ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 22 SUBPART H, PART 24 SUBPART E and PART 27 SUBPART B, C & SUBPART L REQUIREMENT CLASS II PC REPORT

OF

Product Name:	**Smart Phone**
Brand Name:	**Nokia**
Model No.:	**TA-1023**
Model Difference:	**N/A**
FCC ID:	**2AJOTTA-1023**
Report No.:	**ER/2017/90156**
Issue Date:	**Oct. 16, 2017**
FCC Rule Part:	**2 , 22H & 24E & 27B, C & L**
Prepared for:	**HMD Global Oy** **Karaportti 2, 02610 Espoo, Finland**
Prepared by:	**SGS Taiwan Ltd.** **Electronics & Communication Laboratory** **No.134, Wu Kung Road, New Taipei Industrial Park,** **Wuku District, New Taipei City, Taiwan 24803**

Testing Laboratory
0513

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VERIFICATION OF COMPLIANCE

Applicant:	HMD Global Oy Karaportti 2, 02610 Espoo, Finland
Product Name:	Smart Phone
Brand Name:	Nokia
Model No.:	TA-1023
Model Difference:	N/A
FCC ID:	2AJOTTA-1023
File Number:	ER/2017/90156
Date of test:	Jul. 03, 2017 ~ Jul. 06, 2017 Aug. 10, 2017 (LTE Band 5) Oct. 03, 2017 (RSE Spot Check)
Date of EUT Received:	Jul. 24, 2017

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory
The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in TIA/EIA-603-E-2016 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits.
The test results of this report relate only to the tested sample identified in this report.

Test By:	Louis Chen	***Date:***	Oct. 16, 2017
	Louis Chen / Engineer		
Prepared By:	Karen Huang	***Date:***	Oct. 16, 2017
	Karen Huang / Clerk		
Approved By:	Jim Chang	***Date:***	Oct. 16, 2017
	Jim Chang / Asst. Manager		

Revision History

Report Number	Revision	Description	Issue Date
ER/2017/90156	Rev.00	Initial creation of document	Oct. 16, 2017

Contents

1. GENERAL PRODUCT INFORMATION

1.1. Product Description

General:

Product Name:	Smart Phone	
Brand Name:	Nokia	
Model No.:	TA-1023	
Model difference:	N/A	
Hardware Version:	690	
Software Version:	V0.37C	
USB Cable:	Model No.: CUBB01M-FA010-DH, Supplier: Nokia	
Headset:	Model No.: WH-108, Supplier: Nokia	
Power Supply:	3.85Vdc from Rechargeable Li-polymer Battery or 5 V from AC/DC Adapter	
	Battery:	Model No.:HE338, Supplier: Nokia
	Adapter:	Model No.: FC0102, Supplier: Nokia

GSM / WCDMA / LTE:

	Operating Frequency		Rated Power
Cellular Phone Standards Frequency Range and Power	GSM/GPRS 850	824.2 MHz– 848.8 MHz	33dBm
	EDGE 850	824.2 MHz– 848.8 MHz	27dBm
	GSM/GPRS 1900	1850.2MHz – 1909.8MHz	30dBm
	EDGE 1900	1850.2MHz – 1909.8MHz	26dBm
	WCDMA / HSPA+ Band II	1852.4MHz – 1907.6MHz	23.5dBm
	WCDMA / HSPA+ Band IV	1712.4MHz – 1752.6MHz	24dBm
	WCDMA / HSPA+ Band V	826.4MHz - 846.6MHz	24dBm
	LTE-Band 2 (1.4MHz)	1850.7MHz– 1909.3MHz	23dBm
	LTE-Band 2 (3MHz)	1851.5MHz – 1908.5MHz	23dBm
	LTE-Band 2 (5MHz)	1852.5MHz – 1907.5MHz	23dBm
	LTE-Band 2 (10MHz)	1855.0MHz – 1905.0MHz	23dBm
	LTE-Band 2 (15MHz)	1857.5MHz – 1902.5MHz	23dBm
	LTE-Band 2 (20MHz)	1860.0MHz – 1900.0MHz	23dBm
	LTE-Band 4 (1.4MHz)	1710.7MHz– 1754.3MHz	23dBm
	LTE-Band 4 (3MHz)	1711.5MHz – 1753.5MHz	23dBm
	LTE-Band 4 (5MHz)	1712.5MHz – 1752.5MHz	23dBm
	LTE-Band 4 (10MHz)	1715MHz – 1750MHz	23dBm
	LTE-Band 4 (15MHz)	1717.5MHz – 1747.5MHz	23dBm
	LTE-Band 4 (20MHz)	1720MHz – 1745MHz	23dBm
	LTE-Band 5 (1.4MHz)	824.7MHz – 848.3MHz	23dBm
	LTE-Band 5 (3MHz)	825.5MHz – 847.5MHz	23dBm
	LTE-Band 5 (5MHz)	826.5MHz – 846.5MHz	23dBm
	LTE-Band 5 (10MHz)	829.0MHz – 844.0MHz	23dBm
	LTE-Band 7 (Bandwidth 5MHz)	2502.5MHz – 2567.5MHz	23dBm
	LTE-Band 7 (Bandwidth 10MHz)	2505.0MHz – 2565.0MHz	23dBm
	LTE-Band 7 (Bandwidth 15MHz)	2507.5MHz – 2562.5MHz	23dBm
	LTE-Band 7 (Bandwidth 20MHz)	2510.0MHz – 2560MHz	23dBm
	LTE-Band 12 (1.4MHz)	699.7MHz– 715.3MHz	23dBm
	LTE-Band 12 (3MHz)	700.5MHz – 714.5MHz	23dBm
	LTE-Band 12 (5MHz)	701.5MHz – 713.5MHz	23dBm
	LTE-Band 12 (10MHz)	704.0MHz – 711.0MHz	23dBm
	LTE-Band 17 (5MHz)	706.5MHz – 713.5MHz	23dBm
	LTE-Band 17 (10MHz)	709.0MHz –711.0MHz	23dBm

Cellular Phone Standards Frequency Range and Power	LTE-Band 38 (Bandwidth 5MHz)	2572.5MHz – 2617.5MHz	23dBm
	LTE-Band 38 (Bandwidth 10MHz)	2575MHz – 2615MHz	23dBm
	LTE-Band 38 (Bandwidth 15MHz)	2577.5MHz – 2612.5MHz	23dBm
	LTE-Band 38 (Bandwidth 20MHz)	2580MHz – 2610MHz	23dBm
IMEI:	356040080004613		

Type of Emission:

Frequency Band	Type of Emission:
GSM 850	243KGXW
GPRS 850	245KGXW
EDGE 850	245KG7W
GSM 1900	246KGXW
GPRS 1900	240KGXW
EDGE 1900	249KG7W
WCDMA Band II	4M16F9W
HSDPA Band II	4M16F9W
HSUPA Band II	4M16F9W
WCDMA Band IV	4M15F9W
HSDPA Band IV	4M16F9W
HSUPA Band IV	4M16F9W
WCDMA Band V	4M13F9W
HSDPA Band V	4M15F9W
HSUPA Band V	4M13F9W

LTE Band	BW (MHz)	Modulation	Type of Emission
LTE Band 2	1.4MHz	QPSK	1M10G7D
LTE Band 2	1.4MHz	16QAM	1M10D7W
LTE Band 2	3MHz	QPSK	2M70G7D
LTE Band 2	3MHz	16QAM	2M71D7W
LTE Band 2	5MHz	QPSK	4M51G7D
LTE Band 2	5MHz	16QAM	4M51D7W
LTE Band 2	10MHz	QPSK	9M02G7D
LTE Band 2	10MHz	16QAM	8M96D7W
LTE Band 2	15MHz	QPSK	13M5G7D
LTE Band 2	15MHz	16QAM	13M5D7W
LTE Band 2	20MHz	QPSK	18M0G7D
LTE Band 2	20MHz	16QAM	18M0D7W

LTE Band	BW (MHz)	Modulation	Type of Emission
LTE Band 4	1.4MHz	QPSK	1M10G7D
LTE Band 4	1.4MHz	16QAM	1M10D7W
LTE Band 4	3MHz	QPSK	2M71G7D
LTE Band 4	3MHz	16QAM	2M71D7W
LTE Band 4	5MHz	QPSK	4M51G7D
LTE Band 4	5MHz	16QAM	4M51D7W
LTE Band 4	10MHz	QPSK	9M01G7D
LTE Band 4	10MHz	16QAM	8M96D7W
LTE Band 4	15MHz	QPSK	13M5G7D
LTE Band 4	15MHz	16QAM	13M5D7W
LTE Band 4	20MHz	QPSK	18M0G7D
LTE Band 4	20MHz	16QAM	18M0D7W
LTE Band 5	1.4MHz	QPSK	1M10G7D
LTE Band 5	1.4MHz	16QAM	1M10D7W
LTE Band 5	3MHz	QPSK	2M70G7D
LTE Band 5	3MHz	16QAM	2M70D7W
LTE Band 5	5MHz	QPSK	4M51G7D
LTE Band 5	5MHz	16QAM	4M51D7W
LTE Band 5	10MHz	QPSK	9M01G7D
LTE Band 5	10MHz	16QAM	8M97D7W
LTE Band 7	5MHz	QPSK	4M53G7D
LTE Band 7	5MHz	16QAM	4M52D7W
LTE Band 7	10MHz	QPSK	9M01G7D
LTE Band 7	10MHz	16QAM	8M96D7W
LTE Band 7	15MHz	QPSK	13M5G7D
LTE Band 7	15MHz	16QAM	13M5D7W
LTE Band 7	20MHz	QPSK	17M9G7D
LTE Band 7	20MHz	16QAM	18M0D7W
LTE Band 12	1.4MHz	QPSK	1M10G7D
LTE Band 12	1.4MHz	16QAM	1M10D7W
LTE Band 12	3MHz	QPSK	2M70G7D
LTE Band 12	3MHz	16QAM	2M70D7W
LTE Band 12	5MHz	QPSK	4M52G7D
LTE Band 12	5MHz	16QAM	4M52D7W
LTE Band 12	10MHz	QPSK	9M03G7D
LTE Band 12	10MHz	16QAM	8M95D7W

LTE Band	BW (MHz)	Modulation	Type of Emission
LTE Band 17	5MHz	QPSK	4M52G7D
LTE Band 17	5MHz	16QAM	4M59D7W
LTE Band 17	10MHz	QPSK	9M10G7D
LTE Band 17	10MHz	16QAM	9M12D7W
LTE Band 38	5MHz	QPSK	4M21G7D
LTE Band 38	5MHz	16QAM	4M51D7W
LTE Band 38	10MHz	QPSK	8M99G7D
LTE Band 38	10MHz	16QAM	8M98D7W
LTE Band 38	15MHz	QPSK	13M5G7D
LTE Band 38	15MHz	16QAM	13M5D7W
LTE Band 38	20MHz	QPSK	18M0G7D
LTE Band 38	20MHz	16QAM	18M0D7W

Max ERP/EIRP Power Measurement Result:

	dBm		W
GSM 850	**15.65**	ERP	0.037
GPRS 850	**19.15**	ERP	0.082
EDGE 850	**16.95**	ERP	0.050
GSM 1900	**22.44**	EIRP	0.175
GPRS 1900	**26.29**	EIRP	0.426
EDGE 1900	**24.72**	EIRP	0.296
WCDMA Band II	**21.53**	EIRP	0.142
HSDPA Band II	**25.33**	EIRP	0.341
HSUPA Band II	**23.08**	EIRP	0.203
WCDMA Band IV	**21.52**	EIRP	0.142
HSDPA Band IV	**24.31**	EIRP	0.270
HSUPA Band IV	**22.83**	EIRP	0.192
WCDMA Band V	**10.72**	ERP	0.012
HSDPA Band V	**12.44**	ERP	0.018
HSUPA Band V	**11.71**	ERP	0.015
LTE-Band 2 (Bandwidth 1.4MHz) QPSK	**18.87**	EIRP	0.077
LTE-Band 2 (Bandwidth 1.4MHz) 16QAM	**19.06**	EIRP	0.081
LTE-Band 2 (Bandwidth 3MHz) QPSK	**19.23**	EIRP	0.084
LTE-Band 2 (Bandwidth 3MHz) 16QAM	**19.33**	EIRP	0.086
LTE-Band 2 (Bandwidth 5MHz) QPSK	**19.17**	EIRP	0.083
LTE-Band 2 (Bandwidth 5MHz) 16QAM	**19.18**	EIRP	0.083
LTE-Band 2 (Bandwidth 10MHz) QPSK	**19.63**	EIRP	0.092
LTE-Band 2 (Bandwidth 10MHz) 16QAM	**19.01**	EIRP	0.080
LTE-Band 2 (Bandwidth 15MHz) QPSK	**19.34**	EIRP	0.086
LTE-Band 2 (Bandwidth 15MHz) 16QAM	**19.62**	EIRP	0.092
LTE-Band 2 (Bandwidth 20MHz) QPSK	**19.60**	EIRP	0.091
LTE-Band 2 (Bandwidth 20MHz) 16QAM	**19.55**	EIRP	0.090
LTE-Band 4 (Bandwidth 1.4MHz) QPSK	**18.87**	EIRP	0.077
LTE-Band 4 (Bandwidth 1.4MHz) 16QAM	**19.06**	EIRP	0.081
LTE-Band 4 (Bandwidth 3MHz) QPSK	**19.23**	EIRP	0.084
LTE-Band 4 (Bandwidth 3MHz) 16QAM	**19.33**	EIRP	0.086
LTE-Band 4 (Bandwidth 5MHz) QPSK	**19.17**	EIRP	0.083
LTE-Band 4 (Bandwidth 5MHz) 16QAM	**19.18**	EIRP	0.083
LTE-Band 4 (Bandwidth 10MHz) QPSK	**19.63**	EIRP	0.092
LTE-Band 4 (Bandwidth 10MHz) 16QAM	**19.01**	EIRP	0.080
LTE-Band 4 (Bandwidth 15MHz) QPSK	**19.34**	EIRP	0.086
LTE-Band 4 (Bandwidth 15MHz) 16QAM	**19.62**	EIRP	0.092
LTE-Band 4 (Bandwidth 20MHz) QPSK	**19.60**	EIRP	0.091
LTE-Band 4 (Bandwidth 20MHz) 16QAM	**19.55**	EIRP	0.090

	dBm		W
LTE-Band 5 (Bandwidth 1.4MHz) QPSK	**15.62**	ERP	0.036
LTE-Band 5 (Bandwidth 1.4MHz) 16QAM	**15.21**	ERP	0.033
LTE-Band 5 (Bandwidth 3MHz) QPSK	**15.42**	ERP	0.035
LTE-Band 5 (Bandwidth 3MHz) 16QAM	**15.48**	ERP	0.035
LTE-Band 5 (Bandwidth 5MHz) QPSK	**15.21**	ERP	0.033
LTE-Band 5 (Bandwidth 5MHz) 16QAM	**16.18**	ERP	0.041
LTE-Band 5 (Bandwidth 10MHz) QPSK	**14.94**	ERP	0.031
LTE-Band 5 (Bandwidth 10MHz) 16QAM	**15.89**	ERP	0.039
LTE-Band 7 (Bandwidth 5MHz) QPSK	**22.11**	EIRP	0.163
LTE-Band 7 (Bandwidth 5MHz) 16QAM	**21.98**	EIRP	0.158
LTE-Band 7 (Bandwidth 10MHz) QPSK	**22.52**	EIRP	0.179
LTE-Band 7 (Bandwidth 10MHz) 16QAM	**22.44**	EIRP	0.175
LTE-Band 7 (Bandwidth 15MHz) QPSK	**22.36**	EIRP	0.172
LTE-Band 7 (Bandwidth 15MHz) 16QAM	**22.80**	EIRP	0.191
LTE-Band 7 (Bandwidth 20MHz) QPSK	**22.60**	EIRP	0.182
LTE-Band 7 (Bandwidth 20MHz) 16QAM	**22.11**	EIRP	0.163
LTE-Band 12 (Bandwidth 1.4MHz) QPSK	**14.97**	ERP	0.031
LTE-Band 12 (Bandwidth 1.4MHz) 16QAM	**14.77**	ERP	0.030
LTE-Band 12 (Bandwidth 3MHz) QPSK	**15.12**	ERP	0.033
LTE-Band 12 (Bandwidth 3MHz) 16QAM	**14.75**	ERP	0.030
LTE-Band 12 (Bandwidth 5MHz) QPSK	**14.70**	ERP	0.030
LTE-Band 12 (Bandwidth 5MHz) 16QAM	**14.56**	ERP	0.029
LTE-Band 12 (Bandwidth 10MHz) QPSK	**14.88**	ERP	0.031
LTE-Band 12 (Bandwidth 10MHz) 16QAM	**14.70**	ERP	0.030
LTE-Band 17 (Bandwidth 5MHz) QPSK	**16.44**	ERP	0.044
LTE-Band 17 (Bandwidth 5MHz) 16QAM	**16.51**	ERP	0.045
LTE-Band 17 (Bandwidth 10MHz) QPSK	**16.00**	ERP	0.040
LTE-Band 17 (Bandwidth 10MHz) 16QAM	**15.60**	ERP	0.036
LTE-Band 38 (Bandwidth 5MHz) QPSK	**28.36**	EIRP	0.685
LTE-Band 38 (Bandwidth 5MHz) 16QAM	**27.89**	EIRP	0.615
LTE-Band 38 (Bandwidth 10MHz) QPSK	**28.39**	EIRP	0.690
LTE-Band 38 (Bandwidth 10MHz) 16QAM	**27.63**	EIRP	0.579
LTE-Band 38 (Bandwidth 15MHz) QPSK	**28.02**	EIRP	0.634
LTE-Band 38 (Bandwidth 15MHz) 16QAM	**27.66**	EIRP	0.583
LTE-Band 38 (Bandwidth 20MHz) QPSK	**26.58**	EIRP	0.455
LTE-Band 38 (Bandwidth 20MHz) 16QAM	**26.35**	EIRP	0.432

1.2. Test Methodology of Applied Standards

FCC 47 CFR Part 2, 22, 24, 27

ANSI / TIA / EIA 603-E-2016

KDB971168 D01 Power Meas license Digital System

KDB941225 of the Output power Procedure of (SAR Measurement Procedures for 3G Devices, WCDMA / HSPA) was used for EUT and Base station setting.

TS 151 010-1 is used to set, and measure the output power.

Note: All test items have been performed and record as per the above standards.

1.3. Test Facility

SGS Taiwan Ltd. Electronics & Communication Laboratory No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan. (TAF code 0513)

FCC Registration Numbers are: 509634

1.4. Special Accessories

No special accessories were used during testing.

1.5. Equipment Modifications

There were no modifications incorporated into the EUT.

1.6. Class II Permissive Change

This report includes test data that fully referred from the original authorization FCC ID: **2AJOTTA-1023.** Grant Date: 08/08/2017 and 09/05/2017. Exhibition: PCE Test report ER/2017/60090 and ER/2017/60090-01.

RSE spot check data has been included in this report to apply for C2PC as an attestation that the modification does not impact compliance.

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

According to measurement procured TIA/EIA 603E, the EUT is placed on a turn 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)

According to measurement procured TIA/EIA 603E, The EUT is a placed on as turn table which is 0.8 m above ground plane. 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 according to the requirements in Section 8 and 13.

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 example with cable loss 1 dB for low band and 1 for high band with 10 dB attenuator and 3.2 splitter.

Low Band: Offset = RF cable loss (dB) + attenuation factor(dB) =3.8+10=13.8(dB)

High Band: Offset = RF cable loss (dB) + attenuation factor(dB) =4+10=14(dB)

2.5. Final Amplifier Voltage and Current Information:

Test mode	DC voltage (V)	DC current (mA)
GSM 850	3.8	316
GSM 1900	3.8	206
GPRS 850	3.8	325
GPRS 1900	3.8	222
EDGE 850	3.8	337
EDGE 1900	3.8	207
WCDMA B2	3.8	332
WCDMA B4	3.8	206
WCDMA B5	3.8	325
HSUPA B2	3.8	226
HSUPA B4	3.8	343
HSUPA B5	3.8	231
HSDPA B2	3.8	333
HSDPA B4	3.8	239
HSDPA B5	3.8	348

LTE Band 2

Test mode	DC voltage (V)	DC current (mA)
LTE Band 2_1.4M QPSK	3.8	729
LTE Band 2_1.4M 16QAM	3.8	641
LTE Band 2_3M QPSK	3.8	736
LTE Band 2_3M 16QAM	3.8	658
LTE Band 2_5M QPSK	3.8	736
LTE Band 2_5M 16QAM	3.8	664
LTE Band 2_10M QPSK	3.8	720
LTE Band 2_10M 16QAM	3.8	651
LTE Band 2_15M QPSK	3.8	732
LTE Band 2_15M 16QAM	3.8	660
LTE Band 2_20M QPSK	3.8	708
LTE Band 2_20M 16QAM	3.8	640

LTE Band 4

Test mode	DC voltage (V)	DC current (mA)
LTE Band 4_1.4M QPSK	3.8	656
LTE Band 4_1.4M 16QAM	3.8	605
LTE Band 4_3M QPSK	3.8	660
LTE Band 4_3M 16QAM	3.8	615
LTE Band 4_5M QPSK	3.8	641
LTE Band 4_5M 16QAM	3.8	588
LTE Band 4_10M QPSK	3.8	639
LTE Band 4_10M 16QAM	3.8	608
LTE Band 4_15M QPSK	3.8	628
LTE Band 4_15M 16QAM	3.8	579
LTE Band 4_20M QPSK	3.8	635
LTE Band 4_20M 16QAM	3.8	594

LTE Band 5

Test mode	DC voltage (V)	DC current (mA)
LTE Band 5_1.4M QPSK	3.85	719
LTE Band 5_1.4M 16QAM	3.85	678
LTE Band 5_3M QPSK	3.85	733
LTE Band 5_3M 16QAM	3.85	654
LTE Band 5_5M QPSK	3.85	759
LTE Band 5_5M 16QAM	3.85	681
LTE Band 5_10M QPSK	3.85	724
LTE Band 5_10M 16QAM	3.85	692

LTE Band 7

Test mode	DC voltage (V)	DC current (mA)
LTE Band 7_5M QPSK	3.8	732
LTE Band 7_5M 16QAM	3.8	655
LTE Band 7_10M QPSK	3.8	741
LTE Band 7_10M 16QAM	3.8	633
LTE Band 7_15M QPSK	3.8	771
LTE Band 7_15M 16QAM	3.8	665
LTE Band 7_20M QPSK	3.8	711
LTE Band 7_20M 16QAM	3.8	671

LTE Band 12

Test mode	DC voltage (V)	DC current (mA)
LTE Band 12_1.4M QPSK	3.8	462
LTE Band 12_1.4M 16QAM	3.8	431
LTE Band 12_3M QPSK	3.8	486
LTE Band 12_3M 16QAM	3.8	448
LTE Band 12_5M QPSK	3.8	474
LTE Band 12_5M 16QAM	3.8	444
LTE Band 12_10M QPSK	3.8	458
LTE Band 12_10M 16QAM	3.8	419

LTE Band 17

Test mode	DC voltage (V)	DC current (mA)
LTE Band 17_5M QPSK	3.8	28
LTE Band 17_5M 16QAM	3.8	402
LTE Band 17_10M QPSK	3.8	449
LTE Band 17_10M 16QAM	3.8	414

LTE Band 38

Test mode	DC voltage (V)	DC current (mA)
LTE Band 38_5M QPSK	3.8	349
LTE Band 38_5M 16QAM	3.8	301
LTE Band 38_10M QPSK	3.8	322
LTE Band 38_10M 16QAM	3.8	289
LTE Band 38_15M QPSK	3.8	311
LTE Band 38_15M 16QAM	3.8	294
LTE Band 38_20M QPSK	3.8	317
LTE Band 38_20M 16QAM	3.8	288

2.6. Configuration of Tested System

Fig. 2-1 Configuration of Tested System (Fixed Channel-Conducted)

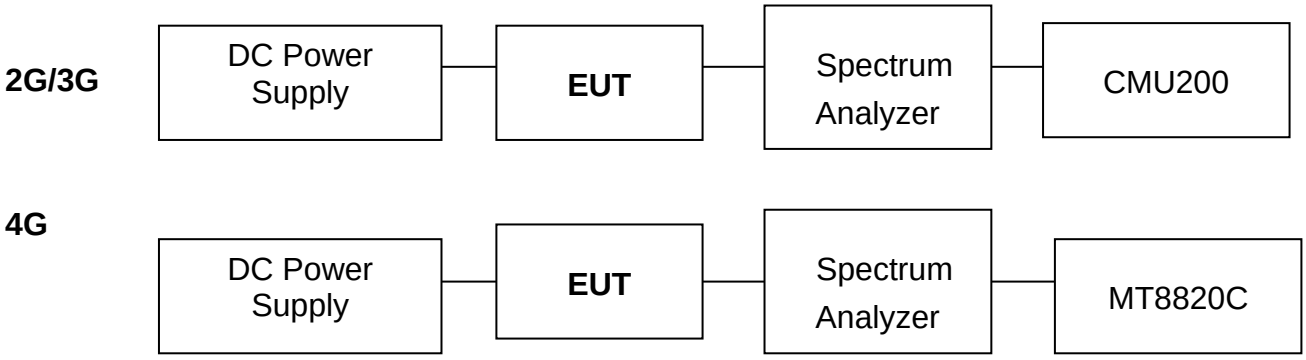


Fig. 2-2 Configuration of Tested System (Fixed Channel-Radiated)

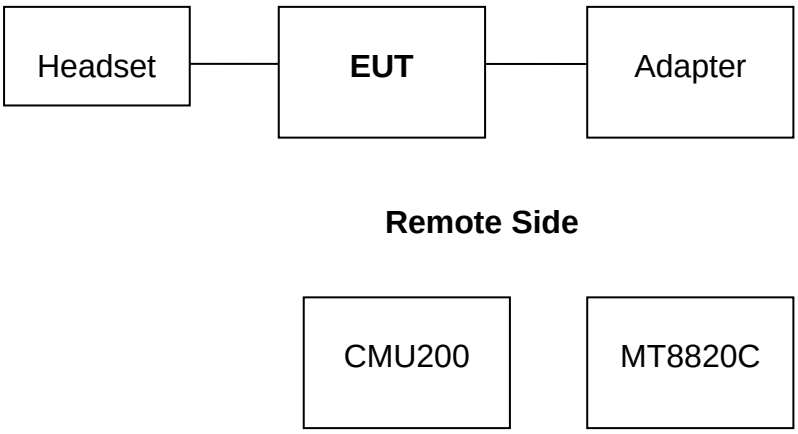


Table 2-1 Equipment Used in

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	Universal Radio Communication Tester	R&S	CMU200	102189	shielded	Un-shielded
2.	Universal Radio Communication Tester	Anritsu	MT8820C	6200307563	shielded	Un-shielded

3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§2.1046	RF Power Output	Compliant
§2.1046(a) §22.913(a)(5) §24.232(c) §27.50(c)(9)(10) §27.50(d)(4) §27.50(h)(2)	ERP/ EIRP measure-ment	Compliant
§2.1049(h)	99% & 26dB Oc-cuupied Bandwidth	Compliant
§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h) §27.53(m)(4)(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(g) §27.53(h) §27.53(m)	Field Strength of Spu-rious Radiation	Compliant
§24.232(d) §27.50(b)	Peak to Average Ratio	Compliant
§2.1055(a)(1) §22.355 §24.235 §27.54	Frequency Stability	Compliant

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 mode from all possible combinations between available modulations, data rates, X(E1)Y(E2)Z(H) axis and antenna ports. The worst case was found as listed below. Following channel(s) was (were) selected for the final test as listed below:

BAND	ERP/EIRP	RADIATED EMISSION and Wireless charging Cover
GSM/GPRS/EDGE 850	E2-plan	E2-plan
GSM/GPRS/EDGE 1900	H-plan	H-plan
WCDMA/HSPA Band II	H-plan	H-plan
WCDMA/HSPA Band IV	H-plan	H-plan
WCDMA/HSPA Band V	E2-plan	E2-plan
LTE Band 2	H-plan	H-plan
LTE Band 5	E2-plan	E2-plan
LTE Band 4	H-plan	H-plan
LTE Band 7	H-plan	H-plan
LTE Band 12	E2-plan	E2-plan
LTE Band 17	E2-plan	E2-plan
LTE Band 38	H-plan	H-plan

GSM/GPRS/EDGE MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
ERP	128 to 251	128, 190, 251	GSM/GPRS/EDGE 850
EIRP	512 to 810	512, 661, 810	GSM/GPRS/EDGE 1900
FREQUENCY STABILITY	128 to 251 512 to 810	190 661	GPRS 850 GPRS 1900
OCCUPIED BANDWIDTH	128 to 251 512 to 810	190 661	GSM/GPRS/EDGE 850 GSM/GPRS/EDGE 1900
PEAK TO AVERAGE RATIO	128 to 251 512 to 810	128, 190, 251 512, 661, 810	GSM/GPRS/EDGE 850 GSM/GPRS/EDGE 1900
BAND EDGE	128 to 251 512 to 810	128, 251 512, 810	GSM/GPRS/EDGE 850 GSM/GPRS/EDGE 1900
CONDCUDETED EMISSION	128 to 251 512 to 810	128, 190, 251 512, 661, 810	GSM/GPRS/EDGE 850 GSM/GPRS/EDGE 1900
RADIATED EMISSION	128 to 251 512 to 810	128, 190, 251 512, 661, 810	GSM 850 GPRS 1900

WCDMA/HSPA MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
ERP	4132 to 4233	4132, 4183, 4233	WCDMA/HSPA Band V
EIRP	9262 to 9538 1312 to 1513	9262, 9400, 9583 1312, 1413, 1513	WCDMA/HSPA Band II WCDMA/HSPA Band IV
FREQUENCY STABILITY	4132 to 4233 1312 to 1513 9262 to 9538	4183 1413 9400	WCDMA Band II WCDMA Band IV WCDMA Band V
OCCUPIED BANDWIDTH	4132 to 4233 1312 to 1513 9262 to 9538	4132, 4183, 4233 1312, 1413, 1513 9262, 9400, 9583	WCDMA/HSPA Band II WCDMA/HSPA Band IV WCDMA/HSPA Band V
PEAK TO AVERAGE RATIO	4132 to 4233 1312 to 1513 9262 to 9538	4132, 4183, 4233 1312, 1413, 1513 9262, 9400, 9583	WCDMA/HSPA Band II WCDMA/HSPA Band IV WCDMA/HSPA Band V
BAND EDGE	4132 to 4233 1312 to 1513 9262 to 9538	4132, 4233 1312, 1513 9262, 9583	WCDMA Band II WCDMA Band IV WCDMA Band V
CONDCUDETED EMISSION	4132 to 4233 1312 to 1513 9262 to 9538	4132, 4183, 4233 1312, 1413, 1513 9262, 9400, 9583	WCDMA Band II WCDMA Band IV WCDMA Band V
RADIATED EMISSION	4132 to 4233 1312 to 1513 9262 to 9538	4132, 4183, 4233 1312, 1413, 1513 9262, 9400, 9583	HSDPA Band II HSUPA Band IV WCDMA Band V

LTE Band 2 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
EIRP	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM	1 RB/ 0,5 RB Offest
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM	1 RB/ 0,14 RB Offest
	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest
	18650 to 19150	18650, 18900, 19150	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK, 16QAM	1 RB/ 0,74 RB Offest
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK, 16QAM	1 RB/ 0,99 RB Offest
FREQUENCY STABILITY	18650 to 19150	18900	10MHz	QPSK,	Full RB
OCCUPIED BANDWIDTH	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM	Full RB
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM	Full RB
	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM	Full RB
	18650 to 19150	18650, 18900, 19150	10MHz	QPSK, 16QAM	Full RB
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK, 16QAM	Full RB
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK, 16QAM	Full RB
PEAK TO AV-ERAGE RATIO	18607 to 19193	18607, 18900, 19193	1.4MHz	16QAM	Full RB
	18615 to 19185	18615, 18900, 19185	3MHz	16QAM	Full RB
	18625 to 19175	18625, 18900, 19175	5MHz	16QAM	Full RB
	18650 to 19150	18650, 18900, 19150	10MHz	16QAM	Full RB
	18675 to 19125	18675, 18900, 19125	15MHz	16QAM	Full RB
	18700 to 19100	18700, 18900, 19100	20MHz	16QAM	Full RB
BAND EDGE	18607 to 19193	18607, 19193	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
	18615 to 19185	18615, 19185	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
	18625 to 19175	18625, 19175	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	18650 to 19150	18650, 19150	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	18675 to 19125	18675, 19125	15MHz	QPSK,	1 RB/ 0,74 RB Offest Full RB
	18700 to 19100	18700, 19100	20MHz	QPSK,	1 RB/ 0,99 RB Offest Full RB
CONDCUDETED EMISSION	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK,	1 RB, 0 RB Offest
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK,	1 RB, 0 RB Offest
	18625 to 19175	18625, 18900, 19175	5MHz	QPSK,	1 RB, 0 RB Offest
	18650 to 19150	18650, 18900, 19150	10MHz	QPSK,	1 RB, 0 RB Offest
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK,	1 RB, 0 RB Offest
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	18625 to 19175	18625, 18900, 19175	5MHz	QPSK	1 RB, 0 RB Offest

LTE Band 4 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
EIRP	19957 to 19393	19957, 20175, 19393	1.4MHz	QPSK, 16QAM	1 RB/ 0,5 RB Offest
	19965 to 22385	19965, 20175, 22385	3MHz	QPSK, 16QAM	1 RB/ 0,14 RB Offest
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	1 RB/ 0,74 RB Offest
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	1 RB/ 0,99 RB Offest
FREQUENCY STABILITY	20000 to 20350	20175	10MHz	QPSK,	Full RB
OCCUPIED BANDWIDTH	19957 to 19393	19957, 20175, 19393	1.4MHz	QPSK, 16QAM	Full RB
	19965 to 22385	19965, 20175, 22385	3MHz	QPSK, 16QAM	Full RB
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	Full RB
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	Full RB
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	Full RB
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	Full RB
PEAK TO AV-ERAGE RATIO	19957 to 19393	19957, 20175, 19393	1.4MHz	16QAM	Full RB
	19965 to 22385	19965, 20175, 22385	3MHz	16QAM	Full RB
	19975 to 20375	19975, 20175, 20375	5MHz	16QAM	Full RB
	20000 to 20350	20000, 20175, 20350	10MHz	16QAM	Full RB
	20025 to 20325	20025, 20175, 20325	15MHz	16QAM	Full RB
	20050 to 20300	20050, 20175, 20300	20MHz	16QAM	Full RB
BAND EDGE	19957 to 19393	19957, 19393	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
	19965 to 22385	19965, 22385	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
	19975 to 20375	19975, 20375	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	20000 to 20350	20000, 20350	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	20025 to 20325	20025, 20325	15MHz	QPSK,	1 RB/ 0,74 RB Offest Full RB
	20050 to 20300	20050, 20300	20MHz	QPSK,	1 RB/ 0,99 RB Offest Full RB
CONDCUDETED EMISSION	19957 to 19393	19957, 20175, 19393	1.4MHz	QPSK,	1 RB, 0 RB Offest
	19965 to 22385	19965, 20175, 22385	3MHz	QPSK,	1 RB, 0 RB Offest
	19975 to 20375	19975, 20175, 20375	5MHz	QPSK,	1 RB, 0 RB Offest
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK,	1 RB, 0 RB Offest
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK,	1 RB, 0 RB Offest
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	19965 to 22385	19965, 20175, 22385	3MHz	16QAM,	1 RB, 0 RB Offest

LTE Band 5 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
ERP	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM	1 RB/ 0,5 RB Offest
	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM	1 RB/ 0,14 RB Offest
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest
FREQUENCY STABILITY	20450 to 20600	20525	10MHz	QPSK,	Full RB
OCCUPIED BANDWIDTH	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM	Full RB
	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM	Full RB
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM	Full RB
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM	Full RB
PEAK TO AV-ERAGE RATIO	20407 to 20643	20407, 20525, 20643	1.4MHz	16QAM	Full RB
	20415 to 20635	20415, 20525, 20635	3MHz	16QAM	Full RB
	20425 to 20625	20425, 20525, 20625	5MHz	16QAM	Full RB
	20450 to 20600	20450, 20525, 20600	10MHz	16QAM	Full RB
BAND EDGE	20407 to 20643	20407, 20643	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
	20415 to 20635	20415, 20635	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
	20425 to 20625	20425, 20625	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	20450 to 20600	20450, 20600	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
CONDCUDETED EMISSION	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK,	1 RB, 0 RB Offest
	20415 to 20635	20415, 20525, 20635	3MHz	QPSK,	1 RB, 0 RB Offest
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK,	1 RB, 0 RB Offest
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	20425 to 20625	20425, 20525, 20625	5MHz	16QAM	1 RB/ 0 RB Offest

LTE Band 7 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
EIRP	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest
	20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest
	20850 to 21375	20850, 21100, 21375	15MHz	QPSK, 16QAM	1 RB/ 0,74 RB Offest
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	1 RB/ 0,99 RB Offest
FREQUENCY STABILITY	20800 to 21400	21100	10MHz	QPSK,	Full RB
OCCUPIED BANDWIDTH	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	Full RB
	20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	Full RB
	20850 to 21375	20850, 21100, 21375	15MHz	QPSK, 16QAM	Full RB
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	Full RB
PEAK TO AV-ERAGE RATIO	20775 to 21425	20775, 21100, 21425	5MHz	16QAM	Full RB
	20800 to 21400	20800, 21100, 21400	10MHz	16QAM	Full RB
	20850 to 21375	20850, 21100, 21375	15MHz	16QAM	Full RB
	20850 to 21350	20850, 21100, 21350	20MHz	16QAM	Full RB
BAND EDGE	20775 to 21425	20775, 21100, 21425	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	20800 to 21400	20800, 21100, 21400	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	20850 to 21375	20850, 21100, 21375	15MHz	QPSK,	1 RB/ 0,74 RB Offest Full RB
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK,	1 RB/ 0,99 RB Offest Full RB
CONDCUDETED EMISSION	20775 to 21425	20775, 21100, 21425	5MHz	QPSK,	1 RB, 0 RB Offest
	20800 to 21400	20800, 21100, 21400	10MHz	QPSK,	1 RB, 0 RB Offest
	20850 to 21375	20850, 21100, 21375	15MHz	QPSK,	1 RB, 0 RB Offest
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	20775 to 21425	20775, 21100, 21425	5MHz	QPSK,	1 RB, 0 RB Offest
EMISSION MASK	20775 to 21425	20775, 21100, 21425	5MHz	QPSK,	1 RB/ 0,24 RB Offest 25 RB/ 0 Offset
	20800 to 21400	20800, 21100, 21400	10MHz	QPSK,	1 RB/ 0,49 RB Offest 50 RB/ 0 Offset
	20850 to 21375	20850, 21100, 21375	15MHz	QPSK,	1 RB/ 0,74 RB Offest 75 RB/ 0 Offset
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK,	1 RB/ 0,99 RB Offest 100 RB/ 0 Offset

LTE Band 12 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
ERP	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	1 RB/ 0,5 RB Offest
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	1 RB/ 0,14 RB Offest
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest
FREQUENCY STABILITY	23060 to 23130	23095	10MHz	QPSK,	Full RB
OCCUPIED BANDWIDTH	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	Full RB
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	Full RB
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	Full RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	Full RB
PEAK TO AV-ERAGE RATIO	23017 to 23173	23017, 23095, 23173	1.4MHz	16QAM	Full RB
	23025 to 23165	23025, 23095, 23165	3MHz	16QAM	Full RB
	23035 to 23155	23035, 23095, 23155	5MHz	16QAM	Full RB
	23060 to 23130	23060, 23095, 23130	10MHz	16QAM	Full RB
BAND EDGE	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
CONDCUDETED EMISSION	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK,	1 RB, 0 RB Offest
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK,	1 RB, 0 RB Offest
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK,	1 RB, 0 RB Offest
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	23035 to 23155	23035, 23095, 23155	5MHz	16QAM	1 RB, 24 RB Offest

LTE Band 17 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
ERP	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest
	23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest
FREQUENCY STABILITY	23780 to 23800	23790	10MHz	QPSK,	Full RB
OCCUPIED BANDWIDTH	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM	Full RB
	23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM	Full RB
PEAK TO AV-ERAGE RATIO	23755 to 23825	23755, 23790, 23825	5MHz	16QAM	Full RB
	23780 to 23800	23780, 23790, 23800	10MHz	16QAM	Full RB
BAND EDGE	23755 to 23825	23755, 23825	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	23780 to 23800	23780, 23800	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
CONDCUDETED EMISSION	23755 to 23825	23755, 23790, 23825	5MHz	QPSK,	1 RB, 0 RB Offest
	23780 to 23800	23780, 23790, 23800	10MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	23755 to 23825	23755, 23790, 23825	5MHz	16QAM	1 RB, 0 RB Offest

LTE Band 38 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
EIRP	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest
	37800 to 38200	37800 , 38000, 38200	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest
	37825 to 38175	37825 , 38000, 38175	15MHz	QPSK, 16QAM	1 RB/ 0,74 RB Offest
	37850 to 38150	37850 , 38000, 38150	20MHz	QPSK, 16QAM	1 RB/ 0,99 RB Offest
FREQUENCY STABILITY	37800 to 38200	37800 , 38000, 38200	10MHz	QPSK,	Full RB
OCCUPIED BANDWIDTH	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM	Full RB
	37800 to 38200	37800 , 38000, 38200	10MHz	QPSK, 16QAM	Full RB
	37825 to 38175	37825 , 38000, 38175	15MHz	QPSK, 16QAM	Full RB
	37850 to 38150	37850 , 38000, 38150	20MHz	QPSK, 16QAM	Full RB
PEAK TO AV-ERAGE RATIO	37775 to 38225	37775, 38000, 38225	5MHz	16QAM	Full RB
	37800 to 38200	37800 , 38000, 38200	10MHz	16QAM	Full RB
	37825 to 38175	37825 , 38000, 38175	15MHz	16QAM	Full RB
	37850 to 38150	37850 , 38000, 38150	20MHz	16QAM	Full RB
BAND EDGE	37775 to 38225	37775, 38000, 38225	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	37800 to 38200	37800 , 38000, 38200	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	37825 to 38175	37825 , 38000, 38175	15MHz	QPSK,	1 RB/ 0,74 RB Offest Full RB
	37850 to 38150	37850 , 38000, 38150	20MHz	QPSK,	1 RB/ 0,99 RB Offest Full RB
CONDCUDETED EMISSION	37775 to 38225	37775, 38000, 38225	5MHz	QPSK,	1 RB, 0 RB Offest
	37800 to 38200	37800 , 38000, 38200	10MHz	QPSK,	1 RB, 0 RB Offest
	37825 to 38175	37825 , 38000, 38175	15MHz	QPSK,	1 RB, 0 RB Offest
	37850 to 38150	37850 , 38000, 38150	20MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	37775 to 38225	37775, 38000, 38225	5MHz	QPSK,	1 RB, 0 RB Offest
EMISSION MASK	37775 to 38225	37775, 38000, 38225	5MHz	QPSK,	1 RB/ 0,24 RB Offest 25 RB/ 0 Offset
	37800 to 38200	37800 , 38000, 38200	10MHz	QPSK,	1 RB/ 0,49 RB Offest 50 RB/ 0 Offset
	37825 to 38175	37825 , 38000, 38175	15MHz	QPSK,	1 RB/ 0,74 RB Offest 75 RB/ 0 Offset
	37850 to 38150	37850 , 38000, 38150	20MHz	QPSK,	1 RB/ 0,99 RB Offest 100 RB/ 0 Offset

5. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty
RF Power Output	+/- 1.10 dB
ERP/ EIRP measurement	Vertical Polarization = +/- 4.74dB Horizontal Polarization =+/- 4.62dB
99% Occupied Bandwidth	+/- 5.19 Hz
Out of Band Emissions at Antenna Terminals and Band Edge	+/- 0.70 dB
Peak to Average Ratio	+/- 0.70 dB
Frequency Stability vs. Temperature	+/- 5.19 Hz
Frequency Stability vs. Voltage	+/- 5.19 Hz
Temperature	+/- 0.65 °C
Humidity	+/- 4.6 %
DC / AC Power Source	DC= +/- 0.13%, AC=+/- 0.2%

Radiated Spurious Emission:

Measurement uncertainty (Polarization : **Vertical**)	9kHz – 30MHz: +/- 2.87 dB
	30MHz - 180MHz: +/- 3.37dB
	180MHz -417MHz: +/- 3.19dB
	0.417GHz-1GHz: +/- 3.19dB
	1GHz - 18GHz: +/- 4.04dB
	18GHz - 40GHz: +/- 4.04dB

Measurement uncertainty (Polarization : **Horizontal**)	9kHz – 30MHz: +/- 2.87 dB
	30MHz - 167MHz: +/- 4.22dB
	167MHz -500MHz: +/- 3.44dB
	0.5GHz-1GHz: +/- 3.39dB
	1GHz - 18GHz: +/- 4.08dB
	18GHz - 40GHz: +/- 4.08dB

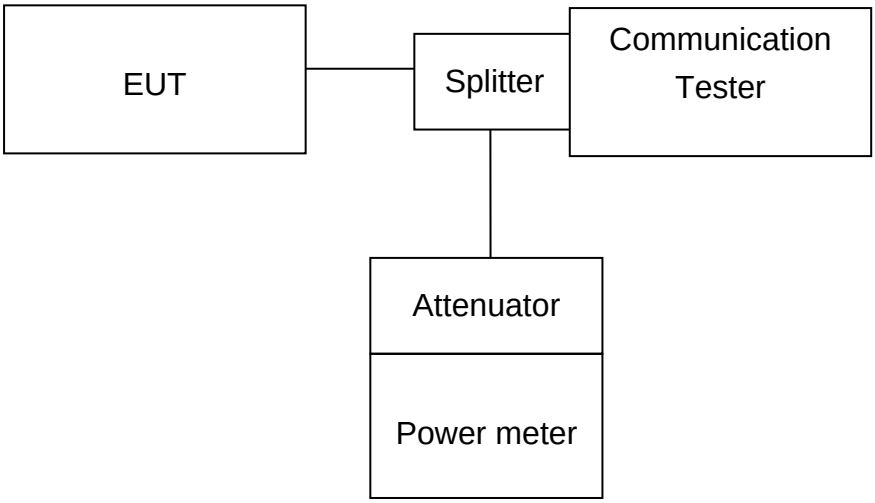
This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

6. RF CONDUCTED OUTPUT POWER MEASUREMENT

6.1. 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.

6.2. Test Set-up



Note: *Measurement setup for testing on Antenna connector*

6.3. Measurement Procedure

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. TS 151 010-1 is reference to conduct the test measurement of output power.

The Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, (WCDMA/HSPA) was used for EUT and Base station setting. RMC 12.2kps is used for this testing, and KDB 971168 D01 Power Meas License Digital System as the supplemental test methodology to adjust the proper setting obtaining the measurement results

6.4. Measurement Equipment Used

Conducted Emission (measured at antenna port) Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Power Meter	Anritsu	ML2495A	1005007	12/15/2016	12/14/2017
Power Sensor	Anritsu	MA2411B	917032	12/15/2016	12/14/2017
EXA Spectrum Ana-lyzer	Agilent	N9030A	MY53120760	03/21/2017	03/20/2018
DC Block	Mini-Circuits	BLK-18-S+	1	01/05/2017	01/04/2018
Coaxial Cable	HU-BER+SUHNER	SUCOFLEX 102	23670/2	01/05/2017	01/04/2018
Attenuator	Mini-Circuit	BW-S10W2+	2	01/05/2017	01/04/2018
Splitter	Agilent	11636B	N/A	01/05/2017	01/04/2018
DC Power Supply	Agilent	E3640A	MY52410006	11/21/2016	11/20/2017
Temperature Chamber	TERCHY	MHG-120LF	911009	05/19/2017	05/18/2018
Radio Communication Analyzer	R&S	CMU200	102189	02/10/2017	02/09/2018
Radio Communication Analyer	Anritsu	MT8820C	6201465317	01/03/2017	01/02/2018

6.5. Measurement Result

RF Conducted Output Power

GSM/GPRS/EDGE (GMSK; 8-PSK) Result:

EUT Mode	Freq. (MHz)	CH	Avg. Power (dBm)
GSM 850	824.2	128	33.54
	836.6	190	33.67
	848.8	251	33.63
GSM 1900	1850.2	512	30.07
	1880.0	661	30.44
	1909.8	810	30.82

EUT Mode	Frequency (MHz)	CH	Average Burst Power (1DN 1UP) Class 8 (dBm)	Average Burst Power (1DN 2UP) Class 10 (dBm)	Average Burst Power (1DN 3UP) Class 12 (dBm)	Average Burst Power (1DN 4UP) Class 12 (dBm)
GPRS 850	824.2	128	33.54	29.18	28.21	26.93
	836.6	190	33.67	29.31	28.33	26.82
	848.8	251	33.63	29.07	28.31	26.92
GPRS 1900	1850.2	512	30.07	27.99	26.87	25.61
	1880.0	661	30.44	28.44	26.75	25.46
	1909.8	810	30.82	28.5	26.88	25.54
EDGE 850	824.2	128	26.98	25.95	24.88	23.46
	836.6	190	26.89	25.91	24.25	23.04
	848.8	251	26.84	25.88	24.25	22.95
EDGE 1900	1850.2	512	25.66	25.14	23.92	22.42
	1880.0	661	26.04	25.34	23.68	22.29
	1909.8	810	26.24	25.47	23.7	22.41

WCDMA MODE:

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 V8.4.0 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7). RMC 12.2kps is used for this testing.

Results:

Mode	Avg. Power (dBm) Band II Channel			Avg. Power (dBm) Band IV Channel			Avg. Power (dBm) Bnad V Channel		
	9262	9400	9538	1312	1413	1513	4132	4183	4233
WCDMA	**23.43**	23.05	22.91	**24.30**	24.32	24.24	**24.54**	24.55	24.63
HSDPA	22.35	22.06	21.87	23.16	23.14	23.31	23.40	23.30	23.45
HSUPA	22.42	21.70	21.26	23.01	23.11	23.14	23.33	23.23	23.28

LTE Result

LTE Band 2_Uplink frequency band : 1850 to 1910 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 18607	Channel (Mid) 18900	Channel (High) 19193	Channel (Low) 18607	Channel (Mid) 18900	Channel (High) 19193
1.4	1	0	23.18	22.89	22.77	21.98	22.37	21.52
	1	5	23.23	23.02	22.64	22.39	21.48	22.04
	3	2	**23.34**	22.99	22.67	**22.42**	22.10	22.10
	6	0	22.26	21.92	21.67	21.21	20.69	20.58

LTE Band 2_Uplink frequency band : 1850 to 1910 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 18615	Channel (Mid) 18900	Channel (High) 19185	Channel (Low) 18615	Channel (Mid) 18900	Channel (High) 19185
3	1	0	22.93	22.88	22.64	22.04	22.09	22.14
	1	14	**23.18**	22.89	22.74	**22.17**	21.87	21.46
	8	4	22.22	21.89	21.77	21.27	21.02	20.99
	15	0	22.13	21.88	21.65	21.17	20.87	20.84

LTE Band 2_Uplink frequency band : 1850 to 1910 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 18625	Channel (Mid) 18900	Channel (High) 19175	Channel (Low) 18625	Channel (Mid) 18900	Channel (High) 19175
5	1	0	**23.19**	22.93	22.63	22.29	**22.49**	21.71
	1	24	23.18	22.89	22.87	22.14	21.83	22.25
	12	6	22.21	21.88	21.65	21.21	20.84	20.61
	25	0	22.18	21.86	21.68	21.16	20.84	20.80

LTE Band 2_Uplink frequency band : 1850 to 1910 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 18650	Channel (Mid) 18900	Channel (High) 19150	Channel (Low) 18650	Channel (Mid) 18900	Channel (High) 19150
10	1	0	23.09	22.91	22.60	22.37	21.70	21.76
	1	49	**23.40**	22.94	22.85	**22.45**	22.41	21.99
	25	12	22.20	21.96	21.81	21.30	21.14	20.67
	50	0	22.22	21.95	21.77	21.39	20.96	20.73

LTE Band 2_Uplink frequency band : 1850 to 1910 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 18675	Channel (Mid) 18900	Channel (High) 19125	Channel (Low) 18675	Channel (Mid) 18900	Channel (High) 19125
15	1	0	**23.26**	22.89	22.77	**22.50**	21.87	22.12
	1	74	23.09	22.83	22.85	22.47	22.03	21.95
	36	19	22.19	21.86	21.74	21.27	20.84	20.71
	75	0	22.16	21.85	21.78	21.32	20.90	20.73

LTE Band 2_Uplink frequency band : 1850 to 1910 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 18700	Channel (Mid) 18900	Channel (High) 19100	Channel (Low) 18700	Channel (Mid) 18900	Channel (High) 19100
20	1	0	**23.41**	22.89	22.87	**22.48**	21.90	22.05
	1	99	22.99	22.84	22.50	21.29	22.06	22.21
	50	25	22.22	21.84	21.71	21.09	20.94	20.61
	100	0	22.05	21.78	21.74	21.17	20.90	20.63

LTE Band 4_Uplink frequency band : 1710 to 1755 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 19957	Channel (Mid) 20175	Channel (High) 20393	Channel (Low) 19957	Channel (Mid) 20175	Channel (High) 20393
1.4	1	0	22.96	22.91	22.99	22.07	22.06	22.36
	1	5	22.90	22.81	22.98	22.06	21.67	**22.44**
	3	2	23.02	23.02	**23.04**	21.90	21.80	22.12
	6	0	22.06	22.09	22.16	20.85	20.85	20.92

LTE Band 4_Uplink frequency band : 1710 to 1755 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 19965	Channel (Mid) 20175	Channel (High) 20385	Channel (Low) 19965	Channel (Mid) 20175	Channel (High) 20385
3	1	0	**23.28**	23.00	23.06	22.50	22.53	**22.74**
	1	14	23.20	22.88	23.12	22.18	22.01	22.23
	8	4	22.07	22.08	22.14	20.81	20.86	21.28
	15	0	21.98	22.08	22.07	20.99	21.23	21.35

LTE Band 4_Uplink frequency band : 1710 to 1755 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 19975	Channel (Mid) 20175	Channel (High) 20375	Channel (Low) 19975	Channel (Mid) 20175	Channel (High) 20375
5	1	0	**23.13**	22.96	22.89	21.98	**22.73**	22.46
	1	24	23.09	22.91	23.07	22.38	22.31	22.67
	12	6	22.00	21.94	22.15	21.11	20.97	21.10
	25	0	22.08	21.98	22.07	21.32	21.03	21.28

LTE Band 4_Uplink frequency band : 1710 to 1755 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20000	Channel (Mid) 20175	Channel (High) 20350	Channel (Low) 20000	Channel (Mid) 20175	Channel (High) 20350
10	1	0	23.09	22.92	23.12	21.81	21.89	22.52
	1	49	**23.24**	22.72	22.99	**22.66**	21.83	22.16
	25	12	22.22	22.09	22.14	21.20	21.25	21.08
	50	0	22.07	22.05	22.04	21.17	21.05	21.12

LTE Band 4_Uplink frequency band : 1710 to 1755 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20025	Channel (Mid) 20175	Channel (High) 20325	Channel (Low) 20025	Channel (Mid) 20175	Channel (High) 20325
15	1	0	23.11	**23.15**	23.05	22.49	**22.74**	22.24
	1	74	**23.15**	22.81	23.05	22.44	21.92	22.17
	36	19	22.23	21.98	22.12	21.26	21.03	21.16
	75	0	22.31	22.01	22.14	21.17	21.13	21.09

LTE Band 4_Uplink frequency band : 1710 to 1755 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20050	Channel (Mid) 20175	Channel (High) 20300	Channel (Low) 20050	Channel (Mid) 20175	Channel (High) 20300
20	1	0	22.93	**23.14**	23.06	**22.56**	22.38	22.12
	1	99	22.92	22.83	22.82	22.05	21.58	22.12
	50	25	22.16	22.01	22.18	21.09	20.99	21.07
	100	0	22.08	22.07	22.06	21.10	21.10	21.12

LTE Band 5_Uplink frequency band : 824 to 849 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20407	Channel (Mid) 20525	Channel (High) 20643	Channel (Low) 20407	Channel (Mid) 20525	Channel (High) 20643
1.4	1	0	23.12	23.03	**23.30**	22.51	21.89	22.57
	1	5	23.15	23.22	23.19	22.12	22.37	**22.77**
	3	2	22.81	22.90	22.83	21.82	21.97	21.97
	6	0	22.27	22.17	22.14	20.93	20.86	21.08

LTE Band 5_Uplink frequency band : 824 to 849 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20415	Channel (Mid) 20525	Channel (High) 20635	Channel (Low) 20415	Channel (Mid) 20525	Channel (High) 20635
3	1	0	23.41	23.18	**23.50**	22.48	22.55	**22.77**
	1	14	23.38	23.37	**23.50**	22.51	22.46	22.45
	8	4	22.27	22.16	22.33	20.95	21.12	21.26
	15	0	22.29	22.13	22.36	21.03	21.18	21.21

LTE Band 5_Uplink frequency band : 824 to 849 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20425	Channel (Mid) 20525	Channel (High) 20625	Channel (Low) 20425	Channel (Mid) 20525	Channel (High) 20625
5	1	0	23.05	23.18	23.19	22.34	22.39	**22.69**
	1	24	23.32	23.42	**23.45**	22.29	22.19	22.59
	12	6	22.28	22.21	22.23	21.28	21.06	21.23
	25	0	22.36	22.24	22.29	21.38	21.25	21.36

LTE Band 5_Uplink frequency band : 824 to 849 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20450	Channel (Mid) 20525	Channel (High) 20600	Channel (Low) 20450	Channel (Mid) 20525	Channel (High) 20600
10	1	0	23.27	23.33	**23.34**	22.47	**22.81**	22.73
	1	49	22.98	23.05	23.17	22.24	22.14	22.33
	25	12	22.39	22.18	22.42	21.33	21.24	21.55
	50	0	22.38	22.17	22.31	21.35	21.08	21.16

LTE Band 7_Uplink frequency band : 2500 to 2570 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20775	Channel (Mid) 21100	Channel (High) 21425	Channel (Low) 20775	Channel (Mid) 21100	Channel (High) 21425
5	1	0	22.50	22.38	**22.59**	21.38	21.54	**21.92**
	1	24	22.44	22.51	22.45	21.73	21.48	21.83
	12	6	21.46	21.27	21.60	20.32	20.33	20.52
	25	0	21.37	21.31	21.53	20.33	20.28	20.46

LTE Band 7_Uplink frequency band : 2500 to 2570 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20800	Channel (Mid) 21100	Channel (High) 21400	Channel (Low) 20800	Channel (Mid) 21100	Channel (High) 21400
10	1	0	22.52	22.33	22.35	21.71	21.80	**21.93**
	1	49	22.37	22.50	**22.60**	21.39	21.60	21.70
	25	12	21.36	21.32	21.62	20.60	20.28	20.50
	50	0	21.44	21.31	21.58	20.30	20.18	20.49

LTE Band 7_Uplink frequency band : 2500 to 2570 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20825	Channel (Mid) 21100	Channel (High) 21375	Channel (Low) 20825	Channel (Mid) 21100	Channel (High) 21375
15	1	0	**22.47**	22.44	22.42	21.51	**21.64**	21.30
	1	74	22.41	22.25	22.45	21.63	20.94	21.38
	36	19	21.26	21.31	21.50	20.32	20.20	20.44
	75	0	21.33	21.28	21.46	20.25	20.26	20.51

LTE Band 7_Uplink frequency band : 2500 to 2570 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)					
			QPSK			16QAM		
			Channel (Low) 20850	Channel (Mid) 21100	Channel (High) 21350	Channel (Low) 20850	Channel (Mid) 21100	Channel (High) 21350
20	1	0	22.41	22.88	**22.90**	21.80	21.67	21.52
	1	99	22.38	22.62	22.73	**21.82**	21.39	21.56
	50	25	21.64	21.62	21.87	20.72	20.78	20.93
	100	0	21.69	21.61	21.98	20.69	20.70	20.85

LTE Band 12_Uplink frequency band : 699 to 716 MHz									
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)						
			QPSK			16QAM			
			Channel (Low) 23017	Channel (Mid) 23095	Channel (High) 23173	Channel (Low) 23017	Channel (Mid) 23095	Channel (High) 23173
1.4	1	0	23.50	23.49	**23.88**	22.08	22.78	22.91
	1	5	23.51	23.36	23.83	22.39	22.84	22.97
	3	2	23.47	23.35	23.87	22.20	22.45	**22.98**
	6	0	22.43	22.54	22.76	21.07	21.40	21.49

LTE Band 12_Uplink frequency band : 699 to 716 MHz									
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)						
			QPSK			16QAM			
			Channel (Low) 23025	Channel (Mid) 23095	Channel (High) 23165	Channel (Low) 23025	Channel (Mid) 23095	Channel (High) 23165
3	1	0	23.44	23.65	23.92	22.40	22.74	**22.92**
	1	14	23.42	23.47	**23.95**	22.71	22.60	22.91
	8	4	22.40	22.52	22.85	21.11	21.56	21.67
	15	0	22.30	22.59	22.68	21.60	21.64	21.66

LTE Band 12_Uplink frequency band : 699 to 716 MHz									
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)						
			QPSK			16QAM			
			Channel (Low) 23035	Channel (Mid) 23095	Channel (High) 23155	Channel (Low) 23035	Channel (Mid) 23095	Channel (High) 23155
5	1	0	23.15	23.52	23.63	22.61	22.92	22.86
	1	24	23.67	23.66	**23.75**	**22.93**	22.71	**22.93**
	12	6	22.56	22.51	22.69	21.17	21.54	21.92
	25	0	22.52	22.54	22.76	21.40	21.52	21.76

LTE Band 12_Uplink frequency band : 699 to 716 MHz									
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)						
			QPSK			16QAM			
			Channel (Low) 23060	Channel (Mid) 23095	Channel (High) 23130	Channel (Low) 23060	Channel (Mid) 23095	Channel (High) 23130
10	1	0	23.37	23.25	23.73	22.08	22.85	22.40
	1	49	23.51	23.36	**23.99**	22.25	22.57	**22.97**
	25	12	22.50	22.52	22.77	21.50	21.47	21.98
	50	0	22.53	22.52	22.71	21.50	21.57	21.87

LTE Band 17_Uplink frequency band : 704 to 716 MHz									
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)						
			QPSK			16QAM			
			Channel (Low) 23755	Channel (Mid) 23790	Channel (High) 23825	Channel (Low) 23755	Channel (Mid) 23790	Channel (High) 23825
5	1	0	23.67	23.65	23.96	22.41	22.94	22.91
	1	24	23.79	23.81	23.95	22.85	22.92	22.63
	12	6	22.74	22.70	22.91	21.54	21.64	21.85
	25	0	22.81	22.80	22.88	21.65	21.85	21.84

LTE Band 17_Uplink frequency band : 704 to 716 MHz									
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)						
			QPSK			16QAM			
			Channel (Low) 23780	Channel (Mid) 23790	Channel (High) 23800	Channel (Low) 23780	Channel (Mid) 23790	Channel (High) 23800
10	1	0	23.64	23.68	23.75	22.83	22.42	22.94
	1	49	23.98	23.94	23.95	22.92	22.93	22.95
	25	12	22.79	22.70	22.80	21.66	21.93	21.74
	50	0	22.73	22.85	22.86	21.80	21.70	21.74

LTE Band 38_Uplink frequency band : 2570 to 2620 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power (dBm)					
			QPSK			16QAM		
			CH (Low) 37775	CH (Mid) 38000	CH (High) 38225	CH (Low) 37775	CH (Mid) 38000	CH (High) 38225
5	1	0	23.31	23.59	23.39	22.57	22.90	22.85
	1	24	23.40	23.53	23.21	22.68	22.83	22.32
	12	6	22.57	22.66	22.41	21.69	21.82	21.38
	25	0	22.69	22.74	22.51	21.79	21.91	21.45

LTE Band 38_Uplink frequency band : 2570 to 2620 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power (dBm)					
			QPSK			16QAM		
			CH (Low) 37800	CH (Mid) 38000	CH (High) 38200	CH (Low) 37800	CH (Mid) 38000	CH (High) 38200
10	1	0	23.39	23.71	23.45	22.81	22.63	22.60
	1	49	23.43	23.48	23.37	22.45	22.81	22.41
	25	12	22.78	22.81	22.49	21.66	21.86	21.68
	50	0	22.51	22.89	22.46	21.64	21.79	21.68

LTE Band 38_Uplink frequency band : 2570 to 2620 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power (dBm)					
			QPSK			16QAM		
			CH (Low) 37825	CH (Mid) 38000	CH (High) 38175	CH (Low) 37825	CH (Mid) 38000	CH (High) 38175
15	1	0	23.46	23.84	23.71	22.60	22.93	22.94
	1	74	23.65	23.84	23.41	22.82	22.84	22.34
	36	19	22.66	22.86	22.59	21.72	21.81	21.72
	75	0	22.73	22.75	22.67	21.54	21.61	21.53

LTE Band 38_Uplink frequency band : 2570 to 2620 MHz								
BW (MHz)	RB Size	RB Offset	Conducted power (dBm)					
			QPSK			16QAM		
			CH (Low) 37850	CH (Mid) 38000	CH (High) 38150	CH (Low) 37850	CH (Mid) 38000	CH (High) 38150
20	1	0	23.46	23.85	23.70	22.85	22.96	22.92
	1	99	23.47	23.39	23.26	22.70	22.76	22.34
	50	25	22.76	22.90	22.71	21.87	21.83	21.68
	100	0	22.83	22.74	22.66	21.73	21.76	21.61

HSDPA Release 6 MODE:

The following 4 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C10.1.4 & C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing.

HSDPA SUB-TEST Setting

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH(FOR HSDPA)

Sub-test	β_c	β_d	β_d ***(SF)***	β_c/β_d	β_{HS} (*Note1, Note 2*)	**CM (dB)** *(Note 3)*	**MPR (dB)** *(Note 3)*	**RMC (Kbps)**
1	2/15	15/15	64	2/15	4/15	0.0	0.0	12.2
2	12/15 *(Note 4)*	15/15 *(Note 4)*	64	12/15 *(Note 4)*	24/15	1.0	0.0	12.2
3	15/15	8/15	64	15/8	30/15	1.5	0.5	12.2
4	15/15	4/15	64	15/4	30/15	1.5	0.5	12.2

Note: The recommended HSDPA MPRs are implemented as per following sub-tests.

Results:

Mode	Sub test	Avg. Power (dBm) Channel			Power Class 3 Limitation (dBm)			Result
		9262	9400	9538				
HSDPA II	1	**22.35**	22.06	21.87	20.3	~	25.7	Pass
	2	21.83	21.57	21.47	20.3	~	25.7	Pass
	3	21.98	21.73	21.44	19.8	~	25.7	Pass
	4	21.97	21.71	21.43	19.8	~	25.7	Pass

Mode	Sub test	Avg. Power (dBm) Channel			Power Class 3 Limitation (dBm)			Result
		1312	1413	1513				
HSDPA IV	1	23.16	**23.14**	23.31	20.3	~	25.7	Pass
	2	22.73	22.61	22.80	20.3	~	25.7	Pass
	3	22.77	22.75	22.83	19.8	~	25.7	Pass
	4	22.66	22.75	22.95	19.8	~	25.7	Pass

Mode	Sub test	Avg. Power (dBm) Channel			Power Class 3 Limitation (dBm)			Result
		4132	4183	4233				
HSDPA V	1	23.40	23.30	**23.45**	20.3	~	25.7	Pass
	2	23.21	23.12	23.17	20.3	~	25.7	Pass
	3	23.14	23.13	23.06	19.8	~	25.7	Pass
	4	23.14	23.13	23.06	19.8	~	25.7	Pass

HSPA (HSDPA & HSUPA) Release 6 MODE

The following 5 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

HSPA SUB-TEST Setting

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH(FOR HSUPA)

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS}	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (Codes)	CM (dB)	MPR (dB)	AG Index	E-TFCI	RMC (Kbps)
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75	12.2
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67	12.2
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed}1: 47/15 β_{ed}2: 47/15	4 4	2	2.0	1.0	15	92	12.2
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71	12.2
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81	12.2

Note: The recommended HSUPA MPRs are implemented as per following sub-tests.

Results:

Mode	Sub test	Avg. Power (dBm) Channel			Power Class 3 Limitation (dBm)			Result
		9262	9400	9538				
HSUPA II	1	22.42	**21.70**	21.26	18.8	~	25.7	**Pass**
	2	21.44	21.02	20.85	16.8	~	25.7	**Pass**
	3	21.08	21.05	20.96	17.8	~	25.7	**Pass**
	4	21.56	21.01	20.96	16.8	~	25.7	**Pass**
	5	22.40	21.90	21.70	18.8	~	25.7	**Pass**

Mode	Sub test	Avg. Power (dBm) Channel			Power Class 3 Limitation (dBm)			Result
		1312	1413	1513				
HSDPA IV	1	23.01	23.11	**23.14**	20.3	~	25.7	**Pass**
	2	22.51	22.54	22.73	20.3	~	25.7	**Pass**
	3	23.14	23.08	23.04	19.8	~	25.7	**Pass**
	4	23.02	23.03	23.18	19.8	~	25.7	**Pass**
	5	23.10	23.12	23.19	19.8	~	25.7	**Pass**

Mode	Sub test	Avg. Power (dBm) Channel			Power Class 3 Limitation (dBm)			Result
		4132	4183	4233				
HSUPA V	1	23.33	**23.23**	23.28	18.8	~	25.7	**Pass**
	2	23.03	23.01	23.03	16.8	~	25.7	**Pass**
	3	23.25	23.15	23.29	17.8	~	25.7	**Pass**
	4	23.36	23.21	23.33	16.8	~	25.7	**Pass**
	5	23.39	23.27	23.34	16.8	~	25.7	**Pass**

Minimum Communications Power Measurement

PCS 1900 band

PCL	0	1	2	3	4	5	6	7	8
Output power (dBm)	30.7	28.7	25.9	23.7	22.4	19.6	17.4	15.6	13.3

PCL	9	10	11	12	13	14	15
Output power (dBm)	10.9	9.4	7.3	4.5	2.7	1.5	-0.1

Note: The EUT output power was controlled by simulator. Set Communication Tester MT8820C PCL as above, and get the mobile phone output power reading

WCDMA/HSDPA/HSUPA band II, IV, V

The EUT output power was controlled by simulator. Set Communication Tester MT8820C function key “UE Power Control” and enter max rated power 24dBm. The EUT is going to be set to max output power to 24dBm. Then record the read (see page 15 for measurement data). The min. power was measures by a function key “minimum power” then record the read. It is -52.3dBm. The power variation can be 0.1dB step by setting.

7. EFFECTIVE RADIATED POWER AND EQUIVALENT ISOTROPIC RADIATED POWER MEASUREMENT

7.1. Standard Applicable

According to FCC §2.1046

FCC 22.913(a) Mobile station is limited to 7W ERP.

FCC 24.232(c) Mobile and portable stations are limited to 2 W EIRP.

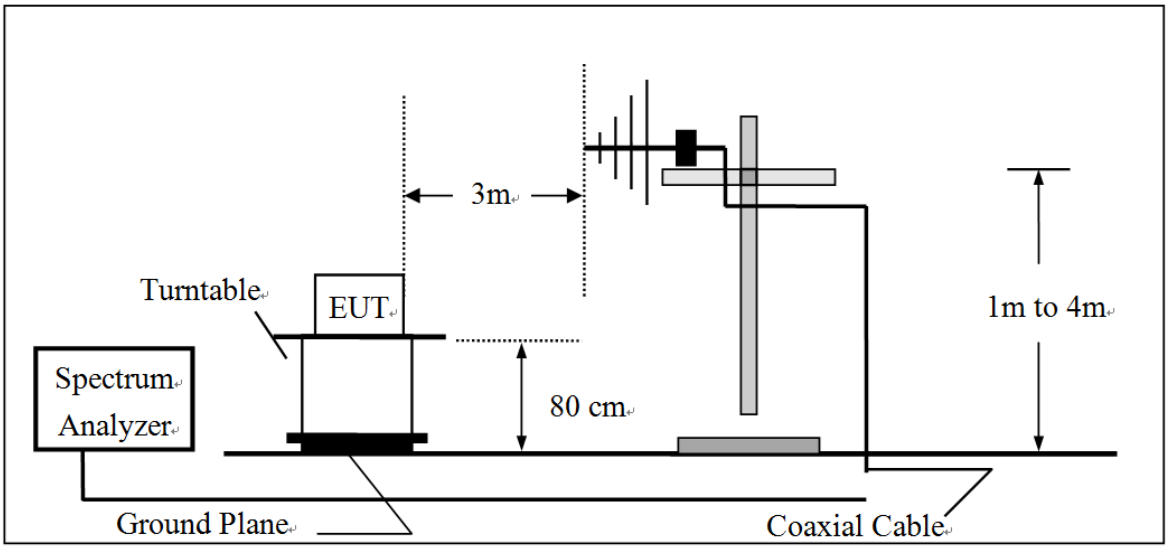
FCC 27.50(c) (10) Control stations and mobile stations are limited to 3 W ERP.

FCC 27.50(d)(4) Fixed, mobile, and portable (hand-held) stations are limited to 1W EIRP.

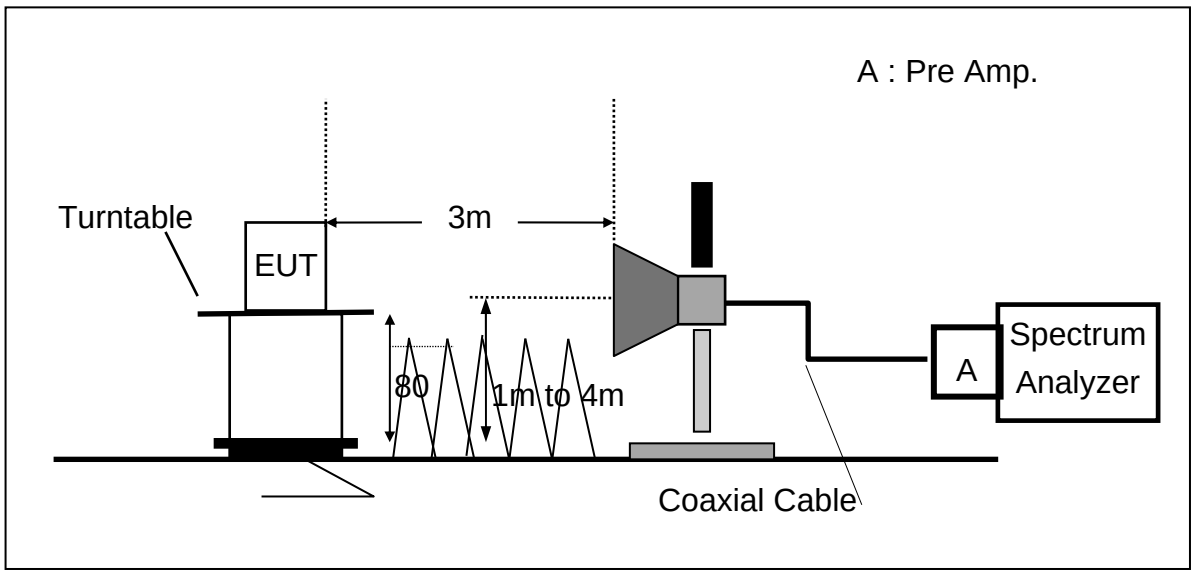
FCC 27, 50(h)(2) Mobile and other user stations. Mobile stations are limited to 2 W EIRP

7.2. Test SET-UP

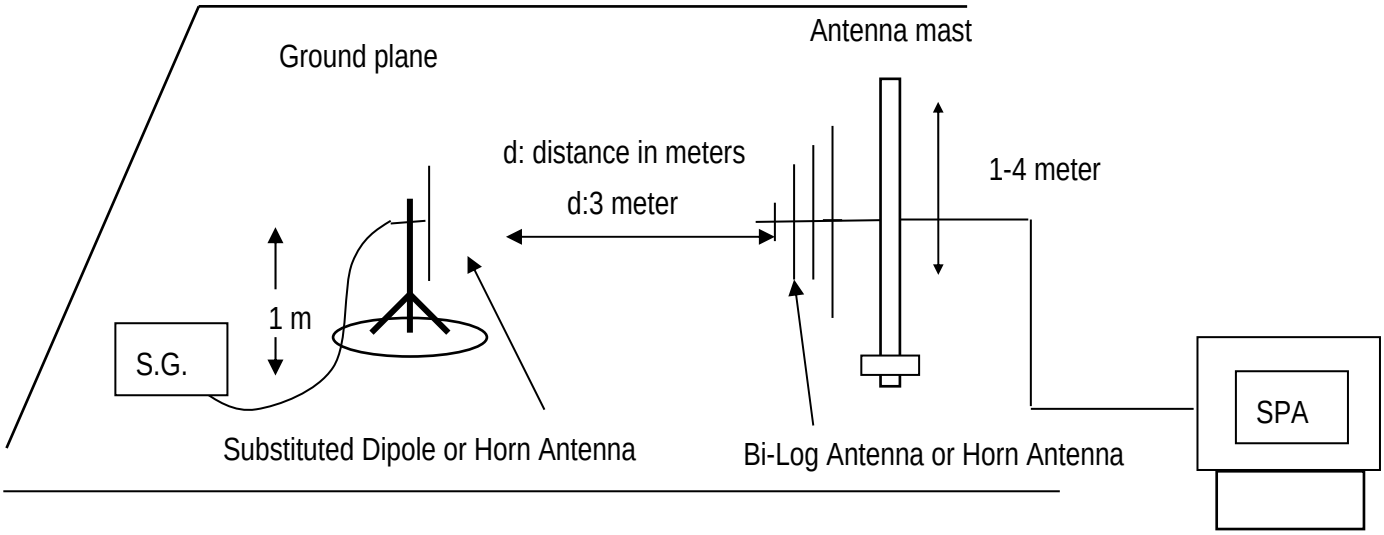
(A) Radiated Power Test Set-Up, Frequency Below1000MHz



(B) Radiated Power Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



7.3. Measurement Procedure

1. The testing follows the Measurement Procedure of FCC KDB 971168 D01
2. The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.
3. During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated
4. The testing follows the Measurement Procedure of FCC KDB 971168 D01
5. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step b. Record the power level of S.G.
6. ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)
7. ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)
8. Spectrum setting:
   (1) Detector = Peak, marker the highest value of the detector by maximum hold, set RBW wide enough to capture the entire signal of emission, and VBW > =3xRBW.
   (2) KDB 971168 D01 is adopted, and the procedure as lists under item 4, Measurement of the Average Power over the Fundamental Signal Bandwidth, is followed to set correspondingly for the acquisition of proper measurement data.
   Set frequency = nominal signal center frequency;
   Set span = 2 X occupied BW;
   Set RBW ≈ 1~5% of the span, not to exceed 1 MHz
   Set VBW = 3 x RBW;
   Select average power (RMS) detector
   Set sweep time and number of measurement points to achieve a minimum of 1 millisecond/pt integration time (ex. Point = 601points, then sweet time = 601*10^-3 = 6s.

   Activate trace averaging routine over a minimum of 10 sweeps;
   Activate marker/span pair and set span = signal or channel bandwidth;
   Activate the band/interval power marker function;
   Record the band power level;
   Record adjusted value as the average signal power level. Then activate the occupied bandwidth measurement function.
   The proper adjustment due to limitation of spectrum capability is given compensated to spectrum with conversion factor of 10*log (TBW/RBW), where TBW is the transmission of UE exceeding the maximum BW UE can extends, and RBW is the resolution BW in UE.

7.4. Measurement Equipment Used

ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
EMI Test Receiver	R&S	ESCI7	100760	05/11/2017	05/10/2018
Spectrum Analyzer	Agilent	E4446A	MY51100003	04/25/2017	04/24/2018
Loop Antenna	ETS-Lindgren	6502	148045	09/20/2016	09/19/2017
Bilog Antenna	SCHWAZBECK	VULB9168	378	12/19/2016	12/18/2017
Horn Antenna	Schwarzbeck	BBHA9120D	1441	08/01/2016	07/31/2017
Pre-Amplifier	Agilent	8447D	2944A07676	01/05/2017	01/04/2018
Pre-Amplifier	EMC Instruments Corp.	EMC0126530	980038	01/05/2017	01/04/2018
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	ChamPro	AM-BS-4500-B	060776-ABS	N.C.R	N.C.R
Controller	ChamPro	EM1000	60776	N.C.R	N.C.R
Low Loss Cable	Huber Suhner	966_RX	9	01/05/2017	01/04/2018
3m Site NSA	SGS	966 chamber	N/A	07/01/2017	06/30/2018
Low Loss Cable	Huber Suhner	966 TX	1	01/05/2017	01/04/2018
Horn Antenna	Schwarzbeck	BBHA9170	184	12/12/2016	12/11/2017
Pre-Amplifier	EMC Instruments Corp.	EMC184045	980135	01/05/2017	01/04/2018
Radio Communication Analyzer	R&S	CMU200	102189	02/10/2017	02/09/2018
Radio Communication Analyer	Anritsu	MT8820C	6201465317	01/03/2017	01/02/2018

Note: *The measurement was taken place with the long duration of the time, and additional equipment list as shown above indicate those equipment of which has been subject to undertake the calibration in intermediate period of time of the measurement.*

ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Horn Antenna	Schwarzbeck	BBHA9120D	1441	08/04/2017	08/03/2018

7.5. Measurement Result: (Peak) –using option of peak measurement

EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
GSM 850	824.2	128	V	7.38	3.31	-2.92	7.76	38.45
			H	14.99	3.31	-2.92	15.37	38.45
	836.6	190	V	7.41	3.29	-2.96	7.74	38.45
			H	14.33	3.29	-2.96	14.65	38.45
	848.8	251	V	1.54	3.27	-3.00	1.80	38.45
			H	15.39	3.27	-3.00	**15.65**	38.45
GPRS 850	824.2	128	V	9.68	3.31	-2.92	10.06	38.45
			H	18.77	3.31	-2.92	**19.15**	38.45
	836.6	190	V	10.01	3.29	-2.96	10.34	38.45
			H	17.56	3.29	-2.96	17.88	38.45
	848.8	251	V	9.05	3.27	-3.00	9.32	38.45
			H	17.70	3.27	-3.00	17.96	38.45
EDGE 850	824.2	128	V	8.79	3.31	-2.92	9.18	38.45
			H	16.57	3.31	-2.92	**16.95**	38.45
	836.6	190	V	8.65	3.29	-2.96	8.97	38.45
			H	15.16	3.29	-2.96	15.48	38.45
	848.8	251	V	6.73	3.27	-3.00	6.99	38.45
			H	15.82	3.27	-3.00	16.08	38.45

Remark: The RBW,VBW of SPA for frequency RBW=300 KHz, VBW=1MHz

EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		**V/H**	**dBm**	**dBd**	**dB**	**dBm**	**dBm**
GSM 1900	1850.2	512	V	12.97	9.94	-4.46	18.45	33.00
			H	15.92	9.94	-4.46	21.40	33.00
	1880.0	661	V	14.44	10.03	-4.51	19.97	33.00
			H	16.58	10.03	-4.51	22.10	33.00
	1909.8	810	V	14.07	10.13	-4.55	19.65	33.00
			H	16.86	10.13	-4.55	**22.44**	33.00
GPRS 1900	1850.2	512	V	15.86	9.94	-4.46	21.34	33.00
			H	20.81	9.94	-4.46	**26.29**	33.00
	1880.0	661	V	17.93	10.03	-4.51	23.45	33.00
			H	20.70	10.03	-4.51	26.22	33.00
	1909.8	810	V	17.75	10.13	-4.55	23.33	33.00
			H	20.20	10.13	-4.55	25.78	33.00
EDGE 1900	1850.2	512	V	14.43	9.94	-4.46	19.91	33.00
			H	19.07	9.94	-4.46	24.55	33.00
	1880.0	661	V	16.28	10.03	-4.51	21.81	33.00
			H	18.94	10.03	-4.51	24.47	33.00
	1909.8	810	V	15.70	10.13	-4.55	21.27	33.00
			H	19.15	10.13	-4.55	**24.72**	33.00

Remark: The RBW,VBW of SPA for frequency RBW=300 KHz, VBW=1MHz

EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		**V/H**	**dBm**	**dBd**	**dB**	**dBm**	**dBm**
GSM 1900	1850.2	512	V	12.97	9.94	-4.46	18.45	33.00
			H	15.92	9.94	-4.46	21.40	33.00
	1880.0	661	V	14.44	10.03	-4.51	19.97	33.00
			H	16.58	10.03	-4.51	22.10	33.00
	1909.8	810	V	14.07	10.13	-4.55	19.65	33.00
			H	16.86	10.13	-4.55	**22.44**	33.00
GPRS 1900	1850.2	512	V	15.86	9.94	-4.46	21.34	33.00
			H	20.81	9.94	-4.46	**26.29**	33.00
	1880.0	661	V	17.93	10.03	-4.51	23.45	33.00
			H	20.70	10.03	-4.51	26.22	33.00
	1909.8	810	V	17.75	10.13	-4.55	23.33	33.00
			H	20.20	10.13	-4.55	25.78	33.00
EDGE 1900	1850.2	512	V	14.43	9.94	-4.46	19.91	33.00
			H	19.07	9.94	-4.46	24.55	33.00
	1880.0	661	V	16.28	10.03	-4.51	21.81	33.00
			H	18.94	10.03	-4.51	24.47	33.00
	1909.8	810	V	15.70	10.13	-4.55	21.27	33.00
			H	19.15	10.13	-4.55	**24.72**	33.00

Remark: The RBW,VBW of SPA for frequency RBW=300 KHz, VBW=1MHz

EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		**V/H**	**dBm**	**dBd**	**dB**	**dBm**	**dBm**
WCDMA Band II	1852.4	9262	V	7.68	9.94	-4.46	13.16	33.00
			H	16.05	9.95	-4.46	**21.53**	33.00
	1880.0	9400	V	12.17	10.03	-4.51	17.69	33.00
			H	15.92	10.03	-4.51	21.45	33.00
	1907.6	9538	V	7.45	10.12	-4.55	13.02	33.00
			H	14.31	10.12	-4.55	19.88	33.00
HSDPA Band II	1852.4	9262	V	12.81	9.94	-4.46	18.29	33.00
			H	19.84	9.95	-4.46	**25.33**	33.00
	1880.0	9400	V	13.48	10.04	-4.51	19.01	33.00
			H	18.51	10.04	-4.51	24.04	33.00
	1907.6	9538	V	11.82	10.12	-4.55	17.39	33.00
			H	18.48	10.12	-4.55	24.05	33.00
HSUPA Band II	1852.4	9262	V	9.37	9.95	-4.46	14.85	33.00
			H	17.60	9.94	-4.46	**23.08**	33.00
	1880.0	9400	V	11.75	10.03	-4.51	17.27	33.00
			H	17.39	10.04	-4.51	22.92	33.00
	1907.6	9538	V	9.01	10.12	-4.55	14.58	33.00
			H	15.17	10.12	-4.55	20.74	33.00

Remark: The RBW,VBW of SPA for frequency RBW=5 MHz, VBW=8 MHz

EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
WCDMA Band IV	1712.4	1312	V	10.17	9.48	-4.31	15.35	30.00
			H	15.57	9.48	-4.31	20.74	30.00
	1732.6	1413	V	11.17	9.55	-4.31	16.41	30.00
			H	16.28	9.55	-4.31	**21.52**	30.00
	1752.6	1513	V	9.06	9.62	-4.34	14.34	30.00
			H	14.57	9.62	-4.34	19.85	30.00
HSDPA Band IV	1712.4	1312	V	12.93	9.48	-4.31	18.11	30.00
			H	19.14	9.48	-4.31	**24.31**	30.00
	1732.6	1413	V	13.16	9.55	-4.31	18.40	30.00
			H	16.80	9.55	-4.31	22.04	30.00
	1752.6	1513	V	10.48	9.62	-4.34	15.77	30.00
			H	16.20	9.62	-4.34	21.49	30.00
HSUPA Band IV	1712.4	1312	V	11.28	9.48	-4.31	16.45	30.00
			H	17.65	9.48	-4.31	**22.83**	30.00
	1732.6	1413	V	11.77	9.55	-4.31	17.01	30.00
			H	16.26	9.55	-4.31	21.51	30.00
	1752.6	1513	V	10.10	9.62	-4.34	15.38	30.00
			H	15.15	9.62	-4.34	20.43	30.00

Remark: The RBW,VBW of SPA for frequency RBW=5 MHz, VBW=8 MHz

EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		**V/H**	**dBm**	**dBd**	**dB**	**dBm**	**dBm**
WCDMA Band V	826.4	4132	V	4.02	3.30	-2.93	4.39	38.45
			H	10.35	3.30	-2.93	**10.72**	38.45
	836.6	4183	V	2.04	3.29	-2.97	2.36	38.45
			H	9.34	3.29	-2.96	9.66	38.45
	846.6	4233	V	0.38	3.27	-3.00	0.66	38.45
			H	9.15	3.27	-3.00	9.43	38.45
HSDPA Band V	826.4	4132	V	5.48	3.30	-2.93	5.85	38.45
			H	12.07	3.30	-2.93	**12.44**	38.45
	836.6	4183	V	3.31	3.29	-2.96	3.64	38.45
			H	10.44	3.29	-2.96	10.77	38.45
	846.6	4233	V	2.37	3.27	-3.00	2.65	38.45
			H	10.58	3.27	-3.00	10.85	38.45
HSUPA Band V	826.4	4132	V	4.63	3.30	-2.93	5.01	38.45
			H	11.33	3.30	-2.93	**11.71**	38.45
	836.6	4183	V	2.93	3.29	-2.96	3.26	38.45
			H	9.54	3.29	-2.96	9.87	38.45
	846.6	4233	V	1.49	3.27	-3.00	1.76	38.45
			H	9.88	3.27	-3.00	10.15	38.45

Remark: The RBW,VBW of SPA for frequency RBW=5 MHz, VBW=8 MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 2 BW: 1.4M QPSK RB: 1,0	1850.7	18607	V	11.09	9.94	-4.46	16.57	33.01
			H	11.99	9.95	-4.46	17.47	33.01
	1880.0	18900	V	9.32	10.03	-4.51	14.84	33.01
			H	13.35	10.03	-4.51	**18.87**	33.01
	1909.3	19193	V	3.51	10.12	-4.55	9.08	33.01
			H	8.66	10.12	-4.55	14.23	33.01
BAND 2 BW: 1.4M QPSK RB: 1,5	1850.7	18607	V	11.09	9.94	-4.46	16.57	33.01
			H	11.98	9.94	-4.46	17.46	33.01
	1880.0	18900	V	9.26	10.03	-4.51	14.78	33.01
			H	13.31	10.03	-4.51	**18.84**	33.01
	1909.3	19193	V	3.22	10.12	-4.55	8.80	33.01
			H	8.43	10.12	-4.55	14.00	33.01
BAND 2 BW: 1.4M 16QAM RB: 1,0	1850.7	18607	V	11.17	9.94	-4.46	16.65	33.01
			H	12.12	9.94	-4.46	17.61	33.01
	1880.0	18900	V	9.14	10.03	-4.51	14.66	33.01
			H	13.30	10.03	-4.51	**18.83**	33.01
	1909.3	19193	V	3.48	10.12	-4.55	9.05	33.01
			H	8.61	10.12	-4.55	14.19	33.01
BAND 2 BW: 1.4M 16QAM RB: 1,5	1850.7	18607	V	11.12	9.94	-4.46	16.60	33.01
			H	11.87	9.94	-4.46	17.35	33.01
	1880.0	18900	V	8.93	10.03	-4.51	14.46	33.01
			H	13.54	10.03	-4.51	**19.06**	33.01
	1909.3	19193	V	3.19	10.12	-4.55	8.77	33.01
			H	8.28	10.12	-4.55	13.85	33.01

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 2 BW: 3M QPSK RB: 1,0	1851.5	18615	V	11.61	9.95	-4.46	17.09	33.01
			H	11.89	9.95	-4.46	17.38	33.01
	1880.0	18900	V	10.49	10.03	-4.50	16.01	33.01
			H	13.71	10.03	-4.50	**19.23**	33.01
	1908.5	19185	V	5.91	10.11	-4.55	11.48	33.01
			H	9.96	10.11	-4.55	15.53	33.01
BAND 2 BW: 3M QPSK RB: 1,14	1851.5	18615	V	11.28	9.94	-4.46	16.76	33.01
			H	12.02	9.94	-4.46	17.50	33.01
	1880.0	18900	V	10.19	10.03	-4.51	15.72	33.01
			H	13.24	10.03	-4.51	**18.77**	33.01
	1908.5	19185	V	4.60	10.12	-4.55	10.18	33.01
			H	9.01	10.12	-4.55	14.58	33.01
BAND 2 BW: 3M 16QAM RB: 1,0	1851.5	18615	V	11.47	9.95	-4.46	16.96	33.01
			H	11.82	9.94	-4.46	17.30	33.01
	1880.0	18900	V	10.41	10.02	-4.50	15.93	33.01
			H	13.81	10.02	-4.50	**19.33**	33.01
	1908.5	19185	V	5.94	10.11	-4.54	11.51	33.01
			H	10.18	10.11	-4.55	15.75	33.01
BAND 2 BW: 3M 16QAM RB: 1,14	1851.5	18615	V	11.28	9.94	-4.46	16.77	33.01
			H	11.75	9.94	-4.46	17.23	33.01
	1880.0	18900	V	10.08	10.03	-4.51	15.60	33.01
			H	13.10	10.03	-4.51	**18.62**	33.01
	1908.5	19185	V	4.53	10.12	-4.55	10.10	33.01
			H	8.97	10.12	-4.55	14.55	33.01

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 2 BW: 5M QPSK RB: 1,0	1852.5	18625	V	11.49	9.95	-4.46	16.97	33.01
			H	11.81	9.95	-4.46	17.30	33.01
	1880.0	18900	V	10.14	10.02	-4.50	15.66	33.01
			H	13.66	10.02	-4.50	**19.17**	33.01
	1907.5	19175	V	6.96	10.11	-4.54	12.52	33.01
			H	10.85	10.11	-4.54	16.42	33.01
BAND 2 BW: 5M QPSK RB: 1,24	1852.5	18625	V	10.64	9.95	-4.46	16.13	33.01
			H	11.71	9.95	-4.46	17.19	33.01
	1880.0	18900	V	9.80	10.04	-4.51	15.32	33.01
			H	12.87	10.04	-4.51	**18.40**	33.01
	1907.5	19175	V	4.30	10.12	-4.55	9.87	33.01
			H	9.00	10.12	-4.55	14.58	33.01
BAND 2 BW: 5M 16QAM RB: 1,0	1852.5	18625	V	11.26	9.95	-4.46	16.74	33.01
			H	11.67	9.94	-4.46	17.15	33.01
	1880.0	18900	V	10.28	10.02	-4.50	15.80	33.01
			H	13.66	10.02	-4.50	**19.18**	33.01
	1907.5	19175	V	6.65	10.11	-4.54	12.22	33.01
			H	10.62	10.11	-4.54	16.19	33.01
BAND 2 BW: 5M 16QAM RB: 1,24	1852.5	18625	V	10.50	9.95	-4.46	15.98	33.01
			H	11.63	9.95	-4.46	17.11	33.01
	1880.0	18900	V	9.76	10.04	-4.51	15.29	33.01
			H	12.82	10.04	-4.51	**18.34**	33.01
	1907.5	19175	V	4.30	10.12	-4.55	9.88	33.01
			H	8.87	10.12	-4.55	14.45	33.01

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 2 BW: 10M QPSK RB: 1,0	1855.0	18650	V	11.38	9.95	-4.46	16.86	33.01
			H	11.82	9.95	-4.46	17.31	33.01
	1880.0	18900	V	10.73	10.01	-4.50	16.24	33.01
			H	14.11	10.01	-4.50	**19.63**	33.01
	1905.0	19150	V	8.16	10.09	-4.54	13.72	33.01
			H	11.66	10.09	-4.54	17.21	33.01
BAND 2 BW: 10M QPSK RB: 1,49	1855.0	18650	V	9.84	9.96	-4.47	15.33	33.01
			H	12.09	9.96	-4.47	17.58	33.01
	1880.0	18900	V	9.20	10.04	-4.51	14.73	33.01
			H	12.07	10.04	-4.51	**17.60**	33.01
	1905.0	19150	V	4.34	10.12	-4.55	9.92	33.01
			H	8.93	10.12	-4.55	14.50	33.01
BAND 2 BW: 10M 16QAM RB: 1,0	1855.0	18650	V	11.26	9.95	-4.46	16.74	33.01
			H	11.79	9.95	-4.46	17.27	33.01
	1880.0	18900	V	10.00	10.02	-4.50	15.52	33.01
			H	13.49	10.02	-4.50	**19.01**	33.01
	1905.0	19150	V	8.38	10.09	-4.54	13.93	33.01
			H	11.52	10.09	-4.54	17.08	33.01
BAND 2 BW: 10M 16QAM RB: 1,49	1855.0	18650	V	9.74	9.96	-4.47	15.23	33.01
			H	12.05	9.96	-4.47	17.54	33.01
	1880.0	18900	V	9.28	10.04	-4.51	14.81	33.01
			H	12.35	10.04	-4.51	**17.88**	33.01
	1905.0	19150	V	4.35	10.12	-4.55	9.93	33.01
			H	9.00	10.12	-4.55	14.57	33.01

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 2 BW: 15M QPSK RB: 1,0	1857.5	18675	V	11.48	9.94	-4.46	16.96	33.01
			H	11.74	9.94	-4.46	17.22	33.01
	1880.0	18900	V	10.33	10.01	-4.50	15.84	33.01
			H	13.83	10.01	-4.50	**19.34**	33.01
	1902.5	19125	V	7.39	10.08	-4.53	12.94	33.01
			H	11.09	10.08	-4.53	16.64	33.01
BAND 2 BW: 15M QPSK RB: 1,74	1857.5	18675	V	10.02	9.98	-4.48	15.52	33.01
			H	13.14	9.98	-4.48	**18.63**	33.01
	1880.0	18900	V	8.32	10.05	-4.52	13.85	33.01
			H	11.25	10.05	-4.52	16.79	33.01
	1902.5	19125	V	4.31	10.12	-4.55	9.89	33.01
			H	8.94	10.12	-4.55	14.51	33.01
BAND 2 BW: 15M 16QAM RB: 1,0	1857.5	18675	V	11.03	9.94	-4.46	16.51	33.01
			H	11.71	9.95	-4.46	17.20	33.01
	1880.0	18900	V	10.22	10.01	-4.50	15.73	33.01
			H	14.11	10.01	-4.50	**19.62**	33.01
	1902.5	19125	V	7.44	10.08	-4.53	12.99	33.01
			H	11.02	10.08	-4.53	16.57	33.01
BAND 2 BW: 15M 16QAM RB: 1,74	1857.5	18675	V	9.94	9.98	-4.48	15.44	33.01
			H	12.94	9.98	-4.48	**18.44**	33.01
	1880.0	18900	V	8.28	10.05	-4.52	13.82	33.01
			H	11.46	10.05	-4.52	16.99	33.01
	1902.5	19125	V	4.22	10.12	-4.55	9.79	33.01
			H	8.89	10.12	-4.55	14.47	33.01

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 2 BW: 20M QPSK RB: 1,0	1860.0	18700	V	11.34	9.95	-4.46	16.83	33.01
			H	11.66	9.95	-4.46	17.14	33.01
	1880.0	18900	V	10.37	10.00	-4.49	15.88	33.01
			H	14.09	10.00	-4.49	**19.60**	33.01
	1900.0	19100	V	7.63	10.07	-4.52	13.17	33.01
			H	10.73	10.07	-4.52	16.27	33.01
BAND 2 BW: 20M QPSK RB: 1,99	1860.0	18700	V	10.52	9.99	-4.49	16.02	33.01
			H	13.98	9.99	-4.49	**19.49**	33.01
	1880.0	18900	V	8.00	10.06	-4.52	13.54	33.01
			H	10.92	10.06	-4.52	16.45	33.01
	1900.0	19100	V	4.48	10.12	-4.55	10.05	33.01
			H	9.05	10.12	-4.55	14.62	33.01
BAND 2 BW: 20M 16QAM RB: 1,0	1860.0	18700	V	11.12	9.95	-4.46	16.61	33.01
			H	12.13	9.94	-4.46	17.61	33.01
	1880.0	18900	V	9.76	10.00	-4.49	15.27	33.01
			H	14.04	10.00	-4.49	**19.55**	33.01
	1900.0	19100	V	7.61	10.07	-4.52	13.16	33.01
			H	10.67	10.07	-4.52	16.21	33.01
BAND 2 BW: 20M 16QAM RB: 1,99	1860.0	18700	V	10.29	9.99	-4.49	15.80	33.01
			H	13.81	9.99	-4.49	**19.32**	33.01
	1880.0	18900	V	7.82	10.06	-4.52	13.36	33.01
			H	11.13	10.06	-4.52	16.66	33.01
	1900.0	19100	V	4.39	10.12	-4.55	9.96	33.01
			H	8.95	10.12	-4.55	14.52	33.01

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 4 BW: 1.4M QPSK RB: 1,0	1710.7	19957	V	11.09	9.94	-4.46	16.57	30.00
			H	11.99	9.95	-4.46	17.47	30.00
	1732.5	20175	V	9.32	10.03	-4.51	14.84	30.00
			H	13.35	10.03	-4.51	**18.87**	30.00
	1754.3	20393	V	3.51	10.12	-4.55	9.08	30.00
			H	8.66	10.12	-4.55	14.23	30.00
BAND 4 BW: 1.4M QPSK RB: 1,5	1710.7	19957	V	11.09	9.94	-4.46	16.57	30.00
			H	11.98	9.94	-4.46	17.46	30.00
	1732.5	20175	V	9.26	10.03	-4.51	14.78	30.00
			H	13.31	10.03	-4.51	**18.84**	30.00
	1754.3	20393	V	3.22	10.12	-4.55	8.80	30.00
			H	8.43	10.12	-4.55	14.00	30.00
BAND 4 BW: 1.4M 16QAM RB: 1,0	1710.7	19957	V	11.17	9.94	-4.46	16.65	30.00
			H	12.12	9.94	-4.46	17.61	30.00
	1732.5	20175	V	9.14	10.03	-4.51	14.66	30.00
			H	13.30	10.03	-4.51	**18.83**	30.00
	1754.3	20393	V	3.48	10.12	-4.55	9.05	30.00
			H	8.61	10.12	-4.55	14.19	30.00
BAND 4 BW: 1.4M 16QAM RB: 1,5	1710.7	19957	V	11.12	9.94	-4.46	16.60	30.00
			H	11.87	9.94	-4.46	17.35	30.00
	1732.5	20175	V	8.93	10.03	-4.51	14.46	30.00
			H	13.54	10.03	-4.51	**19.06**	30.00
	1754.3	20393	V	3.19	10.12	-4.55	8.77	30.00
			H	8.28	10.12	-4.55	13.85	30.00

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 4 BW: 3M QPSK RB: 1,0	1711.5	19965	V	11.61	9.95	-4.46	17.09	30.00
			H	11.89	9.95	-4.46	17.38	30.00
	1732.5	20175	V	10.49	10.03	-4.50	16.01	30.00
			H	13.71	10.03	-4.50	**19.23**	30.00
	1753.5	20385	V	5.91	10.11	-4.55	11.48	30.00
			H	9.96	10.11	-4.55	15.53	30.00
BAND 4 BW: 3M QPSK RB: 1,14	1711.5	19965	V	11.28	9.94	-4.46	16.76	30.00
			H	12.02	9.94	-4.46	17.50	30.00
	1732.5	20175	V	10.19	10.03	-4.51	15.72	30.00
			H	13.24	10.03	-4.51	**18.77**	30.00
	1753.5	20385	V	4.60	10.12	-4.55	10.18	30.00
			H	9.01	10.12	-4.55	14.58	30.00
BAND 4 BW: 3M 16QAM RB: 1,0	1711.5	19965	V	11.47	9.95	-4.46	16.96	30.00
			H	11.82	9.94	-4.46	17.30	30.00
	1732.5	20175	V	10.41	10.02	-4.50	15.93	30.00
			H	13.81	10.02	-4.50	**19.33**	30.00
	1753.5	20385	V	5.94	10.11	-4.54	11.51	30.00
			H	10.18	10.11	-4.55	15.75	30.00
BAND 4 BW: 3M 16QAM RB: 1,14	1711.5	19965	V	11.28	9.94	-4.46	16.77	30.00
			H	11.75	9.94	-4.46	17.23	30.00
	1732.5	20175	V	10.08	10.03	-4.51	15.60	30.00
			H	13.10	10.03	-4.51	**18.62**	30.00
	1753.5	20385	V	4.53	10.12	-4.55	10.10	30.00
			H	8.97	10.12	-4.55	14.55	30.00

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 4 BW: 5M QPSK RB: 1,0	1712.5	19975	V	11.49	9.95	-4.46	16.97	30.00
			H	11.81	9.95	-4.46	17.30	30.00
	1732.5	20175	V	10.14	10.02	-4.50	15.66	30.00
			H	13.66	10.02	-4.50	**19.17**	30.00
	1752.5	20375	V	6.96	10.11	-4.54	12.52	30.00
			H	10.85	10.11	-4.54	16.42	30.00
BAND 4 BW: 5M QPSK RB: 1,24	1712.5	19975	V	10.64	9.95	-4.46	16.13	30.00
			H	11.71	9.95	-4.46	17.19	30.00
	1732.5	20175	V	9.80	10.04	-4.51	15.32	30.00
			H	12.87	10.04	-4.51	**18.40**	30.00
	1752.5	20375	V	4.30	10.12	-4.55	9.87	30.00
			H	9.00	10.12	-4.55	14.58	30.00
BAND 4 BW: 5M 16QAM RB: 1,0	1712.5	19975	V	11.26	9.95	-4.46	16.74	30.00
			H	11.67	9.94	-4.46	17.15	30.00
	1732.5	20175	V	10.28	10.02	-4.50	15.80	30.00
			H	13.66	10.02	-4.50	**19.18**	30.00
	1752.5	20375	V	6.65	10.11	-4.54	12.22	30.00
			H	10.62	10.11	-4.54	16.19	30.00
BAND 4 BW: 5M 16QAM RB: 1,24	1712.5	19975	V	10.50	9.95	-4.46	15.98	30.00
			H	11.63	9.95	-4.46	17.11	30.00
	1732.5	20175	V	9.76	10.04	-4.51	15.29	30.00
			H	12.82	10.04	-4.51	**18.34**	30.00
	1752.5	20375	V	4.30	10.12	-4.55	9.88	30.00
			H	8.87	10.12	-4.55	14.45	30.00

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 4 BW: 10M QPSK RB: 1,0	1715.0	20000	V	11.38	9.95	-4.46	16.86	30.00
			H	11.82	9.95	-4.46	17.31	30.00
	1732.5	20175	V	10.73	10.01	-4.50	16.24	30.00
			H	14.11	10.01	-4.50	**19.63**	30.00
	1750.0	20350	V	8.16	10.09	-4.54	13.72	30.00
			H	11.66	10.09	-4.54	17.21	30.00
BAND 4 BW: 10M QPSK RB: 1,49	1715.0	20000	V	9.84	9.96	-4.47	15.33	30.00
			H	12.09	9.96	-4.47	17.58	30.00
	1732.5	20175	V	9.20	10.04	-4.51	14.73	30.00
			H	12.07	10.04	-4.51	**17.60**	30.00
	1750.0	20350	V	4.34	10.12	-4.55	9.92	30.00
			H	8.93	10.12	-4.55	14.50	30.00
BAND 4 BW: 10M 16QAM RB: 1,0	1715.0	20000	V	11.26	9.95	-4.46	16.74	30.00
			H	11.79	9.95	-4.46	17.27	30.00
	1732.5	20175	V	10.00	10.02	-4.50	15.52	30.00
			H	13.49	10.02	-4.50	**19.01**	30.00
	1750.0	20350	V	8.38	10.09	-4.54	13.93	30.00
			H	11.52	10.09	-4.54	17.08	30.00
BAND 4 BW: 10M 16QAM RB: 1,49	1715.0	20000	V	9.74	9.96	-4.47	15.23	30.00
			H	12.05	9.96	-4.47	17.54	30.00
	1732.5	20175	V	9.28	10.04	-4.51	14.81	30.00
			H	12.35	10.04	-4.51	**17.88**	30.00
	1750.0	20350	V	4.35	10.12	-4.55	9.93	30.00
			H	9.00	10.12	-4.55	14.57	30.00

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 4 BW: 15M QPSK RB: 1,0	1717.5	20025	V	11.48	9.94	-4.46	16.96	30.00
			H	11.74	9.94	-4.46	17.22	30.00
	1732.5	20175	V	10.33	10.01	-4.50	15.84	30.00
			H	13.83	10.01	-4.50	**19.34**	30.00
	1747.5	20325	V	7.39	10.08	-4.53	12.94	30.00
			H	11.09	10.08	-4.53	16.64	30.00
BAND 4 BW: 15M QPSK RB: 1,74	1717.5	20025	V	10.02	9.98	-4.48	15.52	30.00
			H	13.14	9.98	-4.48	**18.63**	30.00
	1732.5	20175	V	8.32	10.05	-4.52	13.85	30.00
			H	11.25	10.05	-4.52	16.79	30.00
	1747.5	20325	V	4.31	10.12	-4.55	9.89	30.00
			H	8.94	10.12	-4.55	14.51	30.00
BAND 4 BW: 15M 16QAM RB: 1,0	1717.5	20025	V	11.03	9.94	-4.46	16.51	30.00
			H	11.71	9.95	-4.46	17.20	30.00
	1732.5	20175	V	10.22	10.01	-4.50	15.73	30.00
			H	14.11	10.01	-4.50	**19.62**	30.00
	1747.5	20325	V	7.44	10.08	-4.53	12.99	30.00
			H	11.02	10.08	-4.53	16.57	30.00
BAND 4 BW: 15M 16QAM RB: 1,74	1717.5	20025	V	9.94	9.98	-4.48	15.44	30.00
			H	12.94	9.98	-4.48	**18.44**	30.00
	1732.5	20175	V	8.28	10.05	-4.52	13.82	30.00
			H	11.46	10.05	-4.52	16.99	30.00
	1747.5	20325	V	4.22	10.12	-4.55	9.79	30.00
			H	8.89	10.12	-4.55	14.47	30.00

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 4 BW: 20M QPSK RB: 1,0	1720.0	20050	V	11.34	9.95	-4.46	16.83	30.00
			H	11.66	9.95	-4.46	17.14	30.00
	1732.5	20175	V	10.37	10.00	-4.49	15.88	30.00
			H	14.09	10.00	-4.49	**19.60**	30.00
	1745.0	20300	V	7.63	10.07	-4.52	13.17	30.00
			H	10.73	10.07	-4.52	16.27	30.00
BAND 4 BW: 20M QPSK RB: 1,99	1720.0	20050	V	10.52	9.99	-4.49	16.02	30.00
			H	13.98	9.99	-4.49	**19.49**	30.00
	1732.5	20175	V	8.00	10.06	-4.52	13.54	30.00
			H	10.92	10.06	-4.52	16.45	30.00
	1745.0	20300	V	4.48	10.12	-4.55	10.05	30.00
			H	9.05	10.12	-4.55	14.62	30.00
BAND 4 BW: 20M 16QAM RB: 1,0	1720.0	20050	V	11.12	9.95	-4.46	16.61	30.00
			H	12.13	9.94	-4.46	17.61	30.00
	1732.5	20175	V	9.76	10.00	-4.49	15.27	30.00
			H	14.04	10.00	-4.49	**19.55**	30.00
	1745.0	20300	V	7.61	10.07	-4.52	13.16	30.00
			H	10.67	10.07	-4.52	16.21	30.00
BAND 4 BW: 20M 16QAM RB: 1,99	1720.0	20050	V	10.29	9.99	-4.49	15.80	30.00
			H	13.81	9.99	-4.49	**19.32**	30.00
	1732.5	20175	V	7.82	10.06	-4.52	13.36	30.00
			H	11.13	10.06	-4.52	16.66	30.00
	1745.0	20300	V	4.39	10.12	-4.55	9.96	30.00
			H	8.95	10.12	-4.55	14.52	30.00

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	ERP dBm	Limit dBm
BAND 5 BW: 1.4M QPSK RB: 1,0	824.7	20407	V	10.90	3.30	-2.93	11.27	38.45
			H	14.08	3.30	-2.93	14.45	38.45
	836.5	20525	V	11.73	3.29	-2.96	12.06	38.45
			H	15.29	3.29	-2.96	**15.62**	38.45
	848.3	20643	V	9.50	3.27	-2.99	9.78	38.45
			H	11.55	3.27	-2.99	11.83	38.45
BAND 5 BW: 1.4M QPSK RB: 1,5	824.7	20407	V	10.97	3.31	-2.92	11.36	38.45
			H	13.90	3.31	-2.92	14.29	38.45
	836.5	20525	V	11.72	3.29	-2.96	12.05	38.45
			H	13.84	3.29	-2.96	14.17	38.45
	848.3	20643	V	8.64	3.27	-3.00	8.91	38.45
			H	11.77	3.27	-3.00	12.04	38.45
BAND 5 BW: 1.4M 16QAM RB: 1,0	824.7	20407	V	11.95	3.30	-2.93	12.32	38.45
			H	14.07	3.30	-2.93	14.44	38.45
	836.5	20525	V	12.13	3.29	-2.96	12.46	38.45
			H	14.88	3.29	-2.96	**15.21**	38.45
	848.3	20643	V	10.45	3.27	-2.99	10.73	38.45
			H	12.01	3.27	-2.99	12.29	38.45
BAND 5 BW: 1.4M 16QAM RB: 1,5	824.7	20407	V	11.65	3.31	-2.92	12.04	38.45
			H	14.14	3.31	-2.92	14.53	38.45
	836.5	20525	V	11.81	3.29	-2.96	12.14	38.45
			H	14.68	3.29	-2.96	15.01	38.45
	848.3	20643	V	10.11	3.27	-3.00	10.38	38.45
			H	12.23	3.27	-3.00	12.50	38.45

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	ERP dBm	Limit dBm
BAND 5 BW: 3M QPSK RB: 1,0	825.5	20415	V	10.63	3.30	-2.93	11.00	38.45
			H	13.88	3.30	-2.93	14.25	38.45
	836.5	20525	V	11.29	3.29	-2.95	11.63	38.45
			H	15.08	3.29	-2.95	**15.42**	38.45
	847.5	20635	V	8.42	3.28	-2.99	8.71	38.45
			H	11.56	3.28	-2.99	11.85	38.45
BAND 5 BW: 3M QPSK RB: 1,14	825.5	20415	V	9.98	3.30	-2.93	10.35	38.45
			H	13.62	3.30	-2.93	13.99	38.45
	836.5	20525	V	10.57	3.29	-2.96	10.90	38.45
			H	14.68	3.29	-2.96	15.01	38.45
	847.5	20635	V	8.87	3.27	-3.00	9.14	38.45
			H	11.54	3.27	-3.00	11.81	38.45
BAND 5 BW: 3M 16QAM RB: 1,0	825.5	20415	V	11.26	3.30	-2.93	11.63	38.45
			H	14.67	3.30	-2.93	15.04	38.45
	836.5	20525	V	12.00	3.29	-2.95	12.34	38.45
			H	15.15	3.29	-2.96	**15.48**	38.45
	847.5	20635	V	9.75	3.28	-2.99	10.04	38.45
			H	12.27	3.28	-2.99	12.56	38.45
BAND 5 BW: 3M 16QAM RB: 1,14	825.5	20415	V	11.56	3.30	-2.93	11.93	38.45
			H	14.15	3.30	-2.93	14.52	38.45
	836.5	20525	V	11.38	3.29	-2.96	11.71	38.45
			H	14.59	3.29	-2.96	14.92	38.45
	847.5	20635	V	9.54	3.27	-3.00	9.81	38.45
			H	11.80	3.27	-3.00	12.07	38.45

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	ERP dBm	Limit dBm
BAND 5 BW: 5M QPSK RB: 1,0	826.5	20425	V	10.10	3.30	-2.93	10.47	38.45
			H	14.84	3.30	-2.93	**15.21**	38.45
	836.5	20525	V	11.24	3.29	-2.95	11.58	38.45
			H	14.63	3.29	-2.95	14.97	38.45
	846.5	20625	V	9.77	3.28	-2.98	10.07	38.45
			H	12.88	3.28	-2.98	13.18	38.45
BAND 5 BW: 5M QPSK RB: 1,24	826.5	20425	V	11.08	3.30	-2.93	11.45	38.45
			H	14.59	3.30	-2.93	14.96	38.45
	836.5	20525	V	9.78	3.29	-2.97	10.10	38.45
			H	13.18	3.29	-2.96	13.51	38.45
	846.5	20625	V	9.39	3.27	-3.00	9.66	38.45
			H	12.32	3.27	-3.00	12.59	38.45
BAND 5 BW: 5M 16QAM RB: 1,0	826.5	20425	V	11.04	3.30	-2.93	11.41	38.45
			H	14.78	3.30	-2.93	15.15	38.45
	836.5	20525	V	11.88	3.29	-2.95	12.22	38.45
			H	15.84	3.29	-2.95	**16.18**	38.45
	846.5	20625	V	9.61	3.28	-2.98	9.91	38.45
			H	12.99	3.28	-2.98	13.29	38.45
BAND 5 BW: 5M 16QAM RB: 1,24	826.5	20425	V	10.77	3.30	-2.93	11.14	38.45
			H	14.64	3.30	-2.93	15.01	38.45
	836.5	20525	V	11.39	3.29	-2.96	11.72	38.45
			H	14.59	3.29	-2.96	14.92	38.45
	846.5	20625	V	10.15	3.27	-3.00	10.42	38.45
			H	13.49	3.27	-3.00	13.76	38.45

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	ERP dBm	Limit dBm
BAND 5 BW: 10M QPSK RB: 1,0	829.0	20450	V	10.55	3.30	-2.93	10.92	38.45
			H	14.26	3.30	-2.93	14.63	38.45
	836.5	20525	V	11.36	3.30	-2.94	11.72	38.45
			H	14.58	3.30	-2.94	**14.94**	38.45
	844.0	20600	V	10.40	3.29	-2.97	10.72	38.45
			H	12.77	3.29	-2.97	13.09	38.45
BAND 5 BW: 10M QPSK RB: 1,49	829.0	20450	V	11.10	3.29	-2.95	11.44	38.45
			H	13.67	3.29	-2.95	14.01	38.45
	836.5	20525	V	9.06	3.28	-2.97	9.37	38.45
			H	12.53	3.28	-2.98	12.83	38.45
	844.0	20600	V	9.33	3.27	-3.00	9.60	38.45
			H	12.14	3.27	-3.00	12.41	38.45
BAND 5 BW: 10M 16QAM RB: 1,0	829.0	20450	V	11.62	3.30	-2.93	12.00	38.45
			H	15.44	3.30	-2.93	15.81	38.45
	836.5	20525	V	12.38	3.30	-2.94	12.73	38.45
			H	15.54	3.30	-2.94	**15.89**	38.45
	844.0	20600	V	10.88	3.29	-2.97	11.20	38.45
			H	14.18	3.29	-2.97	14.50	38.45
BAND 5 BW: 10M 16QAM RB: 1,49	829.0	20450	V	12.63	3.29	-2.95	12.97	38.45
			H	14.97	3.29	-2.95	15.31	38.45
	836.5	20525	V	9.49	3.28	-2.97	9.80	38.45
			H	12.86	3.28	-2.97	13.17	38.45
	844.0	20600	V	10.56	3.27	-3.00	10.83	38.45
			H	12.92	3.27	-3.00	13.19	38.45

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 7 BW: 5M QPSK RB: 1,0	2502.5	20775	V	7.79	10.90	-5.26	13.44	33.01
			H	15.58	10.90	-5.25	**21.22**	33.01
	2535.0	21100	V	9.72	10.94	-5.30	15.36	33.01
			H	15.34	10.94	-5.30	20.98	33.01
	2567.5	21425	V	5.73	10.98	-5.34	11.37	33.01
			H	13.83	10.98	-5.34	19.47	33.01
BAND 7 BW: 5M QPSK RB: 1,24	2502.5	20775	V	8.67	10.90	-5.26	14.31	33.01
			H	16.47	10.90	-5.26	**22.11**	33.01
	2535.0	21100	V	9.64	10.95	-5.31	15.28	33.01
			H	15.67	10.95	-5.31	21.31	33.01
	2567.5	21425	V	4.98	10.99	-5.34	10.63	33.01
			H	13.08	10.99	-5.34	18.73	33.01
BAND 7 BW: 5M 16QAM RB: 1,0	2502.5	20775	V	7.62	10.90	-5.25	13.26	33.01
			H	15.42	10.90	-5.25	**21.07**	33.01
	2535.0	21100	V	9.80	10.94	-5.30	15.44	33.01
			H	15.26	10.94	-5.30	20.90	33.01
	2567.5	21425	V	5.94	10.98	-5.34	11.58	33.01
			H	14.01	10.98	-5.34	19.66	33.01
BAND 7 BW: 5M 16QAM RB: 1,24	2502.5	20775	V	8.60	10.90	-5.26	14.25	33.01
			H	16.33	10.90	-5.26	**21.98**	33.01
	2535.0	21100	V	9.55	10.95	-5.31	15.19	33.01
			H	15.49	10.95	-5.31	21.13	33.01
	2567.5	21425	V	5.15	10.99	-5.34	10.80	33.01
			H	13.28	10.99	-5.34	18.93	33.01

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

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EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
BAND 7 BW: 10M QPSK RB: 1,0	2505.0	20800	V	7.54	10.90	-5.26	13.19	33.01
			H	15.46	10.90	-5.26	21.11	33.01
	2535.0	21100	V	9.45	10.94	-5.29	15.10	33.01
			H	15.26	10.94	-5.29	20.91	33.01
	2565.0	21400	V	7.25	10.98	-5.34	12.89	33.01
			H	15.50	10.98	-5.34	**21.13**	33.01
BAND 7 BW: 10M QPSK RB: 1,49	2505.0	20800	V	8.30	10.91	-5.26	13.95	33.01
			H	16.87	10.91	-5.26	**22.52**	33.01
	2535.0	21100	V	9.43	10.95	-5.31	15.07	33.01
			H	15.86	10.95	-5.31	21.50	33.01
	2565.0	21400	V	4.81	10.99	-5.34	10.46	33.01
			H	13.05	10.99	-5.34	18.70	33.01
BAND 7 BW: 10M 16QAM RB: 1,0	2505.0	20800	V	7.49	10.90	-5.26	13.14	33.01
			H	15.44	10.90	-5.26	21.09	33.01
	2535.0	21100	V	9.26	10.94	-5.29	14.91	33.01
			H	15.31	10.94	-5.29	20.96	33.01
	2565.0	21400	V	7.40	10.98	-5.34	13.04	33.01
			H	15.70	10.98	-5.34	**21.34**	33.01
BAND 7 BW: 10M 16QAM RB: 1,49	2505.0	20800	V	8.36	10.91	-5.26	14.01	33.01
			H	16.79	10.91	-5.26	**22.44**	33.01
	2535.0	21100	V	9.10	10.95	-5.31	14.74	33.01
			H	15.58	10.95	-5.31	21.22	33.01
	2565.0	21400	V	5.01	10.99	-5.34	10.66	33.01
			H	13.23	10.99	-5.34	18.88	33.01

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 7 BW: 15M QPSK RB: 1,0	2507.5	20825	V	7.57	10.90	-5.26	13.22	33.01
			H	15.42	10.90	-5.25	21.07	33.01
	2535.0	21100	V	9.17	10.93	-5.29	14.81	33.01
			H	15.43	10.94	-5.29	21.08	33.01
	2562.5	21375	V	8.78	10.97	-5.34	14.41	33.01
			H	16.55	10.97	-5.34	**22.18**	33.01
BAND 7 BW: 15M QPSK RB: 1,74	2507.5	20825	V	8.11	10.92	-5.27	13.76	33.01
			H	16.71	10.92	-5.27	**22.36**	33.01
	2535.0	21100	V	9.33	10.95	-5.32	14.97	33.01
			H	16.15	10.95	-5.32	21.79	33.01
	2562.5	21375	V	4.82	10.99	-5.34	10.46	33.01
			H	12.99	10.99	-5.34	18.64	33.01
BAND 7 BW: 15M 16QAM RB: 1,0	2507.5	20825	V	7.50	10.90	-5.25	13.15	33.01
			H	15.53	10.90	-5.25	21.17	33.01
	2535.0	21100	V	9.08	10.93	-5.29	14.73	33.01
			H	15.31	10.93	-5.29	20.96	33.01
	2562.5	21375	V	9.04	10.97	-5.34	14.67	33.01
			H	16.41	10.97	-5.34	**22.04**	33.01
BAND 7 BW: 15M 16QAM RB: 1,74	2507.5	20825	V	7.91	10.92	-5.27	13.56	33.01
			H	17.15	10.92	-5.27	**22.80**	33.01
	2535.0	21100	V	9.09	10.95	-5.32	14.73	33.01
			H	16.12	10.95	-5.32	21.76	33.01
	2562.5	21375	V	4.95	10.99	-5.34	10.60	33.01
			H	13.20	10.99	-5.34	18.85	33.01

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 7 BW: 20M QPSK RB: 1,0	2510.0	20850	V	7.56	10.90	-5.25	13.21	33.01
			H	15.40	10.90	-5.26	21.05	33.01
	2535.0	21100	V	8.84	10.93	-5.29	14.49	33.01
			H	15.43	10.93	-5.29	21.08	33.01
	2560.0	21350	V	9.41	10.96	-5.33	15.04	33.01
			H	16.97	10.96	-5.33	**22.60**	33.01
BAND 7 BW: 20M QPSK RB: 1,99	2510.0	20850	V	8.02	10.92	-5.27	13.67	33.01
			H	16.05	10.92	-5.27	21.70	33.01
	2535.0	21100	V	9.48	10.95	-5.32	15.11	33.01
			H	16.40	10.95	-5.32	**22.03**	33.01
	2560.0	21350	V	4.65	10.99	-5.34	10.30	33.01
			H	12.98	10.99	-5.34	18.63	33.01
BAND 7 BW: 20M 16QAM RB: 1,0	2510.0	20850	V	7.37	10.90	-5.26	13.01	33.01
			H	15.66	10.90	-5.25	21.31	33.01
	2535.0	21100	V	8.73	10.93	-5.29	14.38	33.01
			H	15.37	10.93	-5.29	21.02	33.01
	2560.0	21350	V	8.88	10.96	-5.33	14.51	33.01
			H	16.48	10.96	-5.33	**22.11**	33.01
BAND 7 BW: 20M 16QAM RB: 1,99	2510.0	20850	V	7.91	10.92	-5.27	13.56	33.01
			H	15.95	10.92	-5.27	21.60	33.01
	2535.0	21100	V	9.15	10.96	-5.32	14.79	33.01
			H	16.24	10.96	-5.32	**21.88**	33.01
	2560.0	21350	V	4.88	10.99	-5.34	10.53	33.01
			H	13.19	10.99	-5.34	18.84	33.01

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 12 BW: 1.4M QPSK RB: 1,0	699.7	23017	V	8.60	3.08	-2.96	8.72	34.77
			H	14.51	3.08	-2.96	**14.63**	34.77
	707.5	23095	V	6.38	3.09	-3.04	6.44	34.77
			H	13.35	3.09	-3.04	13.41	34.77
	715.3	23173	V	5.10	3.11	-3.06	5.15	34.77
			H	13.62	3.11	-3.06	13.67	34.77
BAND 12 BW: 1.4M QPSK RB: 1,5	699.7	23017	V	8.90	3.08	-2.96	9.02	34.77
			H	14.85	3.08	-2.96	**14.97**	34.77
	707.5	23095	V	6.59	3.09	-3.04	6.64	34.77
			H	13.68	3.09	-3.04	13.74	34.77
	715.3	23173	V	4.96	3.11	-3.06	5.01	34.77
			H	13.69	3.11	-3.06	13.74	34.77
BAND 12 BW: 1.4M 16QAM RB: 1,0	699.7	23017	V	8.10	3.08	-2.96	8.22	34.77
			H	14.13	3.08	-2.96	**14.25**	34.77
	707.5	23095	V	6.10	3.09	-3.04	6.16	34.77
			H	13.15	3.09	-3.04	13.21	34.77
	715.3	23173	V	5.14	3.11	-3.06	5.18	34.77
			H	13.68	3.11	-3.06	13.73	34.77
BAND 12 BW: 1.4M 16QAM RB: 1,5	699.7	23017	V	8.29	3.08	-2.96	8.41	34.77
			H	14.64	3.08	-2.96	**14.77**	34.77
	707.5	23095	V	6.32	3.10	-3.04	6.38	34.77
			H	13.26	3.09	-3.04	13.32	34.77
	715.3	23173	V	4.62	3.11	-3.06	4.67	34.77
			H	13.54	3.11	-3.06	13.59	34.77

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 12 BW: 3M QPSK RB: 1,0	700.5	23025	V	8.71	3.08	-2.96	8.84	34.77
			H	14.81	3.08	-2.96	**14.93**	34.77
	707.5	23095	V	6.08	3.09	-3.03	6.14	34.77
			H	13.22	3.09	-3.03	13.27	34.77
	714.5	23165	V	6.10	3.11	-3.06	6.15	34.77
			H	14.32	3.11	-3.06	14.36	34.77
BAND 12 BW: 3M QPSK RB: 1,14	700.5	23025	V	8.55	3.08	-2.98	8.65	34.77
			H	15.01	3.08	-2.98	**15.12**	34.77
	707.5	23095	V	6.63	3.10	-3.04	6.69	34.77
			H	14.04	3.10	-3.04	14.09	34.77
	714.5	23165	V	4.92	3.11	-3.06	4.96	34.77
			H	13.68	3.11	-3.06	13.73	34.77
BAND 12 BW: 3M 16QAM RB: 1,0	700.5	23025	V	8.25	3.08	-2.98	8.35	34.77
			H	14.36	3.08	-2.99	14.46	34.77
	707.5	23095	V	5.88	3.09	-3.03	5.93	34.77
			H	12.92	3.09	-3.03	12.97	34.77
	714.5	23165	V	5.78	3.11	-3.06	5.83	34.77
			H	14.47	3.11	-3.06	**14.52**	34.77
BAND 12 BW: 3M 16QAM RB: 1,14	700.5	23025	V	8.27	3.08	-2.98	8.37	34.77
			H	14.64	3.08	-2.97	**14.75**	34.77
	707.5	23095	V	6.40	3.10	-3.04	6.45	34.77
			H	13.71	3.10	-3.04	13.76	34.77
	714.5	23165	V	4.67	3.11	-3.06	4.72	34.77
			H	13.59	3.11	-3.06	13.64	34.77

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 12 BW: 5M QPSK RB: 1,0	701.5	23035	V	8.58	3.08	-2.96	8.71	34.77
			H	14.53	3.08	-2.96	14.65	34.77
	707.5	23095	V	6.08	3.09	-3.03	6.13	34.77
			H	13.08	3.09	-3.03	13.14	34.77
	713.5	23155	V	6.82	3.10	-3.05	6.88	34.77
			H	14.64	3.10	-3.05	**14.70**	34.77
BAND 12 BW: 5M QPSK RB: 1,24	701.5	23035	V	7.02	3.09	-3.01	7.10	34.77
			H	13.64	3.09	-3.01	13.72	34.77
	707.5	23095	V	6.82	3.10	-3.04	6.88	34.77
			H	14.56	3.10	-3.05	**14.62**	34.77
	713.5	23155	V	4.81	3.11	-3.06	4.85	34.77
			H	13.77	3.11	-3.06	13.81	34.77
BAND 12 BW: 5M 16QAM RB: 1,0	701.5	23035	V	8.44	3.08	-2.96	8.56	34.77
			H	14.23	3.08	-2.97	14.35	34.77
	707.5	23095	V	6.13	3.09	-3.03	6.18	34.77
			H	12.99	3.09	-3.03	13.05	34.77
	713.5	23155	V	6.62	3.10	-3.05	6.67	34.77
			H	14.51	3.10	-3.05	**14.56**	34.77
BAND 12 BW: 5M 16QAM RB: 1,24	701.5	23035	V	6.91	3.09	-3.01	6.99	34.77
			H	13.54	3.09	-3.01	13.61	34.77
	707.5	23095	V	6.31	3.10	-3.04	6.36	34.77
			H	13.98	3.10	-3.05	**14.03**	34.77
	713.5	23155	V	4.76	3.11	-3.06	4.81	34.77
			H	13.59	3.11	-3.06	13.64	34.77

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 12 BW: 10M QPSK RB: 1,0	704.0	23060	V	8.54	3.08	-2.96	8.66	34.77
			H	14.76	3.08	-2.96	**14.88**	34.77
	707.5	23095	V	7.38	3.08	-3.00	7.47	34.77
			H	13.97	3.08	-3.00	14.05	34.77
	711.0	23130	V	6.23	3.09	-3.04	6.28	34.77
			H	13.30	3.09	-3.04	13.35	34.77
BAND 12 BW: 10M QPSK RB: 1,49	704.0	23060	V	6.58	3.10	-3.04	6.63	34.77
			H	13.94	3.10	-3.04	14.00	34.77
	707.5	23095	V	6.59	3.10	-3.05	6.64	34.77
			H	14.71	3.10	-3.05	**14.76**	34.77
	711.0	23130	V	4.88	3.11	-3.06	4.93	34.77
			H	13.63	3.11	-3.06	13.68	34.77
BAND 12 BW: 10M 16QAM RB: 1,0	704.0	23060	V	8.49	3.08	-2.96	8.61	34.77
			H	14.58	3.08	-2.96	**14.70**	34.77
	707.5	23095	V	7.06	3.08	-3.00	7.15	34.77
			H	13.80	3.08	-3.00	13.89	34.77
	711.0	23130	V	6.10	3.09	-3.04	6.15	34.77
			H	12.97	3.09	-3.04	13.03	34.77
BAND 12 BW: 10M 16QAM RB: 1,49	704.0	23060	V	6.45	3.10	-3.04	6.50	34.77
			H	13.86	3.10	-3.04	13.91	34.77
	707.5	23095	V	6.23	3.10	-3.05	6.28	34.77
			H	14.32	3.10	-3.05	**14.37**	34.77
	711.0	23130	V	4.68	3.11	-3.06	4.72	34.77
			H	13.59	3.11	-3.06	13.64	34.77

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 17 BW: 5M QPSK RB: 1,0	706.5	23755	V	9.76	3.09	-3.04	9.82	34.77
			H	14.31	3.09	-3.03	14.37	34.77
	710.0	23790	V	10.64	3.09	-3.04	10.70	34.77
			H	15.38	3.09	-3.04	15.43	34.77
	713.5	23825	V	11.34	3.10	-3.05	11.39	34.77
			H	16.18	3.10	-3.05	**16.23**	34.77
BAND 17 BW: 5M QPSK RB: 1,24	706.5	23755	V	10.68	3.10	-3.04	10.74	34.77
			H	15.49	3.10	-3.04	15.54	34.77
	710.0	23790	V	11.31	3.10	-3.05	11.36	34.77
			H	16.39	3.10	-3.05	**16.44**	34.77
	713.5	23825	V	9.67	3.11	-3.06	9.72	34.77
			H	15.34	3.11	-3.06	15.39	34.77
BAND 17 BW: 5M 16QAM RB: 1,0	706.5	23755	V	9.84	3.09	-3.03	9.90	34.77
			H	14.27	3.09	-3.04	14.33	34.77
	710.0	23790	V	10.65	3.09	-3.04	10.70	34.77
			H	15.29	3.09	-3.04	15.34	34.77
	713.5	23825	V	11.58	3.10	-3.05	11.64	34.77
			H	16.30	3.10	-3.05	**16.36**	34.77
BAND 17 BW: 5M 16QAM RB: 1,24	706.5	23755	V	10.72	3.10	-3.04	10.78	34.77
			H	15.20	3.10	-3.04	15.26	34.77
	710.0	23790	V	11.14	3.10	-3.05	11.19	34.77
			H	16.46	3.10	-3.05	**16.51**	34.77
	713.5	23825	V	9.49	3.11	-3.06	9.54	34.77
			H	15.11	3.11	-3.06	15.16	34.77

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 17 BW: 10M QPSK RB: 1,0	709.0	23780	V	9.82	3.09	-3.03	9.88	34.77
			H	14.19	3.09	-3.03	14.25	34.77
	710.0	23790	V	10.07	3.09	-3.03	10.12	34.77
			H	14.56	3.09	-3.03	14.62	34.77
	711.0	23800	V	10.14	3.09	-3.04	10.20	34.77
			H	14.79	3.09	-3.04	**14.84**	34.77
BAND 17 BW: 10M QPSK RB: 1,49	709.0	23780	V	10.62	3.11	-3.06	10.67	34.77
			H	15.95	3.11	-3.06	**16.00**	34.77
	710.0	23790	V	10.06	3.11	-3.06	10.11	34.77
			H	15.37	3.11	-3.06	15.42	34.77
	711.0	23800	V	9.63	3.11	-3.06	9.68	34.77
			H	15.18	3.11	-3.06	15.23	34.77
BAND 17 BW: 10M 16QAM RB: 1,0	709.0	23780	V	9.65	3.09	-3.03	9.70	34.77
			H	14.16	3.09	-3.03	14.22	34.77
	710.0	23790	V	10.04	3.09	-3.03	10.09	34.77
			H	14.63	3.09	-3.03	14.69	34.77
	711.0	23800	V	10.16	3.09	-3.04	10.22	34.77
			H	14.74	3.09	-3.04	**14.79**	34.77
BAND 17 BW: 10M 16QAM RB: 1,49	709.0	23780	V	10.62	3.11	-3.06	10.67	34.77
			H	15.55	3.11	-3.06	**15.60**	34.77
	710.0	23790	V	10.07	3.11	-3.06	10.12	34.77
			H	15.37	3.11	-3.06	15.42	34.77
	711.0	23800	V	9.70	3.11	-3.06	9.75	34.77
			H	15.35	3.11	-3.06	15.40	34.77

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency	CH	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
BAND 38 BW: 5M QPSK RB: 1,0	2572.5	37775	V	11.34	10.99	-5.34	17.00	33.00
			H	20.29	10.99	-5.34	25.94	33.00
	2595.0	38000	V	13.71	11.02	-5.34	19.39	33.00
			H	22.69	11.02	-5.34	**28.36**	33.00
	2617.5	38225	V	12.10	11.05	-5.37	17.78	33.00
			H	21.56	11.05	-5.37	27.24	33.00
BAND 38 BW: 5M QPSK RB: 1,24	2572.5	37775	V	12.59	10.99	-5.34	18.24	33.00
			H	22.06	11.00	-5.34	**27.72**	33.00
	2595.0	38000	V	13.32	11.02	-5.35	19.00	33.00
			H	21.96	11.02	-5.35	27.64	33.00
	2617.5	38225	V	12.49	11.05	-5.37	18.18	33.00
			H	21.71	11.05	-5.37	27.39	33.00
BAND 38 BW: 5M 16QAM RB: 1,0	2572.5	37775	V	11.15	10.99	-5.34	16.81	33.00
			H	20.21	10.99	-5.34	25.86	33.00
	2595.0	38000	V	13.28	11.02	-5.34	18.96	33.00
			H	22.21	11.02	-5.34	**27.89**	33.00
	2617.5	38225	V	12.05	11.05	-5.37	17.73	33.00
			H	20.89	11.05	-5.37	26.57	33.00
BAND 38 BW: 5M 16QAM RB: 1,24	2572.5	37775	V	12.49	10.99	-5.34	18.15	33.00
			H	21.14	10.99	-5.34	26.80	33.00
	2595.0	38000	V	13.35	11.02	-5.35	19.03	33.00
			H	21.32	11.02	-5.35	**27.00**	33.00
	2617.5	38225	V	12.42	11.05	-5.37	18.10	33.00
			H	20.72	11.05	-5.37	26.40	33.00

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 38 BW: 10M QPSK RB: 1,0	2575.0	37800	V	12.56	10.99	-5.34	18.21	33.00
			H	20.72	10.99	-5.34	26.37	33.00
	2595.0	38000	V	14.13	11.02	-5.34	19.81	33.00
			H	22.24	11.02	-5.34	**27.92**	33.00
	2615.0	38200	V	13.04	11.04	-5.36	18.72	33.00
			H	21.15	11.04	-5.36	26.83	33.00
BAND 38 BW: 10M QPSK RB: 1,49	2575.0	37800	V	14.98	11.00	-5.34	20.64	33.00
			H	22.73	11.00	-5.34	**28.39**	33.00
	2595.0	38000	V	13.64	11.03	-5.35	19.32	33.00
			H	21.21	11.03	-5.35	26.88	33.00
	2615.0	38200	V	13.47	11.05	-5.37	19.15	33.00
			H	21.52	11.05	-5.37	27.20	33.00
BAND 38 BW: 10M 16QAM RB: 1,0	2575.0	37800	V	12.15	10.99	-5.34	17.81	33.00
			H	19.93	10.99	-5.34	25.58	33.00
	2595.0	38000	V	14.34	11.02	-5.34	20.02	33.00
			H	21.82	11.02	-5.34	**27.49**	33.00
	2615.0	38200	V	12.01	11.04	-5.36	17.70	33.00
			H	20.18	11.04	-5.36	25.86	33.00
BAND 38 BW: 10M 16QAM RB: 1,49	2575.0	37800	V	14.06	11.00	-5.34	19.72	33.00
			H	21.97	11.00	-5.34	**27.63**	33.00
	2595.0	38000	V	13.15	11.03	-5.35	18.83	33.00
			H	21.03	11.03	-5.35	26.71	33.00
	2615.0	38200	V	12.52	11.05	-5.37	18.20	33.00
			H	20.84	11.05	-5.37	26.53	33.00

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 38 BW: 15M QPSK RB: 1,0	2575.0	37800	V	12.40	10.99	-5.34	18.05	33.00
			H	20.14	10.99	-5.34	25.79	33.00
	2595.0	38000	V	14.47	11.02	-5.34	20.14	33.00
			H	22.10	11.02	-5.34	**27.77**	33.00
	2615.0	38200	V	12.49	11.04	-5.36	18.17	33.00
			H	20.42	11.04	-5.36	26.10	33.00
BAND 38 BW: 15M QPSK RB: 1,74	2575.0	37800	V	14.51	11.01	-5.34	20.18	33.00
			H	22.35	11.01	-5.34	**28.02**	33.00
	2595.0	38000	V	13.24	11.03	-5.35	18.92	33.00
			H	20.75	11.03	-5.35	26.43	33.00
	2615.0	38200	V	12.71	11.05	-5.37	18.39	33.00
			H	20.78	11.05	-5.37	26.46	33.00
BAND 38 BW: 15M 16QAM RB: 1,0	2575.0	37800	V	12.33	10.99	-5.34	17.99	33.00
			H	20.10	10.99	-5.34	25.75	33.00
	2595.0	38000	V	14.18	11.02	-5.34	19.86	33.00
			H	21.80	11.02	-5.34	**27.48**	33.00
	2615.0	38200	V	12.45	11.04	-5.36	18.13	33.00
			H	20.28	11.04	-5.36	25.96	33.00
BAND 38 BW: 15M 16QAM RB: 1,74	2575.0	37800	V	14.19	11.01	-5.34	19.85	33.00
			H	22.00	11.01	-5.34	**27.66**	33.00
	2595.0	38000	V	13.15	11.03	-5.35	18.82	33.00
			H	20.66	11.03	-5.35	26.34	33.00
	2615.0	38200	V	12.58	11.05	-5.37	18.26	33.00
			H	20.55	11.05	-5.37	26.23	33.00

The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

EUT			Measurement					
Operation Band	Fundamental Frequency MHz	CH	Antenna Pol. V/H	S.G. Output dBm	Antenna Gain dBi	Cable Loss dB	EIRP dBm	Limit dBm
BAND 38 BW: 20M QPSK RB: 1,0	2580.0	37850	V	12.48	10.99	-5.34	18.13	33.00
			H	18.86	10.99	-5.34	24.51	33.00
	2595.0	38000	V	14.64	11.01	-5.34	20.31	33.00
			H	20.91	11.01	-5.34	**26.58**	33.00
	2610.0	38150	V	13.26	11.03	-5.35	18.94	33.00
			H	19.19	11.03	-5.35	24.87	33.00
BAND 38 BW: 20M QPSK RB: 1,74	2580.0	37850	V	14.73	11.01	-5.34	20.40	33.00
			H	20.75	11.01	-5.34	**26.43**	33.00
	2595.0	38000	V	12.83	11.03	-5.35	18.51	33.00
			H	12.70	11.03	-5.35	18.37	33.00
	2610.0	38150	V	19.15	11.03	-5.35	24.83	33.00
			H	19.40	11.05	-5.37	25.08	33.00
BAND 38 BW: 20M 16QAM RB: 1,0	2580.0	37850	V	12.33	10.99	-5.34	17.98	33.00
			H	18.72	10.99	-5.34	24.37	33.00
	2595.0	38000	V	14.44	11.01	-5.34	20.11	33.00
			H	20.68	11.01	-5.34	**26.35**	33.00
	2610.0	38150	V	13.07	11.03	-5.35	18.74	33.00
			H	19.13	11.03	-5.35	24.80	33.00
BAND 38 BW: 20M 16QAM RB: 1,74	2580.0	37850	V	14.21	11.01	-5.34	19.88	33.00
			H	20.39	11.01	-5.34	**26.07**	33.00
	2595.0	38000	V	12.55	11.03	-5.35	18.23	33.00
			H	18.95	11.03	-5.35	24.63	33.00
	2610.0	38150	V	12.35	11.05	-5.37	18.03	33.00
			H	19.03	11.05	-5.37	24.71	33.00

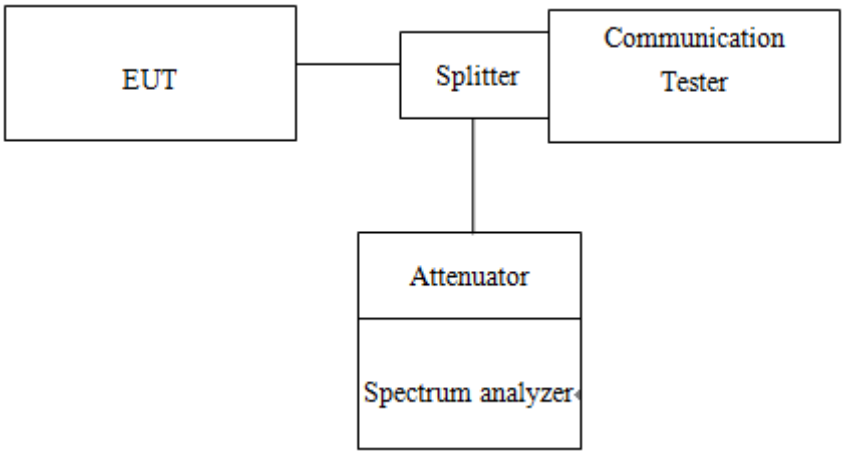
The RBW,VBW of SPA for frequency RBW= 8MHz , VBW= 8MHz

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, -20dBc display line was placed on the screen (or 20dB bandwidth). Set RBW to 99% bandwidth, RBW= 1% ~ 5%, VBW= 3 RBW, with span > 2 * Signal BW, set % Power = 99%.

8.4. Measurement Equipment Used

Conducted Emission (measured at antenna port) Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EXA Spectrum Ana-lyzer	Agilent	N9030A	MY53120760	03/21/2017	03/20/2018
DC Block	Mini-Circuits	BLK-18-S+	1	01/05/2017	01/04/2018
Coaxial Cable	HU-BER+SUHNER	SUCOFLEX 102	23670/2	01/05/2017	01/04/2018
Attenuator	Mini-Circuit	BW-S10W2+	2	01/05/2017	01/04/2018
Splitter	Agilent	11636B	N/A	01/05/2017	01/04/2018
DC Power Supply	Agilent	E3640A	MY52410006	11/21/2016	11/20/2017
Temperature Chamber	TERCHY	MHG-120LF	911009	05/19/2017	05/18/2018
Radio Communication Analyzer	R&S	CMU200	102189	02/10/2017	02/09/2018
Radio Communication Analyer	Anritsu	MT8820C	6201465317	01/03/2017	01/02/2018

8.5. Measurement Result

Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		GSM 850	GPRS 850	EDGE 850	GPRS 850	GPRS 850	EDGE 850
824.2	128	0.24340	0.24477	0.24512	0.31770	0.32020	0.30470
836.6	190	0.24623	0.24835	0.24474	0.32000	0.31620	0.31800
848.8	251	0.24202	0.24835	0.24765	0.31180	0.31650	0.32230

Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		GSM 1900	GPRS 1900	EDGE 1900	GSM 1900	GPRS 1900	EDGE 1900
1850.2	512	0.24590	0.24045	0.24874	0.31610	0.31390	0.32020
1880.0	661	0.24384	0.24181	0.24071	0.31210	0.31910	0.31490
1909.8	810	0.24845	0.24374	0.24642	3.22100	0.31500	0.31880

Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		WCDMA II	HSDPA II	HSUPA II	WCDMA II	HSDPA II	HSUPA II
1850.20	9262	4.1554	4.1572	4.1586	4.7230	4.7230	4.7320
1880.00	9400	4.1622	4.1669	4.1561	4.7180	4.7470	4.7190
1909.80	9538	4.1438	4.1493	4.1430	4.7130	4.7170	4.7300

Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		WCDMA IV	HSDPA IV	HSUPA IV	WCDMA IV	HSDPA IV	HSUPA IV
1712.40	1312	4.1491	4.1638	4.1562	4.6920	4.7080	4.7070
1732.60	1413	4.1412	4.1510	4.1622	4.6950	4.7080	4.7020
1752.60	1513	4.1444	4.1609	4.1648	4.6860	4.7060	4.7140

Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		WCDMA V	HSDPA V	HSUPA V	WCDMA V	HSDPA V	HSUPA V
826.40	4132	4.1329	4.1502	4.1347	4.7100	4.6870	4.7050
836.60	4183	4.1432	4.1535	4.1430	4.6900	4.7130	4.7000
846.60	4233	4.1450	4.1413	4.1509	4.7070	4.7100	4.6950

LTE BAND 2 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1850.7	18607	1.0959	1.1016	1.285	1.289
1880.0	18900	1.0996	1.0996	1.305	1.287
1909.3	19193	1.0996	1.0996	1.297	1.298

LTE BAND 2 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1851.5	18615	2.7014	2.7042	2.986	3.003
1880.0	18900	2.7034	2.7058	2.979	3.003
1908.5	19185	2.7028	2.7050	2.982	2.993

LTE BAND 2 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1852.5	18625	4.5123	4.5124	5.059	5.049
1880.0	18900	4.5047	4.5106	5.025	5.015
1907.5	19175	4.5093	4.5091	5.052	5.038

LTE BAND 2 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1855.0	18650	8.9843	8.9586	9.894	9.844
1880.0	18900	9.0240	8.9553	9.928	9.807
1905.0	19150	8.9802	8.9428	9.908	9.762

LTE BAND 2 Channel bandwidth: 15MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1857.5	18675	13.482	13.466	14.80	14.84
1880.0	18900	13.504	13.490	14.73	14.78
1902.5	19125	13.494	13.477	14.73	14.83

LTE BAND 2 Channel bandwidth: 20MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1860.0	18700	17.893	17.941	19.46	19.48
1880.0	18900	17.952	17.993	19.52	19.41
1900.0	19100	17.951	17.993	19.56	19.41

LTE BAND 4 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1710.7	19957	1.0978	1.1018	1.289	1.296
1732.5	20175	1.0982	1.1016	1.289	1.287
1754.3	20393	1.0982	1.1011	1.286	1.303

LTE BAND 4 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1711.5	19965	2.6993	2.7065	2.994	3.002
1732.5	20175	2.7050	2.7049	3.003	2.997
1753.5	20385	2.7022	2.7026	2.988	2.999

LTE BAND 4 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1712.5	19957	4.5108	4.5090	5.033	5.007
1732.5	20175	4.5055	4.5071	5.049	5.012
1752.5	20375	4.5104	4.5110	5.046	5.011

LTE BAND 4 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1715.0	20000	9.0084	8.9548	9.928	9.857
1732.5	20175	8.9987	8.9569	9.908	9.858
1750.0	20350	8.9911	8.9534	9.885	9.826

LTE BAND 4 Channel bandwidth: 15MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1717.5	20025	13.502	13.478	14.72	14.79
1732.5	20175	13.498	13.475	14.75	14.86
1747.5	20325	13.504	13.486	14.83	14.89

LTE BAND 4 Channel bandwidth: 20MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
1720.0	20050	17.937	17.942	19.57	19.54
1732.5	20175	17.923	17.930	19.50	19.50
1745.0	20300	17.980	17.992	19.58	19.54

LTE BAND 5 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
824.7	20407	1.0967	1.0987	1.291	1.288
836.5	20525	1.0956	1.0982	1.290	1.293
848.3	20643	1.0976	1.0986	1.291	1.295

LTE BAND 5 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
825.5	20415	2.6994	2.6978	2.979	2.999
836.5	20525	2.6997	2.6997	2.973	2.992
847.5	20635	2.6893	2.6963	2.923	2.930

LTE BAND 5 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
826.5	20425	4.5035	4.4998	5.037	5.041
836.5	20525	4.5097	4.5059	5.029	5.036
846.5	20625	4.4971	4.5016	4.874	5.032

LTE BAND 5 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
829.0	20450	8.9917	8.9431	9.895	9.842
836.5	20525	9.0069	8.9686	9.938	9.809
844.0	20600	8.9962	8.9643	9.888	9.839

LTE BAND 7 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
2502.5	20775	4.5159	4.5150	5.059	5.035
2535.0	21100	4.5156	4.5131	5.059	5.038
2567.5	21425	4.5266	4.5104	5.144	5.034

LTE BAND 7 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
2505.0	20800	9.0022	8.9572	9.945	9.882
2535.0	21100	9.0083	8.9647	9.913	9.856
2565.0	21400	9.0064	8.9544	9.958	9.841

LTE BAND 7 Channel bandwidth: 15MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
2507.5	20825	13.501	13.484	14.84	14.78
2535.0	21100	13.491	13.469	14.84	14.84
2562.5	21375	13.494	13.476	14.82	14.83

LTE BAND 7 Channel bandwidth: 20MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
2510.0	20850	17.936	17.989	19.59	19.59
2535.0	21100	17.947	17.959	19.47	19.50
2560.0	21350	17.900	17.966	19.49	19.53

LTE BAND 12 Channel bandwidth: 1.4MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
699.7	23017	1.1013	1.0998	1.256	1.286
707.5	23095	1.0963	1.1004	1.290	1.291
715.3	23173	1.0972	1.1024	1.294	1.293

LTE BAND 12 Channel bandwidth: 3MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
700.5	23025	2.6987	2.7048	2.987	3.014
707.5	23095	2.6832	2.7000	2.899	2.926
714.5	23165	2.7047	2.6985	2.992	2.919

LTE BAND 12 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
701.5	23035	4.5181	4.5147	5.069	5.051
707.5	23095	4.5012	4.5117	4.915	5.026
713.5	23155	4.5083	4.5165	4.889	5.052

LTE BAND 12 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
704.0	23060	9.0295	8.9495	9.949	9.555
707.5	23095	8.9686	8.9508	9.546	9.817
711.0	23130	9.0014	8.9410	9.887	9.834

LTE BAND 17 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
706.5	23755	4.5180	4.5908	4.958	4.829
710.0	23790	4.5088	4.5129	5.063	5.024
713.5	23825	4.5211	4.5148	5.077	5.025

LTE BAND 17 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
709.0	23780	9.0852	9.1227	9.517	9.655
710.0	23790	9.1035	8.9459	9.527	9.776
711.0	23780	8.9921	8.9518	9.894	9.817

LTE BAND 38 Channel bandwidth: 5MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
2572.5	37775	4.5239	4.5141	5.387	5.060
2595.0	38000	4.5214	4.5128	5.368	5.027
2617.5	38225	4.5201	4.5119	5.470	5.042

LTE BAND 38 Channel bandwidth: 10MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
2575.0	37800	8.9725	8.9626	10.069	9.813
2595.0	38000	8.9864	8.9622	10.033	9.939
2615.0	38200	8.9704	8.9821	9.928	10.121

LTE BAND 38 Channel bandwidth: 15MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
2577.5	37825	13.495	13.521	15.41	15.44
2595.0	38000	13.493	13.512	15.61	15.37
2612.5	38175	13.501	13.491	15.67	14.77

LTE BAND 38 Channel bandwidth: 20MHz					
Freq. (MHz)	CH	99% BW (MHz)		26 dB BW (MHz)	
		QPSK	16QAM	QPSK	16QAM
2580.0	37850	17.959	17.970	21.17	19.48
2595.0	38000	17.952	17.910	20.42	19.48
2610.0	38150	17.931	17.924	19.84	19.55

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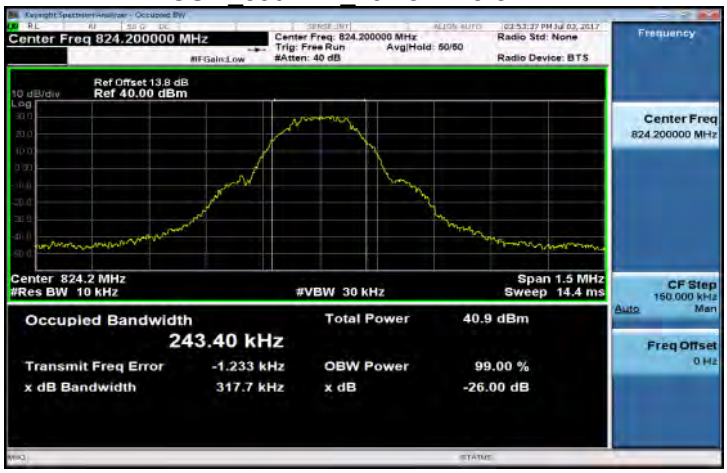
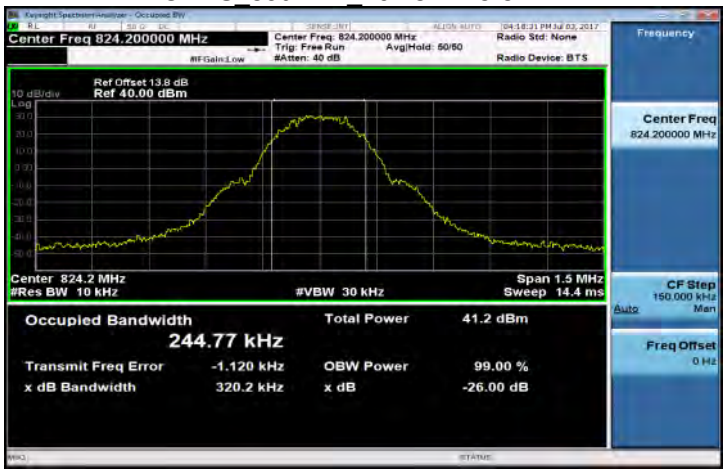
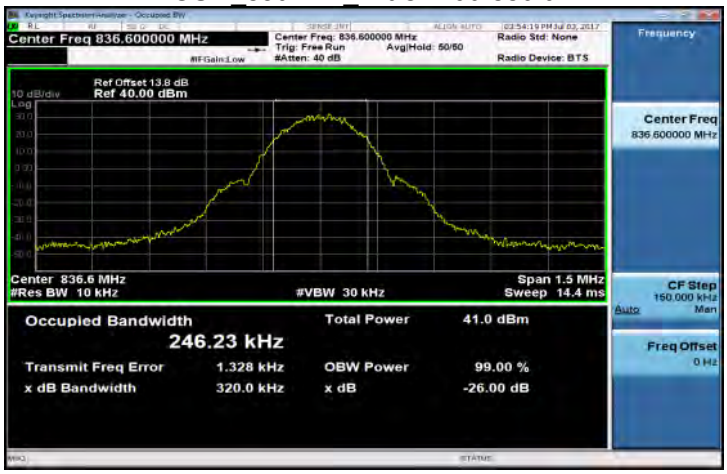


GPRS_850MHz_LowCH128-824.2



GSM_850MHz_MidCH190-836.6



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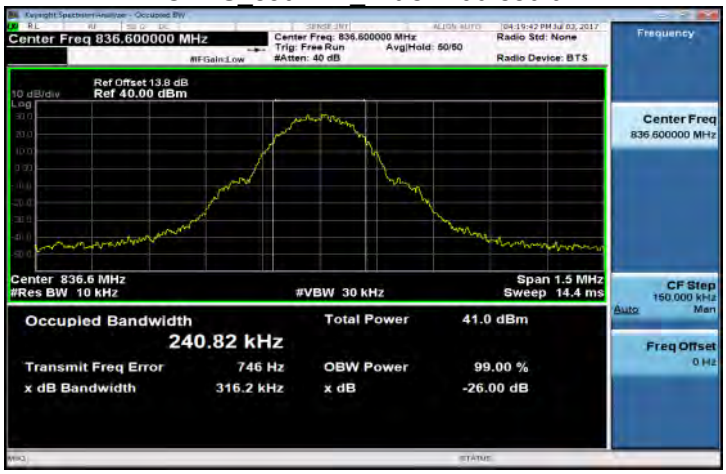
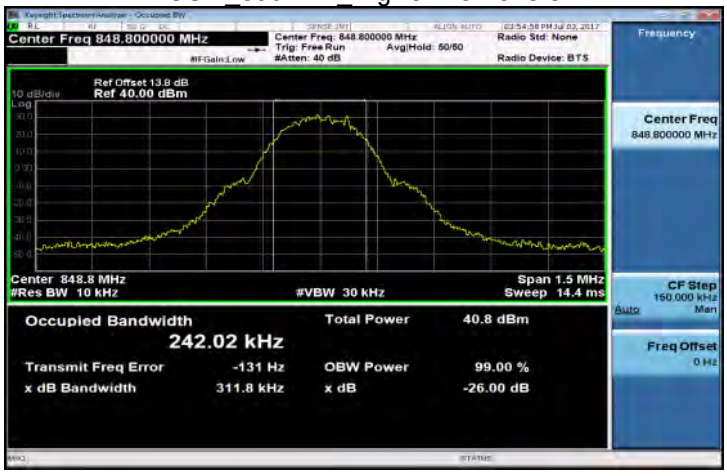
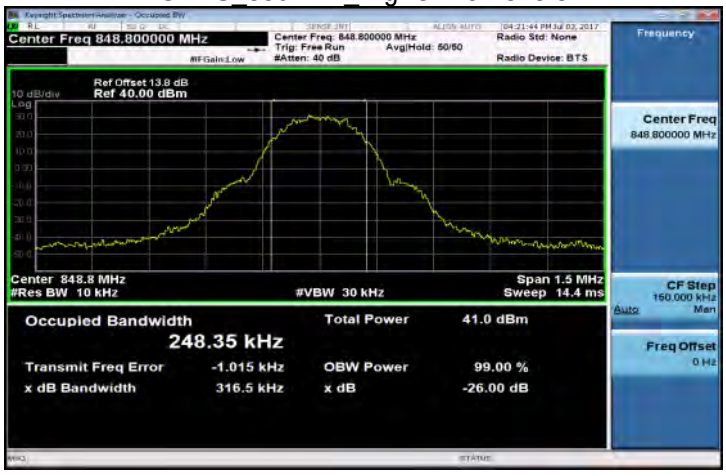


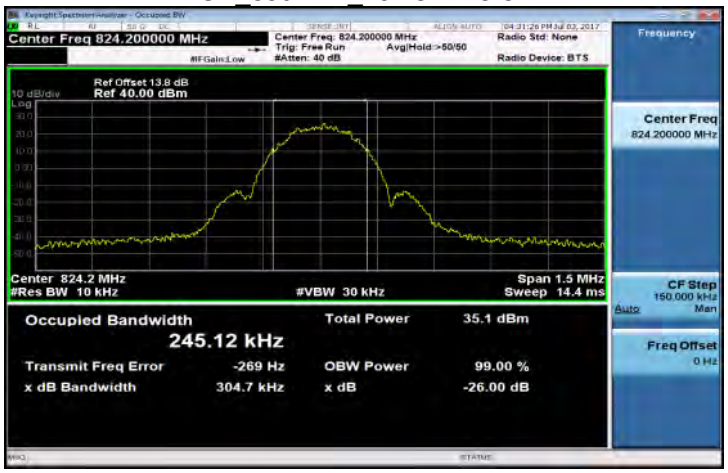
GSM_850MHz_HighCH251-848.8



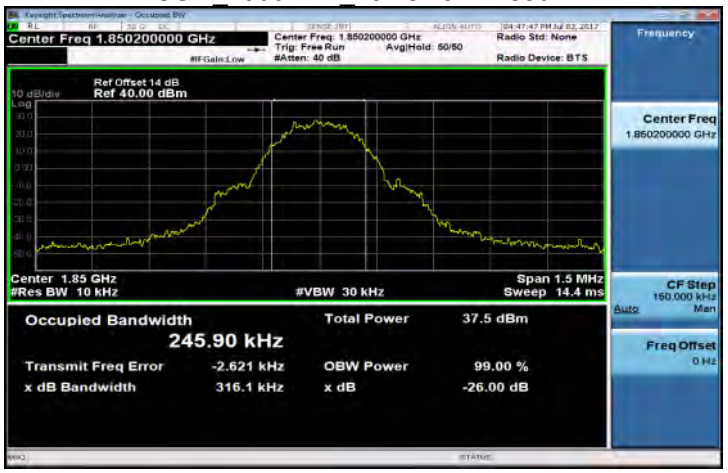
GPRS_850MHz_HighCH251-848.8



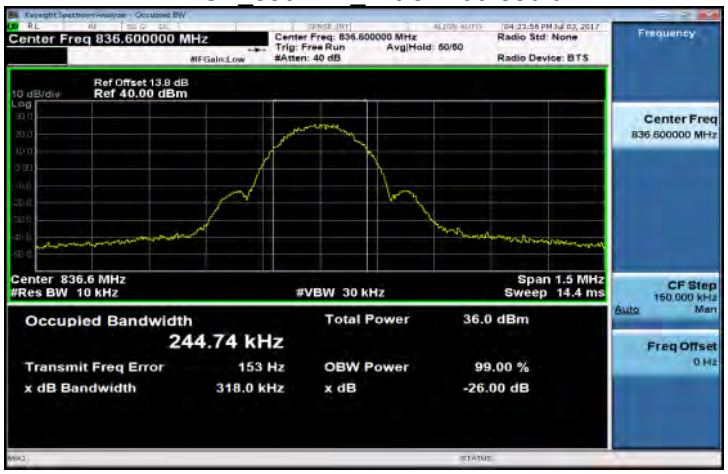
EDGE_850MHz_LowCH128-824.2



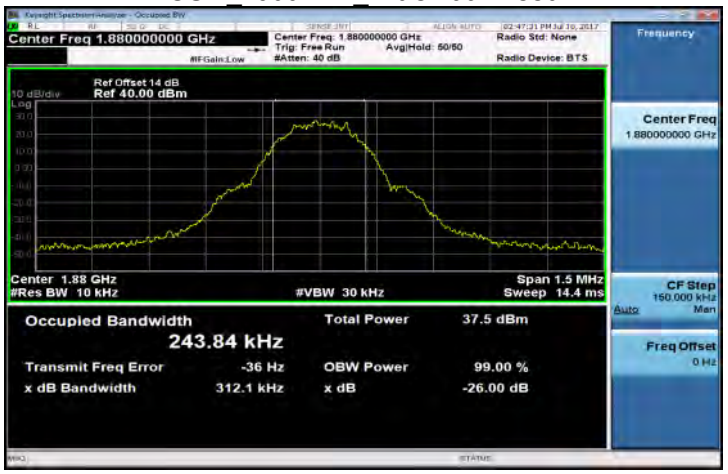
GSM_1900MHz_LowCH512-1850.2



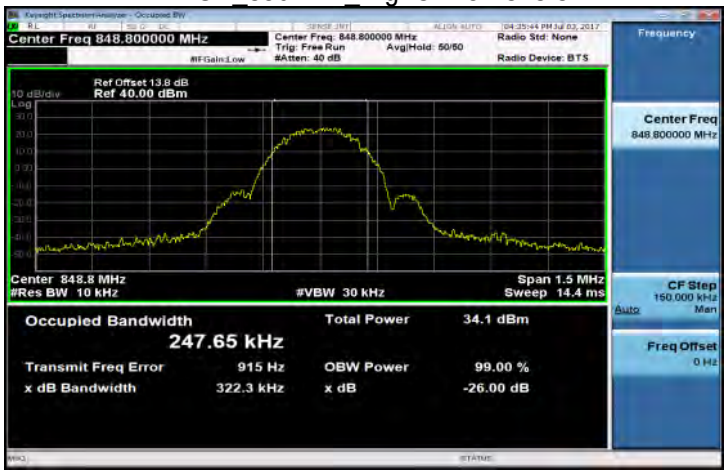
EDGE_850MHz_MidCH190-836.6



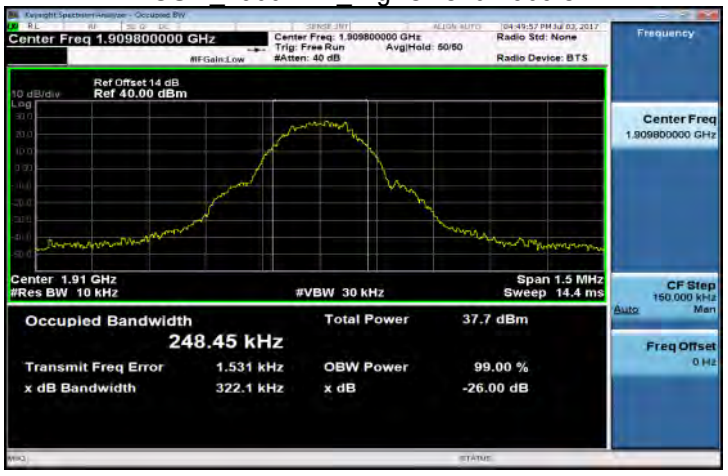
GSM_1900MHz_MidCH661-1880



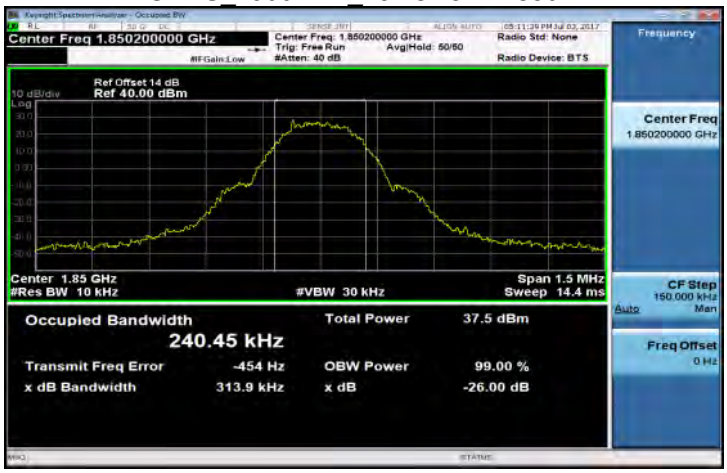
EDGE_850MHz_HighCH251-848.8



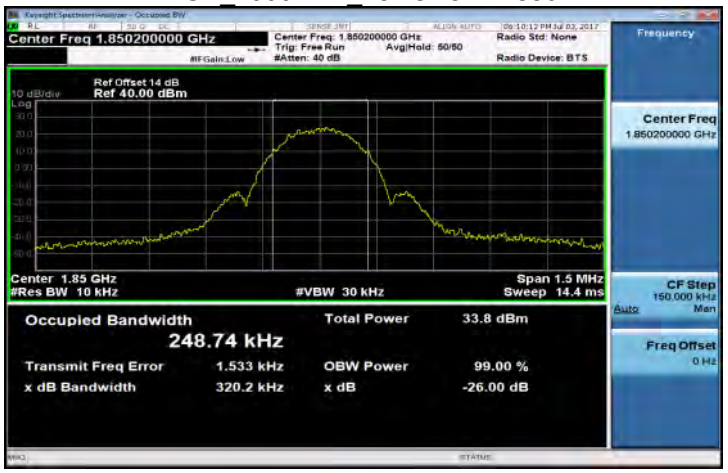
GSM_1900MHz_HighCH810-1909.8



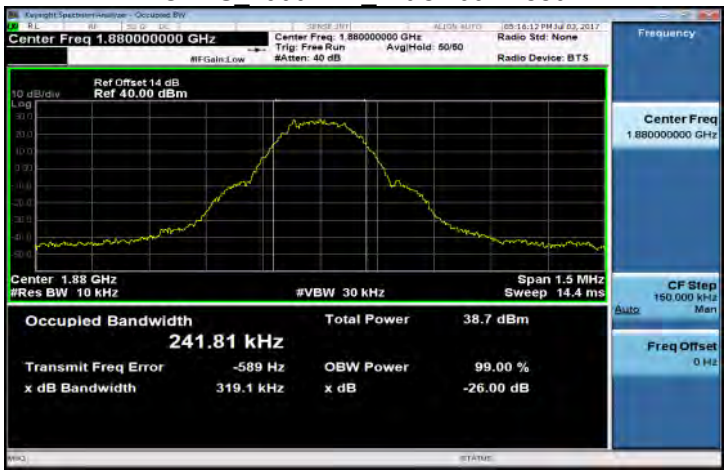
GPRS_1900MHz_LowCH512-1850.2



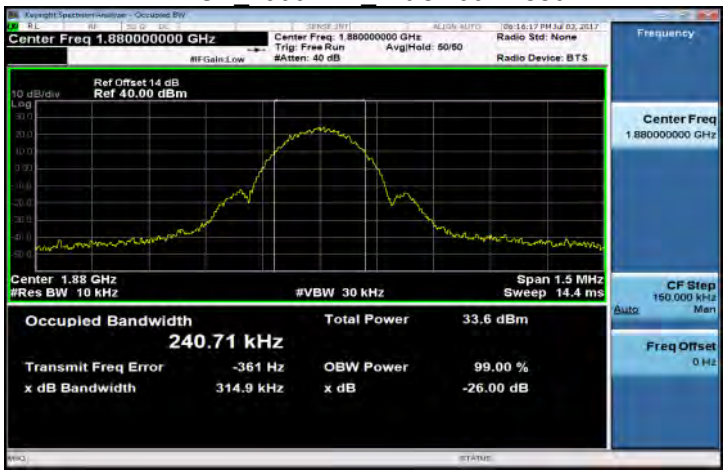
EDGE_1900MHz_LowCH512-1850.2



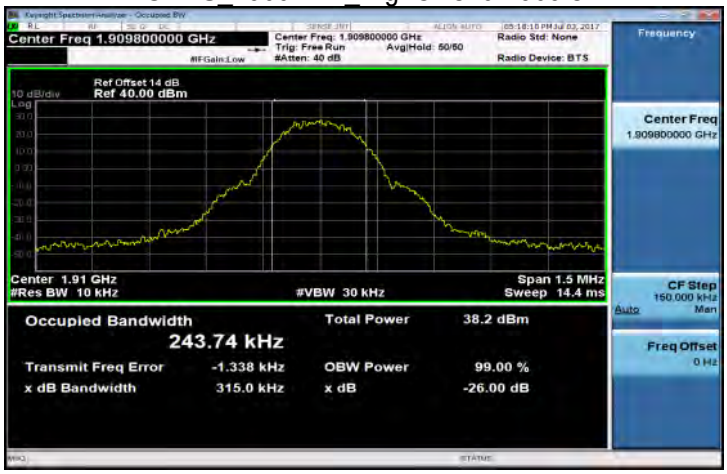
GPRS_1900MHz_MidCH661-1880



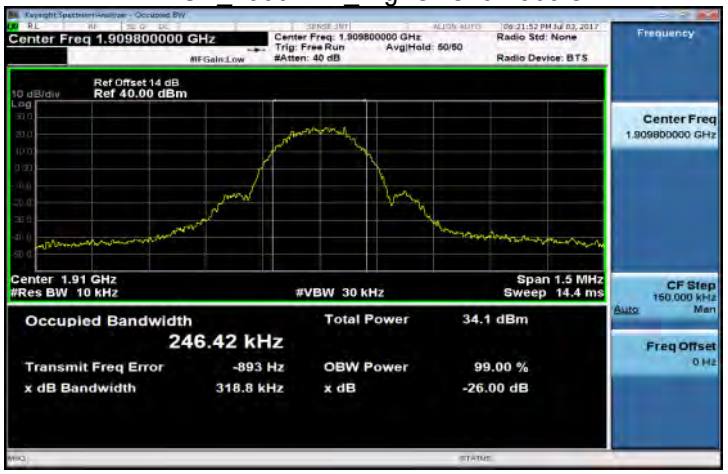
EDGE_1900MHz_MidCH661-1880



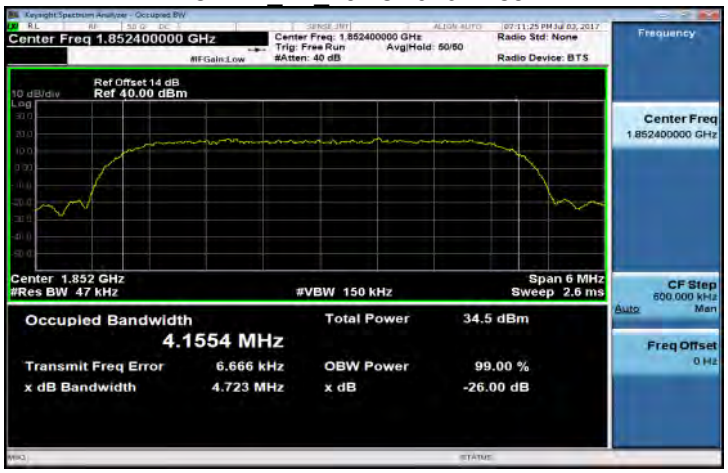
GPRS_1900MHz_HighCH810-1909.8



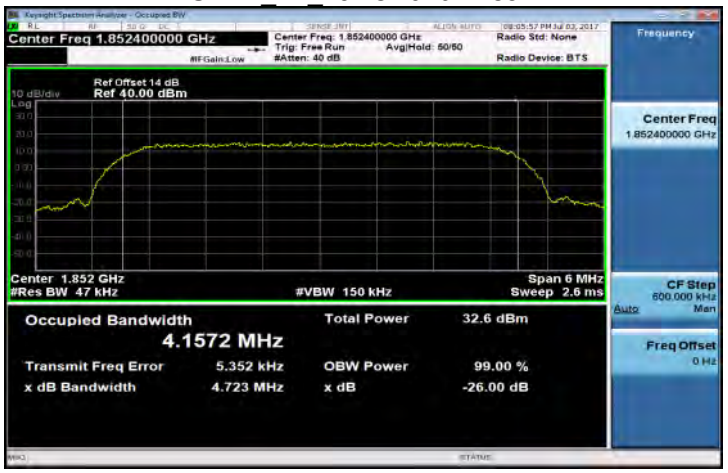
EDGE_1900MHz_HighCH810-1909.8



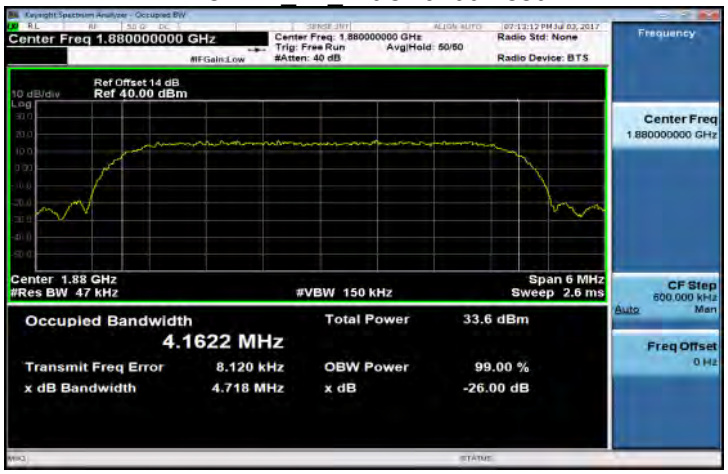
WCDMA_B2_LowCH9262-1852.4



HSDPA_B2_LowCH9262-1852.4



WCDMA_B2_MidCH9400-1880



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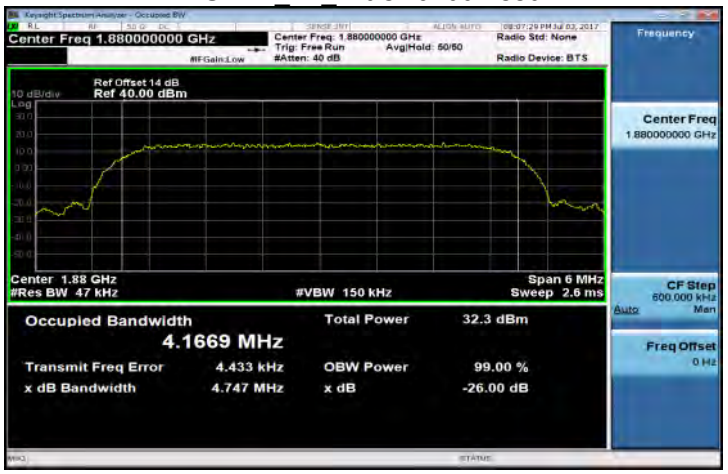
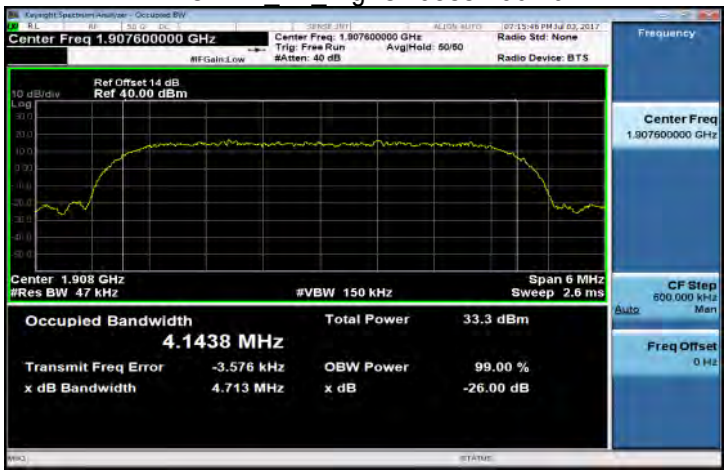


WCDMA_B2_HighCH9538-1907.6



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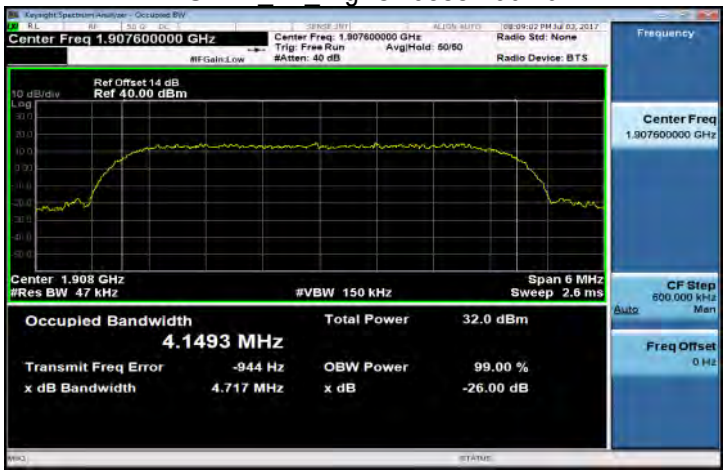

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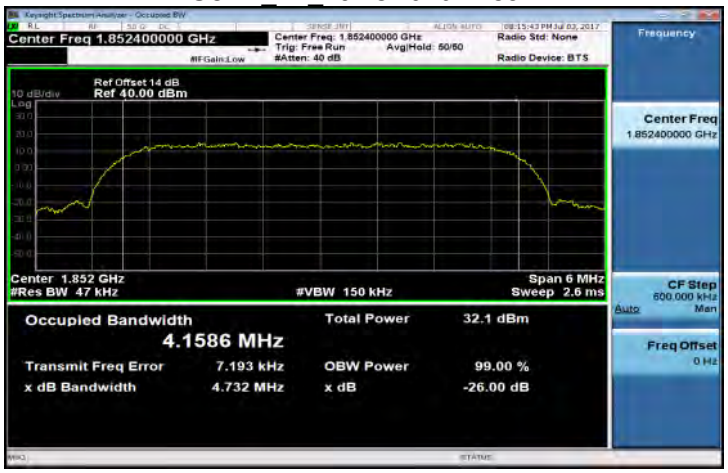
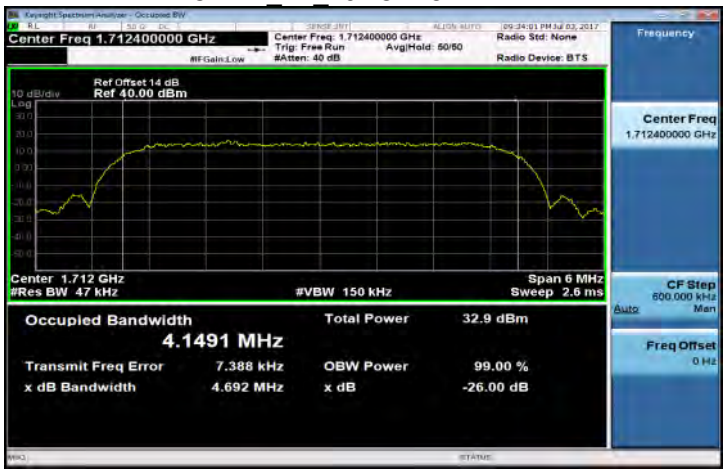
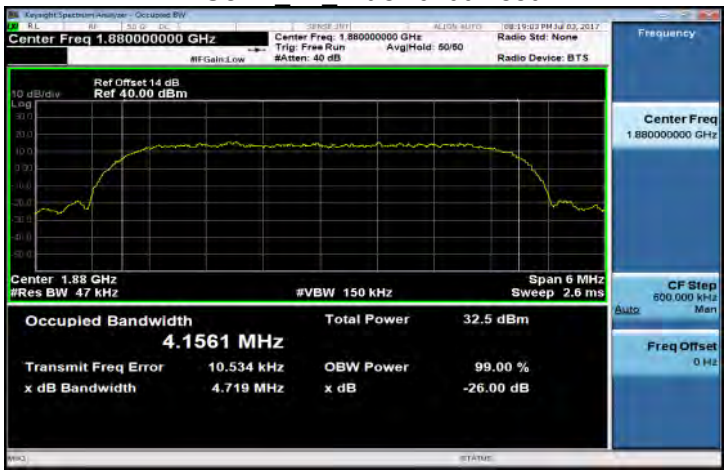


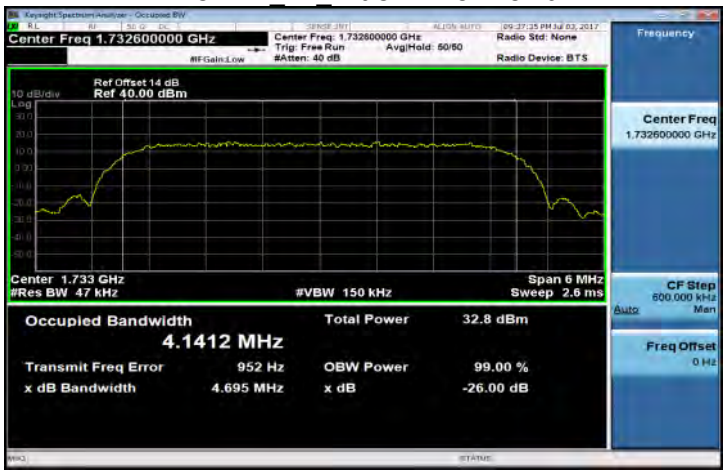
WCDMA_B4_LowCH1312-1712.4



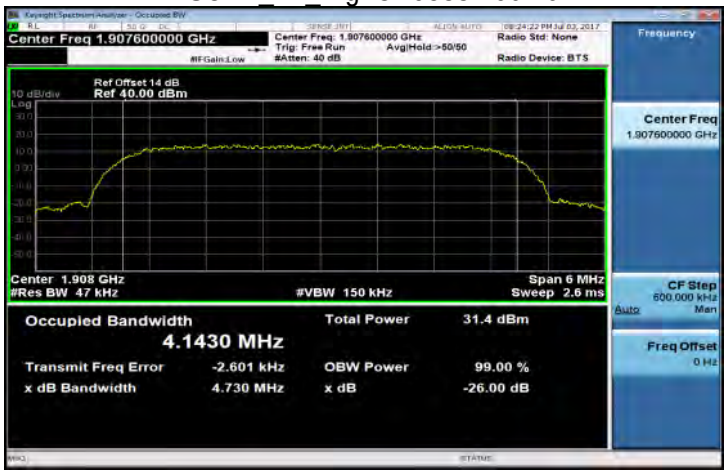
HSUPA_B2_MidCH9400-1880



WCDMA_B4_MidCH1413-1732.6



HSUPA_B2_HighCH9538-1907.6



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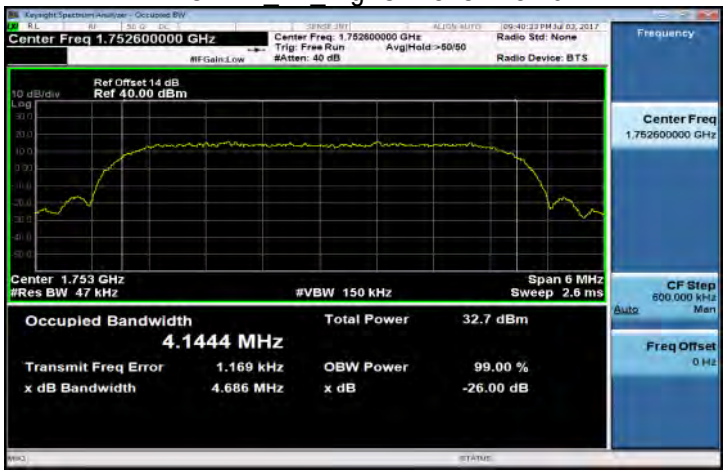

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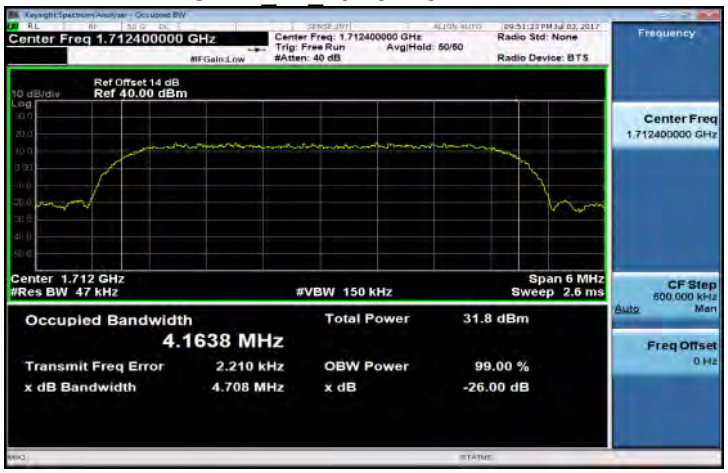

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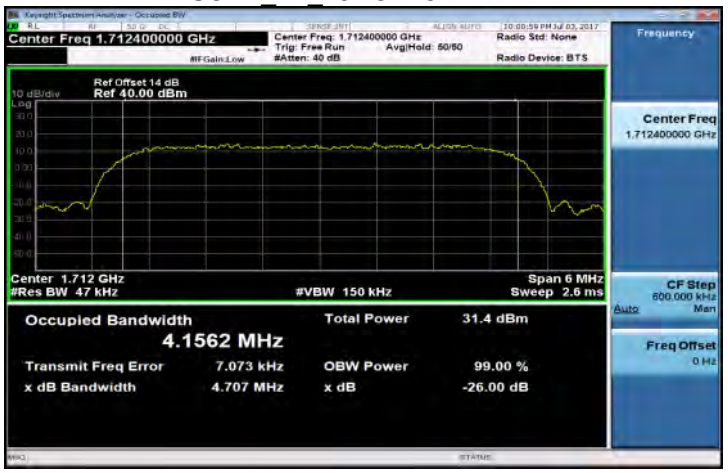

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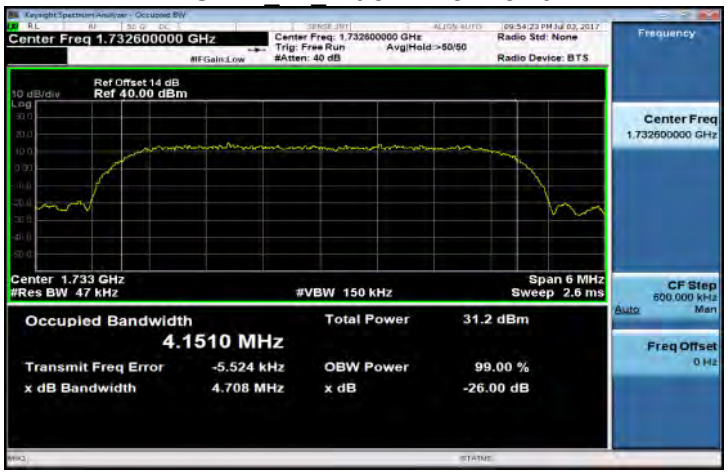

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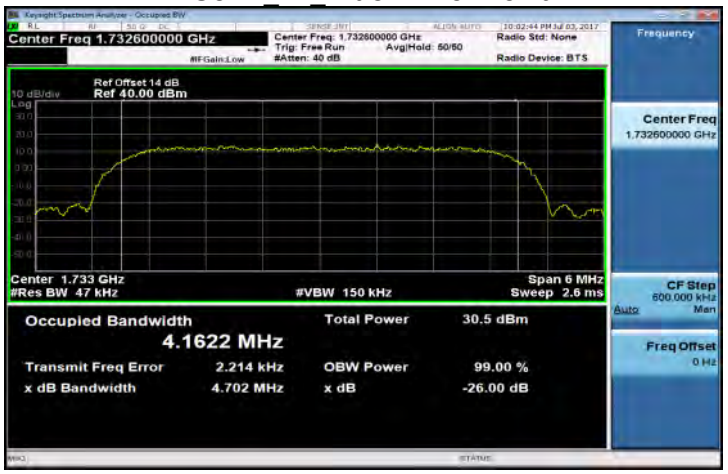

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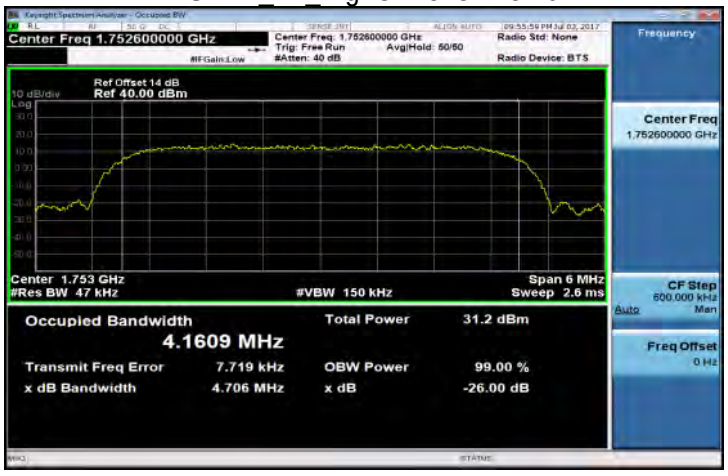

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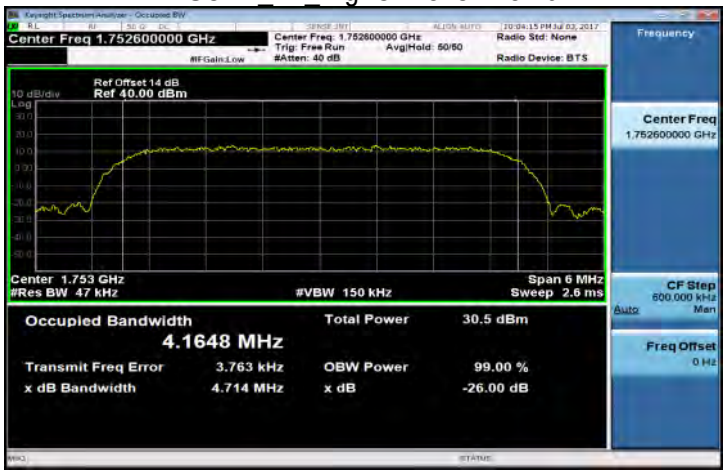
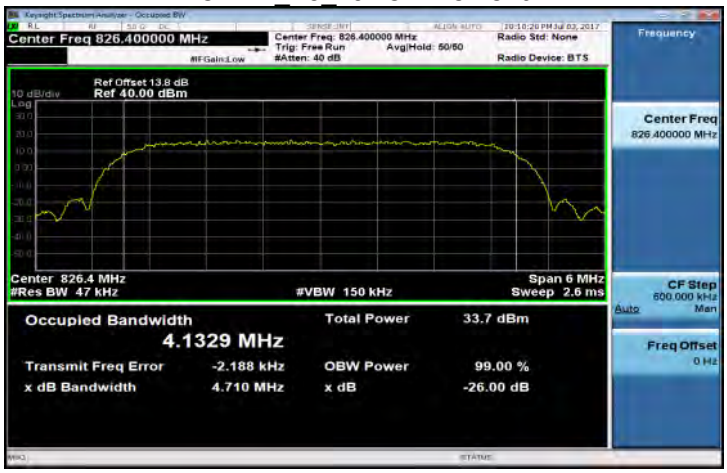


WCDMA_B5_LowCH4132-826.4



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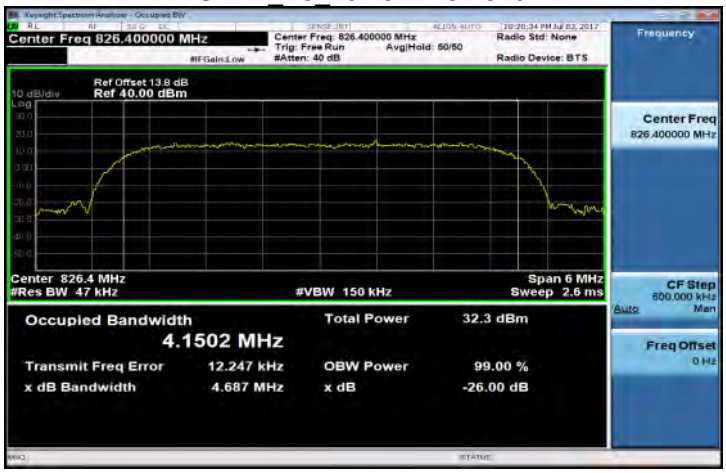
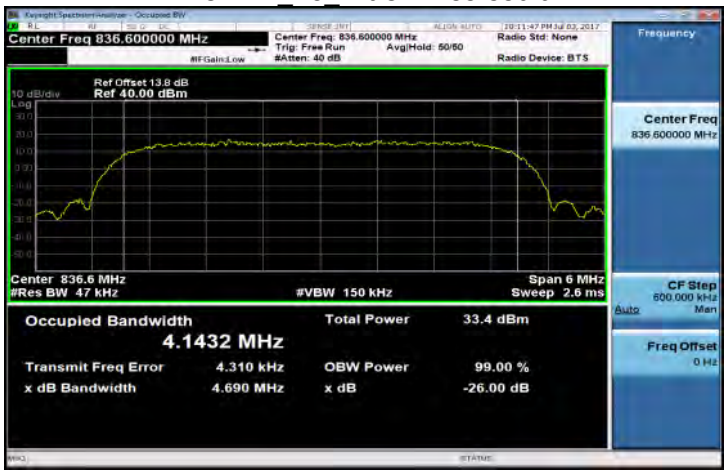
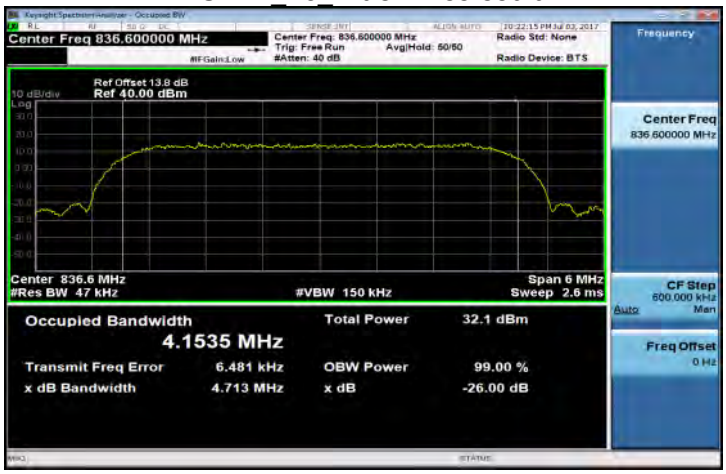


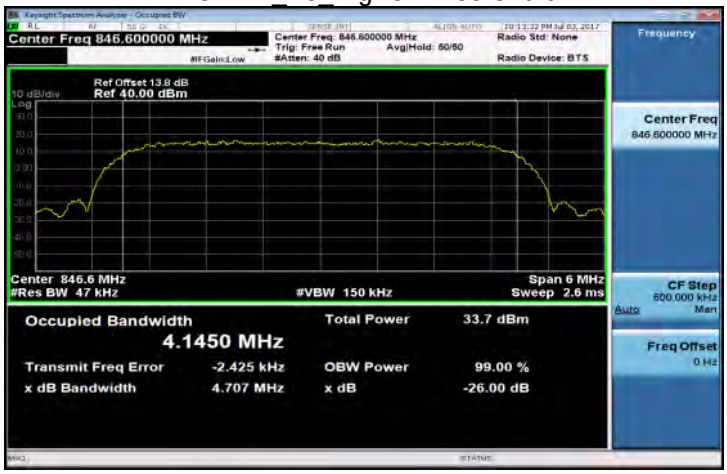
WCDMA_B5_MidCH4183-836.6



HSDPA_B5_MidCH4183-836.6



WCDMA_B5_HighCH4233-846.6



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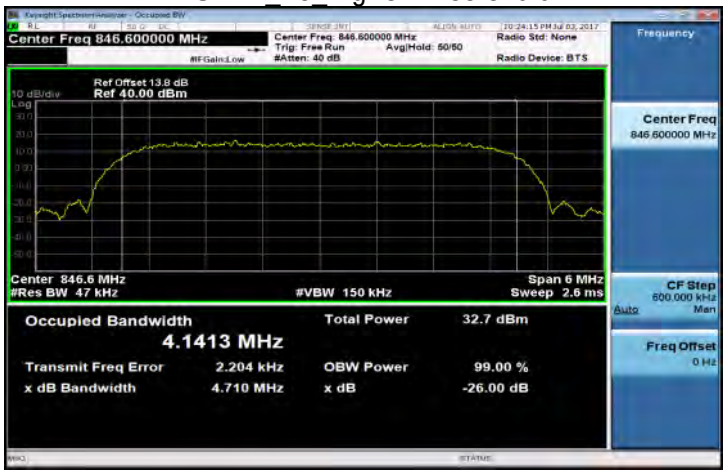
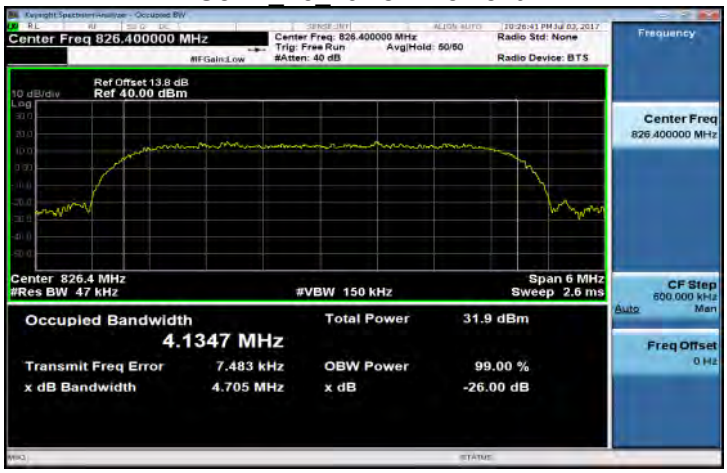
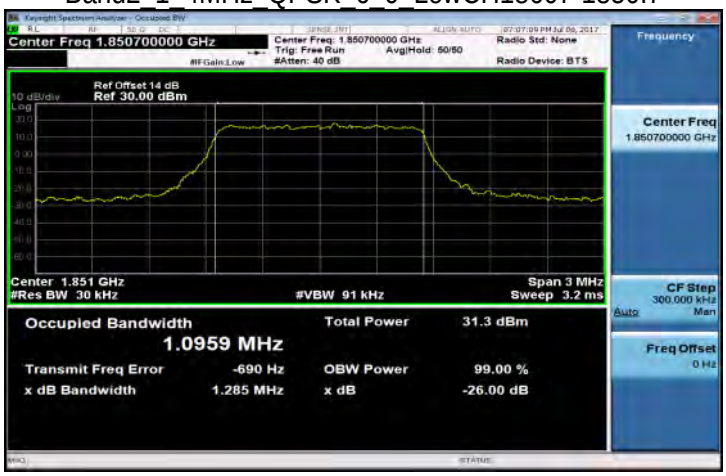


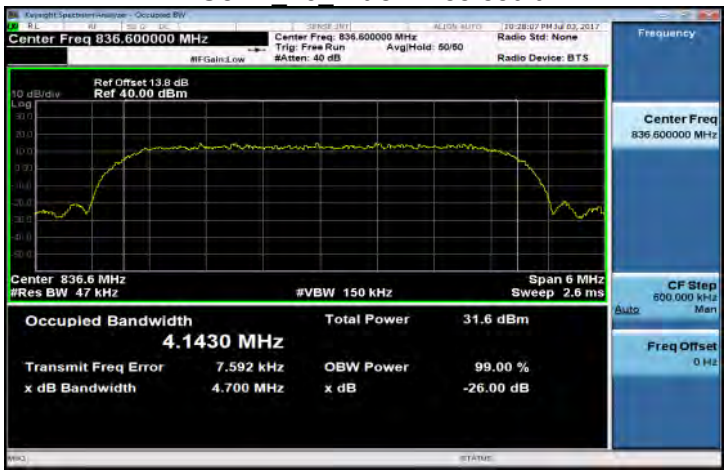
HSUPA_B5_LowCH4132-826.4



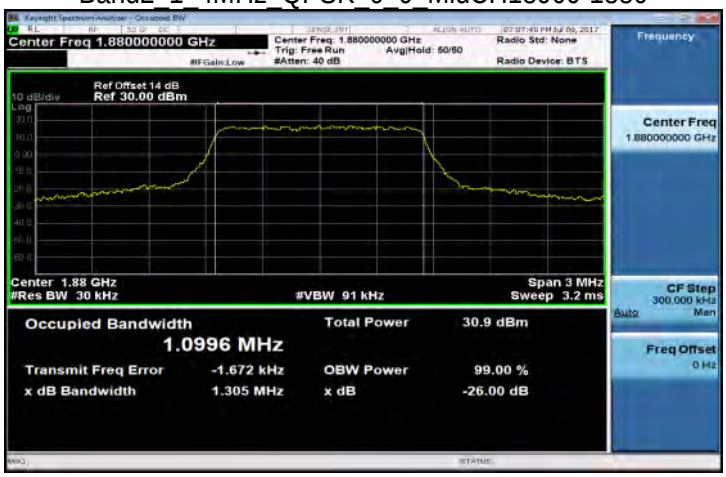
Band2_1_4MHz_QPSK_6_0_LowCH18607-1850.7



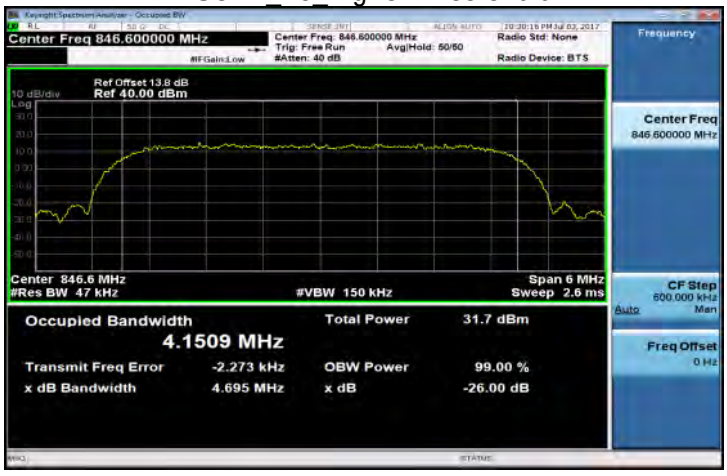
HSUPA_B5_MidCH4183-836.6



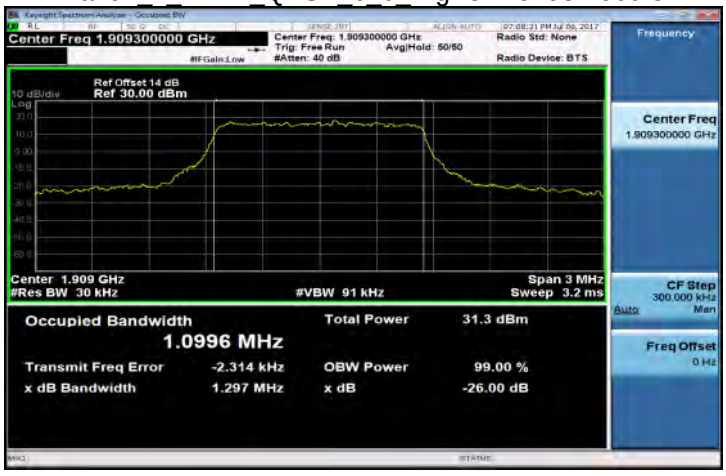
Band2_1_4MHz_QPSK_6_0_MidCH18900-1880



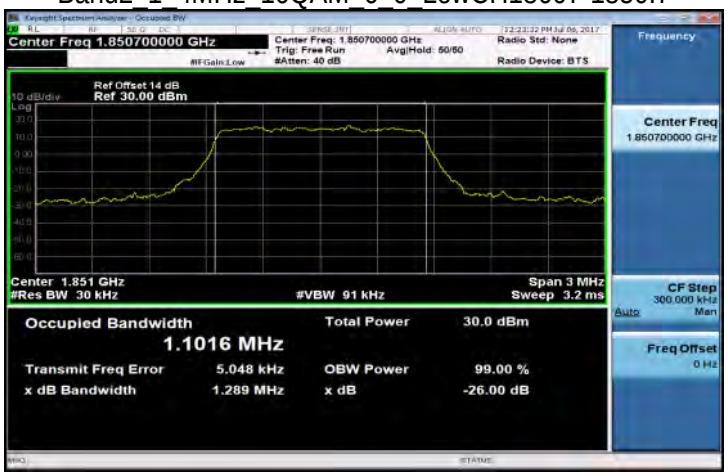
HSUPA_B5_HighCH4233-846.6



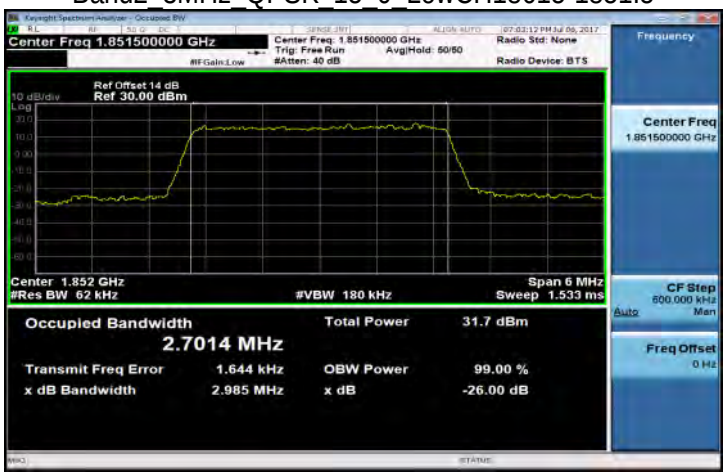
Band2_1_4MHz_QPSK_6_0_HighCH19193-1909.3



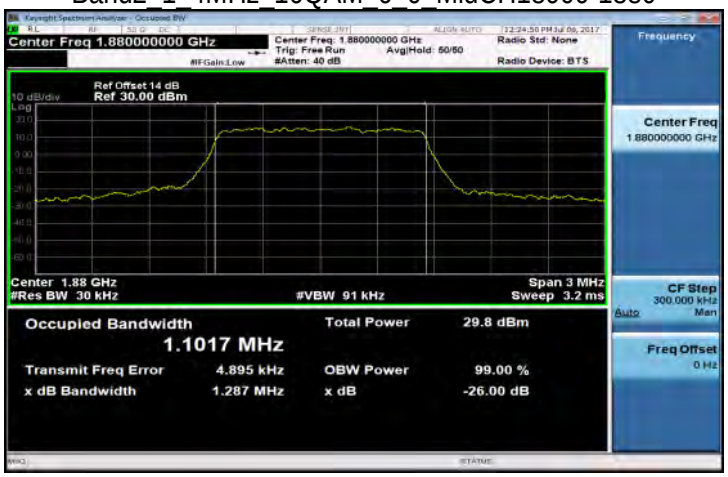
Band2_1_4MHz_16QAM_6_0_LowCH18607-1850.7



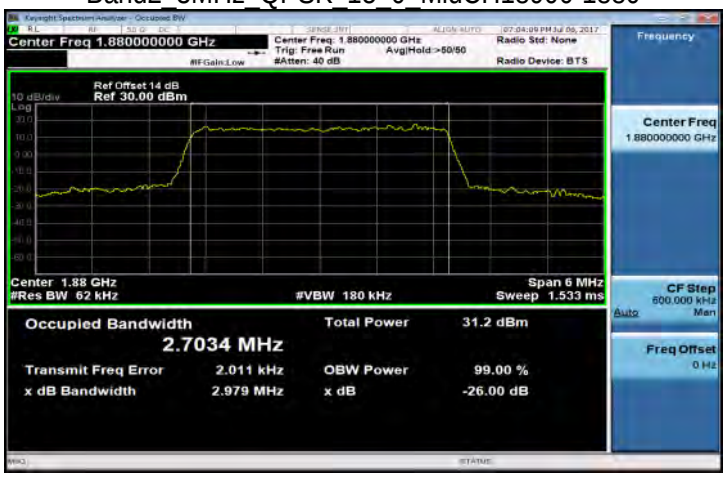
Band2_3MHz_QPSK_15_0_LowCH18615-1851.5



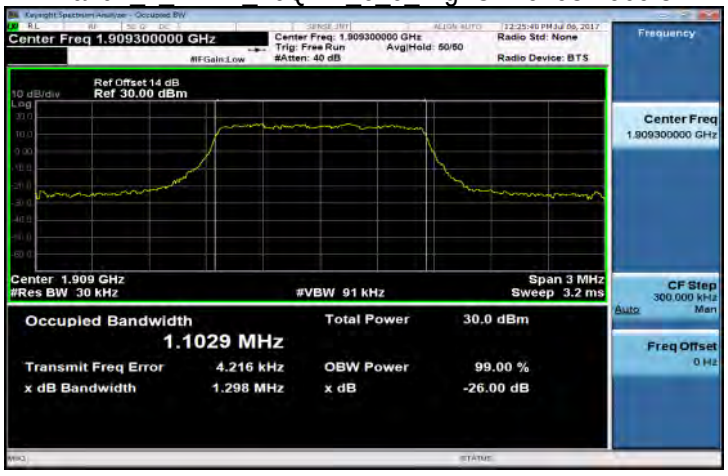
Band2_1_4MHz_16QAM_6_0_MidCH18900-1880



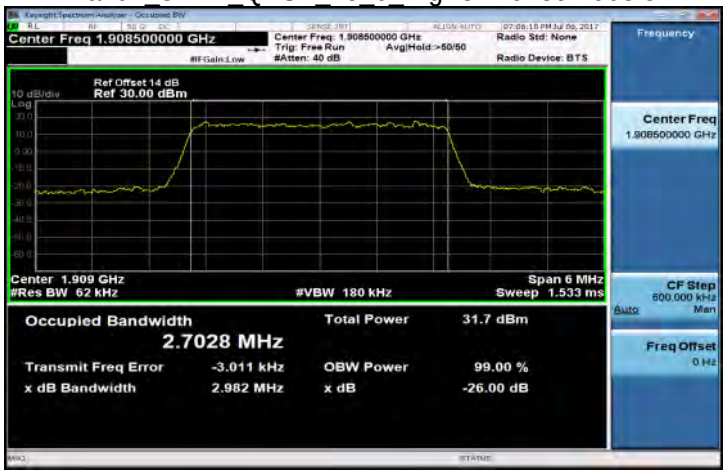
Band2_3MHz_QPSK_15_0_MidCH18900-1880



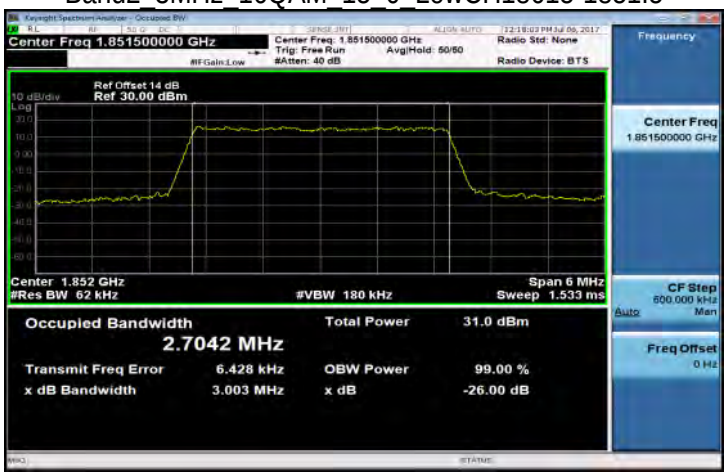
Band2_1_4MHz_16QAM_6_0_HighCH19193-1909.3



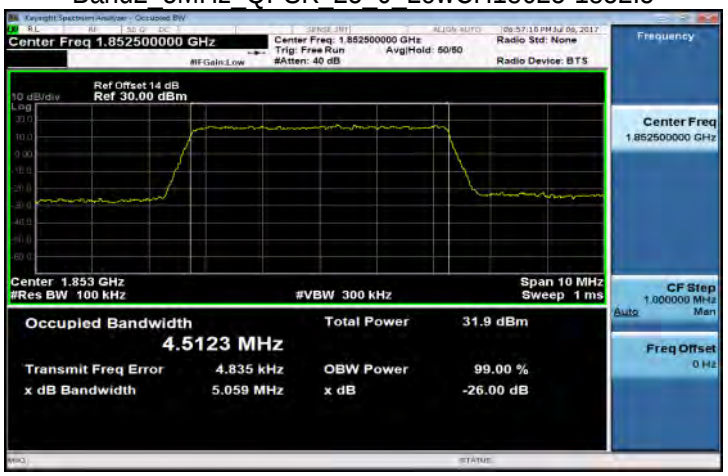
Band2_3MHz_QPSK_15_0_HighCH19185-1908.5



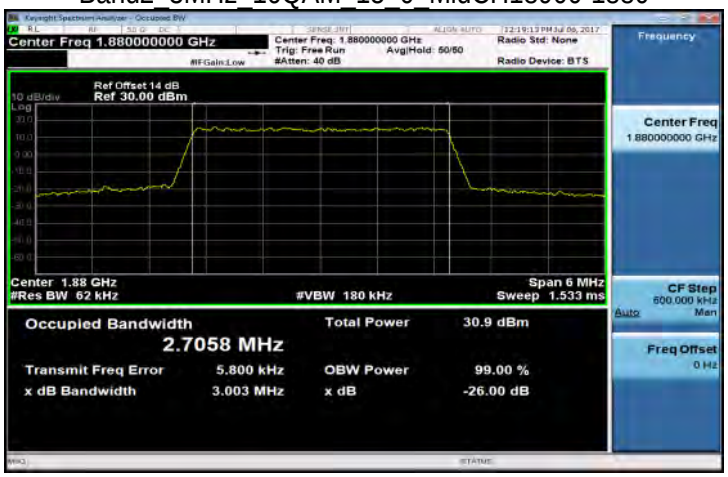
Band2_3MHz_16QAM_15_0_LowCH18615-1851.5



Band2_5MHz_QPSK_25_0_LowCH18625-1852.5



Band2_3MHz_16QAM_15_0_MidCH18900-1880



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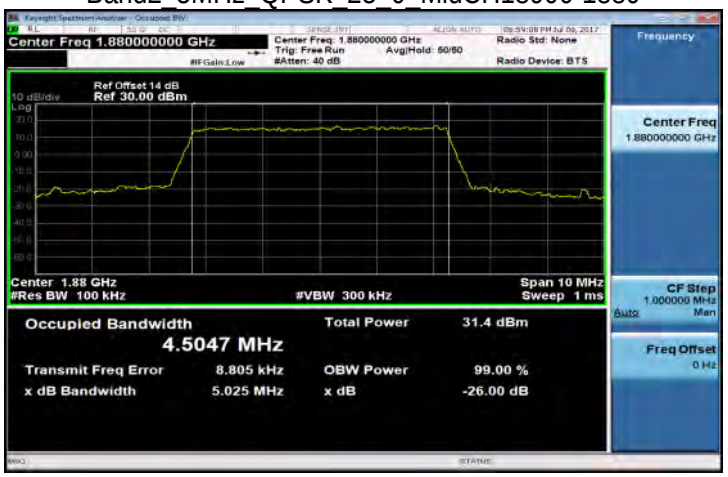
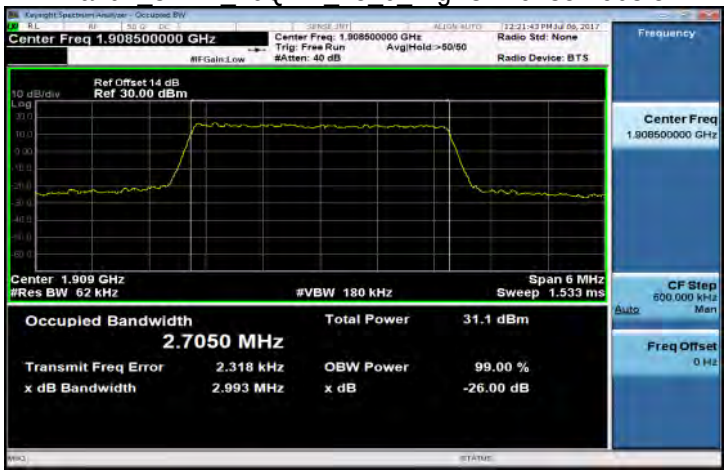


Band2_3MHz_16QAM_15_0_HighCH19185-1908.5



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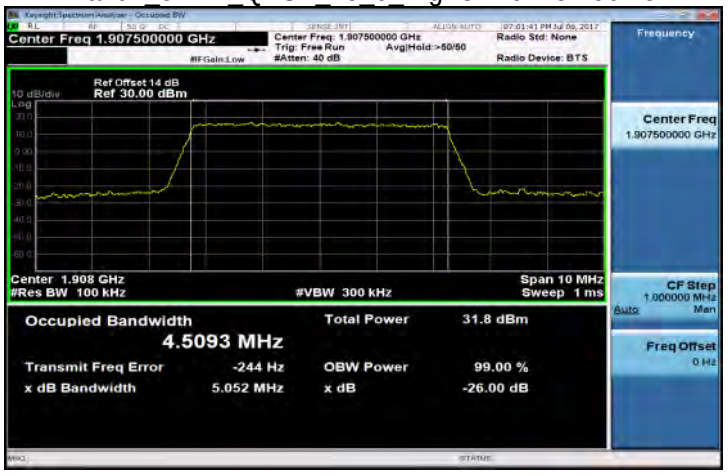
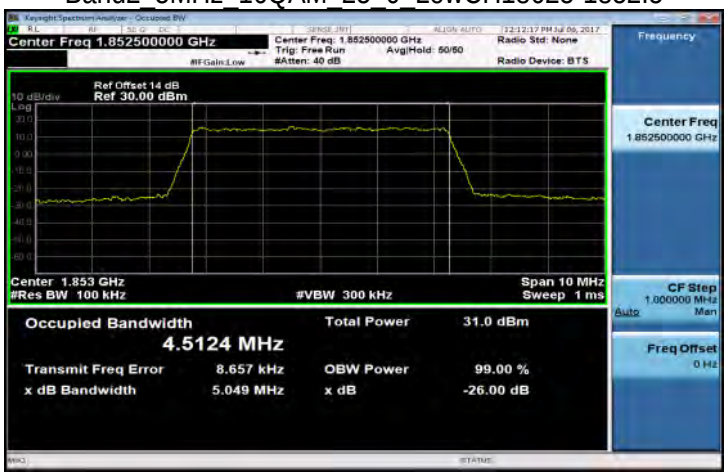
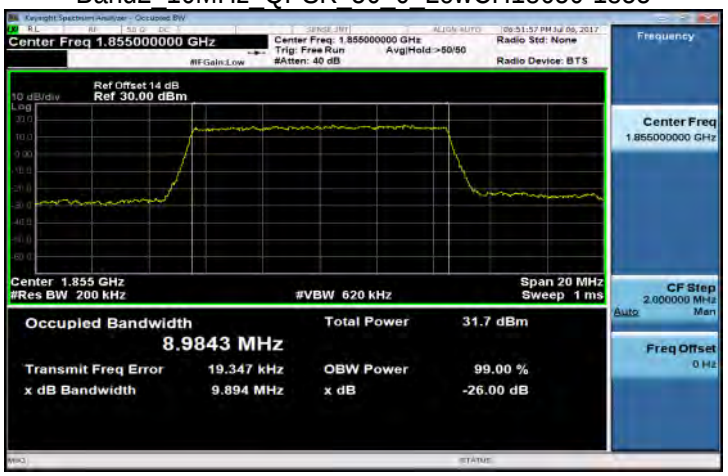


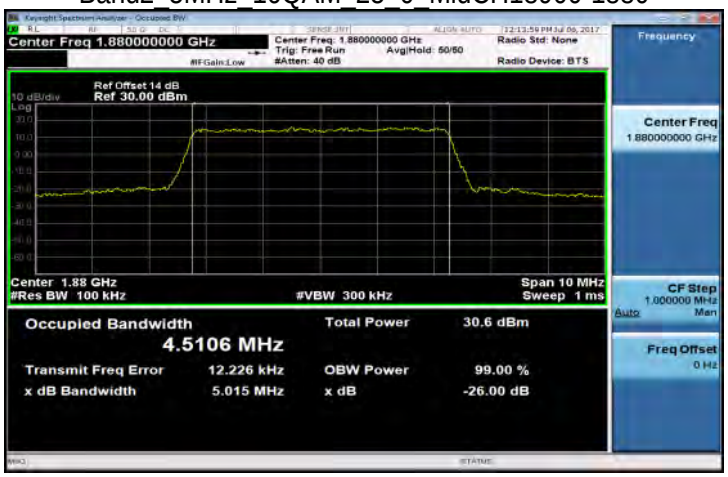
Band2_5MHz_16QAM_25_0_LowCH18625-1852.5



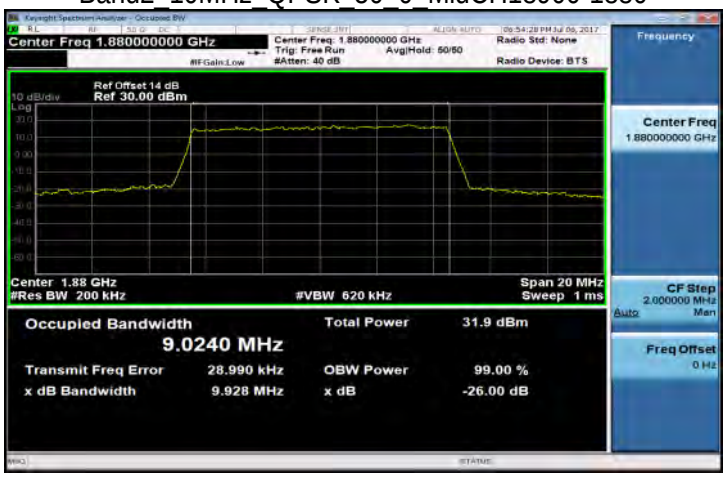
Band2_10MHz_QPSK_50_0_LowCH18650-1855



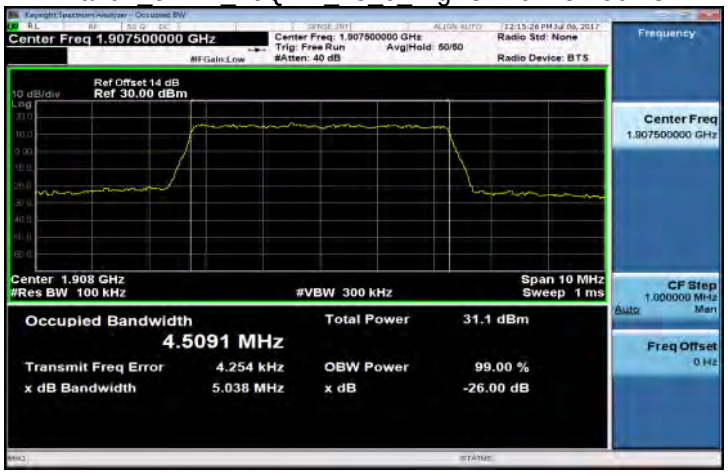
Band2_5MHz_16QAM_25_0_MidCH18900-1880



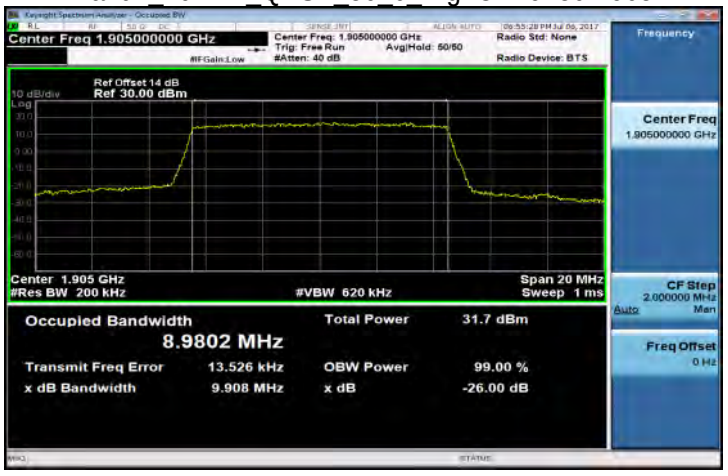
Band2_10MHz_QPSK_50_0_MidCH18900-1880



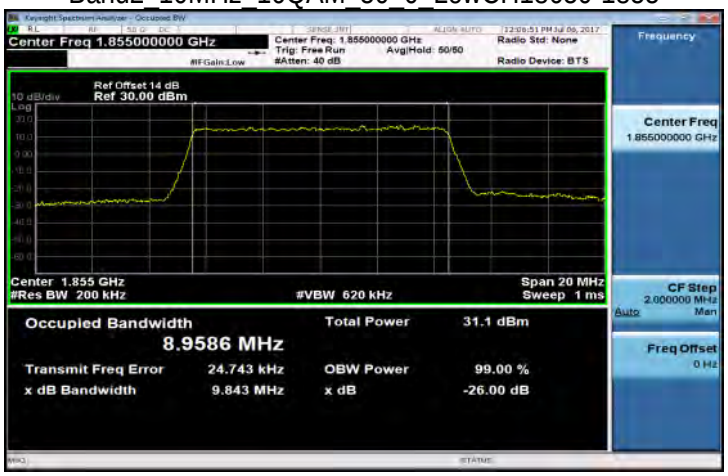
Band2_5MHz_16QAM_25_0_HighCH19175-1907.5



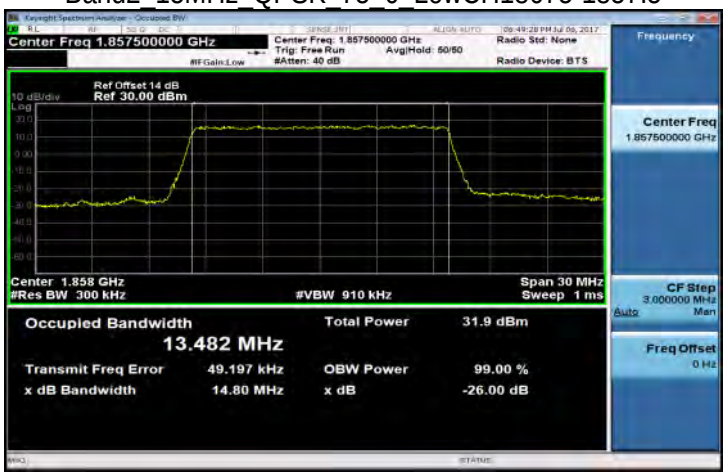
Band2_10MHz_QPSK_50_0_HighCH19150-1905



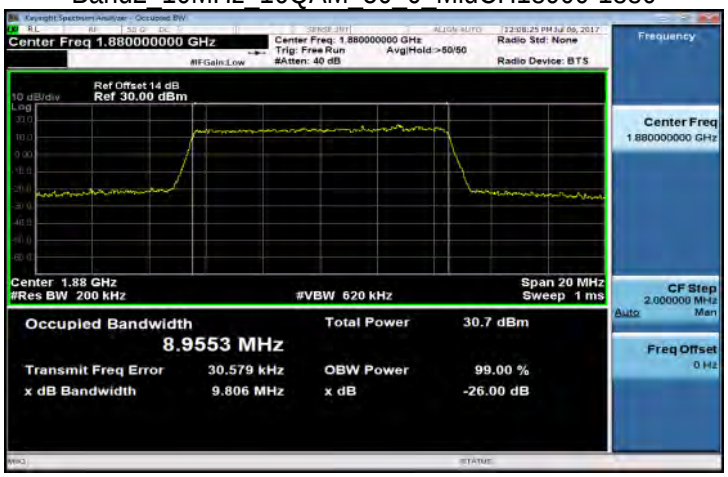
Band2_10MHz_16QAM_50_0_LowCH18650-1855



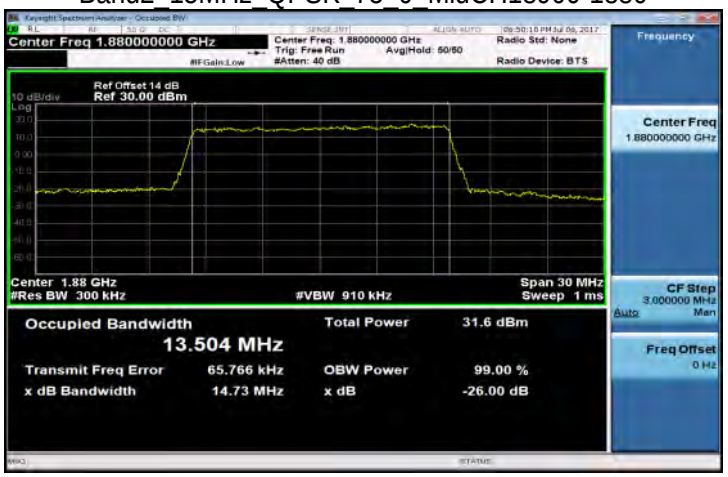
Band2_15MHz_QPSK_75_0_LowCH18675-1857.5



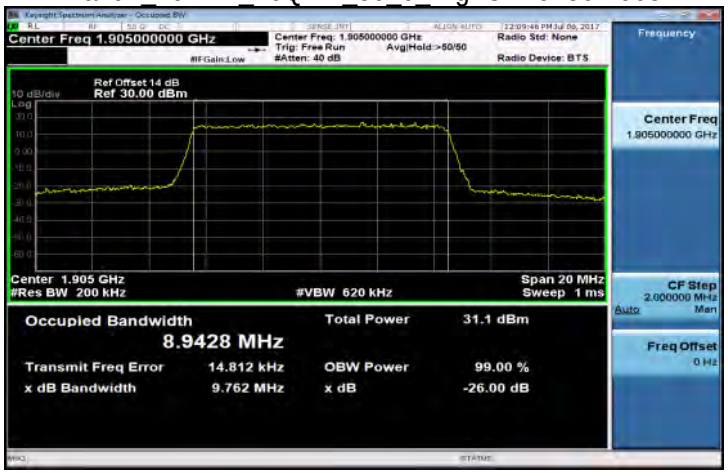
Band2_10MHz_16QAM_50_0_MidCH18900-1880



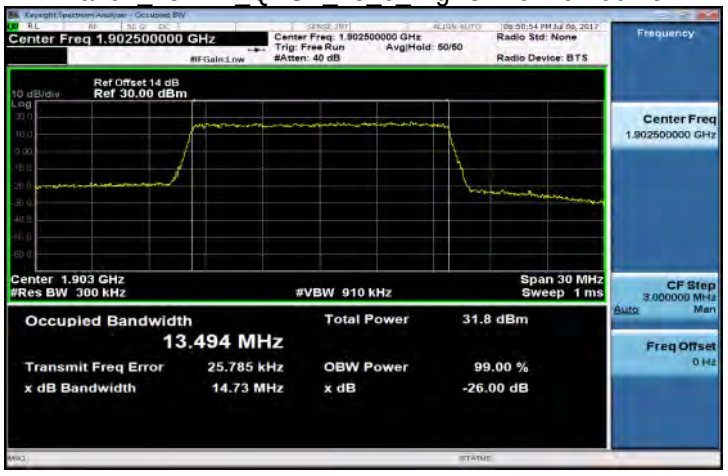
Band2_15MHz_QPSK_75_0_MidCH18900-1880



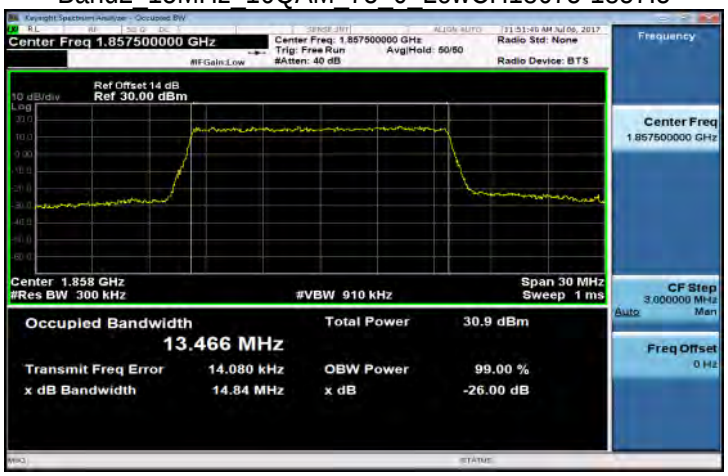
Band2_10MHz_16QAM_50_0_HighCH19150-1905



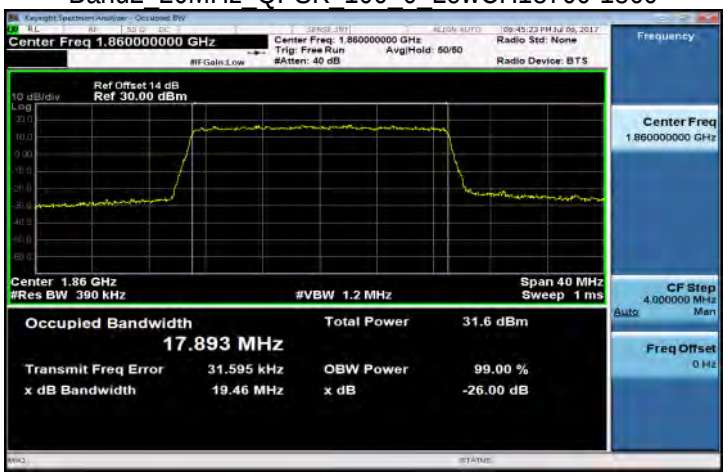
Band2_15MHz_QPSK_75_0_HighCH19125-1902.5



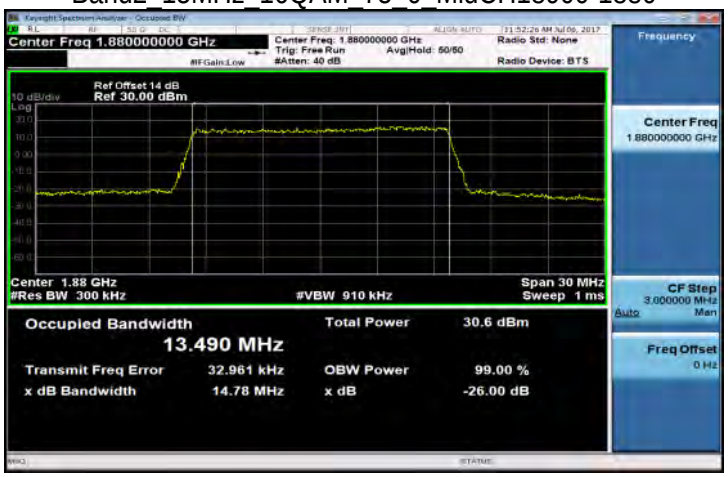
Band2_15MHz_16QAM_75_0_LowCH18675-1857.5



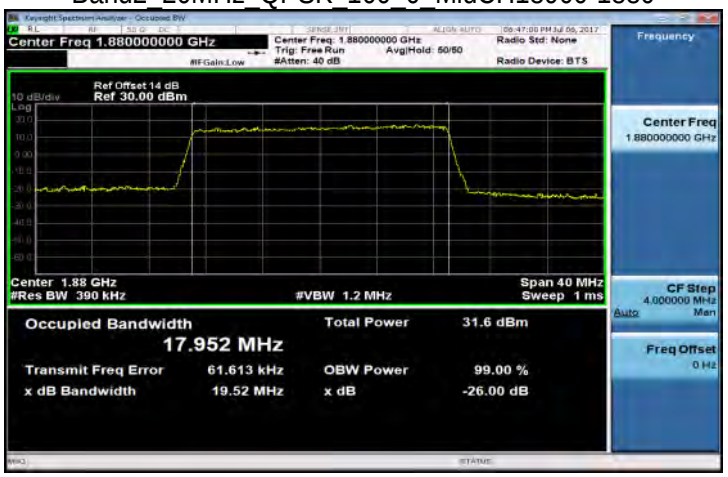
Band2_20MHz_QPSK_100_0_LowCH18700-1860



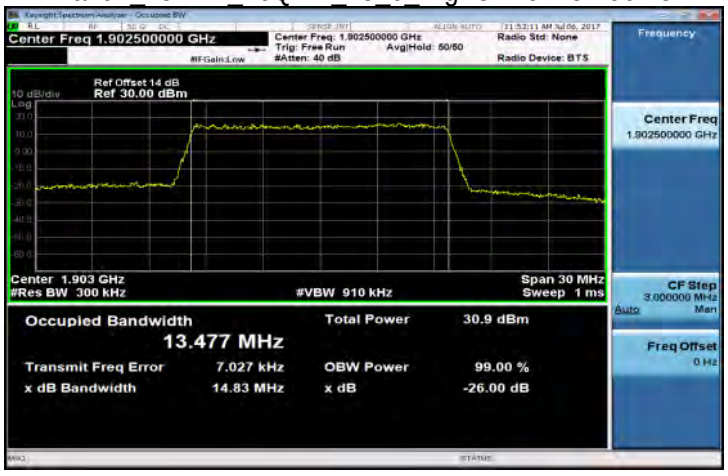
Band2_15MHz_16QAM_75_0_MidCH18900-1880



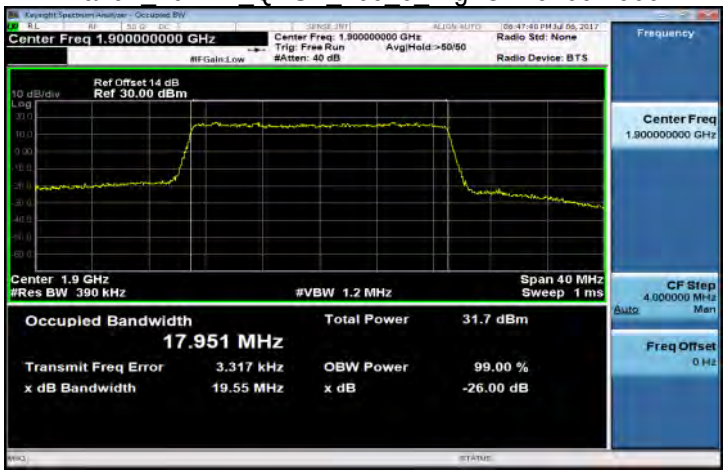
Band2_20MHz_QPSK_100_0_MidCH18900-1880



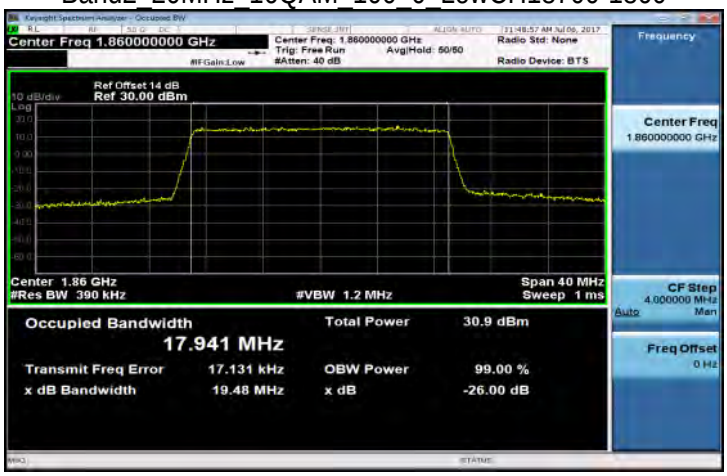
Band2_15MHz_16QAM_75_0_HighCH19125-1902.5



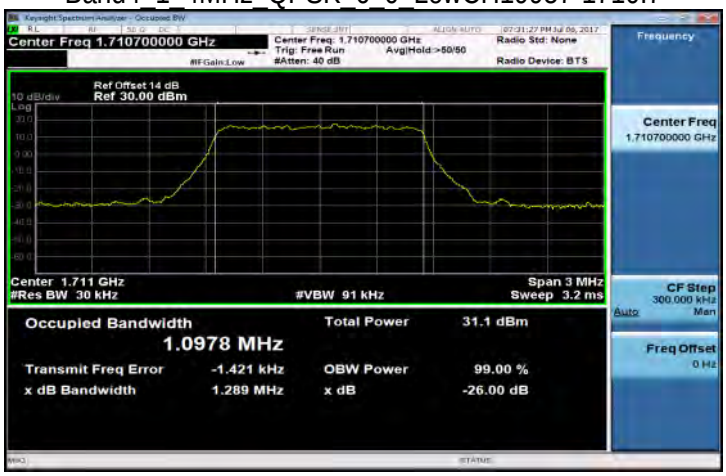
Band2_20MHz_QPSK_100_0_HighCH19100-1900



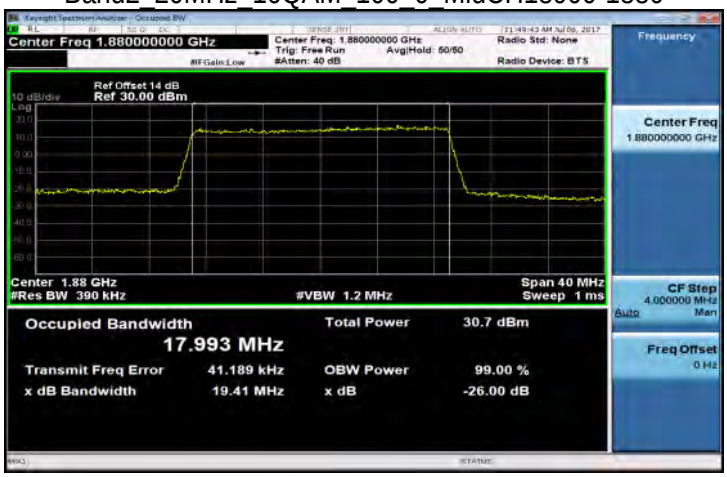
Band2_20MHz_16QAM_100_0_LowCH18700-1860



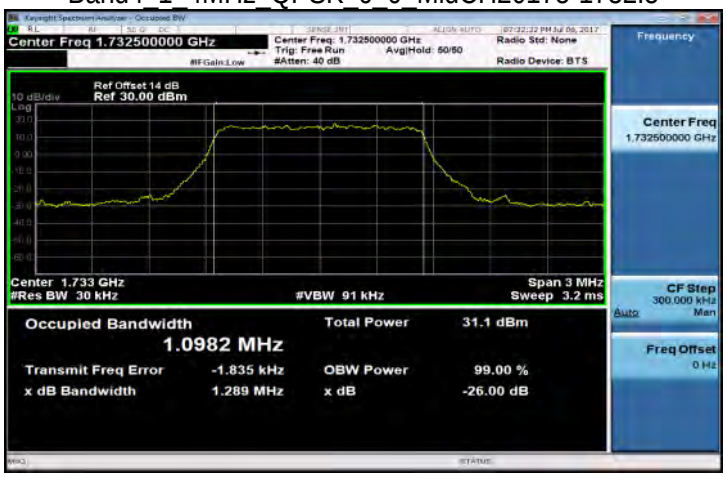
Band4_1_4MHz_QPSK_6_0_LowCH19957-1710.7



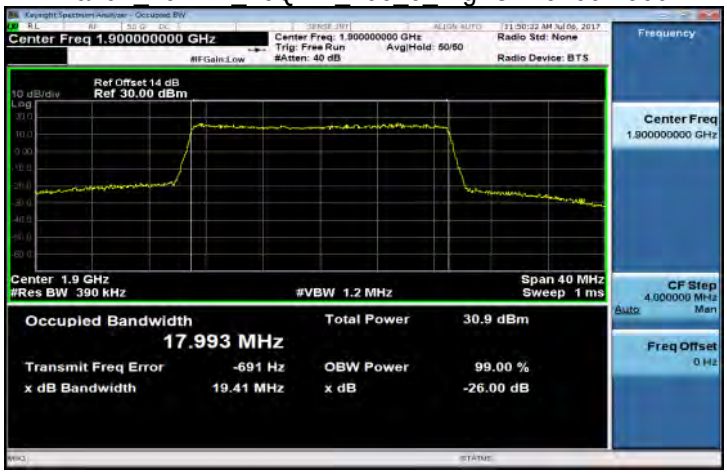
Band2_20MHz_16QAM_100_0_MidCH18900-1880



Band4_1_4MHz_QPSK_6_0_MidCH20175-1732.5



Band2_20MHz_16QAM_100_0_HighCH19100-1900



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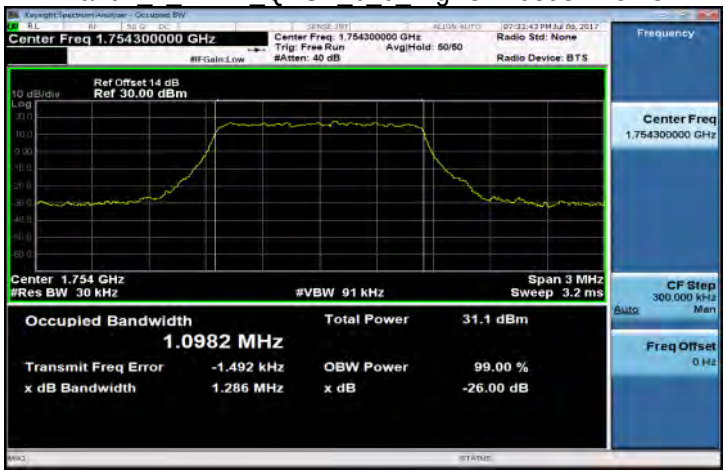
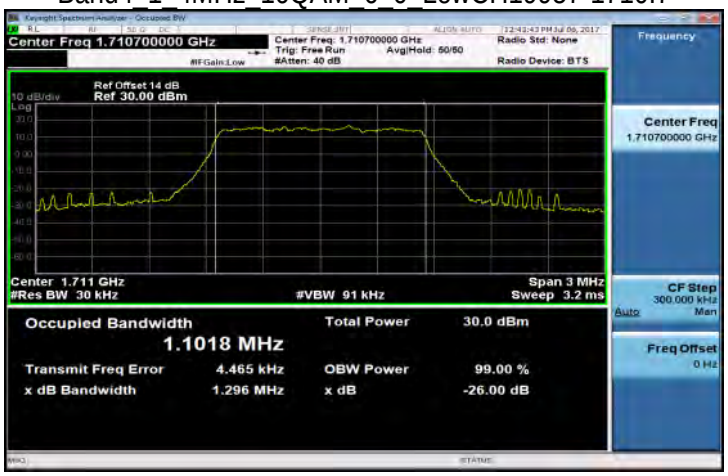
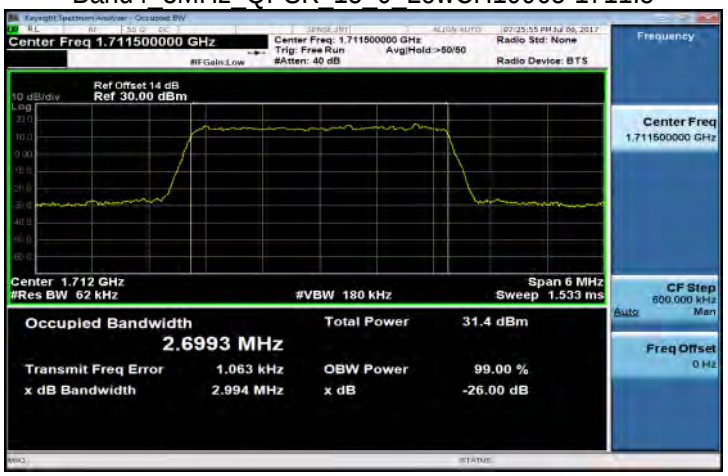


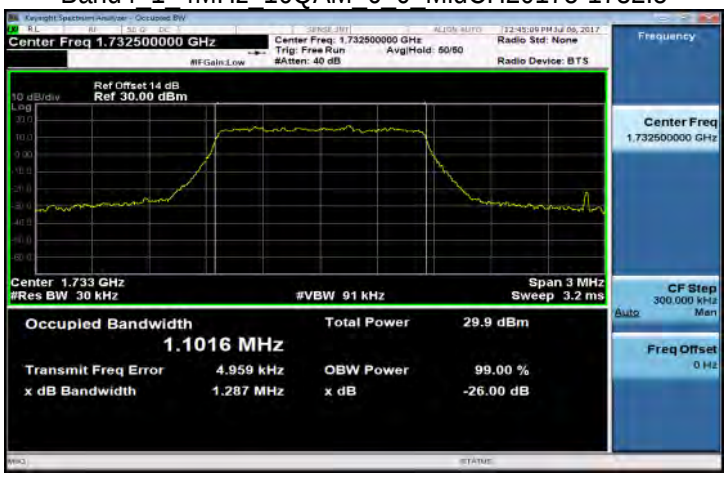
Band4_1_4MHz_16QAM_6_0_LowCH19957-1710.7



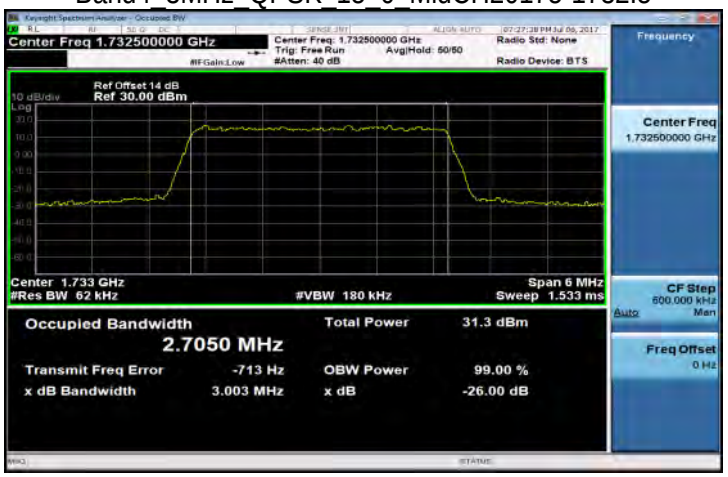
Band4_3MHz_QPSK_15_0_LowCH19965-1711.5



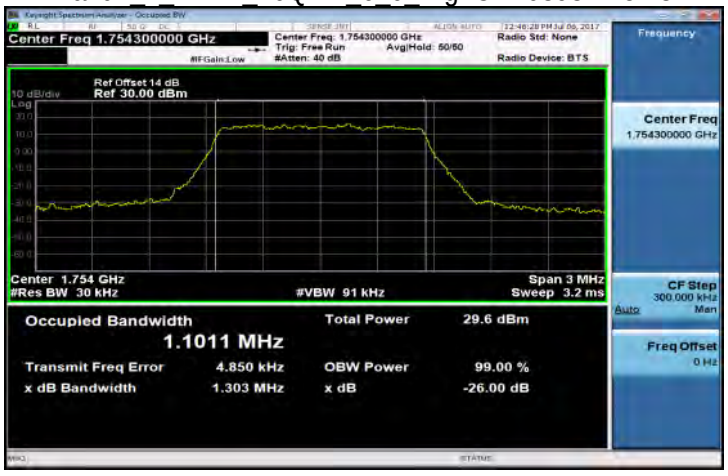
Band4_1_4MHz_16QAM_6_0_MidCH20175-1732.5



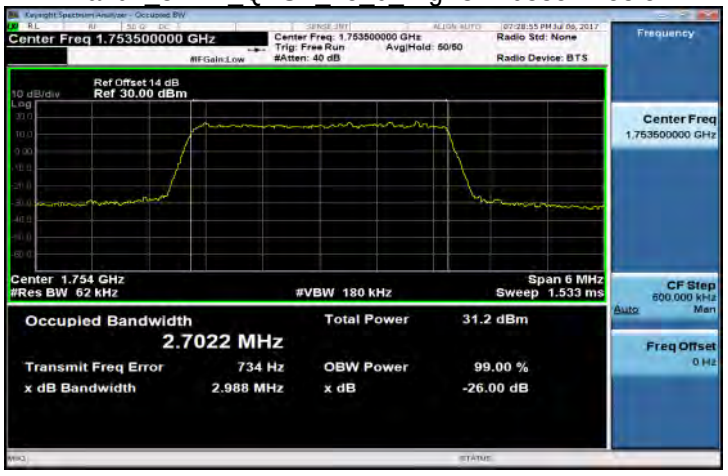
Band4_3MHz_QPSK_15_0_MidCH20175-1732.5



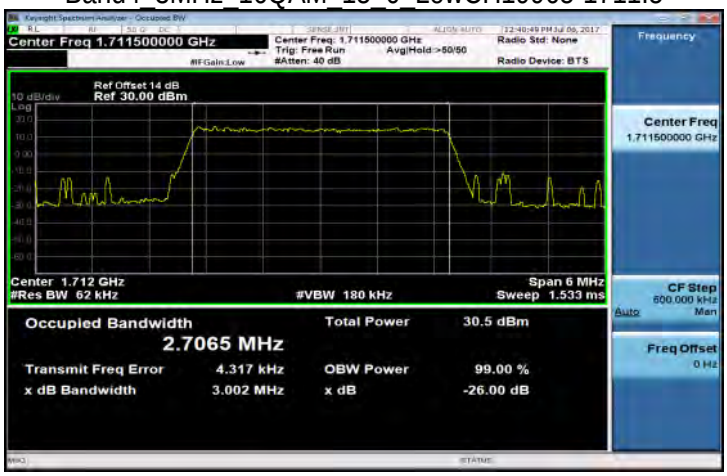
Band4_1_4MHz_16QAM_6_0_HighCH20393-1754.3



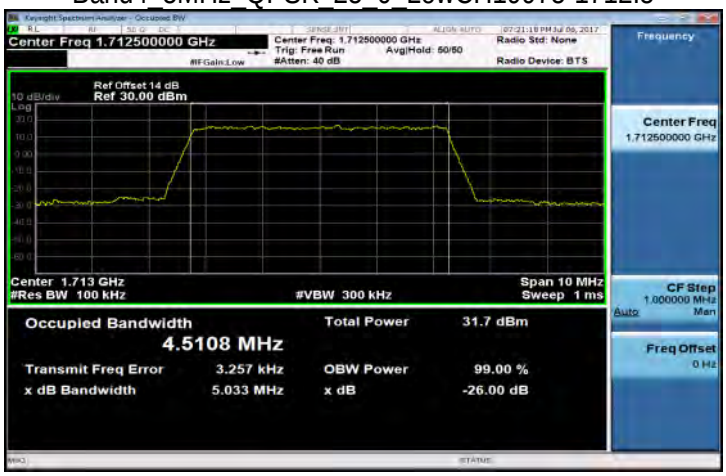
Band4_3MHz_QPSK_15_0_HighCH20385-1753.5



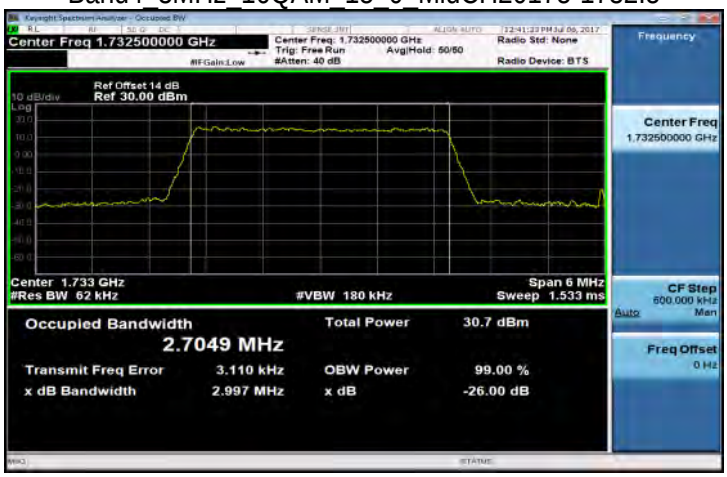
Band4_3MHz_16QAM_15_0_LowCH19965-1711.5



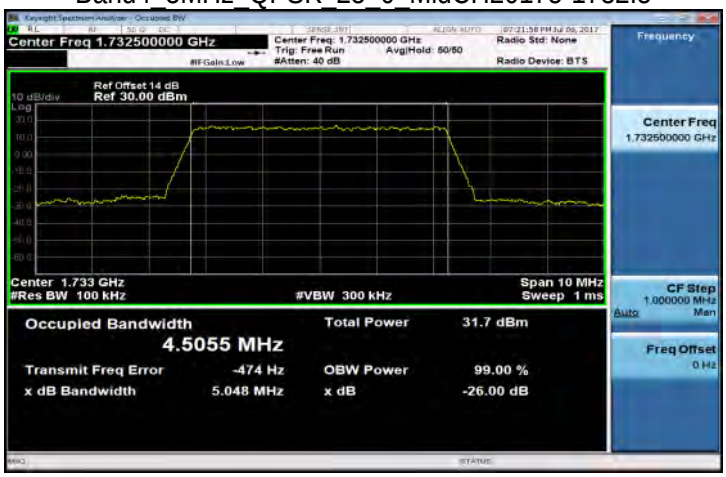
Band4_5MHz_QPSK_25_0_LowCH19975-1712.5



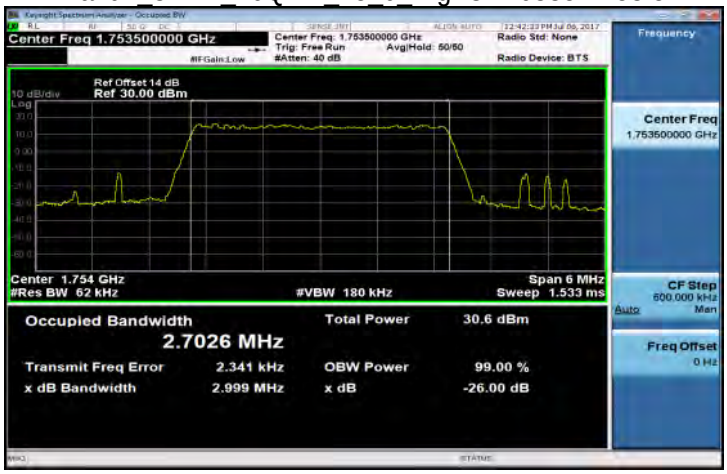
Band4_3MHz_16QAM_15_0_MidCH20175-1732.5



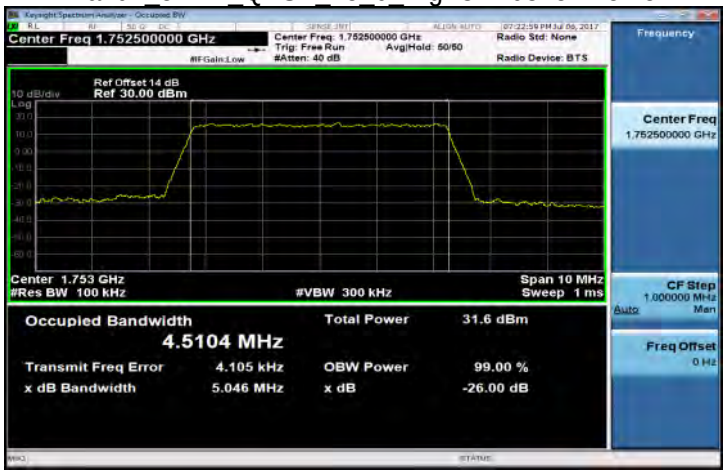
Band4_5MHz_QPSK_25_0_MidCH20175-1732.5



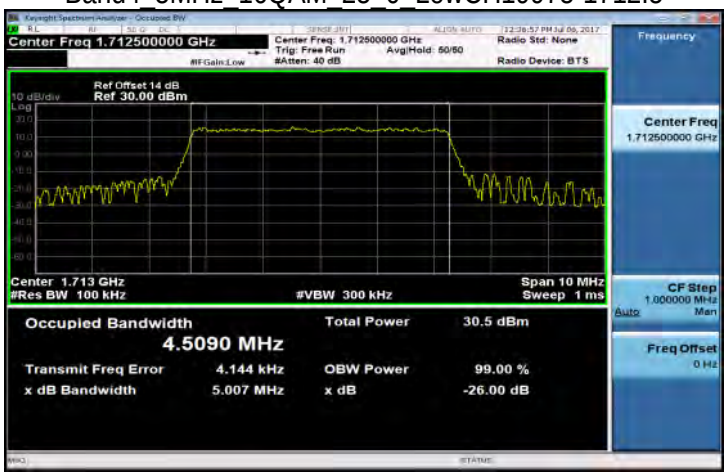
Band4_3MHz_16QAM_15_0_HighCH20385-1753.5



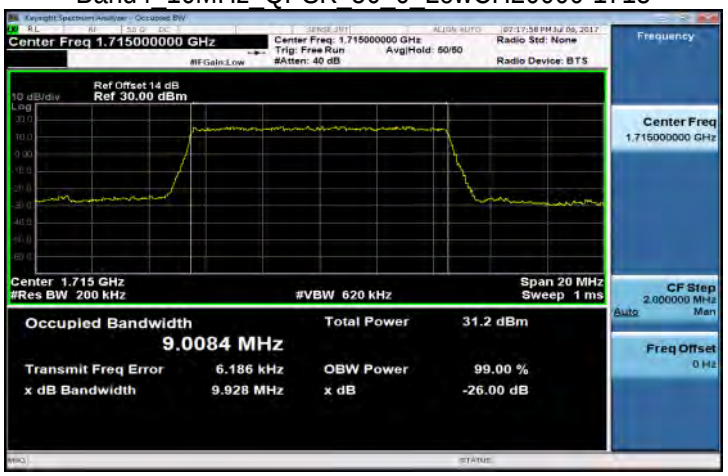
Band4_5MHz_QPSK_25_0_HighCH20375-1752.5



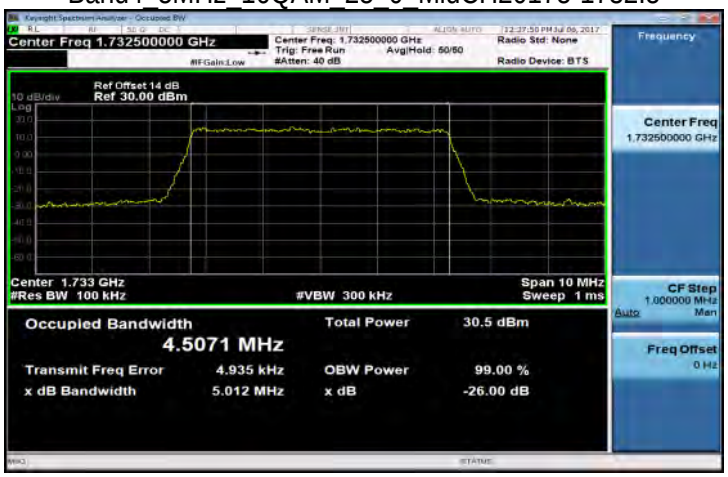
Band4_5MHz_16QAM_25_0_LowCH19975-1712.5



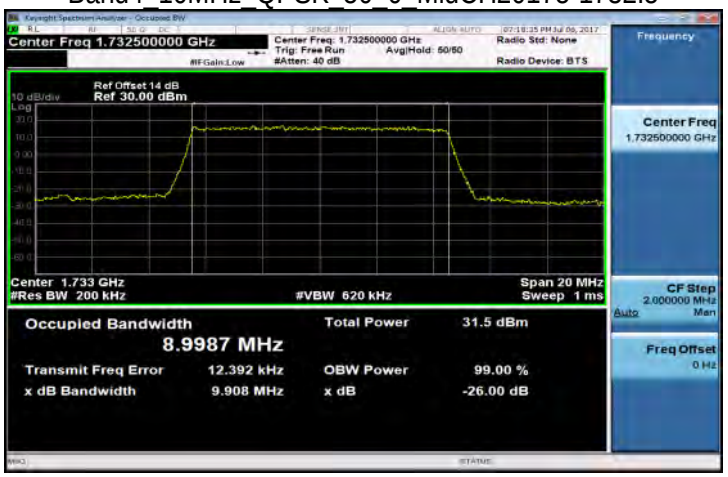
Band4_10MHz_QPSK_50_0_LowCH20000-1715



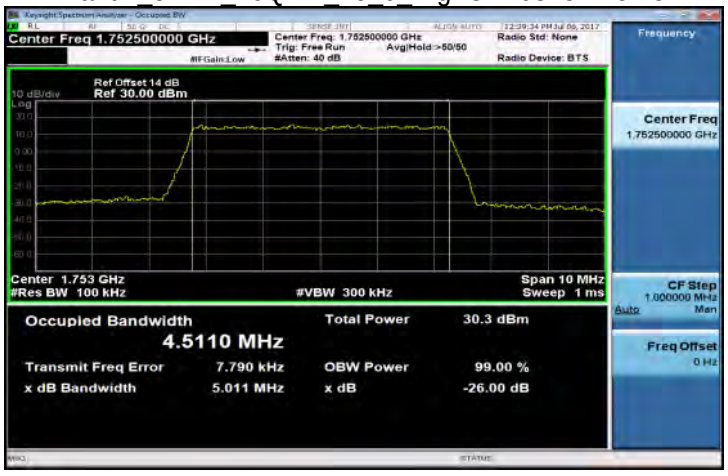
Band4_5MHz_16QAM_25_0_MidCH20175-1732.5



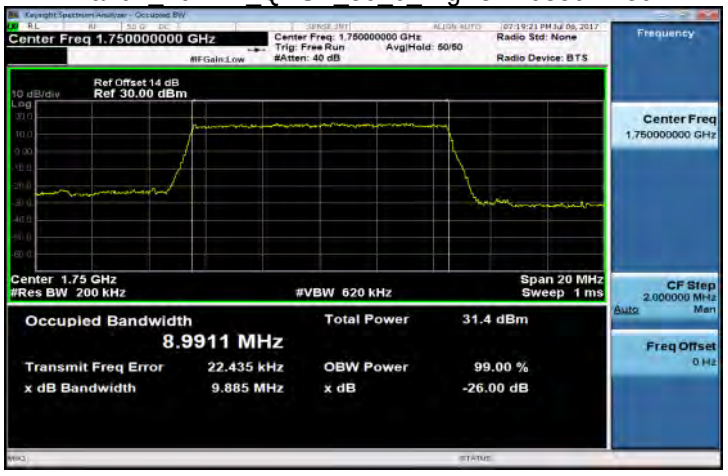
Band4_10MHz_QPSK_50_0_MidCH20175-1732.5



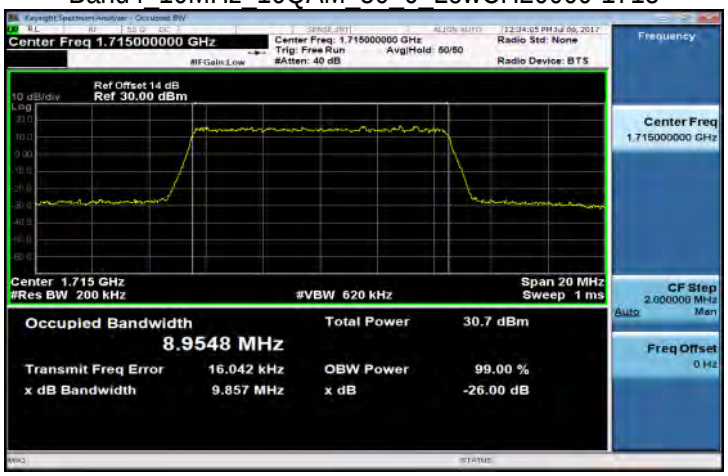
Band4_5MHz_16QAM_25_0_HighCH20375-1752.5



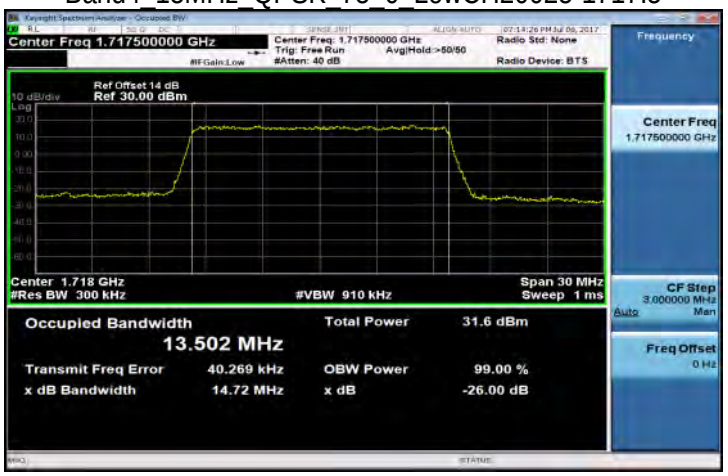
Band4_10MHz_QPSK_50_0_HighCH20350-1750



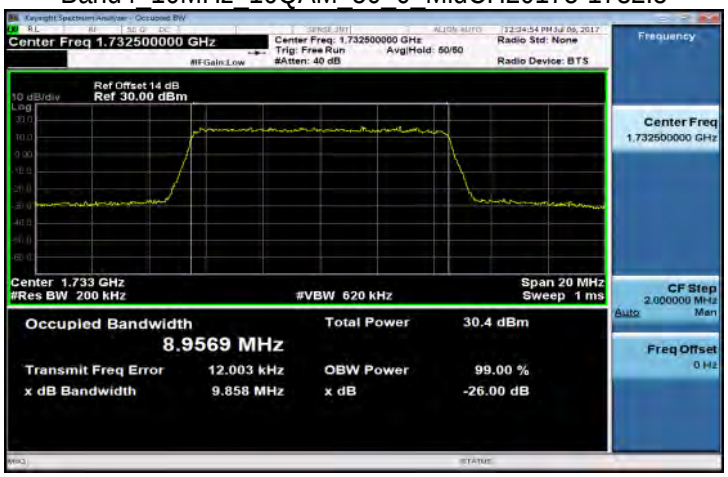
Band4_10MHz_16QAM_50_0_LowCH20000-1715



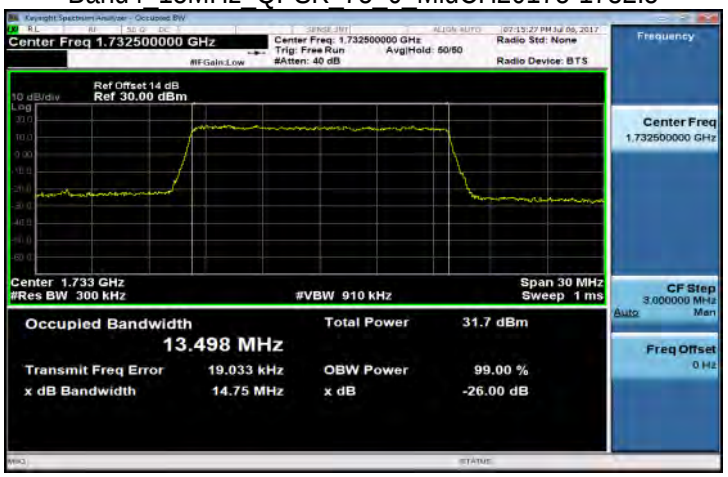
Band4_15MHz_QPSK_75_0_LowCH20025-1717.5



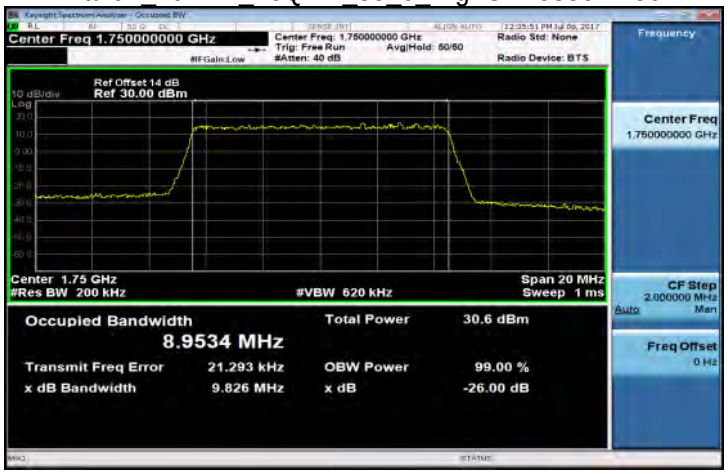
Band4_10MHz_16QAM_50_0_MidCH20175-1732.5



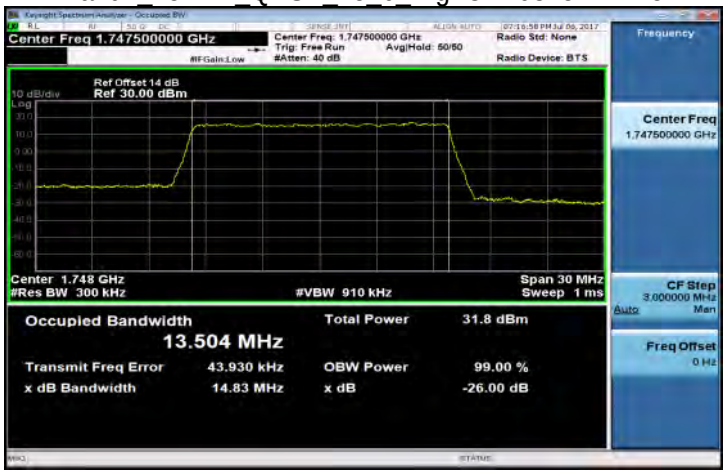
Band4_15MHz_QPSK_75_0_MidCH20175-1732.5



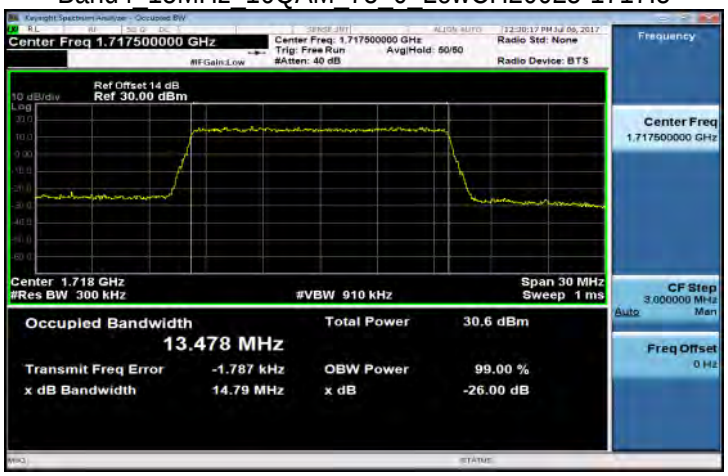
Band4_10MHz_16QAM_50_0_HighCH20350-1750



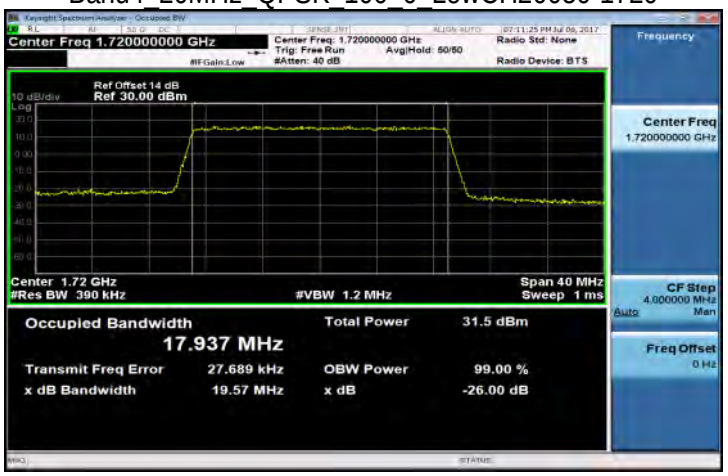
Band4_15MHz_QPSK_75_0_HighCH20325-1747.5



Band4_15MHz_16QAM_75_0_LowCH20025-1717.5



Band4_20MHz_QPSK_100_0_LowCH20050-1720



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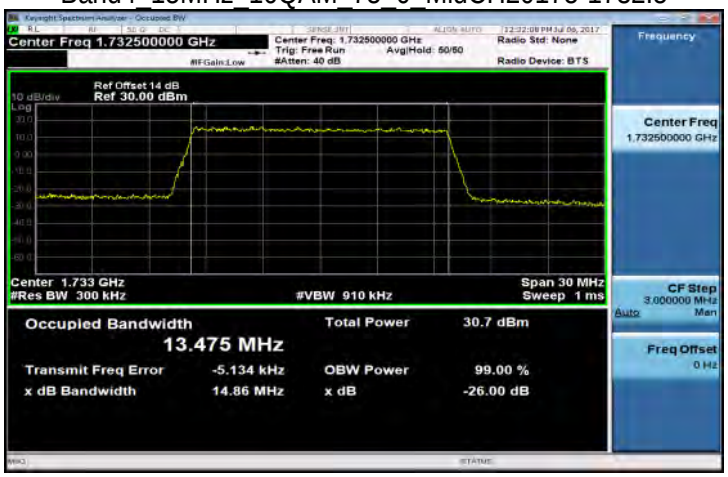
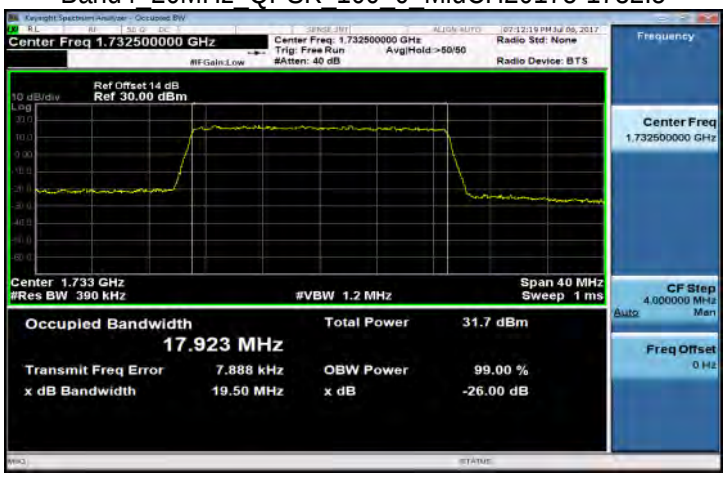
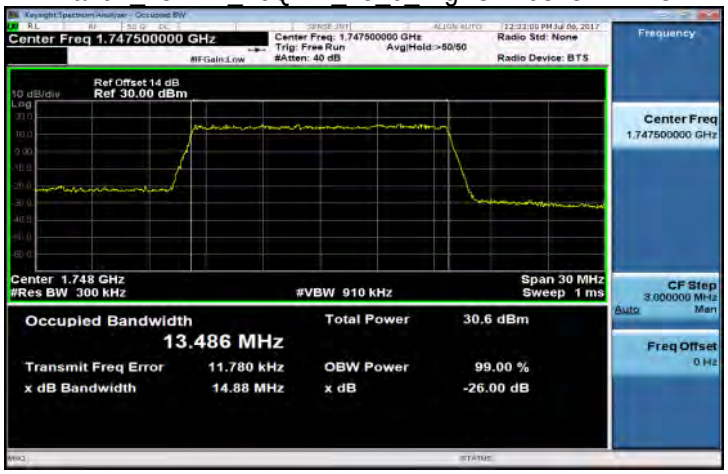


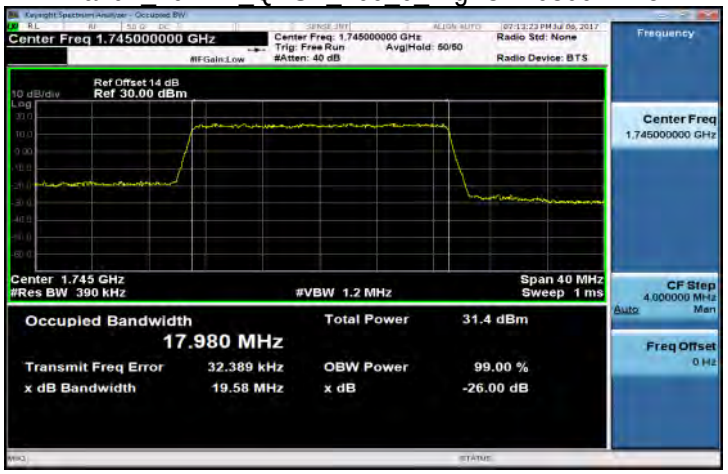
Band4_20MHz_QPSK_100_0_MidCH20175-1732.5



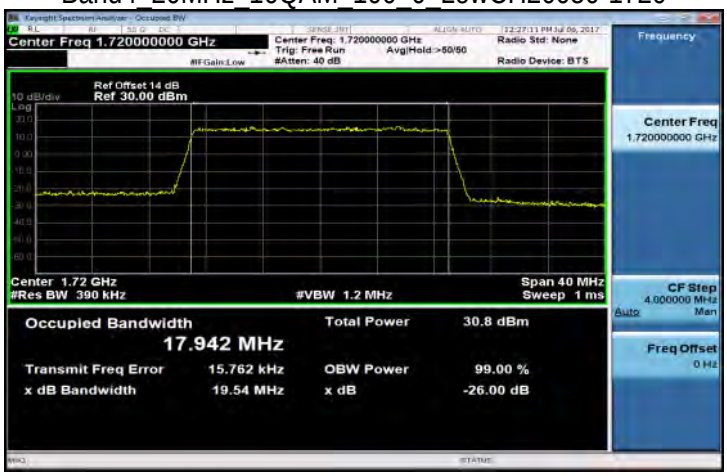
Band4_15MHz_16QAM_75_0_HighCH20325-1747.5



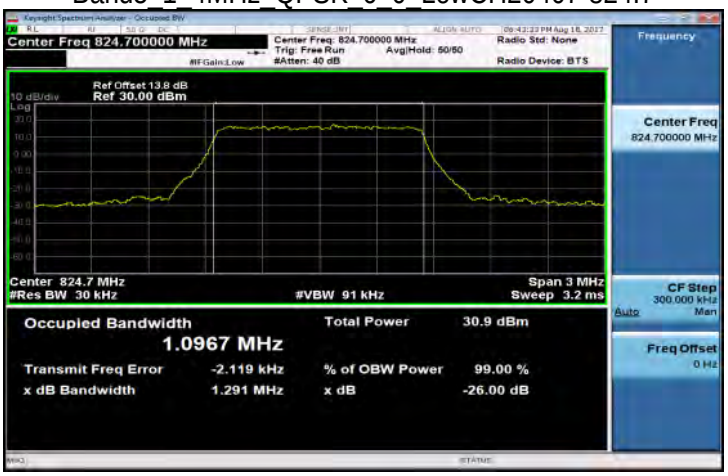
Band4_20MHz_QPSK_100_0_HighCH20300-1745



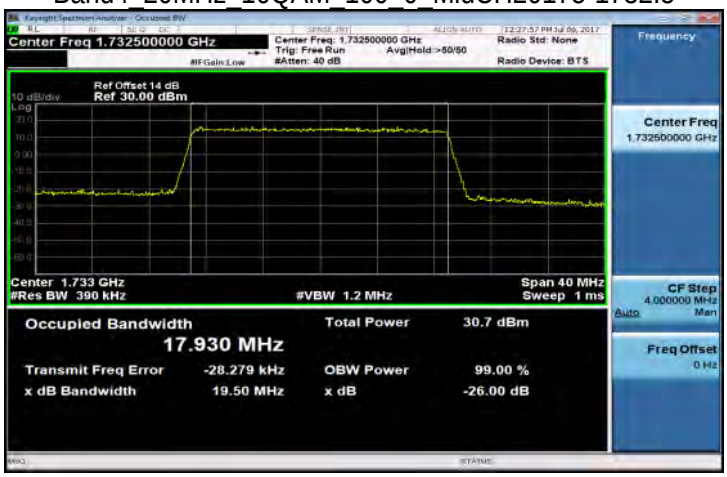
Band4_20MHz_16QAM_100_0_LowCH20050-1720



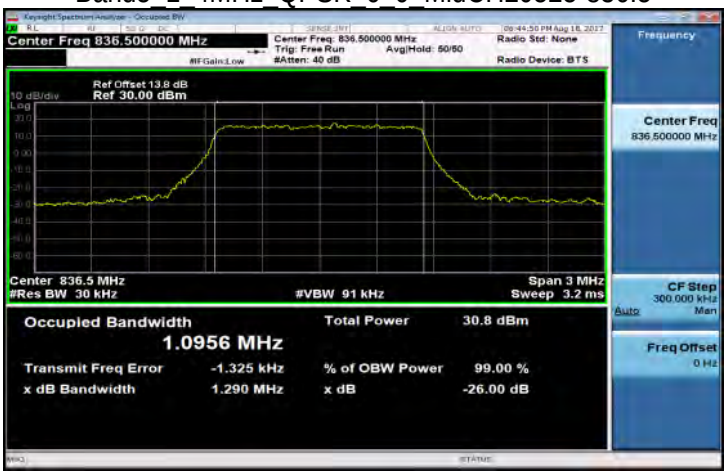
Band5_1_4MHz_QPSK_6_0_LowCH20407-824.7



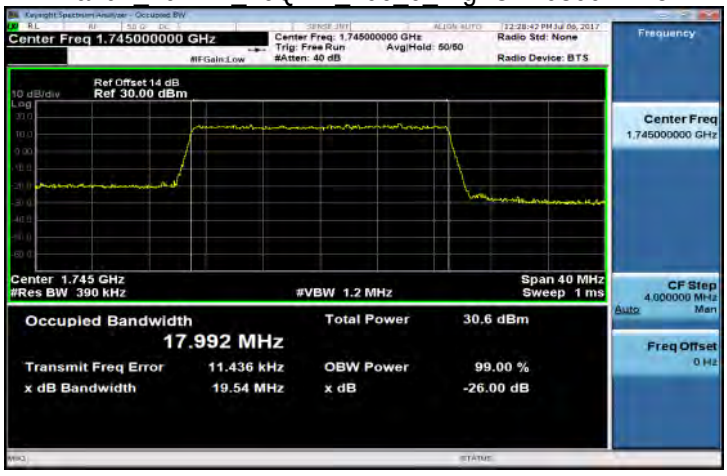
Band4_20MHz_16QAM_100_0_MidCH20175-1732.5



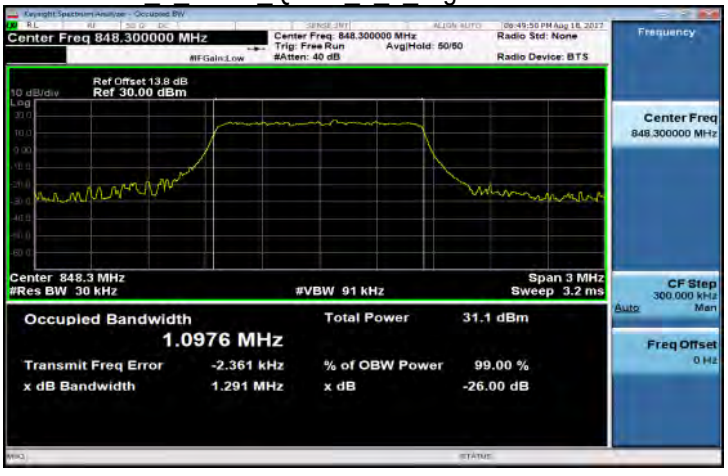
Band5_1_4MHz_QPSK_6_0_MidCH20525-836.5



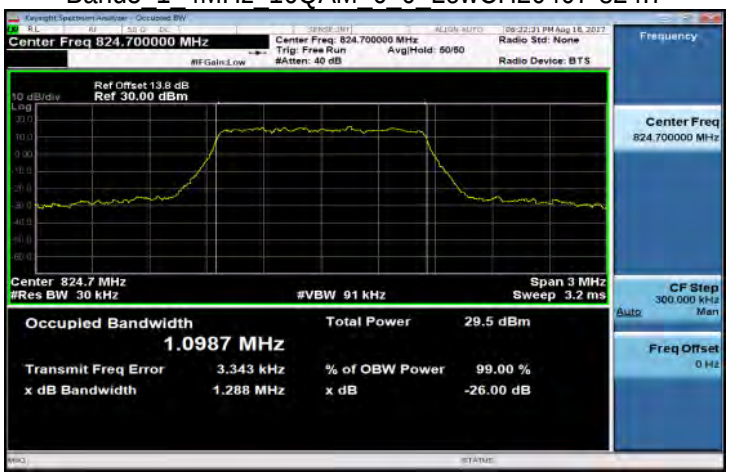
Band4_20MHz_16QAM_100_0_HighCH20300-1745



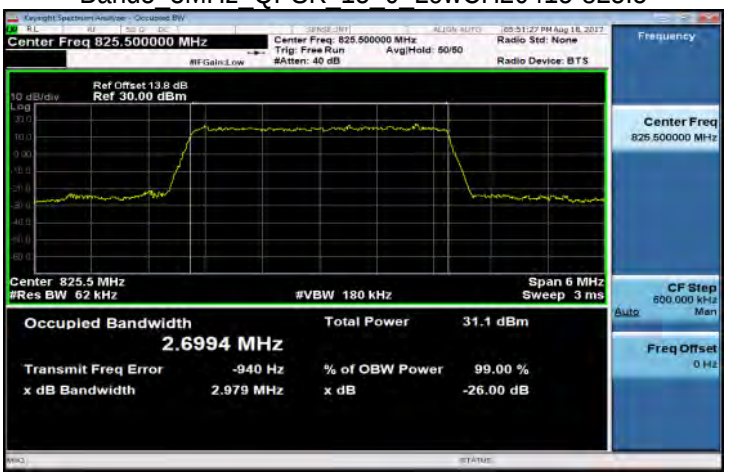
Band5_1_4MHz_QPSK_6_0_HighCH20643-848.3



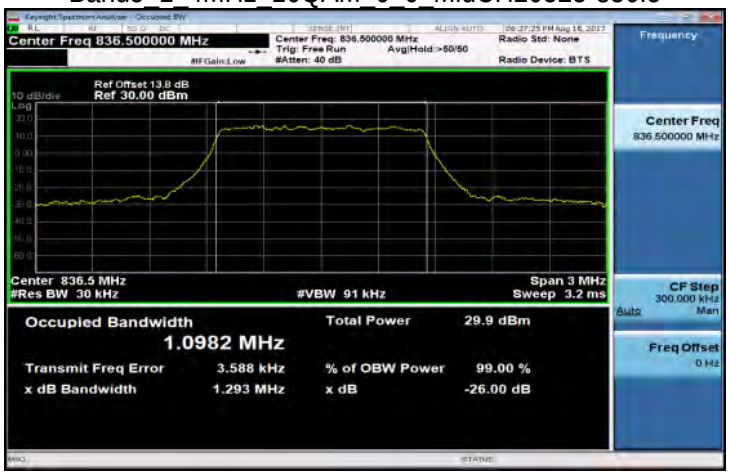
Band5_1_4MHz_16QAM_6_0_LowCH20407-824.7



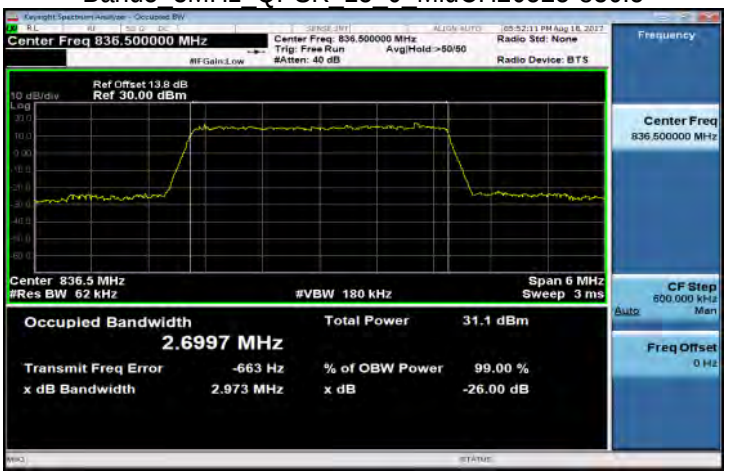
Band5_3MHz_QPSK_15_0_LowCH20415-825.5



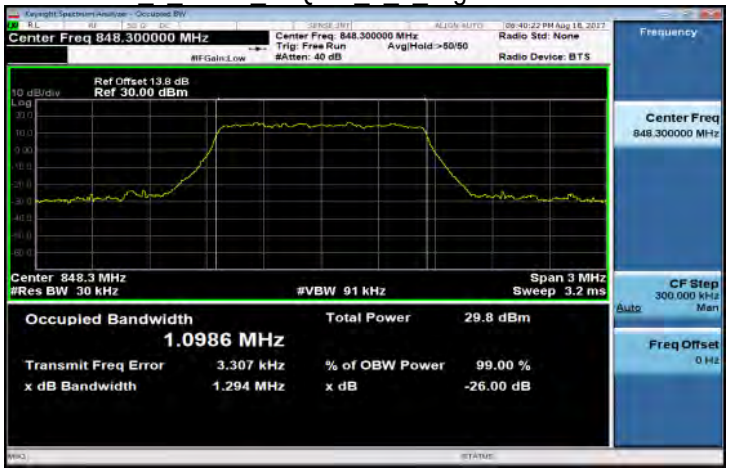
Band5_1_4MHz_16QAM_6_0_MidCH20525-836.5



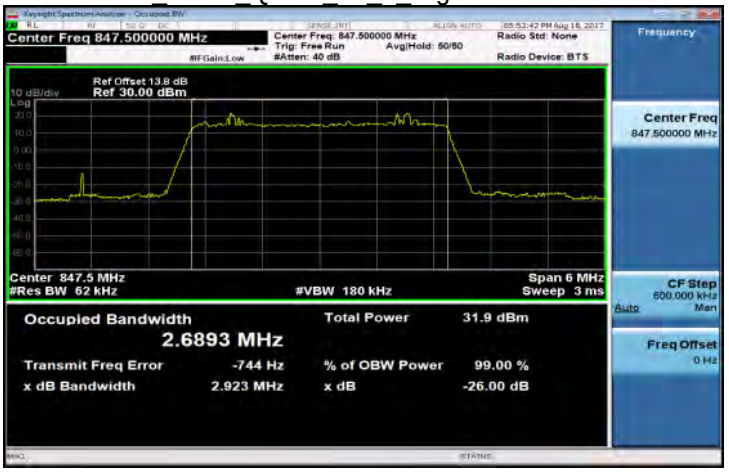
Band5_3MHz_QPSK_15_0_MidCH20525-836.5



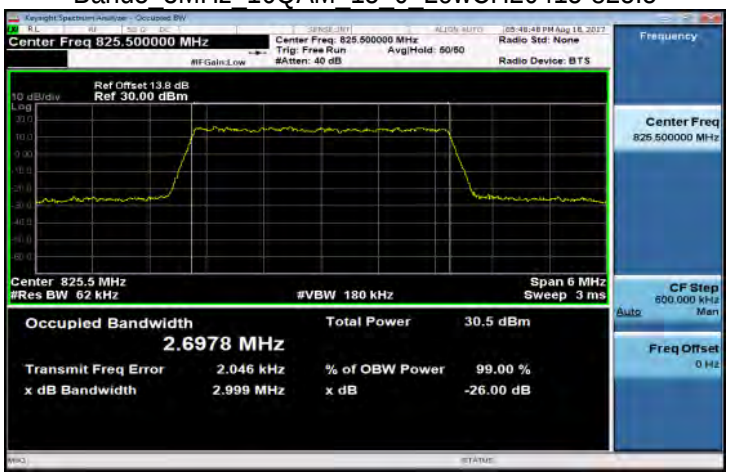
Band5_1_4MHz_16QAM_6_0_HighCH20643-848.3



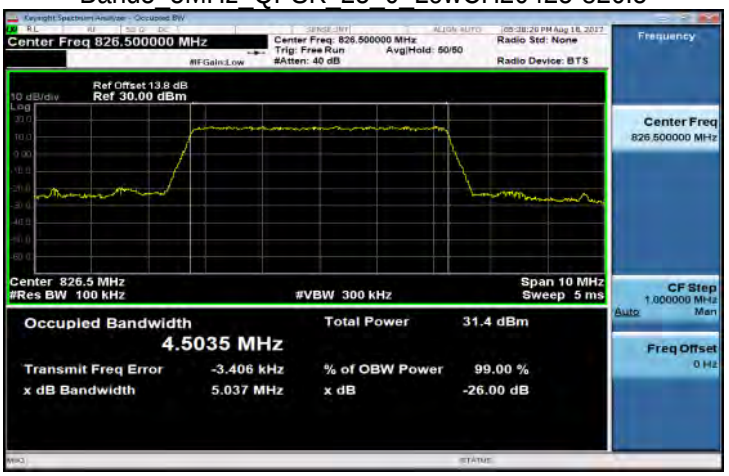
Band5_3MHz_QPSK_15_0_HighCH20635-847.5



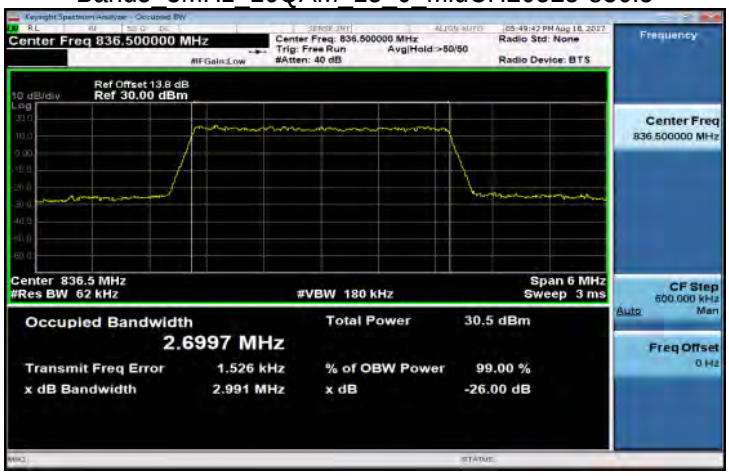
Band5_3MHz_16QAM_15_0_LowCH20415-825.5



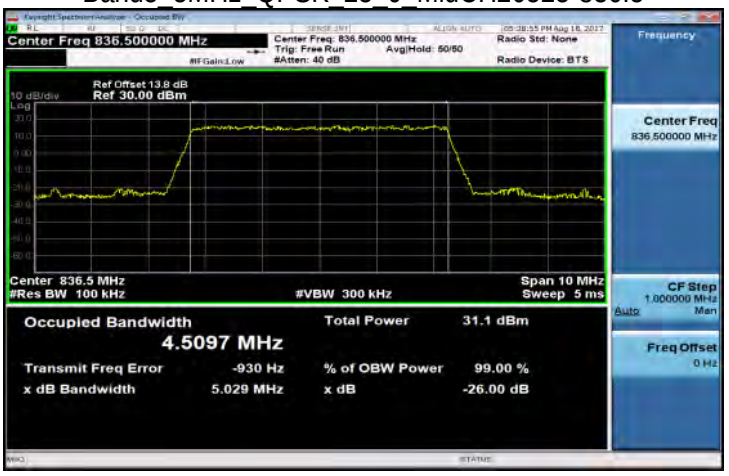
Band5_5MHz_QPSK_25_0_LowCH20425-826.5



Band5_3MHz_16QAM_15_0_MidCH20525-836.5



Band5_5MHz_QPSK_25_0_MidCH20525-836.5



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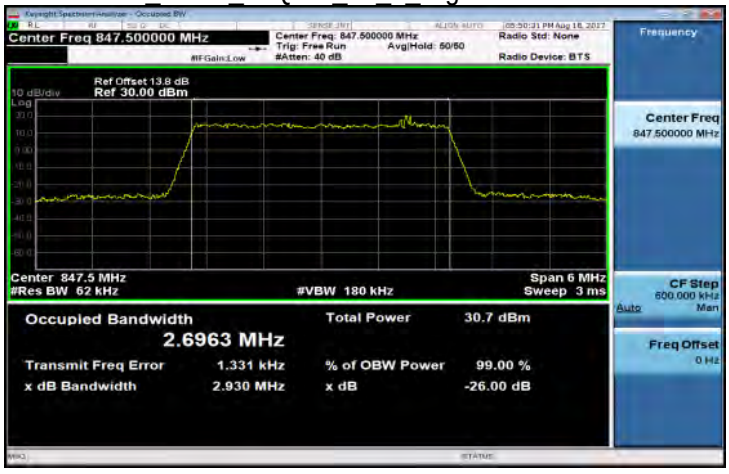

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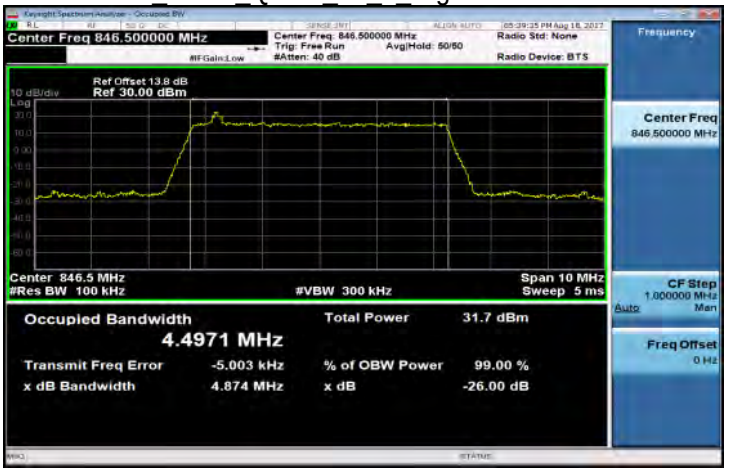

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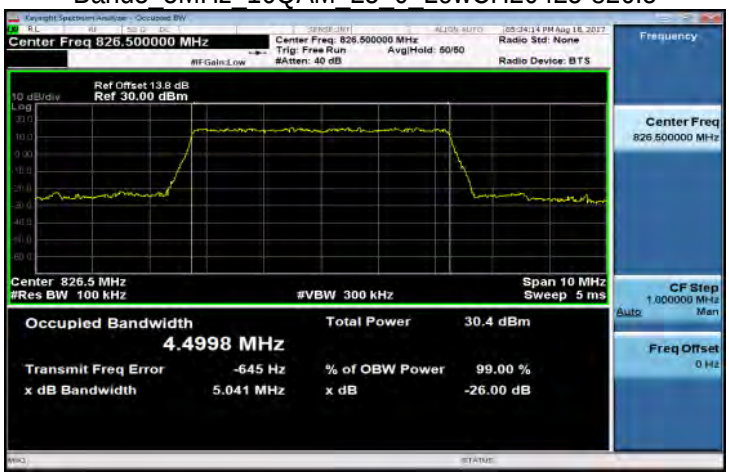
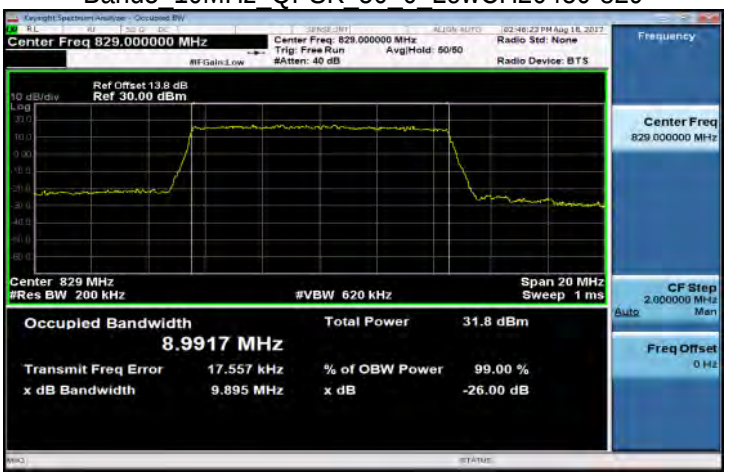
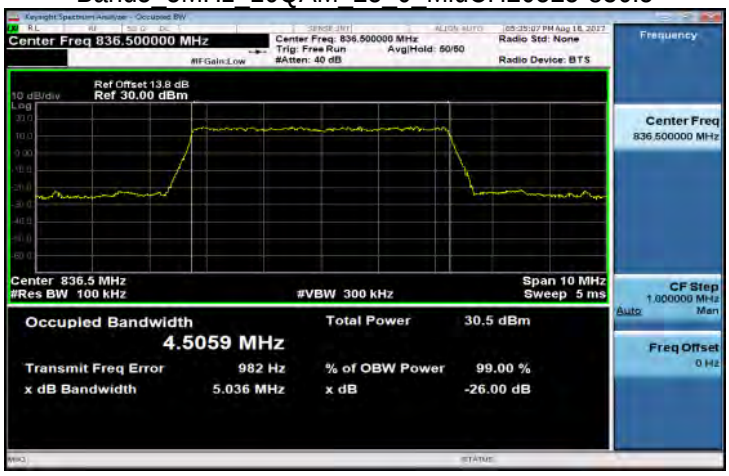


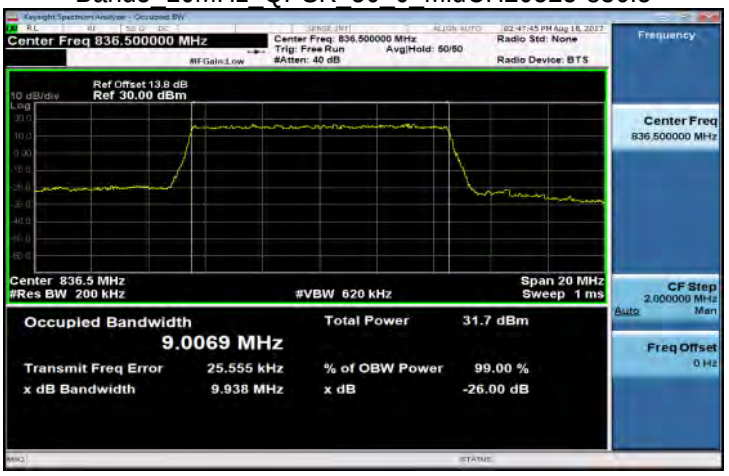
Band5_10MHz_QPSK_50_0_LowCH20450-829



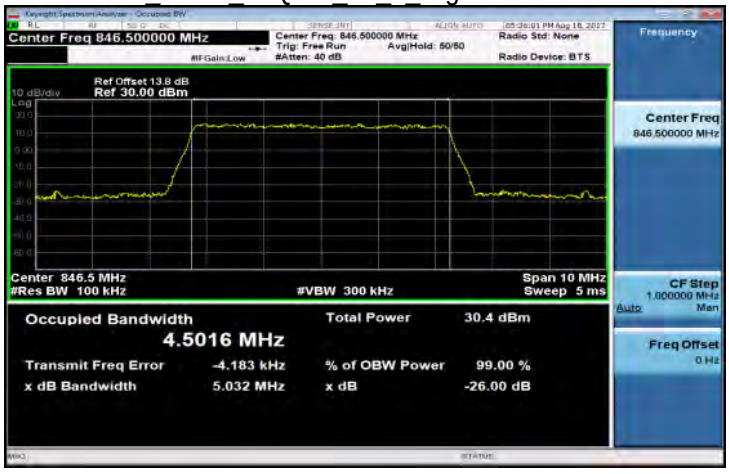
Band5_5MHz_16QAM_25_0_MidCH20525-836.5



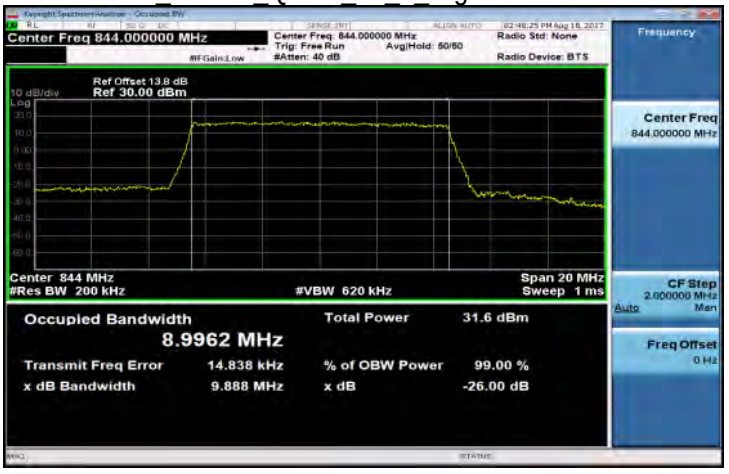
Band5_10MHz_QPSK_50_0_MidCH20525-836.5



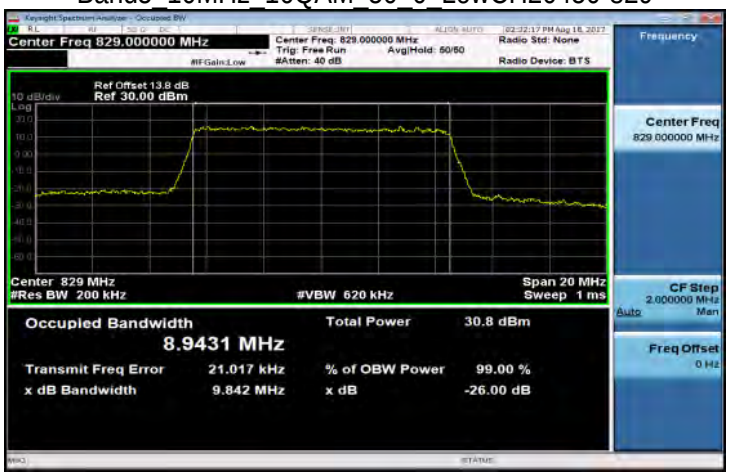
Band5_5MHz_16QAM_25_0_HighCH20625-846.5



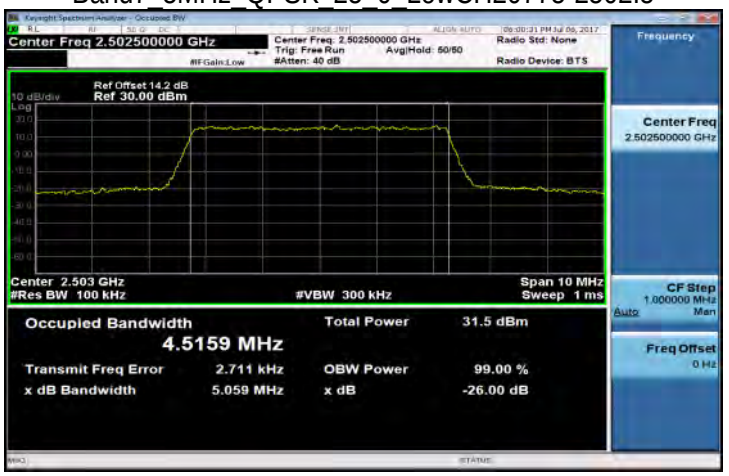
Band5_10MHz_QPSK_50_0_HighCH20600-844



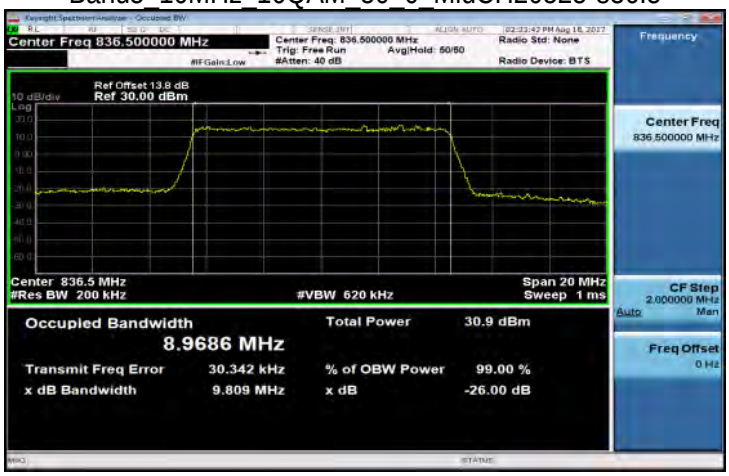
Band5_10MHz_16QAM_50_0_LowCH20450-829



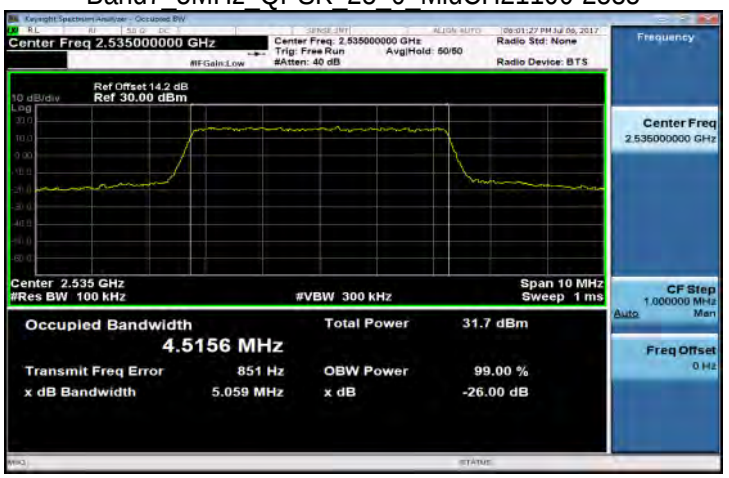
Band7_5MHz_QPSK_25_0_LowCH20775-2502.5



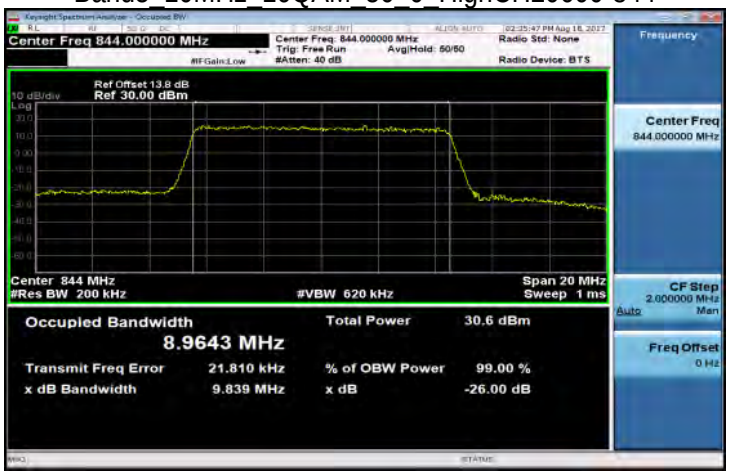
Band5_10MHz_16QAM_50_0_MidCH20525-836.5



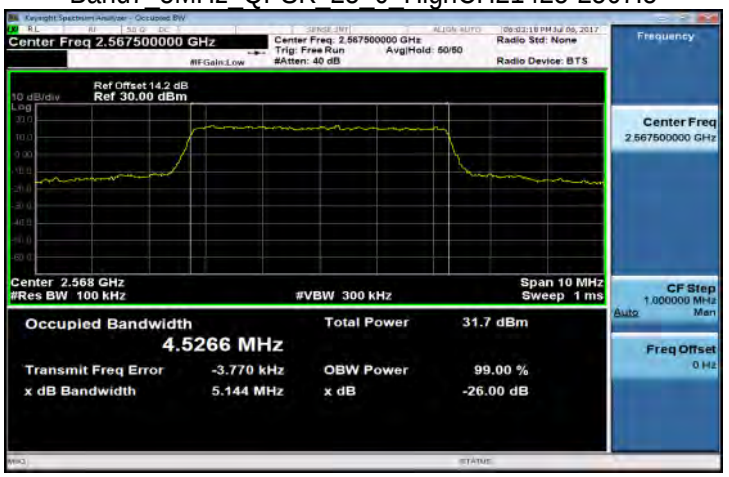
Band7_5MHz_QPSK_25_0_MidCH21100-2535



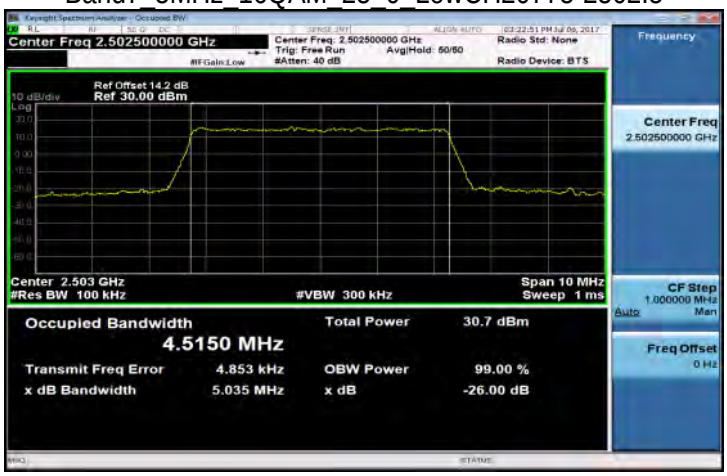
Band5_10MHz_16QAM_50_0_HighCH20600-844



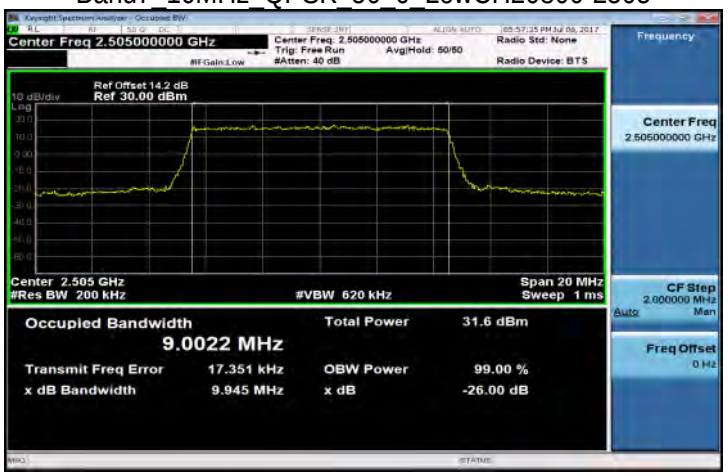
Band7_5MHz_QPSK_25_0_HighCH21425-2567.5



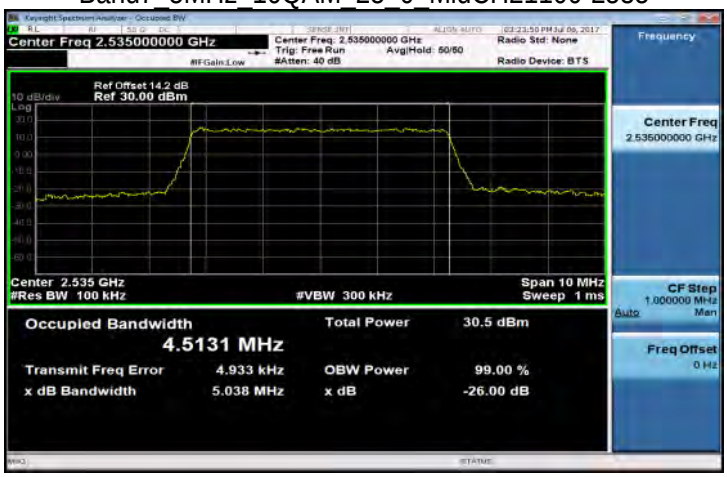
Band7_5MHz_16QAM_25_0_LowCH20775-2502.5



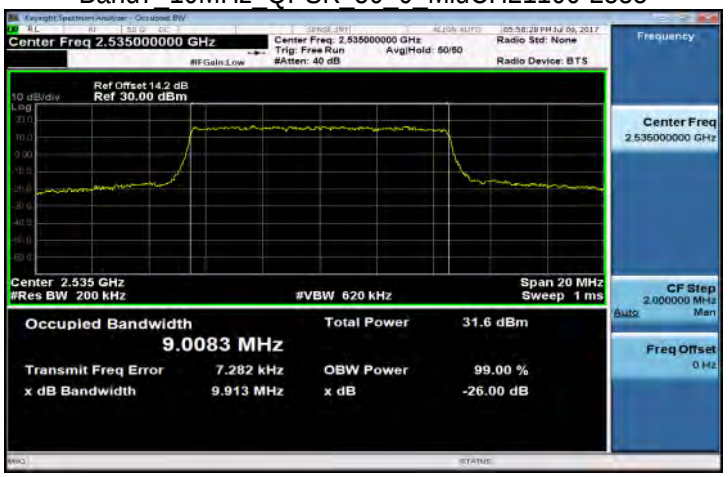
Band7_10MHz_QPSK_50_0_LowCH20800-2505



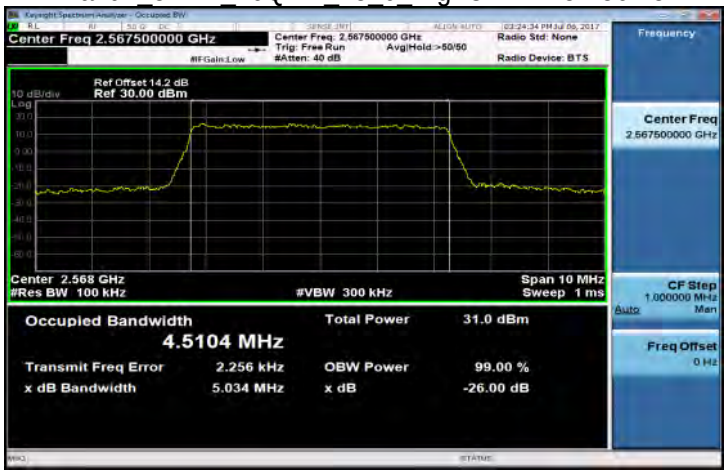
Band7_5MHz_16QAM_25_0_MidCH21100-2535



Band7_10MHz_QPSK_50_0_MidCH21100-2535



Band7_5MHz_16QAM_25_0_HighCH21425-2567.5



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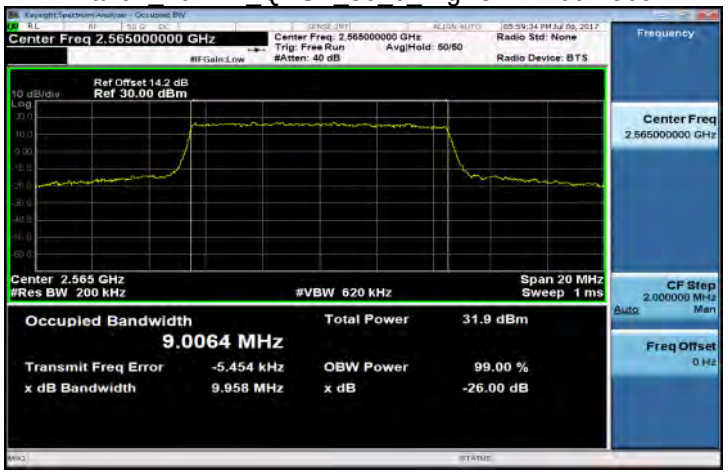
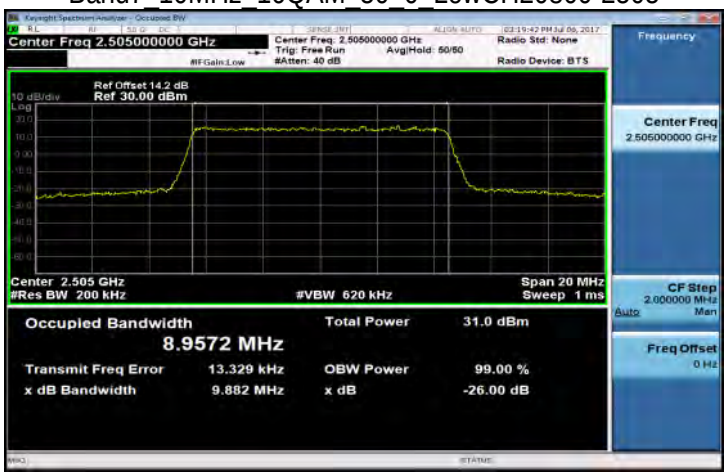
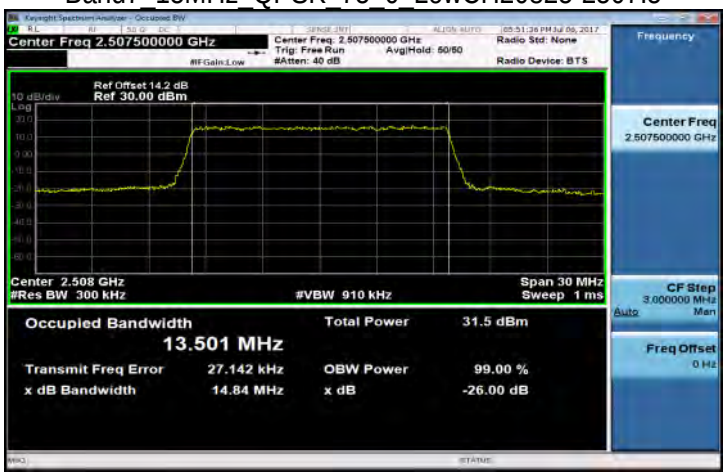


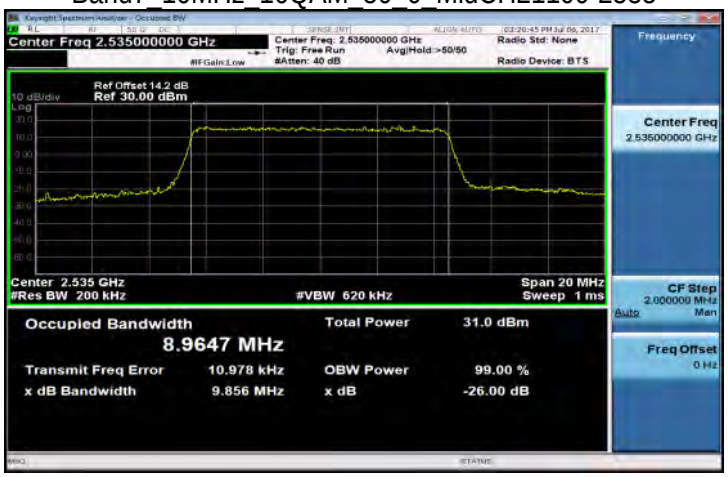
Band7_10MHz_16QAM_50_0_LowCH20800-2505



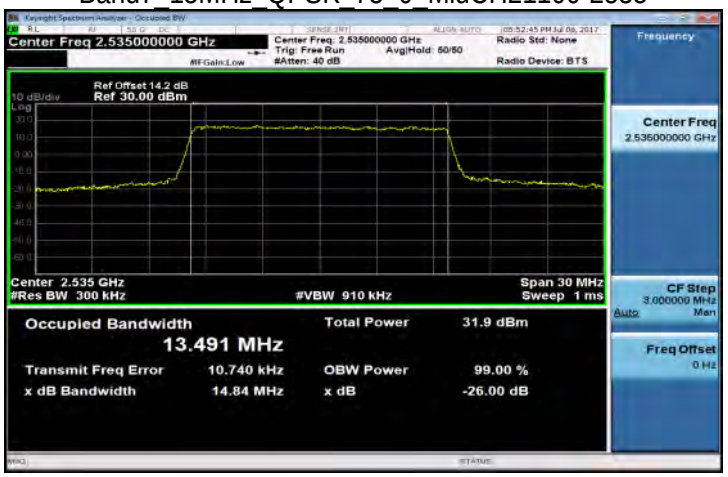
Band7_15MHz_QPSK_75_0_LowCH20825-2507.5



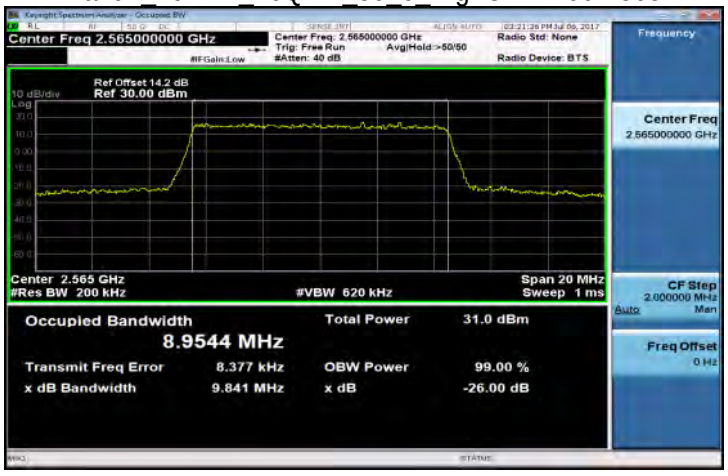
Band7_10MHz_16QAM_50_0_MidCH21100-2535



Band7_15MHz_QPSK_75_0_MidCH21100-2535



Band7_10MHz_16QAM_50_0_HighCH21400-2565



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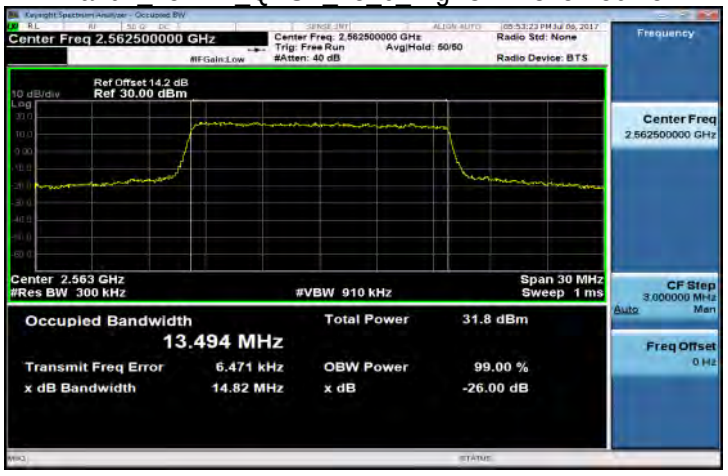
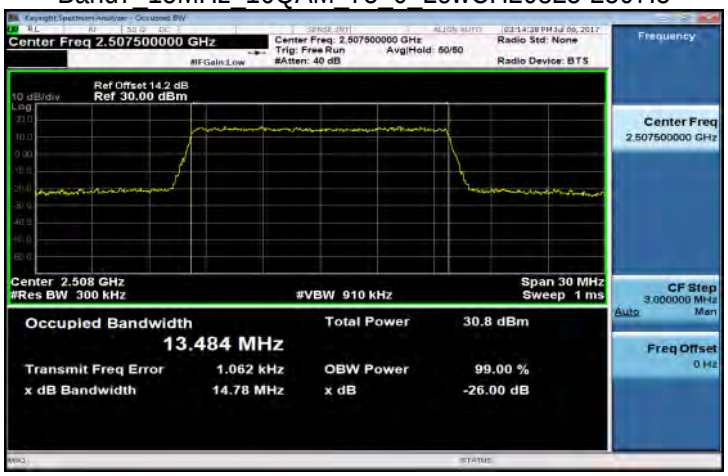
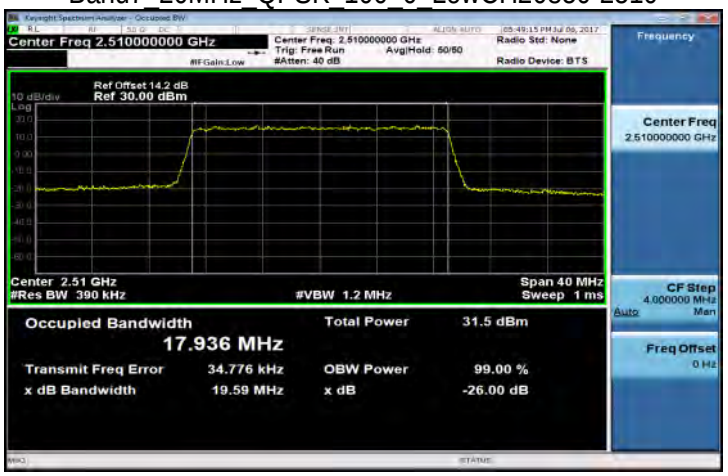


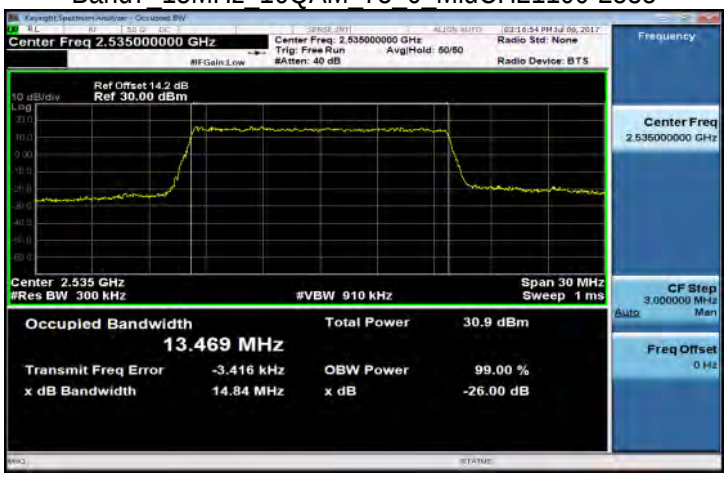
Band7_15MHz_16QAM_75_0_LowCH20825-2507.5



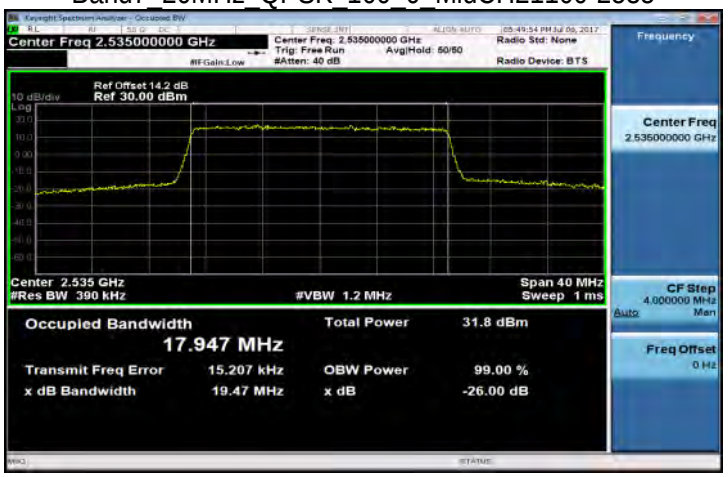
Band7_20MHz_QPSK_100_0_LowCH20850-2510



Band7_15MHz_16QAM_75_0_MidCH21100-2535



Band7_20MHz_QPSK_100_0_MidCH21100-2535



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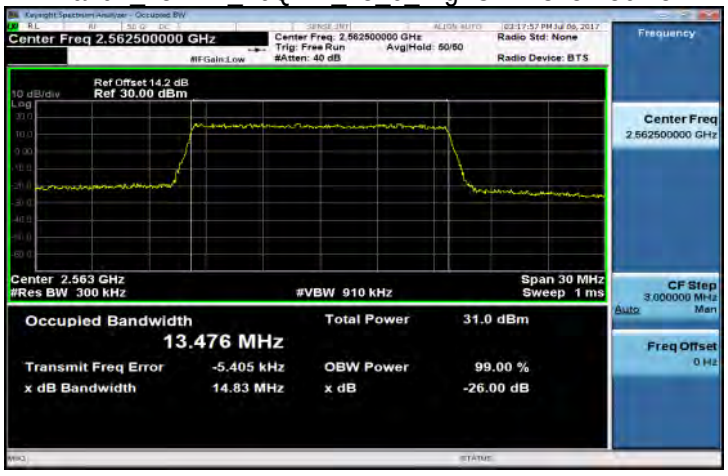
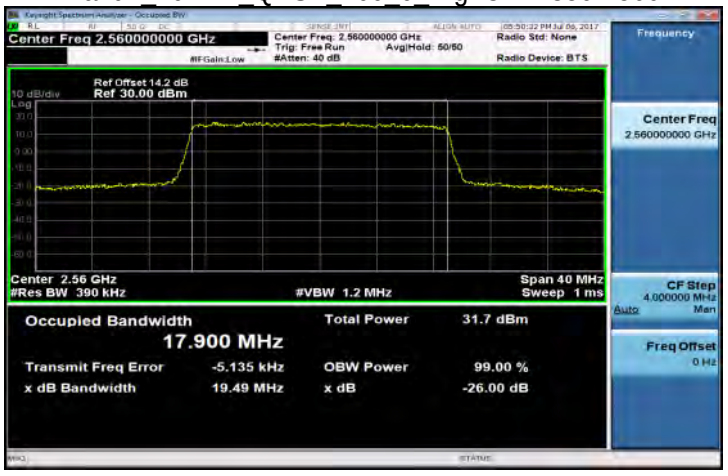
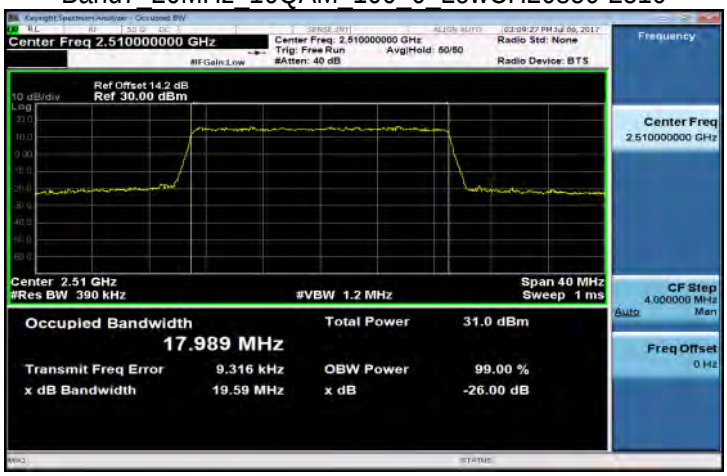


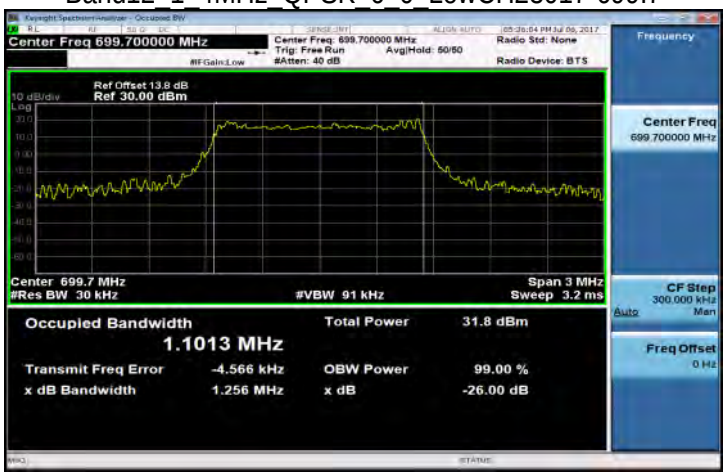
Band7_20MHz_QPSK_100_0_HighCH21350-2560



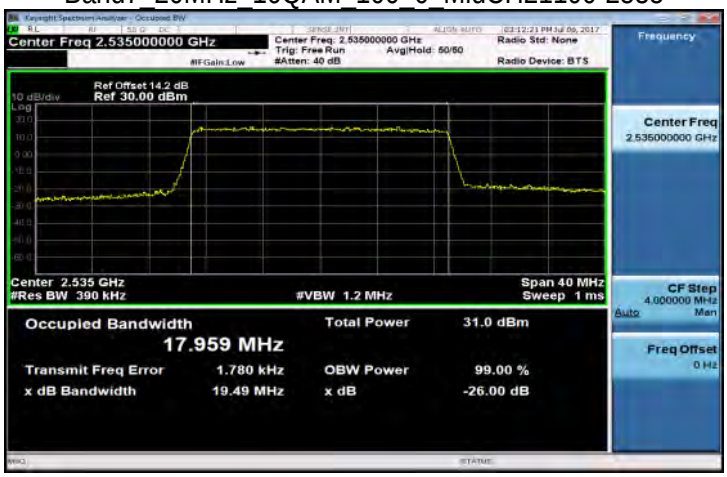
Band7_20MHz_16QAM_100_0_LowCH20850-2510



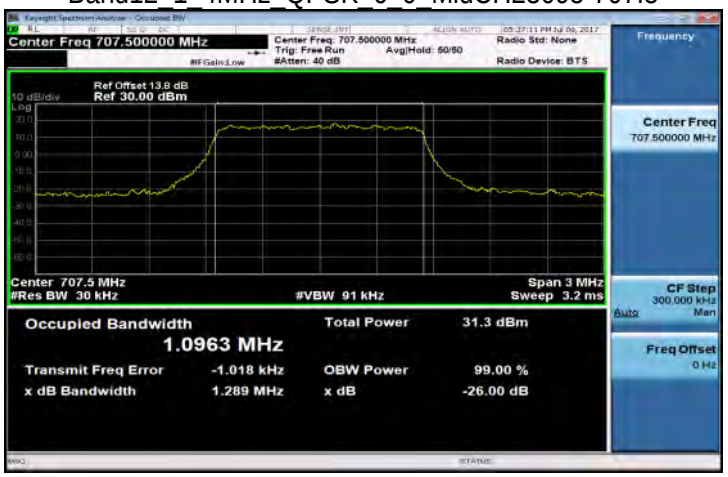
Band12_1_4MHz_QPSK_6_0_LowCH23017-699.7



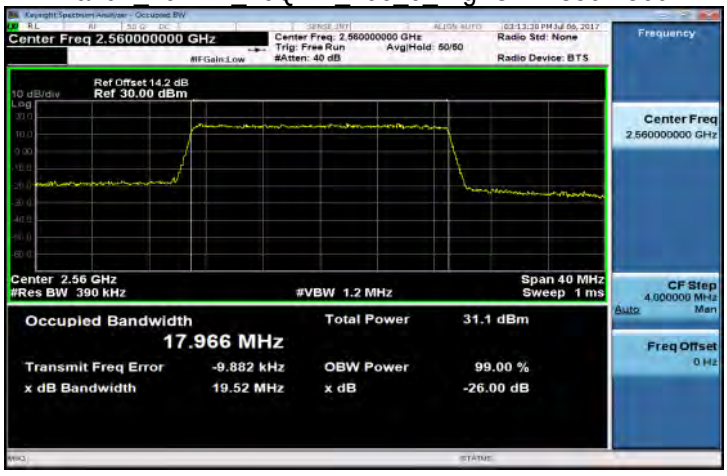
Band7_20MHz_16QAM_100_0_MidCH21100-2535



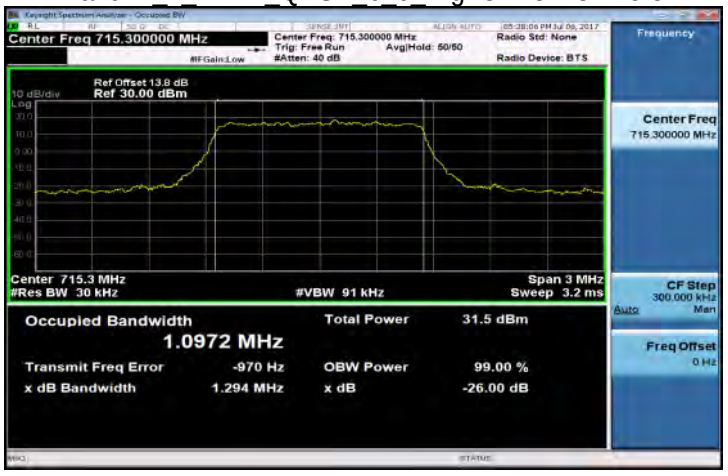
Band12_1_4MHz_QPSK_6_0_MidCH23095-707.5



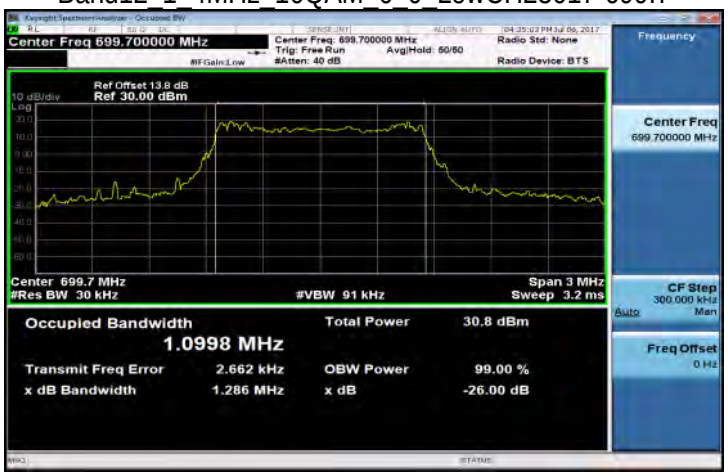
Band7_20MHz_16QAM_100_0_HighCH21350-2560



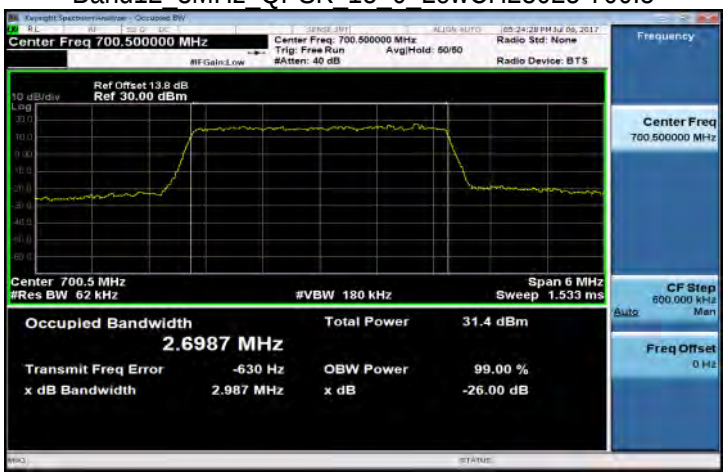
Band12_1_4MHz_QPSK_6_0_HighCH23173-715.3



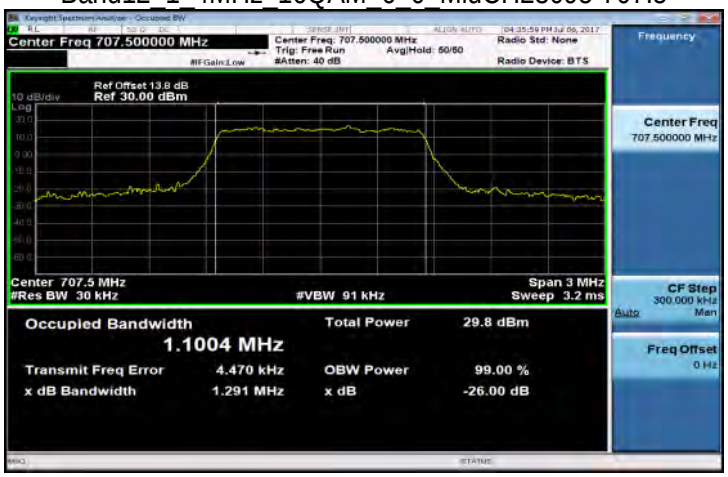
Band12_1_4MHz_16QAM_6_0_LowCH23017-699.7



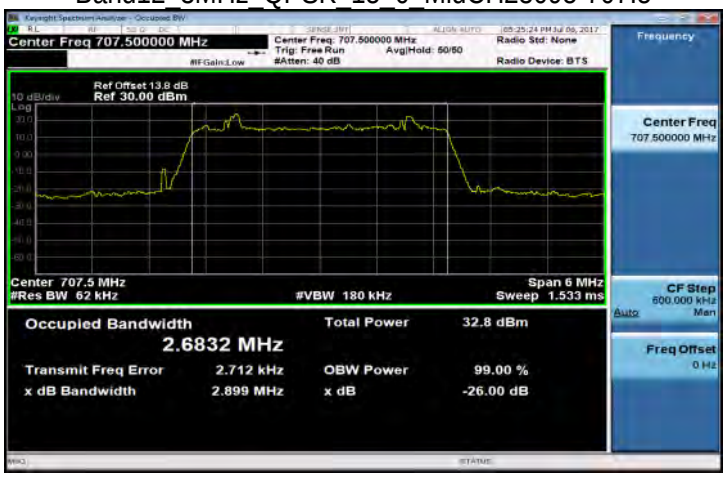
Band12_3MHz_QPSK_15_0_LowCH23025-700.5



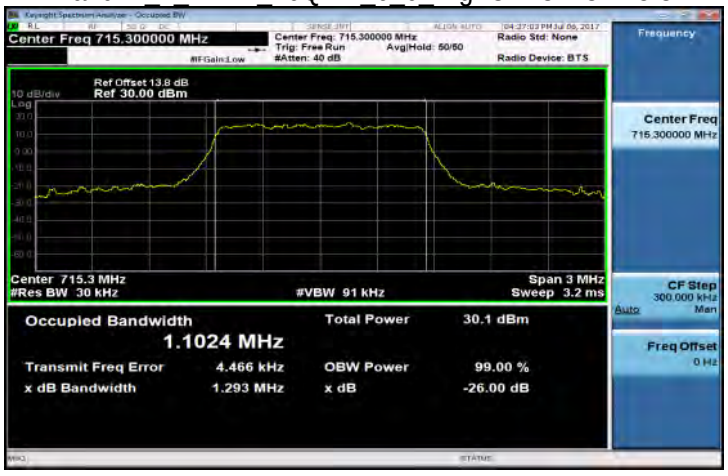
Band12_1_4MHz_16QAM_6_0_MidCH23095-707.5



Band12_3MHz_QPSK_15_0_MidCH23095-707.5



Band12_1_4MHz_16QAM_6_0_HighCH23173-715.3



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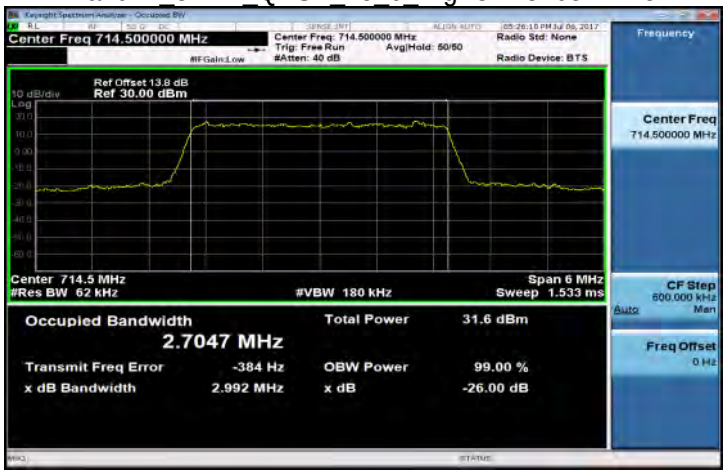
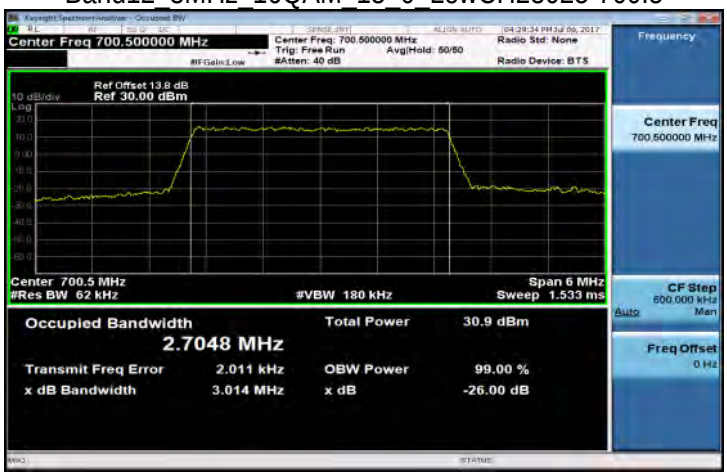
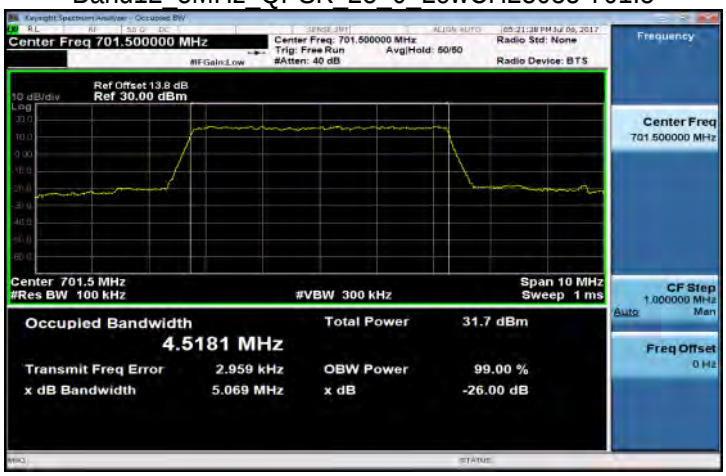


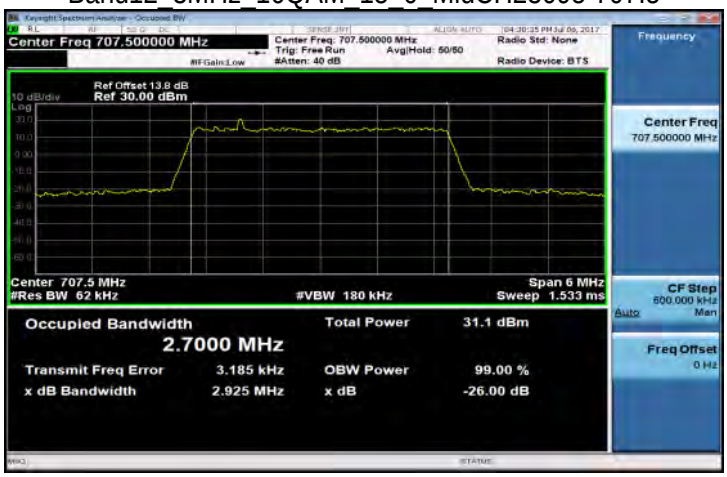
Band12_3MHz_16QAM_15_0_LowCH23025-700.5



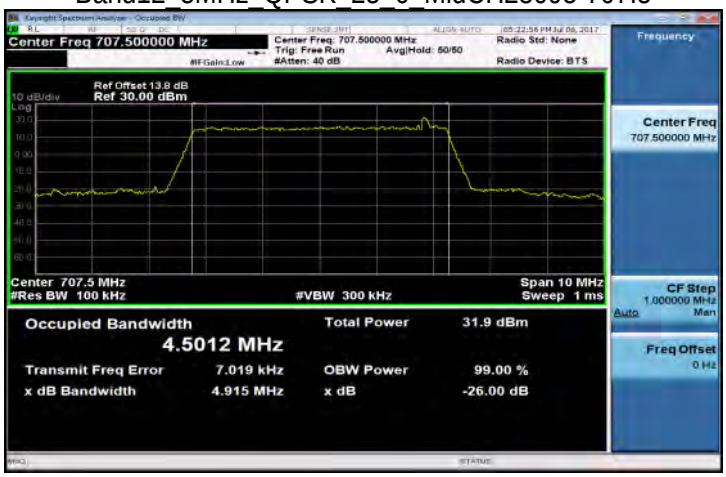
Band12_5MHz_QPSK_25_0_LowCH23035-701.5



Band12_3MHz_16QAM_15_0_MidCH23095-707.5



Band12_5MHz_QPSK_25_0_MidCH23095-707.5



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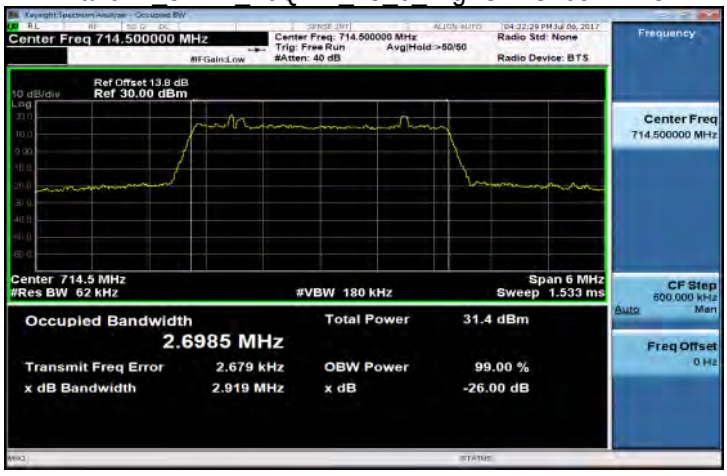

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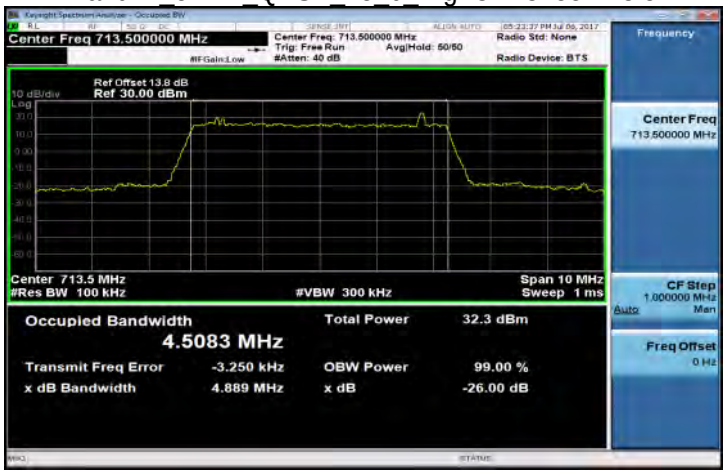
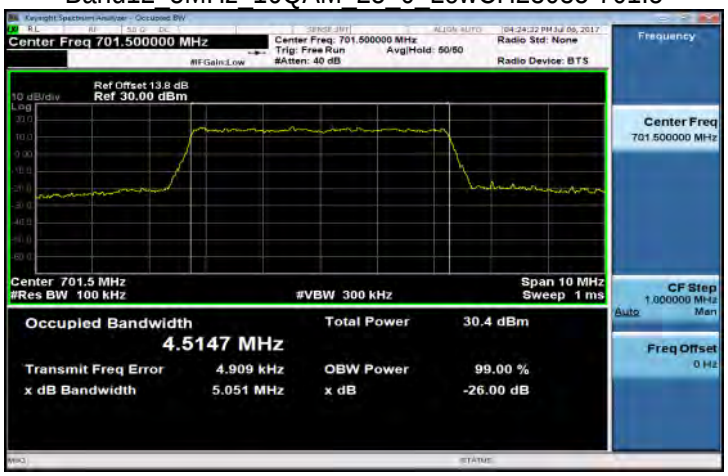
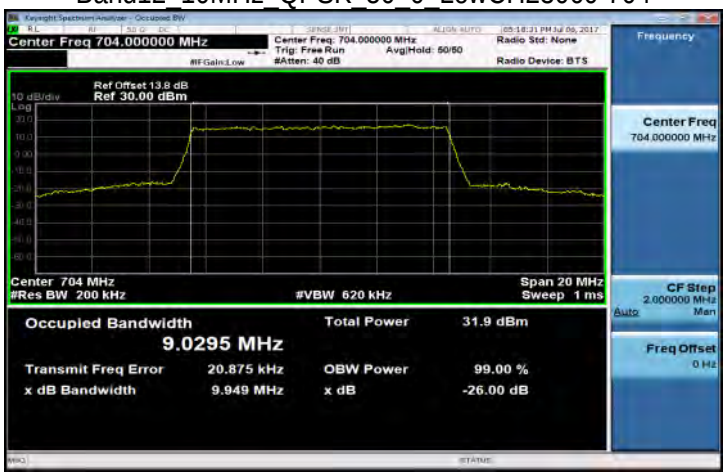


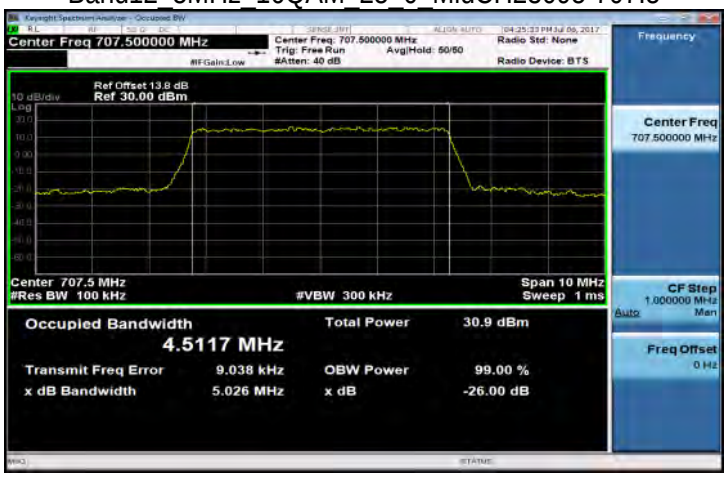
Band12_5MHz_16QAM_25_0_LowCH23035-701.5



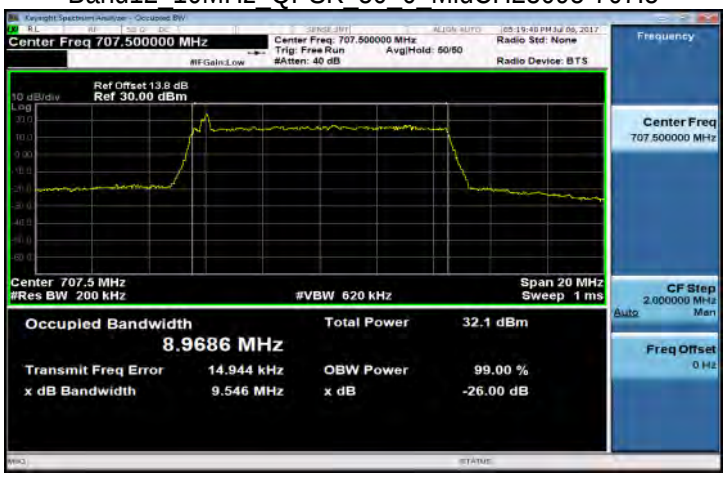
Band12_10MHz_QPSK_50_0_LowCH23060-704



Band12_5MHz_16QAM_25_0_MidCH23095-707.5



Band12_10MHz_QPSK_50_0_MidCH23095-707.5



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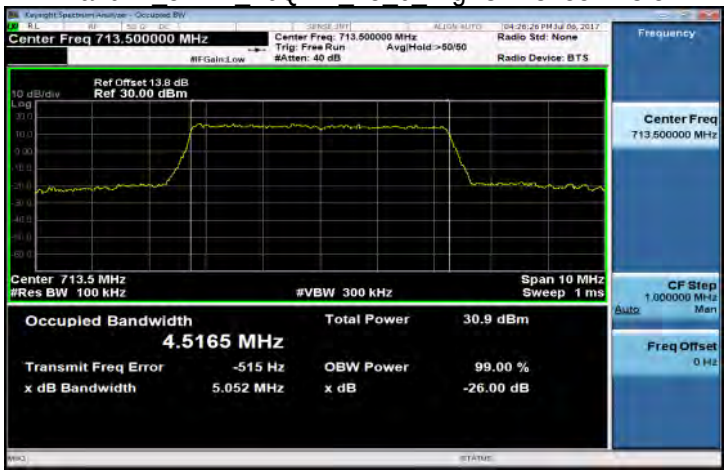
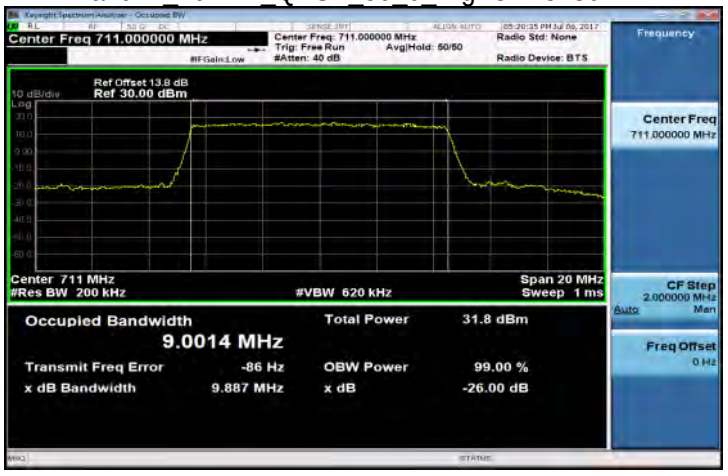
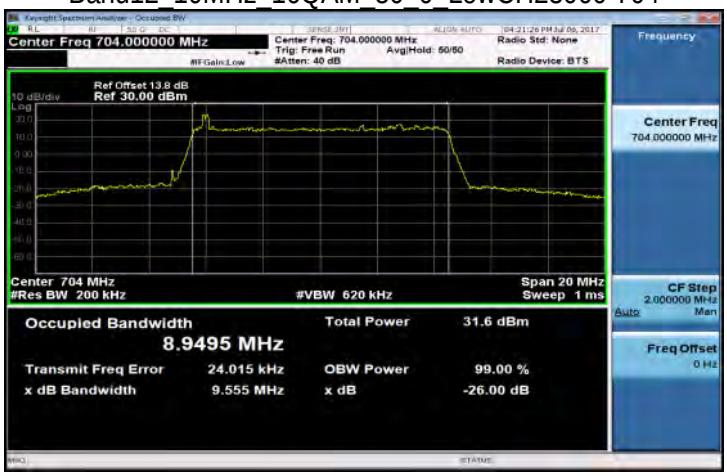


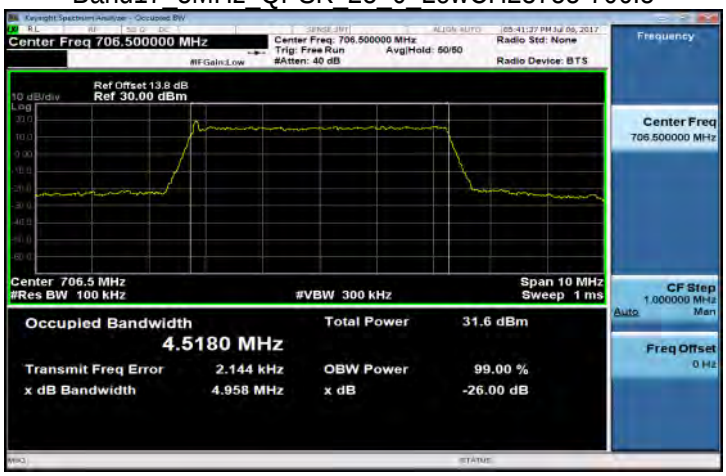
Band12_10MHz_QPSK_50_0_HighCH23130-711



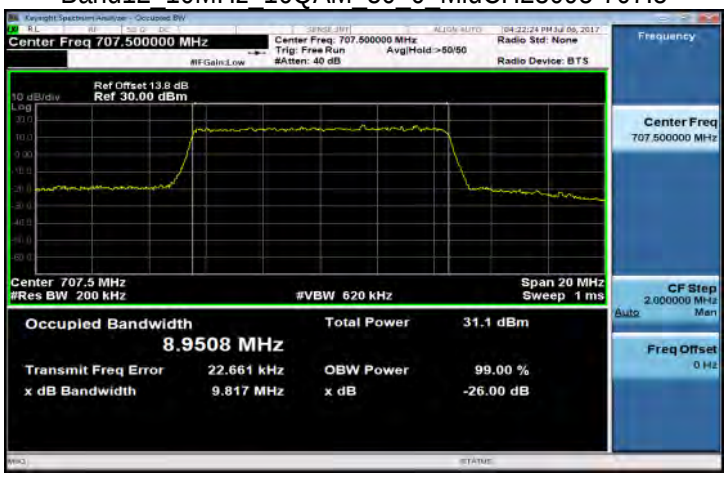
Band12_10MHz_16QAM_50_0_LowCH23060-704



Band17_5MHz_QPSK_25_0_LowCH23755-706.5



Band12_10MHz_16QAM_50_0_MidCH23095-707.5



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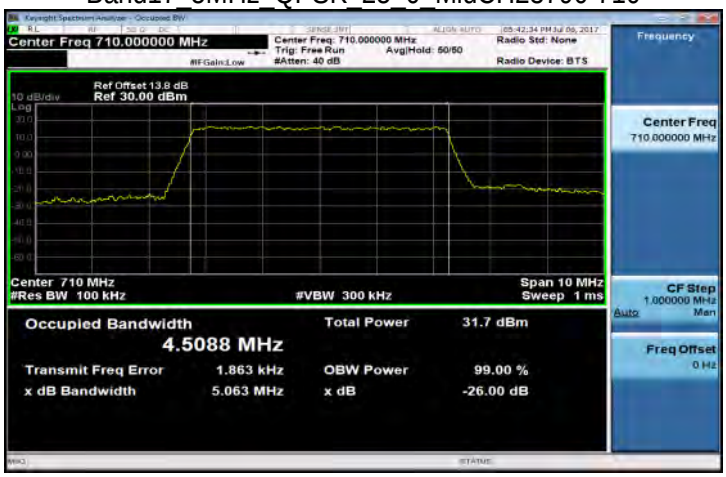
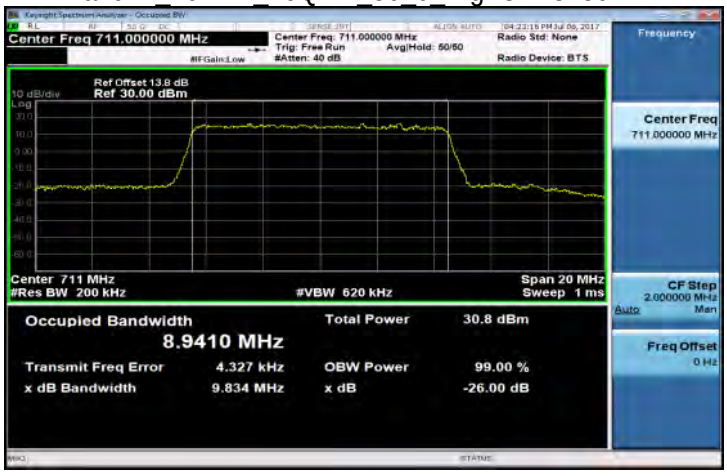


Band12_10MHz_16QAM_50_0_HighCH23130-711



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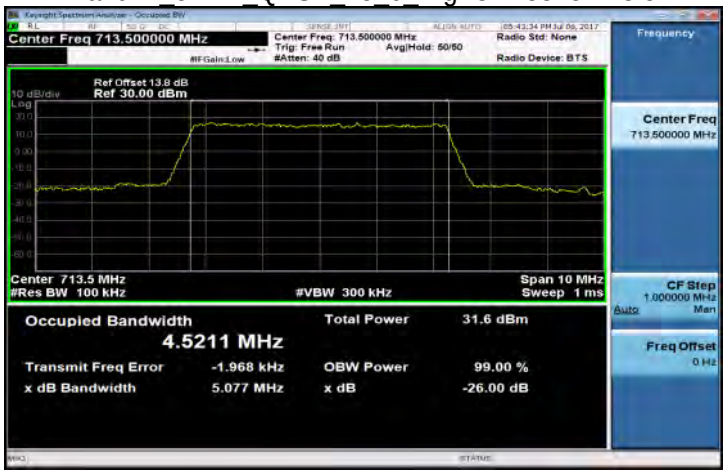
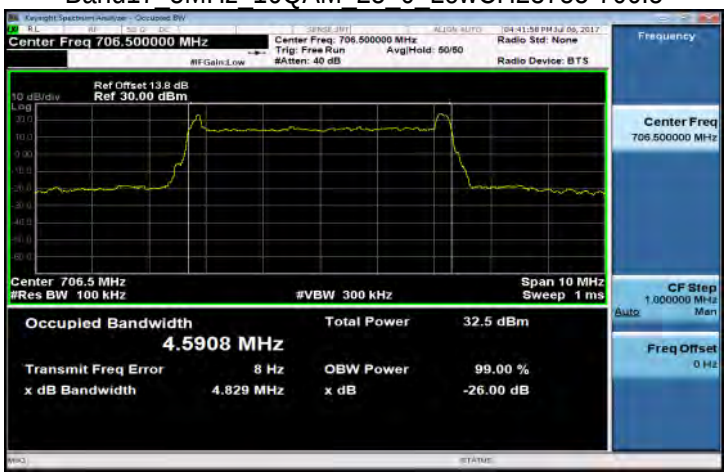


Band17_5MHz_16QAM_25_0_LowCH23755-706.5



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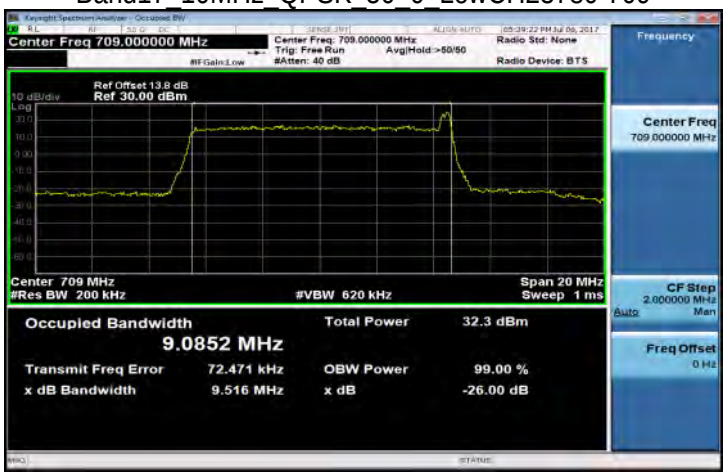

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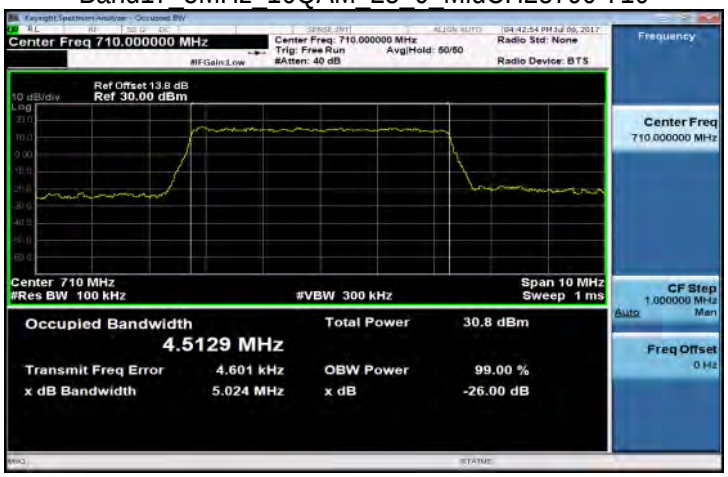

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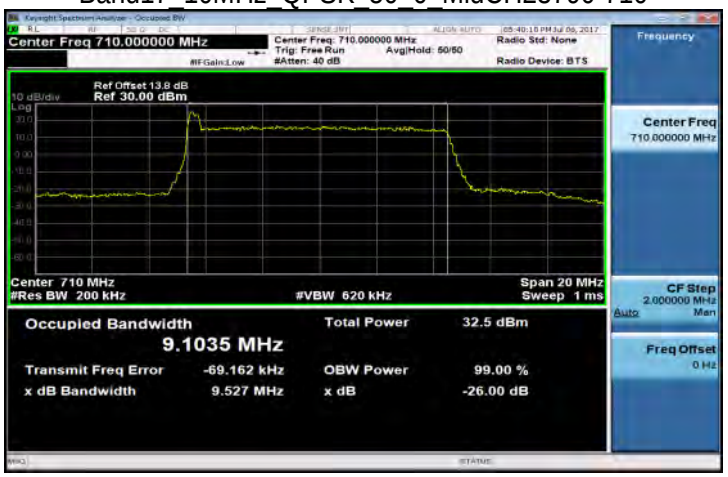

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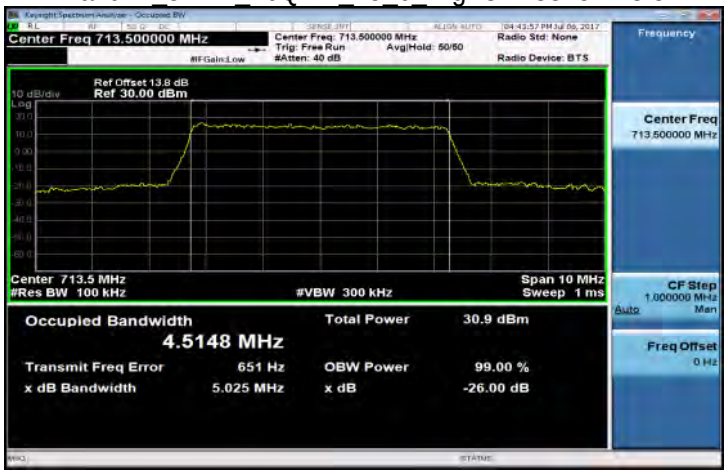

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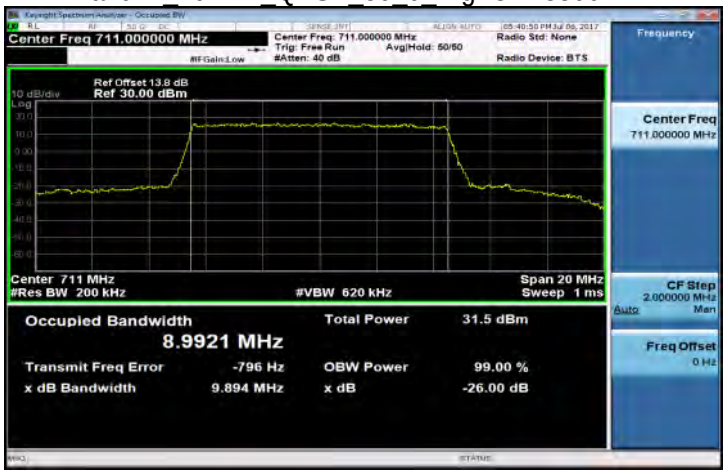

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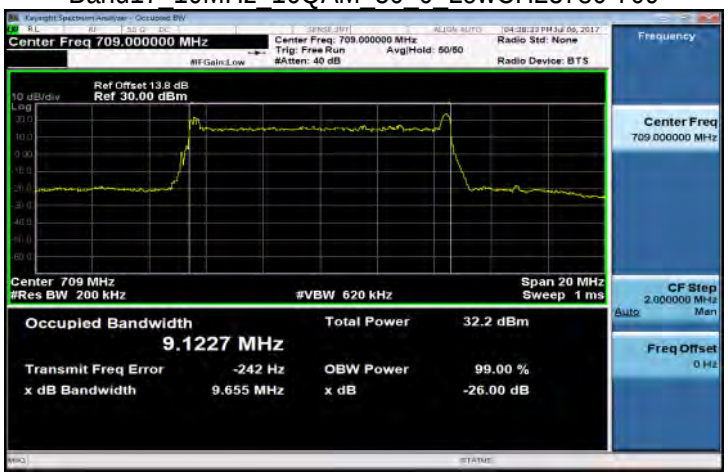
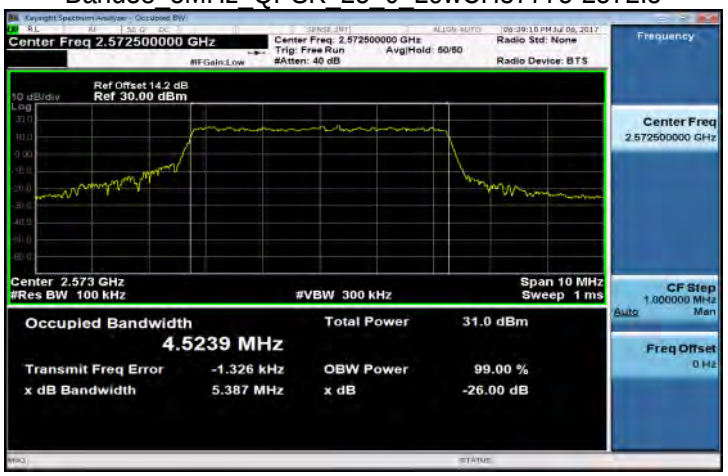


Band38_5MHz_QPSK_25_0_LowCH37775-2572.5



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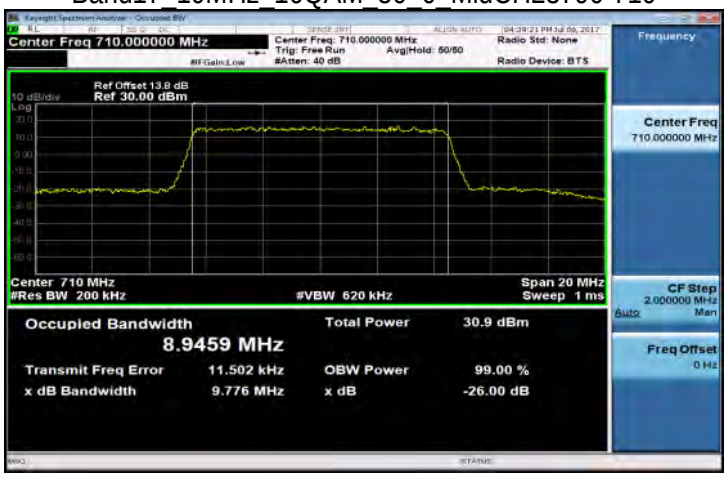

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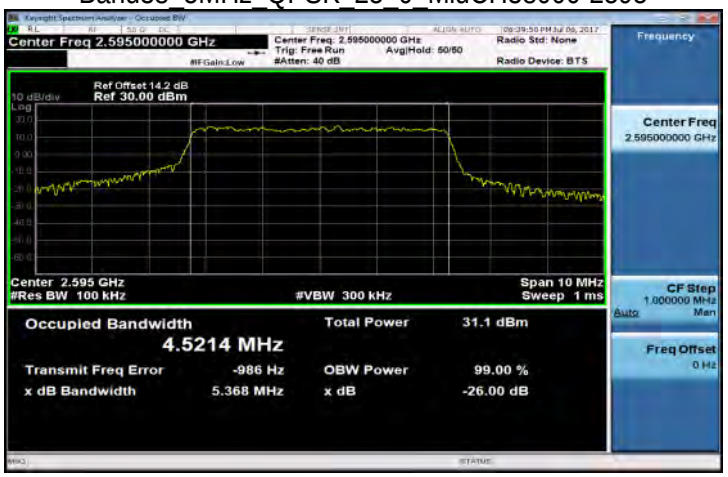
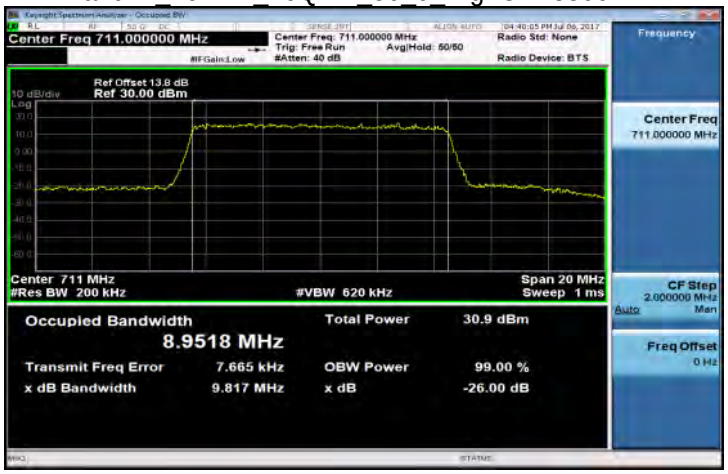
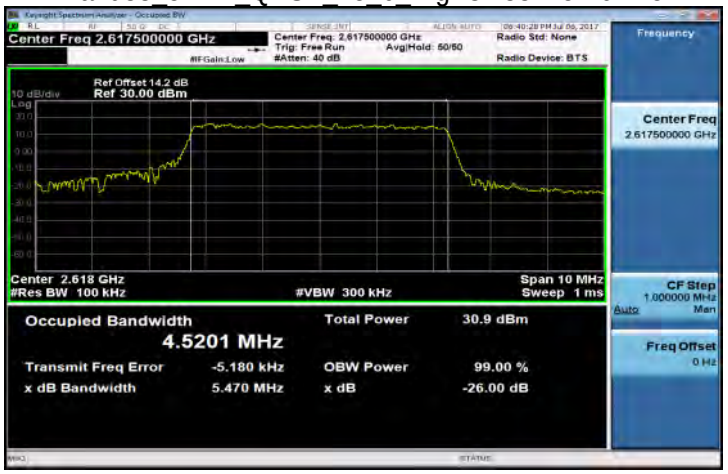


Band17_10MHz_16QAM_50_0_HighCH23800-711



Band38_5MHz_QPSK_25_0_HighCH38225-2617.5



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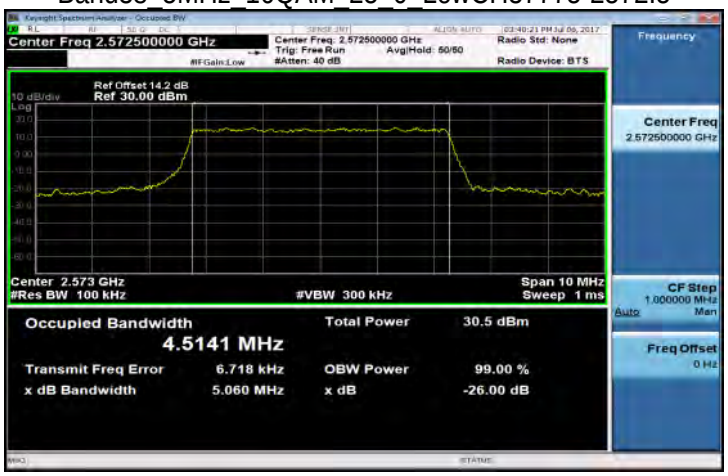
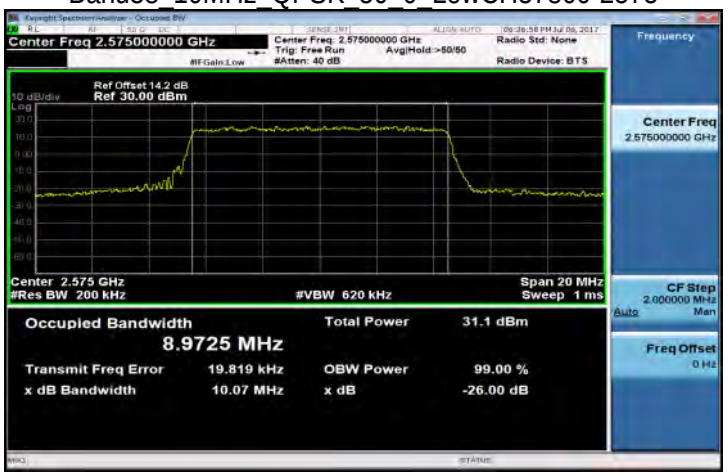
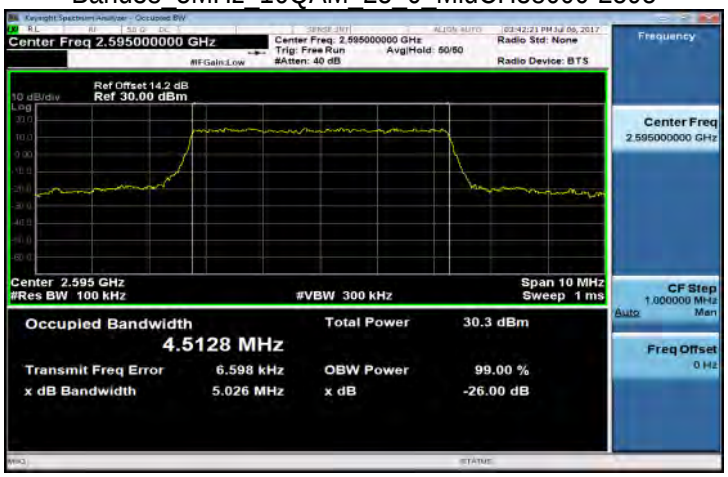


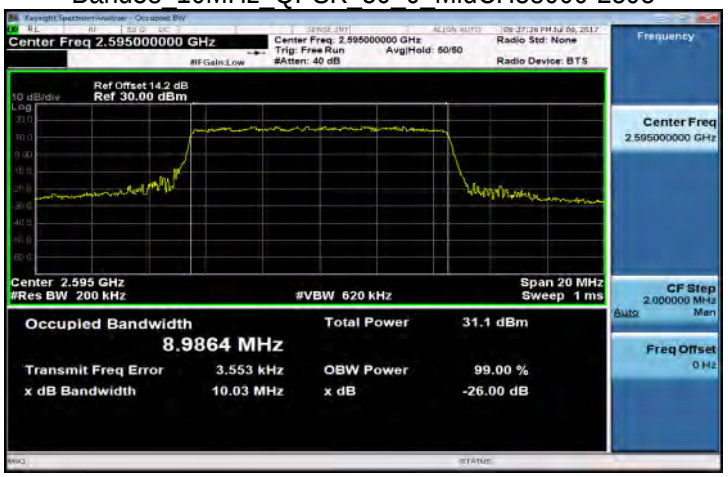
Band38_10MHz_QPSK_50_0_LowCH37800-2575



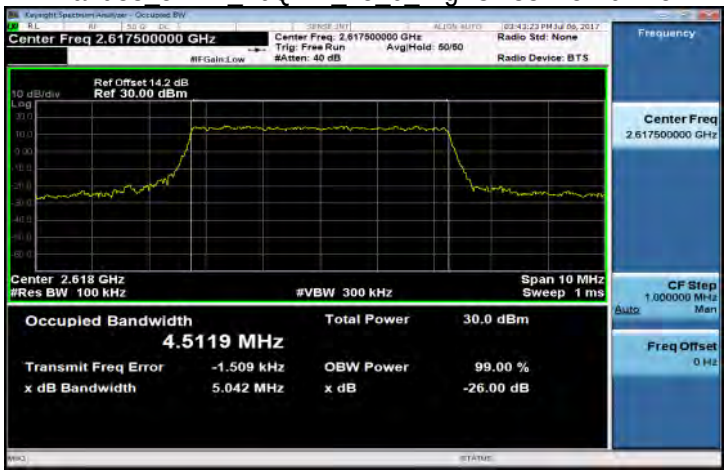
Band38_5MHz_16QAM_25_0_MidCH38000-2595



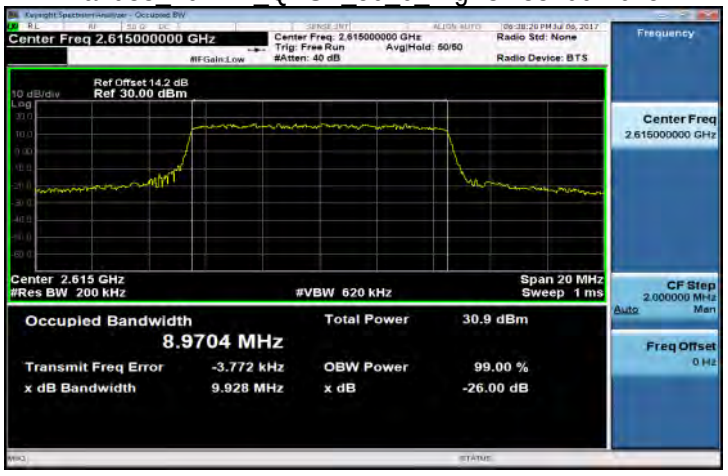
Band38_10MHz_QPSK_50_0_MidCH38000-2595



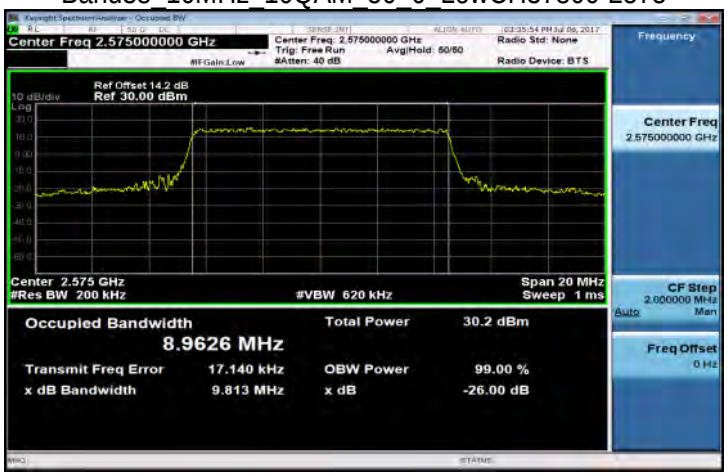
Band38_5MHz_16QAM_25_0_HighCH38225-2617.5



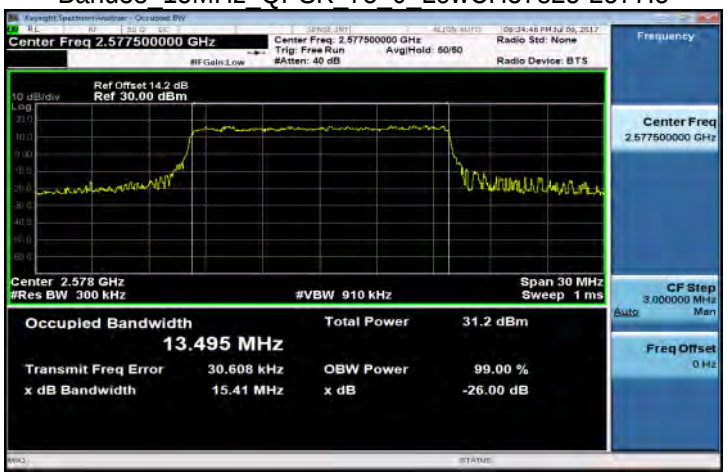
Band38_10MHz_QPSK_50_0_HighCH38200-2615



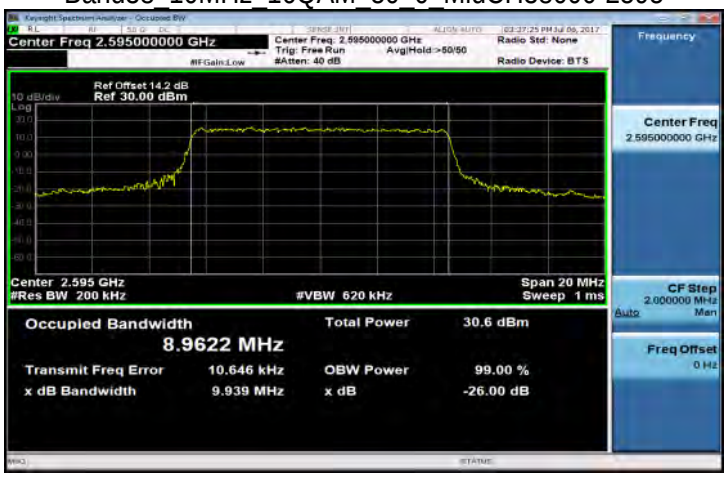
Band38_10MHz_16QAM_50_0_LowCH37800-2575



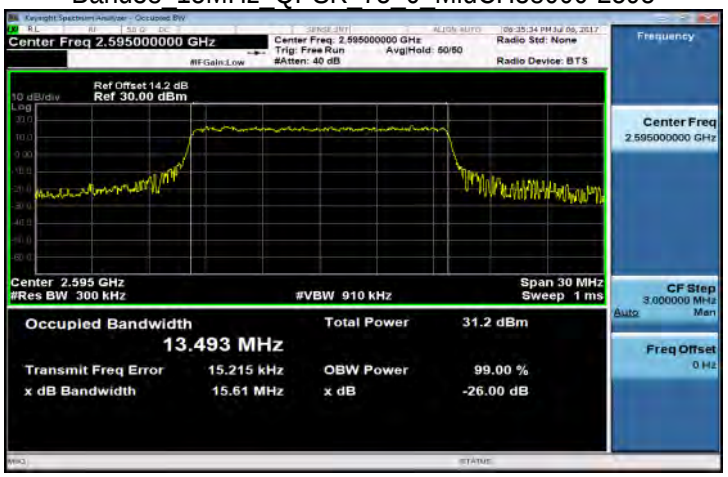
Band38_15MHz_QPSK_75_0_LowCH37825-2577.5



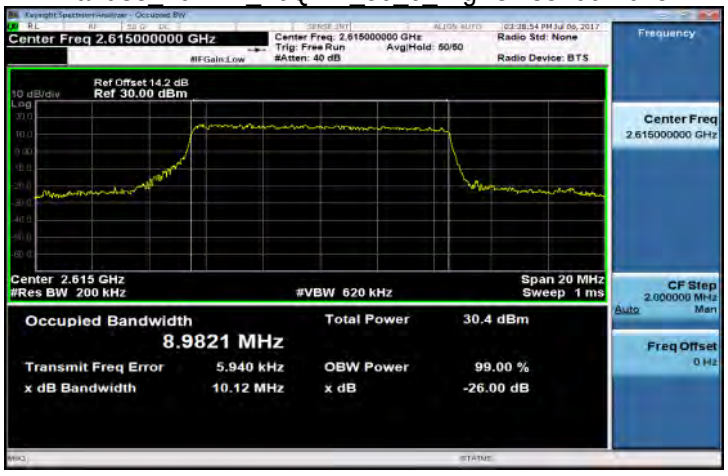
Band38_10MHz_16QAM_50_0_MidCH38000-2595



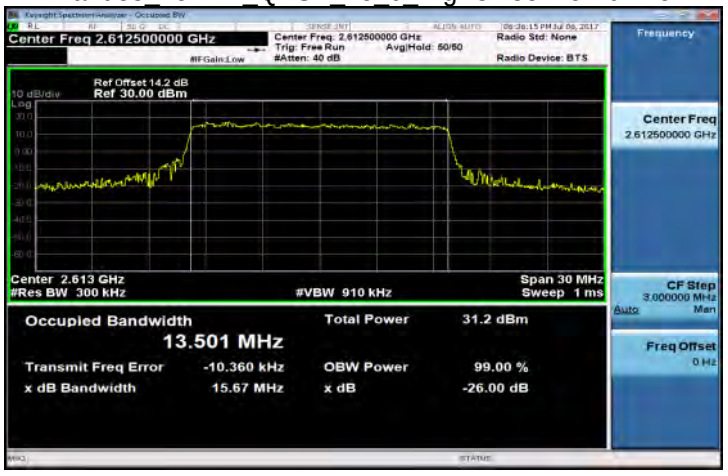
Band38_15MHz_QPSK_75_0_MidCH38000-2595



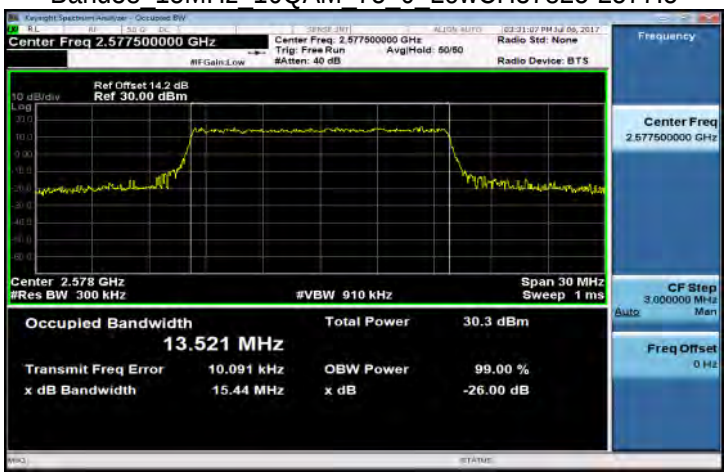
Band38_10MHz_16QAM_50_0_HighCH38200-2615



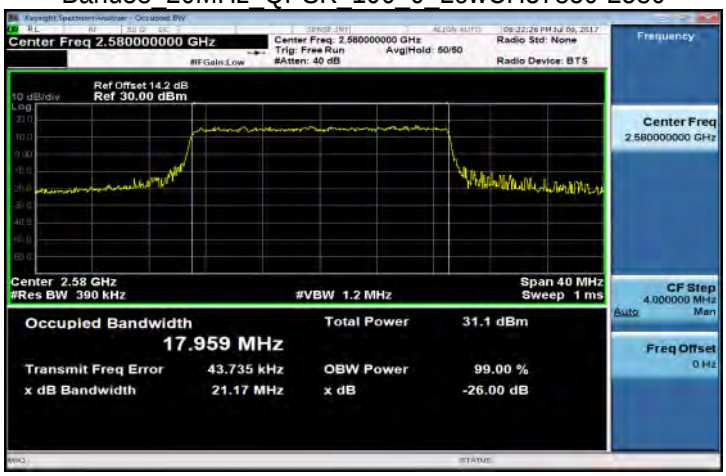
Band38_15MHz_QPSK_75_0_HighCH38175-2612.5



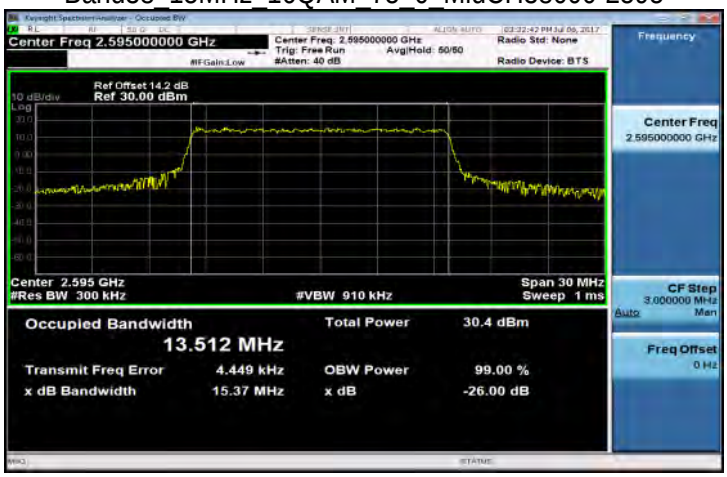
Band38_15MHz_16QAM_75_0_LowCH37825-2577.5



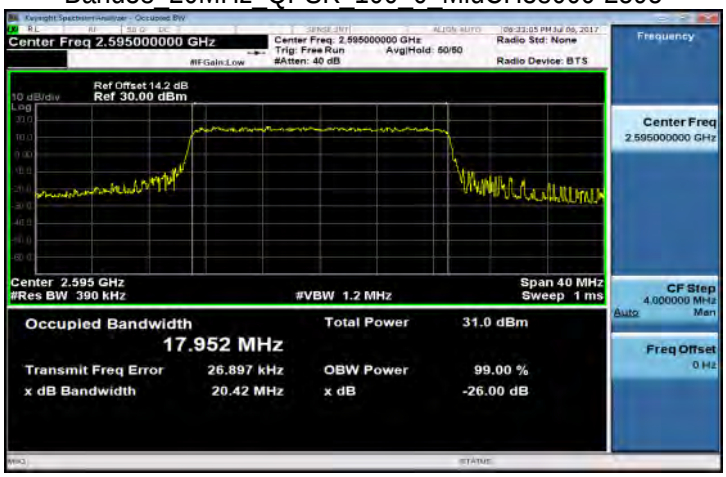
Band38_20MHz_QPSK_100_0_LowCH37850-2580



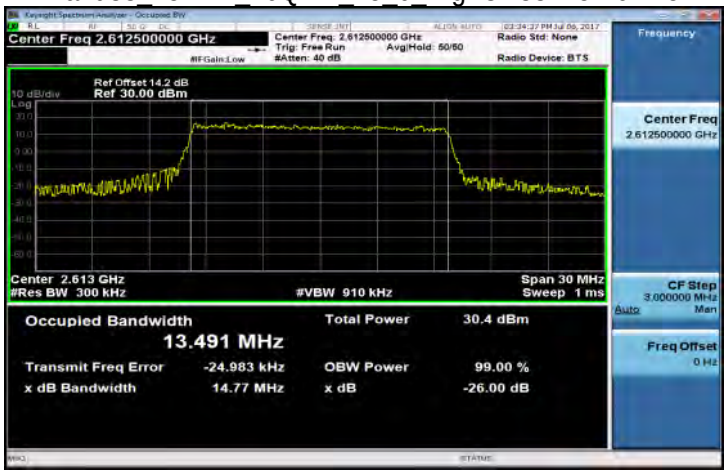
Band38_15MHz_16QAM_75_0_MidCH38000-2595



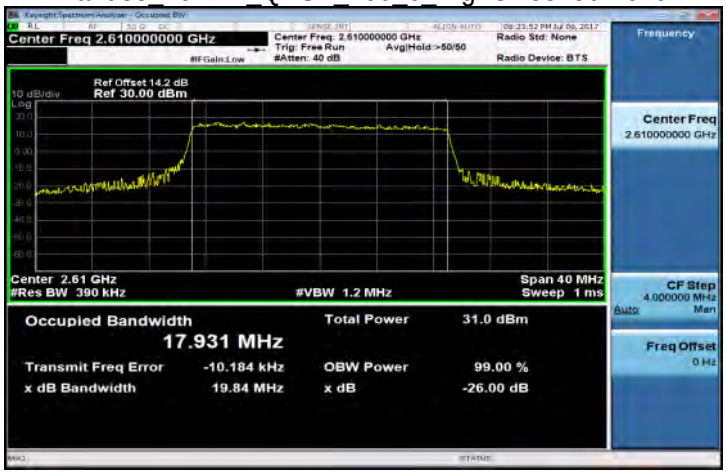
Band38_20MHz_QPSK_100_0_MidCH38000-2595



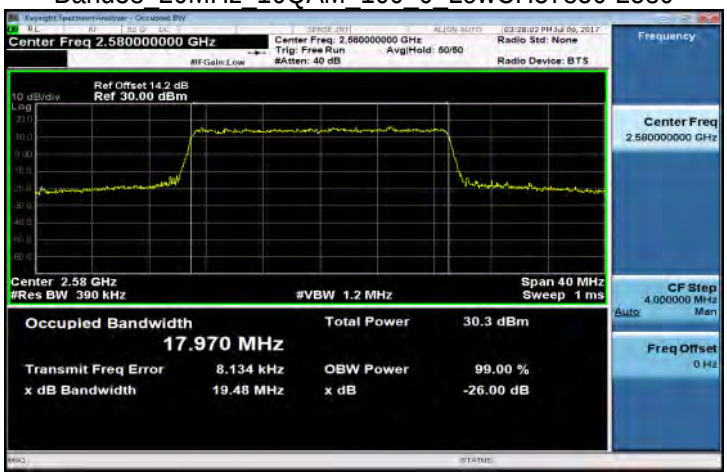
Band38_15MHz_16QAM_75_0_HighCH38175-2612.5



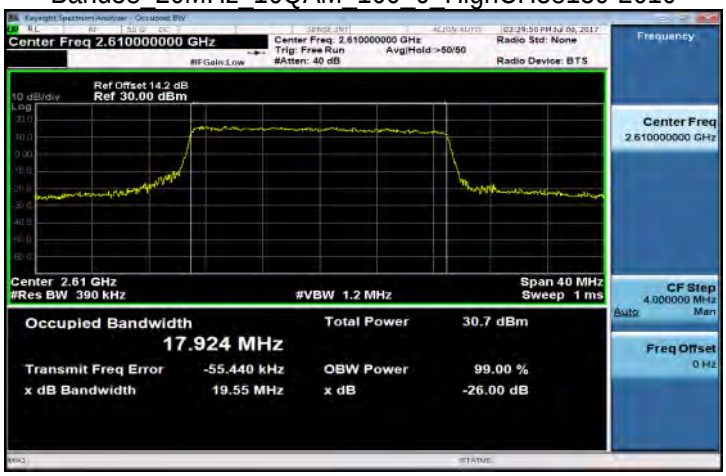
Band38_20MHz_QPSK_100_0_HighCH38150-2610



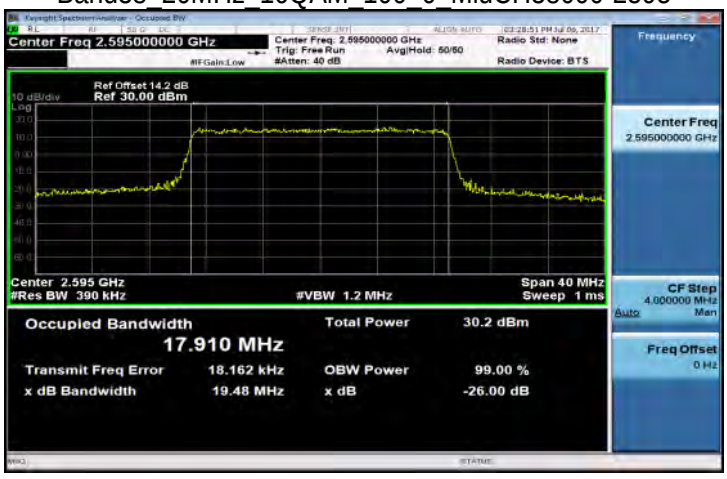
Band38_20MHz_16QAM_100_0_LowCH37850-2580



Band38_20MHz_16QAM_100_0_HighCH38150-2610



Band38_20MHz_16QAM_100_0_MidCH38000-2595



9. OUT OF BAND EMISSION AT ANTENNA TERMINALS

9.1. Standard Applicable

FCC §22.917(a), §24.238(a), §27.53(g)(h), the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than 43 + 10 log (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm).

§27.53 (m) (4) shall not be less than 55 +10log(mean output power in watt) dBc below the mean power output outside a license's frequency block (-25dBm).

FCC §27.53(g)

Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FCC §27.53(h)

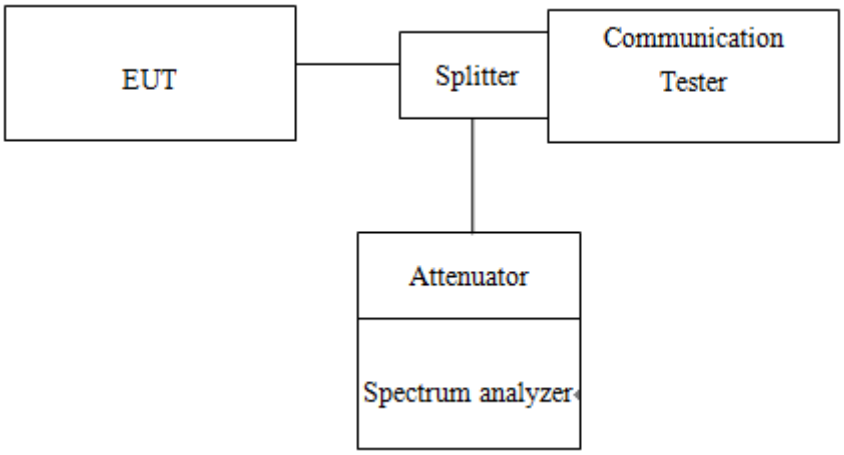
Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

FCC §27.53(m) (4) (6)

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in § 27.53(m)(6). In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz.

Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

9.2. Test SET-UP



9.3. Measurement Procedure

Conducted Emission

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

1. To connect Antenna Port of EUT to Spectrum.
2. Set RBW = 1MHz & VBW = 1MHz on Spectrum.
3. Allow trace to fully stabilize
4. Repeat above procedures until all default test channel measured were complete.

Band Edge

1. To connect Antenna Port of EUT to Spectrum.
2. The band edge of low and high channels for the highest RF powers was measured. Setting RBW ≥ 1% EBW.
3. Allow trace to fully stabilize
4. Repeat above procedures until all default test channel measured were complete.

9.4. Measurement Equipment Used

Conducted Emission (measured at antenna port) Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EXA Spectrum Analyzer	Agilent	N9030A	MY53120760	03/21/2017	03/20/2018
DC Block	Mini-Circuits	BLK-18-S+	1	01/05/2017	01/04/2018
Coaxial Cable	HUBER+SUHNER	SUCOFLEX 102	23670/2	01/05/2017	01/04/2018
Attenuator	Mini-Circuit	BW-S10W2+	2	01/05/2017	01/04/2018
Splitter	Agilent	11636B	N/A	01/05/2017	01/04/2018
DC Power Supply	Agilent	E3640A	MY52410006	11/21/2016	11/20/2017
Temperature Chamber	TERCHY	MHG-120LF	911009	05/19/2017	05/18/2018
Radio Communication Analyzer	R&S	CMU200	102189	02/10/2017	02/09/2018
Radio Communication Analyer	Anritsu	MT8820C	6201465317	01/03/2017	01/02/2018

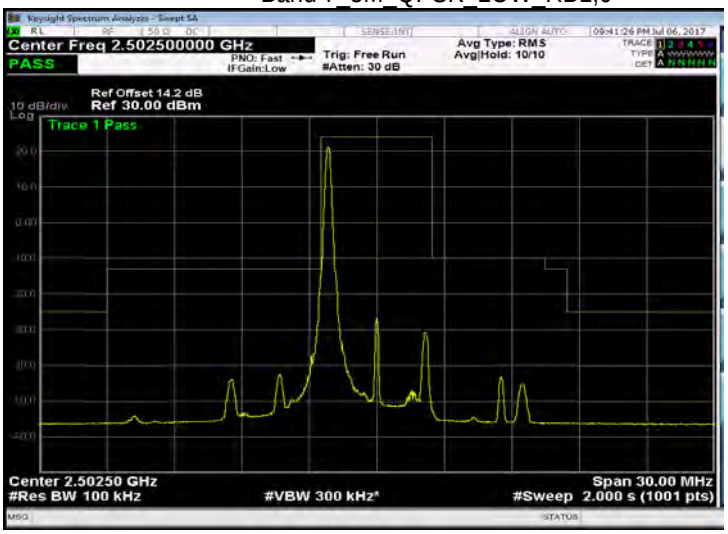
9.5. Measurement Result:

Refer to next pages.

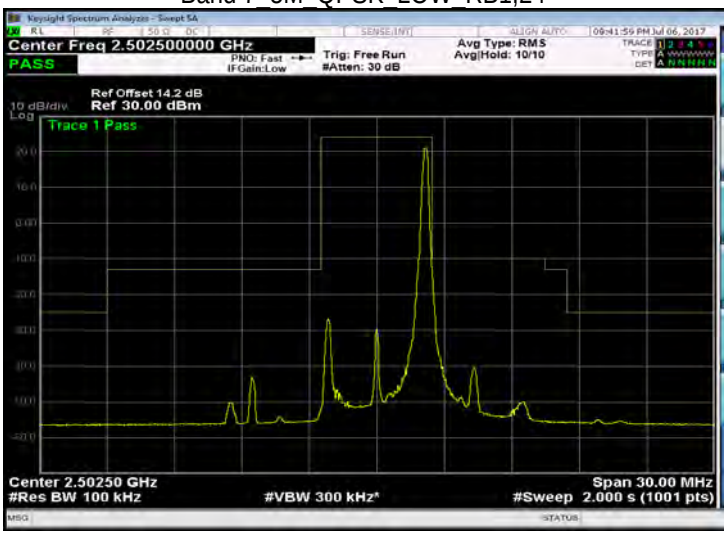
NOTE: The occurrence of the spike on the conducted emission is the signal of the fundamental emission.

MASK

Band 7_5M_QPSK_LOW_RB1,0

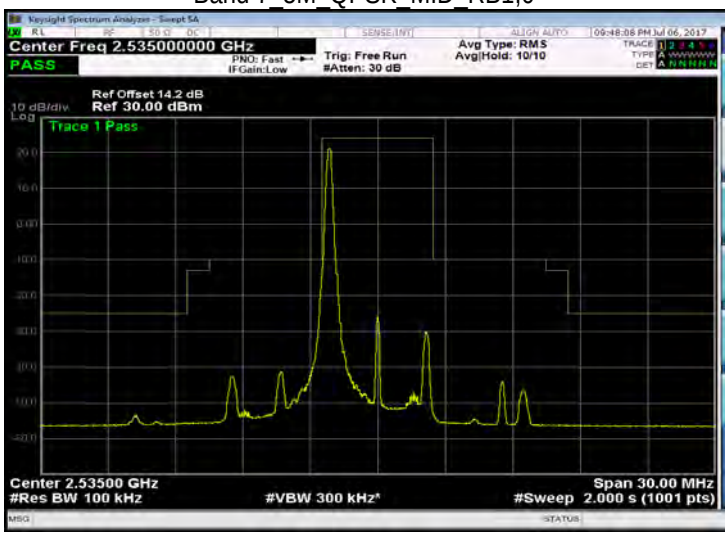


Band 7_5M_QPSK_LOW_RB1,24

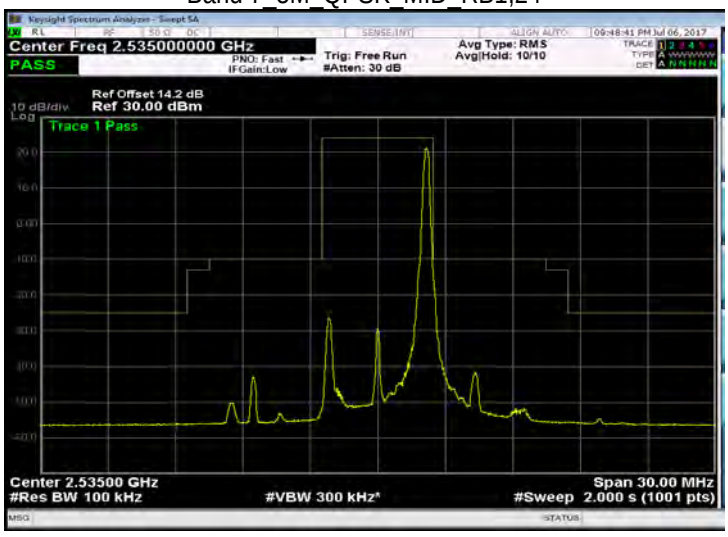


Band 7_5M_QPSK_LOW_RB25,0

Band 7_5M_QPSK_MID_RB1,0



Band 7_5M_QPSK_MID_RB1,24



Band 7_5M_QPSK_MID_RB25,0