Appendix for test report

1Appendix_A: Effective (Isotropic) Radiated Power Output Data

Part I - Test Results

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
BAND38	LTE/TM1	5	LCH	RB1#0	22.77	24.57	33	PASS
				RB1#13	22.93	24.73	33	PASS
				RB1#24	22.5	24.3	33	PASS
				RB12#0	21.86	23.66	33	PASS
				RB12#6	21.88	23.68	33	PASS
				RB12#13	21.75	23.55	33	PASS
				RB25#0	21.79	23.59	33	PASS
			MCH	RB1#0	22.91	24.71	33	PASS
				RB1#13	23.11	24.91	33	PASS
				RB1#24	22.75	24.55	33	PASS
				RB12#0	22.14	23.94	33	PASS
				RB12#6	22.19	23.99	33	PASS
				RB12#13	22.01	23.81	33	PASS
				RB25#0	22.09	23.89	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
			HCH	RB1#0	23.38	25.18	33	PASS
				RB1#13	23.43	25.23	33	PASS
				RB1#24	23.07	24.87	33	PASS
				RB12#0	22.39	24.19	33	PASS
				RB12#6	22.38	24.18	33	PASS
				RB12#13	22.18	23.98	33	PASS
				RB25#0	22.26	24.06	33	PASS
		10	LCH	RB1#0	22.78	24.58	33	PASS
				RB1#25	22.95	24.75	33	PASS
				RB1#49	22.55	24.35	33	PASS
				RB25#0	21.8	23.6	33	PASS
				RB25#13	21.91	23.71	33	PASS
				RB25#25	21.82	23.62	33	PASS
				RB50#0	21.69	23.49	33	PASS
			MCH	RB1#0	22.92	24.72	33	PASS
				RB1#25	23.19	24.99	33	PASS
				RB1#49	22.96	24.76	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB25#0	22.15	23.95	33	PASS
				RB25#13	22.17	23.97	33	PASS
				RB25#25	22.14	23.94	33	PASS
				RB50#0	22.1	23.9	33	PASS
			HCH	RB1#0	23.32	25.12	33	PASS
				RB1#25	23.5	25.3	33	PASS
				RB1#49	23.27	25.07	33	PASS
				RB25#0	22.31	24.11	33	PASS
				RB25#13	22.4	24.2	33	PASS
				RB25#25	22.37	24.17	33	PASS
				RB50#0	22.37	24.17	33	PASS
		15	LCH	RB1#0	22.67	24.47	33	PASS
				RB1#38	22.96	24.76	33	PASS
				RB1#74	22.63	24.43	33	PASS
				RB36#0	21.83	23.63	33	PASS
				RB36#18	22.01	23.81	33	PASS
				RB36#39	21.81	23.61	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB75#0	21.59	23.39	33	PASS
			MCH	RB1#0	22.75	24.55	33	PASS
				RB1#38	23.14	24.94	33	PASS
				RB1#74	22.96	24.76	33	PASS
				RB36#0	22.16	23.96	33	PASS
				RB36#18	22.19	23.99	33	PASS
				RB36#39	22.12	23.92	33	PASS
				RB75#0	22.15	23.95	33	PASS
			HCH	RB1#0	23.12	24.92	33	PASS
				RB1#38	23.54	25.34	33	PASS
				RB1#74	23.22	25.02	33	PASS
				RB36#0	22.28	24.08	33	PASS
				RB36#18	22.4	24.2	33	PASS
				RB36#39	22.25	24.05	33	PASS
				RB75#0	22.35	24.15	33	PASS
		20	LCH	RB1#0	21.59	23.39	33	PASS
				RB1#50	22.99	24.79	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB1#99	23.05	24.85	33	PASS
				RB50#0	21.49	23.29	33	PASS
				RB50#25	21.73	23.53	33	PASS
				RB50#50	22.06	23.86	33	PASS
				RB100#0	21.47	23.27	33	PASS
			MCH	RB1#0	22.09	23.89	33	PASS
				RB1#50	23.28	25.08	33	PASS
				RB1#99	23.45	25.25	33	PASS
				RB50#0	21.82	23.62	33	PASS
				RB50#25	22.28	24.08	33	PASS
				RB50#50	22.38	24.18	33	PASS
				RB100#0	21.87	23.67	33	PASS
			HCH	RB1#0	22.03	23.83	33	PASS
				RB1#50	23.52	25.32	33	PASS
				RB1#99	23.57	25.37	33	PASS
				RB50#0	21.98	23.78	33	PASS
				RB50#25	22.64	24.44	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB50#50	22.47	24.27	33	PASS
				RB100#0	22.03	23.83	33	PASS
	LTE/TM 2	5	LCH	RB1#0	22.03	23.83	33	PASS
				RB1#13	22.2	24	33	PASS
				RB1#24	21.76	23.56	33	PASS
				RB12#0	20.75	22.55	33	PASS
				RB12#6	20.83	22.63	33	PASS
				RB12#13	20.63	22.43	33	PASS
				RB25#0	20.74	22.54	33	PASS
			MCH	RB1#0	22.18	23.98	33	PASS
				RB1#13	22.35	24.15	33	PASS
				RB1#24	22.07	23.87	33	PASS
				RB12#0	21.1	22.9	33	PASS
				RB12#6	21.29	23.09	33	PASS
				RB12#13	21.11	22.91	33	PASS
				RB25#0	21.01	22.81	33	PASS
			HCH	RB1#0	22.43	24.23	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB1#13	22.61	24.41	33	PASS
				RB1#24	22.32	24.12	33	PASS
				RB12#0	21.3	23.1	33	PASS
				RB12#6	21.23	23.03	33	PASS
				RB12#13	21.04	22.84	33	PASS
				RB25#0	21.24	23.04	33	PASS
			LCH	RB1#0	22.16	23.96	33	PASS
				RB1#25	22.32	24.12	33	PASS
				RB1#49	21.97	23.77	33	PASS
		10		RB25#0	20.78	22.58	33	PASS
				RB25#13	20.8	22.6	33	PASS
				RB25#25	20.66	22.46	33	PASS
				RB50#0	20.55	22.35	33	PASS
			MCH	RB1#0	22.03	23.83	33	PASS
				RB1#25	22.23	24.03	33	PASS
				RB1#49	22.1	23.9	33	PASS
				RB25#0	21.12	22.92	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB25#13	21.09	22.89	33	PASS
				RB25#25	21.05	22.85	33	PASS
				RB50#0	21.06	22.86	33	PASS
			HCH	RB1#0	22.78	24.58	33	PASS
				RB1#25	22.98	24.78	33	PASS
				RB1#49	22.7	24.5	33	PASS
				RB25#0	21.3	23.1	33	PASS
				RB25#13	21.36	23.16	33	PASS
				RB25#25	21.26	23.06	33	PASS
				RB50#0	21.24	23.04	33	PASS
		15	LCH	RB1#0	21.89	23.69	33	PASS
				RB1#38	22.17	23.97	33	PASS
				RB1#74	21.88	23.68	33	PASS
				RB36#0	20.71	22.51	33	PASS
				RB36#18	20.94	22.74	33	PASS
				RB36#39	20.74	22.54	33	PASS
				RB75#0	20.46	22.26	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
			MCH	RB1#0	21.67	23.47	33	PASS
				RB1#38	22.14	23.94	33	PASS
				RB1#74	21.95	23.75	33	PASS
				RB36#0	21.24	23.04	33	PASS
				RB36#18	21.28	23.08	33	PASS
				RB36#39	21.15	22.95	33	PASS
				RB75#0	21.12	22.92	33	PASS
			HCH	RB1#0	22.41	24.21	33	PASS
				RB1#38	22.68	24.48	33	PASS
				RB1#74	22.32	24.12	33	PASS
				RB36#0	21.34	23.14	33	PASS
				RB36#18	21.39	23.19	33	PASS
				RB36#39	21.18	22.98	33	PASS
				RB75#0	21.26	23.06	33	PASS
		20	LCH	RB1#0	22.11	23.91	33	PASS
				RB1#50	22.5	24.3	33	PASS
				RB1#99	22.6	24.4	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB50#0	21.03	22.83	33	PASS
				RB50#25	20.62	22.42	33	PASS
				RB50#50	20.98	22.78	33	PASS
				RB100#0	20.89	22.69	33	PASS
			MCH	RB1#0	21.79	23.59	33	PASS
				RB1#50	22.5	24.3	33	PASS
				RB1#99	22.64	24.44	33	PASS
				RB50#0	21.35	23.15	33	PASS
				RB50#25	21.32	23.12	33	PASS
				RB50#50	21.35	23.15	33	PASS
				RB100#0	21.32	23.12	33	PASS
			HCH	RB1#0	22.09	23.89	33	PASS
				RB1#50	22.64	24.44	33	PASS
				RB1#99	22.58	24.38	33	PASS
				RB50#0	21.44	23.24	33	PASS
				RB50#25	21.58	23.38	33	PASS
				RB50#50	21.39	23.19	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB100#0	21.42	23.22	33	PASS

Note1:

a, For getting the ERP (Efficient Radiated Power) or EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

ERP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBd]

EIRP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBi]

b, SGP=Signal Generator Level

Note2:

SET Span=1.5*OBW

SET RBW=1%of the OBW,not to exceed 1MHz

SET VBW>= 3*RBW

SET Sweep time=auto-couple.

Detector:RMS

2Appendix_B: Peak-to-Average Ratio

Part I - Test Results

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
BAND38	LTE/TM1	5	LCH	RB1#0	5.2	13	PASS
				RB1#13	5.06	13	PASS
				RB1#24	5.33	13	PASS
				RB12#0	6.38	13	PASS
				RB12#6	5.81	13	PASS
				RB12#13	6.08	13	PASS
				RB25#0	6.05	13	PASS
			MCH	RB1#0	5.17	13	PASS
				RB1#13	5	13	PASS
				RB1#24	5.67	13	PASS
				RB12#0	5.67	13	PASS
				RB12#6	5.37	13	PASS
				RB12#13	5.59	13	PASS
				RB25#0	6.03	13	PASS
			HCH	RB1#0	4.92	13	PASS
				RB1#13	4.68	13	PASS
				RB1#24	5.06	13	PASS
				RB12#0	6.45	13	PASS
				RB12#6	6.11	13	PASS
				RB12#13	6.38	13	PASS
				RB25#0	6.65	13	PASS
		10	LCH	RB1#0	4.88	13	PASS
				RB1#25	4.73	13	PASS
				RB1#49	4.71	13	PASS
				RB25#0	6.13	13	PASS
				RB25#13	6.45	13	PASS
				RB25#25	6.33	13	PASS
				RB50#0	6.38	13	PASS
			MCH	RB1#0	4.74	13	PASS
				RB1#25	4.71	13	PASS
				RB1#49	4.86	13	PASS
				RB25#0	5.61	13	PASS
				RB25#13	5.59	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB25#25	5.69	13	PASS
				RB50#0	6.24	13	PASS
			HCH	RB1#0	4.47	13	PASS
				RB1#25	4.46	13	PASS
				RB1#49	4.58	13	PASS
				RB25#0	5.78	13	PASS
				RB25#13	5.85	13	PASS
				RB25#25	6	13	PASS
				RB50#0	6.23	13	PASS
			LCH	RB1#0	4.9	13	PASS
				RB1#38	4.71	13	PASS
				RB1#74	4.72	13	PASS
				RB36#0	6.12	13	PASS
				RB36#18	6.15	13	PASS
				RB36#39	5.98	13	PASS
				RB75#0	6.84	13	PASS
		15	MCH	RB1#0	4.44	13	PASS
				RB1#38	4.24	13	PASS
				RB1#74	4.44	13	PASS
				RB36#0	6.11	13	PASS
				RB36#18	6.04	13	PASS
				RB36#39	6.01	13	PASS
				RB75#0	6.54	13	PASS
			HCH	RB1#0	4.85	13	PASS
				RB1#38	4.74	13	PASS
				RB1#74	5.08	13	PASS
				RB36#0	5.72	13	PASS
				RB36#18	5.92	13	PASS
				RB36#39	5.97	13	PASS
				RB75#0	6.83	13	PASS
		20	LCH	RB1#0	5.37	13	PASS
				RB1#50	4.71	13	PASS
				RB1#99	4.73	13	PASS
				RB50#0	6.83	13	PASS
				RB50#25	6.18	13	PASS
				RB50#50	6.04	13	PASS
				RB100#0	6.66	13	PASS
			MCH	RB1#0	5.28	13	PASS
				RB1#50	4.68	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB1#99	5.22	13	PASS
				RB50#0	6.2	13	PASS
				RB50#25	5.76	13	PASS
				RB50#50	5.81	13	PASS
				RB100#0	6.45	13	PASS
			HCH	RB1#0	5.12	13	PASS
				RB1#50	4.72	13	PASS
				RB1#99	4.9	13	PASS
				RB50#0	6.05	13	PASS
				RB50#25	5.64	13	PASS
				RB50#50	5.98	13	PASS
				RB100#0	6.61	13	PASS
			LCH	RB1#0	6.6	13	PASS
				RB1#13	6.18	13	PASS
				RB1#24	6.7	13	PASS
				RB12#0	7.51	13	PASS
				RB12#6	7.25	13	PASS
				RB12#13	7.15	13	PASS
				RB25#0	7.21	13	PASS
			MCH	RB1#0	5.9	13	PASS
				RB1#13	5.67	13	PASS
				RB1#24	6.29	13	PASS
	LTE/TM2	5		RB12#0	6.32	13	PASS
				RB12#6	5.95	13	PASS
				RB12#13	6.14	13	PASS
				RB25#0	6.55	13	PASS
			HCH	RB1#0	6.1	13	PASS
				RB1#13	5.64	13	PASS
				RB1#24	6.37	13	PASS
				RB12#0	6.98	13	PASS
				RB12#6	6.87	13	PASS
				RB12#13	6.83	13	PASS
				RB25#0	6.94	13	PASS
		10	LCH	RB1#0	5.8	13	PASS
				RB1#25	5.77	13	PASS
				RB1#49	5.68	13	PASS
				RB25#0	6.54	13	PASS
				RB25#13	6.74	13	PASS
				RB25#25	6.6	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB50#0	7.29	13	PASS
			MCH	RB1#0	4.97	13	PASS
				RB1#25	4.92	13	PASS
				RB1#49	4.99	13	PASS
				RB25#0	6.54	13	PASS
				RB25#13	6.42	13	PASS
				RB25#25	6.54	13	PASS
				RB50#0	6.81	13	PASS
			HCH	RB1#0	4.74	13	PASS
				RB1#25	4.84	13	PASS
				RB1#49	5.04	13	PASS
				RB25#0	6.62	13	PASS
				RB25#13	6.96	13	PASS
				RB25#25	6.69	13	PASS
				RB50#0	7.22	13	PASS
			LCH	RB1#0	6.11	13	PASS
				RB1#38	6.14	13	PASS
				RB1#74	5.93	13	PASS
				RB36#0	6.76	13	PASS
				RB36#18	6.5	13	PASS
				RB36#39	6.69	13	PASS
				RB75#0	7.21	13	PASS
		15	MCH	RB1#0	5.37	13	PASS
				RB1#38	5.37	13	PASS
				RB1#74	5.47	13	PASS
				RB36#0	6.63	13	PASS
				RB36#18	6.65	13	PASS
				RB36#39	6.56	13	PASS
				RB75#0	7.07	13	PASS
			HCH	RB1#0	5.61	13	PASS
				RB1#38	5.7	13	PASS
				RB1#74	5.91	13	PASS
				RB36#0	6.77	13	PASS
				RB36#18	7.07	13	PASS
				RB36#39	7.5	13	PASS
				RB75#0	6.86	13	PASS
		20	LCH	RB1#0	6.02	13	PASS
				RB1#50	5.76	13	PASS
				RB1#99	5.63	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB50#0	7.17	13	PASS
				RB50#25	6.66	13	PASS
				RB50#50	6.57	13	PASS
				RB100#0	7.48	13	PASS
			MCH	RB1#0	5.86	13	PASS
				RB1#50	5.4	13	PASS
				RB1#99	5.64	13	PASS
				RB50#0	7.16	13	PASS
				RB50#25	6.5	13	PASS
				RB50#50	6.55	13	PASS
				RB100#0	7.04	13	PASS
			HCH	RB1#0	5.33	13	PASS
				RB1#50	5.28	13	PASS
				RB1#99	5.5	13	PASS
				RB50#0	7.04	13	PASS
				RB50#25	6.79	13	PASS
				RB50#50	7.02	13	PASS
				RB100#0	7.54	13	PASS

3Appendix_C: Modulation Characteristics

Part I - Test Plots

3.1 For LTE

3.1.1 Test Band = BAND38

3.1.1.1 Test Mode = LTE/TM1

3.1.1.1.1 Test Bandwidth = 5

3.1.1.1.1.1 Test Channel = MCH

3.1.1.1.1.1.1 Test RB = RB25#0
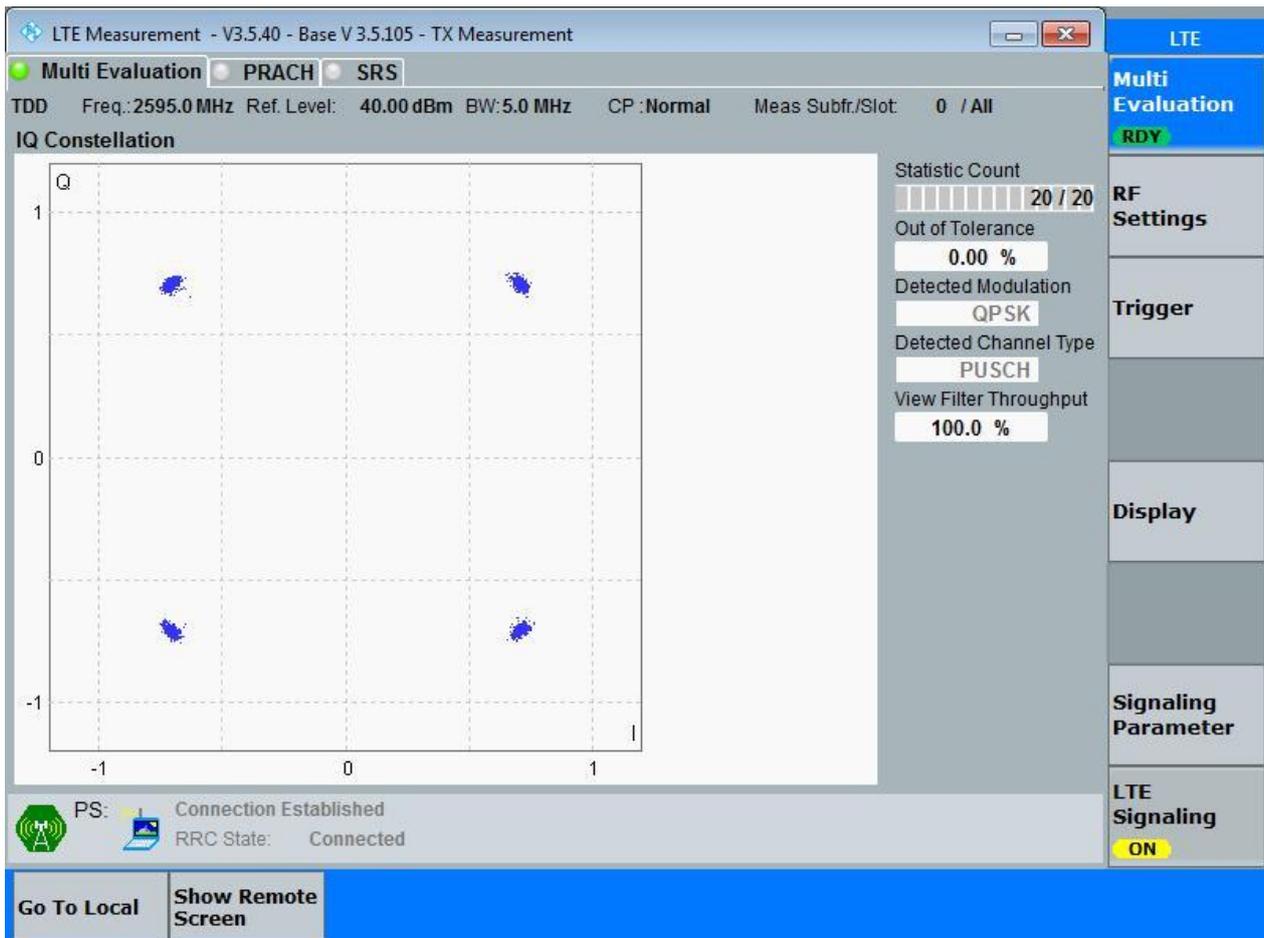
3.1.1.1.2 Test Bandwidth = 10

3.1.1.1.2.1 Test Channel = MCH

3.1.1.1.2.1.1 Test RB = RB50#0
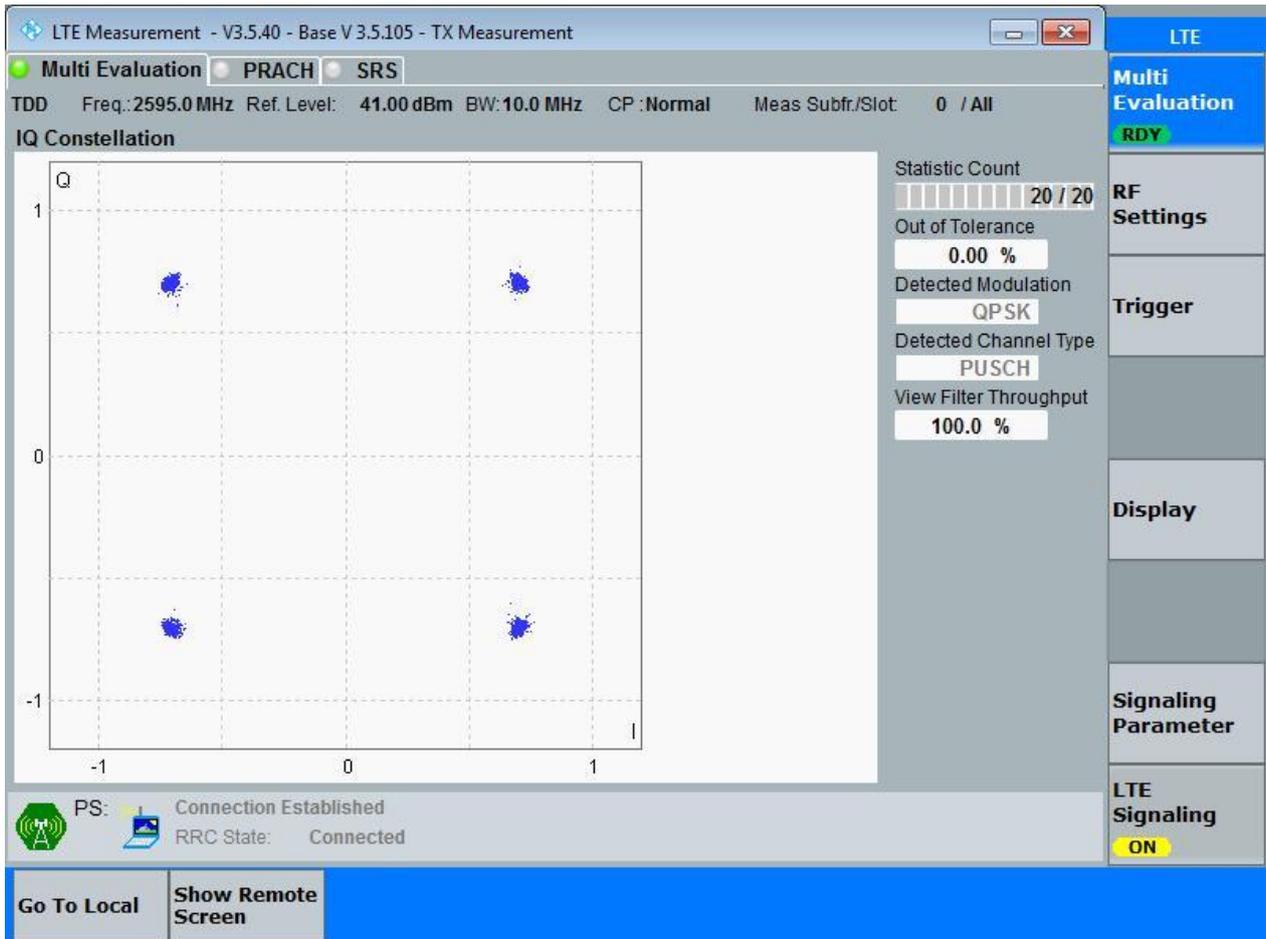
3.1.1.1.3 Test Bandwidth = 15

3.1.1.1.3.1 Test Channel = MCH

3.1.1.1.3.1.1 Test RB = RB75#0
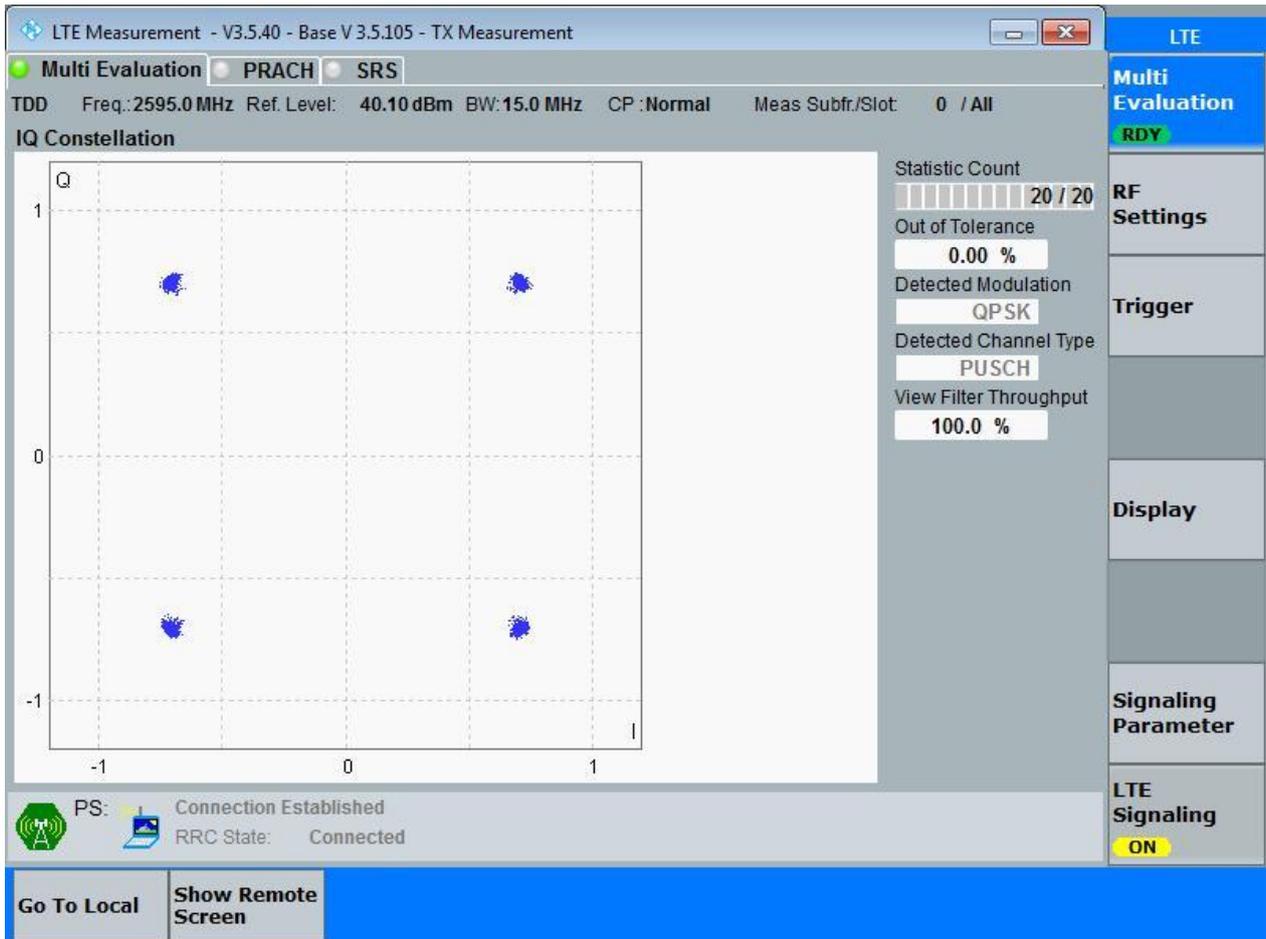
3.1.1.1.4 Test Bandwidth = 20

3.1.1.1.4.1 Test Channel = MCH

3.1.1.1.4.1.1 Test RB = RB100#0
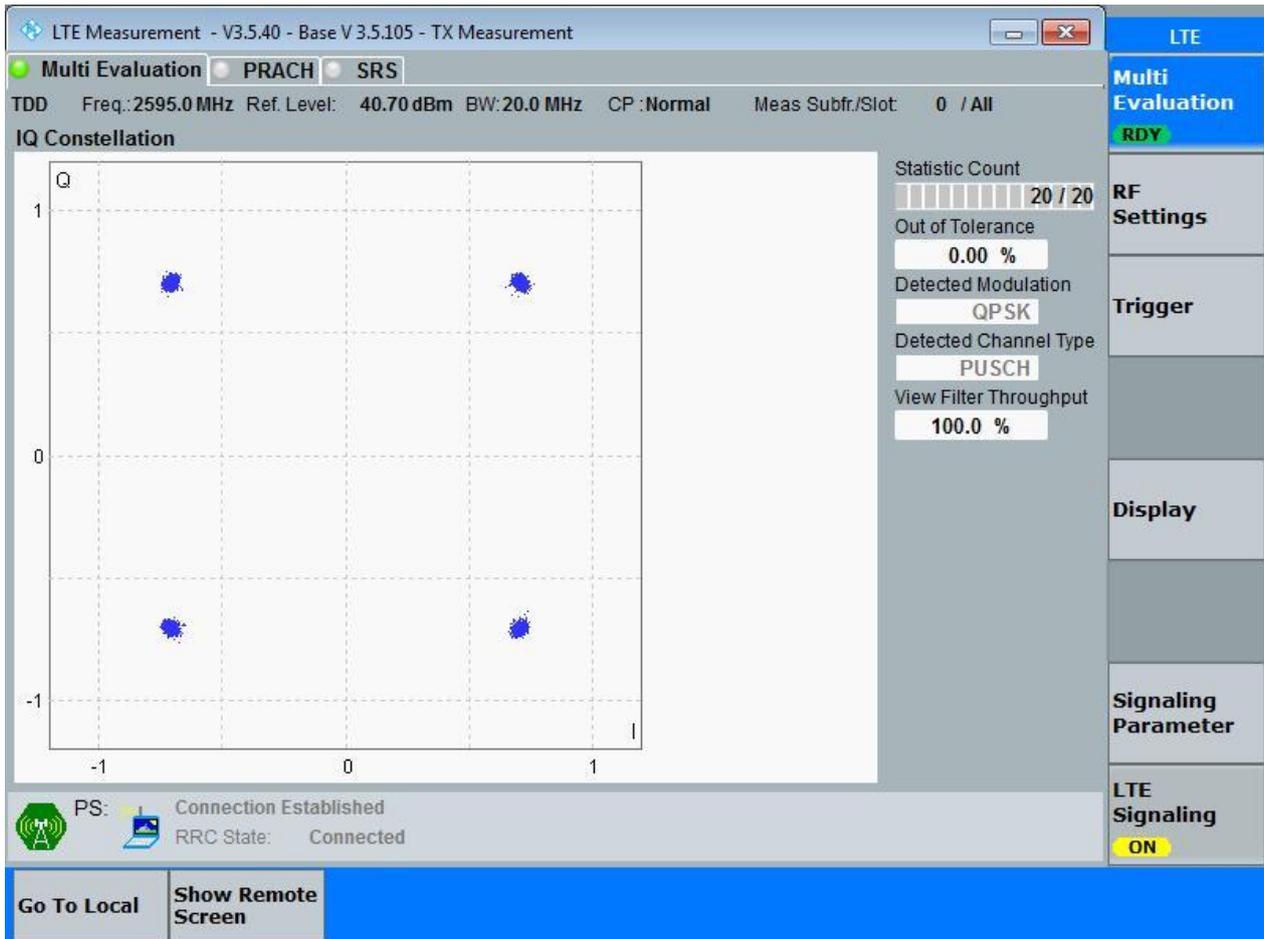
3.1.1.2 Test Mode = LTE/TM2

3.1.1.2.1 Test Bandwidth = 5

3.1.1.2.1.1 Test Channel = MCH

3.1.1.2.1.1.1 Test RB = RB25#0
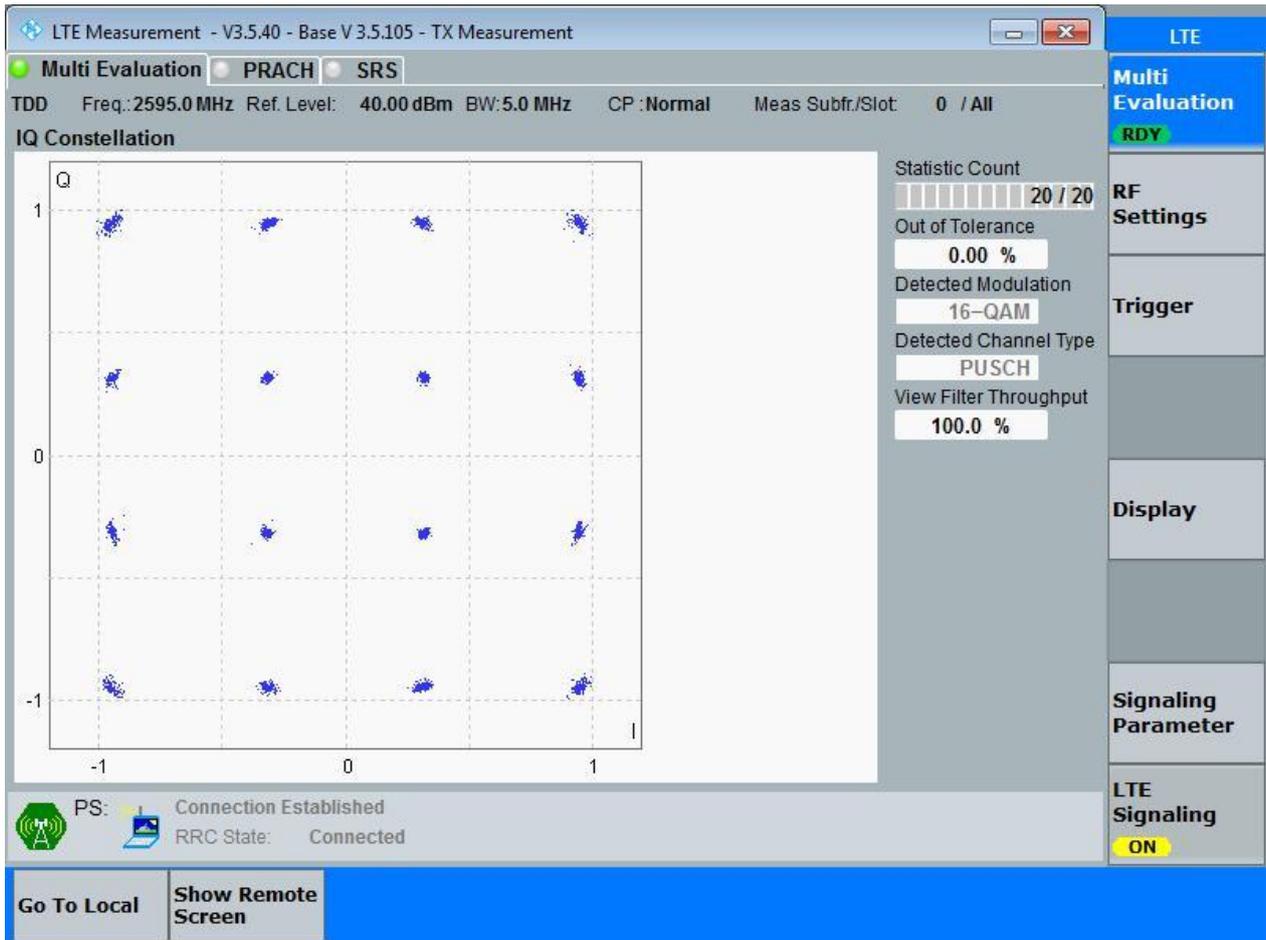
3.1.1.2.2 Test Bandwidth = 10

3.1.1.2.2.1 Test Channel = MCH

3.1.1.2.2.1.1 Test RB = RB50#0
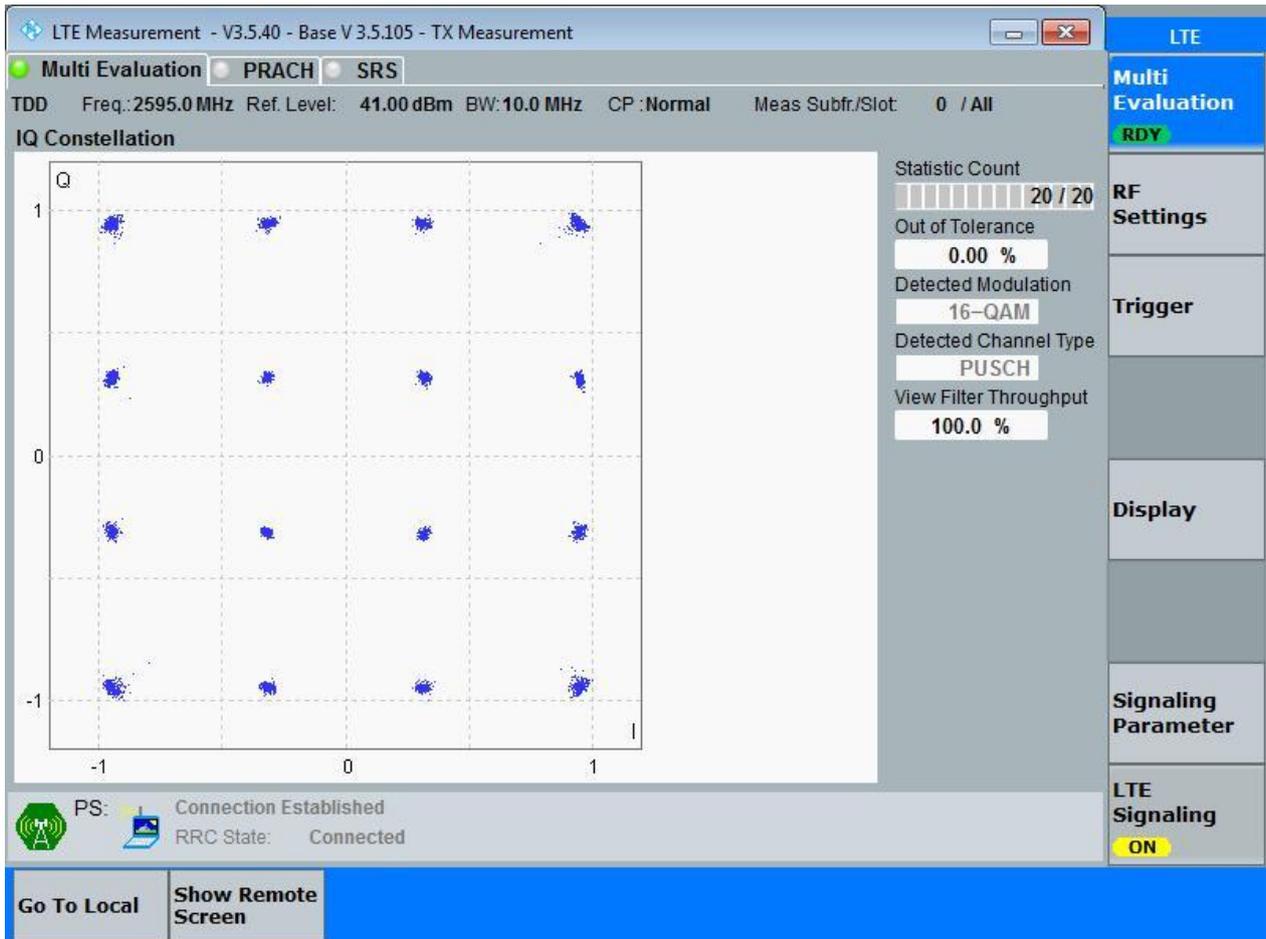
3.1.1.2.3 Test Bandwidth = 15

3.1.1.2.3.1 Test Channel = MCH

3.1.1.2.3.1.1 Test RB = RB75#0
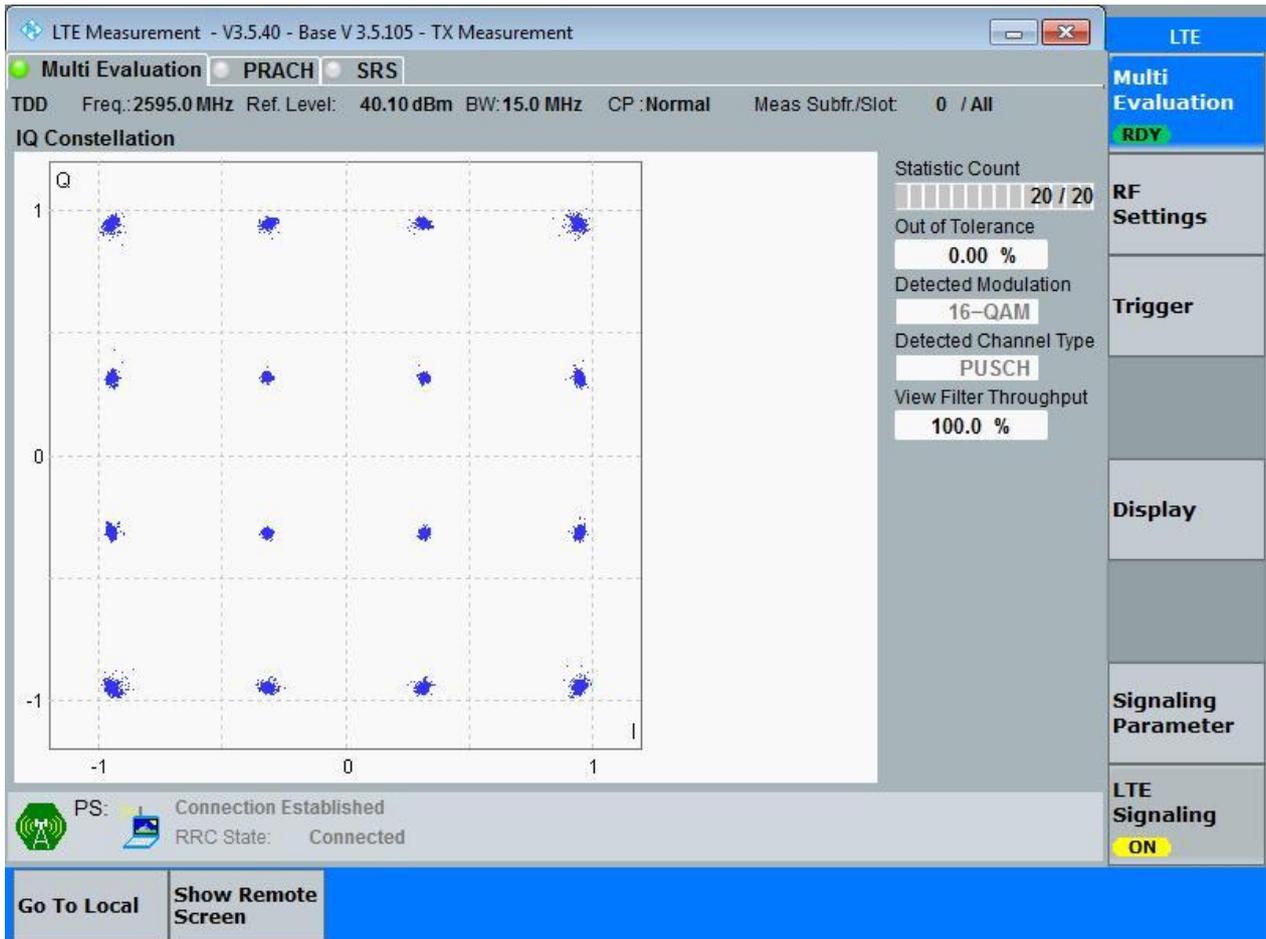
3.1.1.2.4 Test Bandwidth = 20

3.1.1.2.4.1 Test Channel = MCH

3.1.1.2.4.1.1 Test RB = RB100#0
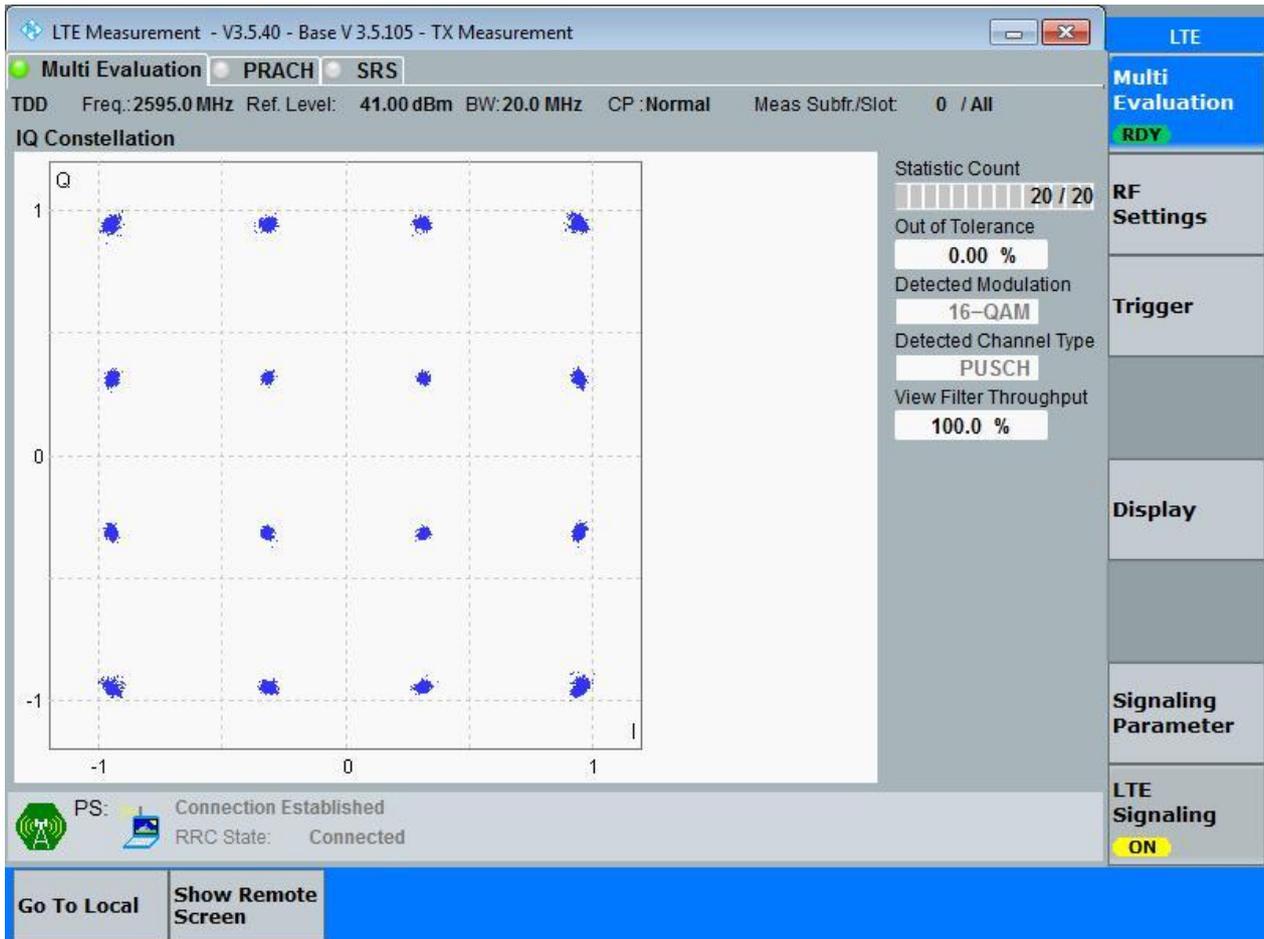
4Appendix_D: Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Bandwidth	Test Channel	Test RB	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
BAND38	LTE/TM1	5	LCH	RB25#0	4.49	4.84	Pass
		5	MCH	RB25#0	4.50	4.86	Pass
		5	HCH	RB25#0	4.49	4.82	Pass
		10	LCH	RB50#0	8.98	9.57	Pass
		10	MCH	RB50#0	8.99	9.56	Pass
		10	HCH	RB50#0	8.98	9.60	Pass
		15	LCH	RB75#0	13.45	14.36	Pass
		15	MCH	RB75#0	13.48	14.36	Pass
		15	HCH	RB75#0	13.47	14.36	Pass
		20	LCH	RB100#0	17.93	19.01	Pass
		20	MCH	RB100#0	17.96	19.06	Pass
		20	HCH	RB100#0	17.96	18.99	Pass
	LTE/TM2	5	LCH	RB25#0	4.50	4.84	Pass
		5	MCH	RB25#0	4.49	4.83	Pass
		5	HCH	RB25#0	4.49	4.85	Pass
		10	LCH	RB50#0	8.98	9.55	Pass
		10	MCH	RB50#0	8.99	9.55	Pass
		10	HCH	RB50#0	8.98	9.57	Pass
		15	LCH	RB75#0	13.46	14.29	Pass
		15	MCH	RB75#0	13.48	14.35	Pass
		15	HCH	RB75#0	13.47	14.32	Pass
		20	LCH	RB100#0	17.96	18.99	Pass
		20	MCH	RB100#0	17.96	19.03	Pass
		20	HCH	RB100#0	17.94	19.01	Pass

**4.1 For LTE**

4.1.1 Test Band = BAND38

4.1.1.1 Test Mode = LTE/TM1

4.1.1.1.1 Test Bandwidth = 5

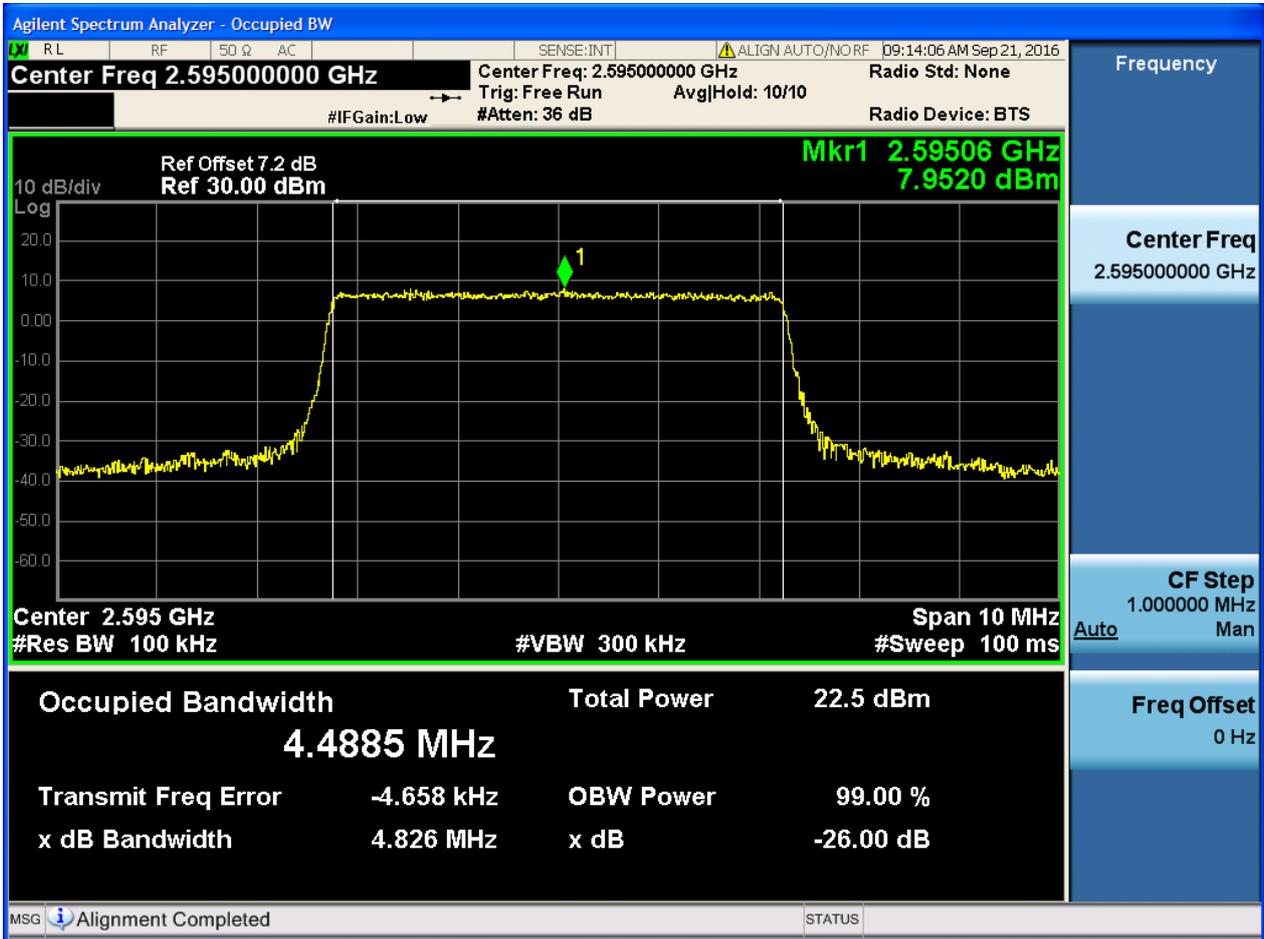**4.1.1.1.1.1 Test Channel = LCH**

4.1.1.1.1.1.1 Test RB = RB25#0
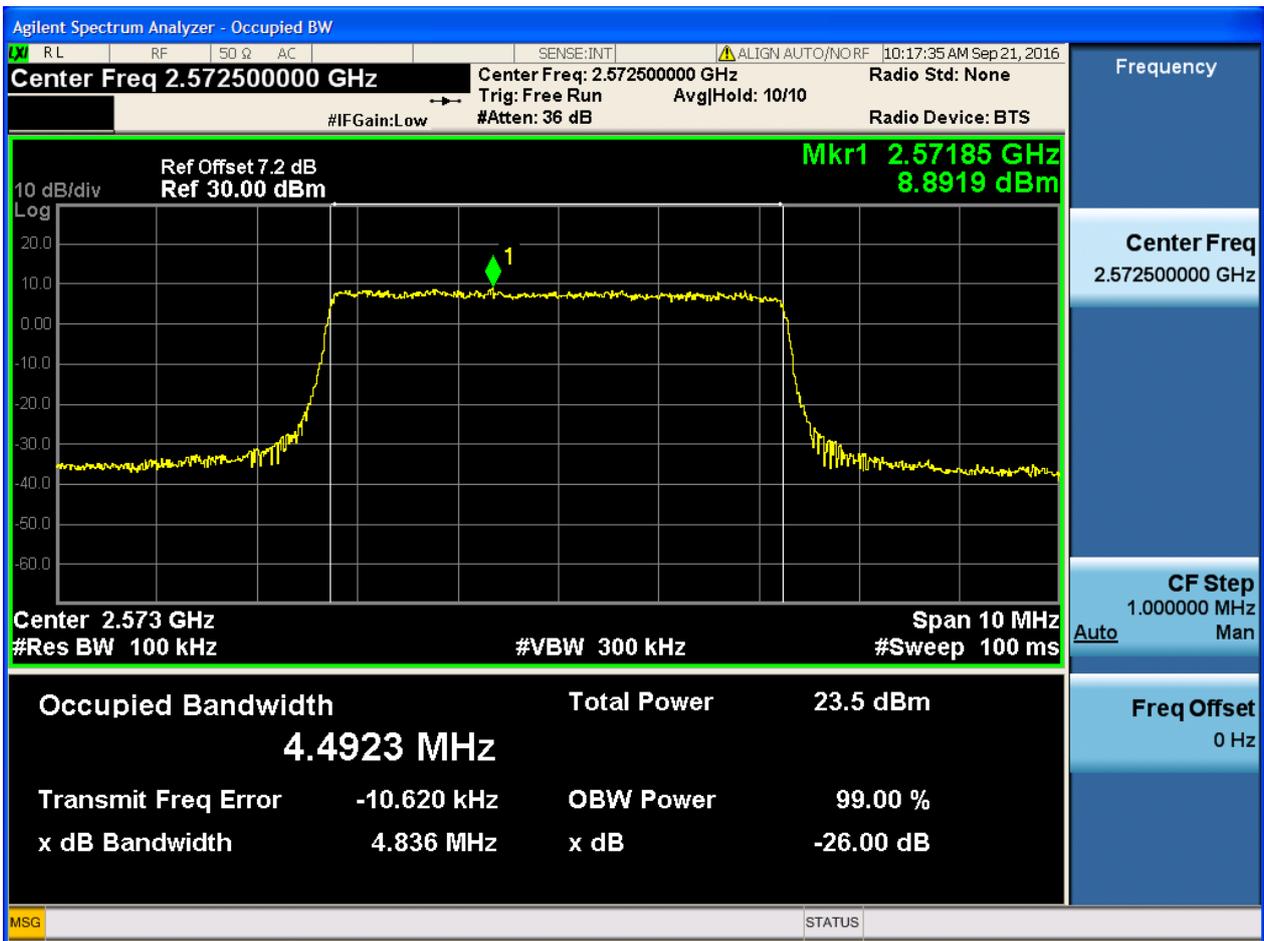
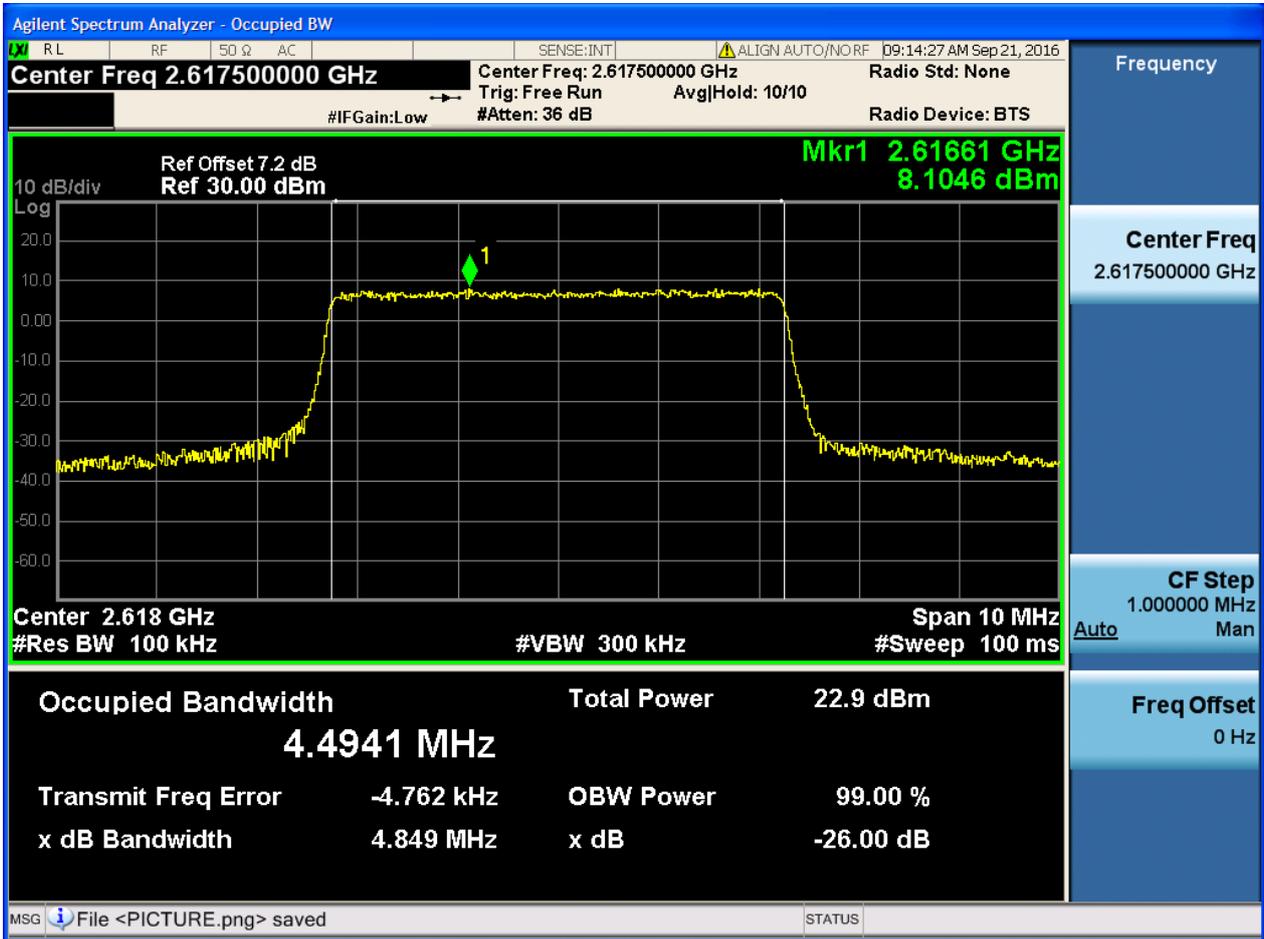## 4.1.1.1.1.2 Test Channel = MCH

4.1.1.1.1.2.1 Test RB = RB25#0
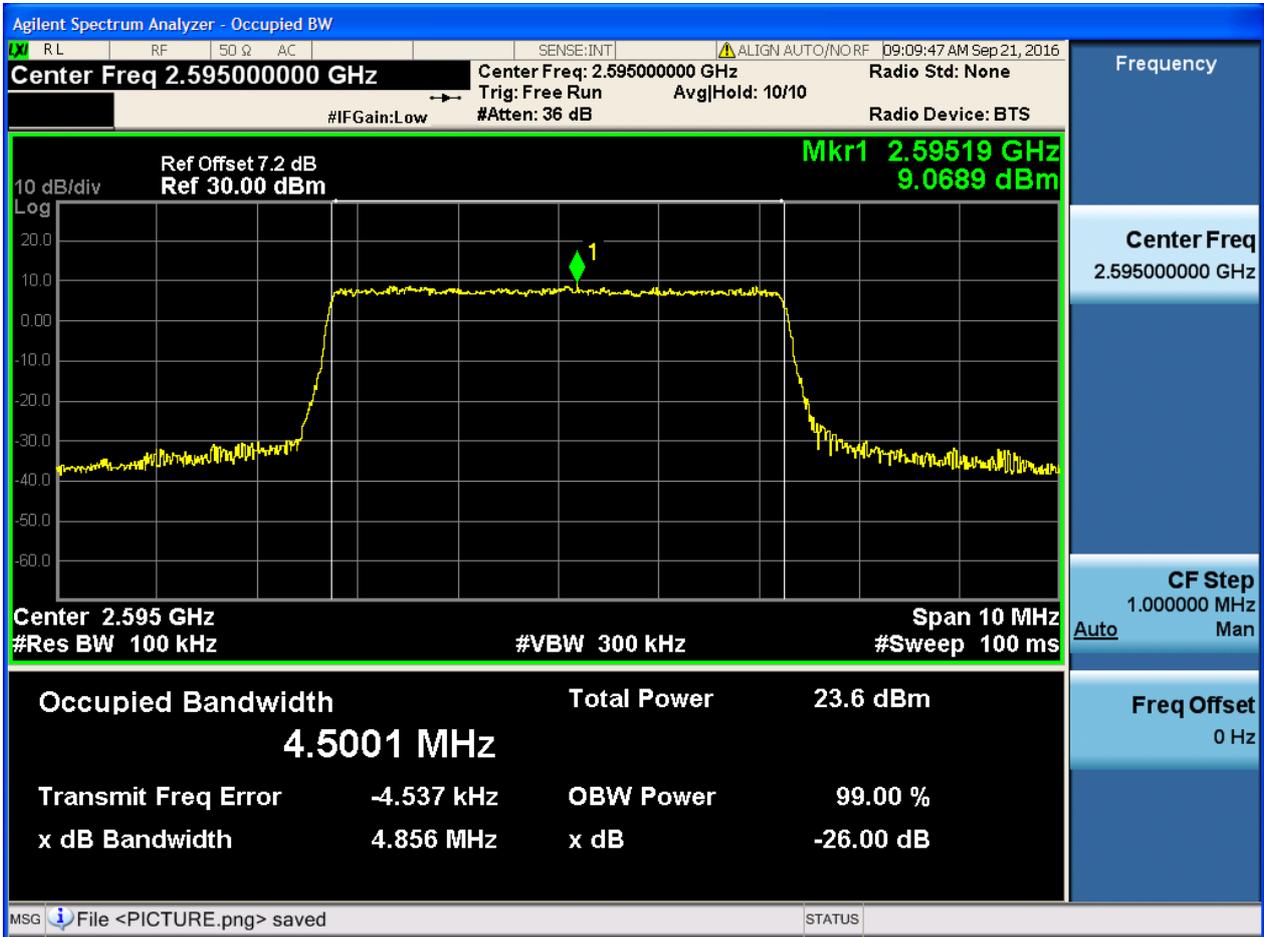
4.1.1.1.1.3 Test Channel = HCH

4.1.1.1.1.3.1 Test RB = RB25#0
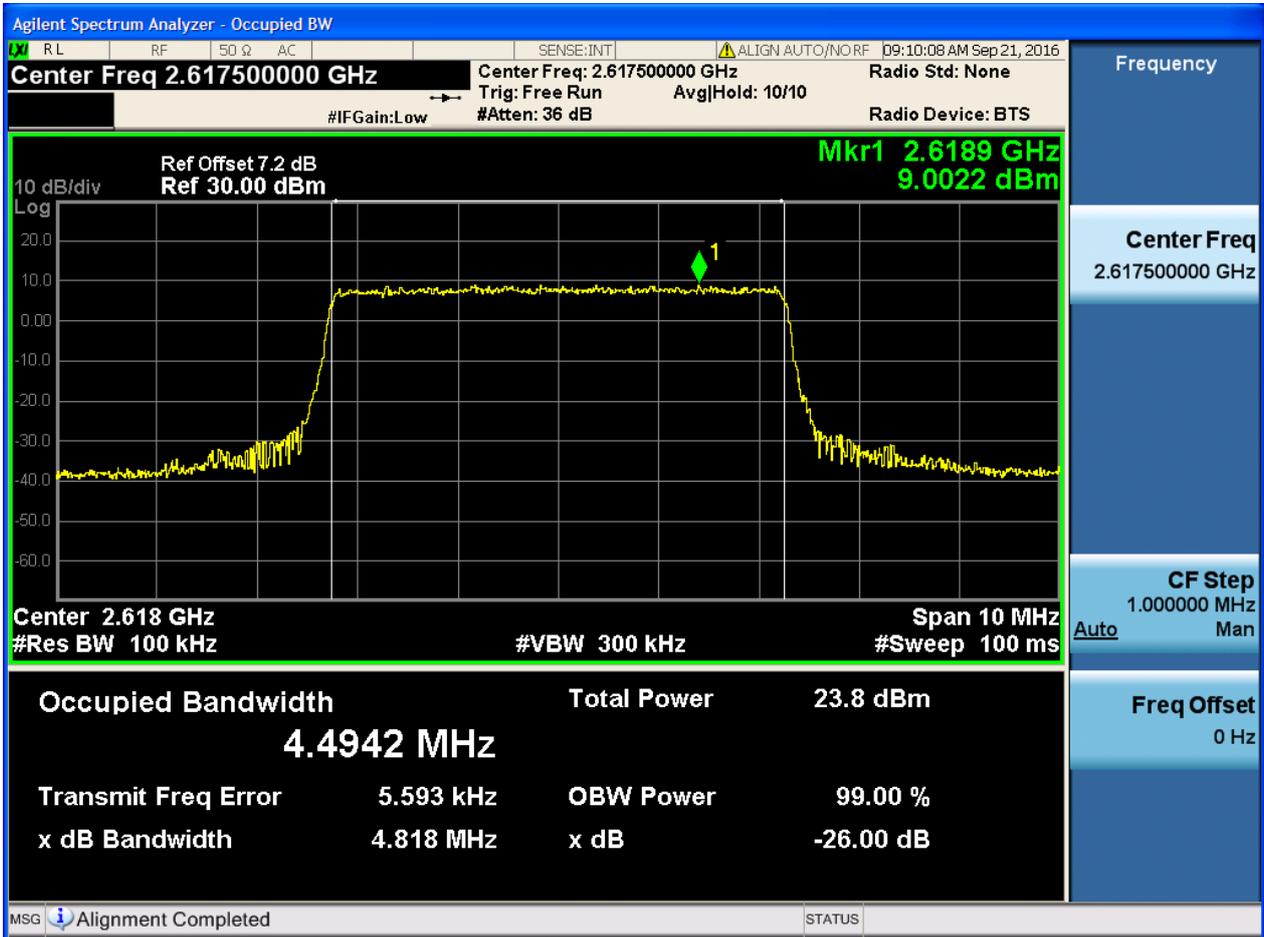
4.1.1.1.2 Test Bandwidth = 10
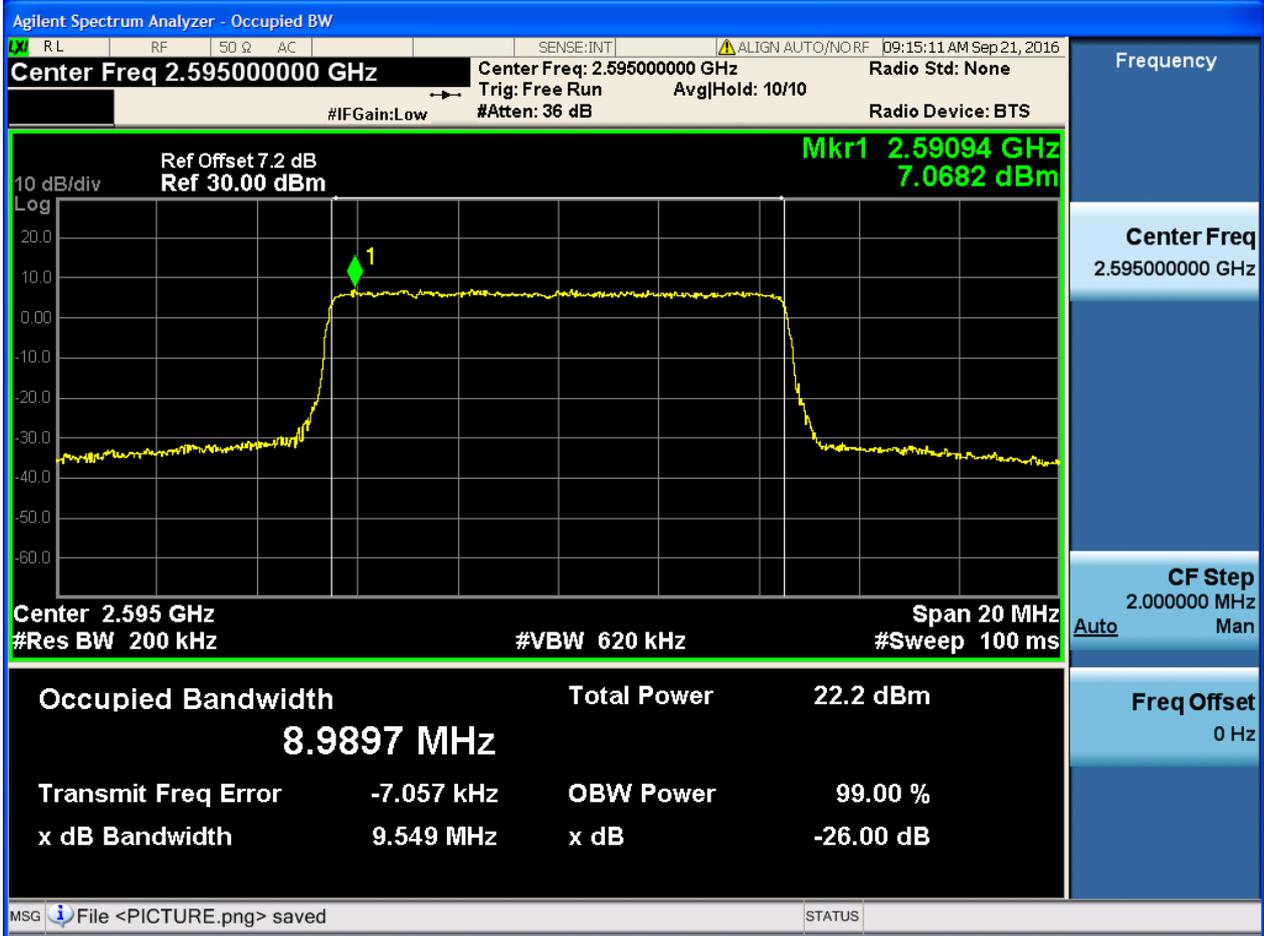
4.1.1.1.2.1 Test Channel = LCH

## 4.1.1.1.2.1.1 Test RB = RB50#0
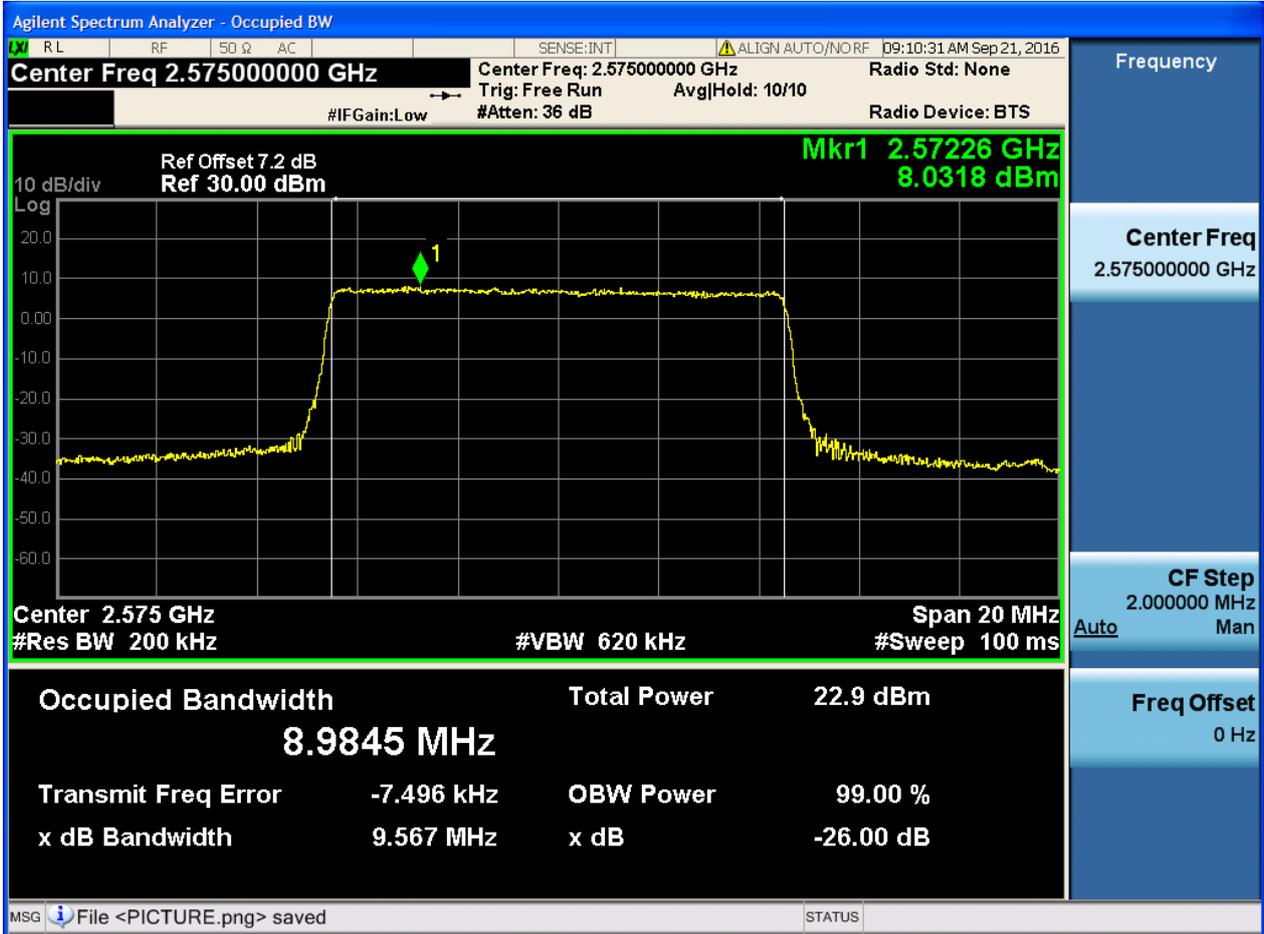
4.1.1.1.2.2 Test Channel = MCH

4.1.1.1.2.2.1 Test RB = RB50#0
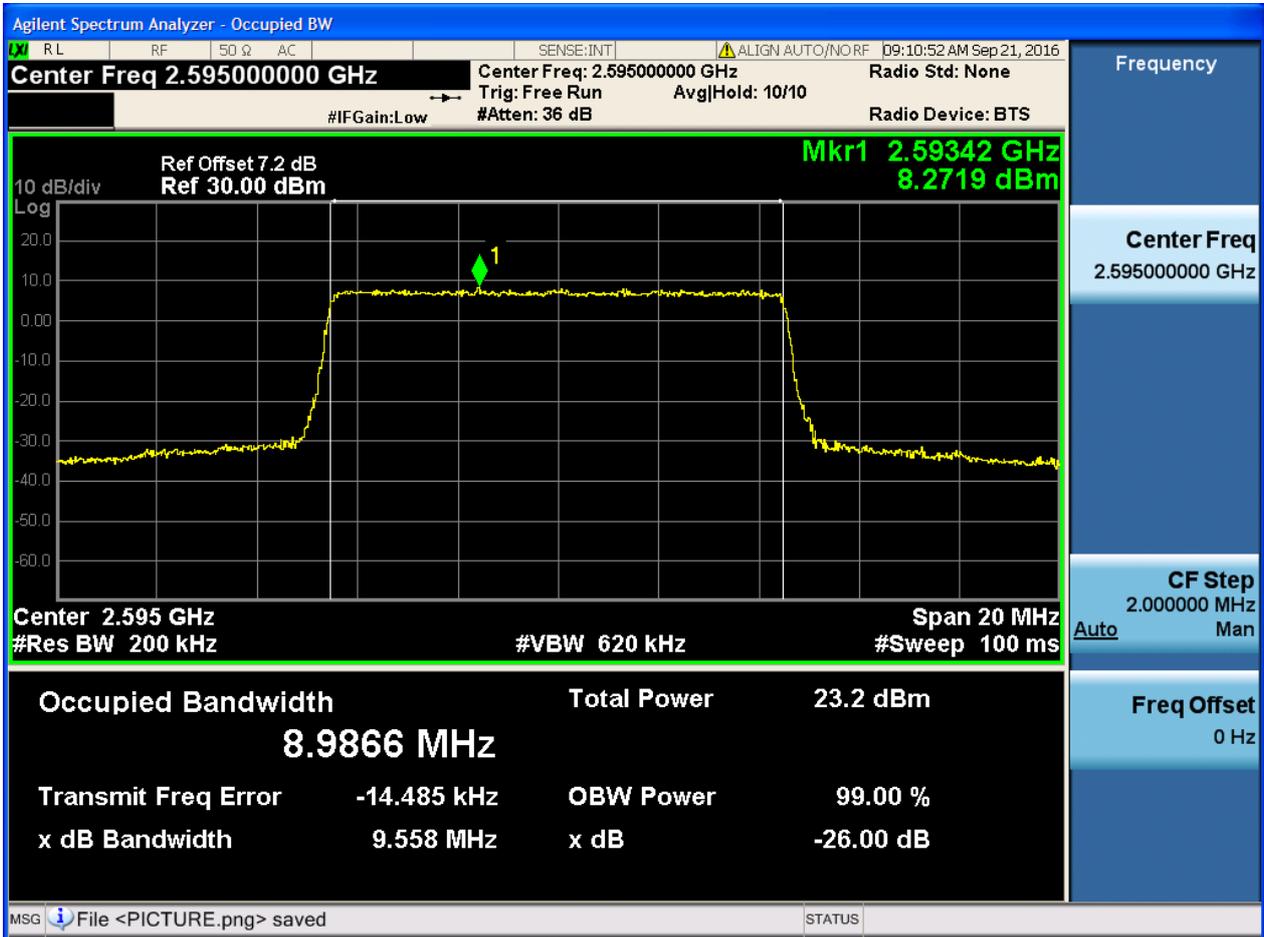
4.1.1.1.2.3 Test Channel = HCH

### 4.1.1.1.2.3.1 Test RB = RB50#0
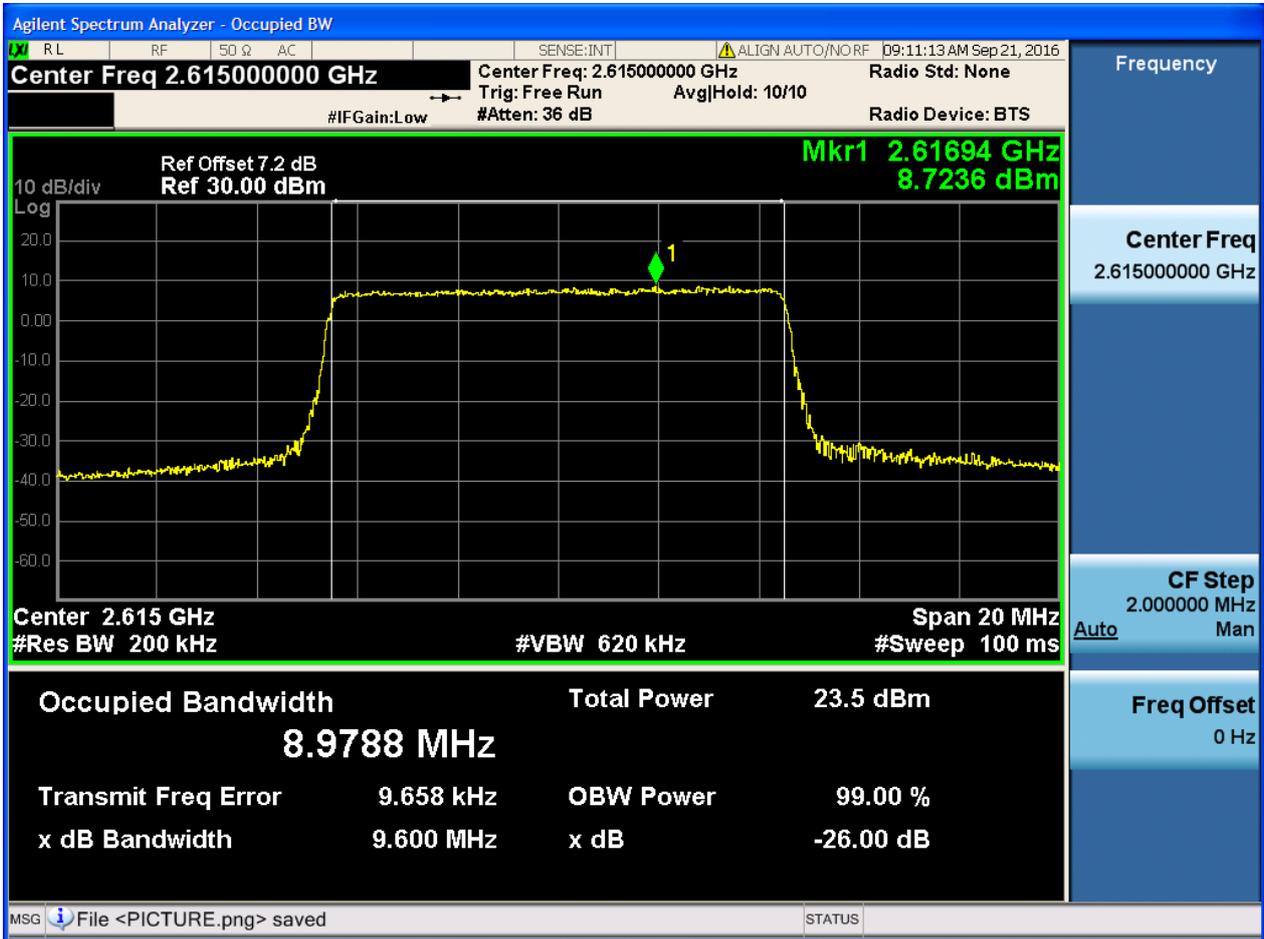
4.1.1.1.3 Test Bandwidth = 15

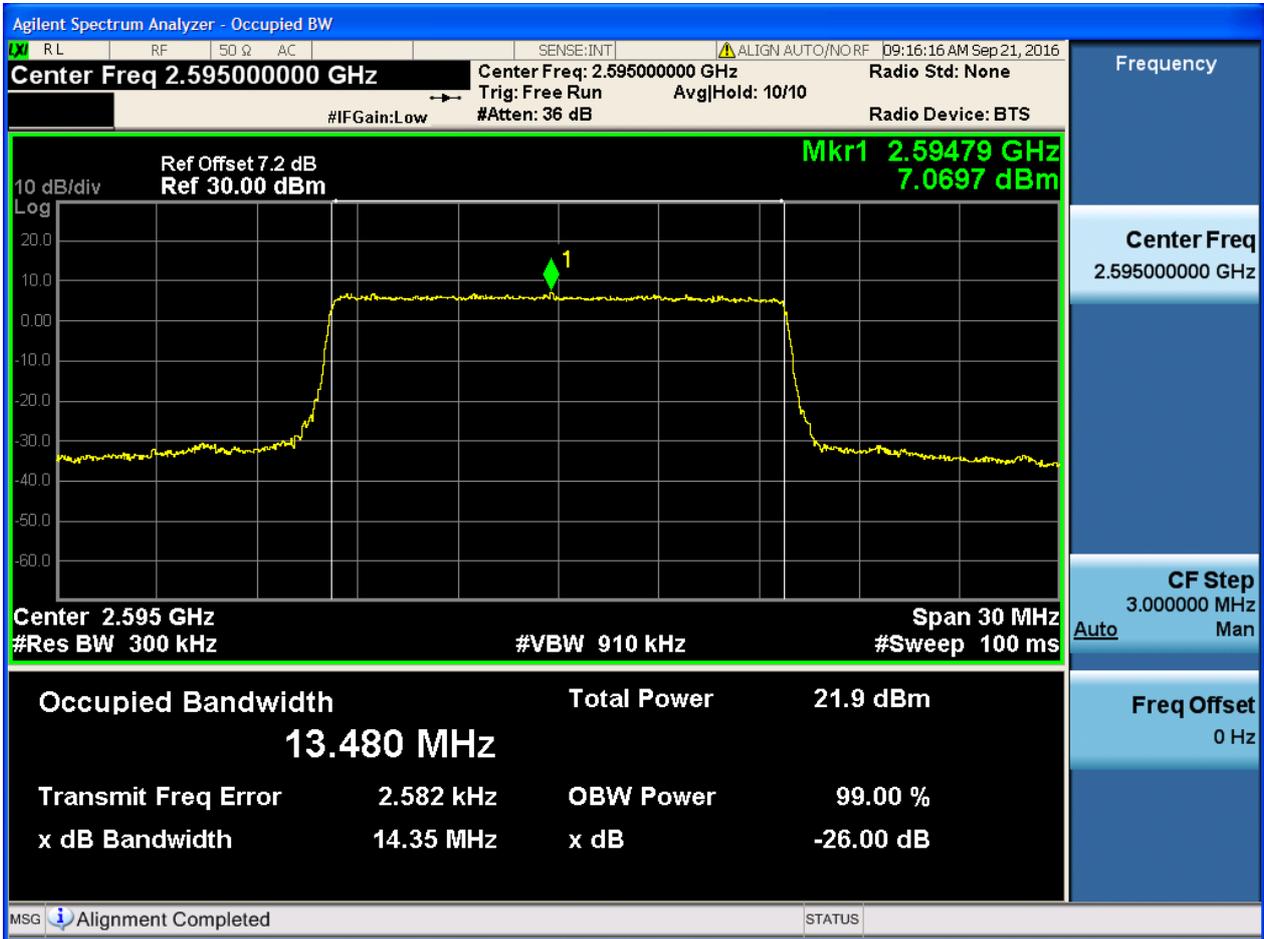### 4.1.1.1.3.1 Test Channel = LCH

### 4.1.1.1.3.1.1 Test RB = RB75#0
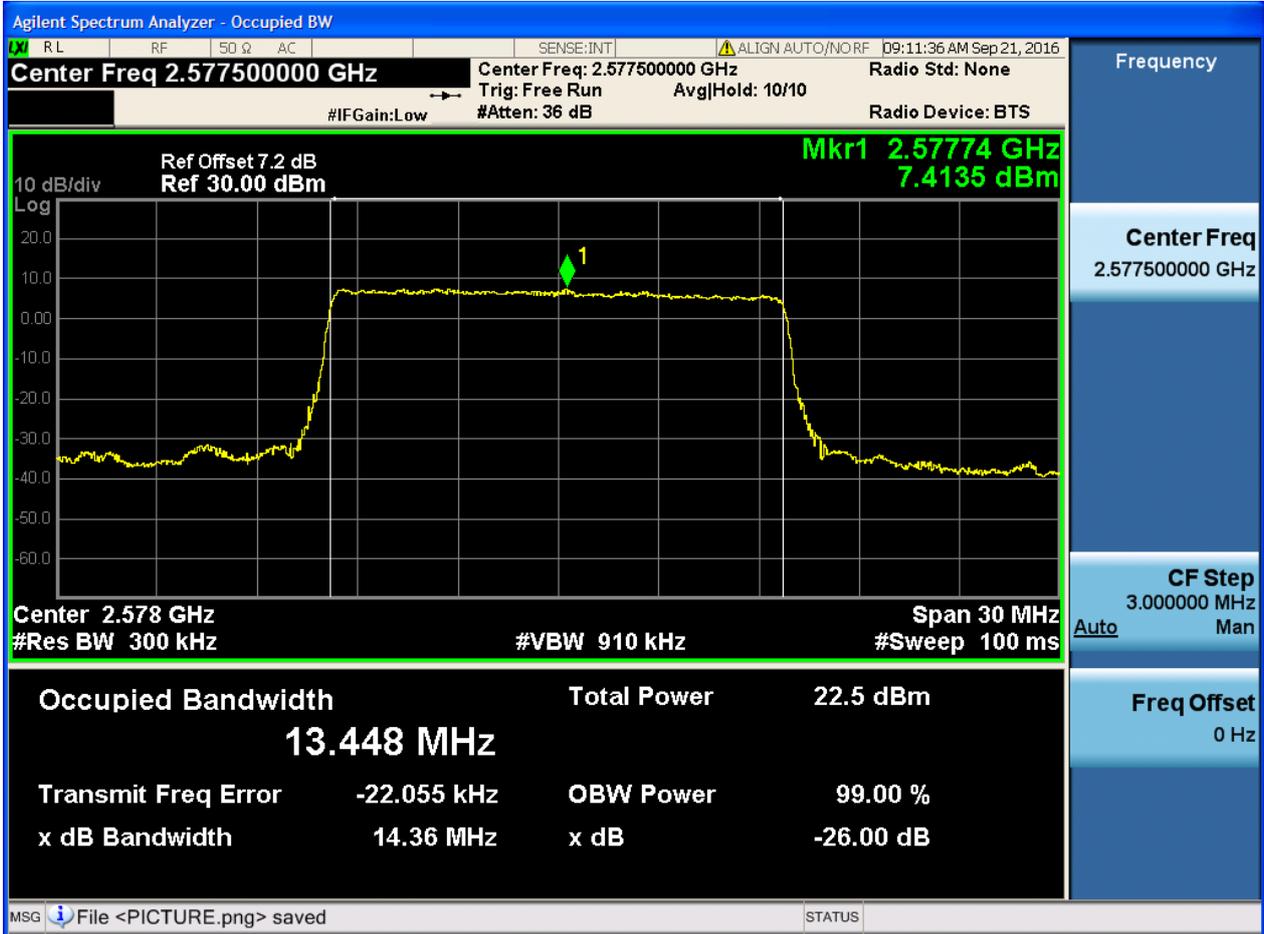
4.1.1.1.3.2 Test Channel = MCH

4.1.1.1.3.2.1 Test RB = RB75#0
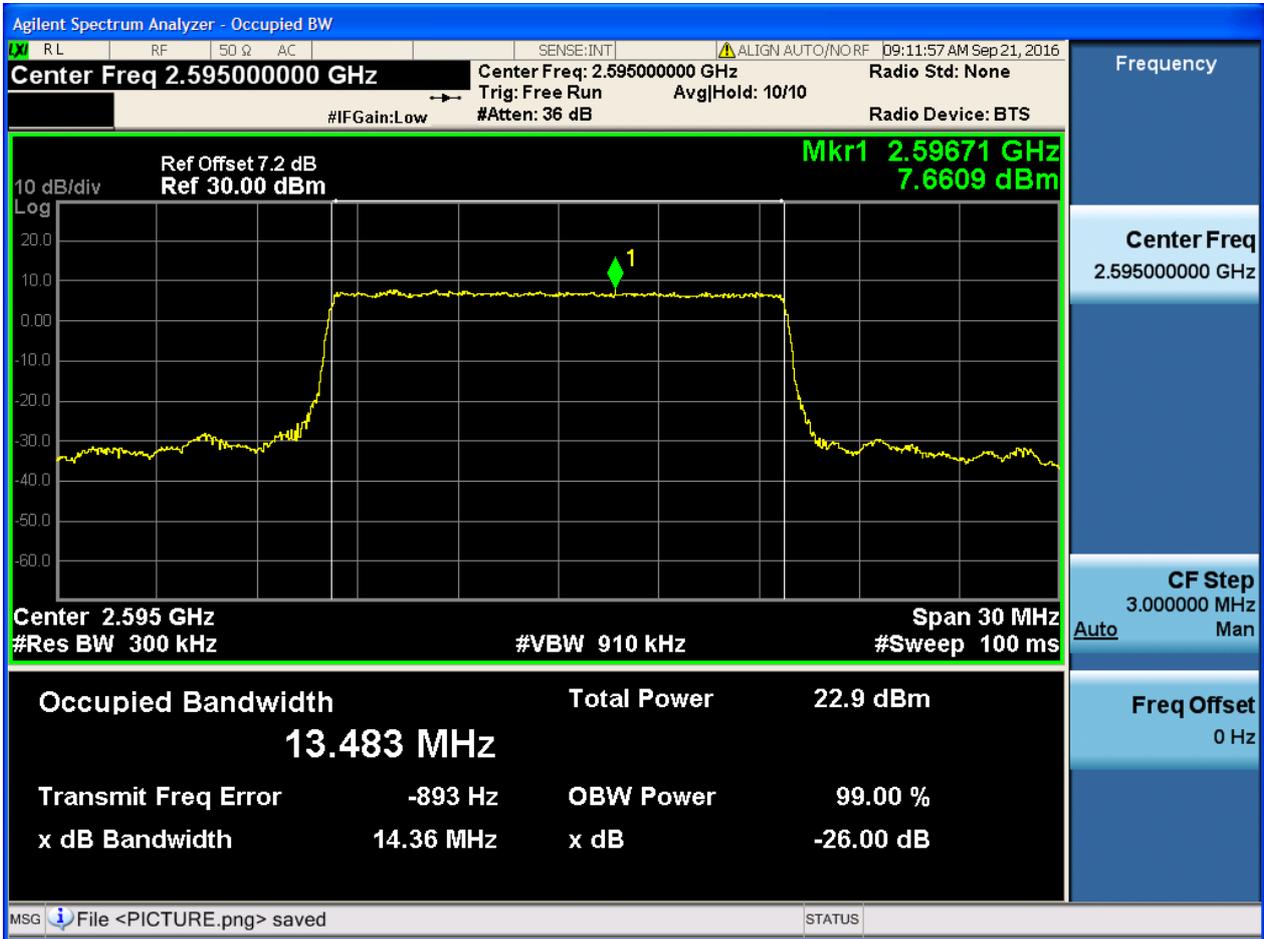
4.1.1.1.3.3 Test Channel = HCH

4.1.1.1.3.3.1 Test RB = RB75#0

Agilent Spectrum Analyzer - Occupied BW		
R L	RF	50 Ω	AC	SENSE:INT	ALIGN AUTO/NO RF	09:12:18 AM Sep 21, 2016	Frequency

Center Freq 2.612500000 GHz

Center Freq: 2.612500000 GHz Radio Std: None
Trig: Free Run   Avg|Hold: 10/10
#IFGain:Low   #Atten: 36 dB   Radio Device: BTS

Mkr1 2.61712 GHz
8.2005 dBm

Ref Offset 7.2 dB
10 dB/div Ref 30.00 dBm
Log

Center Freq
2.612500000 GHz

Center 2.613 GHz   Span 30 MHz
#Res BW 300 kHz   #VBW 910 kHz   #Sweep 100 ms

CF Step
3.000000 MHz
Auto   Man

Occupied Bandwidth	Total Power	23.2 dBm	Freq Offset
13.471 MHz			0 Hz
Transmit Freq Error	23.748 kHz	OBW Power	99.00 %
x dB Bandwidth	14.36 MHz	x dB	-26.00 dB

MSG Alignment Completed   STATUS

4.1.1.1.4 Test Bandwidth = 20

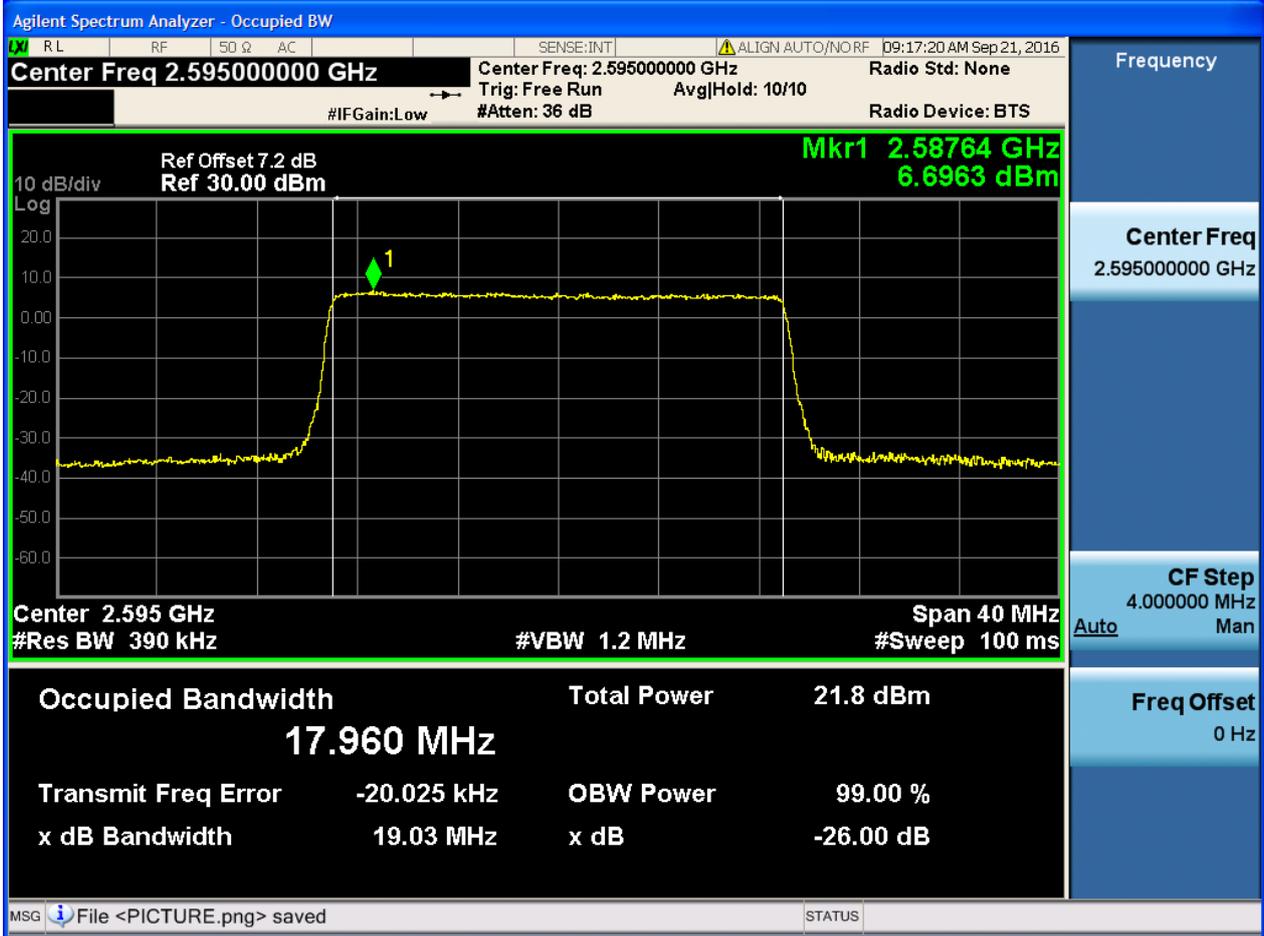### 4.1.1.1.4.1 Test Channel = LCH

4.1.1.1.4.1.1 Test RB = RB100#0

4.1.1.1.4.2 Test Channel = MCH

4.1.1.1.4.2.1 Test RB = RB100#0
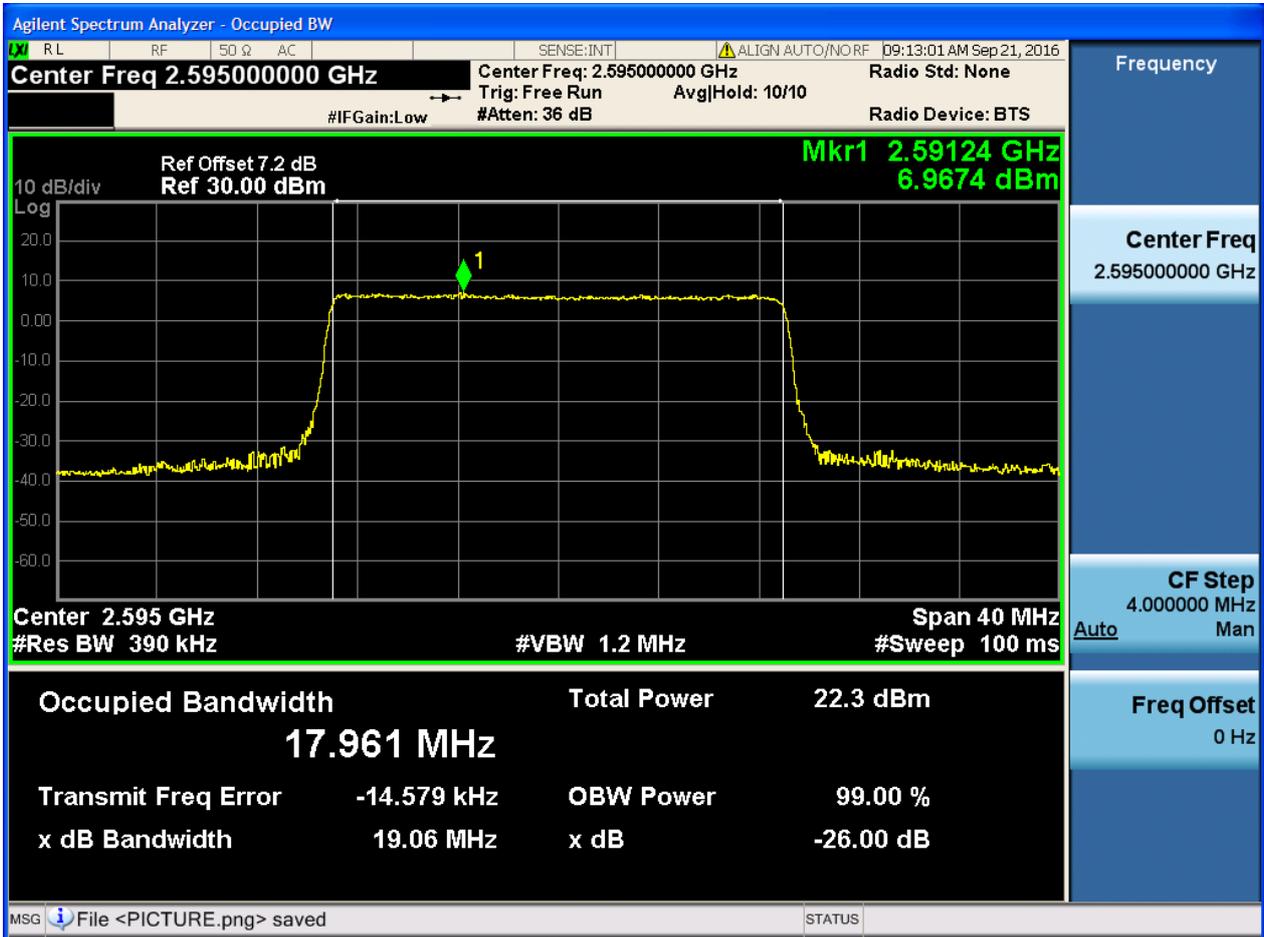
4.1.1.1.4.3 Test Channel = HCH

4.1.1.1.4.3.1 Test RB = RB100#0
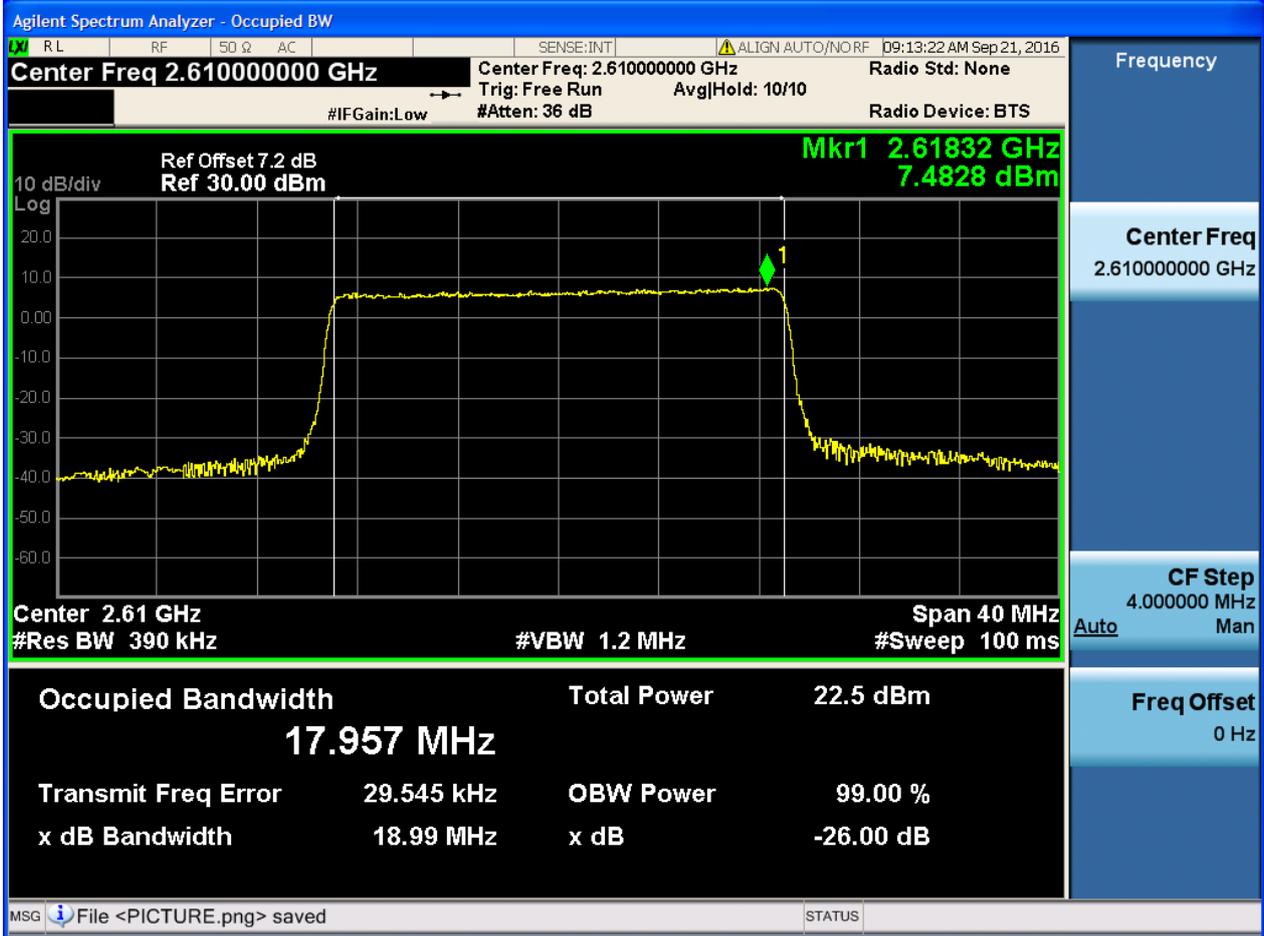
4.1.1.2 Test Mode = LTE/TM2

4.1.1.2.1 Test Bandwidth = 5

4.1.1.2.1.1 Test Channel = LCH

4.1.1.2.1.1.1 Test RB = RB25#0
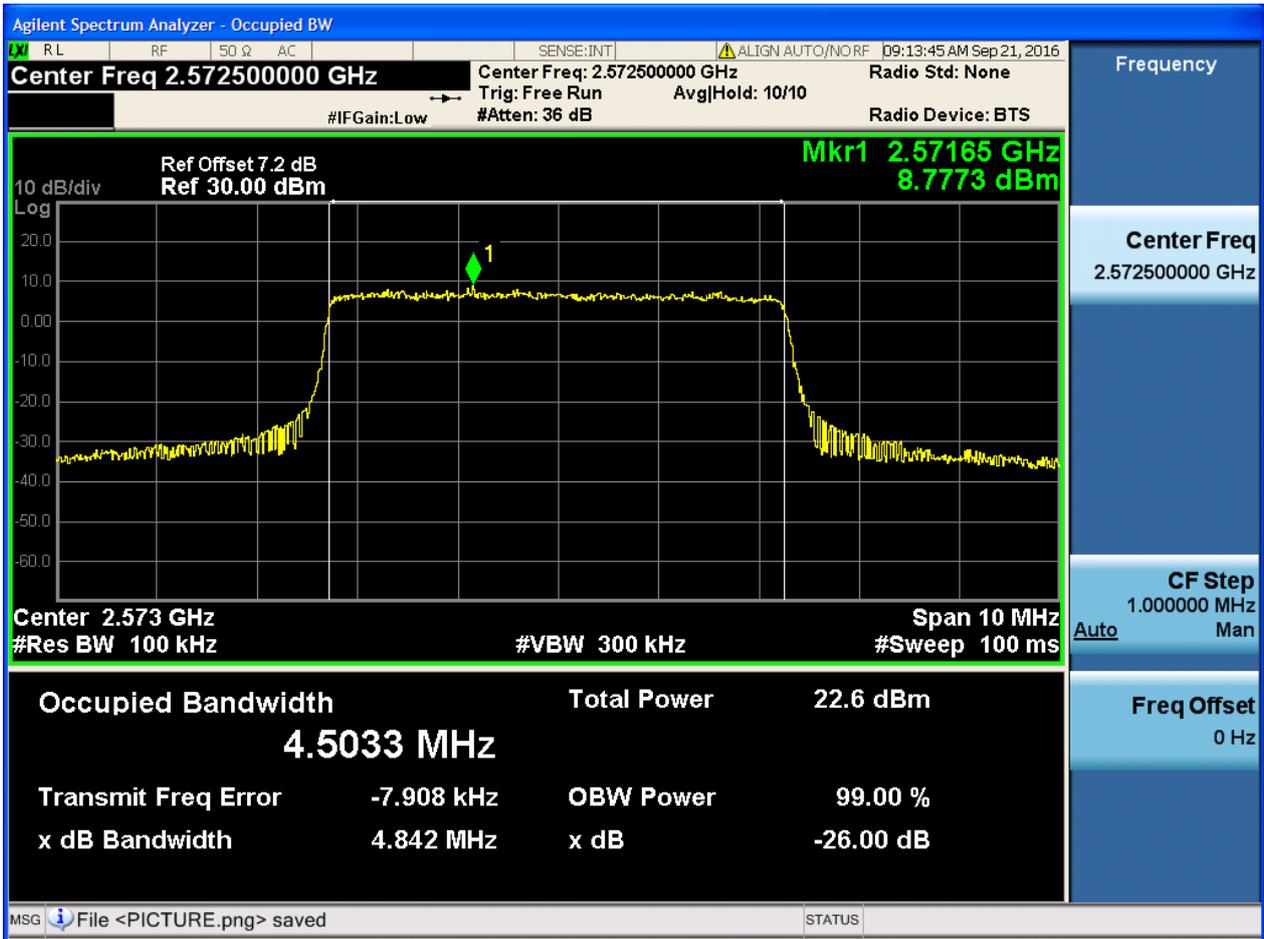
4.1.1.2.1.2 Test Channel = MCH

4.1.1.2.1.2.1 Test RB = RB25#0

4.1.1.2.1.3 Test Channel = HCH

4.1.1.2.1.3.1 Test RB = RB25#0

4.1.1.2.2 Test Bandwidth = 10

4.1.1.2.2.1 Test Channel = LCH

4.1.1.2.2.1.1 Test RB = RB50#0
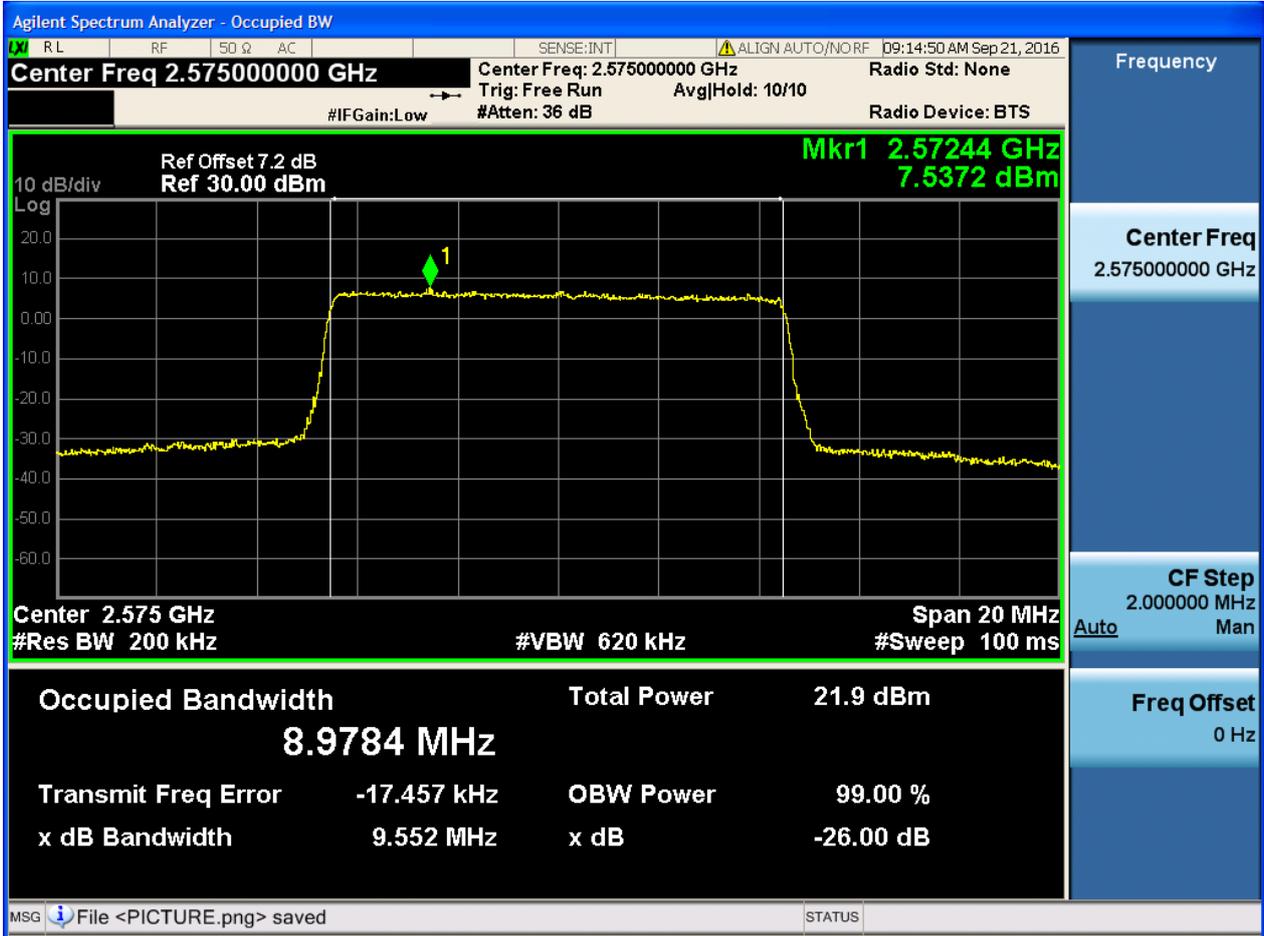
4.1.1.2.2.2 Test Channel = MCH

4.1.1.2.2.2.1 Test RB = RB50#0

4.1.1.2.2.3 Test Channel = HCH

4.1.1.2.2.3.1 Test RB = RB50#0
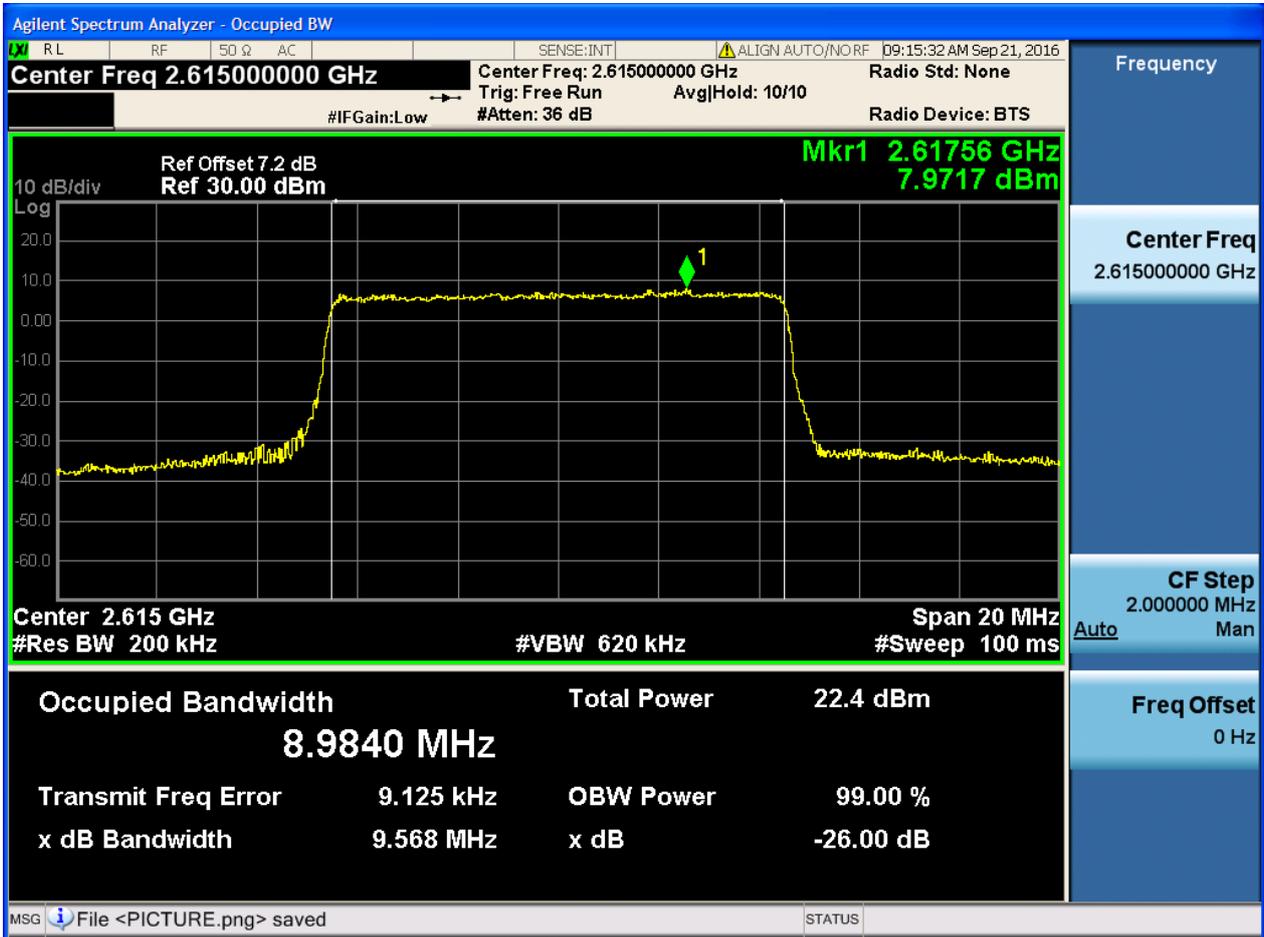
4.1.1.2.3 Test Bandwidth = 15

4.1.1.2.3.1 Test Channel = LCH

4.1.1.2.3.1.1 Test RB = RB75#0
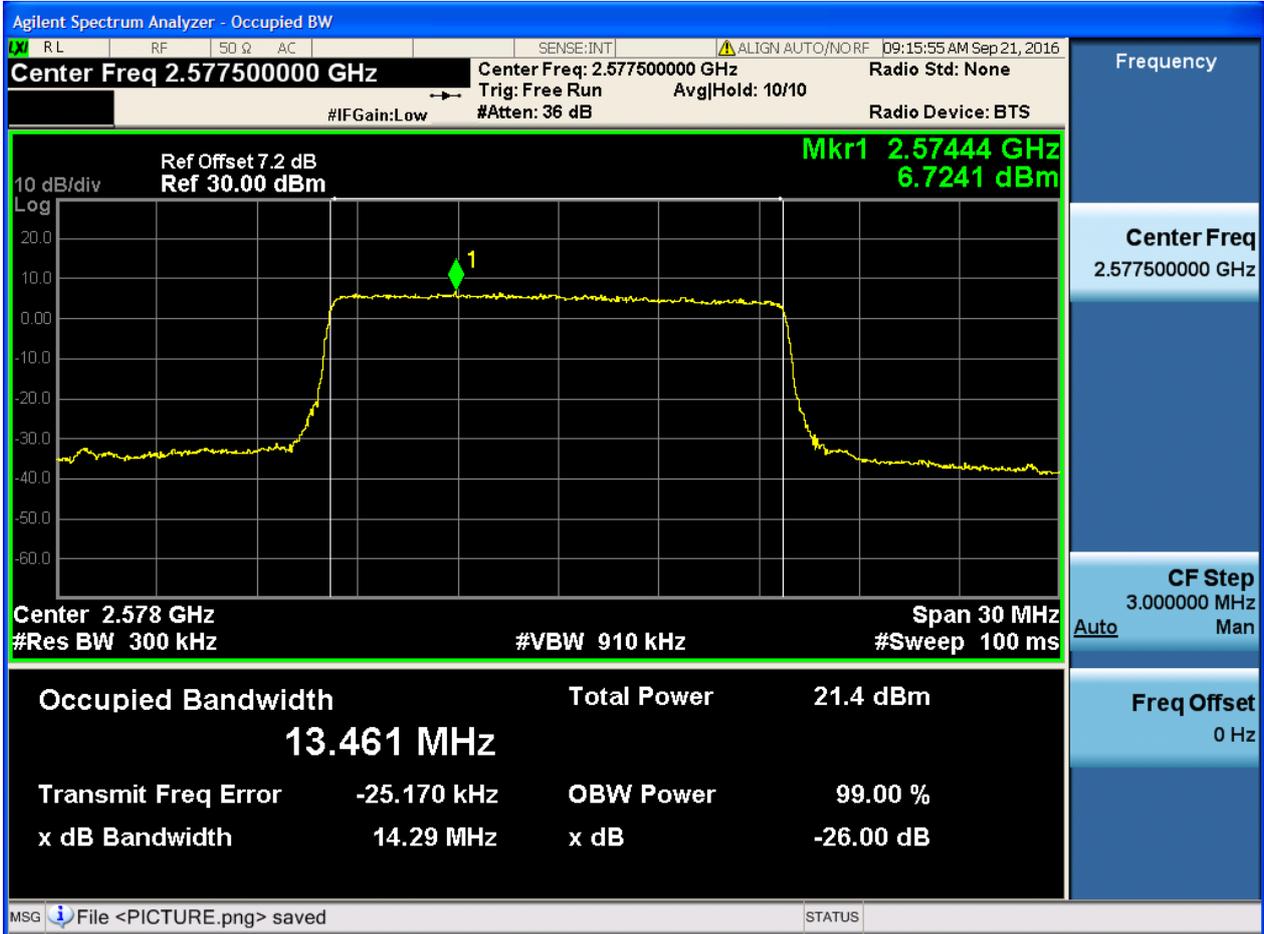
4.1.1.2.3.2 Test Channel = MCH

4.1.1.2.3.2.1 Test RB = RB75#0

4.1.1.2.3.3 Test Channel = HCH

4.1.1.2.3.3.1 Test RB = RB75#0
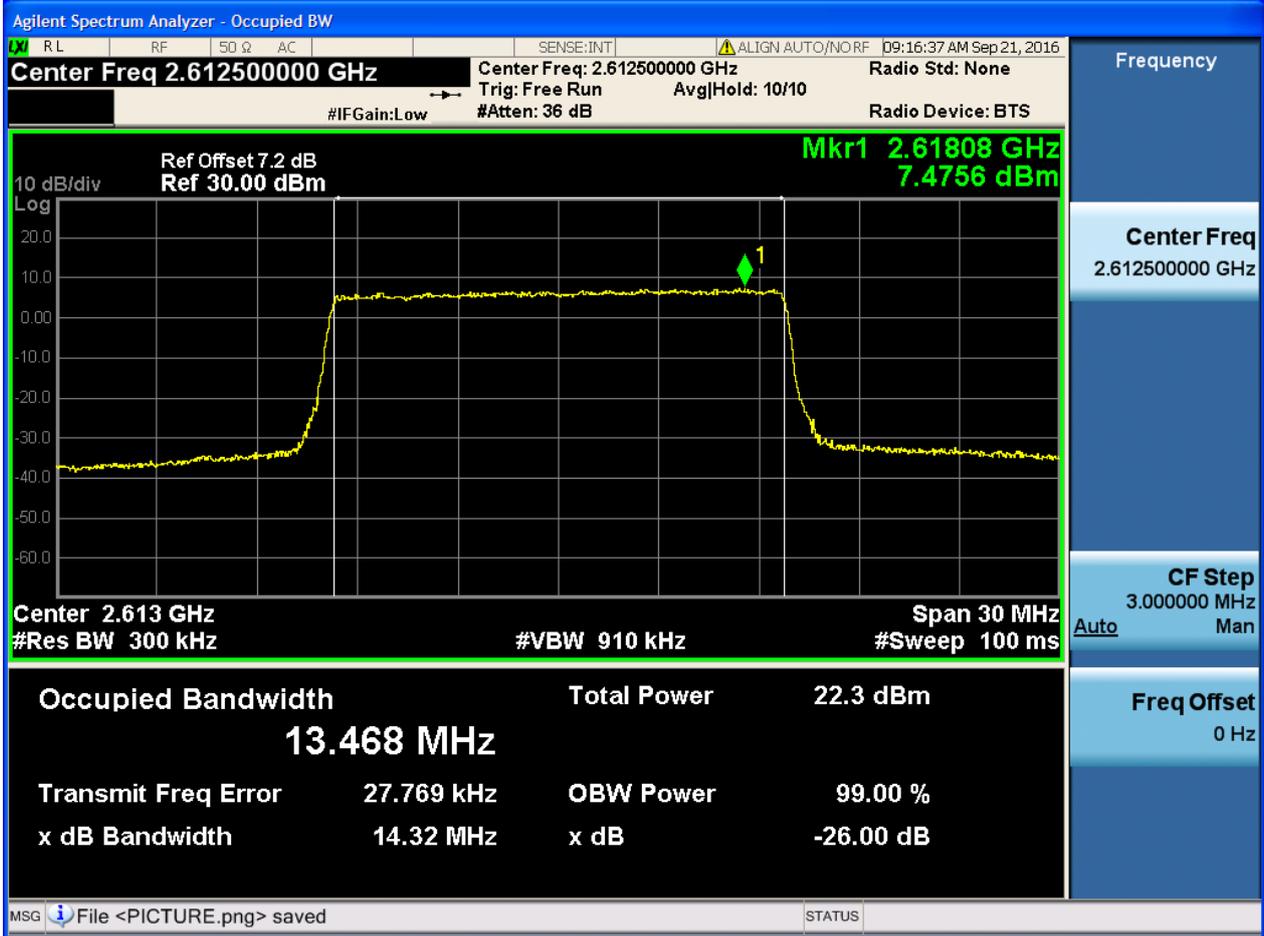
4.1.1.2.4 Test Bandwidth = 20

4.1.1.2.4.1 Test Channel = LCH

4.1.1.2.4.1.1 Test RB = RB100#0
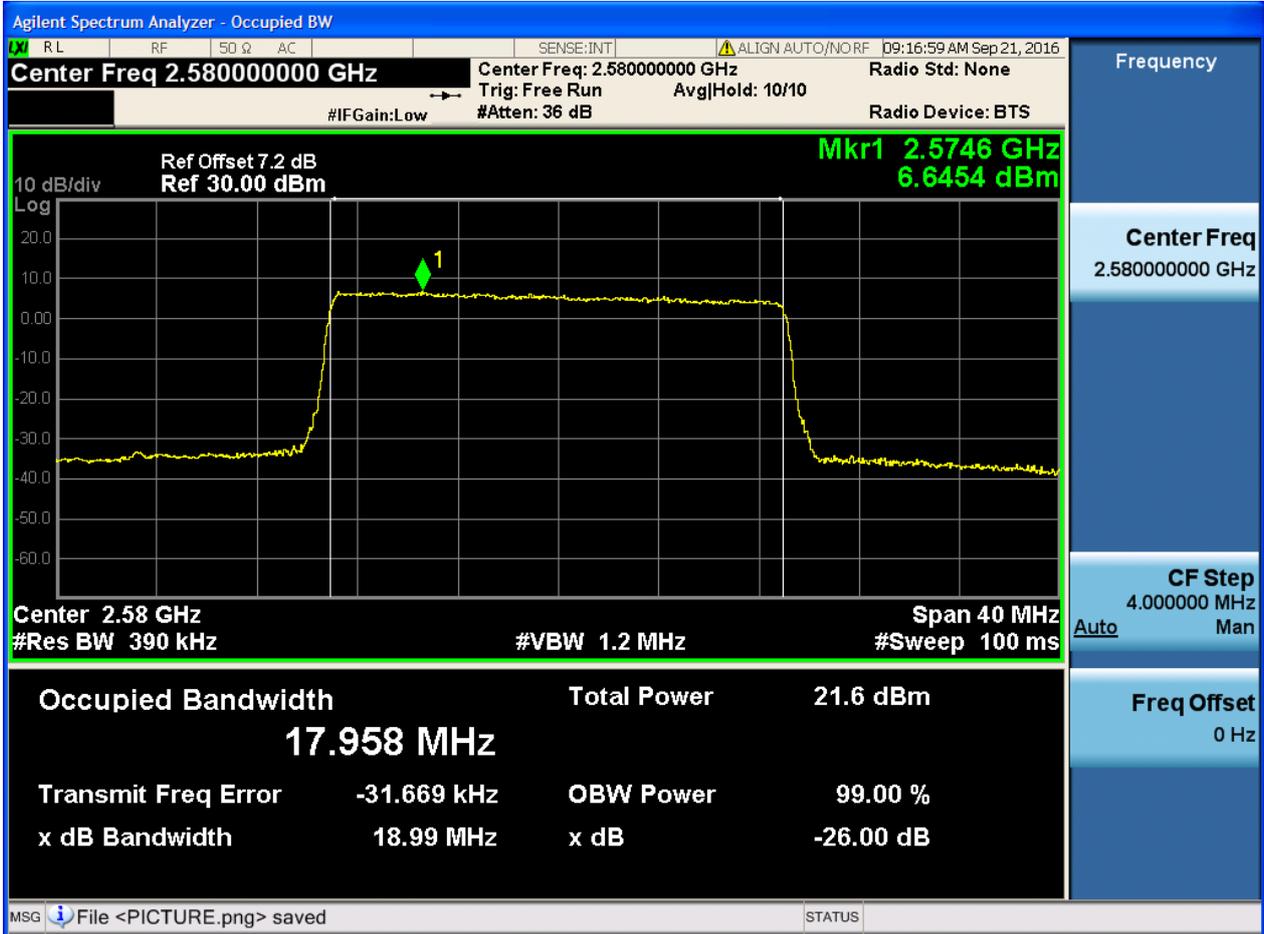
4.1.1.2.4.2 Test Channel = MCH

4.1.1.2.4.2.1 Test RB = RB100#0

4.1.1.2.4.3 Test Channel = HCH

4.1.1.2.4.3.1 Test RB = RB100#0
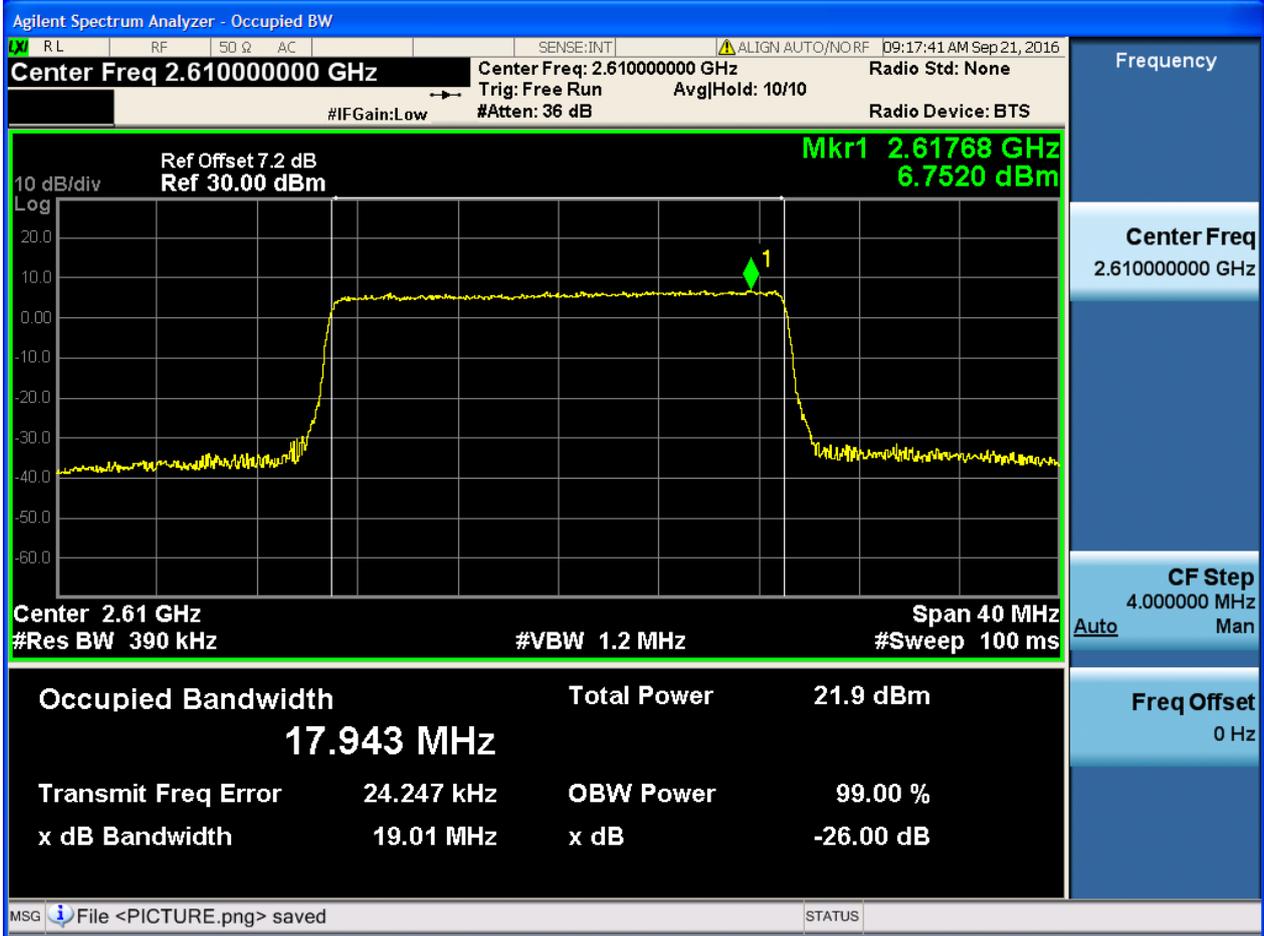
5Appendix_E: Band Edges Compliance

Part I - Test Plots

5.1 For LTE

5.1.1 Test Band = BAND38

5.1.1.1 Test Mode = LTE/TM1

5.1.1.1.1 Test Bandwidth = 5

5.1.1.1.1.1 Test Channel = LCH

5.1.1.1.1.1.1 Test RB = RB1#0

5.1.1.1.1.1.2 Test RB = RB1#24

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Copyright © Huawei Technologies Co., Ltd.
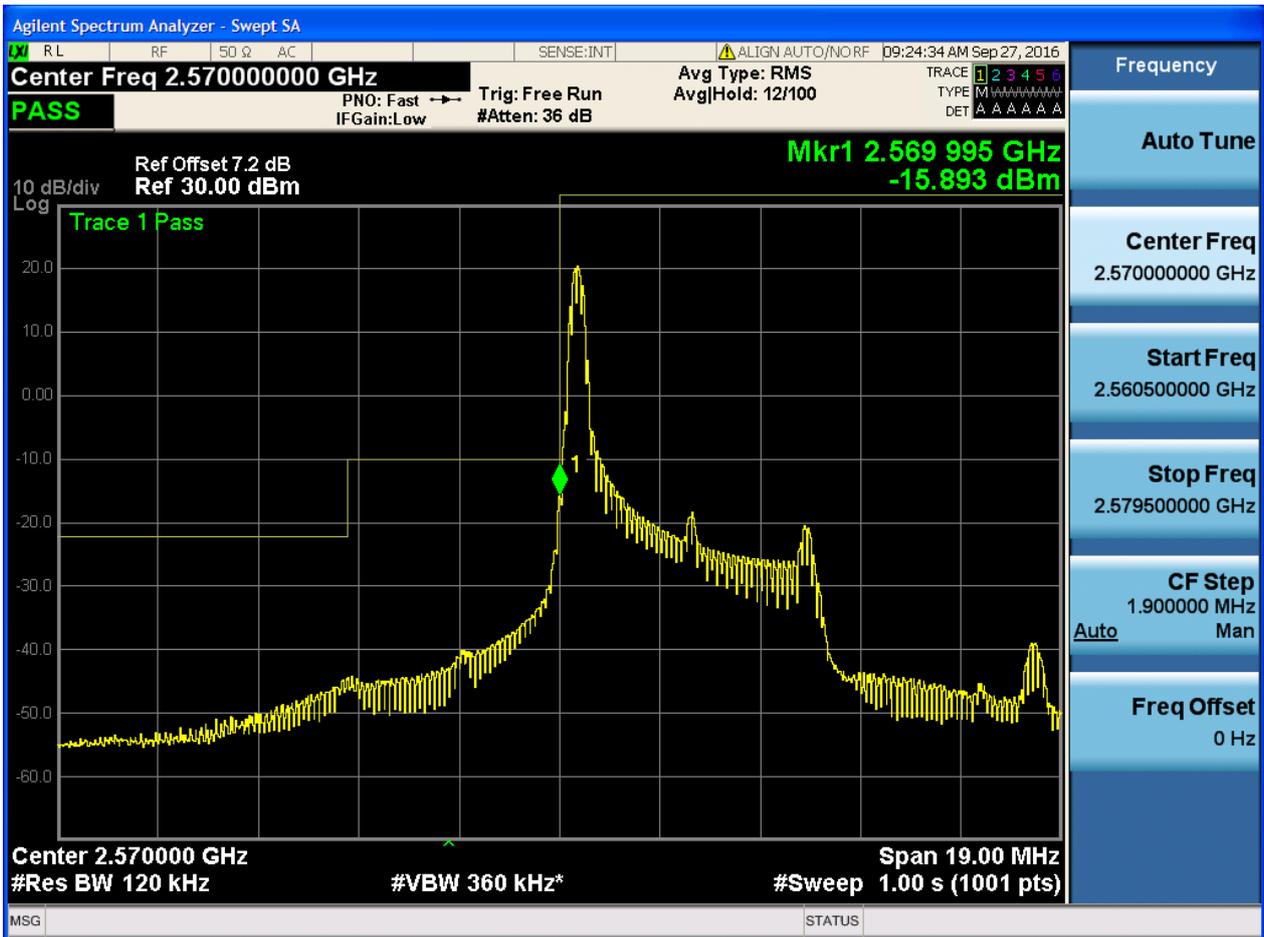
5.1.1.1.1.1.3 Test RB = RB12#6

5.1.1.1.1.1.4 Test RB = RB25#0

5.1.1.1.1.2 Test Channel = HCH

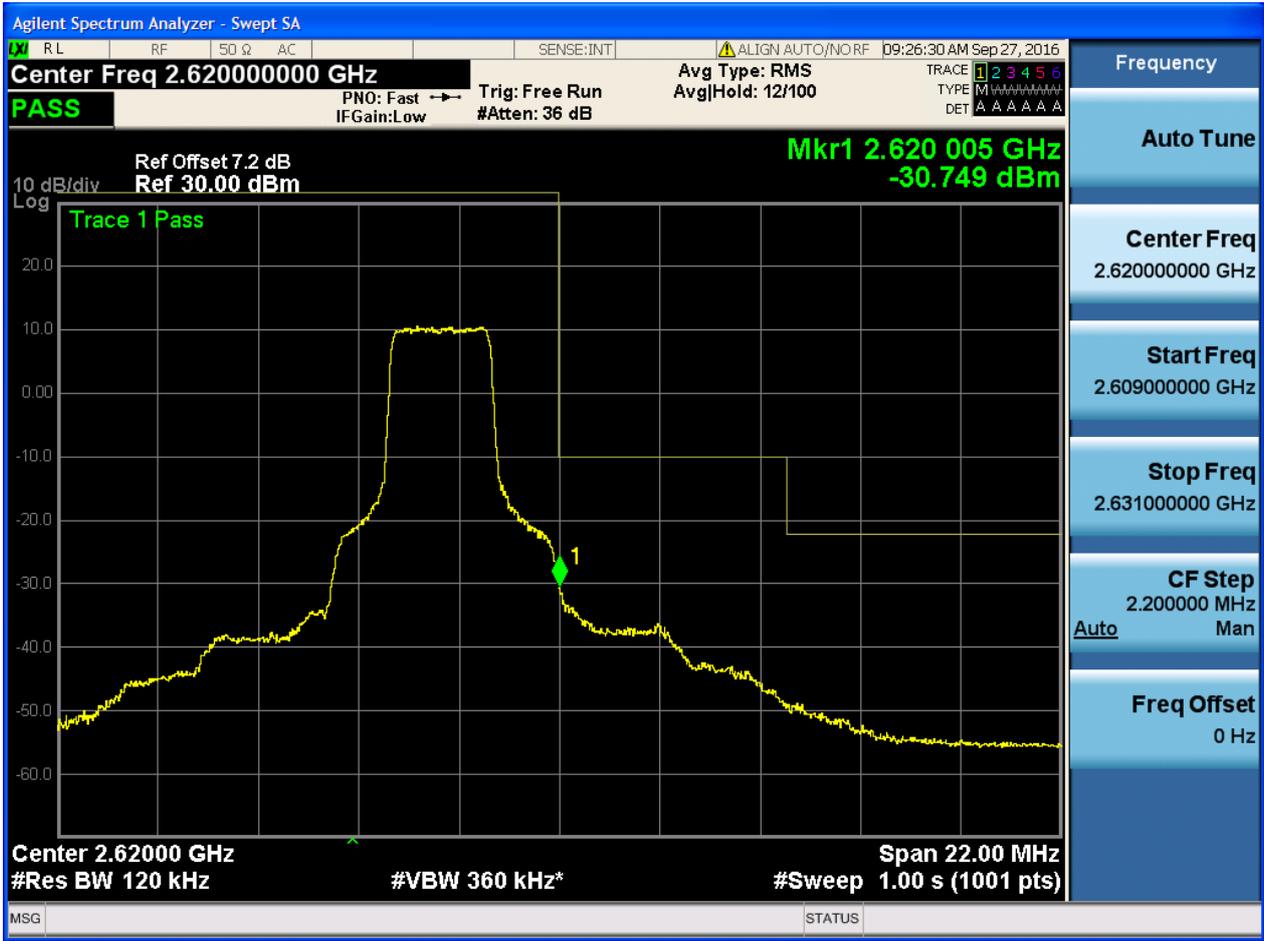## 5.1.1.1.1.2.1 Test RB = RB1#0

5.1.1.1.1.2.2 Test RB = RB1#24
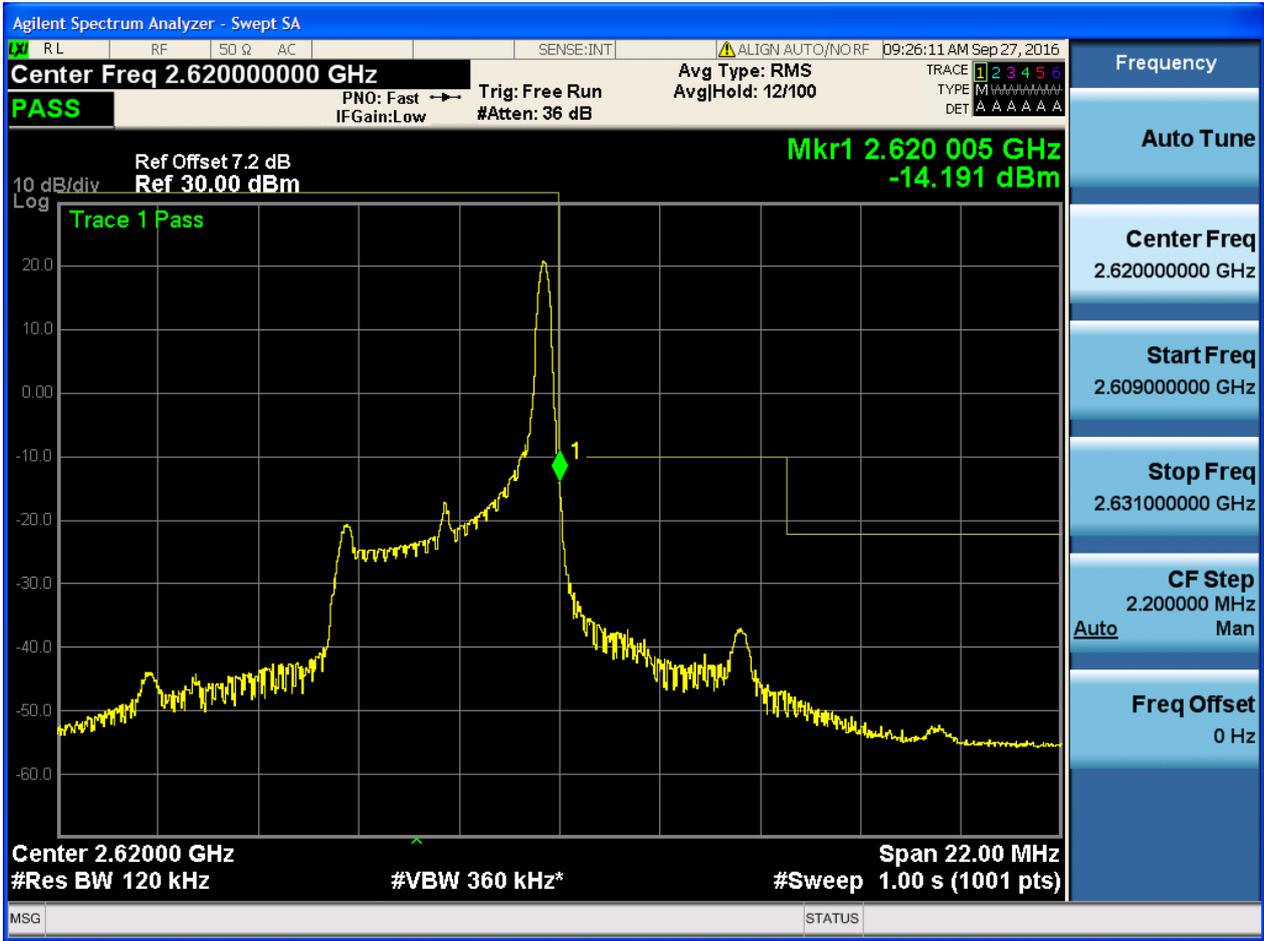
5.1.1.1.1.2.3 Test RB = RB12#6
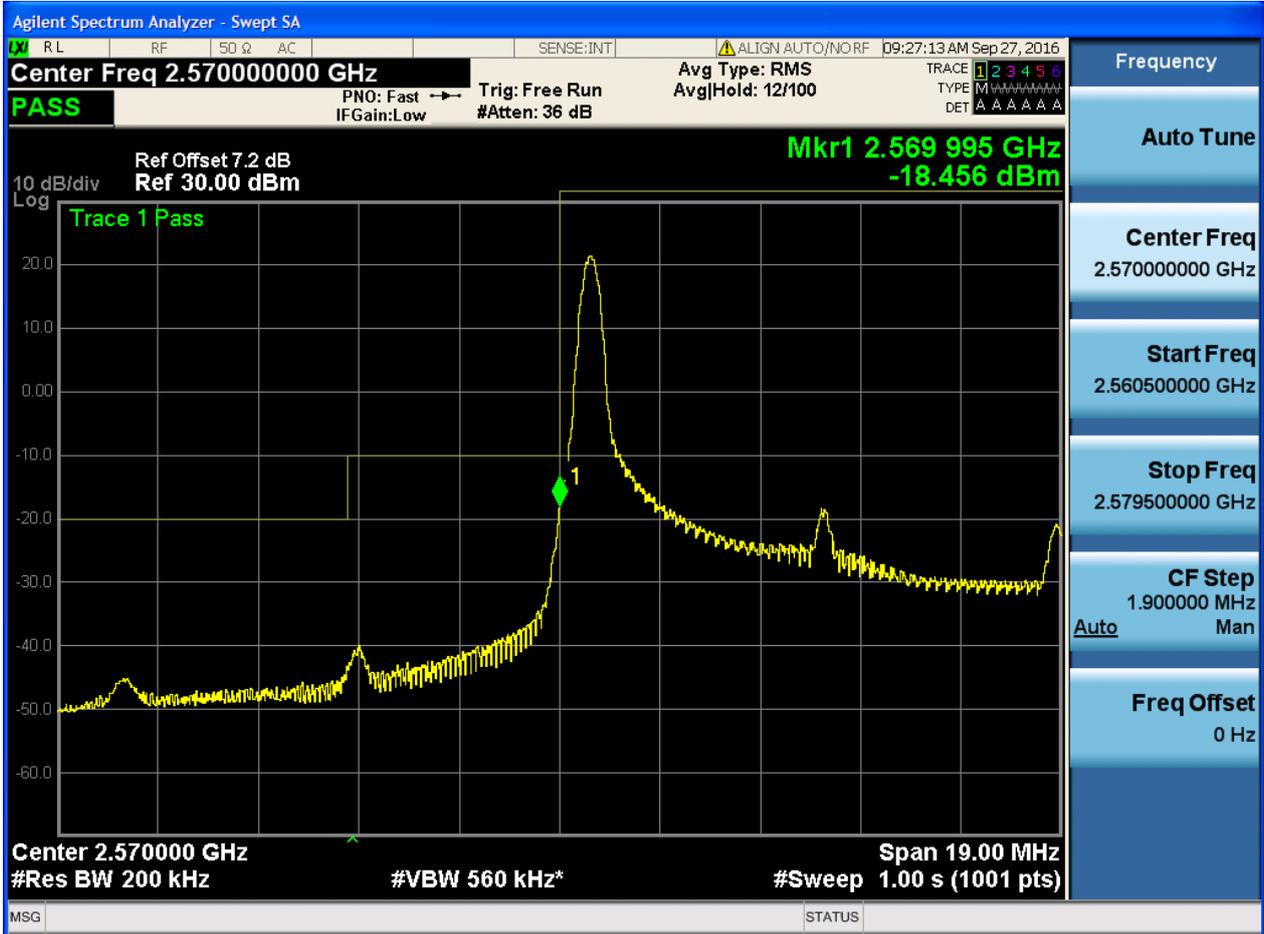
5.1.1.1.1.2.4 Test RB = RB25#0

5.1.1.1.2 Test Bandwidth = 10

5.1.1.1.2.1 Test Channel = LCH

5.1.1.1.2.1.1 Test RB = RB1#0

5.1.1.1.2.1.2 Test RB = RB1#49
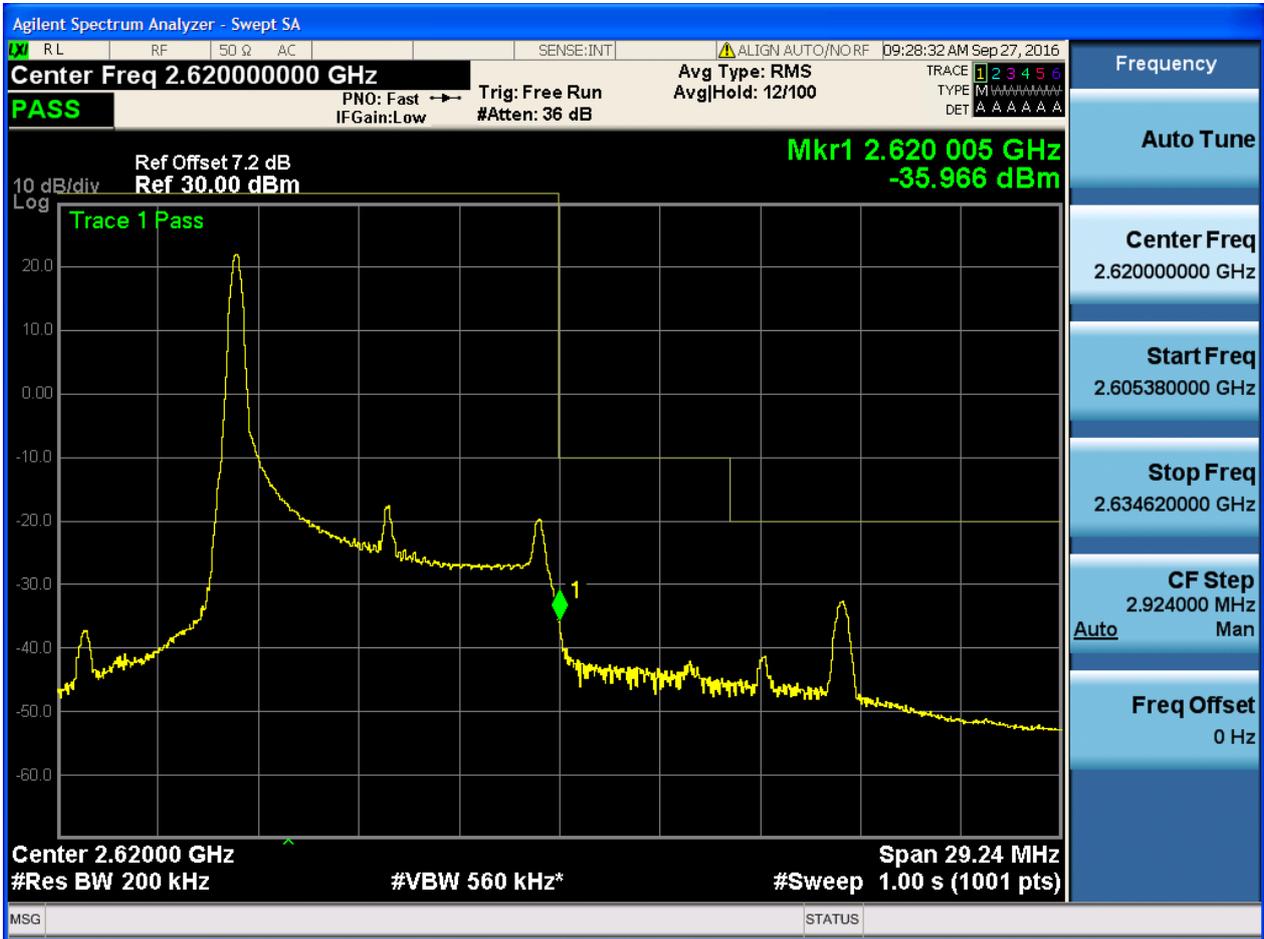
5.1.1.1.2.1.3 Test RB = RB25#13

5.1.1.1.2.1.4 Test RB = RB50#0

5.1.1.1.2.2 Test Channel = HCH

5.1.1.1.2.2.1 Test RB = RB1#0

5.1.1.1.2.2.2 Test RB = RB1#49

5.1.1.1.2.2.3 Test RB = RB25#13
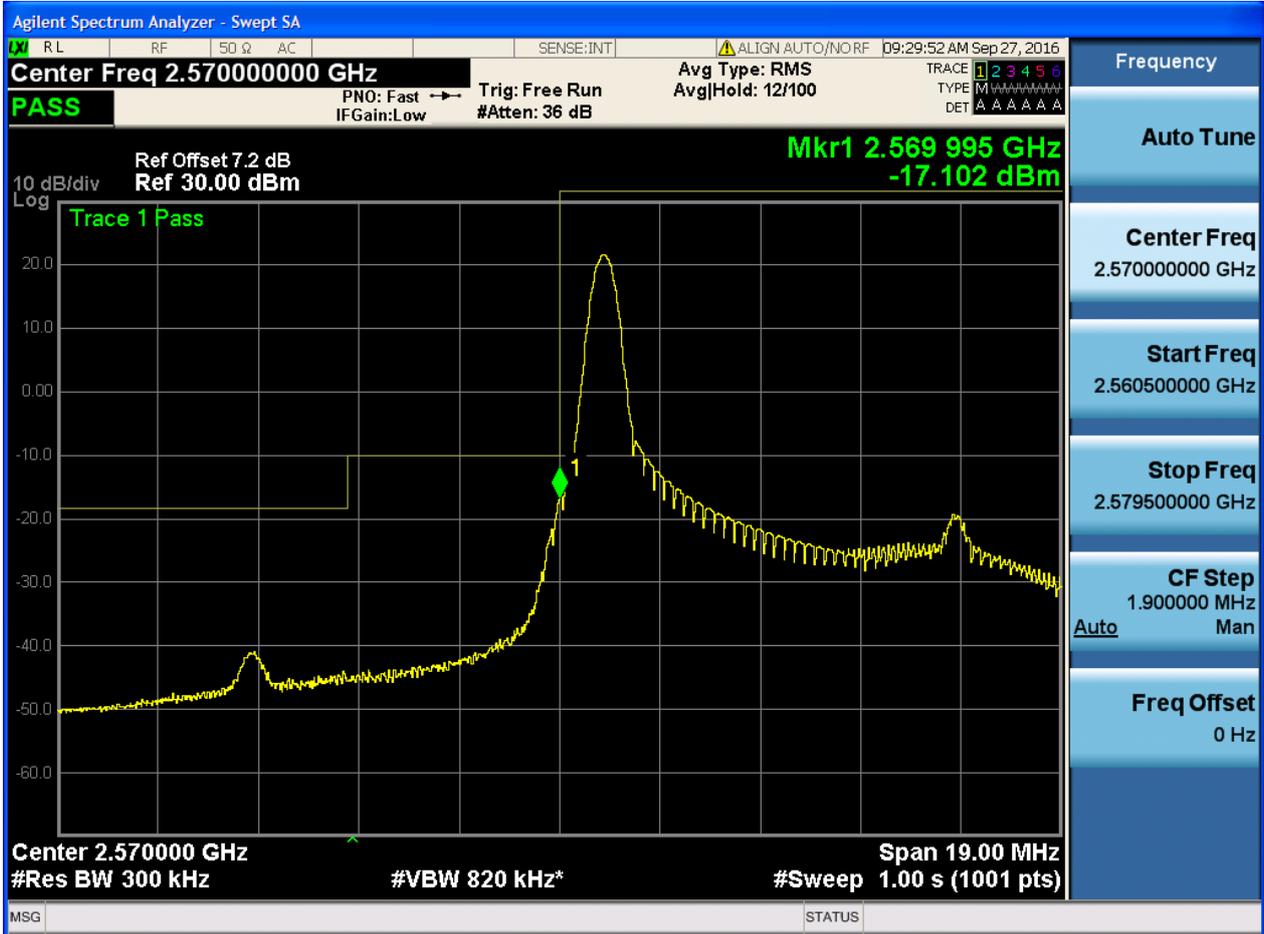
5.1.1.1.2.2.4 Test RB = RB50#0

5.1.1.1.3 Test Bandwidth = 15

5.1.1.1.5.1 Test Channel = LCH

5.1.1.1.5.1.1 Test RB = RB1#0

5.1.1.1.5.1.2 Test RB = RB1#74

5.1.1.1.5.1.3 Test RB = RB36#18

5.1.1.1.5.1.4 Test RB = RB75#0

5.1.1.1.3.2 Test Channel = HCH

5.1.1.1.3.2.1 Test RB = RB1#0

5.1.1.1.3.2.2 Test RB = RB1#74

5.1.1.1.3.2.3 Test RB = RB36#18

5.1.1.1.3.2.4 Test RB = RB75#0

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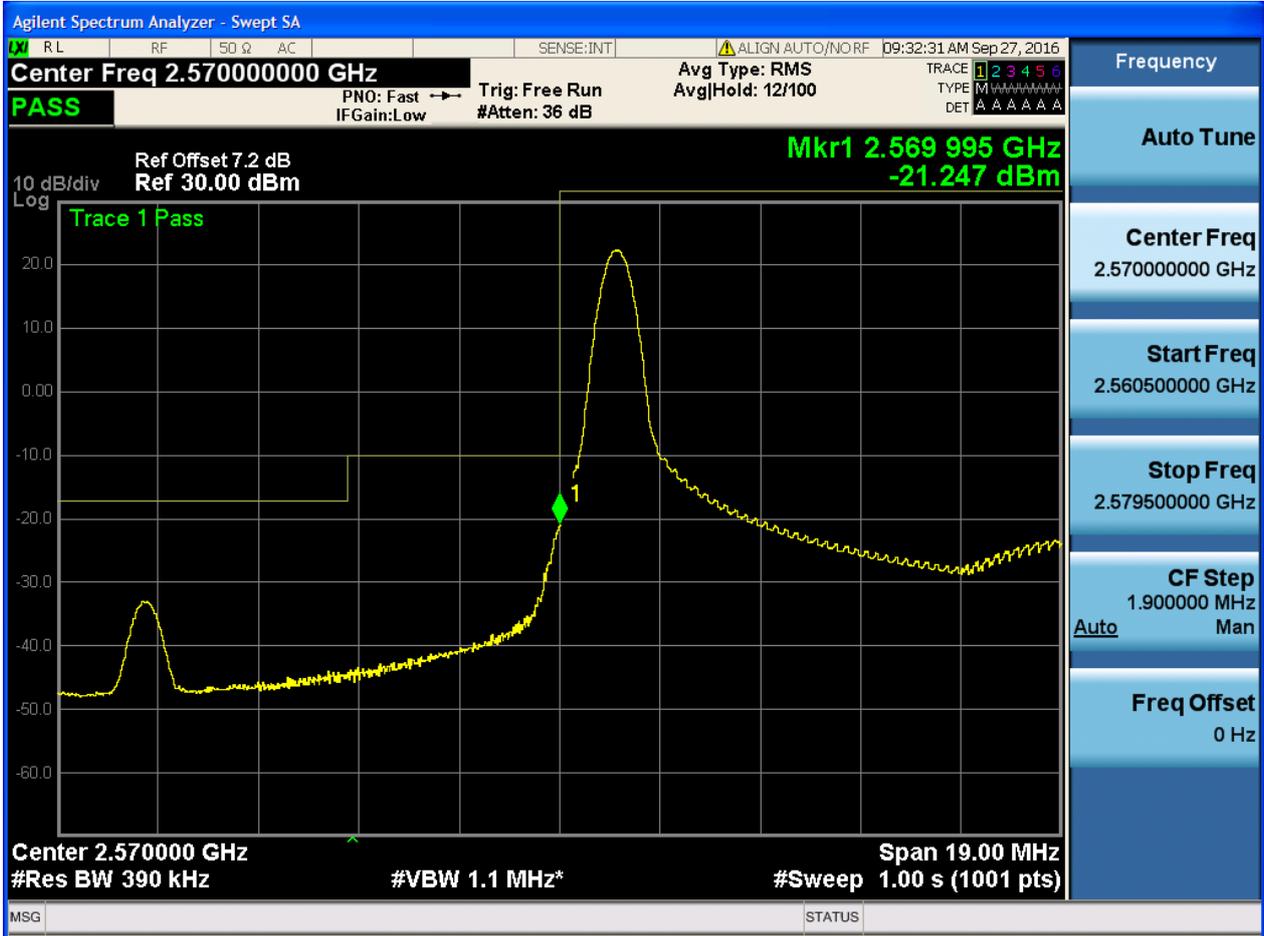Copyright © Huawei Technologies Co., Ltd.

5.1.1.1.4 Test Bandwidth = 20

5.1.1.1.4.1 Test Channel = LCH

5.1.1.1.4.1.1 Test RB = RB1#0

5.1.1.1.4.1.2 Test RB = RB1#99

5.1.1.1.4.1.3 Test RB = RB50#25
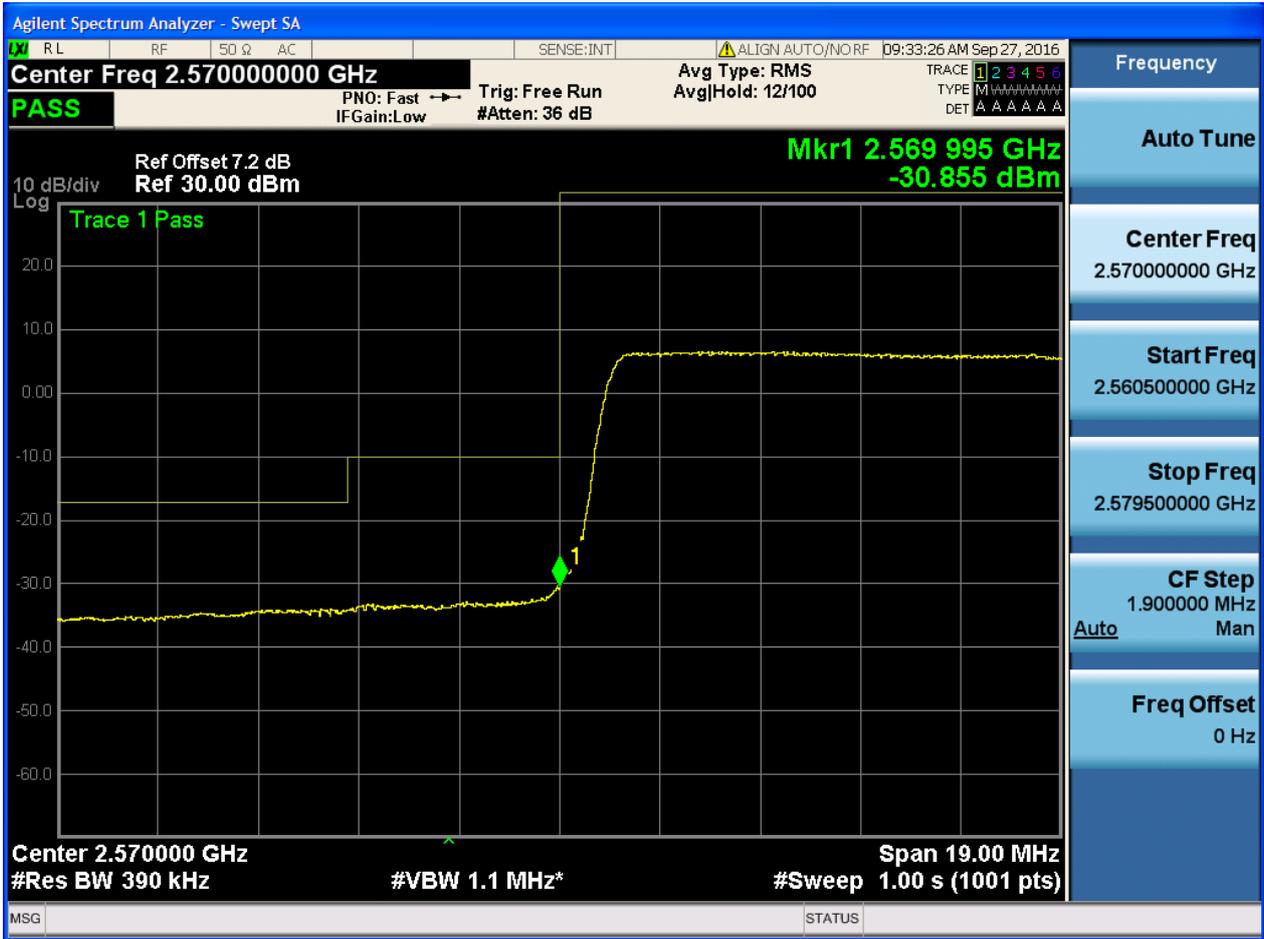
5.1.1.1.4.1.4 Test RB = RB100#0

5.1.1.1.4.2 Test Channel = HCH

5.1.1.1.4.2.1 Test RB = RB1#0

5.1.1.1.4.2.2 Test RB = RB1#99

5.1.1.1.4.2.3 Test RB = RB50#25
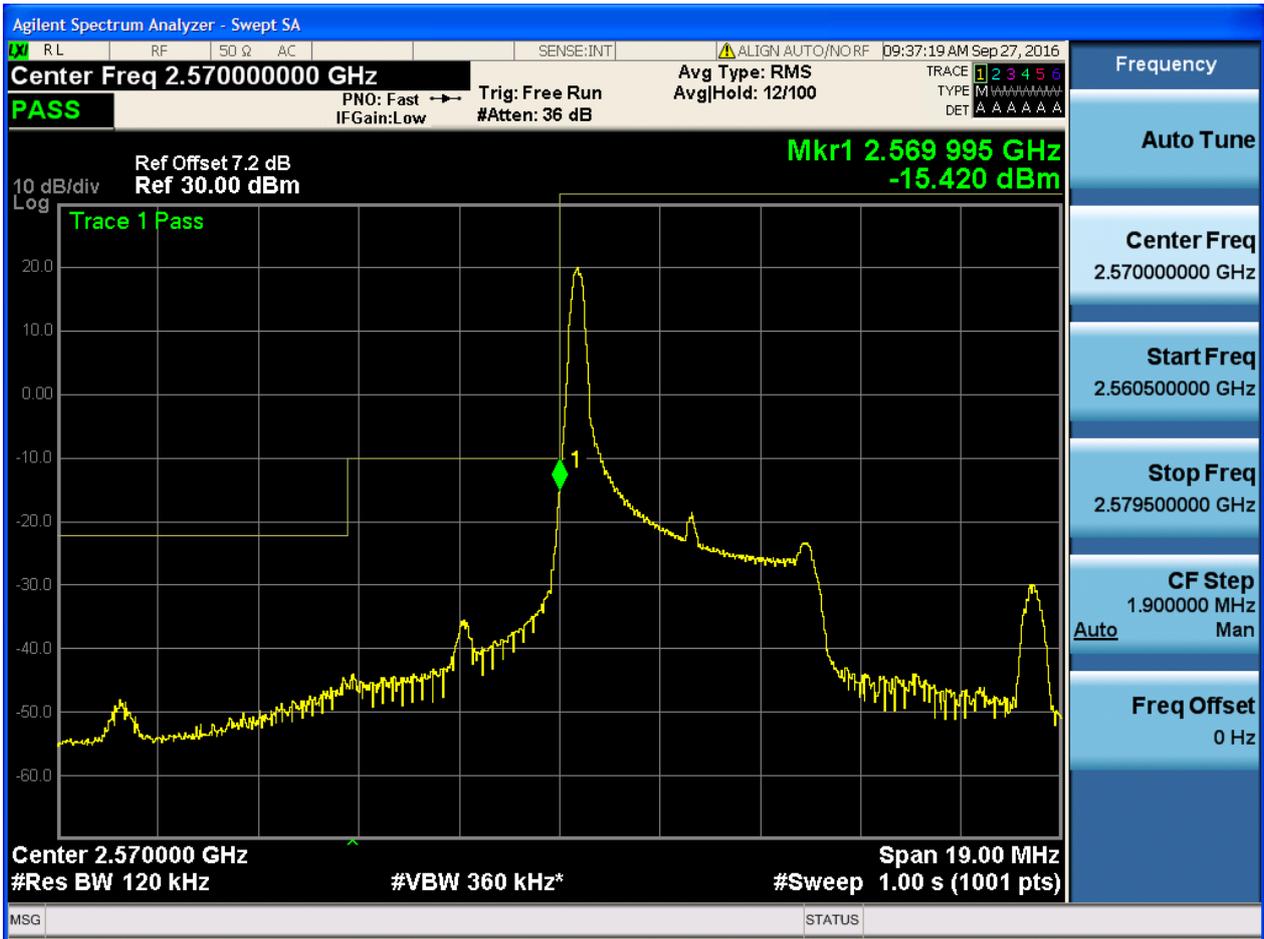
5.1.1.1.4.2.4 Test RB = RB100#0

5.1.1.2 Test Mode = LTE/TM2

5.1.1.2.1 Test Bandwidth = 5

5.1.1.2.1.1 Test Channel = LCH

5.1.1.2.1.1.1 Test RB = RB1#0

5.1.1.2.1.1.2 Test RB = RB1#24

5.1.1.2.1.1.3 Test RB = RB12#6

Agilent Spectrum Analyzer - Swept SA

R L · RF · 50 Ω · AC · SENSE:INT · ⚠ALIGN AUTO/NORF · 09:37:56 AM Sep 27, 2016

Center Freq 2.570000000 GHz

PNO: Fast · Trig: Free Run · Avg Type: RMS · TRACE 1 2 3 4 5 6
IFGain:Low · #Atten: 36 dB · Avg|Hold: 12/100 · TYPE M WWWWWW
· · · DET A A A A A A

PASS

Ref Offset 7.2 dB
10 dB/div Ref 30.00 dBm

Mkr1 2.569 995 GHz
-30.313 dBm

Log

Trace 1 Pass

20.0

10.0

0.00

-10.0

-20.0

-30.0

-40.0

-50.0

-60.0

Center 2.570000 GHz
#Res BW 120 kHz · #VBW 360 kHz* · Span 19.00 MHz
#Sweep 1.00 s (1001 pts)

MSG · STATUS

Frequency

Auto Tune

Center Freq
2.570000000 GHz

Start Freq
2.560500000 GHz

Stop Freq
2.579500000 GHz

CF Step
1.900000 MHz
Auto · Man

Freq Offset
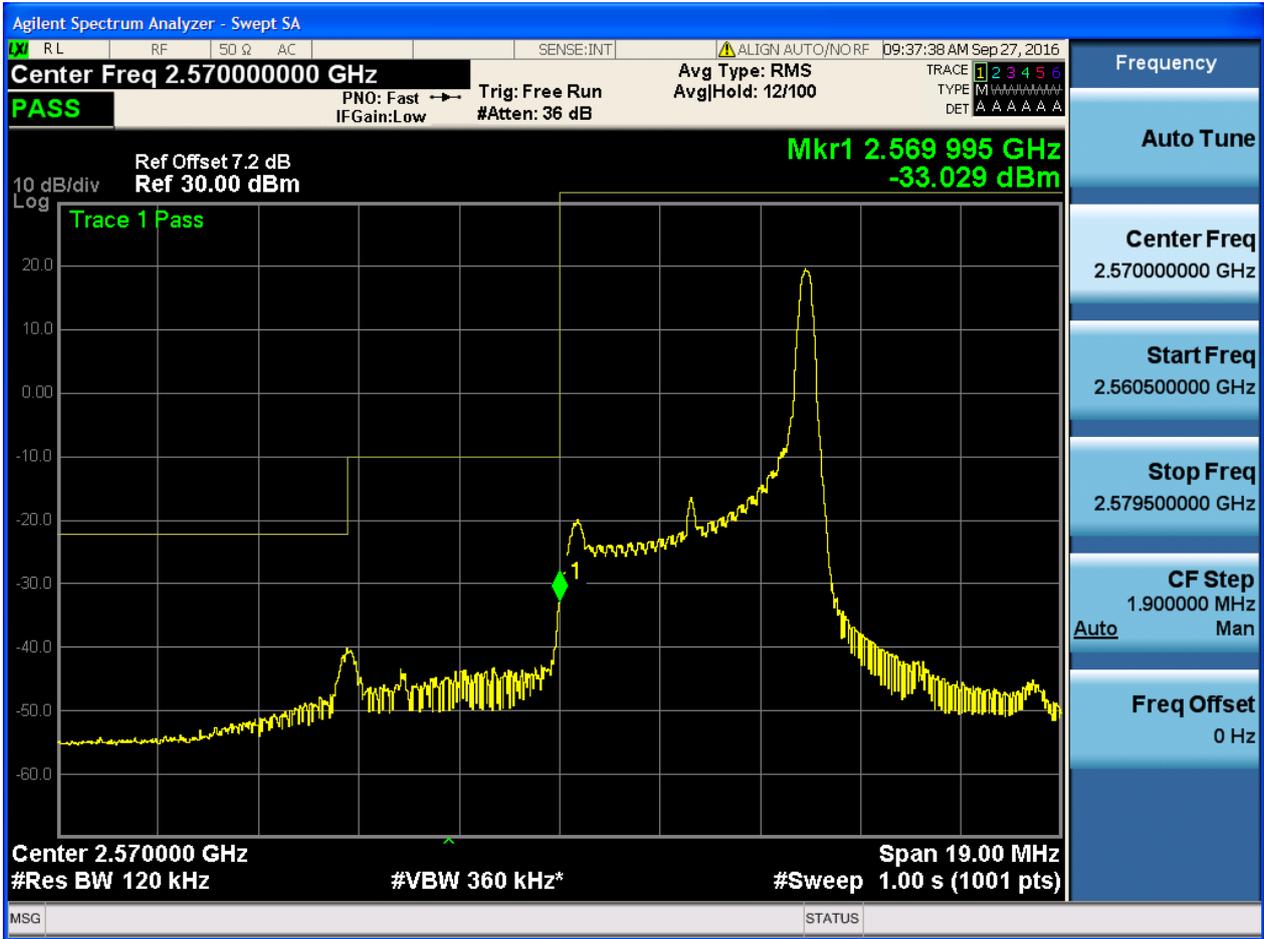0 Hz

5.1.1.2.1.1.4 Test RB = RB25#0

5.1.1.2.1.2 Test Channel = HCH

5.1.1.2.1.2.1 Test RB = RB1#0

5.1.1.2.1.2.2 Test RB = RB1#24

5.1.1.2.1.2.3 Test RB = RB12#6

5.1.1.2.1.2.4 Test RB = RB25#0

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5.1.1.2.2 Test Bandwidth = 10

5.1.1.2.2.1 Test Channel = LCH

5.1.1.2.2.1.1 Test RB = RB1#0

5.1.1.2.2.1.2 Test RB = RB1#49

5.1.1.2.2.1.3 Test RB = RB25#13

5.1.1.2.2.1.4 Test RB = RB50#0

5.1.1.2.2.2 Test Channel = HCH

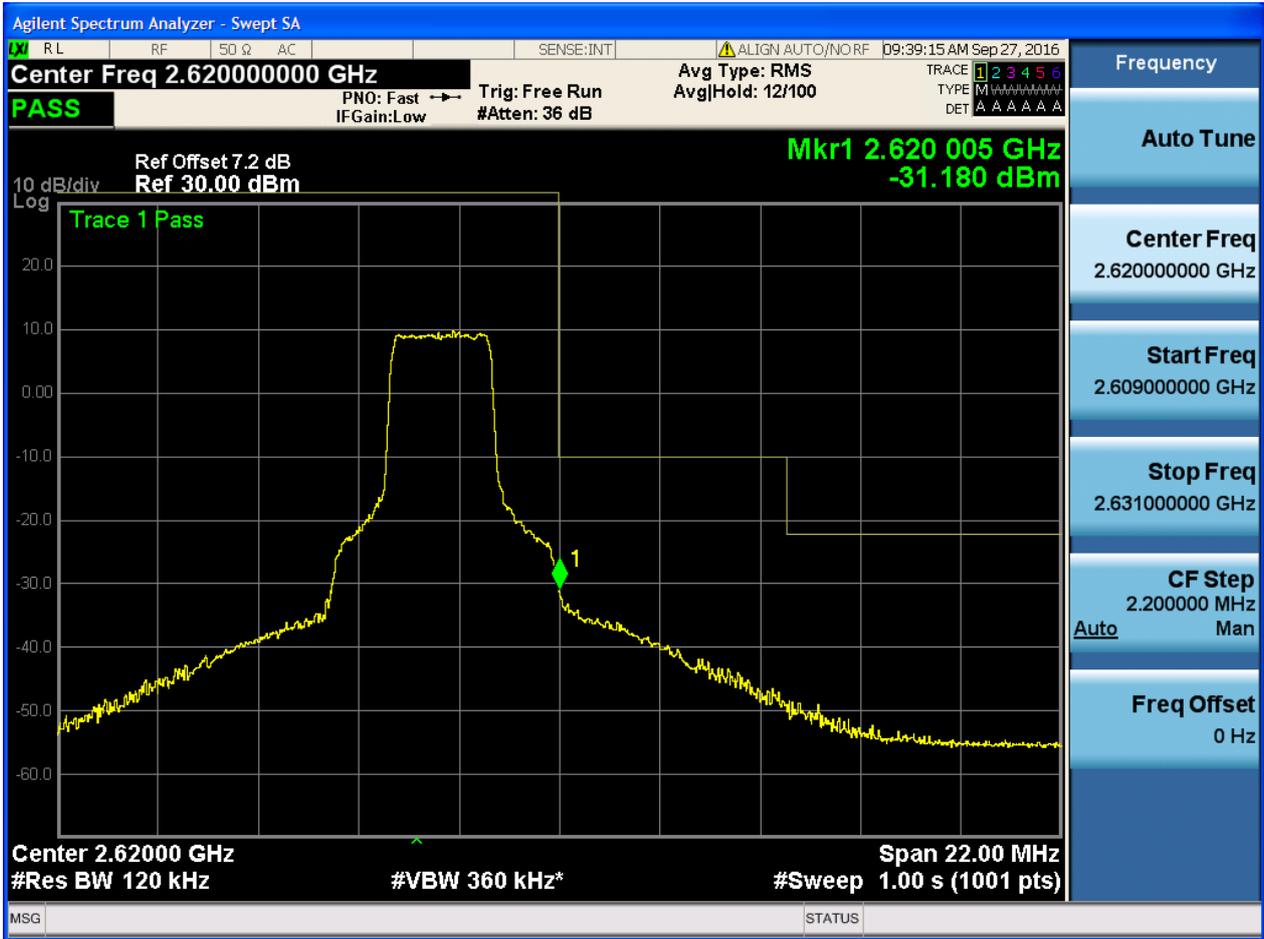### 5.1.1.2.2.2.1 Test RB = RB1#0

5.1.1.2.2.2.2 Test RB = RB1#49

5.1.1.2.2.2.3 Test RB = RB25#13

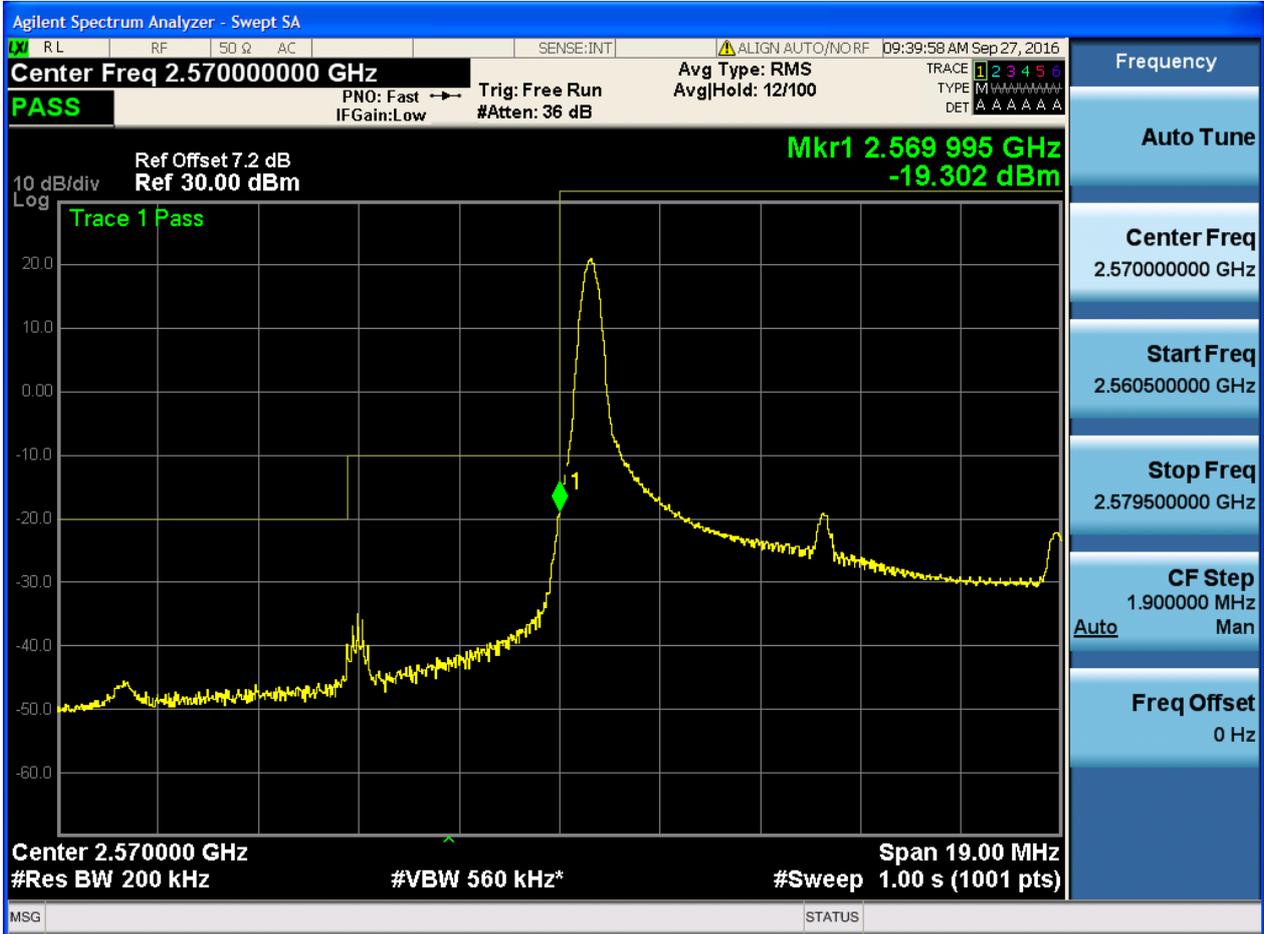## 5.1.1.2.2.2.4 Test RB = RB50#0

5.1.1.2.3 Test Bandwidth = 15

5.1.1.2.5.1 Test Channel = LCH

5.1.1.2.5.1.1 Test RB = RB1#0

5.1.1.2.5.1.2 Test RB = RB1#74
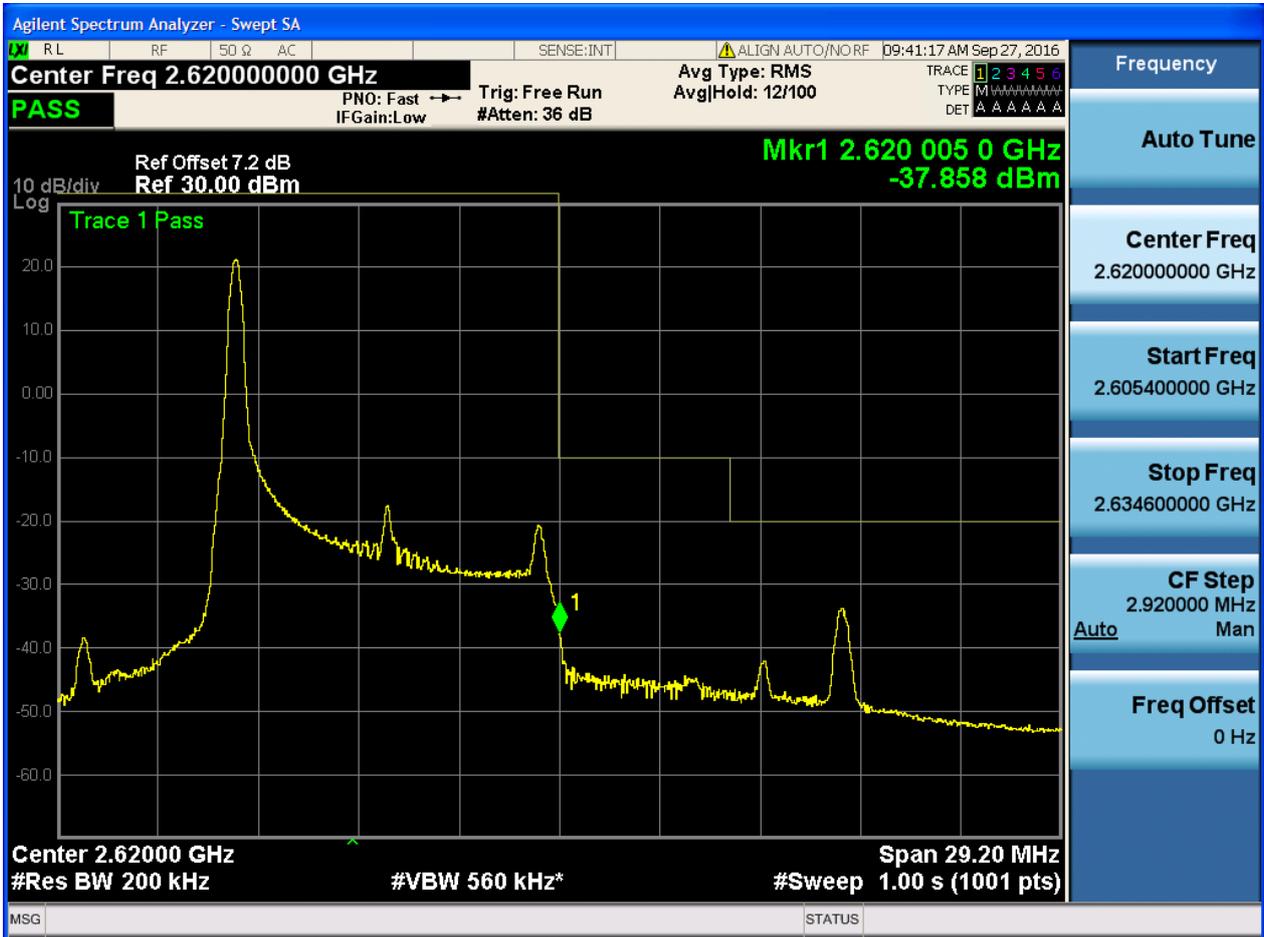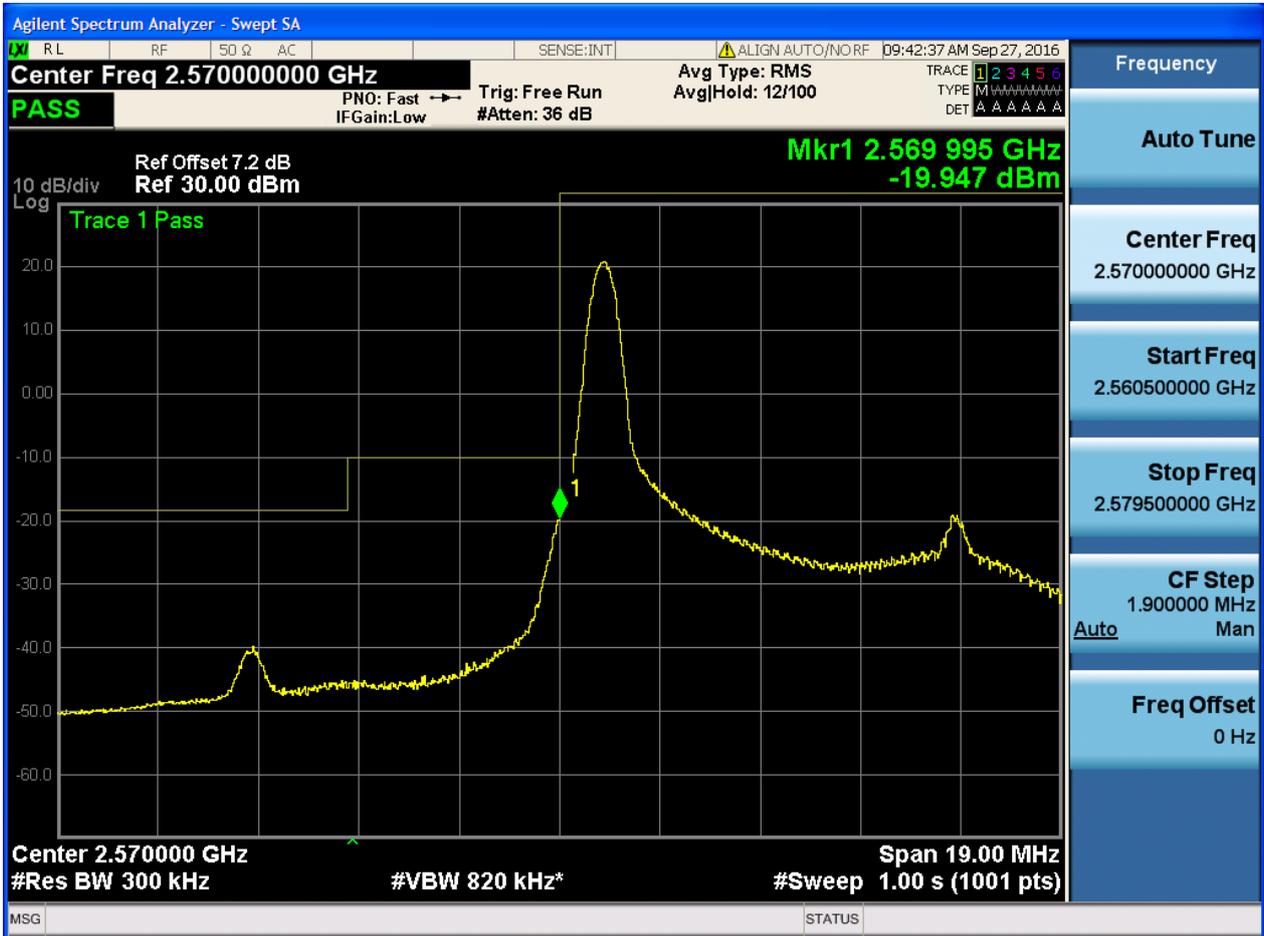
5.1.1.2.5.1.3 Test RB = RB36#18

Agilent Spectrum Analyzer - Swept SA				
R L	RF	50 Ω AC	SENSE:INT	ALIGN AUTO/NO RF 09:43:14 AM Sep 27, 2016

Center Freq 2.570000000 GHz

PNO: Fast → Trig: Free Run
IFGain:Low #Atten: 36 dB

Avg Type: RMS
Avg|Hold: 12/100

TRACE 1 2 3 4 5 6
TYPE M W W W W W W
DET A A A A A A

Frequency

PASS

Auto Tune

Ref Offset 7.2 dB
Ref 30.00 dBm
10 dB/div
Log

Mkr1 2.569 995 GHz
-32.119 dBm

Trace 1 Pass

20.0

10.0

0.00

-10.0

-20.0

-30.0

-40.0

-50.0

-60.0

1

Center 2.570000 GHz
#Res BW 300 kHz

#VBW 820 kHz*

Span 19.00 MHz
#Sweep 1.00 s (1001 pts)

MSG

STATUS

Center Freq
2.570000000 GHz

Start Freq
2.560500000 GHz

Stop Freq
2.579500000 GHz

CF Step
1.900000 MHz
Auto Man

Freq Offset
0 Hz

5.1.1.2.5.1.4 Test RB = RB75#0

5.1.1.2.3.2 Test Channel = HCH

5.1.1.2.3.2.1 Test RB = RB1#0

5.1.1.2.3.2.2 Test RB = RB1#74

5.1.1.2.3.2.3 Test RB = RB36#18

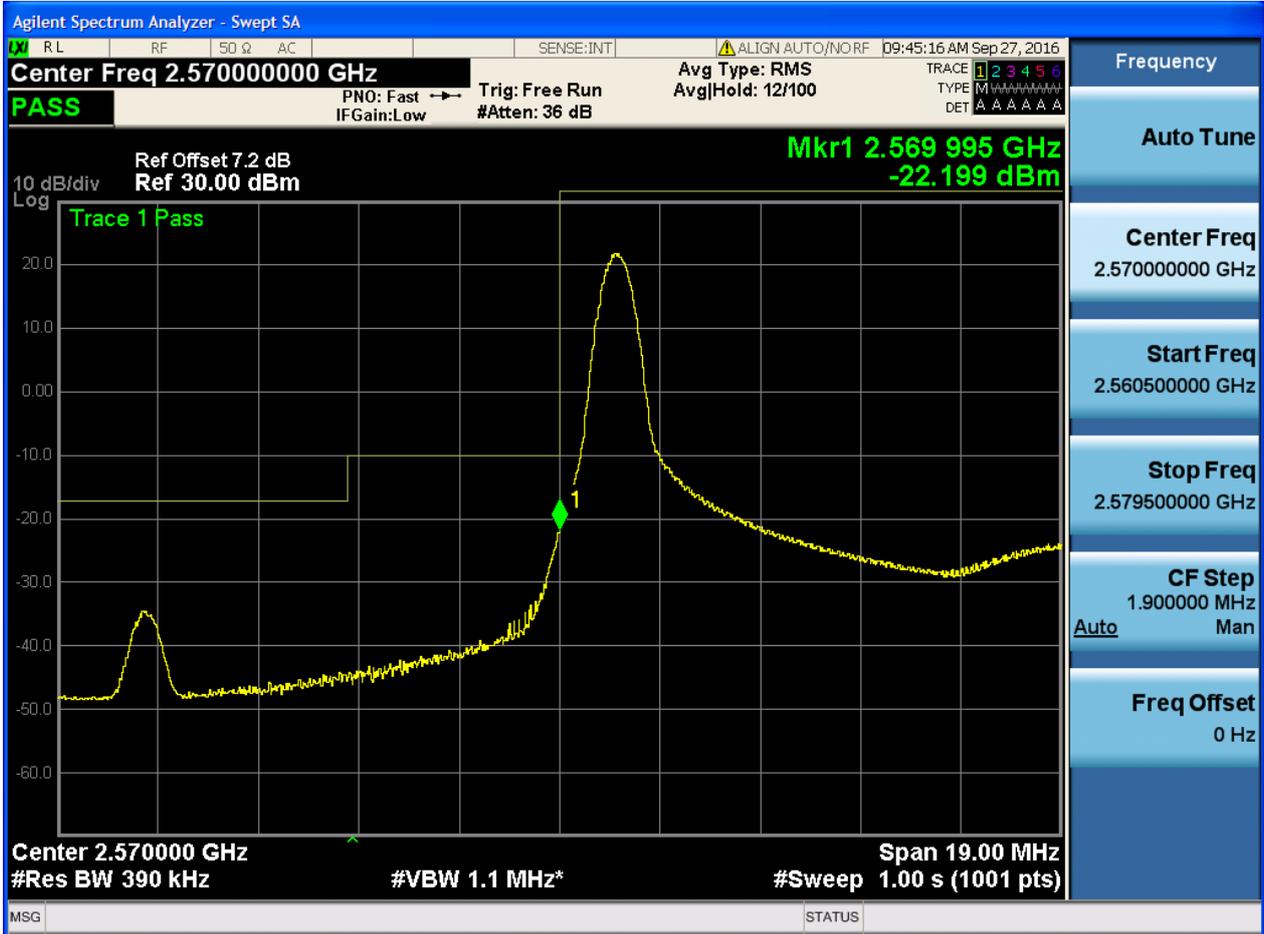## 5.1.1.2.3.2.4 Test RB = RB75#0

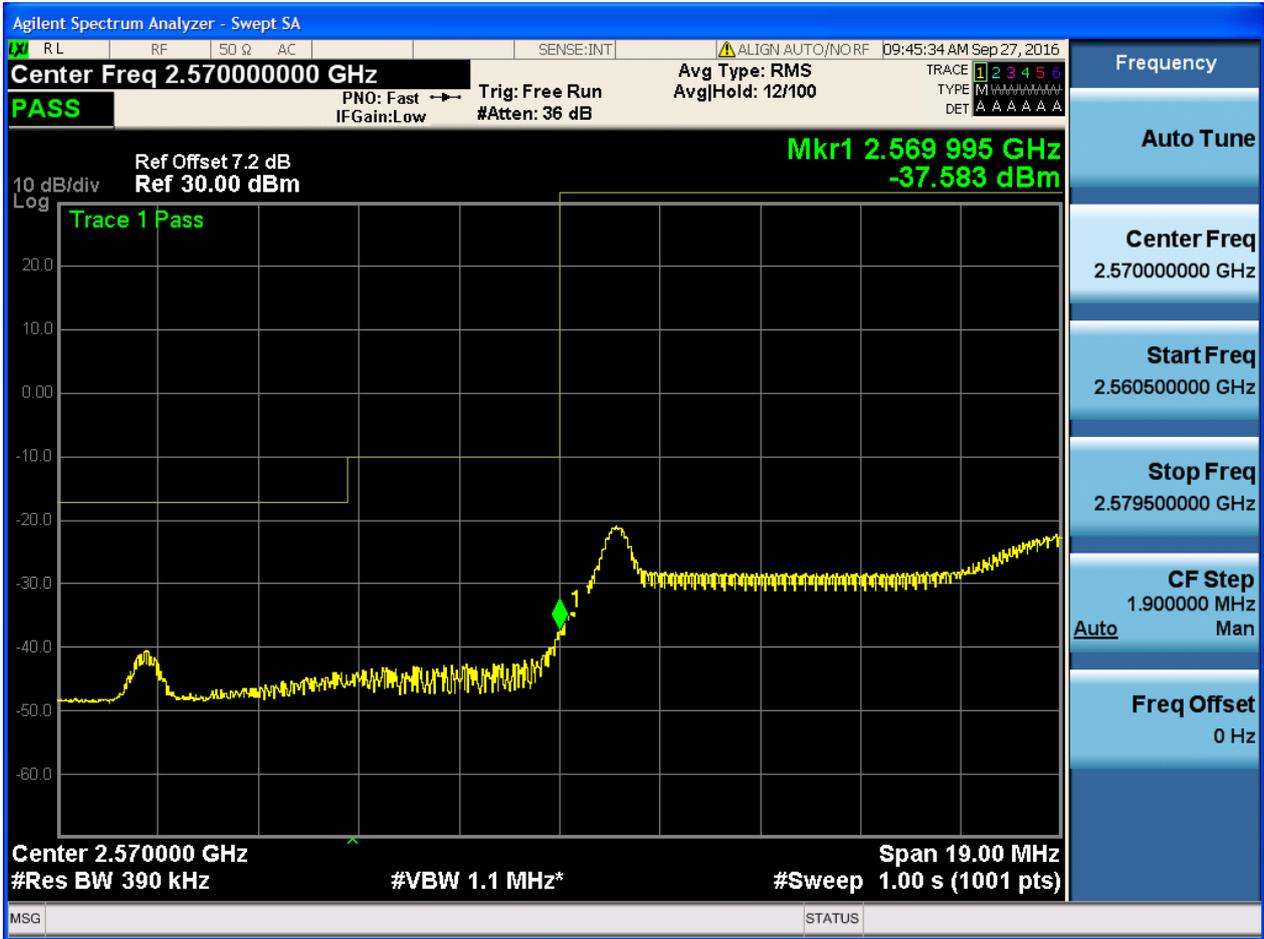### 5.1.1.2.4 Test Bandwidth = 20

5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0

5.1.1.2.4.1.2 Test RB = RB1#99

5.1.1.2.4.1.3 Test RB = RB50#25

5.1.1.2.4.1.4 Test RB = RB100#0

5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0

5.1.1.2.4.2.2 Test RB = RB1#99

Agilent Spectrum Analyzer - Swept SA

R L   RF   50 Ω   AC   SENSE:INT   ⚠ ALIGN AUTO/NO RF   09:46:53 AM Sep 27, 2016

Center Freq 2.620000000 GHz

PASS   PNO: Fast ←→   Trig: Free Run   Avg Type: RMS   TRACE 1 2 3 4 5 6
                        IFGain:Low   #Atten: 36 dB   Avg|Hold: 12/100   TYPE M wwwwww
                                                                                       DET A A A A A A

Mkr1 2.620 01 GHz
-21.066 dBm

Ref Offset 7.2 dB
10 dB/div Ref 30.00 dBm
Log

Trace 1 Pass

20.0

10.0

0.00

-10.0

-20.0   1

-30.0

-40.0

-50.0

-60.0

Center 2.62000 GHz   Span 48.02 MHz
#Res BW 390 kHz   #VBW 1.1 MHz*   #Sweep 1.00 s (1001 pts)

MSG   STATUS

Frequency

Auto Tune

Center Freq
2.620000000 GHz

Start Freq
2.595990000 GHz

Stop Freq
2.644010000 GHz

CF Step
4.802000 MHz
Auto   Man

Freq Offset
0 Hz

5.1.1.2.4.2.3 Test RB = RB50#25

5.1.1.2.4.2.4 Test RB = RB100#0

6Appendix_F: Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (Span / RBW)" with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.
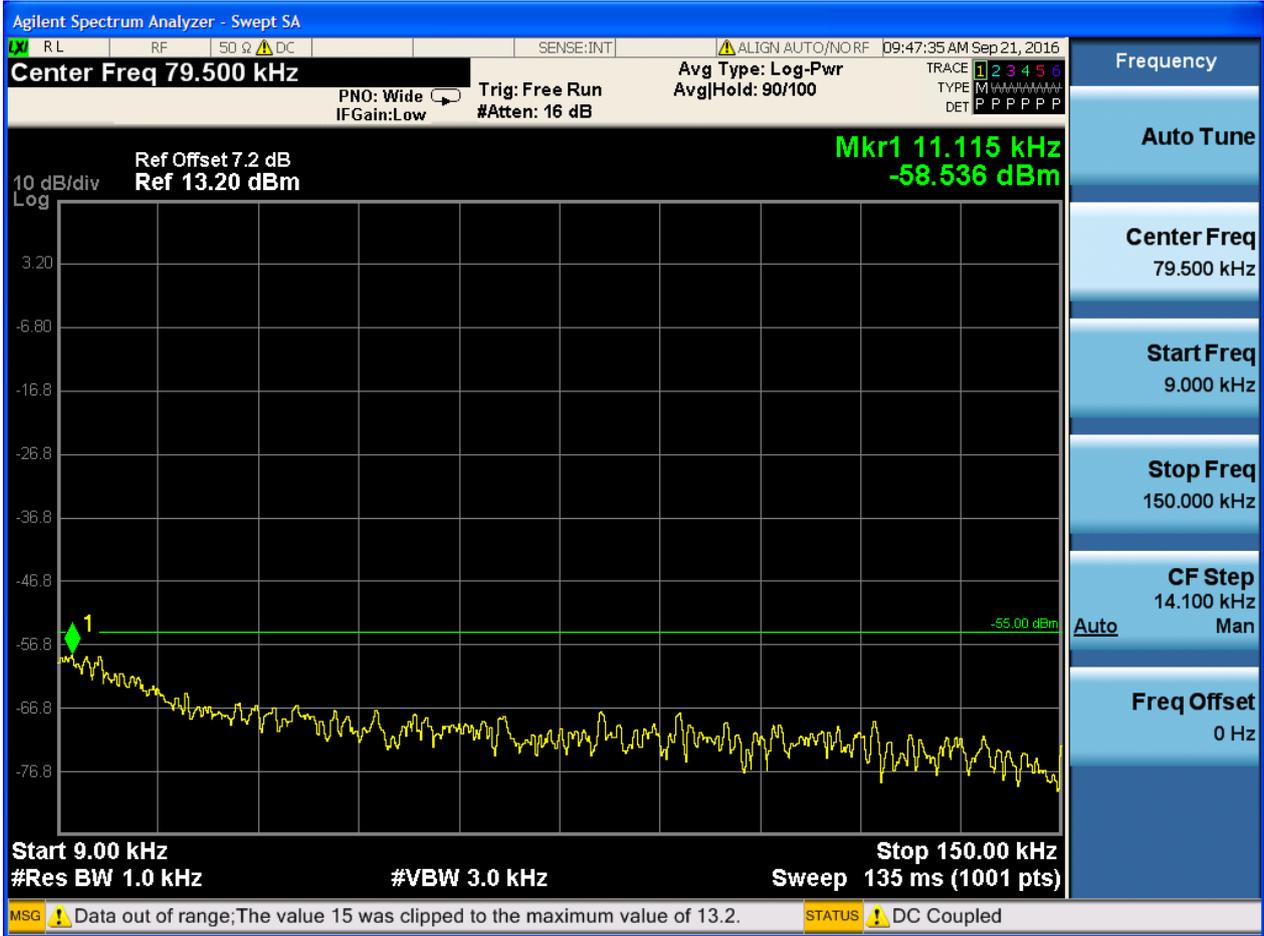
Part I - Test Plots
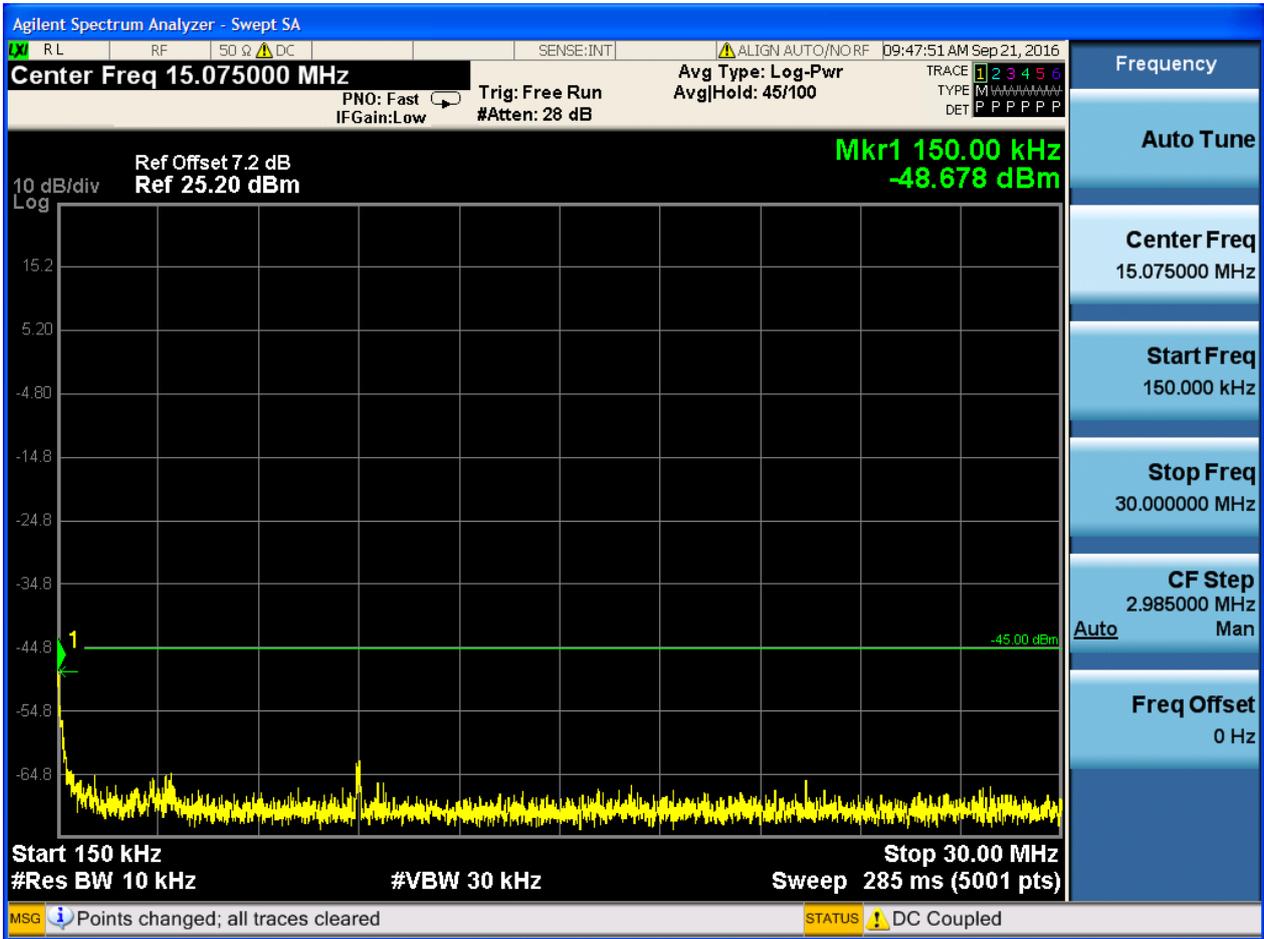
6.1 For LTE

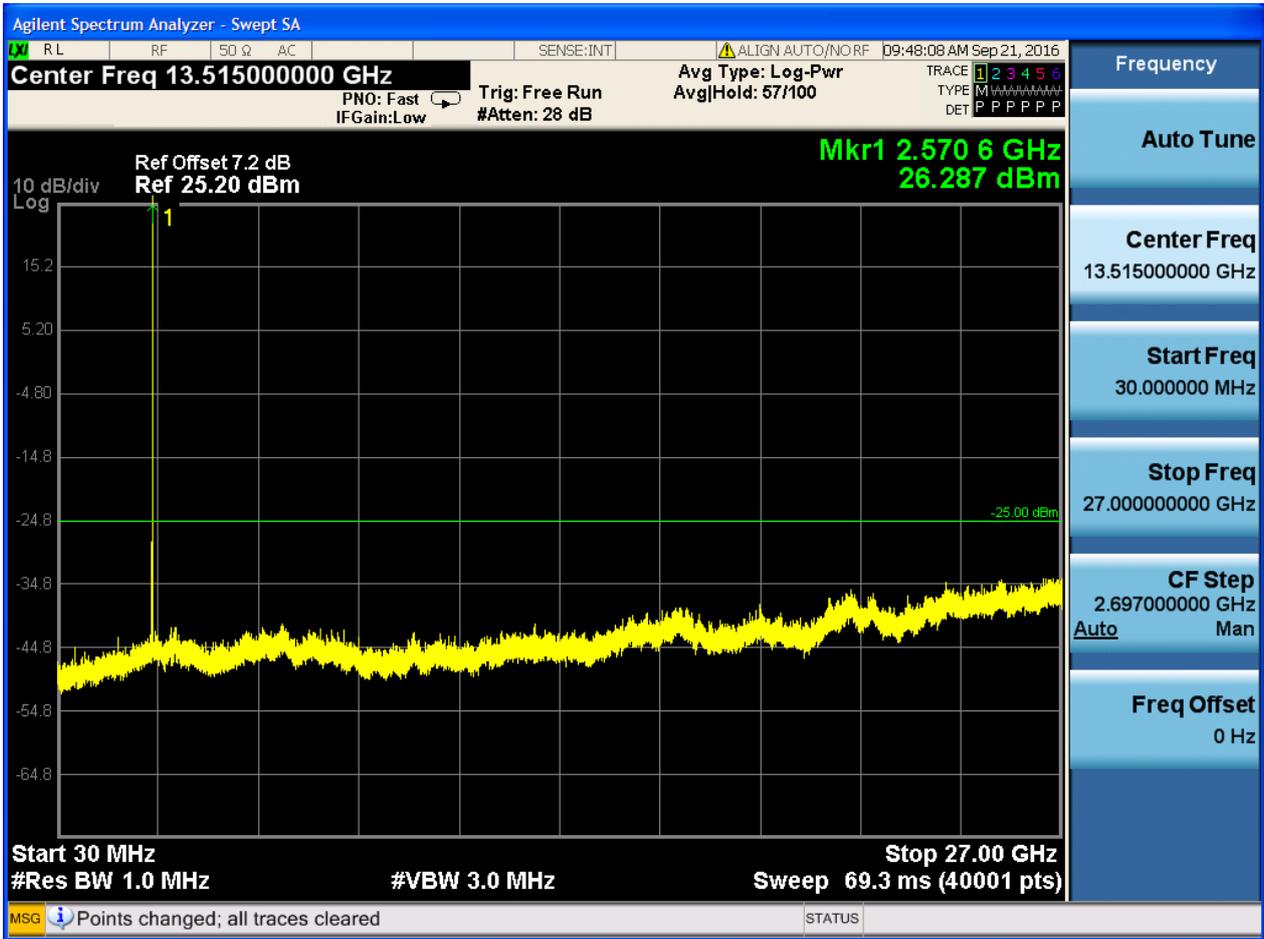**6.1.1 Test Band = BAND38**

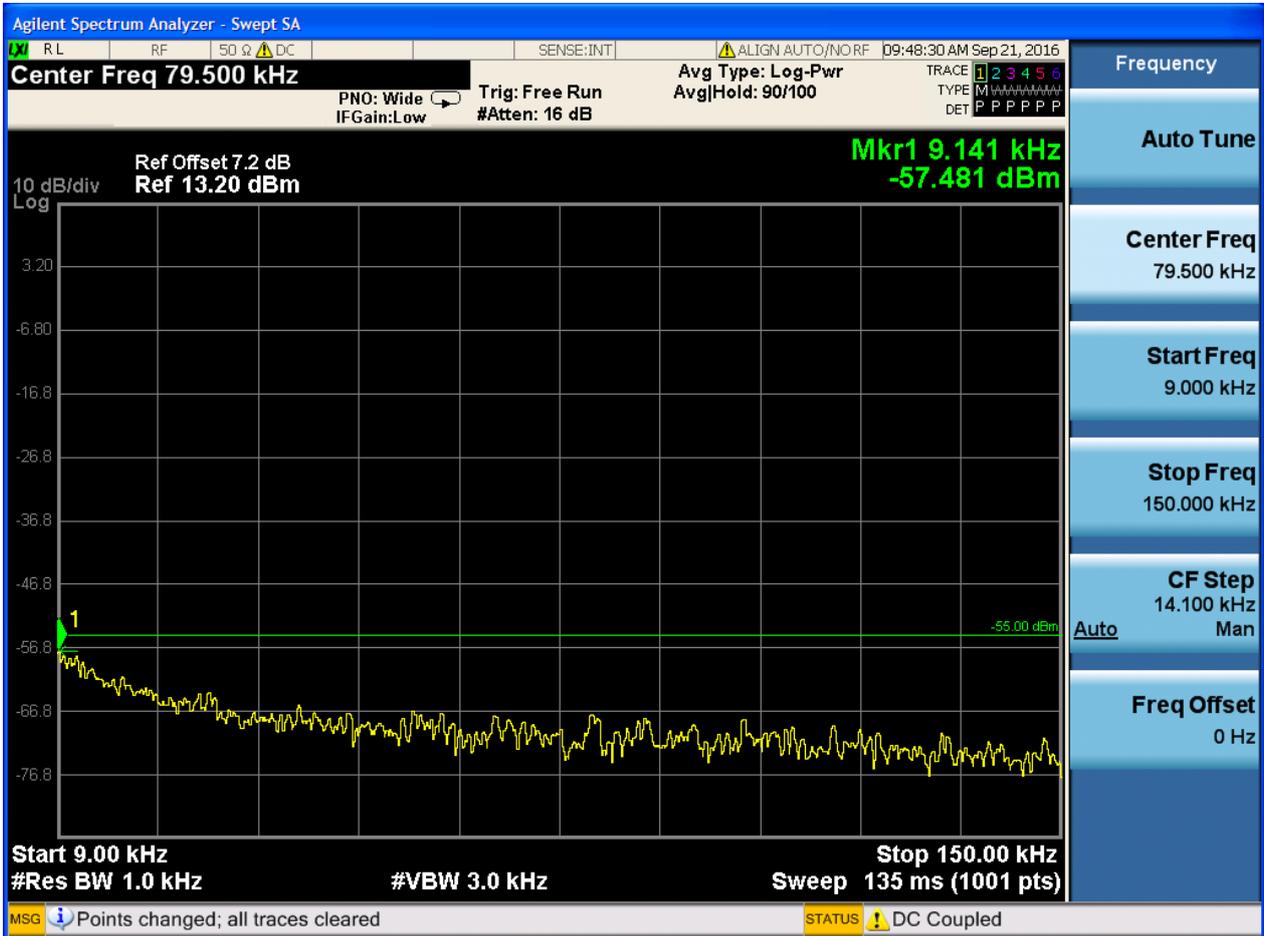**6.1.1.1 Test Mode = LTE/TM1**

6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0

Agilent Spectrum Analyzer - Swept SA

LXI R L   RF   50 Ω ⚠ DC   SENSE:INT   ⚠ ALIGN AUTO/NO RF   09:47:35 AM Sep 21, 2016

Center Freq 79.500 kHz

PNO: Wide ⤵   Trig: Free Run   Avg Type: Log-Pwr   TRACE 1 2 3 4 5 6
IFGain:Low   #Atten: 16 dB   Avg|Hold: 90/100   TYPE M WWWWWWWW
                                                               DET P P P P P P

Ref Offset 7.2 dB   **Mkr1 11.115 kHz**
10 dB/div **Ref 13.20 dBm**   **-58.536 dBm**
Log

3.20

-6.80

-16.8

-26.8

-36.8

-46.8

1   -55.00 dBm
-56.8

-66.8

-76.8

Start 9.00 kHz   **Stop 150.00 kHz**
#Res BW 1.0 kHz   **#VBW 3.0 kHz**   **Sweep 135 ms (1001 pts)**

MSG ⚠ Data out of range;The value 15 was clipped to the maximum value of 13.2.   STATUS ⚠ DC Coupled

Frequency

Auto Tune

Center Freq
79.500 kHz

Start Freq
9.000 kHz

Stop Freq
150.000 kHz

CF Step
14.100 kHz
Auto   Man
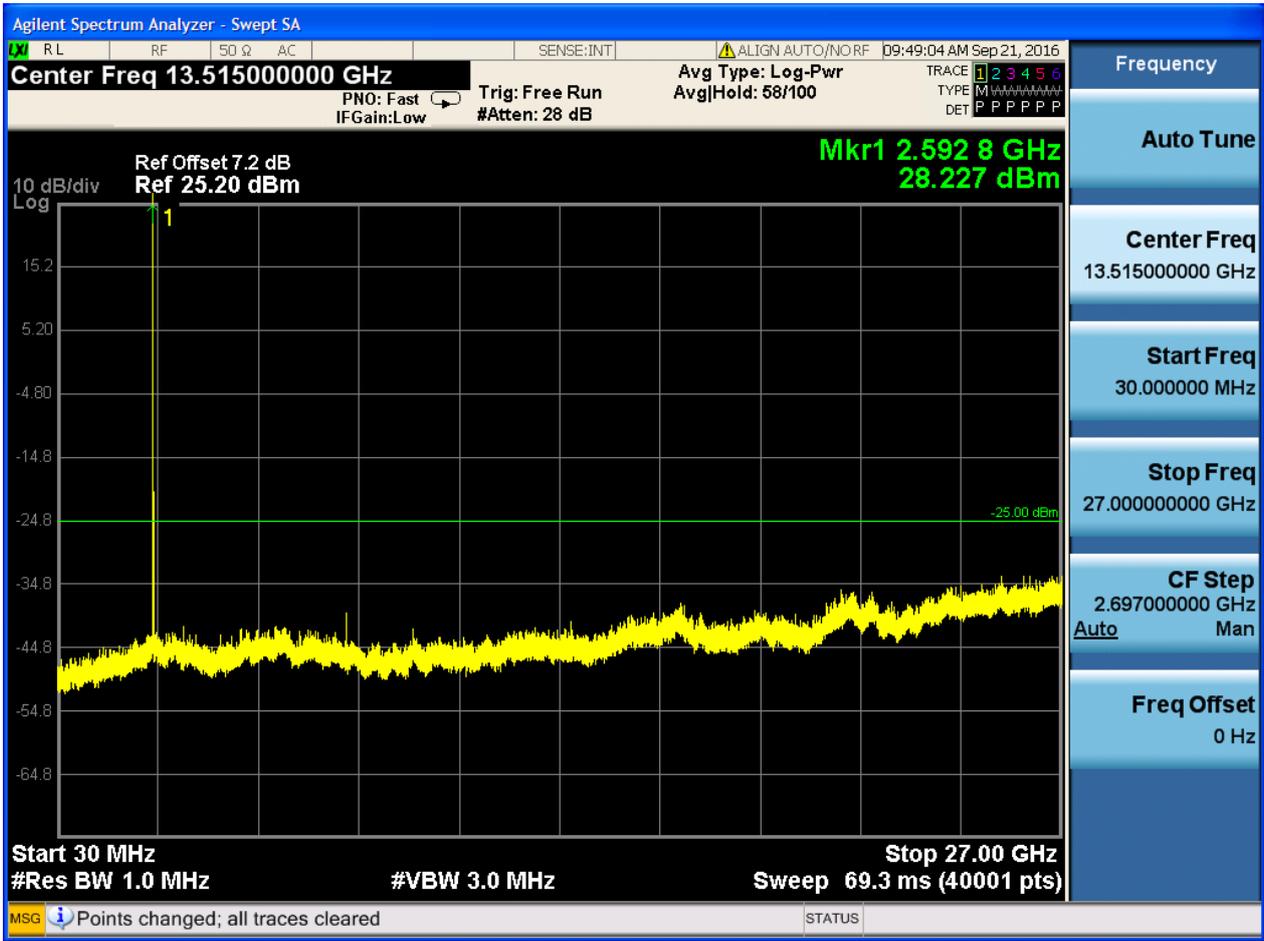
Freq Offset
0 Hz

6.1.1.1.1.2 Test Channel = MCH

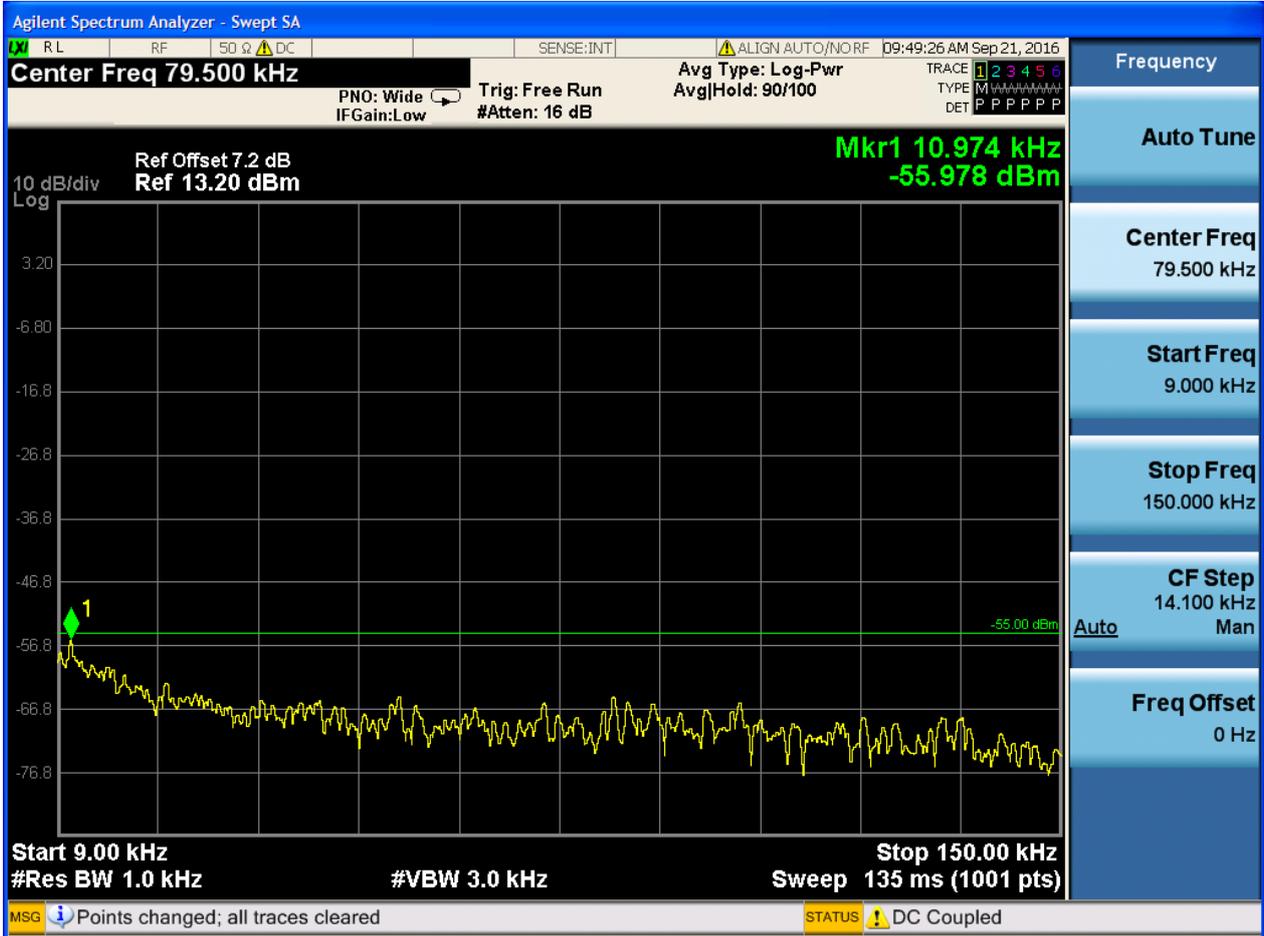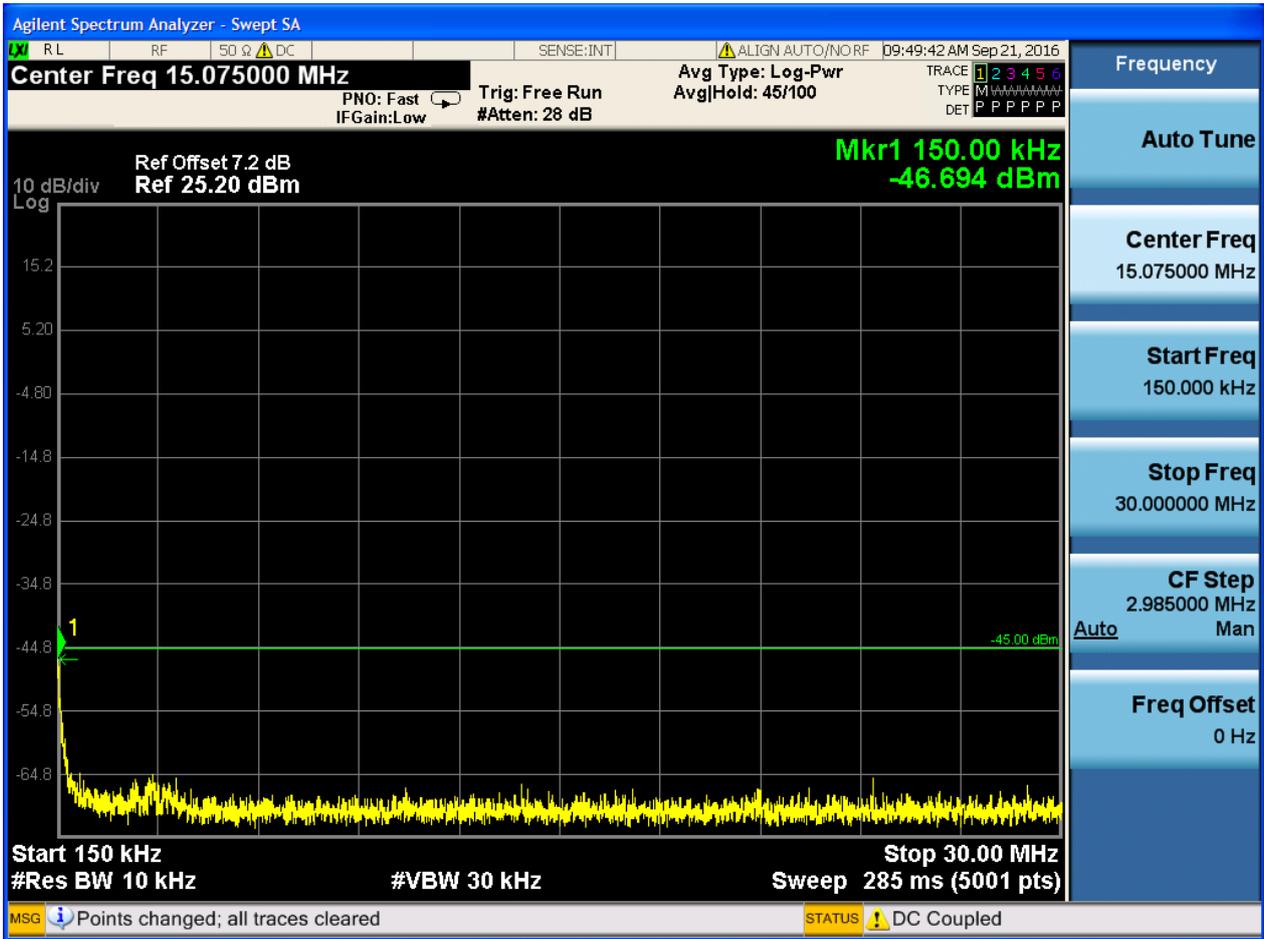### 6.1.1.1.1.2.1 Test RB = RB1#0

6.1.1.1.1.3 Test Channel = HCH
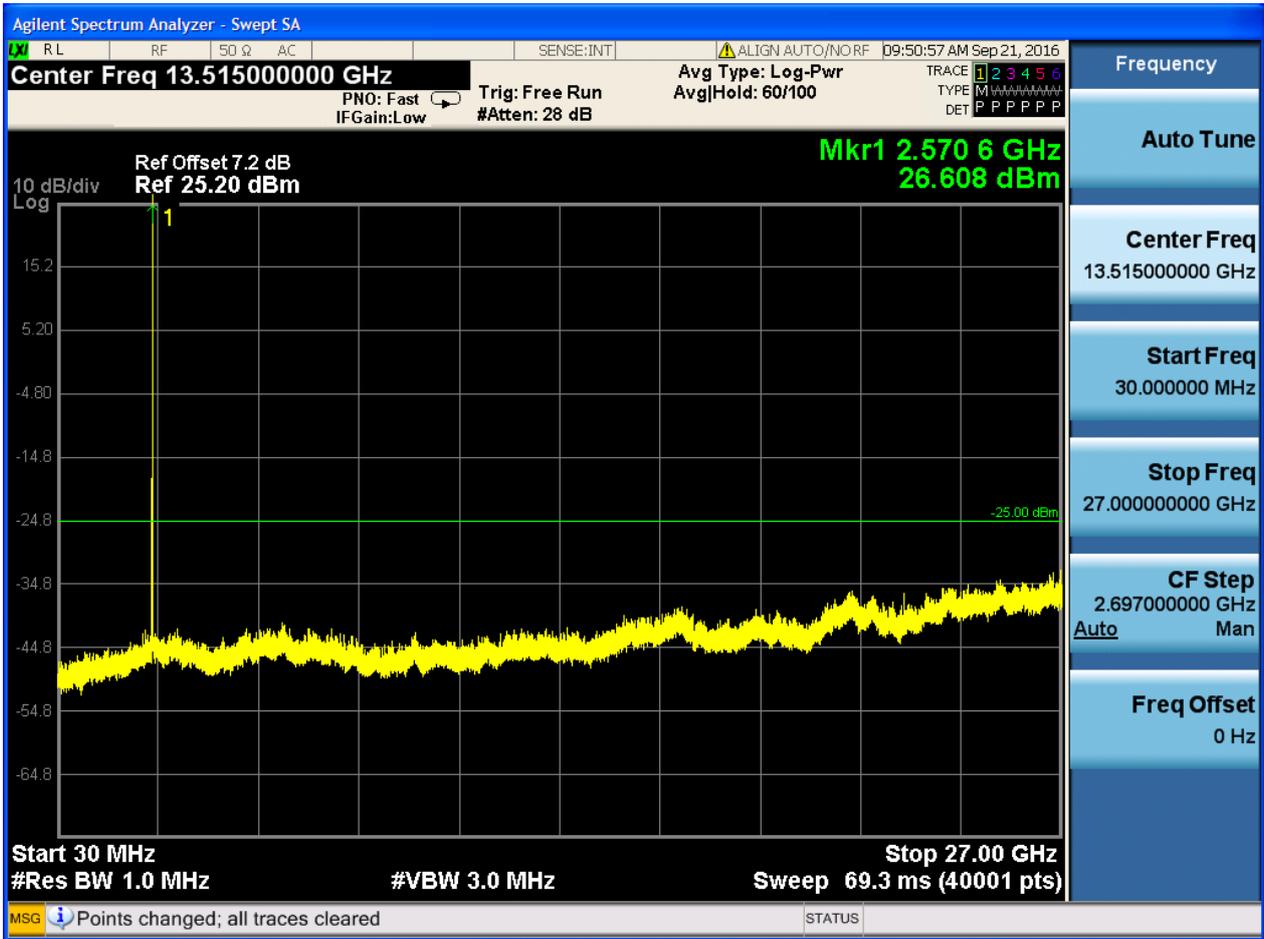
6.1.1.1.1.3.1 Test RB = RB1#0

6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0

6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0