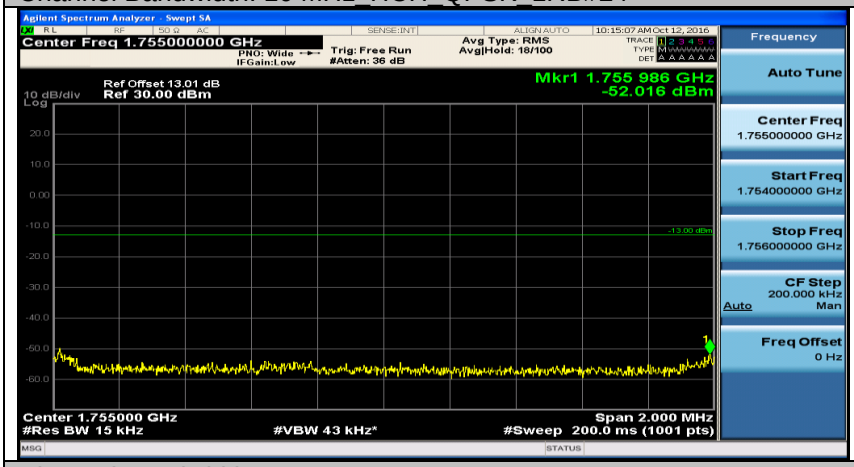
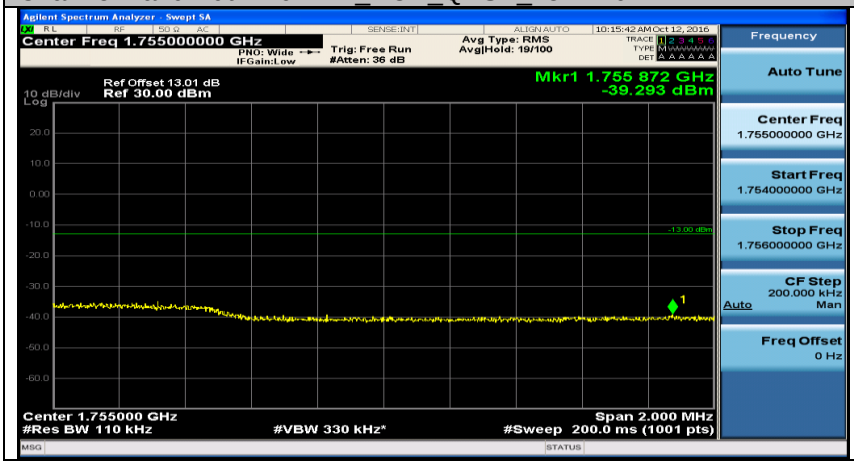
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24

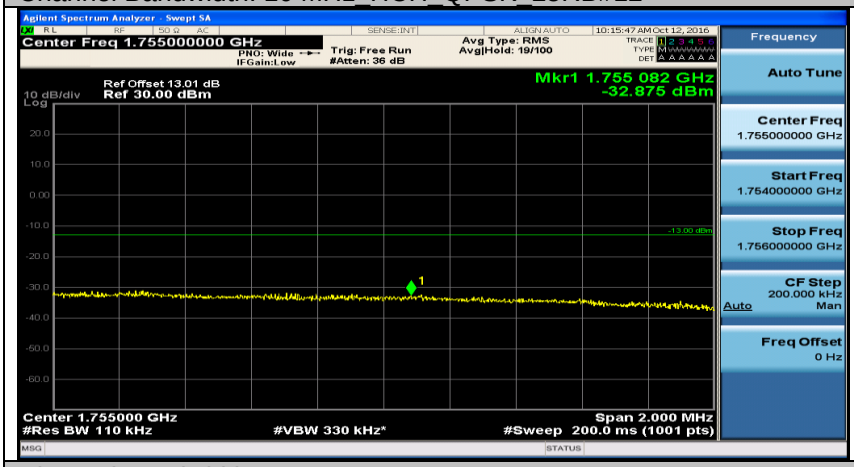


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#0



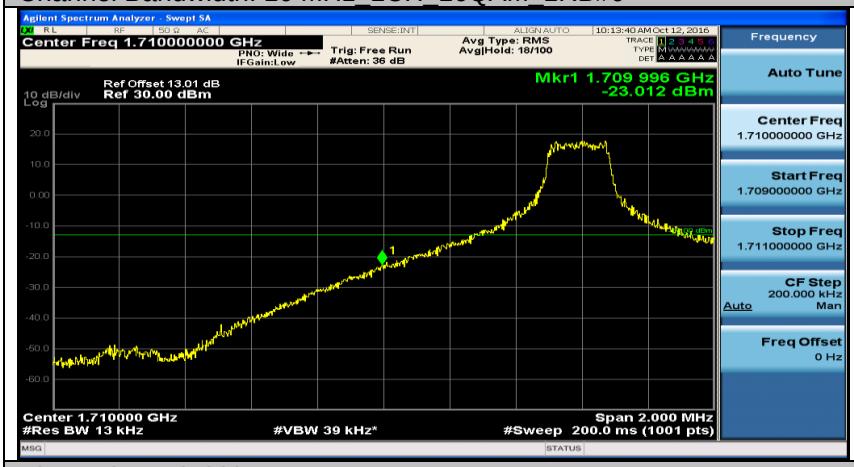
Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#12



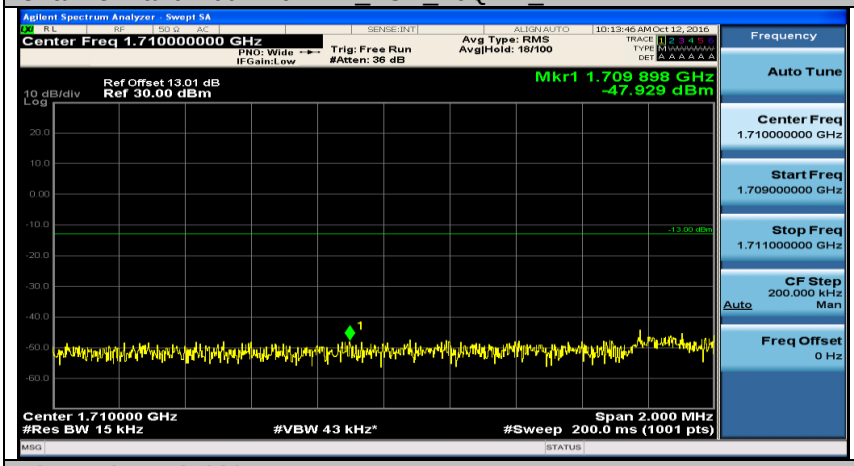
Channel Bandwidth: 10 MHz_HCH_QPSK_25RB#25

Channel Bandwidth: 10 MHz_HCH_QPSK_50RB#0

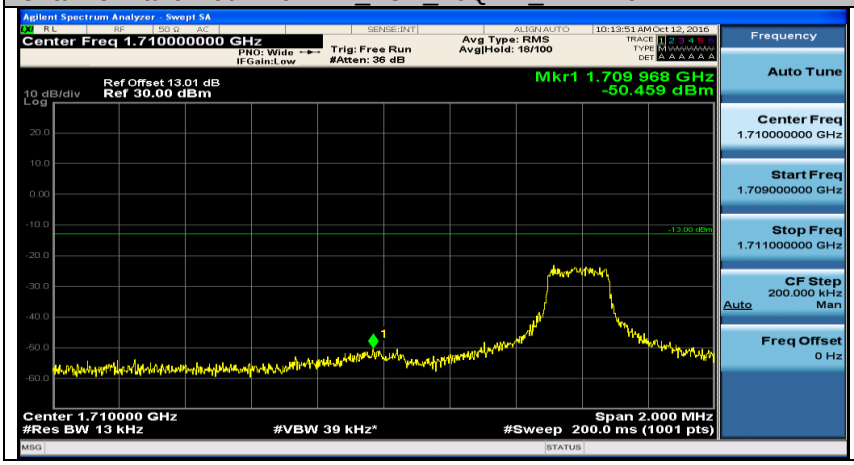
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



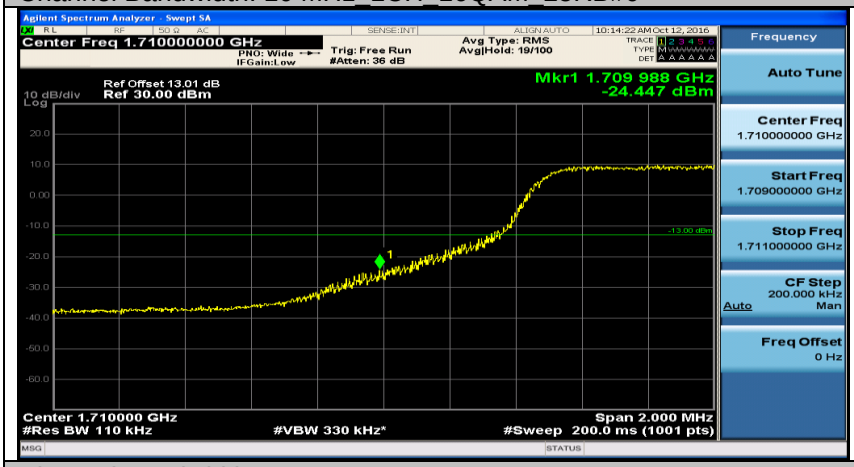
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24



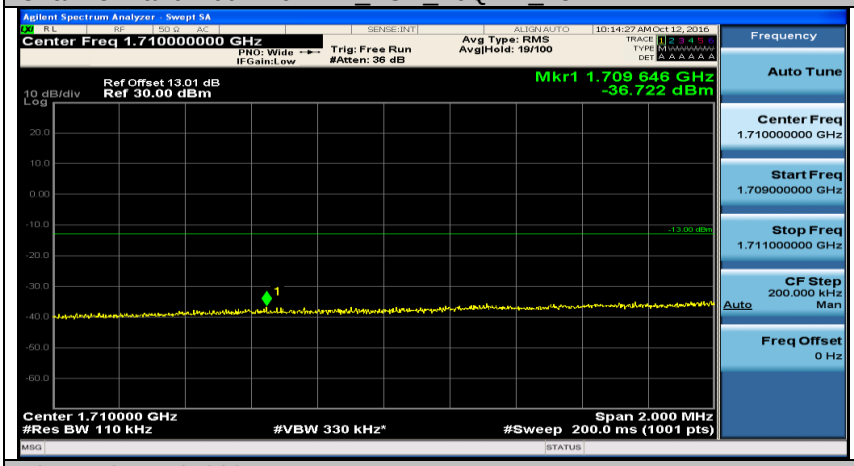
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49



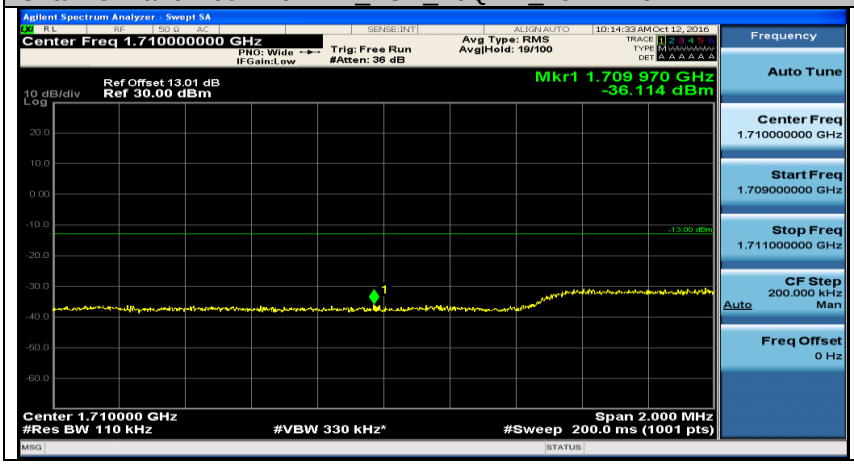
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#0



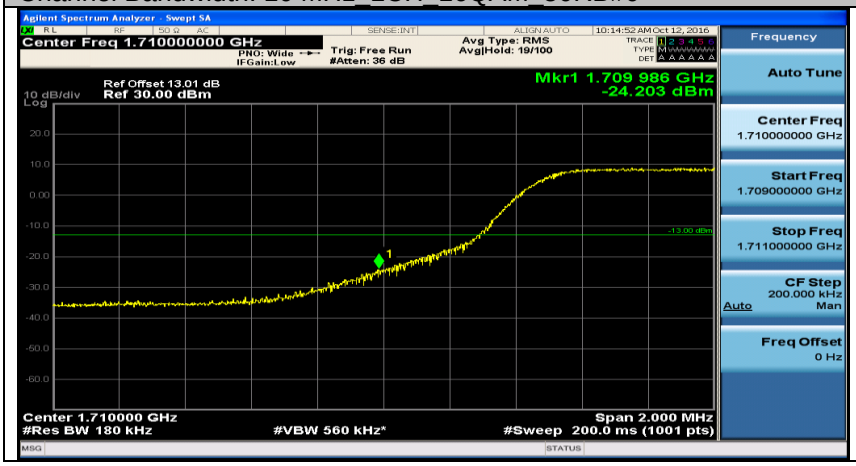
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#12



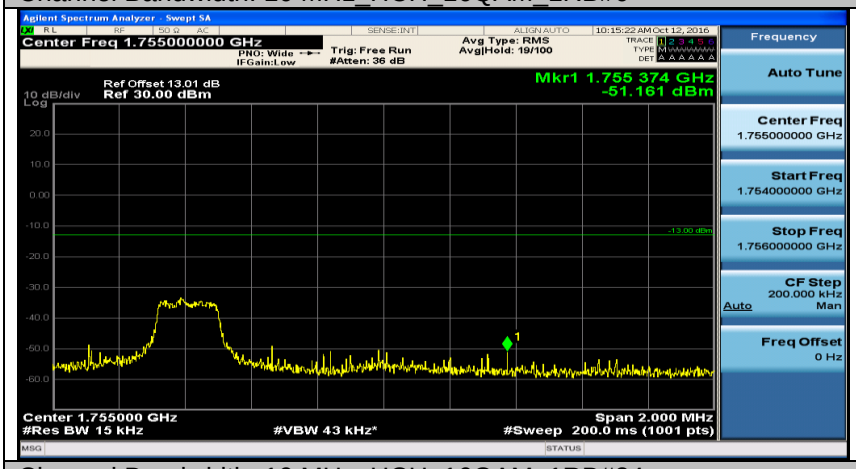
Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#25



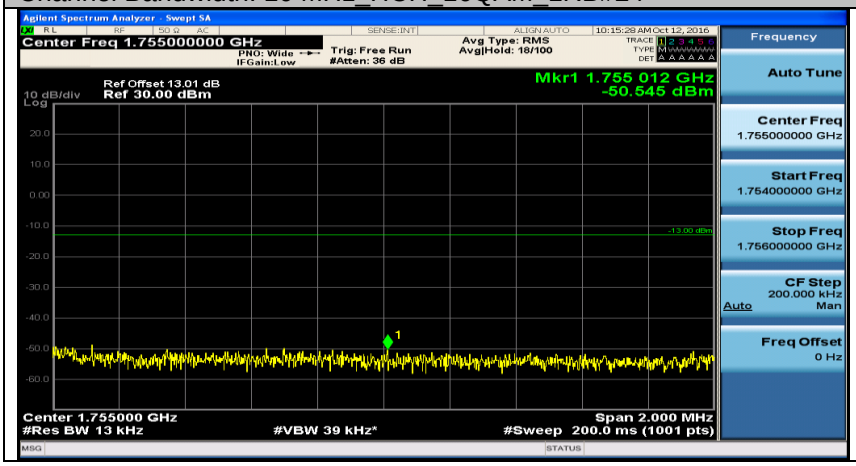
Channel Bandwidth: 10 MHz_LCH_16QAM_50RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0

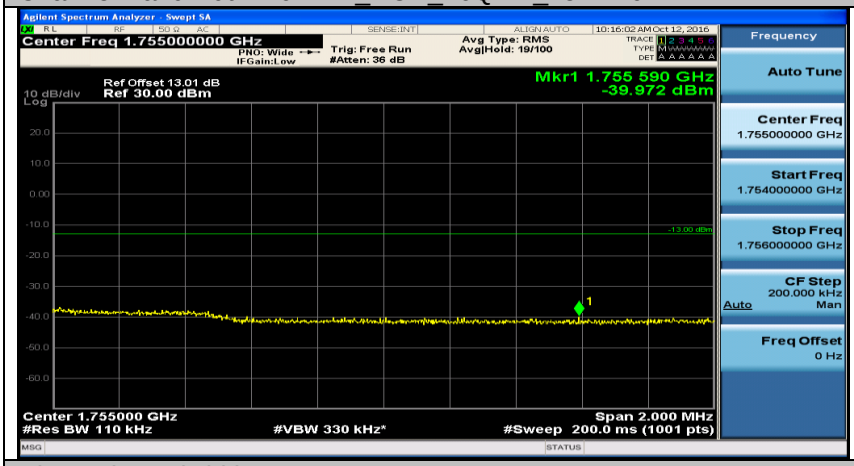


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

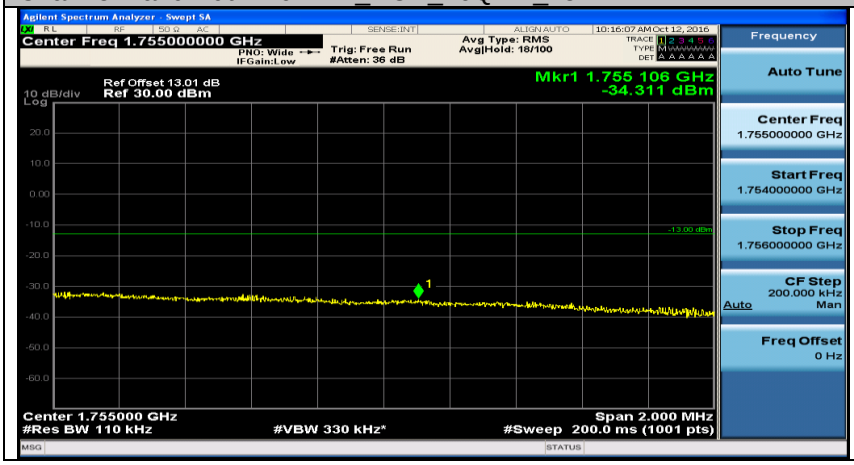


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49

Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#0



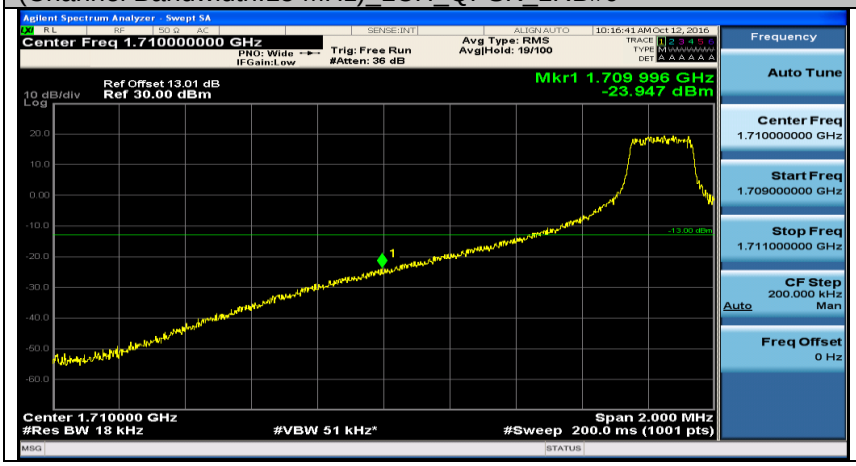
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#12



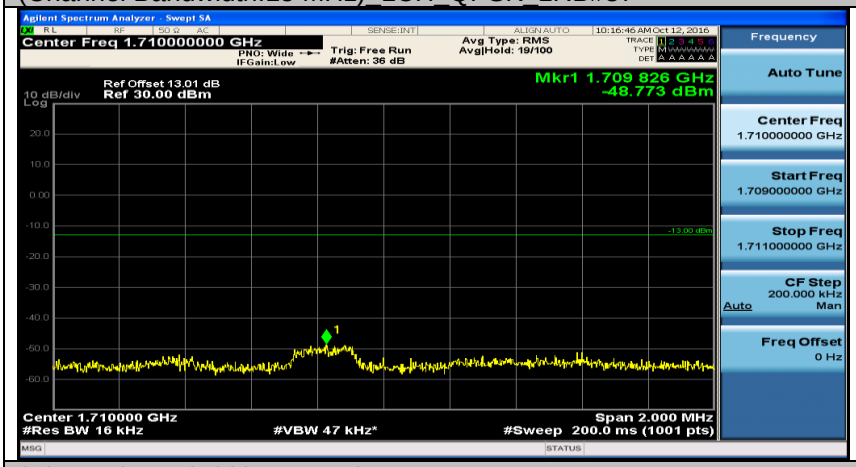
Channel Bandwidth: 10 MHz_HCH_16QAM_25RB#25

Channel Bandwidth: 10 MHz_HCH_16QAM_50RB#0

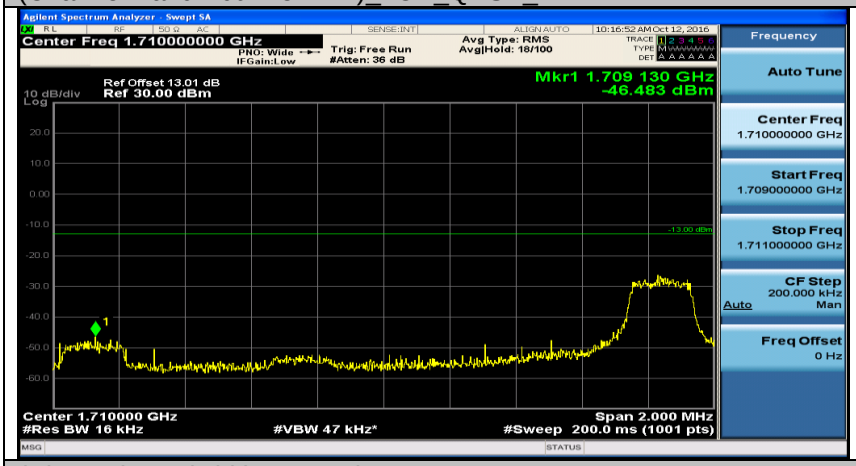
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#0



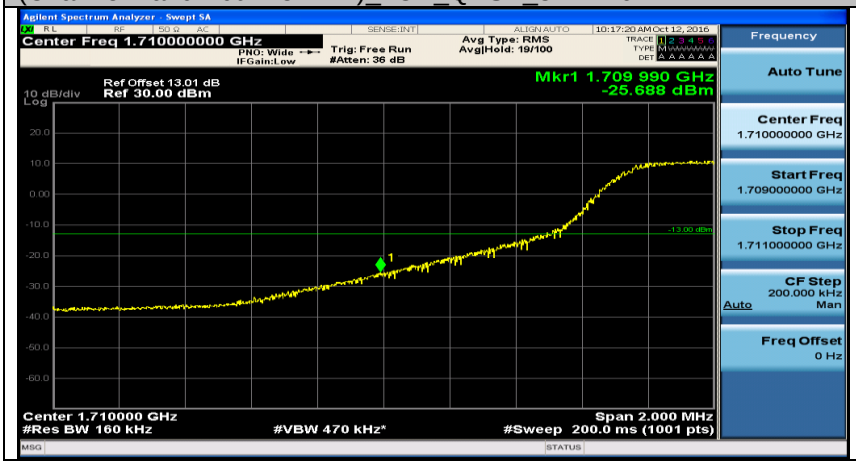
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#37



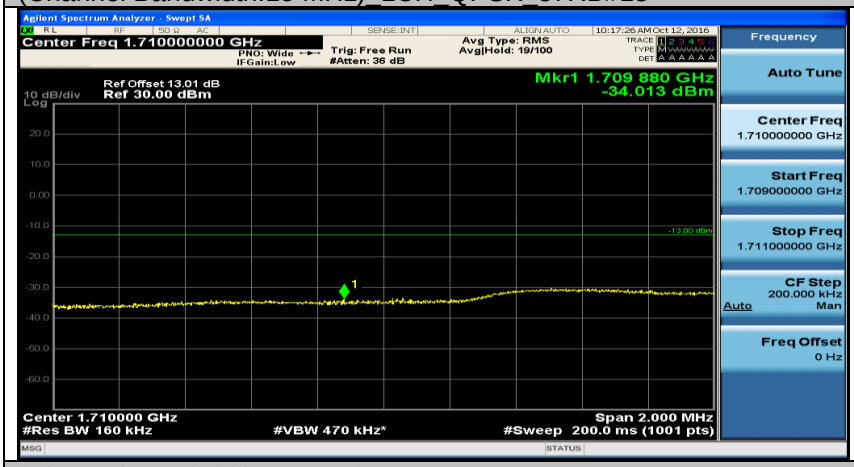
(Channel Bandwidth:15 MHz)_LCH_QPSK_1RB#74



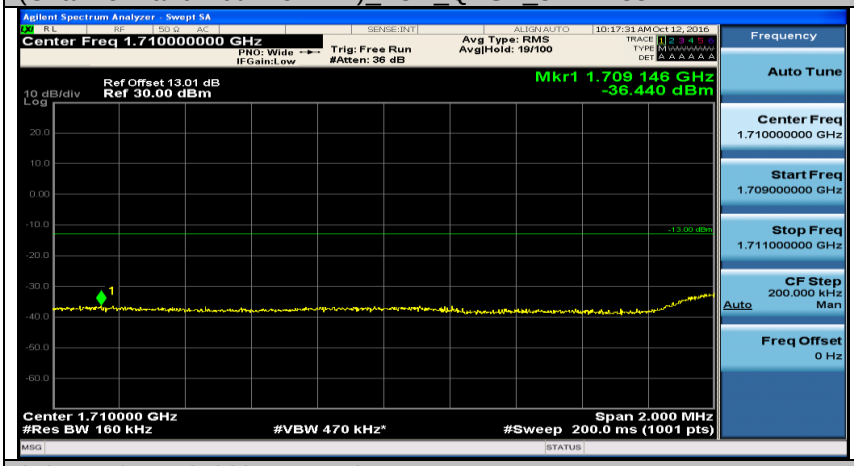
(Channel Bandwidth:15 MHz)_LCH_QPSK_37RB#0



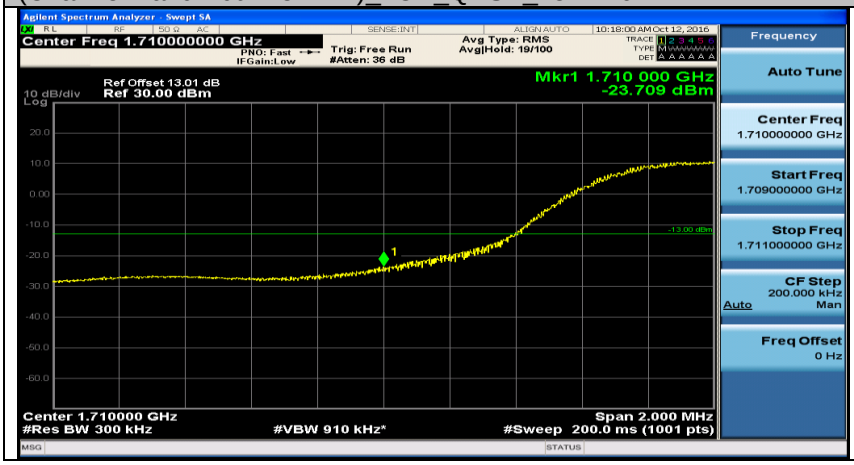
(Channel Bandwidth:15 MHz)_LCH_QPSK_37RB#18



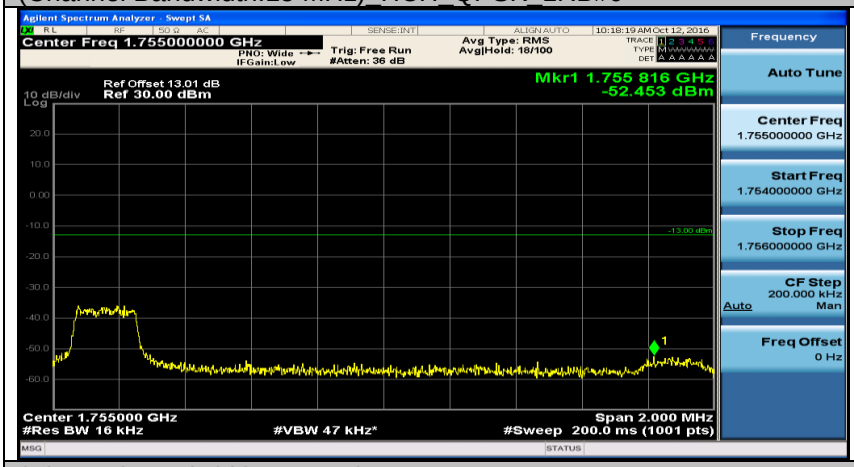
(Channel Bandwidth:15 MHz)_LCH_QPSK_37RB#38



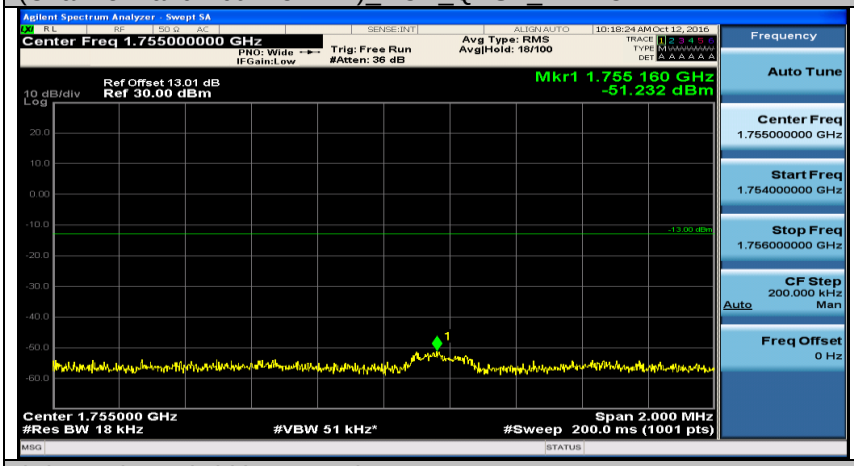
(Channel Bandwidth:15 MHz)_LCH_QPSK_75RB#0



(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

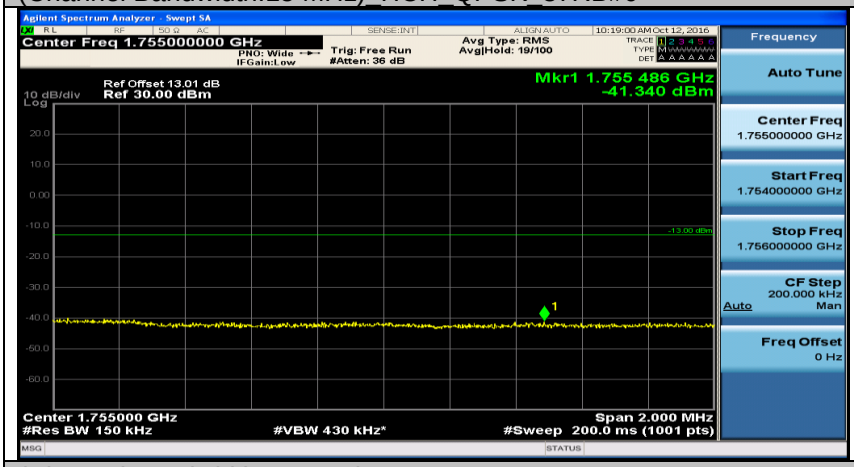


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

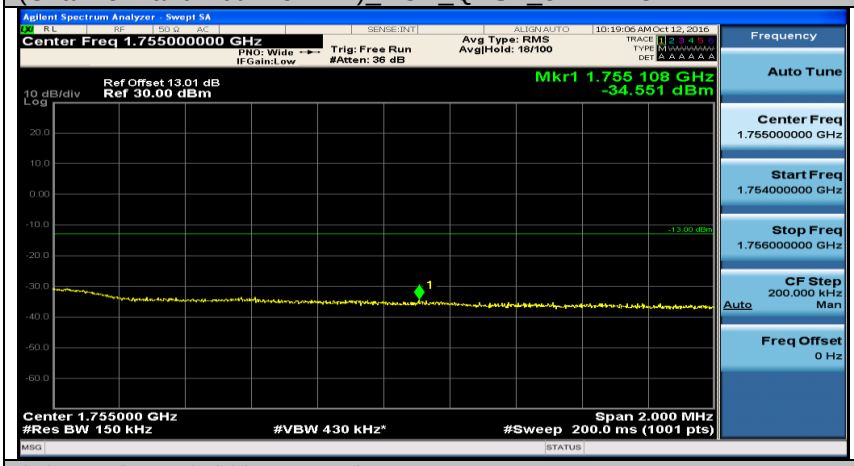


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#74

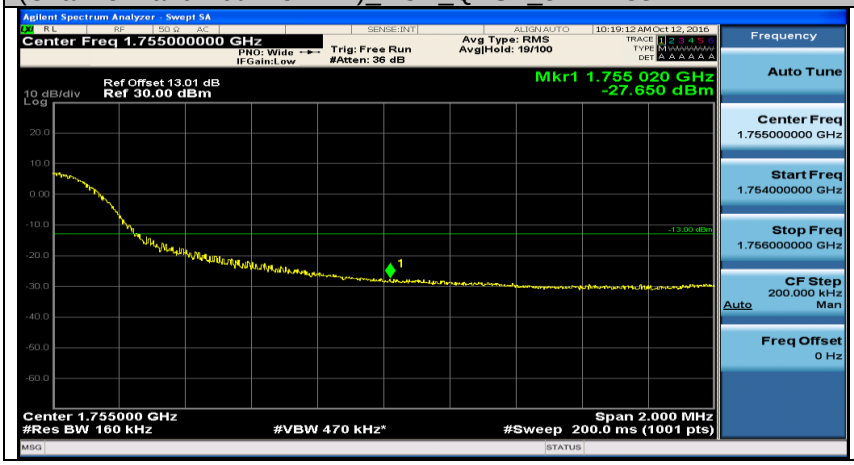
(Channel Bandwidth:15 MHz)_HCH_QPSK_37RB#0



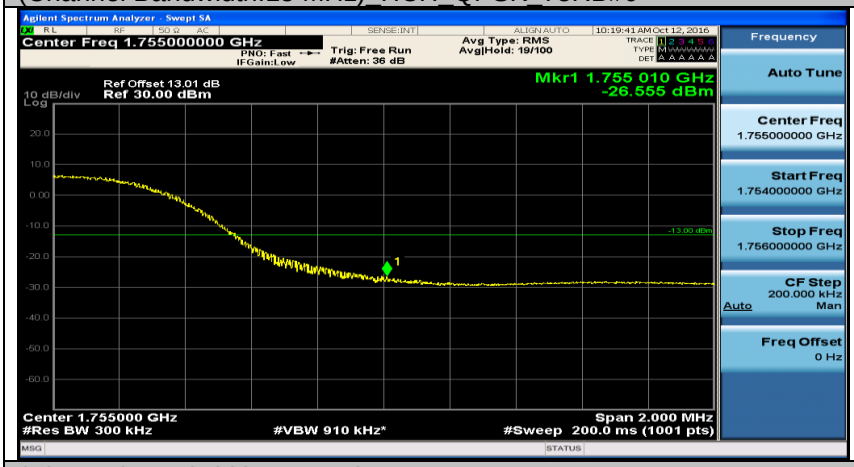
(Channel Bandwidth:15 MHz)_HCH_QPSK_37RB#18



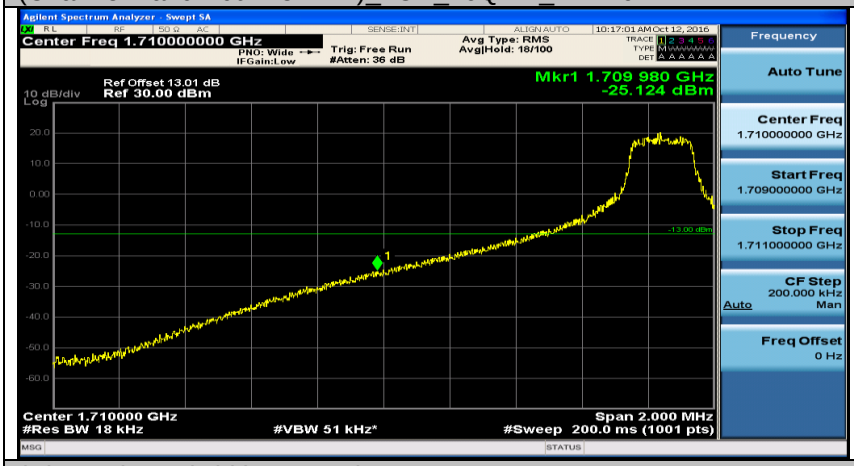
(Channel Bandwidth:15 MHz)_HCH_QPSK_37RB#38



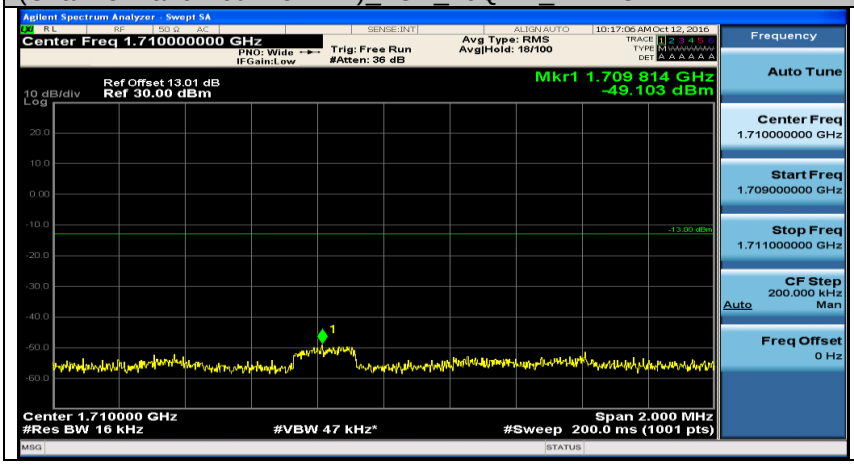
(Channel Bandwidth:15 MHz)_HCH_QPSK_75RB#0



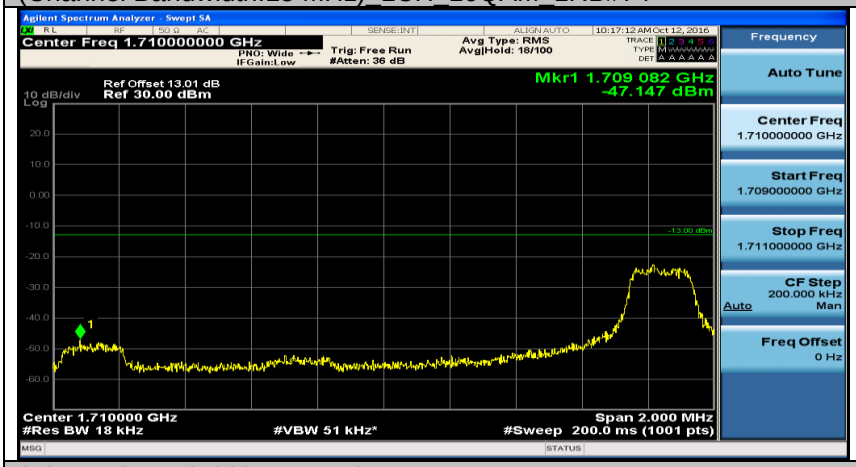
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0



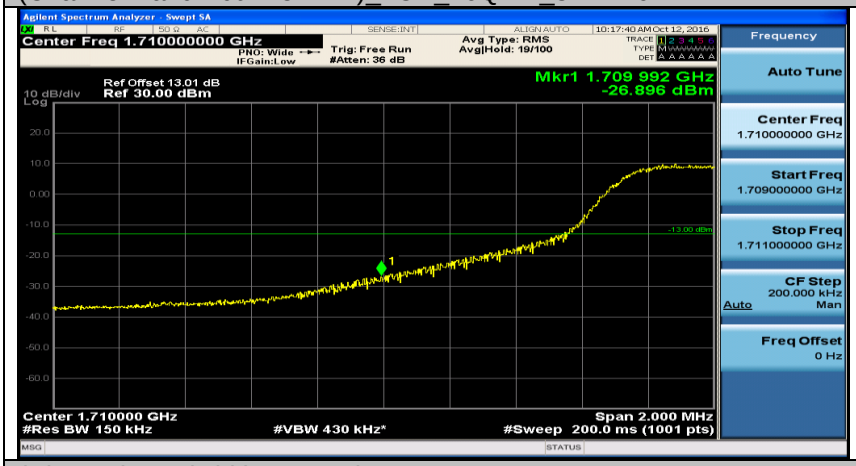
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37



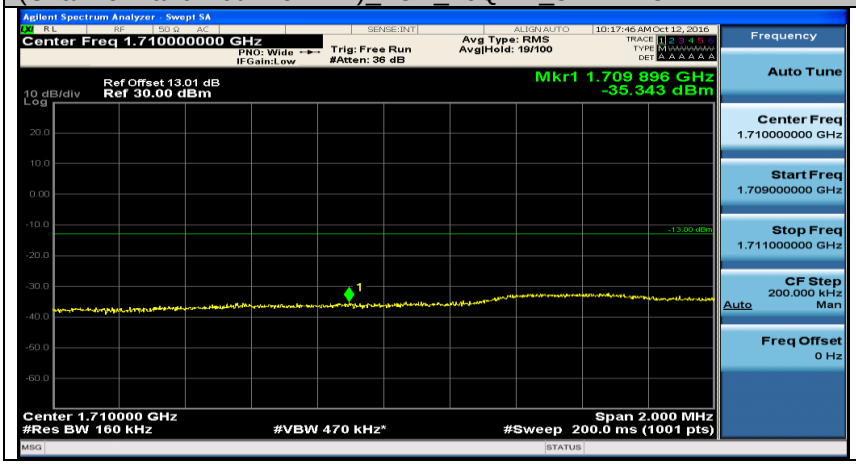
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#74



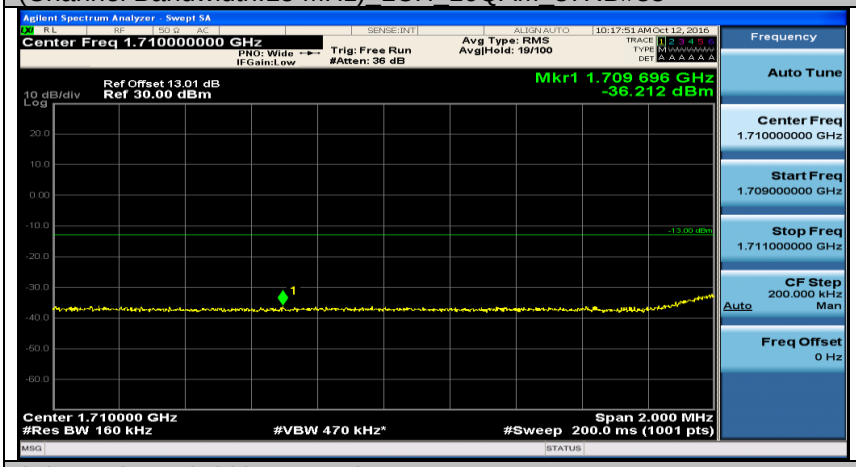
(Channel Bandwidth:15 MHz)_LCH_16QAM_37RB#0



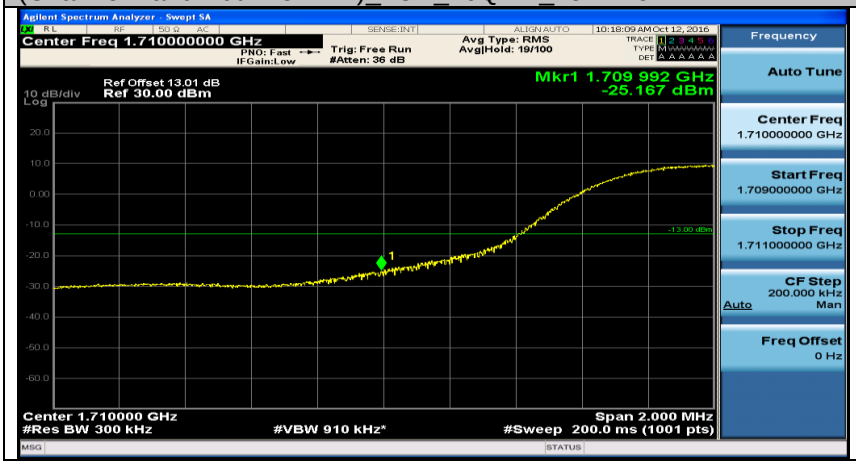
(Channel Bandwidth:15 MHz)_LCH_16QAM_37RB#18



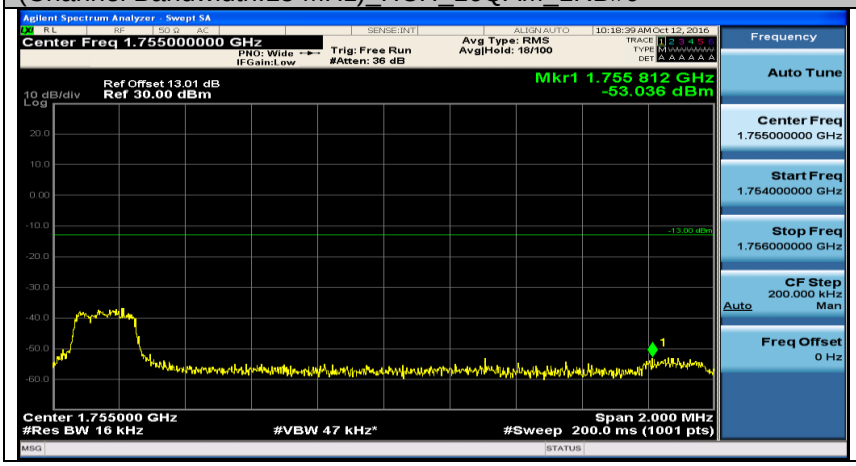
(Channel Bandwidth:15 MHz)_LCH_16QAM_37RB#38



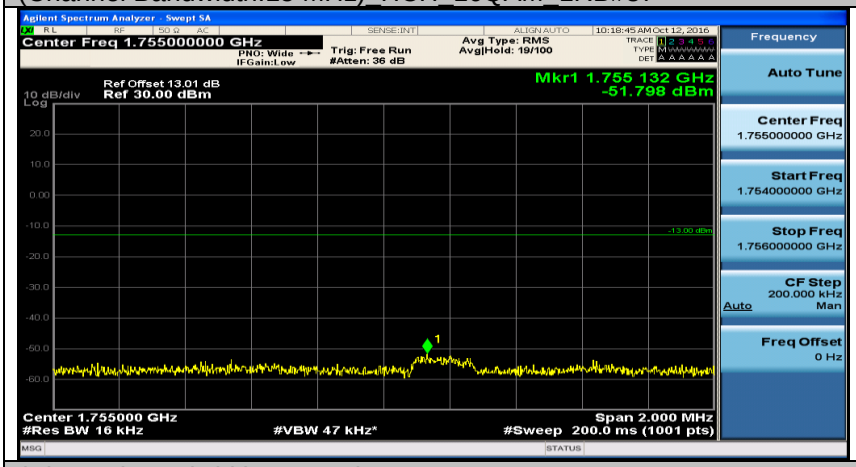
(Channel Bandwidth:15 MHz)_LCH_16QAM_75RB#0



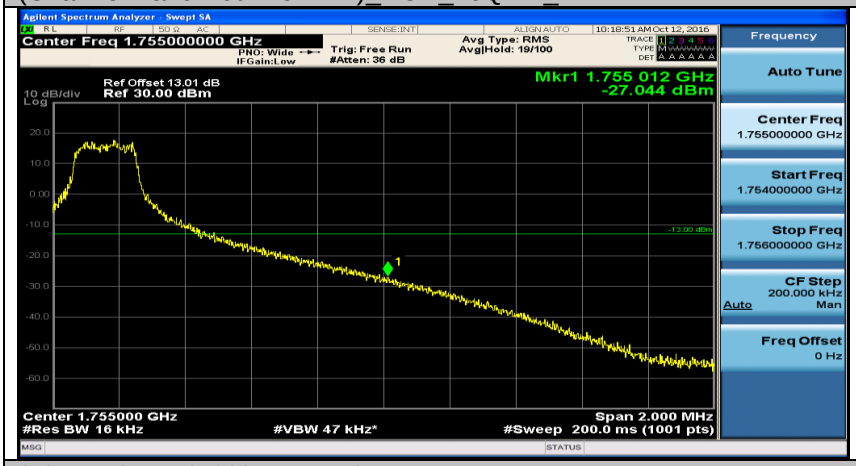
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0



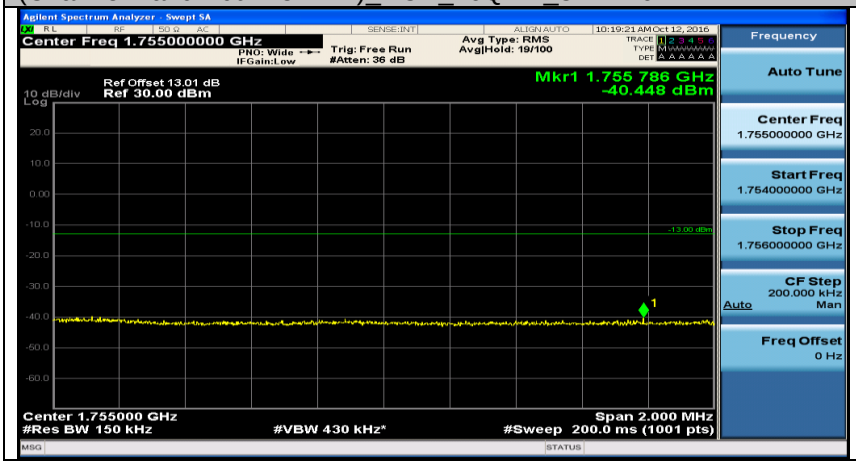
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37



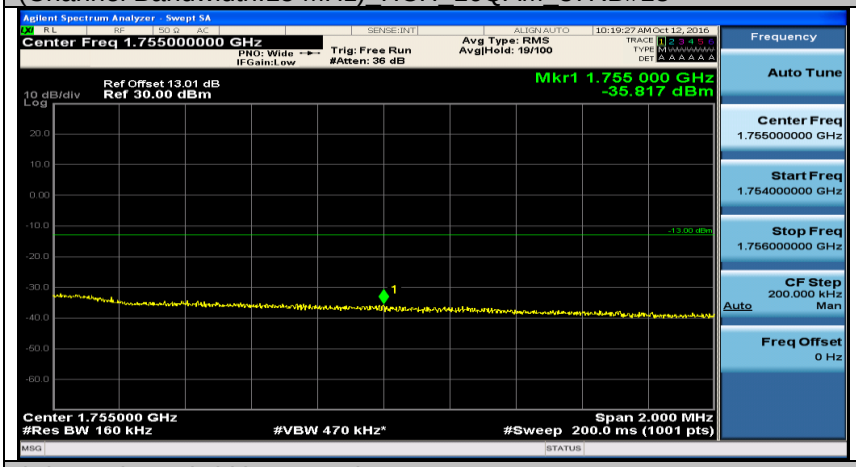
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#74



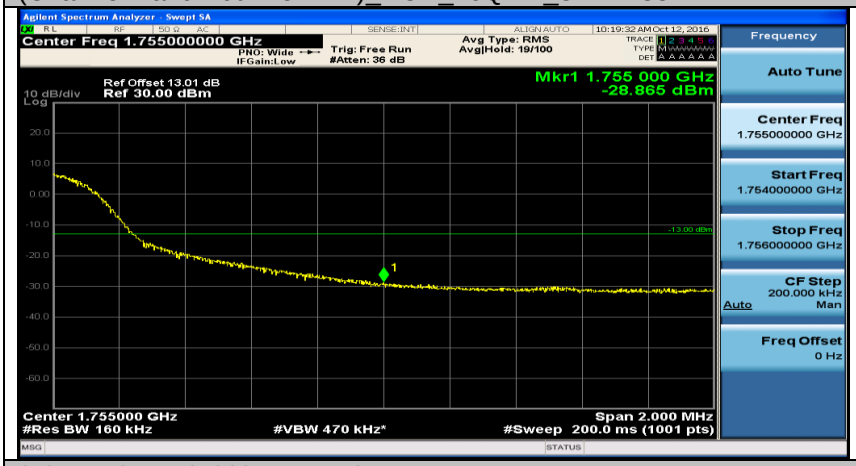
(Channel Bandwidth:15 MHz)_HCH_16QAM_37RB#0



(Channel Bandwidth:15 MHz)_HCH_16QAM_37RB#18

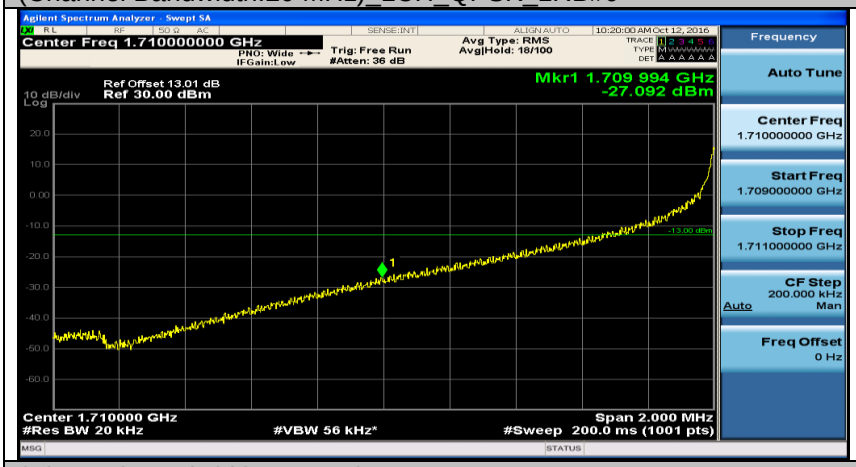


(Channel Bandwidth:15 MHz)_HCH_16QAM_37RB#38

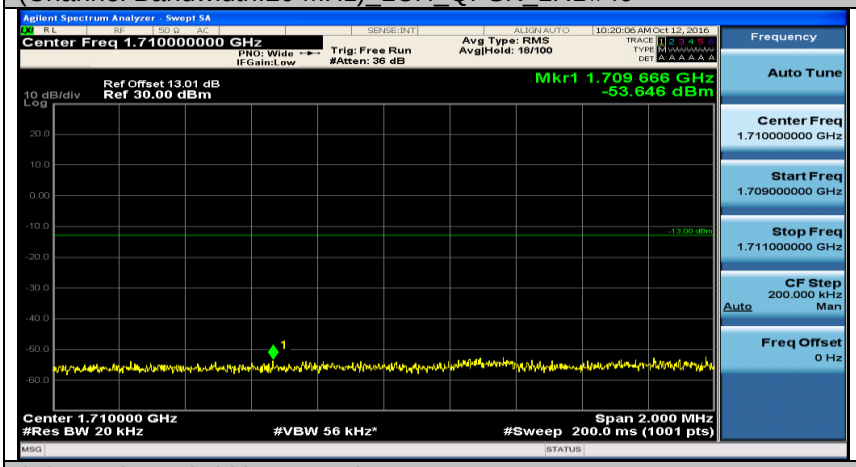


(Channel Bandwidth:15 MHz)_HCH_16QAM_75RB#0

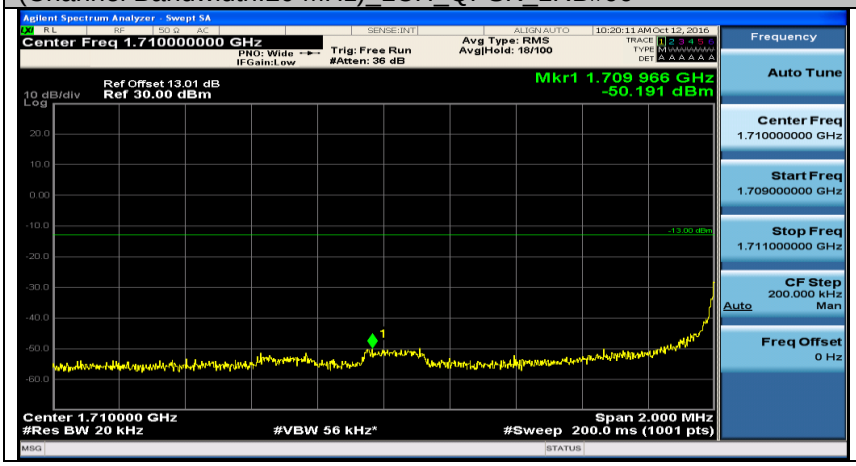
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#0



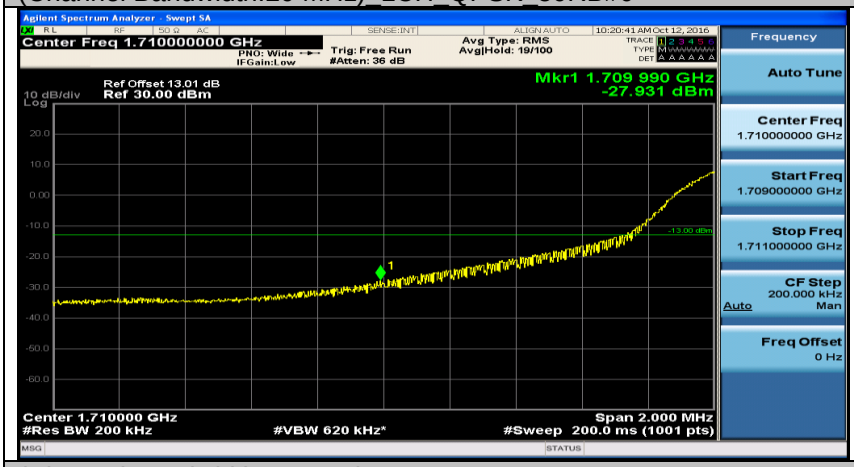
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#49



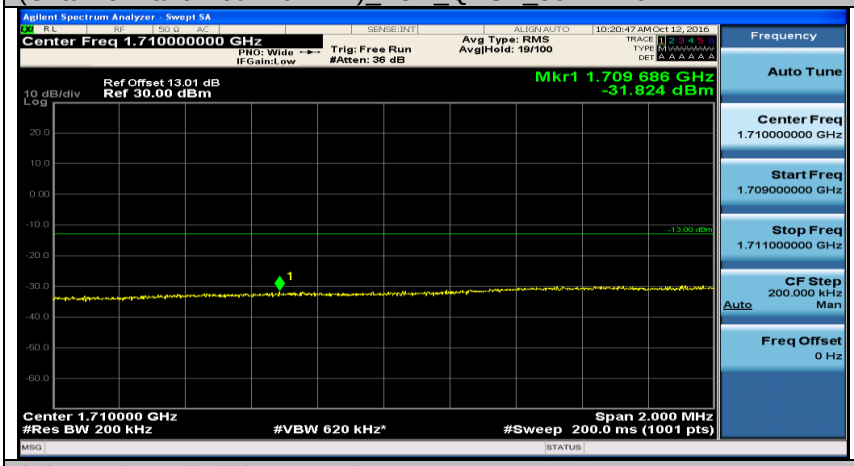
(Channel Bandwidth:20 MHz)_LCH_QPSK_1RB#99



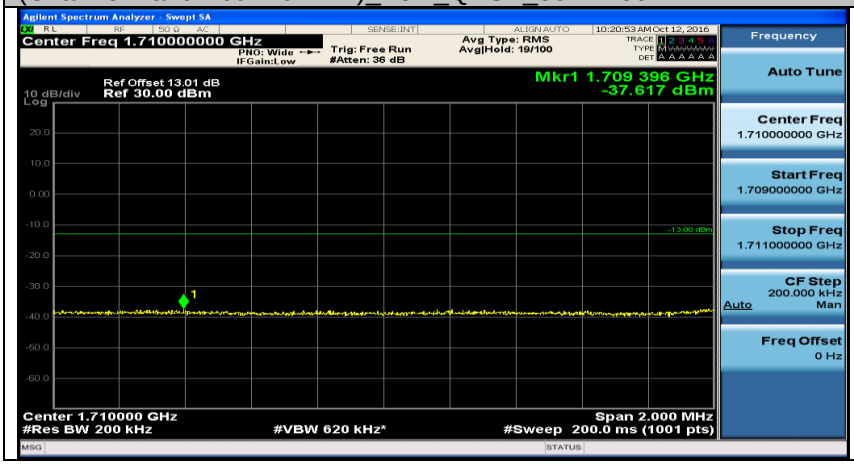
(Channel Bandwidth:20 MHz)_LCH_QPSK_50RB#0



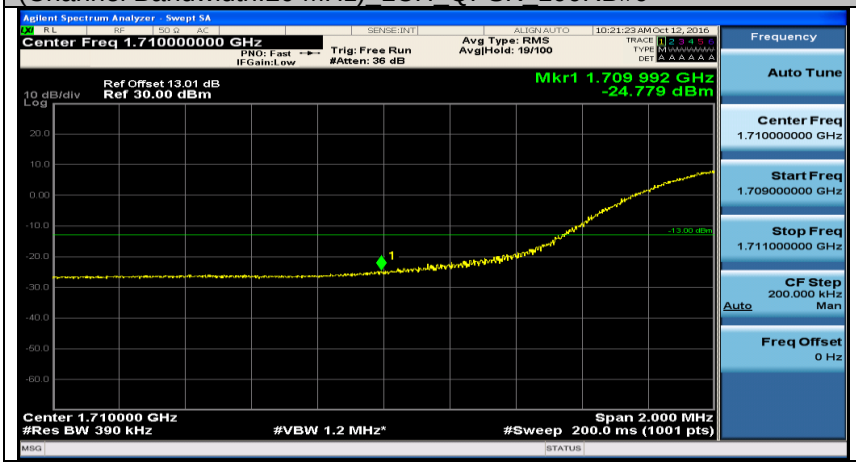
(Channel Bandwidth:20 MHz)_LCH_QPSK_50RB#25



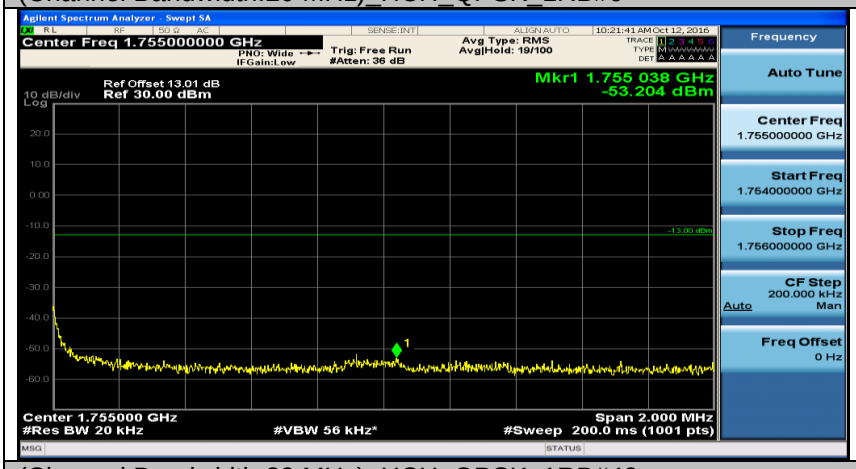
(Channel Bandwidth:20 MHz)_LCH_QPSK_50RB#50



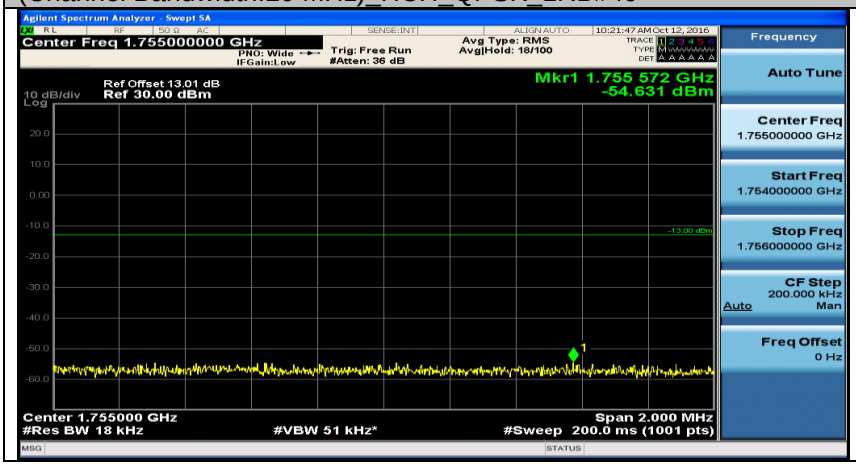
(Channel Bandwidth:20 MHz)_LCH_QPSK_100RB#0



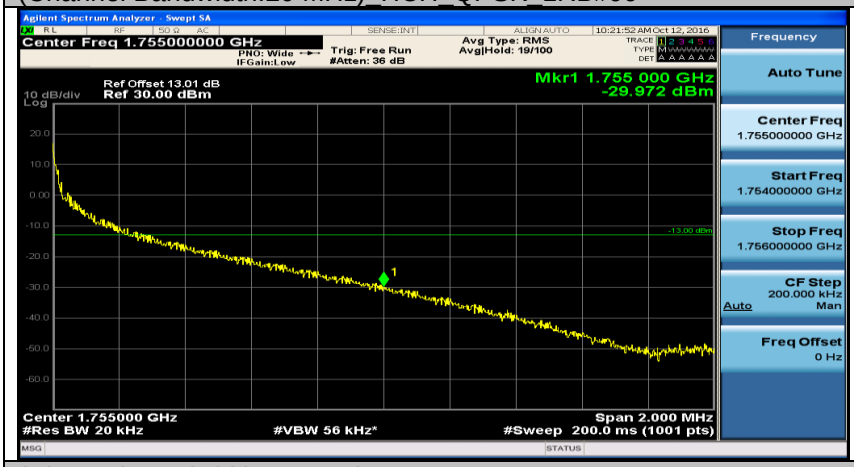
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0



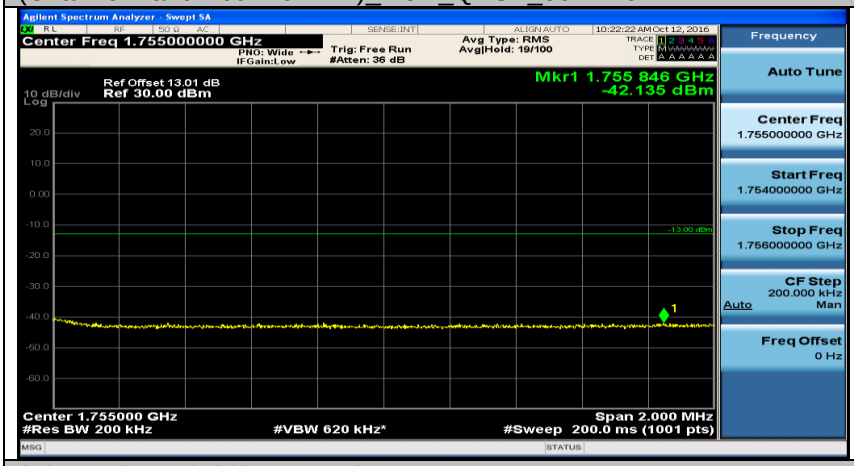
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49



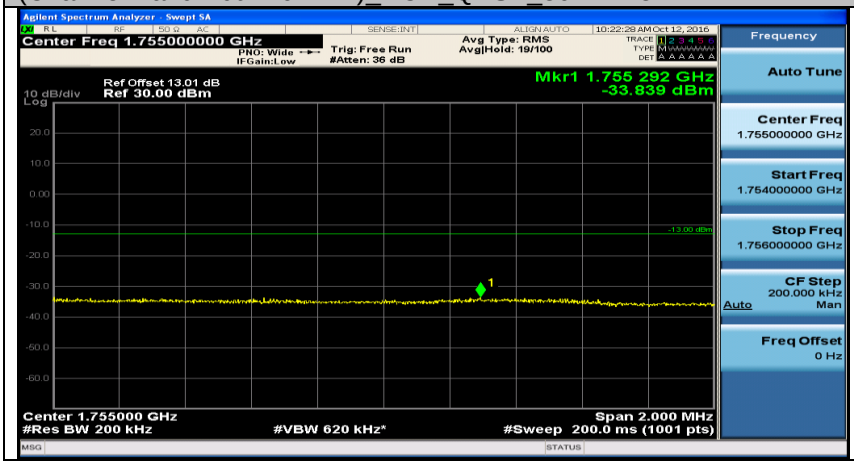
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#99



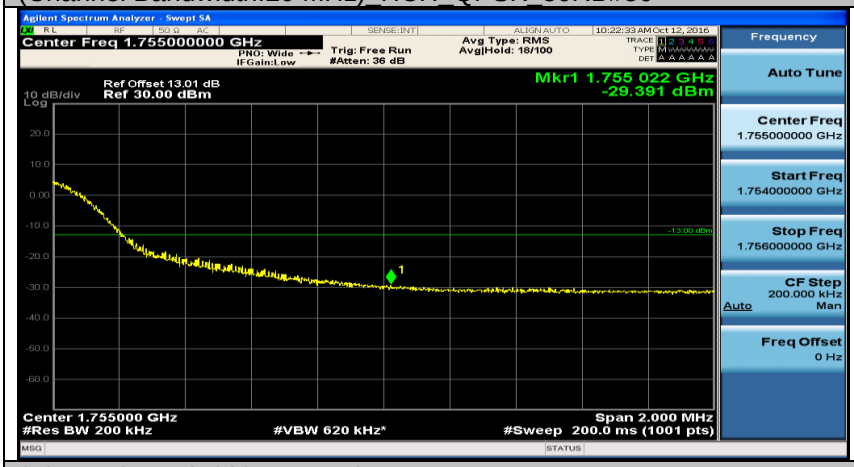
(Channel Bandwidth:20 MHz)_HCH_QPSK_50RB#0



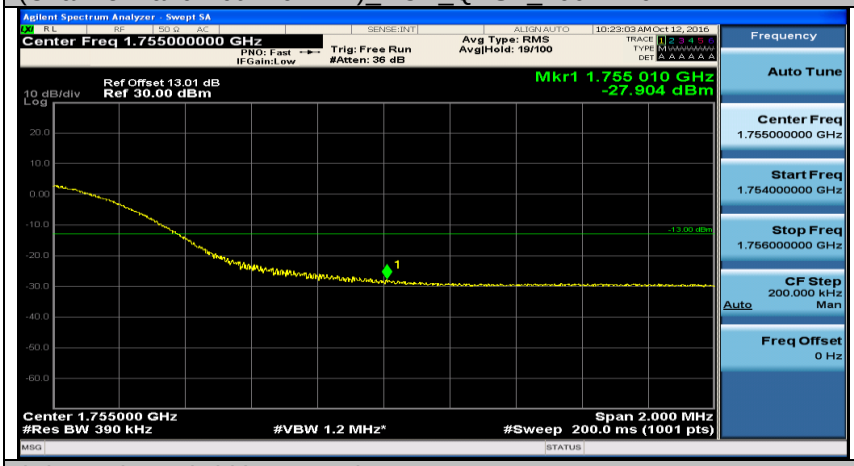
(Channel Bandwidth:20 MHz)_HCH_QPSK_50RB#25



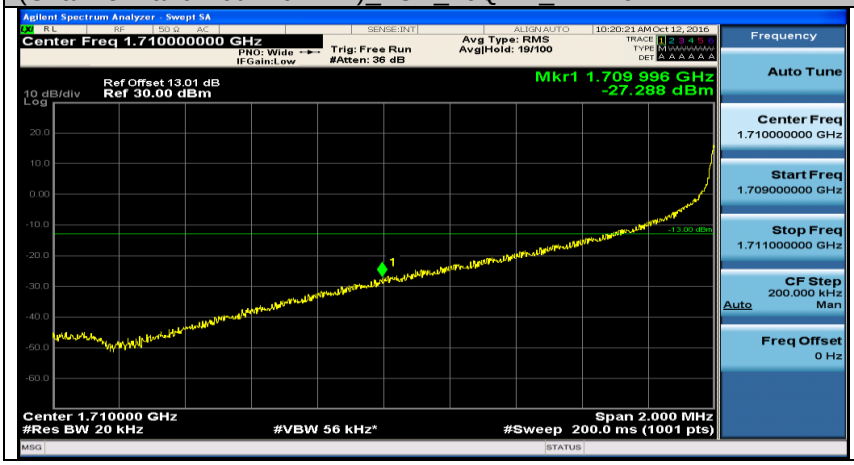
(Channel Bandwidth:20 MHz)_HCH_QPSK_50RB#50



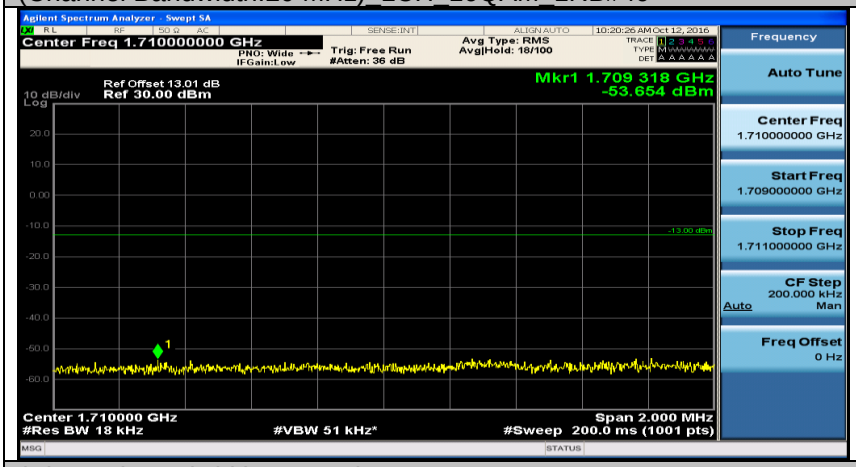
(Channel Bandwidth:20 MHz)_HCH_QPSK_100RB#0



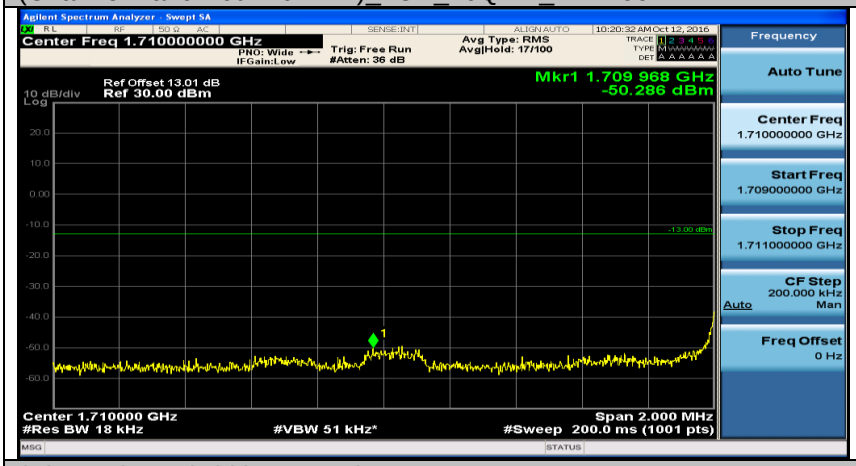
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0



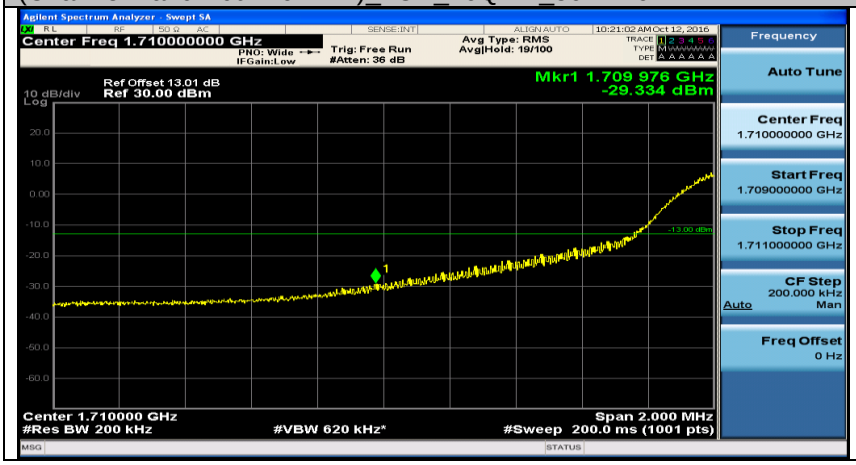
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49



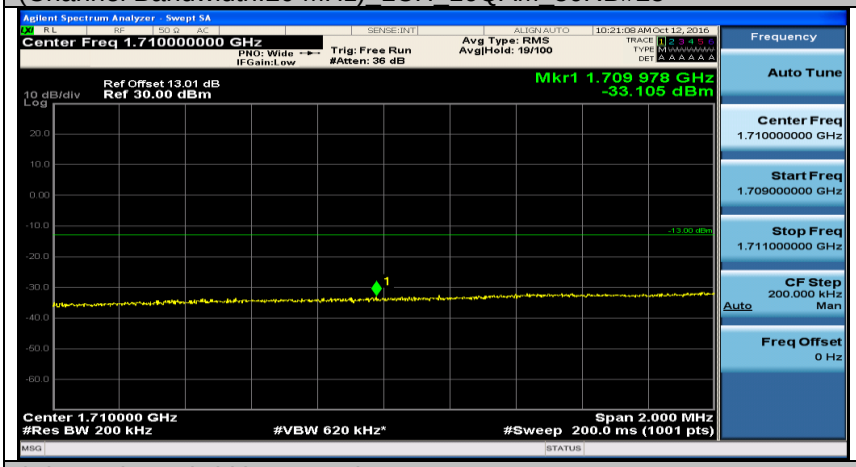
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#99



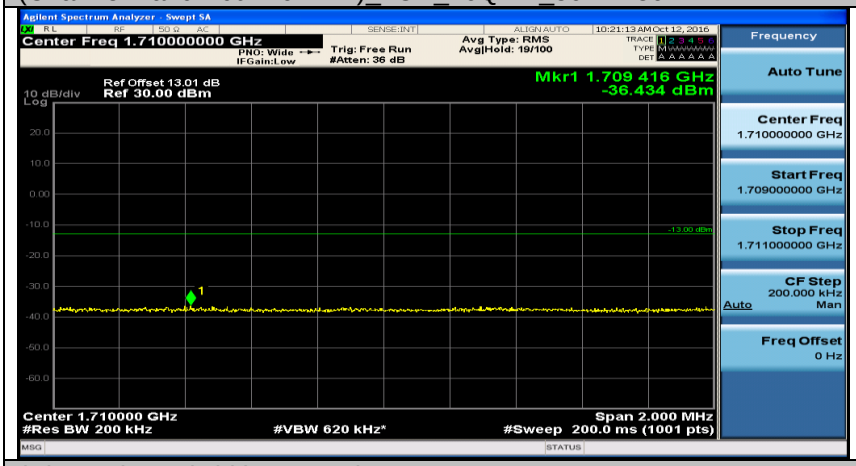
(Channel Bandwidth:20 MHz)_LCH_16QAM_50RB#0



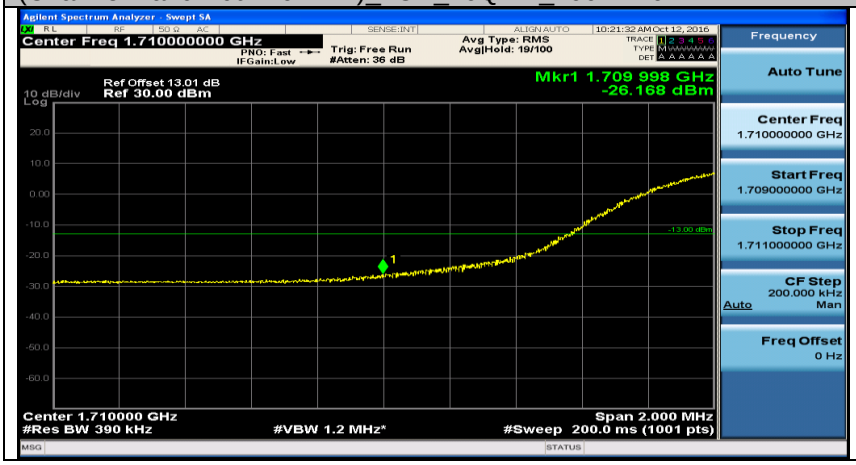
(Channel Bandwidth:20 MHz)_LCH_16QAM_50RB#25



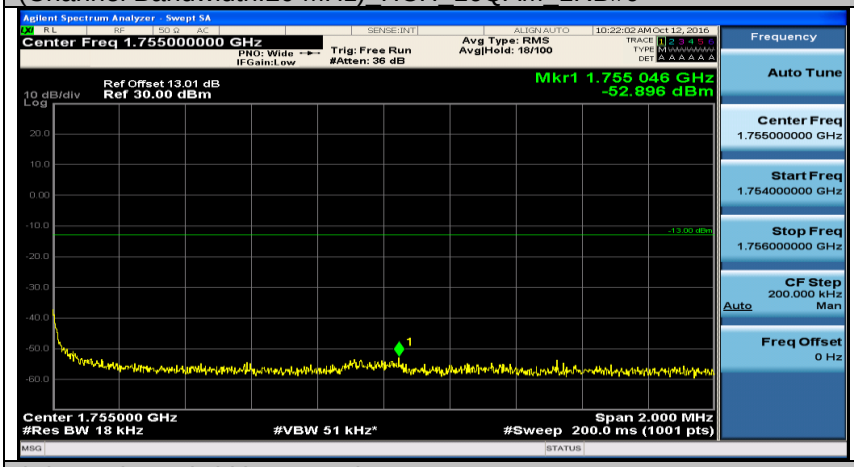
(Channel Bandwidth:20 MHz)_LCH_16QAM_50RB#50



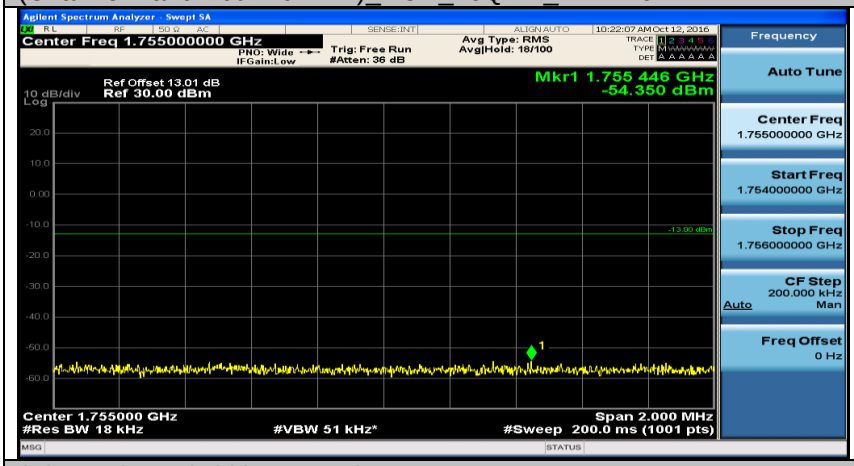
(Channel Bandwidth:20 MHz)_LCH_16QAM_100RB#0



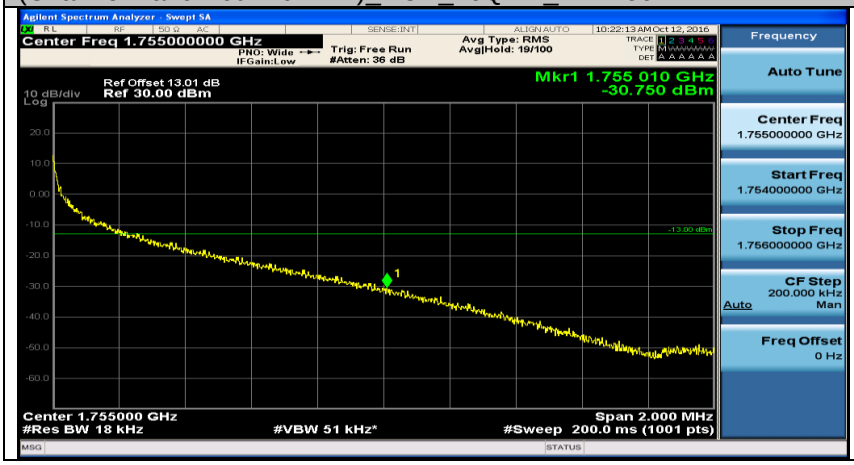
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



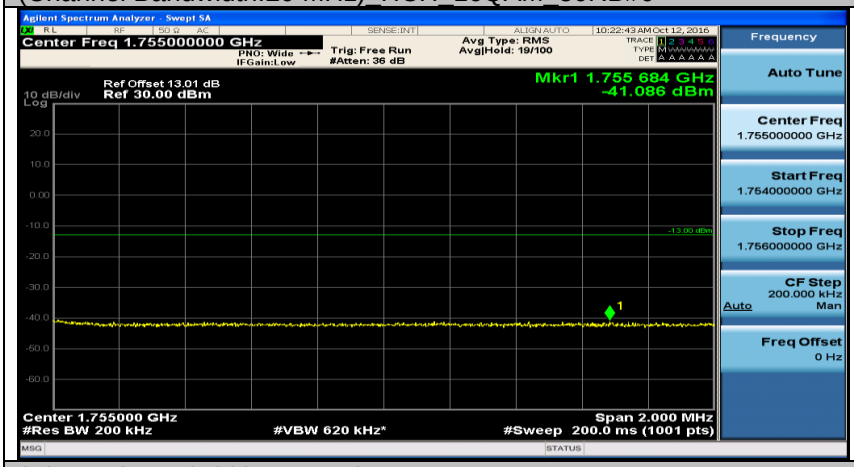
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49



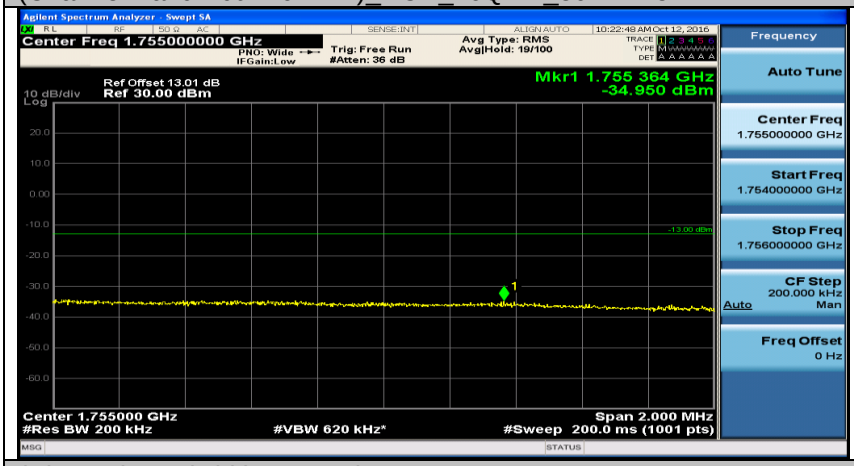
(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#99



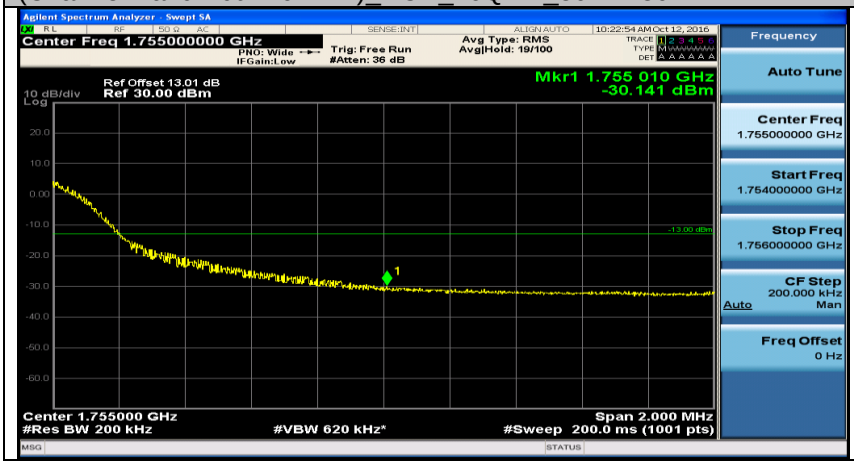
(Channel Bandwidth:20 MHz)_HCH_16QAM_50RB#0



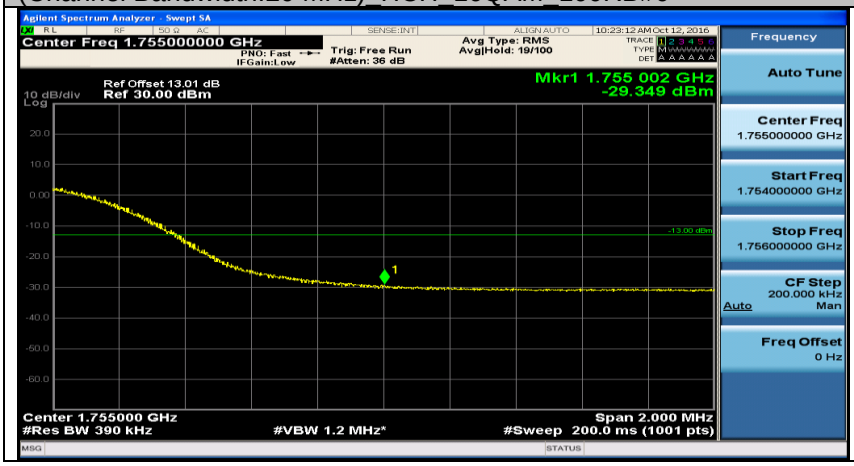
(Channel Bandwidth:20 MHz)_HCH_16QAM_50RB#25



(Channel Bandwidth:20 MHz)_HCH_16QAM_50RB#50



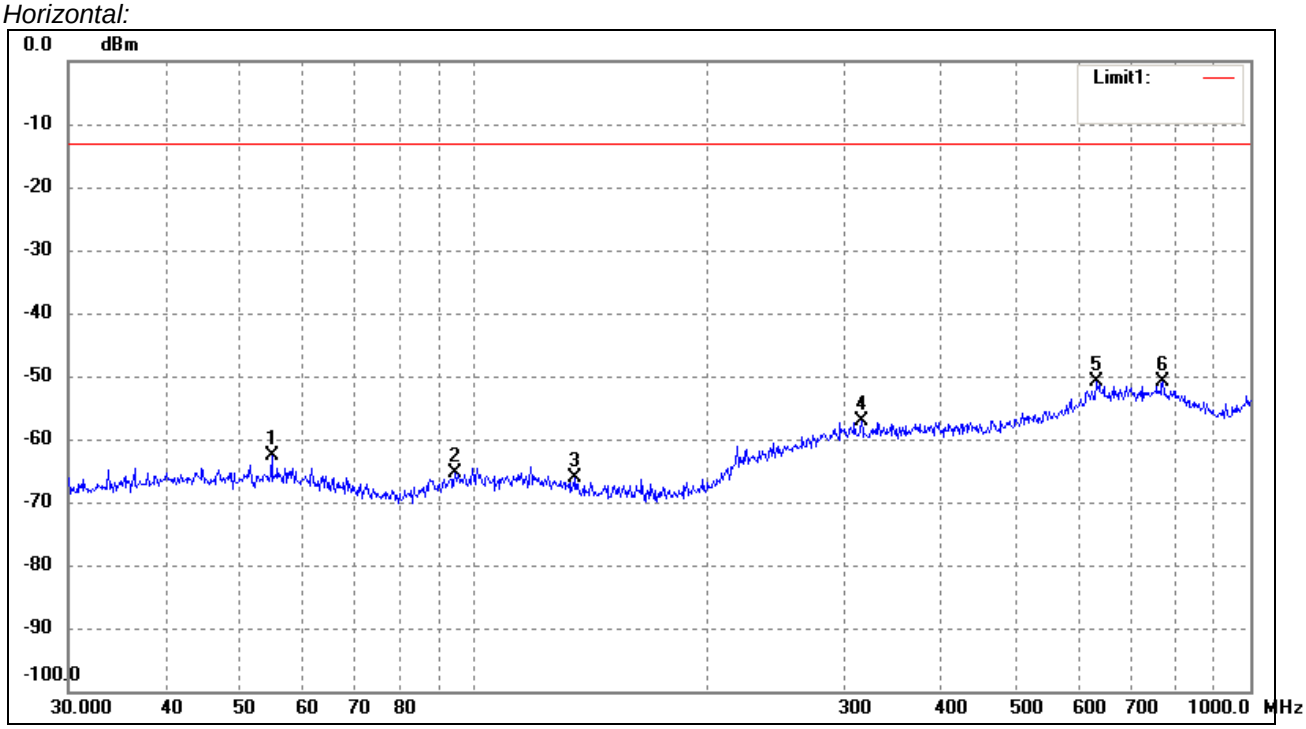
(Channel Bandwidth:20 MHz)_HCH_16QAM_100RB#0



4. Radiated Radiated Emissions

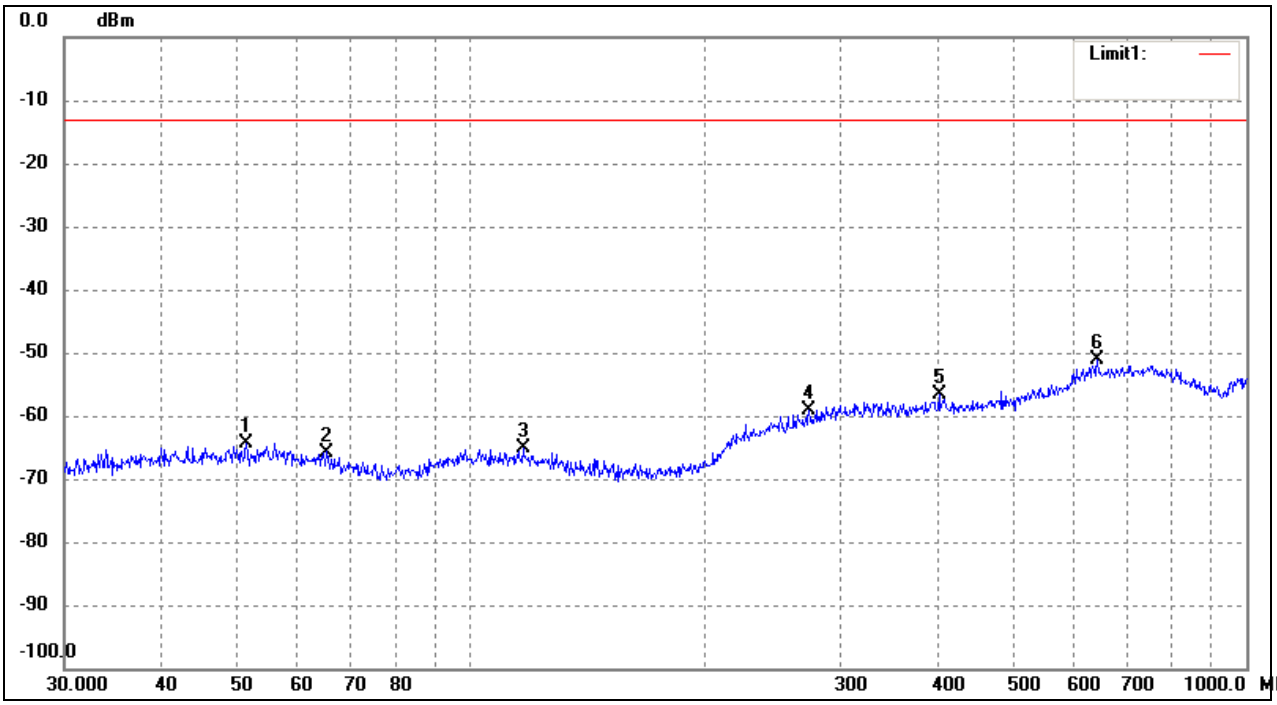
4.1 Test Datas

30MHz to 1GHz
Horizontal:



No.	Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.8348	-79.46	16.83	-62.63	-13.00	-49.63	ERP
2	94.4284	-81.20	15.90	-65.30	-13.00	-52.30	ERP
3	135.0319	-81.59	15.36	-66.23	-13.00	-53.23	ERP
4	315.4808	-80.90	23.75	-57.15	-13.00	-44.15	ERP
5	633.9073	-80.57	29.66	-50.91	-13.00	-37.91	ERP
6	771.4486	-79.98	29.19	-50.79	-13.00	-37.79	ERP

Vertical:



No.	Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	51.4807	-81.09	16.82	-64.27	-13.00	-51.27	ERP
2	65.3432	-81.45	15.70	-65.75	-13.00	-52.75	ERP
3	116.9495	-81.73	16.63	-65.10	-13.00	-52.10	ERP
4	273.2341	-81.52	22.44	-59.08	-13.00	-46.08	ERP
5	401.8385	-81.13	24.41	-56.72	-13.00	-43.72	ERP
6	642.8613	-80.97	29.80	-51.17	-13.00	-38.17	ERP

Spurious Emissions Above 1GHz

Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Polar H/V
Low Channel (1710.0MHz)						
3420.00	-36.76	8.65	-28.11	-13	-15.11	H
5130.00	-38.94	12.03	-26.91	-13	-13.91	H
3420.00	-32.58	8.65	-23.93	-13	-10.93	V
5130.00	-36.74	12.03	-24.71	-13	-11.71	V
Middle Channel (1732.5MHz)						
3465.00	-34.59	8.91	-25.68	-13	-12.68	H
5197.50	-37.83	12.29	-25.54	-13	-12.54	H
3465.00	-32.84	8.91	-23.93	-13	-10.93	V
5197.50	-38.16	12.29	-25.87	-13	-12.87	V
High Channel (1755.0MHz)						
3510.00	-36.07	9.11	-26.96	-13	-13.96	H
5265.00	-36.68	12.56	-24.12	-13	-11.12	H
3510.00	-33.66	9.11	-24.55	-13	-11.55	V
5265.00	-38.09	12.56	-25.53	-13	-12.53	V

Note:
1. This EUT was tested in 3 orthogonal positions and the worst case position data was reported.
2. Testing is carried out with frequency rang 9kHz to 20GHz, which above 3th Harmonics are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured, so the data is not display.
3. All test modes (different bandwidth and different modulation) are performed, but only the worst case is recorded in this report.

5. Frequency Stability

5.1 Environmental Conditions

Temperature:	Supply Voltage
20°C	DC 3.3-4.2V declared by manufacturer
-30°C to +50°C	Normal

5.2 Test Data

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	3.73	0.002180	± 2.5	PASS
		VN	TN	0.81	0.000473	± 2.5	PASS
		VH	TN	3.37	0.001970	± 2.5	PASS
	MCH	VL	TN	0.71	0.000410	± 2.5	PASS
		VN	TN	0.52	0.000300	± 2.5	PASS
		VH	TN	0.26	0.000150	± 2.5	PASS
	HCH	VL	TN	2.37	0.001351	± 2.5	PASS
		VN	TN	-1.73	-0.000986	± 2.5	PASS
		VH	TN	2.88	0.001642	± 2.5	PASS
16QAM	LCH	VL	TN	1.7	0.000994	± 2.5	PASS
		VN	TN	4.72	0.002759	± 2.5	PASS
		VH	TN	2.05	0.001198	± 2.5	PASS
	MCH	VL	TN	0.54	0.000312	± 2.5	PASS
		VN	TN	0.22	0.000127	± 2.5	PASS
		VH	TN	-0.56	-0.000323	± 2.5	PASS
	HCH	VL	TN	2.34	0.001334	± 2.5	PASS
		VN	TN	-1.5	-0.000855	± 2.5	PASS
		VH	TN	-0.19	-0.000108	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.25	0.001900	± 2.5	PASS
		VN	-20	1.47	0.000859	± 2.5	PASS
		VN	-10	-1.48	-0.000865	± 2.5	PASS
		VN	0	4.25	0.002484	± 2.5	PASS
		VN	10	-1.74	-0.001017	± 2.5	PASS
		VN	20	3.24	0.001894	± 2.5	PASS
		VN	30	1.03	0.000602	± 2.5	PASS
		VN	40	4.78	0.002794	± 2.5	PASS
		VN	50	-0.44	-0.000257	± 2.5	PASS
	MCH	VN	-30	-1.28	-0.000739	± 2.5	PASS
		VN	-20	1.89	0.001091	± 2.5	PASS
		VN	-10	-1.63	-0.000941	± 2.5	PASS
		VN	0	-1.01	-0.000583	± 2.5	PASS
		VN	10	-0.74	-0.000427	± 2.5	PASS
		VN	20	3.37	0.001945	± 2.5	PASS
		VN	30	4.52	0.002609	± 2.5	PASS
		VN	40	4.44	0.002563	± 2.5	PASS
		VN	50	0.24	0.000139	± 2.5	PASS
	HCH	VN	-30	3.09	0.001761	± 2.5	PASS
		VN	-20	-1.03	-0.000587	± 2.5	PASS