FCC Test Report

(Part 22&24&27)

Product Name	:	LTE Module
Model No	:	IMG3-VT
FCC ID	:	NKR-IMG3-VT

Applicant	:	Wistron NeWeb Corporation
Address	:	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan

Date of Receipt	:	2020/05/21
Issued Date	:	2020/07/31
Report No.	:	2050525R-E3042110012
Report Version	:	V1.0

Test Report

Issued Date : 2020/07/31
Report No.: 2050525R-E3042110012

Product Name	:	LTE Module
Applicant	:	Wistron NeWeb Corporation
Address	:	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan
Manufacturer	:	Wistron NeWeb Corporation
Trade Name	:	WNC
Model No.	:	IMG3-VT
EUT Rated Voltage	:	DC 3.3V
EUT Test Voltage	:	DC 3.3V
Measurement Standard	:	FCC CFR Title 47 Part 2, 22, 24, 27
Measurement Reference	:	TIA/EIA 603-E 2016
		KDB 971168 D01V03
		ANSI C63.26 2015
Test Result	:	Complied

Documented By : Peggy Tu
(Adm. Assistant / Peggy Tu)

Tested By : Vorana Chen
(Senior Engineer / Vorana Chen)

Approved By :
(Director /Vincent Lin)

Revision History

Report No.	Version	Description	Issued Date
2050525R-E3042110012	V1.0	Initial issue of report	July. 31, 2020

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	LTE Module
Model No.	IMG3-VT
Trade Name	WNC
IMEI No 29	353450100324130
IMEI No 30	353450100324140
FCC ID	NKR-IMG3-VT
TX Frequency	LTE Band 2: 1850~1910MHz
	LTE Band 4: 1710MHz~1755MHz
	LTE Band 5: 824MHz ~849MHz
	LTE Band 13: 777~787MHz
	LTE Band 66:1710MHz~1780MHz
Rx Frequency	LTE Band 2: 1930~1990MHz
	LTE Band 4: 2110~2155MHz
	LTE Band 5: 869~894MHz
	LTE Band 13: 746~756MHz
	LTE Band 66: 2110~2200MHz
2UL CA list	CA_2A-2A, CA_2A-4A, CA_2A-5A, CA_2A-13A, CA_2A-66A, CA_4A-4A, CA_4A-5A, CA_4A-13A, CA_5A-66A, CA_5B, CA_13A-2A, CA_13A-4A CA_13A-66A, CA_66B, CA_66C.
Bandwidth	LTE Band 2: 1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz
	LTE Band 4: 1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz
	LTE Band 5: 1.4MHz/3MHz/5MHz/10MHz
	LTE Band 13: 5MHz/10MHz
	LTE Band 66:1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz
Modulation	QPSK/16-QAM/64QAM
HW Version	0.0.1
SW Version	ARM0:0.70.3.0.0 ARM1:1.0.0.0
Antenna Type	Dipole Antenna

1.2. Antenna List

No	Manufacturer	Part No	Antenna Type	Peak Gain
1	Wieson Technologies Co., Ltd.	GY115	Dipole Antenna	1.66dBi for 746-787MHz 3.20dBi for 824-894MHz 1.62dBi for 1710-1785MHz 1.56dBi for 1850-1910MHz

1.3. Operational Description

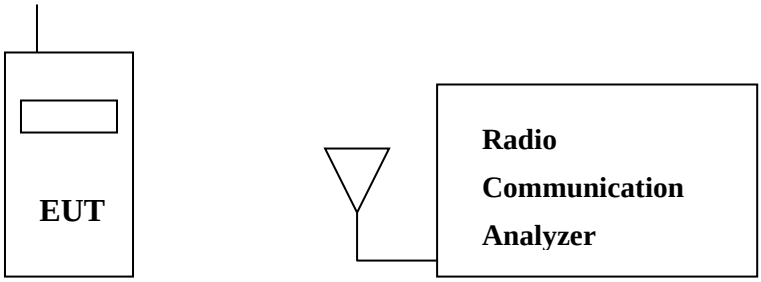
The EUT provide all functions described as above. The EUT is tested with maximum rated TX power via the Base Station simulator.
DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode:	LTE Band 2
	LTE Band 4/66
	LTE Band 5
	LTE Band 13
	CA_2A-2A
	CA_2A-4A/66A
	CA_2A-5A
	CA_2A-13A
	CA_4A-4A
	CA_4A-5A
	CA_4A-13A
	CA_5A-66A
	CA_5B
	CA_13A-2A
	CA_13A-4A/66A
	CA_66B
	CA_66C

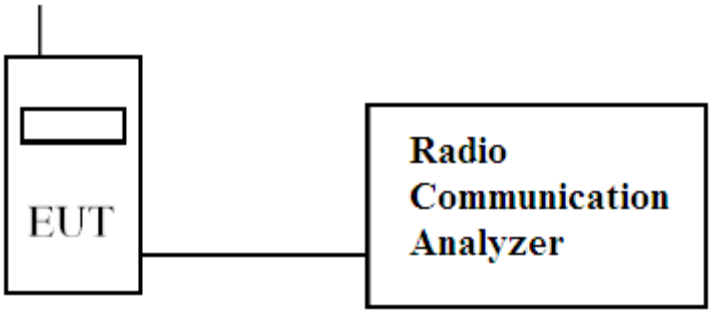
Note :
1. WWAN Module ant0 support TX/RX functions and support 2UL CA PCC functions.
2. WWAN Module ant1 and 3 support RX functions.
3. WWAN Module ant2 support 2UL CA SCC functions and RX functions.
4. LTE Band 4 is covered by Band 66.
5. All operation modes has been verified and the report shows the worst case mode.

1.4. Configuration of tested System

(a) Configuration of Radiated measurement



(b) Configuration of Conducted measurement



1.5. EUT Setup Procedures

(1) Setup the EUT and simulators as shown on 1.3
(2) Turn on the power of all equipments.
(3) The EUT link with base station and it will continue receive the signal.
(4) Repeat the above procedure.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20 ~ 25
Humidity (%RH)	25-75	47 ~ 55

USA : FCC Registration Number: TW3023

Canada : IC Registration Number: 4075A

Site Description: Accredited by TAF
Accredited Number: 3023

Test Laboratory: DEKRA Testing and Certification Co., Ltd
Address: No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
Phone number: 886-2-8601-3788
Fax number: 886-2-8601-3789
Email address: info.tw@dekra.com
Website: http://www.dekra.com.tw

2. Technical Test

2.1. Summary of test result

FCC Standard	Test Item	Result	Note
2.1046	Conducted Output Power	Pass	
22.913(a)			
24.232(c)			
27.5			
2.1049	Occupied Bandwidth	Pass	
22.917(a)			
24.238(b)			
27.53 (g, h, m(4))			
2.1051	Spurious Emission at Antenna Terminals	Pass	
22.917(a)			
24.238(a)			
27.53 (g, h, m(4))			
2.1051	Conducted Emission	Pass	
22.917(a)			
24.238(a)			
27.53 (g, h, m(4))			
2.1053	Field Strength of Spurious Radiation	Pass	
22.917(a)			
24.238(a)			
27.53 (g, h, m(4))			
2.1055	Frequency Stability for Temperature & Voltage	Pass	
22.355			
24.235			
27.54			
24.232(d)	Peak to Average Ratio	Pass	
27.50(a)			

2.2. List of test Equipment

Conducted /CTR

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY54510357	2019/04/29
Directional coupler	Agilent	87300C	MY44300353	2019/12/05
Directional coupler	Agilent	778D-012	50550	2019/12/05
Standard Temperature & Humidity Chamber	WIT	TH-1S-B	EQ-201-00146	2020/04/06
DC power supply	Agilent	E3610A	MY40009845	2019/07/25
Communication Tester	Anritsu	MT8820C	6201465467	2019/07/30
Communication Tester	R&S	CMW500	157304	2019/11/13

Radiated / Site3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2707	2020/01/20
Horn Antenna	R&S	9120D	867	2020/04/21
Pre-Amplifier	Agilent	87405C	MY55380068	2019/08/09
Spectrum Analyzer	Agilent	N9010A	MY54510357	2019/04/29
DC power supply	Agilent	E3646A	MY53020023	2019/10/14
Communication Tester	Anritsu	MT8820C	6201465467	2019/07/30
Communication Tester	R&S	CMW500	157304	2019/11/13

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty of confidence of 95% is evaluated as ± 1.52 dB

Radiated Emission (Below 1GHz)

The measurement uncertainty of confidence of 95% is evaluated as ± 4.22 dB .

Radiated Emission (Above 1GHz)

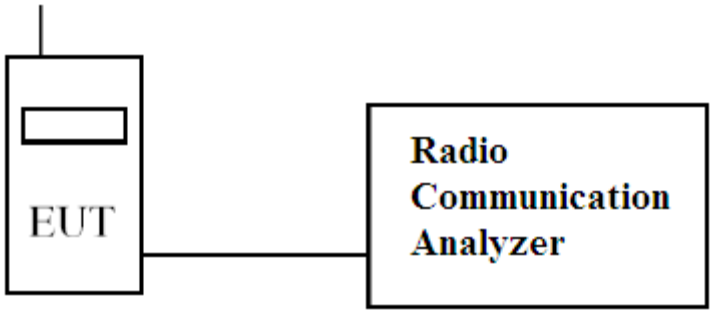
The measurement uncertainty of confidence of 95% is evaluated as ± 4.08 dB

3. Conducted Output Power Measurment

3.1. Test Specification

According to FCC Part 2.1046, 22.913, 24.232, 27.50

3.2. Test Setup



3.3. Limits

Band	Limit
LTE Band 2/1900	<2W EIRP
LTE Band 4/1700	<1W EIRP
LTE Band 5/850	<7W ERP
LTE Band 13/700	<3W ERP
LTE Band 66/1700	<1W EIRP

3.4. Test Procedure

The EUT is tested with maximum rated TX power via the Base Station simulator, and the output power was measured at the antenna terminals of the EUT.

3.5. Test Result of Maximum Power Output

Channel	Modulation	LTE Band 2 (1900MHz)							
		RB	RB	Maximum Conducted Output Power					
		No.	Offset	1.4M	3M	5M	10M	15M	20M
Low	QPSK	1	#0	23.66	22.86	22.57	**22.84**	**23.00**	**23.08**
		1	#Mid	**23.77**	22.96	22.62	22.28	22.38	22.12
		1	#Max	23.67	22.74	22.63	22.16	22.30	22.43
		50%	#0	23.63	22.39	22.26	21.54	21.49	21.54
		50%	#Mid	23.75	22.01	21.84	21.60	21.48	21.31
		50%	#Max	23.71	21.93	21.76	21.39	21.34	21.37
		100%	--	22.32	21.94	21.83	21.53	21.47	21.40
	16QAM	1	#0	22.48	**22.55**	21.52	**22.03**	22.10	**22.19**
		1	#Mid	22.66	**22.55**	21.84	21.90	21.95	21.73
		1	#Max	22.43	22.39	21.59	21.79	21.82	22.18
		50%	#0	22.34	21.60	21.46	20.69	20.67	20.53
		50%	#Mid	22.30	21.14	21.06	20.75	20.55	20.41
		50%	#Max	22.25	21.06	21.03	20.36	20.43	20.49
		100%	--	21.60	21.23	21.07	20.55	20.59	20.52
	64QAM	1	#0	22.27	21.92	21.40	21.38	21.78	21.32
		1	#Mid	22.32	21.86	21.62	21.29	21.82	21.02
		1	#Max	22.17	21.82	21.38	21.26	21.66	21.60
		50%	#0	21.59	20.93	20.78	20.15	20.12	20.14
		50%	#Mid	21.58	20.50	20.41	20.29	20.08	19.79
		50%	#Max	21.55	20.55	20.36	20.09	19.84	19.95
		100%	--	20.64	20.42	20.35	20.13	20.15	19.88
Mid	QPSK	1	#0	23.38	23.07	22.56	22.26	22.60	22.62
		1	#Mid	23.53	**23.26**	**23.00**	22.57	22.81	22.68
		1	#Max	23.45	23.10	22.65	22.50	22.61	22.48
		50%	#0	23.45	22.57	22.35	21.68	21.46	21.63
		50%	#Mid	23.53	22.27	22.06	21.81	21.71	21.56
		50%	#Max	23.47	22.23	21.91	21.61	21.69	21.54
		100%	--	22.39	22.17	22.01	21.66	21.71	21.58
	16QAM	1	#0	22.65	22.12	21.79	21.53	**22.27**	21.72
		1	#Mid	**22.80**	22.38	**22.18**	21.83	21.94	21.68
		1	#Max	22.61	22.07	21.85	21.65	21.71	21.49
		50%	#0	22.44	21.52	21.36	20.69	20.56	20.55

		50%	#Mid	22.57	21.24	21.10	20.74	20.80	20.51
		50%	#Max	22.49	21.27	20.96	20.61	20.72	20.59
		100%	--	21.48	21.16	21.00	20.69	20.74	20.66
	64QAM	1	#0	22.28	21.64	21.55	21.12	21.39	21.82
		1	#Mid	22.54	21.93	21.96	21.58	21.74	22.09
		1	#Max	22.35	21.65	21.57	21.36	21.38	21.69
		50%	#0	21.87	20.96	20.73	20.30	20.11	20.20
		50%	#Mid	21.94	20.67	20.52	20.49	20.46	20.33
		50%	#Max	21.88	20.66	20.43	20.35	20.52	20.35
		100%	--	20.90	20.65	20.57	20.24	20.38	20.30
High	QPSK	1	#0	22.62	22.39	22.18	21.92	22.46	22.52
		1	#Mid	22.93	22.59	22.33	22.12	22.23	22.10
		1	#Max	22.81	22.56	22.23	22.15	22.14	22.08
		50%	#0	22.70	21.74	21.75	21.15	21.11	21.21
		50%	#Mid	22.80	21.40	21.43	21.26	21.19	21.16
		50%	#Max	22.83	21.49	21.42	21.38	21.44	21.33
		100%	--	21.86	21.67	21.42	21.21	21.34	21.33
	16QAM	1	#0	21.97	22.08	21.52	21.29	21.58	22.10
		1	#Mid	22.21	21.90	21.66	21.47	21.82	21.69
		1	#Max	22.14	21.45	21.56	21.56	21.84	21.79
		50%	#0	21.80	20.78	20.65	20.18	20.06	20.33
		50%	#Mid	21.94	20.46	20.34	20.29	20.14	20.15
		50%	#Max	22.07	20.54	20.44	20.30	20.44	20.31
		100%	--	21.00	20.70	20.49	20.28	20.31	20.33
	64QAM	1	#0	21.52	21.02	20.95	20.68	21.18	21.33
		1	#Mid	21.75	21.16	21.14	20.88	21.27	21.14
		1	#Max	21.54	21.07	20.95	21.00	21.35	21.31
		50%	#0	21.10	20.20	20.19	19.80	19.59	19.73
		50%	#Mid	21.22	19.99	19.88	19.93	19.78	19.71
		50%	#Max	21.11	20.05	19.87	20.01	19.97	19.93
		100%	--	20.14	19.94	19.90	19.78	19.85	19.81

Channel	Modulation	LTE Band 5 (850MHz)							
		RB	RB	Maximum Conducted Output Power					
		No.	Offset	1.4M	3M	5M	10M	15M	20M
Low	QPSK	1	#0	23.25	**22.94**	**22.65**	22.48	--	--
		1	#Mid	**23.27**	22.47	22.36	**23.19**	--	--
		1	#Max	22.76	22.51	22.45	22.15	--	--
		50%	#0	23.19	21.98	21.78	21.31	--	--
		50%	#Mid	23.16	21.34	21.36	21.80	--	--
		50%	#Max	22.94	21.29	21.66	21.63	--	--
		100%	--	22.07	21.65	21.67	21.59	--	--
	16QAM	1	#0	22.57	**22.40**	**22.00**	21.81	--	--
		1	#Mid	**22.59**	21.77	21.76	21.88	--	--
		1	#Max	22.01	21.86	21.74	21.55	--	--
		50%	#0	22.27	21.23	21.00	20.40	--	--
		50%	#Mid	22.15	20.61	20.45	20.88	--	--
		50%	#Max	21.95	20.56	20.73	20.75	--	--
		100%	--	21.25	20.85	20.76	20.68	--	--
	64QAM	1	#0	22.41	22.15	21.64	21.75	--	--
		1	#Mid	22.40	21.84	21.46	21.69	--	--
		1	#Max	21.75	21.68	21.49	21.08	--	--
		50%	#0	22.47	20.76	20.54	20.11	--	--
		50%	#Mid	22.26	20.12	20.09	20.65	--	--
		50%	#Max	22.05	20.05	20.53	20.16	--	--
		100%	--	20.47	20.34	20.18	20.06	--	--
Mid	QPSK	1	#0	21.88	21.71	21.70	22.43	--	--
		1	#Mid	22.07	21.93	21.74	21.37	--	--
		1	#Max	22.44	22.83	22.40	23.10	--	--
		50%	#0	21.94	20.99	21.05	20.90	--	--
		50%	#Mid	22.67	20.77	20.64	20.75	--	--
		50%	#Max	22.58	20.80	20.88	21.69	--	--
		100%	--	20.96	20.96	20.97	21.02	--	--
	16QAM	1	#0	21.26	21.12	20.84	21.82	--	--
		1	#Mid	21.37	21.32	21.07	20.74	--	--
		1	#Max	21.21	22.25	21.12	**22.40**	--	--
		50%	#0	21.04	20.17	20.13	19.73	--	--

		50%	#Mid	21.12	19.85	19.75	19.80	--	--
		50%	#Max	21.04	19.97	19.97	20.28	--	--
		100%	--	20.11	19.97	20.07	20.12	--	--
	64QAM	1	#0	20.60	20.30	20.59	20.89	--	--
		1	#Mid	20.74	20.66	20.83	20.19	--	--
		1	#Max	20.59	20.94	21.07	21.32	--	--
		50%	#0	20.46	19.61	19.67	19.48	--	--
		50%	#Mid	20.49	19.44	19.34	19.66	--	--
		50%	#Max	20.40	19.66	19.75	19.99	--	--
		100%	--	19.89	19.71	19.68	19.80	--	--
High	QPSK	1	#0	21.71	21.90	22.52	22.63	--	--
		1	#Mid	21.81	21.92	21.82	22.73	--	--
		1	#Max	22.38	22.32	21.42	21.86	--	--
		50%	#0	21.75	21.05	21.67	21.92	--	--
		50%	#Mid	21.79	20.72	20.86	21.63	--	--
		50%	#Max	22.38	20.64	20.54	21.16	--	--
		100%	--	20.84	20.85	21.27	21.59	--	--
	16QAM	1	#0	21.06	21.08	21.63	22.05	--	--
		1	#Mid	21.18	21.21	20.96	21.83	--	--
		1	#Max	21.10	21.10	20.80	20.70	--	--
		50%	#0	20.90	19.98	20.76	20.88	--	--
		50%	#Mid	20.92	19.79	19.96	20.42	--	--
		50%	#Max	20.91	19.68	19.34	20.00	--	--
		100%	--	20.01	19.69	20.14	20.70	--	--
	64QAM	1	#0	20.46	20.62	21.37	21.57	--	--
		1	#Mid	20.62	20.67	20.71	21.32	--	--
		1	#Max	20.50	20.48	20.40	20.20	--	--
		50%	#0	20.54	19.57	20.28	20.66	--	--
		50%	#Mid	20.59	19.26	19.58	20.19	--	--
		50%	#Max	20.60	19.06	18.99	19.71	--	--
		100%	--	19.82	19.27	19.85	20.01	--	--

Channel	Modulation	LTE Band 13 (700MHz)							
		RB	RB	Maximum Conducted Output Power					
		No.	Offset	1.4M	3M	5M	10M	15M	20M
Low	QPSK	1	#0	--	--	22.83	--	--	--
		1	#Mid	--	--	22.93	--	--	--
		1	#Max	--	--	22.63	--	--	--
		50%	#0	--	--	22.55	--	--	--
		50%	#Mid	--	--	22.18	--	--	--
		50%	#Max	--	--	22.00	--	--	--
		100%	--	--	--	21.99	--	--	--
	16QAM	1	#0	--	--	22.19	--	--	--
		1	#Mid	--	--	22.35	--	--	--
		1	#Max	--	--	22.06	--	--	--
		50%	#0	--	--	21.70	--	--	--
		50%	#Mid	--	--	21.13	--	--	--
		50%	#Max	--	--	20.96	--	--	--
		100%	--	--	--	21.06	--	--	--
	64QAM	1	#0	--	--	21.81	--	--	--
		1	#Mid	--	--	21.80	--	--	--
		1	#Max	--	--	21.53	--	--	--
		50%	#0	--	--	21.13	--	--	--
		50%	#Mid	--	--	20.80	--	--	--
		50%	#Max	--	--	20.51	--	--	--
		100%	--	--	--	20.63	--	--	--
Mid	QPSK	1	#0	--	--	22.63	**23.04**	--	--
		1	#Mid	--	--	22.92	22.78	--	--
		1	#Max	--	--	22.61	22.66	--	--
		50%	#0	--	--	22.26	21.95	--	--
		50%	#Mid	--	--	22.03	21.84	--	--
		50%	#Max	--	--	21.96	21.87	--	--
		100%	--	--	--	22.00	21.82	--	--
	16QAM	1	#0	--	--	22.07	22.12	--	--
		1	#Mid	--	--	22.38	**22.24**	--	--
		1	#Max	--	--	22.06	22.12	--	--
		50%	#0	--	--	21.31	21.01	--	--
		50%	#Mid	--	--	20.99	20.79	--	--

		50%	#Max	--	--	20.93	20.90	--	--
		100%	--	--	--	20.96	20.99	--	--
	64QAM	1	#0	--	--	21.75	21.85	--	--
		1	#Mid	--	--	21.97	21.64	--	--
		1	#Max	--	--	21.59	21.79	--	--
		50%	#0	--	--	20.94	20.48	--	--
		50%	#Mid	--	--	20.68	20.41	--	--
		50%	#Max	--	--	20.56	20.45	--	--
		100%	--	--	--	20.52	20.30	--	--
High	QPSK	1	#0	--	--	22.70	--	--	--
		1	#Mid	--	--	**22.98**	--	--	--
		1	#Max	--	--	22.46	--	--	--
		50%	#0	--	--	22.23	--	--	--
		50%	#Mid	--	--	22.02	--	--	--
		50%	#Max	--	--	21.86	--	--	--
		100%	--	--	--	22.01	--	--	--
	16QAM	1	#0	--	--	22.13	--	--	--
		1	#Mid	--	--	**22.41**	--	--	--
		1	#Max	--	--	21.90	--	--	--
		50%	#0	--	--	21.30	--	--	--
		50%	#Mid	--	--	20.99	--	--	--
		50%	#Max	--	--	20.85	--	--	--
		100%	--	--	--	20.99	--	--	--
	64QAM	1	#0	--	--	21.67	--	--	--
		1	#Mid	--	--	21.88	--	--	--
		1	#Max	--	--	21.45	--	--	--
		50%	#0	--	--	20.78	--	--	--
		50%	#Mid	--	--	20.35	--	--	--
		50%	#Max	--	--	20.22	--	--	--
		100%	--	--	--	20.36	--	--	--

Channel	Modulation	LTE Band 4/66 (1700MHz)							
		RB	RB	Maximum Conducted Output Power					
		No.	Offset	1.4M	3M	5M	10M	15M	20M
Low	QPSK	1	#0	23.50	23.31	23.05	23.06	23.32	23.19
		1	#Mid	23.55	23.44	23.28	22.99	23.04	23.01
		1	#Max	23.31	23.22	22.97	23.08	23.03	23.02
		50%	#0	23.47	22.80	22.61	22.16	21.99	22.06
		50%	#Mid	23.42	22.48	22.23	22.06	22.13	22.04
		50%	#Max	23.32	22.34	22.13	21.93	22.02	21.93
		100%	--	22.54	22.46	22.20	22.09	22.16	22.22
	16QAM	1	#0	22.60	22.52	22.16	22.06	22.80	22.43
		1	#Mid	22.80	22.57	22.41	22.18	22.81	22.25
		1	#Max	22.48	22.45	22.08	22.15	22.69	22.38
		50%	#0	22.79	21.90	21.70	21.27	21.09	21.11
		50%	#Mid	22.89	21.55	21.32	21.16	21.07	21.10
		50%	#Max	22.78	21.53	21.29	21.01	20.97	21.07
		100%	--	21.78	21.46	21.21	21.25	21.16	21.17
	64QAM	1	#0	21.81	21.80	21.40	21.56	21.63	21.63
		1	#Mid	21.96	22.09	21.54	21.39	21.40	21.38
		1	#Max	21.66	21.73	21.13	21.48	21.60	21.69
		50%	#0	21.60	20.84	20.69	20.17	20.01	20.28
		50%	#Mid	21.68	20.54	20.43	20.19	20.26	20.26
		50%	#Max	21.59	20.51	20.39	20.12	20.28	20.19
		100%	--	20.79	20.43	20.21	20.11	20.30	20.39
Mid	QPSK	1	#0	23.86	23.68	23.36	23.08	23.26	23.12
		1	#Mid	**24.00**	**23.73**	**23.51**	**23.42**	**23.47**	**23.34**
		1	#Max	23.91	23.52	23.09	23.28	23.44	23.30
		50%	#0	23.77	23.00	22.89	22.36	22.11	22.25
		50%	#Mid	23.78	22.59	22.55	22.43	22.33	22.31
		50%	#Max	23.86	22.62	22.37	22.19	22.36	22.19
		100%	--	22.78	22.54	22.43	22.34	22.41	22.32
	16QAM	1	#0	23.21	22.99	22.90	22.44	22.61	22.69
		1	#Mid	**23.35**	**23.15**	**23.06**	**22.70**	**22.85**	**22.90**
		1	#Max	23.08	22.85	22.66	22.64	22.66	22.78
		50%	#0	22.98	22.28	22.17	21.48	21.17	21.34
		50%	#Mid	22.99	21.79	21.74	21.46	21.38	21.24

		50%	#Max	22.90	21.70	21.57	21.24	21.40	21.21
		100%	--	21.75	21.69	21.60	21.30	21.34	21.38
	64QAM	1	#0	21.92	21.85	21.85	21.32	21.88	21.44
		1	#Mid	22.07	21.98	21.88	21.41	22.24	21.69
		1	#Max	21.88	21.70	21.56	21.37	22.14	21.58
		50%	#0	22.04	20.99	21.03	20.44	20.06	20.29
		50%	#Mid	22.06	20.64	20.67	20.50	20.21	20.30
		50%	#Max	21.98	20.61	20.49	20.28	20.24	20.34
		100%	--	21.13	20.62	20.43	20.33	20.36	20.31
High	QPSK	1	#0	23.31	23.14	22.63	22.98	23.30	23.27
		1	#Mid	23.49	23.39	23.16	22.56	22.90	23.10
		1	#Max	23.25	23.15	22.96	22.98	23.03	23.01
		50%	#0	23.29	22.49	22.19	21.91	22.19	22.42
		50%	#Mid	23.33	22.21	22.04	21.74	21.91	22.02
		50%	#Max	23.24	22.15	21.97	21.78	21.78	21.85
		100%	--	22.39	22.12	22.01	21.81	22.22	22.23
	16QAM	1	#0	22.59	22.15	22.15	22.11	22.42	22.55
		1	#Mid	22.77	22.42	22.28	21.65	22.00	22.50
		1	#Max	22.53	22.20	22.01	22.01	22.11	22.44
		50%	#0	22.57	21.75	21.38	21.02	21.17	21.33
		50%	#Mid	22.48	21.31	21.06	20.89	20.86	21.05
		50%	#Max	22.43	21.29	21.02	20.95	20.92	20.89
		100%	--	21.48	21.12	20.93	21.01	21.22	21.22
	64QAM	1	#0	21.78	21.23	20.85	21.12	21.47	21.85
		1	#Mid	21.96	21.56	21.44	20.68	21.21	21.73
		1	#Max	21.74	21.37	21.24	21.37	21.33	21.80
		50%	#0	21.91	20.50	20.10	19.98	20.26	20.36
		50%	#Mid	21.96	20.26	19.84	19.74	20.16	20.09
		50%	#Max	21.90	20.22	19.97	19.75	19.87	19.92
		100%	--	20.32	20.10	19.85	19.93	20.38	20.25

2UL_CA_5B Maximum Conducted Output Power														
Channel	Bandwidth (MHz)	PCC					SCC					Total Power (dBm)		
		BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
Low	5+10	5	20428	826.8	1	0	10	20500	834	1	49	14.37	14.39	14.29
					1	24				1	0	24.12	24.00	22.17
					25	0				50	0	22.43	21.37	21.46
	10+5	10	20450	829	1	0	5	20522	836.2	1	24	13.55	14.09	13.88
					1	49				1	0	23.46	22.36	20.38
					50	0				25	0	21.70	20.69	20.67
	10+10	10	20450	829	1	0	10	20549	838.9	1	49	14.42	14.52	14.45
					1	49				1	0	23.50	22.85	20.93
					50	0				50	0	22.37	21.39	21.41
Mid	5+10	5	20478	831.8	1	0	10	20550	839	1	49	14.58	14.63	14.88
					1	24				1	0	23.40	22.84	20.77
					25	0				50	0	22.26	21.40	21.38
	10+5	10	20500	834	1	0	5	20572	841.2	1	24	14.36	14.32	14.12
					1	49				1	0	23.68	22.78	20.99
					50	0				25	0	21.99	21.09	21.06
	10+10	10	20476	831.6	1	0	10	20575	841.5	1	49	14.68	14.68	14.61
					1	49				1	0	23.13	21.85	20.04
					50	0				50	0	22.81	21.81	21.81
High	5+10	5	20528	836.8	1	0	10	20600	844	1	49	14.29	14.67	14.29
					1	24				1	0	24.17	23.21	21.48
					25	0				50	0	22.99	21.80	21.84
	10+5	10	20550	839	1	0	5	20622	846.2	1	24	13.57	14.04	13.64
					1	49				1	0	24.52	23.40	21.67
					50	0				25	0	22.40	21.13	21.14
	10+10	10	20501	834.1	1	0	10	20600	844	1	49	14.31	14.45	14.53
					1	49				1	0	24.16	23.04	20.72
					50	0				50	0	22.71	21.74	21.64

2UL_CA_66B Maximum Conducted Output Power														
Channel	Bandwidth (MHz)	PCC					SCC					UL CA Power (dBm)		
		BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
Low	5+10	5	132000	1712.8	1	0	10	132072	1720	1	49	14.66	14.83	14.59
					1	24				1	0	24.41	23.18	20.97
					25	0				50	0	22.32	20.98	21.00
	10+5	10	132022	1715	1	0	5	132094	1722.2	1	24	14.54	14.20	14.57
					1	49				1	0	23.25	22.68	20.45
					50	0				25	0	21.98	20.96	21.09
	5+5	5	131997	1712.5	1	0	5	132045	1717.3	1	24	13.83	14.09	14.02
					1	24				1	0	23.36	23.52	23.41
					25	0				25	0	23.66	23.49	23.58
	5+15	5	132002	1713	1	0	15	132095	1722.3	1	74	14.09	14.04	14.09
					1	24				1	0	23.98	23.90	24.05
					25	0				75	0	23.78	23.75	23.80
	15+5	15	132047	1717.5	1	0	5	132140	1726.8	1	24	13.76	13.65	13.77
					1	74				1	0	23.55	23.46	23.65
					75	0				25	0	23.72	23.64	23.60
	10+10	10	132022	1715	1	0	10	132121	1724.9	1	49	13.93	14.11	14.07
					1	49				1	0	23.42	22.69	20.74
					50	0				50	0	21.79	20.89	20.86
Mid	5+10	5	132375	1750.3	1	0	10	132447	1757.5	1	49	14.89	15.07	15.26
					1	24				1	0	24.24	23.43	21.47
					25	0				50	0	22.49	21.36	21.50
	10+5	10	132397	1752.5	1	0	5	132469	1759.7	1	24	14.53	14.33	14.64
					1	49				1	0	23.87	22.95	20.94
					50	0				25	0	22.16	21.12	21.18
	5+5	5	132398	1752.6	1	0	5	132446	1757.4	1	24	14.15	14.19	14.20
					1	24				1	0	23.41	23.51	23.60
					25	0				25	0	23.69	23.68	23.75
	5+15	5	132353	1748.1	1	0	15	132446	1757.4	1	74	14.52	14.70	14.77
					1	24				1	0	24.01	24.19	24.18
					25	0				75	0	24.05	24.00	24.05
	15+5	15	132398	1752.6	1	0	5	132491	1761.9	1	24	14.20	14.29	14.38
					1	74				1	0	23.52	23.48	23.22
					75	0				25	0	23.81	23.74	23.62
	10+10	10	132373	1750.1	1	0	10	132472	1760	1	49	14.46	14.54	14.53
					1	49				1	0	23.75	22.84	20.93
					50	0				50	0	21.94	20.85	20.87

High	5+10	5	132550	1767.8	1	0	10	132622	1775	1	49	14.65	14.48	14.74
					1	24				1	0	23.72	23.12	21.29
					25	0				50	0	22.05	21.12	21.10
	10+5	10	132572	1770	1	0	5	132644	1777.2	1	24	14.17	13.64	14.40
					1	49				1	0	23.48	22.59	21.00
					50	0				25	0	21.74	20.86	20.77
	5+5	5	132599	1772.7	1	0	5	132647	1777.5	1	24	13.77	13.83	13.84
					1	24				1	0	22.83	22.92	22.94
					25	0				25	0	23.50	23.55	23.53
	5+15	5	132504	1763.2	1	0	15	132597	1772.5	1	74	14.05	13.92	13.95
					1	24				1	0	24.12	24.15	24.09
					25	0				75	0	23.77	23.82	23.82
	15+5	15	132549	1767.7	1	0	5	132642	1777	1	24	13.61	13.83	13.80
					1	74				1	0	23.03	23.25	23.16
					75	0				25	0	23.50	23.45	23.59
	10+10	10	132523	1765.1	1	0	10	132622	1775	1	49	13.86	13.79	13.96
					1	49				1	0	23.39	22.76	20.96
					50	0				50	0	21.65	20.58	20.57

2UL_CA_66C Maximum Conducted Output Power														
Channel	Bandwidth (MHz)	PCC					SCC					UL CA Power (dBm)		
		BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
Low	10+15	10	132025	1715.3	1	0	15	132145	1727.3	1	74	16.08	16.13	16.23
					1	49				1	0	23.92	23.80	23.90
					50	0				75	0	24.17	24.09	24.04
	15+10	15	132047	1717.5	1	0	10	132167	1729.5	1	49	16.20	16.42	16.36
					1	74				1	0	24.05	24.19	24.13
					75	0				50	0	24.17	24.15	24.16
	15+15	15	132047	1717.5	1	0	15	132197	1732.5	1	74	16.16	16.32	16.27
					1	74				1	0	23.87	23.23	21.13
					75	0				75	0	22.18	21.02	21.05
	5+20	5	132005	1713.3	1	0	20	132122	1725	1	99	16.13	16.21	16.20
					1	24				1	0	24.11	22.94	21.06
					25	0				100	0	22.30	21.19	21.12
	20+5	20	132072	1720	1	0	5	132189	1731.7	1	24	16.09	16.08	16.00
					1	99				1	0	23.82	22.82	20.95
					100	0				25	0	22.12	20.99	20.98
	10+20	10	132027	1715.5	1	0	20	132171	1729.9	1	99	16.00	16.11	16.08
					1	24				1	0	23.84	23.01	20.97
					25	0				100	0	22.10	21.16	21.16
	20+10	20	132072	1720	1	0	10	132216	1734.4	1	24	16.07	16.11	16.15
					1	99				1	0	23.82	22.94	20.95
					100	0				25	0	22.23	21.17	21.15
	15+20	15	132050	1717.8	1	0	20	132221	1734.9	1	99	15.88	15.74	15.81
					1	74				1	0	23.99	23.14	20.82
					75	0				100	0	22.42	21.49	21.46
	20+15	20	132072	1720	1	0	15	132243	1737.1	1	74	15.99	16.03	16.02
					1	99				1	0	24.04	23.11	21.06
					100	0				75	0	22.37	21.21	21.19
	20+20	20	132072	1720	1	0	20	132270	1739.8	1	99	16.57	16.49	16.33
					1	99				1	0	23.94	23.00	20.95
					100	0				100	0	22.27	21.24	21.32
Mid	10+15	10	132351	1747.9	1	0	15	132471	1759.9	1	74	16.74	16.82	16.83
					1	49				1	0	24.23	24.63	24.70
					50	0				75	0	24.37	24.39	24.39
	15+10	15	132373	1750.1	1	0	10	132493	1762.1	1	49	16.03	16.76	16.87
					1	74				1	0	23.97	24.06	24.03
					75	0				50	0	24.58	24.57	24.52
	15+15	15	132347	1747.5	1	0	15	132497	1762.5	1	74	16.57	16.44	16.49
					1	74				1	0	24.47	23.26	21.53
					75	0				75	0	22.46	21.51	21.53
	5+20	5	132330	1745.8	1	0	20	132447	1757.5	1	99	16.59	16.65	16.66
					1	24				1	0	24.28	23.37	21.50
					25	0				100	0	22.58	21.54	21.54
	20+5	20	132397	1752.5	1	0	5	132514	1764.2	1	24	16.55	16.52	16.57
					1	99				1	0	23.87	22.96	21.02
					100	0				25	0	22.15	21.20	21.22
	10+20	10	132328	1745.6	1	0	20	132472	1760	1	99	16.44	16.56	16.64
					1	24				1	0	24.39	23.41	21.49
					25	0				100	0	22.53	21.54	21.56
	20+10	20	132373	1750.1	1	0	10	132517	1764.5	1	24	16.51	16.53	16.60
					1	99				1	0	24.12	23.04	21.11
					100	0				25	0	23.28	21.27	21.25

	15+20	15	132325	1745.3	1	0	20	132496	1762.4	1	99	16.34	16.85	16.81
					1	74				1	0	24.42	23.73	21.93
					75	0				100	0	22.46	21.51	21.43
	20+15	20	132348	1747.6	1	0	15	132519	1764.7	1	74	16.31	16.30	16.28
					1	99				1	0	24.16	23.15	21.16
					100	0				75	0	22.36	21.43	21.41
	20+20	20	132323	1745.1	1	0	20	132521	1764.9	1	99	16.13	16.23	16.24
					1	99				1	0	24.56	23.52	21.58
					100	0				100	0	22.35	21.52	21.57
High	10+15	10	132477	1760.5	1	0	15	132597	1772.5	1	74	16.24	16.37	16.34
					1	49				1	0	24.36	24.34	24.51
					50	0				75	0	24.18	24.08	24.06
	15+10	15	132499	1762.7	1	0	10	132619	1774.7	1	49	16.39	16.15	16.19
					1	74				1	0	24.33	24.41	24.40
					75	0				50	0	23.87	23.84	23.92
	15+15	15	132447	1757.5	1	0	15	132597	1772.5	1	74	16.29	16.42	16.47
					1	74				1	0	24.11	23.48	21.66
					75	0				75	0	22.37	21.41	21.40
	5+20	5	132455	1758.3	1	0	20	132572	1770	1	99	15.96	16.16	16.17
					1	24				1	0	23.78	22.97	21.18
					25	0				100	0	22.14	20.95	20.91
	20+5	20	132522	1765	1	0	5	132639	1776.7	1	24	15.88	15.88	15.93
					1	99				1	0	21.70	20.70	20.73
					100	0				25	0	21.65	20.66	20.64
	10+20	10	132428	1755.6	1	0	20	132572	1770	1	99	16.19	16.16	16.27
					1	24				1	0	23.86	22.92	21.14
					25	0				100	0	22.27	21.20	21.19
	20+10	20	132473	1760.1	1	0	10	132617	1774.5	1	24	16.44	16.33	16.33
					1	99				1	0	24.14	23.13	21.14
					100	0				25	0	21.99	21.03	21.10
	15+20	15	132401	1752.9	1	0	20	132572	1770	1	99	16.35	16.43	16.41
					1	74				1	0	24.06	23.27	21.45
					75	0				100	0	22.35	21.41	21.43
	20+15	20	132423	1755.1	1	0	15	132594	1772.2	1	74	16.55	16.65	16.67
					1	99				1	0	24.59	23.59	21.68
					100	0				75	0	22.49	21.58	21.55
	20+20	20	132374	1750.2	1	0	20	132572	1770	1	99	16.23	16.32	16.37
					1	99				1	0	24.28	23.20	21.34
					100	0				100	0	22.41	21.47	21.41

CA_2A+2A Maximum Conducted Output Power													
Bandwidth (MHz)	PCC					SCC					UL CA Power (dBm)		
	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
5+5	5	18625	1852.5	1	0	5	19175	1907.5	1	24	22.13	22.22	22.19
				1	24				1	0	23.61	23.63	23.55
				25	0				25	0	23.90	23.88	23.85
10+10	10	18650	1855	1	0	10	19150	1905	1	49	23.66	23.50	23.68
				1	49				1	0	23.61	23.60	23.64
				50	0				50	0	23.76	23.84	24.01
15+15	15	18675	1857.5	1	0	15	19125	1902.5	1	74	5.22	5.16	5.28
				1	74				1	0	5.79	5.73	5.74
				75	0				75	0	16.04	16.04	16.07
20+20	20	18700	1860	1	0	20	19100	1900	1	99	5.07	5.10	5.04
				1	99				1	0	5.99	5.95	5.91
				100	0				100	0	17.69	17.56	17.57

CA_4A+4A Maximum Conducted Output Power													
Bandwidth (MHz)	PCC					SCC					UL CA Power (dBm)		
	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
5+5	5	19975	1712.5	1	0	5	20375	1752.5	1	24	5.66	5.71	5.63
				1	24				1	0	5.92	5.97	5.90
				25	0				25	0	12.42	12.54	12.53
10+10	10	20000	1715	1	0	10	20350	1750	1	49	6.21	6.18	6.23
				1	49				1	0	5.94	5.85	5.99
				50	0				50	0	14.05	14.08	14.14
15+15	15	20025	1717.5	1	0	15	20325	1747.5	1	74	6.20	6.13	6.19
				1	74				1	0	5.93	5.93	6.07
				75	0				75	0	15.97	15.95	15.97
20+20	20	20050	1720	1	0	20	20300	1745	1	99	5.98	5.97	5.90
				1	99				1	0	5.72	5.78	5.79
				100	0				100	0	16.95	16.99	17.00

CA_2A+4A/66A Maximum Conducted Output Power																	
PCC UL CA Power (dBm)									SCC UL CA Power (dBm)								
LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM	LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
2	5	18625	1852.5	1	0	19.86	20.44	19.48	66	5	132647	1777.5	1	24	21.43	21.29	21.41
				1	24	19.85	20.47	19.36					1	0	20.89	20.77	20.79
				25	0	20.15	20.08	19.67					25	0	21.60	21.49	21.40
2	10	18650	1855	1	0	19.63	19.69	19.52	66	10	132622	1775	1	49	21.86	21.74	21.73
				1	49	19.88	19.82	19.64					1	0	21.99	21.80	21.81
				50	0	19.74	19.75	19.37					50	0	21.55	21.54	21.62
2	15	18675	1857.5	1	0	20.35	20.46	19.98	66	15	132597	1772.5	1	74	22.47	22.26	22.37
				1	74	20.48	20.42	19.69					1	0	22.13	21.90	21.91
				75	0	20.01	19.99	19.57					75	0	21.93	22.14	22.20
2	20	18700	1860	1	0	20.49	20.61	20.45	66	20	132572	1770	1	99	22.15	22.09	22.14
				1	99	20.58	20.67	20.66					1	0	22.21	22.17	21.13
				100	0	19.83	19.90	19.49					100	0	22.21	22.20	22.20

CA_2A+5A Maximum Conducted Output Power																	
PCC UL CA Power (dBm)									SCC UL CA Power (dBm)								
LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM	LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
2	5	18625	1852.5	1	0	19.84	20.30	19.38	5	5	20625	846.5	1	24	21.31	21.11	21.07
				1	24	19.82	20.57	19.53					1	0	22.68	22.61	22.55
				25	0	20.31	20.26	19.80					25	0	22.61	22.64	22.62
2	10	18650	1855	1	0	19.64	19.70	19.48	5	10	20600	844	1	49	21.66	21.42	21.47
				1	49	19.87	19.83	19.58					1	0	21.93	21.94	21.84
				50	0	19.67	19.71	19.36					50	0	22.80	22.85	22.85
2	15	18675	1857.5	1	0	19.83	19.78	19.58	5	5	20625	846.5	1	24	20.87	21.08	21.18
				1	74	20.07	20.06	19.93					1	0	22.78	22.68	22.58
				75	0	19.96	19.99	19.49					25	0	22.36	22.37	22.37
2	20	18700	1860	1	0	20.32	20.73	19.40	5	10	20600	844	1	49	21.68	21.54	21.50
				1	99	20.56	20.89	20.15					1	0	21.93	21.88	21.90
				100	0	19.95	20.04	19.52					50	0	22.79	22.84	22.88

CA_2A+13A Maximum Conducted Output Power																	
PCC UL CA Power (dBm)									SCC UL CA Power (dBm)								
LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM	LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
2	5	18625	1852.5	1	0	19.94	20.41	19.47	13	5	23255	784.5	1	24	23.10	22.98	22.99
				1	24	19.91	20.43	19.52					1	0	23.74	23.60	23.52
				25	0	19.98	20.02	19.67					25	0	23.41	23.48	23.47
2	10	18650	1855	1	0	19.73	19.74	19.52	13	10	23230	782	1	49	23.69	23.51	23.47
				1	49	19.87	19.84	19.66					1	0	23.70	23.66	23.58
				50	0	19.85	20.04	19.54					50	0	23.86	24.05	24.08
2	15	18675	1857.5	1	0	19.83	20.31	19.87	13	5	23255	784.5	1	24	23.04	23.07	23.10
				1	74	20.11	20.35	20.25					1	0	23.83	23.82	23.74
				75	0	20.13	20.17	19.78					25	0	23.61	23.62	23.73
2	20	18700	1860	1	0	19.81	20.24	19.45	13	10	23230	782	1	49	23.38	23.34	23.66
				1	99	20.42	20.82	20.19					1	0	24.29	24.30	23.91
				100	0	20.09	20.10	19.61					50	0	24.20	24.21	24.18

CA_4A+5A Maximum Conducted Output Power																	
PCC UL CA Power (dBm)									SCC UL CA Power (dBm)								
LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM	LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
4	5	19975	1712.5	1	0	20.36	20.91	20.21	5	5	20625	846.5	1	24	21.19	21.18	21.27
				1	24	20.23	20.84	19.94					1	0	22.60	22.33	22.43
				25	0	20.57	20.64	20.17					25	0	22.80	22.23	22.20
4	10	20000	1715	1	0	20.30	20.34	20.09	5	10	20600	844	1	49	22.06	21.96	21.96
				1	49	20.42	20.46	20.09					1	0	21.83	21.70	21.66
				50	0	20.24	20.45	19.87					50	0	22.53	22.56	22.56
4	15	20025	1717.5	1	0	20.46	21.17	20.34	5	5	20625	846.5	1	24	21.11	21.23	21.35
				1	74	20.31	20.97	20.24					1	0	22.53	22.60	22.55
				75	0	20.51	20.51	19.98					25	0	22.22	22.23	22.24
4	20	20050	1720	1	0	20.55	20.57	20.46	5	10	20600	844	1	49	21.51	21.46	21.56
				1	99	20.43	20.51	20.41					1	0	21.96	21.79	21.93
				100	0	20.37	20.44	20.02					50	0	22.48	22.54	22.58

CA_4A+13A Maximum Conducted Output Power																	
PCC UL CA Power (dBm)									SCC UL CA Power (dBm)								
LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM	LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
4	5	19975	1712.5	1	0	20.59	21.28	20.37	13	5	23255	784.5	1	24	23.01	22.98	23.04
				1	24	20.58	20.92	20.08					1	0	23.63	23.56	23.58
				25	0	20.87	20.88	20.49					25	0	23.49	23.42	23.44
4	10	20000	1715	1	0	20.47	20.48	20.06	13	10	23230	782	1	49	23.67	23.65	23.61
				1	49	20.77	20.51	20.03					1	0	24.23	24.25	24.32
				50	0	20.67	20.63	20.19					50	0	23.96	23.91	24.00
4	15	20025	1717.5	1	0	20.58	20.52	20.38	13	5	23255	784.5	1	24	23.07	22.89	22.94
				1	74	20.51	20.43	20.21					1	0	23.51	23.31	23.31
				75	0	20.72	20.73	20.11					25	0	23.47	23.35	23.32
4	20	20050	1720	1	0	20.90	20.95	20.48	13	10	23230	782	1	49	23.62	23.56	23.71
				1	99	20.44	20.46	20.37					1	0	23.75	23.74	23.87
				100	0	20.78	20.77	20.06					50	0	24.11	24.09	24.01

CA_5A+66A Maximum Conducted Output Power																	
PCC UL CA Power (dBm)									SCC UL CA Power (dBm)								
LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM	LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
5	5	20625	846.5	1	0	21.09	21.59	20.65	66	5	131997	1712.5	1	24	21.34	21.24	21.20
				1	24	20.04	20.47	19.58					1	0	21.77	21.61	21.55
				25	0	21.72	20.49	20.31					25	0	21.44	21.79	21.73
5	10	20600	844	1	0	21.61	21.69	21.27	66	10	132022	1715	1	49	21.43	21.13	21.16
				1	49	19.75	19.81	19.53					1	0	22.05	21.83	21.82
				50	0	21.33	21.27	20.72					50	0	22.04	22.04	22.03
5	5	20625	846.5	1	0	20.84	21.49	20.64	66	15	132047	1717.5	1	74	21.80	21.62	21.68
				1	24	19.94	20.42	19.58					1	0	22.07	21.75	21.77
				25	0	20.66	20.64	20.27					75	0	22.22	22.18	22.15
5	10	20600	844	1	0	21.61	21.61	21.47	66	20	132072	1720	1	99	21.56	21.43	21.41
				1	49	19.81	19.75	19.44					1	0	21.81	21.67	21.74
				50	0	21.24	21.26	20.67					100	0	22.08	22.14	22.10

CA_13A+2A Maximum Conducted Output Power																	
PCC UL CA Power (dBm)									SCC UL CA Power (dBm)								
LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM	LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
13	5	23255	784.5	1	0	20.68	21.20	20.05	2	5	18625	1852.5	1	24	20.96	20.80	20.82
				1	24	21.17	21.68	20.72					1	0	20.60	20.40	20.39
				25	0	21.03	21.13	20.55					25	0	21.22	21.16	21.13
13	10	23230	782	1	0	20.56	20.54	20.28	2	10	18650	1855	1	49	21.20	21.02	21.05
				1	49	21.10	21.11	20.98					1	0	20.95	20.76	20.77
				50	0	21.11	21.16	20.82					50	0	21.17	21.15	21.06
13	5	23255	784.5	1	0	20.67	21.18	19.98	2	15	18675	1857.5	1	0	21.35	21.04	21.19
				1	24	21.34	21.84	20.77					1	74	21.16	20.98	21.02
				25	0	21.18	21.33	20.63					75	0	21.16	21.17	21.13
13	10	23230	782	1	0	20.46	20.49	20.36	2	20	18700	1860	1	0	21.18	21.15	21.15
				1	49	21.10	21.02	20.91					1	99	21.41	21.14	21.29
				50	0	21.29	21.33	20.79					100	0	21.14	21.15	21.19

CA_13A+4A/66A Maximum Conducted Output Power																	
PCC UL CA Power (dBm)									SCC UL CA Power (dBm)								
LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM	LTE Band	BW (MHz)	Channel	Frquency (MHz)	RB No.	RB offest	QPSK	16QAM	64QAM
13	5	23255	784.5	1	0	21.33	21.86	20.80	66	5	131997	1712.5	1	24	21.31	21.13	21.11
				1	24	20.75	21.21	20.01					1	0	21.85	21.61	21.80
				25	0	21.10	21.18	20.72					25	0	21.84	21.76	21.76
13	10	23230	782	1	0	21.01	21.03	20.88	66	10	132022	1715	1	49	21.38	21.05	20.96
				1	49	20.53	20.51	20.33					1	0	21.99	21.76	21.74
				50	0	21.14	21.16	20.73					50	0	21.64	21.59	21.63
13	5	23255	784.5	1	0	21.07	21.60	20.67	66	15	132047	1717.5	1	74	21.69	21.46	21.43
				1	24	20.71	21.26	20.17					1	0	21.96	21.75	21.76
				25	0	20.83	21.08	20.54					75	0	21.78	22.17	22.10
13	10	23230	782	1	0	20.56	20.49	20.38	66	20	132072	1720	1	99	21.81	21.64	21.59
				1	49	21.04	21.27	20.95					1	0	21.71	21.34	21.33
				50	0	21.12	21.15	20.78					100	0	21.49	21.53	21.54

3.6. Maximum Conducted Power and ERP/EIRP Power

According to KDB 412172 D01 Section 1.2 Power Approach

EIRP = P_T + G_T – L_C = ERP + 2.15 dB, ERP = EIRP – 2.15 dB

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

LTE Band	BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Antenna Gain (dBi)	Maximum EIRP (W)	Maximum EIRP Limit (W)
2	1.4M	QPSK	23.77	0.238	1.56	0.341	2
		16QAM	22.80	0.191	1.56	0.273	2
		64QAM	22.54	0.179	1.56	0.257	2
	3M	QPSK	23.26	0.212	1.56	0.257	2
		16QAM	22.55	0.180	1.56	0.303	2
		64QAM	21.93	0.156	1.56	0.258	2
	5M	QPSK	23.00	0.200	1.56	0.258	2
		16QAM	22.18	0.165	1.56	0.223	2
		64QAM	21.96	0.157	1.56	0.286	2
	10M	QPSK	22.84	0.192	1.56	0.286	2
		16QAM	22.03	0.160	1.56	0.237	2
		64QAM	21.58	0.144	1.56	0.225	2
	15M	QPSK	23.00	0.200	1.56	0.225	2
		16QAM	22.27	0.169	1.56	0.275	2
		64QAM	21.82	0.152	1.56	0.229	2
	20M	QPSK	23.08	0.203	1.56	0.229	2
		16QAM	22.19	0.166	1.56	0.206	2
		64QAM	22.09	0.162	1.56	0.286	2

LTE Band	BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Antenna Gain (dBi)	Maximum ERP (W)	Maximum ERP Limit (W)
5	1.4M	QPSK	23.27	0.212	3.2	0.270	7
		16QAM	22.59	0.182	3.2	0.231	7
		64QAM	22.47	0.177	3.2	0.225	7
	3M	QPSK	22.94	0.197	3.2	0.251	7
		16QAM	22.40	0.174	3.2	0.221	7
		64QAM	22.15	0.164	3.2	0.209	7
	5M	QPSK	22.65	0.184	3.2	0.234	7
		16QAM	22.00	0.158	3.2	0.202	7
		64QAM	21.64	0.146	3.2	0.186	7
	10M	QPSK	23.19	0.208	3.2	0.265	7
		16QAM	22.40	0.174	3.2	0.221	7
		64QAM	21.75	0.150	3.2	0.191	7

LTE Band	BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Antenna Gain (dBi)	Maximum ERP (W)	Maximum ERP Limit (W)
13	5M	QPSK	22.98	0.199	1.66	0.177	3
		16QAM	22.41	0.174	1.66	0.156	3
		64QAM	21.97	0.157	1.66	0.141	3
	10M	QPSK	23.04	0.201	1.66	0.180	3
		16QAM	22.24	0.167	1.66	0.150	3
		64QAM	21.85	0.153	1.66	0.137	3

LTE Band	BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Antenna Gain (dBi)	Maximum ERP (W)	Maximum ERP Limit (W)
4/66	1.4M	QPSK	24.00	0.251	1.62	0.365	1
		16QAM	23.35	0.216	1.62	0.314	1
		64QAM	22.07	0.161	1.62	0.234	1
	3M	QPSK	23.73	0.236	1.62	0.234	1
		16QAM	23.15	0.207	1.62	0.343	1
		64QAM	22.09	0.162	1.62	0.300	1
	5M	QPSK	23.51	0.224	1.62	0.300	1
		16QAM	23.06	0.202	1.62	0.235	1
		64QAM	21.88	0.154	1.62	0.326	1
	10M	QPSK	23.42	0.220	1.62	0.326	1
		16QAM	22.70	0.186	1.62	0.294	1
		64QAM	21.56	0.143	1.62	0.224	1
	15M	QPSK	23.47	0.222	1.62	0.224	1
		16QAM	22.85	0.193	1.62	0.319	1
		64QAM	22.24	0.167	1.62	0.270	1
	20M	QPSK	23.34	0.216	1.62	0.270	1
		16QAM	22.90	0.195	1.62	0.208	1
		64QAM	21.85	0.153	1.62	0.323	1

LTE 2UL Band	BW (MHz)	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Antenna Gain (dBi)	Maximum ERP (W)	Maximum ERP Limit (W)
5B	5+10	QPSK	24.12	0.258	3.2	0.329	7
		16QAM	24.00	0.251	3.2	0.320	7
		64QAM	22.17	0.165	3.2	0.210	7
	10+5	QPSK	24.12	0.258	3.2	0.329	7
		16QAM	23.40	0.219	3.2	0.279	7
		64QAM	21.67	0.147	3.2	0.187	7
	10+10	QPSK	24.12	0.258	3.2	0.329	7
		16QAM	23.04	0.201	3.2	0.256	7
		64QAM	21.81	0.152	3.2	0.193	7

LTE 2UL Band	BW (MHz)	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Antenna Gain (dBi)	Maximum EIRP (W)	Maximum EIRP Limit (W)
66B	5+10	QPSK	24.41	0.276	1.62	0.401	1
		16QAM	23.43	0.220	1.62	0.320	1
		64QAM	21.50	0.141	1.62	0.205	1
	10+5	QPSK	23.87	0.244	1.62	0.354	1
		16QAM	22.95	0.197	1.62	0.286	1
		64QAM	21.18	0.131	1.62	0.191	1
	5+5	QPSK	23.69	0.234	1.62	0.340	1
		16QAM	23.68	0.233	1.62	0.339	1
		64QAM	23.75	0.237	1.62	0.344	1
	5+15	QPSK	24.12	0.258	1.62	0.375	1
		16QAM	24.19	0.262	1.62	0.381	1
		64QAM	24.18	0.262	1.62	0.380	1
	15+5	QPSK	23.81	0.240	1.62	0.349	1
		16QAM	23.74	0.237	1.62	0.344	1
		64QAM	23.65	0.232	1.62	0.337	1
	10+10	QPSK	23.75	0.237	1.62	0.344	1
		16QAM	22.84	0.192	1.62	0.279	1
		64QAM	20.96	0.125	1.62	0.181	1

LTE 2UL Band	BW (MHz)	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Antenna Gain (dBi)	Maximum EIRP (W)	Maximum EIRP Limit (W)
66C	10+15	QPSK	24.37	0.274	1.62	0.397	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	24.70	0.295	1.62	0.429	1
	15+10	QPSK	24.58	0.287	1.62	0.417	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	24.52	0.283	1.62	0.411	1
	15+15	QPSK	24.47	0.280	1.62	0.406	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	21.66	0.147	1.62	0.213	1
	5+20	QPSK	24.28	0.268	1.62	0.389	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	21.54	0.143	1.62	0.207	1
	20+5	QPSK	23.87	0.244	1.62	0.354	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	21.22	0.132	1.62	0.192	1
	10+20	QPSK	24.39	0.275	1.62	0.399	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	21.56	0.143	1.62	0.208	1
	20+10	QPSK	24.14	0.259	1.62	0.377	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	21.25	0.133	1.62	0.194	1
	15+20	QPSK	24.42	0.277	1.62	0.402	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	21.93	0.156	1.62	0.226	1
	20+15	QPSK	24.59	0.288	1.62	0.418	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	21.68	0.147	1.62	0.214	1
	20+20	QPSK	24.56	0.286	1.62	0.415	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	21.58	0.144	1.62	0.209	1
	10+15	QPSK	24.37	0.274	1.62	0.397	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	24.70	0.295	1.62	0.429	1
	15+10	QPSK	24.58	0.287	1.62	0.417	1
		16QAM	24.63	0.290	1.62	0.422	1
		64QAM	24.52	0.283	1.62	0.411	1

LTE 2UL Band	BW (MHz)	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Antenna Gain (dBi)	Maximum EIRP (W)	Maximum EIRP Limit (W)
2A+2A	5+5	QPSK	23.90	0.245	1.56	0.352	2
		16QAM	23.88	0.244	1.56	0.350	2
		64QAM	23.85	0.243	1.56	0.348	2
	10+10	QPSK	23.76	0.238	1.56	0.340	2
		16QAM	23.84	0.242	1.56	0.347	2
		64QAM	24.01	0.252	1.56	0.361	2
	15+15	QPSK	16.04	0.040	1.56	0.058	2
		16QAM	16.04	0.040	1.56	0.058	2
		64QAM	16.07	0.040	1.56	0.058	2
	20+20	QPSK	17.69	0.059	1.56	0.084	2
		16QAM	17.56	0.057	1.56	0.082	2
		64QAM	17.57	0.057	1.56	0.082	2

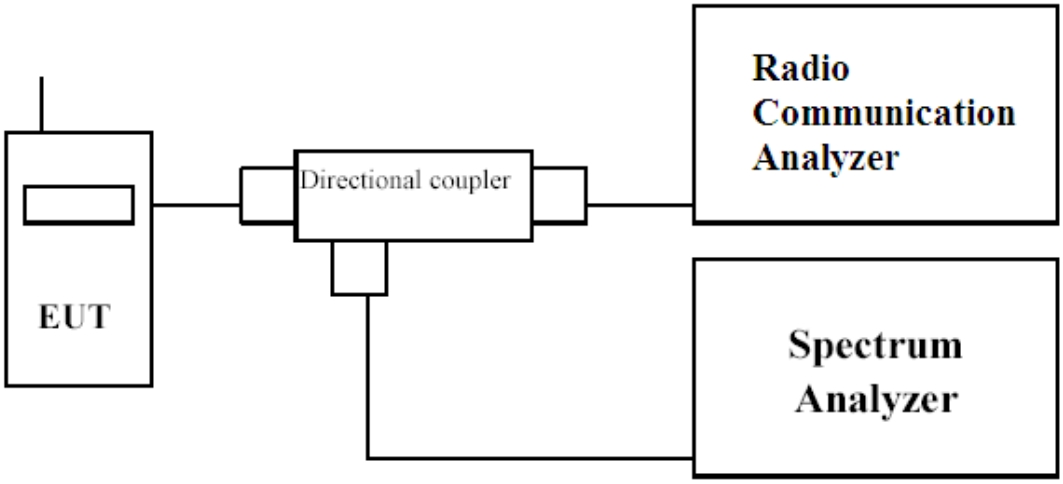
LTE 2UL Band	BW (MHz)	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Antenna Gain (dBi)	Maximum EIRP (W)	Maximum EIRP Limit (W)
4A+4A	5+5	QPSK	12.42	0.017	1.62	0.025	1
		16QAM	12.54	0.018	1.62	0.026	1
		64QAM	12.53	0.018	1.62	0.026	1
	10+10	QPSK	14.05	0.025	1.62	0.037	1
		16QAM	14.08	0.026	1.62	0.037	1
		64QAM	14.14	0.026	1.62	0.038	1
	15+15	QPSK	15.97	0.040	1.62	0.057	1
		16QAM	15.95	0.039	1.62	0.057	1
		64QAM	15.97	0.040	1.62	0.057	1
	20+20	QPSK	16.95	0.050	1.62	0.072	1
		16QAM	16.99	0.050	1.62	0.073	1
		64QAM	17.00	0.050	1.62	0.073	1

4. Occupied Bandwidth

4.1. Test Secification

According to FCC Part 2.1049, 22.917, 24.238, 27.53

4.2. Test Setup



4.3. Test Procedure

The EUT is tested with maximum rated TX power via the Base Station simulator, and the occupied bandwidth was measured at the antenna terminals of the EUT.

The Resolution BW of the analyzer is set to 1 %~5% of the emission bandwidth. The EUT's occupied bandwidth is measured as the width of the signal between two points, one below the carrier center frequency and one above the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
The plots below show the resultant display from the Spectrum Analyser.

4.4. Test Result of Occupied Bandwidth

Product	LTE Module
Test Mode	Occupied Bandwidth
Test Site	CTR

LTE Band 2

BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			26 dB bandwidth (MHz)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4M	18607	1850.7	1.1163	1.1098	1.1167	1.4630	1.4580	1.4890
1.4M	18900	1880	1.1153	1.1095	1.1333	1.4620	1.4720	1.5430
1.4M	19193	1909.3	1.1162	1.1114	1.1166	1.4620	1.4800	1.4760
3M	18615	1851.5	2.8047	2.7734	2.7772	3.5770	3.4670	3.5030
3M	18900	1880	2.7991	2.7748	2.7923	3.5590	3.4950	3.5290
3M	19185	1908.5	2.8045	2.7780	2.7861	3.5290	3.4780	3.5150
5M	18625	1852.5	4.5260	4.5016	4.5463	5.3390	5.2010	5.2810
5M	18900	1880	4.5258	4.5022	4.5255	5.3600	5.2150	5.3140
5M	19175	1907.5	4.5291	4.5085	4.5435	5.3270	5.2440	5.3240
10M	18650	1855	9.0577	9.0539	9.0423	10.150	10.260	10.170
10M	18900	1880	9.0520	9.0624	9.0638	10.200	10.290	10.180
10M	19150	1905	9.0395	9.0417	9.0359	10.120	10.180	10.120
15M	18675	1857.5	13.440	13.424	13.464	14.660	14.640	14.740
15M	18900	1880	13.455	13.446	13.489	14.770	14.730	14.620
15M	19125	1902.5	13.427	13.410	13.392	14.630	14.600	14.600
20M	18700	1860	18.507	18.446	18.504	20.530	20.210	20.320
20M	18900	1880	18.543	18.486	18.518	20.340	20.290	20.360
20M	19100	1900	18.454	18.399	18.353	20.280	20.240	20.310

LTE Band 5

BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			26 dB bandwidth (MHz)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4M	20407	824.7	1.1155	1.1101	1.1311	1.4980	1.4670	1.5240
1.4M	20525	836.5	1.1144	1.1119	1.1143	1.4930	1.4640	1.4740
1.4M	20643	848.3	1.1176	1.1129	1.1215	1.5180	1.4820	1.4920
3M	20415	825.5	2.7967	2.7748	2.7782	3.4870	3.5030	3.5000
3M	20525	836.5	2.8112	2.7814	2.8020	3.5090	3.5090	3.5290
3M	20635	847.5	2.8062	2.7817	2.8076	3.5150	3.5260	3.4370
5M	20425	826.5	4.5379	4.5253	4.5631	5.3110	5.2940	5.3360
5M	20525	836.5	4.5454	4.5154	4.5467	5.2420	5.3110	5.3010
5M	20625	846.5	4.5248	4.4924	4.5251	5.1980	5.1910	5.2370
10M	20450	829	9.1140	9.1215	9.0926	10.250	10.240	10.190
10M	20525	836.5	9.0684	9.0942	9.1006	10.130	10.230	10.180
10M	20600	844	8.9248	8.9384	8.9322	9.9320	9.9840	9.8990

LTE Band 13								
BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			26 dB bandwidth (MHz)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5M	23205	779.5	4.5176	4.4951	4.5300	5.2500	5.1850	5.322
5M	23230	782	4.5233	4.5030	4.5464	5.2930	5.2180	5.312
5M	23255	784.5	4.5225	4.5015	4.5247	5.3210	5.2020	5.307
10M	23230	782	9.0075	9.0226	9.0104	10.130	10.120	10.090

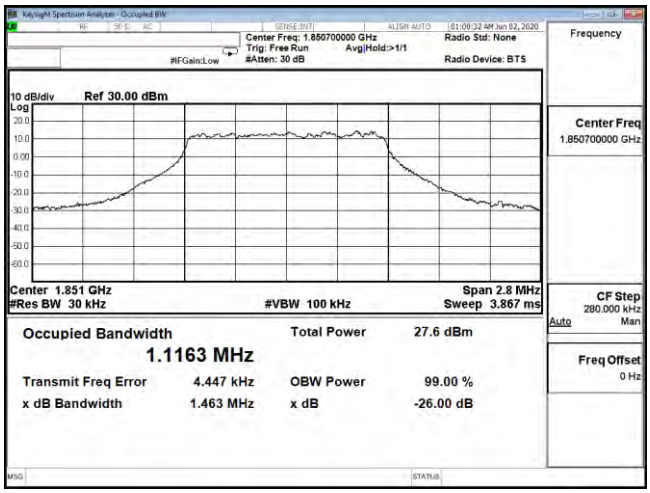
LTE Band 66								
BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			26 dB bandwidth (MHz)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4M	131979	1710.7	1.1149	1.1109	1.1146	1.4690	1.4770	1.4960
1.4M	132322	1745	1.1157	1.1095	1.1251	1.4610	1.4560	1.5150
1.4M	132665	1779.3	1.1150	1.1096	1.1211	1.4970	1.4710	1.4660
3M	131987	1711.5	2.7958	2.7766	2.7881	3.5600	3.4920	3.4820
3M	132322	1745	2.7949	2.7729	2.7828	3.5480	3.4930	3.4610
3M	132657	1778.5	2.7883	2.7731	2.7949	3.5670	3.4600	3.4830
5M	131997	1712.5	4.5262	4.5064	4.5571	5.3440	5.2190	5.3610
5M	132322	1745	4.5243	4.5059	4.5314	5.2740	5.2350	5.3030
5M	132647	1777.5	4.5198	4.5036	4.5379	5.3140	5.2140	5.3530
10M	132022	1715	9.0683	9.0715	9.0707	10.1900	10.2200	10.1000
10M	132322	1745	9.0650	9.0737	9.0633	10.2100	10.2900	10.1600
10M	132622	1775	9.0463	9.0577	9.0740	10.1300	10.2100	10.1700
15M	132047	1717.5	13.4770	13.4590	13.4580	14.6100	14.5200	14.7000
15M	132322	1745	13.4790	13.4720	13.5030	14.7400	14.5900	14.7200
15M	132597	1772.5	13.4620	13.4440	13.4970	14.6200	14.5400	14.6600
20M	132072	1720	18.5130	18.4390	18.5110	20.3900	20.2600	20.2400
20M	132322	1745	18.6470	18.5740	18.5800	20.5200	20.3100	20.3000
20M	132572	1770	18.5910	18.5100	18.4540	20.3800	20.2300	20.3100

2UL_CA_5B Occupied Bandwidth										
Bandwidth (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			26 dB Bandwidth (MHz)		
					QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5M +10M	20428	826.8	20500	834	13.874	13.841	13.854	15.13	15.05	15.13
5M +10M	20478	831.8	20550	839	13.980	13.961	13.982	15.19	15.20	15.16
5M +10M	20528	836.8	20600	844	13.939	13.935	13.953	15.12	15.10	15.11
10M +5M	20450	829	20522	836.2	13.885	13.897	13.919	15.02	14.91	14.94
10M +5M	20500	834	20572	841.2	13.980	13.975	13.980	15.11	14.85	14.90
10M +5M	20550	839	20622	846.2	13.944	13.934	13.941	15.02	15.00	15.06
10M +10M	20450	829	20549	838.9	19.598	19.567	19.608	21.39	21.27	21.30
10M +10M	20476	831.6	20575	841.5	19.446	19.461	19.395	21.09	21.12	21.14
10M +10M	20501	834.1	20600	844	19.384	19.317	19.415	21.11	20.95	21.05

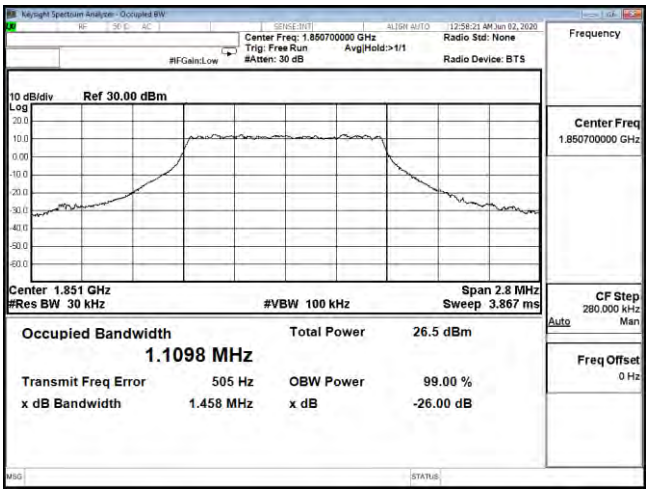
2UL_CA_66B Occupied Bandwidth										
Bandwidth (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			26 dB Bandwidth (MHz)		
					QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5M +10M	132000	1712.8	132072	1720	13.792	13.961	13.971	15.19	15.13	15.20
5M +10M	132375	1750.3	132447	1757.5	13.939	13.928	13.938	15.20	15.20	15.12
5M +10M	132550	1767.8	132622	1775	13.930	13.914	13.926	15.17	15.13	15.11
10M +5M	132022	1715	132094	1722.2	13.916	13.896	13.897	15.10	14.94	14.98
10M +5M	132397	1752.5	132469	1759.7	13.926	13.916	13.943	15.13	15.03	15.04
10M +5M	132572	1770	132644	1777.2	13.923	13.918	13.918	15.04	15.06	15.07
5M +5M	131997	1712.5	132045	1717.3	9.3964	9.4035	9.4122	10.43	10.59	10.54
5M +5M	132398	1752.6	132446	1757.4	9.3841	9.3783	9.3828	10.55	10.60	10.56
5M +5M	132599	1772.7	132647	1777.5	9.3926	9.3636	9.3750	10.58	10.51	10.54
5M +15M	132002	1713	132095	1722.3	18.953	18.868	18.854	20.74	20.69	20.71
5M +15M	132353	1748.1	132446	1757.4	18.937	18.853	18.839	20.84	20.69	20.66
5M +15M	132504	1763.2	132597	1772.5	18.909	18.899	18.932	20.78	20.78	20.68
15M +5M	132047	1717.5	132140	1726.8	18.796	18.780	18.789	20.63	20.56	20.56
15M +5M	132398	1752.6	132491	1761.9	18.927	18.906	18.875	20.66	20.57	20.59
15M +5M	132549	1767.7	132642	1777	18.869	18.764	18.806	20.62	20.57	20.53
10M +10M	132022	1715	132121	1724.9	19.406	19.406	19.369	21.28	21.20	21.19
10M +10M	132373	1750.1	132472	1760	19.421	19.429	19.413	21.34	21.26	21.29
10M +10M	132523	1765.1	132622	1775	19.420	19.426	19.407	21.17	21.22	21.16

2UL_CA_66C Occupied Bandwidth										
Bandwidth (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			26 dB Bandwidth (MHz)		
					QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10M +15M	132025	1715.3	132145	1727.3	23.589	23.578	23.552	25.57	25.50	25.57
10M +15M	132351	1747.9	132471	1759.9	23.629	23.649	23.683	25.61	25.58	25.55
10M +15M	132477	1760.5	132597	1772.5	23.706	23.630	23.656	25.66	25.67	25.55
15M +10M	132047	1717.5	132167	1729.5	23.515	23.404	23.438	25.49	25.38	25.48
15M +10M	132373	1750.1	132493	1762.1	23.734	23.651	23.607	25.72	25.61	25.58
15M +10M	132499	1762.7	132619	1774.7	23.679	23.686	23.704	25.73	25.57	25.50
15M +15M	132047	1717.5	132197	1732.5	28.626	28.589	28.519	30.82	30.75	30.82
15M +15M	132347	1747.5	132497	1762.5	28.797	28.772	28.762	30.79	30.88	30.83
15M +15M	132447	1757.5	132597	1772.5	28.810	28.781	28.810	30.92	30.97	30.85
5M +20M	132005	1713.3	132122	1725	23.466	23.403	23.440	25.28	25.36	25.23
5M +20M	132330	1745.8	132447	1757.5	23.459	23.420	23.422	25.43	25.27	25.34
5M +20M	132455	1758.3	132572	1770	23.518	23.492	23.526	25.41	25.31	25.33
20M +5M	132072	1720	132189	1731.7	23.307	23.163	23.219	25.14	25.03	25.09
20M +5M	132397	1752.5	132514	1764.2	23.515	23.505	23.430	25.30	25.24	25.23
20M +5M	132522	1765	132639	1776.7	23.408	23.347	23.409	25.35	25.22	25.13
10M +20M	132027	1715.5	132171	1729.9	28.042	27.946	28.003	30.20	30.14	30.12
10M +20M	132328	1745.6	132472	1760	28.220	28.142	28.172	30.32	30.23	30.25
10M +20M	132428	1755.6	132572	1770	28.331	28.292	28.243	30.36	30.25	30.23
20M +10M	132072	1720	132216	1734.4	27.964	27.868	27.883	30.06	30.02	30.02
20M +10M	132373	1750.1	132517	1764.5	28.192	28.171	28.229	30.21	30.15	30.18
20M +10M	132473	1760.1	132617	1774.5	28.204	28.145	28.171	30.15	30.08	30.11
15M +20M	132050	1717.8	132221	1734.9	32.840	32.724	32.744	35.13	35.08	35.01
15M +20M	132325	1745.3	132496	1762.4	33.088	33.015	33.027	35.34	35.23	35.12
15M +20M	132401	1752.9	132572	1770	33.049	33.027	33.001	35.39	35.28	35.30
20M +15M	132072	1720	132243	1737.1	32.798	32.859	32.774	35.04	34.99	35.02
20M +15M	132348	1747.6	132519	1764.7	33.072	33.037	33.107	35.21	35.20	35.17
20M +15M	132423	1755.1	132594	1772.2	33.062	33.123	33.052	35.22	35.16	35.19
20M +20M	132072	1720	132270	1739.8	37.609	37.455	37.613	39.99	40.06	39.98
20M +20M	132323	1745.1	132521	1764.9	37.982	38.030	37.976	40.17	40.11	40.11
20M +20M	132374	1750.2	132572	1770	37.930	37.916	37.942	40.14	40.14	40.11

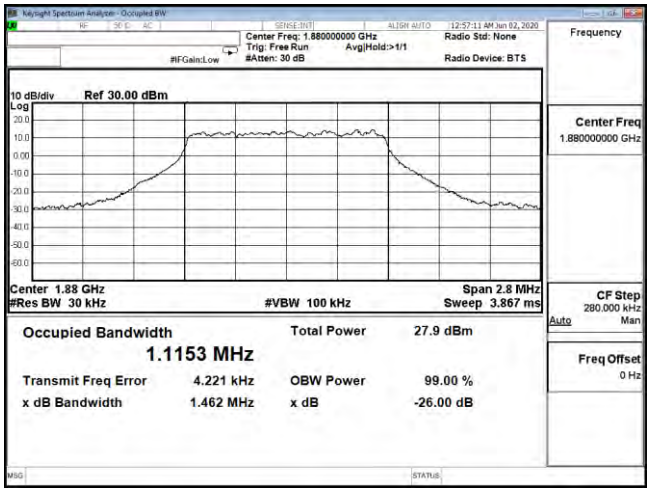
Product	LTE Module		
Test Mode	Occupied Bandwidth		
Date of Test	2020/06/05	Test Site	CTR
Test Condition	Band 2 QPSK/16QAM		



OCC B2 1.4M CH18607 QPSK



OCC B2 1.4M CH18607 16QAM



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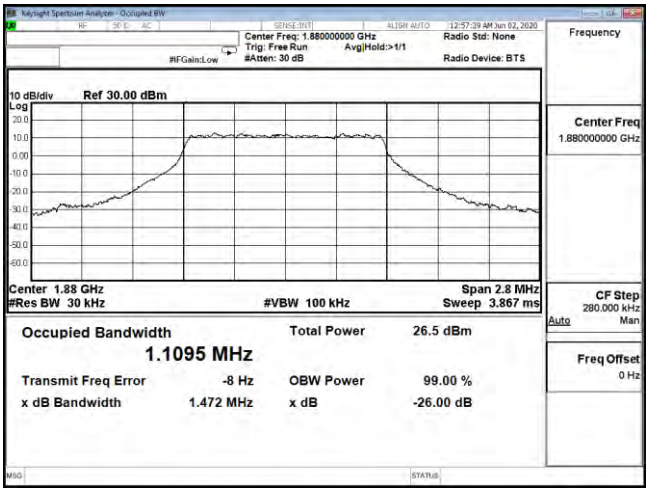

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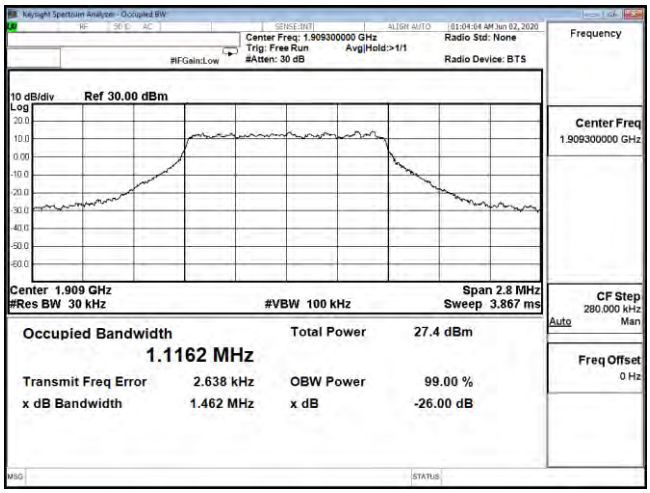

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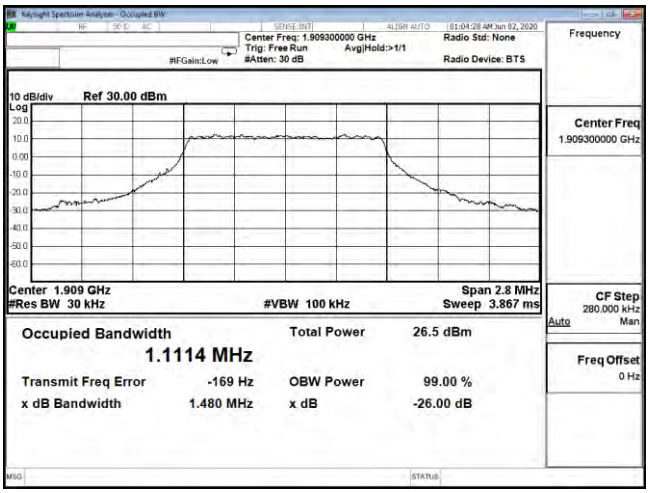

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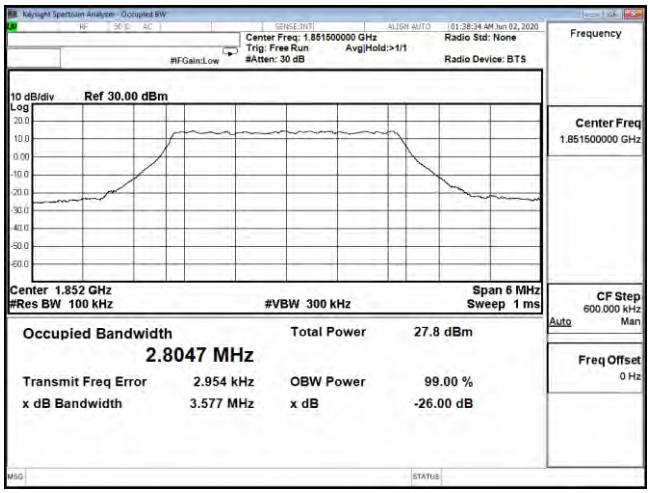

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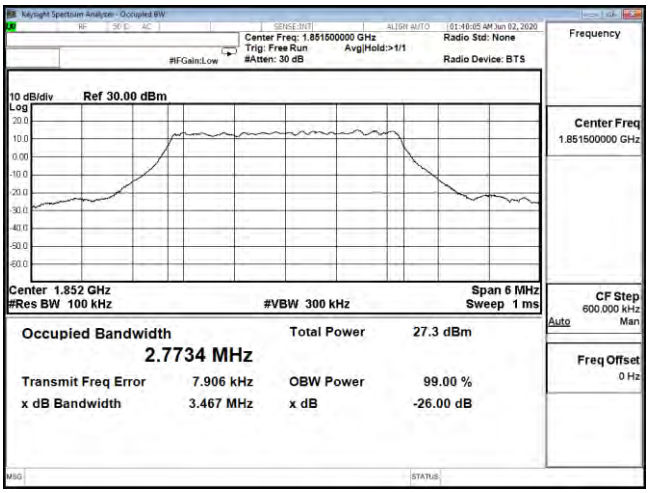

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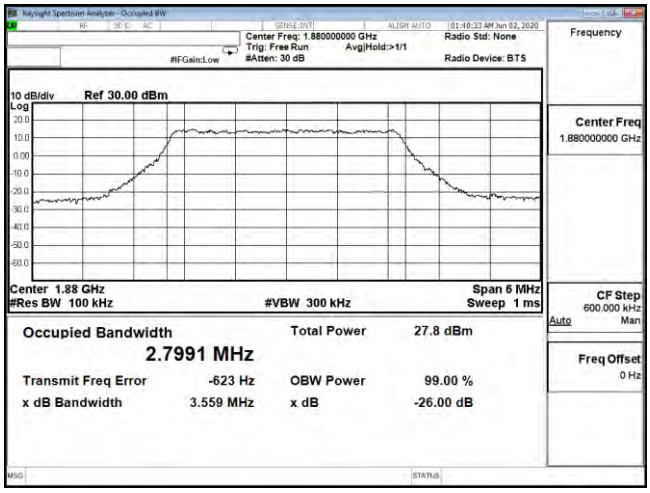

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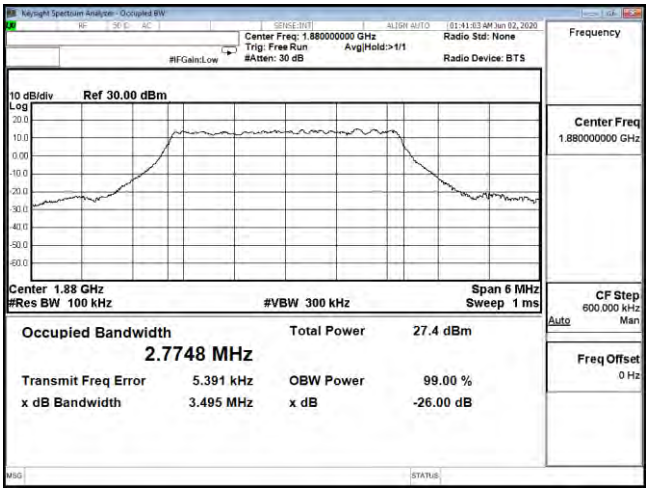

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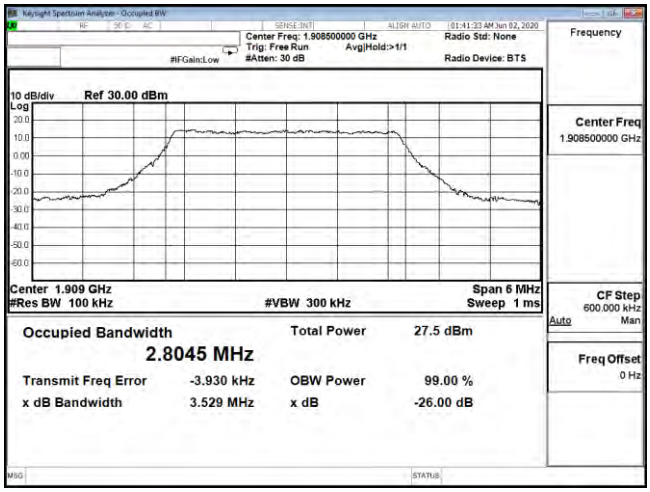
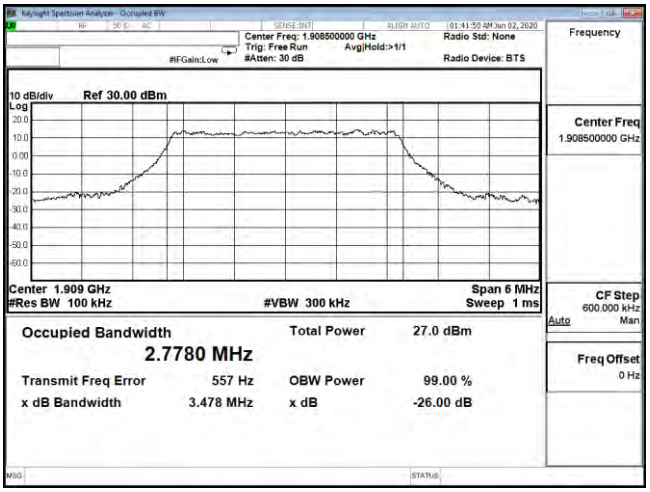


OCC B2 3M CH19185 QPSK



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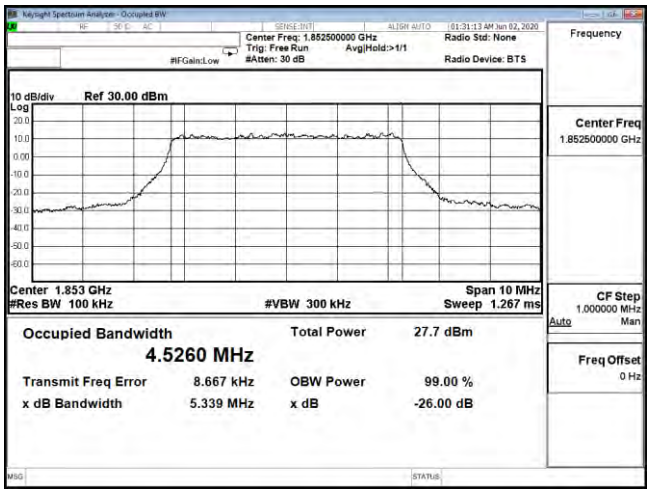
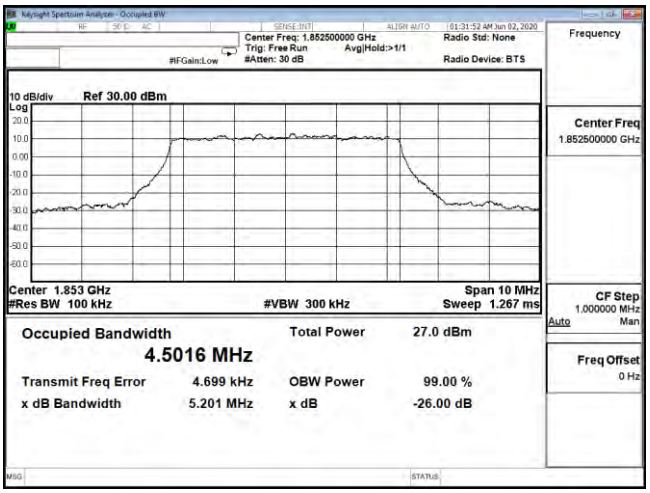


OCC B2 5M CH18625 QPSK



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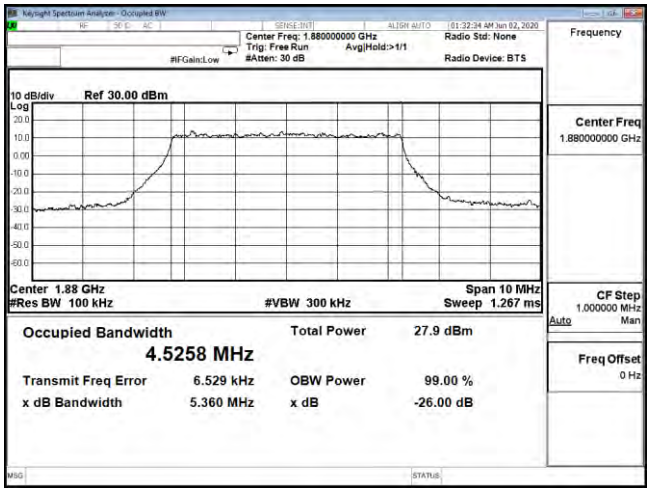

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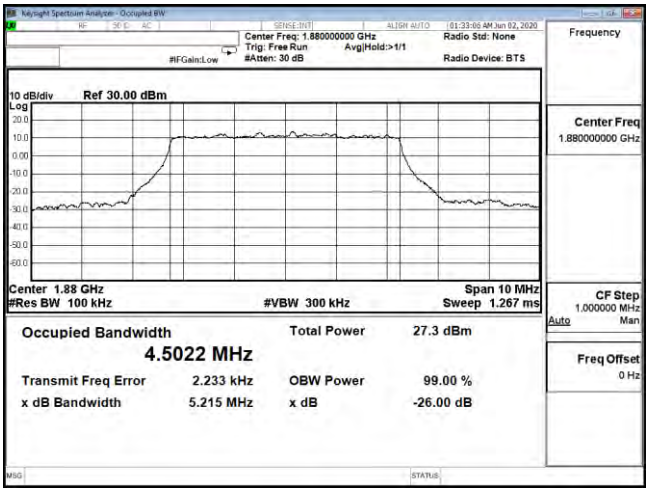

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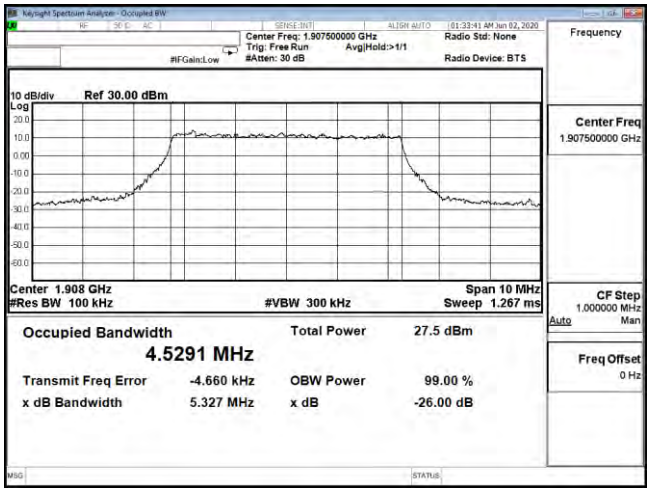
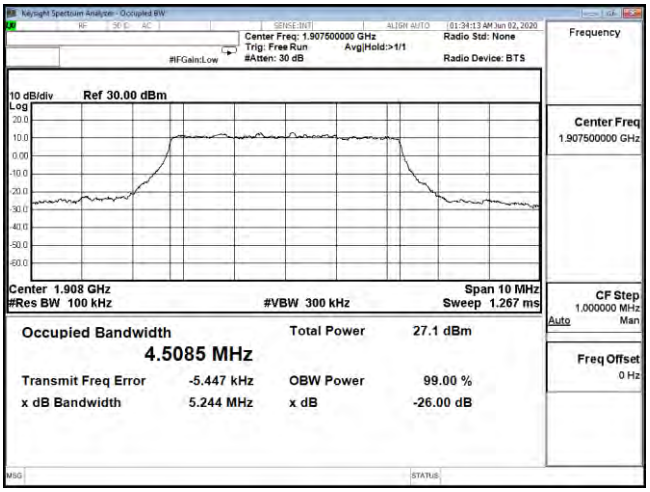


OCC B2 5M CH19175 QPSK



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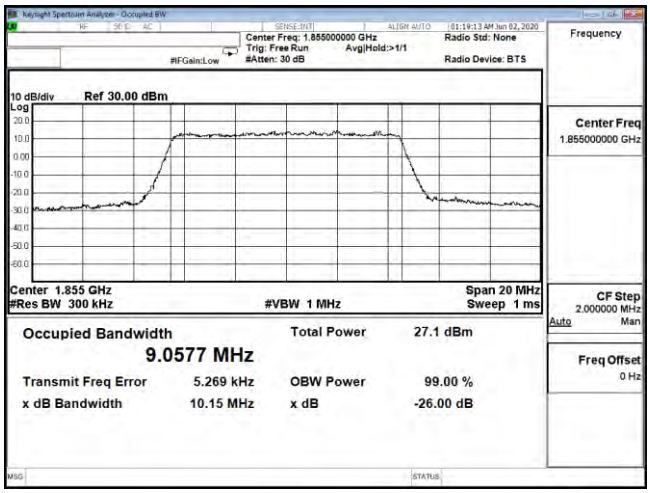
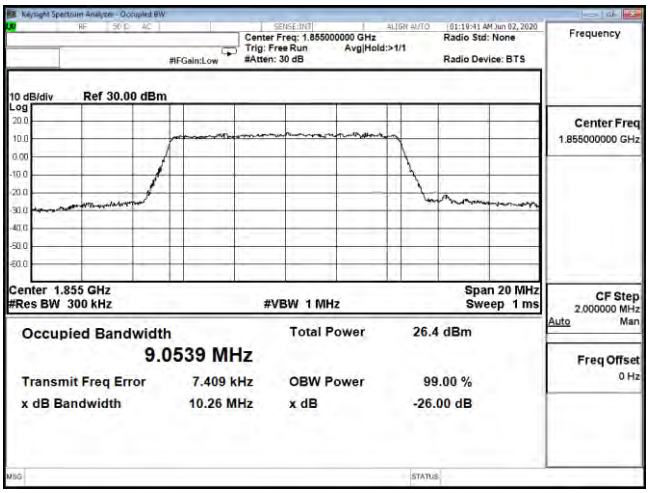


OCC B2 10M CH18650 QPSK



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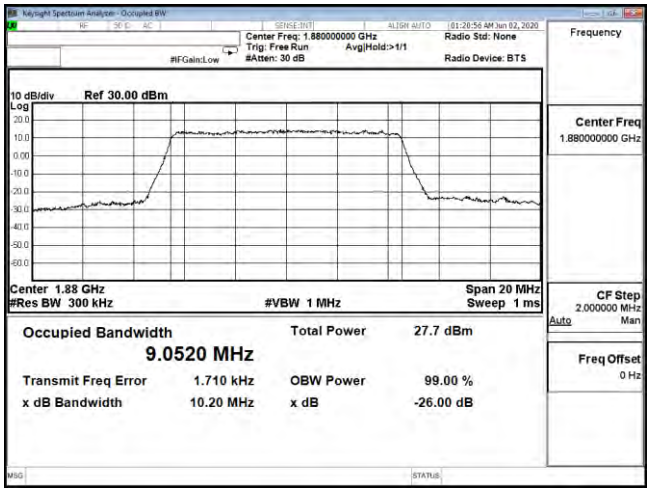

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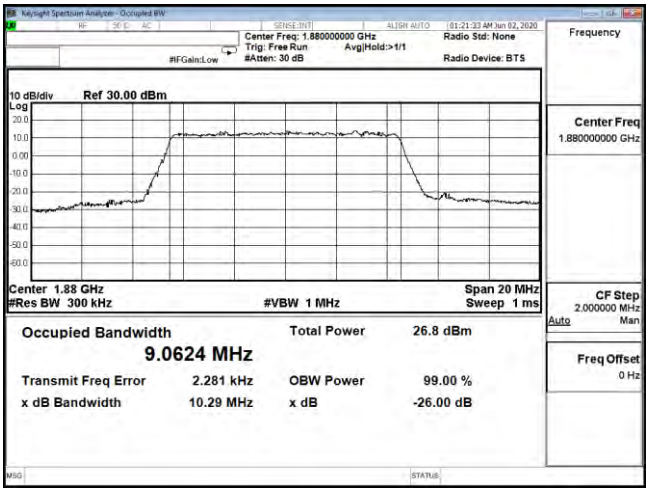

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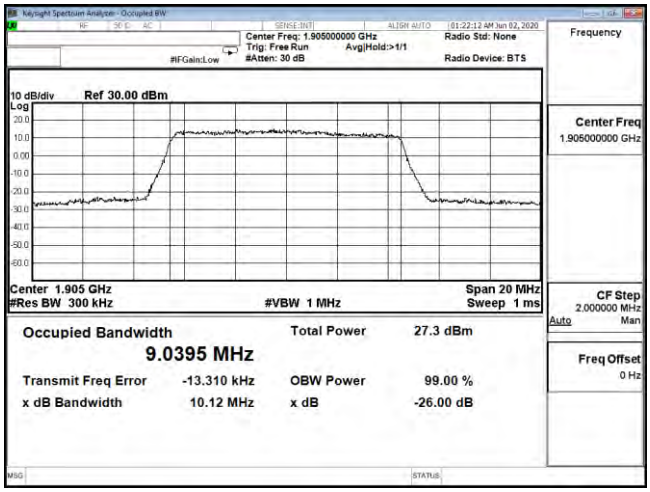

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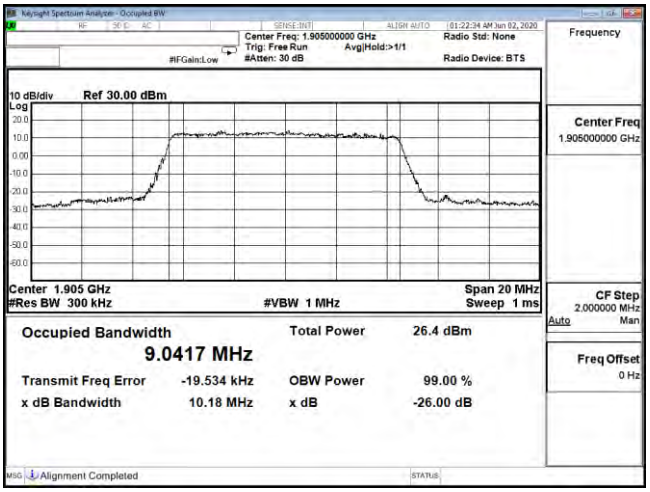

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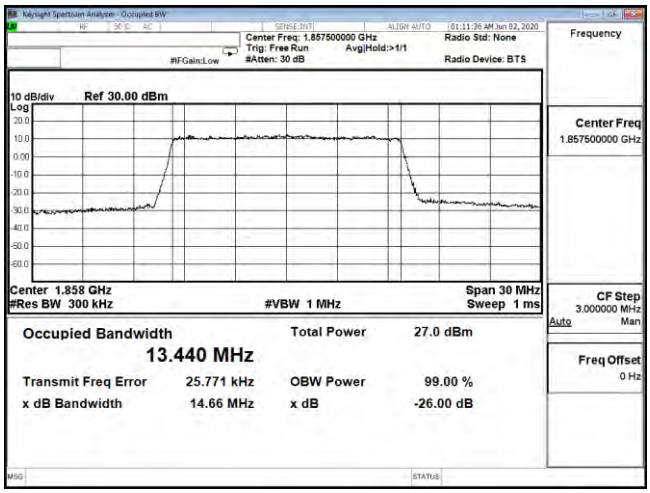

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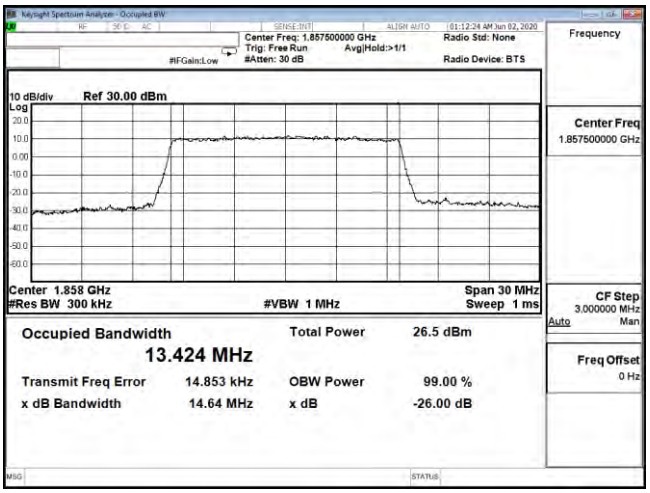

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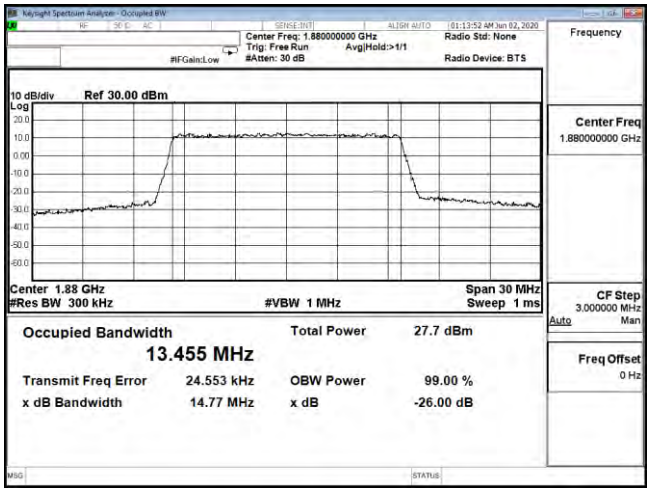

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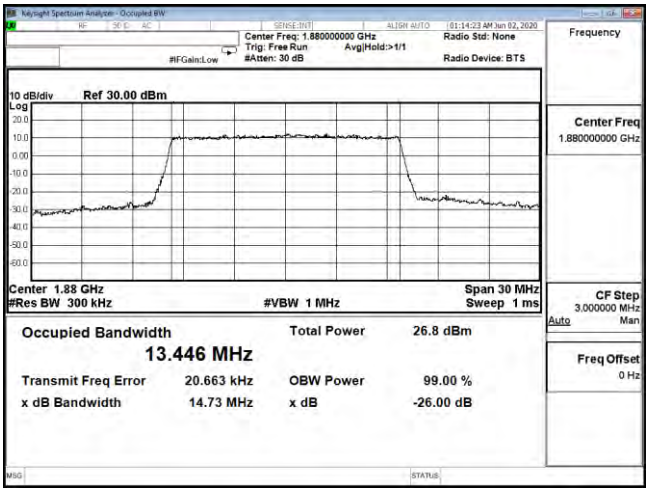

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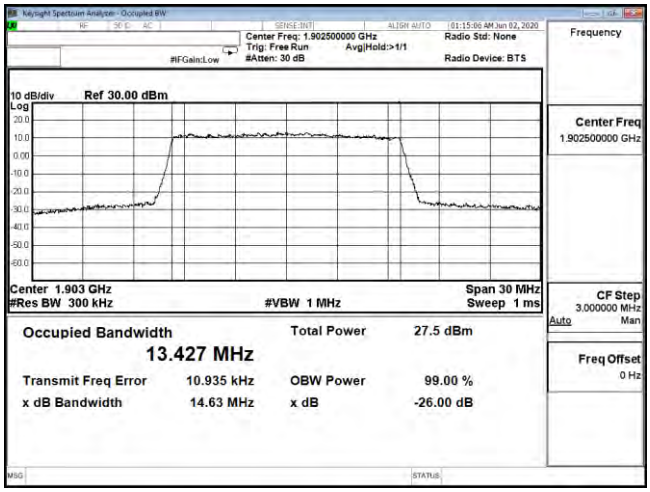
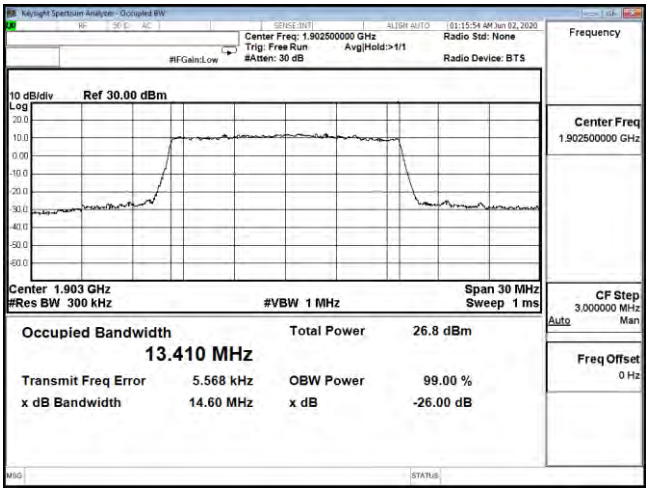


OCC B2 15M CH19125 QPSK



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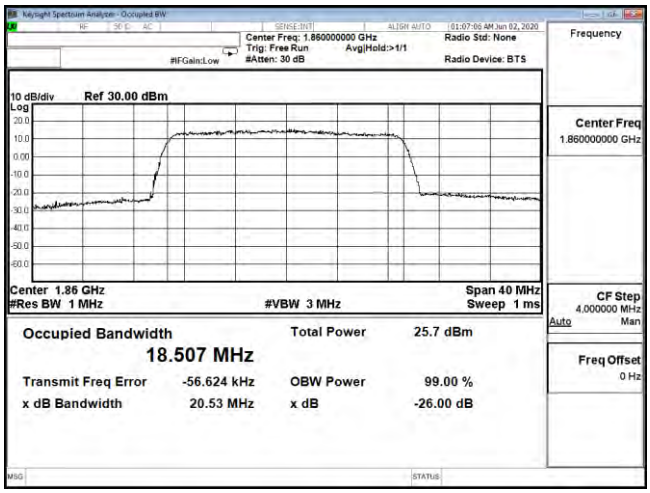

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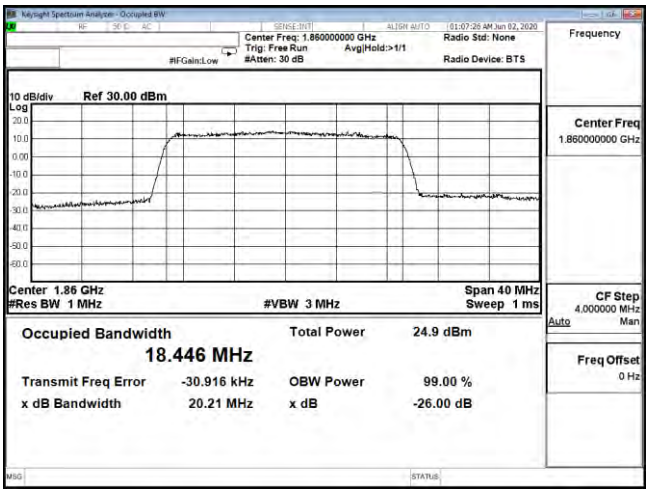

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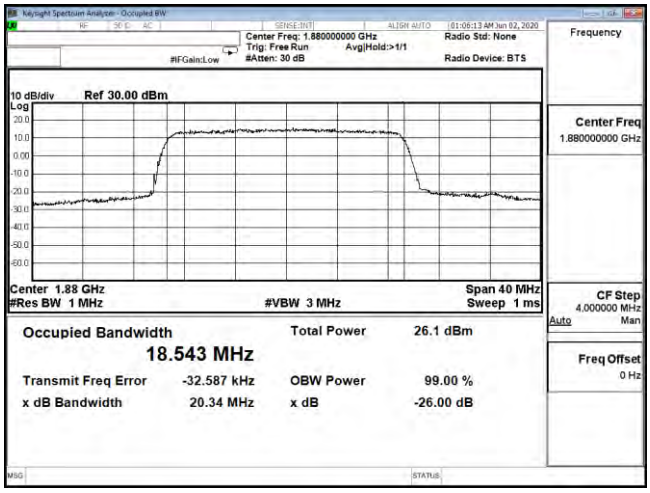

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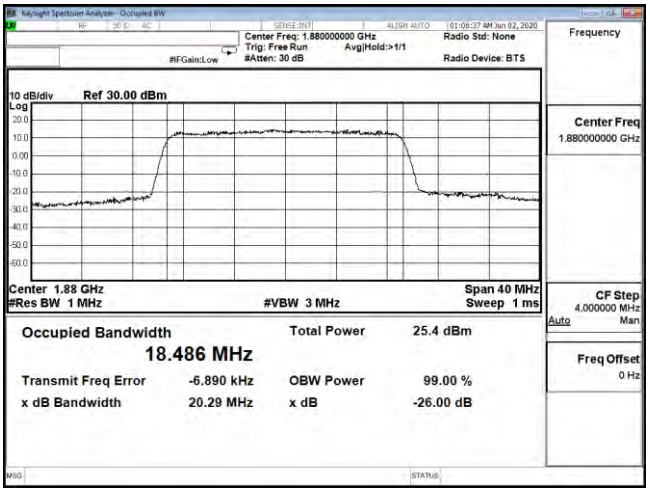

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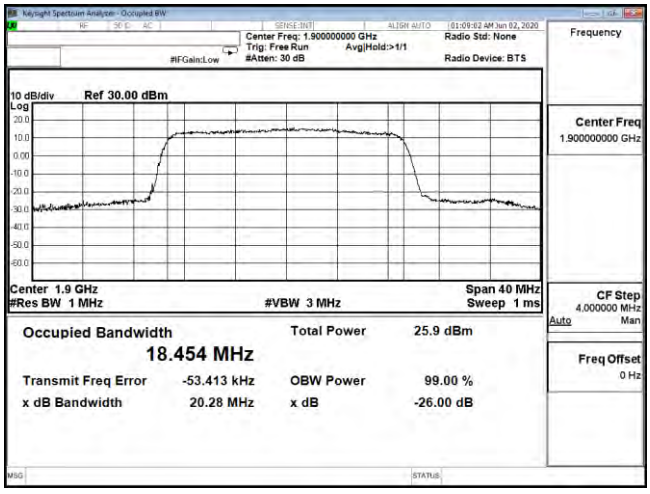
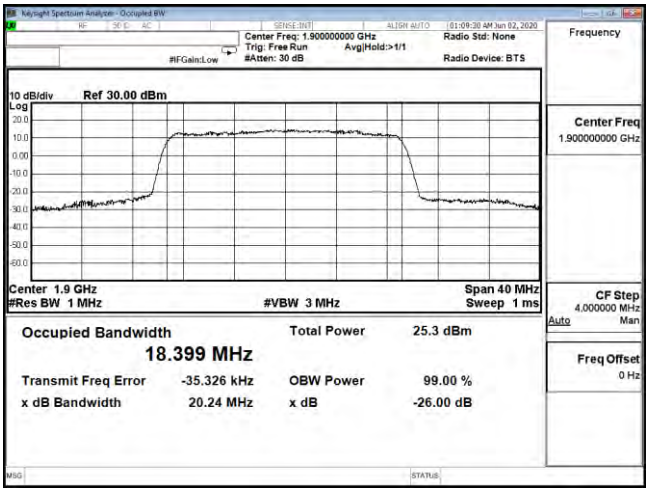
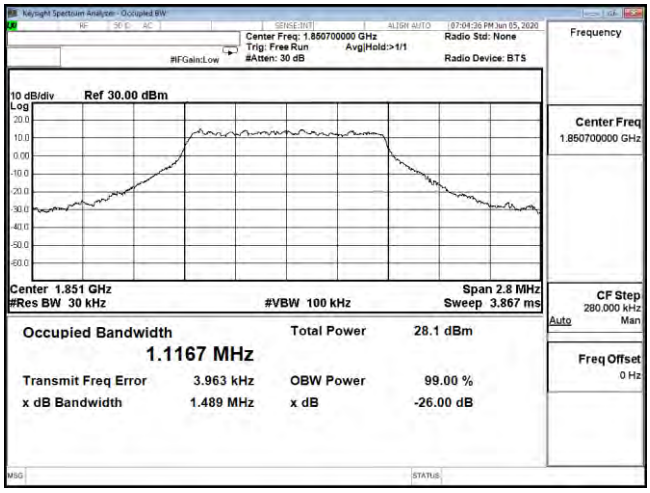


OCC B2 20M CH19100 QPSK

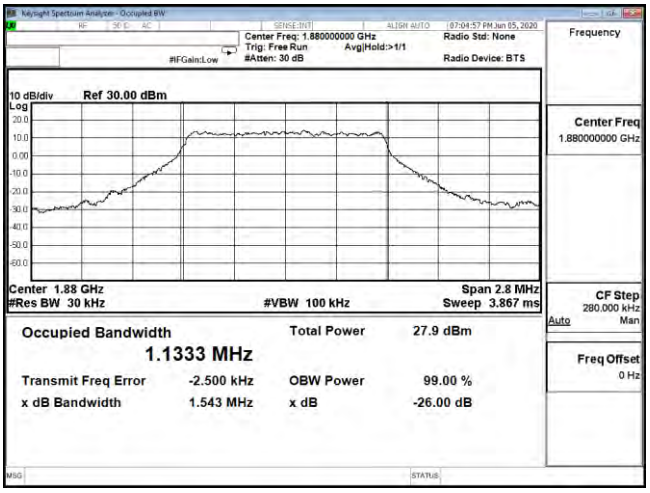


OCC B2 20M CH19100 16QAM

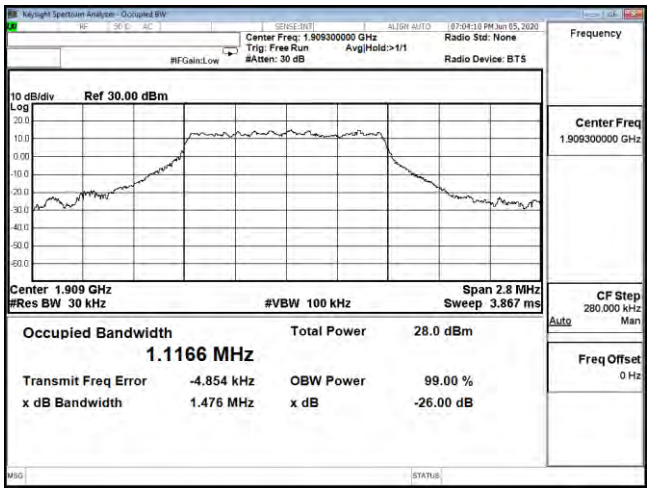
Product	LTE Module		
Test Mode	Occupied Bandwidth		
Date of Test	2020/06/05	Test Site	CTR
Test Condition	Band 2 64QAM		



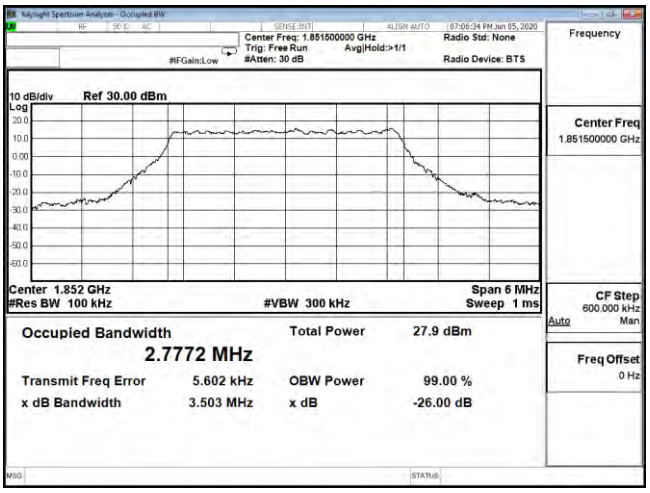
OCC B2 1.4M CH18607 64QAM



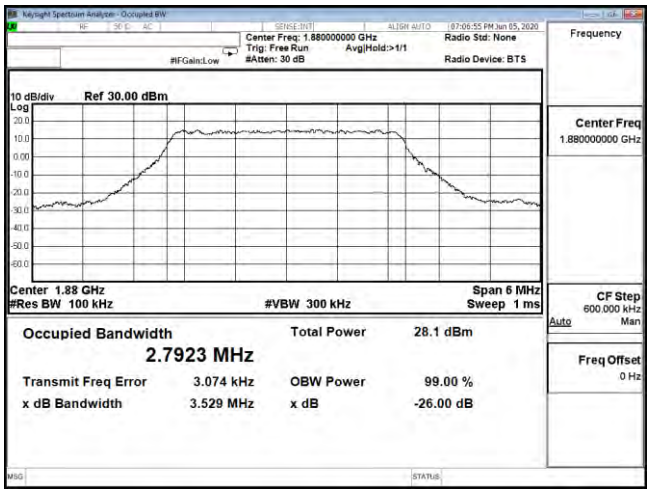
OCC B2 1.4M CH18900 64QAM



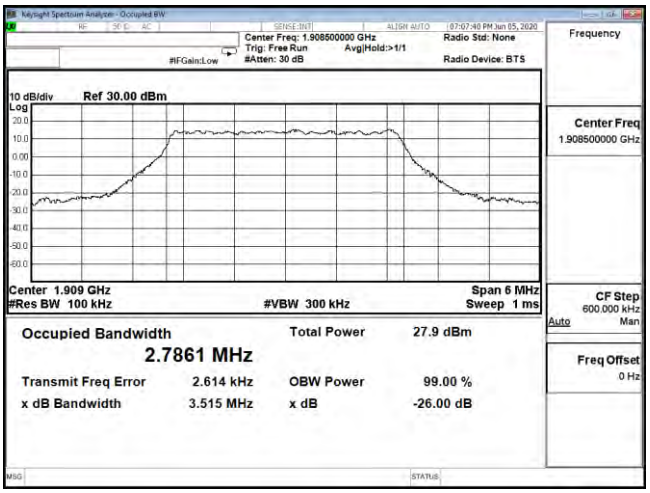
OCC B2 1.4M CH19193 64QAM



OCC B2 3M CH18615 64QAM



OCC B2 3M CH18900 64QAM



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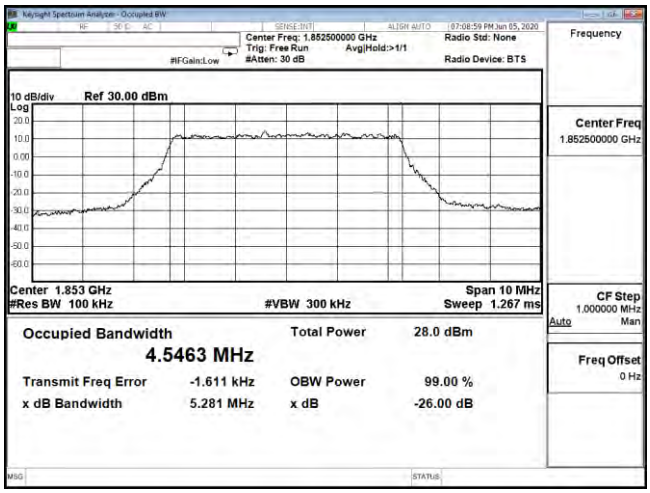
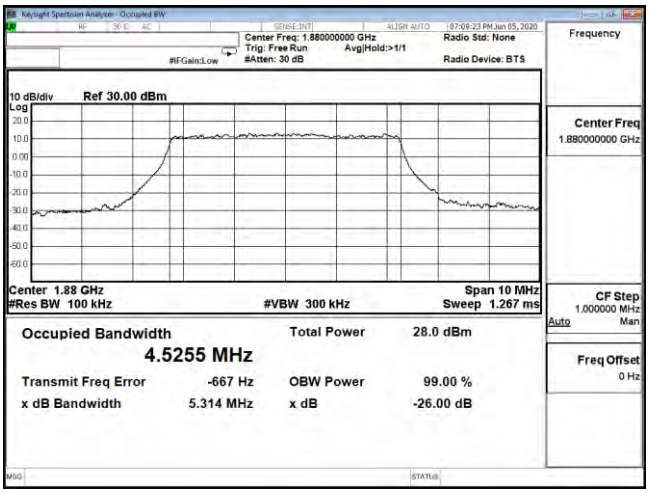
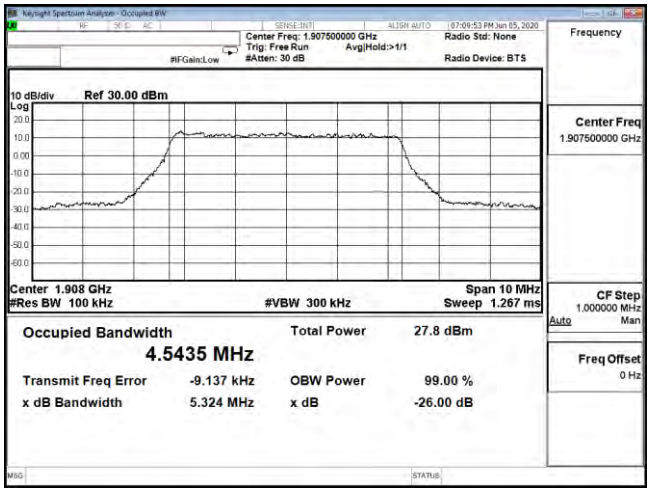


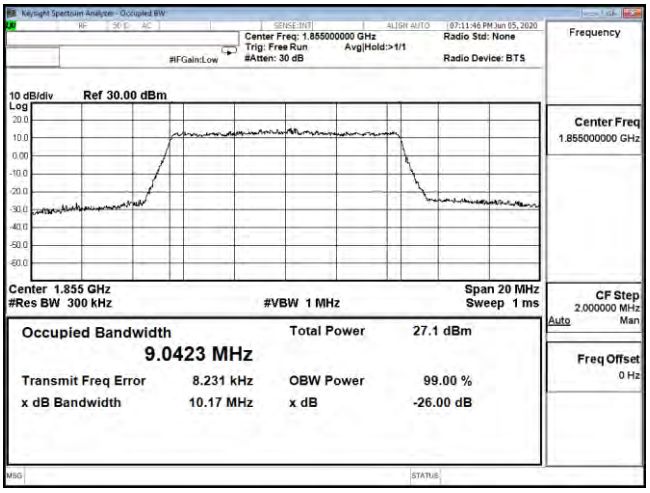
OCC B2 5M CH18625 64QAM



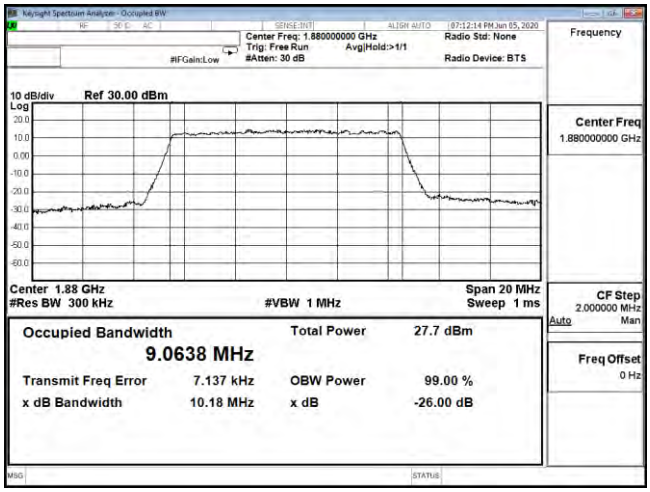
OCC B2 5M CH18900 64QAM



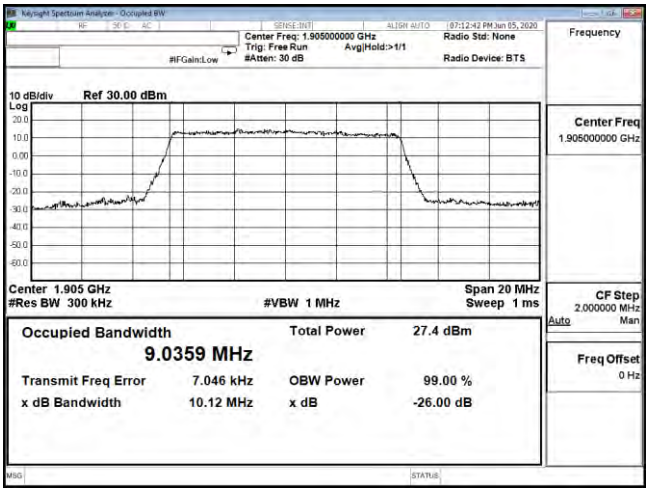
OCC B2 5M CH19175 64QAM



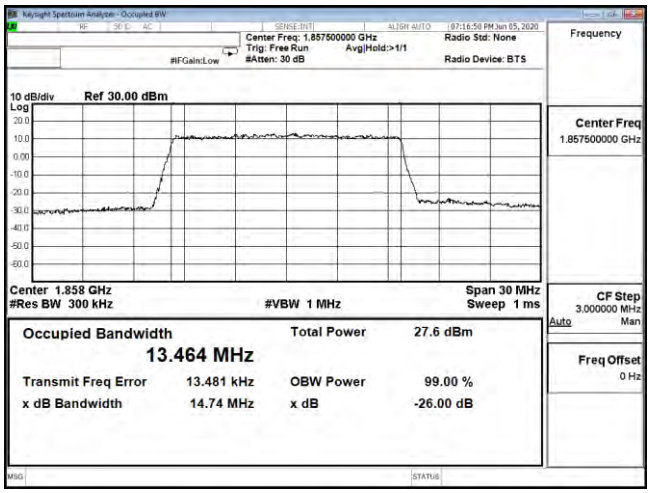
OCC B2 10M CH18650 64QAM



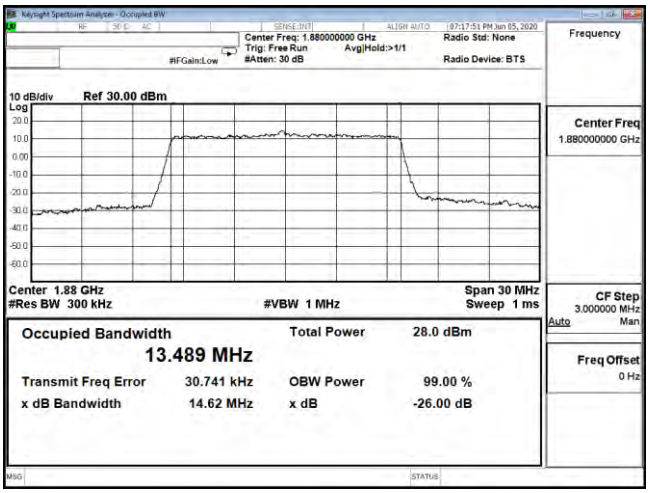
OCC B2 10M CH18900 64QAM



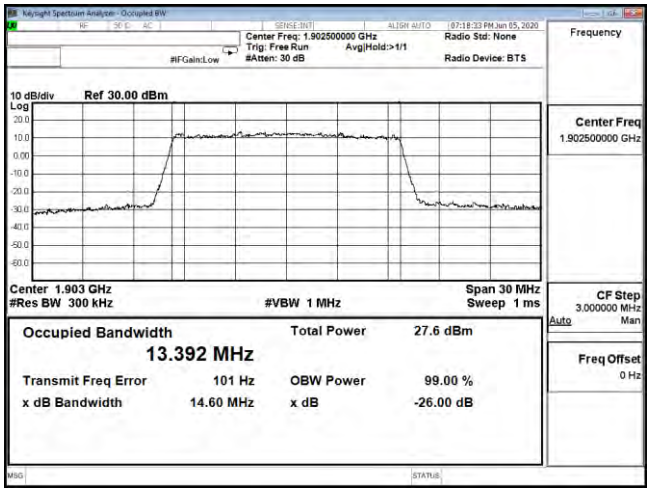
OCC B2 10M CH19150 64QAM



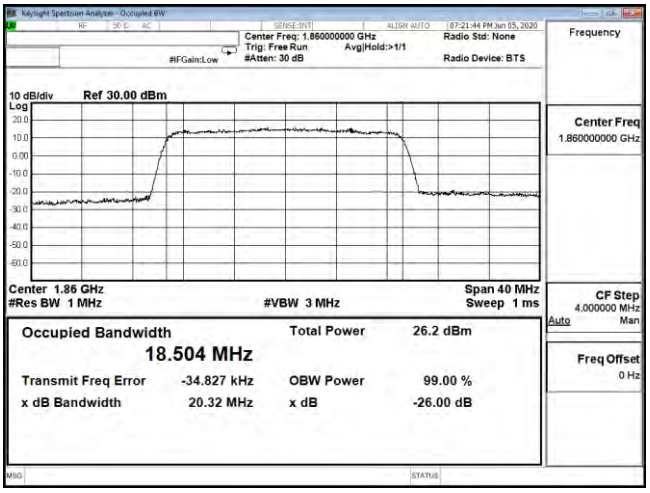
OCC B2 15M CH18675 64QAM



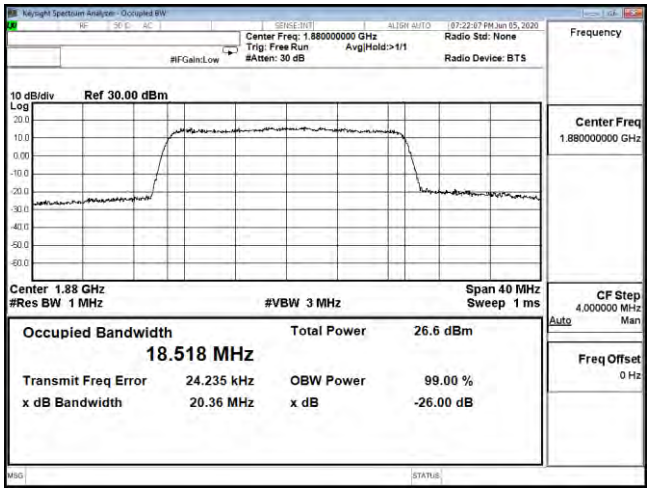
OCC B2 15M CH18900 64QAM



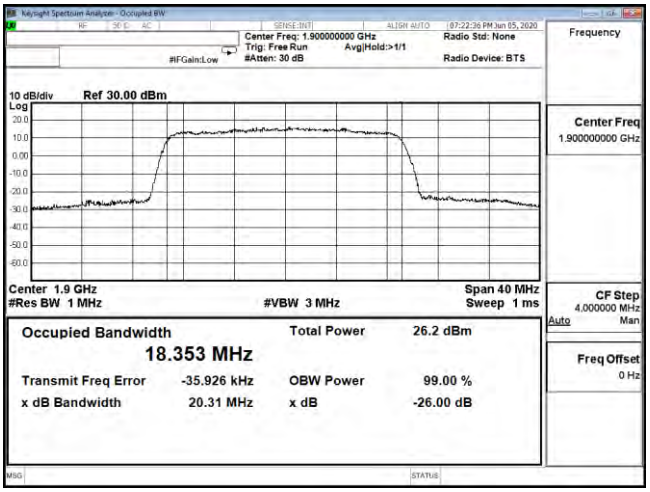
OCC B2 15M CH19125 64QAM



OCC B2 20M CH18700 64QAM

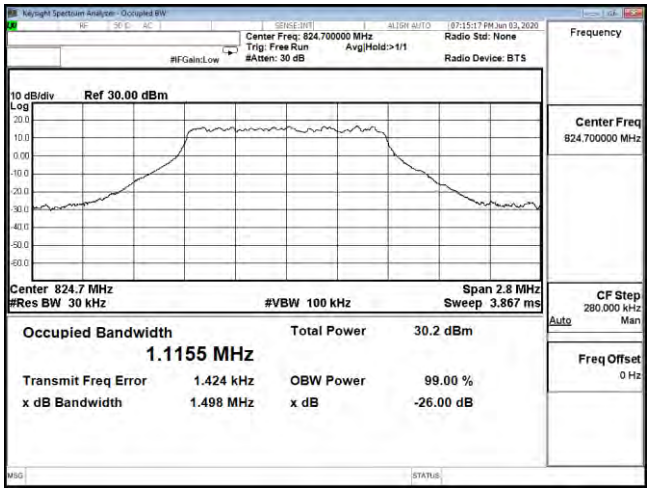


OCC B2 20M CH18900 64QAM



OCC B2 20M CH19100 64QAM

Product	LTE Module		
Test Mode	Occupied Bandwidth		
Date of Test	2020/06/05	Test Site	CTR
Test Condition	Band 5 QPSK/16QAM		



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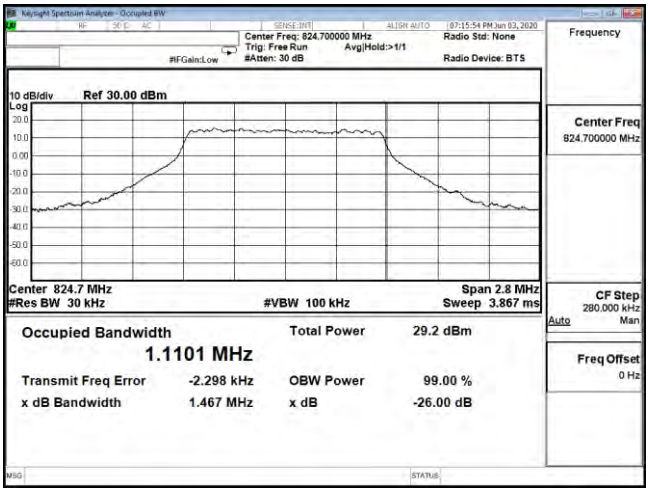
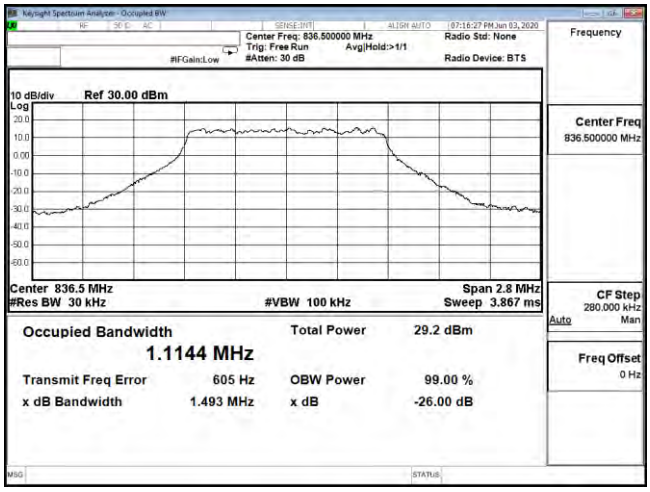
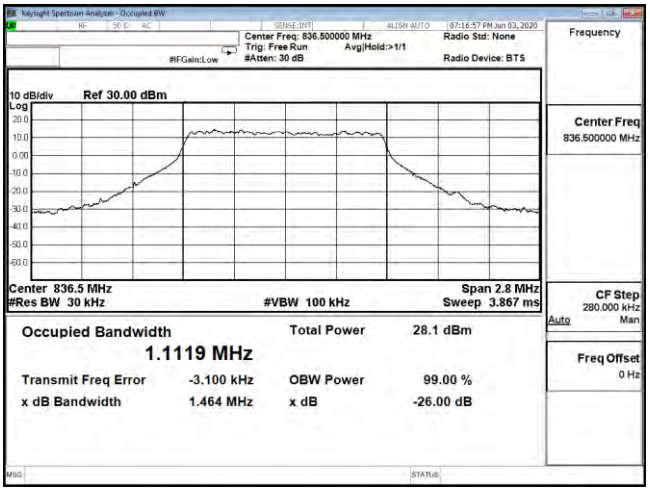


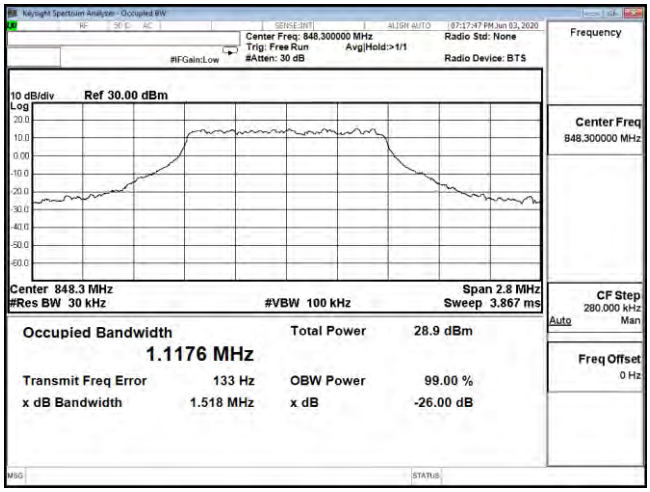
OCC B5 1.4M CH20407 16QAM



OCC B5 1.4M CH20525 QPSK



OCC B5 1.4M CH20525 16QAM



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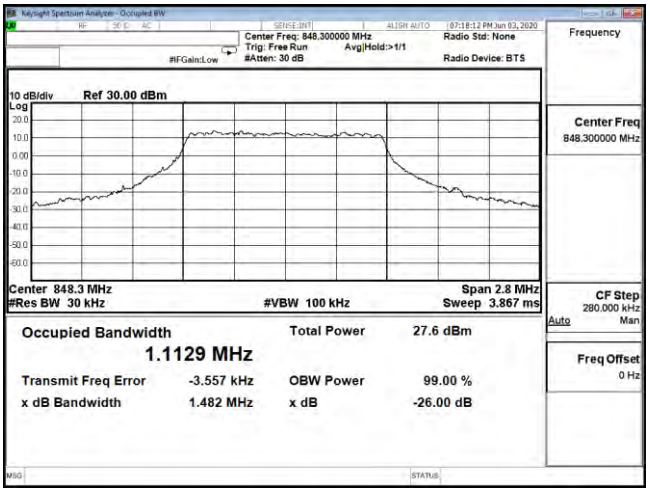

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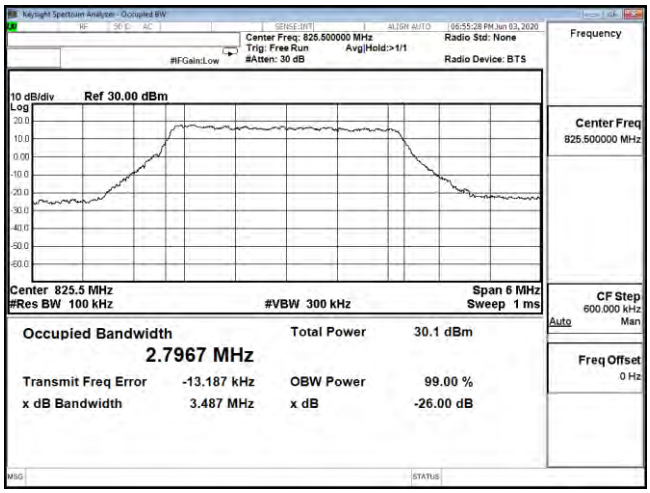
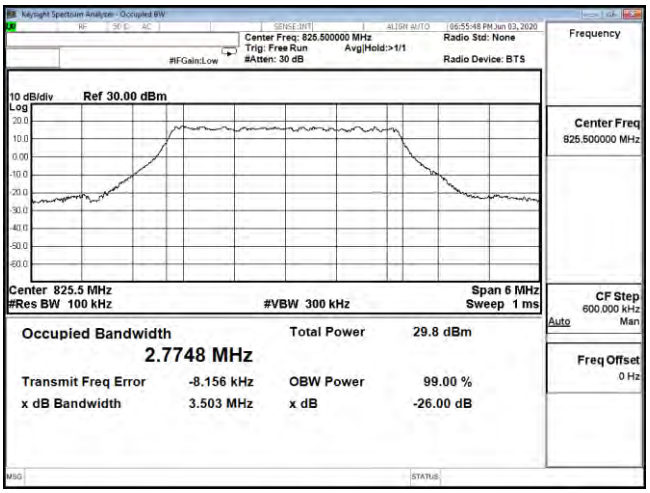


OCC B5 3M CH20415 QPSK



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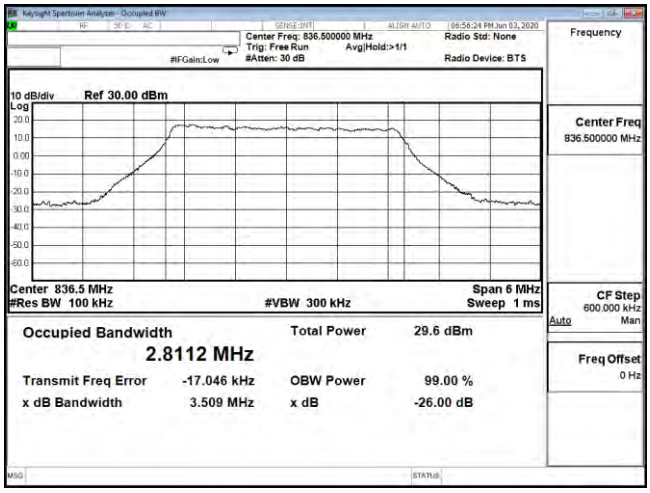

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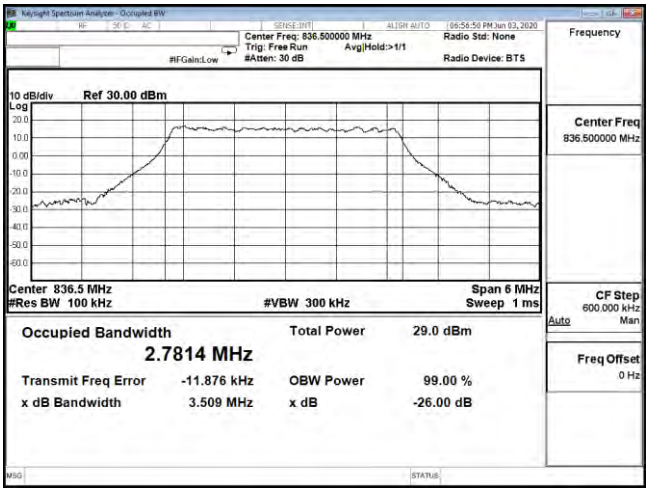
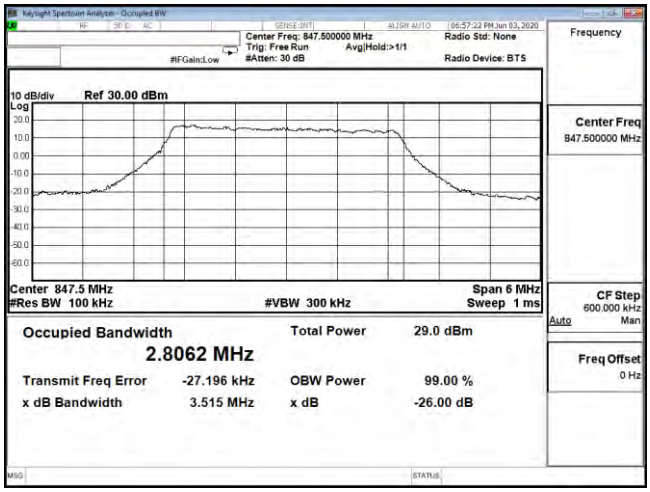
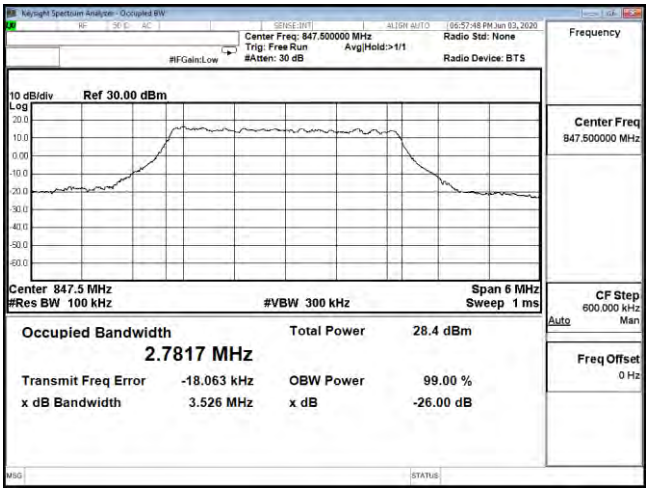


OCC B5 3M CH20525 16QAM



OCC B5 3M CH20635 QPSK



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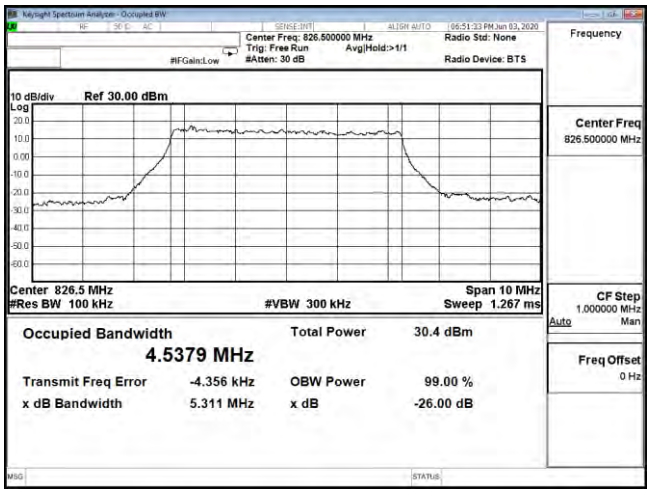

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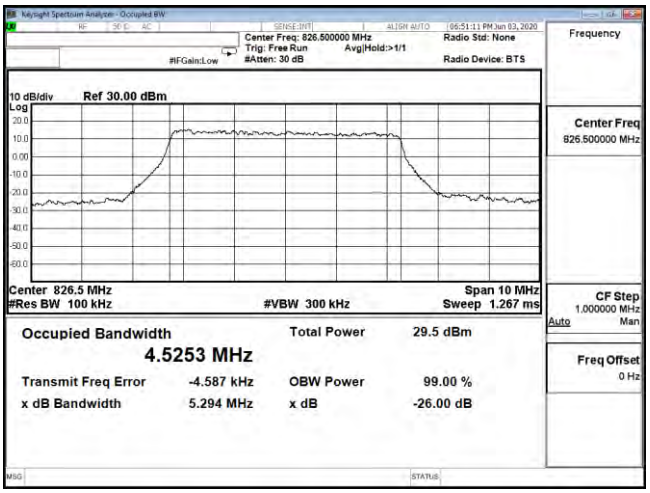

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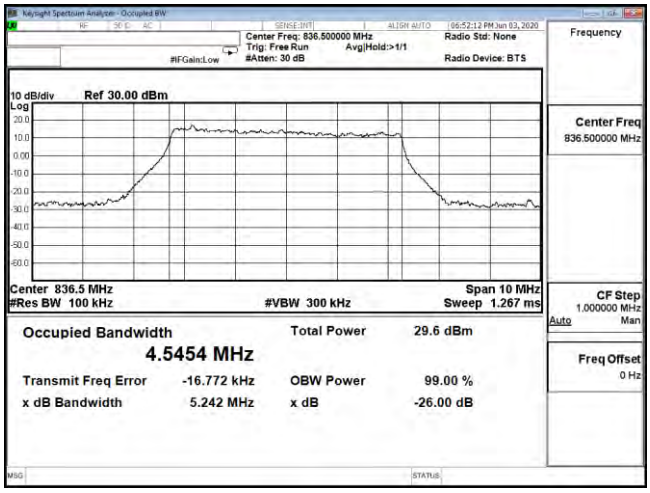
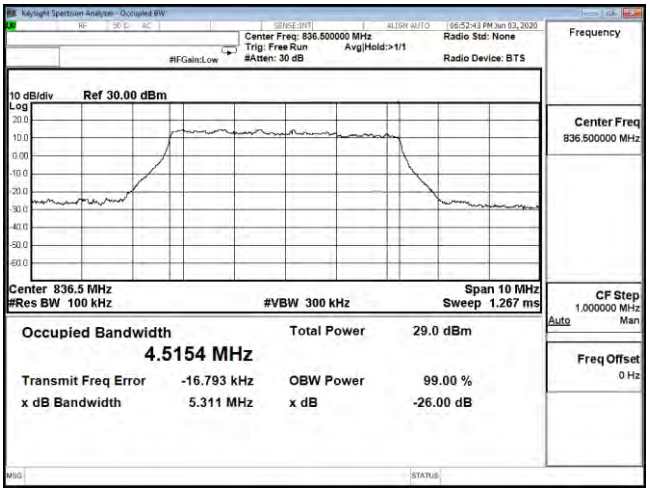


OCC B5 5M CH20525 QPSK



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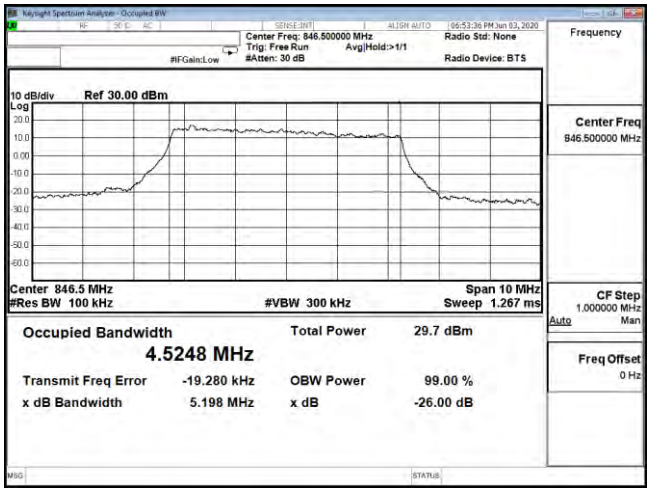

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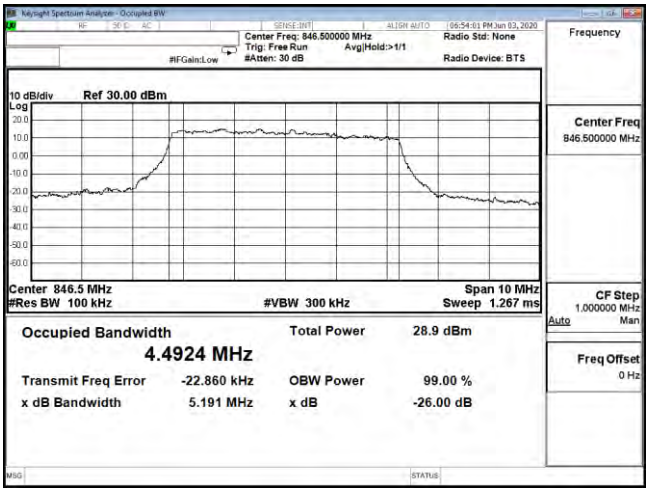
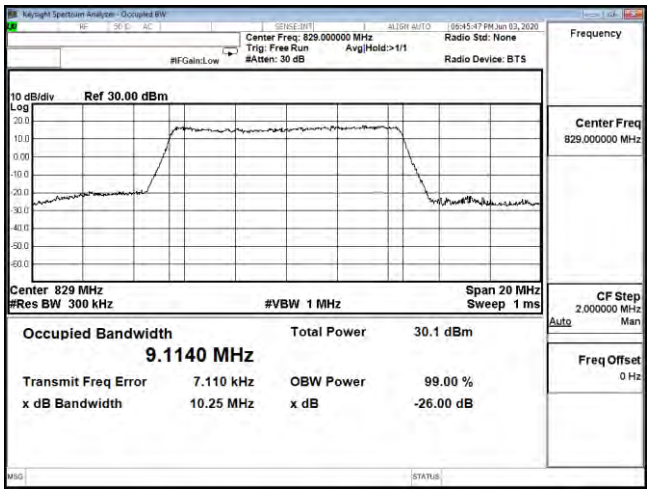
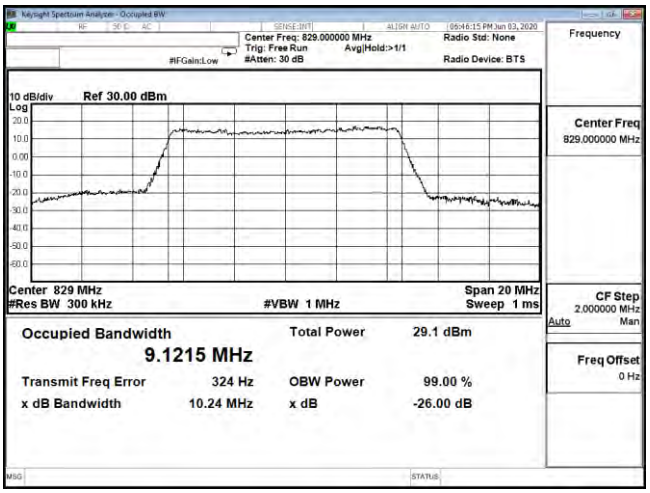


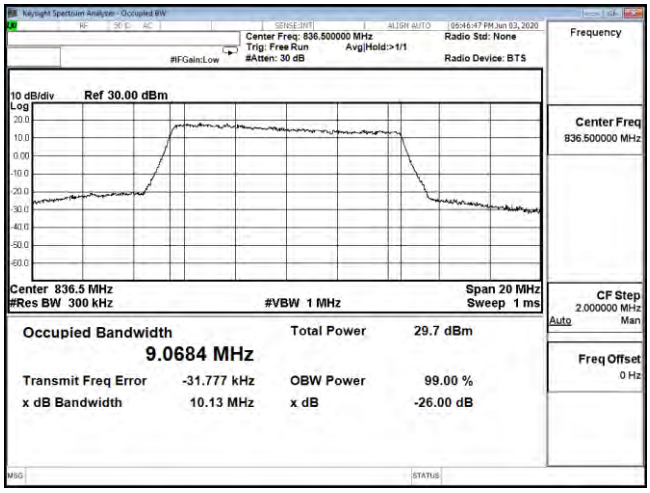
OCC B5 5M CH20625 16QAM



OCC B5 10M CH20450 QPSK



OCC B5 10M CH20450 16QAM



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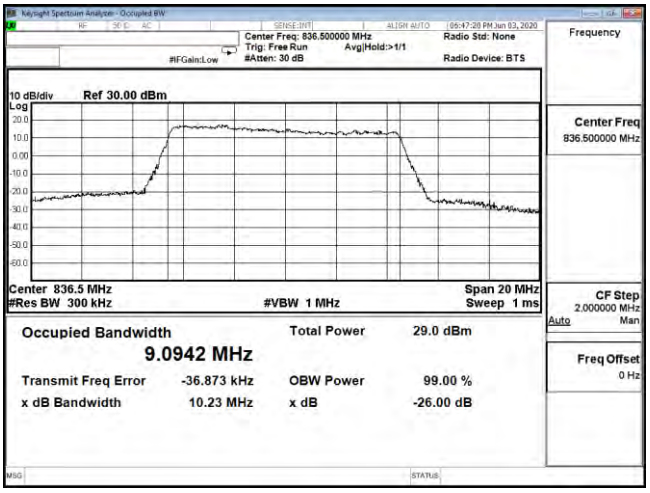
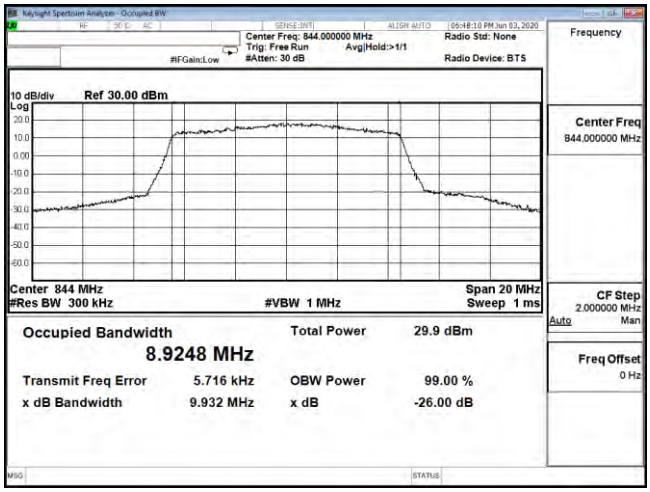
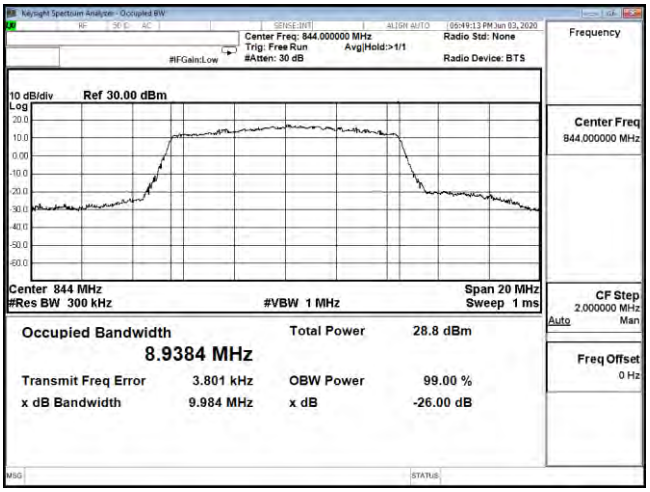


OCC B5 10M CH20525 16QAM

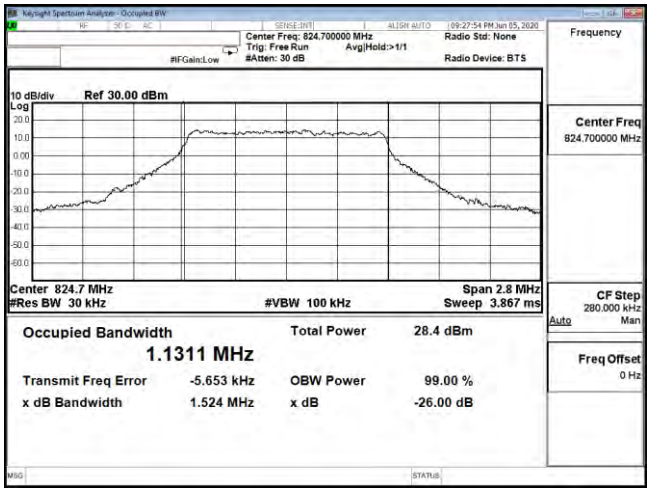


OCC B5 10M CH20600 QPSK

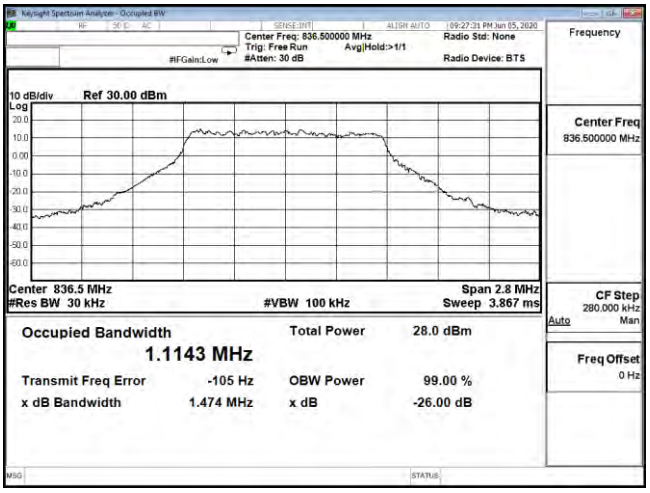


OCC B5 10M CH20600 16QAM

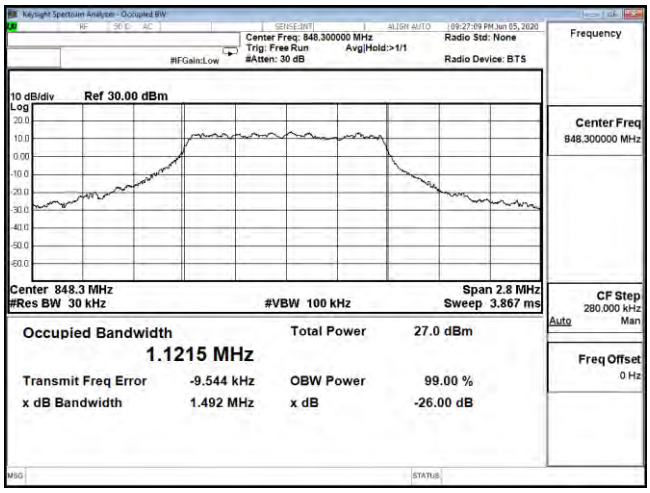
Product	LTE Module		
Test Mode	Occupied Bandwidth		
Date of Test	2020/06/05	Test Site	CTR
Test Condition	Band 5 64QAM		



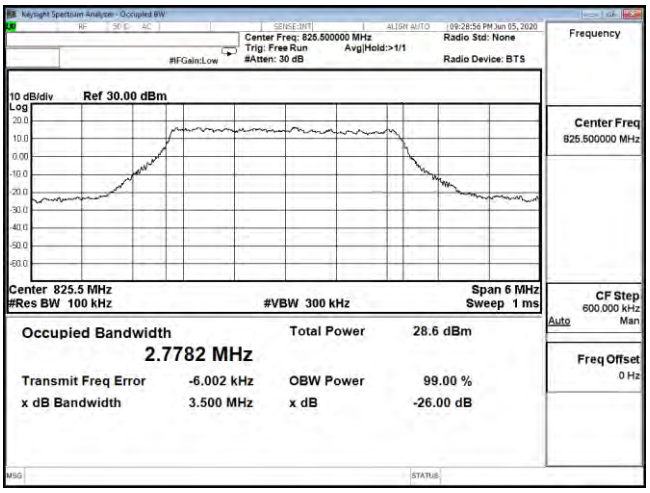
OCC B5 1.4M CH20407 64QAM



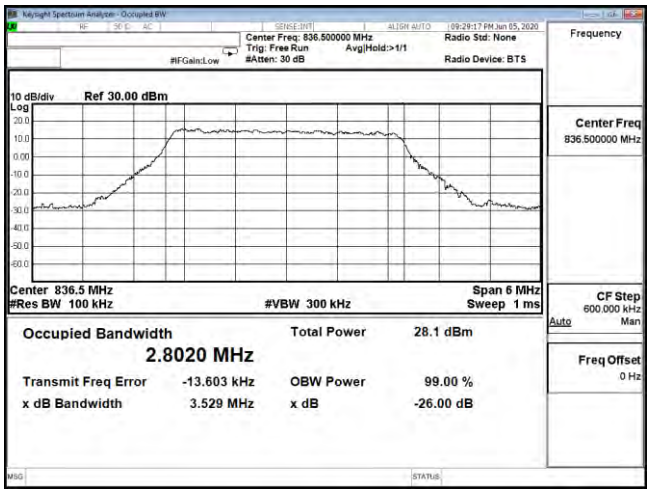
OCC B5 1.4M CH20525 64QAM



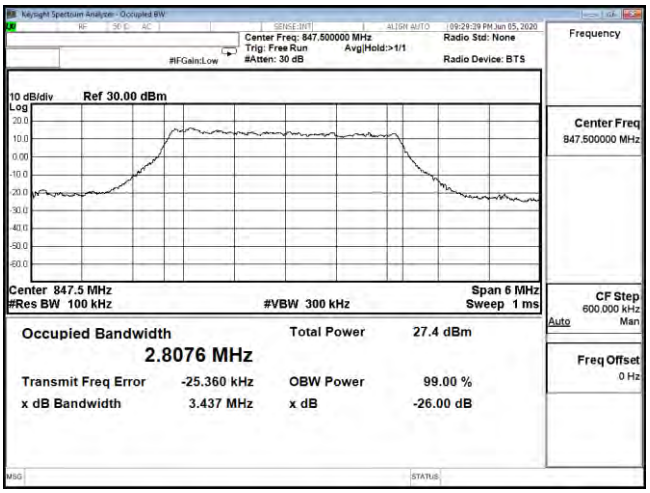
OCC B5 1.4M CH20643 64QAM



OCC B5 3M CH20415 64QAM



OCC B5 3M CH20525 64QAM



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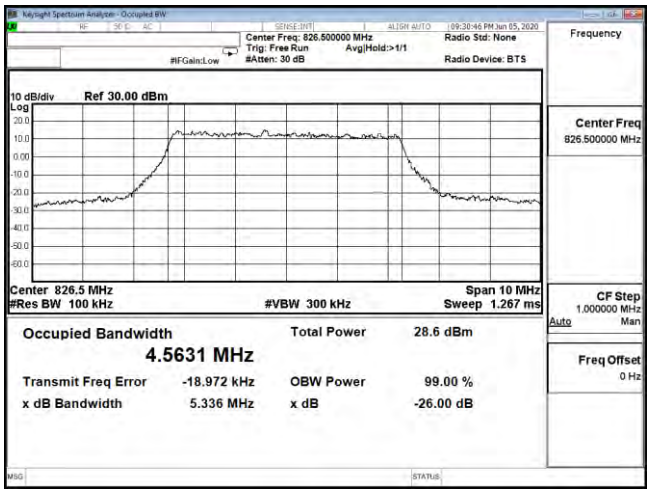
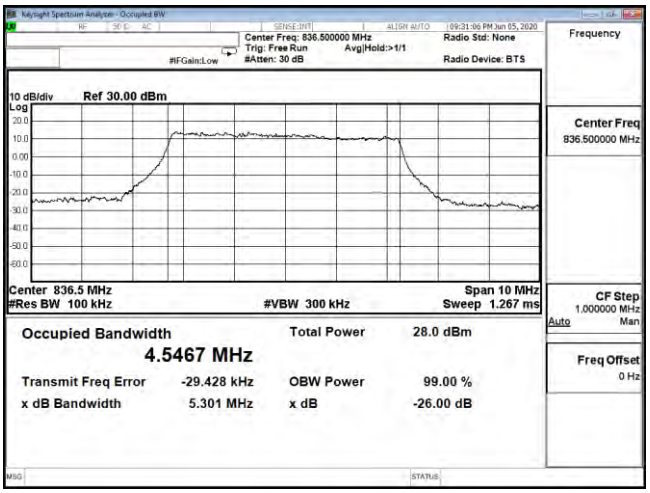


OCC B5 5M CH20425 64QAM



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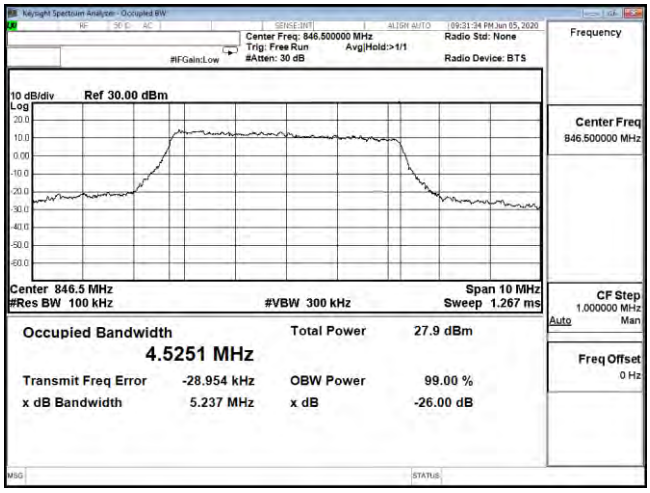

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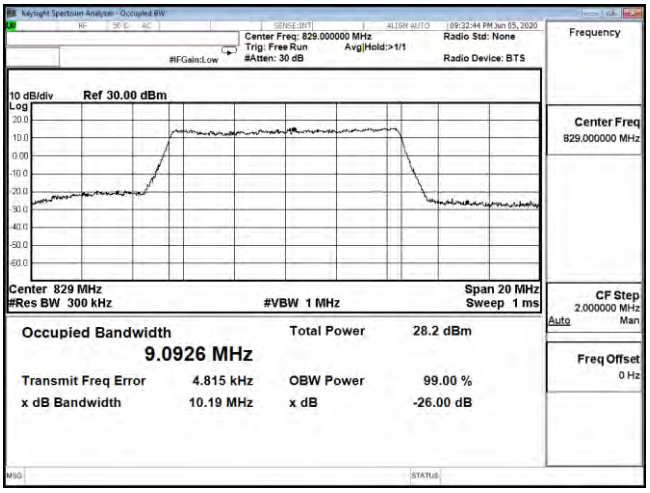
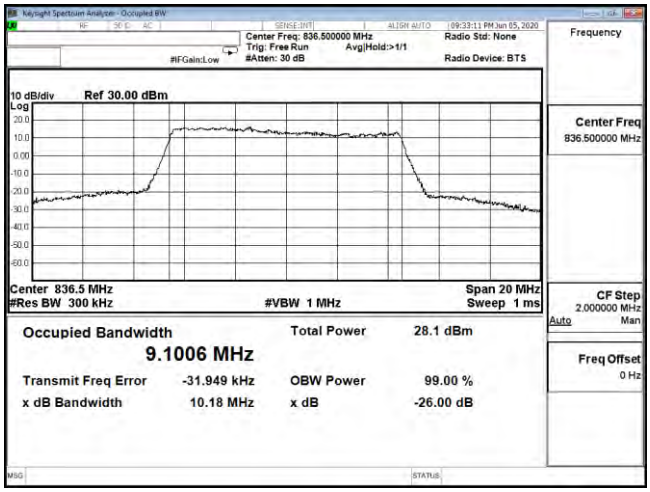
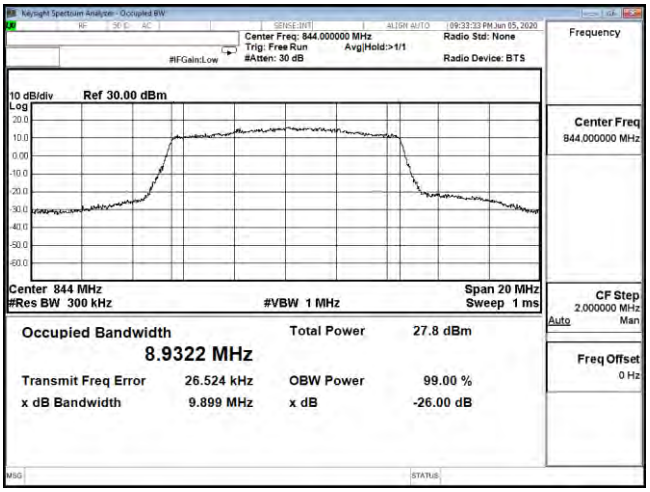


OCC B5 10M CH20450 64QAM

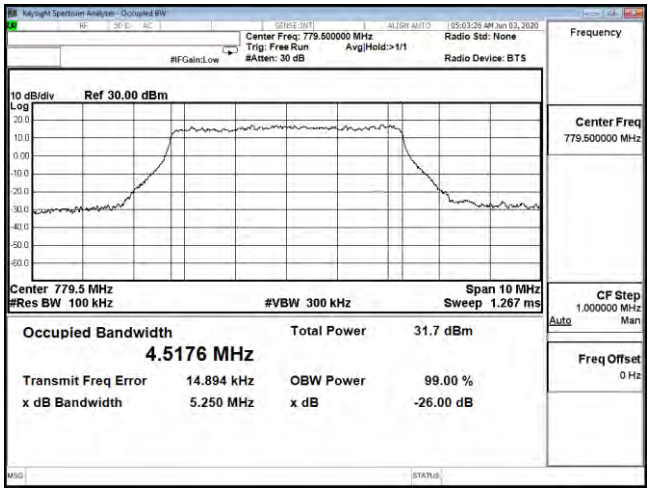


OCC B5 10M CH20525 64QAM

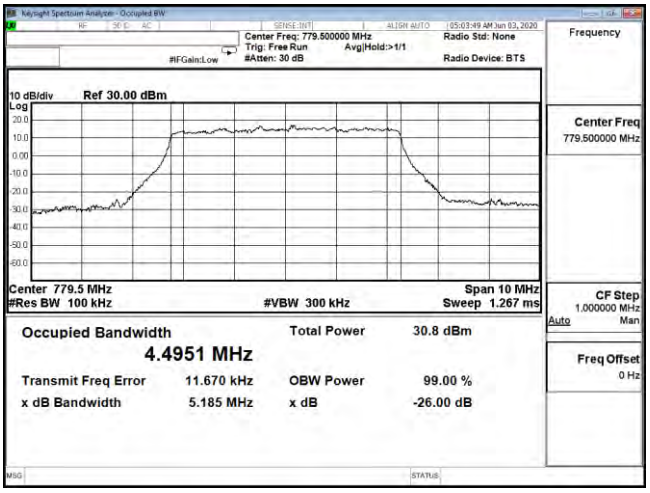


OCC B5 10M CH20600 64QAM

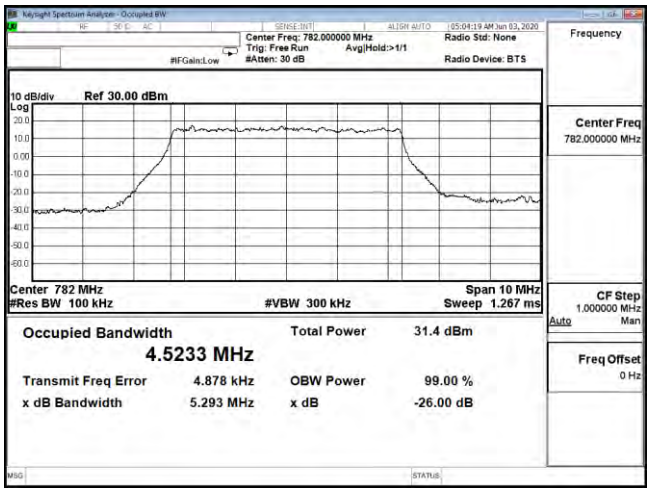
Product	LTE Module		
Test Mode	Occupied Bandwidth		
Date of Test	2020/06/05	Test Site	CTR
Test Condition	Band 13 QPSK/16QAM		



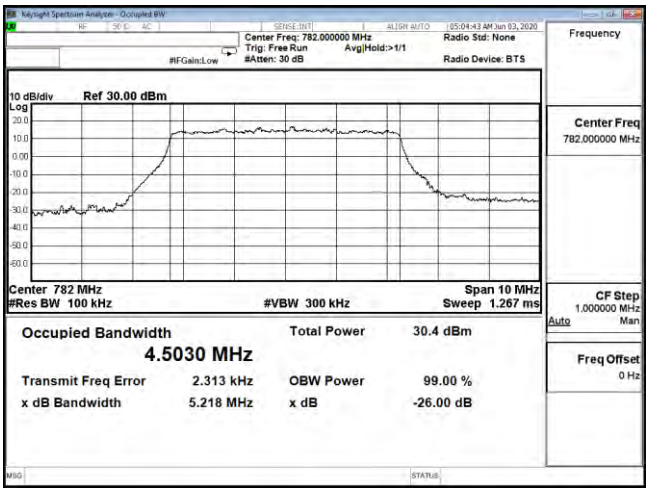
OCC B13 5M CH23205 QPSK



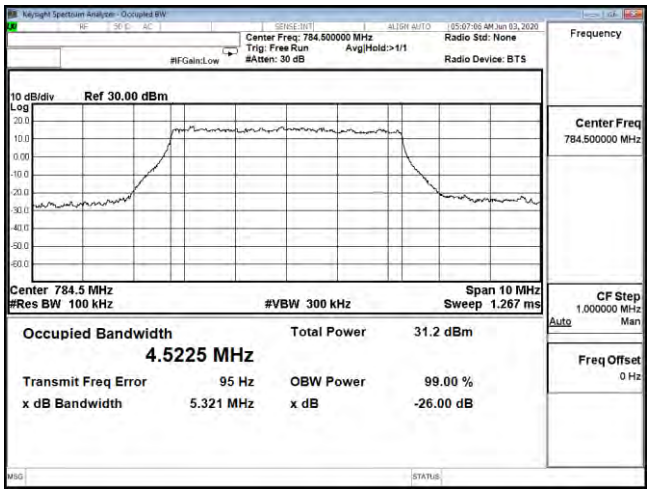
OCC B13 5M CH23205 16QAM



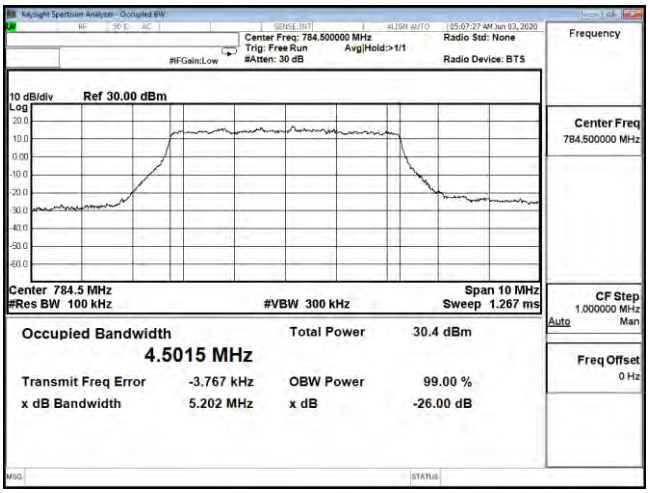
OCC B13 5M CH23230 QPSK



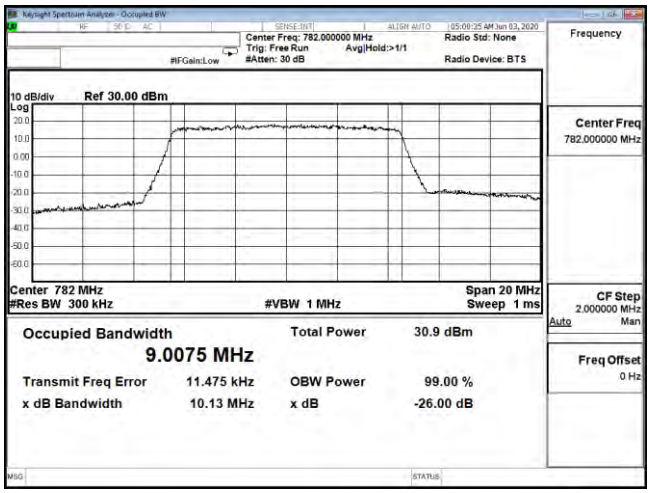
OCC B13 5M CH23230 16QAM



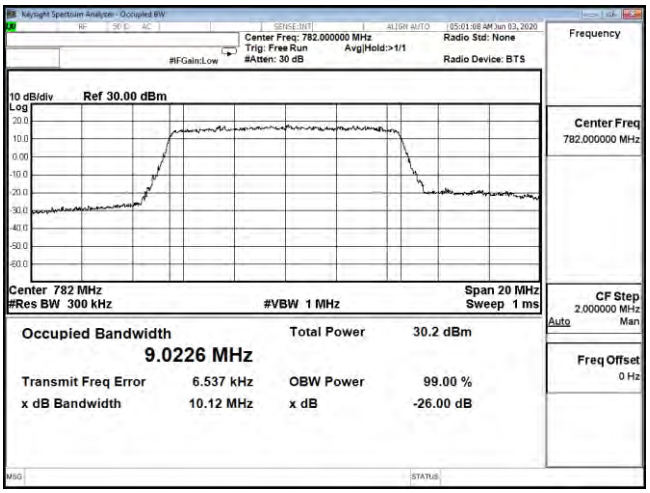
OCC B13 5M CH23255 QPSK



OCC B13 5M CH23255 16QAM

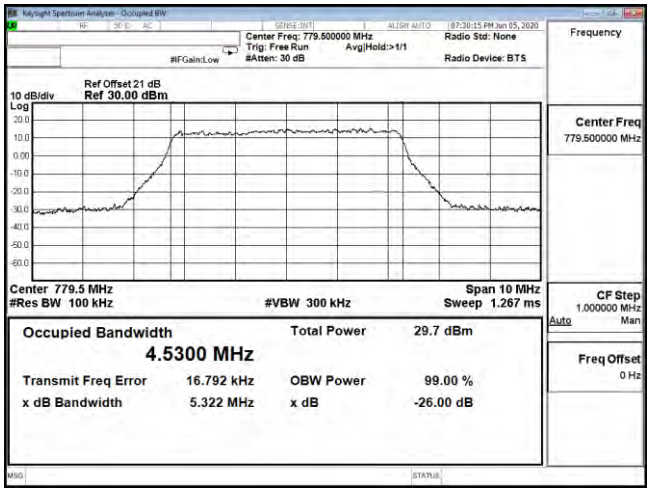


OCC B13 10M CH23230 QPSK

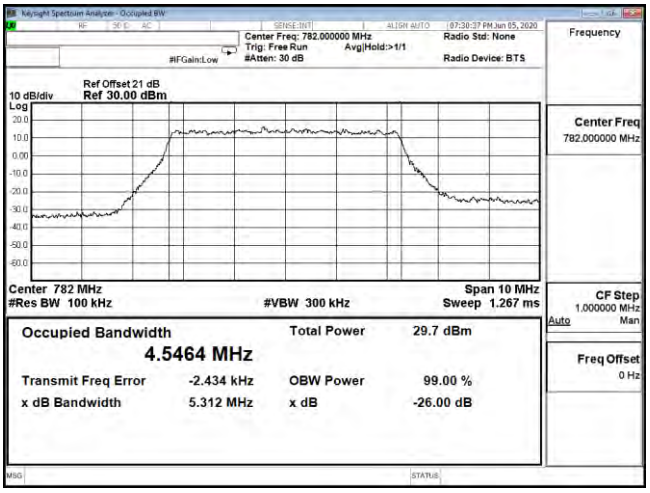


OCC B13 10M CH23230 16QAM

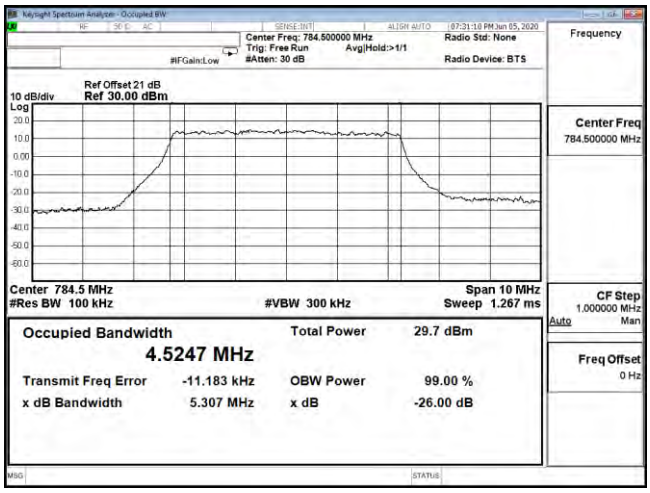
Product	LTE Module		
Test Mode	Occupied Bandwidth		
Date of Test	2020/06/05	Test Site	CTR
Test Condition	Band 13 64QAM		



OCC B13 5M CH23205 64QAM



OCC B13 5M CH23230 64QAM



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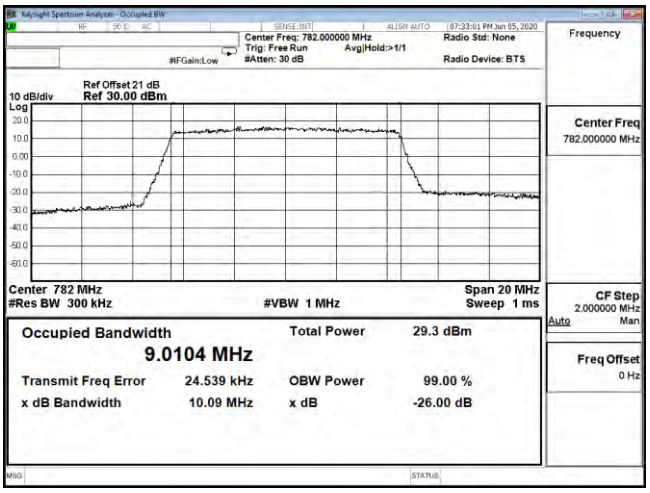
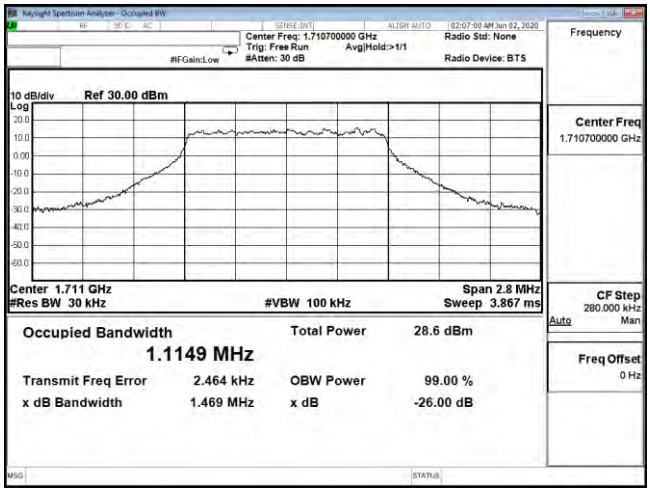
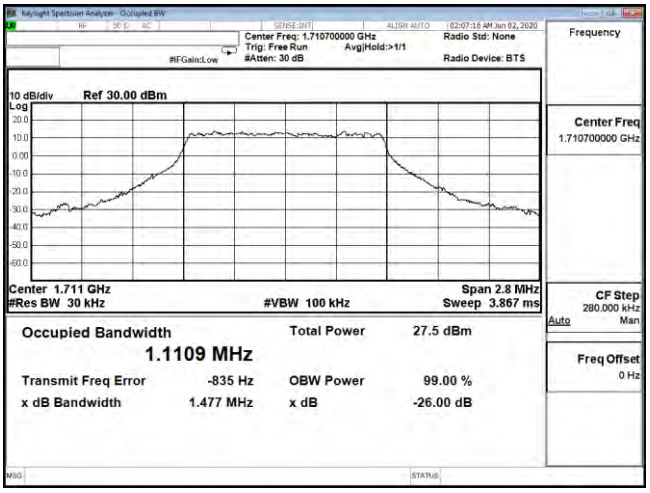


OCC B13 10M CH23230 64QAM

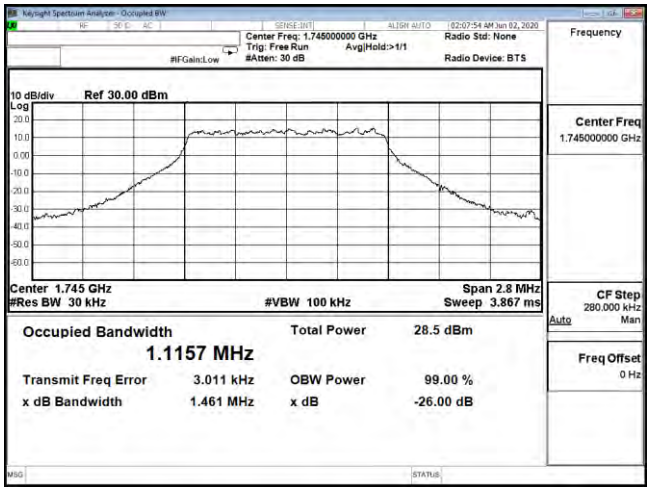
Product	LTE Module		
Test Mode	Occupied Bandwidth		
Date of Test	2020/06/05	Test Site	CTR
Test Condition	Band 66 QPSK/16QAM		



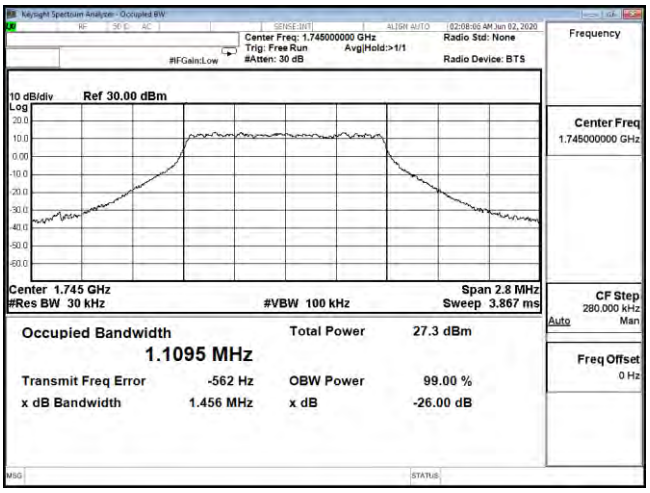
OCC B66 1.4M CH131979 QPSK



OCC B66 1.4M CH131979 16QAM



OCC B66 1.4M CH132322 QPSK



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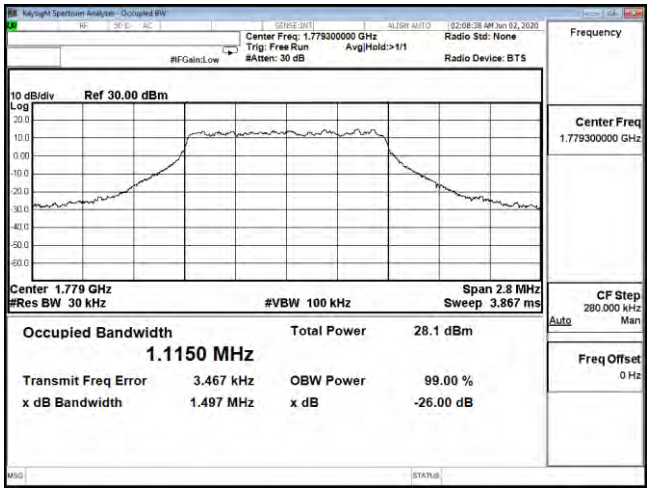
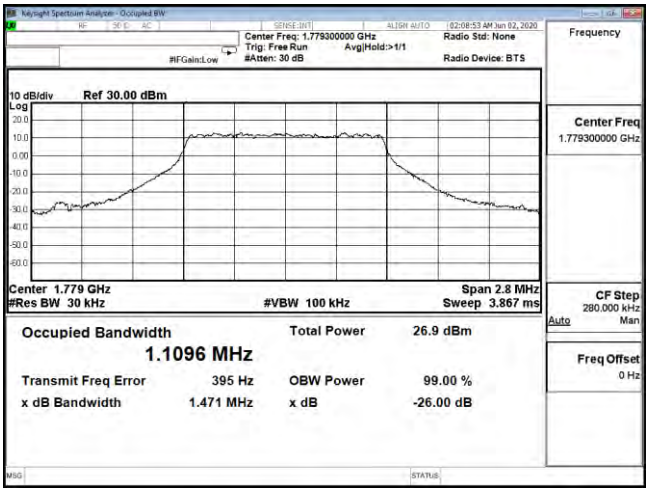
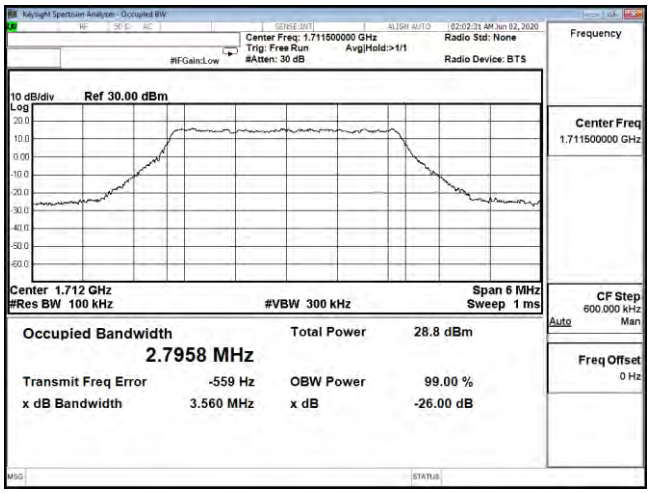


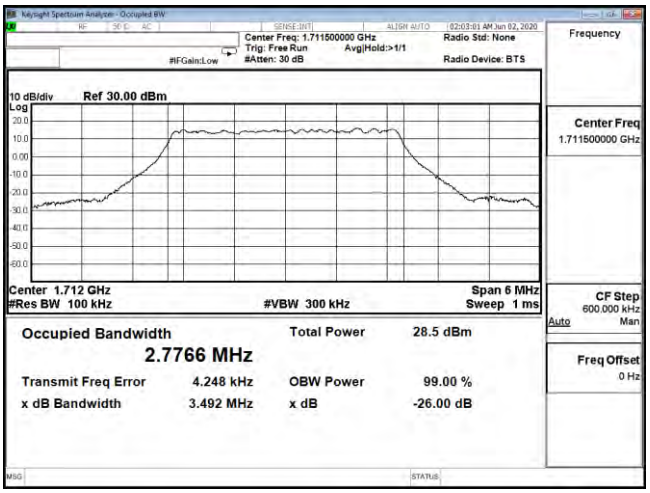
OCC B66 1.4M CH132665 QPSK



OCC B66 1.4M CH132665 16QAM



OCC B66 3M CH131987 QPSK



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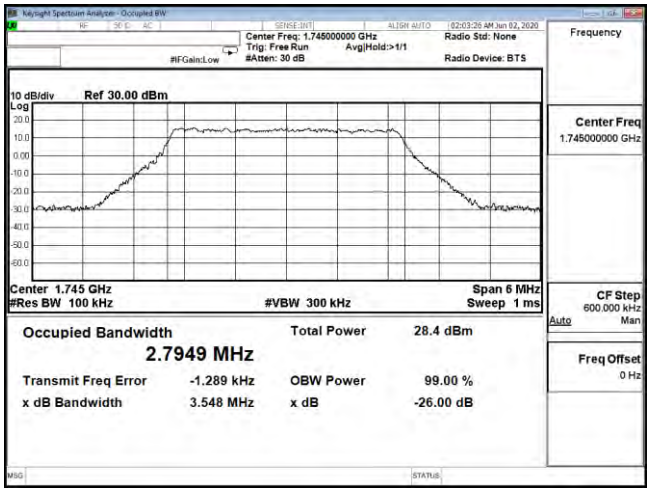

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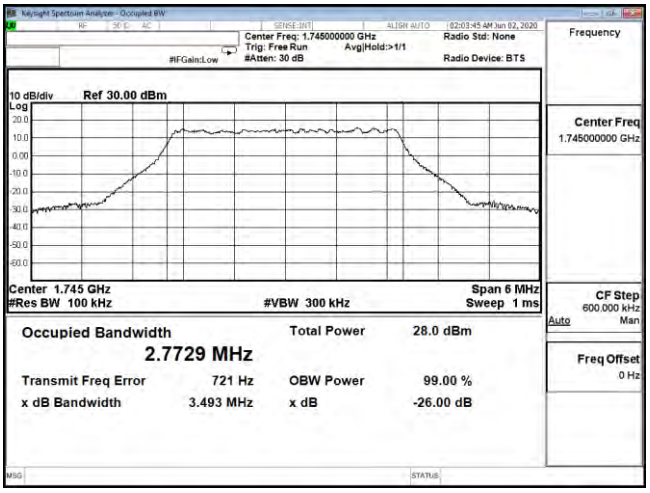

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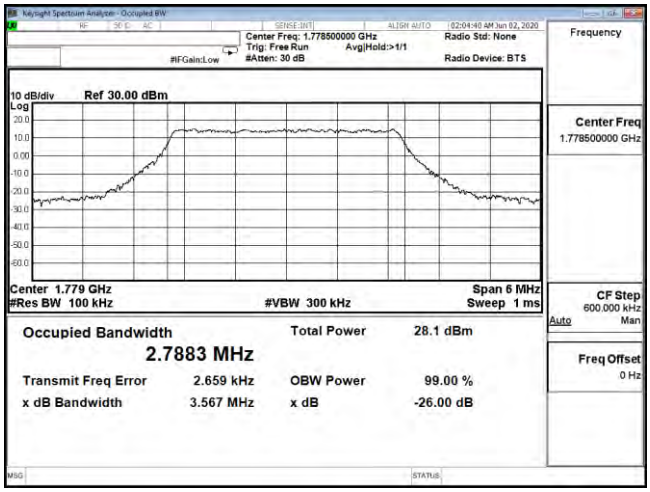
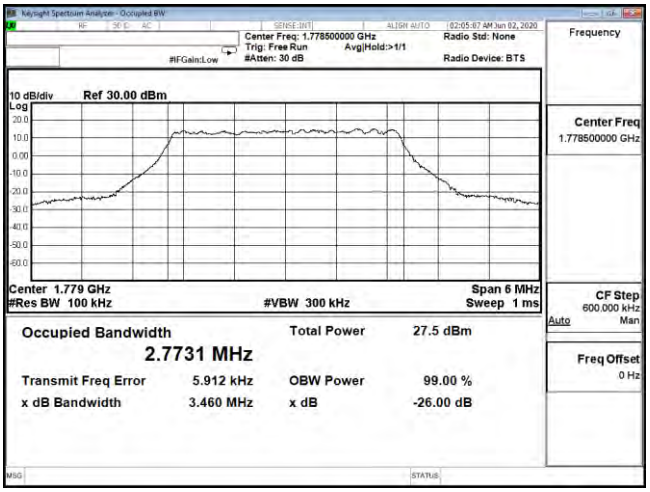


OCC B66 3M CH132657 QPSK



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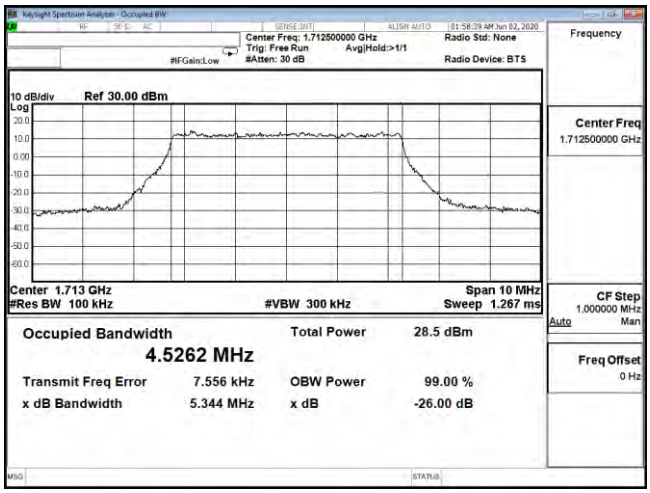

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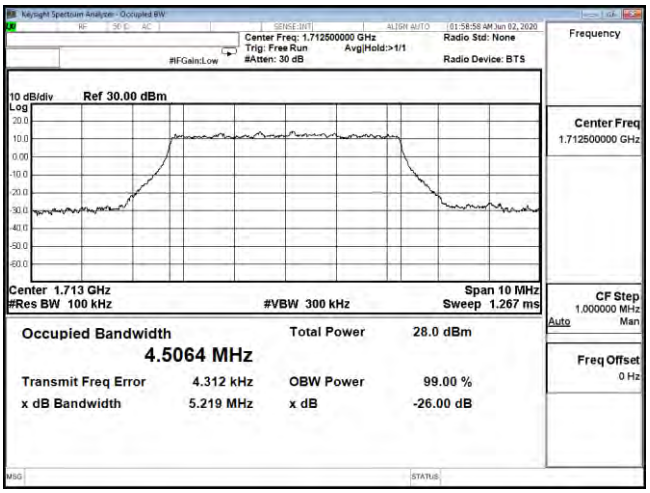

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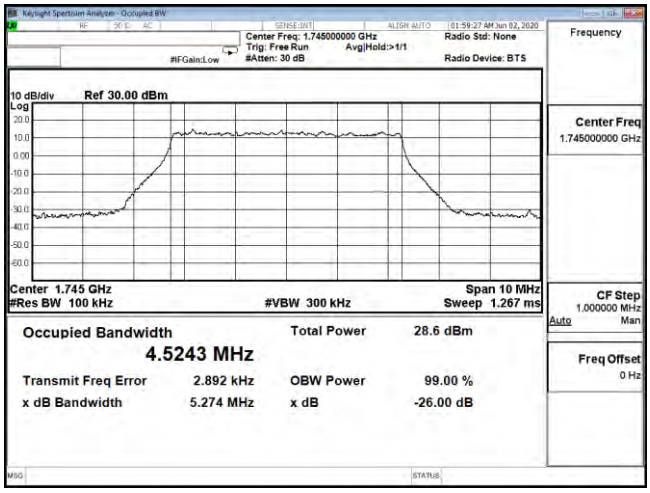

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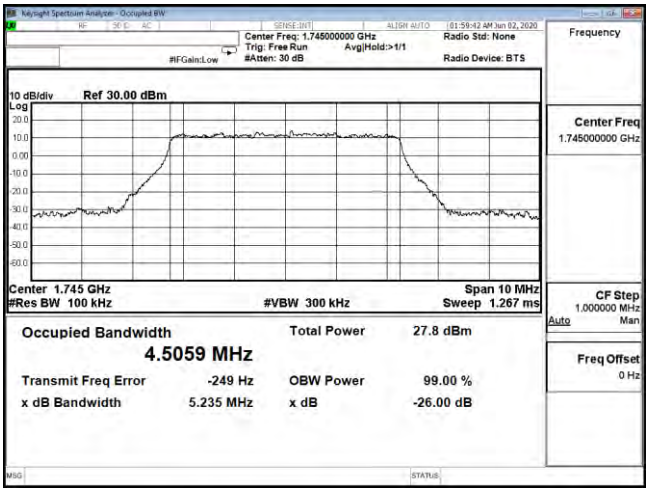

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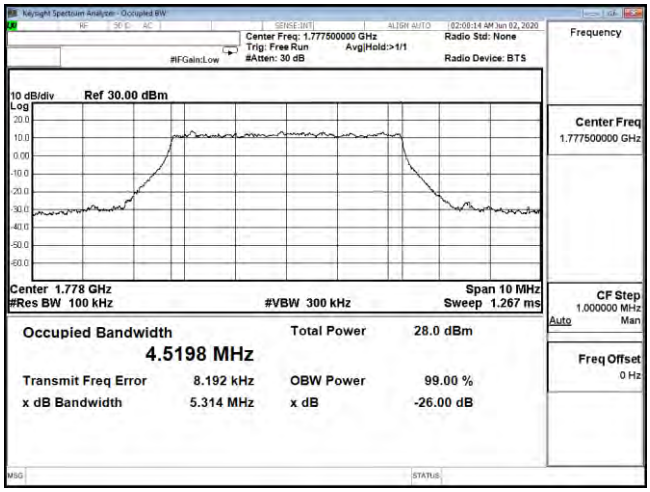

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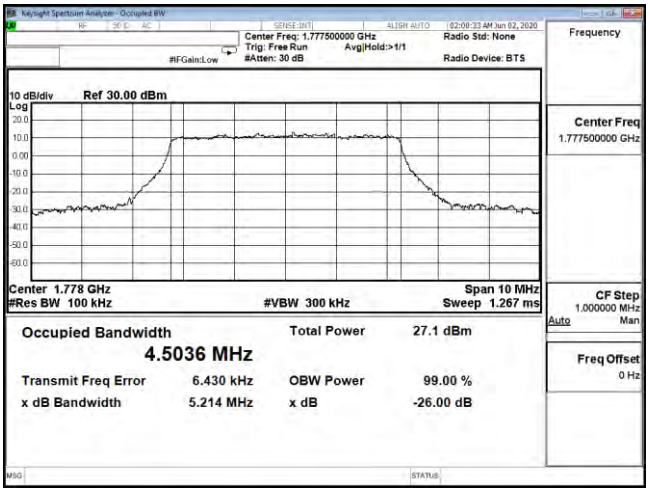

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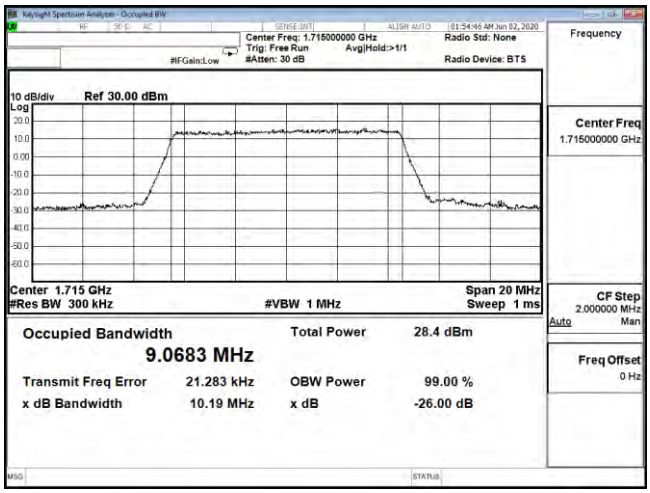

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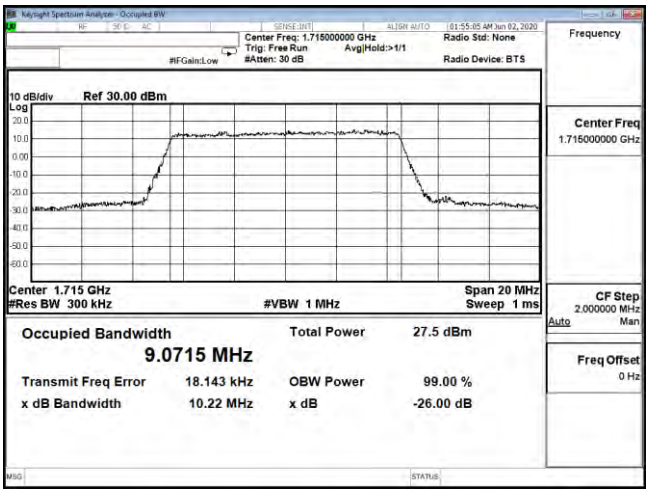

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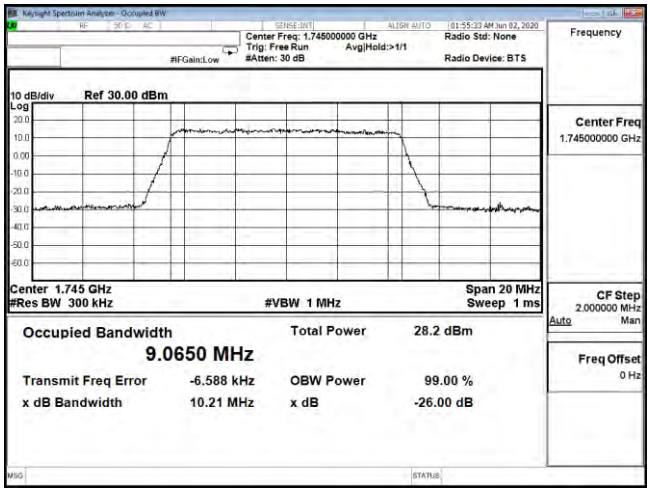

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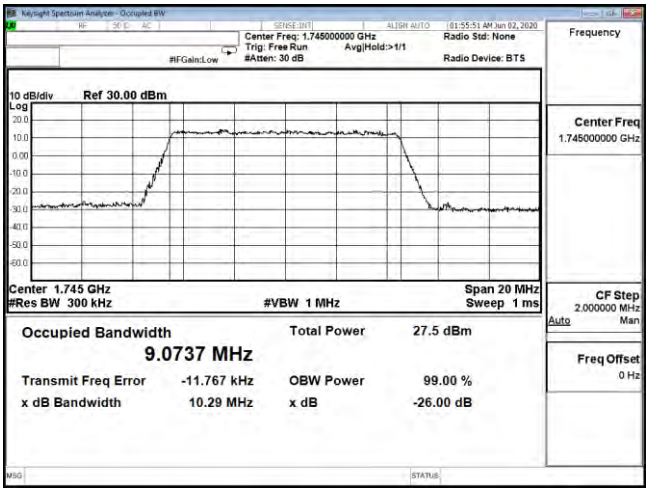

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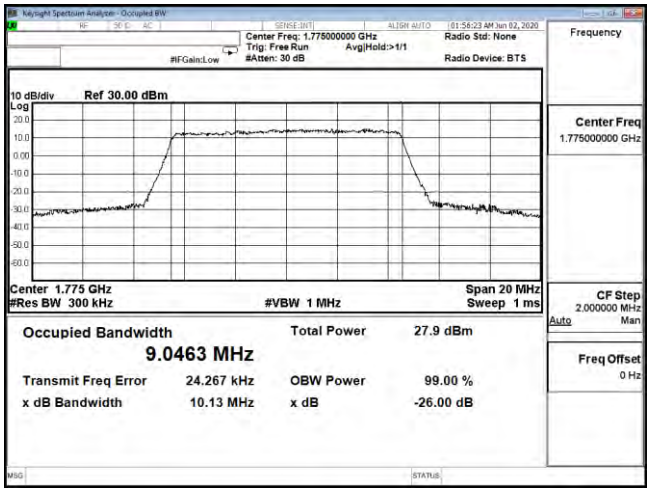

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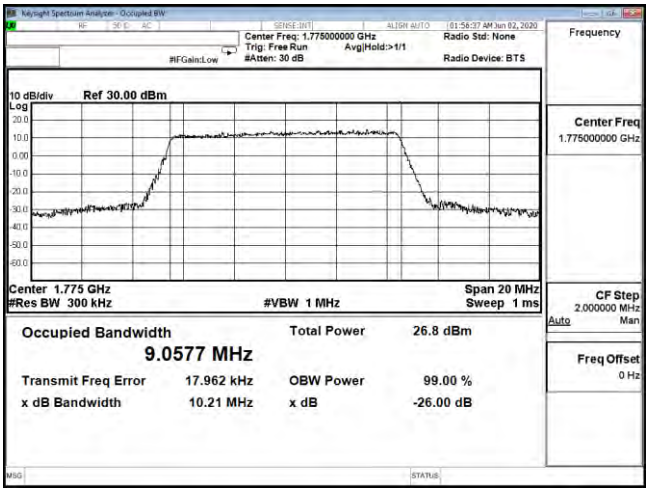

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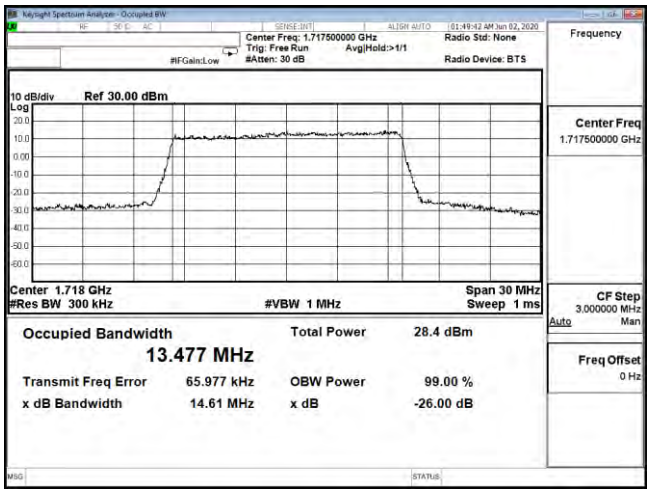

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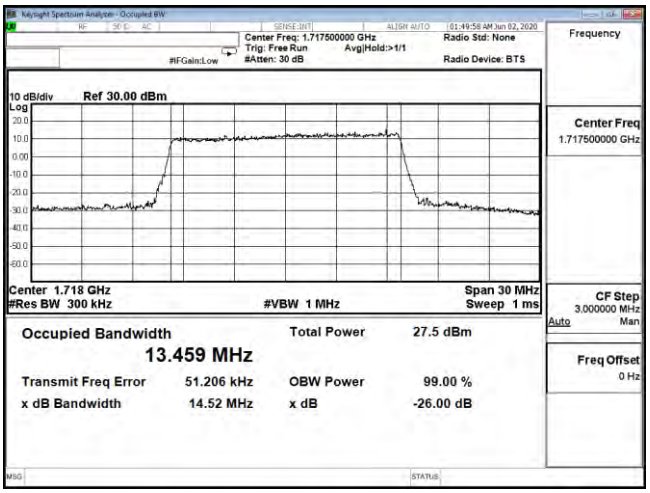

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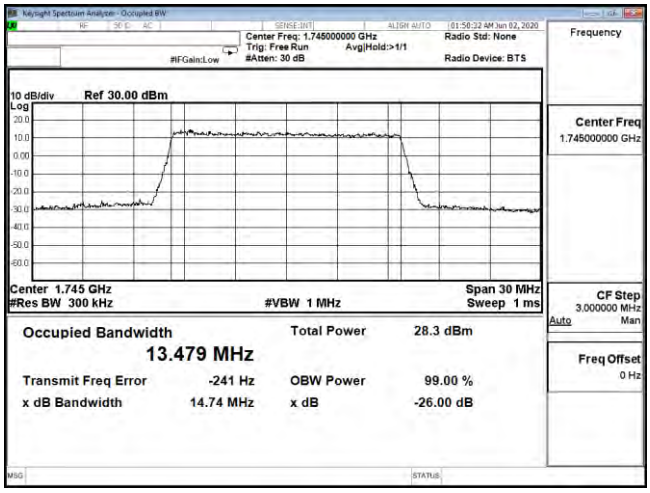

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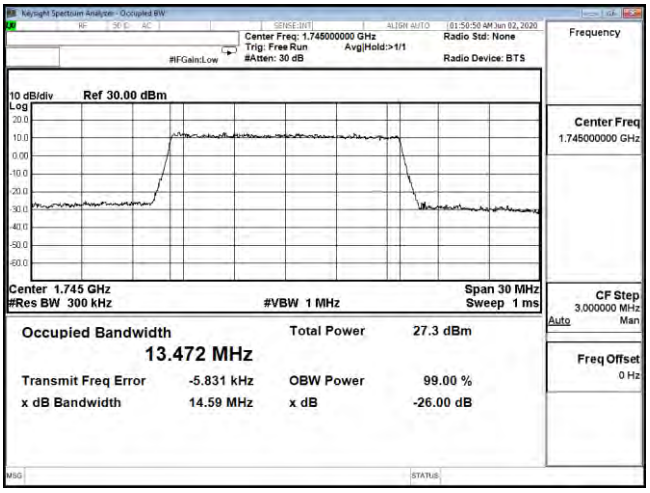

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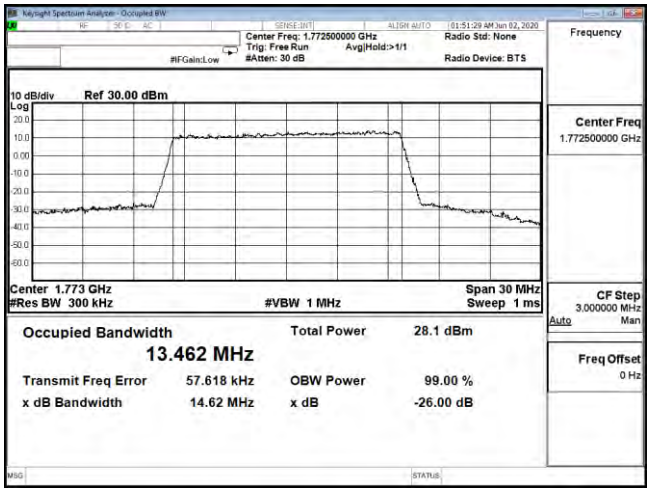

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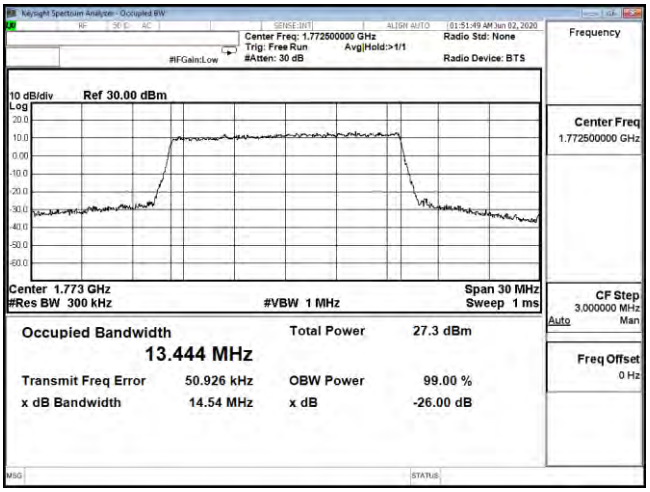

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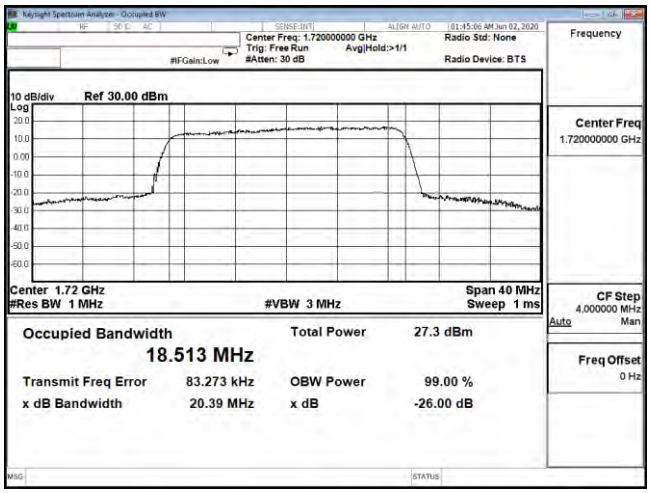

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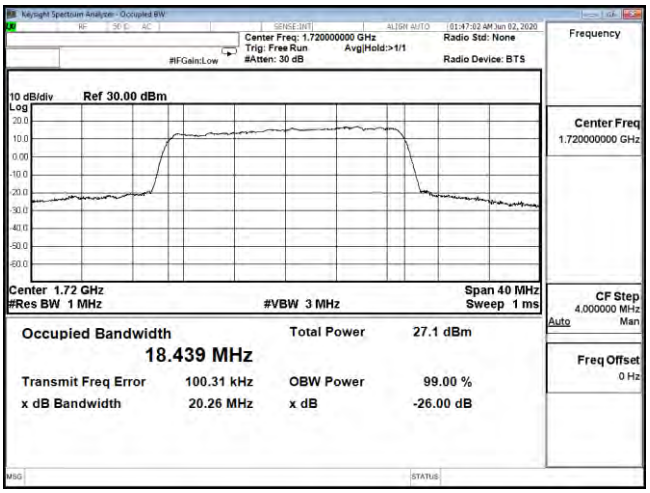

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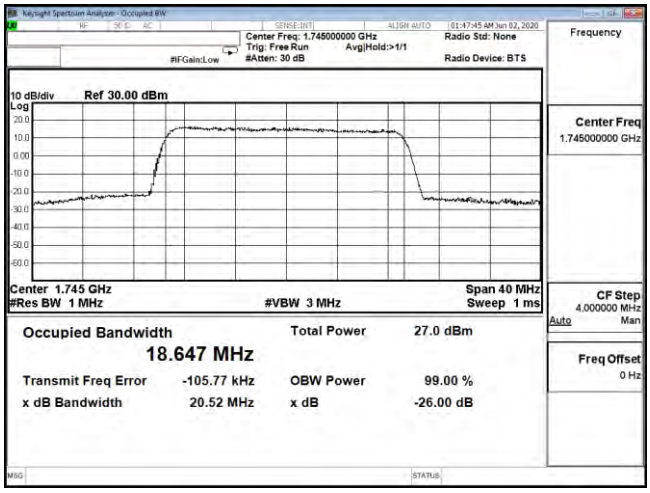

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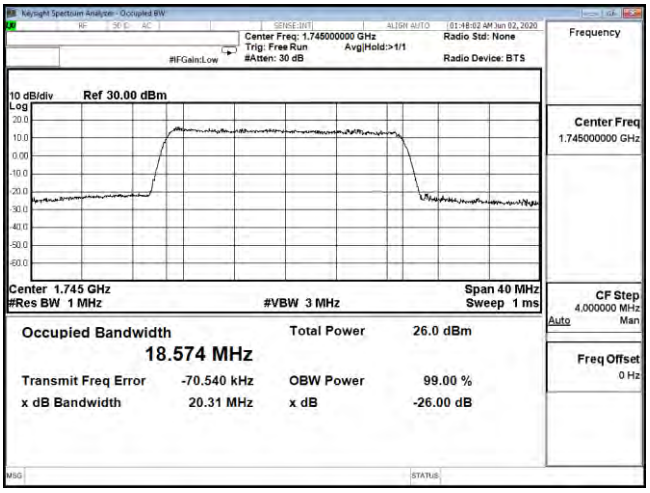

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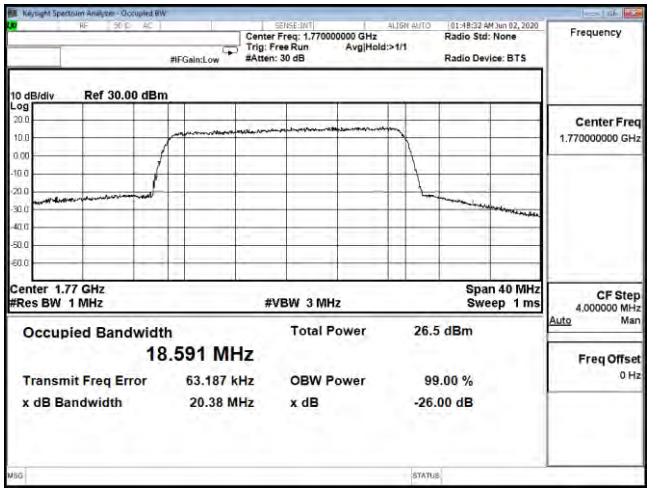

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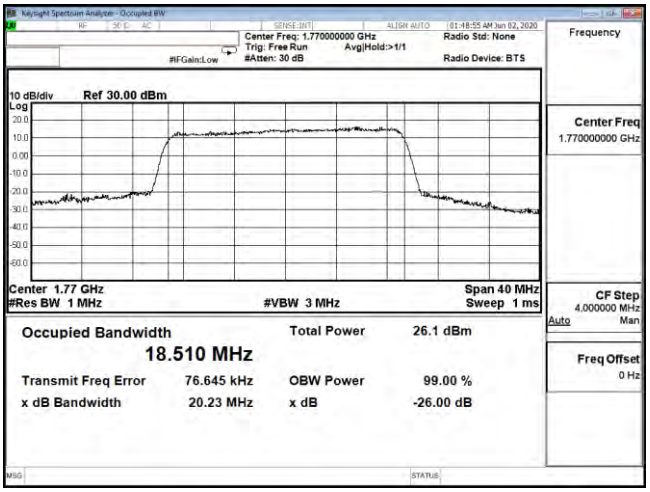
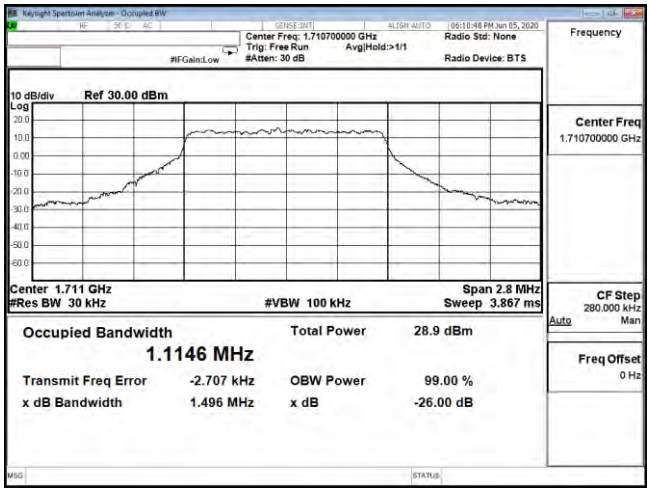


OCC B66 20M CH132572 16QAM

Product	LTE Module		
Test Mode	Occupied Bandwidth		
Date of Test	2020/06/05	Test Site	CTR
Test Condition	Band 66 64QAM		



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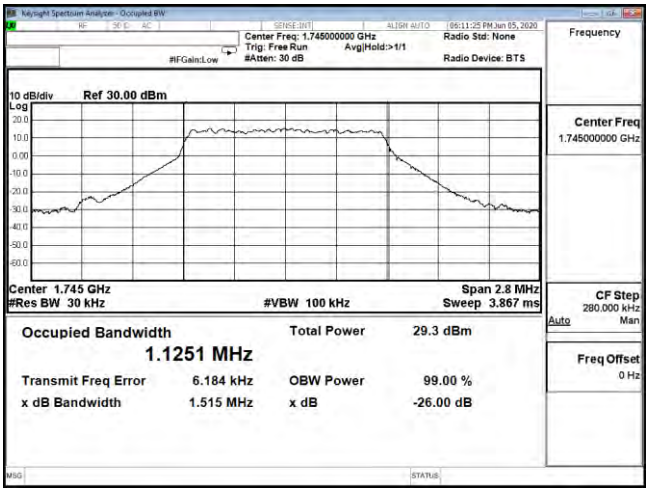

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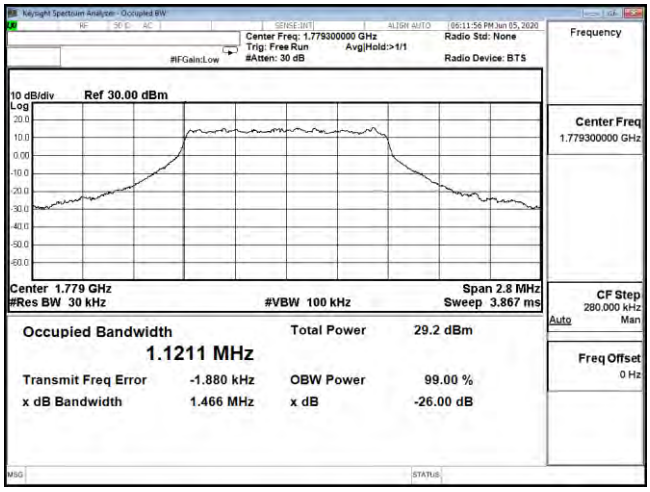

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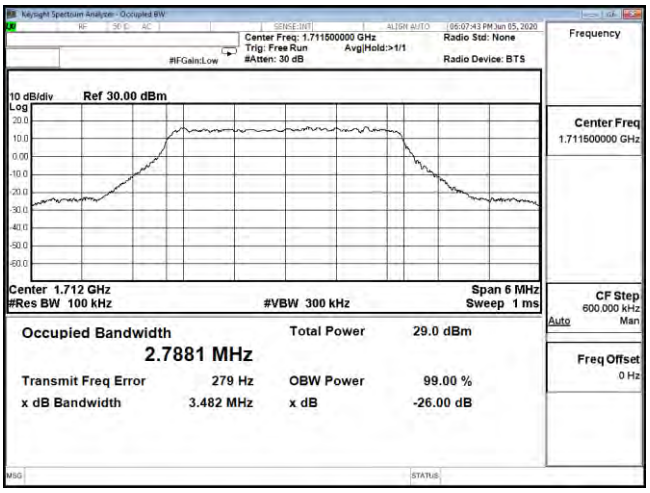

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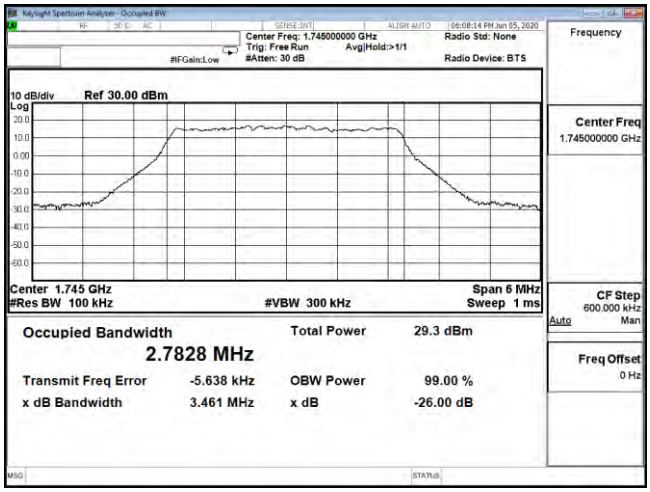

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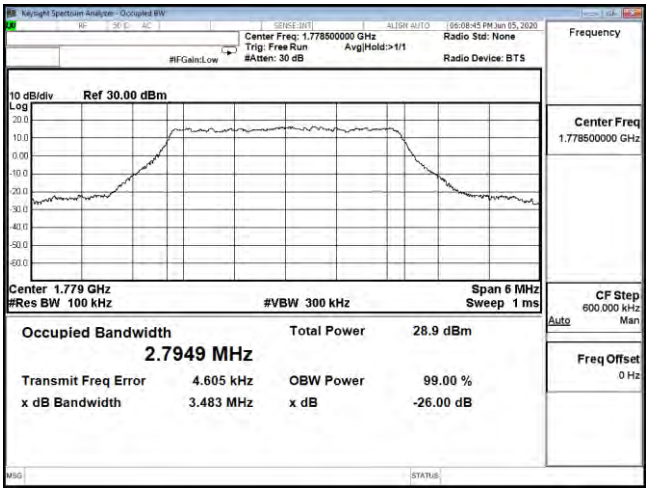

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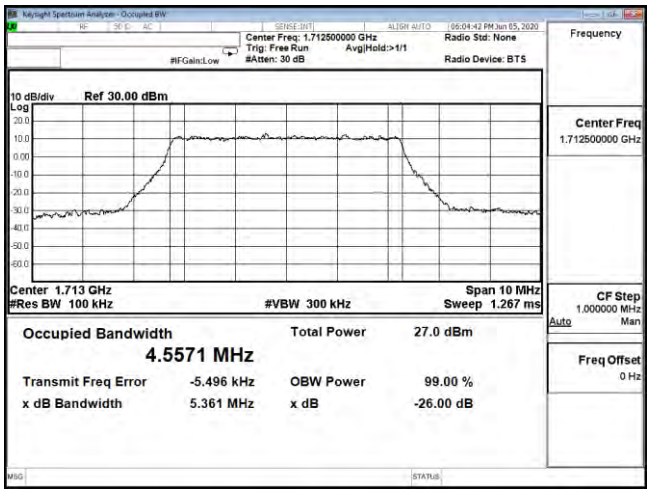

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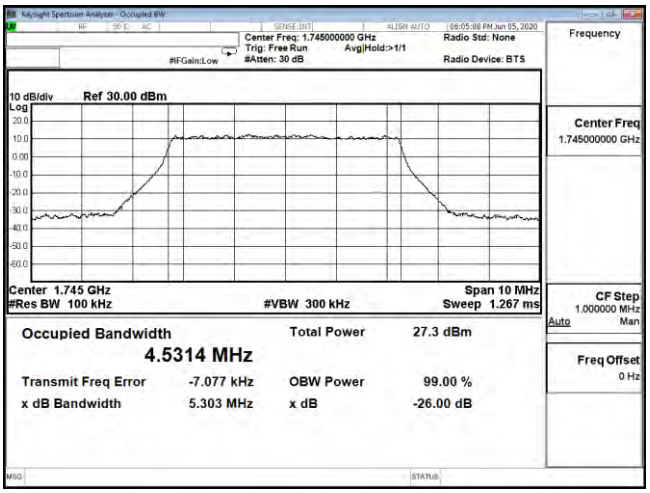

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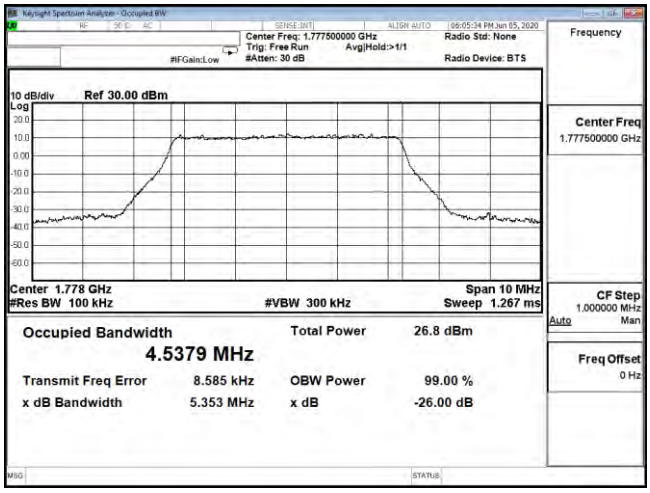

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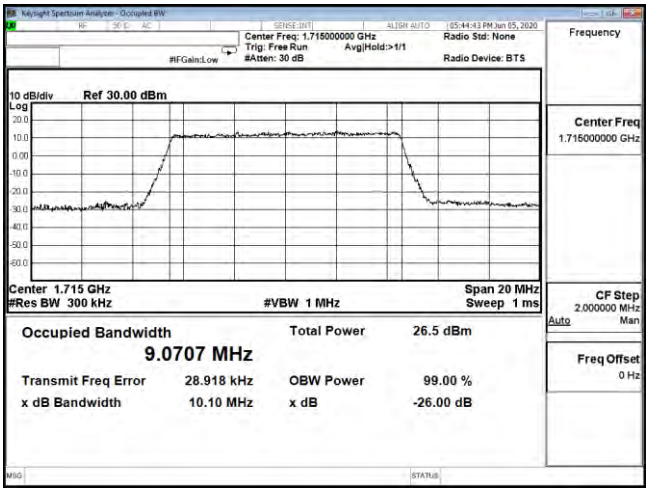

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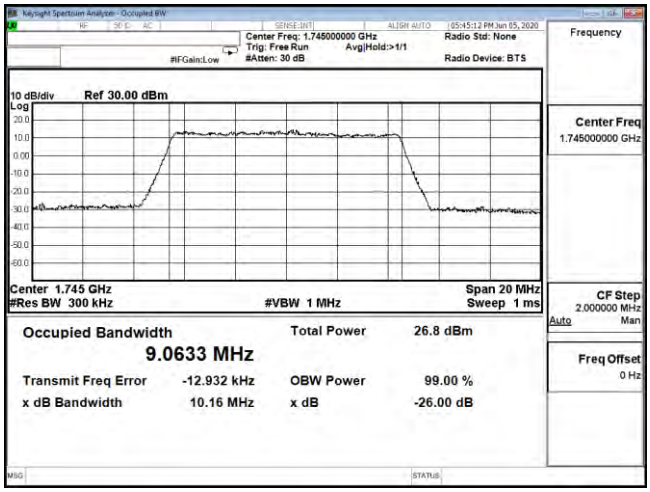

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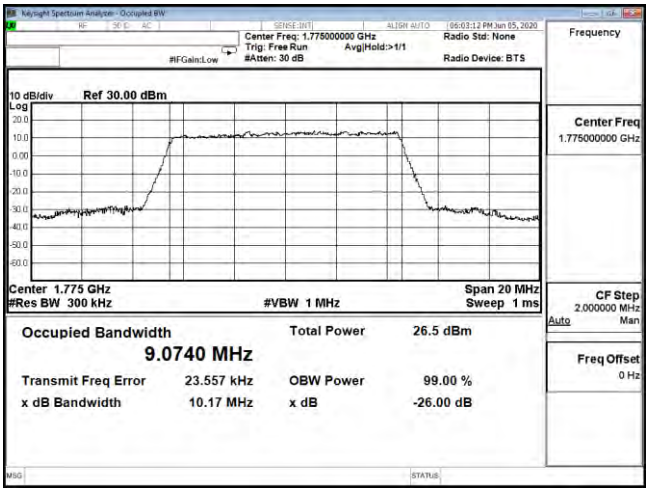

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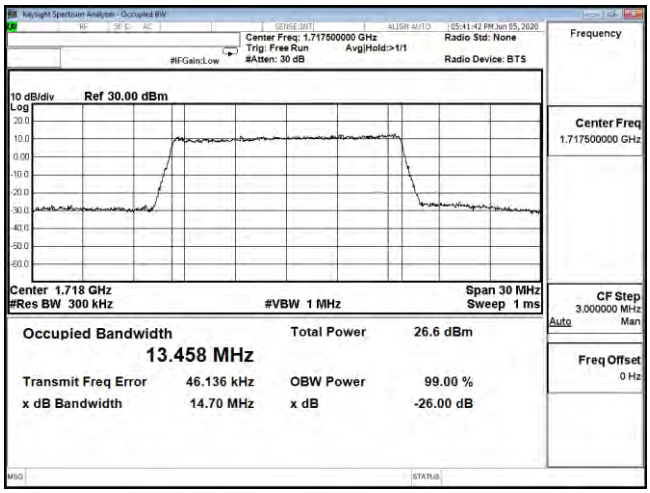

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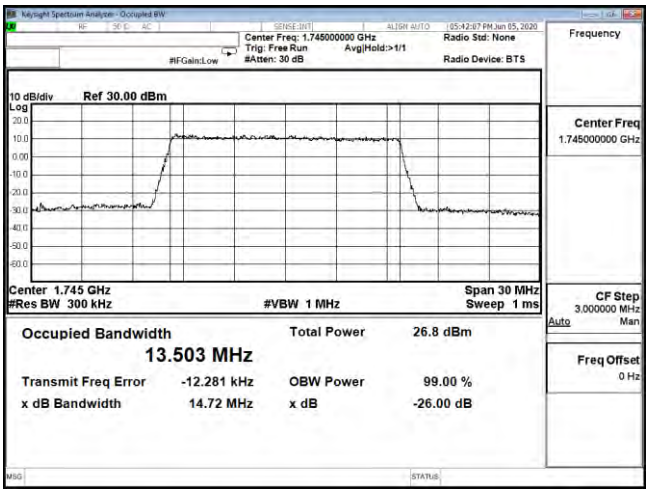

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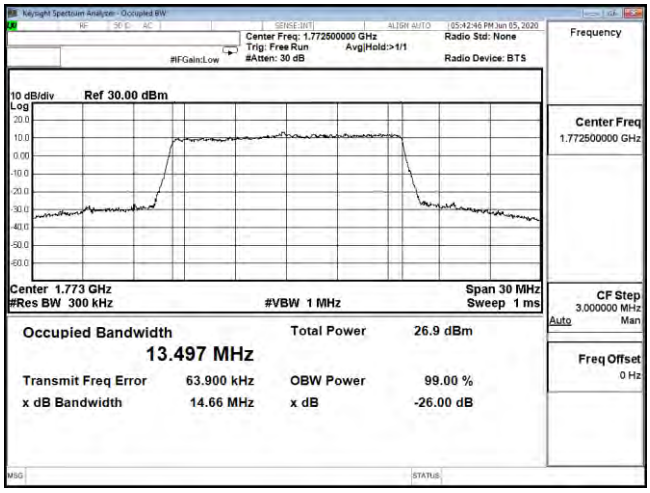

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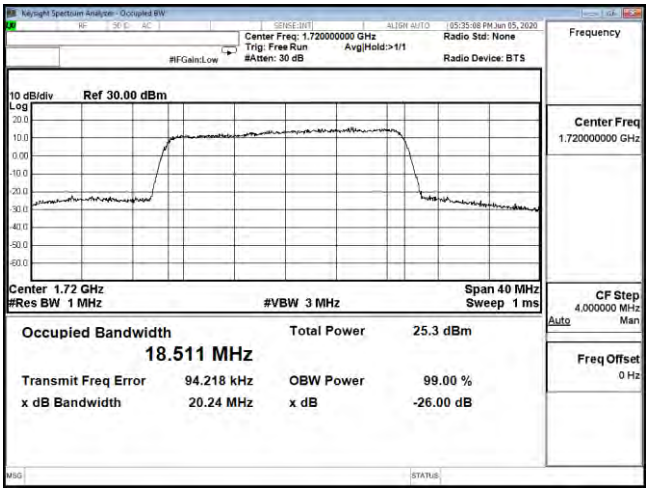

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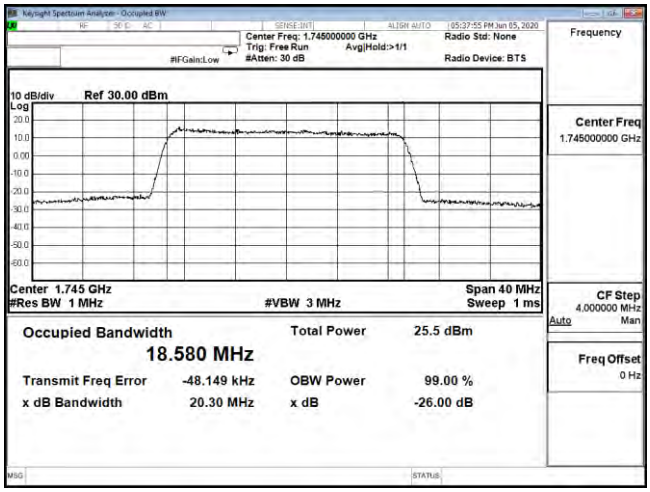

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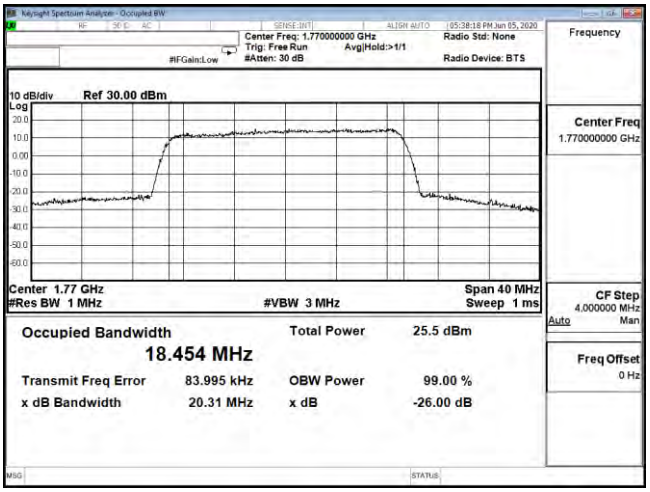
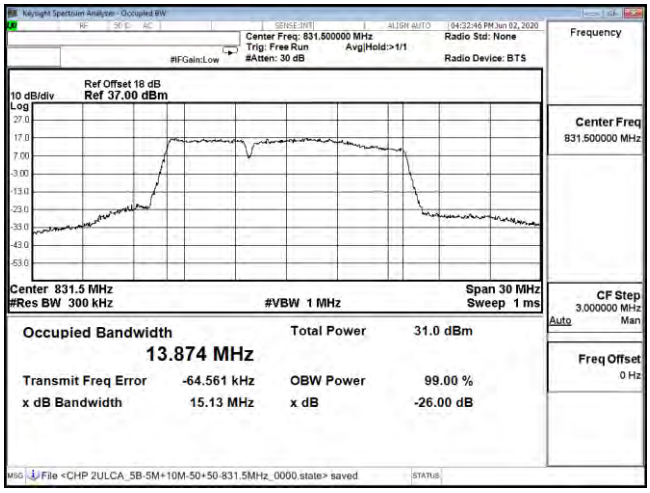
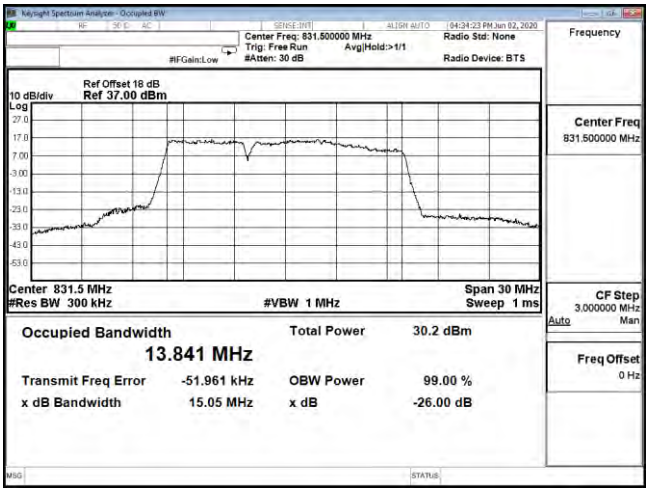


OCC B66 20M CH132572 64QAM

Product	LTE Module		
Test Mode	Occupied Bandwidth		
Date of Test	2020/06/05	Test Site	CTR
Test Condition	2UL-CA-5B		



OCC(5M+10M)-2ULCA_5B-QPSK_826.8+834



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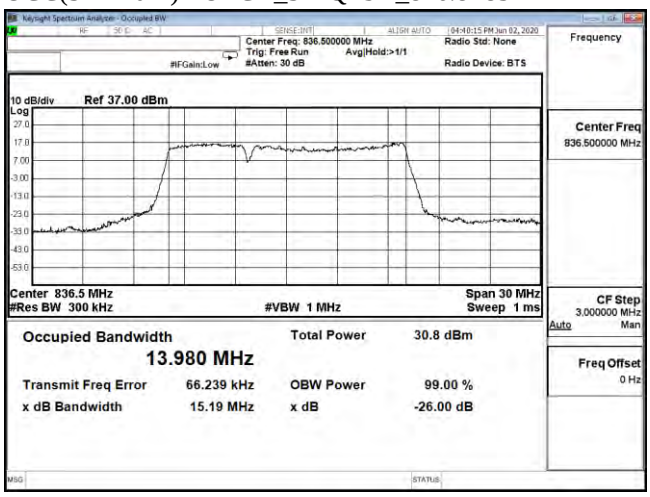
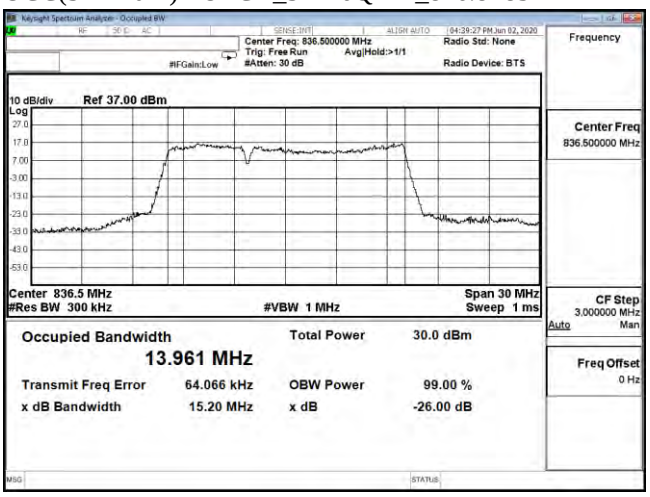


OCC(5M+10M)-2ULCA_5B-QPSK_831.8+839



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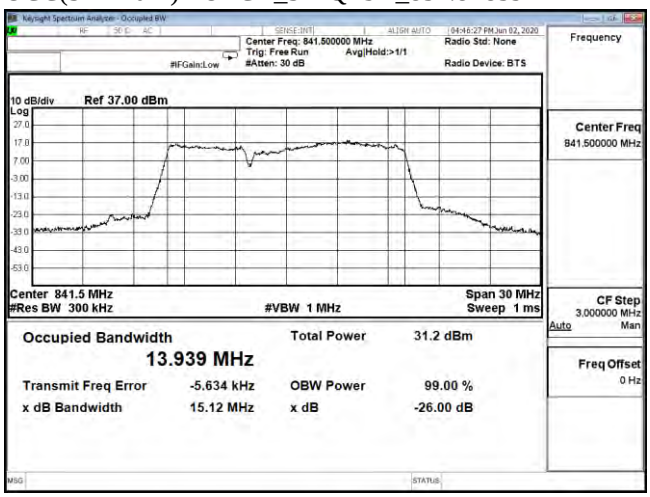

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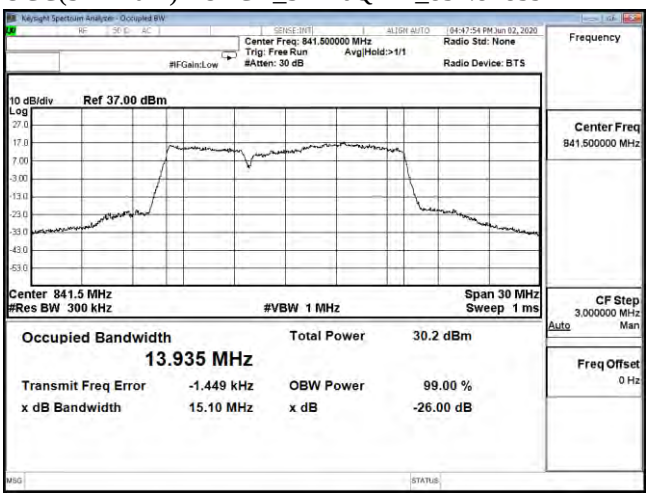

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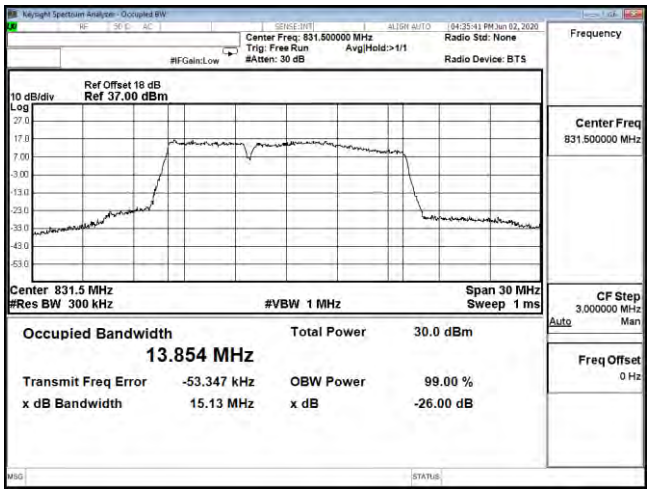

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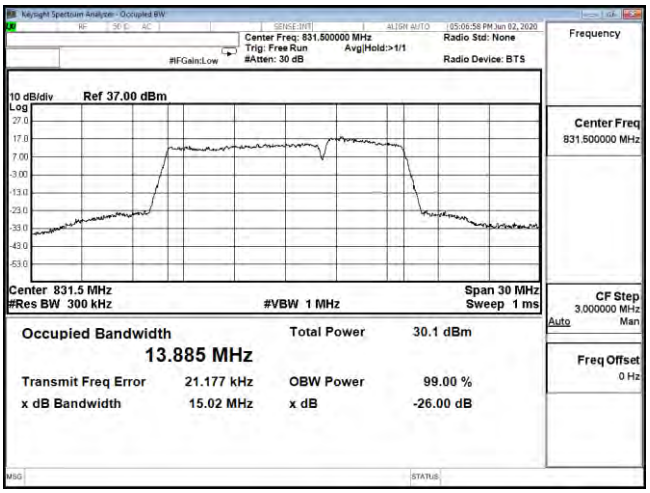

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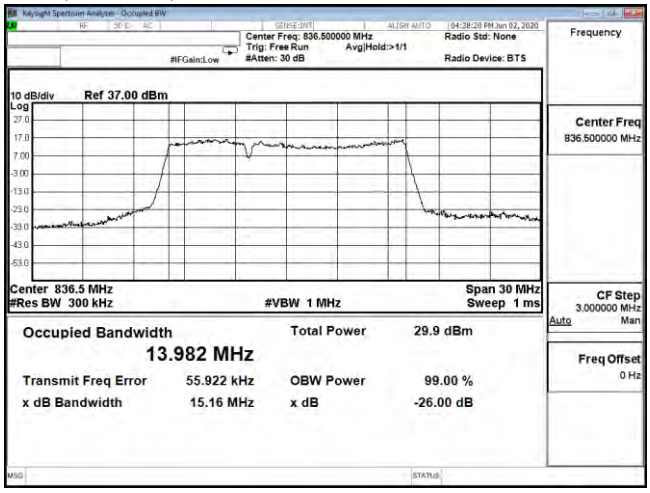

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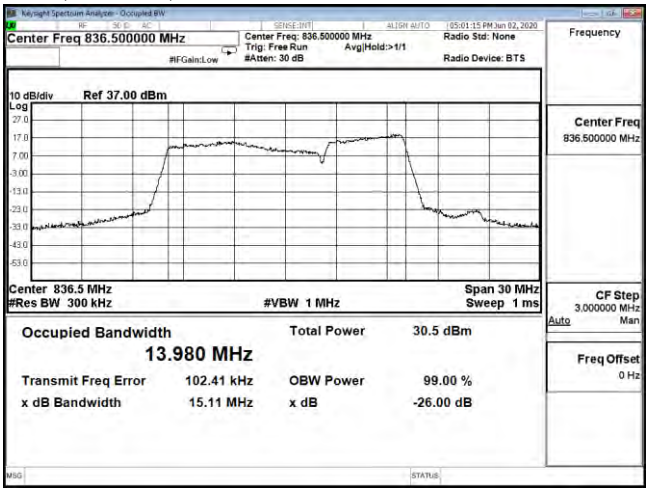

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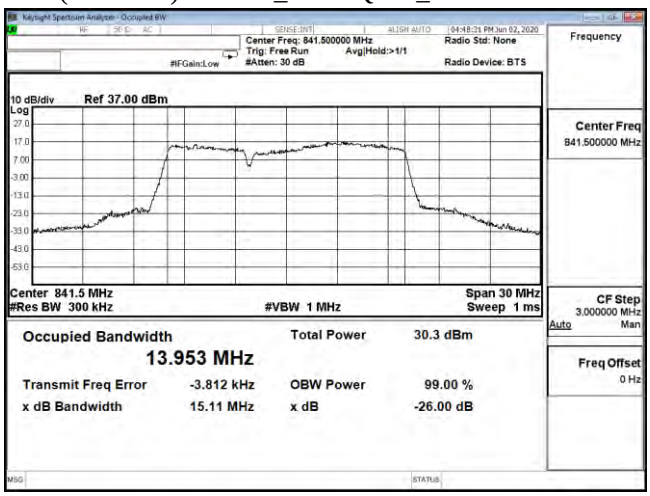

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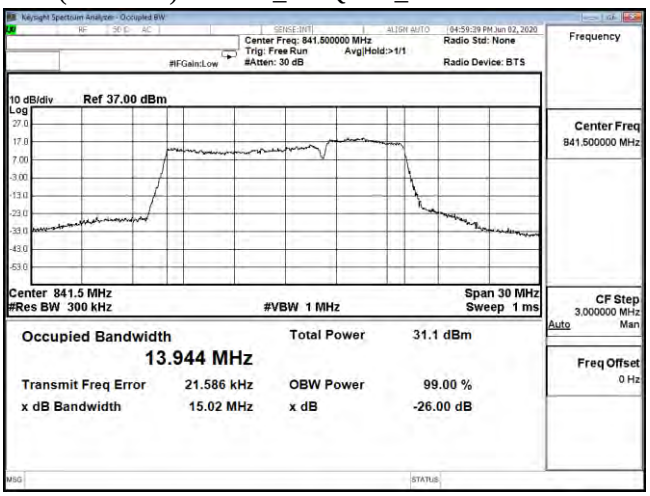
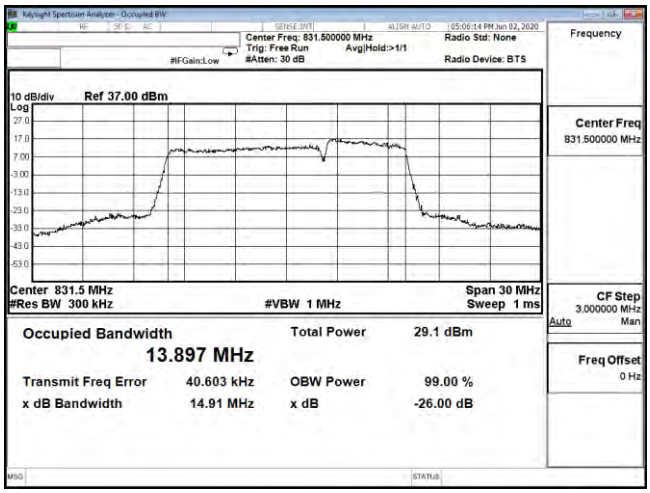
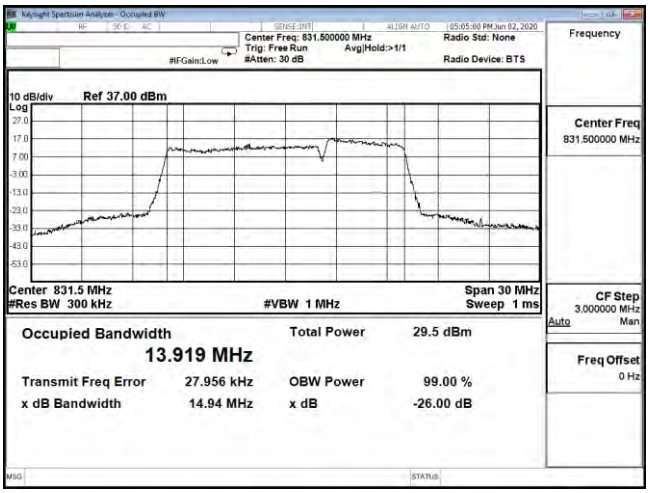


OCC(10M+5M)-2ULCA_5B-QPSK_839+846.2



OCC(10M+5M)-2ULCA_5B-16QAM_829+836.2



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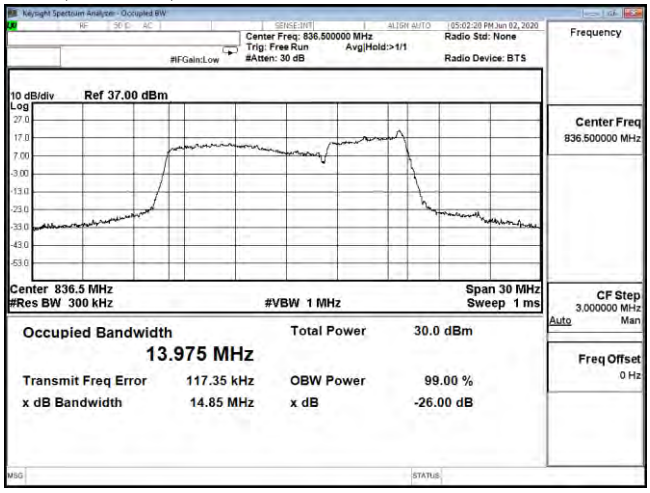
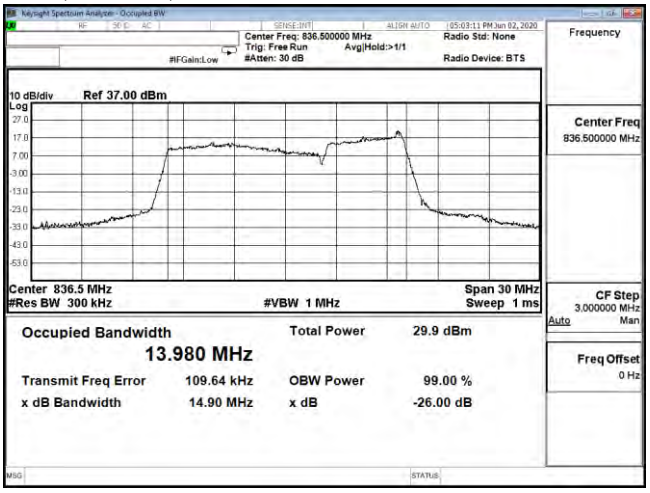


OCC(10M+5M)-2ULCA_5B-16QAM_834+841.2



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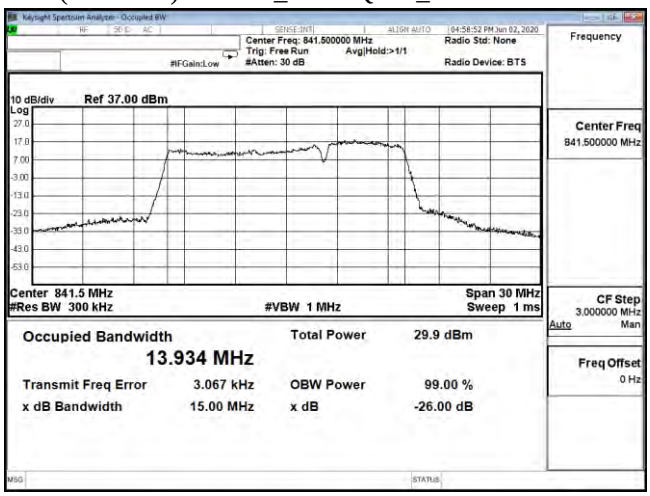

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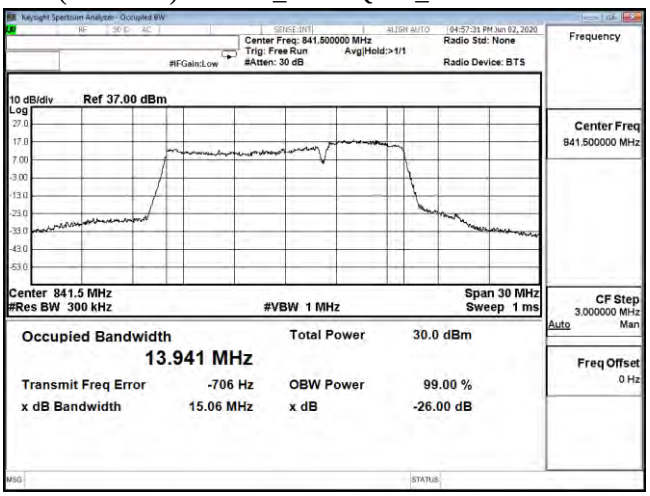

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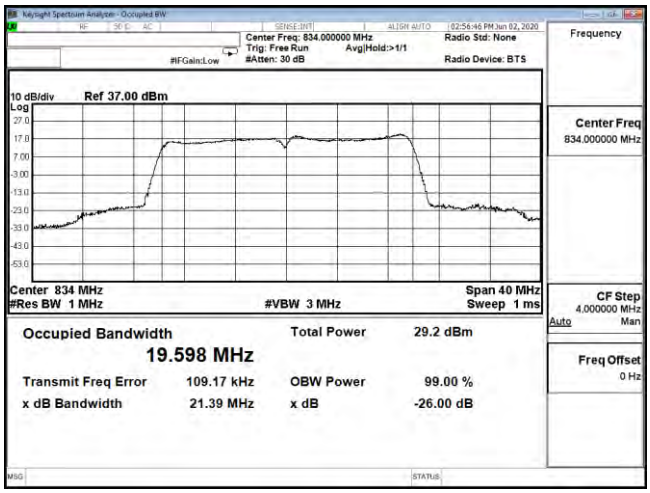
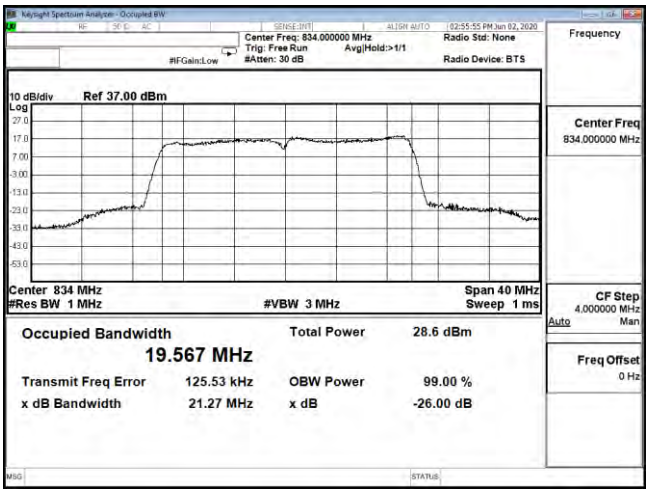
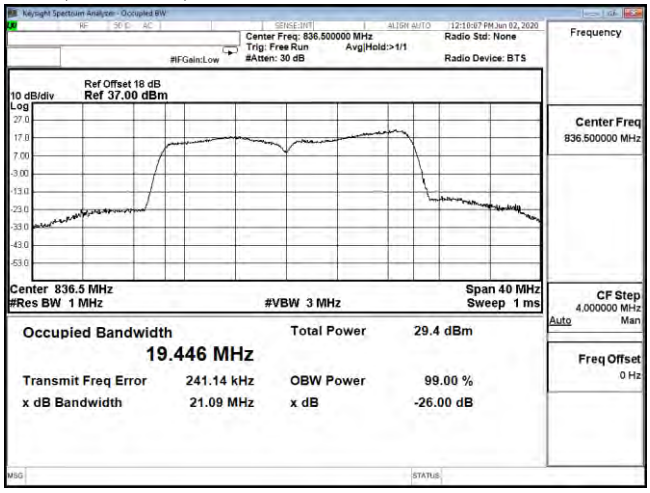


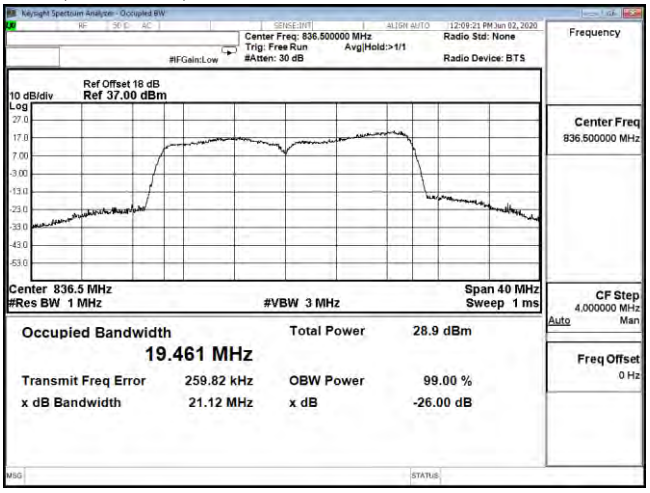
OCC(10M+10M)-2ULCA_5B-QPSK_829+838.9



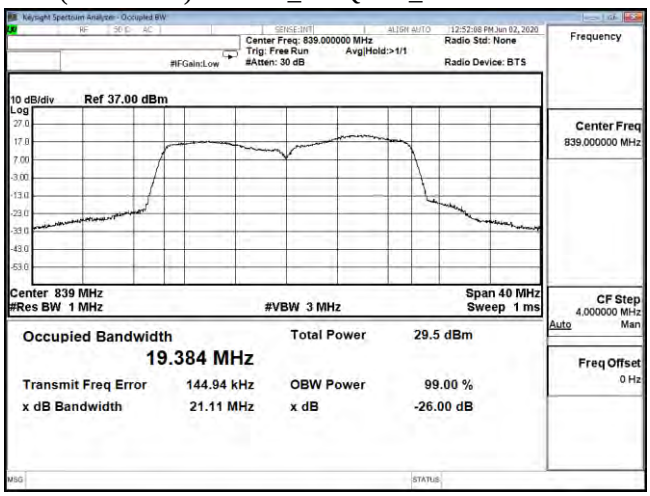
OCC(10M+10M)-2ULCA_5B-16QAM_829+838.9



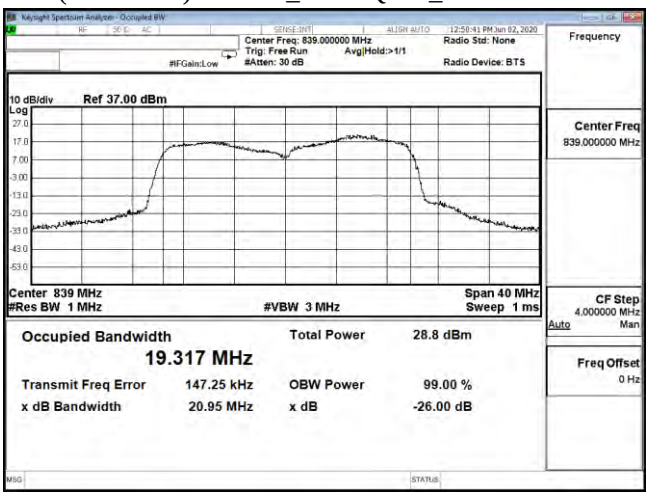
OCC(10M+10M)-2ULCA_5B-QPSK_831.6+841.5



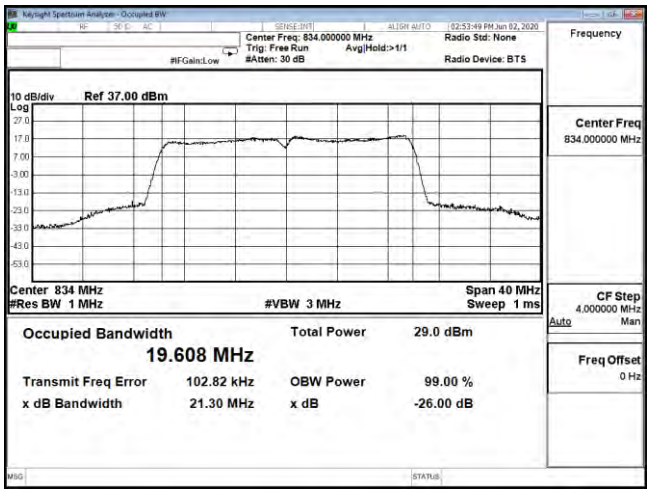
OCC(10M+10M)-2ULCA_5B-16QAM_831.6+841.5



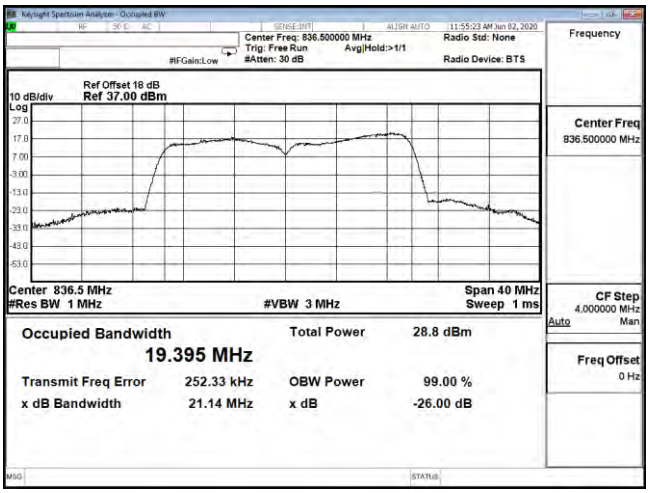
OCC(10M+10M)-2ULCA_5B-QPSK_834.1+844



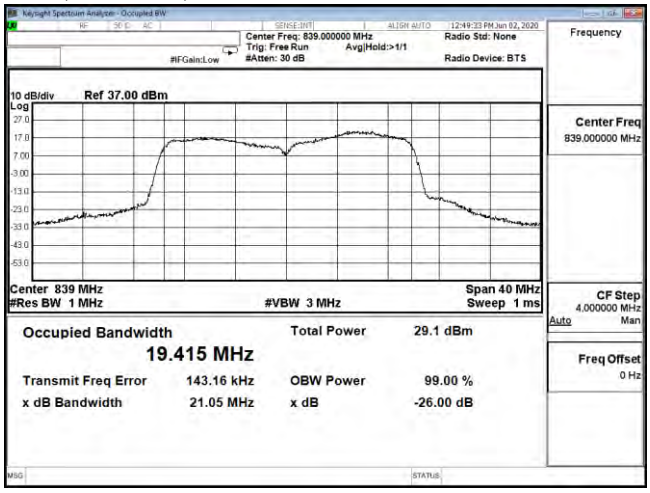
OCC(10M+10M)-2ULCA_5B-16QAM_834.1+844



OCC(10M+10M)-2ULCA_5B-64QAM_829+838.9

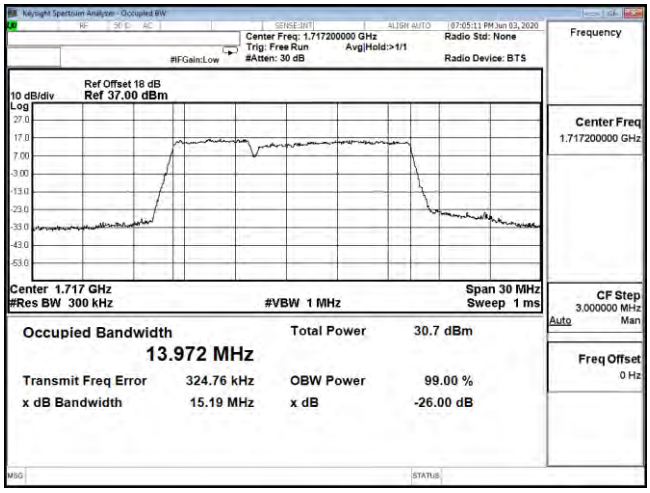


OCC(10M+10M)-2ULCA_5B-64QAM_831.6+841.5

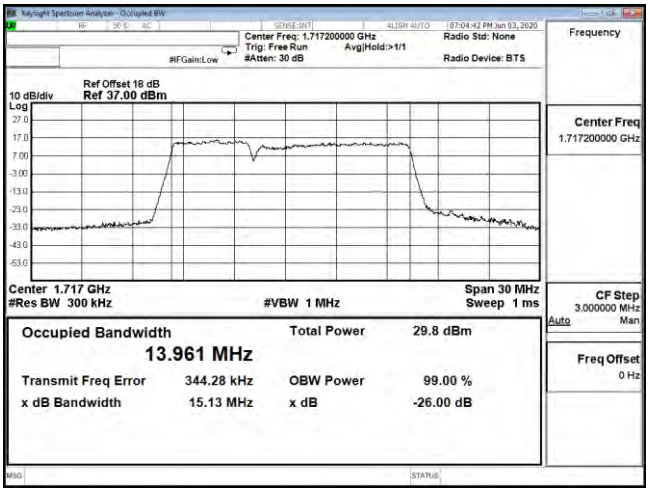


OCC(10M+10M)-2ULCA_5B-64QAM_834.1+844

Product	LTE Module		
Test Mode	Occupied Bandwidth		
Date of Test	2020/06/05	Test Site	CTR
Test Condition	2UL-CA-66B		



OCC(5M+10M)-2ULCA_66B-QPSK_1712.8(50,0)+1720(25,0)



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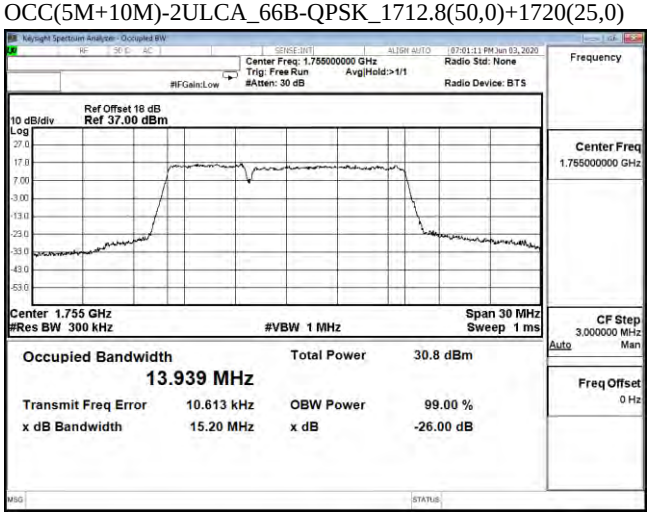
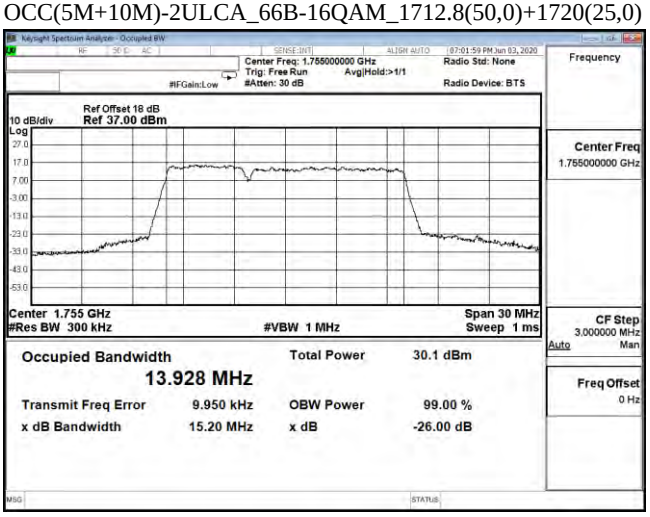
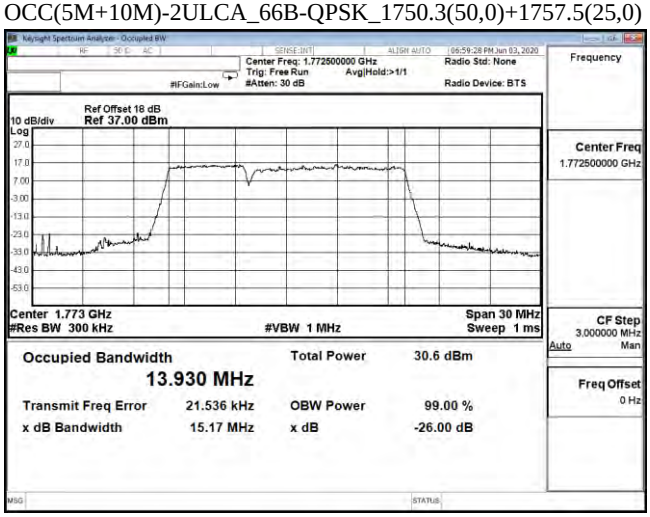


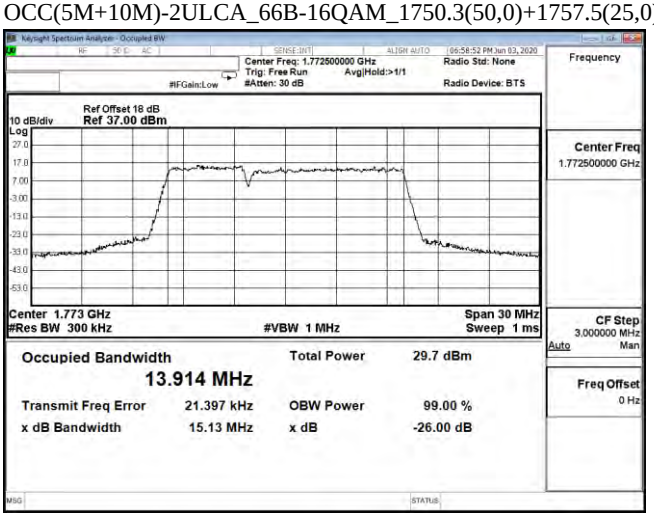
OCC(5M+10M)-2ULCA_66B-QPSK_1750.3(50,0)+1757.5(25,0)



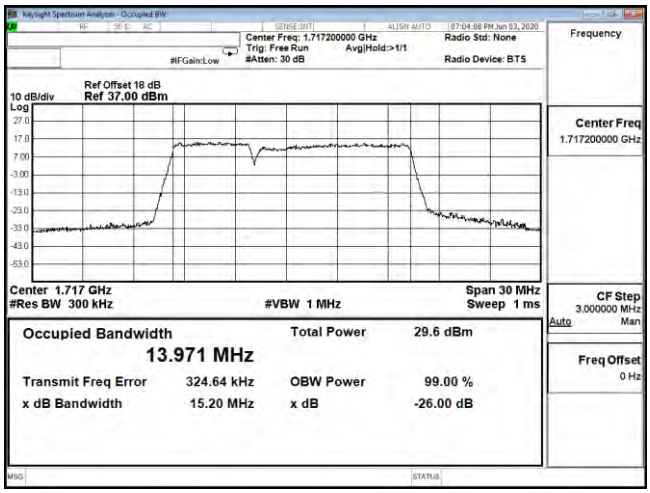
OCC(5M+10M)-2ULCA_66B-16QAM_1750.3(50,0)+1757.5(25,0)



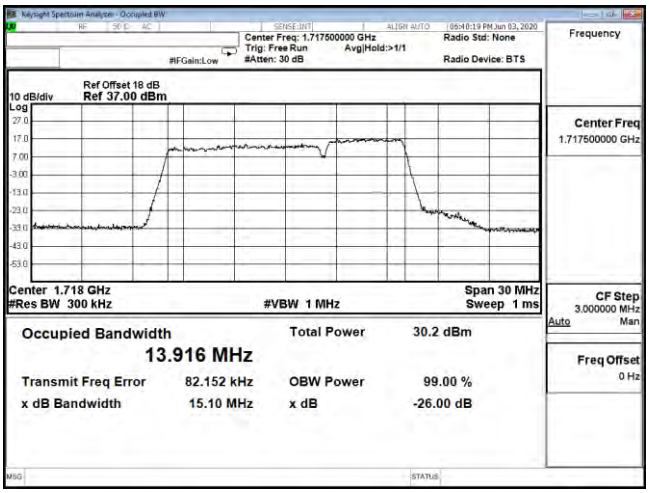
OCC(5M+10M)-2ULCA_66B-QPSK_1767.8(50,0)+1775(25,0)



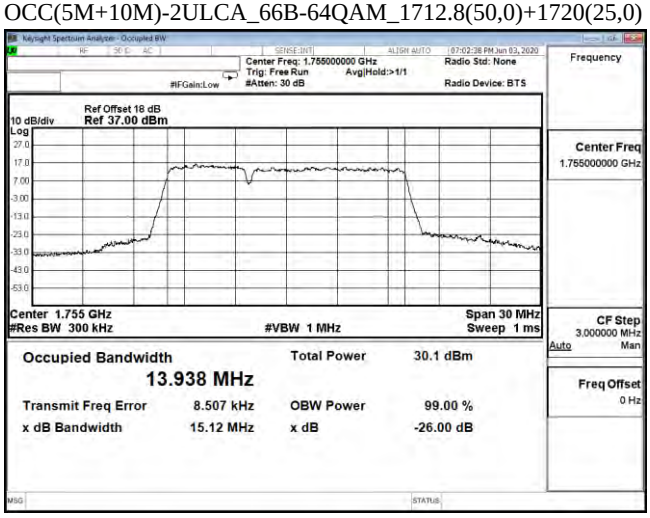
OCC(5M+10M)-2ULCA_66B-16QAM_1767.8(50,0)+1775(25,0)



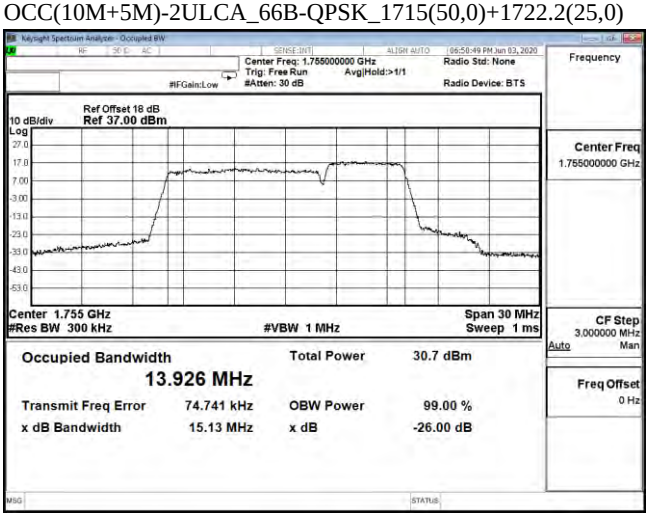
OCC(5M+10M)-2ULCA_66B-64QAM_1712.8(50,0)+1720(25,0)



OCC(10M+5M)-2ULCA_66B-QPSK_1715(50,0)+1722.2(25,0)



OCC(5M+10M)-2ULCA_66B-64QAM_1750.3(50,0)+1757.5(25,0)



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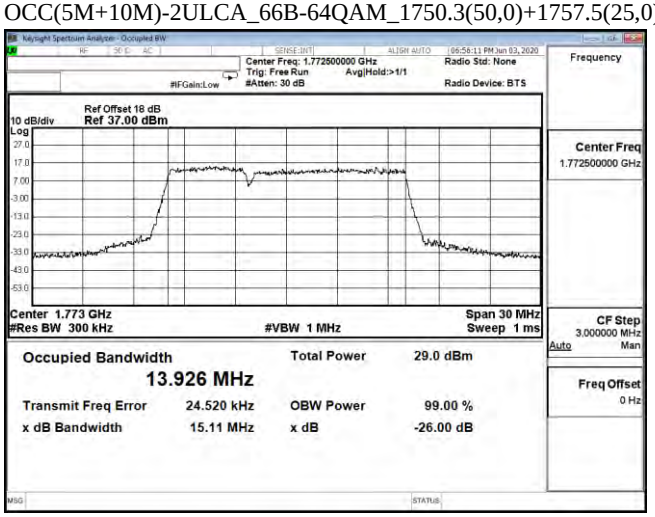
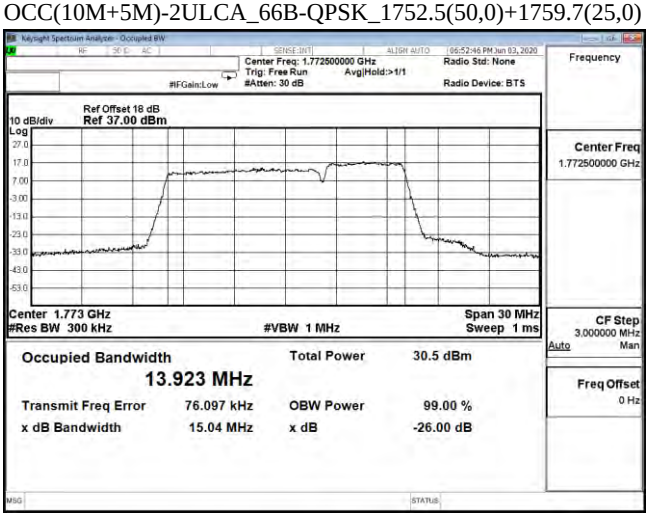


OCC(5M+10M)-2ULCA_66B-64QAM_1767.8(50,0)+1775(25,0)



OCC(10M+5M)-2ULCA_66B-QPSK_1770(50,0)+1777.2(25,0)