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Report No.: 2411TW7401-U8
Report Version: 1.0
Issue Date: 2025-04-15

MEASUREMENT REPORT

FCC ID	:	**2AQ5W-G60PRO**
APPLICANT	:	**AMobile Solutions Corp.**
Application Type	:	**Certification**
Product	:	**Industry Inspection Device**
Model No.	:	**G60 Pro**
Brand Name	:	**AMobile**
Classification	:	**PCS Licensed Transmitter held to ear (PCE)**
FCC Rule Part(s)	:	**Part2, Part22 Subpart H, Part24 Subpart E, Part27**
Test Procedure(s)	:	**ANSI/TIA-603-E-2016, ANSI C63.26 2015**
Received Date	:	**November 19, 2024**
Test Date	:	**January 22 ~ March 21, 2025**

Tested By : Wen Lee
(Wen Lee)

Reviewed By : Paddy Chen
(Paddy Chen)

Approved By : Chenz Ker
(Chenz Ker)

Testing Laboratory
3261

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
2411TW7401-U8	1.0	Original Report	2025-04-15	

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Description Page

General Information

Applicant	AMobile Solutions Corp.
Applicant Address	8F.-1, No. 700, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan
Manufacturer	AMobile Solutions Corp.
Manufacturer Address	8F.-1, No. 700, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan
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

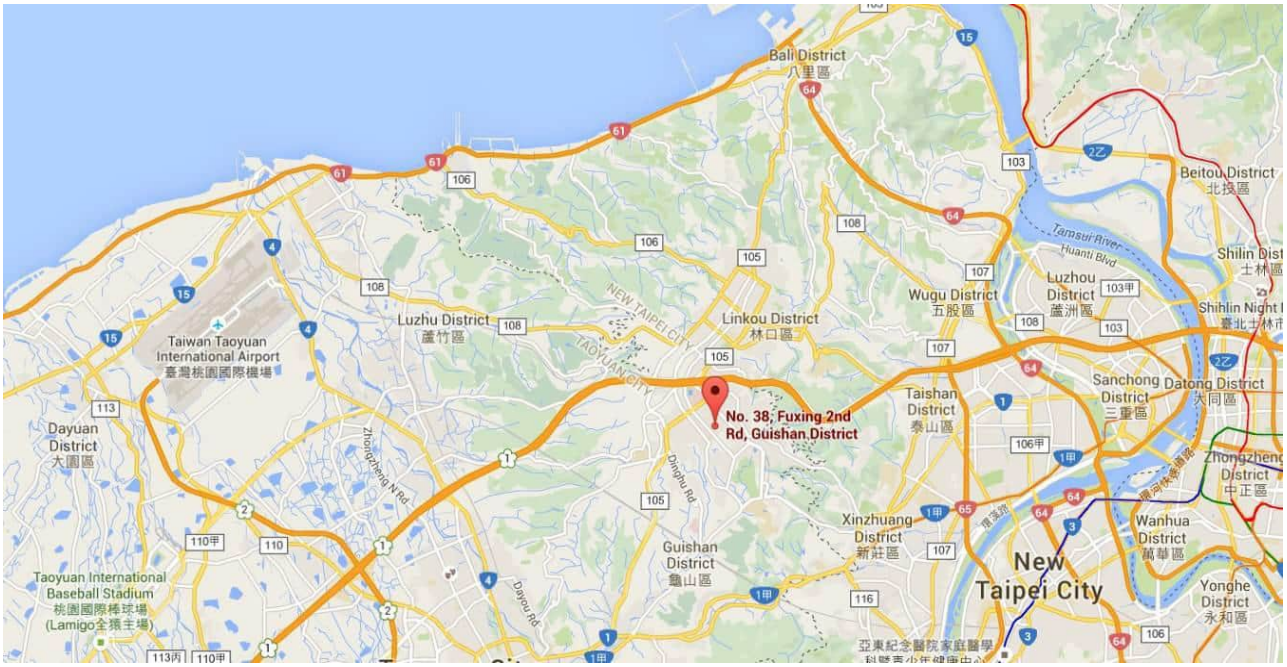
1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm.
2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
3. MRT Lab 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. 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.

1.1. 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).



1.2. Product Information

Product Name	Industry Inspection Device
Brand Name	AMobile
Model No.	G60 Pro
Test Sample Number	#1
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.3. Radio Specification under Testing

E-UTRA Specification	
FDD TX Frequency Range	Band 2: 1850 ~ 1910 MHz; Band 4: 1710 ~ 1755 MHz Band 5: 824 ~ 849 MHz; Band 7: 2500 ~ 2570 MHz Band 12: 699 ~ 716 MHz; Band 17: 704 ~ 716 MHz
FDD RX Frequency Range	Band 2: 1930 ~ 1990 MHz; Band 4: 2110 ~ 2155 MHz Band 5: 869 ~ 894 MHz; Band 7: 2620 ~ 2690 MHz Band 12: 729 ~ 746 MHz; Band 17: 734 ~ 746 MHz
Support Bandwidth	Band 2, 4: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz Band 5, 12, 17: 1.4MHz, 3MHz, 5MHz, 10MHz Band 7: 5MHz, 10MHz, 15MHz, 20MHz
Type of Modulation	UL up to 16QAM, DL up to 16QAM

1.4. Description of Available Antennas

Antenna Type			PCB
Technology	Frequency Range (MHz)		Max Peak Gain (dBi)
	TX	RX	ANT0
Band 2	1850 ~ 1910	1930 ~ 1990	0.26
Band 4	1710 ~ 1755	2110 ~ 2155	0.26
Band 5	824 ~ 849	869 ~ 894	1.79
Band 7	2500 ~ 2570	2620 ~ 2690	1.32
Band 12	699 ~ 716	729 ~ 746	-1.43
Band 17	704 ~ 716	734 ~ 746	-1.43
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).			

1.5. 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, 22.355, 24.235, 27.54	Frequency Stability		Pass
2.1046, 22.913(a)(5), 24.232(c) 27.50(a)(3) (b)(10) (c)(10) (d)(4) (h)(2)	Transmitter Output Power		Pass
22.913(d), 24.232(d), 27.50(d)(5)	Peak to Average Ratio		Pass
2.1051, 22.917(a), 24.238(a) 27.53(a) (c) (f) (g) (h) (m)	Transmitter unwanted emissions (band-edge)		Pass
2.1051, 22.917(a), 24.238(a) 27.53(a) (c) (f) (g) (h) (m)	Transmitter unwanted emissions (spurious)		
2.1053, 22.917(a), 24.238(a) 27.53(a) (c) (f) (g) (h) (m)	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.
4) LTE Band 12 (699 ~ 716 MHz) overlaps the entire frequency range of LTE Band 17 (704 ~ 716 MHz). Therefore, test data provided in this report covers Band 17 as well as Band 12.

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	Maximum BW	All Modulation	Full	Middle
Band Edge	All BW	QPSK	1RB/Half/Full	Low/High
Conducted Emissions	All BW	QPSK	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.

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, 22.355, 24.235, 27.54

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 ±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 Measurment

According to FCC Part 2.1046, 22.913, 24.232, 27.50

According to KDB 412172 D01 Section 1.2 Power Approach

EIRP = PT + GT – LC = ERP + 2.15 dB, ERP = EIRP – 2.15 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	EIRP Power Limit
Band 5	7W (38.45dBm)	Band 2	2W (33dBm)
Band 12	3W (34.77dBm)	Band 4	1W (30dBm)
Band 13	3W (34.77dBm)	Band 7	2W (33dBm)
Band 17	3W (34.77dBm)	Band 25	2W (33dBm)
Band 26	7W (38.45dBm)	Band 30	250mW (24dBm)
Band 71	3W (34.77dBm)	Band 38	2W (33dBm)
--	--	Band 41	2W (33dBm)
--	--	Band 66	1W (30dBm)

2.5. Peak-Average Ratio

According to FCC Part 22.913, 24.232, 27.50

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, 22.917, 24.238, 27.53

For GSM 850/1900, WCDMA B2/B4/B5, LTE B2/B4/B5/B12/B17/B25/B26(824-849MHz)/B66/B71

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. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

For LTE B13

For operations in the 776-788 MHz band, the FCC limit is 43 + 10 log(P) dB below the transmitter power (P) in a 100 kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power (P), by at least 65 + 10 log (P) dB, for mobile and portable equipment.

For LTE B7/B38/B41

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

For LTE B30

For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:
(i) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337 MHz;
(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300 MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;

2.7. Conducted and Radiated Spurious Emissions

According to FCC Part 2.1051, 2.1053, 22.917, 24.238, 27.53

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 GSM 850/1900, WCDMA B2/B4/B5, LTE B2/B4/B5/B12/B17/B25/B26(824-849MHz)/B66/B71

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 B13

For operations in the 776-788 MHz band, the FCC limit is 43 + 10 log(P) dB below the transmitter power (P) in a 100 kHz bandwidth.

For operations in the 775-788 MHz band, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP). The emission limit equal to -40dBm.

For LTE B7/B38/B41

For mobile digital stations, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 55 + 10 log(P) dB. The emission limit equal to -25dBm.

For LTE B30

For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

3. TEST EQUIPMENT CALIBRATION DATE

Radiated Emissions – AC1

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	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2026/2/11
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2026/2/11
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	2026/3/4
Signal Analyzer	R&S	FSV40	MRTTWA00007	1 year	2025/4/14
Antenna Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2025/6/14
Cable	Rosnol	K1K50-UP0264-K1K50-4M	MRTTWE00012	1 year	2025/6/14
Temperature/Humidity Meter	TFA	35.1083	MRTTWA00050	1 year	2025/6/2

Conducted Test Equipment –SR6

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	2026/3/12
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: ± 3.92dB 30MHz~1GHz: ± 4.25dB 1GHz~18GHz: ± 4.40dB 18GHz~40GHz: ± 4.45dB
Frequency Error
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±78.4Hz
Conducted Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ± 0.84dB
Conducted Spurious Emission
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):± 2.65 dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±3.3%
Temp. / Humidity
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±0.82°C/ ±3%
DC Voltage
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): ±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

ERP or EIRP = P_{Meas} + G_T

where

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

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

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

ERP = EIRP -2.15

LTE Band		Band2	Antenna Gain (dBi)		0.26
BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Maximum EIRP (W)	EIRP Limit (W)
1.4M	QPSK	21.54	0.143	0.151	2
	16QAM	20.46	0.111	0.118	2
	64QAM	19.36	0.086	0.092	2
3M	QPSK	20.98	0.125	0.133	2
	16QAM	20.37	0.109	0.116	2
	64QAM	19.22	0.084	0.089	2
5M	QPSK	20.99	0.126	0.133	2
	16QAM	19.82	0.096	0.102	2
	64QAM	18.99	0.079	0.084	2
10M	QPSK	21.27	0.134	0.142	2
	16QAM	20.11	0.103	0.109	2
	64QAM	18.84	0.077	0.081	2
15M	QPSK	20.98	0.125	0.133	2
	16QAM	19.56	0.090	0.096	2
	64QAM	18.83	0.076	0.081	2
20M	QPSK	20.71	0.118	0.125	2
	16QAM	19.37	0.086	0.092	2
	64QAM	18.67	0.074	0.078	2

LTE Band		Band4	Antenna Gain (dBi)		0.26
BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Maximum EIRP (W)	EIRP Limit (W)
1.4M	QPSK	22.51	0.178	0.189	1
	16QAM	21.93	0.156	0.166	1
	64QAM	20.91	0.123	0.131	1
3M	QPSK	22.56	0.180	0.191	1
	16QAM	21.73	0.149	0.158	1
	64QAM	20.73	0.118	0.126	1
5M	QPSK	22.74	0.188	0.200	1
	16QAM	21.15	0.130	0.138	1
	64QAM	20.54	0.113	0.120	1
10M	QPSK	22.41	0.174	0.185	1
	16QAM	21.15	0.130	0.138	1
	64QAM	20.32	0.108	0.114	1
15M	QPSK	22.40	0.174	0.185	1
	16QAM	21.62	0.145	0.154	1
	64QAM	20.68	0.117	0.124	1
20M	QPSK	22.47	0.177	0.187	1
	16QAM	21.37	0.137	0.146	1
	64QAM	20.55	0.114	0.121	1

LTE Band		Band5	Antenna Gain (dBi)		1.79
BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Maximum ERP (W)	ERP Limit (W)
1.4MHz	QPSK	20.60	0.115	0.106	7
	16QAM	19.87	0.097	0.089	7
	64QAM	19.15	0.082	0.076	7
3MHz	QPSK	20.88	0.122	0.113	7
	16QAM	19.85	0.097	0.089	7
	64QAM	18.93	0.078	0.072	7
5MHz	QPSK	20.70	0.117	0.108	7
	16QAM	19.71	0.094	0.086	7
	64QAM	18.73	0.075	0.069	7
10MHz	QPSK	20.76	0.119	0.110	7
	16QAM	19.59	0.091	0.084	7
	64QAM	18.69	0.074	0.068	7

LTE Band		Band7	Antenna Gain (dBi)	
BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Maximum EIRP (W)
5MHz	QPSK	22.81	0.191	0.259
	16QAM	21.70	0.148	0.200
	64QAM	20.85	0.122	0.165
10MHz	QPSK	22.56	0.180	0.244
	16QAM	21.35	0.136	0.185
	64QAM	20.58	0.114	0.155
15MHz	QPSK	22.58	0.181	0.245
	16QAM	20.96	0.125	0.169
	64QAM	19.98	0.100	0.135
20MHz	QPSK	22.33	0.171	0.232
	16QAM	21.27	0.134	0.182
	64QAM	20.09	0.102	0.138

LTE Band		Band12	Antenna Gain (dBi)		-1.43
BW	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (W)	Maximum ERP (W)	ERP Limit (W)
1.4MHz	QPSK	22.45	0.176	0.077	3
	16QAM	21.71	0.148	0.065	3
	64QAM	20.88	0.122	0.054	3
3MHz	QPSK	22.60	0.182	0.080	3
	16QAM	21.68	0.147	0.065	3
	64QAM	20.61	0.115	0.050	3
5MHz	QPSK	22.59	0.182	0.080	3
	16QAM	21.32	0.136	0.059	3
	64QAM	20.58	0.114	0.050	3
10MHz	QPSK	22.45	0.176	0.077	3
	16QAM	21.24	0.133	0.058	3
	64QAM	20.26	0.106	0.047	3

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.

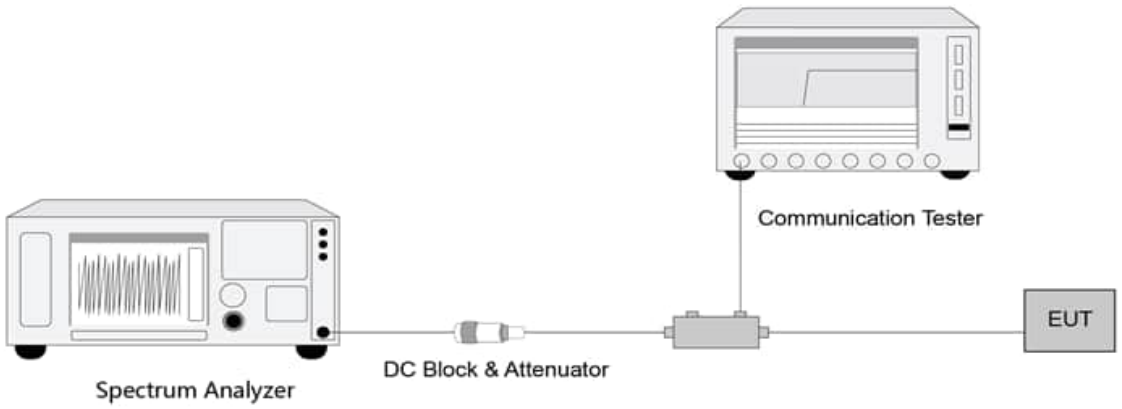
5.2.2 Test Procedure used

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 ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

5.2.4 Test Setup



5.2.5 Test Result

Refer to Appendix A.1

5.3. Frequency Stability 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 ±0.00025% (±2.5ppm) of the center frequency.

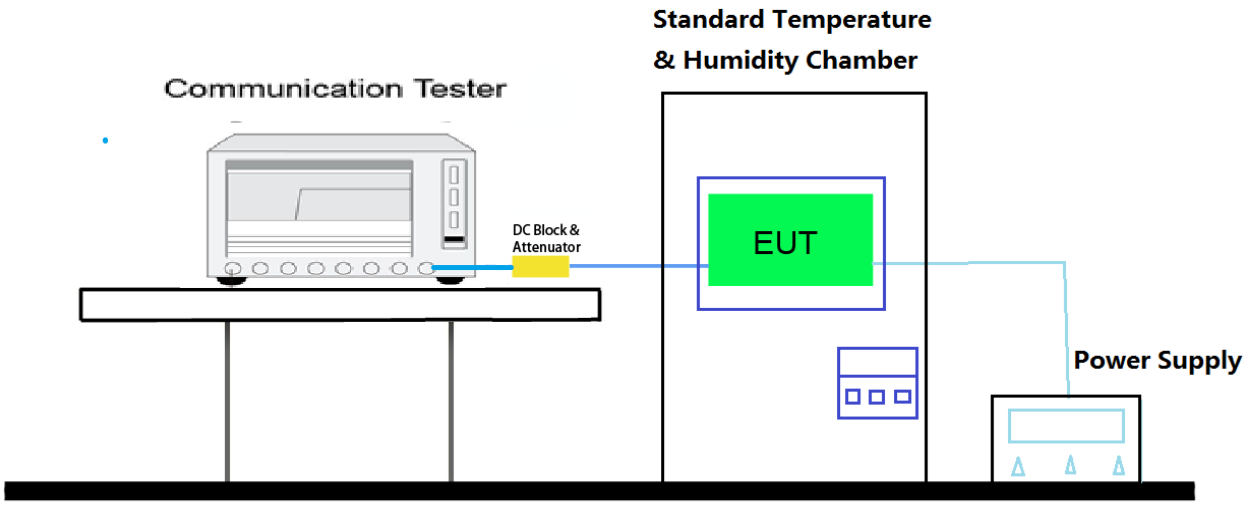
5.3.2 Test Procedure

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 (±15%) and endpoint, recordthe 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	EIRP Power Limit
LTE Band 5	7W (38.45dBm)	LTE Band 2	2W (33dBm)
LTE Band 12	3W (34.77dBm)	LTE Band 4	1W (30dBm)
LTE Band 13	3W (34.77dBm)	LTE Band 7	2W (33dBm)
LTE Band 17	3W (34.77dBm)	LTE Band 25	2W (33dBm)
LTE Band 26	7W (38.45dBm)	250mW (24dBm)	250mW (24dBm)
LTE Band 71	3W (34.77dBm)	LTE Band 38	2W (33dBm)
--	--	LTE Band 41	2W (33dBm)
--	--	LTE Band 66	1W (30dBm)

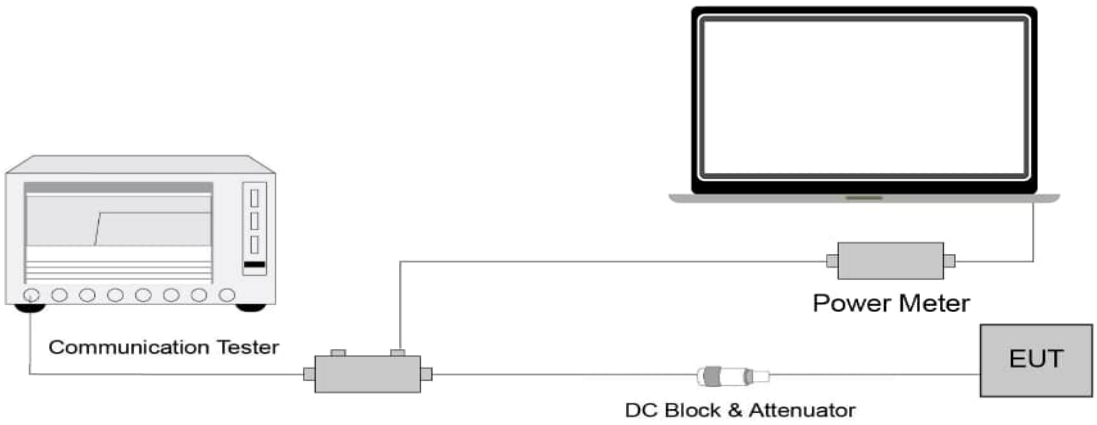
5.4.2 Test Procedure

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.

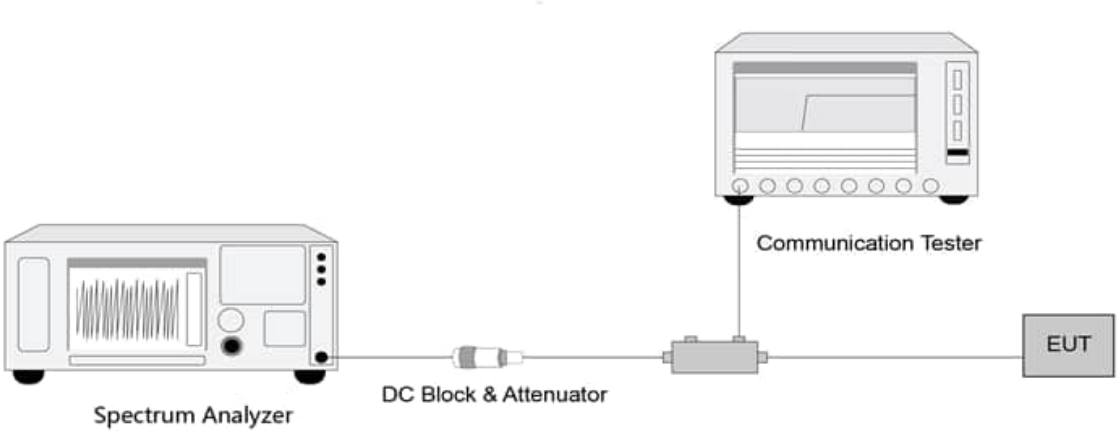
5.5.2 Test Procedure

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

5.5.3 Test Setting

1. Set the resolution / measurement bandwidth ≥ 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

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 B13

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power (P), by at least 65 + 10 log (P) dB, for mobile and portable equipment.

For LTE B7/B38/B41

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

For LTE B30

For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:
(i) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300 MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;

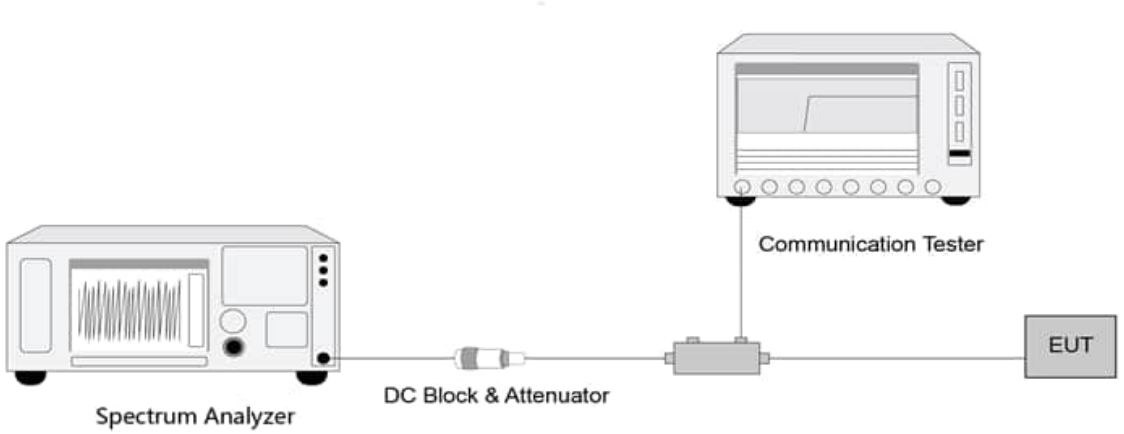
5.6.2 Test Procedure

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.

For LTE B7/B38/B41

For mobile digital stations, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 55 + 10 log(P) dB. The emission limit equal to -25dBm.

For LTE B30

For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:
(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz. The emission limit equal to -40dBm.

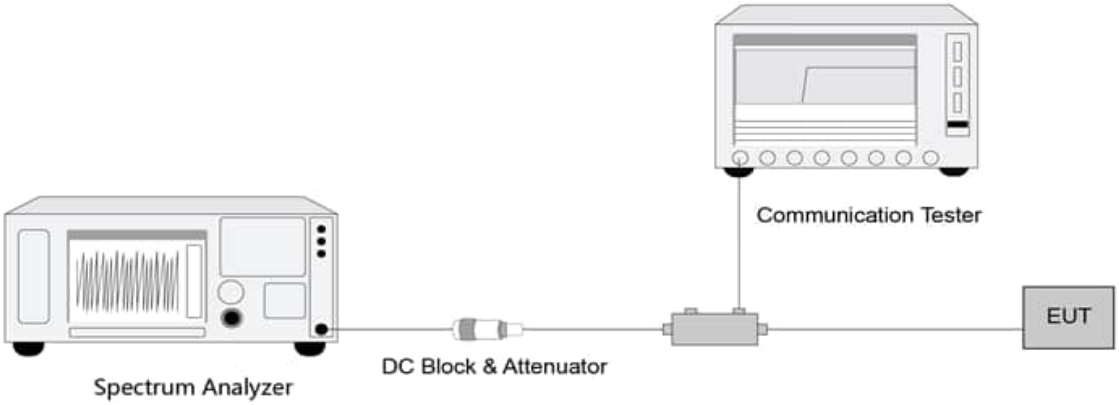
5.7.2 Test Procedure

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 ≥ 3*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 B13

For operations in the 775-788 MHz band, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP). The emission limit equal to -40dBm.

For LTE B7/B38/B41

For mobile digital stations, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 55 + 10 log(P) dB. The emission limit equal to -25dBm.

For LTE B30

For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:
(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz. The emission limit equal to -40dBm.

5.8.2 Test Procedure

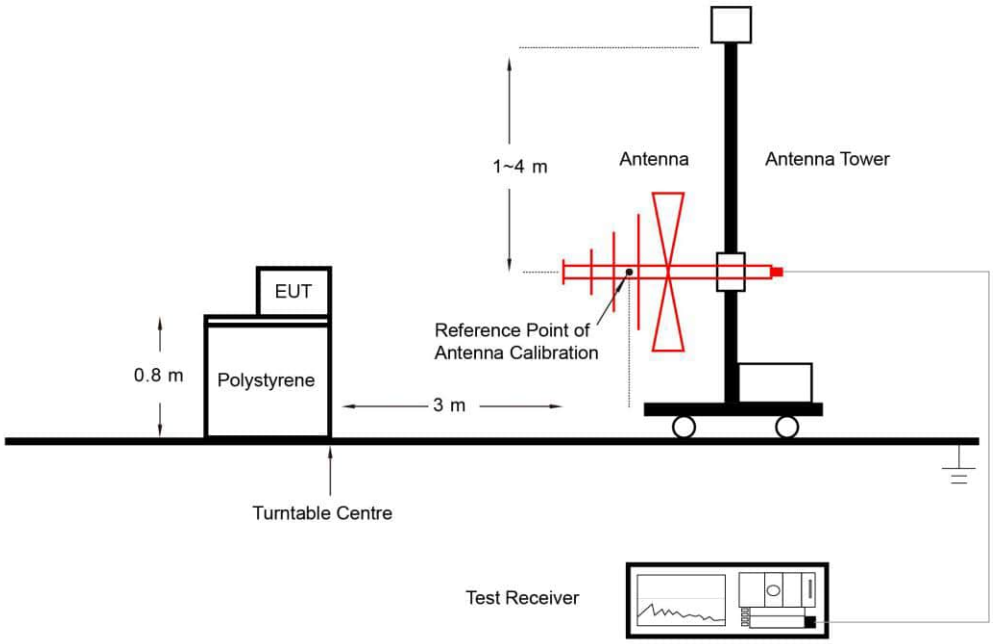
ANSI C63.26-2015 - Section 5.7

5.8.3 Test Setting

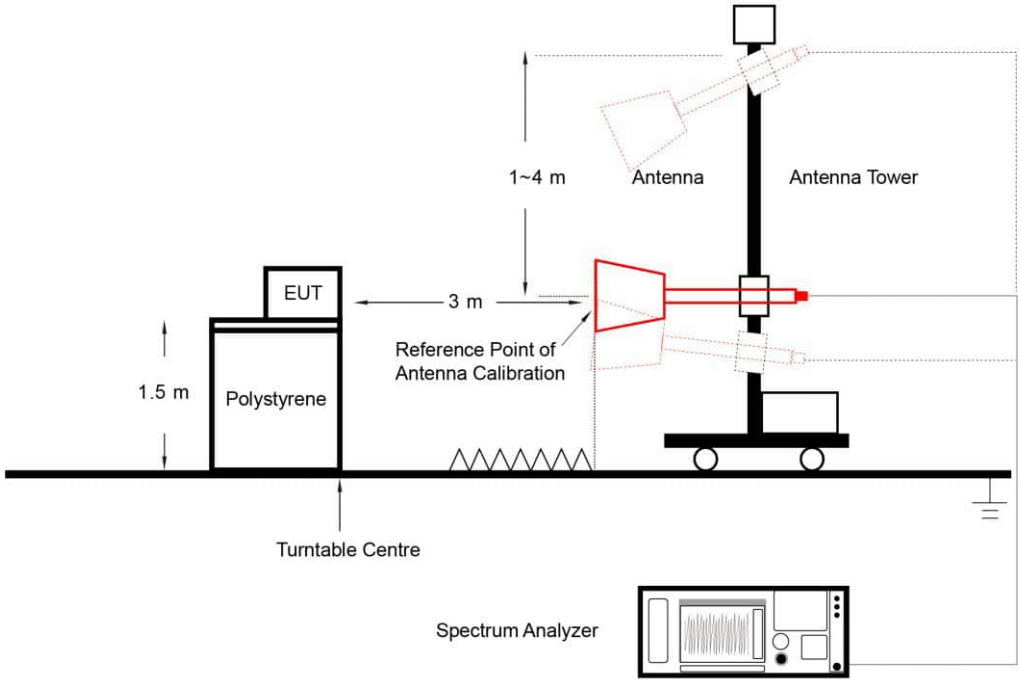
1. RBW = 120kHz or 1MHz
2. VBW ≥ 3*RBW
3. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period)
4. Detector = CISPR quasi-peak / average detector (Below 1 GHz, compliance with the limits shall be demonstrated using a CISPR quasi-peak detector and the related measurement bandwidth.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

5.8.4 Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.8.5 Test Result

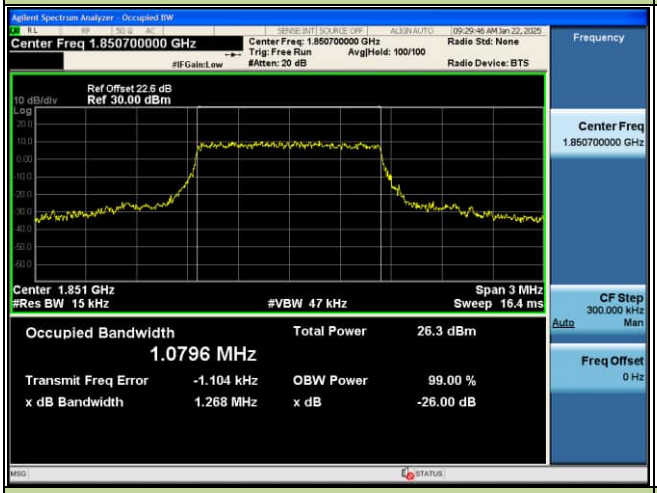
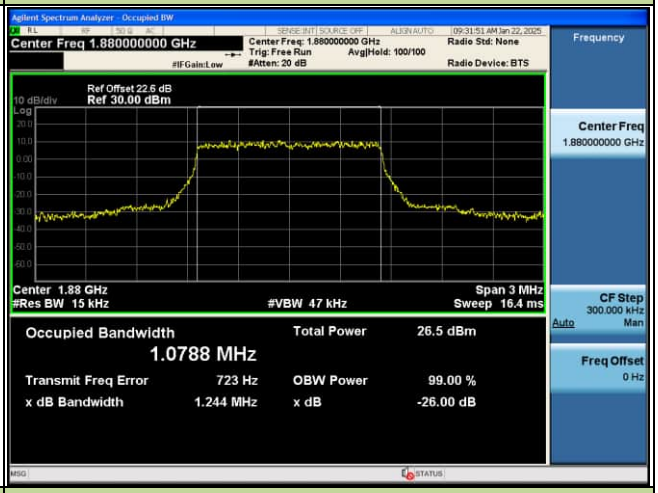
Refer to Appendix A.7.

Appendix A : TEST RESULT DATA

A1. Occupied Bandwidth Test Result

A1.1 LTE Band 2

LTE Band 2								
BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			26 dB bandwidth (MHz)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4M	18607	1850.7	1.0796	1.0754	1.0775	1.268	1.232	1.248
1.4M	18900	1880	1.0788	1.0761	1.0753	1.244	1.256	1.253
1.4M	19193	1909.3	1.0810	1.0768	1.0738	1.258	1.233	1.224
3M	18615	1851.5	2.6877	2.6783	2.6789	2.860	2.842	2.854
3M	18900	1880	2.6798	2.6718	2.6802	2.831	2.840	2.858
3M	19185	1908.5	2.6792	2.6726	2.6774	2.841	2.851	2.832
5M	18625	1852.5	4.4722	4.4611	4.4568	4.800	4.776	4.777
5M	18900	1880	4.4555	4.4624	4.4646	4.758	4.761	4.770
5M	19175	1907.5	4.4523	4.4619	4.4602	4.761	4.812	4.810
10M	18650	1855	8.9332	8.9324	8.9617	9.506	9.427	9.391
10M	18900	1880	8.9584	8.9360	8.9326	9.370	9.464	9.448
10M	19150	1905	8.9839	8.9393	8.9450	9.635	9.478	9.532
15M	18675	1857.5	13.425	13.412	13.397	14.16	14.17	14.26
15M	18900	1880	13.399	13.378	13.387	14.07	14.01	14.11
15M	19125	1902.5	13.467	13.479	13.462	14.21	14.23	14.17
20M	18700	1860	17.859	17.907	17.896	18.62	18.72	18.73
20M	18900	1880	17.786	17.866	17.857	18.64	18.74	18.66
20M	19100	1900	17.938	17.971	17.910	18.97	18.78	18.96

OCC_4G_B2_.QPSK_1.4M CH18607	OCC_4G_B2_.QPSK_1.4M CH18900
	
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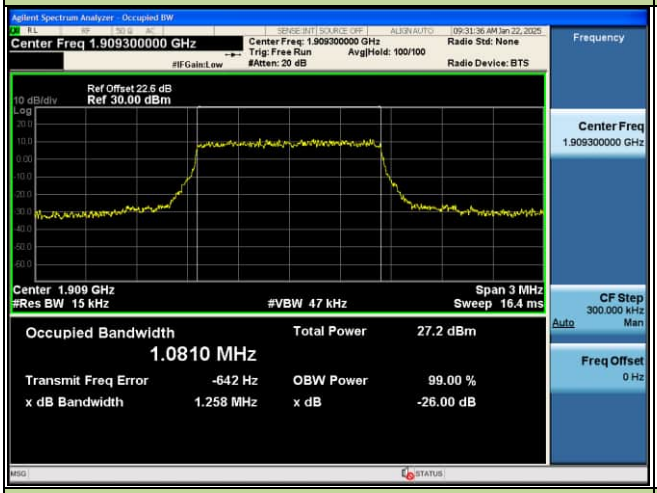	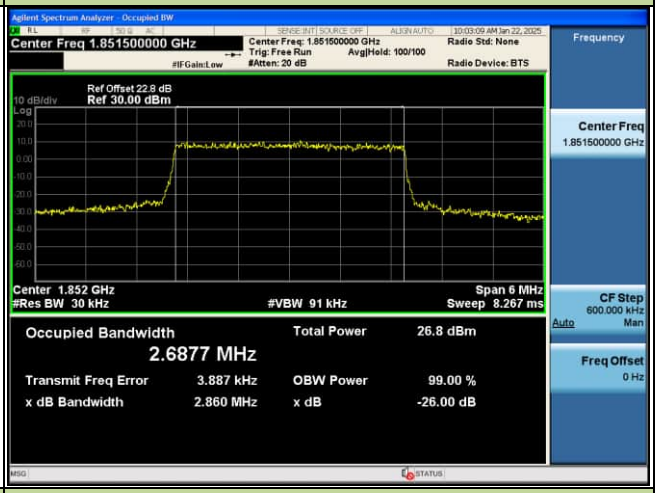
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	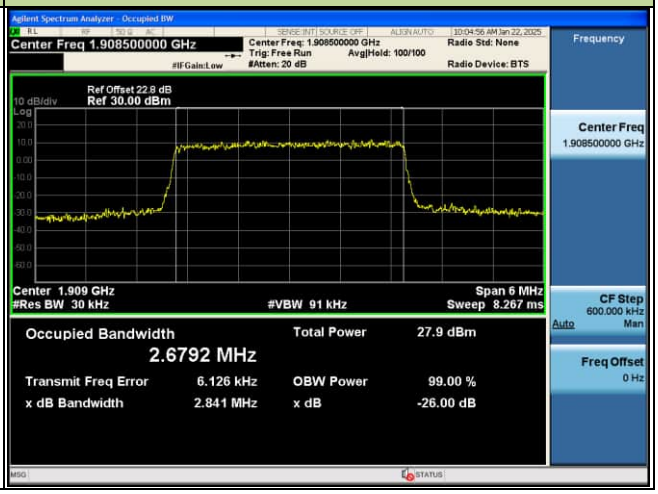

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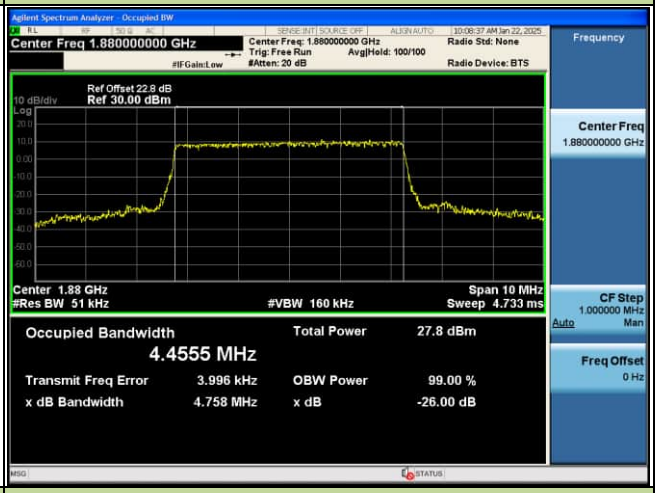

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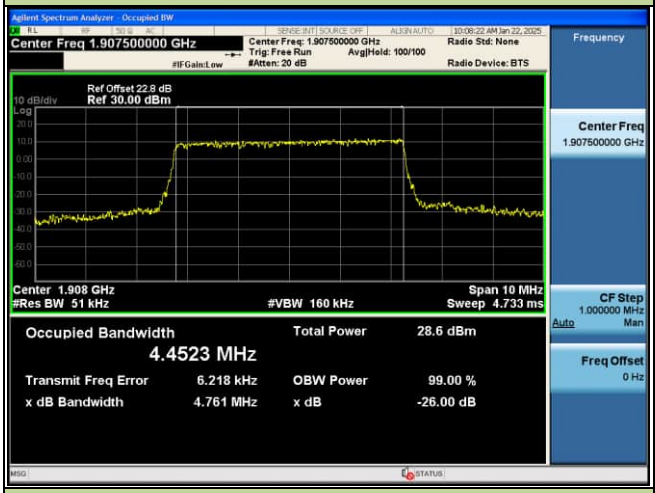

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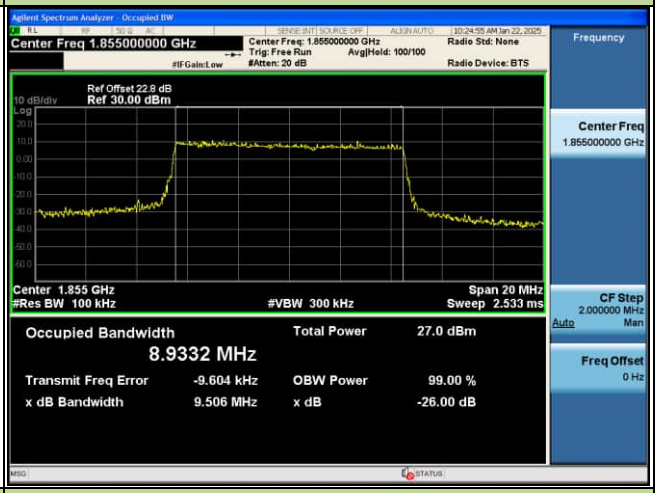

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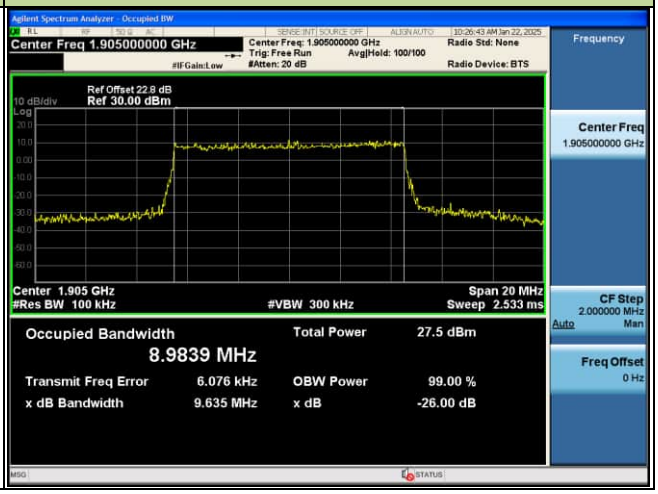

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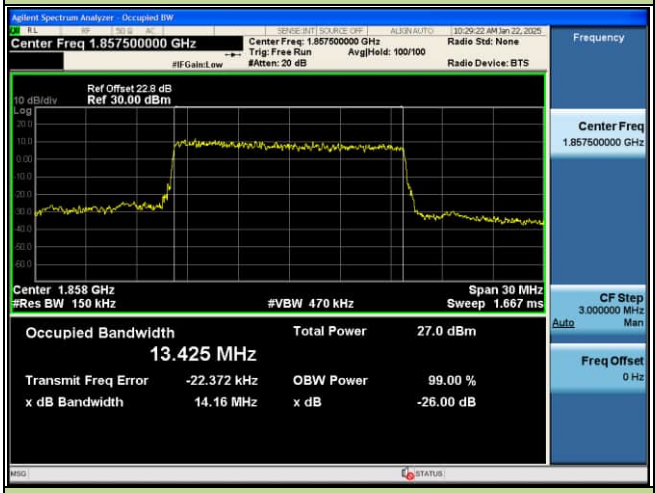	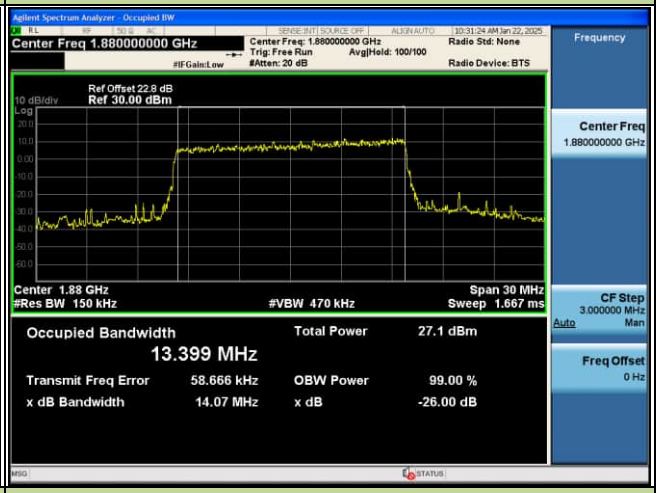
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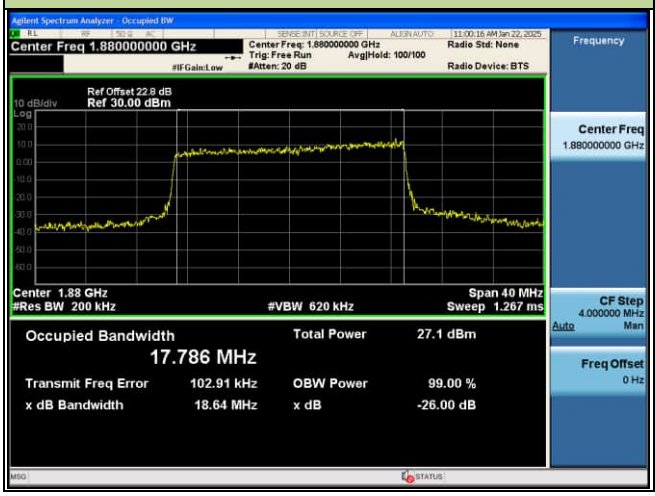	

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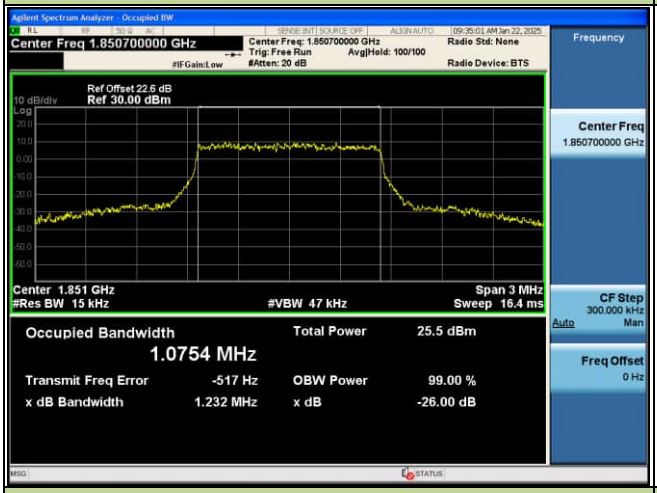	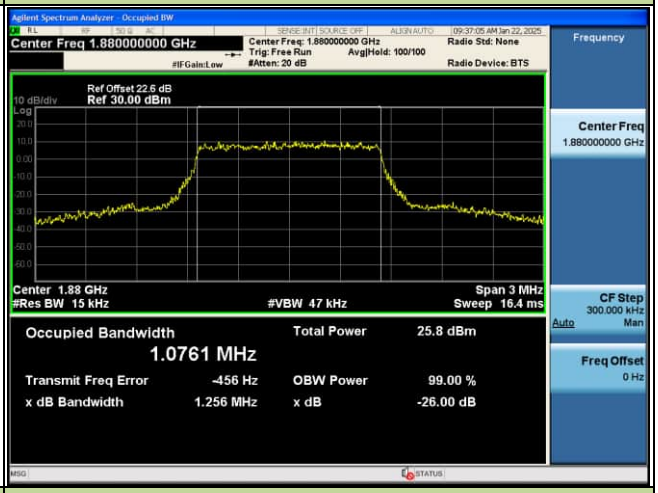
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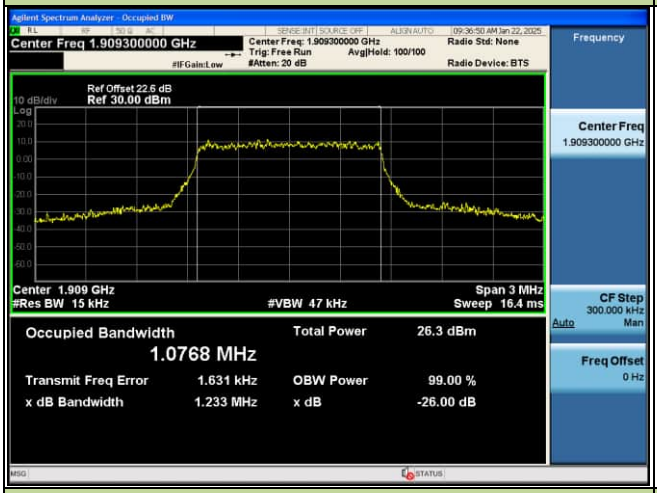	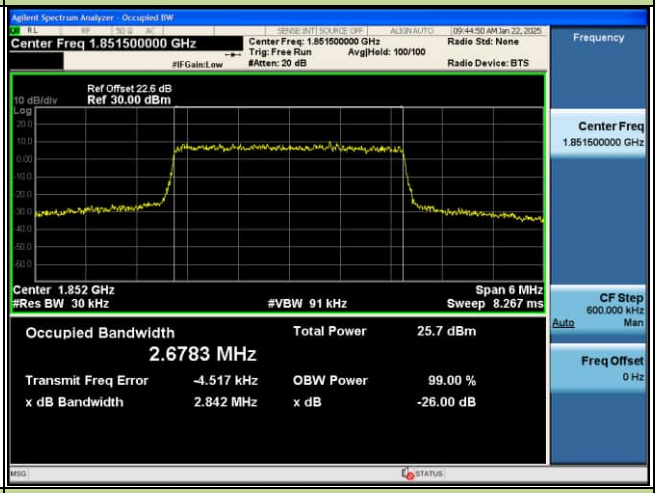
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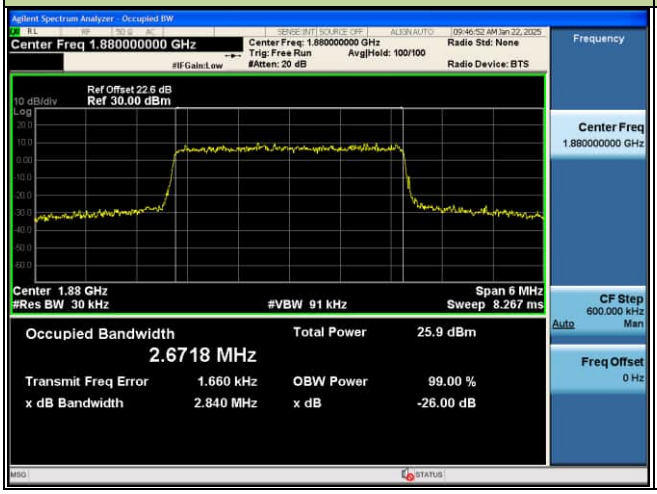	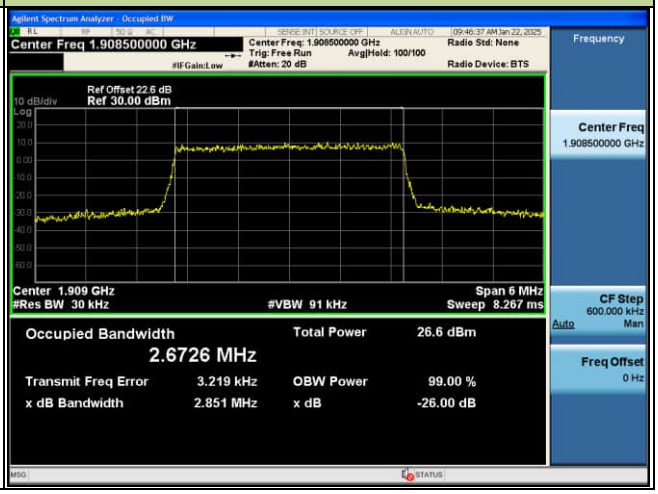

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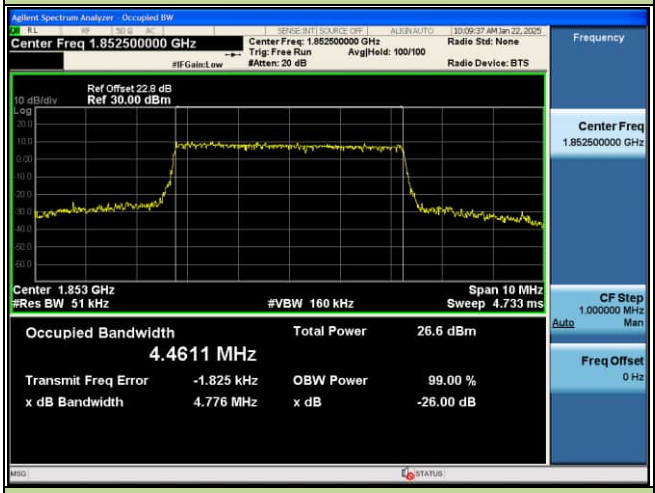	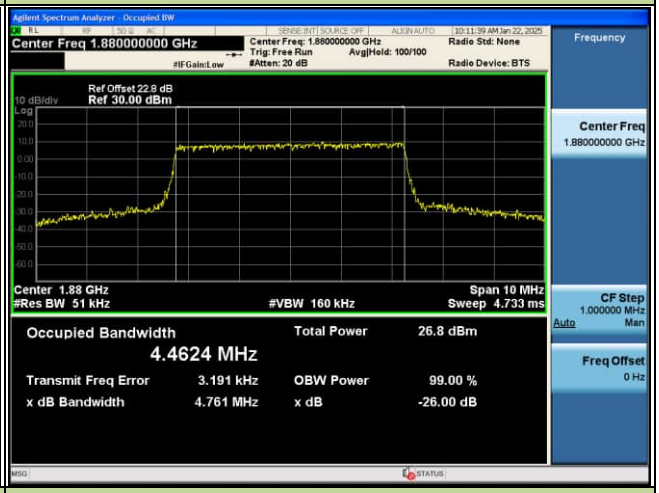
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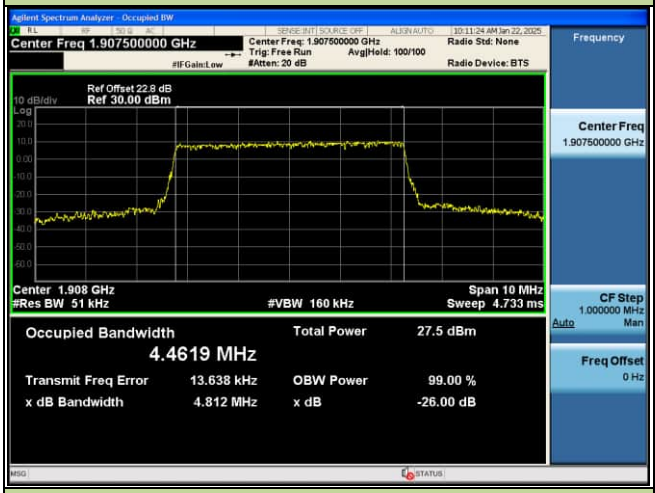	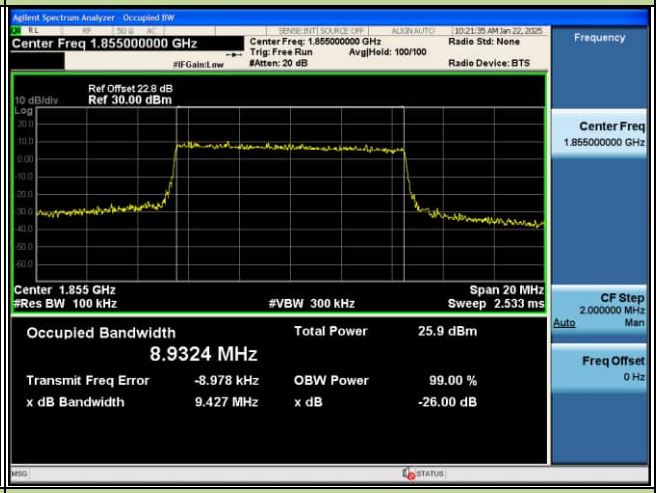
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	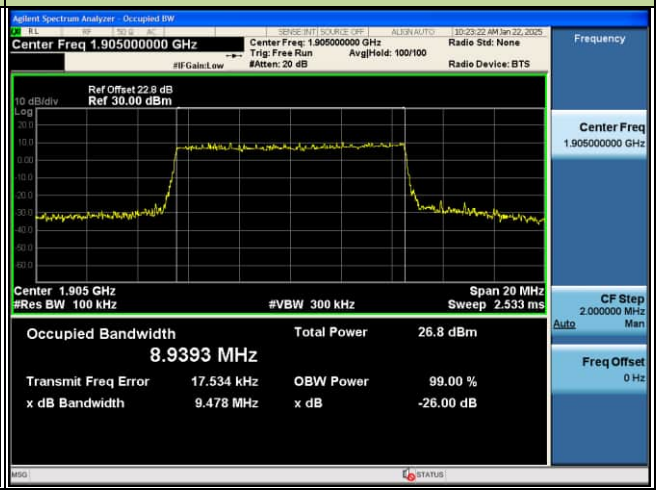

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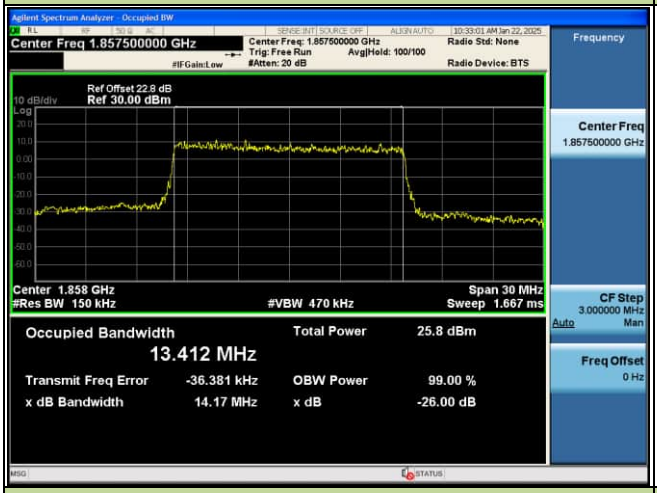	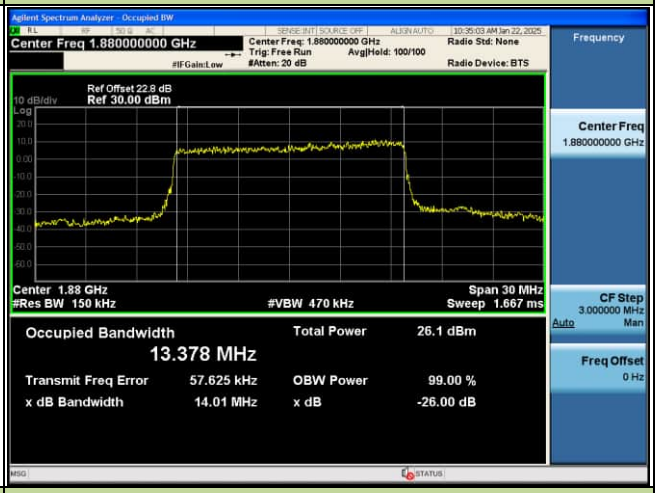
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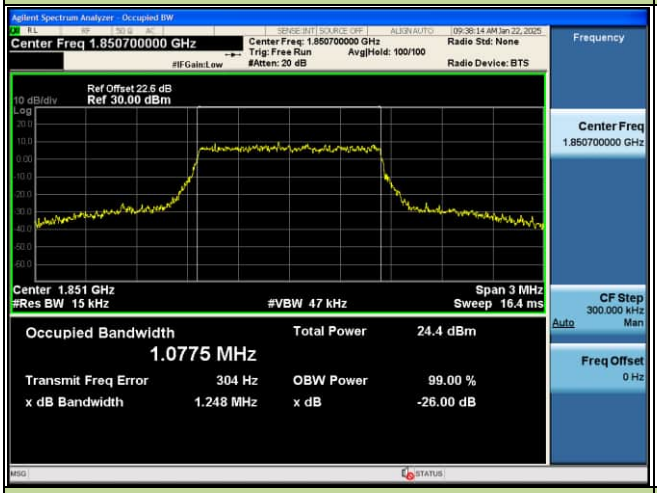
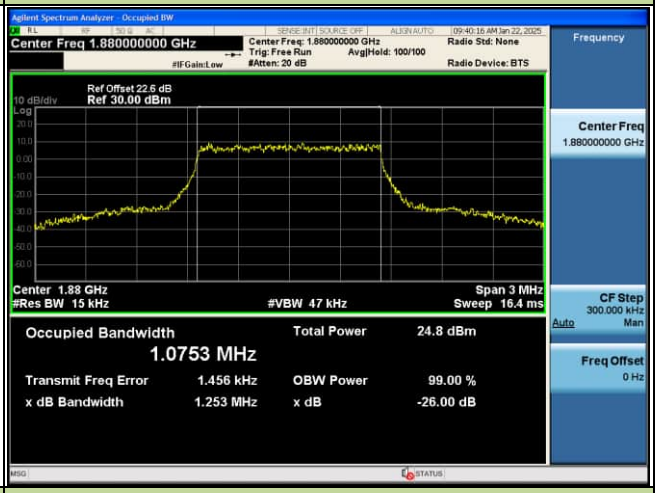
OCC_4G_B2_16QAM_20M CH18900	OCC_4G_B2_16QAM_20M CH19100
	

OCC_4G_B2_64QAM_1.4M CH18607	OCC_4G_B2_64QAM_1.4M CH18900
	
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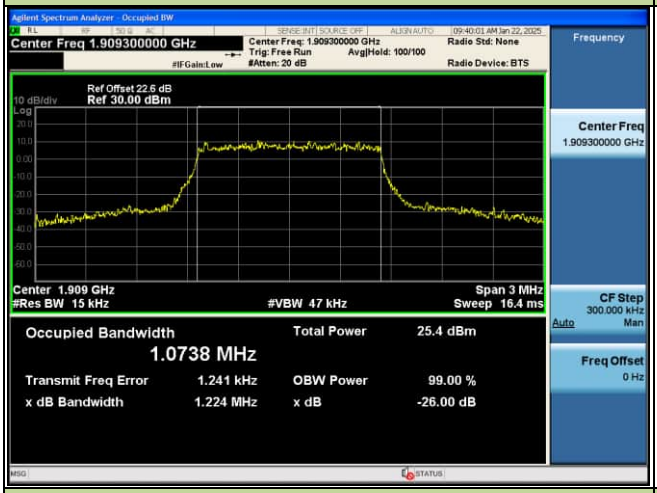	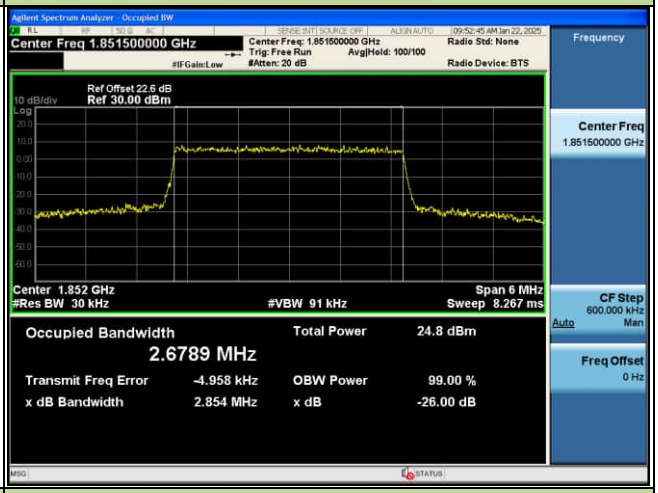
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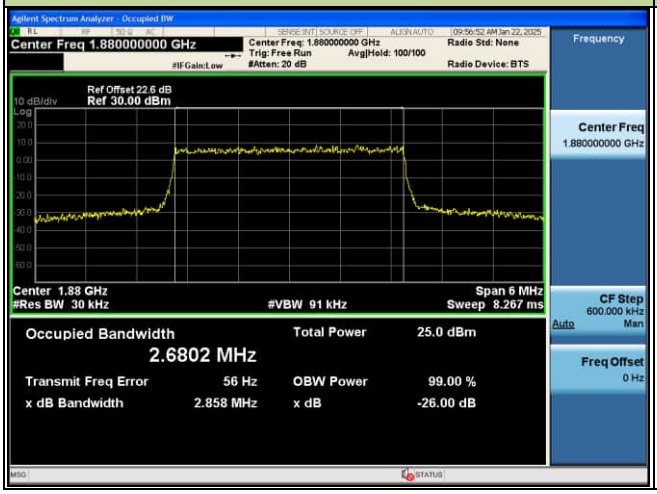	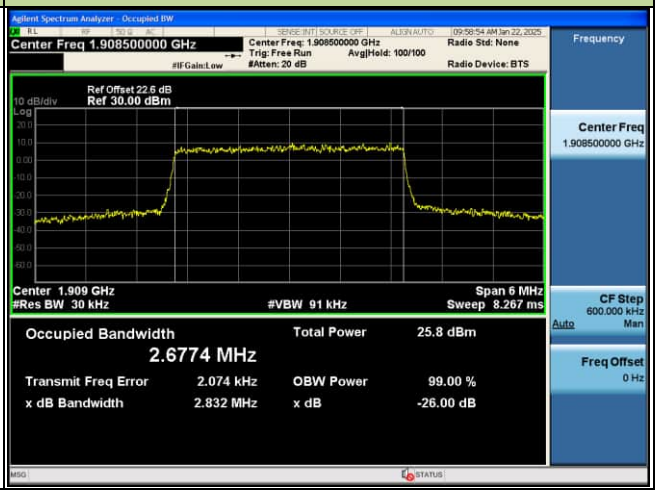

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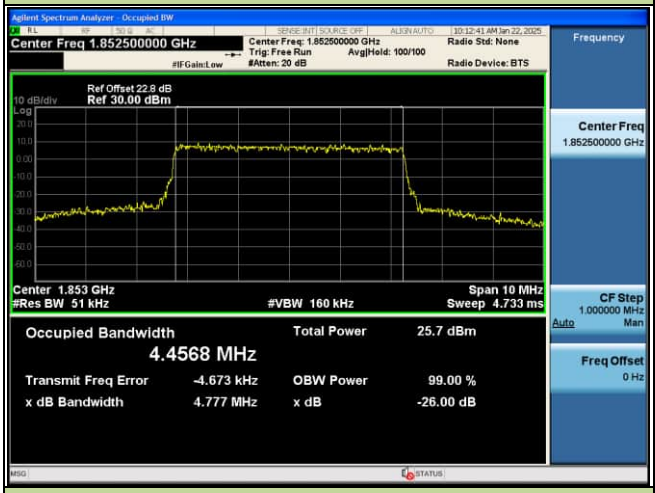	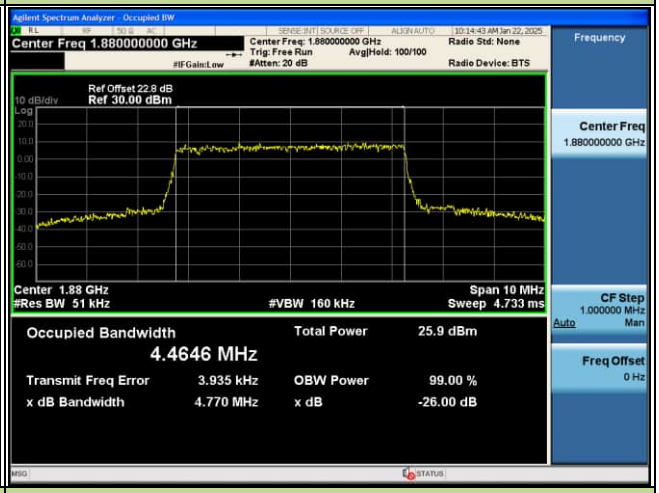
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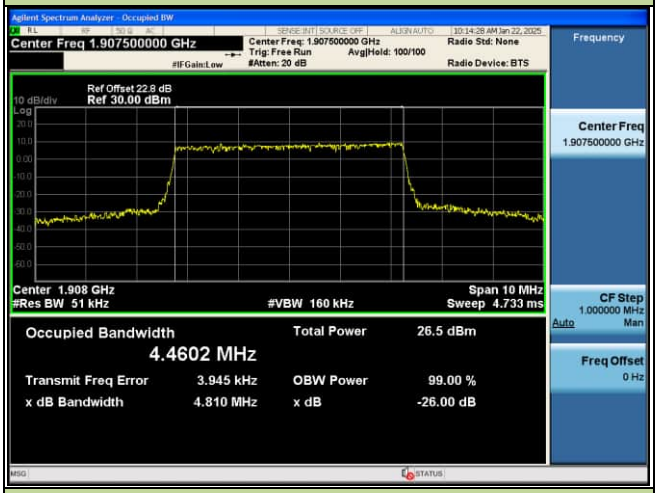	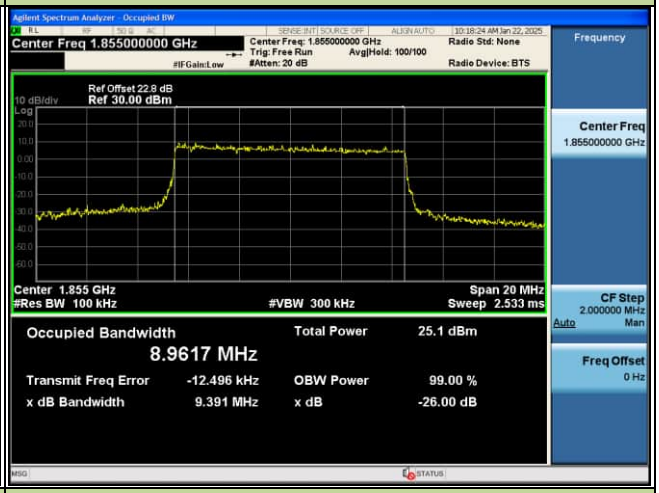
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	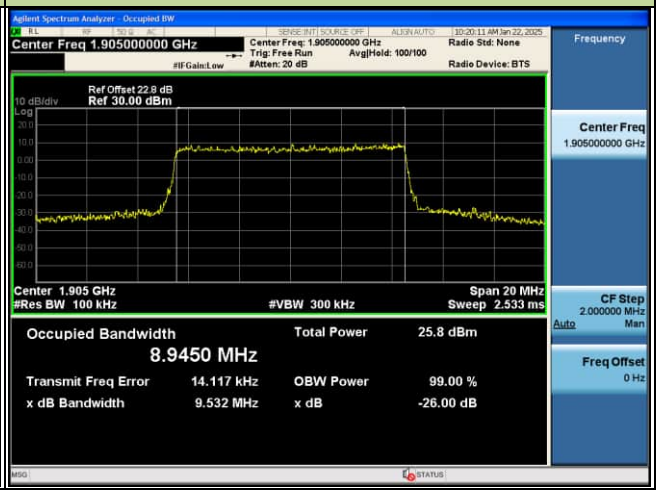

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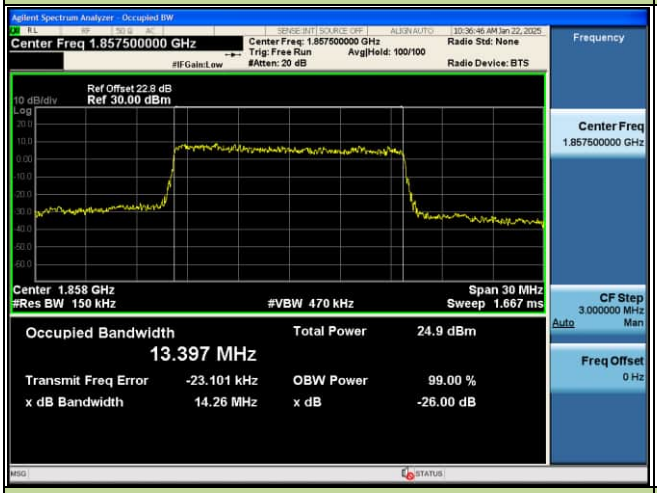
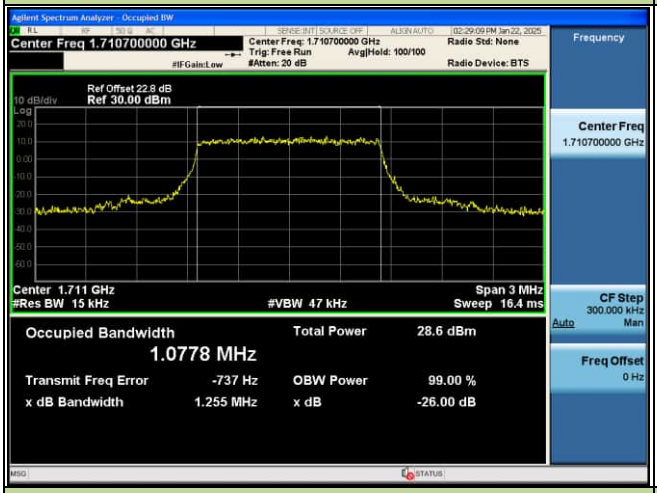
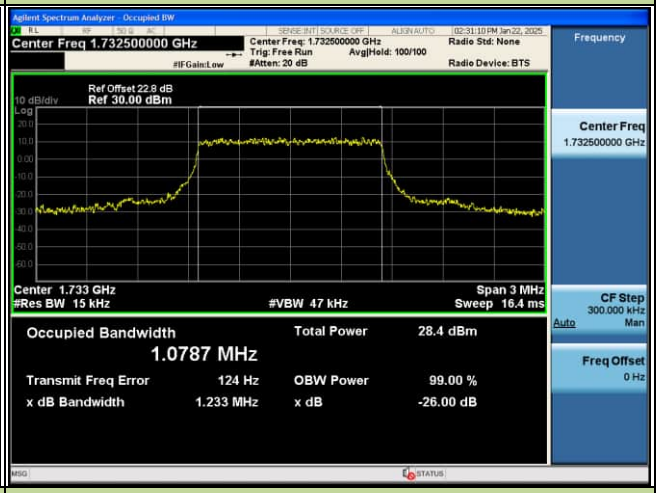
	
OCC_4G_B2_64QAM_15M CH19125	OCC_4G_B2_64QAM_20M CH18700
	
OCC_4G_B2_64QAM_20M CH18900	OCC_4G_B2_64QAM_20M CH19100
	

A1.2 LTE Band 4

LTE Band 4								
BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			26 dB bandwidth (MHz)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4M	19957	1710.7	1.0778	1.0760	1.0786	1.255	1.233	1.248
1.4M	20175	1732.5	1.0787	1.0802	1.0758	1.233	1.253	1.255
1.4M	20393	1754.3	1.0814	1.0767	1.0834	1.220	1.248	1.256
3M	19965	1711.5	2.6751	2.6748	2.6713	2.836	2.831	2.830
3M	20175	1732.5	2.6774	2.6750	2.6770	2.847	2.871	2.840
3M	20385	1753.5	2.6829	2.6739	2.6839	2.841	2.834	2.861
5M	19975	1712.5	4.4513	4.4678	4.4553	4.813	4.801	4.798
5M	20175	1732.5	4.4577	4.4631	4.4591	4.797	4.740	4.849
5M	20375	1752.5	4.4534	4.4653	4.4610	4.779	4.811	4.775
10M	20000	1715	8.9214	8.9460	8.9297	9.432	9.480	9.481
10M	20175	1732.5	8.9402	8.9482	8.9312	9.434	9.462	9.431
10M	20350	1750	8.9324	8.9500	8.9357	9.565	9.464	9.513
15M	20025	1717.5	13.390	13.439	13.445	14.13	14.27	14.25
15M	20175	1732.5	13.402	13.430	13.414	14.33	14.25	14.10
15M	20325	1747.5	13.422	13.423	13.389	14.30	14.19	14.18
20M	20050	1720	17.836	17.851	17.882	18.64	18.77	18.84
20M	20175	1732.5	17.863	17.866	17.881	18.83	18.82	18.88
20M	20300	1745	17.887	17.890	17.906	18.87	18.82	18.87

OCC_4G_B4_.QPSK_1.4M CH19957	OCC_4G_B4_.QPSK_1.4M CH20175
	
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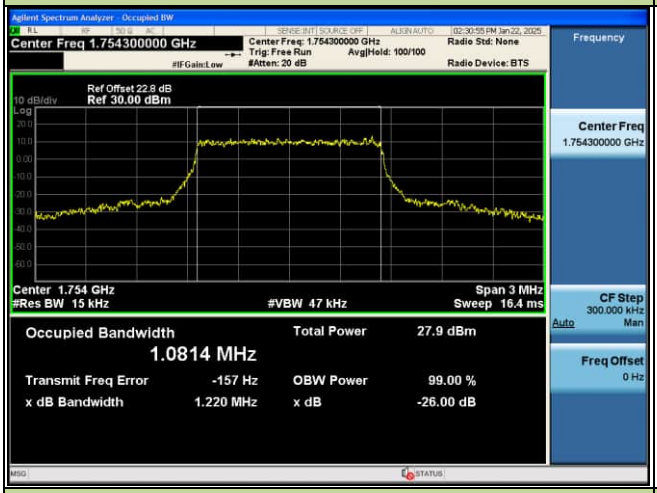	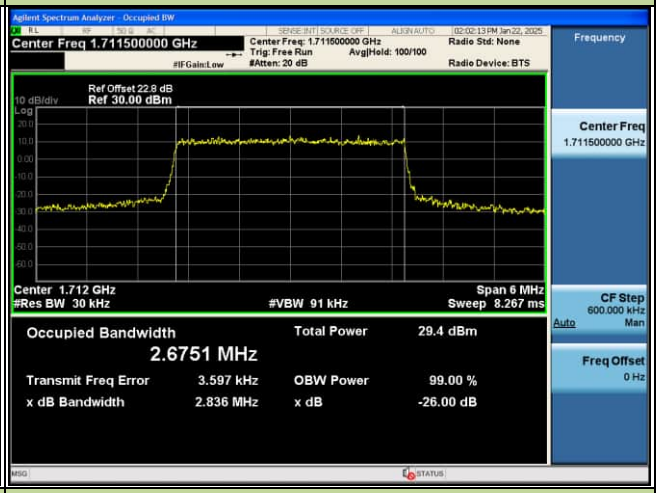
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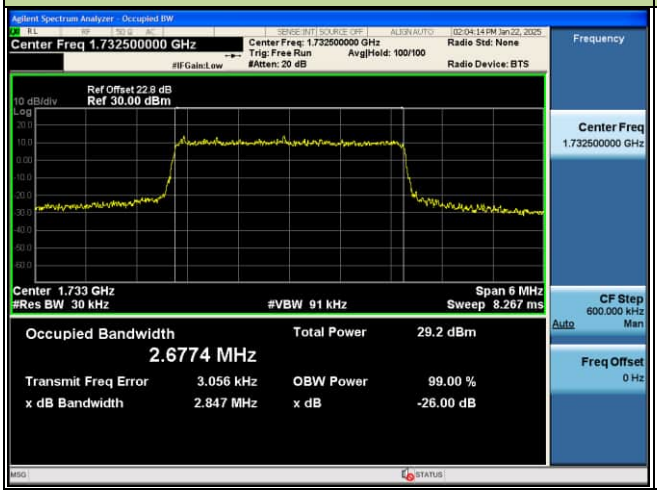	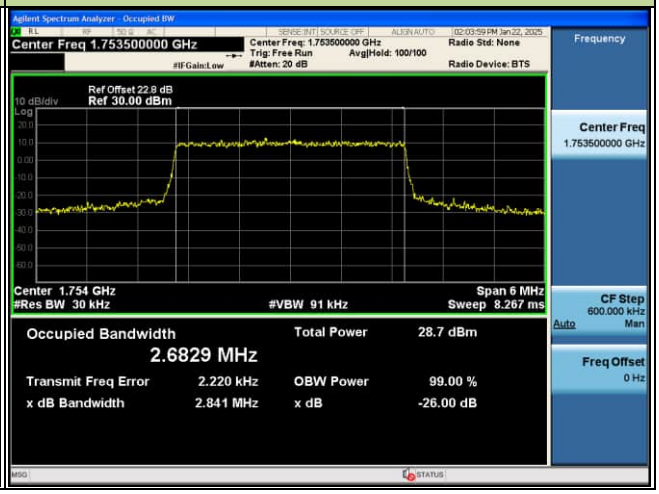

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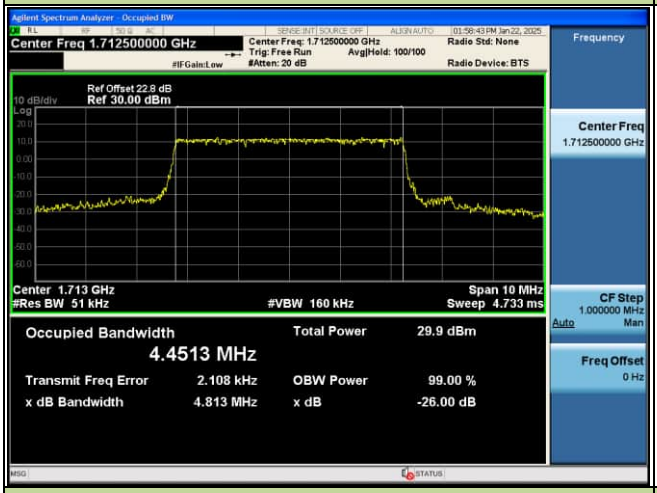	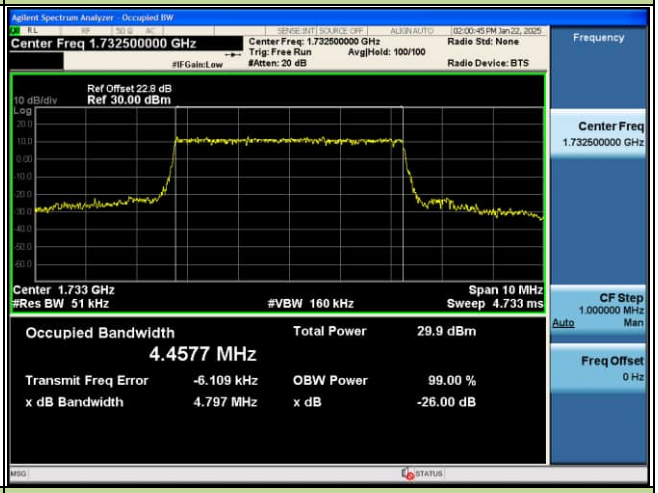
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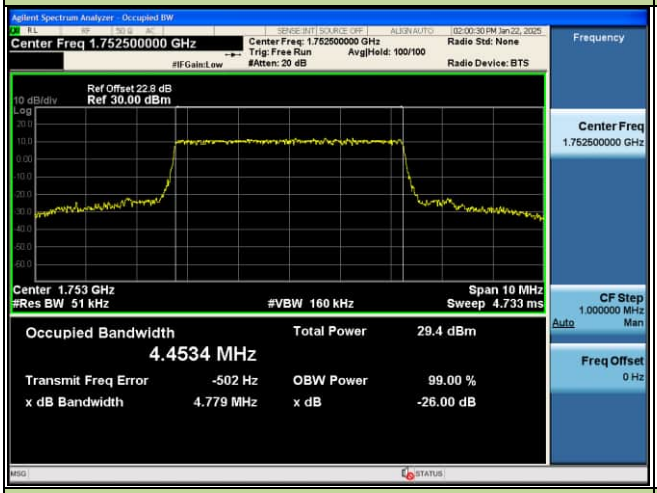	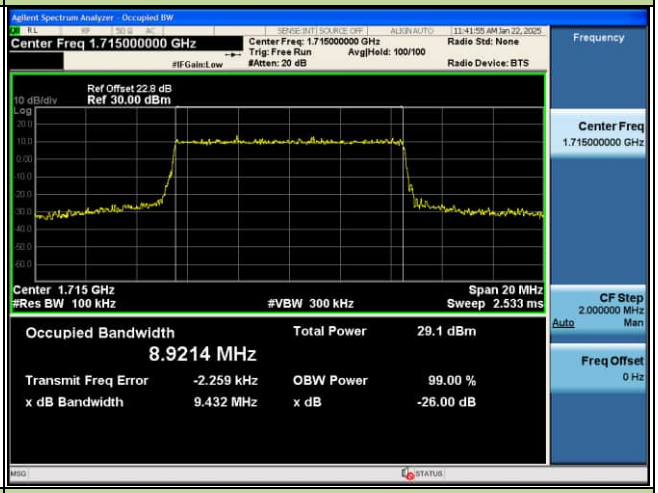
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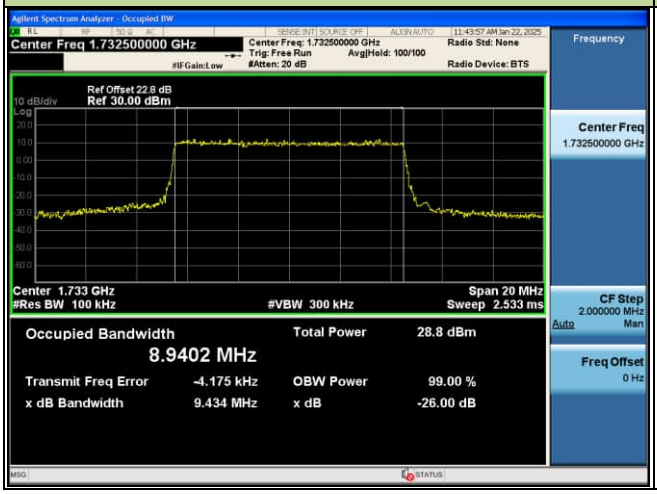	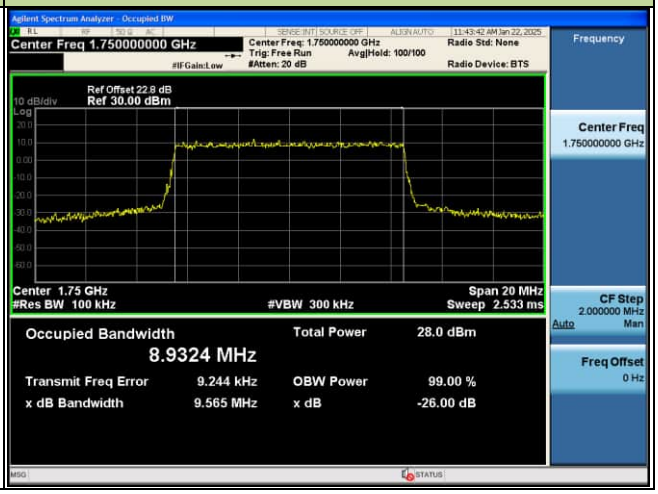

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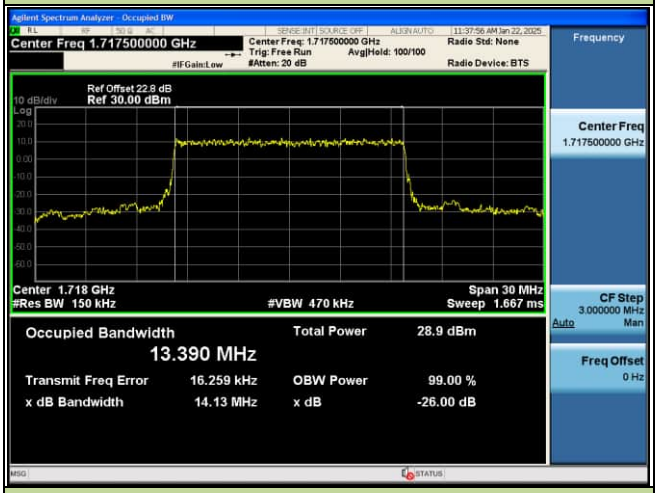	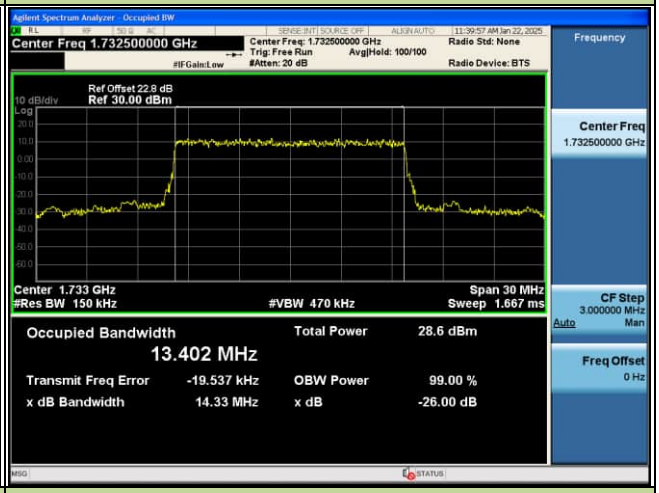
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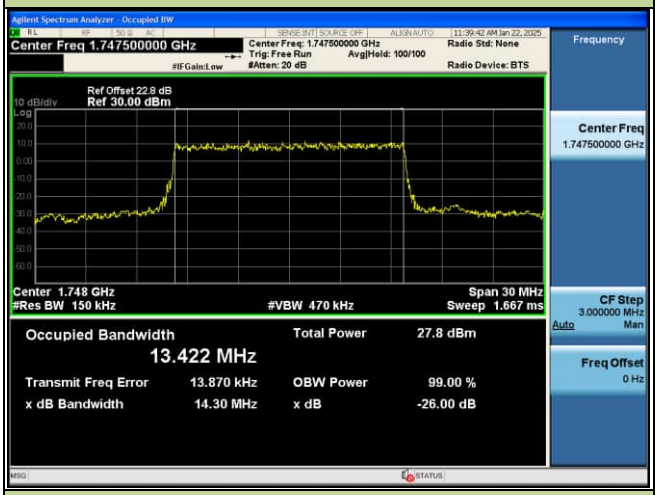	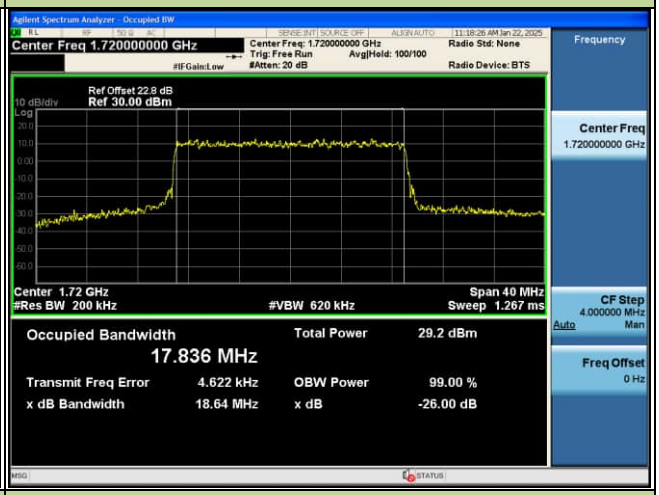
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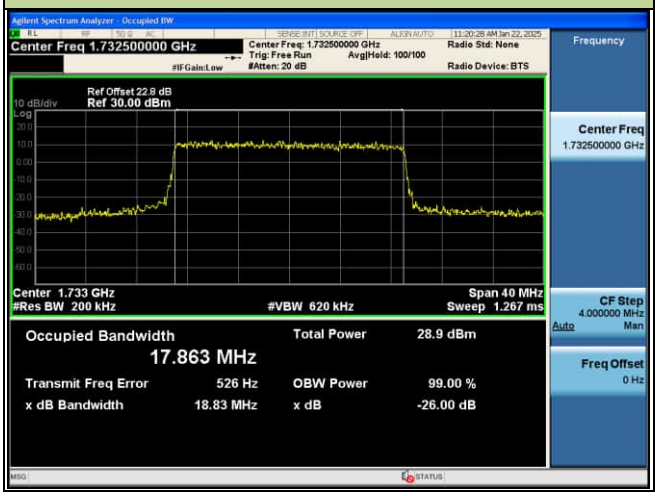	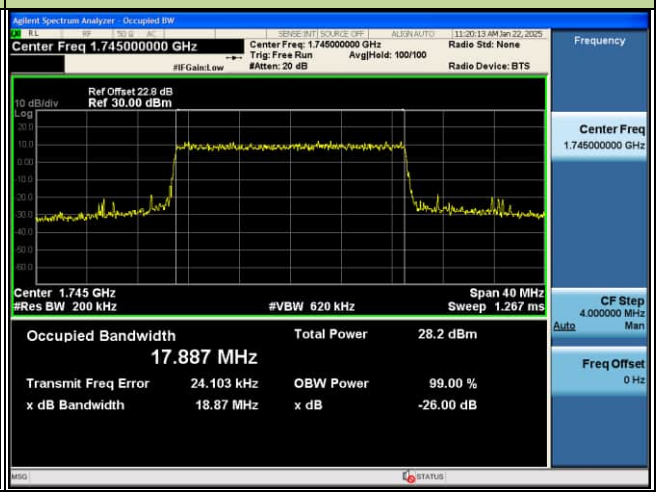

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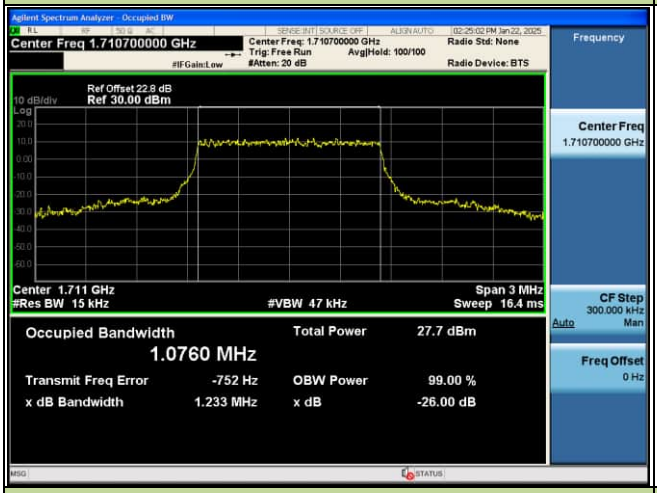	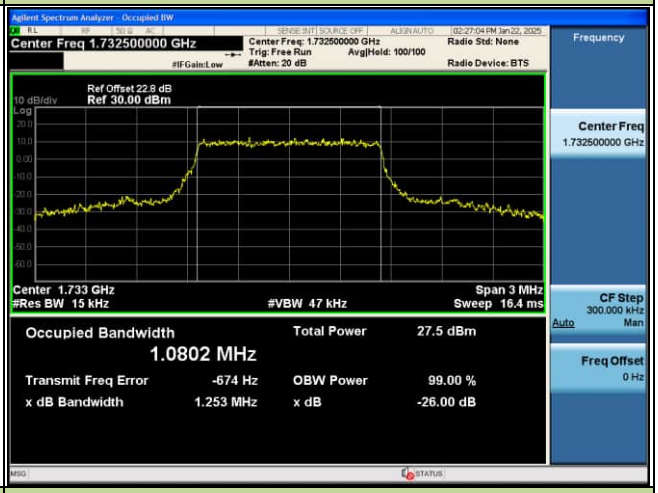
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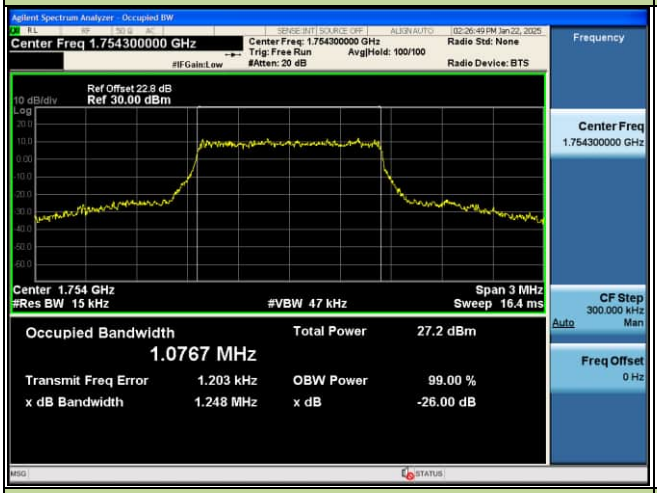	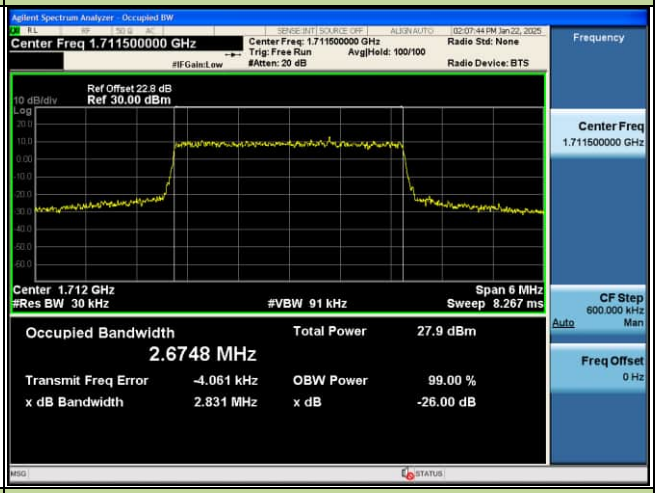
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	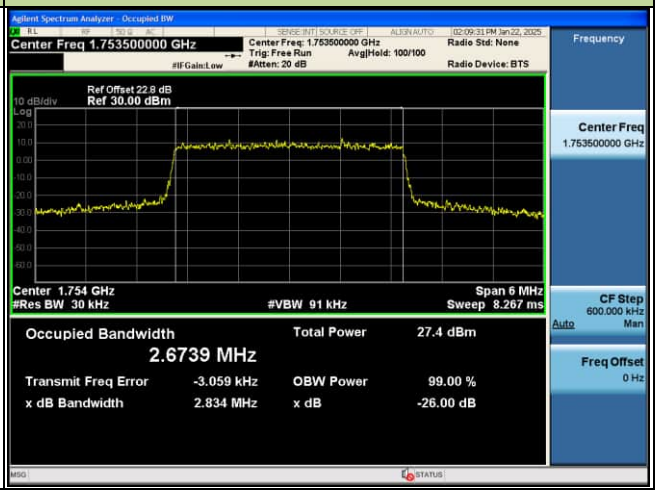

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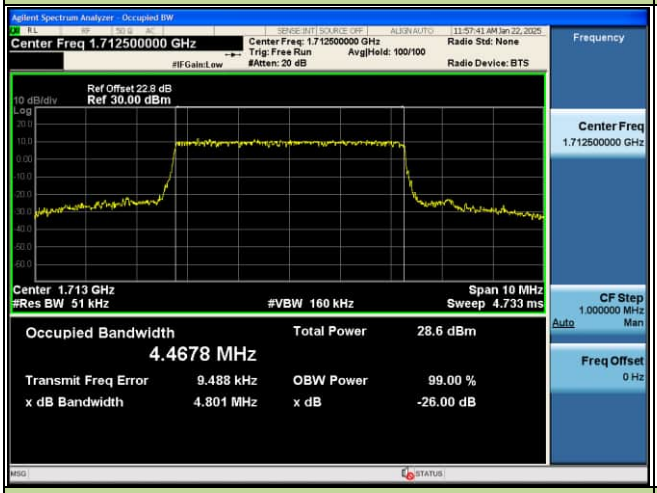	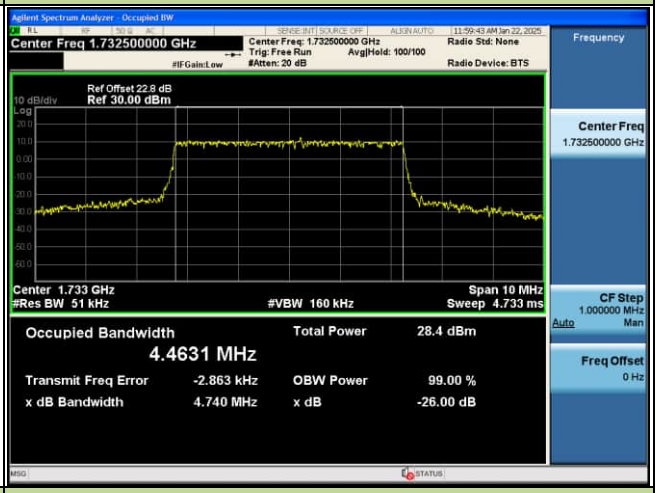
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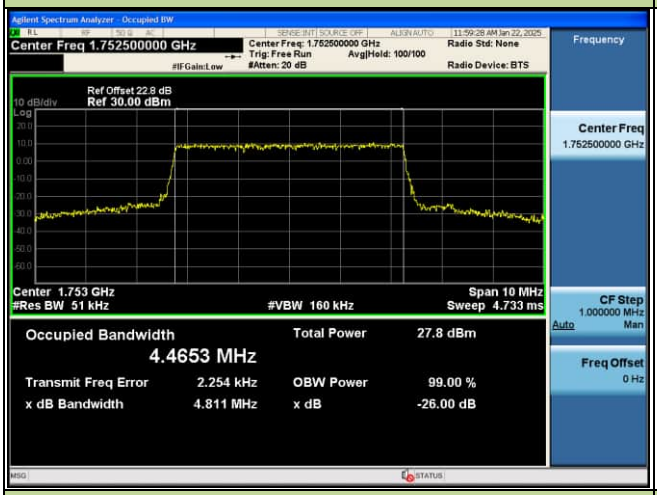	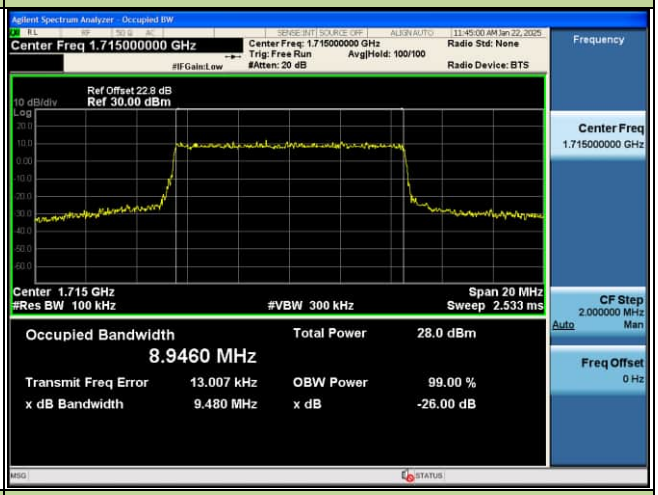
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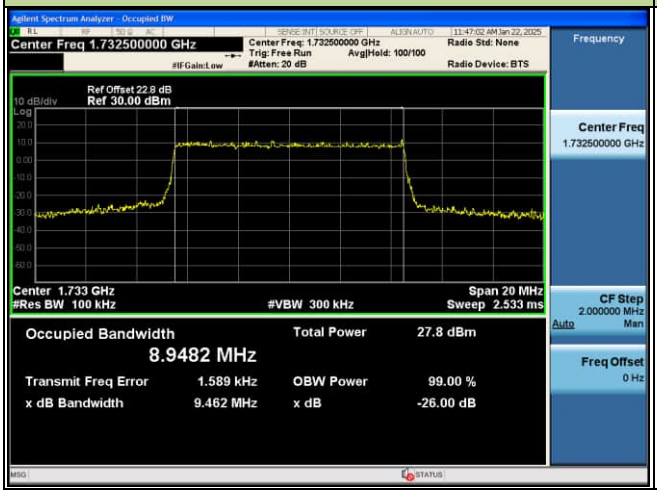
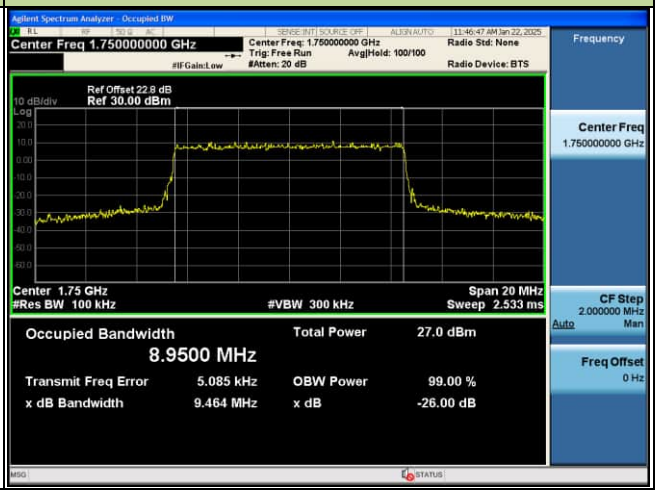
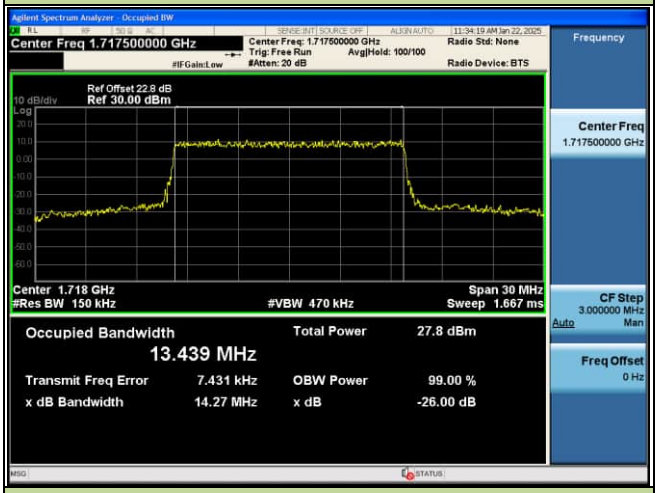
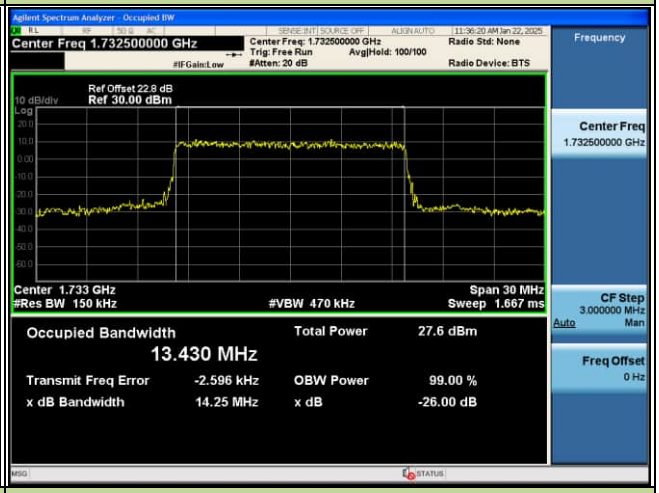
	

OCC_4G_B4_16QAM_15M CH20025	OCC_4G_B4_16QAM_15M CH20175
	
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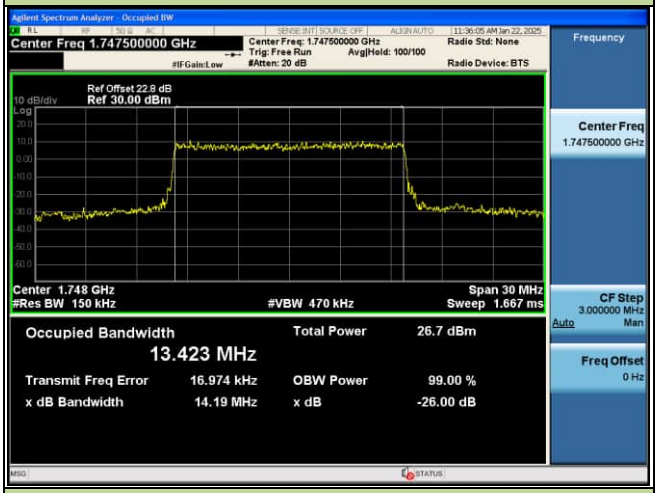	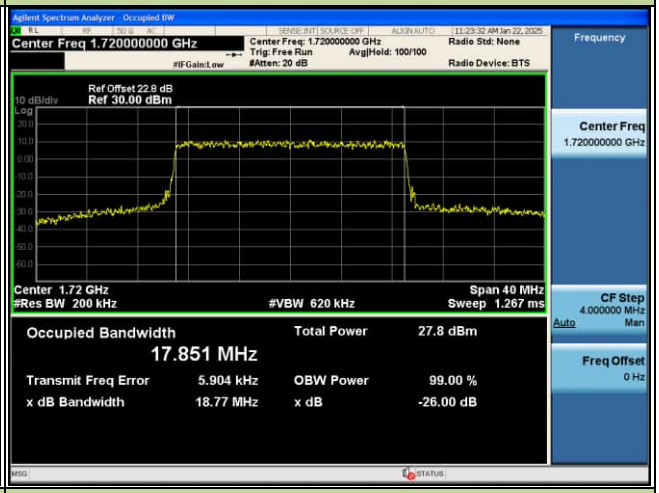
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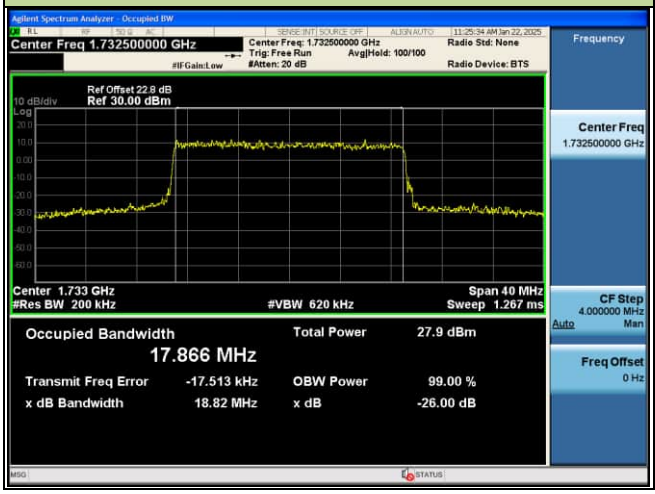	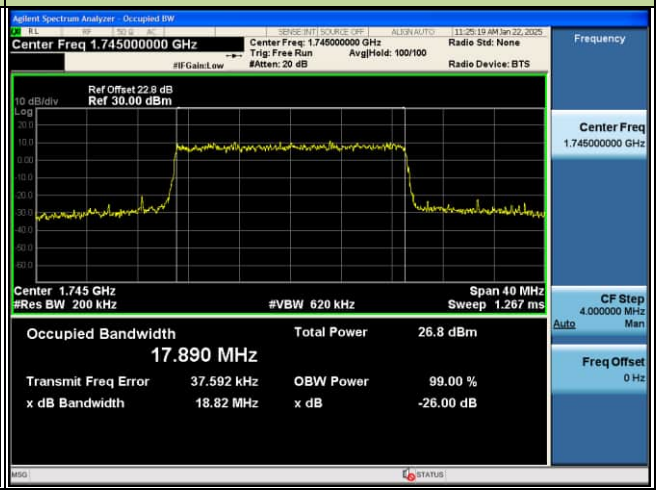

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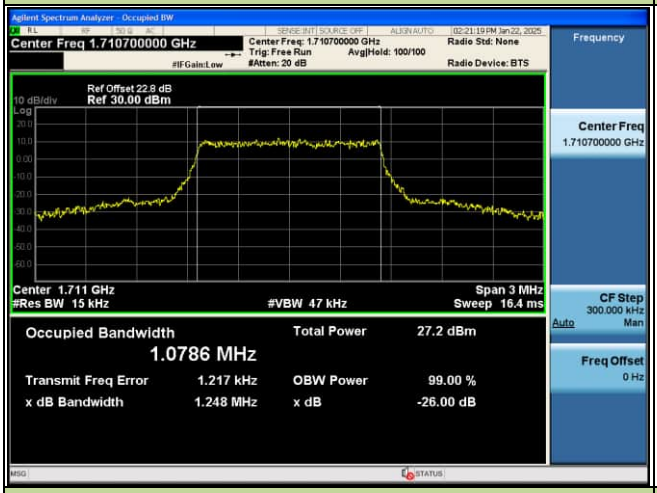	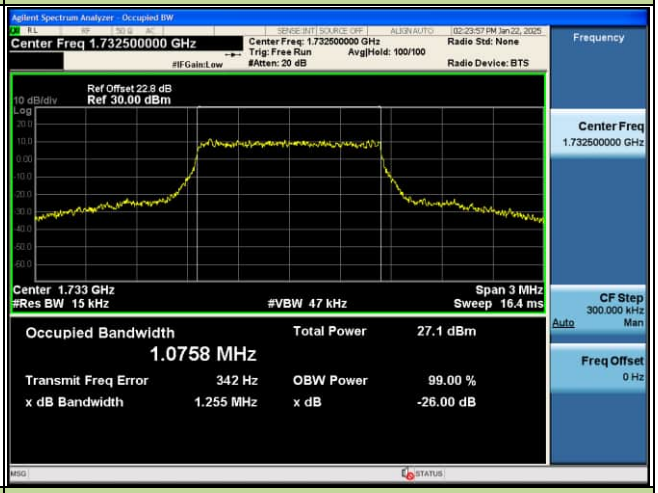
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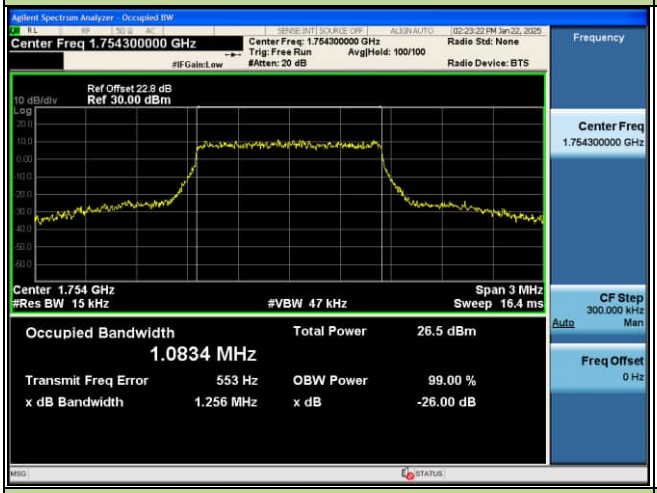	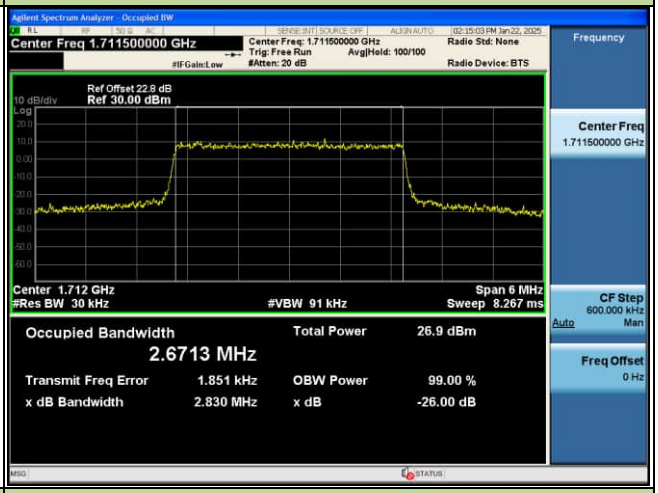
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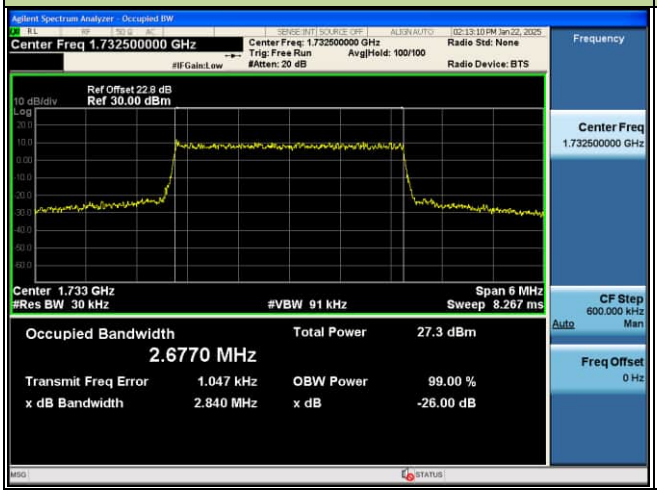	

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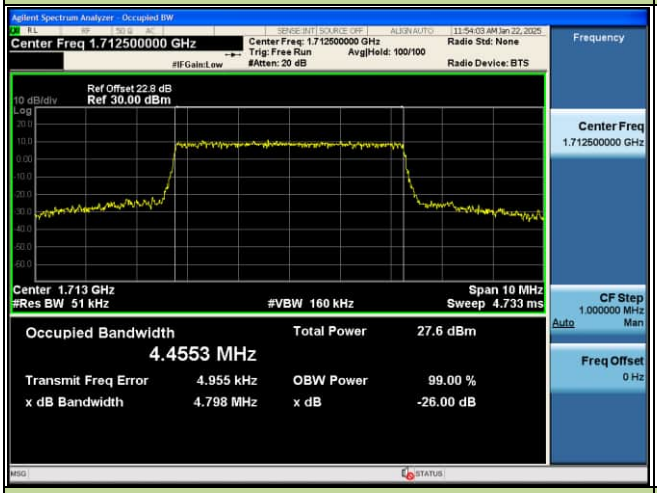	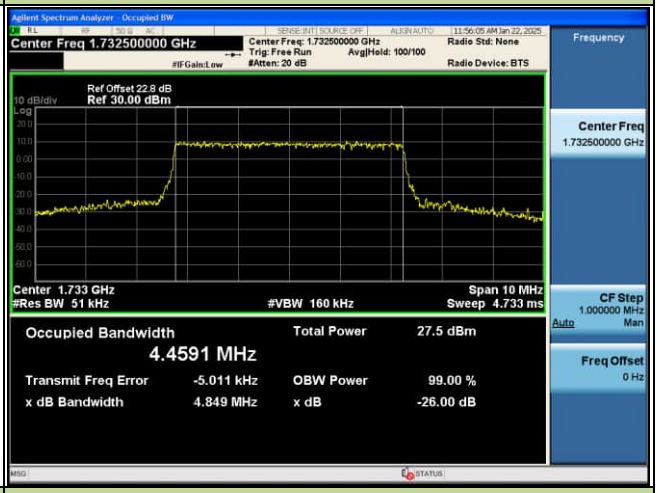
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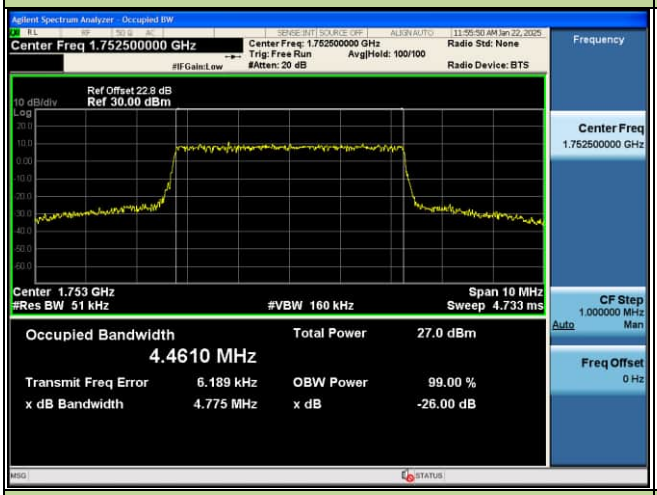	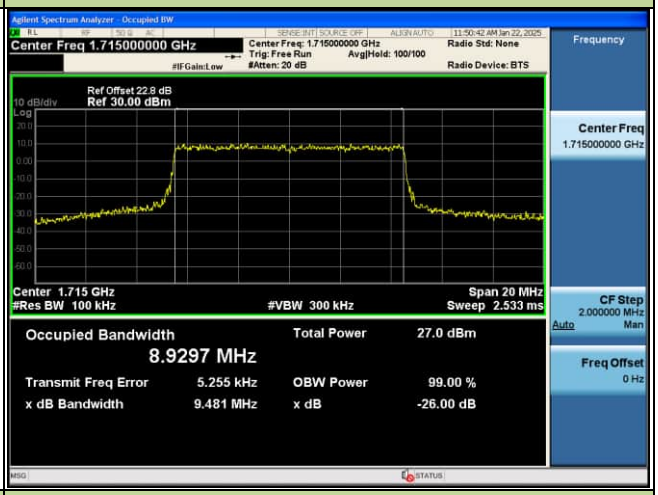
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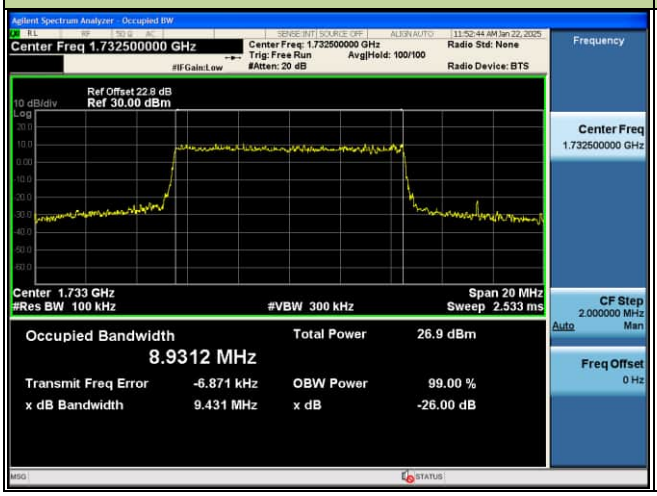	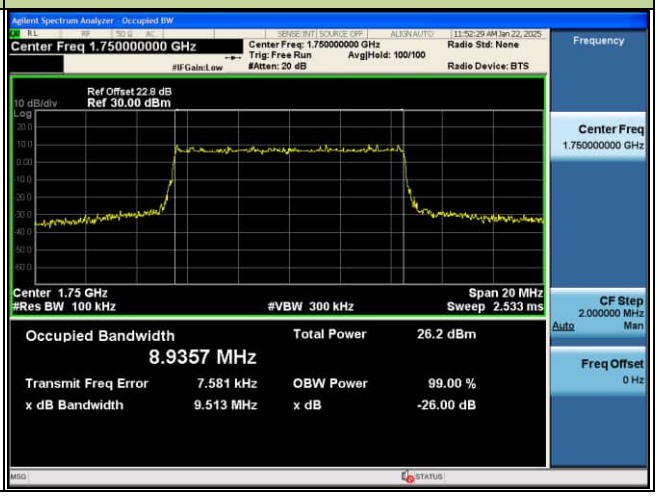

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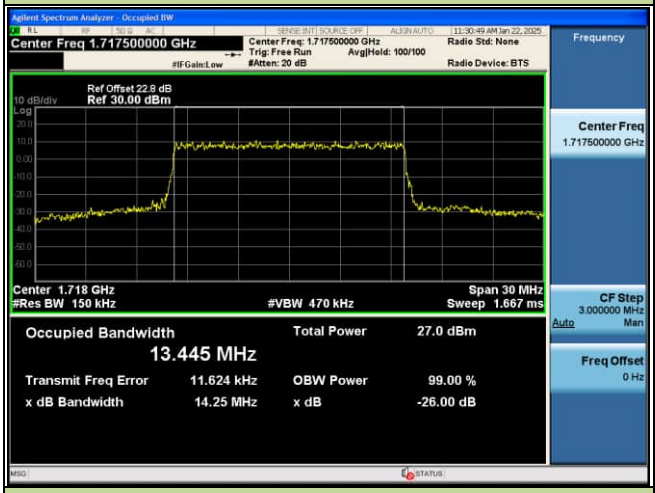	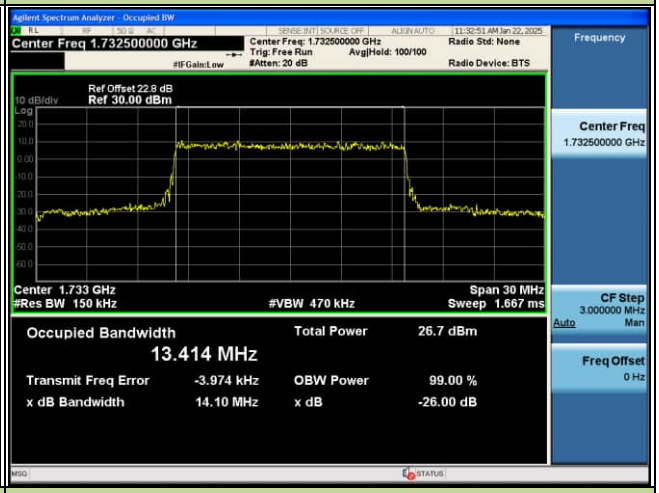
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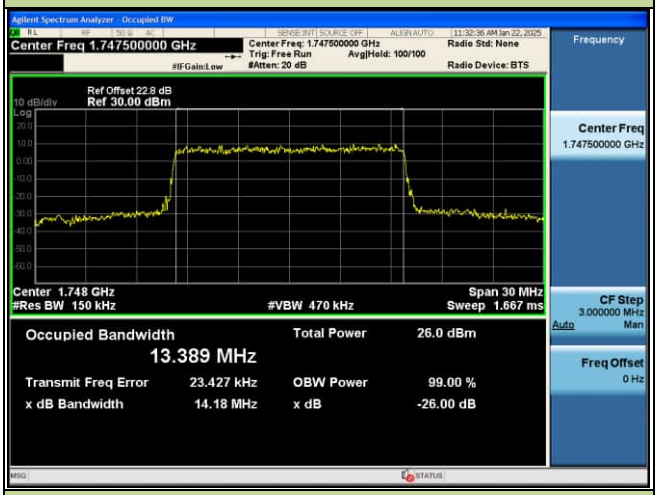	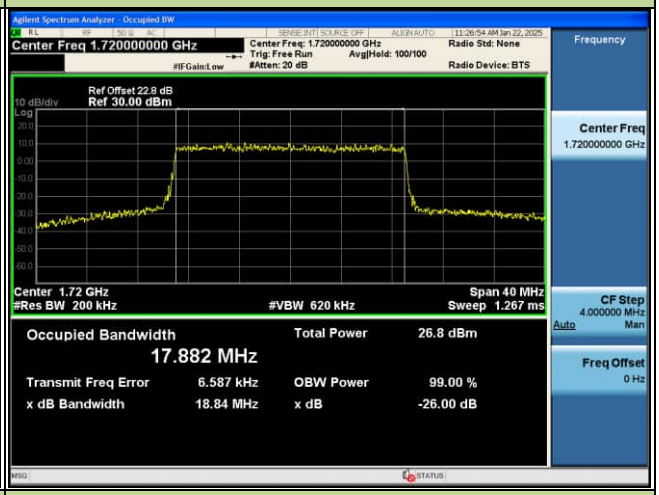
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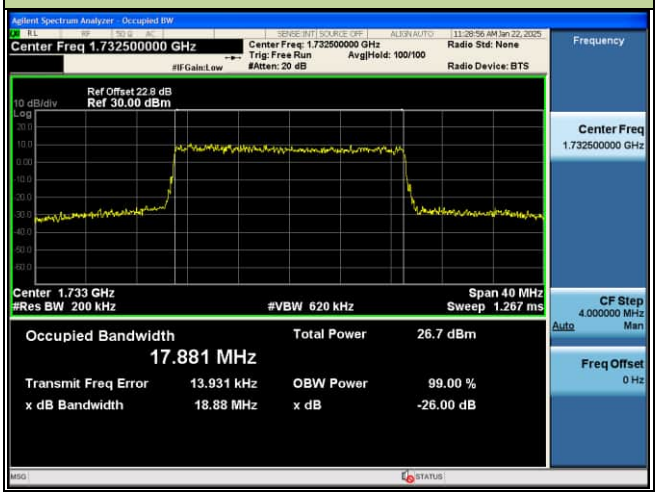	

A1.3 LTE Band 5

LTE Band 5								
BW	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			26 dB bandwidth (MHz)		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4M	20407	824.7	1.0778	1.0755	1.0764	1.254	1.220	1.235
1.4M	20525	836.5	1.0759	1.0809	1.0771	1.235	1.259	1.251
1.4M	20643	848.3	1.0838	1.0770	1.0764	1.233	1.269	1.224
3M	20415	825.5	2.6748	2.6713	2.6638	2.844	2.834	2.823
3M	20525	836.5	2.6793	2.6756	2.6751	2.843	2.824	2.860
3M	20635	847.5	2.6802	2.6774	2.6807	2.847	2.857	2.846
5M	20425	826.5	4.4473	4.4543	4.4551	4.755	4.782	4.793
5M	20525	836.5	4.4642	4.4695	4.4591	4.811	4.761	4.790
5M	20625	846.5	4.4674	4.4684	4.4559	4.781	4.843	4.799
10M	20450	829	8.9137	8.8928	8.9147	9.389	9.414	9.393
10M	20525	836.5	8.9627	8.9514	8.9443	9.625	9.393	9.497
10M	20600	844	8.8985	8.9142	8.8953	9.346	9.430	9.340

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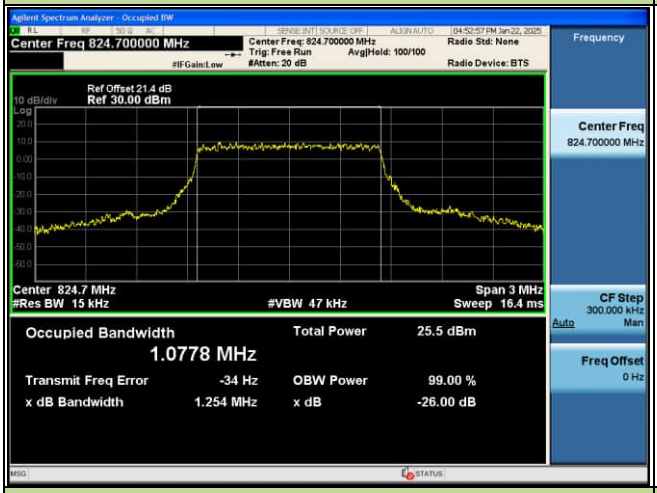	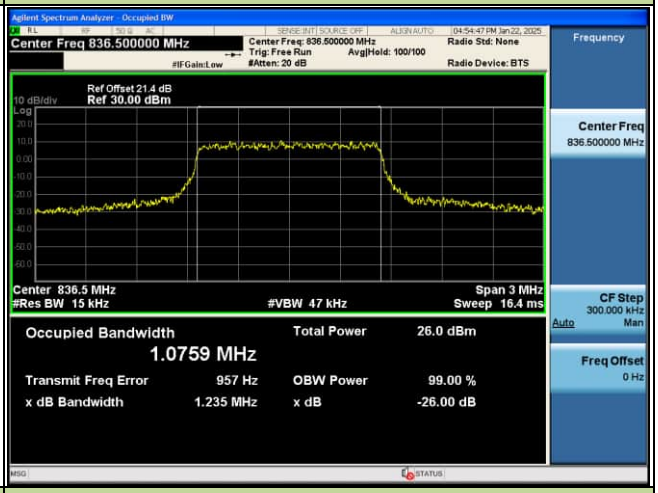
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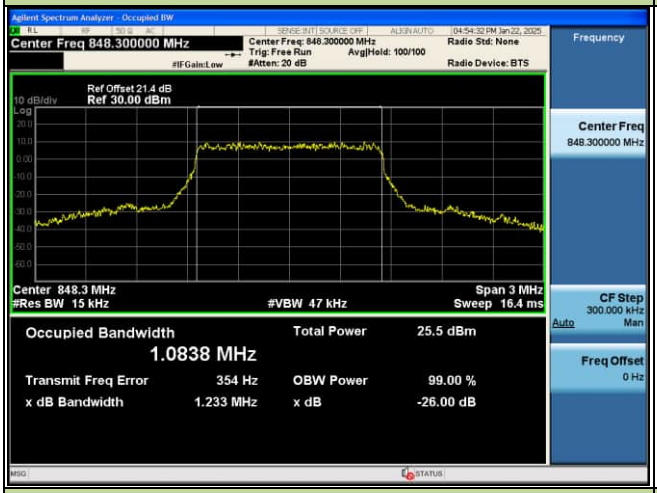	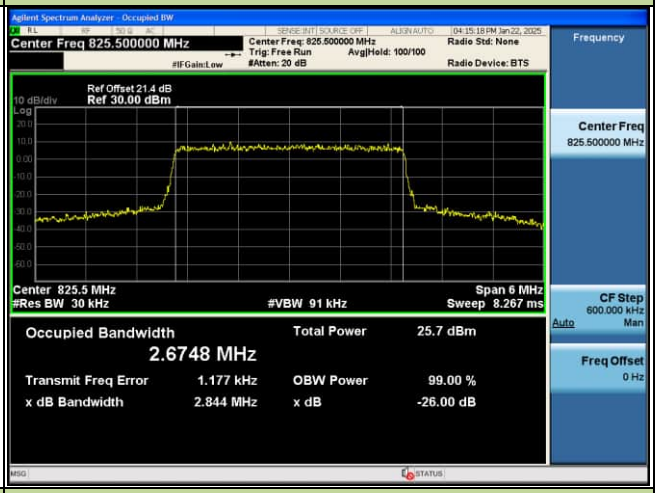
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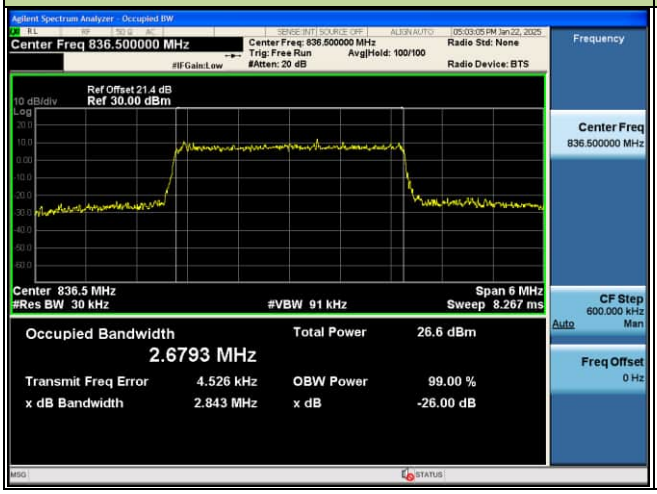	

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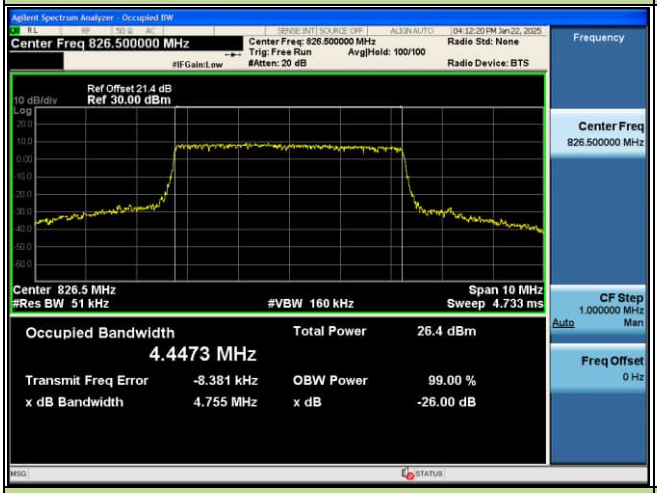

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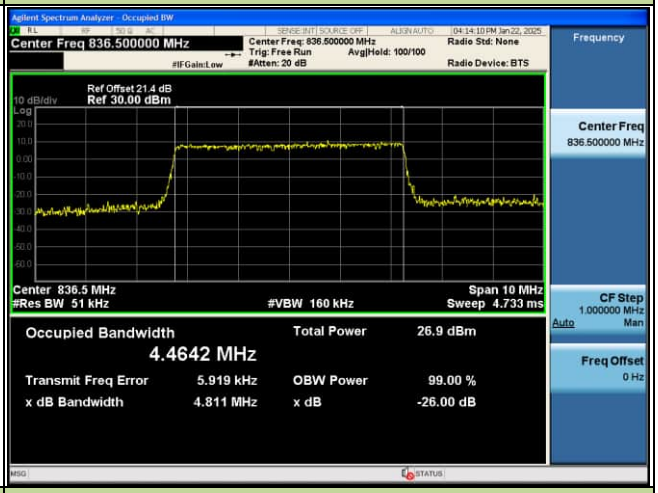

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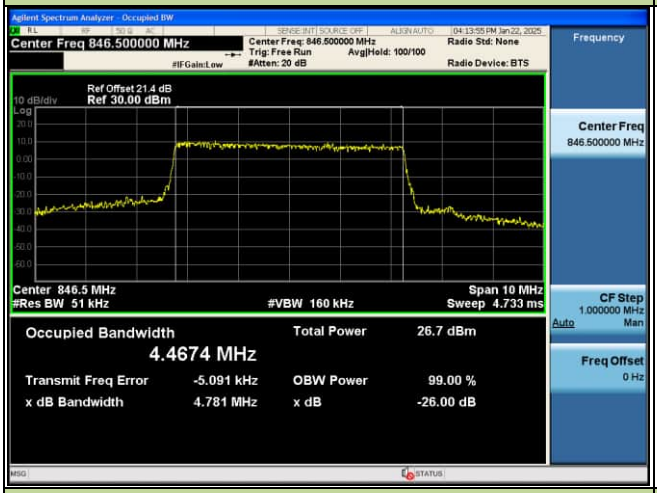

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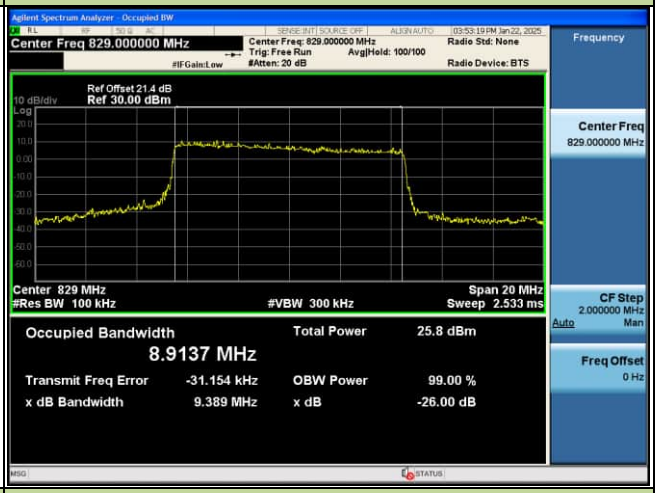

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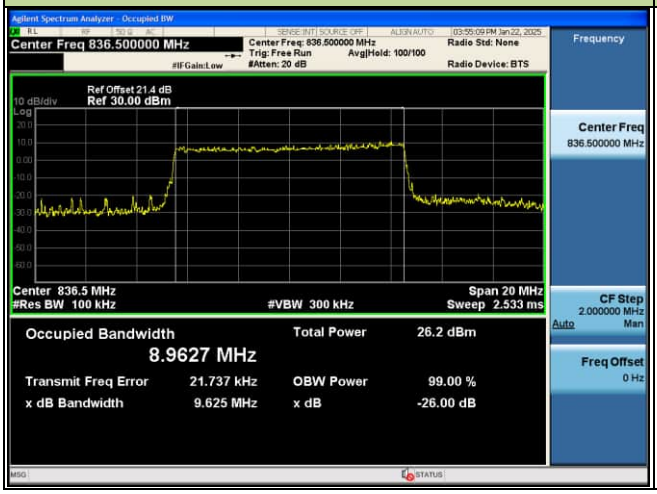

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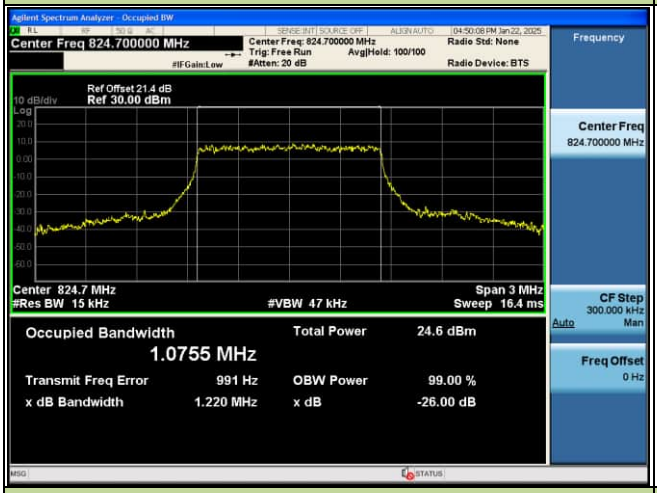	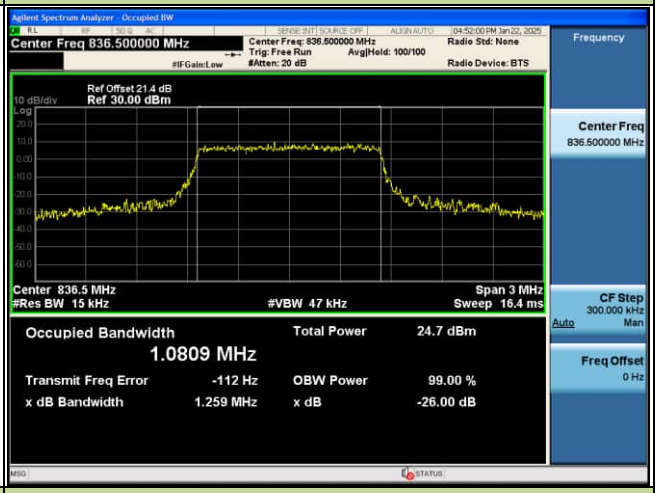
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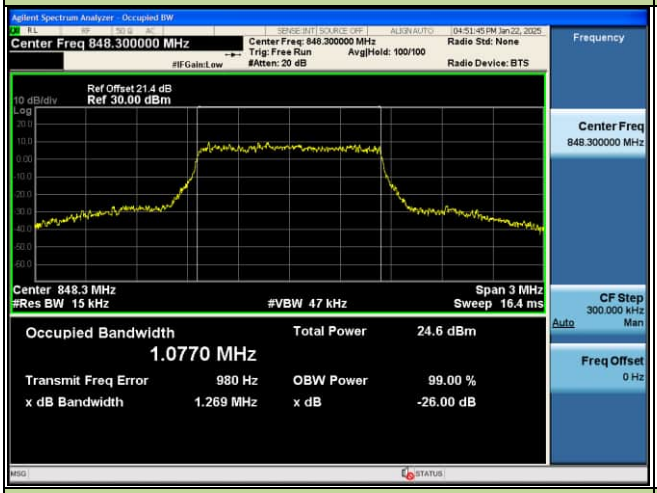	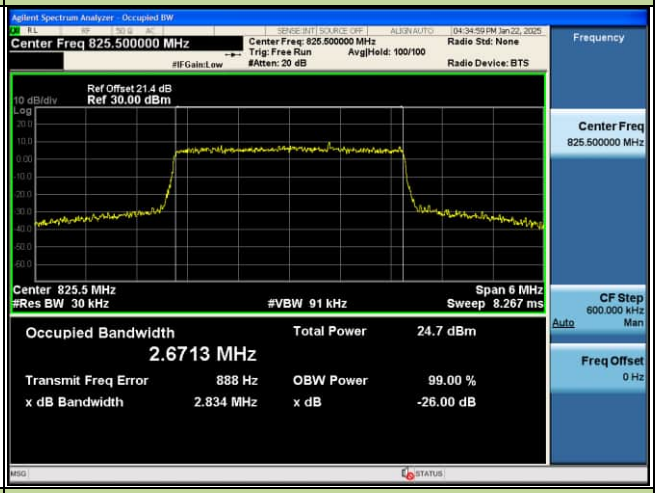
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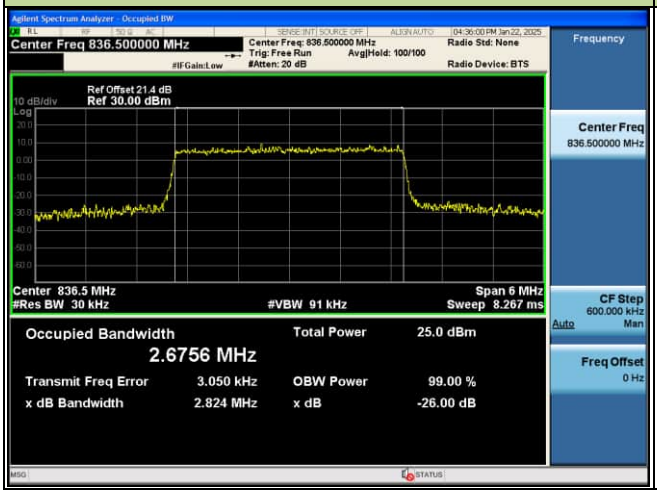	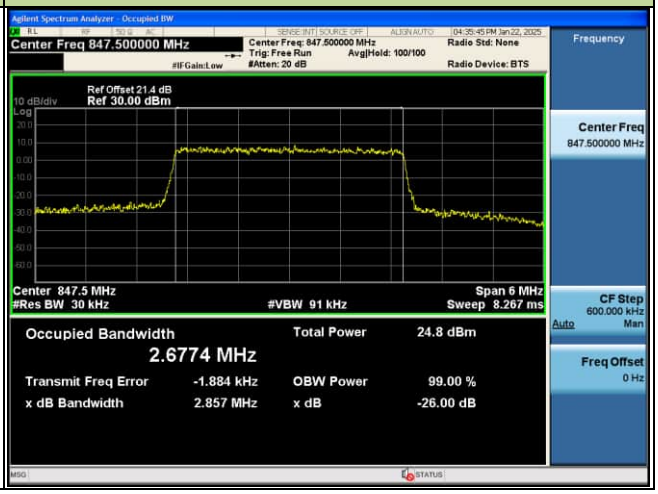

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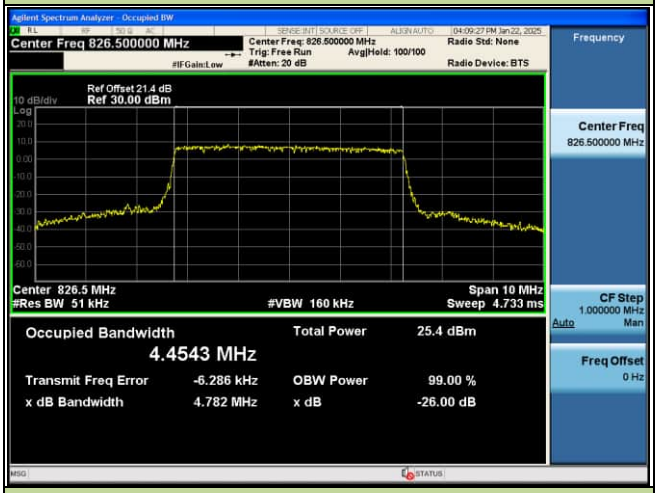	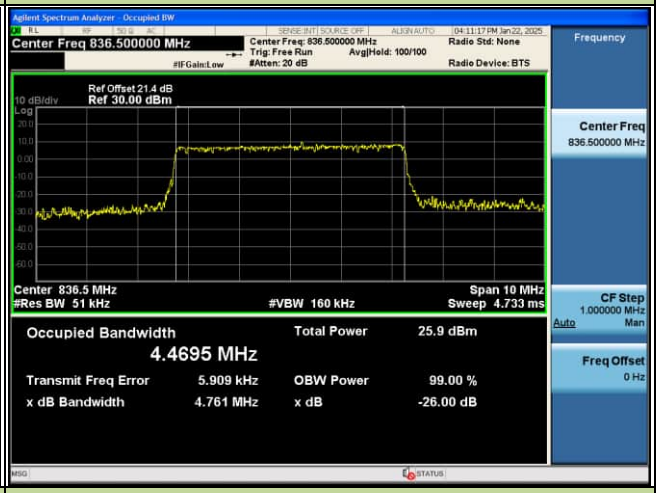
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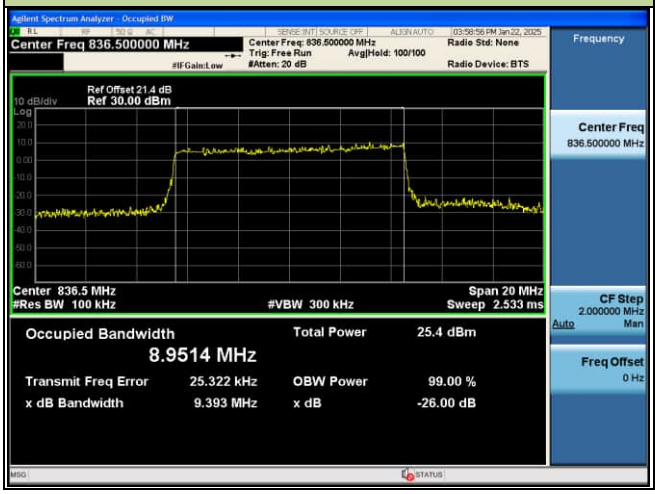	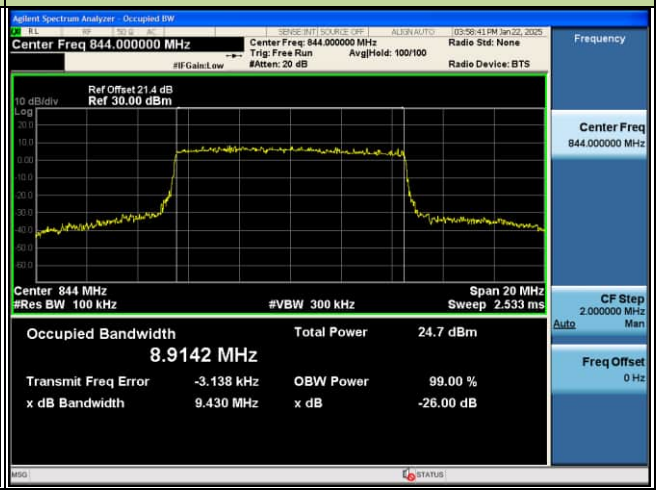

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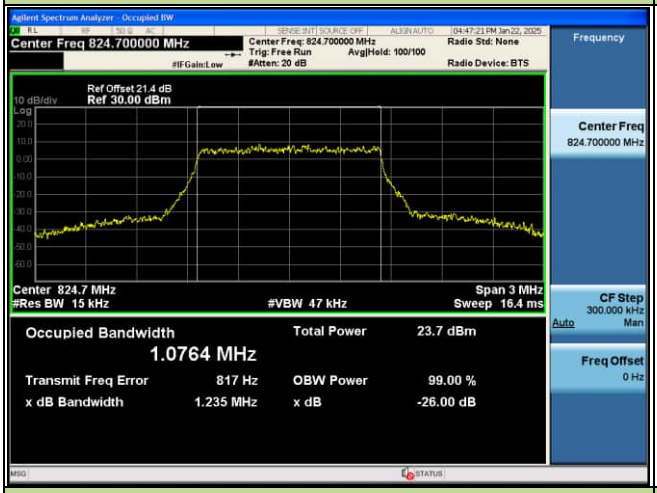	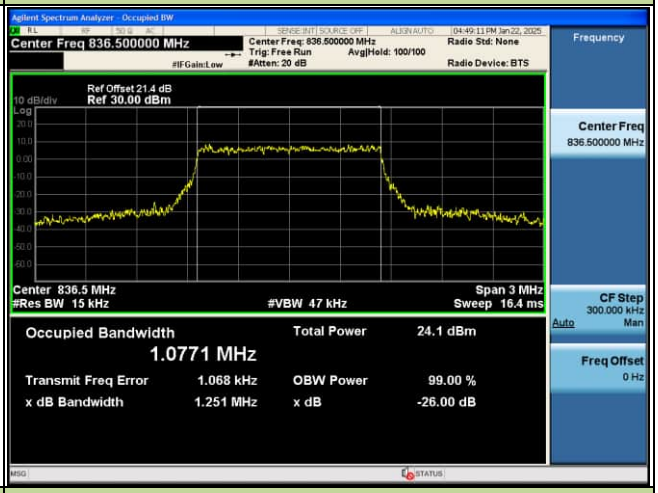
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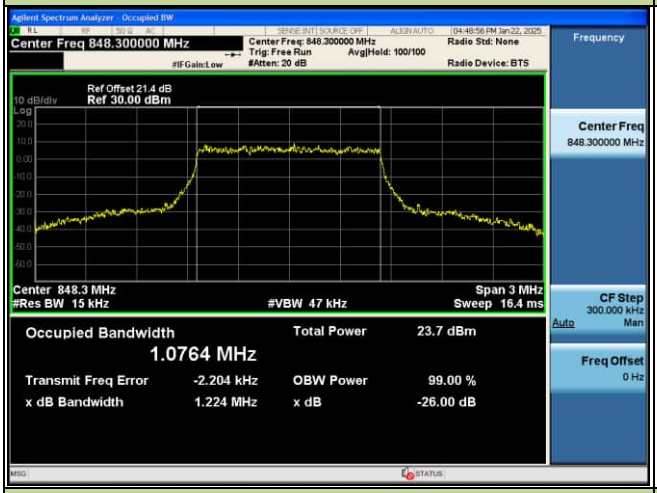	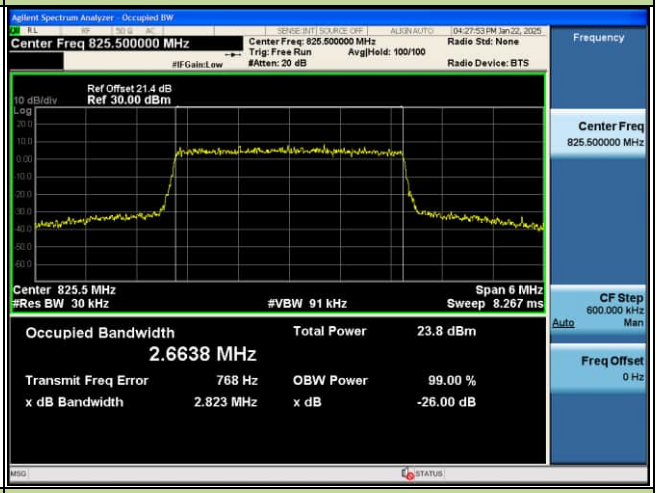
OCC_4G_B5_64QAM_3M CH20525	**OCC_4G_B5_64QAM_3M CH20635**