

1.1 Test Result

Test Band: 13 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		
16QAM	1	0	23.16	23.94	23.67	-8.97	-6.82	14.19	14.97	14.70	34.77	PASS
		13	23.20	23.98	23.65	-8.97	-6.82	14.23	15.01	14.68	34.77	PASS
		24	23.26	23.95	23.22	-8.97	-6.82	14.29	14.98	14.25	34.77	PASS
	12	0	23.06	22.83	22.96	-8.97	-6.82	14.09	13.86	13.99	34.77	PASS
		6	22.85	22.86	23.09	-8.97	-6.82	13.88	13.89	14.12	34.77	PASS
		13	22.76	23.15	22.76	-8.97	-6.82	13.79	14.18	13.79	34.77	PASS
QPSK	25	0	22.96	23.00	23.09	-8.97	-6.82	13.99	14.03	14.12	34.77	PASS
	24.66		24.59	24.94	-8.97	-6.82	15.69	15.62	15.97	34.77	PASS	
	1	13	24.90	24.86	25.09	-8.97	-6.82	15.93	15.89	16.12	34.77	PASS
		24	24.84	24.83	24.77	-8.97	-6.82	15.87	15.86	15.80	34.77	PASS
		12	0	24.08	24.00	24.10	-8.97	-6.82	15.11	15.03	15.13	34.77
	6		24.11	24.15	24.12	-8.97	-6.82	15.14	15.18	15.15	34.77	PASS
	13		23.95	24.05	23.97	-8.97	-6.82	14.98	15.08	15.00	34.77	PASS
	25	0	24.05	24.09	24.12	-8.97	-6.82	15.08	15.12	15.15	34.77	PASS
	Test Band: 13 10MHz Bandwidth											
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
16QAM	12	0	/	22.13	/	-8.97	-6.82	/	13.16	/	34.77	PASS
		6	/	23.10	/	-8.97	-6.82	/	14.13	/	34.77	PASS
		13	/	22.63	/	-8.97	-6.82	/	13.66	/	34.77	PASS
QPSK	1	0	/	21.26	/	-8.97	-6.82	/	12.29	/	34.77	PASS
		25	/	22.34	/	-8.97	-6.82	/	13.37	/	34.77	PASS
		49	/	21.58	/	-8.97	-6.82	/	12.61	/	34.77	PASS
	25	0	/	21.42	/	-8.97	-6.82	/	12.45	/	34.77	PASS
		13	/	21.47	/	-8.97	-6.82	/	12.50	/	34.77	PASS
		25	/	21.99	/	-8.97	-6.82	/	13.02	/	34.77	PASS
	50	0	/	21.30	/	-8.97	-6.82	/	12.33	/	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)												

2. Frequency stability

2.1 Test Result

Test Band: 13 5MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mod e	RB Allocation		Test Tem p.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offse t			LCH	MCH	HCH	LCH	MCH	HCH		
16Q AM	25	0	NT	LV	0.0000	0.0000	0.0000	- 0.0008	- 0.0003	- 0.0003	2.50	PASS
				NV	- 1.0000	0.0000	0.0000	- 0.0015	- 0.0004	- 0.0008	2.50	PASS
				HV	- 1.0000	0.0000	1.0000	- 0.0014	- 0.0003	- 0.0016	2.50	PASS
QPS K	25	0	NT	LV	- 1.0000	- 1.0000	0.0000	- 0.0022	- 0.0021	- 0.0006	2.50	PASS
				NV	- 2.0000	- 1.0000	1.0000	- 0.0031	- 0.0022	- 0.0017	2.50	PASS
				HV	- 2.0000	0.0000	0.0000	- 0.0031	- 0.0013	- 0.0002	2.50	PASS
Test Band: 13 10MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mod e	RB Allocation		Test Tem p.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offse t			LCH	MCH	HCH	LCH	MCH	HCH		
16Q AM	12	0	NT	LV	/	0.0000	/	/	- 0.0006	/	2.50	PASS
				NV	/	0.0000	/	/	- 0.0008	/	2.50	PASS
				HV	/	0.0000	/	/	- 0.0007	/	2.50	PASS
QPS K	50	0	NT	LV	/	0.0000	/	/	- 0.0003	/	2.50	PASS
				NV	/	0.0000	/	/	- 0.0007	/	2.50	PASS
				HV	/	0.0000	/	/	- 0.0001	/	2.50	PASS

Test Band: 13 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		
16QAM	25	0	NV	-30.00	0.0000	0.0000	0.0000	-0.0012	-0.0007	-0.0012	2.50	PASS
				-20.00	1.0000	0.0000	0.0000	-0.0023	-0.0006	0.0001	2.50	PASS
				-10.00	1.0000	0.0000	0.0000	-0.0016	-0.0001	0.0005	2.50	PASS
				0.00	1.0000	0.0000	0.0000	-0.0019	-0.0008	0.0007	2.50	PASS
				10.00	0.0000	0.0000	0.0000	-0.0003	-0.0001	-0.0002	2.50	PASS
				20.00	1.0000	0.0000	0.0000	-0.0017	-0.0011	0.0001	2.50	PASS
				30.00	1.0000	0.0000	0.0000	-0.0014	-0.0006	0.0009	2.50	PASS
				40.00	1.0000	0.0000	0.0000	-0.0013	-0.0006	0.0013	2.50	PASS
				50.00	1.0000	0.0000	0.0000	-0.0021	-0.0001	0.0004	2.50	PASS
QPSK	25	0	NV	-30.00	1.0000	1.0000	0.0000	-0.0021	-0.0018	0.0000	2.50	PASS
				-20.00	1.0000	1.0000	0.0000	-0.0021	-0.0018	0.0000	2.50	PASS
				-10.00	2.0000	0.0000	0.0000	-0.0031	-0.0010	0.0011	2.50	PASS
				0.00	1.0000	1.0000	0.0000	-0.0025	-0.0019	0.0012	2.50	PASS
				10.00	2.0000	1.0000	0.0000	-0.0028	-0.0016	0.0012	2.50	PASS
				20.00	1.0000	1.0000	0.0000	-0.0015	-0.0023	0.0002	2.50	PASS
				30.00	1.0000	1.0000	0.0000	-0.0013	-0.0023	0.0005	2.50	PASS
				40.00	1.0000	1.0000	0.0000	-0.0024	-0.0013	0.0012	2.50	PASS
				50.00	2.0000	1.0000	0.0000	-0.0029	-0.0017	0.0010	2.50	PASS
Test Band: 13 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		
16QAM	12	0	NV	-30.00	/	0.0000	/	/	-0.0009	/	2.50	PASS
				-20.00	/	0.0000	/	/	-0.0012	/	2.50	PASS
				-10.00	/	0.0000	/	/	-0.0006	/	2.50	PASS
				0.00	/	0.0000	/	/	-0.0004	/	2.50	PASS
				10.00	/	0.0000	/	/	0.0002	/	2.50	PASS
				20.00	/	0.0000	/	/	0.0004	/	2.50	PASS
				30.00	/	0.0000	/	/	-0.0007	/	2.50	PASS
				40.00	/	0.0000	/	/	-0.0003	/	2.50	PASS

				50.00	/	0.0000	/	/	0.0004	/	2.50	PASS
QPSK	50	0	NV	-	/	0.0000	/	/	-	/	2.50	PASS
				30.00	/	0.0000	/	/	0.0001	/	2.50	PASS
				-	/	0.0000	/	/	0.0012	/	2.50	PASS
				20.00	/	0.0000	/	/	0.0006	/	2.50	PASS
				-	/	0.0000	/	/	0.0006	/	2.50	PASS
				10.00	/	0.0000	/	/	0.0009	/	2.50	PASS
				0.00	/	0.0000	/	/	0.0009	/	2.50	PASS
				10.00	/	1.0000	/	/	0.0013	/	2.50	PASS
				20.00	/	1.0000	/	/	0.0015	/	2.50	PASS
				30.00	/	1.0000	/	/	0.0016	/	2.50	PASS
				40.00	/	0.0000	/	/	0.0006	/	2.50	PASS
				50.00	/	0.0000	/	/	0.0005	/	2.50	PASS

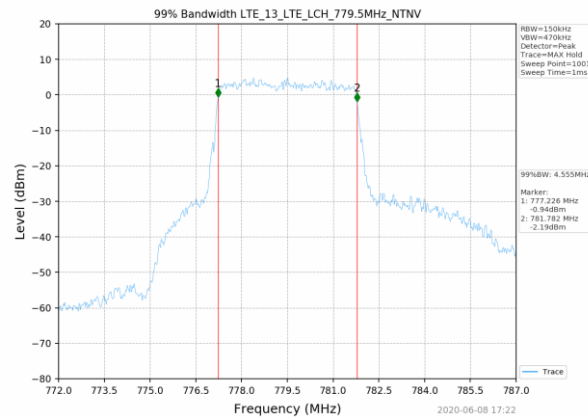
3. 99% & 26dB Bandwidth

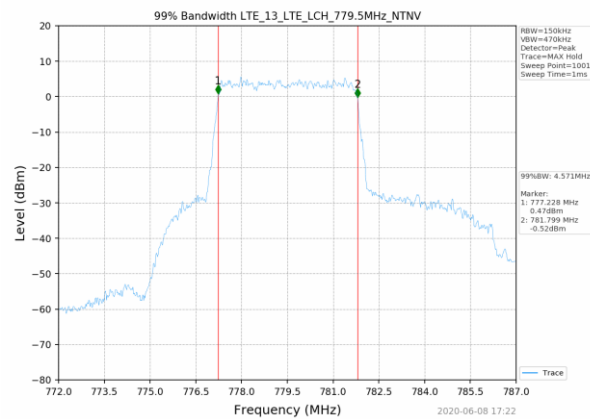
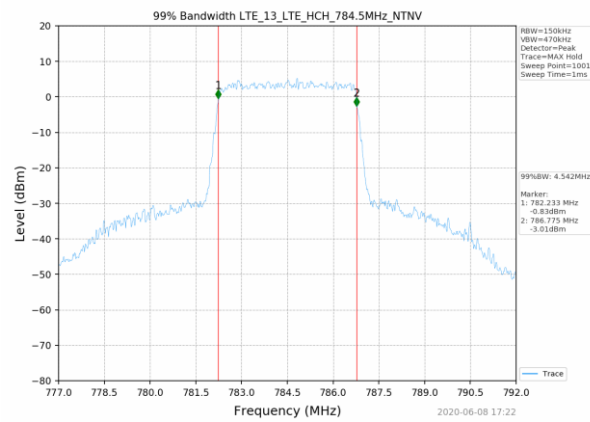
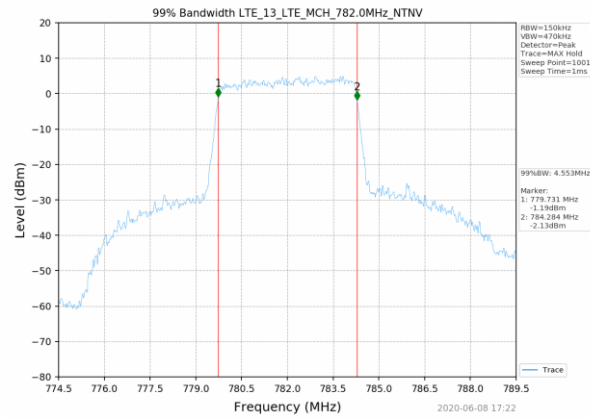
3.1 Test Result

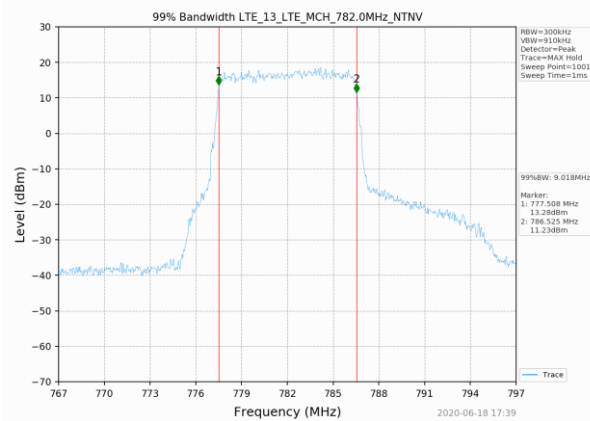
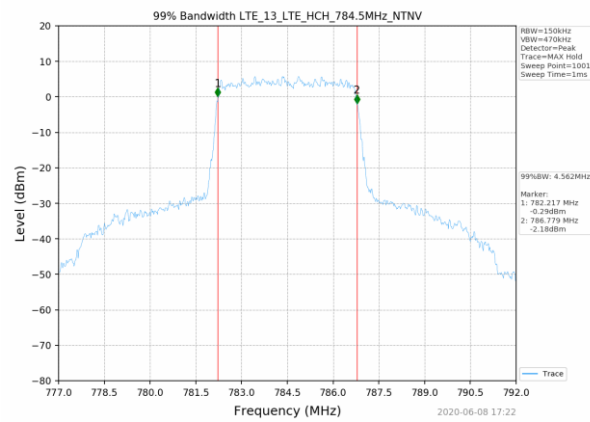
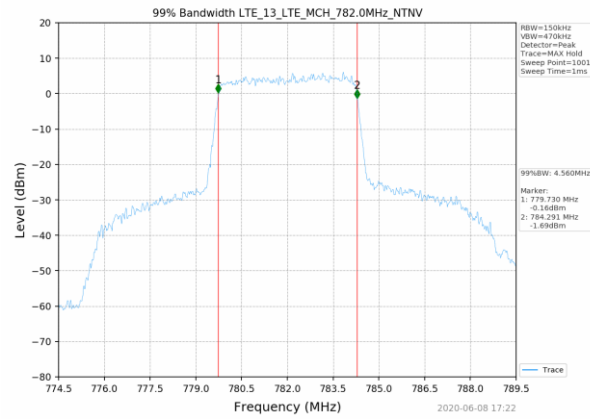
Test Band: 13 _ 5MHz Bandwidth							
Test Mode	RB Allocation		99% Occupied Bandwidth (MHz)			Limit	Verdict
	Size	Offset	LCH	MCH	HCH		
16QAM	25	0	4.550	4.550	4.540	N/A	PASS
QPSK	25	0	4.570	4.560	4.560	N/A	PASS
Test Band: 13 _ 10MHz Bandwidth							
Test Mode	RB Allocation		99% Occupied Bandwidth (MHz)			Limit	Verdict
	Size	Offset	LCH	MCH	HCH		
16QAM	12	0	/	9.020	/	N/A	PASS
QPSK	50	0	/	9.030	/	N/A	PASS

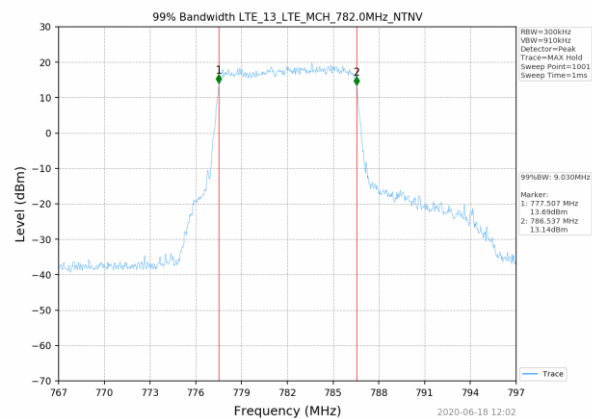
Test Band: 13 _ 5MHz Bandwidth							
Test Mode	RB Allocation		26dB Bandwidth (MHz)			Limit	Verdict
	Size	Offset	LCH	MCH	HCH		
16QAM	25	0	5.080	5.100	5.080	N/A	PASS
QPSK	25	0	5.070	5.100	5.110	N/A	PASS
Test Band: 13 _ 10MHz Bandwidth							
Test Mode	RB Allocation		26dB Bandwidth (MHz)			Limit	Verdict
	Size	Offset	LCH	MCH	HCH		
16QAM	12	0	/	9.970	/	N/A	PASS
QPSK	50	0	/	9.980	/	N/A	PASS

3.2 Test Graph(99% Bandwidth)

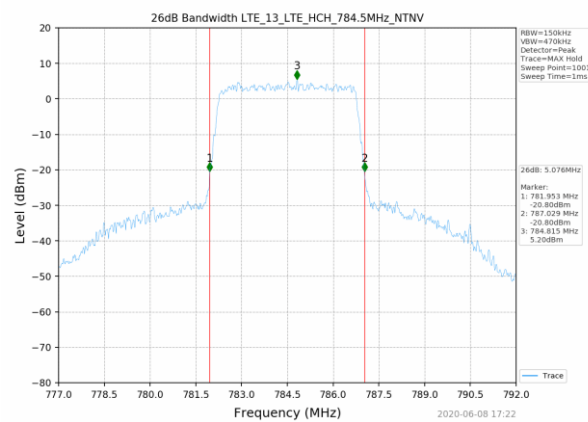
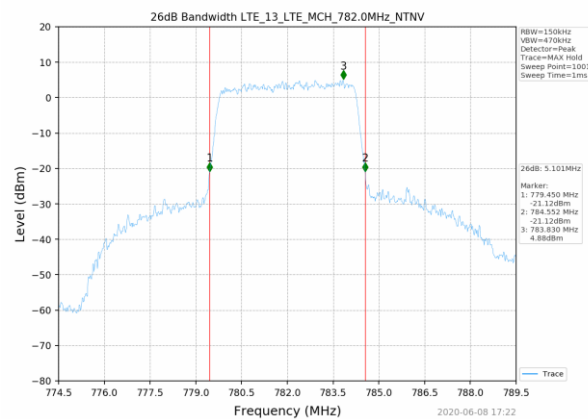
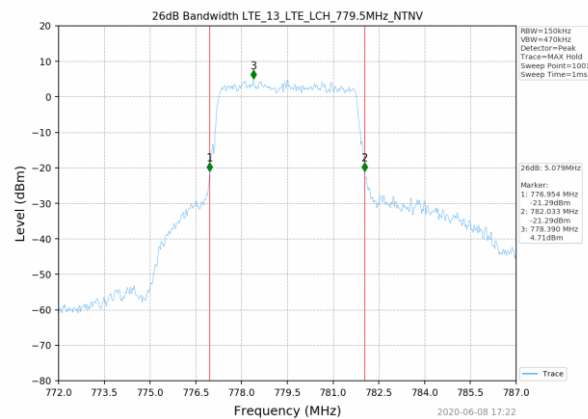


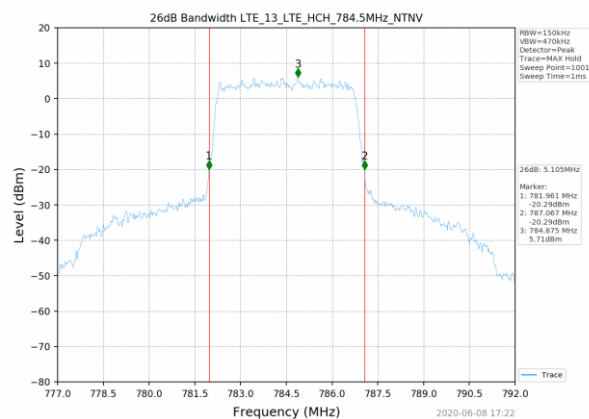
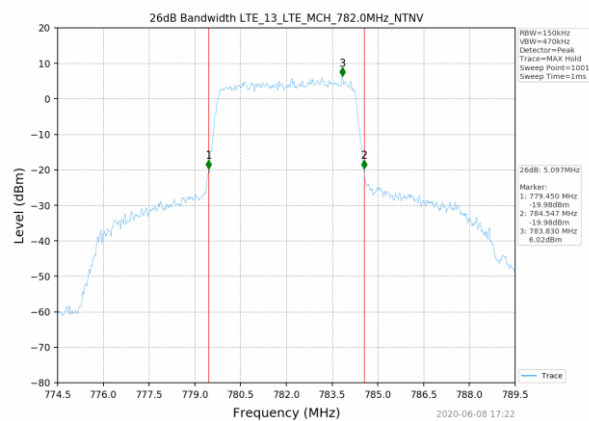
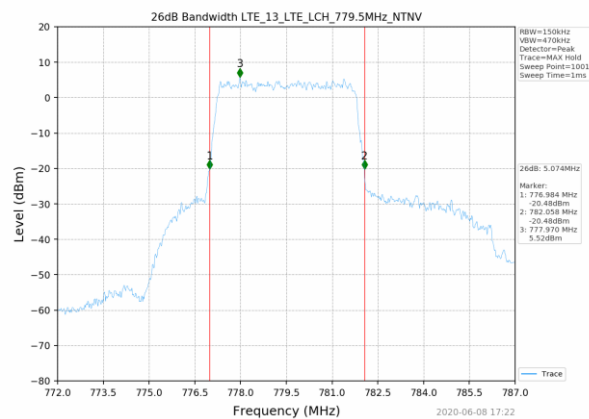


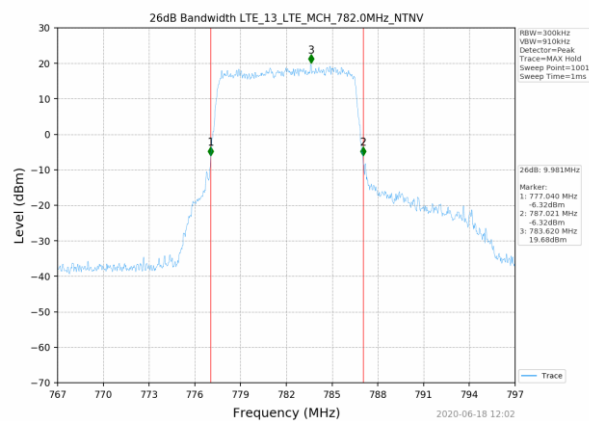
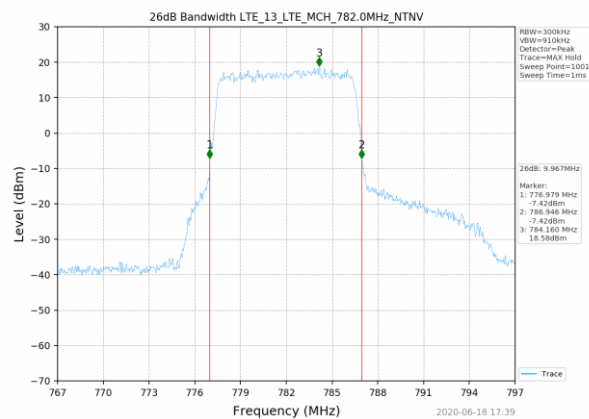




3.3 Test Graph(26dB Bandwidth)







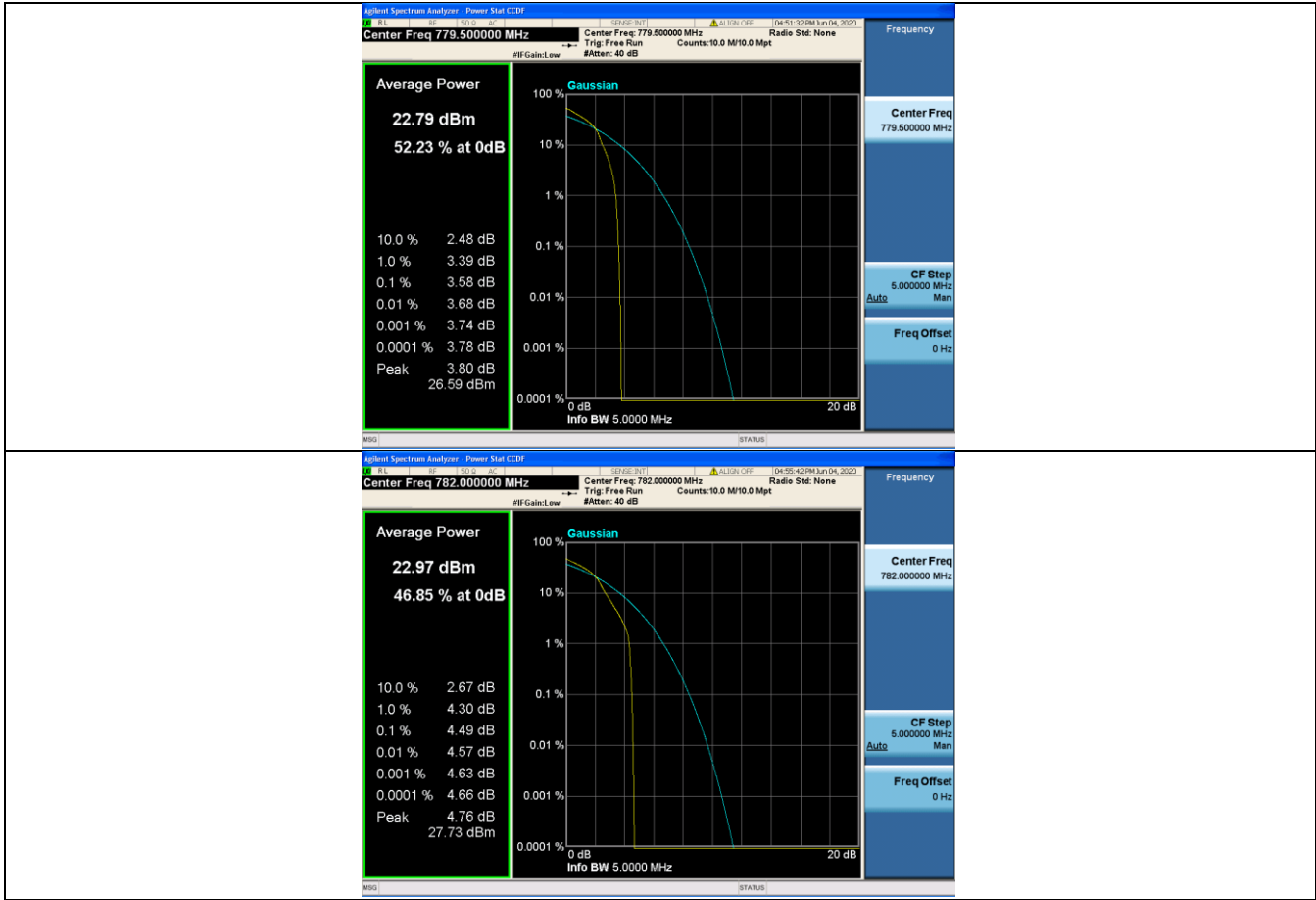
4. Peak-Average Ratio

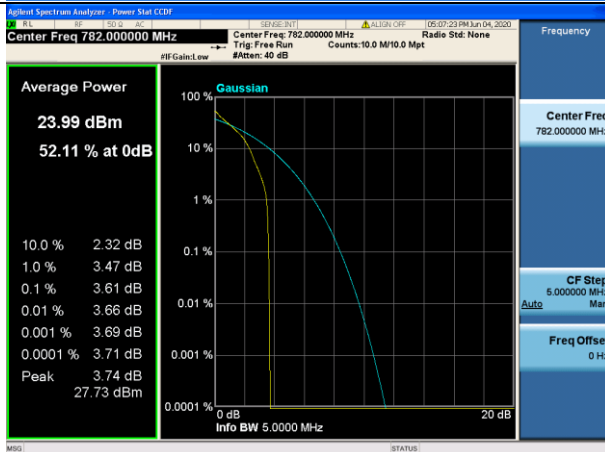
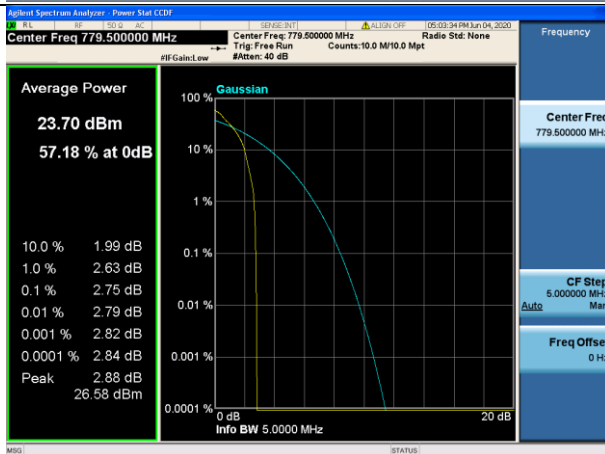
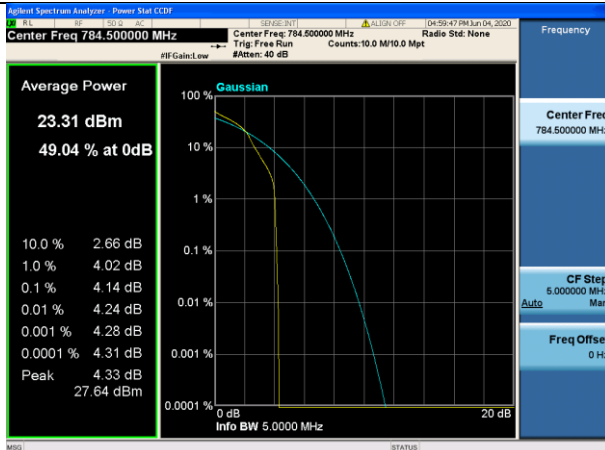
4.1 Test Result

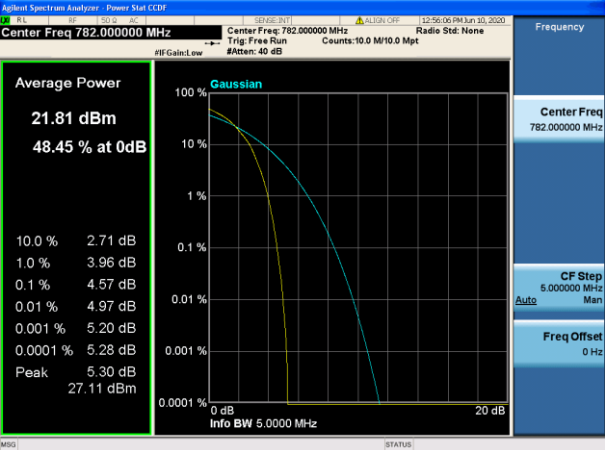
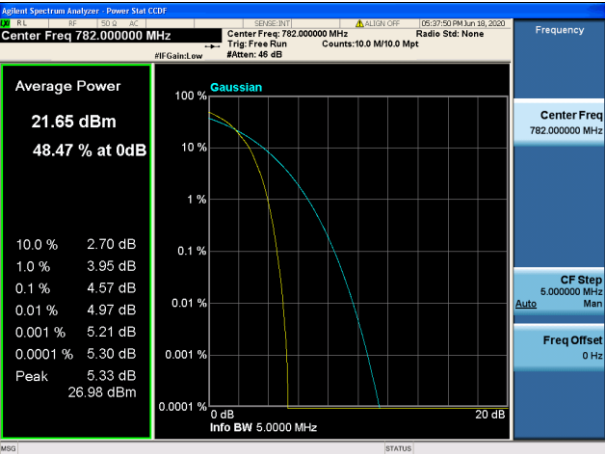
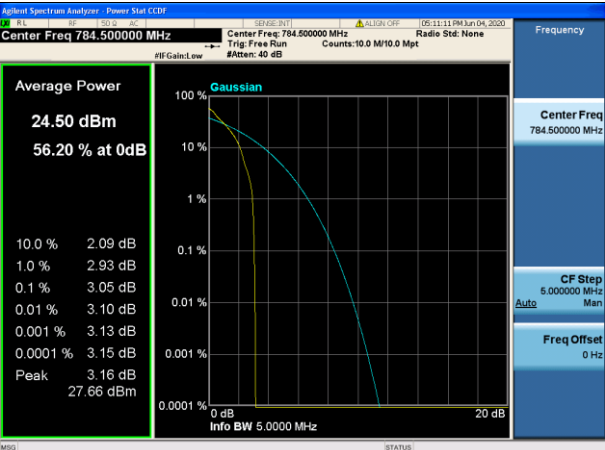
Test Band: 13 5MHz Bandwidth							
Test Mode	RB Allocation		Test result (dB)			Limit (dB)	Verdict
	Size	Offset	LCH	MCH	HCH		
16QAM	25	0	5.37	5.20	5.16	13	PASS
QPSK	25	0	4.50	4.38	4.34	13	PASS

Test Band: 13 10MHz Bandwidth							
Test Mode	RB Allocation		Test result (dB)			Limit (dB)	Verdict
	Size	Offset	LCH	MCH	HCH		
16QAM	12	0	/	4.57	/	13	PASS
QPSK	50	0	/	4.62	/	13	PASS

4.2 Test Graph

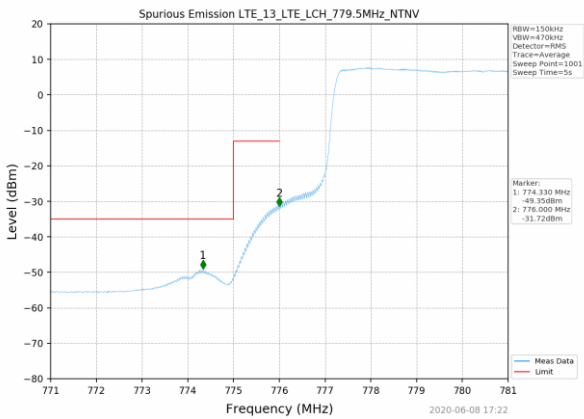
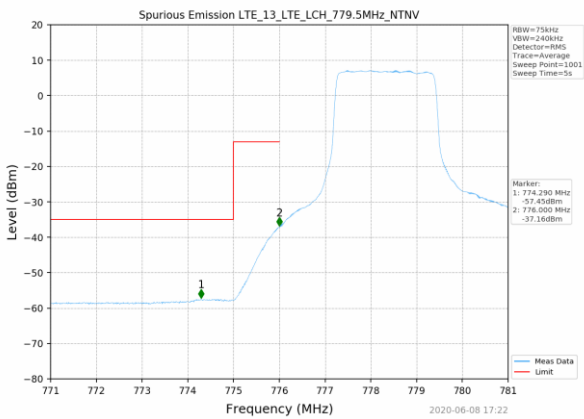
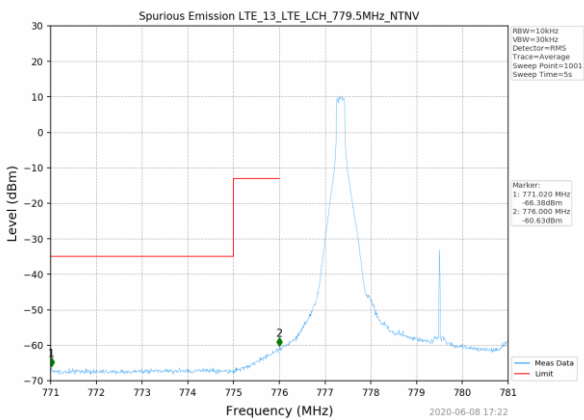


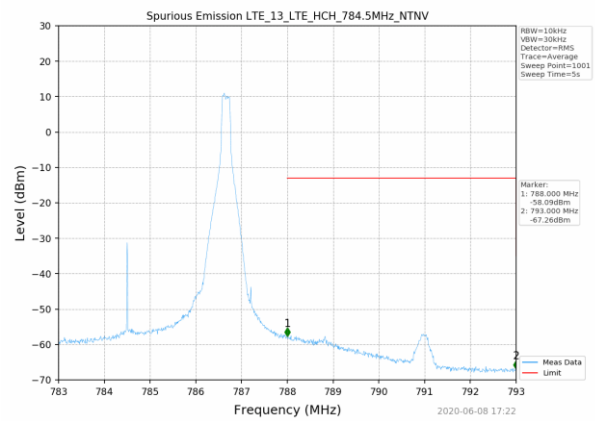
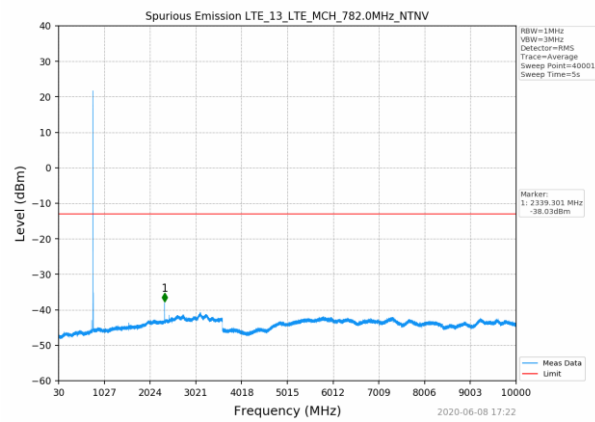
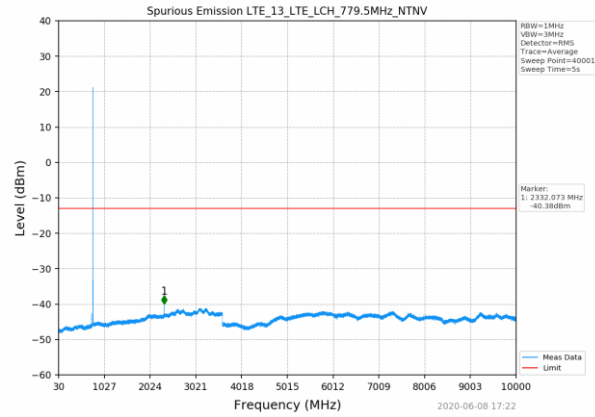


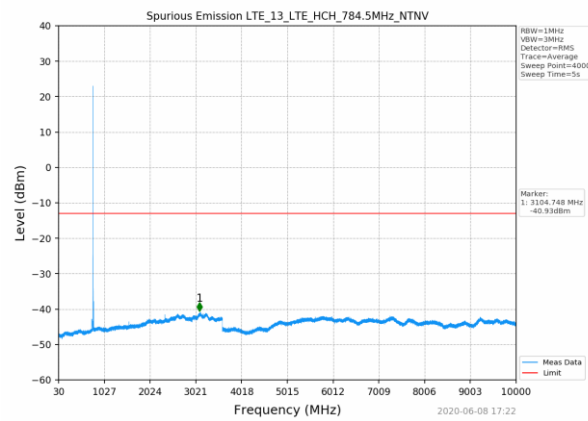
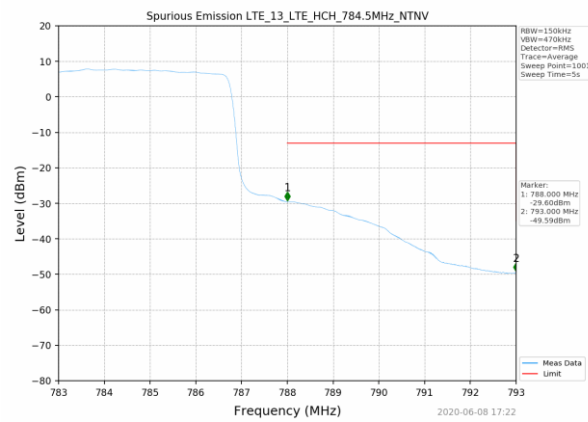
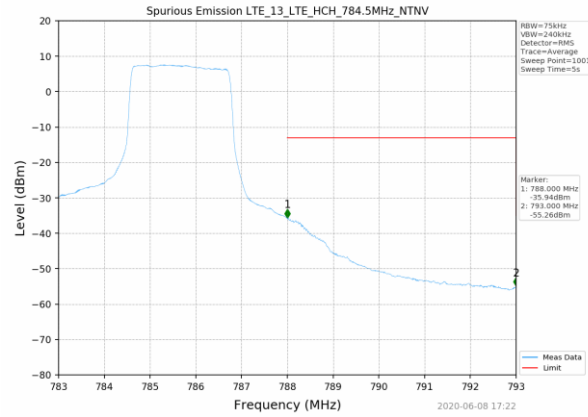


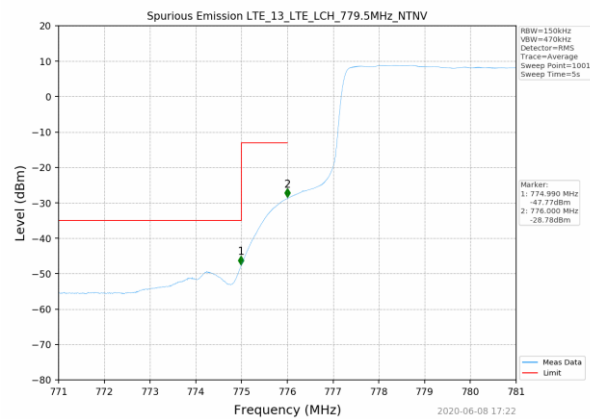
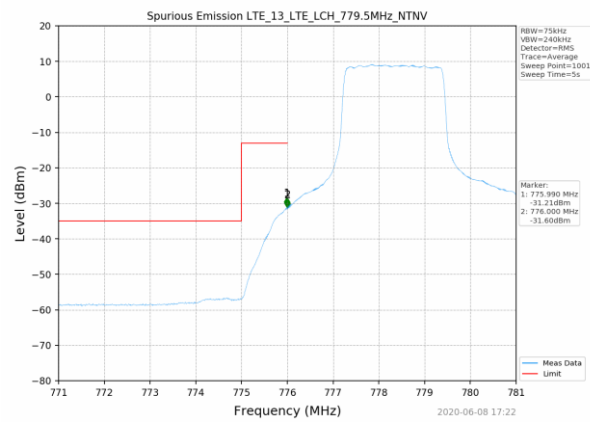
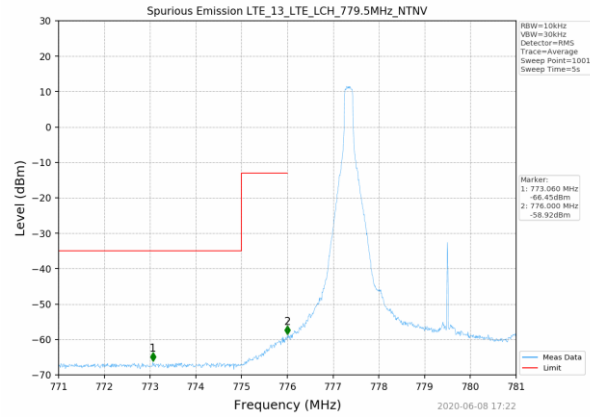
5. Spurious Emission

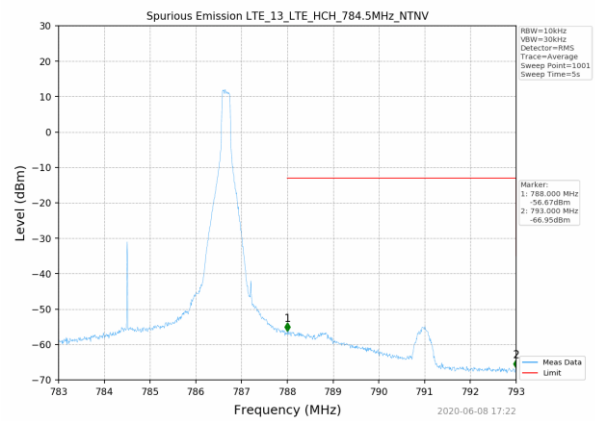
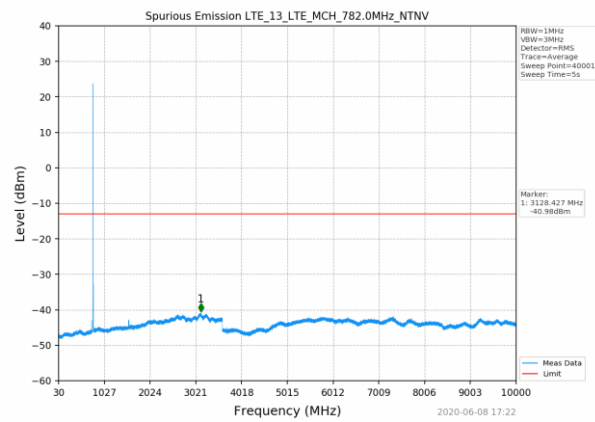
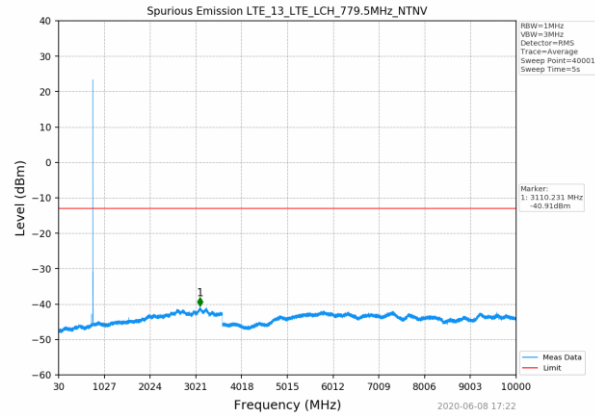
5.1 Test Graph

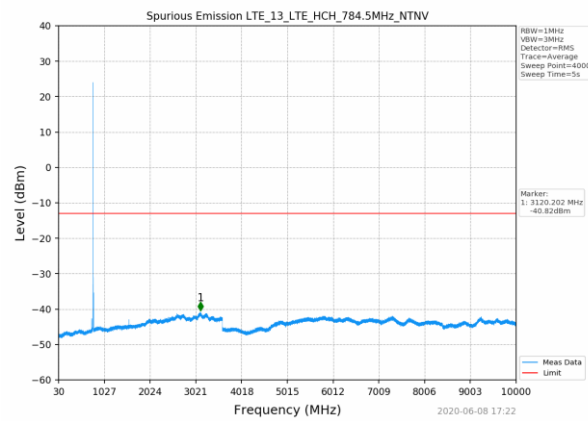
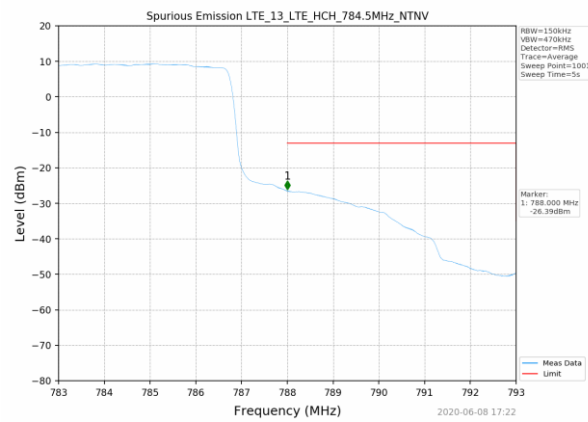
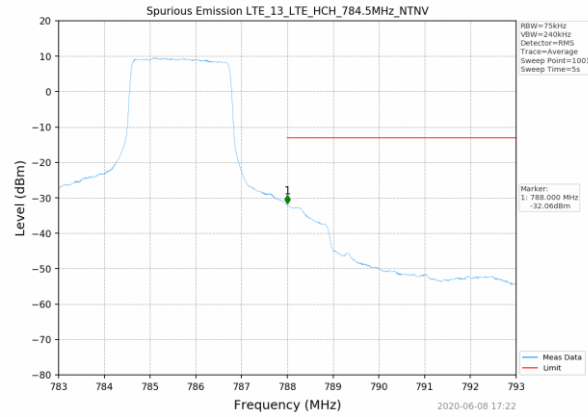


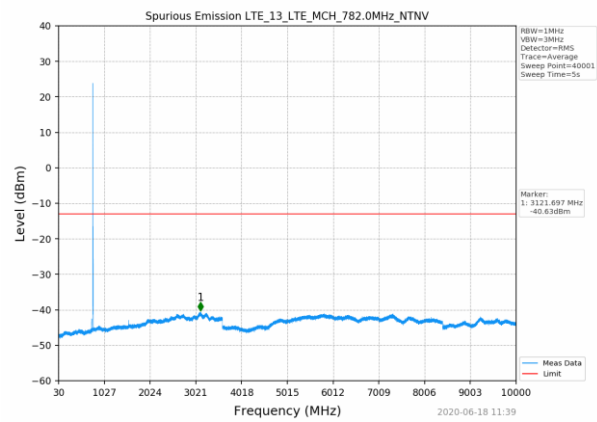
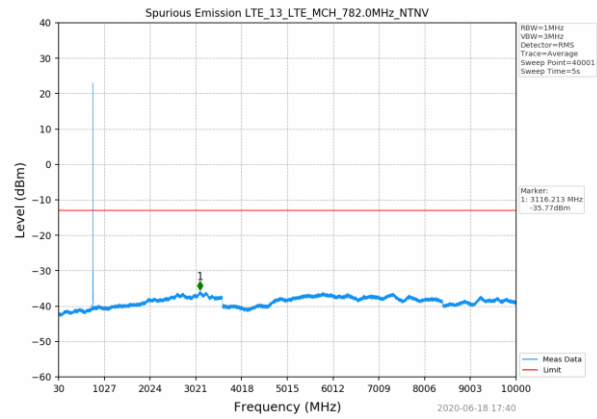












Radiated Measurement:

Remark: Margin = Limit - EIRP

LTE FDD Band 13_Channel Bandwidth 5MHz_QPSK_ Low Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1559.0	-36.97	2.89	3.00	8.64	-31.22	-13.00	18.22	H
2338.5	-44.26	2.97	3.00	9.87	-37.36	-13.00	24.36	H
1559.0	-38.29	2.89	3.00	8.64	-32.54	-13.00	19.54	V
2338.5	-43.38	2.97	3.00	9.87	-36.48	-13.00	23.48	V

LTE FDD Band 13_Channel Bandwidth 5MHz_QPSK_ Middle Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1564.0	-38.96	2.89	3.00	8.64	-33.21	-13.00	20.21	H
2346.0	-42.96	2.97	3.00	9.87	-36.06	-13.00	23.06	H
1564.0	-37.97	2.89	3.00	8.64	-32.22	-13.00	19.22	V
2346.0	-42.47	2.97	3.00	9.87	-35.57	-13.00	22.57	V

LTE FDD Band 13_Channel Bandwidth 5MHz_QPSK_ High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1569.0	-37.18	2.89	3.00	8.64	-31.43	-13.00	18.43	H
2353.5	-43.39	2.97	3.00	9.87	-36.49	-13.00	23.49	H
1569.0	-37.27	2.89	3.00	8.64	-31.52	-13.00	18.52	V
2353.5	-43.98	2.97	3.00	9.87	-37.08	-13.00	24.08	V

LTE FDD Band 13_Channel Bandwidth 10MHz_QPSK_ Low & Middle & High Channel

Frequency (MHz)	PMea (dBm)	Pcl (dB)	Diatance	Ga Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1564.0	-37.82	2.89	3.00	8.64	-32.07	-13.00	19.07	H
2346.0	-44.09	2.97	3.00	9.87	-37.19	-13.00	24.19	H
1564.0	-38.35	2.89	3.00	8.64	-32.60	-13.00	19.60	V
2346.0	-43.78	2.97	3.00	9.87	-36.88	-13.00	23.88	V