



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	21.51	22.41	33	PASS
				RB1#13	21.76	22.66	33	PASS
				RB1#24	21.49	22.39	33	PASS
				RB12#0	20.83	21.73	33	PASS
				RB12#6	20.92	21.82	33	PASS
				RB12#13	20.75	21.65	33	PASS
			MCH	RB25#0	20.83	21.73	33	PASS
				RB1#0	21.56	22.46	33	PASS
				RB1#13	21.74	22.64	33	PASS
				RB1#24	21.27	22.17	33	PASS
				RB12#0	20.73	21.63	33	PASS
				RB12#6	20.76	21.66	33	PASS
				RB12#13	20.56	21.46	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB25#0	20.64	21.54	33	PASS
			HCH	RB1#0	21.92	22.82	33	PASS
				RB1#13	22.18	23.08	33	PASS
				RB1#24	21.69	22.59	33	PASS
				RB12#0	21.15	22.05	33	PASS
				RB12#6	21.19	22.09	33	PASS
				RB12#13	21	21.9	33	PASS
				RB25#0	21.08	21.98	33	PASS
		10	LCH	RB1#0	21.35	22.25	33	PASS
				RB1#25	21.9	22.8	33	PASS
				RB1#49	21.44	22.34	33	PASS
				RB25#0	20.84	21.74	33	PASS
				RB25#13	20.96	21.86	33	PASS
				RB25#25	20.8	21.7	33	PASS
				RB50#0	20.81	21.71	33	PASS
			MCH	RB1#0	21.49	22.39	33	PASS
				RB1#25	21.77	22.67	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB1#49	21.41	22.31	33	PASS
				RB25#0	20.72	21.62	33	PASS
				RB25#13	20.71	21.61	33	PASS
				RB25#25	20.59	21.49	33	PASS
				RB50#0	20.65	21.55	33	PASS
			HCH	RB1#0	21.78	22.68	33	PASS
				RB1#25	22.18	23.08	33	PASS
				RB1#49	21.71	22.61	33	PASS
				RB25#0	21	21.9	33	PASS
				RB25#13	21.04	21.94	33	PASS
				RB25#25	20.94	21.84	33	PASS
				RB50#0	20.93	21.83	33	PASS
		15	LCH	RB1#0	21.18	22.08	33	PASS
				RB1#38	21.88	22.78	33	PASS
				RB1#74	21.22	22.12	33	PASS
				RB36#0	20.81	21.71	33	PASS
				RB36#18	20.92	21.82	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB36#39	20.79	21.69	33	PASS
				RB75#0	20.76	21.66	33	PASS
			MCH	RB1#0	21.35	22.25	33	PASS
				RB1#38	21.73	22.63	33	PASS
				RB1#74	21.24	22.14	33	PASS
				RB36#0	20.62	21.52	33	PASS
				RB36#18	20.75	21.65	33	PASS
				RB36#39	20.55	21.45	33	PASS
				RB75#0	20.61	21.51	33	PASS
			HCH	RB1#0	21.53	22.43	33	PASS
				RB1#38	22.16	23.06	33	PASS
				RB1#74	21.54	22.44	33	PASS
				RB36#0	20.86	21.76	33	PASS
				RB36#18	21.01	21.91	33	PASS
				RB36#39	20.87	21.77	33	PASS
				RB75#0	20.86	21.76	33	PASS
		20	LCH	RB1#0	21.56	22.46	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB1#50	21.97	22.87	33	PASS
				RB1#99	21.49	22.39	33	PASS
				RB50#0	20.91	21.81	33	PASS
				RB50#25	20.96	21.86	33	PASS
				RB50#50	20.79	21.69	33	PASS
				RB100#0	20.89	21.79	33	PASS
			MCH	RB1#0	21.61	22.51	33	PASS
				RB1#50	21.73	22.63	33	PASS
				RB1#99	21.52	22.42	33	PASS
				RB50#0	20.91	21.81	33	PASS
				RB50#25	20.85	21.75	33	PASS
				RB50#50	20.73	21.63	33	PASS
				RB100#0	20.82	21.72	33	PASS
			HCH	RB1#0	21.67	22.57	33	PASS
				RB1#50	22.13	23.03	33	PASS
				RB1#99	21.84	22.74	33	PASS
				RB50#0	20.9	21.8	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB50#25	20.98	21.88	33	PASS
				RB50#50	21.06	21.96	33	PASS
				RB100#0	20.92	21.82	33	PASS
	LTE/TM2	5	LCH	RB1#0	21.02	21.92	33	PASS
				RB1#13	21.27	22.17	33	PASS
				RB1#24	20.96	21.86	33	PASS
				RB12#0	20.83	21.73	33	PASS
				RB12#6	20.98	21.88	33	PASS
				RB12#13	20.77	21.67	33	PASS
				RB25#0	20.71	21.61	33	PASS
			MCH	RB1#0	21.04	21.94	33	PASS
				RB1#13	21.2	22.1	33	PASS
				RB1#24	20.75	21.65	33	PASS
				RB12#0	20.76	21.66	33	PASS
				RB12#6	20.79	21.69	33	PASS
				RB12#13	20.59	21.49	33	PASS
				RB25#0	20.61	21.51	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
			HCH	RB1#0	21.14	22.04	33	PASS
				RB1#13	21.36	22.26	33	PASS
				RB1#24	20.86	21.76	33	PASS
				RB12#0	21.15	22.05	33	PASS
				RB12#6	21.2	22.1	33	PASS
				RB12#13	21.01	21.91	33	PASS
				RB25#0	21.09	21.99	33	PASS
		10	LCH	RB1#0	20.82	21.72	33	PASS
				RB1#25	21.31	22.21	33	PASS
				RB1#49	20.86	21.76	33	PASS
				RB25#0	20.77	21.67	33	PASS
				RB25#13	20.88	21.78	33	PASS
				RB25#25	20.72	21.62	33	PASS
				RB50#0	20.75	21.65	33	PASS
			MCH	RB1#0	20.94	21.84	33	PASS
				RB1#25	21.21	22.11	33	PASS
				RB1#49	20.85	21.75	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB25#0	20.75	21.65	33	PASS
				RB25#13	20.72	21.62	33	PASS
				RB25#25	20.62	21.52	33	PASS
				RB50#0	20.63	21.53	33	PASS
			HCH	RB1#0	21.05	21.95	33	PASS
				RB1#25	21.47	22.37	33	PASS
				RB1#49	21.02	21.92	33	PASS
				RB25#0	20.97	21.87	33	PASS
				RB25#13	20.99	21.89	33	PASS
				RB25#25	20.9	21.8	33	PASS
				RB50#0	20.9	21.8	33	PASS
		15	LCH	RB1#0	20.72	21.62	33	PASS
				RB1#38	21.33	22.23	33	PASS
				RB1#74	20.7	21.6	33	PASS
				RB36#0	20.8	21.7	33	PASS
				RB36#18	20.92	21.82	33	PASS
				RB36#39	20.78	21.68	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB75#0	20.74	21.64	33	PASS
			MCH	RB1#0	20.73	21.63	33	PASS
				RB1#38	21.09	21.99	33	PASS
				RB1#74	20.59	21.49	33	PASS
				RB36#0	20.61	21.51	33	PASS
				RB36#18	20.76	21.66	33	PASS
				RB36#39	20.57	21.47	33	PASS
				RB75#0	20.61	21.51	33	PASS
			HCH	RB1#0	20.74	21.64	33	PASS
				RB1#38	21.36	22.26	33	PASS
				RB1#74	20.77	21.67	33	PASS
				RB36#0	20.78	21.68	33	PASS
				RB36#18	21.03	21.93	33	PASS
				RB36#39	20.88	21.78	33	PASS
				RB75#0	20.88	21.78	33	PASS
		20	LCH	RB1#0	20.98	21.88	33	PASS
				RB1#50	21.42	22.32	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB1#99	20.94	21.84	33	PASS
				RB50#0	20.87	21.77	33	PASS
				RB50#25	20.92	21.82	33	PASS
				RB50#50	20.76	21.66	33	PASS
				RB100#0	20.88	21.78	33	PASS
			MCH	RB1#0	21.18	22.08	33	PASS
				RB1#50	21.32	22.22	33	PASS
				RB1#99	21.17	22.07	33	PASS
				RB50#0	20.84	21.74	33	PASS
				RB50#25	20.79	21.69	33	PASS
				RB50#50	20.66	21.56	33	PASS
				RB100#0	20.76	21.66	33	PASS
			HCH	RB1#0	21.13	22.03	33	PASS
				RB1#50	21.5	22.4	33	PASS
				RB1#99	21.19	22.09	33	PASS
				RB50#0	20.85	21.75	33	PASS
				RB50#25	20.93	21.83	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				RB50#50	21	21.9	33	PASS
				RB100#0	20.86	21.76	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:

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

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

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

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	4.31	13	PASS
				RB1#13	4.27	13	PASS
				RB1#24	4.4	13	PASS
				RB12#0	6.07	13	PASS
				RB12#6	6.15	13	PASS
				RB12#13	6.21	13	PASS
				RB25#0	6.18	13	PASS
			MCH	RB1#0	5.06	13	PASS
				RB1#13	4.95	13	PASS
				RB1#24	5.13	13	PASS
				RB12#0	6.04	13	PASS
				RB12#6	6.14	13	PASS
				RB12#13	6.05	13	PASS
				RB25#0	6.15	13	PASS
			HCH	RB1#0	5.01	13	PASS
				RB1#13	4.92	13	PASS
				RB1#24	5.06	13	PASS
				RB12#0	6.11	13	PASS
				RB12#6	5.72	13	PASS
				RB12#13	6.01	13	PASS
				RB25#0	6.44	13	PASS
		10	LCH	RB1#0	5.18	13	PASS
				RB1#25	4.98	13	PASS
				RB1#49	5.21	13	PASS
				RB25#0	6.1	13	PASS
				RB25#13	6.12	13	PASS
				RB25#25	6.09	13	PASS
				RB50#0	6.41	13	PASS
			MCH	RB1#0	4.95	13	PASS
				RB1#25	4.83	13	PASS
				RB1#49	4.96	13	PASS
				RB25#0	6.31	13	PASS
				RB25#13	6.17	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB25#25	6.41	13	PASS
				RB50#0	6.81	13	PASS
			HCH	RB1#0	5.12	13	PASS
				RB1#25	4.93	13	PASS
				RB1#49	5.14	13	PASS
				RB25#0	6.43	13	PASS
				RB25#13	6.63	13	PASS
				RB25#25	6.49	13	PASS
				RB50#0	6.46	13	PASS
		15	LCH	RB1#0	5.4	13	PASS
				RB1#38	5.23	13	PASS
				RB1#74	5.46	13	PASS
				RB36#0	6.4	13	PASS
				RB36#18	6.2	13	PASS
				RB36#39	6.36	13	PASS
				RB75#0	6.39	13	PASS
			MCH	RB1#0	5.89	13	PASS
				RB1#38	5.69	13	PASS
				RB1#74	5.93	13	PASS
				RB36#0	6.31	13	PASS
				RB36#18	6.56	13	PASS
				RB36#39	6.56	13	PASS
				RB75#0	6.54	13	PASS
			HCH	RB1#0	5.03	13	PASS
				RB1#38	4.85	13	PASS
				RB1#74	5.04	13	PASS
				RB36#0	6.61	13	PASS
				RB36#18	6.48	13	PASS
				RB36#39	6.37	13	PASS
				RB75#0	6.56	13	PASS
		20	LCH	RB1#0	5.63	13	PASS
				RB1#50	5.47	13	PASS
				RB1#99	5.73	13	PASS
				RB50#0	6.56	13	PASS
				RB50#25	6.13	13	PASS
				RB50#50	6.52	13	PASS
				RB100#0	6.45	13	PASS
			MCH	RB1#0	5.44	13	PASS
				RB1#50	5.32	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB1#99	5.59	13	PASS
				RB50#0	6.81	13	PASS
				RB50#25	6.68	13	PASS
				RB50#50	6.86	13	PASS
				RB100#0	7.07	13	PASS
			HCH	RB1#0	5.36	13	PASS
				RB1#50	5.17	13	PASS
				RB1#99	5.23	13	PASS
				RB50#0	6.57	13	PASS
				RB50#25	6.58	13	PASS
				RB50#50	6.29	13	PASS
				RB100#0	6.5	13	PASS
	LTE/TM2	5	LCH	RB1#0	5.54	13	PASS
				RB1#13	5.6	13	PASS
				RB1#24	5.58	13	PASS
				RB12#0	6.45	13	PASS
				RB12#6	6.41	13	PASS
				RB12#13	6.5	13	PASS
				RB25#0	6.85	13	PASS
			MCH	RB1#0	5.78	13	PASS
				RB1#13	5.94	13	PASS
				RB1#24	5.89	13	PASS
				RB12#0	6.37	13	PASS
				RB12#6	6.49	13	PASS
				RB12#13	6.36	13	PASS
				RB25#0	6.82	13	PASS
			HCH	RB1#0	5.63	13	PASS
				RB1#13	5.63	13	PASS
				RB1#24	5.68	13	PASS
				RB12#0	6.24	13	PASS
				RB12#6	6.25	13	PASS
				RB12#13	6.26	13	PASS
				RB25#0	6.74	13	PASS
		10	LCH	RB1#0	5.99	13	PASS
				RB1#25	5.74	13	PASS
				RB1#49	5.89	13	PASS
				RB25#0	6.4	13	PASS
				RB25#13	6.24	13	PASS
				RB25#25	6.49	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB50#0	6.72	13	PASS
				RB1#0	5.4	13	PASS
			MCH	RB1#25	5.16	13	PASS
				RB1#49	5.41	13	PASS
				RB25#0	6.88	13	PASS
				RB25#13	6.52	13	PASS
				RB25#25	6.94	13	PASS
				RB50#0	6.86	13	PASS
			HCH	RB1#0	6.45	13	PASS
				RB1#25	6.14	13	PASS
				RB1#49	6.22	13	PASS
				RB25#0	6.28	13	PASS
				RB25#13	6.31	13	PASS
				RB25#25	6.47	13	PASS
				RB50#0	7.19	13	PASS
		15	LCH	RB1#0	5.97	13	PASS
				RB1#38	5.9	13	PASS
				RB1#74	6.01	13	PASS
				RB36#0	6.66	13	PASS
				RB36#18	6.63	13	PASS
				RB36#39	6.65	13	PASS
				RB75#0	7.01	13	PASS
			MCH	RB1#0	6.16	13	PASS
				RB1#38	6.07	13	PASS
				RB1#74	6.43	13	PASS
				RB36#0	6.73	13	PASS
				RB36#18	6.94	13	PASS
				RB36#39	7.03	13	PASS
				RB75#0	7.33	13	PASS
			HCH	RB1#0	5.78	13	PASS
				RB1#38	5.51	13	PASS
				RB1#74	5.6	13	PASS
				RB36#0	6.96	13	PASS
				RB36#18	6.75	13	PASS
				RB36#39	6.77	13	PASS
				RB75#0	7.13	13	PASS
		20	LCH	RB1#0	6.28	13	PASS
				RB1#50	6.08	13	PASS
				RB1#99	6.37	13	PASS

Test Band(For LTE)	Test Mode	Test Bandwidth (MHz)	Test Channel	Test RB	Measured[dB]	Limit [dB]	Verdict
				RB50#0	6.69	13	PASS
				RB50#25	6.49	13	PASS
				RB50#50	6.53	13	PASS
				RB100#0	7.11	13	PASS
			MCH	RB1#0	6.12	13	PASS
				RB1#50	6.06	13	PASS
				RB1#99	6.22	13	PASS
				RB50#0	6.89	13	PASS
				RB50#25	6.96	13	PASS
				RB50#50	6.9	13	PASS
				RB100#0	7.25	13	PASS
			HCH	RB1#0	5.84	13	PASS
				RB1#50	5.71	13	PASS
				RB1#99	5.81	13	PASS
				RB50#0	7.02	13	PASS
				RB50#25	6.96	13	PASS
				RB50#50	6.59	13	PASS
				RB100#0	7.05	13	PASS

3Appendix_C: Modulation Characteristics

Part I - Test Plots

3.1 For LTE

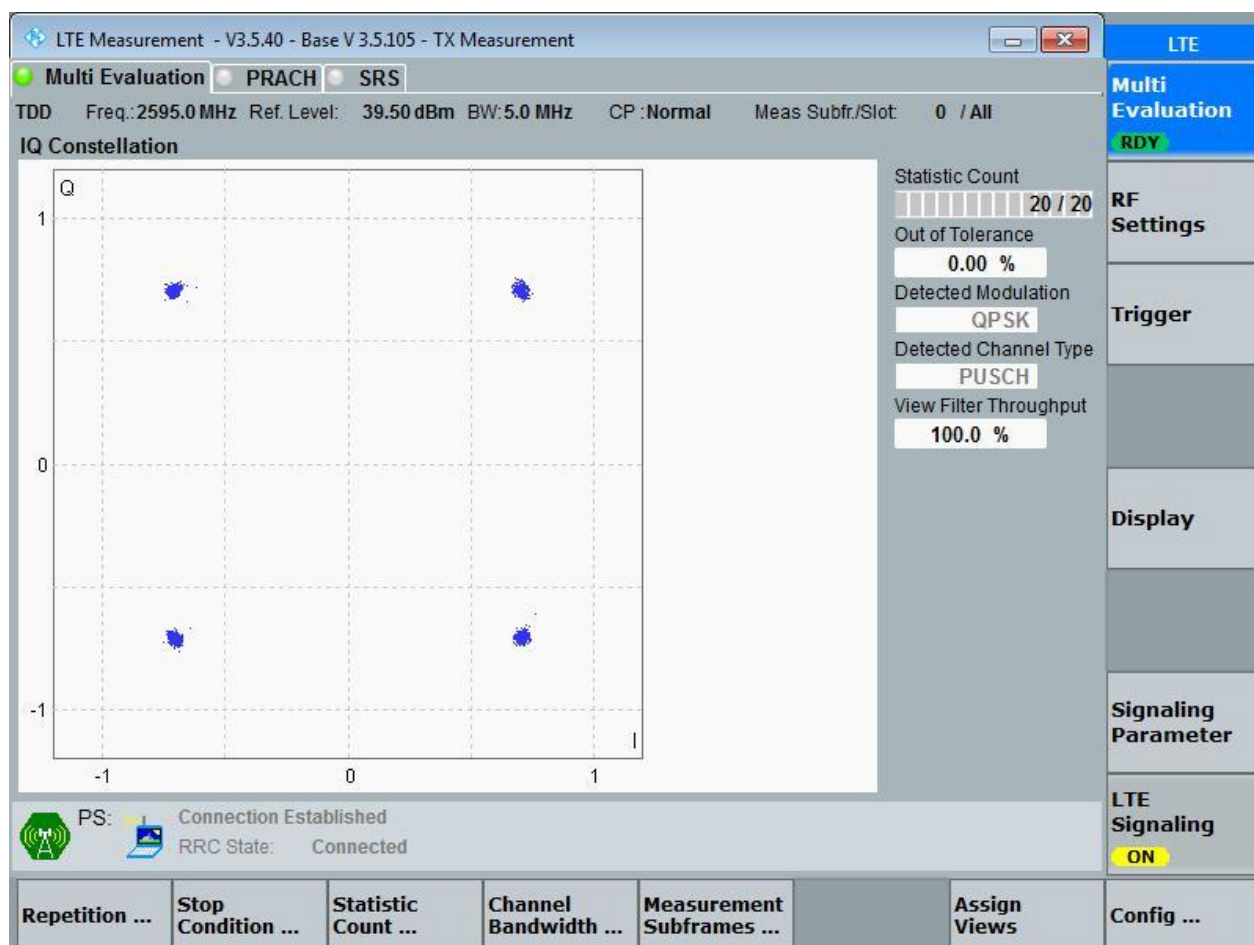
3.1.1 Test Band = BAND38

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

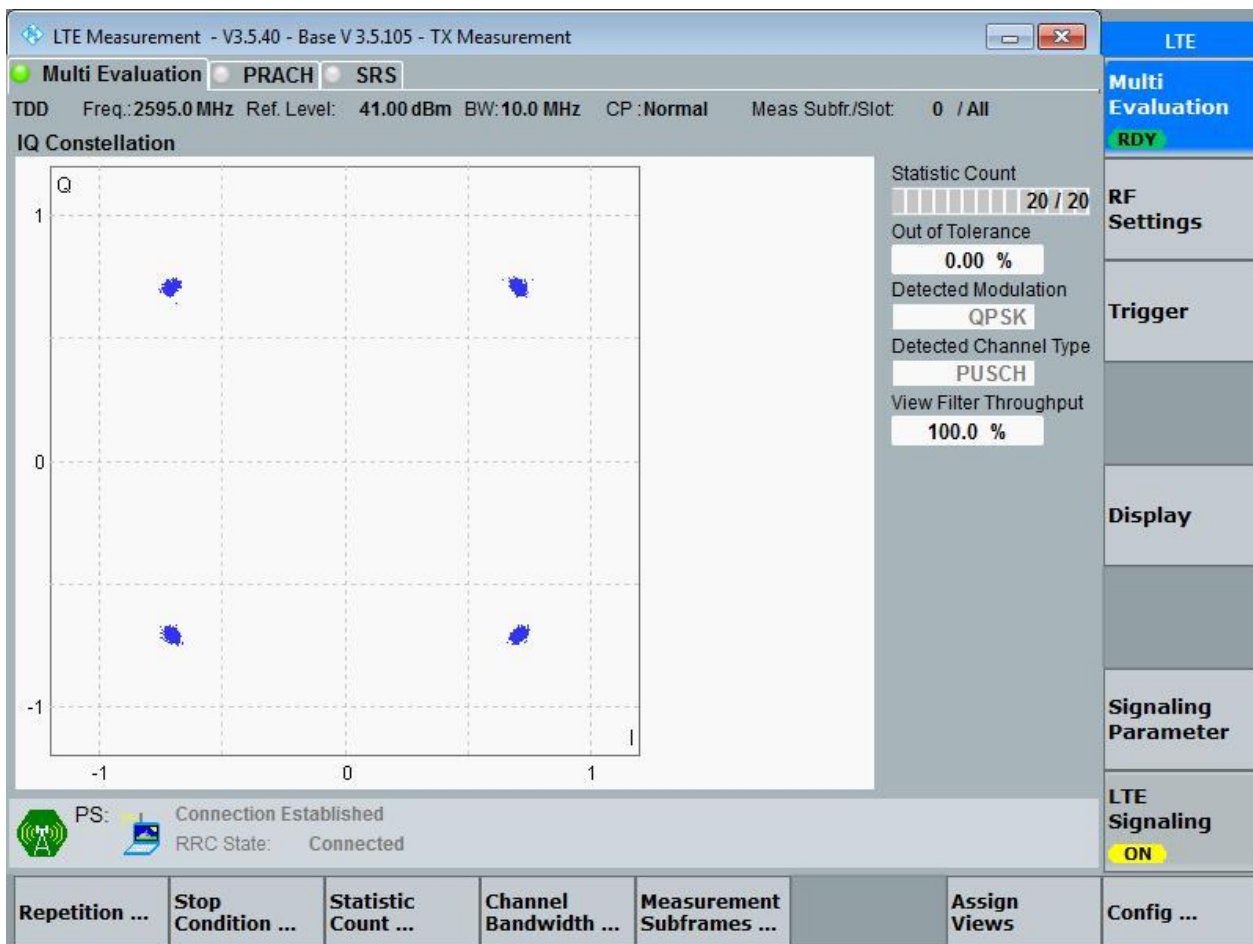
3.1.1.1.1.1.1 Test RB = RB25#0



3.1.1.1.2 Test Bandwidth = 10

3.1.1.1.2.1 Test Channel = MCH

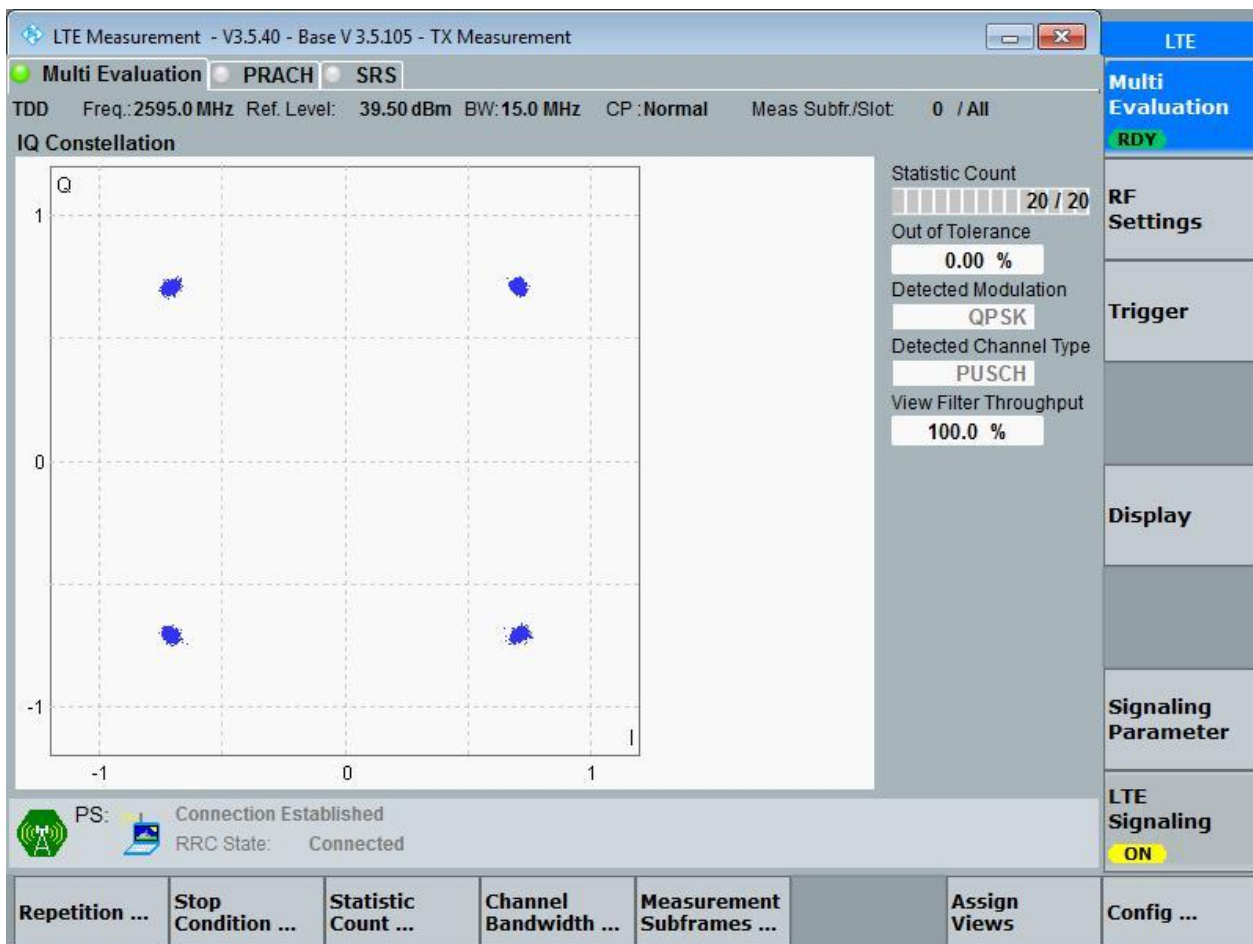
3.1.1.1.2.1.1 Test RB = RB50#0



3.1.1.1.3 Test Bandwidth = 15

3.1.1.1.3.1 Test Channel = MCH

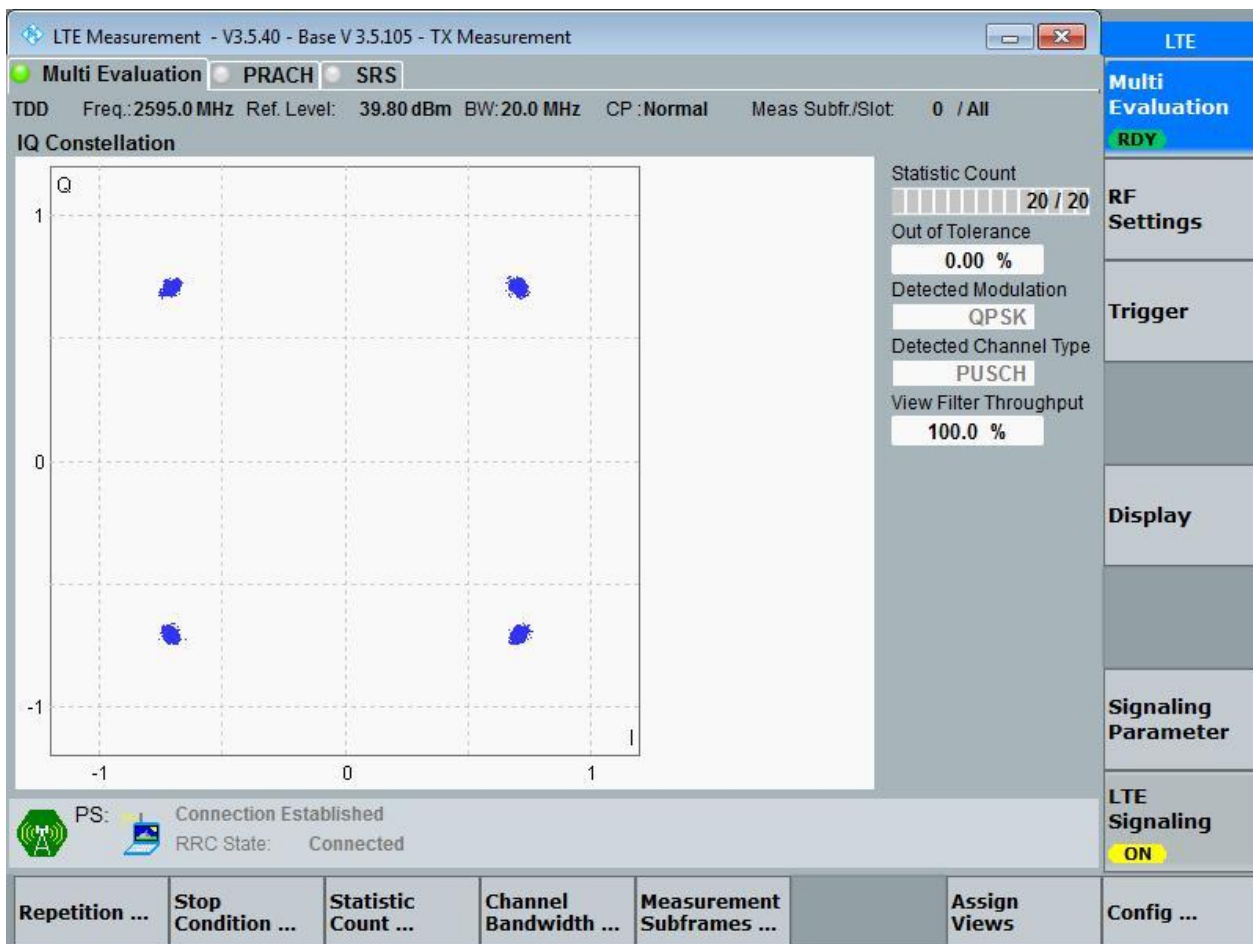
3.1.1.1.3.1.1 Test RB = RB75#0



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

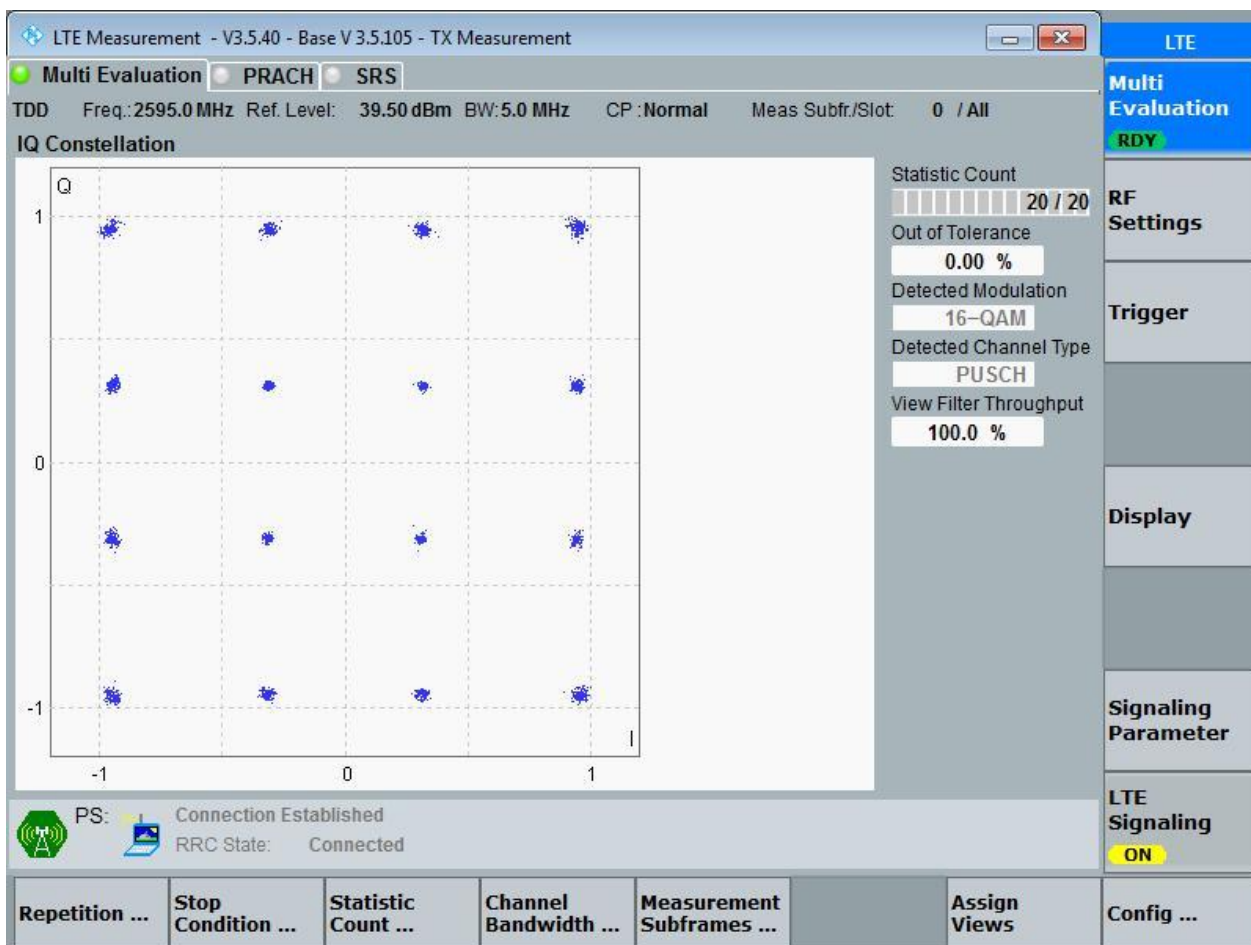


3.1.1.2 Test Mode = LTE/TM2

3.1.1.2.1 Test Bandwidth = 5

3.1.1.2.1.1 Test Channel = MCH

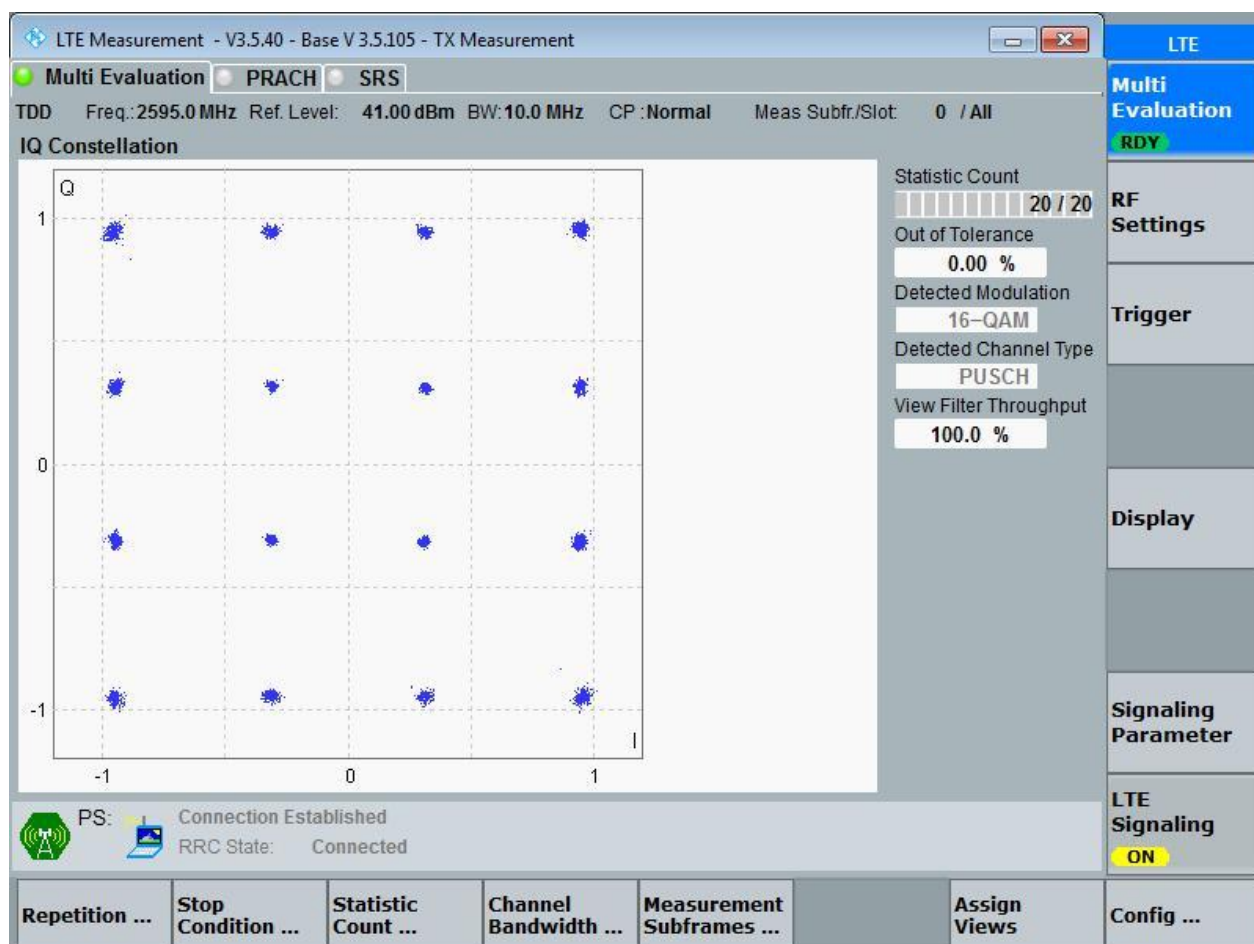
3.1.1.2.1.1.1 Test RB = RB25#0



3.1.1.2.2 Test Bandwidth = 10

3.1.1.2.2.1 Test Channel = MCH

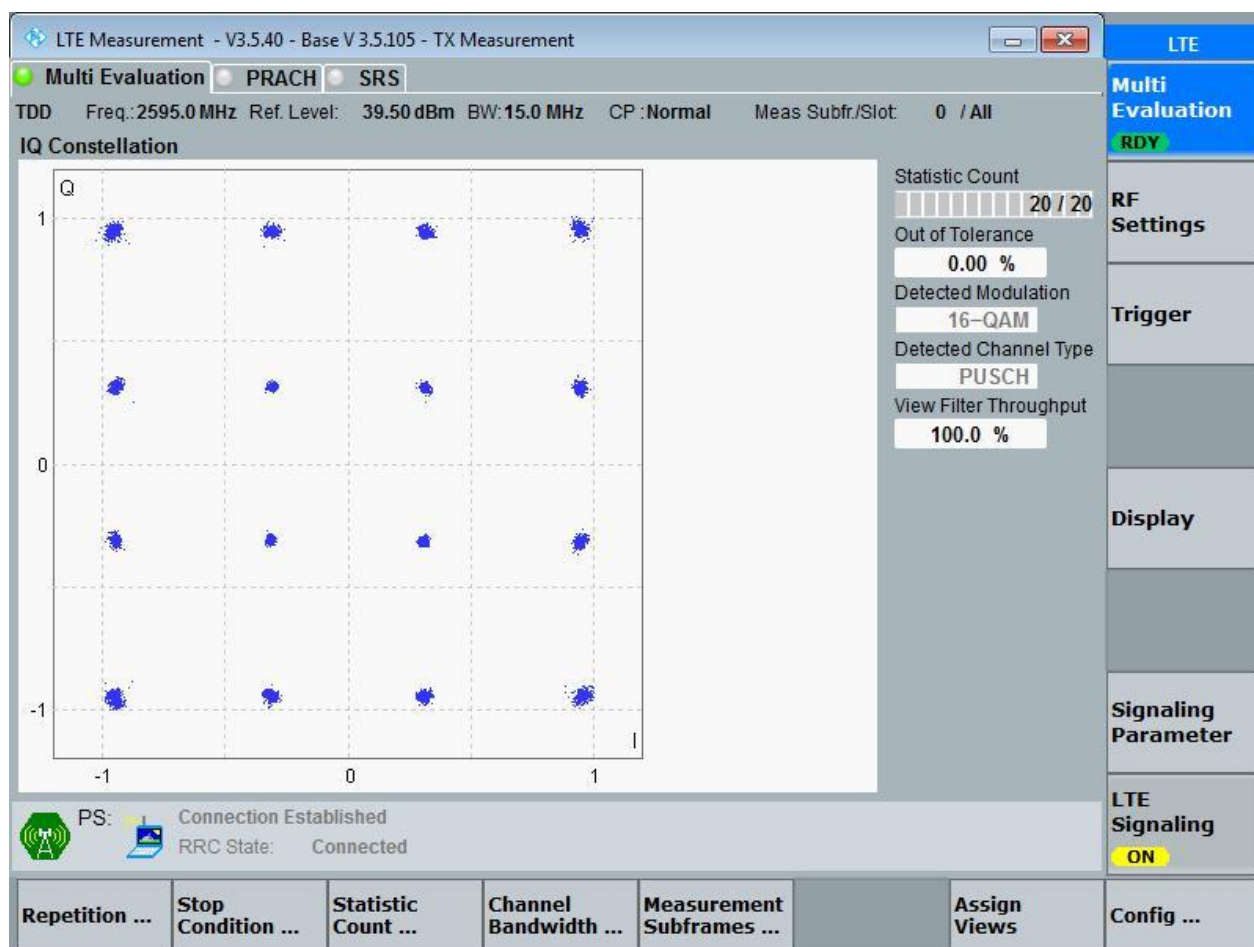
3.1.1.2.2.1.1 Test RB = RB50#0



3.1.1.2.3 Test Bandwidth = 15

3.1.1.2.3.1 Test Channel = MCH

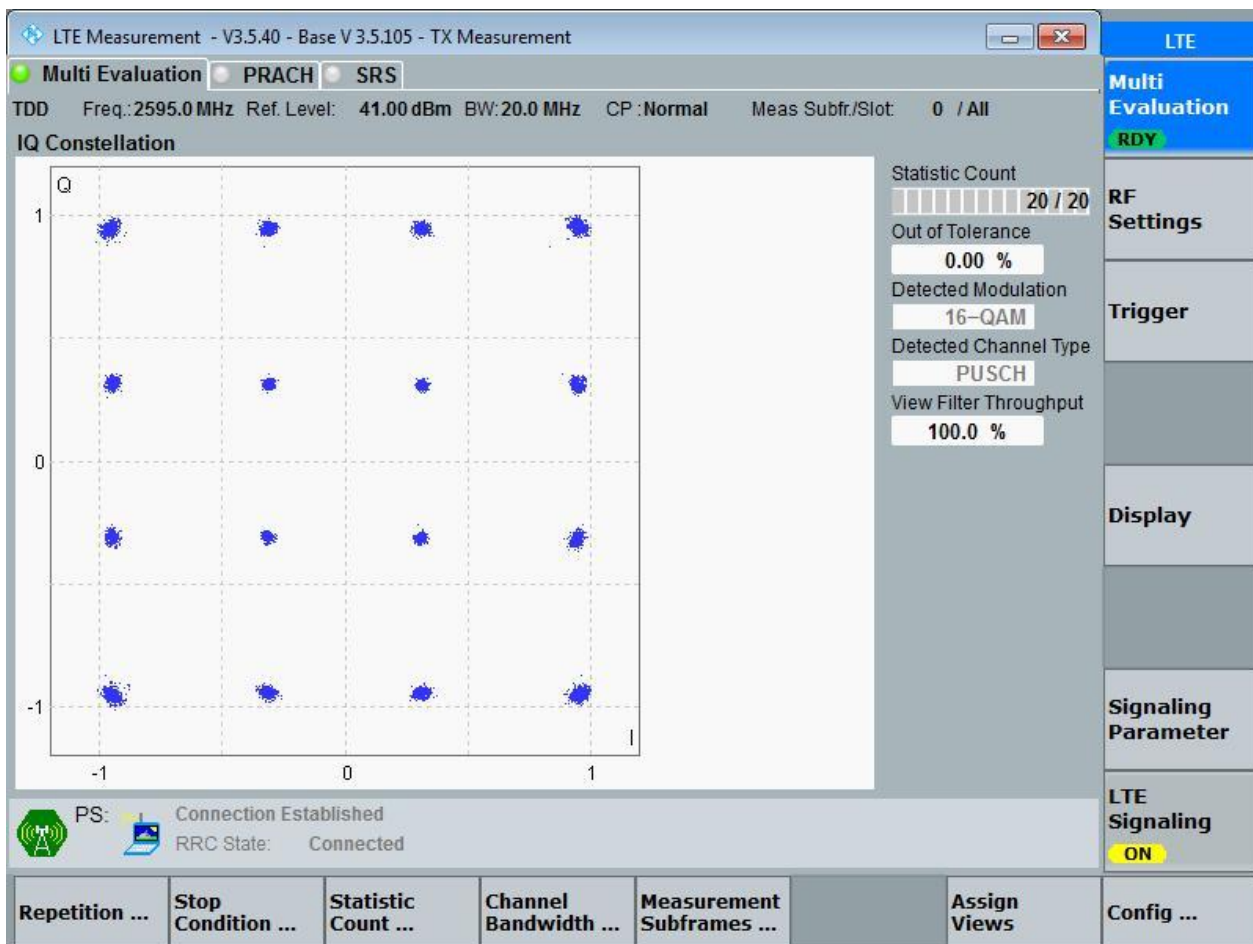
3.1.1.2.3.1.1 Test RB = RB75#0



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	4.96	Pass
			MCH	RB25#0	4.49	4.97	Pass
			HCH	RB25#0	4.51	4.99	Pass
		10	LCH	RB50#0	8.97	9.93	Pass
			MCH	RB50#0	8.99	9.86	Pass
			HCH	RB50#0	9.03	11.72	Pass
		15	LCH	RB75#0	13.49	14.99	Pass
			MCH	RB75#0	13.45	15.15	Pass
			HCH	RB75#0	13.52	15.07	Pass
		20	LCH	RB100#0	17.97	19.76	Pass
			MCH	RB100#0	17.99	19.80	Pass
			HCH	RB100#0	17.96	19.77	Pass
	LTE/TM2	5	LCH	RB25#0	4.51	5.17	Pass
			MCH	RB25#0	4.51	4.98	Pass
			HCH	RB25#0	4.50	5.02	Pass
		10	LCH	RB50#0	9.00	9.96	Pass
			MCH	RB50#0	8.97	10.01	Pass
			HCH	RB50#0	9.03	9.89	Pass
		15	LCH	RB75#0	13.48	15.05	Pass
			MCH	RB75#0	13.49	15.34	Pass
			HCH	RB75#0	13.47	15.13	Pass
		20	LCH	RB100#0	17.95	19.90	Pass
			MCH	RB100#0	18.03	19.99	Pass
			HCH	RB100#0	17.99	19.84	Pass



Part II - Test Plots

4.1 For LTE

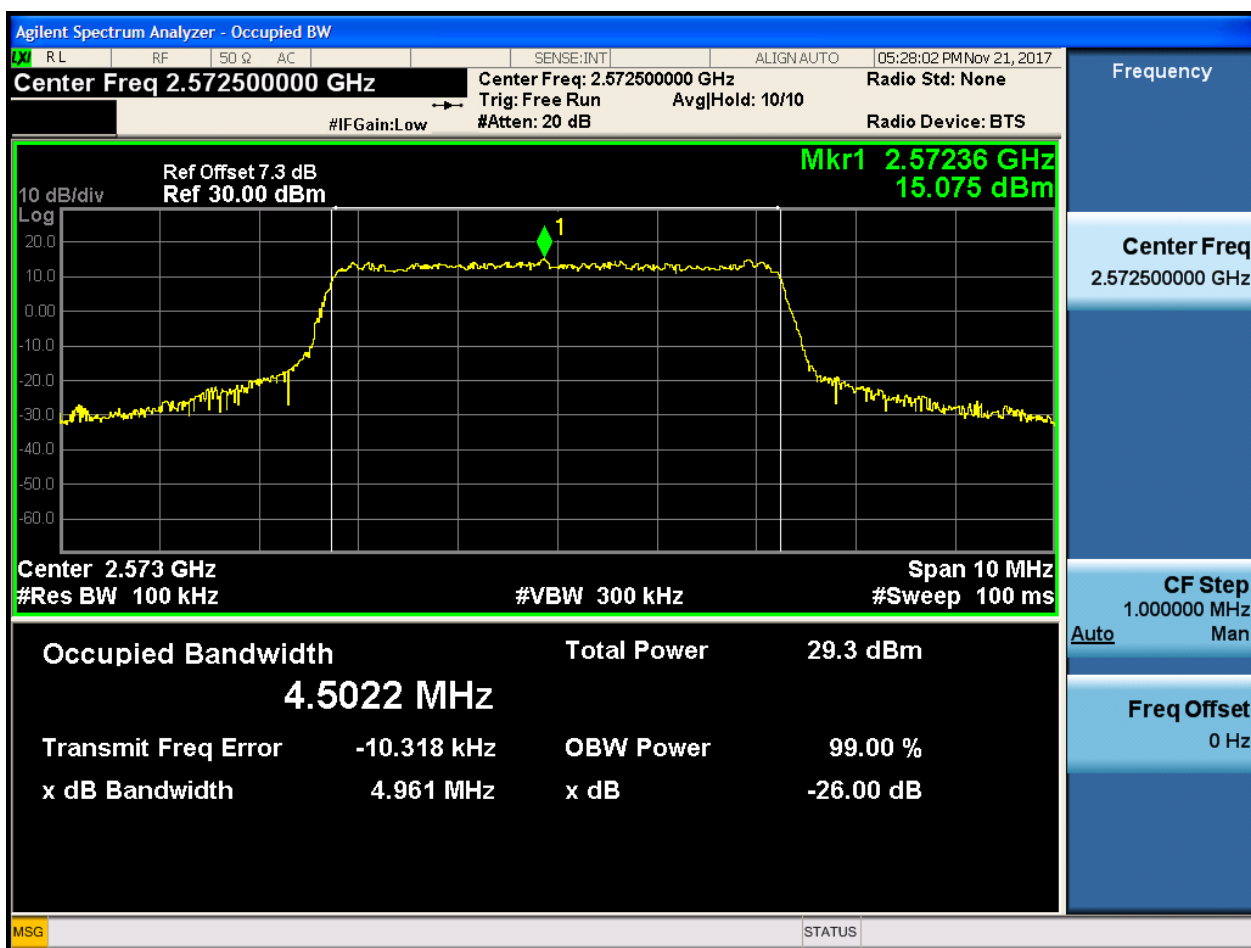
4.1.1 Test Band = BAND38

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

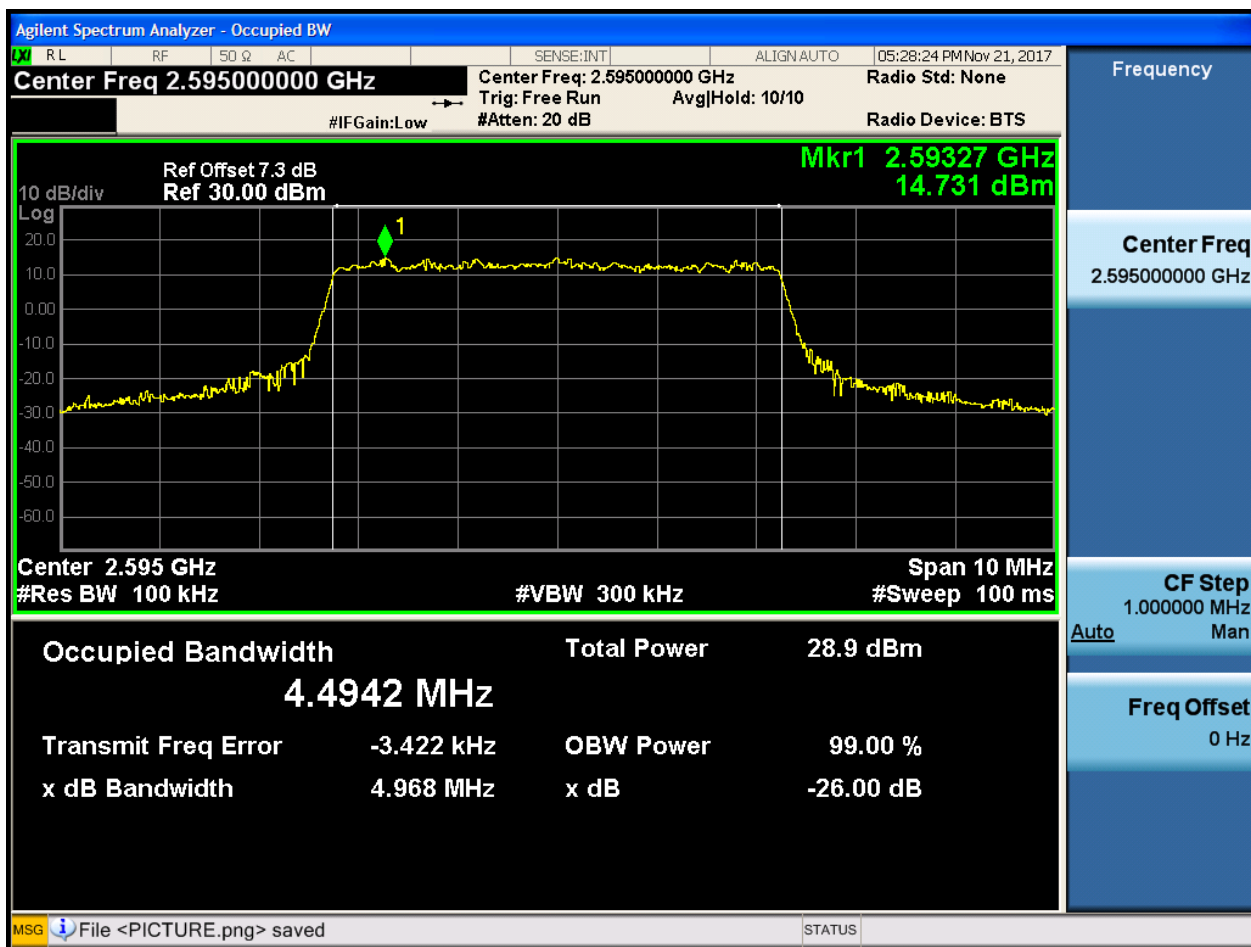
4.1.1.1.1.1.1 Test RB = RB25#0





4.1.1.1.1.2 Test Channel = MCH

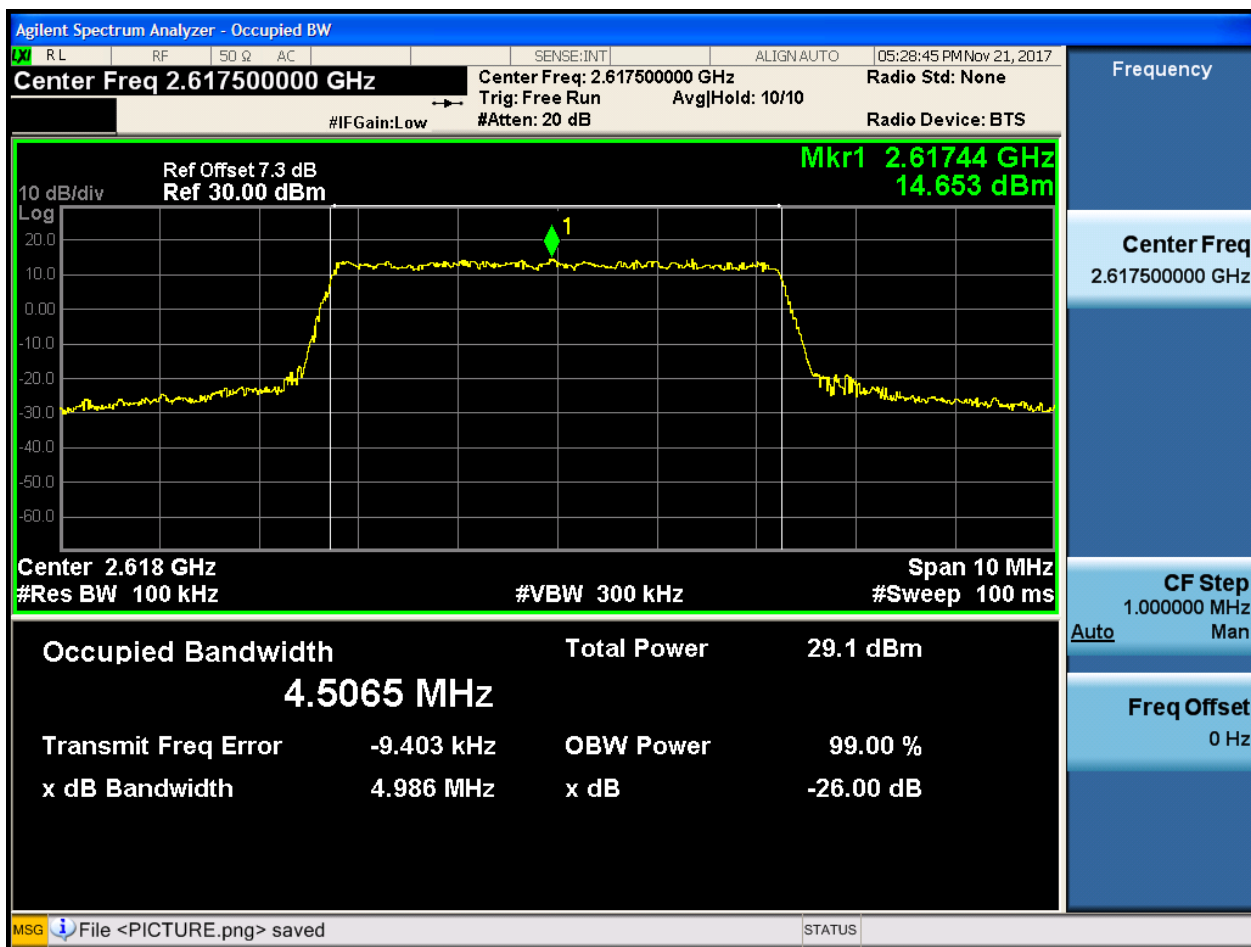
4.1.1.1.1.2.1 Test RB = RB25#0





4.1.1.1.1.3 Test Channel = HCH

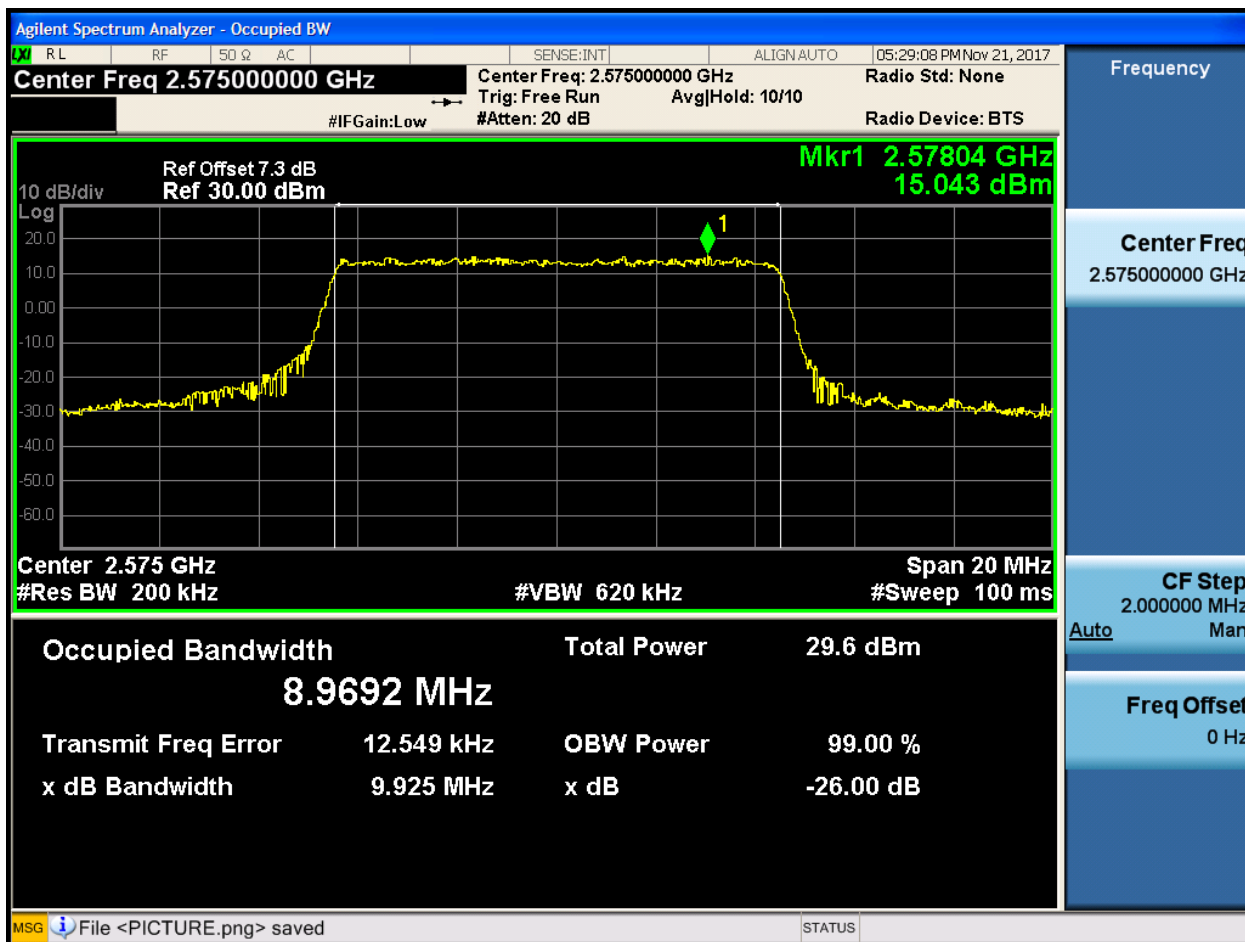
4.1.1.1.1.3.1 Test RB = RB25#0



4.1.1.1.2 Test Bandwidth = 10

4.1.1.1.2.1 Test Channel = LCH

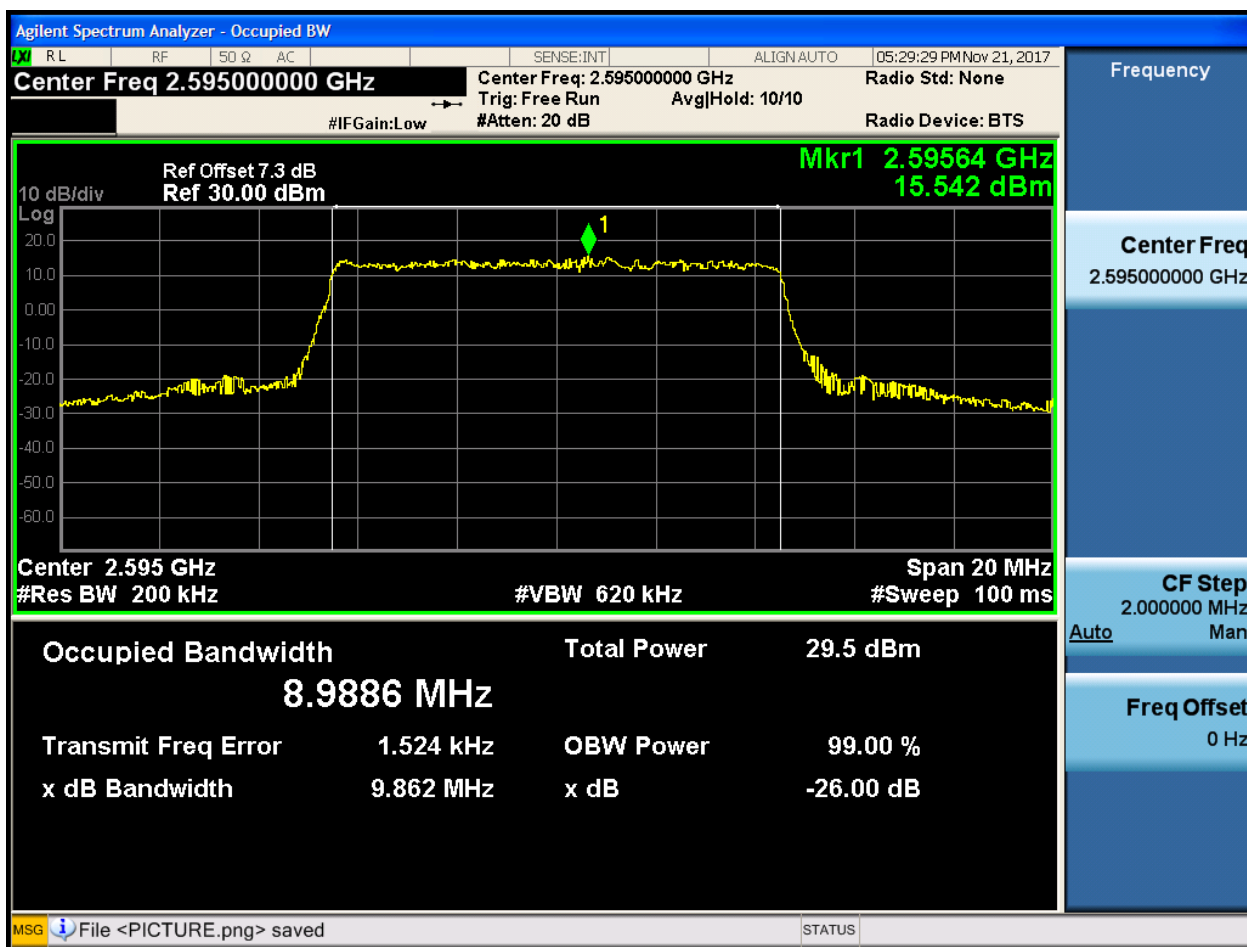
4.1.1.1.2.1.1 Test RB = RB50#0





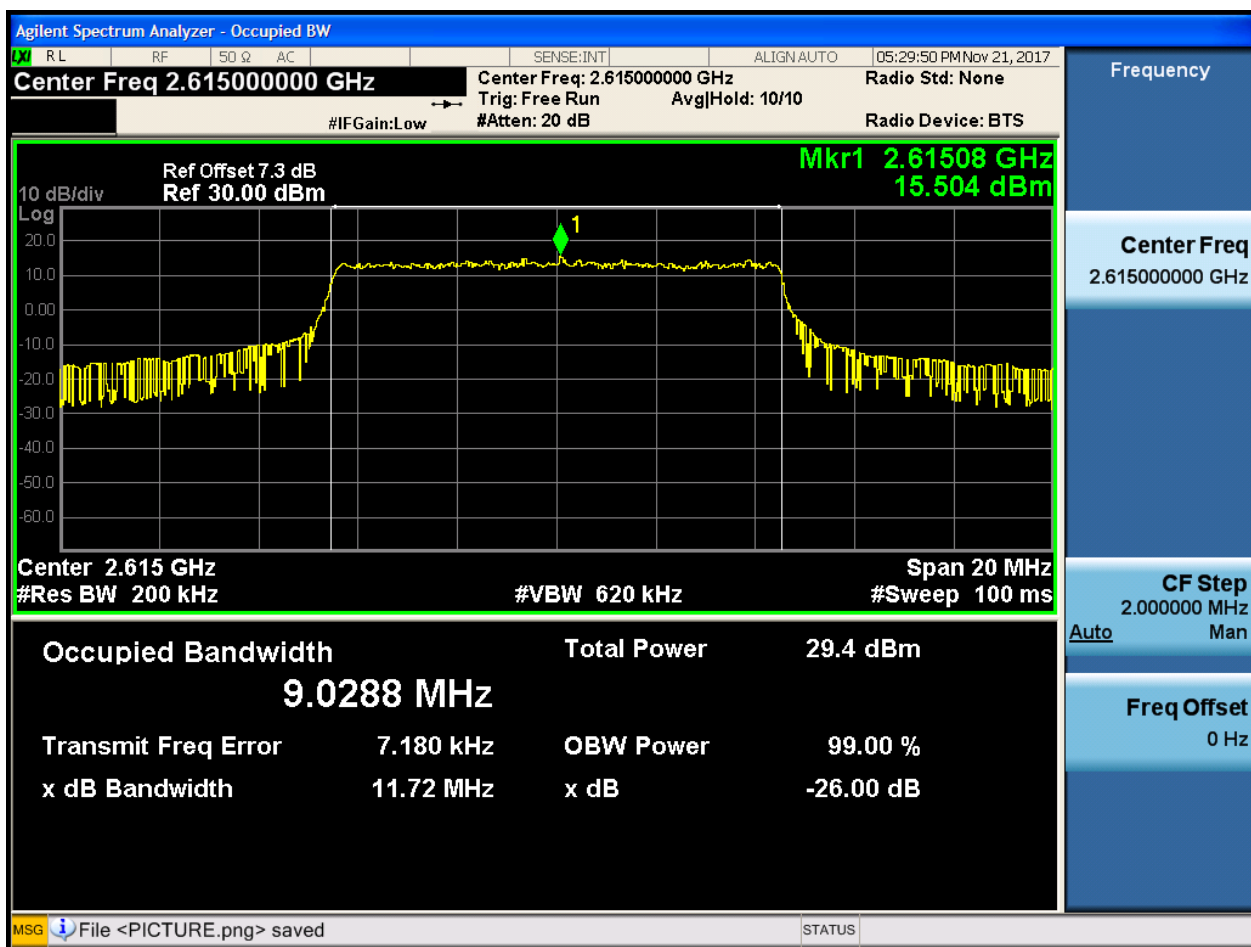
4.1.1.1.2.2 Test Channel = MCH

4.1.1.1.2.2.1 Test RB = RB50#0



4.1.1.1.2.3 Test Channel = HCH

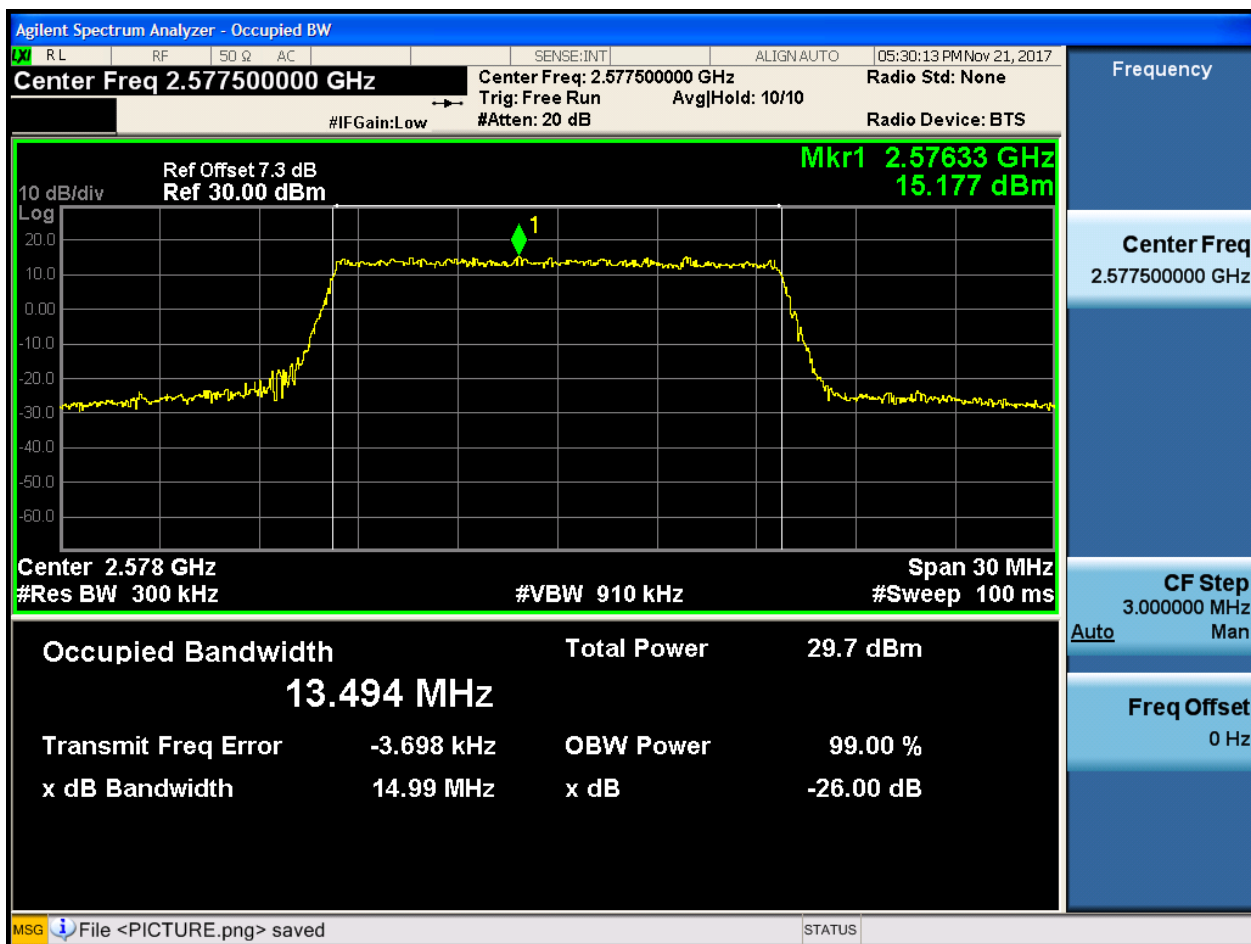
4.1.1.1.2.3.1 Test RB = RB50#0



4.1.1.1.3 Test Bandwidth = 15

4.1.1.1.3.1 Test Channel = LCH

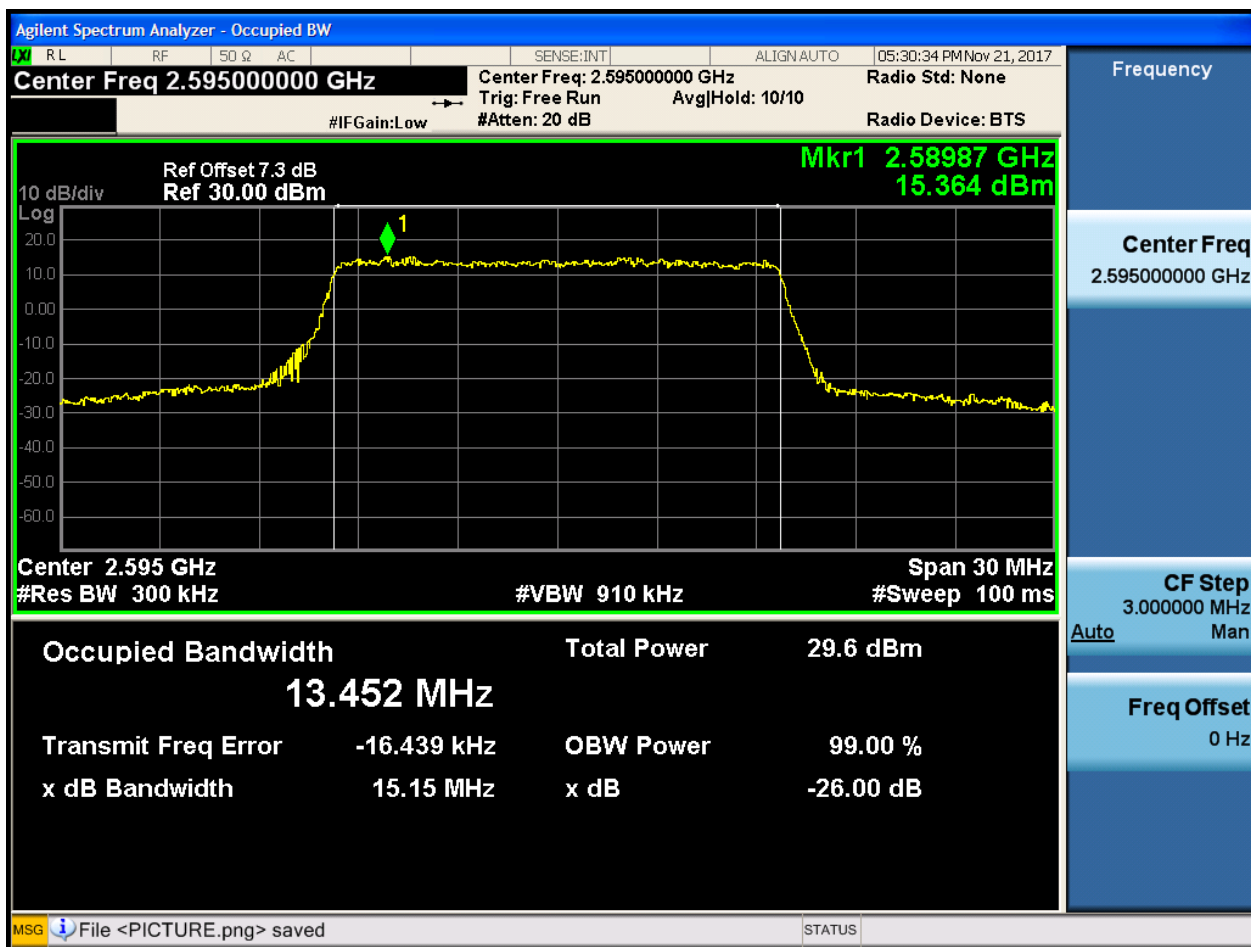
4.1.1.1.3.1.1 Test RB = RB75#0





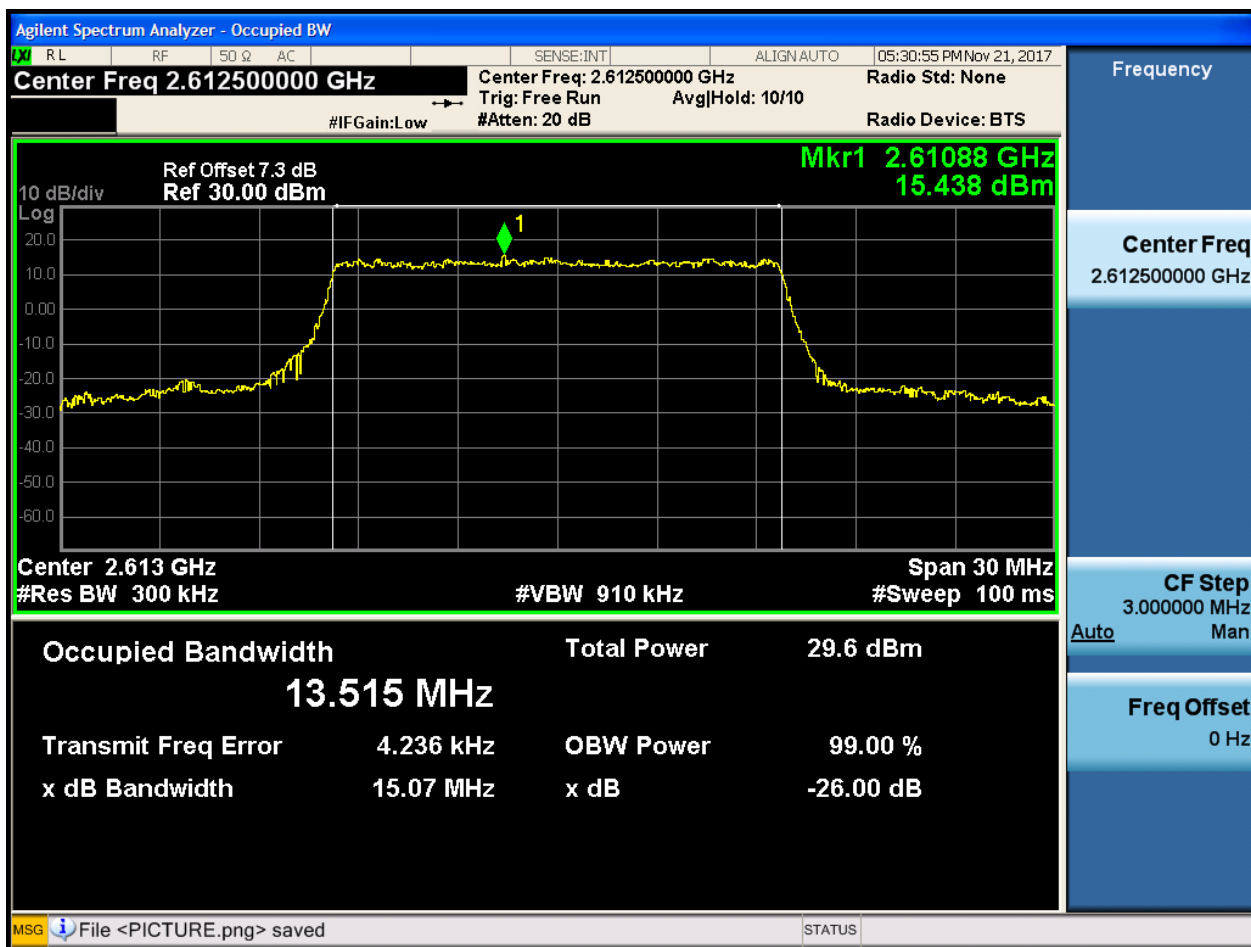
4.1.1.1.3.2 Test Channel = MCH

4.1.1.1.3.2.1 Test RB = RB75#0



4.1.1.1.3.3 Test Channel = HCH

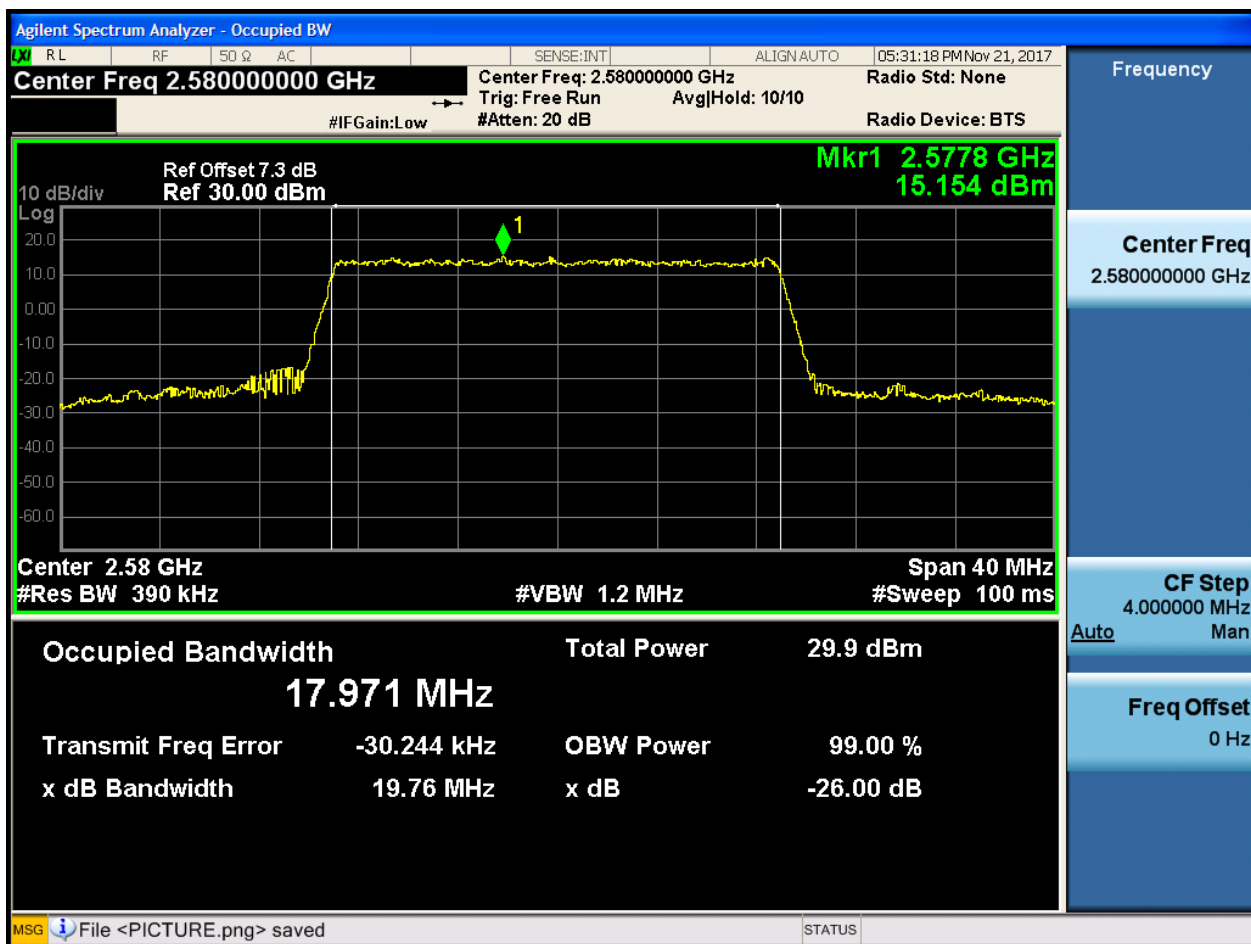
4.1.1.1.3.3.1 Test RB = RB75#0



4.1.1.1.4 Test Bandwidth = 20

4.1.1.1.4.1 Test Channel = LCH

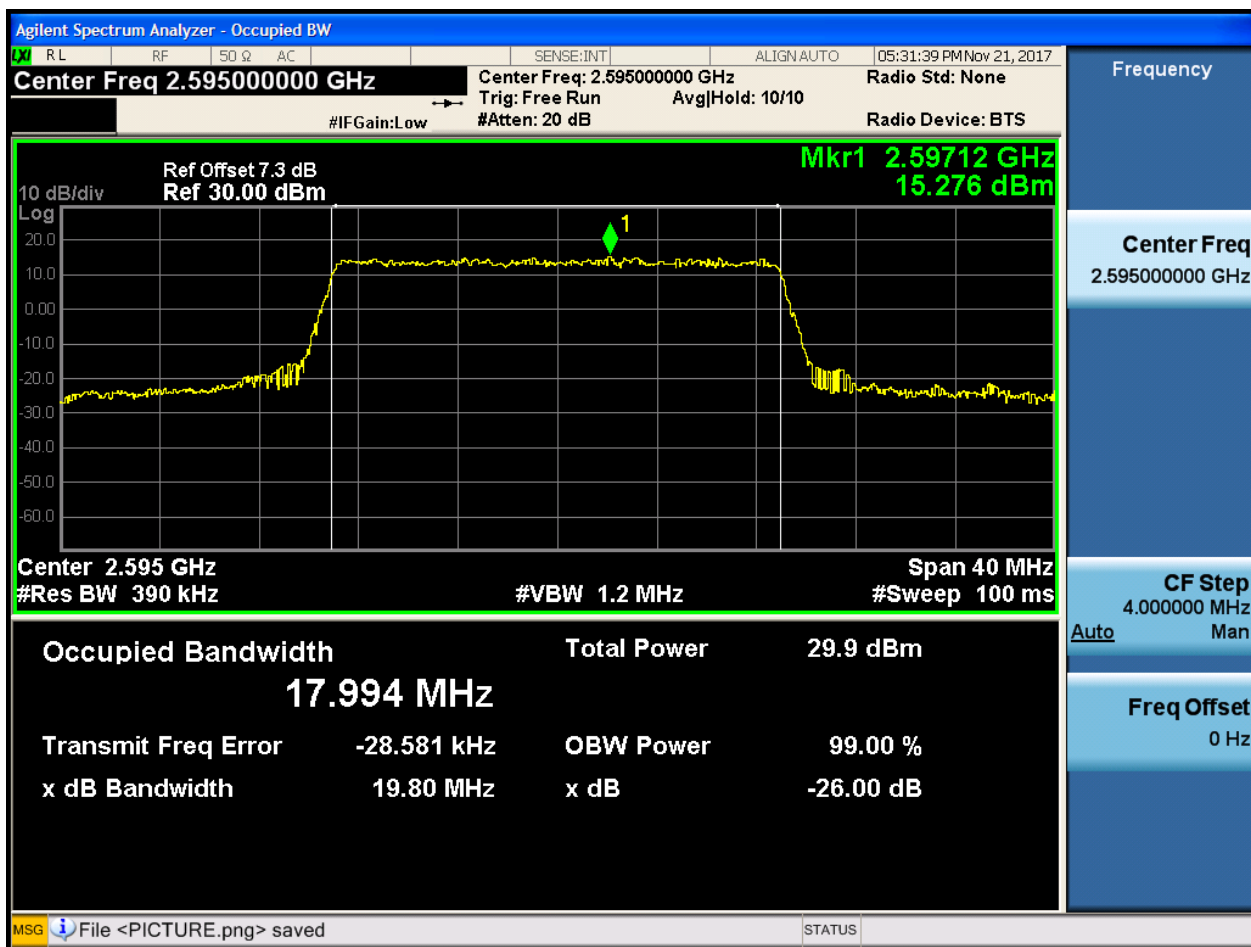
4.1.1.1.4.1.1 Test RB = RB100#0





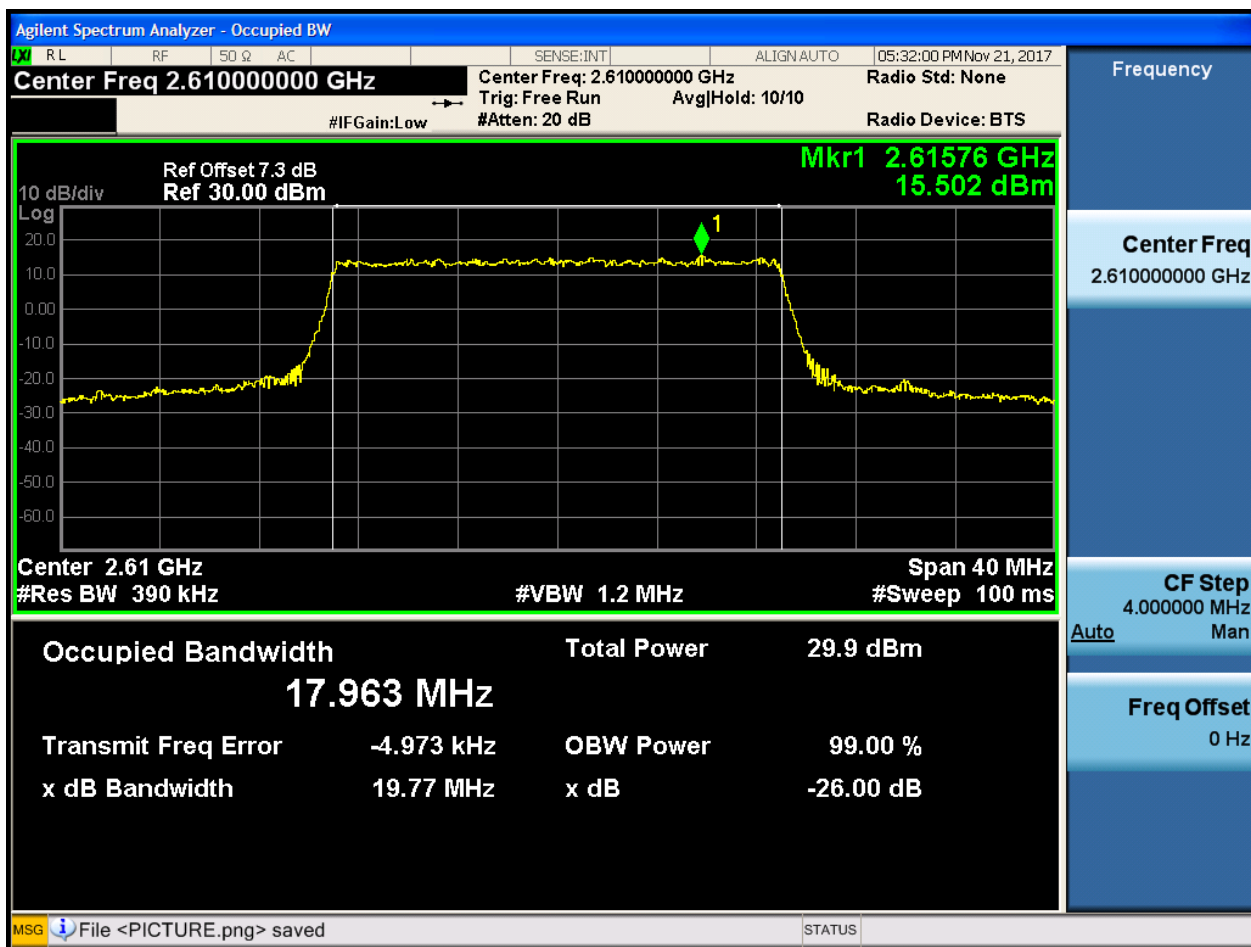
4.1.1.1.4.2 Test Channel = MCH

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

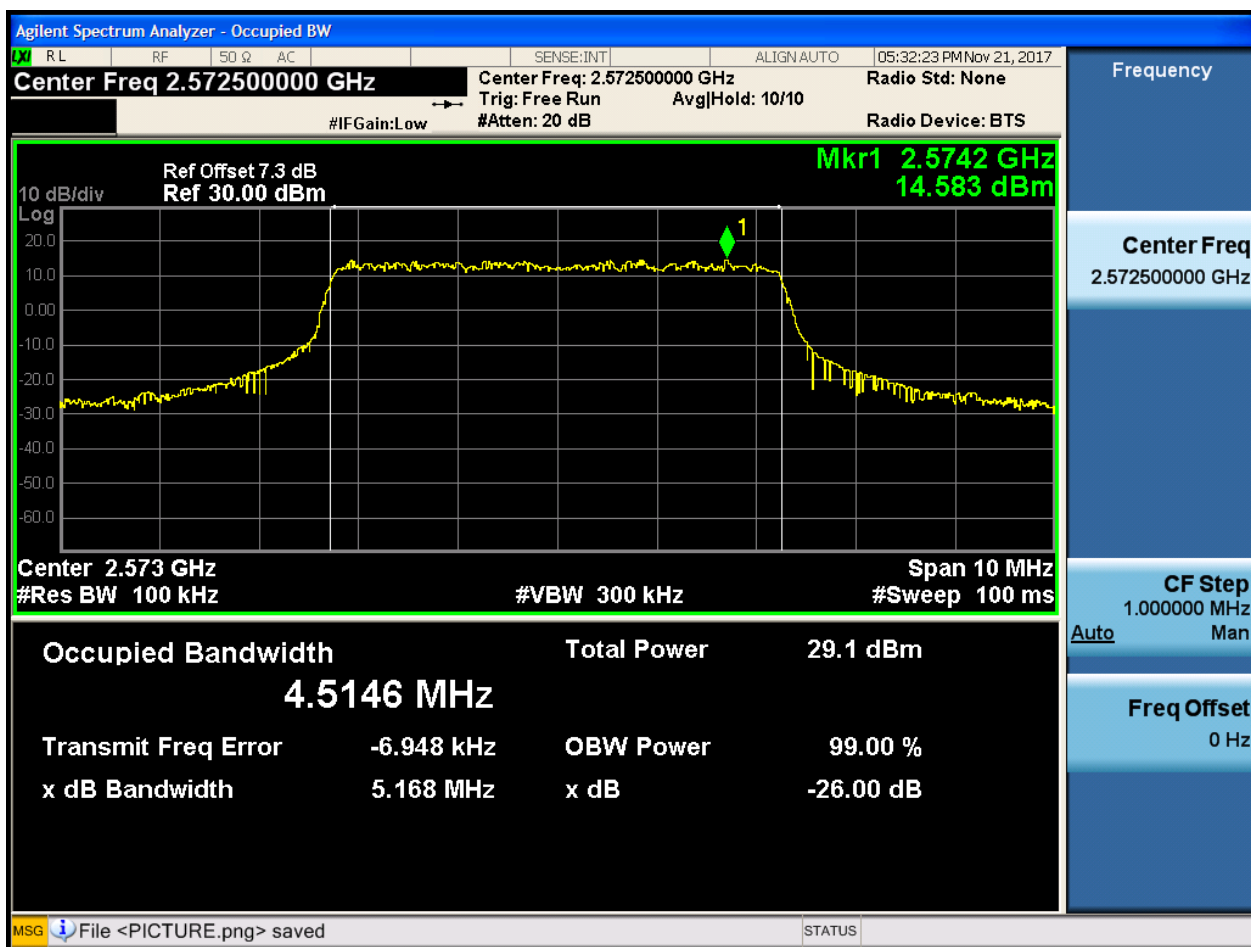


4.1.1.2 Test Mode = LTE/TM2

4.1.1.2.1 Test Bandwidth = 5

4.1.1.2.1.1 Test Channel = LCH

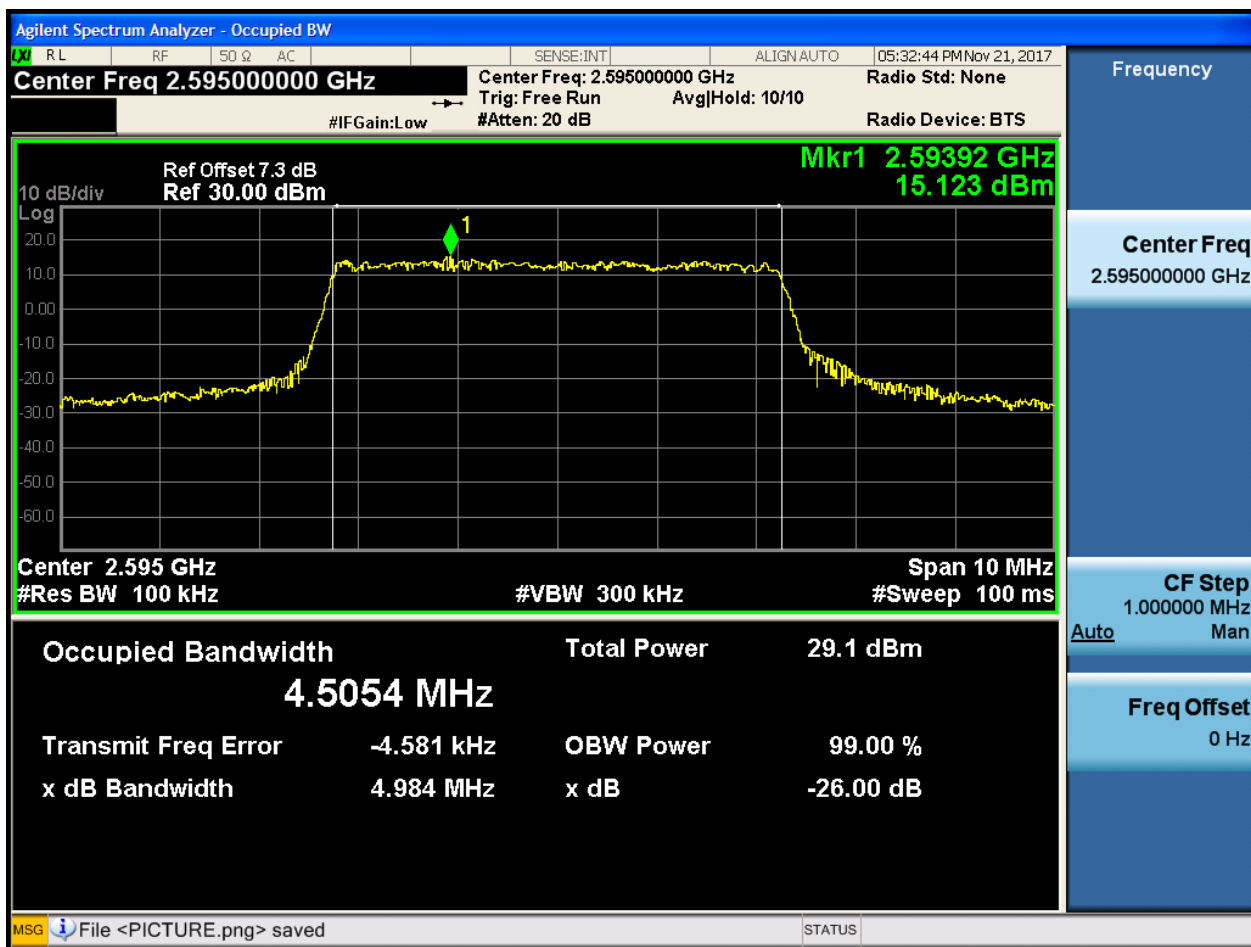
4.1.1.2.1.1.1 Test RB = RB25#0





4.1.1.2.1.2 Test Channel = MCH

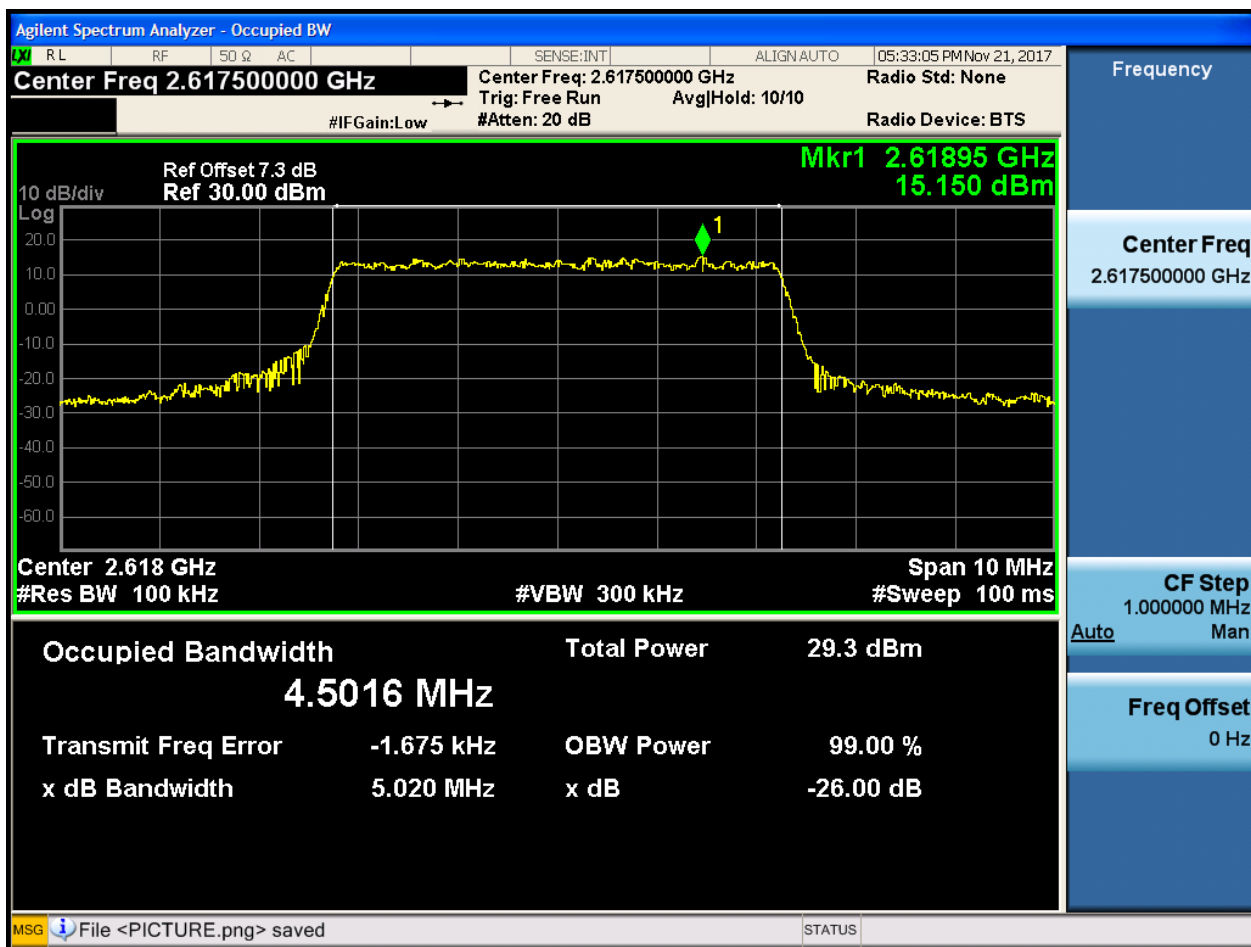
4.1.1.2.1.2.1 Test RB = RB25#0





4.1.1.2.1.3 Test Channel = HCH

4.1.1.2.1.3.1 Test RB = RB25#0

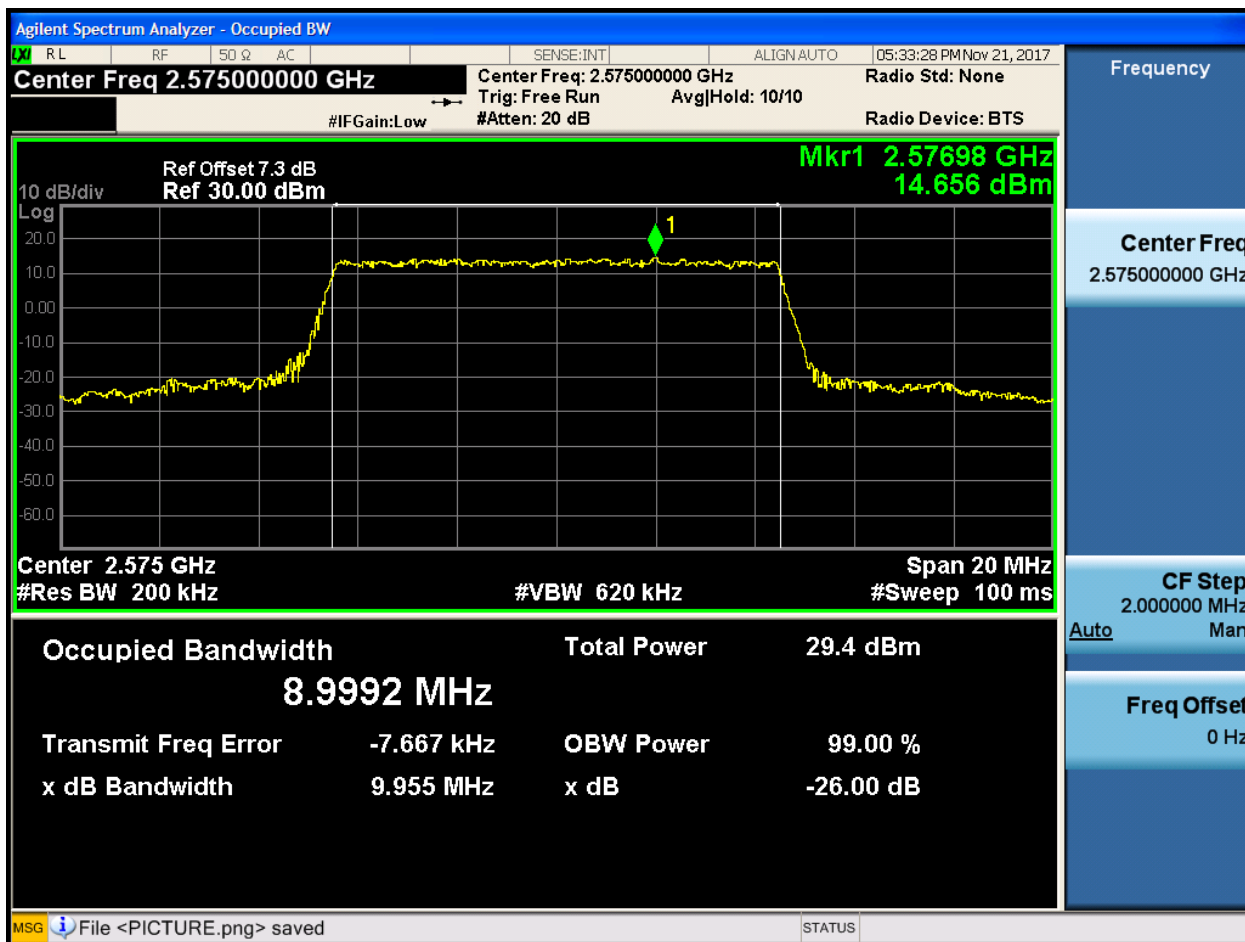




4.1.1.2.2 Test Bandwidth = 10

4.1.1.2.2.1 Test Channel = LCH

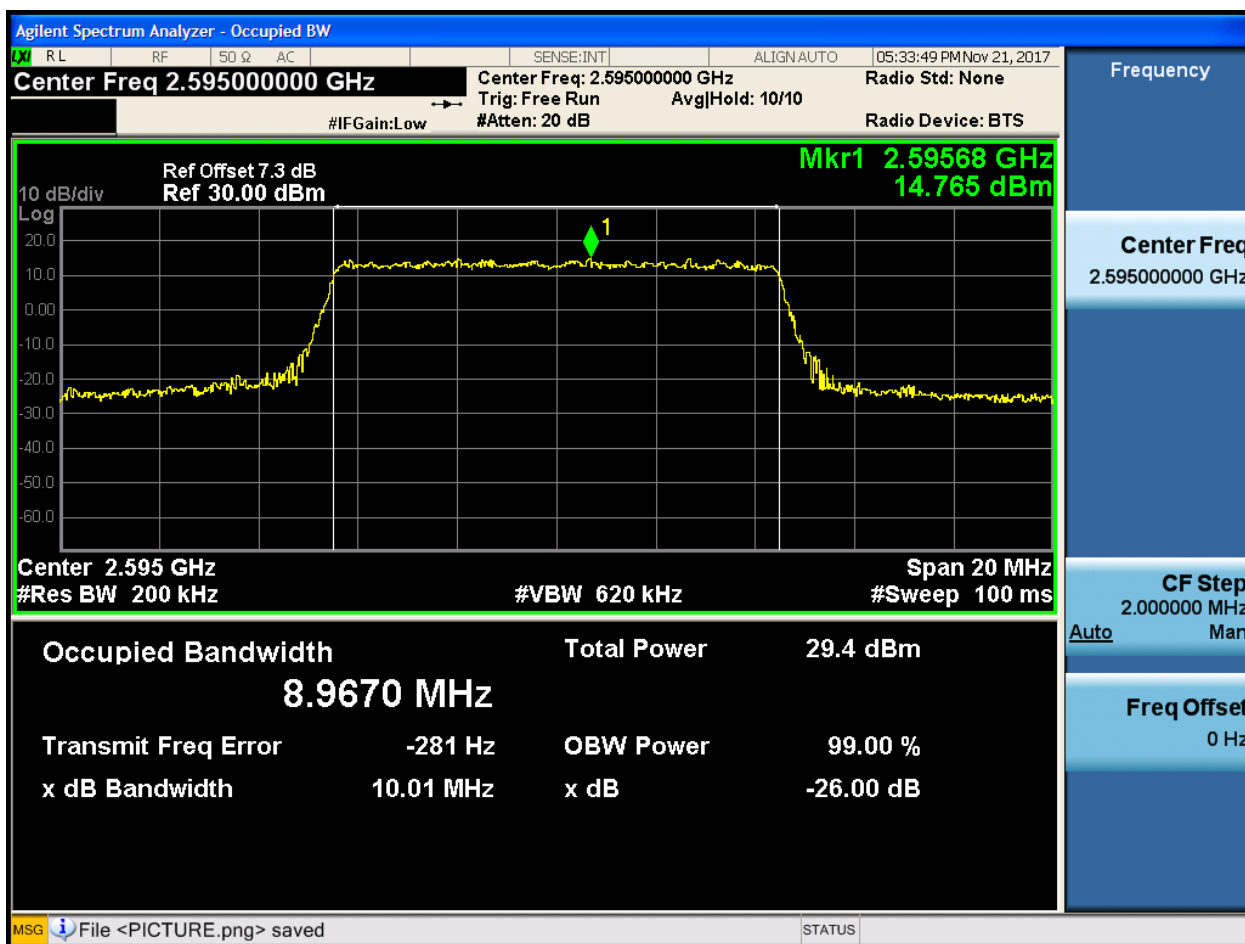
4.1.1.2.2.1.1 Test RB = RB50#0





4.1.1.2.2.2 Test Channel = MCH

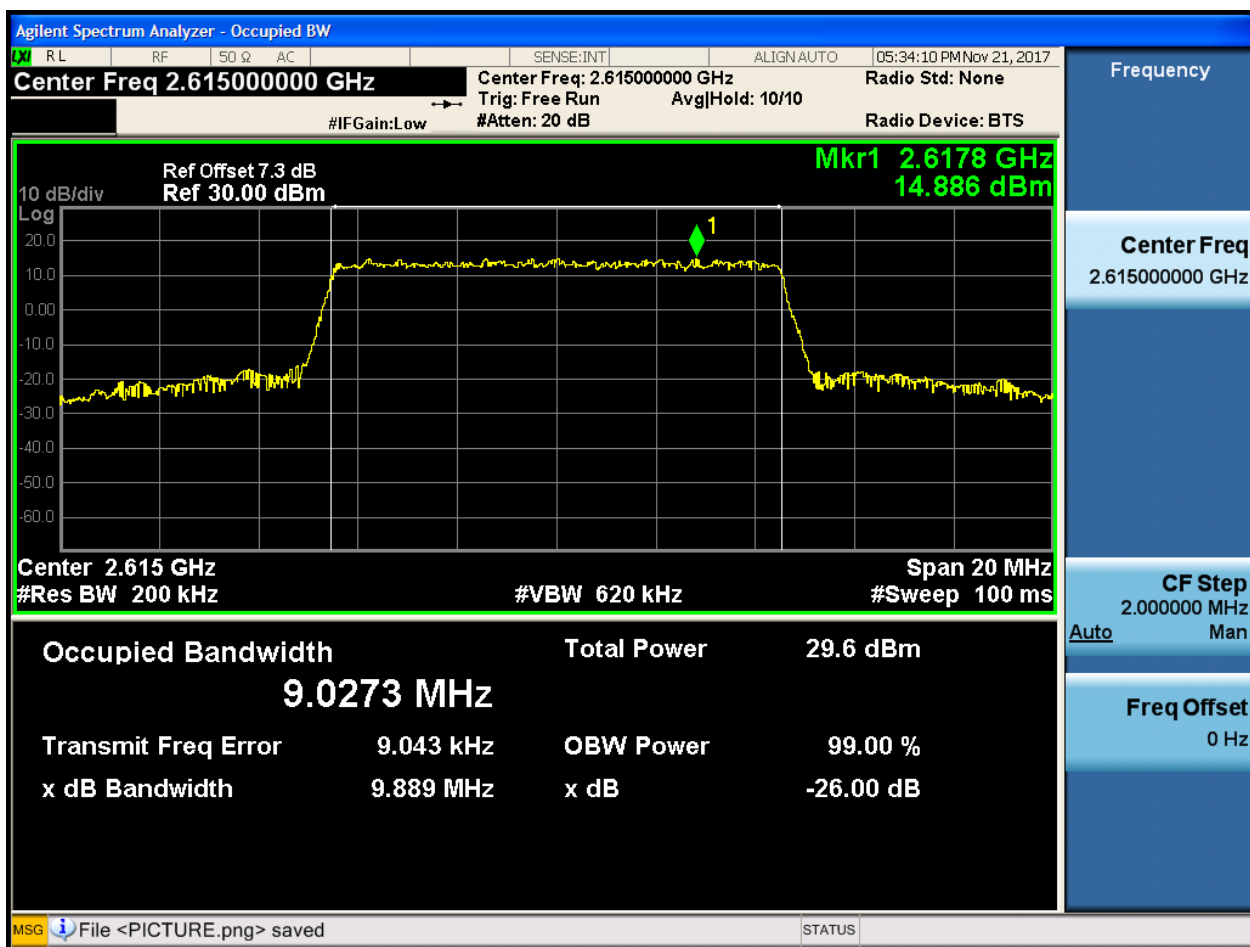
4.1.1.2.2.2.1 Test RB = RB50#0





4.1.1.2.2.3 Test Channel = HCH

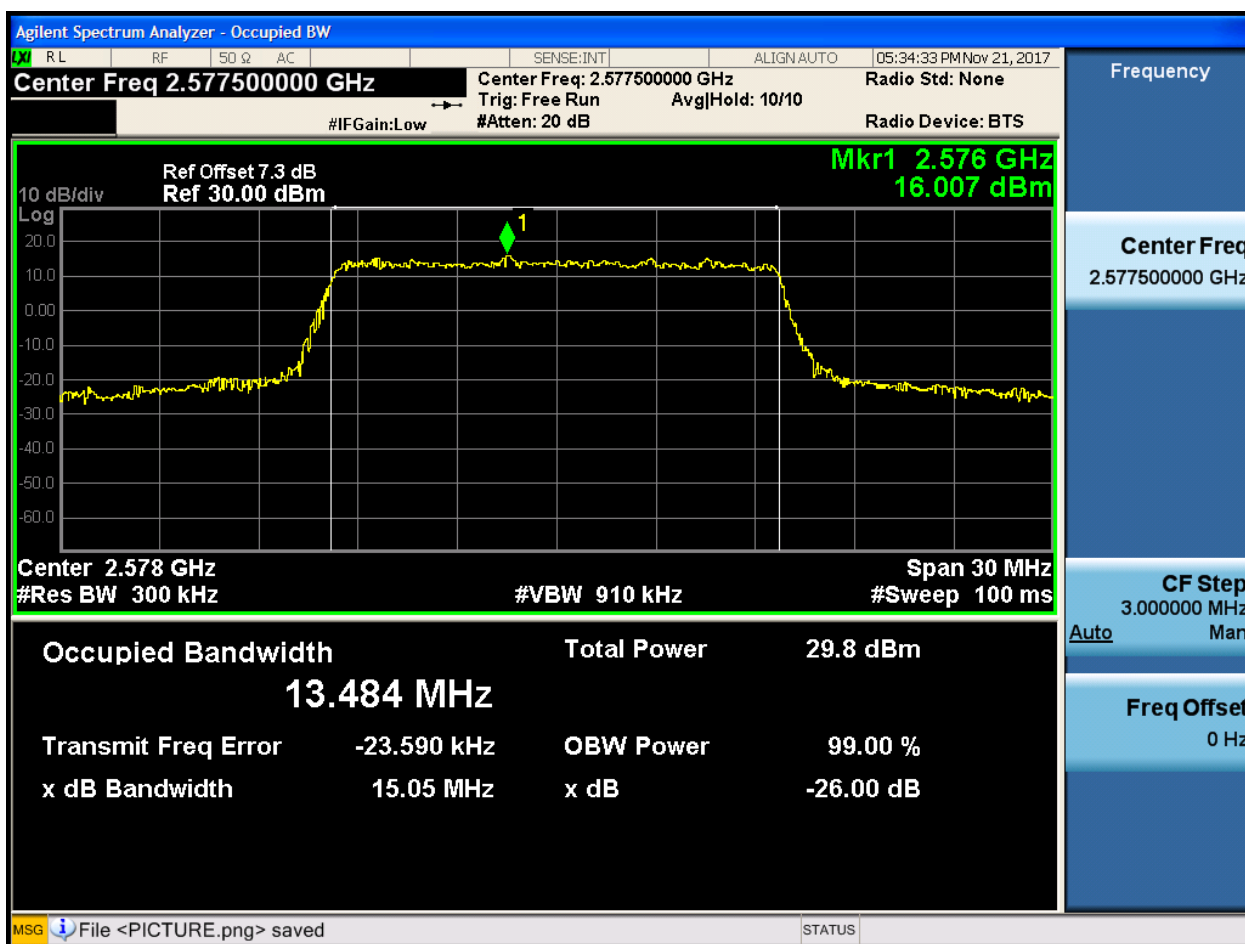
4.1.1.2.2.3.1 Test RB = RB50#0



4.1.1.2.3 Test Bandwidth = 15

4.1.1.2.3.1 Test Channel = LCH

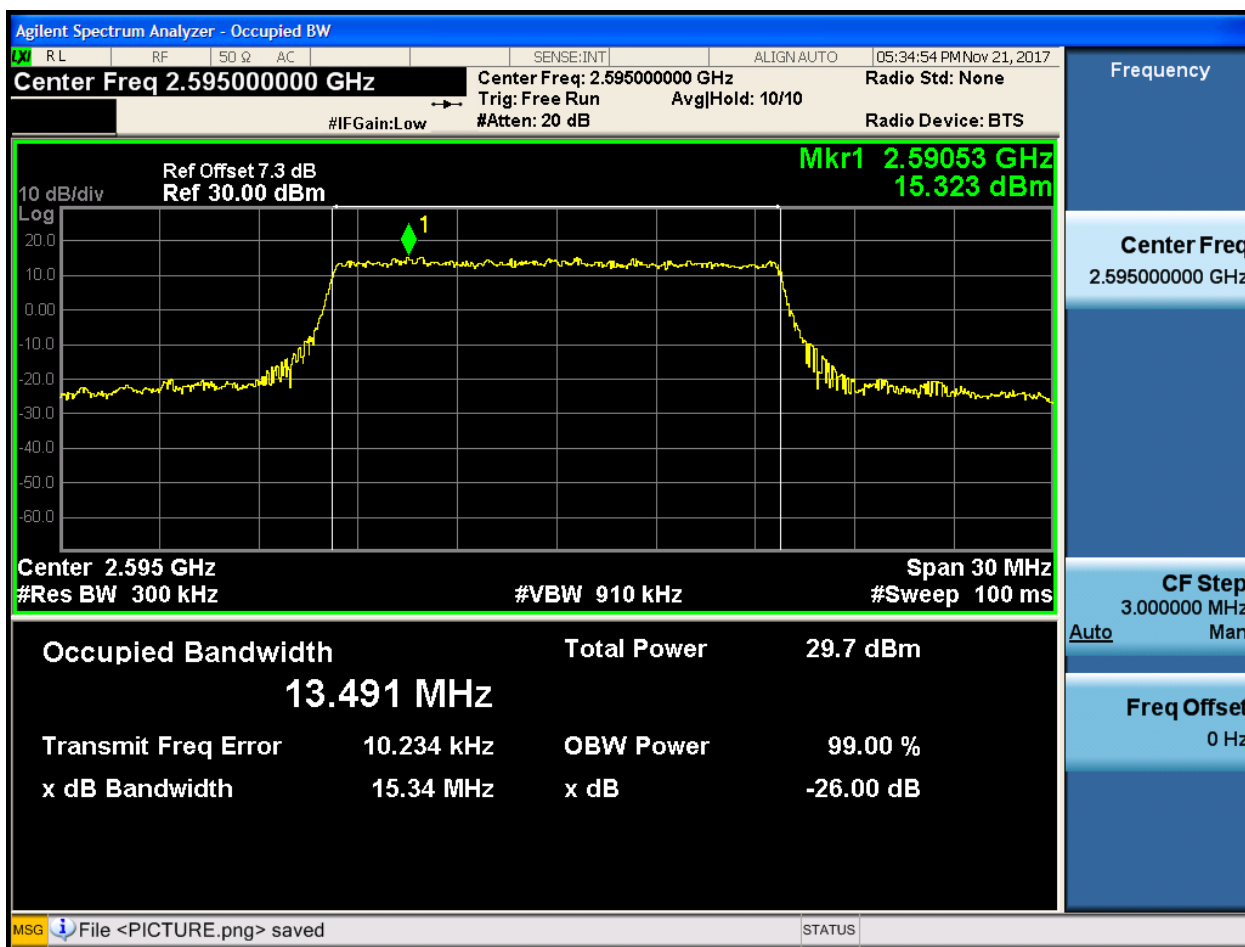
4.1.1.2.3.1.1 Test RB = RB75#0





4.1.1.2.3.2 Test Channel = MCH

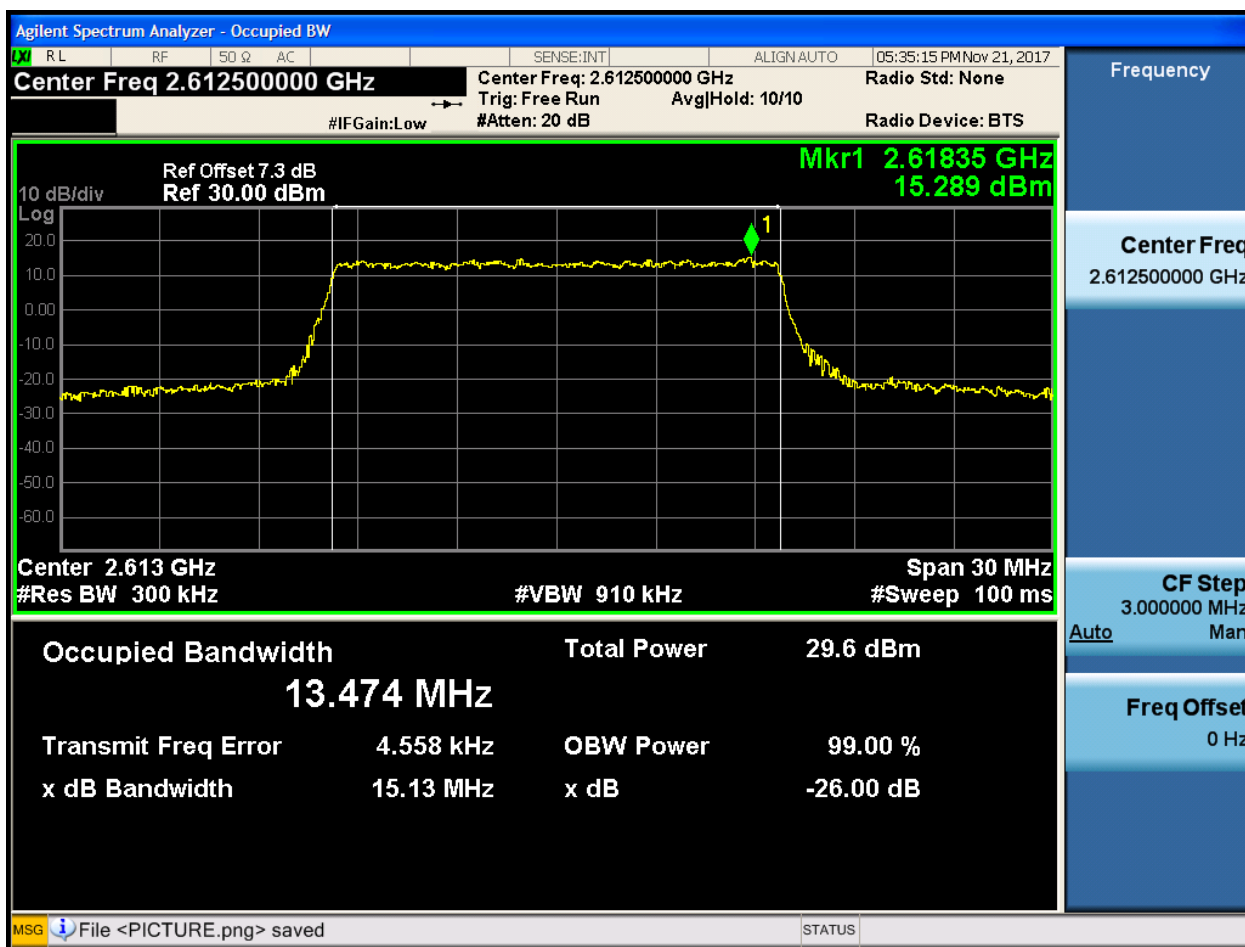
4.1.1.2.3.2.1 Test RB = RB75#0





4.1.1.2.3.3 Test Channel = HCH

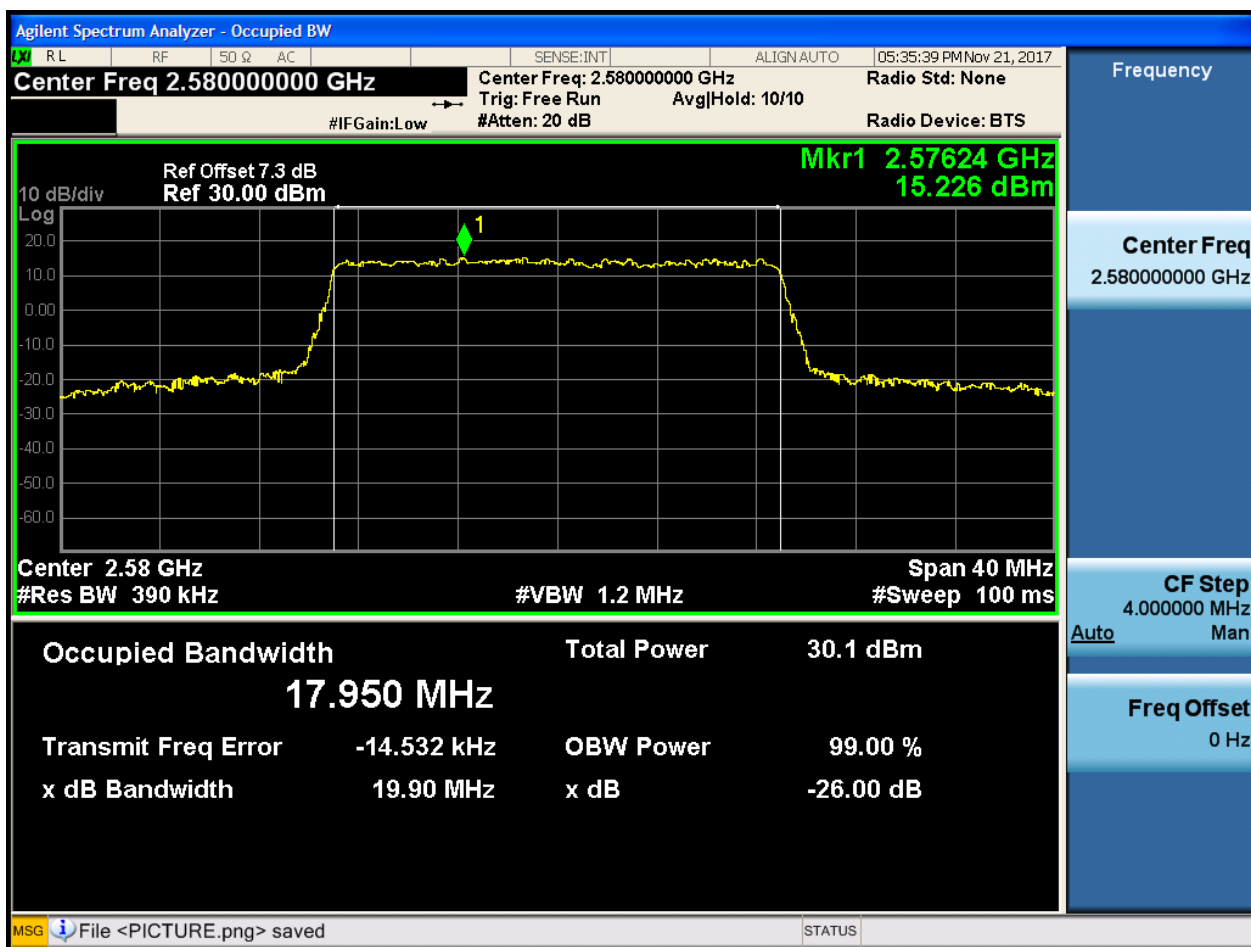
4.1.1.2.3.3.1 Test RB = RB75#0



4.1.1.2.4 Test Bandwidth = 20

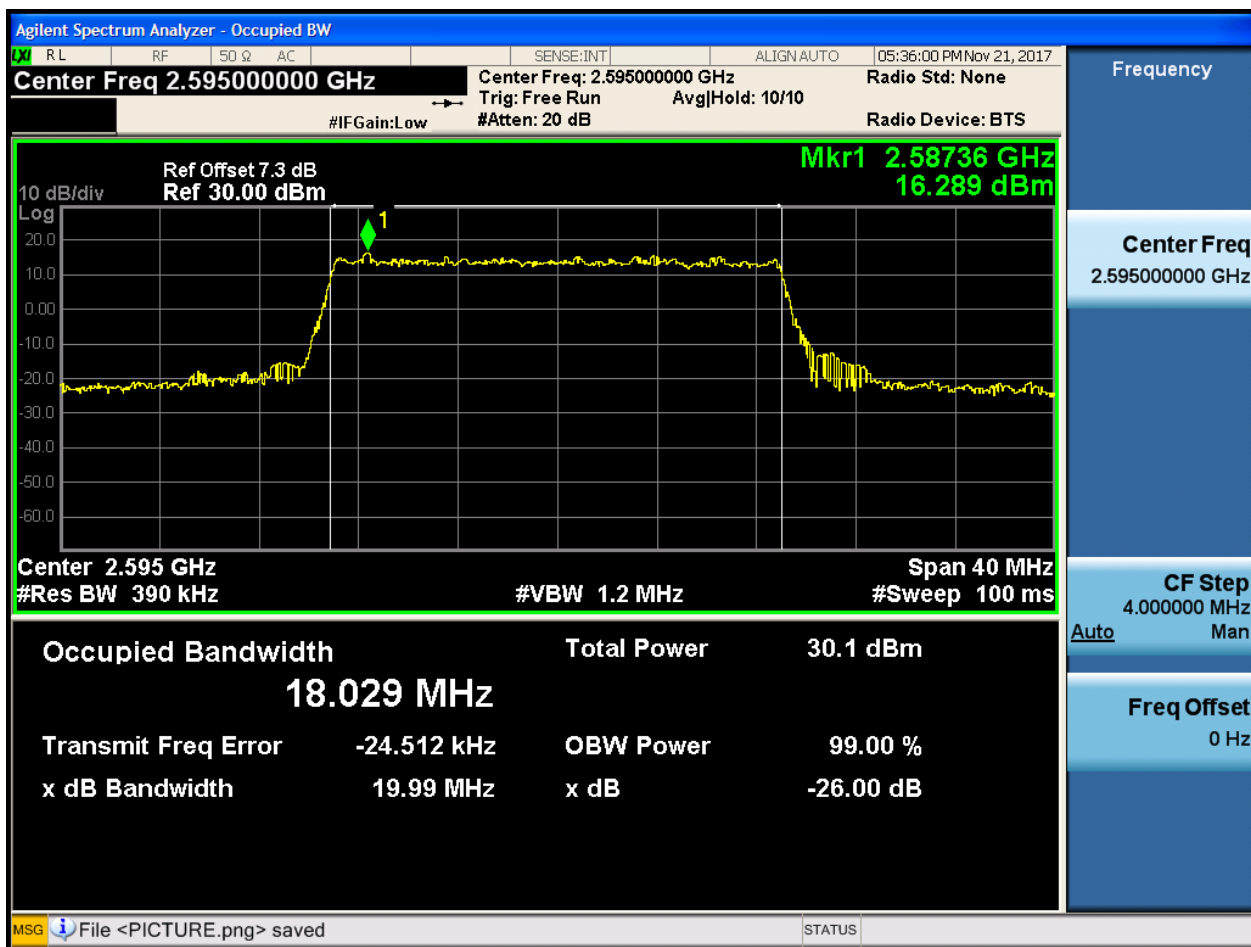
4.1.1.2.4.1 Test Channel = LCH

4.1.1.2.4.1.1 Test RB = RB100#0



4.1.1.2.4.2 Test Channel = MCH

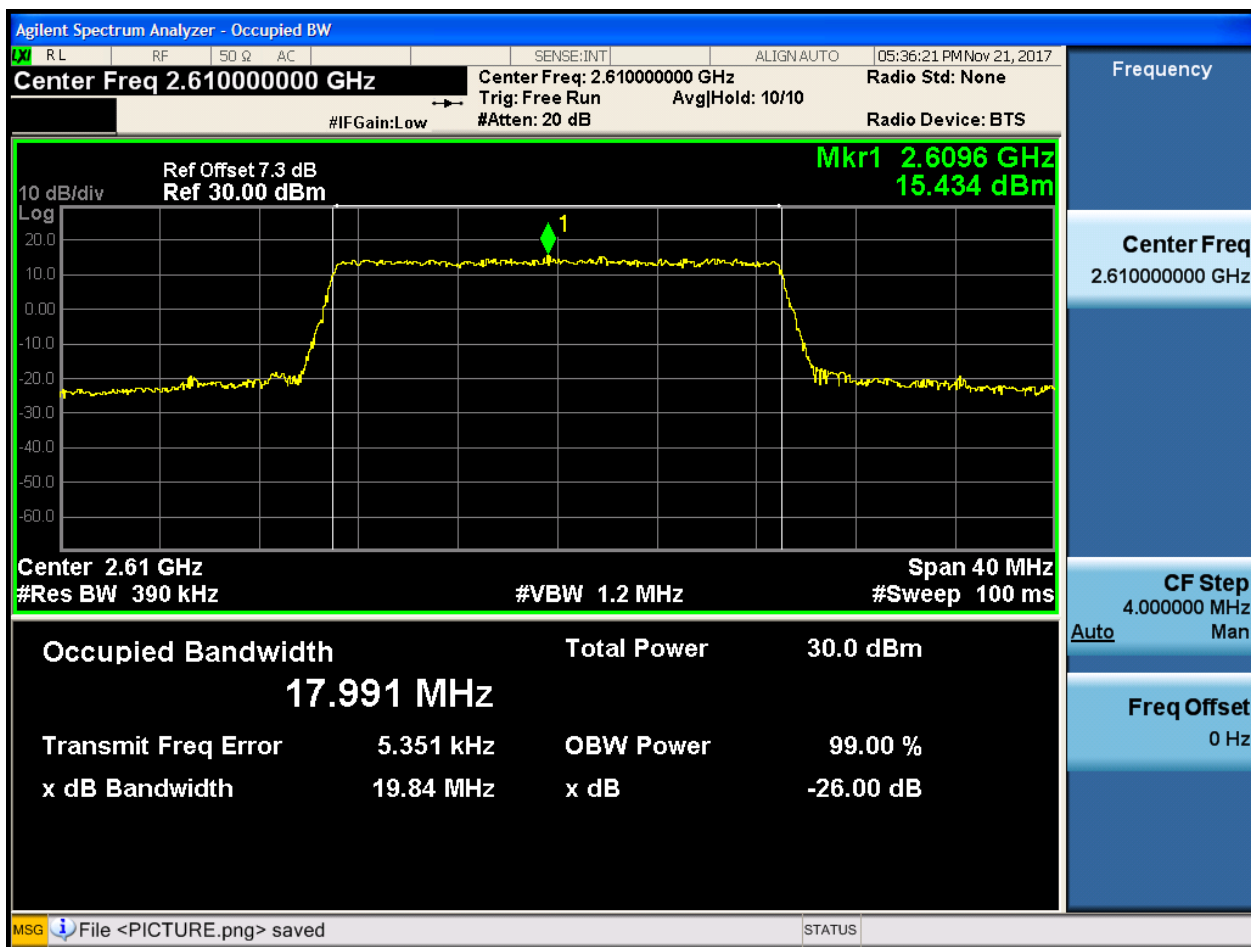
4.1.1.2.4.2.1 Test RB = RB100#0





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

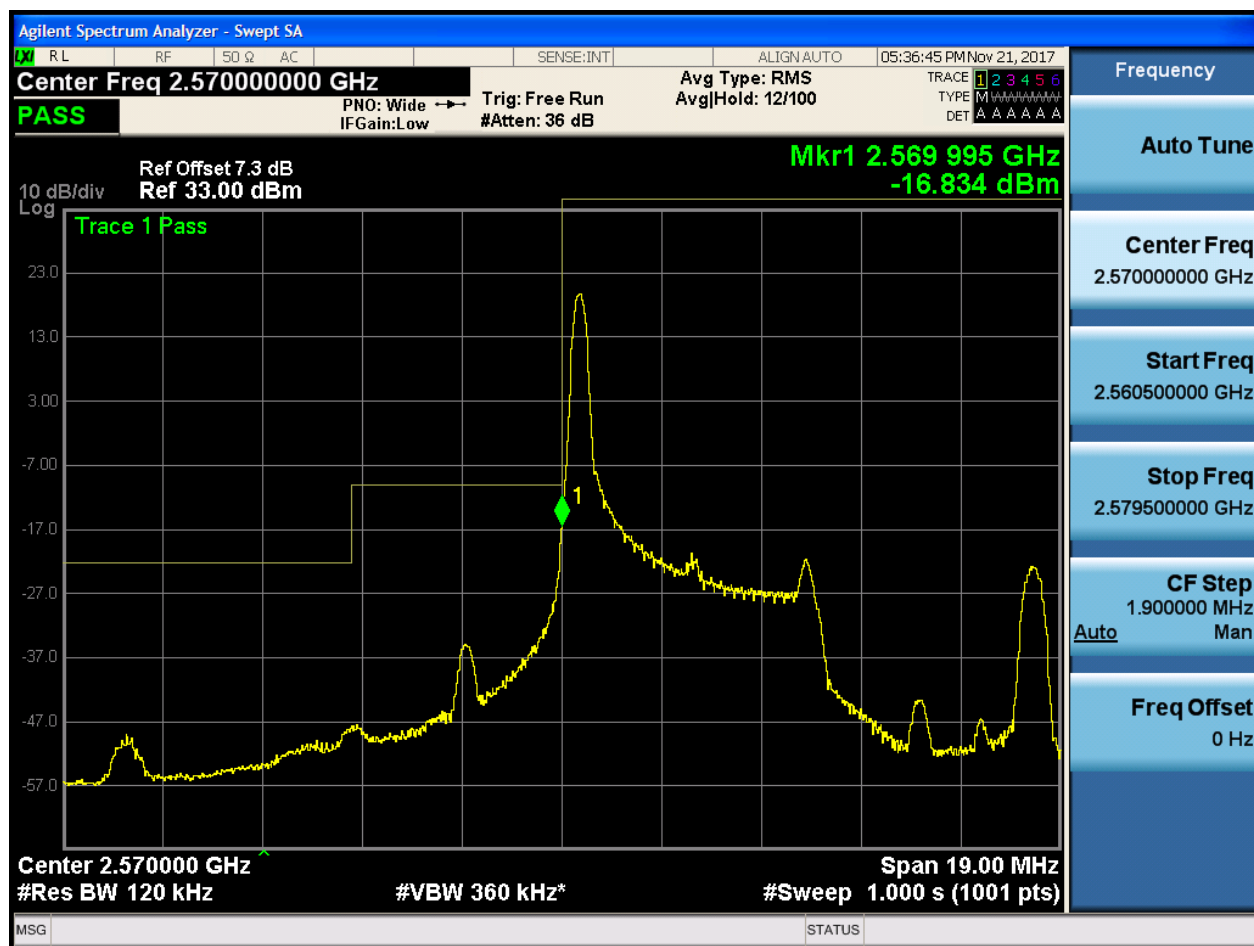
5.1.1 Test Band = BAND38

5.1.1.1 Test Mode = LTE/TM1

5.1.1.1.1 Test Bandwidth = 5

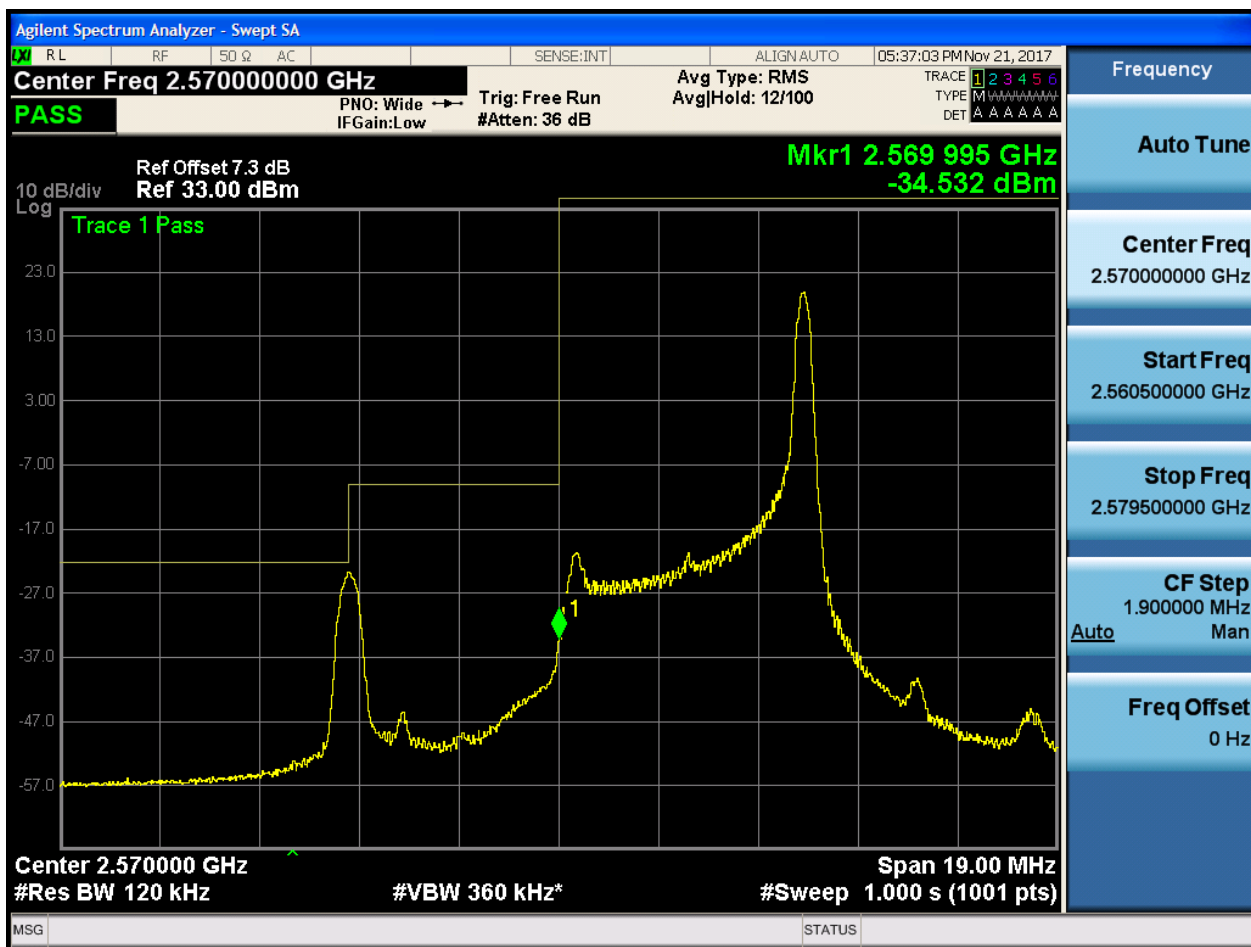
5.1.1.1.1.1 Test Channel = LCH

5.1.1.1.1.1.1 Test RB = RB1#0



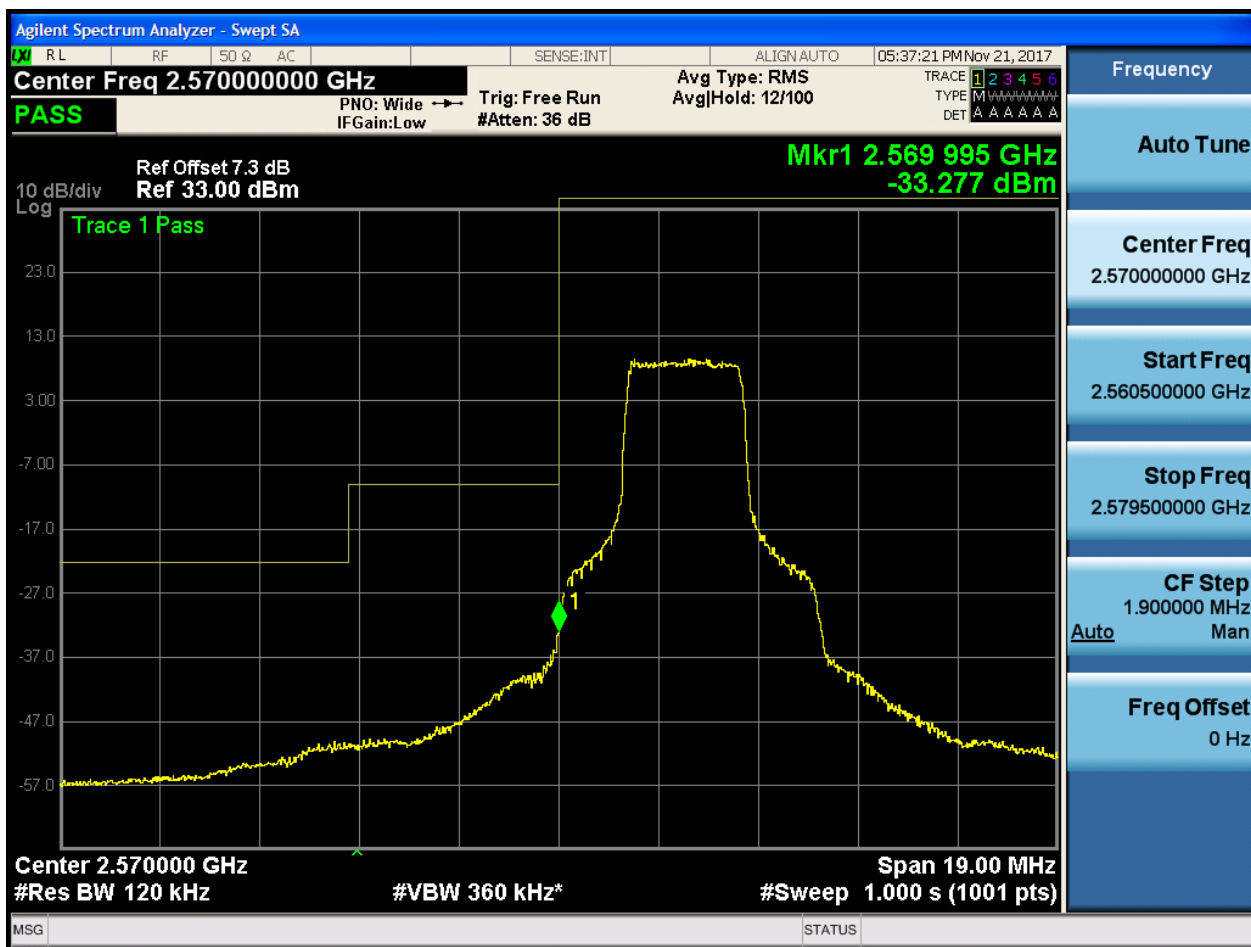


5.1.1.1.1.2 Test RB = RB1#24





5.1.1.1.1.3 Test RB = RB12#6

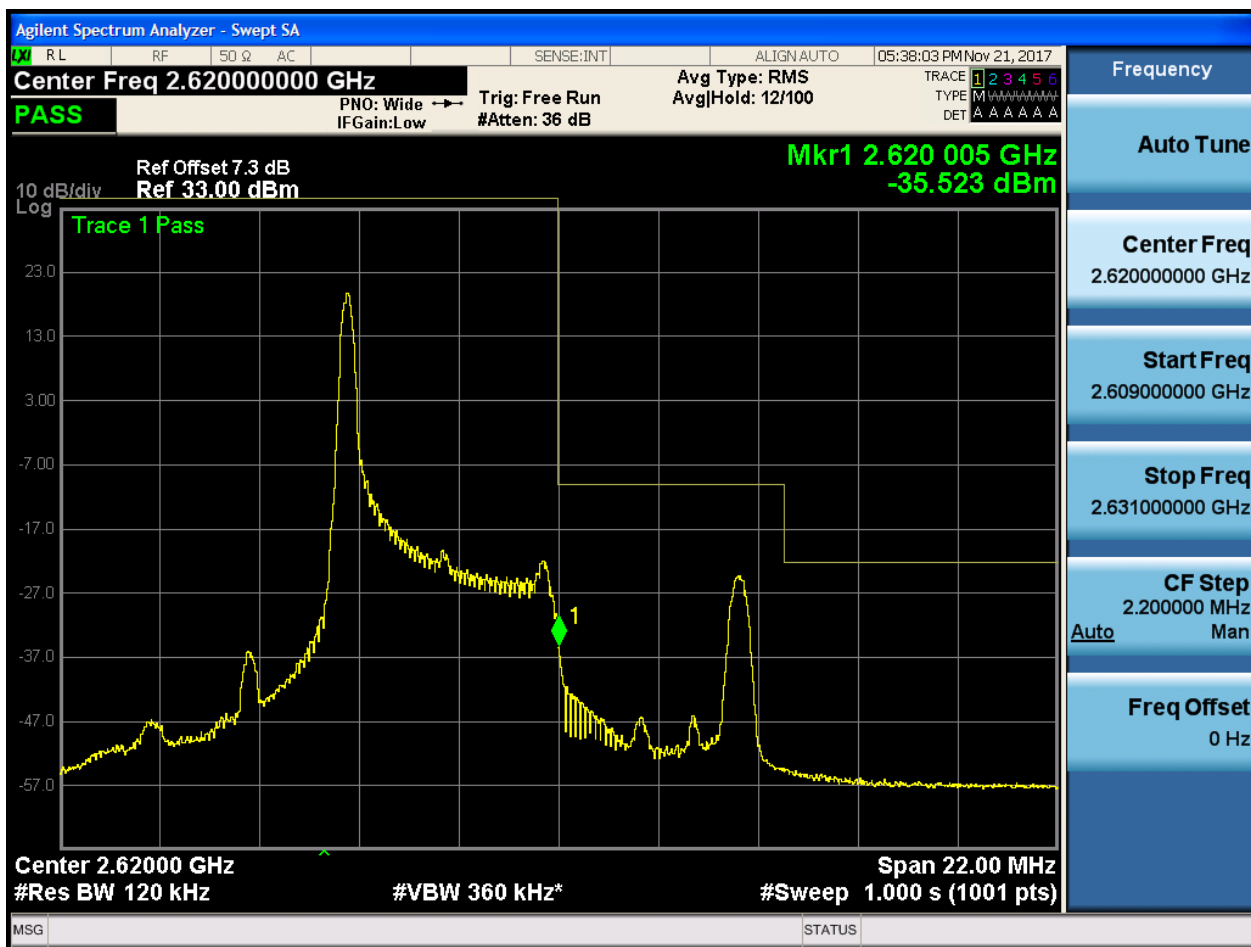


[illegible]



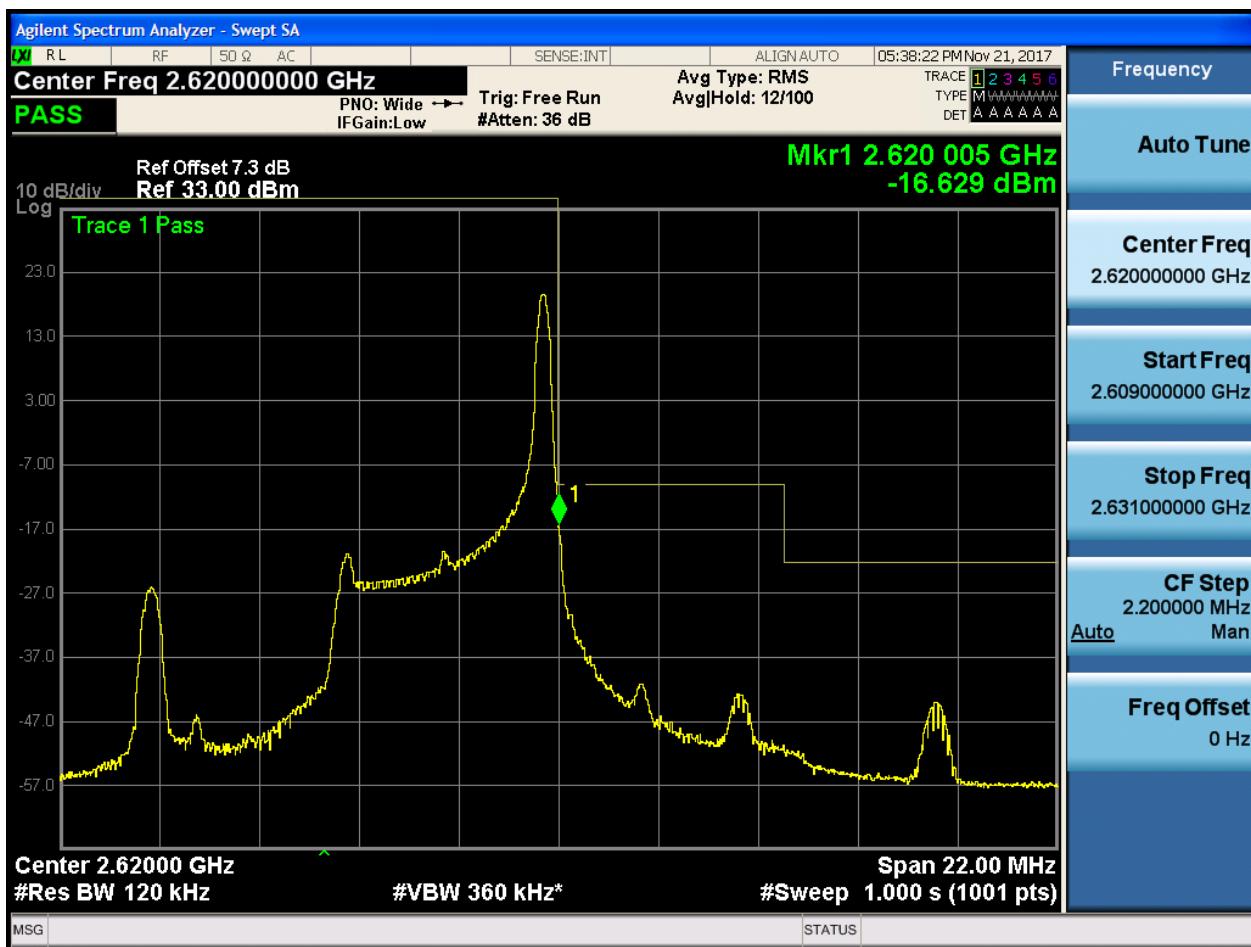
5.1.1.1.2 Test Channel = HCH

5.1.1.1.2.1 Test RB = RB1#0



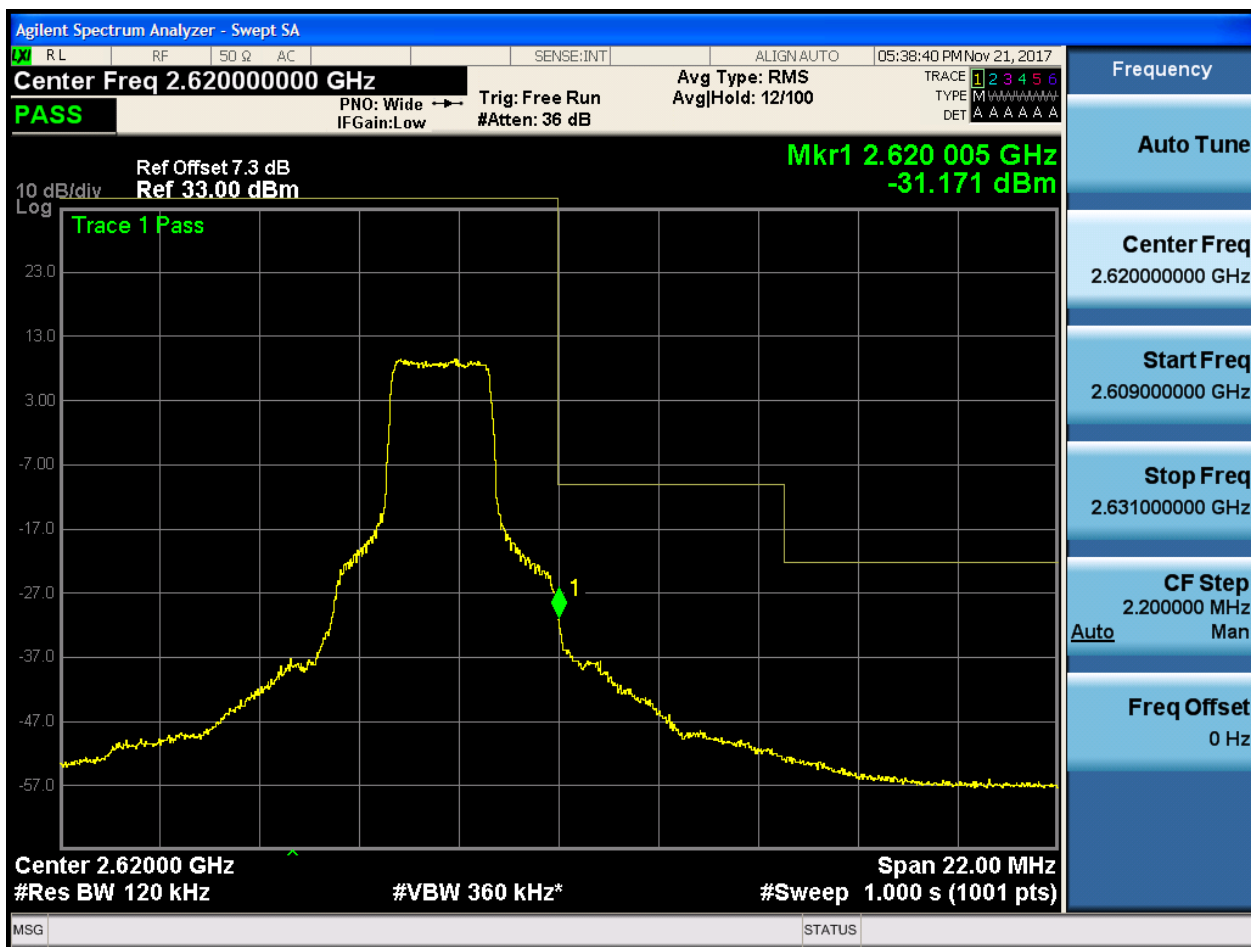


5.1.1.1.2.2 Test RB = RB1#24





5.1.1.1.2.3 Test RB = RB12#6





5.1.1.1.2.4 Test RB = RB25#0

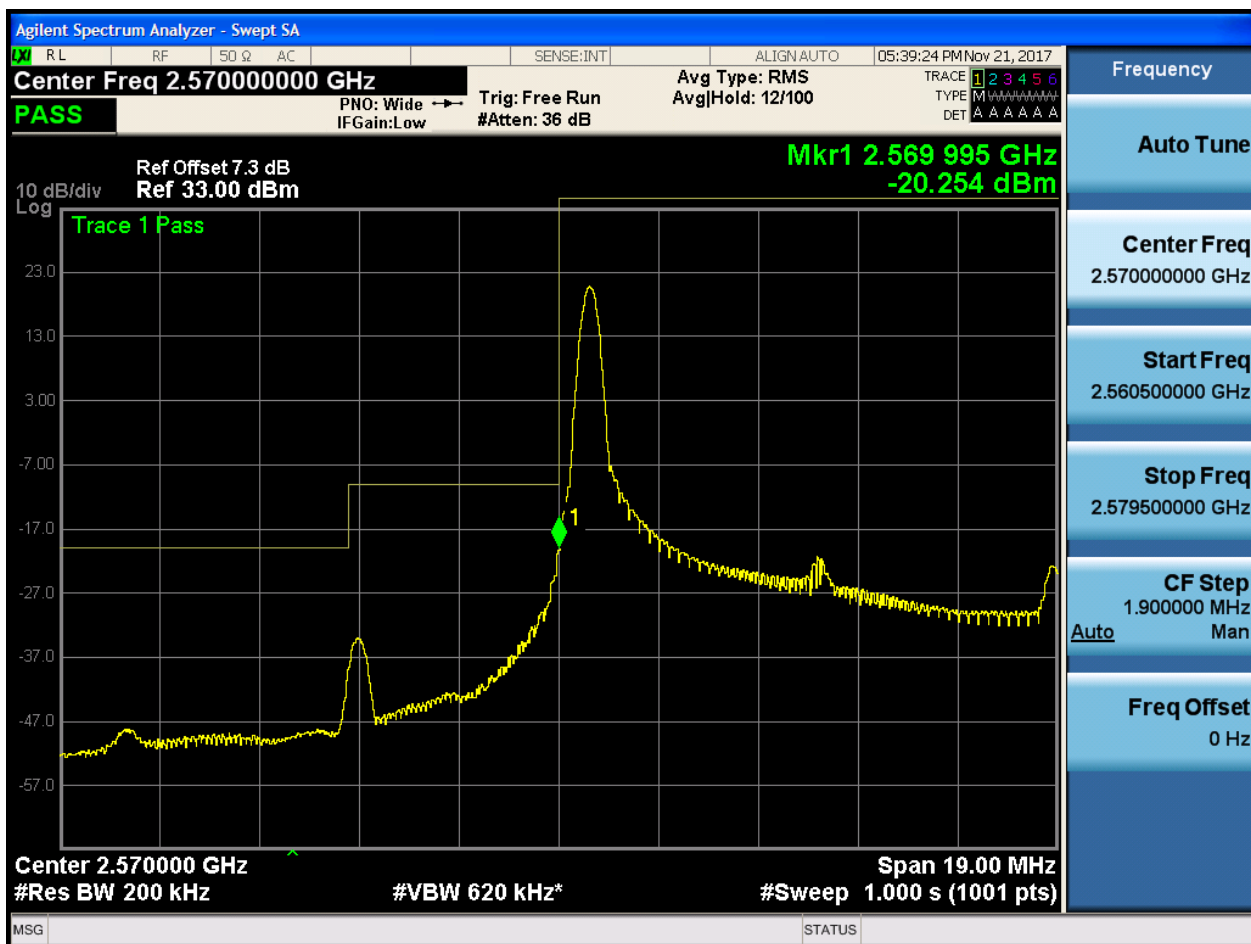




5.1.1.1.2 Test Bandwidth = 10

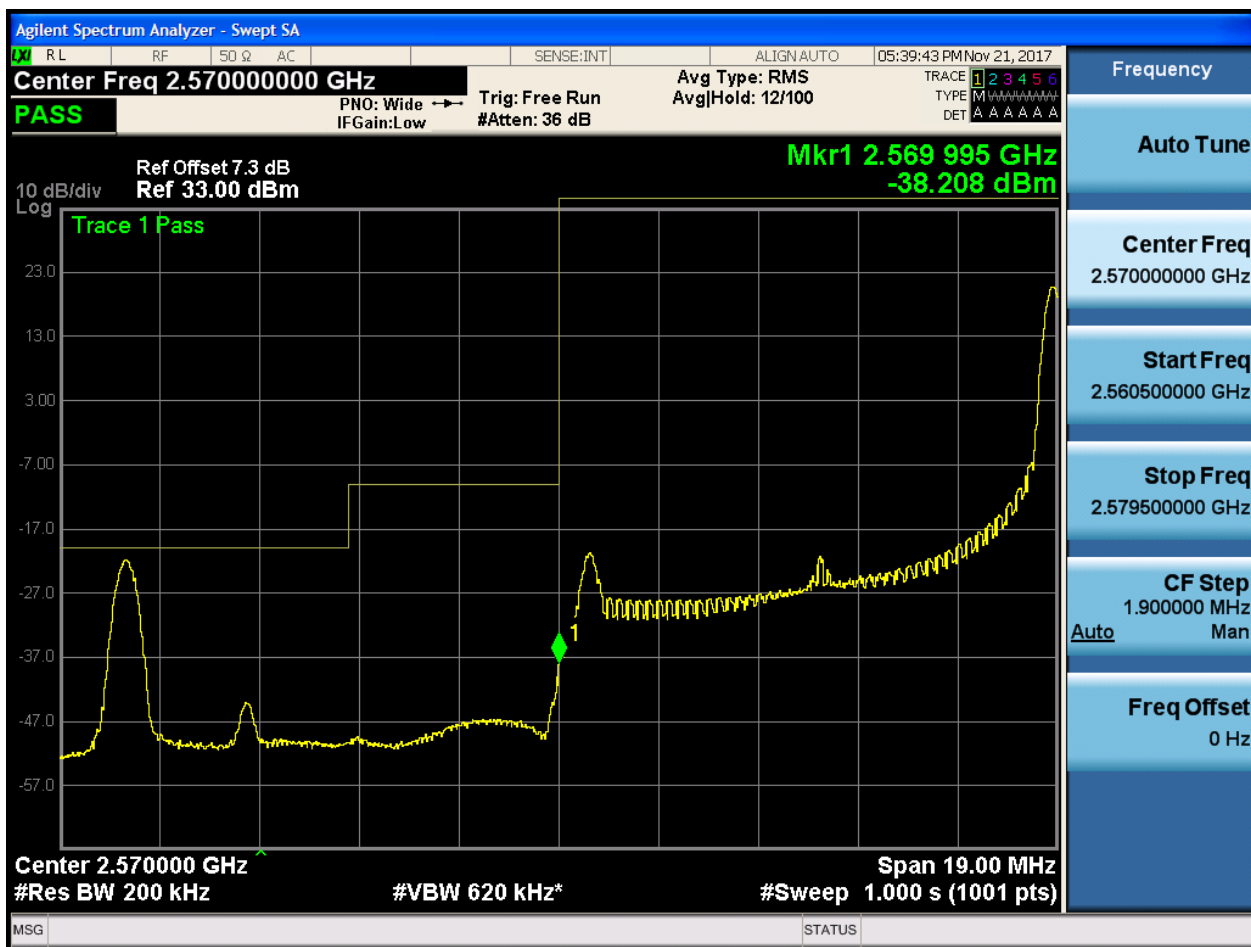
5.1.1.1.2.1 Test Channel = LCH

5.1.1.1.2.1.1 Test RB = RB1#0





5.1.1.1.2.1.2 Test RB = RB1#49





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:40:01 PM Nov 21, 2017

Center Freq 2.570000000 GHz Avg Type: RMS
#Res BW 200 kHz IFGain:Low Trig: Free Run AvgHold: 12/100
PNO: Wide Trace 1 2 3 4 5 6
IFGain:Low #Atten: 36 dB TYPE M A A A A A A
DET A A A A A A

PASS

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.569 995 GHz
-34.584 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.570000 GHz
#Res BW 200 kHz #VBW 620 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

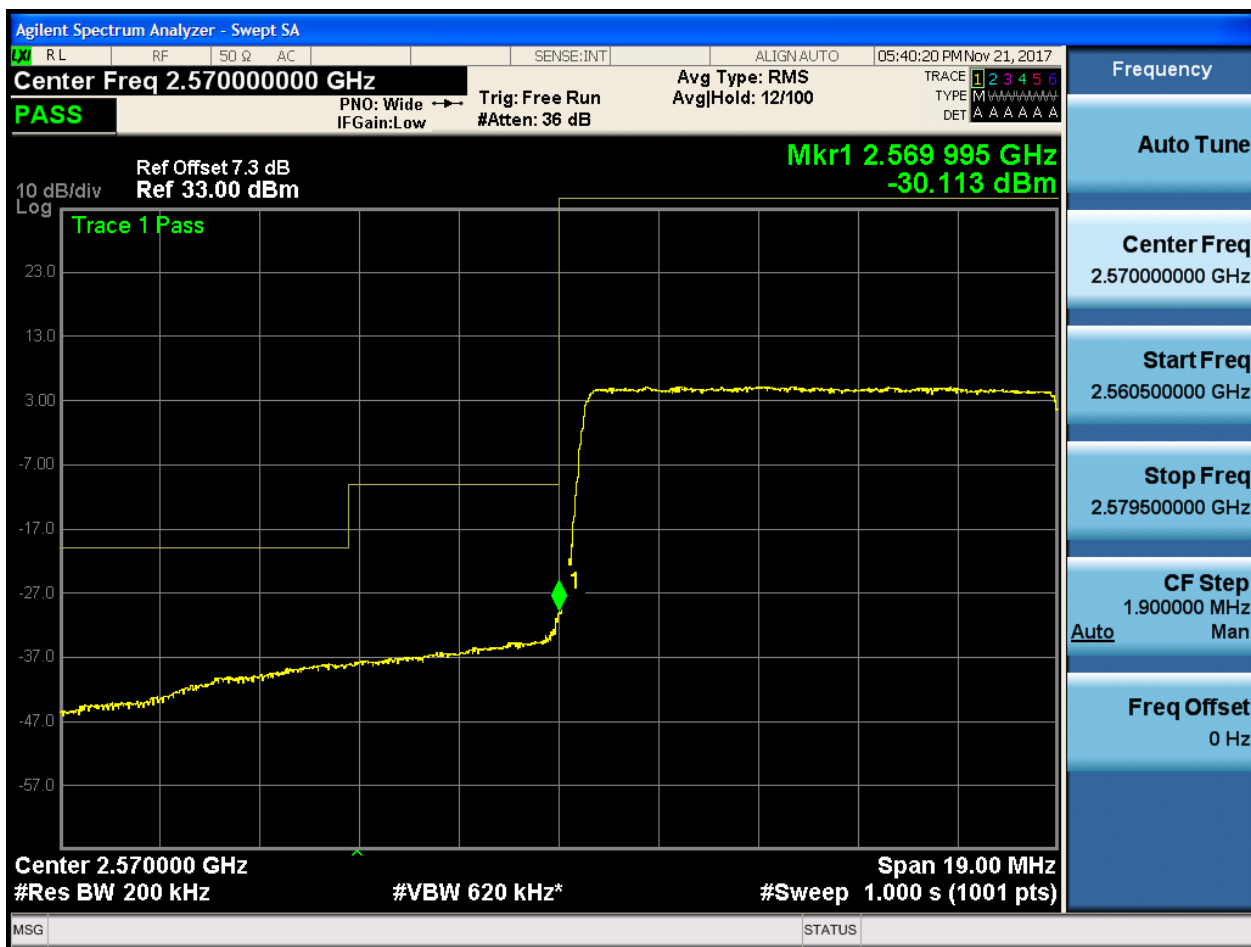
Stop Freq
2.579500000 GHz

CF Step
1.900000 MHz
Auto Man

Freq Offset
0 Hz



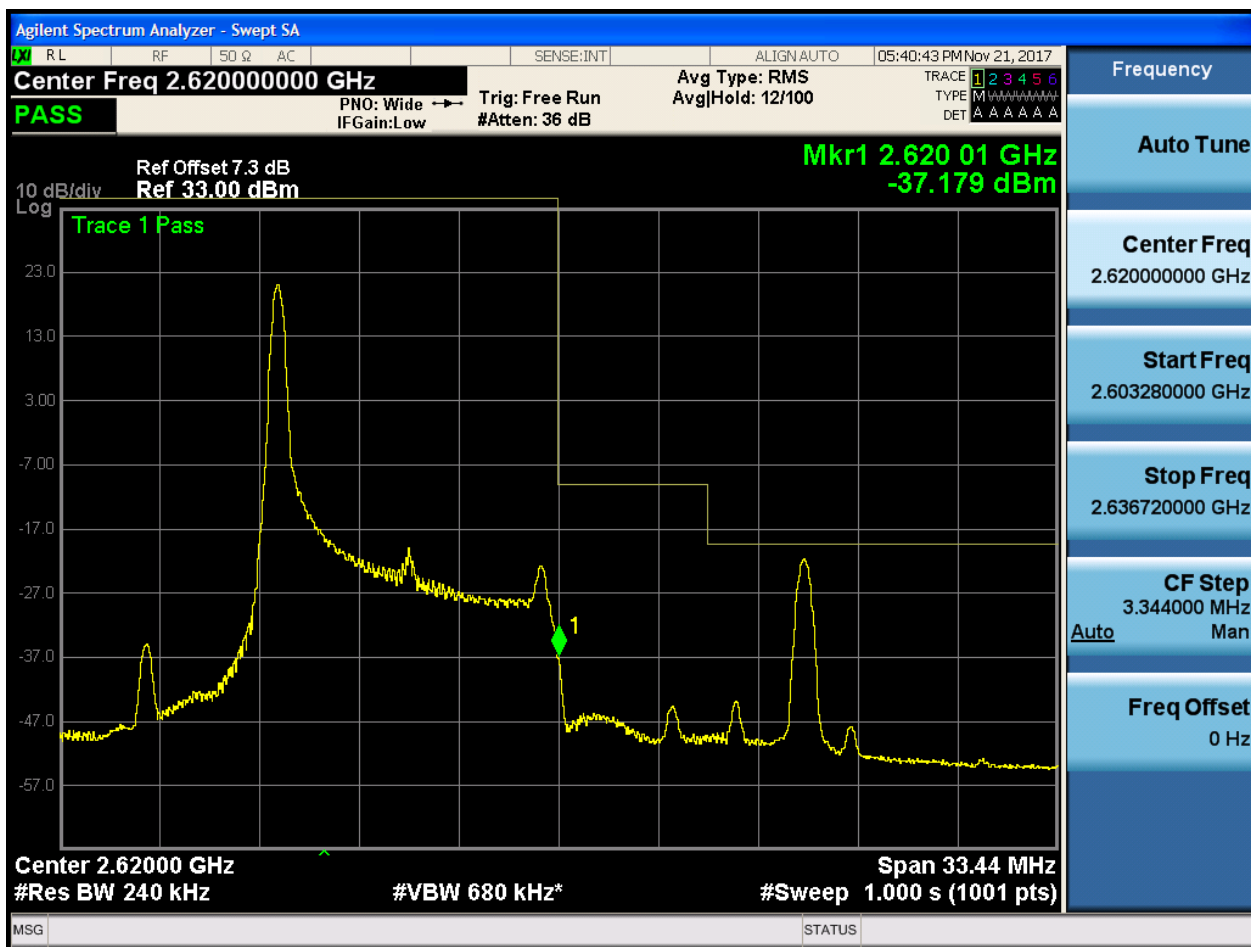
5.1.1.1.2.1.4 Test RB = RB50#0





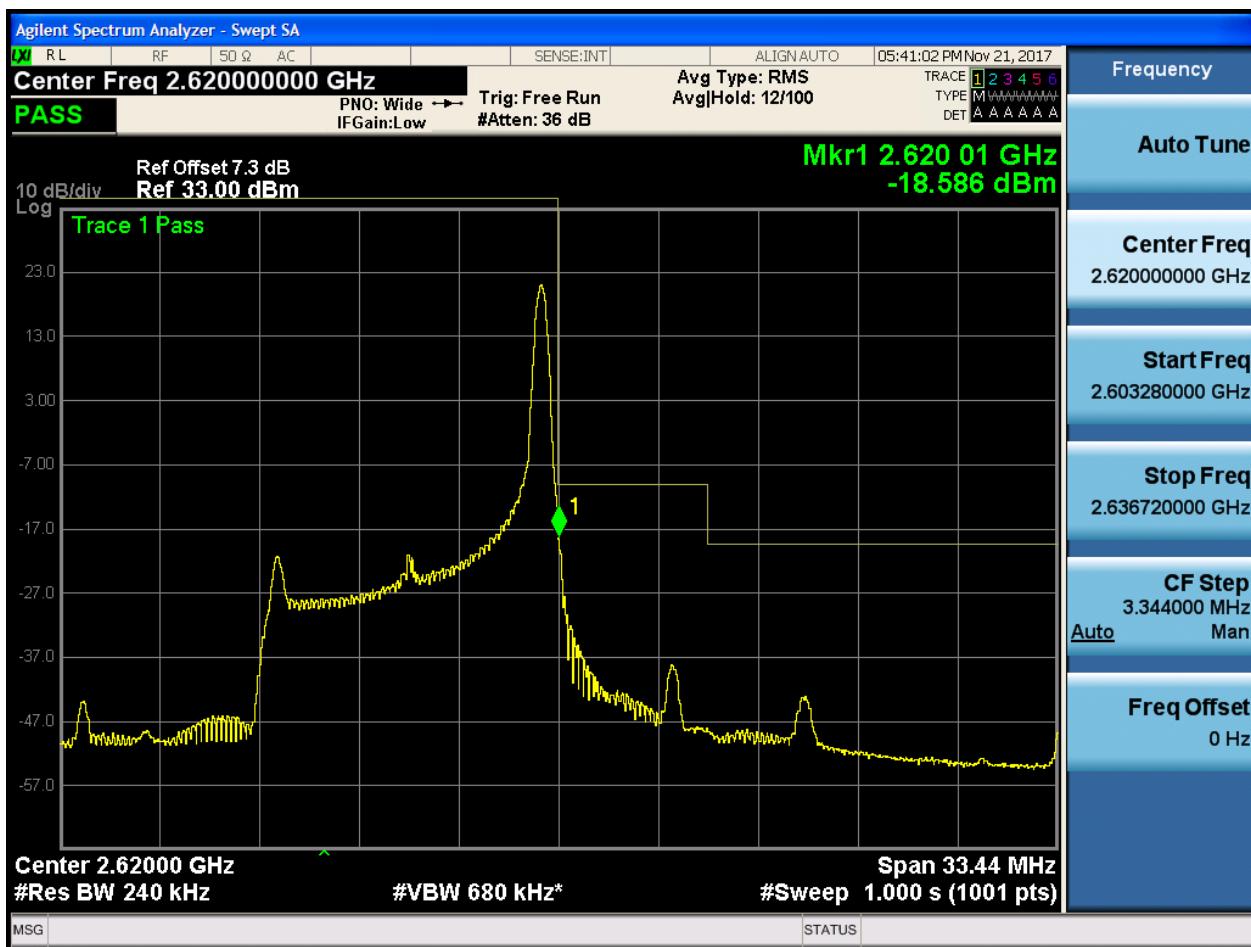
5.1.1.1.2.2 Test Channel = HCH

5.1.1.1.2.2.1 Test RB = RB1#0



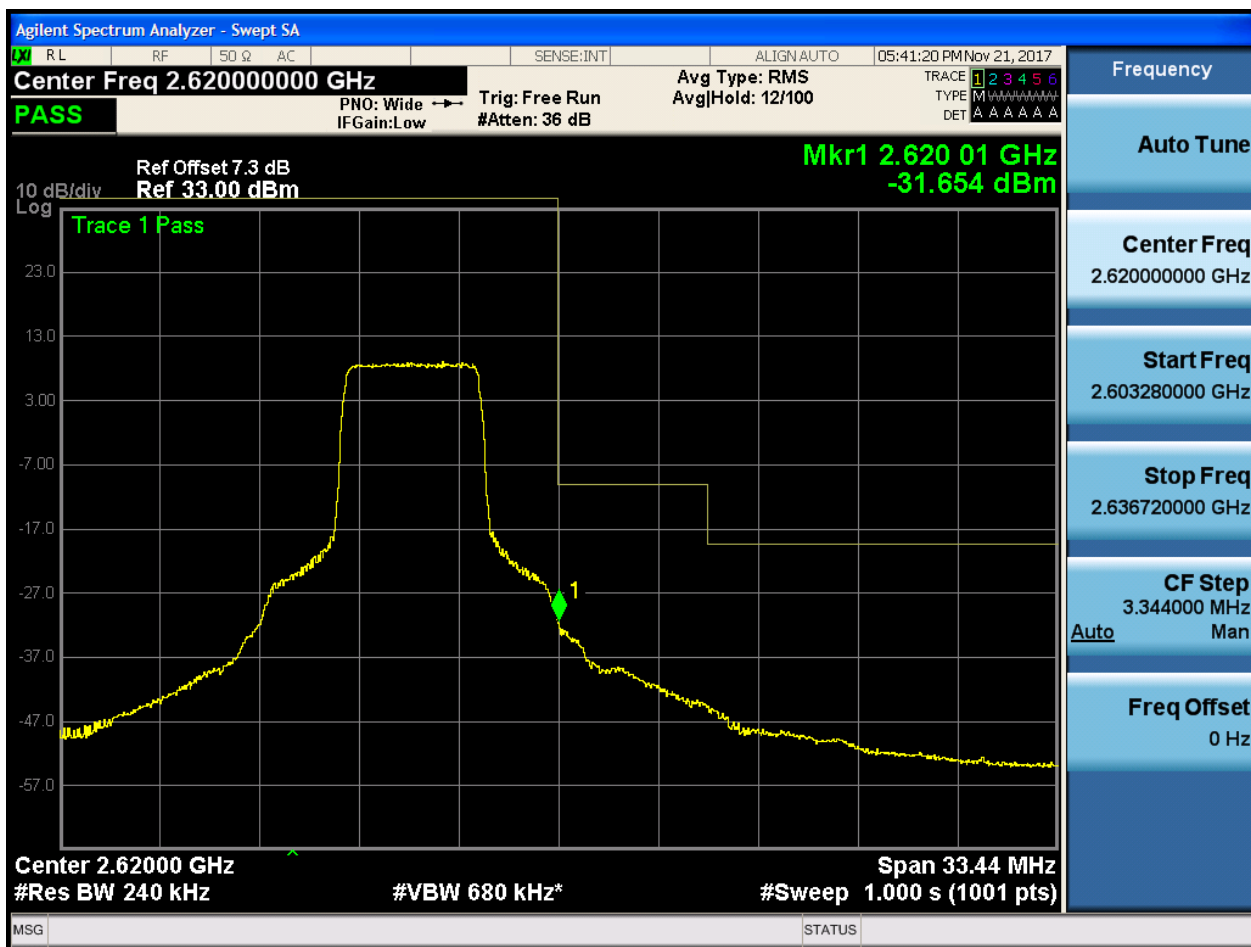


5.1.1.1.2.2.2 Test RB = RB1#49





5.1.1.1.2.2.3 Test RB = RB25#13





5.1.1.1.2.2.4 Test RB = RB50#0

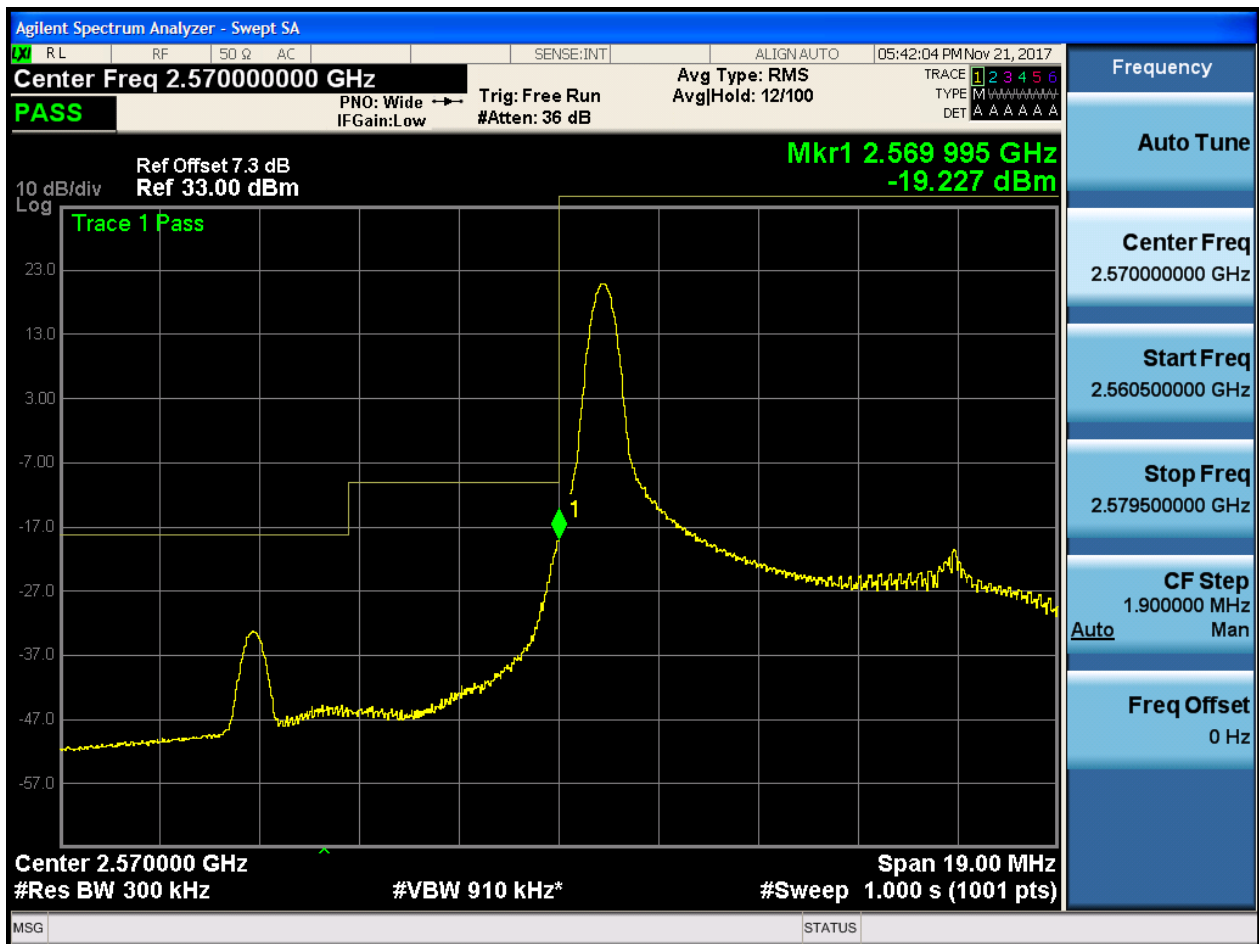




5.1.1.1.3 Test Bandwidth = 15

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





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:42:41 PM Nov 21, 2017

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 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
-34.236 dBm

10 dB/div
Log

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
2.560500000 GHz
Stop Freq
2.579500000 GHz
CF Step
1.900000 MHz
Auto Man
Freq Offset
0 Hz



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 05:42:59 PM Nov 21, 2017

Center Freq 2.570000000 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 W W
DET A A A A A A A

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.569 995 GHz
-29.895 dBm

10 dB/div
Log

Trace 1 Pass

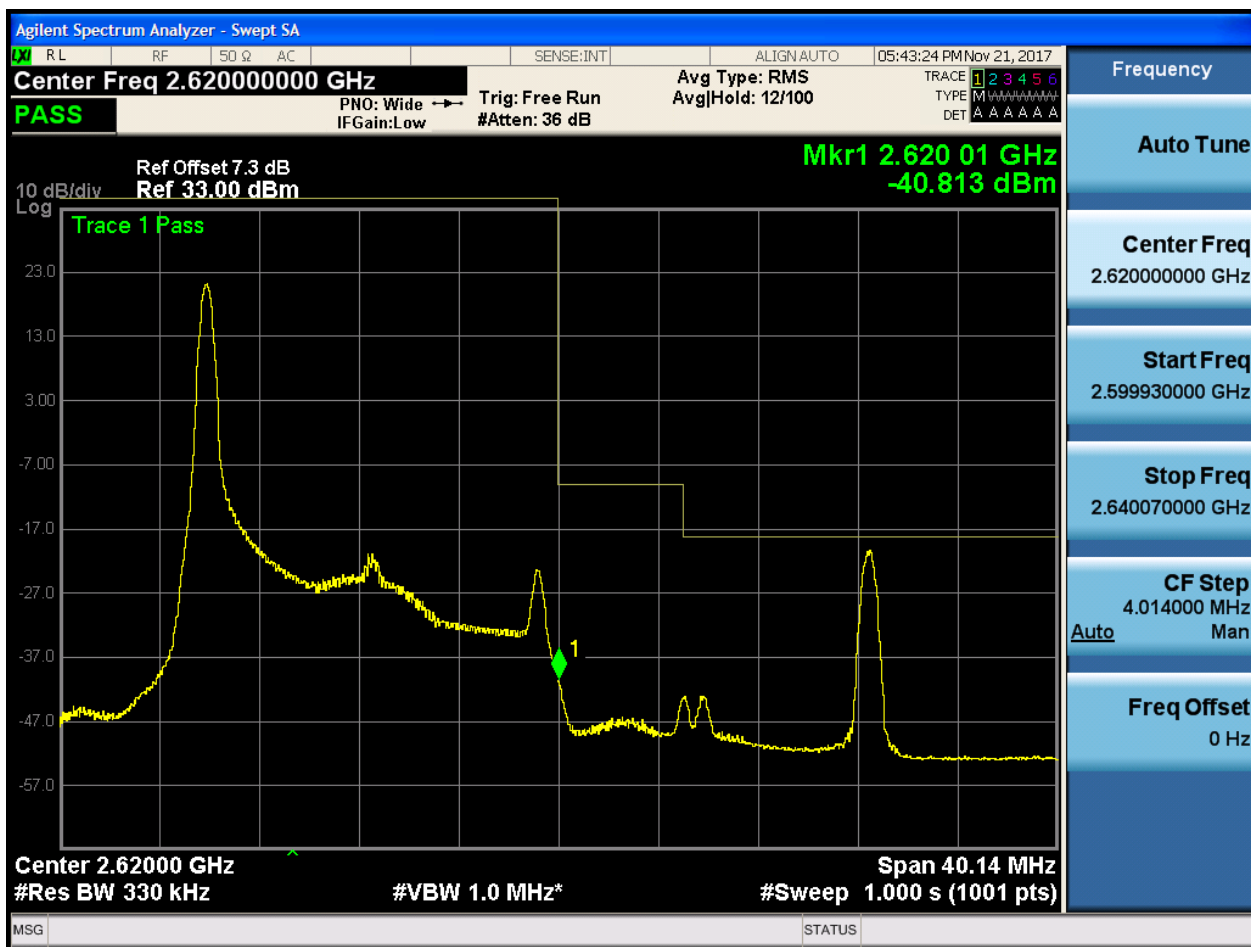
Center 2.570000 GHz
#Res BW 300 kHz #VBW 910 kHz* Span 19.00 MHz
#Sweep 1.000 s (1001 pts)

MSG STATUS

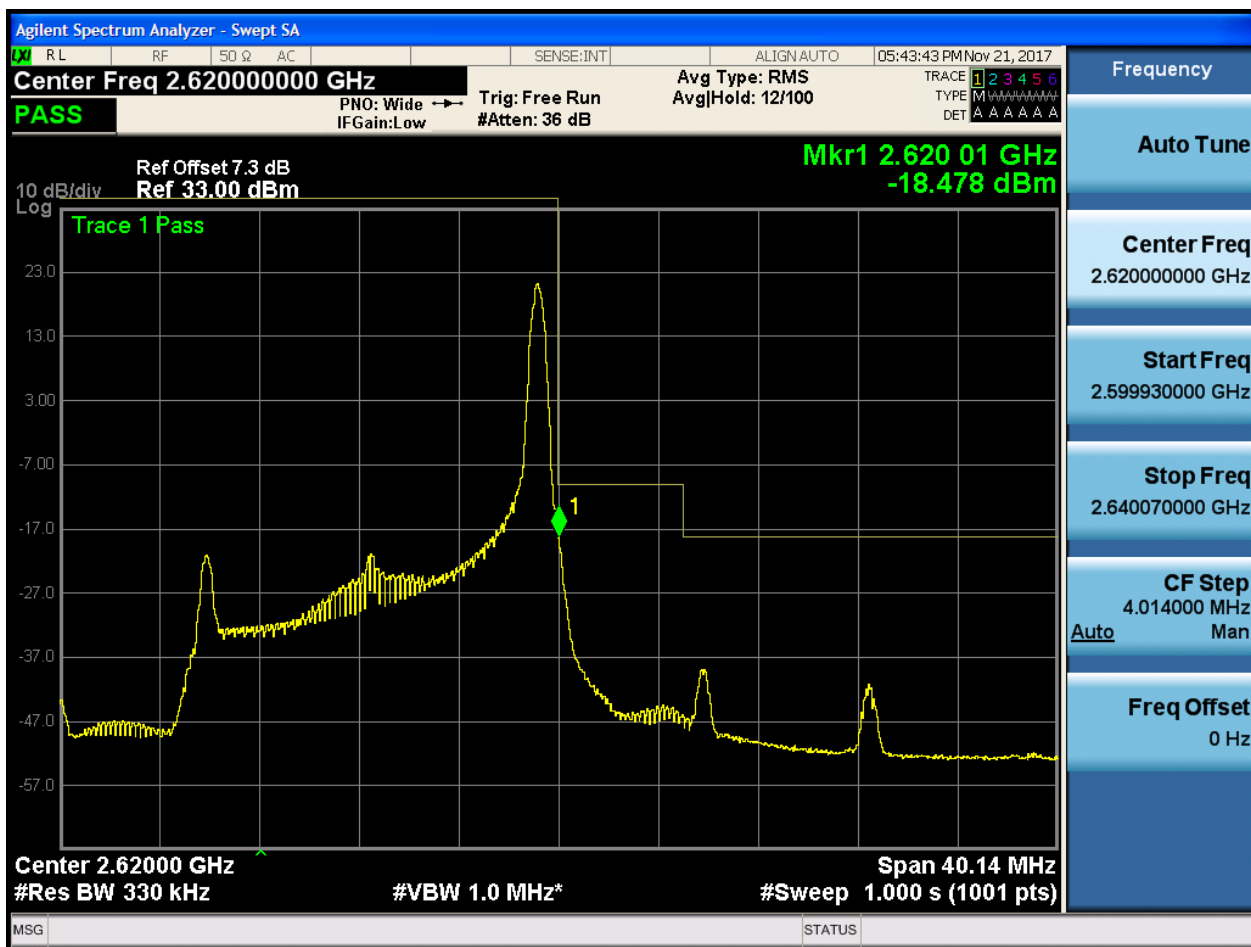


5.1.1.1.3.2 Test Channel = HCH

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

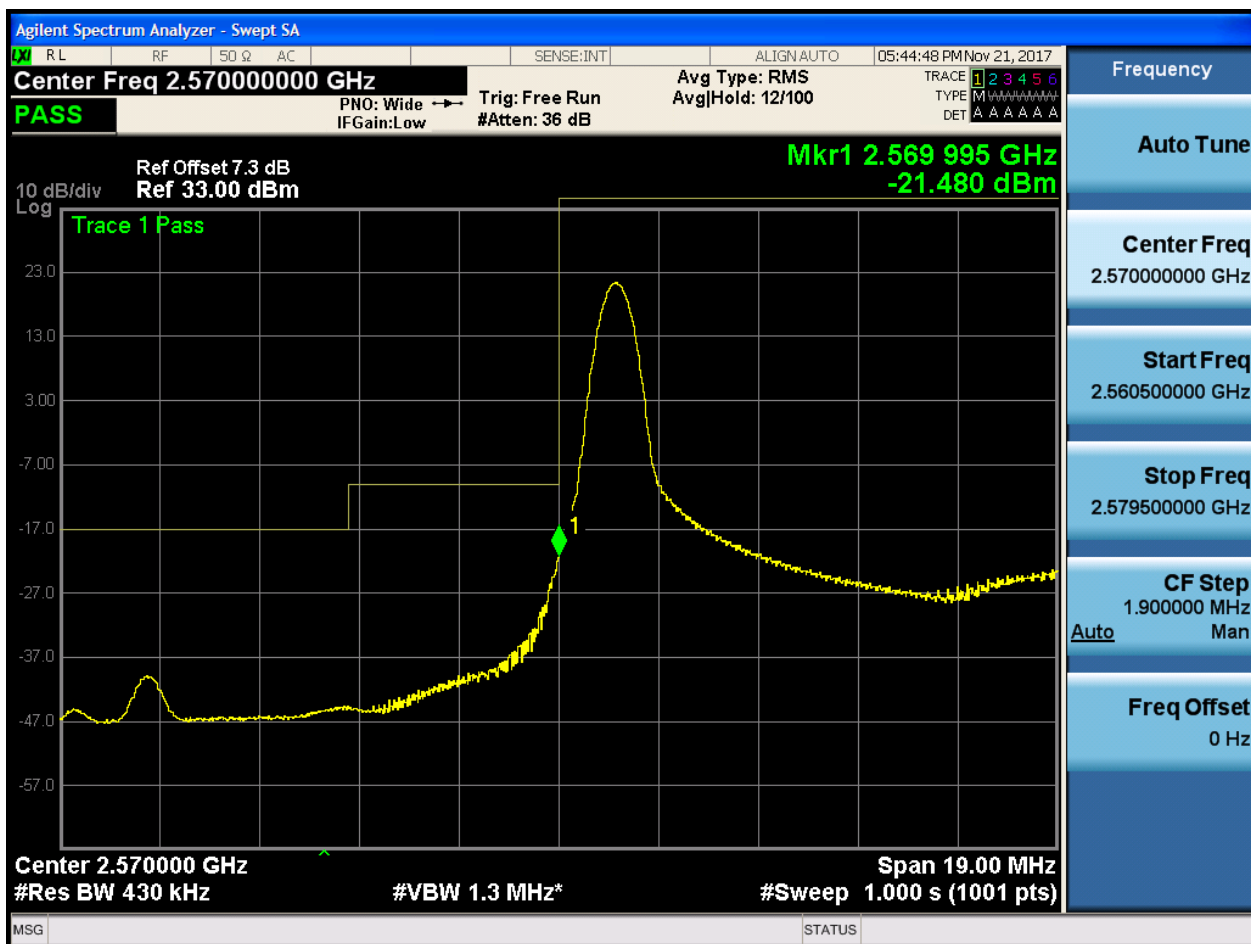




5.1.1.1.4 Test Bandwidth = 20

5.1.1.1.4.1 Test Channel = LCH

5.1.1.1.4.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:45:07 PM Nov 21, 2017

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
-40.927 dBm

10 dB/div
Log

Trace 1 Pass

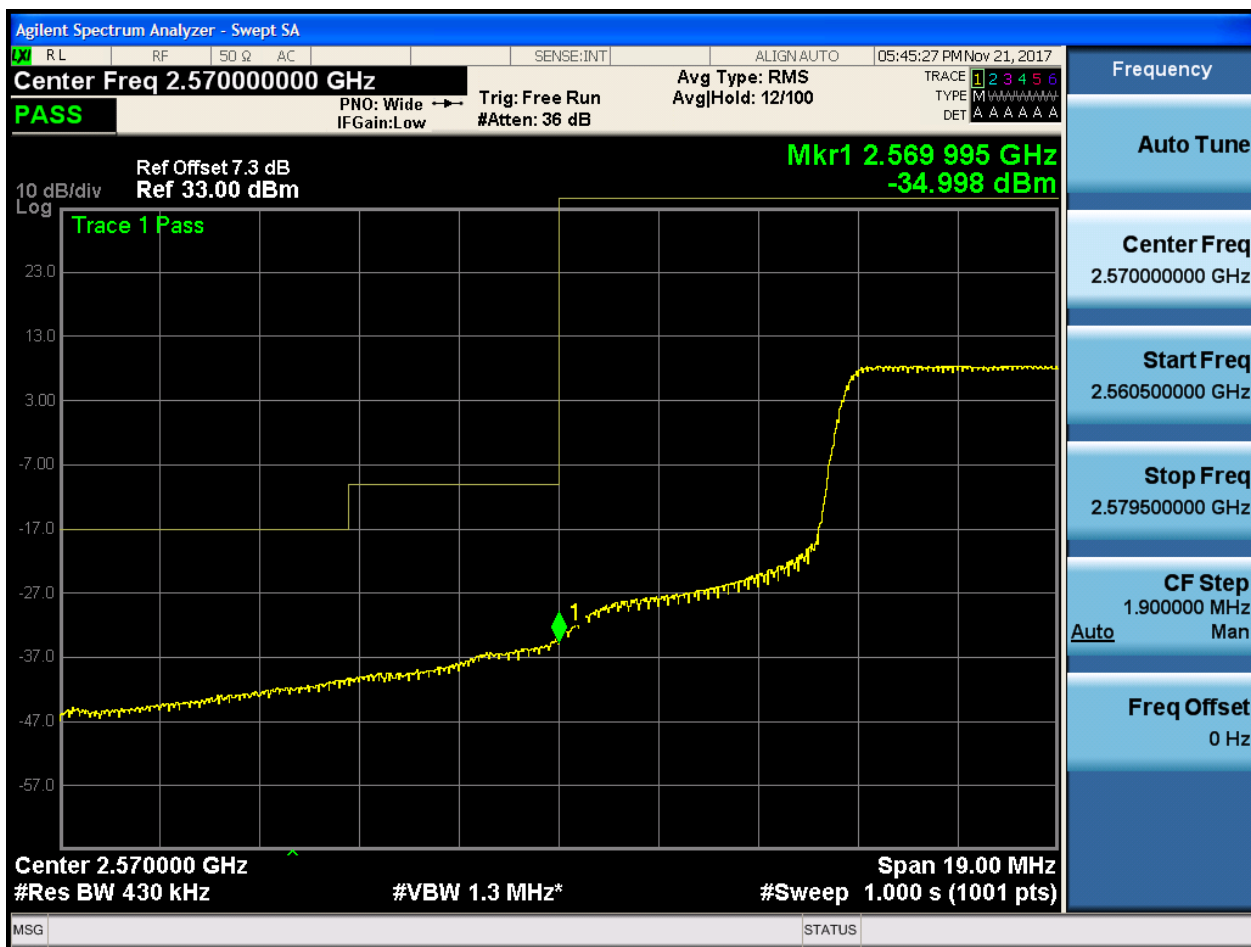
Center 2.570000 GHz
#Res BW 430 kHz
#VBW 1.3 MHz*
Span 19.00 MHz
#Sweep 1.000 s (1001 pts)

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

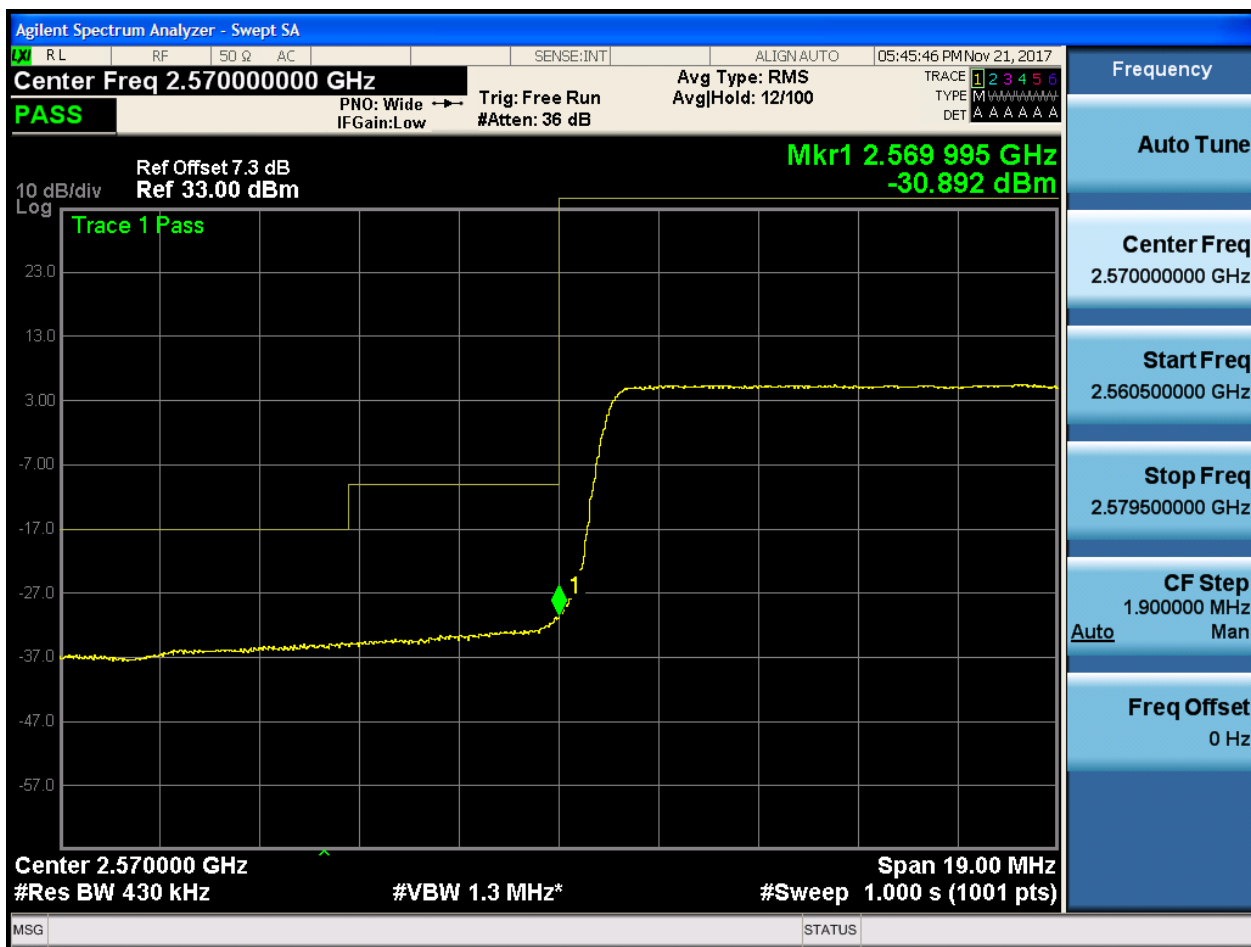


5.1.1.1.4.1.3 Test RB = RB50#25



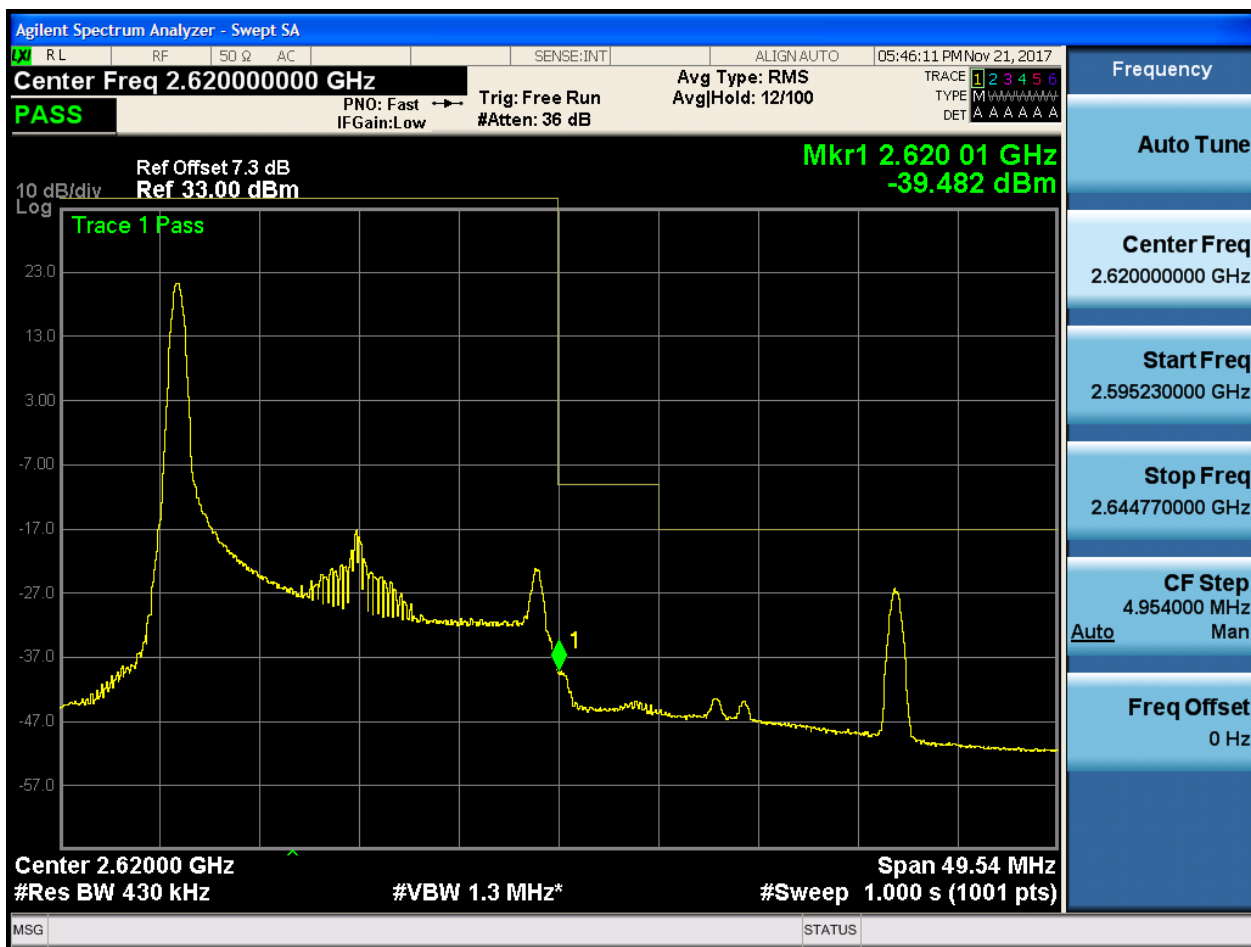


5.1.1.1.4.1.4 Test RB = RB100#0



5.1.1.1.4.2 Test Channel = HCH

5.1.1.1.4.2.1 Test RB = RB1#0



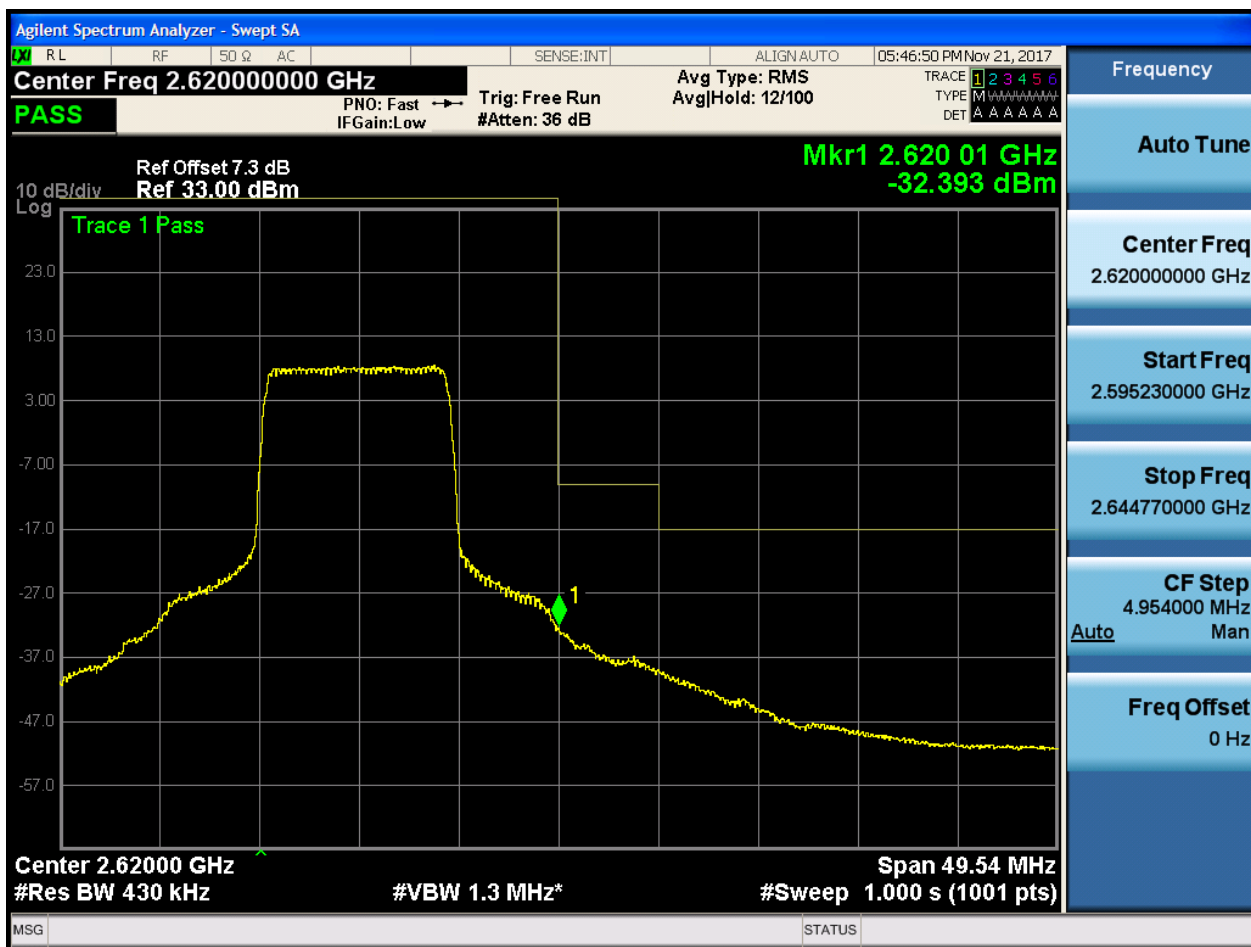


5.1.1.1.4.2.2 Test RB = RB1#99





5.1.1.1.4.2.3 Test RB = RB50#25





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 05:47:09 PM Nov 21, 2017

Center Freq 2.620000000 GHz Avg Type: RMS
PASS PNO: Fast IF Gain: Low Trig: Free Run #Atten: 36 dB
TYPE M DET A A A A A A

Ref Offset 7.3 dB Ref 33.00 dBm Mkr1 2.620 01 GHz -29.338 dBm

10 dB/div Log

Trace 1 Pass

The spectrum analyzer trace shows a signal at 2.62 GHz with a sharp drop in power at 2.64477 GHz. The y-axis is labeled '10 dB/div Log' and ranges from -57.0 to 23.0 dBm. The x-axis is labeled 'Center 2.62000 GHz' and ranges from 2.59523 GHz to 2.64477 GHz. The signal is labeled 'Trace 1 Pass' and 'Mkr1 2.620 01 GHz -29.338 dBm'. The signal is a sharp peak at 2.62 GHz, dropping to a noise floor of approximately -40 dBm at 2.64477 GHz. The signal is labeled '1' at the drop point.

Center 2.62000 GHz Span 49.54 MHz
#Res BW 430 kHz #VBW 1.3 MHz* #Sweep 1.000 s (1001 pts)

MSG STATUS

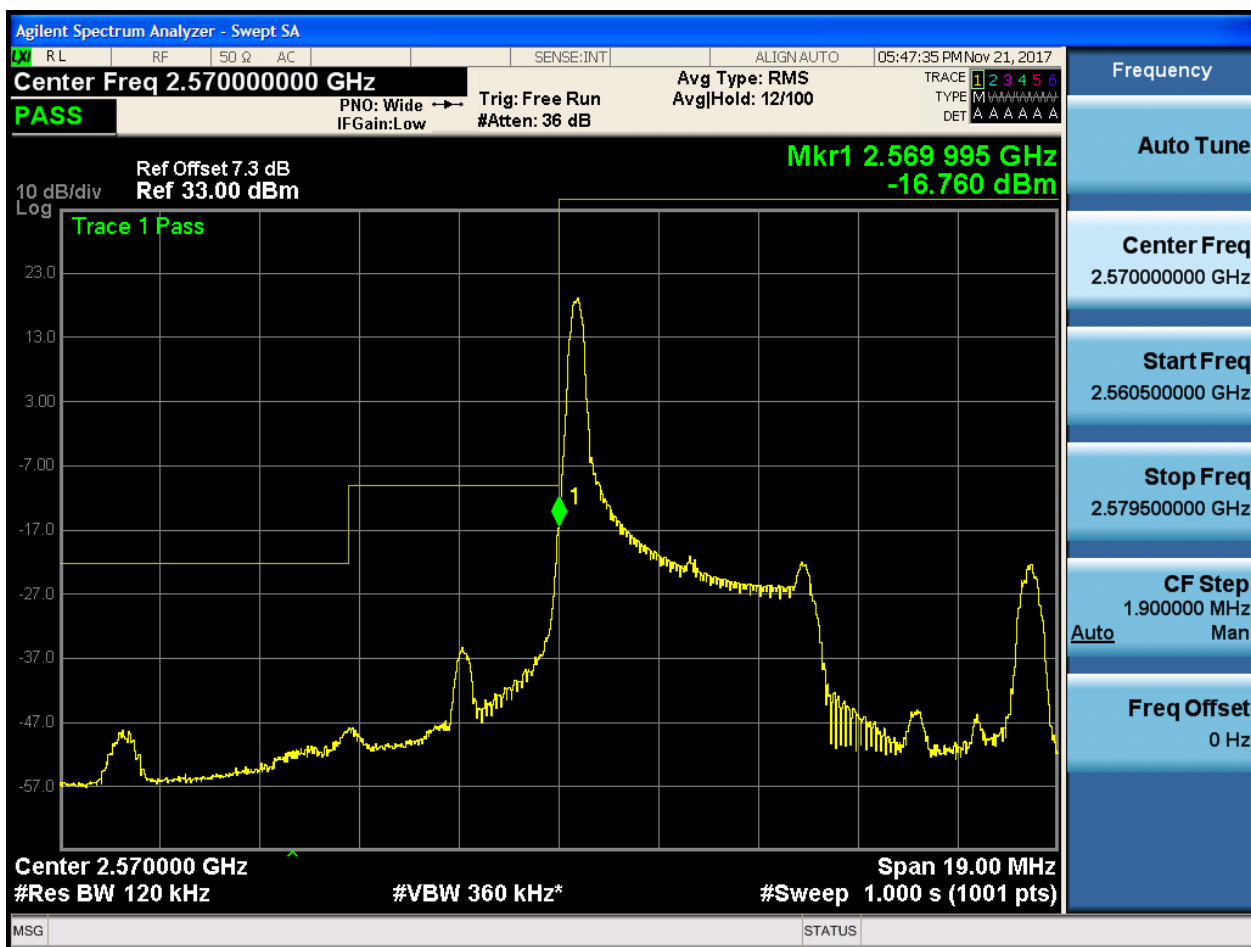
Frequency
Auto Tune
Center Freq 2.620000000 GHz
Start Freq 2.595230000 GHz
Stop Freq 2.644770000 GHz
CF Step 4.954000 MHz Auto Man
Freq Offset 0 Hz

5.1.1.2 Test Mode = LTE/TM2

5.1.1.2.1 Test Bandwidth = 5

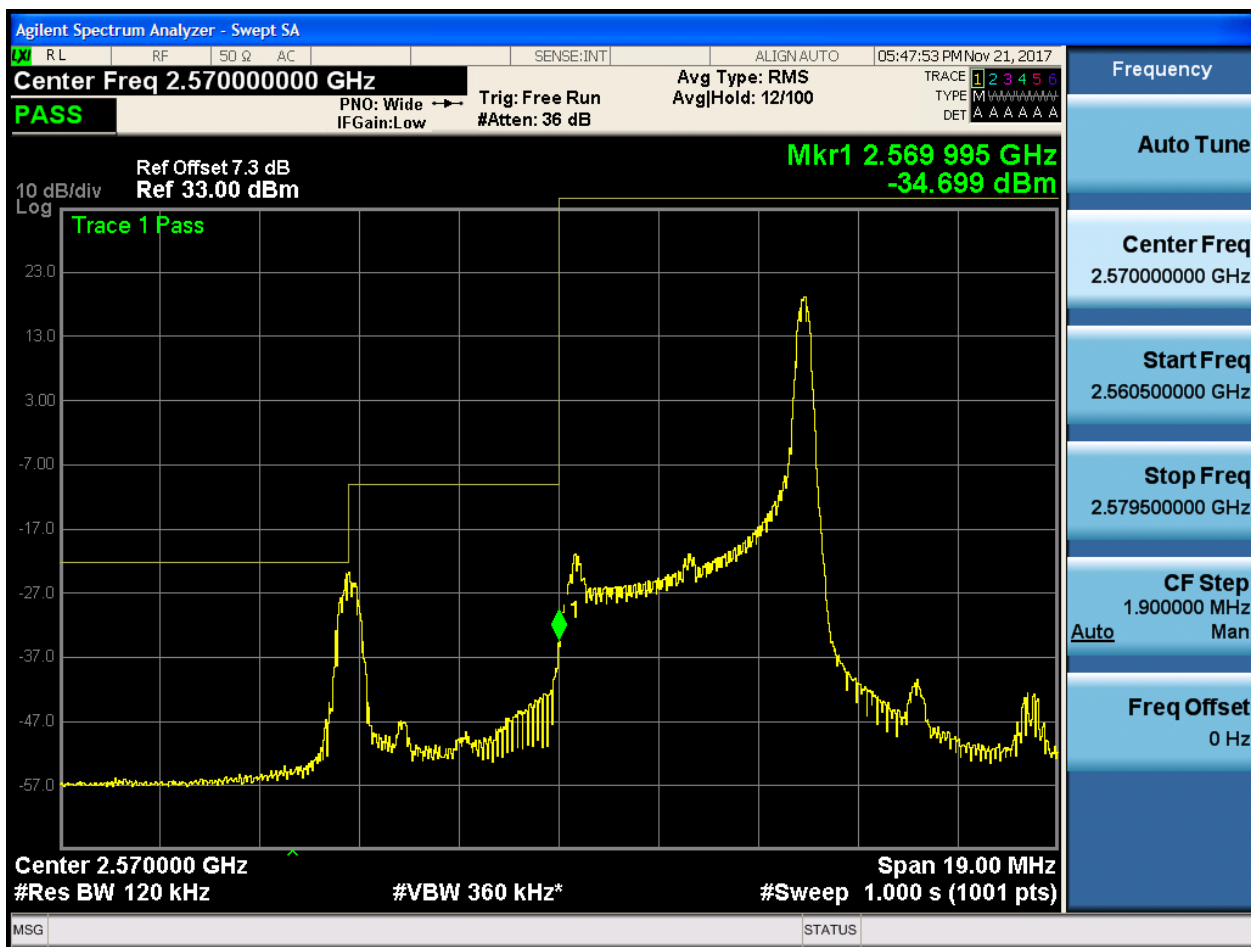
5.1.1.2.1.1 Test Channel = LCH

5.1.1.2.1.1.1 Test RB = RB1#0



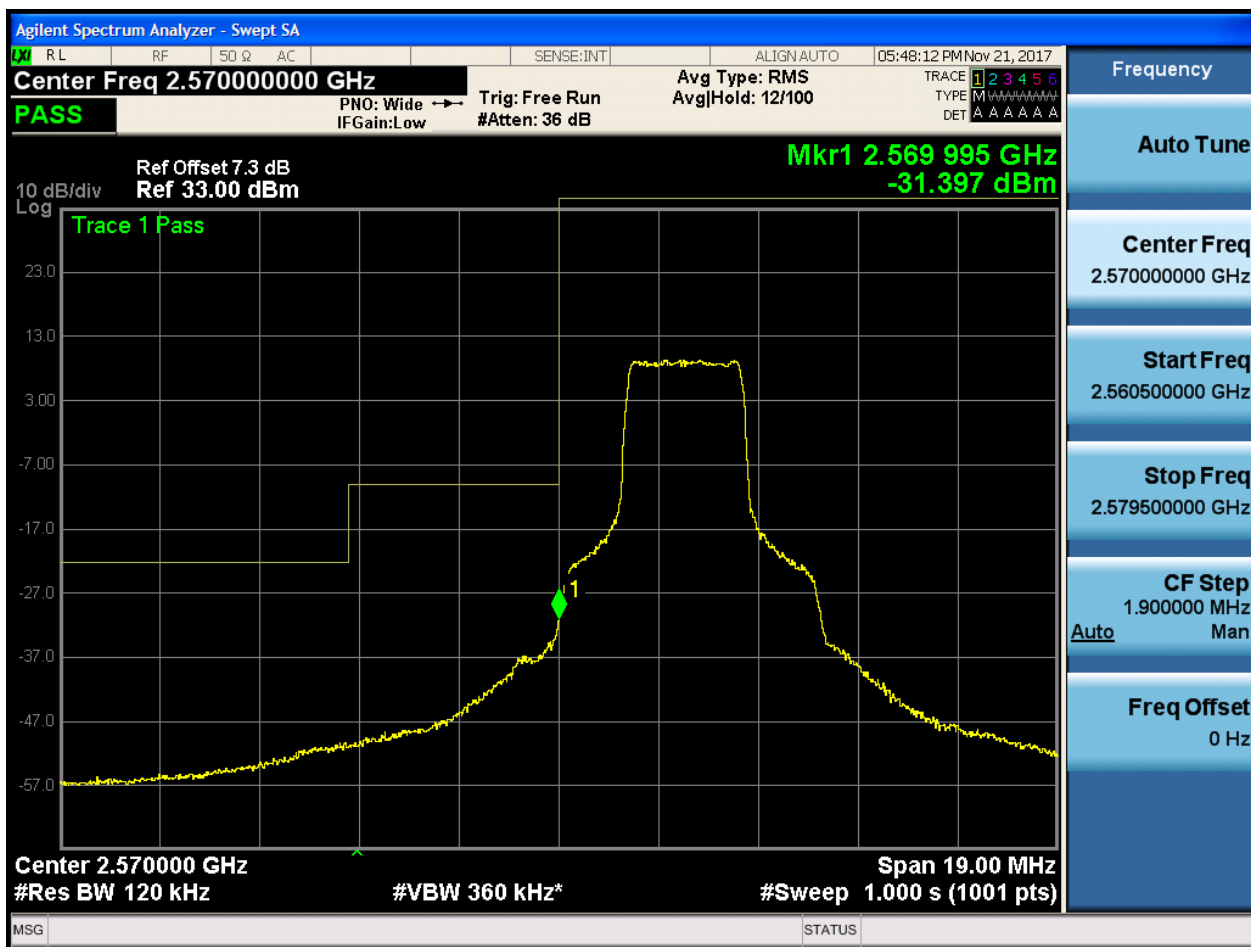


5.1.1.2.1.1.2 Test RB = RB1#24





5.1.1.2.1.1.3 Test RB = RB12#6

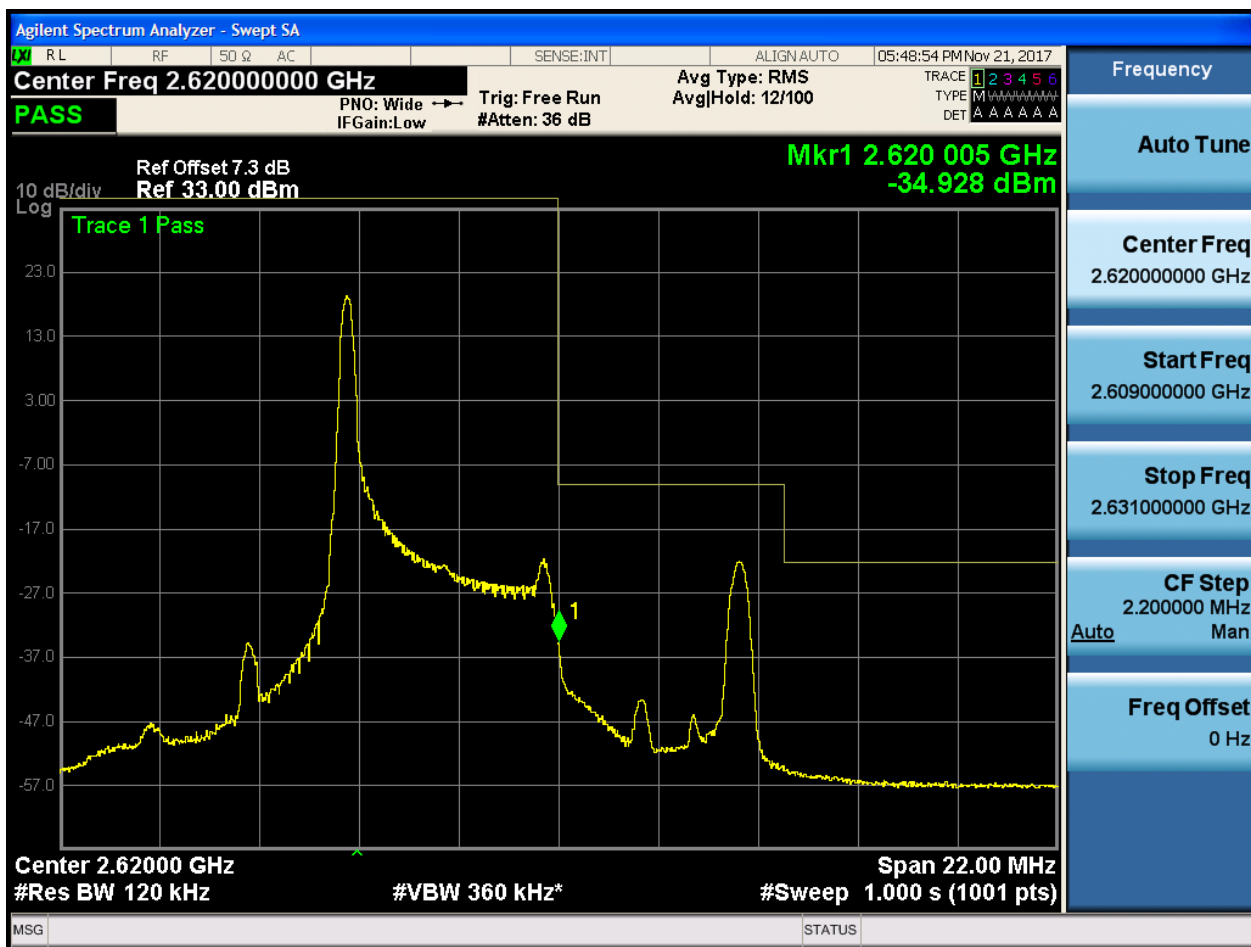


[illegible]



5.1.1.2.1.2 Test Channel = HCH

5.1.1.2.1.2.1 Test RB = RB1#0



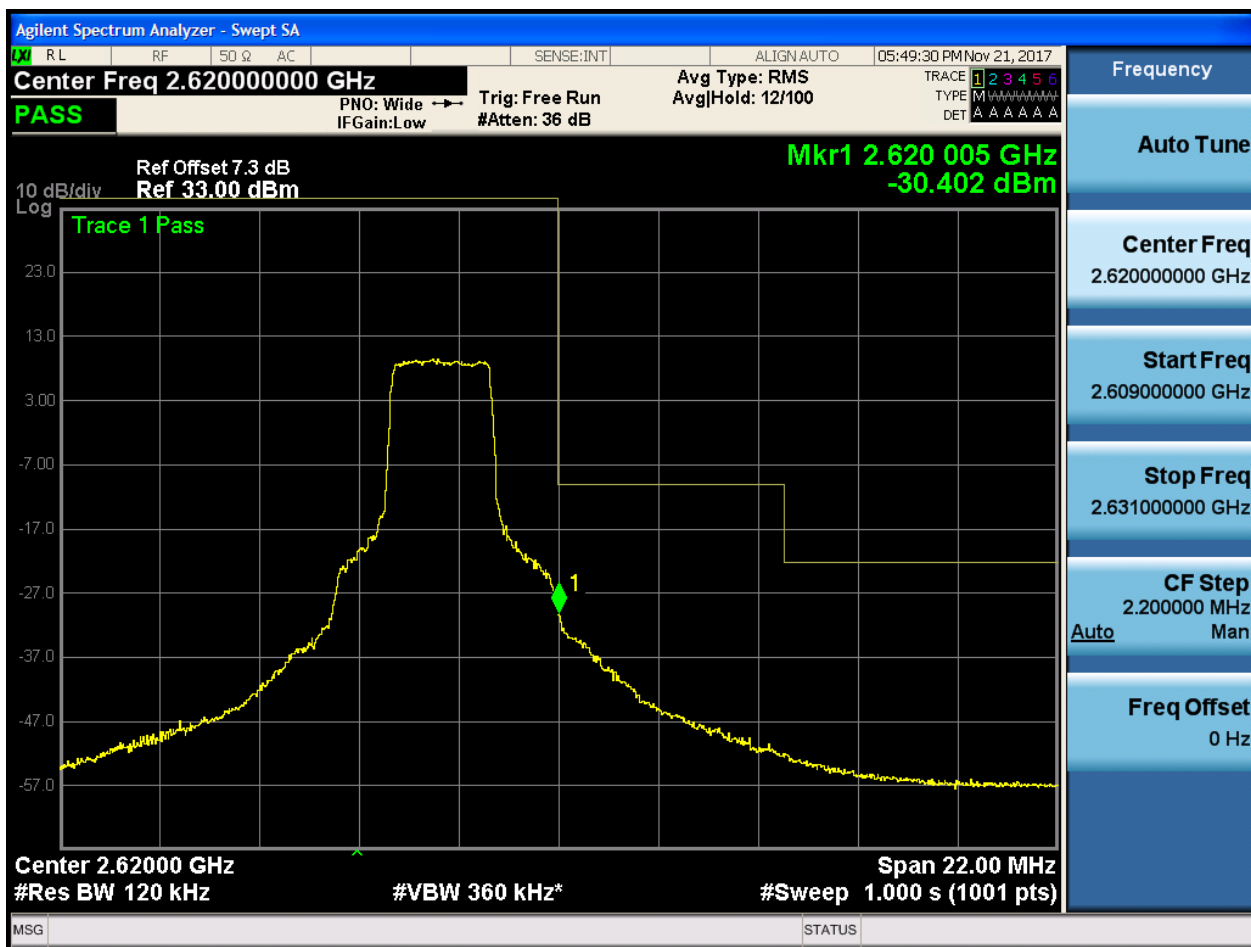


5.1.1.2.1.2.2 Test RB = RB1#24





5.1.1.2.1.2.3 Test RB = RB12#6





5.1.1.2.1.2.4 Test RB = RB25#0

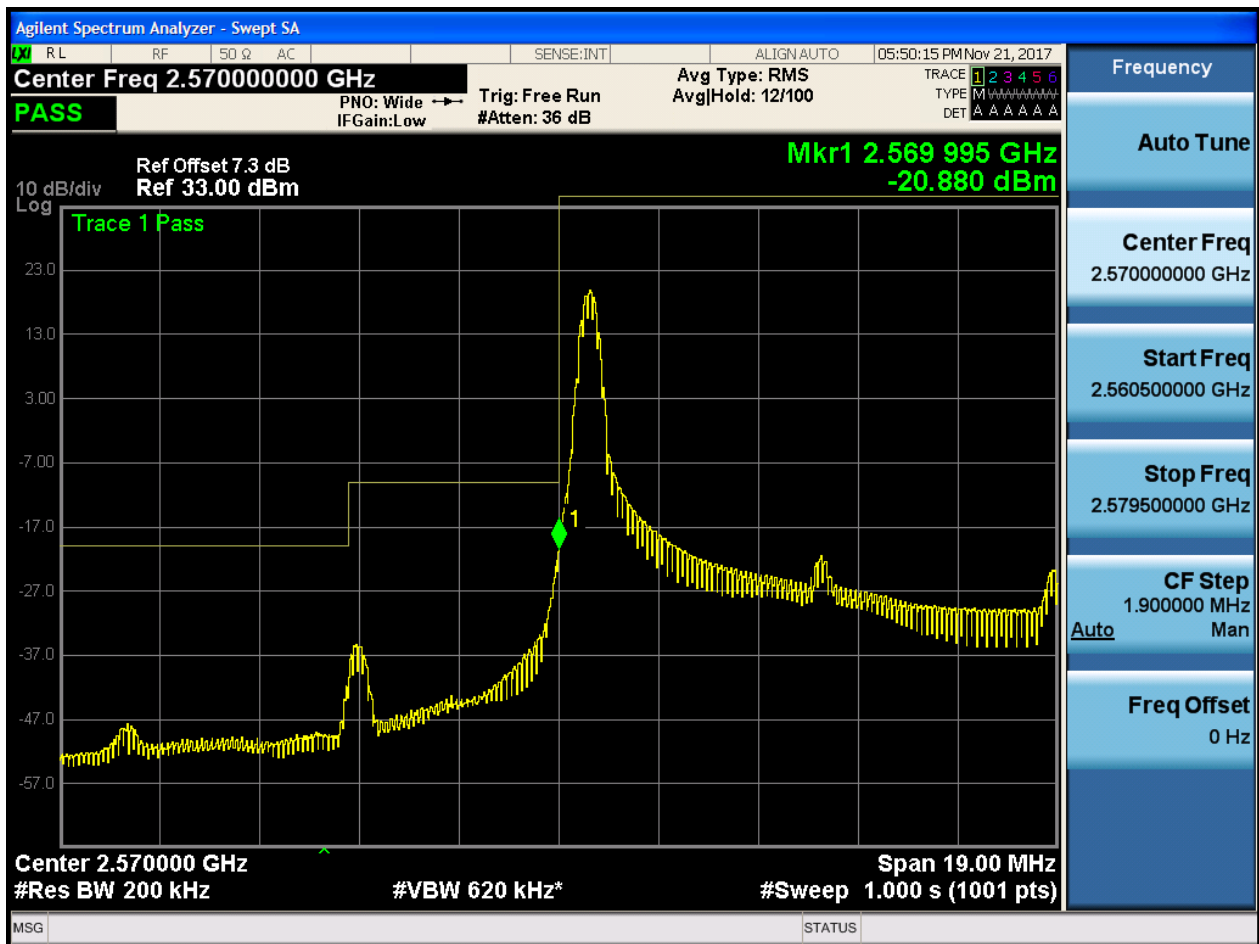




5.1.1.2.2 Test Bandwidth = 10

5.1.1.2.2.1 Test Channel = LCH

5.1.1.2.2.1.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 05:50:33 PM Nov 21, 2017

Center Freq 2.57000000 GHz Avg Type: RMS
PASS PNO: Wide Trg: Free Run Avg|Hold: 12/100
IFGain:Low #Atten: 36 dB TRACE 1 2 3 4 5 6
TYPE M M M M M M M M
DET A A A A A A A

Ref Offset 7.3 dB Mkr1 2.569 995 GHz
Ref 33.00 dBm -41.395 dBm

10 dB/div Log

Trace 1 Pass

Center 2.57000 GHz Span 19.00 MHz
#Res BW 200 kHz #VBW 620 kHz* #Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.57000000 GHz

Start Freq
2.56050000 GHz

Stop Freq
2.57950000 GHz

CF Step
1.900000 MHz
Auto Man

Freq Offset
0 Hz



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:50:51 PM Nov 21, 2017

Center Freq 2.570000000 GHz Avg Type: RMS
#Res BW 200 kHz #VBW 620 kHz* #Sweep 1.000 s (1001 pts)

PASS PNO: Wide IFGain:Low Trig: Free Run #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
-33.703 dBm

10 dB/div
Log

Trace 1 Pass

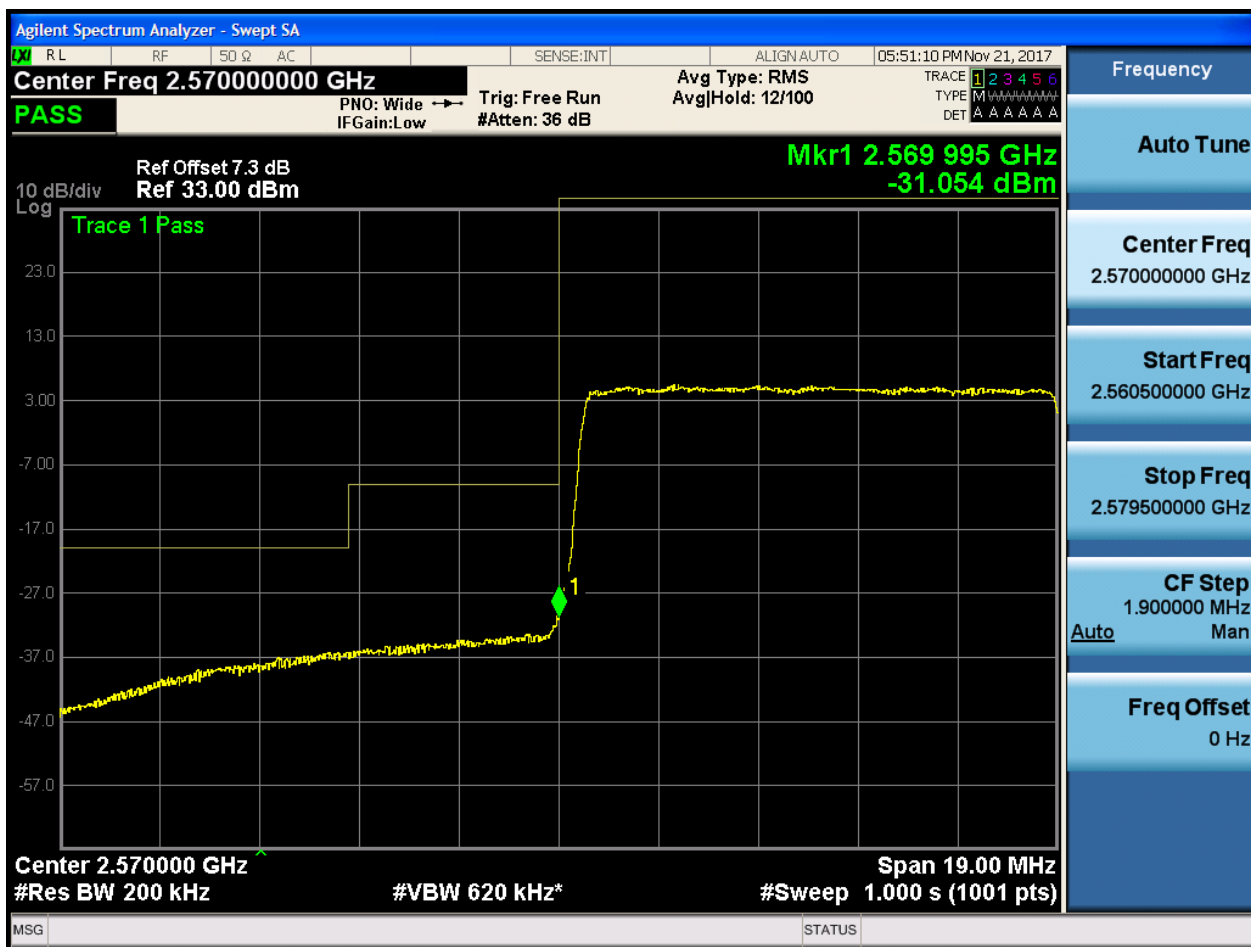
Center 2.570000 GHz Span 19.00 MHz
#Res BW 200 kHz #VBW 620 kHz* #Sweep 1.000 s (1001 pts)

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



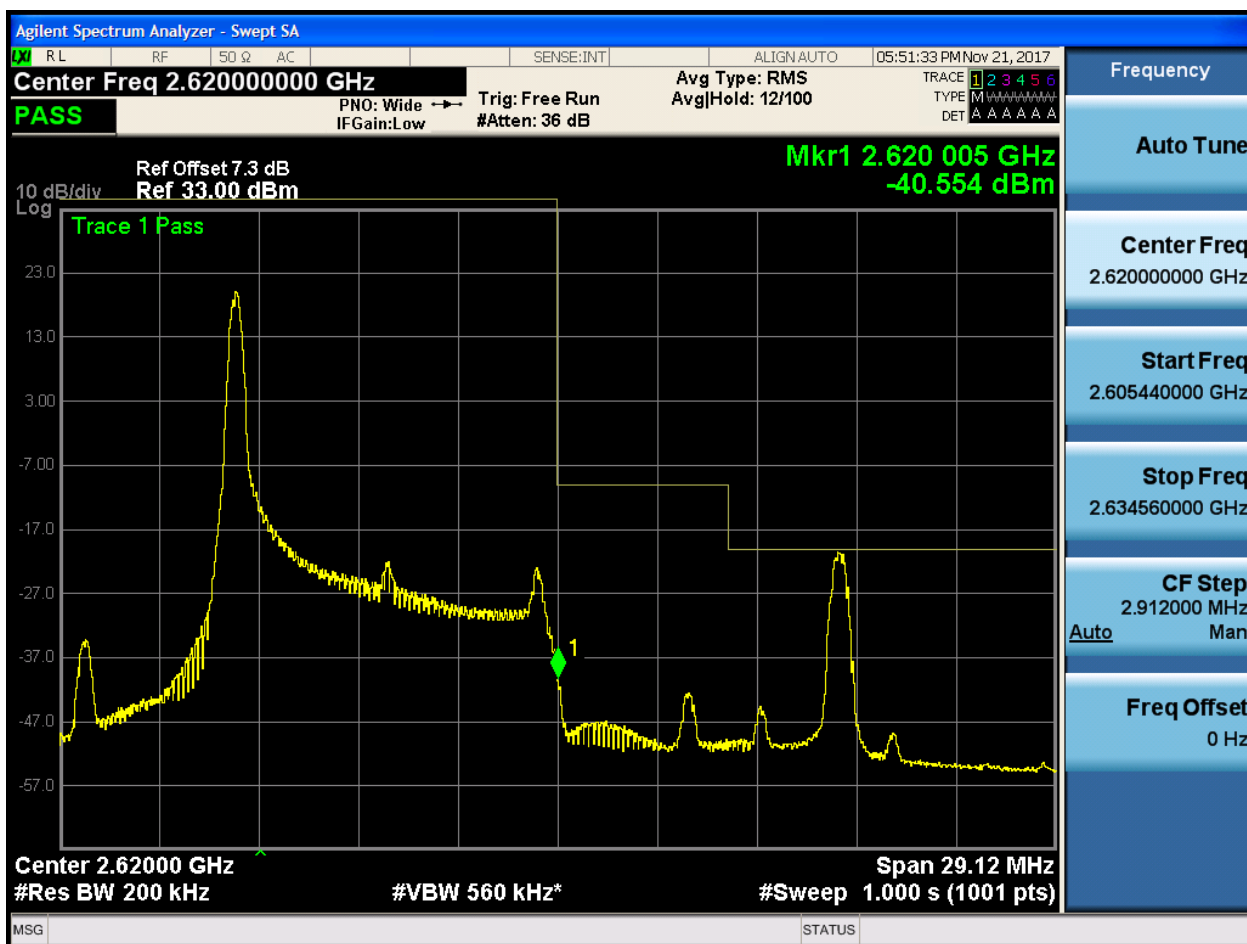
5.1.1.2.2.1.4 Test RB = RB50#0



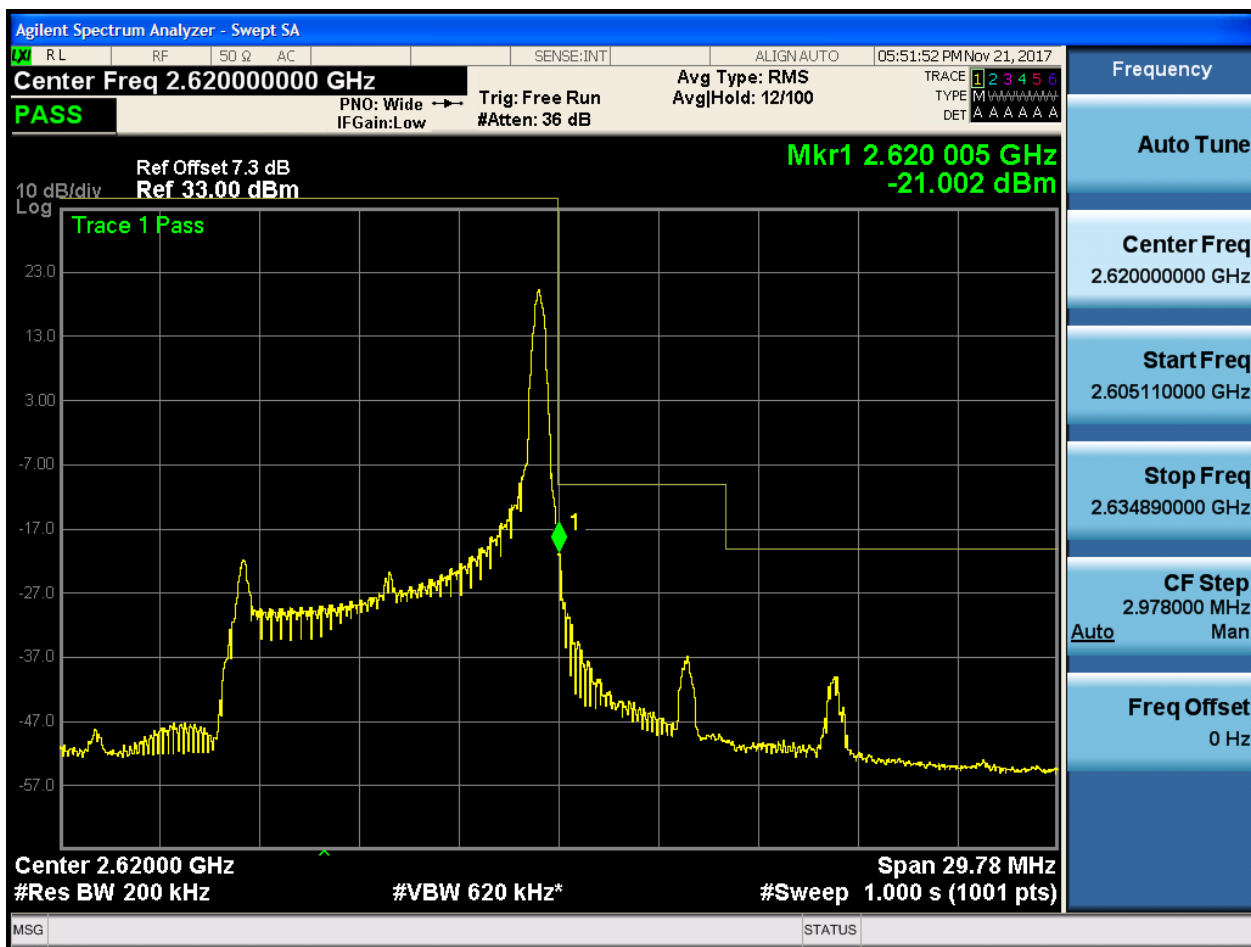


5.1.1.2.2.2 Test Channel = HCH

5.1.1.2.2.2.1 Test RB = RB1#0



5.1.1.2.2.2.2 Test RB = RB1#49





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:52:10 PM Nov 21, 2017

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 W W
DET A A A A A A

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.620 005 GHz
-32.273 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.62000 GHz Span 29.78 MHz
#Res BW 200 kHz #VBW 620 kHz* #Sweep 1.000 s (1001 pts)

Frequency

Auto Tune

Center Freq
2.620000000 GHz

Start Freq
2.605110000 GHz

Stop Freq
2.634890000 GHz

CF Step
2.978000 MHz
Auto Man

Freq Offset
0 Hz

MSG STATUS



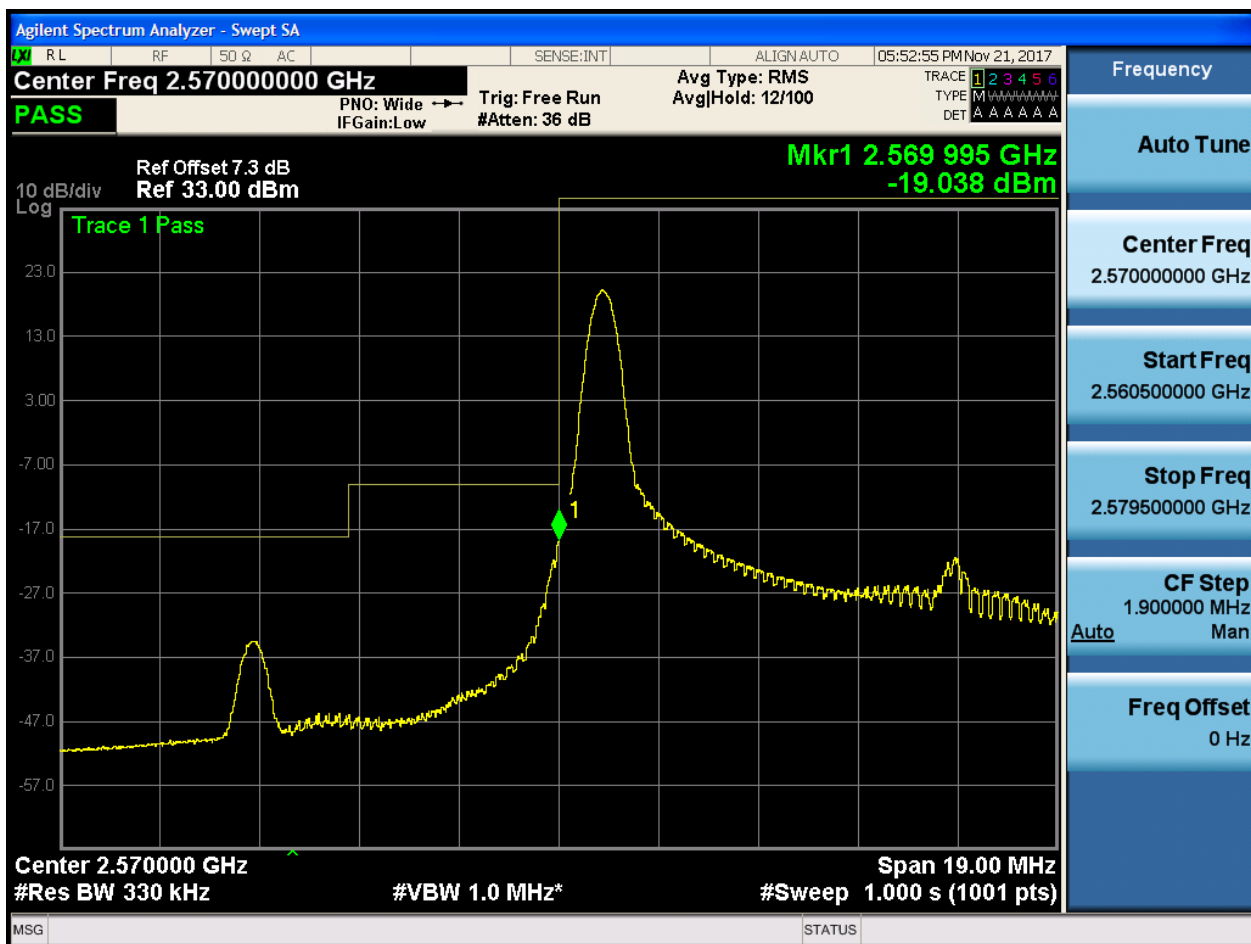
5.1.1.2.2.2.4 Test RB = RB50#0



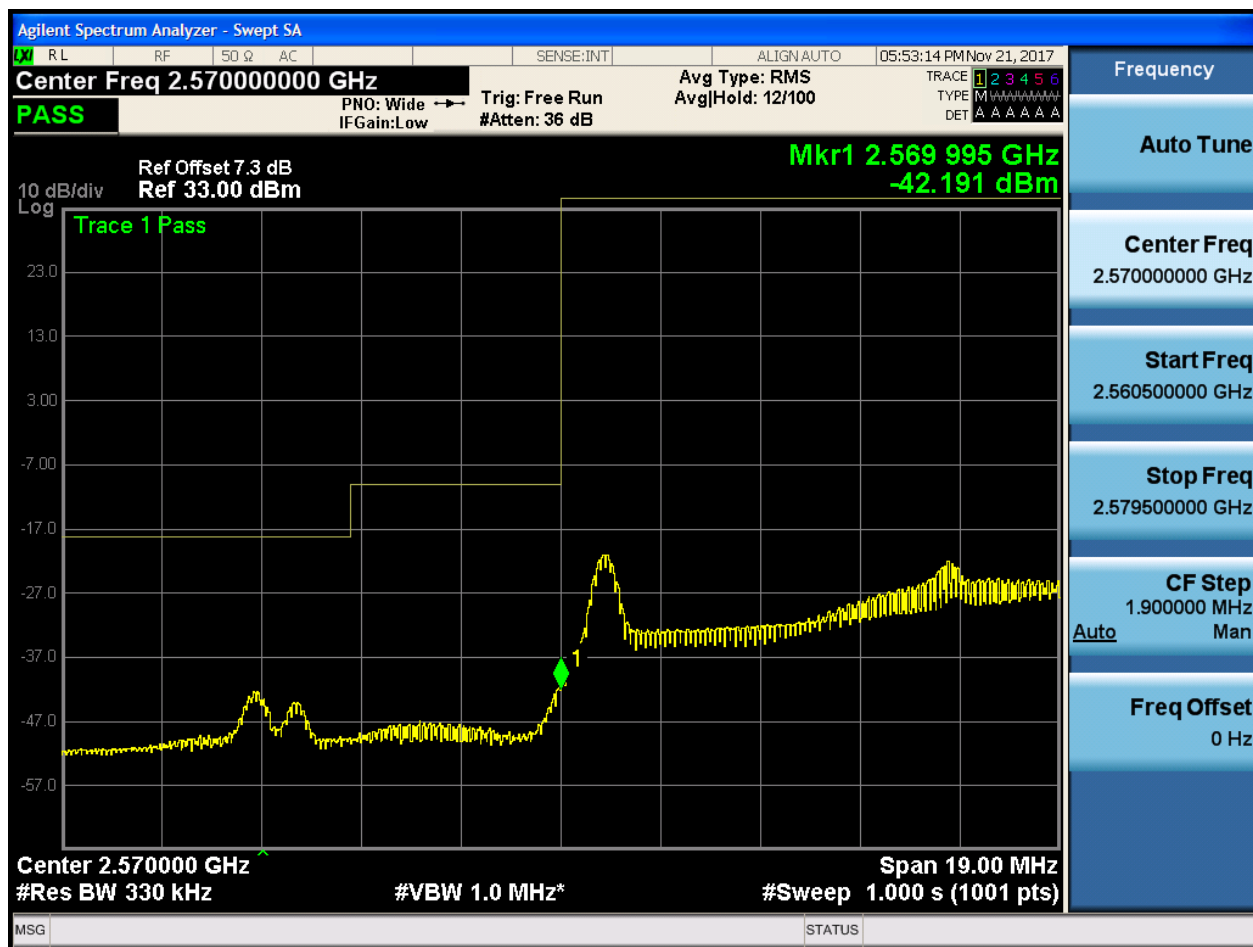
5.1.1.2.3 Test Bandwidth = 15

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





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:53:33 PM Nov 21, 2017

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
-32.854 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.570000 GHz Span 19.00 MHz
#Res BW 330 kHz #VBW 1.0 MHz* #Sweep 1.000 s (1001 pts)

MSG STATUS



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:53:52 PM Nov 21, 2017

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
 -29.094 dBm

10 dB/div
 Log

Trace 1 Pass

Center 2.570000 GHz Span 19.00 MHz
 #Res BW 330 kHz #VBW 1.0 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

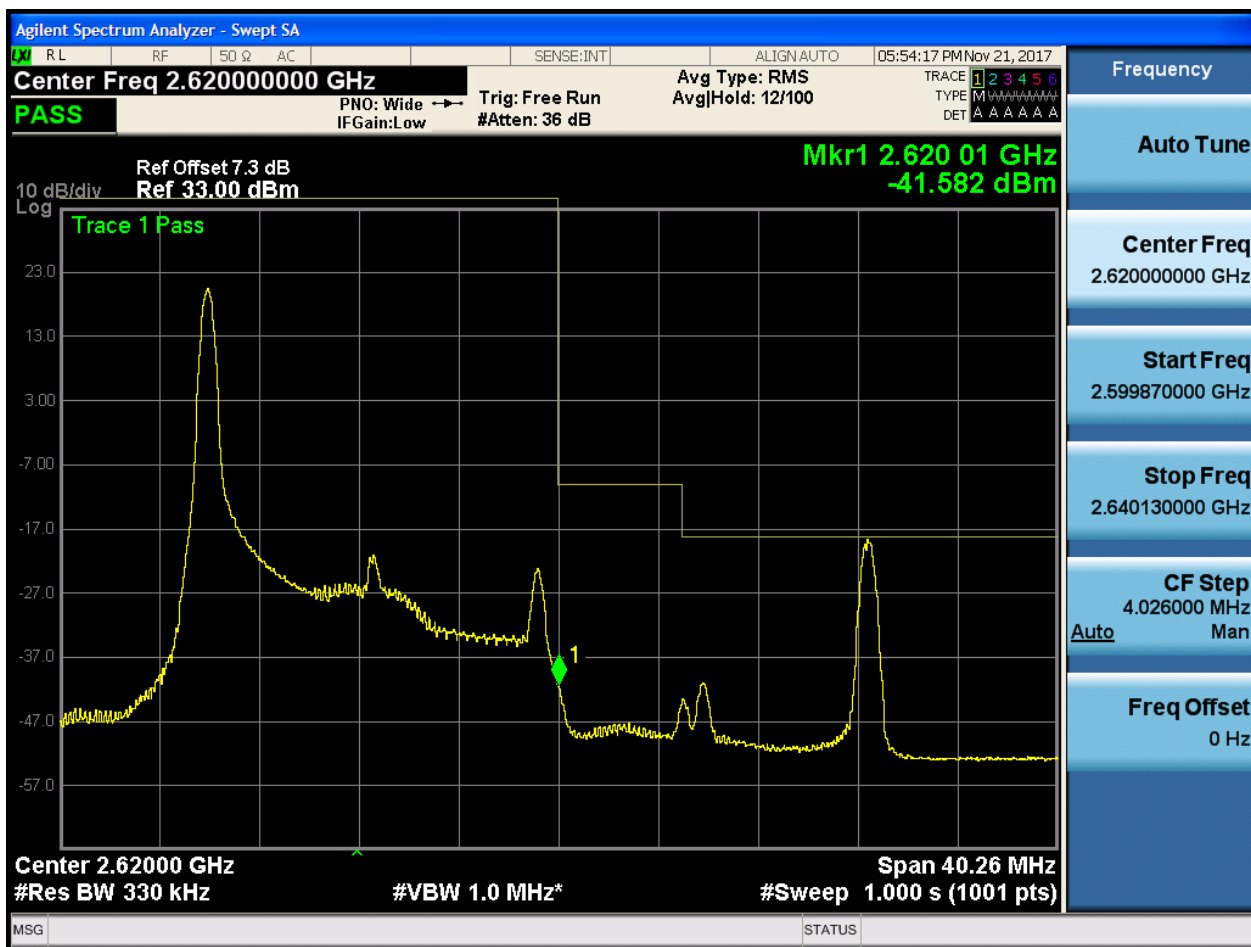
CF Step
 1.900000 MHz
 Auto Man

Freq Offset
 0 Hz



5.1.1.2.3.2 Test Channel = HCH

5.1.1.2.3.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:54:36 PM Nov 21, 2017

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 W W
 DET A A A A A A A

Ref Offset 7.3 dB Mkr1 2.620 01 GHz
 Ref 33.00 dBm -18.598 dBm

10 dB/div Log

Trace 1 Pass

Center 2.62000 GHz Span 40.26 MHz
 #Res BW 330 kHz #VBW 1.0 MHz* #Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.620000000 GHz

Start Freq
2.599870000 GHz

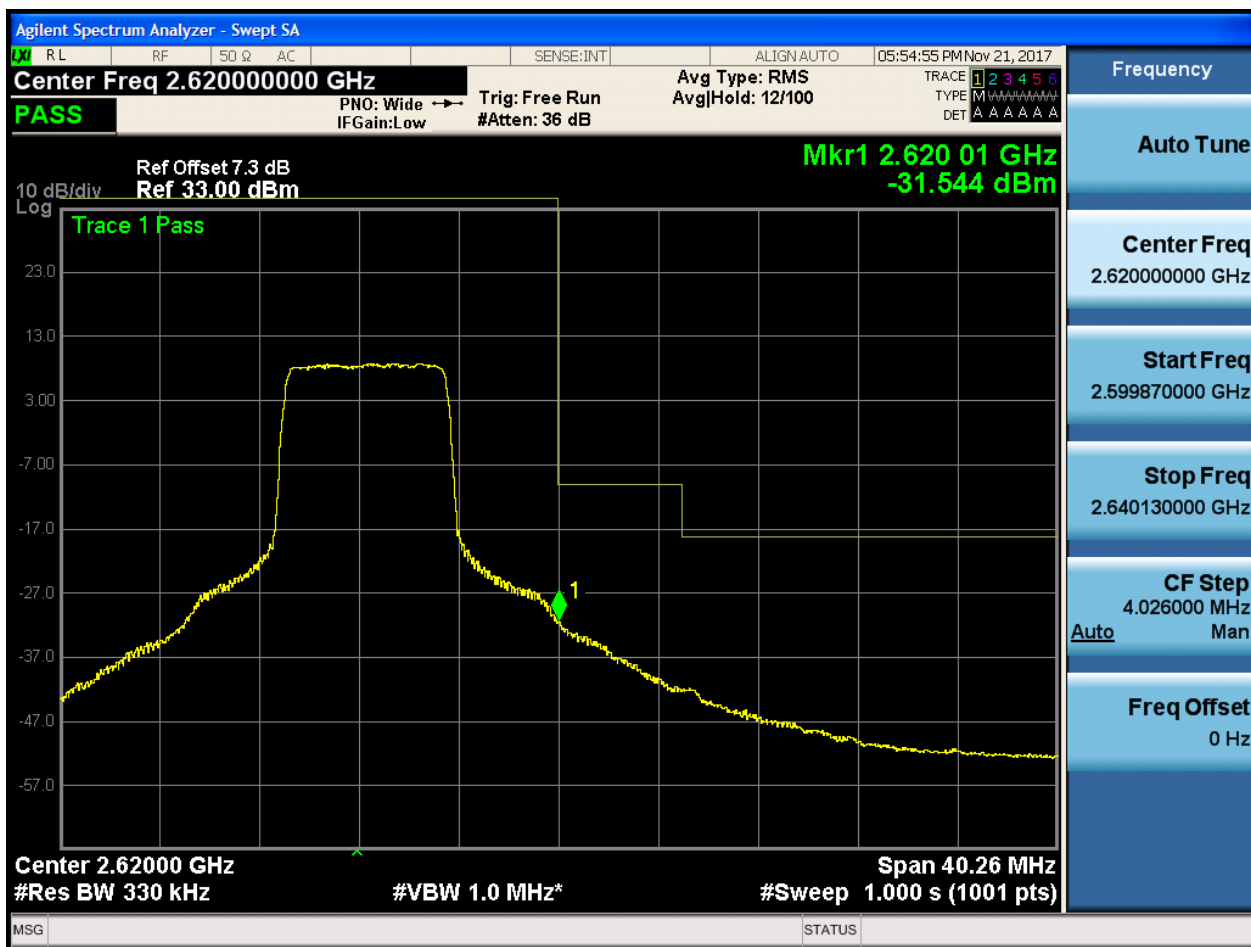
Stop Freq
2.640130000 GHz

CF Step
4.026000 MHz
Auto Man

Freq Offset
0 Hz



5.1.1.2.3.2.3 Test RB = RB36#18





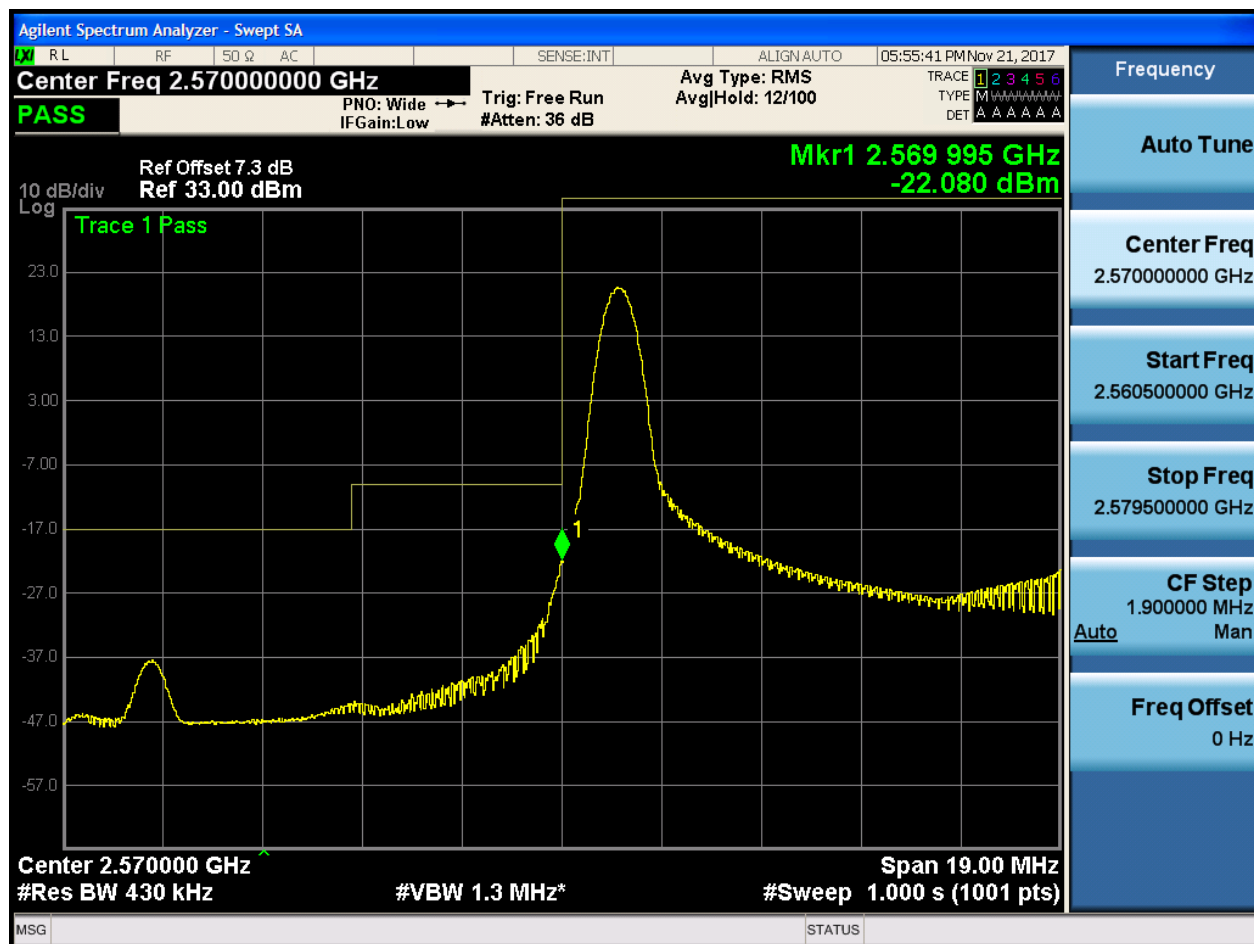
5.1.1.2.3.2.4 Test RB = RB75#0



5.1.1.2.4 Test Bandwidth = 20

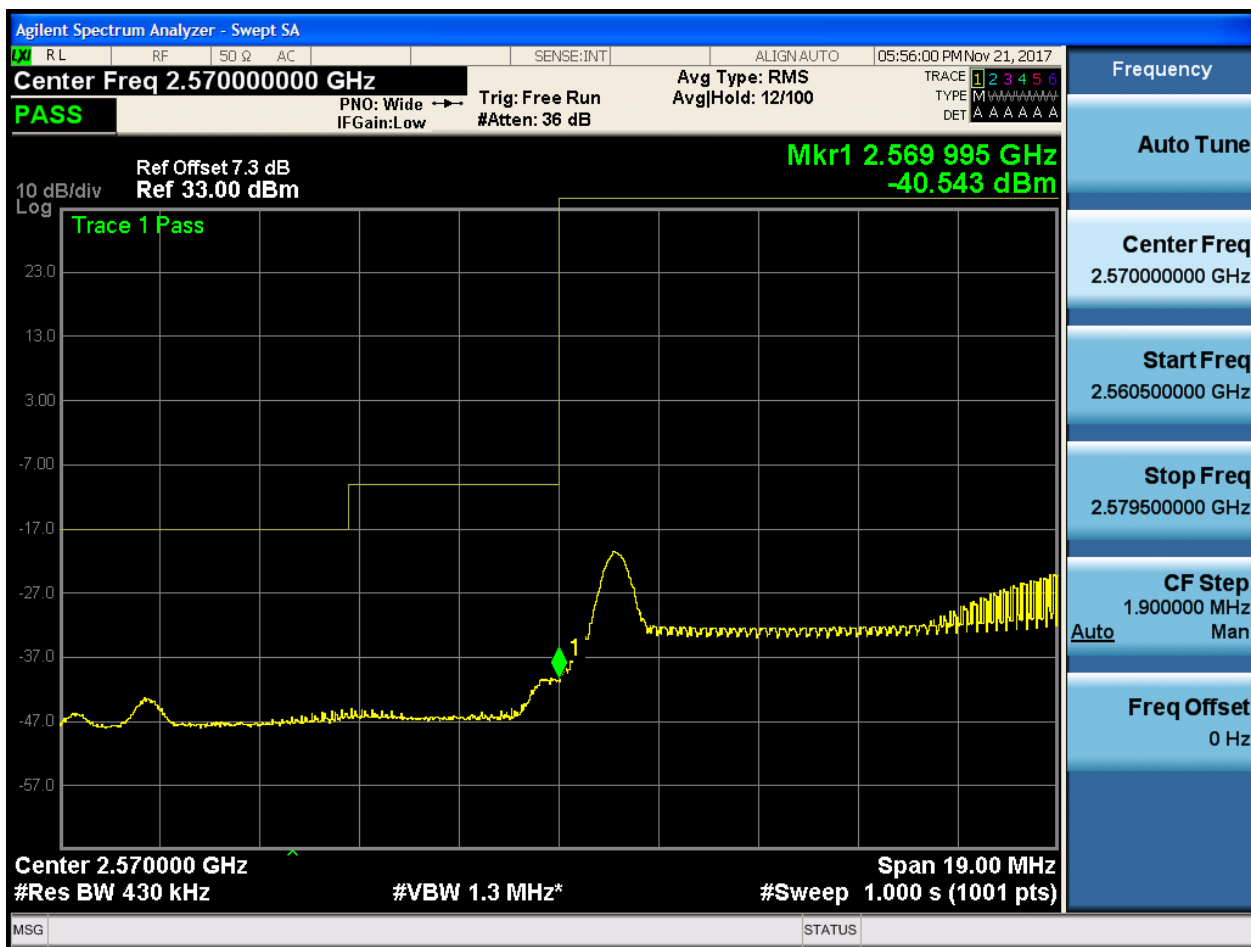
5.1.1.2.4.1 Test Channel = LCH

5.1.1.2.4.1.1 Test RB = RB1#0





5.1.1.2.4.1.2 Test RB = RB1#99





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:56:20 PM Nov 21, 2017

Center Freq 2.570000000 GHz Avg Type: RMS
#Res BW 430 kHz #VBW 1.3 MHz* #Sweep 1.000 s (1001 pts)

PASS PNO: Wide Trig: Free Run
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 2.569 995 GHz
-32.899 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.570000 GHz

Span 19.00 MHz

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

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:56:39 PM Nov 21, 2017

Center Freq 2.570000000 GHz Avg Type: RMS
PASS PNO: Wide IFGain:Low Trig: Free Run AvgHold: 12/100
TRACE 1 2 3 4 5 6
TYPE M 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
-30.846 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.570000 GHz Span 19.00 MHz
#Res BW 430 kHz #VBW 1.3 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

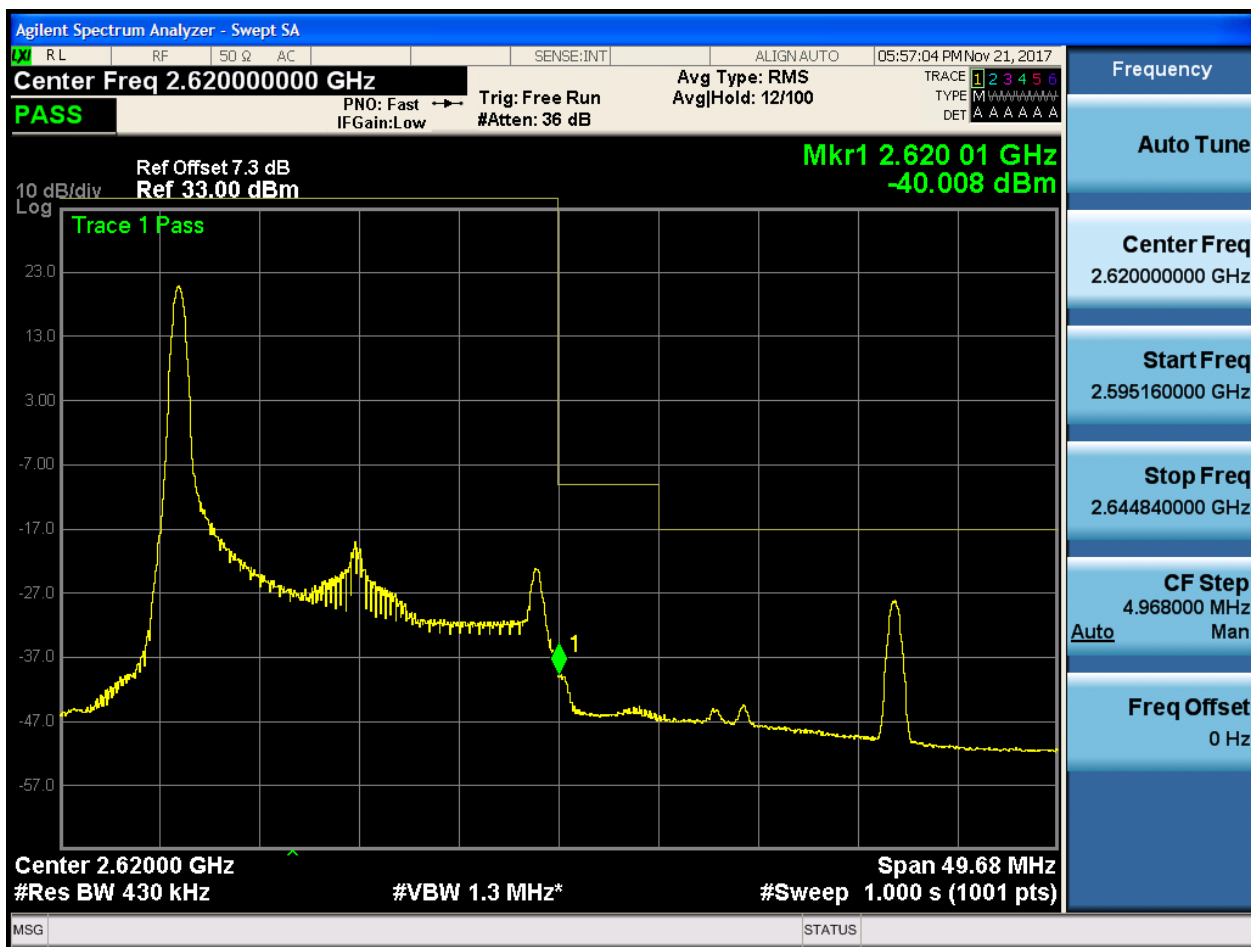
CF Step
1.900000 MHz
Auto Man

Freq Offset
0 Hz



5.1.1.2.4.2 Test Channel = HCH

5.1.1.2.4.2.1 Test RB = RB1#0





Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:57:23 PM Nov 21, 2017

Center Freq 2.62000000 GHz Avg Type: RMS
#Res BW 430 kHz IF Gain: Low Trig: Free Run Avg Hold: 12/100
PNO: Fast #Atten: 36 dB

PASS

Ref Offset 7.3 dB
Ref 33.00 dBm

Mkr1 2.620 01 GHz
-23.753 dBm

10 dB/div
Log

Trace 1 Pass

Center 2.62000 GHz Span 49.68 MHz
#Res BW 430 kHz #VBW 1.3 MHz* #Sweep 1.000 s (1001 pts)

MSG STATUS



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 05:58:02 PM Nov 21, 2017

Center Freq 2.620000000 GHz Avg Type: RMS
#Res BW 430 kHz IF Gain: Low Trig: Free Run #Atten: 36 dB

PASS PNO: Fast → DET: A A A A A A

10 dB/div Ref Offset 7.3 dB Mkr1 2.620 01 GHz
Log Ref 33.00 dBm -29.426 dBm

Trace 1 Pass

Center 2.62000 GHz Span 49.68 MHz
#Res BW 430 kHz #VBW 1.3 MHz* #Sweep 1.000 s (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq
2.620000000 GHz

Start Freq
2.595160000 GHz

Stop Freq
2.644840000 GHz

CF Step
4.968000 MHz
Auto Man

Freq Offset
0 Hz

4Appendix_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

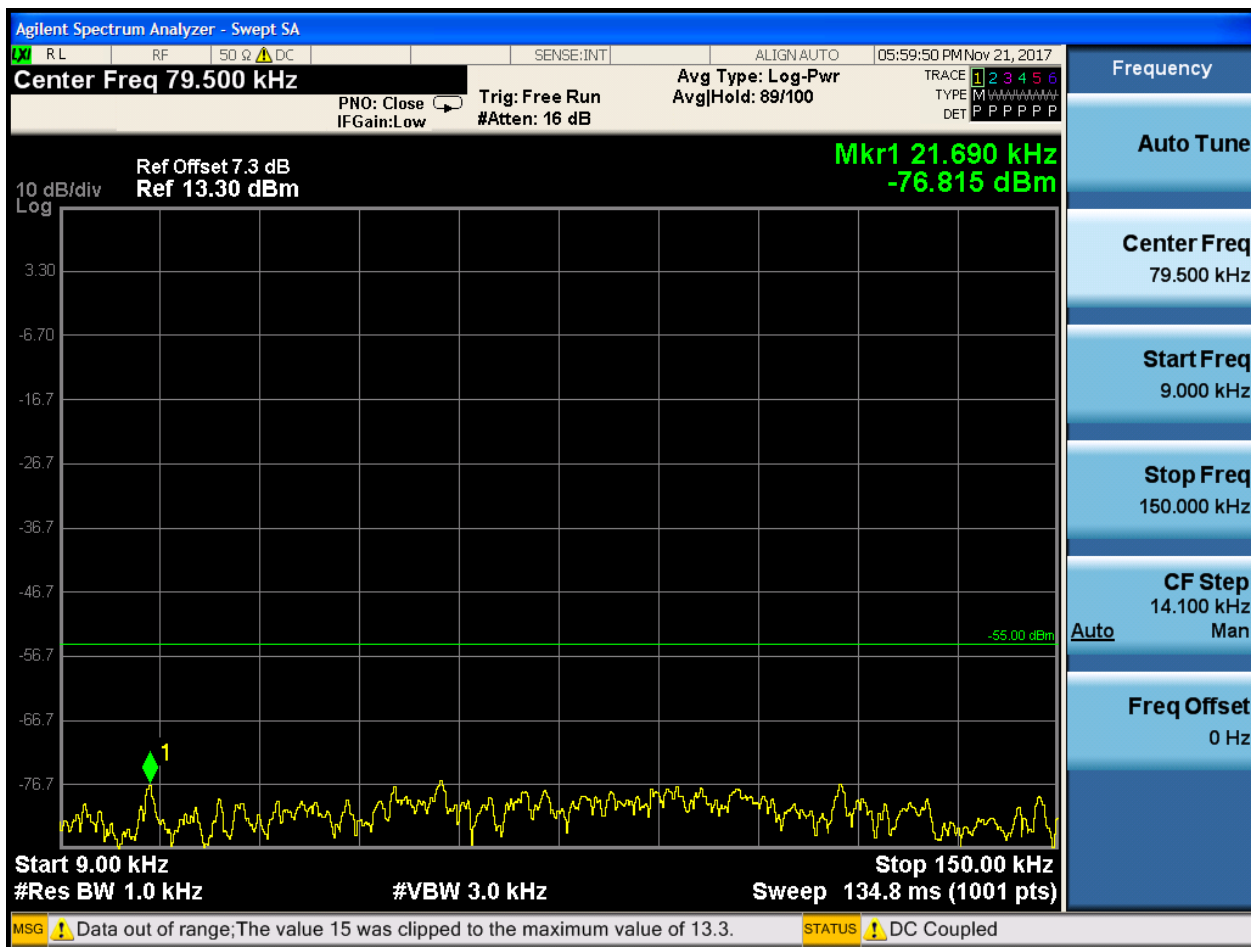
6.1.1 Test Band = BAND38

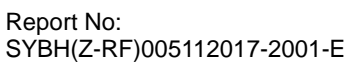
6.1.1.1 Test Mode = LTE/TM1

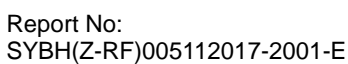
6.1.1.1.1 Test Bandwidth = 5

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

