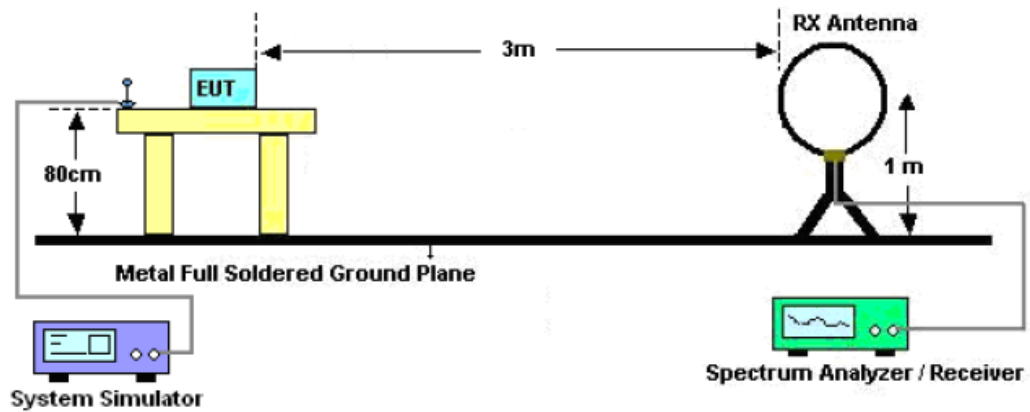
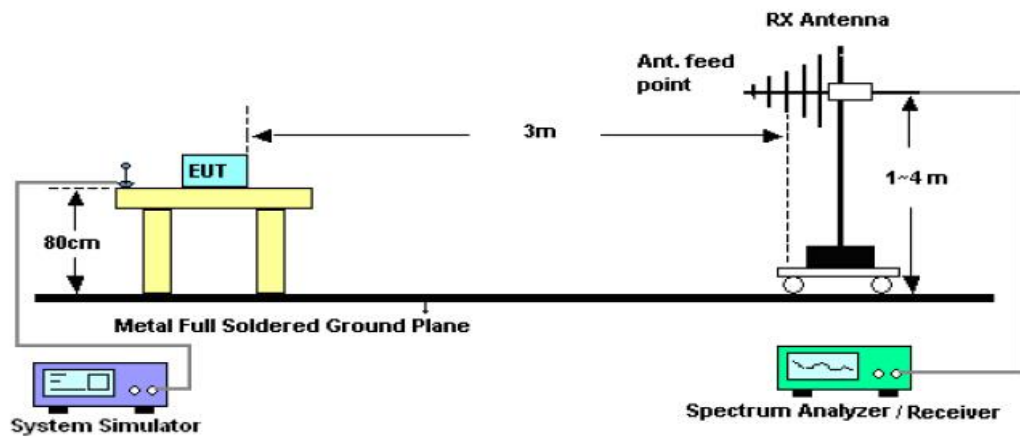


7.2.2. TEST SETUP

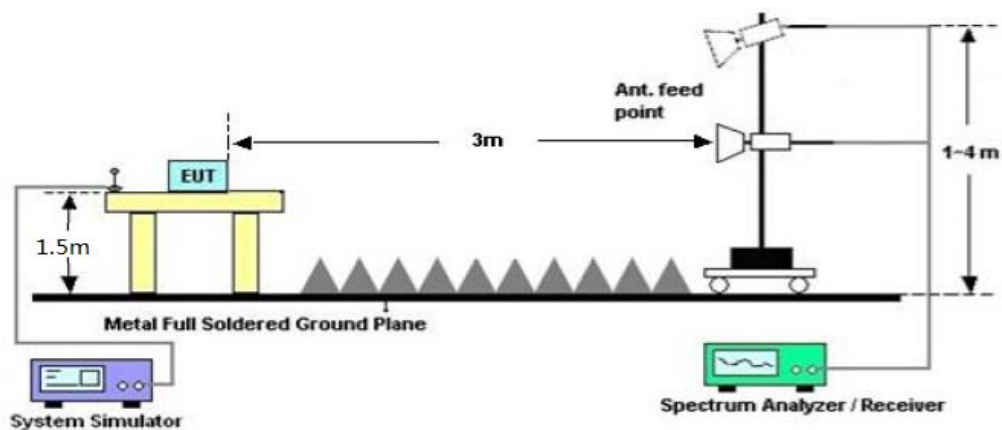
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



7.2.3 PROVISIONS APPLICABLE

(a) On any frequency outside a licensee's frequency block (e.g. A, D, B, etc.) within the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P , in Watts) by at least $43+10\log(P)$ dB. The specification that emissions shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

Note: Only record the worst condition of each test mode:

7.2.4 MEASUREMENT RESULT

LTE Band 2 Low channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
3720	V	-37.20	-13	-24.2
691.3	V	-42.82	-13	-29.82
712.5	V	-45.70	-13	-32.7
3720	H	-37.52	-13	-24.52
642.6	H	-43.25	-13	-30.25
586.6	H	-46.15	-13	-33.15

Middle channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
3760	V	-38.93	-13	-25.93
524.3	V	-44.07	-13	-31.07
493.6	V	-44.32	-13	-31.32
3760	H	-38.21	-13	-25.21
619.6	H	-43.09	-13	-30.09
336.9	H	-46.40	-13	-33.4

High channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
3800	V	-37.99	-13	-24.99
647.5	V	-44.60	-13	-31.6
442.3	V	-44.80	-13	-31.8
3800	H	-36.73	-13	-23.73
751.5	H	-45.42	-13	-32.42
610.6	H	-45.62	-13	-32.62

LTE Band 4

Low channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
3440	V	-37.35	-13	-24.35
831.4	V	-42.47	-13	-29.47
783.6	V	-43.57	-13	-30.57
3440	H	-36.84	-13	-23.84
845.3	H	-43.56	-13	-30.56
661.8	H	-43.35	-13	-30.35

Middle channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
3465	V	-36.17	-13	-23.17
712.2	V	-42.33	-13	-29.33
612.3	V	-44.26	-13	-31.26
3465	H	-35.87	-13	-22.87
725.0	H	-42.17	-13	-29.17
615.8	H	-42.83	-13	-29.83

High channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
3490	V	-36.79	-13	-23.79
713.3	V	-43.69	-13	-30.69
652.8	V	-43.37	-13	-30.37
3490	H	-35.53	-13	-22.53
552.2	H	-41.24	-13	-28.24
418.3	H	-43.12	-13	-30.12

LTE Band 7

Low channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
3440	V	-40.02	-25	-27.02
874.61	V	-44.66	-25	-31.66
759.13	V	-45.05	-25	-32.05
3440	H	-37.71	-25	-24.71
549.66	H	-42.37	-25	-29.37
447.03	H	-43.18	-25	-30.18

Middle channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
3465	V	-37.94	-25	-24.94
561.33	V	-44.55	-25	-31.55
436.16	V	-46.50	-25	-33.5
3465	H	-38.45	-25	-25.45
343.66	H	-44.40	-25	-31.4
289.44	H	-46.96	-25	-33.96

High channel

Frequency (MHz)	Polarity (H/V)	Emission Level (dBm)	Limit (dBm)	Margin (dB)
3490	V	-38.78	-25	-25.78
536.33	V	-42.59	-25	-29.59
444.70	V	-45.40	-25	-32.4
3490	H	-39.36	-25	-26.36
318.59	H	-42.72	-25	-29.72
287.16	H	-46.39	-25	-33.39

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°C. 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°C increments from -10°C to +40°C. 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°C.
- 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°C increments from +40°C to -10°C. 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°C 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 $\pm 0.00025\%$ (± 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 2

Middle Channel, $f_0 = 1880$ MHz			
Temperature (°C)	Power Supplied (VDC)	Frequency Error (Hz)	Frequency Error (ppm)
-10	3.8	0.47	0.000255
0		-7.37	-0.003981
10		-5.97	-0.003223
20		3.59	0.001940
30		-5.01	-0.002705
40		-5.04	-0.002721
25	4.35	-2.78	-0.001500
	3.23	-12.00	-0.006384

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. The

LTE Band 4

Middle Channel, $f_0 = 1732.5$ MHz				
Temperature (°C)	Power Supplied (VDC)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.7	-9.66	-0.005614	± 2.5
0		-6.74	-0.003917	± 2.5
10		-4.72	-0.002745	± 2.5
20		-2.78	-0.001613	± 2.5
30		-3.95	-0.002295	± 2.5
40		-3.93	-0.002287	± 2.5
25	4.2	-2.62	-0.001522	± 2.5
	3.5	-5.95	-0.003435	± 2.5

LTE Band 7

Middle Channel, $f_0 = 2535$ MHz			
Temperature (°C)	Power Supplied (VDC)	Frequency Error (Hz)	Frequency Error (ppm)
-10	3.8	4.92	0.001961
0		-1.80	-0.000718
10		-4.85	-0.001932
20		1.29	0.000513
30		-1.92	-0.000764
40		3.75	0.001493
25	4.35	1.32	0.000524
	3.23	-6.78	-0.002675

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

The EUT doesn't work below -10°C

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 2

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	6	0	1.0815	PASS
	MCH	6	0	1.0777	PASS
	HCH	6	0	1.0764	PASS
16QAM	LCH	6	0	1.0794	PASS
	MCH	6	0	1.0762	PASS
	HCH	6	0	1.0771	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	15	0	2.6827	PASS
	MCH	15	0	2.6790	PASS
	HCH	15	0	2.6774	PASS
16QAM	LCH	15	0	2.6785	PASS
	MCH	15	0	2.6793	PASS
	HCH	15	0	2.6818	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.4786	PASS
	MCH	25	0	4.4717	PASS
	HCH	25	0	4.4761	PASS
16QAM	LCH	25	0	4.4795	PASS
	MCH	25	0	4.4813	PASS
	HCH	25	0	4.4740	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	8.9622	PASS
	MCH	50	0	8.9470	PASS
	HCH	50	0	8.9446	PASS
16QAM	LCH	50	0	8.9438	PASS
	MCH	50	0	8.9552	PASS
	HCH	50	0	8.9381	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	13.436	PASS
	MCH	75	0	13.422	13.372
	HCH	75	0	13.400	PASS
16QAM	LCH	75	0	13.422	PASS
	MCH	75	0	13.427	PASS
	HCH	75	0	13.411	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	17.890	PASS
	MCH	100	0	17.906	PASS
	HCH	100	0	17.841	PASS
16QAM	LCH	100	0	17.894	PASS
	MCH	100	0	17.897	PASS
	HCH	100	0	17.847	PASS

LTE Band 4

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	6	0	1.0779	PASS
	MCH	6	0	1.0813	PASS
	HCH	6	0	1.0776	PASS
16QAM	LCH	6	0	1.0788	PASS
	MCH	6	0	1.0793	PASS
	HCH	6	0	1.0777	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	15	0	2.6779	PASS
	MCH	15	0	2.6831	PASS
	HCH	15	0	2.6834	PASS
16QAM	LCH	15	0	2.6723	PASS
	MCH	15	0	2.6792	PASS
	HCH	15	0	2.6786	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.4756	PASS
	MCH	25	0	4.4808	PASS
	HCH	25	0	4.4726	PASS
16QAM	LCH	25	0	4.4787	PASS
	MCH	25	0	4.4792	PASS
	HCH	25	0	4.4800	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	8.9578	PASS
	MCH	50	0	8.9538	PASS
	HCH	50	0	8.9364	PASS
16QAM	LCH	50	0	8.9362	PASS
	MCH	50	0	8.9602	PASS
	HCH	50	0	8.9398	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	13.414	PASS
	MCH	75	0	13.426	PASS
	HCH	75	0	13.416	PASS
16QAM	LCH	75	0	13.403	PASS
	MCH	75	0	13.410	PASS
	HCH	75	0	13.412	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	17.848	PASS
	MCH	100	0	17.858	PASS
	HCH	100	0	17.860	PASS
16QAM	LCH	100	0	17.853	PASS
	MCH	100	0	17.878	PASS
	HCH	100	0	17.883	PASS

LTE Band 7

Channel Bandwidth: 5MHz

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth(MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.4795	PASS
	MCH	25	0	4.4932	PASS
	HCH	25	0	4.4790	PASS
16QAM	LCH	25	0	4.4828	PASS
	MCH	25	0	4.4852	PASS
	HCH	25	0	4.4777	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	8.9453	PASS
	MCH	50	0	8.9546	PASS
	HCH	50	0	8.9442	PASS
16QAM	LCH	50	0	8.9301	PASS
	MCH	50	0	8.9565	PASS
	HCH	50	0	8.9310	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	13.406	PASS
	MCH	75	0	13.416	PASS
	HCH	75	0	13.425	PASS
16QAM	LCH	75	0	13.398	PASS
	MCH	75	0	13.411	PASS
	HCH	75	0	13.410	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Occupied Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	17.873	PASS
	MCH	100	0	17.824	PASS
	HCH	100	0	17.890	PASS
16QAM	LCH	100	0	17.863	PASS
	MCH	100	0	17.831	PASS
	HCH	100	0	17.885	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 2

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	6	0	1.217	PASS
	MCH	6	0	1.225	PASS
	HCH	6	0	1.218	PASS
16QAM	LCH	6	0	1.230	PASS
	MCH	6	0	1.196	PASS
	HCH	6	0	1.242	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	15	0	2.838	PASS
	MCH	15	0	2.826	PASS
	HCH	15	0	2.837	PASS
16QAM	LCH	15	0	2.833	PASS
	MCH	15	0	2.838	PASS
	HCH	15	0	2.819	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.857	PASS
	MCH	25	0	4.881	PASS
	HCH	25	0	4.891	PASS
16QAM	LCH	25	0	4.885	PASS
	MCH	25	0	4.907	PASS
	HCH	25	0	4.861	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	9.511	PASS
	MCH	50	0	9.552	PASS
	HCH	50	0	9.423	PASS
16QAM	LCH	50	0	9.565	PASS
	MCH	50	0	9.508	PASS
	HCH	50	0	9.548	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	14.24	PASS
	MCH	75	0	14.18	PASS
	HCH	75	0	14.05	PASS
16QAM	LCH	75	0	14.13	PASS
	MCH	75	0	14.17	PASS
	HCH	75	0	14.08	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	18.65	PASS
	MCH	100	0	18.73	PASS
	HCH	100	0	18.66	PASS
16QAM	LCH	100	0	18.60	PASS
	MCH	100	0	18.70	PASS
	HCH	100	0	18.63	PASS

LTE Band 4

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	6	0	1.219	PASS
	MCH	6	0	1.244	PASS
	HCH	6	0	1.232	PASS
16QAM	LCH	6	0	1.256	PASS
	MCH	6	0	1.235	PASS
	HCH	6	0	1.220	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	15	0	2.813	PASS
	MCH	15	0	2.838	PASS
	HCH	15	0	2.831	PASS
16QAM	LCH	15	0	2.832	PASS
	MCH	15	0	2.825	PASS
	HCH	15	0	2.838	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.865	PASS
	MCH	25	0	4.847	PASS
	HCH	25	0	4.834	PASS
16QAM	LCH	25	0	4.876	PASS
	MCH	25	0	4.936	PASS
	HCH	25	0	4.853	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	9.499	PASS
	MCH	50	0	9.520	PASS
	HCH	50	0	9.446	PASS
16QAM	LCH	50	0	9.555	PASS
	MCH	50	0	9.505	PASS
	HCH	50	0	9.468	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	14.32	PASS
	MCH	75	0	14.33	PASS
	HCH	75	0	14.16	PASS
16QAM	LCH	75	0	14.17	PASS
	MCH	75	0	14.15	PASS
	HCH	75	0	14.19	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	18.61	PASS
	MCH	100	0	18.70	PASS
	HCH	100	0	18.69	PASS
16QAM	LCH	100	0	18.69	PASS
	MCH	100	0	18.70	PASS
	HCH	100	0	18.75	PASS

LTE Band 7

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	25	0	4.948	PASS
	MCH	25	0	7.103	PASS
	HCH	25	0	4.912	PASS
16QAM	LCH	25	0	4.965	PASS
	MCH	25	0	5.161	PASS
	HCH	25	0	4.935	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	50	0	9.526	PASS
	MCH	50	0	9.614	PASS
	HCH	50	0	9.445	PASS
16QAM	LCH	50	0	9.524	PASS
	MCH	50	0	9.580	PASS
	HCH	50	0	9.533	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	75	0	14.22	PASS
	MCH	75	0	15.76	PASS
	HCH	75	0	14.28	PASS
16QAM	LCH	75	0	14.16	PASS
	MCH	75	0	14.23	PASS
	HCH	75	0	14.14	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20MHz					
Modulation	Channel	RB Configuration		26dB Bandwidth (MHz)	Verdict
		Size	Offset		
QPSK	LCH	100	0	18.59	PASS
	MCH	100	0	18.76	PASS
	HCH	100	0	18.67	PASS
16QAM	LCH	100	0	18.67	PASS
	MCH	100	0	18.76	PASS
	HCH	100	0	18.65	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.

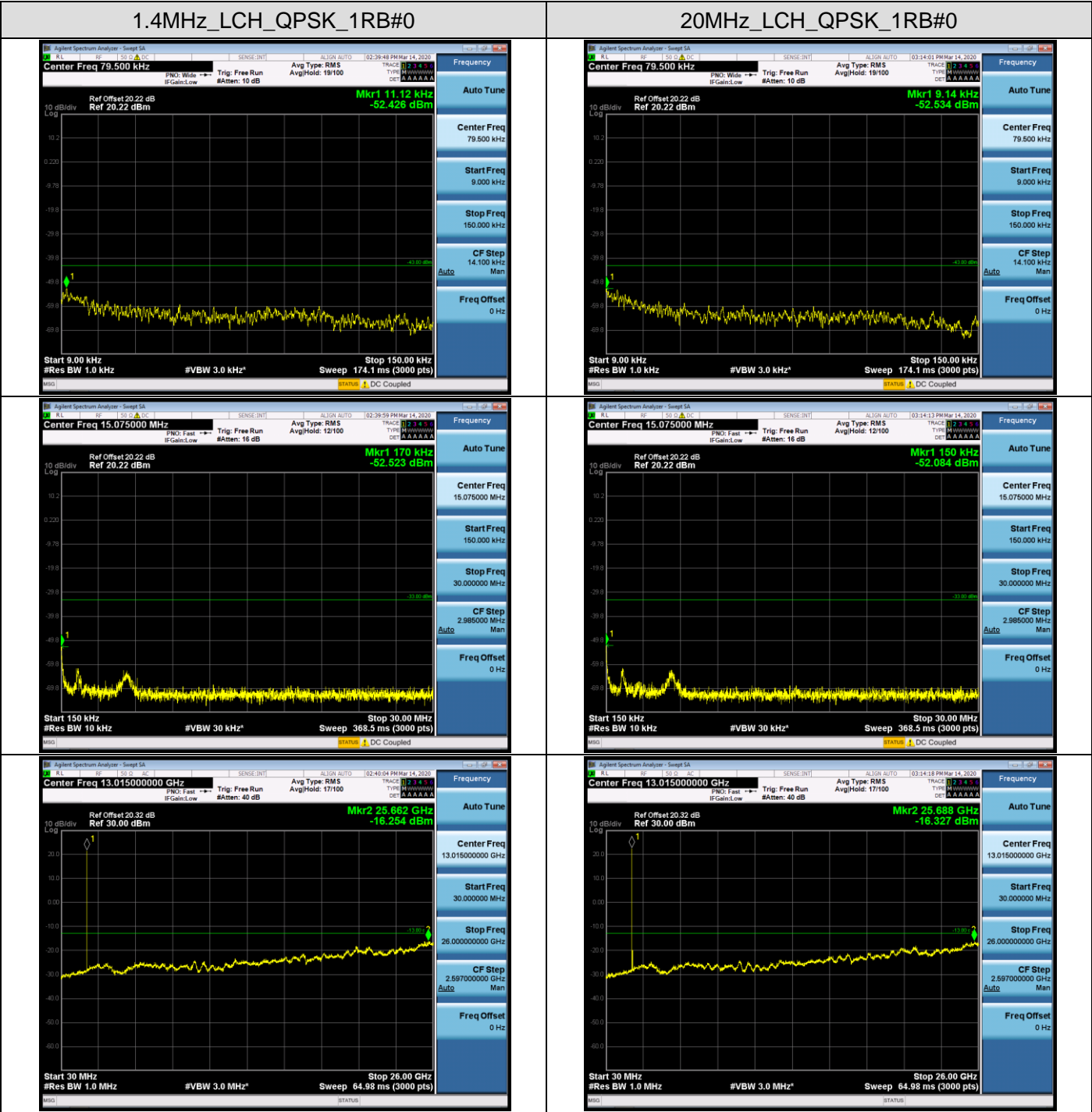
The minimum permissible attenuation level of any spurious emission is $43 + \log_{10}(P[\text{Watts}])$, where P is the transmitter power in Watts.

For Band 7:

- (i) $40 + 10 \log_{10} p$ from the channel edges to 5 MHz away
- (ii) $43 + 10 \log_{10} p$ between 5 MHz and X MHz from the channel edges, and
- (iii) $55 + 10 \log_{10} p$ at X MHz and beyond from the channel edges

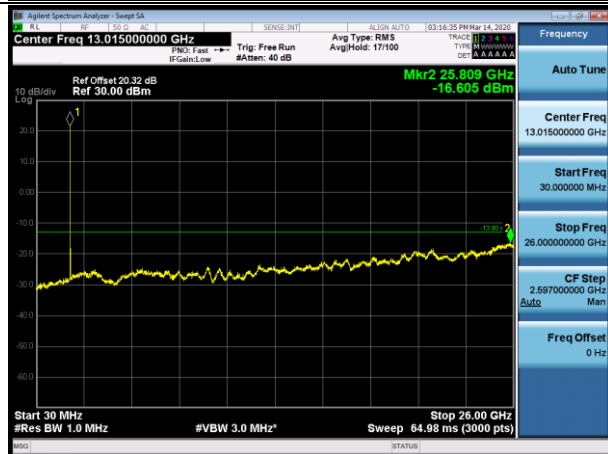
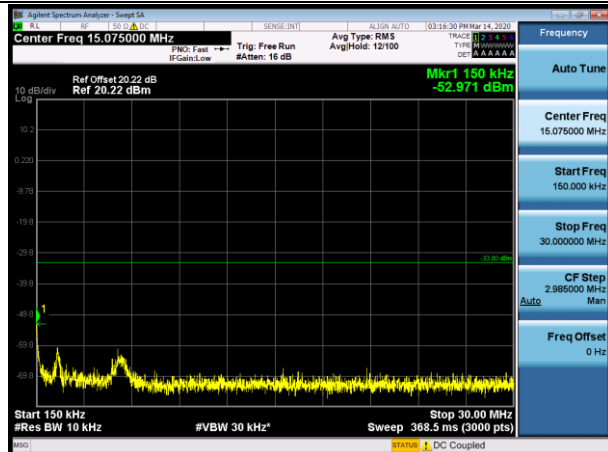
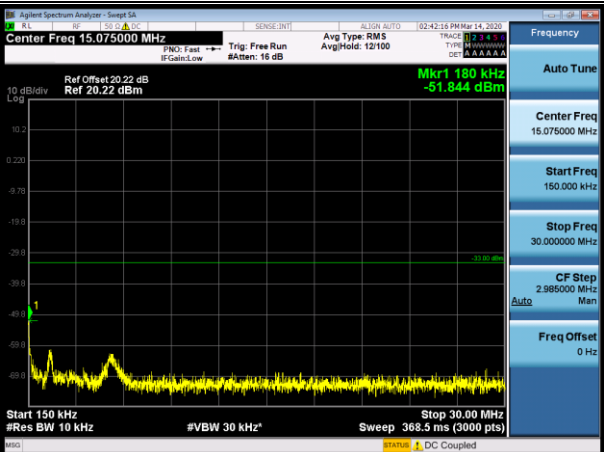
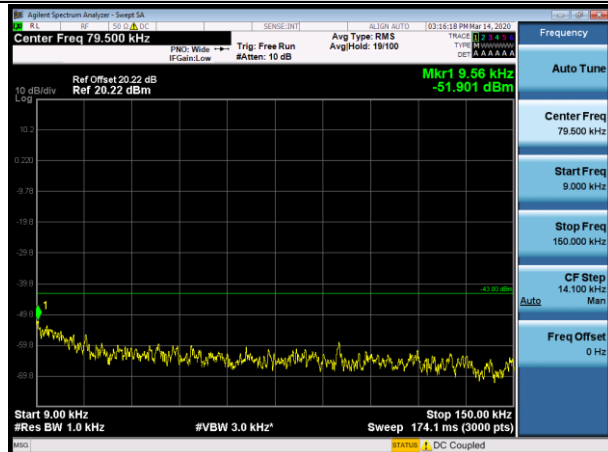
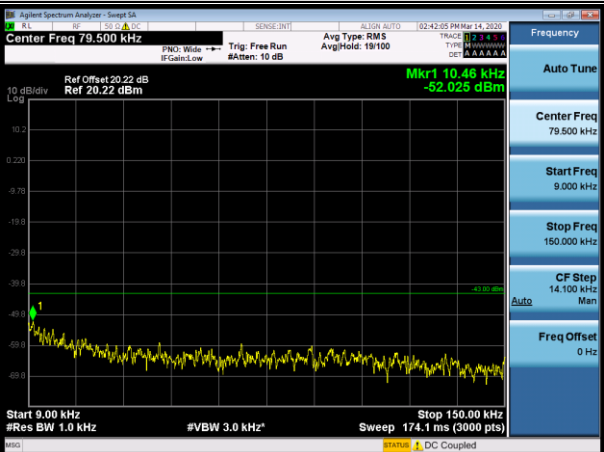
Please refers to Appendix C for compliance test plots for band edge

APPENDIX A TEST PLOTS FOR CONDUCTED SPURIOUS EMISSION
LTE BAND 2



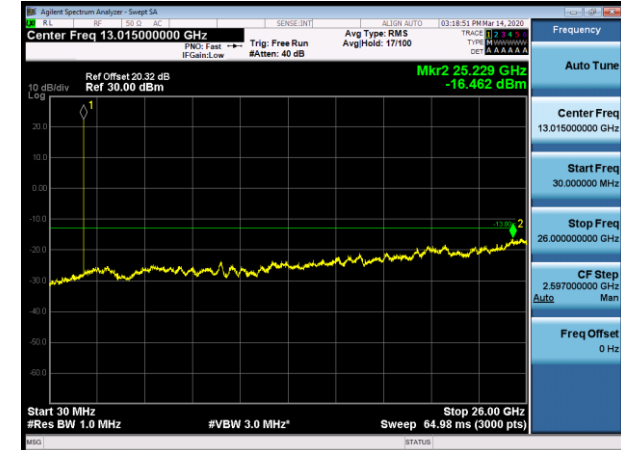
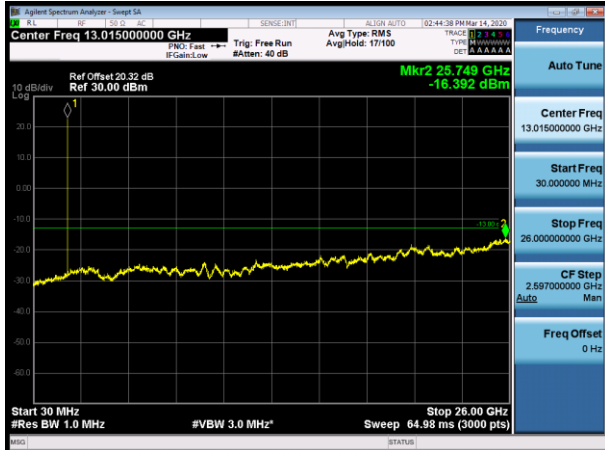
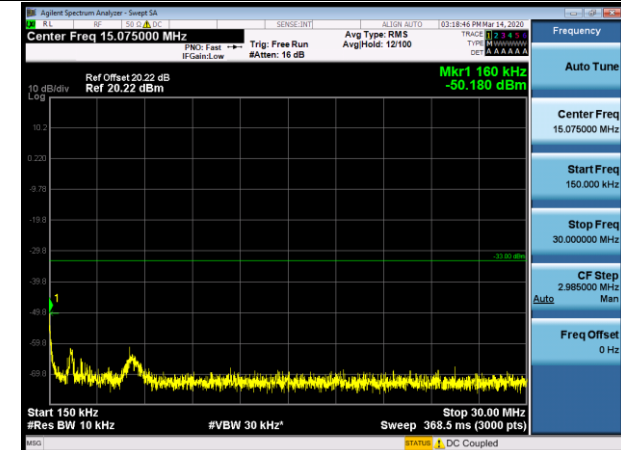
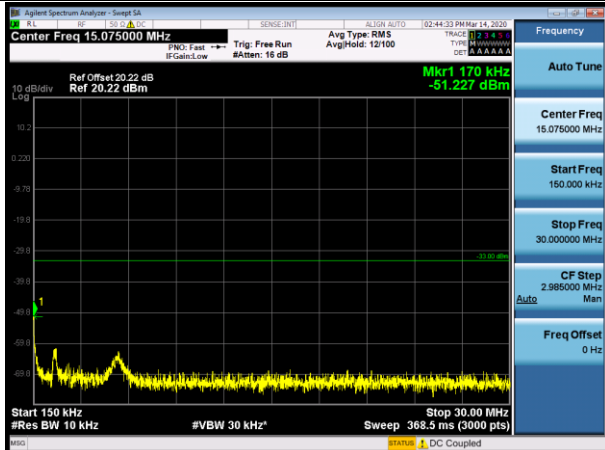
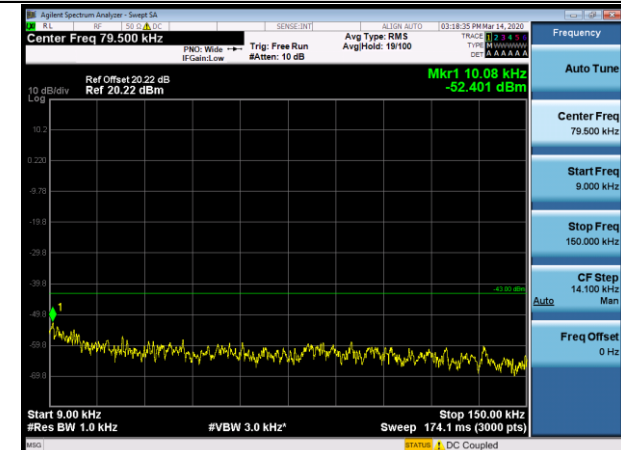
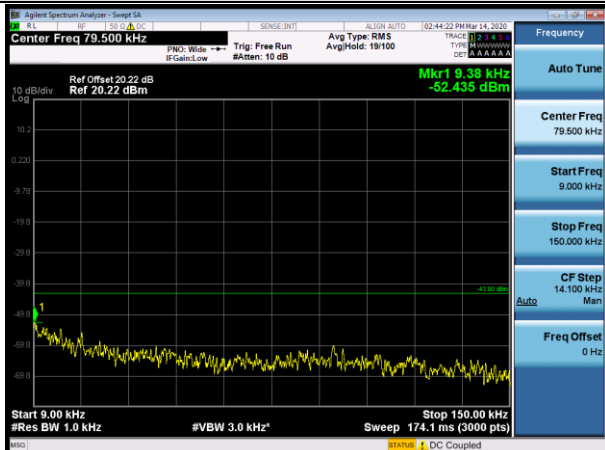
1.4MHz_MCH_QPSK_1RB#0

20MHz_MCH_QPSK_1RB#0

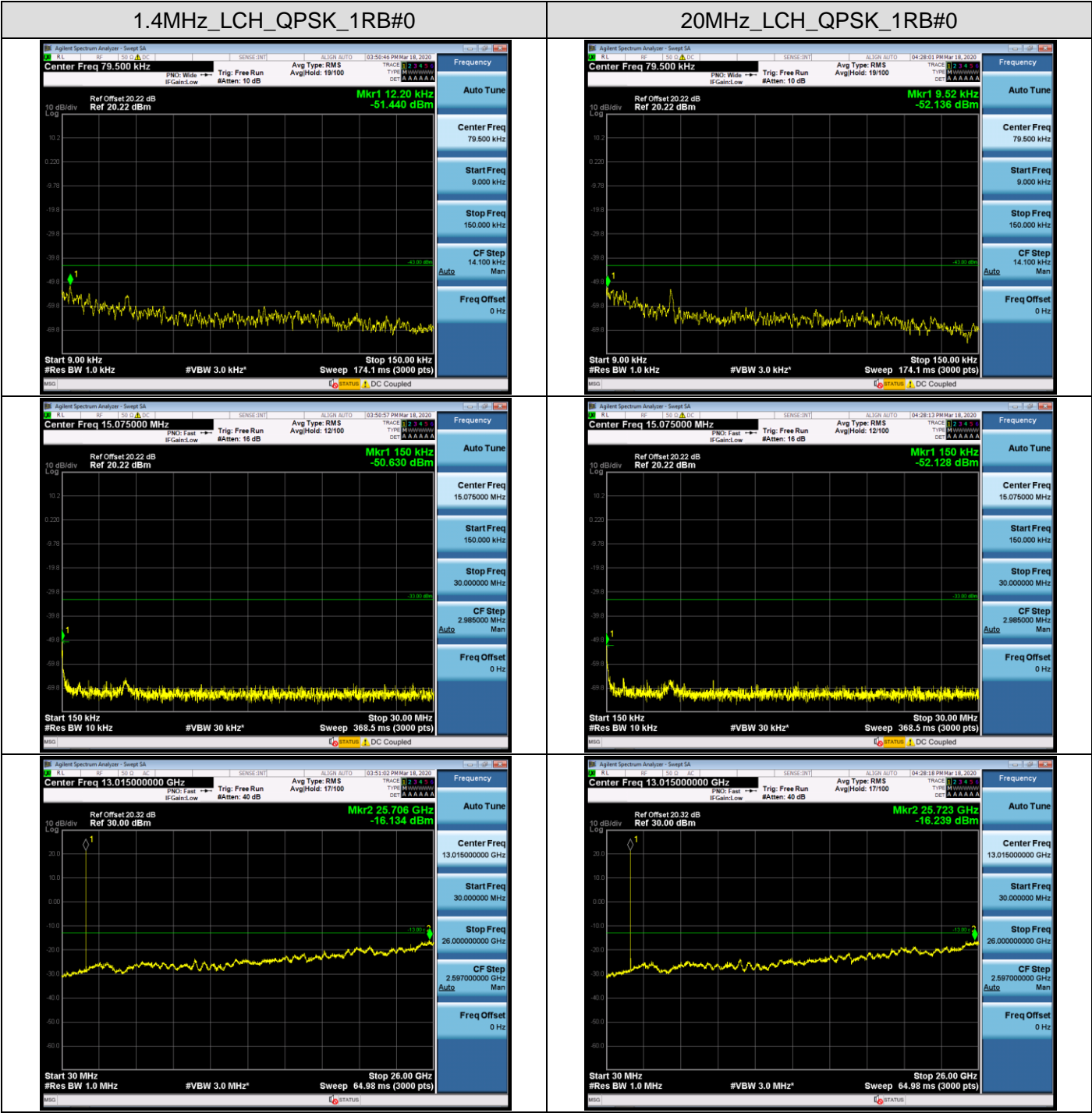


1.4MHz_HCH_QPSK_1RB#0

20MHz_HCH_QPSK_1RB#0

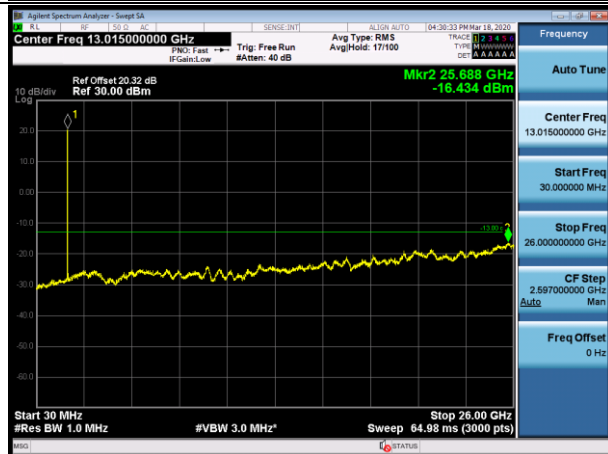
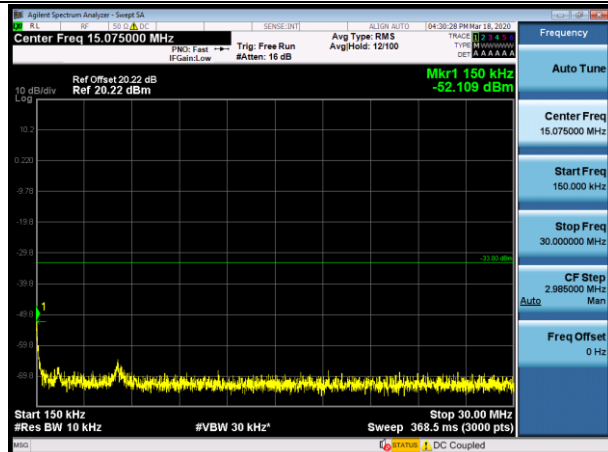
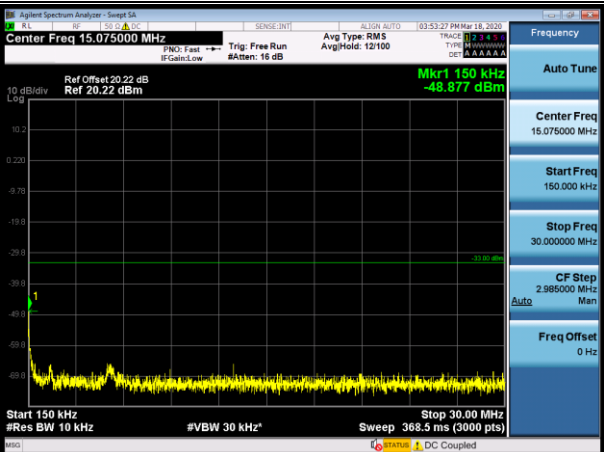
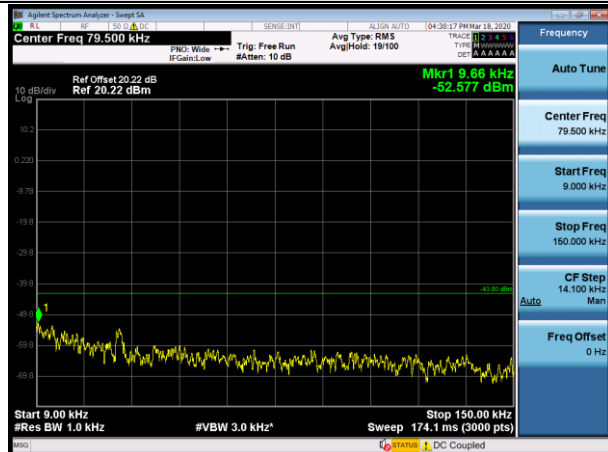
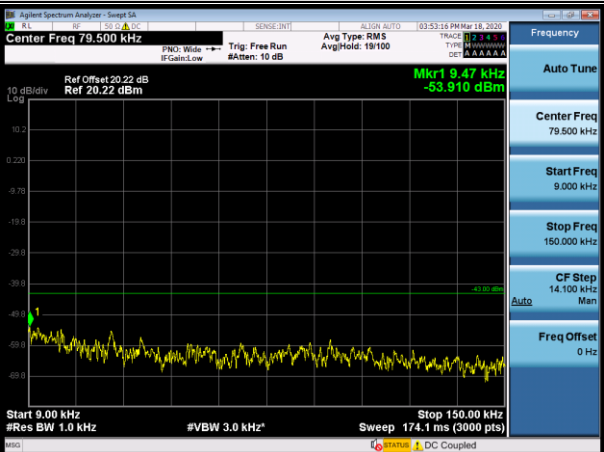


TEST PLOTS FOR CONDUCTED SPURIOUS EMISSION
LTE BAND 4



1.4MHz_MCH_QPSK_1RB#0

20MHz_MCH_QPSK_1RB#0



1.4MHz_HCH_QPSK_1RB#0

20MHz_HCH_QPSK_1RB#0

