RF TEST REPORT

Applicant	Huawei Device Co., Ltd.
FCC ID	2ATEYJLN
Product	Smart phone
Model	JLN-LX3
Report No.	R2112A1178-R4
Issue Date	January 29, 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 90S (2020)**. 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	2.1046/90.635(b)	PASS
2	Occupied Bandwidth	2.1049/ 90.209	PASS
3	Emission Masks	2.1051 / 90.691	PASS
4	Peak-to-Average Power Ratio	KDB 971168 D01(5.7)	PASS
5	Frequency Stability	2.1055 / 90.213	PASS
6	Spurious Emissions at Antenna Terminals	2.1051 / 90.691	PASS
7	Radiates Spurious Emission	2.1053 /90.691	PASS
Date of Testing: January 5, 2022~ January 26, 2022 Date of Sample Received: December 24, 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 electromagnetic emissions measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission 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
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E-mail:	xukai@ta-shanghai.com

2. General Description of Equipment under Test

2.1. Applicant and Manufacturer Information

Applicant	Huawei Device Co., Ltd.
Applicant address	No.2 of Xincheng Road, Songshan Lake Zone, Dongguan, Guangdong 523808, People's Republic of China
Manufacturer	Huawei Device Co., Ltd.
Manufacturer address	No.2 of Xincheng Road, Songshan Lake Zone, Dongguan, Guangdong 523808, People's Republic of China

2.2. General Information

EUT Description			
Model	JLN-LX3		
SN	HWQYD21C07500160		
Hardware Version	HL1JLNM		
Software Version	12.0.1.100(C900E100R1P3)		
Power Supply	Battery / AC adapter		
Antenna Type	Internal Antenna		
Antenna Gain	Main Antenna(dBi)	Second Antenna(dBi)	
	-6.08	-5.00	
Test Mode(s)	LTE Band 26;		
Test Modulation	QPSK, 16QAM, 64QAM;		
LTE Category	5		
Maximum E.R.P.	LTE Band 26:	17.70dBm	
Rated Power Supply Voltage	3.87V		
Operating Voltage	Minimum: 3.6V Maximum: 4.48V		
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)
	LTE Band 26	814 ~ 824	859 ~ 869

EUT Accessory			
Accessory	**Model**	**Manufacture**	**No.**
Adapter	HW-110600U00	Huawei Technologies Co., Ltd. (Manufacturer: Astec Electronics (Luoding) Co. Limited)	1
		Huawei Technologies Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	2
	HW-110600U02	Huawei Technologies Co., Ltd. (Manufacturer: Astec Electronics (Luoding) Co. Limited)	3
		Huawei Technologies Co., Ltd.	4

		(Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	
	HW-110600E02	Huawei Technologies Co., Ltd. (Manufacturer: Astec Electronics (Luoding) Co. Limited)	5
		Huawei Technologies Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	6
	HW-110600B02	Huawei Technologies Co., Ltd. (Manufacturer: Astec Electronics (Luoding) Co. Limited)	7
		Huawei Technologies Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	8
	HW-110600A02	Huawei Technologies Co., Ltd. (Manufacturer: Astec Electronics (Luoding) Co. Limited)	9
		Huawei Technologies Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	10
	HW-110600B00	Huawei Technologies Co., Ltd. (Manufacturer: Astec Electronics (Luoding) Co. Limited)	11
		Huawei Technologies Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	12
	HW-110600E00	Huawei Technologies Co., Ltd. (Manufacturer: Astec Electronics (Luoding) Co. Limited)	13
		Huawei Technologies Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	14
	HW-110600A00	Huawei Technologies Co., Ltd. (Manufacturer: Astec Electronics (Luoding) Co. Limited)	15
		Huawei Technologies Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	16
Battery	HB426493EFW	SCUD (FUJIAN) Electronics Co., Ltd.	1
USB Cable	L99UC139-CS-H	Luxshare Precision industry Co.,Ltd	1
	213-01011-0	MING JI ELECTRONICS CO., LTD.	2
Earphone	1311-3291-6001 -TC-351	Boluo County Quancheng Electronic Co., Ltd.	1
Earphone, USB Type-C to 3.5mm Adapter Assembly	6001-7001-TC-3 48	Boluo County Quancheng Electronic Co., Ltd.	1
	USB042020090 AW7	Jiangxi Lianchuang Hongsheng Electronic Co.,Ltd.	2
	642344	FOSTER ELECTRIC CO. (HONG KONG) LTD	3

Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.

2. There are more than one Adapter, Battery and USB Cable, each one should be applied throughout the compliance test respectively, however, only the worst case (Adapter 2, Battery 1 and USB Cable 1) will be recorded in this report.

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 90S (2020)

ANSI C63.26 (2015)

Reference standard:

FCC CFR47 Part 2 (2020)

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 LTE Band (Main Antenna); Z axis, horizontal polarization for LTE Band (Second Antenna)) and the worst case was recorded.

All mode and data rates and positions were investigated.
The following testing in LTE is set based on the maximum RF Output Power.

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

Test items	Bandwidth (MHz)				Modulation		RB			Test Channel		
	1.4	3	5	10	QPSK	16QAM/ 64QAM	1	50%	100%	L	M	H
RF Power Output and Effective Radiated Power	O	O	O	O	O	O	O	O	O	O	O	O
Occupied Bandwidth	O	O	O	O	O	O	-	-	O	O	O	O
Emission Mask	O	O	O	O	O	O	O	-	O	O	-	O
Peak-to-Average Power Ratio	O	O	O	O	O	O	-	-	O	O	O	O
Frequency Stability	O	O	O	O	O	O	O	-	-	-	O	-
Spurious Emissions at Antenna Terminals	O	O	O	O	O	-	O	-	-	O	O	O
Radiates Spurious Emission	O	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

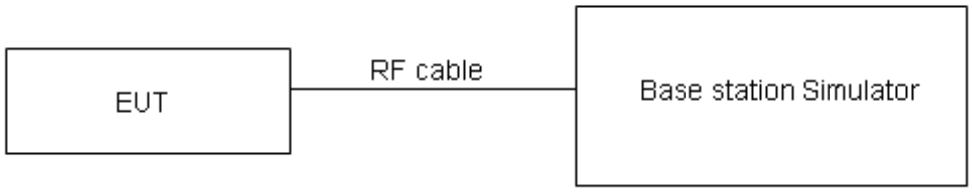
Temperature	Relative humidity
21°C ~25°C	40%~60%

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 (dBm) = Output Power (dBm) - Losses (dB) + Antenna Gain (dBi)
where:dBd refers to gain relative to an ideal dipole.
EIRP (dBm) = ERP (dBm) + 2.15 (dB.)

Test Setup



Limits

Part 90.635 (b) the maximum output power of the transmitter for mobile stations is 100 watts.

Rule Part 90.635(b) specifies that “The maximum output power of the transmitter for mobile stations is 100 watts”.

Limit	≤ 100 W (50 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 dB for RF power output, k = 2, U= 1.19 dB for ERP.

Test Results

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	Main Antenna ERP (dBm)	Second Antenna ERP (dBm)
LTE band 26	1.4	26697	1	#0	QPSK	24.67	16.44	17.52
	1.4	26697	1	#Mid	QPSK	24.82	16.59	17.67
	1.4	26697	1	#Max	QPSK	24.61	16.38	17.46
	1.4	26697	3	#0	QPSK	24.62	16.39	17.47
	1.4	26697	3	#Mid	QPSK	24.65	16.42	17.50
	1.4	26697	3	#Max	QPSK	24.56	16.33	17.41
	1.4	26697	6	#0	QPSK	23.68	15.45	16.53
	1.4	26697	1	#0	QAM16	23.67	15.44	16.52
	1.4	26697	1	#Mid	QAM16	23.79	15.56	16.64
	1.4	26697	1	#Max	QAM16	23.62	15.39	16.47
	1.4	26697	3	#0	QAM16	23.90	15.67	16.75
	1.4	26697	3	#Mid	QAM16	23.83	15.60	16.68
	1.4	26697	3	#Max	QAM16	23.79	15.56	16.64
	1.4	26697	6	#0	QAM16	22.74	14.51	15.59
	1.4	26740	1	#0	QPSK	24.57	16.34	17.42
	1.4	26740	1	#Mid	QPSK	24.70	16.47	17.55
	1.4	26740	1	#Max	QPSK	24.65	16.42	17.50
	1.4	26740	3	#0	QPSK	24.63	16.40	17.48
	1.4	26740	3	#Mid	QPSK	24.61	16.38	17.46
	1.4	26740	3	#Max	QPSK	24.59	16.36	17.44
	1.4	26740	6	#0	QPSK	23.66	15.43	16.51
	1.4	26740	1	#0	QAM16	23.75	15.52	16.60
	1.4	26740	1	#Mid	QAM16	23.84	15.61	16.69
	1.4	26740	1	#Max	QAM16	23.81	15.58	16.66
	1.4	26740	3	#0	QAM16	23.63	15.40	16.48
	1.4	26740	3	#Mid	QAM16	23.63	15.40	16.48
	1.4	26740	3	#Max	QAM16	23.67	15.44	16.52
	1.4	26740	6	#0	QAM16	22.58	14.35	15.43
	1.4	26783	1	#0	QPSK	24.79	16.56	17.64
	1.4	26783	1	#Mid	QPSK	24.74	16.51	17.59
	1.4	26783	1	#Max	QPSK	24.66	16.43	17.51
	1.4	26783	3	#0	QPSK	24.64	16.41	17.49
	1.4	26783	3	#Mid	QPSK	24.66	16.43	17.51
	1.4	26783	3	#Max	QPSK	24.65	16.42	17.50
	1.4	26783	6	#0	QPSK	23.70	15.47	16.55
	1.4	26783	1	#0	QAM16	23.63	15.40	16.48
	1.4	26783	1	#Mid	QAM16	23.57	15.34	16.42
	1.4	26783	1	#Max	QAM16	23.57	15.34	16.42
	1.4	26783	3	#0	QAM16	23.64	15.41	16.49

	1.4	26783	3	#Mid	QAM16	23.64	15.41	16.49
	1.4	26783	3	#Max	QAM16	23.66	15.43	16.51
	1.4	26783	6	#0	QAM16	22.65	14.42	15.50
	3	26705	1	#0	QPSK	24.61	16.38	17.46
	3	26705	1	#Mid	QPSK	24.64	16.41	17.49
	3	26705	1	#Max	QPSK	24.53	16.30	17.38
	3	26705	8	#0	QPSK	23.65	15.42	16.50
	3	26705	8	#Mid	QPSK	23.67	15.44	16.52
	3	26705	8	#Max	QPSK	23.72	15.49	16.57
	3	26705	15	#0	QPSK	23.77	15.54	16.62
	3	26705	1	#0	QAM16	23.91	15.68	16.76
	3	26705	1	#Mid	QAM16	23.93	15.70	16.78
	3	26705	1	#Max	QAM16	23.82	15.59	16.67
	3	26705	8	#0	QAM16	22.74	14.51	15.59
	3	26705	8	#Mid	QAM16	22.73	14.50	15.58
	3	26705	8	#Max	QAM16	22.75	14.52	15.60
	3	26705	15	#0	QAM16	22.71	14.48	15.56
	3	26740	1	#0	QPSK	24.63	16.40	17.48
	3	26740	1	#Mid	QPSK	24.75	16.52	17.60
	3	26740	1	#Max	QPSK	24.61	16.38	17.46
	3	26740	8	#0	QPSK	23.69	15.46	16.54
	3	26740	8	#Mid	QPSK	23.68	15.45	16.53
	3	26740	8	#Max	QPSK	23.75	15.52	16.60
	3	26740	15	#0	QPSK	23.73	15.50	16.58
	3	26740	1	#0	QAM16	23.85	15.62	16.70
	3	26740	1	#Mid	QAM16	23.84	15.61	16.69
	3	26740	1	#Max	QAM16	23.76	15.53	16.61
	3	26740	8	#0	QAM16	22.67	14.44	15.52
	3	26740	8	#Mid	QAM16	22.69	14.46	15.54
	3	26740	8	#Max	QAM16	22.74	14.51	15.59
	3	26740	15	#0	QAM16	22.57	14.34	15.42
	3	26775	1	#0	QPSK	24.78	16.55	17.63
	3	26775	1	#Mid	QPSK	24.83	16.60	17.68
	3	26775	1	#Max	QPSK	24.78	16.55	17.63
	3	26775	8	#0	QPSK	23.72	15.49	16.57
	3	26775	8	#Mid	QPSK	23.70	15.47	16.55
	3	26775	8	#Max	QPSK	23.66	15.43	16.51
	3	26775	15	#0	QPSK	23.73	15.50	16.58
	3	26775	1	#0	QAM16	23.65	15.42	16.50
	3	26775	1	#Mid	QAM16	23.71	15.48	16.56
	3	26775	1	#Max	QAM16	23.60	15.37	16.45
	3	26775	8	#0	QAM16	22.69	14.46	15.54
	3	26775	8	#Mid	QAM16	22.69	14.46	15.54

	3	26775	8	#Max	QAM16	22.68	14.45	15.53
	3	26775	15	#0	QAM16	22.76	14.53	15.61
	5	26715	1	#0	QPSK	24.75	16.52	17.60
	5	26715	1	#Mid	QPSK	24.66	16.43	17.51
	5	26715	1	#Max	QPSK	24.63	16.40	17.48
	5	26715	12	#0	QPSK	23.74	15.51	16.59
	5	26715	12	#Mid	QPSK	23.73	15.50	16.58
	5	26715	12	#Max	QPSK	23.73	15.50	16.58
	5	26715	25	#0	QPSK	23.71	15.48	16.56
	5	26715	1	#0	QAM16	24.02	15.79	16.87
	5	26715	1	#Mid	QAM16	23.96	15.73	16.81
	5	26715	1	#Max	QAM16	23.93	15.70	16.78
	5	26715	12	#0	QAM16	22.72	14.49	15.57
	5	26715	12	#Mid	QAM16	22.75	14.52	15.60
	5	26715	12	#Max	QAM16	22.71	14.48	15.56
	5	26715	25	#0	QAM16	22.68	14.45	15.53
	5	26740	1	#0	QPSK	24.70	16.47	17.55
	5	26740	1	#Mid	QPSK	24.72	16.49	17.57
	5	26740	1	#Max	QPSK	24.71	16.48	17.56
	5	26740	12	#0	QPSK	23.76	15.53	16.61
	5	26740	12	#Mid	QPSK	23.78	15.55	16.63
	5	26740	12	#Max	QPSK	23.73	15.50	16.58
	5	26740	25	#0	QPSK	23.78	15.55	16.63
	5	26740	1	#0	QAM16	23.92	15.69	16.77
	5	26740	1	#Mid	QAM16	23.96	15.73	16.81
	5	26740	1	#Max	QAM16	23.94	15.71	16.79
	5	26740	12	#0	QAM16	22.78	14.55	15.63
	5	26740	12	#Mid	QAM16	22.74	14.51	15.59
	5	26740	12	#Max	QAM16	22.66	14.43	15.51
	5	26740	25	#0	QAM16	22.68	14.45	15.53
	5	26765	1	#0	QPSK	24.70	16.47	17.55
	5	26765	1	#Mid	QPSK	24.64	16.41	17.49
	5	26765	1	#Max	QPSK	24.57	16.34	17.42
	5	26765	12	#0	QPSK	23.73	15.50	16.58
	5	26765	12	#Mid	QPSK	23.73	15.50	16.58
	5	26765	12	#Max	QPSK	23.80	15.57	16.65
	5	26765	25	#0	QPSK	23.69	15.46	16.54
	5	26765	1	#0	QAM16	24.09	15.86	16.94
	5	26765	1	#Mid	QAM16	24.01	15.78	16.86
	5	26765	1	#Max	QAM16	24.01	15.78	16.86
	5	26765	12	#0	QAM16	22.78	14.55	15.63
	5	26765	12	#Mid	QAM16	22.79	14.56	15.64
	5	26765	12	#Max	QAM16	22.81	14.58	15.66

	5	26765	25	#0	QAM16	22.71	14.48	15.56
	10	26740	1	#0	QPSK	24.85	16.62	17.70
	10	26740	1	#Mid	QPSK	24.65	16.42	17.50
	10	26740	1	#Max	QPSK	24.83	16.60	17.68
	10	26740	25	#0	QPSK	23.78	15.55	16.63
	10	26740	25	#Mid	QPSK	23.79	15.56	16.64
	10	26740	25	#Max	QPSK	23.79	15.56	16.64
	10	26740	50	#0	QPSK	23.76	15.53	16.61
	10	26740	1	#0	QAM16	24.18	15.95	17.03
	10	26740	1	#Mid	QAM16	23.92	15.69	16.77
	10	26740	1	#Max	QAM16	24.08	15.85	16.93
	10	26740	25	#0	QAM16	22.79	14.56	15.64
	10	26740	25	#Mid	QAM16	22.83	14.60	15.68
	10	26740	25	#Max	QAM16	22.87	14.64	15.72
	10	26740	50	#0	QAM16	22.77	14.54	15.62
	1.4	26697	1	#0	QAM64	23.05	14.82	15.90
	1.4	26697	1	#Mid	QAM64	23.16	14.93	16.01
	1.4	26697	1	#Max	QAM64	23.02	14.79	15.87
	1.4	26697	3	#0	QAM64	23.30	15.07	16.15
	1.4	26697	3	#Mid	QAM64	23.25	15.02	16.10
	1.4	26697	3	#Max	QAM64	23.19	14.96	16.04
	1.4	26697	6	#0	QAM64	22.10	13.87	14.95
	1.4	26740	1	#0	QAM64	23.12	14.89	15.97
	1.4	26740	1	#Mid	QAM64	23.25	15.02	16.10
	1.4	26740	1	#Max	QAM64	23.16	14.93	16.01
	1.4	26740	3	#0	QAM64	23.07	14.84	15.92
	1.4	26740	3	#Mid	QAM64	23.06	14.83	15.91
	1.4	26740	3	#Max	QAM64	23.10	14.87	15.95
	1.4	26740	6	#0	QAM64	21.98	13.75	14.83
	1.4	26783	1	#0	QAM64	23.00	14.77	15.85
	1.4	26783	1	#Mid	QAM64	22.98	14.75	15.83
	1.4	26783	1	#Max	QAM64	22.94	14.71	15.79
	1.4	26783	3	#0	QAM64	23.03	14.80	15.88
	1.4	26783	3	#Mid	QAM64	22.97	14.74	15.82
	1.4	26783	3	#Max	QAM64	23.02	14.79	15.87
	1.4	26783	6	#0	QAM64	22.01	13.78	14.86
	3	26705	1	#0	QAM64	23.32	15.09	16.17
	3	26705	1	#Mid	QAM64	23.33	15.10	16.18
	3	26705	1	#Max	QAM64	23.23	15.00	16.08
	3	26705	8	#0	QAM64	22.06	13.83	14.91
	3	26705	8	#Mid	QAM64	22.06	13.83	14.91
	3	26705	8	#Max	QAM64	22.12	13.89	14.97
	3	26705	15	#0	QAM64	22.12	13.89	14.97

	3	26740	1	#0	QAM64	23.22	14.99	16.07
	3	26740	1	#Mid	QAM64	23.24	15.01	16.09
	3	26740	1	#Max	QAM64	23.12	14.89	15.97
	3	26740	8	#0	QAM64	22.04	13.81	14.89
	3	26740	8	#Mid	QAM64	22.05	13.82	14.90
	3	26740	8	#Max	QAM64	22.09	13.86	14.94
	3	26740	15	#0	QAM64	22.00	13.77	14.85
	3	26775	1	#0	QAM64	23.01	14.78	15.86
	3	26775	1	#Mid	QAM64	23.02	14.79	15.87
	3	26775	1	#Max	QAM64	22.98	14.75	15.83
	3	26775	8	#0	QAM64	22.07	13.84	14.92
	3	26775	8	#Mid	QAM64	22.05	13.82	14.90
	3	26775	8	#Max	QAM64	22.03	13.80	14.88
	3	26775	15	#0	QAM64	22.08	13.85	14.93
	5	26715	1	#0	QAM64	23.38	15.15	16.23
	5	26715	1	#Mid	QAM64	23.29	15.06	16.14
	5	26715	1	#Max	QAM64	23.26	15.03	16.11
	5	26715	12	#0	QAM64	22.09	13.86	14.94
	5	26715	12	#Mid	QAM64	22.08	13.85	14.93
	5	26715	12	#Max	QAM64	22.09	13.86	14.94
	5	26715	25	#0	QAM64	22.05	13.82	14.90
	5	26740	1	#0	QAM64	23.27	15.04	16.12
	5	26740	1	#Mid	QAM64	23.33	15.10	16.18
	5	26740	1	#Max	QAM64	23.29	15.06	16.14
	5	26740	12	#0	QAM64	22.12	13.89	14.97
	5	26740	12	#Mid	QAM64	22.11	13.88	14.96
	5	26740	12	#Max	QAM64	22.04	13.81	14.89
	5	26740	25	#0	QAM64	22.09	13.86	14.94
	5	26765	1	#0	QAM64	23.39	15.16	16.24
	5	26765	1	#Mid	QAM64	23.36	15.13	16.21
	5	26765	1	#Max	QAM64	23.37	15.14	16.22
	5	26765	12	#0	QAM64	22.14	13.91	14.99
	5	26765	12	#Mid	QAM64	22.16	13.93	15.01
	5	26765	12	#Max	QAM64	22.20	13.97	15.05
	5	26765	25	#0	QAM64	22.08	13.85	14.93
	10	26740	1	#0	QAM64	23.52	15.29	16.37
	10	26740	1	#Mid	QAM64	23.28	15.05	16.13
	10	26740	1	#Max	QAM64	23.52	15.29	16.37
	10	26740	25	#0	QAM64	22.20	13.97	15.05
	10	26740	25	#Mid	QAM64	22.22	13.99	15.07
	10	26740	25	#Max	QAM64	22.28	14.05	15.13
	10	26740	50	#0	QAM64	22.14	13.91	14.99

5.2. Occupied Bandwidth

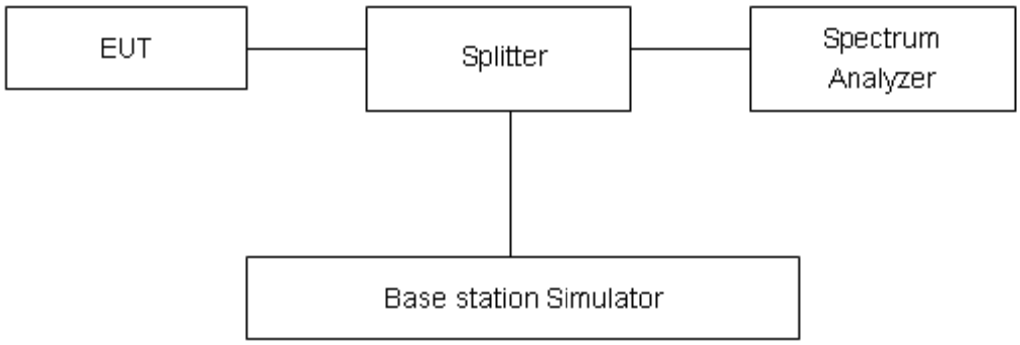
Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

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 ≥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.
Part 90.209 (a) Each authorization issued to a station licensed under this part will show an emission designator representing the class of emission authorized. The designator will be prefixed by a specified necessary bandwidth. This number does not necessarily indicate the bandwidth occupied by the emission at any instant. In those cases where part 2.202 of this chapter does not provide a formula for the computation of necessary bandwidth, the occupied bandwidth, as defined in part 2 of this chapter, may be used in lieu of the necessary bandwidth.

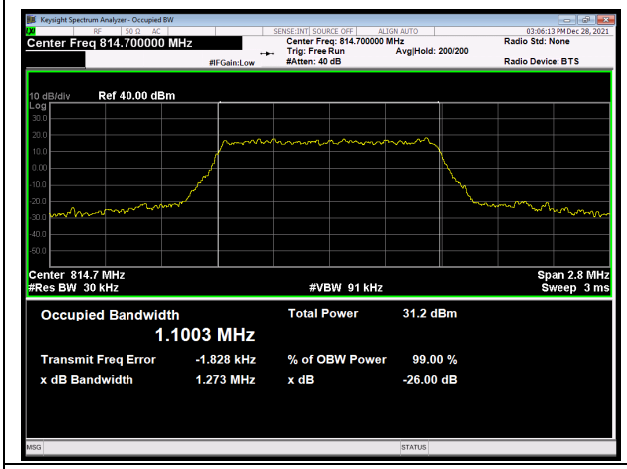
Measurement Uncertainty

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

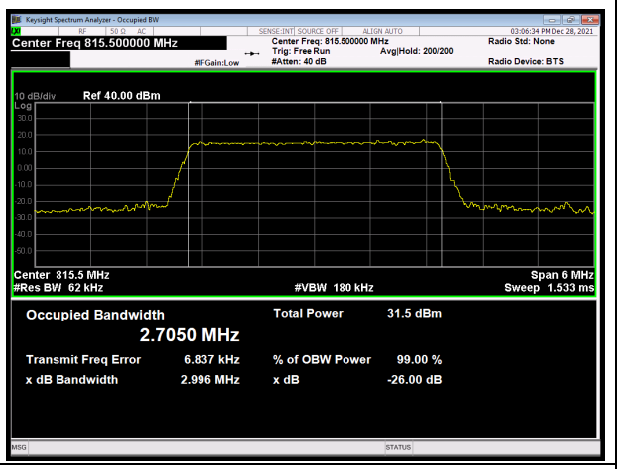
Test Result

LTE Band 26						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	1.4	26697	814.7	1.10	1.27
			26740	819	1.09	1.28
			26783	823.3	1.09	1.30
		3	26705	815.5	2.71	3.00
			26740	819	2.69	2.98
			26775	822.5	2.71	2.98
		5	26715	816.5	4.51	4.97
			26740	819	4.50	5.04
			26765	821.5	4.50	4.95
		10	26740	819	8.98	9.71
	16QAM	1.4	26697	814.7	1.10	1.28
			26740	819	1.10	1.30
			26783	823.3	1.09	1.30
		3	26705	815.5	2.70	3.00
			26740	819	2.69	3.00
			26775	822.5	2.70	2.98
		5	26715	816.5	4.52	4.98
			26740	819	4.52	4.99
			26765	821.5	4.54	5.00
		10	26740	819	8.97	9.75
	64QAM	1.4	26697	814.7	1.10	1.28
			26740	819	1.10	1.30
			26783	823.3	1.09	1.27
		3	26705	815.5	2.70	2.97
			26740	819	2.70	3.00
			26775	822.5	2.70	2.99
		5	26715	816.5	4.50	4.97
			26740	819	4.53	4.95
			26765	821.5	4.50	5.03
		10	26740	819	9.00	9.84

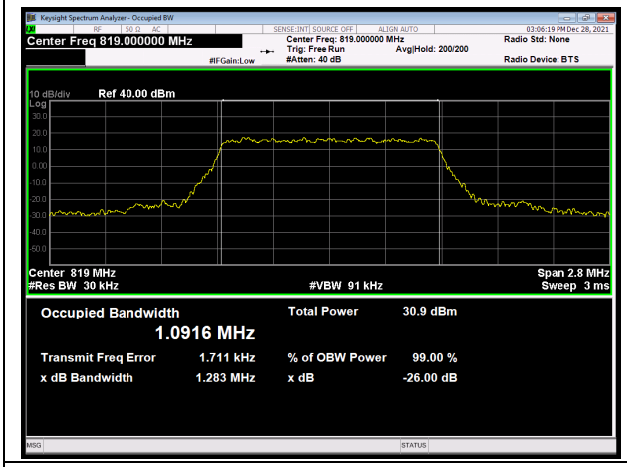
LTE Band 26 QPSK 1.4MHz CH Low



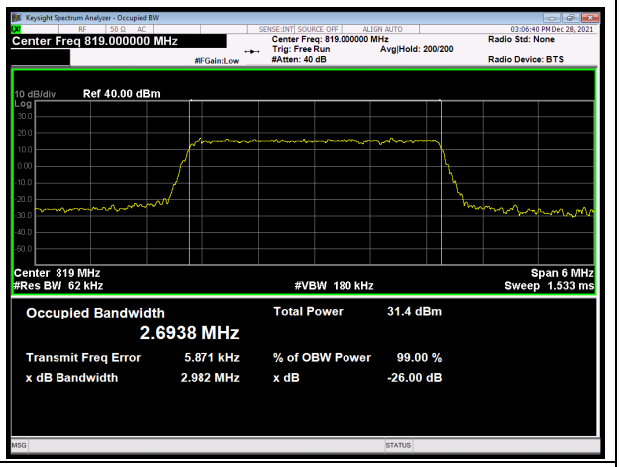
LTE Band 26 QPSK 3MHz CH Low



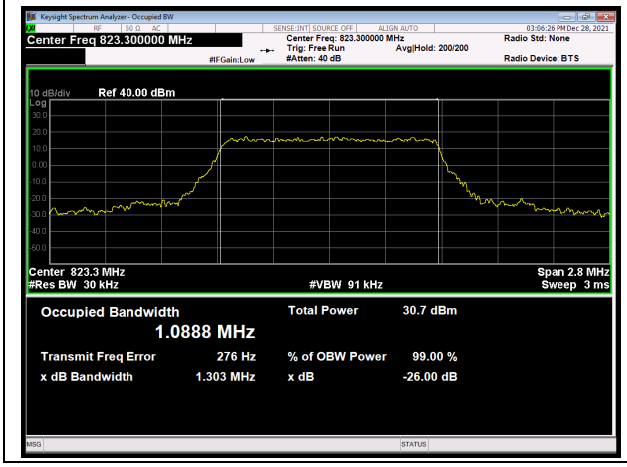
LTE Band 26 QPSK 1.4MHz CH Middle



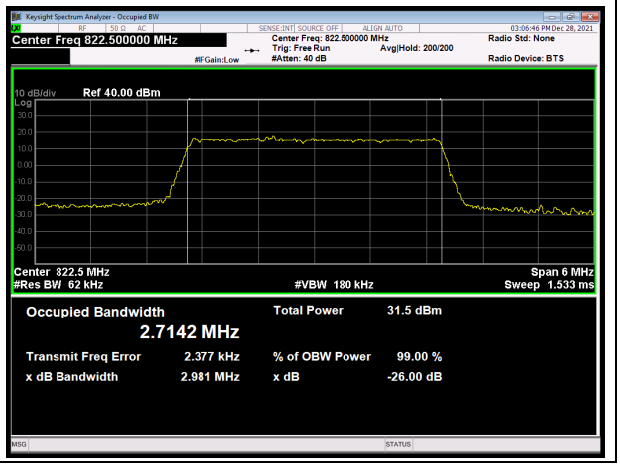
LTE Band 26 QPSK 3MHz CH Middle



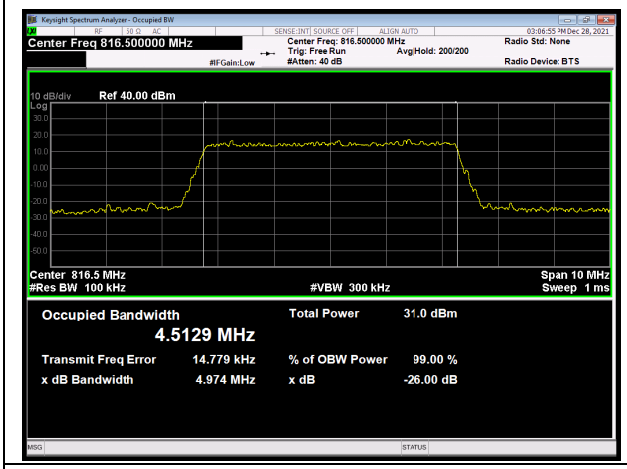
LTE Band 26 QPSK 1.4MHz CH High



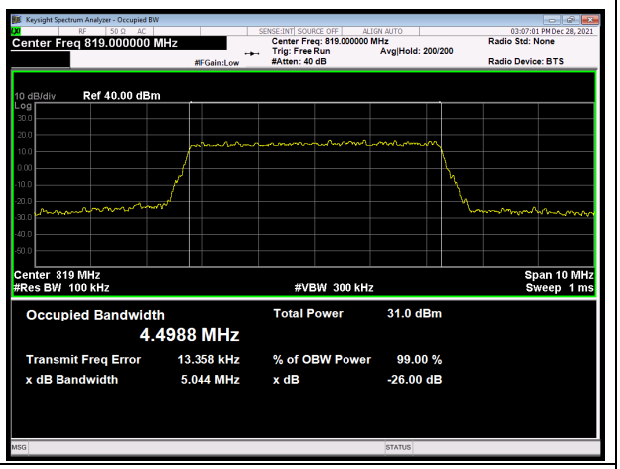
LTE Band 26 QPSK 3MHz CH High



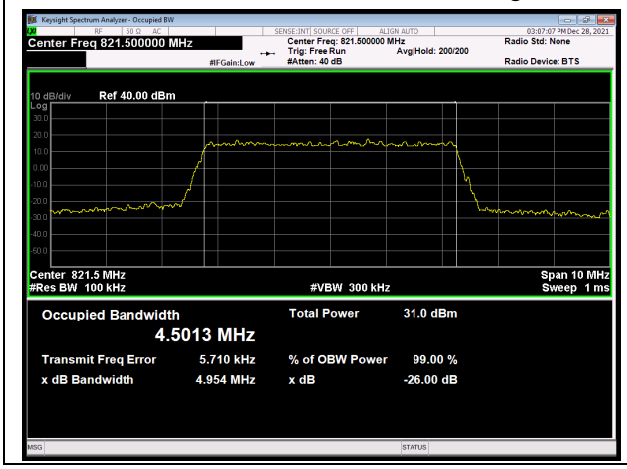
LTE Band 26 QPSK 5MHz CH Low



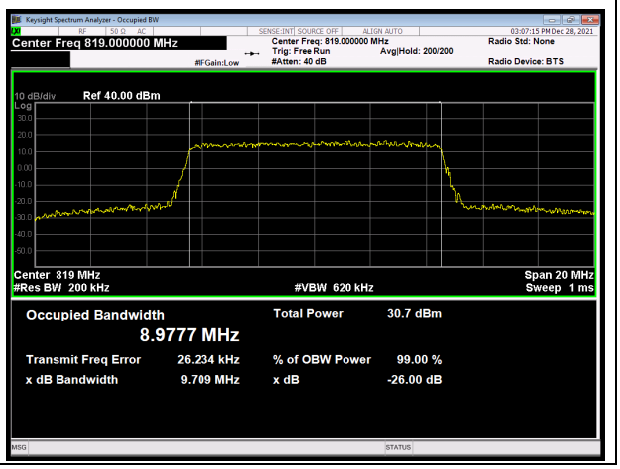
LTE Band 26 QPSK 5MHz CH Middle



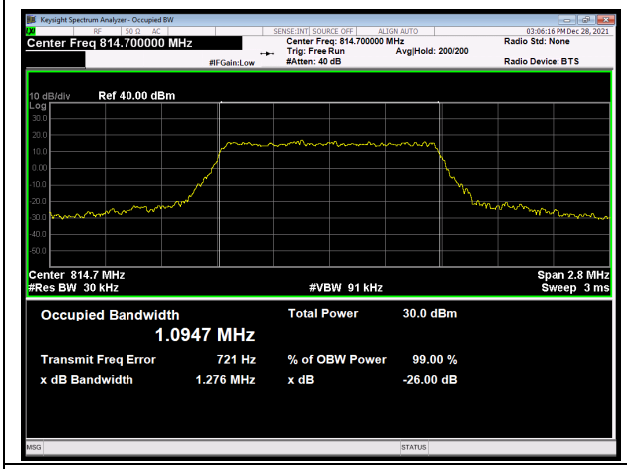
LTE Band 26 QPSK 5MHz CH High



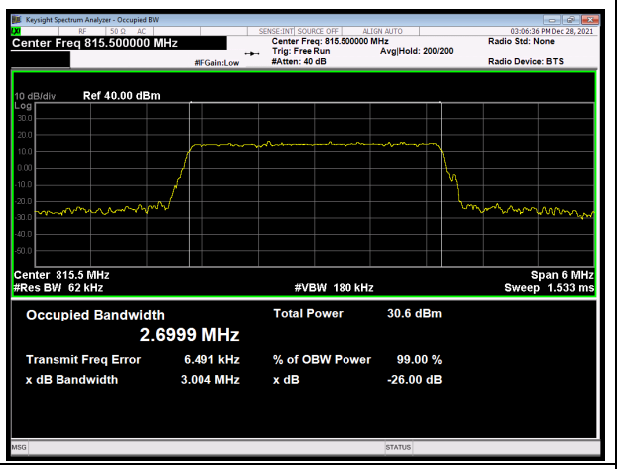
LTE Band 26 QPSK 10MHz CH Middle



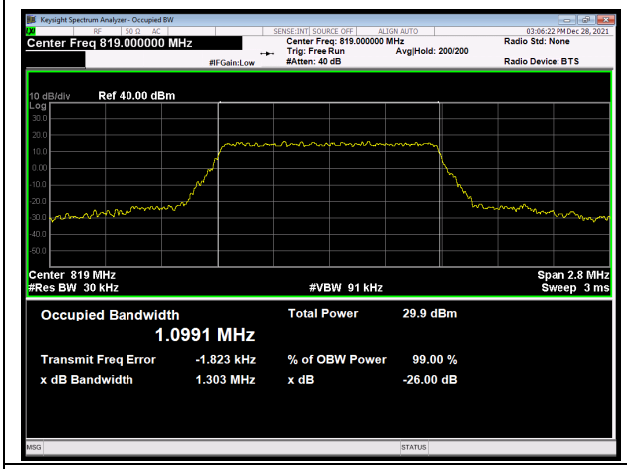
LTE Band 26 16QAM 1.4MHz CH Low



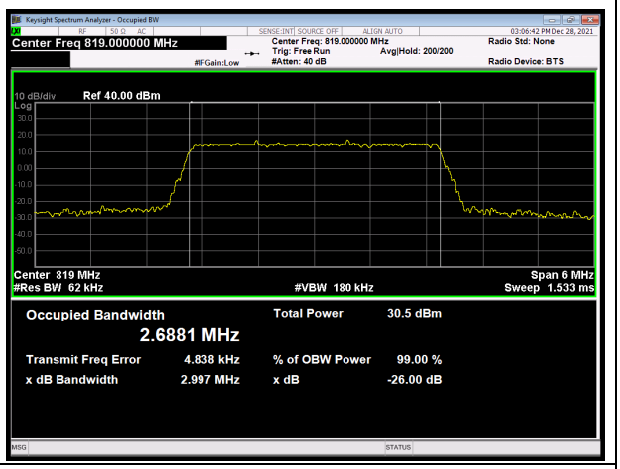
LTE Band 26 16QAM 3MHz CH Low



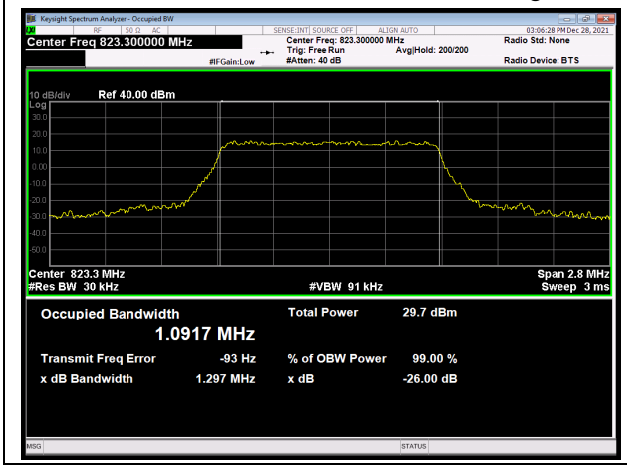
LTE Band 26 16QAM 1.4MHz CH Middle



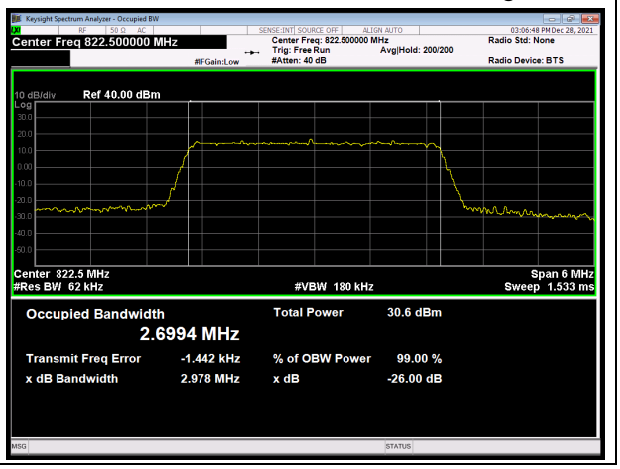
LTE Band 26 16QAM 3MHz CH Middle



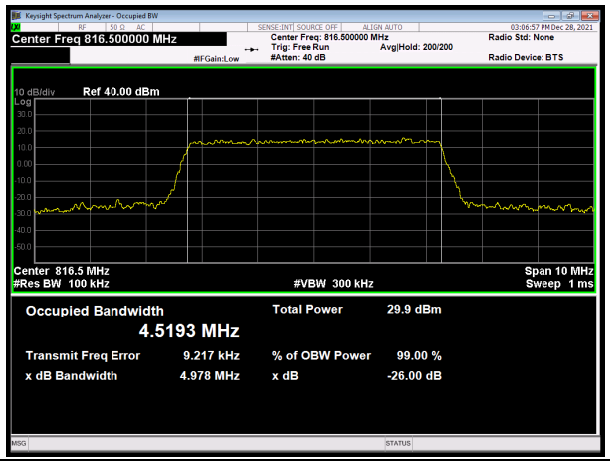
LTE Band 26 16QAM 1.4MHz CH High



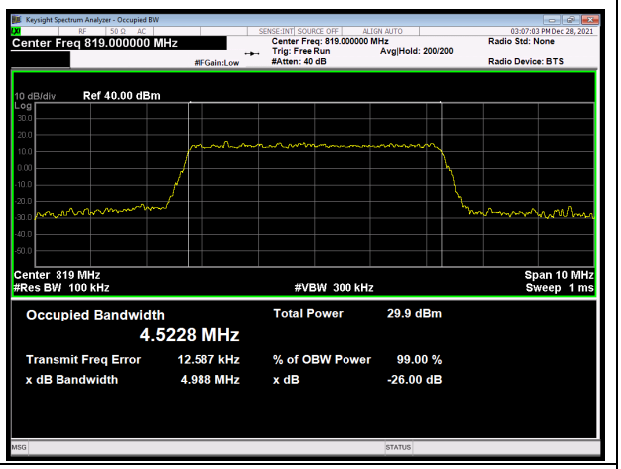
LTE Band 26 16QAM 3MHz CH High



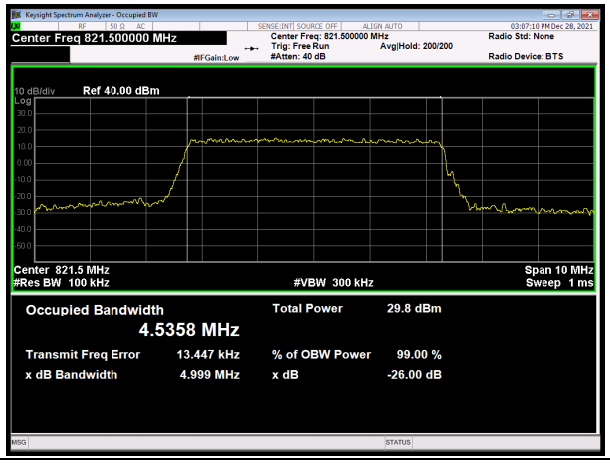
LTE Band 26 16QAM 5MHz CH Low



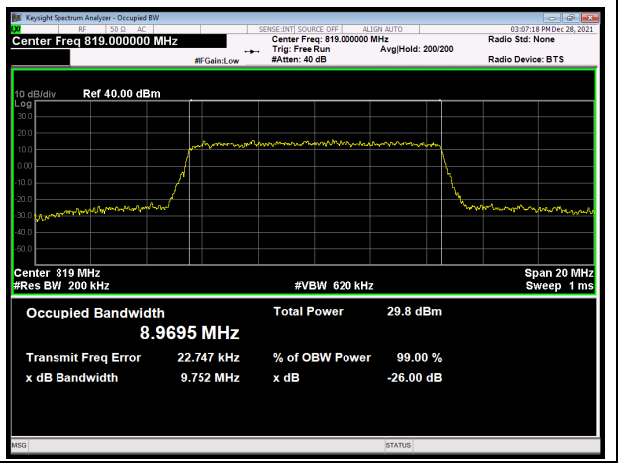
LTE Band 26 16QAM 5MHz CH Middle



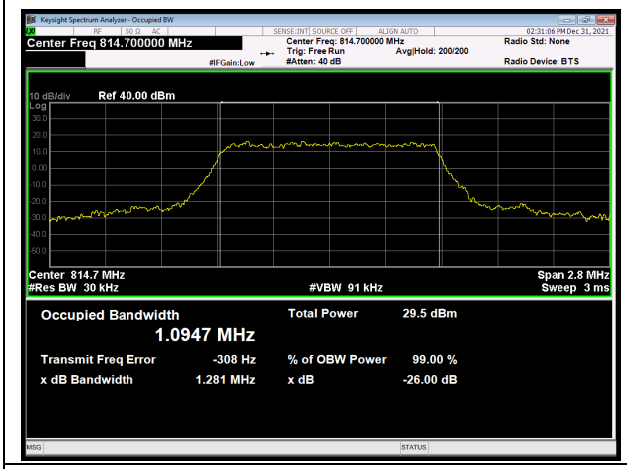
LTE Band 26 16QAM 5MHz CH High



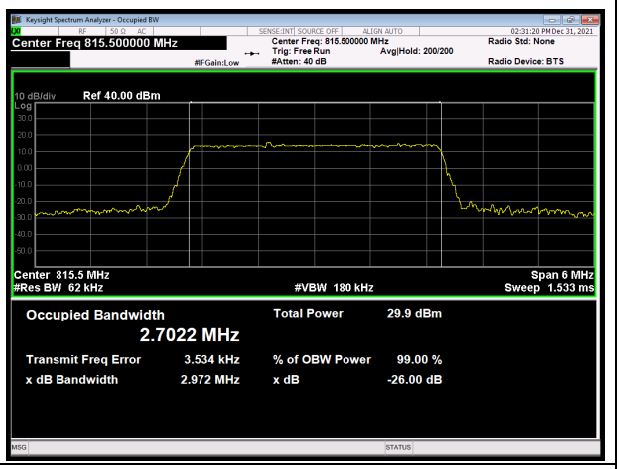
LTE Band 26 16QAM 10MHz CH Middle



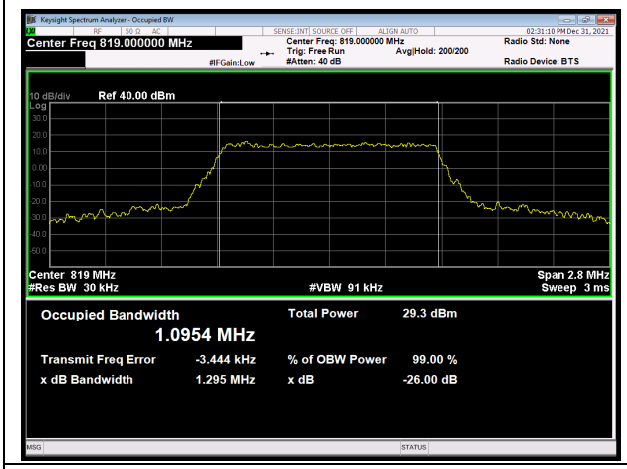
LTE Band 26 64QAM 1.4MHz CH Low



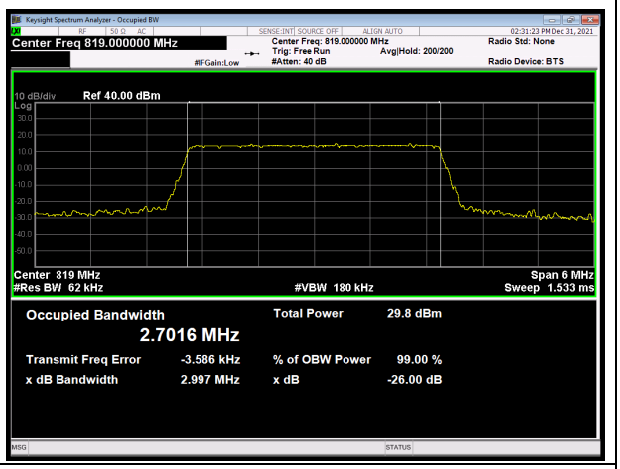
LTE Band 26 64QAM 3MHz CH Low



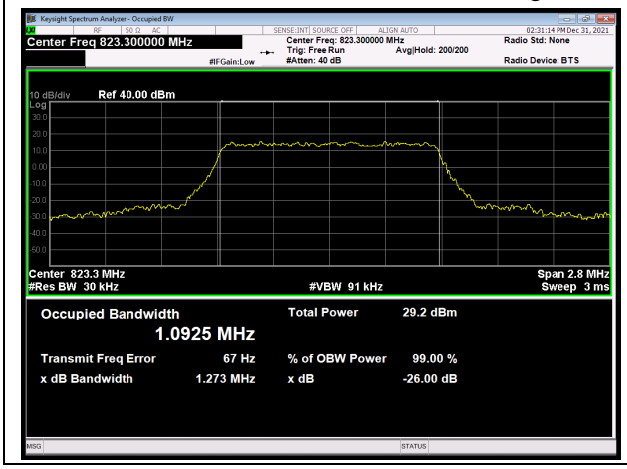
LTE Band 26 64QAM 1.4MHz CH Middle



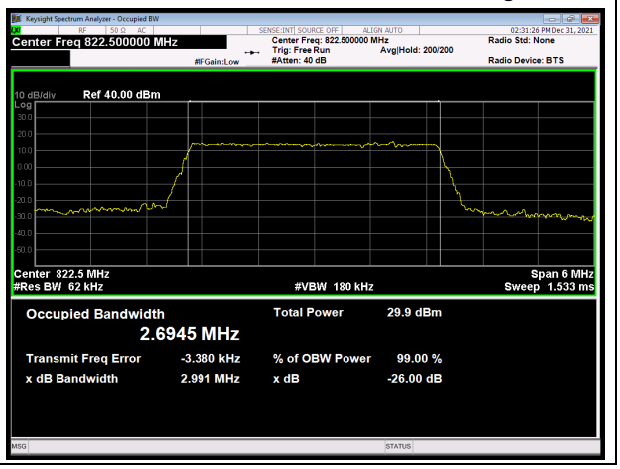
LTE Band 26 64QAM 3MHz CH Middle



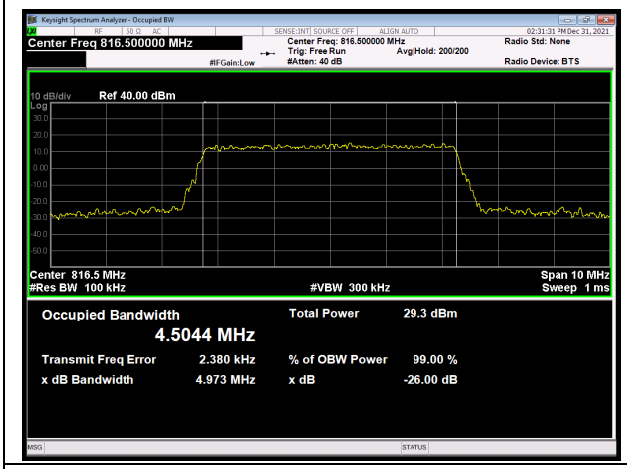
LTE Band 26 64QAM 1.4MHz CH High



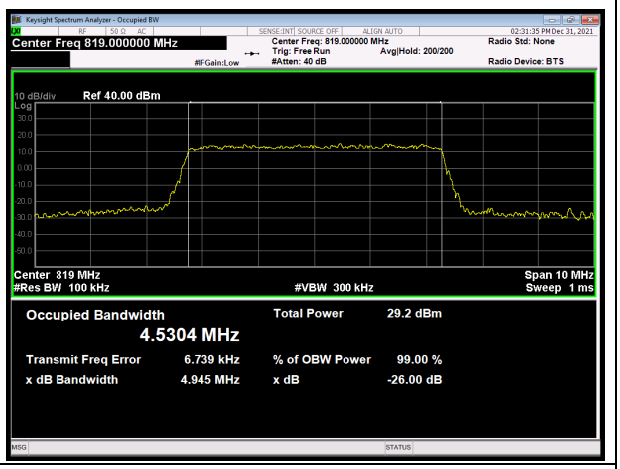
LTE Band 26 64QAM 3MHz CH High



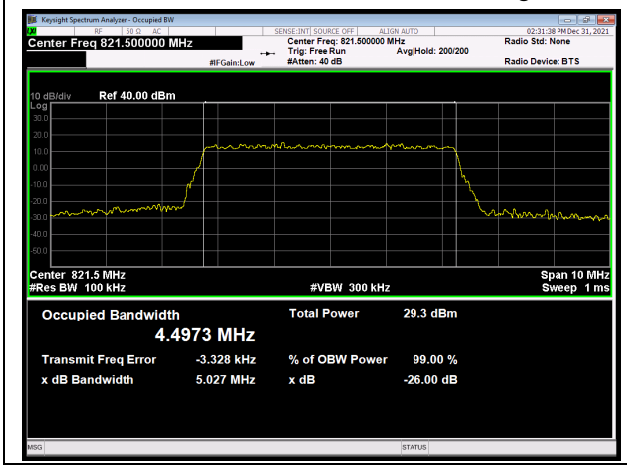
LTE Band 26 64QAM 5MHz CH Low



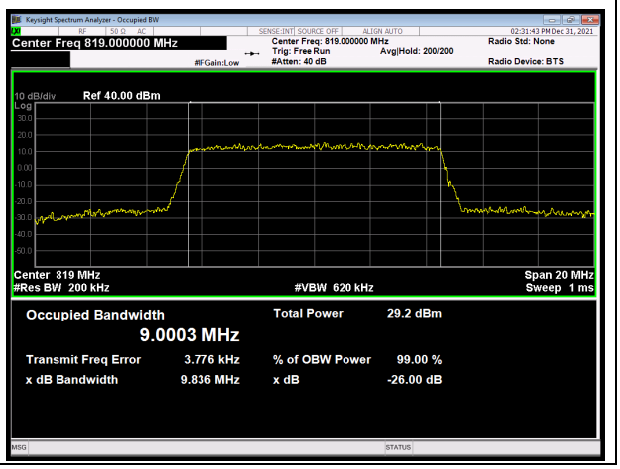
LTE Band 26 64QAM 5MHz CH Middle



LTE Band 26 64QAM 5MHz CH High



LTE Band 26 64QAM 10MHz CH Middle



5.3. Emission Mask

Ambient condition

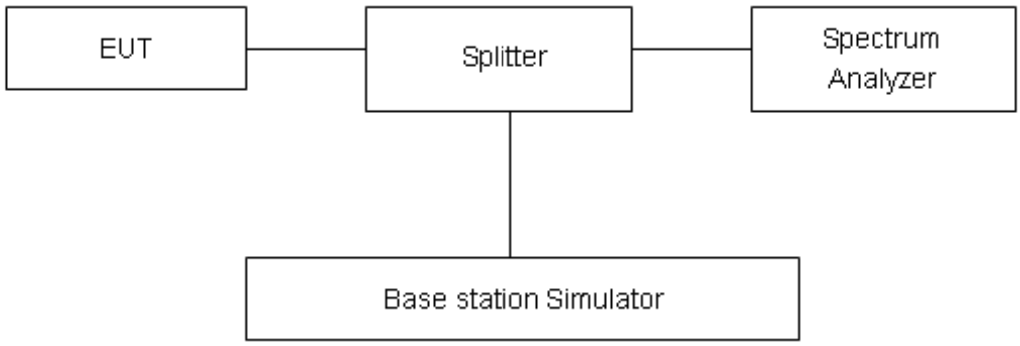
Temperature	Relative humidity
21°C ~25°C	40%~60%

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.
For Section 90.691(a) compliance testing, use RBW = 300 Hz for offsets less than 37.5 kHz from a channel edge; RBW = 100 kHz for offsets greater than 37.5 kHz is allowed.

Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

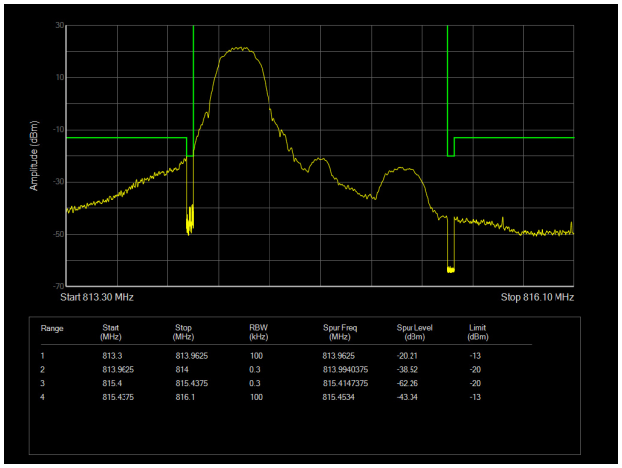
Rule Part 90.691(a) specifies that " For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 $Log_{10}(f/6.1)$ decibels or 50 + 10 $Log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz."

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.

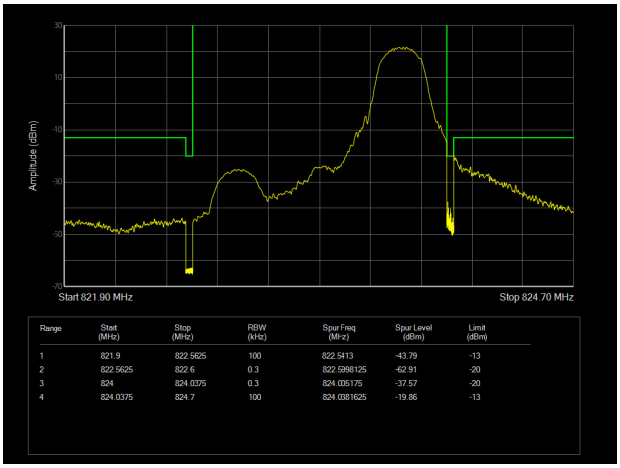
Test Result:

LTE Band 26 QPSK 1.4MHz CH-Low 1RB



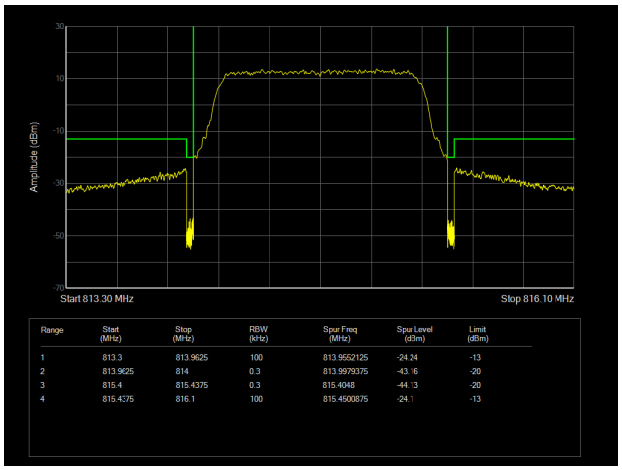
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	813.3	813.9625	100	813.9625	-20.21	-13
2	813.9625	814	0.3	813.9940375	-38.12	-20
3	815.4	815.4375	0.3	815.4147375	-62.26	-20
4	815.4375	816.1	100	815.4534	-43.34	-13

LTE Band 26 QPSK 1.4MHz CH-High 1RB



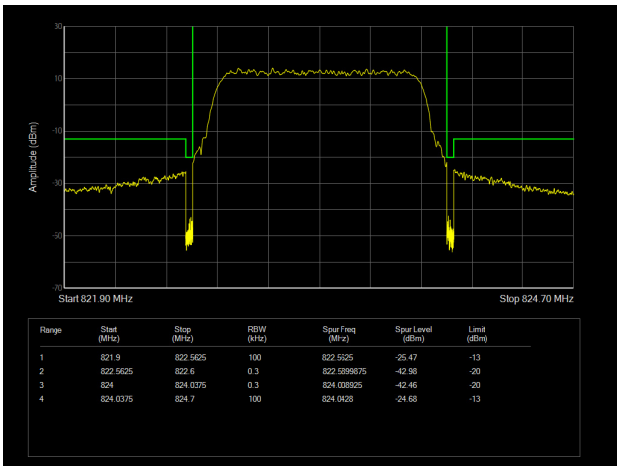
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	821.9	822.5625	100	822.5413	-43.79	-13
2	822.5625	822.6	0.3	822.5998125	-62.91	-20
3	824	824.0375	0.3	824.005175	-37.57	-20
4	824.0375	824.7	100	824.0381625	-19.86	-13

LTE Band 26 QPSK 1.4MHz CH-Low 100%RB



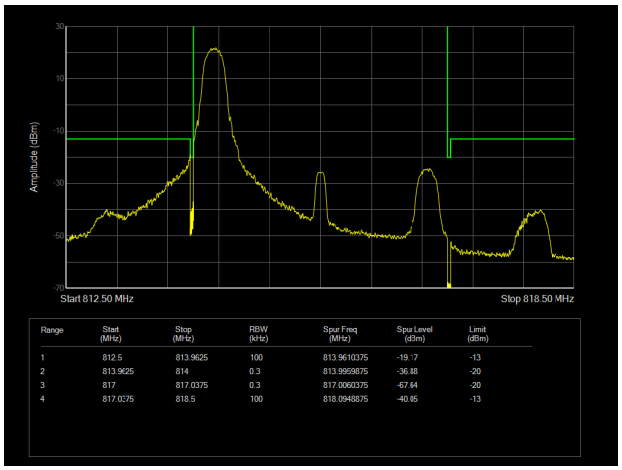
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	813.3	813.9625	100	813.9552125	-24.24	-13
2	813.9625	814	0.3	813.9979375	-43.16	-20
3	815.4	815.4375	0.3	815.4048	-44.13	-20
4	815.4375	816.1	100	815.4500875	-24.1	-13

LTE Band 26 QPSK 1.4MHz CH-High 100%RB



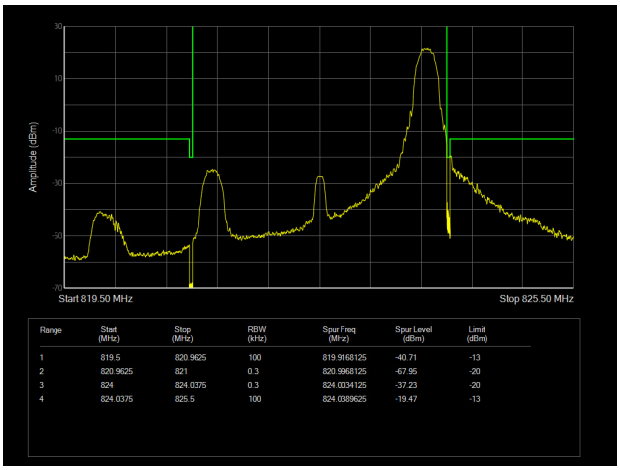
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	821.9	822.5625	100	822.5525	-25.47	-13
2	822.5625	822.6	0.3	822.5998875	-42.98	-20
3	824	824.0375	0.3	824.008925	-42.46	-20
4	824.0375	824.7	100	824.0428	-24.68	-13

LTE Band 26 QPSK 3MHz CH-Low 1RB



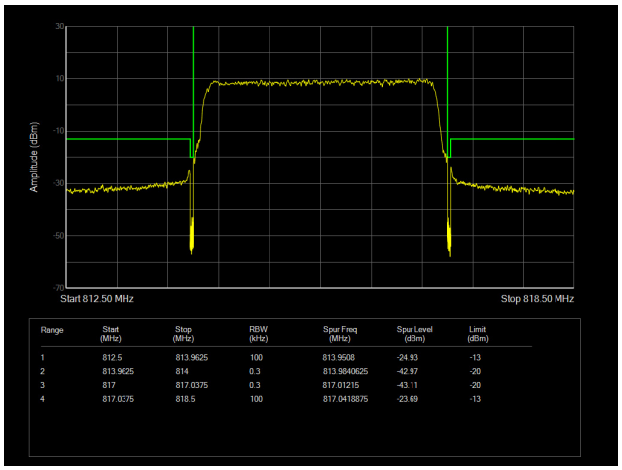
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	812.5	813.9625	100	813.9610375	-19.17	-13
2	813.9625	814	0.3	813.9959875	-36.48	-20
3	817	817.0375	0.3	817.0060375	-67.64	-20
4	817.0375	818.5	100	818.0948875	-40.65	-13

LTE Band 26 QPSK 3MHz CH-High 1RB



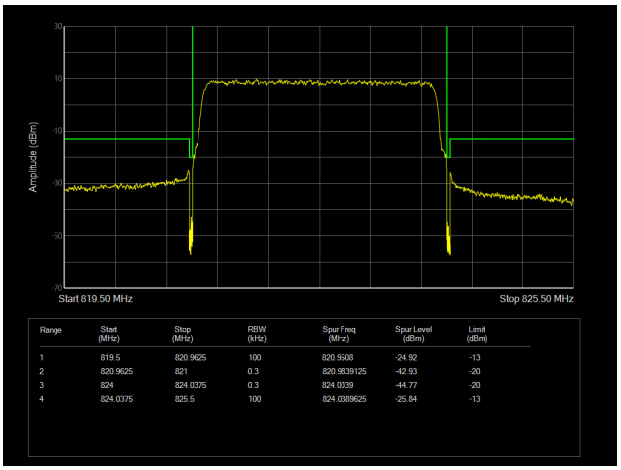
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	819.5	820.9625	100	819.9168125	-40.71	-13
2	820.9625	821	0.3	820.9968125	-67.95	-20
3	824	824.0375	0.3	824.0034125	-37.23	-20
4	824.0375	825.5	100	824.0389625	-19.47	-13

LTE Band 26 QPSK 3MHz CH-Low 100%RB



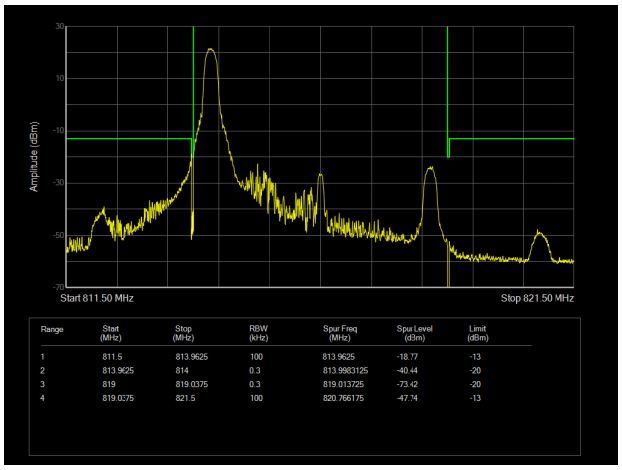
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	812.5	813.9625	100	813.9508	-24.93	-13
2	813.9625	814	0.3	813.9840625	-42.97	-20
3	817	817.0375	0.3	817.01215	-43.11	-20
4	817.0375	818.5	100	817.0418875	-23.69	-13

LTE Band 26 QPSK 3MHz CH-High 100%RB



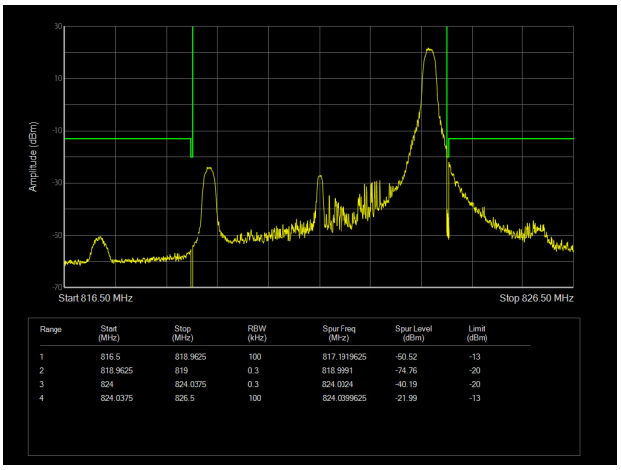
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	819.5	820.9625	100	820.9508	-24.92	-13
2	820.9625	821	0.3	820.9839125	-42.93	-20
3	824	824.0375	0.3	824.0339	-44.77	-20
4	824.0375	825.5	100	824.089625	-25.84	-13

LTE Band 26 QPSK 5MHz CH-Low 1RB



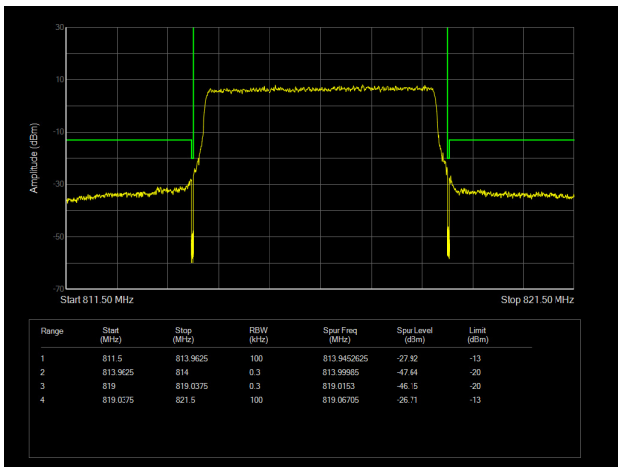
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	811.5	813.9625	100	813.9625	-18.77	-13
2	813.9625	814	0.3	813.9983125	-40.44	-20
3	819	819.0375	0.3	819.013725	-73.42	-20
4	819.0375	821.5	100	820.766175	-47.74	-13

LTE Band 26 QPSK 5MHz CH-High 1RB



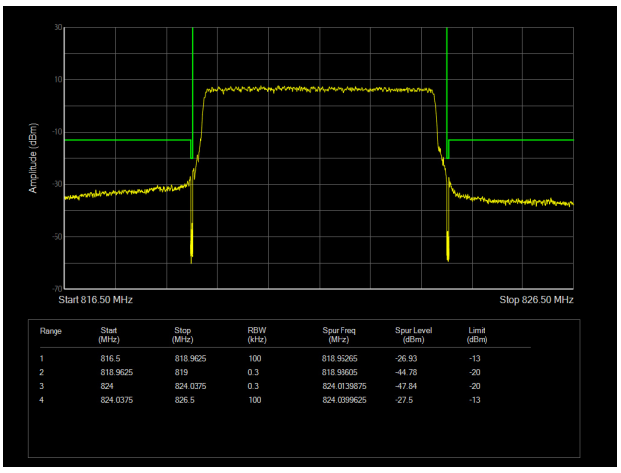
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	816.5	818.9625	100	817.1919625	-50.52	-13
2	818.9625	819	0.3	818.9991	-74.76	-20
3	824	824.0375	0.3	824.0324	-40.19	-20
4	824.0375	826.5	100	824.0399625	-21.99	-13

LTE Band 26 QPSK 5MHz CH-Low 100%RB



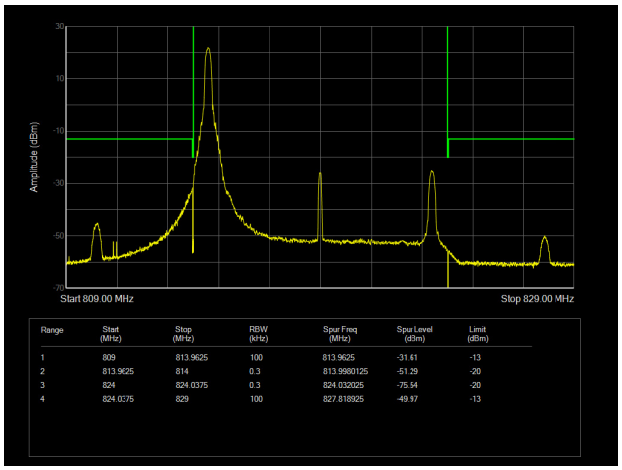
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	811.5	813.9625	100	813.9452625	-27.92	-13
2	813.9625	814	0.3	813.99985	-47.64	-20
3	819	819.0375	0.3	819.0153	-46.15	-20
4	819.0375	821.5	100	819.06705	-26.71	-13

LTE Band 26 QPSK 5MHz CH-High 100%RB



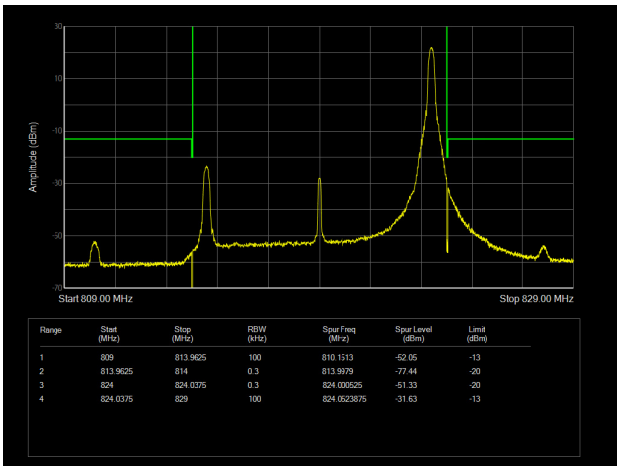
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	816.5	818.9625	100	818.9265	-26.93	-13
2	818.9625	819	0.3	818.99605	-44.78	-20
3	824	824.0375	0.3	824.0139875	-47.84	-20
4	824.0375	826.5	100	824.0399625	-27.5	-13

LTE Band 26 QPSK 10MHz CH-Low 1RB



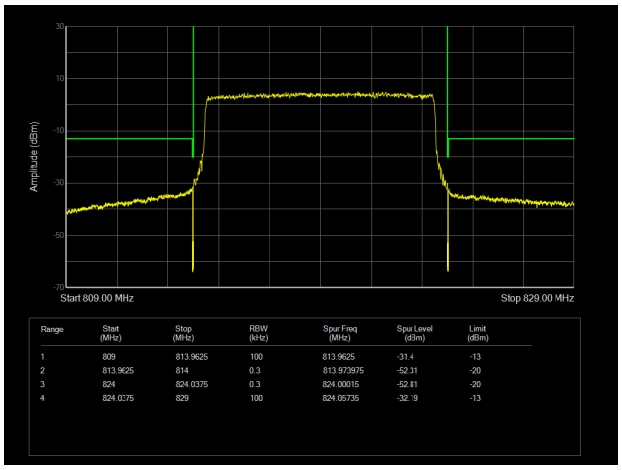
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	809	813.9625	100	813.9625	-31.61	-13
2	813.9625	814	0.3	813.9980125	-51.29	-20
3	824	824.0375	0.3	824.032025	-75.54	-20
4	824.0375	829	100	827.818925	-49.97	-13

LTE Band 26 QPSK 10MHz CH-High 1RB



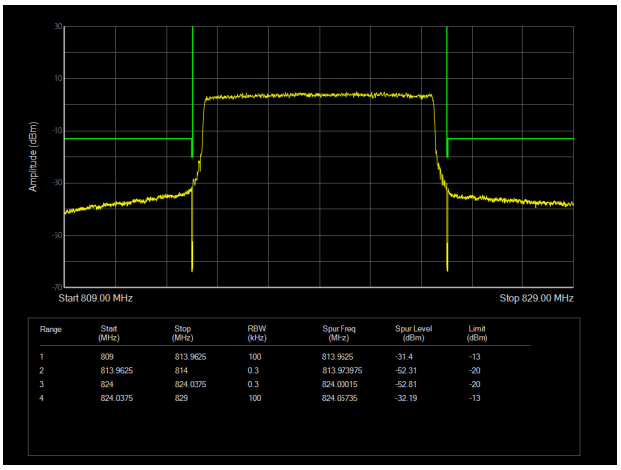
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	809	813.9625	100	810.1513	-52.05	-13
2	813.9625	814	0.3	813.9979	-77.44	-20
3	824	824.0375	0.3	824.000525	-51.33	-20
4	824.0375	829	100	824.023875	-31.63	-13

LTE Band 26 QPSK 10MHz CH-Low 100%RB



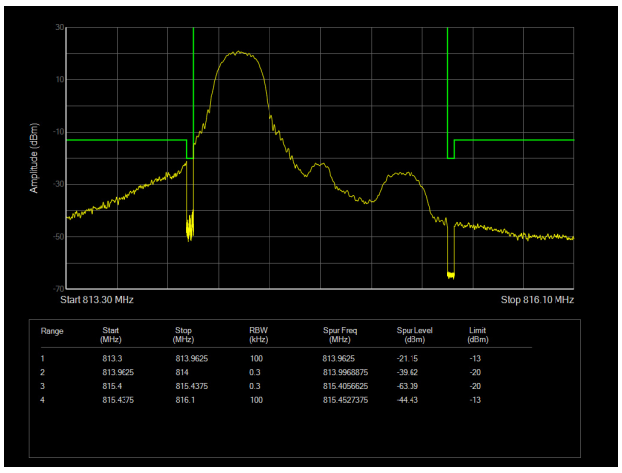
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	809	813.9625	100	813.9625	-31.4	-13
2	813.9625	814	0.3	813.973975	-52.11	-20
3	824	824.0375	0.3	824.00015	-52.81	-20
4	824.0375	829	100	824.05735	-32.19	-13

LTE Band 26 QPSK 10MHz CH-High 100%RB



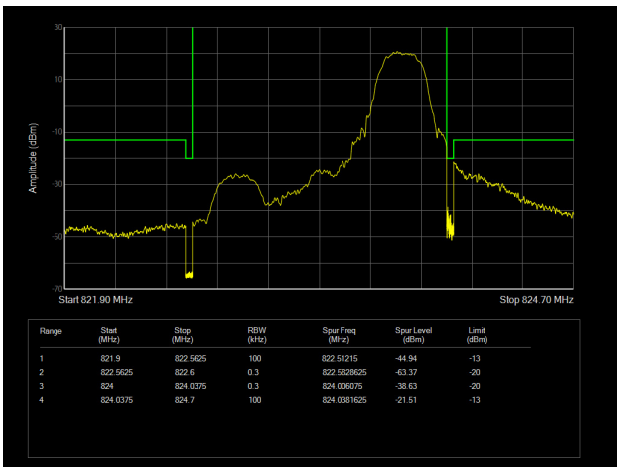
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	809	813.9625	100	813.9625	-31.4	-13
2	813.9625	814	0.3	813.973975	-52.31	-20
3	824	824.0375	0.3	824.00015	-52.81	-20
4	824.0375	829	100	824.05735	-32.19	-13

LTE Band 26 16QAM 1.4MHz CH-Low 1RB



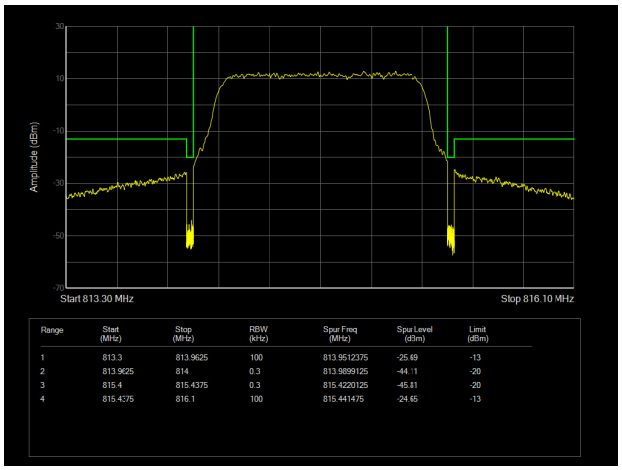
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	813.3	813.9625	100	813.9625	-21.15	-13
2	813.9625	814	0.3	813.9968875	-39.62	-20
3	815.4	815.4375	0.3	815.4056625	-63.39	-20
4	815.4375	816.1	100	815.4527375	-44.43	-13

LTE Band 26 16QAM 1.4MHz CH-High 1RB



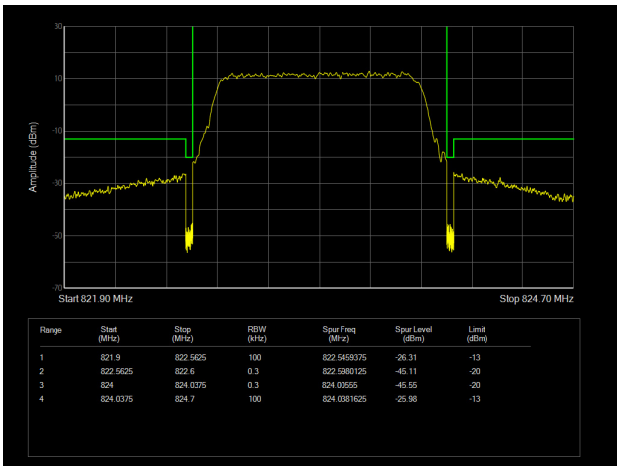
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	821.9	822.5625	100	822.51215	-44.94	-13
2	822.5625	822.6	0.3	822.5928625	-63.37	-20
3	824	824.0375	0.3	824.006075	-38.63	-20
4	824.0375	824.7	100	824.0381625	-21.51	-13

LTE Band 26 16QAM 1.4MHz CH-Low 100%RB



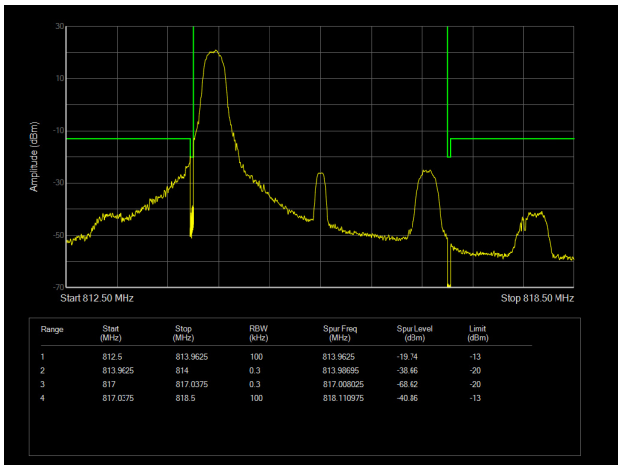
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	813.3	813.9625	100	813.9512375	-25.69	-13
2	813.9625	814	0.3	813.9899125	-44.11	-20
3	815.4	815.4375	0.3	815.4220125	-45.81	-20
4	815.4375	816.1	100	815.441475	-24.45	-13

LTE Band 26 16QAM 1.4MHz CH-High 100%RB



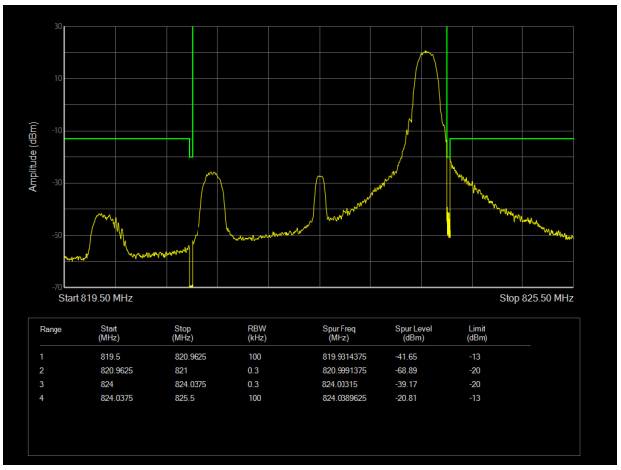
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	821.9	822.5625	100	822.5459375	-26.31	-13
2	822.5625	822.6	0.3	822.5980125	-45.11	-20
3	824	824.0375	0.3	824.03555	-45.55	-20
4	824.0375	824.7	100	824.0381625	-25.98	-13

LTE Band 26 16QAM 3MHz CH-Low 1RB



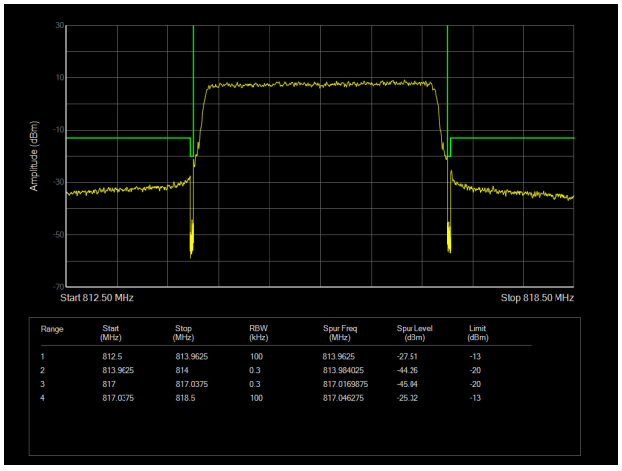
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	812.5	813.9625	100	813.9625	-19.74	-13
2	813.9625	814	0.3	813.98695	-38.66	-20
3	817	817.0375	0.3	817.008025	-68.62	-20
4	817.0375	818.5	100	818.110975	-40.86	-13

LTE Band 26 16QAM 3MHz CH-High 1RB



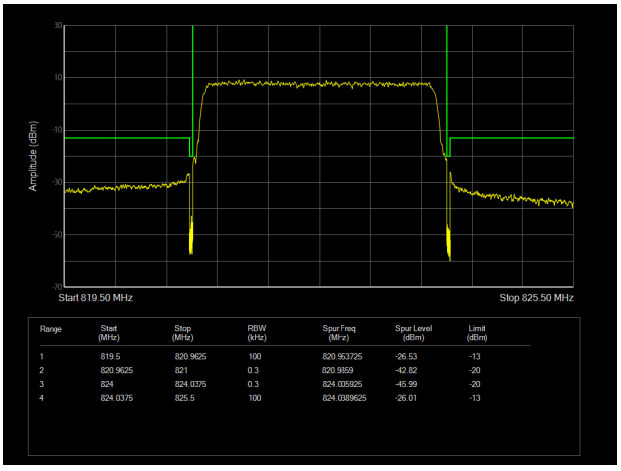
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	819.5	820.9625	100	819.9914375	-41.65	-13
2	820.9625	821	0.3	820.9991375	-68.89	-20
3	824	824.0375	0.3	824.03315	-39.17	-20
4	824.0375	825.5	100	824.0389625	-20.81	-13

LTE Band 26 16QAM 3MHz CH-Low 100%RB



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (d3m)	Limit (dBm)
1	812.5	813.9625	100	813.9625	-27.51	-13
2	813.9625	814	0.3	813.984025	-44.26	-20
3	817	817.0375	0.3	817.0169875	-45.94	-20
4	817.0375	818.5	100	817.046275	-25.32	-13

LTE Band 26 16QAM 3MHz CH-High 100%RB



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	819.5	820.9625	100	820.953725	-26.53	-13
2	820.9625	821	0.3	820.9359	-42.82	-20
3	824	824.0375	0.3	824.005925	-45.99	-20
4	824.0375	825.5	100	824.0389625	-26.01	-13