RF MEASUREMENT REPORT

FCC ID:	XMR024BG770ASN
Applicant:	Quectel Wireless Solutions Co., Ltd.
Product:	LTE NTN Module
Model No.:	BG770A-SN
Brand Name:	Quectel
FCC Rule(s):	Part 90 Subpart S
Result:	Complies
Received Date:	2024-06-14
Test Date:	2024-07-19 ~ 2024-09-26

Reviewed By: Sunny Sun

Approved By: Robin Wu

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
2406RSU025-U2	V01	Initial Report	2024-11-27	Valid

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1. General Information

1.1. Applicant

Quectel Wireless Solutions Co., Ltd.

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

1.2. Manufacturer

Quectel Wireless Solutions Co., Ltd.

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 Location (Suzhou - Wujiang)** Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China				
	Laboratory Accreditations				
	A2LA: 3628.01		CNAS: L10551		
	FCC: CN1166		ISED: CN0001		
	VCCI:	☐R-20025	☐G-20034	☐C-20020	☐T-20020
		☐R-20141	☐G-20134	☐C-20103	☐T-20104
☐	**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: 3261				
	FCC: 291082, TW3261		ISED: TW3261		

1.4. Product Information

Product Name	LTE NTN Module
Model No.	BG770A-SN
Brand Name	Quectel
IMEI	867953065839237 (Radiated) 867953065839203 (Conducted) 867953065838916 (Conducted)
3GPP Specification	L-Band 255 LTE Cat M1 Band 2/4/5/12/13/25/26/66 LTE Cat NB Band 2/4/5/12/13/17/25/66
GNSS Specification	GPS/GLONASS
Operating Temperature Range	-35 ~ 75°C
Supply Voltage Rating	3.1 ~ 4.2Vdc, typical 3.3Vdc
Antenna Specification	Refer to Section 1.6
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Testing

LTE Cat M1 Specification	
TX Frequency Range	Band 26: 814 ~ 824 MHz
RX Frequency Range	Band 26: 859 ~ 869 MHz
Support Bandwidth	Band 26: 1.4, 3, 5, 10 MHz
Support Power Class	PC3
Modulation	Uplink up to 16QAM, Downlink up to 16QAM
Note: LTE Cat M1 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	

1.6. Description of Available Antennas

Technology	Frequency Range (MHz)	Antenna Type	Max Peak Gain (dBi)
LTE Cat M1 Band 26	814 ~ 849	Fixed External Antenna	1.1
Note 1: All antenna information (Antenna type and Peak Gain) is provided by the manufacturer. Note 2: The typical antennas used to calculate the ERP (EIRP).			

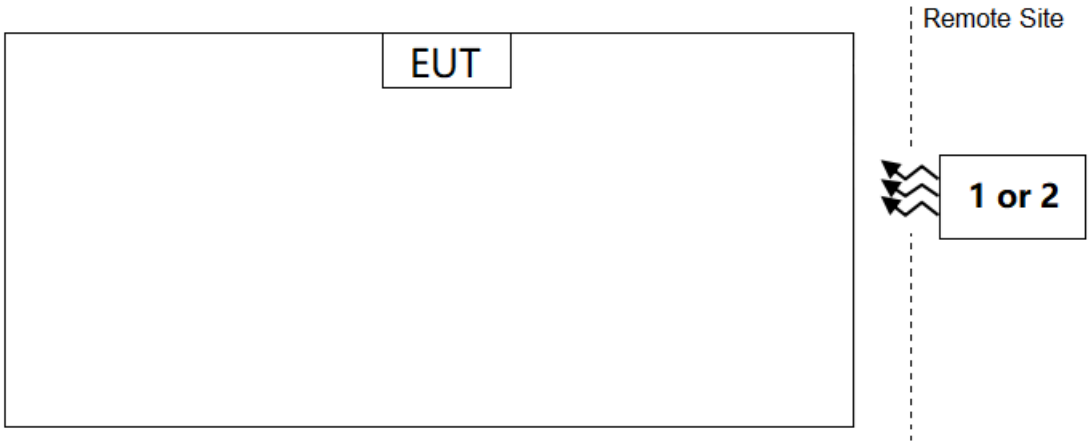
1.7. Test Methodology

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

- FCC CFR 47 Part 2, Part 90
- ANSI C63.26:2015
- 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. Test Configuration

2.1. Test System Connection Diagram



Product		Manufacturer	Model No.
1	Radio Communication Analyzer	Anritsu	MT8821C
2	Communication Tester	R&S	CMW500

2.2. Test Environment Condition

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

3. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
Temperature Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2024-09-27	WZ-TR3
				1 year	2025-09-02	WZ-TR3
Thermohygrometer	testo	608-H1	MRTSUE11268	1 year	2024-12-14	WZ-TR3
Radio Communication Analyzer	Anritsu	MT8821C	MRTSUE06960	1 year	2025-06-18	WZ-SR6
Communication Tester	R&S	CMW500	MRTSUE06881	1 year	2025-05-08	WZ-SR6
Shielding Room	HUAMING	WZ-SR6	MRTSUE06443	N/A	N/A	WZ-SR6
Signal Analyzer	Keysight	N9020B	MRTSUE06583	1 year	2025-06-29	WZ-SR6
Thermohygrometer	testo	608-H1	MRTSUE06362	1 year	2025-02-04	WZ-SR6
USB Power Sensor	Keysight	U2021XA	MRTSUE06447	1 year	2025-05-08	WZ-SR6
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2024-12-21	SIP-AC3
Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2025-07-07	SIP-AC3
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2025-06-06	SIP-AC3
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2025-01-11	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06619	1 year	2024-10-28	SIP-AC3
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06646	1 year	2024-08-04	SIP-AC3
				1 year	2025-07-29	SIP-AC3
Signal Analyzer	Keysight	N9020B	MRTSUE06604	1 year	2025-02-03	SIP-AC3
Signal Analyzer	Keysight	N9010B	MRTSUE07028	1 year	2024-10-23	SIP-AC3
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2024-12-17	SIP-AC3
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2024-10-09	SIP-AC3
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2024-10-23	SIP-AC3
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2025-01-27	SIP-AC3
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07075	1 year	2024-12-04	SIP-AC3
Directional Coupler	MVE	MVE4912-10	MRTSUE07051	1 year	2024-08-23	WZ-SR6
				1 year	2025-08-22	WZ-SR6
Attenuator	MVE	MVE2213	MRTSUE11090	1 year	2025-06-05	WZ-SR6

Software	Version	Function
e3	230711	RE & CE
Controller_MF 7802BS	1.02	RE Antenna & Turntable
UCTS	V 6.23.217.99	license 3G & 4G & 5G
BenchVue Power Meter	2018.1	Power

4. Decision Rules and Measurement Uncertainty

4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.2. 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)): Coaxial: 9kHz~30MHz: 2.35dB Coplanar: 9kHz~30MHz: 2.37dB Horizontal: 30MHz~200MHz: 3.46dB 200MHz~1GHz: 3.78dB 1GHz~40GHz: 4.97dB Vertical: 30MHz~200MHz: 4.07dB 200MHz~1GHz: 5.28dB 1GHz~40GHz: 4.78dB
Conducted Spurious Emissions
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.47dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.66dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 69.28kHz
Frequency Stability
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 8.04Hz

5. Test Result

5.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Test Result
2.1049	Occupied Bandwidth	Conducted	Pass
2.1055, 90.213	Frequency Stability		Pass
90.635	Equivalent Radiated Power		Pass
2.1051, 90.691(a)	Transmitter unwanted emissions (band-edge)		Pass
2.1051, 90.691(a)	Transmitter unwanted emissions (spurious)		
2.1051, 90.691(a)	Transmitter Spurious Emissions	Radiated	Pass

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 were presented the worst-case in the test report.
3) For radiated emission tests, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

5.2. Occupied Bandwidth Measurement

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.

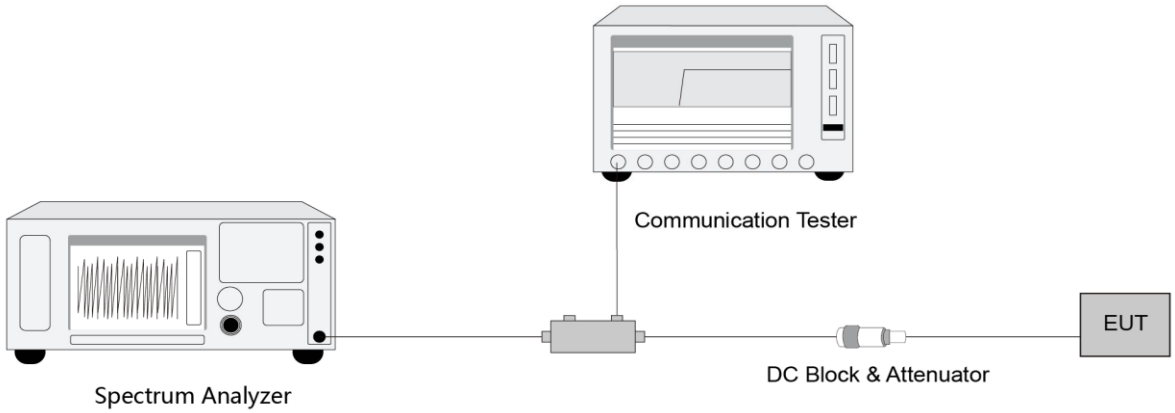
5.2.2. Test Procedure

ANSI C63.26-2015 - Section 5.4.4

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

Refer to Appendix A.1.

5.3. Frequency Stability Measurement

5.3.1. Test Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

5.3.2. Test Procedure

ANSI C63.26-2015 - Section 5.6

5.3.3. Test Setting

1. A reference point shall be established at the applicable unwanted emissions limit using a RBW equal to the RBW required by the unwanted emissions specification of the applicable regulatory standard. These reference points measured using the lowest and highest channel of operation shall be identified as f_L and f_H respectively.
2. Use the frequency error function of the instrument and record the frequency error.
3. Change the temperature of equipment and repeat Steps 2.
4. Change the Voltage of equipment and repeat Steps 2.
5. The frequency error offset determined in the above methods shall be added or subtracted from the values of f_L and f_H and the resulting frequencies must remain within the band

Frequency Stability Under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

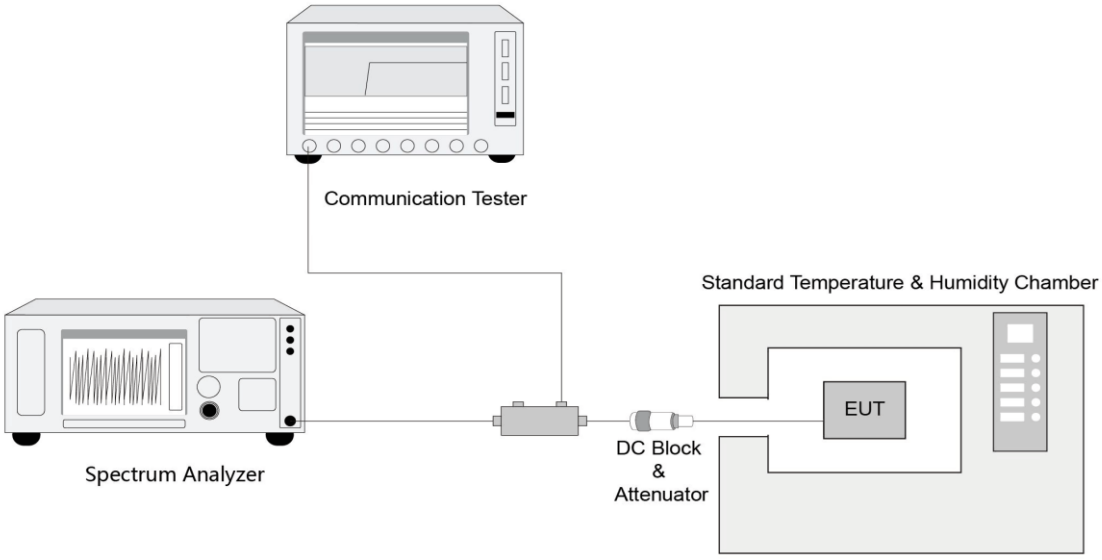
Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, recordthe maximum

frequency change.

5.3.4. Test Setup



5.3.5. Test Result

Refer to Appendix A.2.

5.4. Equivalent Isotropically Radiated Power Measurement

5.4.1. Test Limit

The maximum output power of the transmitter for mobile stations is 100 watts (20dBw).

5.4.2. Test Procedure

ANSI C63.26-2015 - Section 5.2.4.2

5.4.3. Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation (1) as follows:

ERP or EIRP = P_{Meas} + G_T

where

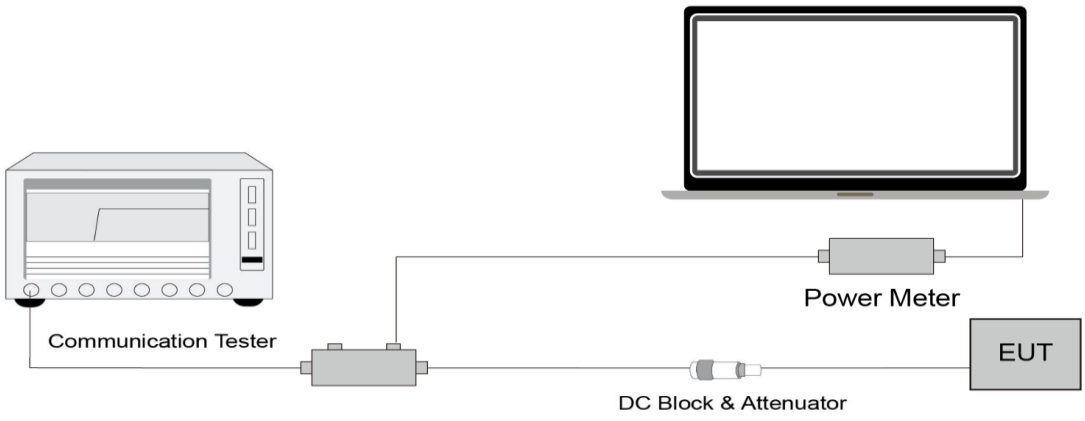
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, e.g., dBm or dBW)

P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

ERP = EIRP -2.15

5.4.4. Test Setup



5.4.5. Test Result

Refer to Appendix A.3.

5.5. Conducted Band-Edge Measurement

5.5.1. Test Limit

Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) 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(f/6.1) decibels or 50 + 10 Log(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.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(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 37.5 kHz.

5.5.2. Test Procedure

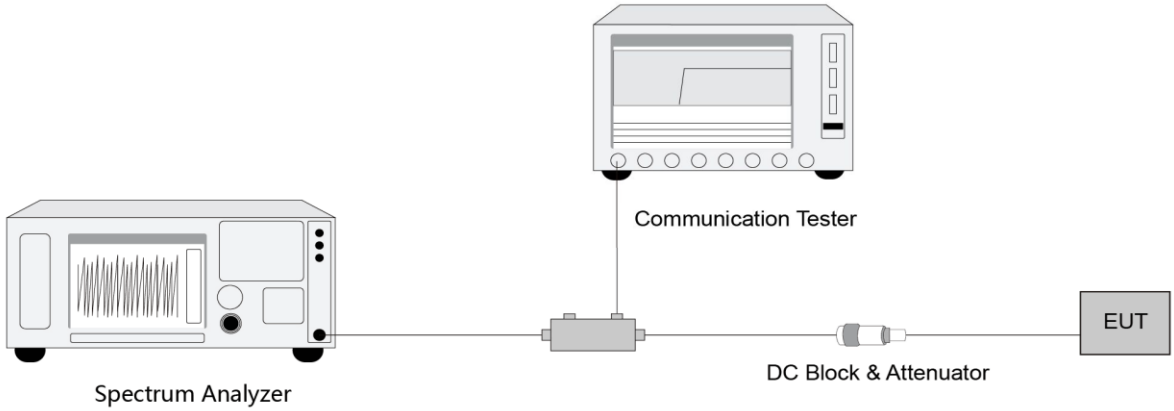
ANSI C63.26-2015 - Section 5.7

5.5.3. Test Setting

1. Set the analyzer frequency to Low or High channel
2. RBW = specified resolution bandwidth, for improvement of the accuracy in the measurement of the average power of a noise-like emission, a RBW narrower than the specified reference bandwidth can be used (generally limited to no less than 1% of the frequency block group, provided that a subsequent integration is performed over the full required measurement bandwidth. This integration should be performed using the spectrum analyzer’s band power functions.
3. VBW ≥ 3*RBW
4. Sweep time = auto
5. Detector = power averaging (rms)
6. If the EUT can be configured to transmit continuously, then set the trigger to free run
7. If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration. Time gating can also be used under similar constraints

8. Compute the power by integrating the spectrum across the specified resolution bandwidth using the instrument's band or channel power measurement function, with the band/channel limits set equal to the specified resolution bandwidth, when using a measurement bandwidth smaller than the specified bandwidth. Otherwise, Use the peak marker function to determine the maximum amplitude level.

5.5.4. Test Setup



5.5.5. Test Result

Refer to Appendix A.4.

5.6. Conducted Spurious Emissions Measurement

5.6.1. Test Limit

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated, and the worst-case configuration results are reported in this section.

For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(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 37.5 kHz.

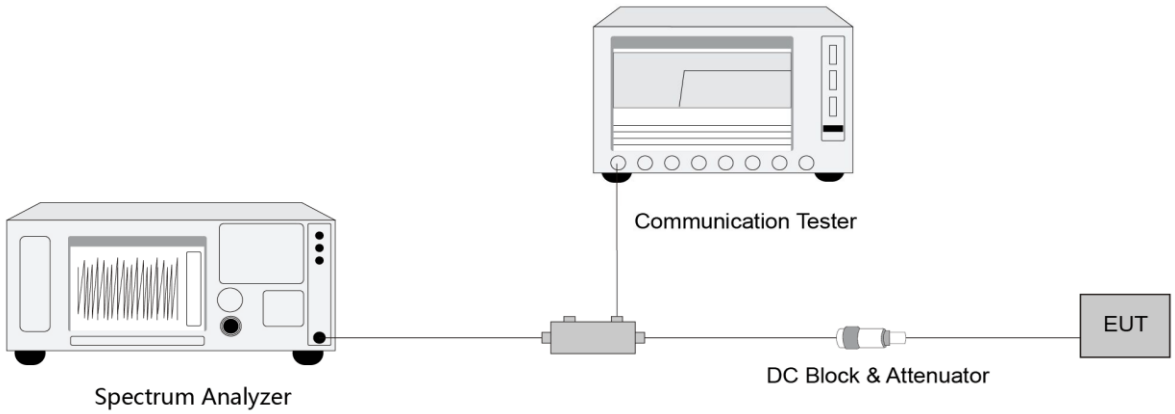
5.6.2. Test Procedure

ANSI C63.26-2015 - Section 5.7

5.6.3. Test Setting

1. Set the analyzer frequency to low, Mid or high channel.
2. RBW = specified resolution bandwidth
3. VBW ≥ 3*RBW
4. Sweep time = auto
5. Detector = power averaging (rms)
6. If the EUT can be configured to transmit continuously, then set the trigger to free run
7. If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration. Time gating can also be used under similar constraints
8. Use the peak marker function to determine the maximum amplitude level.

5.6.4. Test Setup



5.6.5. Test Result

Refer to Appendix A.5

5.7. Radiated Spurious Emissions Measurement

5.7.1. Test Limit

Out of band emissions: The powerof any emission outside of theauthorized operating frequency ranges must be attenuated below the transmitting power (P) by a factorof at least 43 + 10 log(P) dB. The emission limit equal to -13dBm.

E (dBμV/m) = EIRP (dBm) - 20 log D + 104.8; where D is the measurement distance in meters. The emission limit equal to 82.3dBμV/m.

5.7.2. Test Procedure

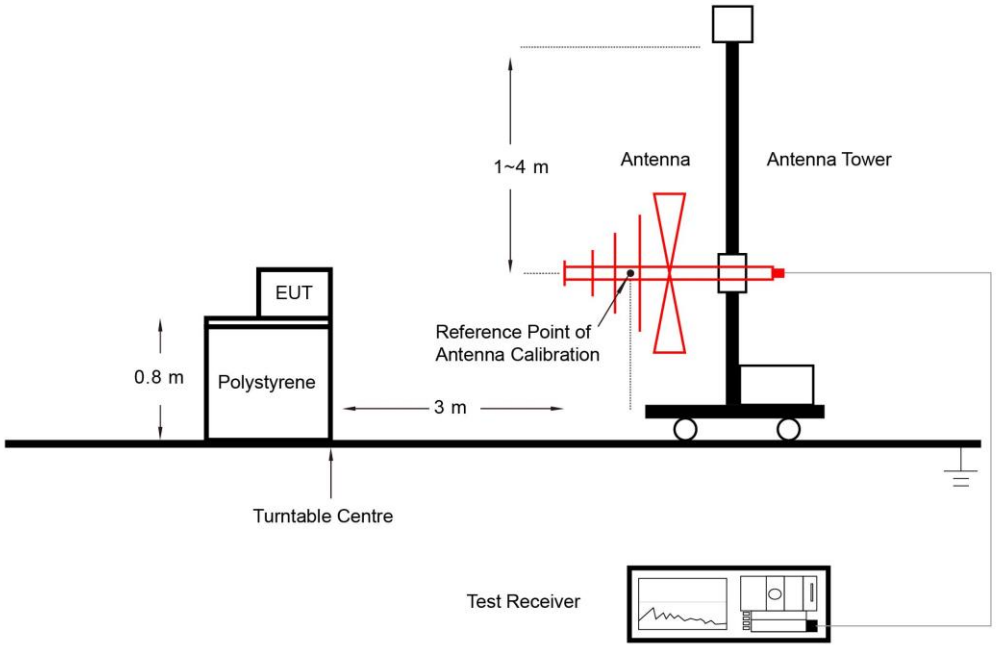
ANSI C63.26-2015 - Section 5.2.7 & 5.5

5.7.3. Test Setting

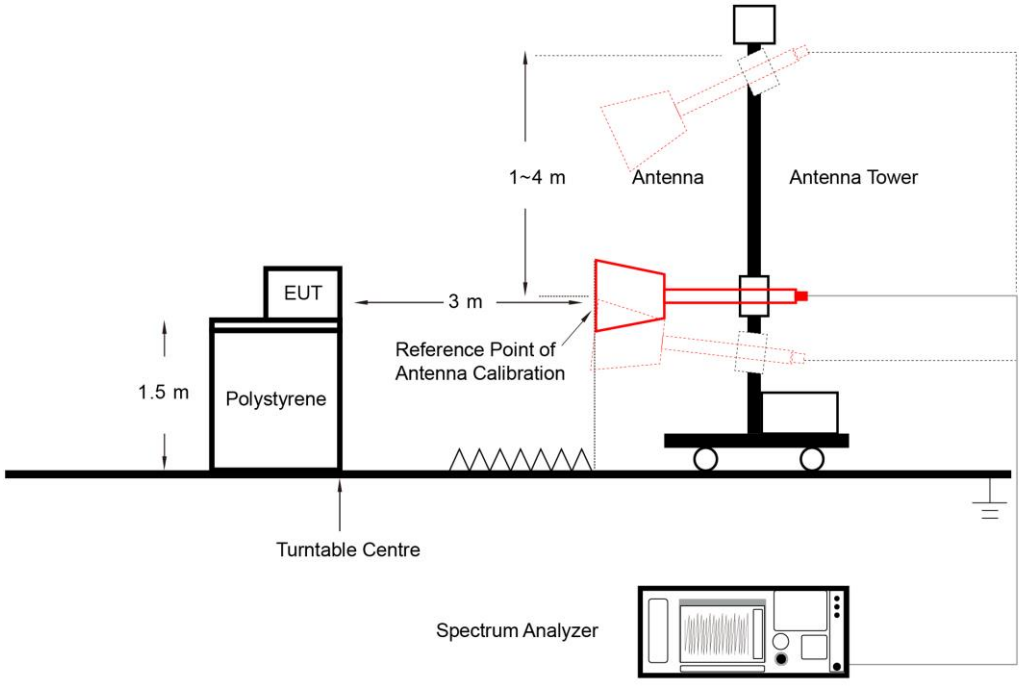
1. RBW = 120kHz or 1MHz
2. VBW ≥ 3*RBW
3. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period)
4. Detector = CISPR quasi-peak / average detector (Below 1 GHz, compliance with the limits shall be demonstrated using a CISPR quasi-peak detector and the related measurement bandwidth. Above 1 GHz, compliance with the limits shall be demonstrated using a linear average detector with a minimum resolution bandwidth of 1 MHz.)
5. The trace was allowed to stabilize

5.7.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.7.5. Test Result

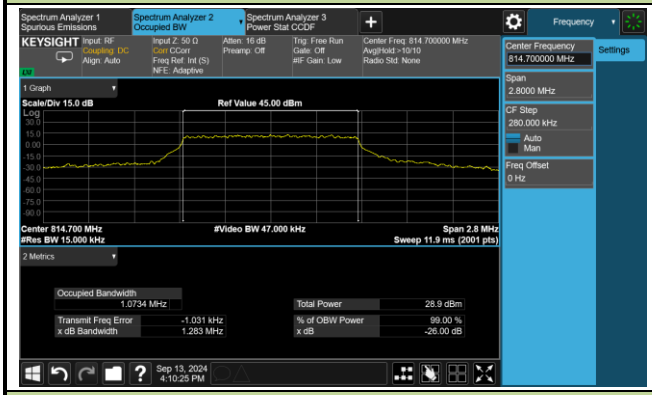
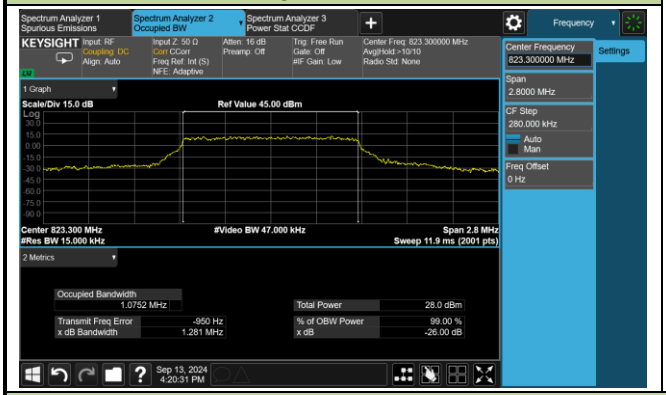
Refer to Appendix A.6.

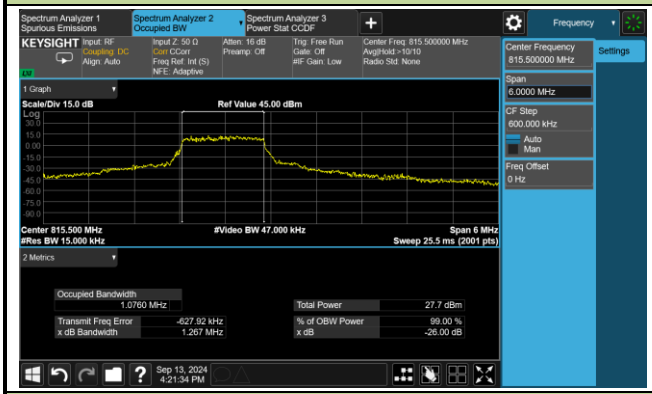
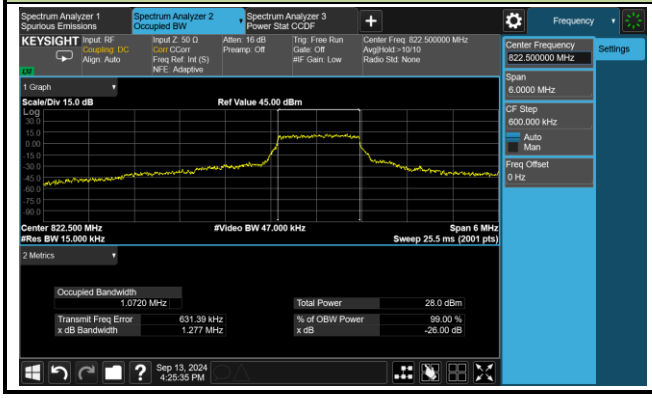
Appendix A - Test Result

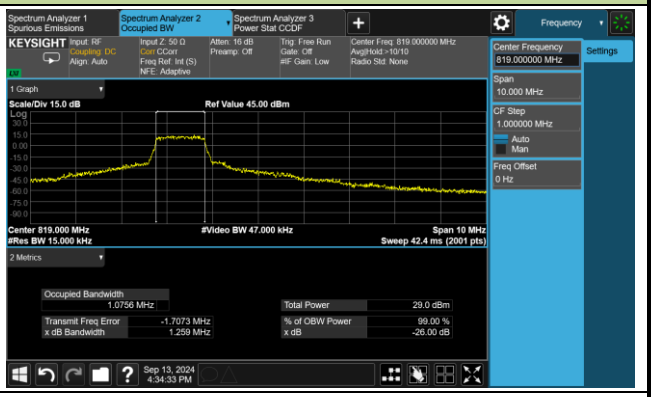
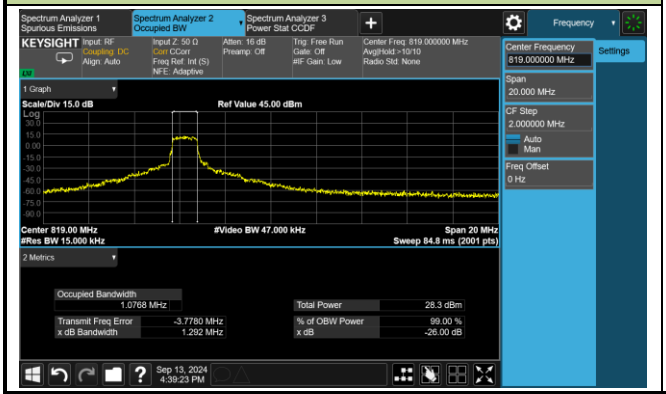
A.1 Occupied Bandwidth Test Result

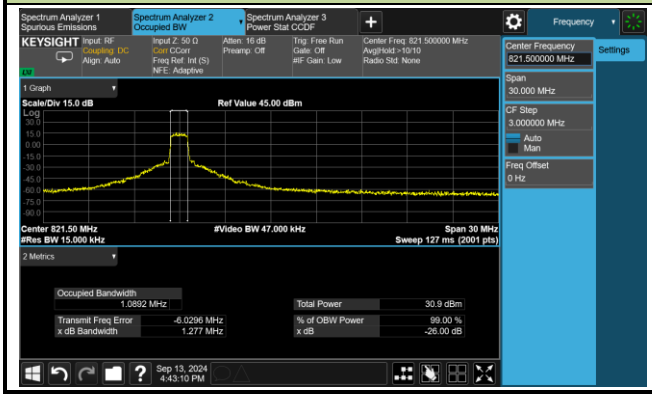
Test Site	WZ-SR6	Test Engineer	Lucas Wang
Test Date	2024-09-12 ~ 2024-09-24	Test Band	Band 26

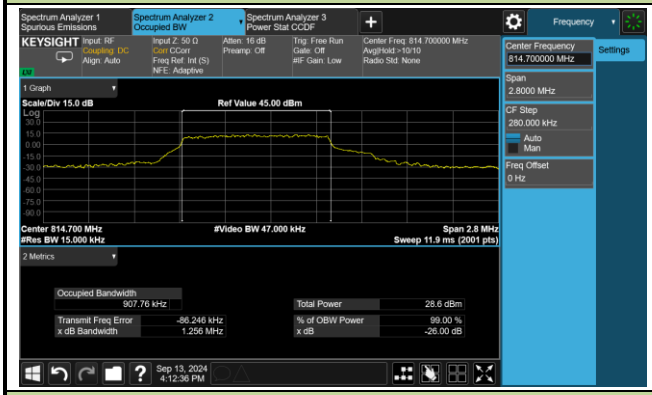
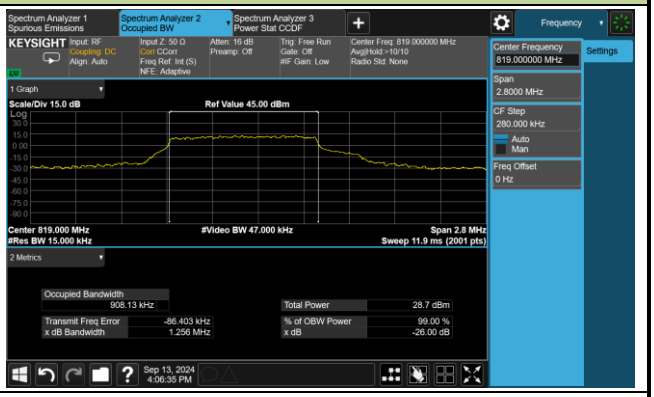
Modulation	Bandwidth (MHz)	Frequency (MHz)	99% Bandwidth (MHz)
QPSK	1.4	814.7	1.0734
		819	1.0724
		823.3	1.0752
	3	815.5	1.0760
		819	1.0735
		822.5	1.0720
	5	816.5	1.0767
		819	1.0756
		821.5	1.0712
	10	819	1.0768
	15	821.5	1.0892
16QAM	1.4	814.7	0.90776
		819	0.90813
		823.3	0.90843
	3	815.5	0.90403
		819	0.90280
		822.5	0.90557
	5	816.5	0.90811
		819	0.90456
		821.5	0.91147
	10	819	0.91879
	15	821.5	0.92099

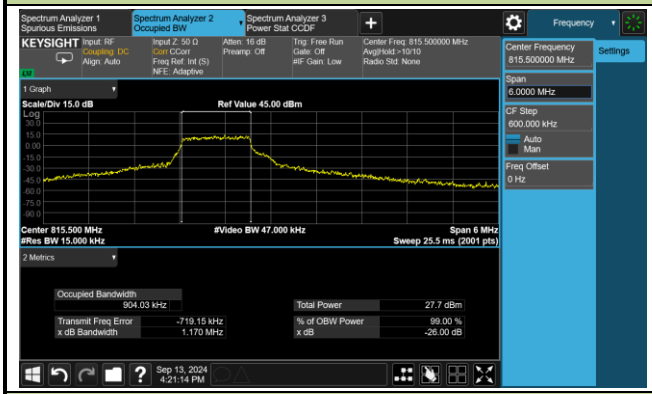
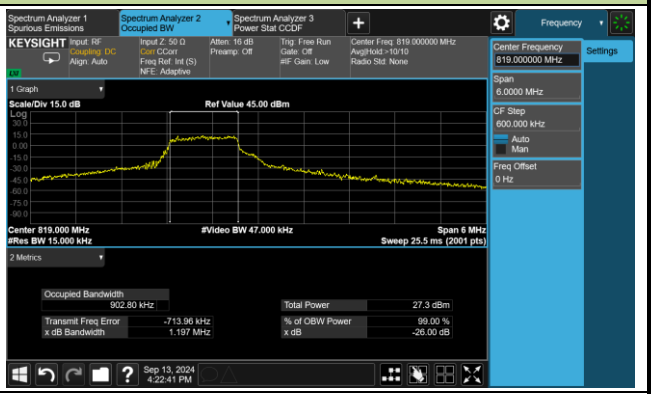
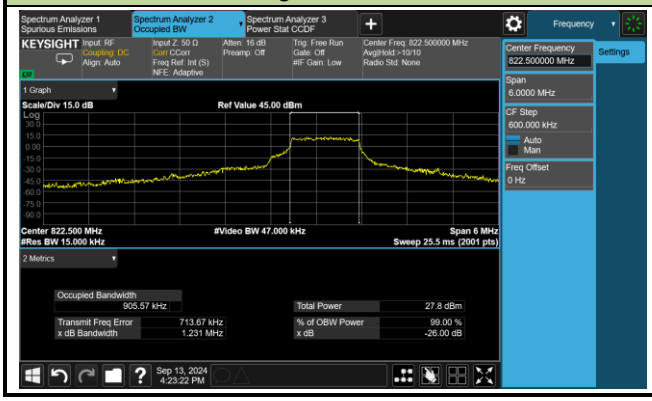
99% Bandwidth – QPSK 1.4MHz	
Low Channel	Middle Channel
	
High Channel	
	

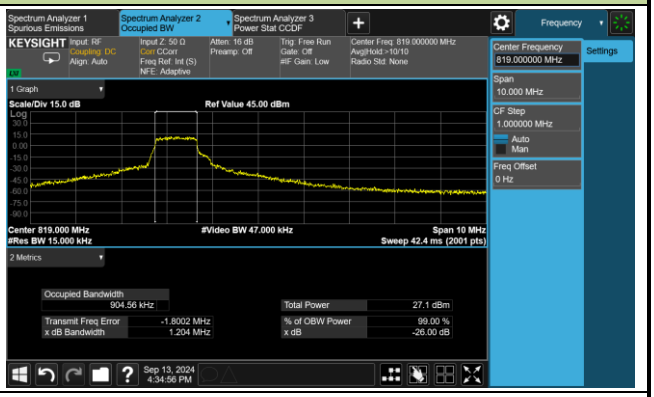
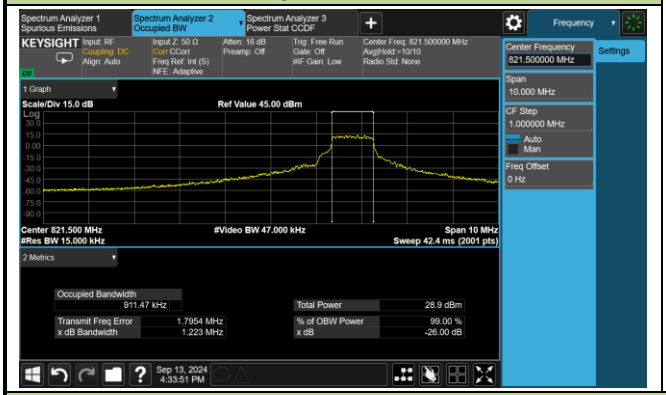
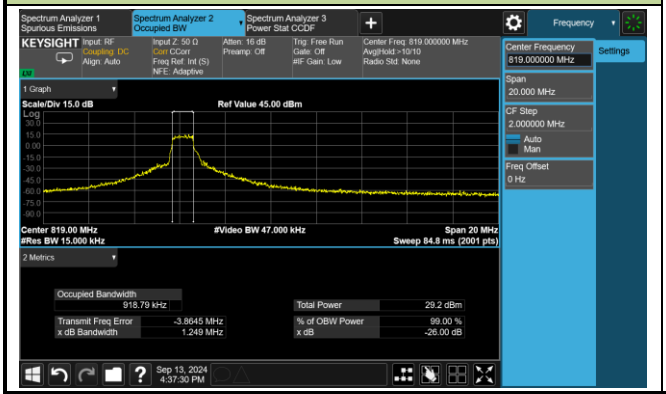
99% Bandwidth – QPSK 3MHz	
Low Channel	Middle Channel
	
High Channel	
	

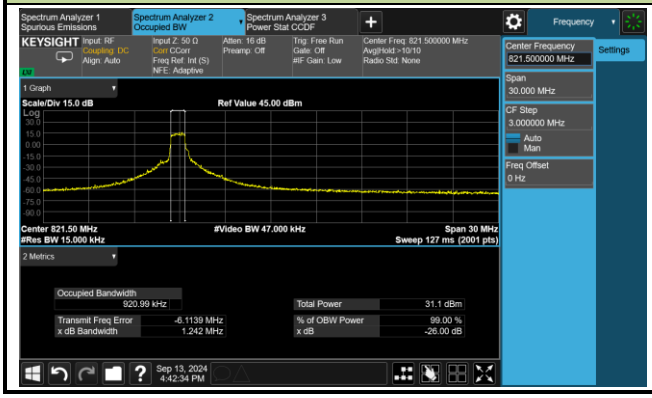
99% Bandwidth – QPSK 5MHz	
Low Channel	Middle Channel
	
High Channel	
99% Bandwidth – QPSK 10MHz	
Middle Channel	
	

99% Bandwidth – QPSK 15MHz	
Middle Channel	
	

99% Bandwidth – 16QAM 1.4MHz	
Low Channel	Middle Channel
	
High Channel	

99% Bandwidth –16QAM 3MHz	
Low Channel	Middle Channel
	
High Channel	
	

99% Bandwidth –16QAM 5MHz	
Low Channel	Middle Channel
	
High Channel	
	
99% Bandwidth –16QAM 10MHz	
Middle Channel	
	

99% Bandwidth –16QAM 15MHz	
Middle Channel	
	

A.2 Frequency Stability Test Result

Test Site	WZ-TR3	Test Engineer	Lucas Wang
Test Date	2024-09-14 ~ 2024-09-18	Test Band	Band 26

Voltage	Temp (°C)	Frequency Range (MHz)		Delta (Hz)	Frequency stability (ppm)	Within Authorized Frequency Block
		814	824			
		f_L	f_H			
Normal	+ 20 (Ref)	814.142	823.862	0.00	0.0000	Pass
	+ 50	814.142	823.862	7.17	0.0088	Pass
	+ 40	814.142	823.862	5.41	0.0066	Pass
	+ 30	814.142	823.862	-1.19	-0.0015	Pass
	+ 10	814.142	823.862	-0.55	-0.0007	Pass
	0	814.142	823.862	0.42	0.0005	Pass
	- 10	814.142	823.862	1.15	0.0014	Pass
	- 20	814.142	823.862	0.08	0.0001	Pass
	- 30	814.142	823.862	10.54	0.0129	Pass
15%	+ 20	814.142	823.862	7.47	0.0092	Pass
-15%	+ 20	814.142	823.862	-4.82	-0.0059	Pass

A.3 Equivalent Isotropically Radited Power Test Result

Test Site	WZ-SR6	Test Engineer	Lucas Wang
Test Date	2024-08-01 ~ 2024-09-24	Test Band	Band 26

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	Output Power (W)	Limit (W)
QPSK							
1.4	814.7	0	1	0	23.14	0.2061	< 100
			1	2	23.24	0.2109	< 100
			1	5	22.75	0.1884	< 100
			6	0	21.33	0.1358	< 100
	819.0	0	1	0	23.16	0.2070	< 100
			1	2	23.33	0.2153	< 100
			1	5	22.82	0.1914	< 100
			6	0	21.41	0.1384	< 100
	823.3	0	1	0	23.28	0.2128	< 100
			1	2	23.25	0.2113	< 100
			1	5	22.85	0.1928	< 100
			6	0	21.41	0.1384	< 100
3	815.5	0	1	0	23.16	0.2070	< 100
			1	2	23.80	0.2399	< 100
			1	5	23.01	0.2000	< 100
			6	0	21.39	0.1377	< 100
	819.0	0	1	0	23.18	0.2080	< 100
			1	2	23.70	0.2344	< 100
			1	5	22.98	0.1986	< 100
			6	0	21.42	0.1387	< 100
	822.5	1	1	0	23.25	0.2113	< 100
			1	2	23.70	0.2344	< 100
			1	5	23.00	0.1995	< 100
			6	0	21.48	0.1406	< 100

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	Output Power (W)	Limit (W)
QPSK							
5	816.5	0	1	0	23.17	0.2075	< 100
			1	2	23.26	0.2118	< 100
			1	5	23.12	0.2051	< 100
			6	0	22.16	0.1644	< 100
	819.0	1	1	0	23.22	0.2099	< 100
			1	2	23.30	0.2138	< 100
			1	5	23.15	0.2065	< 100
			6	0	22.16	0.1644	< 100
	821.5	3	1	0	23.25	0.2113	< 100
			1	2	23.34	0.2158	< 100
			1	5	23.22	0.2099	< 100
			6	0	22.23	0.1671	< 100
10	819.0	0	1	0	23.13	0.2056	< 100
			1	2	23.24	0.2109	< 100
			1	5	23.12	0.2051	< 100
			6	0	22.17	0.1648	< 100
	819.0	3	1	0	23.17	0.2075	< 100
			1	2	23.27	0.2123	< 100
			1	5	23.12	0.2051	< 100
			6	0	22.15	0.1641	< 100
	819.0	7	1	0	23.24	0.2109	< 100
			1	2	23.33	0.2153	< 100
			1	5	23.14	0.2061	< 100
			6	0	22.22	0.1667	< 100

Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	Output Power (W)	Limit (W)
QPSK							
15	821.5	0	1	0	23.56	0.2270	< 100
			1	2	23.47	0.2223	< 100
			1	5	23.46	0.2218	< 100
			6	0	23.28	0.2128	< 100
	821.5	5	1	0	23.62	0.2301	< 100
			1	2	23.50	0.2239	< 100
			1	5	23.52	0.2249	< 100
			6	0	23.32	0.2148	< 100
	821.5	11	1	0	23.63	0.2307	< 100
			1	2	23.61	0.2296	< 100
			1	5	23.53	0.2254	< 100
			6	0	23.42	0.2198	< 100

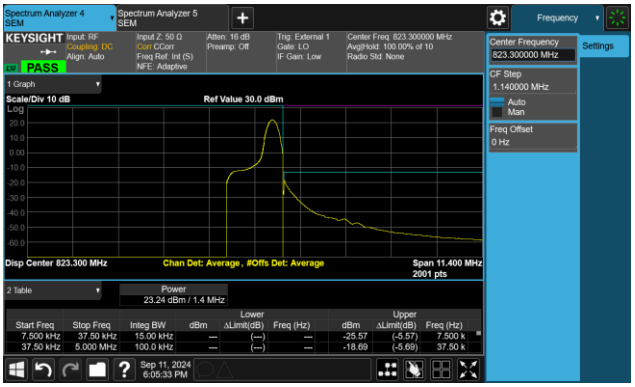
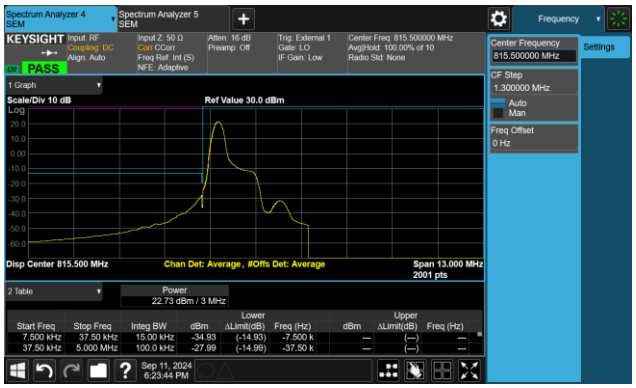
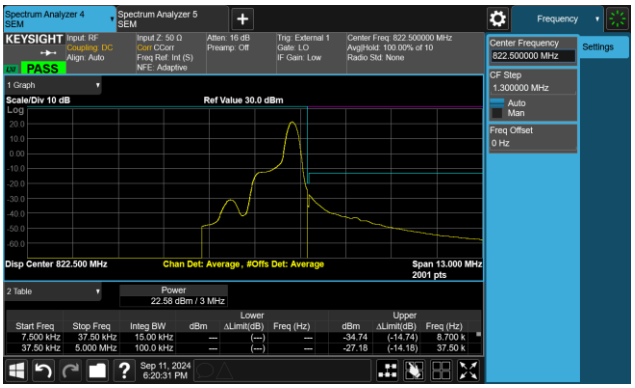
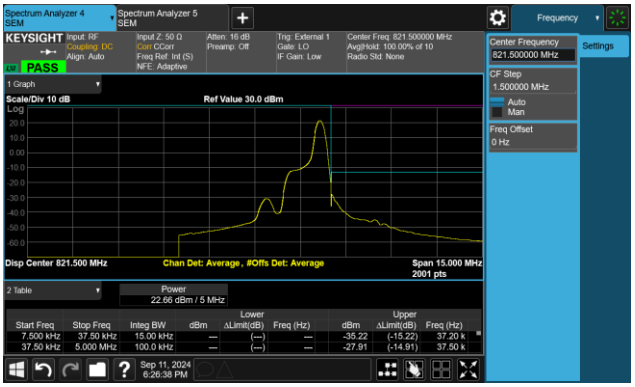
Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	Output Power (W)	Limit (W)
16QAM							
1.4	814.7	0	1	0	23.06	0.2023	< 100
			1	2	22.22	0.1667	< 100
			1	5	22.95	0.1972	< 100
			5	0	21.70	0.1479	< 100
	819.0	0	1	0	23.00	0.1995	< 100
			1	2	22.18	0.1652	< 100
			1	5	22.95	0.1972	< 100
			5	0	21.64	0.1459	< 100
	823.3	0	1	0	23.27	0.2123	< 100
			1	2	22.27	0.1687	< 100
			1	5	23.21	0.2094	< 100
			5	1	21.77	0.1503	< 100
3	815.5	0	1	0	22.56	0.1803	< 100
			1	2	23.95	0.2483	< 100
			1	5	22.47	0.1766	< 100
			5	0	21.46	0.1400	< 100
	819.0	0	1	0	22.67	0.1849	< 100
			1	2	22.42	0.1746	< 100
			1	5	22.56	0.1803	< 100
			5	0	21.47	0.1403	< 100
	822.5	1	1	0	22.75	0.1884	< 100
			1	2	21.62	0.1452	< 100
			1	5	22.63	0.1832	< 100
			5	1	21.65	0.1462	< 100

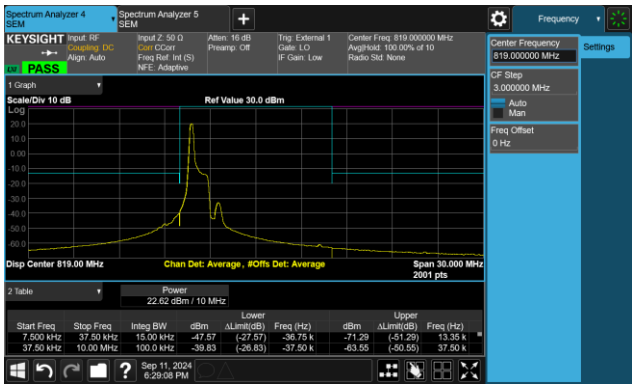
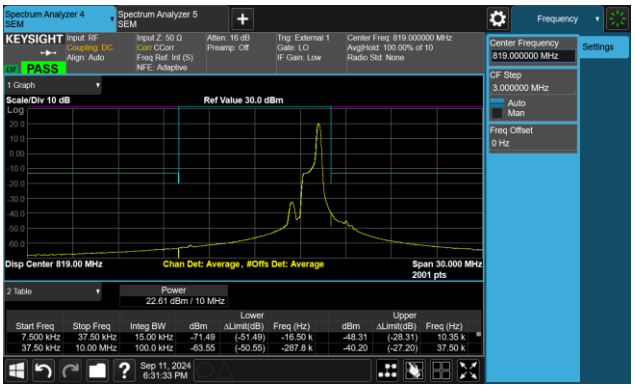
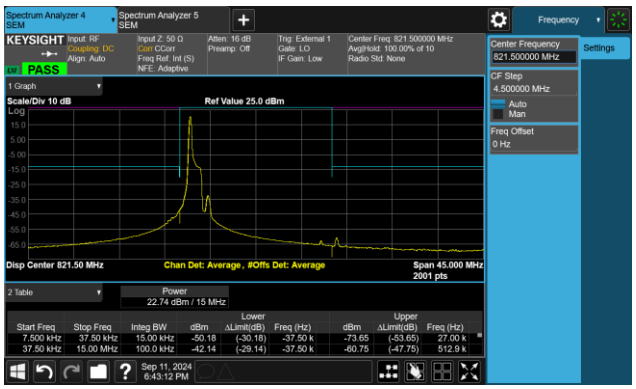
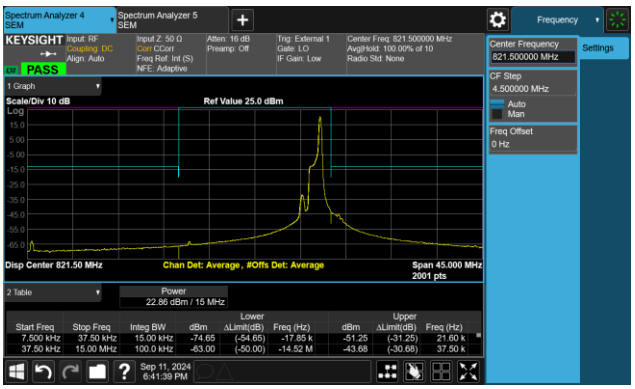
Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	Output Power (W)	Limit (W)
16QAM							
5	816.5	0	1	0	23.59	0.2286	< 100
			1	2	23.61	0.2296	< 100
			1	5	23.98	0.2500	< 100
			5	0	21.03	0.1268	< 100
	819.0	1	1	0	23.62	0.2301	< 100
			1	2	23.64	0.2312	< 100
			1	5	23.92	0.2466	< 100
			5	0	21.07	0.1279	< 100
	821.5	3	1	0	23.67	0.2328	< 100
			1	2	24.25	0.2661	< 100
			1	5	24.03	0.2529	< 100
			5	1	21.28	0.1343	< 100
10	819.0	0	1	0	23.58	0.2280	< 100
			1	2	23.68	0.2333	< 100
			1	5	24.00	0.2512	< 100
			5	0	21.82	0.1521	< 100
	819.0	3	1	0	23.61	0.2296	< 100
			1	2	23.59	0.2286	< 100
			1	5	23.99	0.2506	< 100
			5	0	21.84	0.1528	< 100
	819.0	7	1	0	23.69	0.2339	< 100
			1	2	23.69	0.2339	< 100
			1	5	24.11	0.2576	< 100
			5	1	22.18	0.1652	< 100

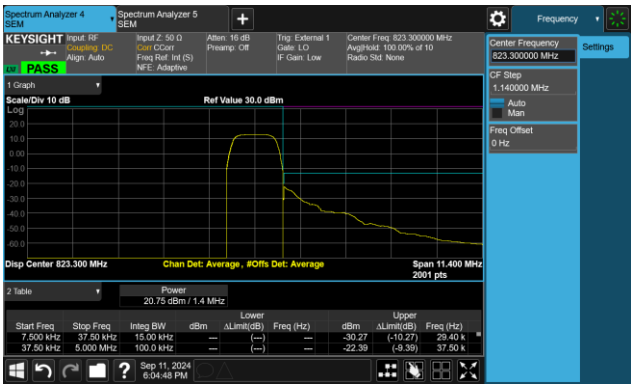
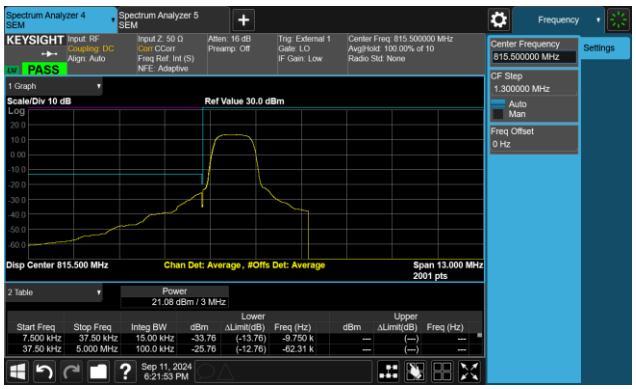
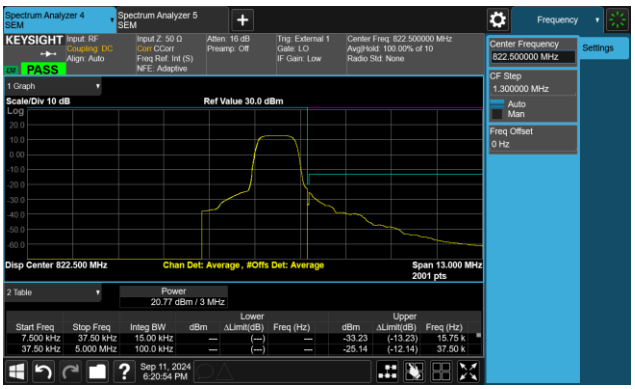
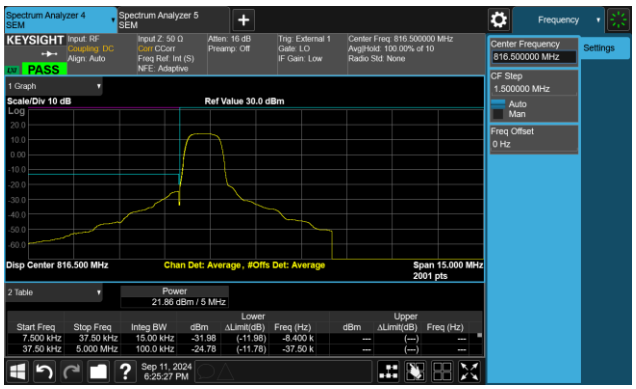
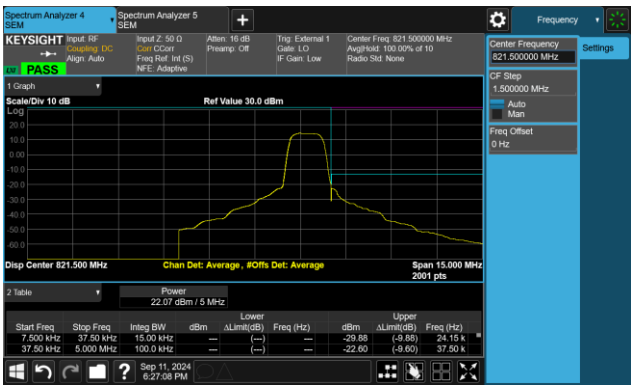
Frequency (MHz)	Channel Bandwidth (MHz)	Index	RB Size	RB Offset	Output Power (dBm)	Output Power (W)	Limit (W)
16QAM							
15	821.5	0	1	0	23.63	0.2307	< 100
			1	2	23.59	0.2286	< 100
			1	5	23.45	0.2213	< 100
			5	0	22.98	0.1986	< 100
	821.5	5	1	0	23.67	0.2328	< 100
			1	2	23.63	0.2307	< 100
			1	5	23.51	0.2244	< 100
			5	0	23.07	0.2028	< 100
	821.5	11	1	0	23.75	0.2371	< 100
			1	2	23.73	0.2360	< 100
			1	5	23.62	0.2301	< 100
			5	1	23.20	0.2089	< 100

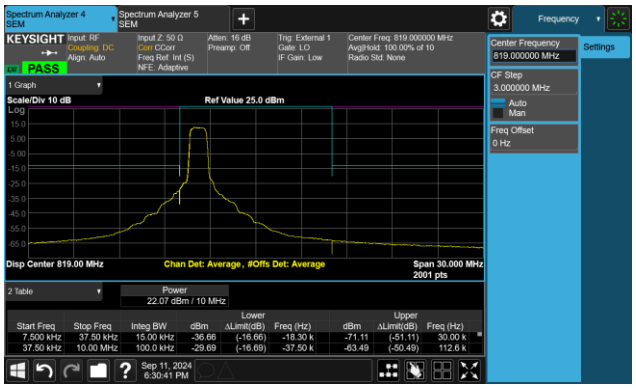
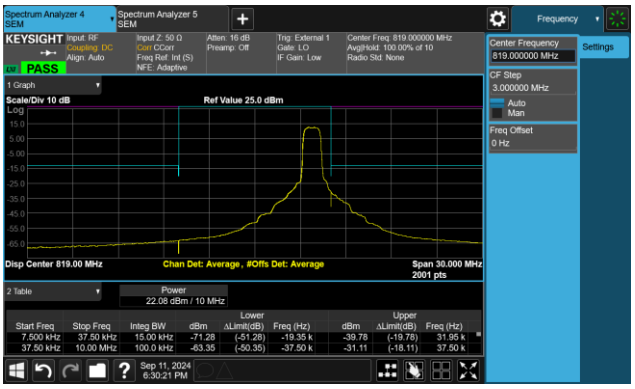
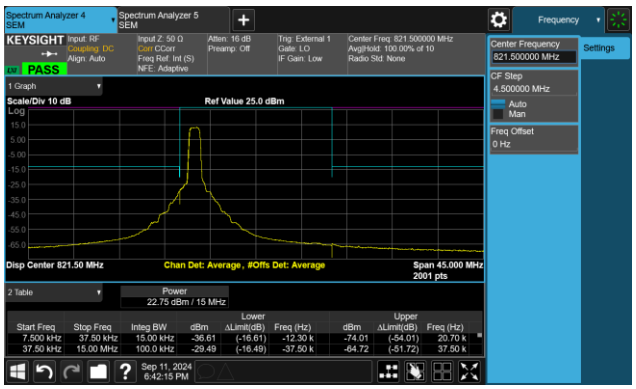
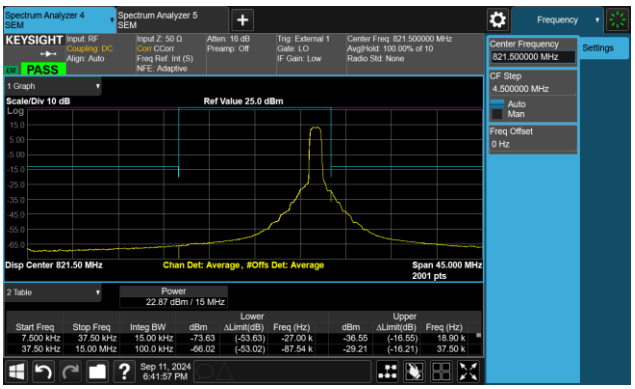
A.4 Conducted Band-Edge Test Result

Test Site	WZ-SR6	Test Engineer	Lucas Wang
Test Date	2024-09-11	Test Band	Band 26

1.4MHz Channel Bandwidth - 1RB	
Lower Band Edge	Upper Band Edge
	
3MHz Channel Bandwidth - 1RB	
Lower Band Edge	Upper Band Edge
	
5MHz Channel Bandwidth - 1RB	
Lower Band Edge	Upper Band Edge
	

10MHz Channel Bandwidth - 1RB	
Lower Band Edge	Upper Band Edge
	
15MHz Channel Bandwidth - 1RB	
Lower Band Edge	Upper Band Edge
	

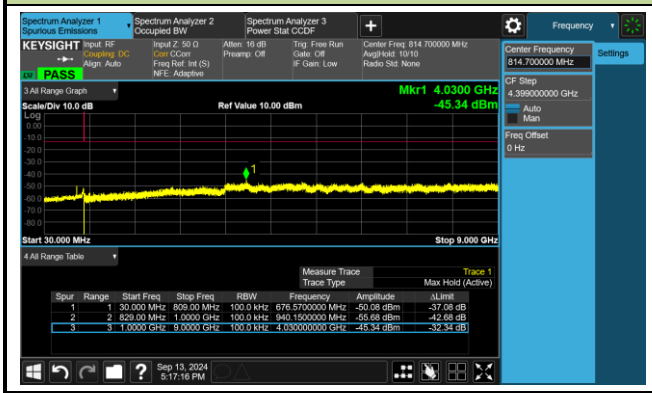
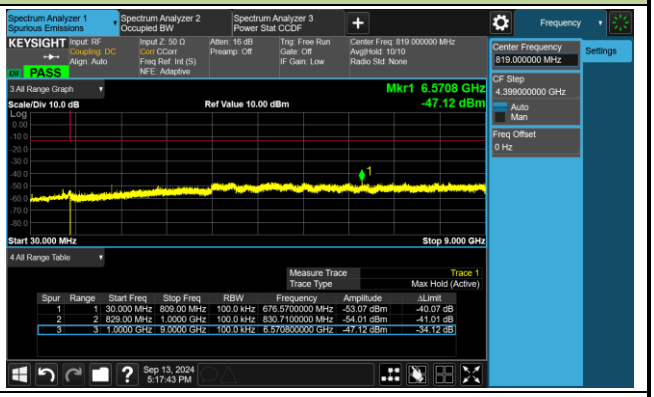
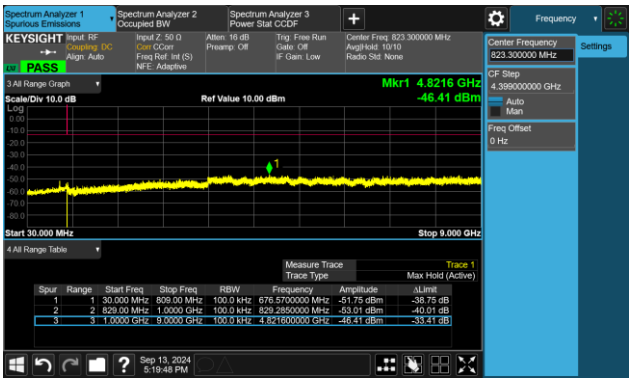
1.4MHz Channel Bandwidth - Full RB	
Lower Band Edge	Upper Band Edge
	
3MHz Channel Bandwidth - Full RB	
Lower Band Edge	Upper Band Edge
	
5MHz Channel Bandwidth - Full RB	
Lower Band Edge	Upper Band Edge
	

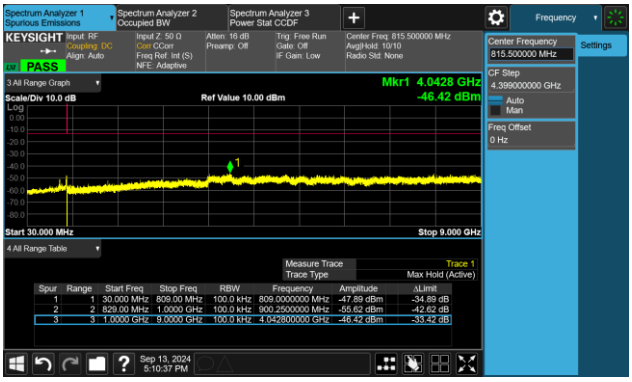
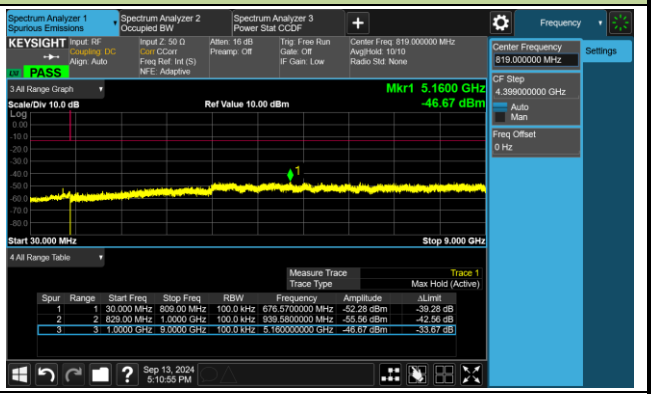
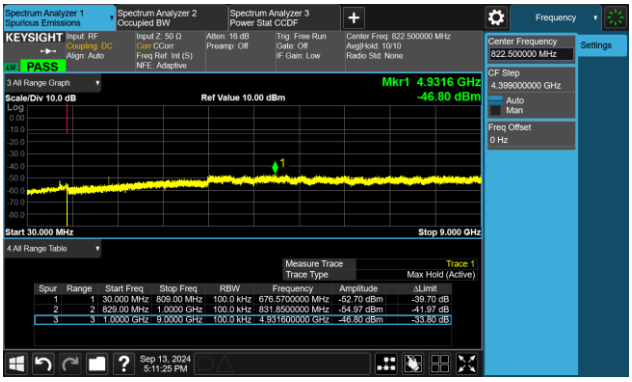
10MHz Channel Bandwidth - Full RB	
Lower Band Edge	Upper Band Edge
	
15MHz Channel Bandwidth - Full RB	
Lower Band Edge	Upper Band Edge
	

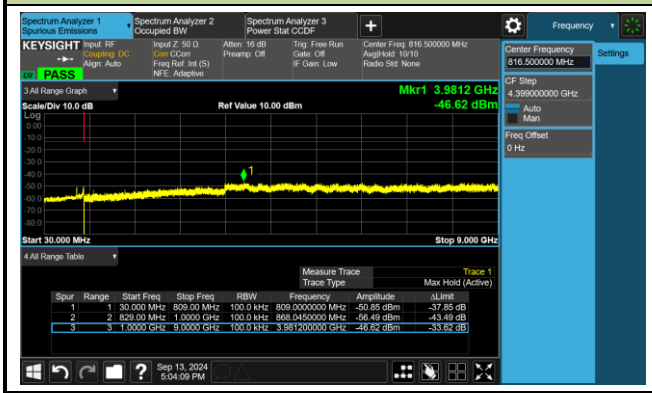
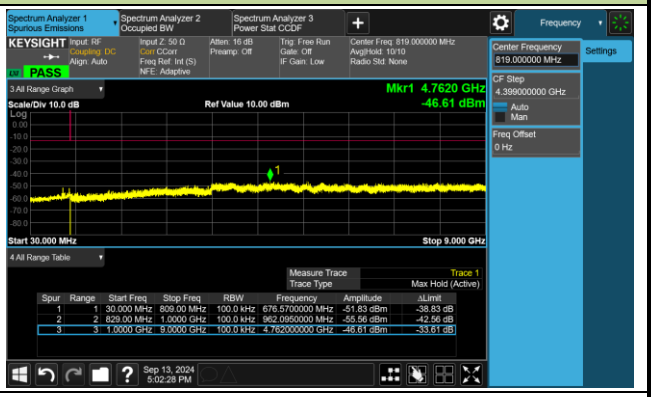
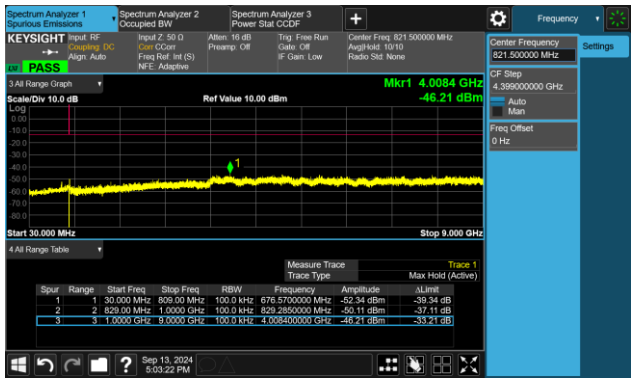
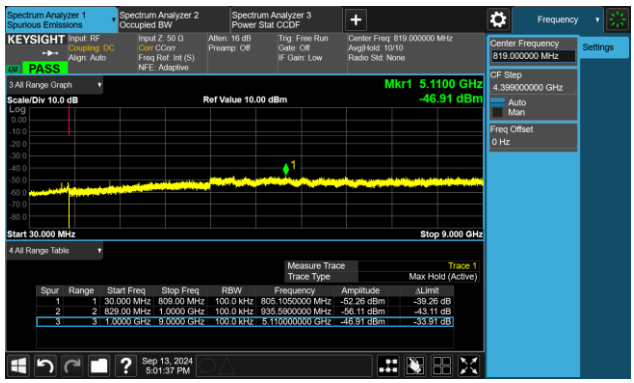
A.5 Conducted Spurious Emissions Test Result

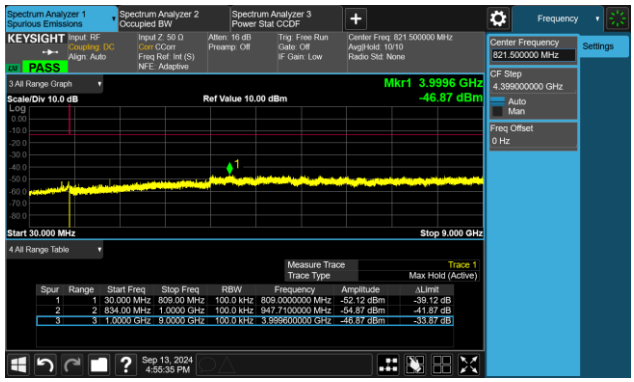
Test Site	WZ-SR6	Test Engineer	Lucas Wang
Test Date	2024-09-13 ~ 2024-09-26	Test Band	Band 26

Channel Bandwidth (MHz)	Frequency (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm)	Limit (dBm)	Result
1.4	814.7	30 ~ 9000	-45.34	≤ -13.00	Pass
1.4	819.0	30 ~ 9000	-47.12	≤ -13.00	Pass
1.4	823.3	30 ~ 9000	-46.41	≤ -13.00	Pass
3	815.5	30 ~ 9000	-46.42	≤ -13.00	Pass
3	819.0	30 ~ 9000	-46.67	≤ -13.00	Pass
3	822.5	30 ~ 9000	-46.80	≤ -13.00	Pass
5	816.5	30 ~ 9000	-46.62	≤ -13.00	Pass
5	819.0	30 ~ 9000	-46.61	≤ -13.00	Pass
5	821.5	30 ~ 9000	-46.21	≤ -13.00	Pass
10	819.0	30 ~ 9000	-46.91	≤ -13.00	Pass
15	821.5	30 ~ 9000	-46.87	≤ -13.00	Pass
Note: The amplitude of Conducted Spurious emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.					

1.4MHz Channel Bandwidth	
Low Channel	Middle Channel
	
High Channel	
	

3MHz Channel Bandwidth	
Low Channel	Middle Channel
	
High Channel	
	

5MHz Channel Bandwidth	
Low Channel	Middle Channel
	
High Channel	
	
10MHz Channel Bandwidth	
Middle Channel	
	

15MHz Channel Bandwidth	
Middle Channel	
	

A.6 Radiated Spurious Emissions Test Result

Test Site	SIP-AC3	Test Engineer	Mero Zhou
Test Date	2024-09-18 ~ 2024-09-23	Test Band	Band 26

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
33.527	21.4	16.4	37.8	82.3	-44.5	Quasi-peak	Horizontal
134.985	18.9	16.3	35.2	82.3	-47.1	Quasi-peak	Horizontal
33.527	33.8	16.4	50.2	82.3	-32.1	Quasi-peak	Vertical
46.765	22.4	17.4	39.8	82.3	-42.5	Quasi-peak	Vertical
4985.200	52.1	-5.4	46.7	82.3	-35.6	Peak	Horizontal
9835.300	49.2	0.8	50.0	82.3	-32.3	Peak	Horizontal
2442.700	59.1	-12.6	46.5	82.3	-35.8	Peak	Vertical
9829.000	48.7	0.8	49.5	82.3	-32.8	Peak	Vertical
Middle Channel							
33.527	18.5	16.4	34.9	82.3	-47.4	Quasi-peak	Horizontal
135.887	17.4	16.4	33.8	82.3	-48.5	Quasi-peak	Horizontal
33.527	33.6	16.4	50.0	82.3	-32.3	Quasi-peak	Vertical
68.800	23.4	15.5	38.9	82.3	-43.4	Quasi-peak	Vertical
4721.500	51.9	-6.2	45.7	82.3	-36.6	Peak	Horizontal
9838.000	48.3	0.8	49.1	82.3	-33.2	Peak	Horizontal
2455.300	61.9	-12.7	49.2	82.3	-33.1	Peak	Vertical
9847.900	48.9	0.7	49.6	82.3	-32.7	Peak	Vertical
High Channel							
33.515	20.2	16.4	36.6	82.3	-45.7	Quasi-peak	Horizontal
136.747	16.5	16.4	32.9	82.3	-49.4	Quasi-peak	Horizontal
33.527	32.8	16.4	49.2	82.3	-33.1	Quasi-peak	Vertical
68.703	24.5	15.5	40.0	82.3	-42.3	Quasi-peak	Vertical
5046.400	51.3	-5.4	45.9	82.3	-36.4	Peak	Horizontal
9773.200	48.4	0.8	49.2	82.3	-33.1	Peak	Horizontal
2468.800	64.2	-12.8	51.4	82.3	-30.9	Peak	Vertical
9915.400	49.4	-0.2	49.2	82.3	-33.1	Peak	Vertical

Note1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note2: The peak-detection value will always be equal to or greater than average-detection value. In a result, the peak-detection value measured by spectrum analyzer shall represent the worst-case results.

Note 3: The amplitude of Radiated transmitter spurious emissions (Frequency range from 9kHz to 30MHz) is

that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Appendix B - Test Setup Photograph

Refer to “2406RSU025-UT” file.

Appendix C - EUT Photograph

Refer to “2406RSU025-UE” file.

The End