



MEASUREMENT REPORT

FCC ID : HD5-CK67X1N
APPLICANT : Honeywell International Inc
Application Type : Certification
Product : Mobile Computer
Model No. : CK67X1N
Brand Name : Honeywell
FCC Classification : PCS Licensed Transmitter worn on body (PCT)
FCC Rule Part(s) : Part2, Part90
Test Procedure(s) : ANSI C63.26 2015
Received Date : August 5, 2024
Test Date : November 8, 2024~January 15, 2025

Tested By : 
(Wen Lee)
Reviewed By : 
(Paddy Chen)
Approved By : 
(Chenz Ker)



The test results only relate to the tested sample.

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 (Taiwan) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2408TW0104-U14	1.0	Original Report	2025-01-16	

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General Information

Applicant	Honeywell International Inc
Applicant Address	9680 Old Bailes Rd. Fort Mill, SC 29707 United States
Manufacturer	Honeywell International Inc. Honeywell Safety and Productivity Solutions
Manufacturer Address	9680 Old Bailes Rd. Fort Mill, SC 29707 United States
Test Site	MRT Technology (Taiwan) Co., Ltd
Test Site Address	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
MRT FCC Registration No.	291082

Test Facility / Accreditations

1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm.
2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Canada, EU and TELEC Rules.

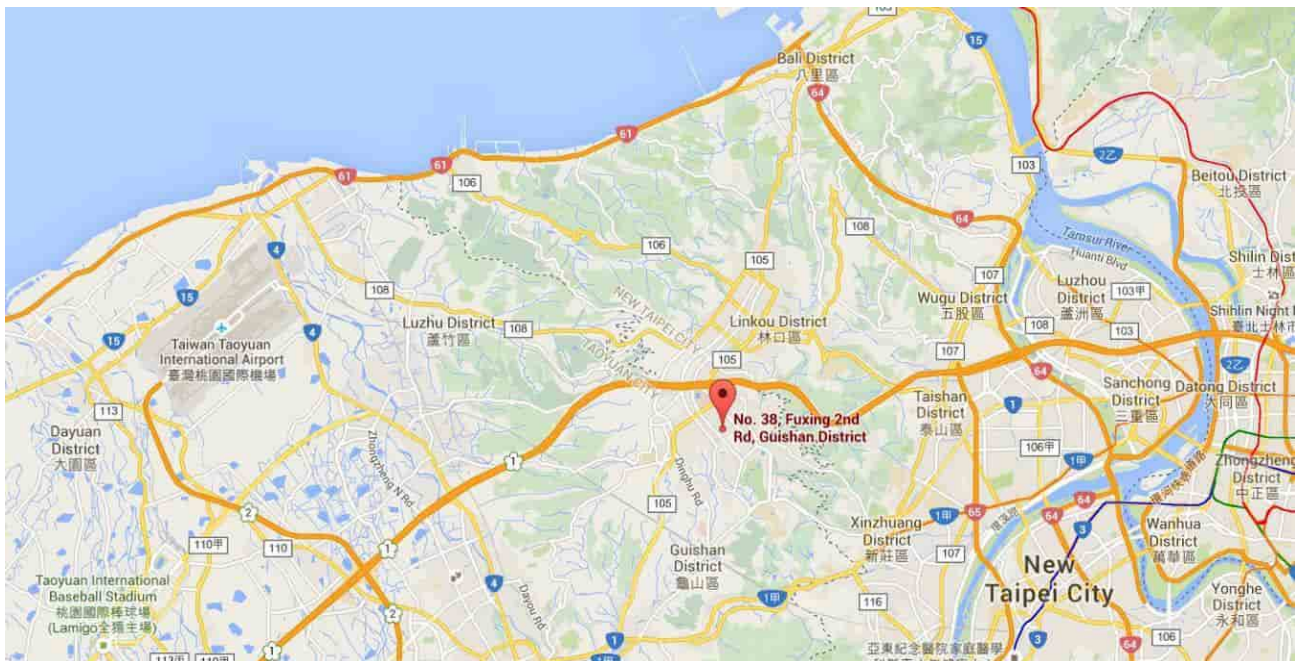
1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taoyuan City. These measurement tests were conducted at the MRT Technology (Taiwan) Co., Ltd. Facility located at No.38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C).



1.3. Product Information

Product Name	Mobile Computer
Model No.	CK67X1N
Brand Name	Honeywell
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Bluetooth Specification	Main BT/BLE : V5.3 dual mode + 2 nd BLE: V5.3 Single mode
NFC Specification	13.56MHz
WWAN Specification	4G-LTE: Band 2,4,5,7,12,13,14,17,25,26,30,38,41,42,43,48,66,71 5G-NR: n 2,5,7,12,13,14,25,26,30,38,41,48,66,71,77,78
CA Intra-Band	5B; 7C; 38C; 41C; 66B; 66C
EUT Identification No.:	#24295D8051, #24295D80CF (Conducted) #24295D8059 (Radiated)
Operating Temperature Range	-20~50 °C
Supply Voltage Rating	DC 3.6V
Accessory	
Battery	Brand: Honeywell MODEL:CK65-BTSC Rating: 3.6Vdc, 7000mAh, 25.2Wh
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

Note:

- For other features of this EUT, test report will be issued separately.
- This product has 3 scanners, 5 keypads, can refer as below:

Scanner	S0703	S0803FR	S0803	--	--
Keypad	Alpha Numeric	Numeric	Large Numeric	53keys Alpha Numeric	42keys Numeric

- This report selected S0803FR with Alpha Numeric as the main test.
- For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.4. Radio Specification under Testing

E-UTRA Specification	
FDD TX Frequency Range	LTE Band 14: 788 ~ 798 MHz; LTE Band 26: 814 ~ 824 MHz NR n14: 788 ~ 798 MHz; NR n26: 814 ~ 824 MHz
FDD RX Frequency Range	LTE Band 14: 758 ~ 768 MHz; LTE Band 26: 859 ~ 869 MHz NR n14: 758 ~ 768 MHz; NR n26: 859 ~ 869 MHz
Support Bandwidth	LTE Band 14, 26: 5MHz, 10MHz NR n14, n26: 5MHz, 10MHz
Type of Modulation	UL up to 256QAM, DL up to 256QAM

1.5. Description of Available Antennas

Antenna Type			LDS	
Technology	Frequency Range (MHz)		Max Peak Gain (dBi)	
	TX	RX	ANT0	ANT2
LTE Band 14	788 ~ 798	758 ~ 768	-3.38	--
LTE Band 26	814 ~ 824	859 ~ 869	-3.38	--
NR n14	788 ~ 798	758 ~ 768	-3.38	--
NR n26	814 ~ 824	859 ~ 869	-3.38	--
Note 1: All antenna information (Antenna type and Peak Gain) is provided by the manufacturer. 2: The typical antennas used to calculate the ERP (EIRP). 3. Ant0 support TX functions for LB (716MHz-898MHz).				

1.6. 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 v02r02: Misc Rev Approv License Devices
- FCC KDB 412172 D01 v01r01: Determining ERP and EIRP

2. DESCRIPTION OF TEST

2.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Test Result
2.1049	Occupied Bandwidth	Conducted	Pass
2.1055, 90.213	Frequency Stability		Pass
2.1046, 90.542(a)(7), 90.635(b)	Transmitter Output Power		Pass
22.913(d)	Peak to Average Ratio		Pass
2.1051, 90.543(e), 90.691(b)	Transmitter unwanted emissions (band-edge)		Pass
2.1051, 90.543(e), 90.691(b)	Transmitter unwanted emissions (spurious)		
2.1053, 90.543(e)(f), 90.691(b)	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, Transmitter unwanted emissions (band-edge), Transmitter unwanted emissions (spurious), Radiated Spurious Emissions were presented 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.

LTE Test Items	Bandwidth	Modulation	RB Combination	Test Channel
Occupied Bandwidth	All BW	All Modulation	Full	Low/Middle/High
Frequency Stability	Maximum BW	QPSK	Full	Middle
Transmitter Output Power	All BW	All Modulation	1RB/Half/Full	Low/Middle/High
Peak to Average Ratio	All BW	All Modulation	Full	Middle
Band Edge	All BW	QPSK	1RB/Half/Full	Low/High
Conducted Emissions	All BW	All Modulation	1RB	Low/Middle/High
Radiated Emissions	Minimum BW	QPSK	1RB	Low/Middle/High

Note:

1. All modes of operation and data rates were investigated. The test results shown in the above part represent the worst case emissions.
2. All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.

NR Test Items	Bandwidth	Modulation	RB Combination	Test Channel
Occupied Bandwidth	All BW	All DFT Modulation	Outer full RB	Low/Middle/High
Frequency Stability	Maximum BW	DFT_BPSK	Outer full RB	Middle
Transmitter Output Power	All BW	All DFT Modulation and CP_QPSK Modulation	Edge_1RB Inner_1RB Inner Full RB Outer full RB	Low/Middle/High
Peak to Average Ratio	Maximum BW	All DFT Modulation	Outer full RB	Middle
Band Edge	All BW	DFT_BPSK	Edge_1RB Outer full RB	Low/High
Conducted Emissions	All BW	All DFT Modulation	Inner_1RB	Low/Middle/High
Radiated Emissions	Minimum BW	DFT_BPSK	Inner_1RB	Low/Middle/High

Note:

1. All modes of operation and data rates were investigated. The test results shown in the above part represent the worst case emissions.
2. All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.

2.2. Occupied Bandwidth

According to FCC Part 2.1049

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.

2.3. Frequency Stability / Temperature Variation

According to FCC Part 2.1055, 90.213

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-E-2016. The frequency stability of the transmitter is measured by:

- a.) Temperature: The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Specification – For Part 22, the frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

Time Period and Procedure:

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

2.4. Conducted Output Power Measurement

According to FCC Part 2.1046, 90.542, 90.635

According to KDB 412172 D01 Section 1.2 Power Approach

$EIRP = PT + GT - LC = ERP + 2.15 \text{ dB}$, $ERP = EIRP - 2.15 \text{ dB}$

PT = transmitter output power in dBm

GT = gain of the transmitting antenna in dBi

LC = signal attenuation in the connecting cable between the transmitter and antenna in dB.

Technology	ERP Power Limit	Technology	ERP Power Limit
LTE Band 14	3W (34.77dBm)	LTE Band 26	100W (50dBm)
NR n14	3W (34.77dBm)	NR n26	100W (50dBm)
LTE Band 26 and NR n26 frequency range 814MHz ~ 824MHz.			

2.5. Peak-Average Ratio

According to FCC Part 22.913

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

2.6. Spurious and Harmonic Emissions at Antenna Terminal

According to FCC Part 2.1051, 90.543, 90.691

For LTE Band 14 and NR n14:

The spurious (unwanted) emission limits specified in the individual FCC rule parts applicable to licensed digital transmitters (typically referred to under the heading 'emission limits') normally apply to any and all emissions that are present outside of the authorized frequency band/block and apply to emissions in both the out-of-band and spurious domains. unwanted emissions are required by the licensed rule parts to be attenuated below the transmitter power by a factor of at least $43 + 10\log(P)$ dB on any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, where P represents the transmitter power expressed in watts.

In accordance with Part 90.543 (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

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

For LTE Band 26 (814MHz ~ 824MHz) and NR n26 (814MHz ~ 824MHz):

(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 $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(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 $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

2.7. Conducted and Radiated Spurious Emissions

According to FCC Part 2.1051, 2.1053, 90.543, 90.691

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.

For LTE Band 14 and NR n14

On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB. The emission limit 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 equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. The radiated emission limit equal to -40dBm.

For LTE Band 26 (814MHz ~ 824MHz) and NR n26 (814MHz ~ 824MHz)

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

3. TEST EQUIPMENT CALIBRATION DATE

Radiated Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	MRTTWA00002	1 year	2025/5/7
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00086	1 year	2025/11/5
Broadband Hornantenna	RFSPIN	DRH18-E	MRTTWA00087	1 year	2025/5/20
Broadband Preamplifier	EMC Instruments corporation	EMC118A45SE	MRTTWA00088	1 year	2025/5/14
Breitband Hornantenna	Schwarzbeck	BBHA 9170	MRTTWA00004	1 year	2025/3/26
Broadband Amplifier	Schwarzbeck	BBV 9721	MRTTWA00006	1 year	2025/3/21
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2025/3/5
Signal Analyzer	R&S	FSVA3044	MRTTWA00092	1 year	2025/6/20
Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2025/6/14
Cable	Rosnol	K1K50-UP0264-K1K50-4M	MRTTWE00012	1 year	2025/6/14

Conducted Test Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2025/9/24
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2025/8/12
USB Wideband Power Sensor	KEYSIGHT	U2021XA	MRTTWA00015	1 year	2025/3/12
Wideband Radio Communication Taster	R&S	CMW 500	MRTTWA00084	1 year	2025/10/23
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MRTTWA00089	1 year	2025/5/30

Test Software

Software	Version	Function
e3	9.160520a	EMI Test Software

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 Emission
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 9kHz~30MHz: $\pm 3.92\text{dB}$ 30MHz~1GHz: $\pm 4.25\text{dB}$ 1GHz~18GHz: $\pm 4.40\text{dB}$ 18GHz~40GHz: $\pm 4.45\text{dB}$
Frequency Error
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 78.4\text{Hz}$
Conducted Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 0.84\text{dB}$
Conducted Spurious Emission
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 2.65\text{ dB}$
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 3.3\%$
Temp. / Humidity
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 0.82^\circ\text{C}/ \pm 3\%$
DC Voltage
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): $\pm 0.3\%$

Note:

Determining compliance is based on the test results met the regulation limits or requirements declared by clients, and the test results don't take into account the value of measurement uncertainty.

5. TEST RESULT

5.1. Summary

Maximum Conducted Power and ERP/EIRP Power

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

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T$$

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)

$$\text{ERP} = \text{EIRP} - 2.15$$

LTE Band		Band14	Antenna Gain (dBi)		-3.38
BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Maximum ERP (W)	ERP Limit (W)
5MHz	QPSK	24.63	0.290	0.081	3
	16QAM	23.98	0.250	0.070	3
	64QAM	22.81	0.191	0.053	3
	256QAM	19.65	0.092	0.026	3
10MHz	QPSK	24.47	0.280	0.078	3
	16QAM	23.84	0.242	0.068	3
	64QAM	22.59	0.182	0.051	3
	256QAM	19.49	0.089	0.025	3

LTE Band		Band26	Antenna Gain (dBi)		-3.38
BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Maximum ERP (W)	ERP Limit (W)
1.4MHz	QPSK	24.49	0.281	0.079	100
	16QAM	23.63	0.231	0.065	100
	64QAM	22.45	0.176	0.049	100
	256QAM	19.70	0.093	0.026	100
3MHz	QPSK	24.25	0.266	0.074	100
	16QAM	23.48	0.223	0.062	100
	64QAM	22.36	0.172	0.048	100
	256QAM	20.01	0.100	0.028	100
5MHz	QPSK	24.48	0.281	0.079	100
	16QAM	23.49	0.223	0.063	100
	64QAM	22.26	0.168	0.047	100
	256QAM	19.73	0.094	0.026	100
10MHz	QPSK	24.10	0.257	0.072	100
	16QAM	23.64	0.231	0.065	100
	64QAM	22.19	0.166	0.046	100
	256QAM	19.36	0.086	0.024	100

NR Band		N14	Antenna Gain (dBi)		-3.38
BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Maximum ERP (W)	ERP Limit (W)
5MHz	DFT_BPSK	24.38	0.274	0.077	3
	DFT_QPSK	24.28	0.268	0.075	3
	DFT_16QAM	23.30	0.214	0.060	3
	DFT_64QAM	21.98	0.158	0.044	3
	DFT_256QAM	19.73	0.094	0.026	3
10MHz	DFT_BPSK	24.18	0.262	0.073	3
	DFT_QPSK	24.15	0.260	0.073	3
	DFT_16QAM	23.20	0.209	0.058	3
	DFT_64QAM	21.84	0.153	0.043	3
	DFT_256QAM	19.69	0.093	0.026	3

NR Band		N26 (Part90)	Antenna Gain (dBi)		-3.38
BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Maximum ERP (W)	ERP Limit (W)
5MHz	DFT_BPSK	24.38	0.274	0.077	100
	DFT_QPSK	24.28	0.268	0.075	100
	DFT_16QAM	23.30	0.214	0.060	100
	DFT_64QAM	21.98	0.158	0.044	100
	DFT_256QAM	19.73	0.094	0.026	100
10MHz	DFT_BPSK	24.18	0.262	0.073	100
	DFT_QPSK	24.15	0.260	0.073	100
	DFT_16QAM	23.20	0.209	0.058	100
	DFT_64QAM	21.84	0.153	0.043	100
	DFT_256QAM	19.69	0.093	0.026	100

LTE Band	BandWidth	Maximum 99% Occupied Bandwidth Designator			
		QPSK	16QAM	64QAM	256QAM
Band 14	5MHz	4M47G7D	4M47W7D	4M47W7D	4M47W7D
	10MHz	8M94G7D	8M94W7D	8M94W7D	8M95W7D

LTE Band	BandWidth	Maximum 99% Occupied Bandwidth Designator			
		QPSK	16QAM	64QAM	256QAM
Band 26 (Part90)	1.4MHz	1M08G7D	1M08W7D	1M08W7D	1M08W7D
	3MHz	2M69G7D	2M68W7D	2M69W7D	2M69W7D
	5MHz	4M47G7D	4M47W7D	4M49W7D	4M47W7D
	10MHz	8M95G7D	8M95W7D	8M93W7D	8M95W7D

NR Band	BandWidth	Maximum 99% Occupied Bandwidth Designator				
		BPSK	QPSK	16QAM	64QAM	256QAM
NR n14	5MHz	4M48G7D	4M47G7D	4M47W7D	4M48W7D	4M49W7D
	10MHz	8M89G7D	8M93G7D	8M91W7D	8M93W7D	8M91W7D

NR Band	BandWidth	Maximum 99% Occupied Bandwidth Designator				
		BPSK	QPSK	16QAM	64QAM	256QAM
NR n26 (814~824MHz)	5MHz	4M49G7D	4M47G7D	4M47W7D	4M47W7D	4M49W7D
	10MHz	8M90G7D	8M94G7D	8M92W7D	8M93W7D	8M92W7D

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.

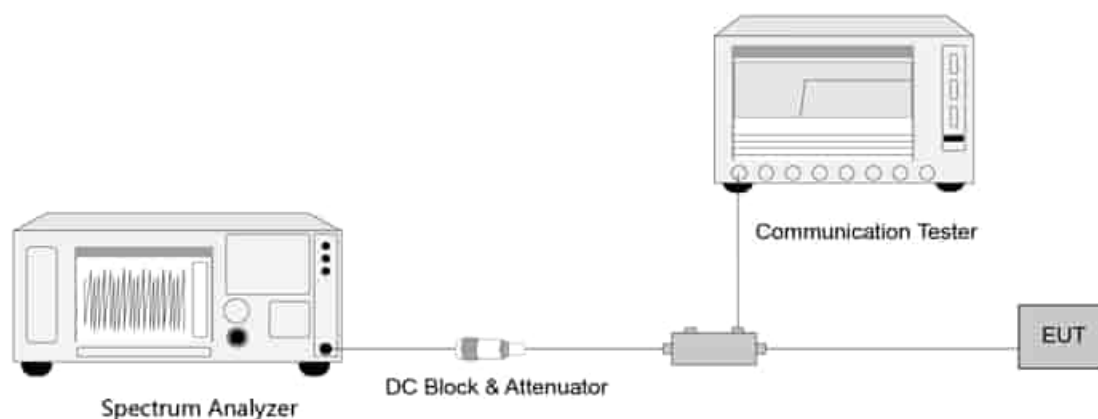
5.2.2 Test Procedure used

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 $\geq 3 \times$ 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 Under Temperature & Voltage Variations

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 $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

5.3.2 Test Procedure

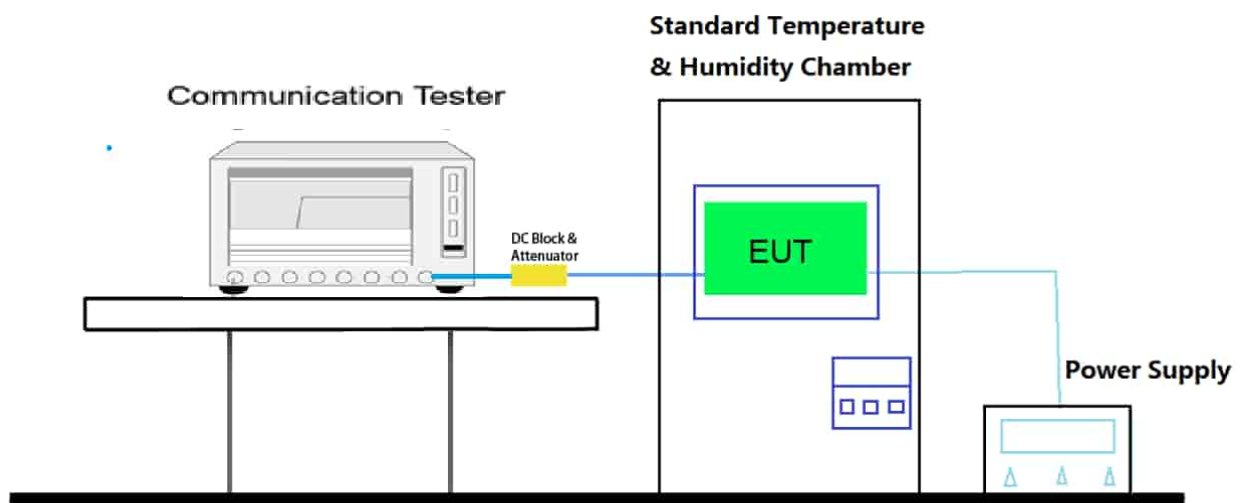
ANSI C63.26-2015 - Section 5.6

5.3.3 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 ($\pm 15\%$) and endpoint, record the maximum

5.3.4 Test Setup



5.3.5 Test Result

Refer to Appendix A.2

5.4. Transmitter Output Power Measurement

5.4.1 Test Limit

Technology	ERP Power Limit	Technology	ERP Power Limit
LTE Band 14	3W (34.77dBm)	LTE Band 26	100W (50dBm)
NR n14	3W (34.77dBm)	NR n26	100W (50dBm)
LTE Band 26 and NR n26 frequency range 814MHz ~ 824MHz.			

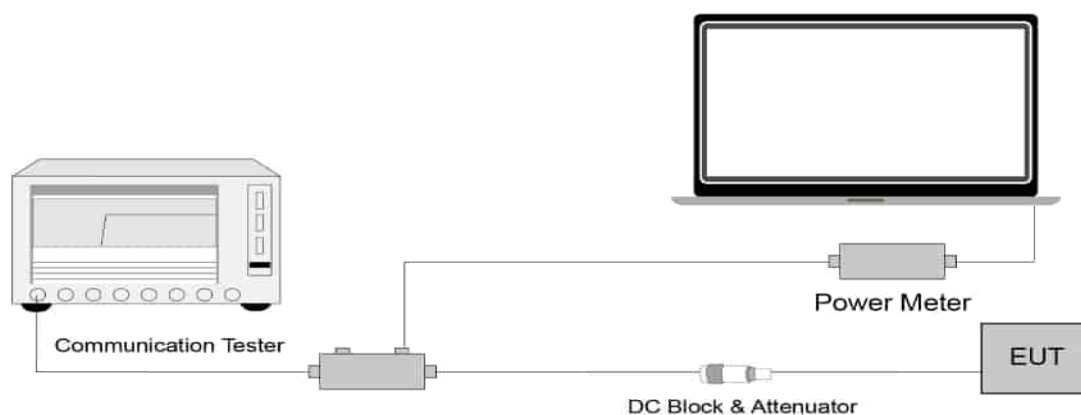
5.4.2 Test Procedure

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.

5.4.4 Test Setup



5.4.5 Test Result

Refer to Appendix A.3

5.5. Peak-Average Ratio

5.5.1 Test Limit

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure.

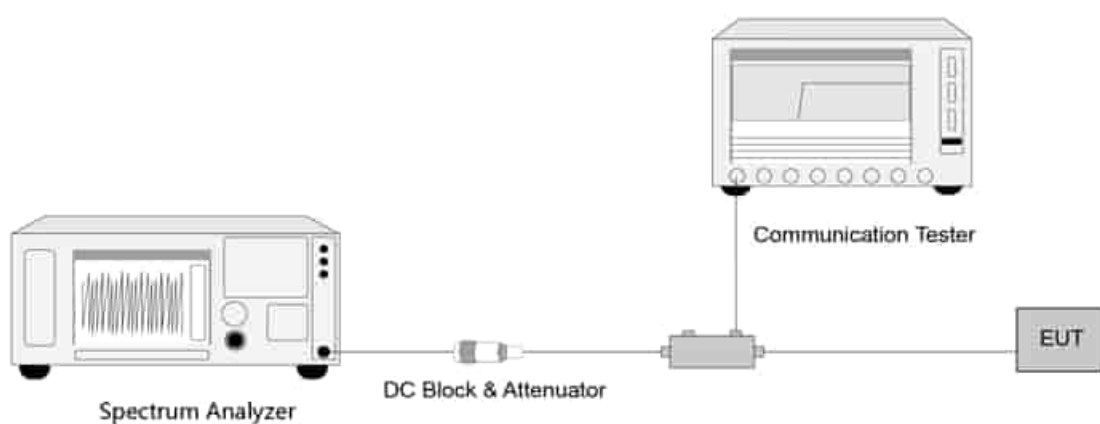
5.5.2 Test Procedure

ANSI C63.26-2015 - Section 5.2.3.4 (CCDF).

5.5.3 Test Setting

1. Set the resolution / measurement bandwidth $\geq$ signal's occupied bandwidth
2. Set the number of counts to a value that stabilizes the measured CCDF curve
3. Record the maximum PARR level associated with a probability of 0.1%

5.5.4 Test Setup



5.5.5 Test Result

Refer to Appendix A.4

5.6. Transmitter unwanted emissions (band-edge) Measurement

5.6.1 Test Limit

For LTE Band 14 and NR n14:

The spurious (unwanted) emission limits specified in the individual FCC rule parts applicable to licensed digital transmitters (typically referred to under the heading 'emission limits') normally apply to any and all emissions that are present outside of the authorized frequency band/block and apply to emissions in both the out-of-band and spurious domains. unwanted emissions are required by the licensed rule parts to be attenuated below the transmitter power by a factor of at least $43 + 10\log(P)$ dB on any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, where P represents the transmitter power expressed in watts.

In accordance with Part 90.543 (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

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

For LTE Band 26 (814MHz ~ 824MHz) and NR n26 (814MHz ~ 824MHz):

(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 $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(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 $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

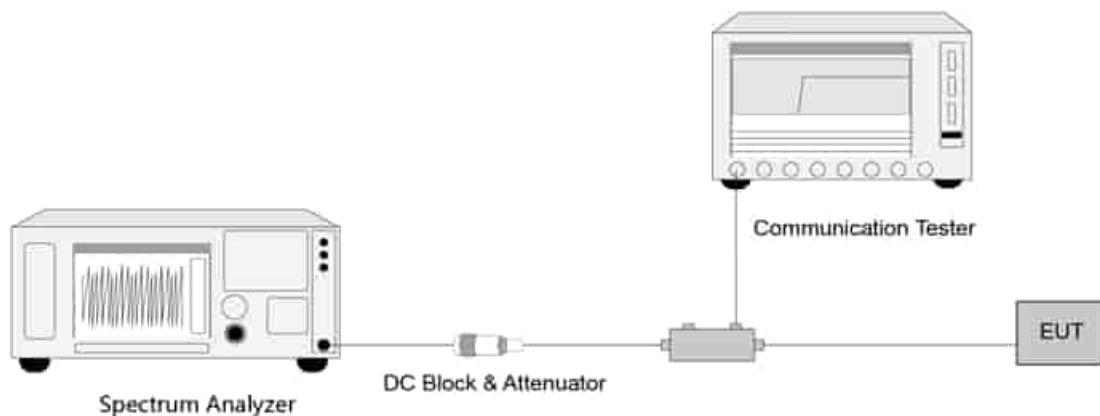
5.6.2 Test Procedure

ANSI C63.26-2015 - Section 5.7.

5.6.3 Test Setting

In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

5.6.4 Test Setup



5.6.4 Test Result

Refer to Appendix A.5

5.7. Transmitter unwanted emissions (spurious) Measurement

5.7.1 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.

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

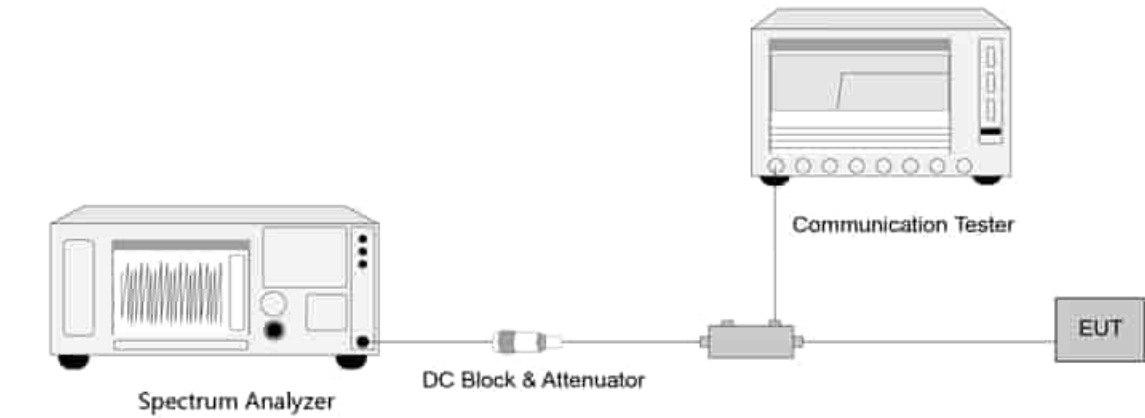
5.7.2 Test Procedure

ANSI C63.26-2015 - Section 5.7

5.7.3 Test Setting

1. Set the analyzer frequency to low, Mid or high channel.
2. RBW = specified resolution bandwidth of 100 kHz is at or below 1GHz and 1MHz is above 1GHz
3. VBW $\geq 3 \times$ RBW
4. Sweep time = auto
5. Detector = power averaging (rms)
6. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic.
7. Use the peak marker function to determine the maximum amplitude level.

5.7.4 Test Setup



5.7.5 Test Result

Refer to Appendix A.6

5.8. Radiated Spurious Emissions Measurement

5.8.1 Test Limit

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

For LTE Band 14 and NR n14

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 equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. The radiated emission limit equal to -40dBm.

5.8.2 Test Procedure

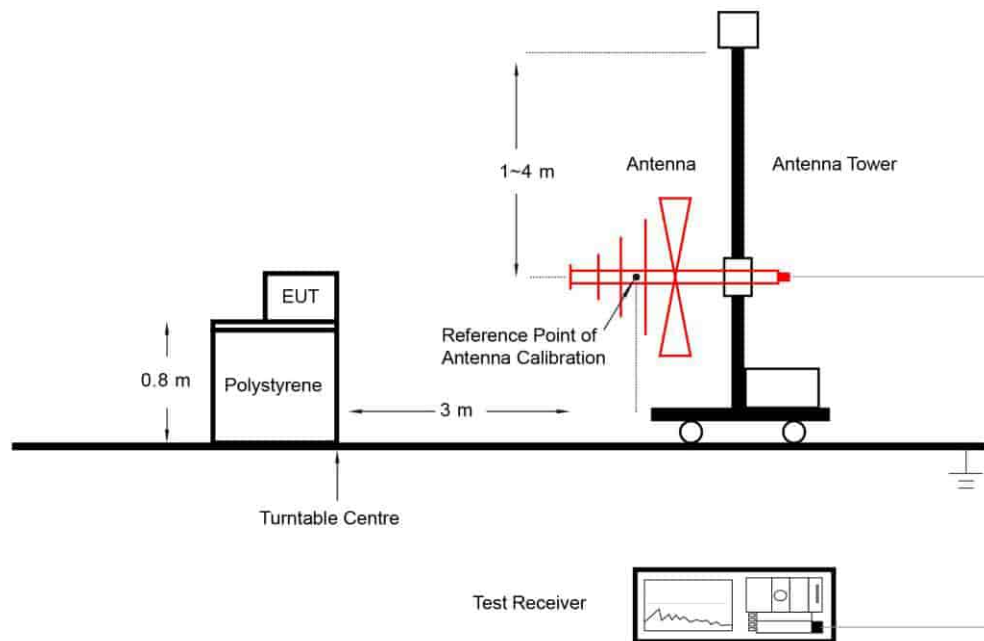
ANSI C63.26-2015 - Section 5.7

5.8.3 Test Setting

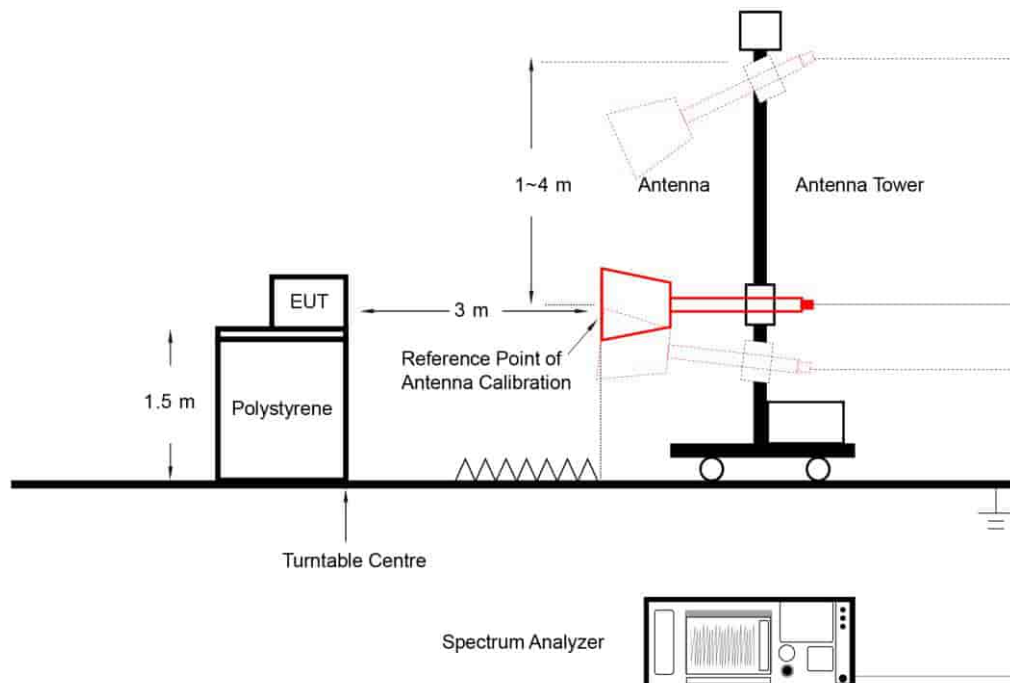
1. RBW = 120kHz or 1MHz
2. VBW $\geq 3 \times$ RBW
3. Sweep time $\geq 10 \times$ (number of points in sweep) $\times$ (transmission symbol period)
4. Detector = CISPR quasi-peak / average detector (Below 1 GHz, compliance with the limits shall be demonstrated using a CISPR quasi-peak detector and the 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

5.8.4 Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.8.5 Test Result

Refer to Appendix A.7.

Appendix A : TEST RESULT DATA

A1. Occupied Bandwidth Test Result

A1.1 LTE Band 14

LTE Band 14										
BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				26 dB bandwidth (MHz)			
			QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
5M	23305	790.5	4.4699	4.4702	4.4708	4.4712	5.077	4.971	4.991	4.986
5M	23330	793	4.4563	4.4618	4.4572	4.4625	4.879	4.845	4.935	4.890
5M	23355	795.5	4.4521	4.4568	4.4600	4.4567	4.952	4.966	4.892	4.910
10M	--	--	--	--	--	--	--	--	--	--
10M	23330	793	8.9409	8.9409	8.9398	8.9502	9.681	9.613	9.682	9.642
10M	--	--	--	--	--	--	--	--	--	--

OCC_4G_B14_.QPSK_5M CH23305



OCC_4G_B14_.QPSK_5M CH23330



OCC_4G_B14_.QPSK_5M CH23355



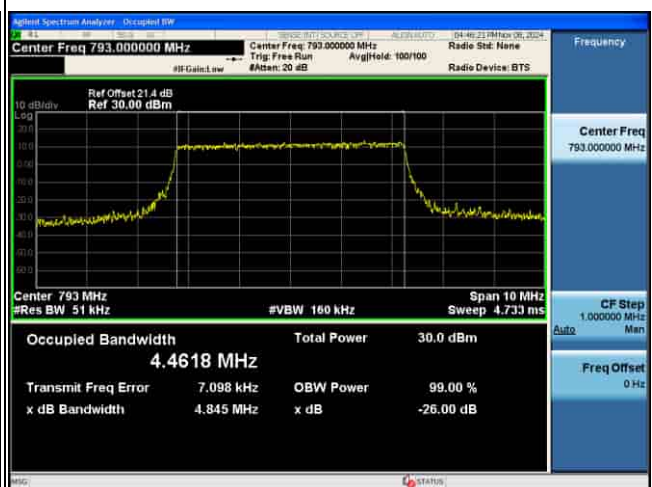
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OCC_4G_B14_16QAM_5M CH23305



OCC_4G_B14_16QAM_5M CH23330



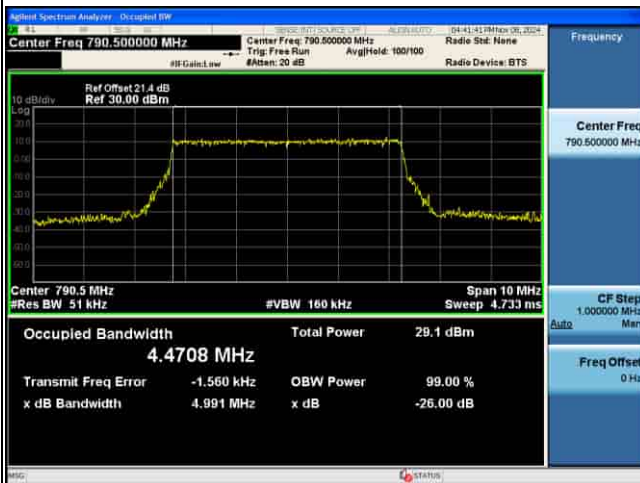
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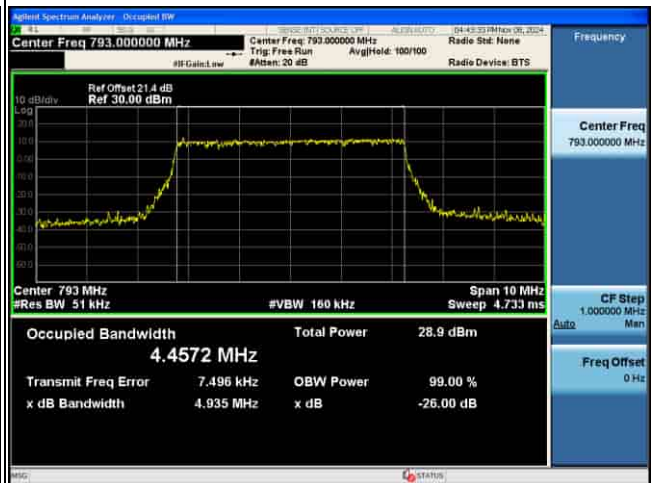
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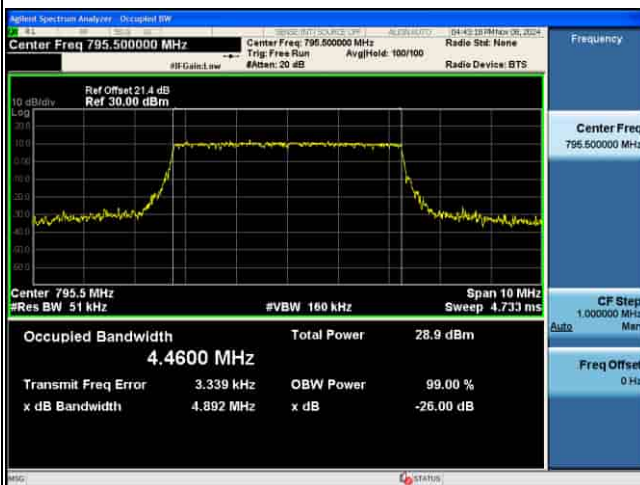
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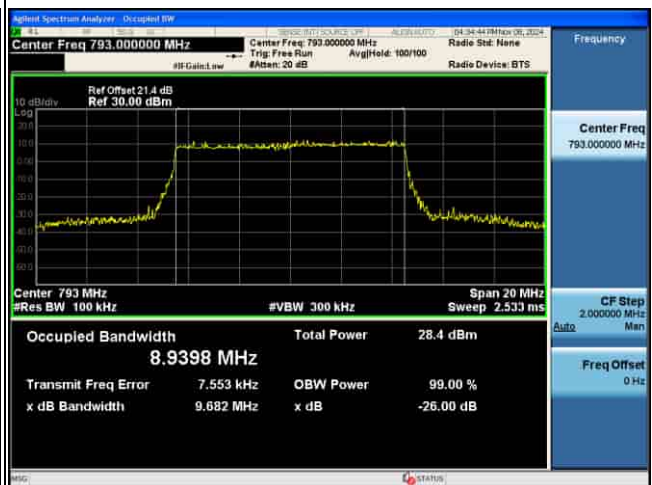
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OCC_4G_B14_64QAM_5M CH23355



OCC_4G_B14_64QAM_10M CH23330



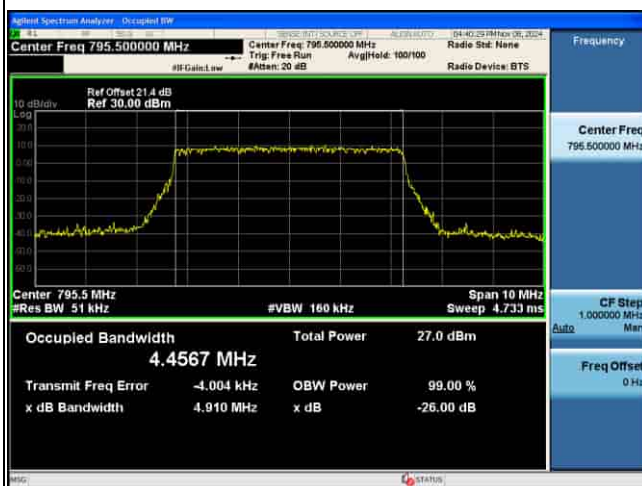
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OCC_4G_B14_256QAM_5M CH23330



OCC_4G_B14_256QAM_5M CH23355



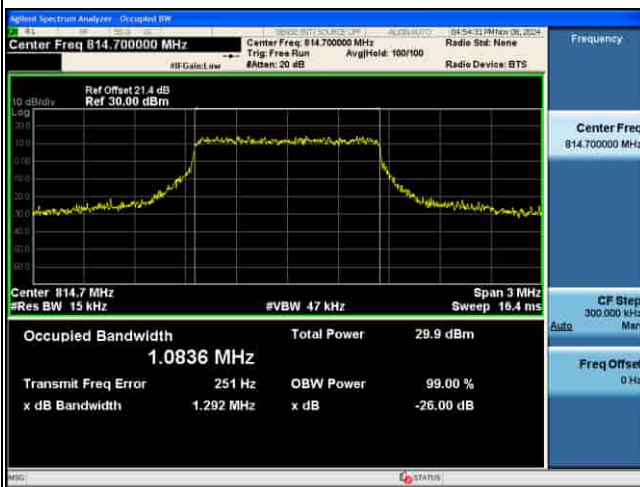
OCC_4G_B14_256QAM_10M CH23330



A1.2 LTE Band 26 (814MHz ~ 824MHz)

LTE Band 26 (Part90)										
BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)				26 dB bandwidth (MHz)			
			QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
1.4M	26697	814.7	1.0836	1.0817	1.0810	1.0789	1.292	1.271	1.307	1.255
1.4M	26740	819	1.0797	1.0823	1.0810	1.0765	1.298	1.262	1.297	1.293
1.4M	26783	823.3	1.0793	1.0807	1.0815	1.0823	1.317	1.276	1.277	1.282
3M	26705	815.5	2.6815	2.6826	2.6885	2.6932	2.977	2.990	2.980	2.925
3M	26740	819	2.6852	2.6832	2.6829	2.6791	2.991	2.952	2.929	2.935
3M	26775	822.5	2.6854	2.6823	2.6781	2.6832	2.939	2.989	2.933	2.923
5M	26715	816.5	4.4613	4.4640	4.4863	4.4717	4.954	4.936	5.031	4.966
5M	26740	819	4.4663	4.4736	4.4648	4.4668	5.014	5.023	4.990	5.037
5M	26765	821.5	4.4543	4.4633	4.4670	4.4638	4.932	4.956	5.040	4.993
10M	--	--	--	--	--	--	--	--	--	--
10M	26740	819	8.9527	8.9452	8.9318	8.9532	9.732	9.717	9.637	9.807
10M	--	--	--	--	--	--	--	--	--	--

OCC_4G_B26(Part90)_QPSK_1.4M CH26697



OCC_4G_B26(Part90)_QPSK_1.4M CH26740



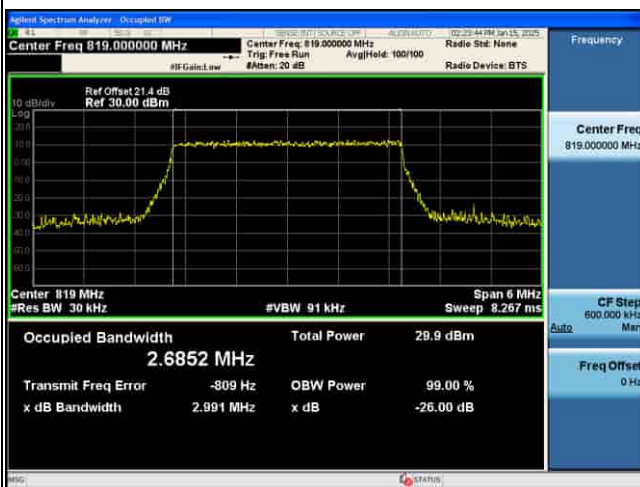
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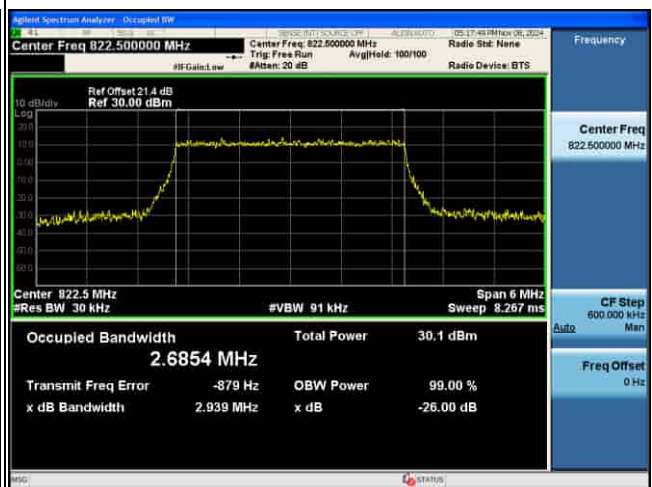
OCC_4G_B26(Part90)_QPSK_3M CH26705



OCC_4G_B26(Part90)_QPSK_3M CH26740



OCC_4G_B26(Part90)_QPSK_3M CH26775



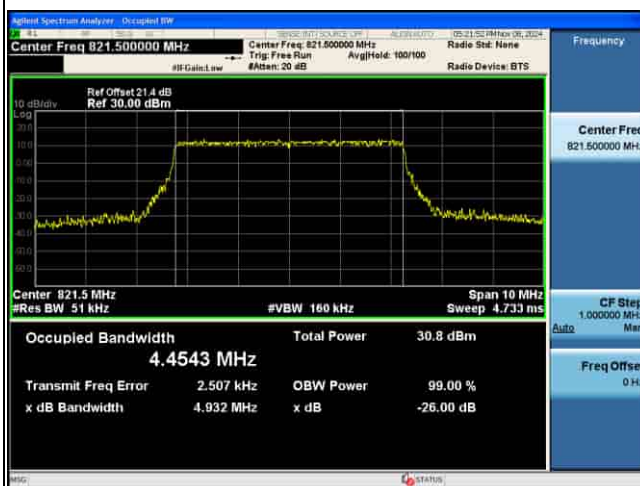
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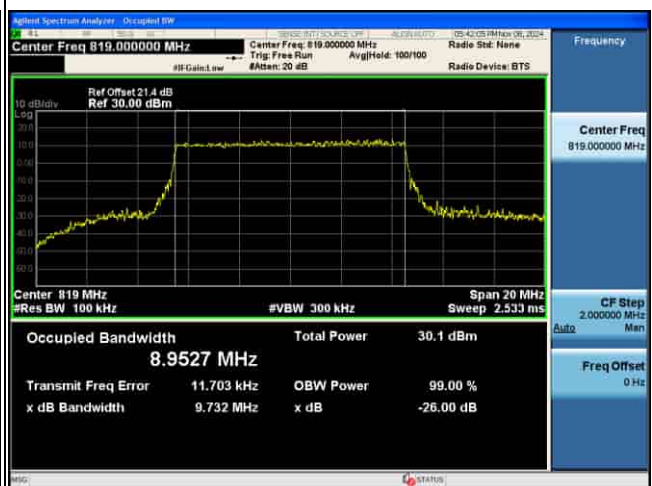
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OCC_4G_B26(Part90)_.QPSK_5M CH26765



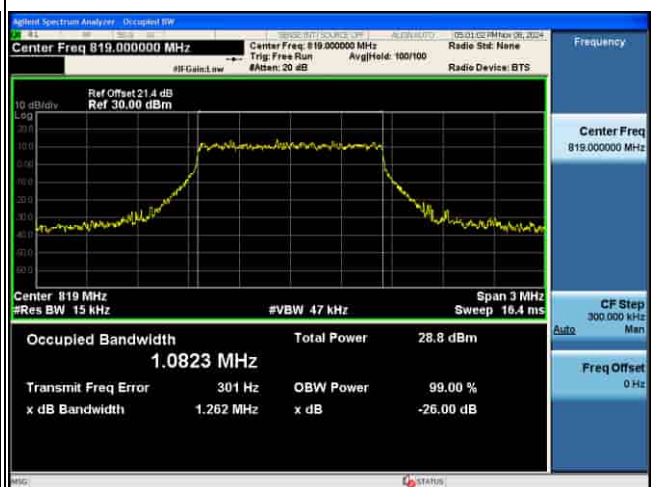
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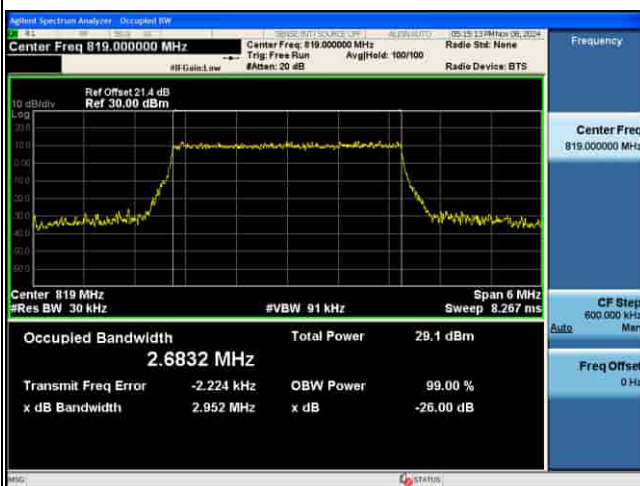
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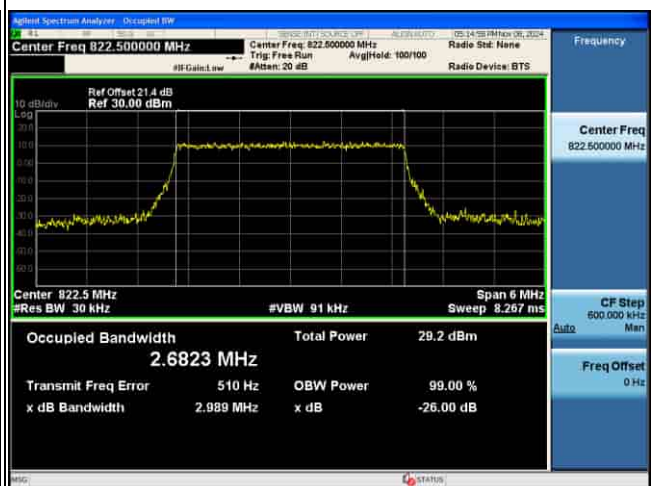
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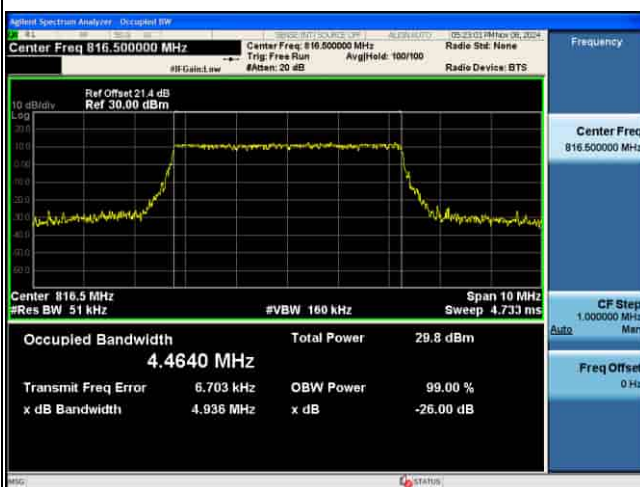
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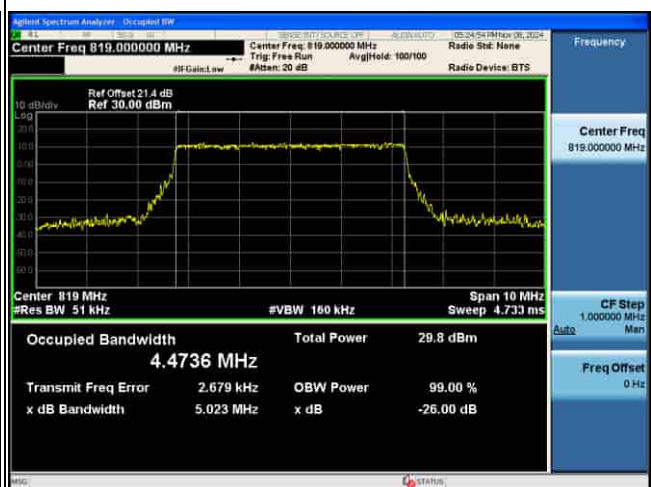
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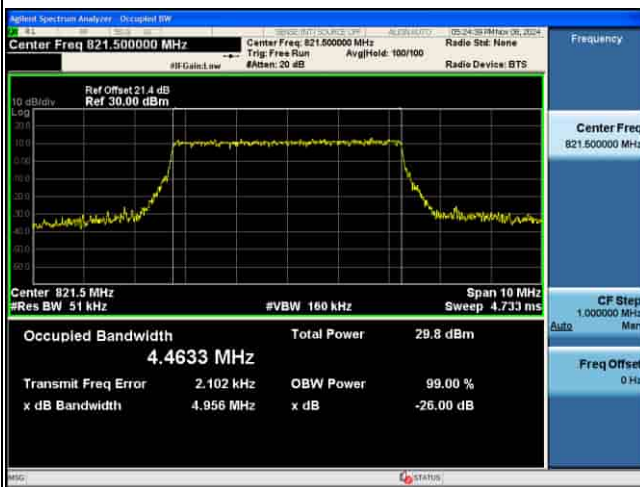
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OCC_4G_B26(Part90)_16QAM_5M CH26740



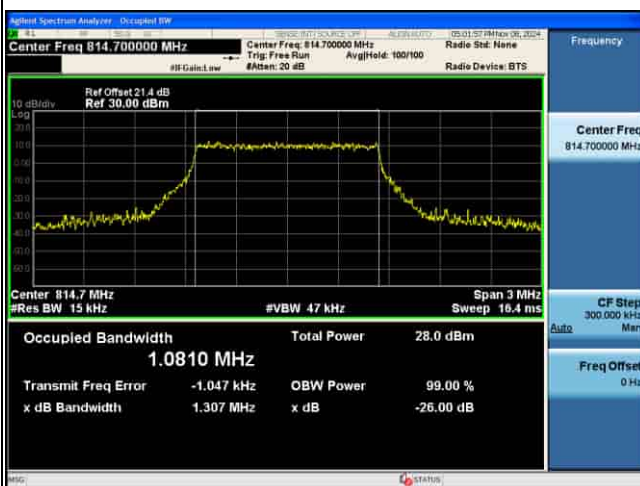
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OCC_4G_B26(Part90)_16QAM_10M CH26740



OCC_4G_B26(Part90)_64QAM_1.4M CH26697



OCC_4G_B26(Part90)_64QAM_1.4M CH26740



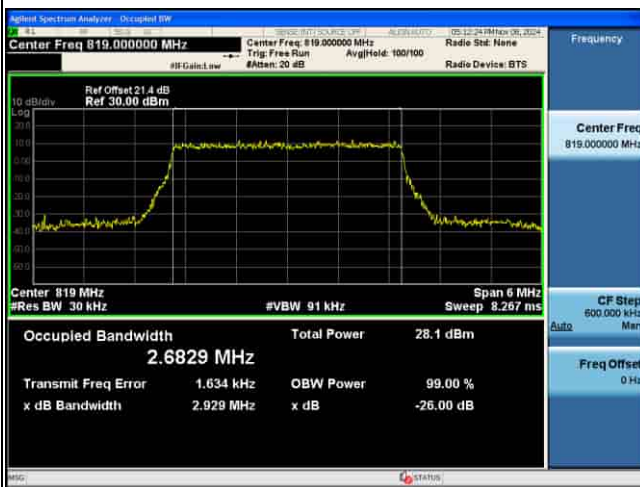
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OCC_4G_B26(Part90)_64QAM_3M CH26705



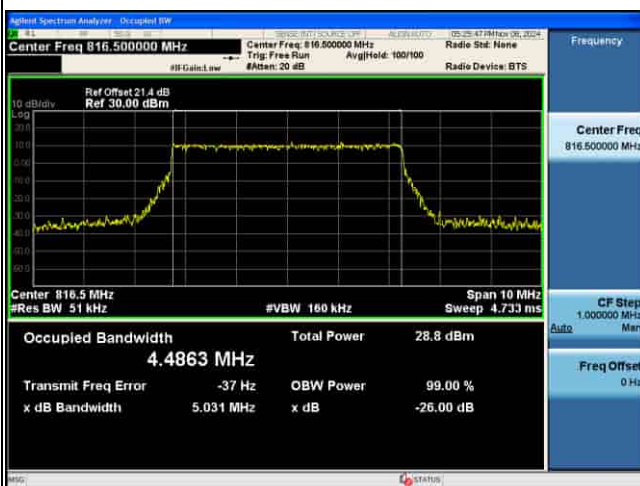
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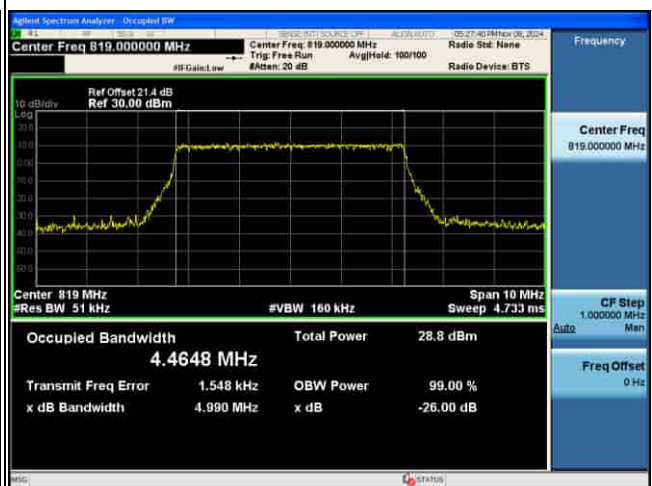
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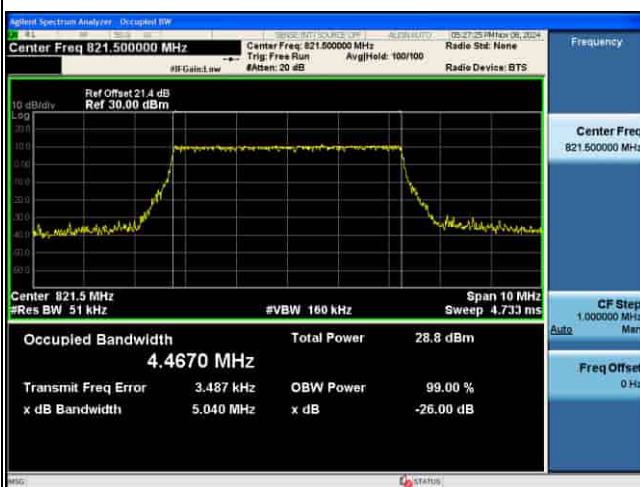
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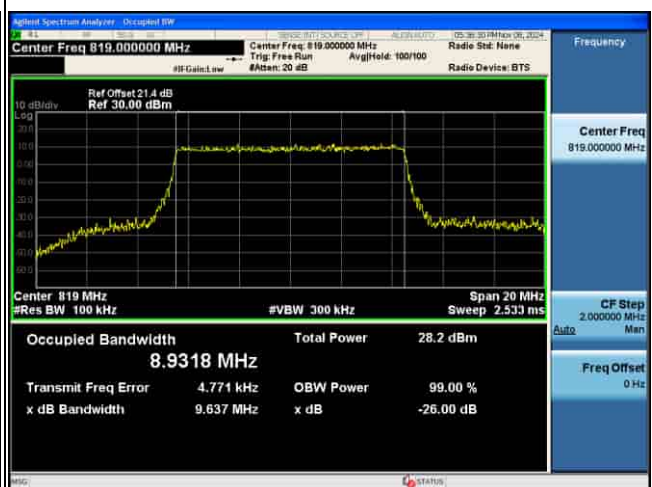
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OCC_4G_B26(Part90)_64QAM_5M CH26765



OCC_4G_B26(Part90)_64QAM_10M CH26740



OCC_4G_B26(Part90)_256QAM_1.4M CH26697



OCC_4G_B26(Part90)_256QAM_1.4M CH26740



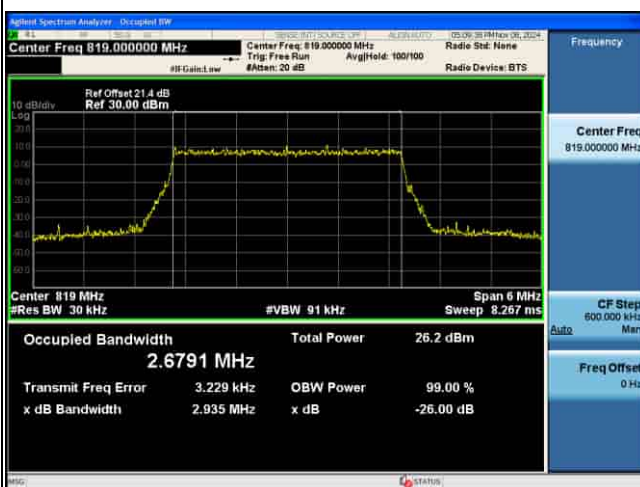
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OCC_4G_B26(Part90)_256QAM_3M CH26705



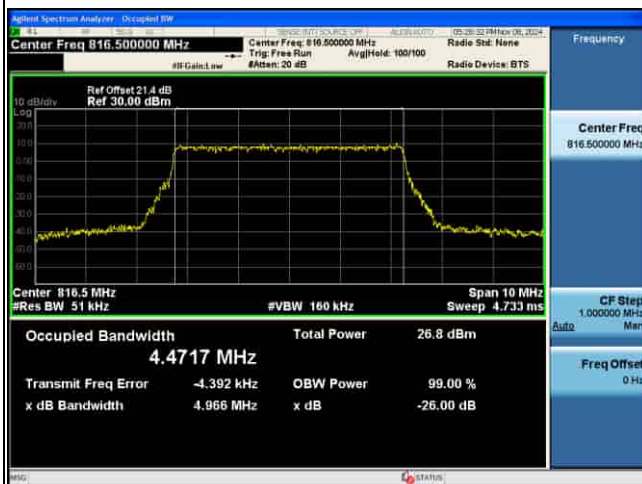
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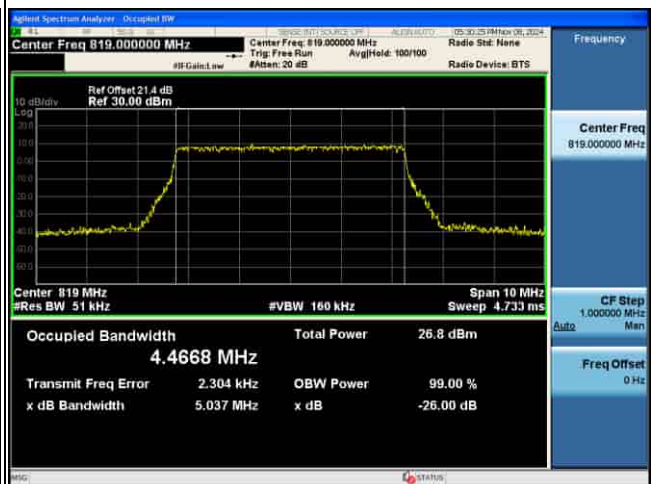
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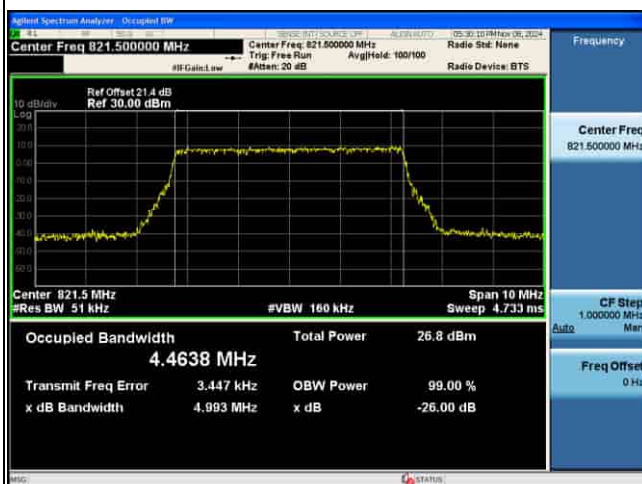
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OCC_4G_B26(Part90)_256QAM_5M CH26740



OCC_4G_B26(Part90)_256QAM_5M CH26765



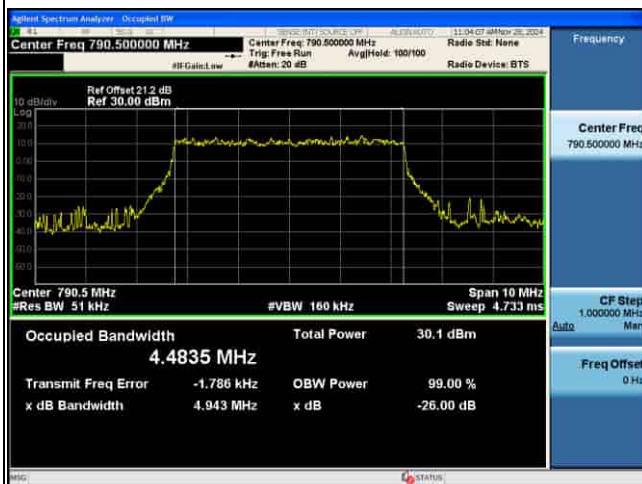
OCC_4G_B26(Part90)_256QAM_10M CH26740



A1.3 NR n14

NR n14												
BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)					26 dB bandwidth (MHz)				
			BPSK	QPSK	16QAM	64QAM	256QAM	BPSK	QPSK	16QAM	64QAM	256QAM
5M	158100	790.5	4.4835	4.4684	4.4611	4.4707	4.4906	4.943	4.936	4.952	4.960	5.071
5M	158600	793	4.4721	4.4684	4.4662	4.4848	4.4673	5.015	4.888	4.906	4.972	4.914
5M	159100	795.5	4.4680	4.4699	4.4549	4.4639	4.4551	4.898	5.045	4.857	4.970	4.944
10M	--	--	--	--	--	--	--	--	--	--	--	--
10M	158600	793	8.8942	8.9335	8.9076	8.9286	8.9123	9.424	9.501	9.526	9.587	9.506
10M	--	--	--	--	--	--	--	--	--	--	--	--

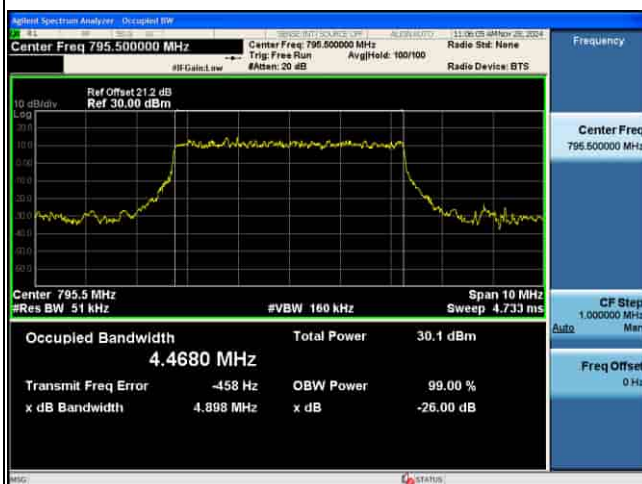
OCC_5G_n14_15KHz_.PI2-BPSK_5M CH158100



OCC_5G_n14_15KHz_.PI2-BPSK_5M CH158600



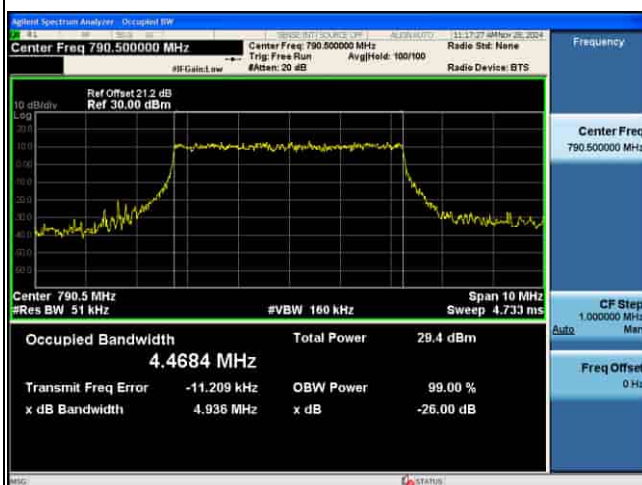
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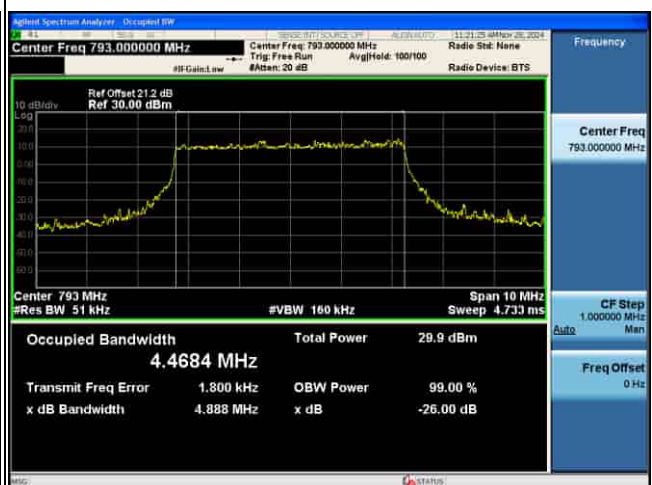
OCC_5G_n14_15KHz_.PI2-BPSK_10M CH158600



OCC_5G_n14_15KHz_.QPSK_5M CH158100



OCC_5G_n14_15KHz_.QPSK_5M CH158600



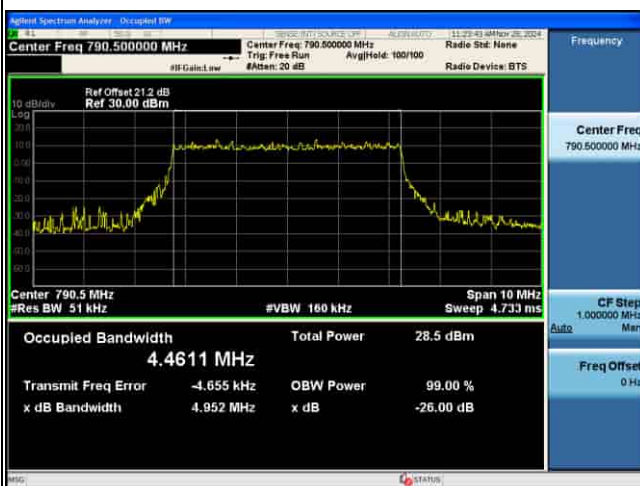
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OCC_5G_n14_15KHz_.QPSK_10M CH158600



OCC_5G_n14_15KHz_16QAM_5M CH158100



OCC_5G_n14_15KHz_16QAM_5M CH158600



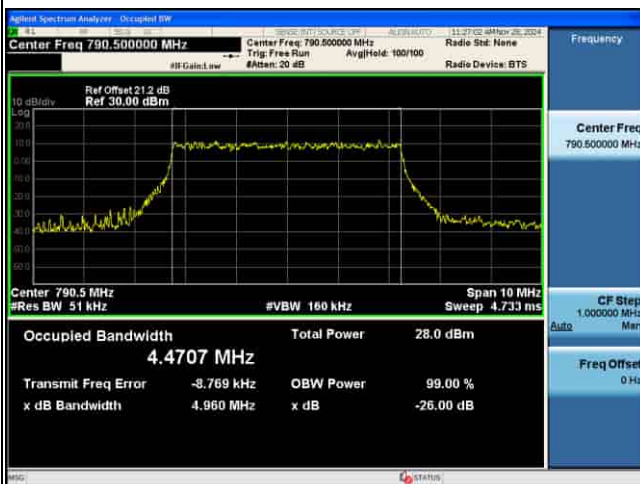
OCC_5G_n14_15KHz_16QAM_5M CH159100



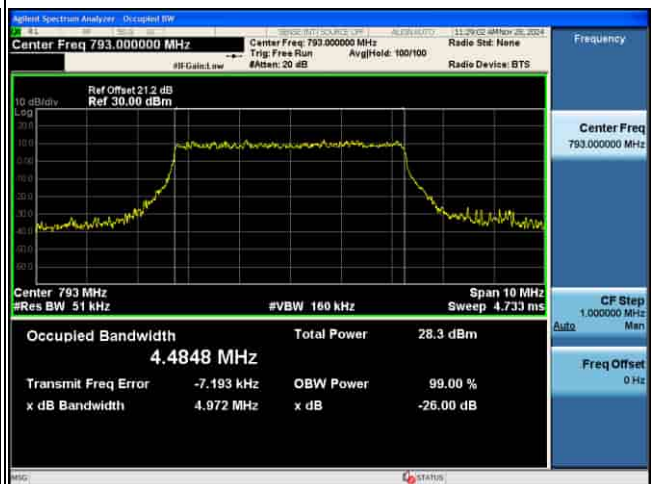
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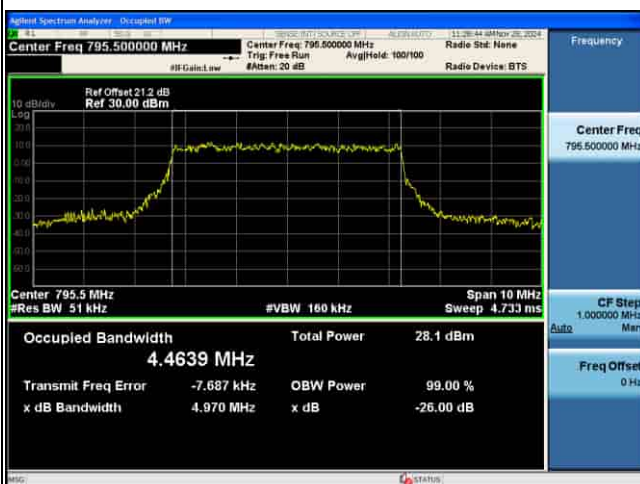
OCC_5G_n14_15KHz_64QAM_5M CH158100



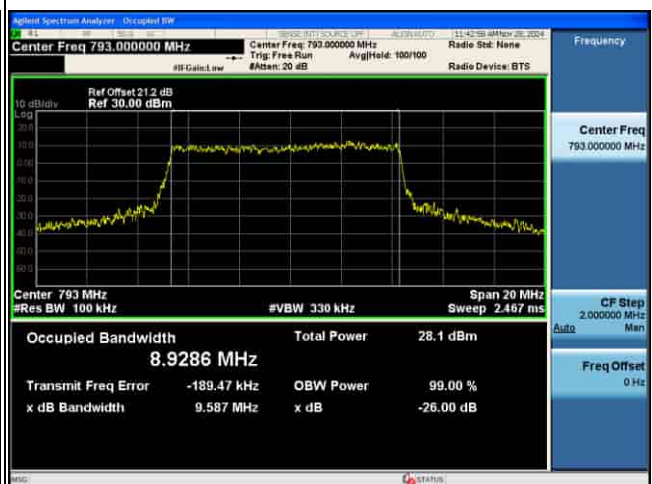
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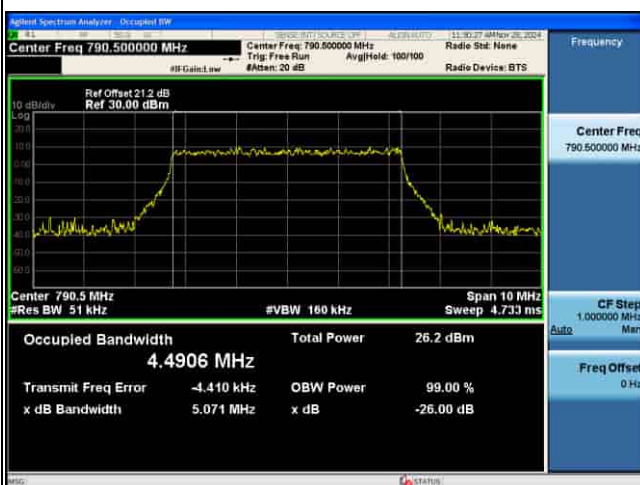
OCC_5G_n14_15KHz_64QAM_5M CH159100



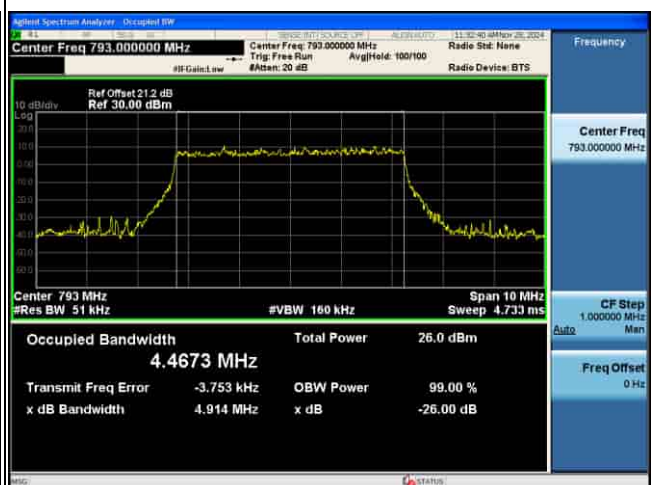
OCC_5G_n14_15KHz_64QAM_10M CH158600

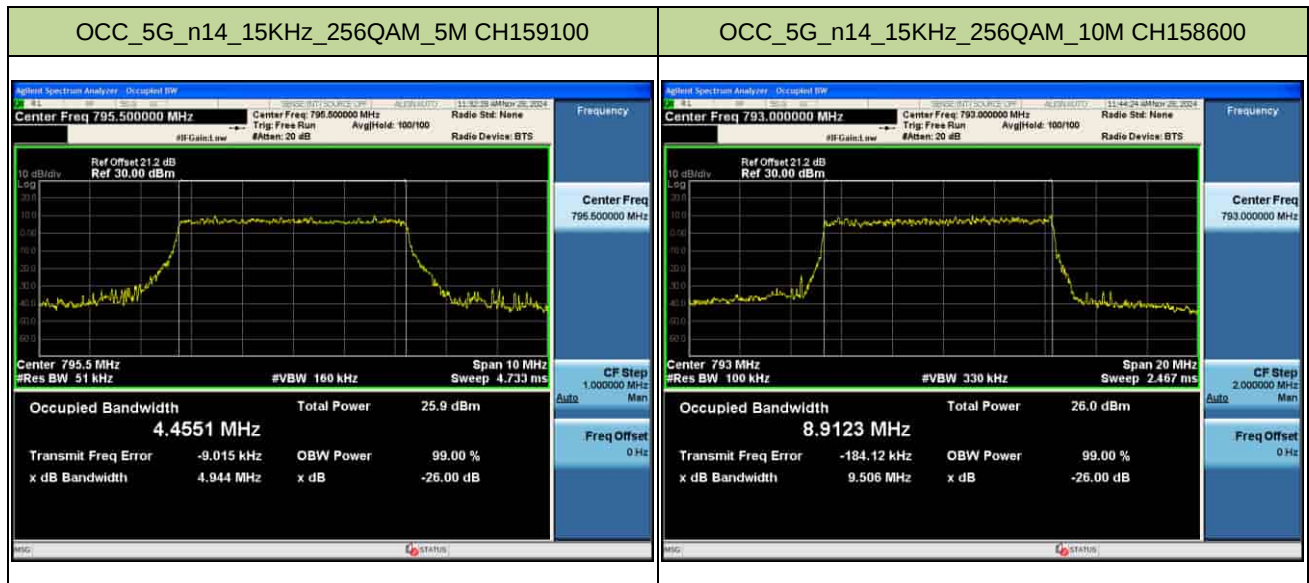


OCC_5G_n14_15KHz_256QAM_5M CH158100



OCC_5G_n14_15KHz_256QAM_5M CH158600

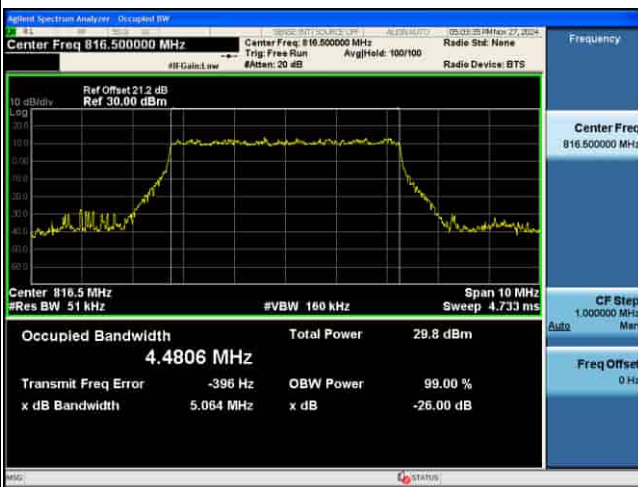




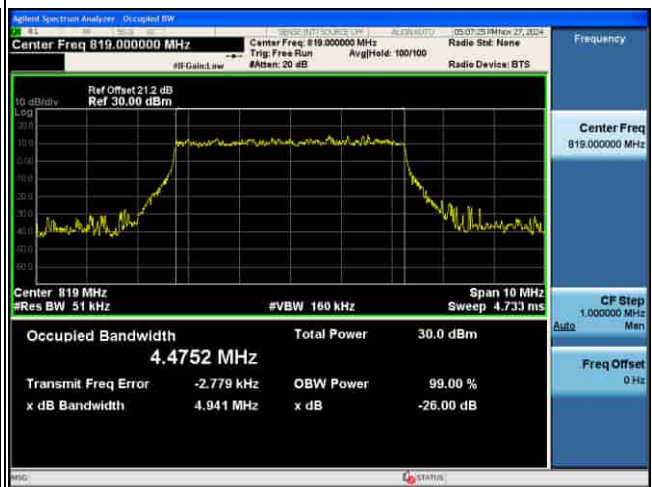
A1.4 NR n26 (814MHz ~ 824MHz)

NR n26 (814~824MHz)												
BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)					26 dB bandwidth (MHz)				
			BPSK	QPSK	16QAM	64QAM	256QAM	BPSK	QPSK	16QAM	64QAM	256QAM
5M	163300	816.5	4.4806	4.4658	4.4602	4.4676	4.4853	5.064	4.969	4.985	4.935	5.006
5M	163800	819	4.4752	4.4697	4.4676	4.4706	4.4617	4.941	4.987	4.840	4.931	4.925
5M	164300	821.5	4.4894	4.4621	4.4594	4.4556	4.4643	4.985	5.013	4.928	4.883	5.007
10M	--	--	--	--	--	--	--	--	--	--	--	--
10M	163800	819	8.9039	8.9428	8.9165	8.9321	8.9196	9.475	9.593	9.609	9.623	9.525
10M	--	--	--	--	--	--	--	--	--	--	--	--

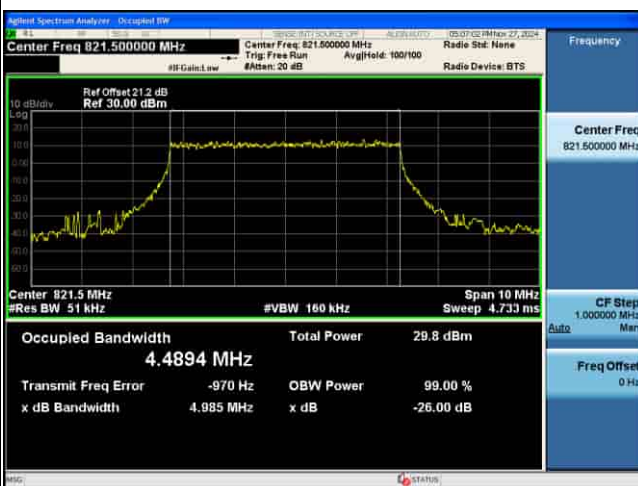
OCC_5G_n26(Part90)_15KHz_.PI2-BPSK_5M CH163300



OCC_5G_n26(Part90)_15KHz_.PI2-BPSK_5M CH163800



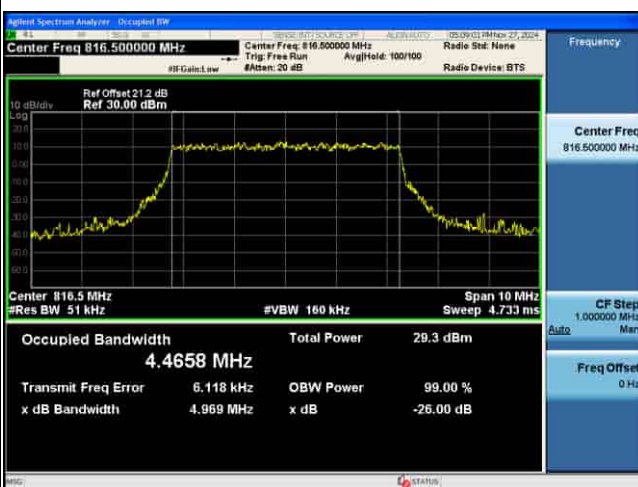
OCC_5G_n26(Part90)_15KHz_.PI2-BPSK_5M CH164300



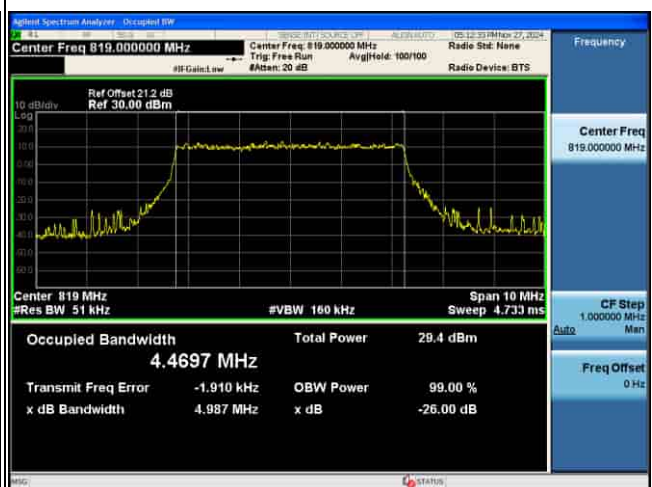
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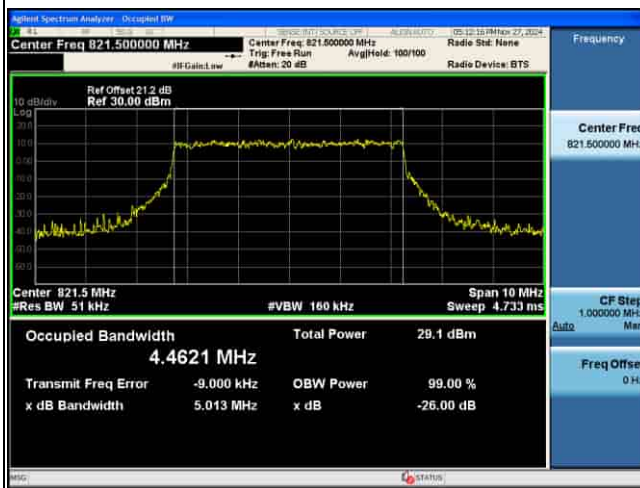
OCC_5G_n26(Part90)_15KHz_.QPSK_5M CH163300



OCC_5G_n26(Part90)_15KHz_.QPSK_5M CH163800



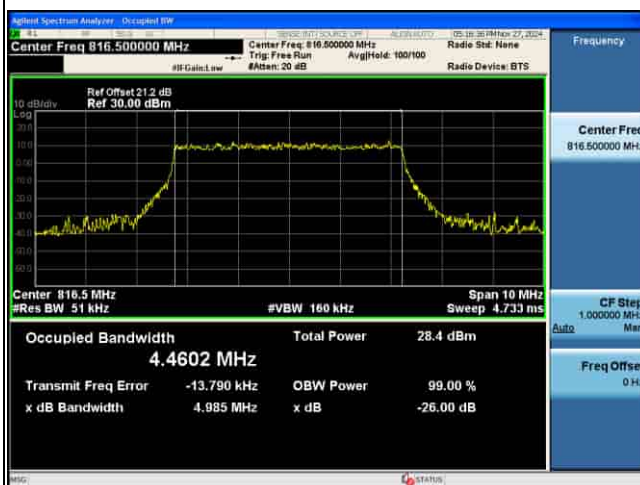
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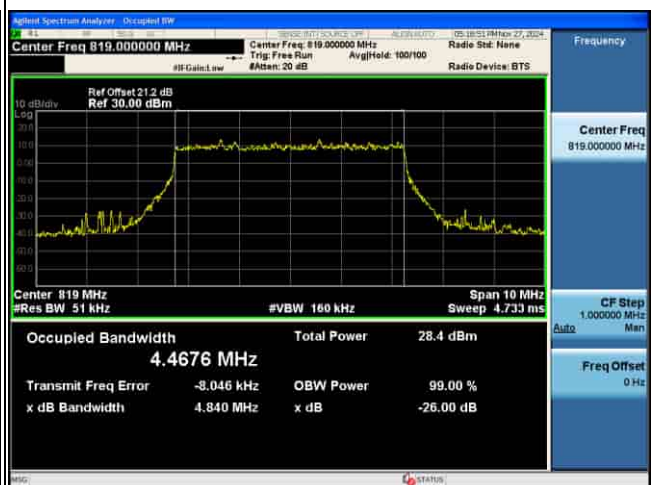
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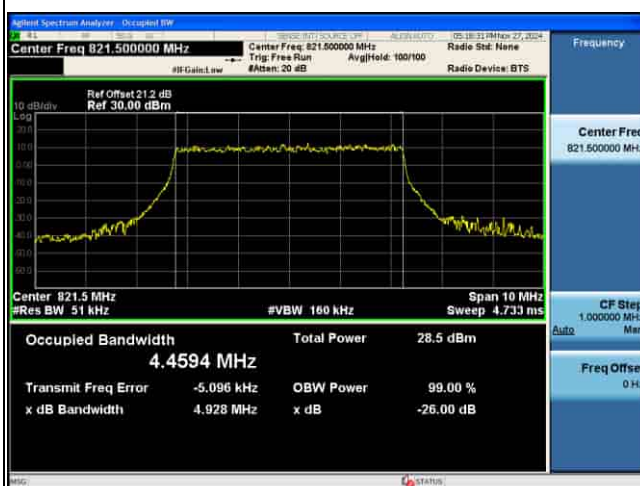
OCC_5G_n26(Part90)_15KHz_16QAM_5M CH163300



OCC_5G_n26(Part90)_15KHz_16QAM_5M CH163800



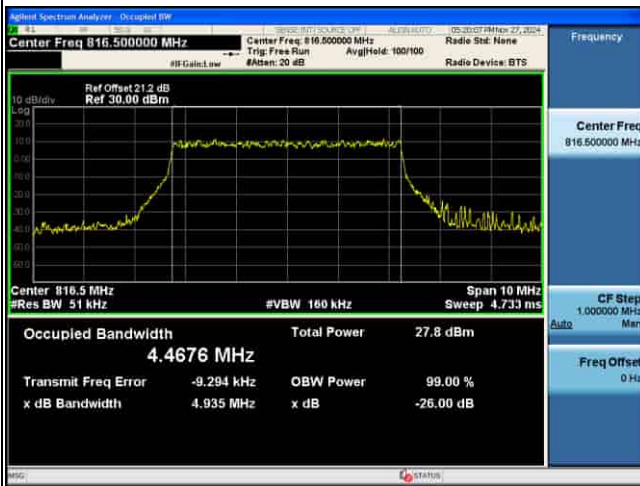
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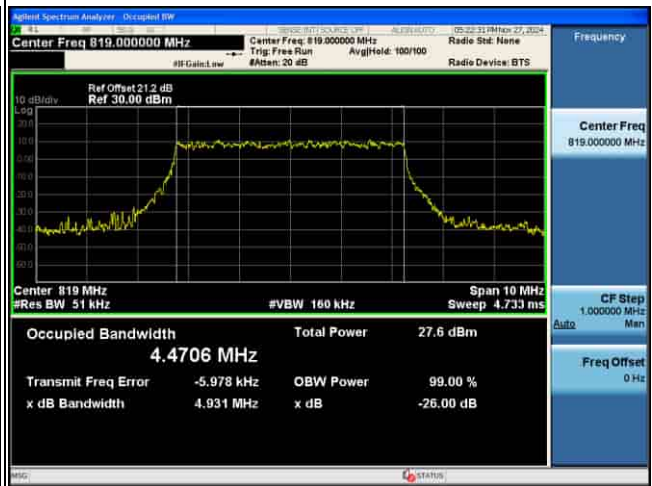
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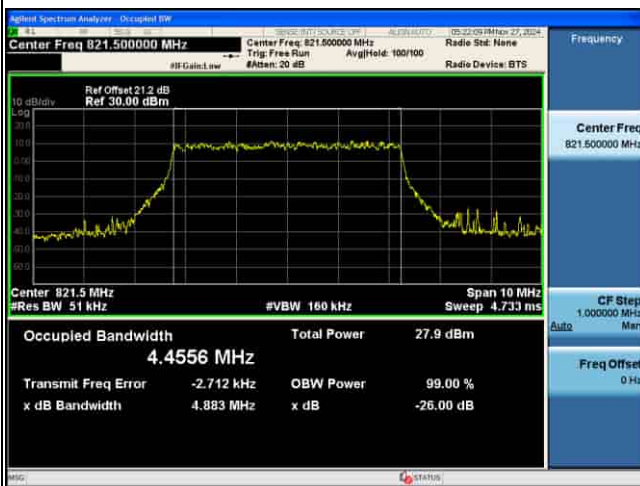
OCC_5G_n26(Part90)_15KHz_64QAM_5M CH163300



OCC_5G_n26(Part90)_15KHz_64QAM_5M CH163800



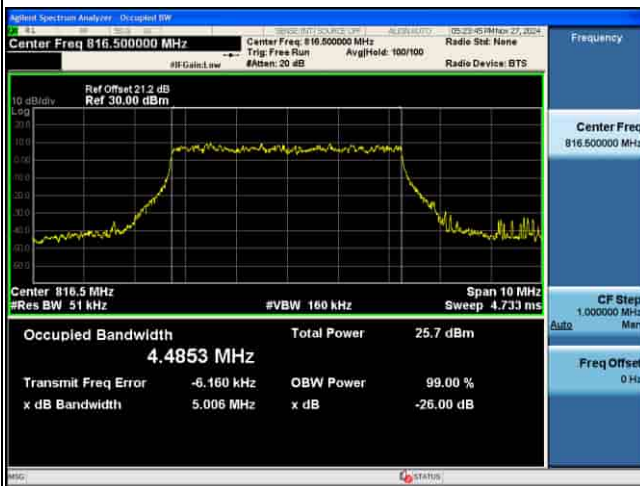
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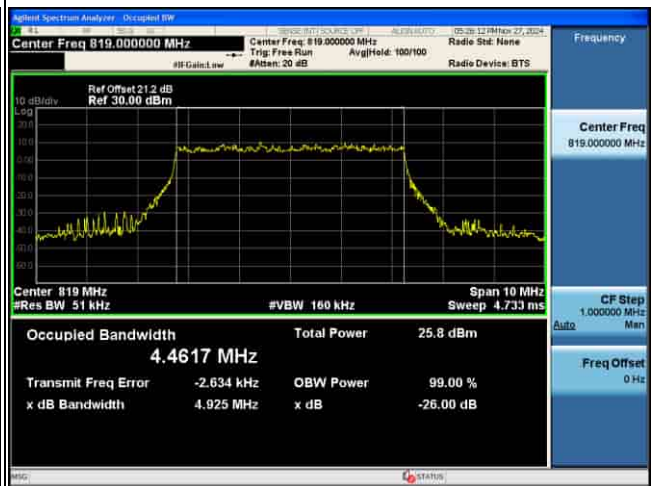
OCC_5G_n26(Part90)_15KHz_64QAM_10M CH163800

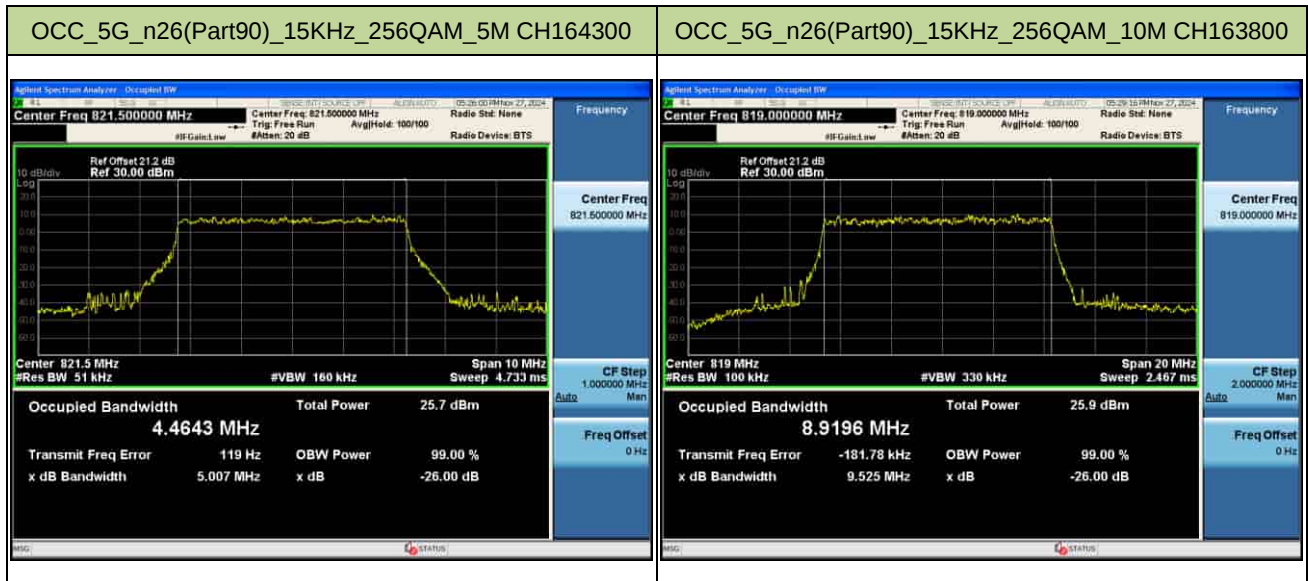


OCC_5G_n26(Part90)_15KHz_256QAM_5M CH163300



OCC_5G_n26(Part90)_15KHz_256QAM_5M CH163800





A2. Frequency Stability Test Result

A2.1 LTE Band 14

Test Site	SR3	Test Engineer	Wen Lee
Test Date	12/25/2024	Test Band	Band 14 10M

Temperature vs. Frequency Stability						
Voltage	Power	Temp	Declared Frequency	Measured Frequency	Frequency Tolerance	Limit
(%)	(VAC)	(°C)	(MHz)	(Hz)	(ppm)	(ppm)
100%	DC 3.6V	-30	793	1.43	0.002	±2.5
		-20	793	1.14	0.001	±2.5
		-10	793	0.42908	0.001	±2.5
		0	793	-0.58859	-0.001	±2.5
		10	793	-1.33	-0.002	±2.5
		+ 20 (Ref)	793	1.13	0.001	±2.5
		30	793	-0.62388	-0.001	±2.5
		40	793	-0.78641	-0.001	±2.5
		50	793	-2.53	-0.003	±2.5
Voltage vs. Frequency Stability						
Voltage	Power	Temp	Declared Frequency	Measured Frequency	Frequency Tolerance	Limit
(%)	(VAC)	(°C)	(MHz)	(Hz)	(ppm)	(ppm)
100%	DC 3.6V	20	793	1.13	0.001	±2.5
115%	DC 4.14V	20	793	0.98738	0.001	±2.5
97%	DC 3.49V	20	793	0.95372	0.001	±2.5

DC Current

DC Current (A)	Link	0.73 A	IDLE	0.14 A
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A2.2 LTE Band 26 (814MHz ~ 824MHz)

Test Site	SR3	Test Engineer	Wen Lee
Test Date	12/25/2024	Test Band	Band 26 (Part90) 10M

Temperature vs. Frequency Stability						
Voltage	Power	Temp	Declared Frequency	Measured Frequency	Frequency Tolerance	Limit
(%)	(VAC)	(°C)	(MHz)	(Hz)	(ppm)	(ppm)
100%	DC 3.6V	-30	819	-1.51	-0.002	±2.5
		-20	819	1.99	0.002	±2.5
		-10	819	1.02	0.001	±2.5
		0	819	-1.81	-0.002	±2.5
		10	819	-1.29	-0.002	±2.5
		+ 20 (Ref)	819	1.06	0.001	±2.5
		30	819	-2.09	-0.003	±2.5
		40	819	-2.44	-0.003	±2.5
		50	819	-2.31	-0.003	±2.5
Voltage vs. Frequency Stability						
Voltage	Power	Temp	Declared Frequency	Measured Frequency	Frequency Tolerance	Limit
(%)	(VAC)	(°C)	(MHz)	(Hz)	(ppm)	(ppm)
100%	DC 3.6V	20	819	1.06	0.001	±2.5
115%	DC 4.14V	20	819	1.13	0.001	±2.5
97%	DC 3.49V	20	819	1.14	0.001	±2.5

DC Current

DC Current (A)	Link	0.57 A	IDLE	0.13 A
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A2.3 NR n14

Test Site	SR3	Test Engineer	Wen Lee
Test Date	12/25/2024	Test Band	NR n14 10M

Temperature vs. Frequency Stability						
Voltage	Power	Temp	Declared Frequency	Measured Frequency	Frequency Tolerance	Limit
(%)	(VAC)	(°C)	(MHz)	(Hz)	(ppm)	(ppm)
100%	DC 3.6V	-30	793	-7.30	-0.009	±2.5
		-20	793	-6.59	-0.008	±2.5
		-10	793	-7.40	-0.009	±2.5
		0	793	-7.31	-0.009	±2.5
		10	793	-6.90	-0.009	±2.5
		+ 20 (Ref)	793	-7.40	-0.009	±2.5
		30	793	-7.47	-0.009	±2.5
		40	793	-7.62	-0.010	±2.5
		50	793	-7.63	-0.010	±2.5
Voltage vs. Frequency Stability						
Voltage	Power	Temp	Declared Frequency	Measured Frequency	Frequency Tolerance	Limit
(%)	(VAC)	(°C)	(MHz)	(Hz)	(ppm)	(ppm)
100%	DC 3.6V	20	793	-7.40	-0.009	±2.5
115%	DC 4.14V	20	793	-7.06	-0.009	±2.5
97%	DC 3.49V	20	793	-7.28	-0.009	±2.5

DC Current

DC Current (A)	Link	0.85 A	IDLE	0.12 A
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A2.4 NR n26 (814MHz ~ 824MHz)

Test Site	SR3	Test Engineer	Wen Lee
Test Date	12/25/2024	Test Band	NR n26 (Part90) 10M

Temperature vs. Frequency Stability						
Voltage	Power	Temp	Declared Frequency	Measured Frequency	Frequency Tolerance	Limit
(%)	(VAC)	(°C)	(MHz)	(Hz)	(ppm)	(ppm)
100%	DC 3.6V	-30	819	0.27116	0.000	±2.5
		-20	819	-0.19631	0.000	±2.5
		-10	819	-0.10787	0.000	±2.5
		0	819	0.78208	0.001	±2.5
		10	819	0.29112	0.000	±2.5
		+ 20 (Ref)	819	0.75980	0.001	±2.5
		30	819	-0.57056	-0.001	±2.5
		40	819	-0.16646	0.000	±2.5
		50	819	-0.16823	0.000	±2.5
Voltage vs. Frequency Stability						
Voltage	Power	Temp	Declared Frequency	Measured Frequency	Frequency Tolerance	Limit
(%)	(VAC)	(°C)	(MHz)	(Hz)	(ppm)	(ppm)
100%	DC 3.6V	20	819	0.7598	0.001	±2.5
115%	DC 4.14V	20	819	0.7446	0.001	±2.5
97%	DC 3.49V	20	819	0.9470	0.001	±2.5

DC Current

DC Current (A)	Link	0.59 A	IDLE	0.14 A
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A3. Transmitter Output Power Test Result

A3.1 LTE Band 14

LTE Band14			Maximum Conducted Output Power (Channel / Frequency (MHz))					
Modulation	Bandwidth		5MHz			10MHz		
	RB	RB	23305	23330	23355	--	23330	--
	No.	Offset	790.5	793	795.5	--	793	--
QPSK	1	#0	24.35	24.19	24.30	--	24.44	--
	1	#Mid	24.29	24.63	24.17	--	24.47	--
	1	#High	24.32	24.14	24.15	--	24.16	--
	50%	#0	23.21	23.29	23.23	--	23.27	--
	50%	#Mid	23.28	23.25	23.40	--	23.37	--
	50%	#High	23.35	23.34	23.32	--	23.35	--
	100%	#0	23.29	23.23	23.19	--	23.24	--
16QAM	1	#0	23.87	23.22	22.96	--	23.19	--
	1	#Mid	23.52	23.52	23.05	--	23.84	--
	1	#High	23.98	23.36	23.05	--	23.40	--
	50%	#0	22.22	22.33	22.14	--	22.27	--
	50%	#Mid	22.34	22.44	22.31	--	22.29	--
	50%	#High	22.23	22.28	22.20	--	22.34	--
	100%	#0	22.33	22.20	22.23	--	22.29	--
64QAM	1	#0	22.44	21.95	21.95	--	22.15	--
	1	#Mid	22.64	22.81	22.37	--	22.59	--
	1	#High	22.54	22.07	21.86	--	22.35	--
	50%	#0	21.17	21.20	21.18	--	21.27	--
	50%	#Mid	21.26	21.15	21.31	--	21.35	--
	50%	#High	21.19	21.28	21.35	--	21.37	--
	100%	#0	21.32	21.29	21.23	--	21.33	--
256QAM	1	#0	19.30	19.21	19.33	--	19.30	--
	1	#Mid	18.94	19.41	18.97	--	19.18	--
	1	#High	19.54	19.32	19.65	--	19.35	--
	50%	#0	19.37	19.23	19.31	--	19.35	--
	50%	#Mid	19.30	19.33	19.40	--	19.41	--
	50%	#High	19.21	19.31	19.38	--	19.49	--
	100%	#0	19.29	19.28	19.36	--	19.39	--

A3.2 LTE Band 26 (814MHz ~ 824MHz)

LTE Band26			Maximum Conducted Output Power (Channel / Frequency (MHz))											
Modulation	Bandwidth		1.4MHz			3MHz			5MHz			10MHz		
	RB	RB	26697	26740	26783	26705	26740	26775	26715	26740	26765	--	26740	--
	No.	Offset	814.7	819	823.3	815.5	819	822.5	816.5	819	821.5	--	819	--
QPSK	1	#0	24.00	24.18	24.00	24.02	23.98	24.01	24.37	24.48	24.00	--	24.10	--
	1	#Mid	24.14	23.82	24.18	24.25	23.80	23.99	24.20	24.08	24.00	--	23.95	--
	1	#High	23.77	23.82	24.49	23.94	23.78	23.98	24.29	23.93	24.20	--	24.10	--
	50%	#0	24.05	23.95	23.96	23.13	22.98	23.05	23.15	23.06	22.92	--	23.12	--
	50%	#Mid	24.13	24.02	23.85	23.15	23.06	23.11	23.15	23.10	23.05	--	23.16	--
	50%	#High	23.99	24.06	24.09	23.06	23.00	23.04	23.11	22.99	23.10	--	23.00	--
	100%	#0	23.07	22.97	23.02	23.05	23.01	23.08	23.12	23.12	23.11	--	23.09	--
16QAM	1	#0	23.28	22.99	23.36	22.56	22.20	23.12	22.78	23.15	22.55	--	22.86	--
	1	#Mid	23.15	22.73	23.44	23.03	23.22	23.48	23.11	23.31	23.11	--	23.64	--
	1	#High	23.63	22.82	23.14	23.11	23.09	22.92	23.40	23.49	22.42	--	22.85	--
	50%	#0	23.08	23.15	22.75	21.97	22.20	22.02	22.20	22.21	22.00	--	22.07	--
	50%	#Mid	23.09	23.01	22.70	22.24	22.23	22.15	22.16	22.05	22.07	--	22.24	--
	50%	#High	22.76	23.06	22.84	22.09	22.10	22.18	22.08	22.08	22.15	--	21.99	--
	100%	#0	21.91	21.88	22.18	21.98	22.08	22.22	22.03	21.96	22.01	--	22.07	--
64QAM	1	#0	21.93	22.23	22.45	22.36	22.29	22.21	21.76	21.84	22.15	--	21.78	--
	1	#Mid	22.07	22.40	21.97	22.05	21.68	21.99	21.73	21.71	21.69	--	22.19	--
	1	#High	21.01	21.65	21.93	21.65	22.30	22.07	22.26	21.82	21.57	--	22.07	--
	50%	#0	21.83	22.19	21.97	21.04	20.83	20.92	21.14	21.13	21.02	--	21.11	--
	50%	#Mid	22.05	22.03	22.16	21.17	20.95	21.08	21.20	21.17	21.15	--	21.06	--
	50%	#High	22.30	21.77	21.98	21.31	21.10	21.22	21.22	21.23	21.20	--	21.19	--
	100%	#0	21.01	21.03	20.73	21.17	21.13	20.99	20.96	21.27	21.09	--	21.19	--
256QAM	1	#0	18.24	19.40	19.60	18.40	20.01	18.86	19.14	19.70	18.64	--	19.33	--
	1	#Mid	19.01	18.71	19.70	19.61	19.33	19.30	18.81	19.44	19.21	--	19.36	--
	1	#High	18.85	18.97	18.76	19.17	19.13	19.22	19.15	19.73	18.72	--	18.93	--
	50%	#0	19.34	19.38	19.04	19.02	19.06	19.03	19.11	19.07	19.13	--	19.09	--
	50%	#Mid	19.17	18.88	19.12	19.18	18.91	18.87	19.06	19.24	19.17	--	19.24	--
	50%	#High	19.00	18.65	18.92	19.03	19.16	19.02	19.17	19.21	19.17	--	19.01	--
	100%	#0	19.30	19.03	18.93	19.04	19.08	19.04	19.18	19.14	19.18	--	19.17	--

A3.3 NR n14

NR N14		Maximum Conducted Output Power (Channel / Frequency (MHz))																	
SCS 15kHz	Modulation	DFT_BPSK			DFT_QPSK			DFT_16QAM			DFT_64QAM			DFT_256QAM			CP_QPSK		
Bandwidth	RB Allocation	158100	158600	159100	158100	158600	159100	158100	158600	159100	158100	158600	159100	158100	158600	159100	158100	158600	159100
	No. @ Offset	790.5	793	795.5	790.5	793	795.5	790.5	793	795.5	790.5	793	795.5	790.5	793	795.5	790.5	793	795.5
5MHz	1@0	23.63	23.69	23.78	23.09	23.00	23.21	22.09	22.14	21.99	21.41	21.64	21.94	18.77	19.07	19.54	20.74	21.57	21.49
	1@1	24.26	24.35	24.38	24.14	24.08	24.28	23.04	23.10	22.97	21.53	21.62	21.98	18.87	19.04	19.61	22.11	23.01	22.95
	1@23	24.31	24.29	24.22	24.09	24.01	24.20	22.99	23.07	22.92	21.42	21.59	21.97	18.92	19.23	19.62	22.08	22.81	23.07
	1@24	23.82	23.75	23.75	23.06	23.01	23.19	21.97	22.12	21.94	21.44	21.66	21.94	18.82	19.18	19.65	20.78	21.50	21.52
	12@6	24.21	24.14	24.29	24.23	24.16	24.23	23.17	23.19	23.30	21.84	21.74	21.66	19.53	19.69	19.73	22.67	22.78	22.76
	25@0	23.68	23.65	23.68	23.15	23.18	23.22	22.25	22.28	22.24	21.86	21.72	21.88	19.73	19.59	19.61	21.05	21.26	21.32
Bandwidth	RB Allocation	--	158600	--	--	158600	--	--	158600	--	--	158600	--	--	158600	--	--	158600	--
	No. @ Offset	--	793	--	--	793	--	--	793	--	--	793	--	--	793	--	--	793	--
10MHz	1@0	--	23.64	--	--	23.21	--	--	21.94	--	--	21.33	--	--	19.44	--	--	21.29	--
	1@1	--	23.85	--	--	24.05	--	--	23.16	--	--	21.83	--	--	19.45	--	--	22.66	--
	1@50	--	23.88	--	--	24.01	--	--	23.09	--	--	21.53	--	--	19.52	--	--	22.44	--
	1@51	--	23.34	--	--	22.99	--	--	22.13	--	--	21.49	--	--	19.55	--	--	21.20	--
	25@12	--	24.18	--	--	24.15	--	--	23.20	--	--	21.84	--	--	19.65	--	--	22.73	--
	50@0	--	23.59	--	--	23.15	--	--	22.16	--	--	21.73	--	--	19.69	--	--	21.18	--

A3.4 NR n26 (814MHz ~ 824MHz)

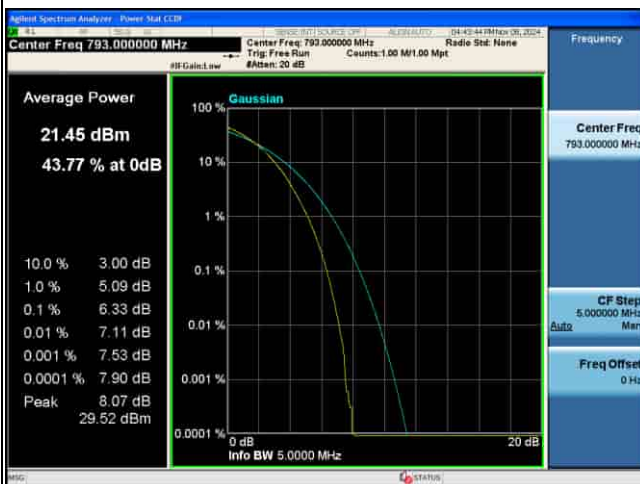
NR N26		Maximum Conducted Output Power (Channel / Frequency (MHz))																	
SCS 15kHz	Modulation	DFT_BPSK			DFT_QPSK			DFT_16QAM			DFT_64QAM			DFT_256QAM			CP_QPSK		
Bandwidth	RB Allocation	163300	163800	164300	163300	163800	164300	163300	163800	164300	163300	163800	164300	163300	163800	164300	163300	163800	164300
	No. @ Offset	816.5	819	821.5	816.5	819	821.5	816.5	819	821.5	816.5	819	821.5	816.5	819	821.5	816.5	819	821.5
5MHz	1@0	23.31	23.36	23.43	22.83	22.69	22.98	21.72	21.86	21.81	21.21	21.36	21.70	18.53	18.82	19.41	20.43	20.89	21.16
	1@1	23.80	23.99	24.11	23.88	23.73	24.00	22.68	22.80	22.74	21.20	21.29	21.63	18.53	18.84	19.45	21.83	22.63	22.90
	1@23	23.86	23.98	23.96	23.91	23.74	23.89	22.79	22.89	22.70	21.27	21.33	21.64	18.66	18.89	19.41	21.81	22.58	22.80
	1@24	23.25	23.52	23.56	22.82	22.78	22.96	21.75	21.85	21.75	21.18	21.36	21.74	18.58	18.81	19.51	20.57	21.03	21.32
	12@6	24.02	23.82	23.93	23.94	23.81	24.00	22.99	22.91	22.93	21.49	21.41	21.32	19.39	19.46	19.43	22.51	22.52	22.44
	25@0	23.46	23.42	23.47	22.92	22.95	22.93	21.96	22.03	21.94	21.55	21.47	21.64	19.53	19.36	19.37	20.81	21.11	21.04
Bandwidth	RB Allocation	--	163800	--	--	163800	--	--	163800	--	--	163800	--	--	163800	--	--	163800	--
	No. @ Offset	--	819	--	--	819	--	--	819	--	--	819	--	--	819	--	--	819	--
10MHz	1@0	--	23.29	--	--	22.77	--	--	21.92	--	--	21.28	--	--	19.20	--	--	20.78	--
	1@1	--	23.53	--	--	23.79	--	--	22.90	--	--	21.19	--	--	19.23	--	--	22.33	--
	1@50	--	23.73	--	--	23.84	--	--	22.99	--	--	21.42	--	--	19.31	--	--	22.29	--
	1@51	--	23.16	--	--	22.92	--	--	22.02	--	--	21.39	--	--	19.32	--	--	20.94	--
	25@12	--	23.92	--	--	23.85	--	--	22.89	--	--	21.58	--	--	19.38	--	--	22.39	--
	50@0	--	23.45	--	--	23.00	--	--	22.01	--	--	21.52	--	--	19.50	--	--	20.96	--

A4. Peak to Average Radio Test Result

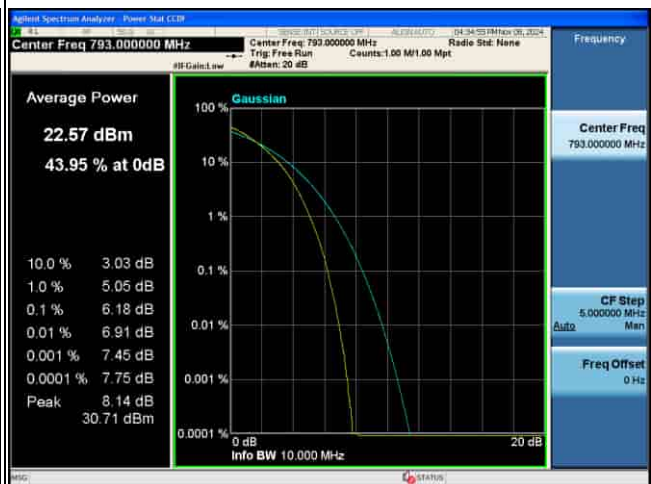
A4.1 LTE Band 14



PTAR_4G_B14_64QAM_5M CH23330



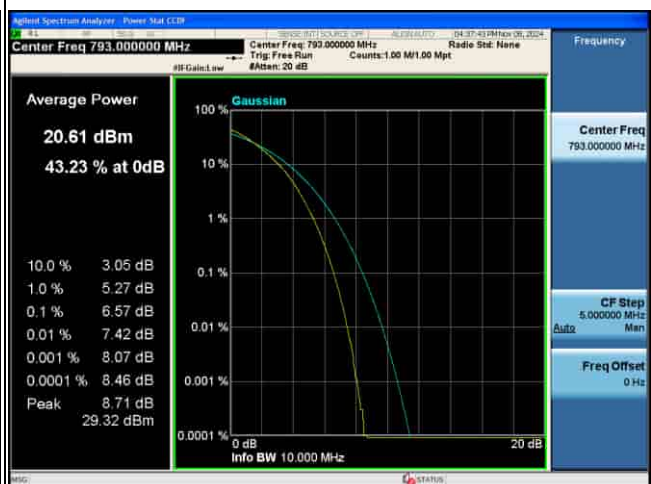
PTAR_4G_B14_64QAM_10M CH23330



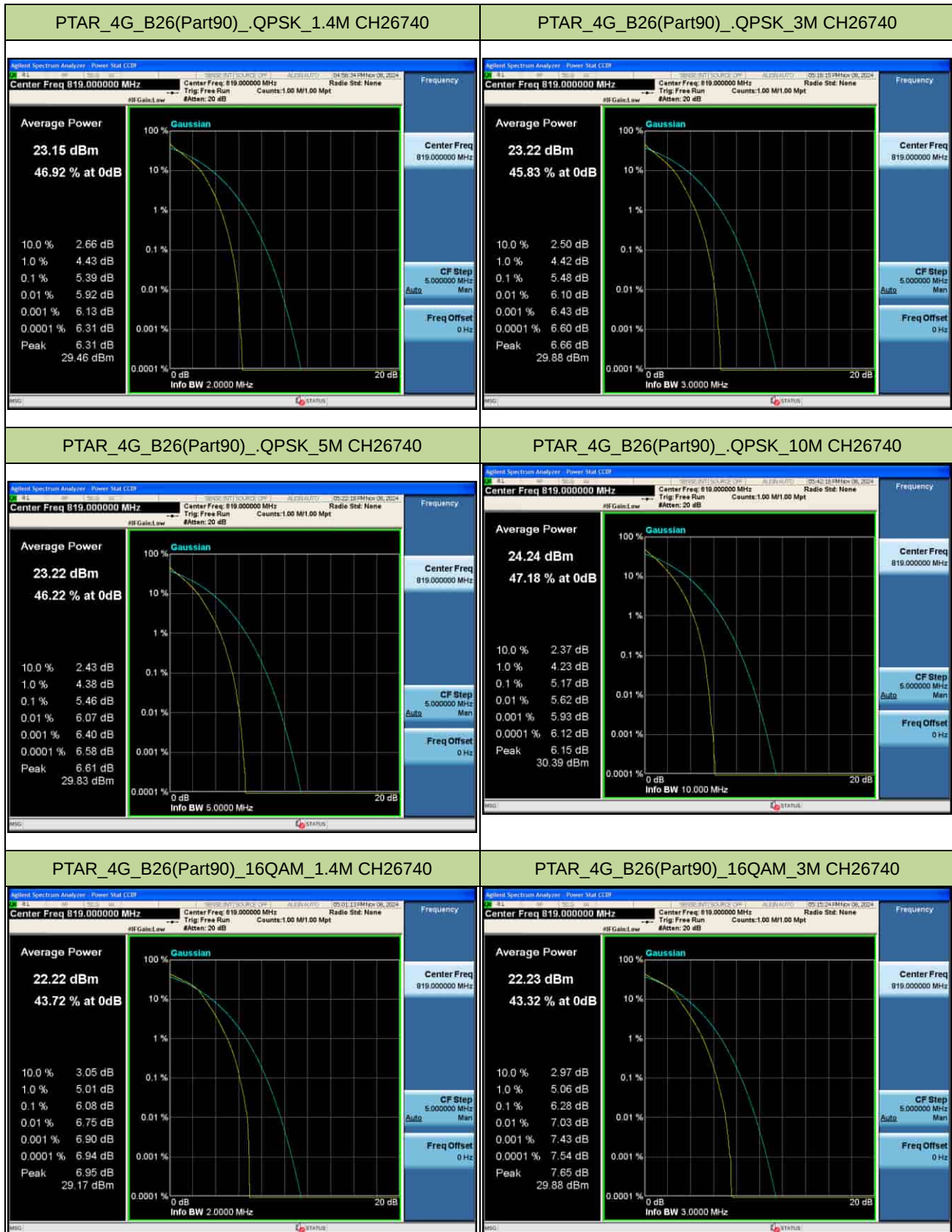
PTAR_4G_B14_256QAM_5M CH23330

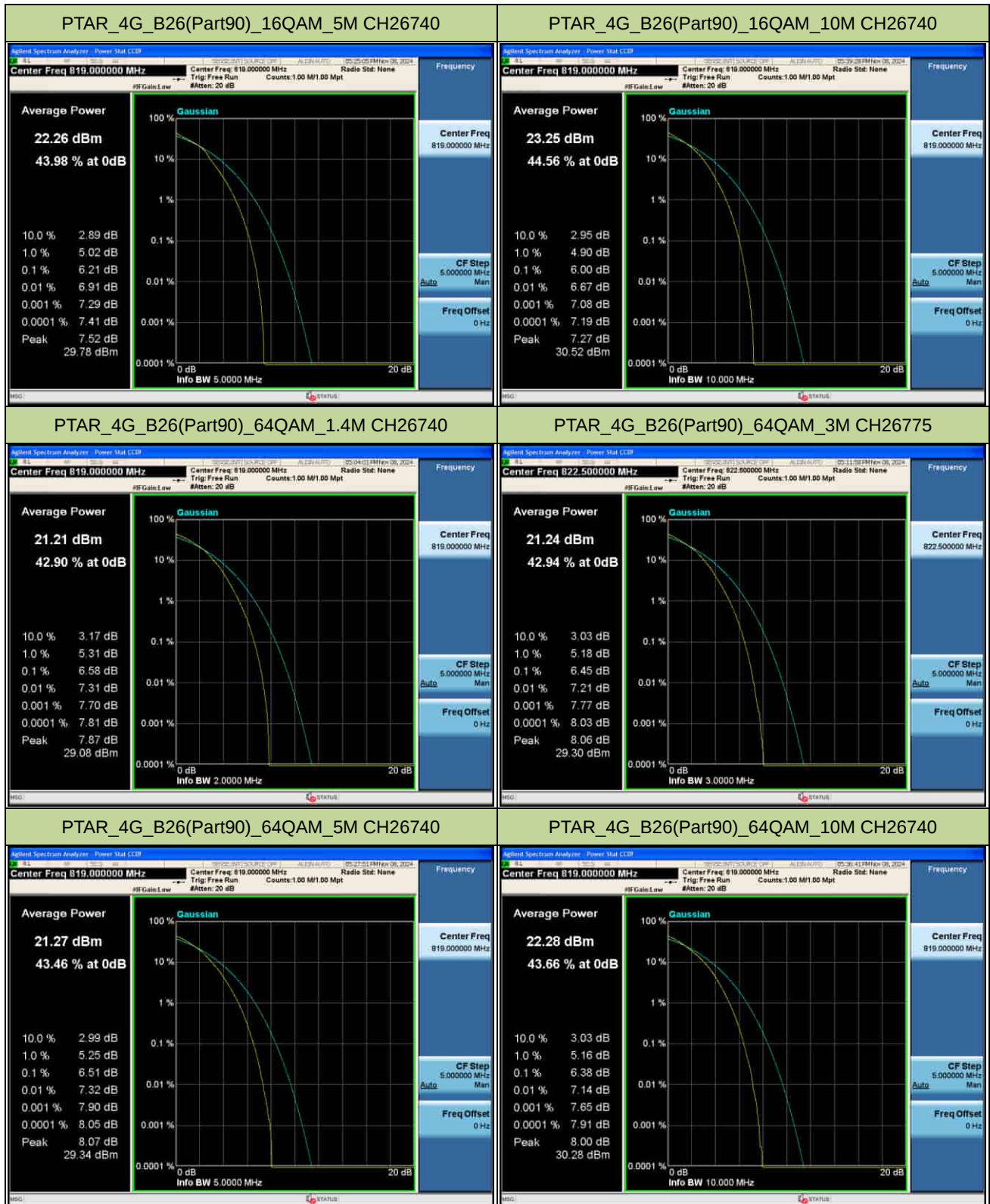


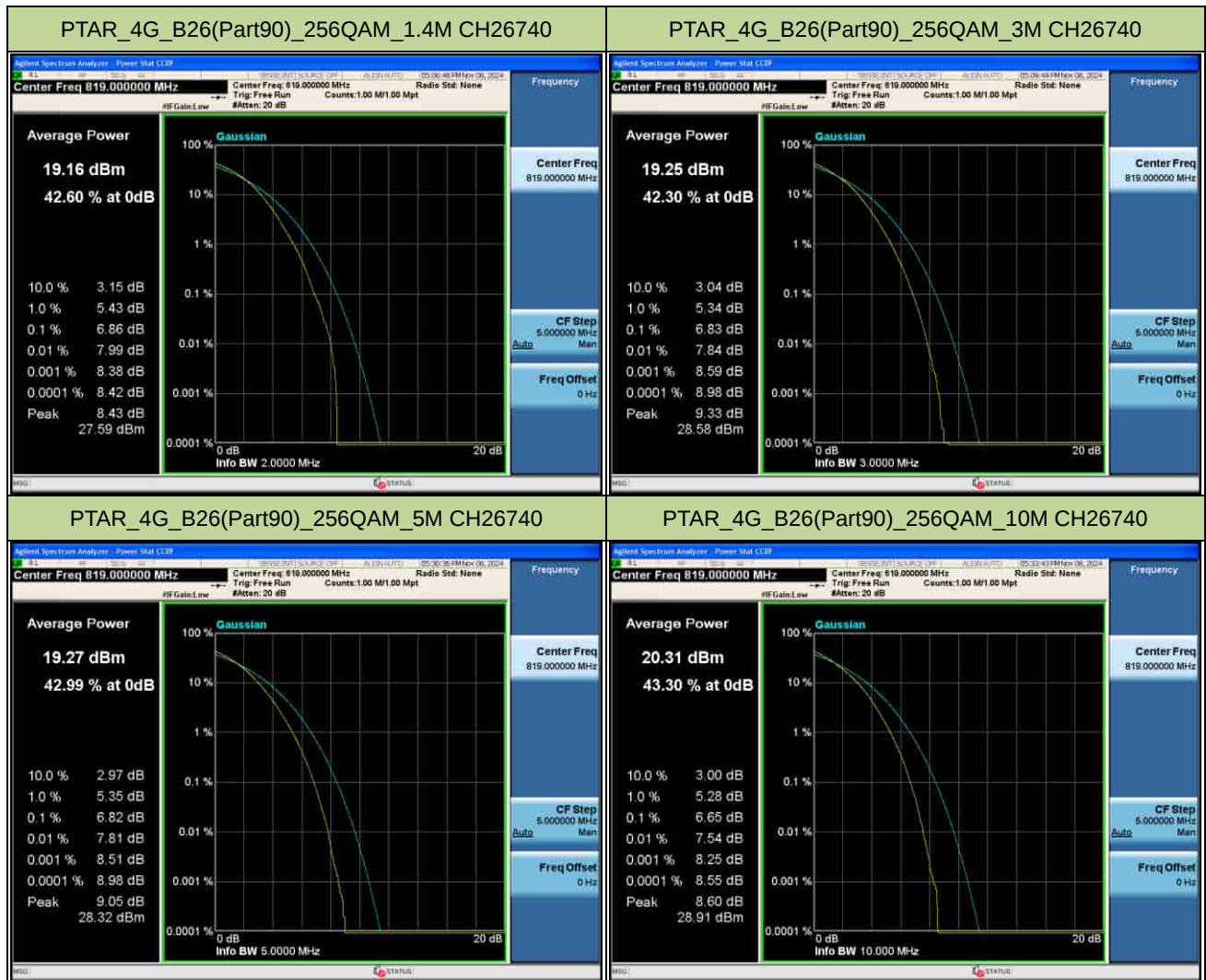
PTAR_4G_B14_256QAM_10M CH23330



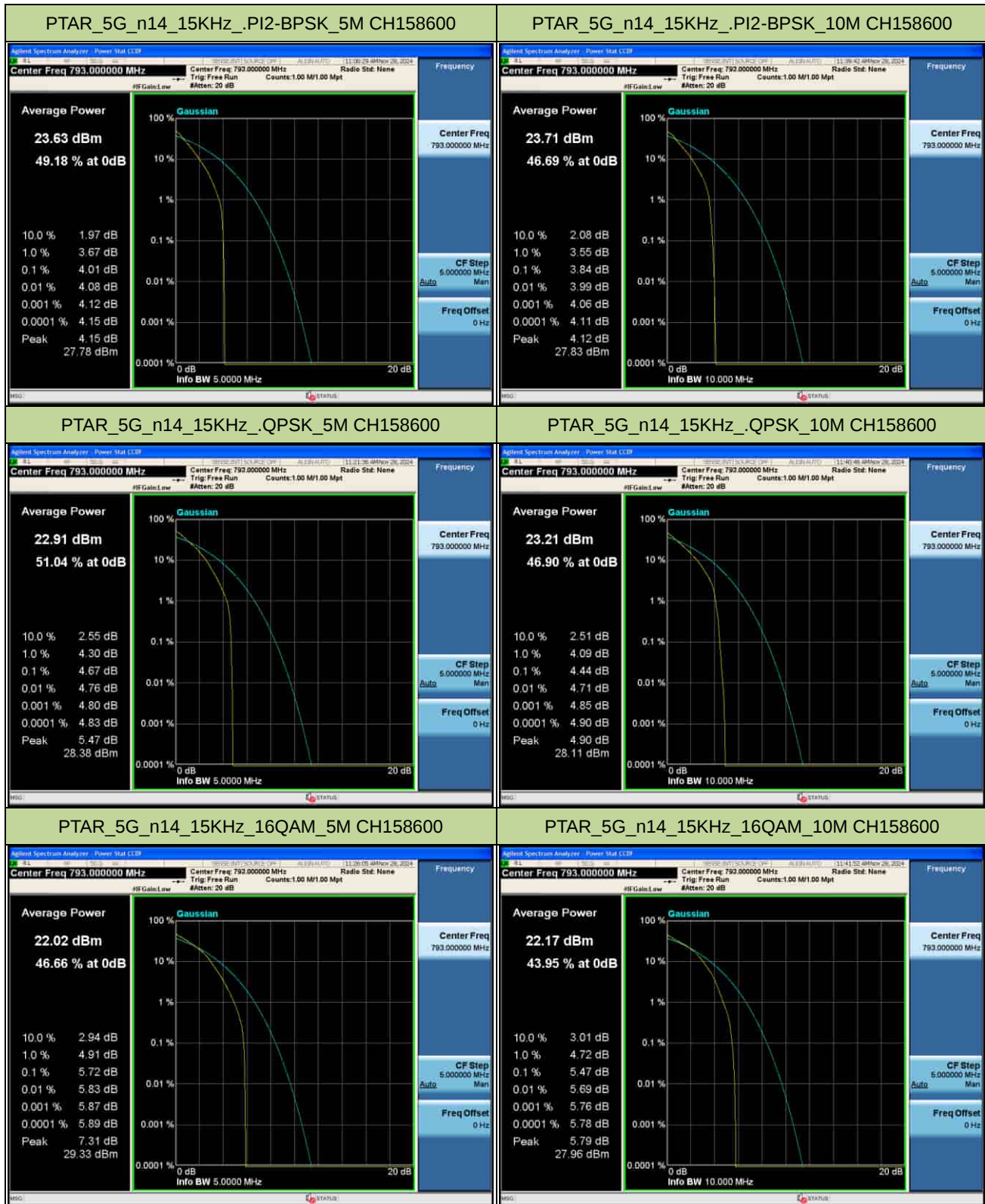
A4.2 LTE Band 26 (814MHz ~ 824MHz)

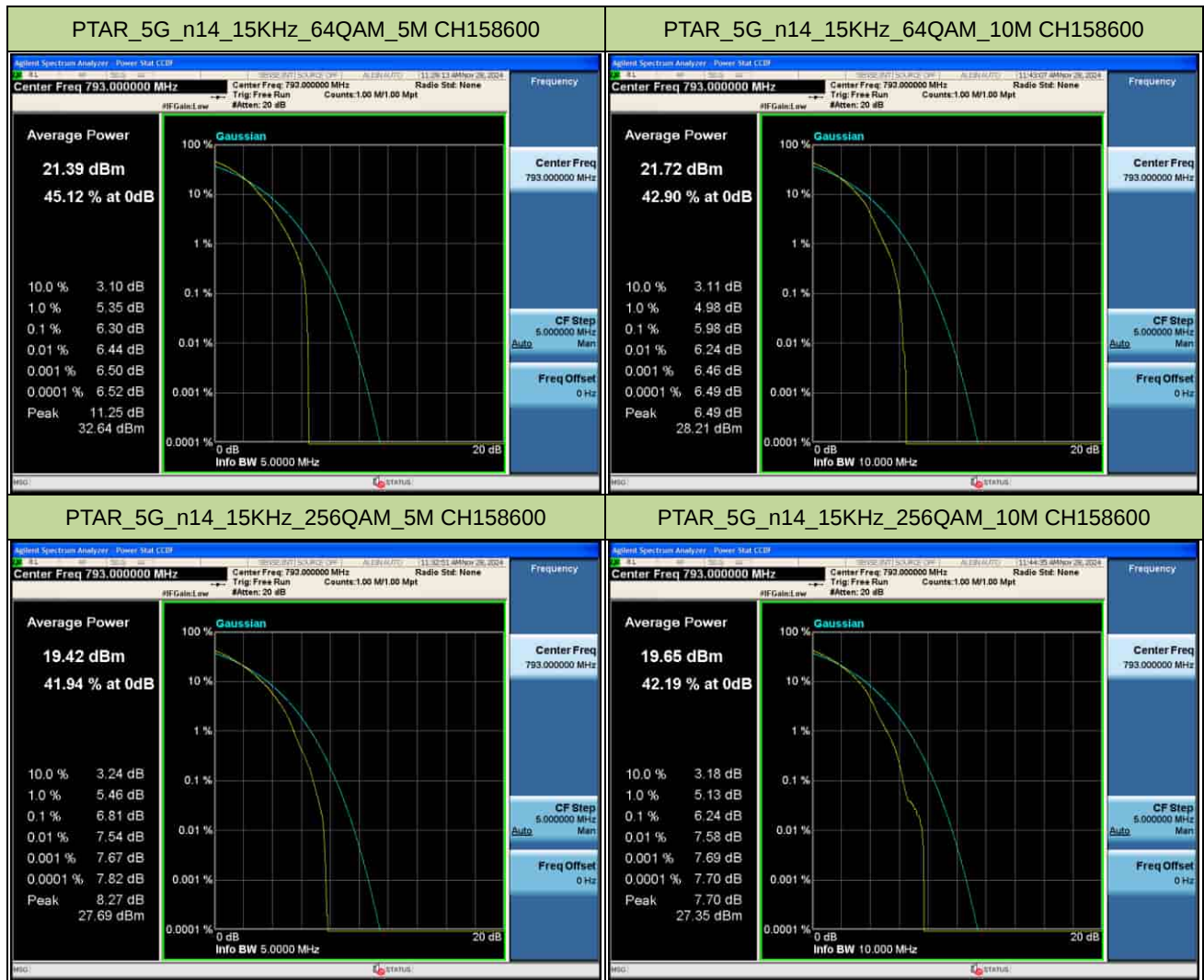




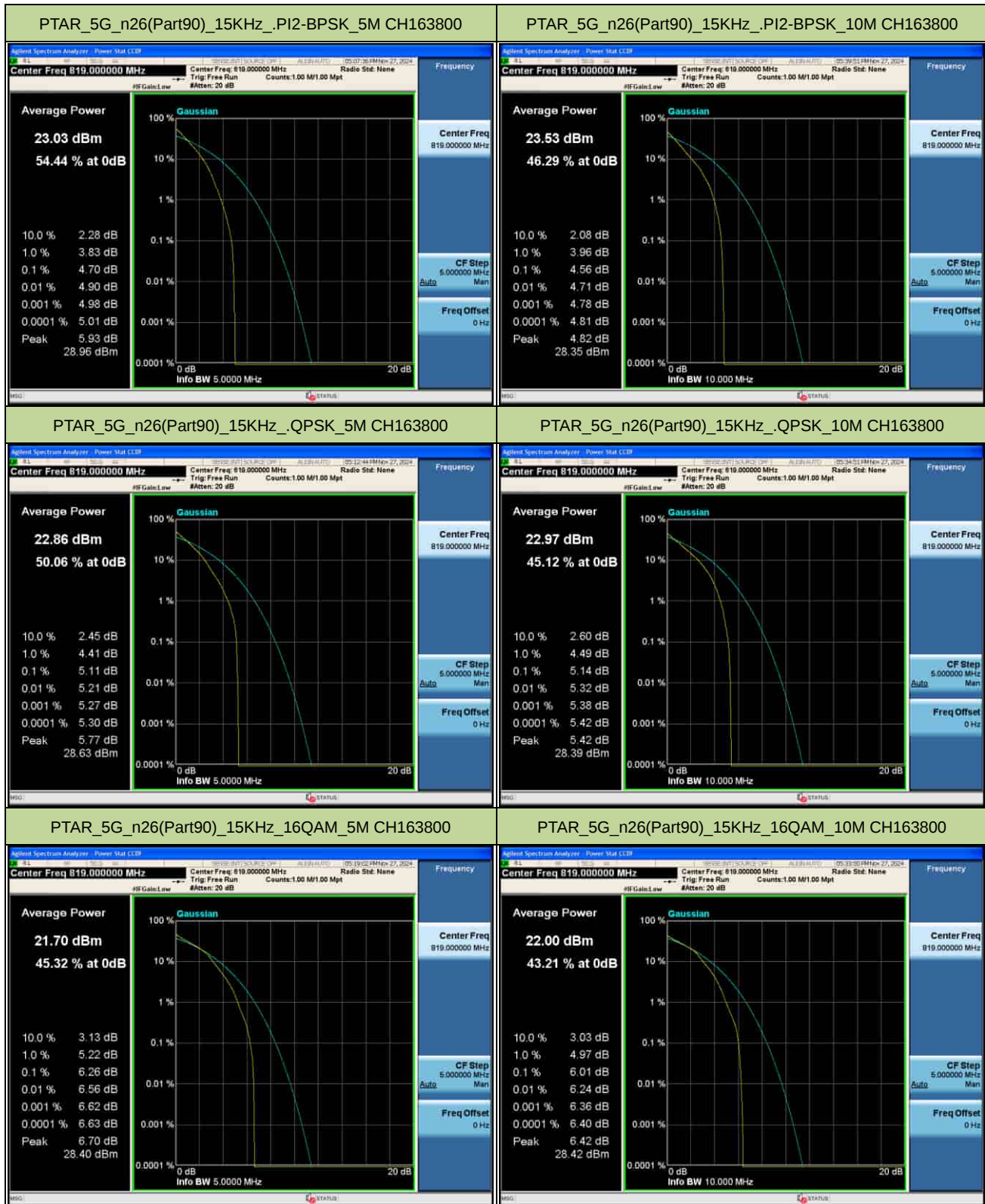


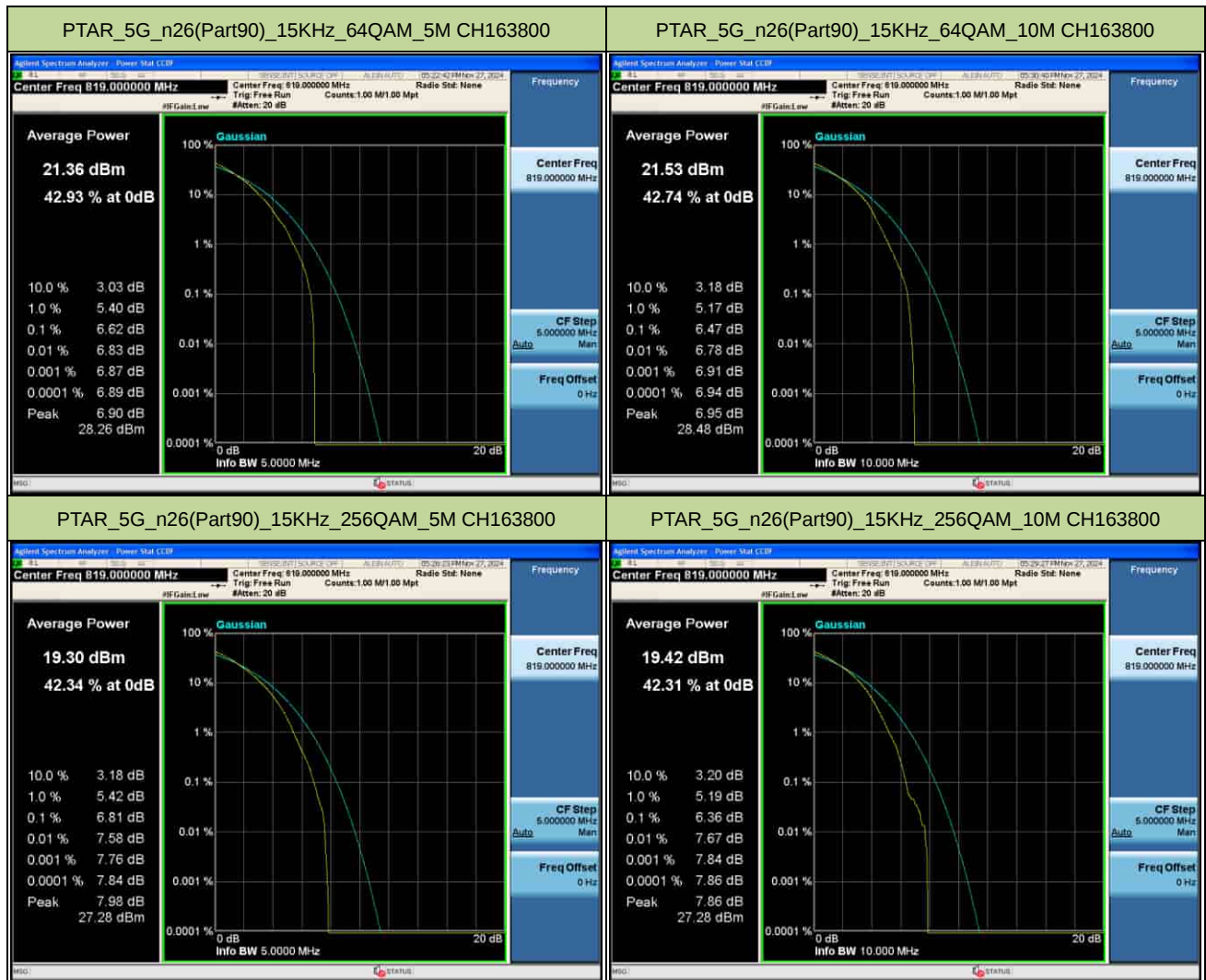
A4.3 NR n14





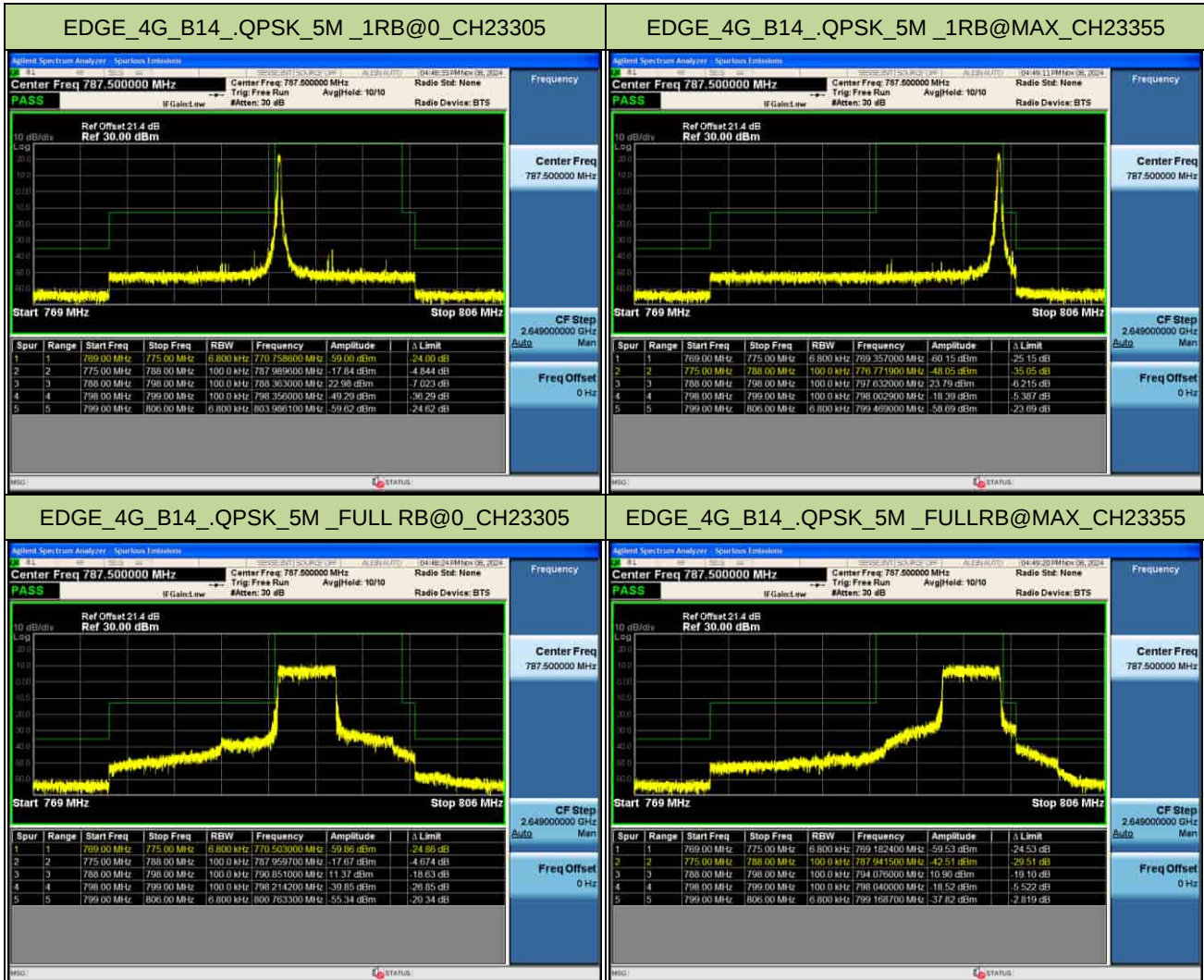
A4.4 NR n26 (814MHz ~ 824MHz)

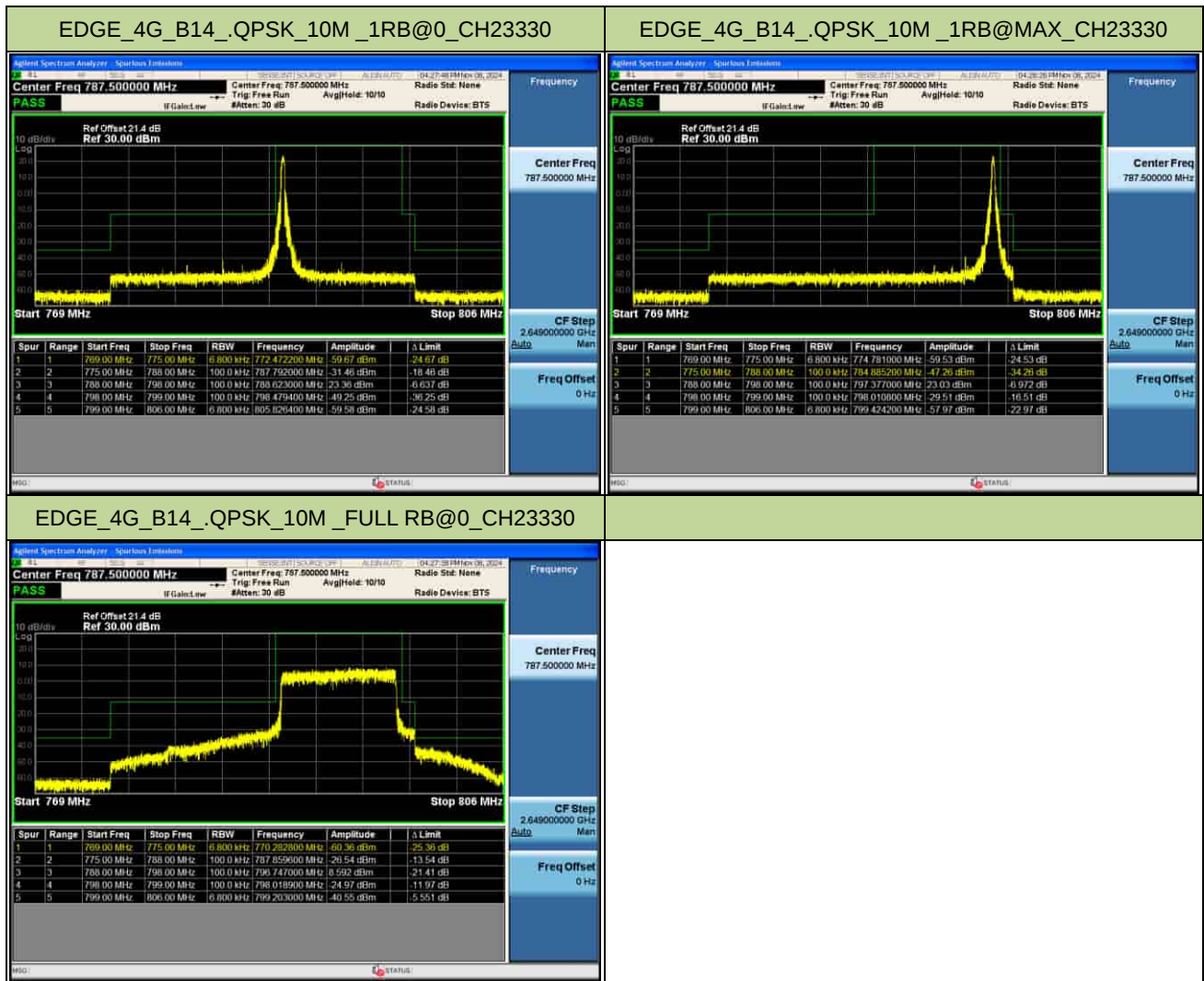




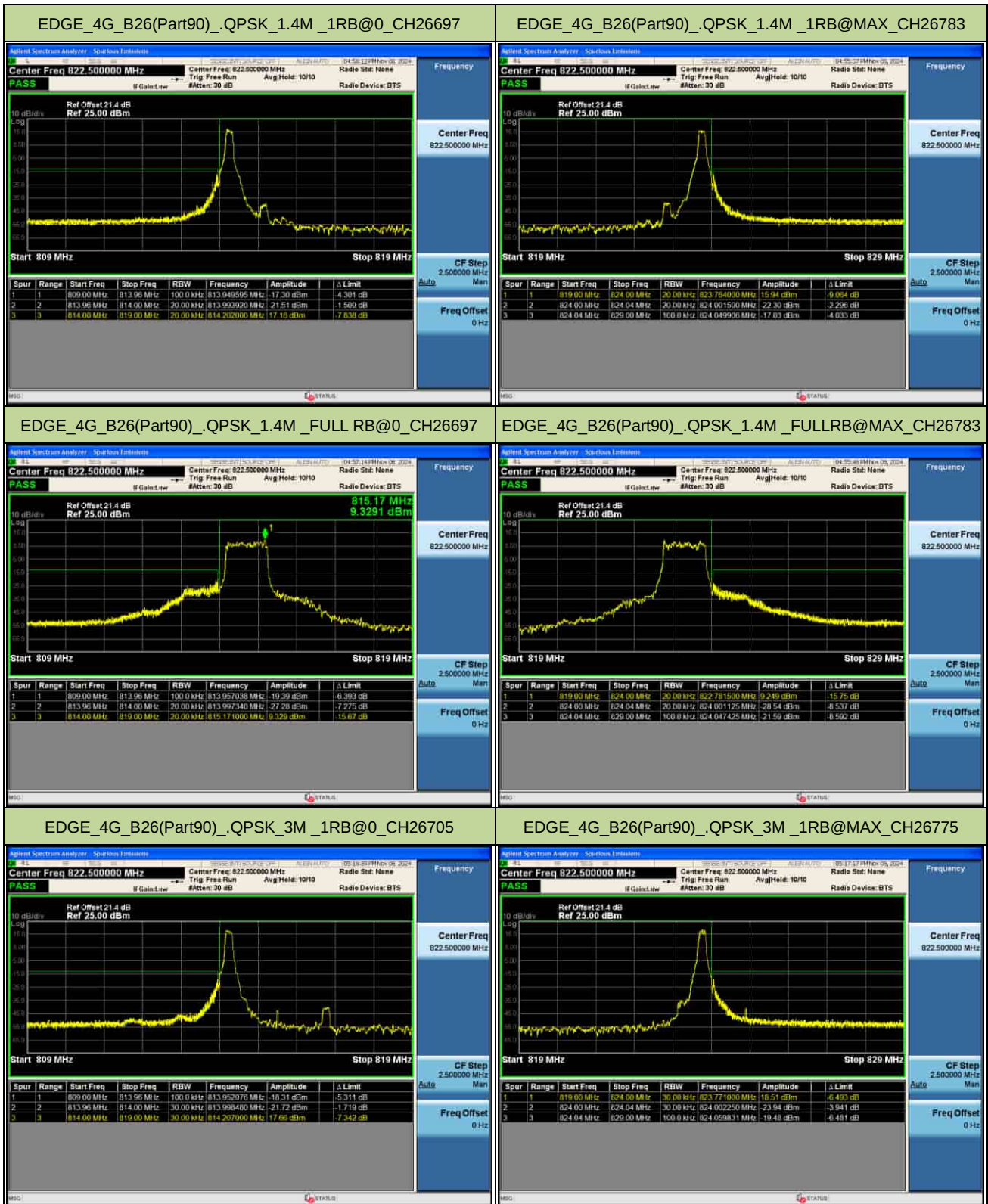
A5. Transmitter unwanted emissions (band-edge) Test Result

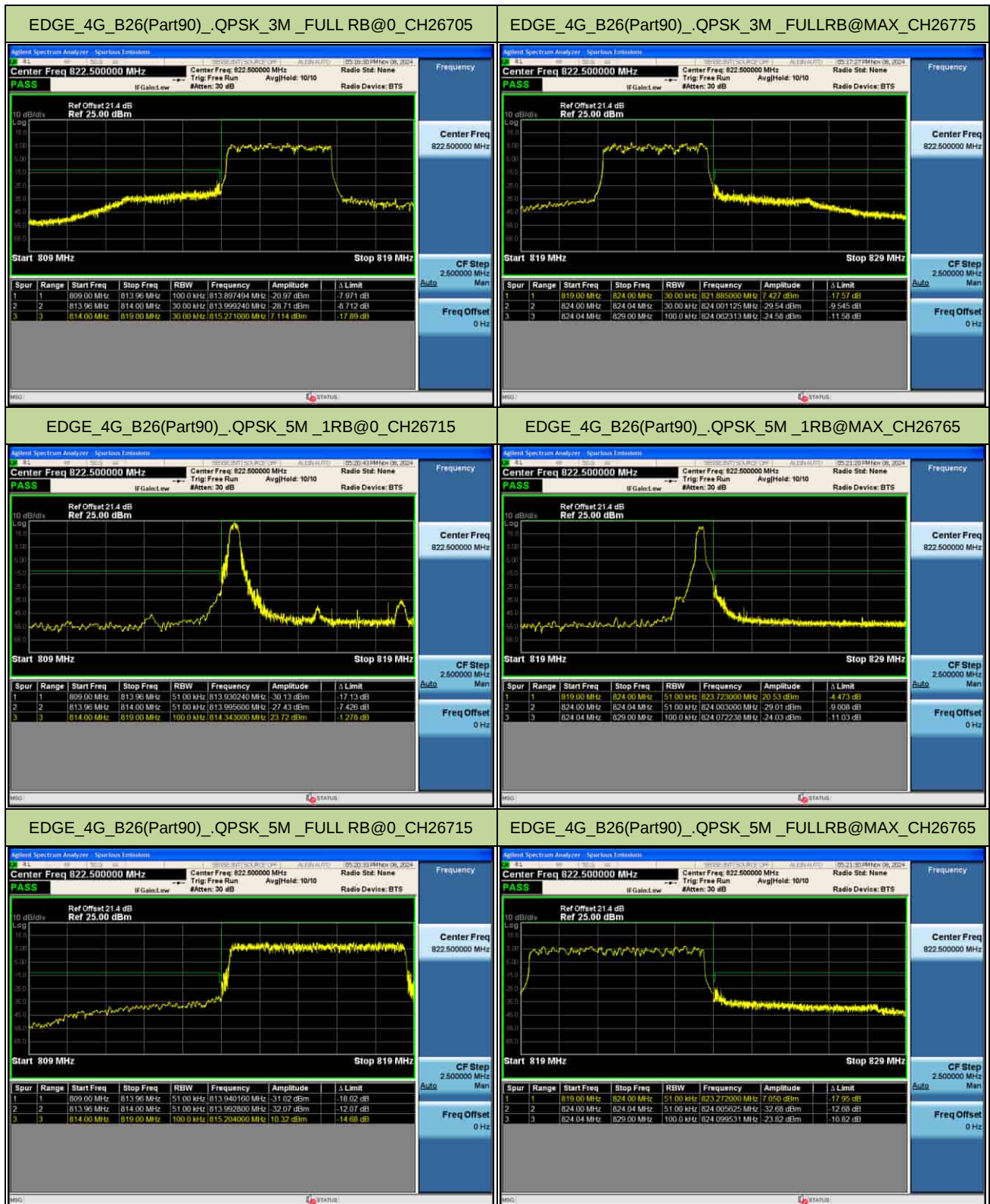
A5.1 LTE Band 14

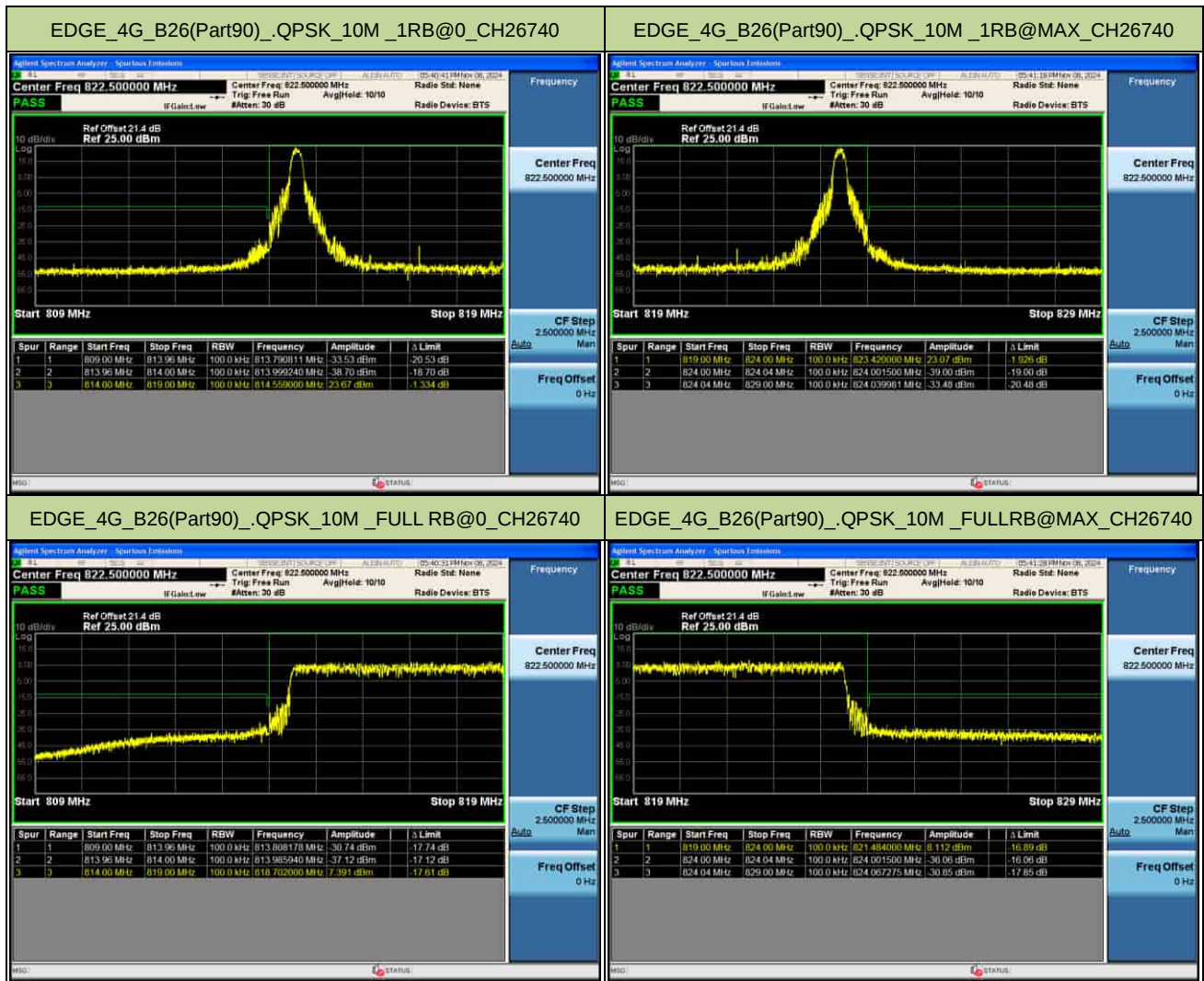




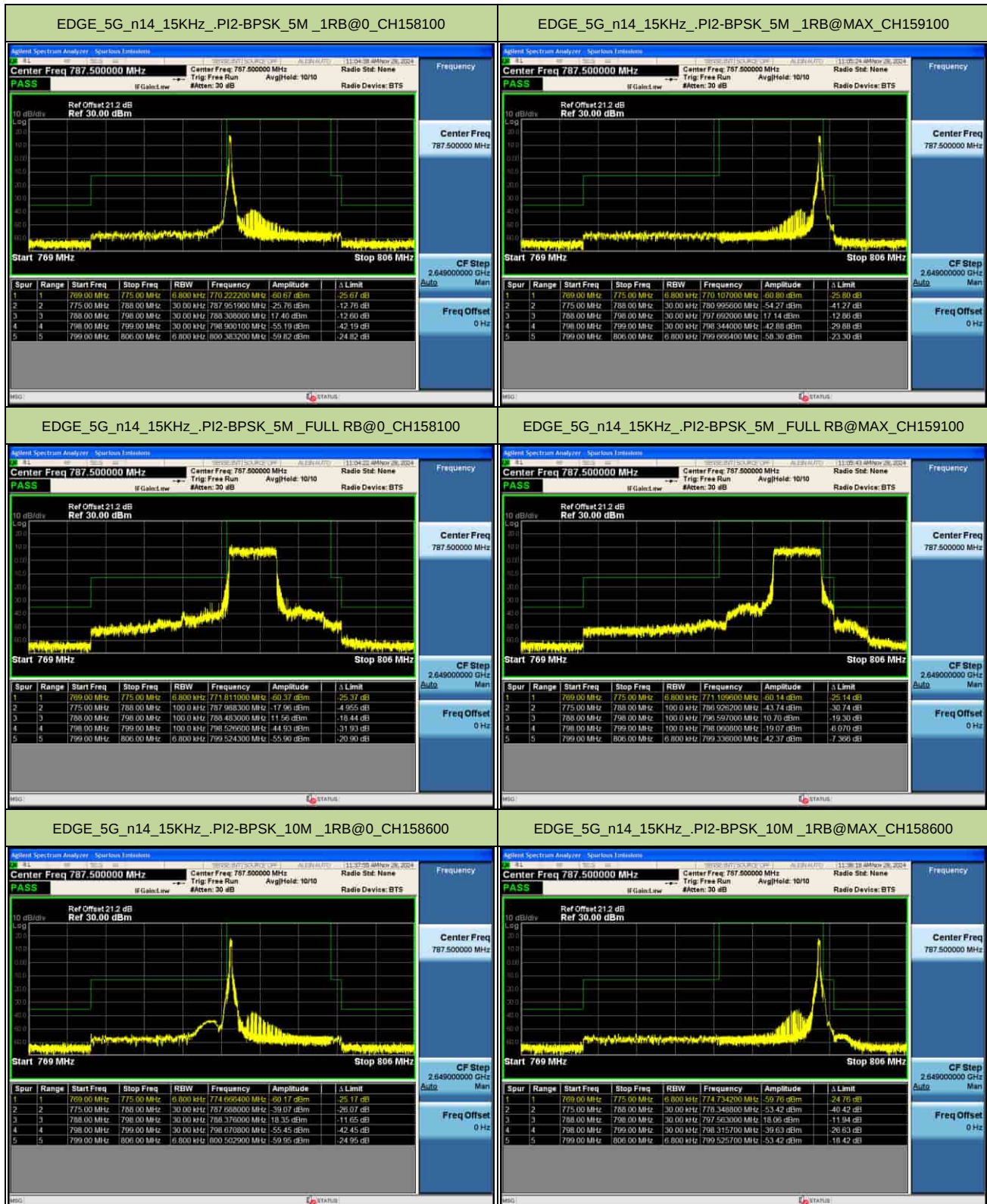
A5.2 LTE Band 26 (814MHz ~ 824MHz)





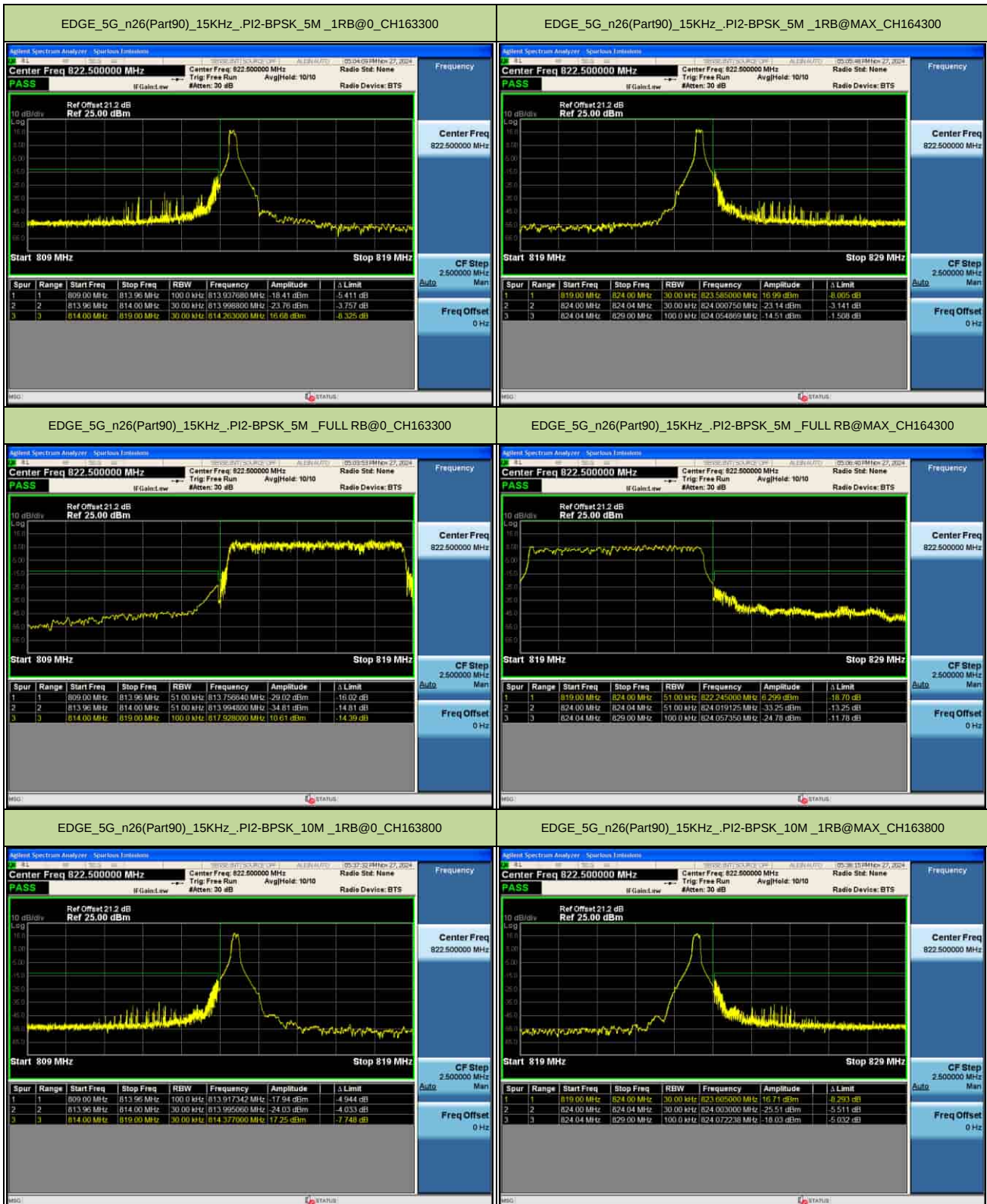


A5.3 NR n14





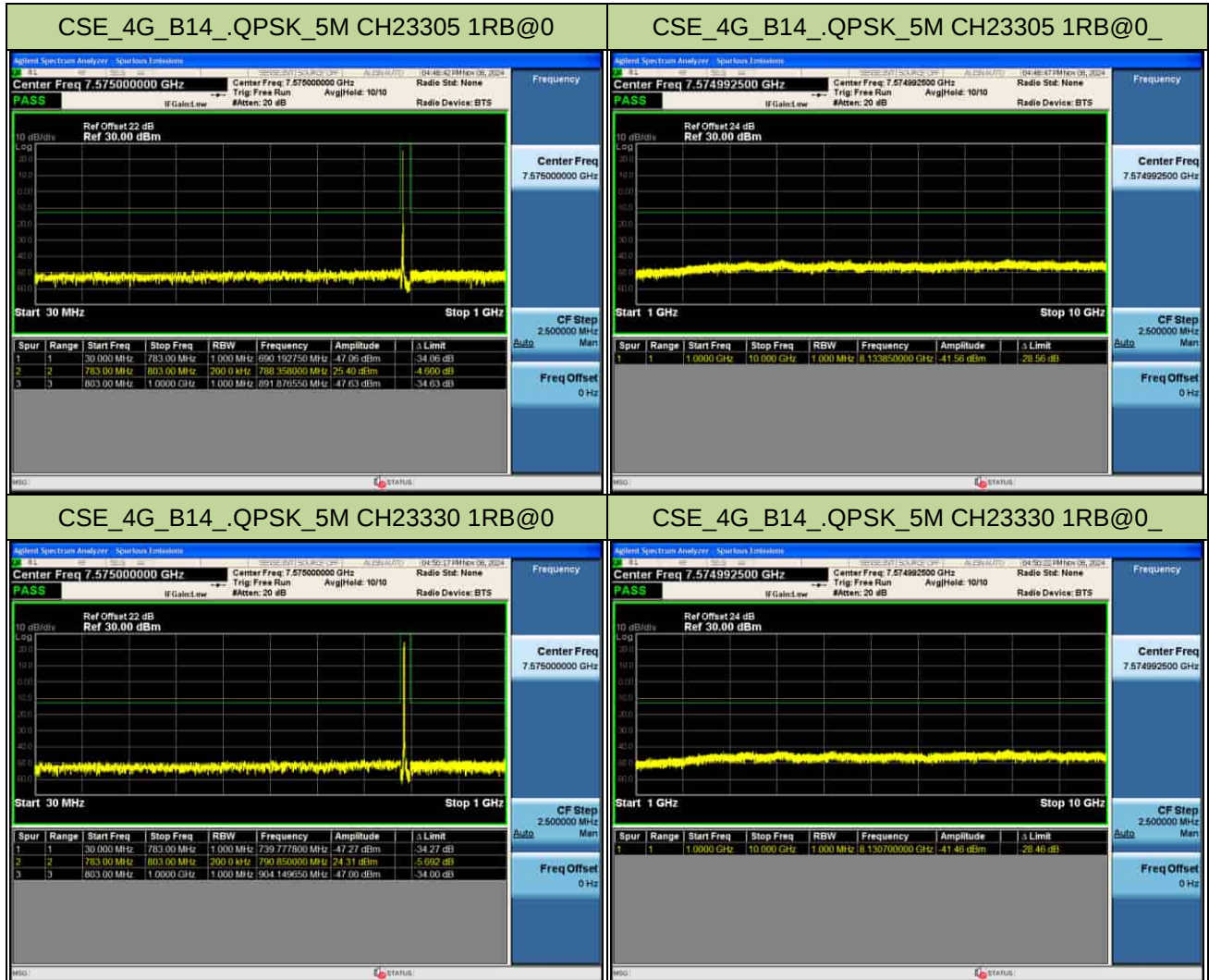
A5.4 NR n26 (814MHz ~ 824MHz)

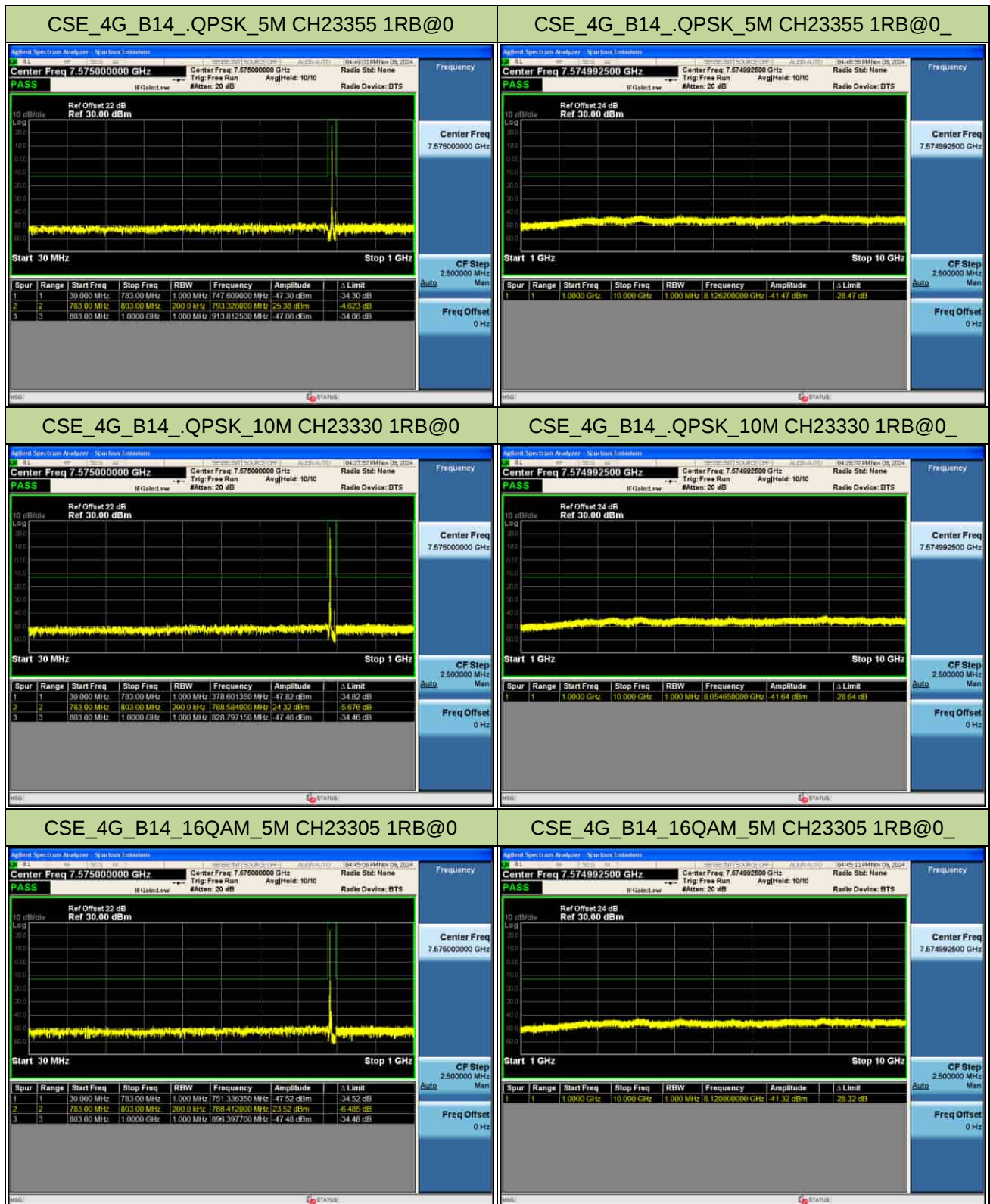


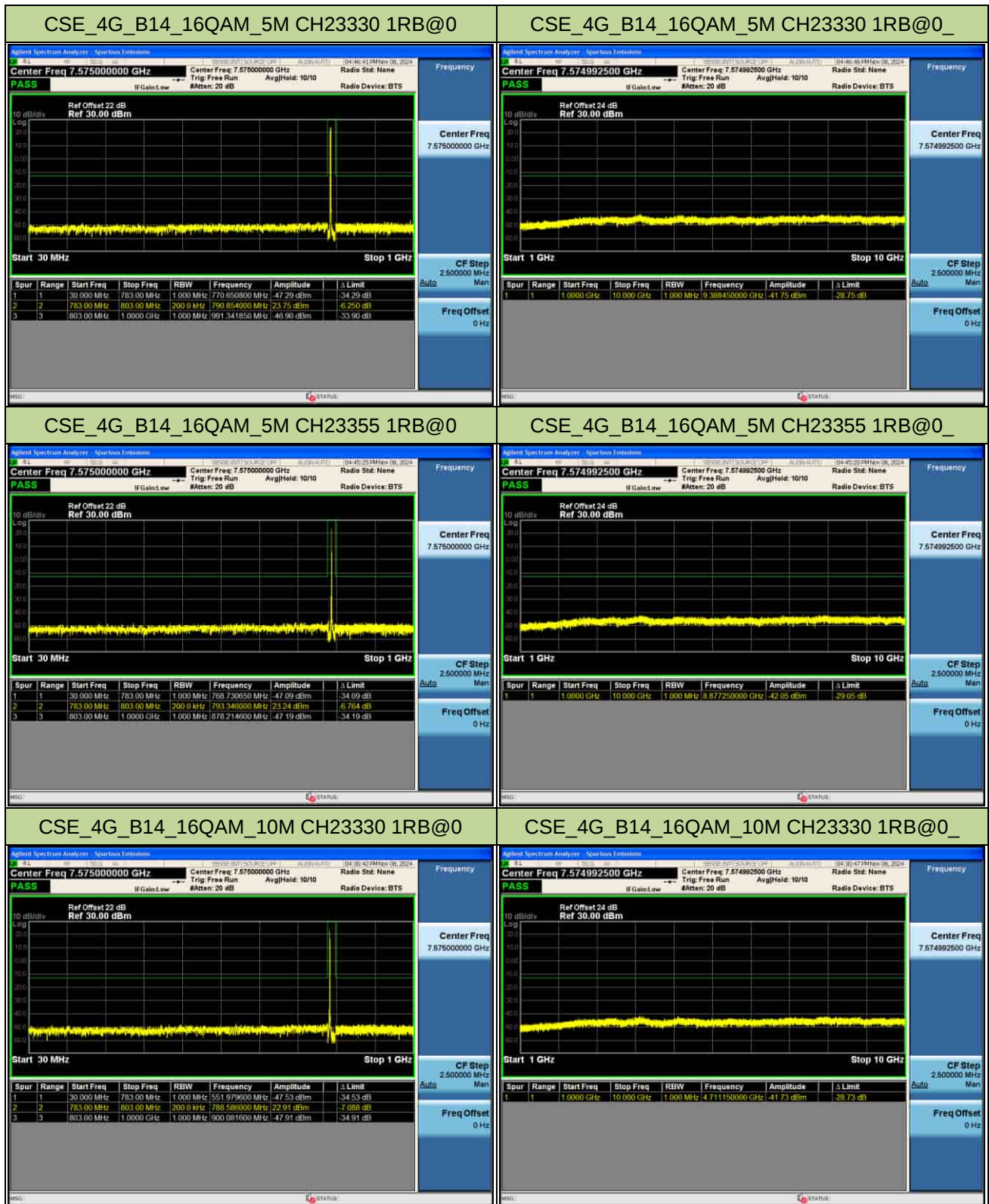


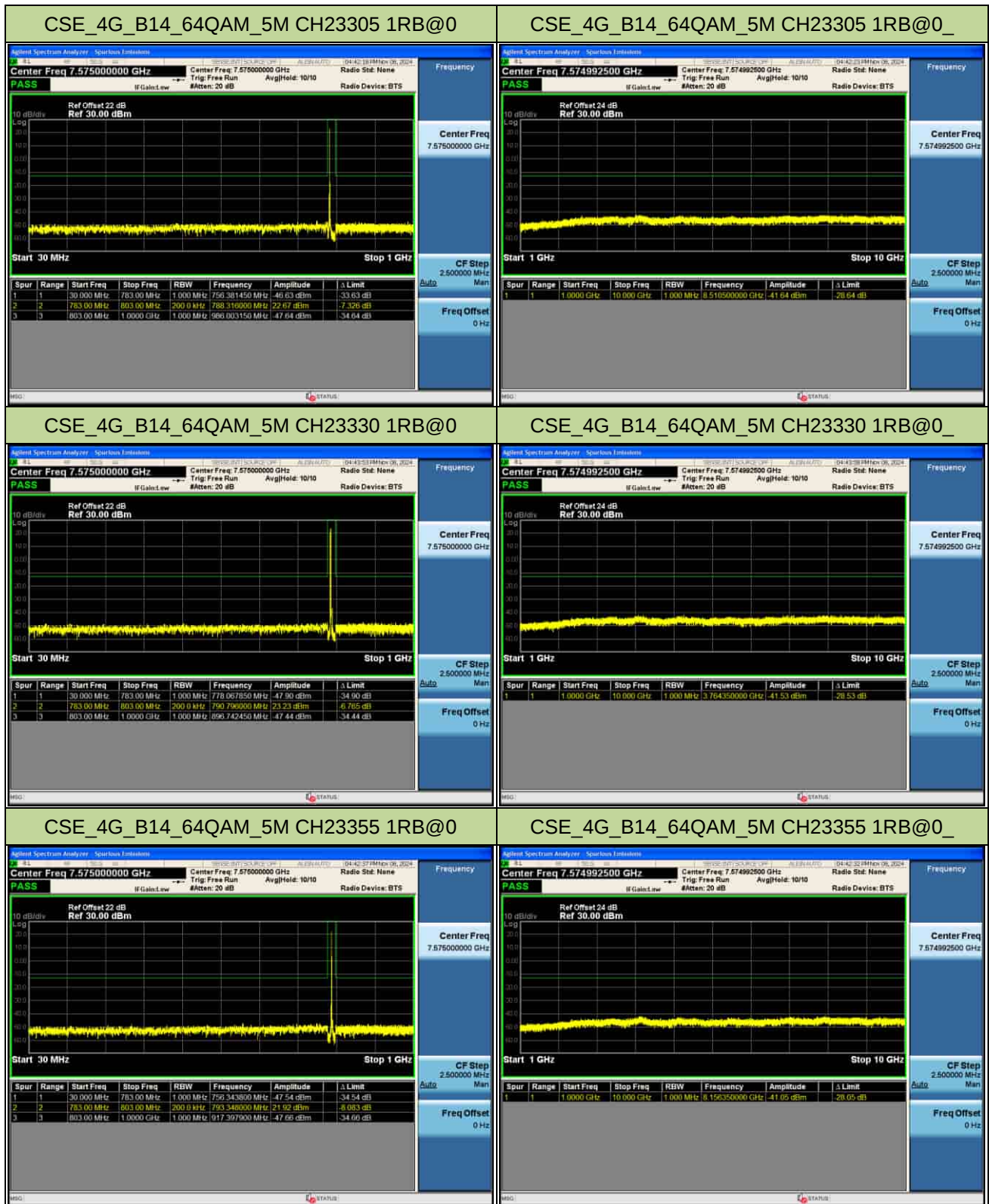
A6. Transmitter unwanted emissions (spurious) Test Result

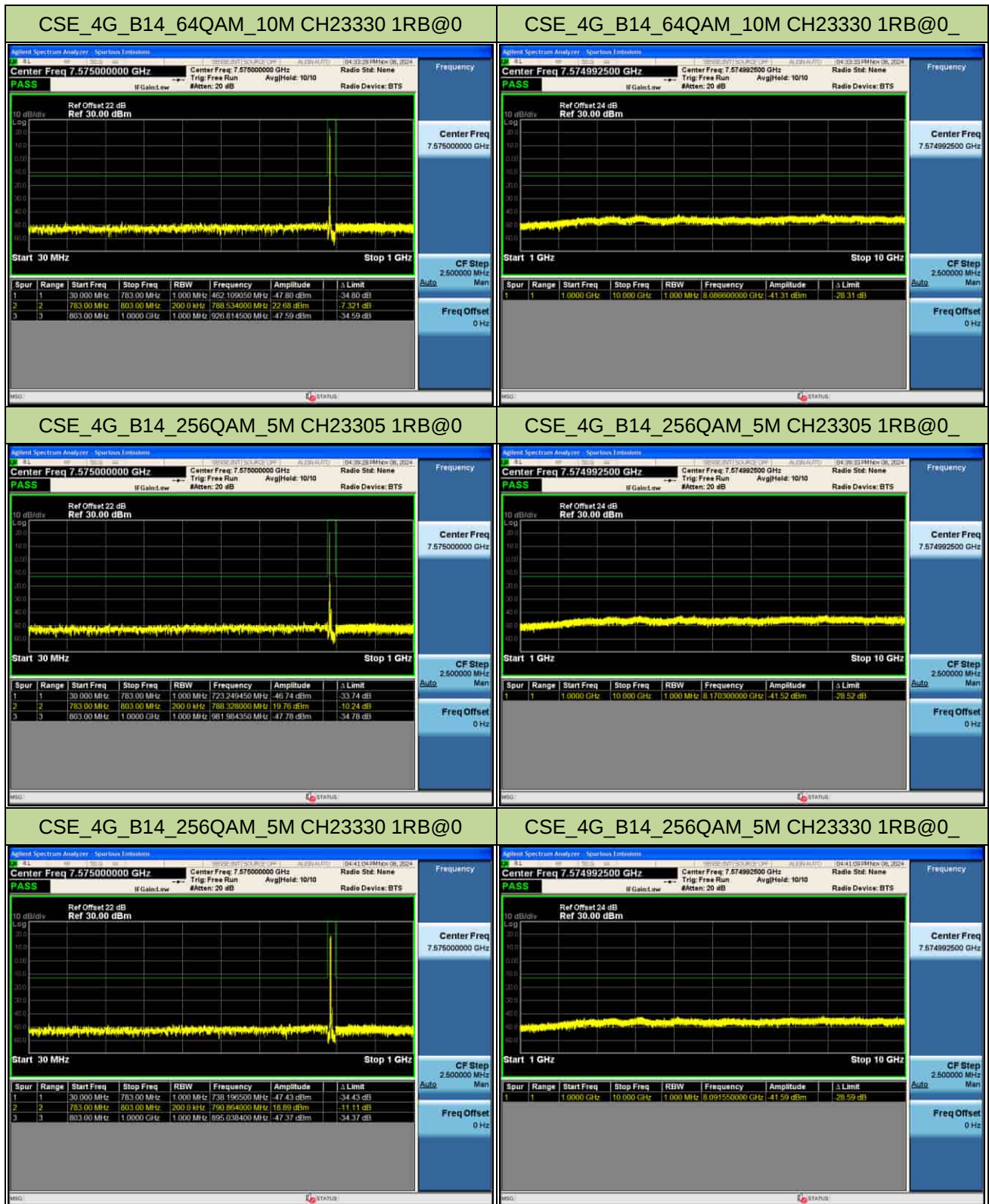
A6.1 LTE Band 14

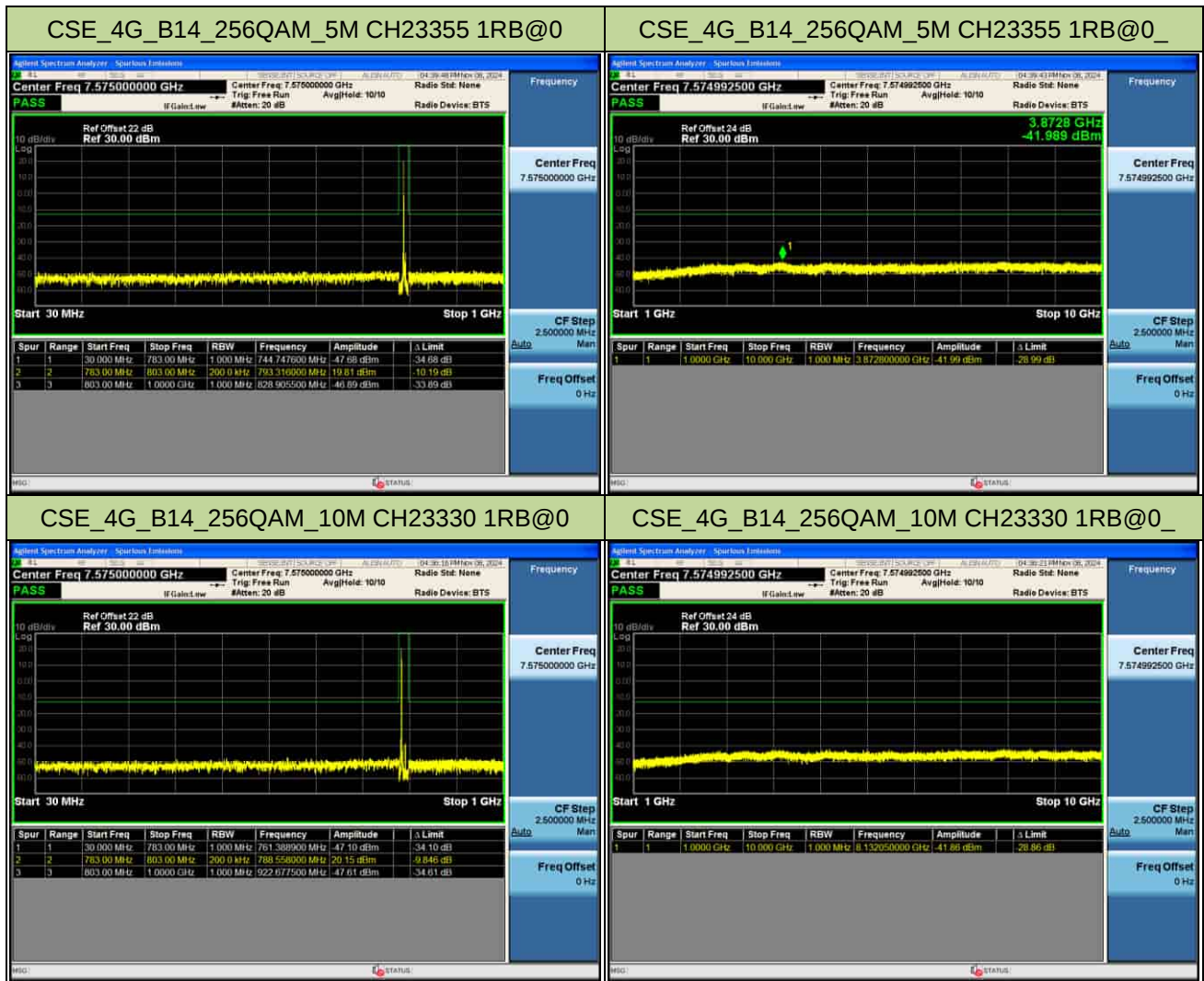












A6.2 LTE Band 26 (814MHz ~ 824MHz)

