REPORT No.: SZ22040005W08

TEST REPORT

APPLICANT	:	Great Talent Technology Limited
PRODUCT NAME	:	Smart Phone
MODEL NAME	:	ACK2326
BRAND NAME	:	ANS
FCC ID	:	2ALZM-ACK2326
STANDARD(S)	:	47 CFR Part 2 47 CFR Part 27, SubpartM
RECEIPT DATE	:	2022-04-01
TEST DATE	:	2022-04-18 to 2022-04-20
ISSUE DATE	:	2022-05-25

Edited by: Tang Jinde

Tang Jinde (Rapporteur)

Approved by: Shen Junsheng

Shen Junsheng (Supervisor)

MORLAB

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DIRECTORY

Change History		
Version	**Date**	**Reason for change**
1.0	2022-05-25	First edition

1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Great Talent Technology Limited
Applicant Address:	35F, HBC HuiLong Center Building-II Minzhi Street, Longhua, Shenzhen, P. R. China 518110
Manufacturer:	Great Talent Technology Limited
ManufacturerAddress:	35F, HBC HuiLong Center Building-II Minzhi Street, Longhua, Shenzhen, P. R. China 518110

1.2. Equipment Under Test (EUT) Description

Product Name:	Smart Phone	
Hardware Version:	Q6002_V1.0	
Software Version:	ACK2326V1.0.0B001	
IMEI:	990019120002086	
Modulation Type:	QPSK, 16QAM, 64QAM	
Operation Band:	Uplink:CA_41C	
Frequency Range:	LTE Band 41	Tx: 2496 MHz– 2690 MHz
		Rx: 2496 MHz– 2690 MHz
Channel Bandwidth:	LTE Band 41	5MHz, 10MHz, 15MHz, 20MHz
Antenna Type:	Fixed Internal Antenna	
Antenna Gain:	LTE Band 41	1.90dBi
Accessory Information:	**Battery**	
	Brand Name:	N/A
	Model No.:	BTE-3005
	Capacity:	3000mAh
	Rated Voltage:	3.80V
	Charge Limit:	4.35V
	Manufacturer:	Phenix New Energy (Hui Zhou) Co., Ltd.
	AC Adapter	
	Brand Name:	N/A
	Model No.:	TPA-46050200UU
	Rated Output:	5V⎓2000mA
	Rated Input:	100-240V～50/60Hz, 0.3A
	Manufacturer:	Shenzhen Tianyin Electronics Co., Ltd.

Note1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.3. Maximum ERP/EIRP and Emission Designator

Channel bandwidth	Maximum ERP/EIRP（W）			
LTE CA_41C	QPSK	16QAM	64QAM	256QAM
20+20	0.308	/	/	/

Channel bandwidth	Emission Designator (99%OBW)		
LTE CA_41C	QPSK	16QAM	64QAM
5+20	22M8G7D	22M4W7D	22M8D7W
10+15	23M6G7D	24M4W7D	24M3D7W
10+20	27M6G7D	27M7W7D	27M7D7W
15+10	23M1G7D	24M6W7D	23M2D7W
15+15	28M2G7D	28M5W7D	28M5D7W
15+20	32M4G7D	32M9W7D	32M9D7W
20+5	22M8G7D	23M2W7D	22M9D7W
20+10	27M7G7D	27M8W7D	27M7D7W
20+15	32M5G7D	32M9W7D	32M9D7W
20+20	37M3G7D	37M7W7D	37M7D7W

1.4. Test Standards and Results

The objective of the report is to perform testing according to Part 2 and Part 27 for the EUT FCC ID Certification:

No	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 27	Miscellaneous Wireless Communications Services

Test detailed items/section required by FCC rules and results are as below:

Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
2.1046, 27.50(h)(2),	Transmitter Conducted Output Power and ERP/EIRP	Mar02, 2022	LiHuaijie	PASS	No deviation
2.1049	Occupied Bandwidth	Mar 02, 2022	ChenHaiju	PASS	No deviation
2.1051, 27.53(m)(4),	Conducted Spurious Emissions	Mar04, 2022	Chen Haiju	PASS	No deviation
2.1051, 27.53(m)(4),	Band Edge	Mar 05, 2022	Chen Haiju	PASS	No deviation
2.1051, 27.53(m)(4),	Radiated Spurious Emissions	Apr 11, 2022	Su Zhan	PASS	No deviation

Note 1: The tests were performed according to the method of measurements prescribed in KDB971168 D01 v03 and ANSI/TIA-603-E-2016.

Note 2: The path loss during the RF test is calibrated to correct the results by the offset setting in the test equipment. The ref offset 8dB contains two parts that cable loss 5dB and Attenuator3dB.

1.5. Environmental Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 - 60
Atmospheric Pressure (kPa):	86-106

2. 47 CFR Part 2and 27M Requirements

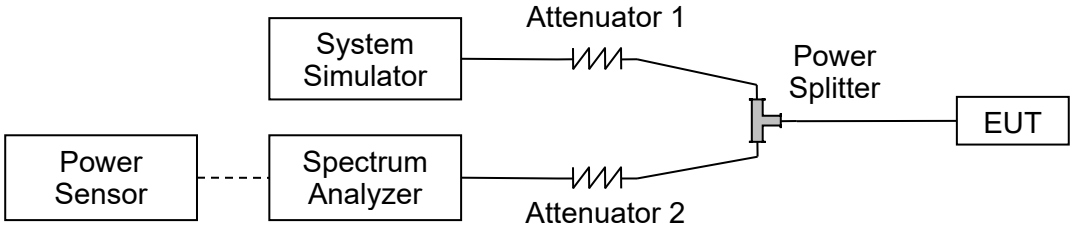
2.1. Transmitter Conducted Output Power And ERP/EIPR

2.1.1. Requirement

According to FCC section 2.1046(a) for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

According to FCC section 27.50 (h)(2) for LTE Band 7/41, Mobile and other user stations. Mobile stations are limited to 2 watts E.I.R.P. All user stations are limited to 2 watts transmitter output power.

2.1.1. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.1.2. Test procedure

KDB 971168 D01v03 Section 5.2 and ANSI/TIA-603-E-2016.

EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)
ERP (dBm) = EIPR (dBm) - 2.15

2.1.3. Result

Conducted Output Power

LTE CA_41C								
Combination:20MHz+20MHz(100RB+100RB)								
PCC Channel (3GPP)	SCC Channel	Modulation	PCC		SCC		Total RB Size	Measured Power(dBm)
			RB Size	RB Offset	RB Size	RB Offset		
39750	39948	QPSK	1	0	100	0	1	22.98
40521	40719	QPSK	1	0	100	0	1	22.76
41292	41490	QPSK	1	0	100	0	1	22.27

Effective Radiated Power and Effective Isotropic Radiated Power

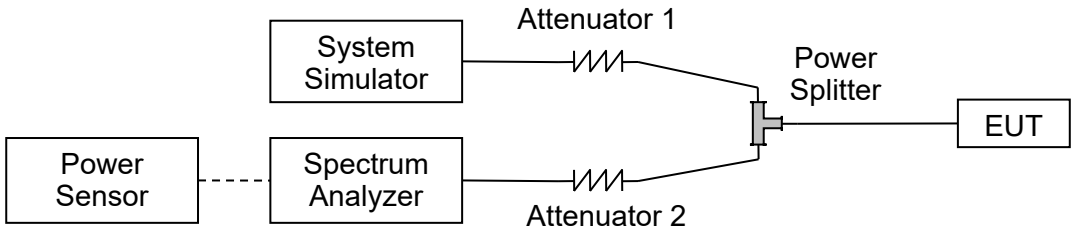
LTE CA_41C									
Combination:20MHz+20MHz(100RB+100RB)									
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Measured Power(dBm)	Measured EIRP(W)
			RB Size	RB Offset	RB Size	RB Offset			
39750	39948	QPSK	1	0	100	0	1	24.88	0.308
40521	40719	QPSK	1	0	100	0	1	24.66	0.292
41292	41490	QPSK	1	0	100	0	1	24.17	0.261

2.2. Occupied Bandwidth

2.2.1. Requirement

According to FCC section 2.1049, the occupied bandwidth 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. Occupied bandwidth is also known as the 99% emission bandwidth.

2.2.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.2.3. Test procedure

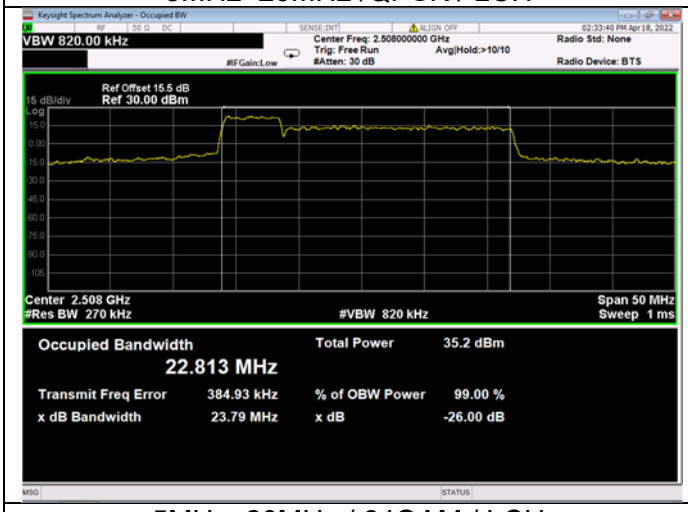
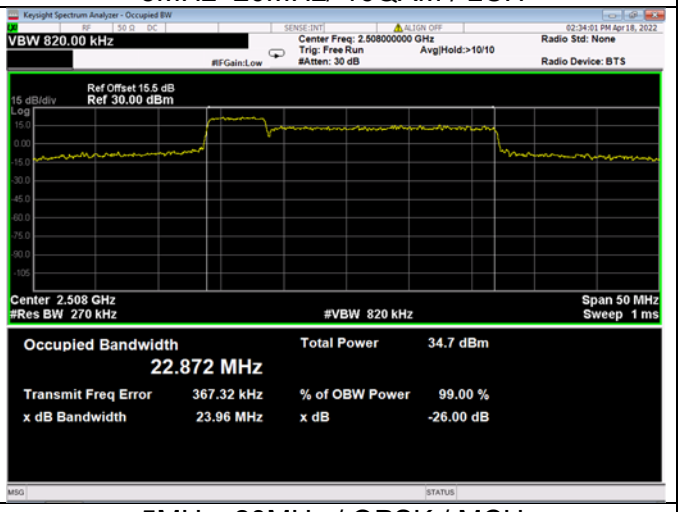
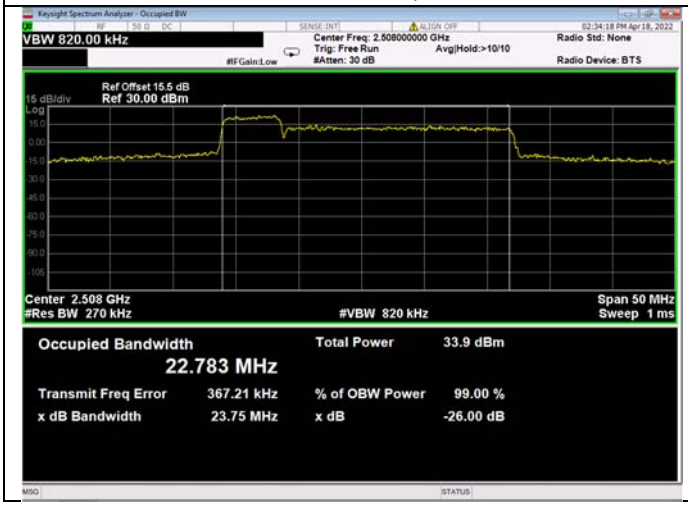
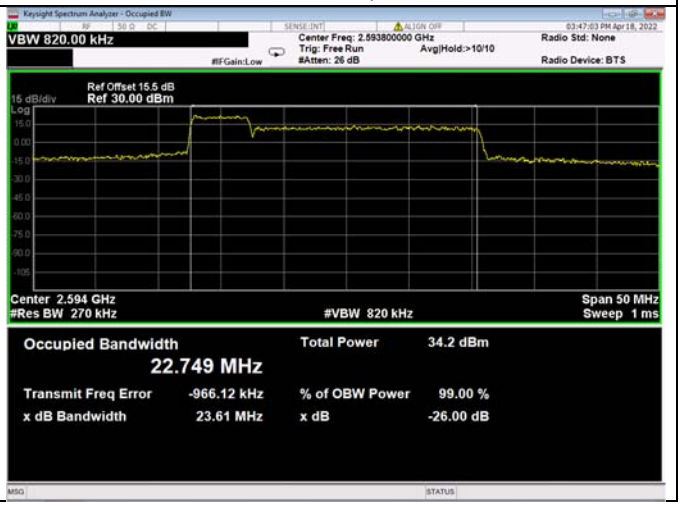
KDB 971168 D01v03 Section 4.1 and ANSI/TIA-603-E-2016.

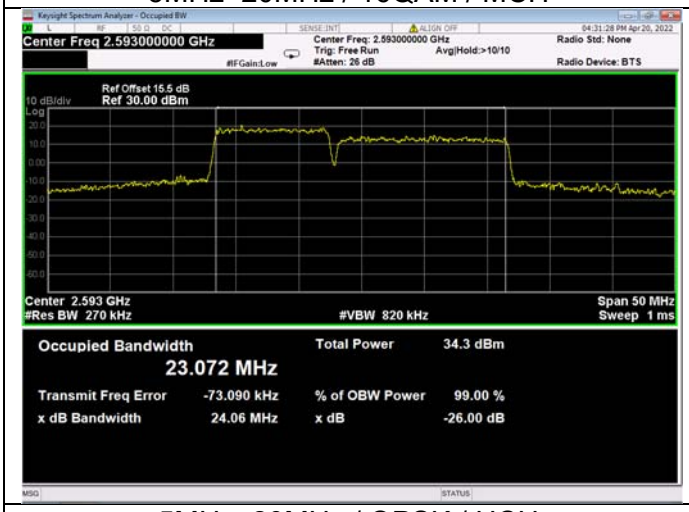
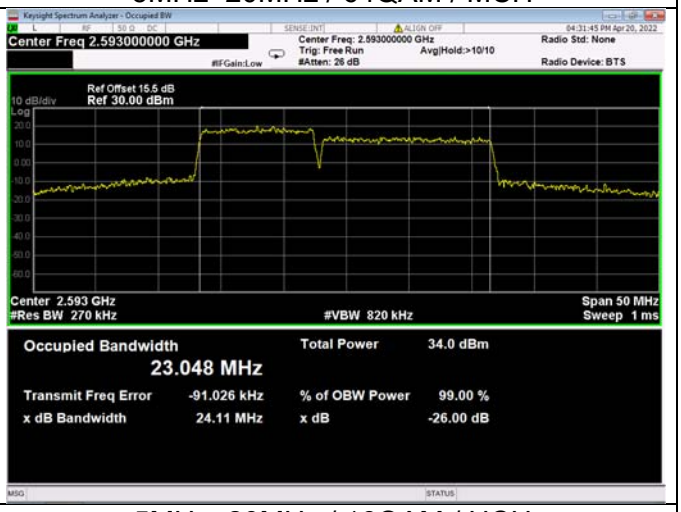
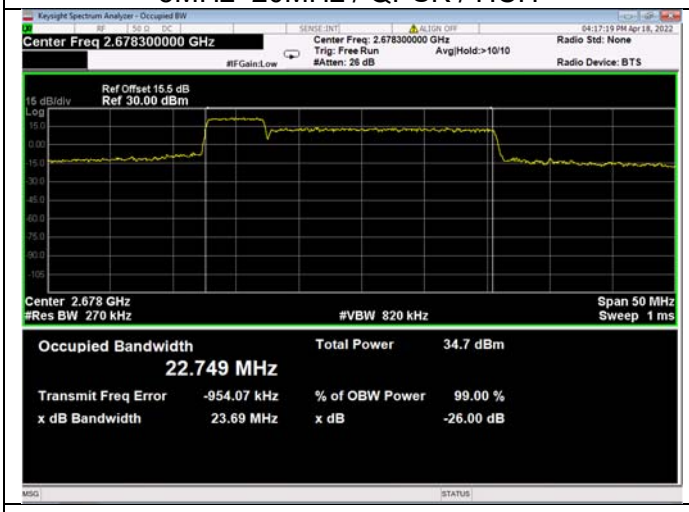
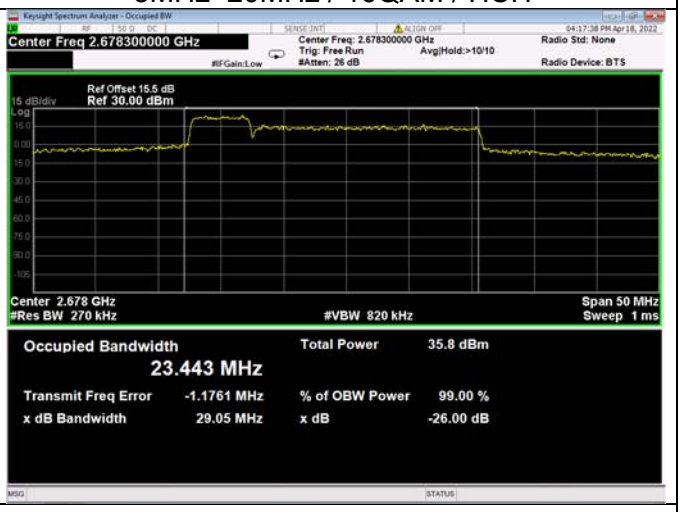
2.2.4. Test Result

LTE CA_41C				
BW(MHz)	**ChannelLevel**	**Modulation**	**99% BW(MHz)**	**26dB BW(MHz)**
5M+20MHz	Low	QPSK	22.81	23.79
	Low	16QAM	22.87	23.96
	Low	64QAM	22.78	23.75
	Mid	QPSK	22.75	23.61
	Mid	16QAM	22.79	23.75
	Mid	64QAM	22.77	23.66
	High	QPSK	22.75	23.69
	High	16QAM	23.44	29.05
	High	64QAM	23.85	31.75
10M+15MHz	Low	QPSK	23.17	29.49
	Low	16QAM	24.42	46.00
	Low	64QAM	24.37	40.90
	Mid	QPSK	23.03	26.37
	Mid	16QAM	23.07	24.06
	Mid	64QAM	23.05	24.11
	High	QPSK	23.60	41.74
	High	16QAM	23.48	46.59
	High	64QAM	23.84	38.29
10M+20MHz	Low	QPSK	27.62	28.97
	Low	16QAM	27.61	28.71
	Low	64QAM	27.63	28.77
	Mid	QPSK	27.56	28.75
	Mid	16QAM	27.62	28.70
	Mid	64QAM	27.66	29.23
	High	QPSK	27.58	28.78
	High	16QAM	27.70	31.22
	High	64QAM	27.75	31.67
15M+10MHz	Low	QPSK	23.07	24.27
	Low	16QAM	24.67	47.13
	Low	64QAM	23.09	24.47
	Mid	QPSK	23.09	24.52
	Mid	16QAM	23.13	24.18
	Mid	64QAM	23.10	24.36
	High	QPSK	23.13	24.27
	High	16QAM	23.38	46.57
	High	64QAM	23.21	36.72

15M+15MHz	Low	QPSK	28.26	34.52
	Low	16QAM	28.40	42.68
	Low	64QAM	28.41	44.11
	Mid	QPSK	28.28	38.41
	Mid	16QAM	28.34	38.76
	Mid	64QAM	28.41	45.22
	High	QPSK	28.25	30.89
	High	16QAM	28.57	52.56
	High	64QAM	28.59	55.03
15M+20MHz	Low	QPSK	32.40	33.94
	Low	16QAM	32.50	33.83
	Low	64QAM	32.45	34.58
	Mid	QPSK	32.42	33.97
	Mid	16QAM	32.54	34.44
	Mid	64QAM	32.49	34.11
	High	QPSK	32.44	33.96
	High	16QAM	32.91	66.07
	High	64QAM	32.99	62.00
20M+5MHz	Low	QPSK	22.85	24.03
	Low	16QAM	22.84	23.86
	Low	64QAM	22.87	23.94
	Mid	QPSK	22.86	23.94
	Mid	16QAM	22.89	23.97
	Mid	64QAM	22.92	23.88
	High	QPSK	22.88	24.00
	High	16QAM	23.29	37.93
	High	64QAM	22.92	28.67
20M+10MHz	Low	QPSK	27.68	29.07
	Low	16QAM	27.68	37.66
	Low	64QAM	27.76	37.26
	Mid	QPSK	27.72	29.20
	Mid	16QAM	27.70	33.33
	Mid	64QAM	27.70	36.47
	High	QPSK	27.69	29.00
	High	16QAM	27.83	48.05
	High	64QAM	27.79	39.09

20M+15MHz	Low	QPSK	32.42	34.04
	Low	16QAM	32.54	35.56
	Low	64QAM	32.51	36.99
	Mid	QPSK	32.49	34.08
	Mid	16QAM	32.57	35.28
	Mid	64QAM	32.55	34.44
	High	QPSK	32.53	34.25
	High	16QAM	32.95	67.48
	High	64QAM	32.95	64.76
20M+20MHz	Low	QPSK	37.18	38.84
	Low	16QAM	37.34	49.01
	Low	64QAM	37.44	59.38
	Mid	QPSK	37.31	44.83
	Mid	16QAM	37.56	60.39
	Mid	64QAM	37.45	59.42
	High	QPSK	37.30	39.07
	High	16QAM	37.79	73.82
	High	64QAM	37.79	69.64

LTE Band 41C	
5MHz+20MHz /QPSK / LCH	5MHz+20MHz/ 16QAM / LCH
	
5MHz+20MHz / 64QAM / LCH	5MHz+20MHz / QPSK / MCH
	

5MHz+20MHz / 16QAM / MCH	5MHz+20MHz / 64QAM / MCH
	
5MHz+20MHz / QPSK / HCH	5MHz+20MHz / 16QAM / HCH
	
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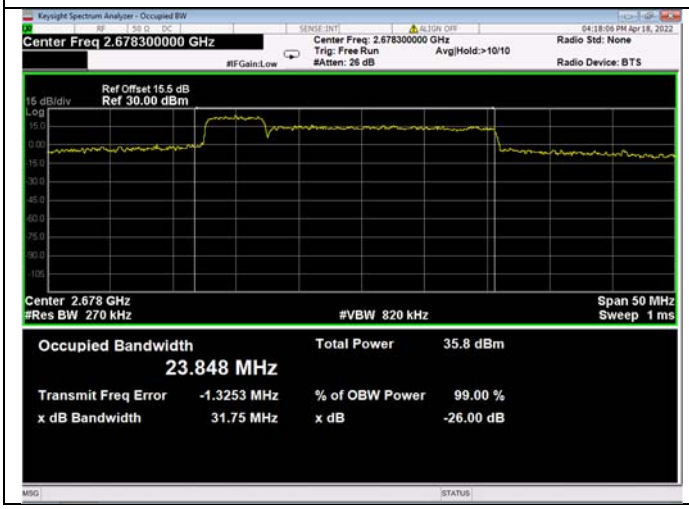
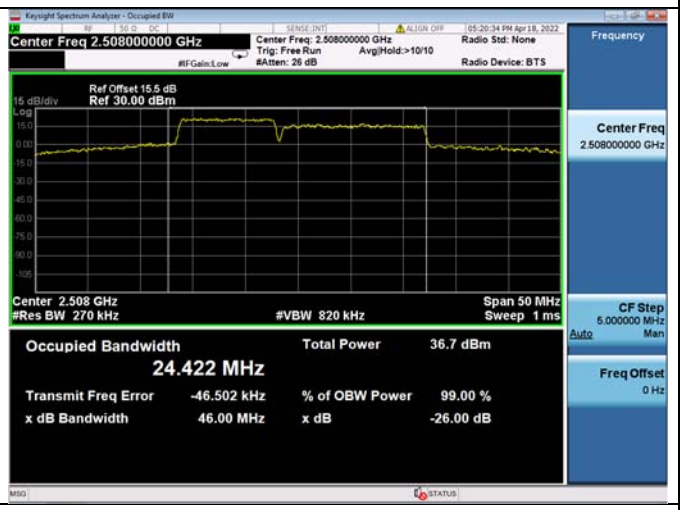
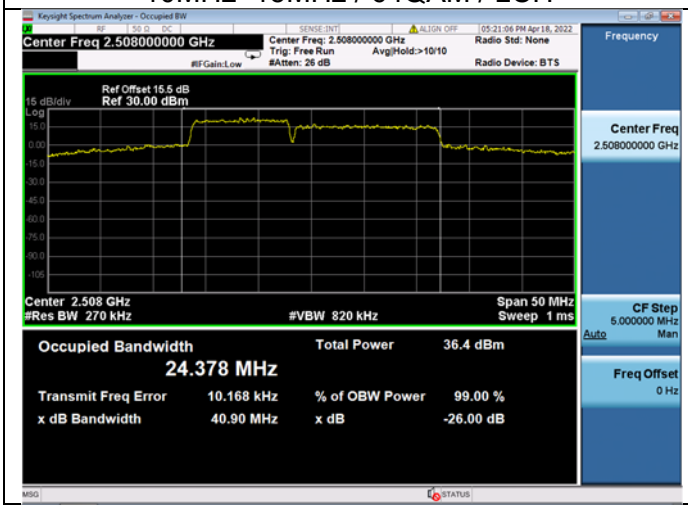
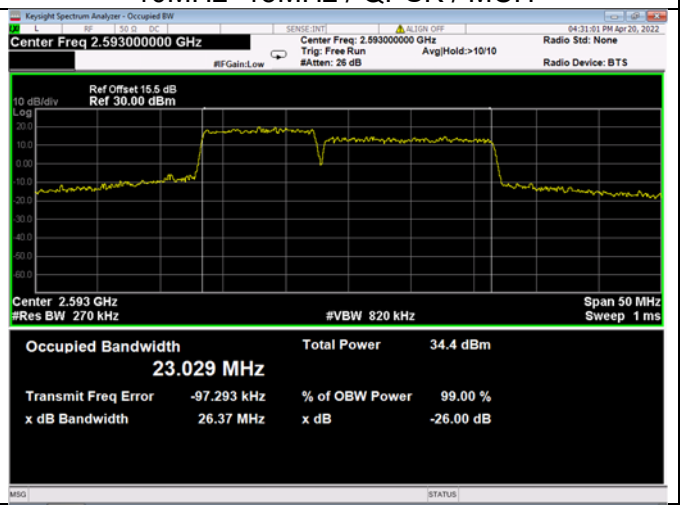
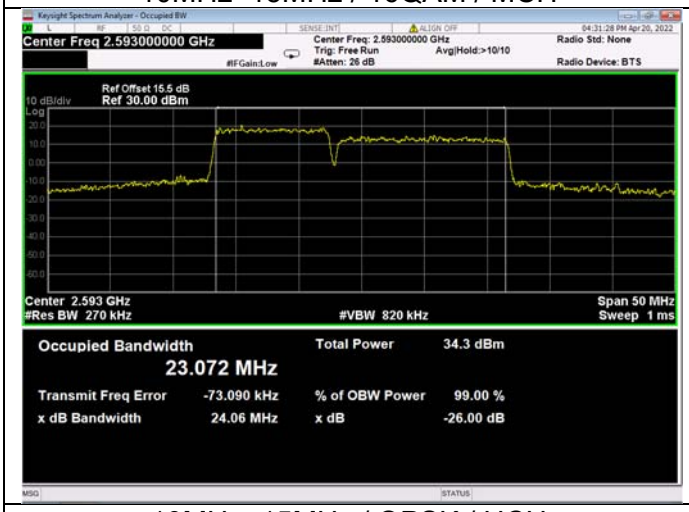
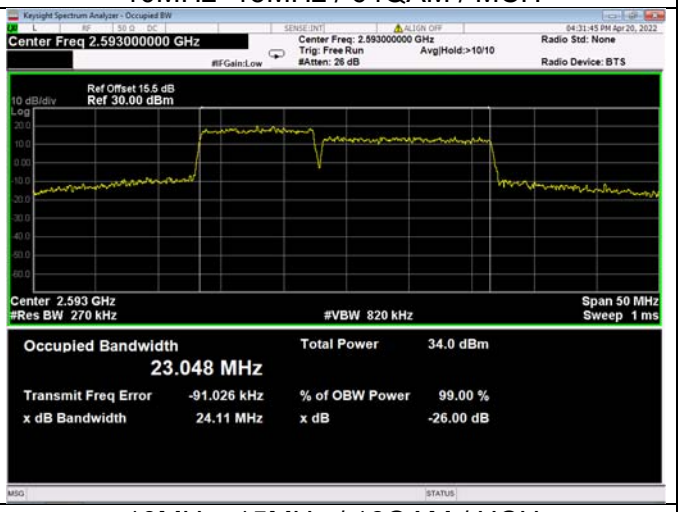
	N/A

LTE CA_41C	
10MHz+15MHz /QPSK / LCH	10MHz+15MHz / 16QAM / LCH
	
10MHz+15MHz / 64QAM / LCH	10MHz+15MHz / QPSK / MCH
	

10MHz+15MHz / 16QAM / MCH



10MHz+15MHz / 64QAM / MCH



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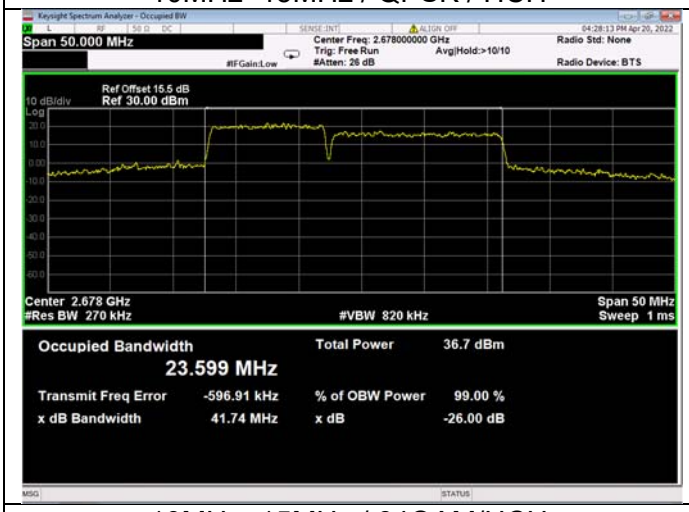
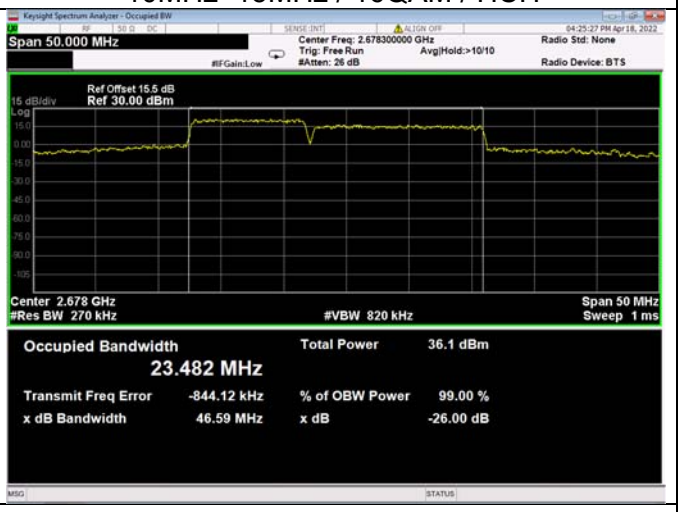
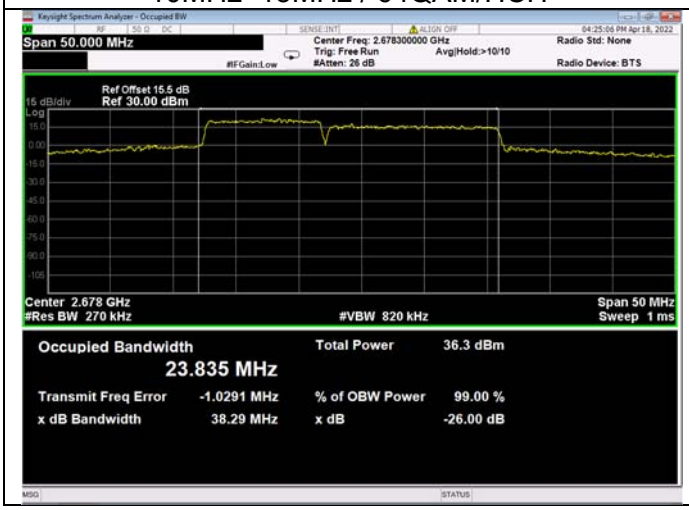


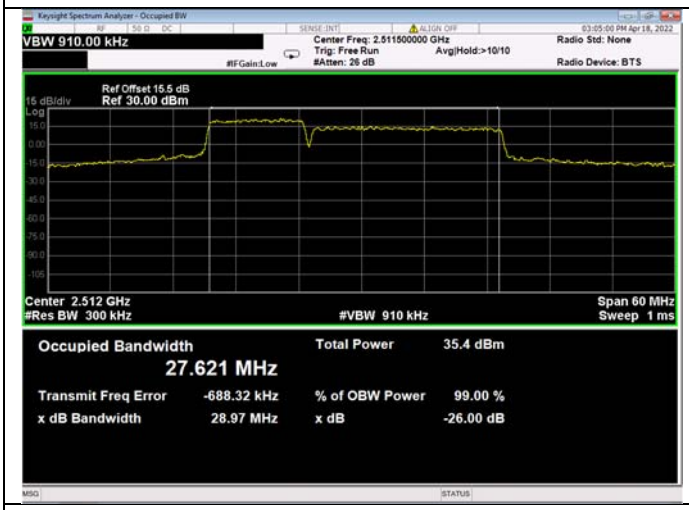
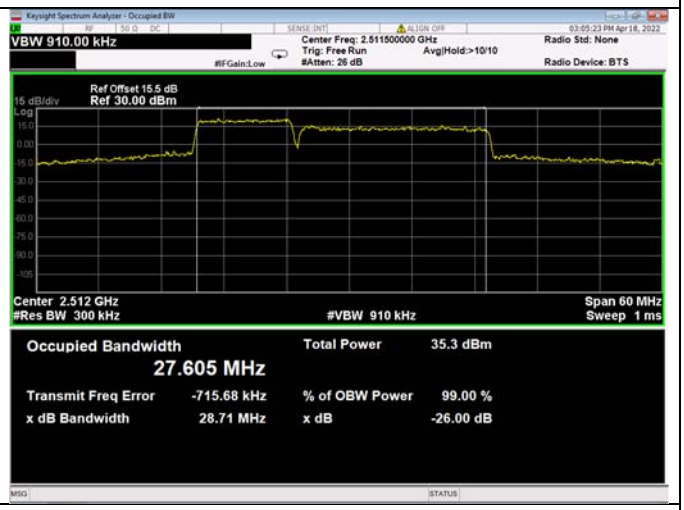
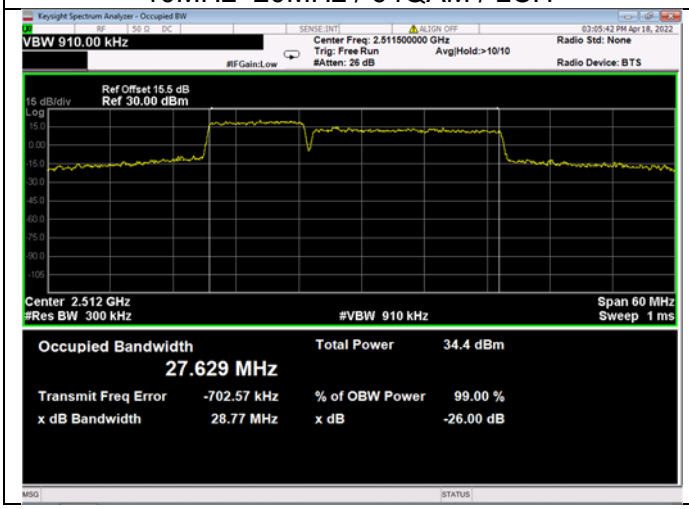
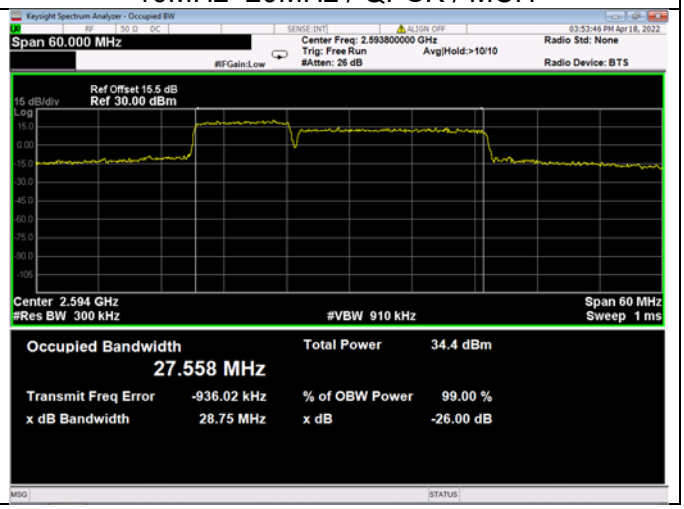
10MHz+15MHz / 16QAM / HCH

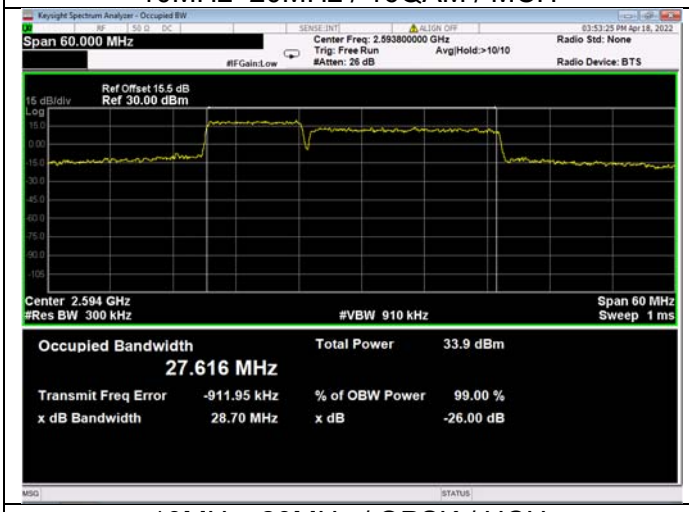
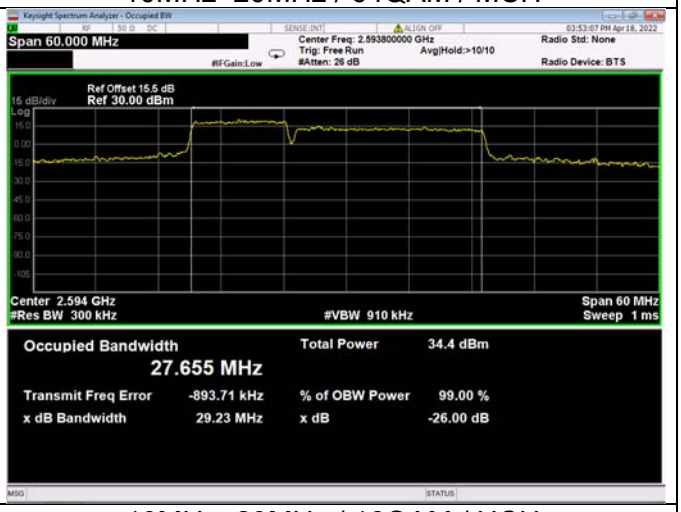
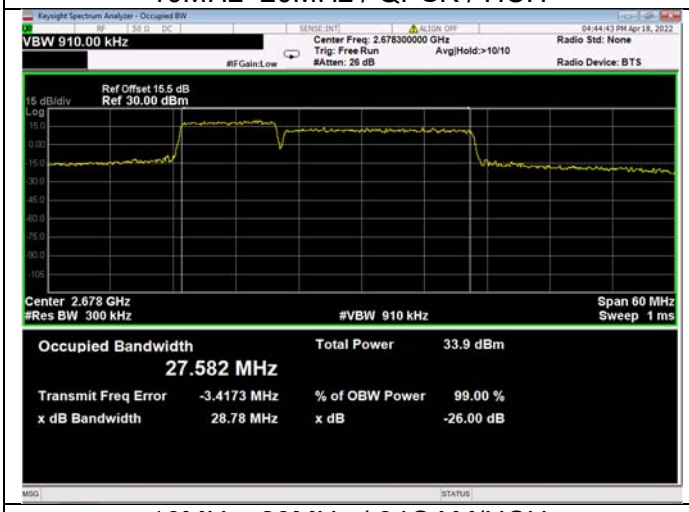
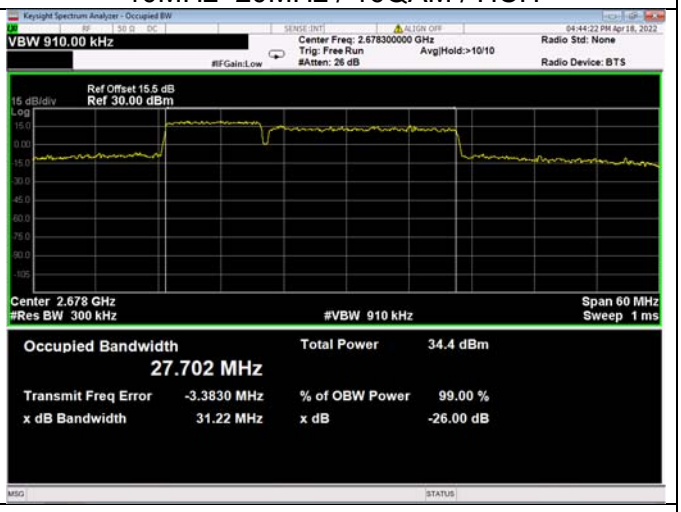
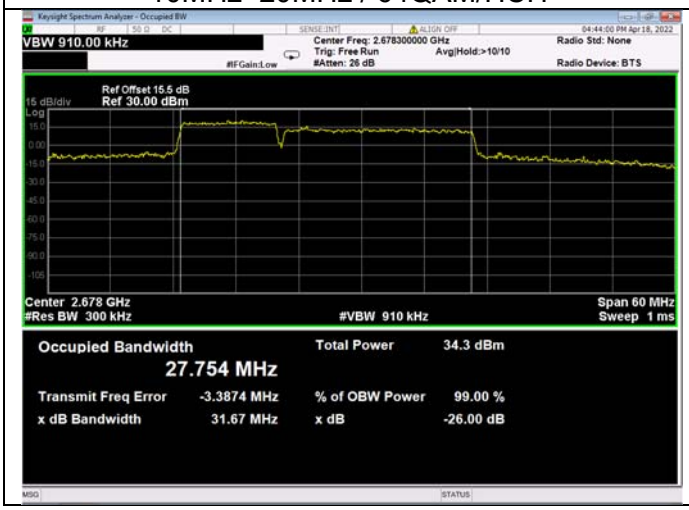


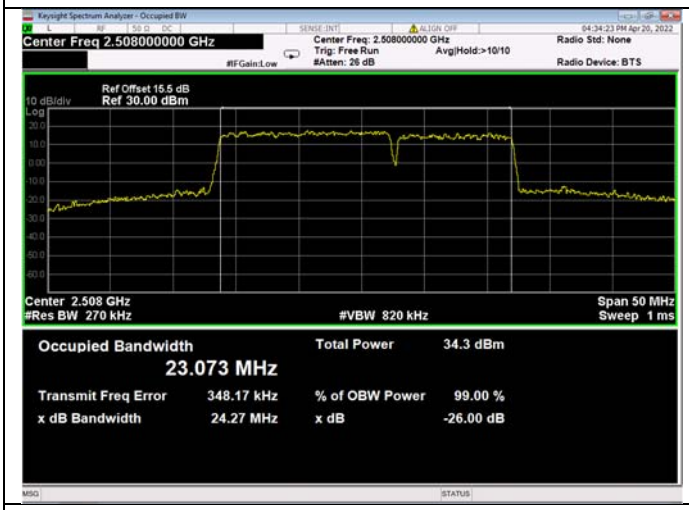
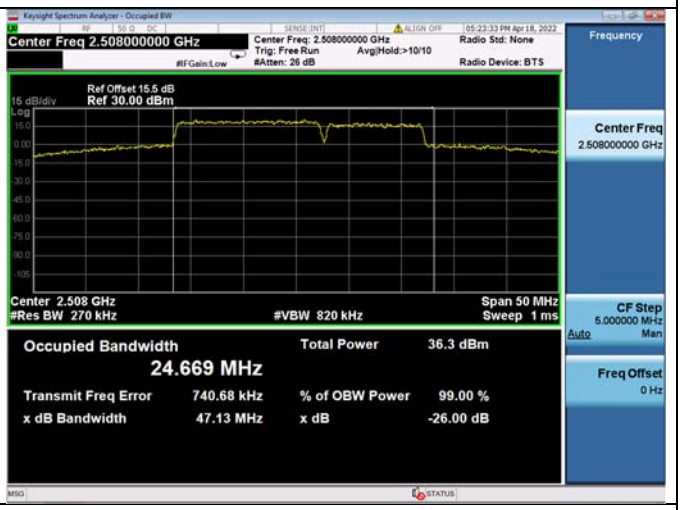
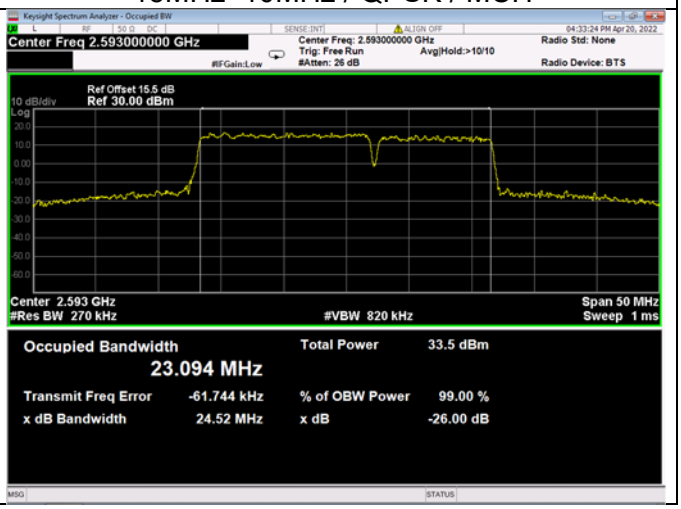
10MHz+15MHz / 64QAM/HCH

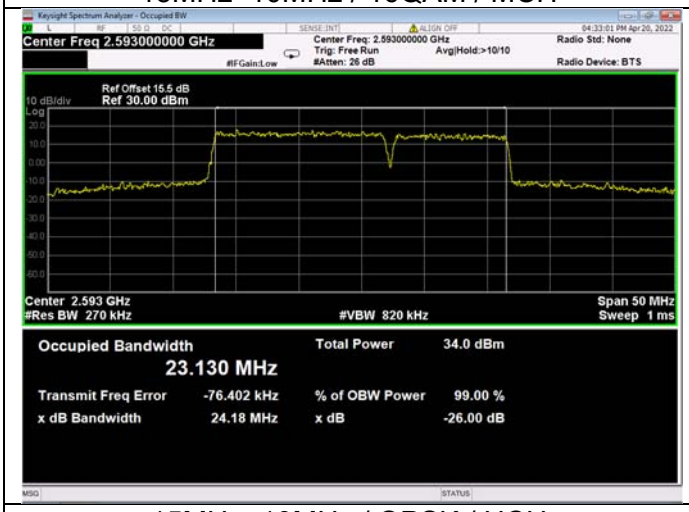
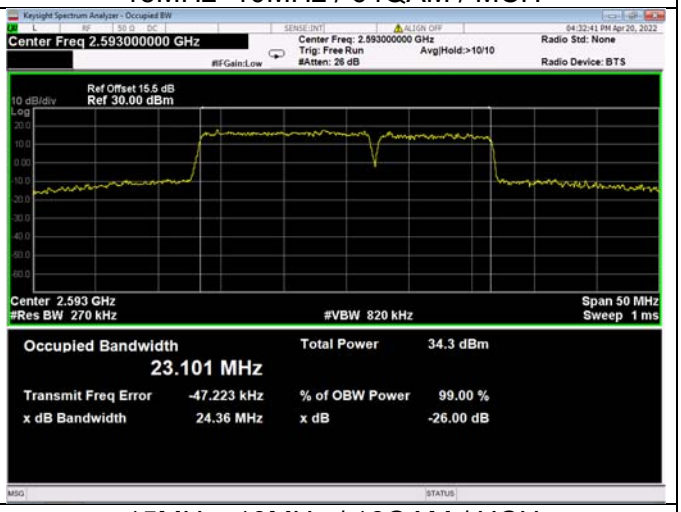
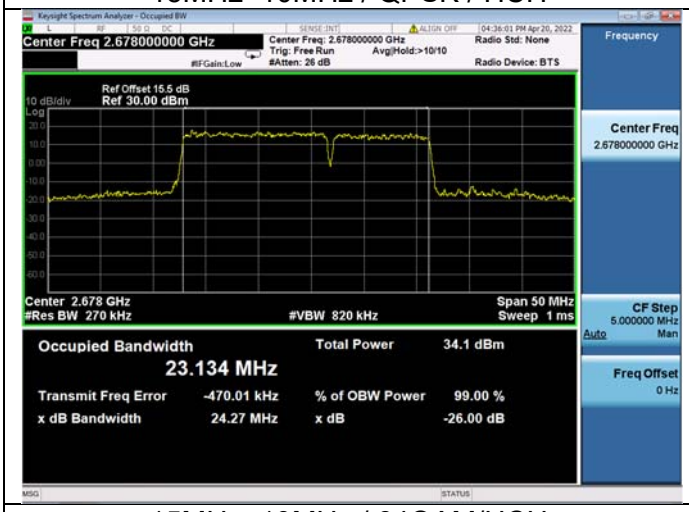
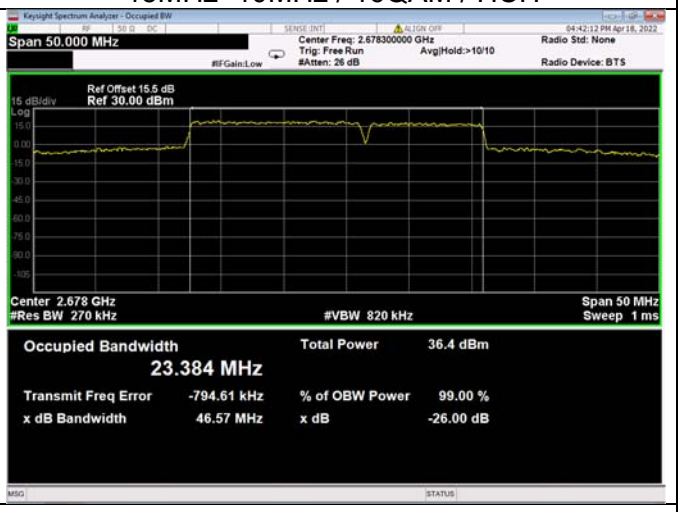
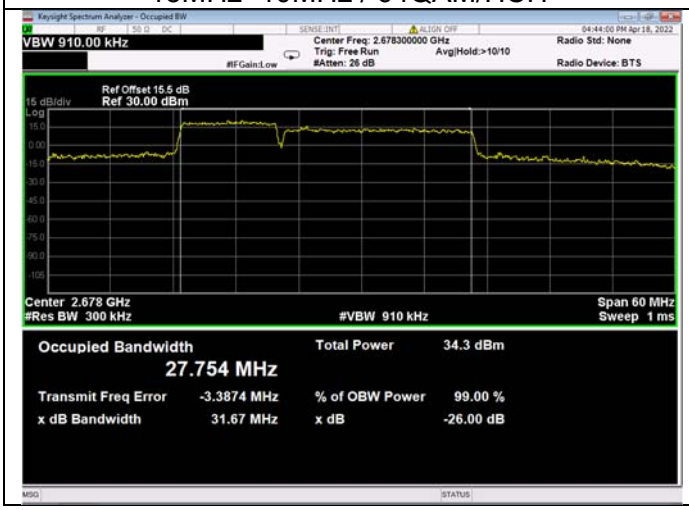


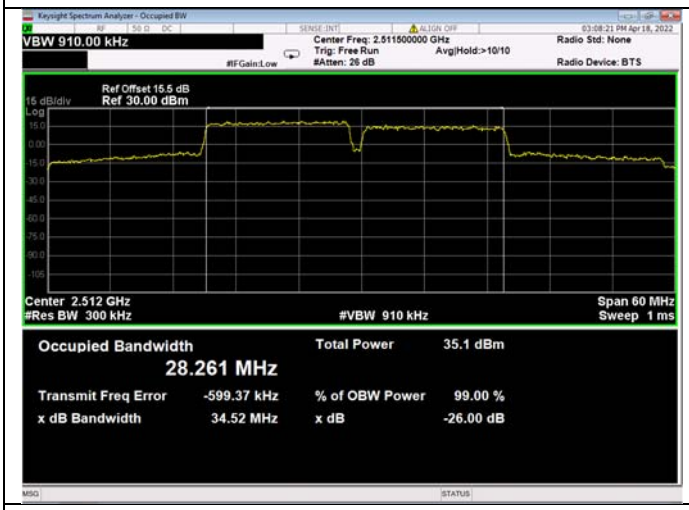
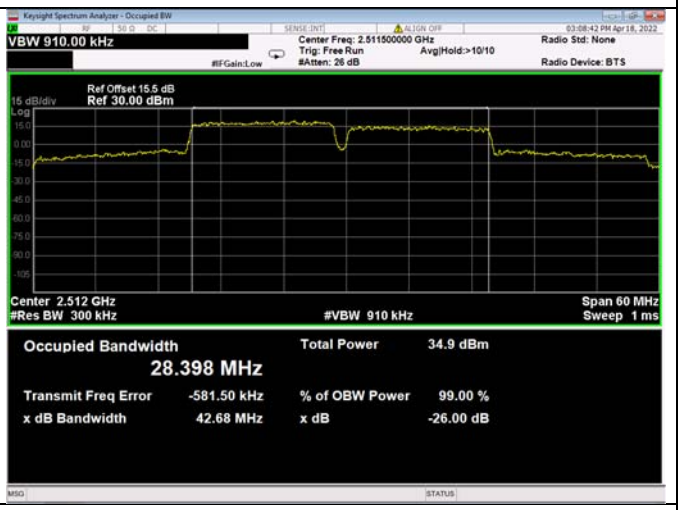
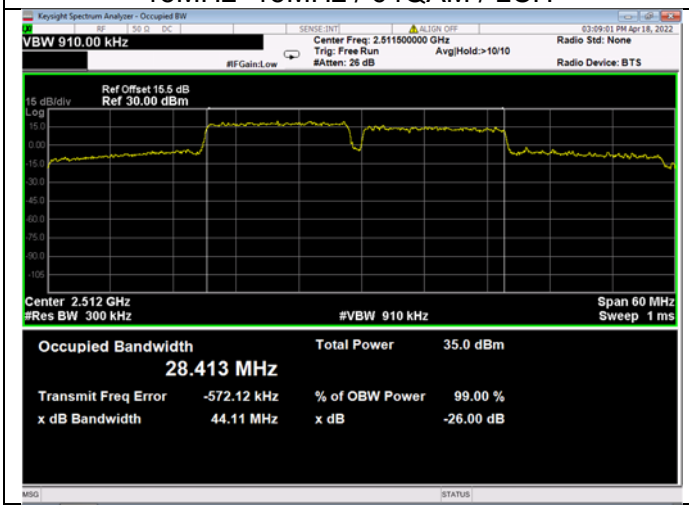
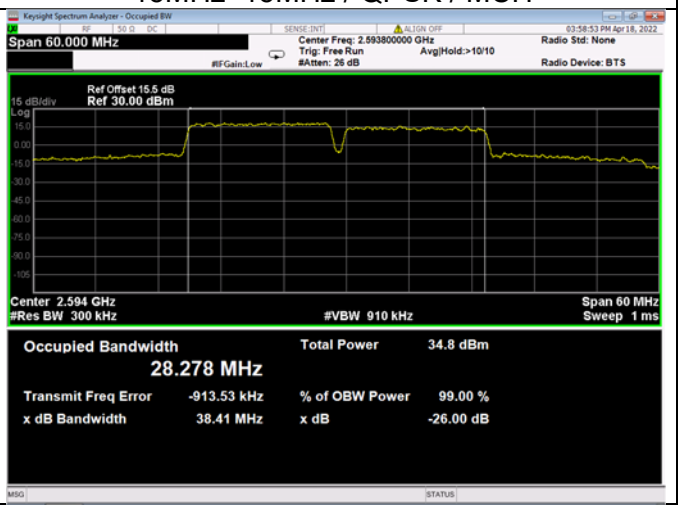
N/A

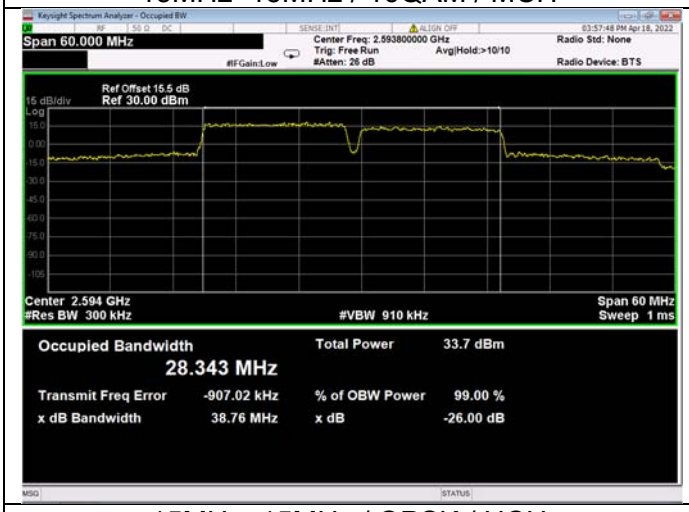
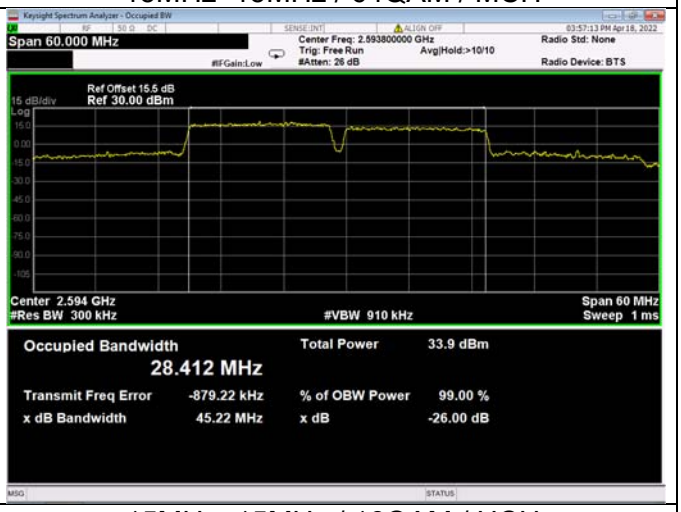
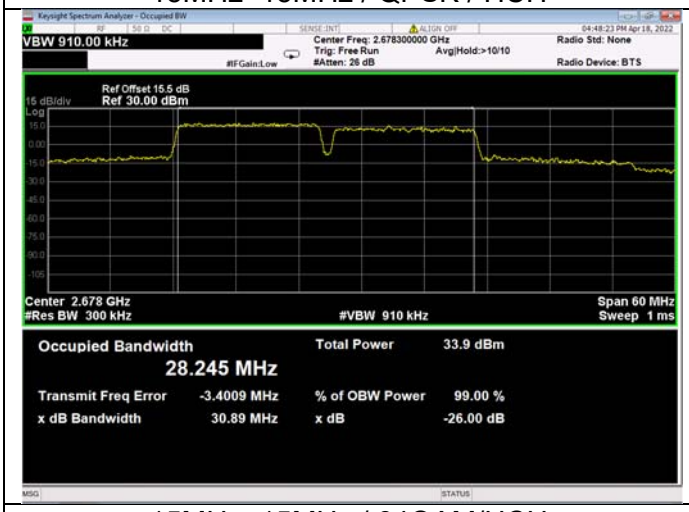
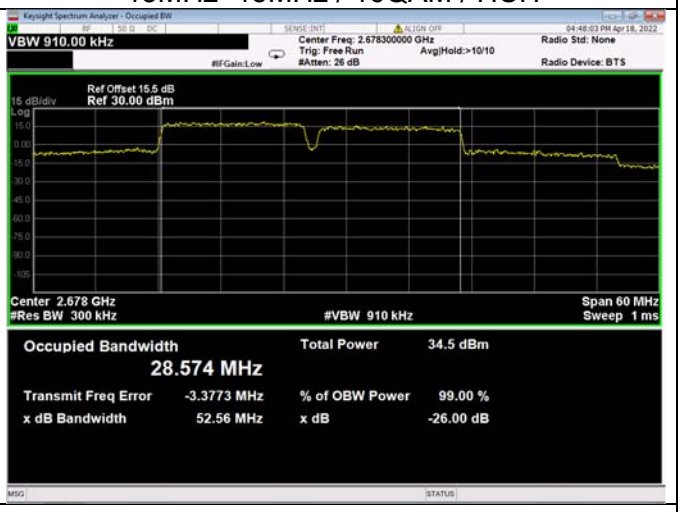
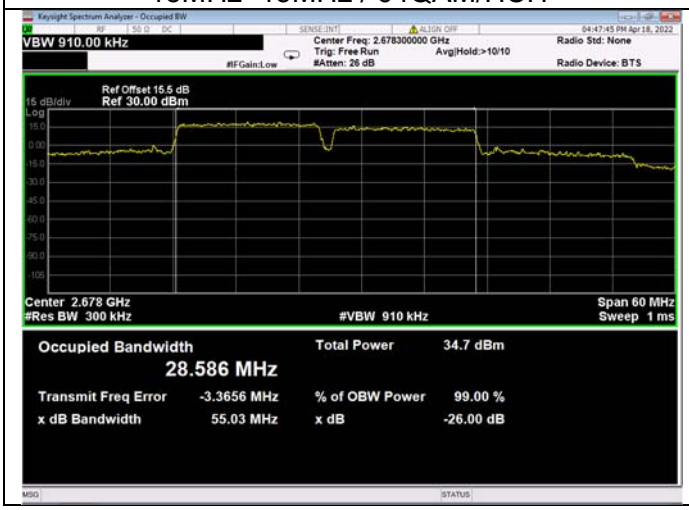
LTE CA_41C	
10MHz+20MHz /QPSK / LCH	10MHz+20MHz / 16QAM / LCH
	
10MHz+20MHz / 64QAM / LCH	10MHz+20MHz / QPSK / MCH
	

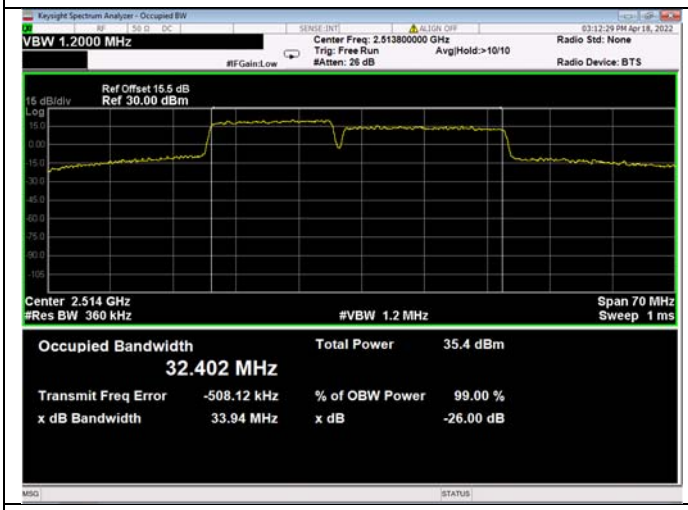
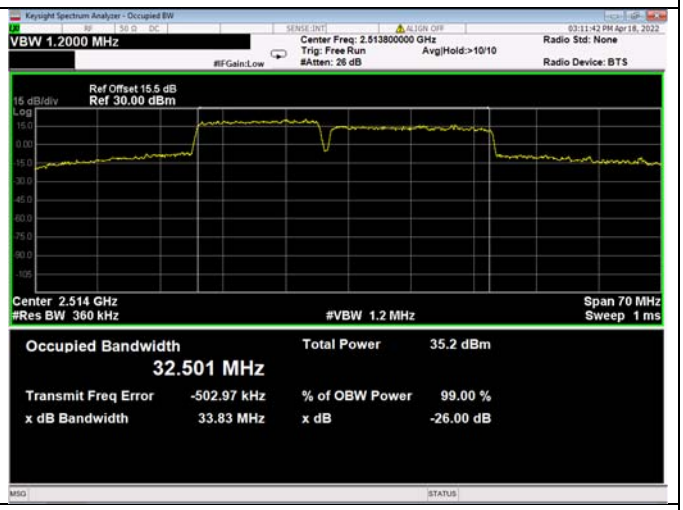
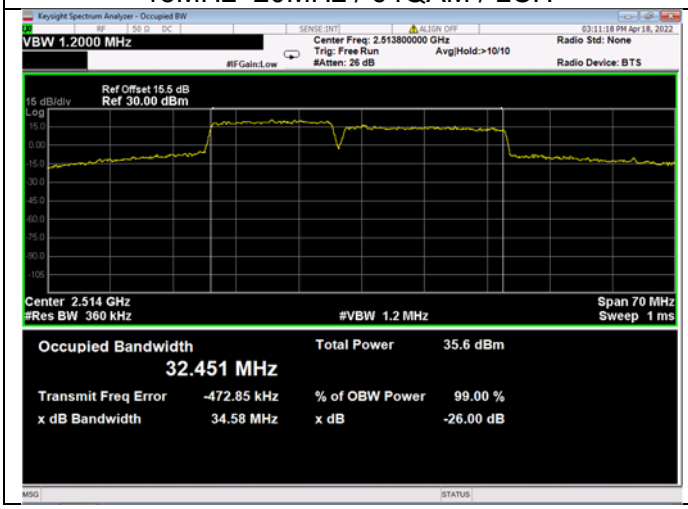
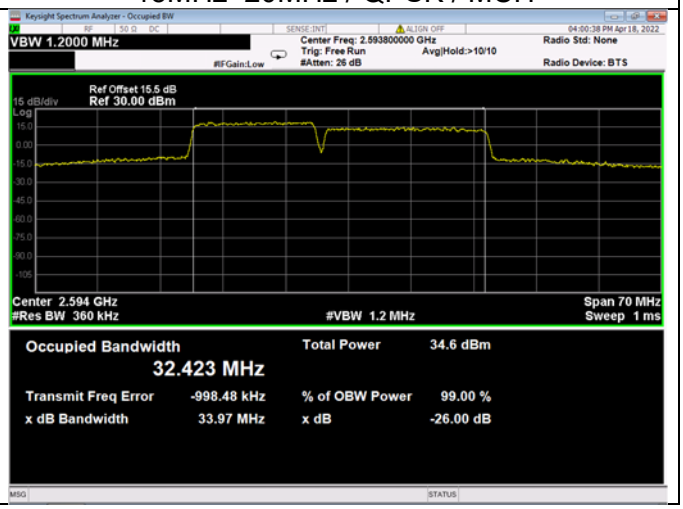
10MHz+20MHz / 16QAM / MCH	10MHz+20MHz / 64QAM / MCH
	
10MHz+20MHz / QPSK / HCH	10MHz+20MHz / 16QAM / HCH
	
10MHz+20MHz / 64QAM/HCH	
	N/A

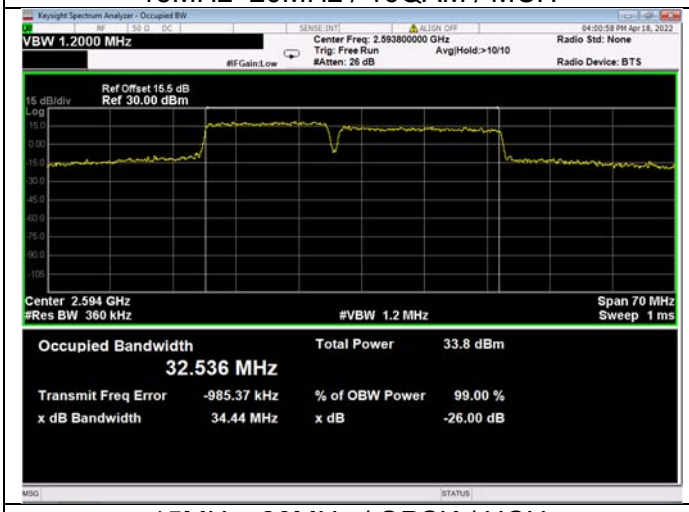
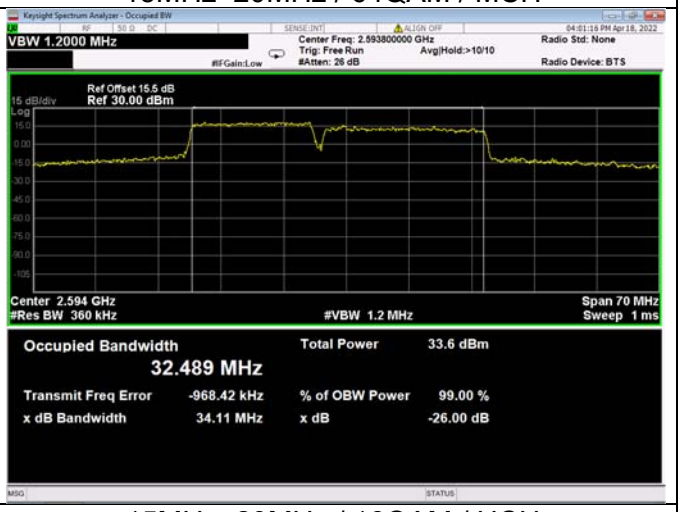
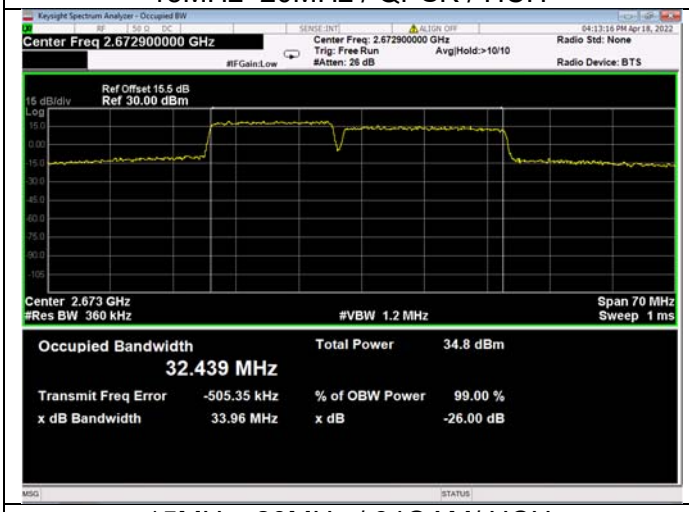
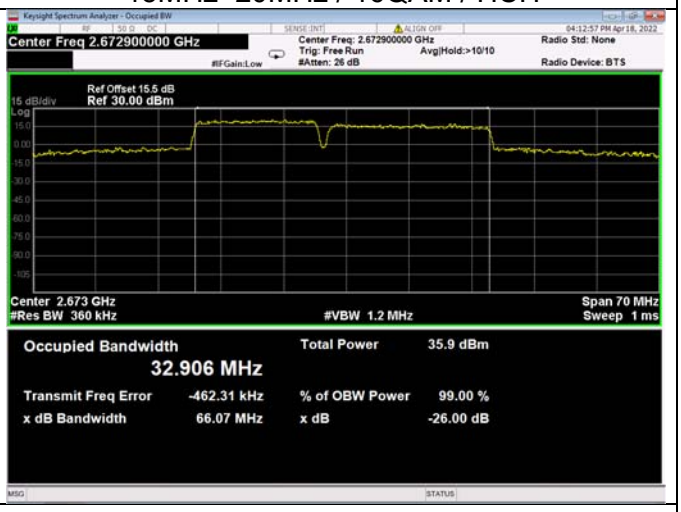
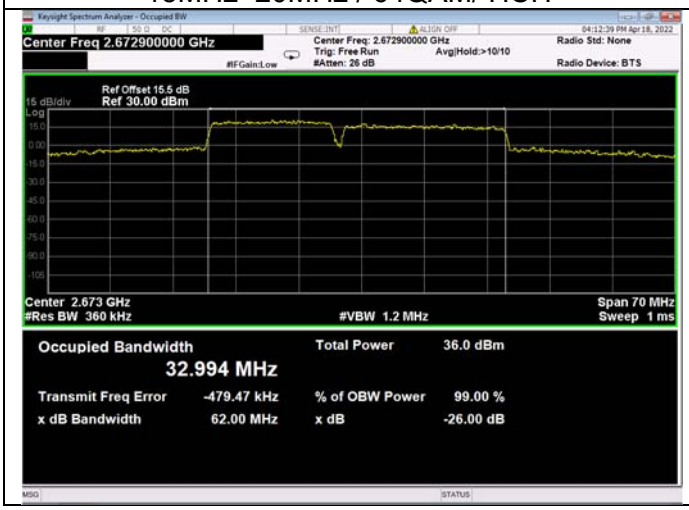
LTE CA_41C	
15MHz+10MHz /QPSK / LCH	15MHz+10MHz / 16QAM / LCH
	
15MHz+10MHz / 64QAM / LCH	15MHz+10MHz / QPSK / MCH
	

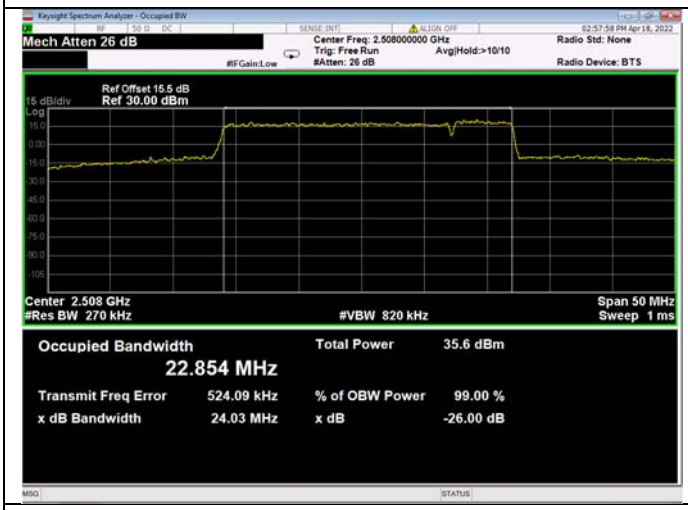
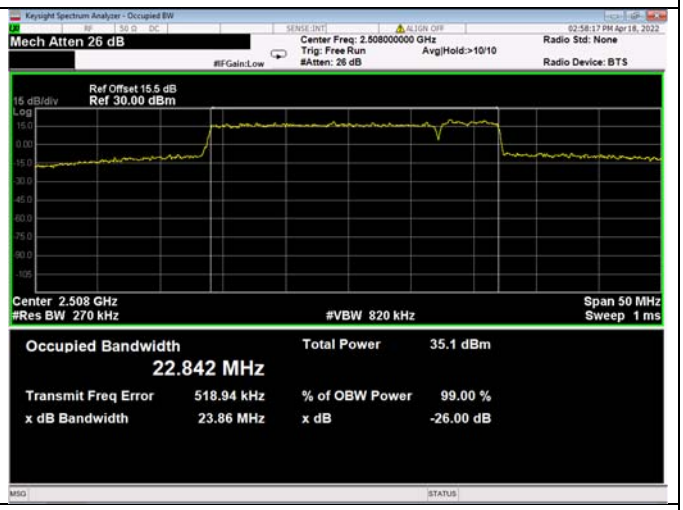
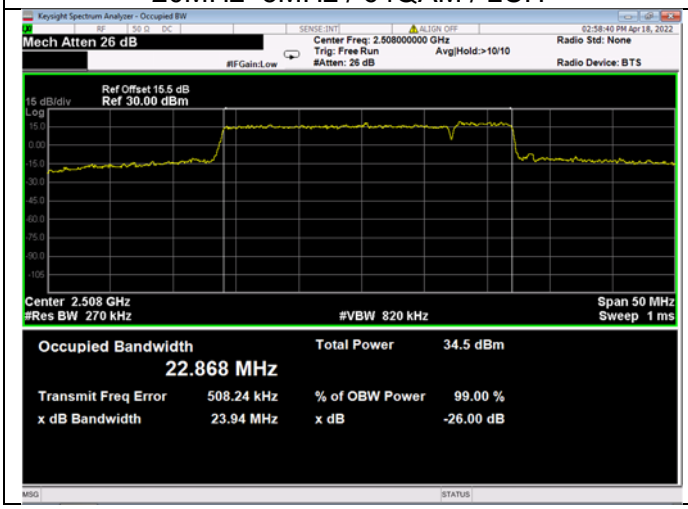
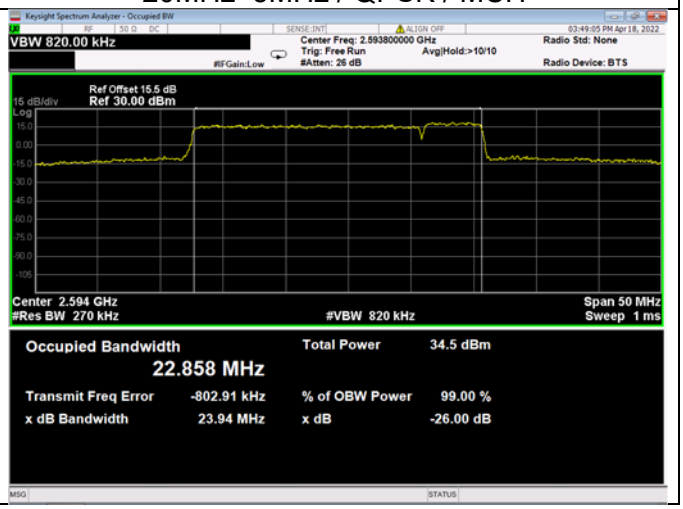
15MHz+10MHz / 16QAM / MCH	15MHz+10MHz / 64QAM / MCH
	
15MHz+10MHz / QPSK / HCH	**15MHz+10MHz / 16QAM / HCH**
	
15MHz+10MHz / 64QAM/HCH	
	N/A

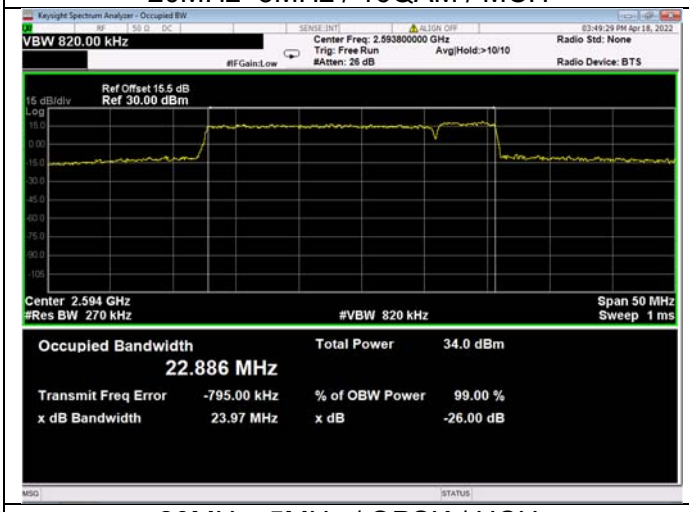
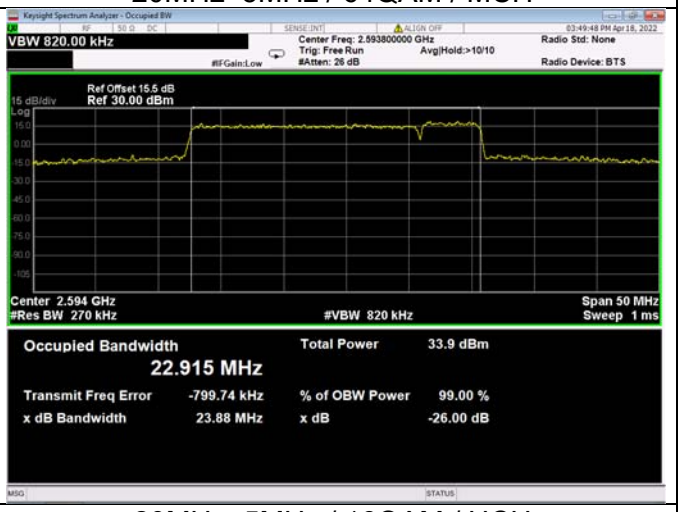
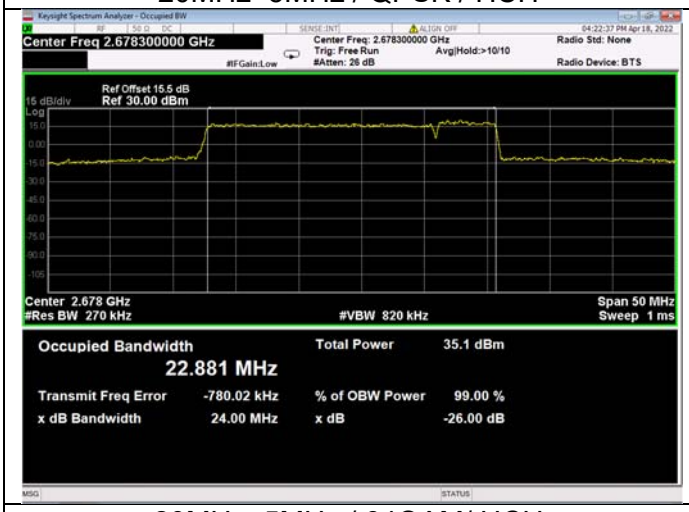
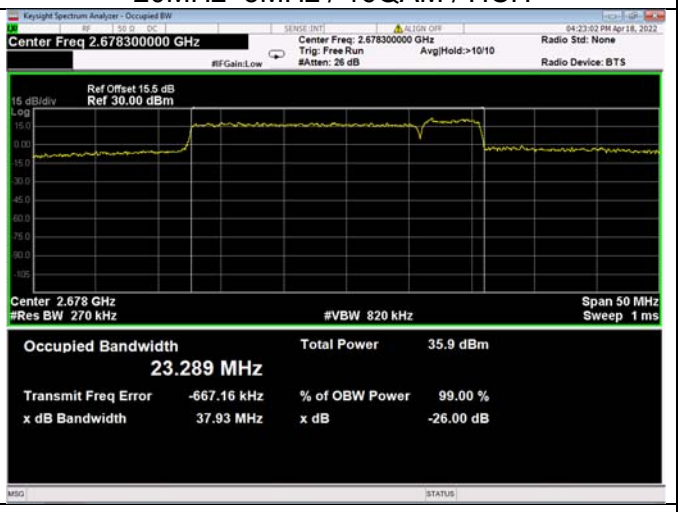
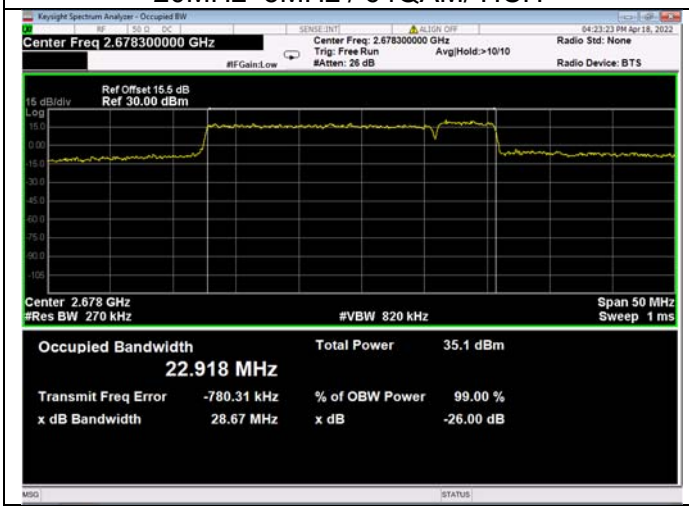
LTE CA_41C	
15MHz+15MHz /QPSK / LCH	15MHz+15MHz / 16QAM / LCH
	
15MHz+15MHz / 64QAM / LCH	15MHz+15MHz / QPSK / MCH
	

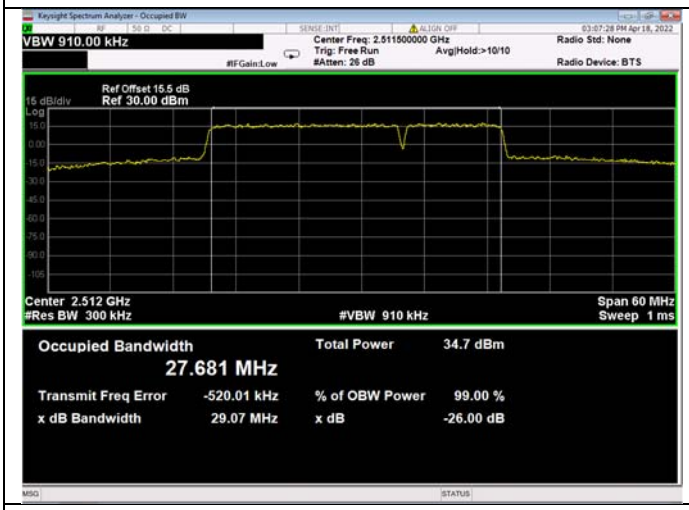
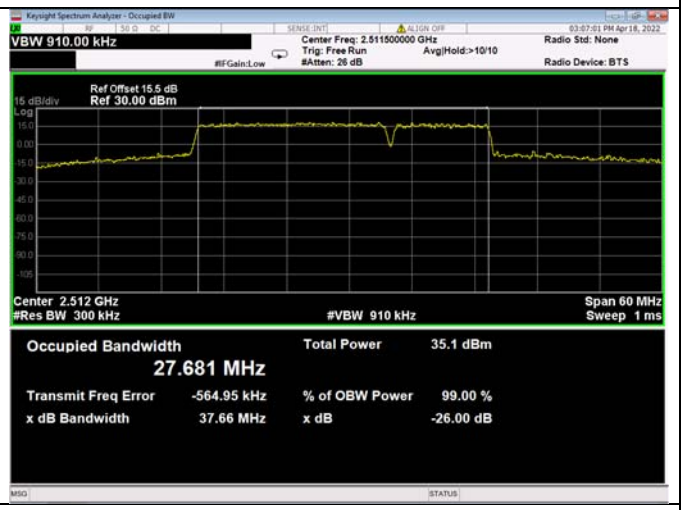
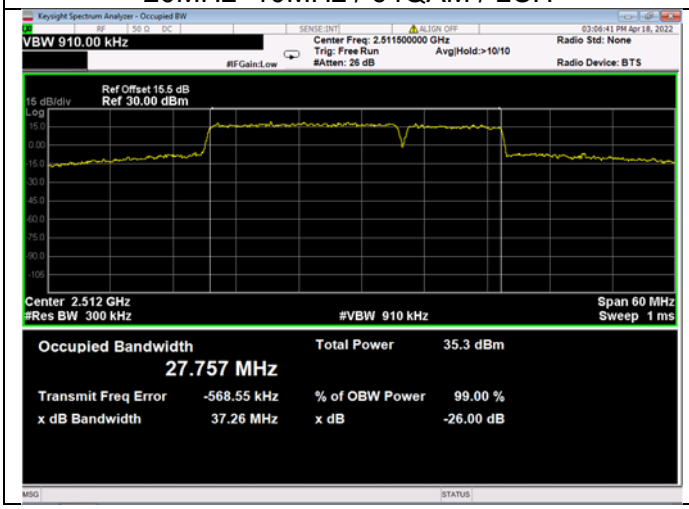
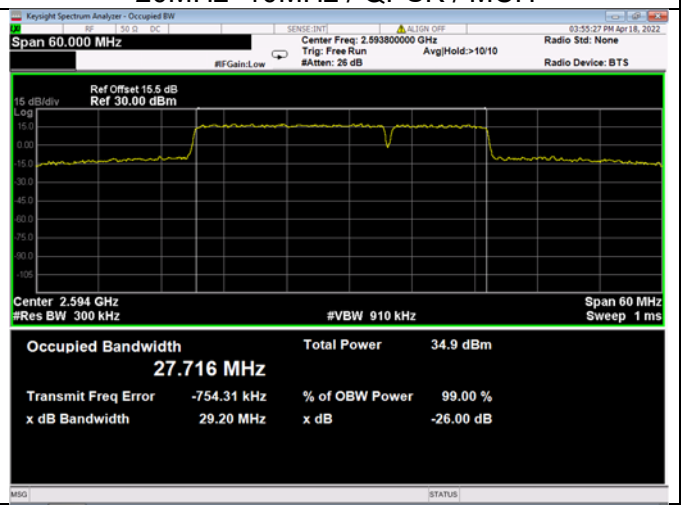
15MHz+15MHz / 16QAM / MCH	15MHz+15MHz / 64QAM / MCH
	
15MHz+15MHz / QPSK / HCH	15MHz+15MHz / 16QAM / HCH
	
15MHz+15MHz / 64QAM/HCH	
	N/A

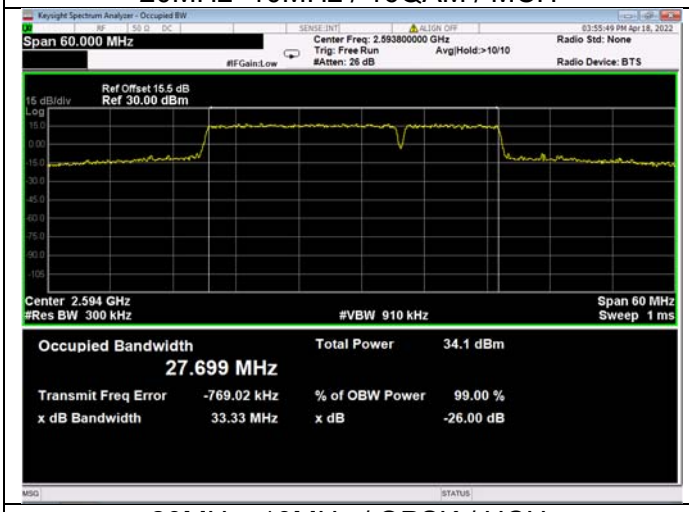
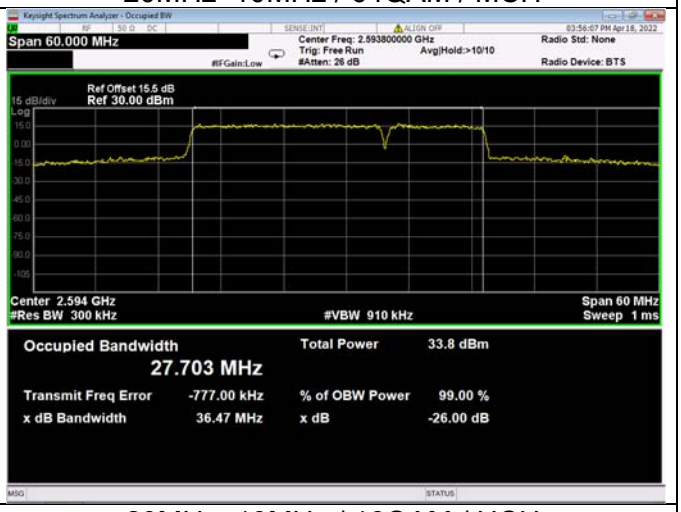
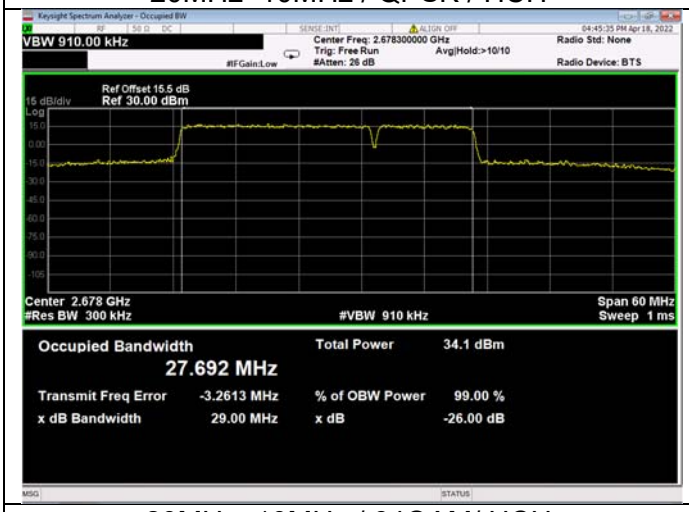
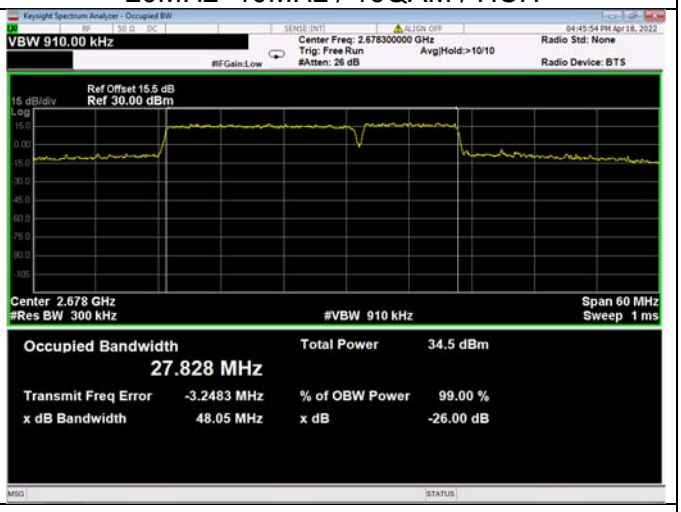
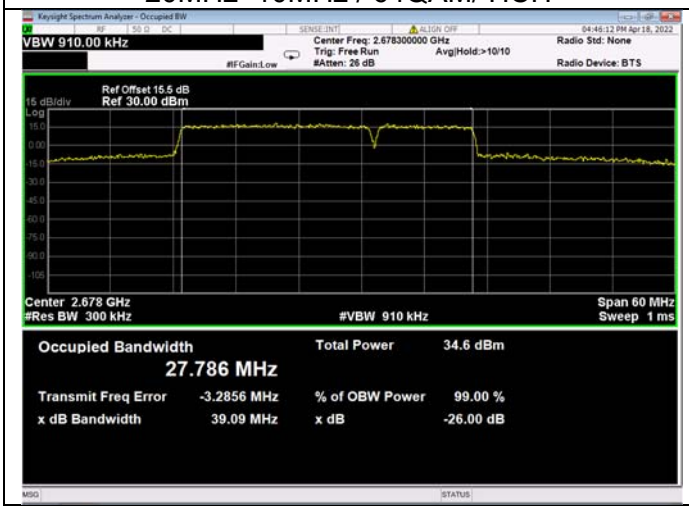
LTE CA_41C	
15MHz+20MHz /QPSK / LCH	15MHz+20MHz / 16QAM / LCH
	
15MHz+20MHz / 64QAM / LCH	15MHz+20MHz / QPSK / MCH
	

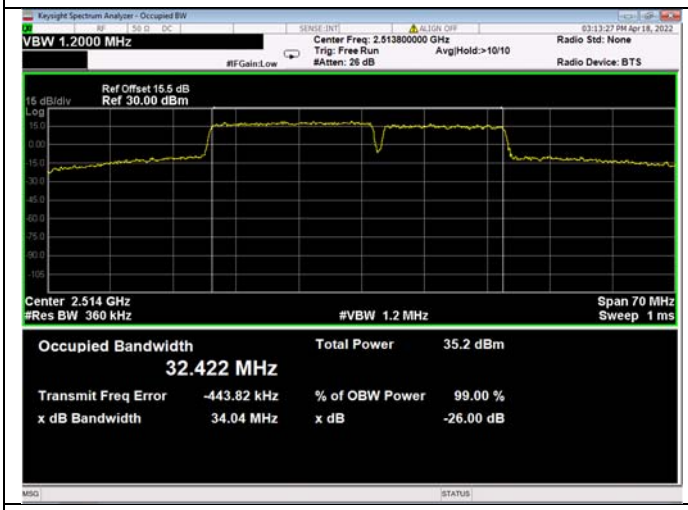
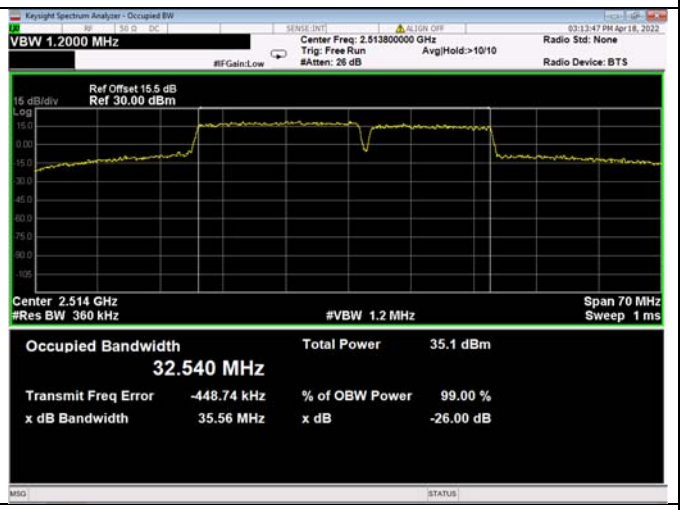
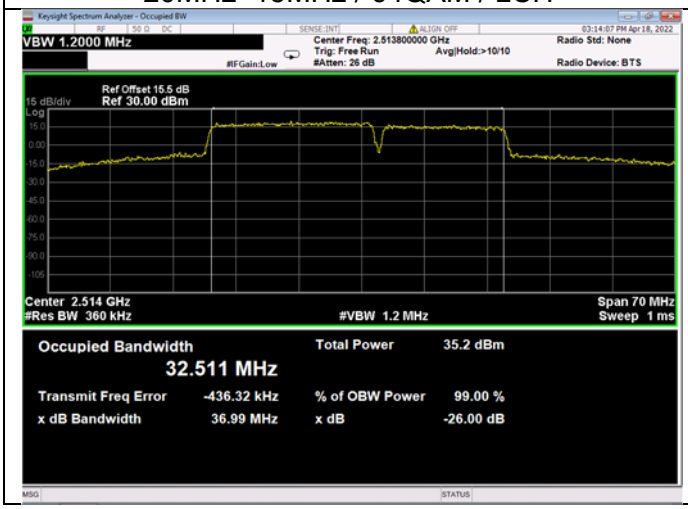
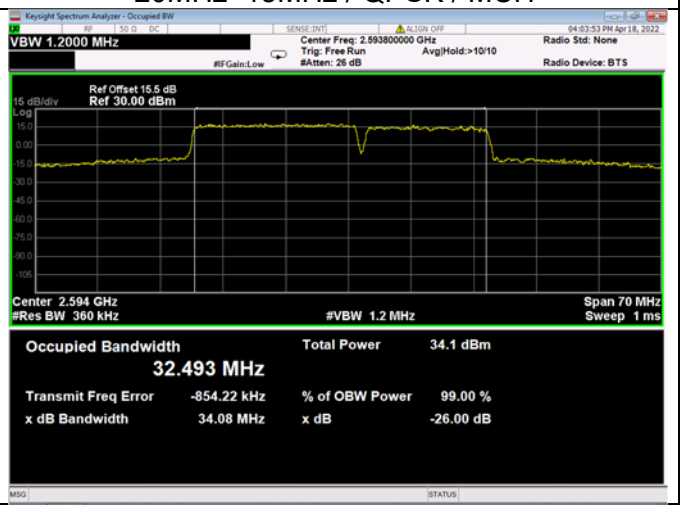
15MHz+20MHz / 16QAM / MCH	15MHz+20MHz / 64QAM / MCH
	
15MHz+20MHz / QPSK / HCH	15MHz+20MHz / 16QAM / HCH
	
15MHz+20MHz / 64QAM/ HCH	
	N/A

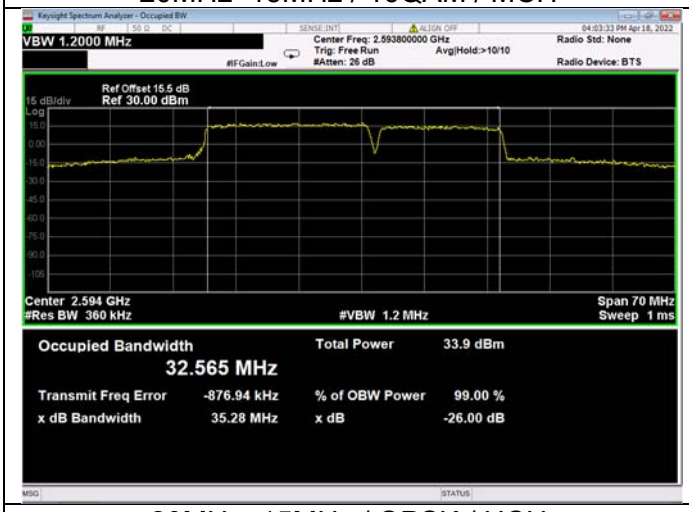
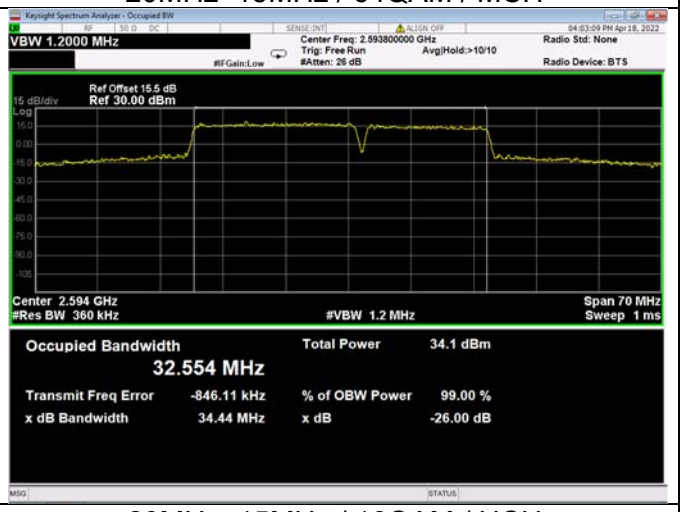
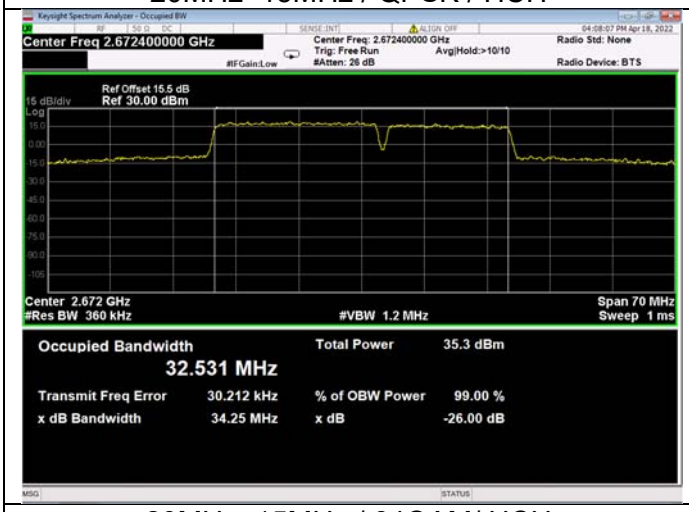
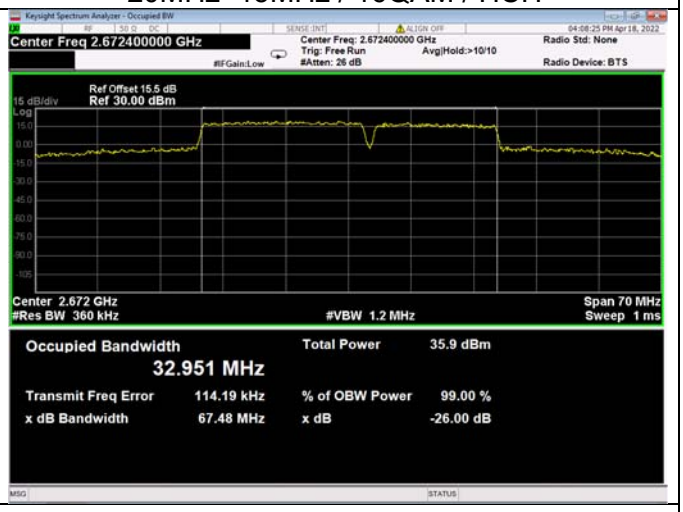
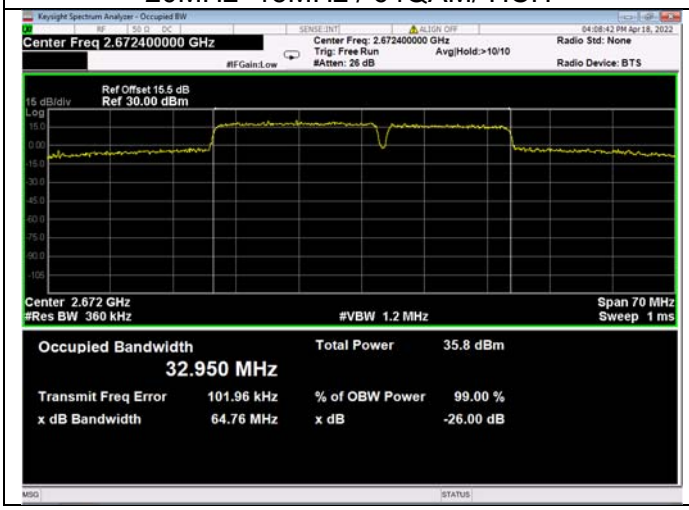
LTE CA_41C	
20MHz+5MHz /QPSK / LCH	20MHz+5MHz / 16QAM / LCH
	
20MHz+5MHz / 64QAM / LCH	20MHz+5MHz / QPSK / MCH
	

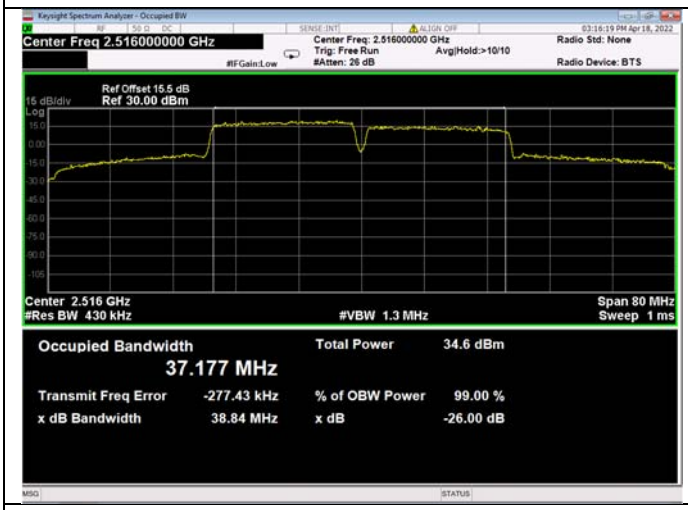
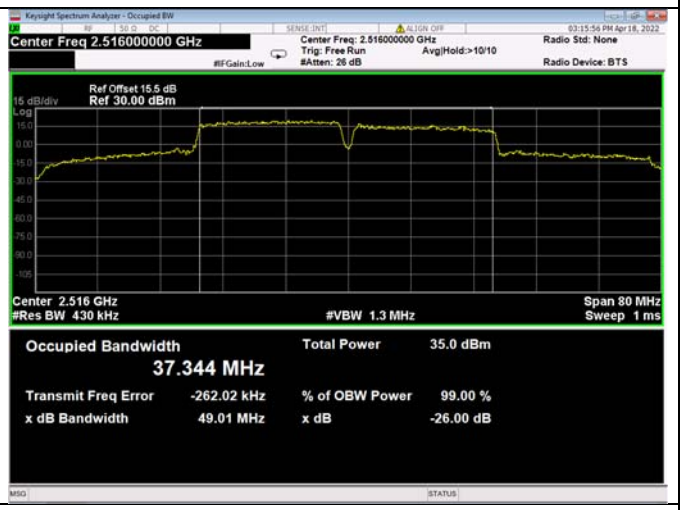
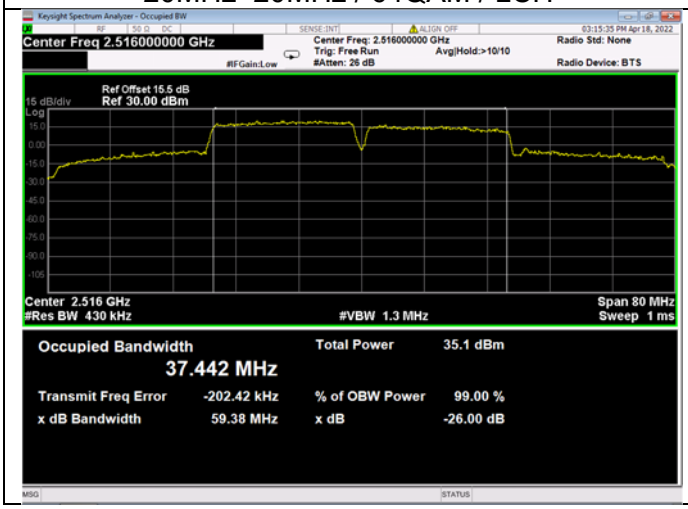
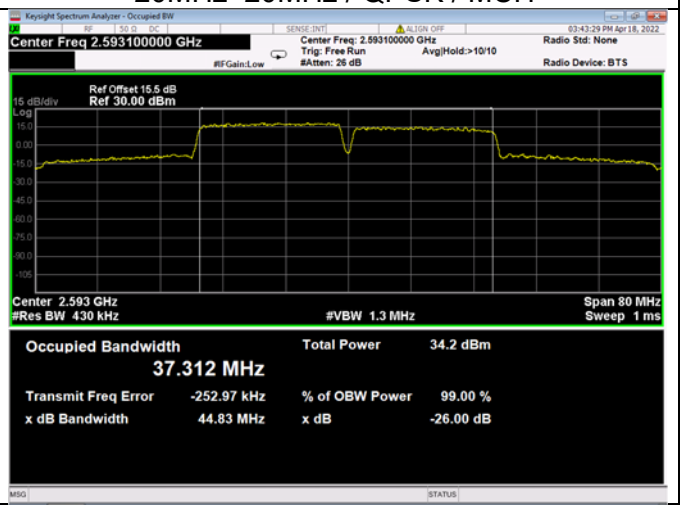
20MHz+5MHz / 16QAM / MCH	20MHz+5MHz / 64QAM / MCH
	
20MHz+5MHz / QPSK / HCH	20MHz+5MHz / 16QAM / HCH
	
20MHz+5MHz / 64QAM/ HCH	
	N/A

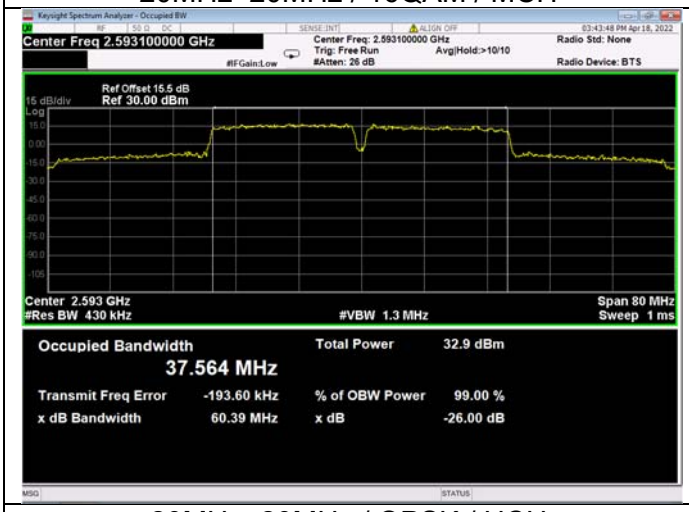
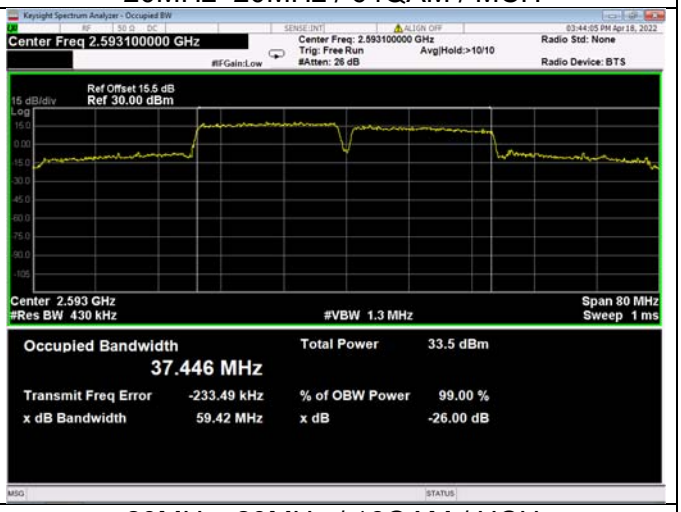
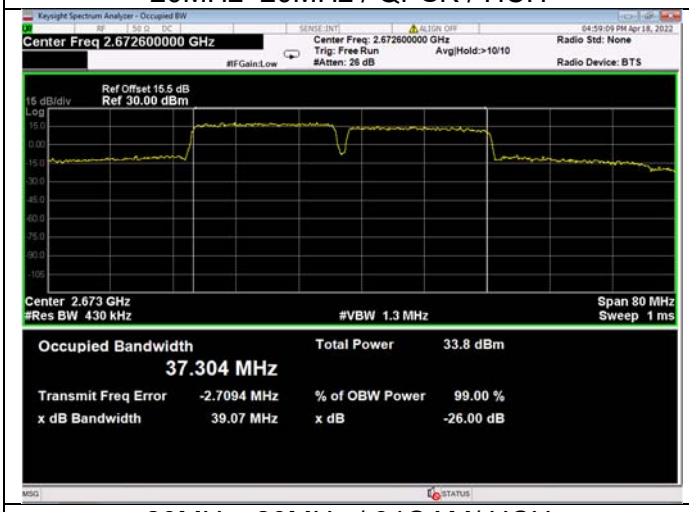
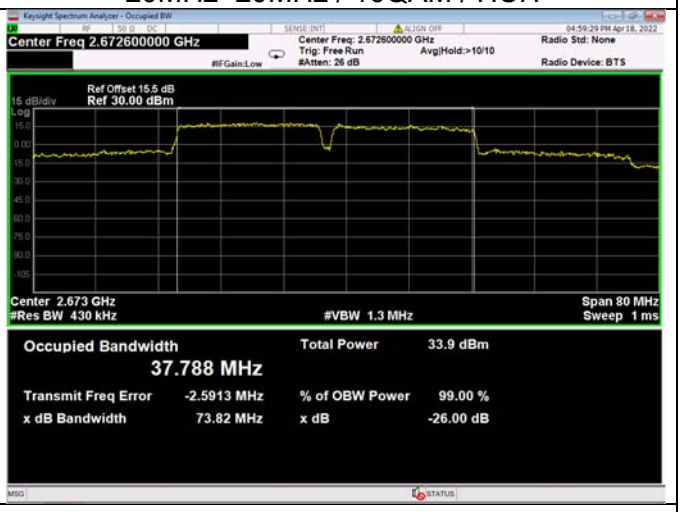
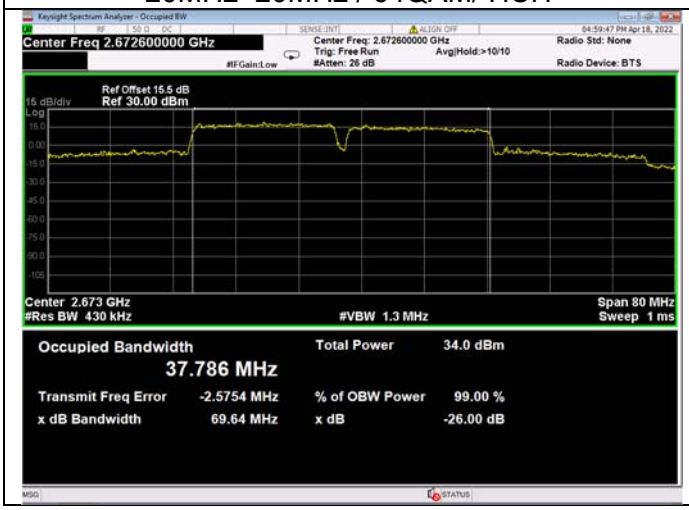
LTE CA_41C	
20MHz+10MHz /QPSK / LCH	20MHz+10MHz / 16QAM / LCH
	
20MHz+10MHz / 64QAM / LCH	20MHz+10MHz / QPSK / MCH
	

20MHz+10MHz / 16QAM / MCH	20MHz+10MHz / 64QAM / MCH
	
20MHz+10MHz / QPSK / HCH	20MHz+10MHz / 16QAM / HCH
	
20MHz+10MHz / 64QAM/ HCH	
	N/A

LTE CA_41C	
20MHz+15MHz /QPSK / LCH	20MHz+15MHz / 16QAM / LCH
	
20MHz+15MHz / 64QAM / LCH	20MHz+15MHz / QPSK / MCH
	

20MHz+15MHz / 16QAM / MCH	20MHz+15MHz / 64QAM / MCH
	
20MHz+15MHz / QPSK / HCH	**20MHz+15MHz / 16QAM / HCH**
	
20MHz+15MHz / 64QAM/ HCH	
	N/A

LTE CA_41C	
20MHz+20MHz /QPSK / LCH	20MHz+20MHz / 16QAM / LCH
	
20MHz+20MHz / 64QAM / LCH	20MHz+20MHz / QPSK / MCH
	

20MHz+20MHz / 16QAM / MCH	20MHz+20MHz / 64QAM / MCH
	
20MHz+20MHz / QPSK / HCH	20MHz+20MHz / 16QAM / HCH
	
20MHz+20MHz / 64QAM/ HCH	
	N/A

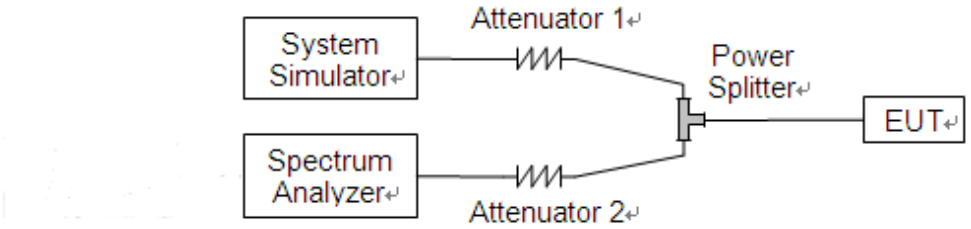
2.3. Conducted Spurious Emissions

2.3.1. Requirement

According to FCC section 2.1051, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43+10*log(P)dB. This calculated to be -13dBm.

Additional requirement for LTE Band 7, 41, 48: The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 55 + 10 log(P) dB. This calculated to be -25dBm.

2.3.2. Test Description

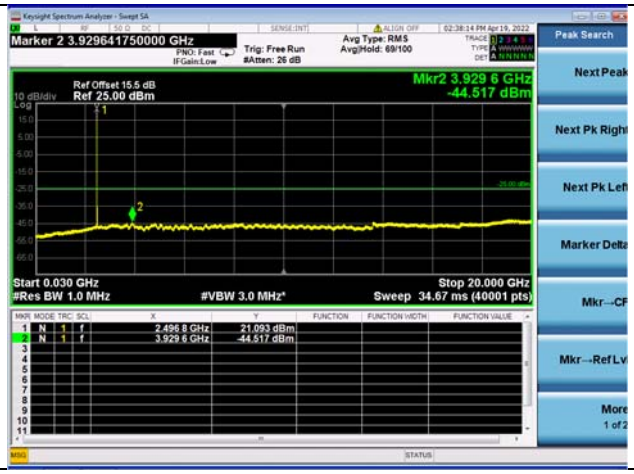
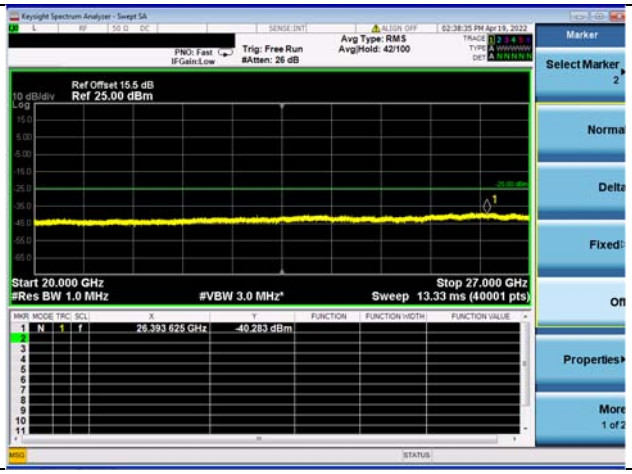
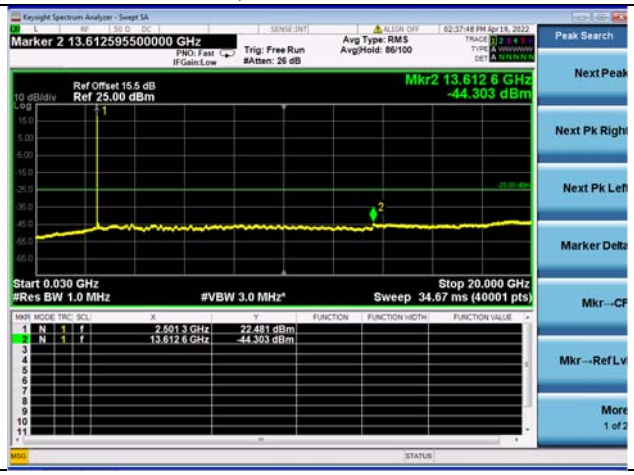
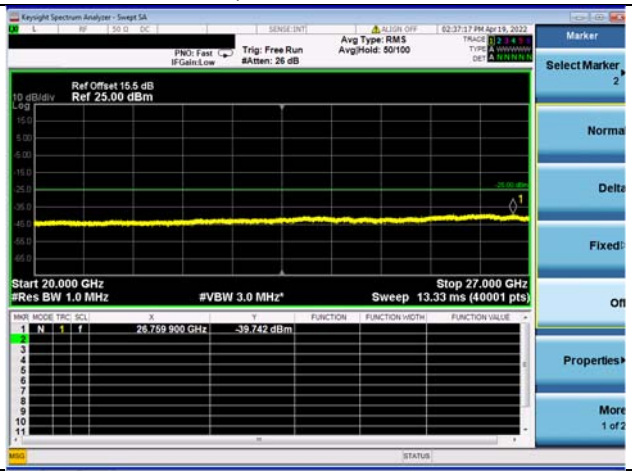
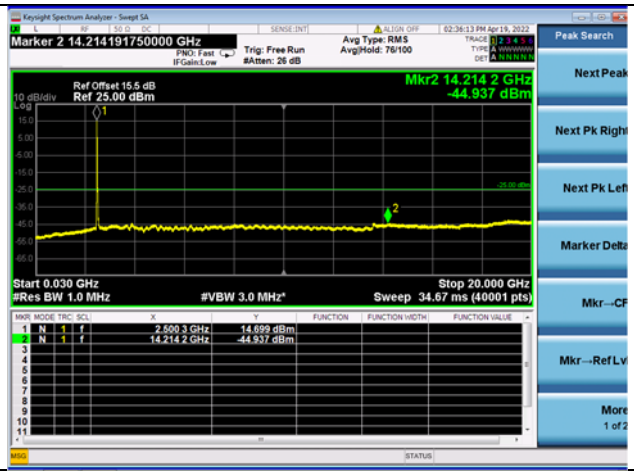
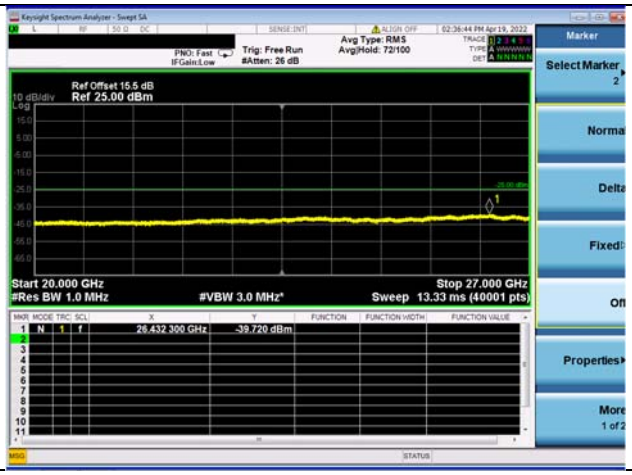


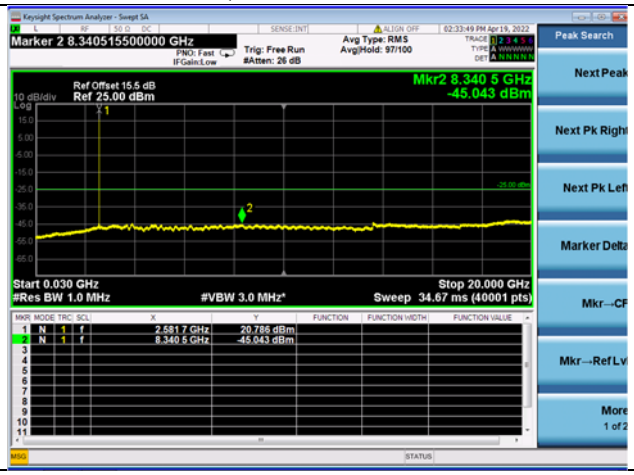
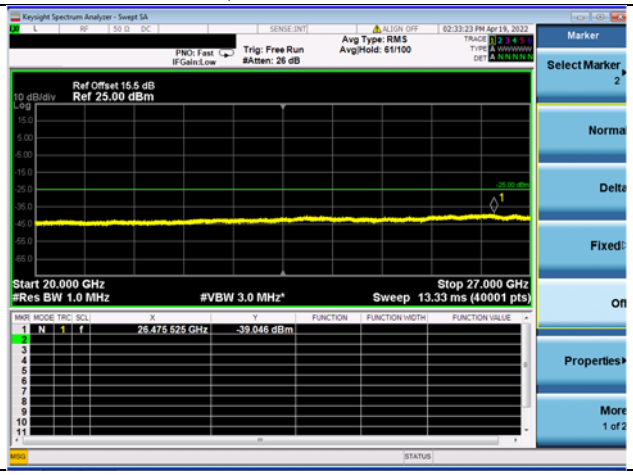
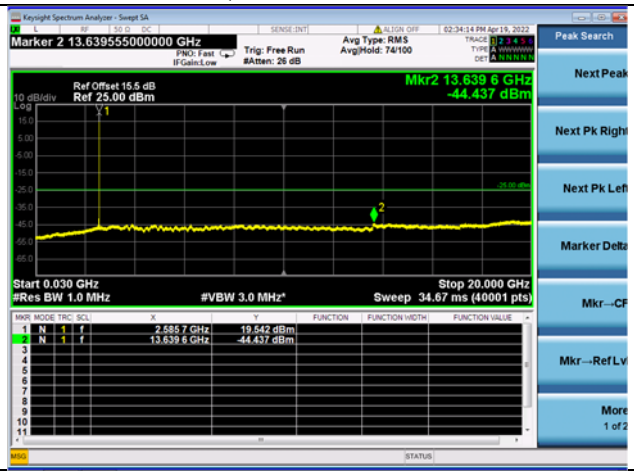
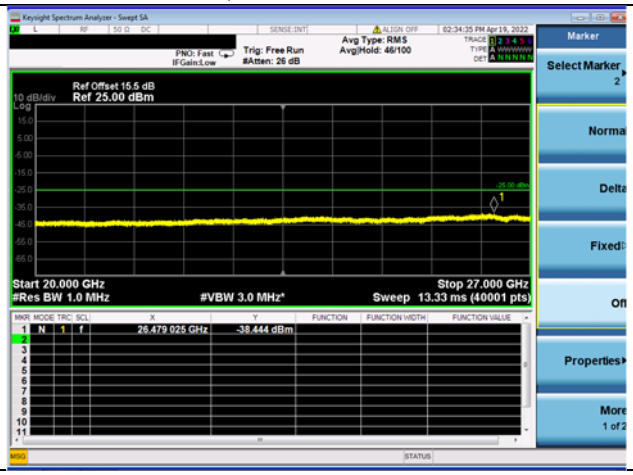
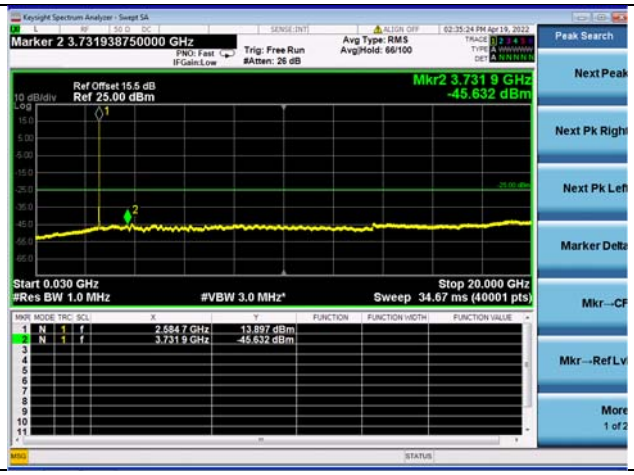
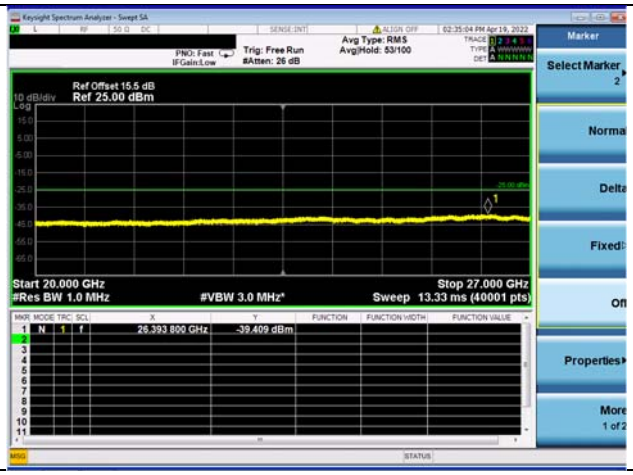
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

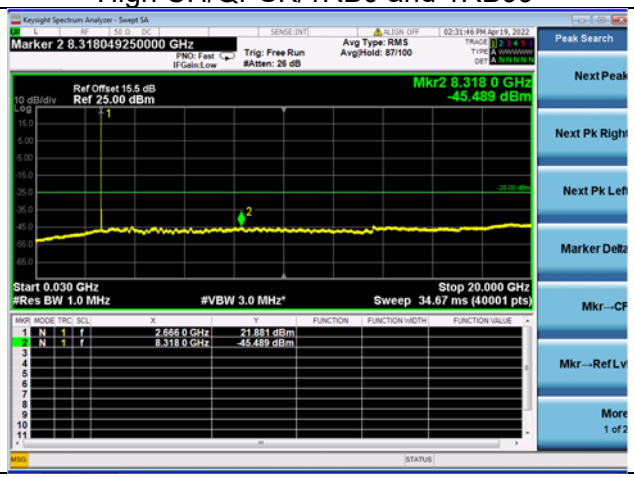
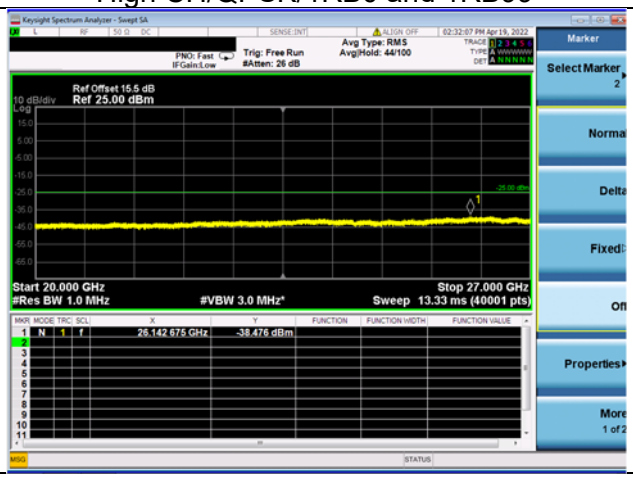
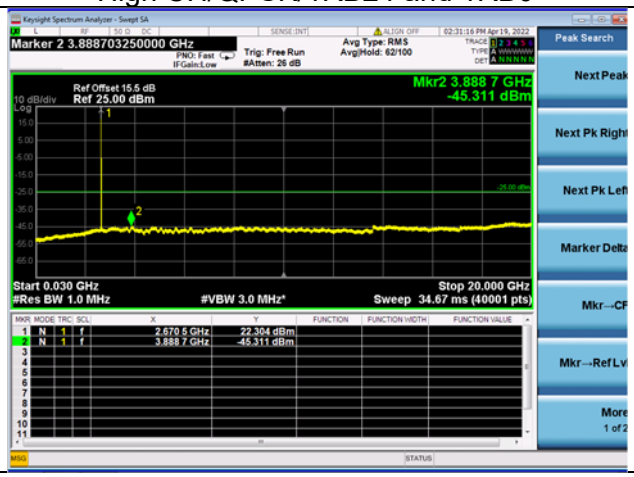
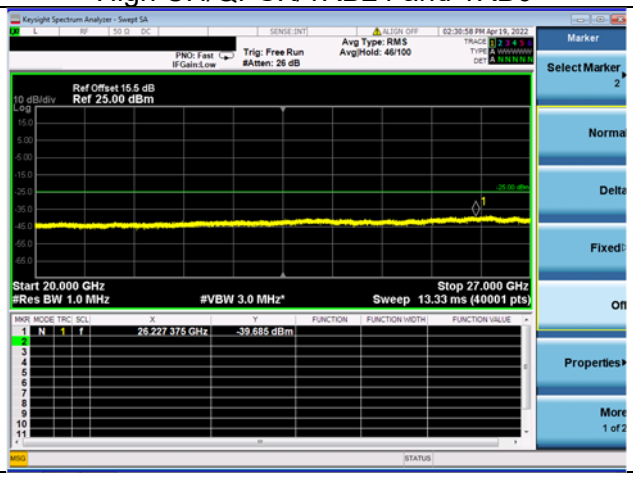
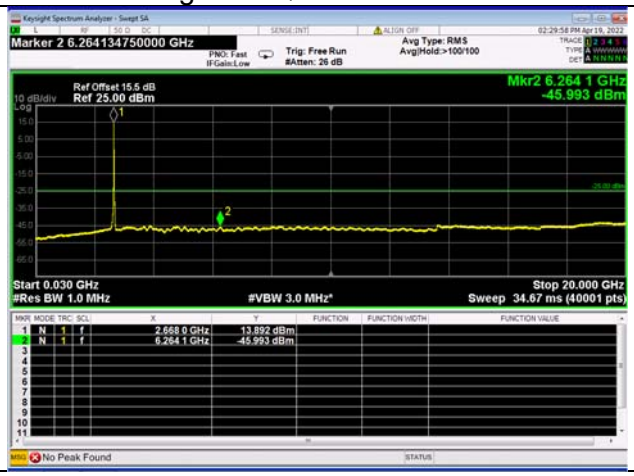
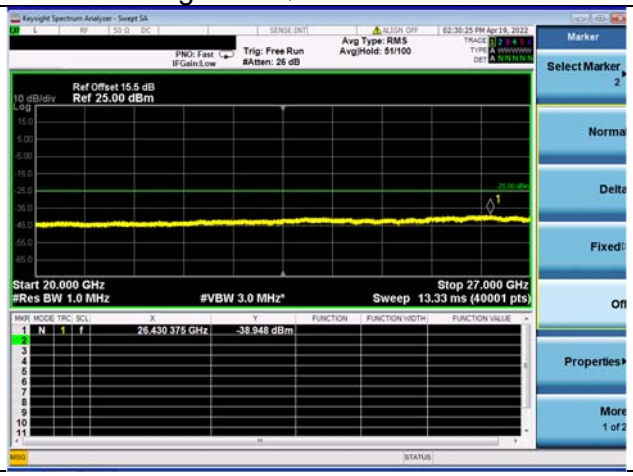
2.3.3. Test procedure

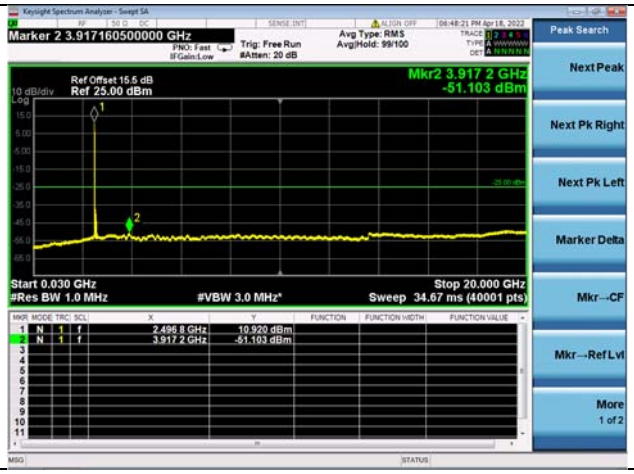
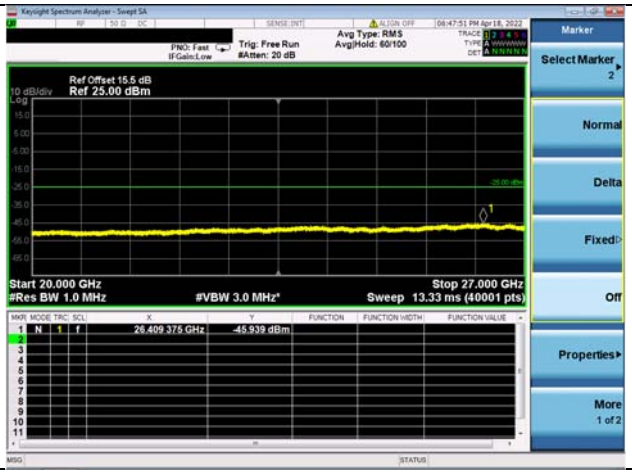
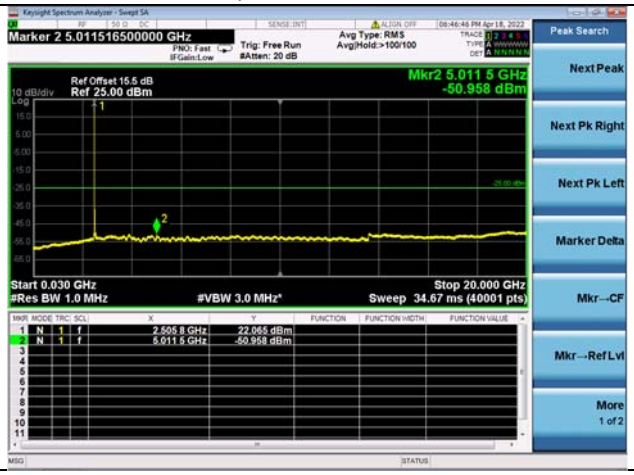
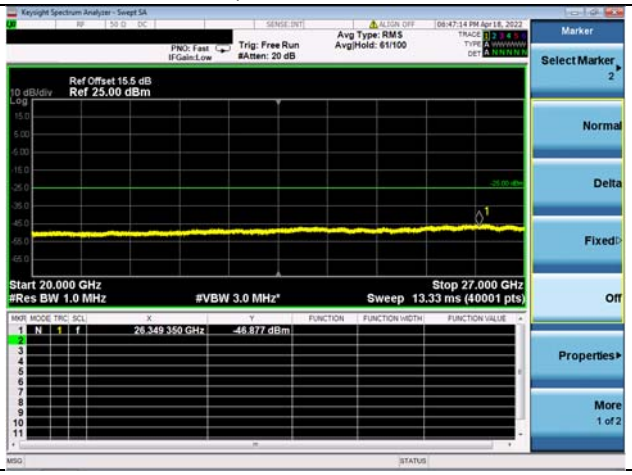
KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.

2.3.4. Test Result

LTE CA_41C CSE	
Channel Bandwidth: 5MHz+20MHz	
LOW CH/QPSK/1RB0 and 1RB99	LOW CH/QPSK/1RB0 and 1RB99
	
LOW CH/QPSK/1RB24 and 1RB0	LOW CH/QPSK/1RB24 and 1RB0
	
LOW CH/QPSK/FULL RB	LOW CH/QPSK/FULL RB
	

Mid CH/QPSK/1RB0 and 1RB99	Mid CH/QPSK/1RB0 and 1RB99
	
Mid CH/QPSK/1RB24 and 1RB0	**Mid CH/QPSK/1RB24 and 1RB0**
	
Mid CH/QPSK/FULL RB	**Mid CH/QPSK/FULL RB**
	

High CH/QPSK/1RB0 and 1RB99	High CH/QPSK/1RB0 and 1RB99
	
High CH/QPSK/1RB24 and 1RB0	High CH/QPSK/1RB24 and 1RB0
	
High CH/QPSK/FULL RB	High CH/QPSK/FULL RB
	

LTE CA_41C CSE	
Channel Bandwidth: 10MHz+15MHz	
LOW CH/QPSK/1RB0 and 1RB74	LOW CH/QPSK/1RB0 and 1RB74
	
LOW CH/QPSK/1RB49 and 1RB0	LOW CH/QPSK/1RB49 and 1RB0
	
LOW CH/QPSK/FULL RB	LOW CH/QPSK/FULL RB