

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 Flex

Brand Name: Clover

Model No.: C405

Model Difference: N/A

Report Number: TERF2206000775E2

FCC ID HFS-C405

IC: 1787B-C405

Date of EUT Received: June 02, 2022

Date of Test: June 16, 2022 ~ July 26, 2022

Issue Date: July 28, 2022

Approved By

Arno Hsieh

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 & 27C and ISSED RSS-Gen 130, 132, 133, 139.

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

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Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
TERF2206000775E2	00	Original	July 18, 2022	Violetta Tang	*
TERF2206000775E2	01	Add test plots of 16QAM modulation	July 28, 2022	Violetta Tang	

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 Flex
Brand Name:	Clover
Model No.:	C405
Model Difference:	N/A
Hardware Version:	N/A
Firmware Version:	N/A
EUT Series No.:	C045UT20760001
Power Supply:	7.6Vdc from Rechargeable Li-ion Polymer Battery
Test Software (Name/Version)	default(link 8820C)

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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

Antenna Type	Antenna Model No.
COUPLING	Ant0
Note: Transmission frequencies in this test report are only available by the above antenna(s).	

Antenna Type	Modulation	Frequency (MHz)	Peak Antenna Gain (dBi)
			Ant0
COUPLING	LTE-Band 2	1850 ~ 1910	1.88
	LTE-Band 4	1710 ~ 1755	1.06
	LTE-Band 5	824 ~ 849	-1.26
	LTE-Band 12	699 ~ 716	-1.58
	LTE-Band 13	777 ~ 787	-1.45
	LTE-Band 17	704 ~ 716	-1.58
	LTE-Band 66	1710 ~ 1780	1.06

Note: Antenna information is provided by the applicant.

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1.4 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

1.5 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.

1.6 Special Accessories

No special accessories were used during testing.

1.7 Equipment Modifications

There was no modifications incorporated into the EUT.

1.8 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.

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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	7.6	490

LTE Band 4

Test mode	DC voltage (V)	DC current (mA)
LTE Band 4_20M QPSK	7.6	440

LTE Band 5

Test mode	DC voltage (V)	DC current (mA)
LTE Band 5_10M QPSK	7.6	470

LTE Band 12

Test mode	DC voltage (V)	DC current (mA)
LTE Band 5_10M QPSK	7.6	450

LTE Band 13

Test mode	DC voltage (V)	DC current (mA)
LTE Band 13_10M QPSK	7.6	470

LTE Band 17

Test mode	DC voltage (V)	DC current (mA)
LTE Band 17_10M QPSK	7.6	480

LTE Band 66

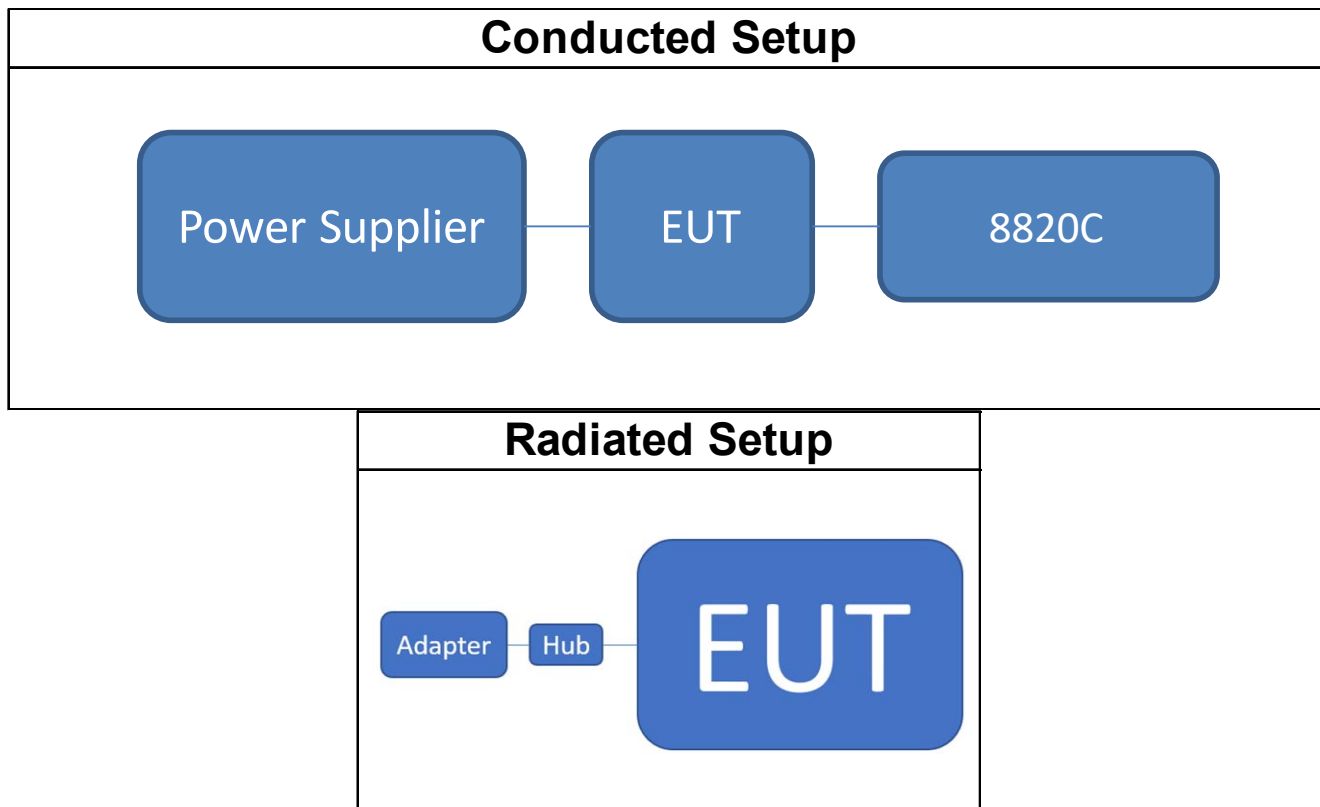
Test mode	DC voltage (V)	DC current (mA)
LTE Band 66_20M QPSK	7.6	450

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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)

Radiated Emission Test Site: SAC G					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Adaptor	Clover	FSP040-RHBN3	N/A	N/A	N/A
Hub	Clover	H305	H035WT20440103	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(b)(10) §27.50(c)(10) §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) §24.238(a) §27.50(c)(5) §27.53(c)(2),(4) §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)(2),(4) §27.50(c)(5) §27.53(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											
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											
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				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.
Radio Communication Analyzer	Anritsu	MT8820C	6201107337	07/28/2021	07/27/2022
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/13/2021	07/12/2022
Spectrum Analyzer	KEYSIGHT	N9010A	MY54510568	07/07/2022	07/06/2023
Test Software	SGS Taiwan	EMI Tool Function Alpha	Ver.1.0	N.C.R	N.C.R
Temperature Chamber	TERCHY	MHK-120LK	1020582	07/01/2021	06/30/2022
Temperature Chamber	TERCHY	MHK-120LK	1020582	06/21/2022	06/20/2023
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

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6.2 Radiated Measurement

Radiated Emission Test Site: SAC G					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Broadband Antenna	SCHWARZBECK	VULB 9168	1206	02/15/2022	02/14/2023
Horn Antenna	Schwarzbeck	BBHA9170	184	12/16/2021	12/15/2022
Horn Antenna	RF SPIN	DRH18-E	210105A18E	04/08/2022	04/07/2023
Loop Antenna	ETS.LINDGREN	6502	143303	05/06/2022	05/07/2023
3m Site NSA	SGS	966 chamber G	N/A	03/30/2022	03/29/2023
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/13/2021	07/12/2022
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/13/2022	07/12/2023
Test Software	audix	e3	E3 20923 SGS Ver.9 (C)	N.C.R	N.C.R
Pre-Amplifier	EMC Instruments	EMC184045B	980135	10/27/2021	10/26/2022
Pre-Amplifier	EMC Instruments	EMC330N	980781	03/15/2022	03/14/2023
Pre-Amplifier	EMC Instruments	EMC118A45SE	980815	03/15/2022	03/14/2023
Coaxial Cable	EMC Instruments	EMCCFD400-NM-NM-8000-5000-2000	210216 、 210217 、 210218	03/15/2022	03/14/2023
Coaxial Cable	EMC Instruments	EMC104-SM-SM-8000-5000-5000	210219 、 210220 、 210221	03/15/2022	03/14/2023
Coaxial Cable	EMC Instruments	EMC105-NM-NM-5000-15000	210224 、 210306	03/15/2022	03/14/2023

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7 MAXIMUM 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)

(10) Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

FCC 27.50(c)

(10) Portable stations (hand-held devices) are limited to 3 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

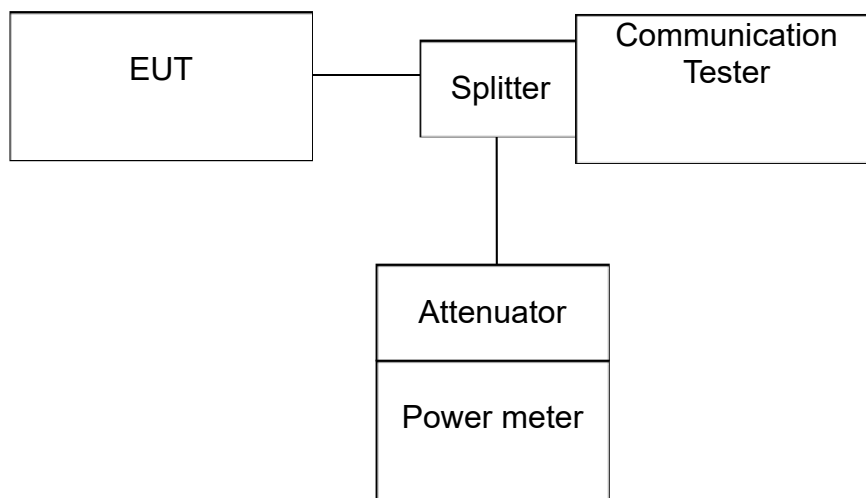
The equivalent isotropically radiated power (e.i.r.p.) for mobile and portable transmitters in the Bands 1710-1780MHz shall not exceed one watt.

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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.

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)²), 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)		1.88							
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	21.70	23.58	33	-9.42
				1	5	21.66	23.54	33	-9.46
				3	2	21.71	23.59	33	-9.41
				6	0	20.72	22.60	33	-10.4
	18900	1880	QPSK	1	0	21.58	23.46	33	-9.54
				1	5	21.57	23.45	33	-9.55
				3	2	21.51	23.39	33	-9.61
				6	0	20.55	22.43	33	-10.57
	19193	1909.3	QPSK	1	0	21.48	23.36	33	-9.64
				1	5	21.49	23.37	33	-9.63
				3	2	21.52	23.40	33	-9.6
				6	0	20.46	22.34	33	-10.66
1.4	18607	1850.7	16QAM	1	0	20.66	22.54	33	-10.46
				1	5	20.63	22.51	33	-10.49
				3	2	20.73	22.61	33	-10.39
				6	0	19.72	21.60	33	-11.4
	18900	1880	16QAM	1	0	20.51	22.39	33	-10.61
				1	5	20.55	22.43	33	-10.57
				3	2	20.51	22.39	33	-10.61
				6	0	19.61	21.49	33	-11.51
	19193	1909.3	16QAM	1	0	20.44	22.32	33	-10.68
				1	5	20.52	22.40	33	-10.6
				3	2	20.53	22.41	33	-10.59
				6	0	19.48	21.36	33	-11.64

Antenna gain (dBi)		1.88							
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	21.71	23.59	33	-9.41
				1	14	21.64	23.52	33	-9.48
				8	4	20.72	22.60	33	-10.4
				15	0	20.65	22.53	33	-10.47
	18900	1880	QPSK	1	0	21.56	23.44	33	-9.56
				1	14	21.53	23.41	33	-9.59
				8	4	20.58	22.46	33	-10.54
				15	0	20.52	22.40	33	-10.6
	19185	1908.5	QPSK	1	0	21.50	23.38	33	-9.62
				1	14	21.53	23.41	33	-9.59
				8	4	20.54	22.42	33	-10.58
				15	0	20.48	22.36	33	-10.64
3	18615	1851.5	16QAM	1	0	20.67	22.55	33	-10.45
				1	14	20.67	22.55	33	-10.45
				8	4	19.63	21.51	33	-11.49
				15	0	19.66	21.54	33	-11.46
	18900	1880	16QAM	1	0	20.53	22.41	33	-10.59
				1	14	20.60	22.48	33	-10.52
				8	4	19.55	21.43	33	-11.57
				15	0	19.59	21.47	33	-11.53
	19185	1908.5	16QAM	1	0	20.52	22.40	33	-10.6
				1	14	20.51	22.39	33	-10.61
				8	4	19.49	21.37	33	-11.63
				15	0	19.52	21.40	33	-11.6

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Antenna gain (dBi)		1.88							
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	21.68	23.56	33	-9.44
				1	24	21.67	23.55	33	-9.45
				12	6	20.68	22.56	33	-10.44
				25	0	20.73	22.61	33	-10.39
	18900	1880	QPSK	1	0	21.55	23.43	33	-9.57
				1	24	21.61	23.49	33	-9.51
				12	6	20.61	22.49	33	-10.51
				25	0	20.52	22.40	33	-10.6
	19175	1907.5	QPSK	1	0	21.52	23.40	33	-9.6
				1	24	21.44	23.32	33	-9.68
				12	6	20.50	22.38	33	-10.62
				25	0	20.48	22.36	33	-10.64
5	18625	1852.5	16QAM	1	0	20.68	22.56	33	-10.44
				1	24	20.65	22.53	33	-10.47
				12	6	19.72	21.60	33	-11.4
				25	0	19.70	21.58	33	-11.42
	18900	1880	16QAM	1	0	20.61	22.49	33	-10.51
				1	24	20.51	22.39	33	-10.61
				12	6	19.60	21.48	33	-11.52
				25	0	19.61	21.49	33	-11.51
	19175	1907.5	16QAM	1	0	20.45	22.33	33	-10.67
				1	24	20.44	22.32	33	-10.68
				12	6	19.53	21.41	33	-11.59
				25	0	19.47	21.35	33	-11.65

Antenna gain (dBi)		1.88							
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	21.71	23.59	33	-9.41
				1	49	21.70	23.58	33	-9.42
				25	12	20.68	22.56	33	-10.44
				50	0	20.64	22.52	33	-10.48
	18900	1880	QPSK	1	0	21.60	23.48	33	-9.52
				1	49	21.56	23.44	33	-9.56
				25	12	20.58	22.46	33	-10.54
				50	0	20.56	22.44	33	-10.56
	19150	1905	QPSK	1	0	21.45	23.33	33	-9.67
				1	49	21.47	23.35	33	-9.65
				25	12	20.54	22.42	33	-10.58
				50	0	20.47	22.35	33	-10.65
10	18650	1855	16QAM	1	0	20.72	22.60	33	-10.4
				1	49	20.73	22.61	33	-10.39
				25	12	19.73	21.61	33	-11.39
				27	0	19.71	21.59	33	-11.41
	18900	1880	16QAM	1	0	20.56	22.44	33	-10.56
				1	49	20.52	22.40	33	-10.6
				25	12	19.60	21.48	33	-11.52
				27	0	19.56	21.44	33	-11.56
	19150	1905	16QAM	1	0	20.46	22.34	33	-10.66
				1	49	20.47	22.35	33	-10.65
				25	12	19.48	21.36	33	-11.64
				27	0	19.44	21.32	33	-11.68

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Antenna gain (dBi)		1.88							
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	21.66	23.54	33	-9.46
				1	74	21.65	23.53	33	-9.47
				36	18	20.68	22.56	33	-10.44
				75	0	20.72	22.60	33	-10.4
	18900	1880	QPSK	1	0	21.55	23.43	33	-9.57
				1	74	21.57	23.45	33	-9.55
				36	18	20.61	22.49	33	-10.51
				75	0	20.52	22.40	33	-10.6
	19125	1902.5	QPSK	1	0	21.51	23.39	33	-9.61
				1	74	21.53	23.41	33	-9.59
				36	18	20.46	22.34	33	-10.66
				75	0	20.49	22.37	33	-10.63
15	18675	1857.5	16QAM	1	0	20.71	22.59	33	-10.41
				1	74	20.70	22.58	33	-10.42
				36	18	19.65	21.53	33	-11.47
				75	0	19.63	21.51	33	-11.49
	18900	1880	16QAM	1	0	20.51	22.39	33	-10.61
				1	74	20.61	22.49	33	-10.51
				36	18	19.57	21.45	33	-11.55
				75	0	19.59	21.47	33	-11.53
	19125	1902.5	16QAM	1	0	20.52	22.40	33	-10.6
				1	74	20.46	22.34	33	-10.66
				36	18	19.48	21.36	33	-11.64
				75	0	19.50	21.38	33	-11.62

Antenna gain (dBi)		1.88							
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	21.73	23.61	33	-9.39
				1	99	21.49	23.37	33	-9.63
				50	25	20.64	22.52	33	-10.48
				100	0	20.48	22.36	33	-10.64
	18900	1880	QPSK	1	0	21.61	23.49	33	-9.51
				1	99	21.49	23.37	33	-9.63
				50	25	20.58	22.46	33	-10.54
				100	0	20.41	22.29	33	-10.71
	19100	1900	QPSK	1	0	21.54	23.42	33	-9.58
				1	99	21.45	23.33	33	-9.67
				50	25	20.54	22.42	33	-10.58
				100	0	20.35	22.23	33	-10.77
20	18700	1860	16QAM	1	0	20.63	22.51	33	-10.49
				1	99	20.67	22.55	33	-10.45
				50	25	19.72	21.60	33	-11.4
				100	0	19.72	21.60	33	-11.4
	18900	1880	16QAM	1	0	20.59	22.47	33	-10.53
				1	99	20.53	22.41	33	-10.59
				50	25	19.54	21.42	33	-11.58
				100	0	19.58	21.46	33	-11.54
	19100	1900	16QAM	1	0	20.51	22.39	33	-10.61
				1	99	20.53	22.41	33	-10.59
				50	25	19.50	21.38	33	-11.62
				100	0	19.53	21.41	33	-11.59

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Antenna gain (dBi)		1.06							
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	21.75	22.81	30	-7.19
				1	5	21.75	22.81	30	-7.19
				3	2	21.77	22.83	30	-7.17
				6	0	20.70	21.76	30	-8.24
	20175	1732.5	QPSK	1	0	21.78	22.84	30	-7.16
				1	5	21.77	22.83	30	-7.17
				3	2	21.85	22.91	30	-7.09
				6	0	20.79	21.85	30	-8.15
	20393	1754.3	QPSK	1	0	22.06	23.12	30	-6.88
				1	5	22.05	23.11	30	-6.89
				3	2	22.03	23.09	30	-6.91
				6	0	21.10	22.16	30	-7.84
1.4	19957	1710.7	16QAM	1	0	20.77	21.83	30	-8.17
				1	5	20.72	21.78	30	-8.22
				3	2	20.72	21.78	30	-8.22
				6	0	19.71	20.77	30	-9.23
	20175	1732.5	16QAM	1	0	20.79	21.85	30	-8.15
				1	5	20.76	21.82	30	-8.18
				3	2	20.84	21.90	30	-8.1
				6	0	19.76	20.82	30	-9.18
	20393	1754.3	16QAM	1	0	21.07	22.13	30	-7.87
				1	5	21.09	22.15	30	-7.85
				3	2	21.03	22.09	30	-7.91
				6	0	20.04	21.10	30	-8.9

Antenna gain (dBi)		1.06							
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	21.68	22.74	30	-7.26
				1	14	21.73	22.79	30	-7.21
				8	4	20.68	21.74	30	-8.26
				15	0	20.68	21.74	30	-8.26
	20175	1732.5	QPSK	1	0	21.82	22.88	30	-7.12
				1	14	21.81	22.87	30	-7.13
				8	4	20.76	21.82	30	-8.18
				15	0	20.84	21.90	30	-8.1
	20385	1753.5	QPSK	1	0	22.10	23.16	30	-6.84
				1	14	22.02	23.08	30	-6.92
				8	4	21.11	22.17	30	-7.83
				15	0	21.12	22.18	30	-7.82
3	19965	1711.5	16QAM	1	0	20.70	21.76	30	-8.24
				1	14	20.70	21.76	30	-8.24
				8	4	19.74	20.80	30	-9.2
				15	0	19.72	20.78	30	-9.22
	20175	1732.5	16QAM	1	0	20.85	21.91	30	-8.09
				1	14	20.79	21.85	30	-8.15
				8	4	19.83	20.89	30	-9.11
				15	0	19.79	20.85	30	-9.15
	20385	1753.5	16QAM	1	0	21.07	22.13	30	-7.87
				1	14	21.09	22.15	30	-7.85
				8	4	20.08	21.14	30	-8.86
				15	0	20.10	21.16	30	-8.84

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Antenna gain (dBi)		1.06							
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	21.75	22.81	30	-7.19
				1	24	21.76	22.82	30	-7.18
				12	6	20.72	21.78	30	-8.22
				25	0	20.68	21.74	30	-8.26
	20175	1732.5	QPSK	1	0	21.84	22.90	30	-7.1
				1	24	21.79	22.85	30	-7.15
				12	6	20.81	21.87	30	-8.13
				25	0	20.85	21.91	30	-8.09
	20375	1752.5	QPSK	1	0	22.07	23.13	30	-6.87
				1	24	22.05	23.11	30	-6.89
				12	6	21.07	22.13	30	-7.87
				25	0	21.11	22.17	30	-7.83
5	19975	1712.5	16QAM	1	0	20.74	21.80	30	-8.2
				1	24	20.70	21.76	30	-8.24
				12	6	19.76	20.82	30	-9.18
				25	0	19.76	20.82	30	-9.18
	20175	1732.5	16QAM	1	0	20.86	21.92	30	-8.08
				1	24	20.80	21.86	30	-8.14
				12	6	19.86	20.92	30	-9.08
				25	0	19.85	20.91	30	-9.09
	20375	1752.5	16QAM	1	0	21.07	22.13	30	-7.87
				1	24	21.03	22.09	30	-7.91
				12	6	20.03	21.09	30	-8.91
				25	0	20.11	21.17	30	-8.83

Antenna gain (dBi)		1.06							
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	21.68	22.74	30	-7.26
				1	49	21.70	22.76	30	-7.24
				25	12	20.71	21.77	30	-8.23
				50	0	20.74	21.80	30	-8.2
	20175	1732.5	QPSK	1	0	21.76	22.82	30	-7.18
				1	49	21.81	22.87	30	-7.13
				25	12	20.77	21.83	30	-8.17
				50	0	20.80	21.86	30	-8.14
	20350	1750	QPSK	1	0	22.05	23.11	30	-6.89
				1	49	22.04	23.10	30	-6.9
				25	12	21.11	22.17	30	-7.83
				50	0	21.11	22.17	30	-7.83
10	20000	1715	16QAM	1	0	20.77	21.83	30	-8.17
				1	49	20.76	21.82	30	-8.18
				25	12	19.70	20.76	30	-9.24
				27	0	19.71	20.77	30	-9.23
	20175	1732.5	16QAM	1	0	20.81	21.87	30	-8.13
				1	49	20.83	21.89	30	-8.11
				25	12	19.83	20.89	30	-9.11
				27	0	19.80	20.86	30	-9.14
	20350	1750	16QAM	1	0	21.08	22.14	30	-7.86
				1	49	21.08	22.14	30	-7.86
				25	12	20.08	21.14	30	-8.86
				27	0	20.10	21.16	30	-8.84

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Antenna gain (dBi)		1.06							
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	21.73	22.79	30	-7.21
				1	74	21.77	22.83	30	-7.17
				36	18	20.77	21.83	30	-8.17
				75	0	20.75	21.81	30	-8.19
	20175	1732.5	QPSK	1	0	21.80	22.86	30	-7.14
				1	74	21.82	22.88	30	-7.12
				36	18	20.84	21.90	30	-8.1
				75	0	20.82	21.88	30	-8.12
	20325	1747.5	QPSK	1	0	22.06	23.12	30	-6.88
				1	74	22.05	23.11	30	-6.89
				36	18	21.03	22.09	30	-7.91
				75	0	21.11	22.17	30	-7.83
15	20025	1717.5	16QAM	1	0	20.72	21.78	30	-8.22
				1	74	20.73	21.79	30	-8.21
				36	18	19.71	20.77	30	-9.23
				75	0	19.69	20.75	30	-9.25
	20175	1732.5	16QAM	1	0	20.83	21.89	30	-8.11
				1	74	20.84	21.90	30	-8.1
				36	18	19.86	20.92	30	-9.08
				75	0	19.86	20.92	30	-9.08
	20325	1747.5	16QAM	1	0	21.07	22.13	30	-7.87
				1	74	21.11	22.17	30	-7.83
				36	18	20.10	21.16	30	-8.84
				75	0	20.03	21.09	30	-8.91

Antenna gain (dBi)		1.06							
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	21.78	22.84	30	-7.16
				1	99	21.37	22.43	30	-7.57
				50	25	20.32	21.38	30	-8.62
				100	0	20.43	21.49	30	-8.51
	20175	1732.5	QPSK	1	0	21.86	22.92	30	-7.08
				1	99	21.58	22.64	30	-7.36
				50	25	20.41	21.47	30	-8.53
				100	0	20.61	21.67	30	-8.33
	20300	1745	QPSK	1	0	22.12	23.18	30	-6.82
				1	99	21.89	22.95	30	-7.05
				50	25	21.31	22.37	30	-7.63
				100	0	20.78	21.84	30	-8.16
20	20050	1720	16QAM	1	0	20.69	21.75	30	-8.25
				1	99	20.69	21.75	30	-8.25
				50	25	19.73	20.79	30	-9.21
				100	0	19.73	20.79	30	-9.21
	20175	1732.5	16QAM	1	0	20.77	21.83	30	-8.17
				1	99	20.86	21.92	30	-8.08
				50	25	19.85	20.91	30	-9.09
				100	0	19.85	20.91	30	-9.09
	20300	1745	16QAM	1	0	21.08	22.14	30	-7.86
				1	99	21.07	22.13	30	-7.87
				50	25	20.04	21.10	30	-8.9
				100	0	20.06	21.12	30	-8.88

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Antenna gain (dBi)		-1.26								
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	22.55	19.14	21.29	38.45	-19.31
				1	5	22.57	19.16	21.31	38.45	-19.29
				3	2	22.48	19.07	21.22	38.45	-19.38
				6	0	21.57	18.16	20.31	38.45	-20.29
	20525	836.5	QPSK	1	0	22.66	19.25	21.40	38.45	-19.20
				1	5	22.73	19.32	21.47	38.45	-19.13
				3	2	22.71	19.30	21.45	38.45	-19.15
				6	0	21.67	18.26	20.41	38.45	-20.19
	20643	848.3	QPSK	1	0	22.34	18.93	21.08	38.45	-19.52
				1	5	22.37	18.96	21.11	38.45	-19.49
				3	2	22.32	18.91	21.06	38.45	-19.54
				6	0	21.36	17.95	20.10	38.45	-20.50
1.4	20407	824.7	16QAM	1	0	21.51	18.10	20.25	38.45	-20.35
				1	5	21.49	18.08	20.23	38.45	-20.37
				3	2	21.48	18.07	20.22	38.45	-20.38
				6	0	20.57	17.16	19.31	38.45	-21.29
	20525	836.5	16QAM	1	0	21.71	18.30	20.45	38.45	-20.15
				1	5	21.73	18.32	20.47	38.45	-20.13
				3	2	21.74	18.33	20.48	38.45	-20.12
				6	0	20.69	17.28	19.43	38.45	-21.17
	20643	848.3	16QAM	1	0	21.37	17.96	20.11	38.45	-20.49
				1	5	21.34	17.93	20.08	38.45	-20.52
				3	2	21.33	17.92	20.07	38.45	-20.53
				6	0	20.32	16.91	19.06	38.45	-21.54

Antenna gain (dBi)		-1.26								
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	22.51	19.10	21.25	38.45	-19.35
				1	14	22.52	19.11	21.26	38.45	-19.34
				8	4	21.54	18.13	20.28	38.45	-20.32
				15	0	21.50	18.09	20.24	38.45	-20.36
	20525	836.5	QPSK	1	0	22.65	19.24	21.39	38.45	-19.21
				1	14	22.64	19.23	21.38	38.45	-19.22
				8	4	21.65	18.24	20.39	38.45	-20.21
				15	0	21.74	18.33	20.48	38.45	-20.12
	20635	847.5	QPSK	1	0	22.34	18.93	21.08	38.45	-19.52
				1	14	22.36	18.95	21.10	38.45	-19.50
				8	4	21.31	17.90	20.05	38.45	-20.55
				15	0	21.34	17.93	20.08	38.45	-20.52
3	20415	825.5	16QAM	1	0	21.48	18.07	20.22	38.45	-20.38
				1	14	21.55	18.14	20.29	38.45	-20.31
				8	4	20.50	17.09	19.24	38.45	-21.36
				15	0	20.49	17.08	19.23	38.45	-21.37
	20525	836.5	16QAM	1	0	21.73	18.32	20.47	38.45	-20.13
				1	14	21.68	18.27	20.42	38.45	-20.18
				8	4	20.70	17.29	19.44	38.45	-21.16
				15	0	20.72	17.31	19.46	38.45	-21.14
	20635	847.5	16QAM	1	0	21.33	17.92	20.07	38.45	-20.53
				1	14	21.37	17.96	20.11	38.45	-20.49
				8	4	20.30	16.89	19.04	38.45	-21.56
				15	0	20.31	16.90	19.05	38.45	-21.55

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Antenna gain (dBi)		-1.26								
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	22.56	19.15	21.30	38.45	-19.30
				1	24	22.52	19.11	21.26	38.45	-19.34
				12	6	21.58	18.17	20.32	38.45	-20.28
				25	0	21.56	18.15	20.30	38.45	-20.30
	20525	836.5	QPSK	1	0	22.71	19.30	21.45	38.45	-19.15
				1	24	22.69	19.28	21.43	38.45	-19.17
				12	6	21.74	18.33	20.48	38.45	-20.12
				25	0	21.69	18.28	20.43	38.45	-20.17
	20625	846.5	QPSK	1	0	22.35	18.94	21.09	38.45	-19.51
				1	24	22.36	18.95	21.10	38.45	-19.50
				12	6	21.27	17.86	20.01	38.45	-20.59
				25	0	21.27	17.86	20.01	38.45	-20.59
5	20425	826.5	16QAM	1	0	21.50	18.09	20.24	38.45	-20.36
				1	24	21.57	18.16	20.31	38.45	-20.29
				12	6	20.55	17.14	19.29	38.45	-21.31
				25	0	20.57	17.16	19.31	38.45	-21.29
	20525	836.5	16QAM	1	0	21.70	18.29	20.44	38.45	-20.16
				1	24	21.71	18.30	20.45	38.45	-20.15
				12	6	20.70	17.29	19.44	38.45	-21.16
				25	0	20.73	17.32	19.47	38.45	-21.13
	20625	846.5	16QAM	1	0	21.30	17.89	20.04	38.45	-20.56
				1	24	21.31	17.90	20.05	38.45	-20.55
				12	6	20.34	16.93	19.08	38.45	-21.52
				25	0	20.30	16.89	19.04	38.45	-21.56

Antenna gain (dBi)		-1.26								
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	22.58	19.17	21.32	38.45	-19.28
				1	49	22.42	19.01	21.16	38.45	-19.44
				25	12	21.34	17.93	20.08	38.45	-20.52
				50	0	21.44	18.03	20.18	38.45	-20.42
	20525	836.5	QPSK	1	0	22.74	19.33	21.48	38.45	-19.12
				1	49	22.39	18.98	21.13	38.45	-19.47
				25	12	21.38	17.97	20.12	38.45	-20.48
				50	0	21.32	17.91	20.06	38.45	-20.54
	20600	844	QPSK	1	0	22.37	18.96	21.11	38.45	-19.49
				1	49	22.03	18.62	20.77	38.45	-19.83
				25	12	21.60	18.19	20.34	38.45	-20.26
				50	0	21.53	18.12	20.27	38.45	-20.33
10	20450	829	16QAM	1	0	21.57	18.16	20.31	38.45	-20.29
				1	49	21.53	18.12	20.27	38.45	-20.33
				25	12	20.52	17.11	19.26	38.45	-21.34
				27	0	20.55	17.14	19.29	38.45	-21.31
	20525	836.5	16QAM	1	0	21.72	18.31	20.46	38.45	-20.14
				1	49	21.66	18.25	20.40	38.45	-20.20
				25	12	20.67	17.26	19.41	38.45	-21.19
				27	0	20.68	17.27	19.42	38.45	-21.18
	20600	844	16QAM	1	0	21.32	17.91	20.06	38.45	-20.54
				1	49	21.34	17.93	20.08	38.45	-20.52
				25	12	20.30	16.89	19.04	38.45	-21.56
				27	0	20.34	16.93	19.08	38.45	-21.52

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Antenna gain (dBi)		-1.58								
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	22.29	18.56	20.71	34.77	-16.21
				1	5	22.32	18.59	20.74	34.77	-16.18
				3	2	21.35	17.62	19.77	34.77	-17.15
				6	0	21.30	17.57	19.72	34.77	-17.20
	23095	707.5	QPSK	1	0	22.32	18.59	20.74	34.77	-16.18
				1	5	22.28	18.55	20.70	34.77	-16.22
				3	2	21.32	17.59	19.74	34.77	-17.18
				6	0	21.30	17.57	19.72	34.77	-17.20
	23173	715.5	QPSK	1	0	22.54	18.81	20.96	34.77	-15.96
				1	5	22.49	18.76	20.91	34.77	-16.01
				3	2	21.55	17.82	19.97	34.77	-16.95
				6	0	21.53	17.80	19.95	34.77	-16.97
1.4	23017	699.7	16QAM	1	0	21.29	17.56	19.71	34.77	-17.21
				1	5	21.29	17.56	19.71	34.77	-17.21
				3	2	21.32	17.59	19.74	34.77	-17.18
				6	0	20.28	16.55	18.70	34.77	-18.22
	23095	707.5	16QAM	1	0	21.33	17.60	19.75	34.77	-17.17
				1	5	21.33	17.60	19.75	34.77	-17.17
				3	2	21.25	17.52	19.67	34.77	-17.25
				6	0	20.32	16.59	18.74	34.77	-18.18
	23173	715.5	16QAM	1	0	21.49	17.76	19.91	34.77	-17.01
				1	5	21.56	17.83	19.98	34.77	-16.94
				3	2	21.55	17.82	19.97	34.77	-16.95
				6	0	20.56	16.83	18.98	34.77	-17.94

Antenna gain (dBi)		-1.58								
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	22.32	18.59	20.74	34.77	-16.18
				1	14	22.34	18.61	20.76	34.77	-16.16
				8	4	21.30	17.57	19.72	34.77	-17.20
				15	0	21.38	17.65	19.80	34.77	-17.12
	23095	707.5	QPSK	1	0	22.30	18.57	20.72	34.77	-16.20
				1	14	22.27	18.54	20.69	34.77	-16.23
				8	4	21.25	17.52	19.67	34.77	-17.25
				15	0	21.31	17.58	19.73	34.77	-17.19
	23165	714.5	QPSK	1	0	22.52	18.79	20.94	34.77	-15.98
				1	14	22.49	18.76	20.91	34.77	-16.01
				8	4	21.52	17.79	19.94	34.77	-16.98
				15	0	21.48	17.75	19.90	34.77	-17.02
3	23025	700.5	16QAM	1	0	21.37	17.64	19.79	34.77	-17.13
				1	14	21.29	17.56	19.71	34.77	-17.21
				8	4	19.22	15.49	17.64	34.77	-19.28
				15	0	19.19	15.46	17.61	34.77	-19.31
	23095	707.5	16QAM	1	0	21.26	17.53	19.68	34.77	-17.24
				1	14	21.24	17.51	19.66	34.77	-17.26
				8	4	19.38	15.65	17.80	34.77	-19.12
				15	0	19.41	15.68	17.83	34.77	-19.09
	23165	714.5	16QAM	1	0	21.48	17.75	19.90	34.77	-17.02
				1	14	21.49	17.76	19.91	34.77	-17.01
				8	4	19.68	15.95	18.10	34.77	-18.82
				15	0	19.61	15.88	18.03	34.77	-18.89

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Antenna gain (dBi)		-1.58								
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	22.36	18.63	20.78	34.77	-16.14
				1	24	22.29	18.56	20.71	34.77	-16.21
				12	6	21.32	17.59	19.74	34.77	-17.18
				25	0	21.29	17.56	19.71	34.77	-17.21
	23095	707.5	QPSK	1	0	22.32	18.59	20.74	34.77	-16.18
				1	24	22.27	18.54	20.69	34.77	-16.23
				12	6	21.31	17.58	19.73	34.77	-17.19
				25	0	21.24	17.51	19.66	34.77	-17.26
	23155	713.5	QPSK	1	0	22.53	18.80	20.95	34.77	-15.97
				1	24	22.54	18.81	20.96	34.77	-15.96
				12	6	21.49	17.76	19.91	34.77	-17.01
				25	0	21.51	17.78	19.93	34.77	-16.99
5	23035	701.5	16QAM	1	0	21.30	17.57	19.72	34.77	-17.20
				1	24	21.34	17.61	19.76	34.77	-17.16
				12	6	20.30	16.57	18.72	34.77	-18.20
				25	0	20.32	16.59	18.74	34.77	-18.18
	23095	707.5	16QAM	1	0	21.25	17.52	19.67	34.77	-17.25
				1	24	21.24	17.51	19.66	34.77	-17.26
				12	6	20.32	16.59	18.74	34.77	-18.18
				25	0	20.31	16.58	18.73	34.77	-18.19
	23155	713.5	16QAM	1	0	21.58	17.85	20.00	34.77	-16.92
				1	24	21.51	17.78	19.93	34.77	-16.99
				12	6	20.58	16.85	19.00	34.77	-17.92
				25	0	20.51	16.78	18.93	34.77	-17.99

Antenna gain (dBi)		-1.58								
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	22.48	18.75	20.90	34.77	-16.02
				1	49	22.33	18.60	20.75	34.77	-16.17
				25	12	21.28	17.55	19.70	34.77	-17.22
				50	0	21.40	17.67	19.82	34.77	-17.10
	23095	707.5	QPSK	1	0	22.43	18.70	20.85	34.77	-16.07
				1	49	22.48	18.75	20.90	34.77	-16.02
				25	12	21.36	17.63	19.78	34.77	-17.14
				50	0	21.41	17.68	19.83	34.77	-17.09
	23130	711	QPSK	1	0	22.68	18.95	21.10	34.77	-15.82
				1	49	22.52	18.79	20.94	34.77	-15.98
				25	12	21.43	17.70	19.85	34.77	-17.07
				50	0	21.42	17.69	19.84	34.77	-17.08
10	23060	704	16QAM	1	0	21.38	17.65	19.80	34.77	-17.12
				1	49	21.29	17.56	19.71	34.77	-17.21
				25	12	20.28	16.55	18.70	34.77	-18.22
				27	0	20.37	16.64	18.79	34.77	-18.13
	23095	707.5	16QAM	1	0	21.30	17.57	19.72	34.77	-17.20
				1	49	21.24	17.51	19.66	34.77	-17.26
				25	12	20.24	16.51	18.66	34.77	-18.26
				27	0	20.30	16.57	18.72	34.77	-18.20
	23130	711	16QAM	1	0	21.50	17.77	19.92	34.77	-17.00
				1	49	21.49	17.76	19.91	34.77	-17.01
				25	12	20.53	16.80	18.95	34.77	-17.97
				27	0	20.52	16.79	18.94	34.77	-17.98

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Antenna gain (dBi)		-1.45								
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	22.29	18.69	20.84	34.77	-16.08
				1	24	22.19	18.59	20.74	34.77	-16.18
				12	6	21.29	17.69	19.84	34.77	-17.08
				25	0	21.21	17.61	19.76	34.77	-17.16
	23230	782	QPSK	1	0	22.30	18.70	20.85	34.77	-16.07
				1	24	22.29	18.69	20.84	34.77	-16.08
				12	6	21.30	17.70	19.85	34.77	-17.07
				25	0	21.31	17.71	19.86	34.77	-17.06
	23255	784.5	QPSK	1	0	22.29	18.69	20.84	34.77	-16.08
				1	24	22.23	18.63	20.78	34.77	-16.14
				12	6	21.30	17.70	19.85	34.77	-17.07
				25	0	21.26	17.66	19.81	34.77	-17.11
5	23205	779.5	16QAM	1	0	21.20	17.60	19.75	34.77	-17.17
				1	24	20.18	16.58	18.73	34.77	-18.19
				12	6	20.22	16.62	18.77	34.77	-18.15
				25	0	20.19	16.59	18.74	34.77	-18.18
	23230	782	16QAM	1	0	21.30	17.70	19.85	34.77	-17.07
				1	24	20.21	16.61	18.76	34.77	-18.16
				12	6	20.27	16.67	18.82	34.77	-18.10
				25	0	20.20	16.60	18.75	34.77	-18.17
	23255	784.5	16QAM	1	0	21.24	17.64	19.79	34.77	-17.13
				1	24	20.15	16.55	18.70	34.77	-18.22
				12	6	20.26	16.66	18.81	34.77	-18.11
				25	0	20.17	16.57	18.72	34.77	-18.20

Antenna gain (dBi)		-1.45								
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	22.47	18.87	21.02	34.77	-15.90
				1	49	22.28	18.68	20.83	34.77	-16.09
				25	12	21.28	17.68	19.83	34.77	-17.09
				50	0	21.12	17.52	19.67	34.77	-17.25
10	23230	782	16QAM	1	0	21.30	17.70	19.85	34.77	-17.07
				1	49	21.32	17.72	19.87	34.77	-17.05
				25	12	20.25	16.65	18.80	34.77	-18.12
				27	0	20.21	16.61	18.76	34.77	-18.16

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Antenna gain (dBi)		-1.58								
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	22.28	18.55	20.70	34.77	-16.22
				1	24	22.26	18.53	20.68	34.77	-16.24
				12	6	21.26	17.53	19.68	34.77	-17.24
				25	0	21.35	17.62	19.77	34.77	-17.15
	23790	710	QPSK	1	0	22.31	18.58	20.73	34.77	-16.19
				1	24	22.28	18.55	20.70	34.77	-16.22
				12	6	21.32	17.59	19.74	34.77	-17.18
				25	0	21.26	17.53	19.68	34.77	-17.24
	23825	713.5	QPSK	1	0	22.30	18.57	20.72	34.77	-16.20
				1	24	22.29	18.56	20.71	34.77	-16.21
				12	6	21.36	17.63	19.78	34.77	-17.14
				25	0	21.29	17.56	19.71	34.77	-17.21
5	23755	706.5	16QAM	1	0	21.28	17.55	19.70	34.77	-17.22
				1	24	21.34	17.61	19.76	34.77	-17.16
				12	6	20.27	16.54	18.69	34.77	-18.23
				25	0	20.26	16.53	18.68	34.77	-18.24
	23790	710	16QAM	1	0	21.29	17.56	19.71	34.77	-17.21
				1	24	21.34	17.61	19.76	34.77	-17.16
				12	6	20.15	16.42	18.57	34.77	-18.35
				25	0	20.21	16.48	18.63	34.77	-18.29
	23825	713.5	16QAM	1	0	21.29	17.56	19.71	34.77	-17.21
				1	24	21.32	17.59	19.74	34.77	-17.18
				12	6	20.30	16.57	18.72	34.77	-18.20
				25	0	20.31	16.58	18.73	34.77	-18.19

Antenna gain (dBi)		-1.58								
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	22.45	18.72	20.87	34.77	-16.05
				1	49	22.36	18.63	20.78	34.77	-16.14
				25	12	21.14	17.41	19.56	34.77	-17.36
				50	0	20.98	17.25	19.40	34.77	-17.52
	23790	710	QPSK	1	0	22.44	18.71	20.86	34.77	-16.06
				1	49	21.34	17.61	19.76	34.77	-17.16
				25	12	21.26	17.53	19.68	34.77	-17.24
				50	0	21.04	17.31	19.46	34.77	-17.46
	23800	711	QPSK	1	0	22.49	18.76	20.91	34.77	-16.01
				1	49	22.39	18.66	20.81	34.77	-16.11
				25	12	21.28	17.55	19.70	34.77	-17.22
				50	0	21.09	17.36	19.51	34.77	-17.41
10	23780	709	16QAM	1	0	21.33	17.60	19.75	34.77	-17.17
				1	49	21.30	17.57	19.72	34.77	-17.20
				25	12	20.32	16.59	18.74	34.77	-18.18
				27	0	20.31	16.58	18.73	34.77	-18.19
	23790	710	16QAM	1	0	21.30	17.57	19.72	34.77	-17.20
				1	49	21.33	17.60	19.75	34.77	-17.17
				25	12	20.18	16.45	18.60	34.77	-18.32
				27	0	20.22	16.49	18.64	34.77	-18.28
	23800	711	16QAM	1	0	21.31	17.58	19.73	34.77	-17.19
				1	49	21.33	17.60	19.75	34.77	-17.17
				25	12	20.37	16.64	18.79	34.77	-18.13
				27	0	20.37	16.64	18.79	34.77	-18.13

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Antenna gain (dBi)		1.06							
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	21.13	22.19	30	-7.81
				1	5	21.13	22.19	30	-7.81
				3	2	21.21	22.27	30	-7.73
				6	0	20.17	21.23	30	-8.77
	132322	1745	QPSK	1	0	21.44	22.50	30	-7.5
				1	5	21.43	22.49	30	-7.51
				3	2	21.43	22.49	30	-7.51
				6	0	20.42	21.48	30	-8.52
	132665	1779.3	QPSK	1	0	21.16	22.22	30	-7.78
				1	5	21.20	22.26	30	-7.74
				3	2	21.19	22.25	30	-7.75
				6	0	20.18	21.24	30	-8.76
1.4	131979	1710.7	16QAM	1	0	20.21	21.27	30	-8.73
				1	5	20.13	21.19	30	-8.81
				3	2	20.16	21.22	30	-8.78
				6	0	19.14	20.20	30	-9.8
	132322	1745	16QAM	1	0	20.46	21.52	30	-8.48
				1	5	20.45	21.51	30	-8.49
				3	2	20.42	21.48	30	-8.52
				6	0	19.40	20.46	30	-9.54
	132665	1779.3	16QAM	1	0	20.21	21.27	30	-8.73
				1	5	20.16	21.22	30	-8.78
				3	2	20.11	21.17	30	-8.83
				6	0	19.20	20.26	30	-9.74

Antenna gain (dBi)		1.06							
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	21.13	22.19	30	-7.81
				1	14	21.14	22.20	30	-7.8
				8	4	20.21	21.27	30	-8.73
				15	0	20.19	21.25	30	-8.75
	132322	1745	QPSK	1	0	21.43	22.49	30	-7.51
				1	14	21.46	22.52	30	-7.48
				8	4	20.47	21.53	30	-8.47
				15	0	20.43	21.49	30	-8.51
	132657	1778.5	QPSK	1	0	21.18	22.24	30	-7.76
				1	14	21.12	22.18	30	-7.82
				8	4	20.13	21.19	30	-8.81
				15	0	20.20	21.26	30	-8.74
3	131987	1711.5	16QAM	1	0	20.13	21.19	30	-8.81
				1	14	20.15	21.21	30	-8.79
				8	4	19.14	20.20	30	-9.8
				15	0	19.11	20.17	30	-9.83
	132322	1745	16QAM	1	0	20.44	21.50	30	-8.5
				1	14	20.45	21.51	30	-8.49
				8	4	19.36	20.42	30	-9.58
				15	0	19.37	20.43	30	-9.57
	132657	1778.5	16QAM	1	0	20.21	21.27	30	-8.73
				1	14	20.13	21.19	30	-8.81
				8	4	19.14	20.20	30	-9.8
				15	0	19.12	20.18	30	-9.82

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Antenna gain (dBi)		1.06							
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	21.17	22.23	30	-7.77
				1	24	21.20	22.26	30	-7.74
				12	6	20.21	21.27	30	-8.73
				25	0	20.21	21.27	30	-8.73
	132322	1745	QPSK	1	0	21.45	22.51	30	-7.49
				1	24	21.43	22.49	30	-7.51
				12	6	20.48	21.54	30	-8.46
				25	0	20.52	21.58	30	-8.42
	132647	1777.5	QPSK	1	0	21.13	22.19	30	-7.81
				1	24	21.20	22.26	30	-7.74
				12	6	20.19	21.25	30	-8.75
				25	0	20.16	21.22	30	-8.78
5	131997	1712.5	16QAM	1	0	20.16	21.22	30	-8.78
				1	24	20.11	21.17	30	-8.83
				12	6	19.12	20.18	30	-9.82
				25	0	19.18	20.24	30	-9.76
	132322	1745	16QAM	1	0	20.52	21.58	30	-8.42
				1	24	20.45	21.51	30	-8.49
				12	6	19.34	20.40	30	-9.6
				25	0	19.36	20.42	30	-9.58
	132647	1777.5	16QAM	1	0	20.14	21.20	30	-8.8
				1	24	20.15	21.21	30	-8.79
				12	6	19.18	20.24	30	-9.76
				25	0	19.14	20.20	30	-9.8

Antenna gain (dBi)		1.06							
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	21.13	22.19	30	-7.81
				1	49	21.12	22.18	30	-7.82
				25	12	20.14	21.20	30	-8.8
				50	0	20.21	21.27	30	-8.73
	132322	1745	QPSK	1	0	21.45	22.51	30	-7.49
				1	49	21.50	22.56	30	-7.44
				25	12	20.52	21.58	30	-8.42
				50	0	20.49	21.55	30	-8.45
	132622	1775	QPSK	1	0	21.11	22.17	30	-7.83
				1	49	21.12	22.18	30	-7.82
				25	12	20.20	21.26	30	-8.74
				50	0	20.11	21.17	30	-8.83
10	132022	1715	16QAM	1	0	20.15	21.21	30	-8.79
				1	49	20.13	21.19	30	-8.81
				25	12	19.18	20.24	30	-9.76
				27	0	19.21	20.27	30	-9.73
	132322	1745	16QAM	1	0	20.52	21.58	30	-8.42
				1	49	20.42	21.48	30	-8.52
				25	12	19.34	20.40	30	-9.6
				27	0	19.37	20.43	30	-9.57
	132622	1775	16QAM	1	0	20.21	21.27	30	-8.73
				1	49	20.13	21.19	30	-8.81
				25	12	19.18	20.24	30	-9.76
				27	0	19.12	20.18	30	-9.82

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Antenna gain (dBi)		1.06							
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	21.18	22.24	30	-7.76
				1	74	21.17	22.23	30	-7.77
				36	18	20.16	21.22	30	-8.78
				75	0	20.15	21.21	30	-8.79
	132322	1745	QPSK	1	0	21.51	22.57	30	-7.43
				1	74	21.47	22.53	30	-7.47
				36	18	20.42	21.48	30	-8.52
				75	0	20.47	21.53	30	-8.47
	132597	1772.5	QPSK	1	0	21.18	22.24	30	-7.76
				1	74	21.19	22.25	30	-7.75
				36	18	20.12	21.18	30	-8.82
				75	0	20.20	21.26	30	-8.74
15	132047	1717.5	16QAM	1	0	20.16	21.22	30	-8.78
				1	74	20.11	21.17	30	-8.83
				36	18	19.14	20.20	30	-9.8
				75	0	19.16	20.22	30	-9.78
	132322	1745	16QAM	1	0	20.50	21.56	30	-8.44
				1	74	20.43	21.49	30	-8.51
				36	18	19.33	20.39	30	-9.61
				75	0	19.41	20.47	30	-9.53
	132597	1772.5	16QAM	1	0	20.13	21.19	30	-8.81
				1	74	20.18	21.24	30	-8.76
				36	18	19.20	20.26	30	-9.74
				75	0	19.14	20.20	30	-9.8

Antenna gain (dBi)		1.06							
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	21.31	22.37	30	-7.63
				1	99	21.40	22.46	30	-7.54
				50	25	20.38	21.44	30	-8.56
				100	0	20.18	21.24	30	-8.76
	132322	1745	QPSK	1	0	21.62	22.68	30	-7.32
				1	99	21.56	22.62	30	-7.38
				50	25	20.05	21.11	30	-8.89
				100	0	20.21	21.27	30	-8.73
	132572	1770	QPSK	1	0	21.31	22.37	30	-7.63
				1	99	21.46	22.52	30	-7.48
				50	25	20.48	21.54	30	-8.46
				100	0	20.24	21.30	30	-8.7
20	132072	1720	16QAM	1	0	20.20	21.26	30	-8.74
				1	99	20.21	21.27	30	-8.73
				50	25	19.21	20.27	30	-9.73
				100	0	19.21	20.27	30	-9.73
	132322	1745	16QAM	1	0	20.42	21.48	30	-8.52
				1	99	20.43	21.49	30	-8.51
				50	25	19.32	20.38	30	-9.62
				100	0	19.40	20.46	30	-9.54
	132572	1770	16QAM	1	0	20.16	21.22	30	-8.78
				1	99	20.14	21.20	30	-8.8
				50	25	19.21	20.27	30	-9.73
				100	0	19.19	20.25	30	-9.75

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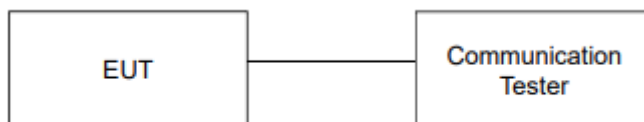
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8 OCCUPIED BANDWIDTH MEASUREMENT

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



Note: Measurement setup for testing on Antenna connector

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	1.0817	1.0876	1.286	1.269
1880.0	18900	1.0827	1.0874	1.286	1.289
1909.3	19193	1.0836	1.0878	1.294	1.293

LTE BAND 2 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1851.5	18615	2.6960	2.6869	2.962	2.973
1880.0	18900	2.7007	2.6902	2.986	2.966
1908.5	19185	2.6977	2.6895	2.985	2.958

LTE BAND 2 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1852.5	18625	4.4894	4.4894	4.992	5.009
1880.0	18900	4.4889	4.4881	4.964	5.007
1907.5	19175	4.4971	4.4861	4.972	4.973

LTE BAND 2 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1855.0	18650	8.9620	4.9272	9.830	6.123
1880.0	18900	8.9526	4.9282	9.785	6.169
1905.0	19150	8.9318	4.9280	9.870	6.107

LTE BAND 2 Channel bandwidth: 15MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1857.5	18675	13.370	13.339	14.53	14.52
1880.0	18900	13.427	13.401	14.58	14.60
1902.5	19125	13.388	13.352	14.45	14.54

LTE BAND 2 Channel bandwidth: 20MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1860.0	18700	17.772	17.843	19.08	19.34
1880.0	18900	17.894	17.934	19.47	19.44
1900.0	19100	17.770	17.820	19.10	19.32

LTE BAND 4 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1710.7	19957	1.0828	1.0878	1.274	1.284
1732.5	20175	1.0807	1.0882	1.280	1.281
1754.3	20393	1.0838	1.0878	1.268	1.287

LTE BAND 4 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1711.5	19965	2.6996	2.6918	2.963	3.218
1732.5	20175	2.6976	2.6877	2.974	2.959
1753.5	20385	2.6971	2.6878	2.987	2.970

LTE BAND 4 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1712.5	19975	4.4943	4.4923	5.005	4.966
1732.5	20175	4.4922	4.4912	4.999	4.992
1752.5	20375	4.4966	4.4907	5.919	4.992

LTE BAND 4 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1715.0	20000	8.9397	4.9251	9.831	6.084
1732.5	20175	8.9490	4.9262	9.819	6.134
1750.0	20350	8.9481	4.9269	9.845	6.076

LTE BAND 4 Channel bandwidth: 15MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1717.5	20025	13.365	13.373	14.54	14.52
1732.5	20175	13.385	13.390	14.60	14.49
1747.5	20325	13.398	13.376	14.57	14.60

LTE BAND 4 Channel bandwidth: 20MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1720.0	20050	17.827	17.860	19.21	19.33
1732.5	20175	17.888	17.879	19.49	19.46
1745.0	20300	17.941	17.930	19.42	19.41

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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	1.0822	1.0861	1.260	1.263
836.5	20525	1.0824	1.0874	1.261	1.268
848.3	20643	1.0827	1.0870	1.262	1.263

LTE BAND 5 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
825.5	20415	2.6971	2.6897	2.973	2.974
836.5	20525	2.7003	2.6887	2.965	2.954
847.5	20635	2.6982	2.6872	2.977	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	4.4859	4.4878	4.962	4.959
836.5	20525	4.4938	4.4857	4.915	4.965
846.5	20625	4.4960	4.4847	4.964	4.982

LTE BAND 5 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
829.0	20450	8.9368	3.0232	9.779	3.696
836.5	20525	8.9541	3.0338	9.741	3.838
844.0	20600	8.9359	3.0282	9.747	3.799

LTE BAND 12 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
699.7	23017	1.0820	1.0862	1.258	1.269
707.5	23095	1.0820	1.0864	1.263	1.261
715.3	23173	1.0826	1.0877	1.273	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	2.6981	2.6851	2.945	2.964
707.5	23095	2.6996	2.6889	2.964	2.953
714.5	23165	2.7011	2.6889	2.965	2.951

LTE BAND 12 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
701.5	23035	4.4880	4.4795	4.974	4.969
707.5	23095	4.4929	4.4896	4.953	4.979
713.5	23155	4.4917	4.4816	4.972	4.946

LTE BAND 12 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
704.0	23060	8.9450	4.9156	9.797	5.689
707.5	23095	8.9624	4.9202	9.800	5.719
711.0	23130	8.9472	4.9231	9.680	5.685

LTE BAND 13 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
779.5	23205	4.4969	4.4885	4.944	4.965
782.0	23230	4.4821	4.4818	4.920	4.964
784.5	23255	4.4957	4.4823	4.935	4.935

LTE BAND 13 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
782.0	23230	8.9392	4.9333	9.781	5.697

LTE BAND 17 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
706.5	23755	4.4951	4.4911	4.969	4.961
710.0	23790	4.4923	4.4853	4.949	4.981
713.5	23825	4.4899	4.4815	4.948	4.945

LTE BAND 17 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
709.0	23780	8.9630	4.9276	9.761	5.722
710.0	23790	8.9388	4.9267	9.731	5.773
711.0	23800	8.9366	4.9219	9.750	5.732

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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	1.0814	1.0859	1.262	1.254
1745.0	132322	1.0831	1.0871	1.263	1.259
1779.3	132665	1.0837	1.0865	1.270	1.262

LTE BAND 66 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1711.5	131987	2.7000	2.6901	2.950	2.960
1745.0	132322	2.7003	2.6895	2.959	2.959
1778.5	132657	2.6974	2.6909	2.971	2.962

LTE BAND 66 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1712.5	131997	4.4912	4.4864	4.980	4.957
1745.0	132322	4.4921	4.4882	4.964	4.987
1777.5	132647	4.4931	4.4868	4.948	4.965

LTE BAND 66 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1715.0	132022	8.9391	4.9153	9.770	5.689
1745.0	132322	8.9536	4.9192	9.737	5.659
1775.0	132622	8.9300	4.9244	9.782	5.660

LTE BAND 66 Channel bandwidth: 15MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1717.5	132047	13.382	13.365	14.55	14.53
1745.0	132322	13.408	13.375	14.66	14.62
1772.5	132597	13.383	13.379	14.46	14.59

LTE BAND 66 Channel bandwidth: 20MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1720.0	132072	17.859	17.889	19.26	19.27
1745.0	132322	17.933	17.950	19.23	19.44
1770.0	132572	17.832	17.874	19.16	19.35

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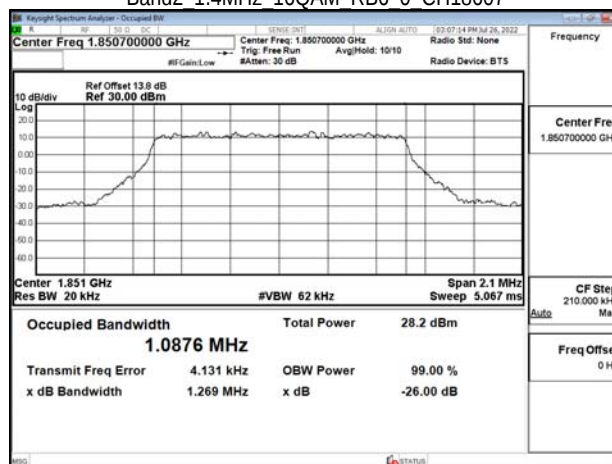
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Band2 1.4MHz QPSK RB6 0 CH18607



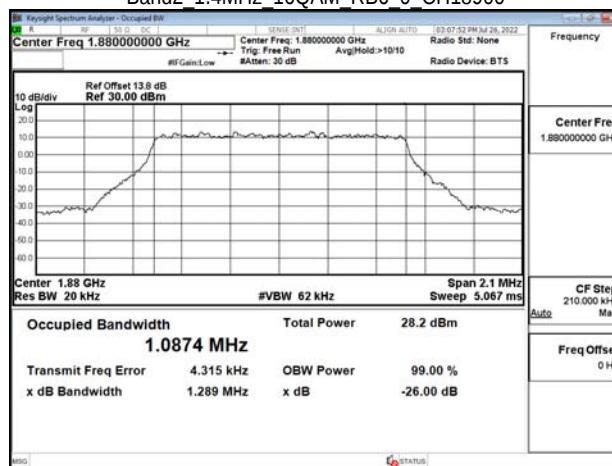
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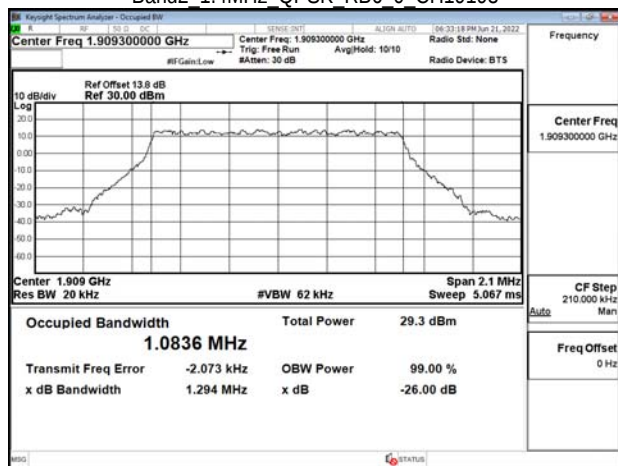
Band2 1.4MHz QPSK RB6 0 CH18900



Band2 1.4MHz 16QAM RB6 0 CH18900



Band2 1.4MHz QPSK RB6 0 CH19193



Band2 1.4MHz 16QAM RB6 0 CH19193

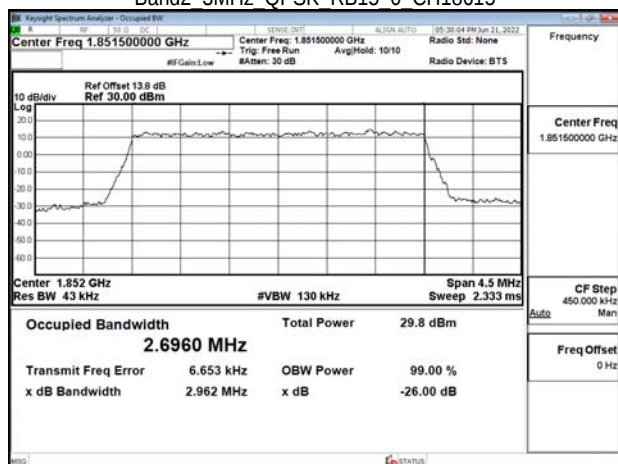


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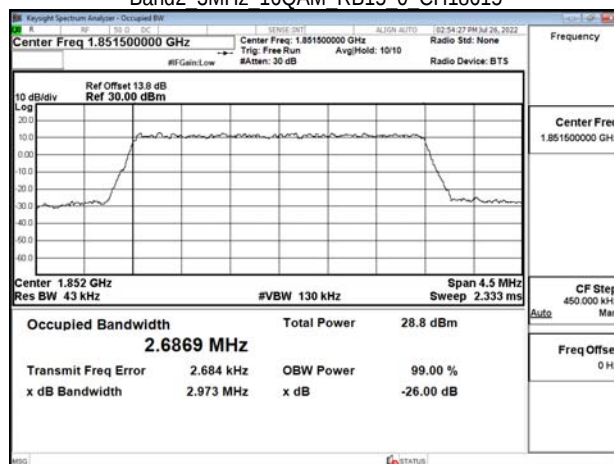
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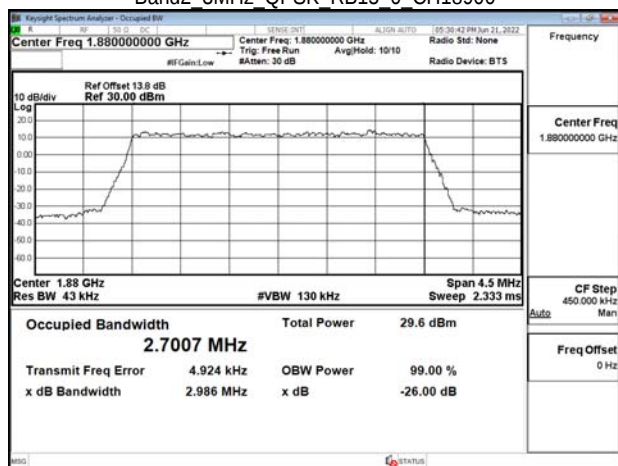
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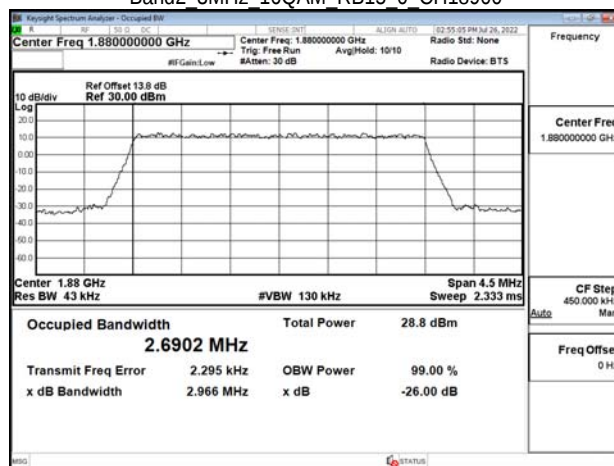
Band2 3MHz 16QAM RB15 0 CH18615



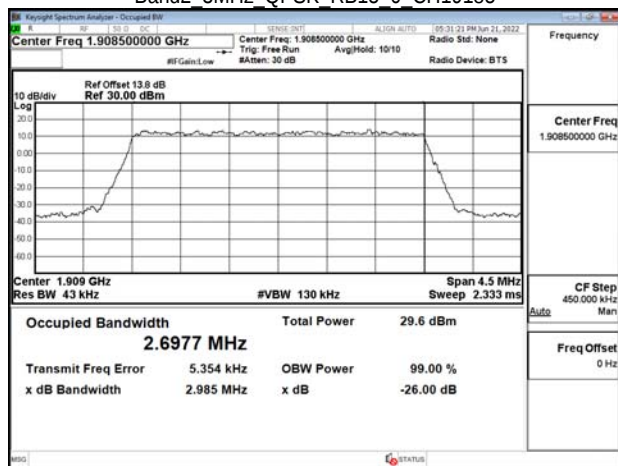
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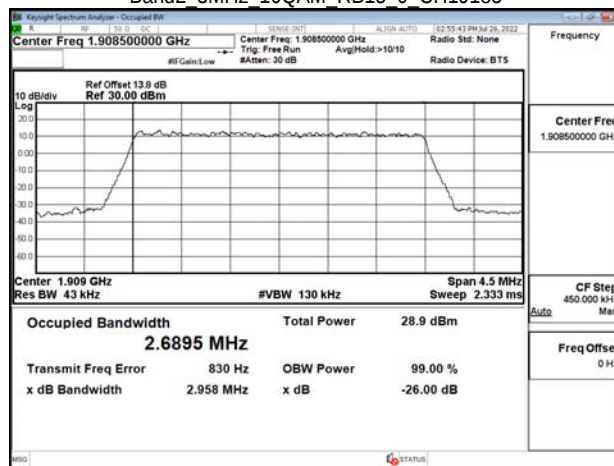
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Band2 3MHz QPSK RB15 0 CH19185



Band2 3MHz 16QAM RB15 0 CH19185

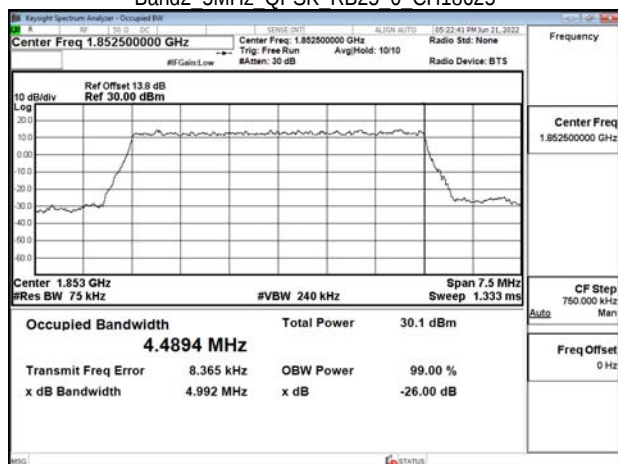


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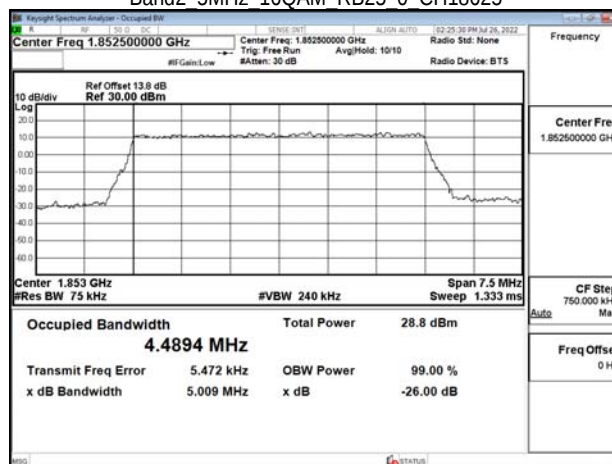
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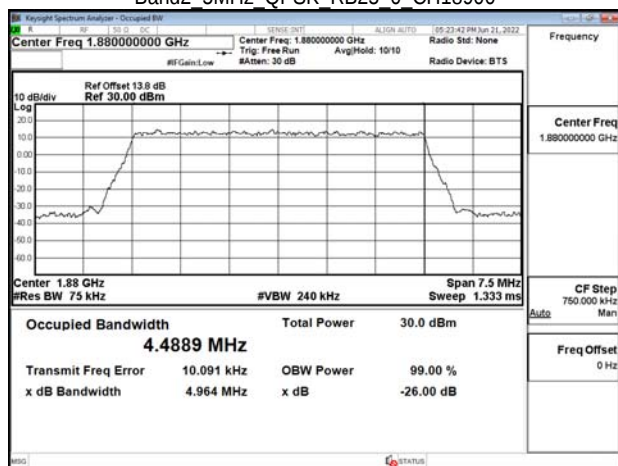
Band2 5MHz QPSK RB25 0 CH18625



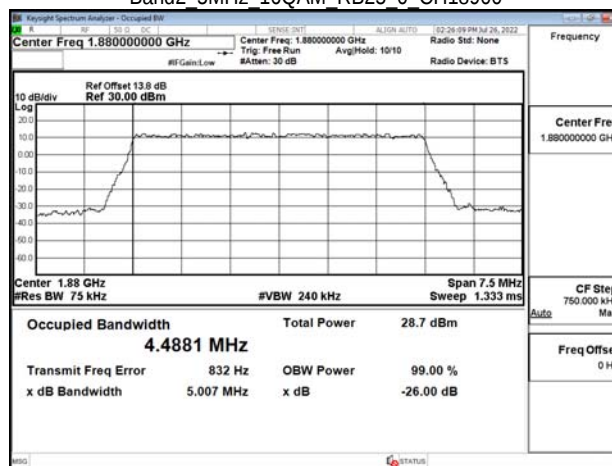
Band2 5MHz 16QAM RB25 0 CH18625



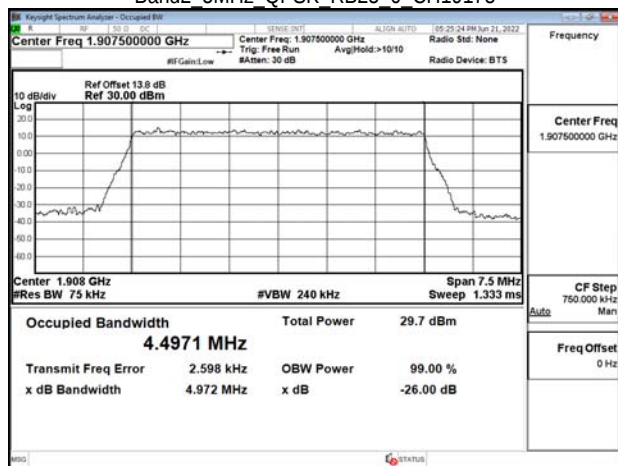
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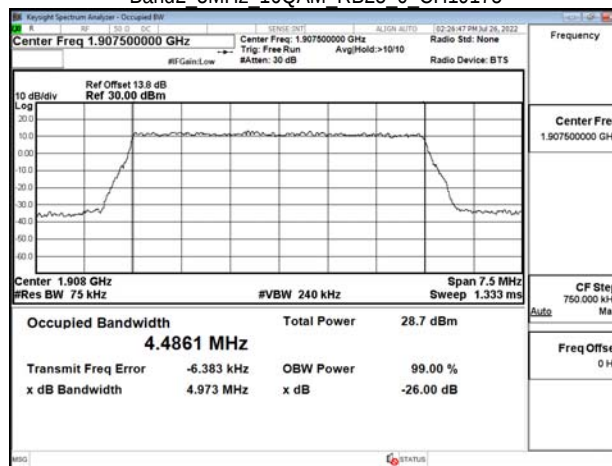
Band2 5MHz 16QAM RB25 0 CH18900



Band2 5MHz QPSK RB25 0 CH19175



Band2 5MHz 16QAM RB25 0 CH19175

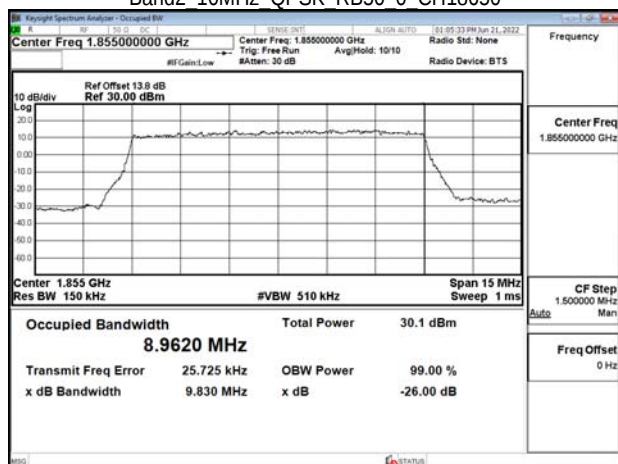


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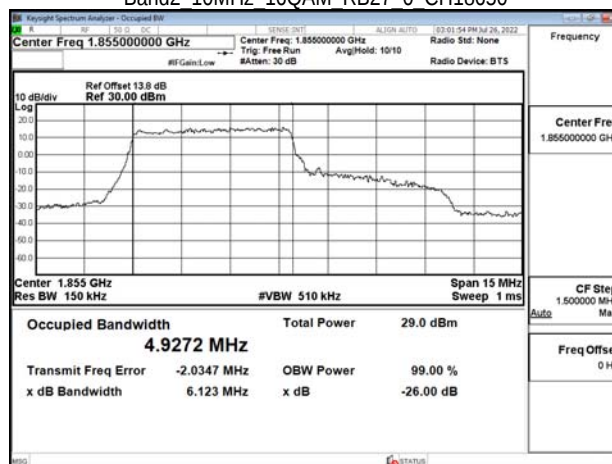
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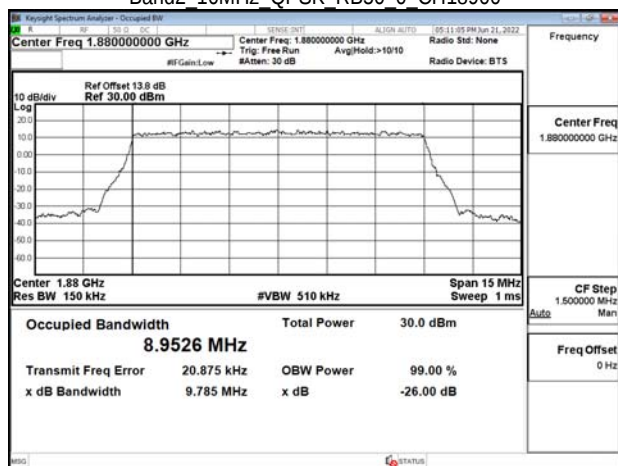
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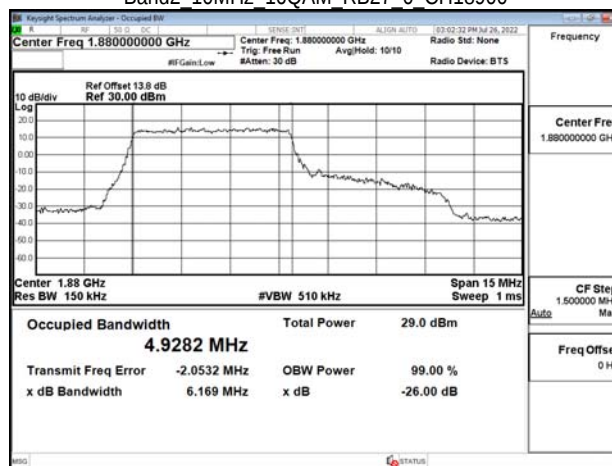
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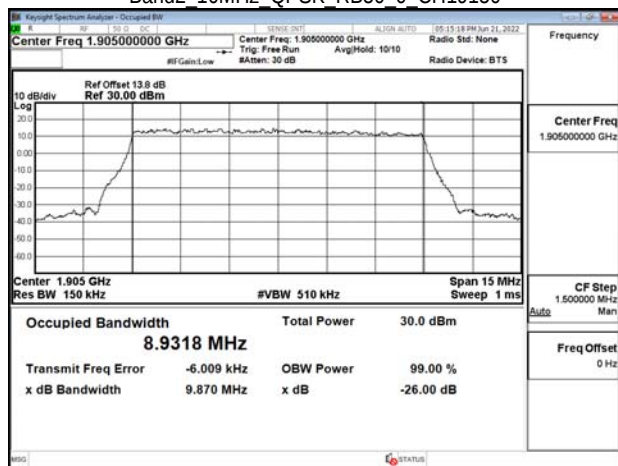
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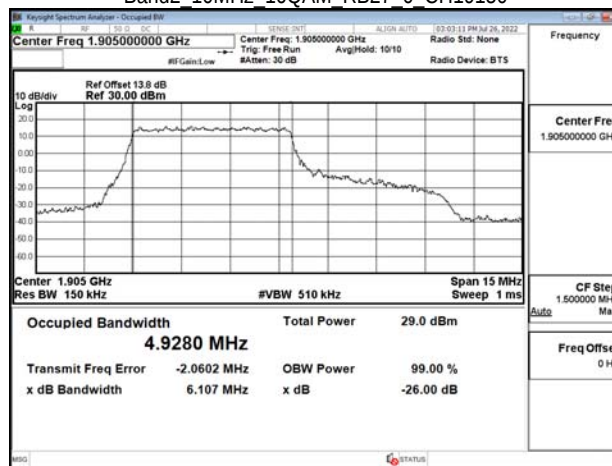
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Band2 10MHz QPSK RB50 0 CH19150



Band2 10MHz 16QAM RB27 0 CH19150

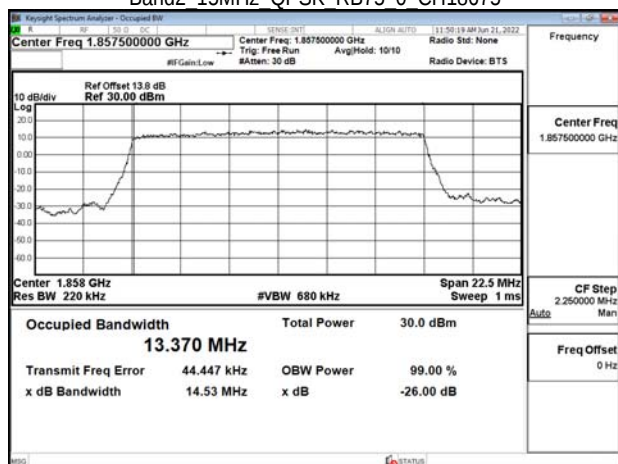


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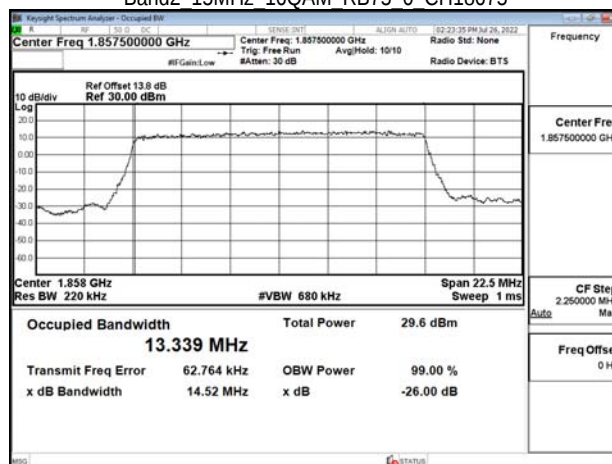
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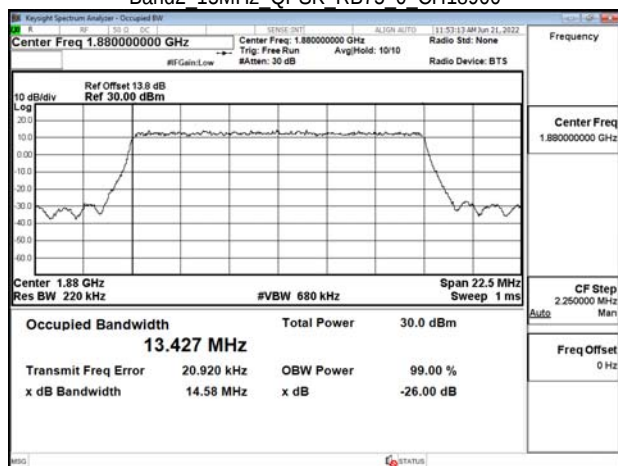
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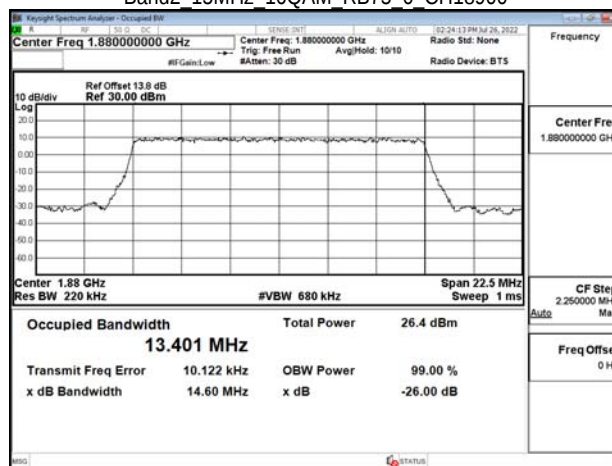
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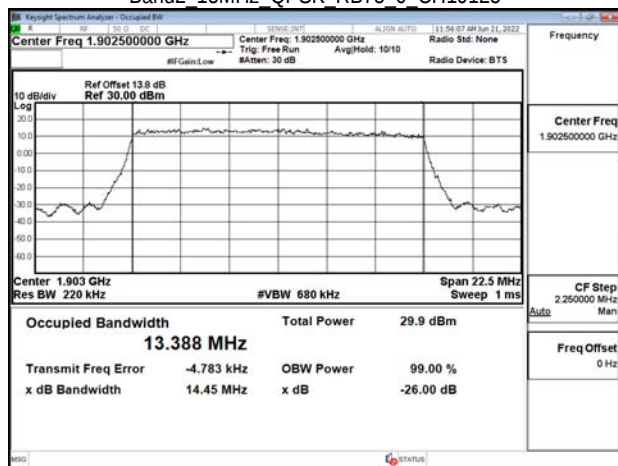
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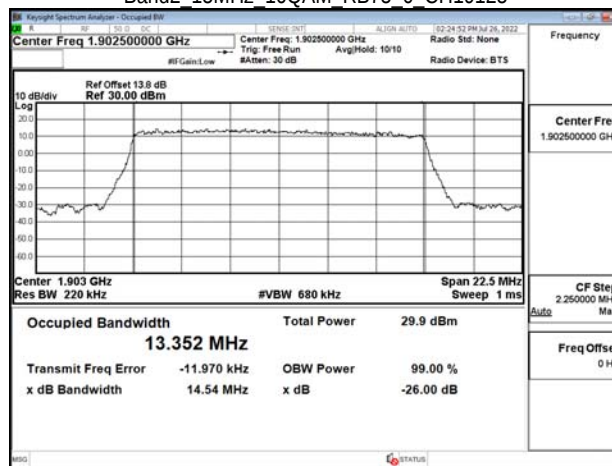
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Band2 15MHz QPSK RB75 0 CH19125



Band2 15MHz 16QAM RB75 0 CH19125

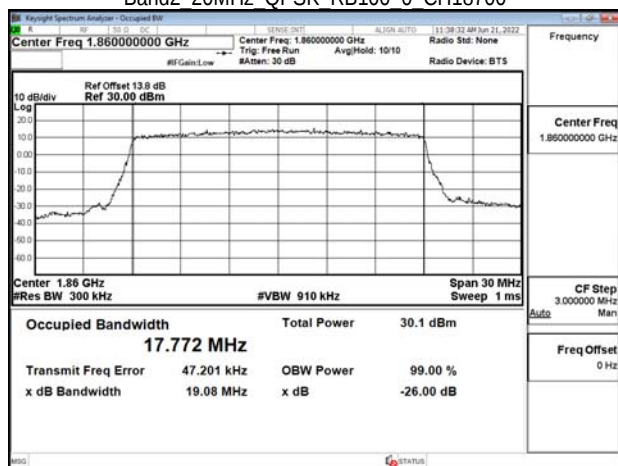


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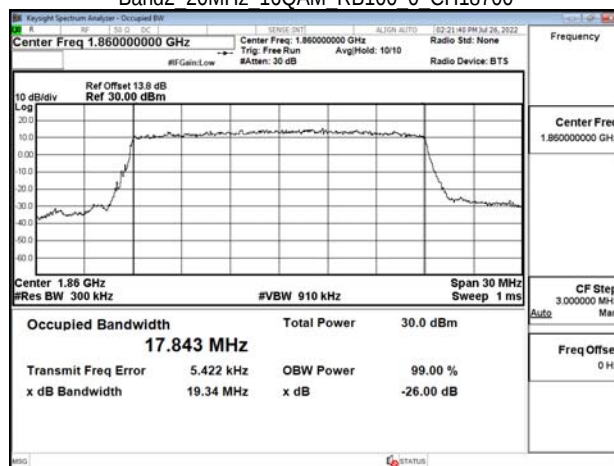
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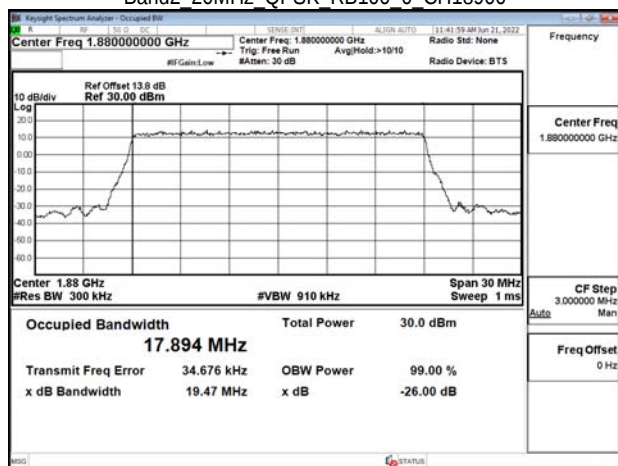
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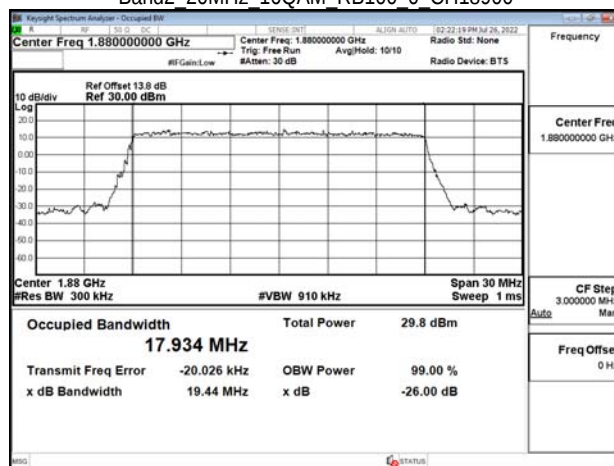
Band2 20MHz 16QAM RB100 0 CH18700



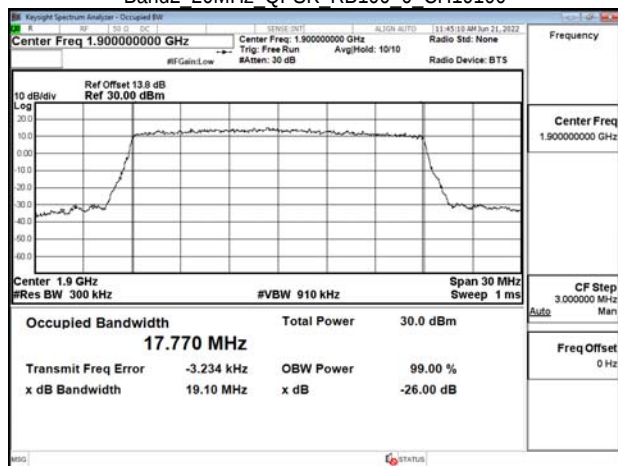
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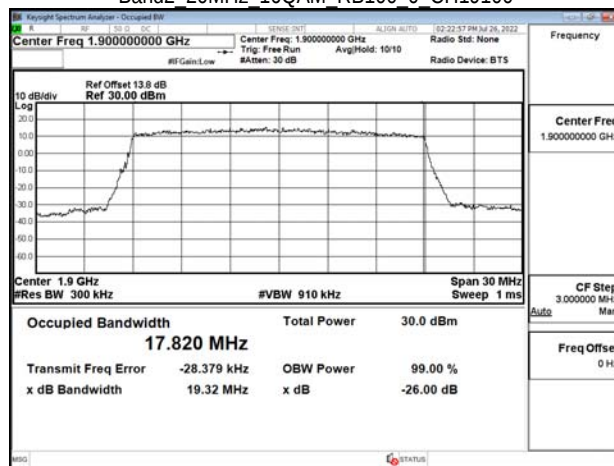
Band2 20MHz 16QAM RB100 0 CH18900



Band2 20MHz QPSK RB100 0 CH19100



Band2 20MHz 16QAM RB100 0 CH19100



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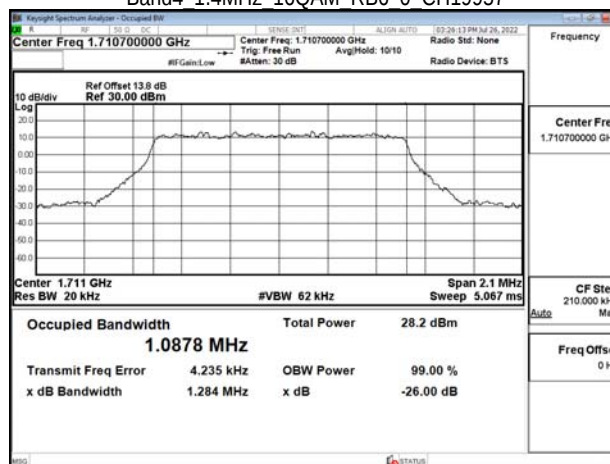
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Band4 1.4MHz QPSK RB6 0 CH19957



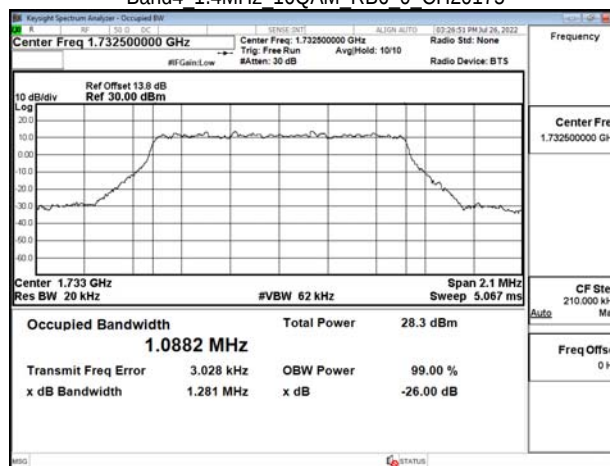
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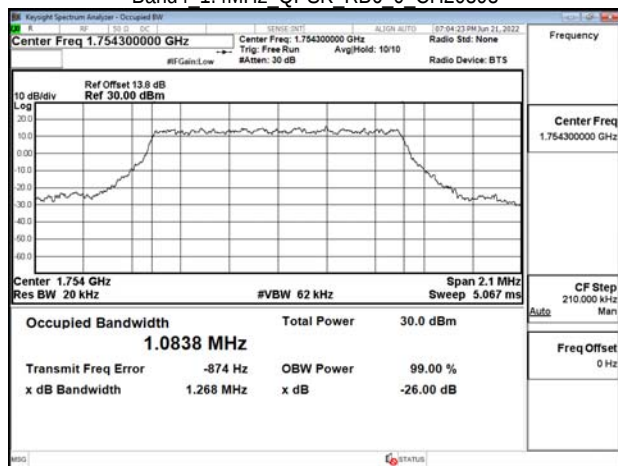
Band4 1.4MHz QPSK RB6 0 CH20175



Band4 1.4MHz 16QAM RB6 0 CH20175



Band4 1.4MHz QPSK RB6 0 CH20393



Band4 1.4MHz 16QAM RB6 0 CH20393

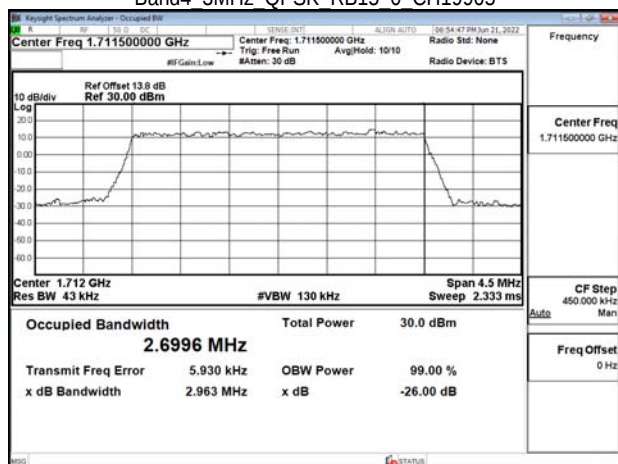


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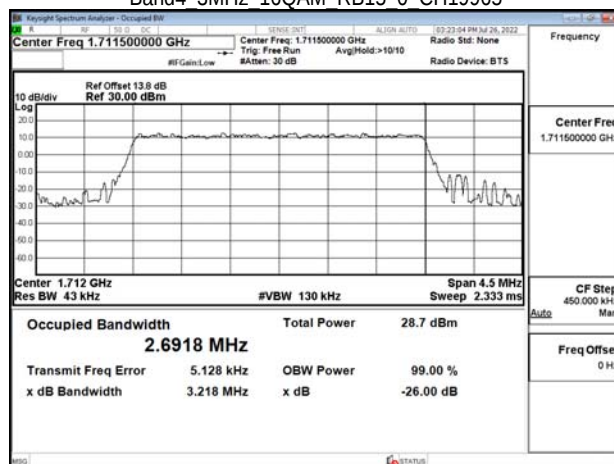
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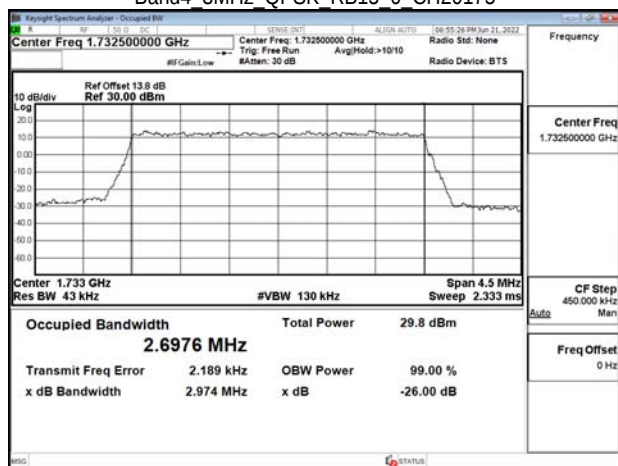
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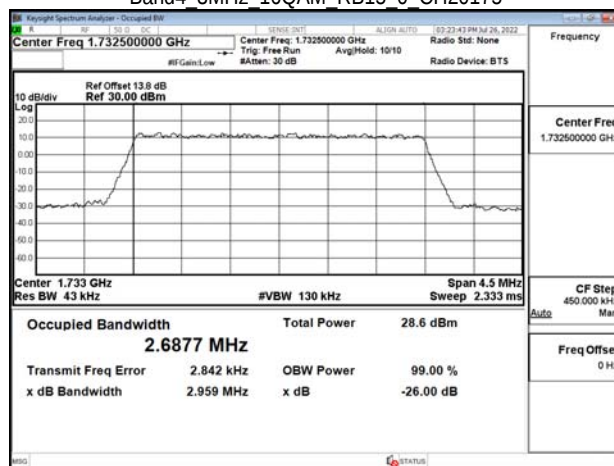
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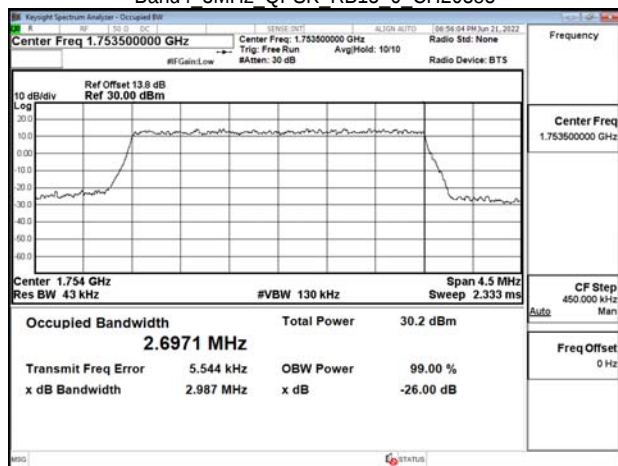
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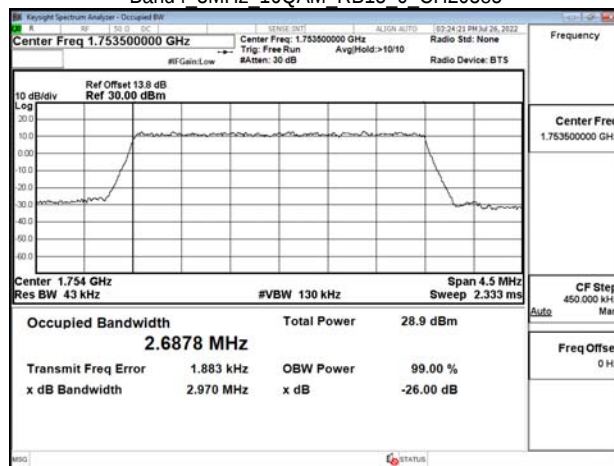
Band4 3MHz 16QAM RB15 0 CH20175



Band4 3MHz QPSK RB15 0 CH20385



Band4 3MHz 16QAM RB15 0 CH20385

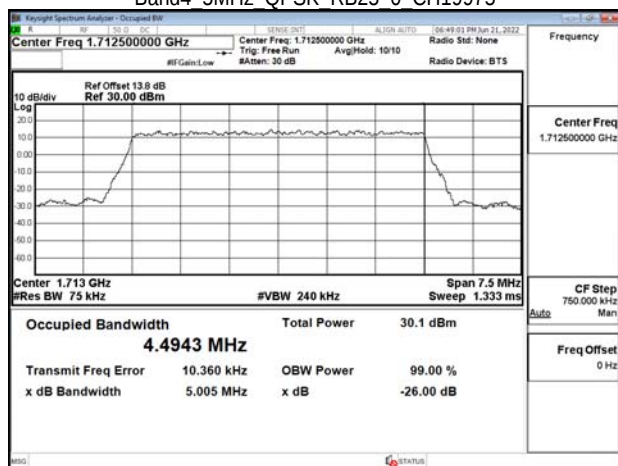


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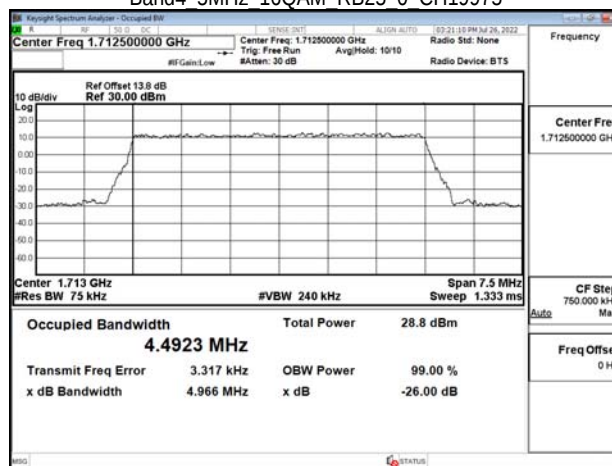
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Band4 5MHz QPSK RB25 0 CH19975



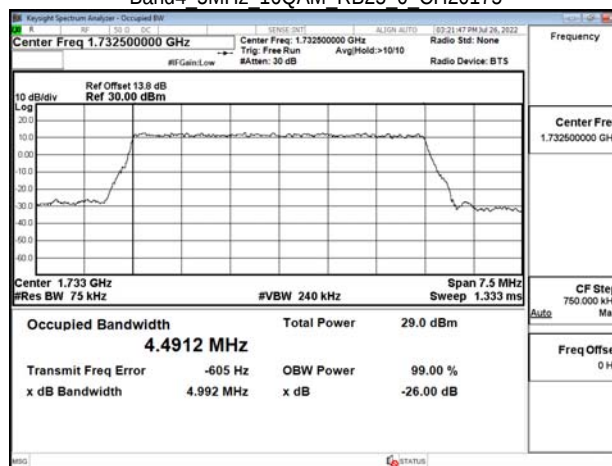
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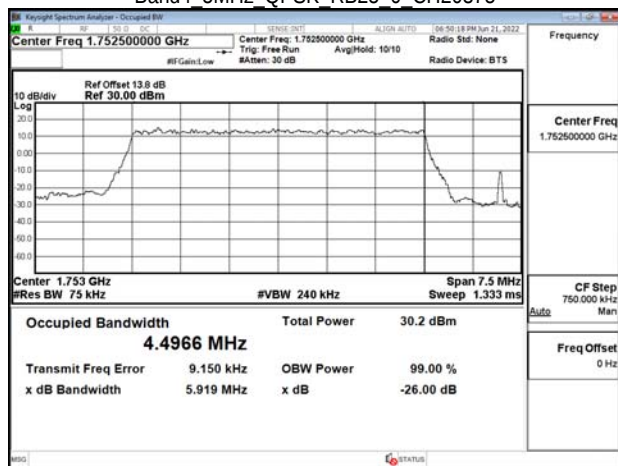
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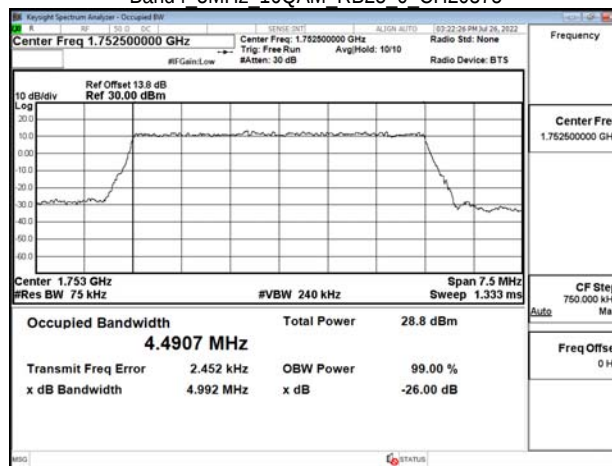
Band4 5MHz 16QAM RB25 0 CH20175



Band4 5MHz QPSK RB25 0 CH20375



Band4 5MHz 16QAM RB25 0 CH20375

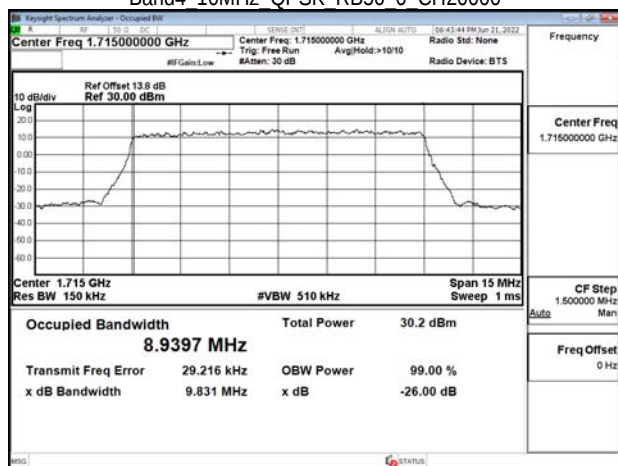


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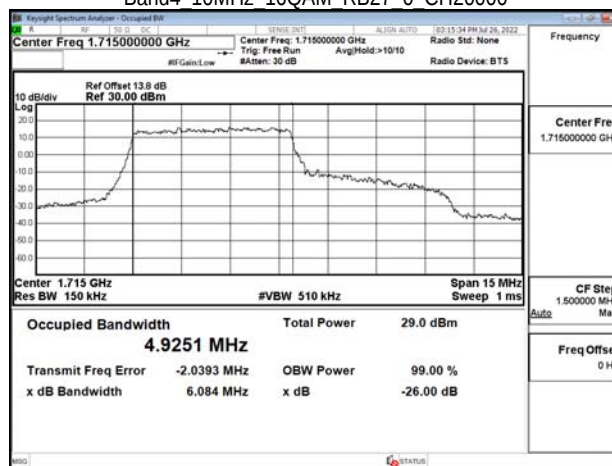
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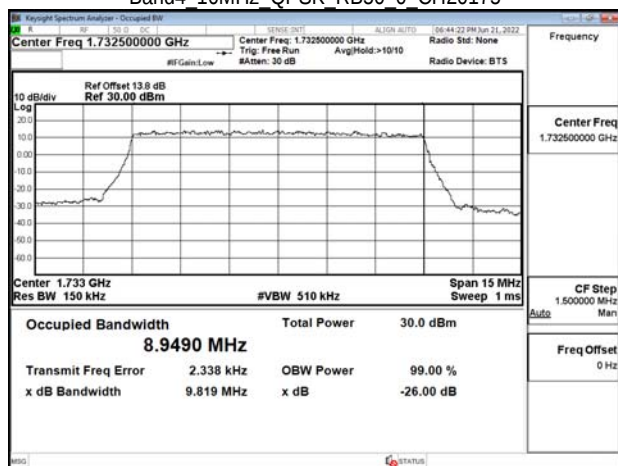
Band4 10MHz QPSK RB50 0 CH20000



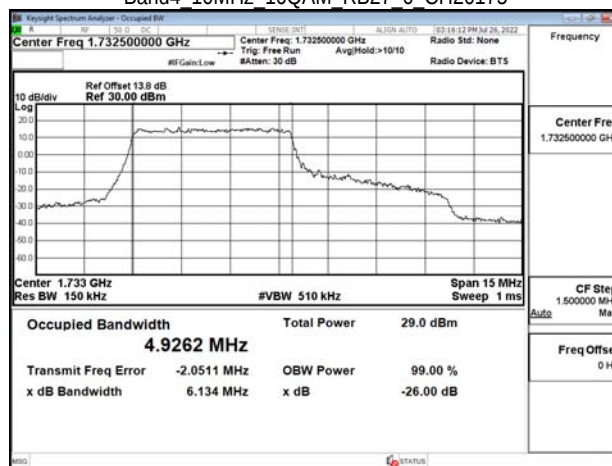
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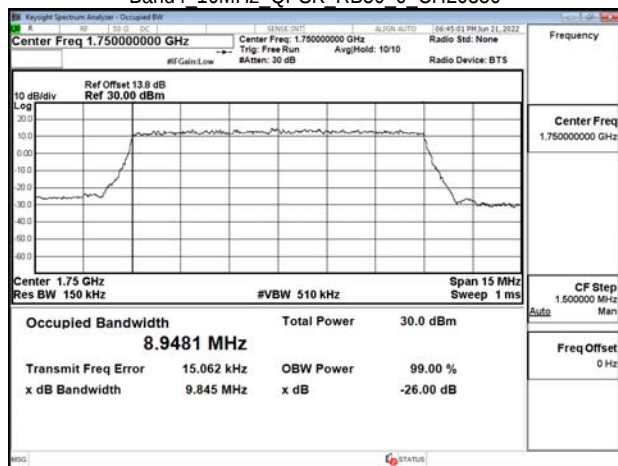
Band4 10MHz QPSK RB50 0 CH20175



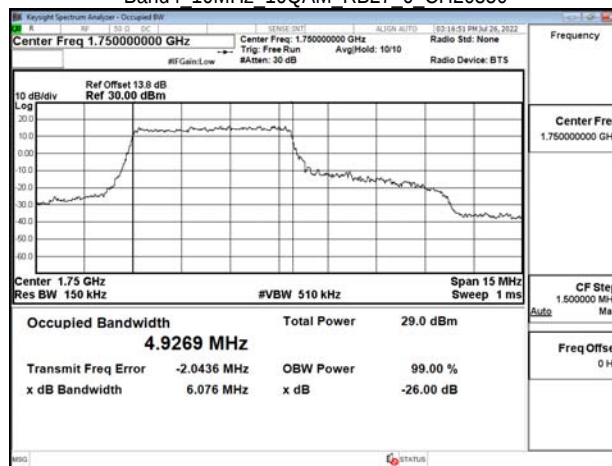
Band4 10MHz 16QAM RB27 0 CH20175



Band4 10MHz QPSK RB50 0 CH20350



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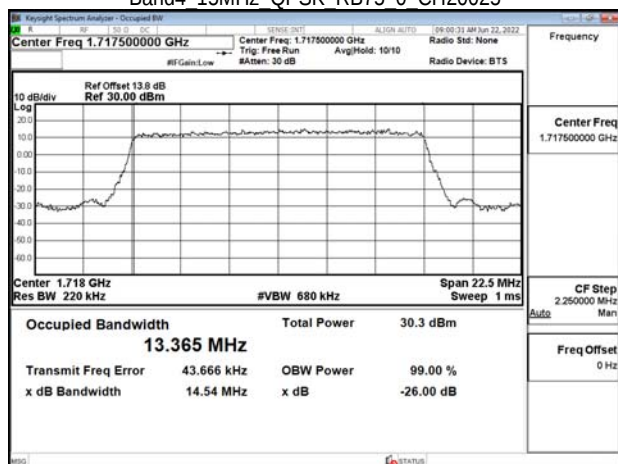


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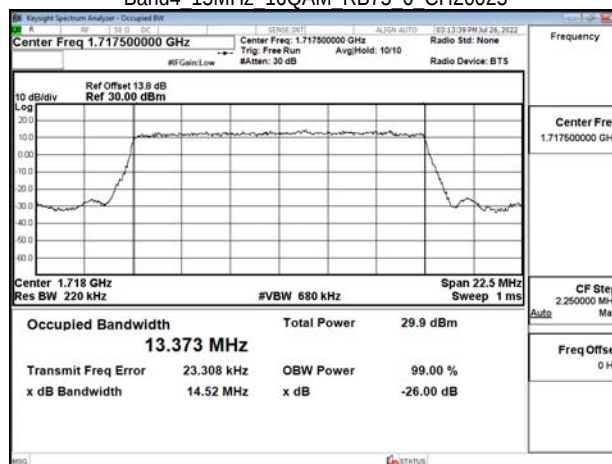
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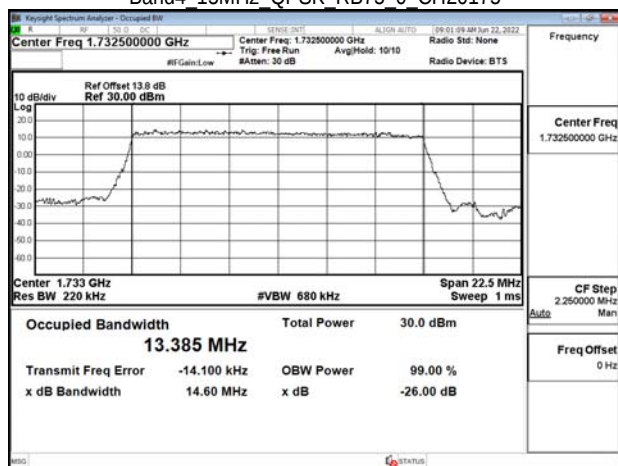
Band4 15MHz QPSK RB75 0 CH20025



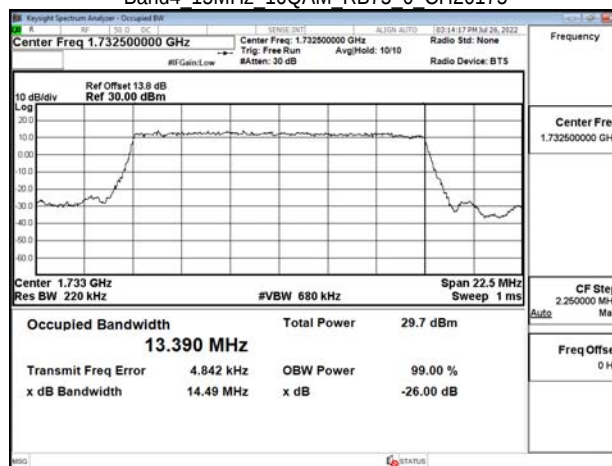
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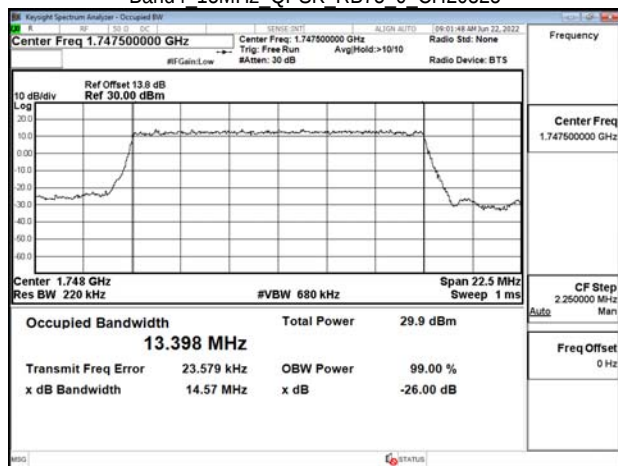
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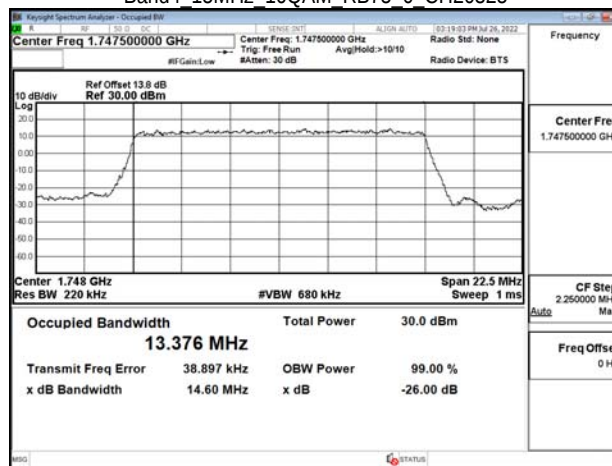
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Band4 15MHz QPSK RB75 0 CH20325



Band4 15MHz 16QAM RB75 0 CH20325

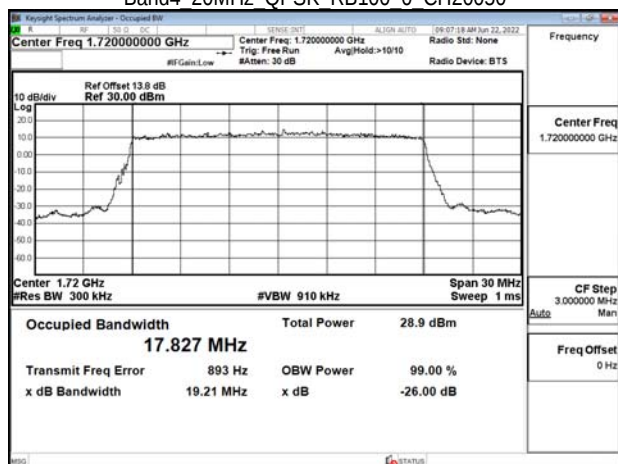


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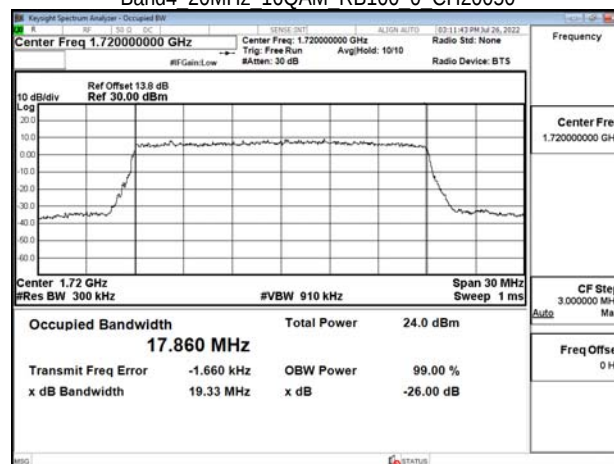
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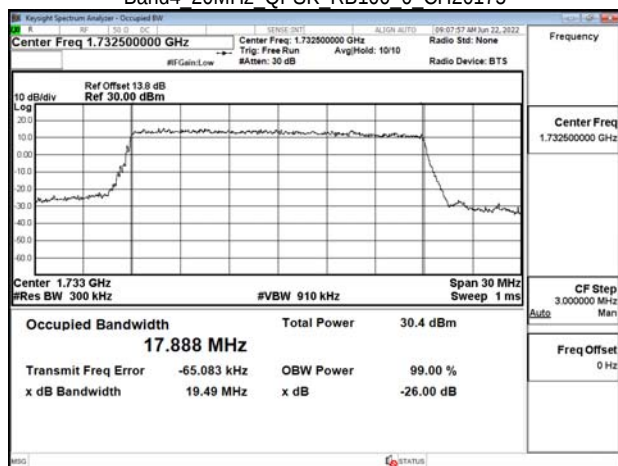
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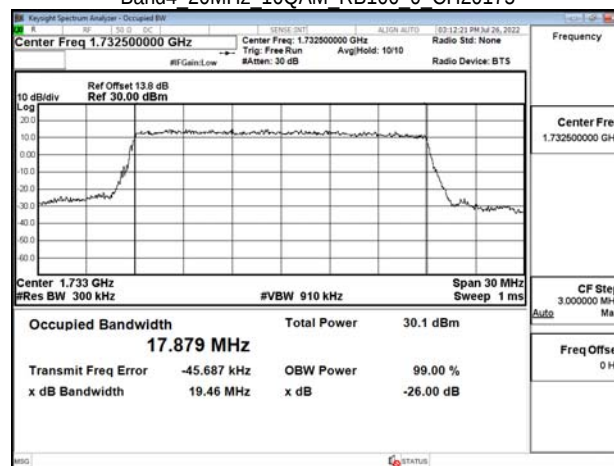
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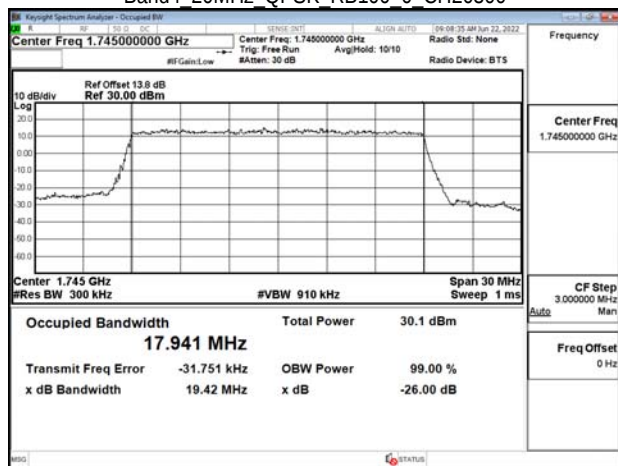
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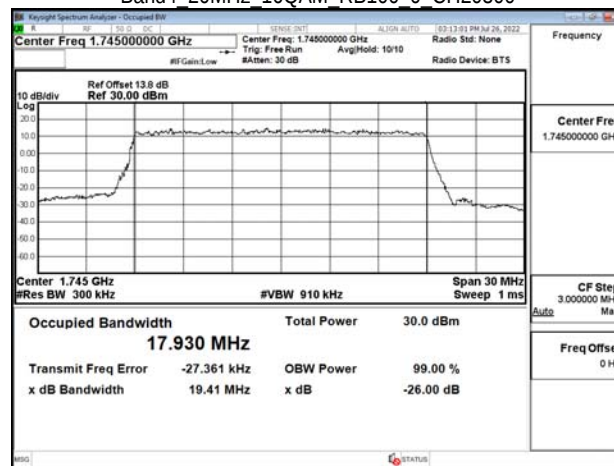
Band4 20MHz 16QAM RB100 0 CH20175



Band4 20MHz QPSK RB100 0 CH20300



Band4 20MHz 16QAM RB100 0 CH20300



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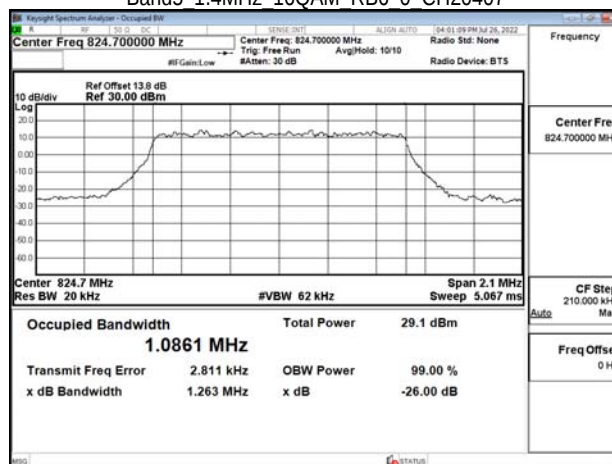
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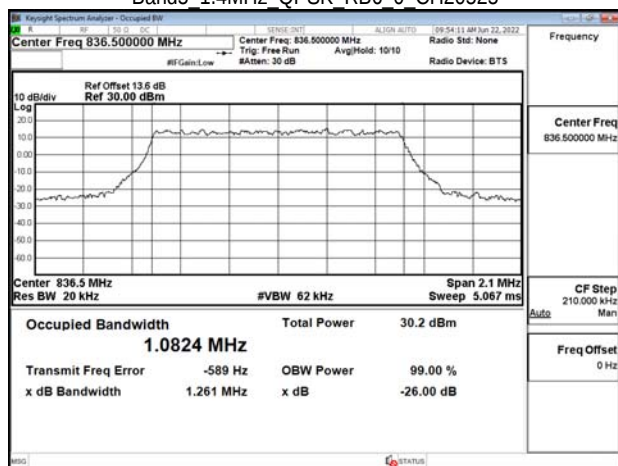
Band5 1.4MHz QPSK RB6 0 CH20407



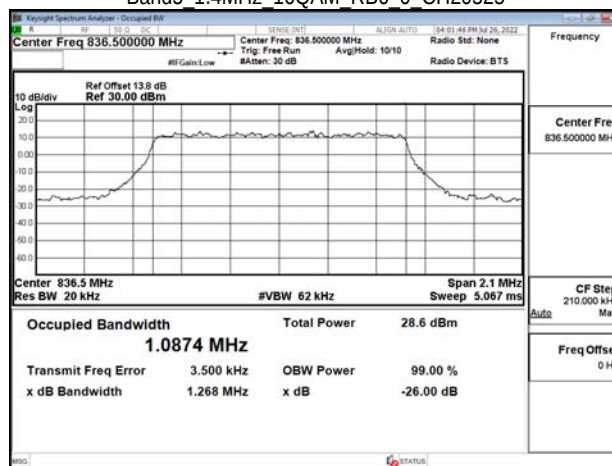
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Band5 1.4MHz QPSK RB6 0 CH20525



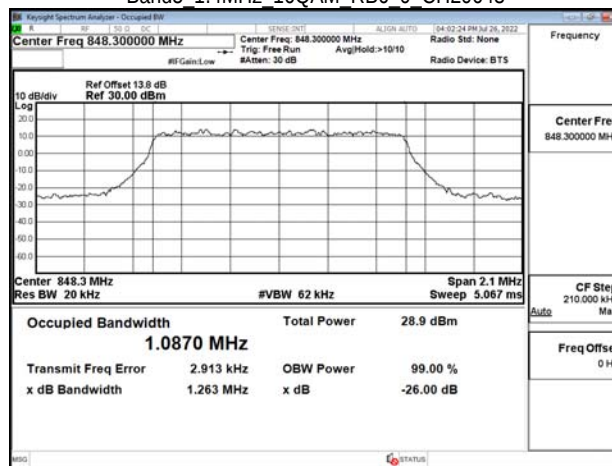
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Band5 1.4MHz QPSK RB6 0 CH20643



Band5 1.4MHz 16QAM RB6 0 CH20643

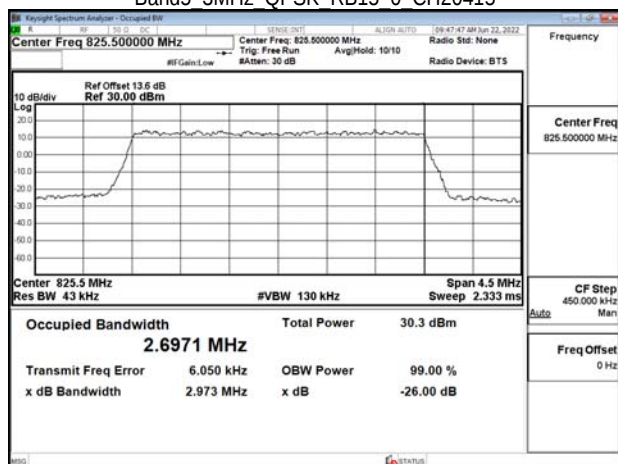


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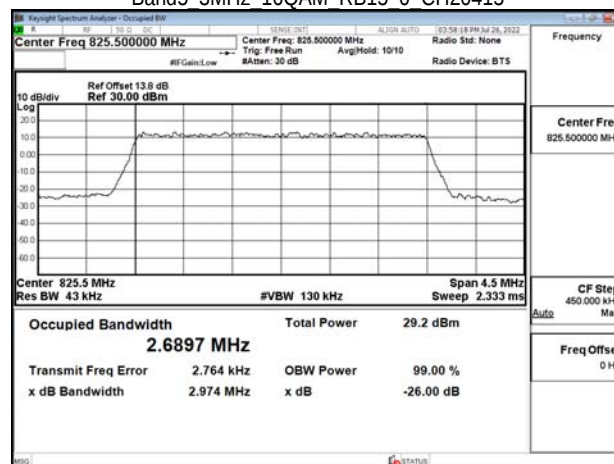
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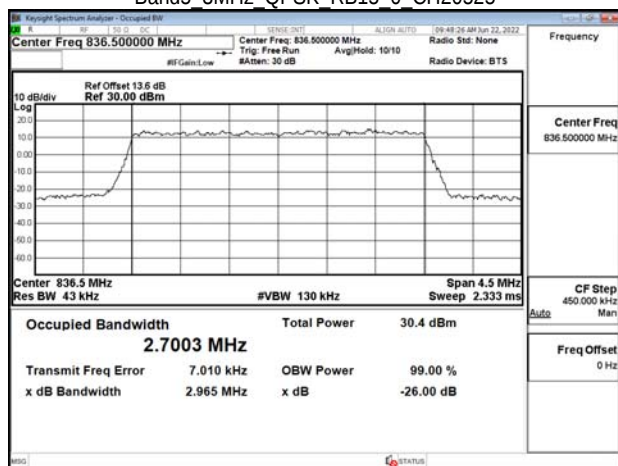
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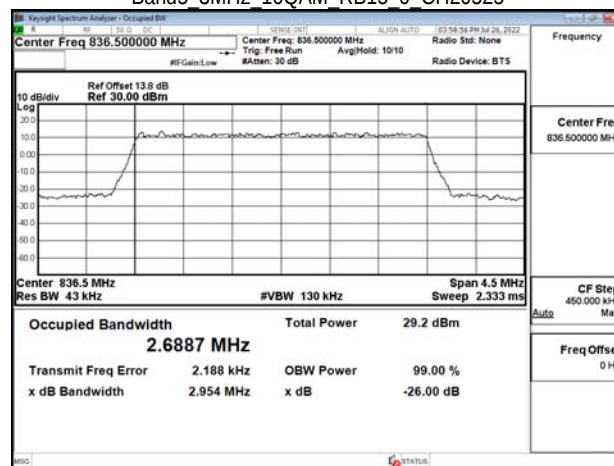
Band5 3MHz 16QAM RB15 0 CH20415



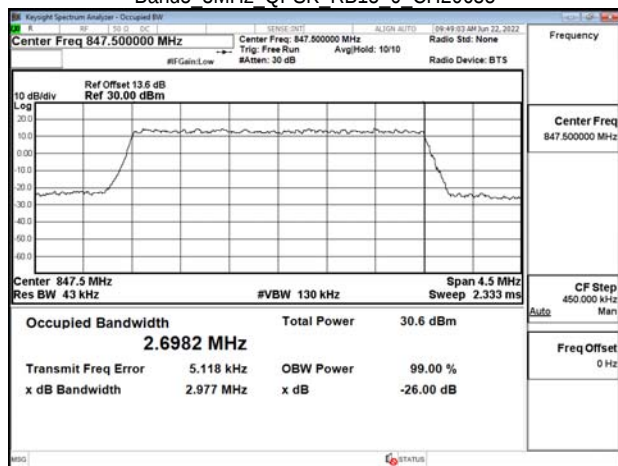
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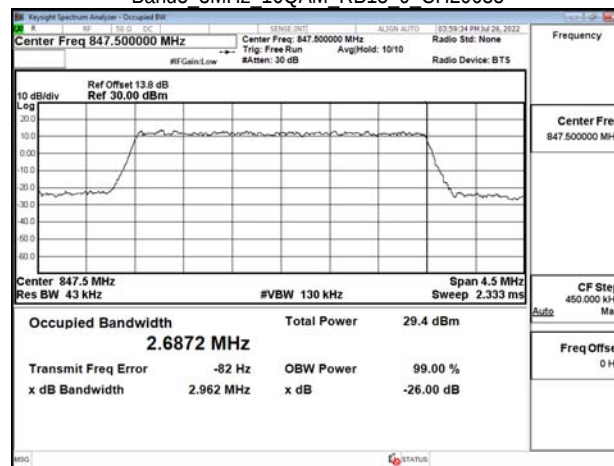
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Band5 3MHz QPSK RB15 0 CH20635



Band5 3MHz 16QAM RB15 0 CH20635

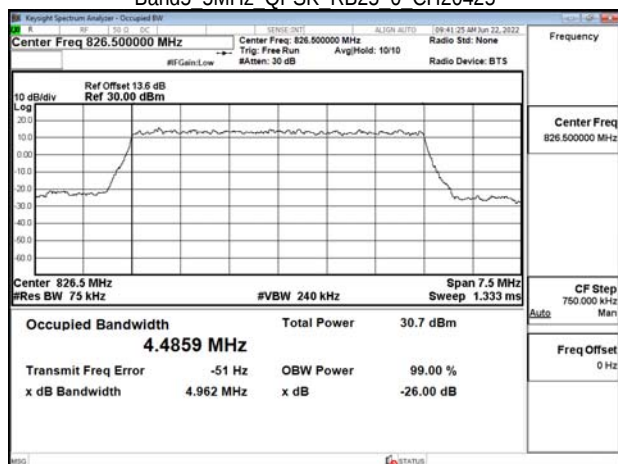


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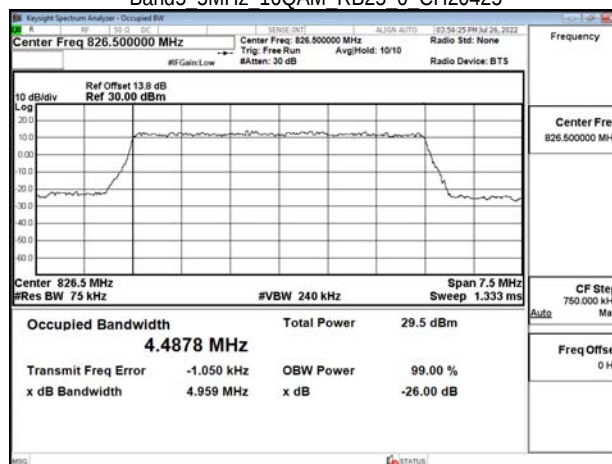
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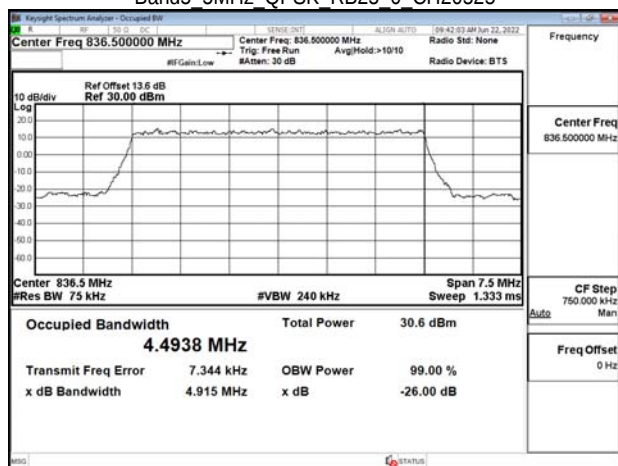
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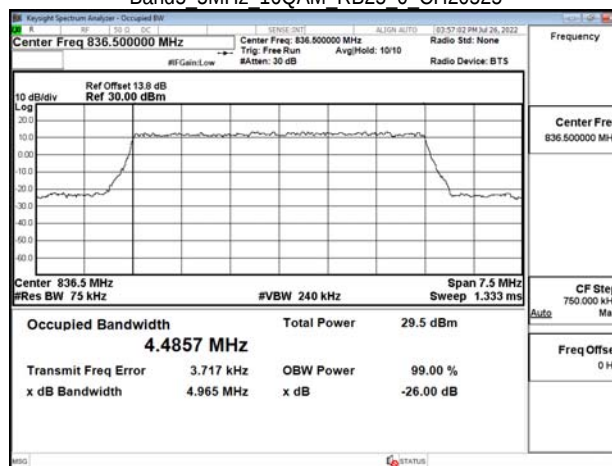
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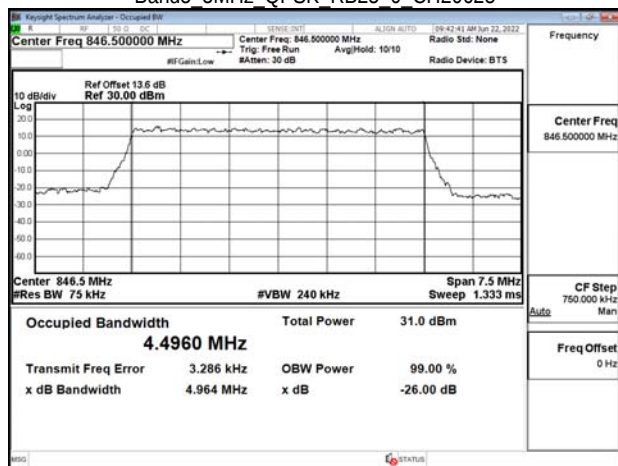
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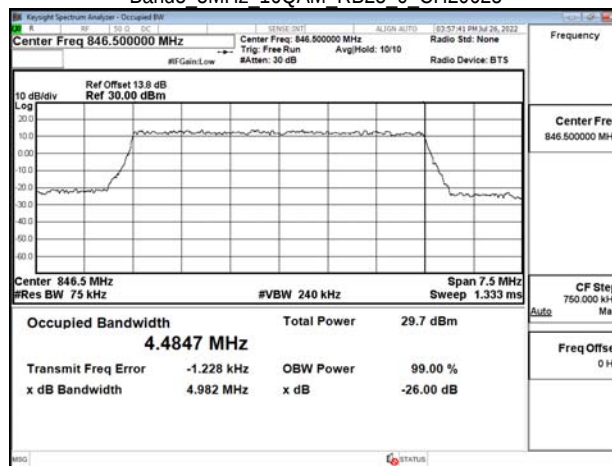
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Band5 5MHz QPSK RB25 0 CH20625



Band5 5MHz 16QAM RB25 0 CH20625

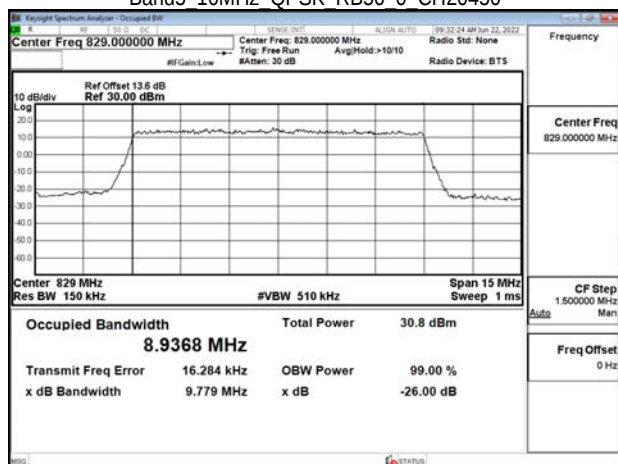


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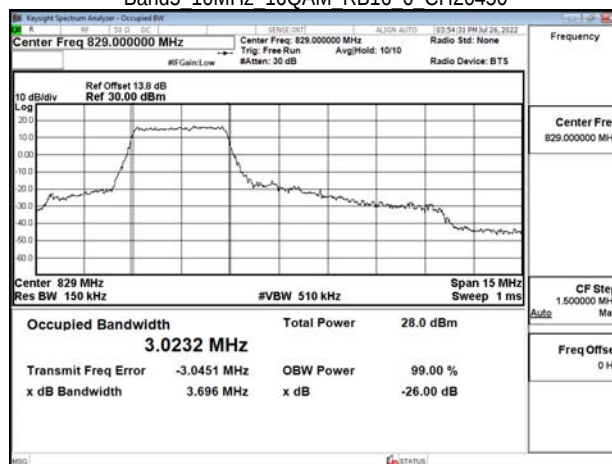
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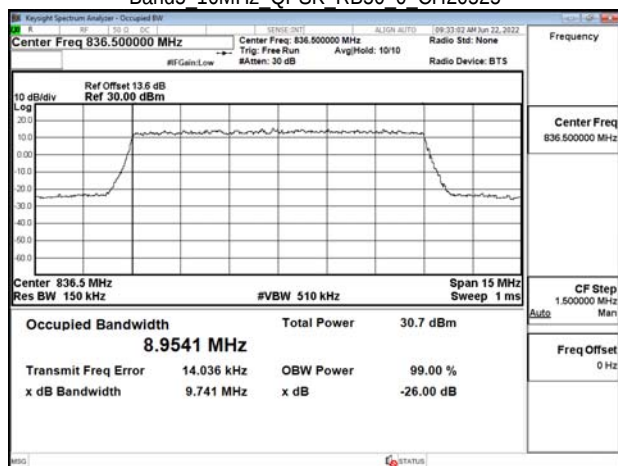
Band5 10MHz QPSK RB50 0 CH20450



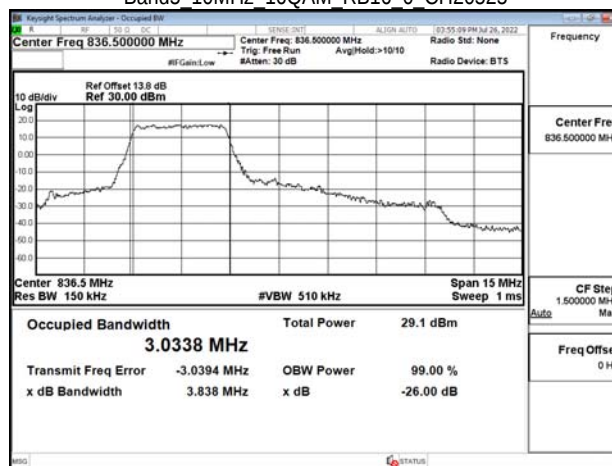
Band5 10MHz 16QAM RB16 0 CH20450



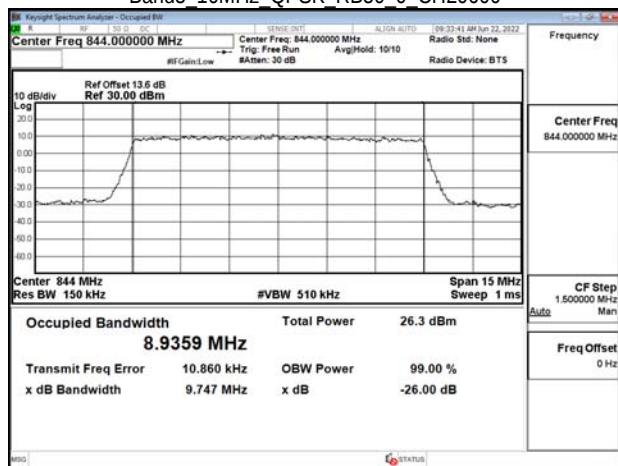
Band5 10MHz QPSK RB50 0 CH20525



Band5 10MHz 16QAM RB16 0 CH20525



Band5 10MHz QPSK RB50 0 CH20600



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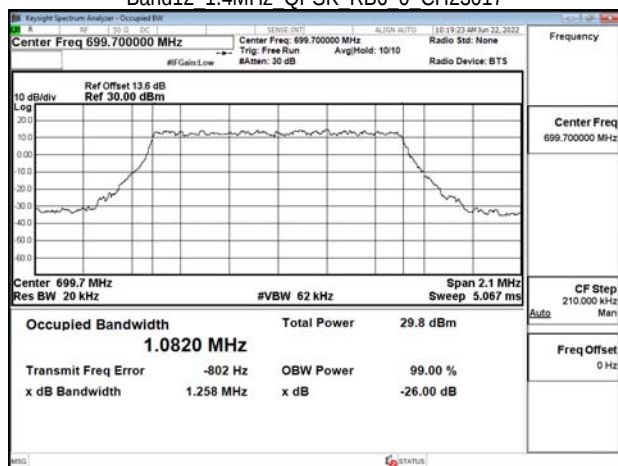


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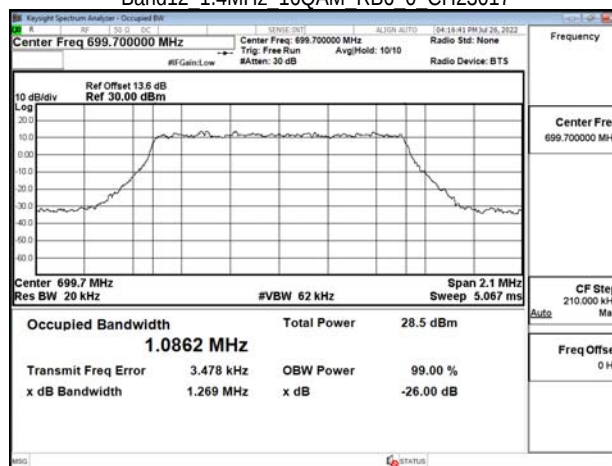
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Band12 1.4MHz QPSK RB6 0 CH23017



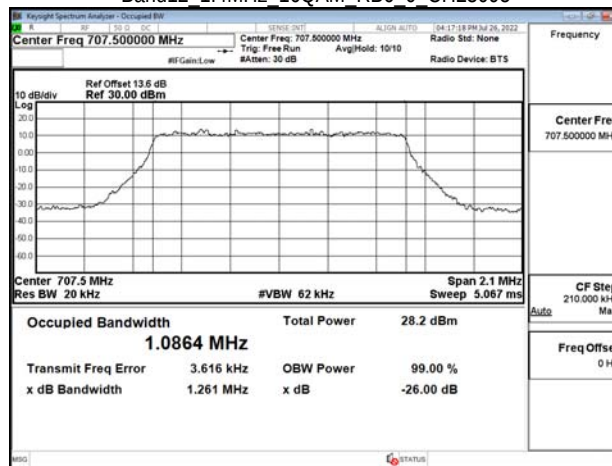
Band12 1.4MHz 16QAM RB6 0 CH23017



Band12 1.4MHz QPSK RB6 0 CH23095



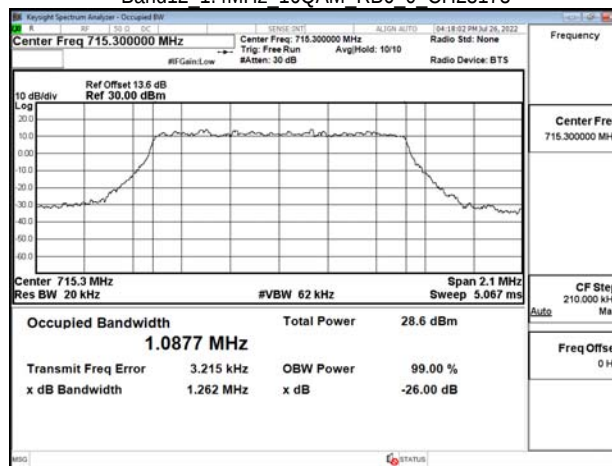
Band12 1.4MHz 16QAM RB6 0 CH23095



Band12 1.4MHz QPSK RB6 0 CH23173



Band12 1.4MHz 16QAM RB6 0 CH23173

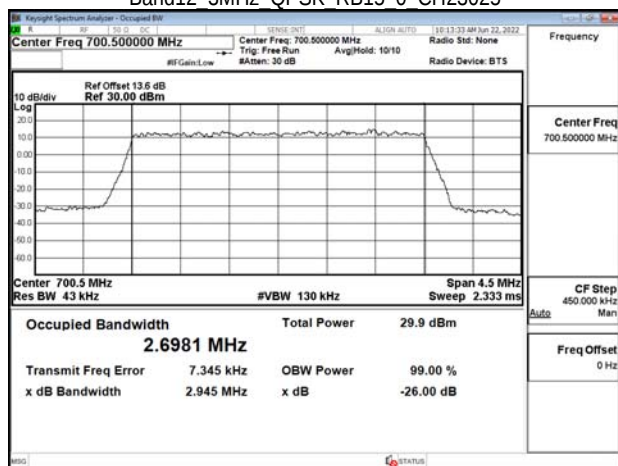


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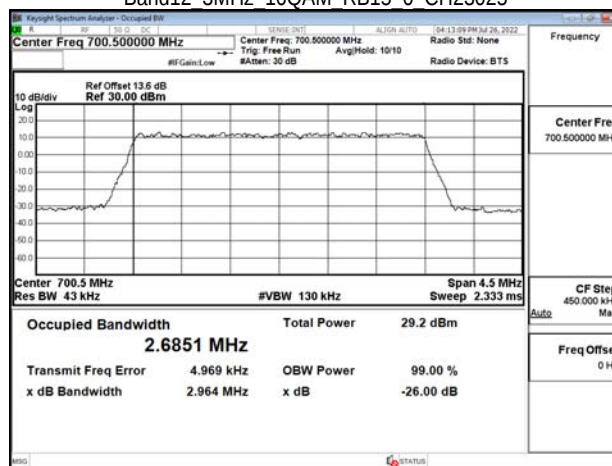
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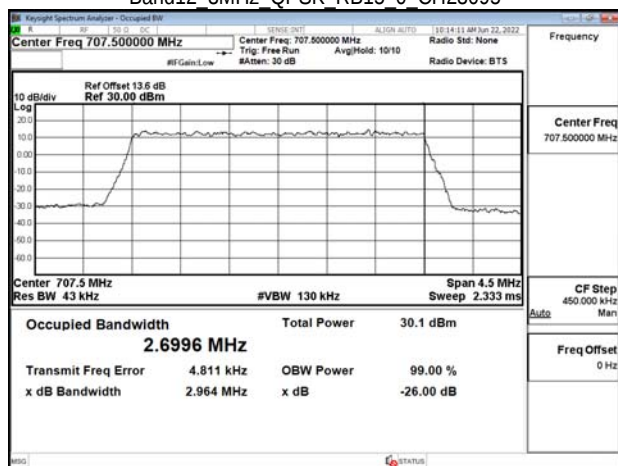
Band12 3MHz QPSK RB15 0 CH23025



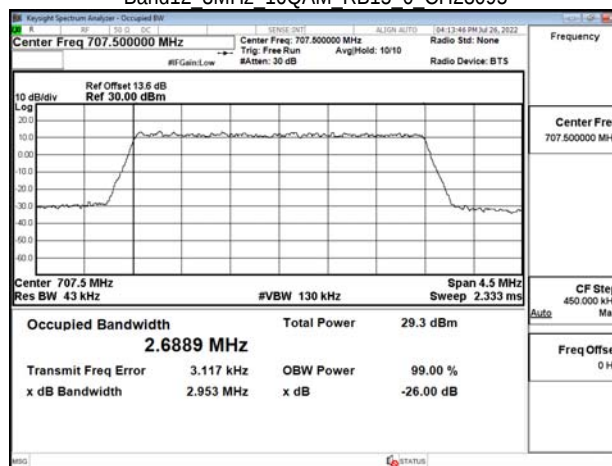
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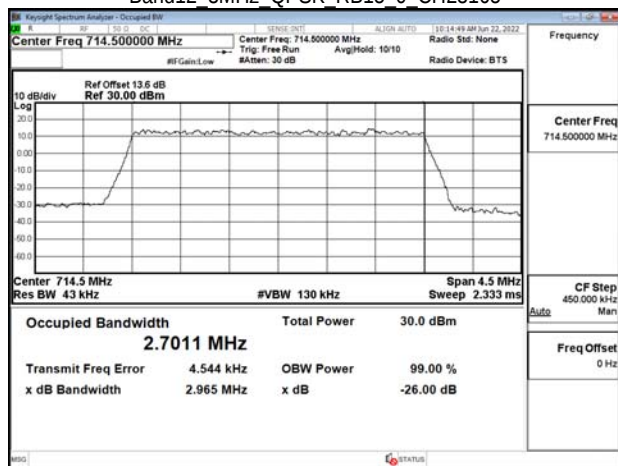
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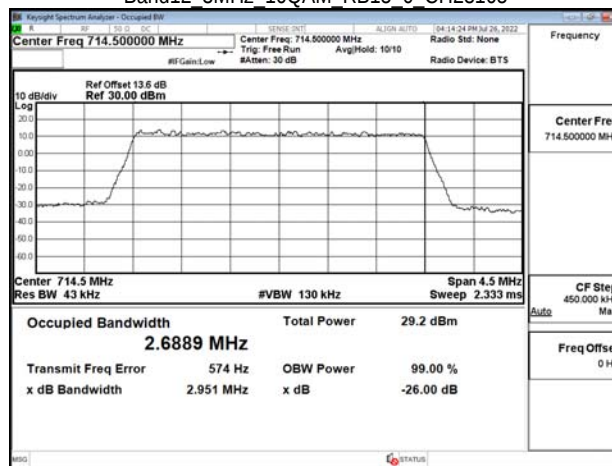
Band12 3MHz 16QAM RB15 0 CH23095



Band12 3MHz QPSK RB15 0 CH23165



Band12 3MHz 16QAM RB15 0 CH23165

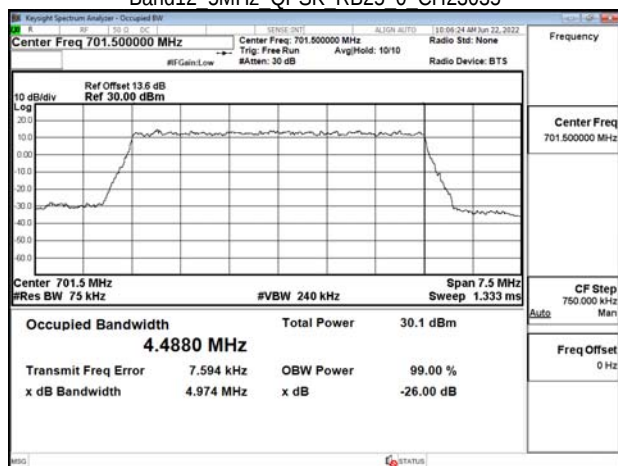


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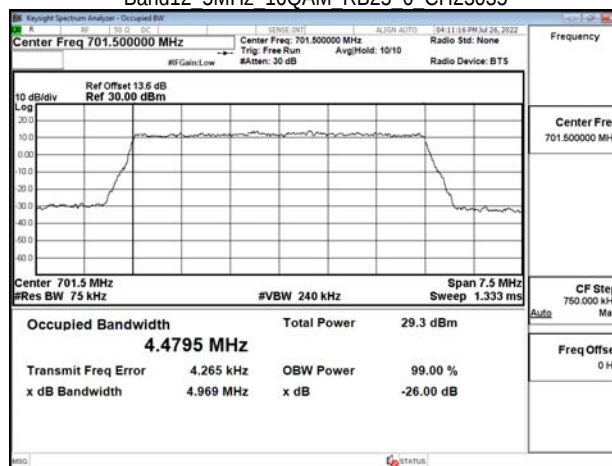
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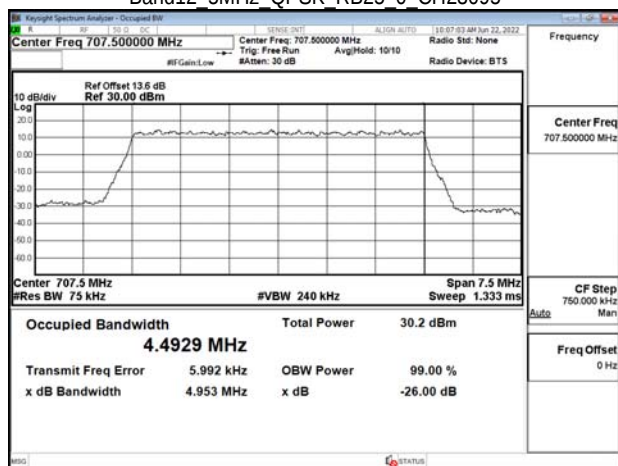
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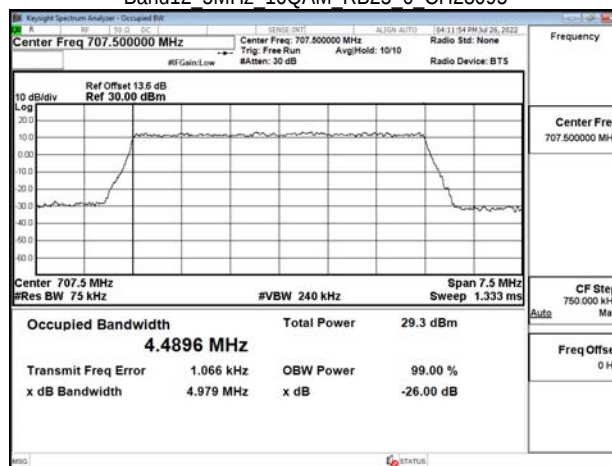
Band12 5MHz 16QAM RB25 0 CH23035



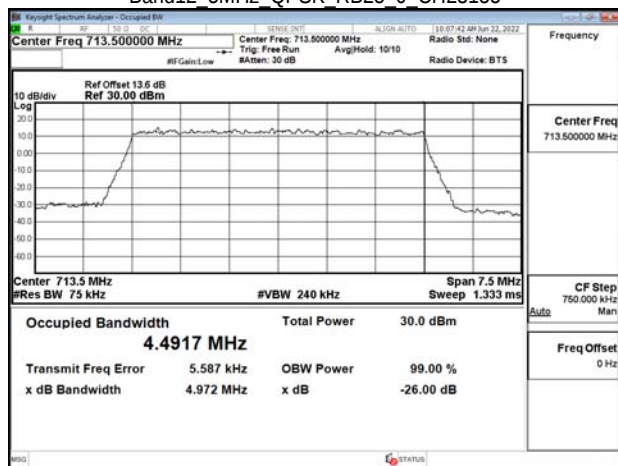
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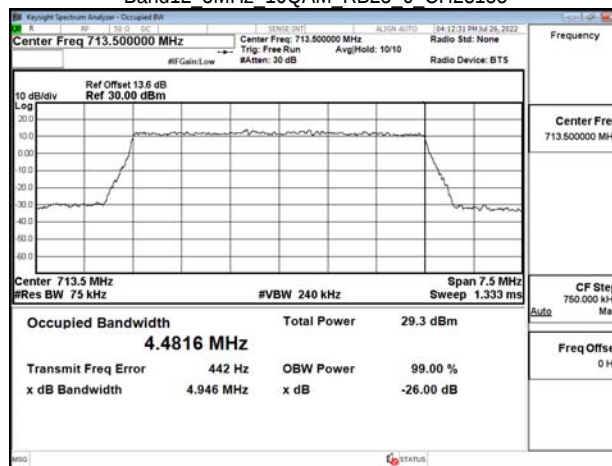
Band12 5MHz 16QAM RB25 0 CH23095



Band12 5MHz QPSK RB25 0 CH23155



Band12 5MHz 16QAM RB25 0 CH23155

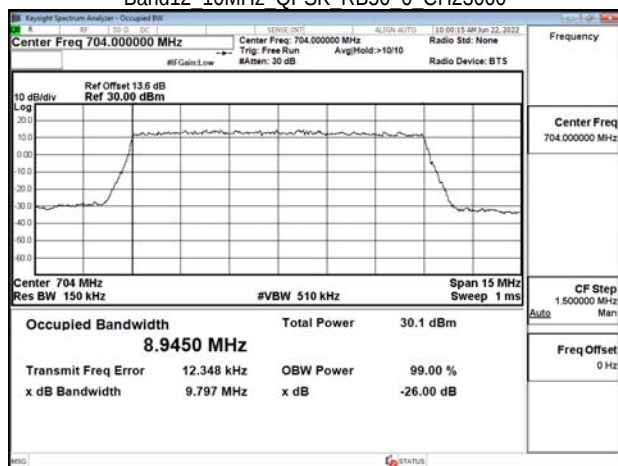


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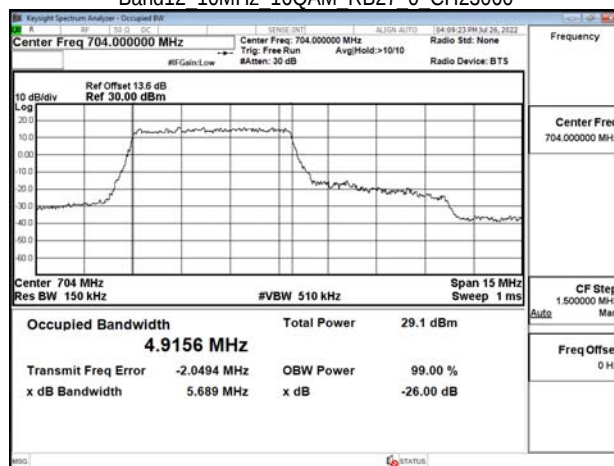
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Band12 10MHz QPSK RB50 0 CH23060



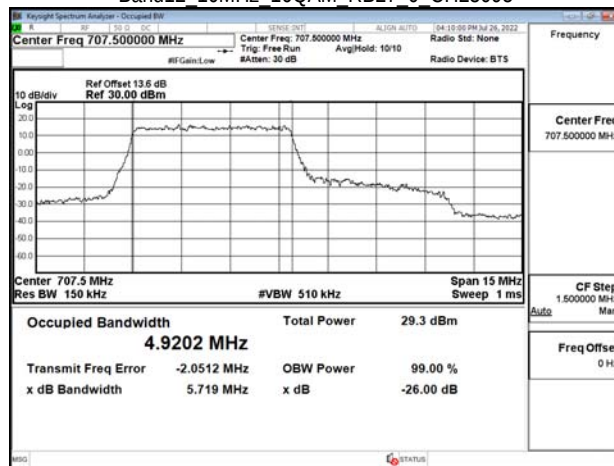
Band12 10MHz 16QAM RB27 0 CH23060



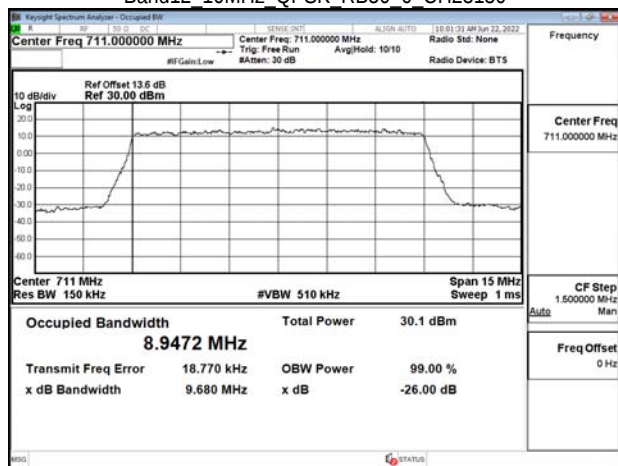
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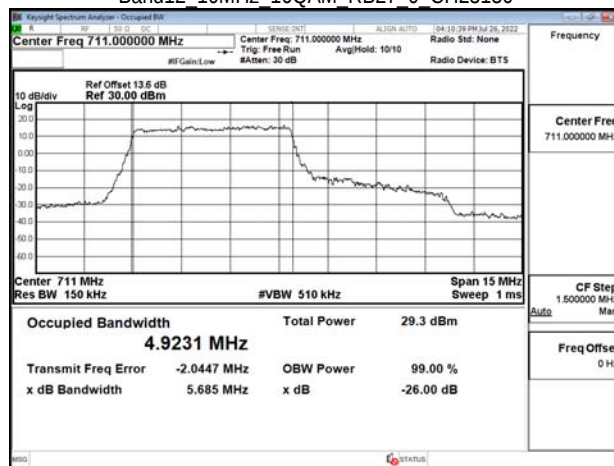
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Band12 10MHz QPSK RB50 0 CH23130



Band12 10MHz 16QAM RB27 0 CH23130

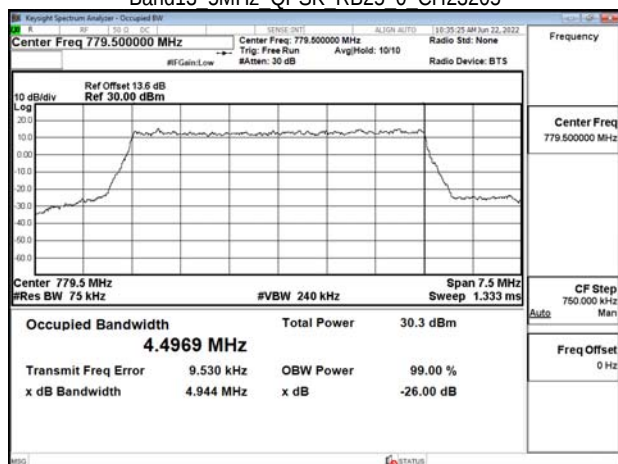


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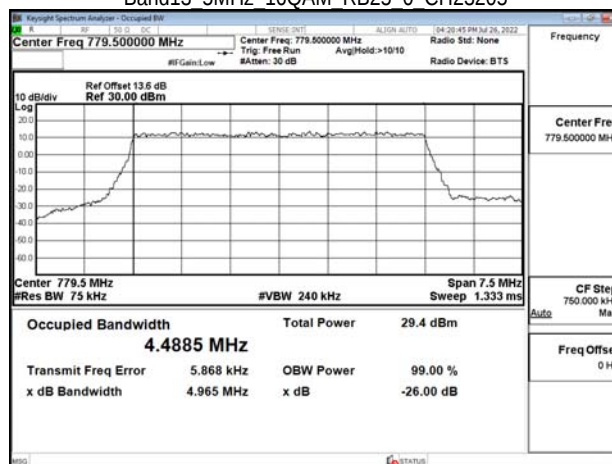
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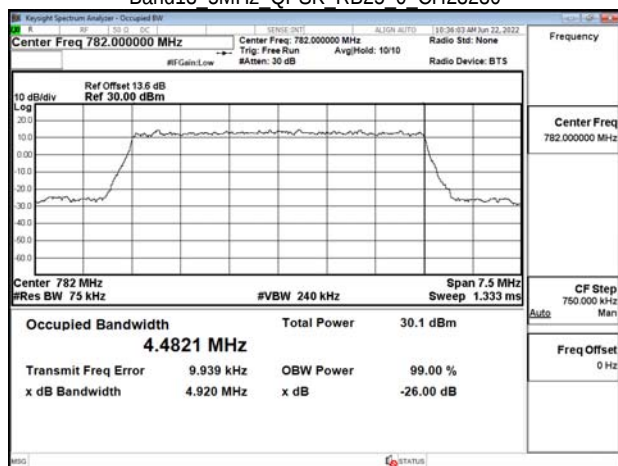
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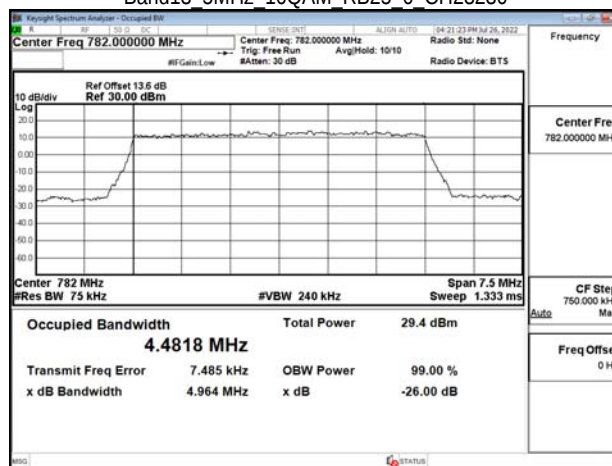
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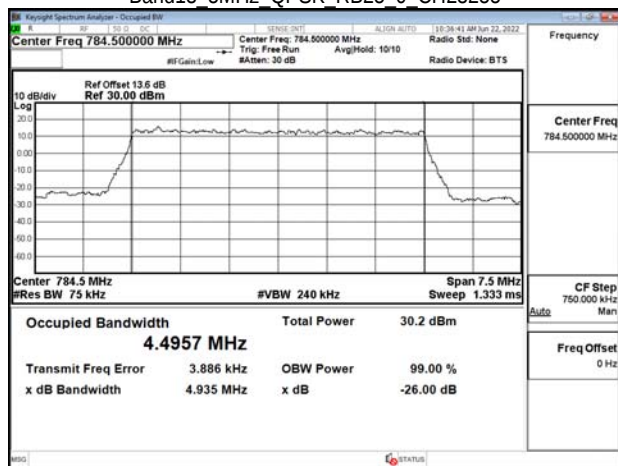
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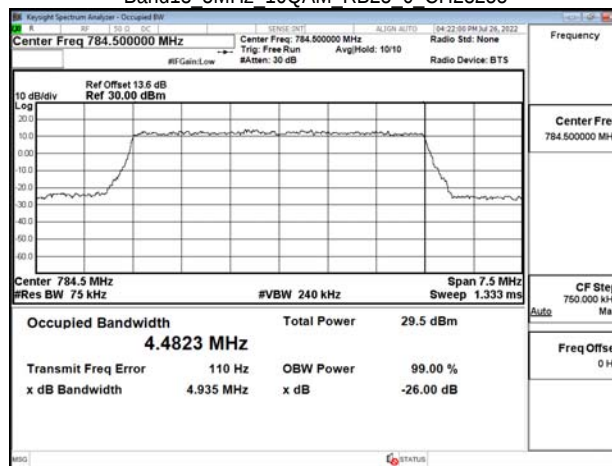
Band13 5MHz 16QAM RB25 0 CH23230



Band13 5MHz QPSK RB25 0 CH23255



Band13 5MHz 16QAM RB25 0 CH23255

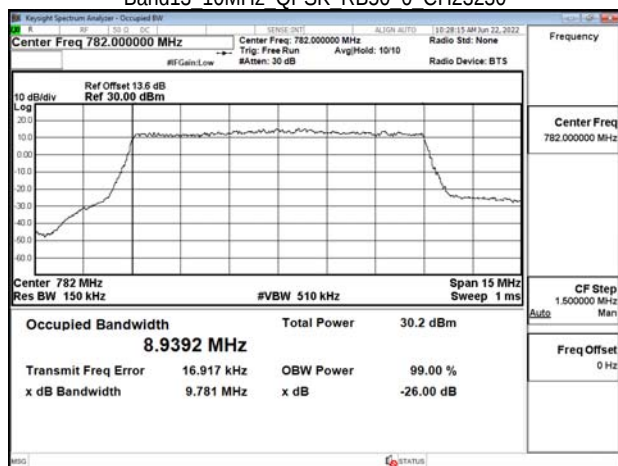


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

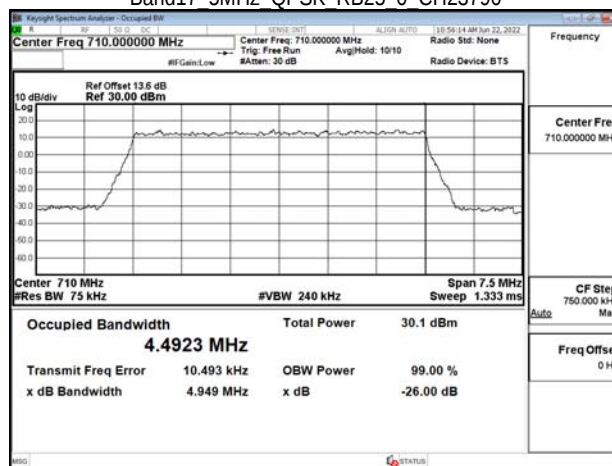
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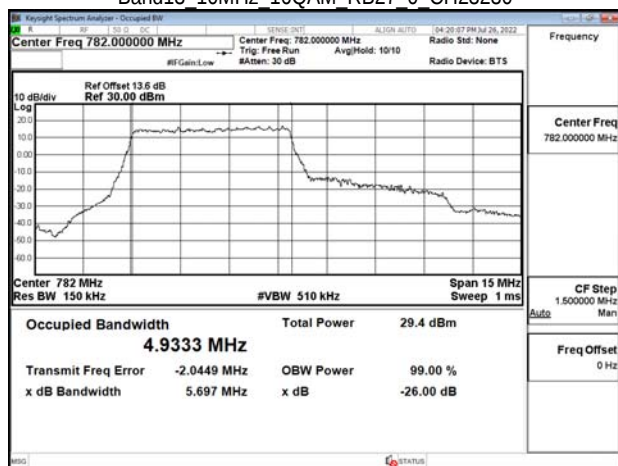
Band13 10MHz QPSK RB50 0 CH23230



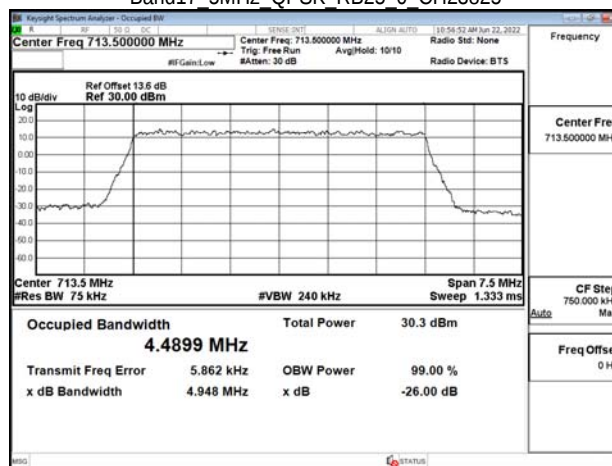
Band17 5MHz QPSK RB25 0 CH23790



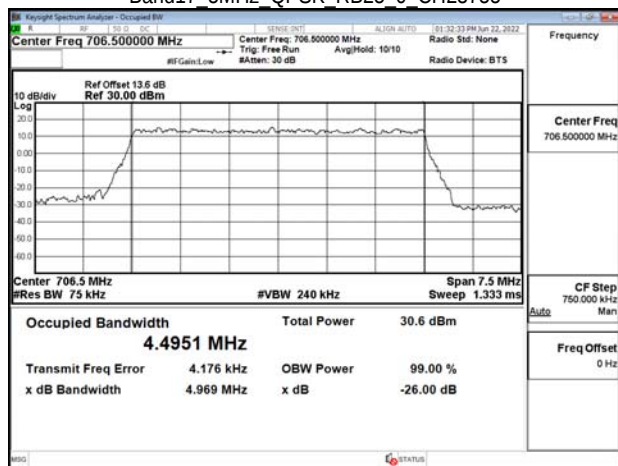
Band13 10MHz 16QAM RB27 0 CH23230



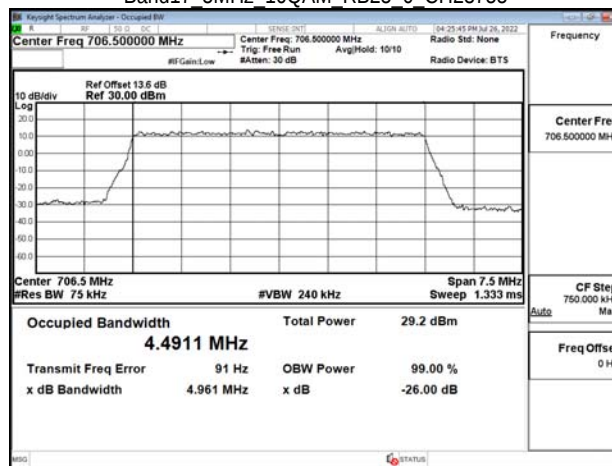
Band17 5MHz QPSK RB25 0 CH23825



Band17 5MHz QPSK RB25 0 CH23755



Band17 5MHz 16QAM RB25 0 CH23755



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