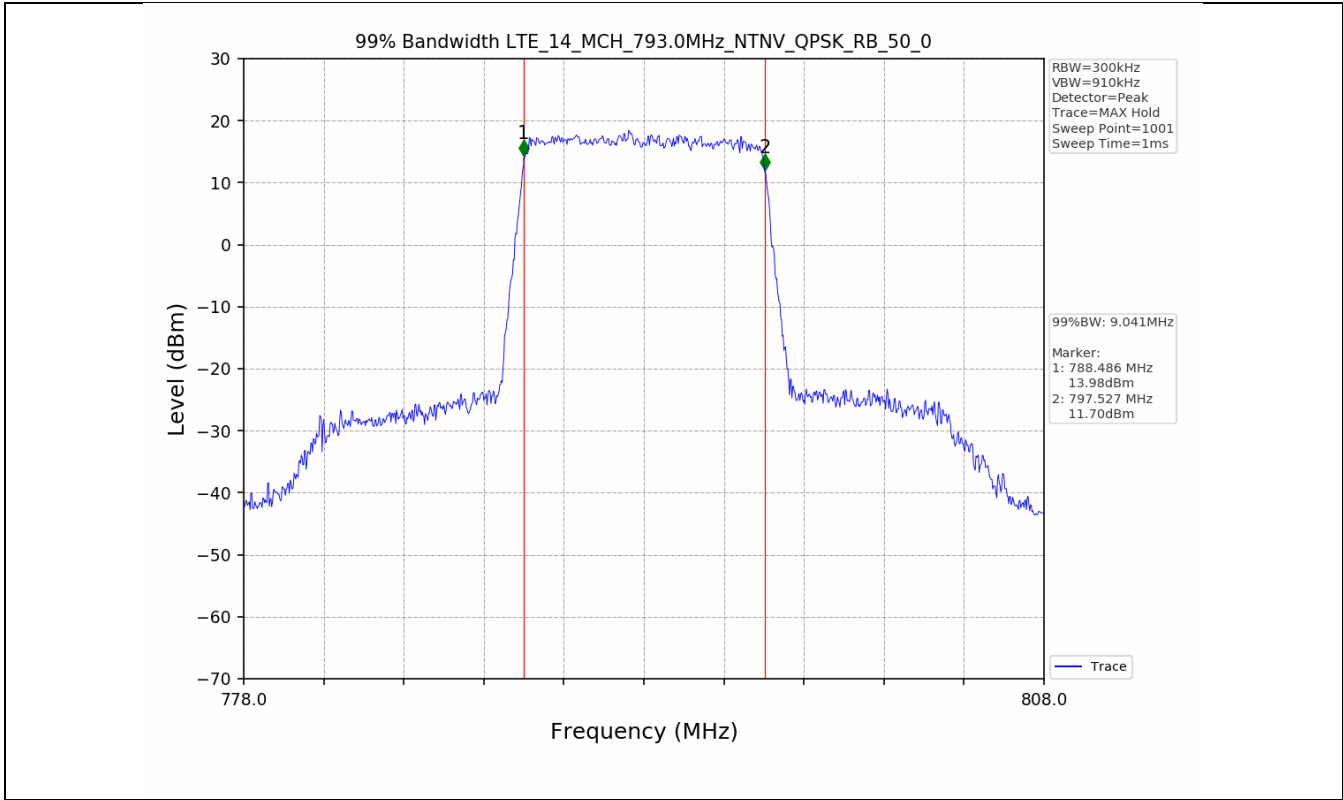




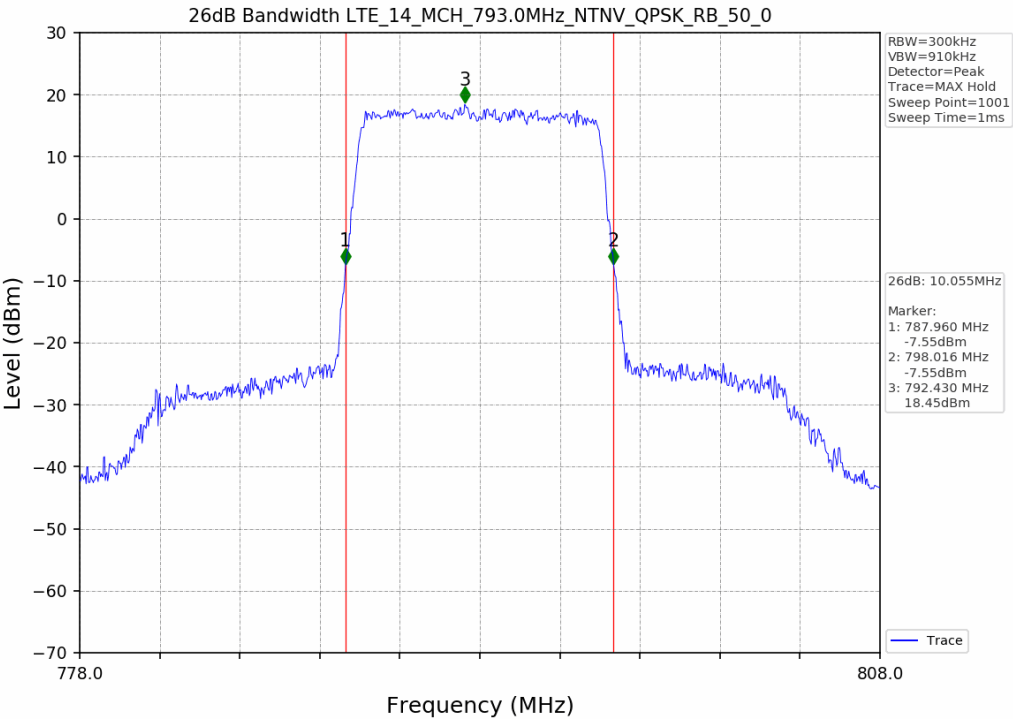
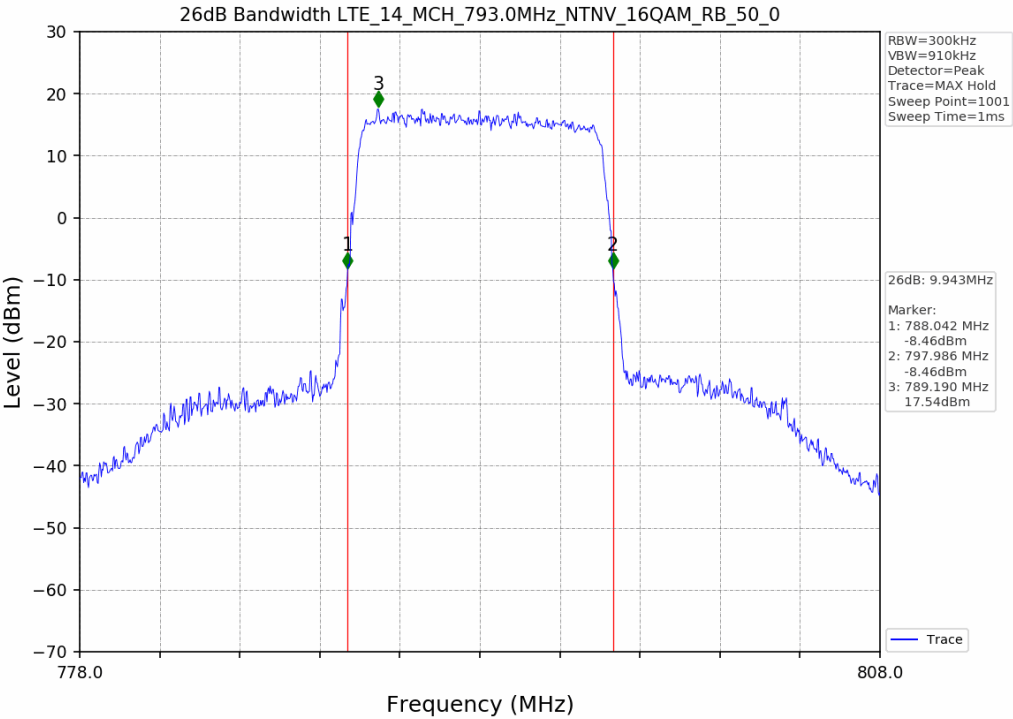


Test Band: 14_10MHz Bandwidth							
Test Mode	RB Allocation		99% Occupied Bandwidth (MHz)			Limit	Verdict
	Size	Offset	LCH	MCH	HCH		
QPSK	50	0	/	9.041	/	N/A	PASS
16QAM	50	0	/	9.055	/	N/A	PASS





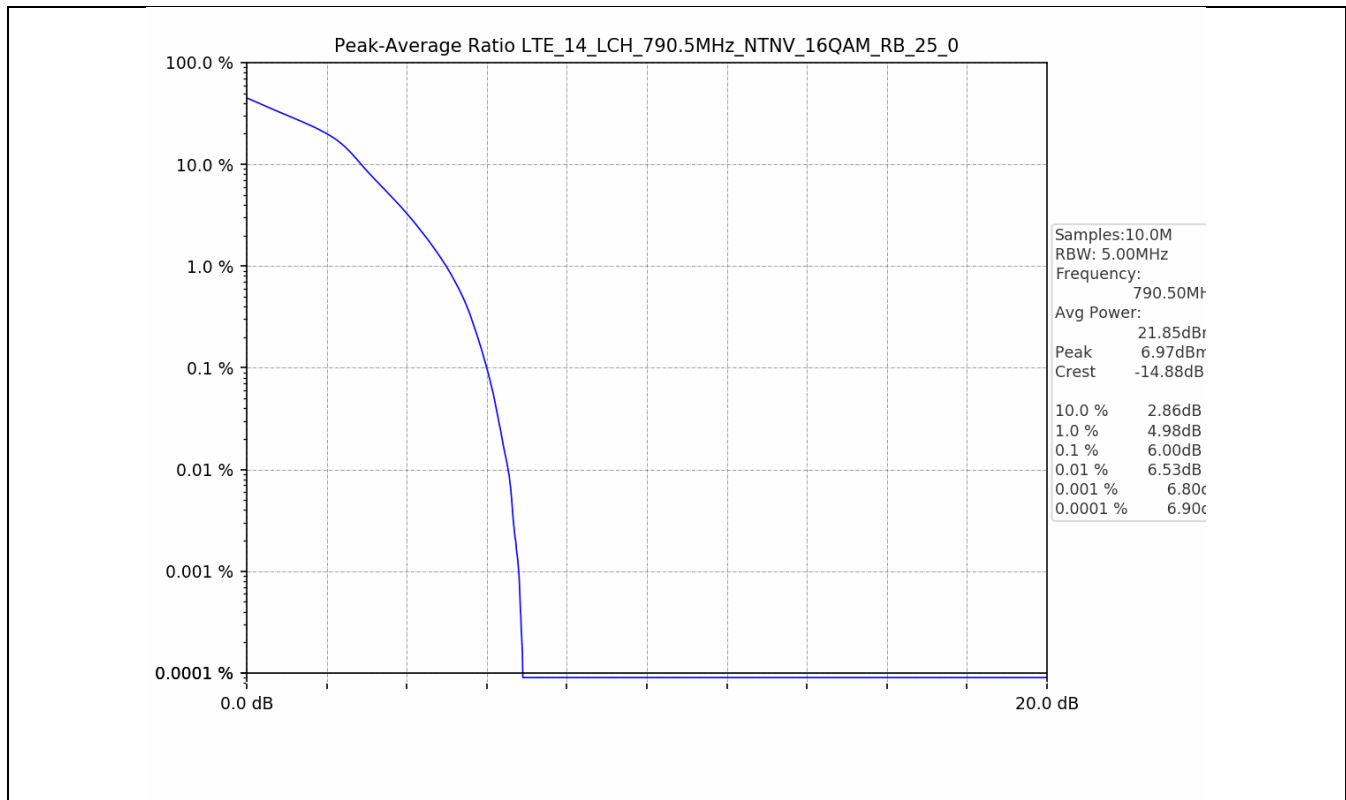
Test Band: 14_10MHz Bandwidth							
Test Mode	RB Allocation		26dB Bandwidth (MHz)			Limit	Verdict
	Size	Offset	LCH	MCH	HCH		
QPSK	50	0	/	10.055	/	N/A	PASS
16QAM	50	0	/	9.943	/	N/A	PASS

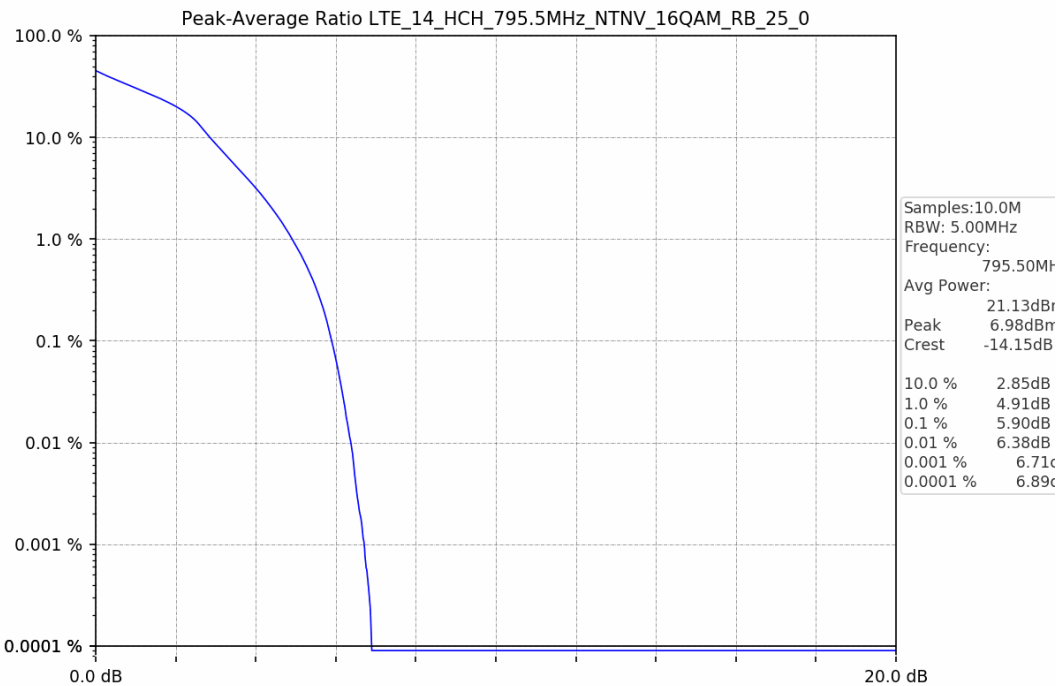
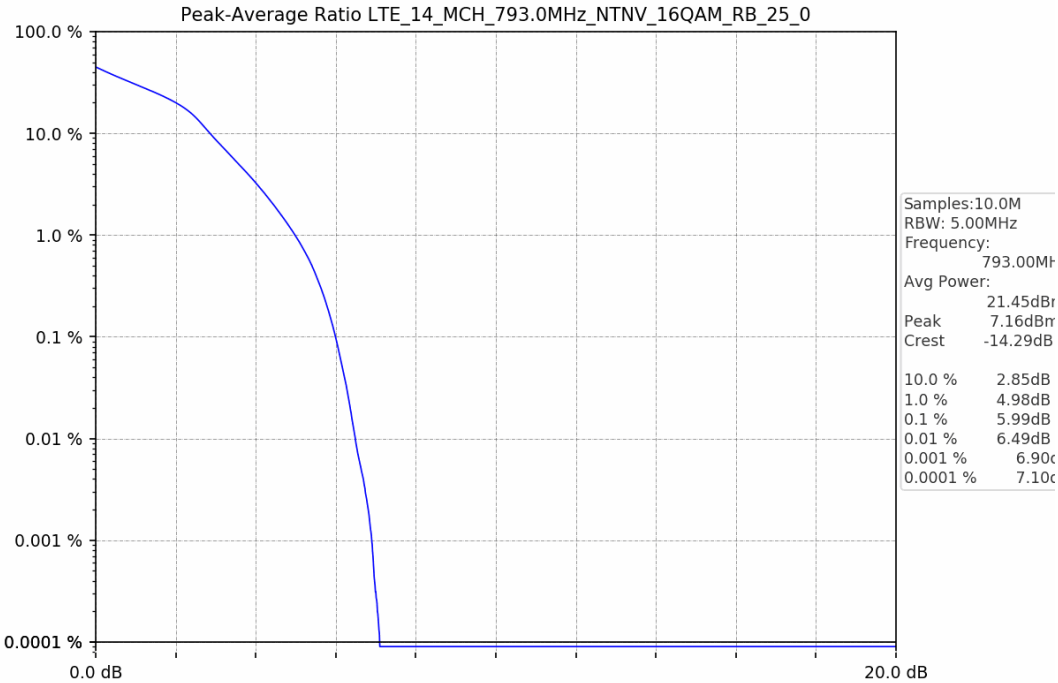


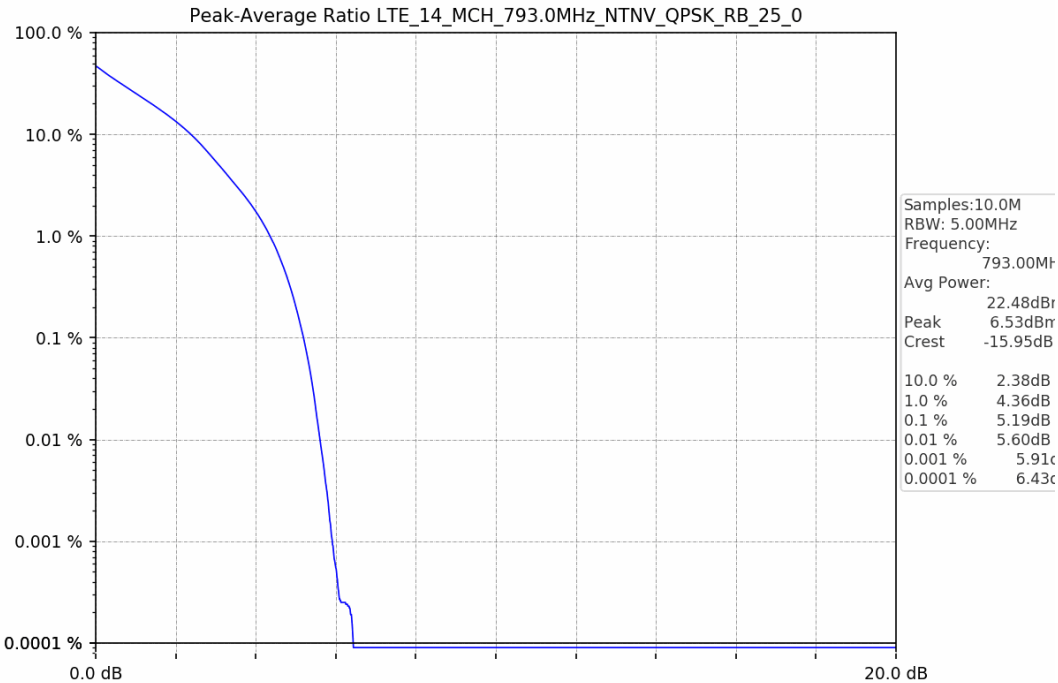
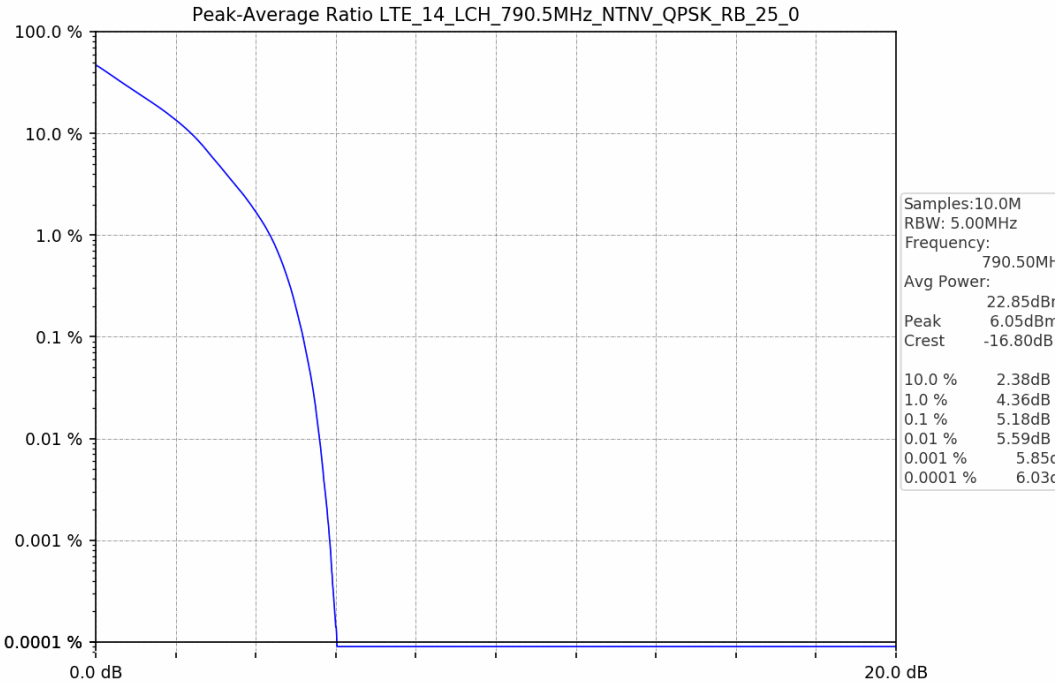
I4. Peak-Average Ratio

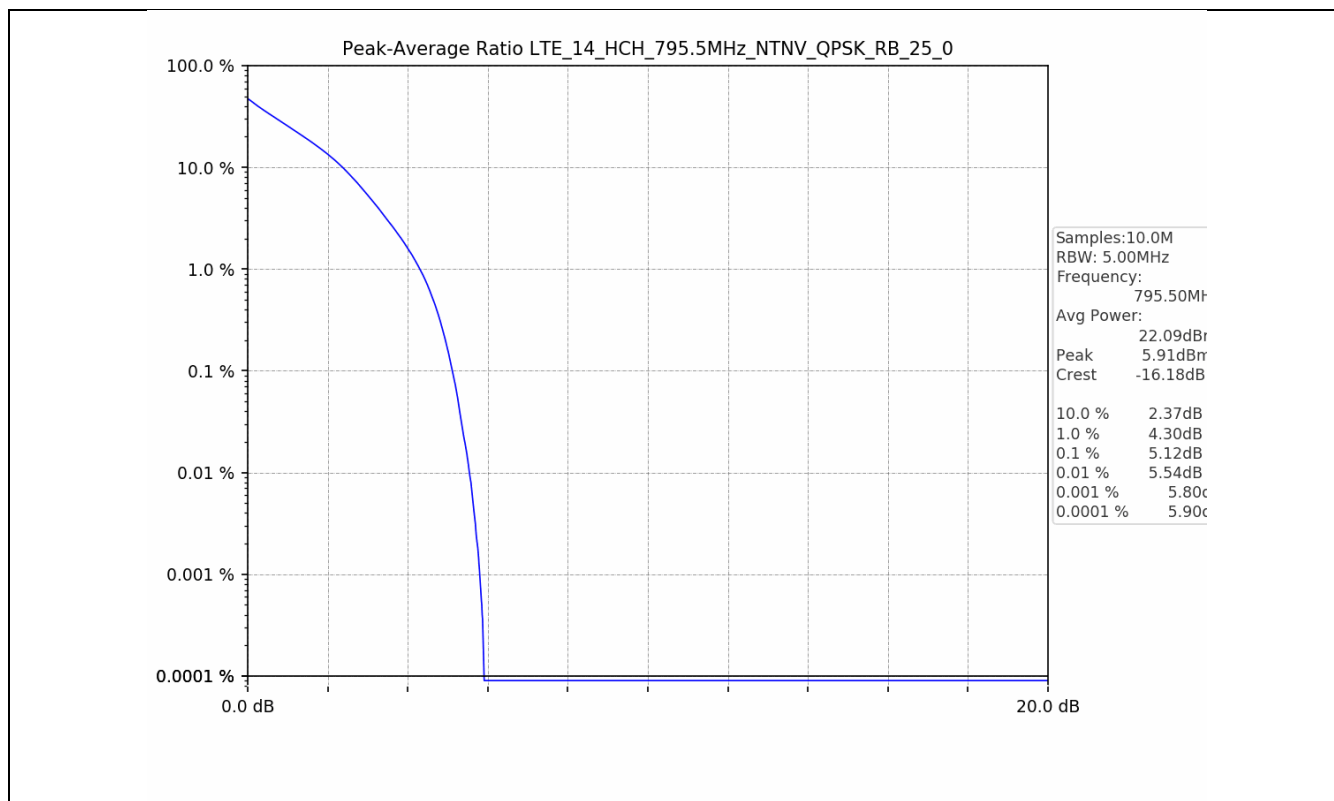
I4.1 Test Result

Test Band: 14 5MHz Bandwidth							
Test Mode	RB Allocation		Test result (dB)			Limit (dB)	Verdict
	Size	Offset	LCH	MCH	HCH		
QPSK	25	0	5.18	5.19	5.12	13	PASS
16QAM	25	0	6.00	5.99	5.90	13	PASS

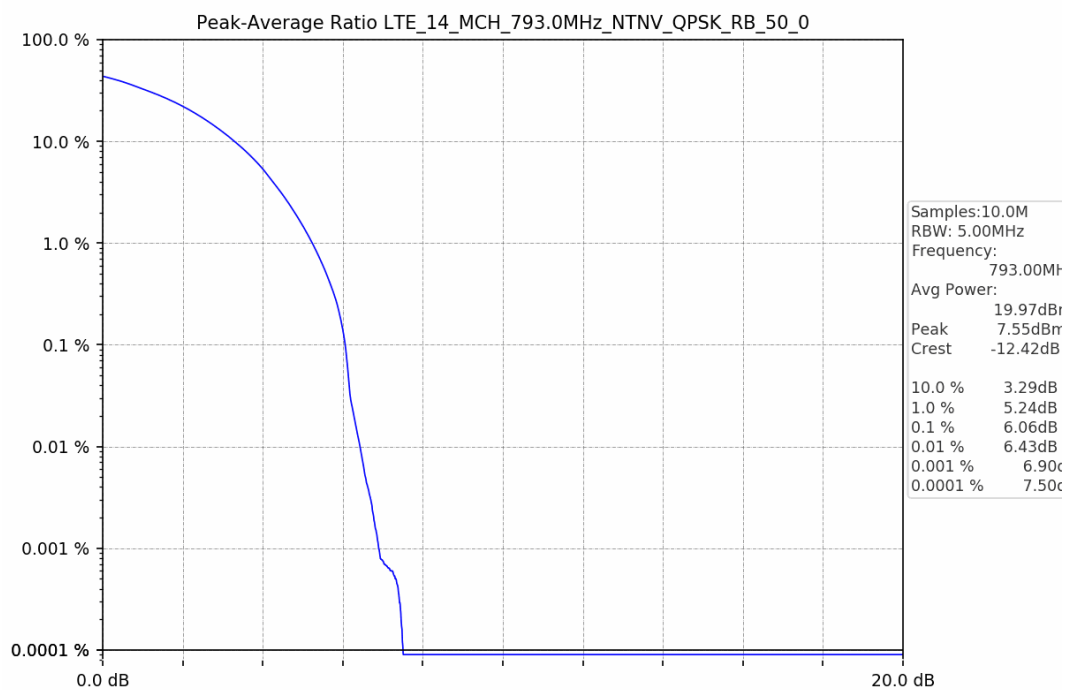
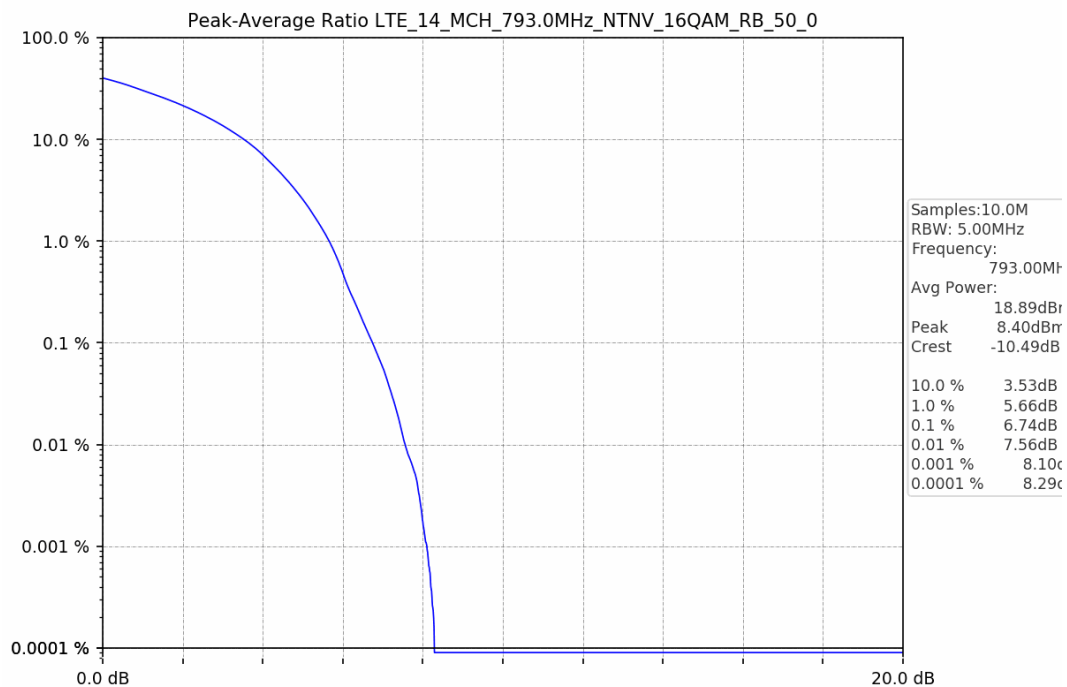








Test Band: 14_10MHz Bandwidth							
Test Mode	RB Allocation		Test result (dB)			Limit (dB)	Verdict
	Size	Offset	LCH	MCH	HCH		
QPSK	50	0	/	6.06	/	13	PASS
16QAM	50	0	/	6.74	/	13	PASS



I5. Spurious Emission

I5.1 Test Graph

