FCC TEST REPORT

FCC ID: 2A7BK-EF425

On Behalf of

EventFalcon Ltd

GPS Tracker

Model No.: EF425

Prepared for	:	EventFalcon Ltd
Address	:	1 Abbeycourt, Kinsale, Co Cork, Ireland

Prepared By	:	Shenzhen Alpha Product Testing Co., Ltd.
Address	:	Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

Report Number	:	A2205151-C01-R04
Date of Receipt	:	May 26, 2022
Date of Test	:	May 26, 2022- June 13, 2022
Date of Report	:	June 14, 2022
Version Number	:	V0

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TEST REPORT DECLARATION

Applicant	:	EventFalcon Ltd
Address	:	1 Abbeycourt, Kinsale, Co Cork, Ireland
Manufacturer	:	HuiZhou Cantrack Technology Co., Ltd
Address	:	2nd floor, Building 3, Changguang Maosen Industrial Park, Chayuan, Qiuchang Town, Huiyang District, Huizhou, Guangdong, China
EUT Description	:	GPS Tracker
	(A) Model No.	: EF425
	(B) Trademark	: N/A

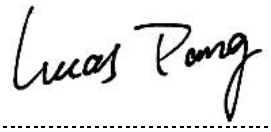
Measurement Standard Used:

FCC CFR Title 47 Part 2
FCC CFR Title 47 Part 22 Subpart H
FCC CFR Title 47 Part 24 Subpart E
FCC CFR Title 47 Part 27
ANSI C63.26:2015

The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Tested by (name + signature).....:	Lucas Pang Project Engineer	
Approved by (name + signature).....:	Simple Guan Project Manager	
Date of issue…… ……..:	June 14, 2022	

Revision History

Revision	Issue Date	Revisions	Revised By
V0	June 14, 2022	Initial released Issue	Lucas Pang

1 Test Summary

Test Item	Section in CFR 47	Result
RF Exposure (SAR)	Part 1.1307, Part 2.1093	Pass (Please refer to RF Exposure Evaluation assessment)
RF Output Power	Part 2.1046, Part 22.913(a) (5), Part 24.232 (c), Part 27.50 (d)(4)	Pass
Peak-To-Average Ratio	Part 2.1046	Pass
Effective Isotropic Radiated power	Part27.50 (b)(10), Part27.50 (c)(10), Part27.50 (d)(4), Part24.232 (c), Part22.913(a)	Pass
Modulation Characteristics	Part 2.1047	N/A
99% & -26 dB Occupied Bandwidth	Part 2.1049, Part 22.913(a), Part 24.238, Part 27.53(a)(m)	Pass
Spurious Emissions at Antenna Terminal	Part 2.1051, Part 22.913 (a), Part 24.238 (a), Part 27.53 (h)(m)	Pass
Field Strength of Spurious Radiation	Part 2.1053, Part 22.913 (a), Part 24.238 (a), Part 27.53 (h)(m)	Pass
Out of band emission, Band Edge	Part 22.913 (a), Part 24.238 (a), Part 27.53(h) (m)	Pass
Frequency stability vs. temperature	Part 2.1055(a)(1)(b)	Pass
Frequency stability vs. voltage	Part 2.1055(d)(1)(2)	Pass

Note:

1. Pass: The EUT complies with the essential requirements in the standard.

2. The conclusion of this test report is judged by actual test data without considering measurement uncertainty.

2 General Information

2.1 General Description of EUT

Description of Device (EUT)

Description	:	GPS Tracker
Trademark	:	N/A
Model Number	:	EF425
DIFF.	:	N/A
Test Voltage	:	DC 3.7V by battery(Built in battery), DC 12V by battery(External battery)
Power supply	:	DC 9-36V
Support Networks	:	LTE
Support Bands	:	LTE Band 2/4/12/13
Channel Bandwidth	:	LTE Band 2: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz
TX Frequency	:	LTE Band 2: 1850 ~ 1910 MHz LTE Band 4: 1710 ~ 1755 MHz LTE Band 12: 699MHz ~ 716MHz LTE Band 13: 777MHz ~ 787MHz.
Modulation type	:	QPSK, 16QAM
Antenna Type	:	Internal antenna, Maximum Gain is 0dBi
Software version	:	V1.0
Hardware version	:	V1.0

Remark 1: The worst-case simultaneous transmission configuration was evaluated with no non-compliance found. Results in this report are only for 4G function, and there is no other transmitter involved.

2.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is filing to comply with Section Part 22 subpart H and Part 24 subpart E of the FCC CFR 47 Rules.

2.3 Test Facility

Shenzhen Alpha Product Testing Co., Ltd

Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

June 21, 2018 File on Federal Communication Commission
Registration Number: 293961

July 15, 2019 Certificated by IC
Registration Number: CN0085

2.4 Accessories of Device (EUT)

Accessories	:	/
Manufacturer	:	/
Model	:	/
Input	:	/
Output	:	/

2.5 Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number	Certification or SDOC
1.	--	--	--	--	--

2.6 Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	24℃
Humidity range:	25-75%	56%
Pressure range:	86-106kPa	98kPa

2.7 Measurement Uncertainty

Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	1.63dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	3.5dB
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	3.74dB(Polarize: V)
	3.76dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz)	3.77dB(Polarize: V)
	3.80dB(Polarize: H)
Uncertainty for radio frequency	5.06×10^{-8}GHz
Uncertainty for conducted RF Power	0.40dB
Uncertainty for temperature	0.2℃
Uncertainty for humidity	1%
Uncertainty for DC and low frequency voltages	0.06%

3 Test Instruments list

Equipment	Manufacture	Model No.	Firmware version	Serial No.	Last cal.	Cal Interval
9*6*6 anechoic chamber	CHENYU	9*6*6	N/A	N/A	2020.09.02	3Year
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	2.3	102137	2021.08.25	1Year
Spectrum analyzer	Agilent	N9020A	A.14.16	MY499100060	2021.08.25	1Year
Receiver	ROHDE&SCHWARZ	ESR	2.28 SP1	1316.3003K03-102082-Wa	2021.08.25	1Year
Receiver	R&S	ESCI	4.42 SP1	101165	2021.08.25	1Year
Bilog Antenna	Schwarzbeck	VULB 9168	N/A	VULB 9168#627	2021.08.30	2Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	N/A	2106	2021.08.30	2Year
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	N/A	00059	2021.08.30	2Year
RF Cable	Resenberger	Cable 1	N/A	RE1	2021.08.25	1Year
RF Cable	Resenberger	Cable 2	N/A	RE2	2021.08.25	1Year
RF Cable	Resenberger	Cable 3	N/A	CE1	2021.08.25	1Year
Pre-amplifier	HP	HP8347A	N/A	2834A00455	2021.08.25	1Year
Pre-amplifier	Agilent	8449B	N/A	3008A02664	2021.08.25	1Year
L.I.S.N.#1	Schwarzbeck	NSLK8126	N/A	8126-466	2021.08.25	1Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	N/A	101043	2021.08.25	1 Year
Horn Antenna	SCHWARZBECK	BBHA9170	N/A	00946	2021.08.30	2 Year
Preamplifier	SKET	LNPA_1840-50	N/A	SK2018101801	2021.08.25	1 Year
Power Meter	Agilent	E9300A	N/A	MY41496628	2021.08.25	1 Year
Power Sensor	DARE	RPR3006W	N/A	15100041SNO91	2021.08.25	1 Year
Temp. & Humid. Chamber	Weihuang	WHTH-1000-40-880	N/A	100631	2022.04.22	1 Year
Switching Mode Power Supply	JUNKE	JK12010S	N/A	20140927-6	2021.08.25	1 Year
Adjustable attenuator	MWRFtest	N/A	N/A	N/A	N/A	N/A
10dB Attenuator	Mini-Circuits	DC-6G	N/A	N/A	N/A	N/A

Software Information			
Test Item	Software Name	Manufacturer	Version
RE	EZ-EMC	farad	Alpha-3A1
CE	EZ-EMC	farad	Alpha-3A1
RF-CE	MTS 8310	MWRFtest	2.0.0.0

4 System test configuration

4.1 Test mode

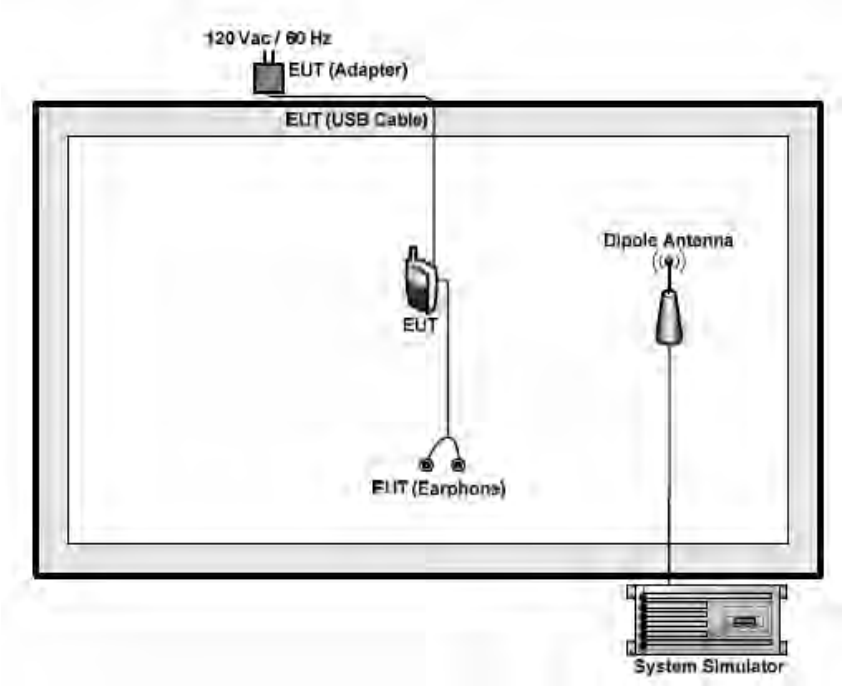
During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Test modes		
Band	Radiated	Conducted
LTE Band 2	■ QPSK link, 16QAM link	■ QPSK link, 16QAM link
LTE Band 4	■ QPSK link, 16QAM link	■ QPSK link, 16QAM link
LTE Band 12	■ QPSK link, 16QAM link	■ QPSK link, 16QAM link
LTE Band 13	■ QPSK link, 16QAM link	■ QPSK link, 16QAM link

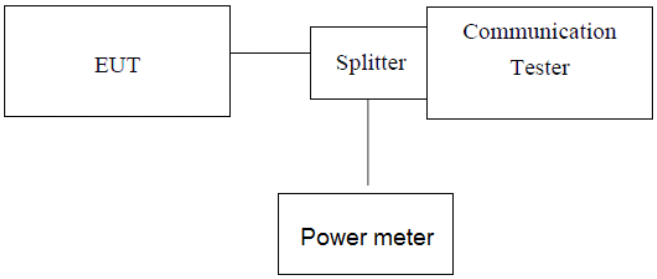
Note: Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas License Digital Systems v03r1 with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

4.2 Configuration of Tested System



4.3 Conducted Output Power

Test Requirement:	FCC part22.913(a) (5), FCC part24.232(b) and FCC Part 27.50
Test Method:	ANSI C63.26:2015
Limit:	No specific RF power output requirements in part 2. 1046.
Test setup:	 *Note: Measurement setup for testing on Antenna connector*
Test Procedure:	1. The transmitter output port was connected to base station. 2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement. 3. Set EUT at maximum power through base station. 4. Select lowest, middle, and highest channels for each band and different modulation. 5. Measure the maximum burst average power.
Test Instruments:	Refer to section 3 for details
Test mode:	Refer to section 4.1 for details
Test results:	Pass

Measurement Data

LTE Band2

BW (MHz)	Frequency (MHz)	RB Configuration		Average Power [dBm]	
		Size	Offset	QPSK	16QAM
1.4	1850.7	1	0	23.71	23.99
		1	3	22.34	23.67
		1	5	24.16	23.17
		3	0	23.70	22.52
		3	2	22.06	22.53
		3	3	22.13	22.36
		6	0	23.23	21.86
	1880.0	1	0	22.67	22.06
		1	3	22.96	21.52
		1	5	22.44	21.91
		3	0	21.97	21.02
		3	2	21.64	22.74
		3	3	22.07	21.07
		6	0	22.07	21.81
	1909.3	1	0	22.21	21.78
		1	3	22.34	23.00
		1	5	22.05	22.59
		3	0	21.19	21.90
		3	2	22.06	21.20
		3	3	22.46	22.89
		6	0	22.89	21.94
3	1851.5	1	0	24.02	23.11
		1	7	22.51	24.39
		1	14	24.16	23.26
		8	0	22.08	22.02
		8	4	21.74	22.68
		8	7	22.88	21.10
		15	0	21.87	21.67
	1880.0	1	0	23.47	21.84
		1	7	23.23	22.55
		1	14	23.18	21.44
		8	0	22.20	21.63
		8	4	21.56	21.72
		8	7	21.39	21.73
		15	0	21.86	21.03
	1908.5	1	0	21.95	22.12
		1	7	21.33	21.25
		1	14	21.54	21.72
		8	0	22.45	21.68
		8	4	21.98	21.48
		8	7	22.48	21.72
		15	0	22.17	21.79
5	1852.5	1	0	23.05	21.68
		1	12	22.88	21.84
		1	24	23.02	21.51

		12	0	22.53	21.47
		12	6	22.10	22.89
		12	13	21.89	21.57
		25	0	21.00	22.50
	1880.0	1	0	24.43	23.74
		1	12	22.58	22.94
		1	24	21.19	21.38
		12	0	21.97	21.69
		12	6	21.96	21.45
		12	13	21.21	21.23
		25	0	22.18	21.73
	1907.5	1	0	22.42	22.63
		1	12	22.26	21.24
		1	24	22.62	21.24
		12	0	22.85	22.21
		12	6	21.47	23.35
		12	13	21.56	21.37
		25	0	22.63	21.98
10	1855.0	1	0	24.26	22.13
		1	24	22.65	22.06
		1	49	23.30	23.10
		25	0	21.73	22.08
		25	12	22.20	21.13
		2·5	25	23.25	22.26
		50	0	23.21	21.66
	1880.0	1	0	22.19	24.13
		1	24	24.16	24.37
		1	49	21.20	21.25
		25	0	21.88	21.47
		25	12	21.42	22.07
		25	25	21.16	21.47
		50	0	21.35	21.57
	1905.0	1	0	22.99	21.45
		1	24	22.84	22.78
		1	49	22.66	22.16
		25	0	22.99	22.10
		25	12	21.69	22.16
		25	25	24.02	22.31
		50	0	22.21	22.65
15	1857.5	1	0	23.95	23.85
		1	37	22.47	23.60
		1	74	23.09	22.35
		37	0	22.28	21.90
		37	18	21.19	22.74
		37	38	21.07	21.91
		75	0	23.18	22.62
	1880.0	1	0	22.43	23.51
		1	37	24.01	22.04
		1	74	23.14	21.48
		37	0	21.33	21.17

		37	18	23.45	23.73
		37	38	22.10	23.17
		75	0	22.16	21.68
	1902.5	1	0	22.60	21.74
		1	37	22.62	21.54
		1	74	23.83	22.68
		37	0	21.31	21.52
		37	18	22.24	21.66
		37	38	22.08	21.41
		75	0	21.46	22.64
20	1860.0	1	0	**24.44**	**24.40**
		1	49	23.46	23.28
		1	99	22.64	22.89
		50	0	22.07	21.82
		50	25	22.73	22.70
		50	50	21.31	21.43
		100	0	22.91	22.17
	1880.0	1	0	22.84	23.96
		1	49	22.96	23.67
		1	99	21.65	21.71
		50	0	22.12	21.38
		50	25	21.95	21.90
		50	50	21.90	22.56
		100	0	21.01	21.57
	1900.0	1	0	22.73	21.80
		1	49	22.09	21.77
		1	99	21.92	21.44
		50	0	22.08	21.96
		50	25	21.51	21.92
		50	50	21.16	21.71
		100	0	21.62	21.22

LTE Band4

BW (MHz)	Frequency (MHz)	RB Configuration		Average Power [dBm]	
		Size	Offset	QPSK	16QAM
1.4	1710.7	1	0	24.08	23.72
		1	3	23.56	23.36
		1	5	24.12	23.57
		3	0	24.47	23.10
		3	2	22.98	22.77
		3	3	23.44	23.03
		6	0	22.72	23.84
	1732.5	1	0	23.46	23.95
		1	3	23.52	22.99
		1	5	21.26	22.58
		3	0	22.49	22.06
		3	2	22.66	22.92
		3	3	21.93	22.96
		6	0	22.43	22.50
	1754.3	1	0	23.17	22.90
		1	3	22.96	22.01
		1	5	22.87	22.82
		3	0	23.07	21.36
		3	2	22.99	22.92
		3	3	21.94	23.76
		6	0	21.56	21.55
3	1711.5	1	0	23.98	23.53
		1	7	23.71	23.65
		1	14	23.69	24.14
		8	0	23.86	22.53
		8	4	23.00	21.60
		8	7	22.88	22.70
		15	0	23.85	22.67
	1732.5	1	0	23.55	23.42
		1	7	23.94	22.96
		1	14	22.42	22.75
		8	0	21.10	21.50
		8	4	21.53	21.44
		8	7	22.58	21.38
		15	0	22.10	21.88
	1753.5	1	0	22.75	22.01
		1	7	22.57	22.73
		1	14	22.86	22.40
		8	0	21.99	21.89
		8	4	21.15	21.15
		8	7	21.71	21.27
		15	0	21.48	23.00
5	1712.5	1	0	23.41	24.22
		1	12	23.14	23.67
		1	24	23.58	22.22

		12	0	24.70	24.66
		12	6	23.84	23.25
		12	13	24.32	23.29
		25	0	23.29	22.43
	1732.5	1	0	22.61	23.16
		1	12	23.55	23.48
		1	24	21.99	21.27
		12	0	21.01	21.74
		12	6	21.74	21.51
		12	13	22.21	21.81
		25	0	22.65	22.64
	1752.5	1	0	21.63	21.86
		1	12	23.38	21.78
		1	24	22.92	21.82
		12	0	22.18	21.80
		12	6	21.90	21.73
		12	13	21.34	21.24
		25	0	22.03	21.66
10	1715.0	1	0	23.35	22.62
		1	24	23.68	23.83
		1	49	24.30	23.61
		25	0	22.99	21.61
		25	12	21.31	21.81
		25	25	22.90	23.32
		50	0	23.29	21.87
	1732.5	1	0	23.50	24.03
		1	24	23.42	22.72
		1	49	21.96	22.15
		25	0	22.62	22.77
		25	12	22.64	23.14
		25	25	23.50	21.77
		50	0	22.43	21.35
	1750.0	1	0	22.36	21.72
		1	24	23.27	21.99
		1	49	23.56	22.99
		25	0	21.92	21.56
		25	12	22.22	21.49
		25	25	22.43	21.50
		50	0	21.77	21.20
15	1717.5	1	0	24.97	24.92
		1	37	24.08	23.44
		1	74	23.43	24.31
		37	0	22.92	22.16
		37	18	23.91	23.04
		37	38	23.20	22.60
		75	0	23.17	21.28
	1732.5	1	0	24.11	23.62
		1	37	23.06	23.09
		1	74	22.03	21.65
		37	0	22.99	22.61

		37	18	21.58	21.74
		37	38	21.31	21.76
		75	0	21.22	21.23
	1747.5	1	0	22.51	23.82
		1	37	23.84	22.44
		1	74	23.67	22.30
		37	0	21.39	22.45
		37	18	21.42	22.29
		37	38	21.39	21.16
		75	0	22.43	21.55
20	1721.0	1	0	**24.98**	**24.93**
		1	49	23.98	23.15
		1	99	22.34	23.79
		50	0	23.58	23.39
		50	25	22.32	21.58
		50	50	23.41	23.21
		100	0	23.21	21.95
	1732.5	1	0	24.39	24.00
		1	49	23.74	24.13
		1	99	22.18	21.12
		50	0	22.80	21.68
		50	25	21.93	21.76
		50	50	21.03	22.09
		100	0	22.13	22.31
	1745.0	1	0	22.49	21.96
		1	49	23.20	22.53
		1	99	22.16	23.35
		50	0	21.61	21.45
		50	25	21.70	21.24
		50	50	22.09	21.57
		100	0	22.39	21.91

LTE Band12

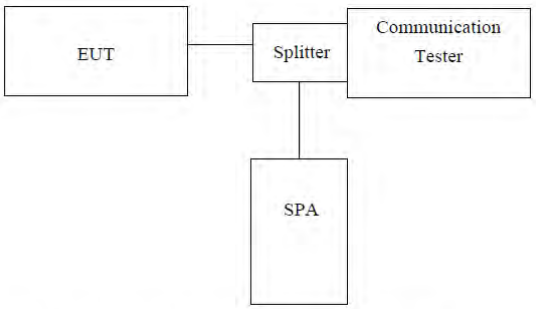
BW (MHz)	Frequency (MHz)	RB Configuration		Average Power [dBm]	
		Size	Offset	QPSK	16QAM
1.4	699.7	1	0	23.67	23.78
		1	3	21.93	23.37
		1	5	23.87	23.23
		3	0	24.16	22.92
		3	2	22.11	22.63
		3	3	22.03	22.52
		6	0	23.08	22.25
	707.5	1	0	22.84	21.73
		1	3	22.60	21.97
		1	5	22.03	21.85
		3	0	21.69	21.56
		3	2	21.14	22.50
		3	3	22.11	21.76
		6	0	21.92	22.08
	715.3	1	0	22.39	21.95
		1	3	22.40	22.52
		1	5	22.00	22.23
		3	0	21.45	22.28
		3	2	22.44	21.18
		3	3	22.65	23.12
		6	0	23.10	22.28
4	700.5	1	0	24.26	22.95
		1	7	22.75	24.52
		1	14	24.64	23.43
		8	0	22.02	22.51
		8	4	21.77	22.63
		8	7	22.52	21.04
		15	0	21.60	21.82
	707.5	1	0	23.35	21.95
		1	7	23.04	22.97
		1	14	22.94	21.38
		8	0	21.97	21.67
		8	4	21.07	21.22
		8	7	21.47	21.12
		15	0	22.18	21.06
	714.5	1	0	21.78	22.11
		1	7	21.07	21.88
		1	14	21.93	21.55
		8	0	22.71	21.44
		8	4	22.43	21.63
		8	7	22.25	21.76
		15	0	22.35	21.56
5	701.5	1	0	22.56	21.33
		1	12	22.41	21.69
		1	24	22.85	21.77

		12	0	22.46	21.53
		12	6	22.34	23.29
		12	13	21.50	21.95
		25	0	21.46	22.44
	707.5	1	0	23.96	23.74
		1	12	22.23	23.07
		1	24	21.99	21.68
		12	0	22.36	21.62
		12	6	21.95	21.17
		12	13	21.51	21.88
		25	0	21.99	21.52
	713.5	1	0	21.98	22.90
		1	12	22.46	21.53
		1	24	23.09	21.60
		12	0	22.45	22.23
		12	6	21.05	23.70
		12	13	21.36	21.91
		25	0	22.62	21.72
10	704	1	0	24.10	22.40
		1	24	22.97	21.70
		1	49	23.56	23.08
		25	0	22.00	21.72
		25	12	22.59	21.98
		25	25	23.12	22.51
		50	0	23.28	22.01
	707.5	1	0	22.36	23.78
		1	24	**24.76**	**24.58**
		1	49	21.85	21.67
		25	0	22.12	21.70
		25	12	21.83	21.90
		25	25	21.34	21.80
		50	0	21.75	21.66
	711.0	1	0	23.21	21.96
		1	24	22.74	22.57
		1	49	22.77	22.16
		25	0	23.22	21.70
		25	12	21.68	22.16
		25	25	23.54	22.17
		50	0	22.25	22.41

LTE Band13

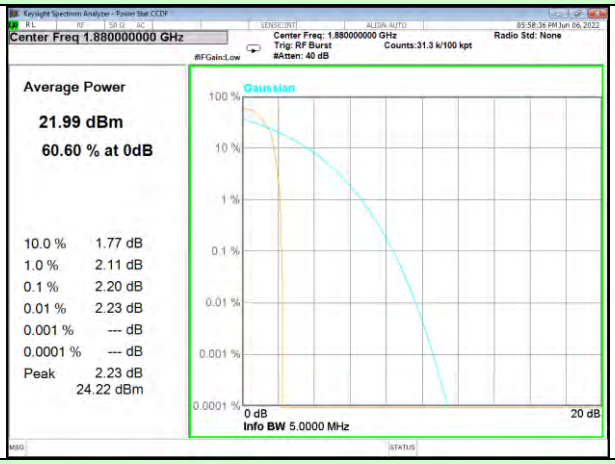
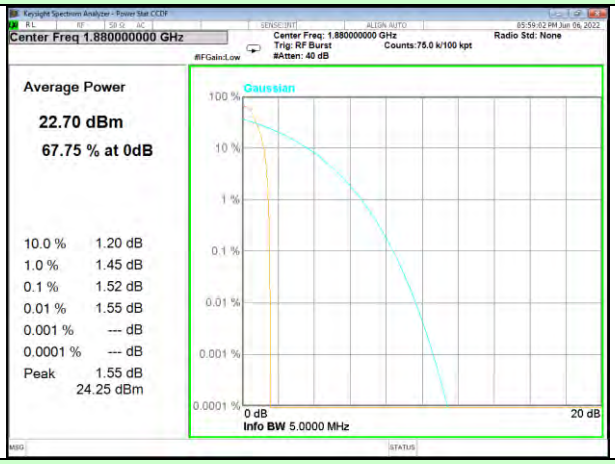
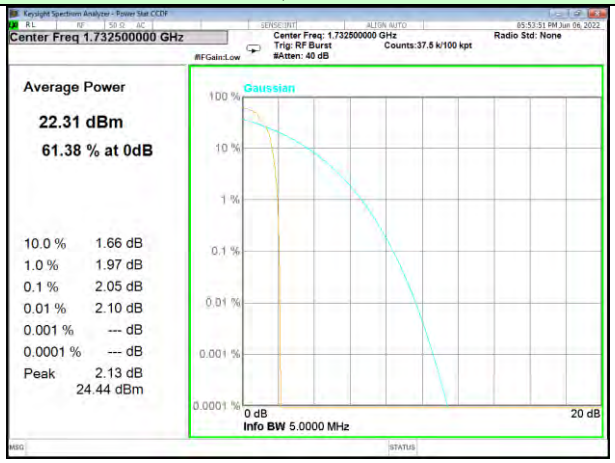
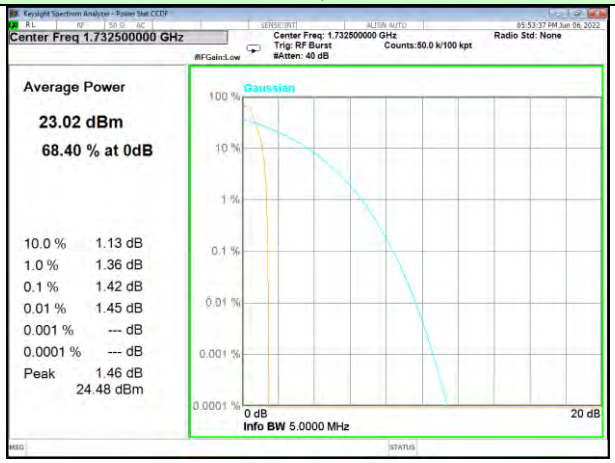
BW (MHz)	Frequency (MHz)	RB Configuration		Average Power [dBm]	
		Size	Offset	QPSK	16QAM
5	779.5	1	0	23.35	23.63
		1	12	22.32	23.34
		1	24	24.50	22.80
		12	0	23.76	22.21
		12	6	21.97	22.79
		12	13	22.59	22.42
		25	0	22.96	22.02
	782	1	0	22.42	22.06
		1	12	22.69	21.08
		1	24	22.20	21.98
		12	0	22.15	21.51
		12	6	21.85	22.26
		12	13	22.14	21.67
		25	0	22.22	21.48
	784.5	1	0	22.43	21.37
		1	12	22.58	22.83
		1	24	21.91	22.33
		12	0	21.03	22.01
		12	6	21.63	21.15
		12	13	22.71	22.72
		25	0	22.66	21.81
10	782	1	0	23.90	23.40
		1	0	22.78	**24.35**
		1	24	**24.52**	23.07
		1	49	22.01	22.24
		25	0	21.29	22.62
		25	12	22.94	21.00
		25	25	21.84	22.01
		50	0	23.85	22.04

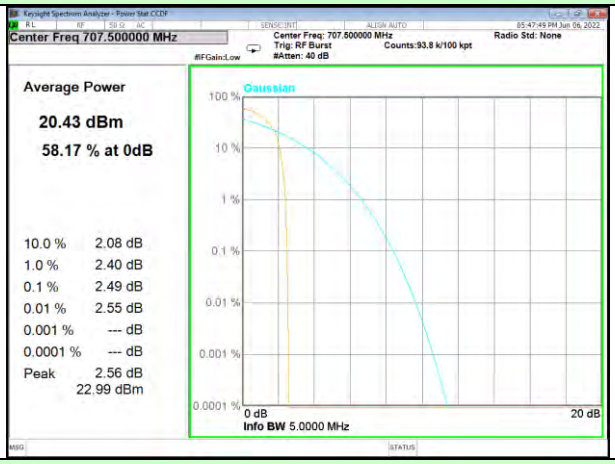
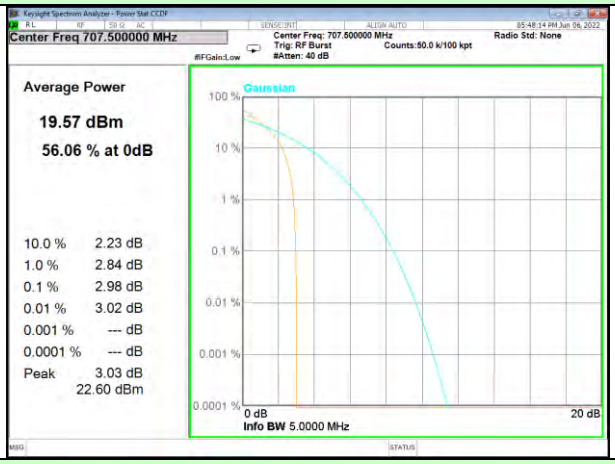
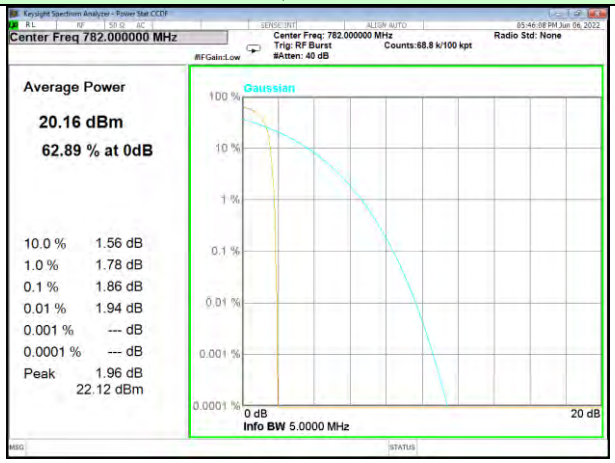
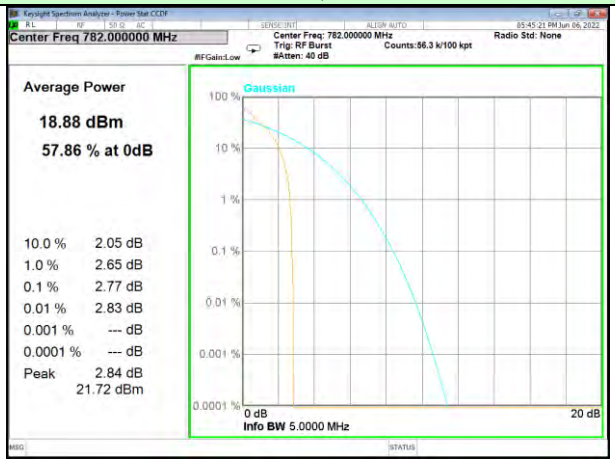
4.4 Peak-to-Average Ratio

Test Requirement:	Part 22.913(d), FCC part24.232(d) and FCC part27.50(d)(5)
Test Method:	ANSI C63.26:2015
Test Limit:	Used complementary cumulative distribution function (CCDF) of analyzer to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time
Test setup:	 *Note: Measurement setup for testing on Antenna connector*
Test Procedure:	1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.7.. 2. The EUT was connected to spectrum and system simulator via a power divider 3. Using the CCDF measurement of spectrum analyzer; 4. Set RBW≥OBW or specified reference bandwidth; 5. Set the number of counts to a value that stabilizes the measured CCDF curve; 6. Set the measurement interval as 1ms 7. Record the maximum PAPR level associated with a probability of 0.1%.
Test Instruments:	Refer to section 3 for details
Test mode:	Refer to section 4.1 for details
Test results:	Pass

Test plots are listed as below:

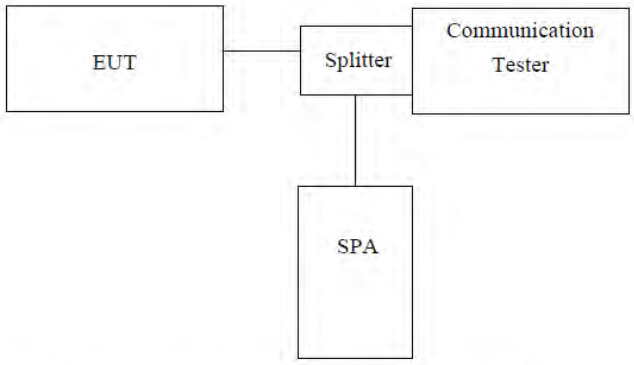
Test mode	Peak to Average Ratio (dB)	Limit (dB)	Result
LTE Band 2 Middle channel/20MHz/QPSK	2.20	13	Pass
LTE Band 2 Middle channel/20MHz/16-QAM	1.52	13	Pass
LTE Band 4 Middle channel/20MHz/QPSK	2.05	13	Pass
LTE Band 4 Middle channel/20MHz/16-QAM	1.42	13	Pass
LTE Band 12 Middle channel/10MHz/QPSK	2.49	13	Pass
LTE Band 12 Middle channel/10MHz/16-QAM	2.96	13	Pass
LTE Band 13 Middle channel/10MHz/QPSK	1.85	13	Pass
LTE Band 13 Middle channel/10MHz/16-QAM	2.77	13	Pass

Test Mode: LTE Band 2 Middle channel/20MHz/QPSK	Test Mode: LTE Band 2 Middle channel/20MHz/16-QAM
	
Test Mode: LTE Band 4 Middle channel/20MHz/QPSK	Test Mode: LTE Band 4 Middle channel/20MHz/16-QAM
	

Test Mode: LTE Band 12 Middle channel/20MHz/QPSK	Test Mode: LTE Band 12 Middle channel/20MHz/16-QAM
	
Test Mode: LTE Band 13 Middle channel/10MHz/QPSK	Test Mode: LTE Band 13 Middle channel/10MHz/16-QAM
	

Note: All bandwidth and modulation are tested, only the worst results are reported.

4.5 Occupy Bandwidth

Test Requirement:	FCC part22.913(a), FCC part24.232(b) and FCC part27.53(a)
Test Method:	ANSI C63.26:2015
Test setup:	 *Note: Measurement setup for testing on Antenna connector*
Test Procedure:	1.The EUT's output RF connector was connected with a short cable to the spectrum analyzer, set center frequency to channel center frequency. 2.RBW was set to about 1%-5% of emission OBW, VBW≥ 3 X RBW. 3.Set spectrum analyzer detection mode to peak, and the trace mode to max hold. 4. Use the 99% OBW function, The 99% power OBW can be found on the plot, determine the "-26dB amplitude" as equal to reference value -26dB.
Test Instruments:	Refer to section 3 for details
Test mode:	Refer to section 4.1 for details
Test results:	Pass

Measurement Data

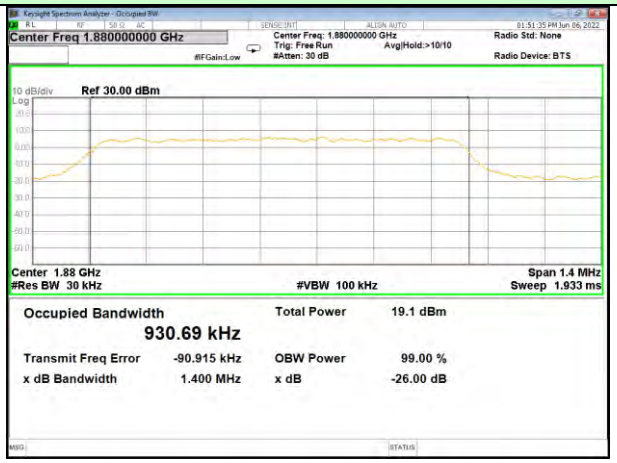
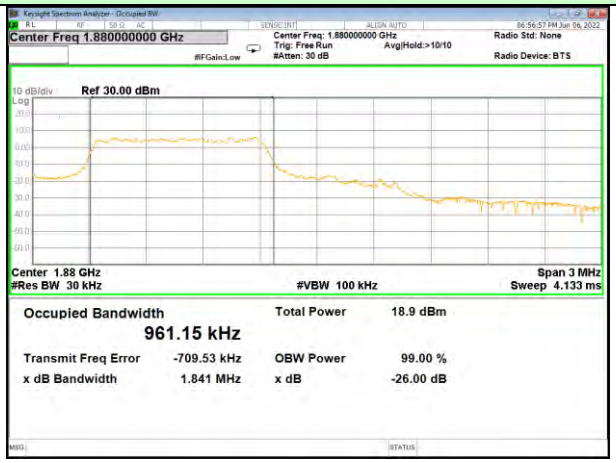
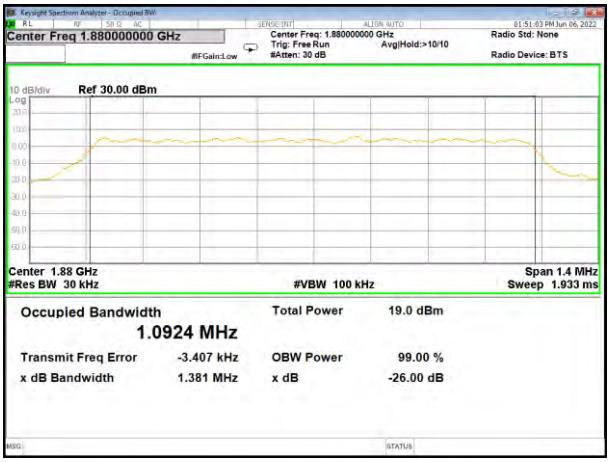
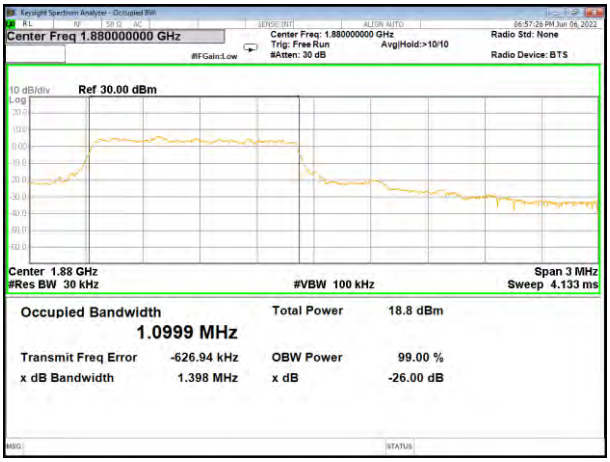
EUT Mode	Channel Bandwidth	Mode	RB Configure		99% Occupy bandwidth (KHz)	-26dB bandwidth (KHz)
			RB Size	RB Offset		
LTE Band 2	1.4MHz	16-QAM	6	0	1092.4	1381
		QPSK	6	0	930.69	1400
	3MHz	16-QAM	15	0	1099.9	1398
		QPSK	15	0	961.15	1841
	5MHz	16-QAM	25	0	1134.5	1859
		QPSK	25	0	1077.6	1734
	10MHz	16-QAM	50	0	1156.8	2028
		QPSK	50	0	1281.5	2276
	15MHz	16-QAM	75	0	1698.4	2803
		QPSK	75	0	1373.5	2285
	20MHz	16-QAM	100	0	1623.4	2582
		QPSK	100	0	1338.2	2370

EUT Mode	Channel Bandwidth	Mode	RB Configure		99% Occupy bandwidth (KHz)	-26dB bandwidth (KHz)
			RB Size	RB Offset		
LTE Band 4	1.4MHz	16-QAM	6	0	1095.5	1400
		QPSK	6	0	938.81	1400
	3MHz	16-QAM	15	0	1105.8	1700
		QPSK	15	0	955.08	1696
	5MHz	16-QAM	25	0	1197	1864
		QPSK	25	0	1081.6	1864
	10MHz	16-QAM	50	0	1251.8	2402
		QPSK	50	0	1400	2224
	15MHz	16-QAM	75	0	1770.4	2738
		QPSK	75	0	1450.7	2248
	20MHz	16-QAM	100	0	1699.8	2828
		QPSK	100	0	1384.3	2366

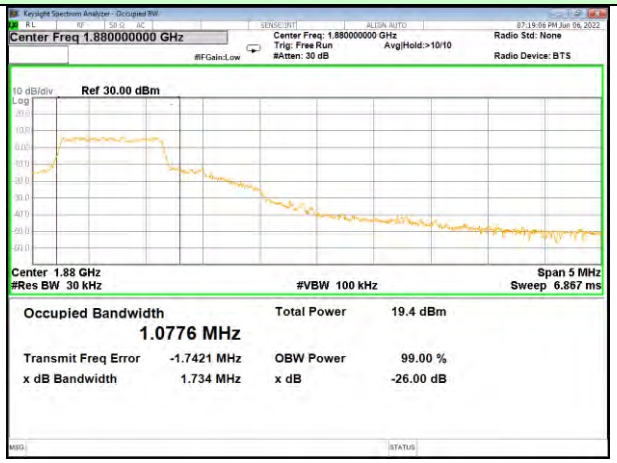
EUT Mode	Channel Bandwidth	Mode	RB Configure		99% Occupy bandwidth (KHz)	-26dB bandwidth (KHz)
			RB Size	RB Offset		
LTE Band 12	1.4MHz	16-QAM	25	0	1089.5	1310
		QPSK	25	0	925.85	1247
	3MHz	16-QAM	50	0	1095.5	1278
		QPSK	50	0	928.88	1263
	5MHz	16-QAM	25	0	1103.8	1345
		QPSK	25	0	952.38	1431
	10MHz	16-QAM	50	0	1097.6	1326
		QPSK	50	0	990.94	1955

EUT Mode	Channel Bandwidth	Mode	RB Configure		99% Occupy bandwidth (KHz)	-26dB bandwidth (KHz)
			RB Size	RB Offset		
LTE Band 13	5MHz	16-QAM	25	0	1100.3	1668
		QPSK	25	0	946.76	1511
	10MHz	16-QAM	50	0	1105.7	1400
		QPSK	50	0	1144	2083

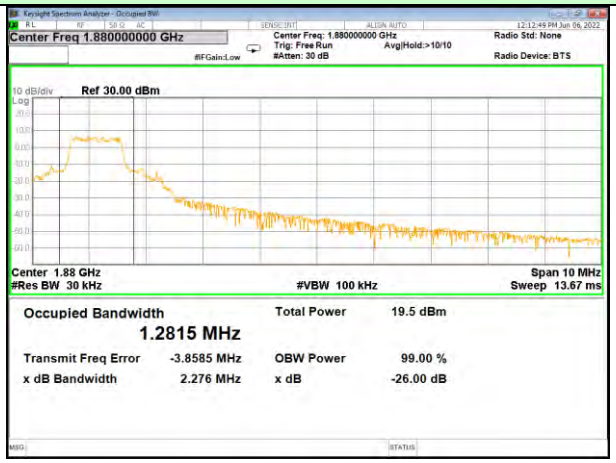
Test plot as follows:

Test Mode: LTE Band 2 Channel Bandwidth: 1.4MHz	Test Mode: LTE Band 2 Channel Bandwidth: 3MHz
	
QPSK	QPSK
	
16-QAM	16-QAM

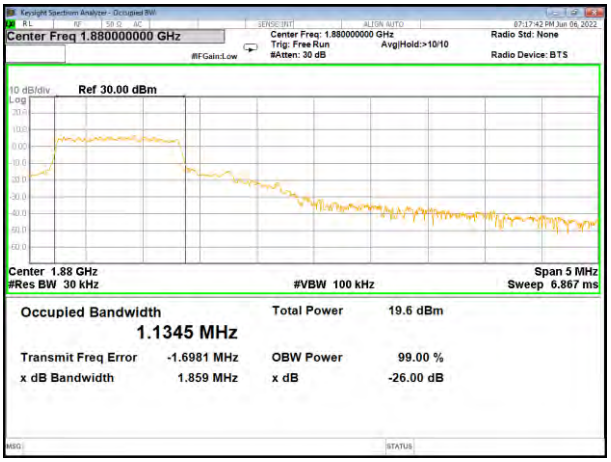
Test Mode: LTE Band 2 Channel Bandwidth: 5MHz	Test Mode: LTE Band 2 Channel Bandwidth: 10MHz



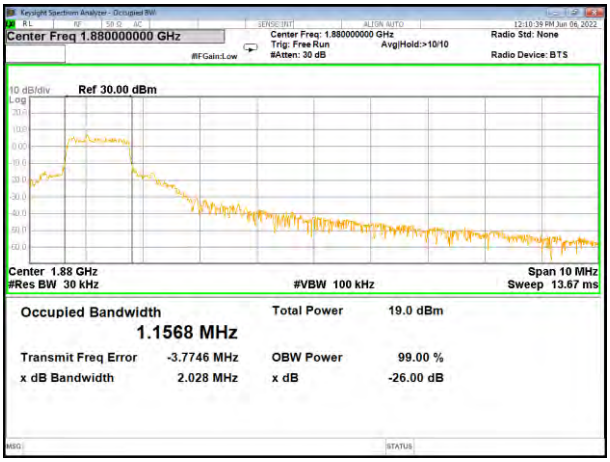
QPSK



QPSK

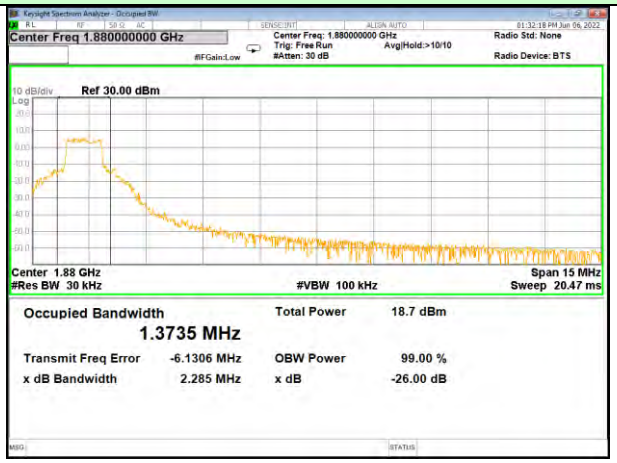


16-QAM

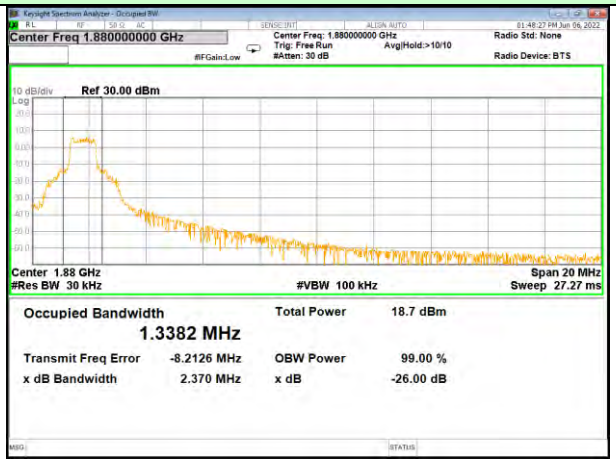


16-QAM

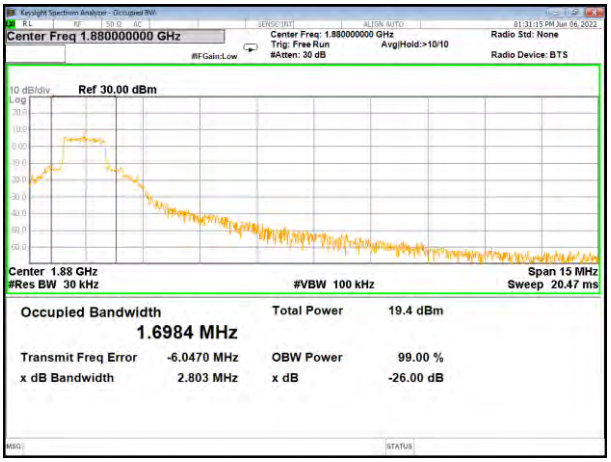
Test Mode: LTE Band 2 Channel Bandwidth: 15MHz	Test Mode: LTE Band 2 Channel Bandwidth: 20MHz



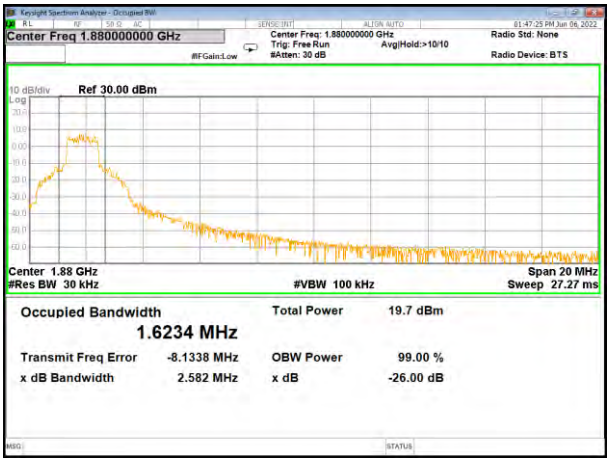
QPSK



QPSK

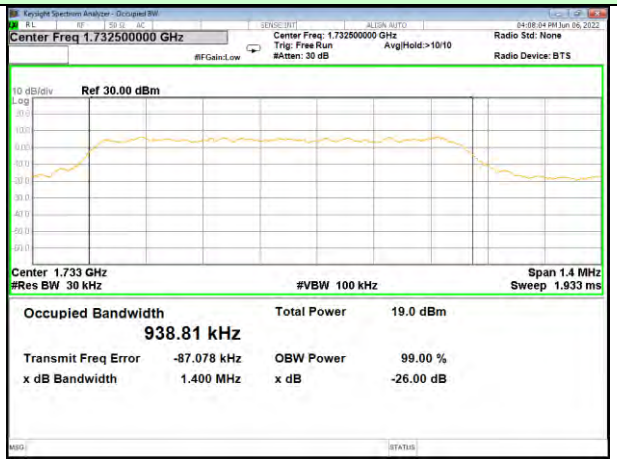


16-QAM

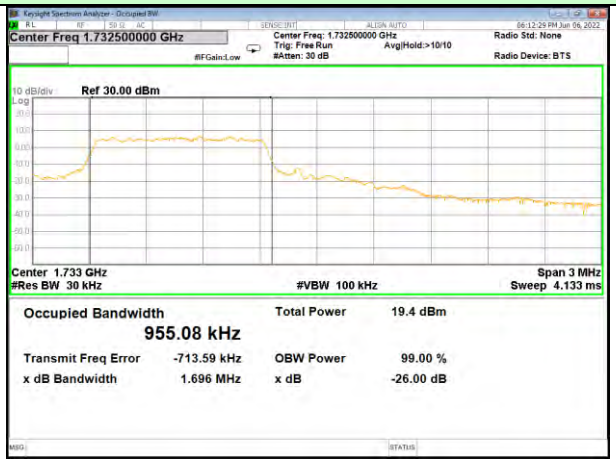


16-QAM

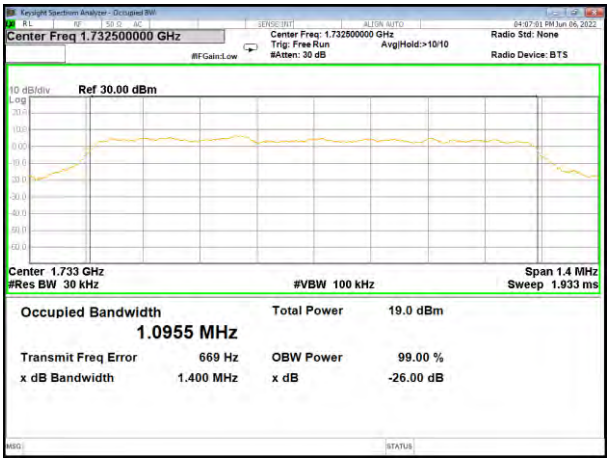
Test Mode: LTE Band 4 Channel Bandwidth: 1.4MHz	Test Mode: LTE Band 4 Channel Bandwidth: 3MHz



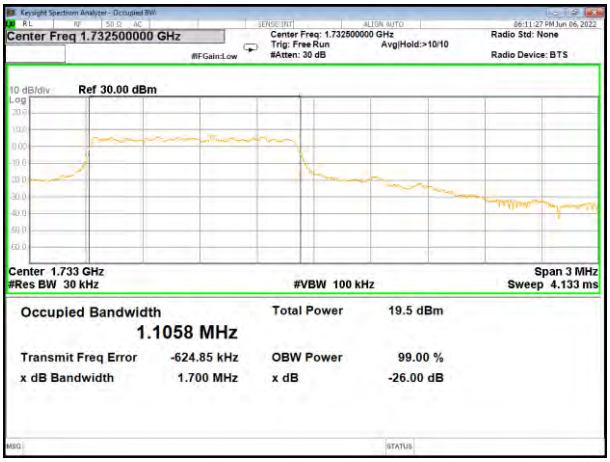
QPSK



QPSK

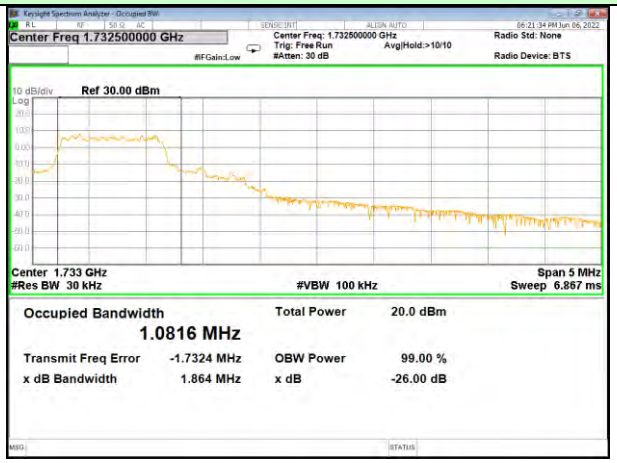


16-QAM

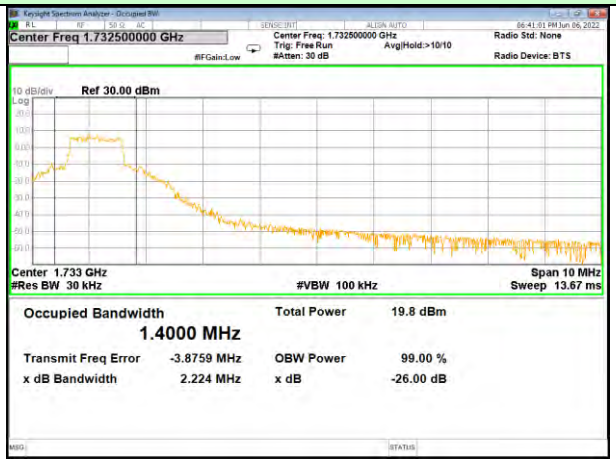


16-QAM

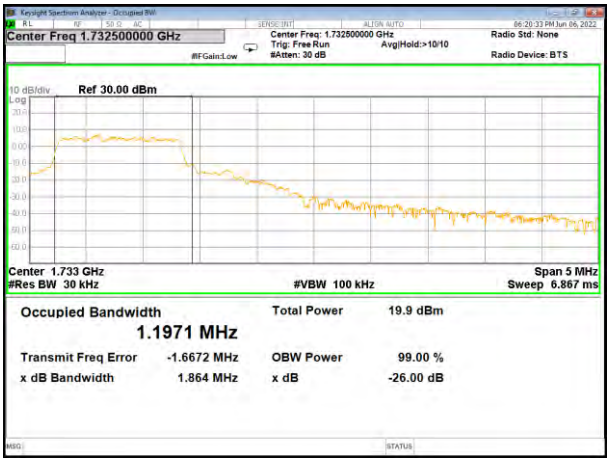
Test Mode: LTE Band 4 Channel Bandwidth: 5MHz	Test Mode: LTE Band 4 Channel Bandwidth: 10MHz



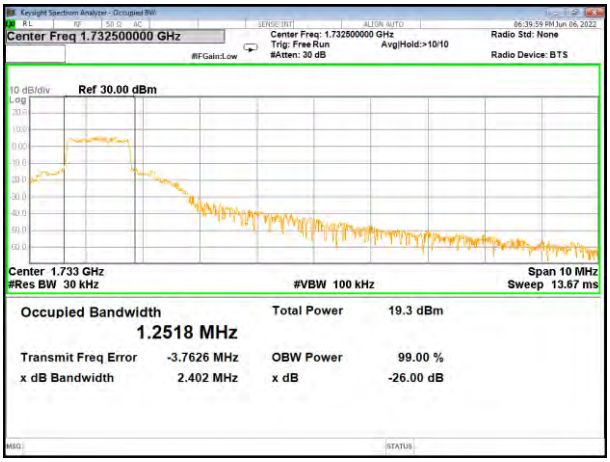
QPSK



QPSK

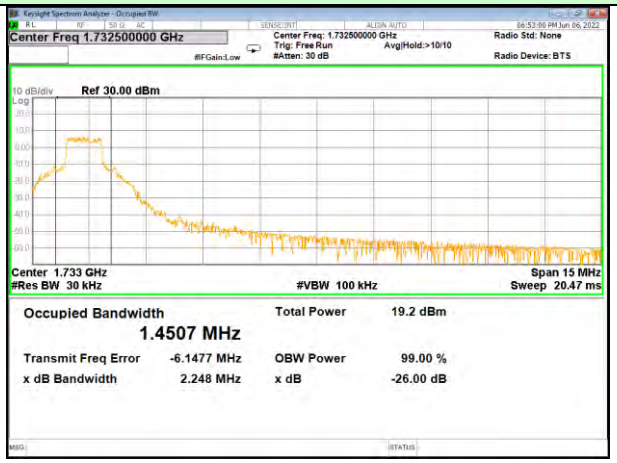


16-QAM

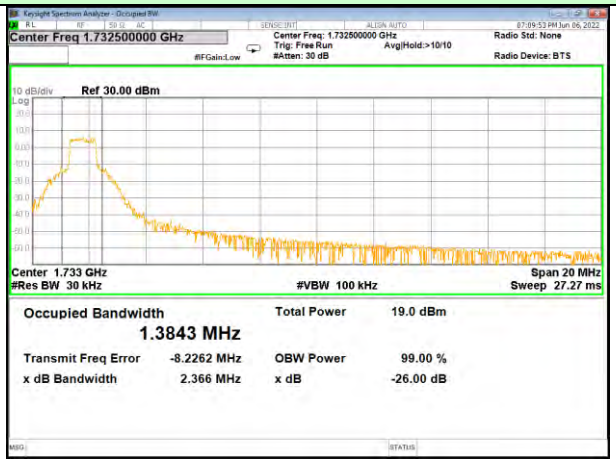


16-QAM

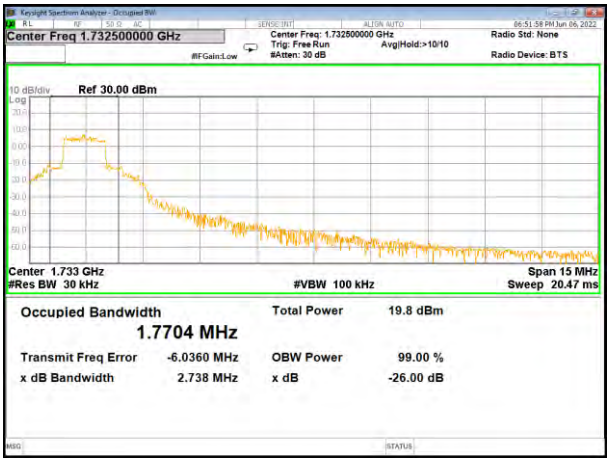
Test Mode: LTE Band 4 Channel Bandwidth: 15MHz	Test Mode: LTE Band 4 Channel Bandwidth: 20MHz



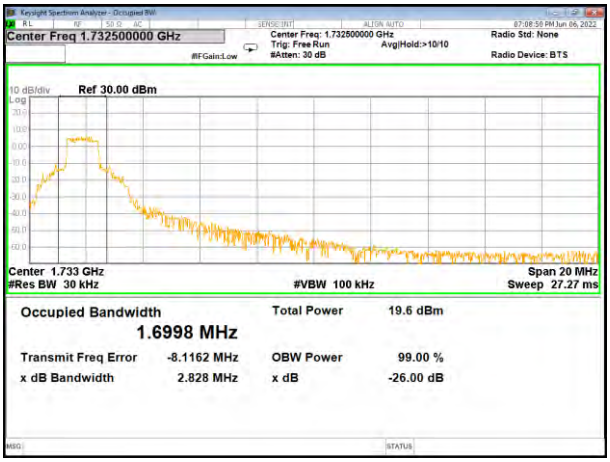
QPSK



QPSK

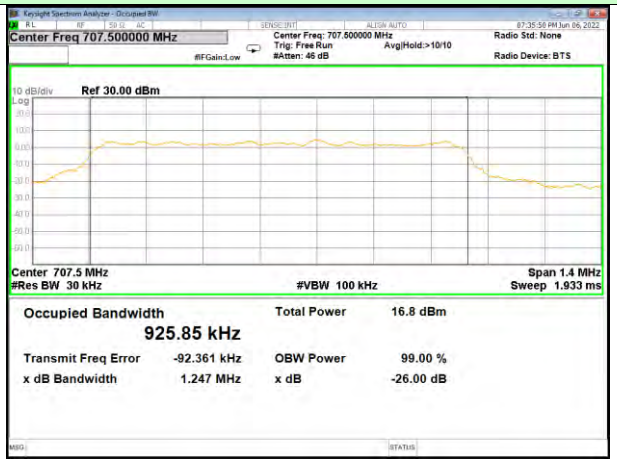


16-QAM

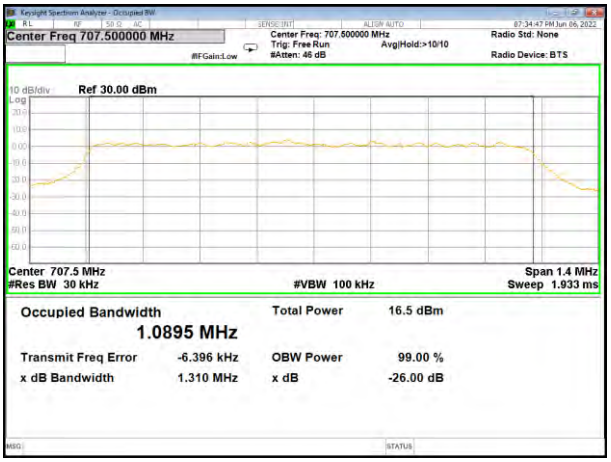


16-QAM

Test Mode: LTE Band 12
Channel Bandwidth: 1.4MHz

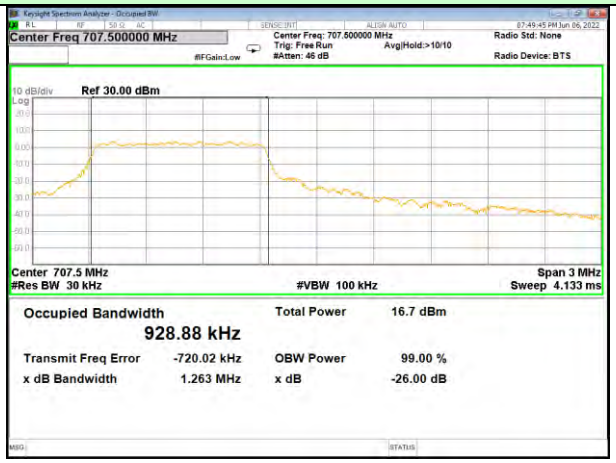


QPSK



16-QAM

Test Mode: LTE Band 12
Channel Bandwidth: 3MHz



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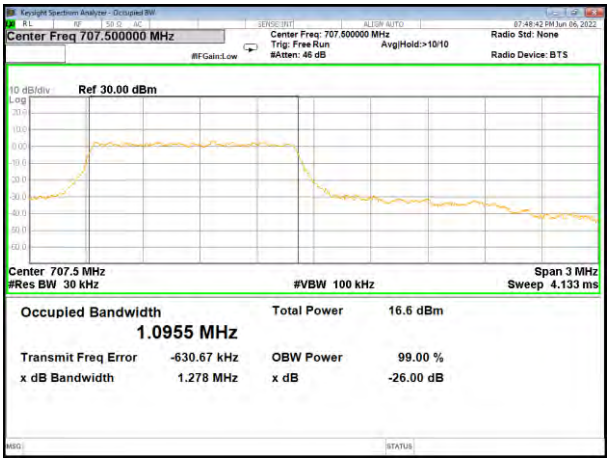

16-QAM