



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	22.17	20.37	33	PASS
				RB1#13	22.32	20.52	33	PASS
				RB1#24	22.26	20.46	33	PASS
				RB12#0	21.09	19.29	33	PASS
				RB12#6	21.14	19.34	33	PASS
				RB12#13	21.14	19.34	33	PASS
				RB25#0	21.07	19.27	33	PASS
			MCH	RB1#0	22.63	20.83	33	PASS
				RB1#13	22.7	20.9	33	PASS
				RB1#24	22.59	20.79	33	PASS
				RB12#0	21.49	19.69	33	PASS
				RB12#6	21.48	19.68	33	PASS
				RB12#13	21.57	19.77	33	PASS
				RB25#0	21.49	19.69	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
			HCH	RB1#0	22.26	20.46	33	PASS
				RB1#13	22.37	20.57	33	PASS
				RB1#24	22.39	20.59	33	PASS
				RB12#0	21.09	19.29	33	PASS
				RB12#6	21.14	19.34	33	PASS
				RB12#13	21.25	19.45	33	PASS
				RB25#0	21.13	19.33	33	PASS
		10	LCH	RB1#0	22	20.2	33	PASS
				RB1#25	22.21	20.41	33	PASS
				RB1#49	22.25	20.45	33	PASS
				RB25#0	21.04	19.24	33	PASS
				RB25#13	21.02	19.22	33	PASS
				RB25#25	21.09	19.29	33	PASS
				RB50#0	21.06	19.26	33	PASS
			MCH	RB1#0	22.93	21.13	33	PASS
				RB1#25	22.83	21.03	33	PASS
				RB1#49	22.86	21.06	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB25#0	21.72	19.92	33	PASS
				RB25#13	21.74	19.94	33	PASS
				RB25#25	21.77	19.97	33	PASS
				RB50#0	21.68	19.88	33	PASS
			HCH	RB1#0	22.18	20.38	33	PASS
				RB1#25	22.06	20.26	33	PASS
				RB1#49	22.1	20.3	33	PASS
				RB25#0	21.16	19.36	33	PASS
				RB25#13	20.97	19.17	33	PASS
				RB25#25	20.96	19.16	33	PASS
				RB50#0	21.03	19.23	33	PASS
		15	LCH	RB1#0	22.01	20.21	33	PASS
				RB1#38	22.11	20.31	33	PASS
				RB1#74	22.36	20.56	33	PASS
				RB36#0	21.08	19.28	33	PASS
				RB36#18	21.08	19.28	33	PASS
				RB36#39	21.28	19.48	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB75#0	21.12	19.32	33	PASS
			MCH	RB1#0	22.77	20.97	33	PASS
				RB1#38	22.71	20.91	33	PASS
				RB1#74	22.47	20.67	33	PASS
				RB36#0	21.69	19.89	33	PASS
				RB36#18	21.76	19.96	33	PASS
				RB36#39	21.74	19.94	33	PASS
				RB75#0	21.67	19.87	33	PASS
			HCH	RB1#0	22.34	20.54	33	PASS
				RB1#38	22.1	20.3	33	PASS
				RB1#74	22.08	20.28	33	PASS
				RB36#0	21.18	19.38	33	PASS
				RB36#18	21.15	19.35	33	PASS
				RB36#39	21.01	19.21	33	PASS
				RB75#0	21.09	19.29	33	PASS
		20	LCH	RB1#0	21.87	20.07	33	PASS
				RB1#50	22.37	20.57	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB1#99	22.38	20.58	33	PASS
				RB50#0	21.09	19.29	33	PASS
				RB50#25	21.18	19.38	33	PASS
				RB50#50	21.34	19.54	33	PASS
				RB100#0	21.19	19.39	33	PASS
			MCH	RB1#0	22.61	20.81	33	PASS
				RB1#50	22.96	21.16	33	PASS
				RB1#99	22.47	20.67	33	PASS
				RB50#0	21.6	19.8	33	PASS
				RB50#25	21.49	19.69	33	PASS
				RB50#50	21.53	19.73	33	PASS
				RB100#0	21.55	19.75	33	PASS
			HCH	RB1#0	22.84	21.04	33	PASS
				RB1#50	22.54	20.74	33	PASS
				RB1#99	22.4	20.6	33	PASS
				RB50#0	21.35	19.55	33	PASS
				RB50#25	21.2	19.4	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB50#50	20.96	19.16	33	PASS
				RB100#0	21.15	19.35	33	PASS
	LTE/TM2	5	LCH	RB1#0	20.88	19.08	33	PASS
				RB1#13	20.97	19.17	33	PASS
				RB1#24	20.3	18.5	33	PASS
				RB12#0	19.92	18.12	33	PASS
				RB12#6	19.94	18.14	33	PASS
				RB12#13	19.96	18.16	33	PASS
				RB25#0	20.02	18.22	33	PASS
			MCH	RB1#0	21.72	19.92	33	PASS
				RB1#13	21.87	20.07	33	PASS
				RB1#24	21.78	19.98	33	PASS
				RB12#0	20.64	18.84	33	PASS
				RB12#6	20.59	18.79	33	PASS
				RB12#13	20.95	19.15	33	PASS
				RB25#0	20.78	18.98	33	PASS
			HCH	RB1#0	20.48	18.68	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB1#13	20.77	18.97	33	PASS
				RB1#24	20.84	19.04	33	PASS
				RB12#0	20.23	18.43	33	PASS
				RB12#6	20.26	18.46	33	PASS
				RB12#13	20.26	18.46	33	PASS
				RB25#0	19.97	18.17	33	PASS
		10	LCH	RB1#0	21.08	19.28	33	PASS
				RB1#25	21.82	20.02	33	PASS
				RB1#49	21.26	19.46	33	PASS
				RB25#0	20.24	18.44	33	PASS
				RB25#13	20.25	18.45	33	PASS
				RB25#25	20.03	18.23	33	PASS
				RB50#0	20.17	18.37	33	PASS
			MCH	RB1#0	21.11	19.31	33	PASS
				RB1#25	22.36	20.56	33	PASS
				RB1#49	21.07	19.27	33	PASS
				RB25#0	20.77	18.97	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB25#13	20.8	19	33	PASS
				RB25#25	20.74	18.94	33	PASS
				RB50#0	20.5	18.7	33	PASS
			HCH	RB1#0	21.07	19.27	33	PASS
				RB1#25	21.38	19.58	33	PASS
				RB1#49	20.9	19.1	33	PASS
				RB25#0	19.99	18.19	33	PASS
				RB25#13	20.25	18.45	33	PASS
				RB25#25	20.25	18.45	33	PASS
				RB50#0	20.13	18.33	33	PASS
		15	LCH	RB1#0	21.2	19.4	33	PASS
				RB1#38	21.2	19.4	33	PASS
				RB1#74	21.49	19.69	33	PASS
				RB36#0	20.13	18.33	33	PASS
				RB36#18	20.22	18.42	33	PASS
				RB36#39	20.38	18.58	33	PASS
				RB75#0	20.28	18.48	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
			MCH	RB1#0	21.76	19.96	33	PASS
				RB1#38	21.61	19.81	33	PASS
				RB1#74	21.52	19.72	33	PASS
				RB36#0	20.58	18.78	33	PASS
				RB36#18	20.41	18.61	33	PASS
				RB36#39	20.42	18.62	33	PASS
				RB75#0	20.52	18.72	33	PASS
			HCH	RB1#0	21.43	19.63	33	PASS
				RB1#38	21.52	19.72	33	PASS
				RB1#74	21.09	19.29	33	PASS
				RB36#0	20.44	18.64	33	PASS
				RB36#18	20.35	18.55	33	PASS
				RB36#39	20.18	18.38	33	PASS
				RB75#0	20.3	18.5	33	PASS
		20	LCH	RB1#0	21.07	19.27	33	PASS
				RB1#50	21.9	20.1	33	PASS
				RB1#99	21.95	20.15	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB50#0	20.36	18.56	33	PASS
				RB50#25	20.51	18.71	33	PASS
				RB50#50	20.55	18.75	33	PASS
				RB100#0	20.38	18.58	33	PASS
			MCH	RB1#0	21.79	19.99	33	PASS
				RB1#50	22.19	20.39	33	PASS
				RB1#99	21.62	19.82	33	PASS
				RB50#0	20.63	18.83	33	PASS
				RB50#25	20.68	18.88	33	PASS
				RB50#50	20.68	18.88	33	PASS
				RB100#0	20.66	18.86	33	PASS
			HCH	RB1#0	21.21	19.41	33	PASS
				RB1#50	21.2	19.4	33	PASS
				RB1#99	20.61	18.81	33	PASS
				RB50#0	20.62	18.82	33	PASS
				RB50#25	20.41	18.61	33	PASS
				RB50#50	20.24	18.44	33	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB100#0	20.41	18.61	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,

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b, SGP=Signal Generator Level

Note2:

$$\text{SET Span} = 1.5 \times \text{OBW}$$

$$\text{SET RBW} = 1\% \text{ of the OBW, not to exceed 1MHz}$$

$$\text{SET VBW} \geq 3 \times \text{RBW}$$

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	4.75	13	PASS
				RB1#13	4.63	13	PASS
				RB1#24	4.82	13	PASS
				RB12#0	5.39	13	PASS
				RB12#6	5.38	13	PASS
				RB12#13	5.37	13	PASS
				RB25#0	5.69	13	PASS
			MCH	RB1#0	4.77	13	PASS
				RB1#13	4.56	13	PASS
				RB1#24	4.71	13	PASS
				RB12#0	5.45	13	PASS
				RB12#6	5.49	13	PASS
				RB12#13	5.36	13	PASS
				RB25#0	5.59	13	PASS
			HCH	RB1#0	4.81	13	PASS
				RB1#13	4.5	13	PASS
				RB1#24	4.72	13	PASS
				RB12#0	5.5	13	PASS
				RB12#6	5.36	13	PASS
				RB12#13	5.37	13	PASS
				RB25#0	5.72	13	PASS
		10	LCH	RB1#0	4.76	13	PASS
				RB1#25	4.65	13	PASS
				RB1#49	4.77	13	PASS
				RB25#0	5.51	13	PASS
				RB25#13	5.46	13	PASS
				RB25#25	5.47	13	PASS
				RB50#0	5.92	13	PASS
			MCH	RB1#0	4.76	13	PASS
				RB1#25	4.65	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB1#49	4.72	13	PASS
				RB25#0	5.47	13	PASS
				RB25#13	5.44	13	PASS
				RB25#25	5.5	13	PASS
				RB50#0	5.85	13	PASS
			HCH	RB1#0	4.78	13	PASS
				RB1#25	4.61	13	PASS
				RB1#49	4.6	13	PASS
				RB25#0	5.46	13	PASS
				RB25#13	5.48	13	PASS
				RB25#25	5.44	13	PASS
				RB50#0	5.91	13	PASS
		15	LCH	RB1#0	4.79	13	PASS
				RB1#38	4.71	13	PASS
				RB1#74	4.77	13	PASS
				RB36#0	5.53	13	PASS
				RB36#18	5.56	13	PASS
				RB36#39	5.6	13	PASS
				RB75#0	6.01	13	PASS
			MCH	RB1#0	4.59	13	PASS
				RB1#38	4.43	13	PASS
				RB1#74	4.58	13	PASS
				RB36#0	5.54	13	PASS
				RB36#18	5.54	13	PASS
				RB36#39	5.45	13	PASS
				RB75#0	5.91	13	PASS
			HCH	RB1#0	4.77	13	PASS
				RB1#38	4.68	13	PASS
				RB1#74	4.68	13	PASS
				RB36#0	5.56	13	PASS
				RB36#18	5.5	13	PASS
				RB36#39	5.54	13	PASS
				RB75#0	5.99	13	PASS
		20	LCH	RB1#0	4.87	13	PASS
				RB1#50	4.75	13	PASS
				RB1#99	4.78	13	PASS
				RB50#0	5.51	13	PASS
				RB50#25	5.61	13	PASS
				RB50#50	5.5	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB100#0	6.03	13	PASS
			MCH	RB1#0	4.8	13	PASS
				RB1#50	4.49	13	PASS
				RB1#99	4.75	13	PASS
				RB50#0	5.51	13	PASS
				RB50#25	5.59	13	PASS
				RB50#50	5.49	13	PASS
				RB100#0	5.93	13	PASS
			HCH	RB1#0	4.56	13	PASS
				RB1#50	4.46	13	PASS
				RB1#99	4.48	13	PASS
				RB50#0	5.55	13	PASS
				RB50#25	5.63	13	PASS
				RB50#50	5.54	13	PASS
				RB100#0	6.02	13	PASS
	LTE/TM2	5	LCH	RB1#0	5.33	13	PASS
				RB1#13	5.06	13	PASS
				RB1#24	5.25	13	PASS
				RB12#0	6.3	13	PASS
				RB12#6	6.25	13	PASS
				RB12#13	6.37	13	PASS
				RB25#0	6.63	13	PASS
			MCH	RB1#0	5.89	13	PASS
				RB1#13	5.67	13	PASS
				RB1#24	5.87	13	PASS
				RB12#0	6.23	13	PASS
				RB12#6	6.24	13	PASS
				RB12#13	6.18	13	PASS
				RB25#0	6.45	13	PASS
			HCH	RB1#0	5.63	13	PASS
				RB1#13	5.41	13	PASS
				RB1#24	5.49	13	PASS
				RB12#0	6.29	13	PASS
				RB12#6	6.31	13	PASS
				RB12#13	6.14	13	PASS
				RB25#0	6.47	13	PASS
		10	LCH	RB1#0	5.56	13	PASS
				RB1#25	5.47	13	PASS
				RB1#49	5.64	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB25#0	6.51	13	PASS
				RB25#13	6.5	13	PASS
				RB25#25	6.41	13	PASS
				RB50#0	6.74	13	PASS
			MCH	RB1#0	5.27	13	PASS
				RB1#25	4.8	13	PASS
				RB1#49	5.16	13	PASS
				RB25#0	6.38	13	PASS
				RB25#13	6.31	13	PASS
				RB25#25	6.33	13	PASS
				RB50#0	6.82	13	PASS
			HCH	RB1#0	5.7	13	PASS
				RB1#25	5.64	13	PASS
				RB1#49	5.64	13	PASS
				RB25#0	6.4	13	PASS
				RB25#13	6.48	13	PASS
				RB25#25	6.43	13	PASS
				RB50#0	6.78	13	PASS
		15	LCH	RB1#0	5.5	13	PASS
				RB1#38	5.55	13	PASS
				RB1#74	5.53	13	PASS
				RB36#0	6.47	13	PASS
				RB36#18	6.42	13	PASS
				RB36#39	6.55	13	PASS
				RB75#0	6.87	13	PASS
			MCH	RB1#0	5.55	13	PASS
				RB1#38	5.28	13	PASS
				RB1#74	5.46	13	PASS
				RB36#0	6.46	13	PASS
				RB36#18	6.55	13	PASS
				RB36#39	6.45	13	PASS
				RB75#0	6.86	13	PASS
			HCH	RB1#0	5.67	13	PASS
				RB1#38	5.62	13	PASS
				RB1#74	5.54	13	PASS
				RB36#0	6.39	13	PASS
				RB36#18	6.37	13	PASS
				RB36#39	6.37	13	PASS
				RB75#0	6.81	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
		20	LCH	RB1#0	5.65	13	PASS
				RB1#50	5.46	13	PASS
				RB1#99	5.66	13	PASS
				RB50#0	6.52	13	PASS
				RB50#25	6.55	13	PASS
				RB50#50	6.55	13	PASS
				RB100#0	6.91	13	PASS
			MCH	RB1#0	5.49	13	PASS
				RB1#50	5.24	13	PASS
				RB1#99	5.39	13	PASS
				RB50#0	6.52	13	PASS
				RB50#25	6.48	13	PASS
				RB50#50	6.46	13	PASS
				RB100#0	6.96	13	PASS
			HCH	RB1#0	5.83	13	PASS
				RB1#50	5.78	13	PASS
				RB1#99	5.73	13	PASS
				RB50#0	6.46	13	PASS
				RB50#25	6.48	13	PASS
				RB50#50	6.44	13	PASS
				RB100#0	6.94	13	PASS

3Appendix_C: Modulation Characteristics

Part I - Test Plots

3.1 For LTE

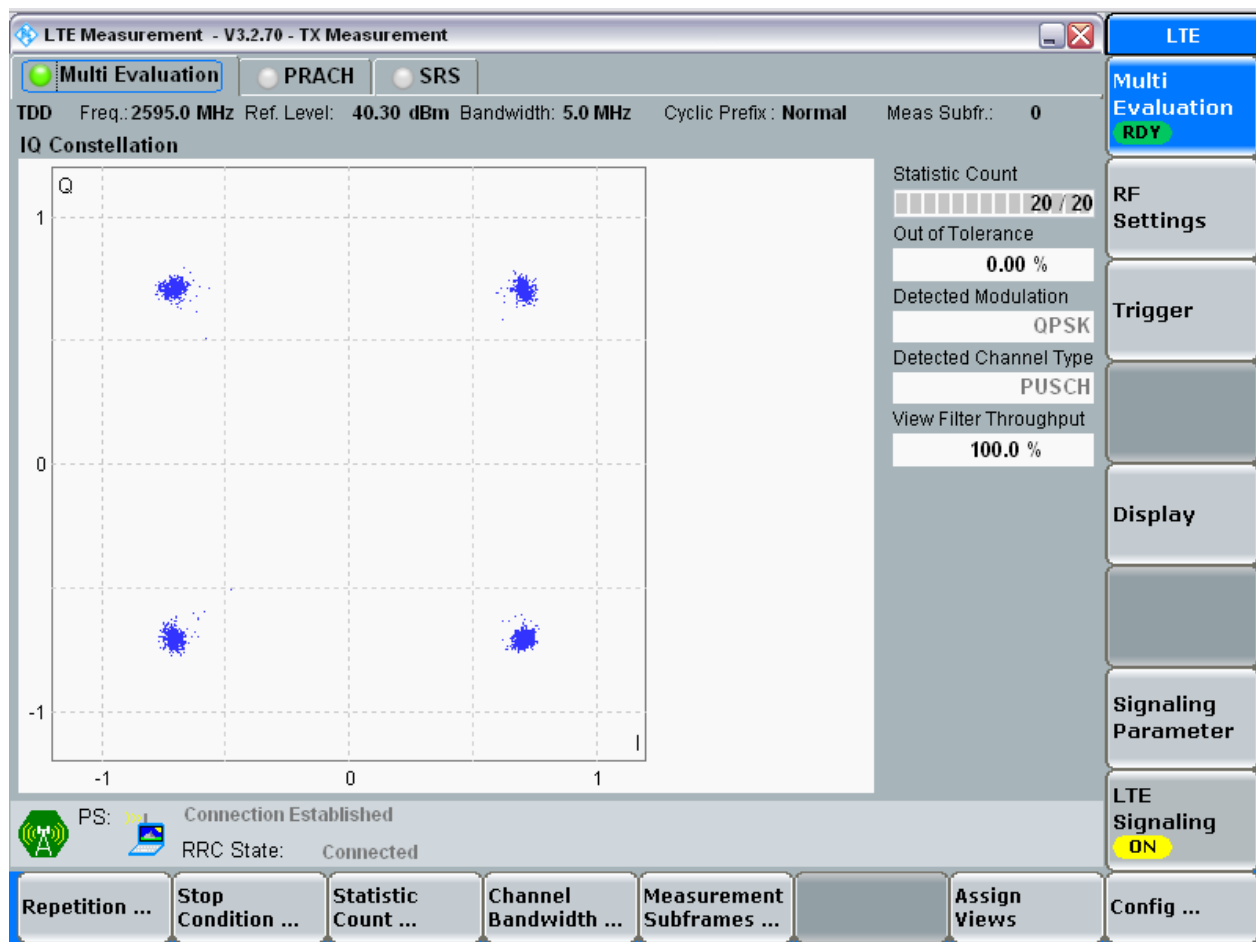
3.1.1 Test Band = BAND38

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

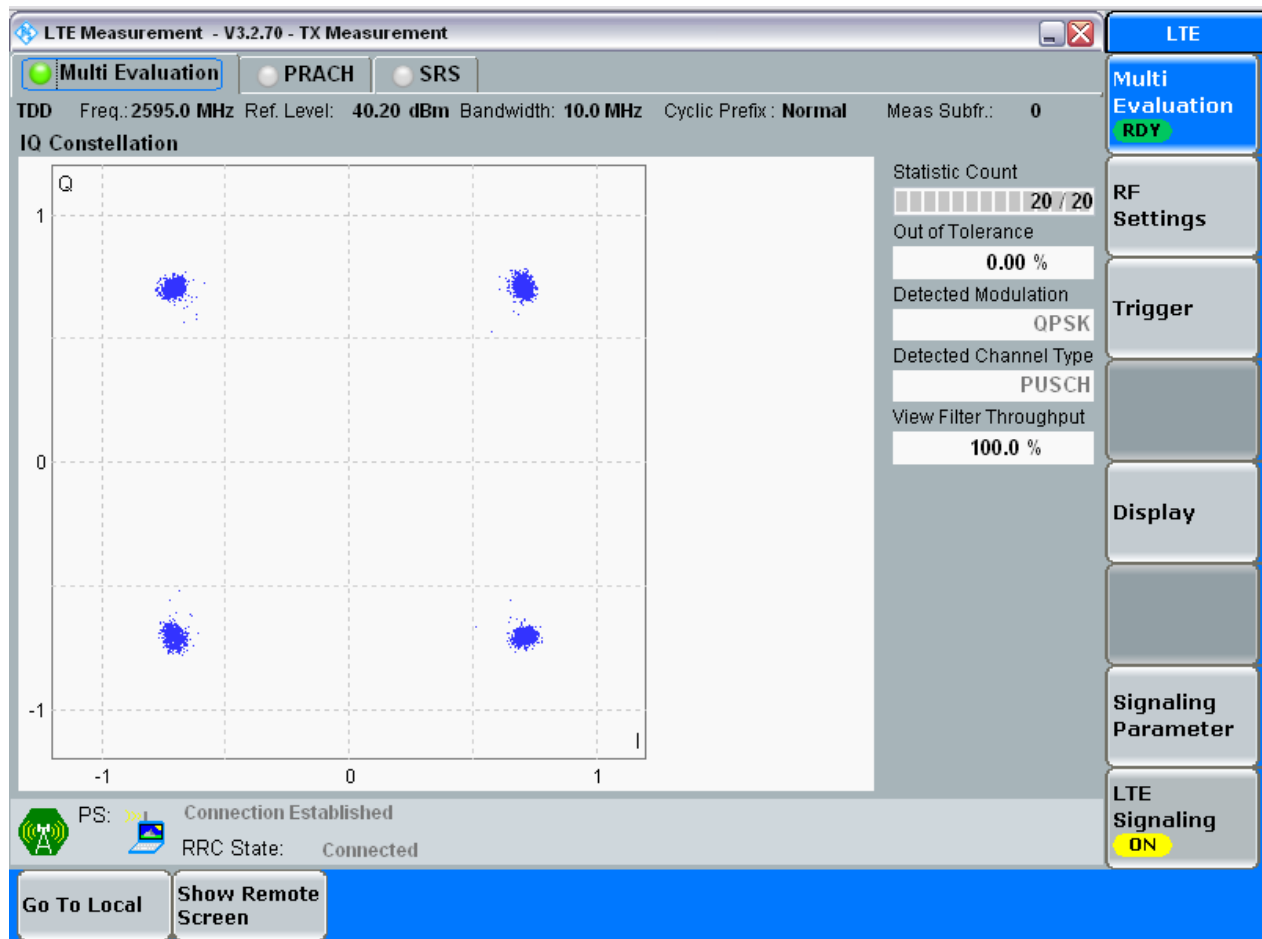
3.1.1.1.1.1.1 Test RB = RB25#0



3.1.1.1.2 Test Bandwidth = 10

3.1.1.1.2.1 Test Channel = MCH

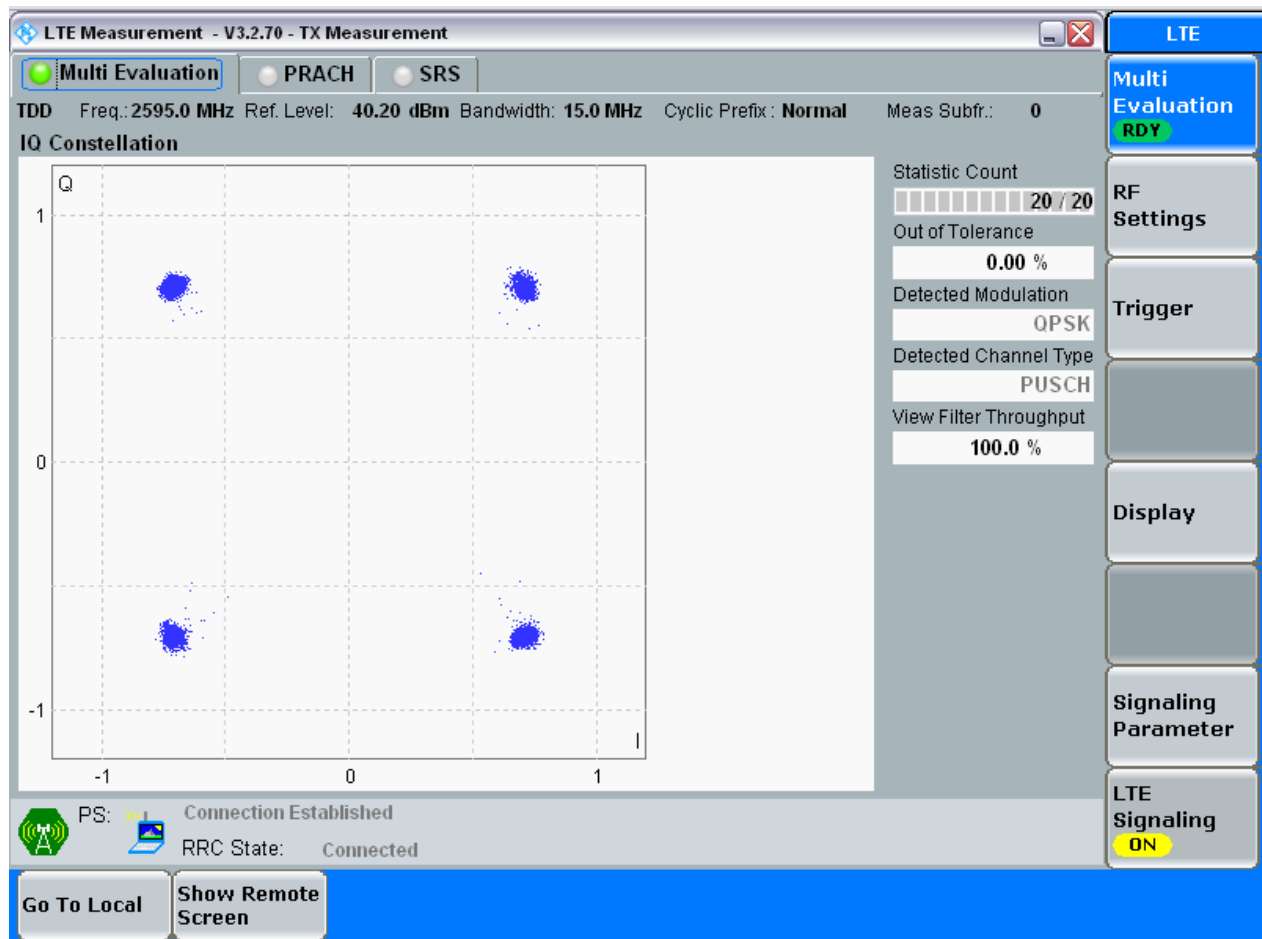
3.1.1.1.2.1.1 Test RB = RB50#0



3.1.1.1.3 Test Bandwidth = 15

3.1.1.1.3.1 Test Channel = MCH

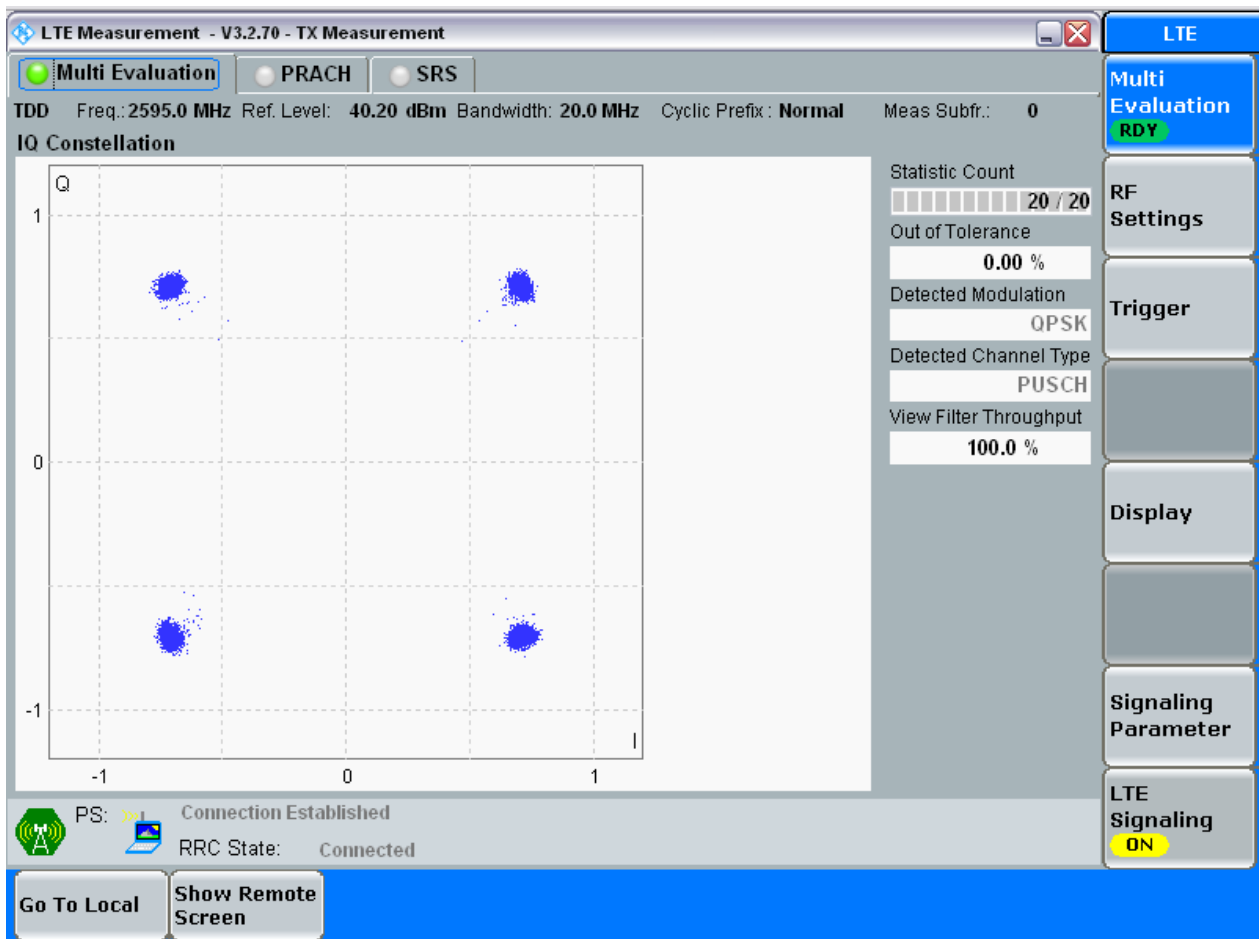
3.1.1.1.3.1.1 Test RB = RB75#0



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

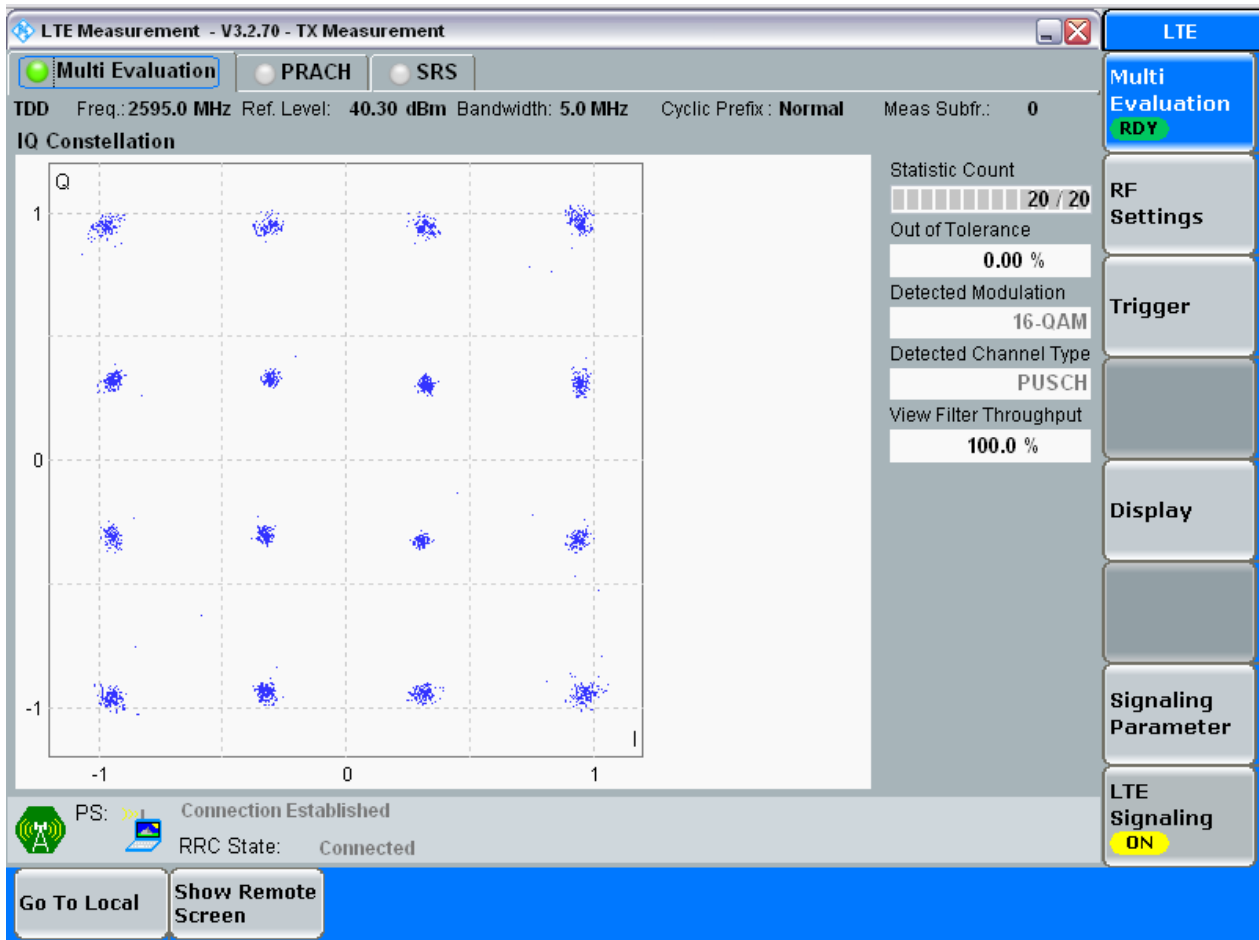


3.1.1.2 Test Mode = LTE/TM2

3.1.1.2.1 Test Bandwidth = 5

3.1.1.2.1.1 Test Channel = MCH

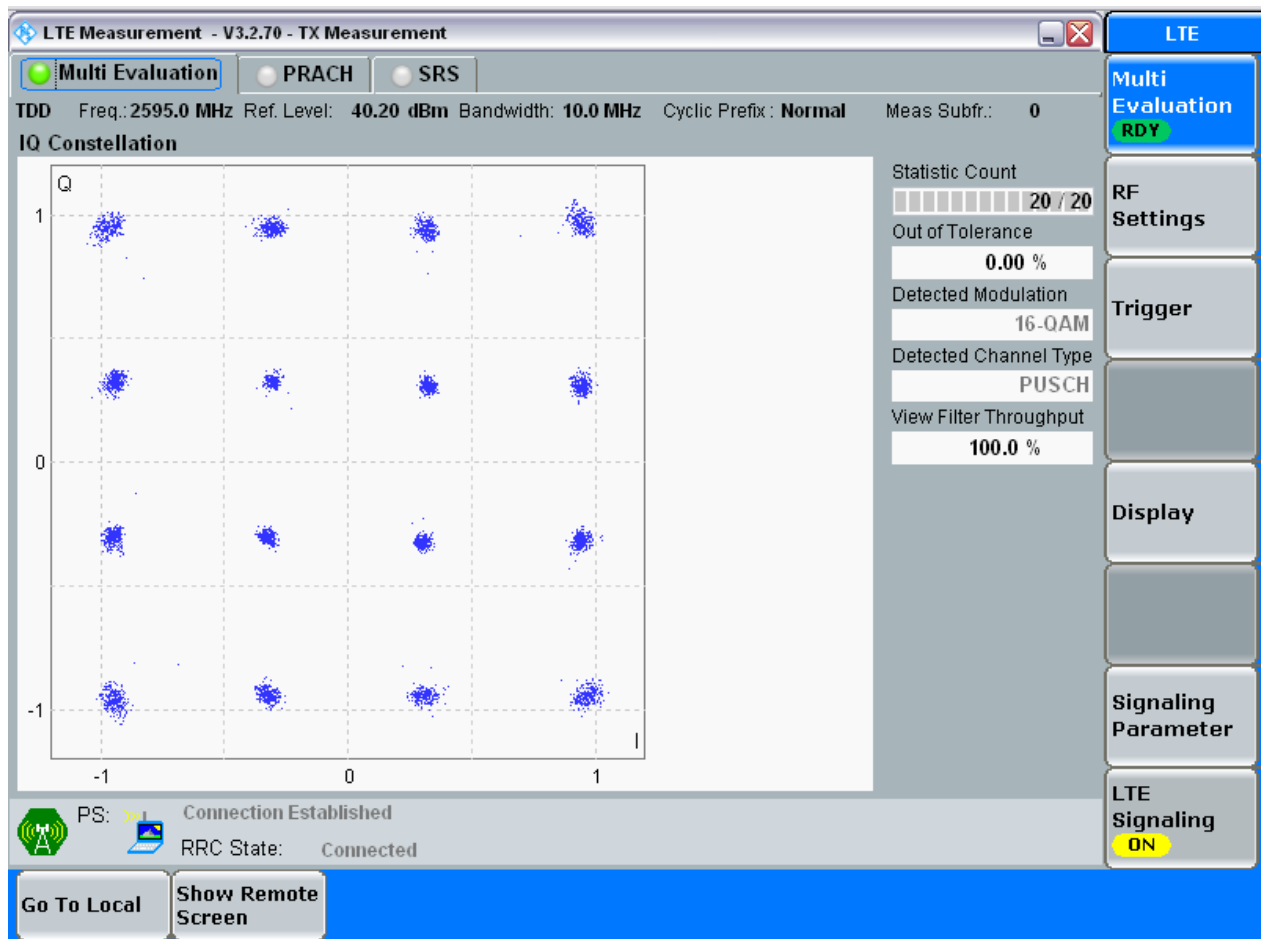
3.1.1.2.1.1.1 Test RB = RB25#0



3.1.1.2.2 Test Bandwidth = 10

3.1.1.2.2.1 Test Channel = MCH

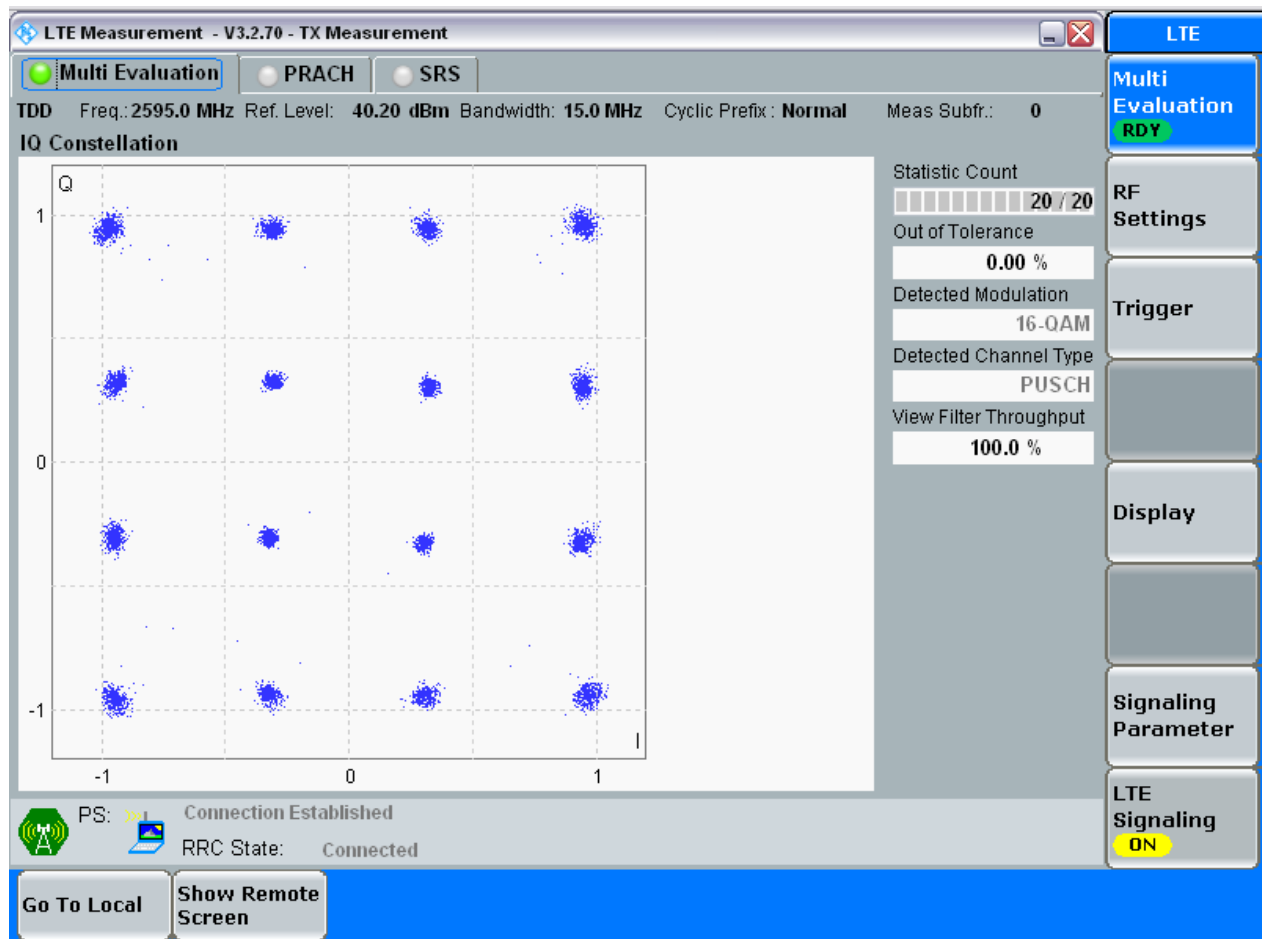
3.1.1.2.2.1.1 Test RB = RB50#0



3.1.1.2.3 Test Bandwidth = 15

3.1.1.2.3.1 Test Channel = MCH

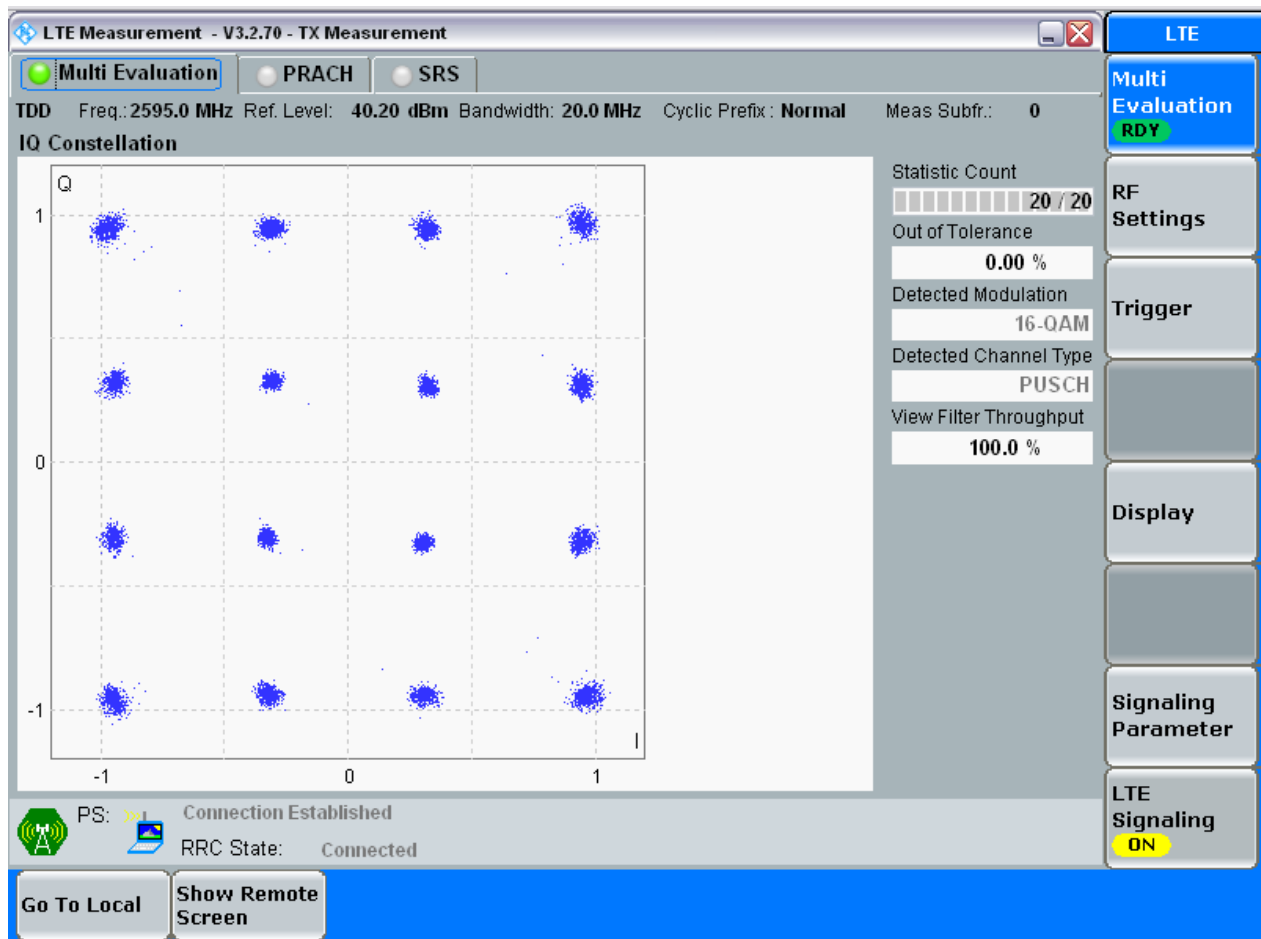
3.1.1.2.3.1.1 Test RB = RB75#0



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	4.50	4.85	Pass
			MCH	RB25#0	4.49	4.82	Pass
			HCH	RB25#0	4.50	4.85	Pass
		10	LCH	RB50#0	8.97	9.58	Pass
			MCH	RB50#0	8.97	9.57	Pass
			HCH	RB50#0	8.98	9.58	Pass
		15	LCH	RB75#0	13.45	14.26	Pass
			MCH	RB75#0	13.43	14.27	Pass
			HCH	RB75#0	13.46	14.28	Pass
		20	LCH	RB100#0	17.92	18.93	Pass
			MCH	RB100#0	17.93	18.97	Pass
			HCH	RB100#0	17.92	18.95	Pass
	LTE/TM2	5	LCH	RB25#0	4.49	4.83	Pass
			MCH	RB25#0	4.50	4.86	Pass
			HCH	RB25#0	4.48	4.85	Pass
		10	LCH	RB50#0	8.97	9.53	Pass
			MCH	RB50#0	8.97	9.52	Pass
			HCH	RB50#0	8.95	9.52	Pass
		15	LCH	RB75#0	13.45	14.25	Pass
			MCH	RB75#0	13.45	14.24	Pass
			HCH	RB75#0	13.46	14.26	Pass
		20	LCH	RB100#0	17.91	18.97	Pass
			MCH	RB100#0	17.90	18.96	Pass
			HCH	RB100#0	17.92	18.97	Pass



Part II - Test Plots

4.1 For LTE

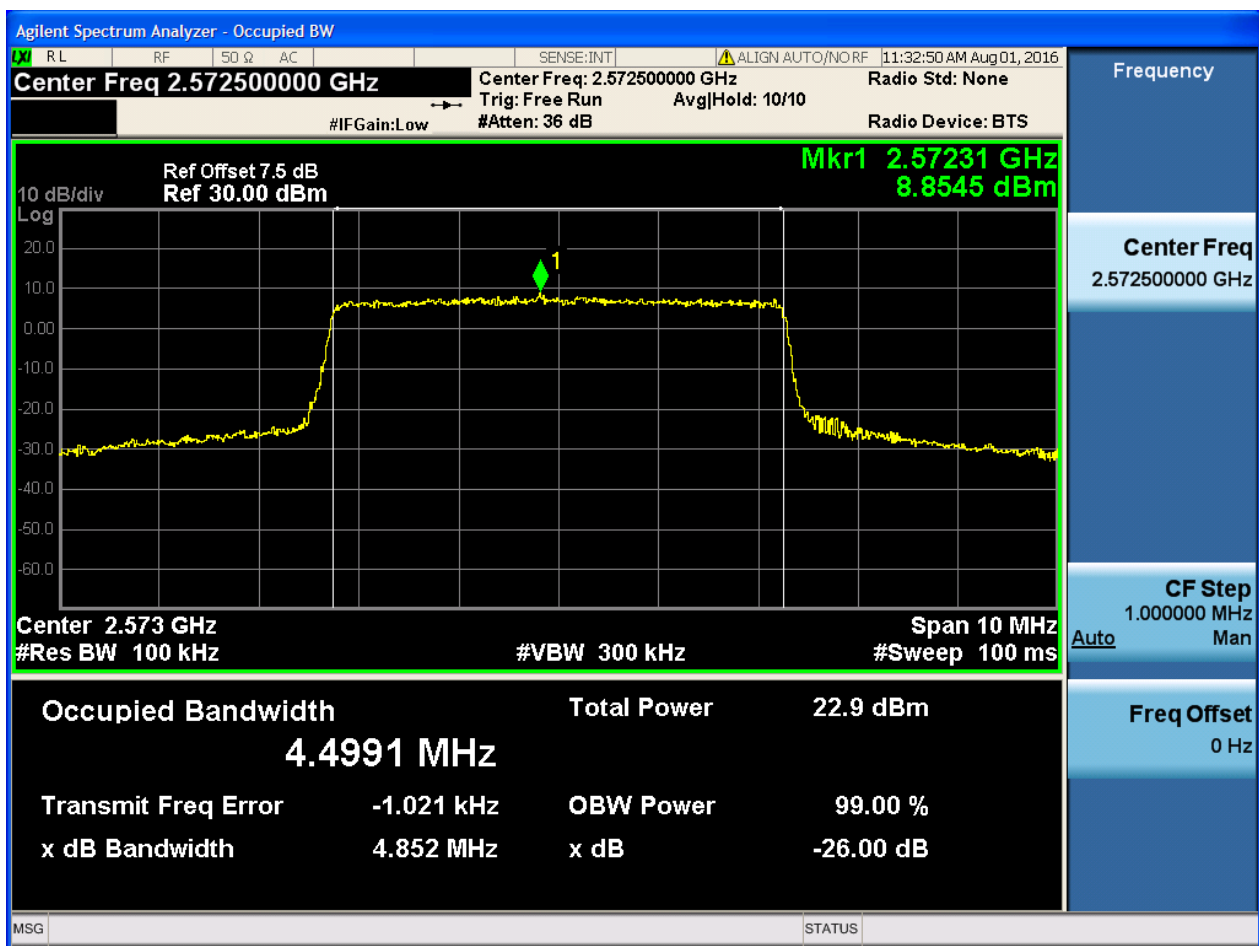
4.1.1 Test Band = BAND38

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

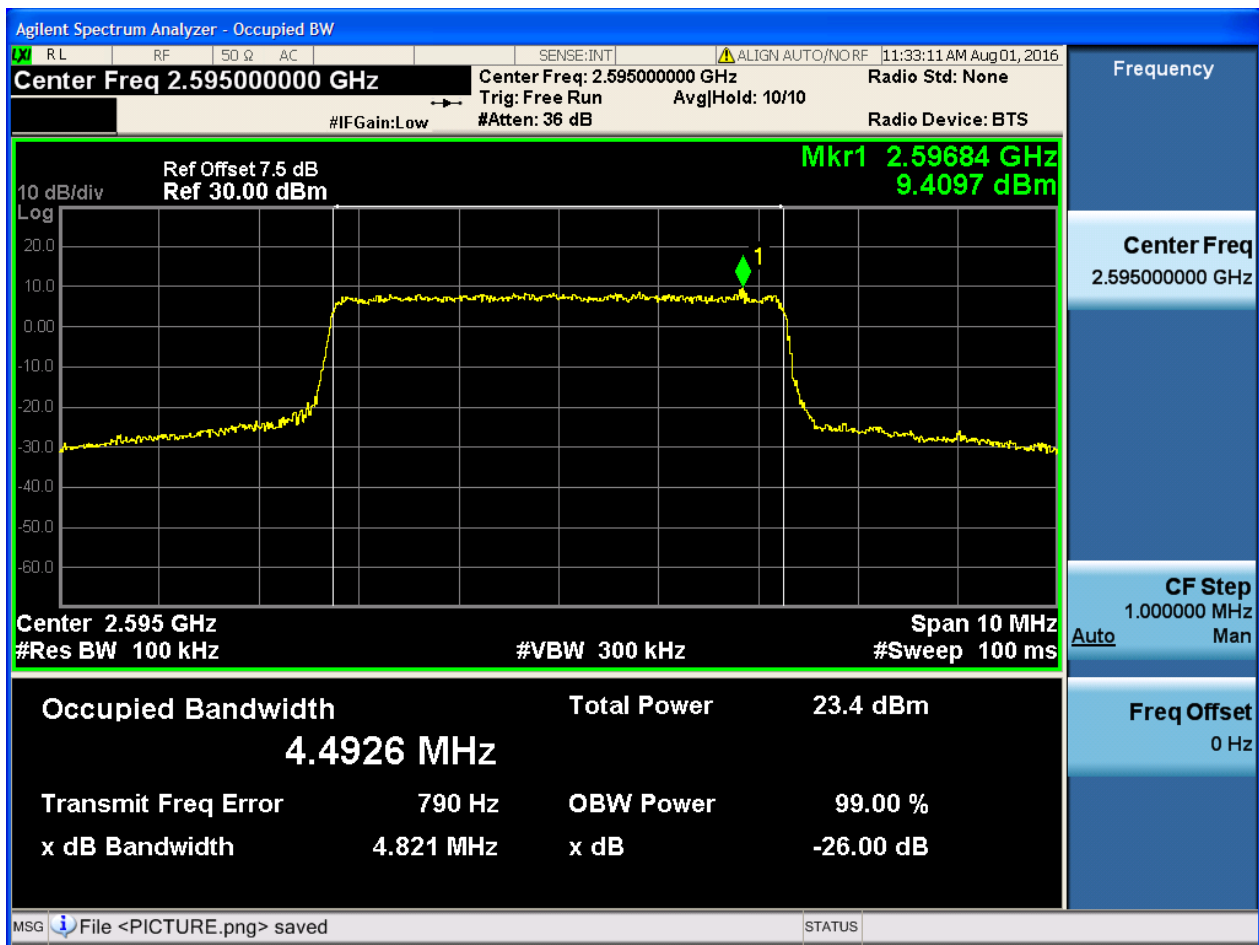
4.1.1.1.1.1.1 Test RB = RB25#0





4.1.1.1.1.2 Test Channel = MCH

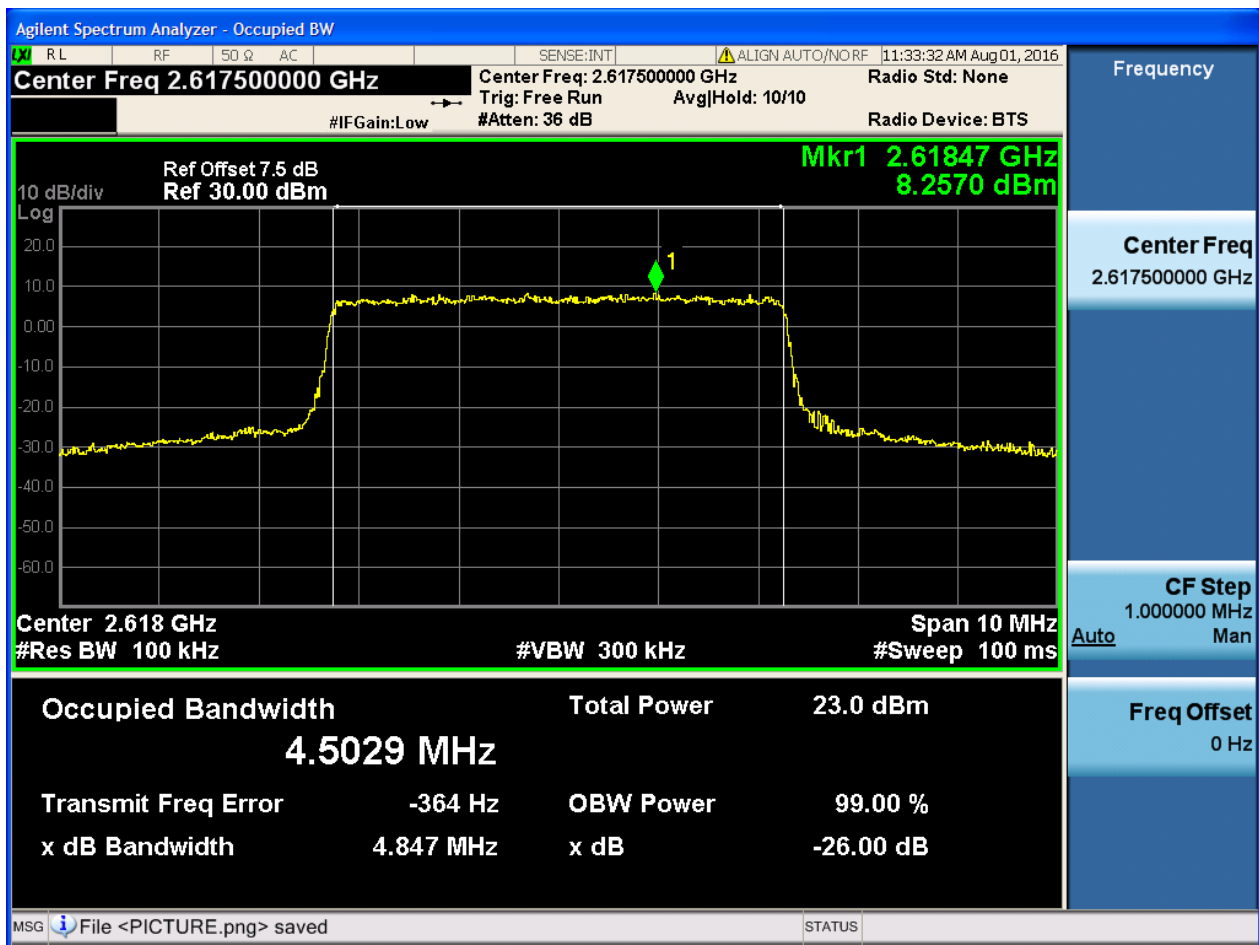
4.1.1.1.1.2.1 Test RB = RB25#0





4.1.1.1.1.3 Test Channel = HCH

4.1.1.1.1.3.1 Test RB = RB25#0

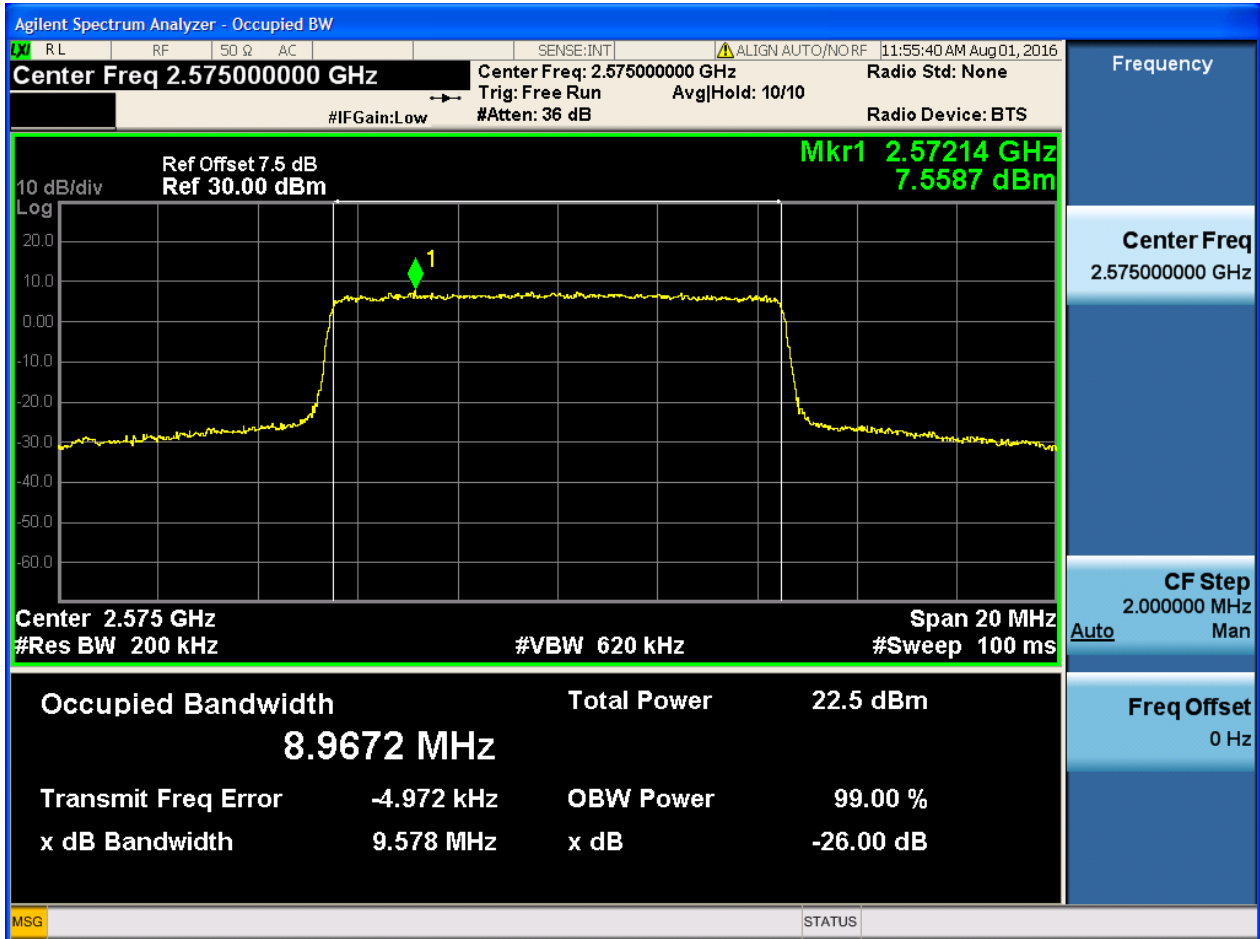




4.1.1.1.2 Test Bandwidth = 10

4.1.1.1.2.1 Test Channel = LCH

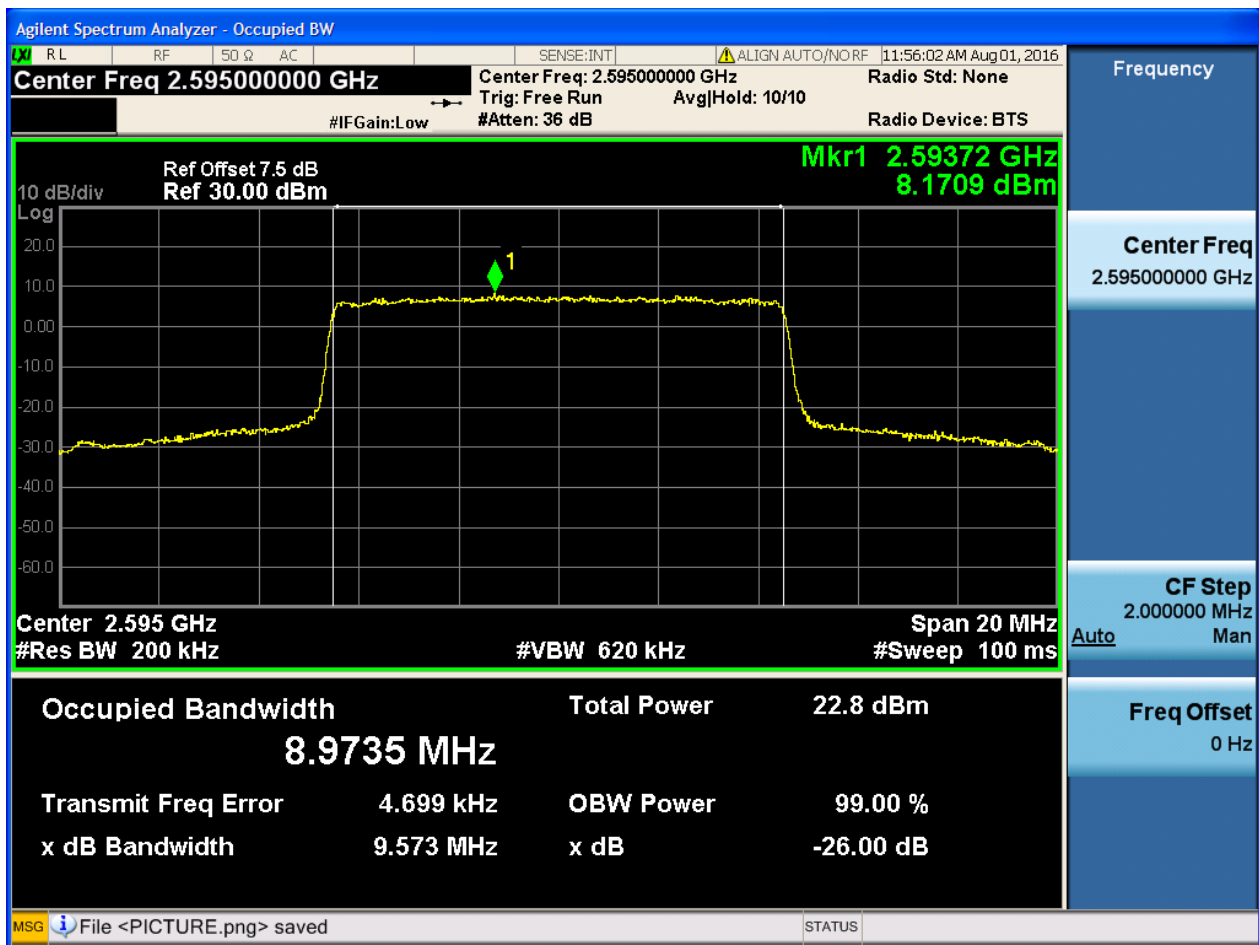
4.1.1.1.2.1.1 Test RB = RB50#0





4.1.1.1.2.2 Test Channel = MCH

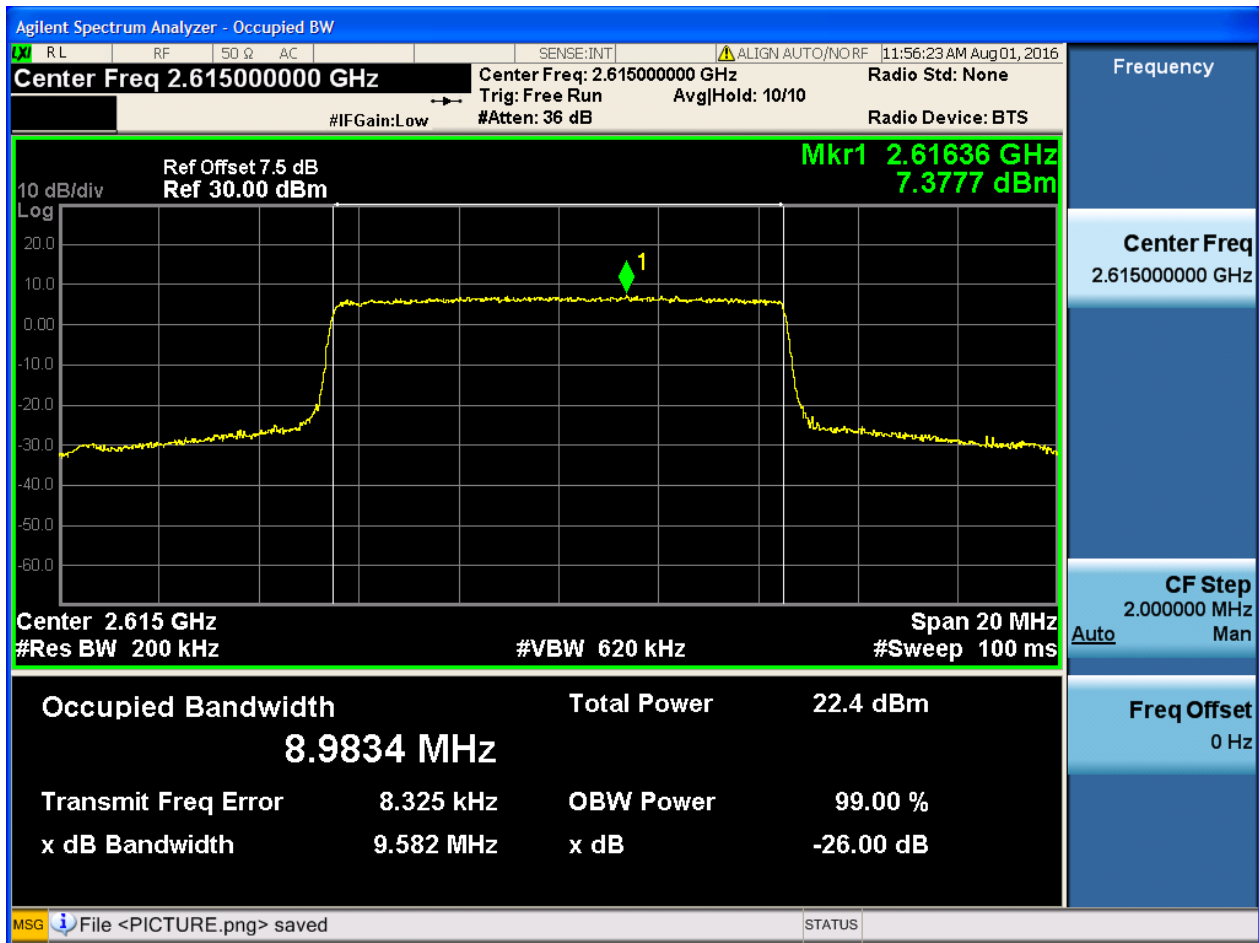
4.1.1.1.2.2.1 Test RB = RB50#0





4.1.1.1.2.3 Test Channel = HCH

4.1.1.1.2.3.1 Test RB = RB50#0

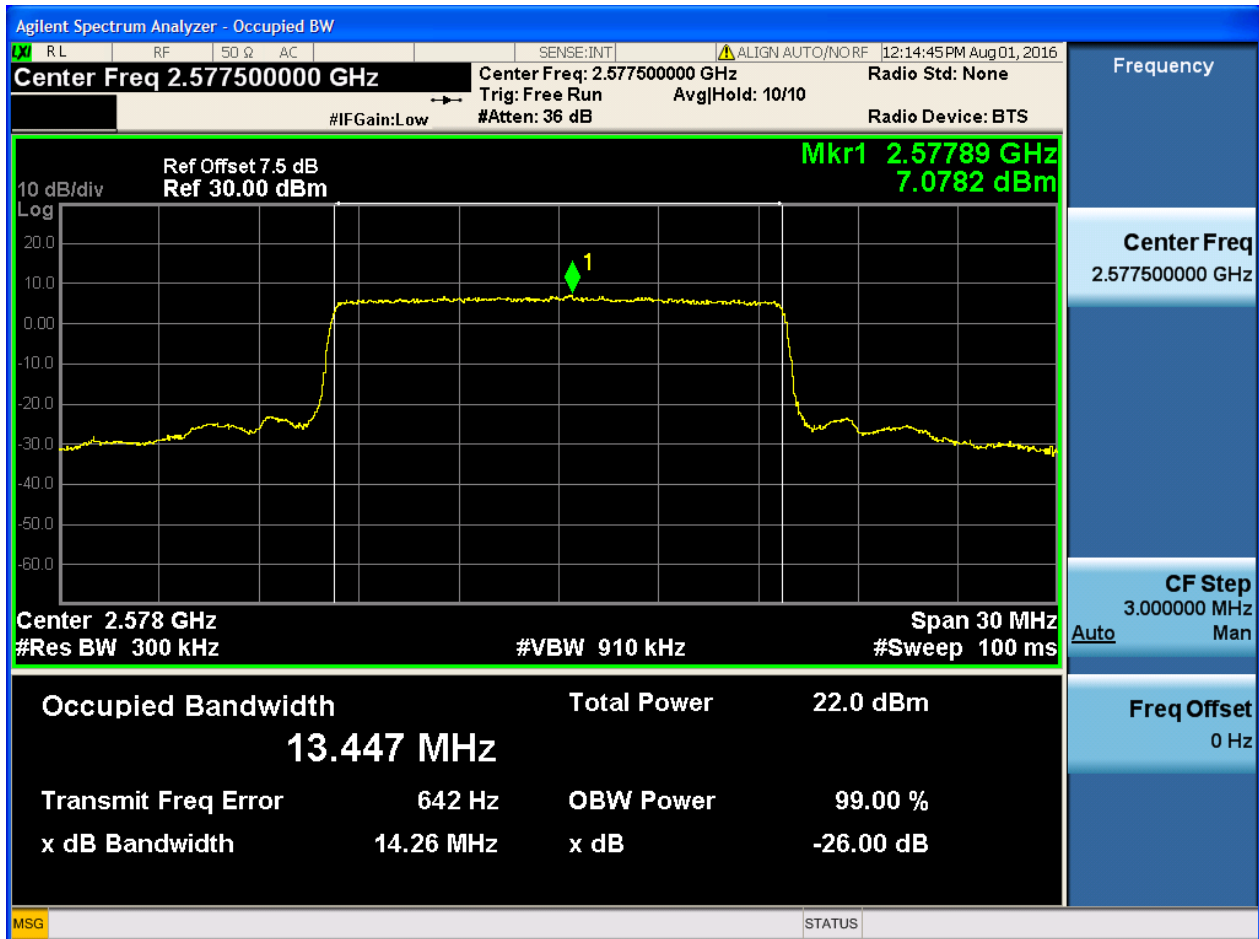




4.1.1.1.3 Test Bandwidth = 15

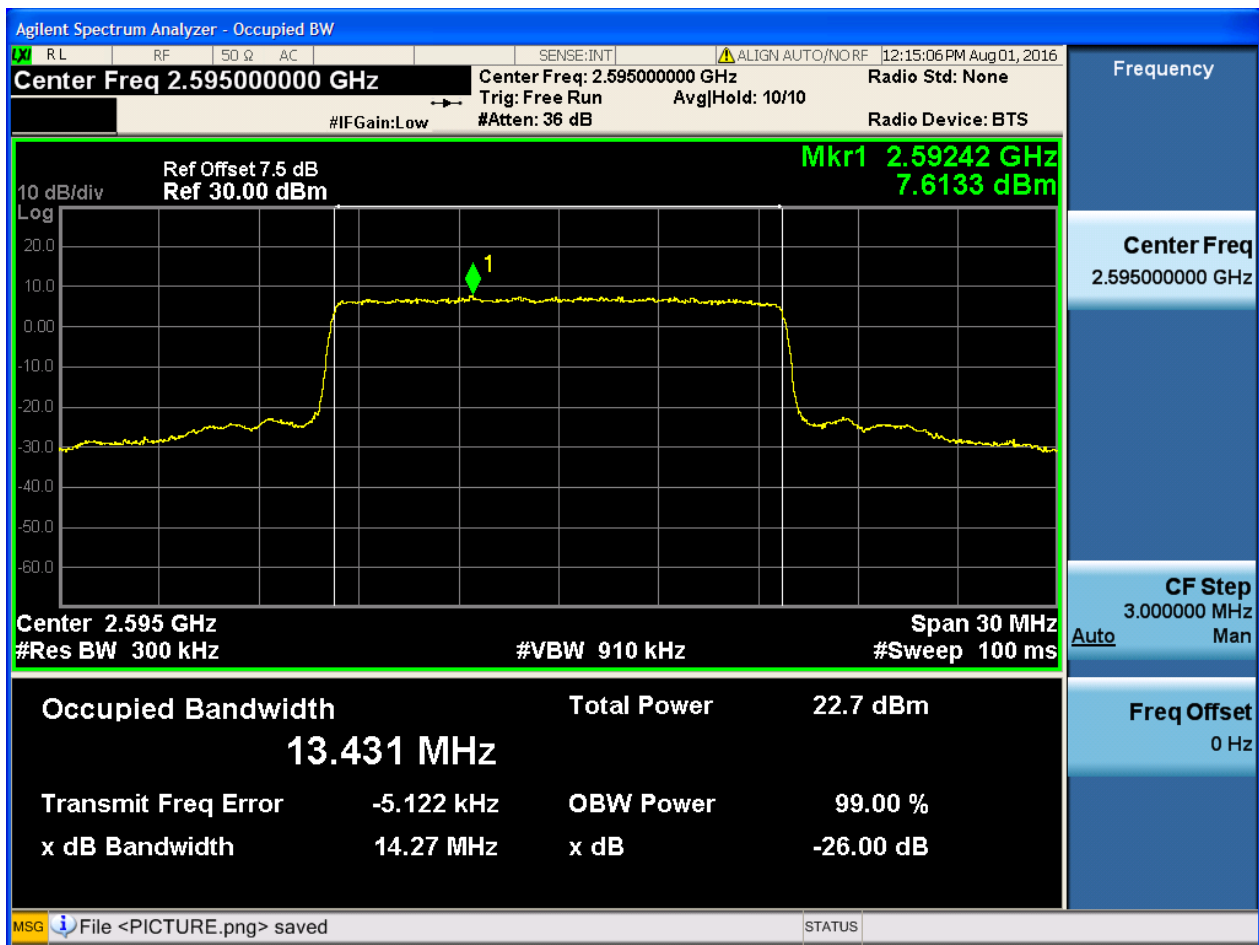
4.1.1.1.3.1 Test Channel = LCH

4.1.1.1.3.1.1 Test RB = RB75#0



4.1.1.1.3.2 Test Channel = MCH

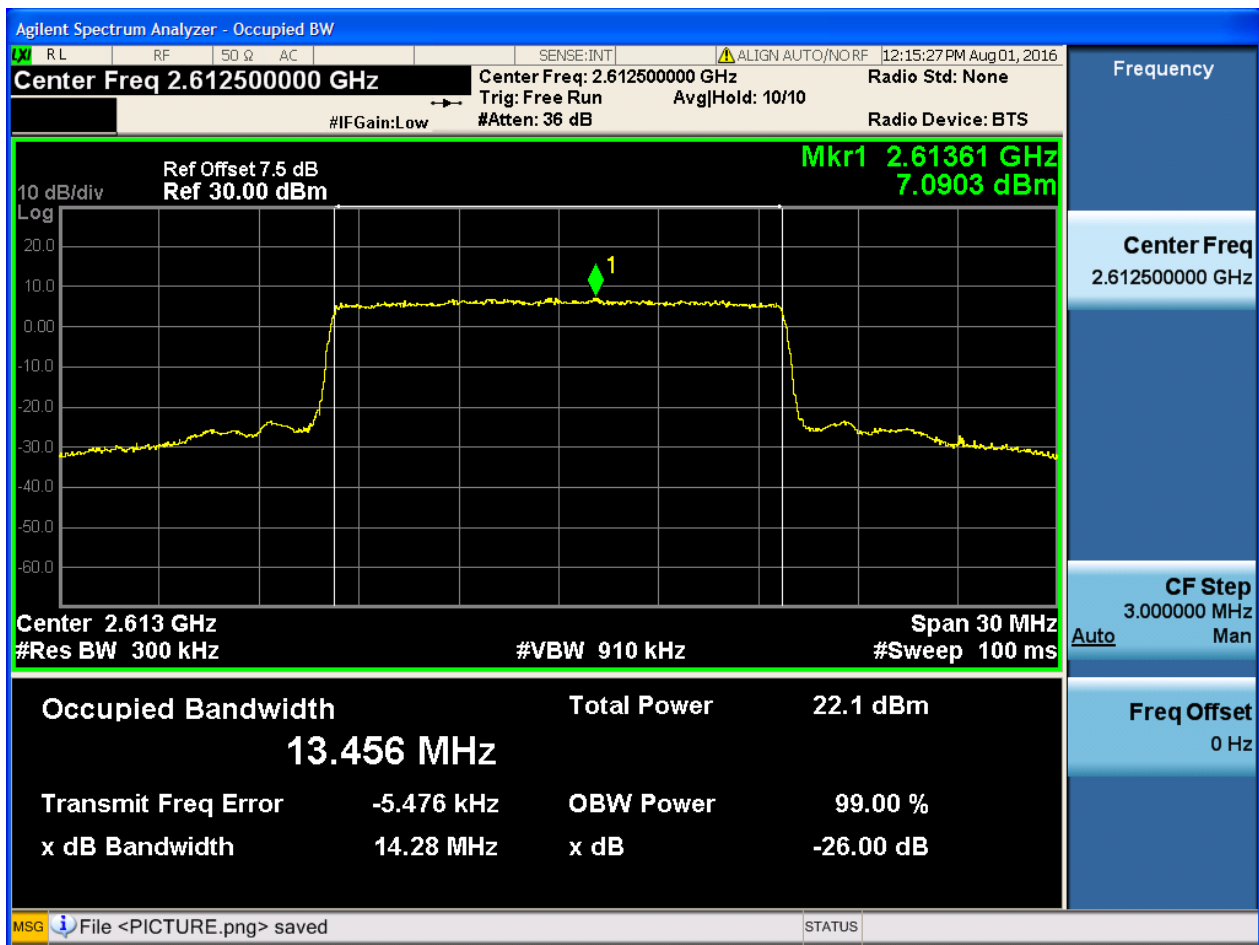
4.1.1.1.3.2.1 Test RB = RB75#0





4.1.1.1.3.3 Test Channel = HCH

4.1.1.1.3.3.1 Test RB = RB75#0

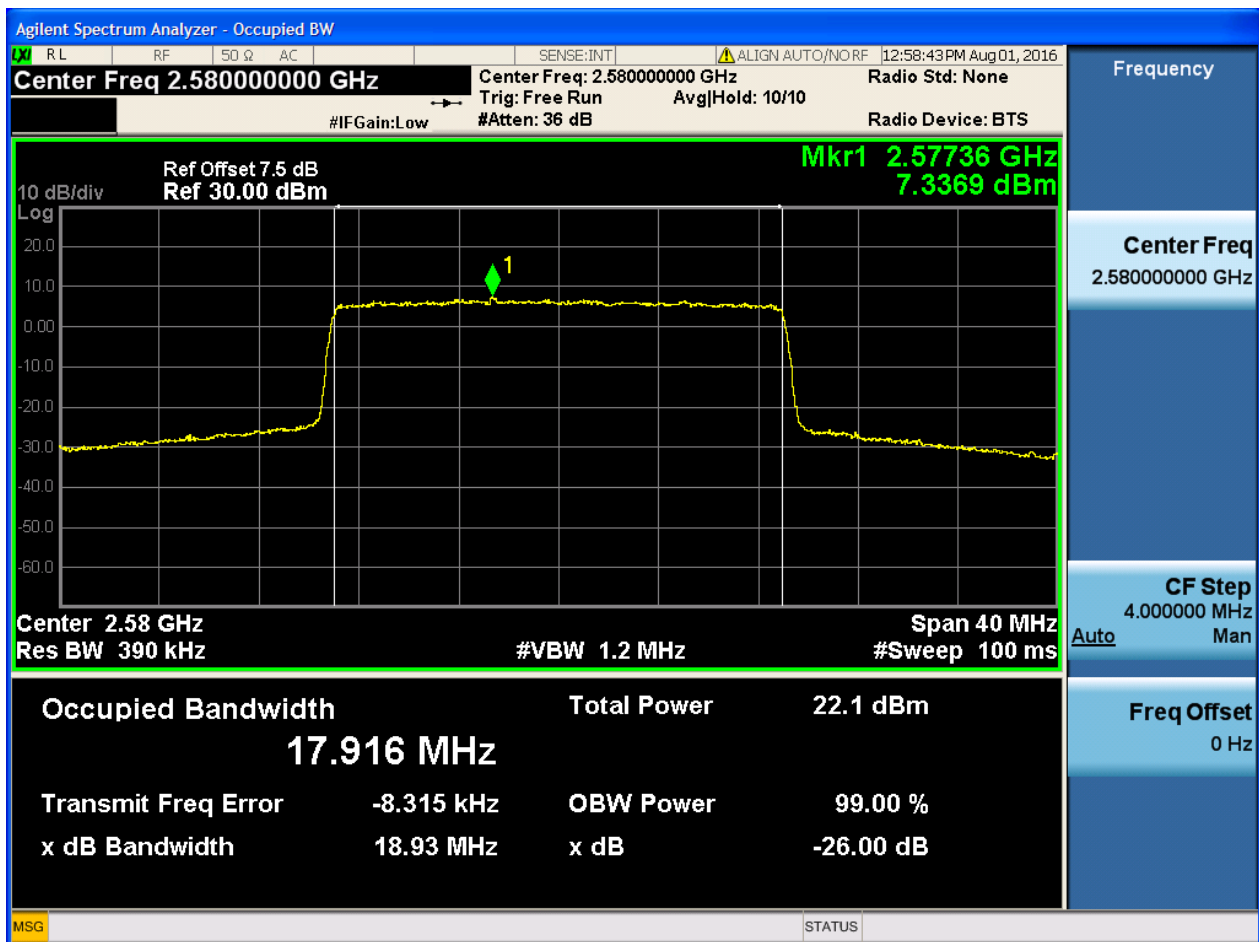




4.1.1.1.4 Test Bandwidth = 20

4.1.1.1.4.1 Test Channel = LCH

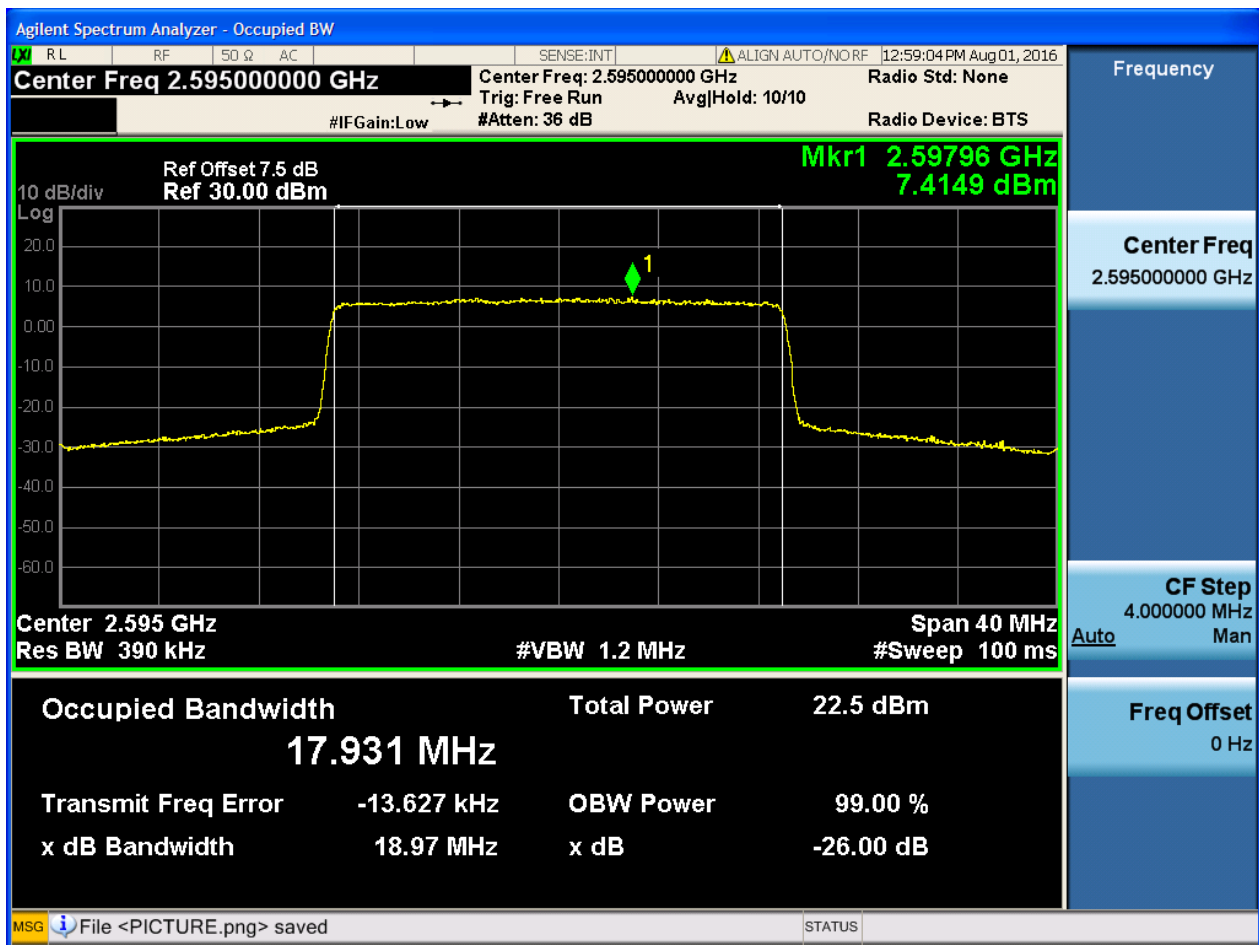
4.1.1.1.4.1.1 Test RB = RB100#0





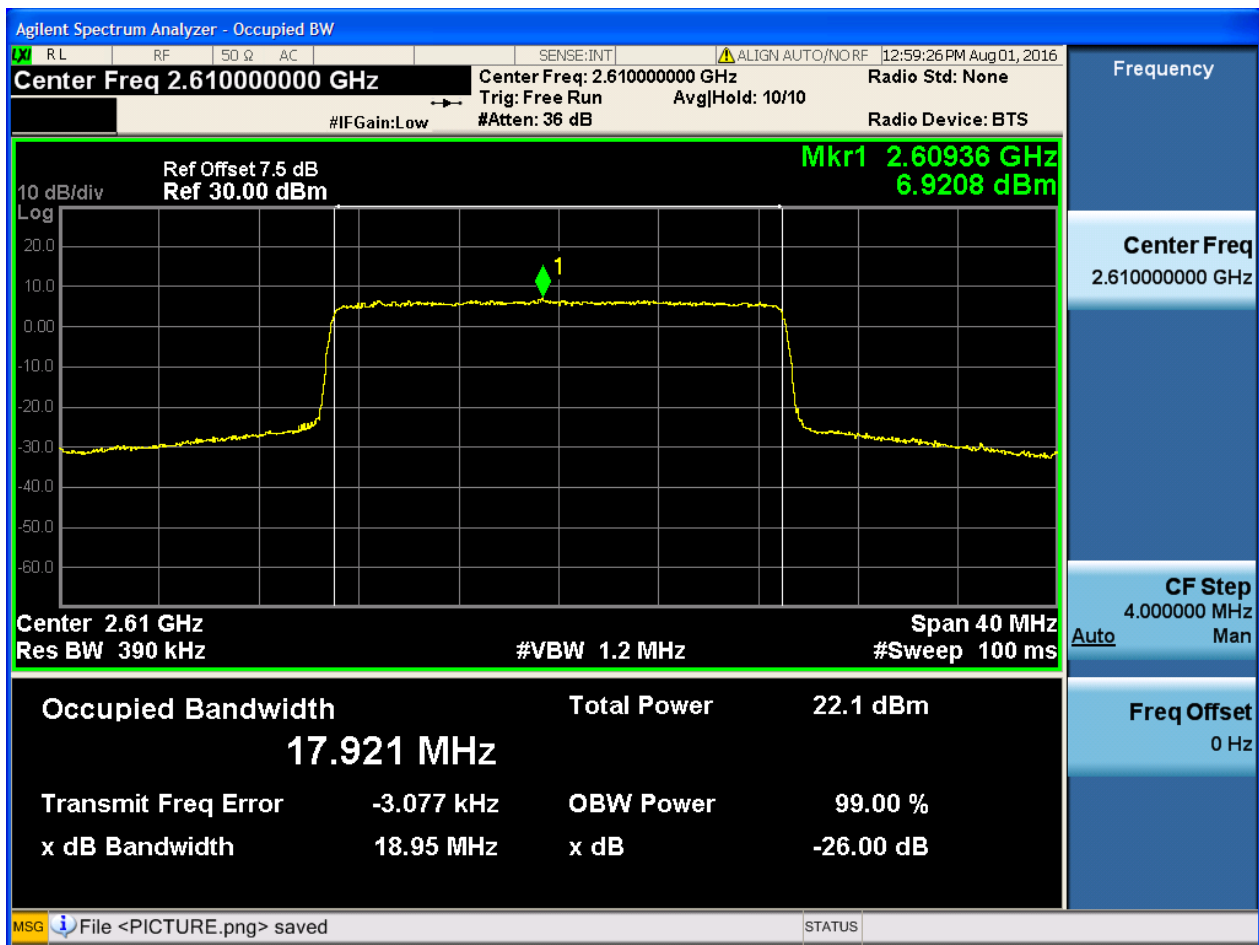
4.1.1.1.4.2 Test Channel = MCH

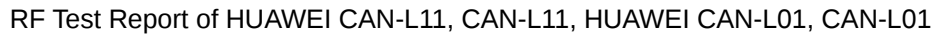
4.1.1.1.4.2.1 Test RB = RB100#0



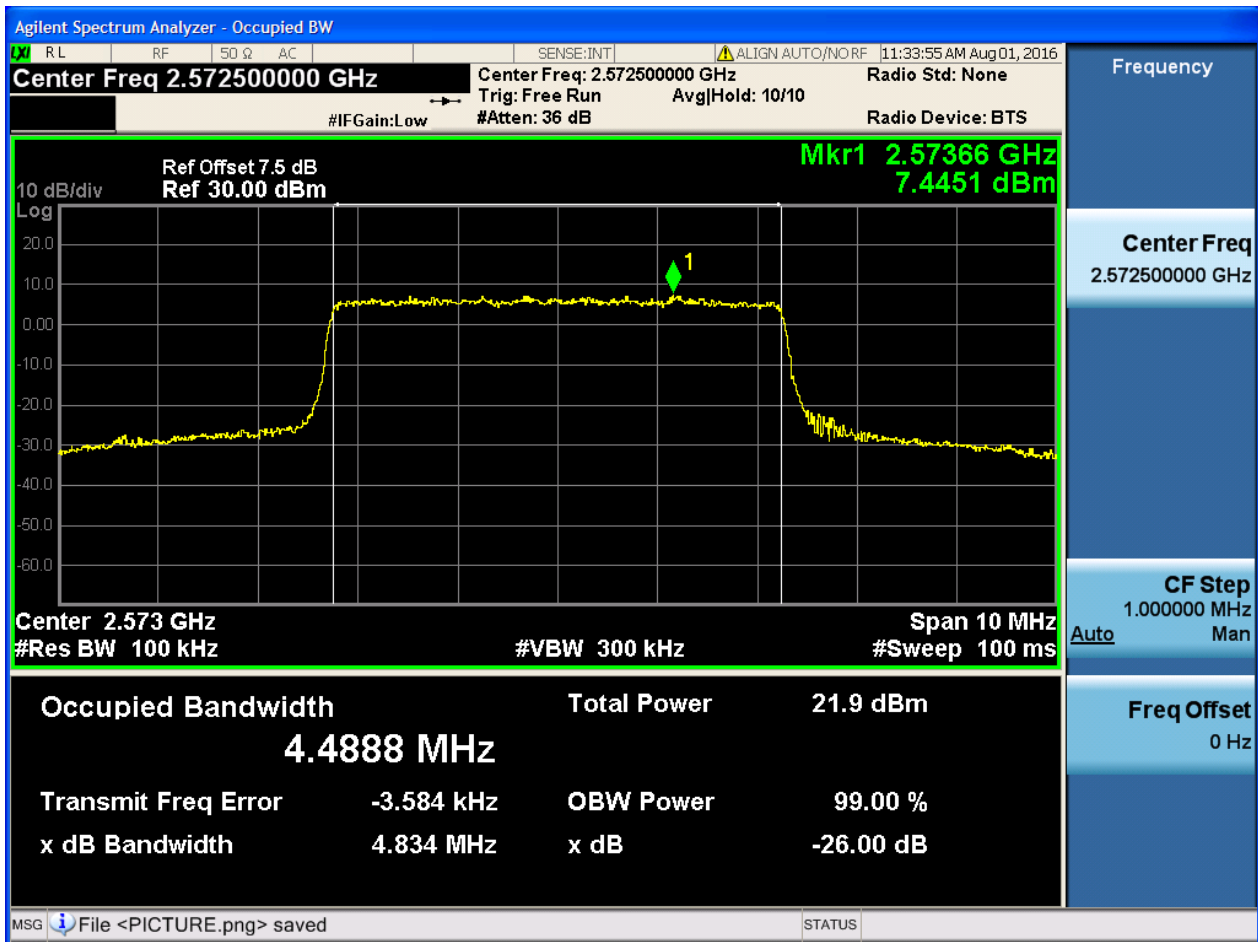
4.1.1.1.4.3 Test Channel = HCH

4.1.1.1.4.3.1 Test RB = RB100#0



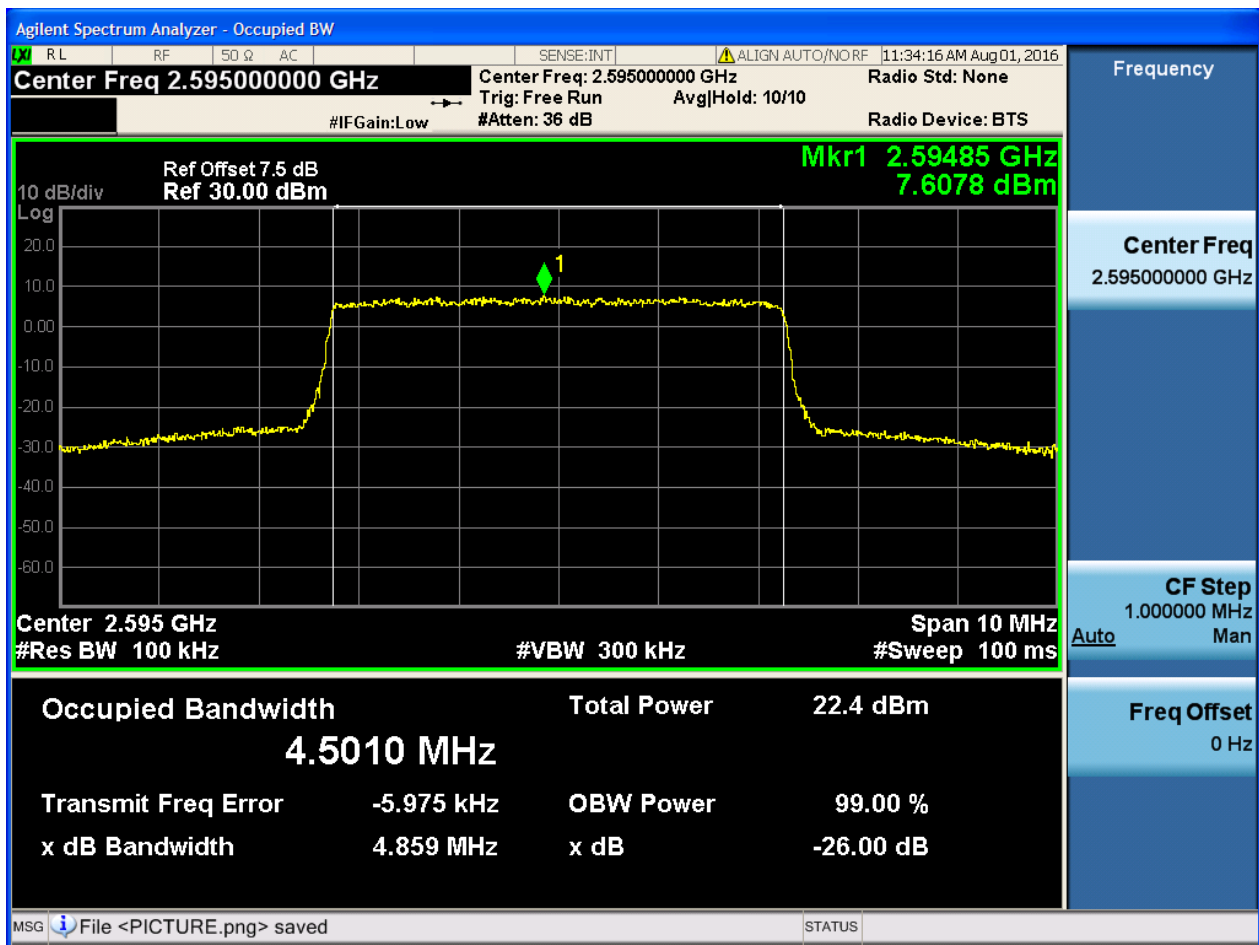


4.1.1.2.1.1.1 Test RB = RB25#0



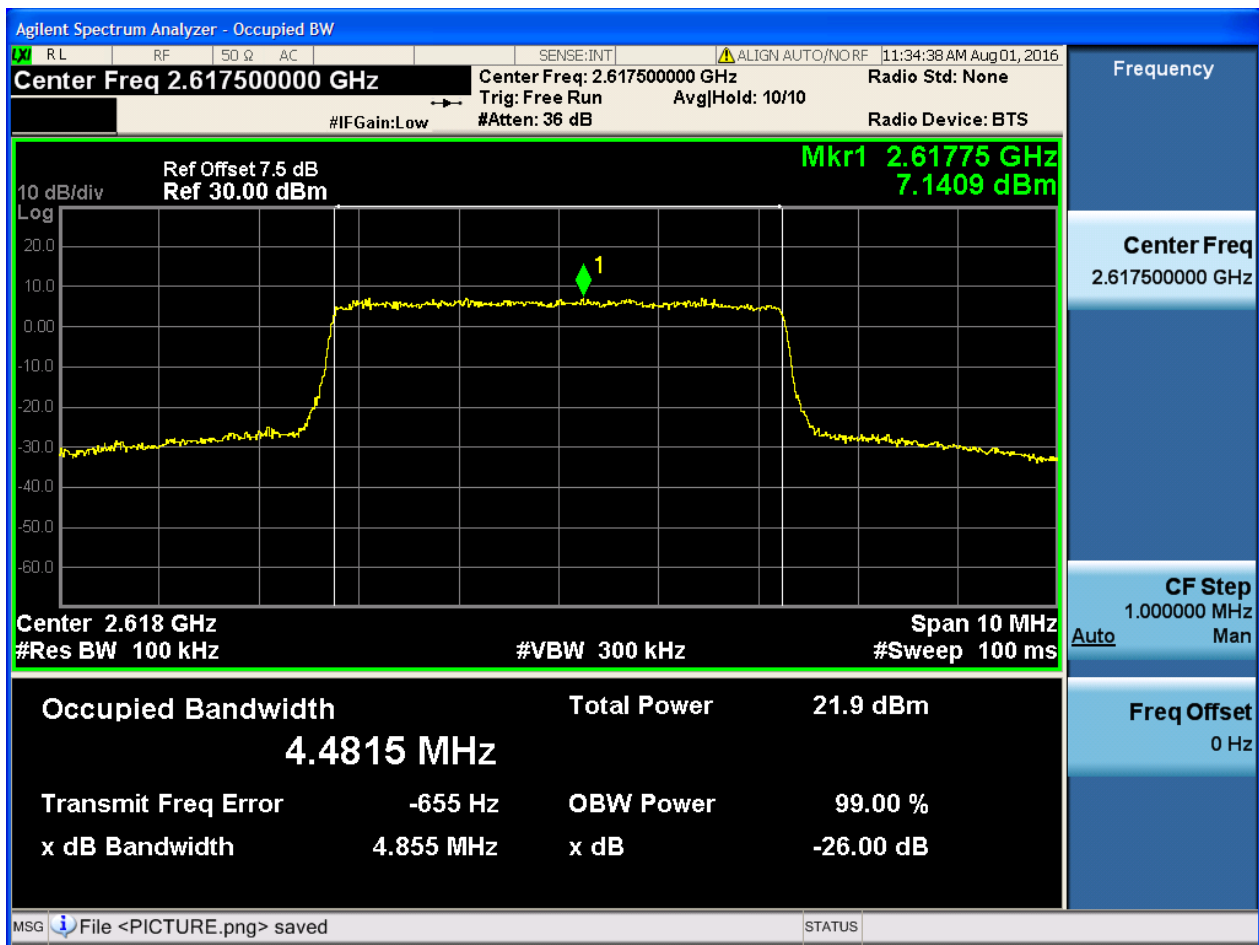
4.1.1.2.1.2 Test Channel = MCH

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

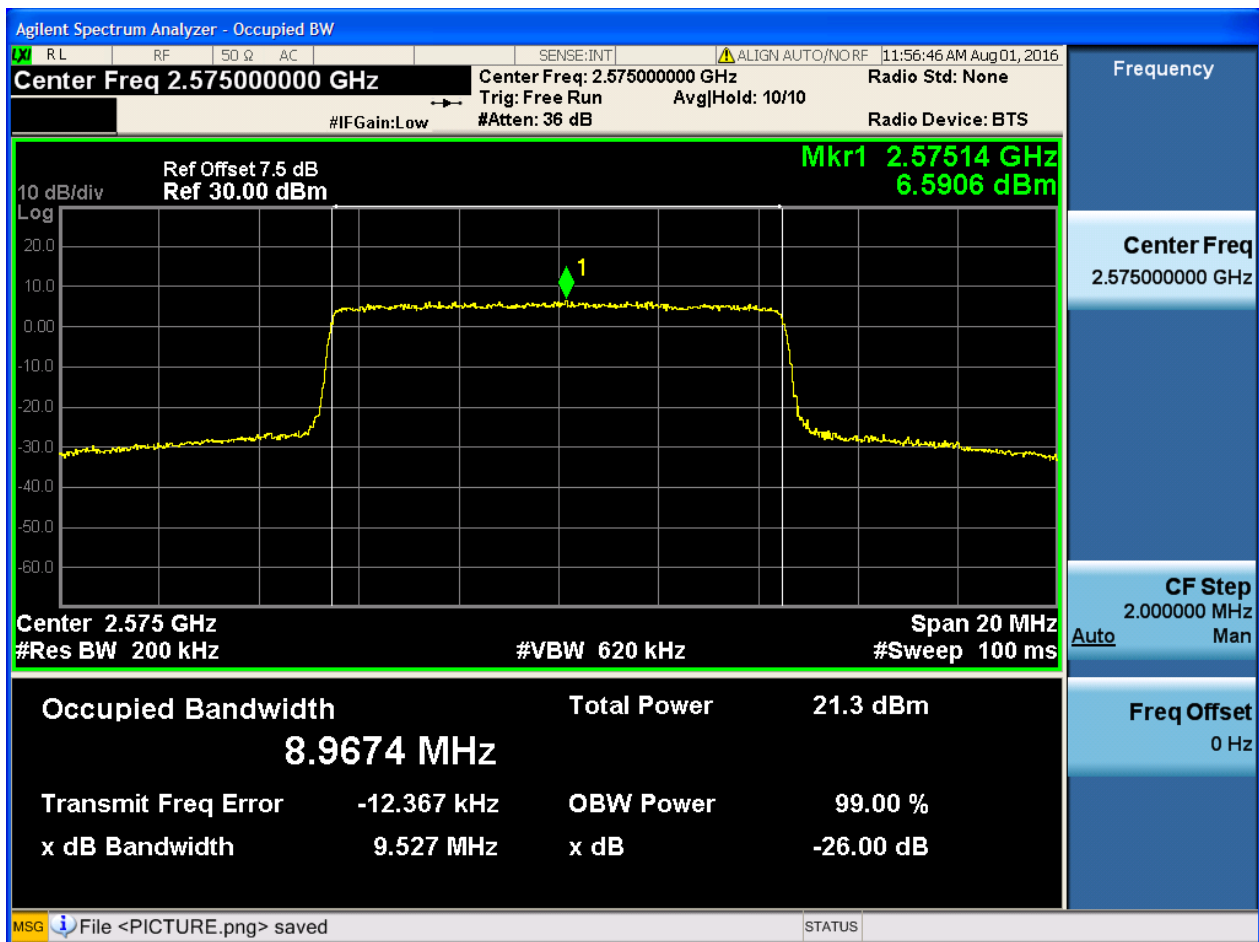




4.1.1.2.2 Test Bandwidth = 10

4.1.1.2.2.1 Test Channel = LCH

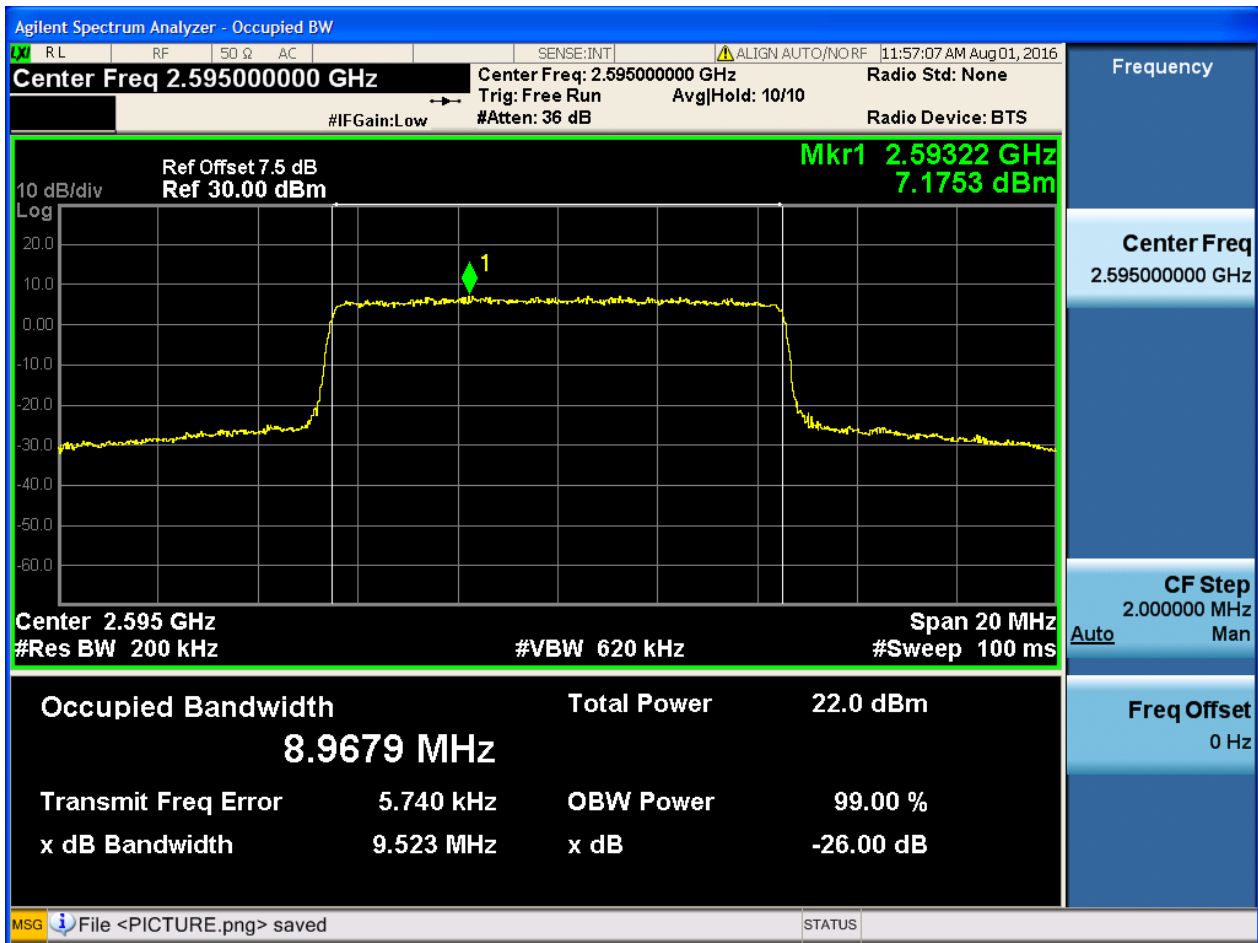
4.1.1.2.2.1.1 Test RB = RB50#0





4.1.1.2.2.2 Test Channel = MCH

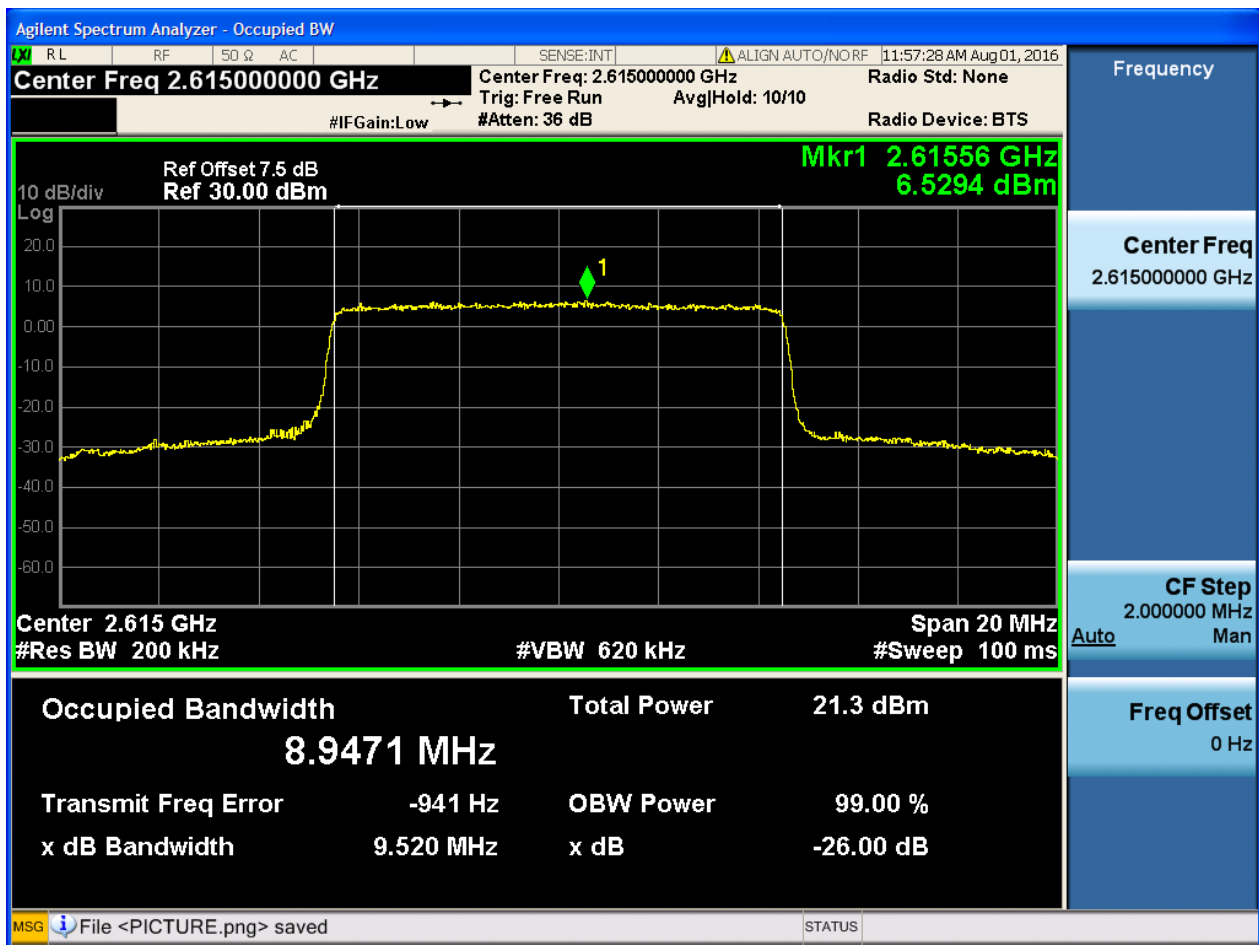
4.1.1.2.2.2.1 Test RB = RB50#0





4.1.1.2.2.3 Test Channel = HCH

4.1.1.2.2.3.1 Test RB = RB50#0

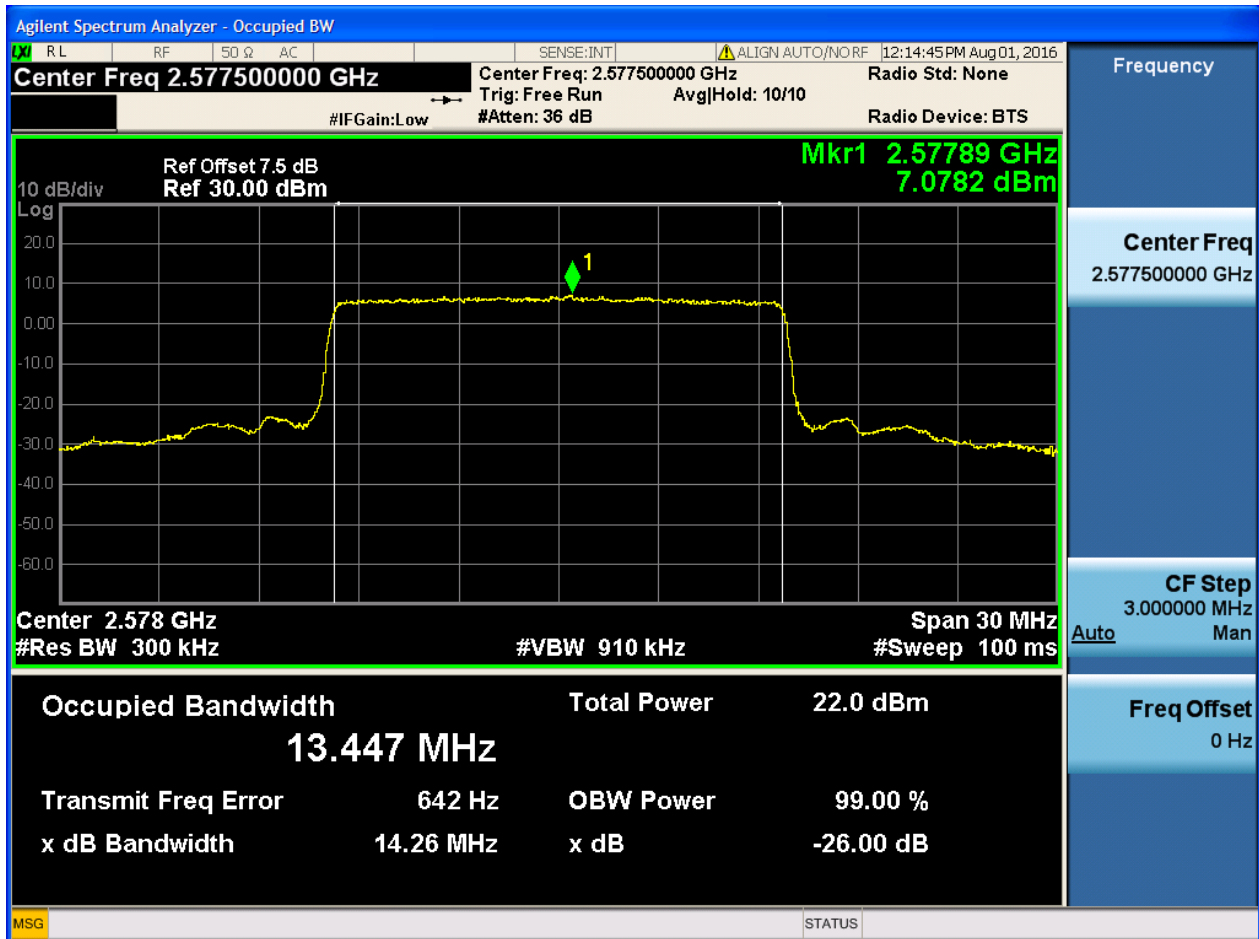




4.1.1.2.3 Test Bandwidth = 15

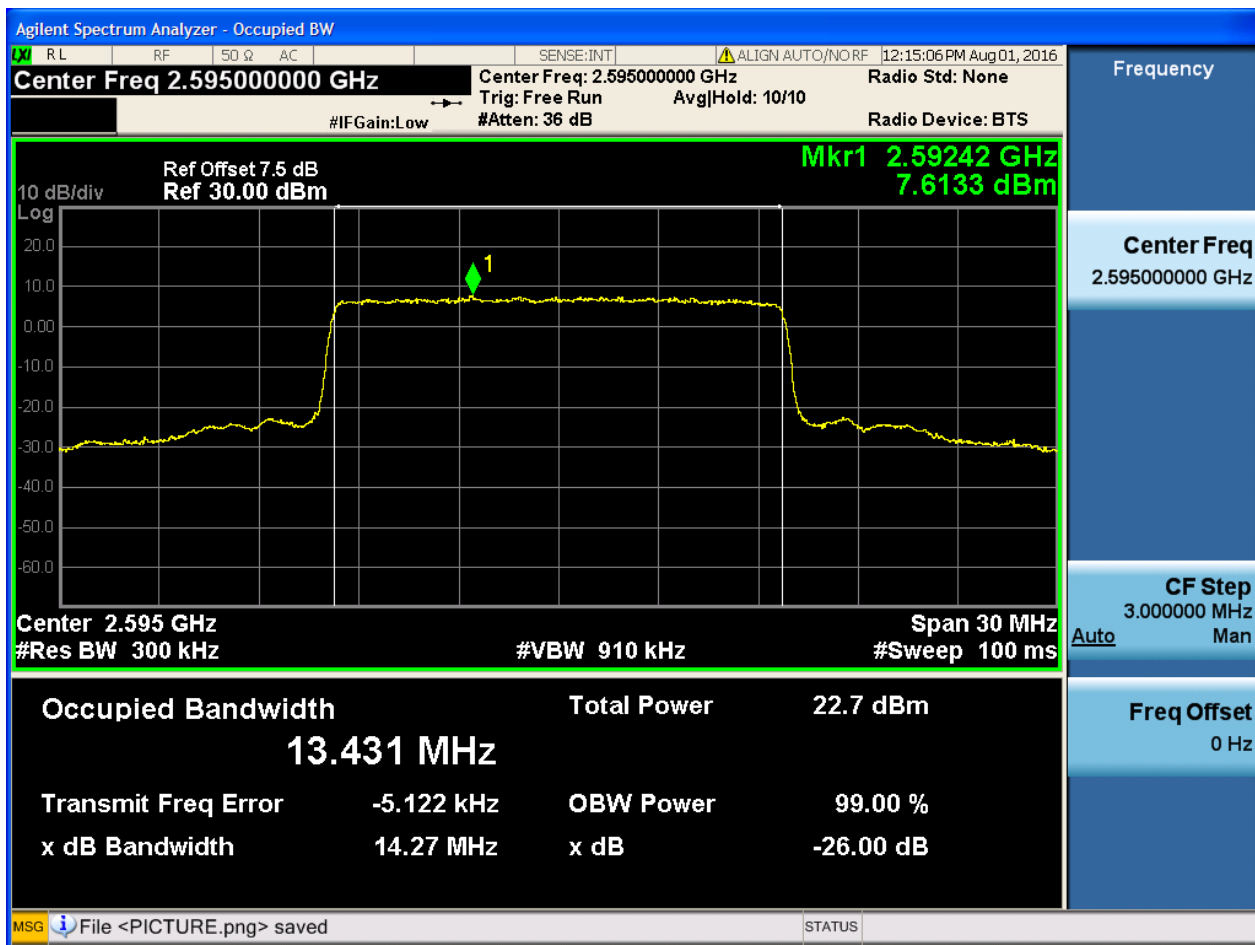
4.1.1.2.3.1 Test Channel = LCH

4.1.1.2.3.1.1 Test RB = RB75#0



4.1.1.2.3.2 Test Channel = MCH

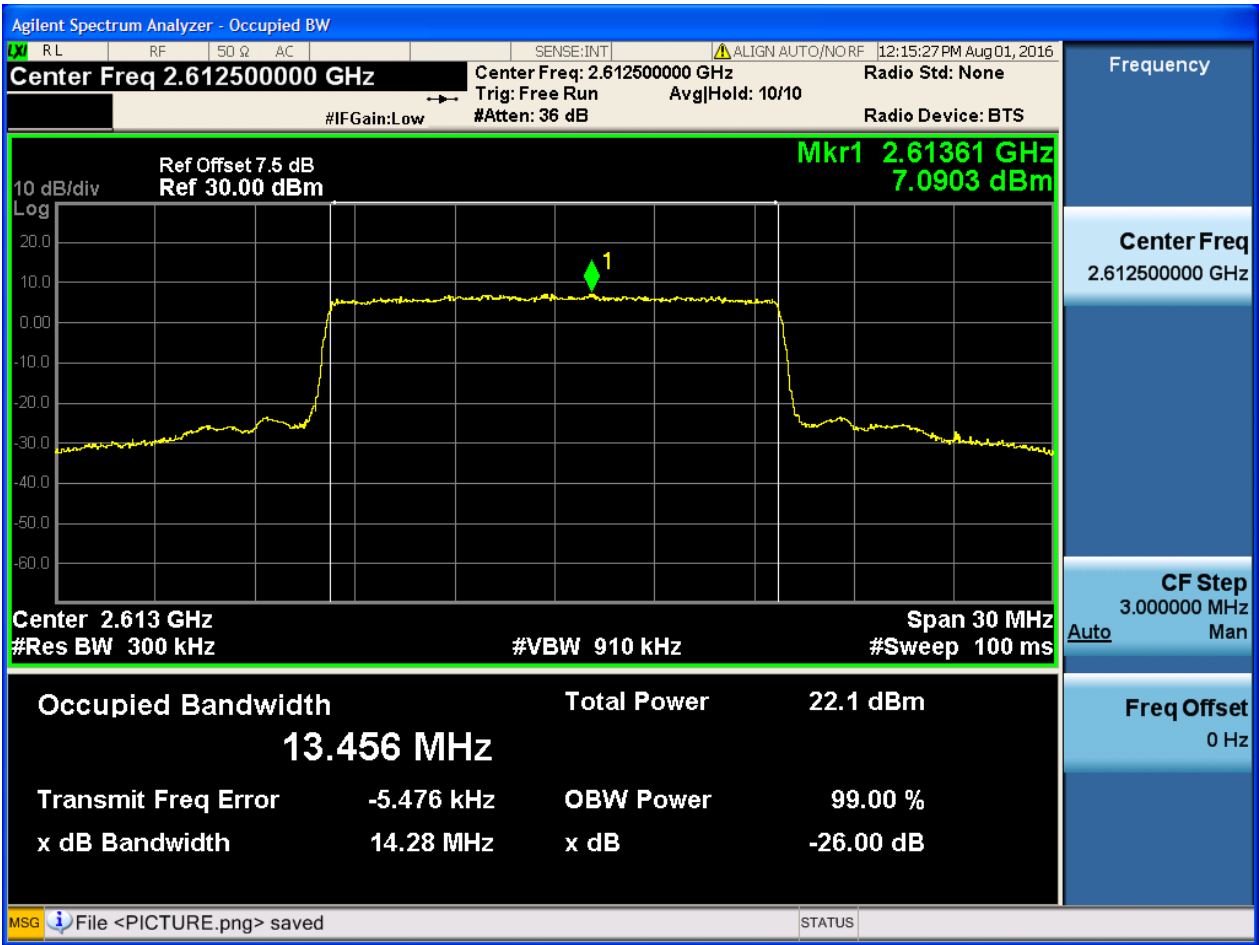
4.1.1.2.3.2.1 Test RB = RB75#0





4.1.1.2.3.3 Test Channel = HCH

4.1.1.2.3.3.1 Test RB = RB75#0

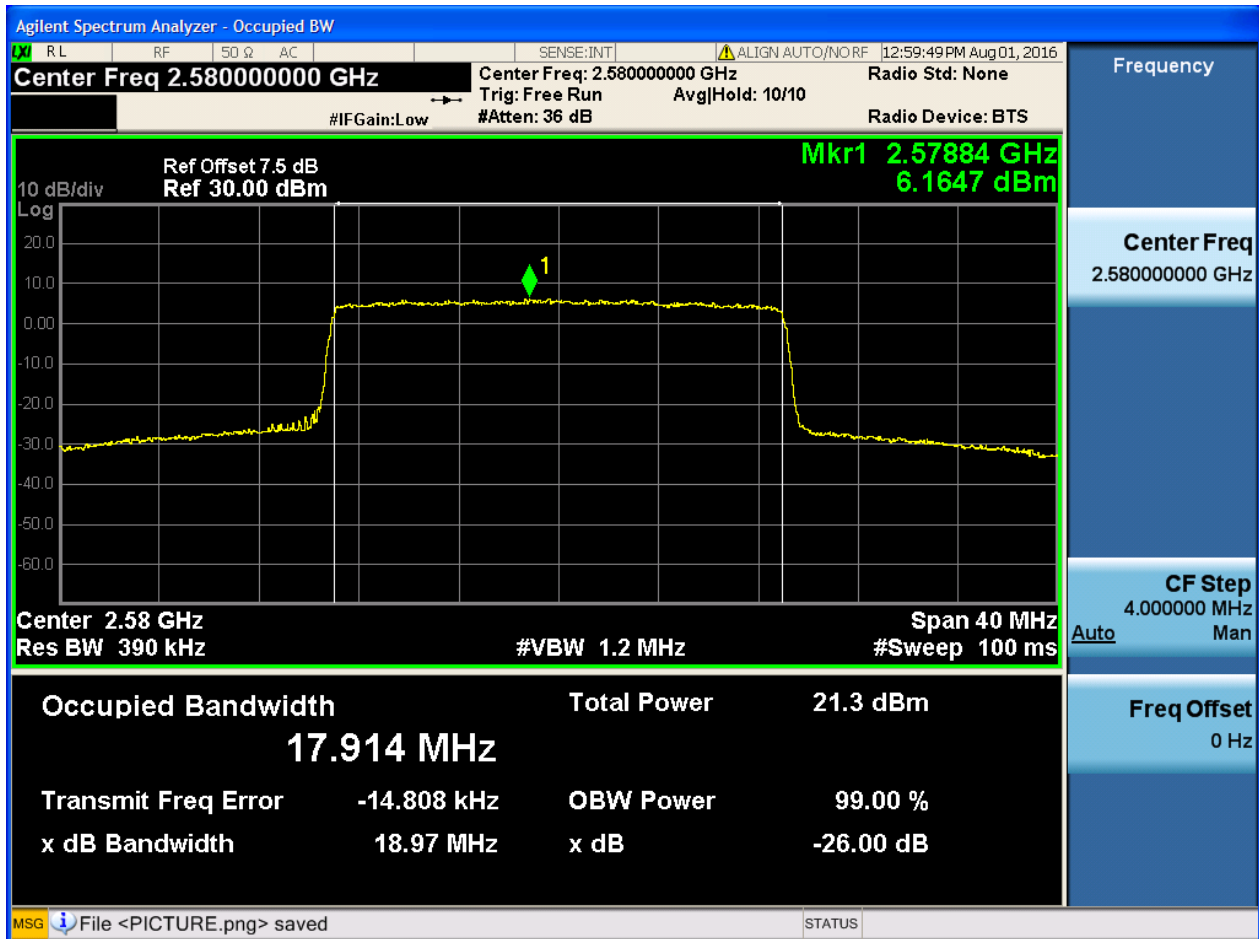




4.1.1.2.4 Test Bandwidth = 20

4.1.1.2.4.1 Test Channel = LCH

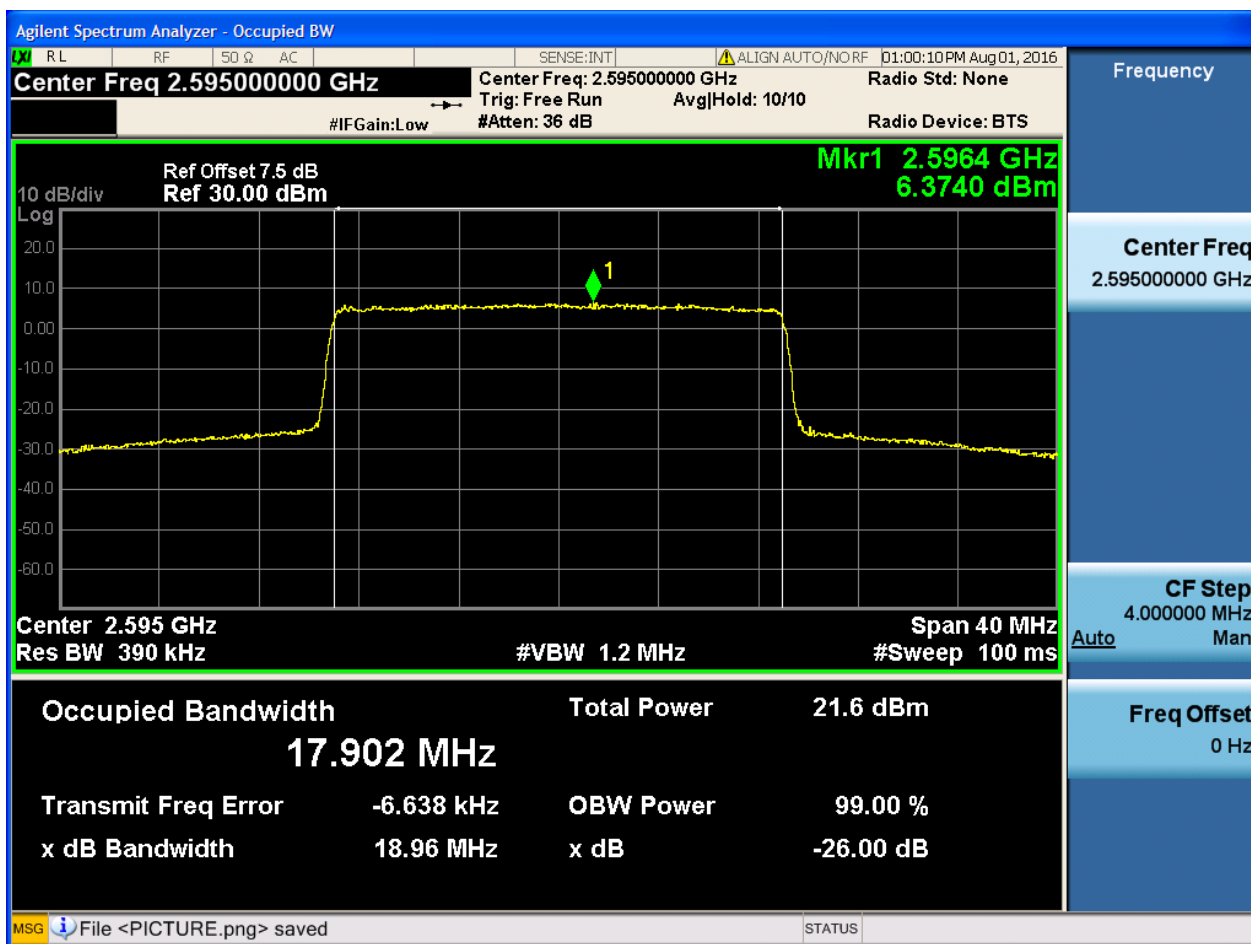
4.1.1.2.4.1.1 Test RB = RB100#0





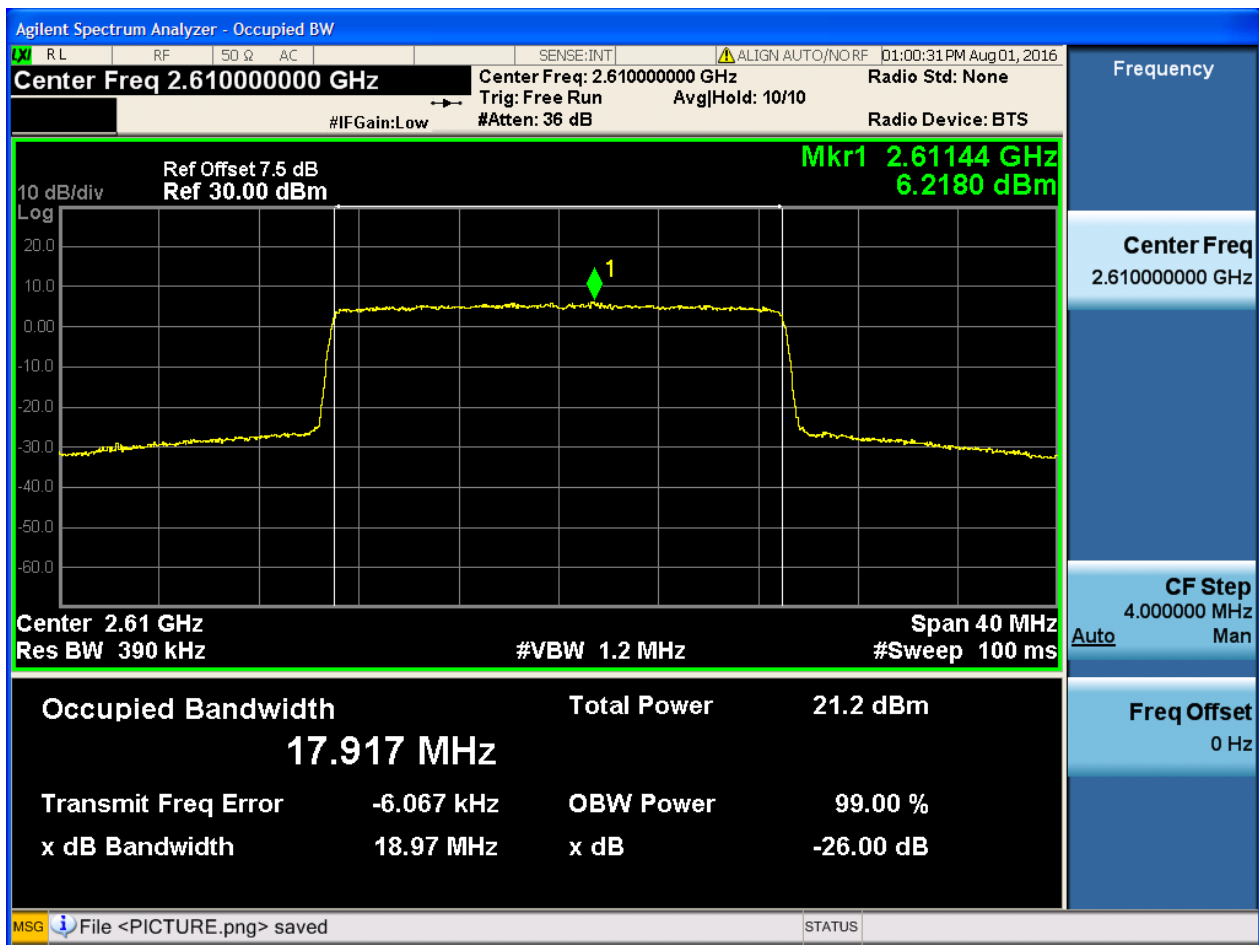
4.1.1.2.4.2 Test Channel = MCH

4.1.1.2.4.2.1 Test RB = RB100#0



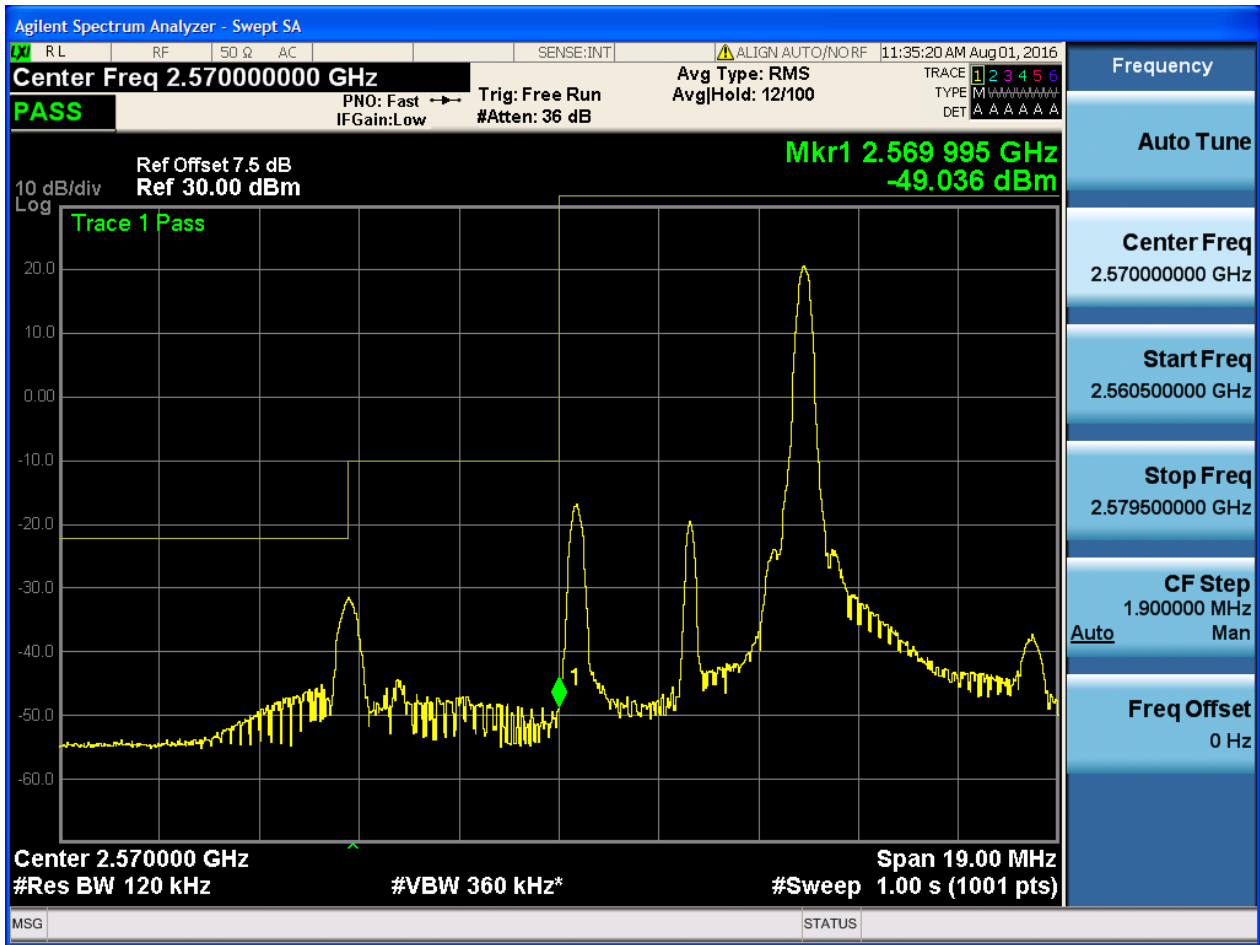
4.1.1.2.4.3 Test Channel = HCH

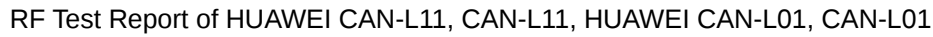
4.1.1.2.4.3.1 Test RB = RB100#0





5.1.1.1.1.2 Test RB = RB1#24





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.57000000 GHz

PASS

Ref Offset 7.5 dB
Ref 30.00 dBm

Mkr1 2.569 995 GHz
-27.765 dBm

Trace 1 Pass

Center 2.57000 GHz
#Res BW 120 kHz
#VBW 360 kHz*

Span 19.00 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.57000000 GHz

Start Freq
2.56050000 GHz

Stop Freq
2.57950000 GHz

CF Step
1.900000 MHz
Man

Freq Offset
0 Hz



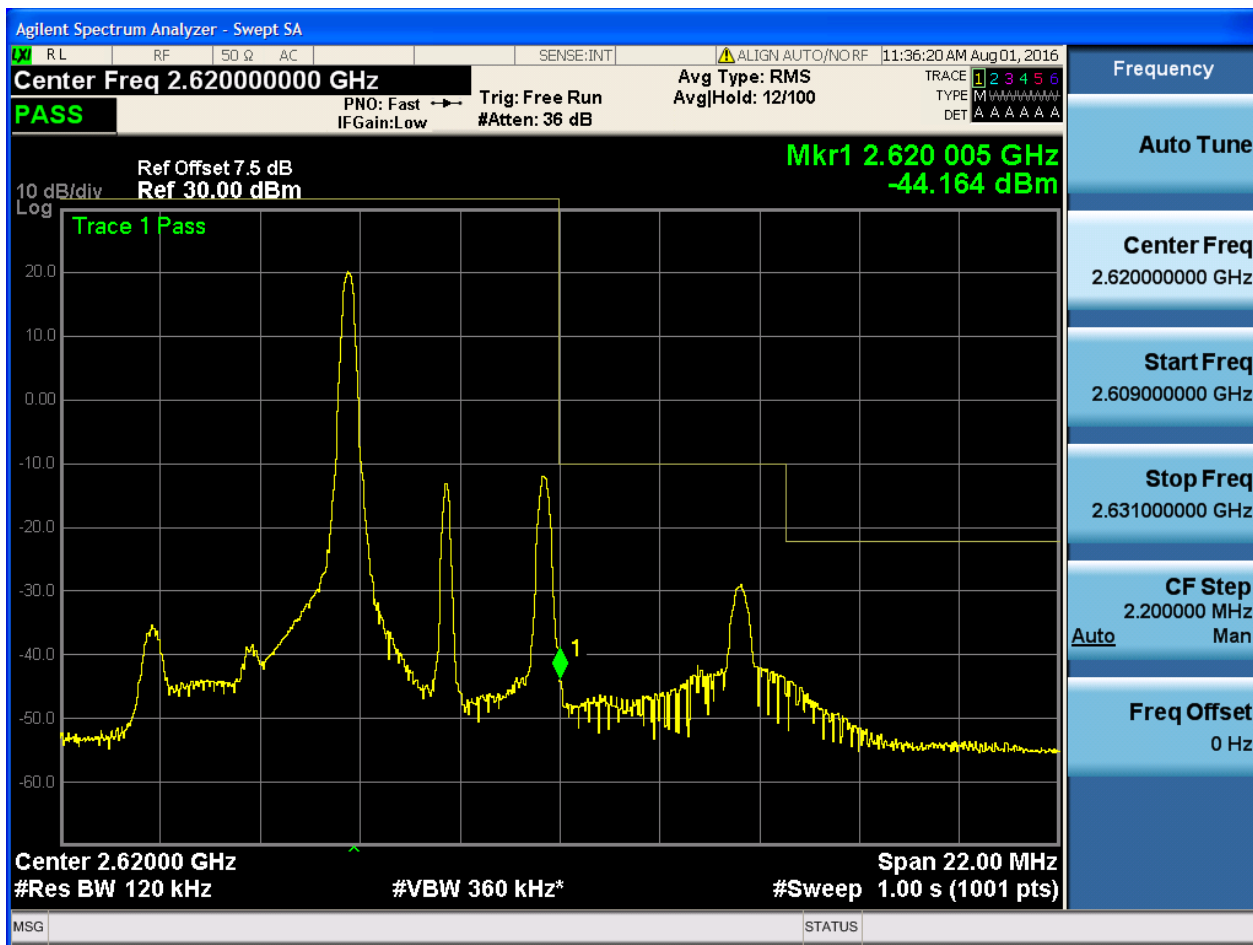
5.1.1.1.1.4 Test RB = RB25#0





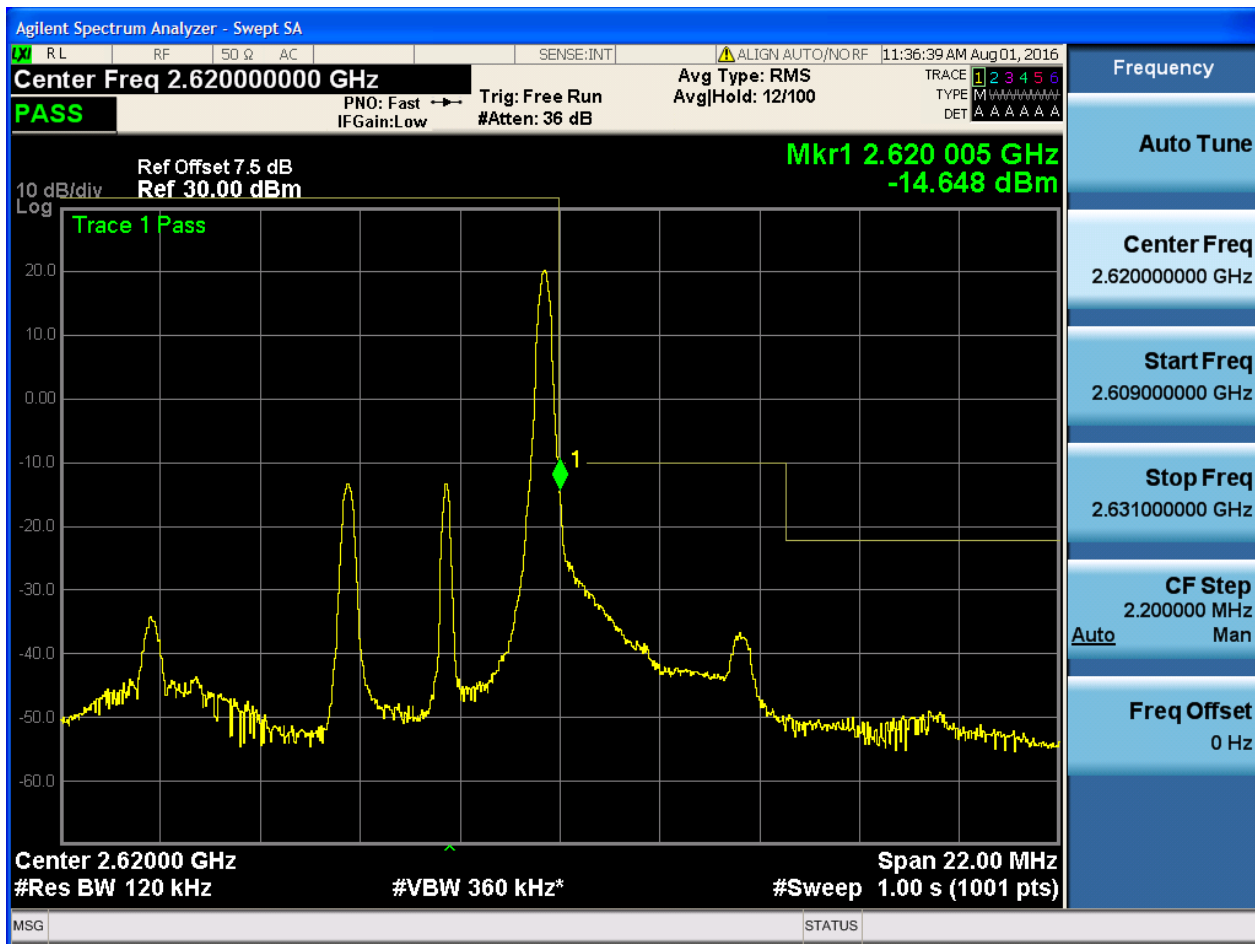
5.1.1.1.1.2 Test Channel = HCH

5.1.1.1.1.2.1 Test RB = RB1#0



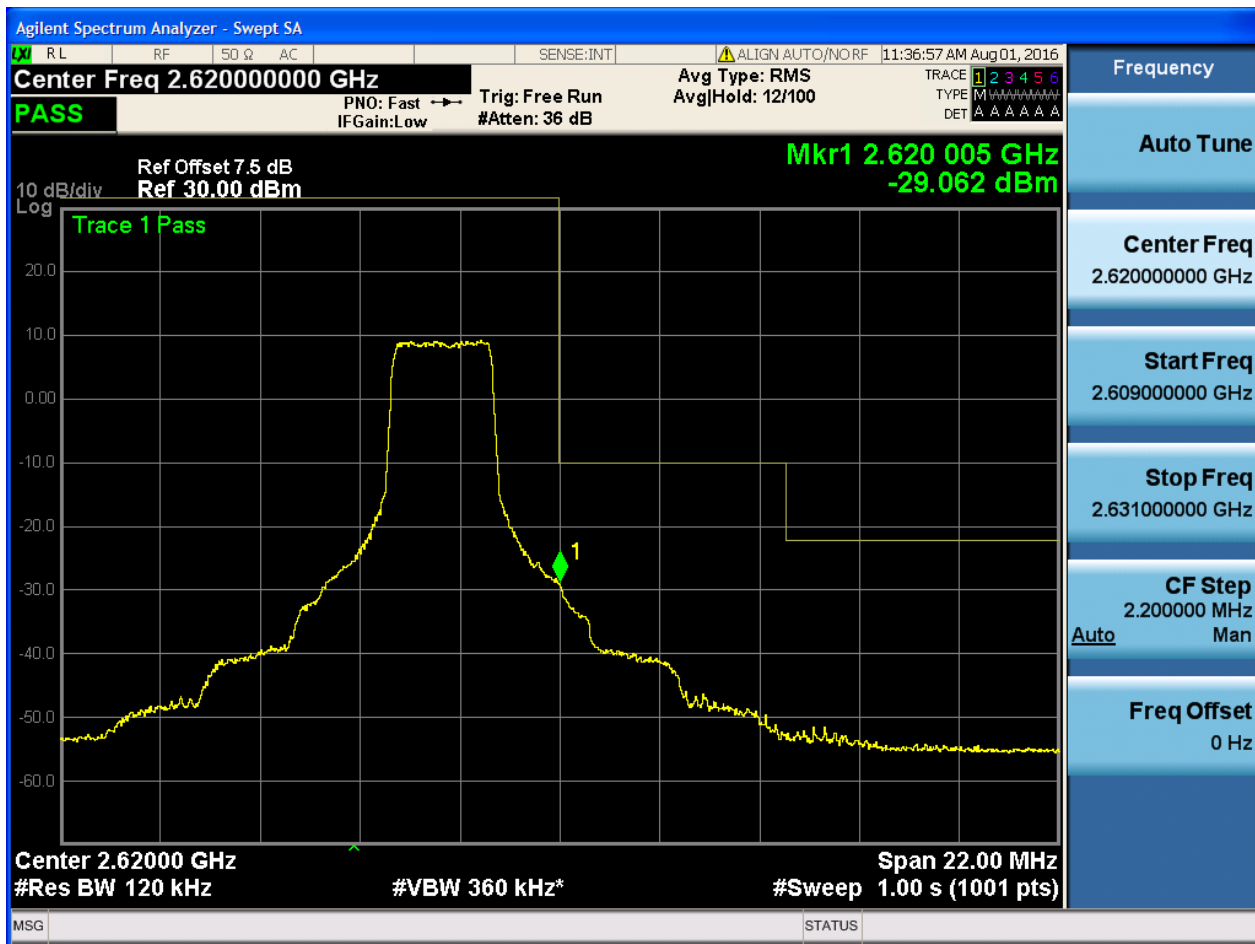


5.1.1.1.2.2 Test RB = RB1#24





5.1.1.1.2.3 Test RB = RB12#6





5.1.1.1.2.4 Test RB = RB25#0

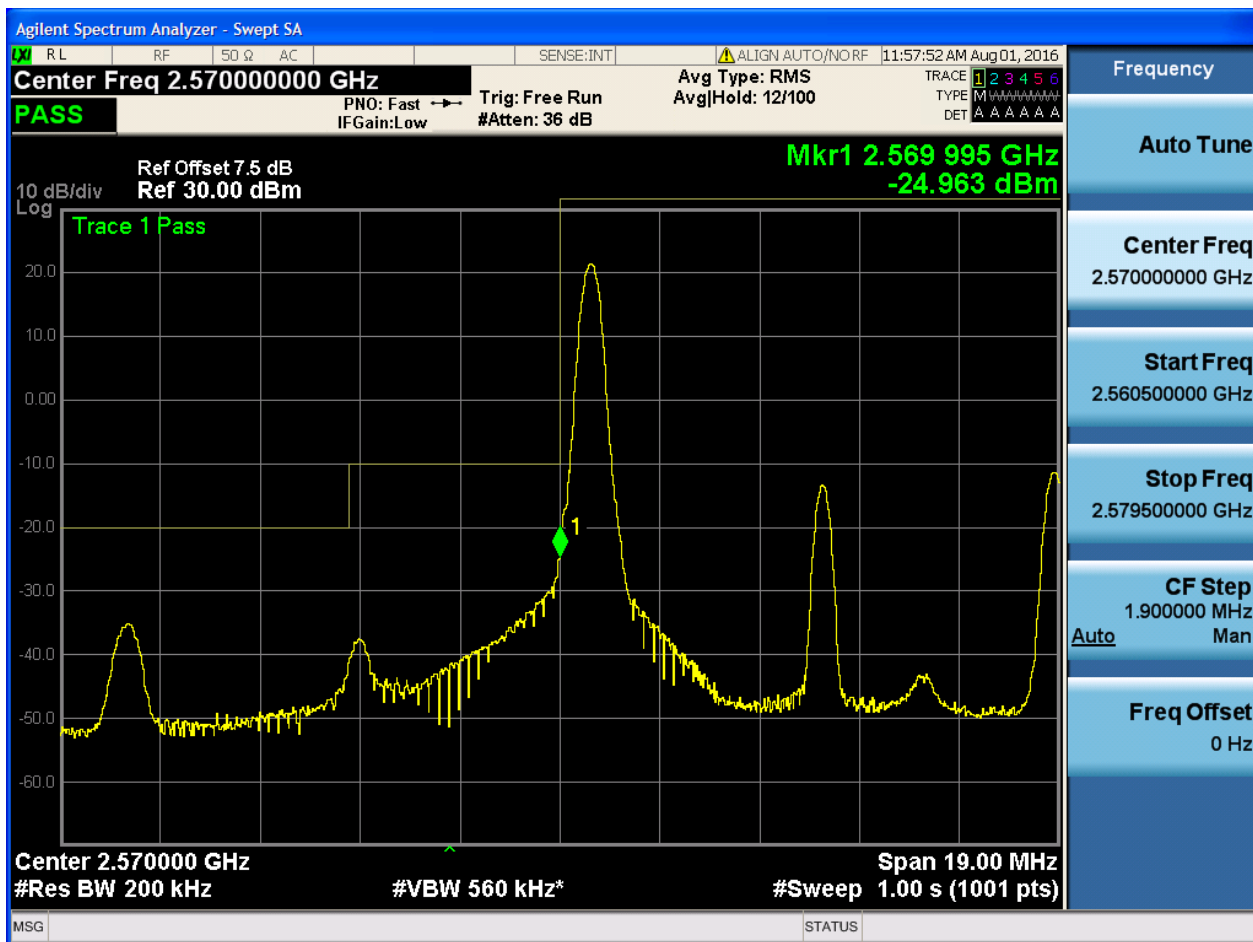




5.1.1.1.2 Test Bandwidth = 10

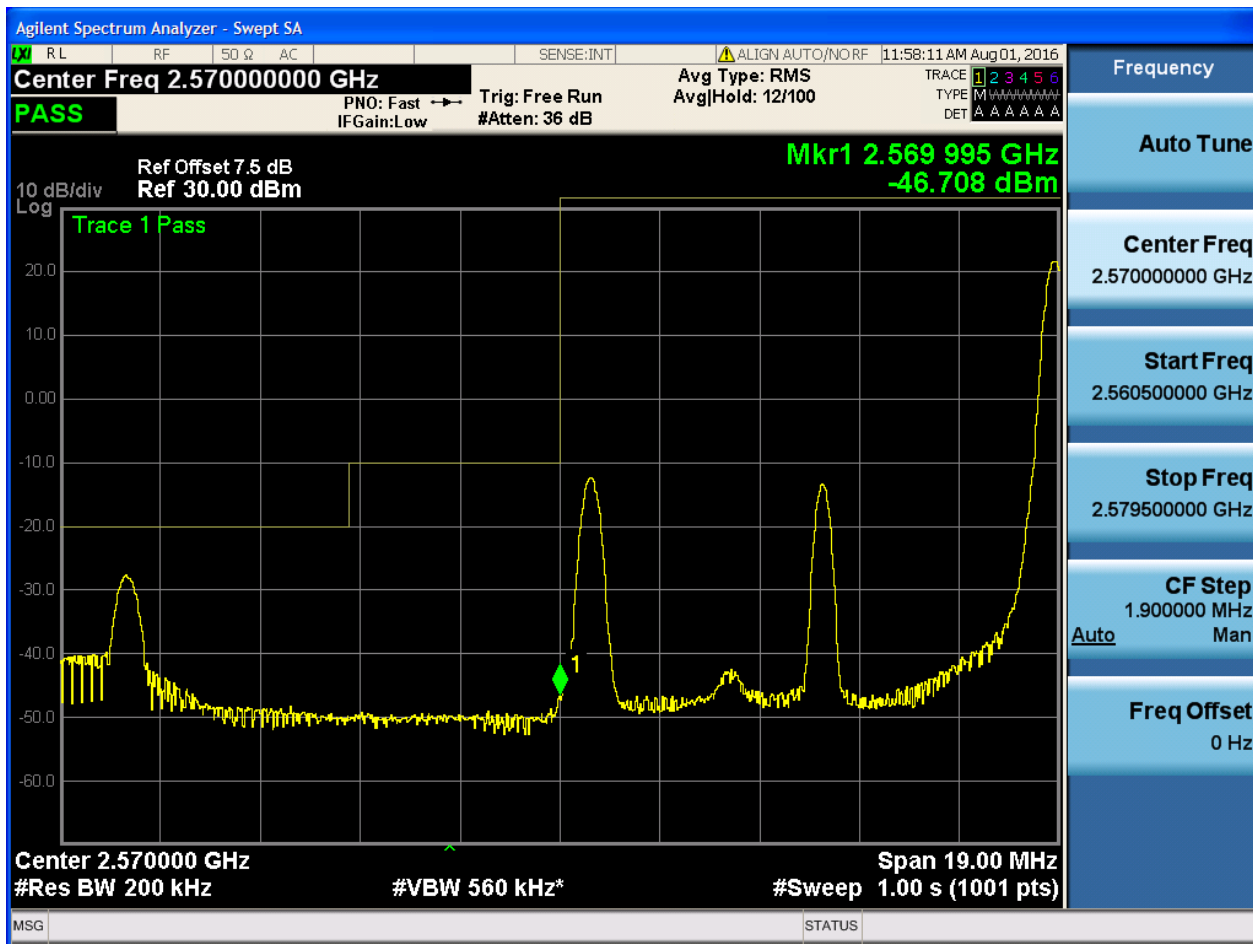
5.1.1.1.2.1 Test Channel = LCH

5.1.1.1.2.1.1 Test RB = RB1#0





5.1.1.1.2.1.2 Test RB = RB1#49



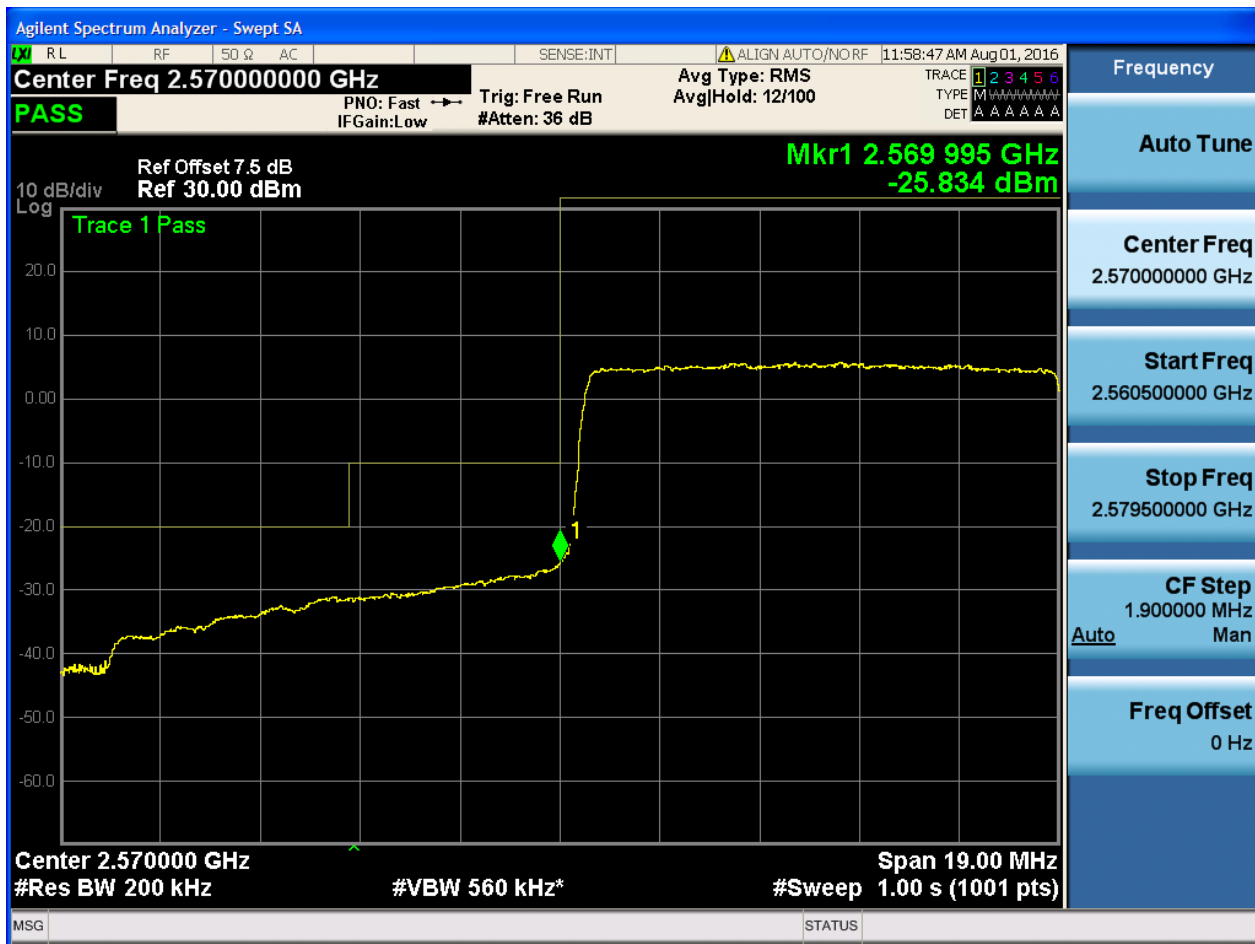


5.1.1.1.2.1.3 Test RB = RB25#13



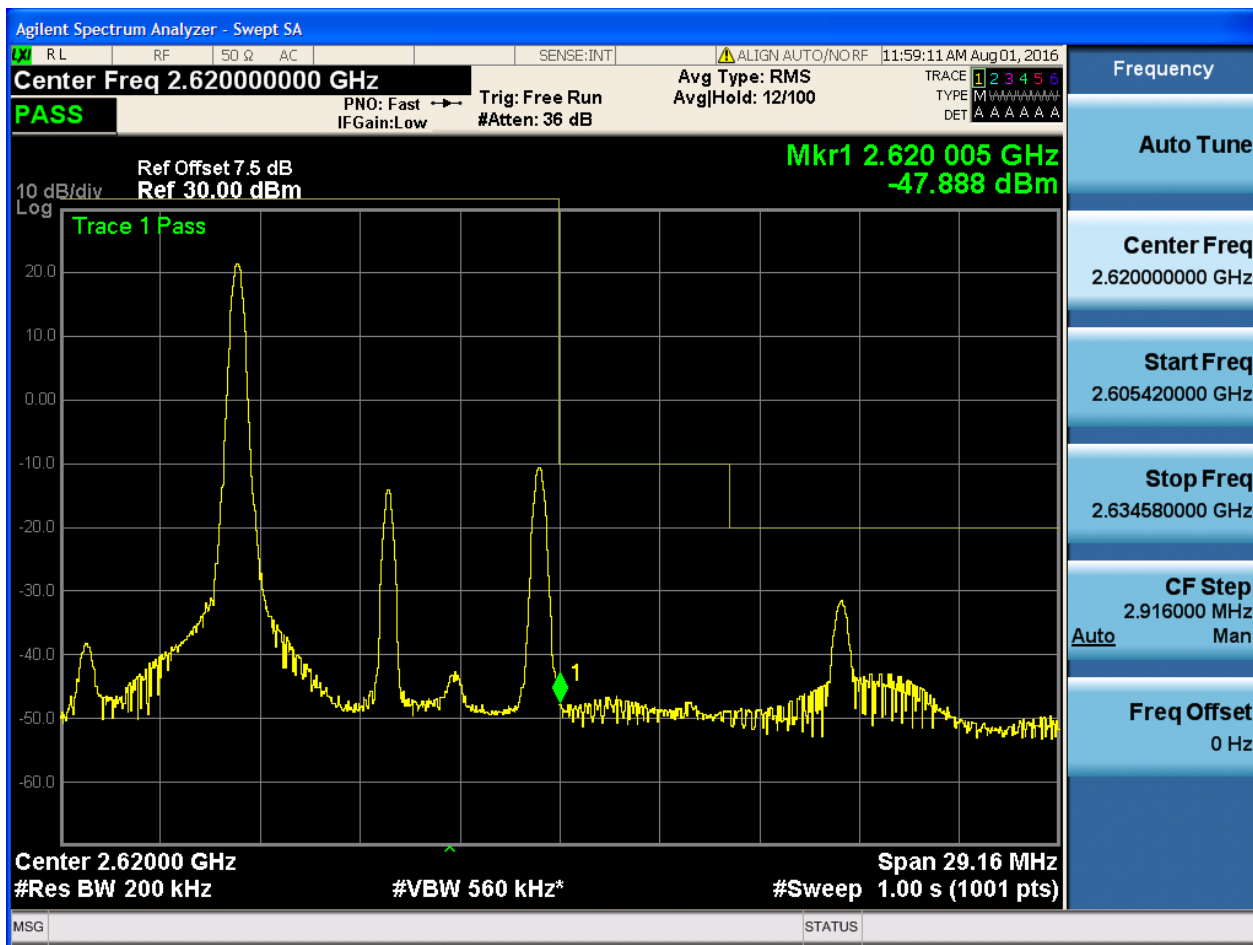


5.1.1.1.2.1.4 Test RB = RB50#0



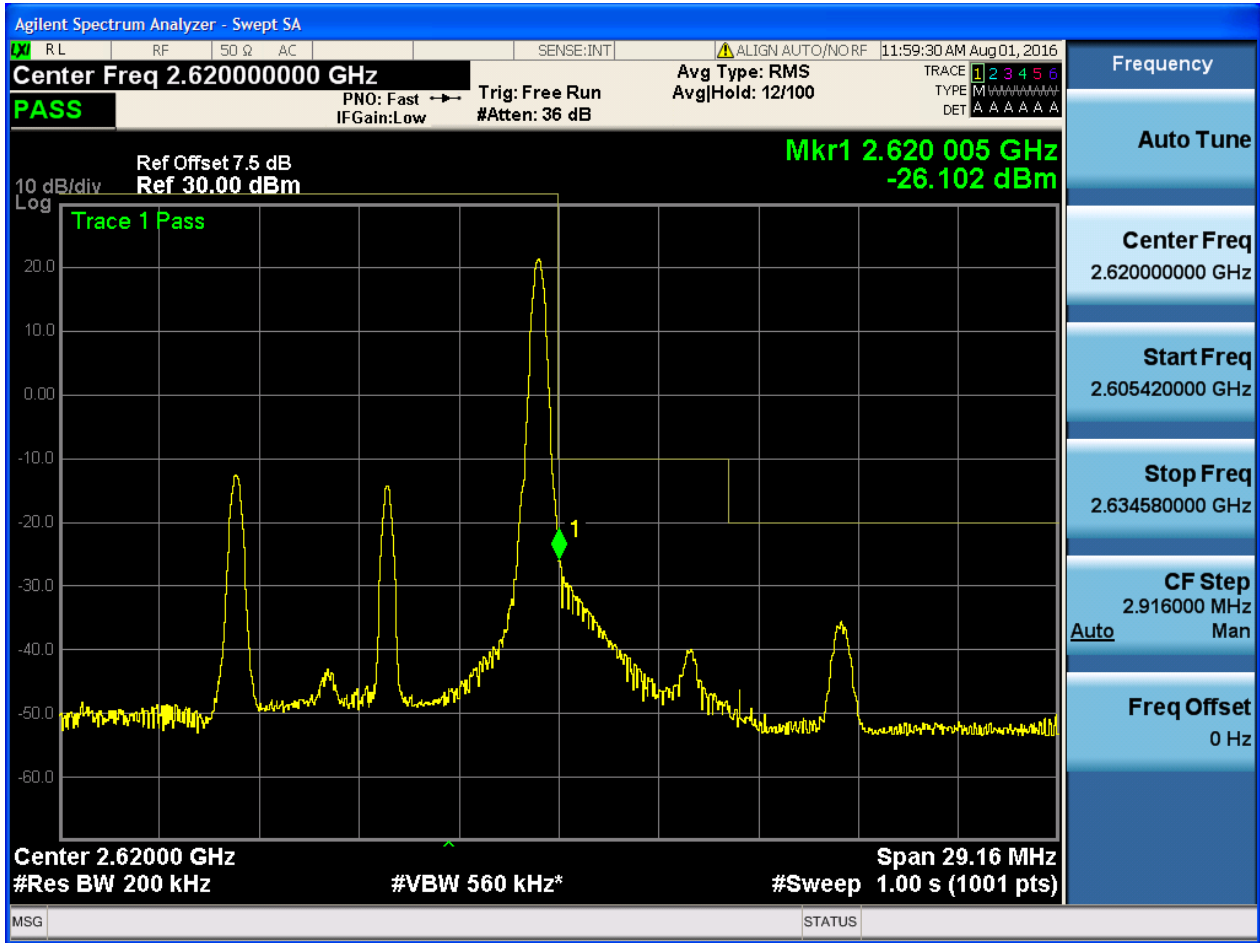
5.1.1.1.2.2 Test Channel = HCH

5.1.1.1.2.2.1 Test RB = RB1#0



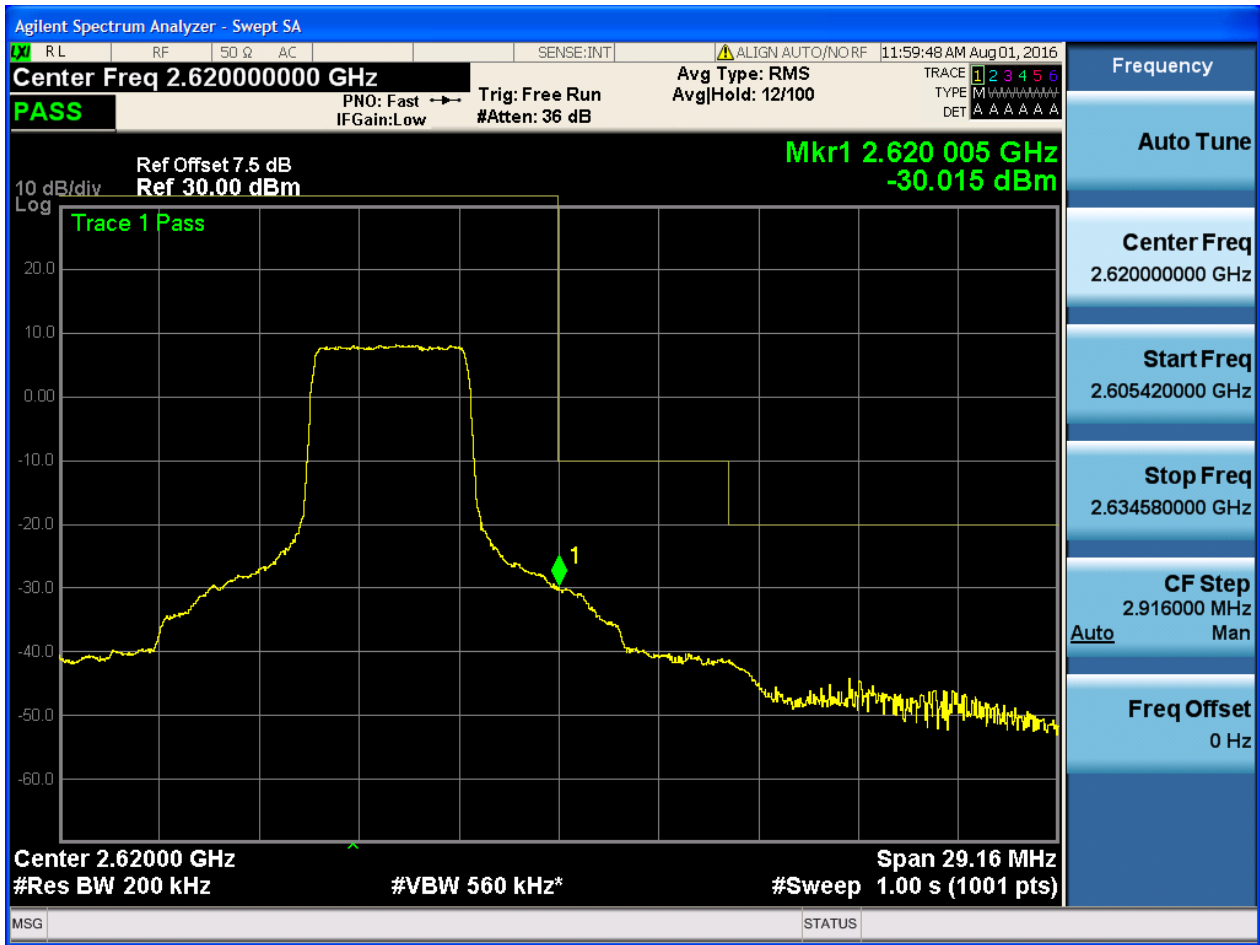


5.1.1.1.2.2.2 Test RB = RB1#49





5.1.1.1.2.2.3 Test RB = RB25#13





5.1.1.1.2.2.4 Test RB = RB50#0

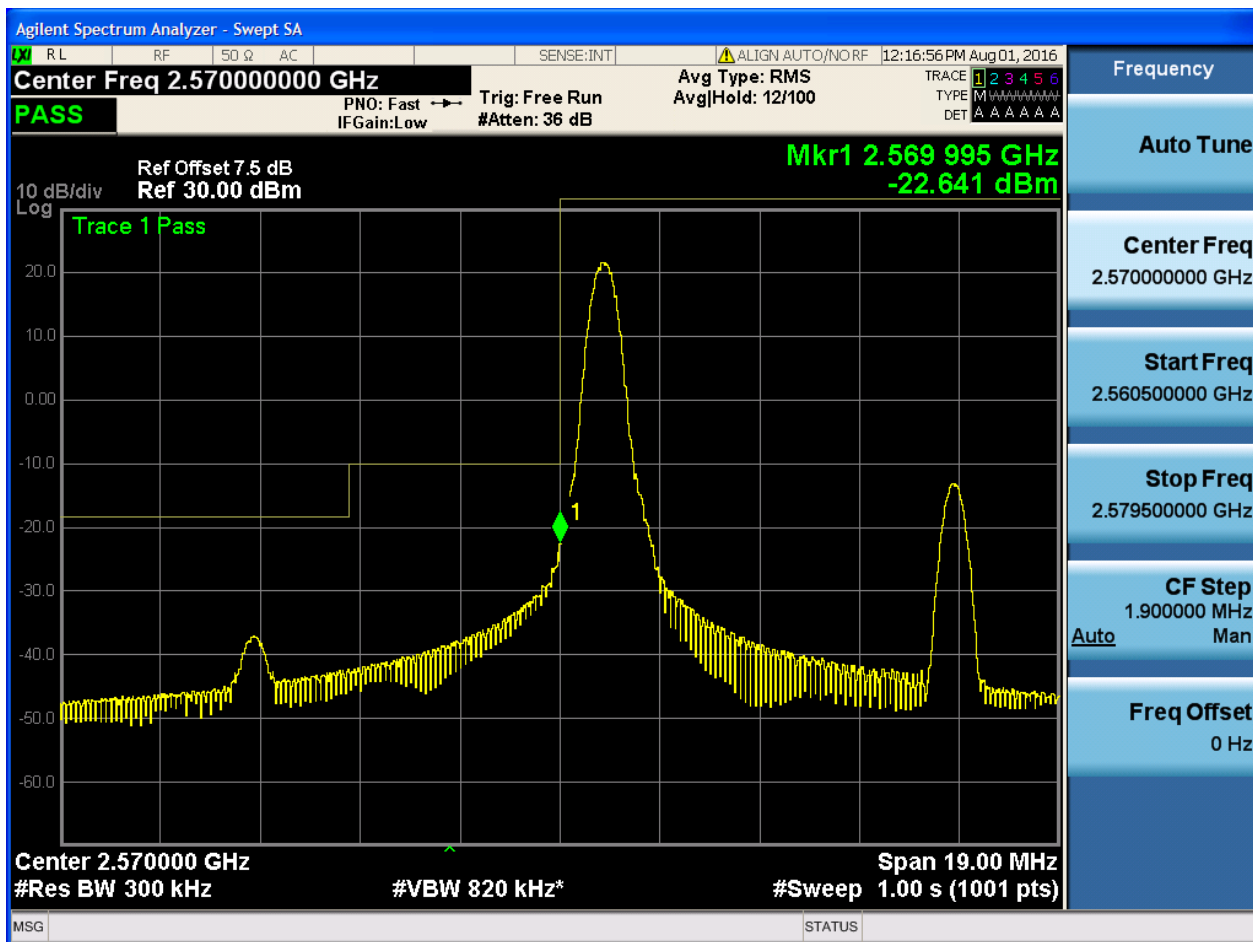




5.1.1.1.3 Test Bandwidth = 15

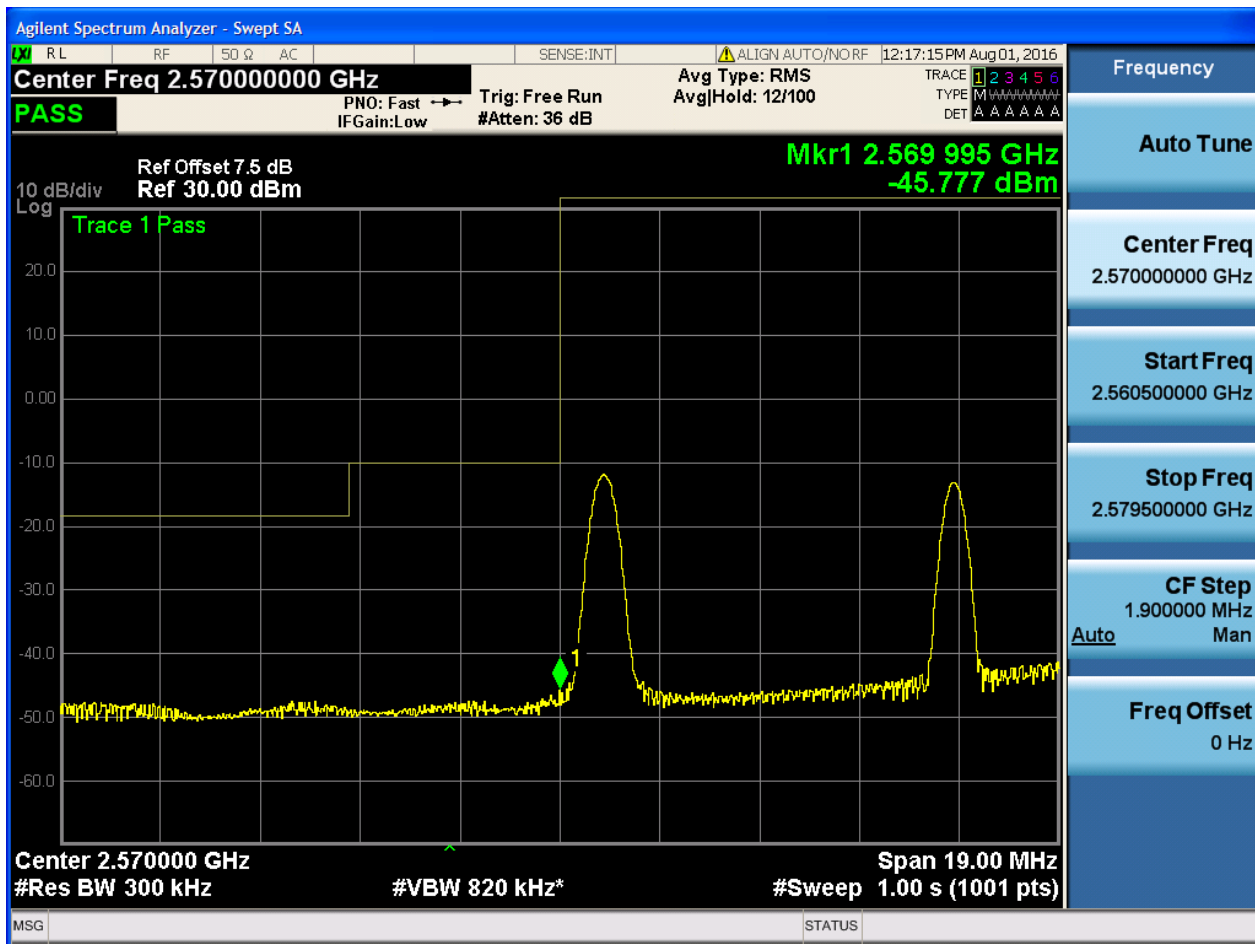
5.1.1.1.3.1 Test Channel = LCH

5.1.1.1.3.1.1 Test RB = RB1#0





5.1.1.1.3.1.2 Test RB = RB1#74





5.1.1.1.3.1.3 Test RB = RB36#18





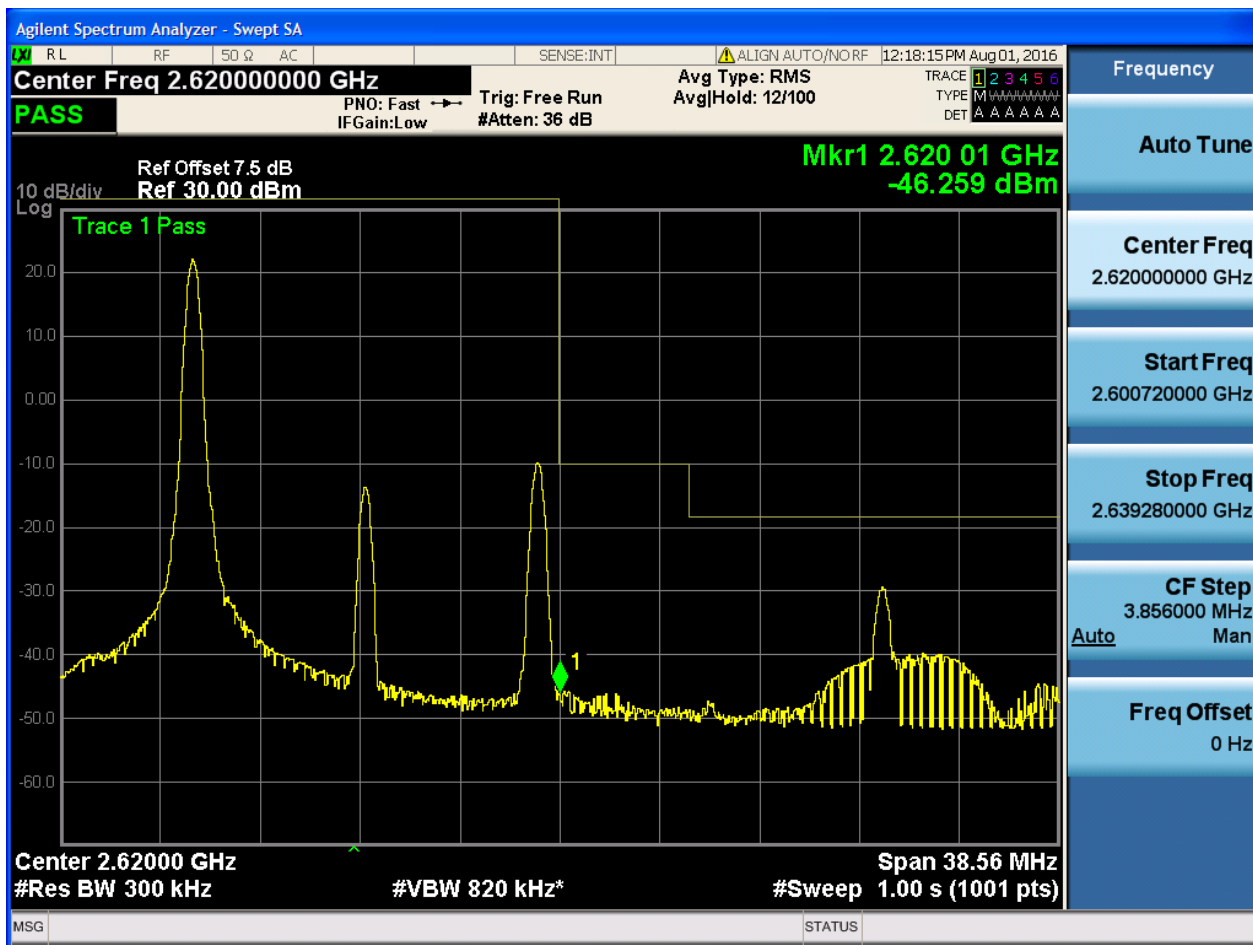
5.1.1.1.3.1.4 Test RB = RB75#0





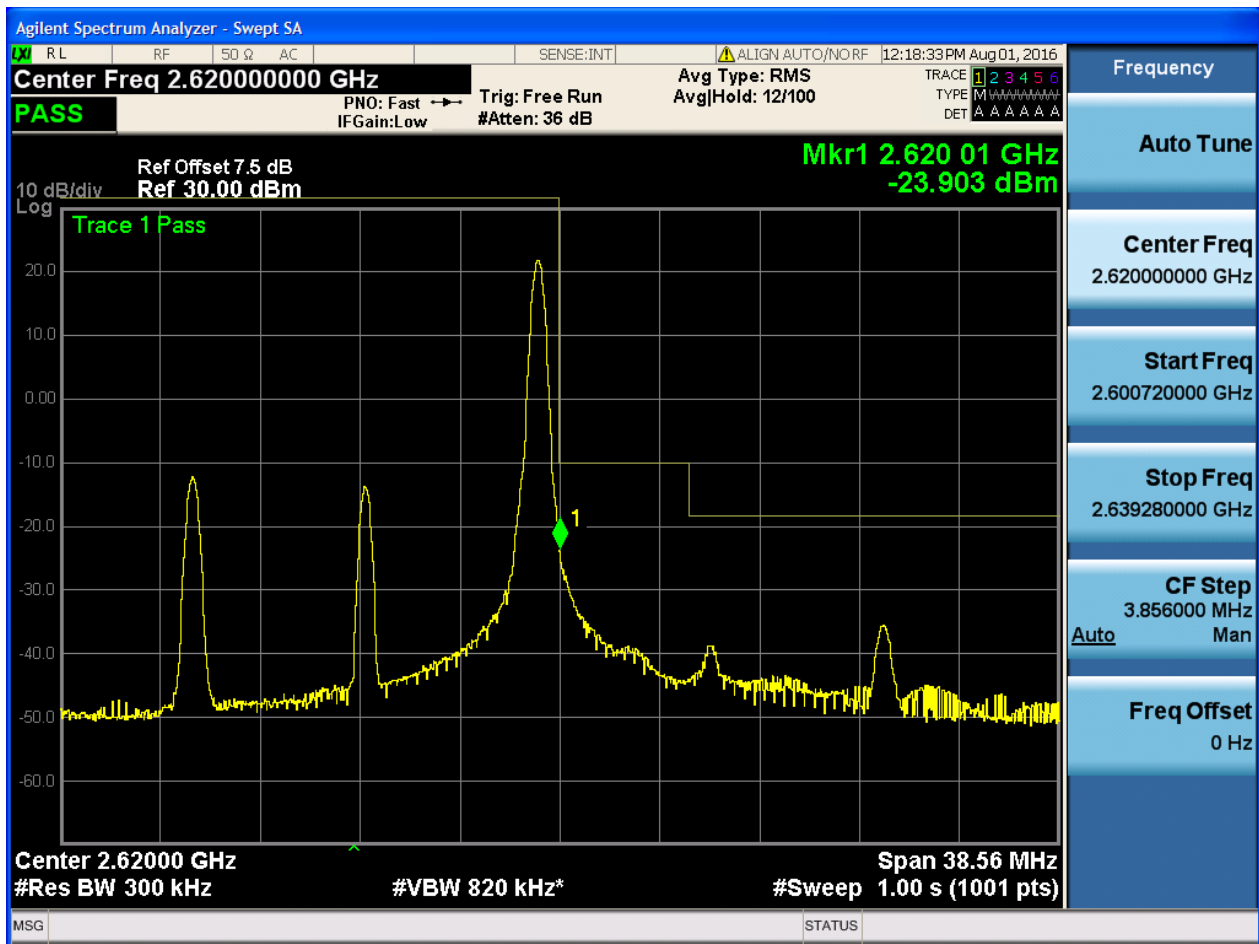
5.1.1.1.3.2 Test Channel = HCH

5.1.1.1.3.2.1 Test RB = RB1#0



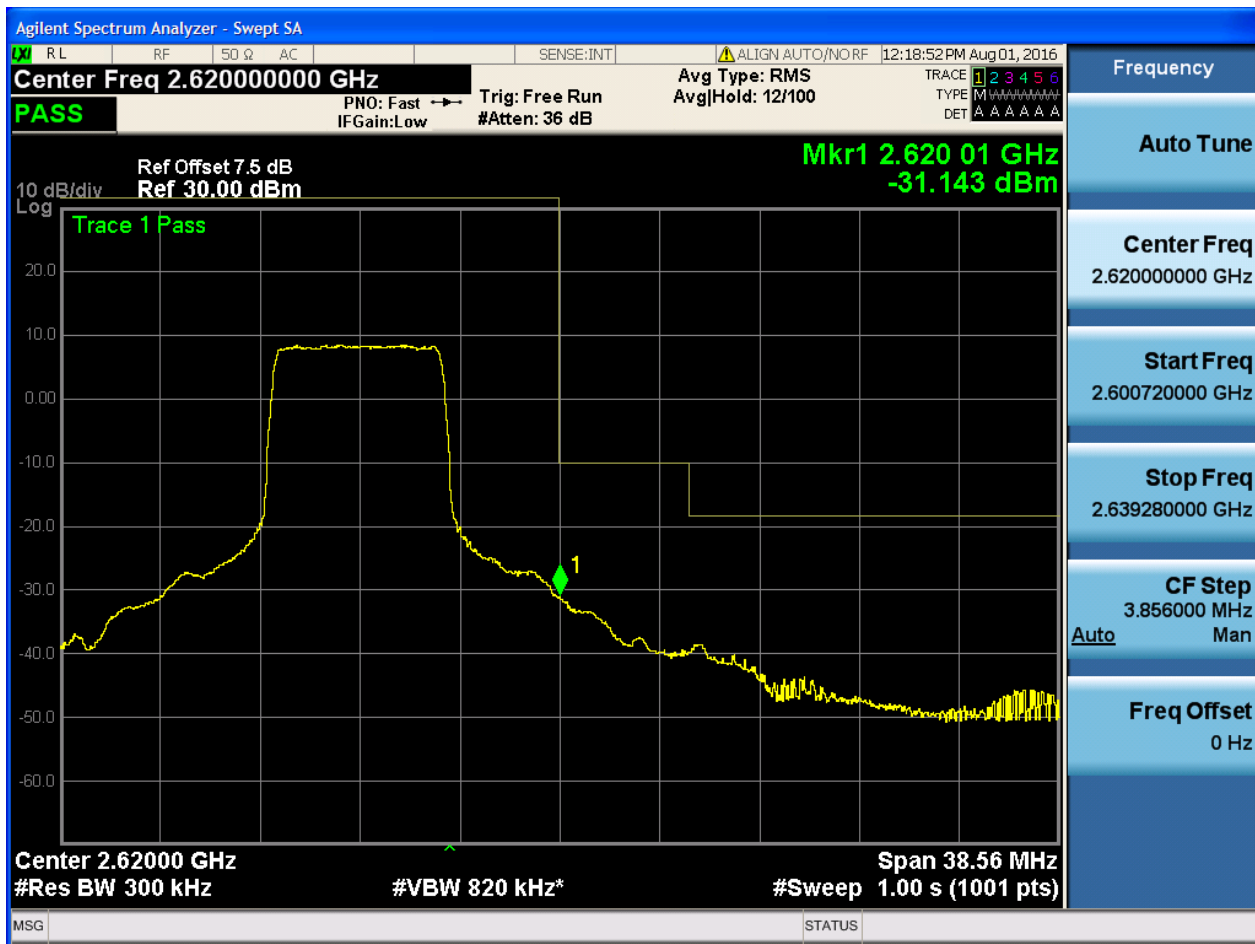


5.1.1.1.3.2.2 Test RB = RB1#74





5.1.1.1.3.2.3 Test RB = RB36#18





5.1.1.1.3.2.4 Test RB = RB75#0

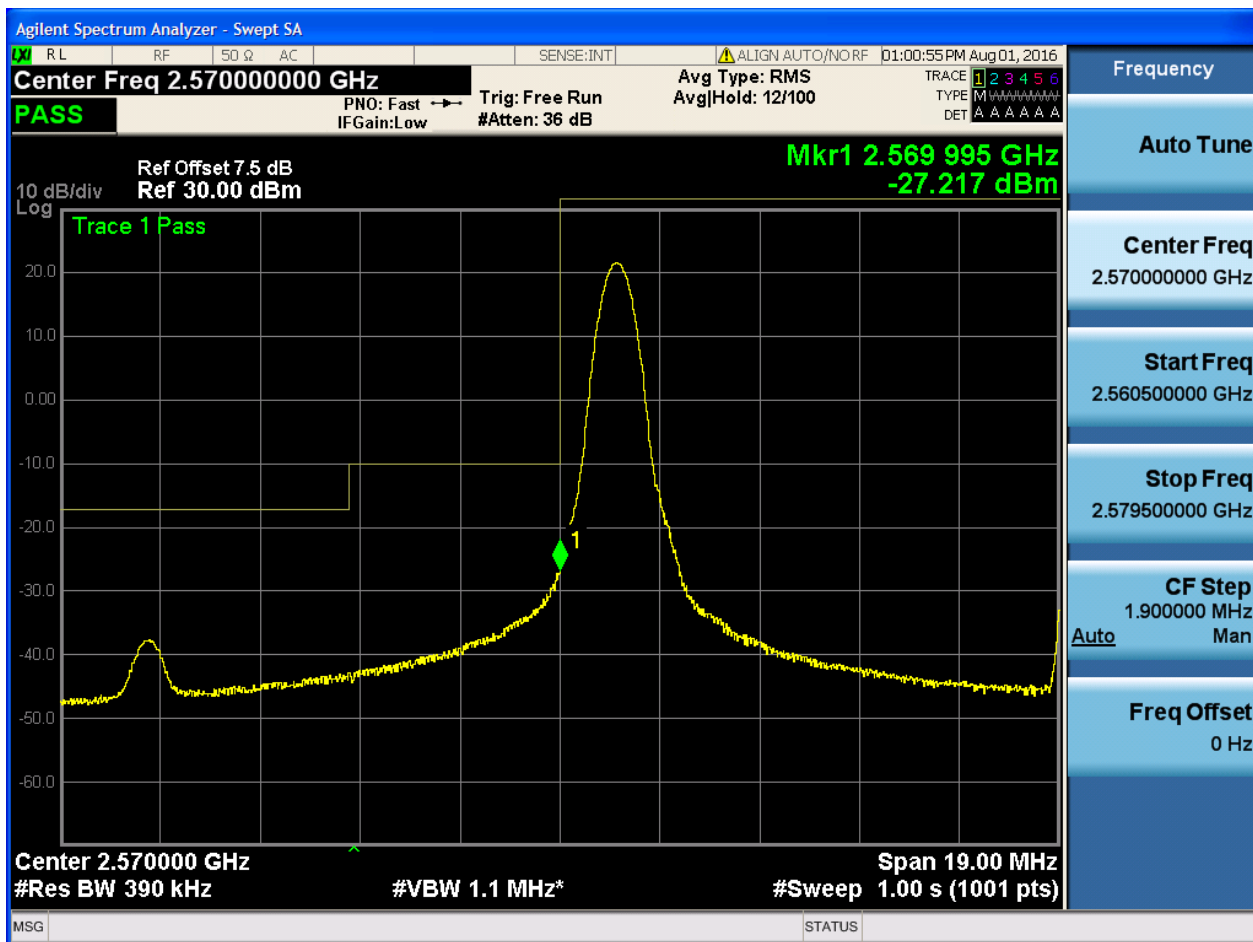




5.1.1.1.4 Test Bandwidth = 20

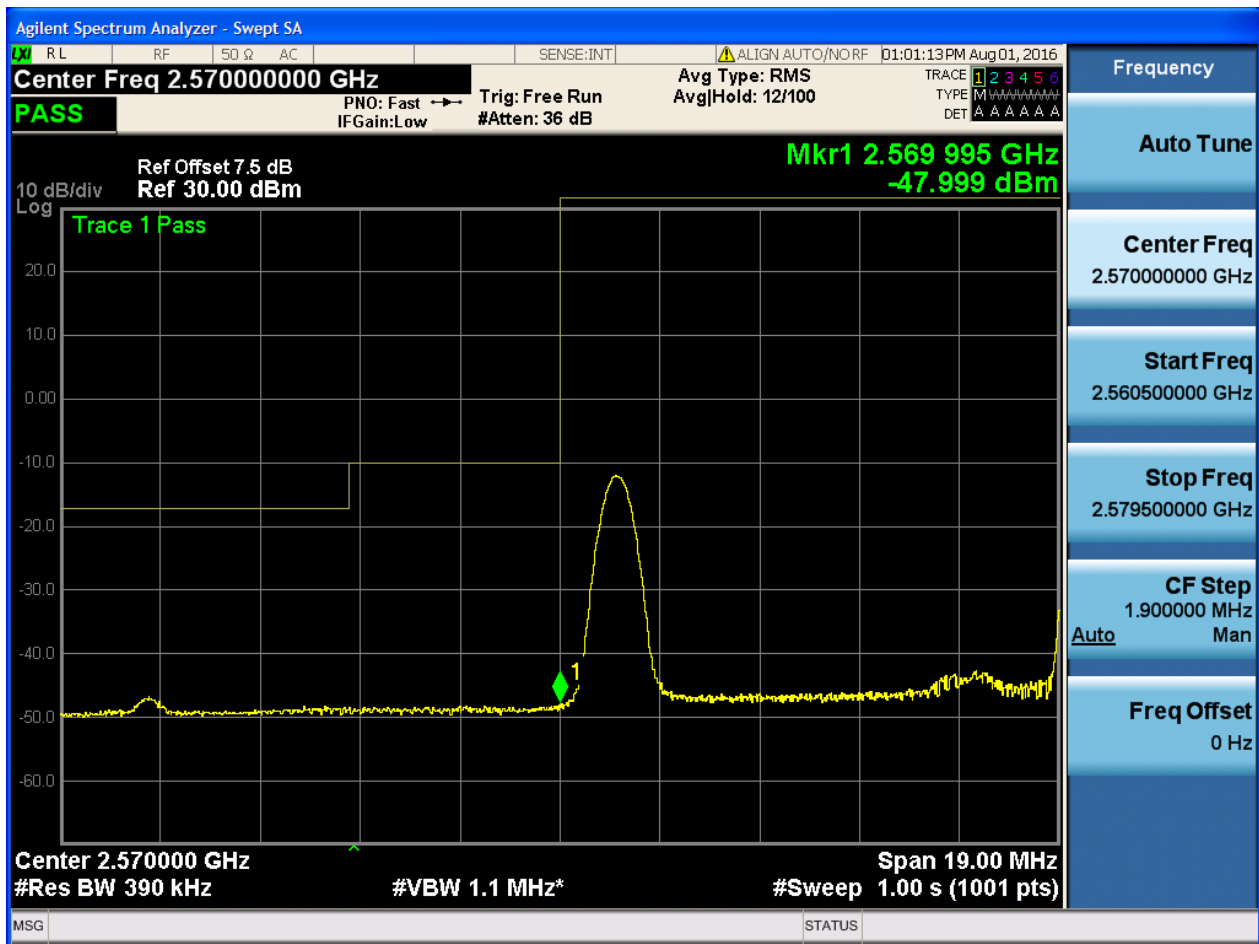
5.1.1.1.4.1 Test Channel = LCH

5.1.1.1.4.1.1 Test RB = RB1#0



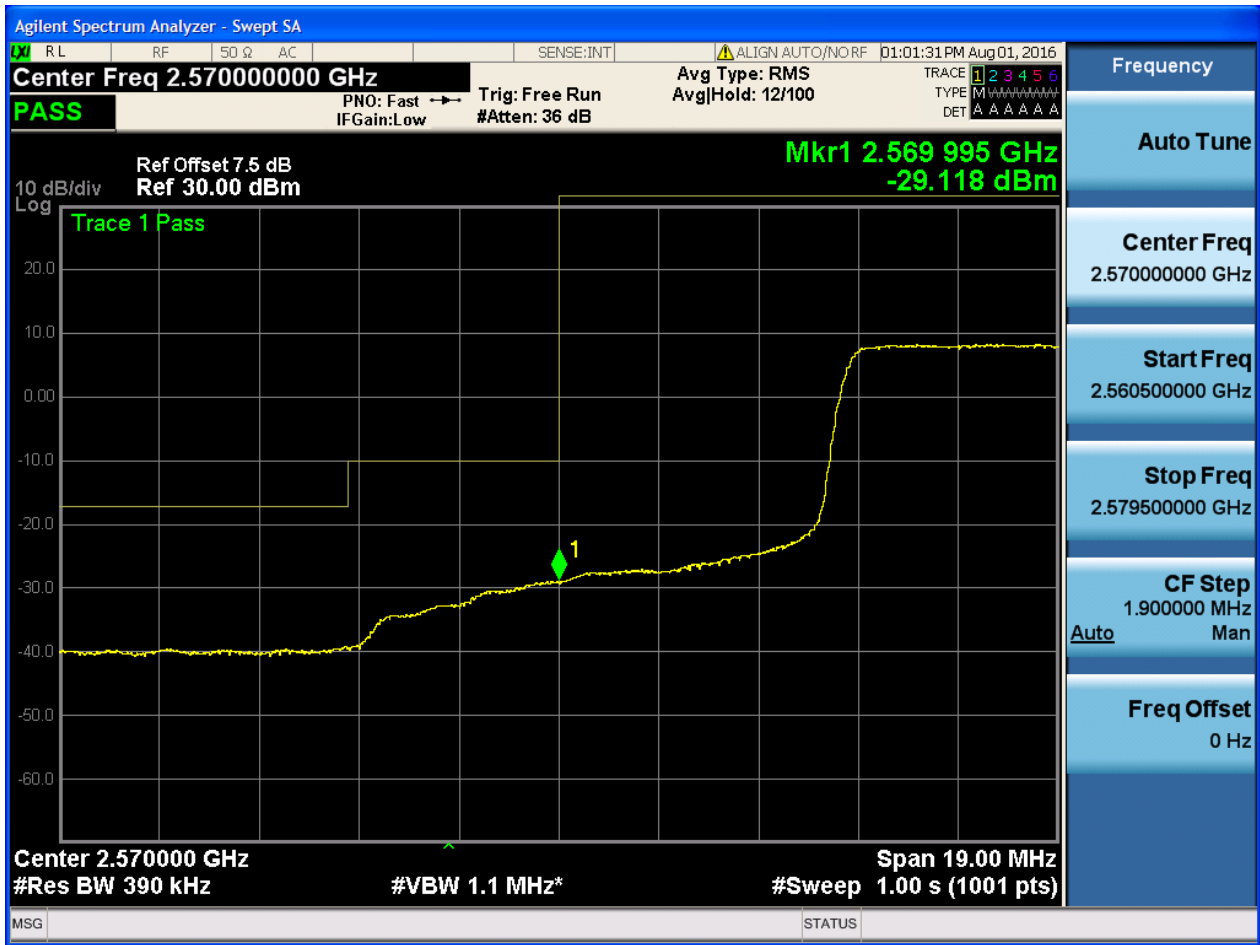


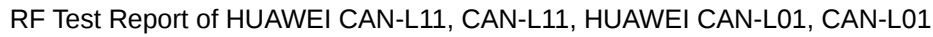
5.1.1.1.4.1.2 Test RB = RB1#99





5.1.1.1.4.1.3 Test RB = RB50#25





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.57000000 GHz

Ref Offset 7.5 dB
Ref 30.00 dBm

Trace 1 Pass

10 dB/div
Log

Trace 1 Pass

Mkr1 2.569 995 GHz
-25.948 dBm

Center 2.570000 GHz
#Res BW 390 kHz
#VBW 1.1 MHz*
Span 19.00 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.57000000 GHz

Start Freq
2.560500000 GHz

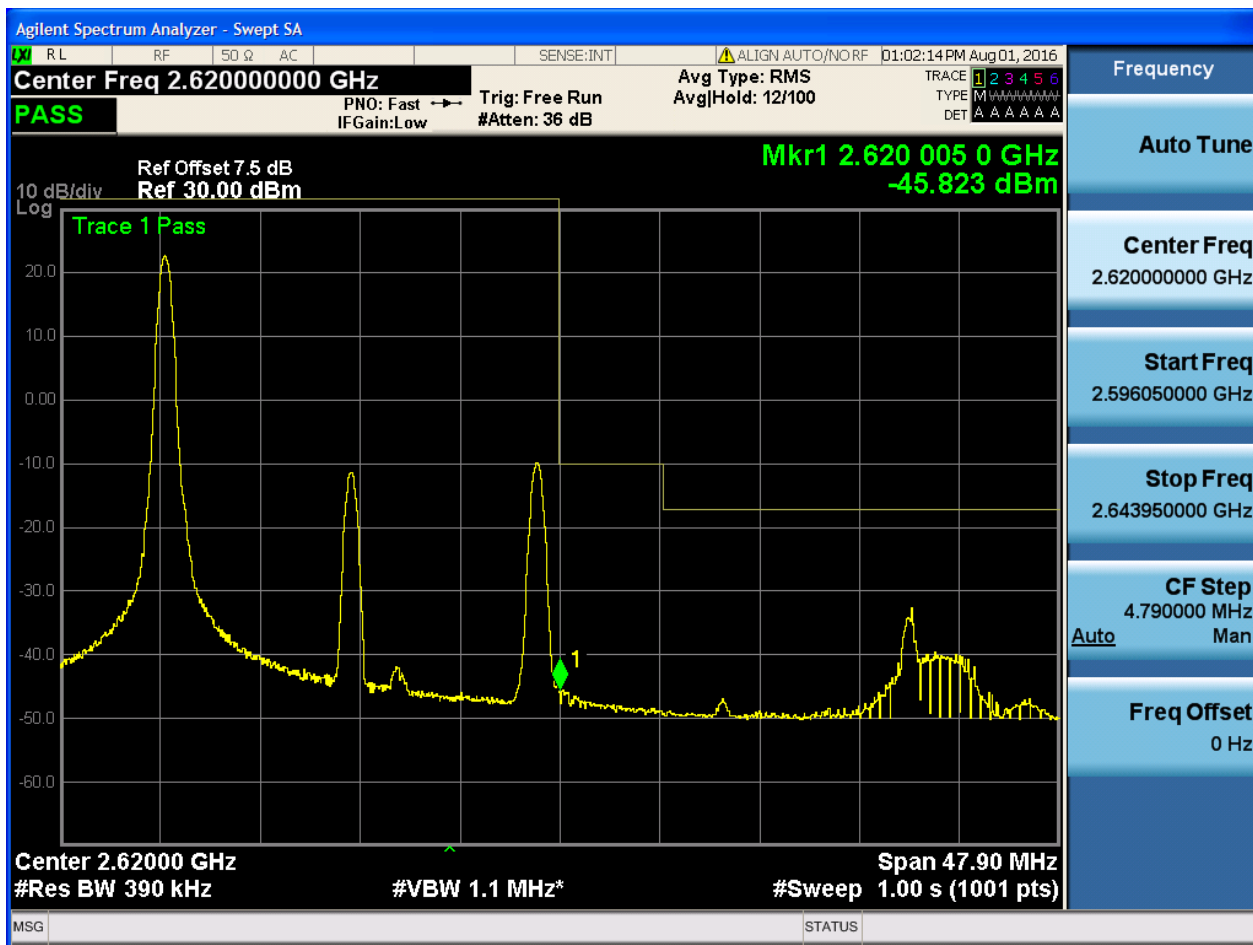
Stop Freq
2.579500000 GHz

CF Step
1.900000 MHz
Man

Freq Offset
0 Hz

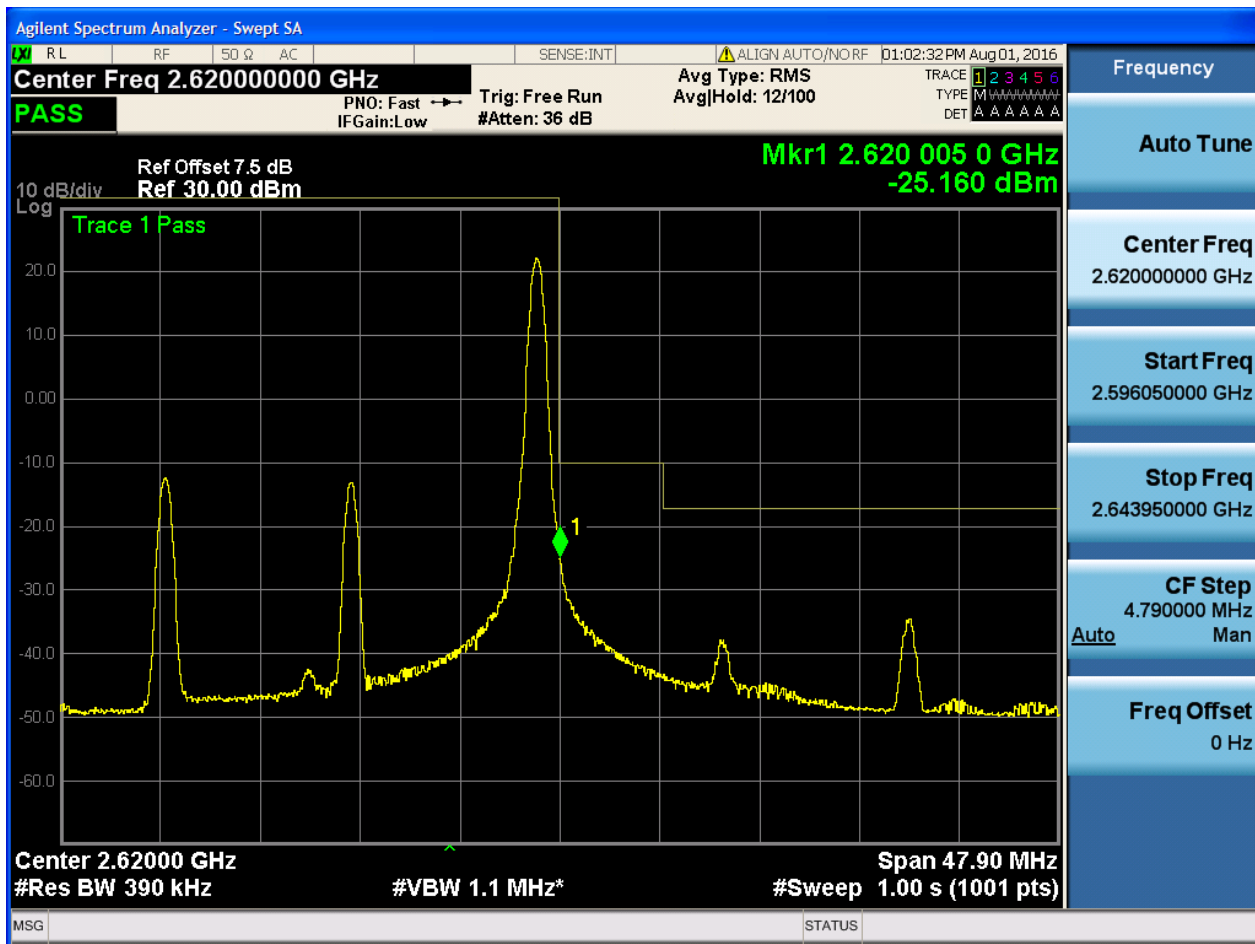
5.1.1.1.4.2 Test Channel = HCH

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



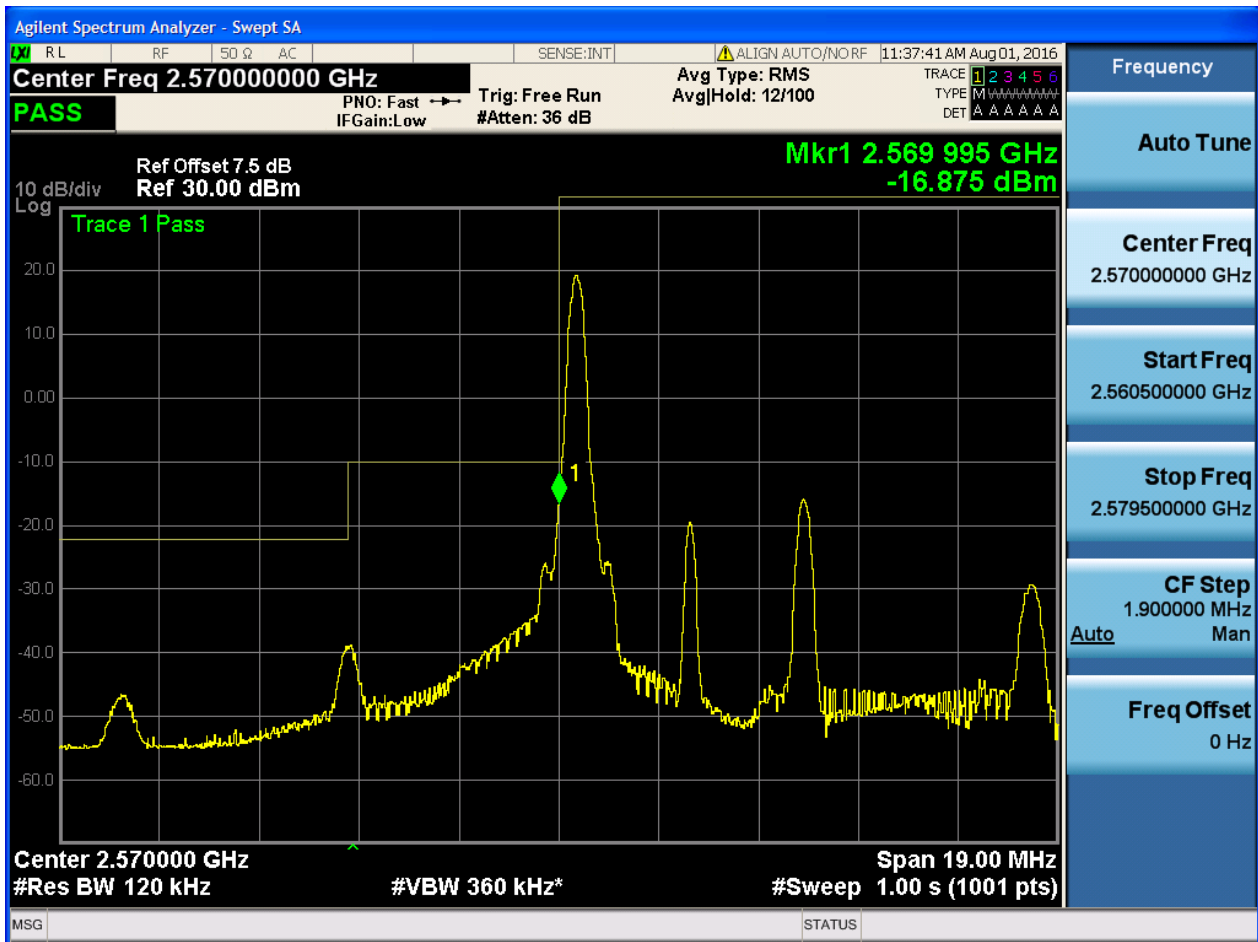


5.1.1.2 Test Mode = LTE/TM2

5.1.1.2.1 Test Bandwidth = 5

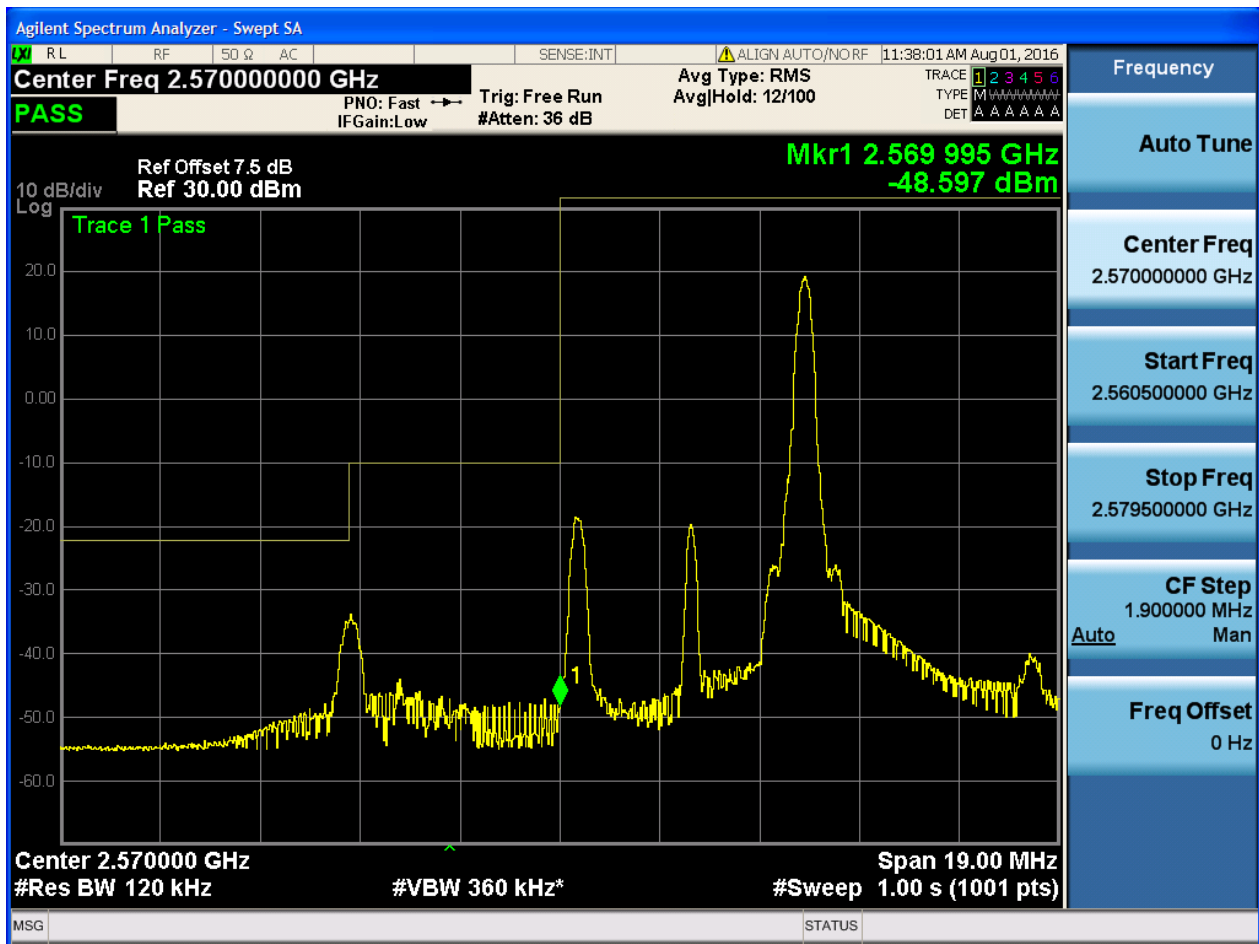
5.1.1.2.1.1 Test Channel = LCH

5.1.1.2.1.1.1 Test RB = RB1#0



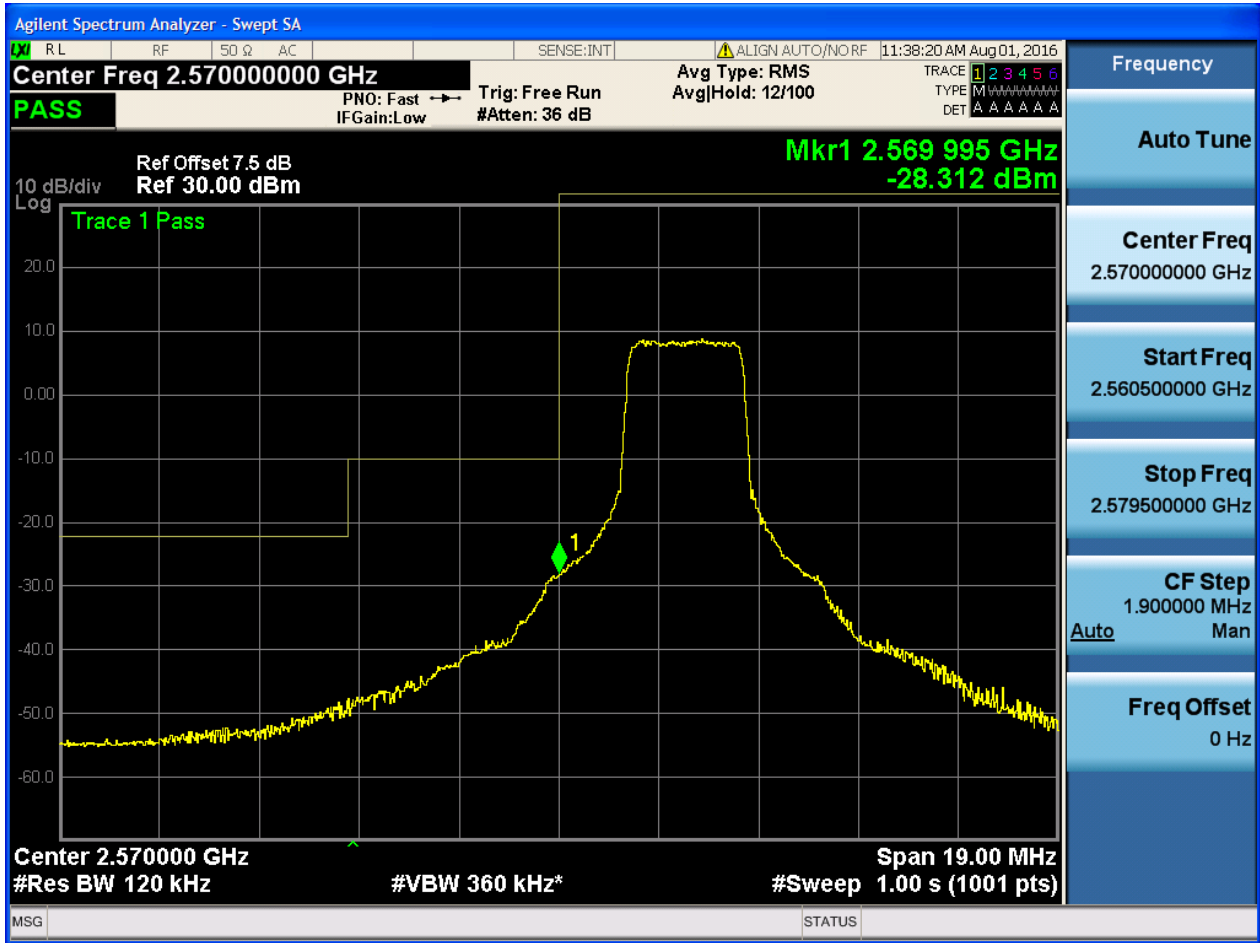


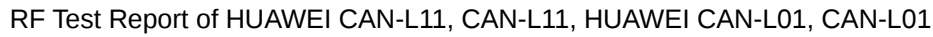
5.1.1.2.1.1.2 Test RB = RB1#24





5.1.1.2.1.1.3 Test RB = RB12#6





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO/NO RF 11:38:38 AM Aug 01, 2016

Center Freq 2.57000000 GHz Avg Type: RMS Trace 1 2 3 4 5 6
PNO: Fast Trig: Free Run TYPE M W W W W W W W
IFGain:Low #Atten: 36 dB DET A A A A A A

PASS

Ref Offset 7.5 dB Mkr1 2.569 995 GHz
Ref 30.00 dBm -25.087 dBm

10 dB/div Log

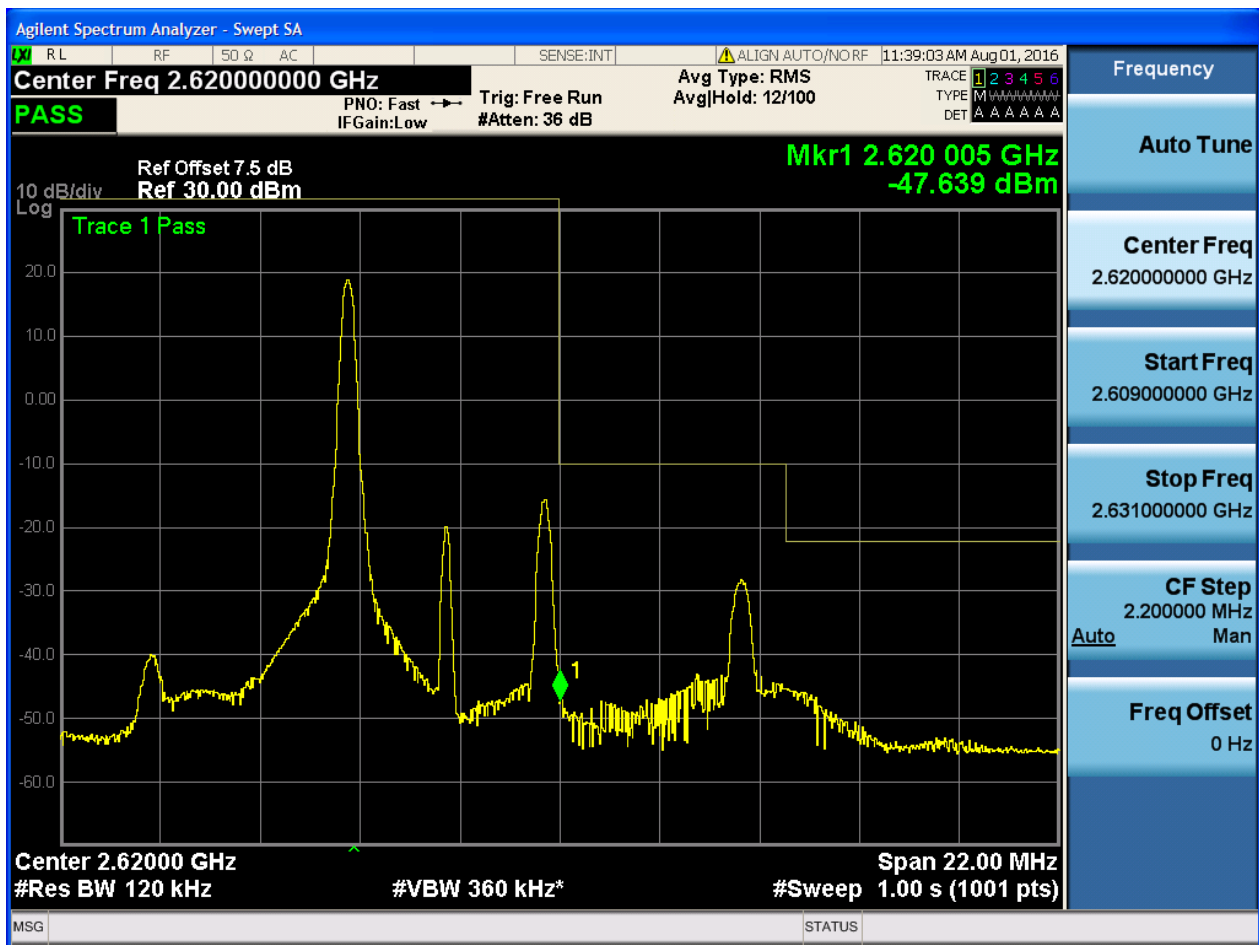
Trace 1 Pass

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

MSG STATUS

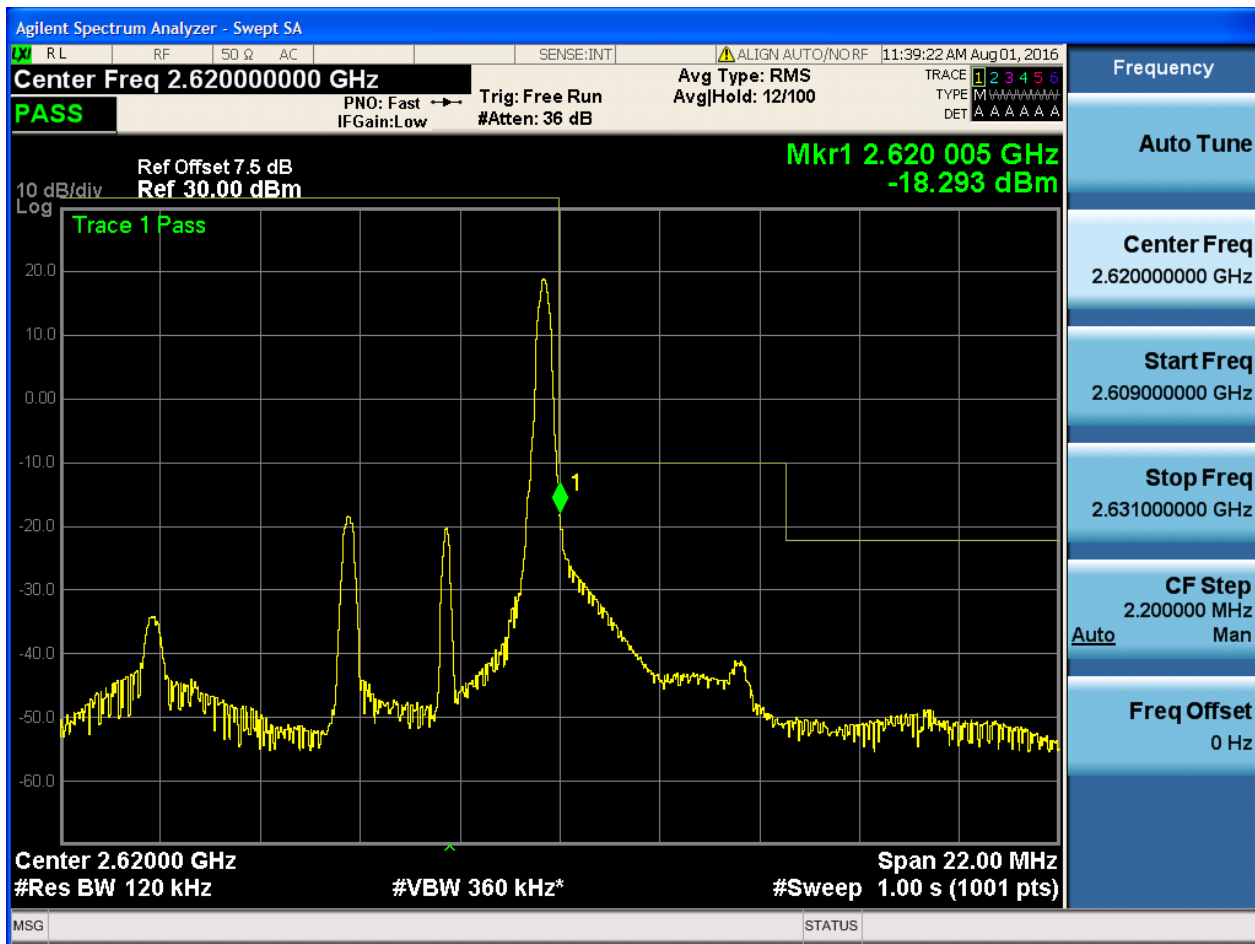
5.1.1.2.1.2 Test Channel = HCH

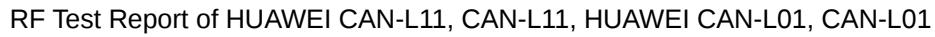
5.1.1.2.1.2.1 Test RB = RB1#0





5.1.1.2.1.2.2 Test RB = RB1#24





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.62000000 GHz

Ref Offset 7.5 dB
Ref 30.00 dBm

Trace 1 Pass

Mkr1 2.620 005 GHz
-30.206 dBm

Center 2.62000 GHz
#Res BW 120 kHz
#VBW 360 kHz*

Span 22.00 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.62000000 GHz

Start Freq
2.609000000 GHz

Stop Freq
2.631000000 GHz

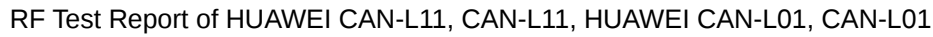
CF Step
2.200000 MHz
Man

Freq Offset
0 Hz



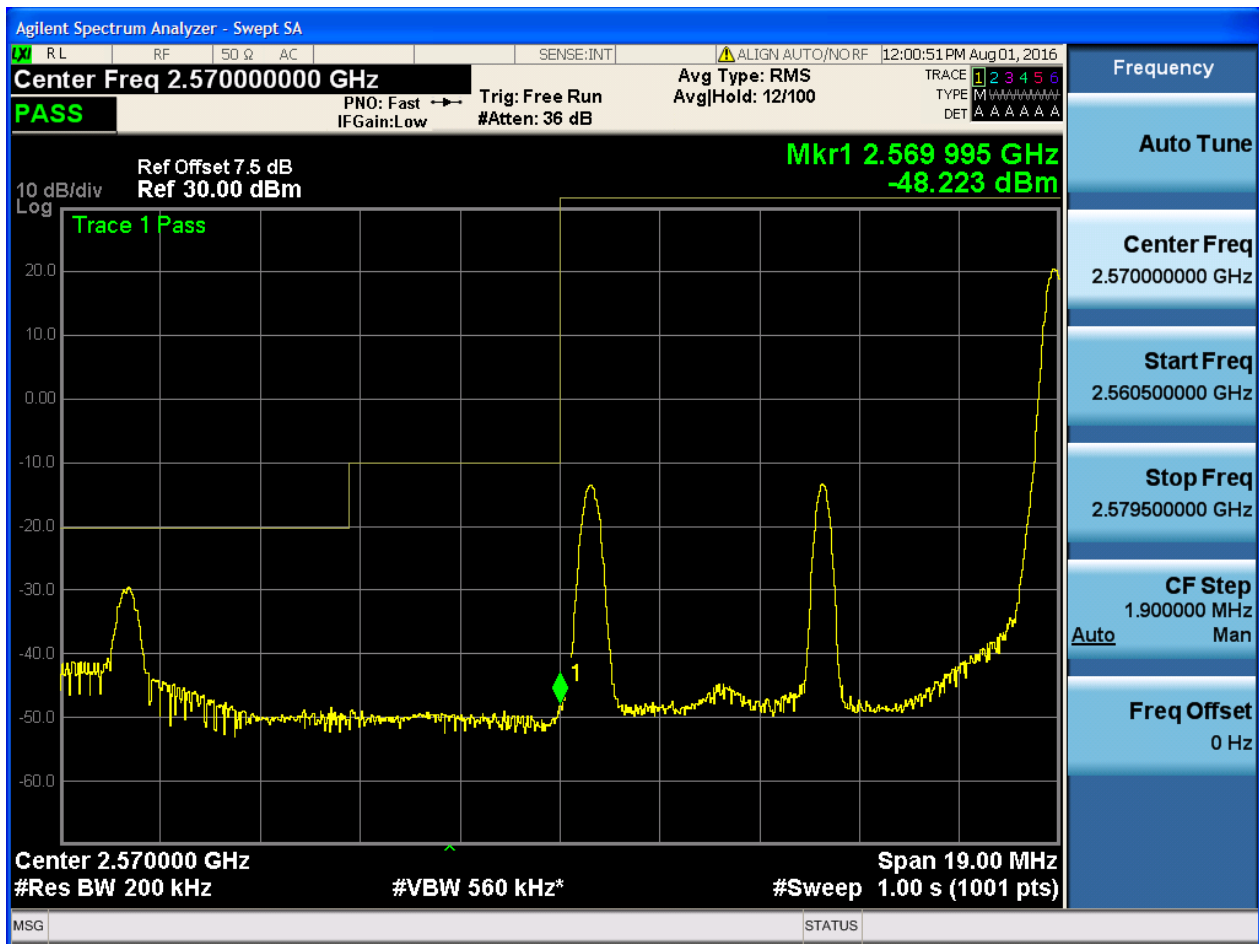
5.1.1.2.1.2.4 Test RB = RB25#0





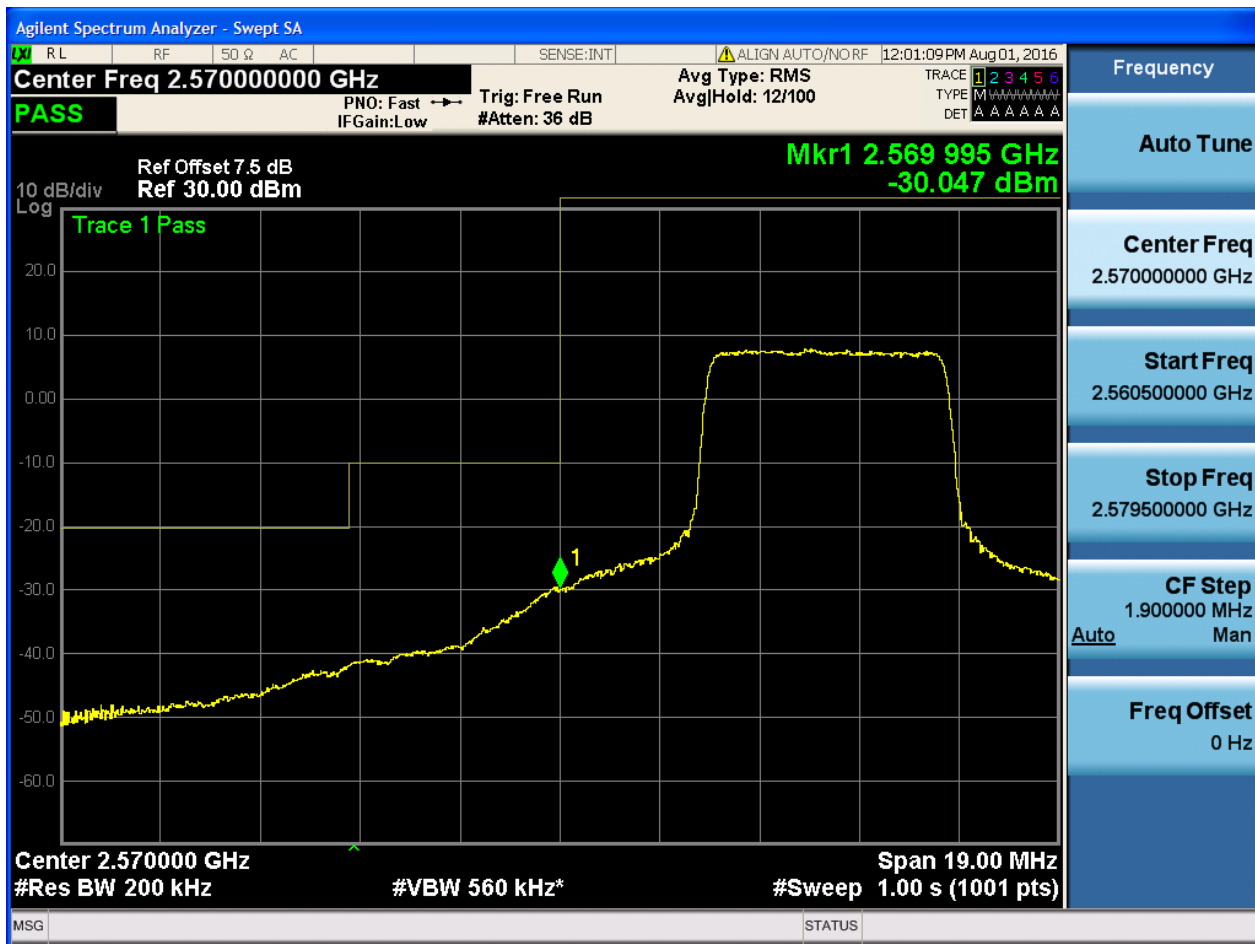


5.1.1.2.2.1.2 Test RB = RB1#49



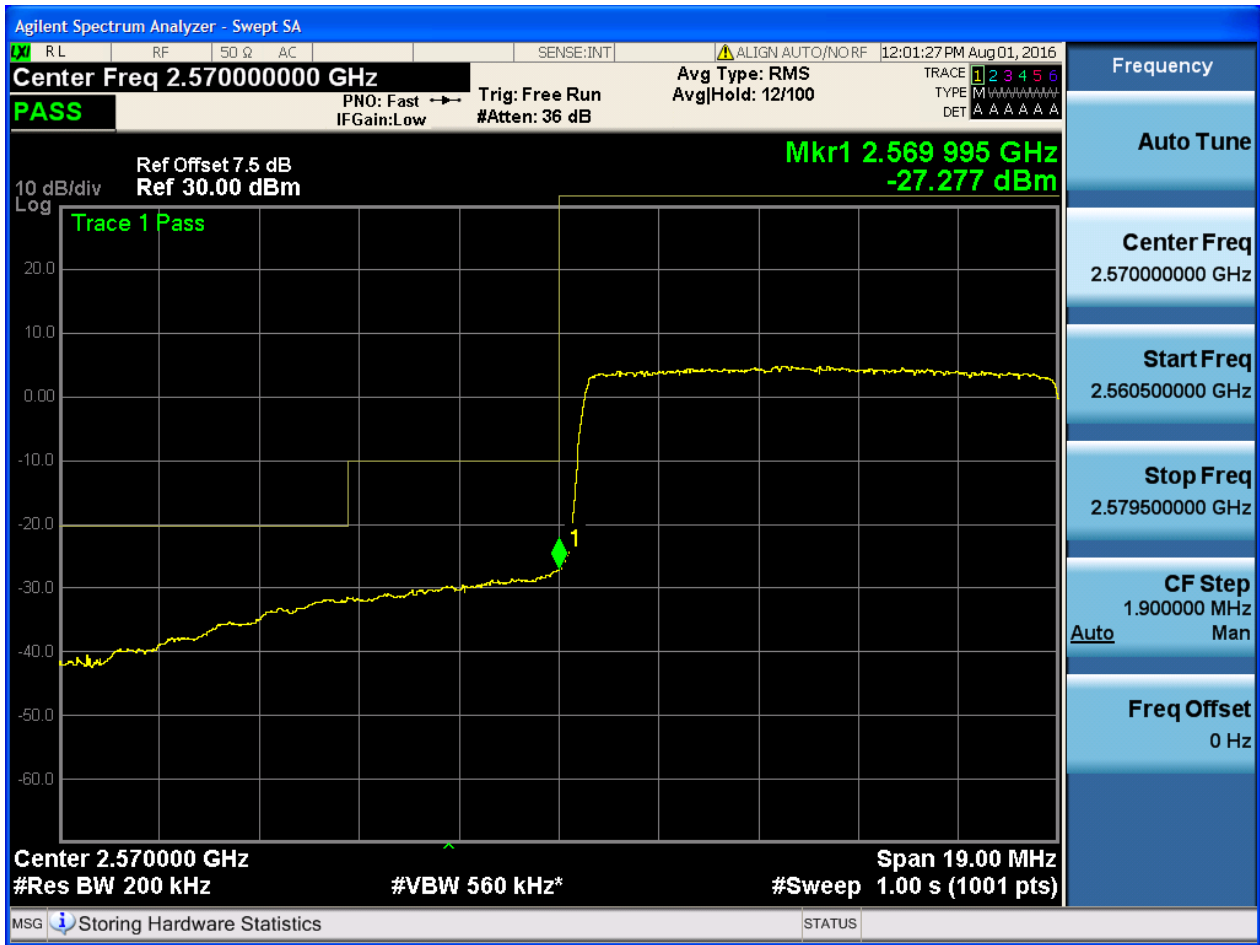


5.1.1.2.2.1.3 Test RB = RB25#13



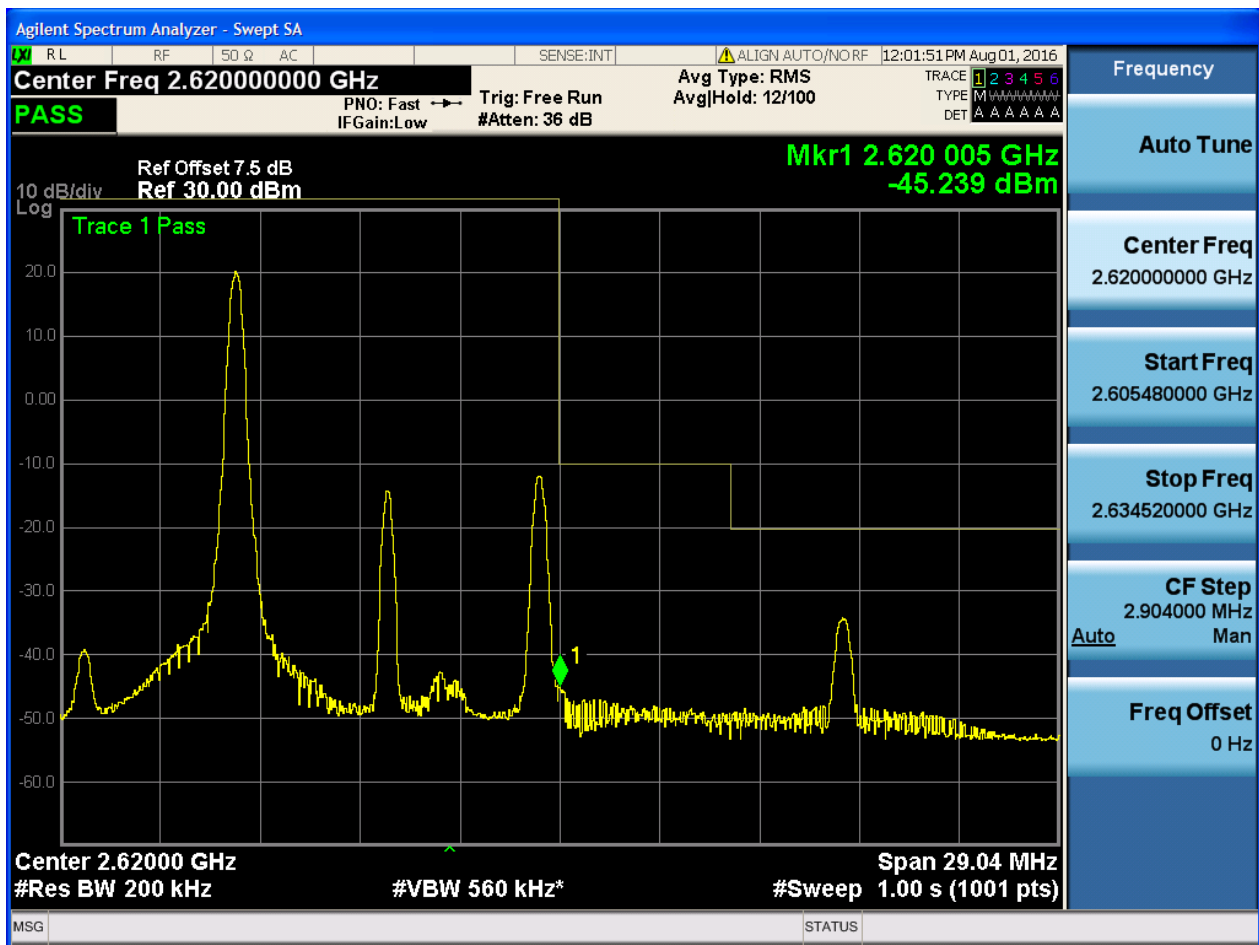


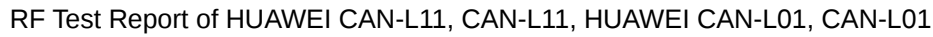
5.1.1.2.2.1.4 Test RB = RB50#0



5.1.1.2.2.2 Test Channel = HCH

5.1.1.2.2.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.62000000 GHz

Ref Offset 7.5 dB
Ref 30.00 dBm

Trace 1 Pass

10 dB/div
Log

Center 2.6200 GHz
#Res BW 200 kHz

Span 29.04 MHz
#Sweep 1.00 s (1001 pts)

Auto Tune

Center Freq
2.62000000 GHz

Start Freq
2.605480000 GHz

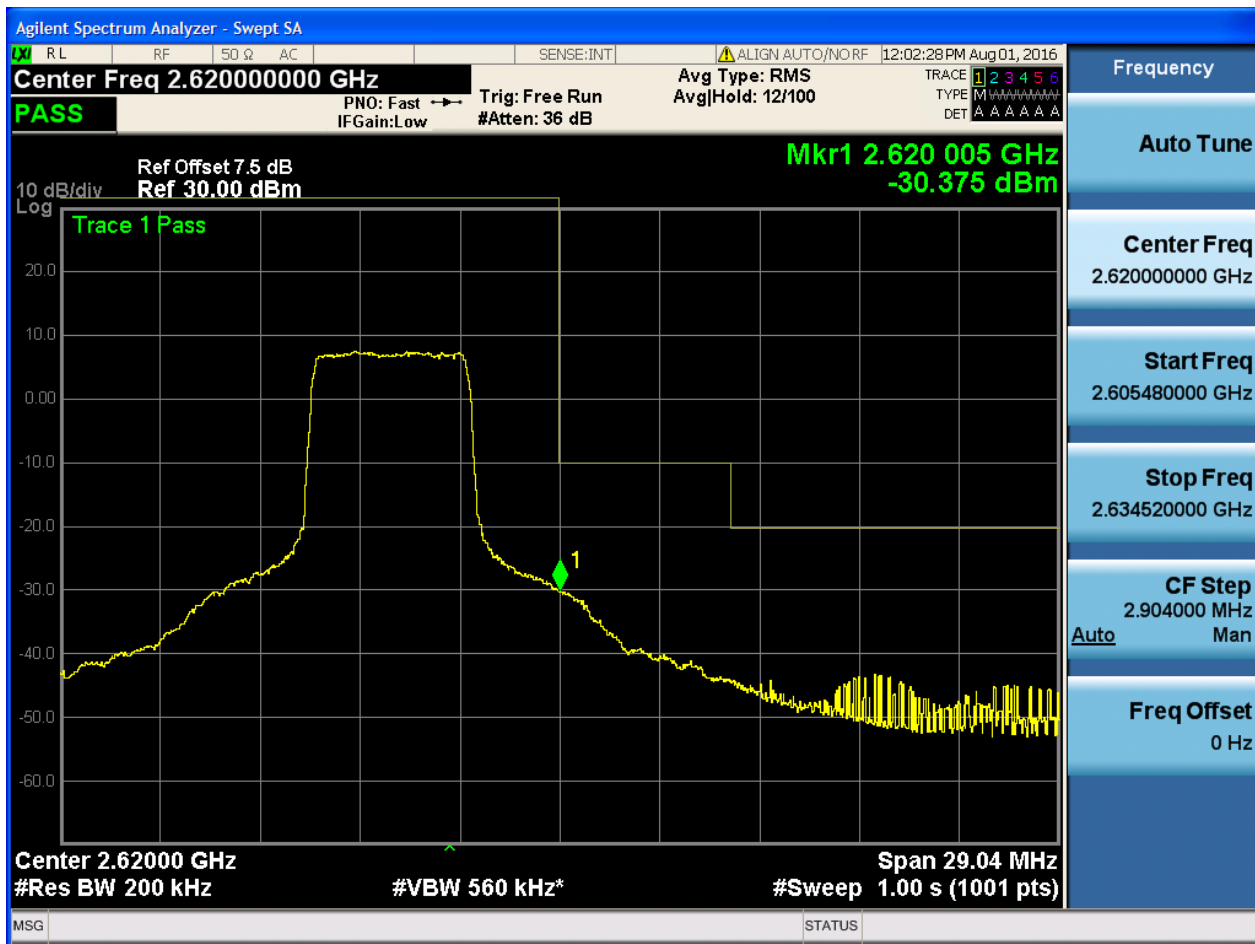
Stop Freq
2.634520000 GHz

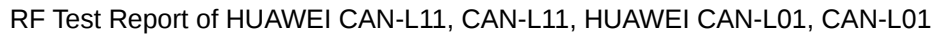
CF Step
2.904000 MHz
Man

Freq Offset
0 Hz



5.1.1.2.2.3 Test RB = RB25#13





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.62000000 GHz

PASS

Ref Offset 7.5 dB
Ref 30.00 dBm

Mkr1 2.620 005 GHz
-26.785 dBm

Trace 1 Pass

Center 2.62000 GHz
#Res BW 200 kHz

#VBW 560 kHz*

Span 29.04 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.62000000 GHz

Start Freq
2.605480000 GHz

Stop Freq
2.634520000 GHz

CF Step
2.904000 MHz
Man

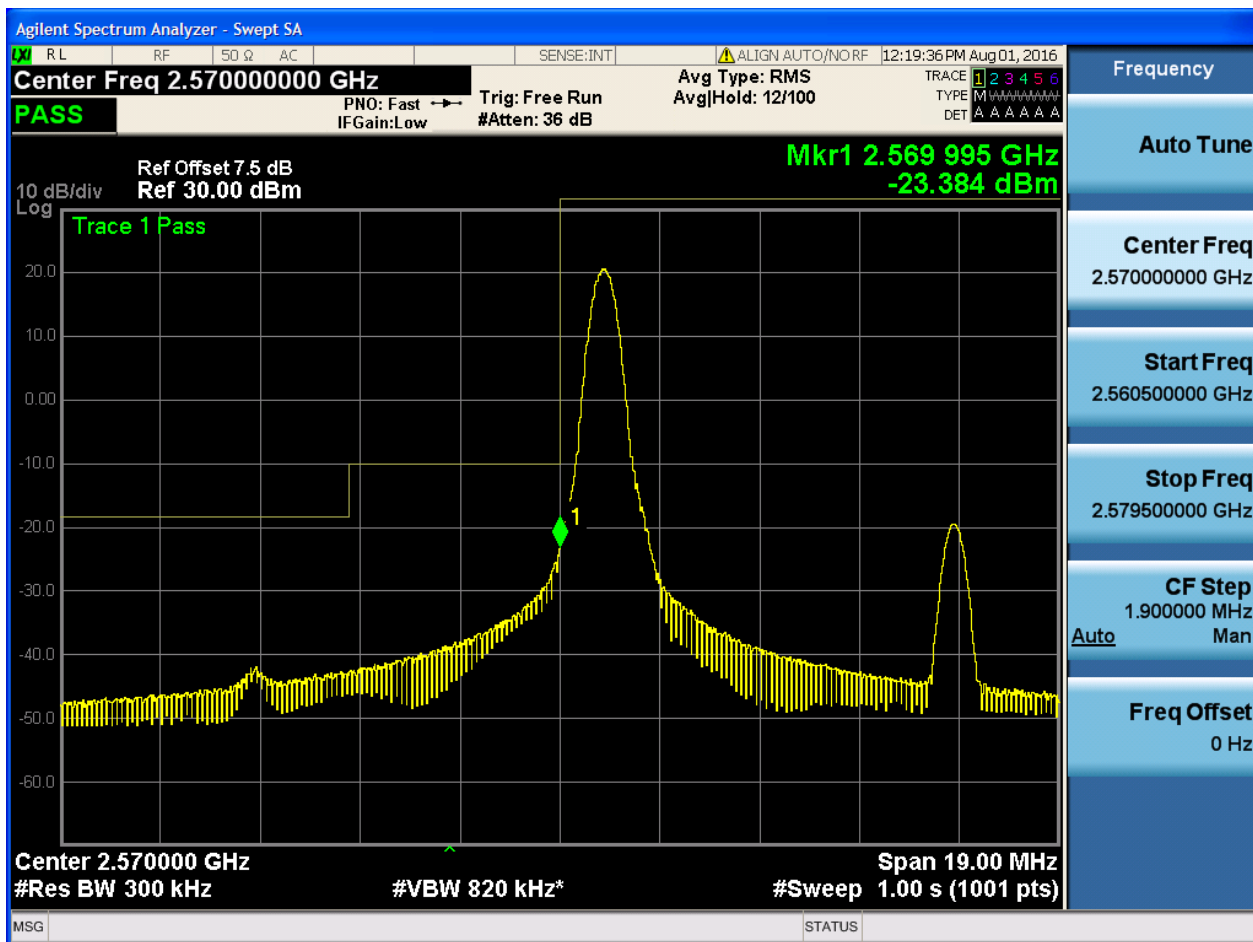
Freq Offset
0 Hz



5.1.1.2.3 Test Bandwidth = 15

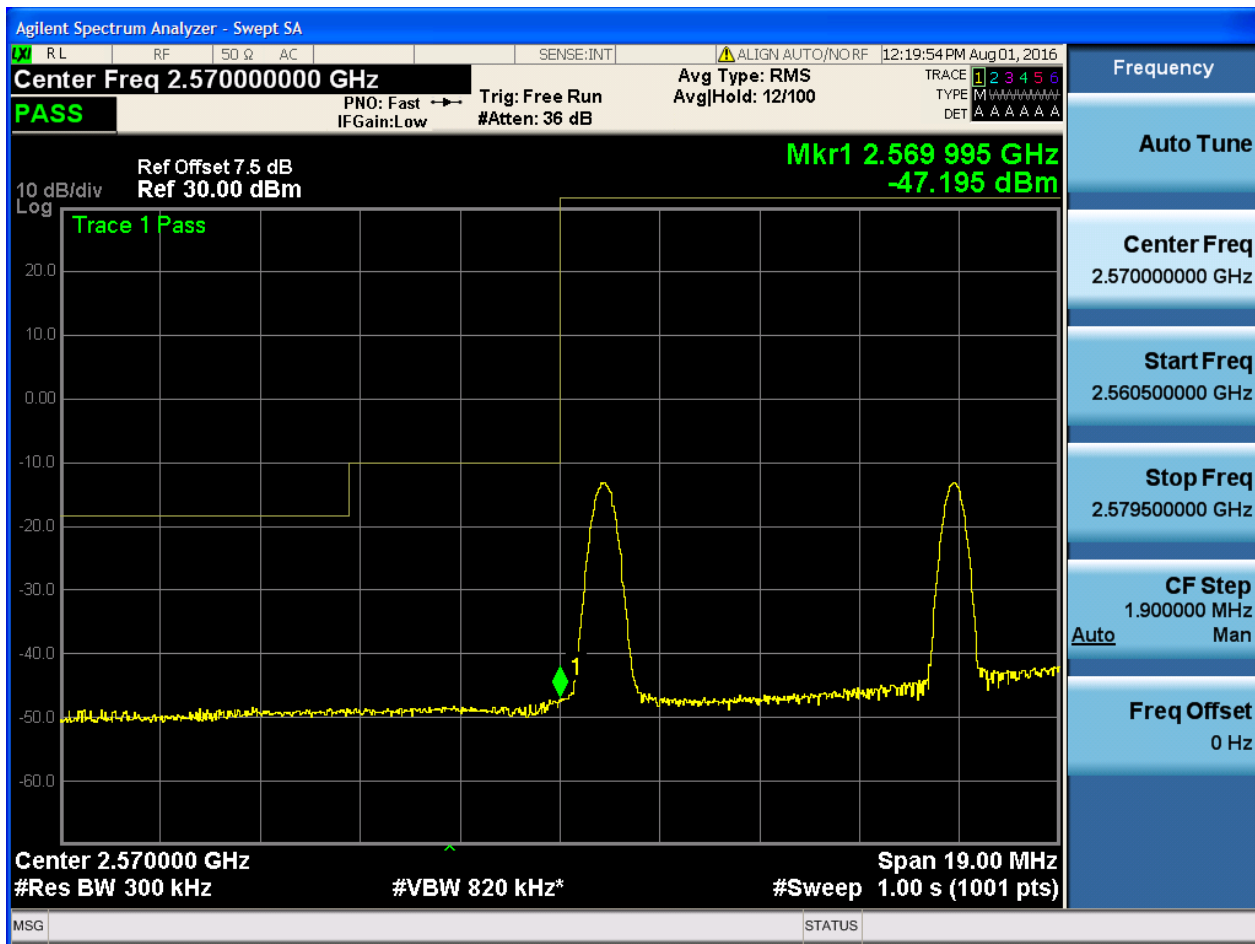
5.1.1.2.3.1 Test Channel = LCH

5.1.1.2.3.1.1 Test RB = RB1#0





5.1.1.2.3.1.2 Test RB = RB1#74



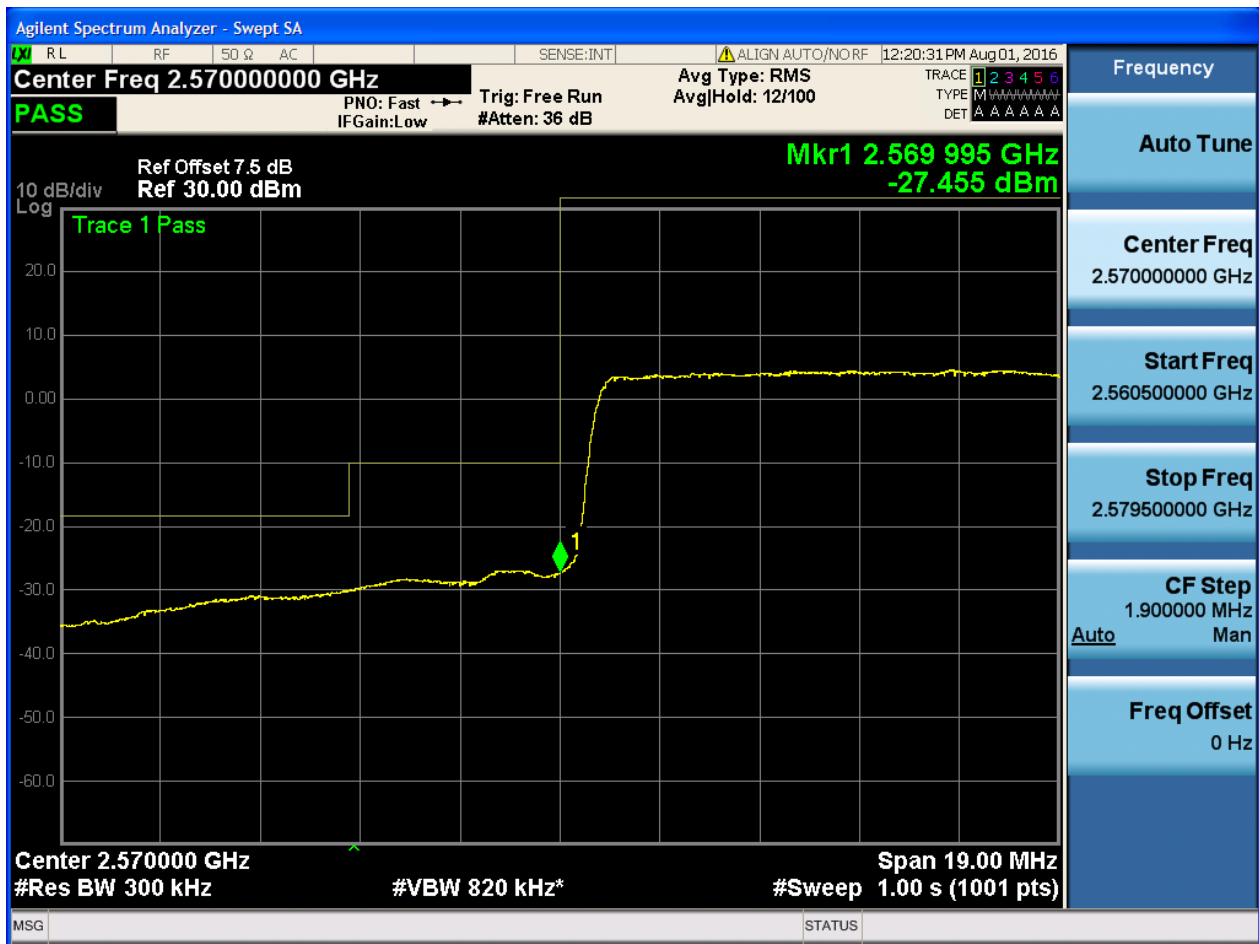


5.1.1.2.3.1.3 Test RB = RB36#18





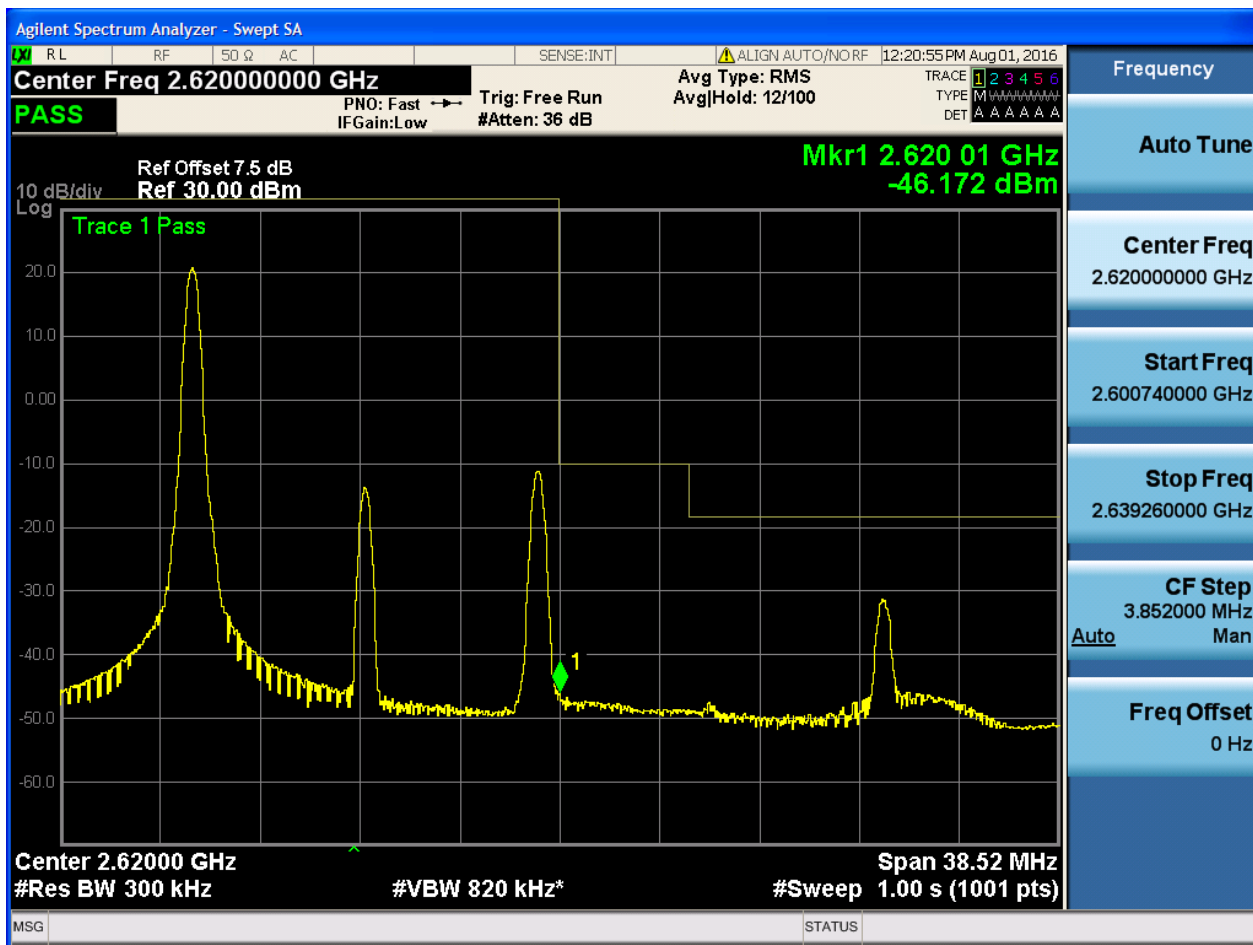
5.1.1.2.3.1.4 Test RB = RB75#0

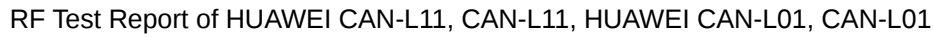




5.1.1.2.3.2 Test Channel = HCH

5.1.1.2.3.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.62000000 GHz

Ref Offset 7.5 dB
Ref 30.00 dBm

Trace 1 Pass

Mkr1 2.620 01 GHz
-25.310 dBm

10 dB/div
Log

Center 2.62000 GHz
#Res BW 300 kHz
#VBW 820 kHz*

Span 38.52 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.62000000 GHz

Start Freq
2.600740000 GHz

Stop Freq
2.639260000 GHz

CF Step
3.852000 MHz
Man

Auto

Freq Offset
0 Hz

The screenshot displays a spectrum analyzer interface. The main plot shows a swept spectrum with a prominent peak at 2.62001 GHz, marked with a green diamond and labeled '1'. The peak is at -25.310 dBm. The plot has a 10 dB/div vertical scale and a logarithmic frequency axis. The center frequency is 2.62000 GHz, with a resolution bandwidth of 300 kHz and a video bandwidth of 820 kHz. The span is 38.52 MHz. The right sidebar contains various settings: Frequency (Auto Tune), Center Freq (2.62000000 GHz), Start Freq (2.600740000 GHz), Stop Freq (2.639260000 GHz), CF Step (3.852000 MHz, Manual), and Freq Offset (0 Hz). The top status bar shows the center frequency, reference offset, and other parameters.



5.1.1.2.3.2.3 Test RB = RB36#18





5.1.1.2.3.2.4 Test RB = RB75#0

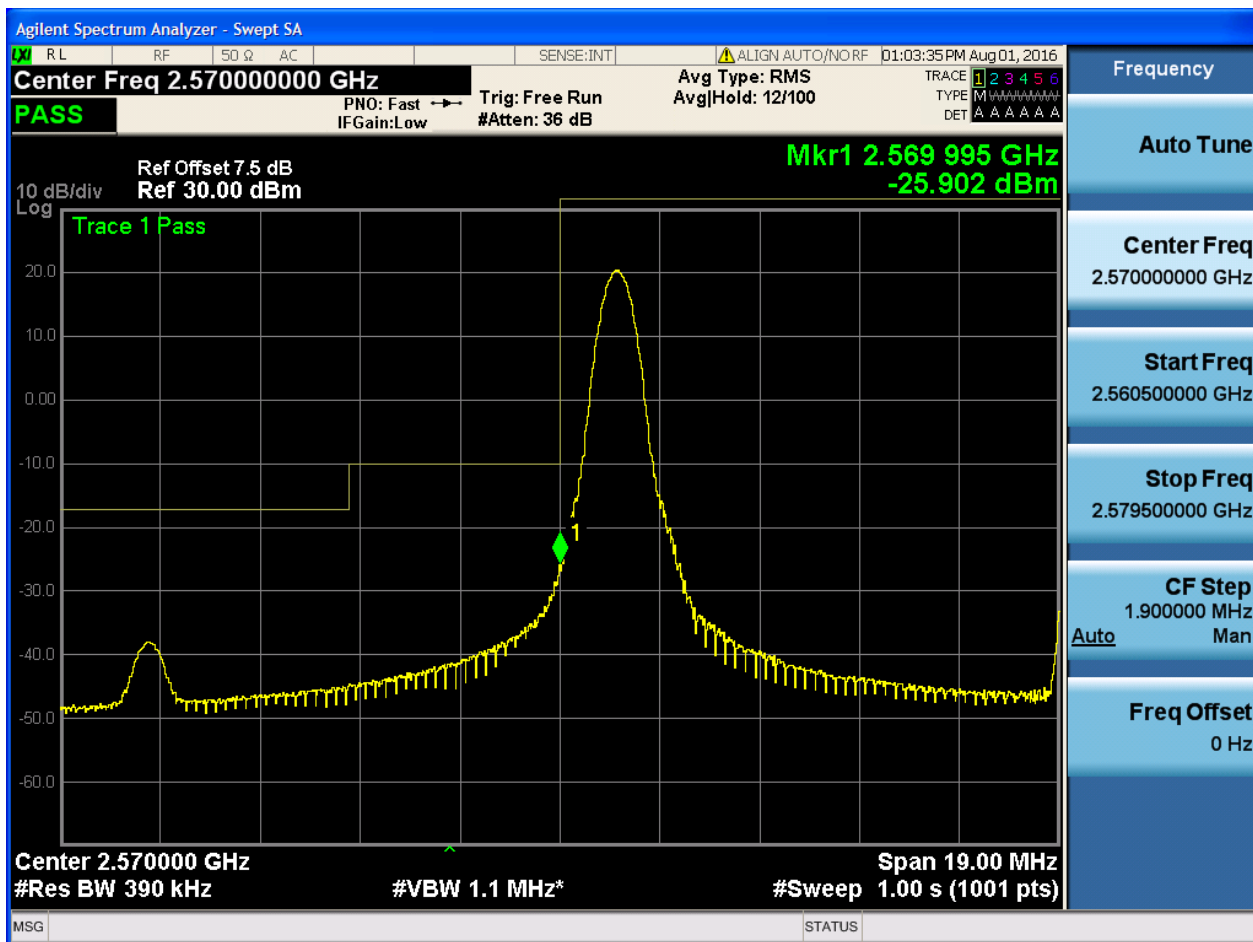


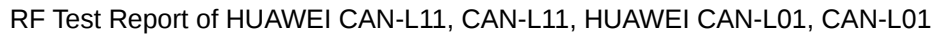


5.1.1.2.4 Test Bandwidth = 20

5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.57000000 GHz

PASS

Ref Offset 7.5 dB
Ref 30.00 dBm

Mkr1 2.569 995 GHz
-49.036 dBm

Trace 1 Pass

Center 2.570000 GHz
#Res BW 390 kHz
#VBW 1.1 MHz*

Span 19.00 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.57000000 GHz

Start Freq
2.560500000 GHz

Stop Freq
2.579500000 GHz

CF Step
1.900000 MHz
Man

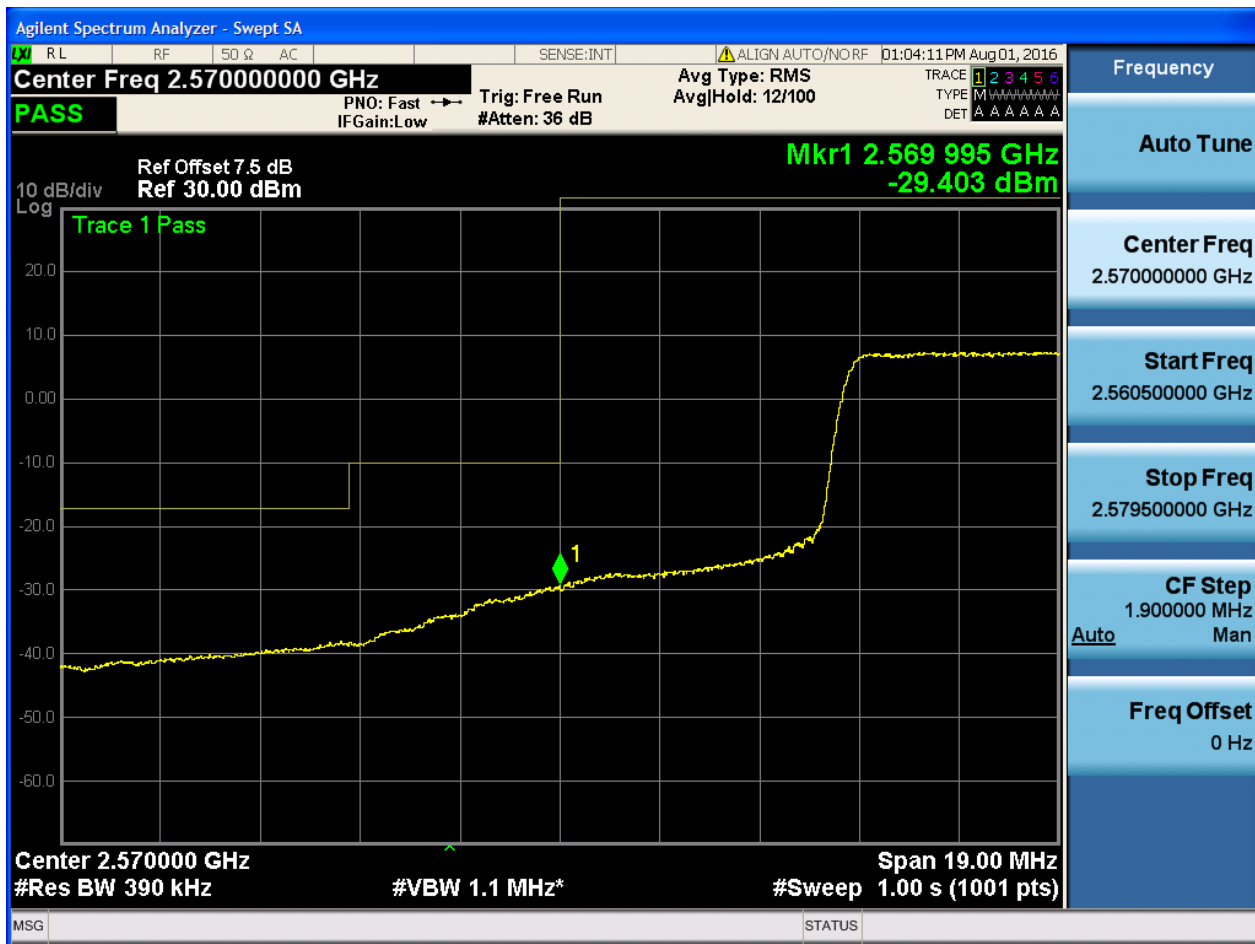
Auto

Freq Offset
0 Hz

The image shows a screenshot of an Agilent Spectrum Analyzer. The main display is a frequency spectrum plot with a yellow trace. The x-axis represents frequency in GHz, ranging from approximately 2.56 to 2.58 GHz. The y-axis represents power in dBm, ranging from -60 to 20 dBm. A prominent peak is visible at approximately 2.569995 GHz, marked with a green diamond and labeled 'Mkr1 2.569 995 GHz -49.036 dBm'. The trace is labeled 'Trace 1 Pass'. The background is black with a white grid. The top of the screen displays various settings and status information, including 'Center Freq 2.57000000 GHz', 'PNO: Fast', 'Trig: Free Run', 'Avg Type: RMS', and 'Avg|Hold: 12/100'. The bottom of the screen shows 'Center 2.570000 GHz', '#Res BW 390 kHz', '#VBW 1.1 MHz*', 'Span 19.00 MHz', and '#Sweep 1.00 s (1001 pts)'. On the right side, there is a vertical panel with various controls and settings, including 'Frequency', 'Auto Tune', 'Center Freq', 'Start Freq', 'Stop Freq', 'CF Step', 'Auto', and 'Freq Offset'.

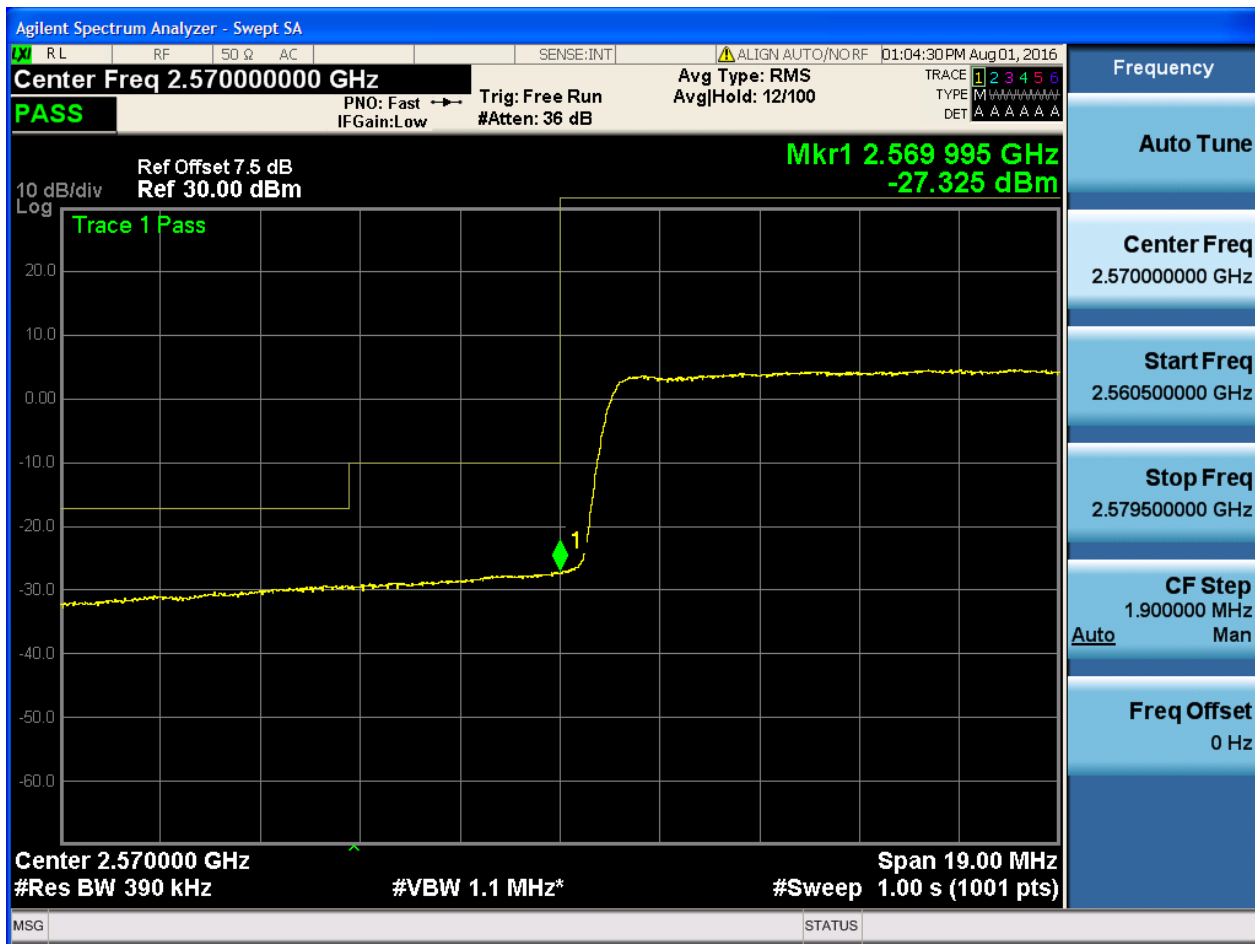


5.1.1.2.4.1.3 Test RB = RB50#25





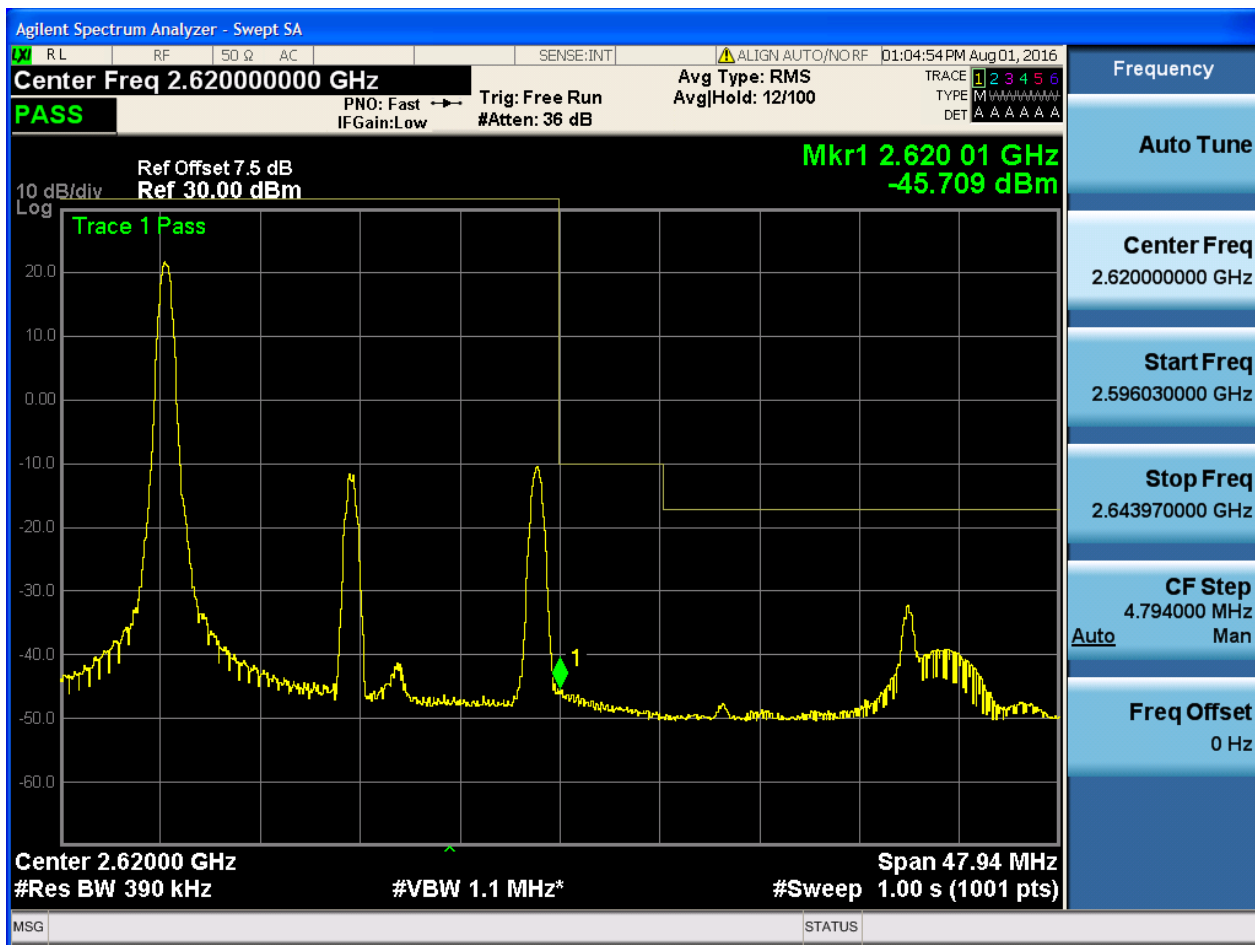
5.1.1.2.4.1.4 Test RB = RB100#0

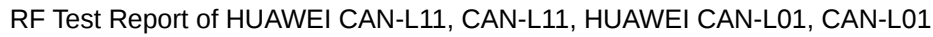




5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.62000000 GHz

Ref Offset 7.5 dB
Ref 30.00 dBm

Trace 1 Pass

10 dB/div
Log

Trace 1 Pass

Mkr1 2.620 01 GHz
-25.117 dBm

Center 2.62000 GHz
#Res BW 390 kHz
#VBW 1.1 MHz*

Span 47.94 MHz
#Sweep 1.00 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.62000000 GHz

Start Freq
2.596030000 GHz

Stop Freq
2.643970000 GHz

CF Step
4.794000 MHz
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

