FCC Test Report
(Part 90 – 5G NR n14/n26)

Report No.:	RFBFLF-WTW-P21010278-17
FCC ID:	MSQI007D
Test Model:	ASUS_I007D
Received Date:	Jan. 04, 2021
Test Date:	Jan. 25 ~ Apr. 09, 2021
Issued Date:	Apr. 09, 2021
Applicant:	ASUSTeK COMPUTER INC.
Address:	1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RFBFLF-WTW-P21010278-17	Original release	Apr. 09, 2021

1 Certificate of Conformity

Product:	EXP21 Smartphone
Brand:	ASUS
Test Model:	ASUS_I007D
Sample Status:	Engineering sample
Applicant:	ASUSTeK COMPUTER INC.
Test Date:	Jan. 25 ~ Apr. 09, 2021
Standards:	FCC Part 90, Subpart I, R, S

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Apr. 09, 2021

Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Apr. 09, 2021

Bruce Chen / Senior Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 90 & Part 2				
FCC Clause		Test Item	Result	Remarks
LTE B14	LTE B26			
2.1046 90.542 (a)(7)	2.1046 90.635 (b)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1047	2.1047	Modulation Characteristics	Pass	Meet the requirement of limit.
2.1055 90.539 (e)	2.1055 90.213	Frequency Stability	Pass	Meet the requirement of limit.
2.1049	2.1049 90.209	Occupied Bandwidth	Pass	Meet the requirement of limit.
90.210 (n)	2.1051 90.691	Emission Masks	Pass	Meet the requirement of limit.
2.1053 90.543 (e)(2)(3)	-	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 90.543 (e)(3)	2.1051 90.691	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 90.543 (e)(f)	2.1053 90.691	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -16.58dB at 1591.00MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 16, 2020	Apr. 15, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 12, 2020	Jun. 11, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSW43	101866	Dec. 14, 2020	Dec. 13, 2021
MXG Vector signal generator Agilent	N5182B	MY53050430	Nov. 25, 2020	Nov. 24, 2021
5G Wireless Test Platforms Keysight	E7515B	MY60102114	May 28, 2020	May 27, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Nov. 06, 2020	Nov. 05, 2021
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 22, 2020	Nov. 21, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Nov. 06, 2020	Nov. 05, 2021
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 22, 2020	Nov. 21, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Jun. 08, 2020	Jun. 07, 2021
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 18, 2020	Feb. 17, 2021
			Feb. 17, 2021	Feb. 16, 2022
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 16, 2021	Jan. 15, 2022
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	Jan. 16, 2021	Jan. 15, 2022
RF signal cable Woken	8D-FB	Cable-CH9-01	Jun. 08, 2020	Jun. 07, 2021
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Standard Temperature And Humidity Chamber GIANT FORCE	GTH-120-40-CP-AR	MAA1306-019	Sep. 10, 2020	Sep. 09, 2021

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
True RMS Clamp Meter Fluke	325	31130711WS	Jun. 06, 2020	Jun. 05, 2021
DC power supply Keysight	U8002A	MY56330015	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.

3 General Information

3.1 General Description of EUT

Product	EXP21 Smartphone					
Brand	ASUS					
Test Model	ASUS_I007D					
Sample Status	Engineering sample					
Power Supply Rating	7.74 Vdc (Battery) 5 Vdc / 9 Vdc / 12 Vdc / 15Vdc / 20Vdc (Adapter)					
Modulation Type	$\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM					
Waveform Type	CP-OFDM, DFT-s-OFDM					
Operating Frequency	n14 (Channel Bandwidth 5MHz)	790.5MHz ~ 795.5MHz				
	n14 (Channel Bandwidth 10MHz)	793.0MHz				
	n26 (Channel Bandwidth 5MHz)	816.5MHz ~ 821.5MHz				
	n26 (Channel Bandwidth 10MHz)	819.0MHz				
Max. ERP Power		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
	n14 (Channel Bandwidth 5MHz)	65.917mW (18.19dBm)	66.834mW (18.25dBm)	49.091mW (16.91dBm)	35.645mW (15.52dBm)	21.627mW (13.35dBm)
	n14 (Channel Bandwidth 10MHz)	66.681mW (18.24dBm)	67.453mW (18.29dBm)	49.659mW (16.96dBm)	35.810mW (15.54dBm)	22.182mW (13.46dBm)
	n26 (Channel Bandwidth 5MHz)	119.399mW (20.77dBm)	119.399mW (20.77dBm)	92.045mW (19.64dBm)	65.615mW (18.17dBm)	40.458mW (16.07dBm)
	n26 (Channel Bandwidth 10MHz)	118.577mW (20.74dBm)	76.033mW (18.81dBm)	92.470mW (19.66dBm)	65.917mW (18.19dBm)	40.644mW (16.09dBm)
Emission Designator		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
	n14 (Channel Bandwidth 5MHz)	4M48G7D	4M47G7D	4M47D7W	4M47D7W	4M47D7W
	n14 (Channel Bandwidth 10MHz)	9M18G7D	9M28G7D	9M29D7W	9M28D7W	9M29D7W
	n26 (Channel Bandwidth 5MHz)	4M48G7D	4M47G7D	4M47D7W	4M47D7W	4M47D7W
	n26 (Channel Bandwidth 10MHz)	9M21G7D	9M28G7D	9M29D7W	9M28D7W	9M29D7W
Antenna Type	Refer to Note as below					
Antenna Connector	Refer to Note as below					
Accessory Device	Refer to Note as below					
Cable Supplied	Refer to Note as below					

Note:

1. The EUT contains following accessory devices.

Product	Brand	Model	Description
Battery	SCUD	C21P2002	Rating: 7.74Vdc, 15.2Wh
Adapter	AOHAI	A320Q-200325C-US	I/P: 100-240Vac, 50/60Hz,1.5A O/P: 5Vdc, 3A; 9Vdc, 3A; 12Vdc, 3A; 15Vdc, 3A; 20Vdc, 3.25A
Type A to Type C USB Cable	Luxshare	LA9U2026-CS-R	0.5m
Type C to Type C Cable	Luxshare	LA9UC006-CS-R	1.2m
Bluetooth Earphone	Bang & Olufsen	EQ Earbud R	FCC ID: TTUBEOPLAYEQR IC: 3775B-BEOPLAYEQR
		EQ Earbud L	FCC ID: TTUBEOPLAYEQL IC: 3775B-BEOPLAYEQL
Bluetooth Earphone Charging Case	Bang & Olufsen	EQ Charging case	I/P: 5Vdc/500mA O/P: 5Vdc/ R170mA; L170mA

2. The following antennas were provided to the EUT.

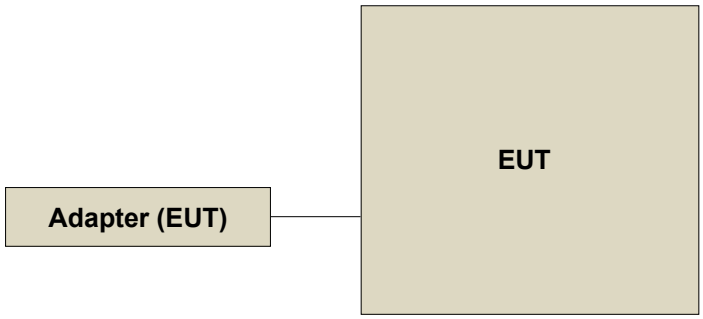
Ant. No.	Brand	Model	Ant. Type	Connecter	Frequency Range
Ant 0	ASUS	ZS675KW	PIFA	LCP+Ipex	610-960MHz, 1710-2690MHz
Ant 1	ASUS	ZS675KW	PIFA	LCP+Ipex	1427-1510MHz, 1710-2690MHz
Ant 2	ASUS	ZS675KW	PIFA	LCP+Ipex	610-960MHz, 1427-1510MHz, 1710-2690MHz
Ant 3	INPAQ	ZS675KW	PIFA	Ipex	1575-1610MHz, 2400-2500MHz, 5150-5850MHz, 5925-7125MHz
Ant 4	INPAQ	ZS675KW	PIFA	Ipex	1176±10MHz, 2400-2500MHz, 5150-5850MHz, 5925-7125MHz
Ant 5	INPAQ	ZS675KW	PIFA	LCP+Ipex	3300-4000MHz, 4400-5000MHz
Ant 6	INPAQ	ZS675KW	PIFA	Ipex	1427-1510MHz, 2400-2500MHz, 5150-5850MHz, 5925-7125MHz
Ant 7	INPAQ	ZS675KW	PIFA	LCP+Ipex	3300-4000MHz, 4400-5000MHz
Ant 8	ASUS	ZS675KW	PIFA	LCP+Ipex	1427-1510MHz, 1710-2690MHz
Ant 9	ASUS	ZS675KW	PIFA	LCP+Ipex	1710-2690MHz
Ant 10	INPAQ	ZS675KW	PIFA	Ipex	3300-4000MHz, 4400-5000MHz
Ant 11	INPAQ	ZS675KW	PIFA	Ipex	3300-4000MHz, 4400-5000MHz

2G / 3G Band													
Band	Freq. Range (MHz)	Gain (dBi)											
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Ant. 4	Ant. 5	Ant. 6	Ant. 7	Ant. 8	Ant. 9	Ant. 10	Ant. 11
GSM-850	824 ~ 849	-1.891		-4.526									
GSM-1900	1850 ~ 1910		-1.887	-1.394						-2.89579			
WCDMA B2	1850 ~ 1910		-1.887	-1.394						-2.89579			
WCDMA B4	1710 ~ 1755		-2.884	-3.228						-3.13552			
WCDMA B5	824 ~ 849	-1.891		-4.526									
CDMA BC0	815 ~ 849	-1.891		-4.526									
CDMA BC1	1850 ~ 1910		-1.887	-1.394						-2.89579			
CDMA BC10	806 ~ 901	-1.891		-4.526									

LTE Band												
Band	Freq. Range (MHz)	Gain (dBi)										
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Ant. 4	Ant. 5	Ant. 6	Ant. 7	Ant. 8	Ant. 9	Ant. 10	Ant. 11
LTE B2	1850 ~ 1910		-1.887	-1.394						-2.89579	-1.804		
LTE B4	1710 ~ 1755		-2.884	-3.228						-3.13552	-1.706		
LTE B5	824 ~ 849	-1.891		-4.526									
LTE B7	2500 ~ 2570		0.185	-0.657						-0.50837	-1.117		
LTE B12	698 ~ 716	-2.135		-4.343									
LTE B13	777 ~ 787	-4.37		-8.13									
LTE B14	788 ~ 798	-4.37		-7.931									
LTE B17	704 ~ 716	-2.135		-4.343									
LTE B25	1850 ~ 1915		-1.887	-1.394						-2.89579			
LTE B26	814 ~ 849	-1.891		-4.526									
LTE B30	2305 ~ 2315		-1.326	-2.669						-1.28433			
LTE B66	1710 ~ 1780		-2.884	-2.478						-3.0668	-1.685		
LTE B71	663 ~ 698	-5.741		-7.388									
T-LTE B38	2570 ~ 2620		0.724	-0.912						-0.59557			
T-LTE B40	2300 ~ 2400		-1.326	-2.669						-1.28433			
T-LTE B41	2496 ~ 2690		1.143	-0.657						-0.59557			
T-LTE B42	3400 ~ 3600						0.313		0.5277			-2.493	-0.35195
T-LTE B43	3600 ~ 3800						-0.434		0.5277			-0.477	-0.161
T-LTE B48	3550 ~ 3700						-0.434		0.5277			-0.477	-0.161
5G FR1 Band													
Band	Freq. Range (MHz)	Gain (dBi)										
		Ant. 0	Ant. 1	Ant. 2	Ant. 3	Ant. 4	Ant. 5	Ant. 6	Ant. 7	Ant. 8	Ant. 9	Ant. 10	Ant. 11
n2	1850 ~ 1910		-1.887	-1.394						-2.89579	-1.804		
n5	824 ~ 849	-1.891		-4.526									
n7	2500 ~ 2570		0.185	-0.657						-0.50837	-1.117		
n12	699 ~ 716	-2.135		-4.343									
n13	777 ~ 787	-4.37		-8.13									
n14	788 ~ 798	-4.37		-7.931									
n25	1850 ~ 1915		-1.887	-1.394						-2.89579	-1.627		
n26	814 ~ 849	-1.891		-4.526									
n30	2305 ~ 2315		-1.326	-2.669						-1.28433			
n38	2570 ~ 2620		0.724	-0.912						-0.59557	-1.3		
n41	2496 ~ 2690		1.143	-0.657						-0.59557	-0.076		
n66	1710 ~ 1780		-2.884	-2.478						-3.0668	-1.685		
n71	663 ~ 698	-5.741		-7.388									
n77	3300 ~ 4200						0.313		0.5277			2.017	0.19902
n78	3300 ~ 3800						0.313		0.5277			2.017	-0.161

* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.2 Configuration of System under Test



Remote site

3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	5G Wireless Test Platforms	Keysight	E7515B	MY58300759	NA	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned as the table below. Following channel(s) was (were) selected for the final test as listed below:

Band	Radiated Emission
n14	Y-plane
n26	Y-plane

n14

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	158100 to 159100	158100 (790.5MHz), 158600 (793.0MHz), 159100 (795.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 1 RB Offset 1 RB / 13 RB Offset 1 RB / 23 RB Offset 12 RB / 0 RB Offset 12 RB / 7 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		158600	158600 (793.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 1 RB Offset 1 RB / 26 RB Offset 1 RB / 50 RB Offset 25 RB / 0 RB Offset 25 RB / 14 RB Offset 25 RB / 27 RB Offset 50 RB / 0 RB Offset
-	Modulation characteristics	158600	158600 (793.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	52 RB / 0 RB Offset
-	Frequency Stability	158100 to 159100	158100 (790.5MHz), 159100 (795.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		158600	158600 (793.0MHz)	10MHz	QPSK	52 RB / 0 RB Offset
-	Occupied Bandwidth	158100 to 159100	158100 (790.5MHz), 158600 (793.0MHz), 159100 (795.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	25 RB / 0 RB Offset
		158600	158600 (793.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	52 RB / 0 RB Offset
-	Emission Mask	158100 to 159100	158100 (790.5MHz), 158600 (793.0MHz), 159100 (795.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		158600	158600 (793.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset 1 RB / 51 RB Offset 52 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	Conducted Emission	158100 to 159100	158100 (790.5MHz), 158600 (793.0MHz), 159100 (795.5MHz)	5MHz	QPSK	1 RB / 1 RB Offset
		158600	158600 (793.0MHz)	10MHz	QPSK	1 RB / 1 RB Offset
-	Radiated Emission Below 1GHz	158100 to 159100	159100 (795.5MHz)	5MHz	QPSK	1 RB / 1 RB Offset
-	Radiated Emission Above 1GHz	158100 to 159100	158100 (790.5MHz), 158600 (793.0MHz), 159100 (795.5MHz)	5MHz	QPSK	1 RB / 1 RB Offset
		158600	158600 (793.0MHz)	10MHz	QPSK	1 RB / 1 RB Offset

Note:

1. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
2. For radiated emission above 1GHz, according to 3GPP 38.521-1 Section 6.5.3.1.4, choose the lowest and highest channel bandwidth for final test.
3. Only output power, modulation characteristics, occupied bandwidth items had been tested under $\pi/2$ BPSK, QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under worse mode according to the maximum output power.

n26

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	163300 to 164300	163300 (816.5MHz), 163800 (819.0MHz), 164300 (821.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 1 RB Offset 1 RB / 13 RB Offset 1 RB / 23 RB Offset 12 RB / 0 RB Offset 12 RB / 7 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		163800	163800 (819.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	1 RB / 1 RB Offset 1 RB / 26 RB Offset 1 RB / 50 RB Offset 25 RB / 0 RB Offset 25 RB / 14 RB Offset 25 RB / 27 RB Offset 50 RB / 0 RB Offset
-	Modulation characteristics	163800	163800 (819.0MHz)	20MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	52 RB / 0 RB Offset
-	Frequency Stability	163300 to 164300	163300 (816.5MHz), 164300 (821.5MHz)	5MHz	$\pi/2$ BPSK	25 RB / 0 RB Offset
		163800	163800 (819.0MHz)	10MHz	$\pi/2$ BPSK	52 RB / 0 RB Offset
-	Occupied Bandwidth	163300 to 164300	163300 (816.5MHz), 163800 (819.0MHz), 164300 (821.5MHz)	5MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	25 RB / 0 RB Offset
		163800	163800 (819.0MHz)	10MHz	$\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM	52 RB / 0 RB Offset
-	Emission Mask	163300 to 164300	163300 (816.5MHz), 164300 (821.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		163800	163800 (819.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 0 RB Offset 1 RB / 51 RB Offset 52 RB / 0 RB Offset
-	Conducted Emission	163300 to 164300	163300 (816.5MHz), 163800 (819.0MHz), 164300 (821.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 1 RB Offset
		163800	163800 (819.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 1 RB Offset

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	Radiated Emission Below 1GHz	163300 to 164300	163800 (819.0MHz)	5MHz	$\pi/2$ BPSK	1 RB / 1 RB Offset
-	Radiated Emission Above 1GHz	163300 to 164300	163300 (816.5MHz), 163800 (819.0MHz), 164300 (821.5MHz)	5MHz	$\pi/2$ BPSK	1 RB / 1 RB Offset
		163800	163800 (819.0MHz)	10MHz	$\pi/2$ BPSK	1 RB / 1 RB Offset

Note:
1. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
2. For radiated emission above 1GHz, according to 3GPP 38.521-1 Section 6.5.3.1.4, choose the lowest and highest channel bandwidth for final test.
3. Only output power, modulation characteristics, occupied bandwidth items had been tested under $\pi/2$ BPSK, QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under worse mode according to the maximum output power.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP	25deg. C, 60%RH	120Vac, 60Hz	James Yang
Modulation characteristics	25deg. C, 60%RH	120Vac, 60Hz	James Yang
Frequency Stability	25deg. C, 60%RH	7.74Vdc	James Yang
Occupied Bandwidth	25deg. C, 60%RH	120Vac, 60Hz	James Yang
Emission Mask	25deg. C, 60%RH	120Vac, 60Hz	James Yang
Conducted Emission	25deg. C, 60%RH	120Vac, 60Hz	James Yang
Radiated Emission	23deg. C, 67%RH 25deg. C, 65%RH	120Vac, 60Hz	Adair Peng Noah Chang

3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test Standard:

FCC 47 CFR Part 2
FCC 47 CFR Part 90
ANSI/TIA/EIA-603-E 2016
ANSI 63.26-2015

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01
KDB 971168 D02 Misc Rev Approv License Devices v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

For n14:
Control stations and mobile stations transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 30 watts ERP. Portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.

For n26:
The output power shall be according to the specific rule Part 90.635 that “Mobile station are limited to 100 watts e.r.p”.

4.1.2 Test Procedures

Conducted Power Measurement:

The EUT was set up for the maximum power with 5GNR link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

Maximum EIRP / ERP

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

$EIRP = P_{Meas} + G_T$

$ERP = P_{Meas} + G_T - 2.15$

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)

4.1.3 Test Setup

Conducted Power Measurement:

4.1.4 Test Results

Conducted Output Power (dBm)

NR Band 14						
BW	MCS Index	RB Size	RB Offset	Mid		
		Channel		158600		
		Frequency (MHz)		793		
10M	$\pi/2$ BPSK	1	1	24.76		
		1	26	24.65		
		1	50	24.61		
		25	0	24.05		
		25	14	24.70		
		25	27	23.86		
		50	0	23.98		
10M	QPSK	1	1	24.81		
		1	26	24.70		
		1	50	24.66		
		25	0	23.59		
		25	14	24.71		
		25	27	23.43		
		50	0	23.54		
10M	16QAM	1	1	23.48		
10M	64QAM	1	1	22.06		
10M	256QAM	1	1	19.98		
BW	MCS Index	Channel		158100	158600	159100
		Frequency (MHz)		790.5	793	795.5
5M	$\pi/2$ BPSK	1	1	24.60	24.71	24.66
		1	13	24.57	24.58	24.52
		1	23	24.57	24.57	24.47
		12	0	23.96	23.87	23.88
		12	7	24.64	24.49	24.57
		12	13	23.74	23.67	23.58
		25	0	23.95	23.87	23.83
5M	QPSK	1	1	24.72	24.77	24.61
		1	13	24.72	24.75	24.58
		1	23	24.59	24.43	24.50
		12	0	23.56	23.43	23.38
		12	7	24.59	24.50	24.51
		12	13	23.38	23.39	23.31
		25	0	23.46	23.36	23.27
5M	16QAM	1	1	23.40	23.43	23.36
5M	64QAM	1	1	22.04	21.84	21.94
5M	256QAM	1	1	19.87	19.84	19.84

NR Band 26						
BW	MCS Index	RB Size	RB Offset	Mid		
		Channel		163800		
		Frequency (MHz)		819		
10M	$\pi/2$ BPSK	1	1	24.78		
		1	26	24.77		
		1	50	24.73		
		25	0	24.31		
		25	14	24.74		
		25	27	24.27		
		50	0	24.33		
10M	QPSK	1	1	22.84		
		1	26	22.85		
		1	50	22.85		
		25	0	21.99		
		25	14	21.88		
		25	27	21.91		
		50	0	21.89		
10M	16QAM	1	1	23.70		
10M	64QAM	1	1	22.23		
10M	256QAM	1	1	20.13		
BW	MCS Index	Channel		163300	163800	164300
		Frequency (MHz)		816.5	819	821.5
5M	$\pi/2$ BPSK	1	1	24.71	24.78	24.73
		1	13	24.73	24.77	24.70
		1	23	24.64	24.73	24.70
		12	0	24.28	24.31	23.81
		12	7	24.70	24.74	24.81
		12	13	24.24	24.27	23.74
		25	0	24.35	24.33	23.83
5M	QPSK	1	1	24.75	24.78	24.73
		1	13	24.79	24.77	24.70
		1	23	24.78	24.73	24.70
		12	0	23.87	24.31	23.81
		12	7	24.72	24.74	24.81
		12	13	23.77	24.27	23.74
		25	0	23.87	24.33	23.83
5M	16QAM	1	1	23.68	23.61	23.59
5M	64QAM	1	1	22.21	22.18	22.14
5M	256QAM	1	1	20.11	20.07	20.01

ERP Power (dBm)

NR Band 14						
BW	MCS Index	RB Size	RB Offset	Mid		
		Channel		158600		
		Frequency (MHz)		793		
10M	$\pi/2$ BPSK	1	1	18.24		
		1	26	18.13		
		1	50	18.09		
		25	0	17.53		
		25	14	18.18		
		25	27	17.34		
		50	0	17.46		
10M	QPSK	1	1	**18.29**		
		1	26	18.18		
		1	50	18.14		
		25	0	17.07		
		25	14	18.19		
		25	27	16.91		
		50	0	17.02		
10M	16QAM	1	1	16.96		
10M	64QAM	1	1	15.54		
10M	256QAM	1	1	13.46		
BW	MCS Index	Channel		158100	158600	159100
		Frequency (MHz)		790.5	793	795.5
5M	$\pi/2$ BPSK	1	1	18.08	18.19	18.14
		1	13	18.05	18.06	18.00
		1	23	18.05	18.05	17.95
		12	0	17.44	17.35	17.36
		12	7	18.12	17.97	18.05
		12	13	17.22	17.15	17.06
		25	0	17.43	17.35	17.31
5M	QPSK	1	1	18.20	**18.25**	18.09
		1	13	18.20	18.23	18.06
		1	23	18.07	17.91	17.98
		12	0	17.04	16.91	16.86
		12	7	18.07	17.98	17.99
		12	13	16.86	16.87	16.79
		25	0	16.94	16.84	16.75
5M	16QAM	1	1	16.88	16.91	16.84
5M	64QAM	1	1	15.52	15.32	15.42
5M	256QAM	1	1	13.35	13.32	13.32

NR Band 26						
BW	MCS Index	RB Size	RB Offset	Mid		
		Channel		163800		
		Frequency (MHz)		819		
10M	$\pi/2$ BPSK	1	1	20.74		
		1	26	20.73		
		1	50	20.69		
		25	0	20.27		
		25	14	20.70		
		25	27	20.23		
		50	0	20.29		
10M	QPSK	1	1	18.80		
		1	26	18.81		
		1	50	18.81		
		25	0	17.95		
		25	14	17.84		
		25	27	17.87		
		50	0	17.85		
10M	16QAM	1	1	19.66		
10M	64QAM	1	1	18.19		
10M	256QAM	1	1	16.09		
BW	MCS Index	Channel		163300	163800	164300
		Frequency (MHz)		816.5	819	821.5
5M	$\pi/2$ BPSK	1	1	20.67	20.74	20.69
		1	13	20.69	20.73	20.66
		1	23	20.60	20.69	20.66
		12	0	20.24	20.27	19.77
		12	7	20.66	20.70	20.77
		12	13	20.20	20.23	19.70
		25	0	20.31	20.29	19.79
5M	QPSK	1	1	20.71	20.74	20.69
		1	13	20.75	20.73	20.66
		1	23	20.74	20.69	20.66
		12	0	19.83	20.27	19.77
		12	7	20.68	20.70	20.77
		12	13	19.73	20.23	19.70
		25	0	19.83	20.29	19.79
5M	16QAM	1	1	19.64	19.57	19.55
5M	64QAM	1	1	18.17	18.14	18.10
5M	256QAM	1	1	16.07	16.03	15.97

4.2 Modulation Characteristics Measurement

4.2.1 Limits of Modulation Characteristics

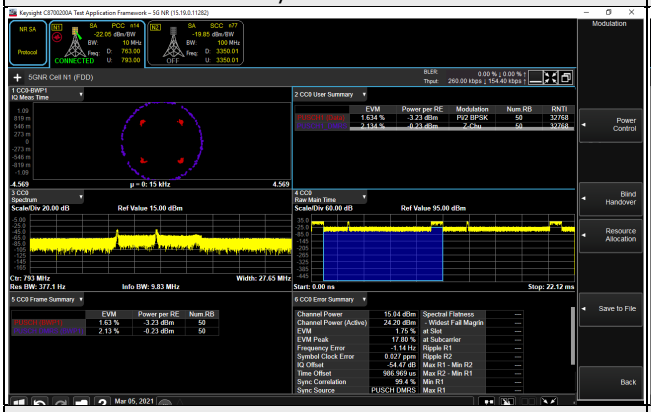
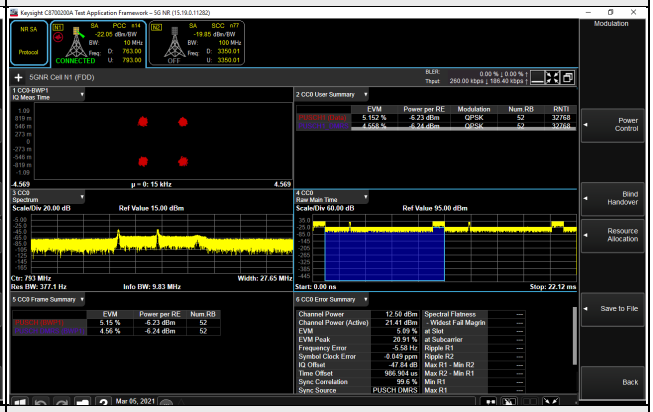
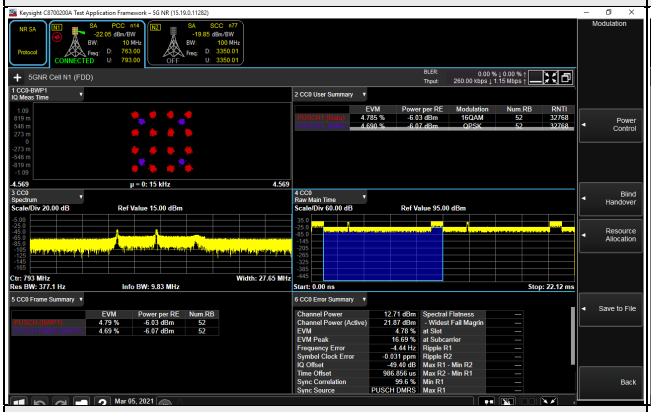
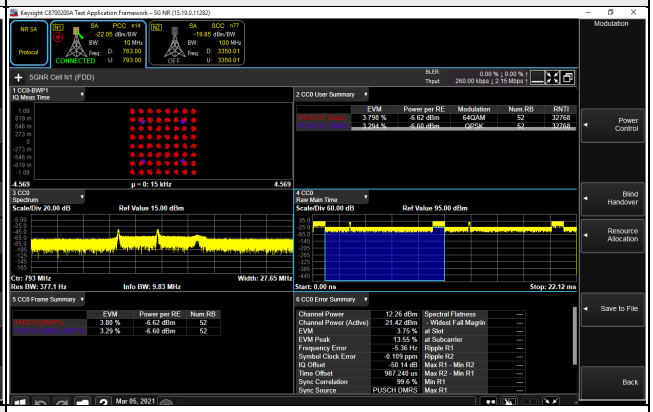
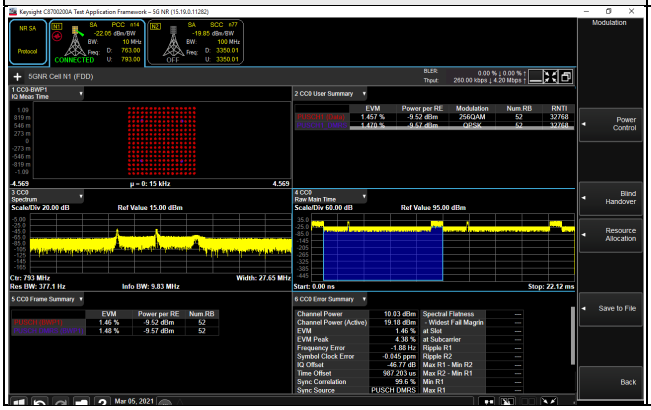
N/A

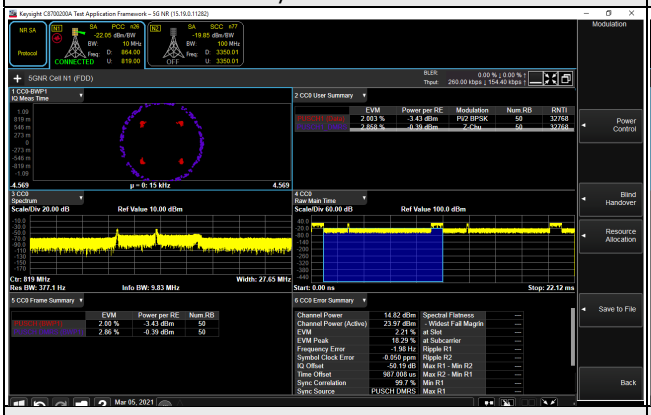
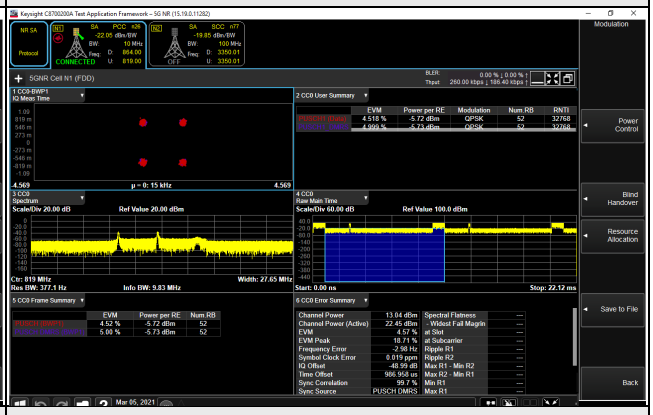
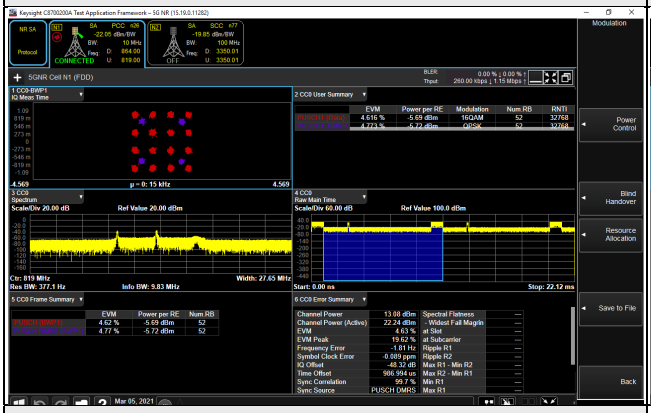
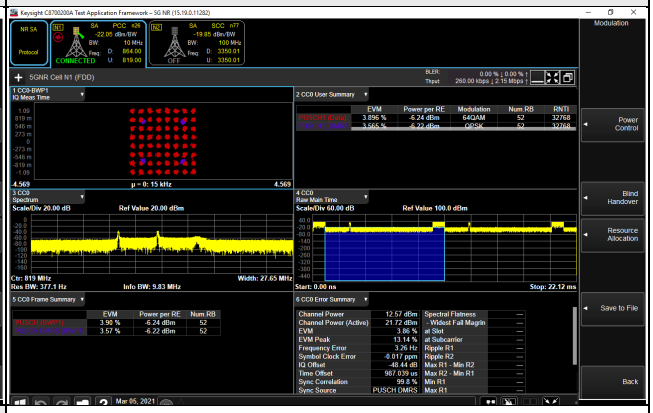
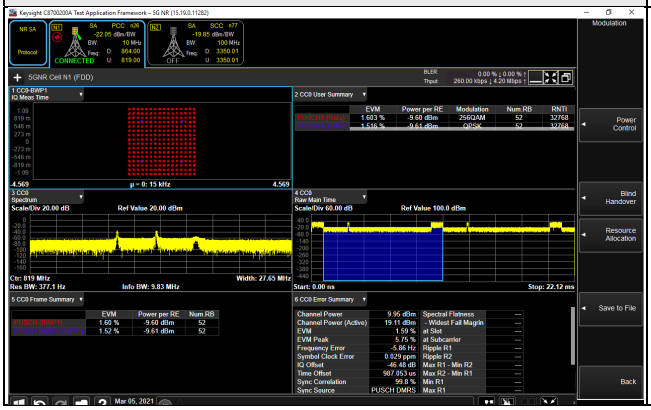
4.2.2 Test Procedure

Connect the EUT to Communication Simulator via the antenna connector, The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

4.2.3 Test Setup

4.2.4 Test Results

n14	
Spectrum Plot of Measurement Value	
Channel: 158600 / Frequency (MHz): 793.0MHz	
$\pi/2$ BPSK	QPSK
	
16QAM	64QAM
	
256QAM	
	

n26	
Spectrum Plot of Measurement Value	
Channel: 163800 / Frequency (MHz): 819.0MHz	
$\pi/2$ BPSK	QPSK
	
16QAM	64QAM
	
256QAM	
	

4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stability Measurement

For n14:
The frequency stability of mobile, portable and control transmitters operating in the wideband segment must be 1.25 parts per million or better when AFC is locked to a base station, and 5 parts per million or better when AFC is not locked.

For n26:
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

4.3.2 Test Procedure

a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5 ℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

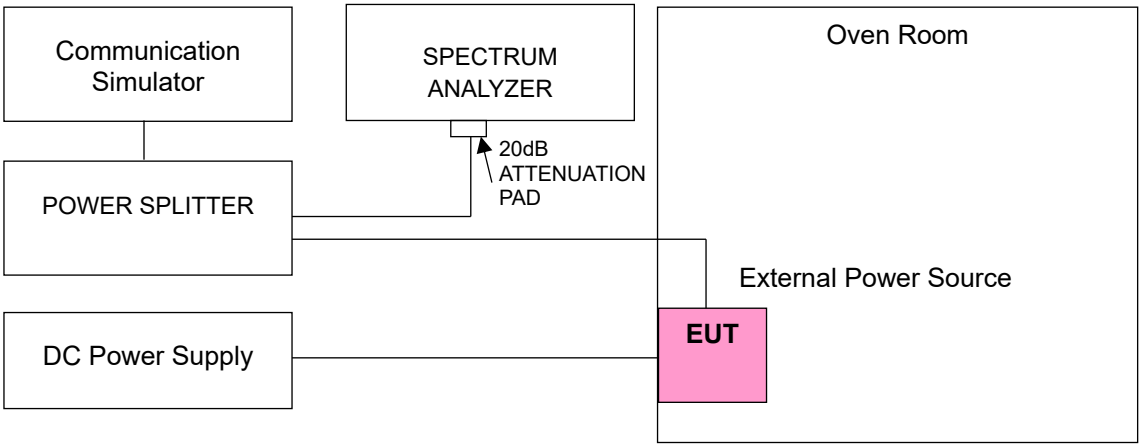
Note: The frequency error was recorded frequency error from the communication simulator.

4.3.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
5G Wireless Test Platforms Keysight	E7515B	MY60102114	May 28, 2020	May 27, 2021
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	Dec. 24, 2020	Dec. 23, 2021
Digital Multimeter Fluke	87-III	70360742	Jun. 23, 2020	Jun. 22, 2021
DC Power Supply Topward	6306A	727263	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.3.4 Test Setup



4.3.5 Test Results

Frequency Error vs. Voltage

Voltage (Vdc)	n14			
	Channel Bandwidth: 5MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
8.90	790.500003	0.004	795.500000	0.002
7.74	790.500002	0.003	795.500000	0.004
6.58	790.500003	0.004	795.500000	0.002

Note: The applicant defined the normal working voltage is from 6.58Vdc to 8.90Vdc.

Frequency Error vs. Temperature

Temp. (℃)	n14			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	790.500001	0.002	795.500000	0.004
-20	790.500004	0.005	795.500000	0.004
-10	790.500003	0.004	795.500000	0.001
0	790.500001	0.002	795.500000	0.004
10	790.499999	-0.002	795.500000	-0.003
20	790.499996	-0.005	795.500000	-0.001
30	790.499997	-0.004	795.500000	-0.001
40	790.499997	-0.004	795.500000	-0.003
50	790.499997	-0.004	795.500000	-0.003

Frequency Error vs. Voltage

Voltage (Vdc)	n14	
	Channel Bandwidth: 10 MHz	
	Frequency (MHz)	Frequency Error (ppm)
8.90	793.000003	0.003
7.74	793.000004	0.004
6.58	793.000001	0.002

Note: The applicant defined the normal working voltage is from 6.58Vdc to 8.90Vdc.

Frequency Error vs. Temperature

Temp. (℃)	n14	
	Channel Bandwidth: 10 MHz	
	Frequency (MHz)	Frequency Error (ppm)
-30	793.000003	0.004
-20	793.000004	0.005
-10	793.000002	0.003
0	793.000004	0.005
10	792.999998	-0.002
20	792.999999	-0.002
30	792.999996	-0.005
40	792.999996	-0.005
50	792.999996	-0.005

Frequency Error vs. Voltage

Voltage (Vdc)	n26			
	Channel Bandwidth: 5MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
8.90	816.500002	0.002	821.500000	0.004
7.74	816.500003	0.004	821.500000	0.004
6.58	816.500003	0.004	821.500000	0.001

Note: The applicant defined the normal working voltage is from 6.58Vdc to 8.90Vdc.

Frequency Error vs. Temperature

Temp. (℃)	n26			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	816.500001	0.001	821.500000	0.004
-20	816.500004	0.004	821.500000	0.005
-10	816.500003	0.004	821.500000	0.003
0	816.500001	0.001	821.500000	0.004
10	816.499997	-0.003	821.500000	-0.003
20	816.499998	-0.003	821.500000	-0.004
30	816.499997	-0.004	821.500000	-0.003
40	816.499998	-0.002	821.500000	-0.001
50	816.499998	-0.003	821.500000	-0.004

Frequency Error vs. Voltage

Voltage (Vdc)	n26	
	Channel Bandwidth: 10 MHz	
	Frequency (MHz)	Frequency Error (ppm)
8.90	819.000001	0.001
7.74	819.000002	0.002
6.58	819.000003	0.003

Note: The applicant defined the normal working voltage is from 6.58Vdc to 8.90Vdc.

Frequency Error vs. Temperature

Temp. (℃)	n26	
	Channel Bandwidth: 10 MHz	
	Frequency (MHz)	Frequency Error (ppm)
-30	819.000001	0.001
-20	819.000003	0.003
-10	819.000004	0.004
0	819.000004	0.005
10	818.999998	-0.002
20	818.999999	-0.002
30	818.999998	-0.002
40	818.999998	-0.002
50	818.999999	-0.002

4.4 Occupied Bandwidth Measurement

4.4.1 Limits of Occupied Bandwidth Measurement

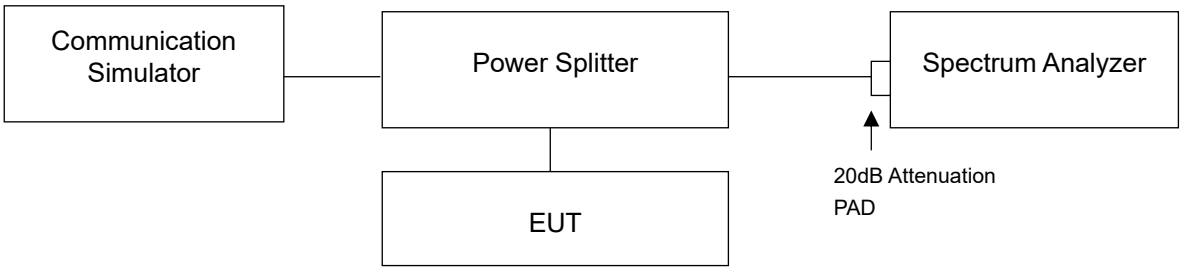
The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.4.2 Test Procedure

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Measurement method, please refer to section 5.4.4 of ANSI C63.26. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

For the 26dBc bandwidth measurement method, please refer to section 5.4.3 of ANSI C63.26.

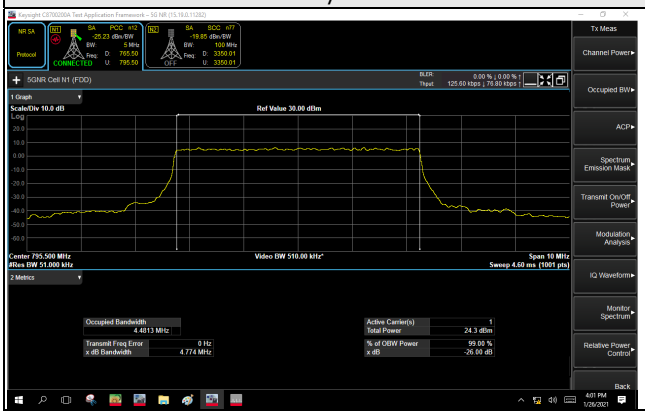
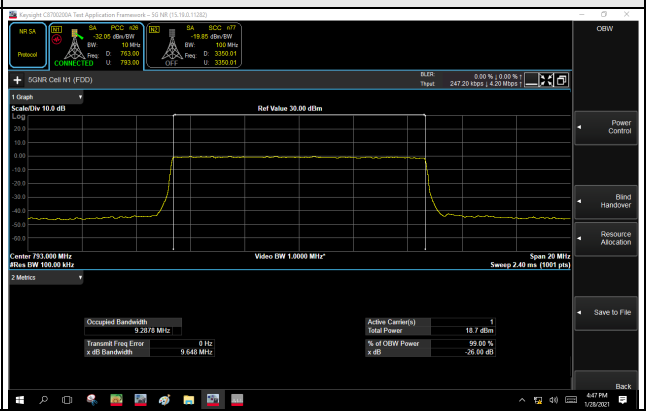
4.4.3 Test Setup



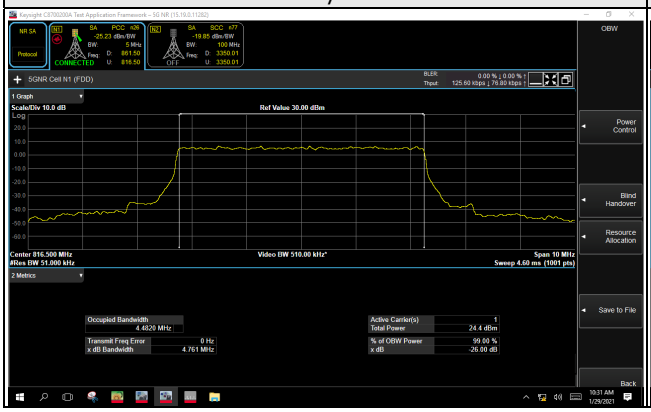
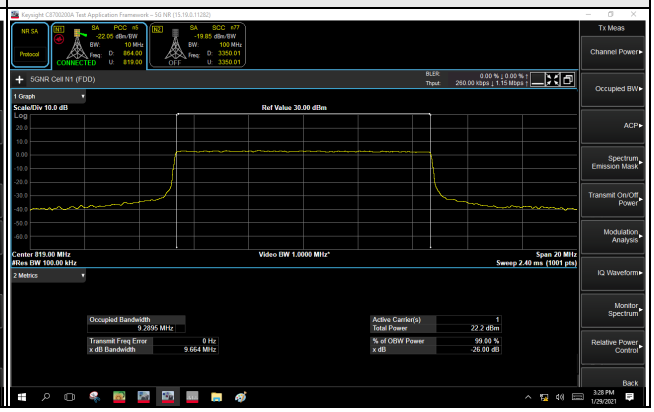
4.4.4 Test Result

Occupied Bandwidth

n14, Channel Bandwidth 5MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
158100	790.5	4.47	4.47	4.47	4.47	4.47
158600	793.0	4.47	4.47	4.47	4.46	4.47
159100	795.5	4.48	4.47	4.47	4.46	4.47
n14, Channel Bandwidth 10MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
158600	793.0	9.18	9.28	9.29	9.28	9.29

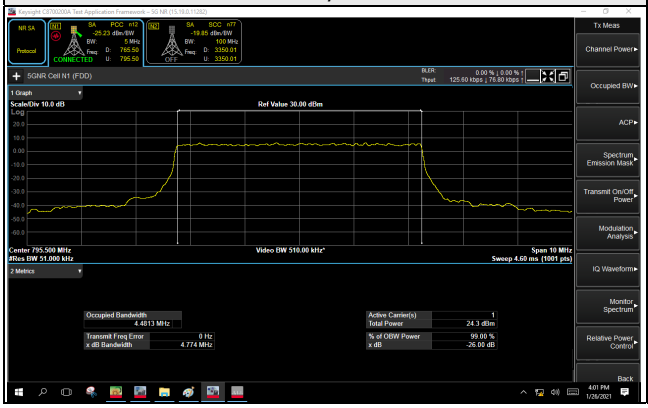
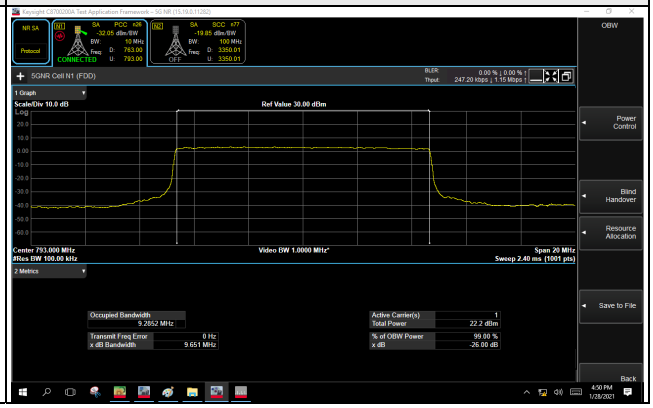
Spectrum Plot of Worst Value	
5MHz / $\pi/2$ BPSK	10MHz / 256QAM
	

n26, Channel Bandwidth 5MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
163300	816.5	4.48	4.47	4.47	4.46	4.47
163800	819.0	4.47	4.47	4.47	4.46	4.47
164300	821.5	4.46	4.47	4.47	4.47	4.47
n26, Channel Bandwidth 10MHz						
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
163800	819.0	9.21	9.28	9.29	9.28	9.29

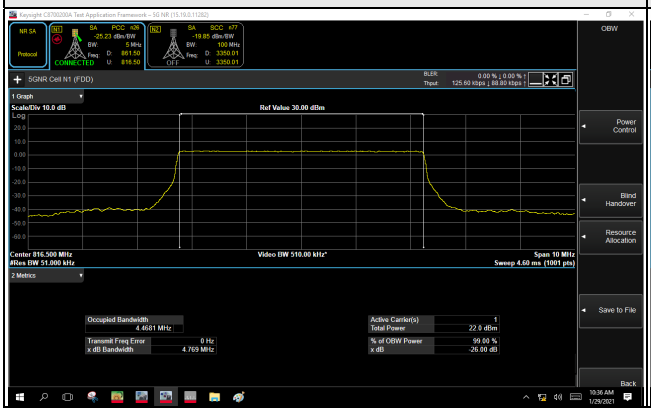
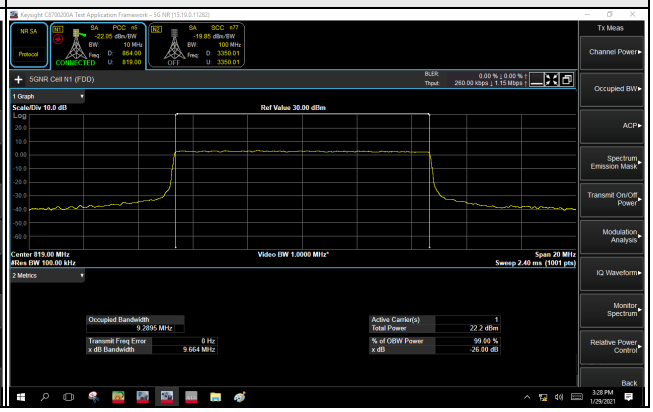
Spectrum Plot of Worst Value	
5MHz / $\pi/2$ BPSK	10MHz / 16QAM
	

26dB Bandwidth

n14, Channel Bandwidth 5MHz						
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
158100	790.5	4.74	4.76	4.77	4.76	4.74
158600	793.0	4.77	4.76	4.75	4.73	4.73
159100	795.5	4.77	4.69	4.72	4.69	4.73
n14, Channel Bandwidth 10MHz						
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
158600	793.0	9.29	9.63	9.65	9.64	9.65

Spectrum Plot of Worst Value	
5MHz / $\pi/2$ BPSK	10MHz / 16QAM
	

n26, Channel Bandwidth 5MHz						
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
163300	816.5	4.76	4.77	4.73	4.73	4.73
163800	819.0	4.75	4.77	4.76	4.74	4.72
164300	821.5	4.72	4.72	4.75	4.73	4.72
n26, Channel Bandwidth 10MHz						
Channel	Frequency (MHz)	26dB Bandwidth (MHz)				
		$\pi/2$ BPSK	QPSK	16QAM	64QAM	256QAM
163800	819.0	9.27	9.65	9.66	9.63	9.64

Spectrum Plot of Worst Value	
5MHz / QPSK	10MHz / 16QAM
	

4.5 Emission Mask Measurement

4.5.1 Limits of Emission Mask Measurement

For n14:

(1) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations.

(2) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least 43 + 10 log (P) dB.

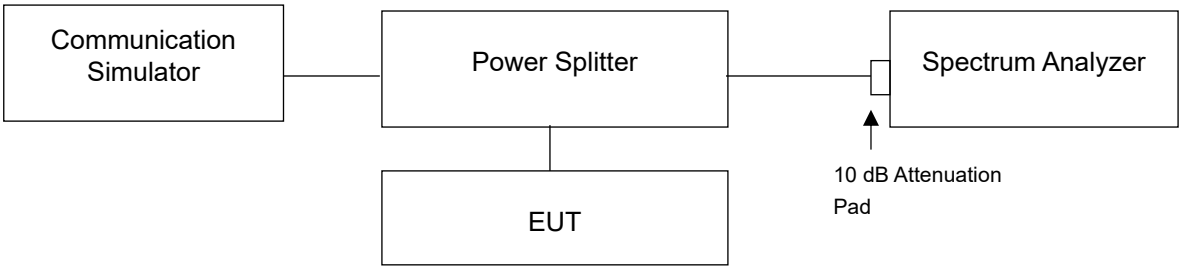
For n26:

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

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 + $10Log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

For § 90.691(a), RBW=300 Hz for offset less than 37.5 kHz from channel edge and RBW=100 kHz for offsets greater than 37.5 kHz is allowed, tested in accordance with FCC KDB 971168 D02 section VIII.

4.5.2 Test Setup

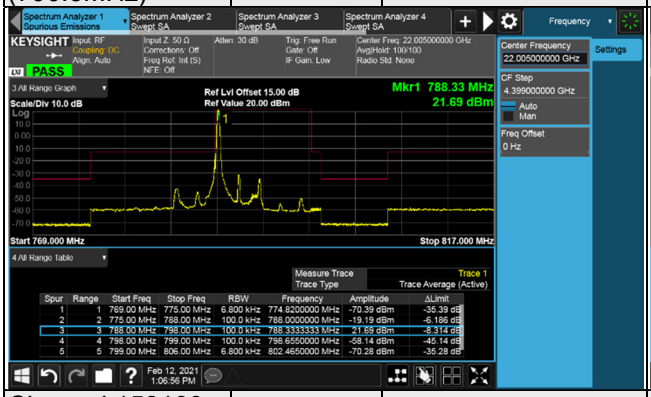
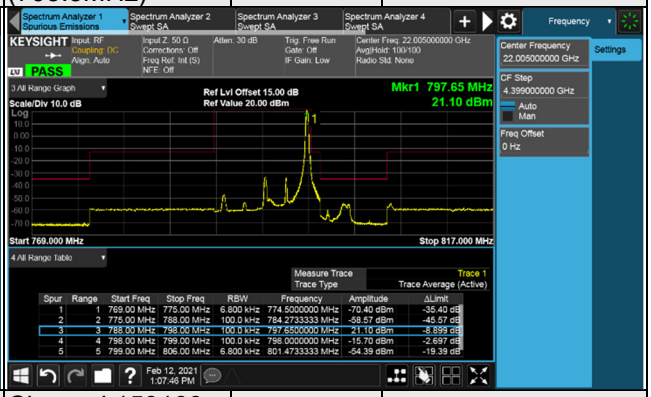
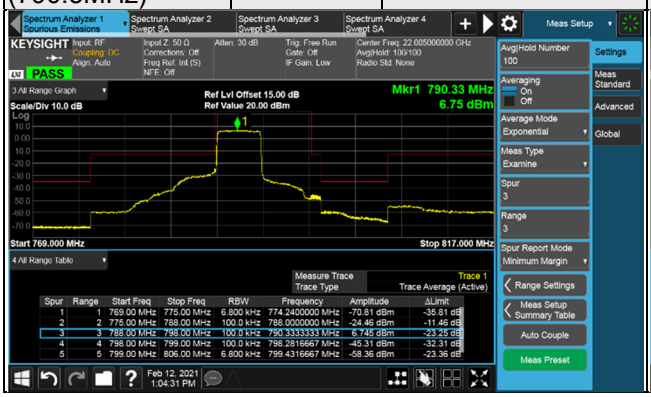
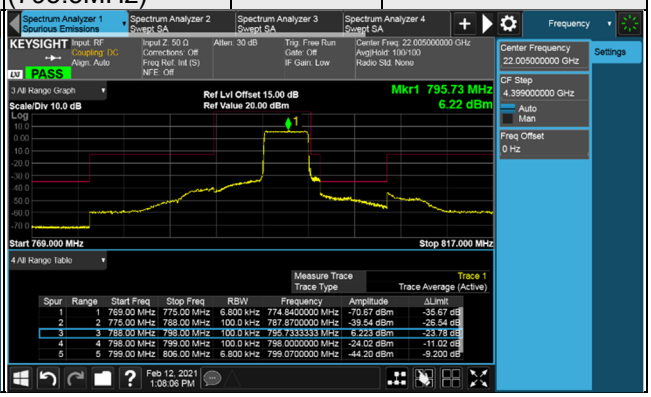


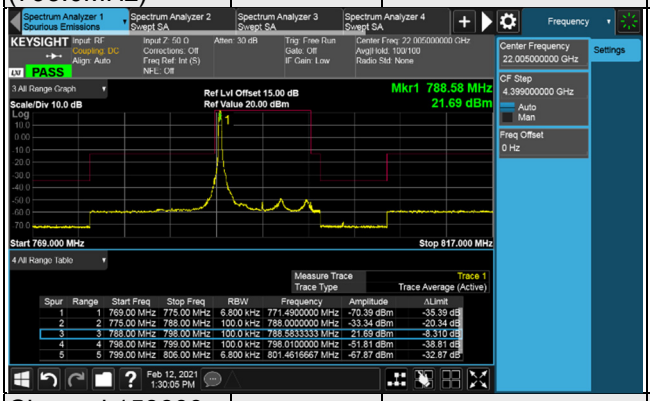
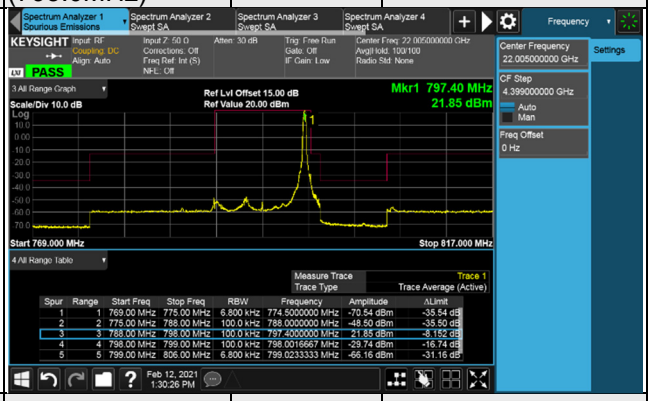
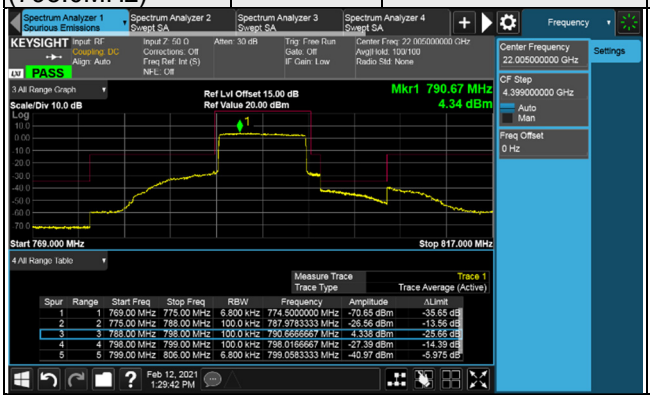
4.5.3 Test Procedures

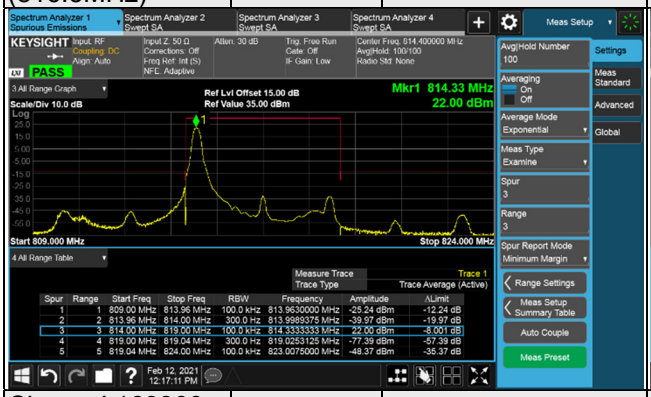
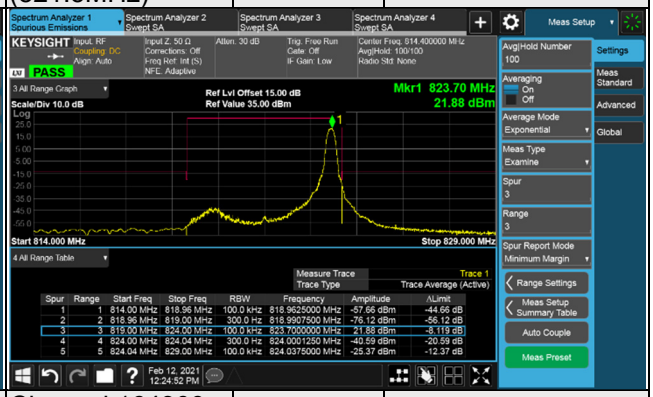
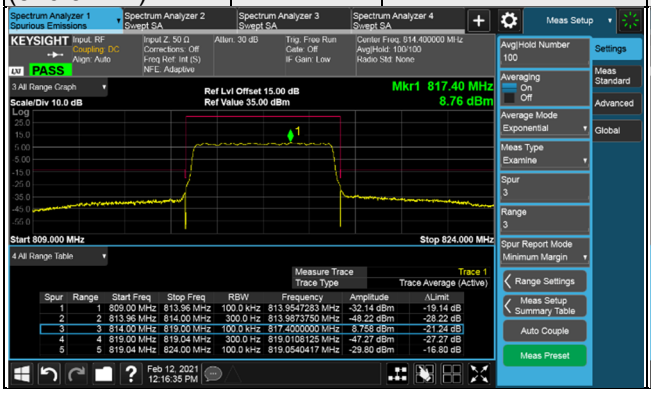
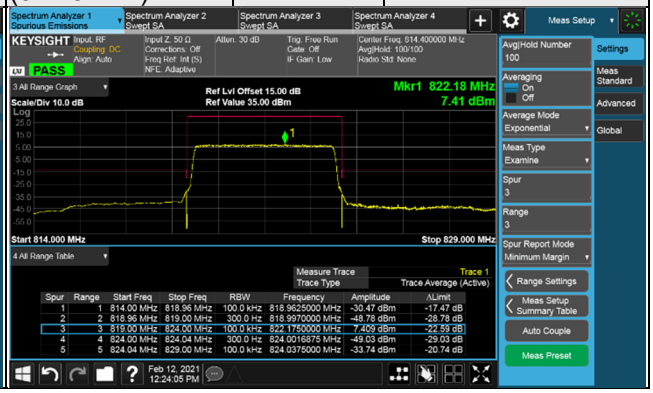
a. The measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

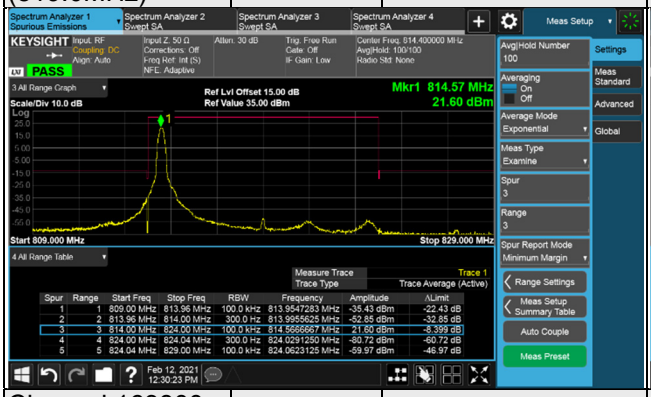
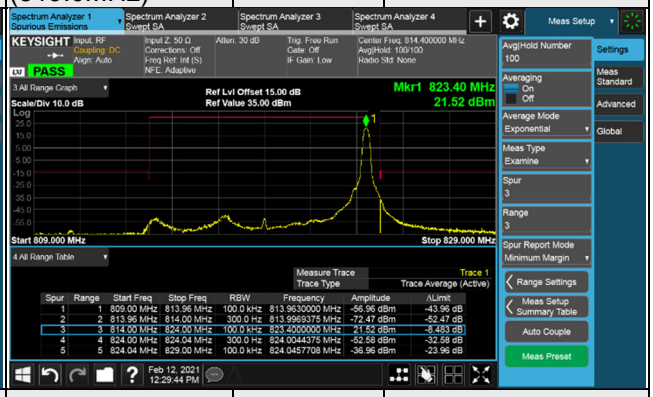
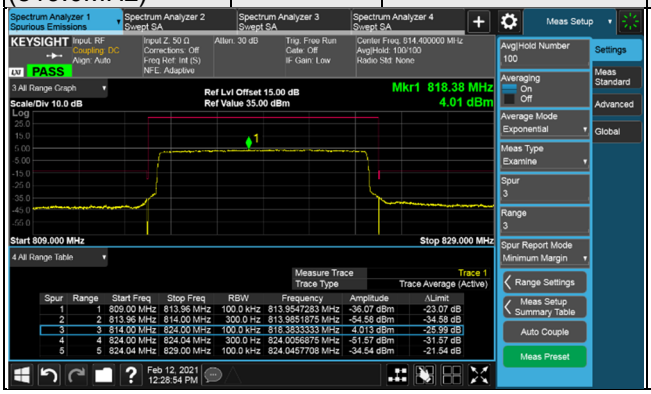
b. Record the test plot.

4.5.4 Test Results

n14, Channel Bandwidth 5MHz					
Channel 158100 (790.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 159100 (795.5MHz)	QPSK	1 RB / 24 RB Offset
					
Channel 158100 (790.5MHz)	QPSK	25 RB / 0 RB Offset	Channel 159100 (795.5MHz)	QPSK	25 RB / 0 RB Offset
					

n14, Channel Bandwidth 10MHz					
Channel 158600 (793.0MHz)	QPSK	1 RB / 0 RB Offset	Channel 158600 (793.0MHz)	QPSK	1 RB / 50 RB Offset
					
Channel 158600 (793.0MHz)	QPSK	51 RB / 0 RB Offset			
					

n26, Channel Bandwidth 5MHz					
Channel 163300 (816.5MHz)	$\pi/2$ BPSK	1 RB / 0 RB Offset	Channel 164300 (821.5MHz)	$\pi/2$ BPSK	1 RB / 24 RB Offset
					
Channel 163300 (816.5MHz)	$\pi/2$ BPSK	25 RB / 0 RB Offset	Channel 164300 (821.5MHz)	$\pi/2$ BPSK	25 RB / 0 RB Offset
					

n26, Channel Bandwidth 10MHz					
Channel 163800 (819.0MHz)	$\pi/2$ BPSK	1 RB / 0 RB Offset	Channel 163800 (819.0MHz)	$\pi/2$ BPSK	1 RB / 50 RB Offset
					
Channel 163800 (819.0MHz)	$\pi/2$ BPSK	51 RB / 0 RB Offset			
					

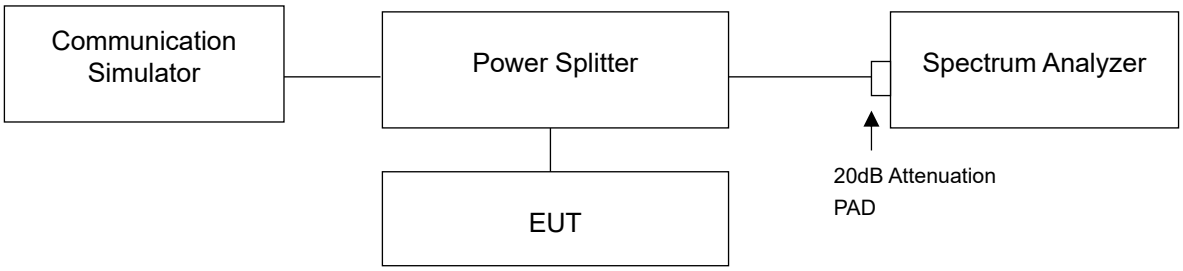
4.6 Conducted Spurious Emissions

4.6.1 Limits of Conducted Spurious Emissions Measurement

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 $\log_{10}$(P) dB. The limit of emission equal to –13dBm.

For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to −70 dBW/MHz. The limit of emissions is equal to -40 dBm.

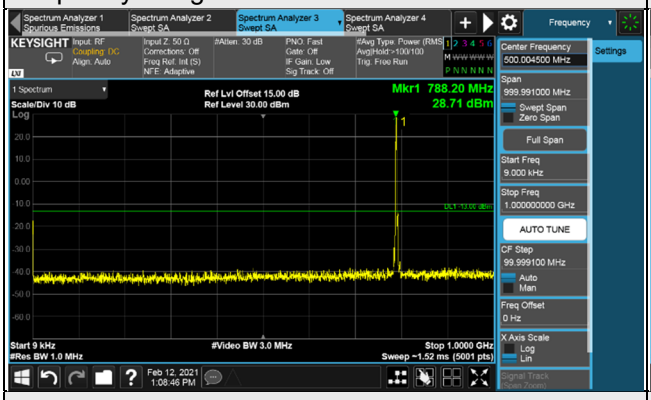
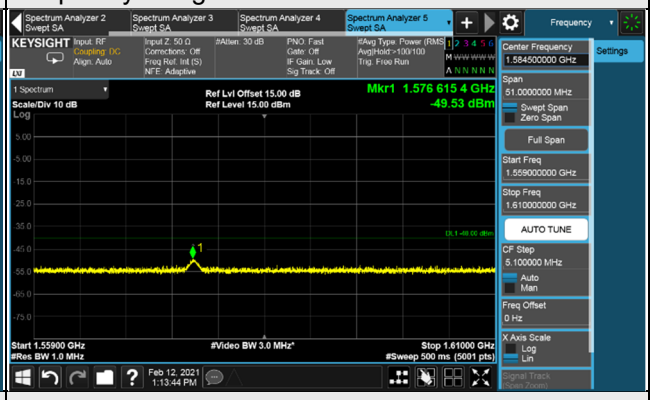
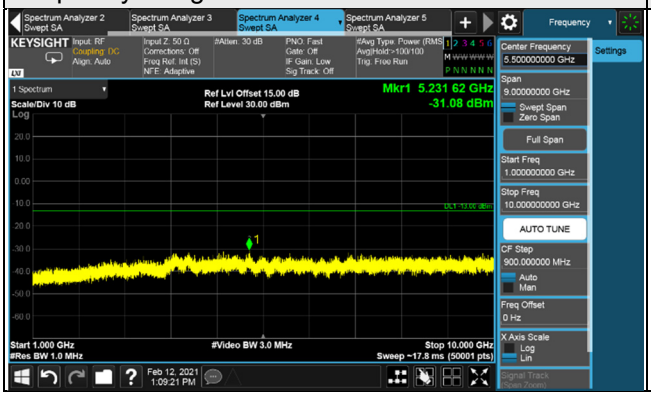
4.6.2 Test Setup



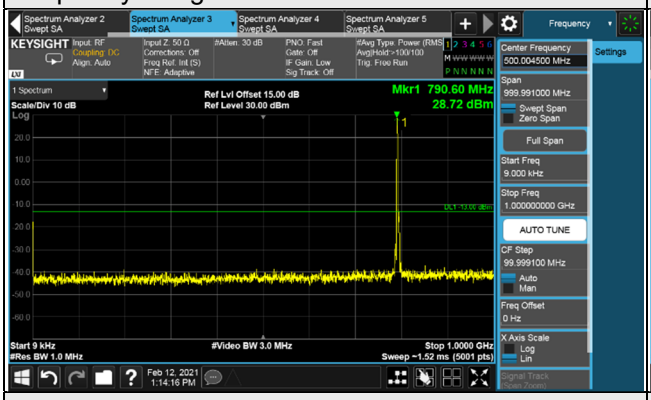
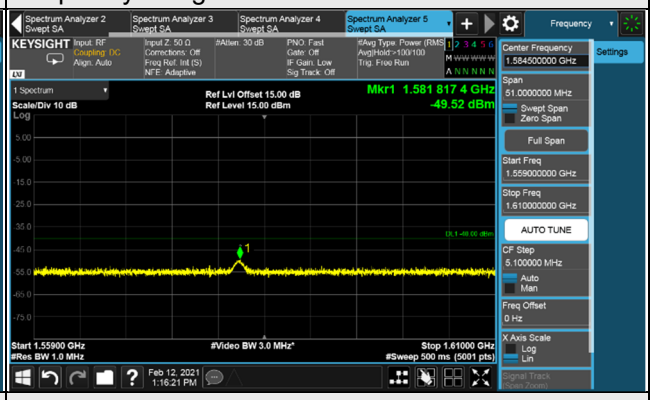
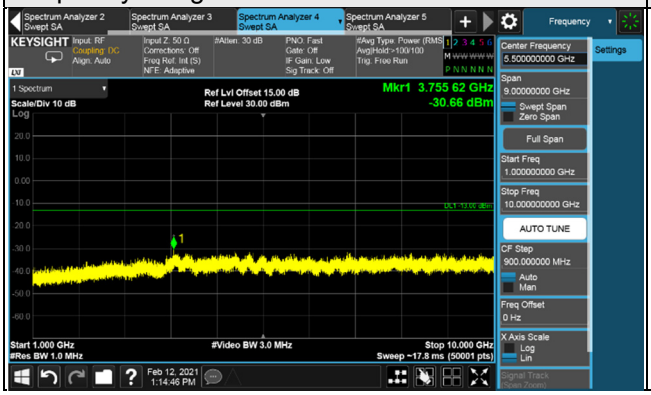
4.6.3 Test Procedure

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
b. Measuring frequency range is from 9kHz to 10GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz are used for conducted emission measurement.

4.6.4 Test Results

n14, Channel Bandwidth 5MHz	
Channel 158100 (790.5MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1.559GHz ~ 1.61GHz
	
Frequency Range : 1GHz ~ 10GHz	
	

*The 9kHz signal over the limit is from Spectrum.

n14, Channel Bandwidth 5MHz	
Channel 158600 (793.0MHz)	
Frequency Range : 9kHz ~ 1GHz	Frequency Range : 1.559GHz ~ 1.61GHz
	
Frequency Range : 1GHz ~ 10GHz	
	

*The 9kHz signal over the limit is from Spectrum.