



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/TM 1	5	LCH	RB1#0	22.85	22.85	33	PASS
				RB1#13	22.99	22.99	33	PASS
				RB1#24	22.57	22.57	33	PASS
				RB12#0	22.01	22.01	33	PASS
				RB12#6	22.07	22.07	33	PASS
				RB12#13	21.87	21.87	33	PASS
				RB25#0	21.93	21.93	33	PASS
			MCH	RB1#0	23.11	23.11	33	PASS
				RB1#13	23.26	23.26	33	PASS
				RB1#24	22.94	22.94	33	PASS
				RB12#0	22.37	22.37	33	PASS
				RB12#6	22.36	22.36	33	PASS
				RB12#13	22.17	22.17	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB25#0	22.2	22.2	33	PASS
			HCH	RB1#0	23.56	23.56	33	PASS
				RB1#13	23.69	23.69	33	PASS
				RB1#24	23.15	23.15	33	PASS
				RB12#0	22.81	22.81	33	PASS
				RB12#6	22.83	22.83	33	PASS
				RB12#13	22.62	22.62	33	PASS
				RB25#0	22.64	22.64	33	PASS
		10	LCH	RB1#0	22.78	22.78	33	PASS
				RB1#25	23.05	23.05	33	PASS
				RB1#49	22.66	22.66	33	PASS
				RB25#0	21.94	21.94	33	PASS
				RB25#13	21.93	21.93	33	PASS
				RB25#25	21.81	21.81	33	PASS
				RB50#0	21.8	21.8	33	PASS
			MCH	RB1#0	23.07	23.07	33	PASS
				RB1#25	23.35	23.35	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB1#49	23.2	23.2	33	PASS
				RB25#0	22.18	22.18	33	PASS
				RB25#13	22.28	22.28	33	PASS
				RB25#25	22.28	22.28	33	PASS
				RB50#0	22.25	22.25	33	PASS
			HCH	RB1#0	23.46	23.46	33	PASS
				RB1#25	23.83	23.83	33	PASS
				RB1#49	23.39	23.39	33	PASS
				RB25#0	22.69	22.69	33	PASS
				RB25#13	22.77	22.77	33	PASS
				RB25#25	22.71	22.71	33	PASS
				RB50#0	22.71	22.71	33	PASS
		15	LCH	RB1#0	22.57	22.57	33	PASS
				RB1#38	22.86	22.86	33	PASS
				RB1#74	22.54	22.54	33	PASS
				RB36#0	21.9	21.9	33	PASS
				RB36#18	22.07	22.07	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB36#39	21.85	21.85	33	PASS
				RB75#0	21.7	21.7	33	PASS
			MCH	RB1#0	22.73	22.73	33	PASS
				RB1#38	23.28	23.28	33	PASS
				RB1#74	23.02	23.02	33	PASS
				RB36#0	22.15	22.15	33	PASS
				RB36#18	22.34	22.34	33	PASS
				RB36#39	22.28	22.28	33	PASS
				RB75#0	22.17	22.17	33	PASS
			HCH	RB1#0	23.19	23.19	33	PASS
				RB1#38	23.85	23.85	33	PASS
				RB1#74	23.31	23.31	33	PASS
				RB36#0	22.59	22.59	33	PASS
				RB36#18	22.76	22.76	33	PASS
				RB36#39	22.63	22.63	33	PASS
				RB75#0	22.69	22.69	33	PASS
		20	LCH	RB1#0	22.75	22.75	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB1#50	23.07	23.07	33	PASS
				RB1#99	22.86	22.86	33	PASS
				RB50#0	22.01	22.01	33	PASS
				RB50#25	21.88	21.88	33	PASS
				RB50#50	22.07	22.07	33	PASS
				RB100#0	21.96	21.96	33	PASS
			MCH	RB1#0	22.82	22.82	33	PASS
				RB1#50	23.4	23.4	33	PASS
				RB1#99	23.32	23.32	33	PASS
				RB50#0	22.28	22.28	33	PASS
				RB50#25	22.4	22.4	33	PASS
				RB50#50	22.41	22.41	33	PASS
				RB100#0	22.32	22.32	33	PASS
			HCH	RB1#0	23.41	23.41	33	PASS
				RB1#50	23.86	23.86	33	PASS
				RB1#99	23.52	23.52	33	PASS
				RB50#0	22.6	22.6	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB50#25	22.85	22.85	33	PASS
				RB50#50	22.73	22.73	33	PASS
				RB100#0	22.72	22.72	33	PASS
	LTE/TM 2	5	LCH	RB1#0	22.21	22.21	33	PASS
				RB1#13	22.37	22.37	33	PASS
				RB1#24	21.97	21.97	33	PASS
				RB12#0	21	21	33	PASS
				RB12#6	21.06	21.06	33	PASS
				RB12#13	20.87	20.87	33	PASS
				RB25#0	20.94	20.94	33	PASS
			MCH	RB1#0	22.48	22.48	33	PASS
				RB1#13	22.61	22.61	33	PASS
				RB1#24	22.23	22.23	33	PASS
				RB12#0	21.3	21.3	33	PASS
				RB12#6	21.29	21.29	33	PASS
				RB12#13	21.1	21.1	33	PASS
				RB25#0	21.12	21.12	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
			HCH	RB1#0	22.68	22.68	33	PASS
				RB1#13	22.81	22.81	33	PASS
				RB1#24	22.42	22.42	33	PASS
				RB12#0	21.82	21.82	33	PASS
				RB12#6	21.83	21.83	33	PASS
				RB12#13	21.62	21.62	33	PASS
				RB25#0	21.64	21.64	33	PASS
		10	LCH	RB1#0	22.16	22.16	33	PASS
				RB1#25	22.43	22.43	33	PASS
				RB1#49	22.04	22.04	33	PASS
				RB25#0	20.94	20.94	33	PASS
				RB25#13	20.98	20.98	33	PASS
				RB25#25	20.86	20.86	33	PASS
				RB50#0	20.76	20.76	33	PASS
			MCH	RB1#0	22.33	22.33	33	PASS
				RB1#25	22.68	22.68	33	PASS
				RB1#49	22.41	22.41	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB25#0	21.12	21.12	33	PASS
				RB25#13	21.16	21.16	33	PASS
				RB25#25	21.14	21.14	33	PASS
				RB50#0	21.25	21.25	33	PASS
			HCH	RB1#0	22.57	22.57	33	PASS
				RB1#25	22.84	22.84	33	PASS
				RB1#49	22.55	22.55	33	PASS
				RB25#0	21.53	21.53	33	PASS
				RB25#13	21.63	21.63	33	PASS
				RB25#25	21.58	21.58	33	PASS
				RB50#0	21.54	21.54	33	PASS
		15	LCH	RB1#0	21.87	21.87	33	PASS
				RB1#38	22.17	22.17	33	PASS
				RB1#74	21.82	21.82	33	PASS
				RB36#0	20.82	20.82	33	PASS
				RB36#18	21.04	21.04	33	PASS
				RB36#39	20.83	20.83	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB75#0	20.7	20.7	33	PASS
			MCH	RB1#0	21.89	21.89	33	PASS
				RB1#38	22.47	22.47	33	PASS
				RB1#74	22.16	22.16	33	PASS
				RB36#0	21.13	21.13	33	PASS
				RB36#18	21.31	21.31	33	PASS
				RB36#39	21.23	21.23	33	PASS
				RB75#0	21.1	21.1	33	PASS
			HCH	RB1#0	22.54	22.54	33	PASS
				RB1#38	23.04	23.04	33	PASS
				RB1#74	22.54	22.54	33	PASS
				RB36#0	21.56	21.56	33	PASS
				RB36#18	21.71	21.71	33	PASS
				RB36#39	21.57	21.57	33	PASS
				RB75#0	21.65	21.65	33	PASS
		20	LCH	RB1#0	22.15	22.15	33	PASS
				RB1#50	22.46	22.46	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB1#99	22.21	22.21	33	PASS
				RB50#0	20.99	20.99	33	PASS
				RB50#25	20.87	20.87	33	PASS
				RB50#50	21.05	21.05	33	PASS
				RB100#0	20.99	20.99	33	PASS
			MCH	RB1#0	22.26	22.26	33	PASS
				RB1#50	22.84	22.84	33	PASS
				RB1#99	22.7	22.7	33	PASS
				RB50#0	21.25	21.25	33	PASS
				RB50#25	21.35	21.35	33	PASS
				RB50#50	21.4	21.4	33	PASS
				RB100#0	21.32	21.32	33	PASS
			HCH	RB1#0	22.59	22.59	33	PASS
				RB1#50	23	23	33	PASS
				RB1#99	22.77	22.77	33	PASS
				RB50#0	21.56	21.56	33	PASS
				RB50#25	21.8	21.8	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB50#50	21.65	21.65	33	PASS
				RB100#0	21.69	21.69	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:

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

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

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

$$\text{SET Sweep time} = \text{auto-couple.}$$

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	4.27	13	PASS
				RB1#13	4.26	13	PASS
				RB1#24	4.41	13	PASS
				RB12#0	5.51	13	PASS
				RB12#6	5.26	13	PASS
				RB12#13	5.41	13	PASS
				RB25#0	5.87	13	PASS
			MCH	RB1#0	4.56	13	PASS
				RB1#13	4.41	13	PASS
				RB1#24	4.69	13	PASS
				RB12#0	5.86	13	PASS
				RB12#6	5.77	13	PASS
				RB12#13	5.88	13	PASS
				RB25#0	6.45	13	PASS
			HCH	RB1#0	3.38	13	PASS
				RB1#13	3.21	13	PASS
				RB1#24	3.66	13	PASS
				RB12#0	4.13	13	PASS
				RB12#6	3.7	13	PASS
				RB12#13	4.24	13	PASS
				RB25#0	4.66	13	PASS
		10	LCH	RB1#0	4.86	13	PASS
				RB1#25	4.66	13	PASS
				RB1#49	4.93	13	PASS
				RB25#0	5.68	13	PASS
				RB25#13	5.64	13	PASS
				RB25#25	5.87	13	PASS
				RB50#0	5.77	13	PASS
			MCH	RB1#0	4.46	13	PASS
				RB1#25	4.24	13	PASS
				RB1#49	4.57	13	PASS
				RB25#0	5.77	13	PASS
				RB25#13	5.77	13	PASS
				RB25#25	5.82	13	PASS
				RB50#0	6.31	13	PASS
			HCH	RB1#0	3.71	13	PASS
				RB1#25	3.13	13	PASS
				RB1#49	3.42	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB25#0	4.42	13	PASS
				RB25#13	3.97	13	PASS
				RB25#25	4.36	13	PASS
				RB50#0	5	13	PASS
		15	LCH	RB1#0	5.02	13	PASS
				RB1#38	4.89	13	PASS
				RB1#74	4.99	13	PASS
				RB36#0	5.8	13	PASS
				RB36#18	5.88	13	PASS
				RB36#39	5.98	13	PASS
				RB75#0	6.58	13	PASS
			MCH	RB1#0	4.51	13	PASS
				RB1#38	4.33	13	PASS
				RB1#74	4.42	13	PASS
				RB36#0	5.61	13	PASS
				RB36#18	5.6	13	PASS
				RB36#39	5.71	13	PASS
				RB75#0	6.31	13	PASS
			HCH	RB1#0	4.16	13	PASS
				RB1#38	3.24	13	PASS
				RB1#74	3.49	13	PASS
				RB36#0	5.13	13	PASS
				RB36#18	4.1	13	PASS
				RB36#39	4.48	13	PASS
				RB75#0	5.26	13	PASS
		20	LCH	RB1#0	5.01	13	PASS
				RB1#50	4.71	13	PASS
				RB1#99	5.08	13	PASS
				RB50#0	6	13	PASS
				RB50#25	6.11	13	PASS
				RB50#50	5.97	13	PASS
				RB100#0	6.49	13	PASS
			MCH	RB1#0	4.86	13	PASS
				RB1#50	4.76	13	PASS
				RB1#99	4.39	13	PASS
				RB50#0	5.91	13	PASS
				RB50#25	6.04	13	PASS
				RB50#50	6.05	13	PASS
				RB100#0	6.15	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
	LTE/TM2		HCH	RB1#0	4.58	13	PASS
				RB1#50	3.35	13	PASS
				RB1#99	3.72	13	PASS
				RB50#0	5.47	13	PASS
				RB50#25	4.74	13	PASS
				RB50#50	4.49	13	PASS
				RB100#0	5.71	13	PASS
		5	LCH	RB1#0	5.34	13	PASS
				RB1#13	5.34	13	PASS
				RB1#24	5.68	13	PASS
				RB12#0	6.38	13	PASS
				RB12#6	6.14	13	PASS
				RB12#13	6.35	13	PASS
				RB25#0	6.77	13	PASS
			MCH	RB1#0	6.09	13	PASS
				RB1#13	6.03	13	PASS
				RB1#24	6.24	13	PASS
				RB12#0	6.3	13	PASS
				RB12#6	6.1	13	PASS
				RB12#13	6.3	13	PASS
				RB25#0	6.8	13	PASS
			HCH	RB1#0	3.58	13	PASS
				RB1#13	3.29	13	PASS
				RB1#24	4.34	13	PASS
				RB12#0	5.12	13	PASS
				RB12#6	4.7	13	PASS
				RB12#13	5.04	13	PASS
				RB25#0	5.69	13	PASS
		10	LCH	RB1#0	5.55	13	PASS
				RB1#25	5.54	13	PASS
				RB1#49	5.7	13	PASS
				RB25#0	6.3	13	PASS
				RB25#13	6.37	13	PASS
				RB25#25	6.44	13	PASS
				RB50#0	6.74	13	PASS
			MCH	RB1#0	5.59	13	PASS
				RB1#25	5.32	13	PASS
				RB1#49	5.55	13	PASS
				RB25#0	6.9	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB25#13	7.02	13	PASS
				RB25#25	7	13	PASS
				RB50#0	6.97	13	PASS
			HCH	RB1#0	4.44	13	PASS
				RB1#25	3.35	13	PASS
				RB1#49	3.8	13	PASS
				RB25#0	5.41	13	PASS
				RB25#13	4.86	13	PASS
				RB25#25	5.16	13	PASS
				RB50#0	5.85	13	PASS
		15	LCH	RB1#0	5.56	13	PASS
				RB1#38	5.55	13	PASS
				RB1#74	5.54	13	PASS
				RB36#0	6.64	13	PASS
				RB36#18	6.62	13	PASS
				RB36#39	6.61	13	PASS
				RB75#0	6.77	13	PASS
			MCH	RB1#0	5.66	13	PASS
				RB1#38	5.47	13	PASS
				RB1#74	5.48	13	PASS
				RB36#0	6.76	13	PASS
				RB36#18	6.74	13	PASS
				RB36#39	6.87	13	PASS
				RB75#0	7.05	13	PASS
			HCH	RB1#0	4.75	13	PASS
				RB1#38	3.46	13	PASS
				RB1#74	4.01	13	PASS
				RB36#0	5.59	13	PASS
				RB36#18	5.07	13	PASS
				RB36#39	5.32	13	PASS
				RB75#0	6.06	13	PASS
		20	LCH	RB1#0	5.37	13	PASS
				RB1#50	5.43	13	PASS
				RB1#99	5.55	13	PASS
				RB50#0	6.68	13	PASS
				RB50#25	6.54	13	PASS
				RB50#50	6.46	13	PASS
				RB100#0	6.95	13	PASS
			MCH	RB1#0	5.35	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB1#50	5.25	13	PASS
				RB1#99	5.05	13	PASS
				RB50#0	6.93	13	PASS
				RB50#25	7.03	13	PASS
				RB50#50	6.67	13	PASS
				RB100#0	6.76	13	PASS
			HCH	RB1#0	5.45	13	PASS
				RB1#50	4.2	13	PASS
				RB1#99	4.11	13	PASS
				RB50#0	6.02	13	PASS
				RB50#25	5.44	13	PASS
				RB50#50	5.46	13	PASS
				RB100#0	6.21	13	PASS

3Appendix_C: Modulation Characteristics

Part I - Test Plots

3.1 For LTE

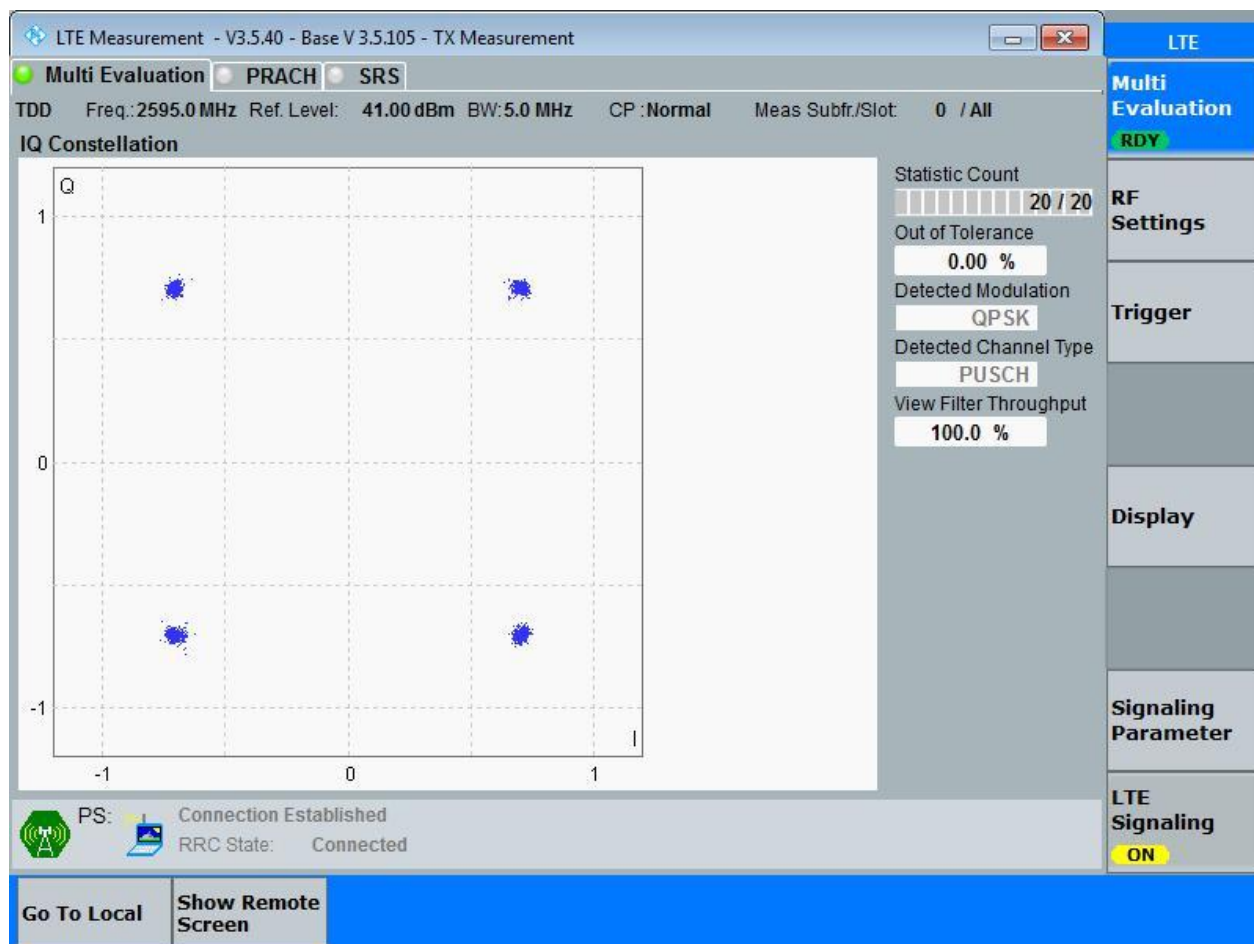
3.1.1 Test Band = BAND38

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

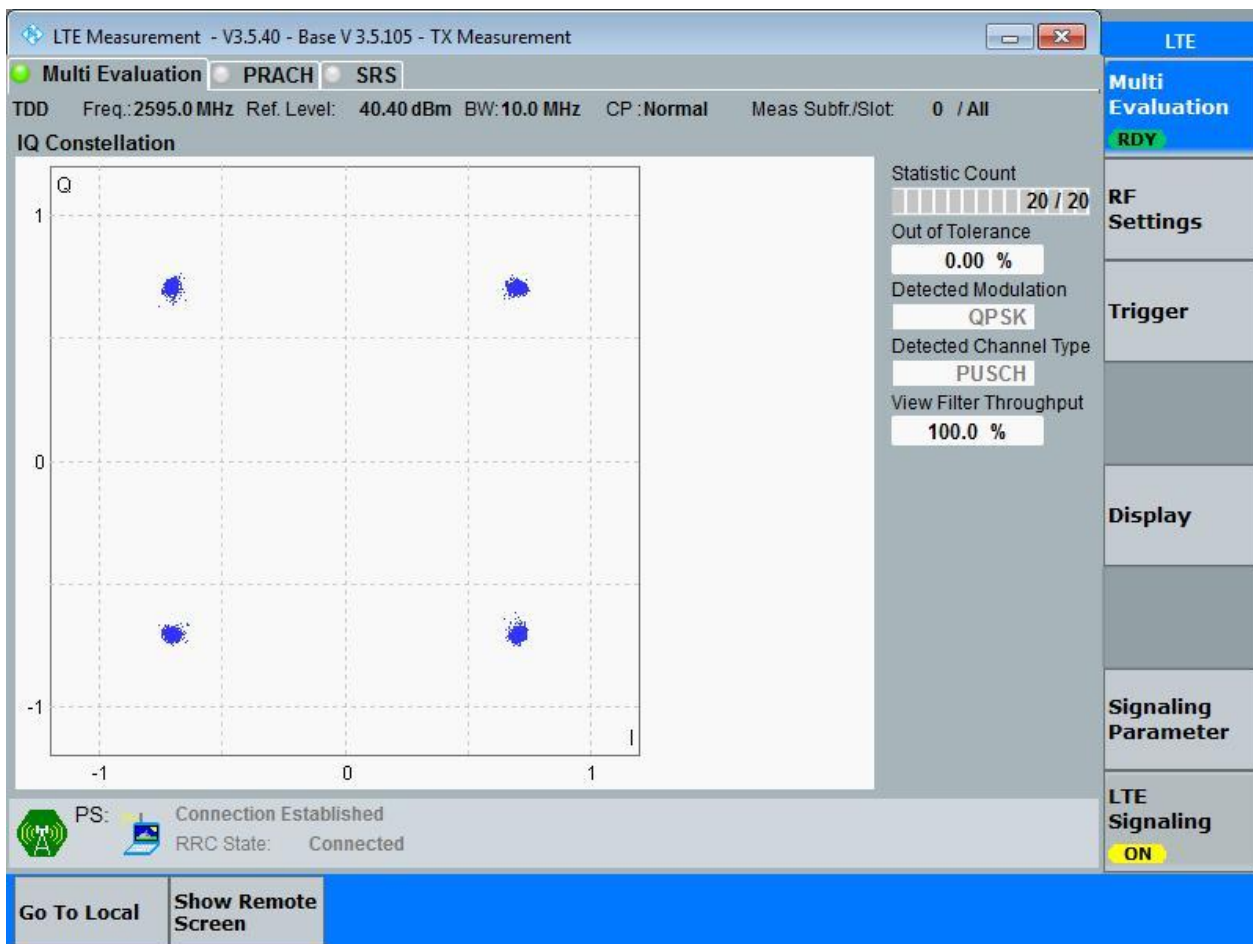
3.1.1.1.1.1.1 Test RB = RB25#0



3.1.1.1.2 Test Bandwidth = 10

3.1.1.1.2.1 Test Channel = MCH

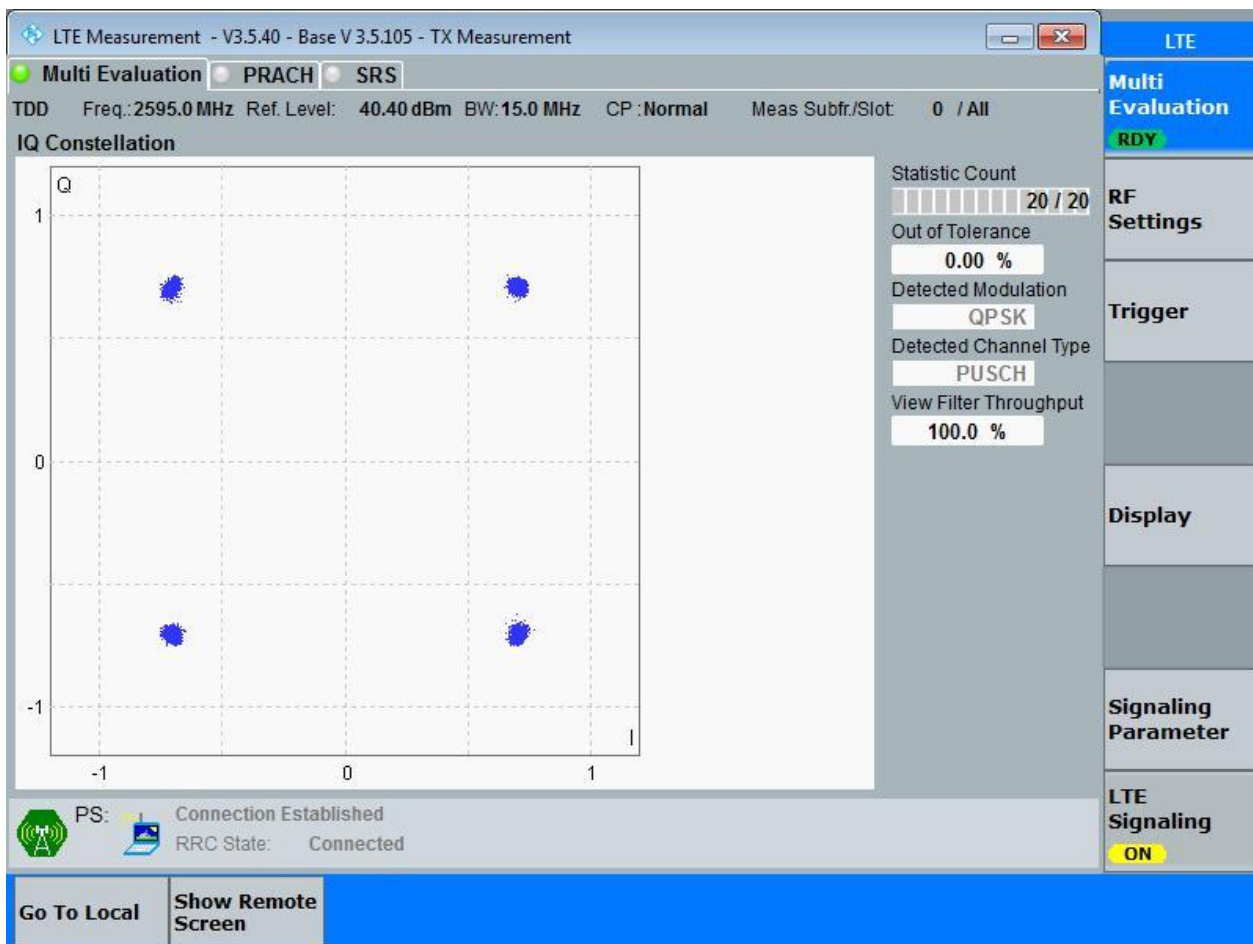
3.1.1.1.2.1.1 Test RB = RB50#0



3.1.1.1.3 Test Bandwidth = 15

3.1.1.1.3.1 Test Channel = MCH

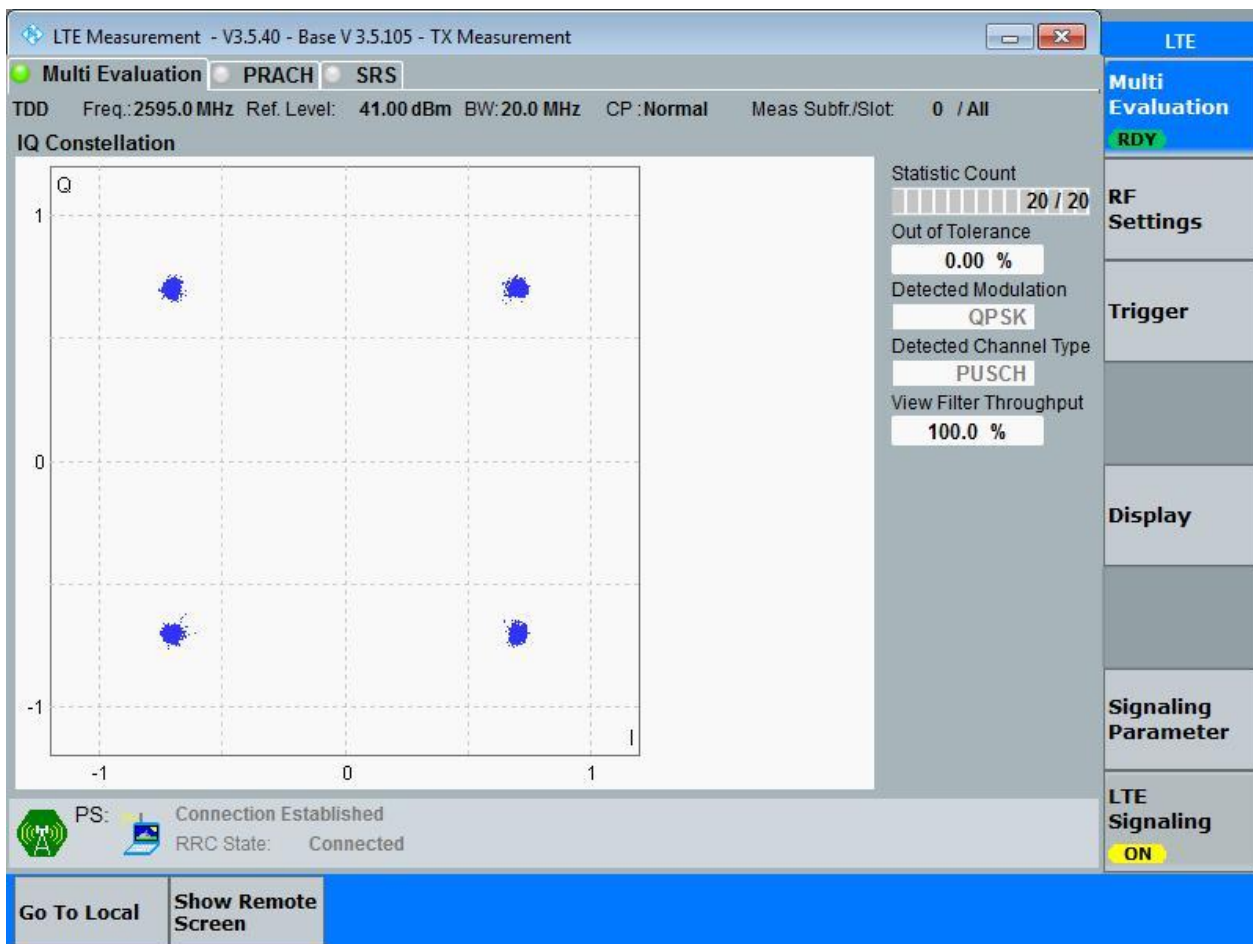
3.1.1.1.3.1.1 Test RB = RB75#0



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

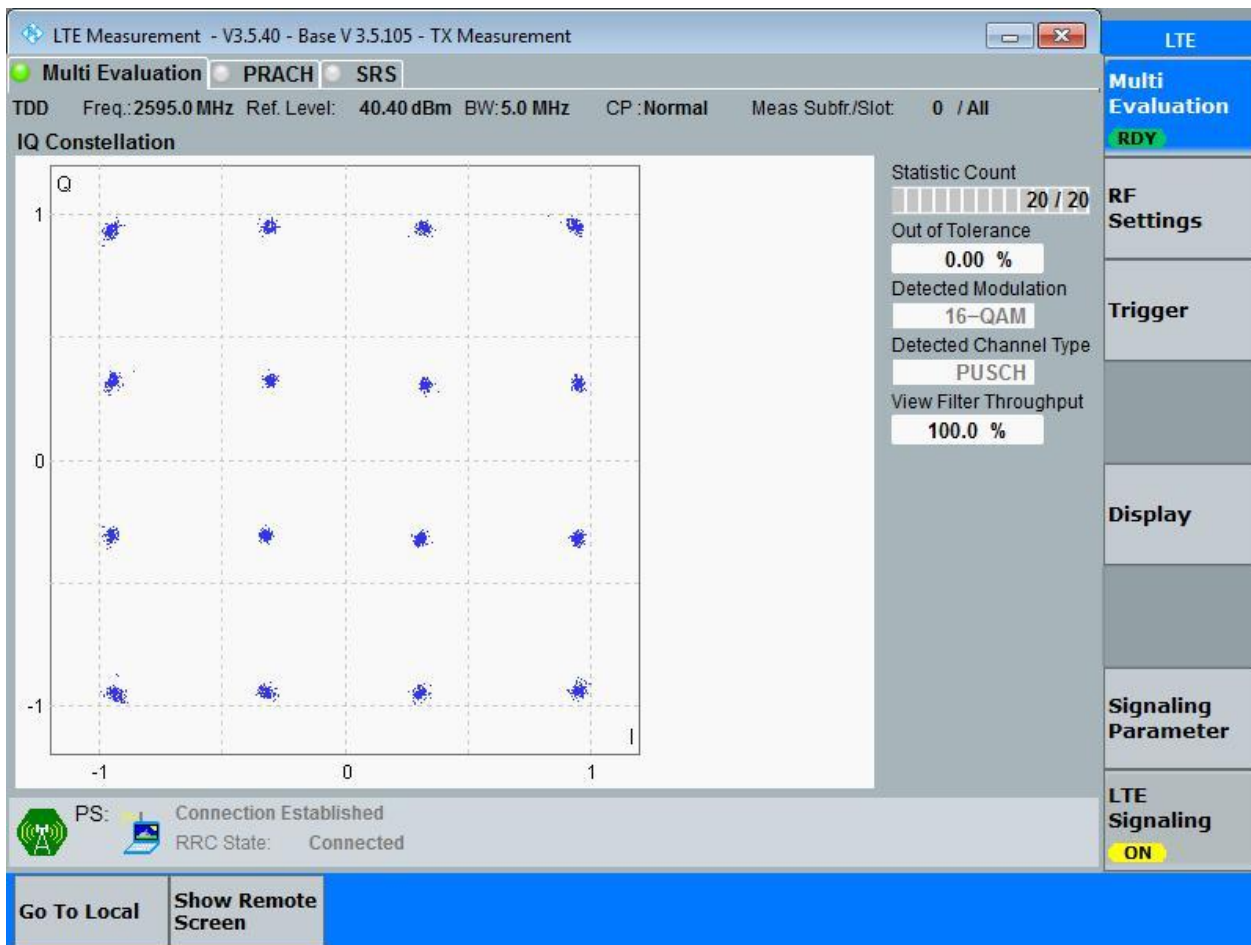


3.1.1.2 Test Mode = LTE/TM2

3.1.1.2.1 Test Bandwidth = 5

3.1.1.2.1.1 Test Channel = MCH

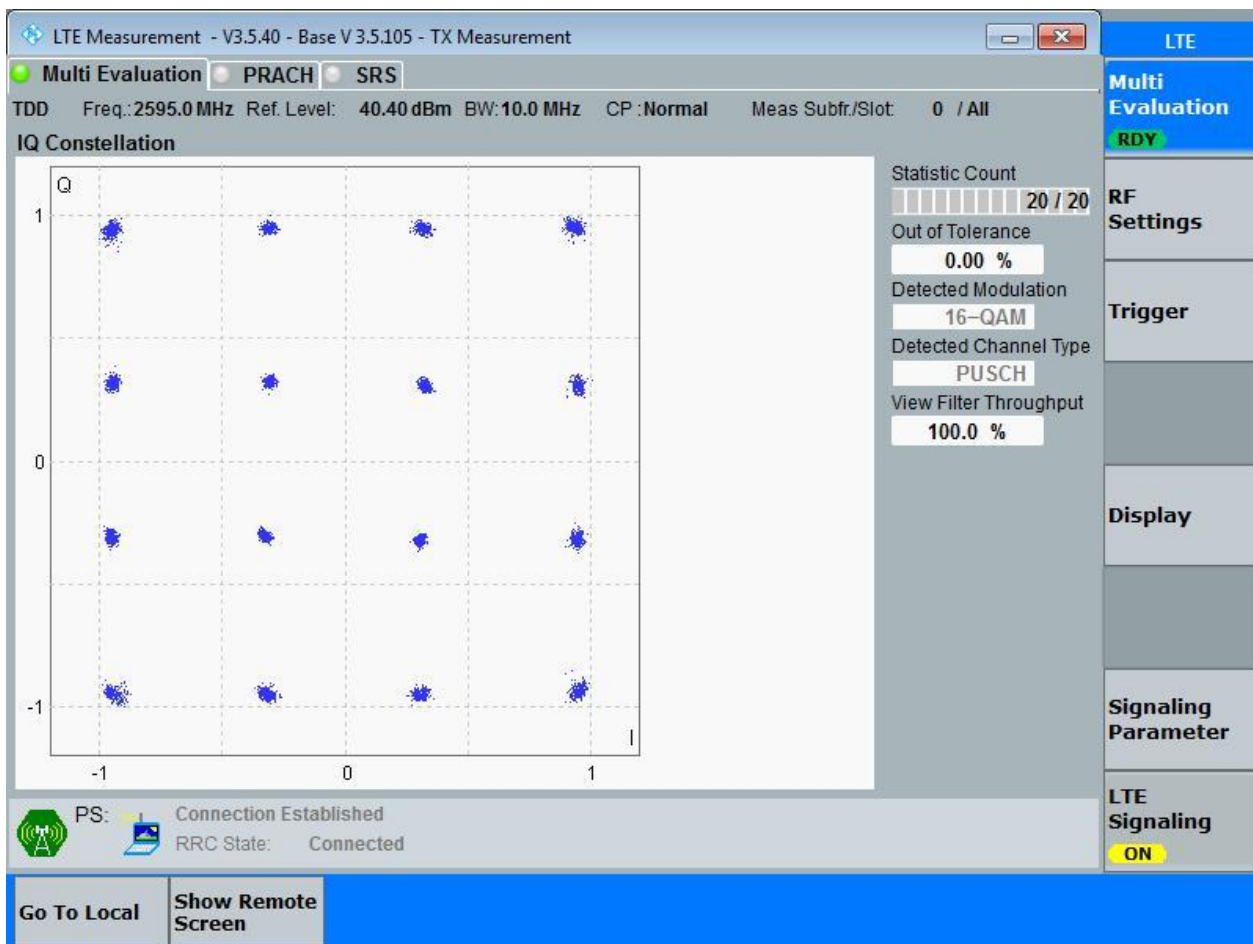
3.1.1.2.1.1.1 Test RB = RB25#0



3.1.1.2.2 Test Bandwidth = 10

3.1.1.2.2.1 Test Channel = MCH

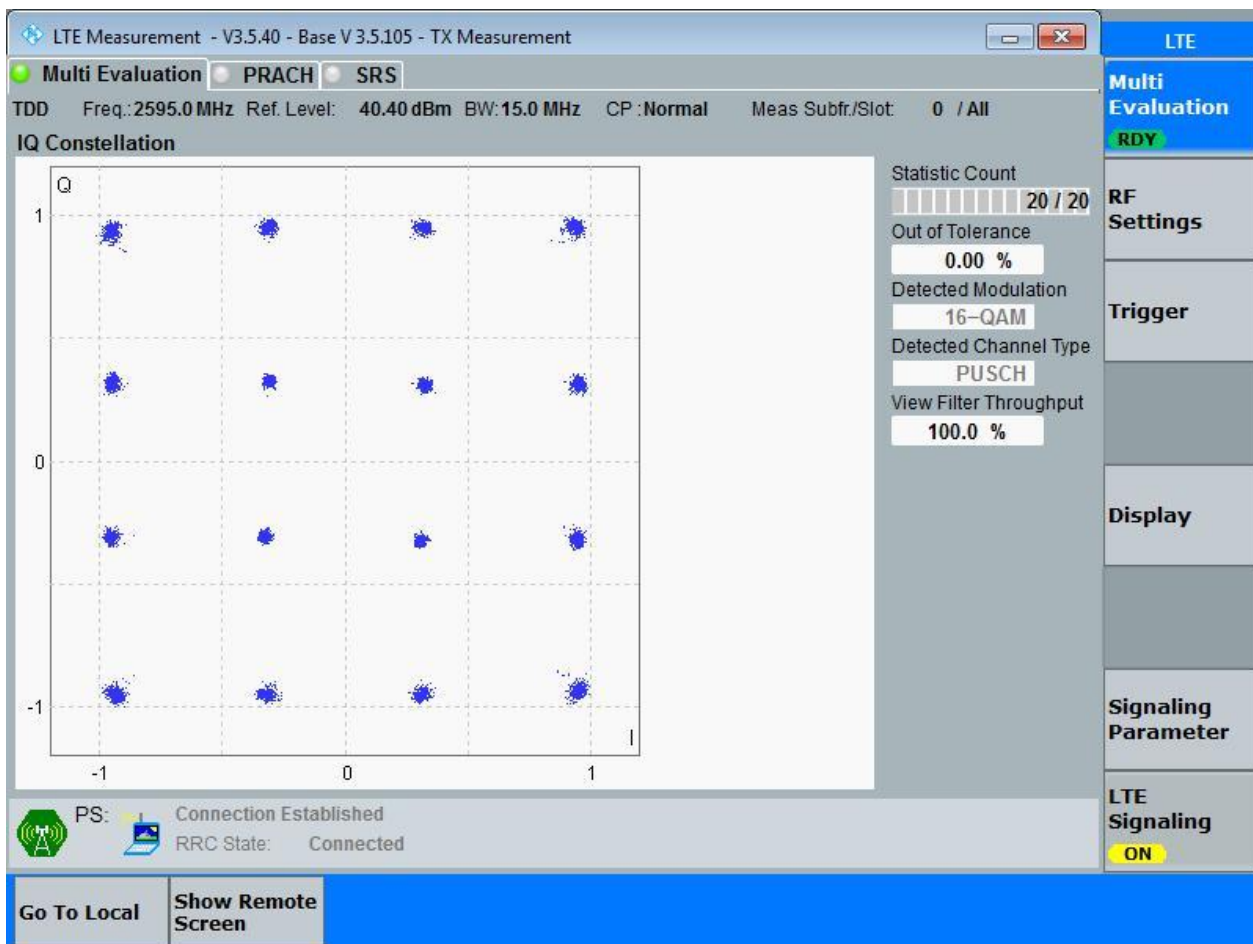
3.1.1.2.2.1.1 Test RB = RB50#0



3.1.1.2.3 Test Bandwidth = 15

3.1.1.2.3.1 Test Channel = MCH

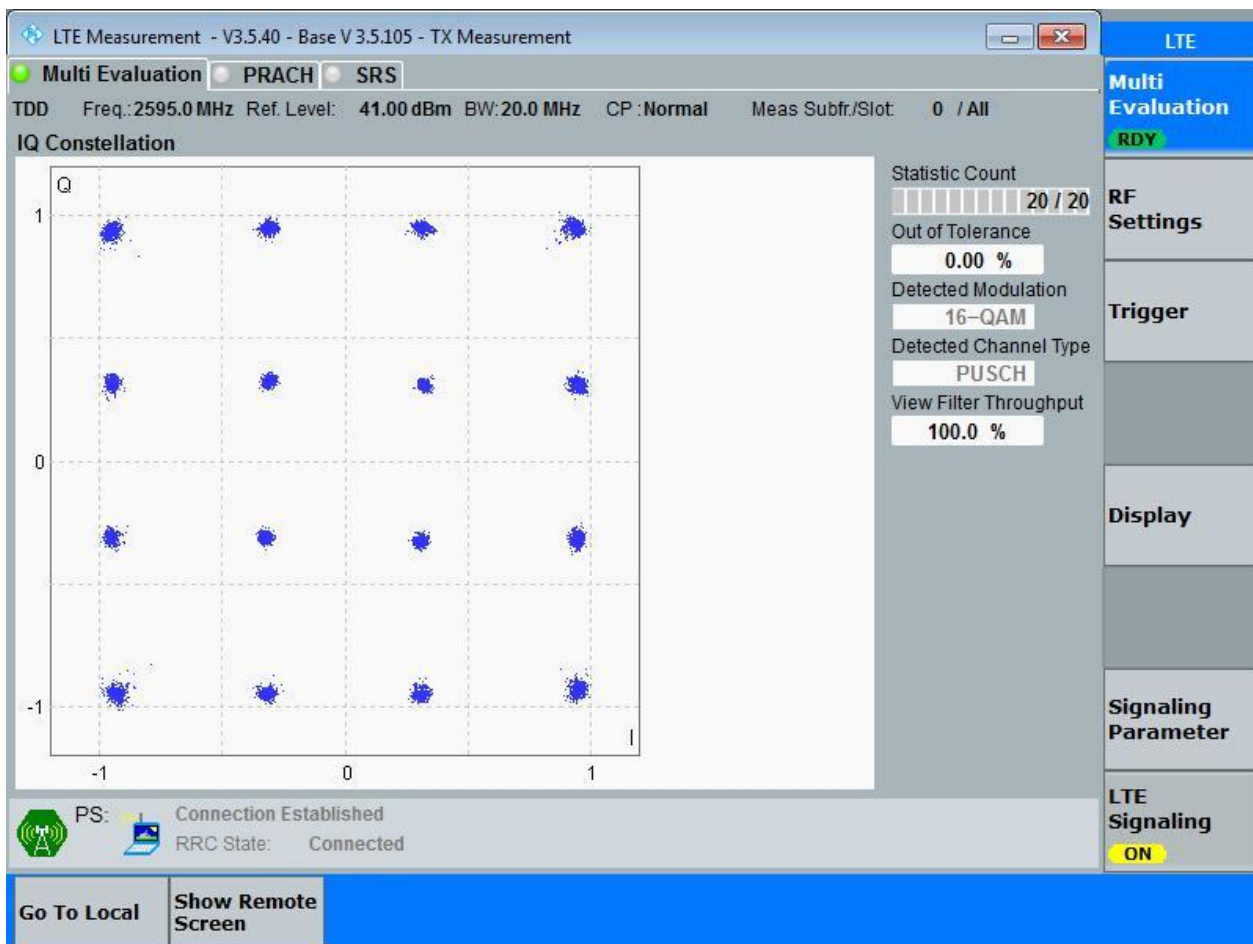
3.1.1.2.3.1.1 Test RB = RB75#0



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	4.84	Pass
			MCH	RB25#0	4.49	4.84	Pass
			HCH	RB25#0	4.50	4.88	Pass
		10	LCH	RB50#0	8.99	9.64	Pass
			MCH	RB50#0	8.99	9.61	Pass
			HCH	RB50#0	9.00	9.58	Pass
		15	LCH	RB75#0	13.46	14.39	Pass
			MCH	RB75#0	13.47	14.28	Pass
			HCH	RB75#0	13.47	14.34	Pass
		20	LCH	RB100#0	17.97	20.05	Pass
			MCH	RB100#0	18.02	20.14	Pass
			HCH	RB100#0	17.91	19.79	Pass
	LTE/TM2	5	LCH	RB25#0	4.50	4.86	Pass
			MCH	RB25#0	4.49	4.84	Pass
			HCH	RB25#0	4.50	4.87	Pass
		10	LCH	RB50#0	8.99	9.60	Pass
			MCH	RB50#0	9.00	9.62	Pass
			HCH	RB50#0	8.98	9.62	Pass
		15	LCH	RB75#0	13.48	14.40	Pass
			MCH	RB75#0	13.47	14.31	Pass
			HCH	RB75#0	13.46	14.33	Pass
		20	LCH	RB100#0	17.97	19.09	Pass
			MCH	RB100#0	17.96	19.04	Pass
			HCH	RB100#0	17.95	19.03	Pass



Part II - Test Plots

4.1 For LTE

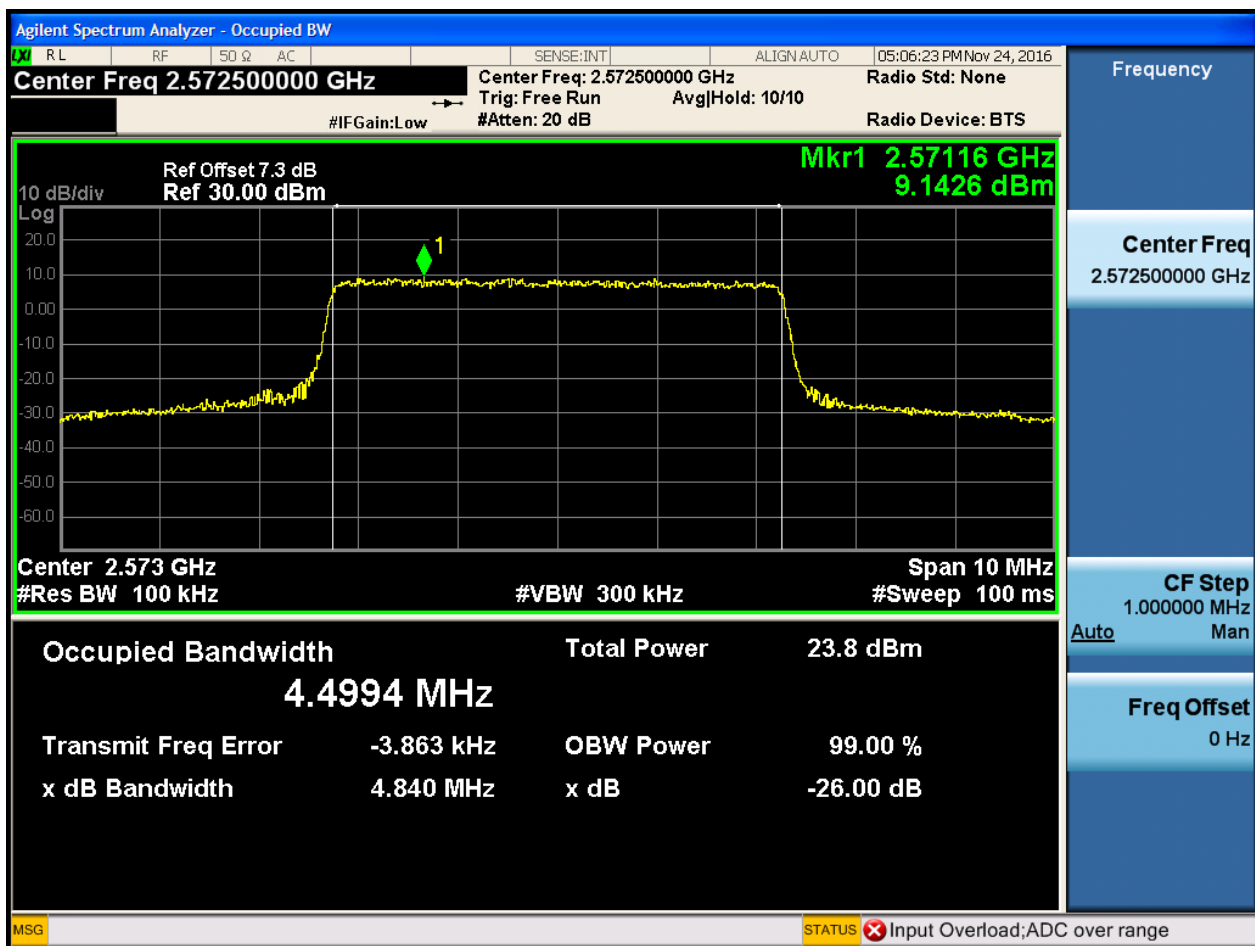
4.1.1 Test Band = BAND38

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

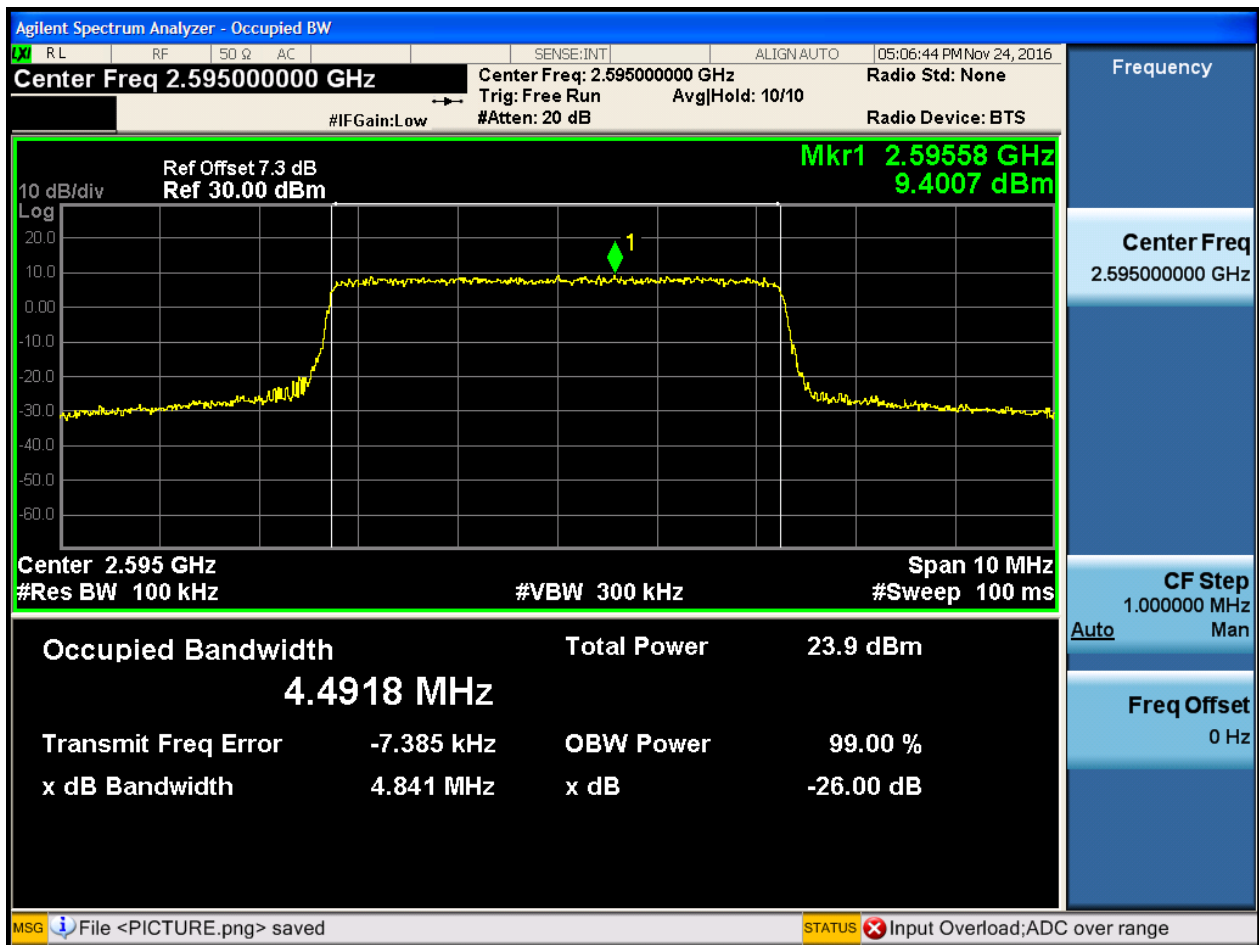
4.1.1.1.1.1.1 Test RB = RB25#0





4.1.1.1.1.2 Test Channel = MCH

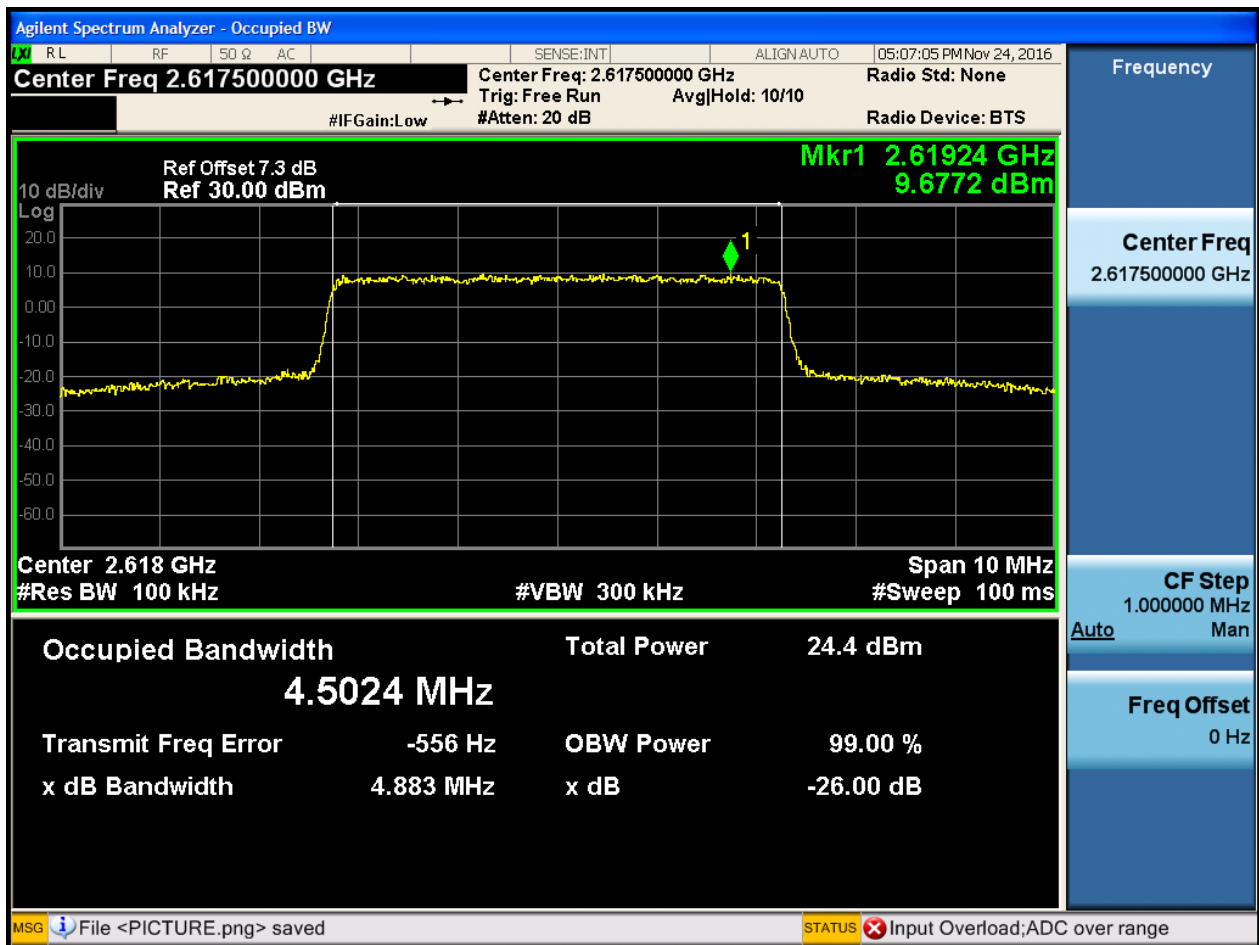
4.1.1.1.1.2.1 Test RB = RB25#0





4.1.1.1.1.3 Test Channel = HCH

4.1.1.1.1.3.1 Test RB = RB25#0

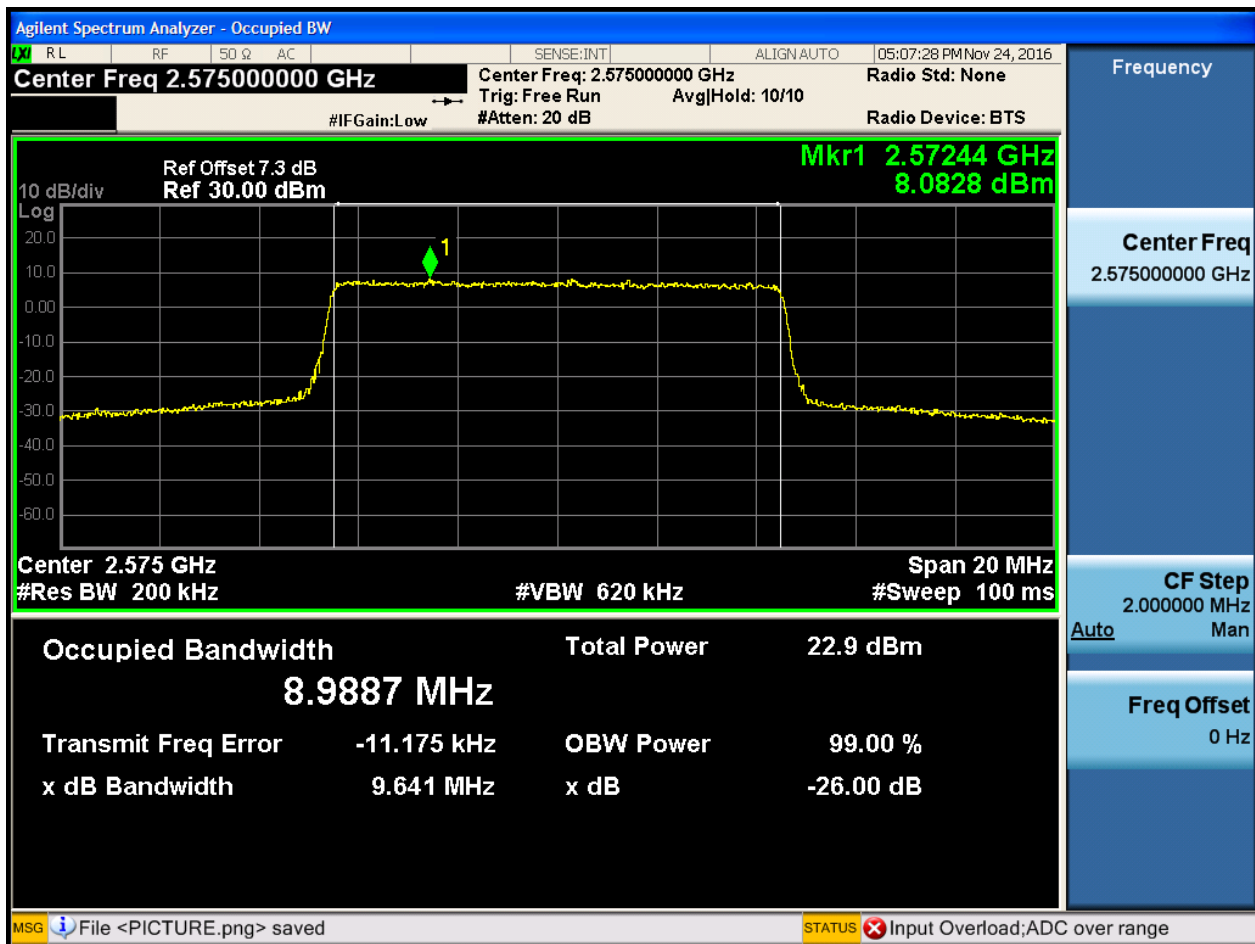




4.1.1.1.2 Test Bandwidth = 10

4.1.1.1.2.1 Test Channel = LCH

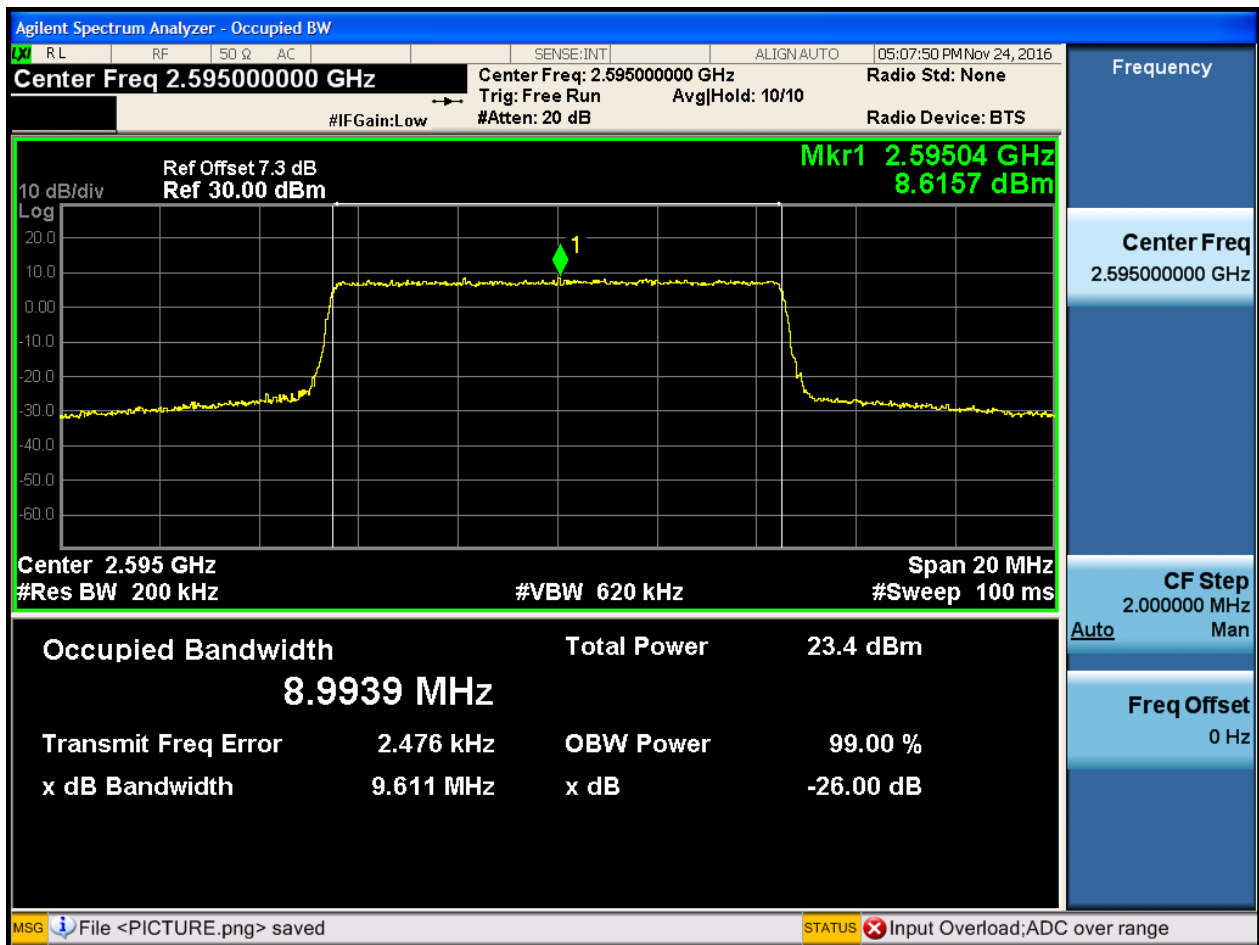
4.1.1.1.2.1.1 Test RB = RB50#0





4.1.1.1.2.2 Test Channel = MCH

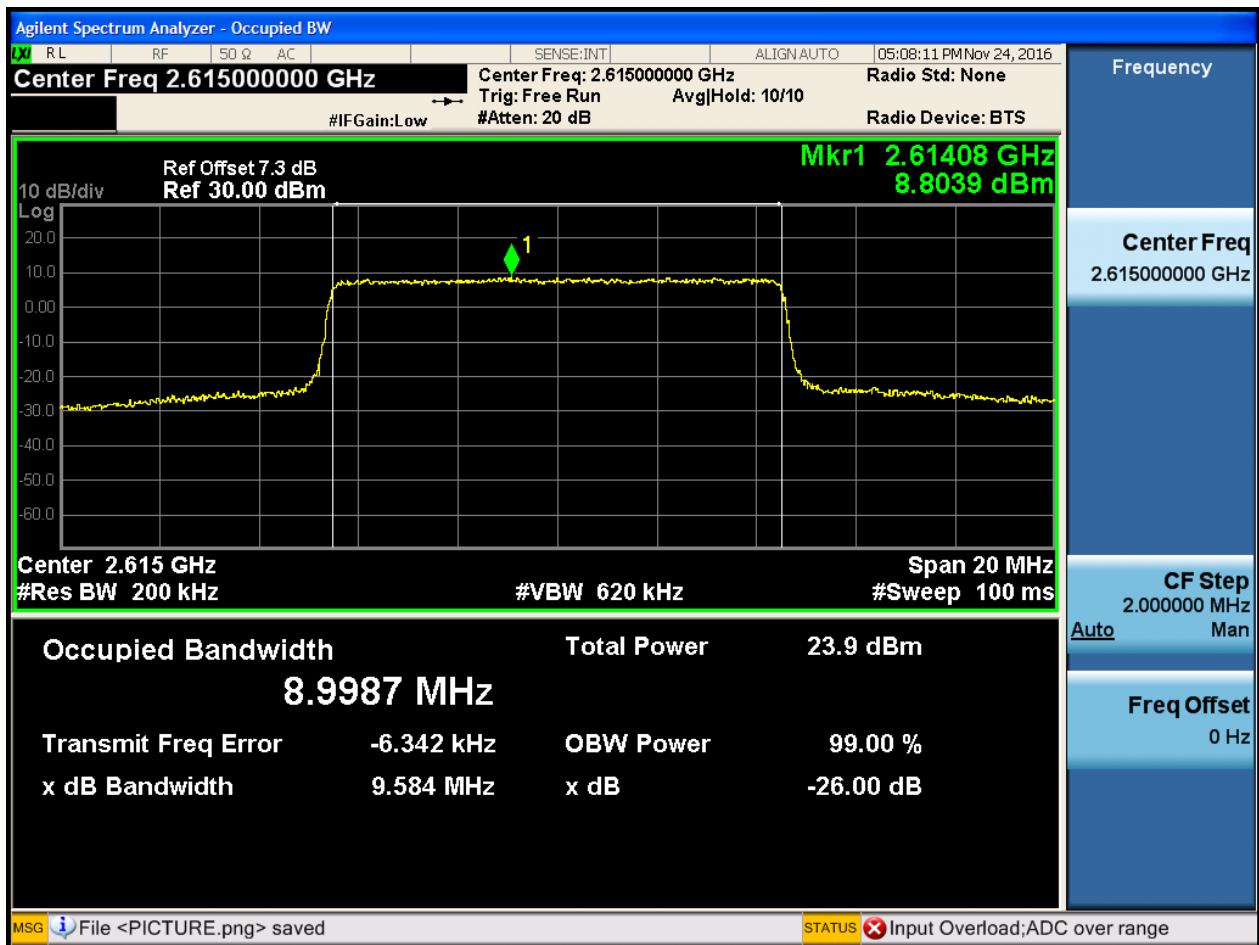
4.1.1.1.2.2.1 Test RB = RB50#0





4.1.1.1.2.3 Test Channel = HCH

4.1.1.1.2.3.1 Test RB = RB50#0

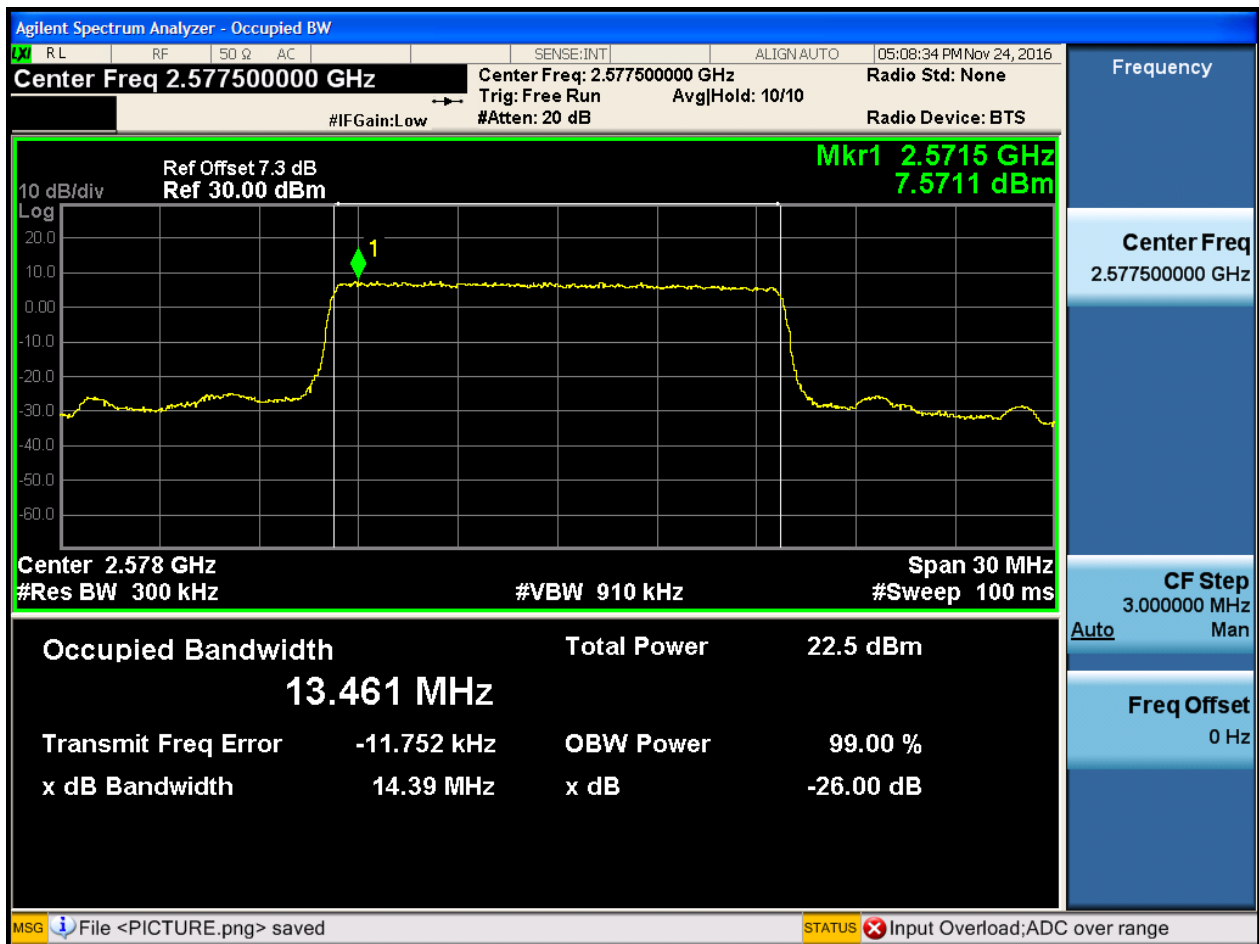




4.1.1.1.3 Test Bandwidth = 15

4.1.1.1.3.1 Test Channel = LCH

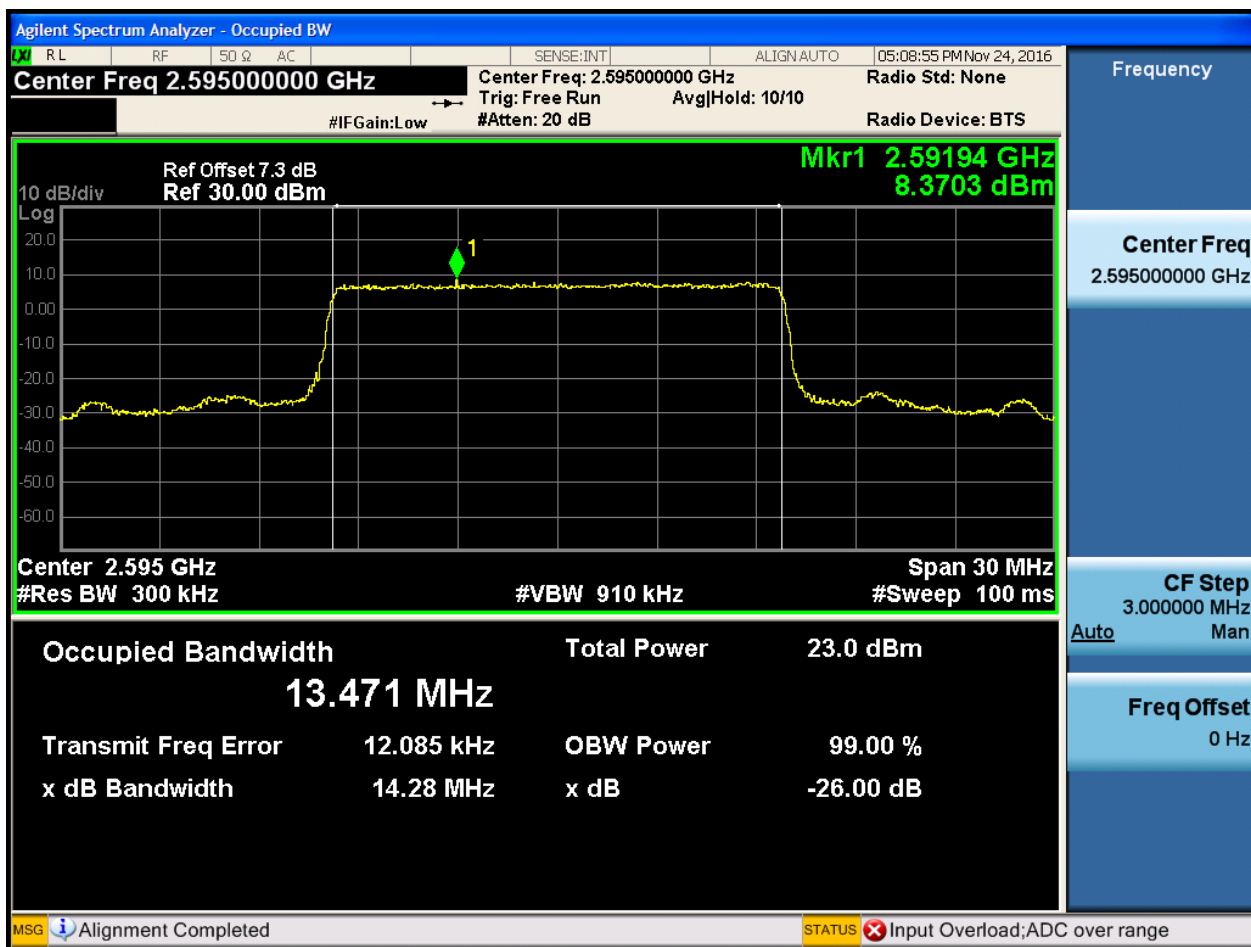
4.1.1.1.3.1.1 Test RB = RB75#0





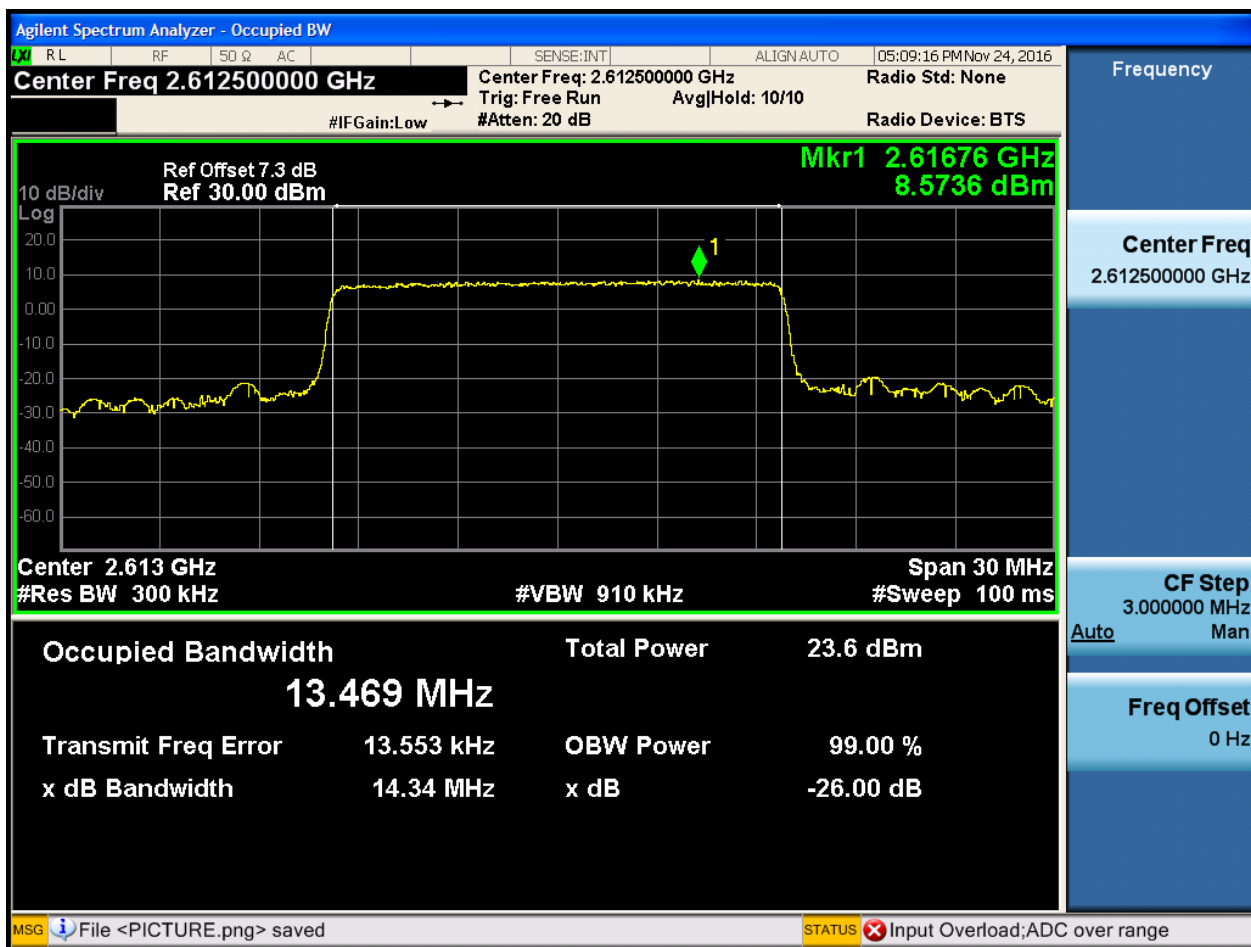
4.1.1.1.3.2 Test Channel = MCH

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

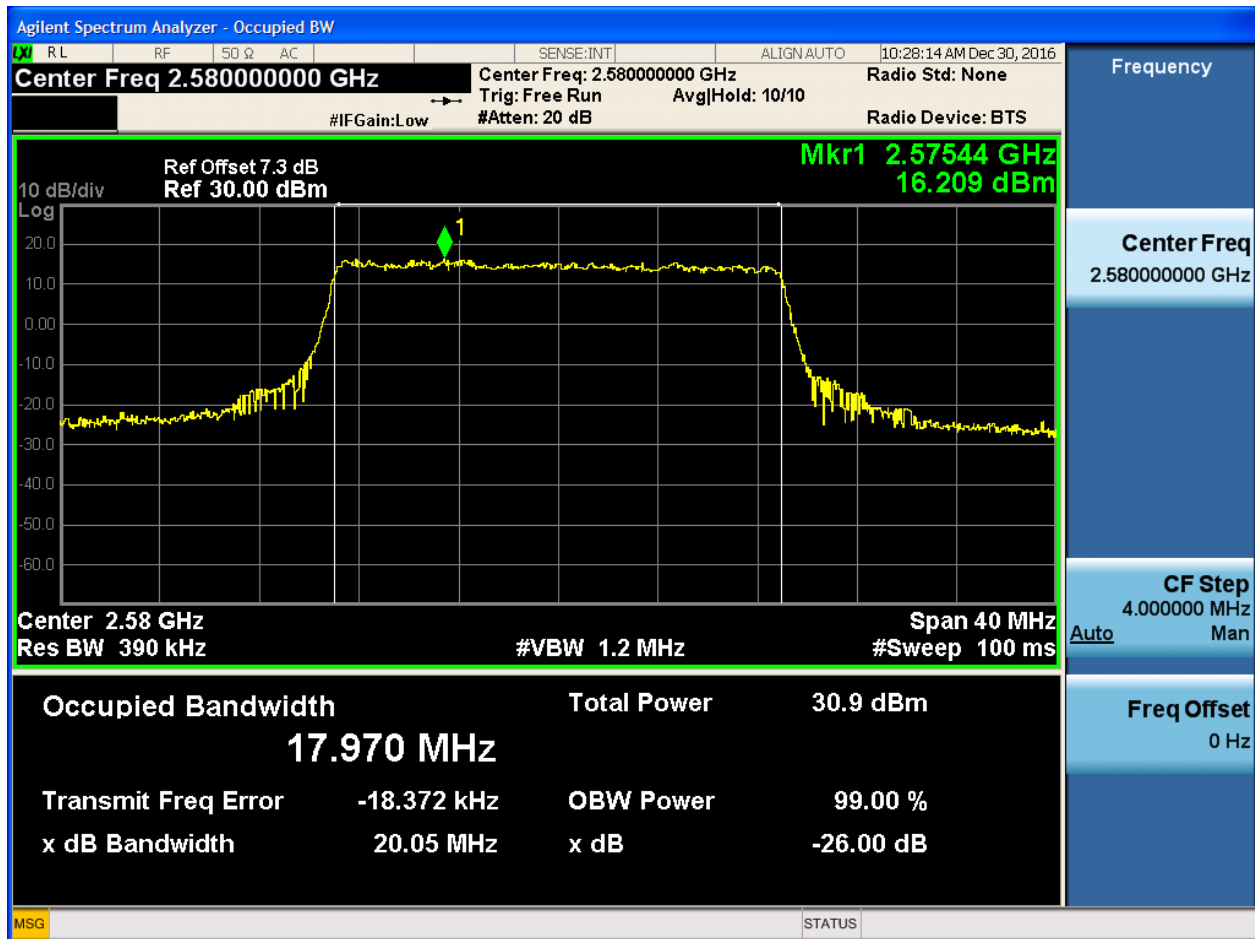




4.1.1.1.4 Test Bandwidth = 20

4.1.1.1.4.1 Test Channel = LCH

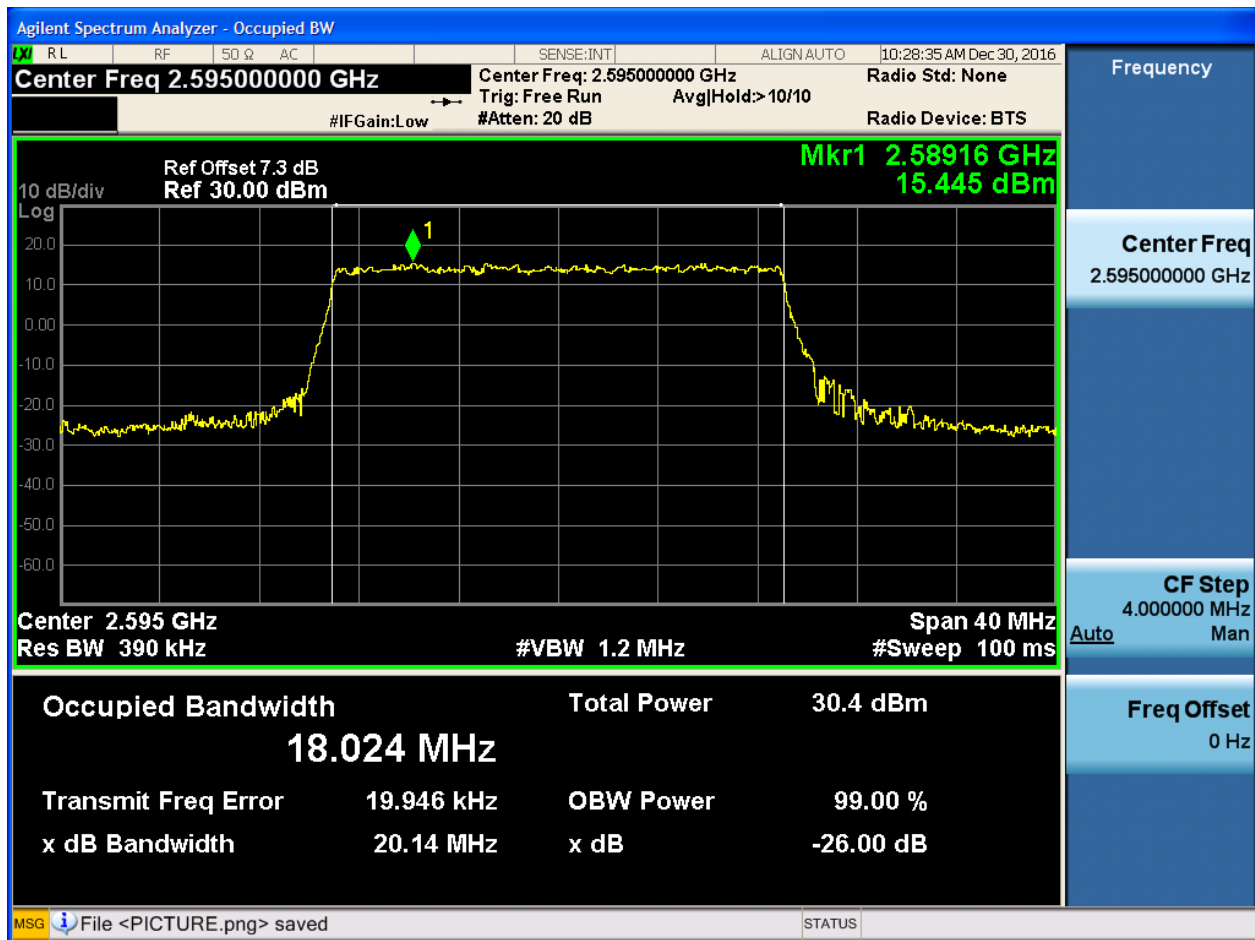
4.1.1.1.4.1.1 Test RB = RB100#0





4.1.1.1.4.2 Test Channel = MCH

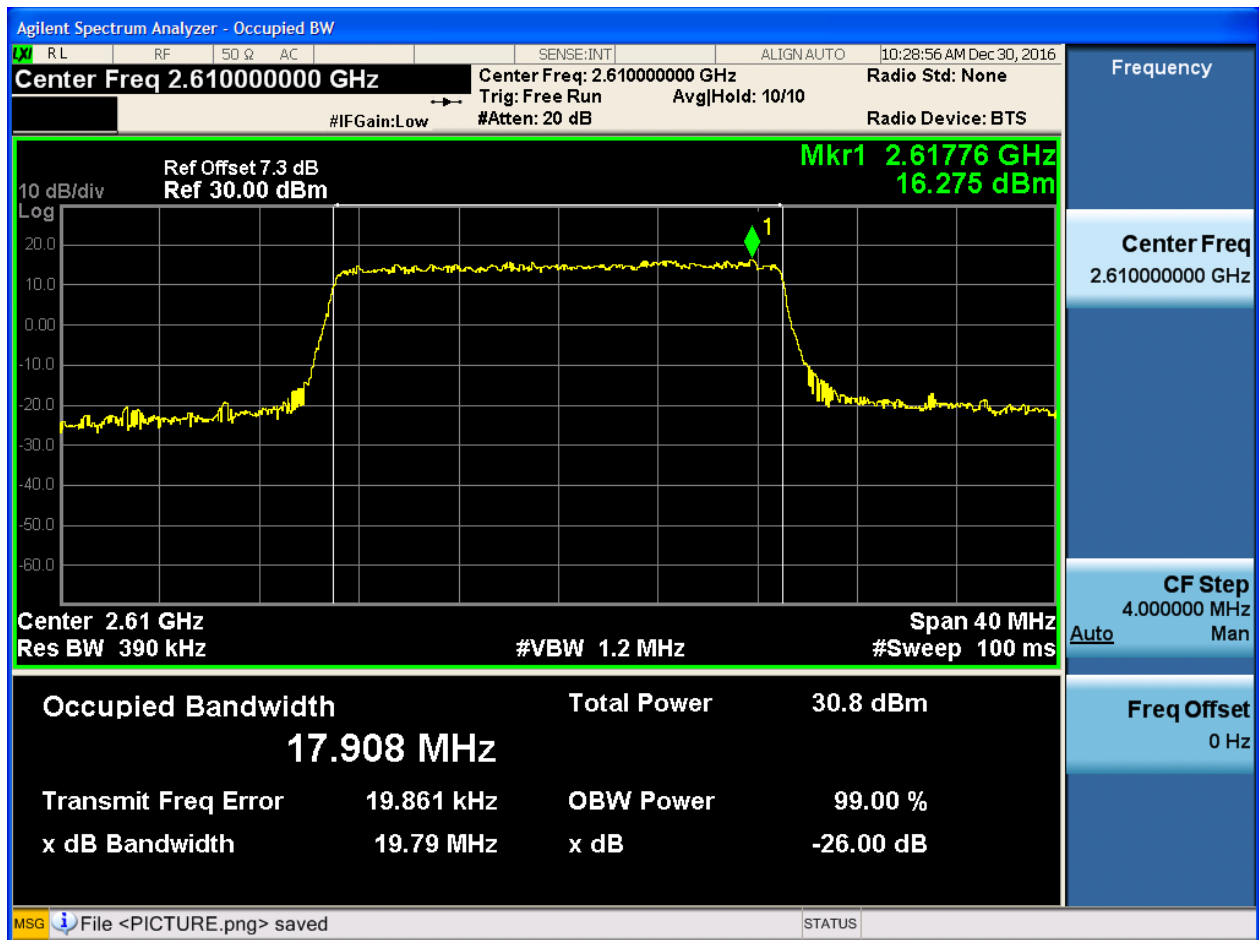
4.1.1.1.4.2.1 Test RB = RB100#0





4.1.1.1.4.3 Test Channel = HCH

4.1.1.1.4.3.1 Test RB = RB100#0



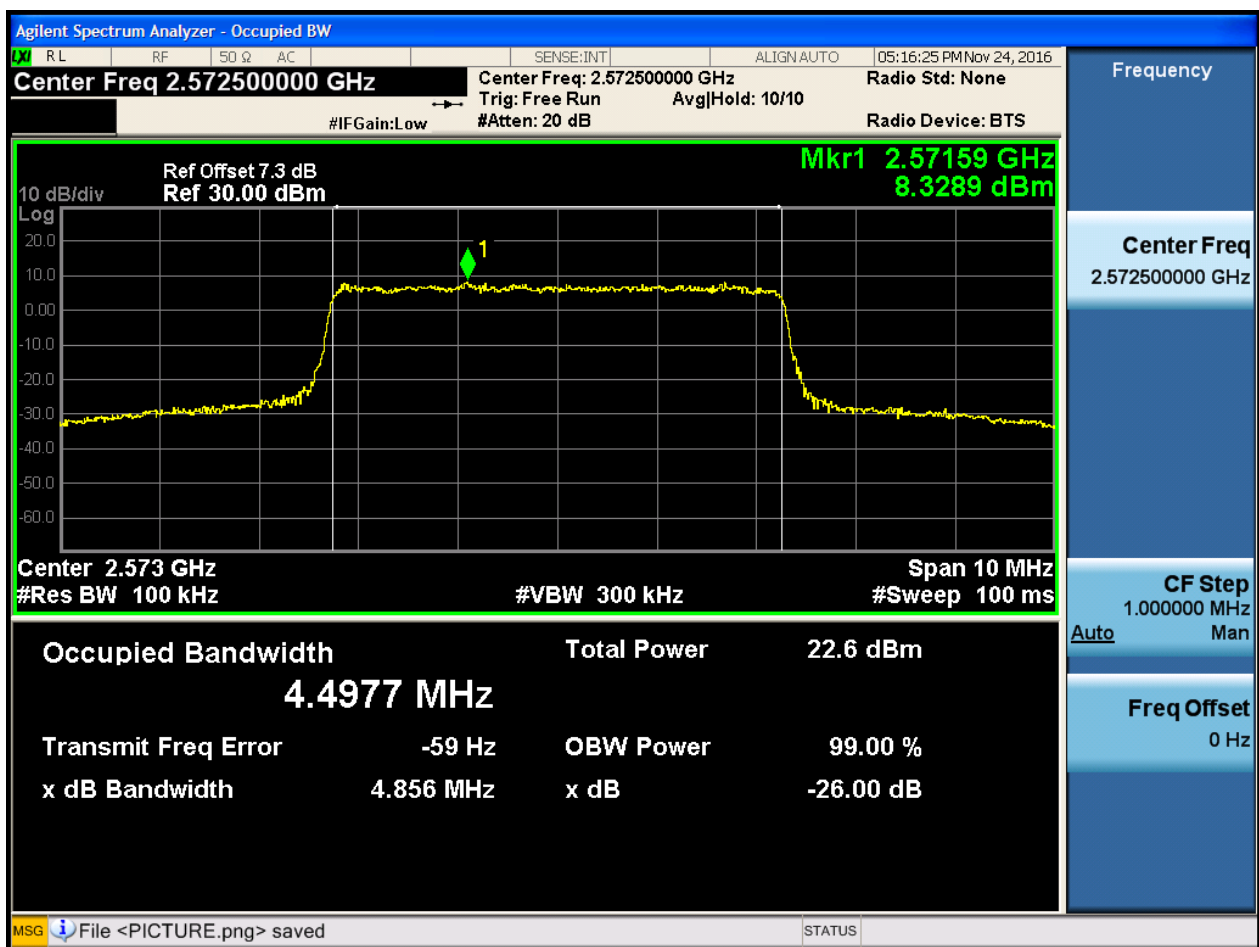


4.1.1.2 Test Mode = LTE/TM2

4.1.1.2.1 Test Bandwidth = 5

4.1.1.2.1.1 Test Channel = LCH

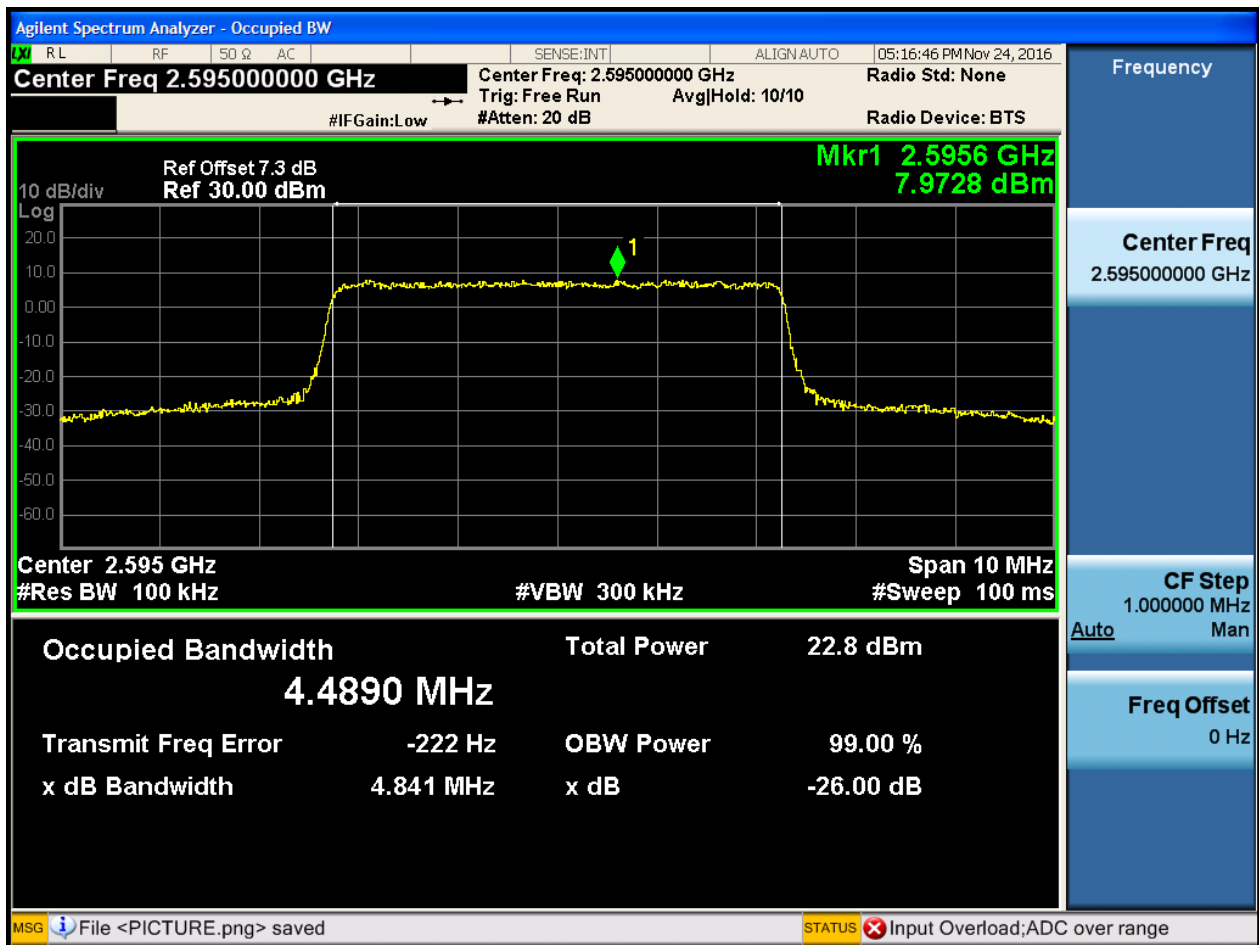
4.1.1.2.1.1.1 Test RB = RB25#0





4.1.1.2.1.2 Test Channel = MCH

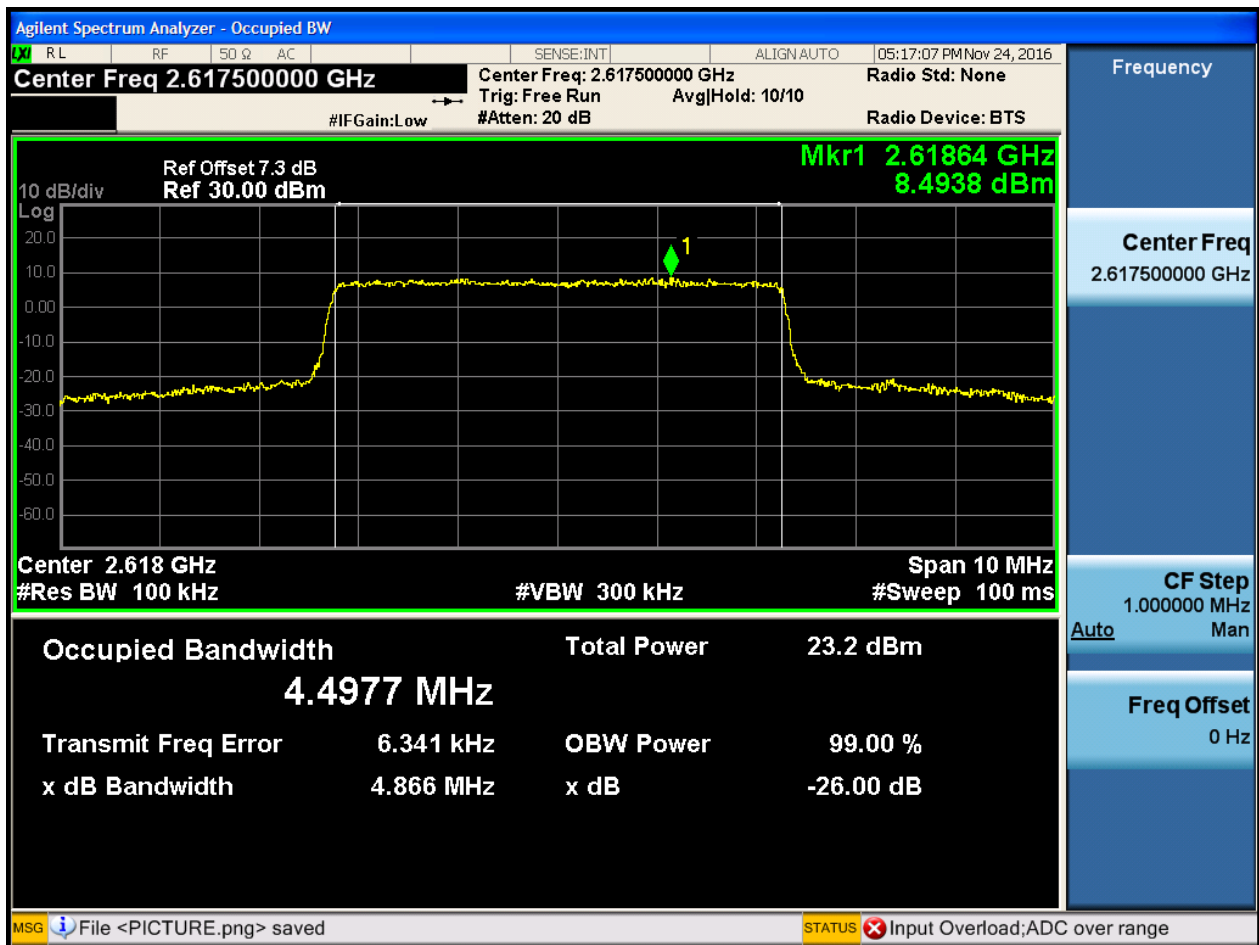
4.1.1.2.1.2.1 Test RB = RB25#0





4.1.1.2.1.3 Test Channel = HCH

4.1.1.2.1.3.1 Test RB = RB25#0

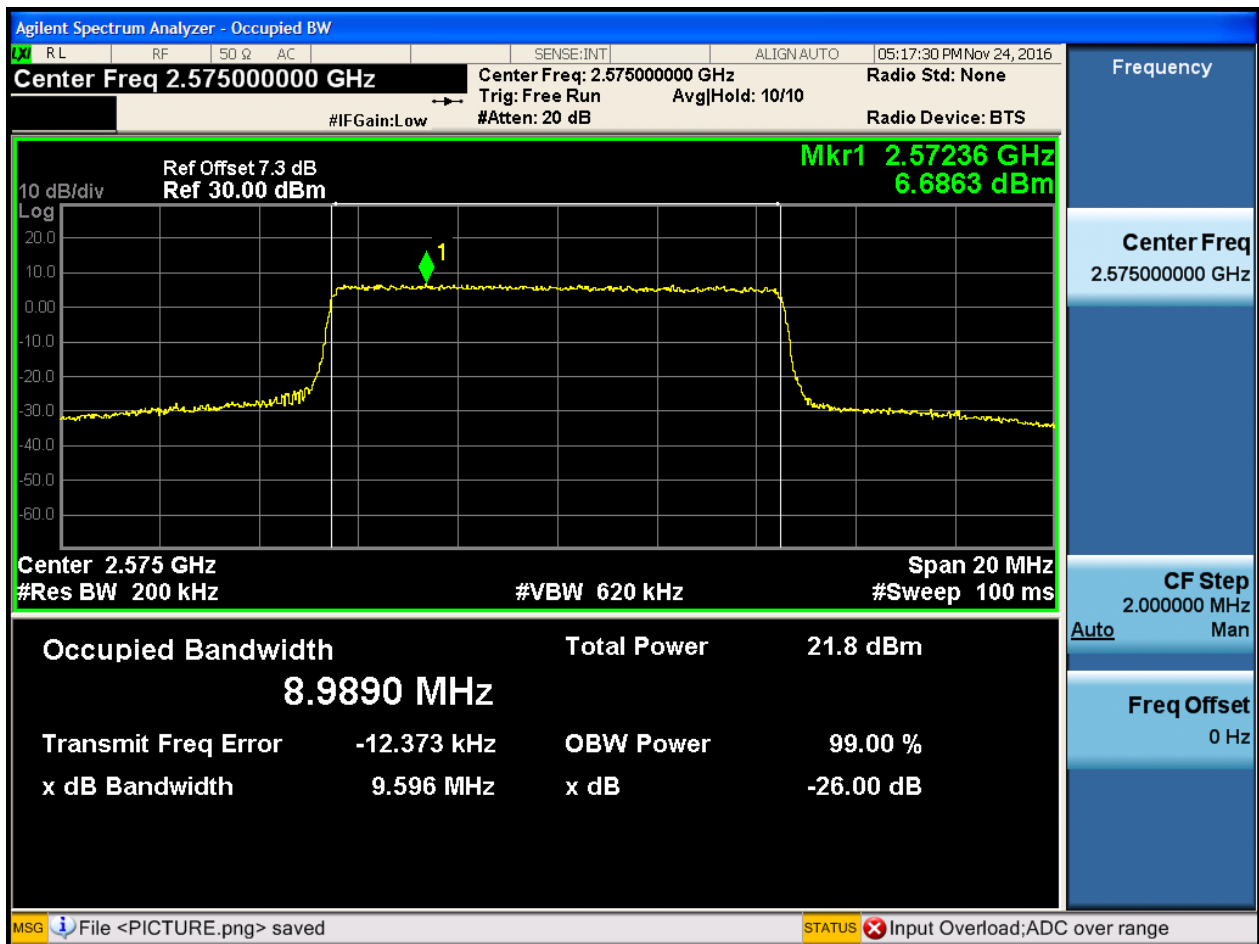




4.1.1.2.2 Test Bandwidth = 10

4.1.1.2.2.1 Test Channel = LCH

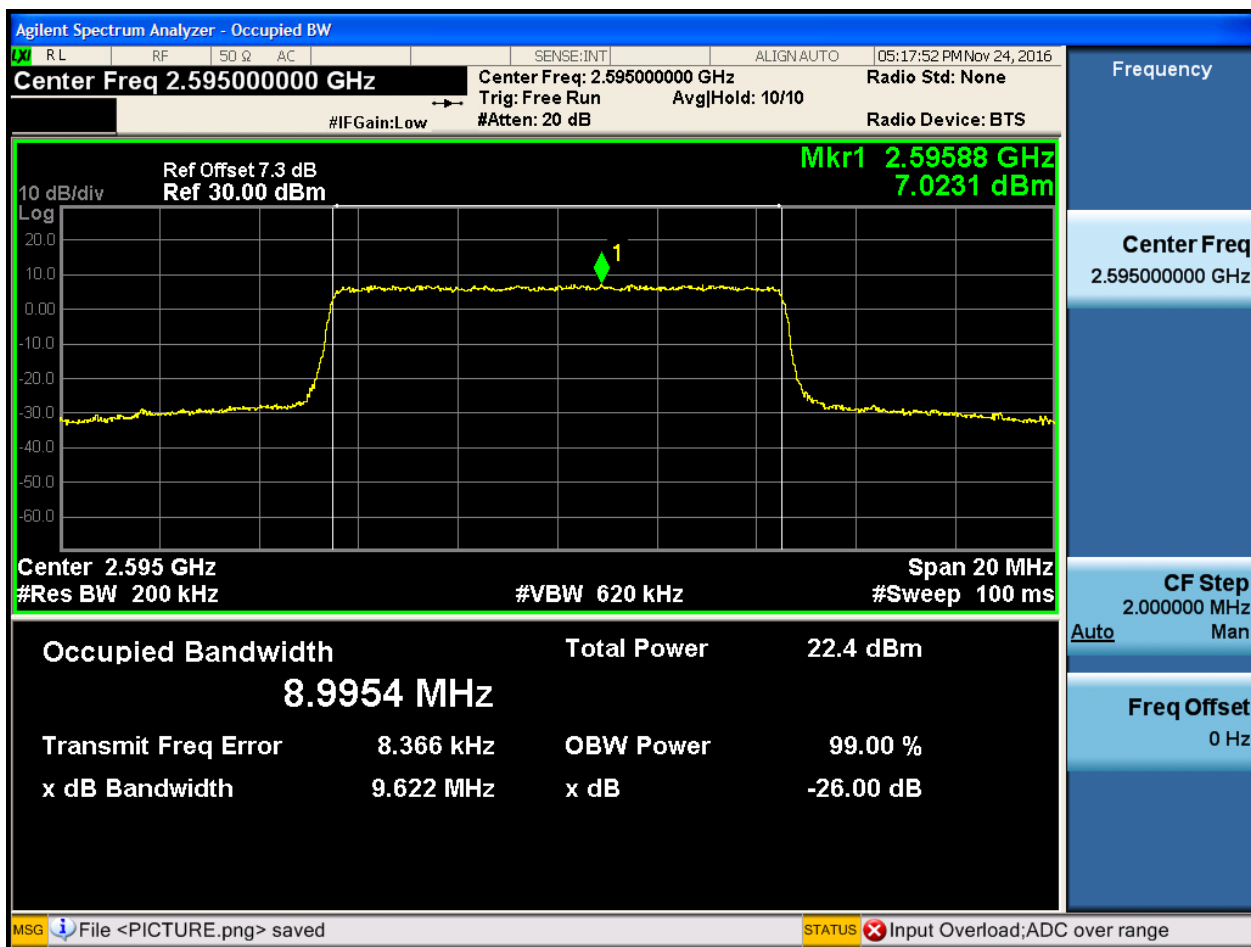
4.1.1.2.2.1.1 Test RB = RB50#0





4.1.1.2.2.2 Test Channel = MCH

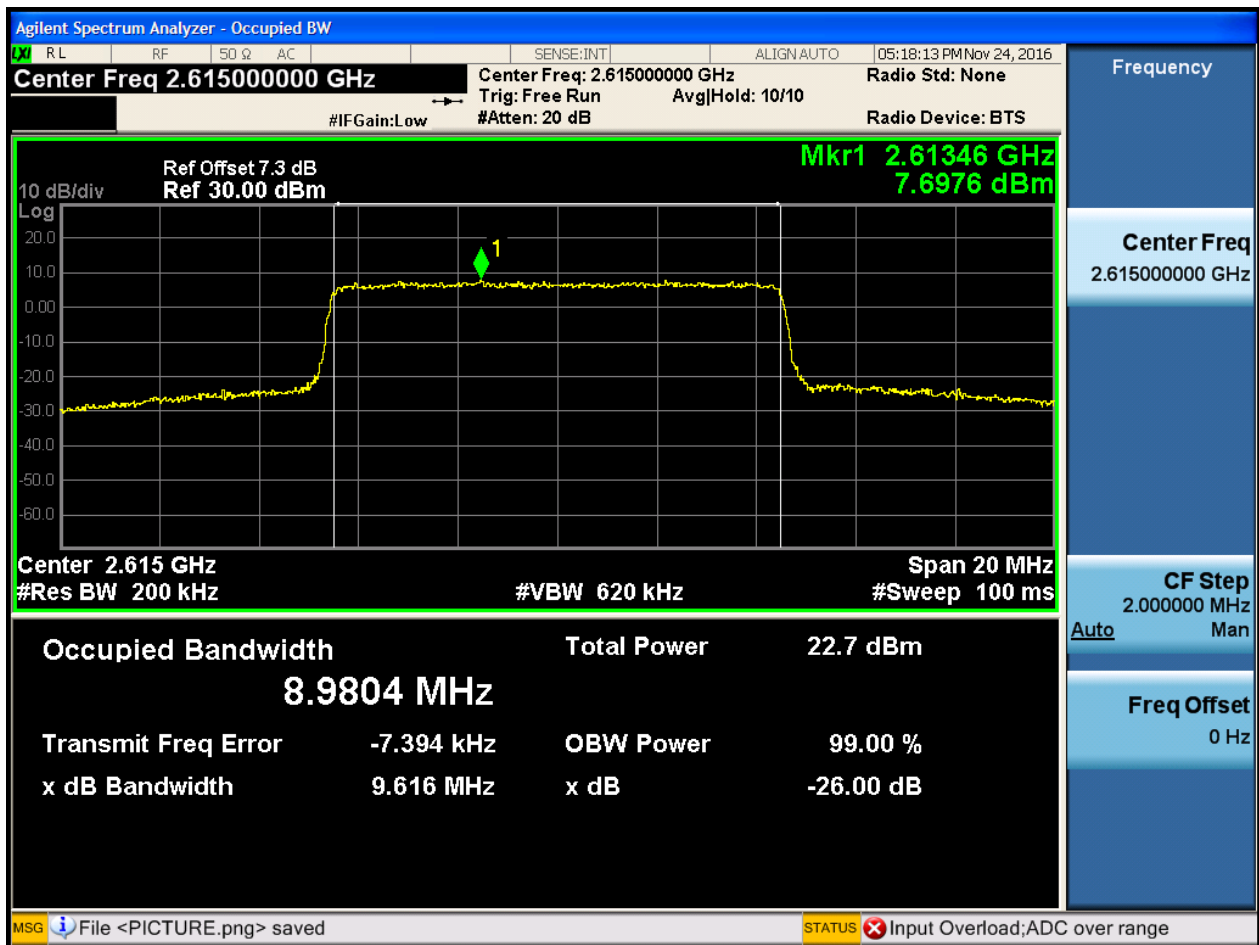
4.1.1.2.2.2.1 Test RB = RB50#0





4.1.1.2.2.3 Test Channel = HCH

4.1.1.2.2.3.1 Test RB = RB50#0

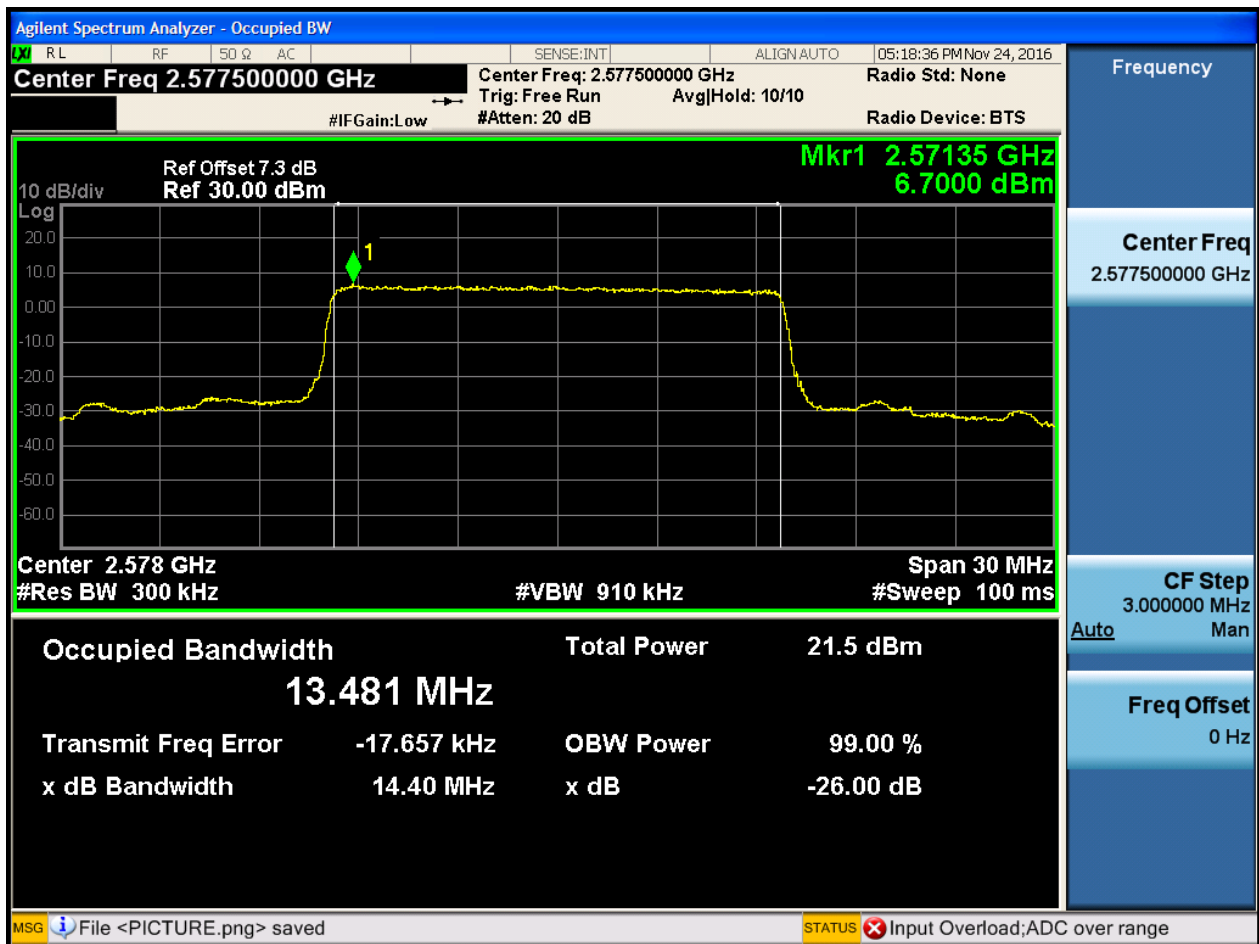




4.1.1.2.3 Test Bandwidth = 15

4.1.1.2.3.1 Test Channel = LCH

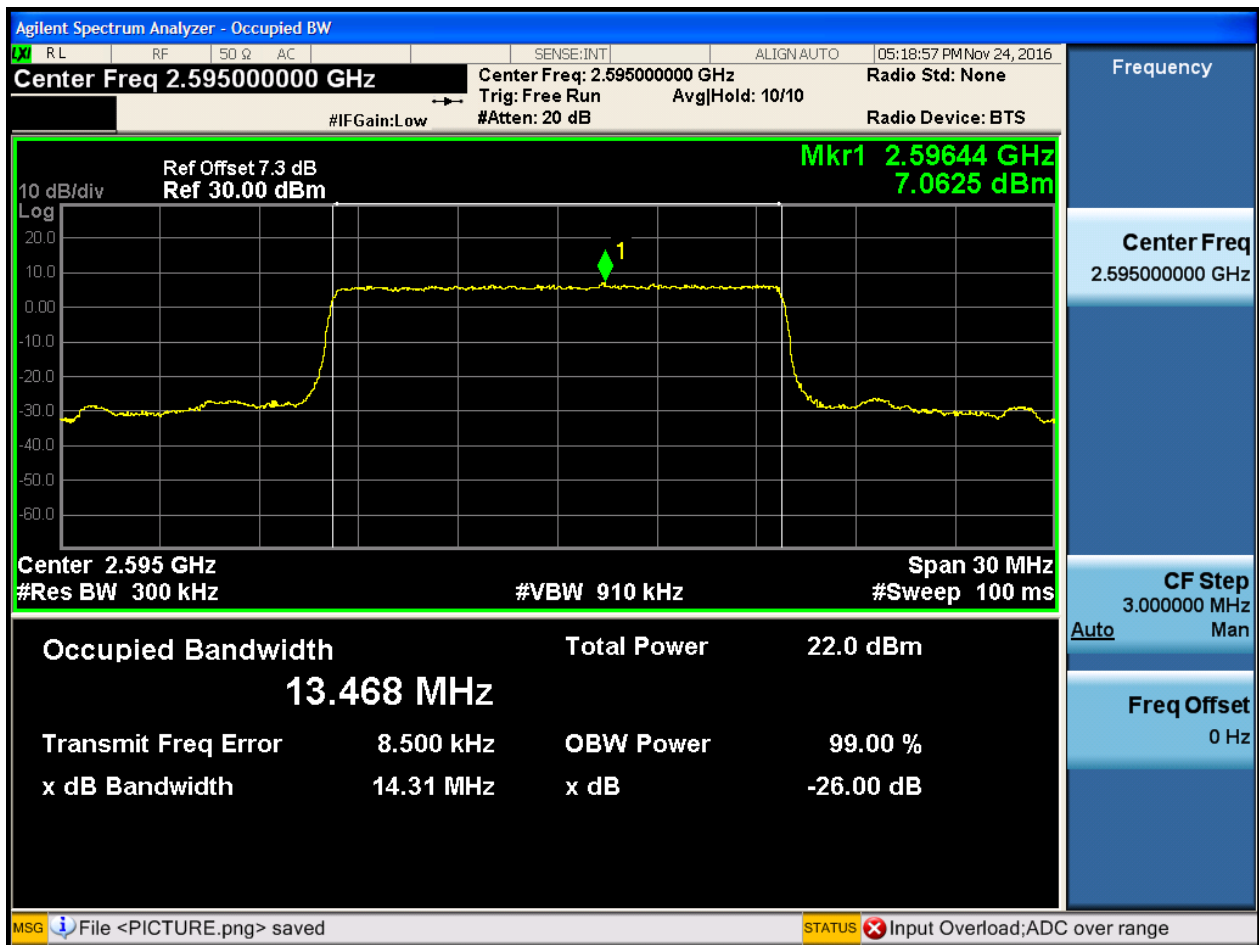
4.1.1.2.3.1.1 Test RB = RB75#0





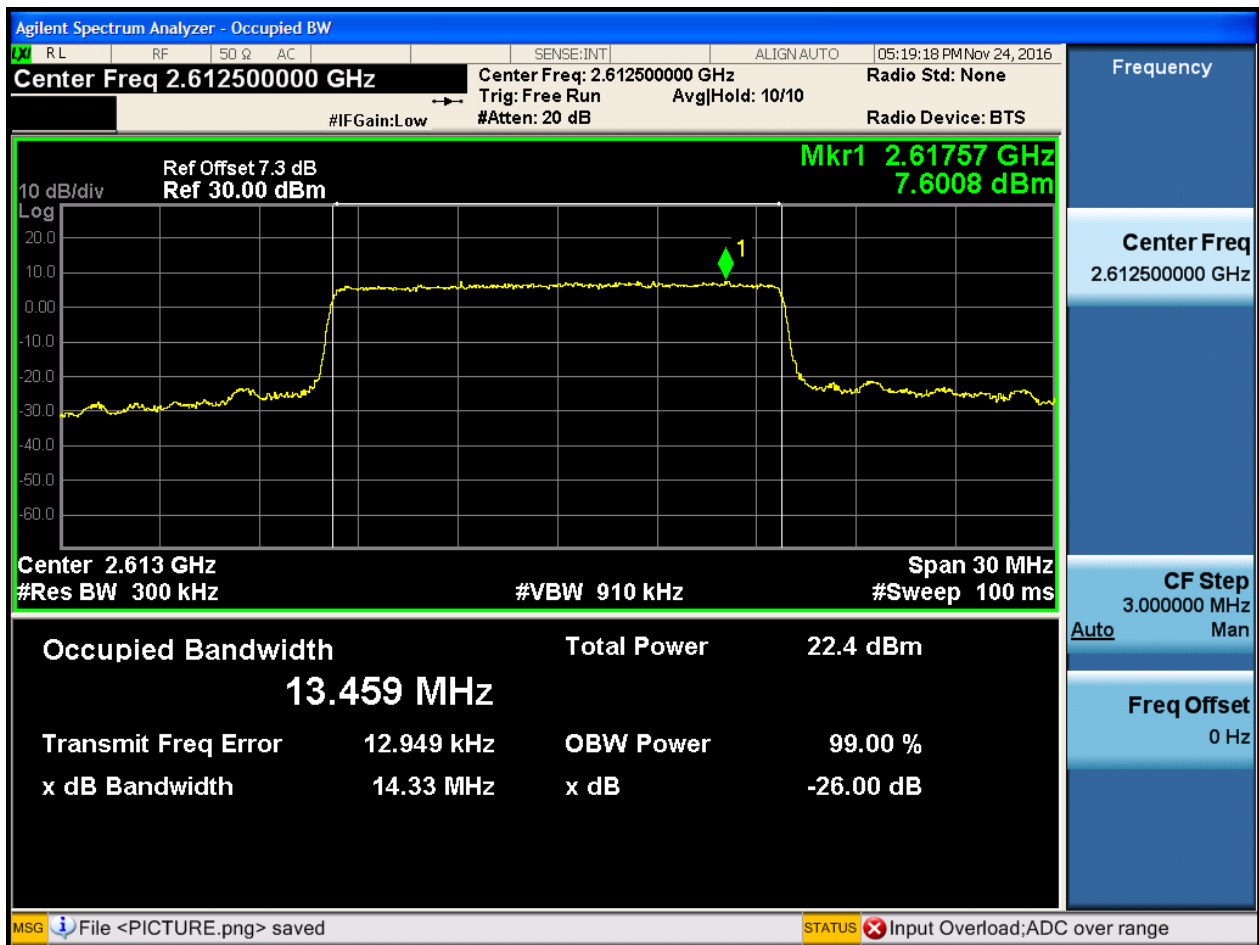
4.1.1.2.3.2 Test Channel = MCH

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

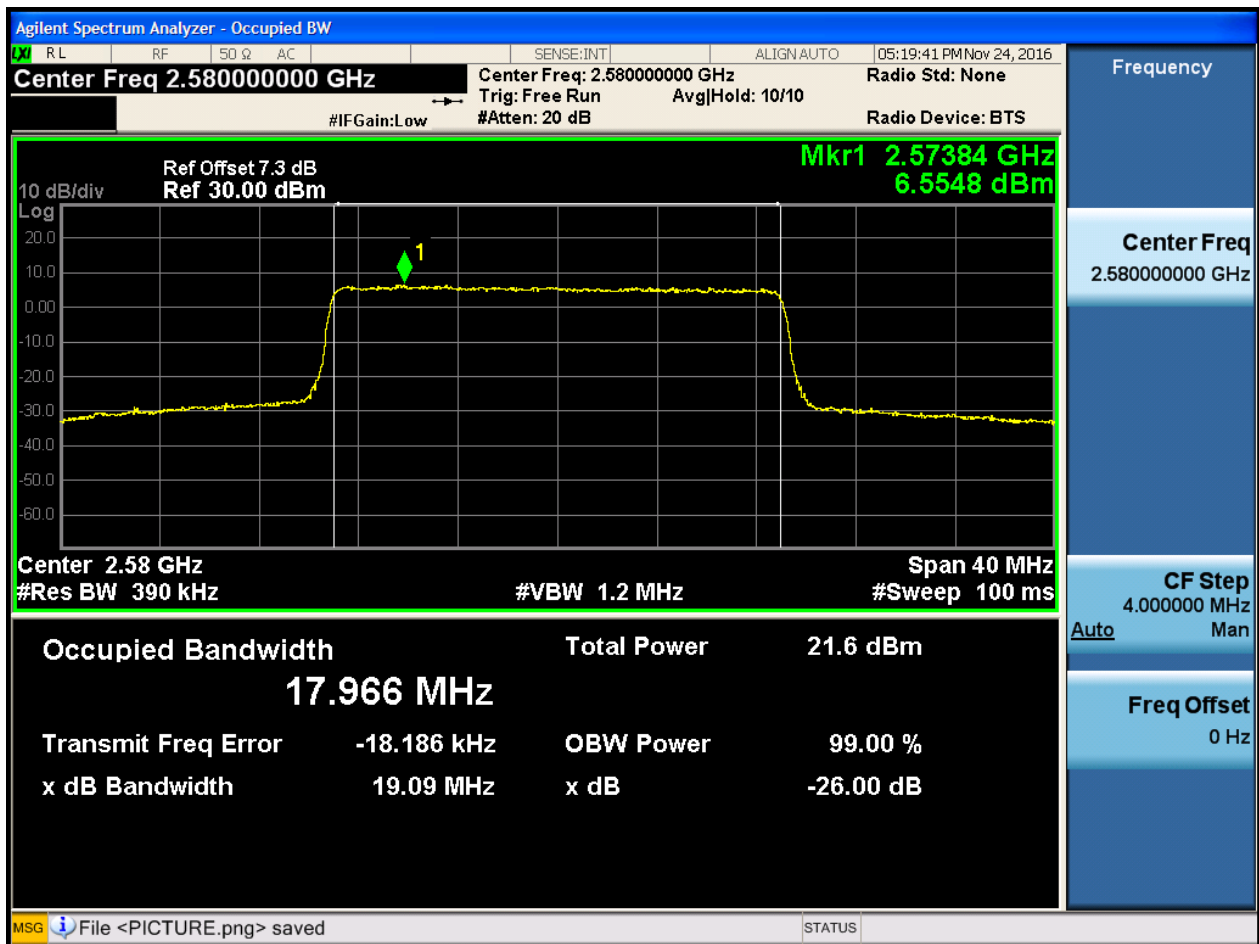




4.1.1.2.4 Test Bandwidth = 20

4.1.1.2.4.1 Test Channel = LCH

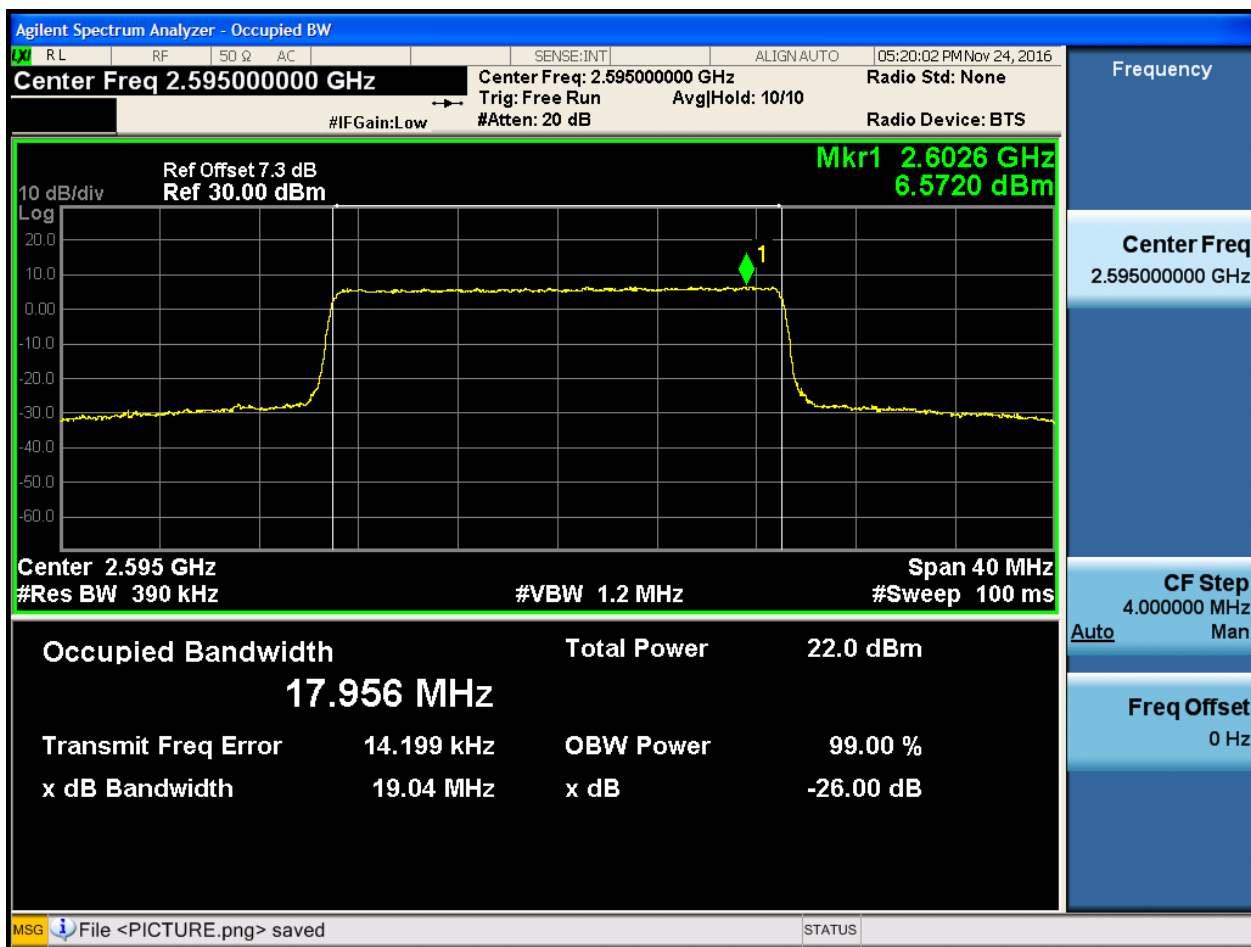
4.1.1.2.4.1.1 Test RB = RB100#0





4.1.1.2.4.2 Test Channel = MCH

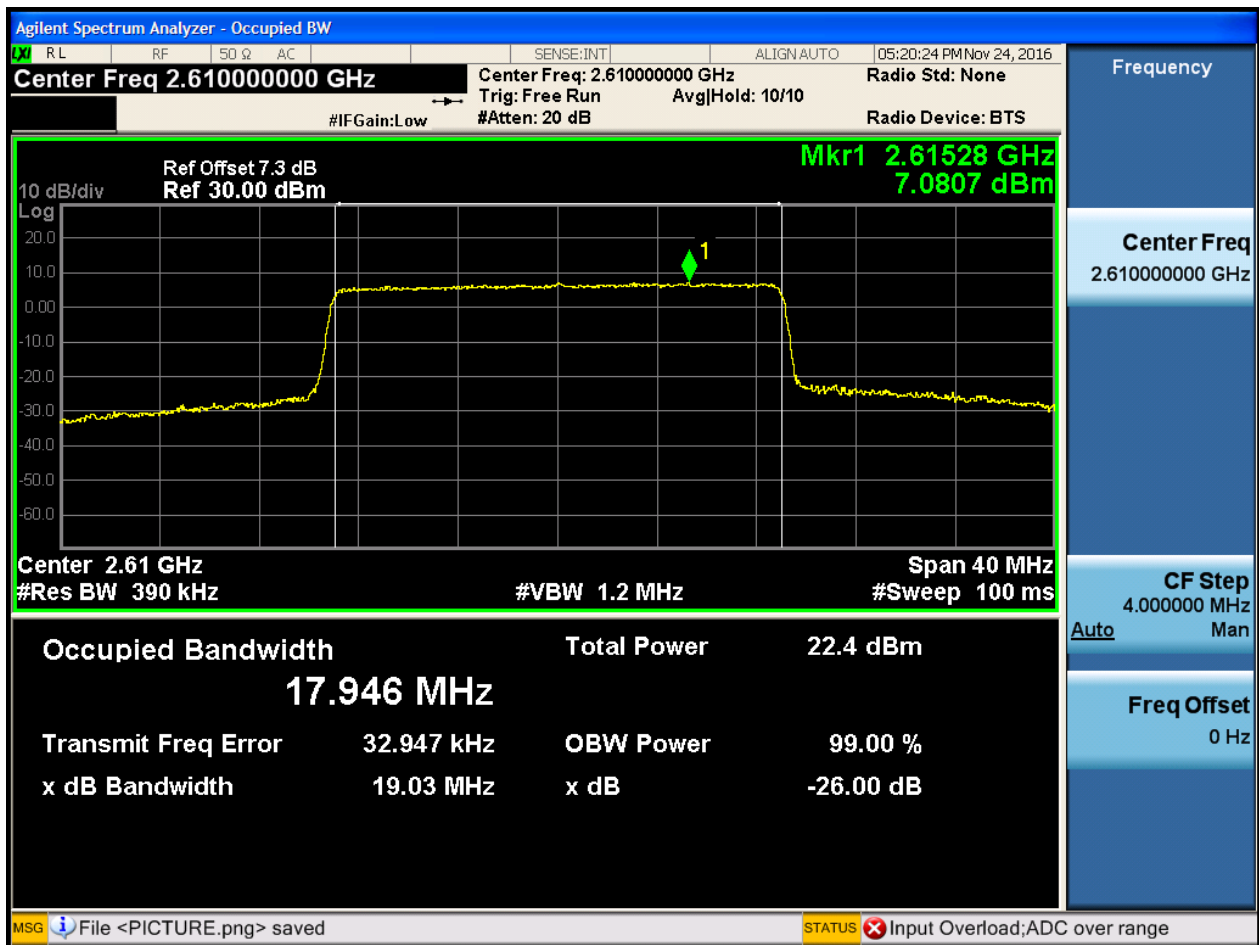
4.1.1.2.4.2.1 Test RB = RB100#0





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

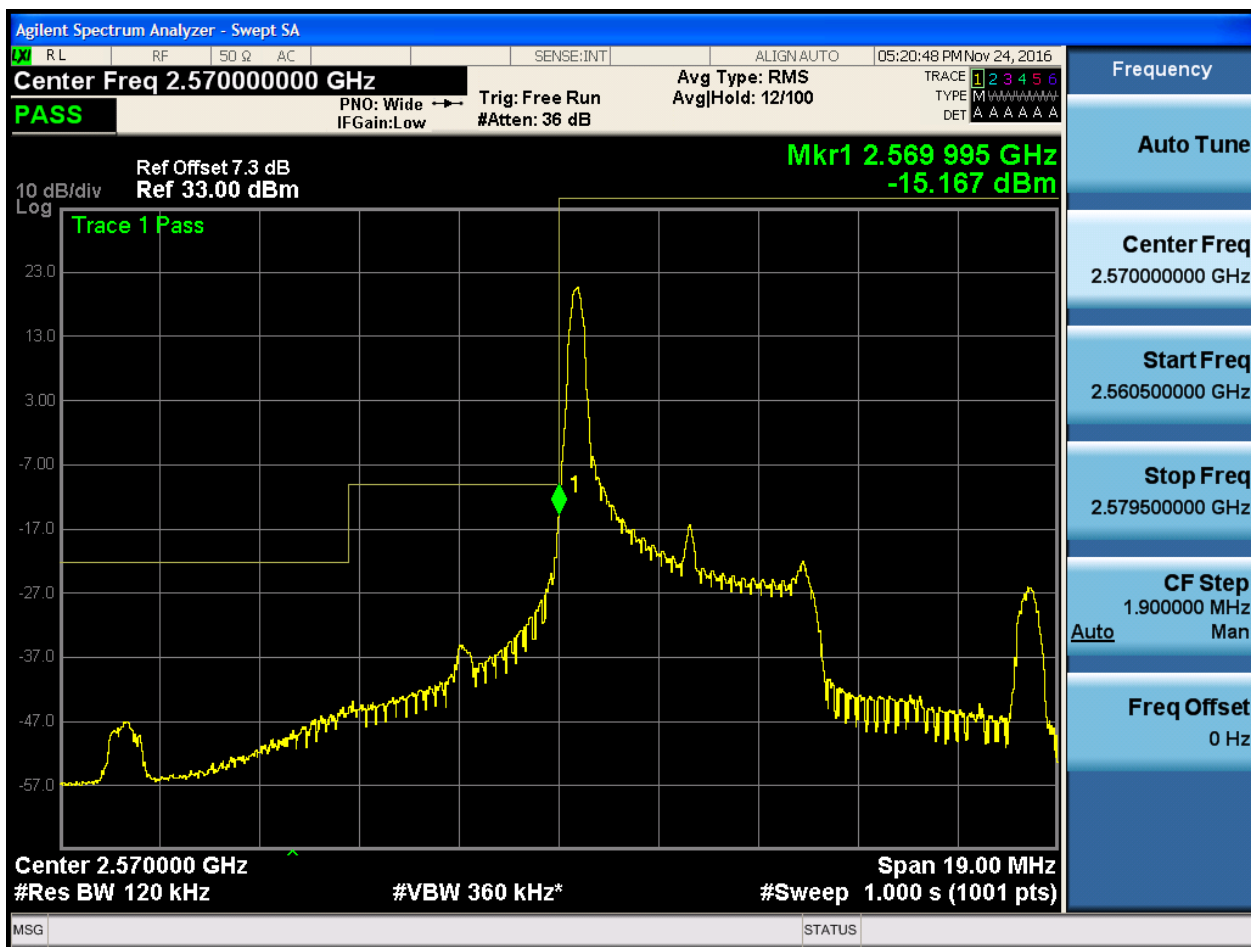
5.1.1 Test Band = BAND38

5.1.1.1 Test Mode = LTE/TM1

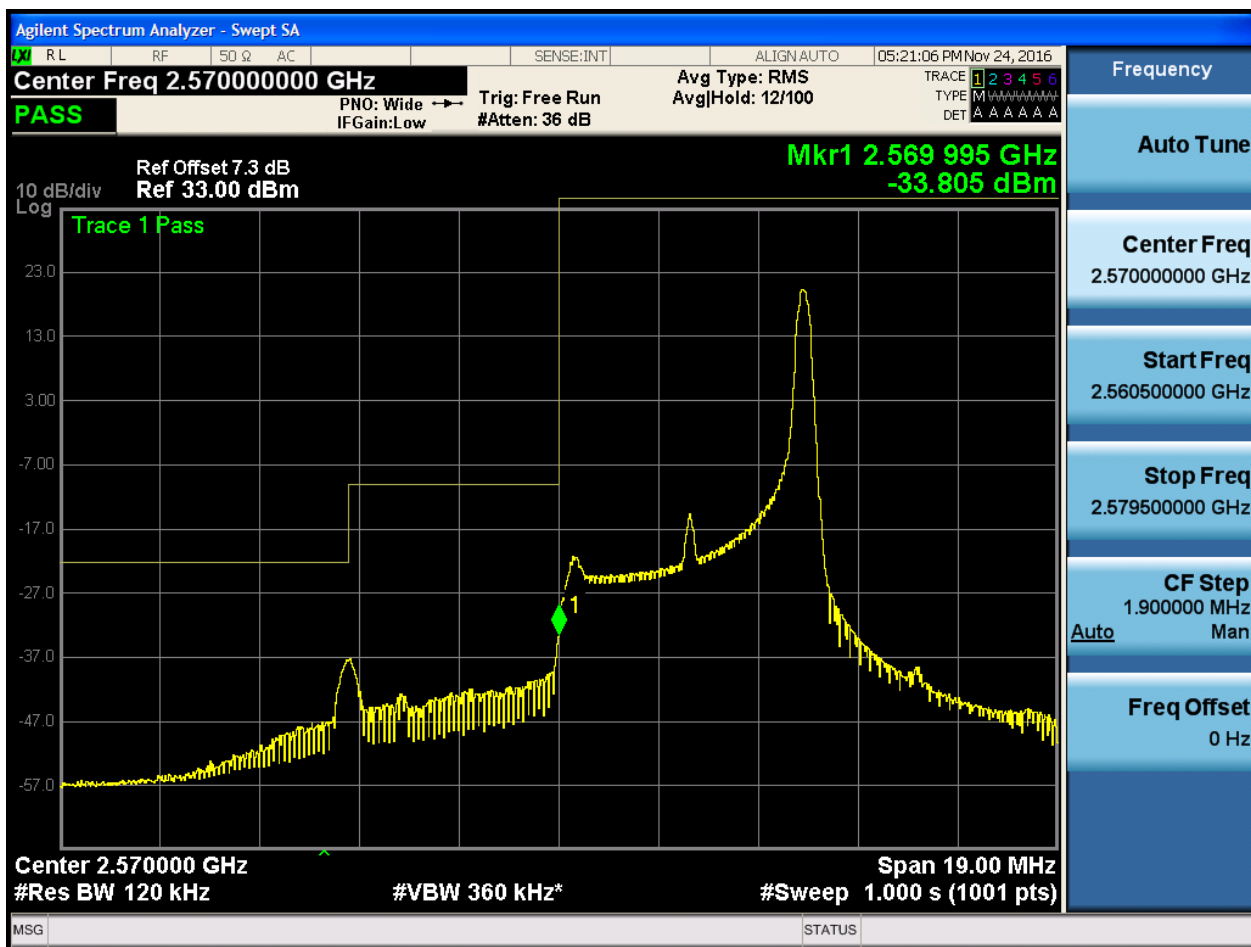
5.1.1.1.1 Test Bandwidth = 5

5.1.1.1.1.1 Test Channel = LCH

5.1.1.1.1.1.1 Test RB = RB1#0

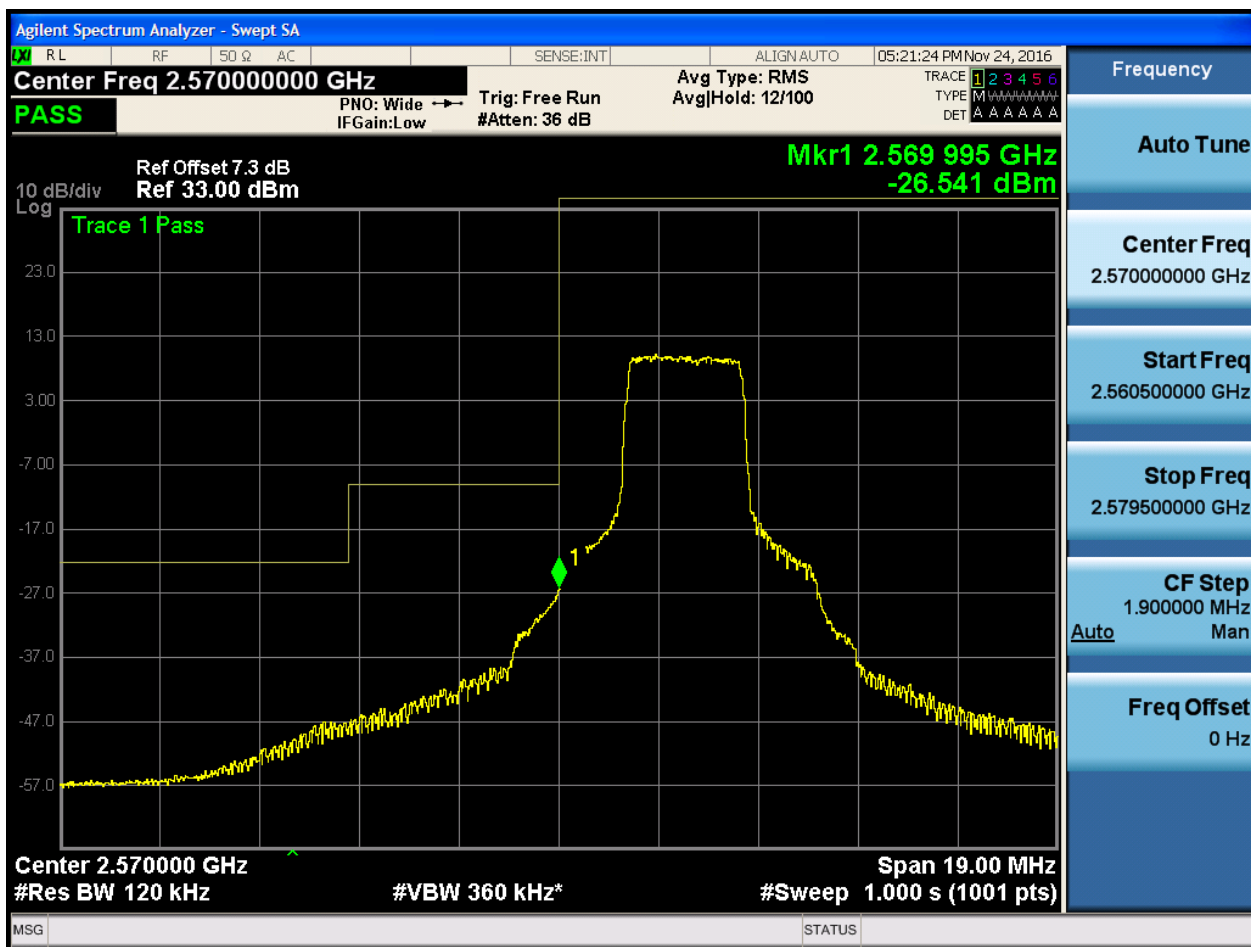


5.1.1.1.1.1.2 Test RB = RB1#24





5.1.1.1.1.3 Test RB = RB12#6





Agilent Spectrum Analyzer - Swept SA

Center Freq 2.570000000 GHz

PASS

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.569 995 GHz
-22.967 dBm

Trace 1 Pass

Center 2.570000 GHz
#Res BW 120 kHz
#VBW 360 kHz*

Span 19.00 MHz
#Sweep 1.000 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.570000000 GHz

Start Freq
2.560500000 GHz

Stop Freq
2.579500000 GHz

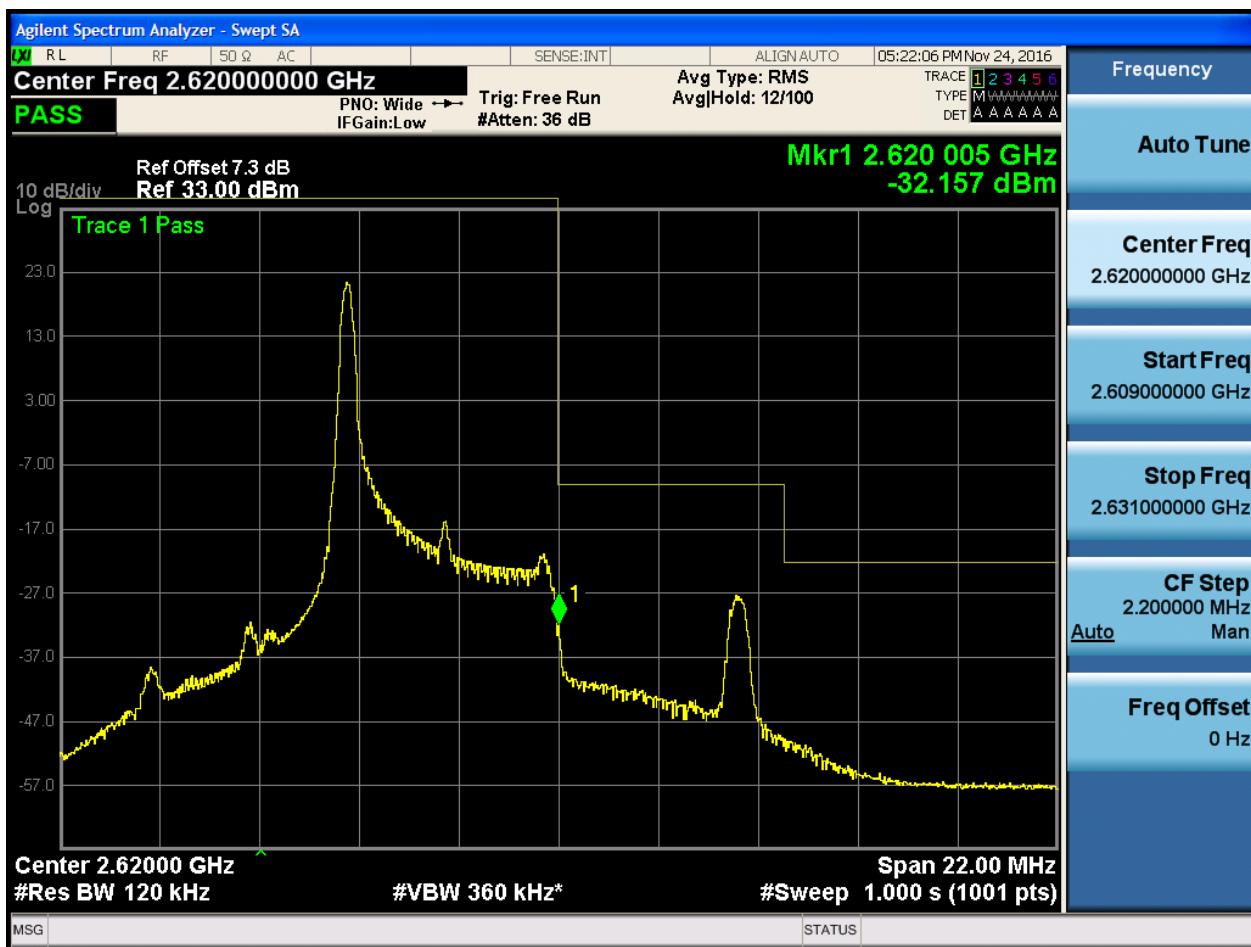
CF Step
1.900000 MHz
Auto Man

Freq Offset
0 Hz



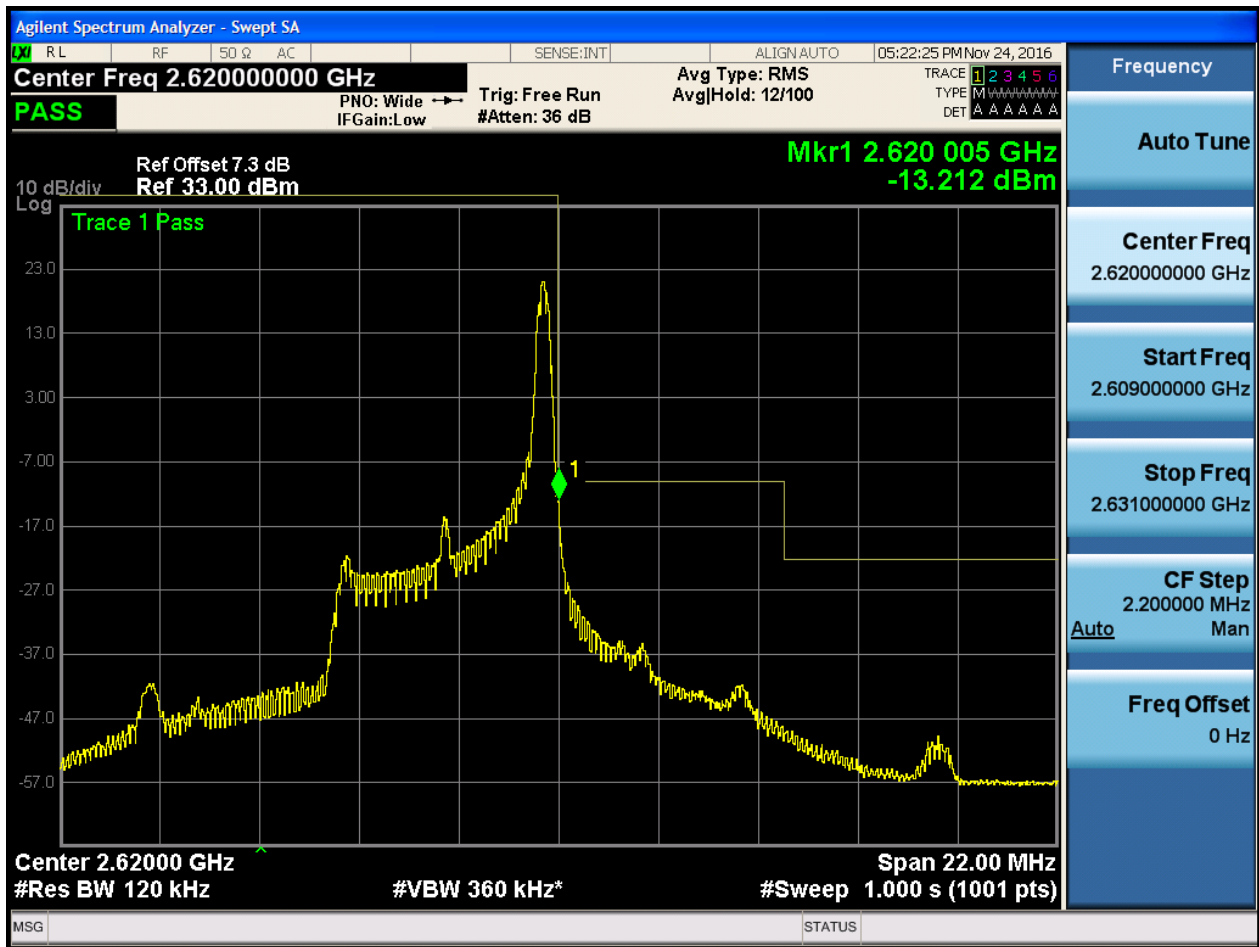
5.1.1.1.1.2 Test Channel = HCH

5.1.1.1.1.2.1 Test RB = RB1#0



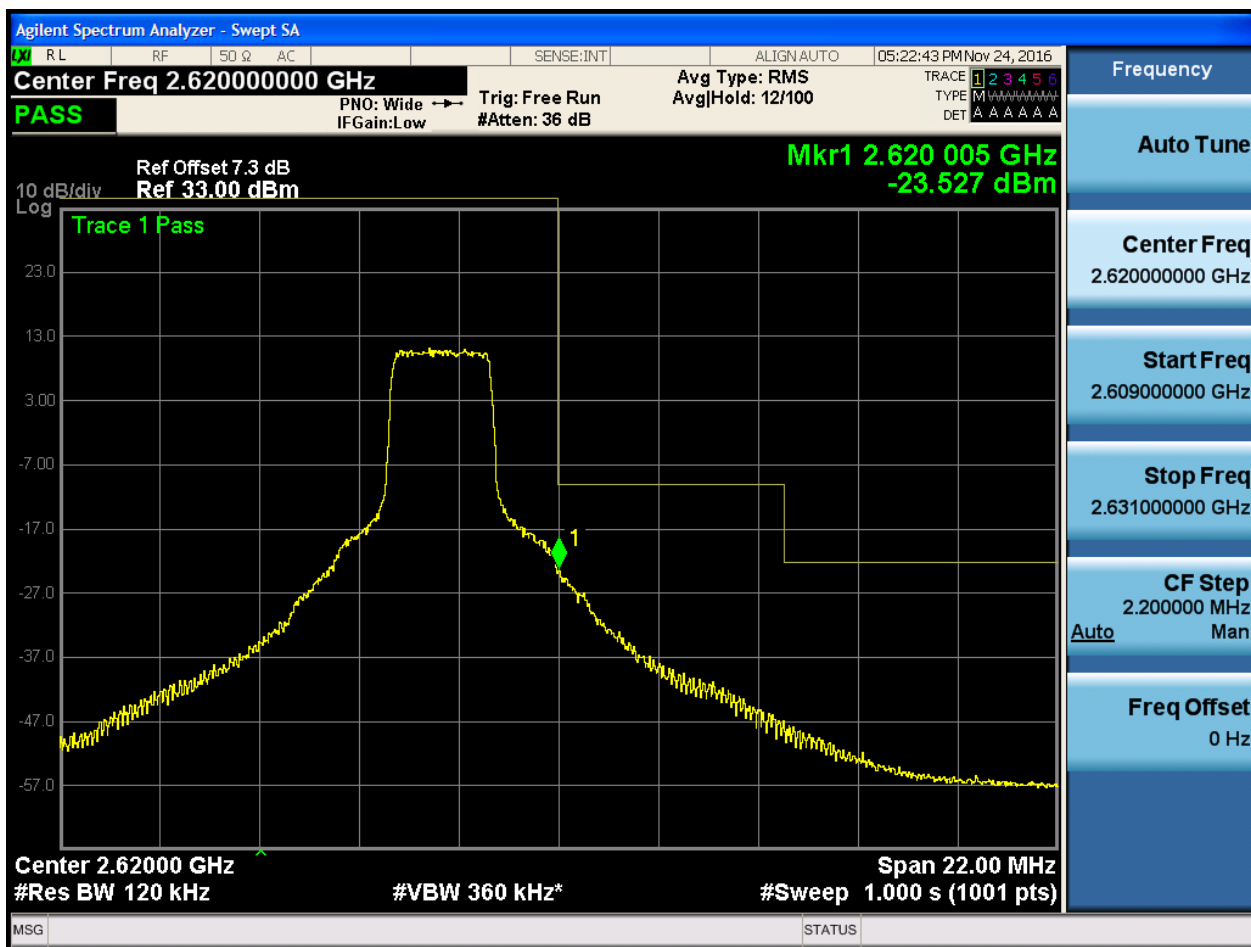


5.1.1.1.2.2 Test RB = RB1#24





5.1.1.1.2.3 Test RB = RB12#6



5.1.1.1.1.2.4 Test RB = RB25#0

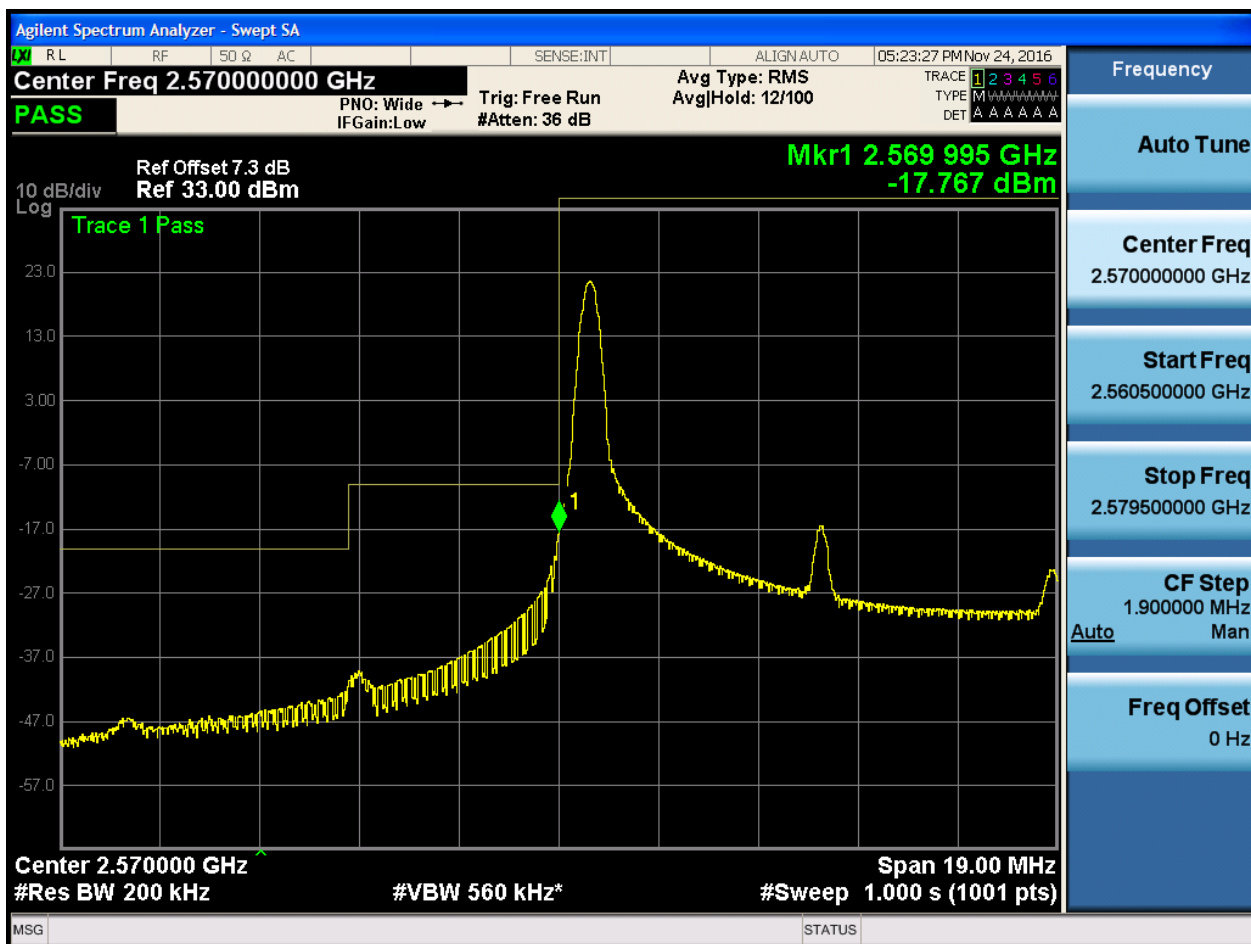




5.1.1.1.2 Test Bandwidth = 10

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





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 05:24:04 PM Nov 24, 2016

Center Freq 2.570000000 GHz Avg Type: RMS
 PASS PNO: Wide IFGain: Low Trig: Free Run AvgHold: 12/100
 #Atten: 36 dB

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

Ref Offset 7.3 dB
 Ref 33.00 dBm

Mkr1 2.569 995 GHz
 -28.232 dBm

10 dB/div
 Log

Trace 1 Pass

Center 2.570000 GHz
 #Res BW 200 kHz
 #VBW 560 kHz*
 Span 19.00 MHz
 #Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
 2.570000000 GHz

Start Freq
 2.560500000 GHz

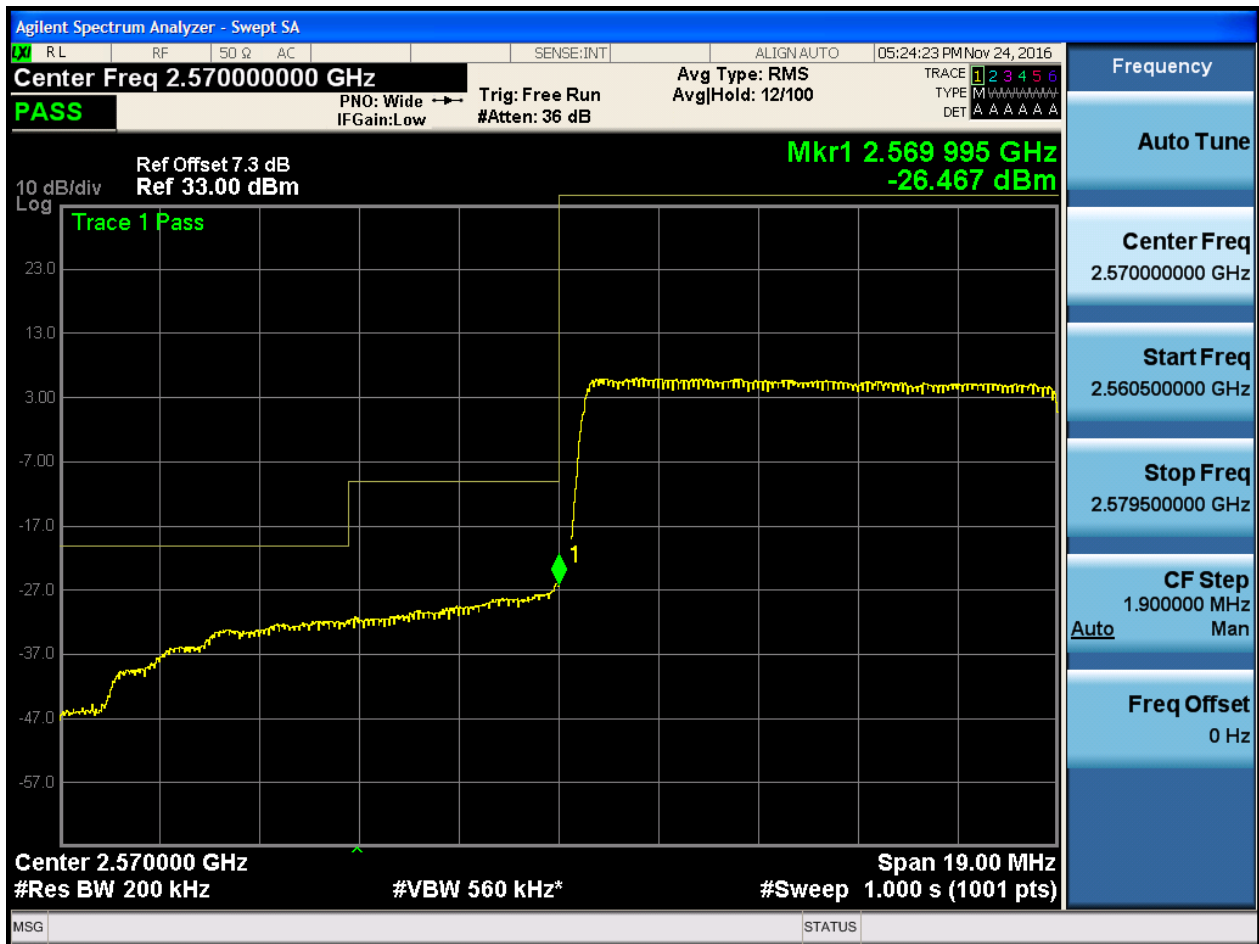
Stop Freq
 2.579500000 GHz

CF Step
 1.900000 MHz
 Auto Man

Freq Offset
 0 Hz



5.1.1.1.2.1.4 Test RB = RB50#0



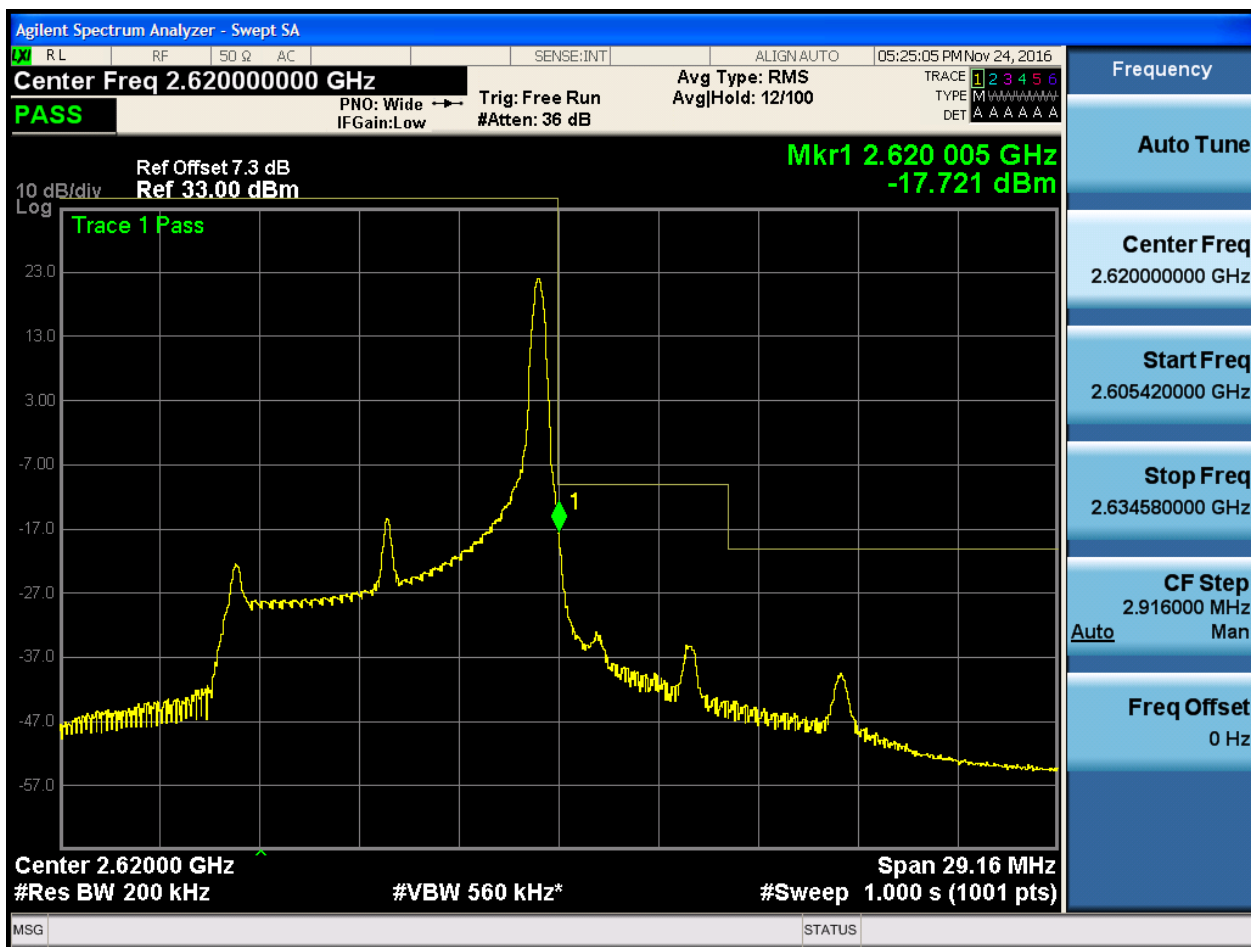


5.1.1.1.2.2 Test Channel = HCH

5.1.1.1.2.2.1 Test RB = RB1#0



5.1.1.1.2.2.2 Test RB = RB1#49





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:25:23 PM Nov 24, 2016

Center Freq 2.620000000 GHz Avg Type: RMS
 PASS PNO: Wide IF Gain: Low Trig: Free Run Avg Hold: 12/100
 #Atten: 36 dB

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

Ref Offset 7.3 dB
 Ref 33.00 dBm

Mkr1 2.620 005 GHz
 -24.827 dBm

10 dB/div
 Log

Trace 1 Pass

Center 2.62000 GHz
 #Res BW 200 kHz

#VBW 560 kHz

Span 29.16 MHz
 #Sweep 1.000 s (1001 pts)

Frequency

Auto Tune

Center Freq
 2.620000000 GHz

Start Freq
 2.605420000 GHz

Stop Freq
 2.634580000 GHz

CF Step
 2.916000 MHz
 Auto Man

Freq Offset
 0 Hz

MSG STATUS



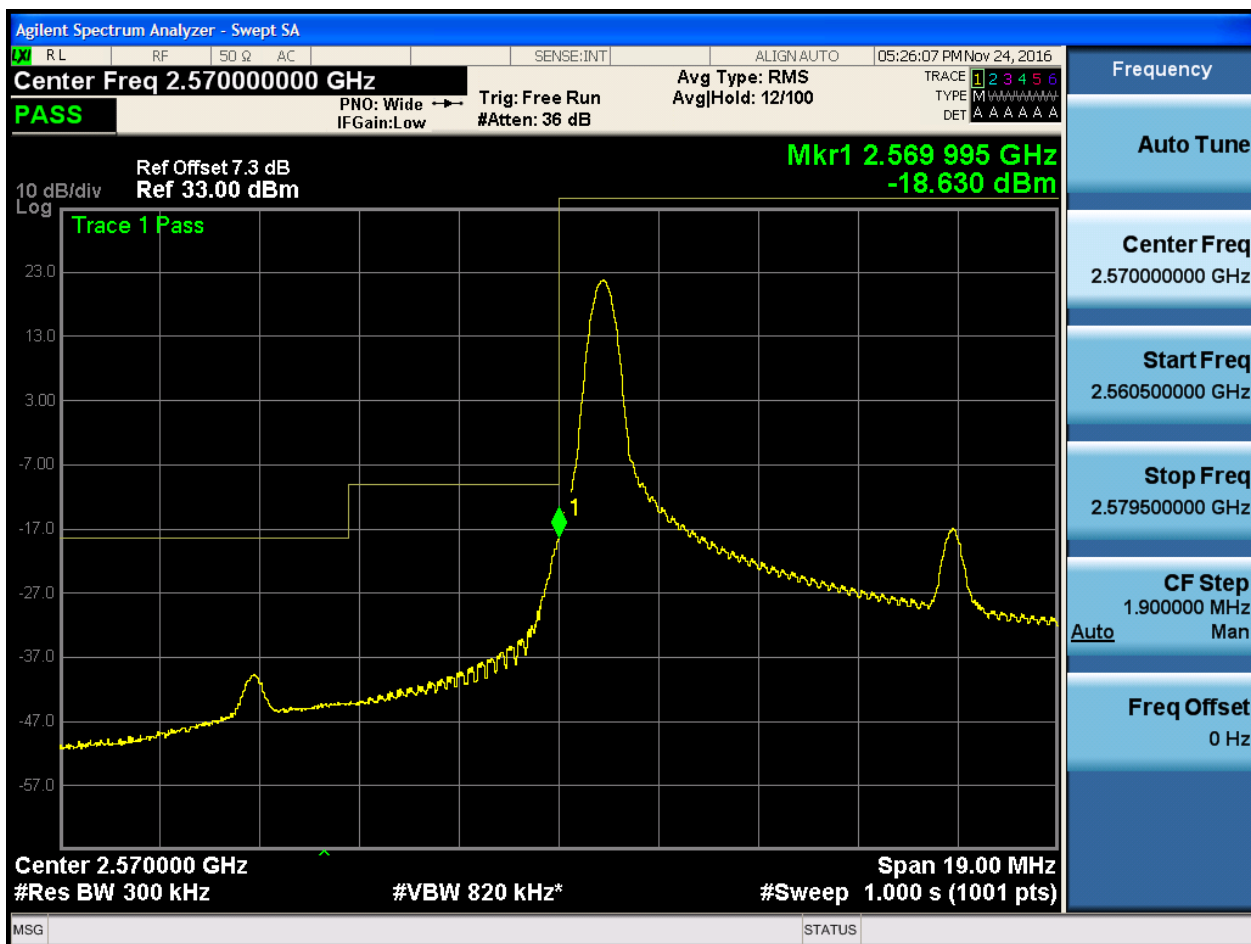
5.1.1.1.2.2.4 Test RB = RB50#0



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





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:26:26 PM Nov 24, 2016

Center Freq 2.570000000 GHz Avg Type: RMS
PASS PNO: Wide Trig: Free Run
IFGain: Low #Atten: 36 dB

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

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.569 995 GHz
-39.368 dBm

10 dB/div
Log

Trace 1 Pass

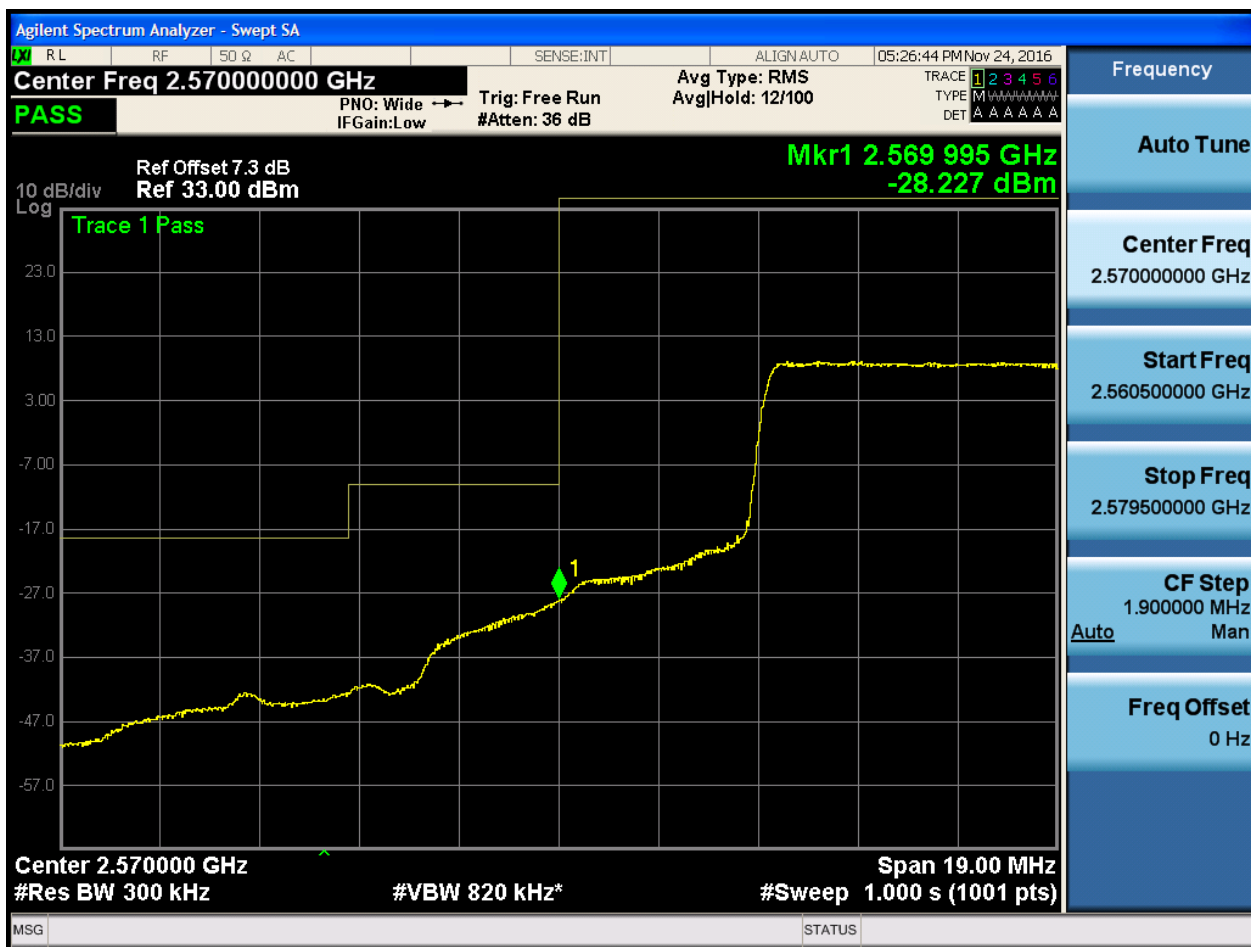
Center 2.570000 GHz Span 19.00 MHz
#Res BW 300 kHz #VBW 820 kHz* #Sweep 1.000 s (1001 pts)

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

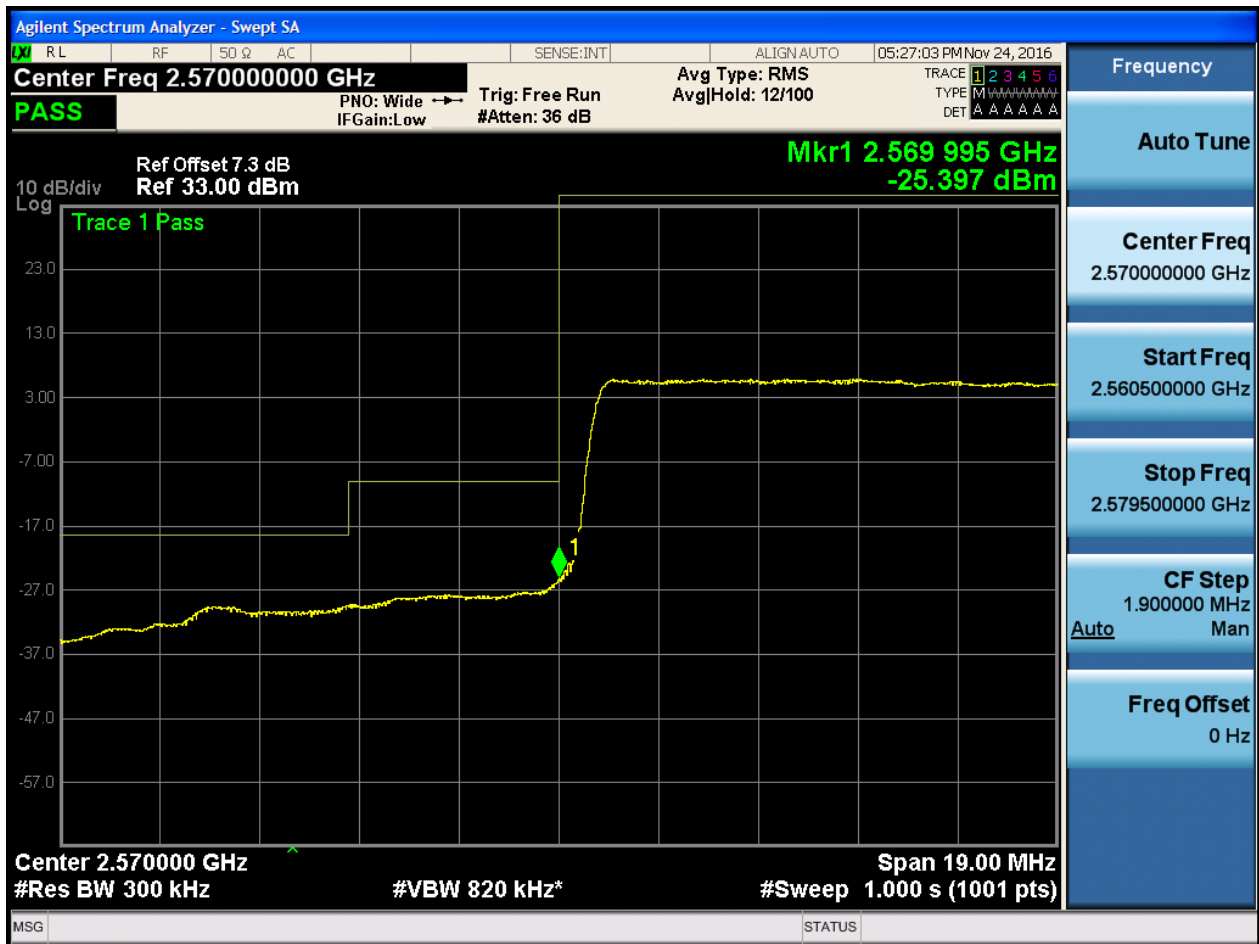


5.1.1.1.3.1.3 Test RB = RB36#18





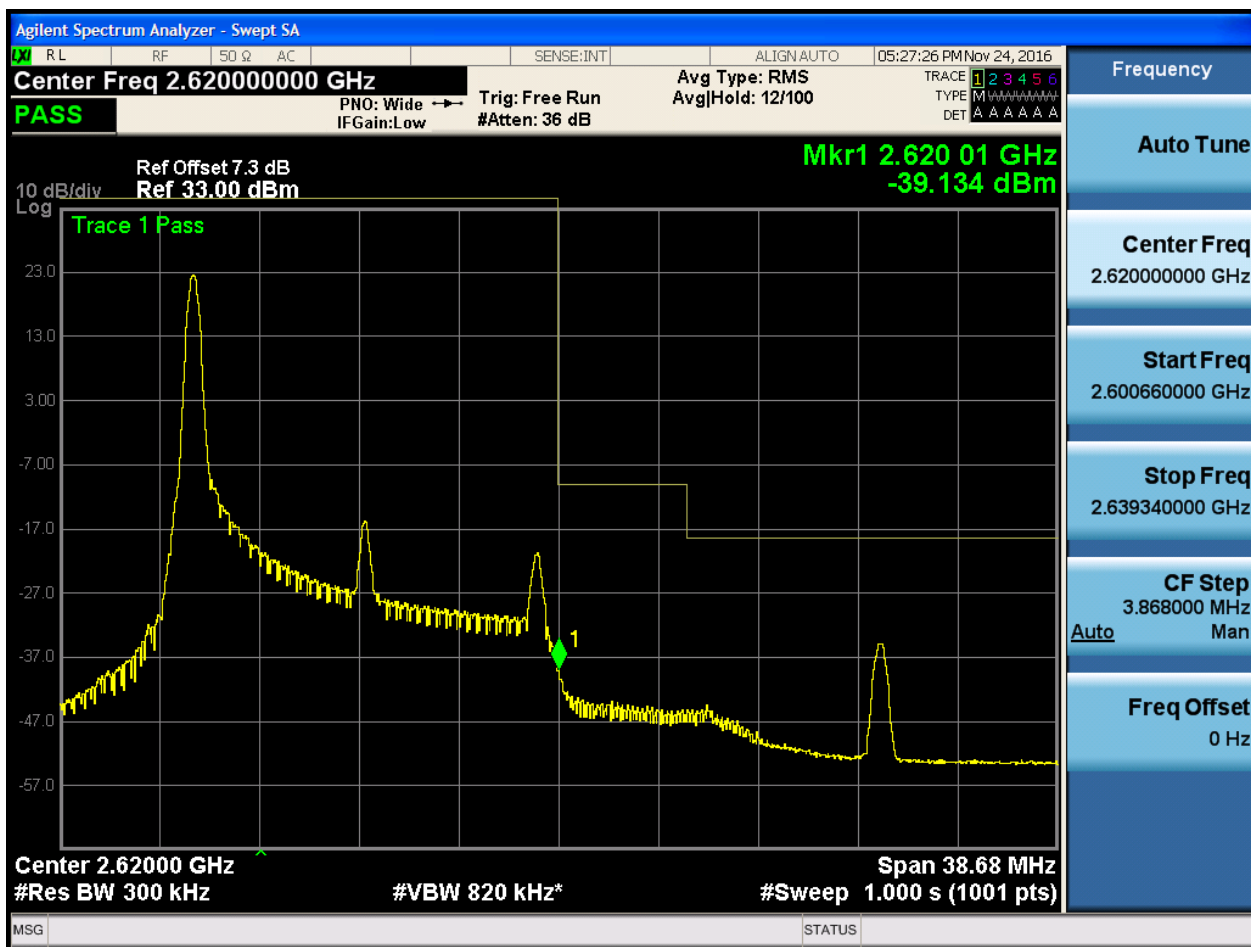
5.1.1.1.3.1.4 Test RB = RB75#0





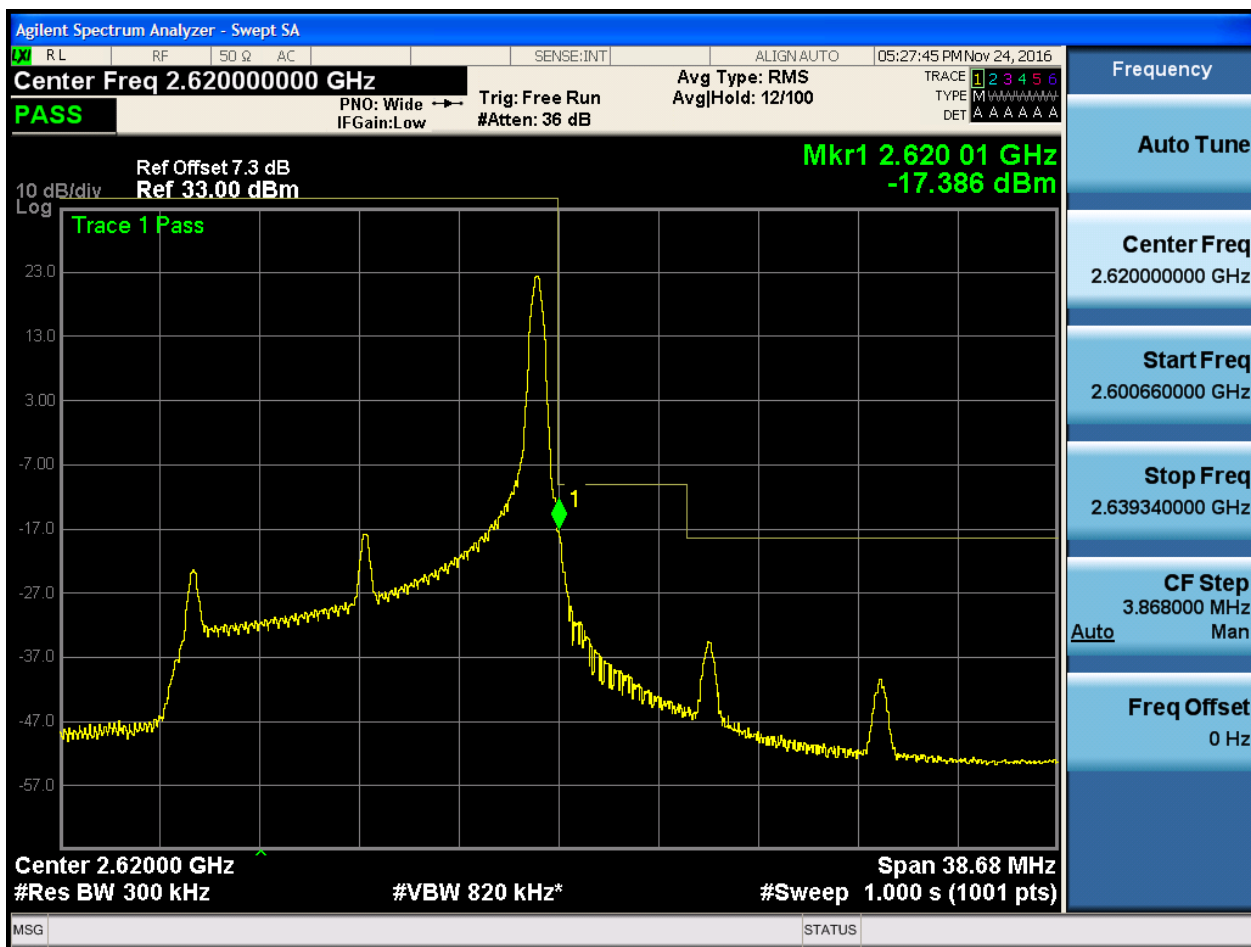
5.1.1.1.3.2 Test Channel = HCH

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





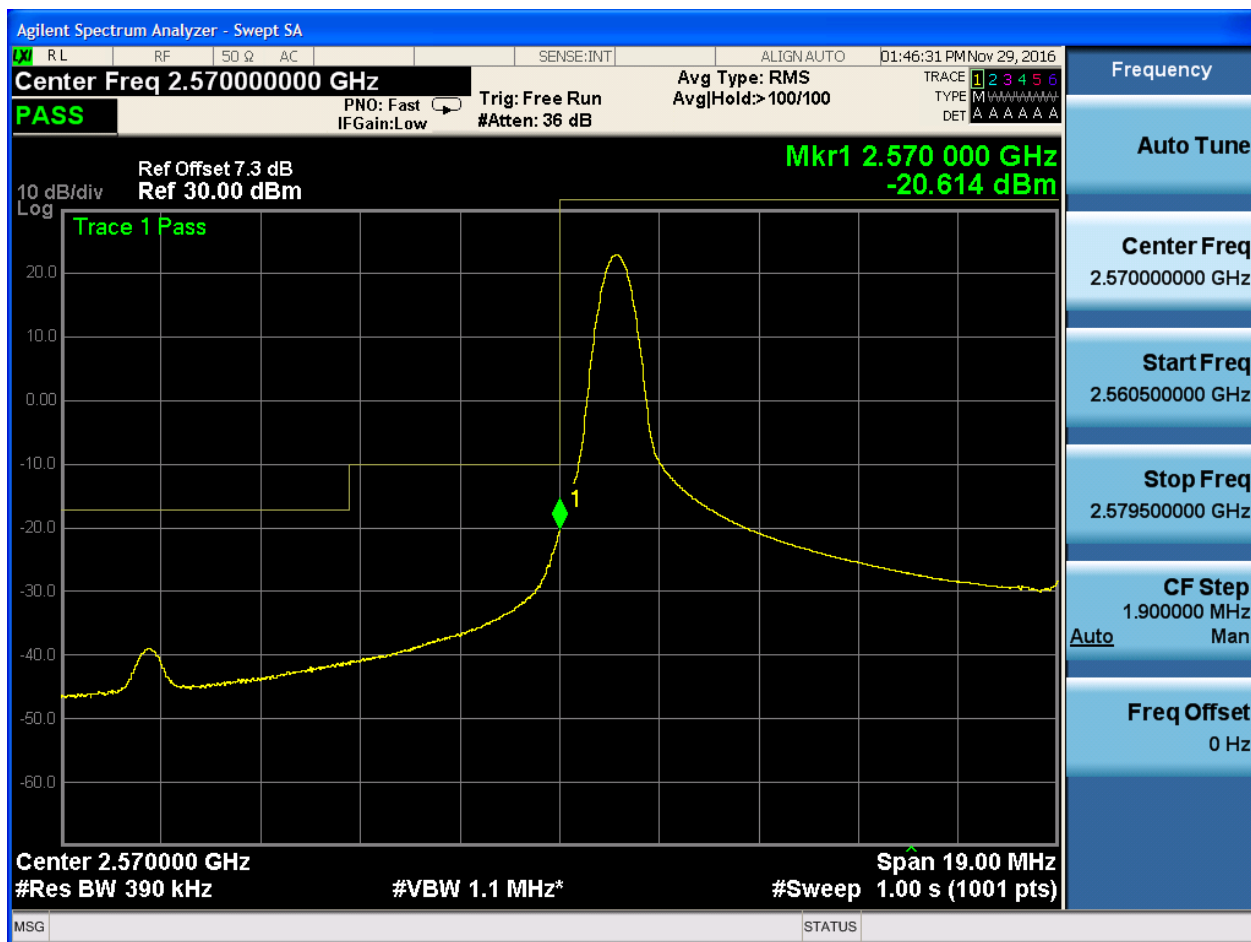
5.1.1.1.3.2.4 Test RB = RB75#0



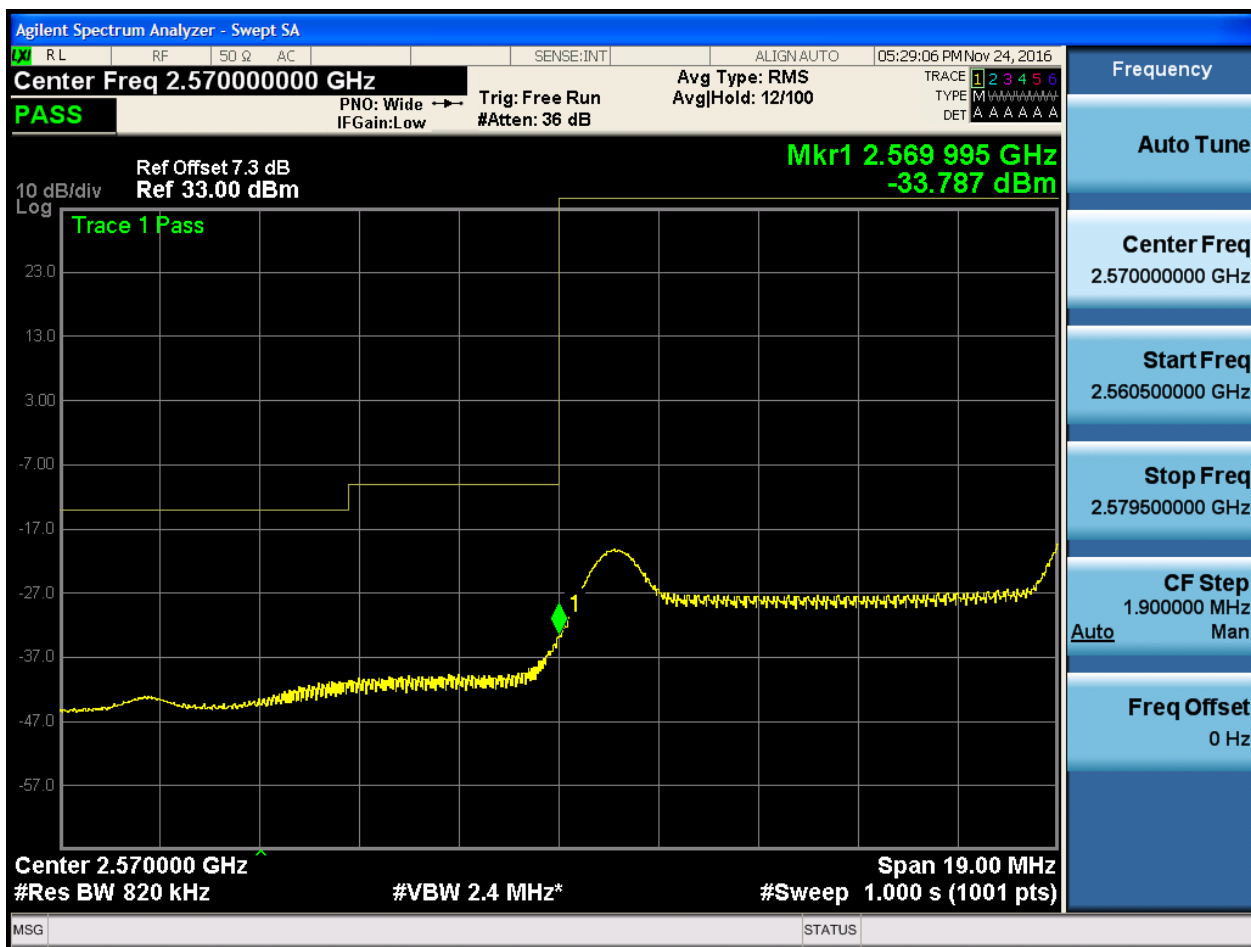
5.1.1.1.4 Test Bandwidth = 20

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





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:29:24 PM Nov 24, 2016

Center Freq 2.570000000 GHz Avg Type: RMS
PASS PNO: Wide IFGain:Low Trig: Free Run AvgHold: 12/100
#Atten: 36 dB

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

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.569 995 GHz
-25.205 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.570000 GHz Span 19.00 MHz
#Res BW 820 kHz #VBW 2.4 MHz* #Sweep 1.000 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



Agilent Spectrum Analyzer - Swept SA

Center Freq 2.57000000 GHz

PASS

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.569 995 GHz
-17.987 dBm

The figure displays a spectrum analyzer screen with a grid. A yellow trace shows a signal level that rises sharply from approximately -27 dBm to about -10 dBm between 2.569 GHz and 2.570 GHz. A green marker labeled 'Mkr1' is placed at the peak of this rise, indicating a frequency of 2.569 995 GHz and a power level of -17.987 dBm. The y-axis is labeled 'Log' and ranges from -57.0 to 23.0 dB/div. The x-axis represents frequency.

Trace 1 Pass

Center 2.570000 GHz

#Res BW 820 kHz

#VBW 2.4 MHz*

Span 19.00 MHz

#Sweep 1.000 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
Auto Man

Freq Offset
0 Hz



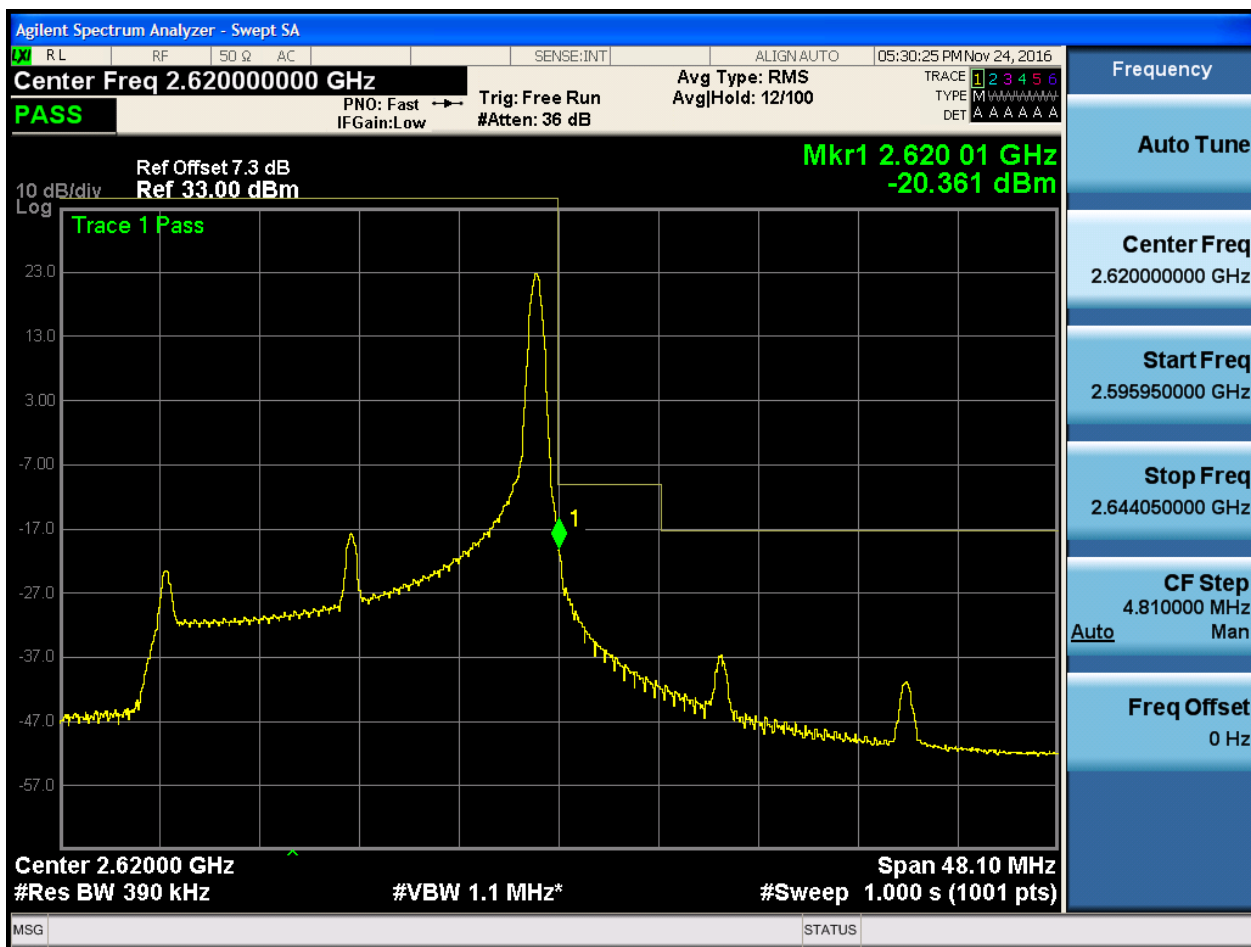
5.1.1.1.4.2 Test Channel = HCH

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



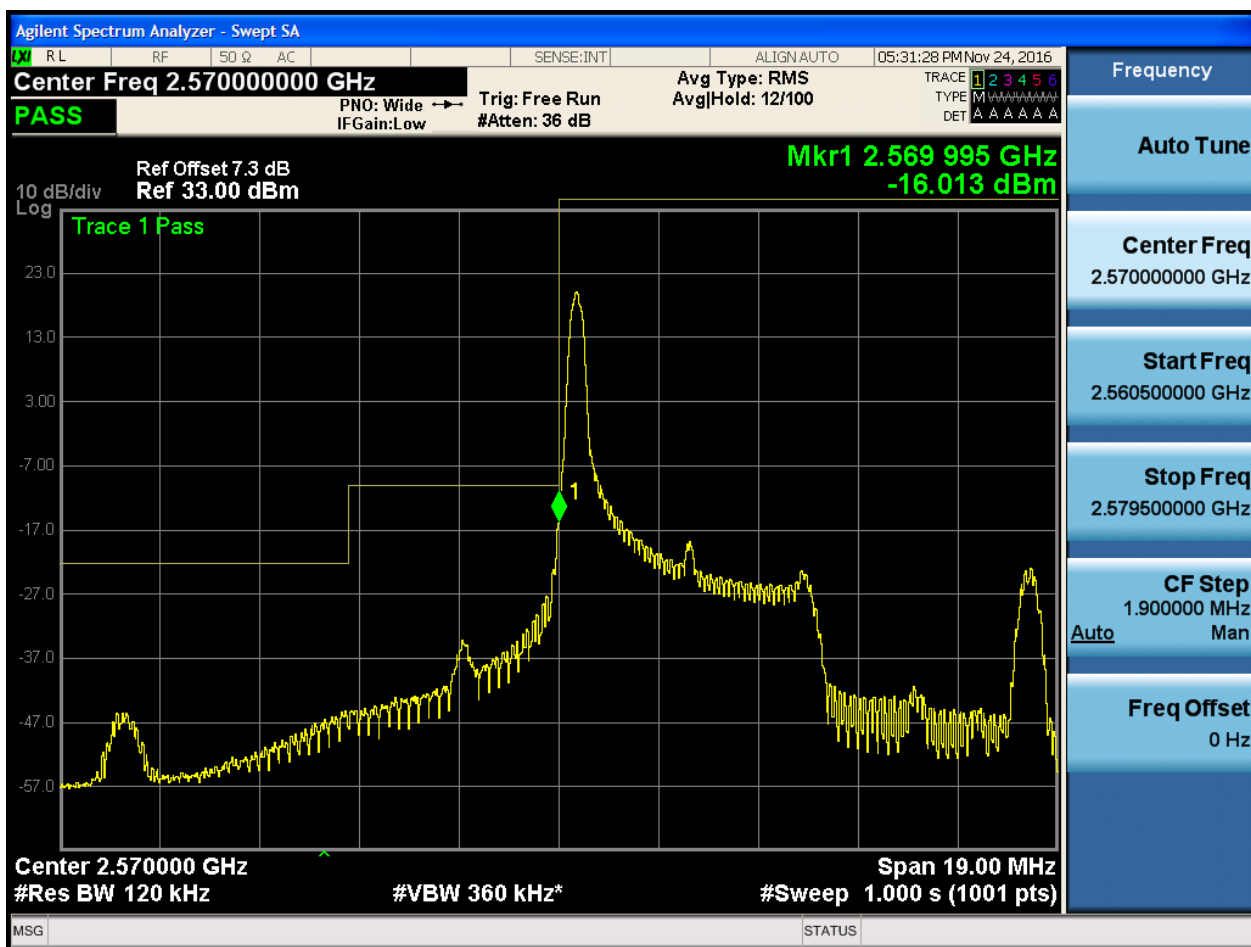


5.1.1.2 Test Mode = LTE/TM2

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





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:31:46 PM Nov 24, 2016

Center Freq 2.570000000 GHz Avg Type: RMS
PASS PNO: Wide IFGain:Low Trig: Free Run AvgHold: 12/100
TYPE M DET A A A A A A

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.569 995 GHz
-33.868 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.570000 GHz
#Res BW 120 kHz #VBW 360 kHz* Span 19.00 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.570000000 GHz

Start Freq
2.560500000 GHz

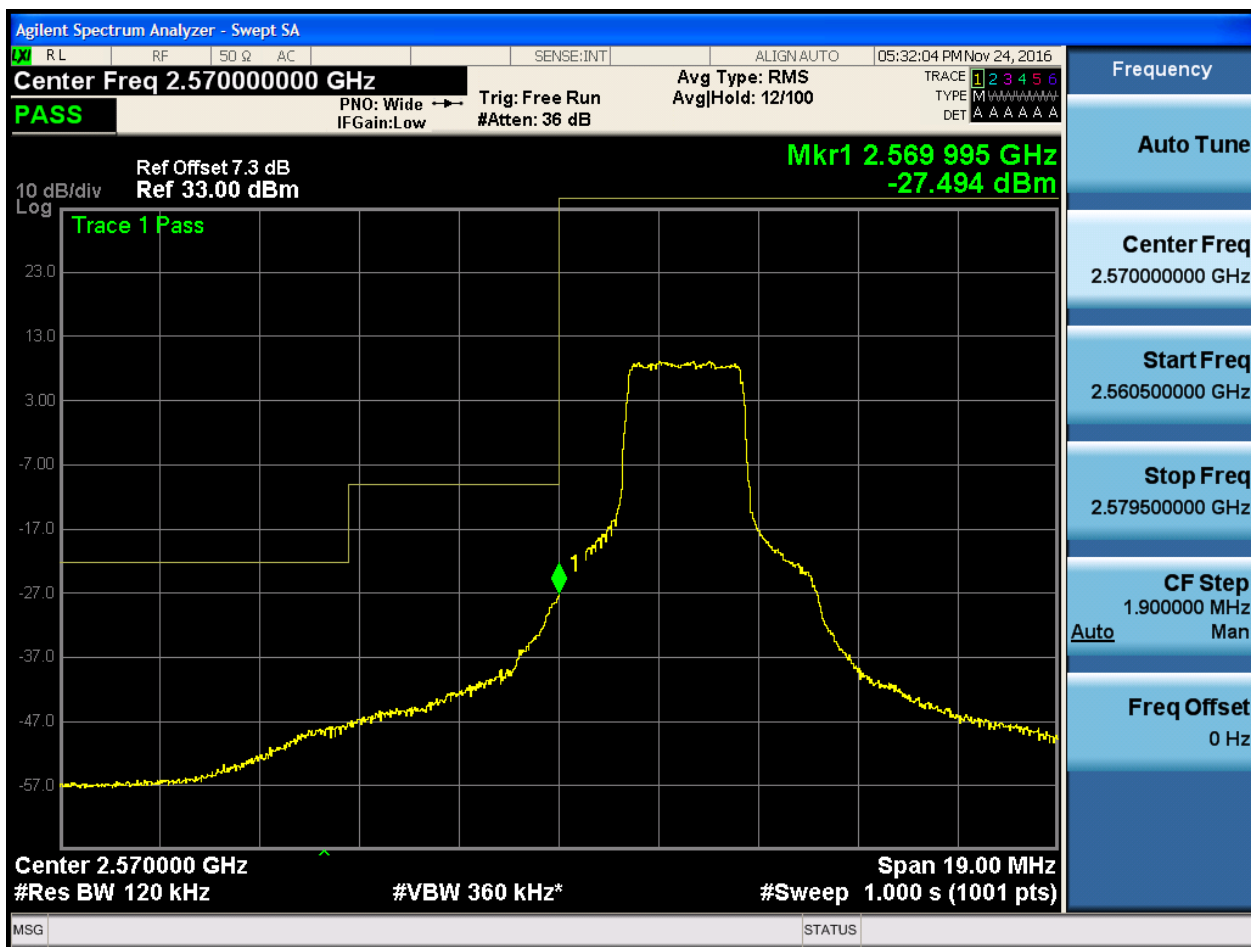
Stop Freq
2.579500000 GHz

CF Step
1.900000 MHz
Auto Man

Freq Offset
0 Hz

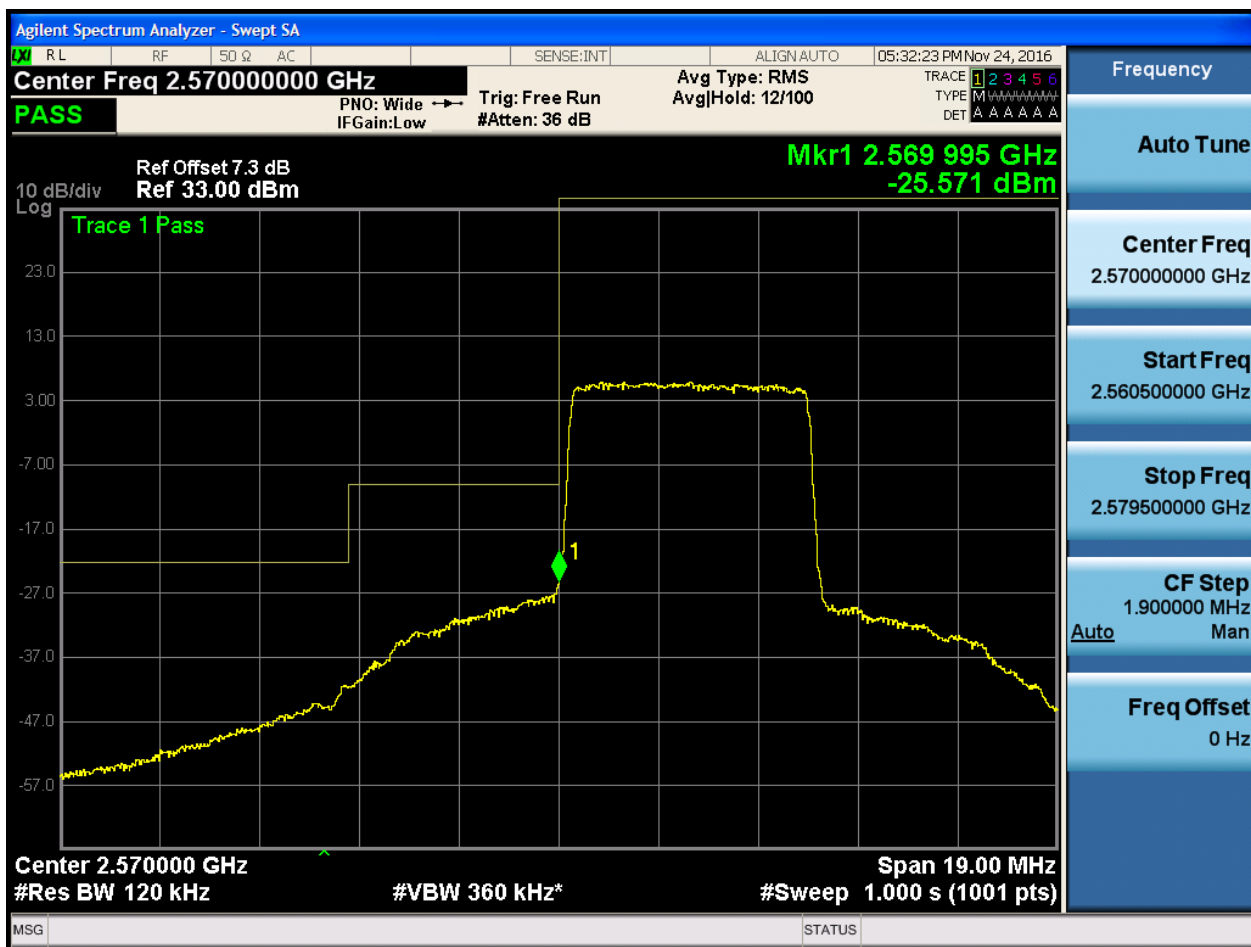


5.1.1.2.1.1.3 Test RB = RB12#6





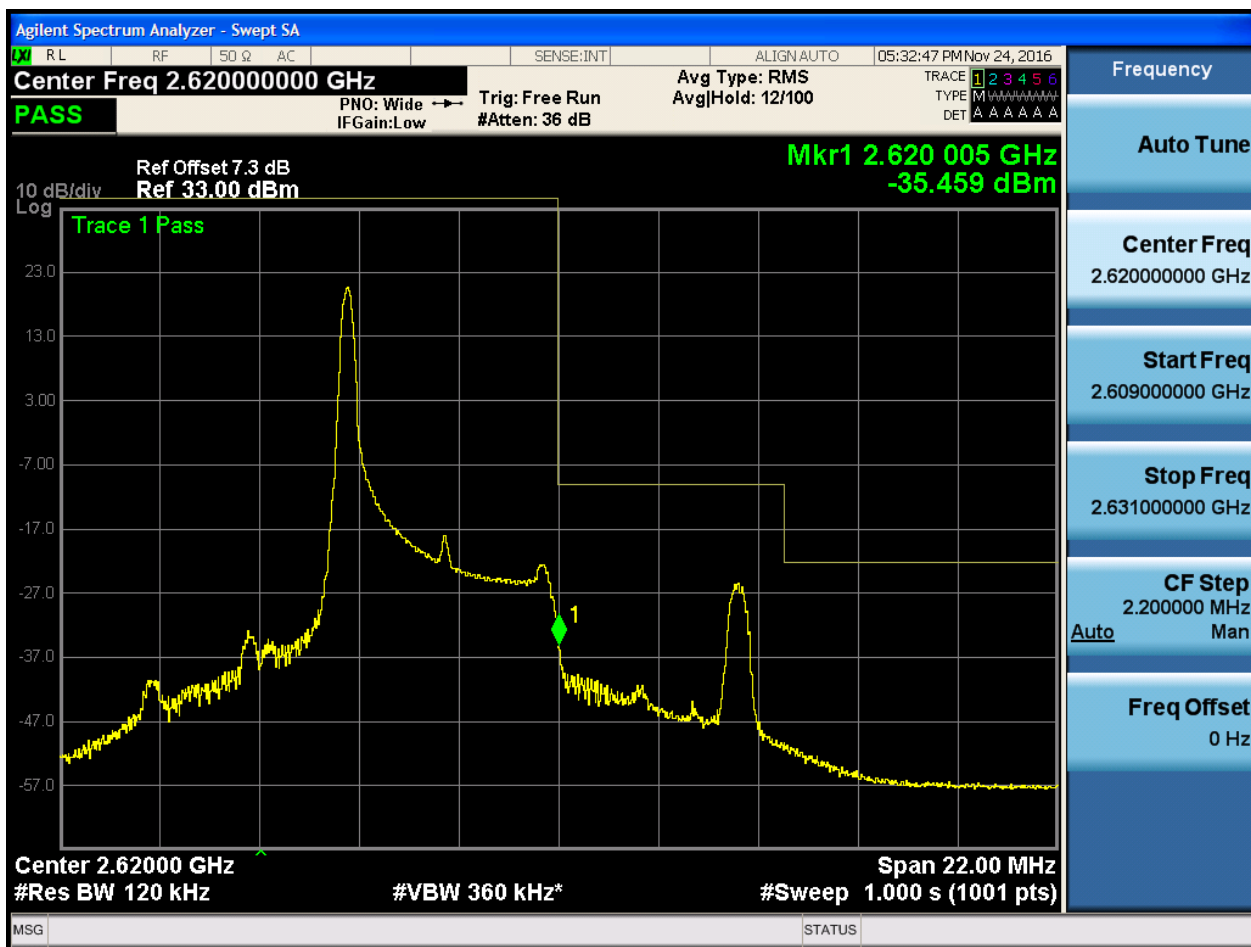
5.1.1.2.1.1.4 Test RB = RB25#0





5.1.1.2.1.2 Test Channel = HCH

5.1.1.2.1.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:33:05 PM Nov 24, 2016

Center Freq 2.620000000 GHz Avg Type: RMS
#Att: 36 dB

PASS PNO: Wide IFGain:Low Trig: Free Run

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

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.620 005 GHz
-15.888 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.62000 GHz
#Res BW 120 kHz

#VBW 360 kHz*

Span 22.00 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.620000000 GHz

Start Freq
2.609000000 GHz

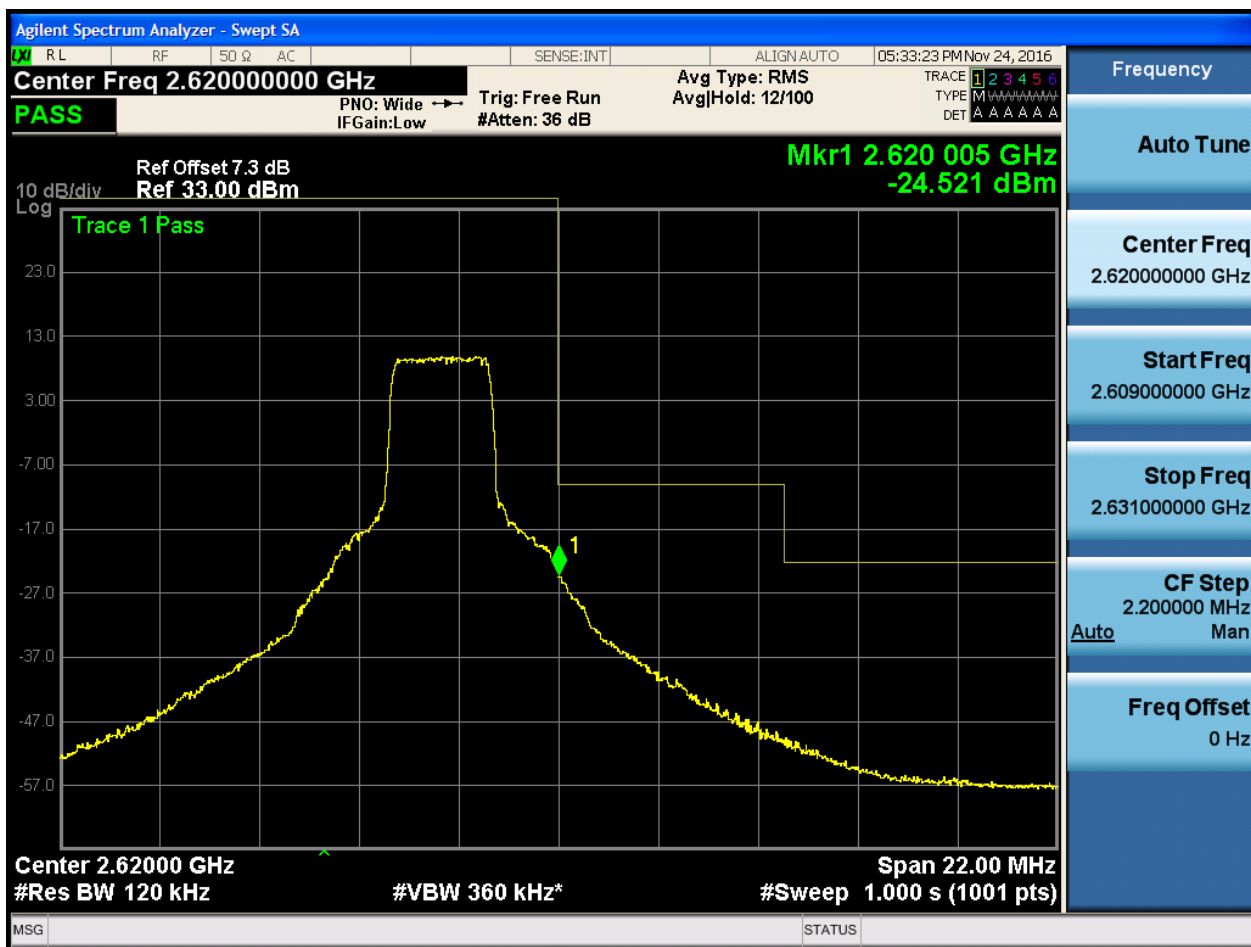
Stop Freq
2.631000000 GHz

CF Step
2.200000 MHz
Auto Man

Freq Offset
0 Hz



5.1.1.2.1.2.3 Test RB = RB12#6





5.1.1.2.1.2.4 Test RB = RB25#0

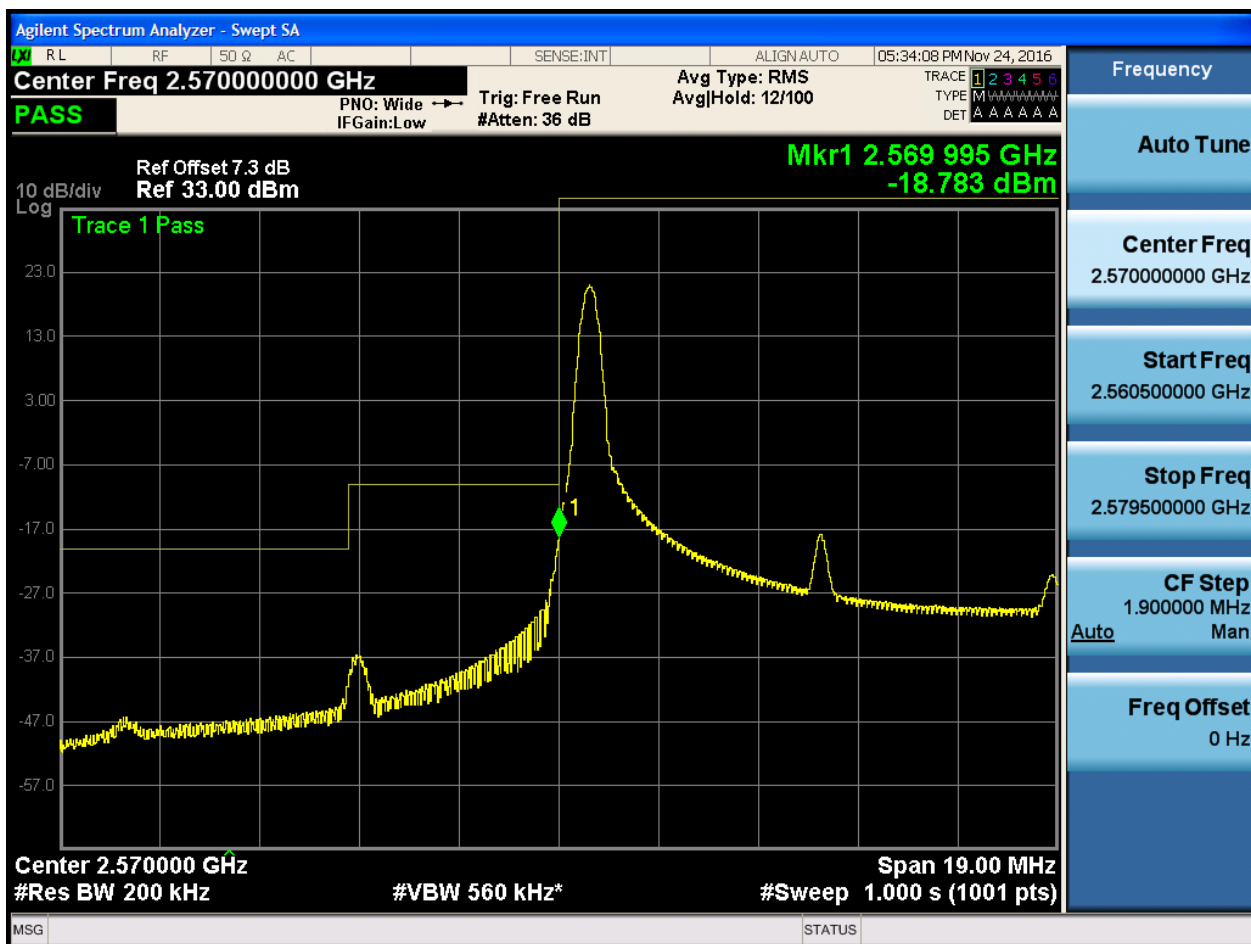




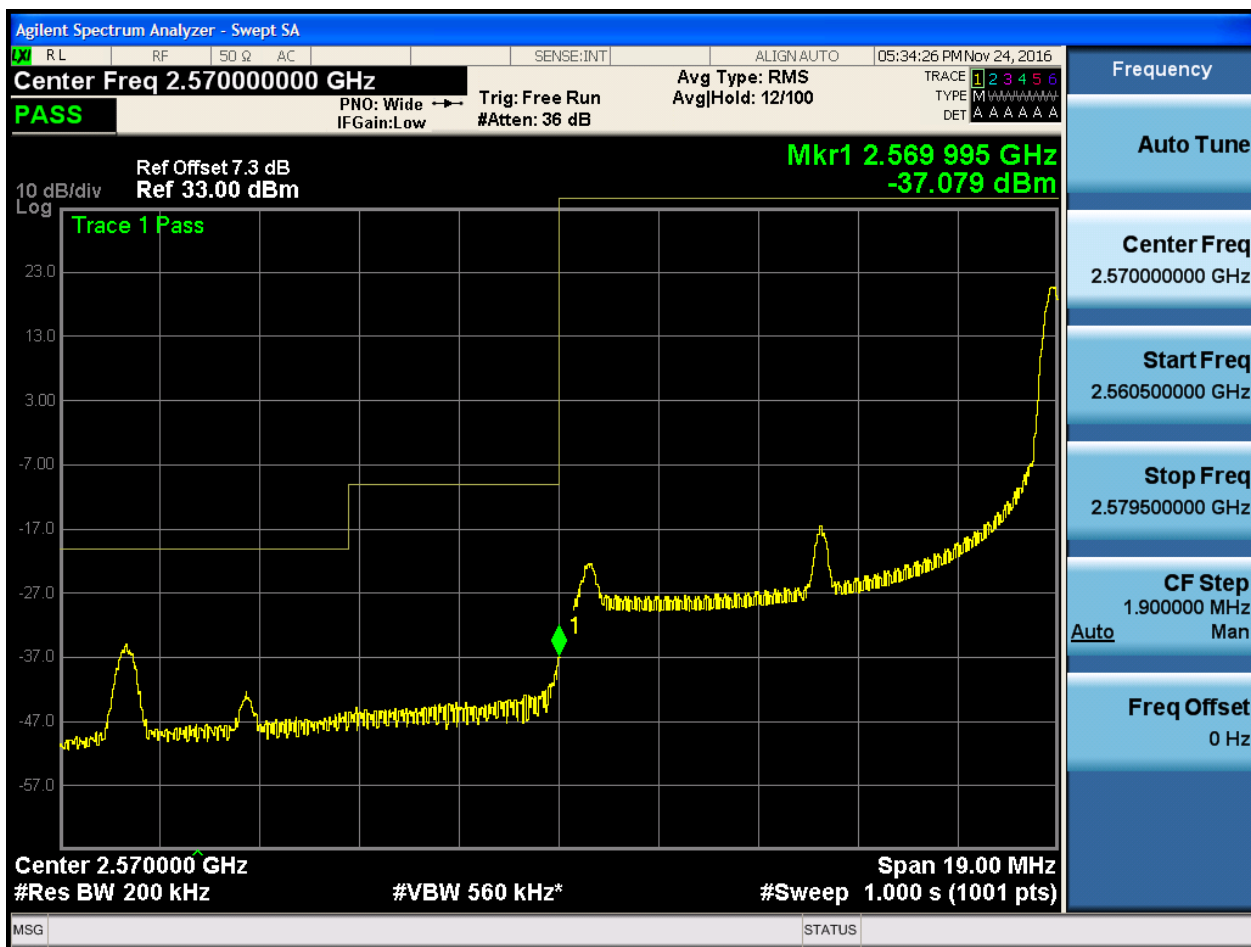
5.1.1.2.2 Test Bandwidth = 10

5.1.1.2.2.1 Test Channel = LCH

5.1.1.2.2.1.1 Test RB = RB1#0

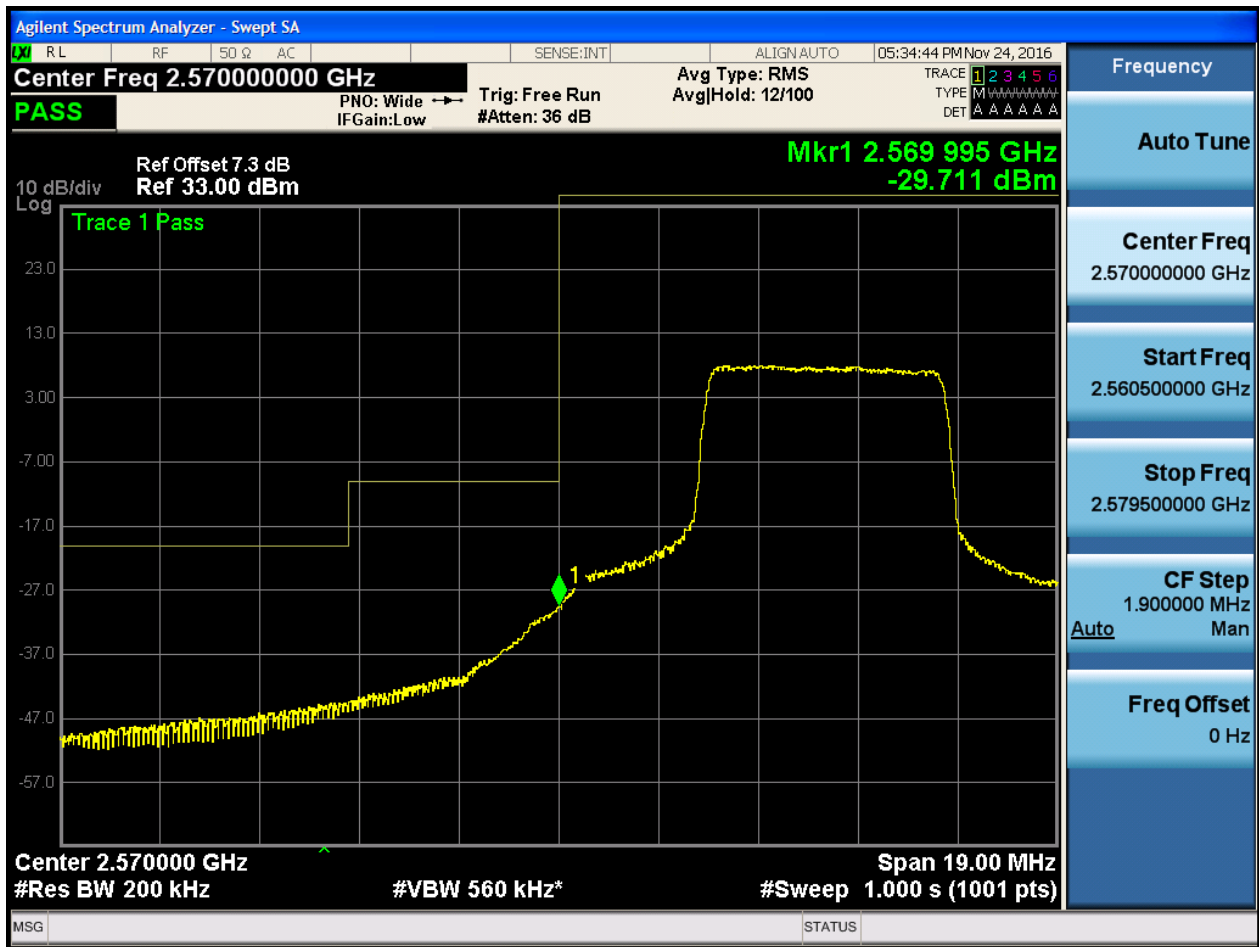


5.1.1.2.2.1.2 Test RB = RB1#49



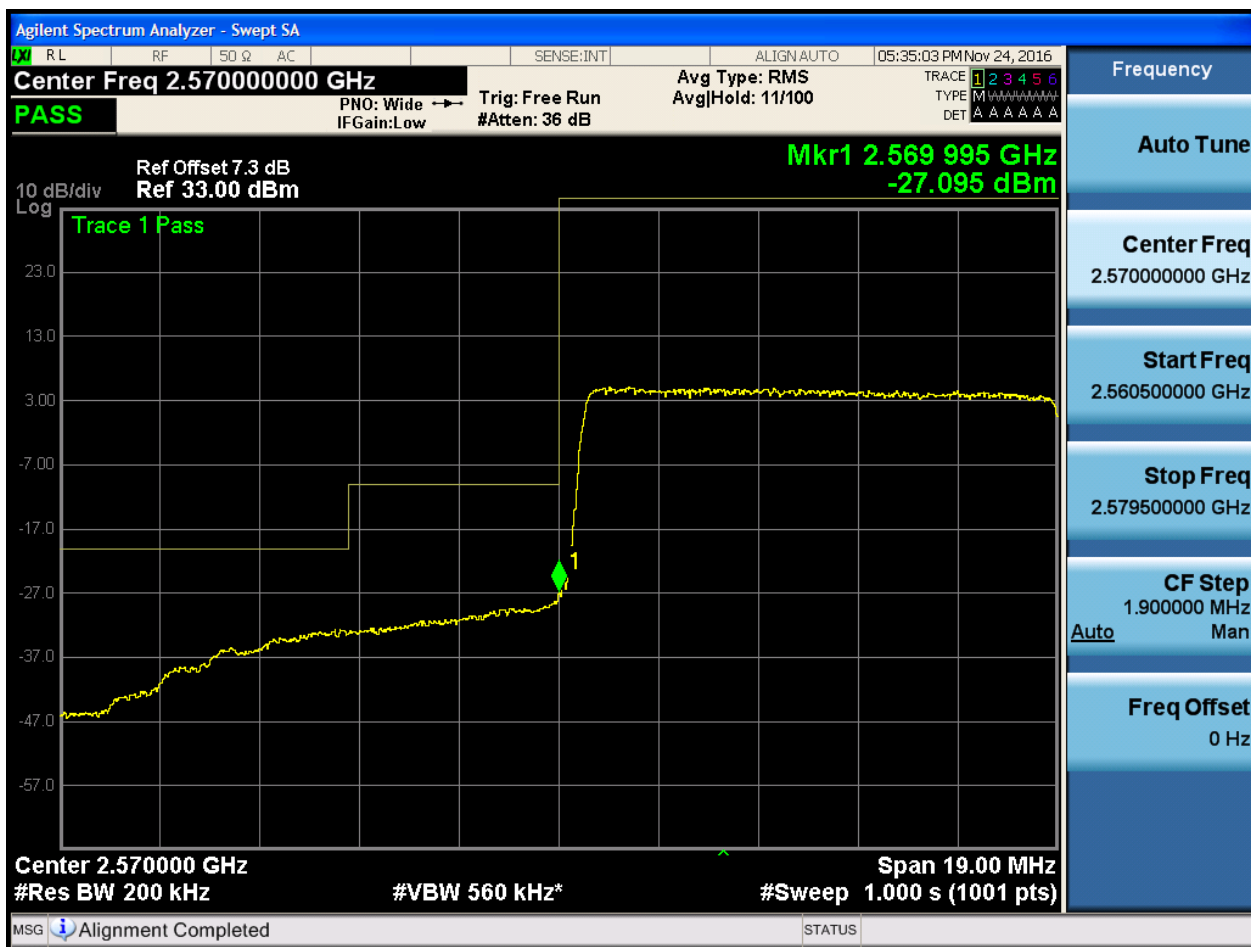


5.1.1.2.2.1.3 Test RB = RB25#13





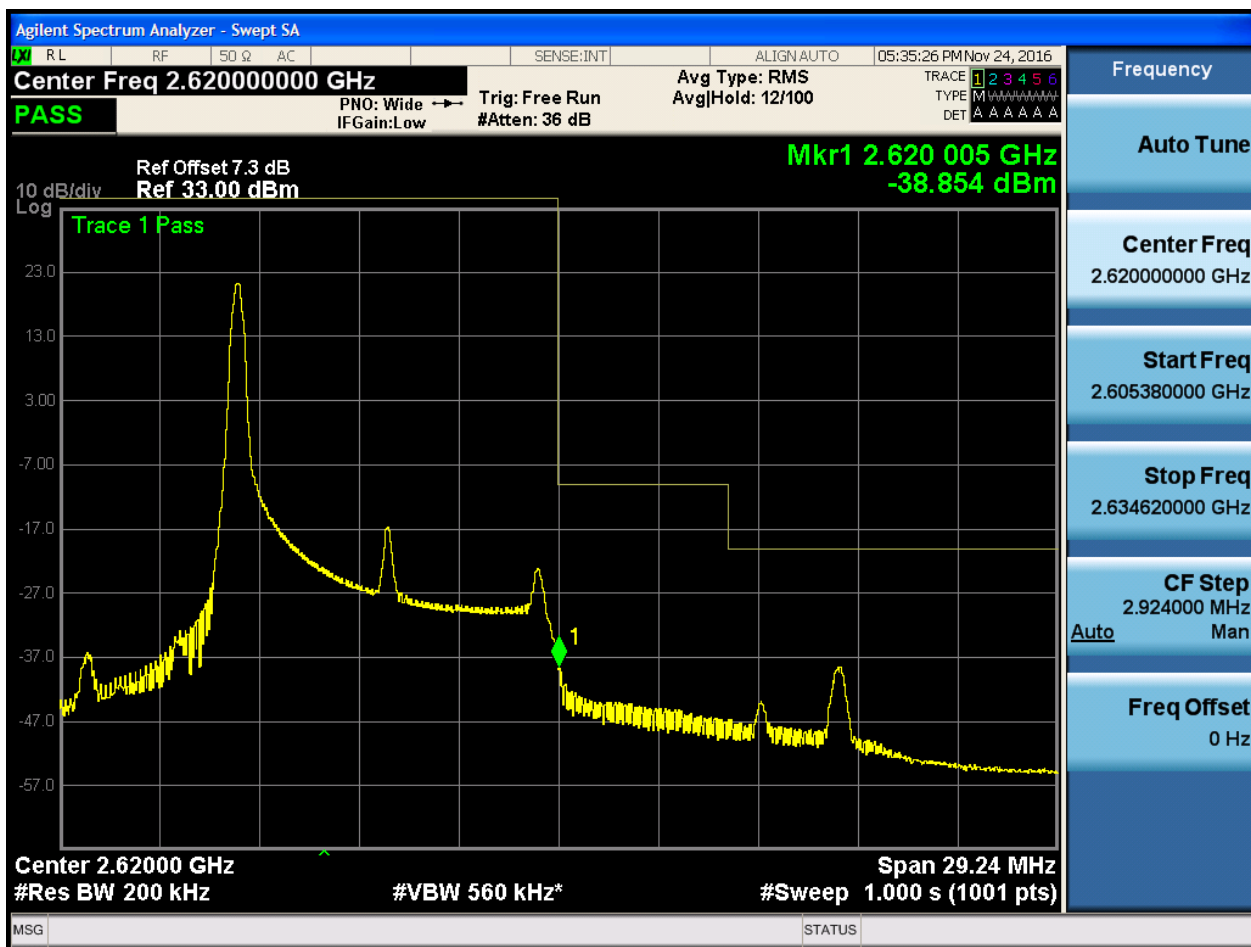
5.1.1.2.2.1.4 Test RB = RB50#0





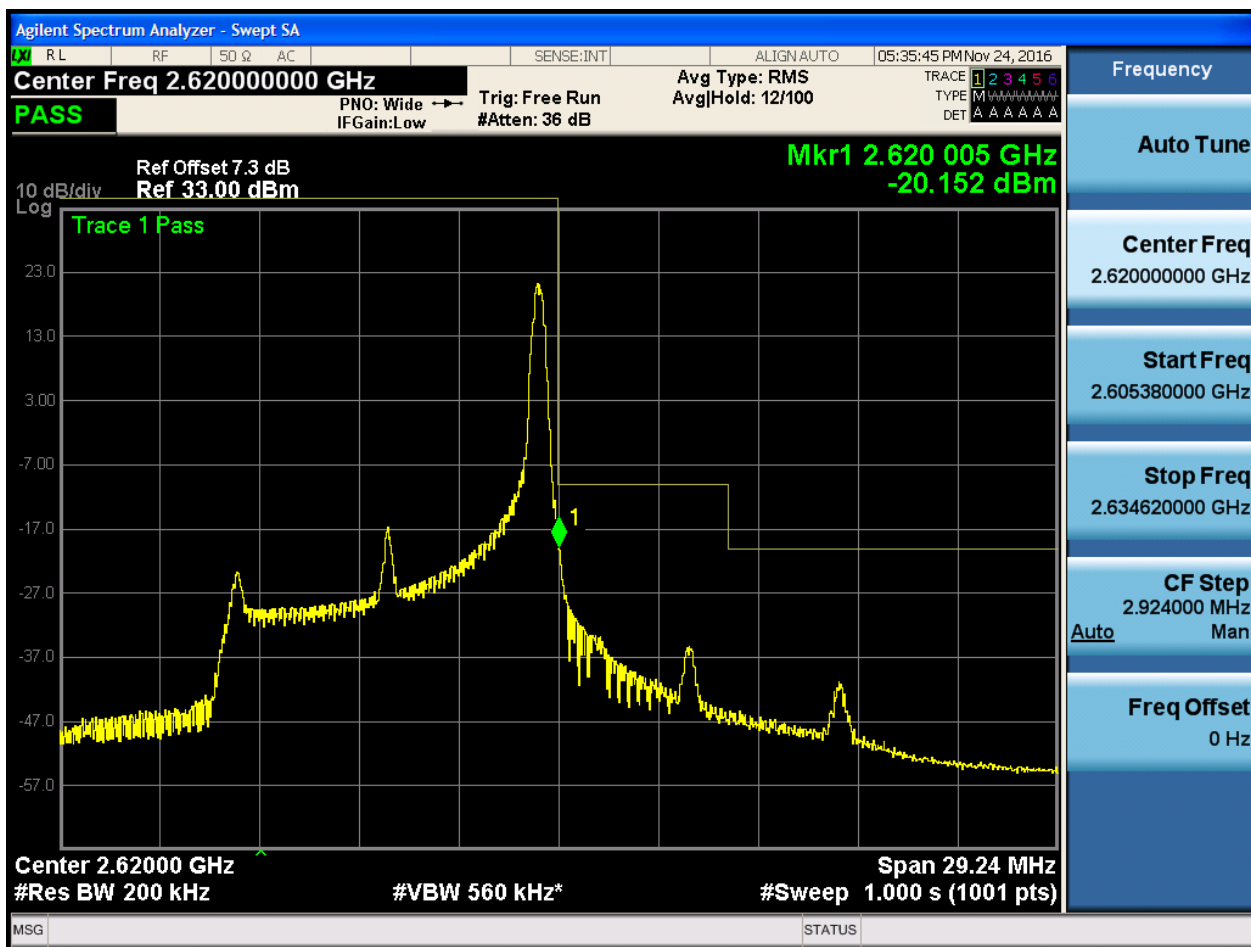
5.1.1.2.2.2 Test Channel = HCH

5.1.1.2.2.2.1 Test RB = RB1#0



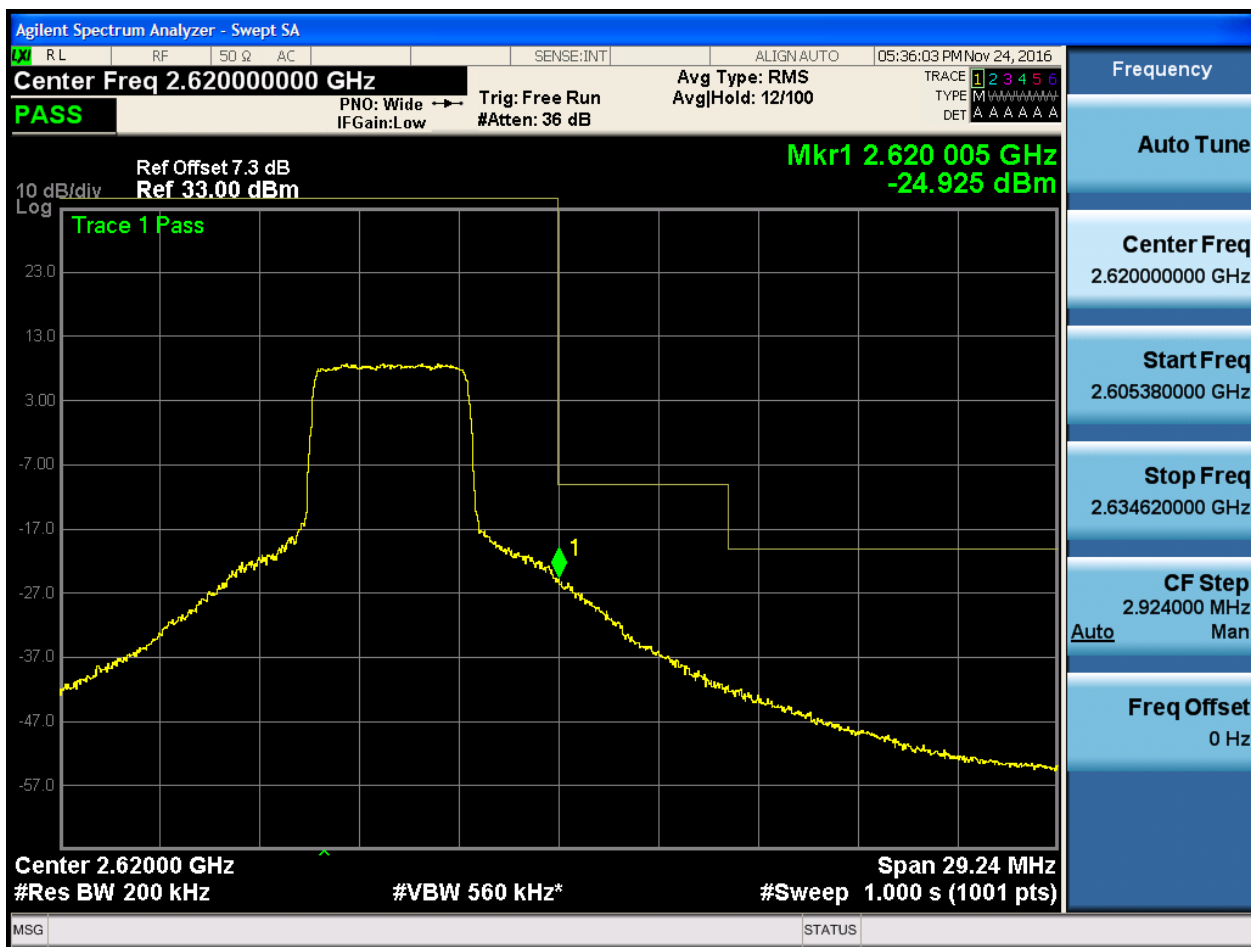


5.1.1.2.2.2 Test RB = RB1#49





5.1.1.2.2.2.3 Test RB = RB25#13





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:36:22 PM Nov 24, 2016

Center Freq 2.620000000 GHz Avg Type: RMS
PASS PNO: Wide IFGain:Low Trig: Free Run AvgHold: 12/100
#Atten: 36 dB

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

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.620 005 GHz
-24.084 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.62000 GHz
#Res BW 200 kHz #VBW 560 kHz* Span 29.24 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.620000000 GHz

Start Freq
2.605380000 GHz

Stop Freq
2.634620000 GHz

CF Step
2.924000 MHz
Auto Man

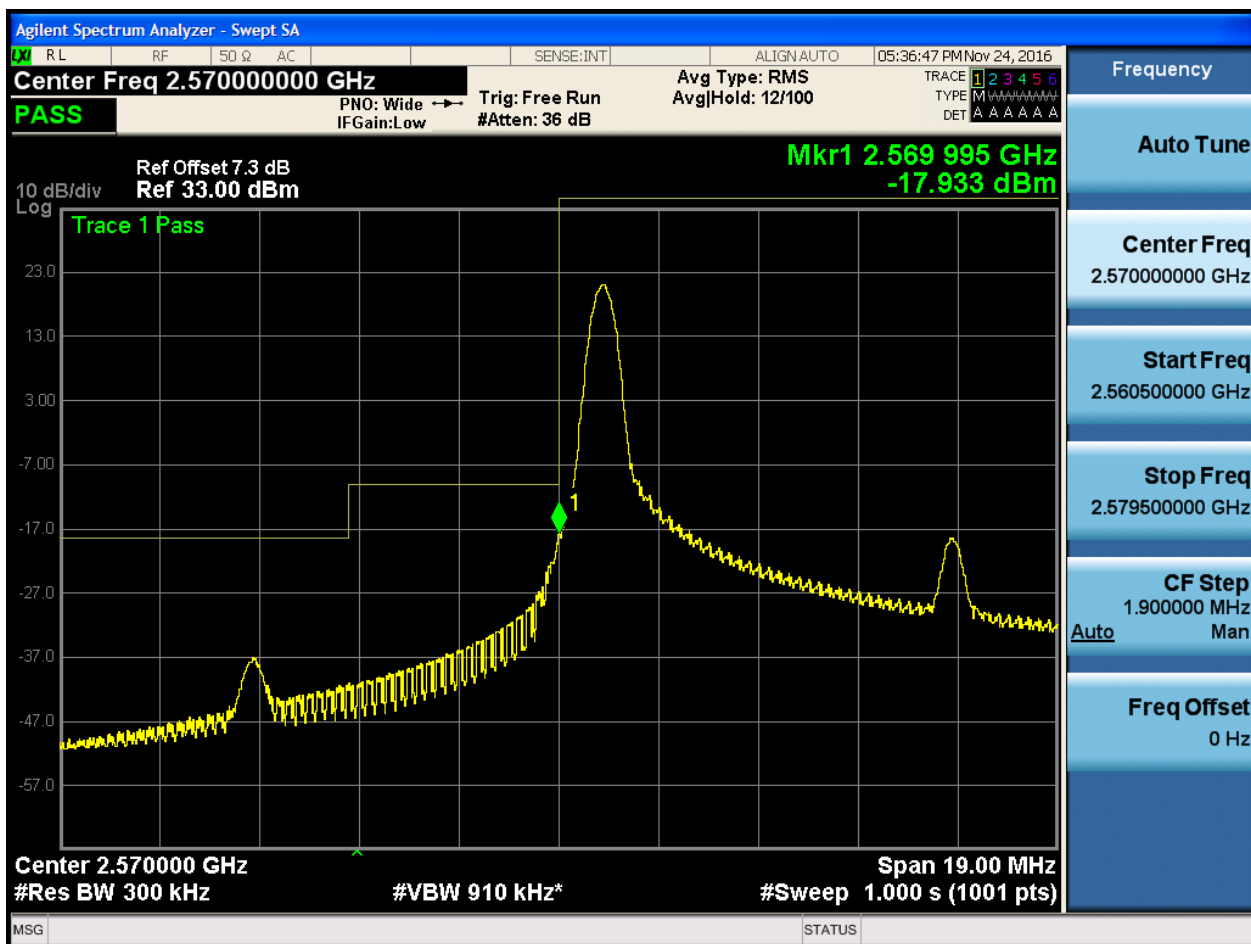
Freq Offset
0 Hz



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





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 05:37:06 PM Nov 24, 2016

Center Freq 2.570000000 GHz Avg Type: RMS
PASS PNO: Wide IFGain: Low Trig: Free Run AvgHold: 12/100
#Atten: 36 dB

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

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.569 995 GHz
-40.607 dBm

10 dB/div
Log

Trace 1 Pass

The spectrum analyzer display shows a signal at 2.57 GHz. The y-axis is logarithmic, ranging from -57.0 dBm to 23.0 dBm. The x-axis is frequency, ranging from 2.565 GHz to 2.575 GHz. A signal is visible at 2.57 GHz, with a peak at -40.607 dBm. The signal is labeled 'Trace 1 Pass'. The center frequency is 2.570000000 GHz. The span is 19.00 MHz. The resolution bandwidth is 300 kHz. The video bandwidth is 910 kHz. The sweep time is 1.000 s (1001 pts). The reference level is 33.00 dBm. The reference offset is 7.3 dB. The marker is at 2.569 995 GHz. The marker value is -40.607 dBm. The signal is labeled 'Trace 1 Pass'.

Center 2.570000 GHz
#Res BW 300 kHz #VBW 910 kHz* Span 19.00 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.570000000 GHz

Start Freq
2.565000000 GHz

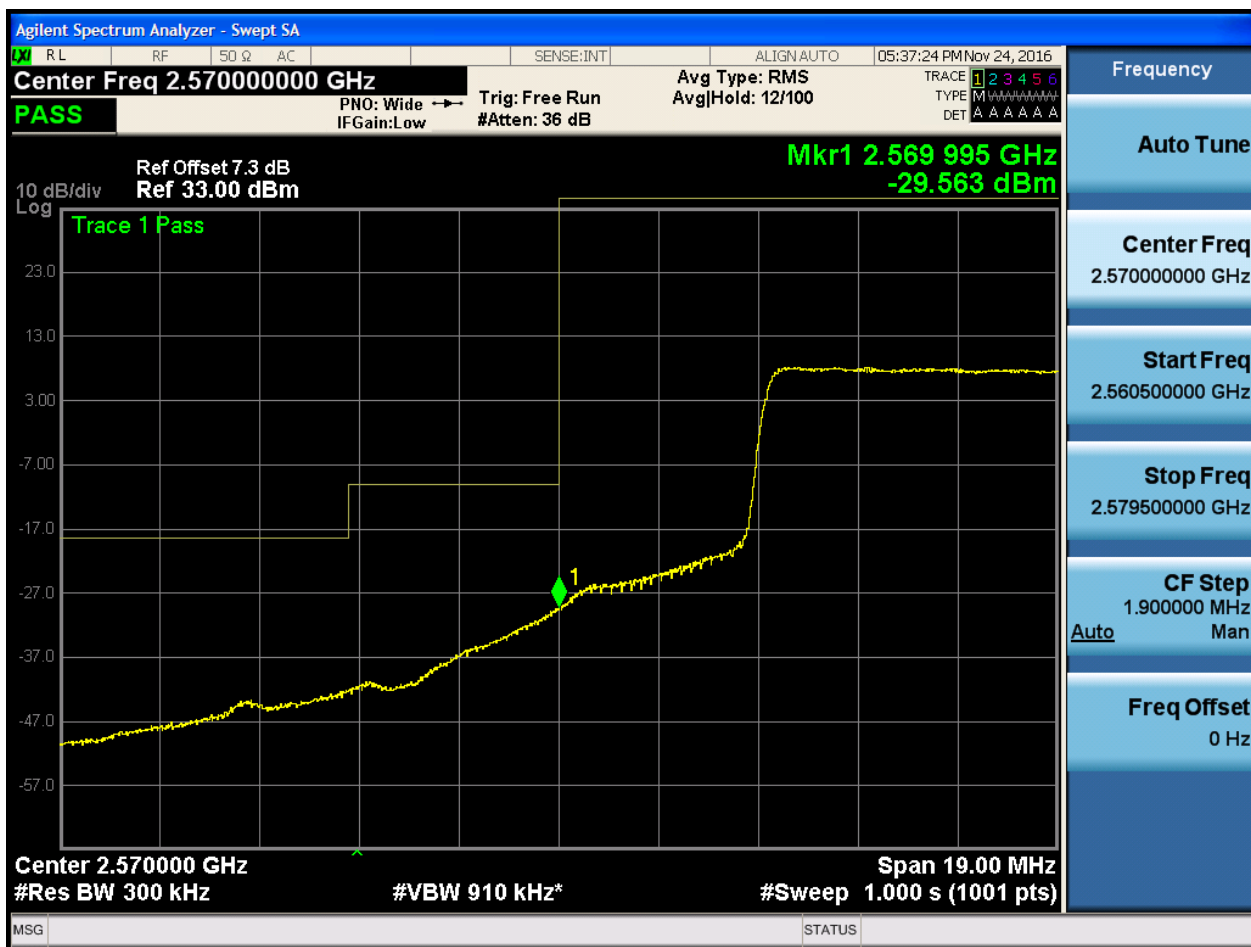
Stop Freq
2.579500000 GHz

CF Step
1.900000 MHz
Auto Man

Freq Offset
0 Hz

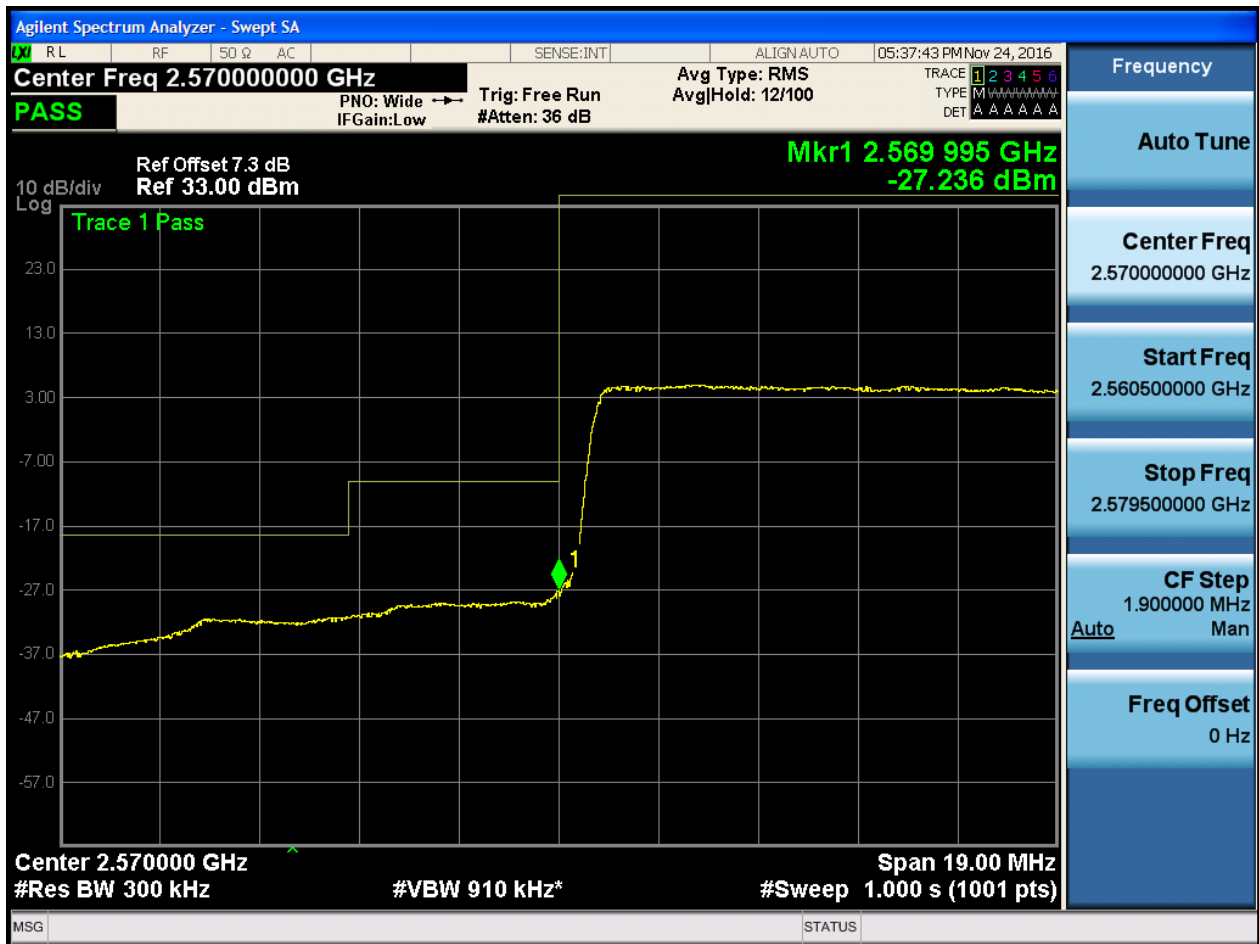


5.1.1.2.3.1.3 Test RB = RB36#18





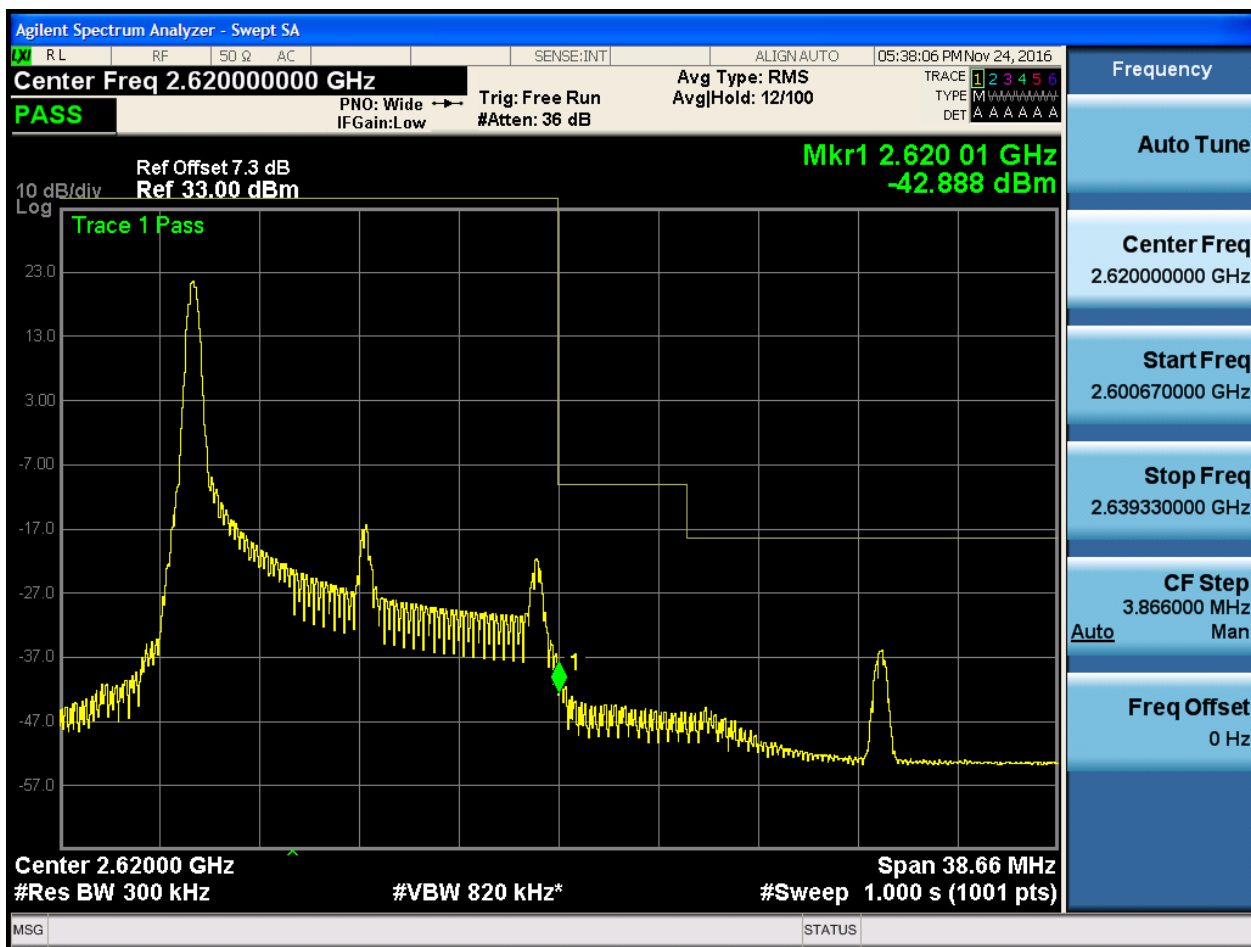
5.1.1.2.3.1.4 Test RB = RB75#0



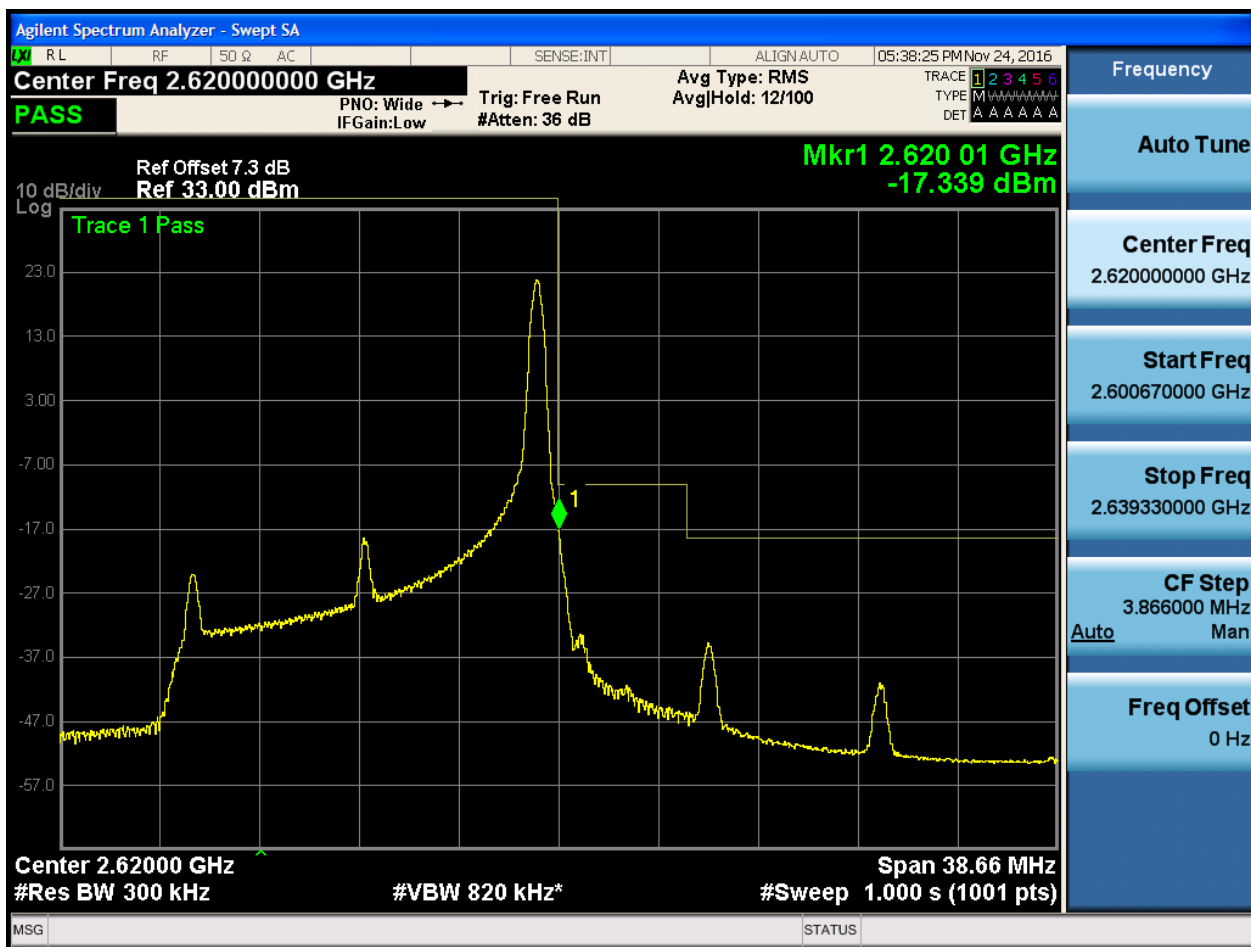


5.1.1.2.3.2 Test Channel = HCH

5.1.1.2.3.2.1 Test RB = RB1#0



5.1.1.2.3.2.2 Test RB = RB1#74





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 05:38:43 PM Nov 24, 2016

Center Freq 2.620000000 GHz Avg Type: RMS
PASS PNO: Wide IF Gain: Low Trig: Free Run Avg Hold: 12/100
TRACE 1 2 3 4 5 6
TYPE M W W W W W W W W W
DET A A A A A A A

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.620 01 GHz
-25.669 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.62000 GHz
#Res BW 300 kHz
#VBW 820 kHz*
Span 38.66 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.620000000 GHz

Start Freq
2.600670000 GHz

Stop Freq
2.639330000 GHz

CF Step
3.866000 MHz
Auto Man

Freq Offset
0 Hz



5.1.1.2.3.2.4 Test RB = RB75#0

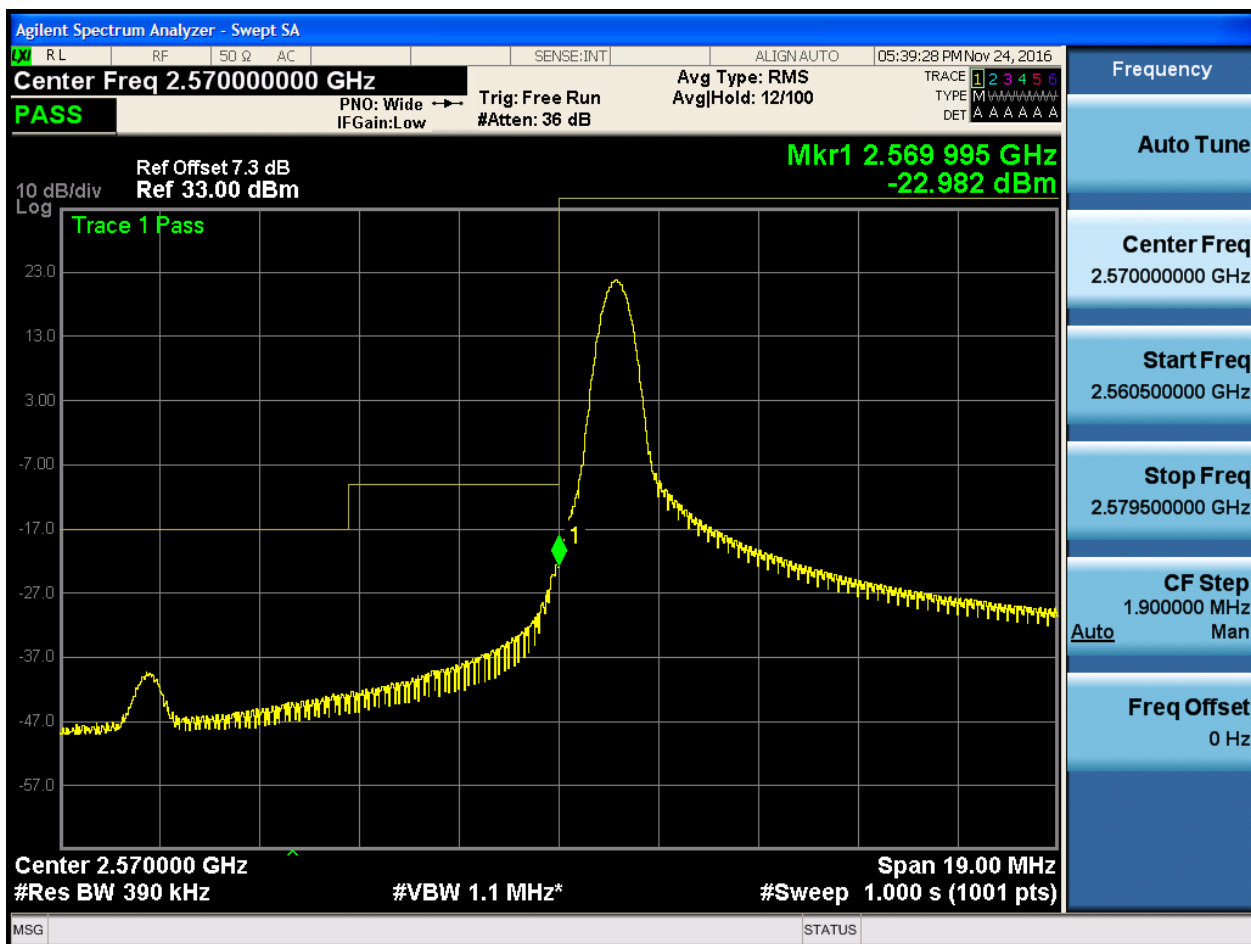




5.1.1.2.4 Test Bandwidth = 20

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 2.570000000 GHz

PASS

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.569 995 GHz
-38.462 dBm

Trace 1 Pass

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

Span 19.00 MHz
#Sweep 1.000 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.570000000 GHz

Start Freq
2.560500000 GHz

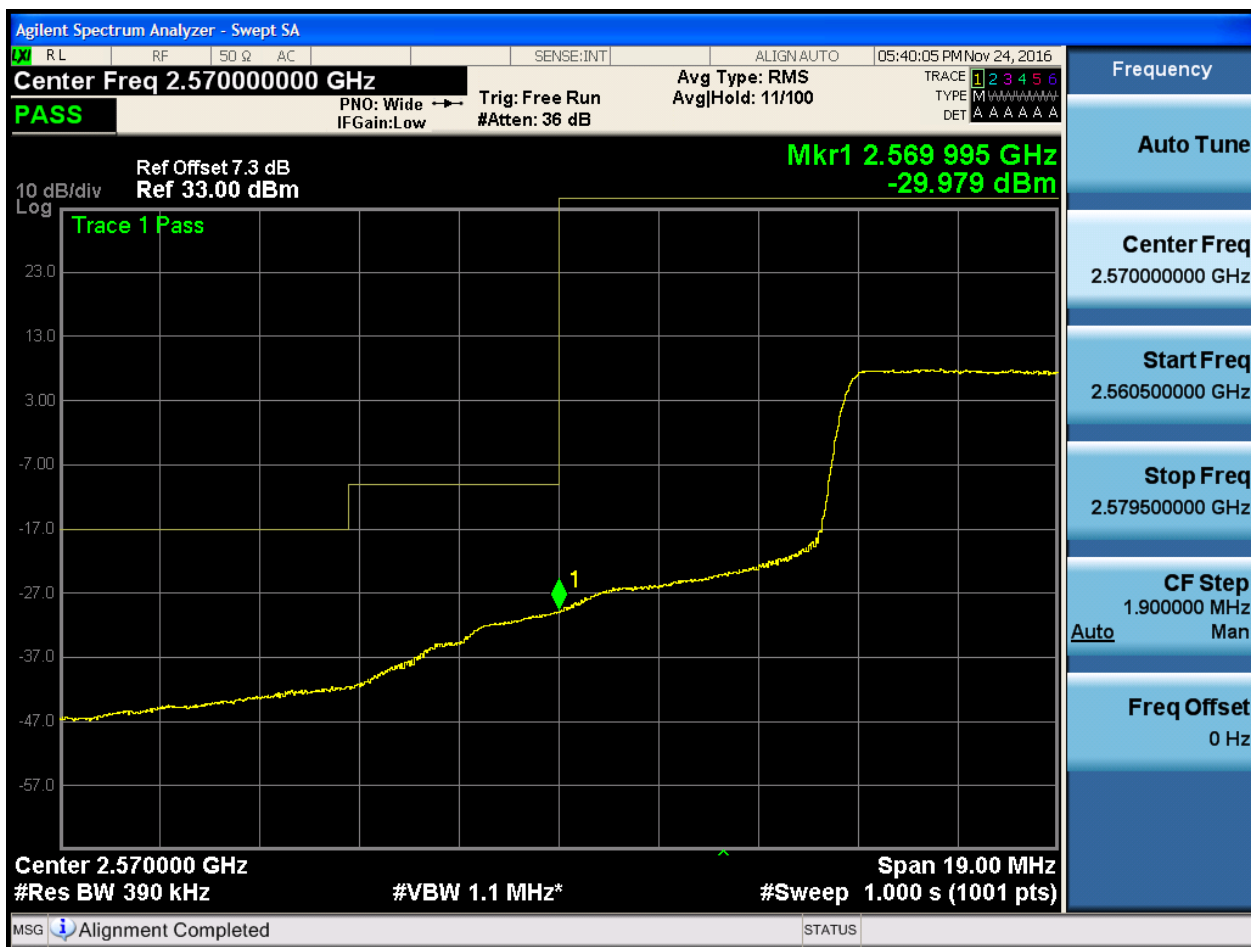
Stop Freq
2.579500000 GHz

CF Step
1.900000 MHz
Auto Man

Freq Offset
0 Hz

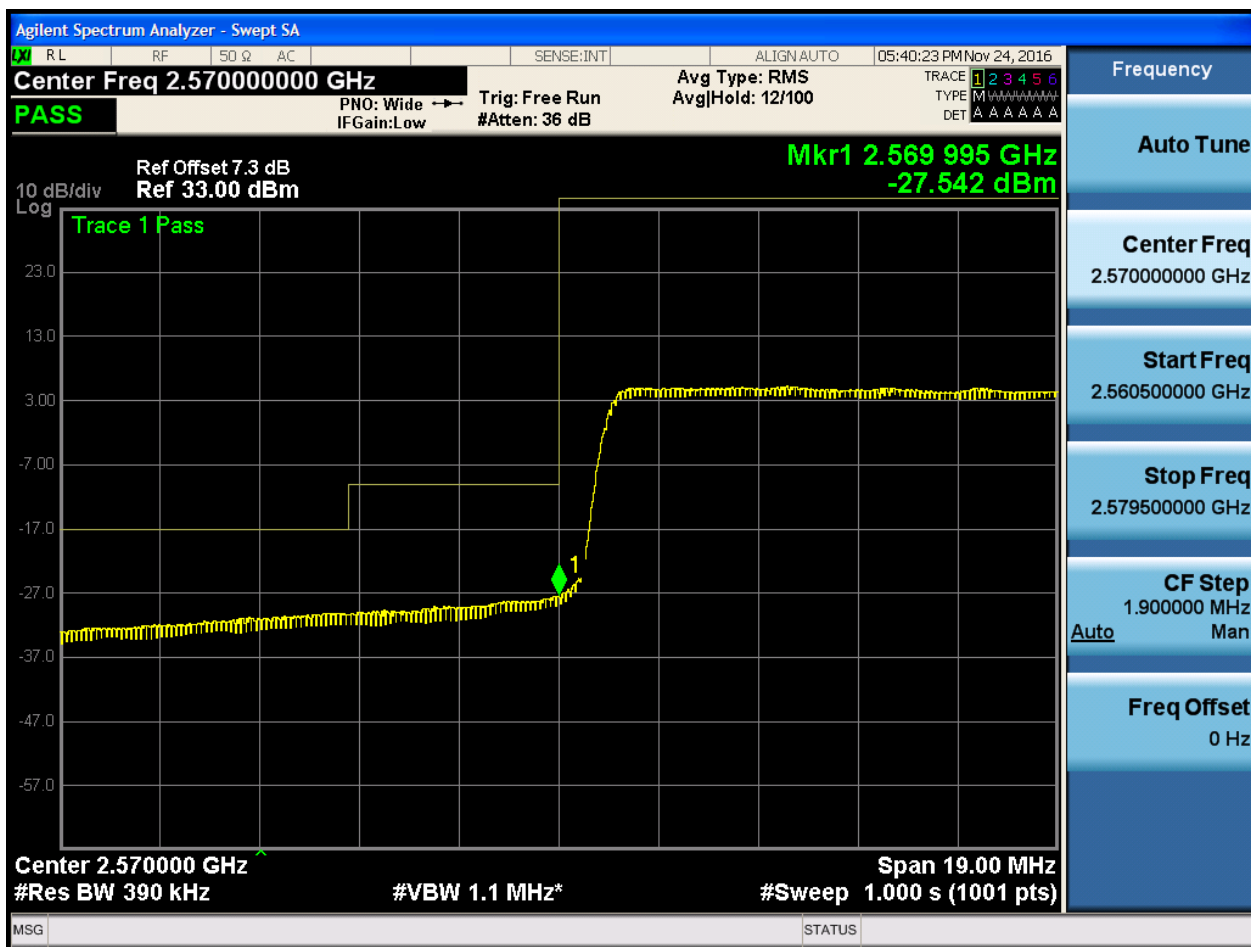


5.1.1.2.4.1.3 Test RB = RB50#25





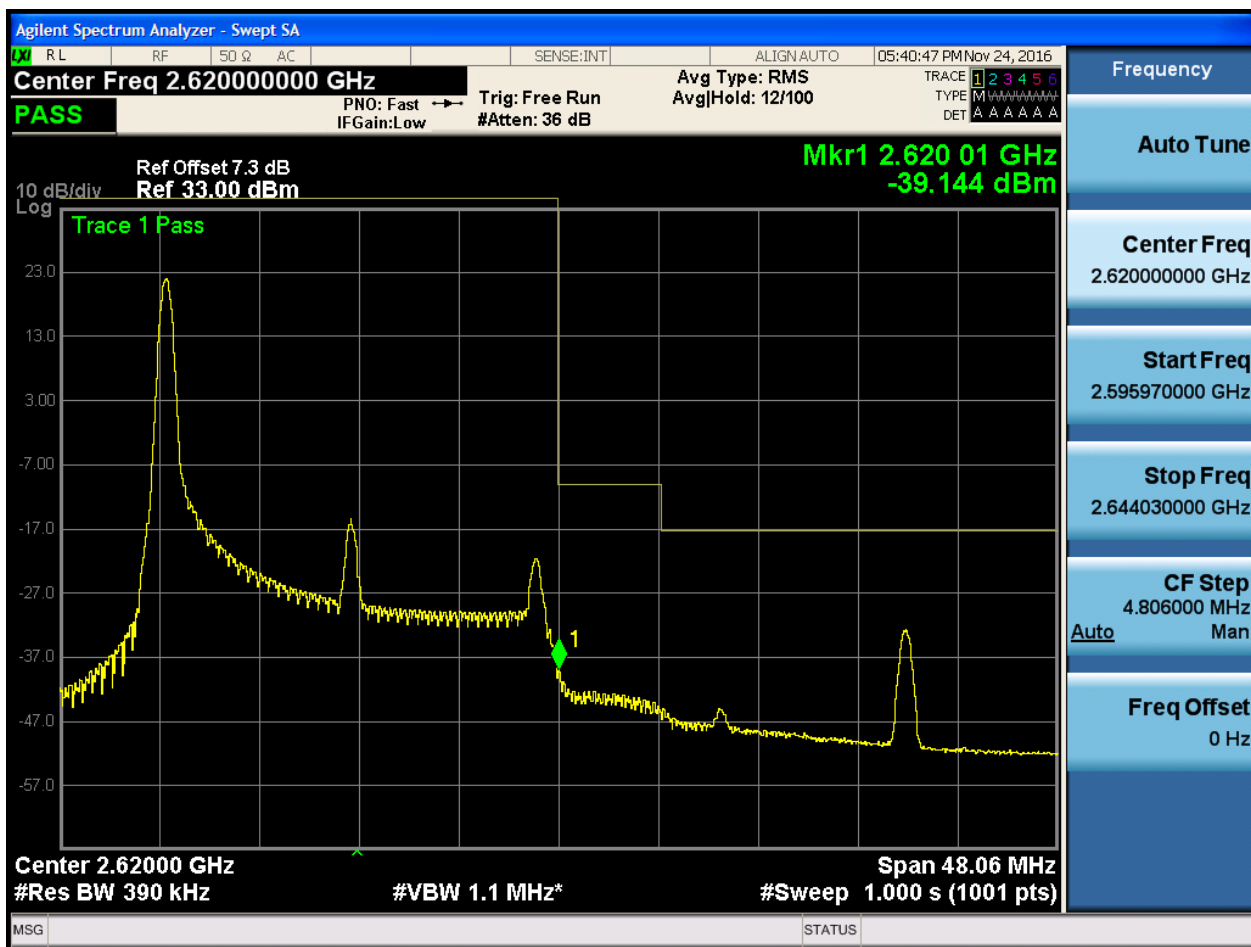
5.1.1.2.4.1.4 Test RB = RB100#0





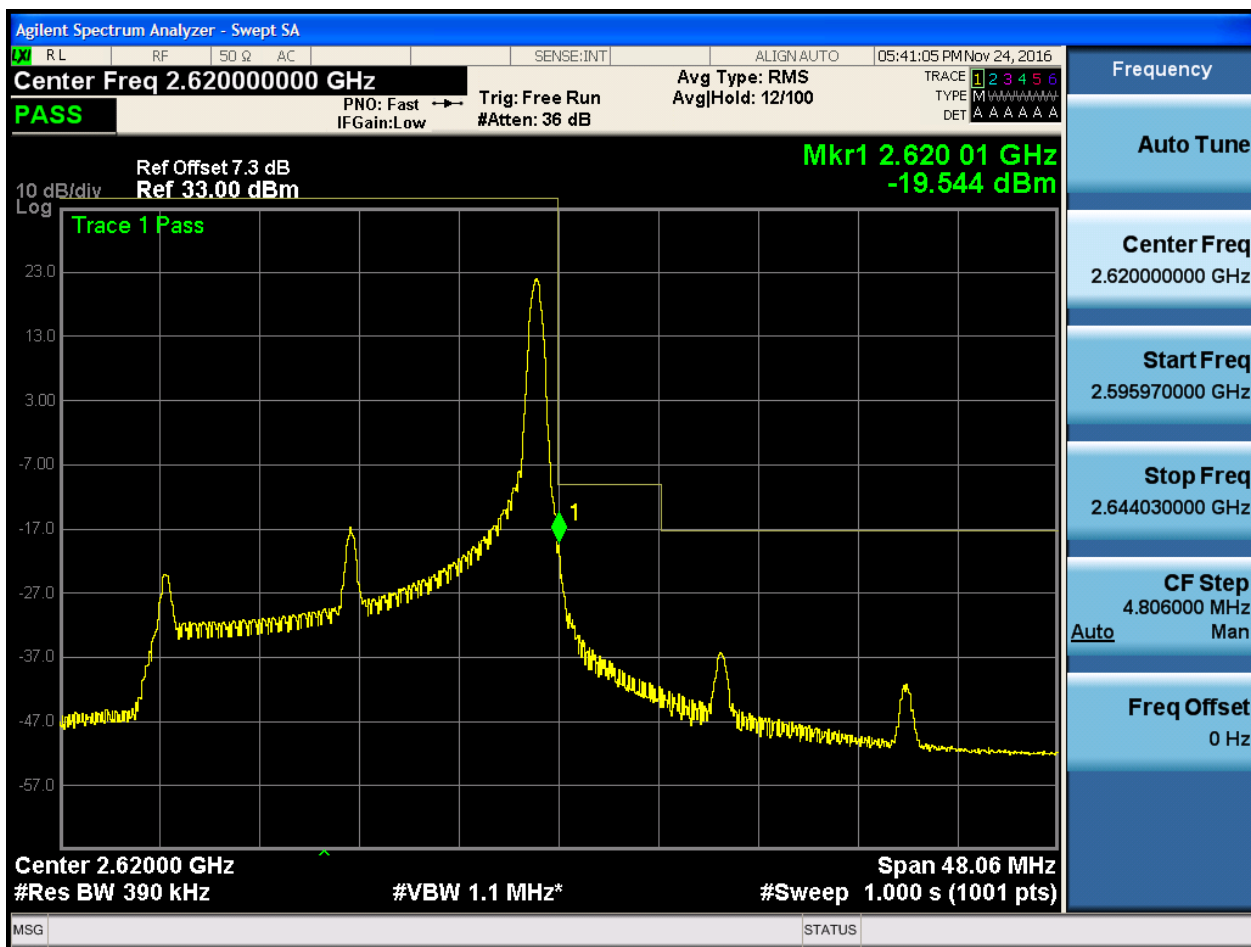
5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0



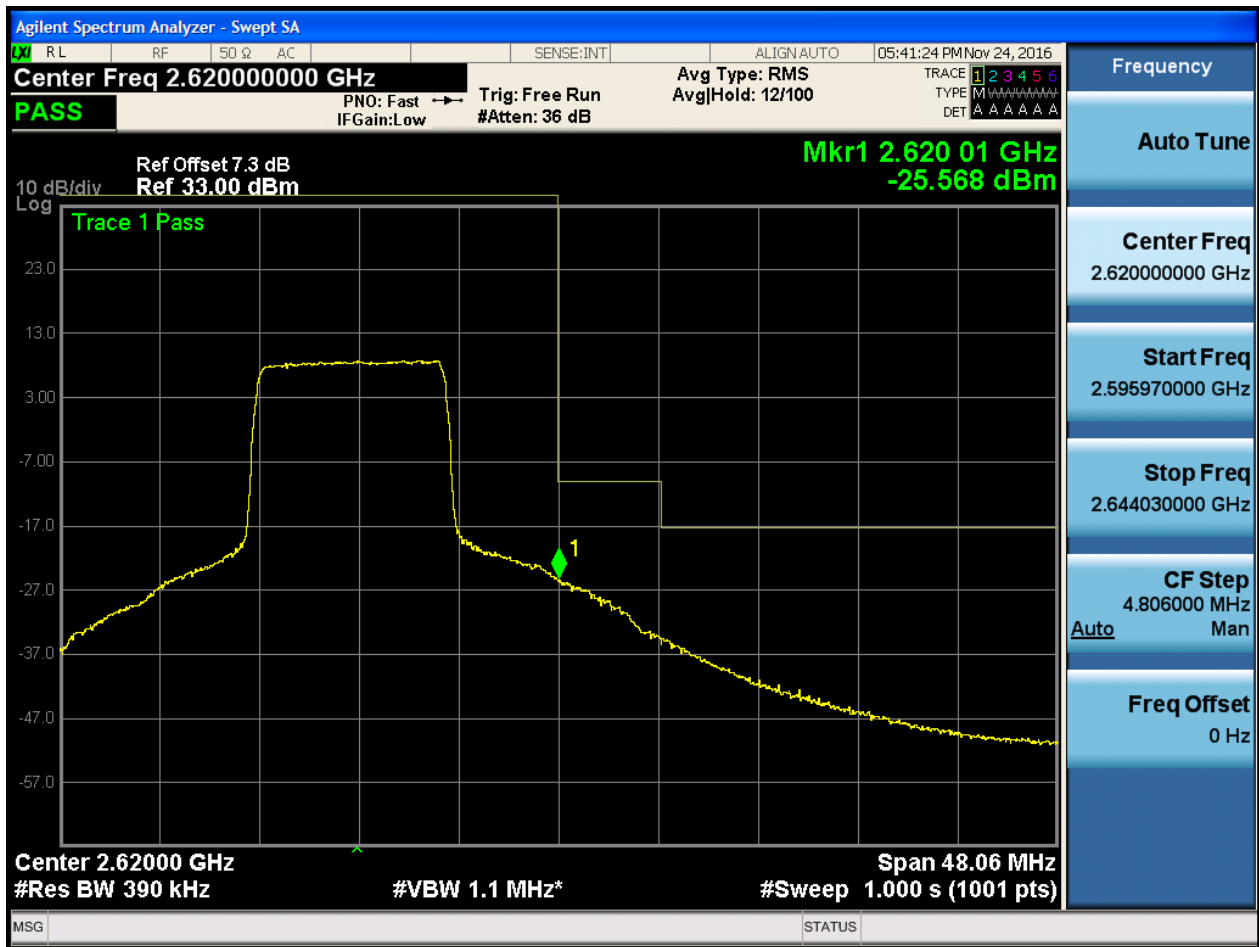


5.1.1.2.4.2.2 Test RB = RB1#99





5.1.1.2.4.2.3 Test RB = RB50#25





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 05:41:42 PM Nov 24, 2016

Center Freq 2.620000000 GHz Avg Type: RMS
PASS PNO: Fast Trig: Free Run AvgHold: 12/100
IFGain: Low #Atten: 36 dB

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

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.620 01 GHz
-24.283 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.62000 GHz
#Res BW 390 kHz
#VBW 1.1 MHz*
Span 48.06 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.620000000 GHz

Start Freq
2.595970000 GHz

Stop Freq
2.644030000 GHz

CF Step
4.806000 MHz
Auto Man

Freq Offset
0 Hz

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

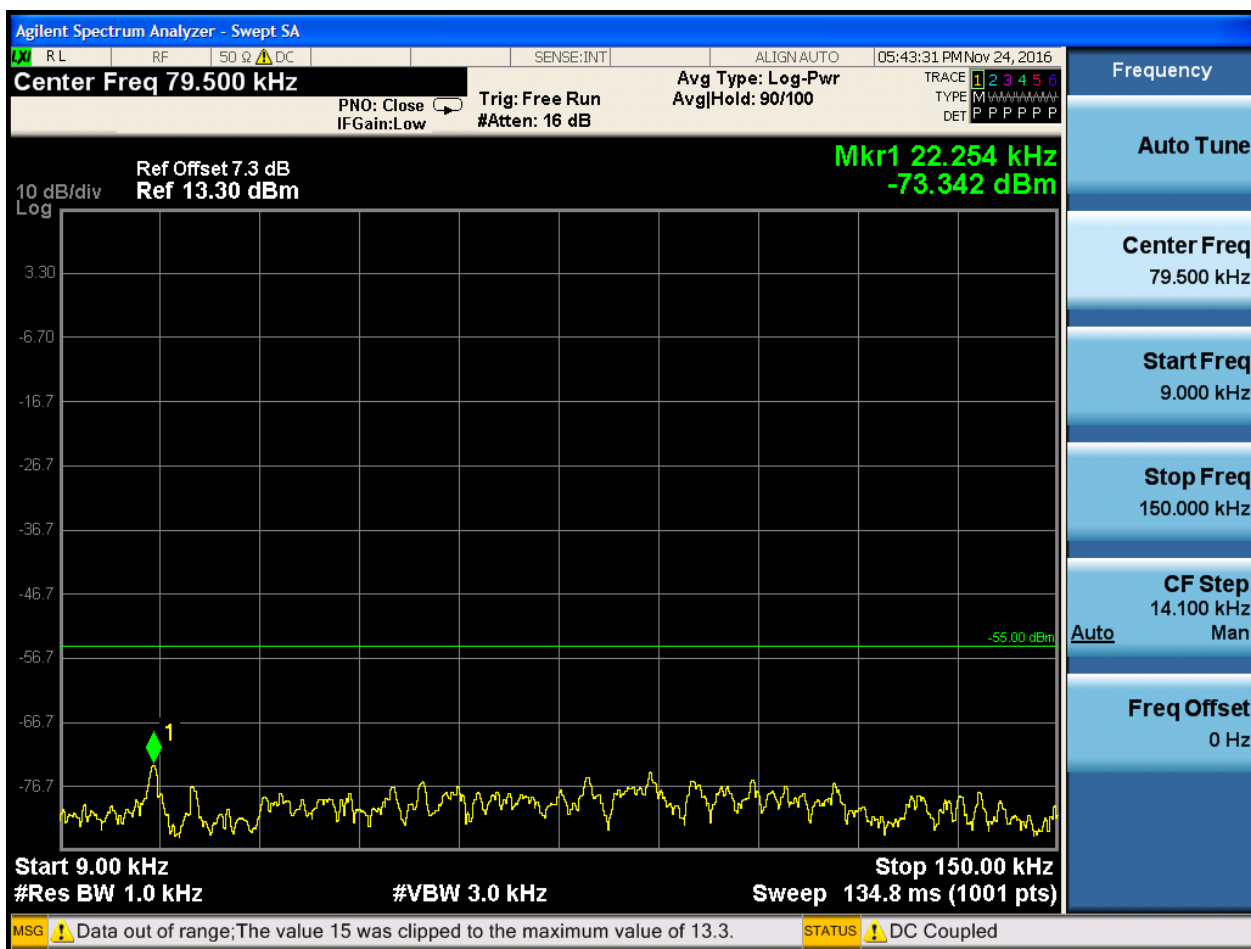
6.1.1 Test Band = BAND38

6.1.1.1 Test Mode = LTE/TM1

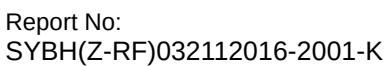
6.1.1.1.1 Test Bandwidth = 5

6.1.1.1.1.1 Test Channel = LCH

6.1.1.1.1.1.1 Test RB = RB1#0

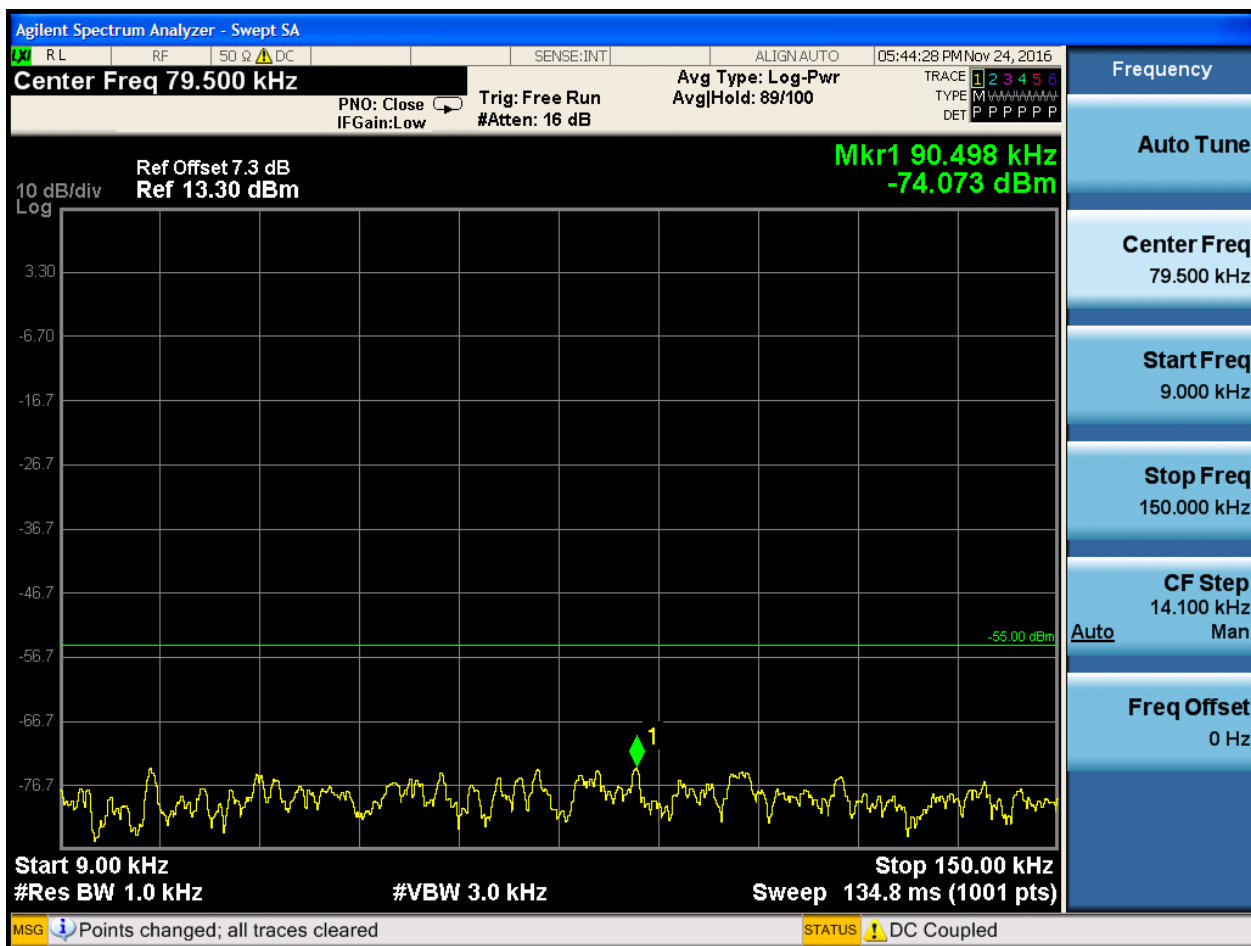


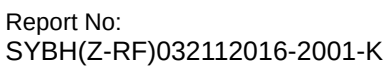


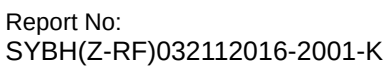


6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 Test RB = RB1#0

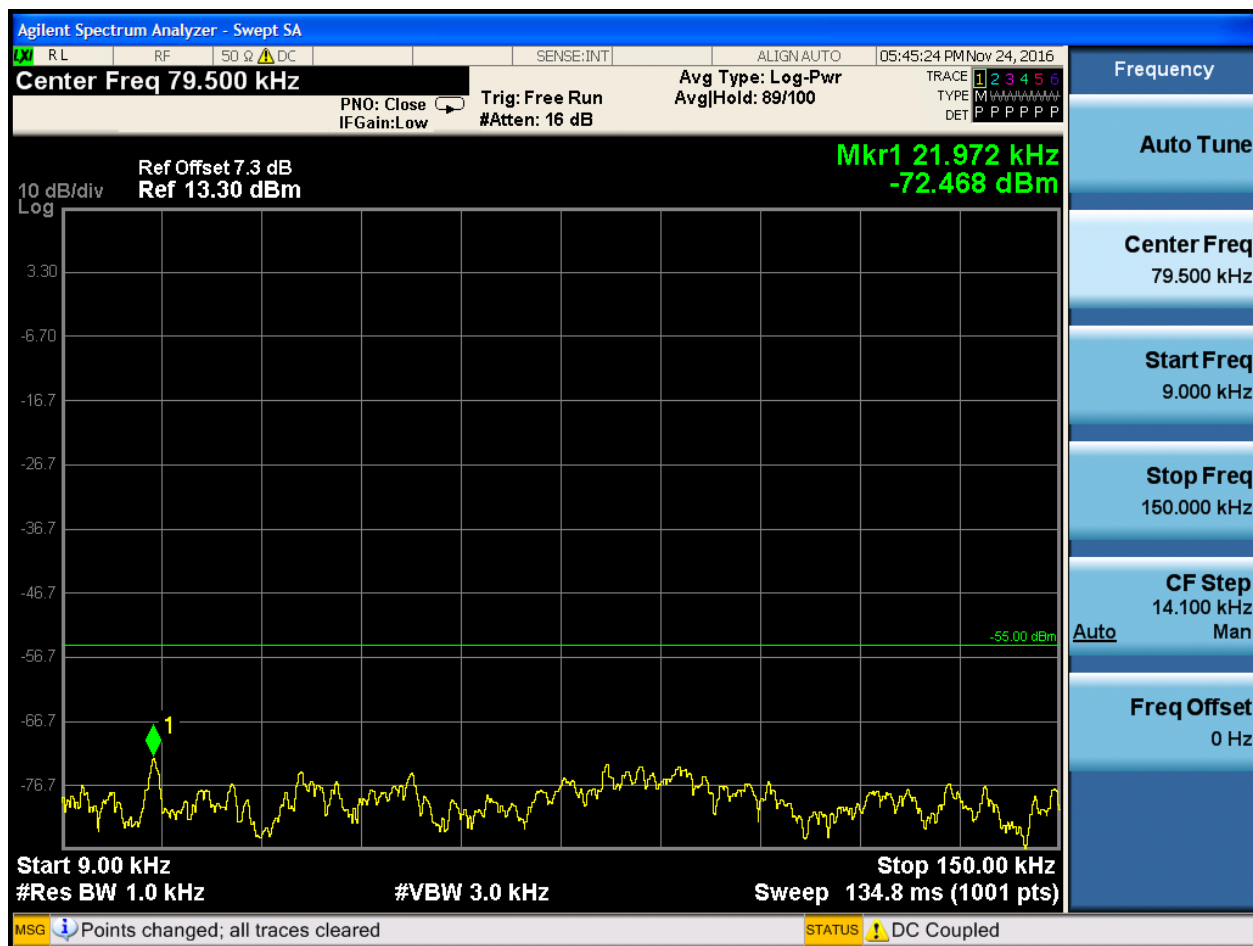


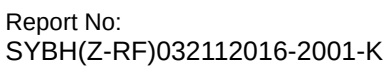




6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 Test RB = RB1#0



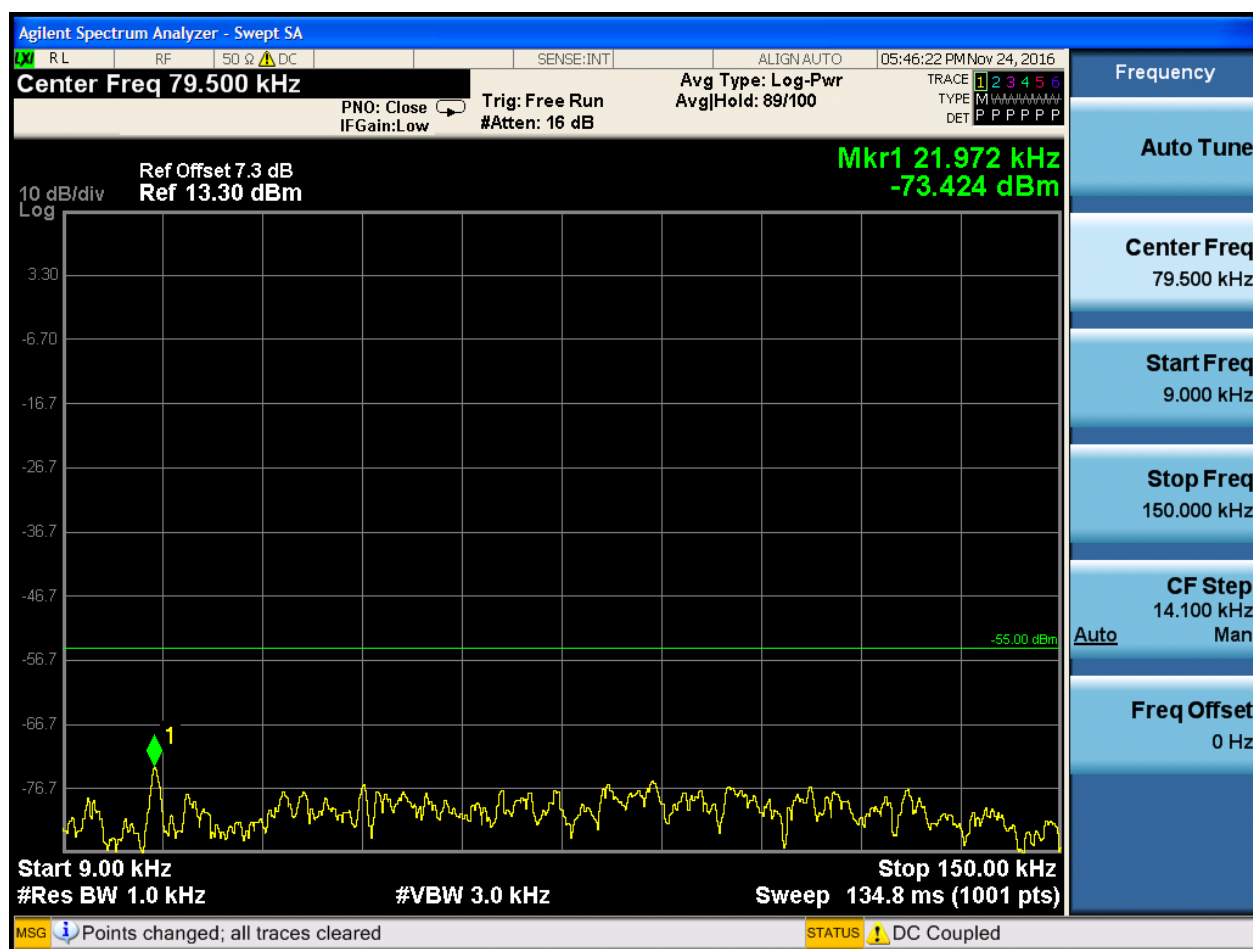


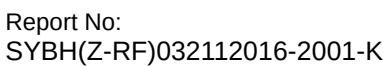


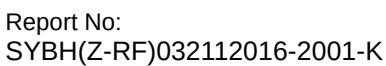
6.1.1.1.2 Test Bandwidth = 10

6.1.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 Test RB = RB1#0

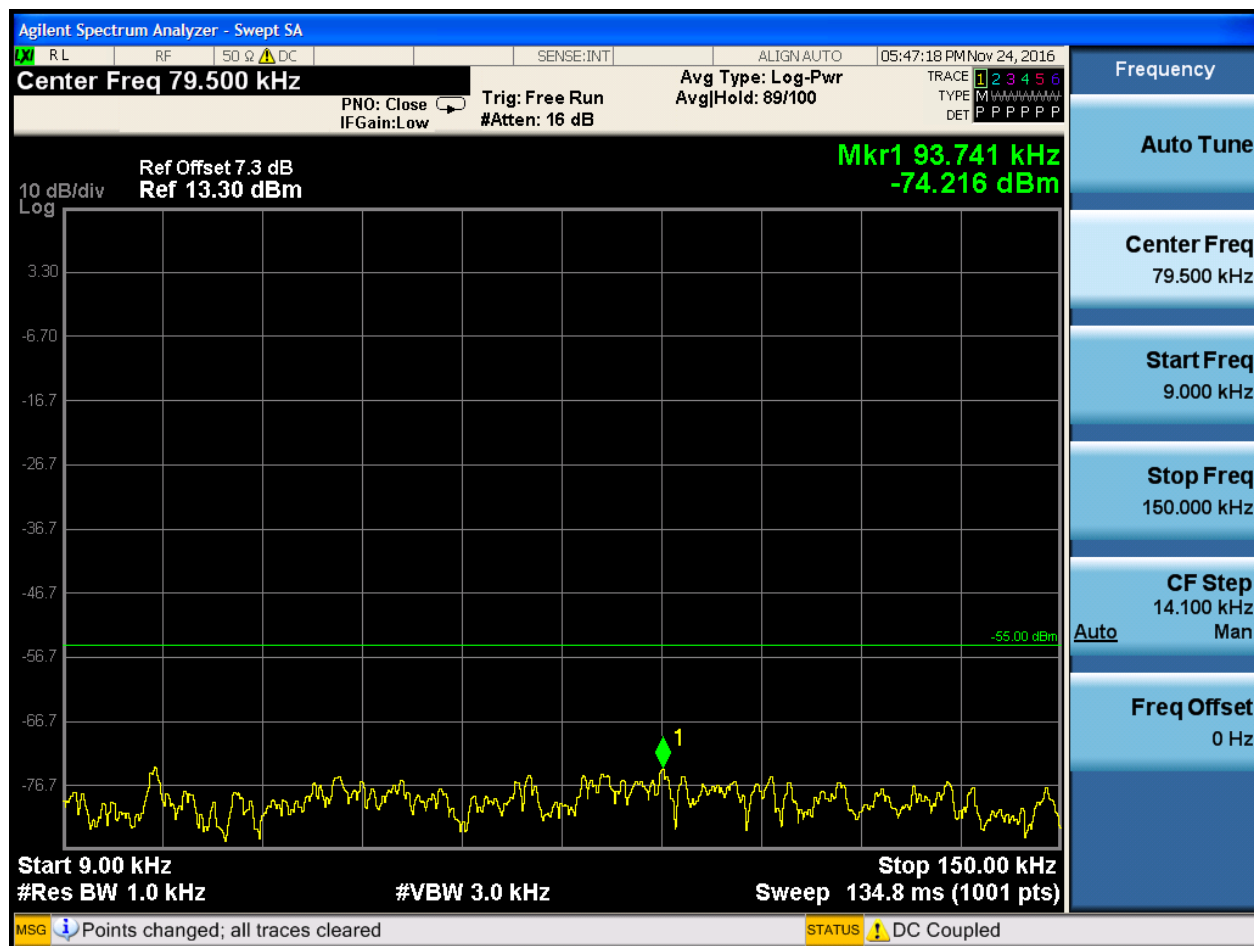




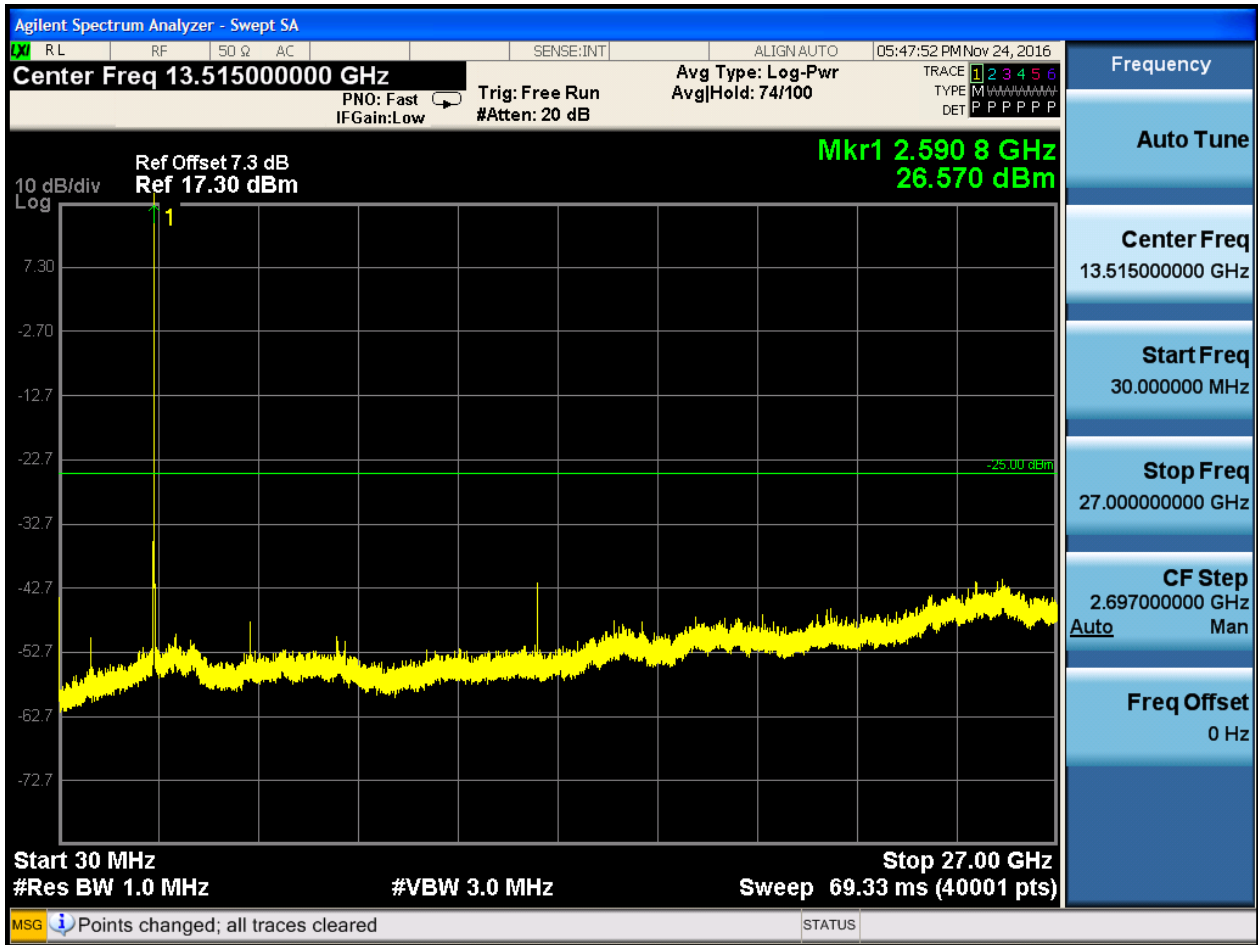


6.1.1.1.2.2 Test Channel = MCH

6.1.1.1.2.2.1 Test RB = RB1#0







6.1.1.1.2.3 Test Channel = HCH

6.1.1.1.2.3.1 Test RB = RB1#0

