MEASUREMENT REPORT

FCC PART 2 & 22 & 24 & 27

FCC ID:	XMR2020RM502QAE
Application:	Quectel Wireless Solutions Company Limited

Application Type:	Certification
Product:	5G Sub-6 GHz M.2 Module
Model No.:	RM502Q-AE
Brand Name:	Quectel
FCC Rule Part(s):	Part 2, 22 (H), 24 (E), 27
Test Procedure(s):	ANSI C63.26: 2015
Test Date:	October 08 ~ November 23, 2020

Reviewed By: Sunny Sun
(Sunny Sun)

Approved By: Robin Wu
(Robin Wu)

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.26-2015. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2010RSU005-U2	Rev. 01	Initial Report	11-16-2020	Invalid
2010RSU005-U2	Rev. 02	Updated Bandedge of Band 12	11-23-2020	Valid

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1. GENERAL INFORMATION

1.1. Applicant

Quectel Wireless Solutions Company Limited
Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

1.2. Manufacturer

Quectel Wireless Solutions Company Limited
Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

1.3. Testing Facility

☒	**Test Site - MRT Suzhou Laboratory**	
	Laboratory Location (Suzhou - Wuzhong)	
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China	
	Laboratory Location (Suzhou - SIP)	
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China	
	Laboratory Accreditations	
	A2LA: 3628.01	CNAS: L10551
	FCC: CN1166	ISED: CN0001
	VCCI: R-20025, G-20034, C-20020, T-20020	
☐	**Test Site - MRT Shenzhen Laboratory**	
	Laboratory Location (Shenzhen)	
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China	
	Laboratory Accreditations	
	A2LA: 3628.02	CNAS: L10551
	FCC: CN1284	ISED: CN0105
☐	**Test Site - MRT Taiwan Laboratory**	
	Laboratory Location (Taiwan)	
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
	Laboratory Accreditations	
	TAF: L3261-190725	
	FCC: 291082, TW3261	ISED: TW3261

2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	5G Sub-6 GHz M.2 Module
Model No.:	RM502Q-AE
Brand Name:	Quectel
IMEI:	Conducted Measurement: 867826050002666 Radiated Measurement: 867826050003060
Operating Temperature:	-20 ~ 60 °C
Power Type:	3.135 ~ 4.4Vdc, typical 3.7Vdc
UMTS Specification	
Single Band:	Band 2, 4, 5
Modulation:	Uplink up to 16QAM, Downlink up to 64QAM
Category:	Category 6
E-UTRA Specification	
Single Band:	Band 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 30, 38, 41, 48, 66, 71
Intra-Band:	CA_2C, CA_5B, CA_7C, CA_38C, CA_41C, CA_66C
Modulation:	UL & DL up to 256QAM
Category:	Category 18
5G NR Specification	
SA Band:	n2, n5, n7, n12, n25, n41, n66, n71, n77
SA UL MIMO Band:	n41
EN-DC Band:	DC_5A_n2A, DC_12A_n2, DC_13A_n2A, DC_2A_n5A DC_30A_n5A, DC_66A_n5A, DC_5A_n7A, DC_12A_n7A DC_2A_n12A, DC_12A_n25A, DC_2A_n41A, DC_25A_n41A DC_26A_n41A, DC_66A_n41A, DC_5A_n66A, DC_12A_n66A DC_13A_n66A, DC_14A_n66A, DC_71A_n66A, DC_2A_n71A DC_7A_n71A, DC_66A_n71A
HPUE Band:	n41, n77 (SA & UL MIMO)
SCS for NR cell:	FDD Band: 15kHz; TDD Band: 30kHz
Modulation:	UL & DL up to 256QAM

2.2. Product Specification Subjective to this Report

FDD T_X Frequency Range:	Band 2: 1850 ~ 1910 MHz; Band 4: 1710 ~ 1755 MHz Band 5: 824 ~ 849 MHz; Band 7: 2500 ~ 2570 MHz Band 12: 699 ~ 716 MHz; Band 13: 777 ~ 787 MHz Band 17: 704 ~ 716 MHz; Band 25: 1850 ~ 1915 MHz; Band 26: 824 ~ 849 MHz; Band 66: 1710 ~ 1780 MHz Band 71: 663 ~ 698 MHz
FDD R_X Frequency Range:	Band 2: 1930 ~ 1990 MHz; Band 4: 2110 ~ 2155 MHz Band 5: 869 ~ 894 MHz; Band 7: 2620 ~ 2690 MHz Band 12: 729 ~ 746 MHz; Band 13: 746 ~ 756 MHz Band 17: 734 ~ 746 MHz; Band 25: 1930 ~ 1995 MHz; Band 26: 869 ~ 894 MHz; Band 66: 2110 ~ 2200 MHz Band 71: 617 ~ 652 MHz
TDD T_X & R_X Frequency Range:	Band 38: 2570 ~ 2620 MHz; Band 41: 2496 ~ 2690 MHz;

Note 1: For other features of this EUT, test report will be issued separately.

Note 2: The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Note 3: LTE band 26 transmit frequency for part 90 rule is 814 ~ 824MHz and part 22 rule is 824 ~ 849MHz. ERP over 15MHz bandwidth complies the ERP limit line of part 22 rule, therefore ERP of the partial frequency spectrum which falls within part 22 also complies.

2.3. Description of Available Antennas

Technology	Frequency Range (MHz)	Antenna Type	Max Peak Gain (dBi)
LTE Band 2	1850 ~ 1910	Dipole	0.25
LTE Band 4	1710 ~ 1755		1.47
LTE Band 5	824 ~ 849		2.68
LTE Band 7	2500 ~ 2570		0.55
LTE Band 12	699 ~ 716		-0.20
LTE Band 13	777 ~ 787		1.54
LTE Band 14	788 ~ 798		2.42
LTE Band 17	704 ~ 716		-0.20
LTE Band 25	1850 ~ 1915		0.25
LTE Band 26	814 ~ 849		2.68
LTE Band 30	2305 ~ 2315		-3.06
LTE Band 38	2570 ~ 2620		0.78
LTE Band 41	2496 ~ 2690		0.78
LTE Band 48	3550 ~ 3700		-4.29
LTE Band 66	1710 ~ 1780		1.47
LTE Band 71	663 ~ 698		1.22

Note: All antenna information (Antenna type and Peak Gain) is provided by the manufacturer.

2.4. Test Methodology

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

- ANSI C63.26:2015
- FCC CFR 47 Part 2, Part 22, Part 24, Part 27
- FCC KDB 971168 D01 v03r01: Power Meas License Digital Systems
- FCC KDB 971168 D02 v02r01: Misc Rev Approv License Devices
- FCC KDB 412172 D01 v01r01: Determining ERP and EIRP

2.5. Device Capabilities

This device contains the following capabilities:
Working on LTE Band 2, 4, 5, 7, 12, 13, 14, 25, 26, 30, 38, 41. 66; Intra-band CA_41C LTE Module.
LTE Band 66 (1710 ~ 1780 MHz) overlaps the entire frequency range of LTE Band 4 (1710 ~ 1755 MHz). Therefore, test data provided in this report covers Band 4 as well as Band 66.

LTE Band 25 (1850 ~ 1915 MHz) overlaps the entire frequency range of LTE Band 2 (1850 ~ 1910 MHz). Therefore, test data provided in this report covers Band 2 as well as Band 25.

LTE Band 26 (814 ~ 849 MHz) overlaps the entire frequency range of LTE Band 5 (824 ~ 849 MHz). Therefore, test data provided in this report covers Band 5 as well as Band 26.

LTE Band 41 (2496 ~ 2690 MHz) overlaps the entire frequency range of LTE Band 38 (2570 ~ 2620 MHz). Therefore, test data provided in this report covers Band 38 as well as Band 41.

2.6. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.7. Maximum Power, Frequency Tolerance, and Emission Designator

LTE Band 2		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	1850.7 ~ 1909.3	1M08G7D	-	0.1884	1M08W7D	-	0.1545
3	1851.5 ~ 1908.5	2M68G7D	-	0.1986	2M68W7D	-	0.1766
5	1852.5 ~ 1907.5	4M47G7D	-	0.1959	4M46W7D	-	0.1667
10	1855.0 ~ 1905.0	8M94G7D	-	0.1923	8M93W7D	-	0.1730
15	1857.5 ~ 1902.5	13M4G7D	-	0.1932	13M4W7D	-	0.1766
20	1860.0 ~ 1900.0	17M9G7D	-0.0023	0.1936	17M9W7D	-	0.1786
LTE Band 2		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	1850.7 ~ 1909.3	1M08W7D	-	0.1306	1M08W7D	-	0.0535
3	1851.5 ~ 1908.5	2M68W7D	-	0.1312	2M69W7D	-	0.0545
5	1852.5 ~ 1907.5	4M46W7D	-	0.1306	4M46W7D	-	0.0551
10	1855.0 ~ 1905.0	8M93W7D	-	0.1291	8M92W7D	-	0.0562
15	1857.5 ~ 1902.5	13M4W7D	-	0.1330	13M4W7D	-	0.0552
20	1860.0 ~ 1900.0	17M9W7D	-	0.1324	17M9W7D	-	0.0519
LTE Band 25		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	1850.7 ~ 1914.3	1M08G7D	-	0.1884	1M08W7D	-	0.1545
3	1851.5 ~ 1913.5	2M68G7D	-	0.1986	2M68W7D	-	0.1766
5	1852.5 ~ 1912.5	4M47G7D	-	0.1959	4M46W7D	-	0.1667
10	1855.0 ~ 1910.0	8M94G7D	-	0.1923	8M93W7D	-	0.1730
15	1857.5 ~ 1907.5	13M4G7D	-	0.1932	13M4W7D	-	0.1766
20	1860.0 ~ 1905.0	17M9G7D	-0.0023	0.1936	17M9W7D	-	0.1786
LTE Band 25		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	1850.7 ~ 1914.3	1M08W7D	-	0.1306	1M08W7D	-	0.0535
3	1851.5 ~ 1913.5	2M68W7D	-	0.1312	2M69W7D	-	0.0545
5	1852.5 ~ 1912.5	4M46W7D	-	0.1306	4M46W7D	-	0.0551
10	1855.0 ~ 1910.0	8M93W7D	-	0.1291	8M92W7D	-	0.0562
15	1857.5 ~ 1907.5	13M4W7D	-	0.1330	13M4W7D	-	0.0552
20	1860.0 ~ 1905.0	17M9W7D	-	0.1324	17M9W7D	-	0.0519

LTE Band 4		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W))
1.4	1710.7 ~ 1754.3	1M08G7D	-	0.1879	1M08W7D	-	0.1560
3	1711.5 ~ 1753.5	2M69G7D	-	0.1928	2M68W7D	-	0.1774
5	1712.5 ~ 1752.5	4M47G7D	-	0.1959	4M47W7D	-	0.1660
10	1715.0 ~ 1750.0	8M94G7D	-	0.1928	8M93W7D	-	0.1742
15	1717.5 ~ 1747.5	13M4G7D	-	0.1950	13M4W7D	-	0.1782
20	1720.0 ~ 1745.0	17M8G7D	-0.0031	0.1986	17M9W7D	-	0.1841
LTE Band 4		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	1710.7 ~ 1754.3	1M08W7D	-	0.1337	1M07W7D	-	0.0502
3	1711.5 ~ 1753.5	2M68W7D	-	0.1337	2M69W7D	-	0.0499
5	1712.5 ~ 1752.5	4M47W7D	-	0.1288	4M48W7D	-	0.0506
10	1715.0 ~ 1750.0	8M93W7D	-	0.1303	8M93W7D	-	0.0538
15	1717.5 ~ 1747.5	13M4W7D	-	0.1365	13M4W7D	-	0.0600
20	1720.0 ~ 1745.0	17M9W7D	-	0.1321	17M9W7D	-	0.0500
LTE Band 66		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W))
1.4	1710.7 ~ 1779.3	1M08G7D	-	0.1879	1M08W7D	-	0.1560
3	1711.5 ~ 1778.5	2M69G7D	-	0.1928	2M68W7D	-	0.1774
5	1712.5 ~ 1777.5	4M47G7D	-	0.1959	4M47W7D	-	0.1660
10	1715.0 ~ 1775.0	8M94G7D	-	0.1928	8M93W7D	-	0.1742
15	1717.5 ~ 1772.5	13M4G7D	-	0.1950	13M4W7D	-	0.1782
20	1720.0 ~ 1770.0	17M8G7D	-0.0031	0.1986	17M9W7D	-	0.1841
LTE Band 66		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	1710.7 ~ 1779.3	1M08W7D	-	0.1337	1M07W7D	-	0.0502
3	1711.5 ~ 1778.5	2M68W7D	-	0.1337	2M69W7D	-	0.0499
5	1712.5 ~ 1777.5	4M47W7D	-	0.1288	4M48W7D	-	0.0506
10	1715.0 ~ 1775.0	8M93W7D	-	0.1303	8M93W7D	-	0.0538
15	1717.5 ~ 1772.5	13M4W7D	-	0.1365	13M4W7D	-	0.0600
20	1720.0 ~ 1770.0	17M9W7D	-	0.1321	17M9W7D	-	0.0500

LTE Band 5		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	824.7 ~ 848.3	1M07G7D	-	0.2729	1M08W7D	-	0.2254
3	825.5 ~ 847.5	2M68G7D	-	0.2799	2M68W7D	-	0.2438
5	826.5 ~ 846.5	4M48G7D	-	0.2767	4M46W7D	-	0.2393
10	829.0 ~ 844.0	8M94G7D	-0.0085	0.2780	8M92W7D	-	0.2495
LTE Band 5		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	824.7 ~ 848.3	1M08W7D	-	0.1782	1M08W7D	-	0.0962
3	825.5 ~ 847.5	2M68W7D	-	0.1807	2M69W7D	-	0.1035
5	826.5 ~ 846.5	4M47W7D	-	0.1858	4M46W7D	-	0.0920
10	829.0 ~ 844.0	8M91W7D	-	0.2649	8M93W7D	-	0.0962
LTE Band 26		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	824.7 ~ 848.3	1M07G7D	-	0.2729	1M08W7D	-	0.2254
3	825.5 ~ 847.5	2M68G7D	-	0.2799	2M68W7D	-	0.2438
5	826.5 ~ 846.5	4M48G7D	-	0.2767	4M46W7D	-	0.2393
10	829.0 ~ 844.0	8M94G7D	-	0.2780	8M92W7D	-	0.2495
15	831.5 ~ 841.5	13M4G7D	-0.0085	0.2692	13M4W7D	-	0.2371
	821.5	13M4G7D	-	0.2767	13M4W7D	-	0.2541
LTE Band 26		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	824.7 ~ 848.3	1M08W7D	-	0.1782	1M08W7D	-	0.0962
3	825.5 ~ 847.5	2M68W7D	-	0.1807	2M69W7D	-	0.1035
5	826.5 ~ 846.5	4M47W7D	-	0.1858	4M46W7D	-	0.0920
10	829.0 ~ 844.0	8M91W7D	-	0.2649	8M93W7D	-	0.0962
15	831.5 ~ 841.5	13M4W7D	-	0.1871	13M4W7D	-	0.0948
	821.5	13M4W7D	-	0.1820	13M4W7D	-	0.0962
LTE Band 7		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	2502.5 ~ 2567.5	4M48G7D	-	0.2104	4M47W7D	-	0.1782
10	2505.0 ~ 2565.0	8M93G7D	-	0.2109	8M91W7D	-	0.1702
15	2507.5 ~ 2562.5	13M4G7D	-	0.2113	13M4W7D	-	0.1758
20	2510.0 ~ 2560.0	17M8G7D	0.0018	0.2123	17M8W7D	-	0.1734

LTE Band 7		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	2502.5 ~ 2567.5	4M47W7D	-	0.1531	4M47W7D	-	0.0632
10	2505.0 ~ 2565.0	8M93W7D	-	0.1429	8M92W7D	-	0.0650
15	2507.5 ~ 2562.5	13M4W7D	-	0.1445	13M4W7D	-	0.0652
20	2510.0 ~ 2560.0	17M9W7D	-	0.1426	17M8W7D	-	0.0579
LTE Band 12		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	699.7 ~ 715.3	1M07G7D	-	0.2023	1M08W7D	-	0.1714
3	700.5 ~ 714.5	2M68G7D	-	0.2099	2M68W7D	-	0.1845
5	701.5 ~ 713.5	4M47G7D	-	0.2104	4M47W7D	-	0.1786
10	704.0 ~ 711.0	8M93G7D	0.0067	0.2080	8M93W7D	-	0.1875
LTE Band 12		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
1.4	699.7 ~ 715.3	1M08W7D	-	0.1387	1M08W7D	-	0.1042
3	700.5 ~ 714.5	2M68W7D	-	0.1387	2M68W7D	-	0.1169
5	701.5 ~ 713.5	4M47W7D	-	0.1390	4M47W7D	-	0.1028
10	704.0 ~ 711.0	8M93W7D	-	0.1400	8M94W7D	-	0.1135
LTE Band 13		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	779.5 ~ 784.5	4M48G7D	-	0.2280	4M47W7D	-	0.1972
10	782.0	8M93G7D	-0.0039	0.2254	8M90W7D	-	0.2075
LTE Band 13		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	779.5 ~ 784.5	4M46W7D	-	0.1535	4M46W7D	-	0.0931
10	782.0	8M91W7D	-	0.1542	8M90W7D	-	0.0973
LTE Band 17		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	706.5 ~ 713.5	4M48G7D	-	0.2259	4M47W7D	-	0.1936
10	709.0 ~ 711.0	8M92G7D	0.0072	0.2254	8M91W7D	-	0.2014
LTE Band 17		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	706.5 ~ 713.5	4M47W7D	-	0.1510	4M47W7D	-	0.1107
10	709.0 ~ 711.0	8M93W7D	-	0.1500	8M94W7D	-	0.0951

LTE Band 38		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max EIRP (W)	Designator	Tolerance (ppm)	Max EIRP (W)
5	2572.5 ~ 2617.5	4M47G7D	-	0.2312	4M46W7D	-	0.1945
10	2575.0 ~ 2615.0	8M9G7D	-	0.2291	8M94W7D	-	0.1968
15	2577.5 ~ 2612.5	13M4G7D	-	0.2307	13M4W7D	-	0.1884
20	2580.0 ~ 2610.0	17M8G7D	-0.0079	0.2307	17M9W7D	-	0.1862
LTE Band 38		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	2572.5 ~ 2617.5	4M46W7D	-	0.1618	4M46W7D	-	0.1503
10	2575.0 ~ 2615.0	8M93W7D	-	0.1560	8M95W7D	-	0.1596
15	2577.5 ~ 2612.5	13M4W7D	-	0.1549	13M5W7D	-	0.1489
20	2580.0 ~ 2610.0	17M8W7D	-	0.1496	17M9W7D	-	0.1503
LTE Band 41		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	2498.5 ~ 2687.5	4M47G7D	-	0.2312	4M46W7D	-	0.1945
10	2501.0 ~ 2685.0	8M9G7D	-	0.2291	8M94W7D	-	0.1968
15	2503.5 ~ 2682.5	13M4G7D	-	0.2307	13M4W7D	-	0.1884
20	2506.0 ~ 2680.0	17M8G7D	-0.0079	0.2307	17M9W7D	-	0.1862
LTE Band 41		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	2498.5 ~ 2687.5	4M46W7D	-	0.1618	4M46W7D	-	0.1503
10	2501.0 ~ 2685.0	8M93W7D	-	0.1560	8M95W7D	-	0.1596
15	2503.5 ~ 2682.5	13M4W7D	-	0.1549	13M5W7D	-	0.1489
20	2506.0 ~ 2680.0	17M8W7D	-	0.1496	17M9W7D	-	0.1503
LTE Band 71		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	665.0 ~ 695.5	4M48G7D	-	0.2070	4M47W7D	-	0.1742
10	668.0 ~ 693.0	8M94G7D	-	0.2109	8M93W7D	-	0.1866
15	670.5 ~ 690.5	13M4G7D	-	0.2143	13M4W7D	-	0.1892
20	673.0 ~ 688.0	17M8G7D	0.0032	0.2153	17M9W7D	-	0.1892

LTE Band 71		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	665.0 ~ 695.5	4M47W7D	-	0.1384	4M47W7D	-	0.0817
10	668.0 ~ 693.0	8M94W7D	-	0.1390	8M92W7D	-	0.0879
15	670.5 ~ 690.5	13M4W7D	-	0.1422	13M4W7D	-	0.0879
20	673.0 ~ 688.0	17M9W7D	-	0.1387	17M8W7D	-	0.0931
LTE Band 38 For HPUE		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	2572.5 ~ 2617.5	4M47G7D	-	0.3954	4M46W7D	-	0.3396
10	2575.0 ~ 2615.0	8M93G7D	-	0.3990	8M94W7D	-	0.3258
15	2577.5 ~ 2612.5	13M4G7D	-	0.3917	13M4W7D	-	0.3281
20	2580.0 ~ 2610.0	17M8G7D	-0.0074	0.3926	17M9W7D	-	0.3289
LTE Band 38 For HPUE		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	2572.5 ~ 2617.5	4M46W7D	-	0.2877	4M46W7D	-	0.2344
10	2575.0 ~ 2615.0	8M94W7D	-	0.2704	8M95W7D	-	0.2355
15	2577.5 ~ 2612.5	13M4W7D	-	0.2679	13M5W7D	-	0.2244
20	2580.0 ~ 2610.0	17M8W7D	-	0.2704	17M9W7D	-	0.1274
LTE Band 41 For HPUE		QPSK			16QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	2498.5 ~ 2687.5	4M47G7D	-	0.4786	4M46W7D	-	0.4009
10	2501.0 ~ 2685.0	8M93G7D	-	0.4688	8M94W7D	-	0.3707
15	2503.5 ~ 2682.5	13M4G7D	-	0.4732	13M4W7D	-	0.3776
20	2506.0 ~ 2680.0	17M8G7D	-0.0074	0.4699	17M9W7D	-	0.3819
LTE Band 41 For HPUE		64QAM			256QAM		
BW (MHz)	Feq. (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5	2498.5 ~ 2687.5	4M46W7D	-	0.2704	4M46W7D	-	0.2570
10	2501.0 ~ 2685.0	8M94W7D	-	0.2576	8M95W7D	-	0.2518
15	2503.5 ~ 2682.5	13M4W7D	-	0.2649	13M5W7D	-	0.2541
20	2506.0 ~ 2680.0	17M8W7D	-	0.2553	17M9W7D	-	0.1578

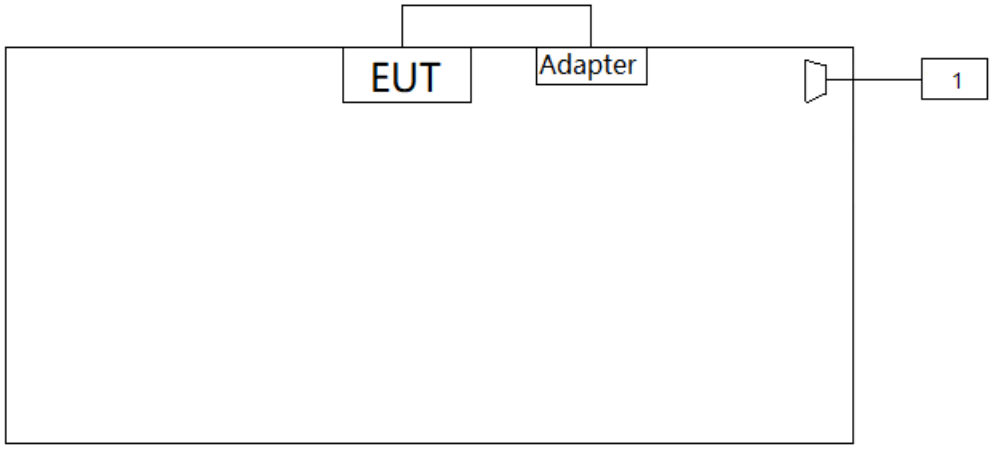
LTE Band 2C	QPSK			16QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power(W)	Designator	Tolerance (ppm)	Max Power (W)
5 + 20MHz	22M6G7D	-	0.2518	22M4W7D	-	0.2094
10 + 15MHz	23M0G7D	-	0.2466	22M8W7D	-	0.2244
10 + 20MHz	27M6G7D	-	0.2449	27M3W7D	-	0.2265
15 + 10MHz	23M1G7D	-	0.2518	22M9W7D	-	0.2317
15 + 15MHz	28M2G7D	-	0.2495	28M0W7D	-	0.2265
15 + 20MHz	32M5G7D	-	0.2518	32M2W7D	-	0.2223
20 + 5MHz	22M8G7D	-	0.2559	22M7W7D	-	0.2317
20 + 10MHz	27M6G7D	-	0.2576	27M6W7D	-	0.2198
20 + 15MHz	32M5G7D	-	0.2495	32M3W7D	-	0.2193
20 + 20MHz	37M4G7D	-	0.2495	37M0W7D	-	0.2228
LTE Band 2C	64QAM			256QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5 + 20MHz	22M6W7D	-	0.1637	22M7W7D	-	0.0670
10 + 15MHz	23M1W7D	-	0.1648	23M0W7D	-	0.0600
10 + 20MHz	27M5W7D	-	0.1710	27M6W7D	-	0.0583
15 + 10MHz	23M0W7D	-	0.1633	23M1W7D	-	0.0611
15 + 15MHz	28M2W7D	-	0.1637	28M2W7D	-	0.0557
15 + 20MHz	32M4W7D	-	0.1722	32M6W7D	-	0.0675
20 + 5MHz	22M8W7D	-	0.1592	22M8W7D	-	0.0726
20 + 10MHz	27M6W7D	-	0.1714	27M7W7D	-	0.0618
20 + 15MHz	32M5W7D	-	0.1702	32M4W7D	-	0.0652
20 + 20MHz	37M3W7D	-	0.1702	37M4W7D	-	0.0615
LTE Band 5B	QPSK			16QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power(W)	Designator	Tolerance (ppm)	Max Power (W)
5 + 10MHz	13M8G7D	-	0.2228	13M9W7D	-	0.1901
10 + 5MHz	13M8G7D	-	0.2286	13M8W7D	-	0.2109
10 + 10MHz	18M6G7D	-	0.2213	18M7W7D	-	0.2213
LTE Band 5B	64QAM			256QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5 + 10MHz	13M8W7D	-	0.1483	13M8W7D	-	0.0948
10 + 5MHz	13M8W7D	-	0.1524	13M8W7D	-	0.1239
10 + 10MHz	18M6W7D	-	0.1500	18M7W7D	-	0.0904

LTE Band 7C	QPSK			16QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power(W)	Designator	Tolerance (ppm)	Max Power (W)
10 + 20MHz	27M5G7D	-	0.2655	27M5W7D	-	0.2371
15 + 10MHz	23M1G7D	-	0.2636	23M0W7D	-	0.2275
15 + 15MHz	28M0G7D	-	0.2594	28M2W7D	-	0.2393
15 + 20MHz	32M5G7D	-	0.2618	32M5W7D	-	0.2410
20 + 10MHz	27M5G7D	-	0.2698	27M6W7D	-	0.2286
20 + 15MHz	32M4G7D	-	0.2649	32M4W7D	-	0.2333
20 + 20MHz	37M3G7D	-	0.2636	37M2W7D		0.2377
LTE Band 7C	64QAM			256QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
10 + 20MHz	27M5W7D	-	0.1531	27M5W7D	-	0.0782
15 + 10MHz	23M0W7D	-	0.1538	23M0W7D	-	0.0885
15 + 15MHz	28M2W7D	-	0.1545	28M2W7D	-	0.0621
15 + 20MHz	32M5W7D	-	0.1556	32M5W7D	-	0.0695
20 + 10MHz	27M5W7D	-	0.1545	27M7W7D	-	0.0687
20 + 15MHz	32M5W7D	-	0.1549	32M6W7D	-	0.0638
20 + 20MHz	37M3W7D	-	0.1521	37M5W7D	-	0.0665
LTE Band 38C	QPSK			16QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power(W)	Designator	Tolerance (ppm)	Max Power (W)
15 + 15MHz	28M0G7D	-	0.2553	28M1W7D	-	0.2168
20 + 20MHz	37M1G7D	-	0.2594	37M1W7D	-	0.2143
LTE Band 38C	64QAM			256QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
15 + 15MHz	28M1W7D	-	0.1738	28M1W7D	-	0.0658
20 + 20MHz	37M2W7D	-	0.1770	37M1W7D	-	0.0711

LTE Band 41C	QPSK			16QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5 + 20MHz	22M4G7D	-	0.2931	22M6W7D	-	0.2455
10 + 15MHz	22M8G7D	-	0.2917	22M9W7D	-	0.2415
10 + 20MHz	27M2G7D	-	0.2897	27M4W7D	-	0.2377
15 + 10MHz	22M9G7D	-	0.2924	23M0W7D	-	0.2404
15 + 15MHz	28M0G7D	-	0.2858	28M1W7D	-	0.2388
15 + 20MHz	32M2G7D	-	0.2891	32M4W7D	-	0.2399
20 + 5MHz	22M7G7D	-	0.3013	22M8W7D	-	0.2606
20 + 10MHz	27M6G7D	-	0.2917	27M6W7D	-	0.2472
20 + 15MHz	32M2G7D	-	0.2897	32M5W7D	-	0.2477
20 + 20MHz	37M2G7D	-	0.2838	37M3W7D	-	0.2410
LTE Band 41C	64QAM			256QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5 + 20MHz	22M4W7D	-	0.2080	22M3W7D	-	0.0813
10 + 15MHz	22M9W7D	-	0.1923	22M8W7D	-	0.0809
10 + 20MHz	27M3W7D	-	0.1936	27M4W7D	-	0.0851
15 + 10MHz	22M9W7D	-	0.2000	22M9W7D	-	0.0774
15 + 15MHz	28M0W7D	-	0.1968	28M0W7D	-	0.0762
15 + 20MHz	32M2W7D	-	0.1941	32M2W7D	-	0.0735
20 + 5MHz	22M7W7D	-	0.2018	22M8W7D	-	0.0836
20 + 10MHz	27M6W7D	-	0.2032	27M6W7D	-	0.0750
20 + 15MHz	32M3W7D	-	0.2023	32M3W7D	-	0.0807
20 + 20MHz	37M1W7D	-	0.1991	37M1W7D	-	0.0798
LTE Band 66C	QPSK			16QAM		
BW (MHz)	Designator	Tolerance (ppm)	BW (MHz)	Designator	Tolerance (ppm)	BW (MHz)
5 + 20MHz	22M7G7D	-	0.2535	22M6G7D	-	0.2178
10 + 15MHz	23M0G7D	-	0.2500	22M9G7D	-	0.2223
10 + 20MHz	27M6G7D	-	0.2466	27M4G7D	-	0.2089
15 + 10MHz	23M0G7D	-	0.2410	23M0G7D	-	0.2198
15 + 15MHz	28M2G7D	-	0.2399	28M1G7D	-	0.2173
15 + 20MHz	32M3G7D	-	0.2410	32M4G7D	-	0.2244
20 + 5MHz	22M9G7D	-	0.2495	22M8G7D	-	0.2244
20 + 10MHz	27M6G7D	-	0.2460	27M6G7D	-	0.2203
20 + 15MHz	32M4G7D	-	0.2455	32M5G7D	-	0.2208
20 + 20MHz	37M5G7D	-	0.2472	37M3G7D	-	0.2084

LTE Band 66C	64QAM			256QAM		
BW (MHz)	Designator	Tolerance (ppm)	Max Power (W)	Designator	Tolerance (ppm)	Max Power (W)
5 + 20MHz	22M6W7D	-	0.1663	22M7W7D	-	0.0553
10 + 15MHz	22M9W7D	-	0.1652	22M9W7D	-	0.0499
10 + 20MHz	27M6W7D	-	0.1690	27M5W7D	-	0.0612
15 + 10MHz	23M0W7D	-	0.1641	23M0W7D	-	0.0466
15 + 15MHz	28M1W7D	-	0.1644	28M2W7D	-	0.0592
15 + 20MHz	32M4W7D	-	0.1641	32M4W7D	-	0.0542
20 + 5MHz	22M8W7D	-	0.1483	22M8W7D	-	0.0575
20 + 10MHz	27M6W7D	-	0.1432	27M6W7D	-	0.0726
20 + 15MHz	32M5W7D	-	0.1489	32M6W7D	-	0.0513
20 + 20MHz	37M4W7D	-	0.1507	37M4W7D	-	0.0608

2.8. Configuration of Tested System



Product		Manufacturer	Model No.
1	Wideband Radio Communication Tester	R&S	CMW 500

2.9. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20% ~ 75%RH

3. TEST EQUIPMENT CALIBRATION DATE

Radiated Emission (WZ- AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2021/08/01
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2021/11/07
PXA Signal Analyzer	Keysight	9030B	MRTSUE06395	1 year	2021/09/03
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/10
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2021/03/31
Broad Band Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2021/10/13
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2021/02/23
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2021/11/15
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2021/06/11
Thermohygrometer	Testo	608-H1	MRTSUE06403	1 year	2021/08/08
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2021/04/30

Radiated Emission (WZ-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Keysight	N9038A	MRTSUE06125	1 year	2021/08/01
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2021/11/07
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/10
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2021/10/13
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06171	1 year	2021/10/27
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2021/02/23
Broad Band Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2021/11/15
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2021/06/11
Temperature/Humidity Meter	Minggao	ETH529	MRTSUE06170	1 year	2020/12/15
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2021/04/30

Conducted Test Equipment (WZ)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2021/04/15
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06452	1 year	2021/07/11
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/15
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2021/11/07
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2020/11/18
DC Power Supply	GWINSTEK	DPS-3303C	MRTSUE06064	N/A	N/A
True RMS Clamp Meter	Fluke	319	MRTSUE06080	1 year	2021/05/06
Directional Coupler	Agilent	87301D	MRTSUE06082	1 year	2021/03/25
Dual Directional Coupler	Agilent	7778D	MRTSUE06083	1 year	2021/03/25
Attenuator	MVE	6dB	MRTSUE06534	1 year	2020/12/12
Attenuator	MVE	10dB	MRTSUE06543	1 year	2020/12/12
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2021/11/07
Thermohygrometer	testo	608-H1	MRTSUE06401	1 year	2021/08/08

Software	Version	Function
EMI Software	V3	EMI Test Software

4. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Radiated Spurious Emissions
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Horizontal: 9kHz ~ 300MHz: 5.04dB 300MHz ~ 1GHz: 4.95dB 1GHz ~ 40GHz: 6.40dB Vertical: 9kHz ~ 300MHz: 5.24dB 300MHz ~ 1GHz: 6.03dB 1GHz ~ 40GHz: 6.40dB
Conducted Spurious Emissions
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.13dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.28%
Frequency Stability
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 76.2Hz

5. TEST RESULT

5.1. Summary

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1049	Occupied Bandwidth	N/A	Conducted	Pass	Section 5.2
2.1055, 22.355 24.235, 27.54	Frequency Stability	< 2.5 ppm		Pass	Section 5.3
22.913(a)(5)	Equivalent Radiated Power (Band 5/26)	< 7 Watts Max ERP		Pass	Section 5.4
27.50(b)(9) 27.50(c)(9)	Equivalent Radiated Power (Band 12, 13, 17)	< 30 Watts Max ERP			
27.50(c)(10)	Equivalent Radiated Power (Band 71)	< 3 Watts Max ERP			
24.232(c) 27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2/25, 7, 38/41)	< 2 Watts Max EIRP			
27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4/66)	< 1 Watts Max EIRP			
24.232(d), 27.50(d)(5)	Peak to Average Ratio	< 13dB		Pass	Section 5.6
2.1051, 22.917(a) 24.238(a), 27.53(c), 27.53(g), 27.53(h)	Band Edge (Band 2/25, 4/66, 5/26, 12, 13, 17, 71)	< 43 + 10log10 (P[Watts])		Pass	Section 5.5, 5.7
27.53(m)	Band Edge (Band 7, 38/41)	27.53(m)(4)			
2.1051, 22.917(a) 24.238(a), 27.53(c), 27.53(g), 27.53(h)	Spurious Emission (Band 2/25, 4/66, 5/26, 12, 13, 17, 71)	< 43 + 10log10 (P[Watts])			
2.1051, 27.53(m)	Spurious Emission (Band 7, 38/41)	< 55 + 10log10 (P[Watts])			
2.1053, 22.917(a) 24.238(a), 27.53(c) (f) (g) (h)	Spurious Emissions (Band 2/25, 4/66, 5/26, 12, 13, 17, 71)	< 43 + 10log10 (P[Watts])	Radiated	Pass	Section 5.8
27.53(m)	Spurious Emissions (Band 7, 38/41)	27.53(m)(4)			

Notes:

1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer.

The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.

2) All supported modulation types were evaluated. The worst-case emission of modulation was selected. Therefore, the Frequency Stability, Channel Band Edge, Conducted Spurious Emission, Radiated Spurious Emission (include the Intr-Band CA Mode) were presented the worst-case in the test report.

5.2. Occupied Bandwidth

5.2.1.Test Limit

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured.

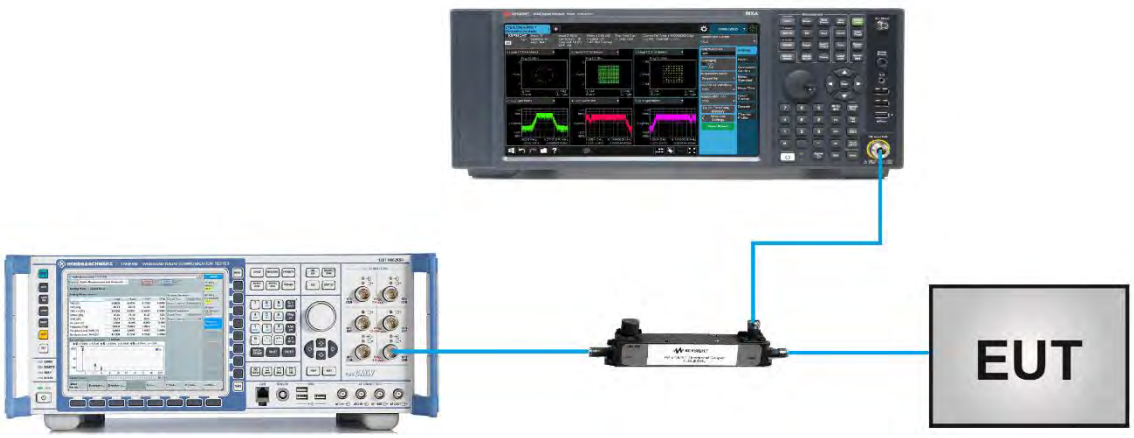
5.2.2.Test Procedure

ANSI C63.26-2015 - Section 5.4

5.2.3.Test Setting

1. Set center frequency to the nominal EUT channel center frequency
2. RBW = The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW
3. VBW ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

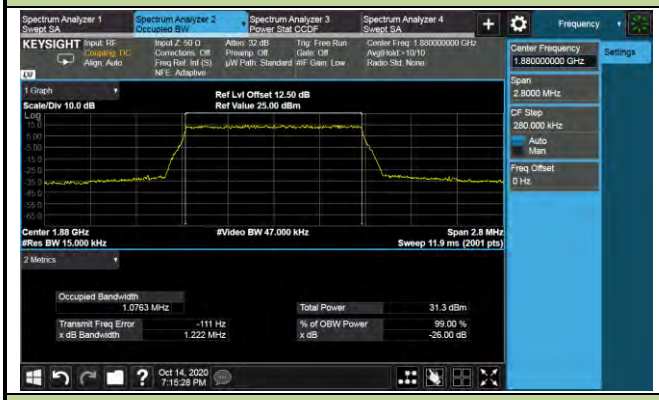
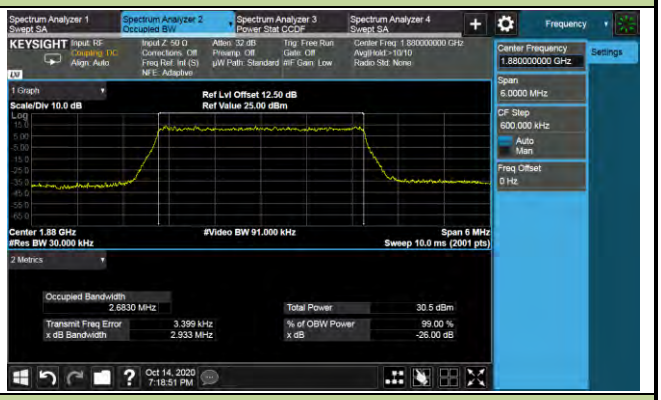
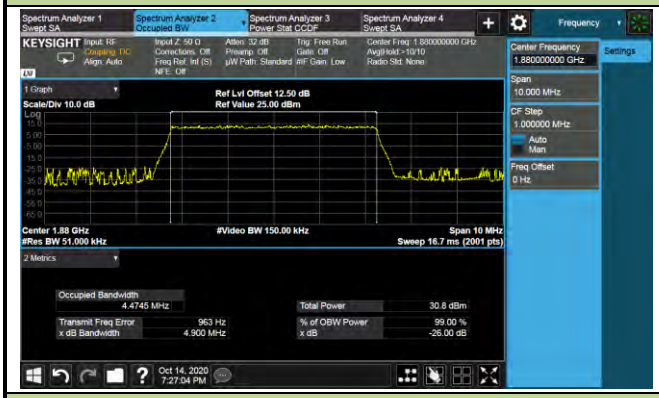
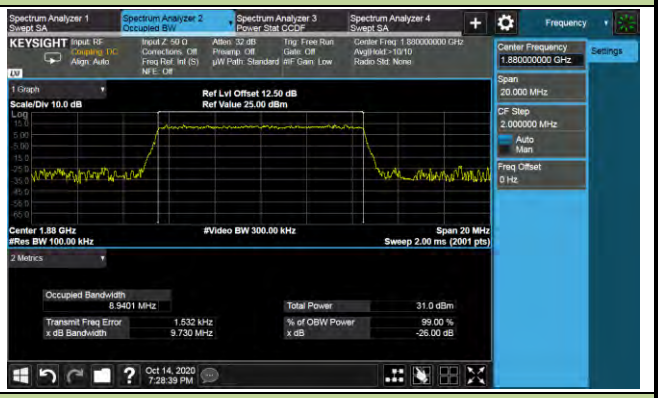
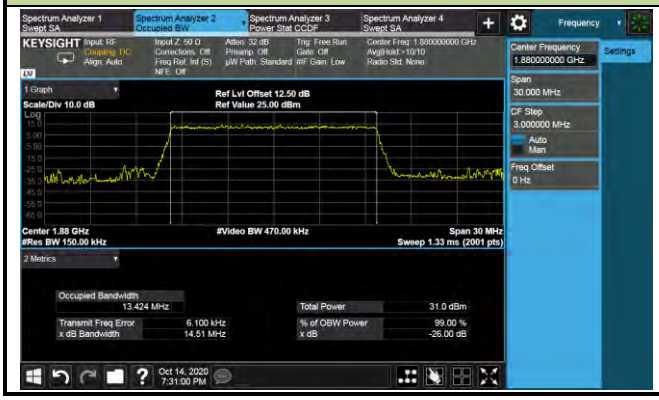
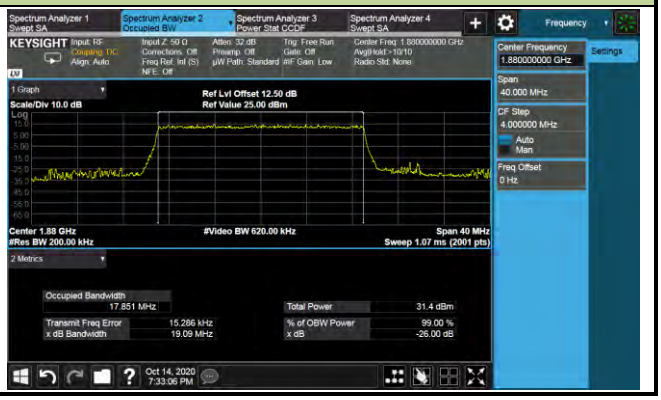
5.2.4.Test Setup

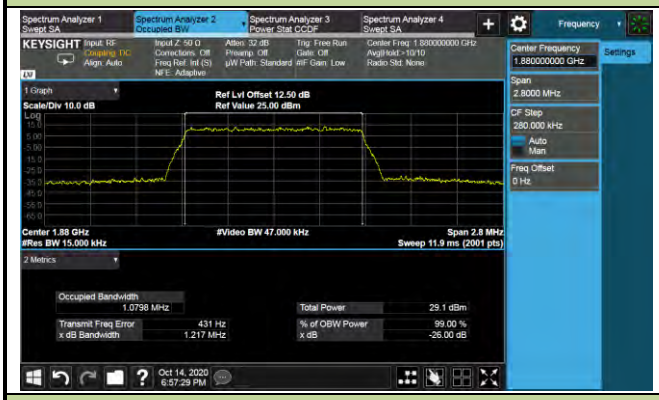
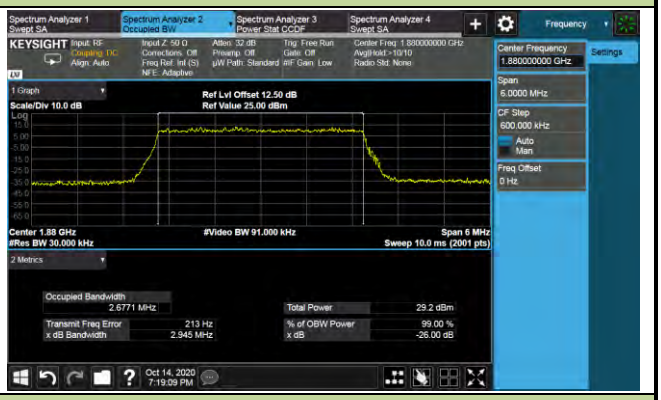
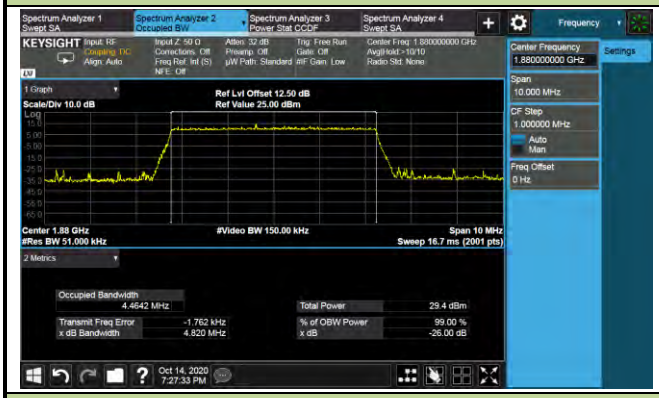
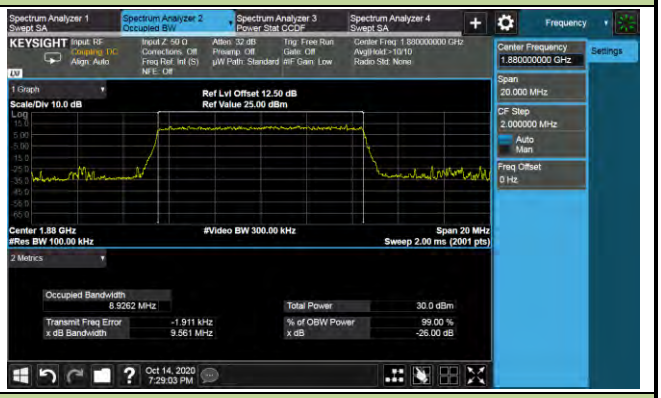
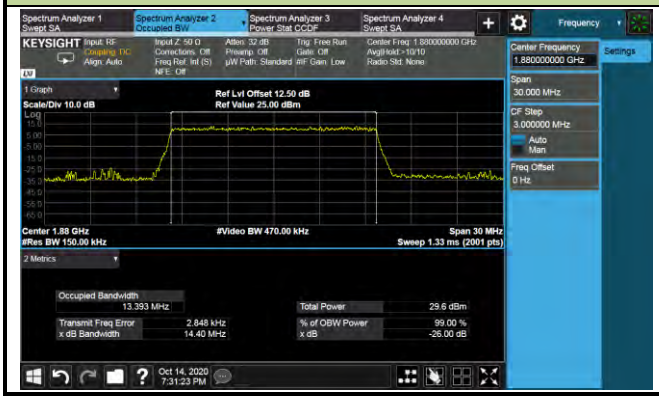
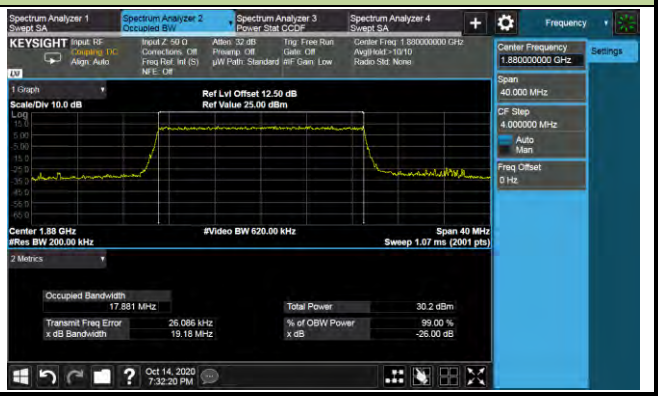


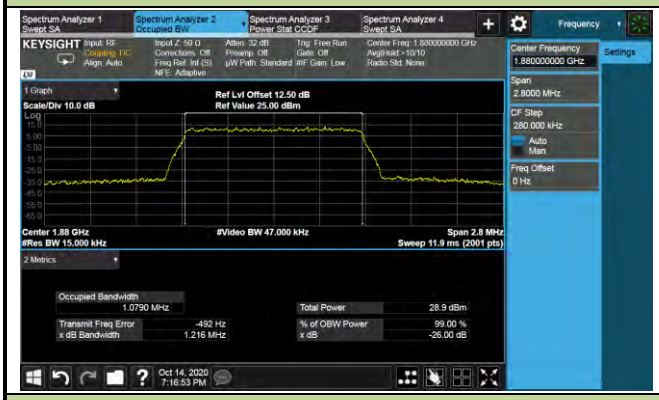
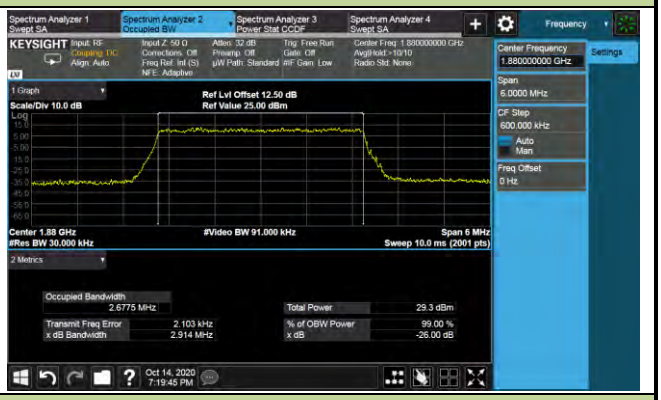
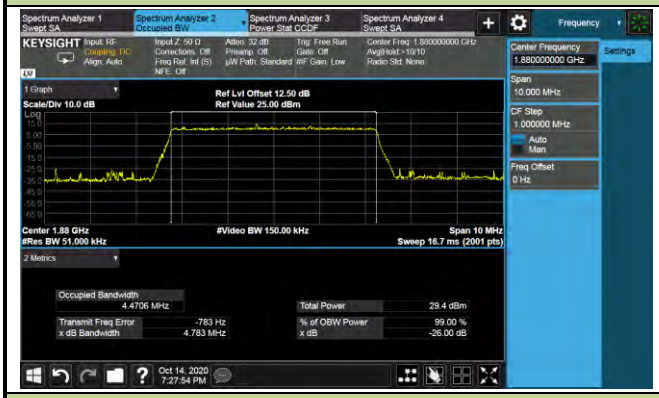
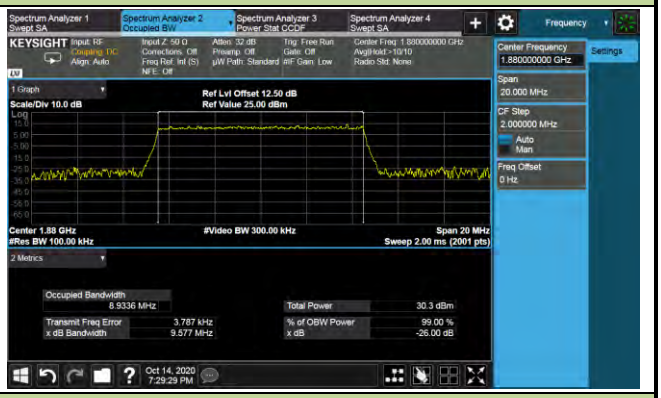
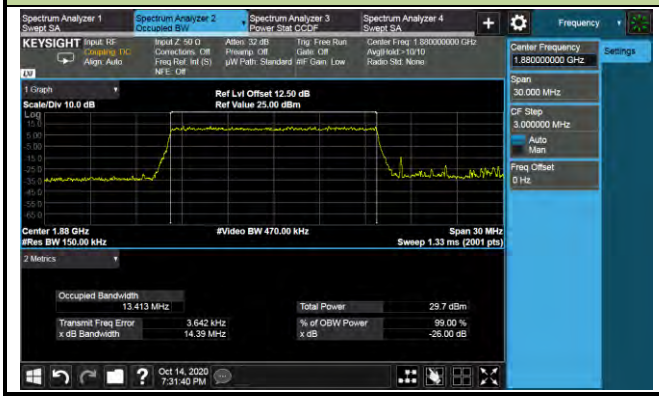
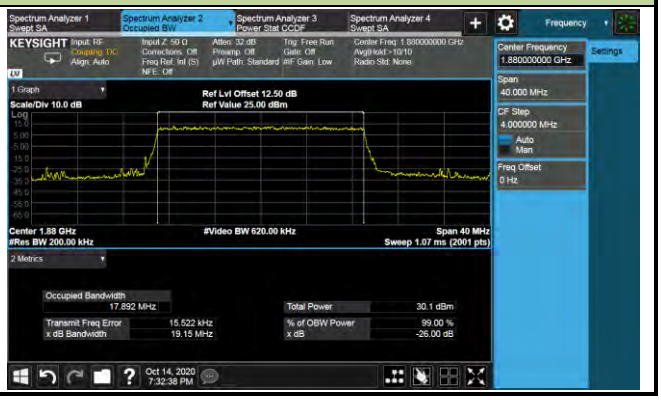
5.2.5.Test Result

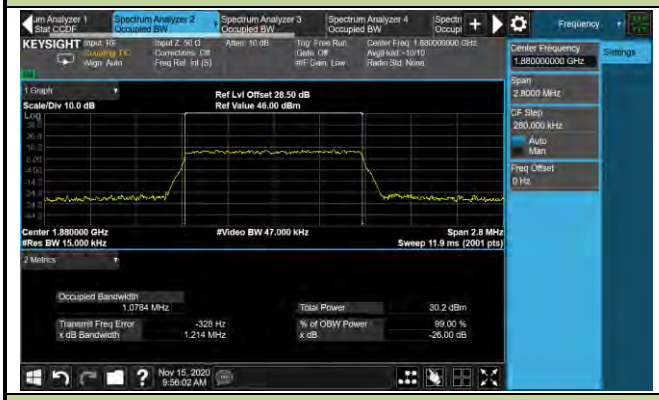
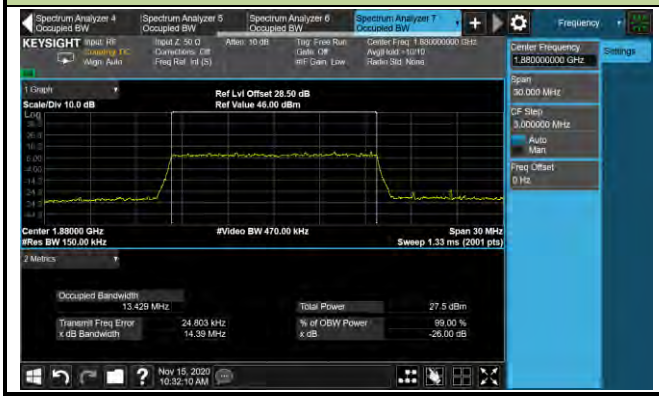
Product	5G Sub-6 GHz M.2 Module	Test Site	WZ-SR6
Test Engineer	Candy Luo	Test Date	2020/10/14 ~ 2020/11/15
Test Band	Band 2/25		

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
26365	1882.5	1.4	1.08
		3	2.68
		5	4.47
		10	8.94
		15	13.42
		20	17.85
16QAM			
26365	1882.5	1.4	1.08
		3	2.68
		5	4.46
		10	8.93
		15	13.39
		20	17.88
64QAM			
26365	1882.5	1.4	1.08
		3	2.68
		5	4.47
		10	8.93
		15	13.41
		20	17.89
256QAM			
26365	1882.5	1.4	1.08
		3	2.69
		5	4.46
		10	8.92
		15	13.43
		20	17.88

99% Bandwidth - QPSK	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

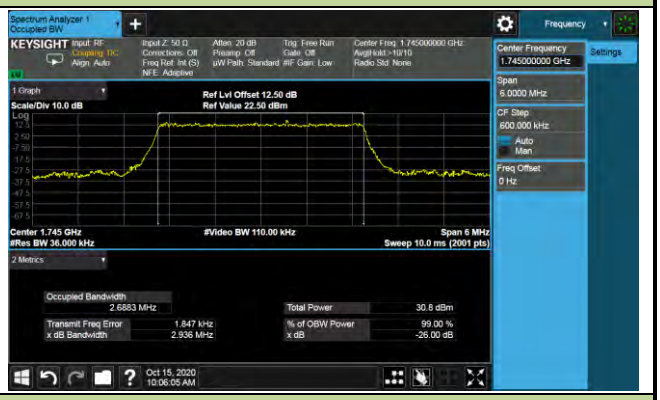
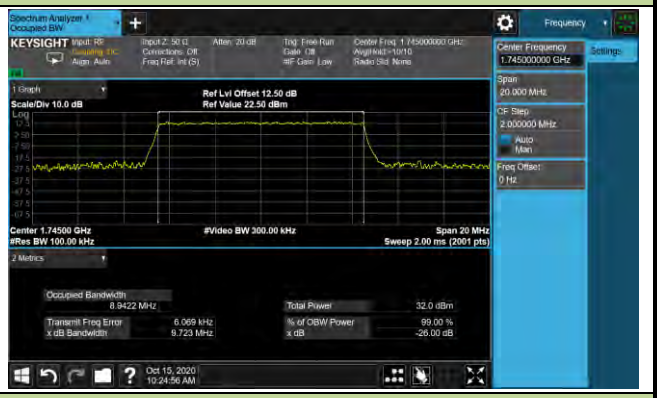
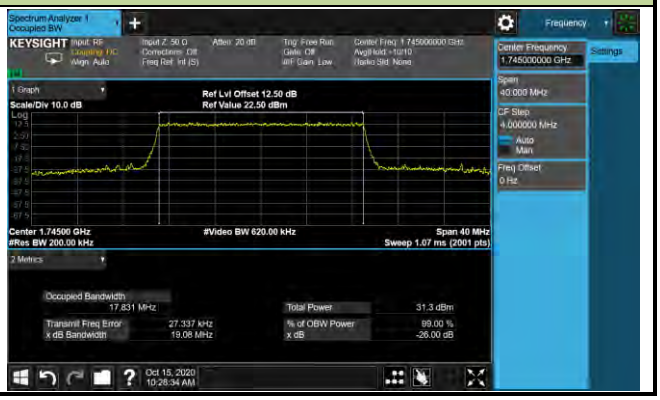
99% Bandwidth - 16QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

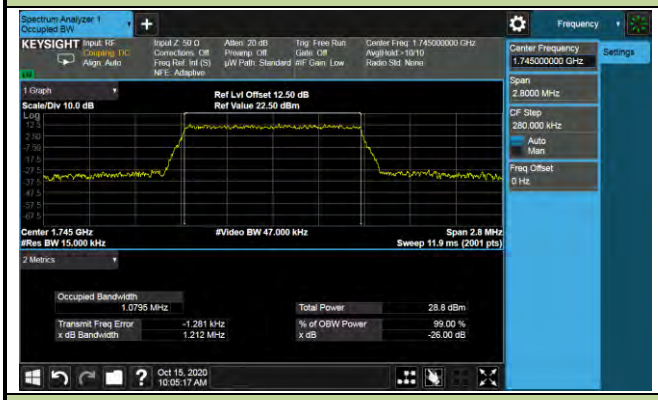
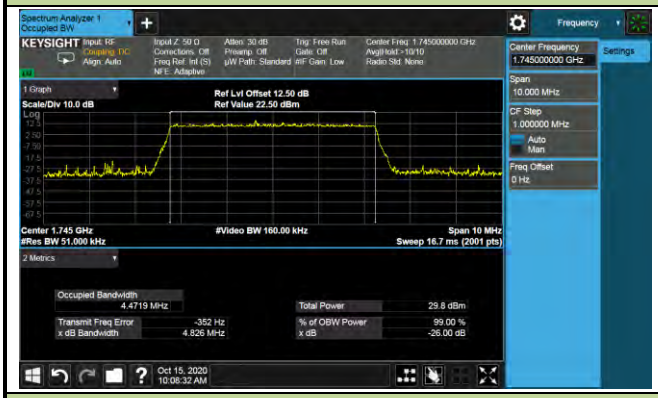
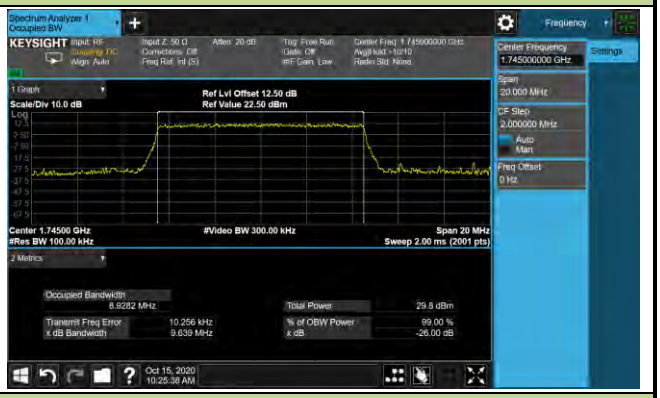
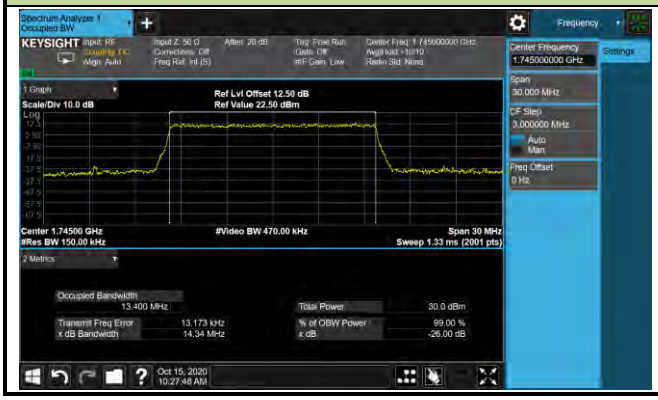
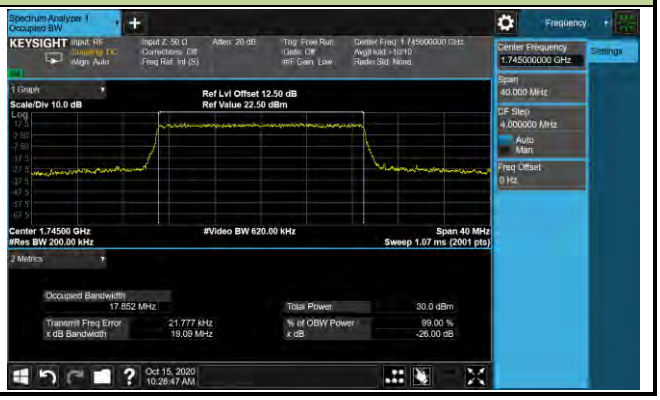
99% Bandwidth - 64QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

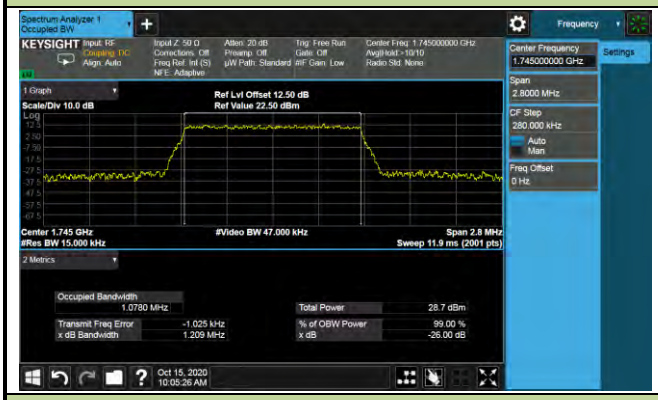
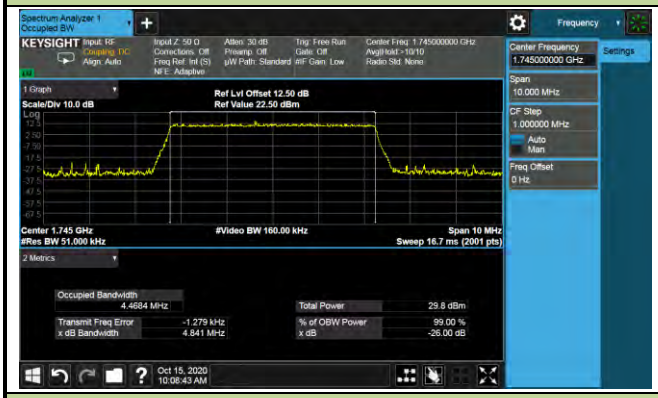
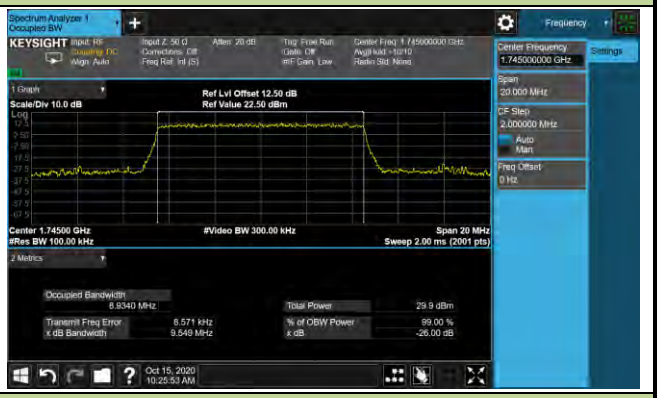
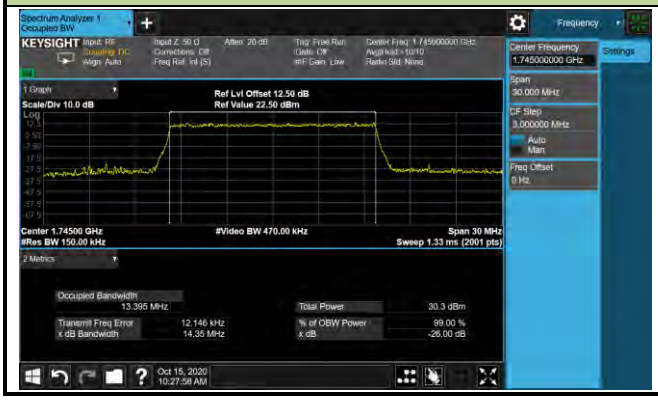
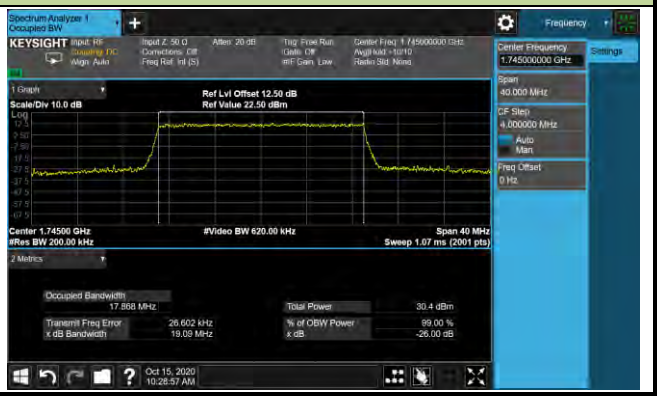
99% Bandwidth - 256QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

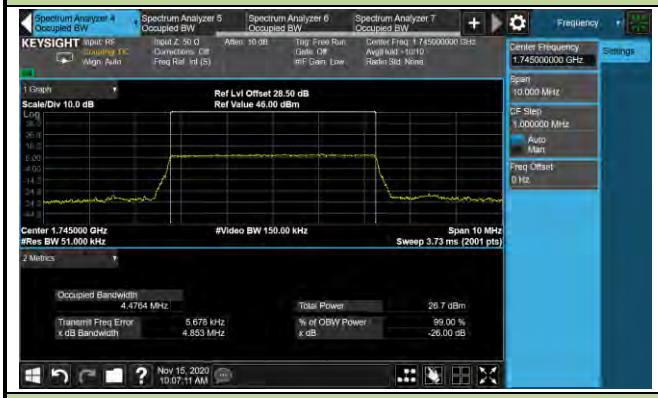
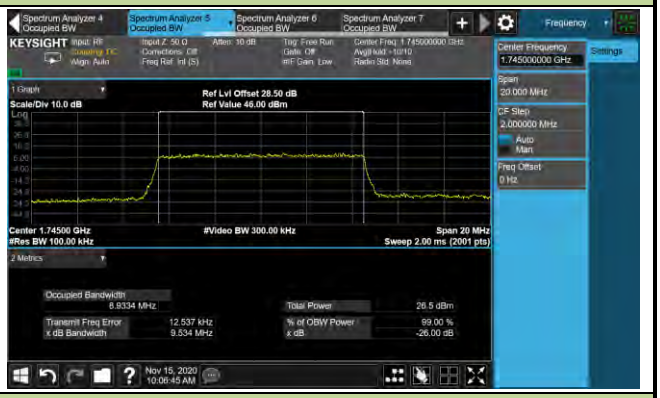
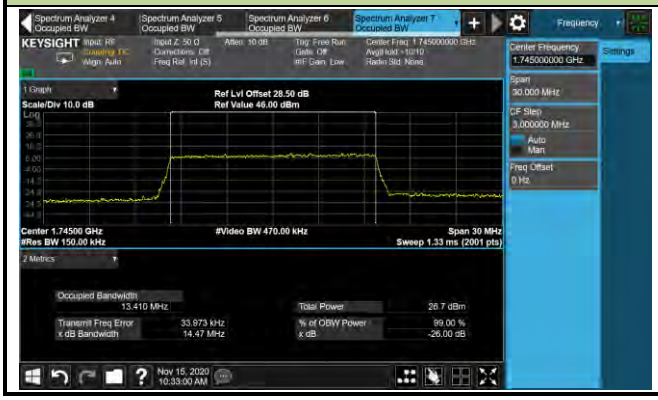
Product	5G Sub-6 GHz M.2 Module	Test Site	WZ-SR6
Test Engineer	Candy Luo	Test Date	2020/10/15 ~ 2020/11/15
Test Band	Band 4/66		

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
20300	1745.0	1.4	1.08
		3	2.69
		5	4.47
		10	8.94
		15	13.44
		20	17.83
16QAM			
20300	1745.0	1.4	1.08
		3	2.68
		5	4.47
		10	8.93
		15	13.40
		20	17.85
64QAM			
20300	1745.0	1.4	1.08
		3	2.68
		5	4.47
		10	8.93
		15	13.40
		20	17.87
256QAM			
20300	1745.0	1.4	1.07
		3	2.69
		5	4.48
		10	8.93
		15	13.41
		20	17.91

99% Bandwidth - QPSK	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

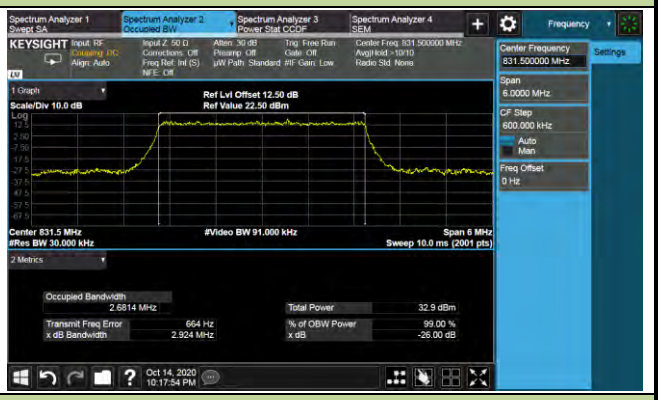
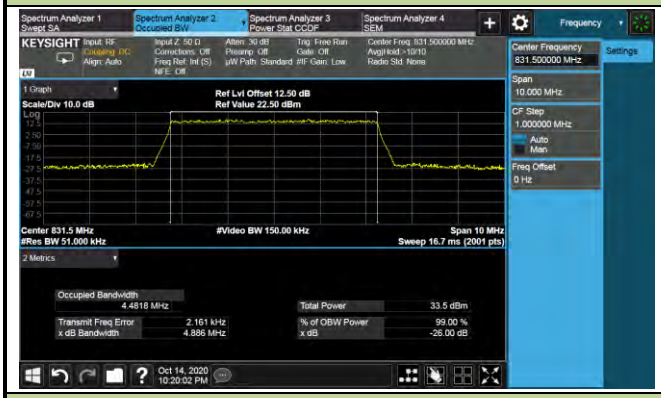
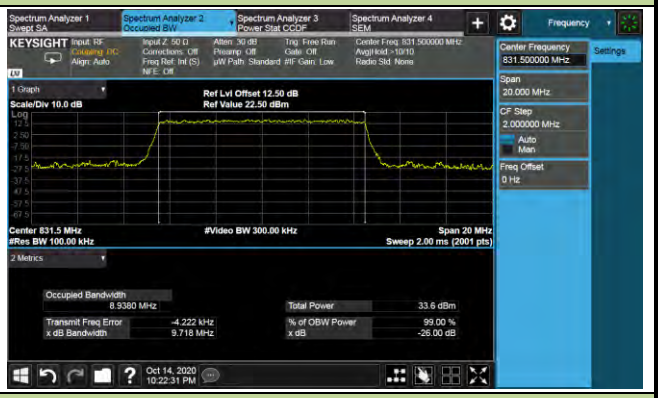
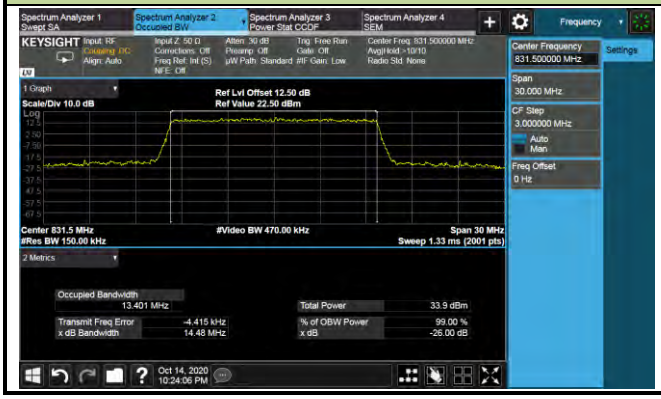
99% Bandwidth - 16QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

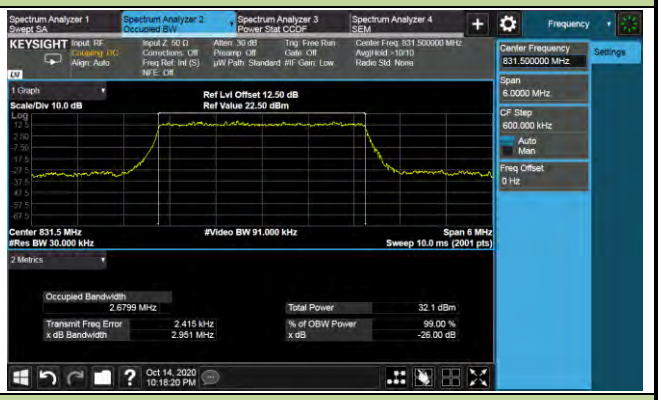
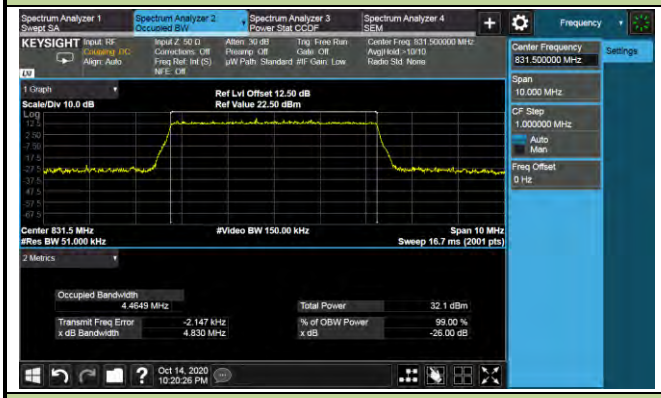
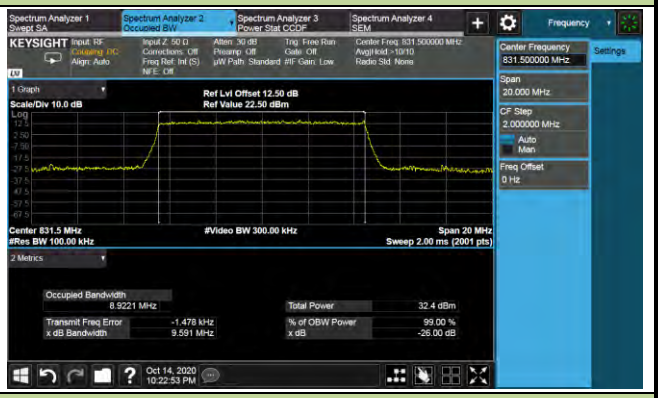
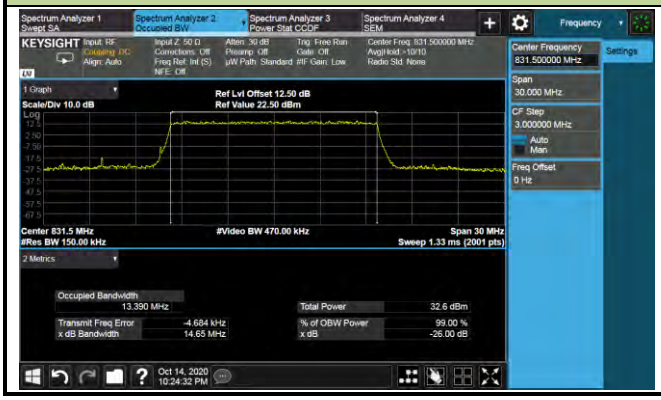
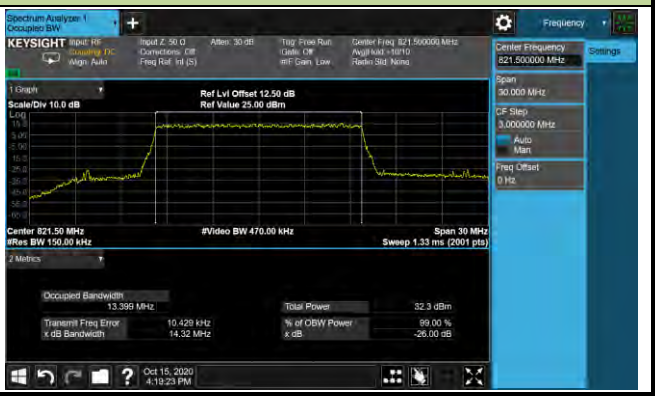
99% Bandwidth - 64QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

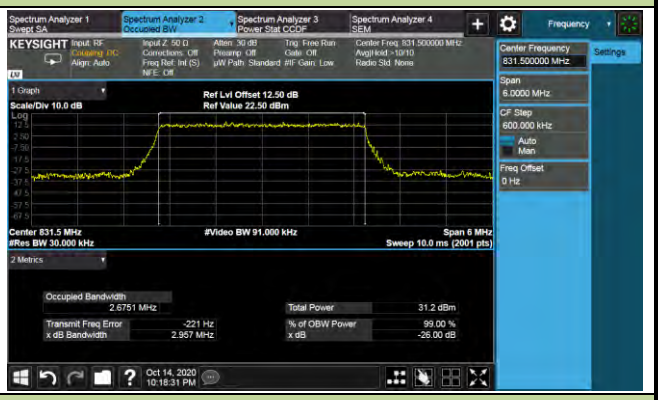
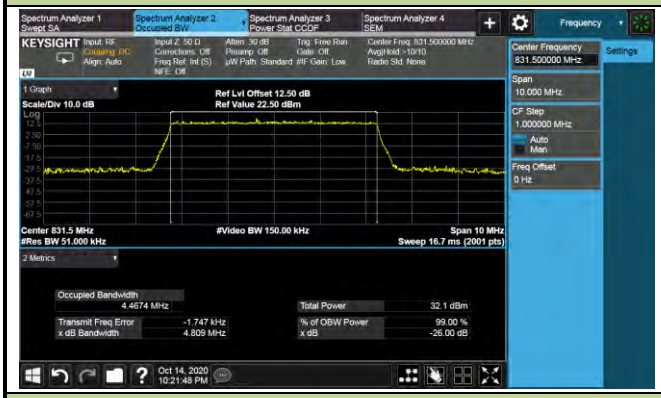
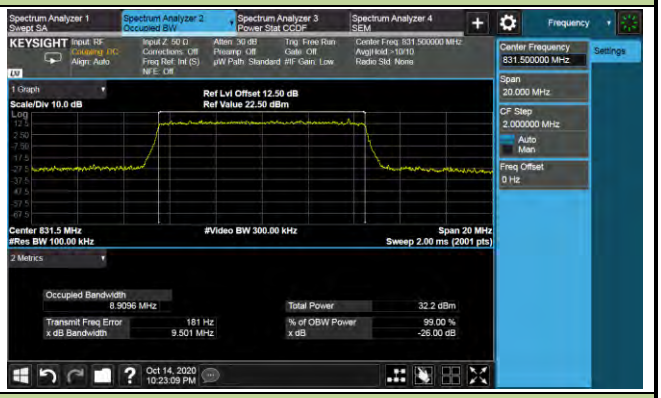
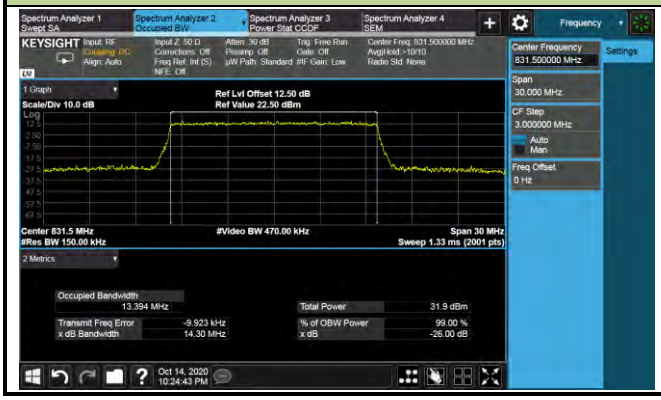
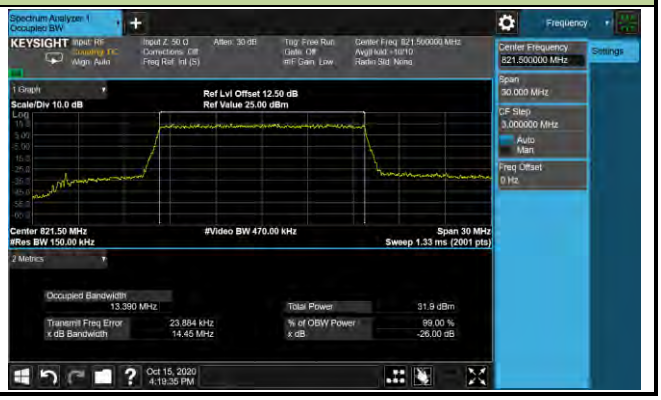
99% Bandwidth - 256QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

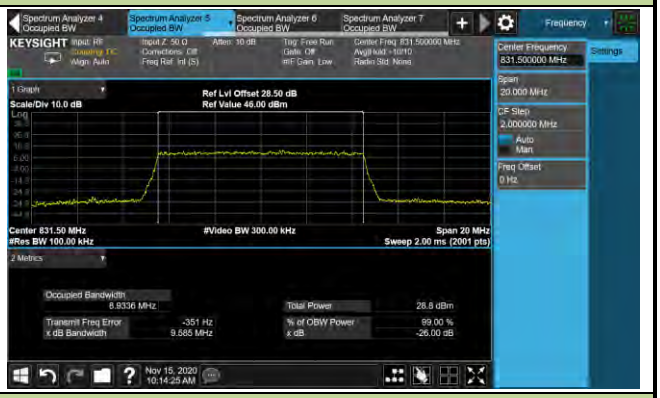
Product	5G Sub-6 GHz M.2 Module	Test Site	WZ-SR6
Test Engineer	Candy Luo	Test Date	2020/10/14 ~ 2020/11/15
Test Band	LTE Band 5/26		

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
20525	836.5	1.4	1.07
		3	2.68
		5	4.48
		10	8.94
		15	13.40
27185	821.5	15	13.40
16QAM			
20525	836.5	1.4	1.08
		3	2.68
		5	4.46
		10	8.92
		15	13.39
27185	821.5	15	13.40
64QAM			
20525	836.5	1.4	1.08
		3	2.68
		5	4.47
		10	8.91
		15	13.39
27185	821.5	15	13.39
256QAM			
20525	836.5	1.4	1.08
		3	2.69
		5	4.46
		10	8.93
		15	13.41
27185	821.5	15	13.40

99% Bandwidth - QPSK	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	821.5MHz
	

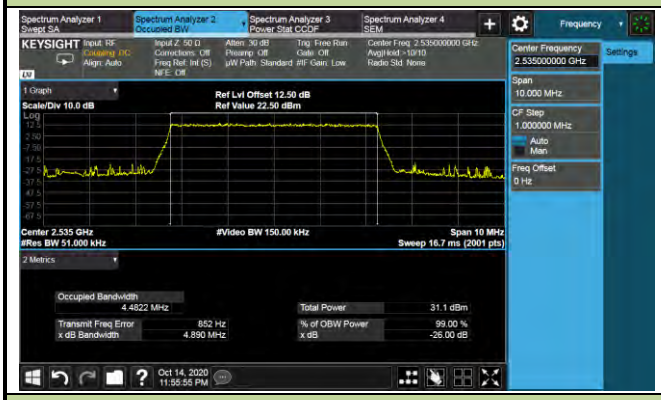
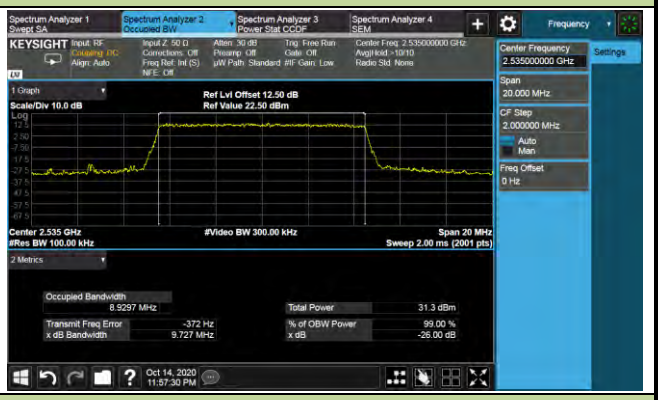
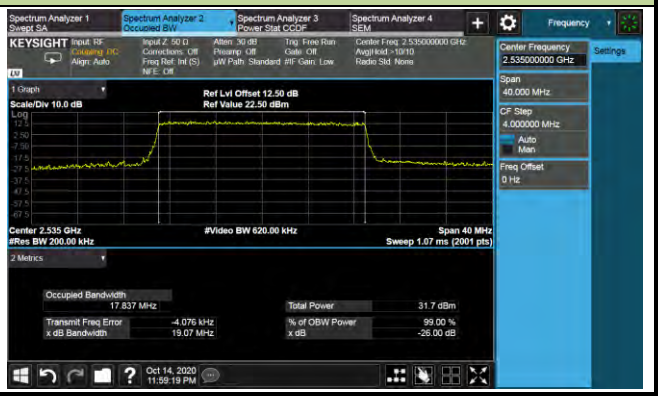
99% Bandwidth -16QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	821.5MHz
	

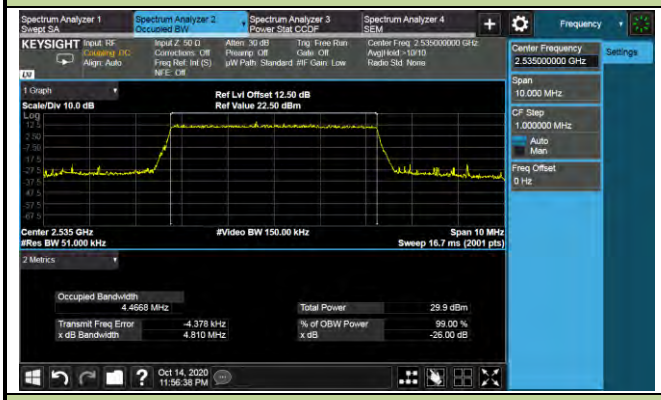
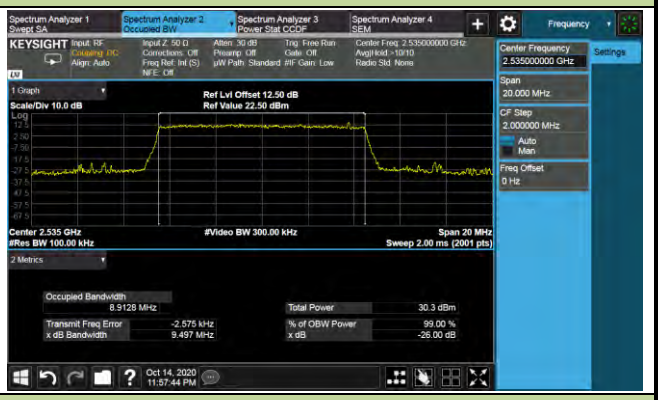
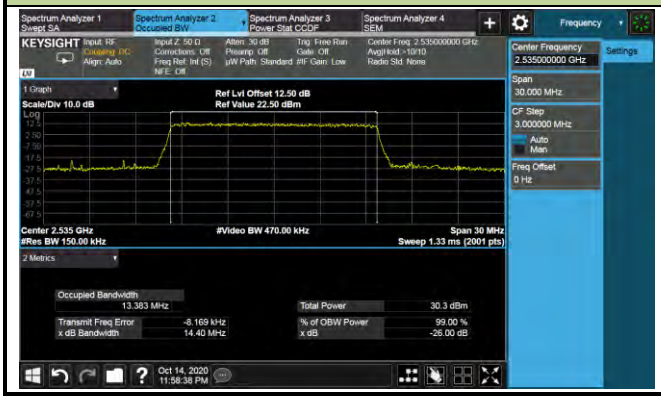
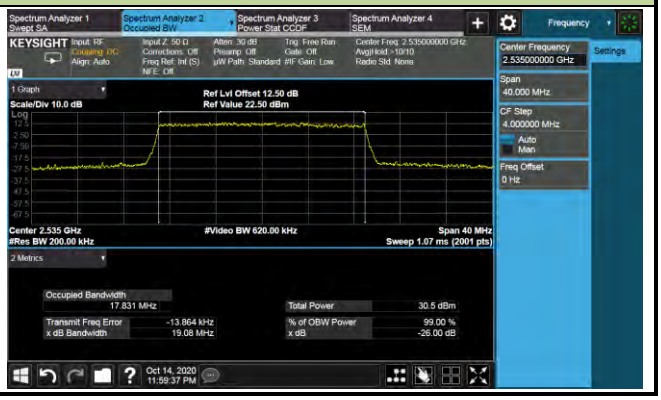
99% Bandwidth - 64QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	821.5MHz
	

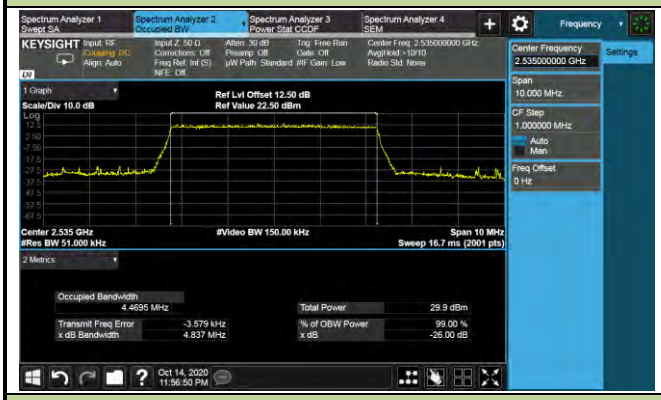
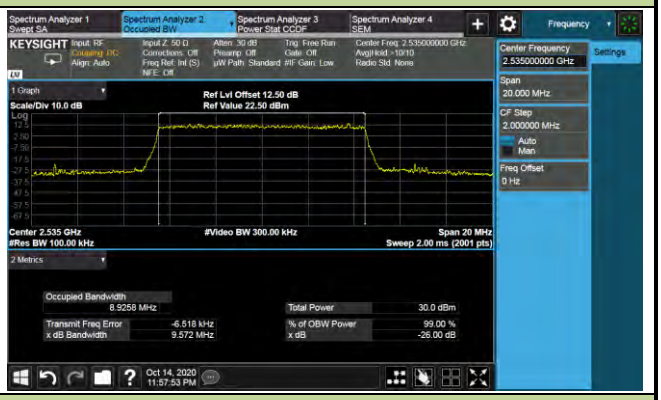
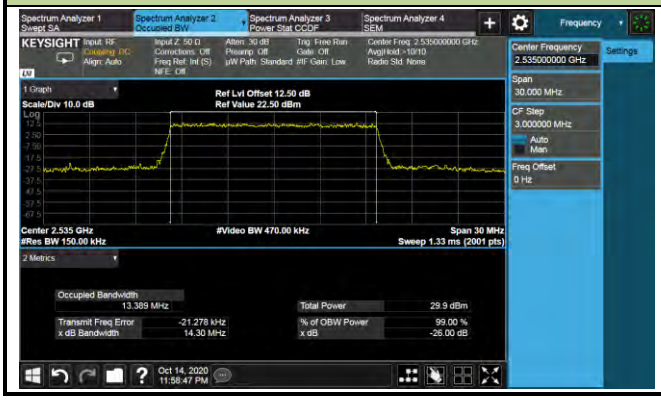
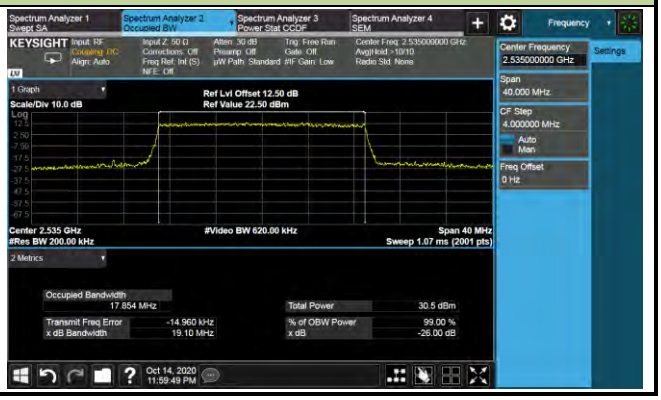
99% Bandwidth - 256QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	821.5MHz

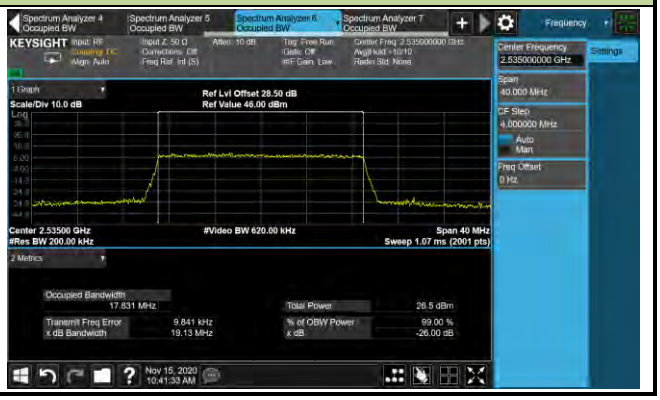
Product	5G Sub-6 GHz M.2 Module	Test Site	WZ-SR6
Test Engineer	Candy Luo	Test Date	2020/10/14 ~ 2020/11/15
Test Band	LTE Band 7		

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
21100	2535.0	5	4.48
		10	8.93
		15	13.41
		20	17.84
16QAM			
21100	2535.0	5	4.47
		10	8.91
		15	13.38
		20	17.83
64QAM			
21100	2535.0	5	4.47
		10	8.93
		15	13.39
		20	17.85
256QAM			
21100	2535.0	5	4.47
		10	8.92
		15	13.40
		20	17.83

99% Bandwidth - QPSK	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

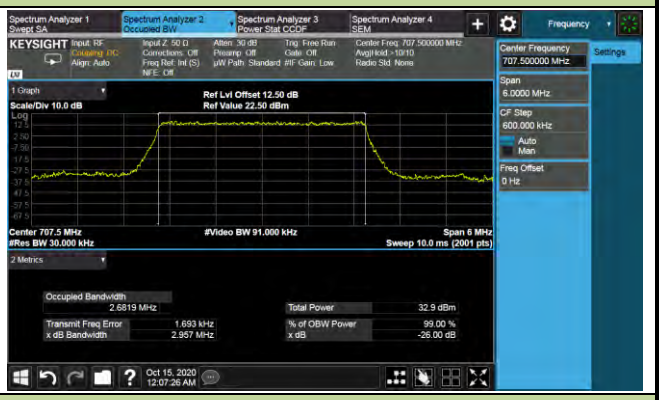
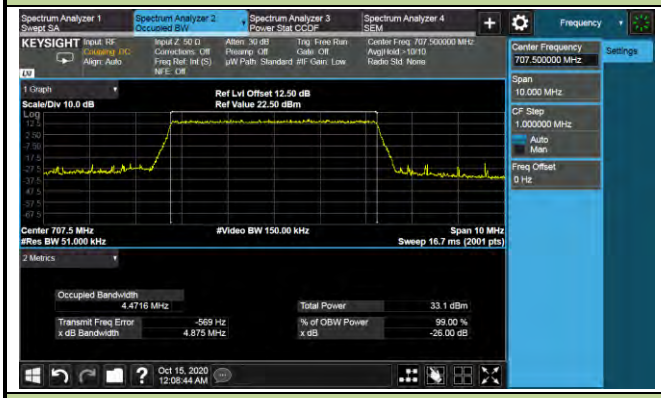
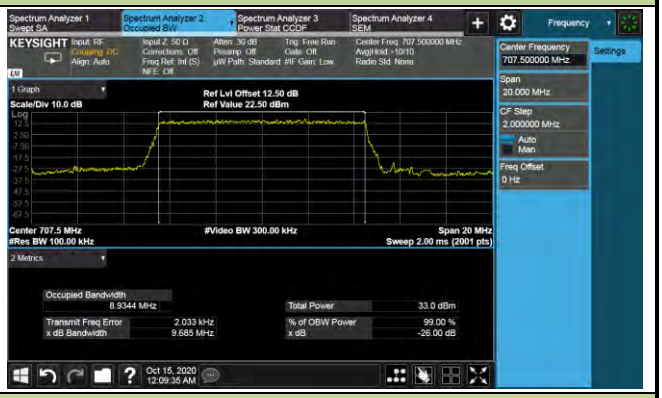
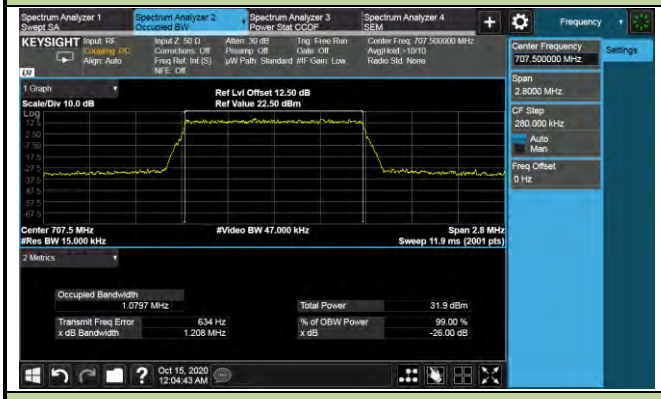
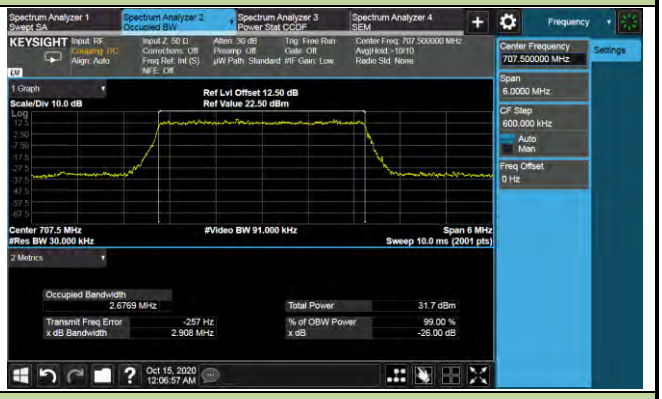
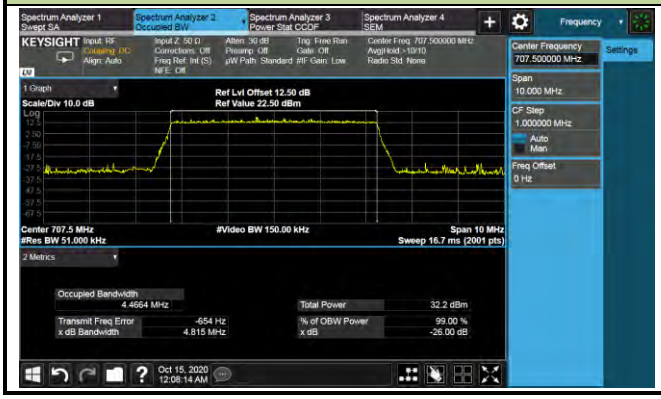
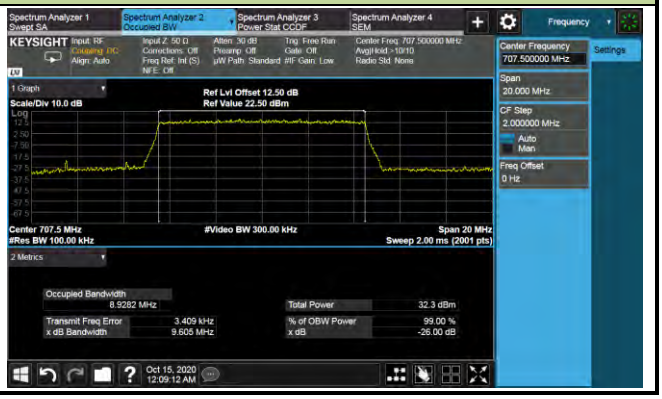
99% Bandwidth - 16QAM	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

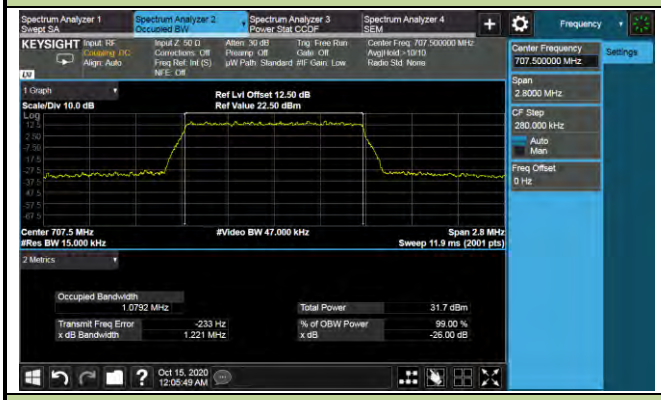
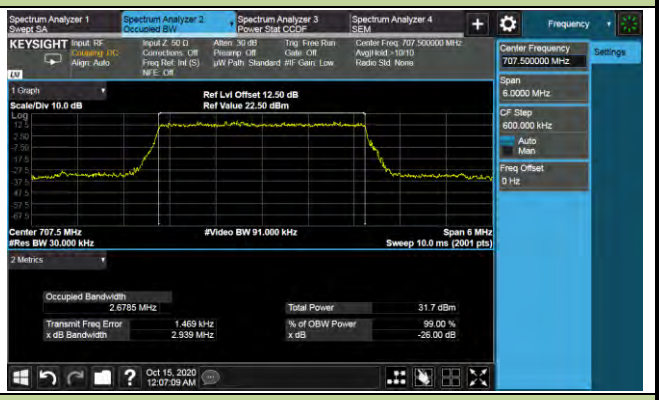
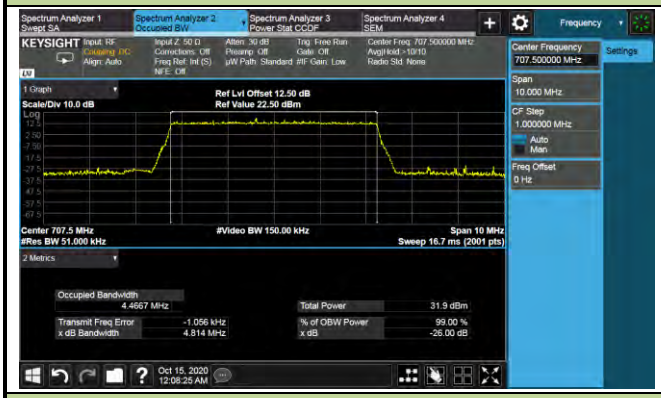
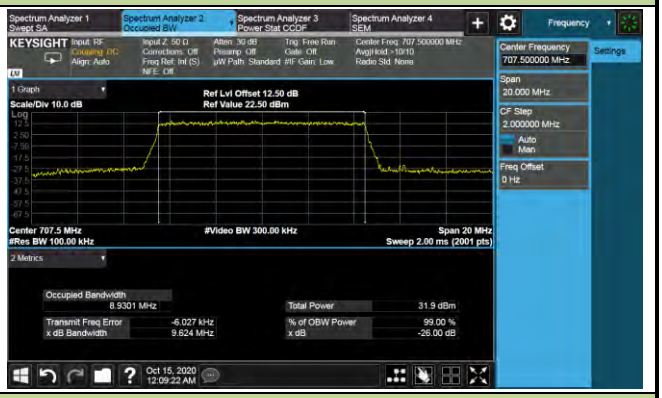
99% Bandwidth - 64QAM	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

99% Bandwidth - 256QAM	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
15MHz Channel Bandwidth	20MHz Channel Bandwidth
	

Product	5G Sub-6 GHz M.2 Module	Test Site	WZ-SR6
Test Engineer	Candy Luo	Test Date	2020/10/15 ~ 2020/11/15
Test Band	LTE Band 12		

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
23095	707.5	1.4	1.07
		3	2.68
		5	4.47
		10	8.93
16QAM			
23095	707.5	1.4	1.08
		3	2.68
		5	4.47
		10	8.93
64QAM			
23095	707.5	1.4	1.08
		3	2.68
		5	4.47
		10	8.93
256QAM			
23095	707.5	1.4	1.08
		3	2.68
		5	4.47
		10	8.94

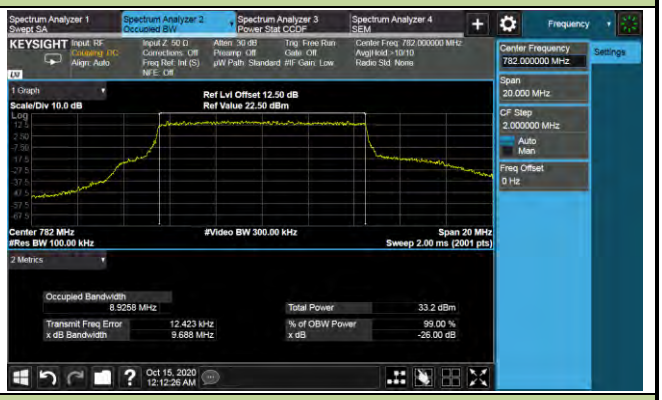
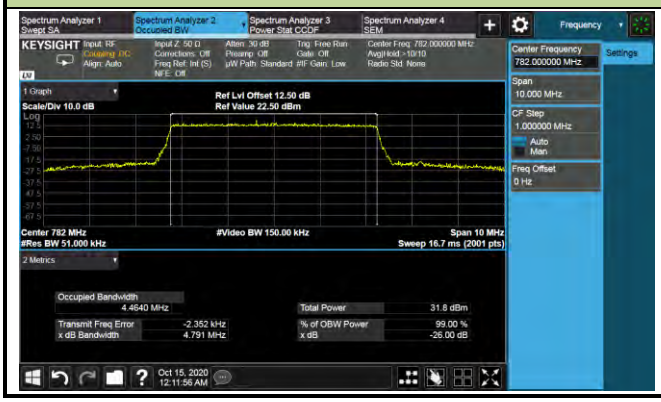
99% Bandwidth - QPSK	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
99% Bandwidth - 16QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	

99% Bandwidth - 64QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	

99% Bandwidth - 256QAM	
1.4MHz Channel Bandwidth	3MHz Channel Bandwidth
5MHz Channel Bandwidth	10MHz Channel Bandwidth

Product	5G Sub-6 GHz M.2 Module	Test Site	WZ-SR6
Test Engineer	Candy Luo	Test Date	2020/10/15 ~ 2020/11/15
Test Band	LTE Band 13		

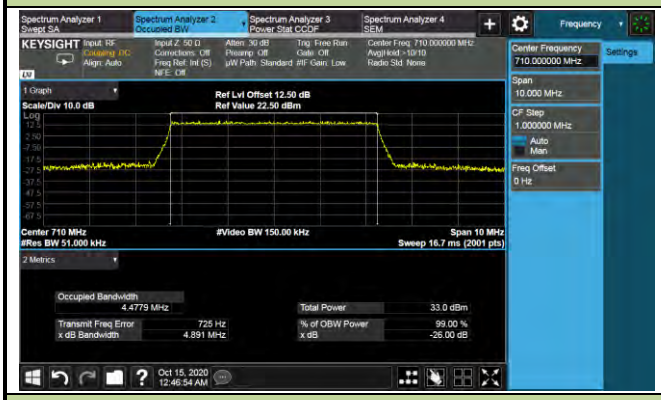
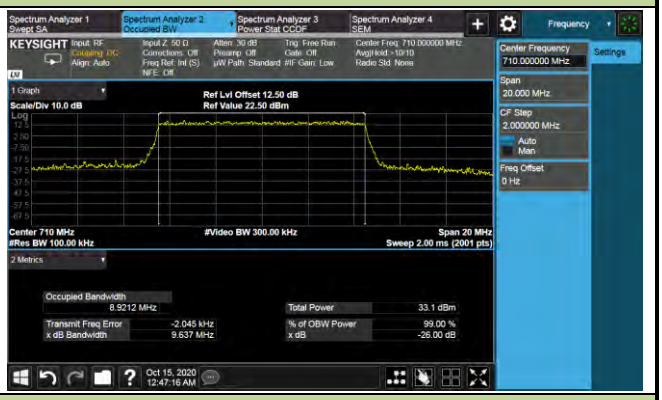
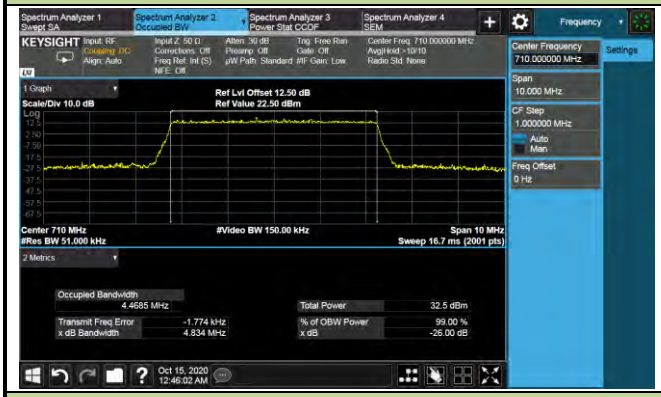
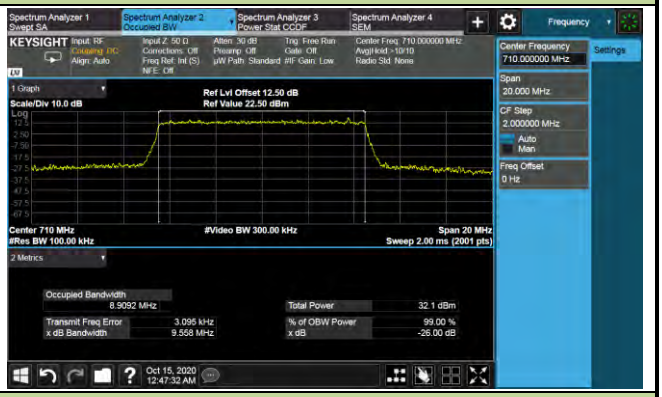
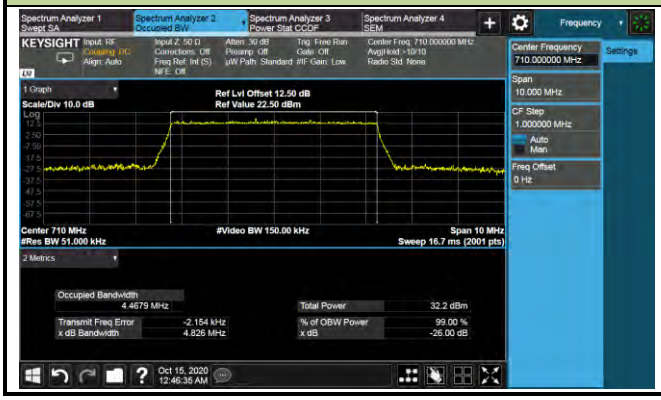
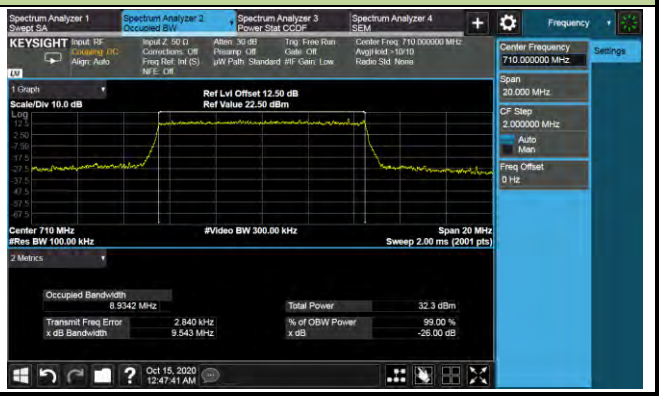
Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
23230	782.0	5	4.48
		10	8.93
16QAM			
23230	782.0	5	4.47
		10	8.90
64QAM			
23230	782.0	5	4.46
		10	8.91
256QAM			
23230	782.0	5	4.46
		10	8.90

99% Bandwidth - QPSK	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
99% Bandwidth - 16QAM	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
99% Bandwidth – 64QAM	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	

99% Bandwidth – 256QAM	
5MHz Channel Bandwidth	10MHz Channel Bandwidth

Product	5G Sub-6 GHz M.2 Module	Test Site	WZ-SR6
Test Engineer	Candy Luo	Test Date	2020/10/15 ~ 2020/11/15
Test Band	LTE Band 17		

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
23790	710.0	5	4.48
		10	8.92
16QAM			
23790	710.0	5	4.47
		10	8.91
64QAM			
23790	710.0	5	4.47
		10	8.93
256QAM			
23790	710.0	5	4.47
		10	8.94

99% Bandwidth - QPSK	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
99% Bandwidth - 16QAM	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	
99% Bandwidth - 64QAM	
5MHz Channel Bandwidth	10MHz Channel Bandwidth
	

99% Bandwidth - 256QAM	
5MHz Channel Bandwidth	10MHz Channel Bandwidth

Product	5G Sub-6 GHz M.2 Module	Test Site	WZ-SR6
Test Engineer	Candy Luo	Test Date	2020/10/22 ~ 2020/11/15
Test Band	LTE Band 38/41_HPUE		

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
37980	2593.0	5	4.47
		10	8.93
		15	13.40
		20	17.82
16QAM			
37980	2593.0	5	4.46
		10	8.94
		15	13.39
		20	17.86
64QAM			
37980	2593.0	5	4.46
		10	8.94
		15	13.40
		20	17.81
256QAM			
37980	2593.0	5	4.46
		10	8.95
		15	13.47
		20	17.85