LTE Band 41

Low channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
5012	V	-37.86	-25	-12.86
774.3	V	-42.26	-25	-17.26
695.2	V	-44.28	-25	-19.28
5012	H	-37.31	-25	-12.31
795.1	H	-44.08	-25	-19.08
684.2	H	-43.66	-25	-18.66

Middle channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
5186	V	-37.36	-25	-12.36
654.2	V	-43.85	-25	-18.85
498.7	V	-44.54	-25	-19.54
5186	H	-38.15	-25	-13.15
555.3	H	-42.68	-25	-17.68
432.1	H	-44.41	-25	-19.41

High channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
5360	V	-36.82	-25	-11.82
483.9	V	-42.85	-25	-17.85
361.5	V	-44.14	-25	-19.14
5360	H	-36.75	-25	-11.75
458.3	H	-42.80	-25	-17.80
397.7	H	-45.04	-25	-20.04

Note:1. Margin = Emission Level -Limit

2. (30MHz-26GHz) Below 30MHZ no Spurious found and above is the worst mode data

8. FREQUENCY STABILITY

8.1 MEASUREMENT METHOD

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a “call mode”. This is accomplished with the use of R&S CMW500 DIGITAL RADIO COMMUNICATION TESTER.

1 Measure the carrier frequency at room temperature.

2 Subject the EUT to overnight soak at -10℃. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on channel 20175 for LTE band 4 measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.

3 Repeat the above measurements at 10℃ increments from -10℃ to +40℃. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.

4 Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1 1/2 hours unpowered, to allow any self-heating to stabilize, before continuing.

5 Subject the EUT to overnight soak at +40℃.

6 With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the centre channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.

7 Repeat the above measurements at 10℃ increments from +40℃ to -10℃. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.

8 At all temperature levels hold the temperature to +/- 0.5℃ during the measurement procedure.

8.2 PROVISIONS APPLICABLE

8.2.1 For Hand carried battery powered equipment

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-E-2016. The frequency stability of the transmitter is measured by:

a.) Temperature: The temperature is varied from -10°C to +40°C in 10°C increments using an environmental chamber.

b.) Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 22, the frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5 ppm) of the center frequency. For Part 24 and Part 27, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

8.2.2 For equipment powered by primary supply voltage

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -10°C to +40°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

8.3 MEASUREMENT RESULT (WORST)

LTE Band 7

MiddleChannel, f_O=2535MHz			
Temperature (℃)	Power Supplied (VDC)	Frequency Error (Hz)	Frequency Error (ppm)
-10	3.85	-8.25	-0.003298
0		-13.93	-0.005568
10		0.39	0.000154
20		-9.68	-0.003870
30		0.37	0.000149
40		-4.25	-0.001698
25	4.40	-9.26	-0.003698
	3.45	-19.08	-0.007626

LTE Band 38

MiddleChannel, f_O=2595MHz			
Temperature (℃)	Power Supplied (VDC)	Frequency Error (Hz)	Frequency Error (ppm)
-10	3.85	-5.84	-0.002269
0		-4.73	-0.001841
10		-4.26	-0.001657
20		1.54	0.000601
30		-4.25	-0.001652
40		2.03	0.000790
25	4.40	-7.94	-0.003086
	3.45	-5.69	-0.002194

LTE Band 40(1)

MiddleChannel, f_O=2310MHz			
Temperature (℃)	Power Supplied (VDC)	Frequency Error (Hz)	Frequency Error (ppm)
-10	3.85	-6.29	-0.002734
0		-4.55	-0.001976
10		-13.82	-0.006002
20		-8.54	-0.003709
30		-8.54	-0.003709
40		-6.57	-0.002852
25	4.40	-9.54	-0.004144
	3.45	-3.78	-0.001607

LTE Band 40(2)

MiddleChannel, f_O=2355MHz			
Temperature (℃)	Power Supplied (VDC)	Frequency Error (Hz)	Frequency Error (ppm)
-10	3.85	-6.34	-0.002697
0		-12.49	-0.005314
10		-4.75	-0.002021
20		-8.15	-0.003470
30		-13.29	-0.005655
40		-19.91	-0.008473
25	4.40	-7.20	-0.003062
	3.45	-8.23	-0.003431

LTE Band 41

MiddleChannel, f_O=2593 MHz			
Temperature (℃)	Power Supplied (VDC)	Frequency Error (Hz)	Frequency Error (ppm)
-10	3.85	-9.74	-0.003740
0		-4.86	-0.001867
10		-6.15	-0.002361
20		-7.93	-0.003042
30		0.70	0.000269
40		-17.64	-0.006771

25	4.40	-4.06	-0.001560
	3.45	-2.90	-0.001097

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very samll. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted duing the frequency stability tests is applied. Therefore the device is detemined to remain operating in band over the temperture and voltage range as tested.

The EUT doesn’t work below -10℃

9. OCCUPIED BANDWIDTH

9.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

9.2 PROVISIONS APPLICABLE

The emission bandwidth is defined as two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power

9.3 MEASUREMENT RESULT

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section.

LTE Band 7

Channel Bandwidth: 5MHz

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.4774	PASS
	MCH	25	0	4.480	PASS
	HCH	25	0	4.480	PASS
16QAM	LCH	25	0	4.4721	PASS
	MCH	25	0	4.460	PASS
	HCH	25	0	4.460	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	8.960	PASS
	MCH	50	0	8.960	PASS
	HCH	50	0	8.960	PASS
16QAM	LCH	50	0	8.960	PASS
	MCH	50	0	8.920	PASS
	HCH	50	0	8.960	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	13.440	PASS
	MCH	75	0	13.440	PASS
	HCH	75	0	13.440	PASS
16QAM	LCH	75	0	13.440	PASS
	MCH	75	0	13.440	PASS
	HCH	75	0	13.380	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	17.840	PASS
	MCH	100	0	17.920	PASS
	HCH	100	0	17.840	PASS
16QAM	LCH	100	0	17.840	PASS
	MCH	100	0	17.840	PASS
	HCH	100	0	17.840	PASS

LTE Band 38

Channel Bandwidth: 5MHz

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.480	PASS
	MCH	25	0	4.5063	PASS
	HCH	25	0	4.4947	PASS
16QAM	LCH	25	0	4.4982	PASS
	MCH	25	0	4.4917	PASS
	HCH	25	0	4.4920	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	8.9875	PASS
	MCH	50	0	8.9685	PASS
	HCH	50	0	8.9723	PASS
16QAM	LCH	50	0	8.9724	PASS
	MCH	50	0	8.9630	PASS
	HCH	50	0	8.9839	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	13.460	PASS
	MCH	75	0	13.447	PASS
	HCH	75	0	13.478	PASS
16QAM	LCH	75	0	13.467	PASS
	MCH	75	0	13.467	PASS
	HCH	75	0	13.467	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	17.927	PASS
	MCH	100	0	17.954	PASS
	HCH	100	0	17.938	PASS
16QAM	LCH	100	0	17.936	PASS
	MCH	100	0	17.940	PASS
	HCH	100	0	17.927	PASS

LTE Band 40(1)

Channel Bandwidth: 5MHz

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.4995	PASS
	MCH	25	0	4.5028	PASS
	HCH	25	0	4.5033	PASS
16QAM	LCH	25	0	4.4980	PASS
	MCH	25	0	4.4998	PASS
	HCH	25	0	4.5010	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	MCH	50	0	8.9980	PASS
16QAM	MCH	50	0	8.9794	PASS

LTE Band 40(2)

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.5107	PASS
	MCH	25	0	4.4970	PASS
	HCH	25	0	4.5106	PASS
16QAM	LCH	25	0	4.5008	PASS
	MCH	25	0	4.5072	PASS
	HCH	25	0	4.4924	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	MCH	50	0	8.9867	PASS
16QAM	MCH	50	0	8.9810	PASS

LTE Band 41

Channel Bandwidth: 5MHz

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.480	PASS
	MCH	25	0	4.480	PASS
	HCH	25	0	4.480	PASS
16QAM	LCH	25	0	4.480	PASS
	MCH	25	0	4.460	PASS
	HCH	25	0	4.480	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	8.920	PASS
	MCH	50	0	8.920	PASS
	HCH	50	0	8.960	PASS
16QAM	LCH	50	0	8.920	PASS
	MCH	50	0	8.920	PASS
	HCH	50	0	8.960	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	13.380	PASS
	MCH	75	0	13.440	PASS
	HCH	75	0	13.380	PASS
16QAM	LCH	75	0	13.440	PASS
	MCH	75	0	13.380	PASS
	HCH	75	0	13.380	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	17.840	PASS
	MCH	100	0	17.840	PASS
	HCH	100	0	17.840	PASS
16QAM	LCH	100	0	17.840	PASS
	MCH	100	0	17.840	PASS
	HCH	100	0	17.840	PASS

Note:Please refers to Appendix B for compliance test plots for Occupied Bandwidth (99%)

10. EMISSION BANDWIDTH

10.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

10.2 PROVISIONS APPLICABLE

The emission bandwidth is defined as two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

10.3 MEASUREMENT RESULT

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section.

LTE Band 7

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.734	PASS
	MCH	25	0	4.660	PASS
	HCH	25	0	4.680	PASS
16QAM	LCH	25	0	4.727	PASS
	MCH	25	0	4.720	PASS
	HCH	25	0	4.660	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	9.320	PASS
	MCH	50	0	9.320	PASS
	HCH	50	0	9.320	PASS
16QAM	LCH	50	0	9.320	PASS
	MCH	50	0	9.320	PASS
	HCH	50	0	9.320	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	13.800	PASS
	MCH	75	0	13.860	PASS
	HCH	75	0	13.800	PASS
16QAM	LCH	75	0	13.800	PASS
	MCH	75	0	13.800	PASS
	HCH	75	0	13.800	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	18.400	PASS
	MCH	100	0	18.400	PASS
	HCH	100	0	18.400	PASS
16QAM	LCH	100	0	18.400	PASS
	MCH	100	0	18.400	PASS
	HCH	100	0	18.320	PASS

LTE Band 38

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.680	PASS
	MCH	25	0	4.772	PASS
	HCH	25	0	4.824	PASS
16QAM	LCH	25	0	4.781	PASS
	MCH	25	0	4.791	PASS
	HCH	25	0	4.770	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	9.483	PASS
	MCH	50	0	9.494	PASS
	HCH	50	0	9.492	PASS
16QAM	LCH	50	0	9.501	PASS
	MCH	50	0	9.492	PASS
	HCH	50	0	9.511	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	14.24	PASS
	MCH	75	0	14.24	PASS
	HCH	75	0	14.23	PASS
16QAM	LCH	75	0	14.25	PASS
	MCH	75	0	14.21	PASS
	HCH	75	0	14.24	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	18.94	PASS
	MCH	100	0	18.95	PASS
	HCH	100	0	18.95	PASS
16QAM	LCH	100	0	18.92	PASS
	MCH	100	0	18.95	PASS
	HCH	100	0	18.93	PASS

LTE Band 40(1)

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.991	PASS
	MCH	25	0	4.958	PASS
	HCH	25	0	4.946	PASS
16QAM	LCH	25	0	4.933	PASS
	MCH	25	0	4.898	PASS
	HCH	25	0	4.868	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	MCH	50	0	9.532	PASS
16QAM	MCH	50	0	9.523	PASS

LTE Band 40(2)

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.866	PASS
	MCH	25	0	4.884	PASS
	HCH	25	0	4.856	PASS
16QAM	LCH	25	0	4.901	PASS
	MCH	25	0	4.908	PASS
	HCH	25	0	4.899	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	MCH	50	0	9.523	PASS
16QAM	MCH	50	0	9.526	PASS

LTE Band 41

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.660	PASS
	MCH	25	0	4.640	PASS
	HCH	25	0	4.700	PASS
16QAM	LCH	25	0	4.660	PASS
	MCH	25	0	4.640	PASS
	HCH	25	0	4.660	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	9.320	PASS
	MCH	50	0	9.320	PASS
	HCH	50	0	9.280	PASS
16QAM	LCH	50	0	9.320	PASS
	MCH	50	0	9.280	PASS
	HCH	50	0	9.280	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	13.800	PASS
	MCH	75	0	13.800	PASS
	HCH	75	0	13.800	PASS
16QAM	LCH	75	0	13.800	PASS
	MCH	75	0	13.800	PASS
	HCH	75	0	13.800	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	18.400	PASS
	MCH	100	0	18.320	PASS
	HCH	100	0	18.400	PASS
16QAM	LCH	100	0	18.400	PASS
	MCH	100	0	18.320	PASS
	HCH	100	0	18.400	PASS

Note:Please refers to Appendix B for compliance test plots for emission bandwidth (-26dBc)

11. BAND EDGE

11.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

11.2 PROVISIONS APPLICABLE

As Specified in FCC rules of §2.1051 §24.238(a) §27.53(g) §27.53(h)§27.53(m)
KDB 971168 D01v03 – Section 6.0

11.3 MEASUREMENT RESULT

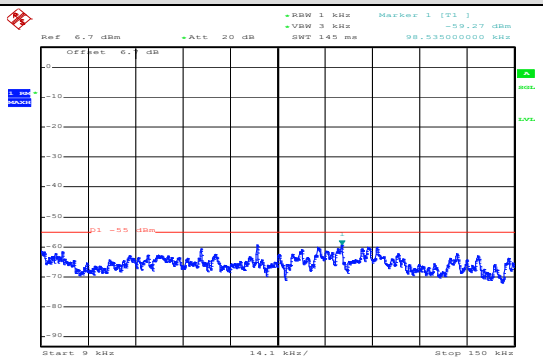
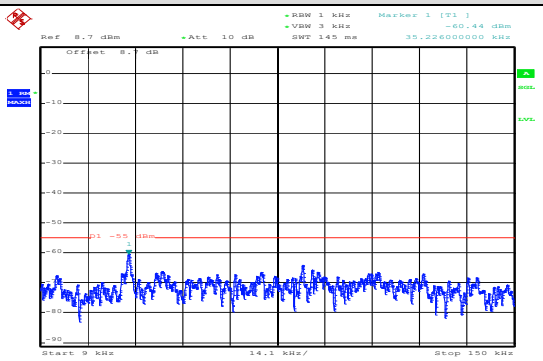
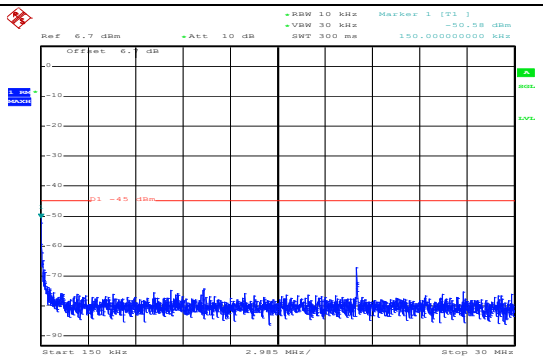
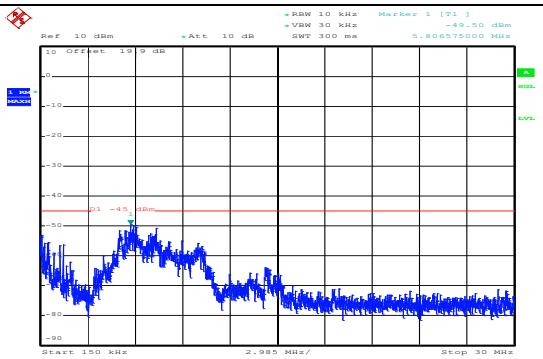
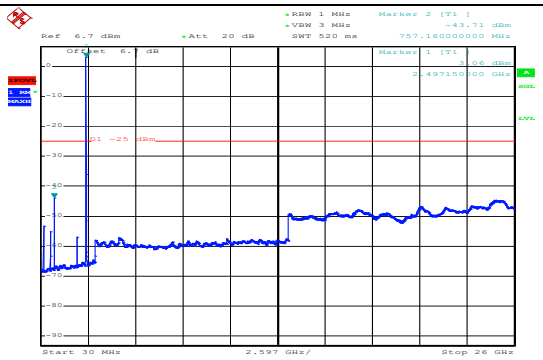
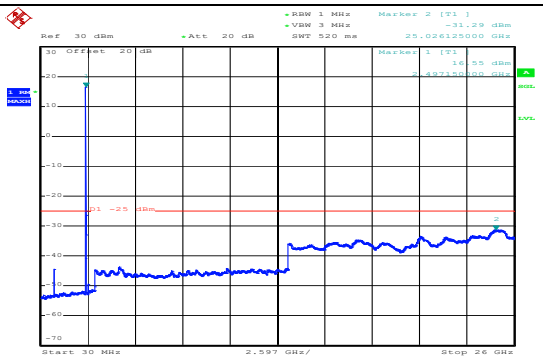
All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequency. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.
The minimum permissible attenuation level of any spurious emission is 43 + log10(P[Watts]), where P is the transmitter power in Watts.
For FCC rules§27.53(m)
(i) 40 + 10 log10 p from the channel edges to 5 MHz away
(ii) 43 + 10 log10 p between 5 MHz and X MHz from the channel edges, and
(iii) 55 + 10 log10 p at X MHz and beyond from the channel edges

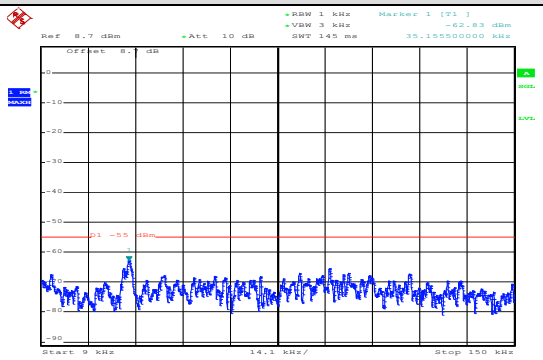
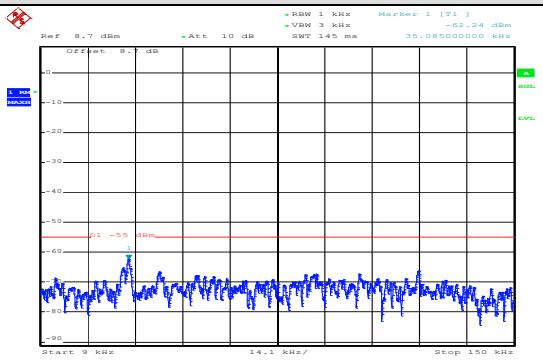
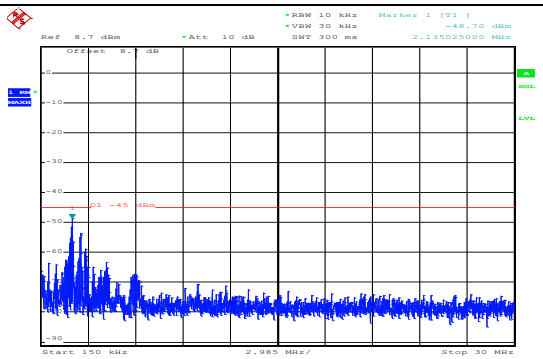
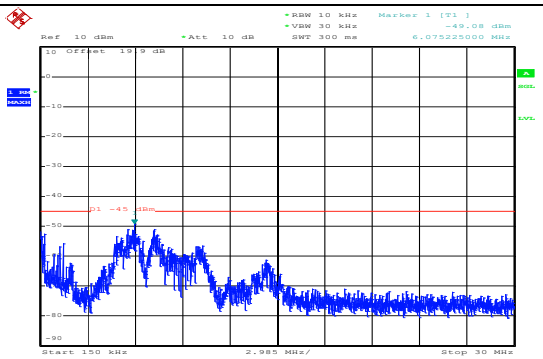
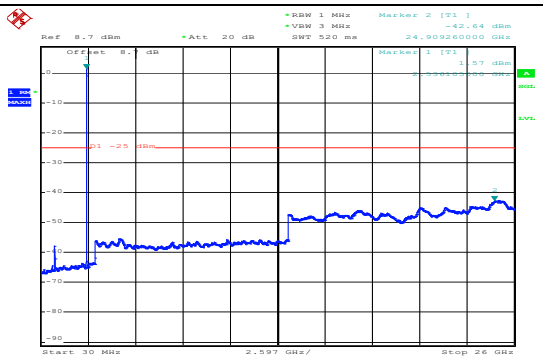
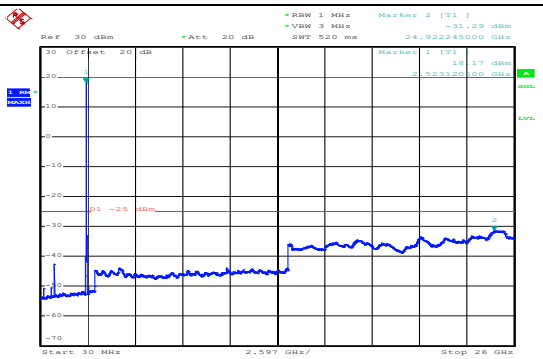
Please refers to Appendix C for compliance test plots for band edge

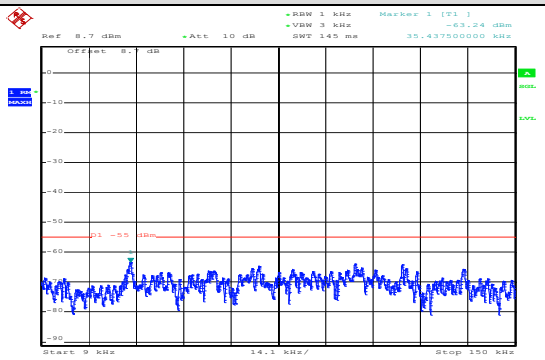
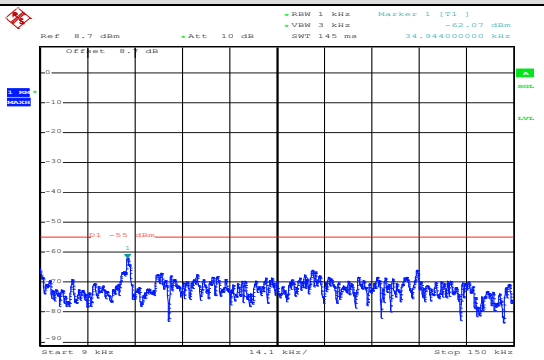
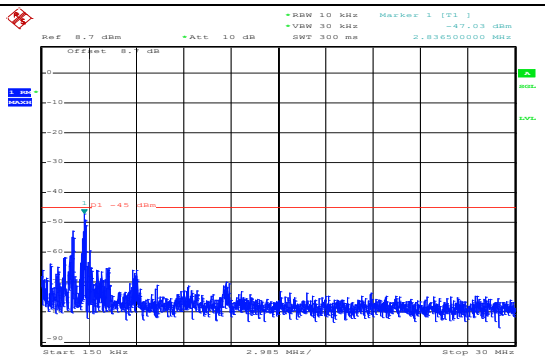
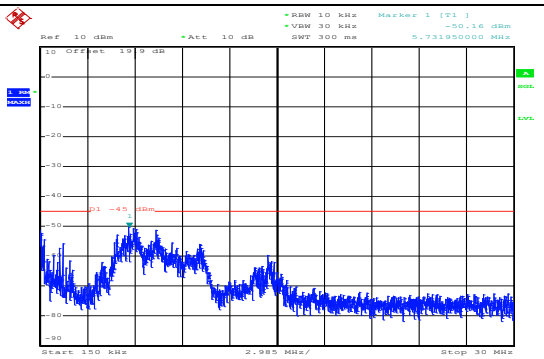
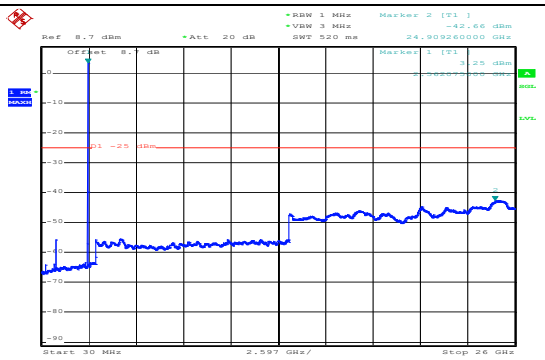
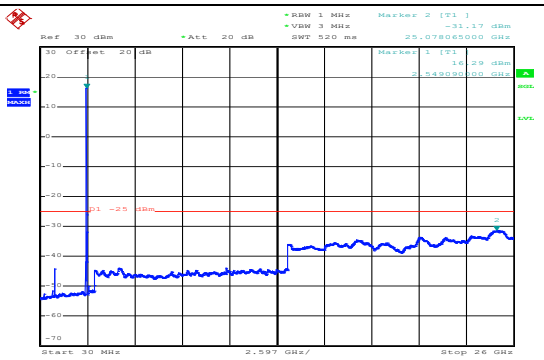
APPENDIX ATEST PLOTS FOR CONDUCTED SPURIOUS EMISSION

TEST PLOTS FOR CONDUCTED SPURIOUS EMISSION

LTE BAND 7

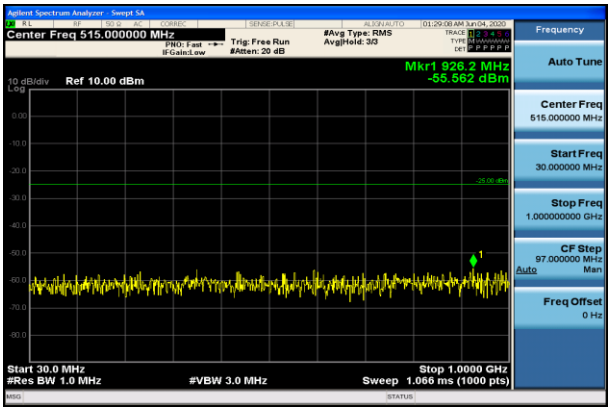
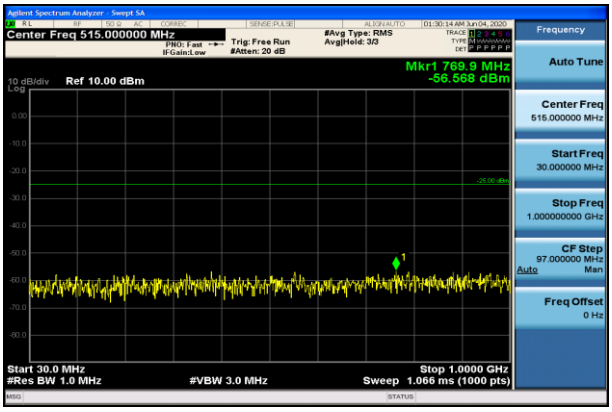
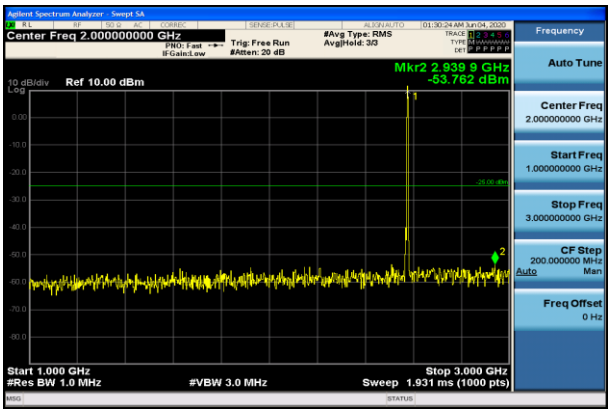
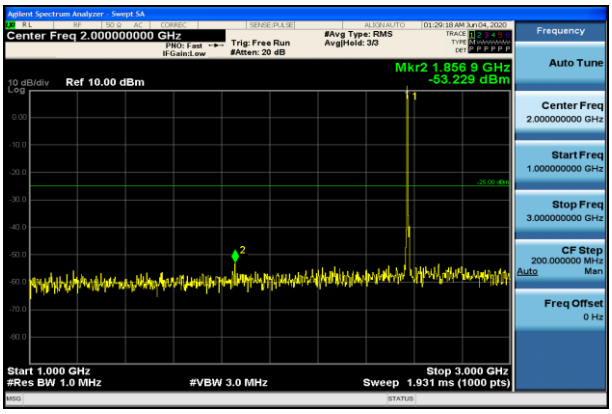
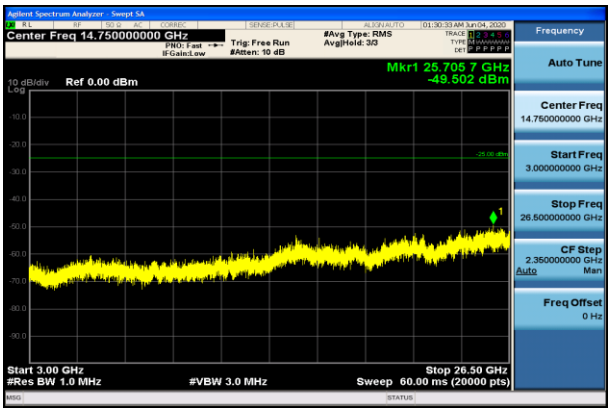
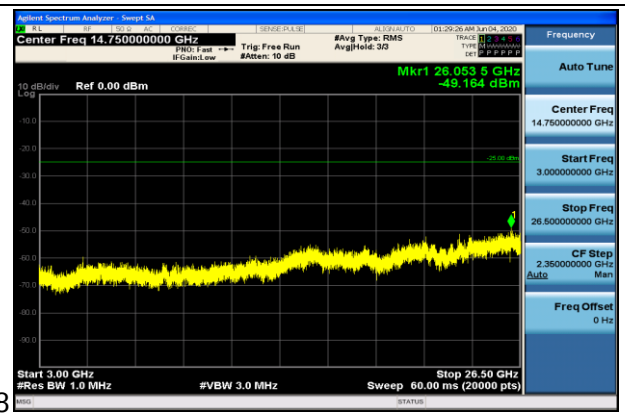
5MHz_LCH_QPSK_1RB#0	20MHz_LCH_QPSK_1RB#0
 AAA Date: 12.MAY.2020 11:16:12	 AAA Date: 12.MAY.2020 09:45:23
 AAA Date: 12.MAY.2020 11:16:20	 AAA Date: 11.MAY.2020 11:41:18
 AAA Date: 12.MAY.2020 11:16:34	 AAA Date: 11.MAY.2020 11:41:33

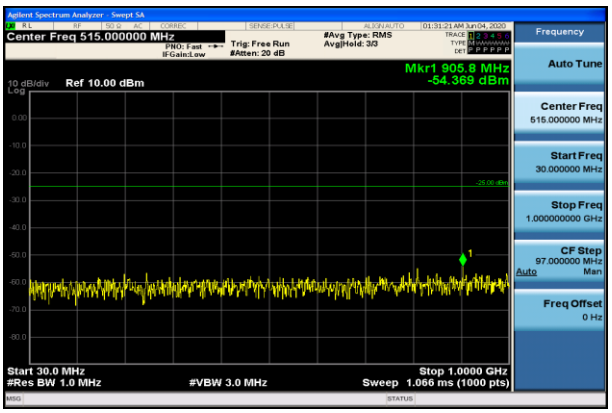
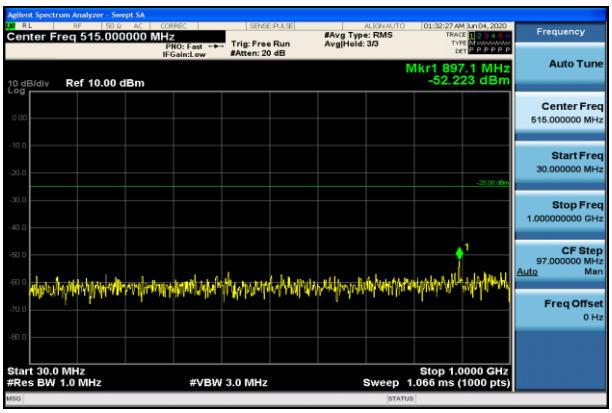
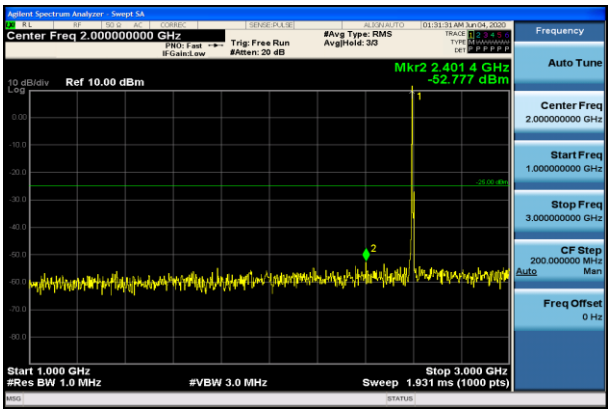
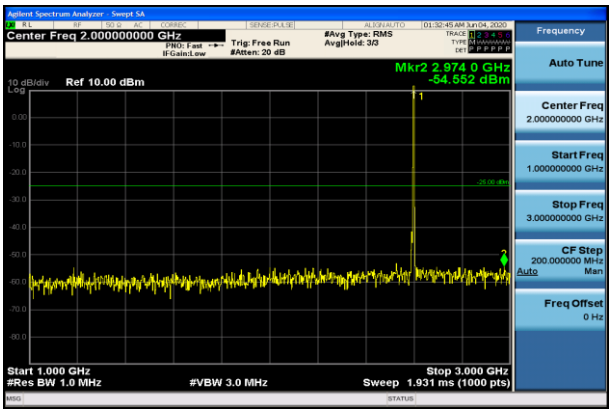
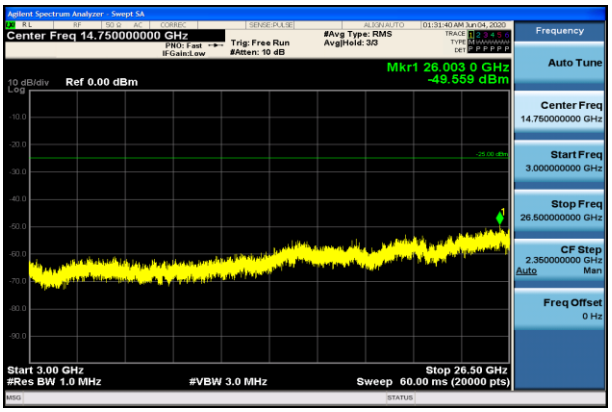
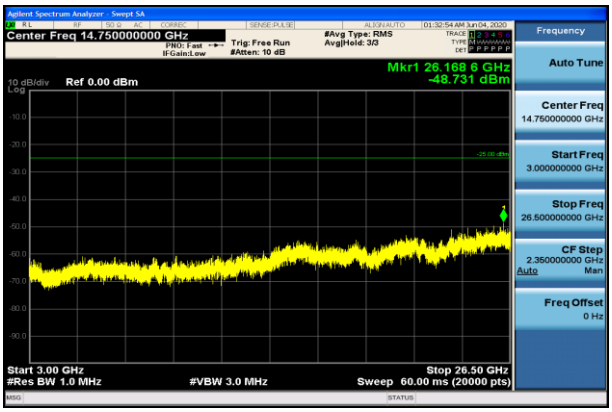
5MHz_MCH_QPSK_1RB#0	20MHz_MCH_QPSK_1RB#0
 AAA Date: 12.MAY.2020 09:47:55	 AAA Date: 12.MAY.2020 09:48:23
 AAA Date: 12.MAY.2020 09:48:03	 AAA Date: 11.MAY.2020 11:44:23
 AAA Date: 12.MAY.2020 09:48:17	 AAA Date: 11.MAY.2020 11:44:38

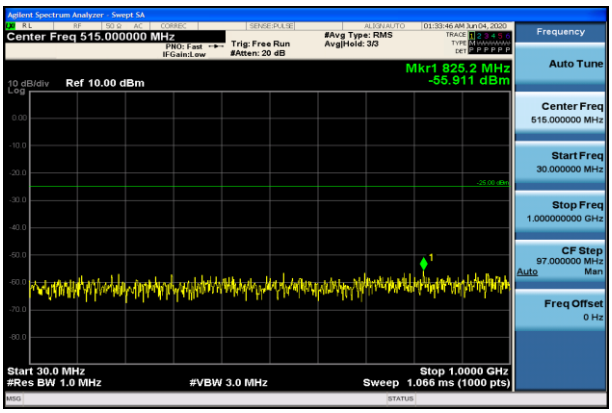
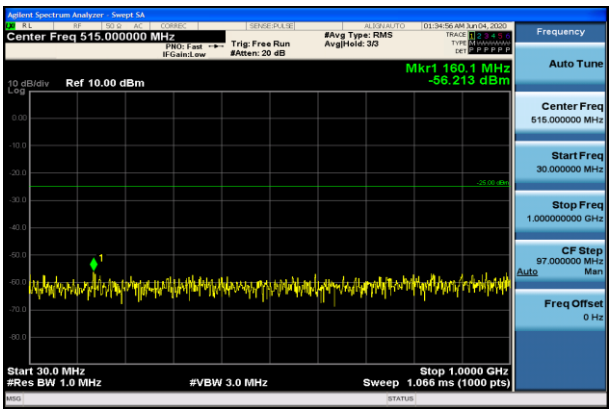
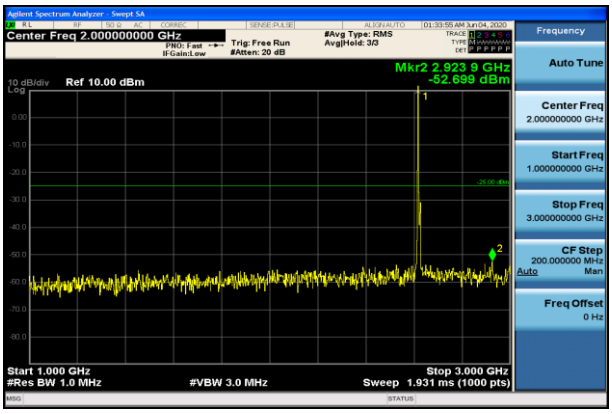
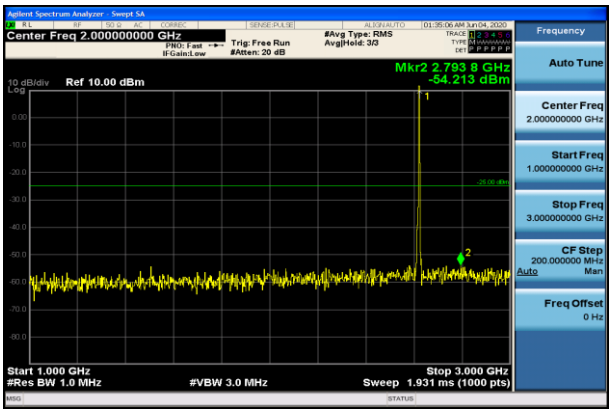
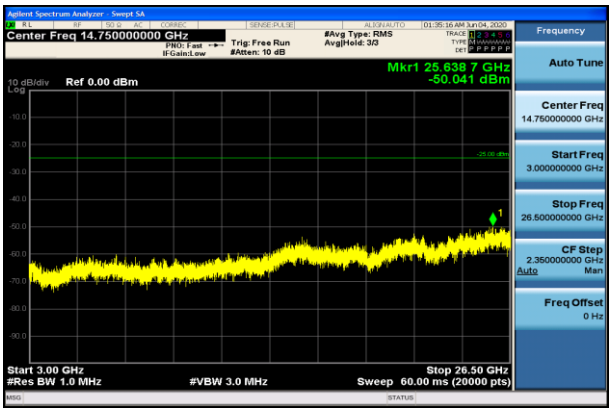
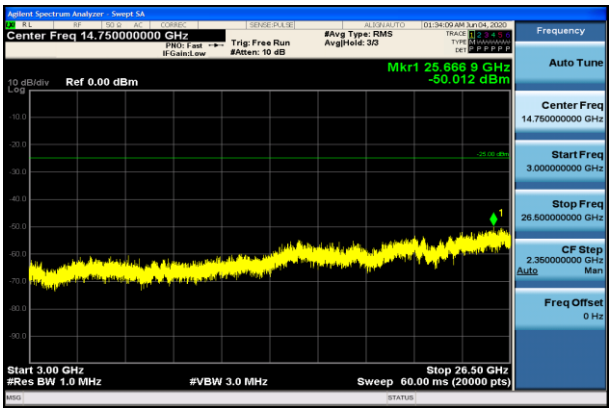
5MHz_HCH_QPSK_1RB#0	20MHz_HCH_QPSK_1RB#0
 AAA Date: 12.MAY.2020 09:50:55	 AAA Date: 12.MAY.2020 09:48:52
 AAA Date: 12.MAY.2020 09:51:03	 AAA Date: 11.MAY.2020 11:47:29
 AAA Date: 12.MAY.2020 09:51:17	 AAA Date: 11.MAY.2020 11:47:43

TEST PLOTS FOR CONDUCTED SPURIOUS EMISSION

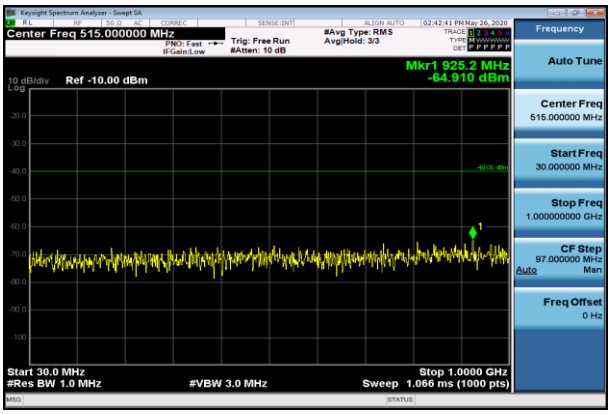
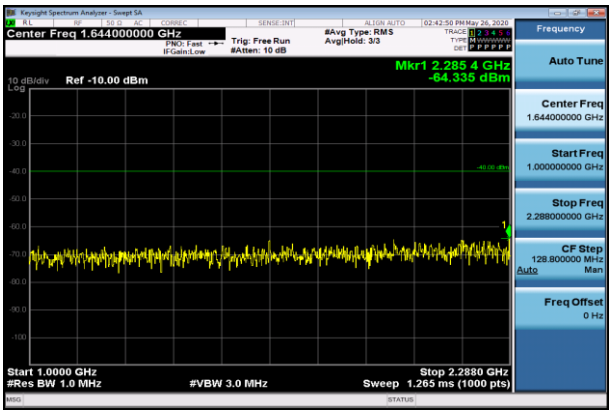
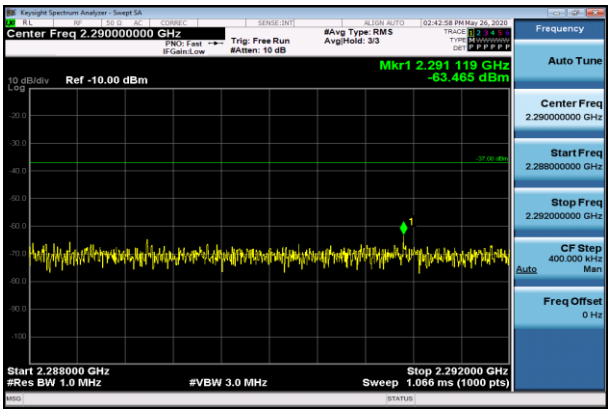
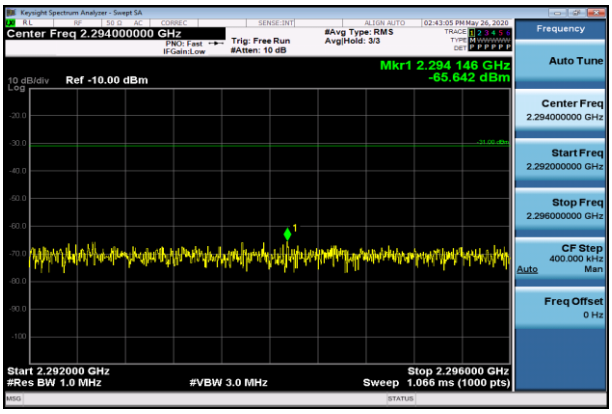
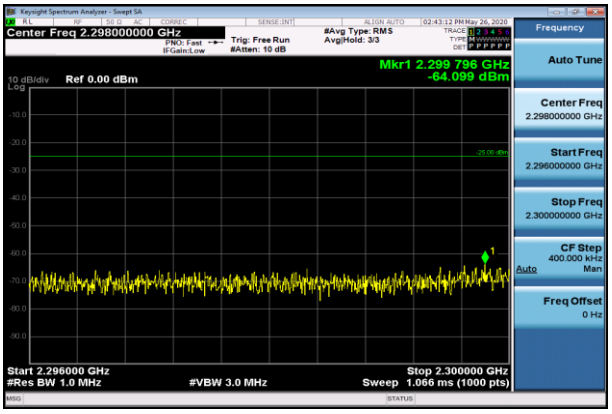
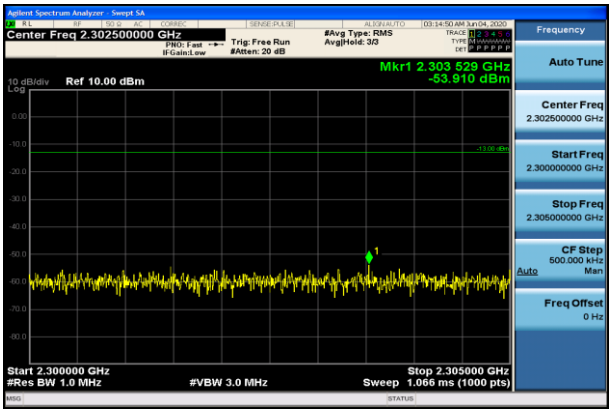
LTE BAND 38

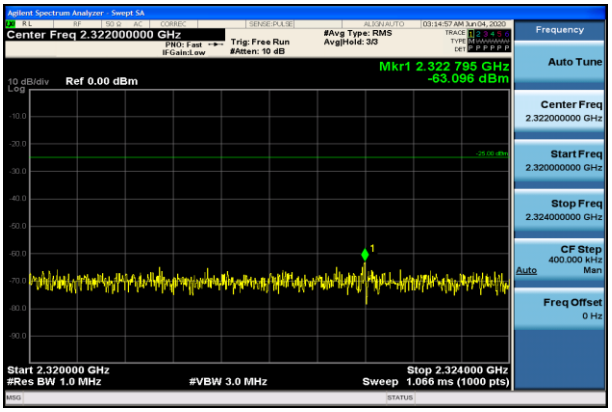
5MHz_LCH_QPSK_1RB#0	20MHz_LCH_QPSK_1RB#0
	
	
	

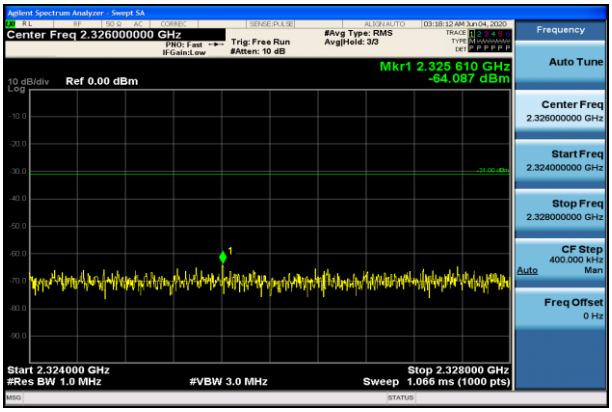
5MHz_MCH_QPSK_1RB#0	20MHz_MCH_QPSK_1RB#0
	
	
	

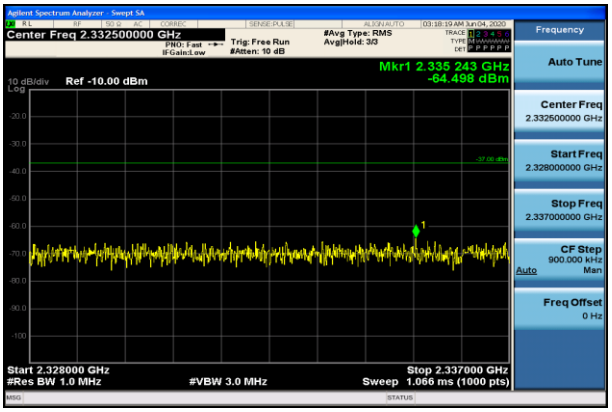
5MHz_HCH_QPSK_1RB#0	20MHz_HCH_QPSK_1RB#0
	
	
	

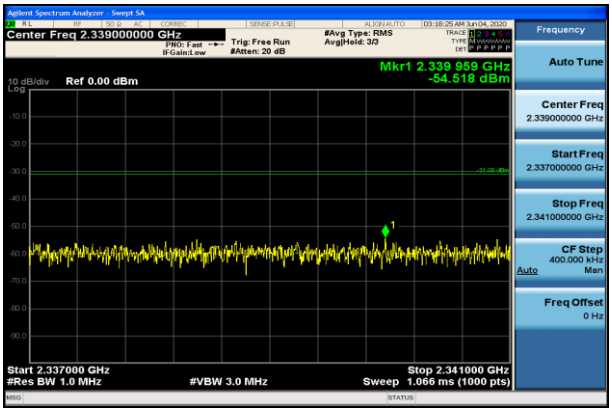
EST PLOTS FOR CONDUCTED SPURIOUS EMISSION
LTE BAND 40(1)

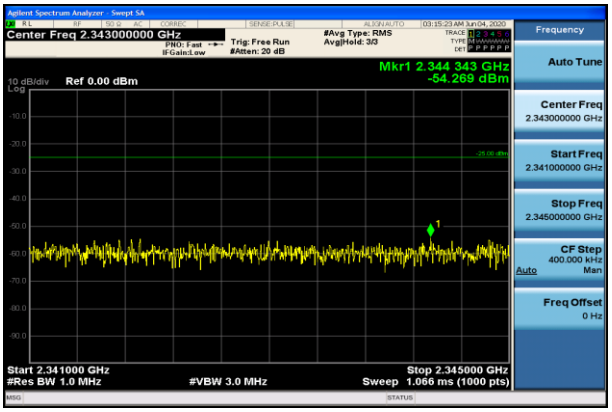
5MHz_LCH_QPSK_1RB#0	
	
	
	

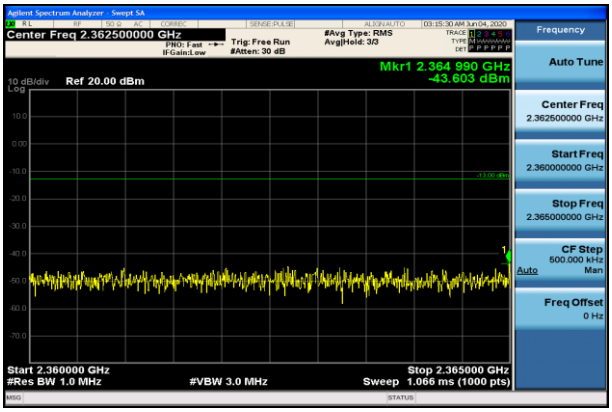

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.322000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:14:57 AM Jun 04, 2020
Mkr1 2.322 795 GHz
-63.096 dBm
10 dB/div
Ref 0.00 dBm
Start 2.320000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.324000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.322000000 GHz
Start Freq
2.320000000 GHz
Stop Freq
2.324000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz

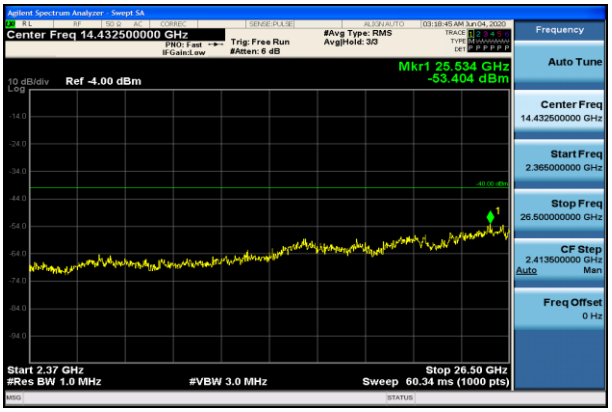

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.326000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:18:12 AM Jun 04, 2020
Mkr1 2.325 610 GHz
-64.087 dBm
10 dB/div
Ref 0.00 dBm
Start 2.324000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.328000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.326000000 GHz
Start Freq
2.324000000 GHz
Stop Freq
2.328000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.332500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:18:19 AM Jun 04, 2020
Mkr1 2.335 243 GHz
-64.498 dBm
10 dB/div
Ref -10.00 dBm
Start 2.328000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.337000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.332500000 GHz
Start Freq
2.328000000 GHz
Stop Freq
2.337000000 GHz
CF Step
900.000 kHz
Auto
Man
Freq Offset
0 Hz

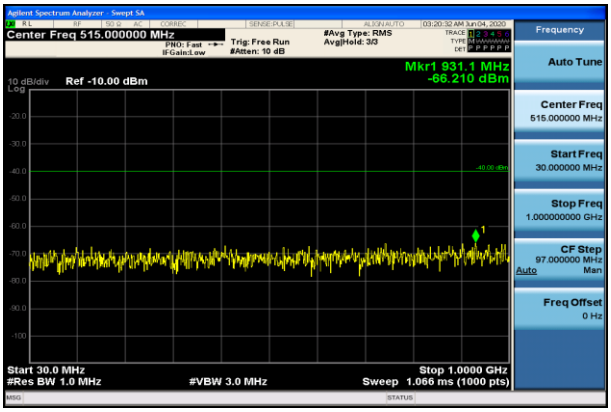

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.339000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:18:25 AM Jun 04, 2020
Mkr1 2.339 959 GHz
-54.518 dBm
10 dB/div
Ref 0.00 dBm
Start 2.337000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.341000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.339000000 GHz
Start Freq
2.337000000 GHz
Stop Freq
2.341000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz

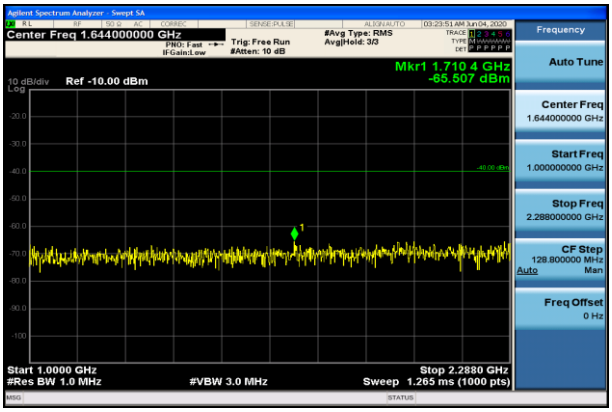

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.343000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:15:23 AM Jun 04, 2020
Mkr1 2.344 343 GHz
-54.269 dBm
10 dB/div
Ref 0.00 dBm
Start 2.341000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.345000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.343000000 GHz
Start Freq
2.341000000 GHz
Stop Freq
2.345000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz

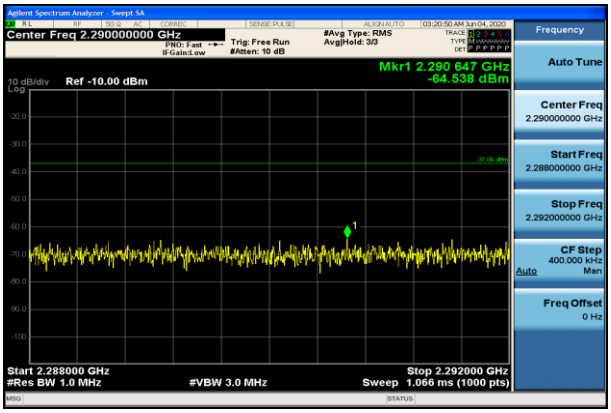

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.362500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:15:30 AM Jun 04, 2020
Mkr1 2.364 990 GHz
-43.603 dBm
10 dB/div
Ref 20.00 dBm
Start 2.360000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.365000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.362500000 GHz
Start Freq
2.360000000 GHz
Stop Freq
2.365000000 GHz
CF Step
500.000 kHz
Auto
Man
Freq Offset
0 Hz

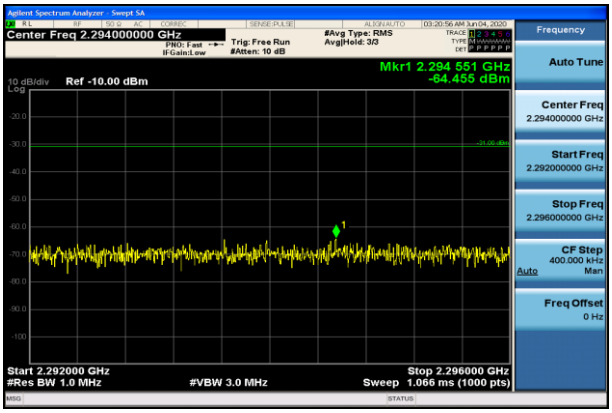

Agilent Spectrum Analyzer - Swept SA
Center Freq 14.432500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 6 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:18:45 AM Jun 04, 2020
Mkr1 25.534 GHz
-53.404 dBm
10 dB/div
Ref -4.00 dBm
Start 2.37 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 26.50 GHz
Sweep 60.34 ms (1000 pts)
Frequency
Auto Tune
Center Freq
14.432500000 GHz
Start Freq
2.365000000 GHz
Stop Freq
26.500000000 GHz
CF Step
2.413500000 GHz
Auto
Man
Freq Offset
0 Hz

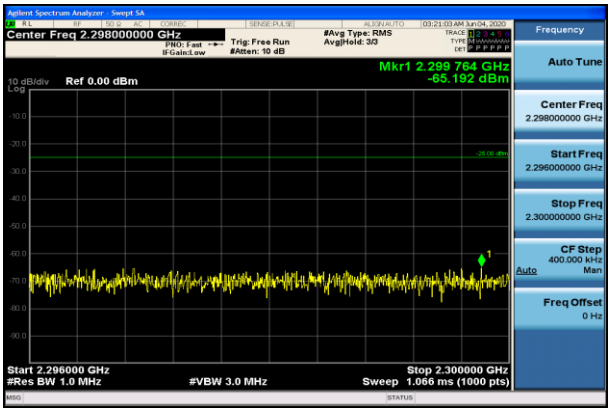
5MHz_MCH_QPSK_1RB#0

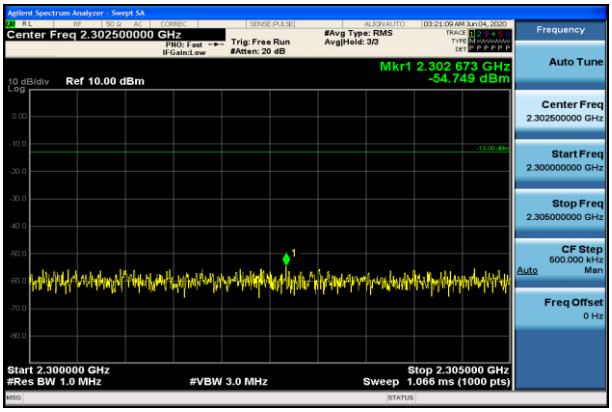


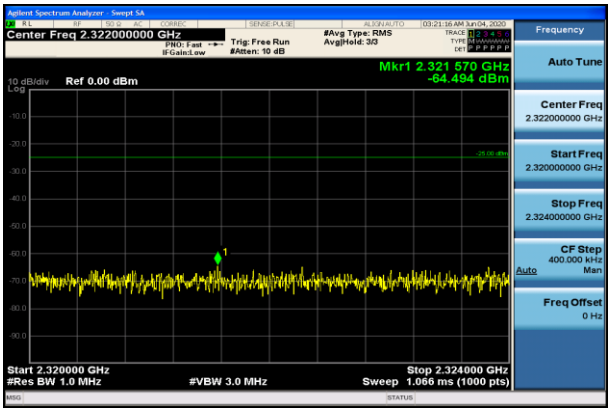


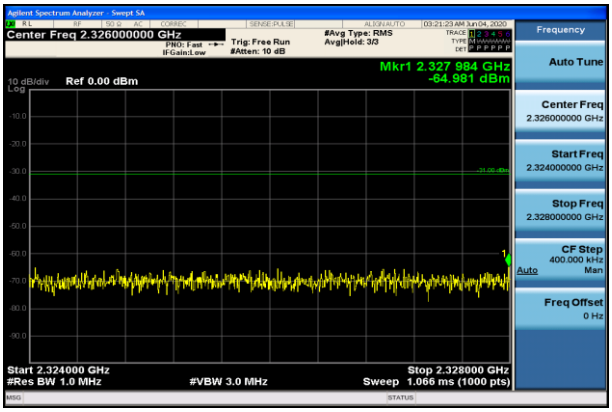


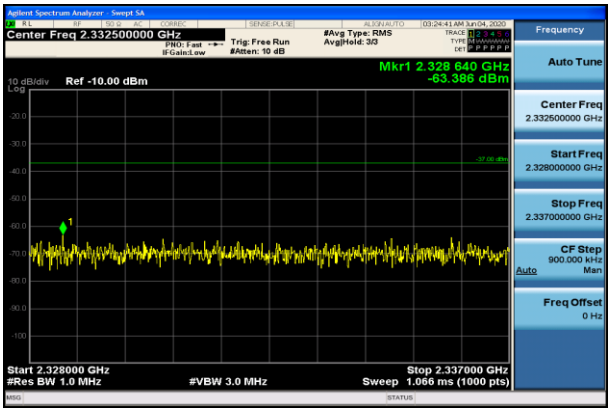


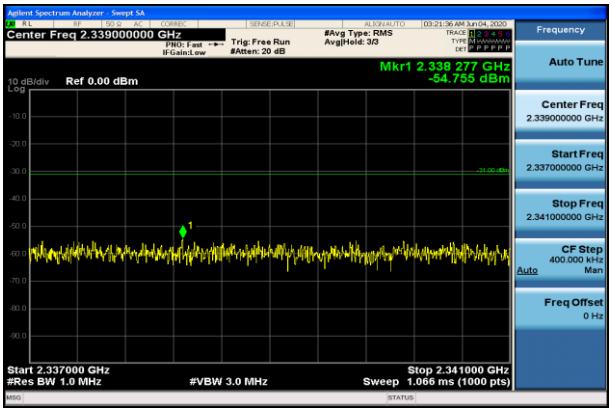


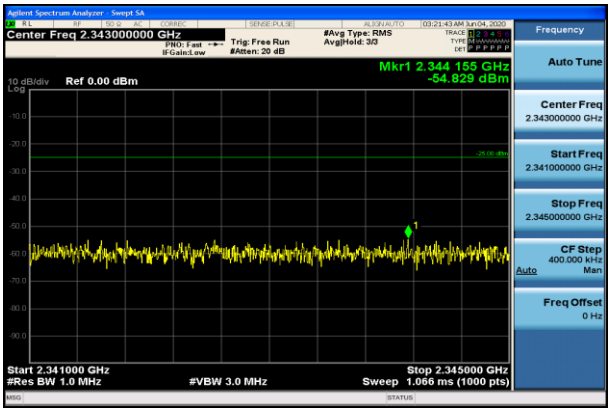


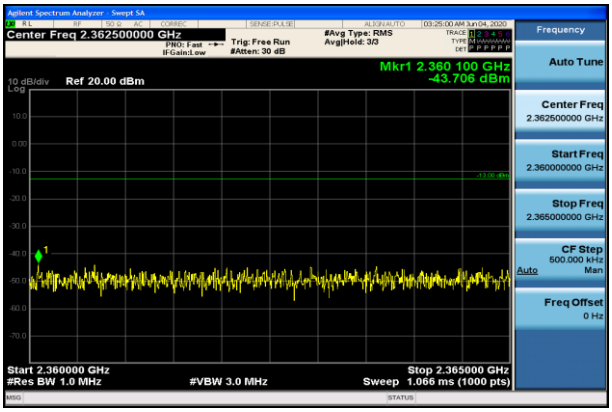

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.322000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:21:16 AM Jun 04, 2020
Mkr1 2.321 570 GHz
-64.494 dBm
10 dB/div
Ref 0.00 dBm
Start 2.320000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.324000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.322000000 GHz
Start Freq
2.320000000 GHz
Stop Freq
2.324000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.326000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:21:23 AM Jun 04, 2020
Mkr1 2.327 984 GHz
-64.981 dBm
10 dB/div
Ref 0.00 dBm
Start 2.324000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.328000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.326000000 GHz
Start Freq
2.324000000 GHz
Stop Freq
2.328000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.332500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:24:41 AM Jun 04, 2020
Mkr1 2.328 640 GHz
-63.386 dBm
10 dB/div
Ref -10.00 dBm
Start 2.328000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.337000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.332500000 GHz
Start Freq
2.328000000 GHz
Stop Freq
2.337000000 GHz
CF Step
900.000 kHz
Auto
Man
Freq Offset
0 Hz

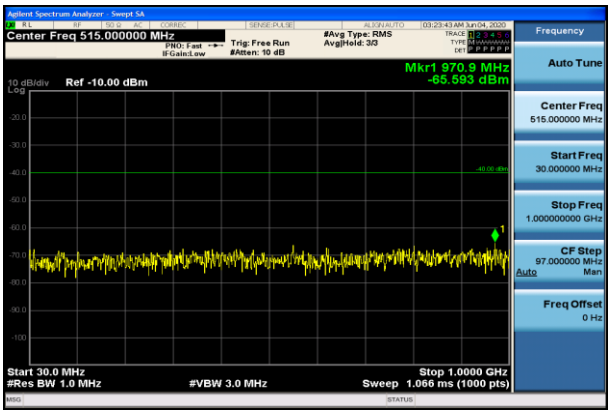

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.339000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:21:36 AM Jun 04, 2020
Mkr1 2.338 277 GHz
-54.755 dBm
10 dB/div
Ref 0.00 dBm
Start 2.337000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.341000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.339000000 GHz
Start Freq
2.337000000 GHz
Stop Freq
2.341000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz

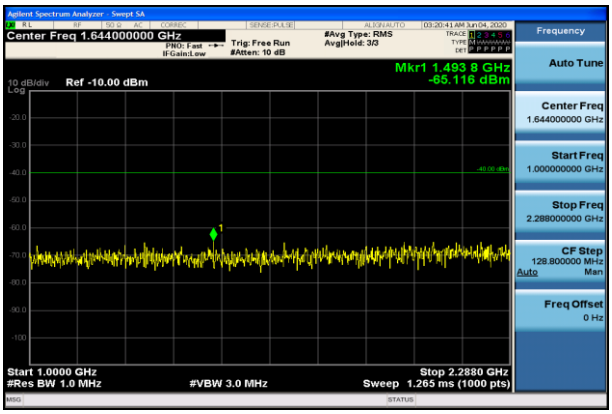

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.343000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:21:43 AM Jun 04, 2020
Mkr1 2.344 155 GHz
-54.829 dBm
10 dB/div
Ref 0.00 dBm
Start 2.341000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.345000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.343000000 GHz
Start Freq
2.341000000 GHz
Stop Freq
2.345000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz

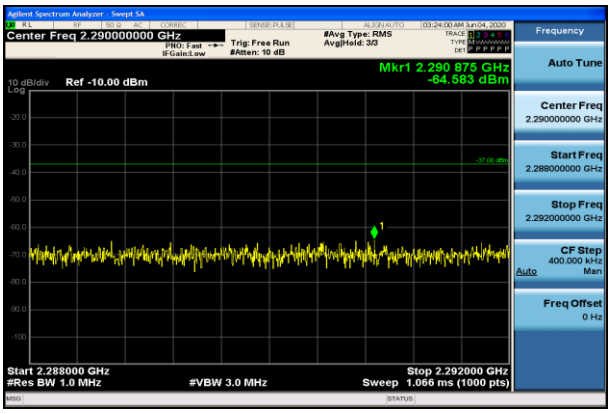

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.362500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:25:00 AM Jun 04, 2020
Mkr1 2.360 100 GHz
-43.706 dBm
10 dB/div
Ref 20.00 dBm
Start 2.360000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.365000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.362500000 GHz
Start Freq
2.360000000 GHz
Stop Freq
2.365000000 GHz
CF Step
500.000 kHz
Auto
Man
Freq Offset
0 Hz

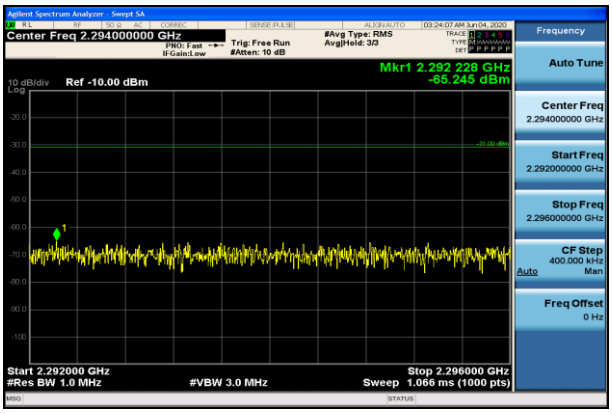
Agilent Spectrum Analyzer - Swept SA
Center Freq 14.432500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 6 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:21:56 AM Jun 04, 2020
Mkr1 26.138 GHz
-53.759 dBm
10 dB/div
Ref -4.00 dBm
Start 2.37 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 26.50 GHz
Sweep 60.34 ms (1000 pts)
Frequency
Auto Tune
Center Freq
14.432500000 GHz
Start Freq
2.365000000 GHz
Stop Freq
26.500000000 GHz
CF Step
2.413500000 GHz
Auto
Man
Freq Offset
0 Hz

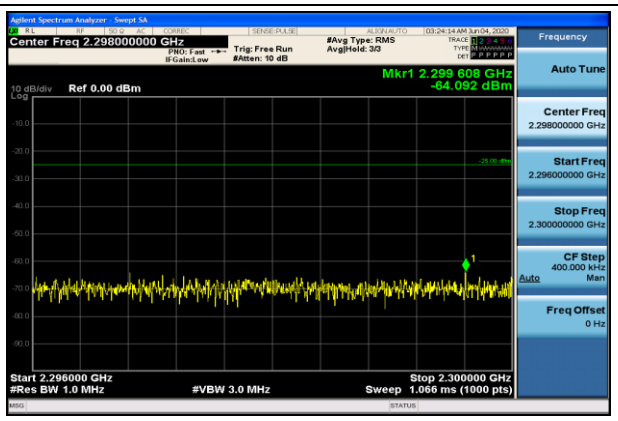
5MHz_HCH_QPSK_1RB#0

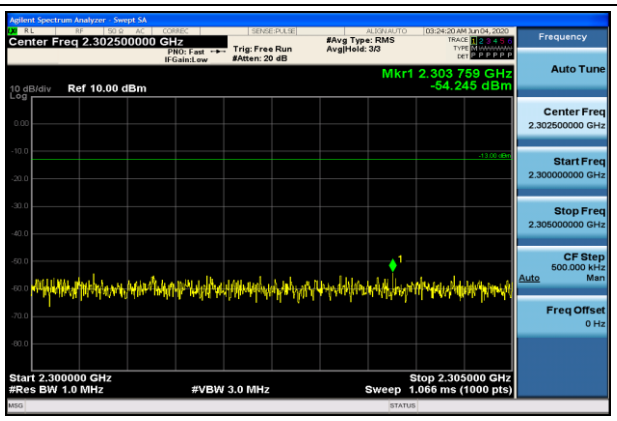


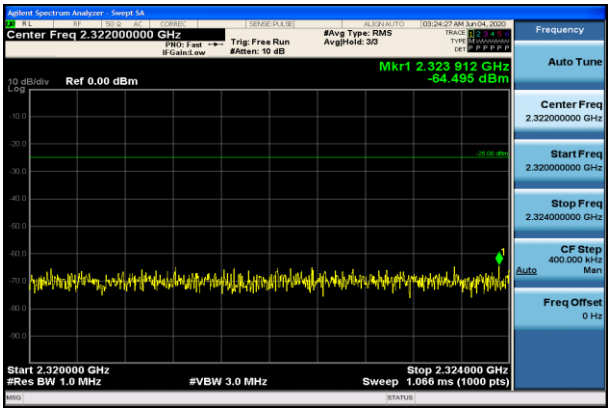


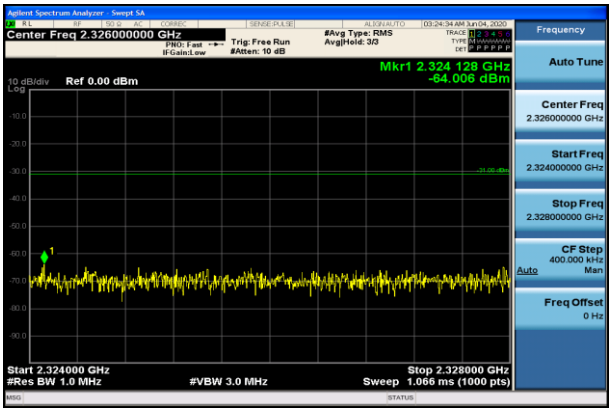


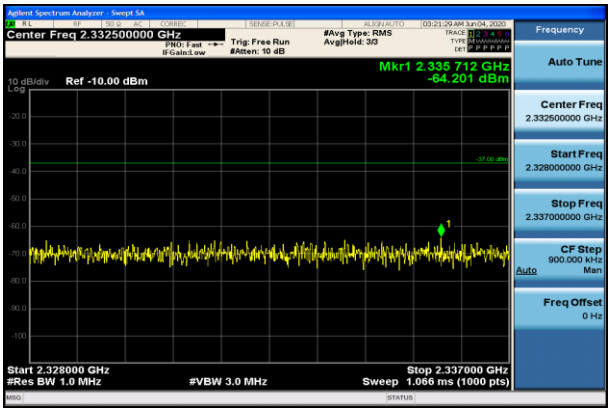


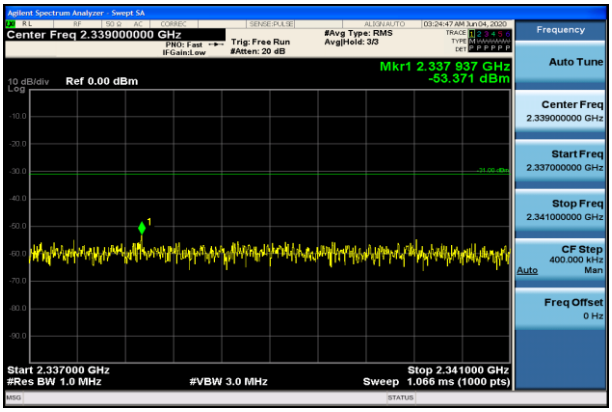


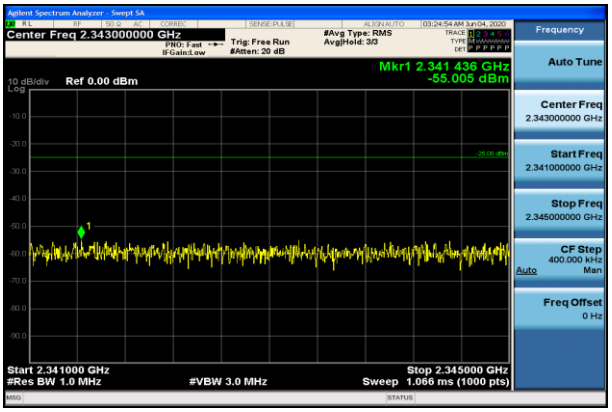


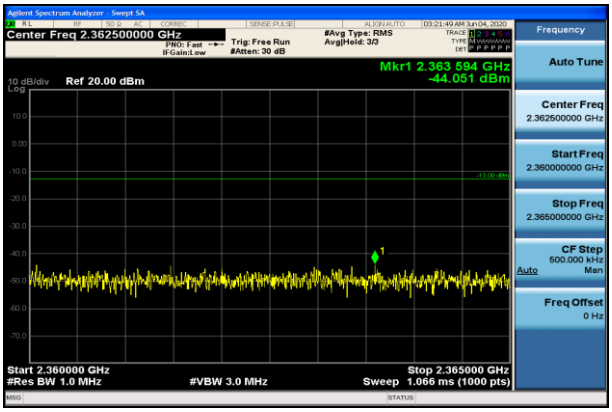

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.322000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:24:27 AM Jun 04, 2020
Mkr1 2.323 912 GHz
-64.495 dBm
10 dB/div
Ref 0.00 dBm
Start 2.320000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.324000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.322000000 GHz
Start Freq
2.320000000 GHz
Stop Freq
2.324000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz

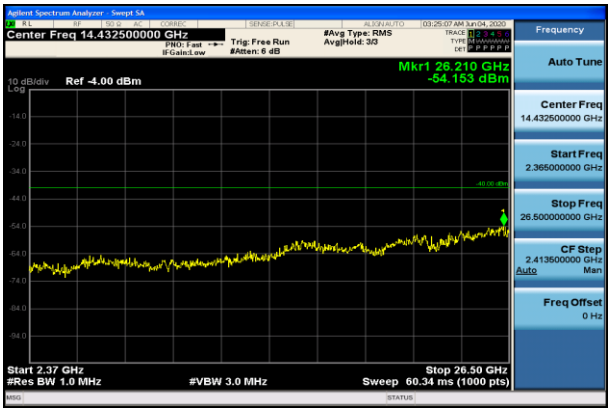

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.326000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:24:34 AM Jun 04, 2020
Mkr1 2.324 128 GHz
-64.006 dBm
10 dB/div
Ref 0.00 dBm
Start 2.324000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.328000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.326000000 GHz
Start Freq
2.324000000 GHz
Stop Freq
2.328000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.332500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:21:29 AM Jun 04, 2020
Mkr1 2.335 712 GHz
-64.201 dBm
10 dB/div
Ref -10.00 dBm
Start 2.328000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.337000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.332500000 GHz
Start Freq
2.328000000 GHz
Stop Freq
2.337000000 GHz
CF Step
900.000 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.339000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:24:47 AM Jun 04, 2020
Mkr1 2.337 937 GHz
-53.371 dBm
10 dB/div
Ref 0.00 dBm
Start 2.337000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.341000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.339000000 GHz
Start Freq
2.337000000 GHz
Stop Freq
2.341000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.343000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:24:54 AM Jun 04, 2020
Mkr1 2.341 436 GHz
-55.005 dBm
10 dB/div
Ref 0.00 dBm
Start 2.341000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.345000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.343000000 GHz
Start Freq
2.341000000 GHz
Stop Freq
2.345000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.362500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:21:49 AM Jun 04, 2020
Mkr1 2.363 594 GHz
-44.051 dBm
10 dB/div
Ref 20.00 dBm
Start 2.360000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 2.365000 GHz
Sweep 1.066 ms (1000 pts)
Frequency
Auto Tune
Center Freq
2.362500000 GHz
Start Freq
2.360000000 GHz
Stop Freq
2.365000000 GHz
CF Step
500.000 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 14.432500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 6 dB
#Avg Type: RMS
Avg|Hold: 3/3
03:25:07 AM Jun 04, 2020
Mkr1 26.210 GHz
-54.153 dBm
10 dB/div
Ref -4.00 dBm
Start 2.37 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 26.50 GHz
Sweep 60.34 ms (1000 pts)
Frequency
Auto Tune
Center Freq
14.432500000 GHz
Start Freq
2.365000000 GHz
Stop Freq
26.500000000 GHz
CF Step
2.413500000 GHz
Auto
Man
Freq Offset
0 Hz