



RF TEST REPORT

Applicant Bluebird Inc.
FCC ID SS4CF550
Product Cost-Effective Full Touch Handheld Computer
Brand BLUEBIRD
Model CF550
Report No. R2111A0957-R1
Issue Date January 7, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2020)/ FCC CFR 47 Part 22H (2020)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Peng Tao

Approved by: Kai Xu

TA Technology (Shanghai) Co., Ltd.

No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000



TABLE OF CONTENT

1. Test Laboratory	4
1.1. Notes of the Test Report	4
1.2. Test facility	4
1.3. Testing Location	4
2. General Description of Equipment under Test	5
2.1. Applicant and Manufacturer Information	5
2.2. General Information	5
3. Applied Standards	7
4. Test Configuration	8
5. Test Case Results	10
5.1. RF Power Output and Effective Radiated Power	10
5.2. Occupied Bandwidth	26
5.3. Band Edge Compliance	46
5.4. Peak-to-Average Power Ratio (PAPR)	67
5.5. Frequency Stability	71
5.6. Spurious Emissions at Antenna Terminals	77
5.7. Radiates Spurious Emission	85
6. Main Test Instruments	93
ANNEX A: The EUT Appearance	94
ANNEX B: Test Setup Photos	95

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: November 17, 2021 ~ December 1, 2021

Date of Sample Received: November 9, 2021

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.



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.
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Xu Kai
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <http://www.ta-shanghai.com>
E-mail: xukai@ta-shanghai.com

2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

Applicant	Bluebird Inc.
Applicant address	3F, 115, Irwon-ro, Gangnam-gu, Seoul, Republic of Korea
Manufacturer	Bluebird Inc.
Manufacturer address	3F, 115, Irwon-ro, Gangnam-gu, Seoul, Republic of Korea

2.2. General Information

EUT Description			
Model	CF550		
IMEI	IMEI 1: 358671240002572 IMEI 2: 358671240002580		
Hardware Version	V1.0		
Software Version	20211026_R1.00		
Power Supply	AC adapter		
Antenna Type	Coupling type (LDS)		
Antenna Gain	2 dBi		
Test Mode(s)	GSM 850; WCDMA Band V; LTE Band 5/19/26;		
Test Modulation	(GSM/GPRS)GMSK, (EGPRS) GMSK/ 8PSK; (WCDMA) BPSK, QPSK,16QAM; (LTE) QPSK, 16QAM, 64QAM;		
LTE Category	6		
Maximum E.R.P.	GSM 850:	32.00dBm	
	WCDMA Band V:	23.27 dBm	
	LTE Band 5 (LTE Band 19):	22.88 dBm	
	LTE Band 26:	21.73dBm	
Rated Power Supply Voltage	3.85V		
Operating Voltage	Minimum: 3.4V Maximum: 4.33V		
Operating Temperature	Lowest: -20°C Highest: +50°C		
Testing Temperature	Lowest: -30°C Highest: +50°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 19	830 ~ 845	875 ~ 890
	LTE Band 26	824 ~ 849	869 ~ 894
EUT Accessory			
Adapter	Manufacturer: Kuantech (Beihai) Co., Ltd. Model: KSA29B0500200D5		
Battery	Manufacturer: Ningbo Veken Battery Co.,Ltd. Model: BAT-435001B		
USB Cable	Manufacturer: GAC Model: GAC-BBD20-002 100cm Cable, Shielded		
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.			



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 (2020)

FCC CFR47 Part 2 (2020)

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 (Z axis, vertical polarization) 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 HSDPA/HSUPA /HSPA+
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



According to TCB workshop October, 2014 RF Exposure Procedures Update (Overlapping LTE Bands):

a) LTE Band 19 (Frequency range 830-890 MHz) is covered by LTE Band 5 (Frequency range: 824-894 MHz) due to similar frequency range, same maximum tune up limit and same channel bandwidth.

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/ 64QAM	1	50%	100%	L	M	H
RF power output and Effective Radiated power	LTE 5 (LTE19)	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 (LTE19)	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 (LTE19)	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 (LTE19)	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 (LTE19)	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 (LTE19)	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 (LTE19)	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.

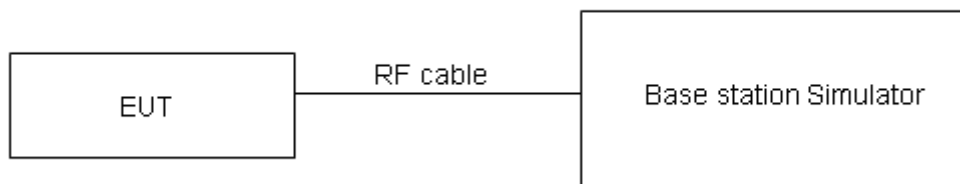
ERP can then be calculated as follows:

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

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

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

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	$\leq 7 \text{ W}$ (38.45 dBm)
-------	--------------------------------

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.4 \text{ dB}$ for RF power output, $k = 2$, $U = 1.19 \text{ dB}$ 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	32.09	32.15	32.13	31.94	32.00	31.98
GPRS (GMSK)	1TXslot	32.10	32.11	32.12	31.95	31.96	31.97
	2TXslots	31.40	31.41	31.46	31.25	31.26	31.31
	3TXslots	29.67	29.74	29.78	29.52	29.59	29.63
	4TXslots	28.45	28.57	28.62	28.30	28.42	28.47
EGPRS	1TXslot	24.97	25.02	25.13	24.82	24.87	24.98
	2TXslots	24.15	24.17	24.25	24.00	24.02	24.10
	3TXslots	22.23	22.35	22.47	22.08	22.20	22.32
	4TXslots	21.32	21.38	21.43	21.17	21.23	21.28

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		21.93	21.92	21.83	21.78	21.77	21.68
HSDPA	Sub - Test 1	21.39	21.34	21.24	21.19	21.12	23.27
	Sub - Test 2	21.38	21.36	21.23	21.21	21.09	23.24
	Sub - Test 3	20.85	20.86	20.7	20.71	20.61	22.76
	Sub - Test 4	20.86	20.87	20.71	20.72	20.59	22.74
HSUPA	Sub - Test 1	21.35	21.33	21.2	21.18	21.07	23.22
	Sub - Test 2	20.34	20.31	20.19	20.16	20.06	22.21
	Sub - Test 3	20.81	20.79	20.66	20.64	20.55	22.70
	Sub - Test 4	20.27	20.28	20.12	20.13	20.03	22.18
	Sub - Test 5	21.28	21.26	21.13	21.11	21.01	23.16
HSPA+	16QAM	20.82	20.83	20.67	20.68	20.58	22.73



Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	ERP (dBm)	Verdict
LTE Band 5	1.4	20407	1	#0	QPSK	22.85	22.70	PASS
	1.4	20407	1	#Mid	QPSK	22.96	22.81	PASS
	1.4	20407	1	#Max	QPSK	22.86	22.71	PASS
	1.4	20407	3	#0	QPSK	22.93	22.78	PASS
	1.4	20407	3	#Mid	QPSK	22.86	22.71	PASS
	1.4	20407	3	#Max	QPSK	22.84	22.69	PASS
	1.4	20407	6	#0	QPSK	21.88	21.73	PASS
	1.4	20407	1	#0	QAM16	21.88	21.73	PASS
	1.4	20407	1	#Mid	QAM16	22.08	21.93	PASS
	1.4	20407	1	#Max	QAM16	21.83	21.68	PASS
	1.4	20407	3	#0	QAM16	22.01	21.86	PASS
	1.4	20407	3	#Mid	QAM16	22.00	21.85	PASS
	1.4	20407	3	#Max	QAM16	22.00	21.85	PASS
	1.4	20407	6	#0	QAM16	20.88	20.73	PASS
	1.4	20525	1	#0	QPSK	22.69	22.54	PASS
	1.4	20525	1	#Mid	QPSK	22.87	22.72	PASS
	1.4	20525	1	#Max	QPSK	22.69	22.54	PASS
	1.4	20525	3	#0	QPSK	22.79	22.64	PASS
	1.4	20525	3	#Mid	QPSK	22.76	22.61	PASS
	1.4	20525	3	#Max	QPSK	22.75	22.60	PASS
	1.4	20525	6	#0	QPSK	21.74	21.59	PASS
	1.4	20525	1	#0	QAM16	21.86	21.71	PASS
	1.4	20525	1	#Mid	QAM16	22.10	21.95	PASS
	1.4	20525	1	#Max	QAM16	21.88	21.73	PASS
	1.4	20525	3	#0	QAM16	21.77	21.62	PASS
	1.4	20525	3	#Mid	QAM16	21.75	21.60	PASS
	1.4	20525	3	#Max	QAM16	21.82	21.67	PASS
	1.4	20525	6	#0	QAM16	20.74	20.59	PASS
	1.4	20643	1	#0	QPSK	22.64	22.49	PASS
	1.4	20643	1	#Mid	QPSK	22.76	22.61	PASS
	1.4	20643	1	#Max	QPSK	22.66	22.51	PASS
	1.4	20643	3	#0	QPSK	22.72	22.57	PASS
	1.4	20643	3	#Mid	QPSK	22.72	22.57	PASS
	1.4	20643	3	#Max	QPSK	22.64	22.49	PASS
	1.4	20643	6	#0	QPSK	21.63	21.48	PASS
	1.4	20643	1	#0	QAM16	21.53	21.38	PASS
	1.4	20643	1	#Mid	QAM16	21.65	21.50	PASS
	1.4	20643	1	#Max	QAM16	21.53	21.38	PASS
	1.4	20643	3	#0	QAM16	21.63	21.48	PASS
	1.4	20643	3	#Mid	QAM16	21.63	21.48	PASS



1.4	20643	3	#Max	QAM16	21.64	21.49	PASS
1.4	20643	6	#0	QAM16	20.67	20.52	PASS
3	20415	1	#0	QPSK	22.87	22.72	PASS
3	20415	1	#Mid	QPSK	22.95	22.80	PASS
3	20415	1	#Max	QPSK	22.90	22.75	PASS
3	20415	8	#0	QPSK	21.84	21.69	PASS
3	20415	8	#Mid	QPSK	21.84	21.69	PASS
3	20415	8	#Max	QPSK	21.84	21.69	PASS
3	20415	15	#0	QPSK	21.83	21.68	PASS
3	20415	1	#0	QAM16	21.74	21.59	PASS
3	20415	1	#Mid	QAM16	21.82	21.67	PASS
3	20415	1	#Max	QAM16	21.77	21.62	PASS
3	20415	8	#0	QAM16	20.87	20.72	PASS
3	20415	8	#Mid	QAM16	20.89	20.74	PASS
3	20415	8	#Max	QAM16	20.89	20.74	PASS
3	20415	15	#0	QAM16	20.89	20.74	PASS
3	20525	1	#0	QPSK	22.81	22.66	PASS
3	20525	1	#Mid	QPSK	22.73	22.58	PASS
3	20525	1	#Max	QPSK	22.74	22.59	PASS
3	20525	8	#0	QPSK	21.74	21.59	PASS
3	20525	8	#Mid	QPSK	21.75	21.60	PASS
3	20525	8	#Max	QPSK	21.76	21.61	PASS
3	20525	15	#0	QPSK	21.78	21.63	PASS
3	20525	1	#0	QAM16	22.10	21.95	PASS
3	20525	1	#Mid	QAM16	22.03	21.88	PASS
3	20525	1	#Max	QAM16	22.03	21.88	PASS
3	20525	8	#0	QAM16	20.84	20.69	PASS
3	20525	8	#Mid	QAM16	20.85	20.70	PASS
3	20525	8	#Max	QAM16	20.83	20.68	PASS
3	20525	15	#0	QAM16	20.73	20.58	PASS
3	20635	1	#0	QPSK	22.71	22.56	PASS
3	20635	1	#Mid	QPSK	22.68	22.53	PASS
3	20635	1	#Max	QPSK	22.67	22.52	PASS
3	20635	8	#0	QPSK	21.73	21.58	PASS
3	20635	8	#Mid	QPSK	21.72	21.57	PASS
3	20635	8	#Max	QPSK	21.70	21.55	PASS
3	20635	15	#0	QPSK	21.65	21.50	PASS
3	20635	1	#0	QAM16	21.87	21.72	PASS
3	20635	1	#Mid	QAM16	21.86	21.71	PASS
3	20635	1	#Max	QAM16	21.82	21.67	PASS
3	20635	8	#0	QAM16	20.77	20.62	PASS
3	20635	8	#Mid	QAM16	20.76	20.61	PASS
3	20635	8	#Max	QAM16	20.69	20.54	PASS



3	20635	15	#0	QAM16	20.65	20.50	PASS
5	20425	1	#0	QPSK	22.79	22.64	PASS
5	20425	1	#Mid	QPSK	22.93	22.78	PASS
5	20425	1	#Max	QPSK	22.72	22.57	PASS
5	20425	12	#0	QPSK	21.82	21.67	PASS
5	20425	12	#Mid	QPSK	21.79	21.64	PASS
5	20425	12	#Max	QPSK	21.82	21.67	PASS
5	20425	25	#0	QPSK	21.80	21.65	PASS
5	20425	1	#0	QAM16	22.02	21.87	PASS
5	20425	1	#Mid	QAM16	22.13	21.98	PASS
5	20425	1	#Max	QAM16	22.02	21.87	PASS
5	20425	12	#0	QAM16	20.77	20.62	PASS
5	20425	12	#Mid	QAM16	20.85	20.70	PASS
5	20425	12	#Max	QAM16	20.80	20.65	PASS
5	20425	25	#0	QAM16	20.90	20.75	PASS
5	20525	1	#0	QPSK	22.69	22.54	PASS
5	20525	1	#Mid	QPSK	22.81	22.66	PASS
5	20525	1	#Max	QPSK	22.69	22.54	PASS
5	20525	12	#0	QPSK	21.81	21.66	PASS
5	20525	12	#Mid	QPSK	21.83	21.68	PASS
5	20525	12	#Max	QPSK	21.81	21.66	PASS
5	20525	25	#0	QPSK	21.82	21.67	PASS
5	20525	1	#0	QAM16	21.94	21.79	PASS
5	20525	1	#Mid	QAM16	22.01	21.86	PASS
5	20525	1	#Max	QAM16	21.85	21.70	PASS
5	20525	12	#0	QAM16	20.75	20.60	PASS
5	20525	12	#Mid	QAM16	20.78	20.63	PASS
5	20525	12	#Max	QAM16	20.72	20.57	PASS
5	20525	25	#0	QAM16	20.85	20.70	PASS
5	20625	1	#0	QPSK	22.56	22.41	PASS
5	20625	1	#Mid	QPSK	22.69	22.54	PASS
5	20625	1	#Max	QPSK	22.52	22.37	PASS
5	20625	12	#0	QPSK	21.77	21.62	PASS
5	20625	12	#Mid	QPSK	21.76	21.61	PASS
5	20625	12	#Max	QPSK	21.62	21.47	PASS
5	20625	25	#0	QPSK	21.71	21.56	PASS
5	20625	1	#0	QAM16	21.90	21.75	PASS
5	20625	1	#Mid	QAM16	22.03	21.88	PASS
5	20625	1	#Max	QAM16	21.79	21.64	PASS
5	20625	12	#0	QAM16	20.80	20.65	PASS
5	20625	12	#Mid	QAM16	20.81	20.66	PASS
5	20625	12	#Max	QAM16	20.71	20.56	PASS
5	20625	25	#0	QAM16	20.78	20.63	PASS



10	20450	1	#0	QPSK	22.84	22.69	PASS
10	20450	1	#Mid	QPSK	22.95	22.80	PASS
10	20450	1	#Max	QPSK	22.73	22.58	PASS
10	20450	25	#0	QPSK	21.84	21.69	PASS
10	20450	25	#Mid	QPSK	21.83	21.68	PASS
10	20450	25	#Max	QPSK	21.75	21.60	PASS
10	20450	50	#0	QPSK	21.80	21.65	PASS
10	20450	1	#0	QAM16	22.16	22.01	PASS
10	20450	1	#Mid	QAM16	22.21	22.06	PASS
10	20450	1	#Max	QAM16	22.02	21.87	PASS
10	20450	25	#0	QAM16	20.98	20.83	PASS
10	20450	25	#Mid	QAM16	20.97	20.82	PASS
10	20450	25	#Max	QAM16	20.89	20.74	PASS
10	20450	50	#0	QAM16	20.87	20.72	PASS
10	20525	1	#0	QPSK	22.81	22.66	PASS
10	20525	1	#Mid	QPSK	23.03	22.88	PASS
10	20525	1	#Max	QPSK	22.69	22.54	PASS
10	20525	25	#0	QPSK	21.86	21.71	PASS
10	20525	25	#Mid	QPSK	21.87	21.72	PASS
10	20525	25	#Max	QPSK	21.80	21.65	PASS
10	20525	50	#0	QPSK	21.84	21.69	PASS
10	20525	1	#0	QAM16	21.98	21.83	PASS
10	20525	1	#Mid	QAM16	22.07	21.92	PASS
10	20525	1	#Max	QAM16	21.91	21.76	PASS
10	20525	25	#0	QAM16	20.95	20.80	PASS
10	20525	25	#Mid	QAM16	20.96	20.81	PASS
10	20525	25	#Max	QAM16	20.88	20.73	PASS
10	20525	50	#0	QAM16	20.88	20.73	PASS
10	20600	1	#0	QPSK	22.81	22.66	PASS
10	20600	1	#Mid	QPSK	22.90	22.75	PASS
10	20600	1	#Max	QPSK	22.68	22.53	PASS
10	20600	25	#0	QPSK	21.78	21.63	PASS
10	20600	25	#Mid	QPSK	21.79	21.64	PASS
10	20600	25	#Max	QPSK	21.67	21.52	PASS
10	20600	50	#0	QPSK	21.75	21.60	PASS
10	20600	1	#0	QAM16	21.65	21.50	PASS
10	20600	1	#Mid	QAM16	21.80	21.65	PASS
10	20600	1	#Max	QAM16	21.53	21.38	PASS
10	20600	25	#0	QAM16	20.85	20.70	PASS
10	20600	25	#Mid	QAM16	20.85	20.70	PASS
10	20600	25	#Max	QAM16	20.75	20.60	PASS
10	20600	50	#0	QAM16	20.86	20.71	PASS
1.4	20407	1	#0	QAM64	21.36	21.21	PASS



1.4	20407	1	#Mid	QAM64	21.60	21.45	PASS
1.4	20407	1	#Max	QAM64	21.40	21.25	PASS
1.4	20407	3	#0	QAM64	21.56	21.41	PASS
1.4	20407	3	#Mid	QAM64	21.55	21.40	PASS
1.4	20407	3	#Max	QAM64	21.57	21.42	PASS
1.4	20407	6	#0	QAM64	20.37	20.22	PASS
1.4	20525	1	#0	QAM64	21.42	21.27	PASS
1.4	20525	1	#Mid	QAM64	21.65	21.50	PASS
1.4	20525	1	#Max	QAM64	21.41	21.26	PASS
1.4	20525	3	#0	QAM64	21.33	21.18	PASS
1.4	20525	3	#Mid	QAM64	21.34	21.19	PASS
1.4	20525	3	#Max	QAM64	21.31	21.16	PASS
1.4	20525	6	#0	QAM64	20.29	20.14	PASS
1.4	20643	1	#0	QAM64	21.04	20.89	PASS
1.4	20643	1	#Mid	QAM64	21.22	21.07	PASS
1.4	20643	1	#Max	QAM64	21.05	20.90	PASS
1.4	20643	3	#0	QAM64	21.16	21.01	PASS
1.4	20643	3	#Mid	QAM64	21.19	21.04	PASS
1.4	20643	3	#Max	QAM64	21.17	21.02	PASS
1.4	20643	6	#0	QAM64	20.26	20.11	PASS
3	20415	1	#0	QAM64	21.73	21.58	PASS
3	20415	1	#Mid	QAM64	21.66	21.51	PASS
3	20415	1	#Max	QAM64	21.61	21.46	PASS
3	20415	8	#0	QAM64	20.38	20.23	PASS
3	20415	8	#Mid	QAM64	20.41	20.26	PASS
3	20415	8	#Max	QAM64	20.43	20.28	PASS
3	20415	15	#0	QAM64	20.30	20.15	PASS
3	20525	1	#0	QAM64	21.53	21.38	PASS
3	20525	1	#Mid	QAM64	21.50	21.35	PASS
3	20525	1	#Max	QAM64	21.45	21.30	PASS
3	20525	8	#0	QAM64	20.32	20.17	PASS
3	20525	8	#Mid	QAM64	20.36	20.21	PASS
3	20525	8	#Max	QAM64	20.38	20.23	PASS
3	20525	15	#0	QAM64	20.31	20.16	PASS
3	20635	1	#0	QAM64	21.10	20.95	PASS
3	20635	1	#Mid	QAM64	21.12	20.97	PASS
3	20635	1	#Max	QAM64	21.12	20.97	PASS
3	20635	8	#0	QAM64	20.28	20.13	PASS
3	20635	8	#Mid	QAM64	20.29	20.14	PASS
3	20635	8	#Max	QAM64	20.24	20.09	PASS
3	20635	15	#0	QAM64	20.29	20.14	PASS
5	20425	1	#0	QAM64	21.58	21.43	PASS
5	20425	1	#Mid	QAM64	21.65	21.50	PASS



5	20425	1	#Max	QAM64	21.54	21.39	PASS
5	20425	12	#0	QAM64	20.31	20.16	PASS
5	20425	12	#Mid	QAM64	20.34	20.19	PASS
5	20425	12	#Max	QAM64	20.43	20.28	PASS
5	20425	25	#0	QAM64	20.41	20.26	PASS
5	20525	1	#0	QAM64	21.49	21.34	PASS
5	20525	1	#Mid	QAM64	21.63	21.48	PASS
5	20525	1	#Max	QAM64	21.51	21.36	PASS
5	20525	12	#0	QAM64	20.28	20.13	PASS
5	20525	12	#Mid	QAM64	20.28	20.13	PASS
5	20525	12	#Max	QAM64	20.29	20.14	PASS
5	20525	25	#0	QAM64	20.44	20.29	PASS
5	20625	1	#0	QAM64	21.37	21.22	PASS
5	20625	1	#Mid	QAM64	21.48	21.33	PASS
5	20625	1	#Max	QAM64	21.28	21.13	PASS
5	20625	12	#0	QAM64	20.25	20.10	PASS
5	20625	12	#Mid	QAM64	20.27	20.12	PASS
5	20625	12	#Max	QAM64	20.14	19.99	PASS
5	20625	25	#0	QAM64	20.27	20.12	PASS
10	20450	1	#0	QAM64	21.68	21.53	PASS
10	20450	1	#Mid	QAM64	21.82	21.67	PASS
10	20450	1	#Max	QAM64	21.55	21.40	PASS
10	20450	25	#0	QAM64	20.50	20.35	PASS
10	20450	25	#Mid	QAM64	20.52	20.37	PASS
10	20450	25	#Max	QAM64	20.43	20.28	PASS
10	20450	50	#0	QAM64	20.41	20.26	PASS
10	20525	1	#0	QAM64	21.52	21.37	PASS
10	20525	1	#Mid	QAM64	21.64	21.49	PASS
10	20525	1	#Max	QAM64	21.44	21.29	PASS
10	20525	25	#0	QAM64	20.51	20.36	PASS
10	20525	25	#Mid	QAM64	20.49	20.34	PASS
10	20525	25	#Max	QAM64	20.42	20.27	PASS
10	20525	50	#0	QAM64	20.45	20.30	PASS
10	20600	1	#0	QAM64	21.17	21.02	PASS
10	20600	1	#Mid	QAM64	21.28	21.13	PASS
10	20600	1	#Max	QAM64	21.05	20.90	PASS
10	20600	25	#0	QAM64	20.39	20.24	PASS
10	20600	25	#Mid	QAM64	20.37	20.22	PASS
10	20600	25	#Max	QAM64	20.29	20.14	PASS
10	20600	50	#0	QAM64	20.39	20.24	PASS



Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	ERP (dBm)	Verdict
LTE Band 26	1.4	26797	1	#0	QPSK	22.67	22.52	PASS
	1.4	26797	1	#Mid	QPSK	22.84	22.69	PASS
	1.4	26797	1	#Max	QPSK	22.70	22.55	PASS
	1.4	26797	3	#0	QPSK	22.76	22.61	PASS
	1.4	26797	3	#Mid	QPSK	22.75	22.60	PASS
	1.4	26797	3	#Max	QPSK	22.70	22.55	PASS
	1.4	26797	6	#0	QPSK	21.67	21.52	PASS
	1.4	26797	1	#0	QAM16	21.60	21.45	PASS
	1.4	26797	1	#Mid	QAM16	21.65	21.50	PASS
	1.4	26797	1	#Max	QAM16	21.57	21.42	PASS
	1.4	26797	3	#0	QAM16	21.69	21.54	PASS
	1.4	26797	3	#Mid	QAM16	21.69	21.54	PASS
	1.4	26797	3	#Max	QAM16	21.66	21.51	PASS
	1.4	26797	6	#0	QAM16	20.72	20.57	PASS
	1.4	26915	1	#0	QPSK	22.64	22.49	PASS
	1.4	26915	1	#Mid	QPSK	22.84	22.69	PASS
	1.4	26915	1	#Max	QPSK	22.64	22.49	PASS
	1.4	26915	3	#0	QPSK	22.66	22.51	PASS
	1.4	26915	3	#Mid	QPSK	22.67	22.52	PASS
	1.4	26915	3	#Max	QPSK	22.64	22.49	PASS
	1.4	26915	6	#0	QPSK	21.58	21.43	PASS
	1.4	26915	1	#0	QAM16	21.61	21.46	PASS
	1.4	26915	1	#Mid	QAM16	21.85	21.70	PASS
	1.4	26915	1	#Max	QAM16	21.63	21.48	PASS
	1.4	26915	3	#0	QAM16	21.80	21.65	PASS
	1.4	26915	3	#Mid	QAM16	21.78	21.63	PASS
	1.4	26915	3	#Max	QAM16	21.83	21.68	PASS
	1.4	26915	6	#0	QAM16	20.68	20.53	PASS
	1.4	27033	1	#0	QPSK	22.50	22.35	PASS
	1.4	27033	1	#Mid	QPSK	22.69	22.54	PASS
	1.4	27033	1	#Max	QPSK	22.46	22.31	PASS
	1.4	27033	3	#0	QPSK	22.56	22.41	PASS
	1.4	27033	3	#Mid	QPSK	22.55	22.40	PASS
	1.4	27033	3	#Max	QPSK	22.53	22.38	PASS
	1.4	27033	6	#0	QPSK	21.54	21.39	PASS
	1.4	27033	1	#0	QAM16	21.68	21.53	PASS
	1.4	27033	1	#Mid	QAM16	21.89	21.74	PASS
	1.4	27033	1	#Max	QAM16	21.69	21.54	PASS
	1.4	27033	3	#0	QAM16	21.58	21.43	PASS
	1.4	27033	3	#Mid	QAM16	21.58	21.43	PASS
	1.4	27033	3	#Max	QAM16	21.60	21.45	PASS



1.4	27033	6	#0	QAM16	20.58	20.43	PASS
3	26805	1	#0	QPSK	22.70	22.55	PASS
3	26805	1	#Mid	QPSK	22.72	22.57	PASS
3	26805	1	#Max	QPSK	22.73	22.58	PASS
3	26805	8	#0	QPSK	21.67	21.52	PASS
3	26805	8	#Mid	QPSK	21.66	21.51	PASS
3	26805	8	#Max	QPSK	21.75	21.60	PASS
3	26805	15	#0	QPSK	21.67	21.52	PASS
3	26805	1	#0	QAM16	21.95	21.80	PASS
3	26805	1	#Mid	QAM16	21.86	21.71	PASS
3	26805	1	#Max	QAM16	21.87	21.72	PASS
3	26805	8	#0	QAM16	20.72	20.57	PASS
3	26805	8	#Mid	QAM16	20.69	20.54	PASS
3	26805	8	#Max	QAM16	20.73	20.58	PASS
3	26805	15	#0	QAM16	20.64	20.49	PASS
3	26915	1	#0	QPSK	22.70	22.55	PASS
3	26915	1	#Mid	QPSK	22.70	22.55	PASS
3	26915	1	#Max	QPSK	22.65	22.50	PASS
3	26915	8	#0	QPSK	21.63	21.48	PASS
3	26915	8	#Mid	QPSK	21.63	21.48	PASS
3	26915	8	#Max	QPSK	21.65	21.50	PASS
3	26915	15	#0	QPSK	21.63	21.48	PASS
3	26915	1	#0	QAM16	21.55	21.40	PASS
3	26915	1	#Mid	QAM16	21.59	21.44	PASS
3	26915	1	#Max	QAM16	21.58	21.43	PASS
3	26915	8	#0	QAM16	20.67	20.52	PASS
3	26915	8	#Mid	QAM16	20.67	20.52	PASS
3	26915	8	#Max	QAM16	20.67	20.52	PASS
3	26915	15	#0	QAM16	20.69	20.54	PASS
3	27025	1	#0	QPSK	22.59	22.44	PASS
3	27025	1	#Mid	QPSK	22.58	22.43	PASS
3	27025	1	#Max	QPSK	22.54	22.39	PASS
3	27025	8	#0	QPSK	21.58	21.43	PASS
3	27025	8	#Mid	QPSK	21.56	21.41	PASS
3	27025	8	#Max	QPSK	21.56	21.41	PASS
3	27025	15	#0	QPSK	21.54	21.39	PASS
3	27025	1	#0	QAM16	21.85	21.70	PASS
3	27025	1	#Mid	QAM16	21.87	21.72	PASS
3	27025	1	#Max	QAM16	21.84	21.69	PASS
3	27025	8	#0	QAM16	20.64	20.49	PASS
3	27025	8	#Mid	QAM16	20.61	20.46	PASS
3	27025	8	#Max	QAM16	20.60	20.45	PASS
3	27025	15	#0	QAM16	20.63	20.48	PASS



5	26815	1	#0	QPSK	22.59	22.44	PASS
5	26815	1	#Mid	QPSK	22.70	22.55	PASS
5	26815	1	#Max	QPSK	22.56	22.41	PASS
5	26815	12	#0	QPSK	21.65	21.50	PASS
5	26815	12	#Mid	QPSK	21.64	21.49	PASS
5	26815	12	#Max	QPSK	21.72	21.57	PASS
5	26815	25	#0	QPSK	21.67	21.52	PASS
5	26815	1	#0	QAM16	21.90	21.75	PASS
5	26815	1	#Mid	QAM16	21.97	21.82	PASS
5	26815	1	#Max	QAM16	21.84	21.69	PASS
5	26815	12	#0	QAM16	20.72	20.57	PASS
5	26815	12	#Mid	QAM16	20.67	20.52	PASS
5	26815	12	#Max	QAM16	20.73	20.58	PASS
5	26815	25	#0	QAM16	20.75	20.60	PASS
5	26915	1	#0	QPSK	22.58	22.43	PASS
5	26915	1	#Mid	QPSK	22.64	22.49	PASS
5	26915	1	#Max	QPSK	22.52	22.37	PASS
5	26915	12	#0	QPSK	21.65	21.50	PASS
5	26915	12	#Mid	QPSK	21.66	21.51	PASS
5	26915	12	#Max	QPSK	21.61	21.46	PASS
5	26915	25	#0	QPSK	21.70	21.55	PASS
5	26915	1	#0	QAM16	21.86	21.71	PASS
5	26915	1	#Mid	QAM16	21.96	21.81	PASS
5	26915	1	#Max	QAM16	21.81	21.66	PASS
5	26915	12	#0	QAM16	20.63	20.48	PASS
5	26915	12	#Mid	QAM16	20.60	20.45	PASS
5	26915	12	#Max	QAM16	20.58	20.43	PASS
5	26915	25	#0	QAM16	20.72	20.57	PASS
5	27015	1	#0	QPSK	22.47	22.32	PASS
5	27015	1	#Mid	QPSK	22.62	22.47	PASS
5	27015	1	#Max	QPSK	22.47	22.32	PASS
5	27015	12	#0	QPSK	21.64	21.49	PASS
5	27015	12	#Mid	QPSK	21.60	21.45	PASS
5	27015	12	#Max	QPSK	21.54	21.39	PASS
5	27015	25	#0	QPSK	21.61	21.46	PASS
5	27015	1	#0	QAM16	21.70	21.55	PASS
5	27015	1	#Mid	QAM16	21.78	21.63	PASS
5	27015	1	#Max	QAM16	21.67	21.52	PASS
5	27015	12	#0	QAM16	20.60	20.45	PASS
5	27015	12	#Mid	QAM16	20.59	20.44	PASS
5	27015	12	#Max	QAM16	20.49	20.34	PASS
5	27015	25	#0	QAM16	20.64	20.49	PASS
10	26840	1	#0	QPSK	22.78	22.63	PASS



10	26840	1	#Mid	QPSK	22.85	22.70	PASS
10	26840	1	#Max	QPSK	22.66	22.51	PASS
10	26840	25	#0	QPSK	21.78	21.63	PASS
10	26840	25	#Mid	QPSK	21.78	21.63	PASS
10	26840	25	#Max	QPSK	21.66	21.51	PASS
10	26840	50	#0	QPSK	21.67	21.52	PASS
10	26840	1	#0	QAM16	21.93	21.78	PASS
10	26840	1	#Mid	QAM16	21.97	21.82	PASS
10	26840	1	#Max	QAM16	21.78	21.63	PASS
10	26840	25	#0	QAM16	20.83	20.68	PASS
10	26840	25	#Mid	QAM16	20.82	20.67	PASS
10	26840	25	#Max	QAM16	20.68	20.53	PASS
10	26840	50	#0	QAM16	20.68	20.53	PASS
10	26915	1	#0	QPSK	22.75	22.60	PASS
10	26915	1	#Mid	QPSK	22.83	22.68	PASS
10	26915	1	#Max	QPSK	22.64	22.49	PASS
10	26915	25	#0	QPSK	21.79	21.64	PASS
10	26915	25	#Mid	QPSK	21.78	21.63	PASS
10	26915	25	#Max	QPSK	21.66	21.51	PASS
10	26915	50	#0	QPSK	21.74	21.59	PASS
10	26915	1	#0	QAM16	21.60	21.45	PASS
10	26915	1	#Mid	QAM16	21.73	21.58	PASS
10	26915	1	#Max	QAM16	21.51	21.36	PASS
10	26915	25	#0	QAM16	20.84	20.69	PASS
10	26915	25	#Mid	QAM16	20.84	20.69	PASS
10	26915	25	#Max	QAM16	20.70	20.55	PASS
10	26915	50	#0	QAM16	20.81	20.66	PASS
10	26990	1	#0	QPSK	22.58	22.43	PASS
10	26990	1	#Mid	QPSK	22.71	22.56	PASS
10	26990	1	#Max	QPSK	22.53	22.38	PASS
10	26990	25	#0	QPSK	21.68	21.53	PASS
10	26990	25	#Mid	QPSK	21.69	21.54	PASS
10	26990	25	#Max	QPSK	21.55	21.40	PASS
10	26990	50	#0	QPSK	21.64	21.49	PASS
10	26990	1	#0	QAM16	21.92	21.77	PASS
10	26990	1	#Mid	QAM16	22.03	21.88	PASS
10	26990	1	#Max	QAM16	21.83	21.68	PASS
10	26990	25	#0	QAM16	20.82	20.67	PASS
10	26990	25	#Mid	QAM16	20.82	20.67	PASS
10	26990	25	#Max	QAM16	20.66	20.51	PASS
10	26990	50	#0	QAM16	20.72	20.57	PASS
15	26865	1	#0	QPSK	22.68	22.53	PASS
15	26865	1	#Mid	QPSK	22.73	22.58	PASS



	15	26865	1	#Max	QPSK	22.55	22.40	PASS
	15	26865	36	#0	QPSK	21.74	21.59	PASS
	15	26865	36	#Mid	QPSK	21.74	21.59	PASS
	15	26865	36	#Max	QPSK	21.66	21.51	PASS
	15	26865	75	#0	QPSK	21.69	21.54	PASS
	15	26865	1	#0	QAM16	21.66	21.51	PASS
	15	26865	1	#Mid	QAM16	21.72	21.57	PASS
	15	26865	1	#Max	QAM16	21.53	21.38	PASS
	15	26865	36	#0	QAM16	20.68	20.53	PASS
	15	26865	36	#Mid	QAM16	20.69	20.54	PASS
	15	26865	36	#Max	QAM16	20.60	20.45	PASS
	15	26865	75	#0	QAM16	20.70	20.55	PASS
	15	26915	1	#0	QPSK	22.58	22.43	PASS
	15	26915	1	#Mid	QPSK	22.64	22.49	PASS
	15	26915	1	#Max	QPSK	22.49	22.34	PASS
	15	26915	36	#0	QPSK	21.80	21.65	PASS
	15	26915	36	#Mid	QPSK	21.79	21.64	PASS
	15	26915	36	#Max	QPSK	21.61	21.46	PASS
	15	26915	75	#0	QPSK	21.67	21.52	PASS
	15	26915	1	#0	QAM16	21.86	21.71	PASS
	15	26915	1	#Mid	QAM16	21.94	21.79	PASS
	15	26915	1	#Max	QAM16	21.79	21.64	PASS
	15	26915	36	#0	QAM16	20.81	20.66	PASS
	15	26915	36	#Mid	QAM16	20.80	20.65	PASS
	15	26915	36	#Max	QAM16	20.65	20.50	PASS
	15	26915	75	#0	QAM16	20.75	20.60	PASS
	15	26965	1	#0	QPSK	22.55	22.40	PASS
	15	26965	1	#Mid	QPSK	22.62	22.47	PASS
	15	26965	1	#Max	QPSK	22.45	22.30	PASS
	15	26965	36	#0	QPSK	21.66	21.51	PASS
	15	26965	36	#Mid	QPSK	21.66	21.51	PASS
	15	26965	36	#Max	QPSK	21.54	21.39	PASS
	15	26965	75	#0	QPSK	21.59	21.44	PASS
	15	26965	1	#0	QAM16	21.70	21.55	PASS
	15	26965	1	#Mid	QAM16	21.75	21.60	PASS
	15	26965	1	#Max	QAM16	21.59	21.44	PASS
	15	26965	36	#0	QAM16	20.66	20.51	PASS
	15	26965	36	#Mid	QAM16	20.71	20.56	PASS
	15	26965	36	#Max	QAM16	20.55	20.40	PASS
	15	26965	75	#0	QAM16	20.69	20.54	PASS
	1.4	26797	1	#0	QAM64	21.81	21.66	PASS
	1.4	26797	1	#Mid	QAM64	21.88	21.73	PASS
	1.4	26797	1	#Max	QAM64	21.75	21.60	PASS



1.4	26797	3	#0	QAM64	21.54	21.39	PASS
1.4	26797	3	#Mid	QAM64	21.51	21.36	PASS
1.4	26797	3	#Max	QAM64	21.51	21.36	PASS
1.4	26797	6	#0	QAM64	20.45	20.30	PASS
1.4	26915	1	#0	QAM64	21.02	20.87	PASS
1.4	26915	1	#Mid	QAM64	21.20	21.05	PASS
1.4	26915	1	#Max	QAM64	21.04	20.89	PASS
1.4	26915	3	#0	QAM64	21.13	20.98	PASS
1.4	26915	3	#Mid	QAM64	21.12	20.97	PASS
1.4	26915	3	#Max	QAM64	21.15	21.00	PASS
1.4	26915	6	#0	QAM64	20.19	20.04	PASS
1.4	27033	1	#0	QAM64	21.10	20.95	PASS
1.4	27033	1	#Mid	QAM64	21.33	21.18	PASS
1.4	27033	1	#Max	QAM64	21.08	20.93	PASS
1.4	27033	3	#0	QAM64	21.26	21.11	PASS
1.4	27033	3	#Mid	QAM64	21.24	21.09	PASS
1.4	27033	3	#Max	QAM64	21.28	21.13	PASS
1.4	27033	6	#0	QAM64	20.20	20.05	PASS
3	26805	1	#0	QAM64	21.56	21.41	PASS
3	26805	1	#Mid	QAM64	21.59	21.44	PASS
3	26805	1	#Max	QAM64	21.52	21.37	PASS
3	26805	8	#0	QAM64	20.27	20.12	PASS
3	26805	8	#Mid	QAM64	20.31	20.16	PASS
3	26805	8	#Max	QAM64	20.33	20.18	PASS
3	26805	15	#0	QAM64	20.18	20.03	PASS
3	26915	1	#0	QAM64	21.41	21.26	PASS
3	26915	1	#Mid	QAM64	21.35	21.20	PASS
3	26915	1	#Max	QAM64	21.36	21.21	PASS
3	26915	8	#0	QAM64	20.20	20.05	PASS
3	26915	8	#Mid	QAM64	20.21	20.06	PASS
3	26915	8	#Max	QAM64	20.21	20.06	PASS
3	26915	15	#0	QAM64	20.14	19.99	PASS
3	27025	1	#0	QAM64	21.00	20.85	PASS
3	27025	1	#Mid	QAM64	21.06	20.91	PASS
3	27025	1	#Max	QAM64	21.03	20.88	PASS
3	27025	8	#0	QAM64	20.18	20.03	PASS
3	27025	8	#Mid	QAM64	20.17	20.02	PASS
3	27025	8	#Max	QAM64	20.13	19.98	PASS
3	27025	15	#0	QAM64	20.18	20.03	PASS
5	26815	1	#0	QAM64	21.40	21.25	PASS
5	26815	1	#Mid	QAM64	21.45	21.30	PASS
5	26815	1	#Max	QAM64	21.33	21.18	PASS
5	26815	12	#0	QAM64	20.19	20.04	PASS



	5	26815	12	#Mid	QAM64	20.16	20.01	PASS
	5	26815	12	#Max	QAM64	20.19	20.04	PASS
	5	26815	25	#0	QAM64	20.27	20.12	PASS
	5	26915	1	#0	QAM64	21.42	21.27	PASS
	5	26915	1	#Mid	QAM64	21.48	21.33	PASS
	5	26915	1	#Max	QAM64	21.39	21.24	PASS
	5	26915	12	#0	QAM64	20.24	20.09	PASS
	5	26915	12	#Mid	QAM64	20.19	20.04	PASS
	5	26915	12	#Max	QAM64	20.20	20.05	PASS
	5	26915	25	#0	QAM64	20.28	20.13	PASS
	5	27015	1	#0	QAM64	21.32	21.17	PASS
	5	27015	1	#Mid	QAM64	21.41	21.26	PASS
	5	27015	1	#Max	QAM64	21.29	21.14	PASS
	5	27015	12	#0	QAM64	20.13	19.98	PASS
	5	27015	12	#Mid	QAM64	20.08	19.93	PASS
	5	27015	12	#Max	QAM64	20.03	19.88	PASS
	5	27015	25	#0	QAM64	20.21	20.06	PASS
	10	26840	1	#0	QAM64	21.46	21.31	PASS
	10	26840	1	#Mid	QAM64	21.52	21.37	PASS
	10	26840	1	#Max	QAM64	21.40	21.25	PASS
	10	26840	25	#0	QAM64	20.37	20.22	PASS
	10	26840	25	#Mid	QAM64	20.36	20.21	PASS
	10	26840	25	#Max	QAM64	20.24	20.09	PASS
	10	26840	50	#0	QAM64	20.26	20.11	PASS
	10	26915	1	#0	QAM64	21.11	20.96	PASS
	10	26915	1	#Mid	QAM64	21.26	21.11	PASS
	10	26915	1	#Max	QAM64	21.01	20.86	PASS
	10	26915	25	#0	QAM64	20.37	20.22	PASS
	10	26915	25	#Mid	QAM64	20.39	20.24	PASS
	10	26915	25	#Max	QAM64	20.26	20.11	PASS
	10	26915	50	#0	QAM64	20.37	20.22	PASS
	10	26990	1	#0	QAM64	21.47	21.32	PASS
	10	26990	1	#Mid	QAM64	21.68	21.53	PASS
	10	26990	1	#Max	QAM64	21.39	21.24	PASS
	10	26990	25	#0	QAM64	20.35	20.20	PASS
	10	26990	25	#Mid	QAM64	20.38	20.23	PASS
	10	26990	25	#Max	QAM64	20.24	20.09	PASS
	10	26990	50	#0	QAM64	20.25	20.10	PASS
	15	26865	1	#0	QAM64	21.34	21.19	PASS
	15	26865	1	#Mid	QAM16	21.41	21.26	PASS
	15	26865	1	#Max	QAM16	21.25	21.10	PASS
	15	26865	36	#0	QAM16	20.30	20.15	PASS
	15	26865	36	#Mid	QAM64	20.31	20.16	PASS



	15	26865	36	#Max	QAM64	20.17	20.02	PASS
	15	26865	75	#0	QAM64	20.29	20.14	PASS
	15	26915	1	#0	QAM64	21.20	21.05	PASS
	15	26915	1	#Mid	QAM64	21.28	21.13	PASS
	15	26915	1	#Max	QAM64	21.10	20.95	PASS
	15	26915	36	#0	QAM64	20.32	20.17	PASS
	15	26915	36	#Mid	QAM64	20.34	20.19	PASS
	15	26915	36	#Max	QAM64	20.18	20.03	PASS
	15	26915	75	#0	QAM64	20.26	20.11	PASS
	15	26965	1	#0	QAM64	21.35	21.20	PASS
	15	26965	1	#Mid	QAM64	21.43	21.28	PASS
	15	26965	1	#Max	QAM64	21.28	21.13	PASS
	15	26965	36	#0	QAM64	20.24	20.09	PASS
	15	26965	36	#Mid	QAM64	20.23	20.08	PASS
	15	26965	36	#Max	QAM64	20.09	19.94	PASS
	15	26965	75	#0	QAM64	20.24	20.09	PASS

5.2. Occupied Bandwidth

Ambient condition

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

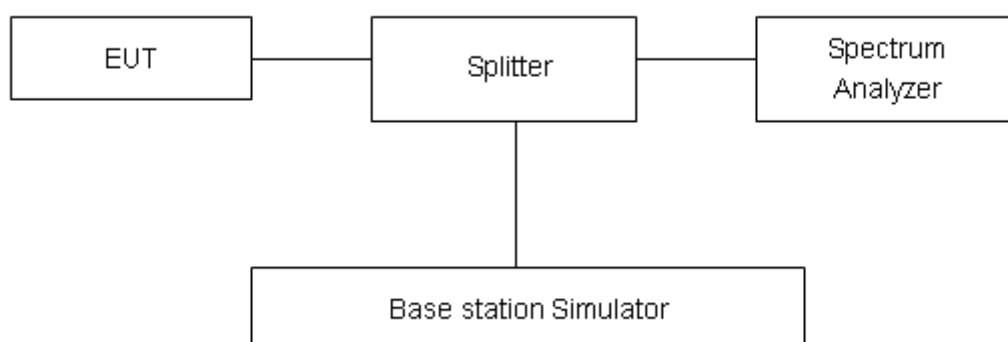
Method of Measurement

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	0.24401	0.3082
	190	836.6	0.24953	0.3122
	251	848.8	0.24252	0.3061
GPRS 850 (GMSK)	128	824.2	0.24369	0.3103
	190	836.6	0.24486	0.3066
	251	848.8	0.24467	0.3119
EGPRS 850 (8PSK)	128	824.2	0.25616	0.3257
	190	836.6	0.25846	0.3381
	251	848.8	0.25538	0.3349
WCDMA Band V (RMC)	4132	826.4	4.16580	4.6910
	4183	836.6	4.17290	4.6910
	4233	846.6	4.15620	4.6930

LTE Band 5						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	1.4	20407	824.7	1.095	1.274
			20525	836.5	1.088	1.269
			20643	848.3	1.090	1.282
		3	20415	825.5	2.692	2.910
			20525	836.5	2.703	2.908
			20635	847.5	2.689	2.898
		5	20425	826.5	4.501	4.865
			20525	836.5	4.498	4.905
			20625	846.5	4.501	4.910
		10	20450	829	8.971	9.702
			20525	836.5	9.002	9.757
			20600	844	8.970	9.586
	16QAM	1.4	20407	824.7	1.090	1.287
			20525	836.5	1.094	1.323
			20643	848.3	1.097	1.264
		3	20415	825.5	2.686	2.904



			20525	836.5	2.684	2.908
			20635	847.5	2.677	2.908
		5	20425	826.5	4.514	4.889
			20525	836.5	4.511	4.927
			20625	846.5	4.497	4.866
		10	20450	829	8.972	9.706
			20525	836.5	9.003	9.637
			20600	844	8.962	9.697
	64QAM	1.4	20407	824.7	1.089	1.274
			20525	836.5	1.096	1.326
			20643	848.3	1.092	1.269
		3	20415	825.5	2.679	2.895
			20525	836.5	2.682	2.935
			20635	847.5	2.688	2.904
		5	20425	826.5	4.510	4.957
			20525	836.5	4.513	4.937
			20625	846.5	4.500	4.903
		10	20450	829	8.990	9.665
			20525	836.5	9.005	9.707
			20600	844	8.976	9.652

LTE Band 26						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	1.4	26797	824.7	1.098	1.279
			26915	836.5	1.095	1.287
			27033	848.3	1.088	1.281
		3	26805	825.5	2.695	2.922
			26915	836.5	2.691	2.916
			27025	847.5	2.689	2.904
		5	26815	826.5	4.511	4.891
			26915	836.5	4.496	4.882
			27015	846.5	4.503	4.904
		10	26840	829	8.972	9.666
			26915	836.5	8.994	9.719



			26990	844	8.992	9.652
		15	26865	831.5	13.472	14.531
			26915	836.5	13.474	14.559
			26965	841.5	13.425	14.416
	16QAM	1.4	26797	824.7	1.096	1.298
			26915	836.5	1.100	1.274
			27033	848.3	1.085	1.277
		3	26805	825.5	2.695	2.934
			26915	836.5	2.693	2.935
			27025	847.5	2.682	2.896
		5	26815	826.5	4.497	4.891
			26915	836.5	4.506	4.922
			27015	846.5	4.492	4.898
		10	26840	829	8.973	9.690
			26915	836.5	9.004	9.762
			26990	844	8.992	9.569
		15	26865	831.5	13.489	14.428
			26915	836.5	13.453	14.351
			26965	841.5	13.434	14.437
	64QAM	1.4	26797	824.7	1.093	1.300
			26915	836.5	1.090	1.275
			27033	848.3	1.092	1.277
		3	26805	825.5	2.688	2.901
			26915	836.5	2.689	2.923
			27025	847.5	2.698	2.928
		5	26815	826.5	4.519	4.916
			26915	836.5	4.502	4.903
			27015	846.5	4.505	4.906
		10	26840	829	8.980	9.605
			26915	836.5	8.981	9.782
			26990	844	8.991	9.696
		15	26865	831.5	13.481	14.448
			26915	836.5	13.459	14.536
			26965	841.5	13.452	14.440



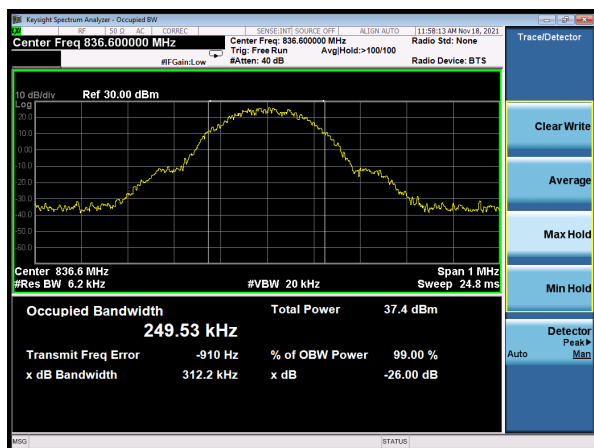
GSM 850 CH-Low



GSM 850 GPRS CH-Low



GSM 850 CH-Middle



GSM 850 GPRS CH-Middle



GSM 850 CH-High

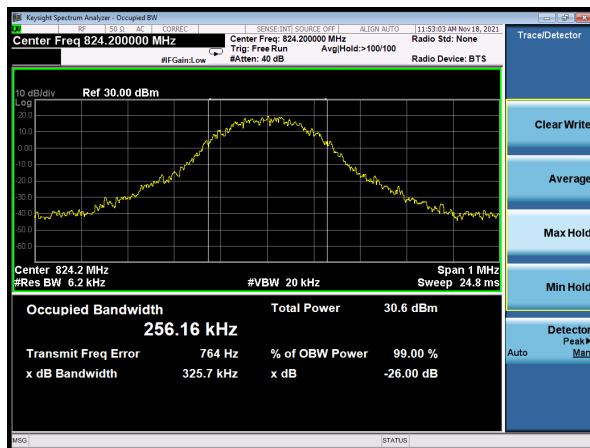


GSM 850 GPRS CH-High

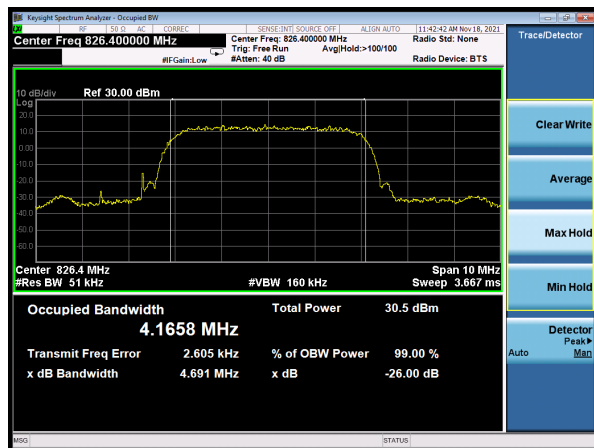




GSM 850 EGPRS CH-Low



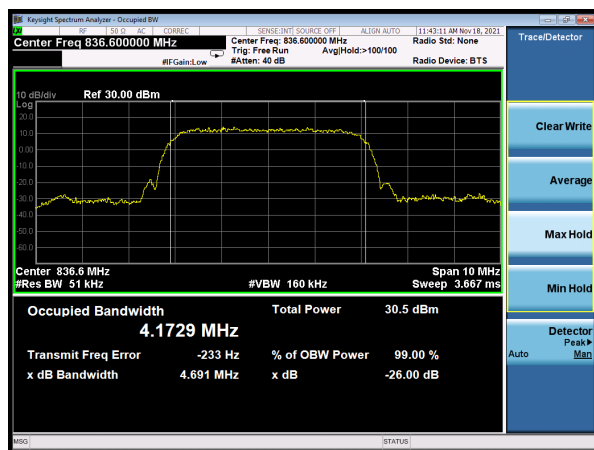
WCDMA Band V CH-Low



GSM 850 EGPRS CH-Middle



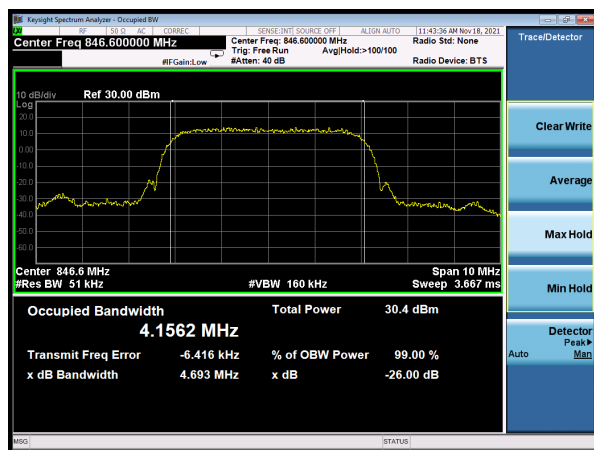
WCDMA Band V CH-Middle



GSM 850 EGPRS CH-High

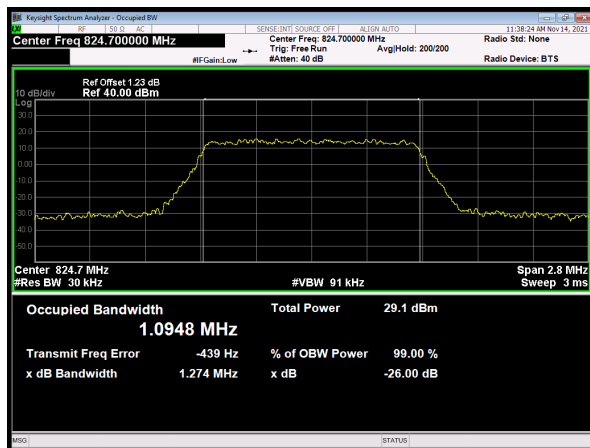


WCDMA Band V CH-High

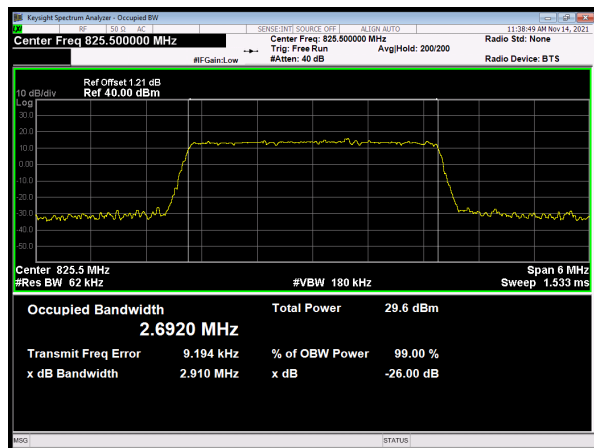




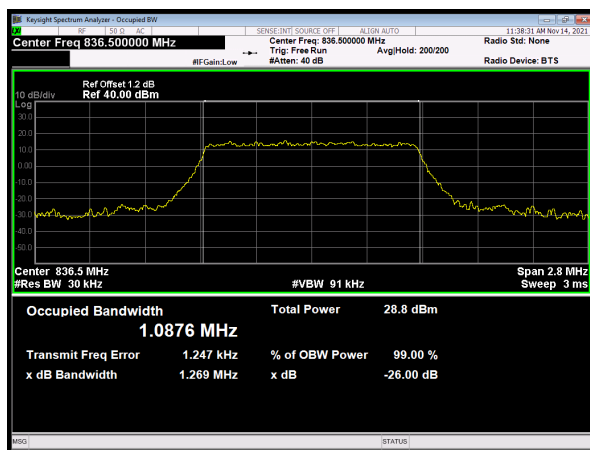
LTE Band 5 QPSK 1.4MHz CH-Low



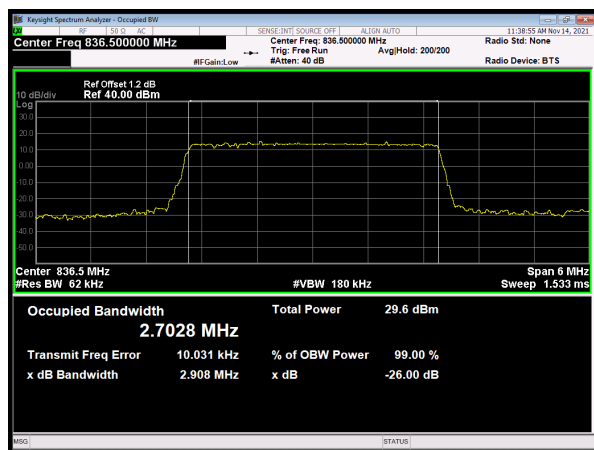
LTE Band 5 QPSK 3MHz CH-Low



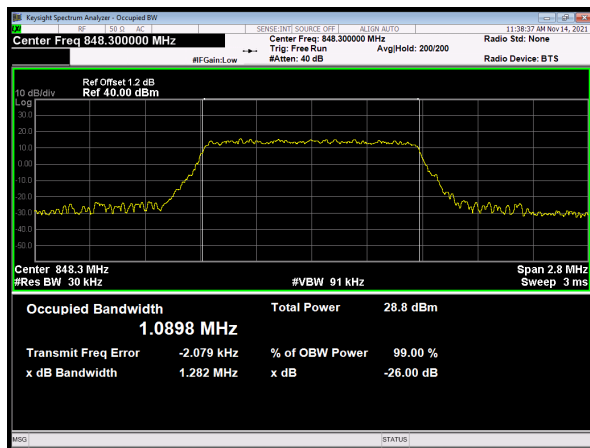
LTE Band 5 QPSK 1.4MHz CH-Middle



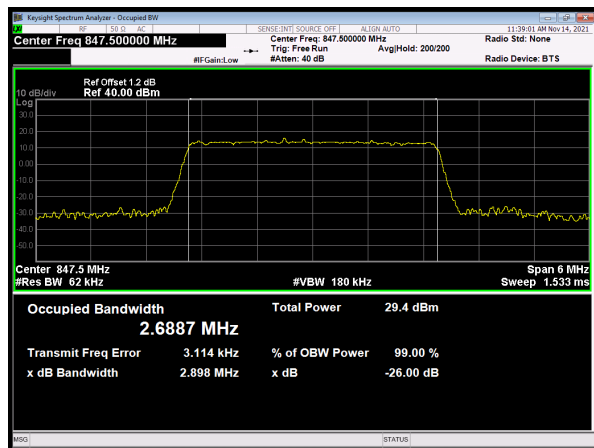
LTE Band 5 QPSK 3MHz CH-Middle



LTE Band 5 QPSK 1.4MHz CH-High

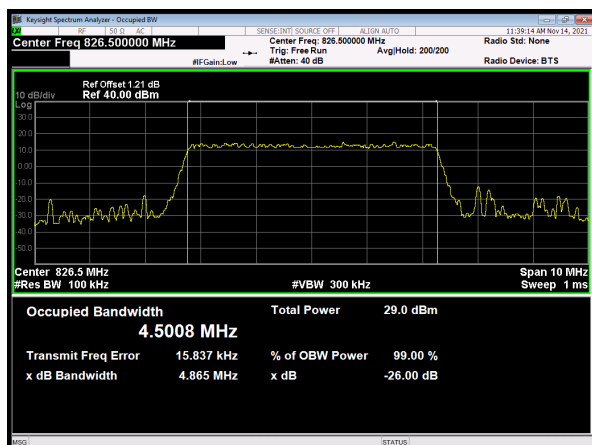


LTE Band 5 QPSK 3MHz CH-High

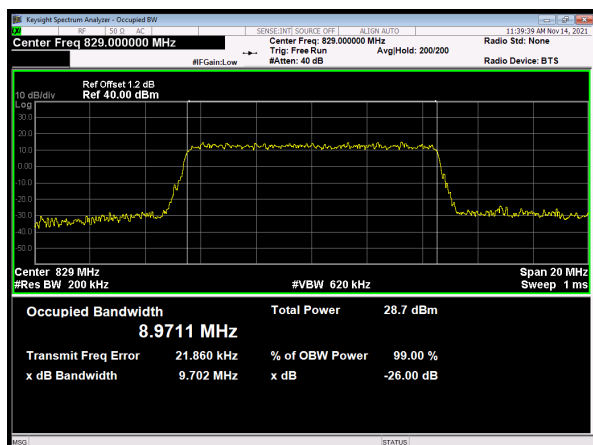




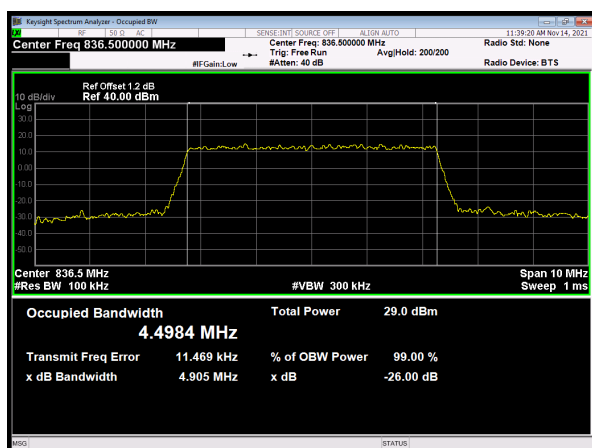
LTE Band 5 QPSK 5MHz CH-Low



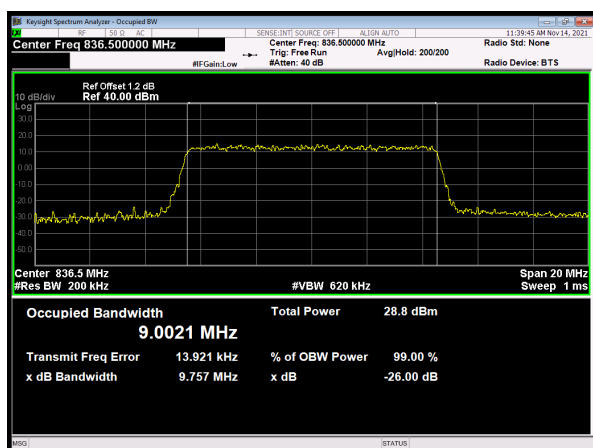
LTE Band 5 QPSK 10MHz CH-Low



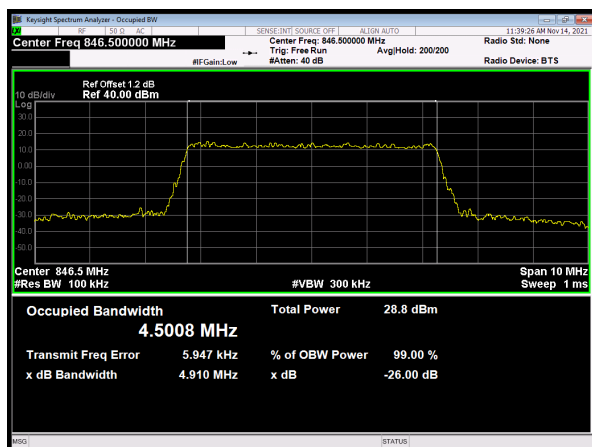
LTE Band 5 QPSK 5MHz CH-Middle



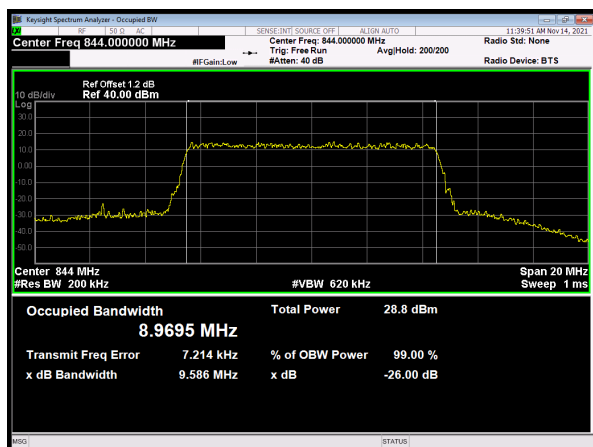
LTE Band 5 QPSK 10MHz CH-Middle



LTE Band 5 QPSK 5MHz CH-High

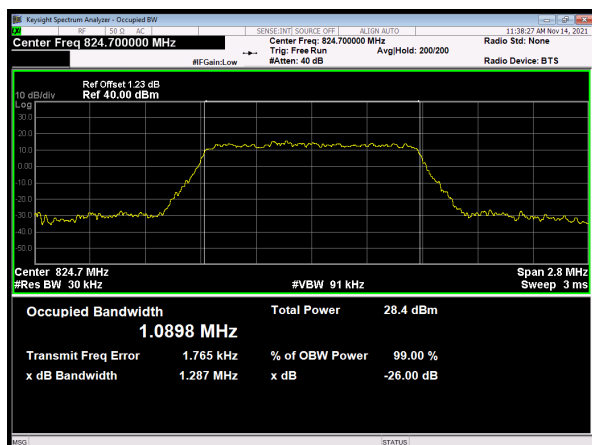


LTE Band 5 QPSK 10MHz CH-High

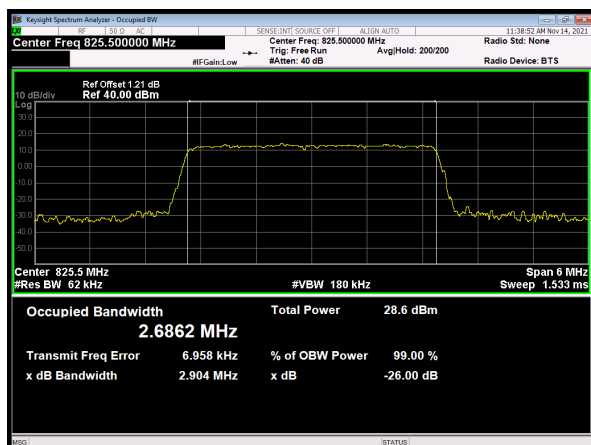




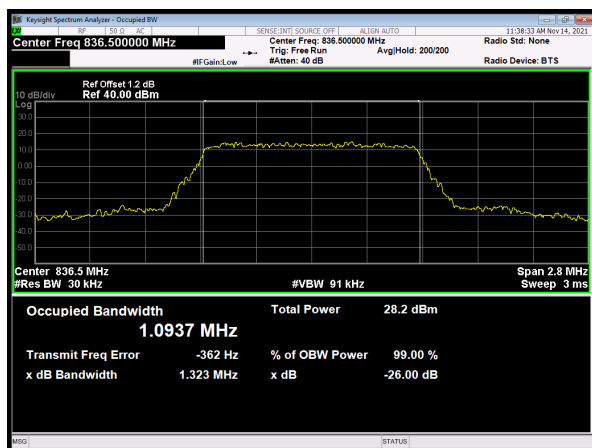
LTE Band 5 16QAM 1.4MHz CH-Low



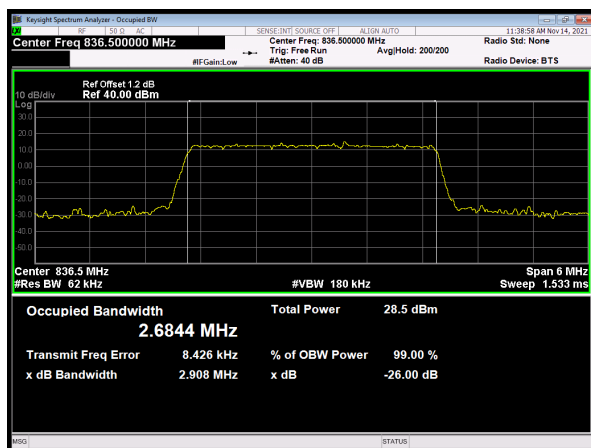
LTE Band 5 16QAM 3MHz CH-Low



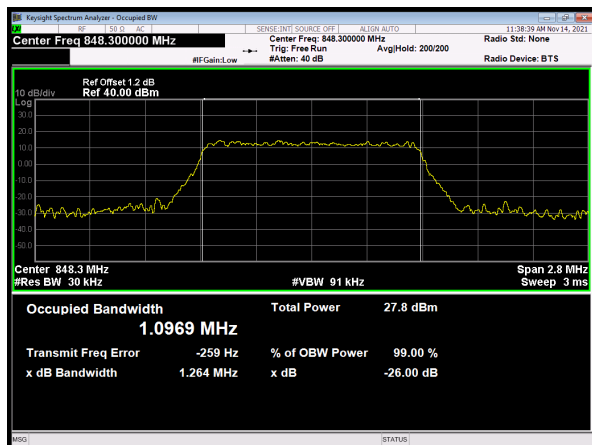
LTE Band 5 16QAM 1.4MHz CH-Middle



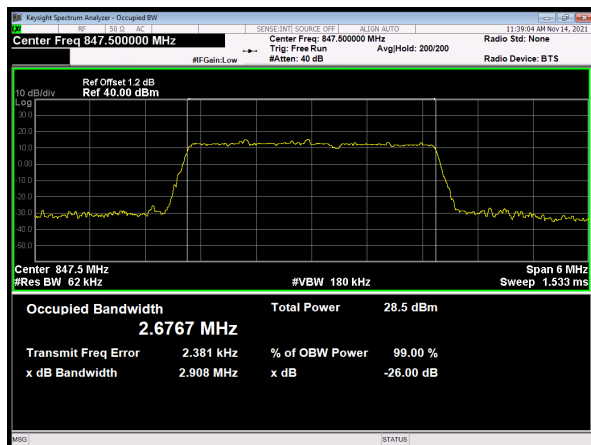
LTE Band 5 16QAM 3MHz CH-Middle



LTE Band 5 16QAM 1.4MHz CH-High

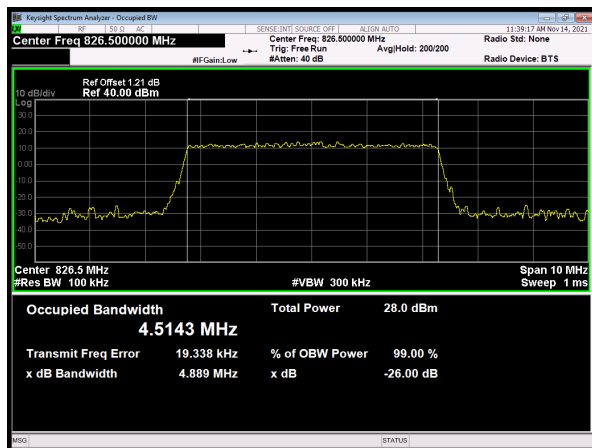


LTE Band 5 16QAM 3MHz CH-High

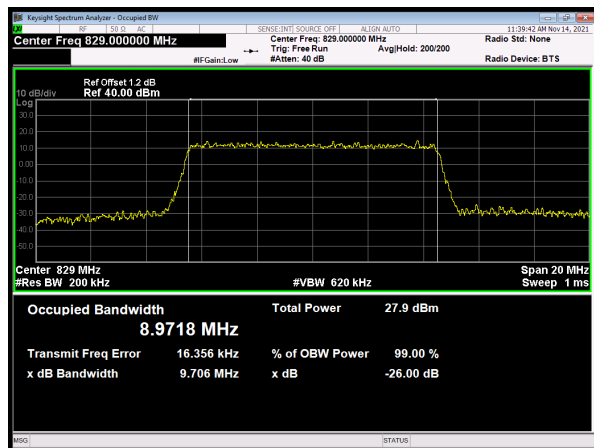




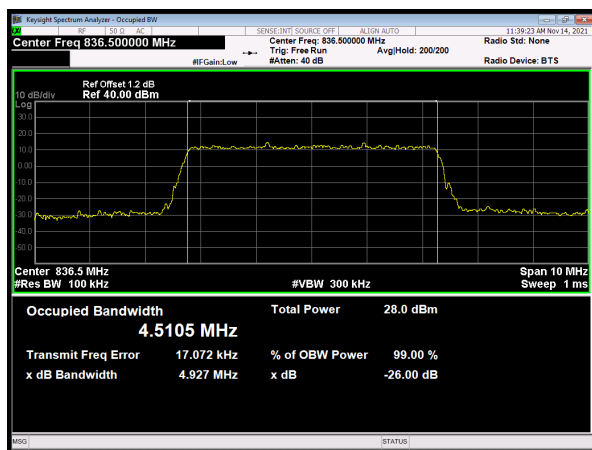
LTE Band 5 16QAM 5MHz CH-Low



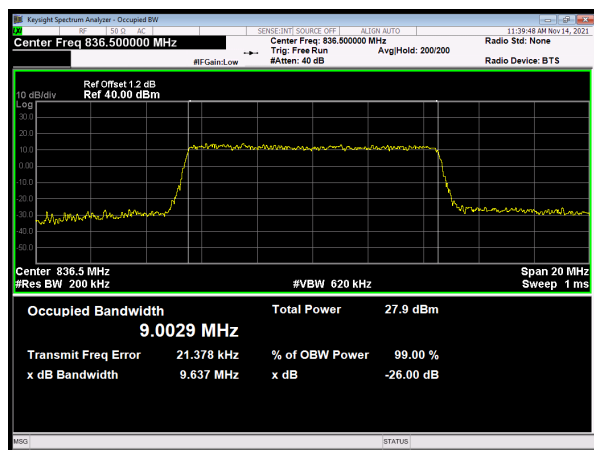
LTE Band 5 16QAM 10MHz CH-Low



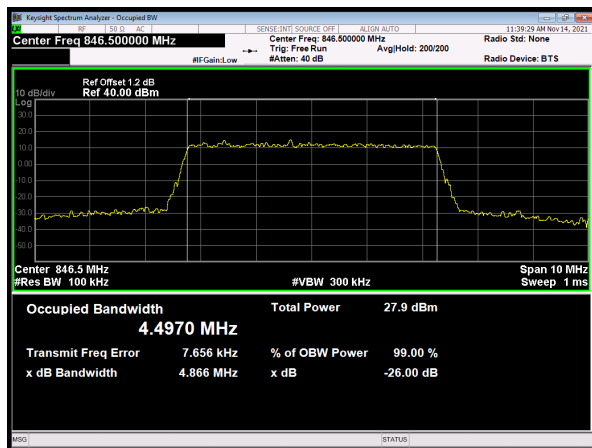
LTE Band 5 16QAM 5MHz CH-Middle



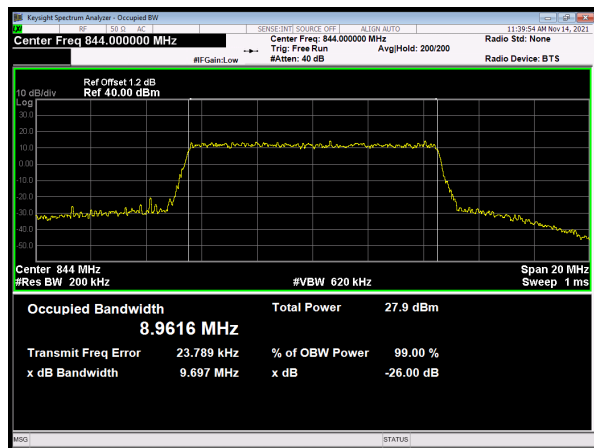
LTE Band 5 16QAM 10MHz CH-Middle



LTE Band 5 16QAM 5MHz CH-High

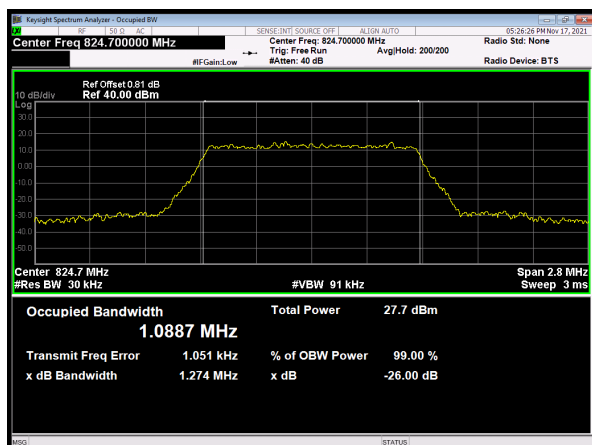


LTE Band 5 16QAM 10MHz CH-High

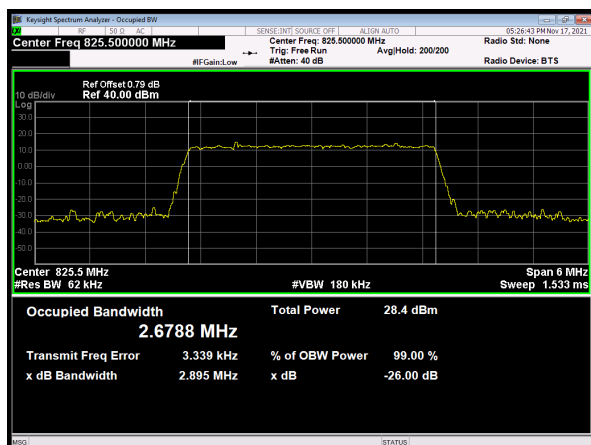




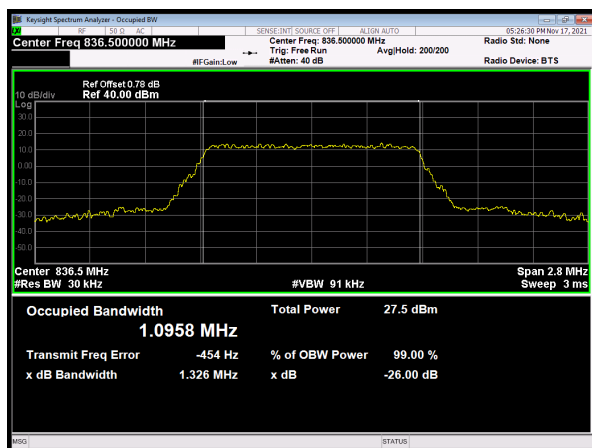
LTE Band 5 64QAM 1.4MHz CH-Low



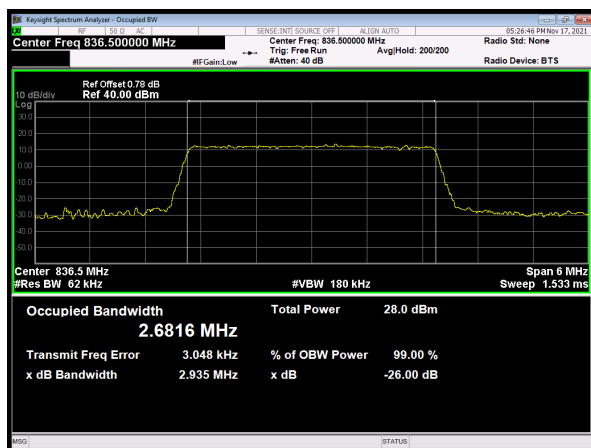
LTE Band 5 64QAM 3MHz CH-Low



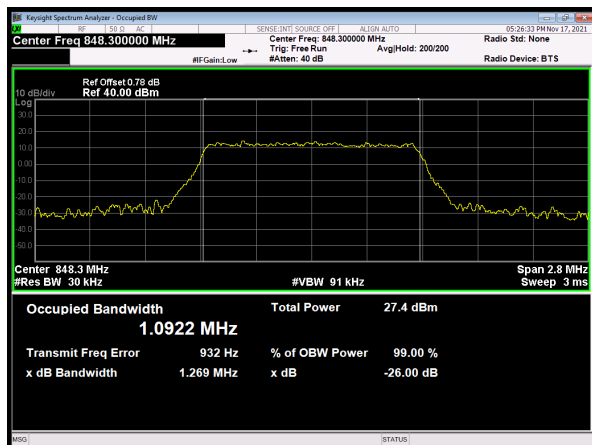
LTE Band 5 64QAM 1.4MHz CH-Middle



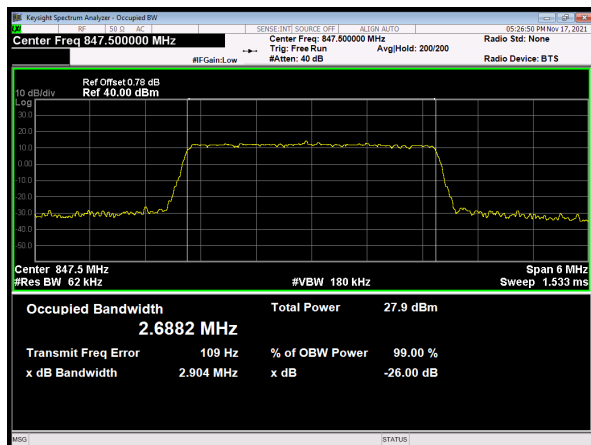
LTE Band 5 64QAM 3MHz CH-Middle



LTE Band 5 64QAM 1.4MHz CH-High

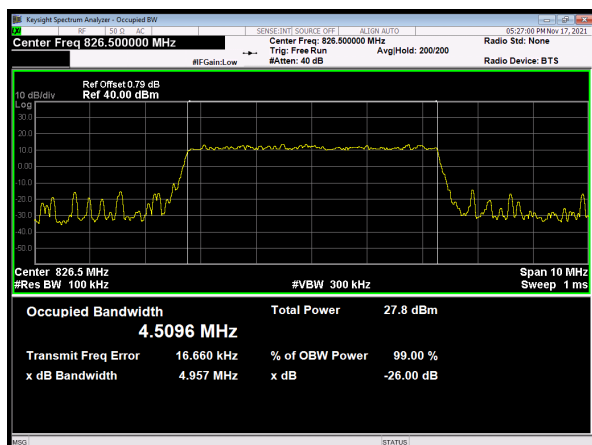


LTE Band 5 64QAM 3MHz CH-High

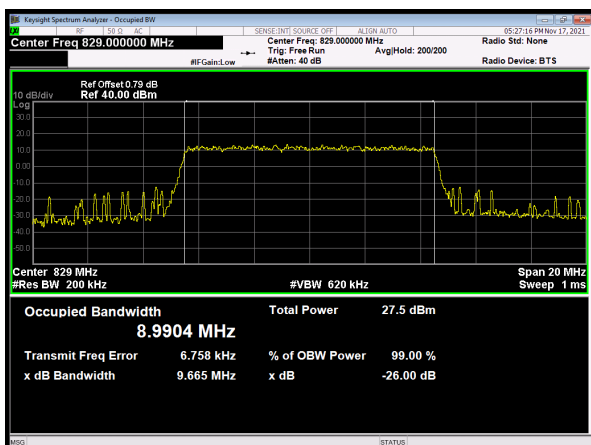




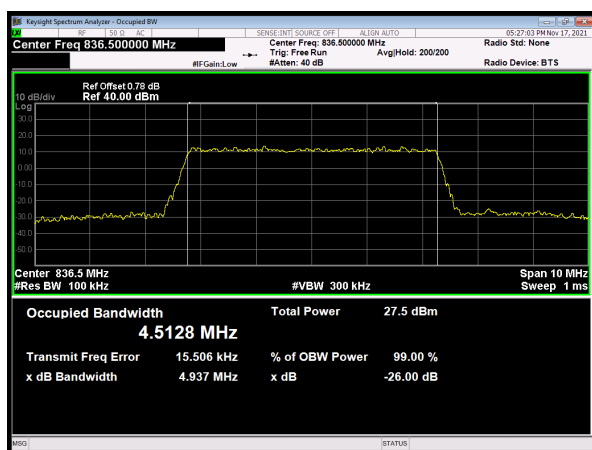
LTE Band 5 64QAM 5MHz CH-Low



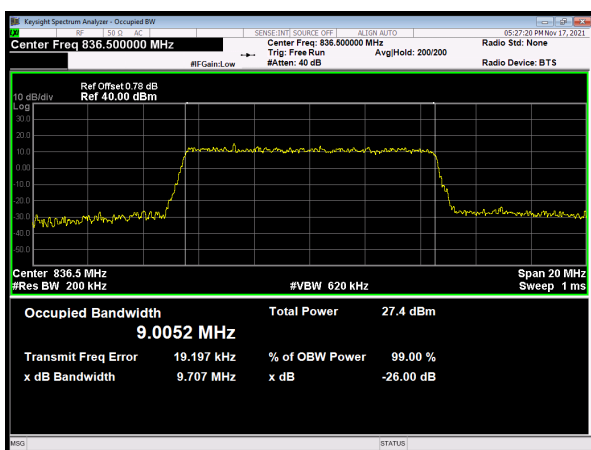
LTE Band 5 64QAM 10MHz CH-Low



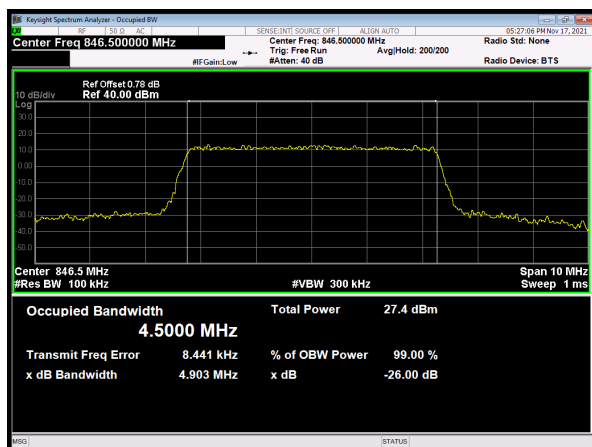
LTE Band 5 64QAM 5MHz CH-Middle



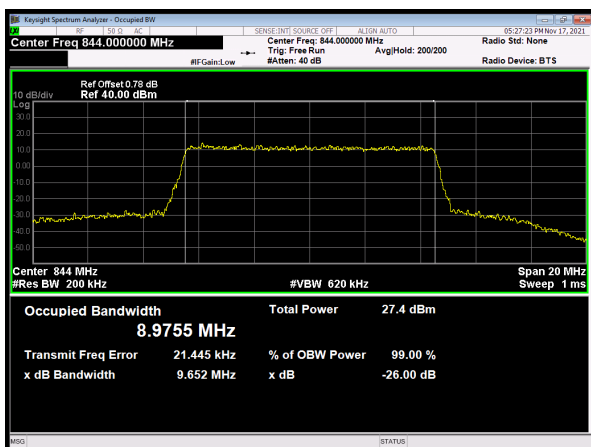
LTE Band 5 64QAM 10MHz CH-Middle



LTE Band 5 64QAM 5MHz CH-High

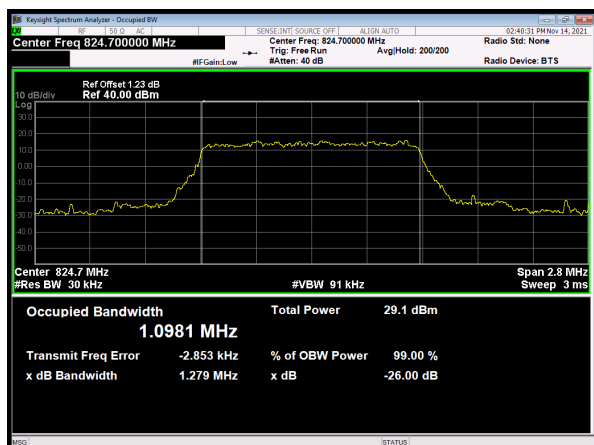


LTE Band 5 64QAM 10MHz CH-High

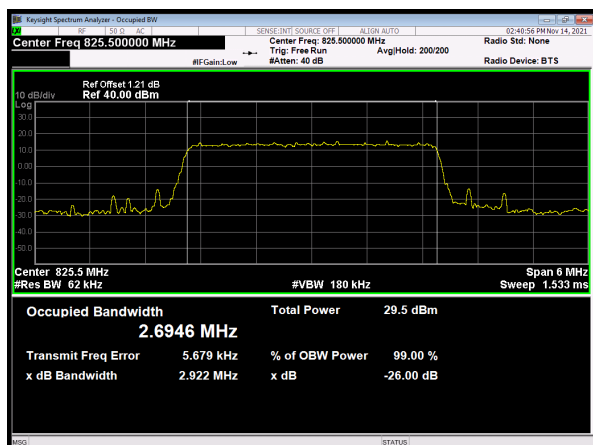




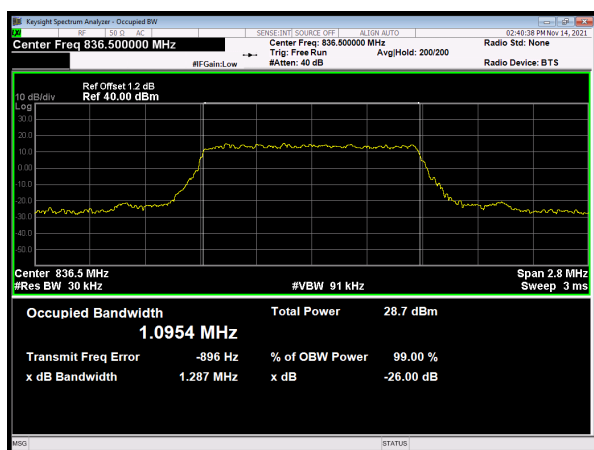
LTE Band 26 QPSK 1.4MHz CH-Low



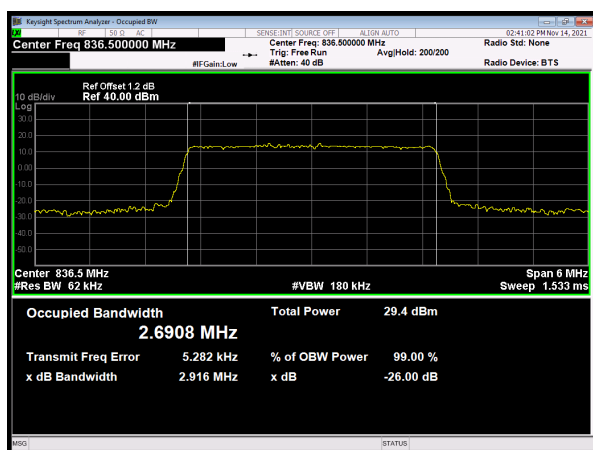
LTE Band 26 QPSK 3MHz CH-Low



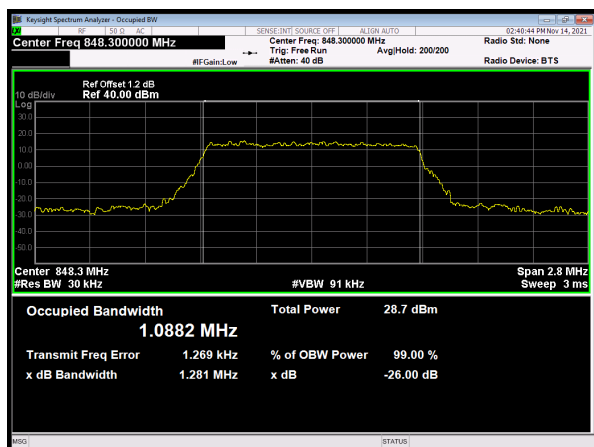
LTE Band 26 QPSK 1.4MHz CH-Middle



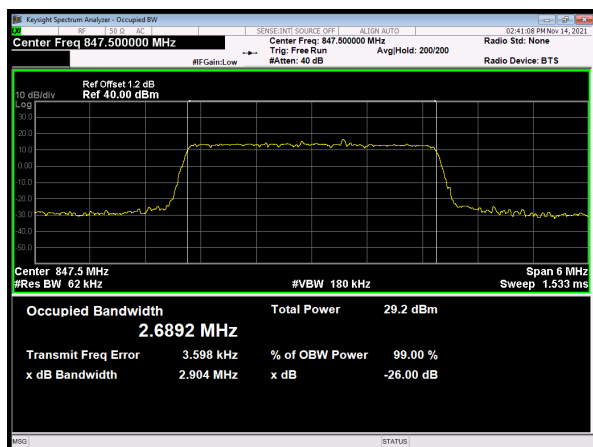
LTE Band 26 QPSK 3MHz CH-Middle



LTE Band 26 QPSK 1.4MHz CH-High

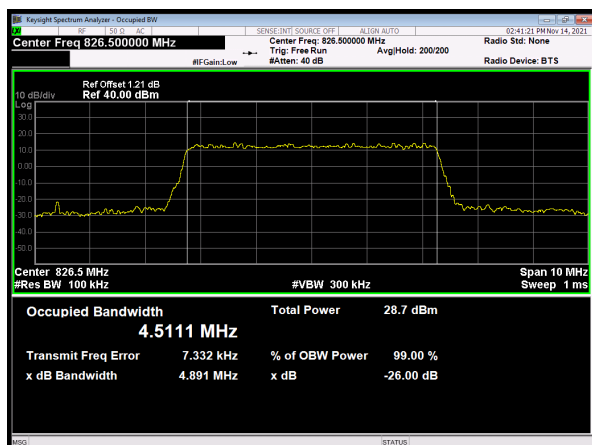


LTE Band 26 QPSK 3MHz CH-High

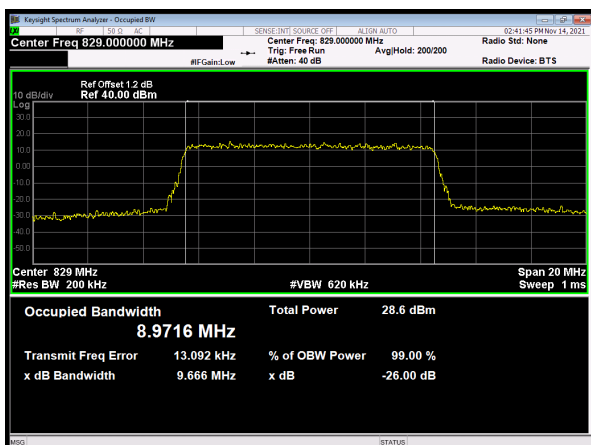




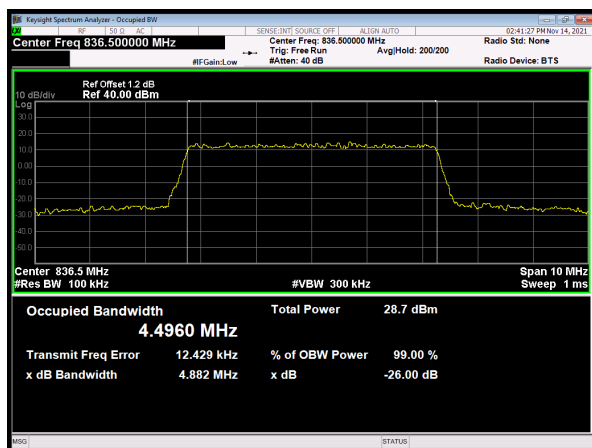
LTE Band 26 QPSK 5MHz CH-Low



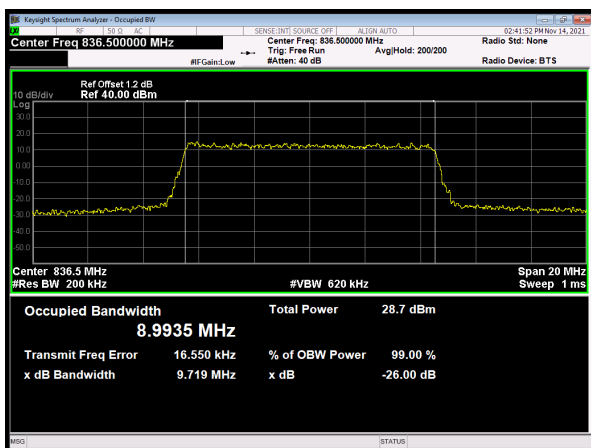
LTE Band 26 QPSK 10MHz CH-Low



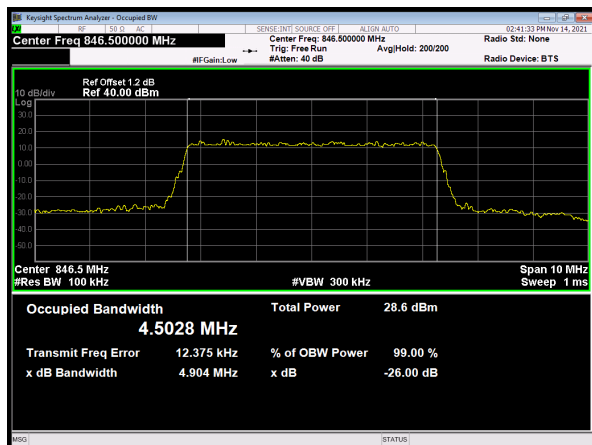
LTE Band 26 QPSK 5MHz CH-Middle



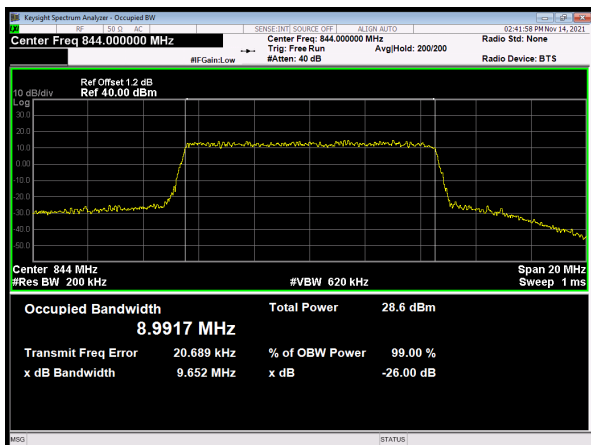
LTE Band 26 QPSK 10MHz CH-Middle



LTE Band 26 QPSK 5MHz CH-High

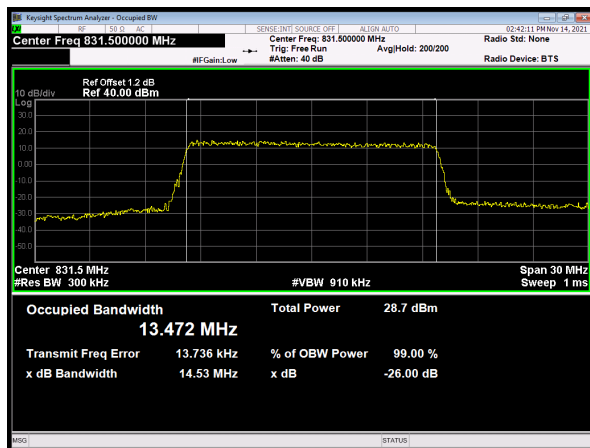


LTE Band 26 QPSK 10MHz CH-High

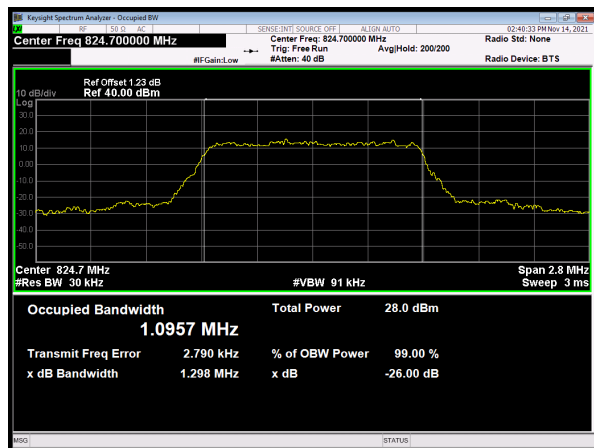




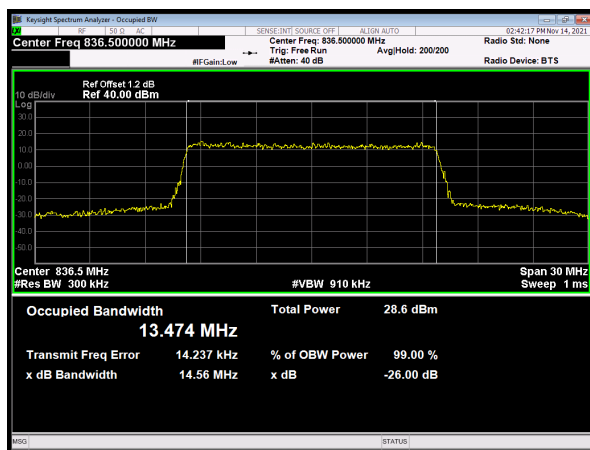
LTE Band 26 QPSK 15MHz CH-Low



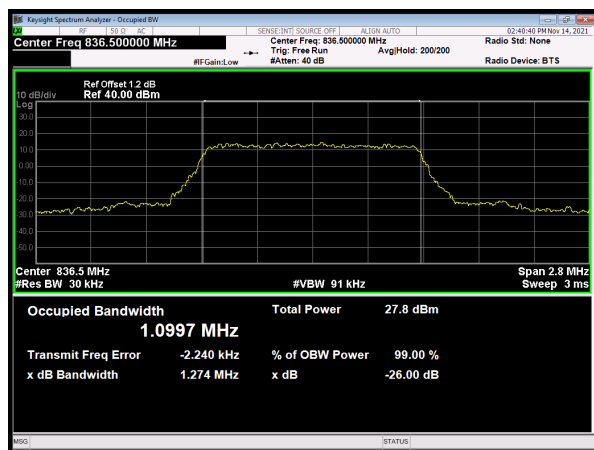
LTE Band 26 16QAM 1.4MHz CH-Low



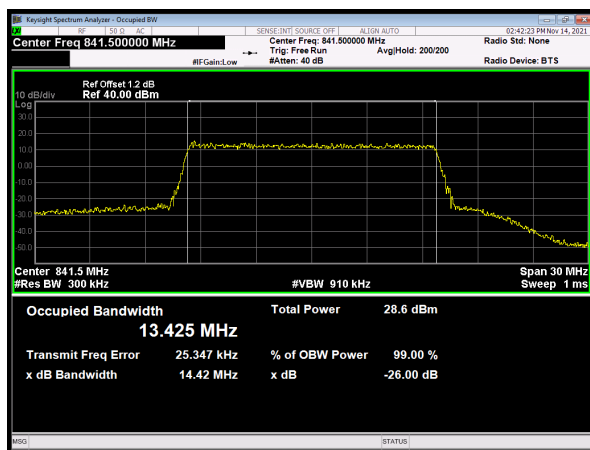
LTE Band 26 QPSK 15MHz CH-Middle



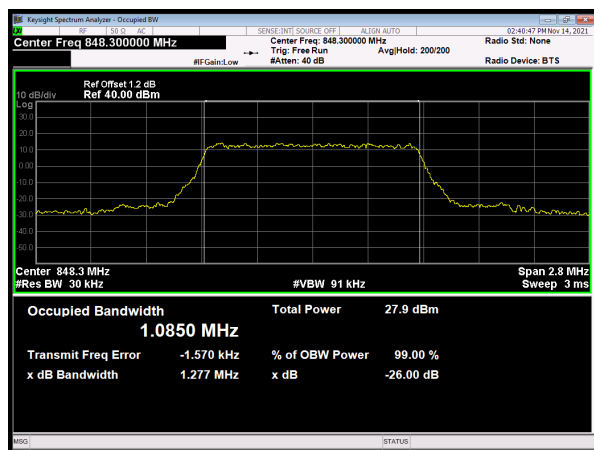
LTE Band 26 16QAM 1.4MHz CH-Middle



LTE Band 26 QPSK 15MHz CH-High

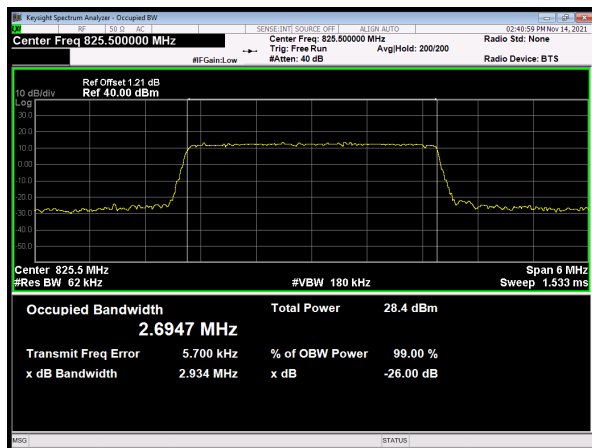


LTE Band 26 16QAM 1.4MHz CH-High

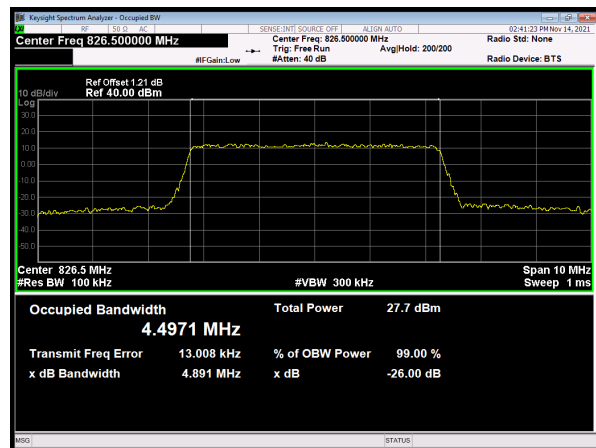




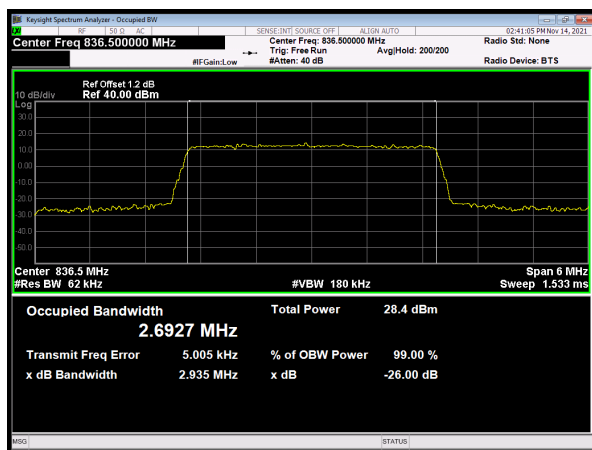
LTE Band 26 16QAM 3MHz CH-Low



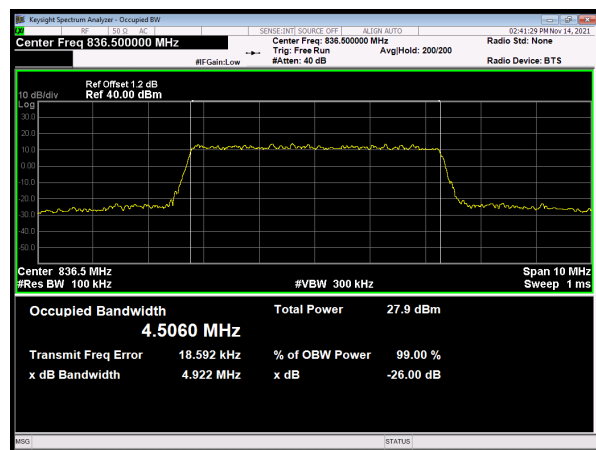
LTE Band 26 16QAM 5MHz CH-Low



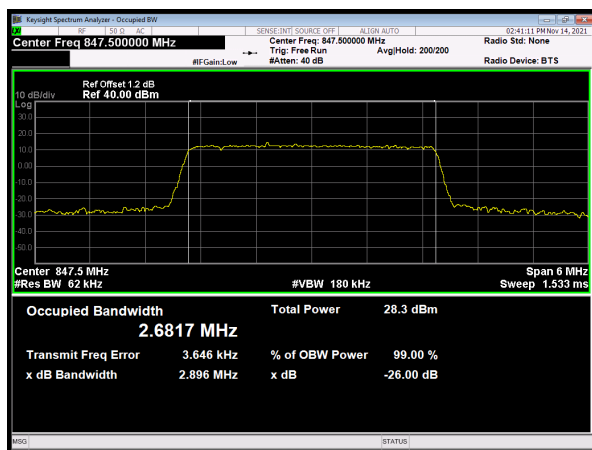
LTE Band 26 16QAM 3MHz CH-Middle



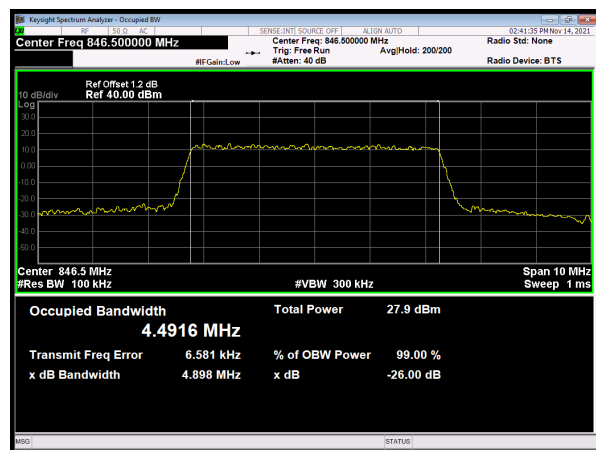
LTE Band 26 16QAM 5MHz CH-Middle



LTE Band 26 16QAM 3MHz CH-High

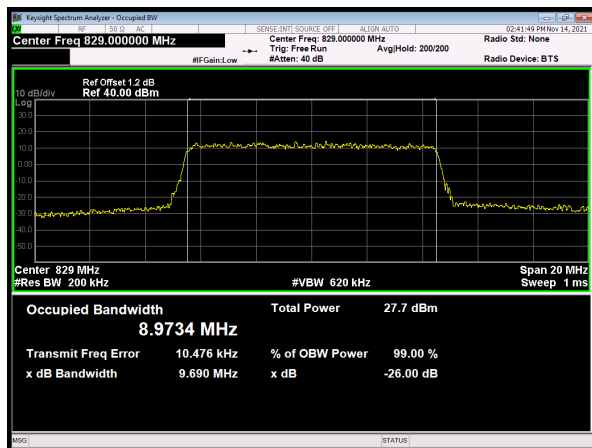


LTE Band 26 16QAM 5MHz CH-High

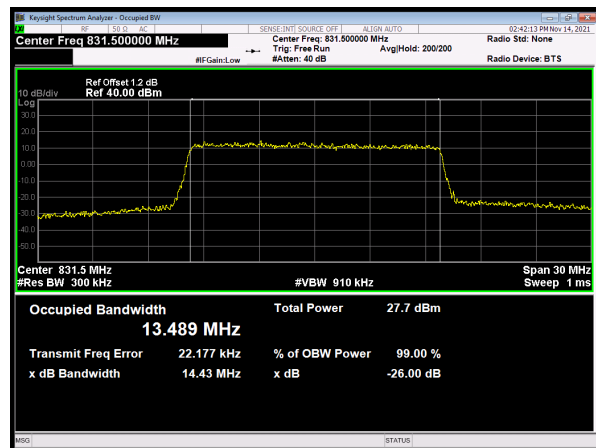




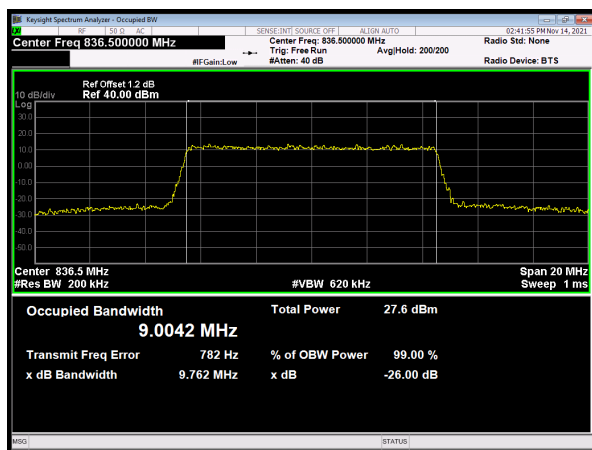
LTE Band 26 16QAM 10MHz CH-Low



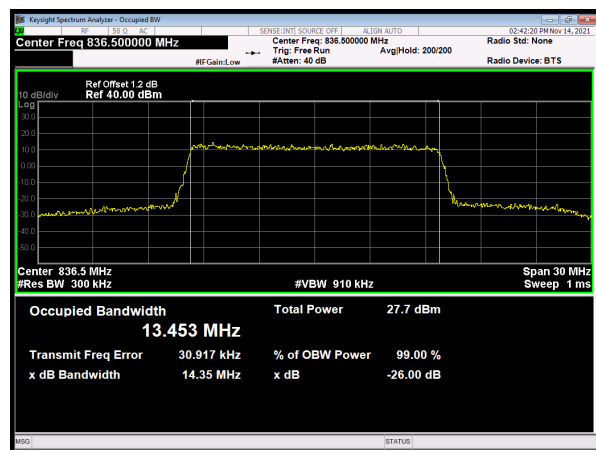
LTE Band 26 16QAM 15MHz CH-Low



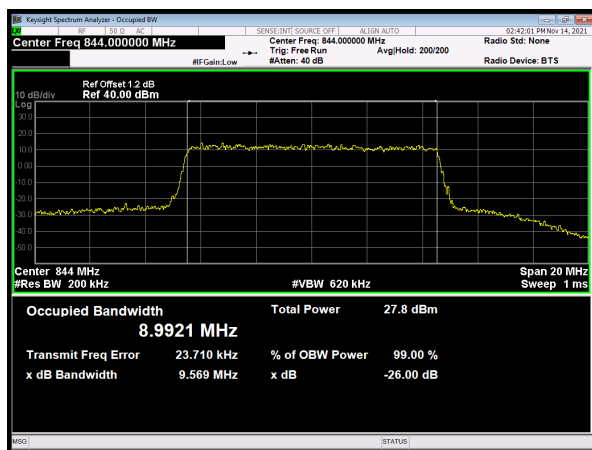
LTE Band 26 16QAM 10MHz CH-Middle



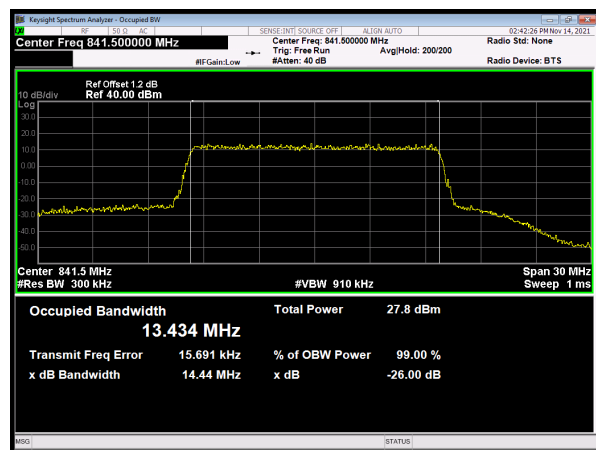
LTE Band 26 16QAM 15MHz CH-Middle



LTE Band 26 16QAM 10MHz CH-High

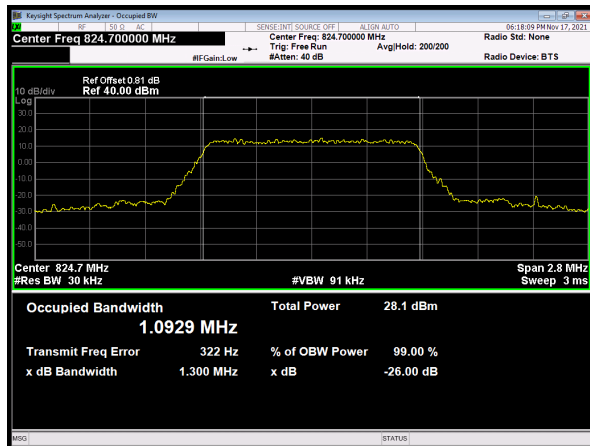


LTE Band 26 16QAM 15MHz CH-High

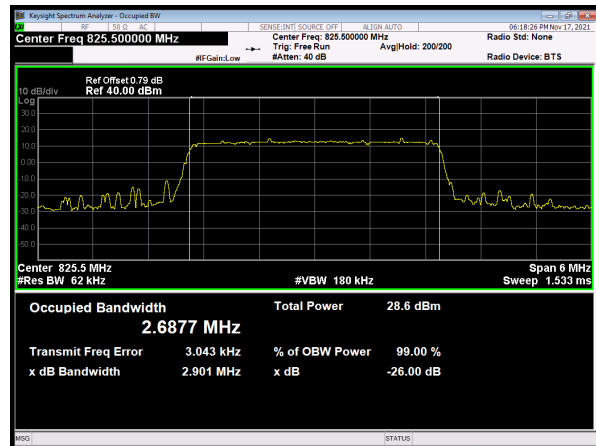




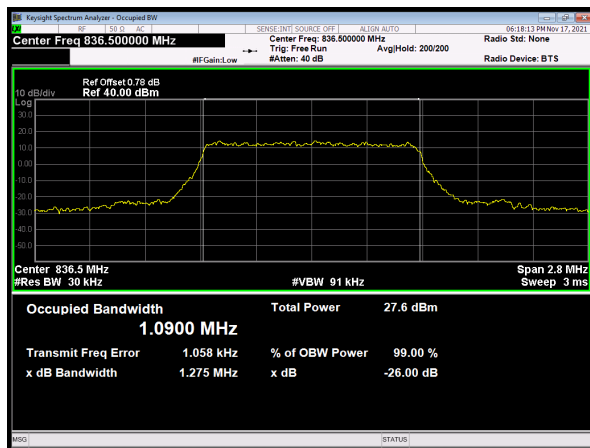
LTE Band 26 64QAM 1.4MHz CH-Low



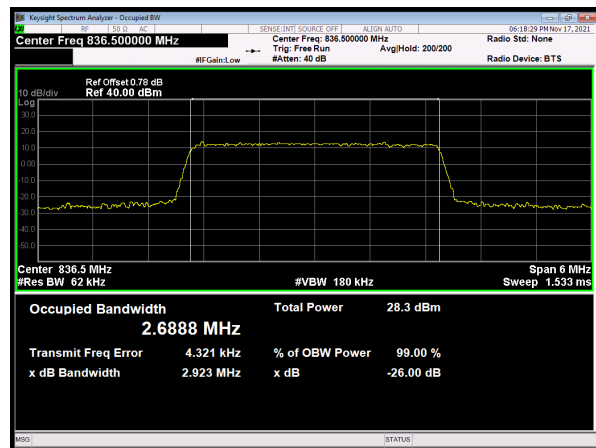
LTE Band 26 64QAM 3MHz CH-Low



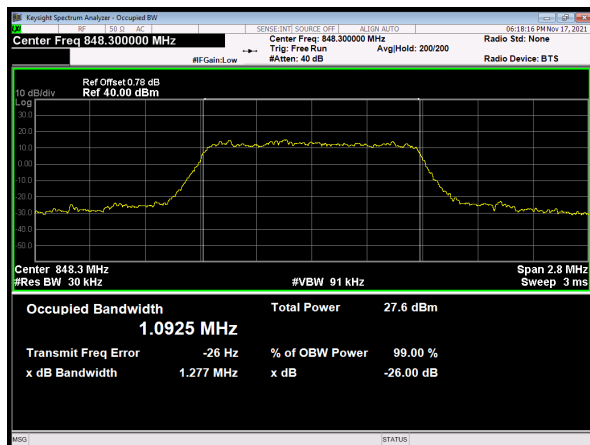
LTE Band 26 64QAM 1.4MHz CH-Middle



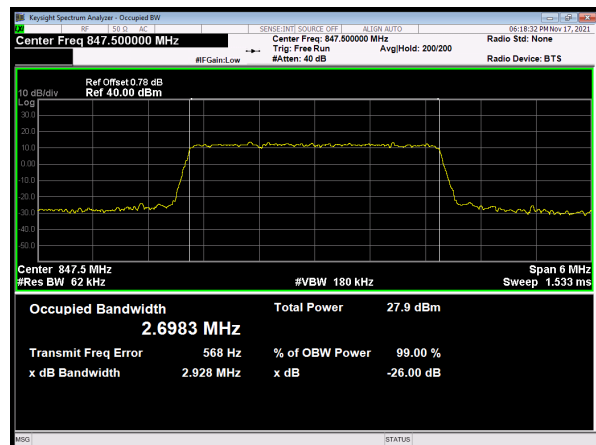
LTE Band 26 64QAM 3MHz CH-Middle



LTE Band 26 64QAM 1.4MHz CH-High

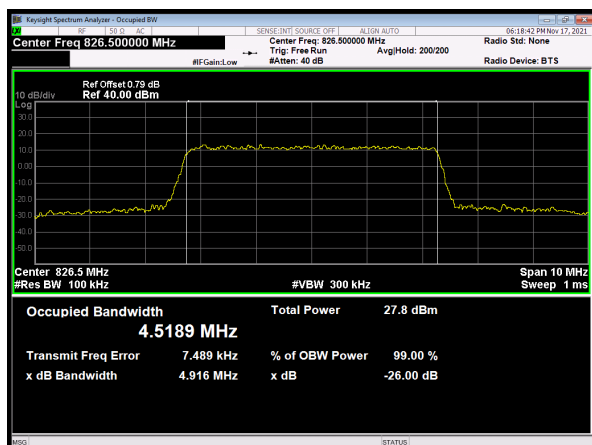


LTE Band 26 64QAM 3MHz CH-High

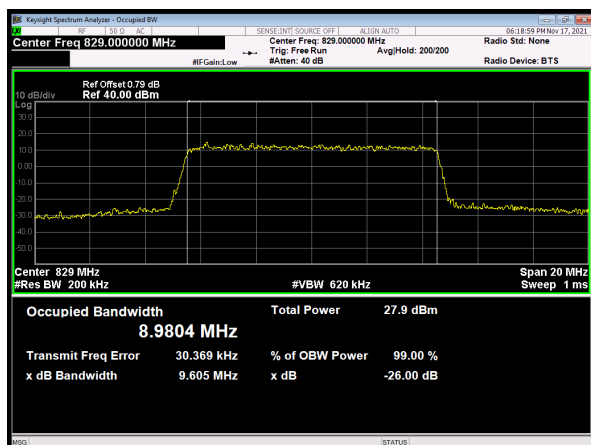




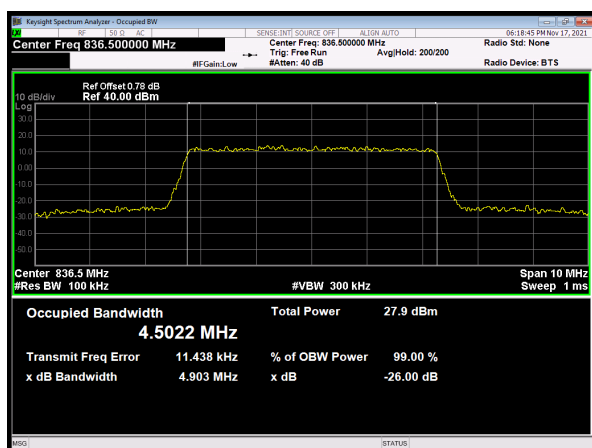
LTE Band 26 64QAM 5MHz CH-Low



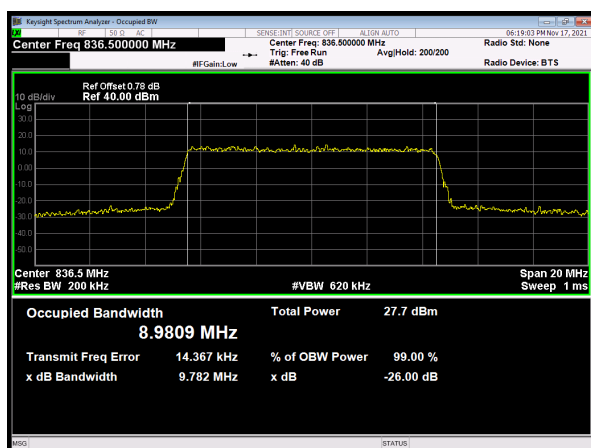
LTE Band 26 64QAM 10MHz CH-Low



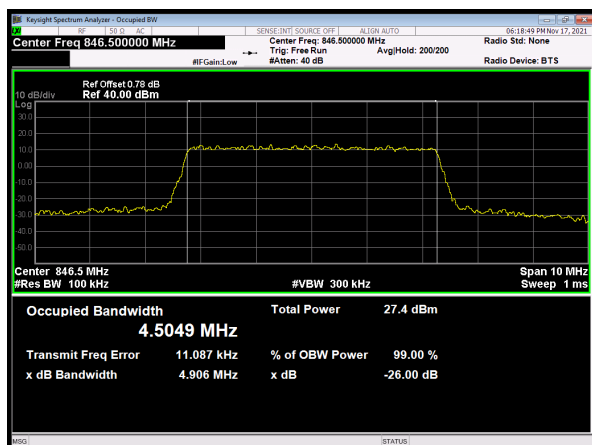
LTE Band 26 64QAM 5MHz CH-Middle



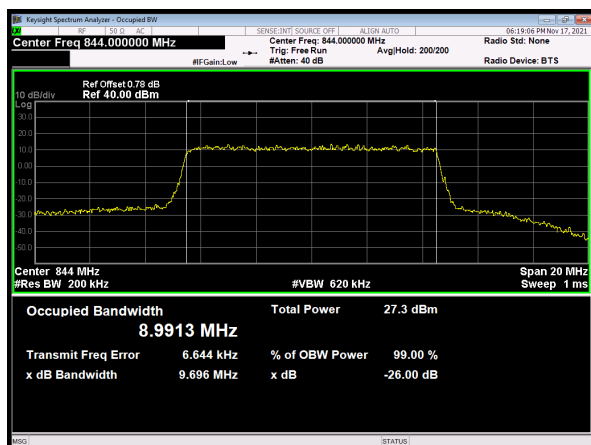
LTE Band 26 64QAM 10MHz CH-Middle



LTE Band 26 64QAM 5MHz CH-High

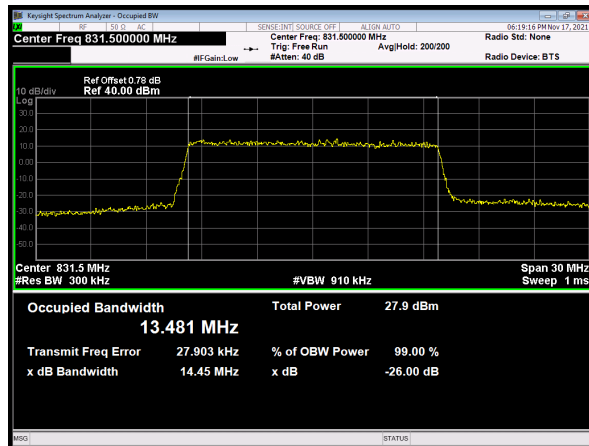


LTE Band 26 64QAM 10MHz CH-High

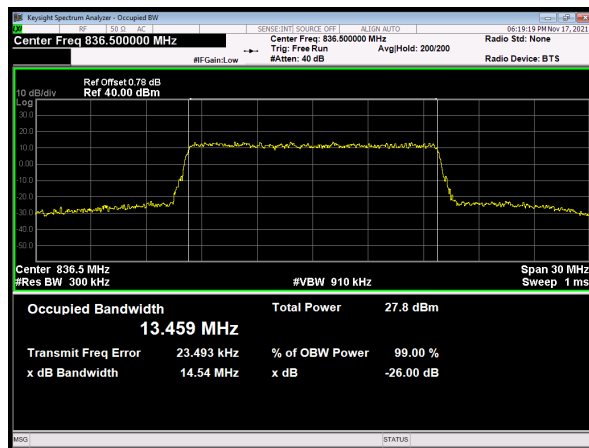




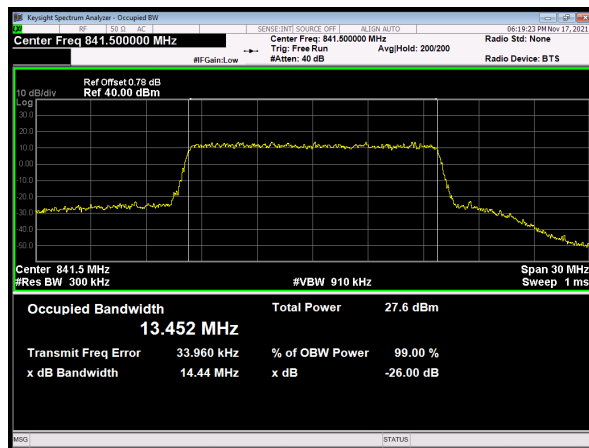
LTE Band 26 64QAM 15MHz CH-Low



LTE Band 26 64QAM 15MHz CH-Middle



LTE Band 26 64QAM 15MHz CH-High



5.3. Band Edge Compliance

Ambient condition

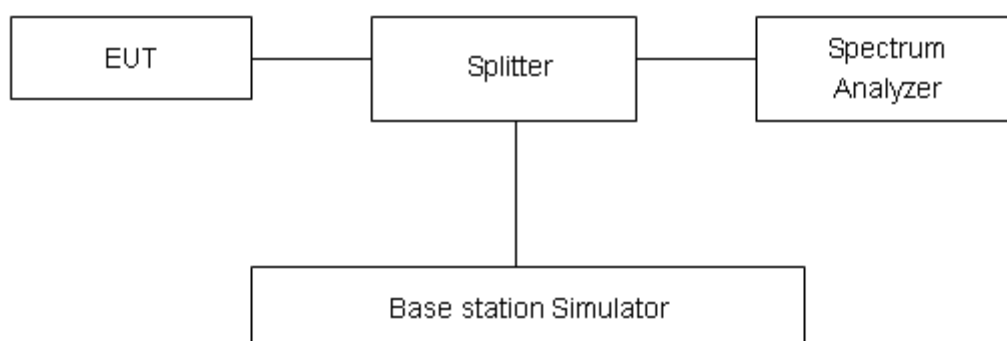
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The average detector is used. RBW is set to $\geq 1\%EBW$, VBW is set to 3x RBW.

Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 22.917(a) specifies that “The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.”

Limit	-13 dBm
-------	---------

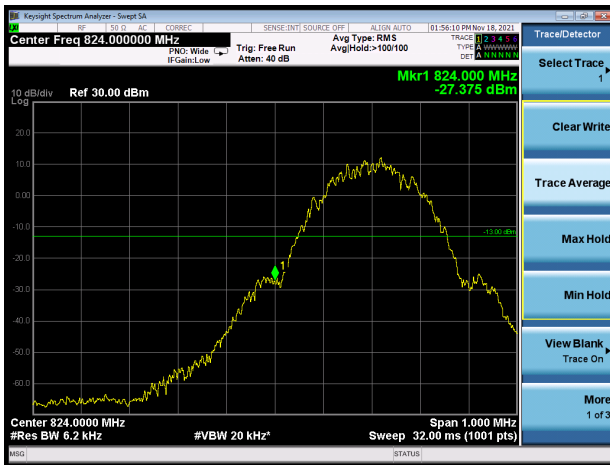
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U=0.684dB$.



Test Result:

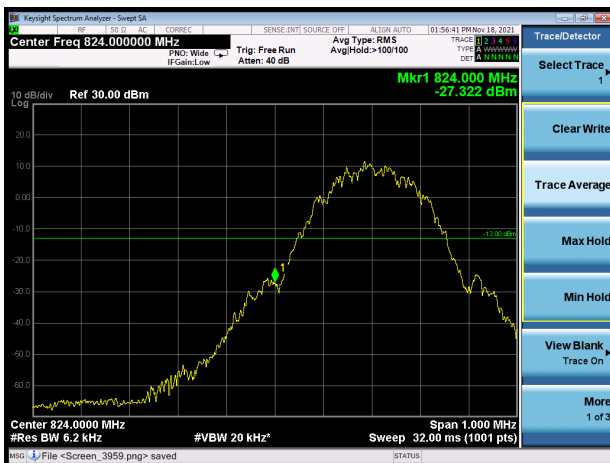
GSM 850 CH-Low



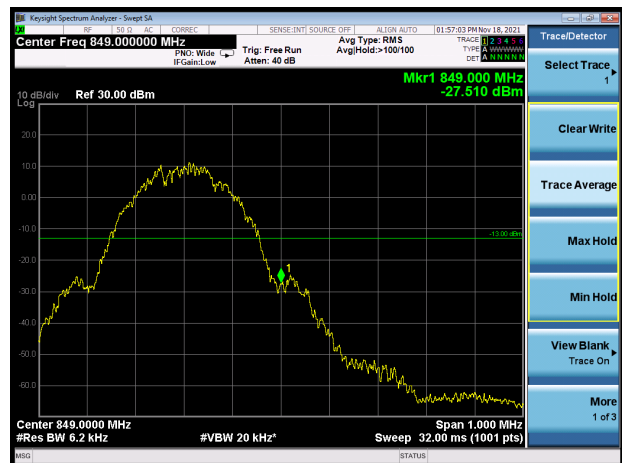
GSM 850 CH-High



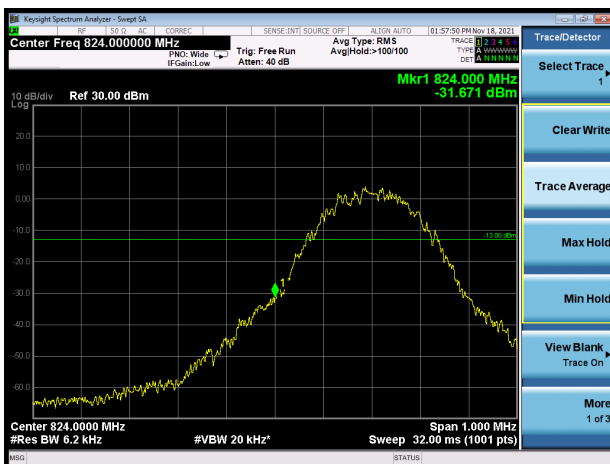
GSM 850 GPRS CH-Low



GSM 850 GPRS CH-High



GSM 850 EGPRS CH-Low



GSM 850 EGPRS CH-High





WCDMA Band V CH-Low

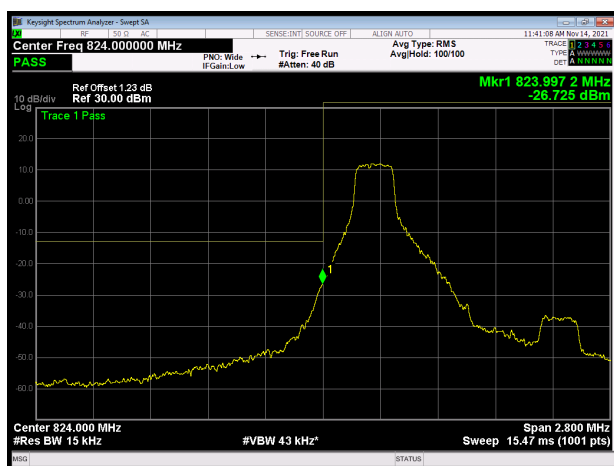


WCDMA Band V CH-High

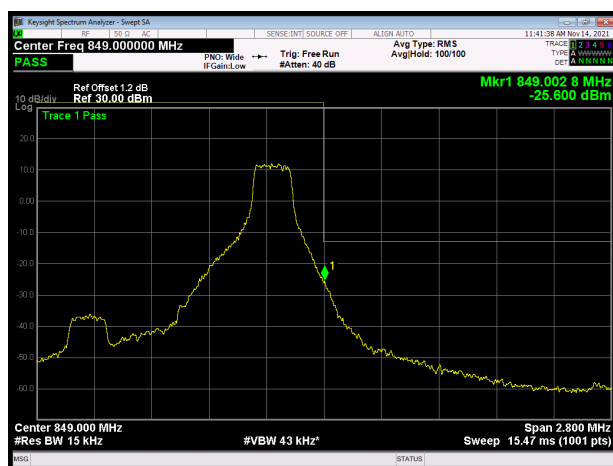




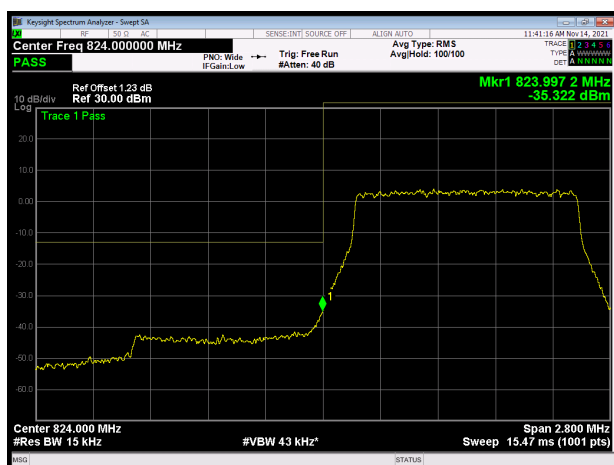
LTE Band 5 QPSK 1.4MHz CH-Low 1RB



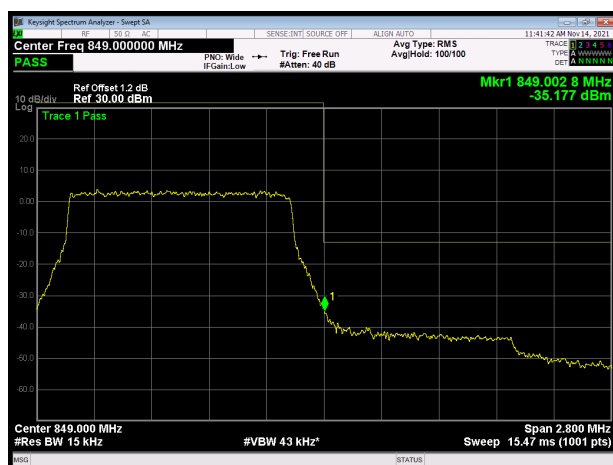
LTE Band 5 QPSK 1.4MHz CH-High 1RB



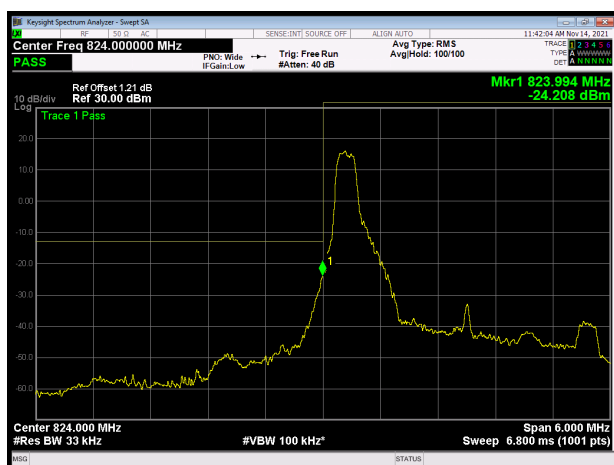
LTE Band 5 QPSK 1.4MHz CH-Low 100%RB



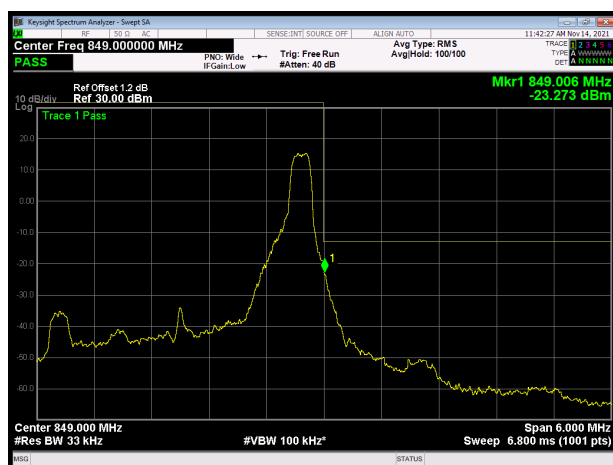
LTE Band 5 QPSK 1.4MHz CH-High 100%RB



LTE Band 5 QPSK 3MHz CH-Low 1RB

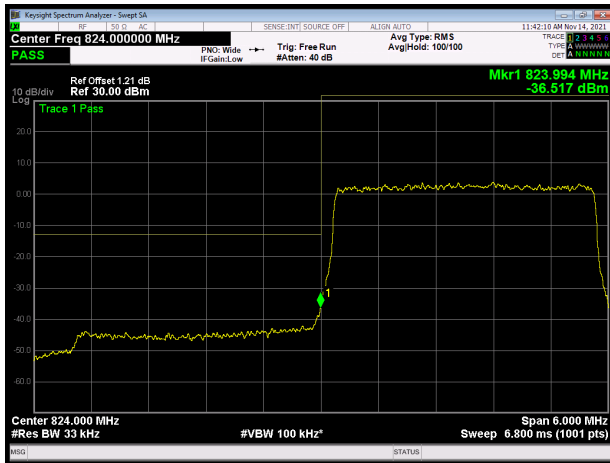


LTE Band 5 QPSK 3MHz CH-High 1RB

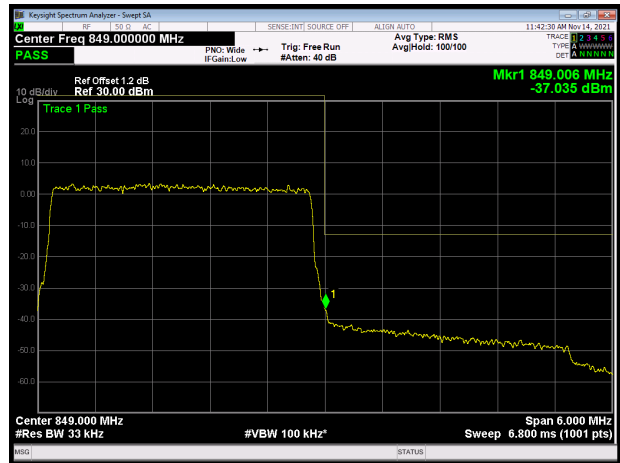




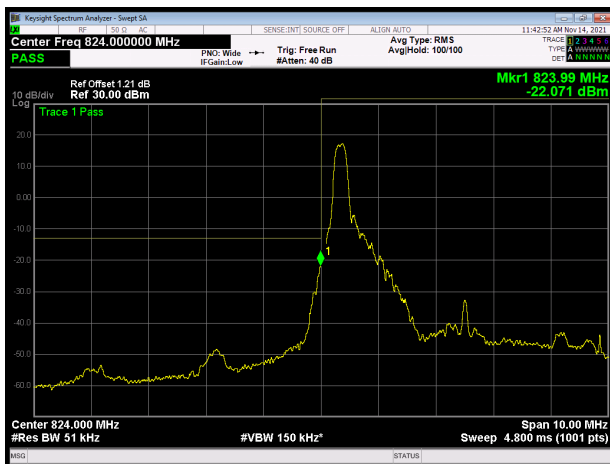
LTE Band 5 QPSK 3MHz CH-Low 100%RB



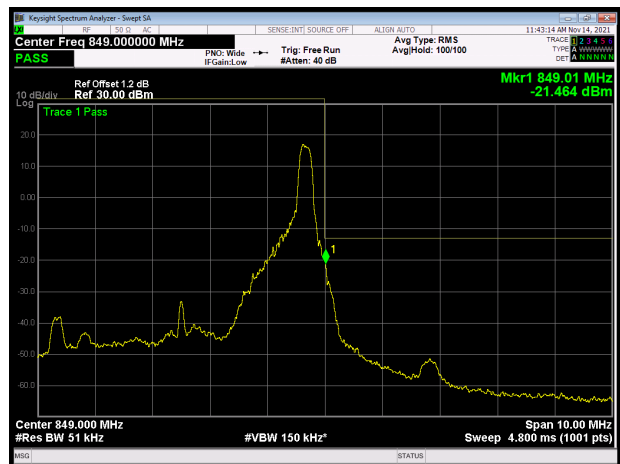
LTE Band 5 QPSK 3MHz CH-High 100%RB



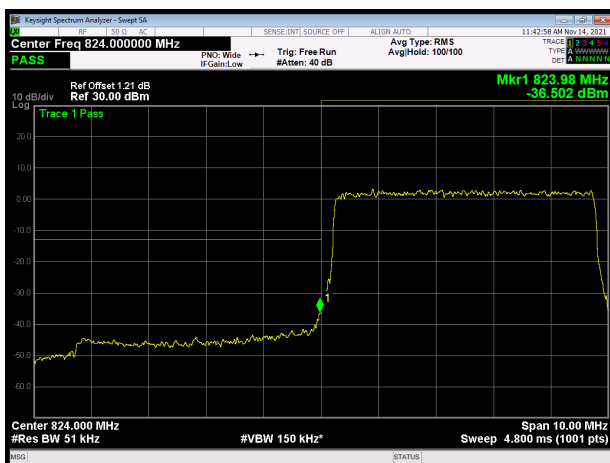
LTE Band 5 QPSK 5MHz CH-Low 1RB



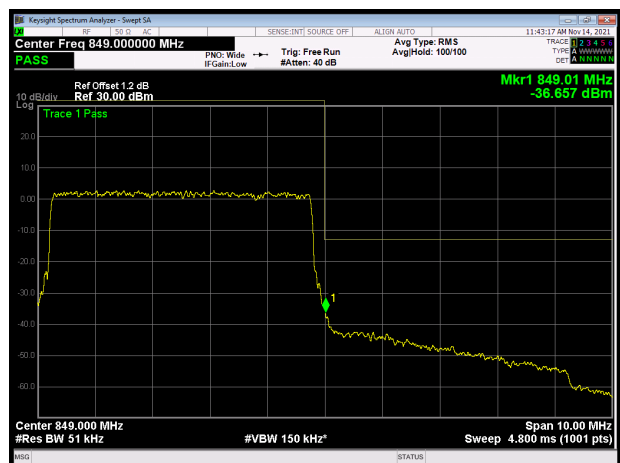
LTE Band 5 QPSK 5MHz CH-High 1RB



LTE Band 5 QPSK 5MHz CH-Low 100%RB

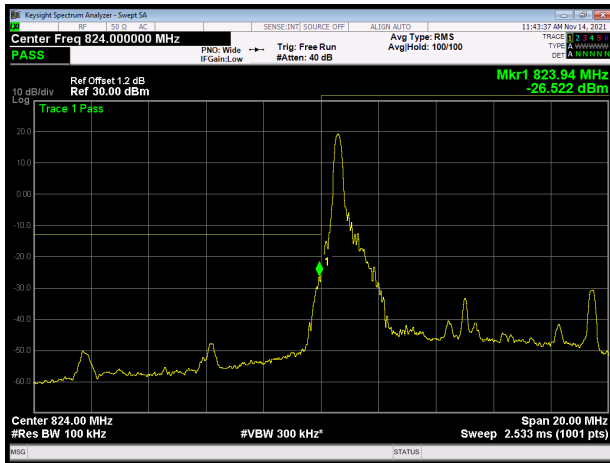


LTE Band 5 QPSK 5MHz CH-High 100%RB

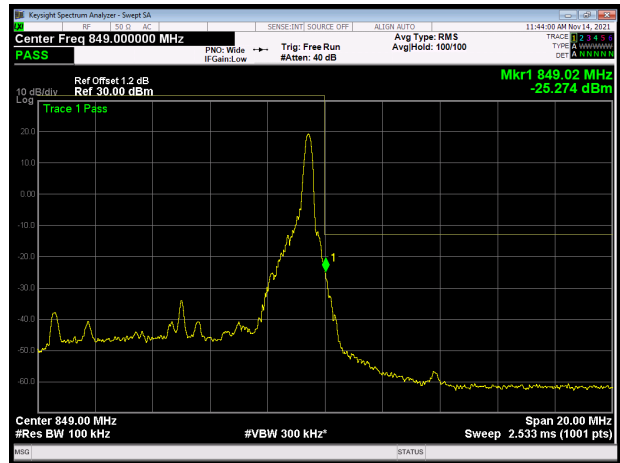




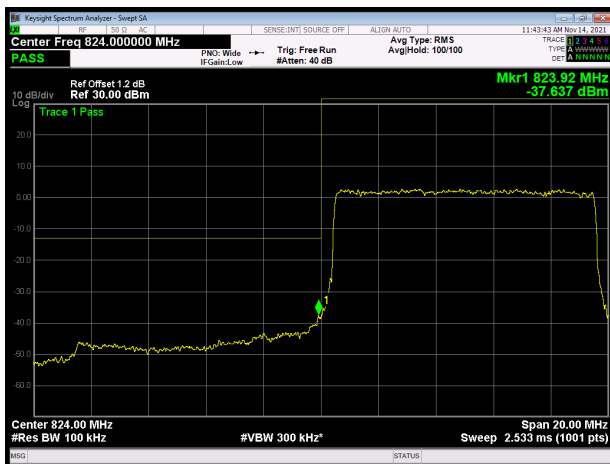
LTE Band 5 QPSK 10MHz CH-Low 1RB



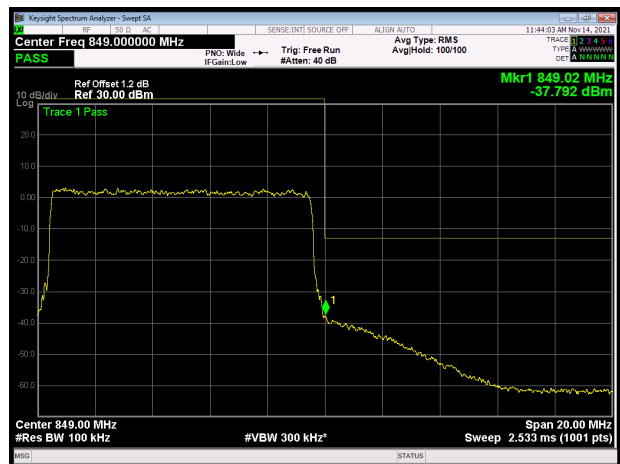
LTE Band 5 QPSK 10MHz CH-High 1RB



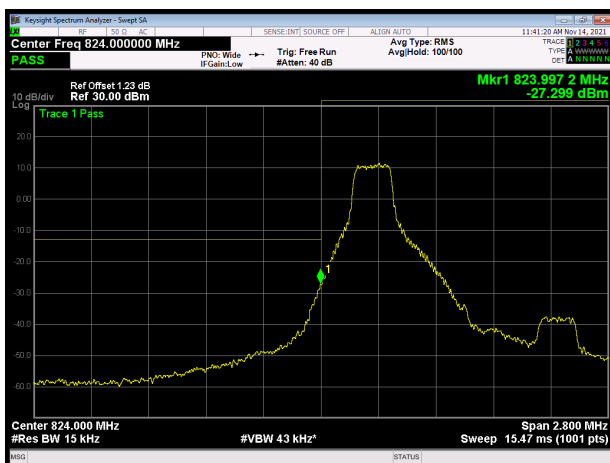
LTE Band 5 QPSK 10MHz CH-Low 100%RB



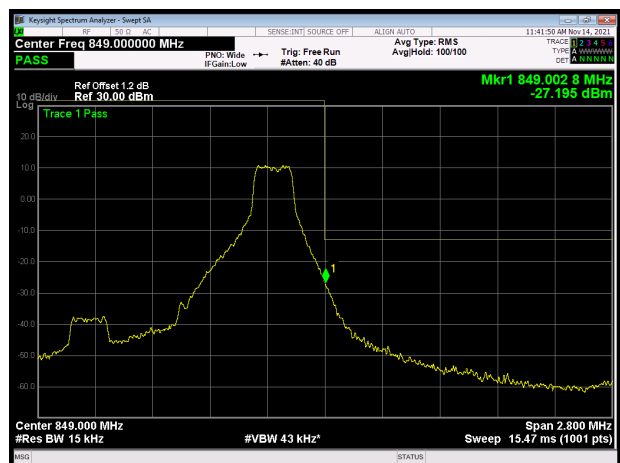
LTE Band 5 QPSK 10MHz CH-High 100%RB



LTE Band 5 16QAM 1.4MHz CH-Low 1RB

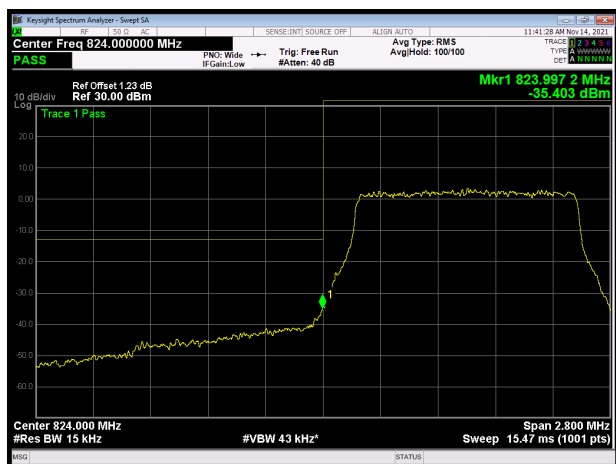


LTE Band 5 16QAM 1.4MHz CH-High 1RB

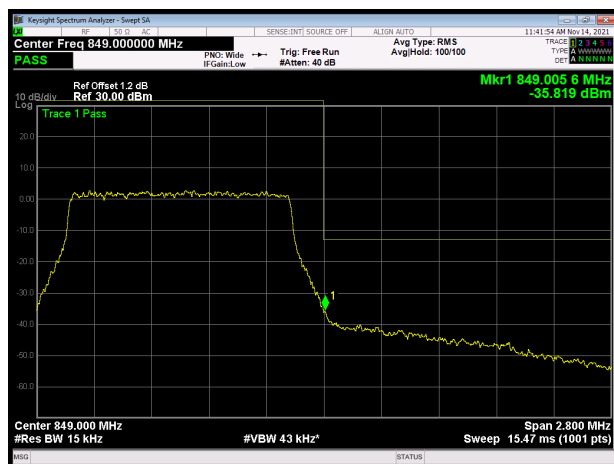




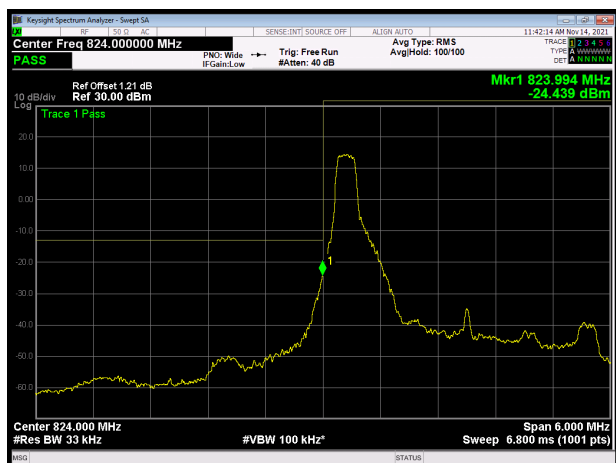
LTE Band 5 16QAM 1.4MHz CH-Low 100%RB



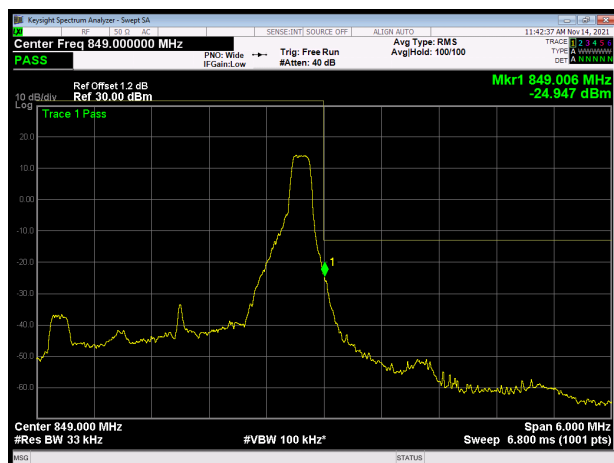
LTE Band 5 16QAM 1.4MHz CH-High 100%RB



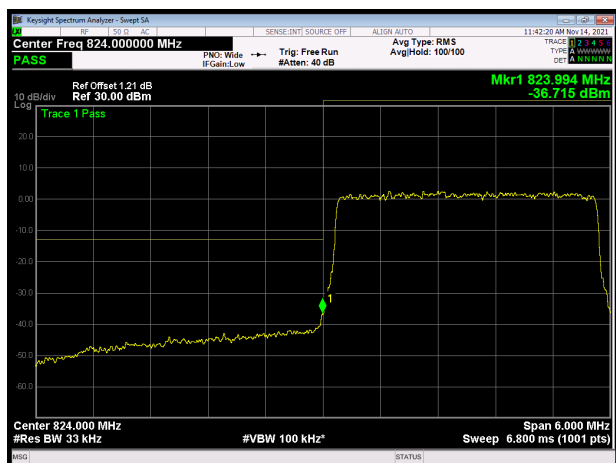
LTE Band 5 16QAM 3MHz CH-Low 1RB



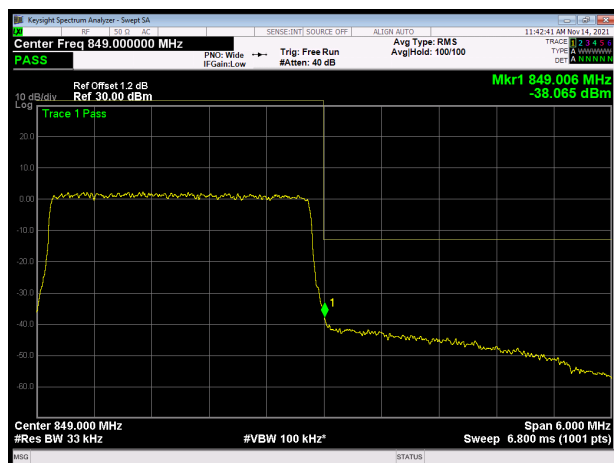
LTE Band 5 16QAM 3MHz CH-High 1RB



LTE Band 5 16QAM 3MHz CH-Low 100%RB

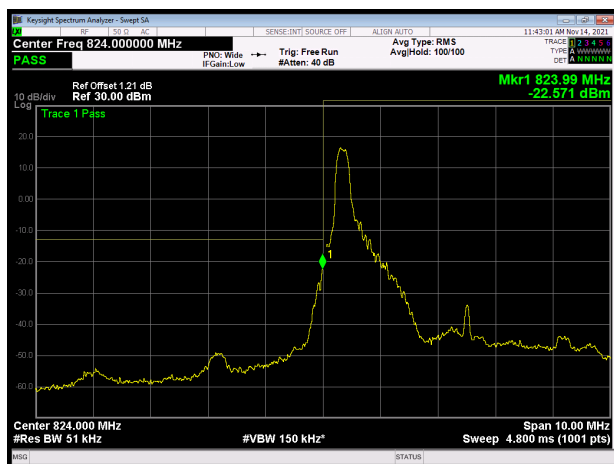


LTE Band 5 16QAM 3MHz CH-High 100%RB

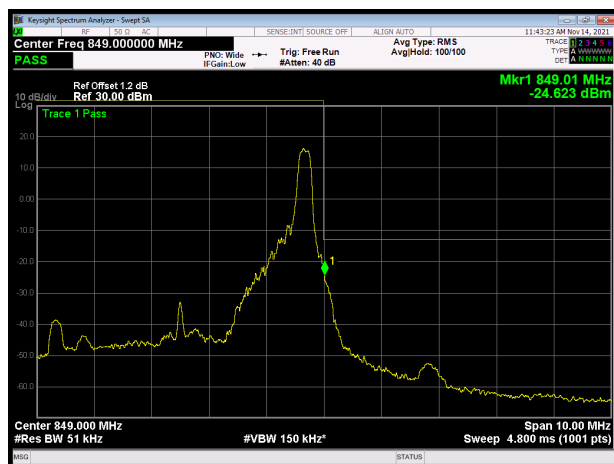




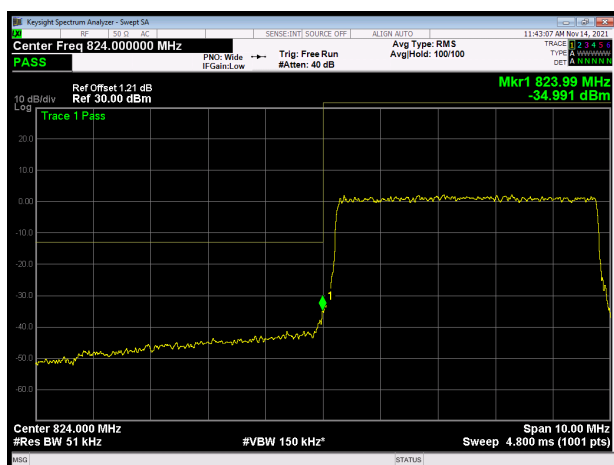
LTE Band 5 16QAM 5MHz CH-Low 1RB



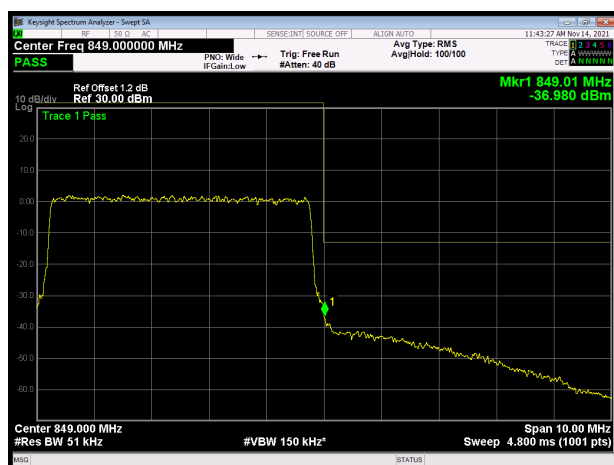
LTE Band 5 16QAM 5MHz CH-High 1RB



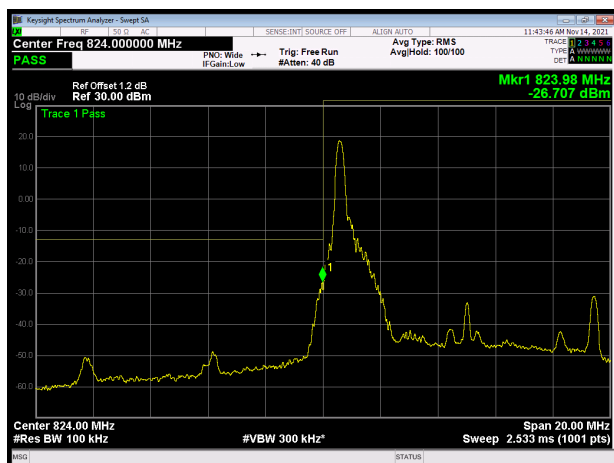
LTE Band 5 16QAM 5MHz CH-Low 100%RB



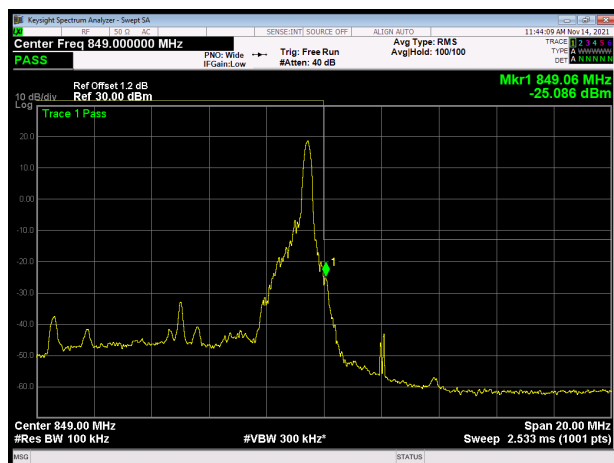
LTE Band 5 16QAM 5MHz CH-High 100%RB



LTE Band 5 16QAM 10MHz CH-Low 1RB

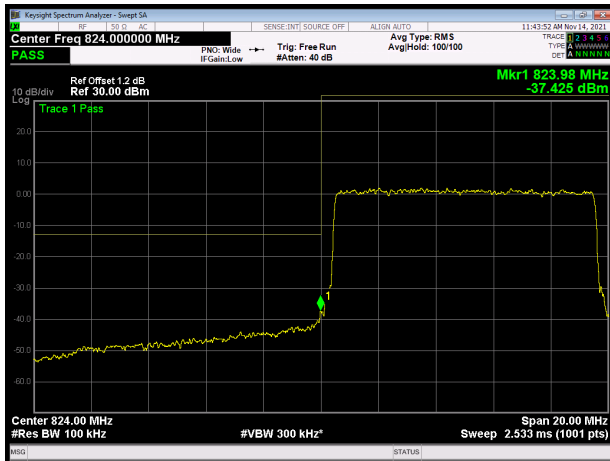


LTE Band 5 16QAM 10MHz CH-High 1RB





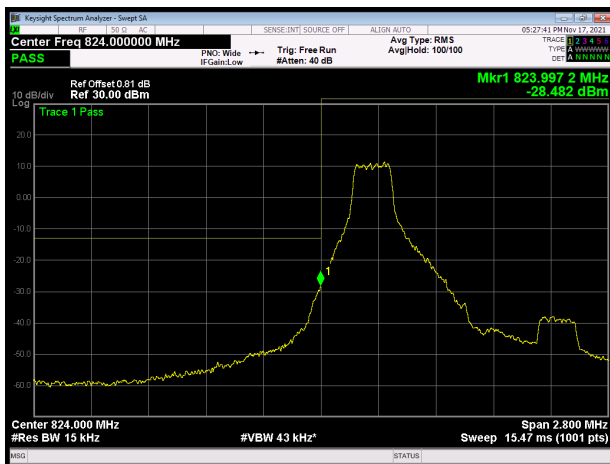
LTE Band 5 16QAM 10MHz CH-Low 100%RB



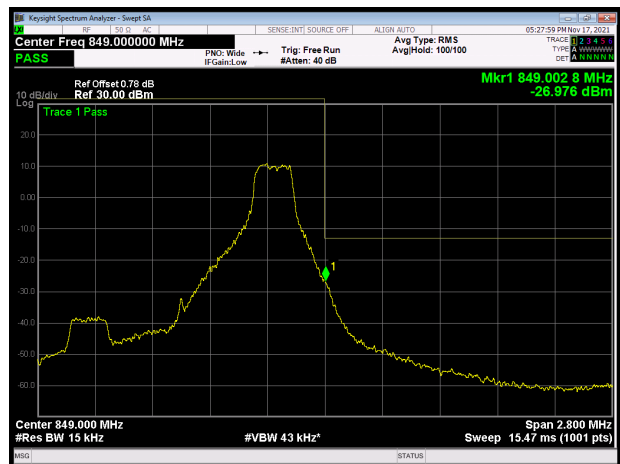
LTE Band 5 16QAM 10MHz CH-High 100%RB



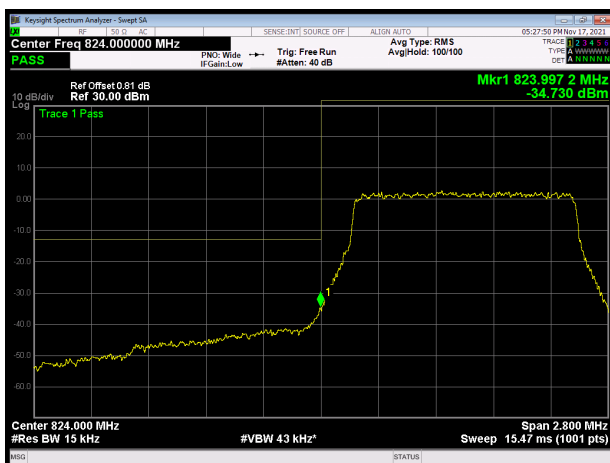
LTE Band 5 64QAM 1.4MHz CH-Low 1RB



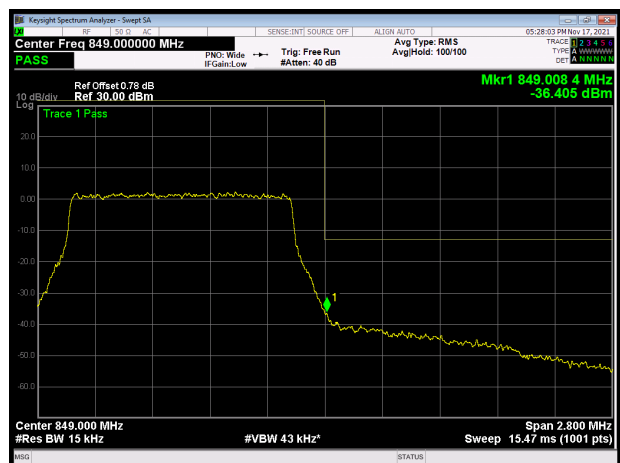
LTE Band 5 64QAM 1.4MHz CH-High 1RB



LTE Band 5 64QAM 1.4MHz CH-Low 100%RB

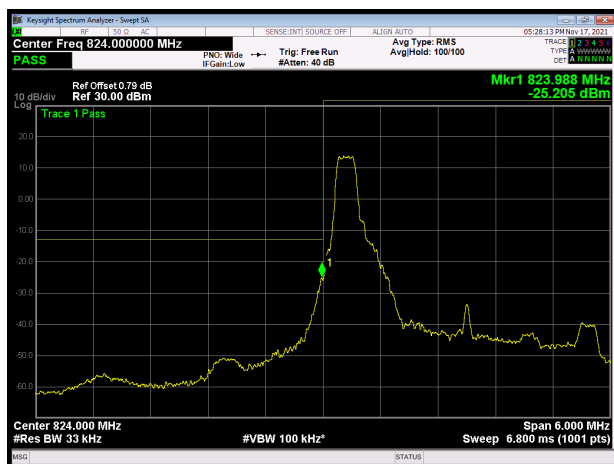


LTE Band 5 64QAM 1.4MHz CH-High 100%RB

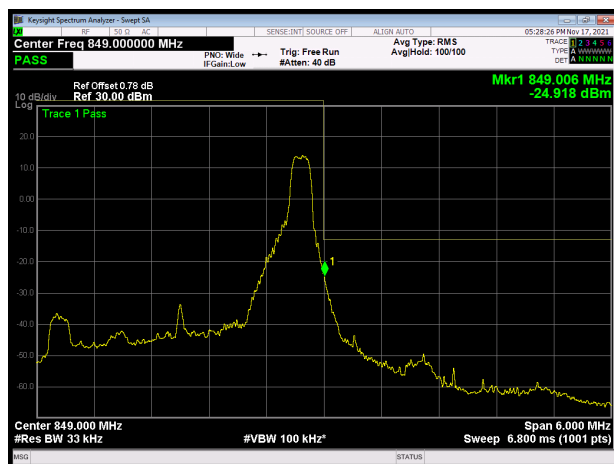




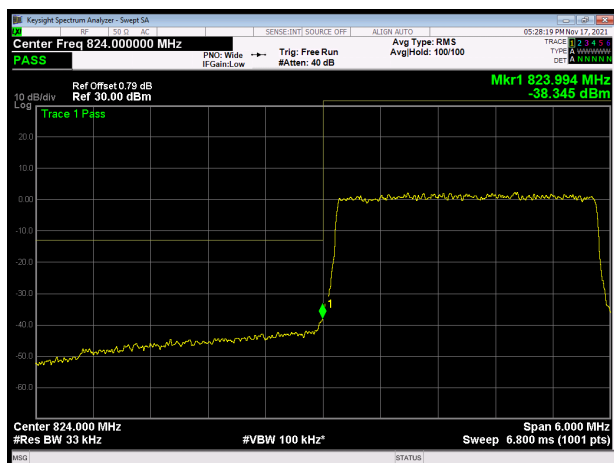
LTE Band 5 64QAM 3MHz CH-Low 1RB



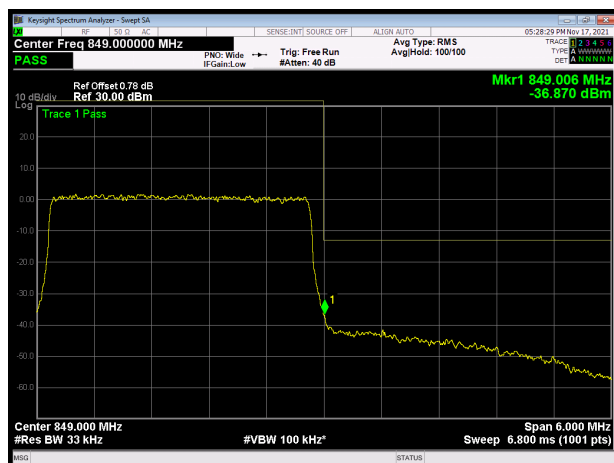
LTE Band 5 64QAM 3MHz CH-High 1RB



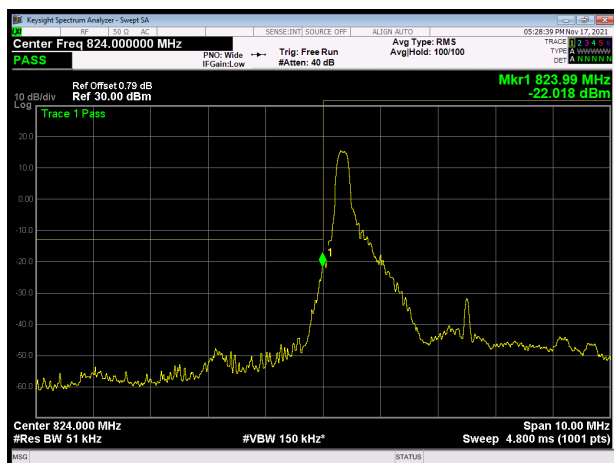
LTE Band 5 64QAM 3MHz CH-Low 100%RB



LTE Band 5 64QAM 3MHz CH-High 100%RB



LTE Band 5 64QAM 5MHz CH-Low 1RB



LTE Band 5 64QAM 5MHz CH-High 1RB

