

**ELECTROMAGNETIC EMISSIONS  
COMPLIANCE REPORT**

**Applicant:** Quanta Computer Inc.  
No. 188, Wenhua 2nd Road, Guishan District, Taoyuan City  
33377, Taiwan

**Manufacturer:** Quanta Computer Inc.  
No. 188, Wenhua 2nd Road, Guishan District, Taoyuan City  
33377, Taiwan

**Product Name:** Clover Mini

**Brand Name:** Clover

**Model No.:** C305

**Model Difference:** N/A

**Report Number:** E2/2022/20116

**FCC ID** HFS-C305

**IC:** 1787B-C305

**Issue Date:** April 14, 2022

**Date of Test:** March 11, 2022 ~ March 23, 2022

**Date of EUT Received:** February 22, 2022

**Approved By** \_\_\_\_\_

**Jay Lin**

**We hereby certify that:**

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.26-2015 and the energy emitted by the sample EUT comply with FCC rule part 2, 22H & 24E & 27 C and ISED RSS-Gen, 130, 132, 133, 139.

The results of this report relate only to the sample identified in this report.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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Revision History					
Report Number	Revision	Description	Issue Date	Revised By	Remark
E2/2022/20116	00	Original	April 14, 2022	Yuri Tsai	

**Note:**

- 1、The remark "\*" indicates modification of the report upon requests from certification body.

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# 1 GENERAL PRODUCT INFORMATION

## 1.1 Product Description

Product Name:	Clover Mini
Brand Name:	Clover
Model No.:	C305
Model Difference:	N/A
Hardware Version:	N/A
Firmware Version:	N/A
EUT Series No.:	C035UT20430001
Power Supply:	12V from Adapter
Test Software (Name/Version)	default

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## 1.2 Operation Frequency Range

LTE Band 2		
BW (MHz)	Operation Frequency (MHz)	
1.4	1850.7	1909.3
3	1851.5	1908.5
5	1852.5	1907.5
10	1855.0	1905.0
15	1857.5	1902.5
20	1860.0	1900.0
LTE Band 4		
BW (MHz)	Operation Frequency (MHz)	
1.4	1710.7	1754.3
3	1711.5	1753.5
5	1712.5	1752.5
10	1715.0	1750.0
15	1717.5	1747.5
20	1720.0	1745.0
LTE Band 5		
BW (MHz)	Operation Frequency (MHz)	
1.4	824.7	848.3
3	825.5	847.5
5	826.5	846.5
10	829.0	844.0

LTE Band 12		
BW (MHz)	Operation Frequency (MHz)	
1.4	699.7	715.3
3	700.5	714.5
5	701.5	713.5
10	704.0	711.0
LTE Band 13		
BW (MHz)	Operation Frequency (MHz)	
5	779.5	784.5
10	782.0	
LTE Band 17		
BW (MHz)	Operation Frequency (MHz)	
5	706.5	713.5
10	709.0	711.0
LTE Band 66		
BW (MHz)	Operation Frequency (MHz)	
1.4	1710.7	1779.3
3	1711.5	1778.5
5	1712.5	1777.5
10	1715.0	1775.0
15	1717.5	1772.5
20	1720.0	1770.0

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### 1.3 Antenna Designation

Type	Modulation	Frequency (MHz)	Peak Antenna Gain (dBi)
PIFA	LTE-Band 2	1850 ~ 1910	2
	LTE-Band 4	1710 ~ 1755	2.19
	LTE-Band 5	824 ~ 849	0.34
	LTE-Band 12	699 ~ 716	2.47
	LTE-Band 13	777 ~ 787	1.75
	LTE-Band 17	704 ~ 716	2.47
	LTE-Band 66	1710 ~ 1780	2.19

**Note:** Antenna information is provided by the applicant.

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### 1.4 Type of Emission & Max ERP/EIRP Power Measurement Result:

LTE Band	BW	Frequency		Modulation	ERP / EIRP (dBm)		(W)	99%	Type of Emission
2	1.4	1850.7	1909.3	QPSK	23.92	EIRP	0.247	1.0868	1M09G7D
				16QAM	23.00	EIRP	0.200	1.0883	1M09D7W
2	3	1851.5	1908.5	QPSK	24.01	EIRP	0.252	2.6862	2M69G7D
				16QAM	23.06	EIRP	0.202	2.6912	2M69D7W
2	5	1852.5	1907.5	QPSK	24.08	EIRP	0.256	4.4915	4M49G7D
				16QAM	22.97	EIRP	0.198	4.4925	4M49D7W
2	10	1855.0	1905.0	QPSK	24.01	EIRP	0.252	8.9634	8M96G7D
				16QAM	23.39	EIRP	0.218	3.0713	3M07D7W
2	15	1857.5	1902.5	QPSK	24.05	EIRP	0.254	13.436	13M4G7D
				16QAM	23.16	EIRP	0.207	3.198	3M20D7W
2	20	1860.0	1900.0	QPSK	23.92	EIRP	0.247	17.893	17M9G7D
				16QAM	23.23	EIRP	0.210	3.766	3M77D7W
LTE Band	BW	Frequency		Modulation	ERP / EIRP (dBm)		(W)	99%	Type of Emission
4	1.4	1710.7	1754.3	QPSK	24.51	EIRP	0.282	1.0875	1M09G7D
				16QAM	23.55	EIRP	0.226	1.0877	1M09D7W
4	3	1711.5	1753.5	QPSK	24.67	EIRP	0.293	2.6883	2M69G7D
				16QAM	23.29	EIRP	0.213	2.6899	2M69D7W
4	5	1712.5	1752.5	QPSK	24.60	EIRP	0.288	4.4917	4M49G7D
				16QAM	24.01	EIRP	0.252	4.4925	4M49D7W
4	10	1715.0	1750.0	QPSK	24.66	EIRP	0.292	8.9729	8M97G7D
				16QAM	23.93	EIRP	0.247	3.0523	3M05D7W
4	15	1717.5	1747.5	QPSK	24.78	EIRP	0.301	13.4270	13M4G7D
				16QAM	24.47	EIRP	0.280	3.1772	3M18D7W
4	20	1720.0	1745.0	QPSK	24.64	EIRP	0.291	17.8580	17M9G7D
				16QAM	23.90	EIRP	0.245	3.7599	3M76D7W
LTE Band	BW	Frequency		Modulation	ERP / EIRP (dBm)		(W)	99%	Type of Emission
5	1.4	824.7	848.3	QPSK	20.84	ERP	0.121	1.0876	1M09G7D
				16QAM	20.05	ERP	0.101	1.0874	1M09D7W
5	3	825.5	847.5	QPSK	20.88	ERP	0.122	2.6893	2M69G7D
				16QAM	20.75	ERP	0.119	2.6911	2M69D7W
5	5	826.5	846.5	QPSK	20.70	ERP	0.117	4.4859	4M49G7D
				16QAM	20.01	ERP	0.100	4.4917	4M49D7W
5	10	829.0	844.0	QPSK	20.98	ERP	0.125	8.9620	8M96G7D
				16QAM	20.19	ERP	0.104	3.0526	3M05D7W

LTE Band	BW	Frequency		Modulation	ERP / EIRP (dBm)		(W)	99%	Type of Emission
12	1.4	699.7	715.3	QPSK	23.02	ERP	0.200	1.0869	1M09G7D
				16QAM	22.18	ERP	0.165	1.0875	1M09D7W
12	3	700.5	714.5	QPSK	23.09	ERP	0.204	2.6874	2M69G7D
				16QAM	21.87	ERP	0.154	2.6921	2M69D7W
12	5	701.5	713.5	QPSK	22.85	ERP	0.193	4.4883	4M49G7D
				16QAM	22.18	ERP	0.165	4.4901	4M49D7W
12	10	704.0	711.0	QPSK	22.95	ERP	0.197	8.9849	8M98G7D
				16QAM	22.38	ERP	0.173	3.0536	3M05D7W
LTE Band	BW	Frequency		Modulation	ERP / EIRP (dBm)		(W)	99%	Type of Emission
13	5	779.5	784.5	QPSK	22.23	ERP	0.167	4.4880	4M49G7D
				16QAM	21.53	ERP	0.142	4.4941	4M49D7W
13	10	782.0	782.0	QPSK	22.06	ERP	0.161	8.9372	8M94G7D
				16QAM	21.50	ERP	0.141	3.0287	3M03D7W
17	5	706.5	713.5	QPSK	23.14	ERP	0.206	4.4911	4M49G7D
				16QAM	21.86	ERP	0.153	4.4908	4M49D7W
17	10	709.0	711.0	QPSK	23.12	ERP	0.205	8.9639	8M96G7D
				16QAM	22.69	ERP	0.186	3.0520	3M05D7W
LTE Band	BW	Frequency		Modulation	ERP / EIRP (dBm)		(W)	99%	Type of Emission
66	1.4	1710.7	1779.3	QPSK	23.91	EIRP	0.246	1.0867	1M09G7D
				16QAM	23.21	EIRP	0.209	1.0872	1M09D7W
66	3	1711.5	1778.5	QPSK	24.06	EIRP	0.255	2.6885	2M69G7D
				16QAM	22.80	EIRP	0.191	2.6922	2M69D7W
66	5	1712.5	1777.5	QPSK	23.92	EIRP	0.247	4.4881	4M49G7D
				16QAM	22.98	EIRP	0.199	4.4918	4M49D7W
66	10	1715.0	1775.0	QPSK	24.15	EIRP	0.260	8.9631	8M96G7D
				16QAM	23.50	EIRP	0.224	3.0303	3M03D7W
66	15	1717.5	1772.5	QPSK	23.97	EIRP	0.249	13.4410	13M4G7D
				16QAM	23.20	EIRP	0.209	3.1568	3M16D7W
66	20	1720.0	1770.0	QPSK	23.99	EIRP	0.251	17.8840	17M9G7D
				16QAM	23.17	EIRP	0.207	3.6907	3M69D7W

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## 1.5 Test Methodology of Applied Standards

FCC 47 CFR Part 2, 22H, 24E, 27C.

ISED RSS-130 Issue 2 Feb. 2019,

ISED RSS-132 Issue 3 Jan. 2013

ISED RSS-133 Issue 6, Amendment 1 Jan. 18, 2018, ISED RSS-139 Issue 3 July 16, 2015

ANSI C63.26-2015

KDB971168 D01 Power Meas license Digital System v03r01

KDB412172 D01 Determining ERP and EIRP v01r01

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1.6 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designation number	IC CAB identifier
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan.	SAC 1	TW0027	TW3702
		SAC 3		
		Conduction 1		
		Conducted 1		
		Conducted 2		
		Conducted 3		
		Conducted 4		
		Conducted 5		
		Conducted 6		
	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conduction C	TW0028	
		SAC C		
		SAC D		
		SAC G		
		Conducted A		
		Conducted B		
		Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
Conducted G				

**Note:** Test site name is remarked on the equipment list in each section of this report as an indication where measurements occurred in specific test site and address.

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### 1.7 Special Accessories

No special accessories were used during testing.

### 1.8 Equipment Modifications

There was no modifications incorporated into the EUT.

### 1.9 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m\*6m\*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

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## 2 SYSTEM TEST CONFIGURATION

### 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

The EUT (Transmitter) was operated in the continuous transmission mode employed with the simulator of the Base Station that fixates at test default channels to fix the Tx frequency which was for the purpose of the measurements.

### 2.3 Test Procedure

#### 2.3.1 Conducted Measurement at Antenna Port

The EUT is placed on a table which is 0.8 m above ground plane. A low loss of RF cable was used to connect the antenna port of EUT to measurement equipment.

#### 2.3.2 Radiated Emissions (ERP/EIRP)

The EUT is placed on a turn table, for emission measurements below 1 GHz is 0.8 m above ground plane, for emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna.

### 2.4 Measurement Results Explanation Example

#### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

#### Note:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor. Following shows an offset computation in physical test.

	RF cable loss (dB)	Attenuation factor(dB)	offset(dB)
Low Band (Below 1GHz)	3.6	10	13.6
High Band (Above 1 GHz)	3.8	10	13.8

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## 2.5 Final Amplifier Voltage and Current Information:

### LTE Band 2

Test mode	DC voltage (V)	DC current (mA)
LTE Band 2_20M QPSK	12	612

### LTE Band 4

Test mode	DC voltage (V)	DC current (mA)
LTE Band 4_20M QPSK	12	592

### LTE Band 5

Test mode	DC voltage (V)	DC current (mA)
LTE Band 5_10M QPSK	12	573

### LTE Band 12

Test mode	DC voltage (V)	DC current (mA)
LTE Band 5_10M QPSK	12	575

### LTE Band 13

Test mode	DC voltage (V)	DC current (mA)
LTE Band 13_10M QPSK	12	579

### LTE Band 17

Test mode	DC voltage (V)	DC current (mA)
LTE Band 17_10M QPSK	12	584

### LTE Band 66

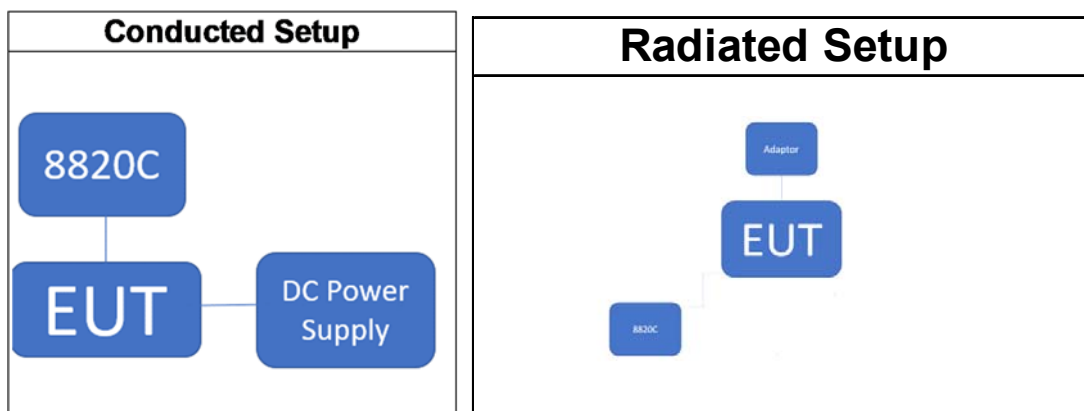
Test mode	DC voltage (V)	DC current (mA)
LTE Band 66_20M QPSK	12	635

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## 2.6 Test Configuration



**Note:** Radio Communication Analyzer is placed in remote side for radiated test.

## 2.7 Control Unit(s)

Conducted Emission Test Site: Conducted E					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
DC Power Supply	Gwinstek	SPS-3610	GEV856769	2021/8/4	08/03/2022
Radiated Emission Test Site: SAC D					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Adapter	Clover	FSP040-RHBN3	N/A	N/A	N/A

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### 3 SUMMARY OF TEST RESULTS

FCC Rules	IC Rules	Description Of Test	Result
§2.1046(a)	RSS-GEN §6.12	RF Power Output	Compliant
§22.913(a)(5) §24.232(c) §27.50(c)(9) §27.50(d)(4)	RSS-130 §4.6 RSS-132 §5.4 RSS-133 §6.4 RSS-139 §6.5	ERP/ EIRP measurement	Compliant
§2.1049(h)	RSS-GEN §6.7	99% & 26dB Occupied Bandwidth	Compliant
§2.1051 §22.917(a)(b) §24.238(a) §27.53(c) §27.53(g) §27.53(h)	RSS-GEN §6.13 RSS-130 §4.7 RSS-132 §5.5 RSS-133 §6.5 RSS-139 §6.6	Out of Band Emissions at Antenna Terminals and Band Edge / Emission mask requirements	Compliant
§2.1053 §22.917(a) §24.238(a) §27.53(c)(f) §27.53(g) §27.53(h)	RSS-GEN §6.13 RSS-130 §4.7 RSS-132 §5.5 RSS-133 §6.5 RSS-139 §6.6	Field Strength of Spurious Radiation	Compliant
§24.232(d) §27.50(a)(1)(B)	RSS-130 §4.6.1 RSS-132 §5.4 RSS-133 §6.4 RSS-139 §6.4	Peak to Average Ratio	Compliant
§2.1055(a)(1) §22.355 §24.235 §27.54	RSS-130 §4.5 RSS-132 §5.3 RSS-133 §6.3 RSS-139 §6.5	Frequency Stability	Compliant

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## 4 DESCRIPTION OF TEST MODES

### 4.1 The Worst Test Modes and Channel Details

1. The EUT has been tested under operating condition.
2. Pre-Scan has been conducted to determine the worst-case scenario from all possible combinations among available modulations, data rates and antenna ports, the worst case configurations listed below for the final test.
3. The field strength of radiated emission was measured as the EUT positioned in different orthogonal planes (E1/E2/H) based on actual usage of the EUT to pre-scan the emissions for determining the worst case scenario.

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## 4.2 Measurement Configuration

Test Items				Max. Output Power										
Band	Test Channel			Bandwidth (MHz)						Modulation		RB #		
	L	M	H	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full
2	V	V	V	V	V	V	V	V	V	V	V	V	V	V
4	V	V	V	V	V	V	V	V	V	V	V	V	V	V
5	V	V	V	V	V	V	V	-	-	V	V	V	V	V
12	V	V	V	V	V	V	V	-	-	V	V	V	V	V
13	V	V	V	-	-	V	V	-	-	V	V	V	V	V
17	V	V	V	-	-	V	V	-	-	V	V	V	V	V
66	V	V	V	V	V	V	V	V	V	V	V	V	V	V

Test Items				Frequency Stability										
Band	Test Channel			Bandwidth (MHz)						Modulation		RB #		
	L	M	H	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full
2	-	V	-	-	-	-	V	-	-	V	-	-	-	V
4	-	V	-	-	-	-	V	-	-	V	-	-	-	V
5	-	V	-	-	-	-	V	-	-	V	-	-	-	V
12	-	V	-	-	-	-	V	-	-	V	-	-	-	V
13	-	V	-	-	-	-	V	-	-	V	-	-	-	V
17	-	V	-	-	-	-	V	-	-	V	-	-	-	V
66	-	V	-	-	-	-	V	-	-	V	-	-	-	V

Test Items				26dB and 99% Bandwidth										
Band	Test Channel			Bandwidth (MHz)						Modulation		RB #		
	L	M	H	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full
2	V	V	V	V	V	V	V	V	V	V	V	-	-	V
4	V	V	V	V	V	V	V	V	V	V	V	-	-	V
5	V	V	V	V	V	V	V	-	-	V	V	-	-	V
12	V	V	V	V	V	V	V	-	-	V	V	-	-	V
13	V	V	V	-	-	V	V	-	-	V	V	-	-	V
17	V	V	V	-	-	V	V	-	-	V	V	-	-	V
66	V	V	V	V	V	V	V	V	V	V	V	-	-	V

Test Items				Peak-to-Average Ratio										
Band	Test Channel			Bandwidth (MHz)						Modulation		RB #		
	L	M	H	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full
2	V	V	V	V	V	V	V	V	V	V	V	-	-	V
4	V	V	V	V	V	V	V	V	V	V	V	-	-	V
5	V	V	V	V	V	V	V	-	-	V	V	-	-	V
12	V	V	V	V	V	V	V	-	-	V	V	-	-	V
13	V	V	V	-	-	V	V	-	-	V	V	-	-	V
17	V	V	V	-	-	V	V	-	-	V	V	-	-	V
66	V	V	V	V	V	V	V	V	V	V	V	-	-	V

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Test Items				Band Edge										
Band	Test Channel			Bandwidth (MHz)						Modulation		RB #		
	L	M	H	1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full
2	V	-	V	V	V	V	V	V	V	V	-	V	V	V
4	V	-	V	V	V	V	V	V	V	V	-	V	V	V
5	V	-	V	V	V	V	V	-	-	V	-	V	V	V
12	V	-	V	V	V	V	V	-	-	V	-	V	V	V
13	V	-	V	-	-	V	V	-	-	V	-	V	V	V
17	V	-	V	-	-	V	V	-	-	V	-	V	V	V
66	V	-	V	V	V	V	V	V	V	V	-	V	V	V
Test Items				Conducted Emission										
2	V	V	V	V	V	V	V	V	V	V	-	V	-	-
4	V	V	V	V	V	V	V	V	V	V	-	V	-	-
5	V	V	V	V	V	V	V	-	-	V	-	V	-	-
12	V	V	V	V	V	V	V	-	-	V	-	V	-	-
13	V	V	V	-	-	V	V	-	-	V	-	V	-	-
17	V	V	V	-	-	V	V	-	-	V	-	V	-	-
66	V	V	V	V	V	V	V	V	V	V	-	V	-	-

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## 5 MEASUREMENT UNCERTAINTY

Test Items	Uncertainty
RF Power Output	+/- 1 dB
ERP/ EIRP measurement	+/- 3 dB
	+/- 3 dB
Emission Bandwidth	+/- 1.53 Hz
Out of Band Emissions at Antenna Terminals and Band Edge	+/- 1.68 dB
Peak to Average Ratio	+/- 1 dB
Frequency Stability vs. Temperature	+/- 1.53 Hz
Frequency Stability vs. Voltage	+/- 1.53 Hz
Temperature	+/- 0.4 °C
Humidity	+/- 3.5 %
DC / AC Power Source	+/- 1 %

Radiated Spurious Emission Measurement Uncertainty		
Polarization: Vertical	+/- 2.57 dB	9kHz~30MHz
	+/- 4.85 dB	30MHz - 1000MHz
	+/- 4.45 dB	1GHz - 18GHz
	+/- 4.24 dB	18GHz - 40GHz
Polarization: Horizontal	+/- 2.57 dB	9kHz~30MHz
	+/- 4.37 dB	30MHz - 1000MHz
	+/- 4.45 dB	1GHz - 18GHz
	+/- 4.24 dB	18GHz - 40GHz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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## 6 MEASUREMENT EQUIPMENT USED

### 6.1 Conducted Measurement

Conducted Emission Test Site: Conducted E					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
DC Power Supply	Gwinstek	SPS-3610	GEV856769	2021/8/4	08/03/2022
Radio Communication Analyser	Anritsu	MT8820C	6201107337	07/28/2021	07/27/2022
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/13/2021	07/12/2022
Temperature Chamber	TERCHY	MHK-120LK	1020582	07/01/2021	06/30/2022
Test Software	SGS Taiwan	Radio Test Software	Ver.21	N.C.R	N.C.R
Coaxial Cables	Woken	00100A1F1A185C	RF87	11/18/2021	11/17/2022
Coaxial Cables	Woken	00100A1F1A185C	RF92	11/18/2021	11/17/2022
Coaxial Cables	Woken	00100A1F2A196C	RF93	11/18/2021	11/17/2022
Attenuator	Marvelous	MVE2213-10	RF06	11/18/2021	11/17/2022
DC Block	PASTERNAK	PE8210	RF158	11/18/2021	11/17/2022
Splitter	Woken	DOM35LW1A2	RF258	11/18/2021	11/17/2022

### 6.2 Radiated Measurement

Radiated Emission Test Site: SAC D					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Broadband Antenna	SCHWARZBECK	VULB 9168	9168-617	11/12/2021	11/11/2022
Horn Antenna	Schwarzbeck	BBHA9170	185	08/06/2021	08/05/2022
Horn Antenna	Schwarzbeck	BBHA9120D	1341	06/04/2021	06/03/2022
Loop Antenna	ETS.LINDGREN	6502	143303	05/07/2021	05/06/2022
3m Site NSA	SGS	966 chamber D	N/A	07/12/2021	07/11/2022
Test Software	audix	e3	E3 20923 SGS Ver.9 ( C )	N.C.R	N.C.R
Spectrum Analyzer	KEYSIGHT	N9010B	MY59071570	06/01/2021	05/31/2022
Radio Communication Analyser	Anritsu	MT8820C	6201107337	07/28/2021	07/27/2022
Pre-Amplifier	EMC Instruments	EMC184045B	980135	10/27/2021	10/26/2022
Pre-Amplifier	EMC Instruments	EMC9135	980234	11/18/2021	11/17/2022
Pre-Amplifier	EMC Instruments	EMC12630SE	980273	11/18/2021	11/17/2022
Coaxial Cable	Huber+Suhner	RG 214/U	W21.01	11/18/2021	11/17/2022
Coaxial Cable	Huber Suhner	EMC106-SM-SM-7200	150703	11/18/2021	11/17/2022
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17413/4	11/18/2021	11/17/2022
Attenuator	Marvelous	WATT-218FS-10	RF17	11/18/2021	11/17/2022
Lowpass Filter	Woken	EWT-56-0019	RF173	11/18/2021	11/17/2022
High Pass Filter	R&S	F13 HPF 3GHz	RF175	11/18/2021	11/17/2022
Band Rejection Filter	Micro-Tronics	BRM50701-01	RF201	11/18/2021	11/17/2022

**NOTE:** N.C.R refers to Not Calibrated Required.

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## 7 MAXMUM OUTPUT POWER

### 7.1 Standard Applicable

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals.

#### 7.1.1 ERP/EIRP LIMIT

According to FCC §2.1046

##### **FCC 22.913(a)**

(5) mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

##### **FCC 24.232(c)**

Mobile and portable stations are limited to 2 W EIRP.

##### **FCC 27.50 (b)**

(9) Control stations and mobile stations transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 30 watts ERP.

##### **FCC 27.50(c)**

(9) Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP.

##### **FCC 27.50(d)**

(4) Mobile, and portable (hand-held) stations operating in the 1710-1755 MHz, 1695-1710 MHz and 1755-1780 MHz bands are limited to 1W EIRP.

##### **RSS-130 §4.6**

The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment operating in 698-756 and 777-787 MHz.

##### **RSS-132 §5.4**

The equivalent isotropically radiated power (e.i.r.p.) for mobile equipment in operating in the Bands 824-849 and 869-894MHz shall not exceed 11.5 watts.

##### **RSS-133 §6.4**

The equivalent isotropically radiated power (e.i.r.p.) for transmitters shall not exceed the limits given in SRSP-510.

According to section 5.1.2 of SRSP-510, Mobile stations and hand-held portables are limited to 2 watts maximum e.i.r.p. The equipment shall employ means to limit the power to the minimum necessary for successful communication.

##### **RSS-139 §6.5**

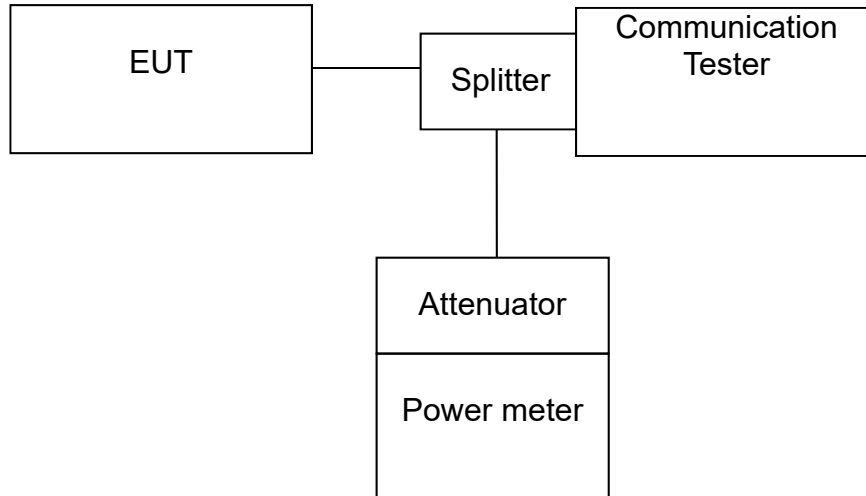
The equivalent isotropically radiated power (e.i.r.p.) for mobile and portable transmitters in the Bands 1710-1780MHz shall not exceed one watt.

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## 7.2 Test Set-up



**Note:** Measurement setup for testing on Antenna connector

## 7.3 Output Power Measurement Applicable Guidance

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading.

KDB 971168 D01 Power Meas License Digital System as the supplemental test methodology to adjust the proper setting obtaining the measurement results.

All LTE bands conducted average power is obtained from the simulator telecommunication test set.

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#### 7.4 Determining ERP and/or EIRP from conducted RF output power measurements

According to KDB 412172 D01 Power Approach,

$$EIRP = P_T + G_T - L_C,$$

$$ERP = EIRP - 2.15,$$

Where:

- ERP or EIRP = effective radiated power or equivalent isotropically radiated power (expressed in the same units as  $P_T$ , typically dBW, dBm, or power spectral density (PSD)<sup>2</sup>), relative to either a dipole antenna (ERP) or an isotropic antenna (EIRP);
- $P_T$  = transmitter output power, expressed in dBW, dBm, or PSD;
- $G_T$  = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);
- $L_C$  = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

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7.5 Measurement Results:

Antenna gain (dBi)		2							
LTE Band 2_Uplink frequency band : 1850 to 1910 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
1.4	18607	1850.7	QPSK	1	0	21.73	23.73	33	-9.27
				1	5	21.58	23.58	33	-9.42
				3	2	21.91	23.91	33	-9.09
				6	0	20.88	22.88	33	-10.12
	18900	1880	QPSK	1	0	21.51	23.51	33	-9.49
				1	5	21.69	23.69	33	-9.31
				3	2	21.68	23.68	33	-9.32
				6	0	20.72	22.72	33	-10.28
	19193	1909.3	QPSK	1	0	21.62	23.62	33	-9.38
				1	5	21.92	23.92	33	-9.08
				3	2	21.83	23.83	33	-9.17
				6	0	20.84	22.84	33	-10.16
1.4	18607	1850.7	16QAM	1	0	21.00	23.00	33	-10
				1	5	20.73	22.73	33	-10.27
				3	2	20.93	22.93	33	-10.07
				6	0	19.98	21.98	33	-11.02
	18900	1880	16QAM	1	0	20.49	22.49	33	-10.51
				1	5	20.56	22.56	33	-10.44
				3	2	20.83	22.83	33	-10.17
				6	0	19.67	21.67	33	-11.33
	19193	1909.3	16QAM	1	0	20.65	22.65	33	-10.35
				1	5	20.60	22.60	33	-10.4
				3	2	21.00	23.00	33	-10
				6	0	19.92	21.92	33	-11.08

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Antenna gain (dBi)		2							
LTE Band 2_Uplink frequency band : 1850 to 1910 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
3	18615	1851.5	QPSK	1	0	22.01	24.01	33	-8.99
				1	14	21.78	23.78	33	-9.22
				8	4	21.03	23.03	33	-9.97
				15	0	20.92	22.92	33	-10.08
	18900	1880	QPSK	1	0	21.73	23.73	33	-9.27
				1	14	21.52	23.52	33	-9.48
				8	4	20.69	22.69	33	-10.31
				15	0	20.67	22.67	33	-10.33
	19185	1908.5	QPSK	1	0	21.57	23.57	33	-9.43
				1	14	21.85	23.85	33	-9.15
				8	4	20.93	22.93	33	-10.07
				15	0	20.79	22.79	33	-10.21
3	18615	1851.5	16QAM	1	0	21.06	23.06	33	-9.94
				1	14	20.71	22.71	33	-10.29
				8	4	20.03	22.03	33	-10.97
				15	0	19.86	21.86	33	-11.14
	18900	1880	16QAM	1	0	20.89	22.89	33	-10.11
				1	14	20.51	22.51	33	-10.49
				8	4	19.65	21.65	33	-11.35
				15	0	19.73	21.73	33	-11.27
	19185	1908.5	16QAM	1	0	20.71	22.71	33	-10.29
				1	14	20.69	22.69	33	-10.31
				8	4	19.85	21.85	33	-11.15
				15	0	19.77	21.77	33	-11.23

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Antenna gain (dBi)		2							
LTE Band 2_Uplink frequency band : 1850 to 1910 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
5	18625	1852.5	QPSK	1	0	22.08	24.08	33	-8.92
				1	24	21.66	23.66	33	-9.34
				12	6	20.85	22.85	33	-10.15
				25	0	20.88	22.88	33	-10.12
	18900	1880	QPSK	1	0	21.51	23.51	33	-9.49
				1	24	21.50	23.50	33	-9.5
				12	6	20.61	22.61	33	-10.39
				25	0	20.61	22.61	33	-10.39
	19175	1907.5	QPSK	1	0	21.53	23.53	33	-9.47
				1	24	21.67	23.67	33	-9.33
				12	6	20.67	22.67	33	-10.33
				25	0	20.82	22.82	33	-10.18
5	18625	1852.5	16QAM	1	0	20.53	22.53	33	-10.47
				1	24	20.86	22.86	33	-10.14
				12	6	19.84	21.84	33	-11.16
				25	0	19.84	21.84	33	-11.16
	18900	1880	16QAM	1	0	20.97	22.97	33	-10.03
				1	24	20.41	22.41	33	-10.59
				12	6	19.70	21.70	33	-11.3
				25	0	19.55	21.55	33	-11.45
	19175	1907.5	16QAM	1	0	20.78	22.78	33	-10.22
				1	24	20.78	22.78	33	-10.22
				12	6	19.66	21.66	33	-11.34
				25	0	20.01	22.01	33	-10.99

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Antenna gain (dBi)		2							
LTE Band 2_Uplink frequency band : 1850 to 1910 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
10	18650	1855	QPSK	1	0	21.87	23.87	33	-9.13
				1	49	21.66	23.66	33	-9.34
				25	12	20.93	22.93	33	-10.07
				50	0	20.93	22.93	33	-10.07
	18900	1880	QPSK	1	0	22.01	24.01	33	-8.99
				1	49	21.80	23.80	33	-9.2
				25	12	20.87	22.87	33	-10.13
				50	0	20.94	22.94	33	-10.06
	19150	1905	QPSK	1	0	21.59	23.59	33	-9.41
				1	49	21.99	23.99	33	-9.01
				25	12	20.94	22.94	33	-10.06
				50	0	20.97	22.97	33	-10.03
10	18650	1855	16QAM	1	0	20.96	22.96	33	-10.04
				1	15	21.03	23.03	33	-9.97
				12	0	21.39	23.39	33	-9.61
				16	0	20.18	22.18	33	-10.82
	18900	1880	16QAM	1	0	21.11	23.11	33	-9.89
				1	15	21.36	23.36	33	-9.64
				12	0	21.11	23.11	33	-9.89
				16	0	20.22	22.22	33	-10.78
	19150	1905	16QAM	1	0	20.36	22.36	33	-10.64
				1	15	21.15	23.15	33	-9.85
				12	0	21.11	23.11	33	-9.89
				16	0	20.17	22.17	33	-10.83

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Antenna gain (dBi)		2							
LTE Band 2_Uplink frequency band : 1850 to 1910 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
15	18675	1857.5	QPSK	1	0	22.05	<b>24.05</b>	33	-8.95
				1	74	21.62	23.62	33	-9.38
				36	18	20.81	22.81	33	-10.19
				75	0	20.79	22.79	33	-10.21
	18900	1880	QPSK	1	0	21.72	23.72	33	-9.28
				1	74	21.55	23.55	33	-9.45
				36	18	20.75	22.75	33	-10.25
				75	0	20.76	22.76	33	-10.24
	19125	1902.5	QPSK	1	0	21.77	23.77	33	-9.23
				1	74	21.85	23.85	33	-9.15
				36	18	20.68	22.68	33	-10.32
				75	0	20.70	22.70	33	-10.3
15	18675	1857.5	16QAM	1	0	20.75	22.75	33	-10.25
				1	15	21.16	<b>23.16</b>	33	-9.84
				16	0	21.07	23.07	33	-9.93
	18900	1880	16QAM	1	0	20.86	22.86	33	-10.14
				1	15	20.83	22.83	33	-10.17
				16	0	20.94	22.94	33	-10.06
	19125	1902.5	16QAM	1	0	20.70	22.70	33	-10.3
				1	15	20.76	22.76	33	-10.24
				16	0	20.69	22.69	33	-10.31

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Antenna gain (dBi)		2							
LTE Band 2_Uplink frequency band : 1850 to 1910 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
20	18700	1860	QPSK	1	0	21.92	23.92	33	-9.08
				1	99	21.46	23.46	33	-9.54
				50	25	20.89	22.89	33	-10.11
				100	0	20.82	22.82	33	-10.18
	18900	1880	QPSK	1	0	21.51	23.51	33	-9.49
				1	99	21.52	23.52	33	-9.48
				50	25	20.75	22.75	33	-10.25
				100	0	20.88	22.88	33	-10.12
	19100	1900	QPSK	1	0	21.55	23.55	33	-9.45
				1	99	21.69	23.69	33	-9.31
				50	25	20.58	22.58	33	-10.42
				100	0	20.86	22.86	33	-10.14
20	18700	1860	16QAM	1	0	20.77	22.77	33	-10.23
				1	17	21.23	23.23	33	-9.77
				18	0	21.17	23.17	33	-9.83
	18900	1880	16QAM	1	0	20.57	22.57	33	-10.43
				1	17	20.82	22.82	33	-10.18
				18	0	21.01	23.01	33	-9.99
	19100	1900	16QAM	1	0	20.57	22.57	33	-10.43
				1	17	20.29	22.29	33	-10.71
				18	0	20.62	22.62	33	-10.38

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Antenna gain (dBi)		2.19							
LTE Band 4_Uplink frequency band : 1710 to 1755 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
1.4	19957	1710.7	QPSK	1	0	22.07	24.26	30	-5.74
				1	5	22.14	24.33	30	-5.67
				3	2	22.18	24.37	30	-5.63
				6	0	21.14	23.33	30	-6.67
	20175	1732.5	QPSK	1	0	22.13	24.32	30	-5.68
				1	5	22.31	24.50	30	-5.5
				3	2	22.22	24.41	30	-5.59
				6	0	20.98	23.17	30	-6.83
	20393	1754.3	QPSK	1	0	22.29	24.48	30	-5.52
				1	5	22.14	24.33	30	-5.67
				3	2	22.32	24.51	30	-5.49
				6	0	21.45	23.64	30	-6.36
1.4	19957	1710.7	16QAM	1	0	21.14	23.33	30	-6.67
				1	5	20.65	22.84	30	-7.16
				3	2	21.14	23.33	30	-6.67
				6	0	19.81	22.00	30	-8
	20175	1732.5	16QAM	1	0	20.79	22.98	30	-7.02
				1	5	20.57	22.76	30	-7.24
				3	2	21.35	23.54	30	-6.46
				6	0	19.82	22.01	30	-7.99
	20393	1754.3	16QAM	1	0	21.17	23.36	30	-6.64
				1	5	21.15	23.34	30	-6.66
				3	2	21.36	23.55	30	-6.45
				6	0	20.02	22.21	30	-7.79

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Antenna gain (dBi)		2.19							
LTE Band 4_Uplink frequency band : 1710 to 1755 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
3	19965	1711.5	QPSK	1	0	21.81	24.00	30	-6
				1	14	22.04	24.23	30	-5.77
				8	4	21.17	23.36	30	-6.64
				15	0	21.12	23.31	30	-6.69
	20175	1732.5	QPSK	1	0	22.20	24.39	30	-5.61
				1	14	21.93	24.12	30	-5.88
				8	4	21.12	23.31	30	-6.69
				15	0	21.04	23.23	30	-6.77
	20385	1753.5	QPSK	1	0	22.33	24.52	30	-5.48
				1	14	22.48	24.67	30	-5.33
				8	4	20.85	23.04	30	-6.96
				15	0	21.41	23.60	30	-6.4
3	19965	1711.5	16QAM	1	0	20.96	23.15	30	-6.85
				1	14	21.04	23.23	30	-6.77
				8	4	20.08	22.27	30	-7.73
				15	0	19.92	22.11	30	-7.89
	20175	1732.5	16QAM	1	0	20.98	23.17	30	-6.83
				1	14	20.97	23.16	30	-6.84
				8	4	20.35	22.54	30	-7.46
				15	0	20.16	22.35	30	-7.65
	20385	1753.5	16QAM	1	0	20.93	23.12	30	-6.88
				1	14	21.10	23.29	30	-6.71
				8	4	20.60	22.79	30	-7.21
				15	0	19.86	22.05	30	-7.95

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Antenna gain (dBi)		2.19							
LTE Band 4_Uplink frequency band : 1710 to 1755 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
5	19975	1712.5	QPSK	1	0	22.00	24.19	30	-5.81
				1	24	21.91	24.10	30	-5.9
				12	6	21.07	23.26	30	-6.74
				25	0	20.78	22.97	30	-7.03
	20175	1732.5	QPSK	1	0	22.11	24.30	30	-5.7
				1	24	21.95	24.14	30	-5.86
				12	6	20.95	23.14	30	-6.86
				25	0	20.89	23.08	30	-6.92
	20375	1752.5	QPSK	1	0	22.20	24.39	30	-5.61
				1	24	22.41	24.60	30	-5.4
				12	6	21.36	23.55	30	-6.45
				25	0	21.25	23.44	30	-6.56
5	19975	1712.5	16QAM	1	0	20.72	22.91	30	-7.09
				1	24	21.06	23.25	30	-6.75
				12	6	20.06	22.25	30	-7.75
				25	0	19.87	22.06	30	-7.94
	20175	1732.5	16QAM	1	0	20.48	22.67	30	-7.33
				1	24	20.82	23.01	30	-6.99
				12	6	19.82	22.01	30	-7.99
				25	0	20.01	22.20	30	-7.8
	20375	1752.5	16QAM	1	0	21.82	24.01	30	-5.99
				1	24	21.16	23.35	30	-6.65
				12	6	20.43	22.62	30	-7.38
				25	0	20.22	22.41	30	-7.59

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Antenna gain (dBi)		2.19							
LTE Band 4_Uplink frequency band : 1710 to 1755 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
10	20000	1715	QPSK	1	0	22.08	24.27	30	-5.73
				1	49	22.23	24.42	30	-5.58
				25	12	21.10	23.29	30	-6.71
				50	0	21.57	23.76	30	-6.24
	20175	1732.5	QPSK	1	0	21.82	24.01	30	-5.99
				1	49	22.06	24.25	30	-5.75
				25	12	21.11	23.30	30	-6.7
				50	0	21.33	23.52	30	-6.48
	20350	1750	QPSK	1	0	22.47	24.66	30	-5.34
				1	49	22.39	24.58	30	-5.42
				25	12	21.41	23.60	30	-6.4
				50	0	21.61	23.80	30	-6.2
10	20000	1715	16QAM	1	0	20.62	22.81	30	-7.19
				1	15	21.74	23.93	30	-6.07
				12	0	21.69	23.88	30	-6.12
				16	0	20.59	22.78	30	-7.22
	20175	1732.5	16QAM	1	0	21.06	23.25	30	-6.75
				1	15	21.26	23.45	30	-6.55
				12	0	21.57	23.76	30	-6.24
				16	0	20.15	22.34	30	-7.66
	20350	1750	16QAM	1	0	21.25	23.44	30	-6.56
				1	15	21.54	23.73	30	-6.27
				12	0	21.42	23.61	30	-6.39
				16	0	20.32	22.51	30	-7.49

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Antenna gain (dBi)		2.19							
LTE Band 4_Uplink frequency band : 1710 to 1755 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
15	20025	1717.5	QPSK	1	0	22.59	<b>24.78</b>	30	-5.22
				1	74	22.20	24.39	30	-5.61
				36	18	21.09	23.28	30	-6.72
				75	0	20.83	23.02	30	-6.98
	20175	1732.5	QPSK	1	0	22.22	24.41	30	-5.59
				1	74	22.46	24.65	30	-5.35
				36	18	21.22	23.41	30	-6.59
				75	0	20.85	23.04	30	-6.96
	20325	1747.5	QPSK	1	0	22.41	24.60	30	-5.4
				1	74	22.45	24.64	30	-5.36
				36	18	21.39	23.58	30	-6.42
				75	0	20.88	23.07	30	-6.93
15	20025	1717.5	16QAM	1	0	22.28	<b>24.47</b>	30	-5.53
				1	15	21.40	23.59	30	-6.41
				16	0	21.70	23.89	30	-6.11
	20175	1732.5	16QAM	1	0	21.25	23.44	30	-6.56
				1	15	21.32	23.51	30	-6.49
				16	0	21.40	23.59	30	-6.41
	20325	1747.5	16QAM	1	0	20.41	22.60	30	-7.4
				1	15	21.57	23.76	30	-6.24
				16	0	21.49	23.68	30	-6.32

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Antenna gain (dBi)		2.19							
LTE Band 4_Uplink frequency band : 1710 to 1755 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
20	20050	1720	QPSK	1	0	21.18	23.37	30	-6.63
				1	99	21.85	24.04	30	-5.96
				50	25	21.04	23.23	30	-6.77
				100	0	21.03	23.22	30	-6.78
	20175	1732.5	QPSK	1	0	22.24	24.43	30	-5.57
				1	99	22.26	24.45	30	-5.55
				50	25	21.14	23.33	30	-6.67
				100	0	21.12	23.31	30	-6.69
	20300	1745	QPSK	1	0	22.43	24.62	30	-5.38
				1	99	22.45	24.64	30	-5.36
				50	25	21.33	23.52	30	-6.48
				100	0	21.15	23.34	30	-6.66
20	20050	1720	16QAM	1	0	20.94	23.13	30	-6.87
				1	17	21.48	23.67	30	-6.33
				18	0	21.62	23.81	30	-6.19
	20175	1732.5	16QAM	1	0	20.83	23.02	30	-6.98
				1	17	21.13	23.32	30	-6.68
				18	0	21.49	23.68	30	-6.32
	20300	1745	16QAM	1	0	20.62	22.81	30	-7.19
				1	17	21.61	23.80	30	-6.2
				18	0	21.71	23.90	30	-6.1

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Antenna gain (dBi)		0.34								
LTE Band 5_Uplink frequency band : 824 to 849 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
1.4	20407	824.7	QPSK	1	0	22.53	20.72	22.87	38.45	-17.73
				1	5	22.39	20.58	22.73	38.45	-17.87
				3	2	22.64	20.83	22.98	38.45	-17.62
				6	0	21.64	19.83	21.98	38.45	-18.62
	20525	836.5	QPSK	1	0	22.32	20.51	22.66	38.45	-17.94
				1	5	22.29	20.48	22.63	38.45	-17.97
				3	2	22.46	20.65	22.80	38.45	-17.80
				6	0	21.50	19.69	21.84	38.45	-18.76
	20643	848.3	QPSK	1	0	22.60	20.79	22.94	38.45	-17.66
				1	5	22.65	20.84	22.99	38.45	-17.61
				3	2	22.63	20.82	22.97	38.45	-17.63
				6	0	21.71	19.90	22.05	38.45	-18.55
1.4	20407	824.7	16QAM	1	0	21.35	19.54	21.69	38.45	-18.91
				1	5	21.29	19.48	21.63	38.45	-18.97
				3	2	21.66	19.85	22.00	38.45	-18.60
				6	0	20.45	18.64	20.79	38.45	-19.81
	20525	836.5	16QAM	1	0	21.23	19.42	21.57	38.45	-19.03
				1	5	21.35	19.54	21.69	38.45	-18.91
				3	2	21.61	19.80	21.95	38.45	-18.65
				6	0	20.40	18.59	20.74	38.45	-19.86
	20643	848.3	16QAM	1	0	21.56	19.75	21.90	38.45	-18.70
				1	5	21.86	20.05	22.20	38.45	-18.40
				3	2	21.80	19.99	22.14	38.45	-18.46
				6	0	20.46	18.65	20.80	38.45	-19.80

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Antenna gain (dBi)		0.34								
LTE Band 5_Uplink frequency band : 824 to 849 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
3	20415	825.5	QPSK	1	0	22.69	20.88	23.03	38.45	-17.57
				1	14	22.54	20.73	22.88	38.45	-17.72
				8	4	21.57	19.76	21.91	38.45	-18.69
				15	0	21.55	19.74	21.89	38.45	-18.71
	20525	836.5	QPSK	1	0	22.19	20.38	22.53	38.45	-18.07
				1	14	22.45	20.64	22.79	38.45	-17.81
				8	4	21.46	19.65	21.80	38.45	-18.80
				15	0	21.45	19.64	21.79	38.45	-18.81
	20635	847.5	QPSK	1	0	22.59	20.78	22.93	38.45	-17.67
				1	14	22.42	20.61	22.76	38.45	-17.84
				8	4	21.80	19.99	22.14	38.45	-18.46
				15	0	21.77	19.96	22.11	38.45	-18.49
3	20415	825.5	16QAM	1	0	21.38	19.57	21.72	38.45	-18.88
				1	14	21.38	19.57	21.72	38.45	-18.88
				8	4	20.48	18.67	20.82	38.45	-19.78
				15	0	20.24	18.43	20.58	38.45	-20.02
	20525	836.5	16QAM	1	0	21.10	19.29	21.44	38.45	-19.16
				1	14	21.38	19.57	21.72	38.45	-18.88
				8	4	20.63	18.82	20.97	38.45	-19.63
				15	0	20.56	18.75	20.90	38.45	-19.70
	20635	847.5	16QAM	1	0	22.56	20.75	22.90	38.45	-17.70
				1	14	21.51	19.70	21.85	38.45	-18.75
				8	4	20.50	18.69	20.84	38.45	-19.76
				15	0	20.53	18.72	20.87	38.45	-19.73

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Antenna gain (dBi)		0.34								
LTE Band 5_Uplink frequency band : 824 to 849 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
5	20425	826.5	QPSK	1	0	22.16	20.35	22.50	38.45	-18.10
				1	24	22.04	20.23	22.38	38.45	-18.22
				12	6	21.61	19.80	21.95	38.45	-18.65
				25	0	21.47	19.66	21.81	38.45	-18.79
	20525	836.5	QPSK	1	0	22.28	20.47	22.62	38.45	-17.98
				1	24	22.51	20.70	22.85	38.45	-17.75
				12	6	21.47	19.66	21.81	38.45	-18.79
				25	0	21.49	19.68	21.83	38.45	-18.77
	20625	846.5	QPSK	1	0	22.41	20.60	22.75	38.45	-17.85
				1	24	22.44	20.63	22.78	38.45	-17.82
				12	6	21.80	19.99	22.14	38.45	-18.46
				25	0	21.71	19.90	22.05	38.45	-18.55
5	20425	826.5	16QAM	1	0	21.70	19.89	22.04	38.45	-18.56
				1	24	20.98	19.17	21.32	38.45	-19.28
				12	6	20.29	18.48	20.63	38.45	-19.97
				25	0	20.58	18.77	20.92	38.45	-19.68
	20525	836.5	16QAM	1	0	20.92	19.11	21.26	38.45	-19.34
				1	24	21.55	19.74	21.89	38.45	-18.71
				12	6	20.45	18.64	20.79	38.45	-19.81
				25	0	20.53	18.72	20.87	38.45	-19.73
	20625	846.5	16QAM	1	0	21.82	20.01	22.16	38.45	-18.44
				1	24	21.70	19.89	22.04	38.45	-18.56
				12	6	20.68	18.87	21.02	38.45	-19.58
				25	0	20.70	18.89	21.04	38.45	-19.56

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Antenna gain (dBi)		0.34								
LTE Band 5_Uplink frequency band : 824 to 849 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
10	20450	829	QPSK	1	0	22.73	20.92	23.07	38.45	-17.53
				1	49	22.74	20.93	23.08	38.45	-17.52
				25	12	21.59	19.78	21.93	38.45	-18.67
				50	0	21.61	19.80	21.95	38.45	-18.65
	20525	836.5	QPSK	1	0	22.13	20.32	22.47	38.45	-18.13
				1	49	22.51	20.70	22.85	38.45	-17.75
				25	12	21.61	19.80	21.95	38.45	-18.65
				50	0	21.55	19.74	21.89	38.45	-18.71
	20600	844	QPSK	1	0	22.48	20.67	22.82	38.45	-17.78
				1	49	22.79	20.98	23.13	38.45	-17.47
				25	12	21.78	19.97	22.12	38.45	-18.48
				50	0	21.71	19.90	22.05	38.45	-18.55
10	20450	829	16QAM	1	0	21.46	19.65	21.80	38.45	-18.80
				1	15	21.54	19.73	21.88	38.45	-18.72
				12	0	21.80	19.99	22.14	38.45	-18.46
				16	0	20.81	19.00	21.15	38.45	-19.45
	20525	836.5	16QAM	1	0	21.47	19.66	21.81	38.45	-18.79
				1	15	21.85	20.04	22.19	38.45	-18.41
				12	0	21.71	19.90	22.05	38.45	-18.55
				16	0	20.67	18.86	21.01	38.45	-19.59
	20600	844	16QAM	1	0	21.48	19.67	21.82	38.45	-18.78
				1	15	22.00	20.19	22.34	38.45	-18.26
				12	0	21.83	20.02	22.17	38.45	-18.43
				16	0	21.04	19.23	21.38	38.45	-19.22

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Antenna gain (dBi)		2.47								
LTE Band 12_Uplink frequency band : 699 to 716 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
1.4	23017	699.7	QPSK	1	0	22.10	22.42	24.57	34.77	-12.35
				1	5	22.45	22.77	24.92	34.77	-12.00
				3	2	22.44	22.76	24.91	34.77	-12.01
				6	0	21.41	21.73	23.88	34.77	-13.04
	23095	707.5	QPSK	1	0	22.41	22.73	24.88	34.77	-12.04
				1	5	22.45	22.77	24.92	34.77	-12.00
				3	2	22.64	22.96	25.11	34.77	-11.81
				6	0	21.75	22.07	24.22	34.77	-12.70
	23173	715.5	QPSK	1	0	22.53	22.85	25.00	34.77	-11.92
				1	5	22.70	23.02	25.17	34.77	-11.75
				3	2	22.47	22.79	24.94	34.77	-11.98
				6	0	21.66	21.98	24.13	34.77	-12.79
1.4	23017	699.7	16QAM	1	0	21.41	21.73	23.88	34.77	-13.04
				1	5	21.50	21.82	23.97	34.77	-12.95
				3	2	21.63	21.95	24.10	34.77	-12.82
				6	0	20.43	20.75	22.90	34.77	-14.02
	23095	707.5	16QAM	1	0	21.70	22.02	24.17	34.77	-12.75
				1	5	21.63	21.95	24.10	34.77	-12.82
				3	2	21.86	22.18	24.33	34.77	-12.59
				6	0	20.79	21.11	23.26	34.77	-13.66
	23173	715.5	16QAM	1	0	21.67	21.99	24.14	34.77	-12.78
				1	5	21.66	21.98	24.13	34.77	-12.79
				3	2	21.81	22.13	24.28	34.77	-12.64
				6	0	20.67	20.99	23.14	34.77	-13.78

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Antenna gain (dBi)		2.47								
LTE Band 12_Uplink frequency band : 699 to 716 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
3	23025	700.5	QPSK	1	0	22.41	22.73	24.88	34.77	-12.04
				1	14	22.40	22.72	24.87	34.77	-12.05
				8	4	21.55	21.87	24.02	34.77	-12.90
				15	0	21.53	21.85	24.00	34.77	-12.92
	23095	707.5	QPSK	1	0	22.62	22.94	25.09	34.77	-11.83
				1	14	22.77	23.09	25.24	34.77	-11.68
				8	4	21.82	22.14	24.29	34.77	-12.63
				15	0	21.78	22.10	24.25	34.77	-12.67
	23165	714.5	QPSK	1	0	22.56	22.88	25.03	34.77	-11.89
				1	14	22.41	22.73	24.88	34.77	-12.04
				8	4	21.61	21.93	24.08	34.77	-12.84
				15	0	21.54	21.86	24.01	34.77	-12.91
3	23025	700.5	16QAM	1	0	21.52	21.84	23.99	34.77	-12.93
				1	14	21.51	21.83	23.98	34.77	-12.94
				8	4	20.45	20.77	22.92	34.77	-14.00
				15	0	20.32	20.64	22.79	34.77	-14.13
	23095	707.5	16QAM	1	0	21.36	21.68	23.83	34.77	-13.09
				1	14	21.55	21.87	24.02	34.77	-12.90
				8	4	20.74	21.06	23.21	34.77	-13.71
				15	0	20.70	21.02	23.17	34.77	-13.75
	23165	714.5	16QAM	1	0	21.34	21.66	23.81	34.77	-13.11
				1	14	21.50	21.82	23.97	34.77	-12.95
				8	4	20.72	21.04	23.19	34.77	-13.73
				15	0	20.24	20.56	22.71	34.77	-14.21

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Antenna gain (dBi)		2.47								
LTE Band 12_Uplink frequency band : 699 to 716 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
5	23035	701.5	QPSK	1	0	22.30	22.62	24.77	34.77	-12.15
				1	24	21.96	22.28	24.43	34.77	-12.49
				12	6	21.48	21.80	23.95	34.77	-12.97
				25	0	21.45	21.77	23.92	34.77	-13.00
	23095	707.5	QPSK	1	0	22.53	22.85	25.00	34.77	-11.92
				1	24	22.45	22.77	24.92	34.77	-12.00
				12	6	21.72	22.04	24.19	34.77	-12.73
				25	0	21.72	22.04	24.19	34.77	-12.73
	23155	713.5	QPSK	1	0	22.31	22.63	24.78	34.77	-12.14
				1	24	22.23	22.55	24.70	34.77	-12.22
				12	6	21.52	21.84	23.99	34.77	-12.93
				25	0	21.43	21.75	23.90	34.77	-13.02
5	23035	701.5	16QAM	1	0	21.17	21.49	23.64	34.77	-13.28
				1	24	21.24	21.56	23.71	34.77	-13.21
				12	6	20.32	20.64	22.79	34.77	-14.13
				25	0	20.35	20.67	22.82	34.77	-14.10
	23095	707.5	16QAM	1	0	21.40	21.72	23.87	34.77	-13.05
				1	24	21.31	21.63	23.78	34.77	-13.14
				12	6	20.55	20.87	23.02	34.77	-13.90
				25	0	20.57	20.89	23.04	34.77	-13.88
	23155	713.5	16QAM	1	0	21.86	22.18	24.33	34.77	-12.59
				1	24	21.39	21.71	23.86	34.77	-13.06
				12	6	20.23	20.55	22.70	34.77	-14.22
				25	0	20.47	20.79	22.94	34.77	-13.98

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Antenna gain (dBi)		2.47								
LTE Band 12_Uplink frequency band : 699 to 716 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
10	23060	704	QPSK	1	0	22.00	22.32	24.47	34.77	-12.45
				1	49	22.63	22.95	25.10	34.77	-11.82
				25	12	21.53	21.85	24.00	34.77	-12.92
				50	0	21.64	21.96	24.11	34.77	-12.81
	23095	707.5	QPSK	1	0	22.42	22.74	24.89	34.77	-12.03
				1	49	22.37	22.69	24.84	34.77	-12.08
				25	12	21.56	21.88	24.03	34.77	-12.89
				50	0	21.61	21.93	24.08	34.77	-12.84
	23130	711	QPSK	1	0	22.22	22.54	24.69	34.77	-12.23
				1	49	22.38	22.70	24.85	34.77	-12.07
				25	12	21.54	21.86	24.01	34.77	-12.91
				50	0	21.63	21.95	24.10	34.77	-12.82
10	23060	704	16QAM	1	0	21.51	21.83	23.98	34.77	-12.94
				1	15	21.75	22.07	24.22	34.77	-12.70
				12	0	21.93	22.25	24.40	34.77	-12.52
				16	0	20.82	21.14	23.29	34.77	-13.63
	23095	707.5	16QAM	1	0	21.13	21.45	23.60	34.77	-13.32
				1	15	21.92	22.24	24.39	34.77	-12.53
				12	0	21.74	22.06	24.21	34.77	-12.71
				16	0	21.05	21.37	23.52	34.77	-13.40
	23130	711	16QAM	1	0	21.42	21.74	23.89	34.77	-13.03
				1	15	21.59	21.91	24.06	34.77	-12.86
				12	0	22.06	22.38	24.53	34.77	-12.39
				16	0	21.00	21.32	23.47	34.77	-13.45

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Antenna gain (dBi)		1.75								
LTE Band 13_Uplink frequency band : 777 to 787 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
5	23205	779.5	QPSK	1	0	22.63	22.23	24.38	34.77	-12.54
				1	24	22.11	21.71	23.86	34.77	-13.06
				12	6	21.47	21.07	23.22	34.77	-13.70
				25	0	21.43	21.03	23.18	34.77	-13.74
	23230	782	QPSK	1	0	22.53	22.13	24.28	34.77	-12.64
				1	24	22.08	21.68	23.83	34.77	-13.09
				12	6	21.48	21.08	23.23	34.77	-13.69
				25	0	21.48	21.08	23.23	34.77	-13.69
	23255	784.5	QPSK	1	0	22.49	22.09	24.24	34.77	-12.68
				1	24	22.27	21.87	24.02	34.77	-12.90
				12	6	21.51	21.11	23.26	34.77	-13.66
				25	0	21.63	21.23	23.38	34.77	-13.54
5	23205	779.5	16QAM	1	0	21.36	20.96	23.11	34.77	-13.81
				1	24	21.25	20.85	23.00	34.77	-13.92
				12	6	20.22	19.82	21.97	34.77	-14.95
				25	0	20.33	19.93	22.08	34.77	-14.84
	23230	782	16QAM	1	0	21.93	21.53	23.68	34.77	-13.24
				1	24	21.28	20.88	23.03	34.77	-13.89
				12	6	20.37	19.97	22.12	34.77	-14.80
				25	0	20.50	20.10	22.25	34.77	-14.67
	23255	784.5	16QAM	1	0	21.19	20.79	22.94	34.77	-13.98
				1	24	21.21	20.81	22.96	34.77	-13.96
				12	6	20.34	19.94	22.09	34.77	-14.83
				25	0	20.46	20.06	22.21	34.77	-14.71

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Antenna gain (dBi)		1.75								
LTE Band 13_Uplink frequency band : 777 to 787 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
10	23230	782	QPSK	1	0	22.39	21.99	24.14	34.77	-12.78
				1	49	22.46	22.06	24.21	34.77	-12.71
				25	12	21.42	21.02	23.17	34.77	-13.75
				50	0	21.45	21.05	23.20	34.77	-13.72
10	23230	782	16QAM	1	0	21.33	20.93	23.08	34.77	-13.84
				1	15	21.37	20.97	23.12	34.77	-13.80
				12	0	21.90	21.50	23.65	34.77	-13.27
				16	0	20.75	20.35	22.50	34.77	-14.42

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Antenna gain (dBi)		2.47								
LTE Band 17_Uplink frequency band : 704 to 716 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
5	23755	706.5	QPSK	1	0	22.56	22.88	25.03	34.77	-11.89
				1	24	22.45	22.77	24.92	34.77	-12.00
				12	6	21.73	22.05	24.20	34.77	-12.72
				25	0	21.67	21.99	24.14	34.77	-12.78
	23790	710	QPSK	1	0	22.82	23.14	25.29	34.77	-11.63
				1	24	22.51	22.83	24.98	34.77	-11.94
				12	6	21.45	21.77	23.92	34.77	-13.00
				25	0	21.57	21.89	24.04	34.77	-12.88
	23825	713.5	QPSK	1	0	22.34	22.66	24.81	34.77	-12.11
				1	24	22.03	22.35	24.50	34.77	-12.42
				12	6	21.52	21.84	23.99	34.77	-12.93
				25	0	21.52	21.84	23.99	34.77	-12.93
5	23755	706.5	16QAM	1	0	21.54	21.86	24.01	34.77	-12.91
				1	24	21.34	21.66	23.81	34.77	-13.11
				12	6	20.56	20.88	23.03	34.77	-13.89
				25	0	20.54	20.86	23.01	34.77	-13.91
	23790	710	16QAM	1	0	21.49	21.81	23.96	34.77	-12.96
				1	24	21.44	21.76	23.91	34.77	-13.01
				12	6	20.26	20.58	22.73	34.77	-14.19
				25	0	20.64	20.96	23.11	34.77	-13.81
	23825	713.5	16QAM	1	0	21.40	21.72	23.87	34.77	-13.05
				1	24	21.10	21.42	23.57	34.77	-13.35
				12	6	20.26	20.58	22.73	34.77	-14.19
				25	0	20.44	20.76	22.91	34.77	-14.01

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Antenna gain (dBi)		2.47								
LTE Band 17_Uplink frequency band : 704 to 716 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
10	23780	709	QPSK	1	0	22.58	22.90	25.05	34.77	-11.87
				1	49	22.80	23.12	25.27	34.77	-11.65
				25	12	21.64	21.96	24.11	34.77	-12.81
				50	0	21.60	21.92	24.07	34.77	-12.85
	23790	710	QPSK	1	0	22.51	22.83	24.98	34.77	-11.94
				1	49	22.60	22.92	25.07	34.77	-11.85
				25	12	21.57	21.89	24.04	34.77	-12.88
				50	0	21.64	21.96	24.11	34.77	-12.81
	23800	711	QPSK	1	0	22.38	22.70	24.85	34.77	-12.07
				1	49	22.26	22.58	24.73	34.77	-12.19
				25	12	21.54	21.86	24.01	34.77	-12.91
				50	0	21.61	21.93	24.08	34.77	-12.84
10	23780	709	16QAM	1	0	21.35	21.67	23.82	34.77	-13.10
				1	15	22.33	22.65	24.80	34.77	-12.12
				12	0	22.08	22.40	24.55	34.77	-12.37
				16	0	21.11	21.43	23.58	34.77	-13.34
	23790	710	16QAM	1	0	21.59	21.91	24.06	34.77	-12.86
				1	15	22.15	22.47	24.62	34.77	-12.30
				12	0	22.37	22.69	24.84	34.77	-12.08
				16	0	21.13	21.45	23.60	34.77	-13.32
	23800	711	16QAM	1	0	21.55	21.87	24.02	34.77	-12.90
				1	15	21.88	22.20	24.35	34.77	-12.57
				12	0	22.37	22.69	24.84	34.77	-12.08
				16	0	20.86	21.18	23.33	34.77	-13.59

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Antenna gain (dBi)		2.19							
LTE Band 66_Uplink frequency band : 1710 to 1780 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
1.4	131979	1710.7	QPSK	1	0	21.57	23.76	30	-6.24
				1	5	21.60	23.79	30	-6.21
				3	2	21.62	23.81	30	-6.19
				6	0	20.60	22.79	30	-7.21
	132322	1745	QPSK	1	0	21.34	23.53	30	-6.47
				1	5	21.37	23.56	30	-6.44
				3	2	21.59	23.78	30	-6.22
				6	0	20.44	22.63	30	-7.37
	132665	1779.3	QPSK	1	0	21.72	23.91	30	-6.09
				1	5	21.67	23.86	30	-6.14
				3	2	21.71	23.90	30	-6.1
				6	0	20.75	22.94	30	-7.06
1.4	131979	1710.7	16QAM	1	0	20.26	22.45	30	-7.55
				1	5	20.43	22.62	30	-7.38
				3	2	20.82	23.01	30	-6.99
				6	0	19.45	21.64	30	-8.36
	132322	1745	16QAM	1	0	20.69	22.88	30	-7.12
				1	5	20.33	22.52	30	-7.48
				3	2	20.56	22.75	30	-7.25
				6	0	19.25	21.44	30	-8.56
	132665	1779.3	16QAM	1	0	21.02	23.21	30	-6.79
				1	5	20.97	23.16	30	-6.84
				3	2	20.68	22.87	30	-7.13
				6	0	19.65	21.84	30	-8.16

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Antenna gain (dBi)		2.19							
LTE Band 66_Uplink frequency band : 1710 to 1780 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
3	131987	1711.5	QPSK	1	0	21.63	23.82	30	-6.18
				1	14	21.87	24.06	30	-5.94
				8	4	20.53	22.72	30	-7.28
				15	0	20.39	22.58	30	-7.42
	132322	1745	QPSK	1	0	21.72	23.91	30	-6.09
				1	14	21.61	23.80	30	-6.2
				8	4	20.48	22.67	30	-7.33
				15	0	20.48	22.67	30	-7.33
	132657	1778.5	QPSK	1	0	21.46	23.65	30	-6.35
				1	14	21.32	23.51	30	-6.49
				8	4	20.55	22.74	30	-7.26
				15	0	20.57	22.76	30	-7.24
3	131987	1711.5	16QAM	1	0	20.14	22.33	30	-7.67
				1	14	20.30	22.49	30	-7.51
				8	4	19.72	21.91	30	-8.09
				15	0	19.47	21.66	30	-8.34
	132322	1745	16QAM	1	0	20.61	22.80	30	-7.2
				1	14	20.00	22.19	30	-7.81
				8	4	19.52	21.71	30	-8.29
				15	0	19.37	21.56	30	-8.44
	132657	1778.5	16QAM	1	0	20.52	22.71	30	-7.29
				1	14	20.32	22.51	30	-7.49
				8	4	19.78	21.97	30	-8.03
				15	0	19.62	21.81	30	-8.19

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LTE Band 66_Uplink frequency band : 1710 to 1780 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
5	131997	1712.5	QPSK	1	0	21.41	23.60	30	-6.4
				1	24	21.73	23.92	30	-6.08
				12	6	20.40	22.59	30	-7.41
				25	0	20.39	22.58	30	-7.42
	132322	1745	QPSK	1	0	21.59	23.78	30	-6.22
				1	24	21.64	23.83	30	-6.17
				12	6	20.38	22.57	30	-7.43
				25	0	20.46	22.65	30	-7.35
	132647	1777.5	QPSK	1	0	21.69	23.88	30	-6.12
				1	24	21.46	23.65	30	-6.35
				12	6	20.50	22.69	30	-7.31
				25	0	20.58	22.77	30	-7.23
5	131997	1712.5	16QAM	1	0	19.99	22.18	30	-7.82
				1	24	20.06	22.25	30	-7.75
				12	6	19.39	21.58	30	-8.42
				25	0	19.42	21.61	30	-8.39
	132322	1745	16QAM	1	0	20.32	22.51	30	-7.49
				1	24	20.11	22.30	30	-7.7
				12	6	19.28	21.47	30	-8.53
				25	0	19.44	21.63	30	-8.37
	132647	1777.5	16QAM	1	0	20.79	22.98	30	-7.02
				1	24	20.13	22.32	30	-7.68
				12	6	19.34	21.53	30	-8.47
				25	0	19.49	21.68	30	-8.32

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Antenna gain (dBi)		2.19							
LTE Band 66_Uplink frequency band : 1710 to 1780 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
10	132022	1715	QPSK	1	0	21.82	24.01	30	-5.99
				1	49	21.26	23.45	30	-6.55
				25	12	20.61	22.80	30	-7.2
				50	0	20.61	22.80	30	-7.2
	132322	1745	QPSK	1	0	21.69	23.88	30	-6.12
				1	49	21.42	23.61	30	-6.39
				25	12	20.59	22.78	30	-7.22
				50	0	20.65	22.84	30	-7.16
	132622	1775	QPSK	1	0	21.96	24.15	30	-5.85
				1	49	21.51	23.70	30	-6.3
				25	12	20.73	22.92	30	-7.08
				50	0	20.78	22.97	30	-7.03
10	132022	1715	16QAM	1	0	20.56	22.75	30	-7.25
				1	15	20.75	22.94	30	-7.06
				12	0	20.94	23.13	30	-6.87
				16	0	19.85	22.04	30	-7.96
	132322	1745	16QAM	1	0	20.91	23.10	30	-6.9
				1	15	20.85	23.04	30	-6.96
				12	0	20.54	22.73	30	-7.27
				16	0	19.75	21.94	30	-8.06
	132622	1775	16QAM	1	0	21.31	23.50	30	-6.5
				1	15	20.40	22.59	30	-7.41
				12	0	20.89	23.08	30	-6.92
				16	0	19.92	22.11	30	-7.89

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Antenna gain (dBi)		2.19							
LTE Band 66_Uplink frequency band : 1710 to 1780 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
15	132047	1717.5	QPSK	1	0	21.56	23.75	30	-6.25
				1	74	21.58	23.77	30	-6.23
				36	18	20.48	22.67	30	-7.33
				75	0	20.62	22.81	30	-7.19
	132322	1745	QPSK	1	0	21.68	23.87	30	-6.13
				1	74	21.75	23.94	30	-6.06
				36	18	20.60	22.79	30	-7.21
				75	0	20.67	22.86	30	-7.14
	132597	1772.5	QPSK	1	0	21.78	23.97	30	-6.03
				1	74	21.73	23.92	30	-6.08
				36	18	20.99	23.18	30	-6.82
				75	0	20.63	22.82	30	-7.18
15	132047	1717.5	16QAM	1	0	20.34	22.53	30	-7.47
				1	15	20.65	22.84	30	-7.16
				12	0	20.82	23.01	30	-6.99
				16	0	20.70	22.89	30	-7.11
	132322	1745	16QAM	1	0	20.54	22.73	30	-7.27
				1	15	20.42	22.61	30	-7.39
				12	0	20.69	22.88	30	-7.12
				16	0	20.63	22.82	30	-7.18
	132597	1772.5	16QAM	1	0	21.01	23.20	30	-6.8
				1	15	20.64	22.83	30	-7.17
				12	0	20.64	22.83	30	-7.17
				16	0	20.67	22.86	30	-7.14

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Antenna gain (dBi)		2.19							
LTE Band 66_Uplink frequency band : 1710 to 1780 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
20	132072	1720	QPSK	1	0	21.51	23.70	30	-6.3
				1	99	21.17	23.36	30	-6.64
				50	25	20.41	22.60	30	-7.4
				100	0	20.59	22.78	30	-7.22
	132322	1745	QPSK	1	0	21.73	23.92	30	-6.08
				1	99	21.67	23.86	30	-6.14
				50	25	20.71	22.90	30	-7.1
				100	0	20.56	22.75	30	-7.25
	132572	1770	QPSK	1	0	21.80	<b>23.99</b>	30	-6.01
				1	99	21.31	23.50	30	-6.5
				50	25	20.89	23.08	30	-6.92
				100	0	20.50	22.69	30	-7.31
20	132072	1720	16QAM	1	0	20.46	22.65	30	-7.35
				1	17	20.72	22.91	30	-7.09
				18	0	20.74	22.93	30	-7.07
	132322	1745	16QAM	1	0	20.98	<b>23.17</b>	30	-6.83
				1	17	20.58	22.77	30	-7.23
				18	0	20.59	22.78	30	-7.22
	132572	1770	16QAM	1	0	20.96	23.15	30	-6.85
				1	17	20.37	22.56	30	-7.44
				18	0	20.35	22.54	30	-7.46

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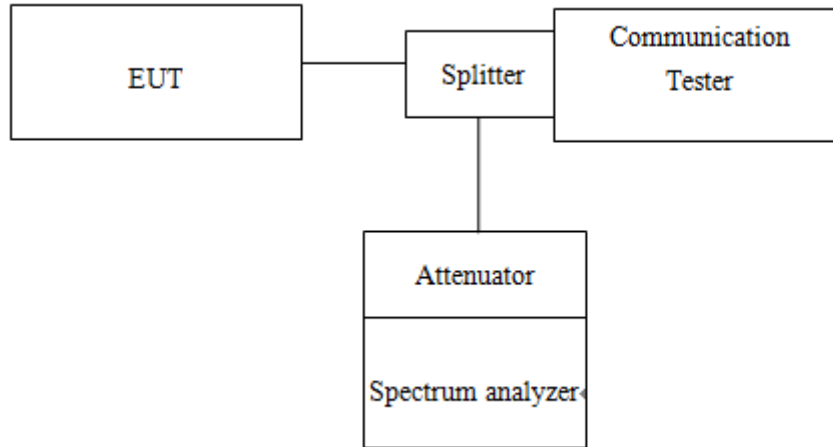
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## 8 OCCUPIED BANDWIDTH MEASUREMENT

### 8.1 Standard Applicable

The occupied bandwidth 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.

### 8.2 Test Set-up



### 8.3 Measurement Procedure

#### **99% &26dB Bandwidth with detector peak**

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% of emission BW, VBW= 3 times RBW, -26dBc display line was placed on the screen (or 26dB bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace. Then set RBW to 99% bandwidth, RBW= 1%, VBW= 3 \* RBW, with span > 2 \* Signal BW, set % Power = 99%.

#### **99% Bandwidth with detector sample**

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% ~ 5% of emission BW, VBW= 3 times RBW. Set RBW= 1% ~ 5%, VBW= 3 \* RBW, with span > 2 \* Signal BW, set % Power = 99%.

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### 8.4 Measurement Result

LTE BAND 2 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1850.7	18607	<b>1.0868</b>	<b>1.0883</b>	1.267	<b>1.296</b>
1880.0	18900	<b>1.0868</b>	<b>1.0883</b>	1.261	1.288
1909.3	19193	1.0824	1.0882	<b>1.293</b>	1.288

LTE BAND 2 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1851.5	18615	2.6858	2.6899	2.947	2.964
1880.0	18900	2.6849	<b>2.6912</b>	<b>2.958</b>	2.964
1908.5	19185	<b>2.6862</b>	2.6888	2.947	<b>2.969</b>

LTE BAND 2 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1852.5	18625	4.4857	4.4910	4.992	<b>5.023</b>
1880.0	18900	4.4846	4.4895	<b>5.010</b>	4.976
1907.5	19175	<b>4.4915</b>	<b>4.4925</b>	5.006	4.976

LTE BAND 2 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1855.0	18650	8.9443	3.0502	9.757	3.726
1880.0	18900	8.9490	<b>3.0713</b>	<b>9.868</b>	<b>4.043</b>
1905.0	19150	<b>8.9634</b>	3.0425	9.851	3.781

LTE BAND 2 Channel bandwidth: 15MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1857.5	18675	13.375	<b>3.1979</b>	14.51	<b>4.579</b>
1880.0	18900	<b>13.436</b>	3.1975	<b>14.64</b>	4.149
1902.5	19125	13.414	3.1657	14.50	4.273

LTE BAND 2 Channel bandwidth: 20MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1860.0	18700	17.770	<b>3.766</b>	19.15	<b>5.573</b>
1880.0	18900	<b>17.893</b>	3.678	<b>19.36</b>	5.309
1900.0	19100	17.790	3.757	19.18	5.326

LTE BAND 4 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1710.7	19957	1.0868	<b>1.0877</b>	<b>1.272</b>	<b>1.284</b>
1732.5	20175	1.0873	1.0873	1.255	1.267
1754.3	20393	<b>1.0875</b>	1.0869	1.261	1.282

LTE BAND 4 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1711.5	19965	2.6842	2.6865	2.941	<b>2.971</b>
1732.5	20175	<b>2.6883</b>	<b>2.6899</b>	<b>2.960</b>	2.955
1753.5	20385	2.6864	2.6894	2.951	2.961

LTE BAND 4 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1712.5	19975	4.4837	4.4893	5.010	4.960
1732.5	20175	4.4879	4.4882	<b>5.030</b>	<b>4.987</b>
1752.5	20375	<b>4.4917</b>	<b>4.4925</b>	5.006	4.974

LTE BAND 4 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1715.0	20000	8.9455	3.0481	9.795	3.794
1732.5	20175	8.9567	3.0475	9.793	3.991
1750.0	20350	<b>8.9729</b>	<b>3.0523</b>	<b>9.848</b>	<b>4.121</b>

LTE BAND 4 Channel bandwidth: 15MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1717.5	20025	13.378	3.1751	14.51	4.330
1732.5	20175	13.416	3.1695	14.56	4.280
1747.5	20325	<b>13.427</b>	<b>3.1772</b>	<b>14.58</b>	<b>4.467</b>

LTE BAND 4 Channel bandwidth: 20MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1720.0	20050	17.800	<b>3.7599</b>	19.18	5.156
1732.5	20175	17.833	3.6977	19.31	<b>5.266</b>
1745.0	20300	<b>17.858</b>	3.6976	<b>19.34</b>	5.234

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LTE BAND 5 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
824.7	20407	1.0866	1.0867	<b>1.286</b>	1.269
836.5	20525	1.0868	1.0867	1.266	<b>1.272</b>
848.3	20643	<b>1.0876</b>	<b>1.0874</b>	1.278	1.269

LTE BAND 5 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
825.5	20415	2.6842	<b>2.6911</b>	2.945	2.960
836.5	20525	<b>2.6893</b>	2.6892	<b>2.968</b>	<b>2.967</b>
847.5	20635	2.6855	<b>2.6911</b>	2.938	2.962

LTE BAND 5 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
826.5	20425	4.4838	4.4778	<b>4.998</b>	4.966
836.5	20525	<b>4.4859</b>	4.4915	4.969	4.970
846.5	20625	4.4852	<b>4.4917</b>	4.993	<b>4.980</b>

LTE BAND 5 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
829.0	20450	8.9515	<b>3.0526</b>	9.758	3.809
836.5	20525	<b>8.9620</b>	3.0503	<b>9.809</b>	<b>3.815</b>
844.0	20600	8.9552	3.0359	9.738	3.798

LTE BAND 12 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
699.7	23017	1.0861	1.0867	1.245	1.259
707.5	23095	<b>1.0869</b>	1.0873	1.248	<b>1.264</b>
715.3	23173	1.0868	<b>1.0875</b>	<b>1.289</b>	1.262

LTE BAND 12 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
700.5	23025	2.6814	2.6877	2.929	2.962
707.5	23095	<b>2.6874</b>	2.6892	2.940	2.956
714.5	23165	2.6873	<b>2.6921</b>	<b>2.956</b>	<b>2.967</b>

LTE BAND 12 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
701.5	23035	4.4759	4.4830	4.961	4.956
707.5	23095	<b>4.4883</b>	<b>4.4901</b>	<b>4.983</b>	<b>4.997</b>
713.5	23155	4.4802	4.4789	4.974	4.952

LTE BAND 12 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
704.0	23060	8.9521	3.0158	9.731	3.670
707.5	23095	<b>8.9849</b>	3.0240	<b>9.795</b>	3.692
711.0	23130	8.9434	<b>3.0536</b>	9.703	<b>3.812</b>

LTE BAND 13 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
779.5	23205	<b>4.4880</b>	<b>4.4941</b>	4.949	<b>4.989</b>
782.0	23230	4.4770	4.4797	4.979	4.958
784.5	23255	4.4848	4.4863	<b>4.985</b>	4.961

LTE BAND 13 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
782.0	23230	<b>8.9372</b>	<b>3.0287</b>	<b>9.713</b>	<b>3.787</b>

LTE BAND 17 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
706.5	23755	<b>4.4911</b>	4.4873	<b>5.010</b>	4.964
710.0	23790	4.4874	<b>4.4908</b>	4.991	<b>4.965</b>
713.5	23825	4.4796	4.4831	4.954	4.948

LTE BAND 17 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
709.0	23780	<b>8.9639</b>	3.0425	<b>9.792</b>	3.686
710.0	23790	8.9542	<b>3.0520</b>	9.755	<b>3.780</b>
711.0	23800	8.9438	3.0486	9.714	3.755

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LTE BAND 66 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1710.7	131979	<b>1.0867</b>	<b>1.0872</b>	1.261	<b>1.261</b>
1745.0	132322	<b>1.0867</b>	1.0862	1.264	<b>1.261</b>
1779.3	132665	1.0861	1.0866	<b>1.270</b>	<b>1.261</b>

LTE BAND 66 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1711.5	131987	2.6878	<b>2.6922</b>	<b>2.947</b>	2.956
1745.0	132322	2.6876	2.6897	2.941	<b>2.969</b>
1778.5	132657	<b>2.6885</b>	2.6870	2.944	2.959

LTE BAND 66 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1712.5	131997	4.4801	4.4897	4.970	4.968
1745.0	132322	4.4876	<b>4.4918</b>	<b>4.986</b>	<b>4.989</b>
1777.5	132647	<b>4.4881</b>	4.4881	4.962	4.962

LTE BAND 66 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1715.0	132022	8.9615	<b>3.0303</b>	9.771	3.699
1745.0	132322	8.9480	3.0275	9.738	<b>3.757</b>
1775.0	132622	<b>8.9631</b>	2.8651	<b>9.776</b>	3.403

LTE BAND 66 Channel bandwidth: 15MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1717.5	132047	13.407	<b>3.1568</b>	14.42	<b>4.063</b>
1745.0	132322	<b>13.441</b>	3.0253	<b>14.53</b>	3.782
1772.5	132597	13.399	2.9841	14.48	3.738

LTE BAND 66 Channel bandwidth: 20MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1720.0	132072	17.782	3.6544	19.19	4.764
1745.0	132322	<b>17.884</b>	<b>3.6907</b>	<b>19.35</b>	<b>4.970</b>
1770.0	132572	17.808	3.6750	19.12	4.779

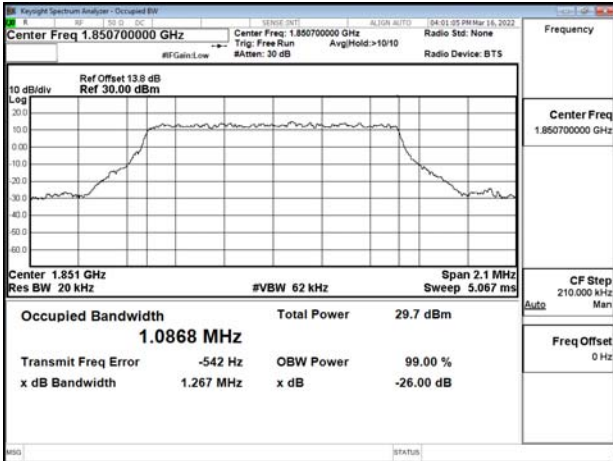
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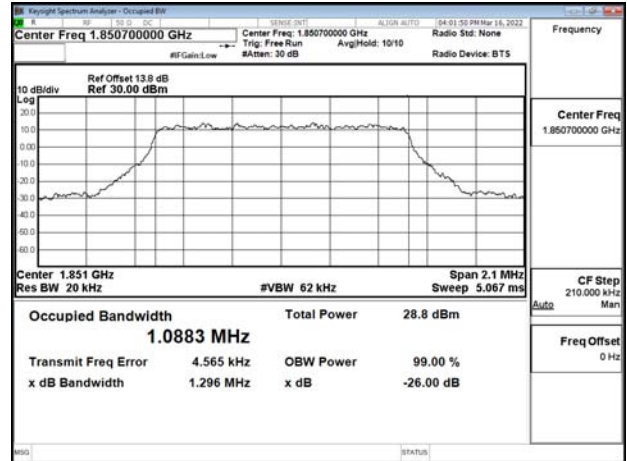
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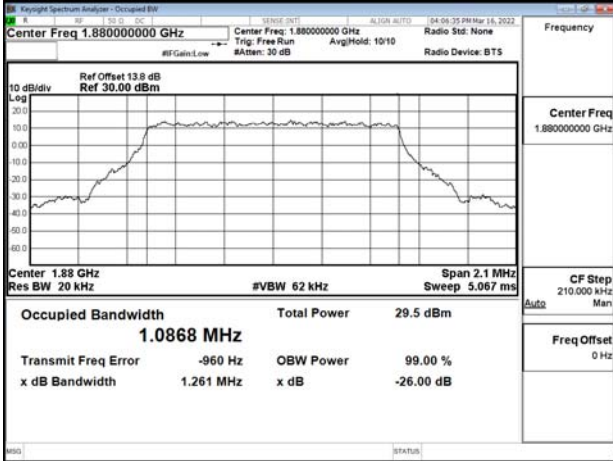
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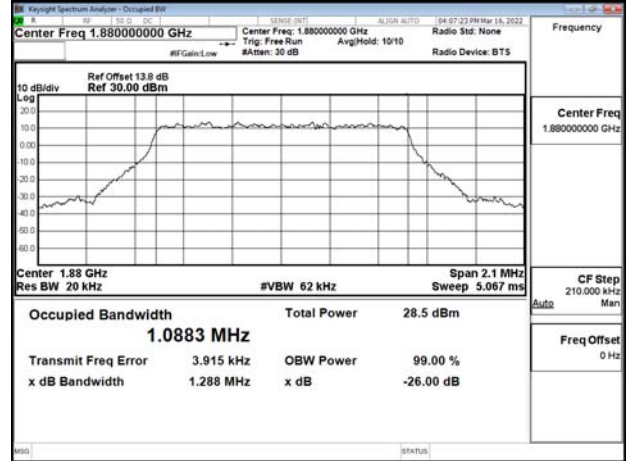
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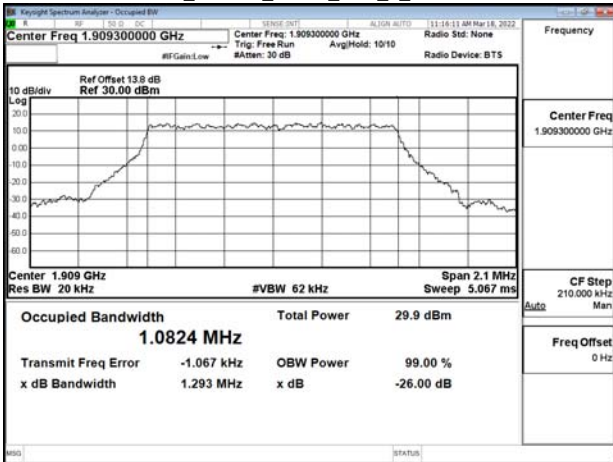
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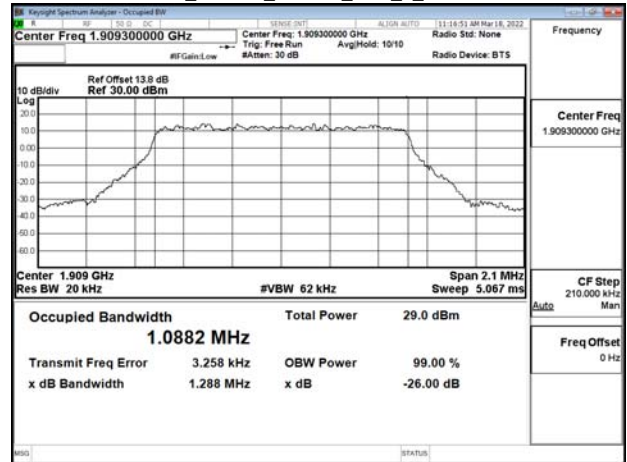
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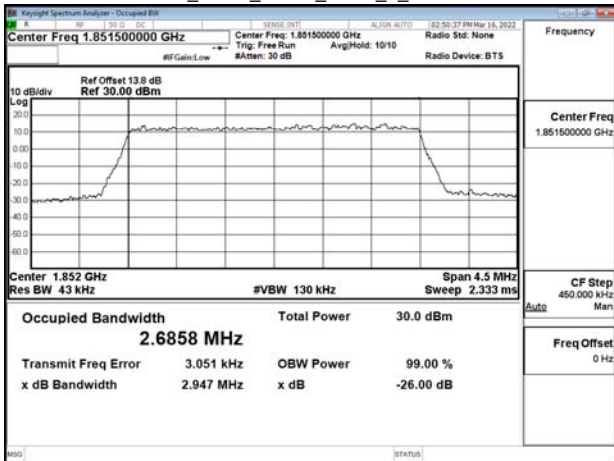


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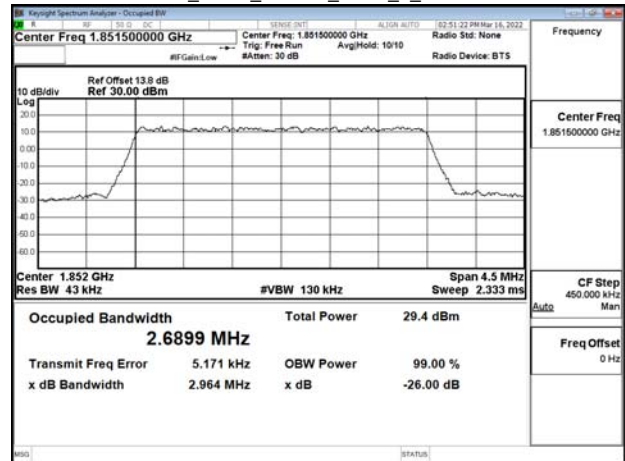
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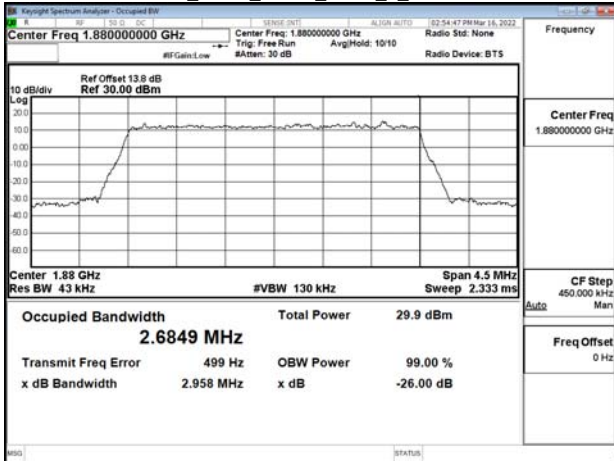
Band2\_3MHz\_QPSK\_RB15\_0\_CH18615



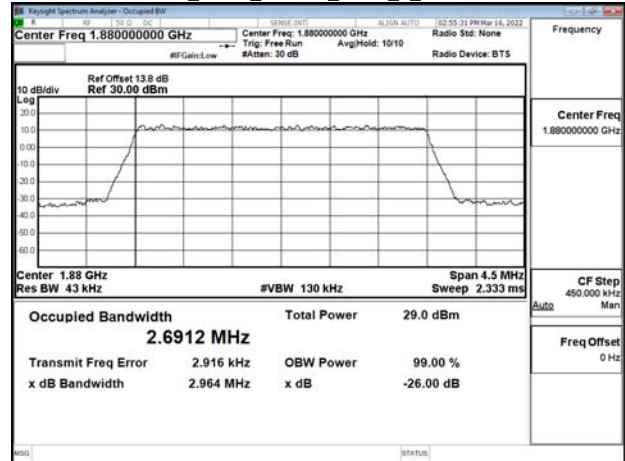
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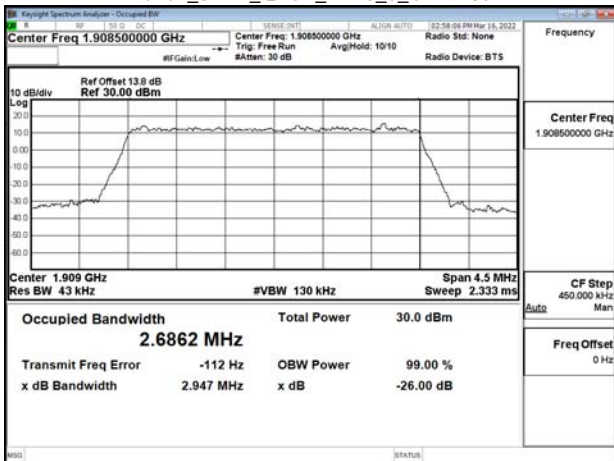
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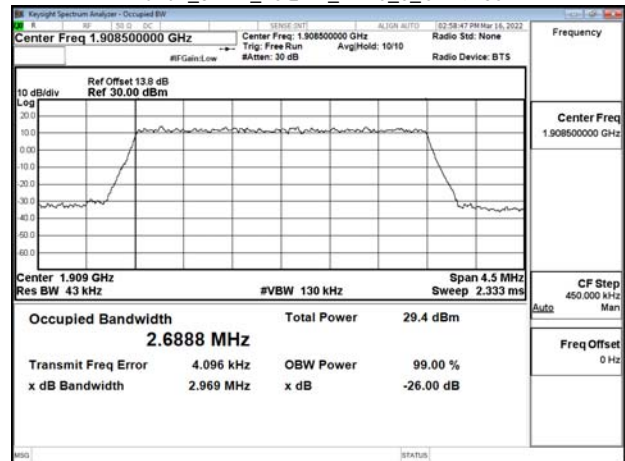
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Band2\_3MHz\_16QAM\_RB15\_0\_CH19185

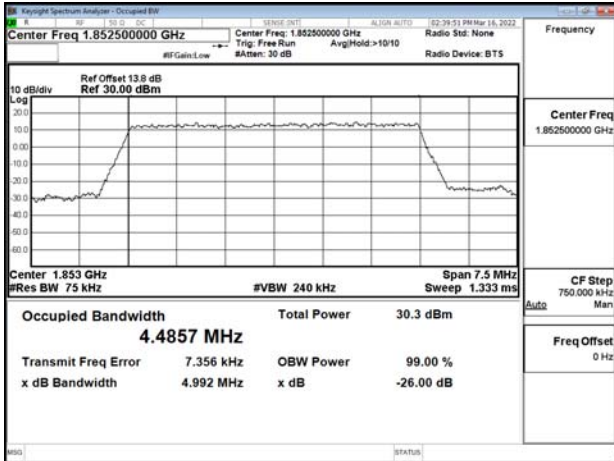


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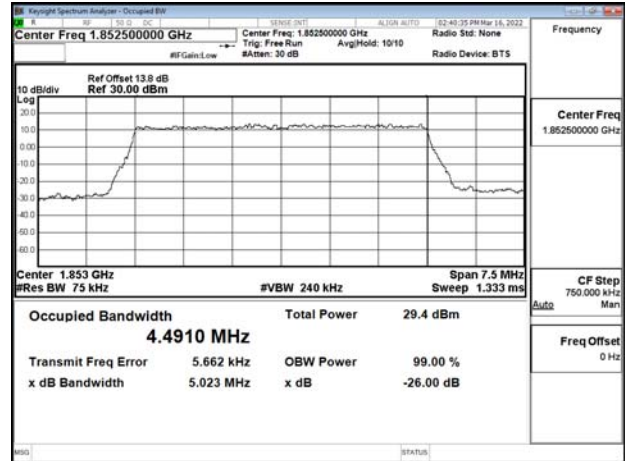
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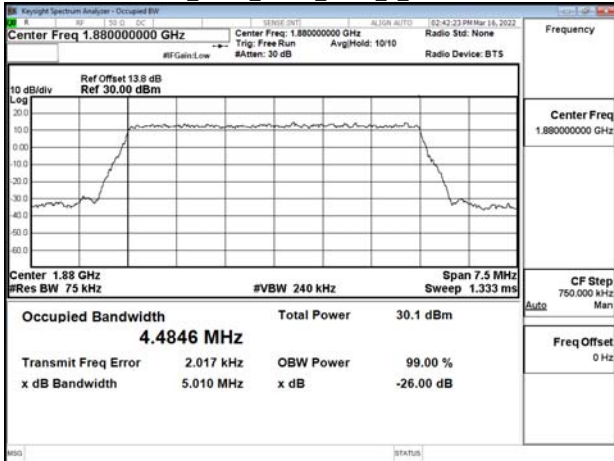
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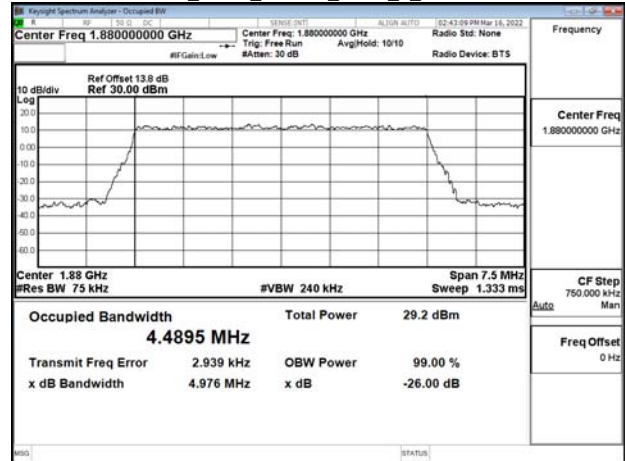
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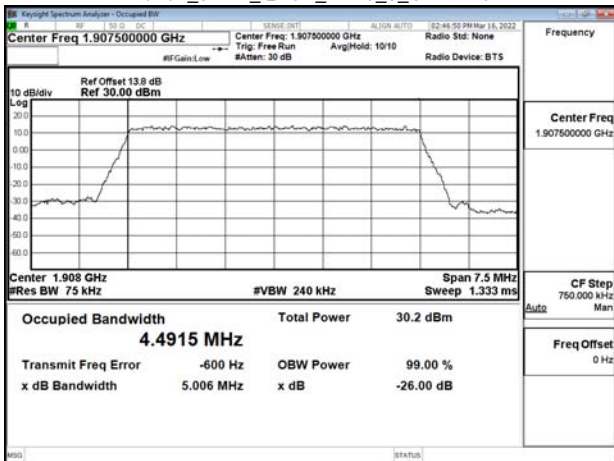
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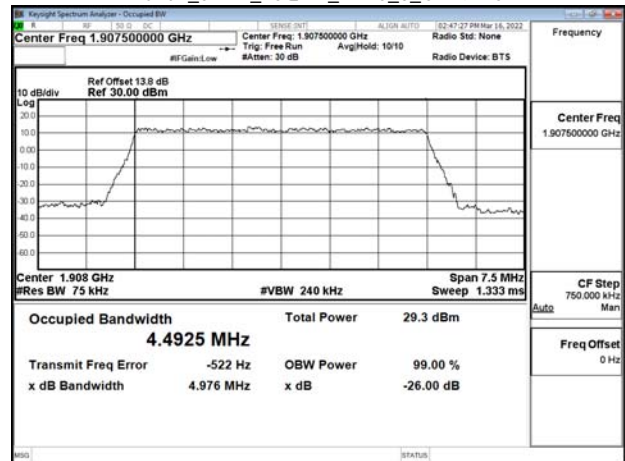
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Band2\_5MHz\_QPSK\_RB25\_0\_CH19175



Band2\_5MHz\_16QAM\_RB25\_0\_CH19175

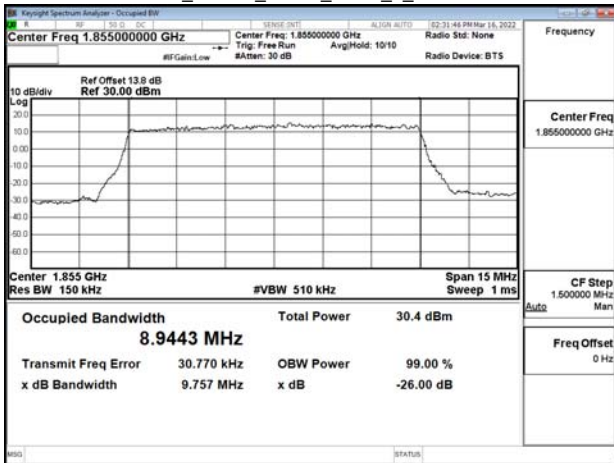


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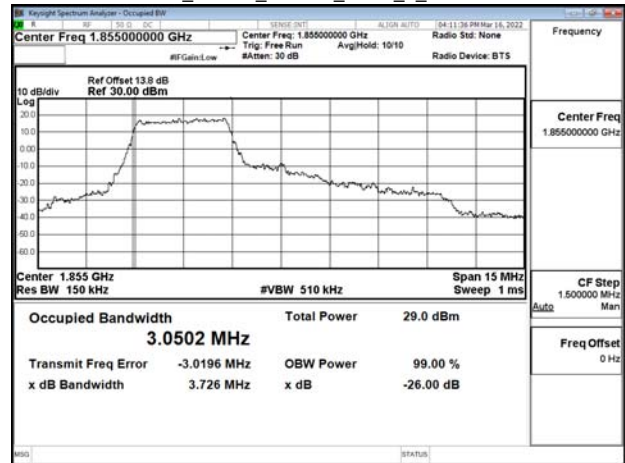
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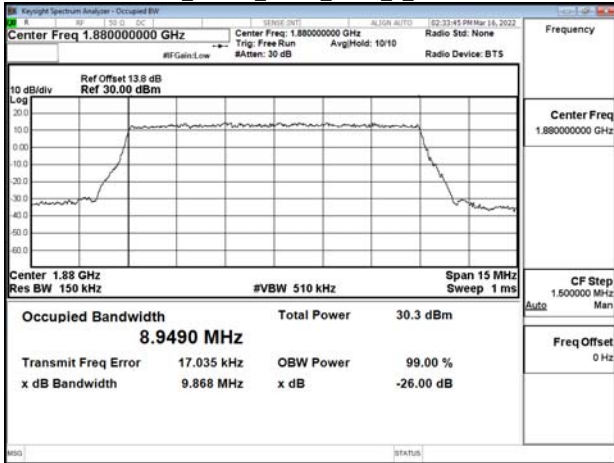
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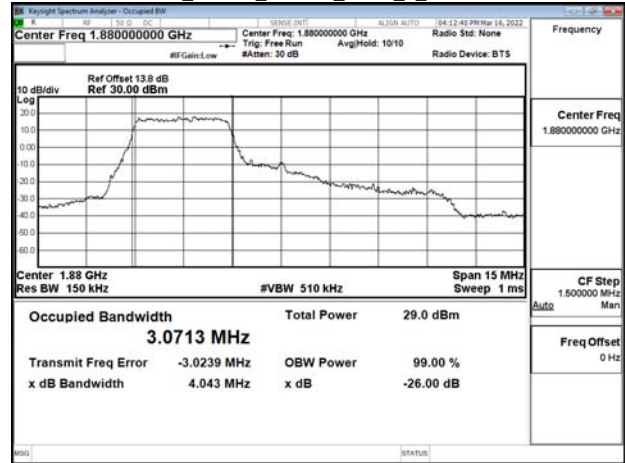
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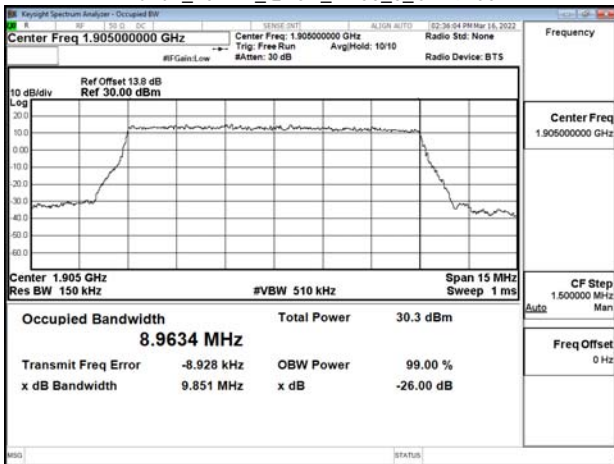
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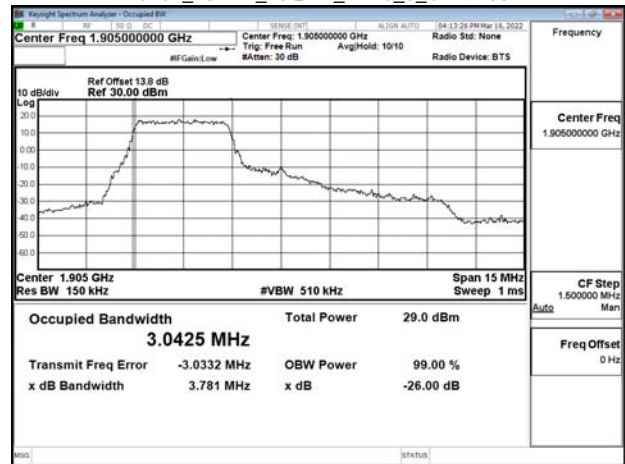
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Band2\_10MHz\_QPSK\_RB50\_0\_CH19150



Band2\_10MHz\_16QAM\_RB16\_0\_CH19150



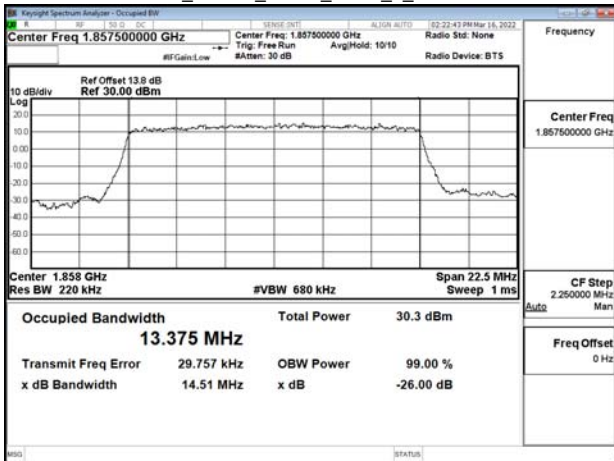
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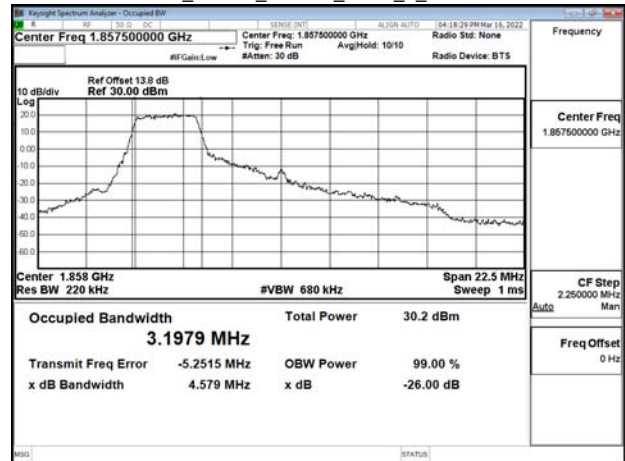
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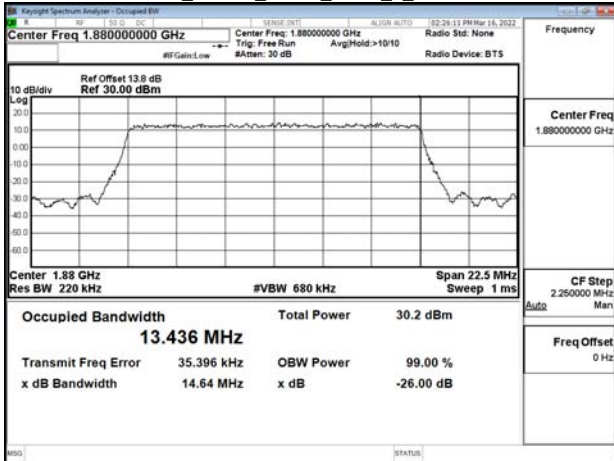
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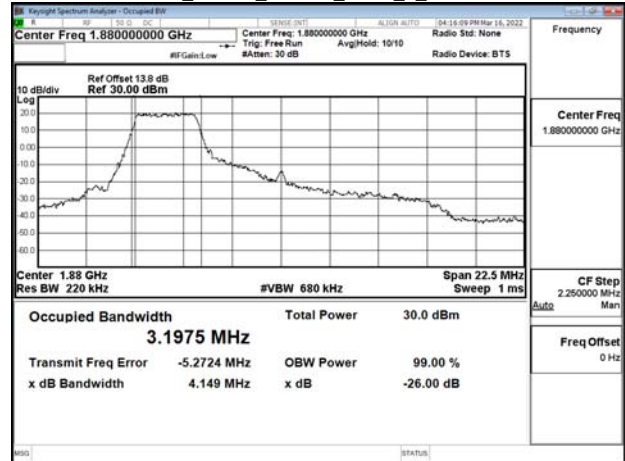
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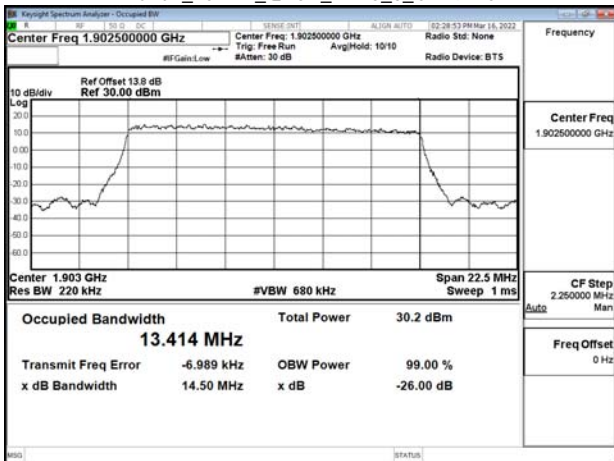
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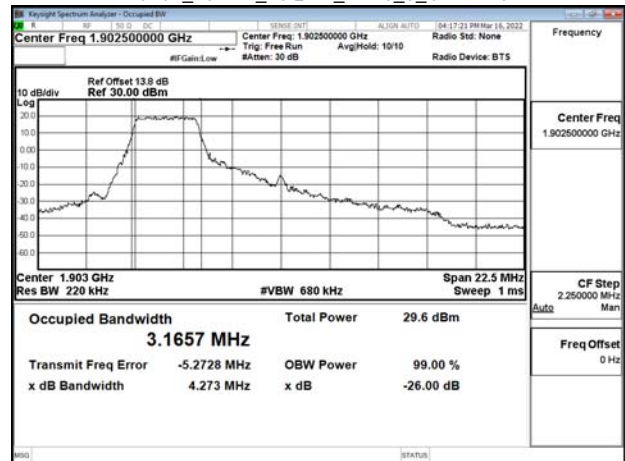
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Band2\_15MHz\_QPSK\_RB75\_0\_CH19125



Band2\_15MHz\_16QAM\_RB16\_0\_CH19125

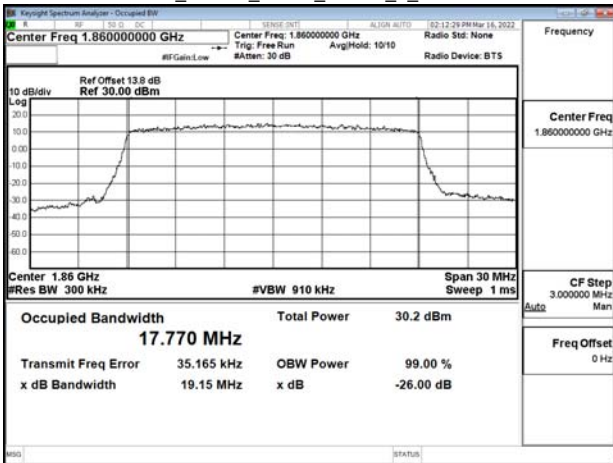


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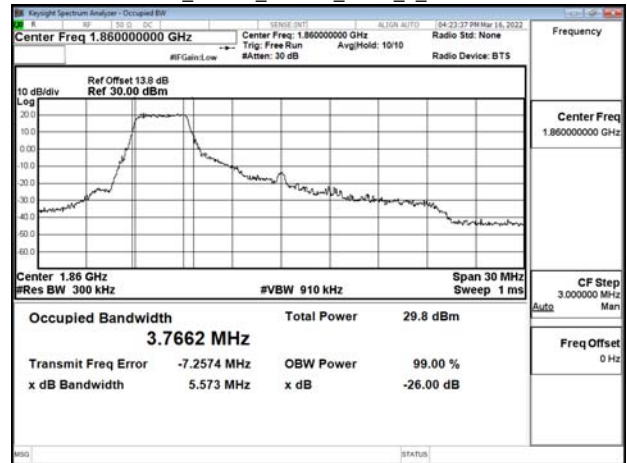
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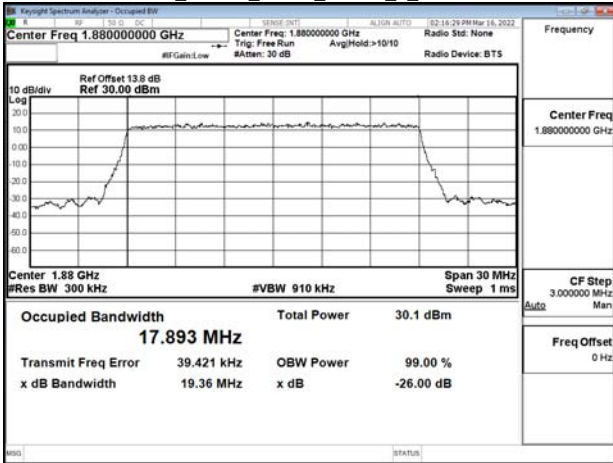
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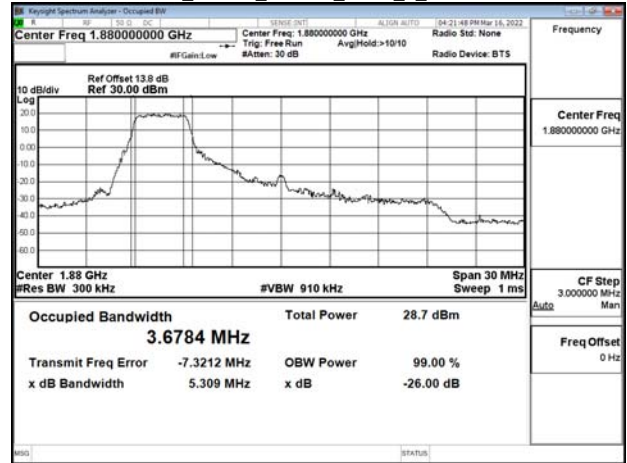
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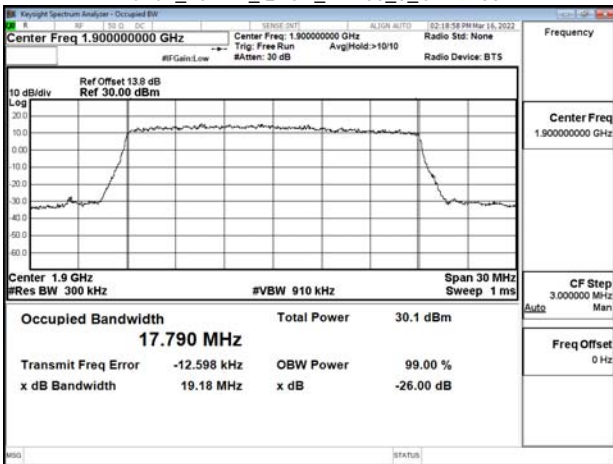
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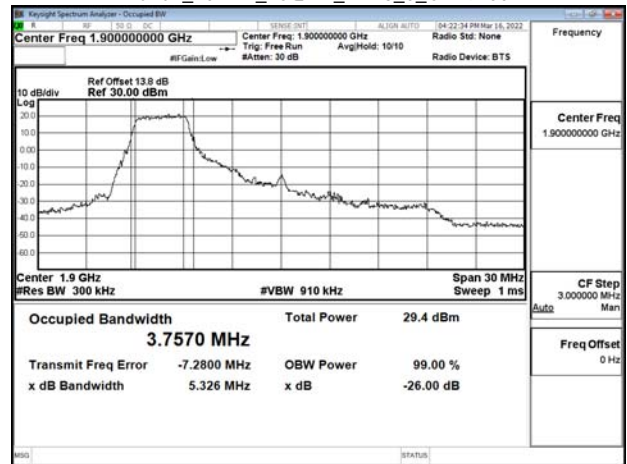
Band2\_20MHz\_16QAM\_RB18\_0\_CH18900



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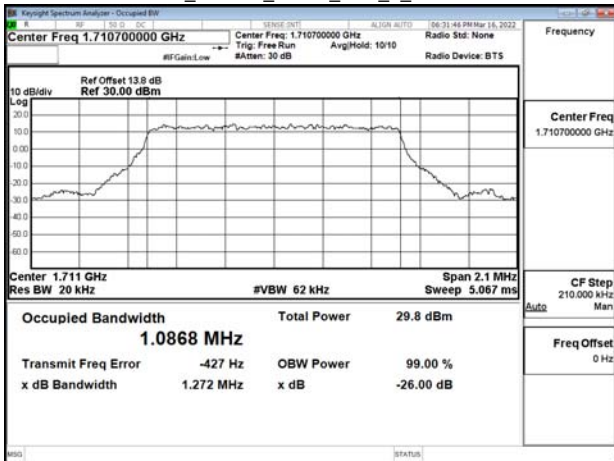


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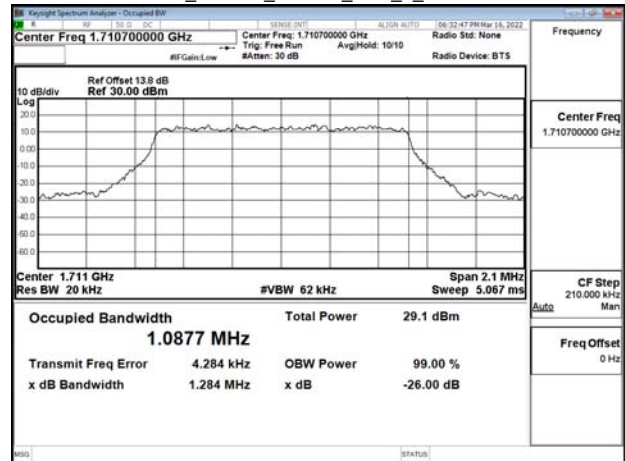
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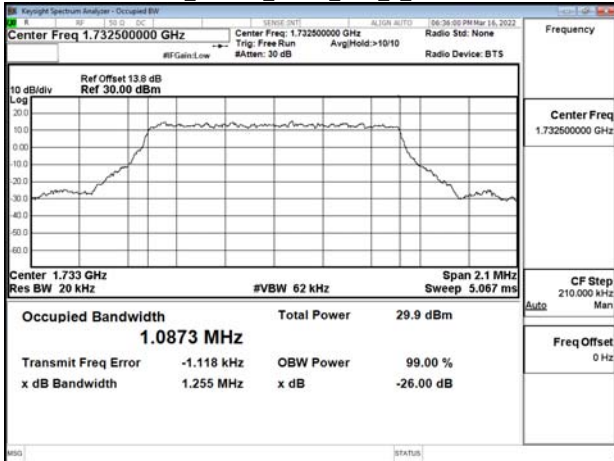
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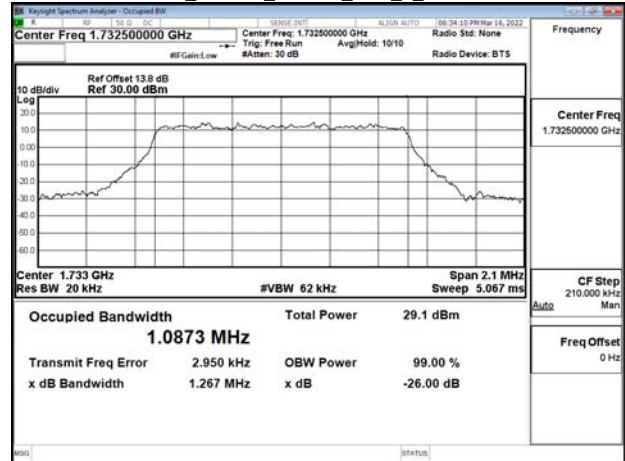
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Band4\_1.4MHz\_QPSK\_RB6\_0\_CH20175



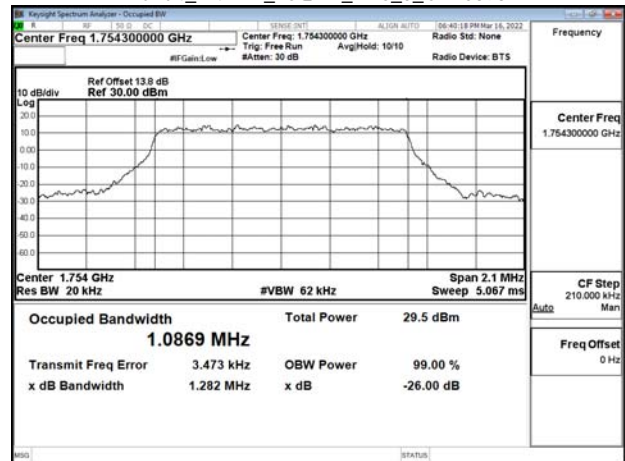
Band4\_1.4MHz\_16QAM\_RB6\_0\_CH20175



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Band4\_1.4MHz\_16QAM\_RB6\_0\_CH20393

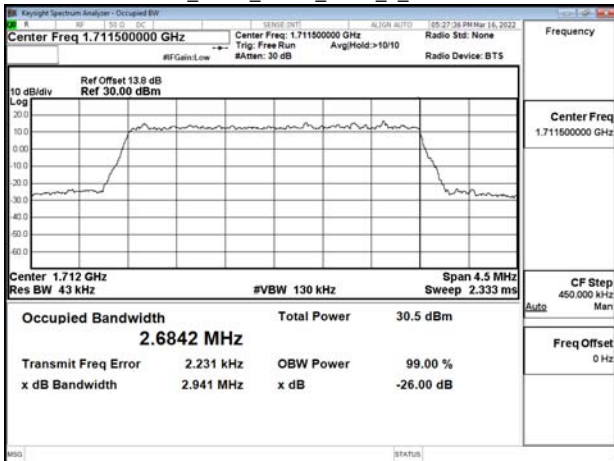


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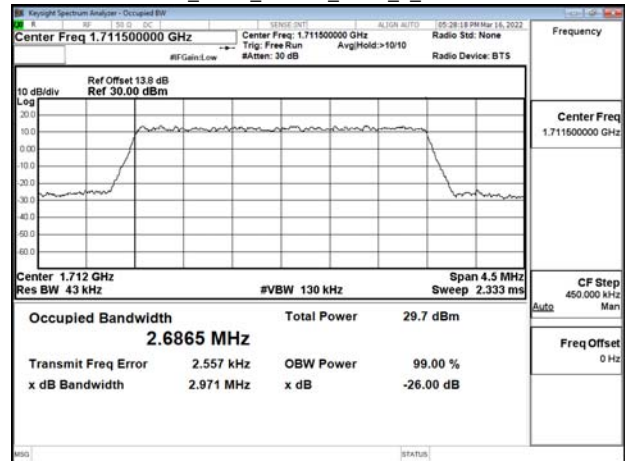
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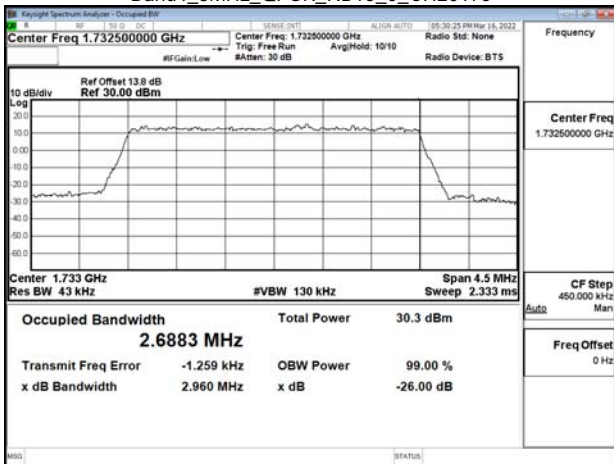
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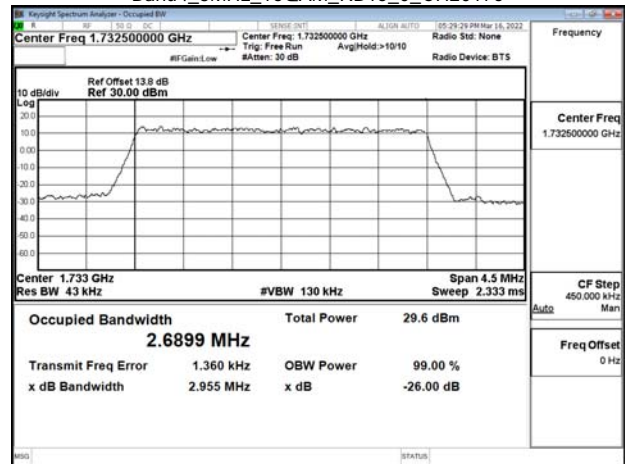
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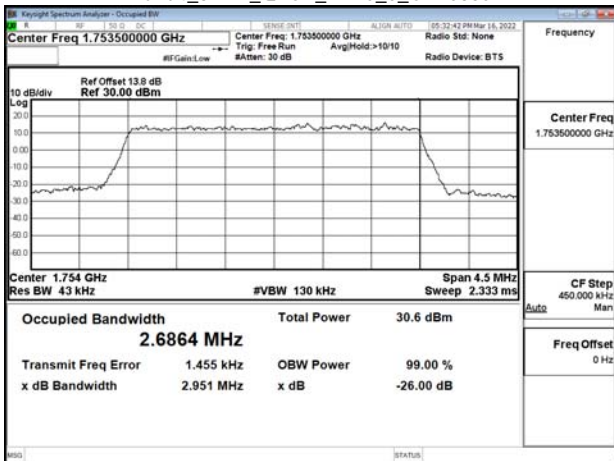
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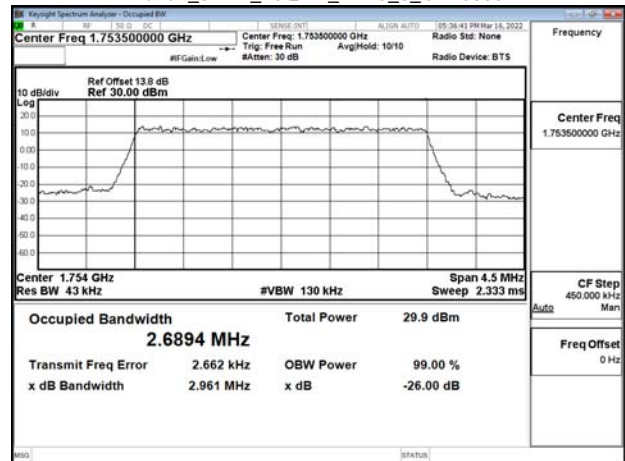
Band4\_3MHz\_16QAM\_RB15\_0\_CH20175



Band4\_3MHz\_QPSK\_RB15\_0\_CH20385



Band4\_3MHz\_16QAM\_RB15\_0\_CH20385



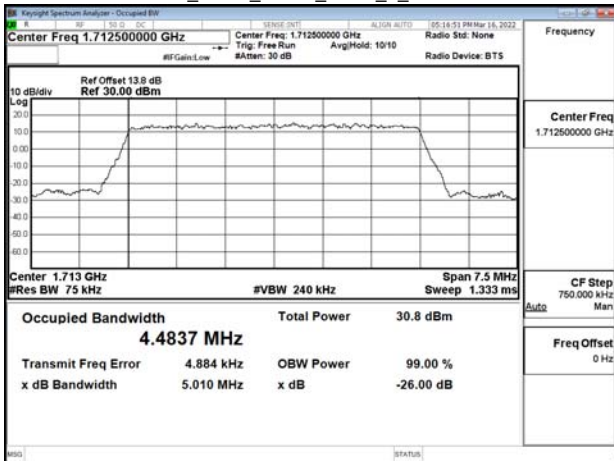
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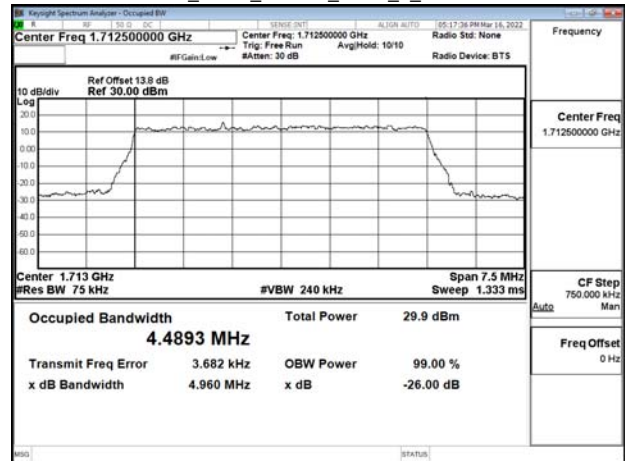
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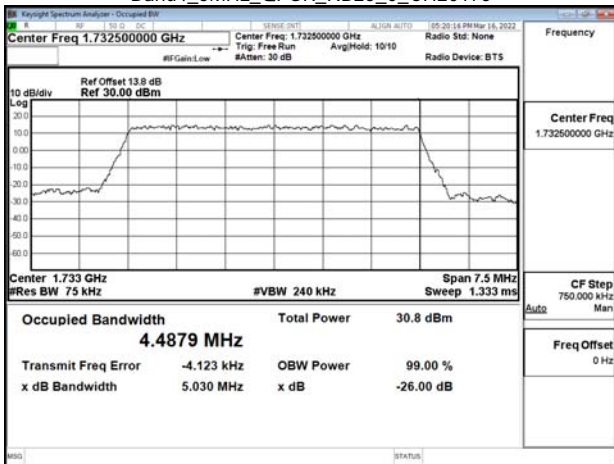
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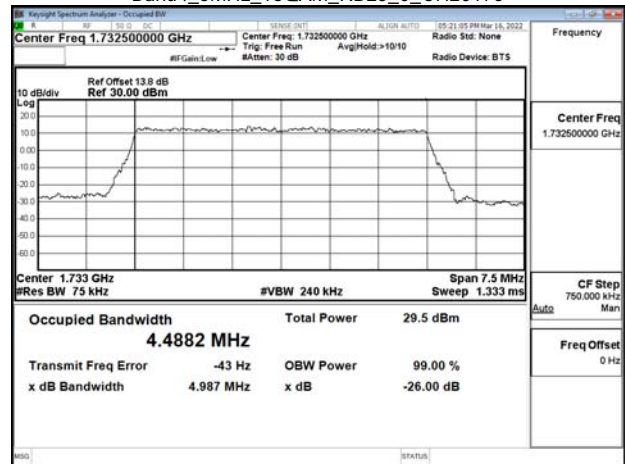
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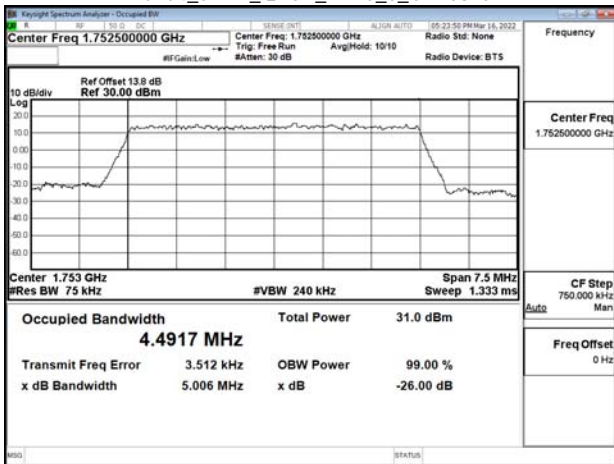
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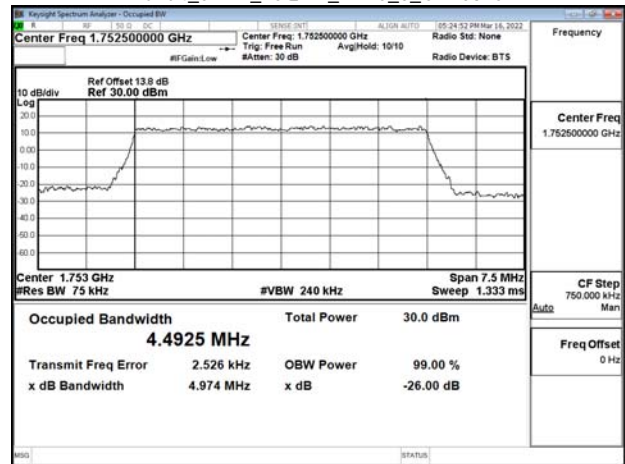
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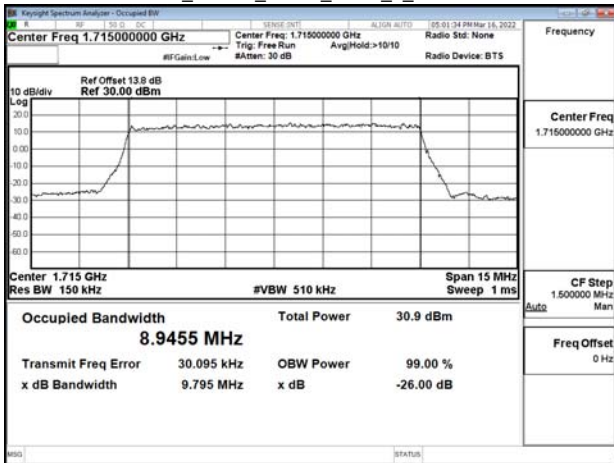


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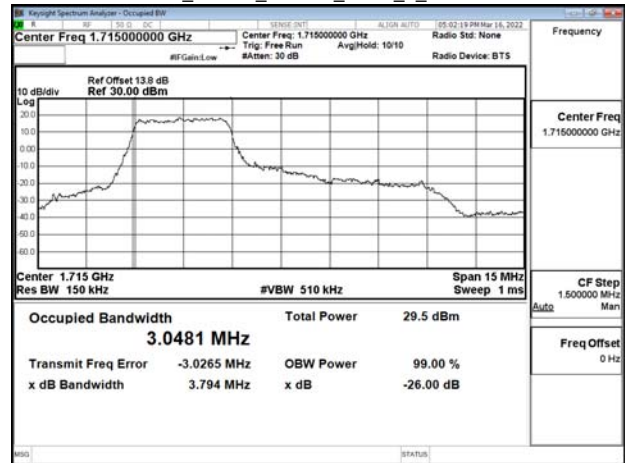
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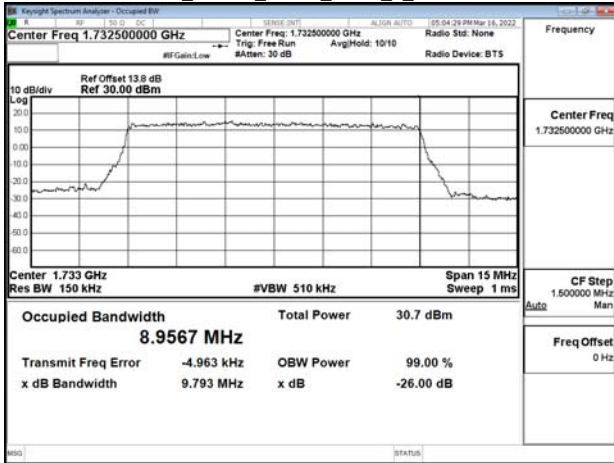
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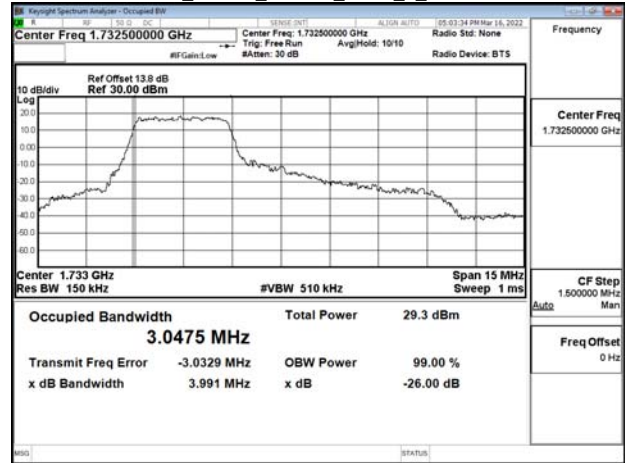
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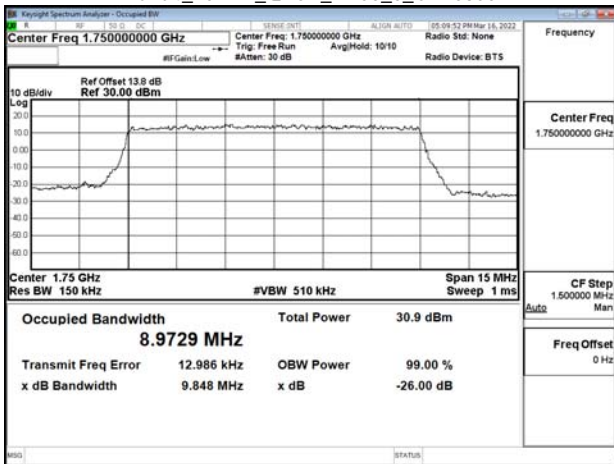
Band4\_10MHz\_QPSK\_RB50\_0\_CH20175



Band4\_10MHz\_16QAM\_RB16\_0\_CH20175



Band4\_10MHz\_QPSK\_RB50\_0\_CH20350



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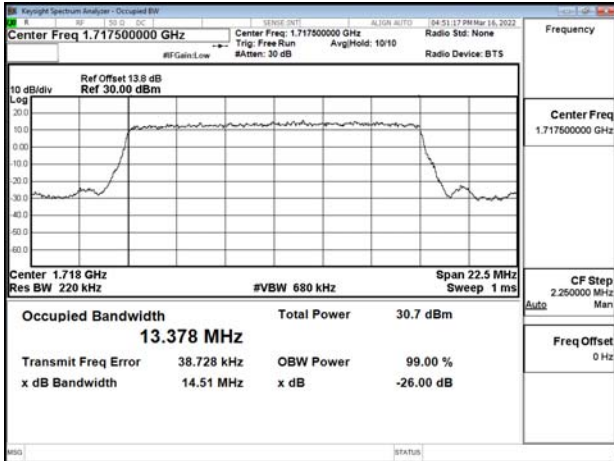


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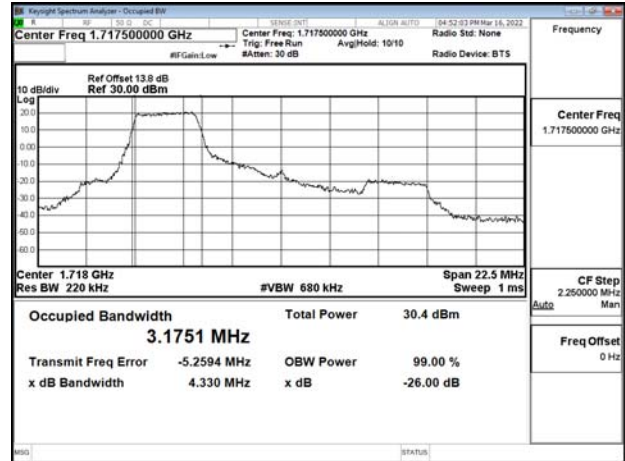
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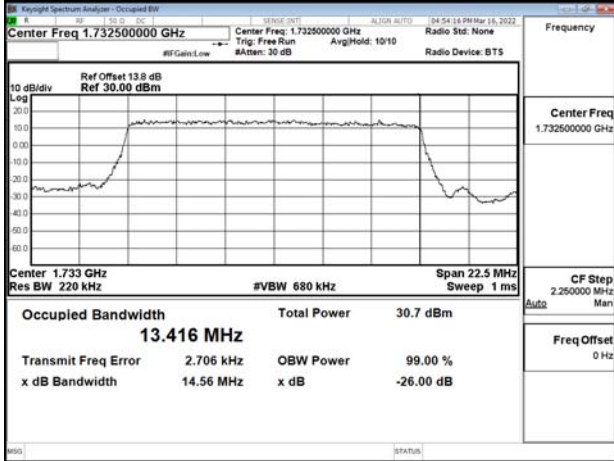
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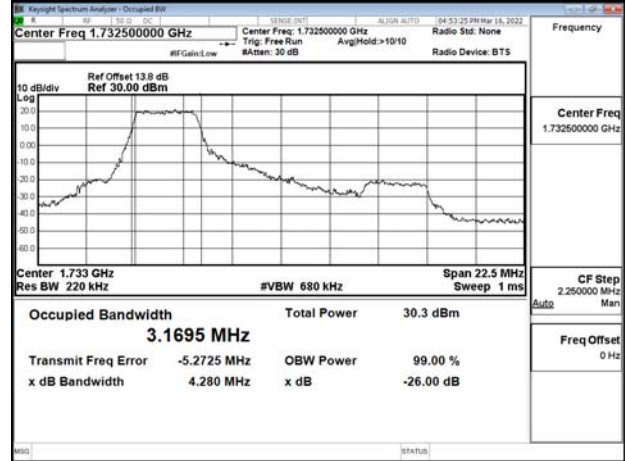
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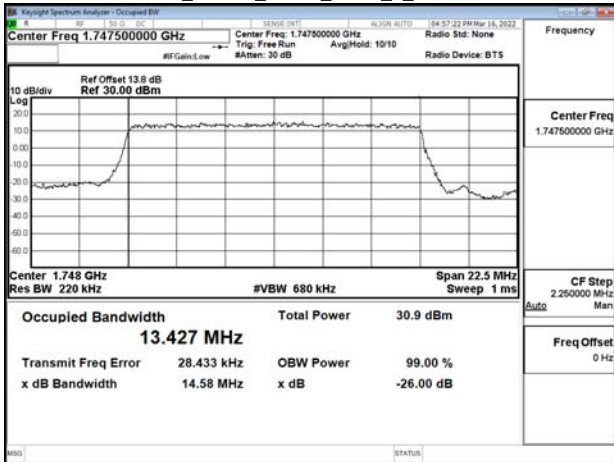
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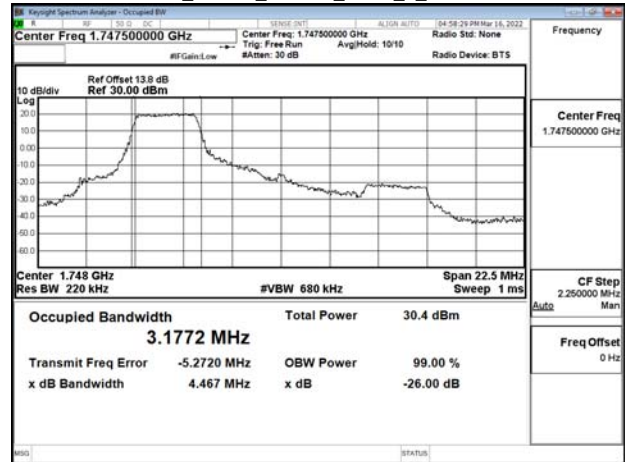
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Band4\_15MHz\_16QAM\_RB16\_0\_CH20325

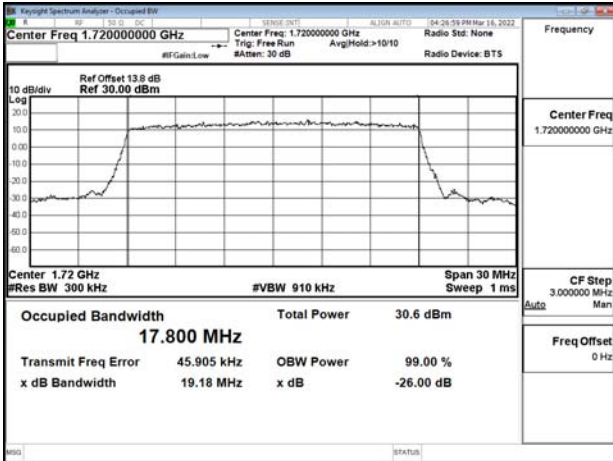


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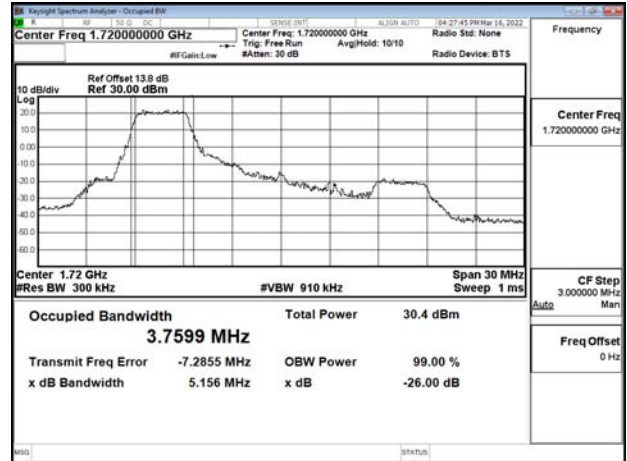
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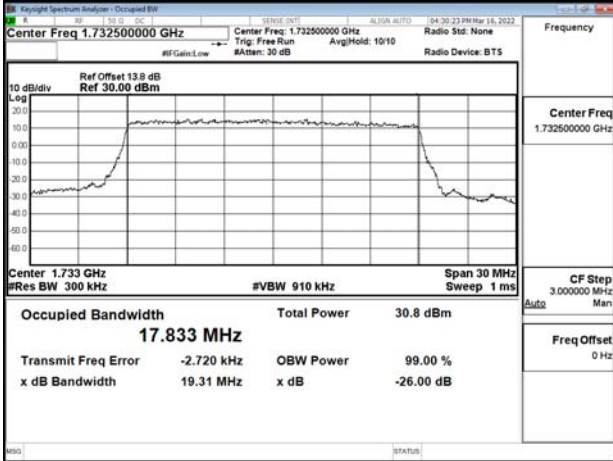
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Band4\_20MHz\_16QAM\_RB18\_0\_CH20050



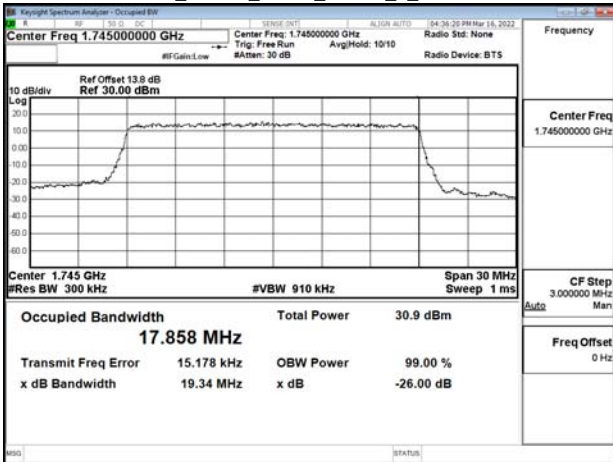
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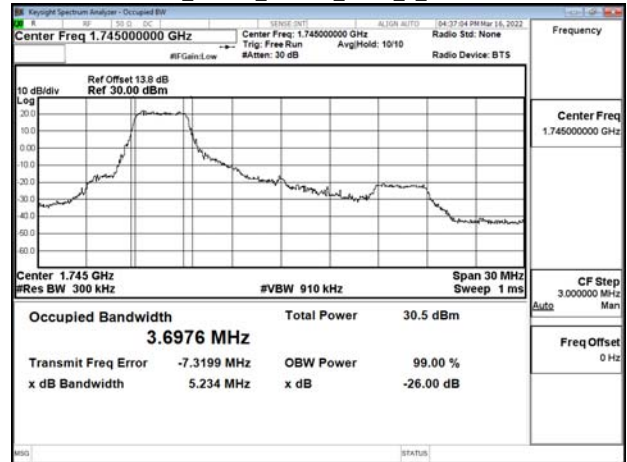
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Band4\_20MHz\_16QAM\_RB18\_0\_CH20300



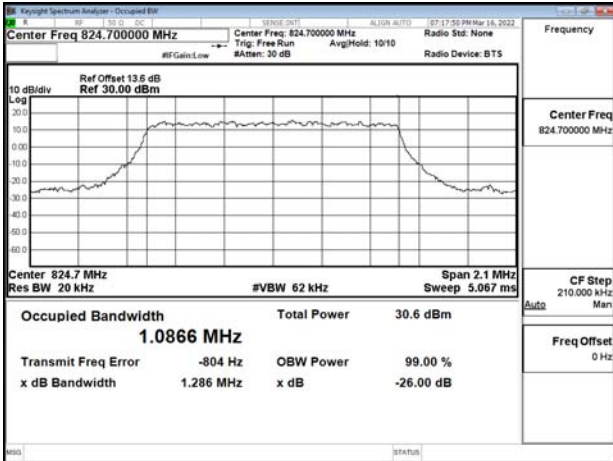
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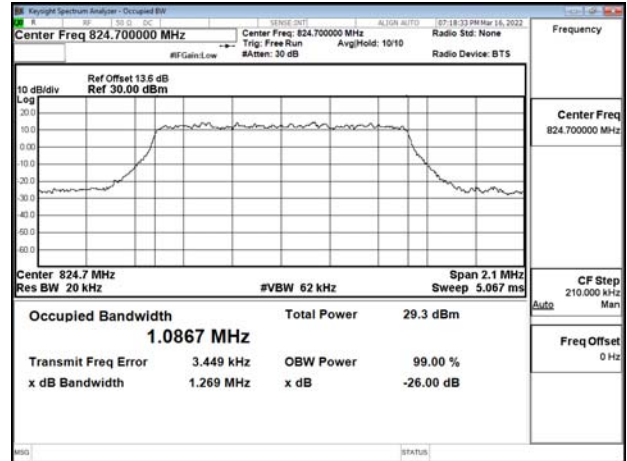
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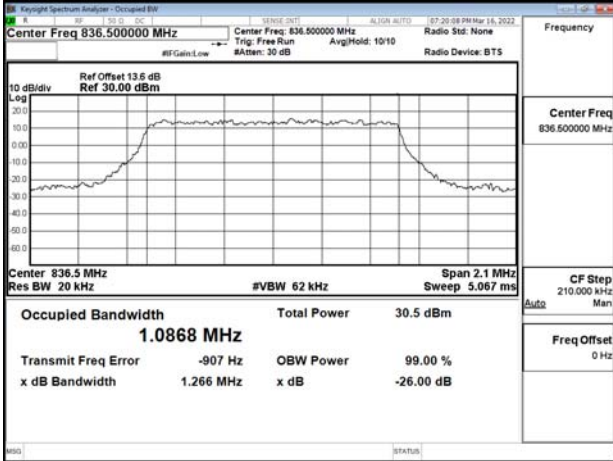
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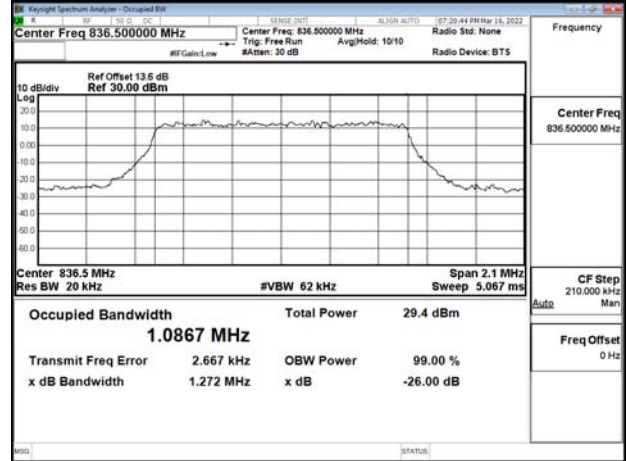
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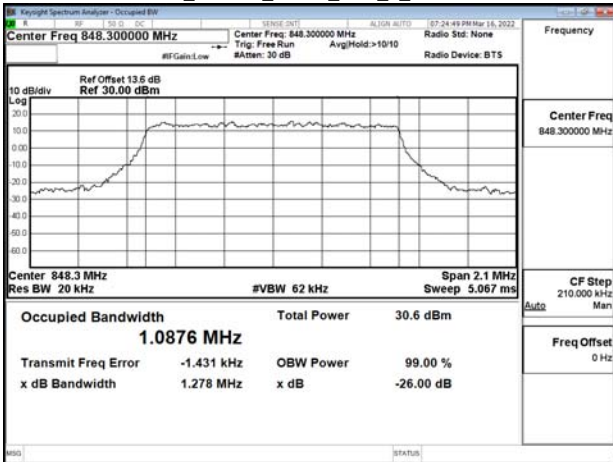
Band5\_1.4MHz\_QPSK\_RB6\_0\_CH20525



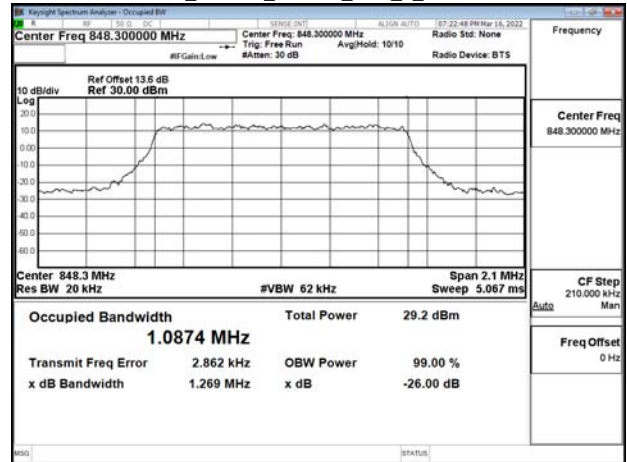
Band5\_1.4MHz\_16QAM\_RB6\_0\_CH20525



Band5\_1.4MHz\_QPSK\_RB6\_0\_CH20643



Band5\_1.4MHz\_16QAM\_RB6\_0\_CH20643

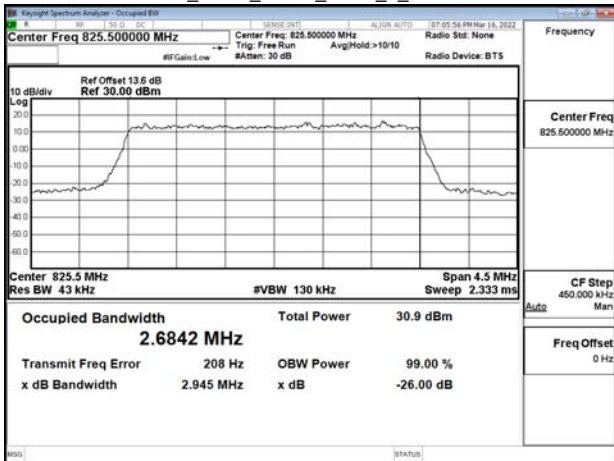


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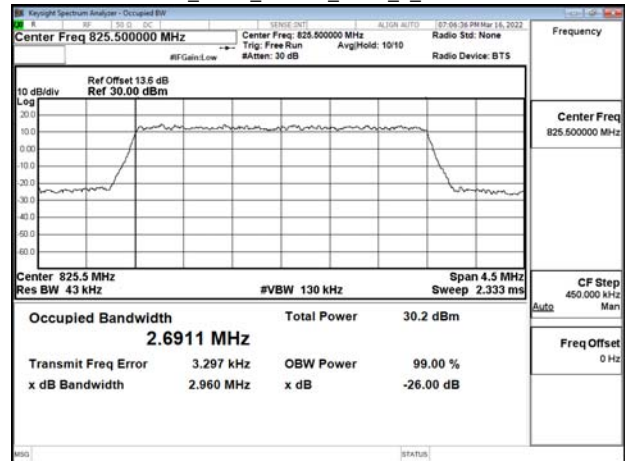
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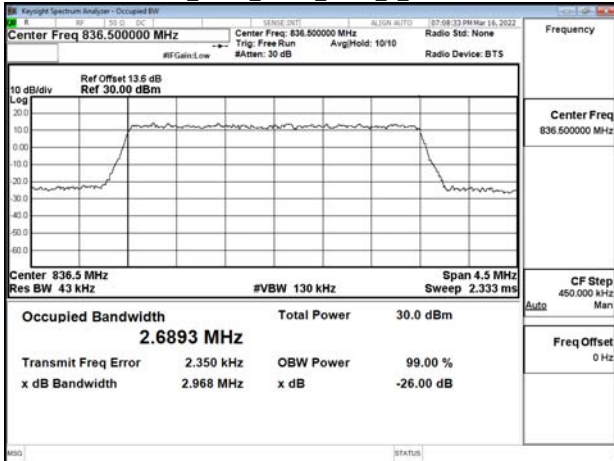
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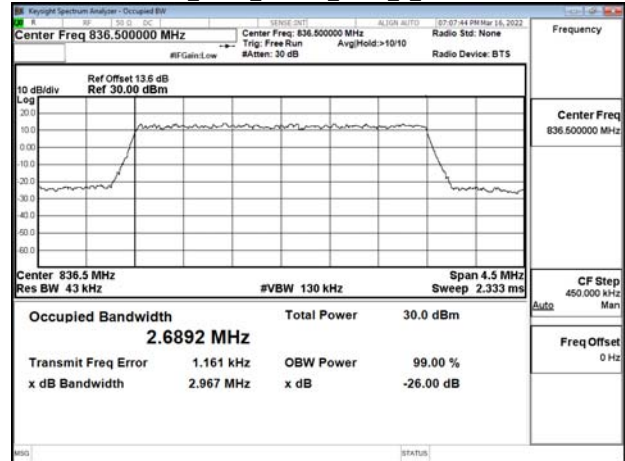
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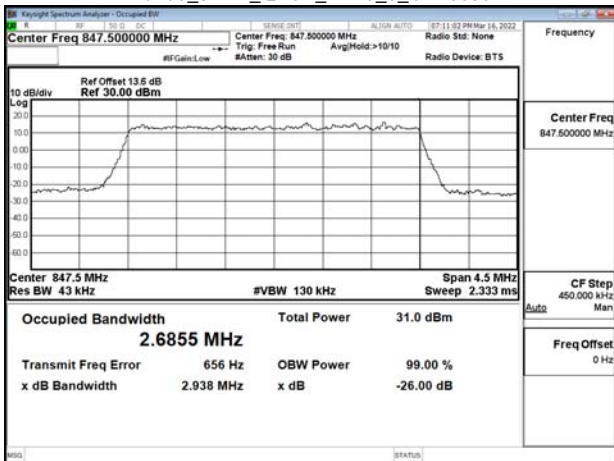
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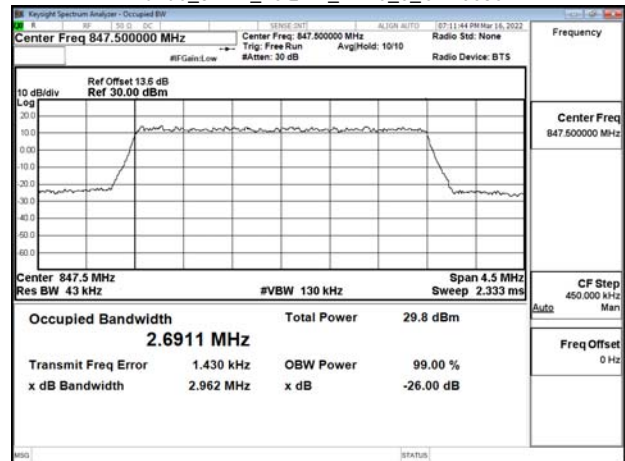
Band5\_3MHz\_16QAM\_RB15\_0\_CH20525



Band5\_3MHz\_QPSK\_RB15\_0\_CH20635



Band5\_3MHz\_16QAM\_RB15\_0\_CH20635

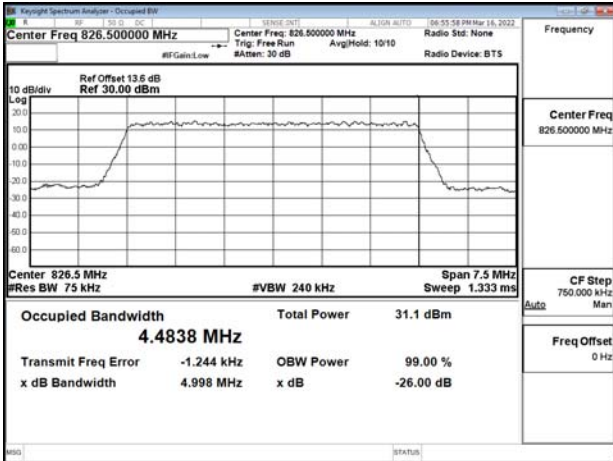


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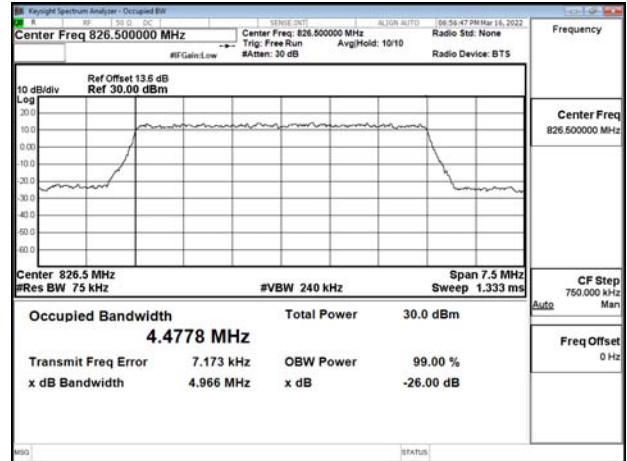
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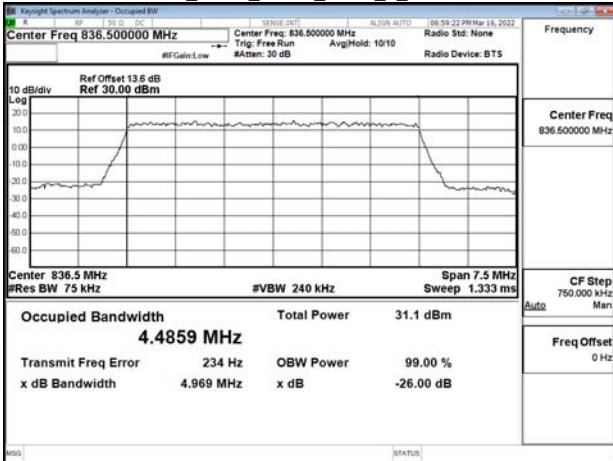
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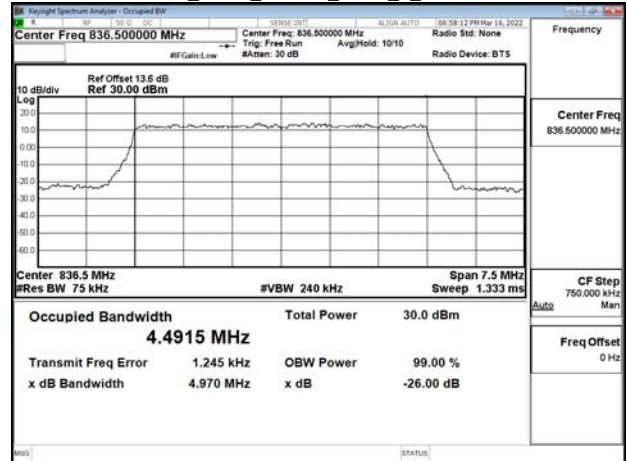
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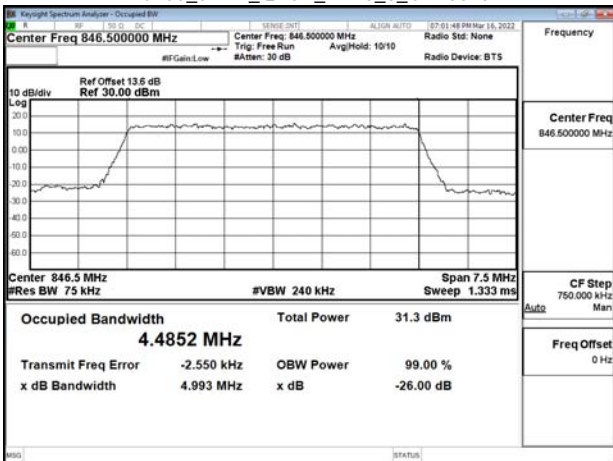
Band5\_5MHz\_QPSK\_RB25\_0\_CH20525



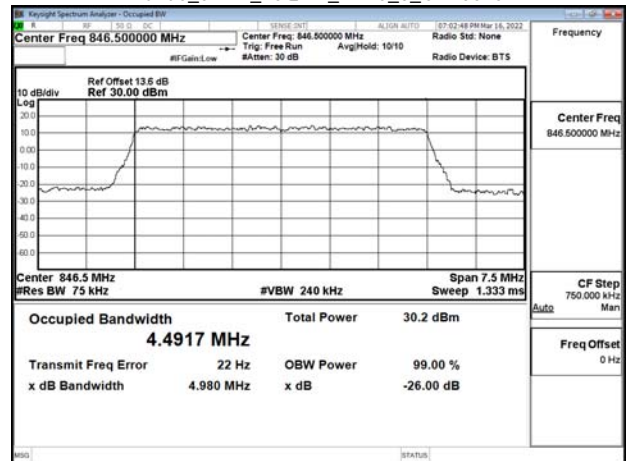
Band5\_5MHz\_16QAM\_RB25\_0\_CH20525



Band5\_5MHz\_QPSK\_RB25\_0\_CH20625



Band5\_5MHz\_16QAM\_RB25\_0\_CH20625

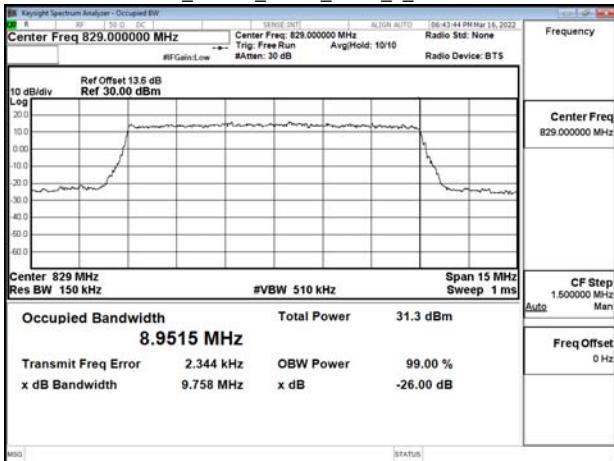


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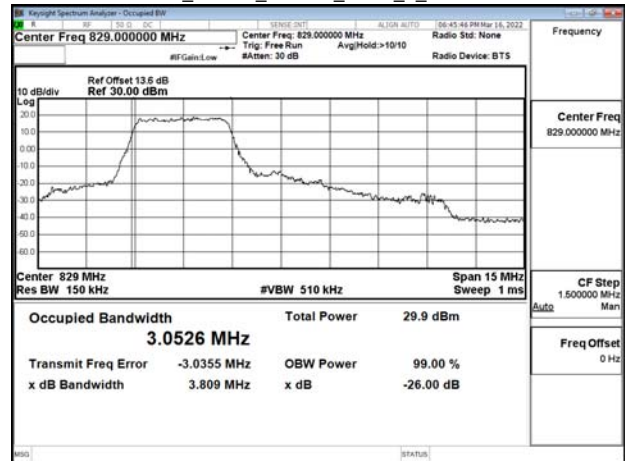
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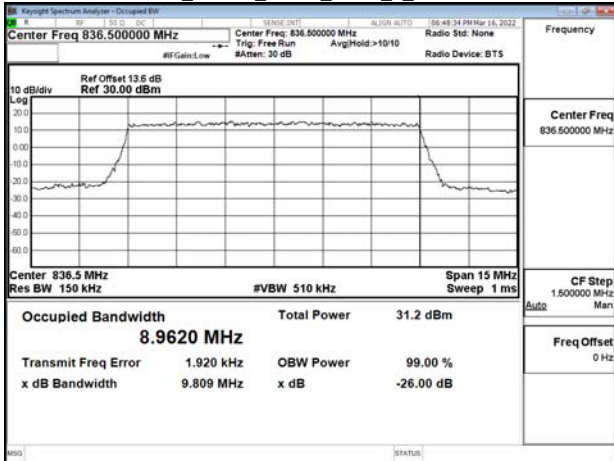
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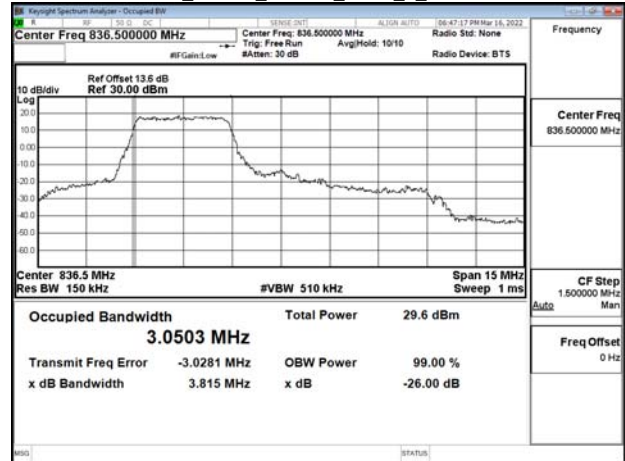
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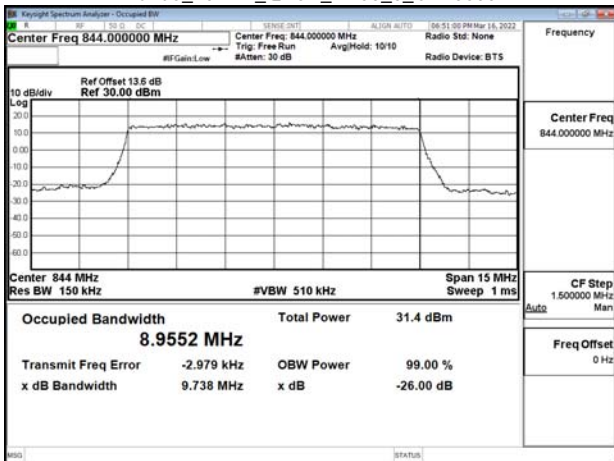
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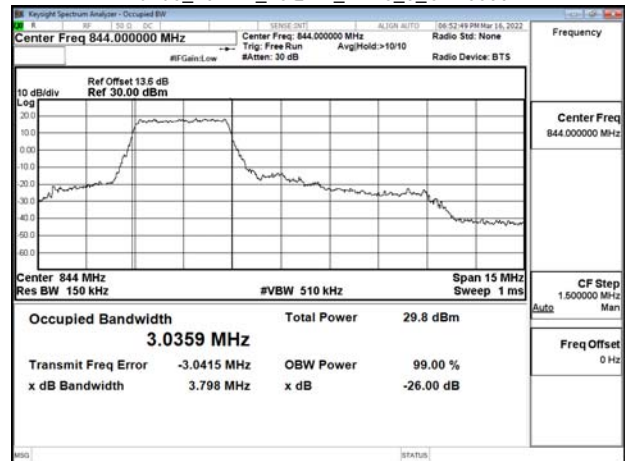
Band5\_10MHz\_16QAM\_RB16\_0\_CH20525



Band5\_10MHz\_QPSK\_RB50\_0\_CH20600



Band5\_10MHz\_16QAM\_RB16\_0\_CH20600



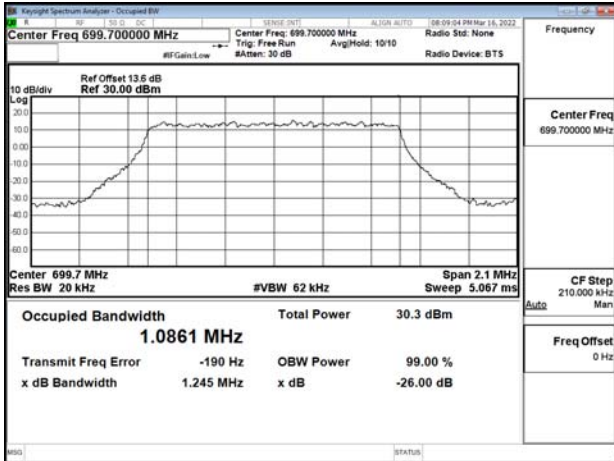
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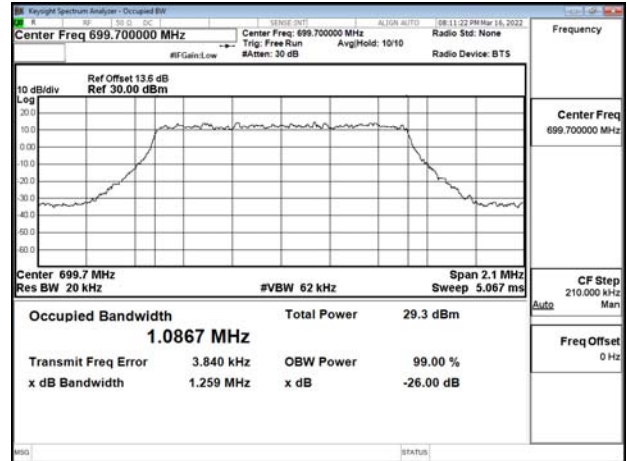
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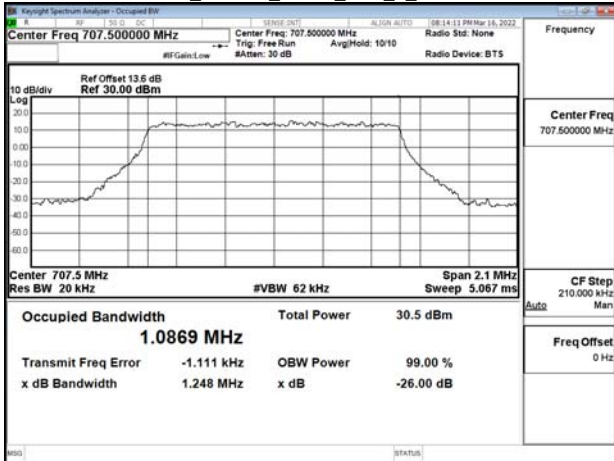
Band12\_1.4MHz\_QPSK\_RB6\_0\_CH23017



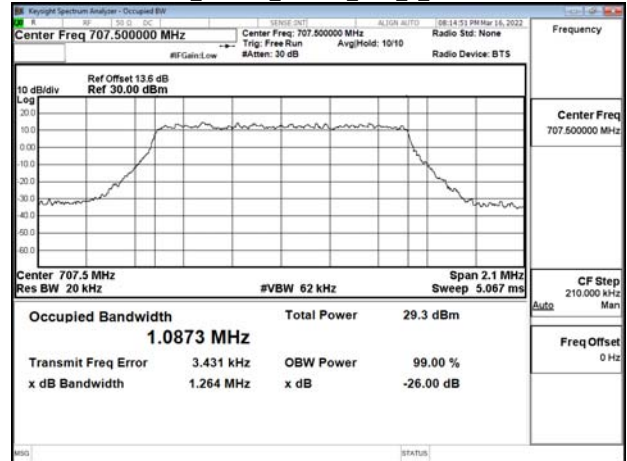
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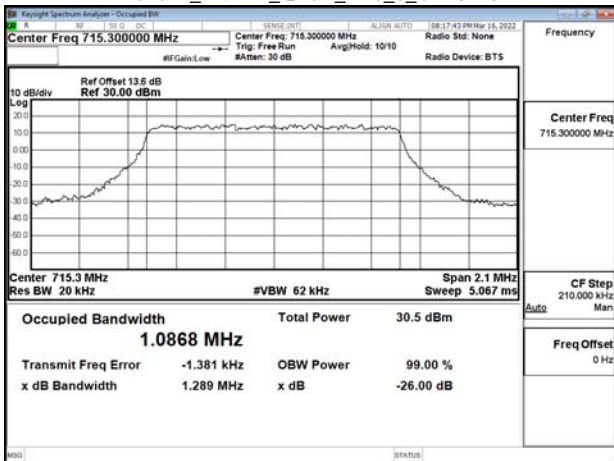
Band12\_1.4MHz\_QPSK\_RB6\_0\_CH23095



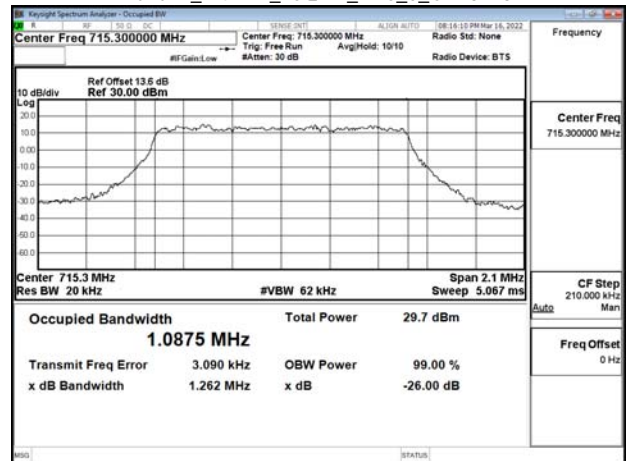
Band12\_1.4MHz\_16QAM\_RB6\_0\_CH23095



Band12\_1.4MHz\_QPSK\_RB6\_0\_CH23173



Band12\_1.4MHz\_16QAM\_RB6\_0\_CH23173

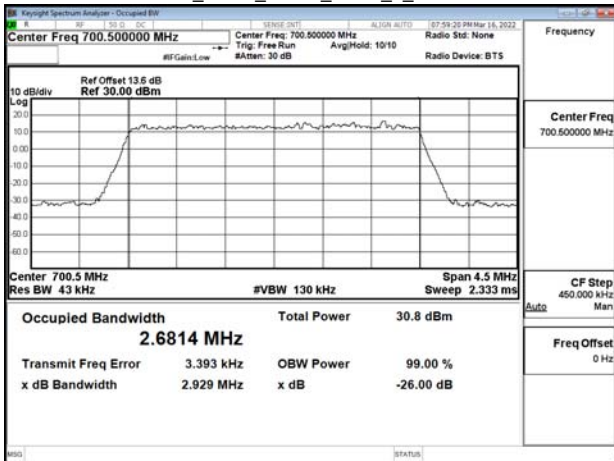


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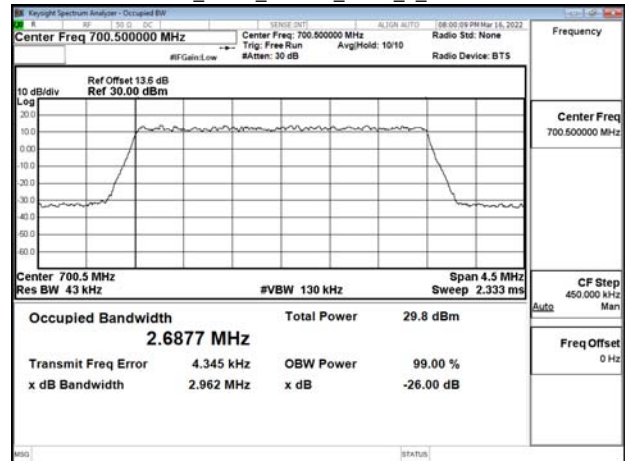
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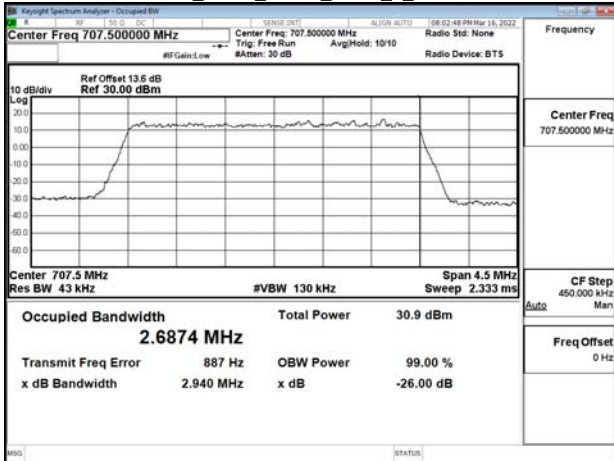
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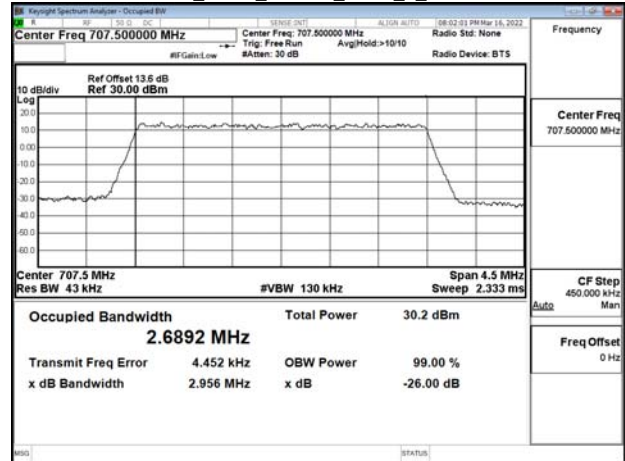
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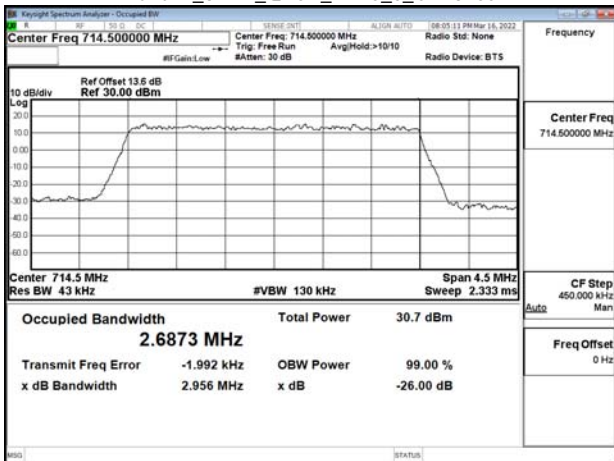
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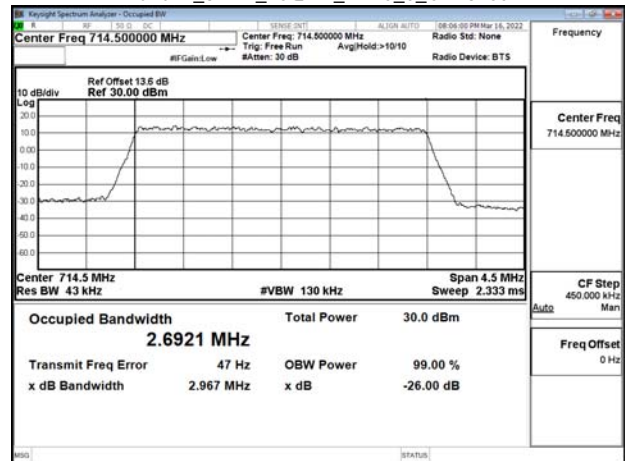
Band12\_3MHz\_16QAM\_RB15\_0\_CH23095



Band12\_3MHz\_QPSK\_RB15\_0\_CH23165



Band12\_3MHz\_16QAM\_RB15\_0\_CH23165

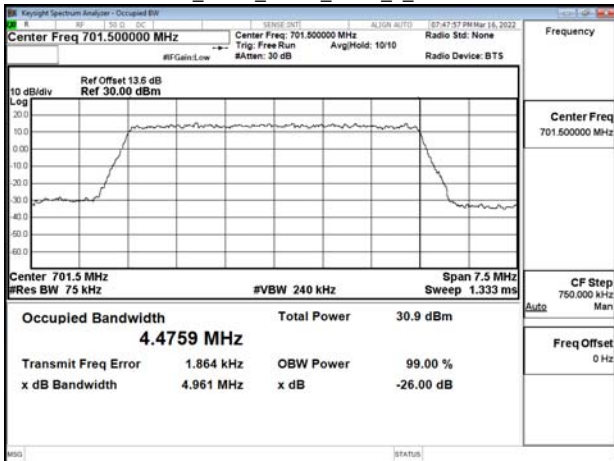


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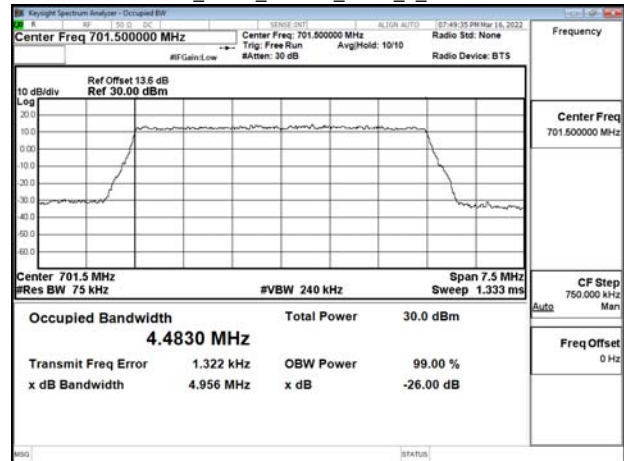
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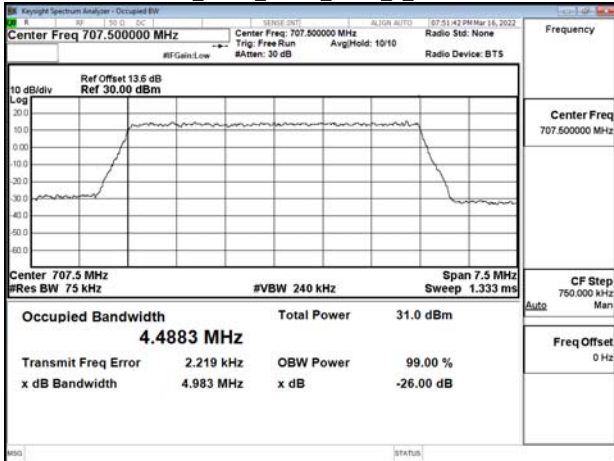
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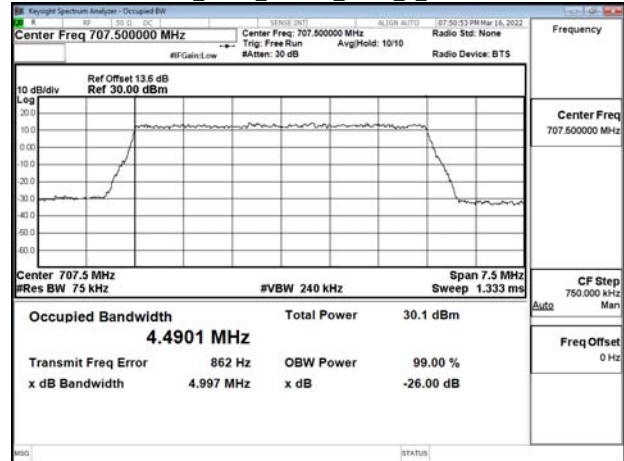
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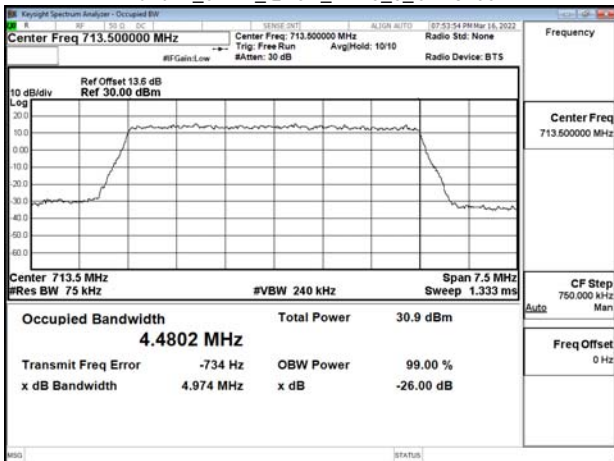
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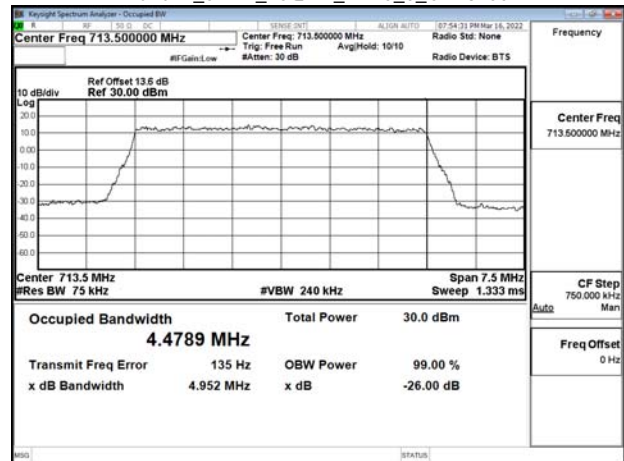
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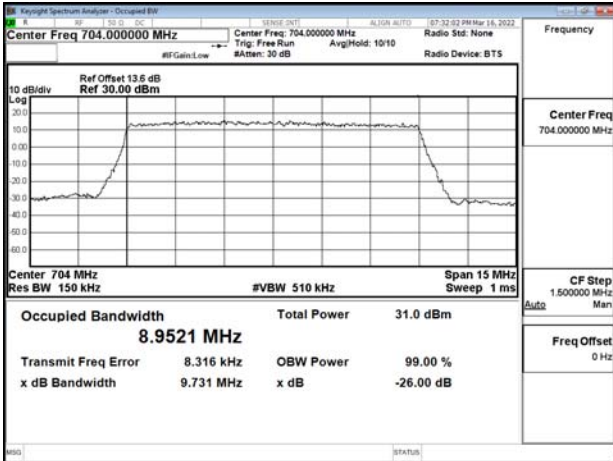


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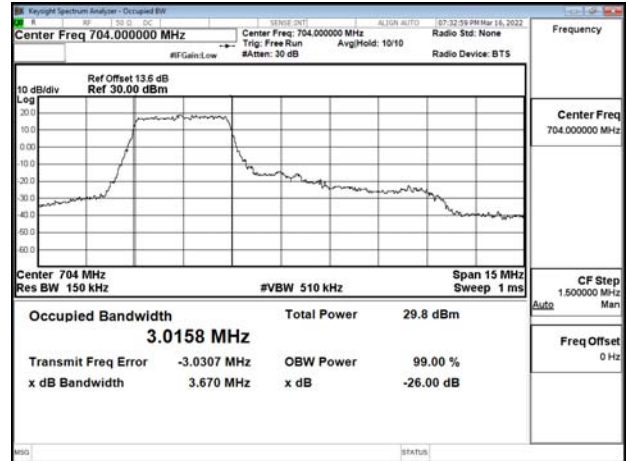
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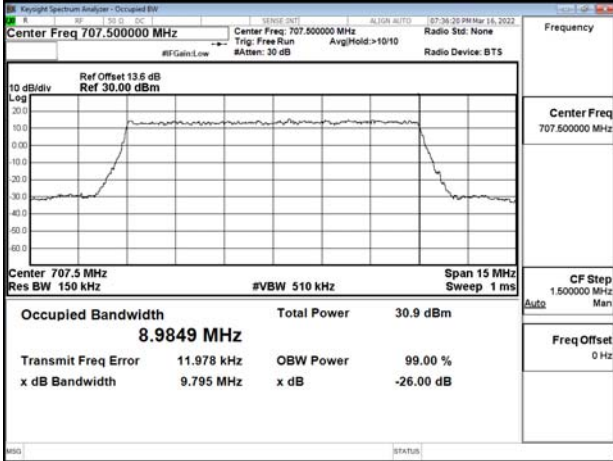
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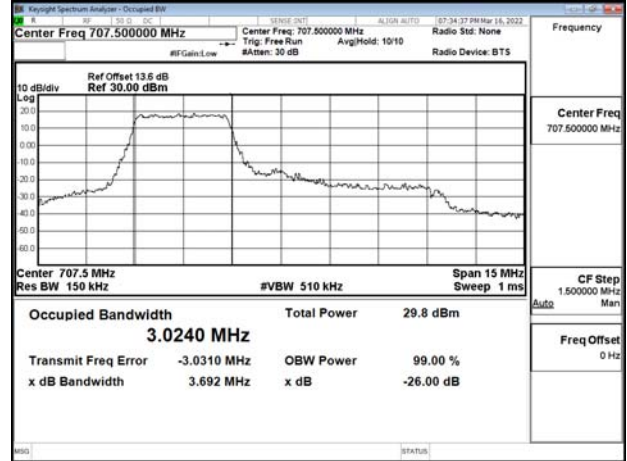
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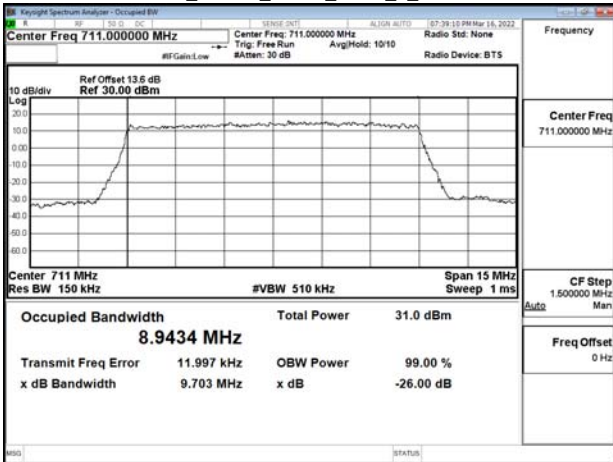
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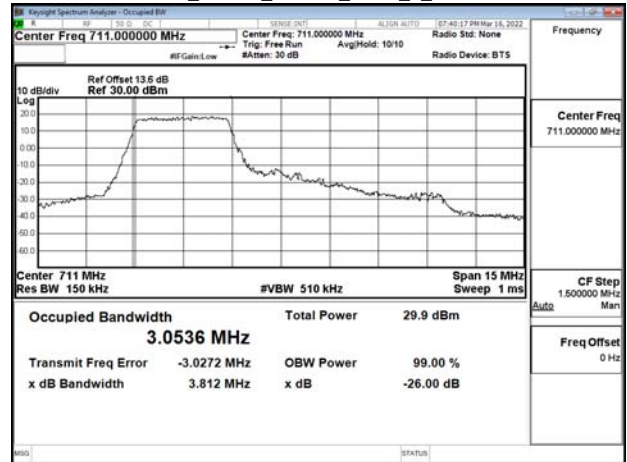
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Band12\_10MHz\_QPSK\_RB50\_0\_CH23130



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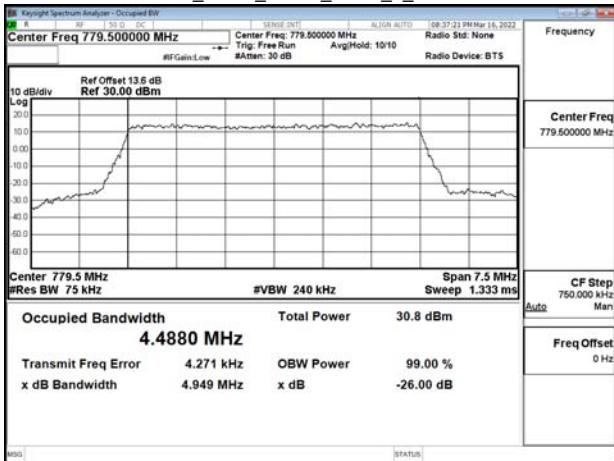
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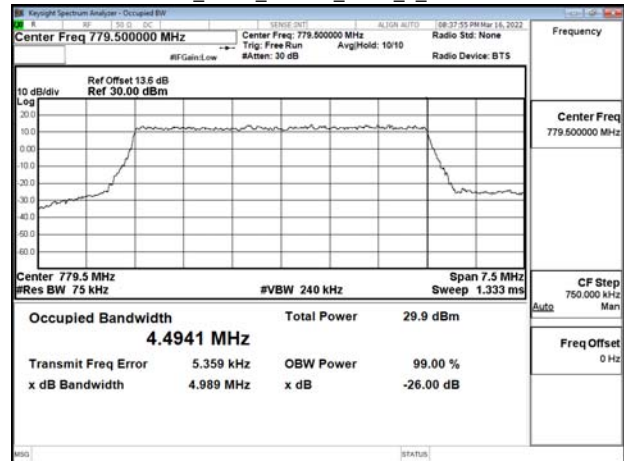
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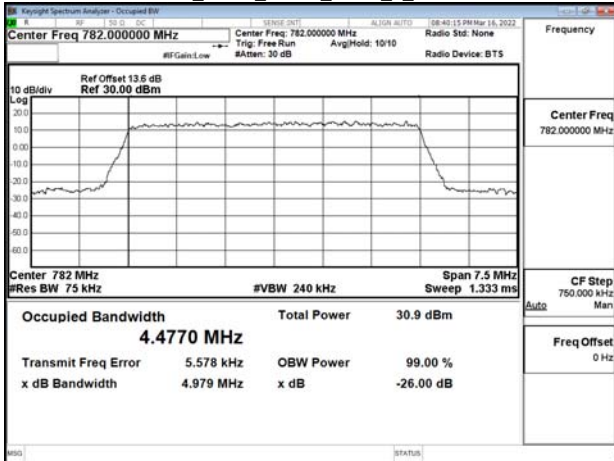
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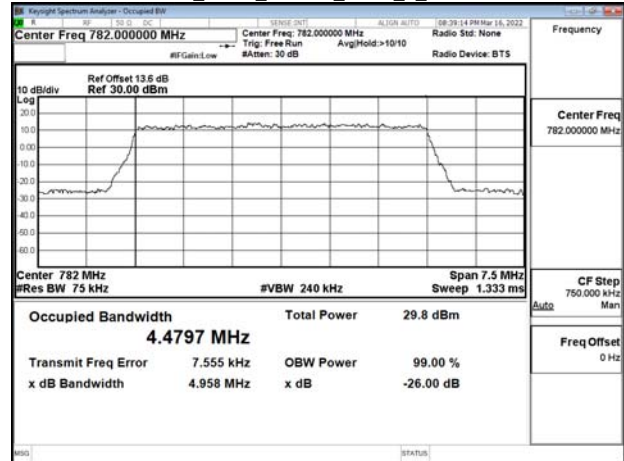
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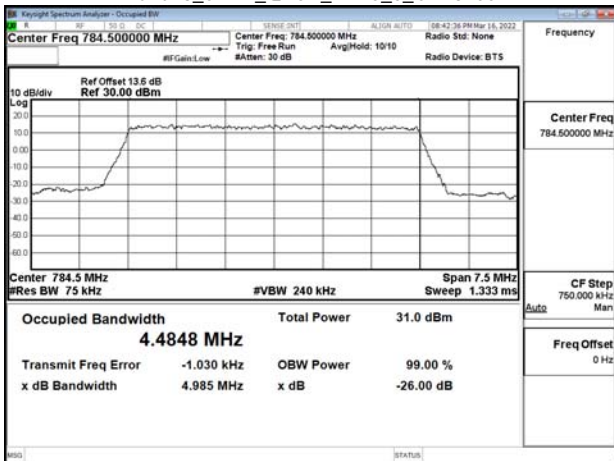
Band13\_5MHz\_QPSK\_RB25\_0\_CH23230



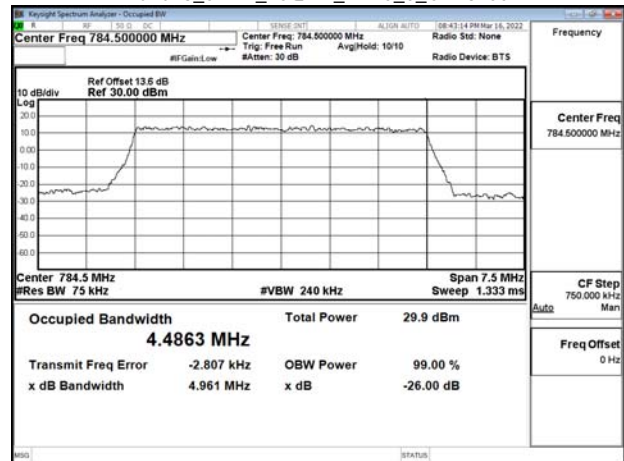
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Band13\_5MHz\_QPSK\_RB25\_0\_CH23255



Band13\_5MHz\_16QAM\_RB25\_0\_CH23255

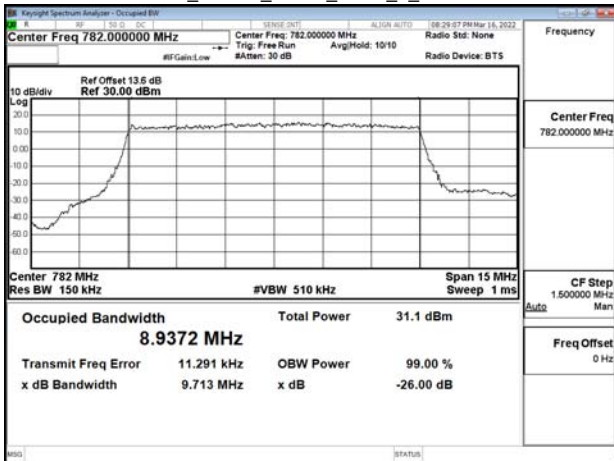


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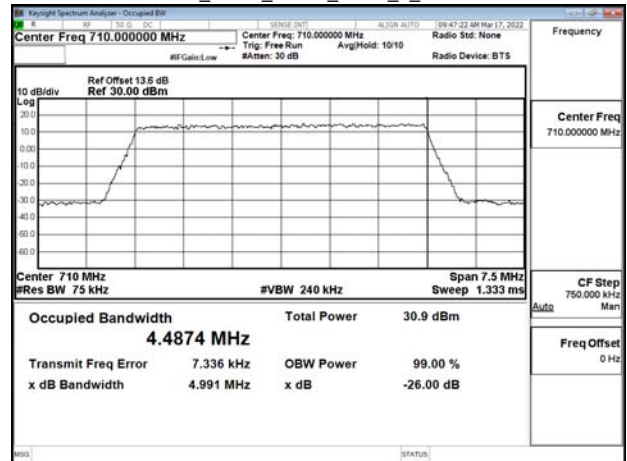
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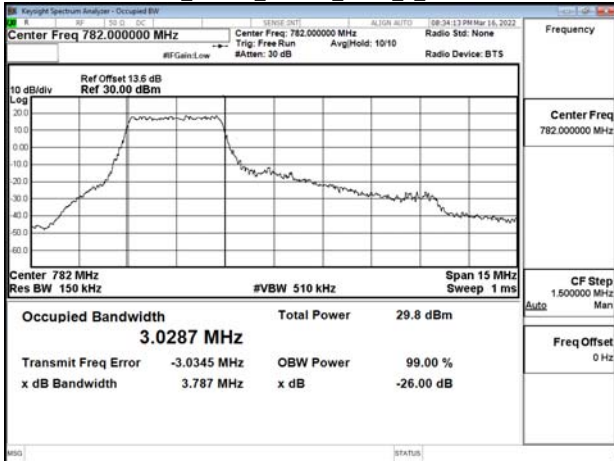
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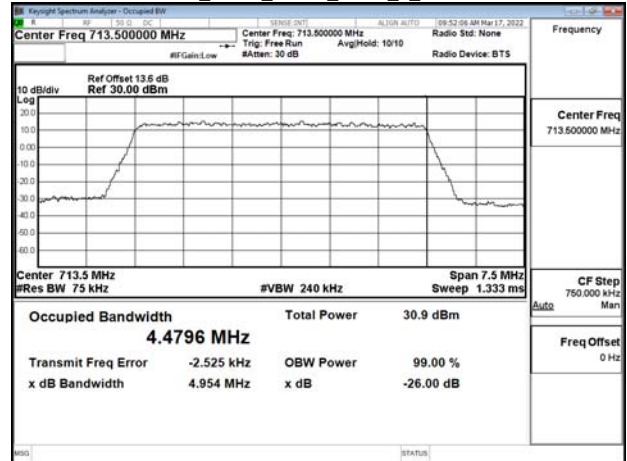
Band17\_5MHz\_QPSK\_RB25\_0\_CH23790



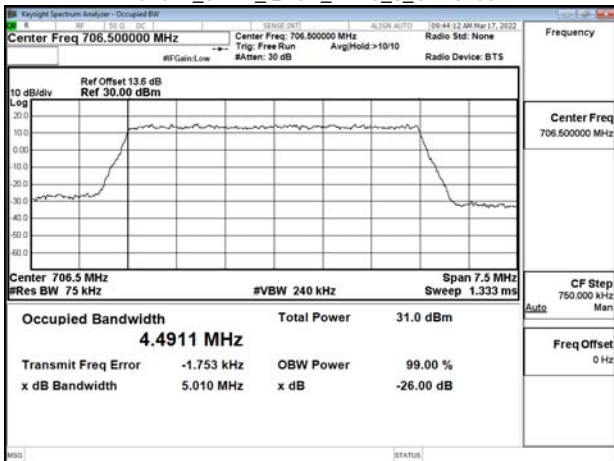
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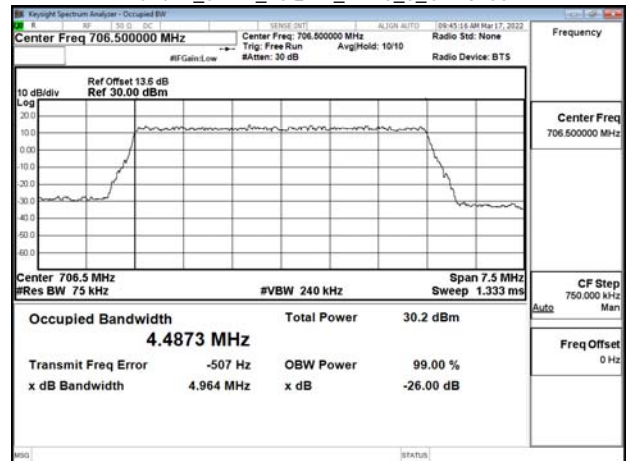
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Band17\_5MHz\_QPSK\_RB25\_0\_CH23755



Band17\_5MHz\_16QAM\_RB25\_0\_CH23755

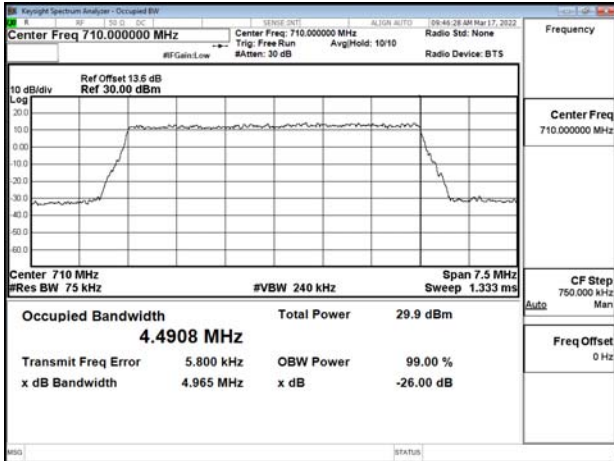


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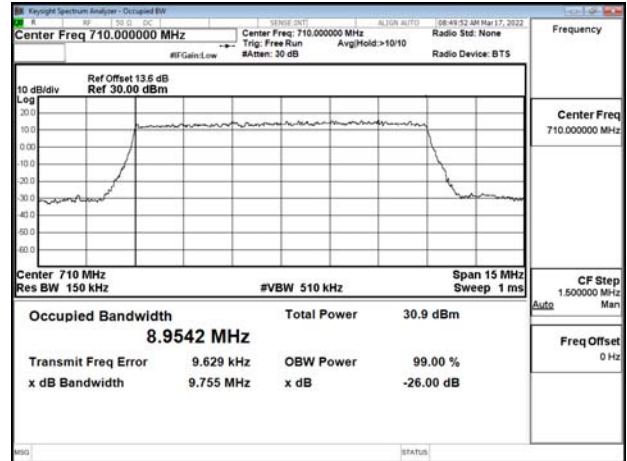
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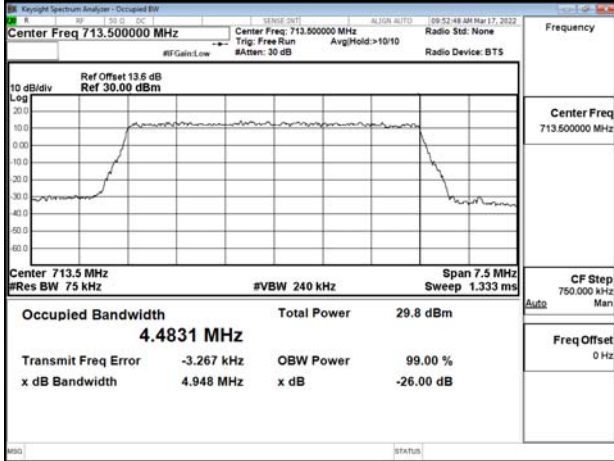
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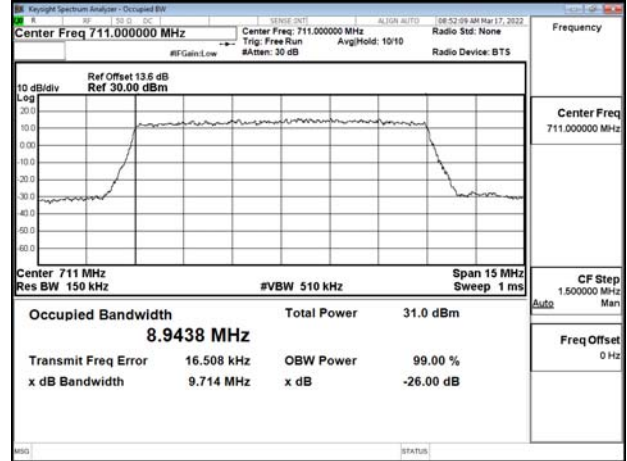
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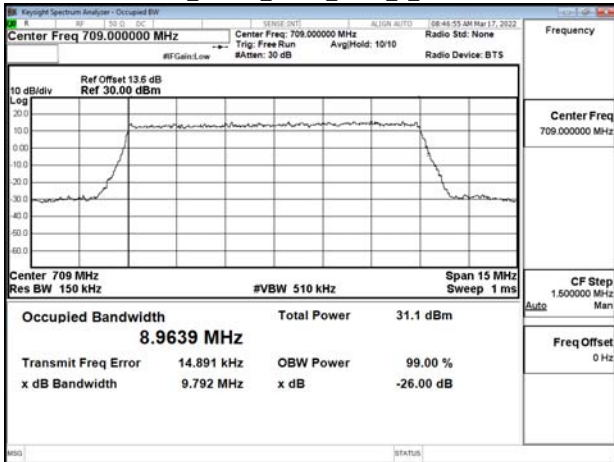
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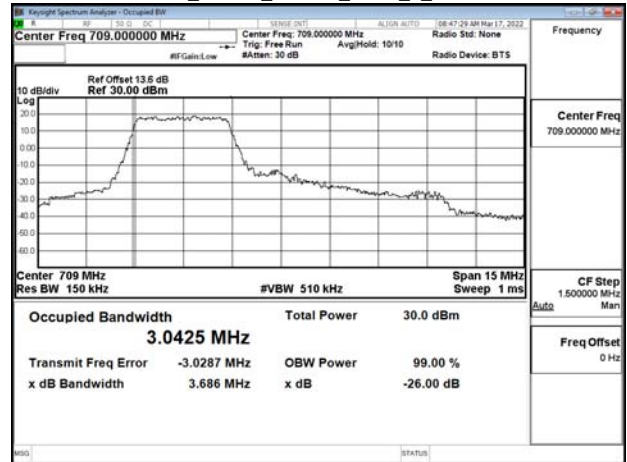
Band17\_10MHz\_QPSK\_RB50\_0\_CH23800



Band17\_10MHz\_QPSK\_RB50\_0\_CH23780



Band17\_10MHz\_16QAM\_RB16\_0\_CH23780



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