



RF TEST REPORT

Applicant Honor Device Co., Ltd.
FCC ID 2AYGCTFY-LX3
Product Smart Phone
Model TFY-LX3
Report No. R2206A0587-R1
Issue Date July 14, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2021)/ FCC CFR 47 Part 22H (2021)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Summary of measurement results

No.	Test Case	Clause in FCC rules	Verdict
1	RF Power Output and Effective Radiated Power	2.1046 22.913(a)(5)	PASS
2	Occupied Bandwidth	2.1049	PASS
3	Band Edge Compliance	2.1051 / 22.917(a)	PASS
4	Peak-to-Average Power Ratio	22.913(d)/ KDB 971168 D01(5.7)	PASS
5	Frequency Stability	2.1055 / 22.355	PASS
6	Spurious Emissions at Antenna Terminals	2.1051 / 22.917(a)	PASS
7	Radiates Spurious Emission	2.1053 / 22.917 (a)	PASS

Date of Testing: January 13, 2022 ~ January 27, 2022

Date of Sample Received: January 10, 2022

Note: PASS: The EUT complies with the essential requirements in the standard.

FAIL: The EUT does not comply with the essential requirements in the standard.

All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.

TFY-LX3 (Report No.: R2206A0587-R1) is a variant model of TFY-LX3 (Report No.: R2201A0036-R1V1). Test values all duplicated from Original for variant. There is no test for variant in this report.

The difference between model TFY-LX3 and TFY-LX3 is show in the below table:

Item	Model	TFY-LX3(Before)	TFY-LX3(After)
Licensed Frequency	GSM	B2/B5 The primary and secondary antenna of B2 supports transmit and receive.	B2/B5 the difference changed by software: The primary antenna of B2 supports transmit and receive, The secondary antenna of B2 only supports receive.
Software	Version	4.2.0.35(C900E14R1P1)	4.2.0.149(C605E1R2P1)
RF	Tune-up	The primary antenna of GSM B2/B5、WCDMA B4/B5、LTE B4/B5/B13/B26/B66 are unchanged.	The primary antenna of WCDMA B2、LTE B2/B7/B38 and the secondary antenna of WCDMA B2/B4、LTE B2/B4/B7/B38/B66 are changed smaller.
Accessory	Battery	Manufacture: Sunwoda、NVT	Manufacture: Sunwoda、NVT、SCUD
Others		The same	

The detailed product change description please refers to the Difference Declaration Letter.



1. Test Laboratory

1.1. Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3. Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
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2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

Applicant	Honor Device Co., Ltd.
Applicant address	Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China
Manufacturer	Honor Device Co., Ltd.
Manufacturer address	Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China

2.2. General Information

EUT Description			
Model	TFY-LX3		
SN	A7NX011C22000163		
Hardware Version	HL6TFYM		
Software Version	4.2.0.149(C605E1R2P1)		
Power Supply	Battery / AC adapter		
Antenna Type	Internal Antenna		
Antenna Gain	Band	Main Antenna	Second Antenna
	GSM 850	-3.78 dBi	NA
	WCDMA Band V	-3.78dBi	NA
	LTE Band 5	-3.78 dBi	NA
Antenna Gain	LTE Band 26	-3.78 dBi	NA
	Test Mode(s)		
GSM 850; WCDMA Band V; LTE Band 5/26;			
Test Modulation			
(GSM/GPRS)GMSK, (EGPRS) GMSK/ 8PSK; (WCDMA) BPSK, QPSK,; (LTE) QPSK, 16QAM;			
GPRS Multislot Class	12		
EGPRS Multislot Class	12		
HSDPA UE Category	14		
HSUPA UE Category	6		
DC-HSDPA UE Category	24		
LTE Category	4		
Maximum E.R.P.	GSM 850:	27.21dBm	
	WCDMA Band V:	18.41dBm	
	LTE Band 5:	18.59dBm	
	LTE Band 26:	18.85dBm	
Rated Power Supply Voltage	3.87V		
Operating Voltage	Minimum: 3.60V Maximum: 4.45V		
Operating Temperature	Lowest: 0°C Highest: 35°C		



Testing Temperature		Lowest: 0°C Highest: 35°C		
Operating Frequency Range(s)		Band	Tx (MHz)	Rx (MHz)
		GSM850	824 ~ 849	869 ~ 894
		WCDMA Band V	824 ~ 849	869 ~ 894
		LTE Band 5	824 ~ 849	869 ~ 894
		LTE Band 26	824 ~ 849	869 ~ 894
EUT Accessory				
Accessory	Model	Manufacture	No.	
Adapter	HW-100225E00	Honor Device Co., Ltd. (Manufacturer:Huntkey)	1	
	HW-100225U00	Honor Device Co., Ltd. (Manufacturer:Huntkey)	2	
	HW-100225B00	Honor Device Co., Ltd. (Manufacturer:Huntkey)	3	
	HN-100225E00	Honor Device Co., Ltd. (Manufacturer: Salcomp)	4	
	HN-100225U00	Honor Device Co., Ltd. (Manufacturer: Salcomp)	5	
Battery	HB416492EFW	Honor Device Co., Ltd. (Manufacturer: Sunwoda Electronic Co.,LTD)	1	
		Honor Device Co., Ltd. (Manufacturer: Dongguan NVT Technology Co., Ltd)	2	
		Honor Device Co., Ltd. (Manufacturer: SCUD (Fujian) Electronics Co., LTD.)	3	
Earphone	MEND1532B528A11	Jiangxi Lianchuang Hongsheng Electronic Co., LTD.	1	
	1293-3283-3.5mm-339	BOLUO COUNTY QUANCHENG ELECTRONIC CO.,LTD.	2	
	EPAB542-2WH05-DH	FOXCONN INTERCONNECT TECHNOLOGY LIMITED	3	
USB Cable	RY0002	NingBo Broad Telecommunication Co., Ltd.	1	
	AU2-CRO013HF	Freeport Resources Enterprises Corp.	2	
	2120-00001-0	MING JI ELECTRONICS CO., LTD.	3	
	L125UC007-CS-H	LUXSHARE PRECISION INDUSTRY CO., LTD.	4	
	CUDU01B-HC451-EH	FOXCONN INTERCONNECT TECHNOLOGY LIMITED	5	
<p>Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.</p> <p>2. There are more than one Adapter, Battery, Earphone and USB Cable, each one should be applied throughout the compliance test respectively, however, only the worst case (Adapter 1, Battery 2, Earphone 1 and USB Cable 3) will be recorded in this report.</p>				



3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR 47 Part 22H (2021)

FCC CFR47 Part 2 (2021)

Reference standard:

ANSI C63.26 (2015)

KDB 971168 D01 Power Meas License Digital Systems v03r01

4. Test Configuration

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes. EUT stand-up position (Z axis), lie-down position (X, Y axis). Receiver antenna polarization (horizontal and vertical), the worst emission was found in position (X axis, horizontal polarization for GSM/WCDMA Band (Main Antenna); Z axis, horizontal polarization for LTE Band (Main Antenna); Z axis, horizontal polarization for GSM/WCDMA Band (Second Antenna); Z axis, vertical polarization for LTE Band (Second Antenna) and the worst case was recorded.

All mode and data rates and positions and RB size and modulations were investigated. Subsequently, only the worst case emissions are reported.

The following testing in GSM/WCDMA/LTE is set based on the maximum RF Output Power.

Test modes are chosen to be reported as the worst case configuration below:

Test items	Modes/Modulation	
	GSM 850	WCDMA Band V
RF Power Output and Effective Radiated power	GSM GPRS EGPRS	RMC/AMR HSDPA/HSUPA DC-HSDPA
Occupied Bandwidth	GSM GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Band Edge Compliance	GSM GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Peak-to-Average Power Ratio	GSM GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Frequency Stability	GSM GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Spurious Emissions at Antenna Terminals	GSM	RMC
Radiates Spurious Emission	GSM	RMC



Test modes are chosen as the worst case configuration below for LTE Band 5/26

Test items	Modes	Bandwidth (MHz)					Modulation		RB			Test Channel		
		1.4	3	5	10	15	QPSK	16QAM	1	50%	100%	L	M	H
RF power output and Effective Radiated power	LTE 5	O	O	O	O	-	O	O	O	O	O	O	O	O
	LTE 26	O	O	O	O	O	O	O	O	O	O	O	O	O
Occupied Bandwidth	LTE 5	O	O	O	O	-	O	O	-	-	O	O	O	O
	LTE 26	O	O	O	O	O	O	O	-	-	O	O	O	O
Band Edge Compliance	LTE 5	O	O	O	O	-	O	O	O	-	O	O	-	O
	LTE 26	O	O	O	O	O	O	O	O	-	O	O	-	O
Peak-to-Average Power Ratio	LTE 5	O	O	O	O	-	O	O	-	-	O	O	O	O
	LTE 26	O	O	O	O	O	O	O	-	-	O	O	O	O
Frequency Stability	LTE 5	O	O	O	O	-	O	O	O	-	-	-	O	-
	LTE 26	O	O	O	O	O	O	O	O	-	-	-	O	-
Spurious Emissions at Antenna Terminals	LTE 5	O	O	O	O	-	O	-	O	-	-	O	O	O
	LTE 26	O	O	O	O	O	O	-	O	-	-	O	O	O
Radiates Spurious Emission	LTE 5	O	-	O	O	-	O	-	O	-	-	-	O	-
	LTE 26	O	-	O	-	O	O	-	O	-	-	-	O	-
Note	1. The mark "O" means that this configuration is chosen for testing. 2. The mark "-" means that this configuration is not testing.													

5. Test Case Results

5.1. RF Power Output and Effective Radiated Power

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the Base Station Simulator with a known loss. The EUT is controlled by the Base Station Simulator test set to ensure max power transmission with proper modulation.

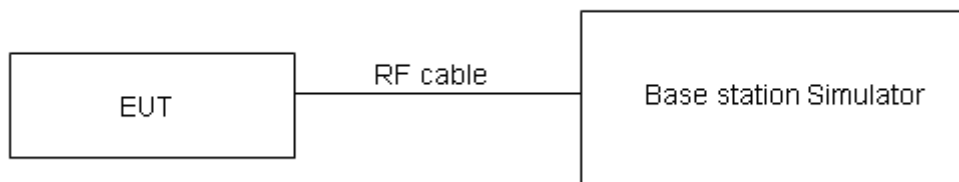
ERP can then be calculated as follows:

$$\text{EIRP (dBm)} = \text{Output Power (dBm)} - \text{Losses (dB)} + \text{Antenna Gain (dBi)}$$

where:dBd refers to gain relative to an ideal dipole.

$$\text{EIRP (dBm)} = \text{ERP (dBm)} + 2.15 \text{ (dB)}.$$

Test Setup



Limits

No specific RF power output requirements in part 2.1046.

Rule Part 22.913(a)(5) specifies that "Mobile/portable stations are limited to 7 watts ERP".

Limit	≤ 7 W (38.45 dBm)
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.4$ dB for RF power output, $k = 2$, $U = 1.19$ dB for ERP.

Test Results

GSM 850		Maximum Output Power (dBm)			ERP (dBm)		
		Channel 128	Channel 190	Channel 251	Channel 128	Channel 190	Channel 251
		824.2 (MHz)	836.6 (MHz)	848.8 (MHz)	824.2 (MHz)	836.6 (MHz)	848.8 (MHz)
GSM(GMSK)	Results	33.11	33.12	33.14	27.18	27.19	27.21
GPRS (GMSK)	1TXslot	32.93	33.10	33.02	27.00	27.17	27.09
	2TXslots	29.19	29.65	29.58	23.26	23.72	23.65
	3TXslots	26.81	27.48	27.35	20.88	21.55	21.42
	4TXslots	25.14	25.54	25.65	19.21	19.61	19.72
EGPRS	1TXslot	26.87	26.94	26.92	20.94	21.01	20.99
	2TXslots	23.81	24.47	23.84	17.88	18.54	17.91
	3TXslots	21.84	22.12	21.97	15.91	16.19	16.04
	4TXslots	20.25	20.53	20.03	14.32	14.60	14.10

WCDMA Band V		Maximum Output Power (dBm)			ERP (dBm)		
		Channel 4132	Channel 4183	Channel 4233	Channel 4132	Channel 4183	Channel 4233
		826.4 (MHz)	836.6 (MHz)	846.6 (MHz)	826.4 (MHz)	836.6 (MHz)	846.6 (MHz)
RMC		24.34	24.15	24.16	18.41	18.22	18.23
AMR		24.26	24.19	24.08	18.33	18.26	18.15
HSDPA	Sub - Test 1	23.52	23.29	23.48	17.59	17.36	17.55
	Sub - Test 2	23.38	23.37	23.48	17.45	17.44	17.55
	Sub - Test 3	23.04	23.01	22.94	17.11	17.08	17.01
	Sub - Test 4	22.92	22.93	22.78	16.99	17.00	16.85
HSUPA	Sub - Test 1	22.92	22.73	23.00	16.99	16.80	17.07
	Sub - Test 2	21.48	21.51	21.26	15.55	15.58	15.33
	Sub - Test 3	22.22	22.17	22.04	16.29	16.24	16.11
	Sub - Test 4	21.82	21.43	21.40	15.89	15.50	15.47
	Sub - Test 5	23.64	23.25	23.24	17.71	17.32	17.31
DC-HSDPA	Sub - Test 1	23.64	23.45	23.52	17.71	17.52	17.59
	Sub - Test 2	23.50	23.47	23.46	17.57	17.54	17.53
	Sub - Test 3	23.00	22.83	22.72	17.07	16.90	16.79
	Sub - Test 4	23.04	22.97	22.92	17.11	17.04	16.99



LTE Band 5				Maximum Output Power(dBm)			ERP (dBm)		
BW	Modulation	RB size	RB offset	Channel/Frequency(MHz)					
				20407 /824.7	20525 /836.5	20643 /848.3	20407 /824.7	20525 /836.5	20643 /848.3
1.4MHz	QPSK	1	0	24.45	24.46	24.33	18.52	18.53	18.40
		1	2	24.43	24.46	24.45	18.50	18.53	18.52
		1	5	24.04	24.18	23.99	18.11	18.25	18.06
		3	0	24.36	24.37	24.52	18.43	18.44	18.59
		3	2	24.30	24.29	24.29	18.37	18.36	18.36
		3	3	24.29	24.24	24.24	18.36	18.31	18.31
	16QAM	6	0	23.27	23.38	23.45	17.34	17.45	17.52
		1	0	23.88	23.84	23.91	17.95	17.91	17.98
		1	2	23.86	23.68	23.70	17.93	17.75	17.77
		1	5	23.51	23.39	23.29	17.58	17.46	17.36
		3	0	23.28	23.35	23.56	17.35	17.42	17.63
		3	2	23.30	23.25	23.37	17.37	17.32	17.44
		3	3	23.24	23.35	23.40	17.31	17.42	17.47
		6	0	22.34	22.40	22.40	16.41	16.47	16.47
BW	Modulation	RB size	RB offset	Channel/Frequency(MHz)					
				20415 /825.5	20525 /836.5	20635 /847.5	20415 /825.5	20525 /836.5	20635 /847.5
3MHz	QPSK	1	0	24.46	24.49	24.35	18.53	18.56	18.42
		1	7	24.42	24.50	24.50	18.49	18.57	18.57
		1	14	24.06	24.22	24.02	18.13	18.29	18.09
		8	0	23.46	23.49	23.65	17.53	17.56	17.72
		8	4	23.43	23.40	23.40	17.50	17.47	17.47
		8	7	23.39	23.37	23.35	17.46	17.44	17.42
		15	0	23.31	23.43	23.50	17.38	17.50	17.57
	16QAM	1	0	23.90	23.85	23.93	17.97	17.92	18.00
		1	7	23.89	23.70	23.74	17.96	17.77	17.81
		1	14	23.53	23.43	23.31	17.60	17.50	17.38
		8	0	22.40	22.49	22.69	16.47	16.56	16.76
		8	4	22.40	22.37	22.48	16.47	16.44	16.55
		8	7	22.34	22.47	22.53	16.41	16.54	16.60
		15	0	22.38	22.45	22.42	16.45	16.52	16.49



BW	Modulation	RB size	RB offset	Channel/Frequency(MHz)					
				20425 /826.5	20525 /836.5	20625 /846.5	20425 /826.5	20525 /836.5	20625 /846.5
5MHz	QPSK	1	0	24.45	24.45	24.33	18.52	18.52	18.40
		1	13	24.40	24.49	24.47	18.47	18.56	18.54
		1	24	24.03	24.17	23.98	18.10	18.24	18.05
		12	0	23.44	23.45	23.62	17.51	17.52	17.69
		12	6	23.40	23.35	23.36	17.47	17.42	17.43
		12	13	23.36	23.34	23.31	17.43	17.41	17.38
		25	0	23.29	23.39	23.45	17.36	17.46	17.52
	16QAM	1	0	23.85	23.83	23.91	17.92	17.90	17.98
		1	13	23.87	23.67	23.72	17.94	17.74	17.79
		1	24	23.50	23.39	23.28	17.57	17.46	17.35
		12	0	22.37	22.47	22.66	16.44	16.54	16.73
		12	6	22.37	22.32	22.44	16.44	16.39	16.51
		12	13	22.32	22.43	22.50	16.39	16.50	16.57
		25	0	22.35	22.40	22.38	16.42	16.47	16.45
BW	Modulation	RB size	RB offset	Channel/Frequency(MHz)					
				20450 /829	20525 /836.5	20600 /844	20450 /829	20525 /836.5	20600 /844
10MHz	QPSK	1	0	24.42	24.41	24.30	18.49	18.48	18.37
		1	25	24.39	24.44	24.45	18.46	18.51	18.52
		1	49	24.01	24.16	23.95	18.08	18.23	18.02
		25	0	23.41	23.40	23.58	17.48	17.47	17.65
		25	13	23.38	23.31	23.33	17.45	17.38	17.40
		25	25	23.33	23.29	23.27	17.40	17.36	17.34
		50	0	23.26	23.34	23.41	17.33	17.41	17.48
	16QAM	1	0	23.77	23.79	23.86	17.84	17.86	17.93
		1	25	23.83	23.65	23.68	17.90	17.72	17.75
		1	49	23.48	23.36	23.26	17.55	17.43	17.33
		25	0	22.34	22.43	22.63	16.41	16.50	16.70
		25	13	22.34	22.30	22.41	16.41	16.37	16.48
		25	25	22.29	22.38	22.46	16.36	16.45	16.53
		50	0	22.33	22.36	22.35	16.40	16.43	16.42



LTE Band 26							
Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	ERP (dBm)	Verdict
1.4	26797	1	#0	QPSK	24.49	18.56	PASS
1.4	26797	1	#Mid	QPSK	24.56	18.63	PASS
1.4	26797	1	#Max	QPSK	24.49	18.56	PASS
1.4	26797	3	#0	QPSK	24.47	18.54	PASS
1.4	26797	3	#Mid	QPSK	24.55	18.62	PASS
1.4	26797	3	#Max	QPSK	24.51	18.58	PASS
1.4	26797	6	#0	QPSK	23.73	17.80	PASS
1.4	26797	1	#0	QAM16	23.62	17.69	PASS
1.4	26797	1	#Mid	QAM16	23.65	17.72	PASS
1.4	26797	1	#Max	QAM16	23.65	17.72	PASS
1.4	26797	3	#0	QAM16	23.91	17.98	PASS
1.4	26797	3	#Mid	QAM16	23.94	18.01	PASS
1.4	26797	3	#Max	QAM16	23.97	18.04	PASS
1.4	26797	6	#0	QAM16	22.77	16.84	PASS
1.4	26915	1	#0	QPSK	24.62	18.69	PASS
1.4	26915	1	#Mid	QPSK	24.78	18.85	PASS
1.4	26915	1	#Max	QPSK	24.63	18.70	PASS
1.4	26915	3	#0	QPSK	24.69	18.76	PASS
1.4	26915	3	#Mid	QPSK	24.73	18.80	PASS
1.4	26915	3	#Max	QPSK	24.72	18.79	PASS
1.4	26915	6	#0	QPSK	23.89	17.96	PASS
1.4	26915	1	#0	QAM16	23.93	18.00	PASS
1.4	26915	1	#Mid	QAM16	23.97	18.04	PASS
1.4	26915	1	#Max	QAM16	23.95	18.02	PASS
1.4	26915	3	#0	QAM16	23.87	17.94	PASS
1.4	26915	3	#Mid	QAM16	23.91	17.98	PASS
1.4	26915	3	#Max	QAM16	23.89	17.96	PASS
1.4	26915	6	#0	QAM16	22.84	16.91	PASS
1.4	27033	1	#0	QPSK	24.22	18.29	PASS
1.4	27033	1	#Mid	QPSK	24.35	18.42	PASS
1.4	27033	1	#Max	QPSK	24.21	18.28	PASS
1.4	27033	3	#0	QPSK	24.28	18.35	PASS
1.4	27033	3	#Mid	QPSK	24.27	18.34	PASS
1.4	27033	3	#Max	QPSK	24.25	18.32	PASS
1.4	27033	6	#0	QPSK	23.47	17.54	PASS
1.4	27033	1	#0	QAM16	23.20	17.27	PASS
1.4	27033	1	#Mid	QAM16	23.36	17.43	PASS
1.4	27033	1	#Max	QAM16	23.15	17.22	PASS
1.4	27033	3	#0	QAM16	23.39	17.46	PASS



1.4	27033	3	#Mid	QAM16	23.51	17.58	PASS
1.4	27033	3	#Max	QAM16	23.42	17.49	PASS
1.4	27033	6	#0	QAM16	22.43	16.50	PASS
3	26805	1	#0	QPSK	24.51	18.58	PASS
3	26805	1	#Mid	QPSK	24.57	18.64	PASS
3	26805	1	#Max	QPSK	24.56	18.63	PASS
3	26805	8	#0	QPSK	23.70	17.77	PASS
3	26805	8	#Mid	QPSK	23.71	17.78	PASS
3	26805	8	#Max	QPSK	23.76	17.83	PASS
3	26805	15	#0	QPSK	23.77	17.84	PASS
3	26805	1	#0	QAM16	23.88	17.95	PASS
3	26805	1	#Mid	QAM16	23.94	18.01	PASS
3	26805	1	#Max	QAM16	23.98	18.05	PASS
3	26805	8	#0	QAM16	22.70	16.77	PASS
3	26805	8	#Mid	QAM16	22.72	16.79	PASS
3	26805	8	#Max	QAM16	22.75	16.82	PASS
3	26805	15	#0	QAM16	22.68	16.75	PASS
3	26915	1	#0	QPSK	24.69	18.76	PASS
3	26915	1	#Mid	QPSK	24.70	18.77	PASS
3	26915	1	#Max	QPSK	24.54	18.61	PASS
3	26915	8	#0	QPSK	23.85	17.92	PASS
3	26915	8	#Mid	QPSK	23.86	17.93	PASS
3	26915	8	#Max	QPSK	23.85	17.92	PASS
3	26915	15	#0	QPSK	23.85	17.92	PASS
3	26915	1	#0	QAM16	23.92	17.99	PASS
3	26915	1	#Mid	QAM16	23.82	17.89	PASS
3	26915	1	#Max	QAM16	23.81	17.88	PASS
3	26915	8	#0	QAM16	22.79	16.86	PASS
3	26915	8	#Mid	QAM16	22.78	16.85	PASS
3	26915	8	#Max	QAM16	22.87	16.94	PASS
3	26915	15	#0	QAM16	22.78	16.85	PASS
3	27025	1	#0	QPSK	24.28	18.35	PASS
3	27025	1	#Mid	QPSK	24.35	18.42	PASS
3	27025	1	#Max	QPSK	24.23	18.30	PASS
3	27025	8	#0	QPSK	23.58	17.65	PASS
3	27025	8	#Mid	QPSK	23.60	17.67	PASS
3	27025	8	#Max	QPSK	23.54	17.61	PASS
3	27025	15	#0	QPSK	23.48	17.55	PASS
3	27025	1	#0	QAM16	23.28	17.35	PASS
3	27025	1	#Mid	QAM16	23.41	17.48	PASS
3	27025	1	#Max	QAM16	23.25	17.32	PASS
3	27025	8	#0	QAM16	22.50	16.57	PASS
3	27025	8	#Mid	QAM16	22.52	16.59	PASS



3	27025	8	#Max	QAM16	22.51	16.58	PASS
3	27025	15	#0	QAM16	22.54	16.61	PASS
5	26815	1	#0	QPSK	24.55	18.62	PASS
5	26815	1	#Mid	QPSK	24.56	18.63	PASS
5	26815	1	#Max	QPSK	24.56	18.63	PASS
5	26815	12	#0	QPSK	23.77	17.84	PASS
5	26815	12	#Mid	QPSK	23.76	17.83	PASS
5	26815	12	#Max	QPSK	23.75	17.82	PASS
5	26815	25	#0	QPSK	23.79	17.86	PASS
5	26815	1	#0	QAM16	24.14	18.21	PASS
5	26815	1	#Mid	QAM16	24.18	18.25	PASS
5	26815	1	#Max	QAM16	24.11	18.18	PASS
5	26815	12	#0	QAM16	22.70	16.77	PASS
5	26815	12	#Mid	QAM16	22.74	16.81	PASS
5	26815	12	#Max	QAM16	22.66	16.73	PASS
5	26815	25	#0	QAM16	22.82	16.89	PASS
5	26915	1	#0	QPSK	24.65	18.72	PASS
5	26915	1	#Mid	QPSK	24.72	18.79	PASS
5	26915	1	#Max	QPSK	24.64	18.71	PASS
5	26915	12	#0	QPSK	23.90	17.97	PASS
5	26915	12	#Mid	QPSK	23.89	17.96	PASS
5	26915	12	#Max	QPSK	23.85	17.92	PASS
5	26915	25	#0	QPSK	23.85	17.92	PASS
5	26915	1	#0	QAM16	23.91	17.98	PASS
5	26915	1	#Mid	QAM16	23.98	18.05	PASS
5	26915	1	#Max	QAM16	23.93	18.00	PASS
5	26915	12	#0	QAM16	22.85	16.92	PASS
5	26915	12	#Mid	QAM16	22.86	16.93	PASS
5	26915	12	#Max	QAM16	22.77	16.84	PASS
5	26915	25	#0	QAM16	22.84	16.91	PASS
5	27015	1	#0	QPSK	24.39	18.46	PASS
5	27015	1	#Mid	QPSK	24.44	18.51	PASS
5	27015	1	#Max	QPSK	24.30	18.37	PASS
5	27015	12	#0	QPSK	23.67	17.74	PASS
5	27015	12	#Mid	QPSK	23.64	17.71	PASS
5	27015	12	#Max	QPSK	23.72	17.79	PASS
5	27015	25	#0	QPSK	23.75	17.82	PASS
5	27015	1	#0	QAM16	23.77	17.84	PASS
5	27015	1	#Mid	QAM16	23.79	17.86	PASS
5	27015	1	#Max	QAM16	23.75	17.82	PASS
5	27015	12	#0	QAM16	22.69	16.76	PASS
5	27015	12	#Mid	QAM16	22.72	16.79	PASS
5	27015	12	#Max	QAM16	22.72	16.79	PASS



5	27015	25	#0	QAM16	22.69	16.76	PASS
10	26840	1	#0	QPSK	24.65	18.72	PASS
10	26840	1	#Mid	QPSK	24.53	18.60	PASS
10	26840	1	#Max	QPSK	24.62	18.69	PASS
10	26840	25	#0	QPSK	23.86	17.93	PASS
10	26840	25	#Mid	QPSK	23.87	17.94	PASS
10	26840	25	#Max	QPSK	23.87	17.94	PASS
10	26840	50	#0	QPSK	23.91	17.98	PASS
10	26840	1	#0	QAM16	24.12	18.19	PASS
10	26840	1	#Mid	QAM16	23.96	18.03	PASS
10	26840	1	#Max	QAM16	24.10	18.17	PASS
10	26840	25	#0	QAM16	22.92	16.99	PASS
10	26840	25	#Mid	QAM16	22.92	16.99	PASS
10	26840	25	#Max	QAM16	22.88	16.95	PASS
10	26840	50	#0	QAM16	22.84	16.91	PASS
10	26915	1	#0	QPSK	24.74	18.81	PASS
10	26915	1	#Mid	QPSK	24.54	18.61	PASS
10	26915	1	#Max	QPSK	24.67	18.74	PASS
10	26915	25	#0	QPSK	23.79	17.86	PASS
10	26915	25	#Mid	QPSK	23.79	17.86	PASS
10	26915	25	#Max	QPSK	23.86	17.93	PASS
10	26915	50	#0	QPSK	23.82	17.89	PASS
10	26915	1	#0	QAM16	23.92	17.99	PASS
10	26915	1	#Mid	QAM16	23.77	17.84	PASS
10	26915	1	#Max	QAM16	23.89	17.96	PASS
10	26915	25	#0	QAM16	22.76	16.83	PASS
10	26915	25	#Mid	QAM16	22.77	16.84	PASS
10	26915	25	#Max	QAM16	22.82	16.89	PASS
10	26915	50	#0	QAM16	22.80	16.87	PASS
10	26990	1	#0	QPSK	24.46	18.53	PASS
10	26990	1	#Mid	QPSK	24.26	18.33	PASS
10	26990	1	#Max	QPSK	24.43	18.50	PASS
10	26990	25	#0	QPSK	23.65	17.72	PASS
10	26990	25	#Mid	QPSK	23.66	17.73	PASS
10	26990	25	#Max	QPSK	23.65	17.72	PASS
10	26990	50	#0	QPSK	23.64	17.71	PASS
10	26990	1	#0	QAM16	23.42	17.49	PASS
10	26990	1	#Mid	QAM16	23.32	17.39	PASS
10	26990	1	#Max	QAM16	23.44	17.51	PASS
10	26990	25	#0	QAM16	22.66	16.73	PASS
10	26990	25	#Mid	QAM16	22.67	16.74	PASS
10	26990	25	#Max	QAM16	22.62	16.69	PASS
10	26990	50	#0	QAM16	22.59	16.66	PASS



15	26865	1	#0	QPSK	24.55	18.62	PASS
15	26865	1	#Mid	QPSK	24.48	18.55	PASS
15	26865	1	#Max	QPSK	24.39	18.46	PASS
15	26865	36	#0	QPSK	23.87	17.94	PASS
15	26865	36	#Mid	QPSK	23.89	17.96	PASS
15	26865	36	#Max	QPSK	23.69	17.76	PASS
15	26865	75	#0	QPSK	23.77	17.84	PASS
15	26865	1	#0	QAM16	24.01	18.08	PASS
15	26865	1	#Mid	QAM16	23.98	18.05	PASS
15	26865	1	#Max	QAM16	23.85	17.92	PASS
15	26865	36	#0	QAM16	22.89	16.96	PASS
15	26865	36	#Mid	QAM16	22.90	16.97	PASS
15	26865	36	#Max	QAM16	22.72	16.79	PASS
15	26865	75	#0	QAM16	22.80	16.87	PASS
15	26915	1	#0	QPSK	24.54	18.61	PASS
15	26915	1	#Mid	QPSK	24.54	18.61	PASS
15	26915	1	#Max	QPSK	24.36	18.43	PASS
15	26915	36	#0	QPSK	23.82	17.89	PASS
15	26915	36	#Mid	QPSK	23.83	17.90	PASS
15	26915	36	#Max	QPSK	23.69	17.76	PASS
15	26915	75	#0	QPSK	23.85	17.92	PASS
15	26915	1	#0	QAM16	23.74	17.81	PASS
15	26915	1	#Mid	QAM16	23.77	17.84	PASS
15	26915	1	#Max	QAM16	23.61	17.68	PASS
15	26915	36	#0	QAM16	22.78	16.85	PASS
15	26915	36	#Mid	QAM16	22.78	16.85	PASS
15	26915	36	#Max	QAM16	22.70	16.77	PASS
15	26915	75	#0	QAM16	22.78	16.85	PASS
15	26965	1	#0	QPSK	24.56	18.63	PASS
15	26965	1	#Mid	QPSK	24.38	18.45	PASS
15	26965	1	#Max	QPSK	24.32	18.39	PASS
15	26965	36	#0	QPSK	23.76	17.83	PASS
15	26965	36	#Mid	QPSK	23.77	17.84	PASS
15	26965	36	#Max	QPSK	23.76	17.83	PASS
15	26965	75	#0	QPSK	23.73	17.80	PASS
15	26965	1	#0	QAM16	23.61	17.68	PASS
15	26965	1	#Mid	QAM16	23.48	17.55	PASS
15	26965	1	#Max	QAM16	23.40	17.47	PASS
15	26965	36	#0	QAM16	22.74	16.81	PASS
15	26965	36	#Mid	QAM16	22.70	16.77	PASS
15	26965	36	#Max	QAM16	22.71	16.78	PASS
15	26965	75	#0	QAM16	22.72	16.79	PASS

5.2. Occupied Bandwidth

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

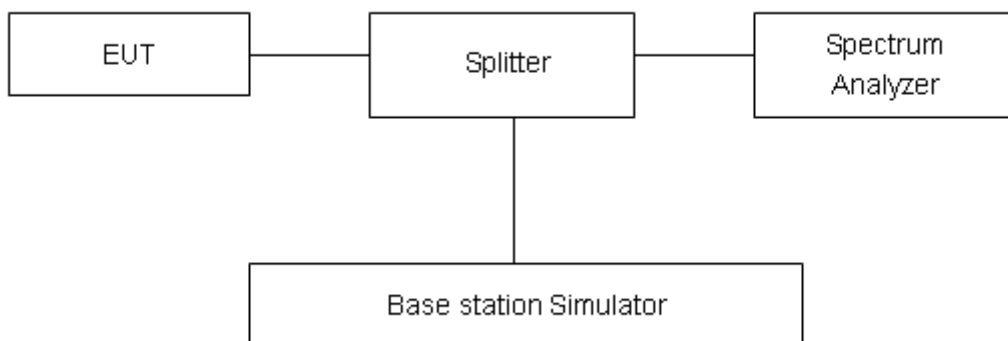
Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.

RBW is set to $\geq 1\%EBW$, VBW is set to 3x RBW.

99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 624\text{Hz}$.



Test Result

Mode	Channel	Frequency (MHz)	99% Power Bandwidth (MHz)	-26dBc Bandwidth(MHz)
GSM 850 (GMSK)	128	824.2	0.245	0.311
	190	836.6	0.252	0.319
	251	848.8	0.242	0.311
GPRS 850 (GMSK)	128	824.2	0.246	0.312
	190	836.6	0.246	0.309
	251	848.8	0.243	0.309
EGPRS 850 (8PSK)	128	824.2	0.247	0.303
	190	836.6	0.243	0.308
	251	848.8	0.248	0.312
WCDMA Band V (RMC)	4132	826.4	4.123	4.685
	4183	836.6	4.113	4.667
	4233	846.6	4.126	4.689

LTE Band 5						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
1	QPSK	1.4	20407	824.7	0.264	0.397
			20525	836.5	0.266	0.404
			20643	848.3	0.267	0.406
		3	20415	825.5	0.340	0.472
			20525	836.5	0.333	0.488
			20635	847.5	0.334	0.485
		5	20425	826.5	0.467	0.649
			20525	836.5	0.480	0.681
			20625	846.5	0.459	0.659
		10	20450	829	0.688	1.006
			20525	836.5	0.675	0.967
			20600	844	0.717	0.941
	16QAM	1.4	20407	824.7	0.264	0.391
			20525	836.5	0.271	0.401



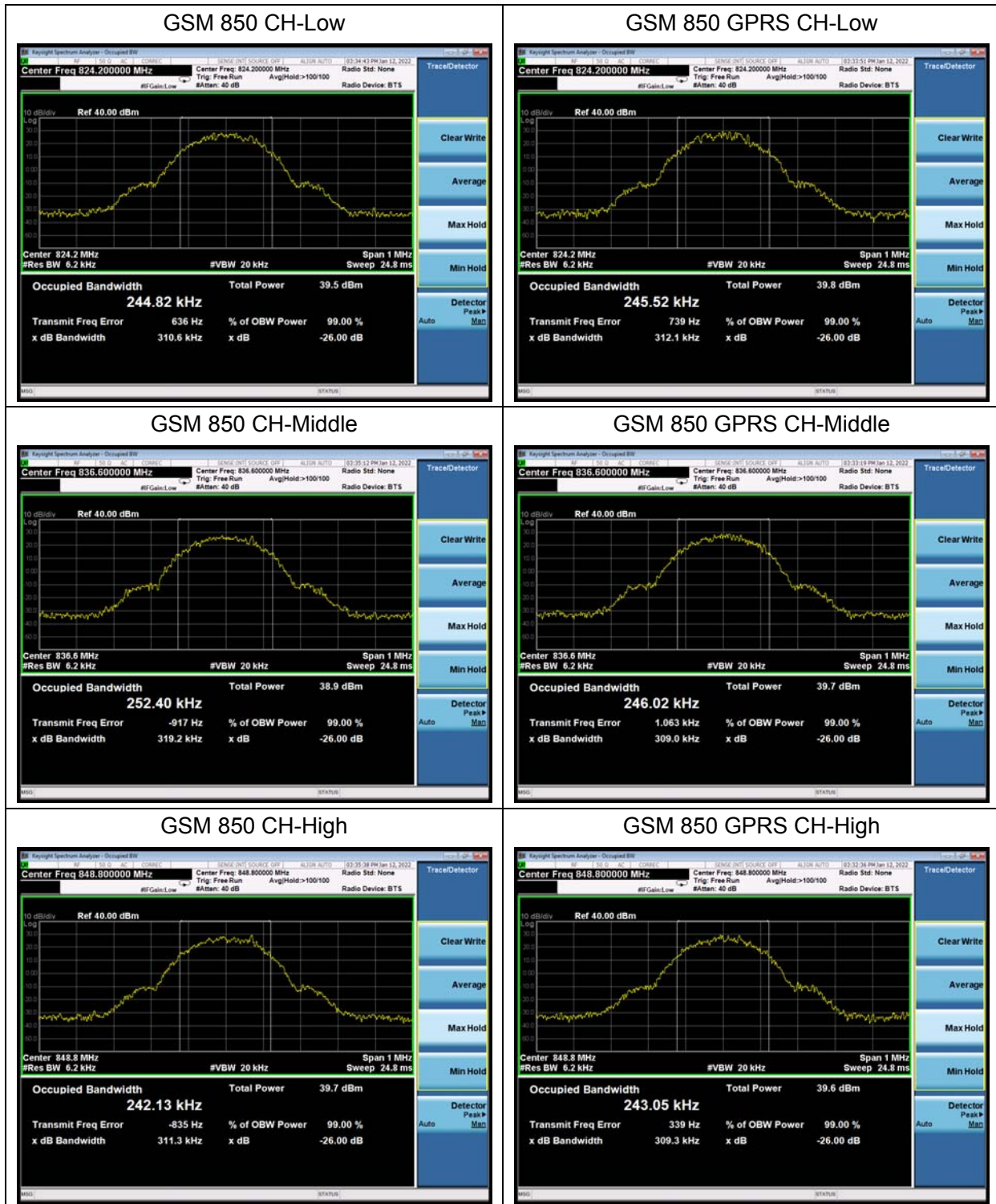
		3	20643	848.3	0.263	0.392		
			20415	825.5	0.325	0.465		
			20525	836.5	0.333	0.477		
		5	20635	847.5	0.325	0.452		
			20425	826.5	0.435	0.604		
			20525	836.5	0.457	0.654		
		10	20625	846.5	0.450	0.655		
			20450	829	0.671	0.892		
			20525	836.5	0.663	0.914		
		100%	QPSK	1.4	20600	844	0.700	0.940
					20407	824.7	1.097	1.280
					20525	836.5	1.093	1.269
3	20643			848.3	1.100	1.296		
	20415			825.5	2.699	2.966		
	20525			836.5	2.707	2.979		
5	20635			847.5	2.703	2.996		
	20425			826.5	4.510	4.986		
	20525			836.5	4.506	4.970		
10	20625			846.5	4.508	4.981		
	20450			829	8.974	9.887		
	20525			836.5	8.991	9.823		
16QAM	1.4	20600	844	8.968	9.809			
		20407	824.7	1.103	1.293			
		20525	836.5	1.102	1.309			
	3	20643	848.3	1.092	1.276			
		20415	825.5	2.694	2.958			
		20525	836.5	2.696	2.973			
	5	20635	847.5	2.689	2.974			
		20425	826.5	4.519	4.963			
		20525	836.5	4.523	4.950			
	10	20625	846.5	4.509	4.996			
		20450	829	8.990	9.741			
		20525	836.5	8.957	9.763			
			20600	844	8.950	9.775		

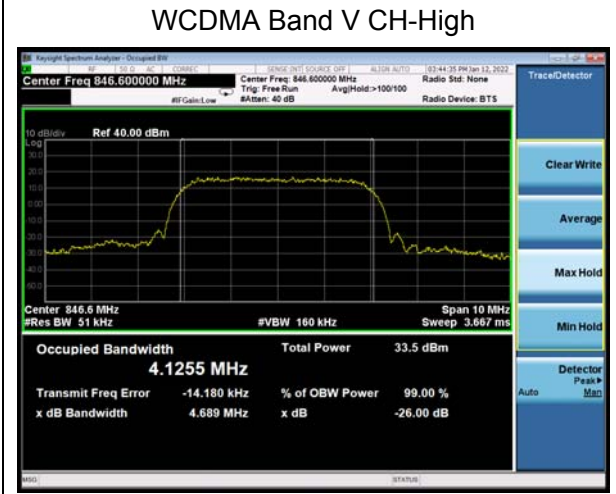
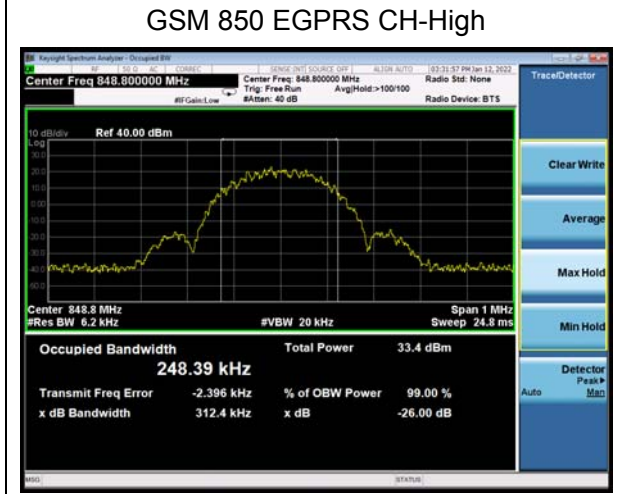
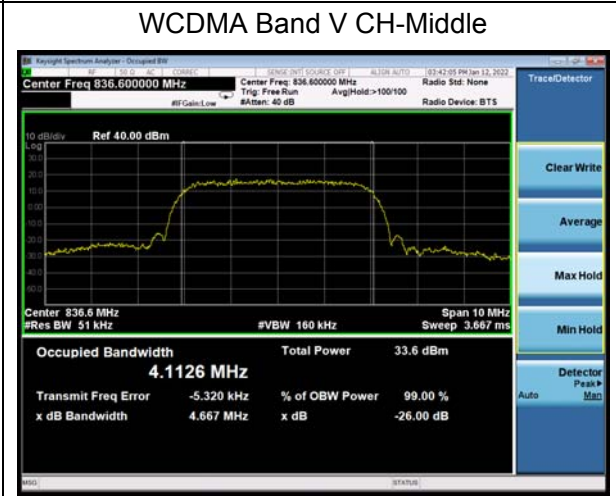
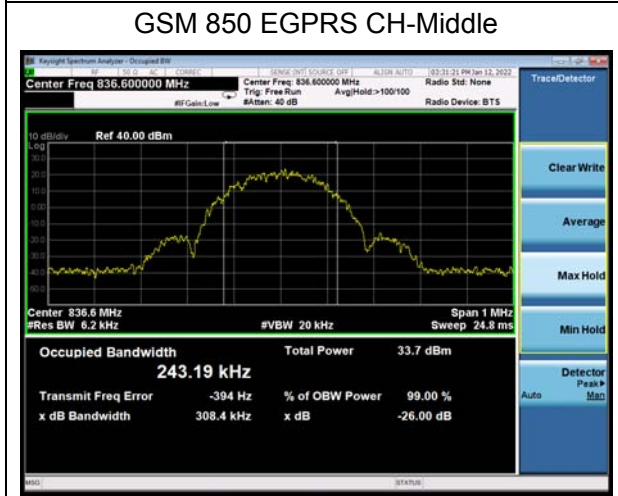
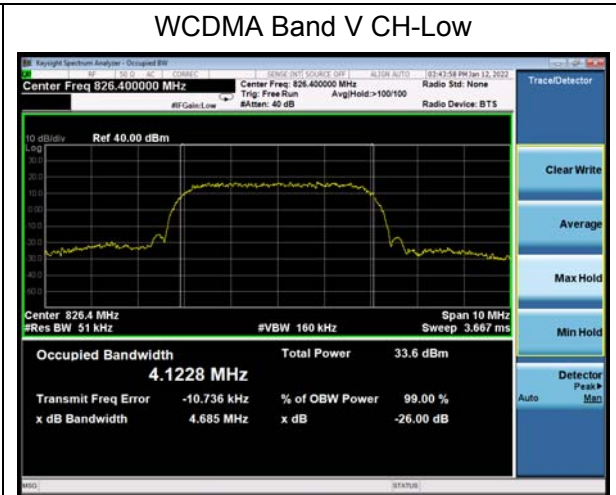
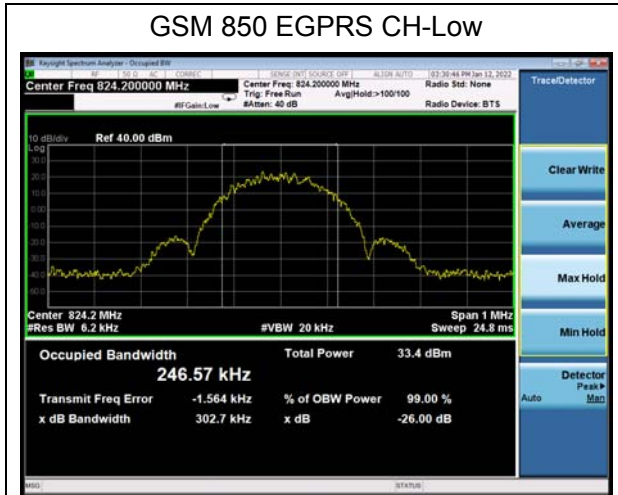


LTE Band 26						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
1	QPSK	1.4	26797	824.7	0.264	0.396
			26915	836.5	0.267	0.407
			27033	848.3	0.269	0.413
		3	26805	825.5	0.345	0.466
			26915	836.5	0.339	0.480
			27025	847.5	0.330	0.473
		5	26815	826.5	0.482	0.673
			26915	836.5	0.477	0.706
			27015	846.5	0.480	0.674
		10	26840	829	0.704	0.984
			26915	836.5	0.709	0.981
			26990	844	0.713	0.983
		15	26865	831.5	1.026	1.492
			26915	836.5	1.030	1.493
			26965	841.5	1.034	1.522
	16QAM	1.4	26797	824.7	0.260	0.380
			26915	836.5	0.267	0.396
			27033	848.3	0.264	0.393
		3	26805	825.5	0.323	0.464
			26915	836.5	0.329	0.474
			27025	847.5	0.325	0.451
		5	26815	826.5	0.459	0.655
			26915	836.5	0.488	0.679
			27015	846.5	0.436	0.635
		10	26840	829	0.674	0.964
			26915	836.5	0.660	0.921
			26990	844	0.657	0.943
15		26865	831.5	1.037	1.494	
		26915	836.5	1.005	1.331	
		26965	841.5	0.983	1.478	
100%	QPSK	1.4	26797	824.7	1.092	1.278



			26915	836.5	1.098	1.298
			27033	848.3	1.098	1.283
		3	26805	825.5	2.696	2.949
			26915	836.5	2.702	2.996
			27025	847.5	2.714	2.984
		5	26815	826.5	4.532	4.991
			26915	836.5	4.515	5.015
			27015	846.5	4.501	4.917
		10	26840	829	8.981	9.800
			26915	836.5	8.996	9.666
			26990	844	8.941	9.873
		15	26865	831.5	13.497	14.790
			26915	836.5	13.463	14.711
			26965	841.5	13.425	14.651
		16QAM	1.4	26797	824.7	1.103
	26915			836.5	1.091	1.272
	27033			848.3	1.097	1.298
	3		26805	825.5	2.695	2.970
			26915	836.5	2.699	2.959
			27025	847.5	2.690	2.962
	5		26815	826.5	4.504	4.979
			26915	836.5	4.520	4.945
			27015	846.5	4.516	5.015
	10		26840	829	8.991	9.844
			26915	836.5	8.970	9.699
			26990	844	8.980	9.798
	15	26865	831.5	13.443	14.580	
26915		836.5	13.448	14.651		
26965		841.5	13.459	14.447		

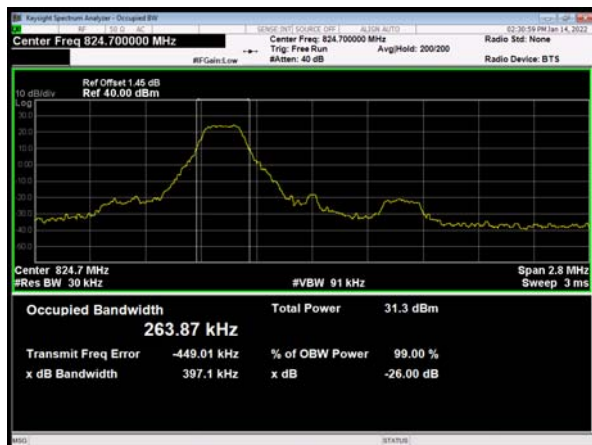




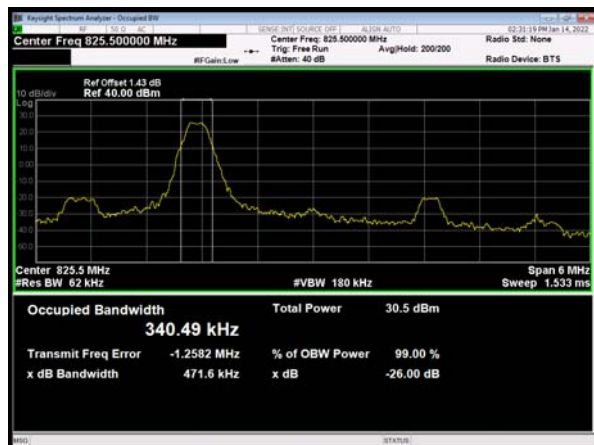


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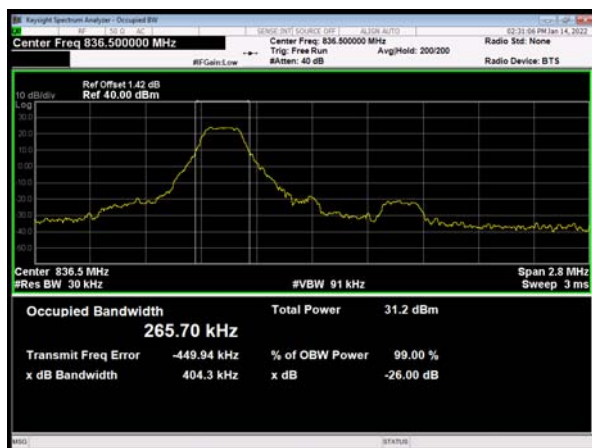
LTE Band 5 QPSK 1.4MHz CH-Low



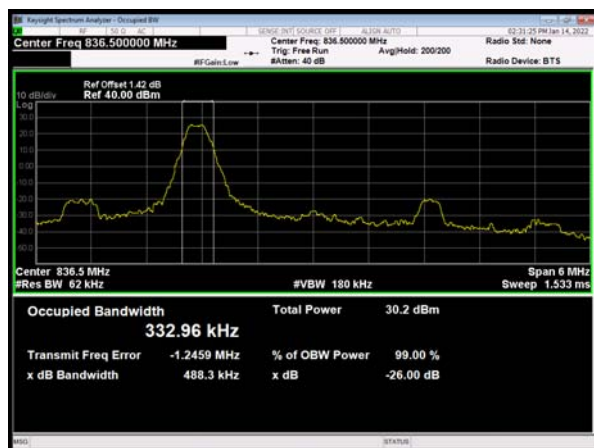
LTE Band 5 QPSK 3MHz CH-Low



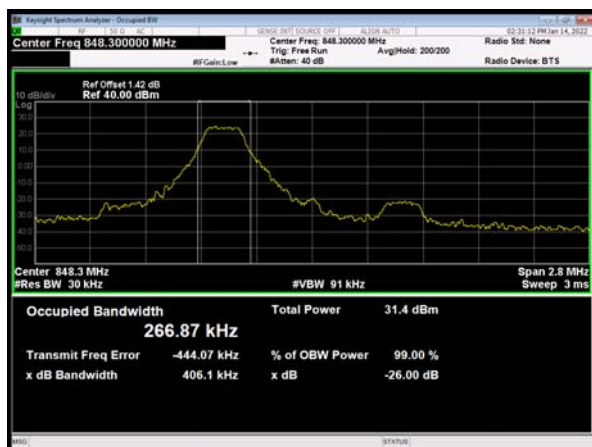
LTE Band 5 QPSK 1.4MHz CH-Middle



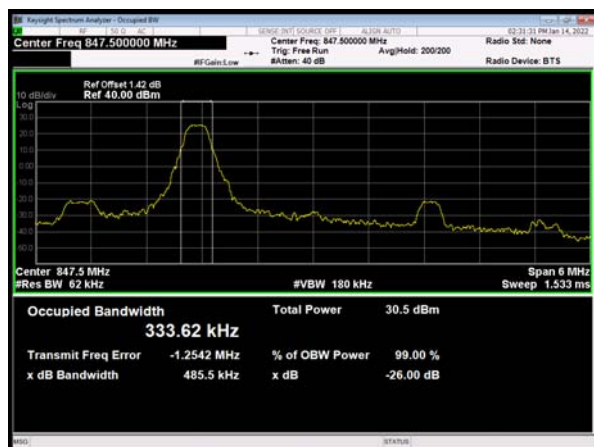
LTE Band 5 QPSK 3MHz CH-Middle

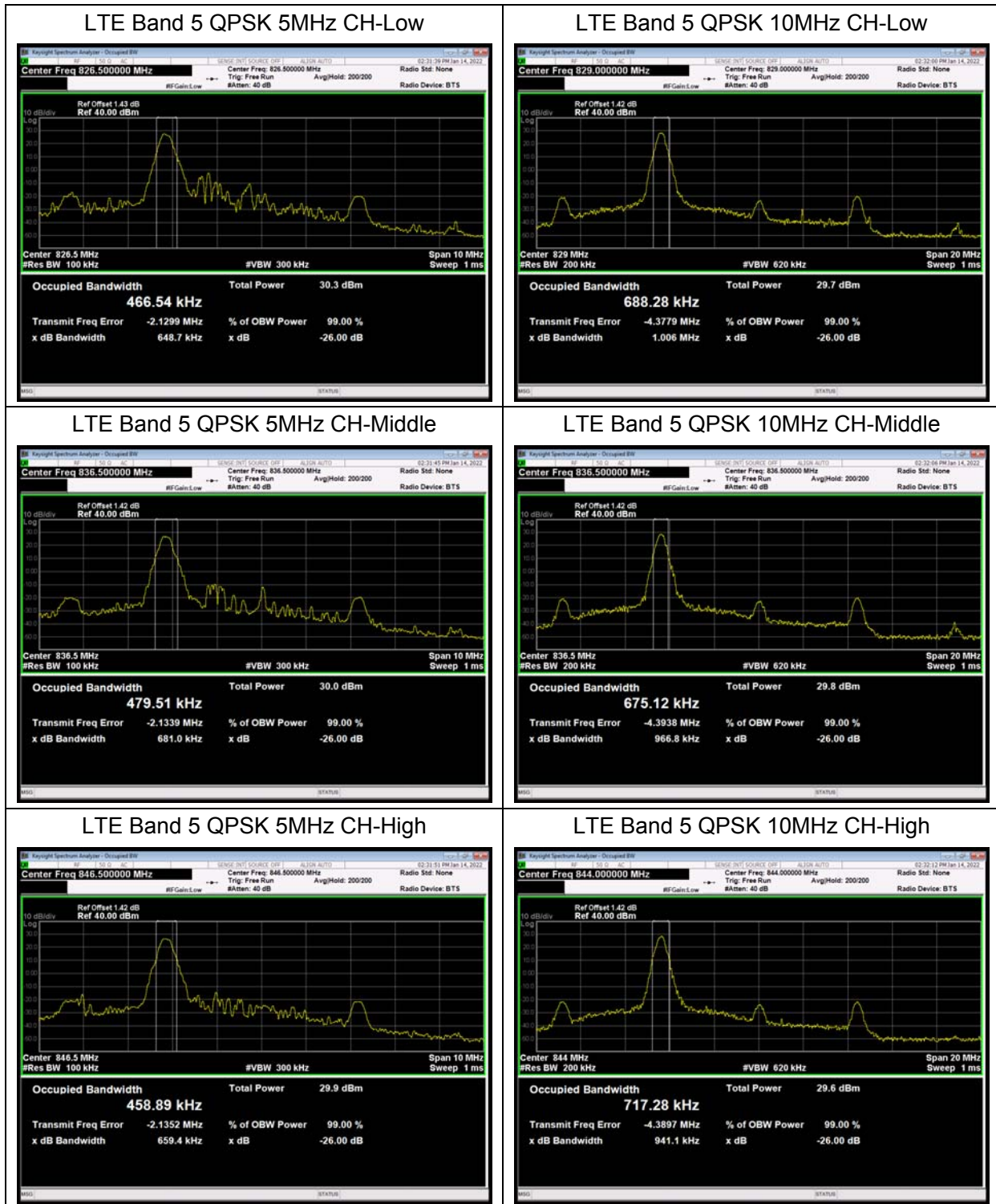


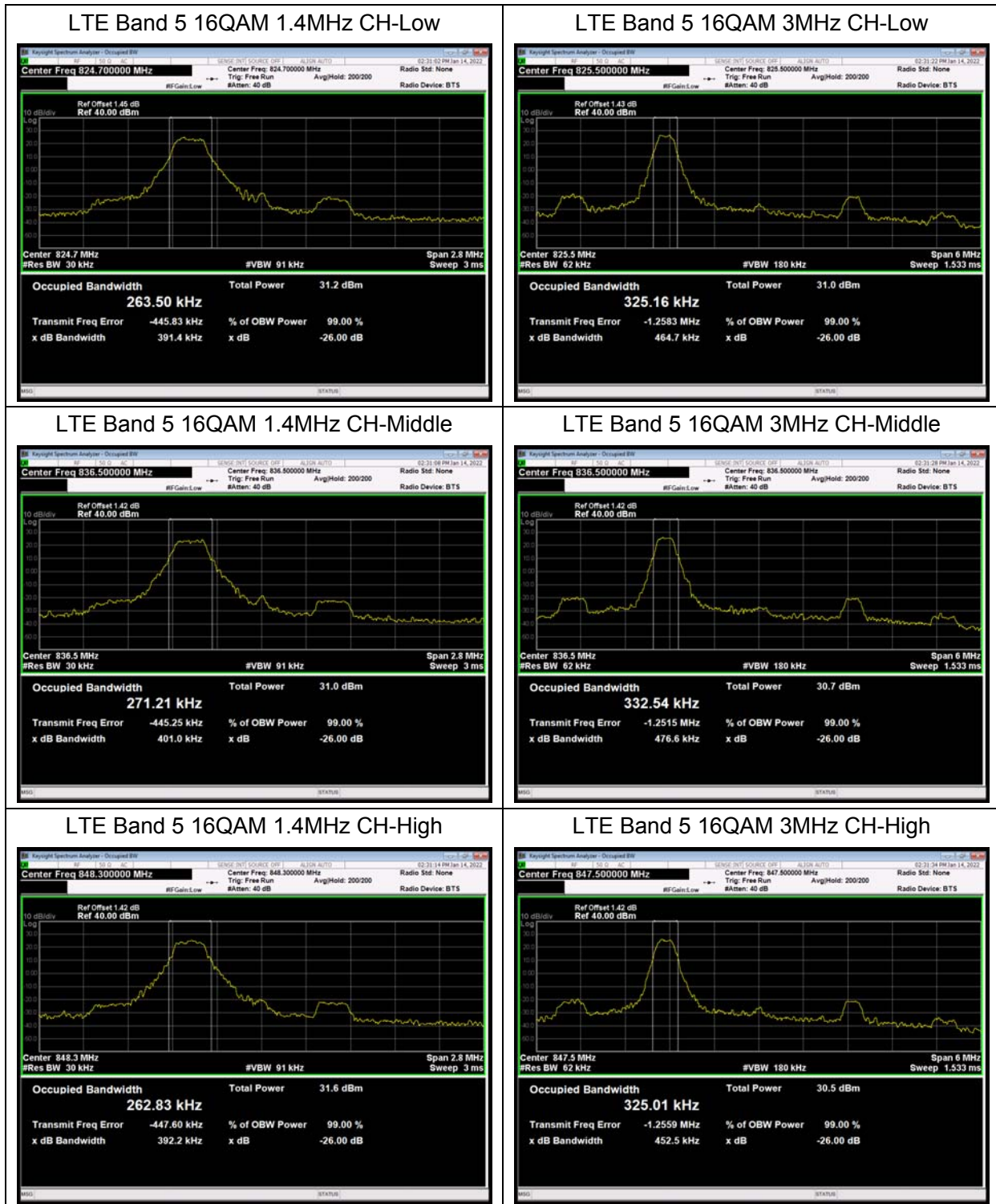
LTE Band 5 QPSK 1.4MHz CH-High

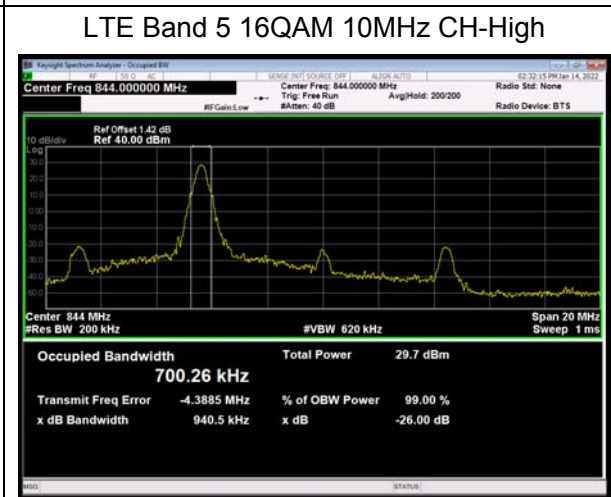
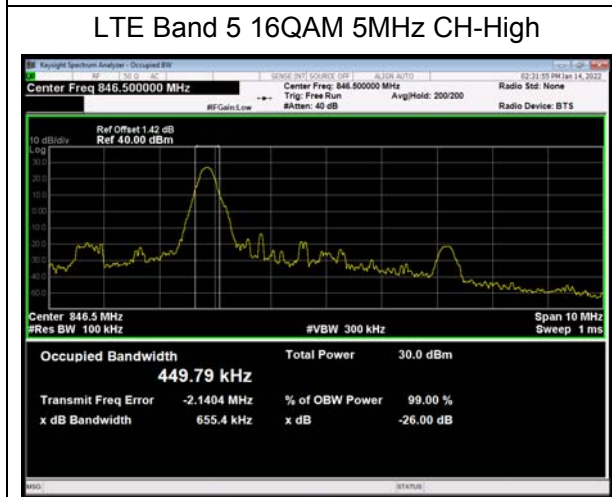
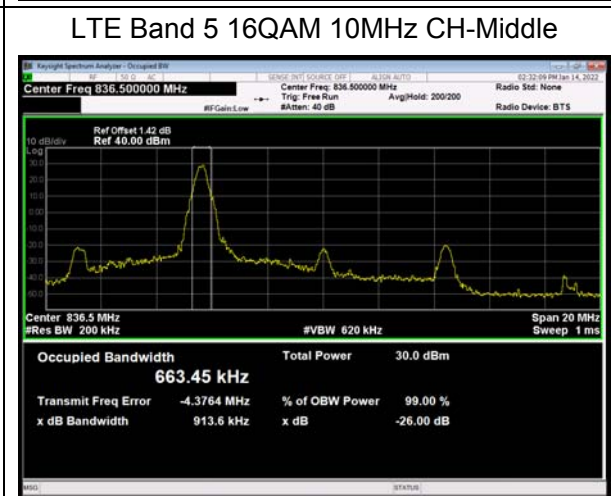
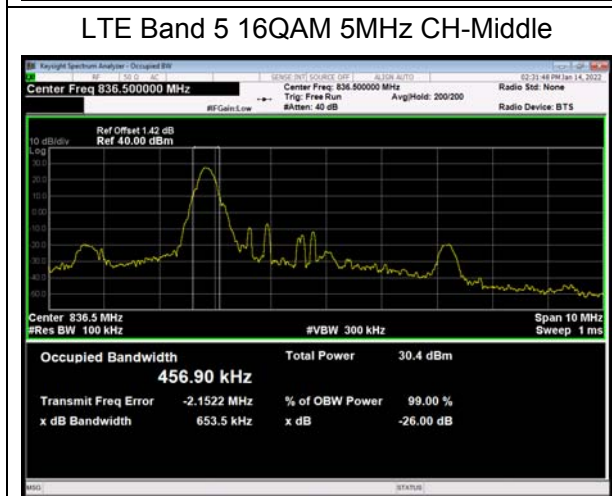
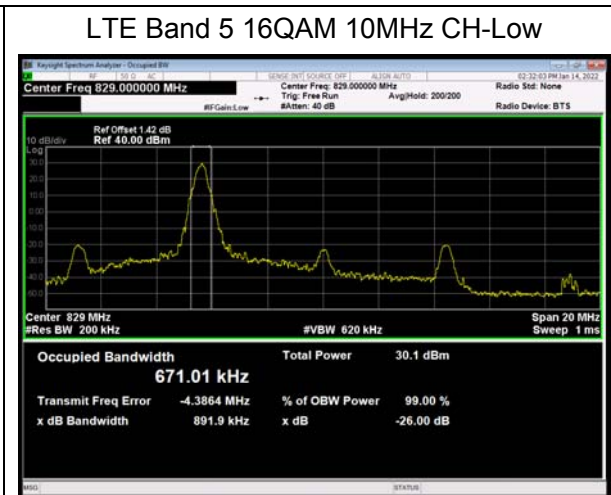
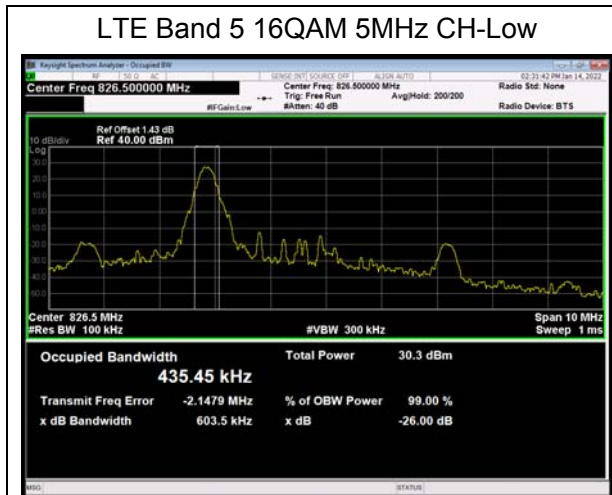


LTE Band 5 QPSK 3MHz CH-High



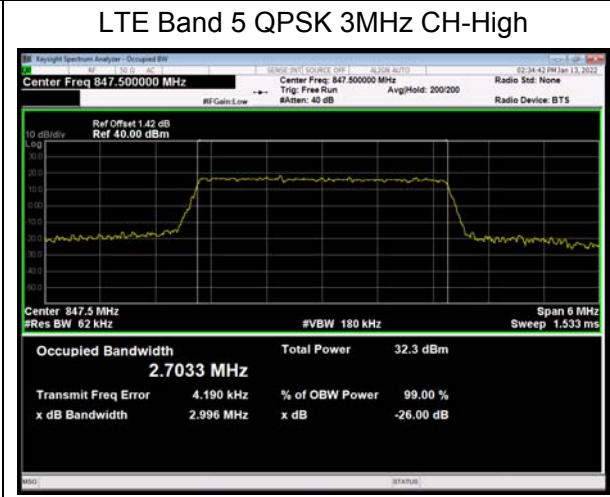
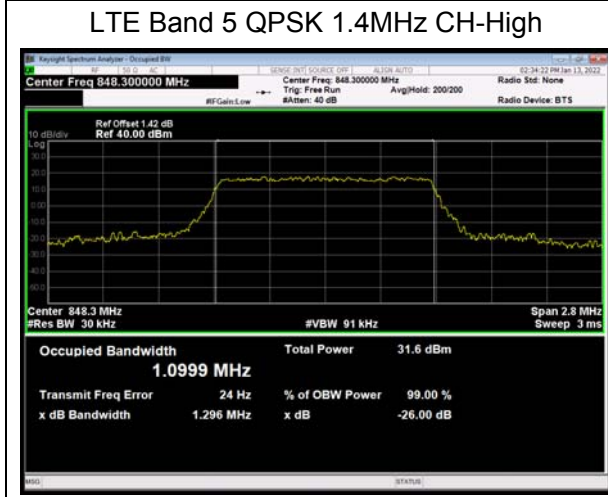
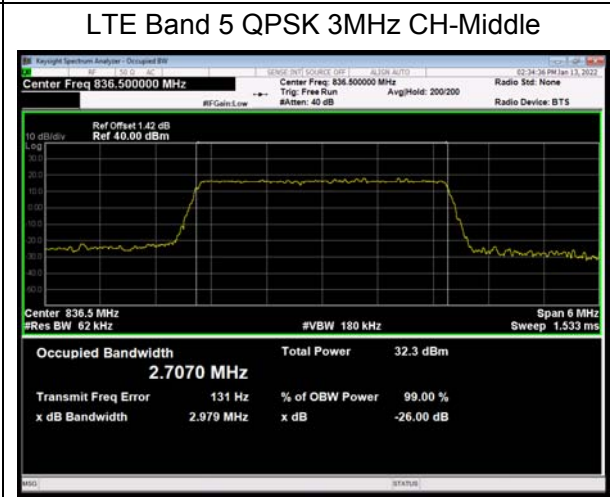
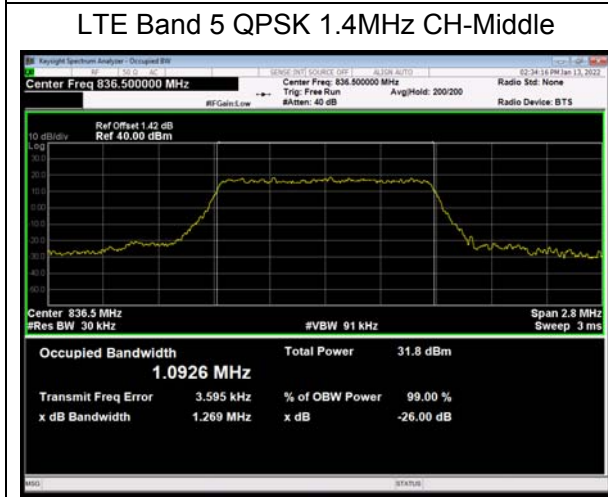
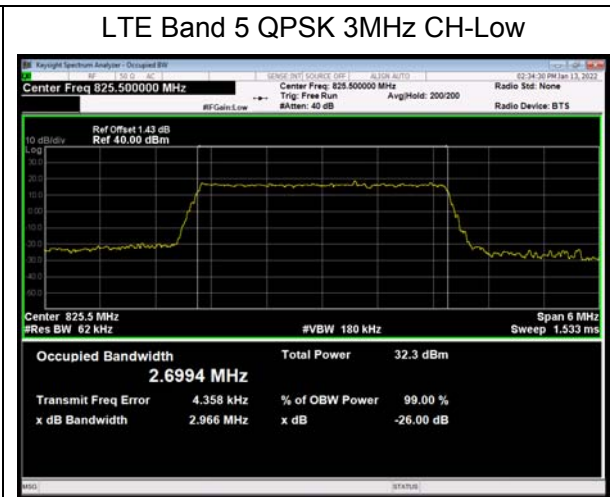
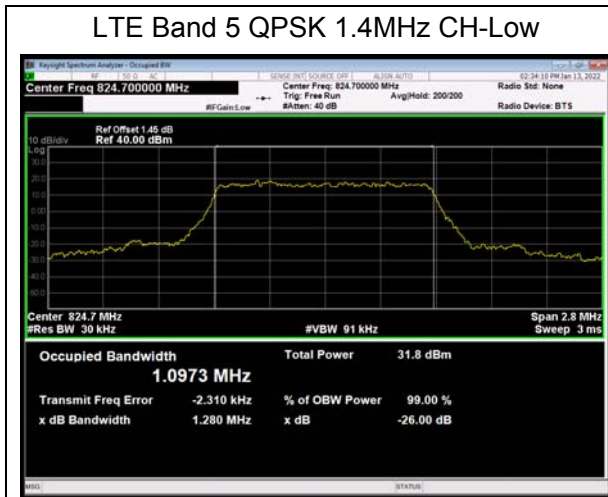


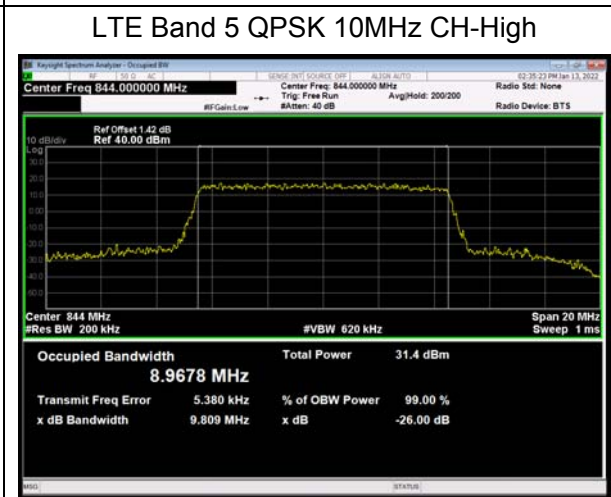
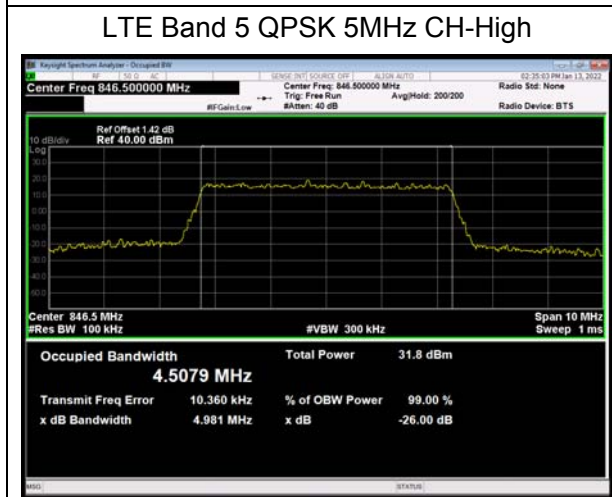
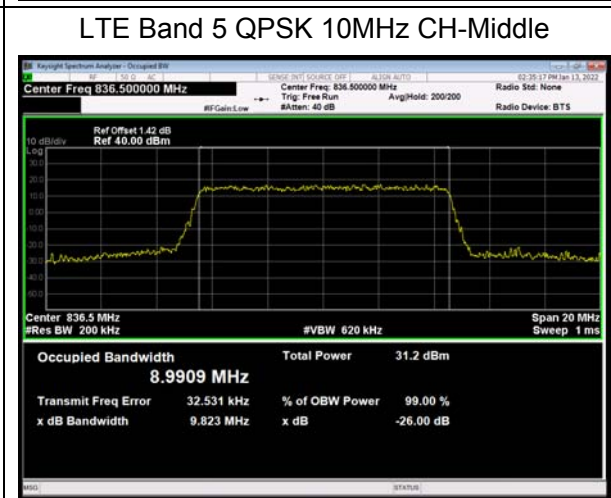
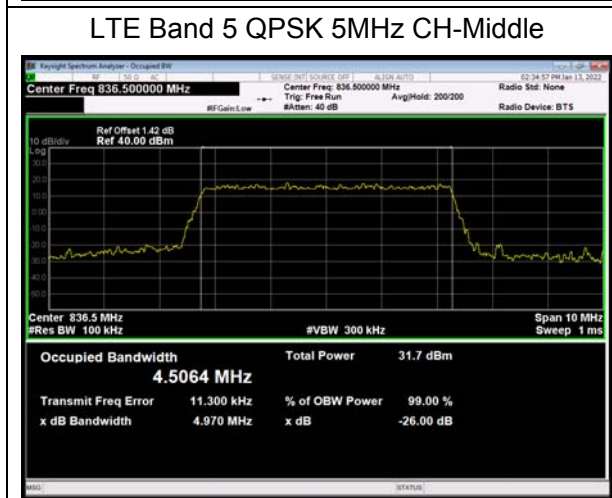
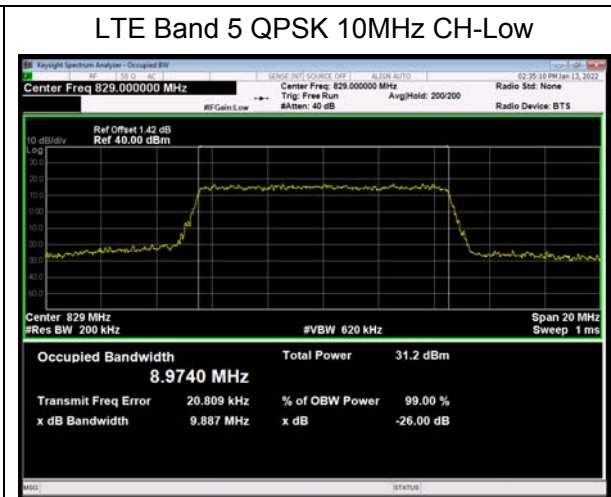
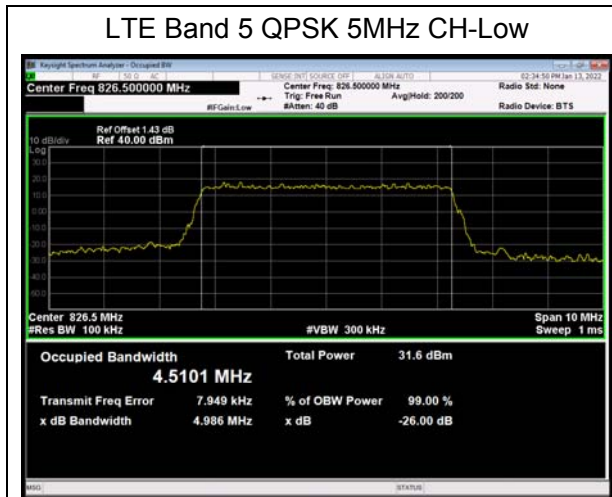


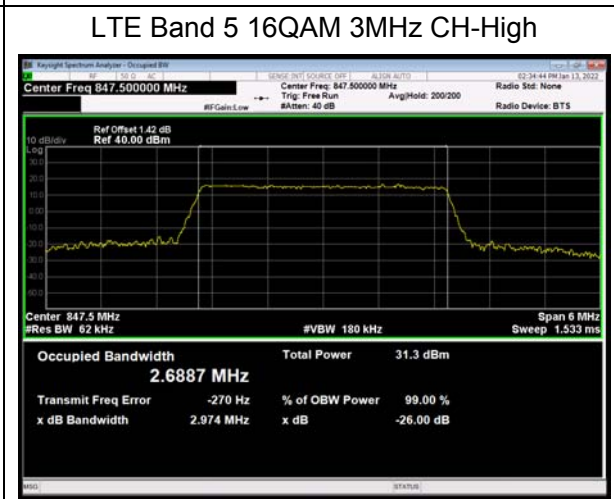
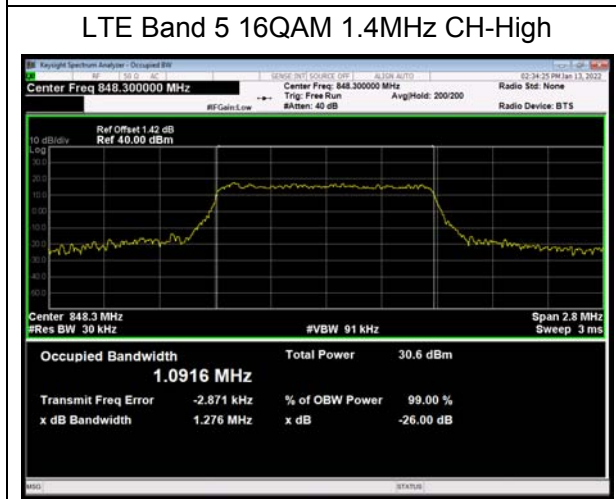
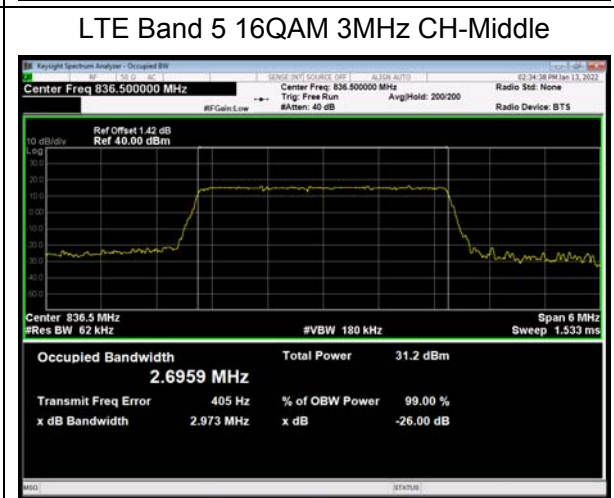
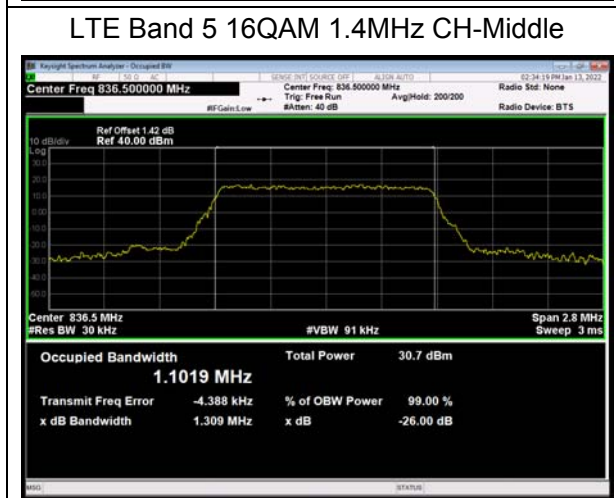
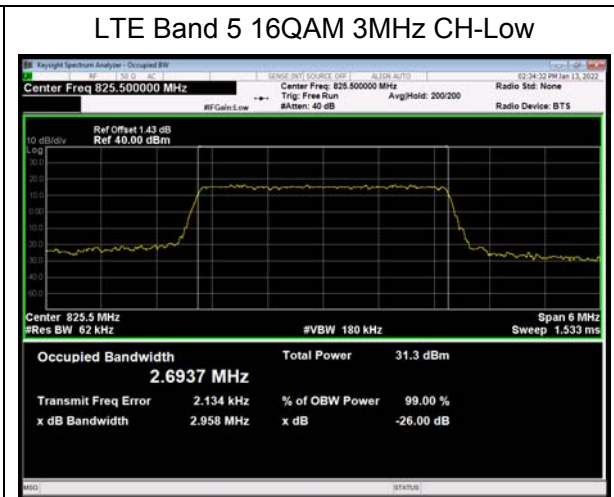
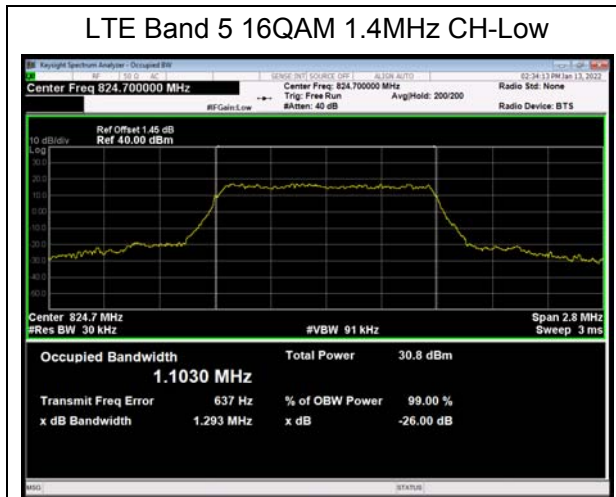


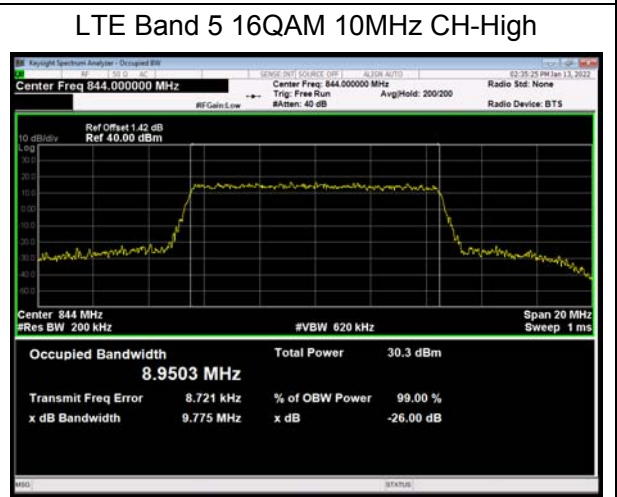
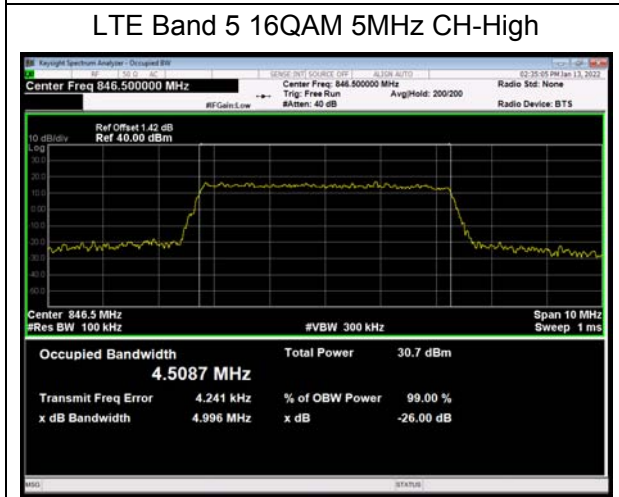
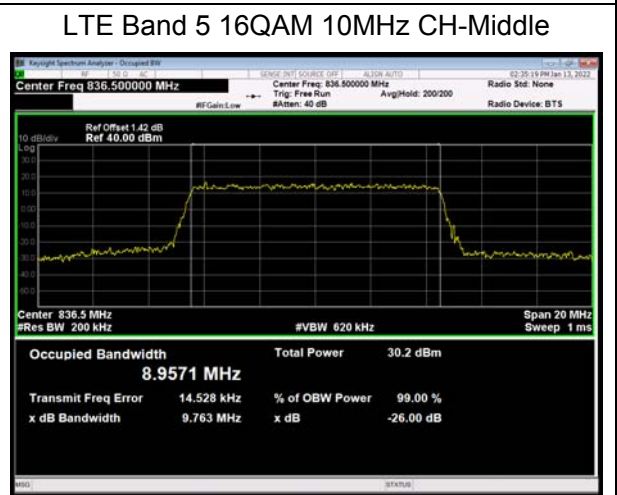
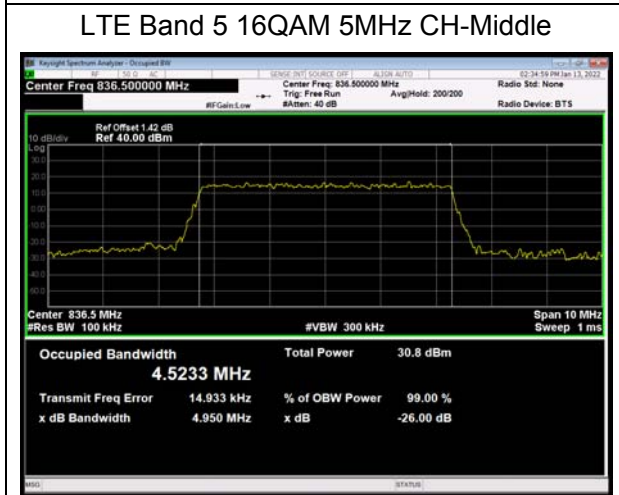
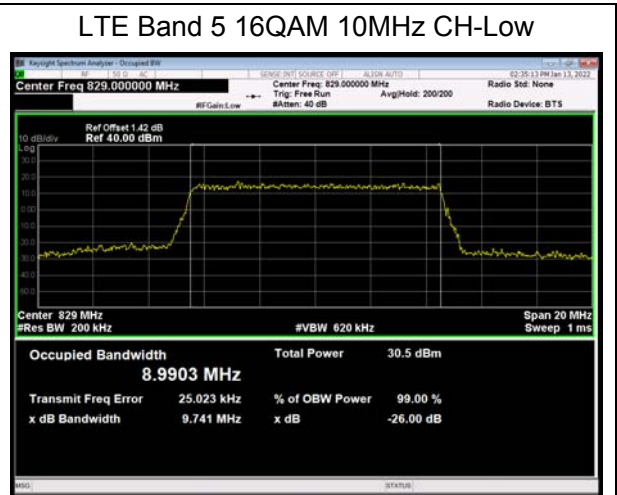
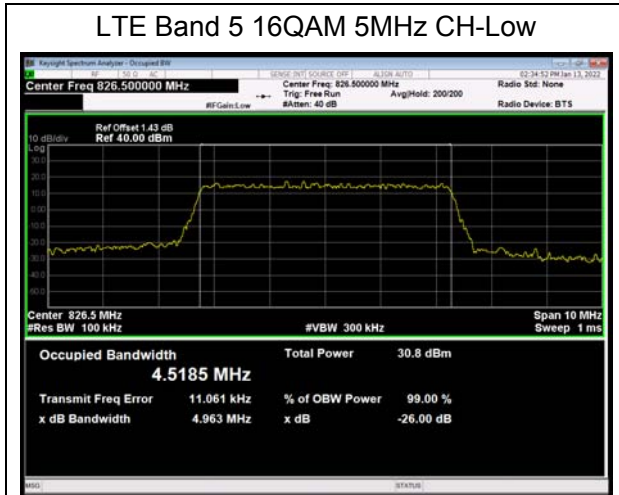


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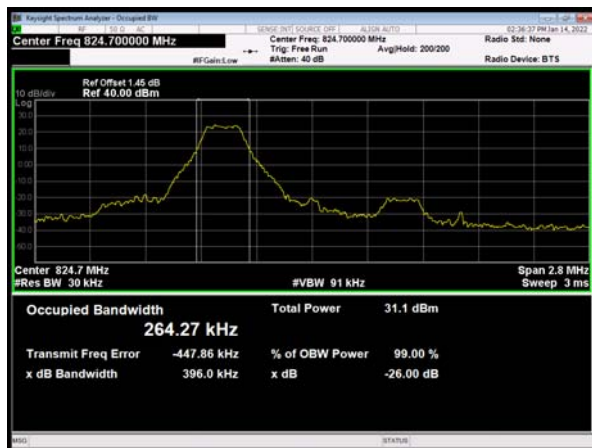




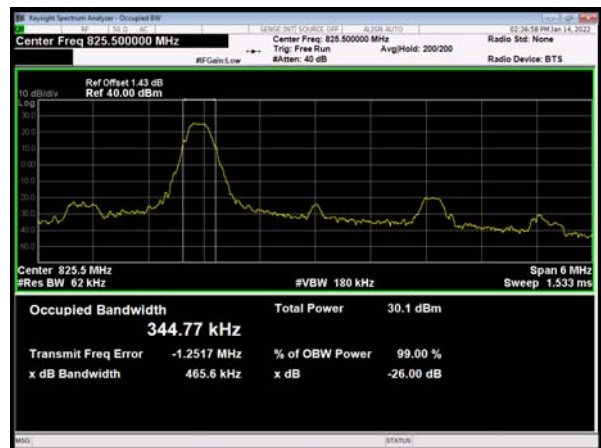


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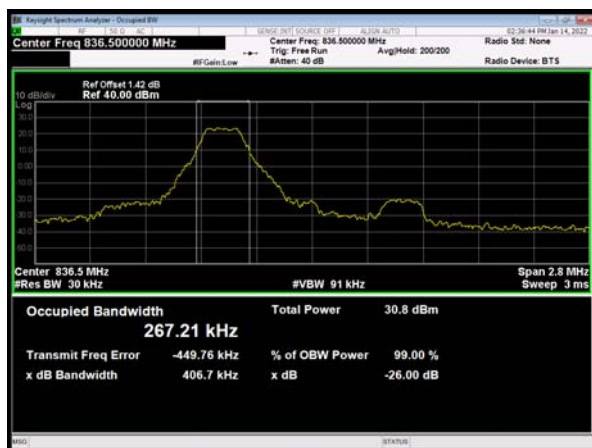
LTE Band 26 QPSK 1.4MHz CH-Low



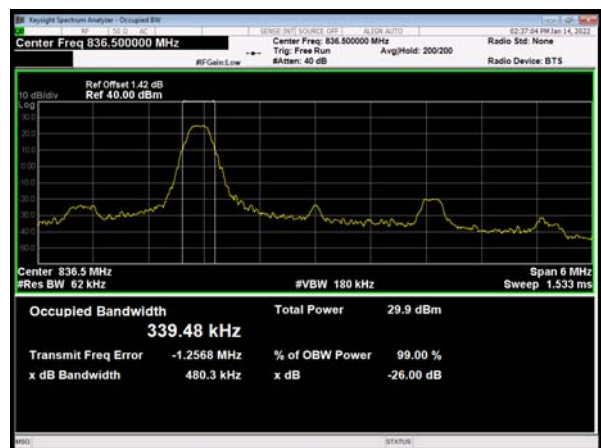
LTE Band 26 QPSK 3MHz CH-Low



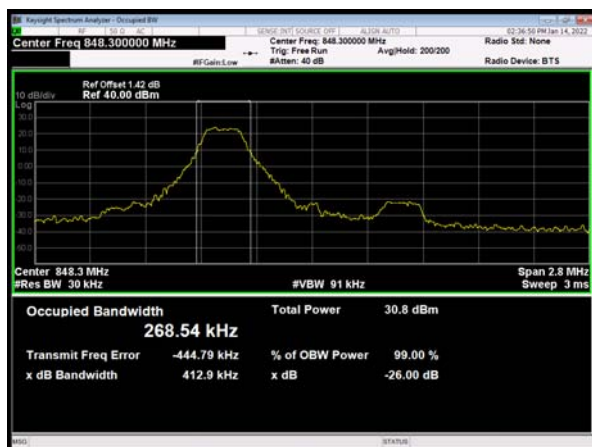
LTE Band 26 QPSK 1.4MHz CH-Middle



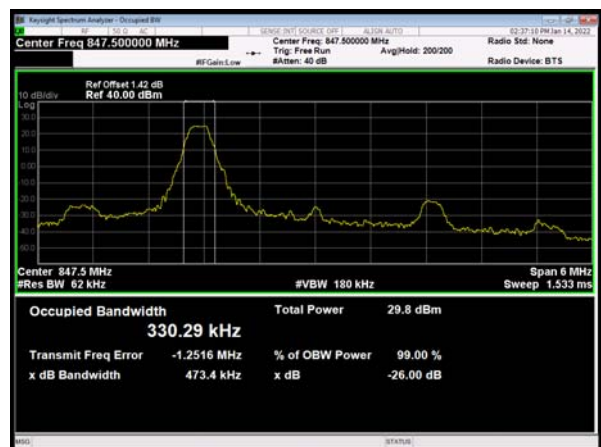
LTE Band 26 QPSK 3MHz CH-Middle

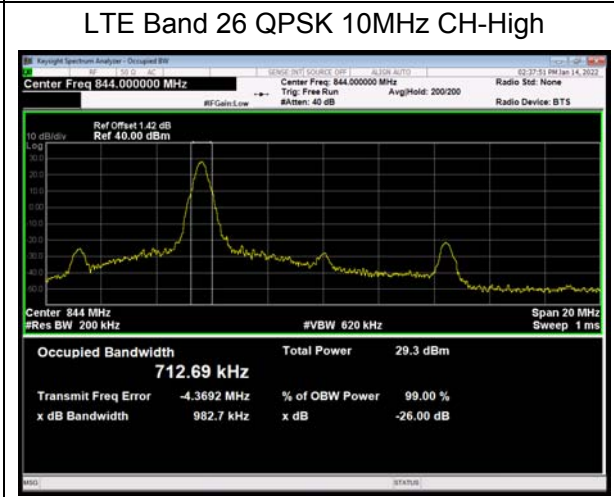
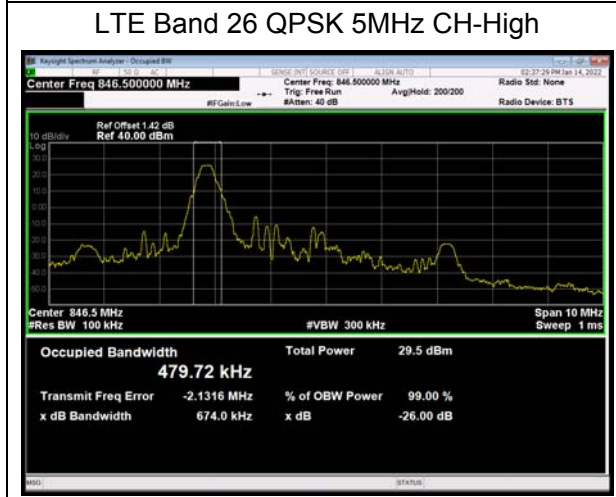
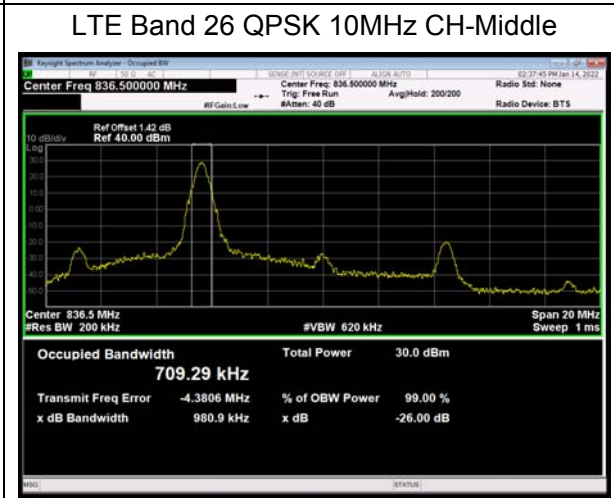
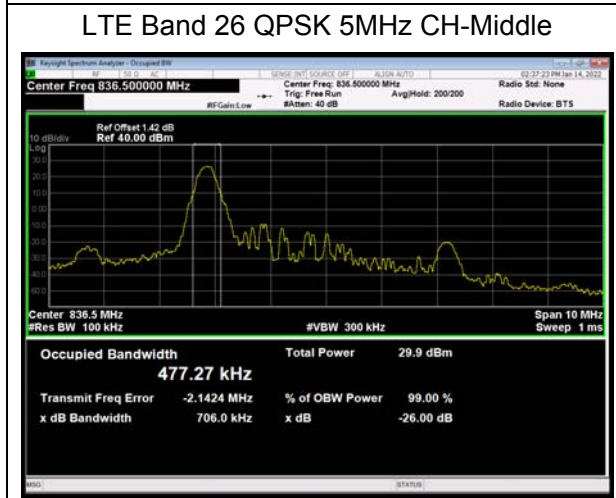
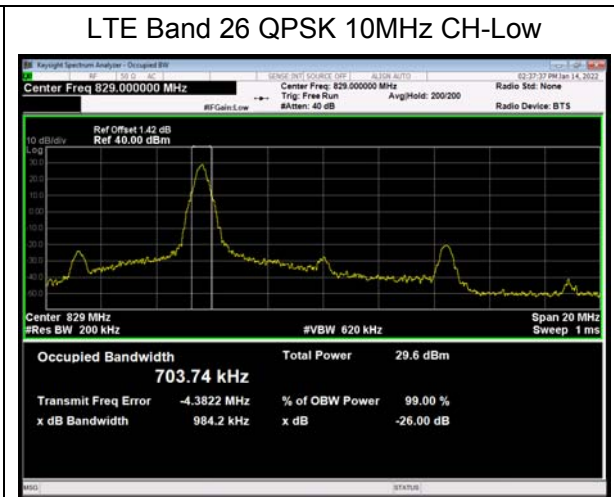
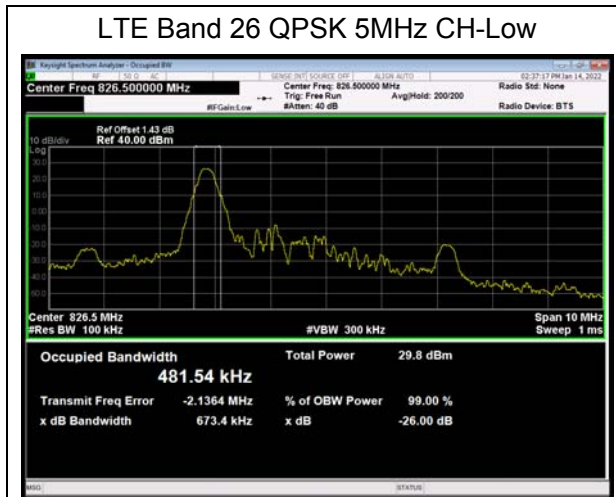


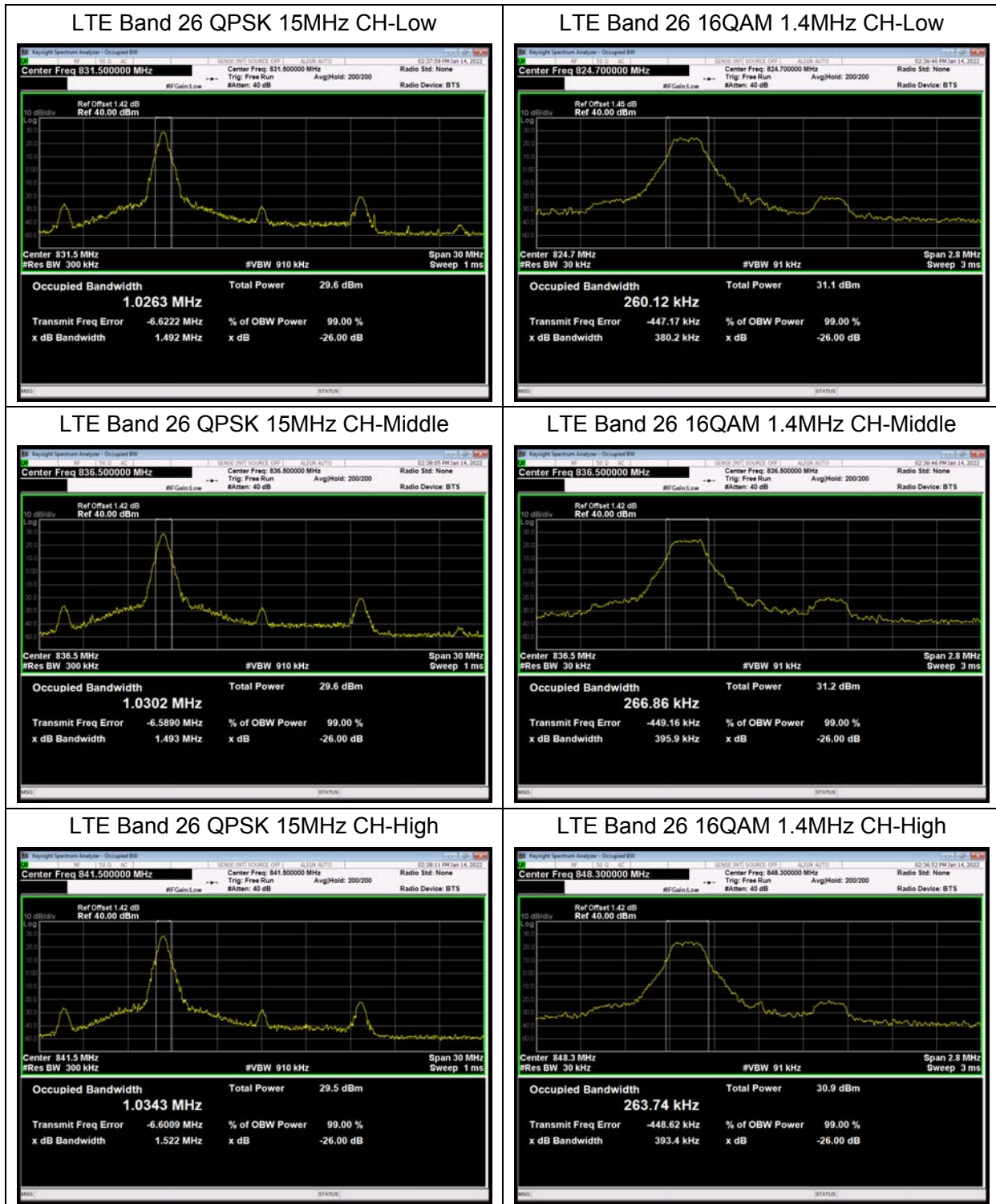
LTE Band 26 QPSK 1.4MHz CH-High

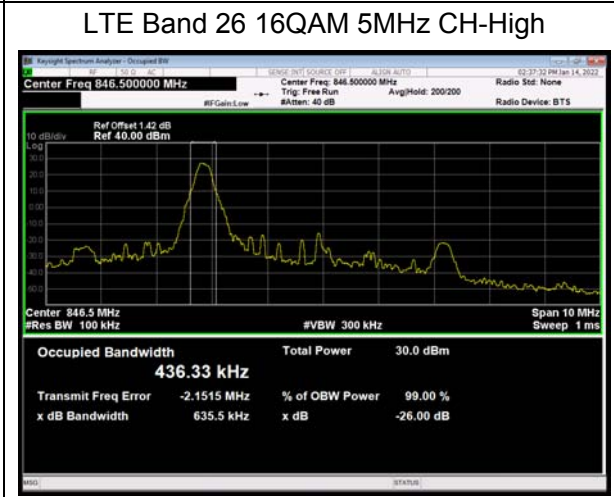
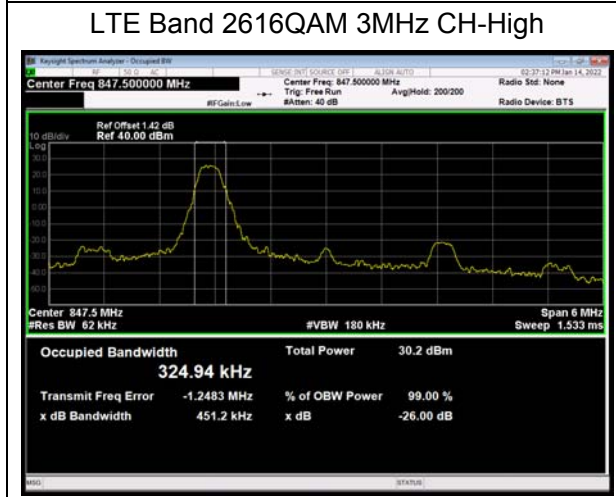
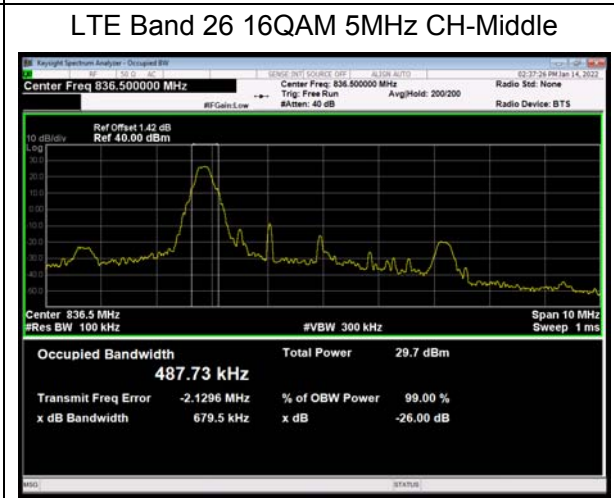
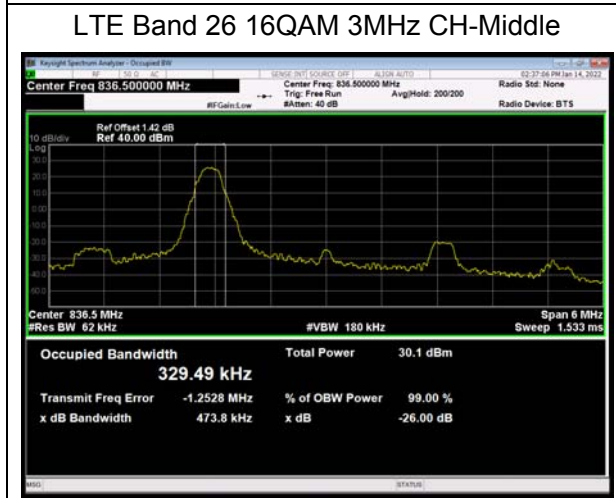
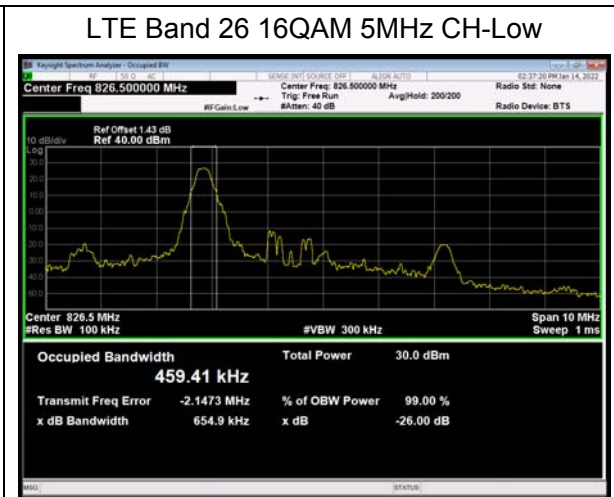
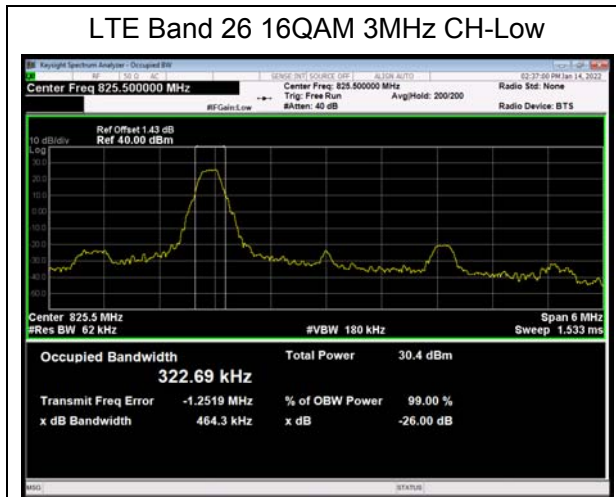


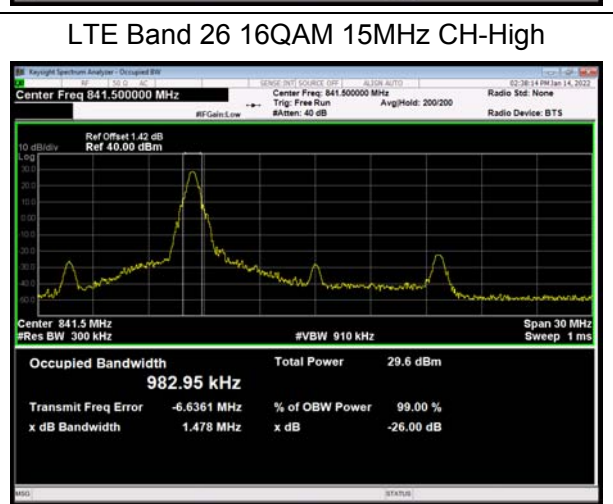
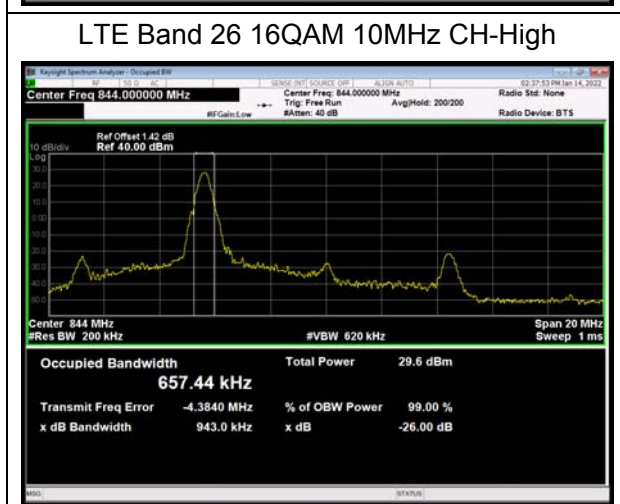
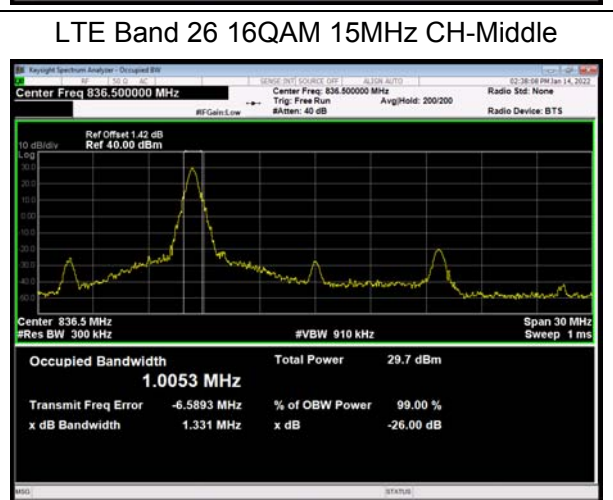
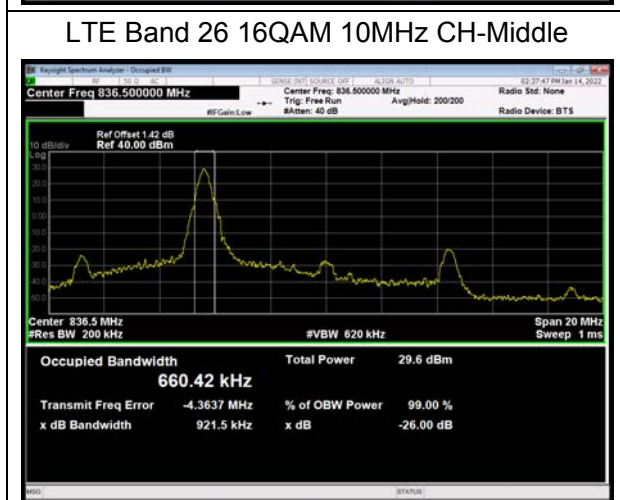
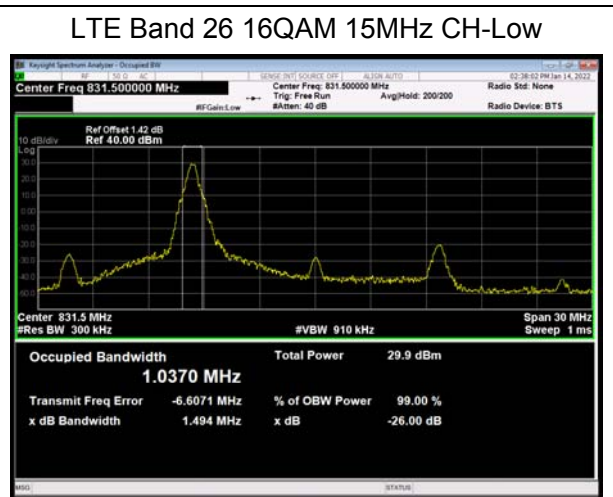
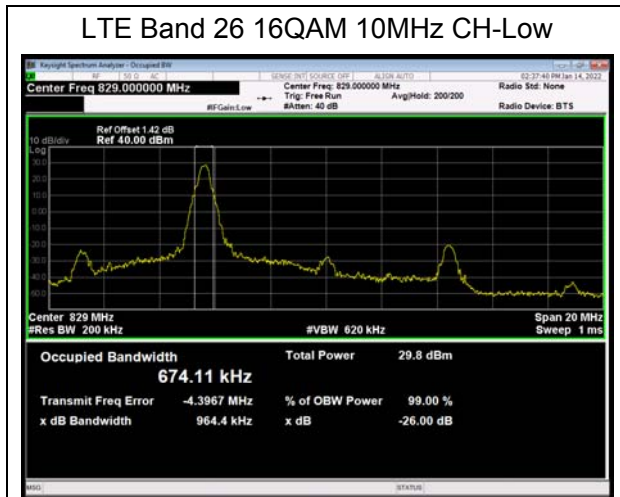
LTE Band 26 QPSK 3MHz CH-High













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